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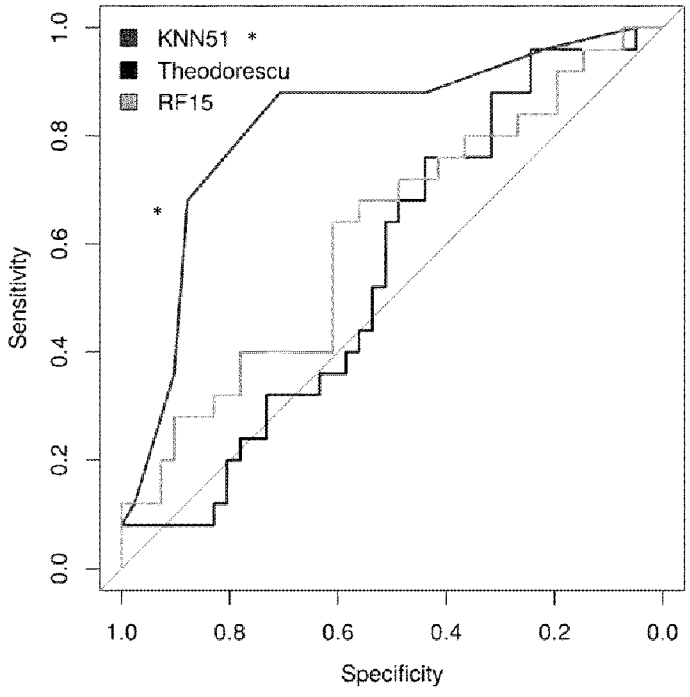
(54) Title: SYSTEMS METHODS AND COMPOSITIONS FOR PREDICTING METASTASIS IN BLADDER CANCER

FIGURE 4



(57) Abstract: The present invention relates to methods, systems and kits for the diagnosis, prognosis and the determination of cancer progression in a subject having cancer. The invention also provides methods, systems and kits for treating cancer in a subject. The methods, systems and kits comprise expression- based analysis of biomarkers. Further disclosed herein, in certain instances, are probe sets for use in assessing a cancer status in a subject. Further disclosed herein are classifiers for analyzing a cancer, such as, for example, bladder cancer. The invention further provides genomic classifiers useful for predicting lymph node metastasis in subjects having bladder cancer.

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SYSTEMS METHODS AND COMPOSITIONS FOR PREDICTING METASTASIS IN BLADDER CANCER

RELATED APPLICATIONS

[0001] This application claims priority to the U.S. Provisional Patent Application Serial No. 62/343,466, filed on May 31, 2016, which is hereby incorporated by reference herein in its entirety.

FIELD OF THE INVENTION

[0002] The present invention relates to methods, systems and kits for the diagnosis, prognosis and the determination of cancer progression in a subject having cancer. The invention also provides methods, systems and kits for treating cancer in a subject. The methods, systems and kits comprise expression-based analysis of biomarkers. Further disclosed herein, in certain instances, are probe sets for use in assessing a cancer status in a subject. Further disclosed herein are classifiers for analyzing a cancer, such as, for example, bladder cancer. The invention further provides genomic classifiers useful for predicting lymphnode metastasis in subjects having bladder cancer.

BACKGROUND OF THE INVENTION

[0003] Cancer is the uncontrolled growth of abnormal cells anywhere in a body. The abnormal cells are termed cancer cells, malignant cells, or tumor cells. Many cancers and the abnormal cells that compose the cancer tissue are further identified by the name of the tissue that the abnormal cells originated from (for example, bladder cancer, breast cancer, lung cancer, colon cancer, prostate cancer, pancreatic cancer, thyroid cancer). Cancer cells can proliferate uncontrollably and form a mass of cancer cells. Cancer cells can break away from this original mass of cells, travel through the blood and lymph systems, and lodge in other organs where they can again repeat the uncontrolled growth cycle. This process of cancer cells leaving an area and growing in another body area is often termed metastatic spread or metastatic disease. For example, if breast cancer cells spread to a bone (or anywhere else), it can mean that the individual has metastatic breast cancer.

[0004] Standard clinical parameters such as tumor size, grade, lymph node involvement and tumor–node–metastasis (TNM) staging (American Joint Committee on Cancer http://www.cancerstaging.org) may correlate with outcome and serve to stratify patients with respect to neoadjuvant chemotherapy (NAC), immunotherapy, antibody therapy and/or radiotherapy regimens. Incorporation of molecular markers in clinical practice may define tumor subtypes that are more likely to respond to targeted therapy. However, stage-matched tumors grouped by histological or molecular subtypes may respond differently to the same treatment regimen. Additional key genetic and epigenetic alterations may exist with important etiological contributions. A more detailed understanding of the molecular mechanisms and regulatory pathways at work in cancer cells and the tumor microenvironment (TME) could dramatically improve the

design of novel anti-tumor drugs and inform the selection of optimal therapeutic strategies. The development and implementation of diagnostic, prognostic and therapeutic biomarkers to characterize the biology of each tumor may assist clinicians in making important decisions with regard to individual patient care and treatment. Thus, provided herein are methods, compositions and systems for the analysis of coding and non-coding targets for the diagnosis, prognosis, and monitoring of a cancer.

[0005] This background information is provided for the purpose of making known information believed by the applicant to be of possible relevance to the present invention. No admission is necessarily intended, nor should be construed, that any of the preceding information constitutes prior art against the present invention.

SUMMARY OF THE INVENTION

[0006] The present invention relates to methods, systems and kits for the diagnosis, prognosis and determination of cancer progression of cancer in a subject. The present invention also relates to methods of treating cancer in a subject. In some embodiments, the present invention provides a method of diagnosing, prognosing, determining the progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy in a subject, comprising (a) assaying an expression level in a sample from the subject for a plurality of targets, wherein the plurality of targets comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; and (b) diagnosing, prognosing, determining the progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy in the subject based on the expression levels of the plurality of targets. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the cancer is a bladder cancer. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the plurality of targets comprises a coding target. In some embodiments, the coding target is an exonic sequence. In some embodiments, the plurality of targets comprises a non-coding target. In some embodiments, the non-coding target comprises an intronic sequence or partially overlaps an intronic sequence. In some embodiments, the non-coding target comprises a sequence within the UTR or partially overlaps with a UTR sequence. In some embodiments, the target comprises a nucleic acid sequence. In some embodiments, the nucleic acid sequence is a DNA sequence. In some embodiments, the nucleic acid sequence is an RNA sequence. In some embodiments, the plurality of targets comprises at

least 2 targets selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises at least 3, 4, or 5 targets selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4,

SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43,

SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy includes determining the malignancy of the cancer. In some embodiments, the diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy includes determining the stage of the cancer. In some embodiments, the diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy includes assessing the risk of systemic cancer, such as, for example, lymph node metastasis. In some embodiments, determining the treatment for the cancer includes determining the efficacy of treatment. In some embodiments, the method further comprises sequencing the plurality of targets. In some embodiments, the method further comprises hybridizing the plurality of targets to a solid support. In some embodiments, the solid support is a bead or array. In some embodiments, assaying the expression level of a plurality of targets may comprise the use of a probe set. In some embodiments, assaying the expression level may comprise the use of a classifier. The classifier may comprise a probe selection region (PSR). In some embodiments, the classifier may comprise the use of an algorithm. The algorithm may comprise a machine learning algorithm. In some embodiments, assaying the expression level may also comprise sequencing the plurality of targets.

[0007] Further disclosed herein in some embodiments is a probe set for assessing a cancer status of a subject comprising a plurality of probes, wherein the probes in the set are capable of detecting an expression level of one or more targets selected from Table 2 or SEQ ID NOs:1-51, wherein the expression level determines the cancer status of the subject with at least 40% specificity. In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises

SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15,

SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the cancer is a bladder cancer. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the probe set further comprises a probe capable of detecting an expression level of at least one coding target. In some embodiments, the coding target is an exonic

sequence. In some embodiments, the probe set further comprises a probe capable of detecting an expression level of at least one non-coding target. In some embodiments, the non-coding target is an intronic sequence or partially overlaps with an intronic sequence. In some embodiments, the non-coding target is a UTR sequence or partially overlaps with a UTR sequence. In some embodiments, assessing the cancer status includes assessing systemic cancer risk, such as, for example, lymphnode metastasis risk. In some embodiments, assessing the cancer status includes determining a treatment modality. In some embodiments, assessing the cancer status includes determining the efficacy of treatment. In some embodiments, the target is a nucleic acid sequence. In some embodiments, the nucleic acid sequence is a DNA sequence. In some embodiments, the nucleic acid sequence is an RNA sequence. In some embodiments, the probes are between about 15 nucleotides and about 500 nucleotides in length. In some embodiments, the probes are between about 15 nucleotides and about 450 nucleotides in length. In some embodiments, the probes are between about 15 nucleotides and about 400 nucleotides in length. In some embodiments, the probes are between about 15 nucleotides and about 350 nucleotides in length. In some embodiments, the probes are between about 15 nucleotides and about 300 nucleotides in length. In some embodiments, the probes are between about 15 nucleotides and about 250 nucleotides in length. In some embodiments, the probes are between about 15 nucleotides and about 200 nucleotides in length. In some embodiments, the probes are at least 15 nucleotides in length. In some embodiments, the probes are at least 25 nucleotides in length. In some embodiments, the expression level determines the cancer status of the subject with at least 50% specificity. In some embodiments, the expression level determines the cancer status of the subject with at least 60% specificity. In some embodiments, the expression level determines the cancer status of the subject with at least 65% specificity. In some embodiments, the expression level determines the cancer status of the subject with at least 70% specificity. In some embodiments, the expression level determines the cancer status of the subject with at least 75% specificity. In some embodiments, the expression level determines the cancer status of the subject with at least 80% specificity. In some embodiments, the expression level determines the cancer status of the subject with at least 85% specificity. In some embodiments, the non-coding target is a non-coding RNA transcript and the non-coding RNA transcript is non-polyadenylated.

[0008] Further disclosed herein in some embodiments is a system for analyzing a cancer, comprising: (a) a probe set comprising a plurality of target sequences, wherein (i) the plurality of target sequences hybridizes to one or more targets selected from Table 2 or SEQ ID NOs:1-51; or (ii) the plurality of target sequences comprises one or more target sequences selected from Table 2 or SEQ ID NOs:1-51; and (b) a computer model or algorithm for analyzing an expression level and/or expression profile of the target hybridized to the probe in a sample from a subject suffering from a cancer. In some embodiments, the system further comprises an electronic memory for capturing and storing an expression profile. In some

embodiments, the system further comprises a computer-processing device, optionally connected to a computer network. In some embodiments, the system further comprises a software module executed by the computer-processing device to analyze an expression profile. In some embodiments, the system further comprises a software module executed by the computer-processing device to compare the expression profile to a standard or control. In some embodiments, the system further comprises a software module executed by the computer-processing device to determine the expression level of the target. In some embodiments, the system further comprises a machine to isolate the target or the probe from the sample. In some embodiments, the system further comprises a machine to sequence the target or the probe. In some embodiments, the system further comprises a machine to amplify the target or the probe. In some embodiments, the system further comprises a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the system further comprises a software module executed by the computer-processing device to transmit an analysis of the expression profile to the individual or a medical professional treating the individual. In some embodiments, the system further comprises a software module executed by the computer-processing device to transmit a diagnosis or prognosis to the individual or a medical professional treating the individual. In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ

ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some

embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the cancer is a bladder cancer. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the system further comprises a sequence for sequencing the plurality of targets. In some embodiments, the system further comprises an instrument for amplifying the plurality of targets. In some embodiments, the system further comprises a label for labeling the plurality of targets.

[0009] Further disclosed herein in some embodiments is a method of analyzing a cancer in an individual in need thereof, comprising: (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; and (b) comparing the expression profile from the sample to an expression profile of a control or standard. In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected

from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO.

48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ

ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the method further comprises providing diagnostic or prognostic information to the individual about the cardiovascular disorder based on the comparison. In some embodiments, the method further comprises diagnosing the individual with a cancer if the expression profile of the sample (a) deviates from the control or standard from a healthy individual or population of healthy individuals, or (b) matches the control or standard from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises predicting the susceptibility of the individual for developing a cancer based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises prescribing a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises altering a treatment regimen prescribed or administered to the individual based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises predicting the individual's response to a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or

have had the cancer. In some embodiments, the deviation is the expression level of one or more targets from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises quantifying the expression level of the plurality of targets. In some embodiments, the method further comprises labeling the plurality of targets. In some embodiments, assaying the expression level of a plurality of targets may comprise the use of a probe set. In some embodiments, obtaining the expression level may comprise the use of a classifier. The classifier may comprise a probe selection region (PSR). In some embodiments, the classifier may comprise the use of an algorithm. The algorithm may comprise a machine learning algorithm. In some embodiments, obtaining the expression level may also comprise sequencing the plurality of targets.

[0010] Disclosed herein in some embodiments is a method of diagnosing cancer in an individual in need thereof, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) diagnosing a cancer in the individual if the expression profile of the sample (i) deviates from the control or standard from a healthy individual or population of healthy individuals, or (ii) matches the control or standard from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets

selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30,

SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is

selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises quantifying the expression level of the plurality of targets. In some embodiments, the method further comprises labeling the plurality of targets. In some embodiments, obtaining the expression level may comprise the use of a classifier. The classifier may comprise a probe selection region (PSR). In some embodiments, the classifier may comprise the use of an algorithm. The algorithm may comprise a machine learning algorithm. In some embodiments, obtaining the expression level may also comprise sequencing the plurality of targets.

[0011] Further disclosed herein in some embodiments is a method of predicting whether an individual is susceptible to developing a cancer, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) predicting the susceptibility of the individual for developing a cancer based on (i) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (ii) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID

NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID

NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof.

In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, obtaining the expression level may comprise the use of a classifier. The classifier may comprise a probe selection region (PSR). In some embodiments, the classifier may comprise the use of an algorithm. The algorithm may comprise a machine learning algorithm. In some embodiments, obtaining the expression level may also comprise sequencing the plurality of targets. In some embodiments, obtaining the expression level may also comprise amplifying the plurality of targets. In some embodiments, obtaining the expression level may also comprise quantifying the plurality of targets.

[0012] Further disclosed herein in some embodiments is a method of predicting an individual's response to a treatment regimen for a cancer, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) predicting the individual's response to a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18,

SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO.

49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the

deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises quantifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises labeling the target, the probe, or any combination thereof. In some embodiments, obtaining the expression level may comprise the use of a classifier. The classifier may comprise a probe selection region (PSR). In some embodiments, the classifier may comprise the use of an algorithm. The algorithm may comprise a machine learning algorithm. In some embodiments, obtaining the expression level may also comprise sequencing the plurality of targets. In some embodiments, obtaining the expression level may also comprise amplifying the plurality of targets. In some embodiments, obtaining the expression level may also comprise quantifying the plurality of targets.

[0013] Disclosed herein in some embodiments is a method of prescribing a treatment regimen for a cancer to an individual in need thereof, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) prescribing a treatment regimen based on (i) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (ii) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10

targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39,

SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments,

the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises converting the expression levels of the target sequences into a likelihood score that indicates the probability that a biological sample is from a patient who will exhibit no evidence of disease or who will exhibit systemic cancer. In some embodiments, the method further comprises quantifying the expression level of the plurality of targets. In some embodiments, the method further comprises labeling the plurality of targets. In some embodiments, the target sequences are differentially expressed the cancer. In some embodiments, the differential expression is dependent on aggressiveness. In some embodiments, the expression profile is determined by a method selected from the

group consisting of RT-PCR, Northern blotting, ligase chain reaction, array hybridization, and a combination thereof. In some embodiments, obtaining the expression level may comprise the use of a classifier. The classifier may comprise a probe selection region (PSR). In some embodiments, the classifier may comprise the use of an algorithm. The algorithm may comprise a machine learning algorithm. In some embodiments, obtaining the expression level may also comprise sequencing the plurality of targets. In some embodiments, obtaining the expression level may also comprise amplifying the plurality of targets. In some embodiments, obtaining the expression level may also comprise quantifying the plurality of targets.

[0014] In some embodiments, the present invention provides methods of treating a subject having cancer, comprising the steps of: obtaining a sample from the subject; measuring the expression level of one or more targets selected from Table 2 or SEQ ID NOs: 1-51; correlating the expression level of the one or more targets with an increased risk of cancer metastasis in the subject; and administering to the subject a cancer treatment; thereby treating cancer in the subject. In other embodiments, the present invention provides methods for treating a subject having cancer, comprising the steps of: performing a nucleic acid-based detection assay to detect the expression level of one or more targets selected from Table 2 or SEQ ID NOs: 1-51 in a sample comprising cancer cells obtained from the subject; determining that the cancer cells from the subject express the one or more targets at an altered level compared to a reference level; determining that the subject is in need of therapy based on the altered level of the one or more targets in the cancer cells as compared to a reference level; and administering an effective amount of a therapy to the subject expressing the altered level of the one or more targets in the cancer cells, thereby treating cancer in the human subject. In some embodiments, the therapy is chemotherapy. In some aspects, the therapy is neoadjuvant chemotherapy (NAC). In some embodiments, the cancer is bladder cancer. In other embodiments, the bladder cancer is the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the methods further comprise determining lymph node involvement following radical cystectomy in a subject with muscle-invasive bladder cancer. In some embodiments, the methods further comprise determining lymph node metastasis following radical cystectomy in a subject with muscle-invasive bladder cancer.

[0015] In some embodiments, the plurality of targets comprises at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 30 targets selected from Table 2 or SEQ ID

NOs:1-51. In some embodiments, the plurality of targets comprises at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 targets selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs: 1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4,

SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma,

squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression levels. In some embodiments, the deviation is the expression level of one or more targets from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs: 1-51. In some embodiments, the method further comprises amplifying the target. In some embodiments, the method further comprises sequencing the target. In some embodiments, the method further comprises quantifying the target. In some embodiments, the method further comprises labeling the target. In some embodiments, obtaining the expression level may comprise the use of a classifier. The classifier may comprise a probe selection region (PSR). In some embodiments, the classifier may comprise the use of an algorithm. The algorithm may comprise a machine learning algorithm. In some embodiments, obtaining the expression level may also comprise sequencing the plurality of targets. In some embodiments, obtaining the expression level may also comprise amplifying the plurality of targets. In some embodiments, obtaining the expression level may also comprise quantifying the plurality of targets.

[0016] In other embodiments, the present invention provides a method of determining the risk of systemic cancer in a subject having bladder cancer, comprising: measuring the expression level, in a bladder tissue or cell sample isolated from a subject, for at least one marker selected from Table 2 or SEQ ID NOs:1-51; wherein an elevated or reduced expression level of the at least one marker, over a control expression level in a corresponding normal bladder cancer tissue or bladder cancer cell sample, is

indicative of an increased risk of systemic cancer. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer.

[0017] Further disclosed herein is a classifier for analyzing a cancer, wherein the classifier has an AUC value of at least about 0.60. The AUC of the classifier may be at least about 0.60, 0.61, 0.62, 0.63, 0.64, 0.65, 0.66, 0.67, 0.68, 0.69, 0.70 or more. The AUC of the classifier may be at least about 0.71, 0.72, 0.73, 0.74, 0.75, 0.76, 0.77, 0.78, 0.79, 0.80 or more. The AUC of the classifier may be at least about 0.81, 0.82, 0.83, 0.84, 0.85, 0.86, 0.87, 0.88, 0.89, 0.90 or more. The AUC of the classifier may be at least about 0.91, 0.92, 0.93, 0.94, 0.95, 0.96, 0.97, 0.98, 0.99 or more. The 95% CI of a classifier or biomarker may be between about 1.10 to 1.70. In some instances, the difference in the range of the 95% CI for a biomarker or classifier is between about 0.25 to about 0.50, between about 0.27 to about 0.47, or between about 0.30 to about 0.45.

[0018] Further disclosed herein is a classifier for analyzing a cancer, wherein the classifier has an AUC value of at least about 0.60. The AUC of the classifier may be at least about 0.60, 0.61, 0.62, 0.63, 0.64, 0.65, 0.66, 0.67, 0.68, 0.69, 0.70 or more. The AUC of the classifier may be at least about 0.71, 0.72, 0.73, 0.74, 0.75, 0.76, 0.77, 0.78, 0.79, 0.80 or more. The AUC of the classifier may be at least about 0.81, 0.82, 0.83, 0.84, 0.85, 0.86, 0.87, 0.88, 0.89, 0.90 or more. The AUC of the classifier may be at least about 0.91, 0.92, 0.93, 0.94, 0.95, 0.96, 0.97, 0.98, 0.99 or more. The 95% CI of a classifier or biomarker may be between about 1.10 to 1.70. In some instances, the difference in the range of the 95% CI for a biomarker or classifier is between about 0.25 to about 0.50, between about 0.27 to about 0.47, or between about 0.30 to about 0.45.

[0019] Further disclosed herein is a method for analyzing a cancer, comprising use of one or more classifiers, wherein the significance of the one or more classifiers is based on one or more metrics selected from the group comprising T-test, P-value, KS (Kolmogorov Smirnov) P-value, accuracy, accuracy P-value, positive predictive value (PPV), negative predictive value (NPV), sensitivity, specificity, AUC, AUC P-value (Auc.pvalue), Wilcoxon Test P-value, Median Fold Difference (MFD), Kaplan Meier (KM) curves, survival AUC (survAUC), Kaplan Meier P-value (KM P-value), Univariable Analysis Odds Ratio P-value (uvaORPval), multivariable analysis Odds Ratio P-value (mvaORPval), Univariable Analysis Hazard Ratio P-value (uvaHRPval) and Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The significance of the one or more classifiers may be based on two or more metrics selected from the group comprising AUC, AUC P-value (Auc.pvalue), Wilcoxon Test P-value, Median Fold Difference (MFD), Kaplan Meier (KM) curves, survival AUC (survAUC), Univariable Analysis Odds Ratio P-value (uvaORPval), multivariable analysis Odds Ratio P-value (mvaORPval), Kaplan Meier P-value (KM P-value), Univariable Analysis Hazard Ratio P-value (uvaHRPval) and Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The significance of the one or more classifiers may be

based on three or more metrics selected from the group comprising AUC, AUC P-value (Auc.pvalue), Wilcoxon Test P-value, Median Fold Difference (MFD), Kaplan Meier (KM) curves, survival AUC (survAUC), Kaplan Meier P-value (KM P-value), Univariable Analysis Odds Ratio P-value (uvaORPval), multivariable analysis Odds Ratio P-value (mvaORPval), Univariable Analysis Hazard Ratio P-value (uvaHRPval) and Multivariable Analysis Hazard Ratio P-value (mvaHRPval).

[0020] The one or more metrics may comprise AUC. The one or more metrics may comprise AUC and AUC P-value. The one or more metrics may comprise AUC P-value and Wilcoxon Test P-value. The one or more metrics may comprise Wilcoxon Test P-value. The one or more metrics may comprise AUC and Univariable Analysis Odds Ratio P-value (uvaORPval). The one or more metrics may comprise multivariable analysis Odds Ratio P-value (mvaORPval) and Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The one or more metrics may comprise AUC and Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The one or more metrics may comprise Wilcoxon Test P-value and Multivariable Analysis Hazard Ratio P-value (mvaHRPval).

[0021] The clinical significance of the classifier may be based on the AUC value. The AUC of the classifier may be at least about about 0.60, 0.61, 0.62, 0.63, 0.64, 0.65, 0.66, 0.67, 0.68, 0.69, 0.70 or more. The AUC of the classifier may be at least about 0.71, 0.72, 0.73, 0.74, 0.75, 0.76, 0.77, 0.78, 0.79, 0.80 or more. The AUC of the classifier may be at least about 0.81, 0.82, 0.83, 0.84, 0.85, 0.86, 0.87, 0.88, 0.89, 0.90 or more. The AUC of the classifier may be at least about 0.91, 0.92, 0.93, 0.94, 0.95, 0.96, 0.97, 0.98, 0.99 or more. The 95% CI of a classifier or biomarker may be between about 1.10 to 1.70. In some instances, the difference in the range of the 95% CI for a biomarker or classifier is between about 0.25 to about 0.50, between about 0.27 to about 0.47, or between about 0.30 to about 0.45.

[0022] The clinical significance of the classifier may be based on Univariable Analysis Odds Ratio P-value (uvaORPval). The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier may be between about 0-0.4. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier may be between about 0-0.3. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier may be between about 0-0.2. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier may be less than or equal to 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[0023] The clinical significance of the classifier may be based on multivariable analysis Odds Ratio P-value (mvaORPval). The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may be between about 0-1. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may

be between about 0-0.9. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may be between about 0-0.8. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may be less than or equal to 0.90, 0.88, 0.86, 0.84, 0.82, 0.80. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may be less than or equal to 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[0024] The clinical significance of the classifier may be based on the Kaplan Meier P-value (KM P-value). The Kaplan Meier P-value (KM P-value) of the classifier may be between about 0-0.8. The Kaplan Meier P-value (KM P-value) of the classifier may be between about 0-0.7. The Kaplan Meier P-value (KM P-value) of the classifier may be less than or equal to 0.80, 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The Kaplan Meier P-value (KM P-value) of the classifier may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Kaplan Meier P-value (KM P-value) of the classifier may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Kaplan Meier P-value (KM P-value) of the classifier may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[0025] The clinical significance of the classifier may be based on the survival AUC value (survAUC). The survival AUC value (survAUC) of the classifier may be between about 0-1. The survival AUC value (survAUC) of the classifier may be between about 0-0.9. The survival AUC value (survAUC) of the classifier may be less than or equal to 1, 0.98, 0.96, 0.94, 0.92, 0.90, 0.88, 0.86, 0.84, 0.82, 0.80. The survival AUC value (survAUC) of the classifier may be less than or equal to 0.80, 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The survival AUC value (survAUC) of the classifier may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The survival AUC value (survAUC) of the classifier may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The survival AUC value (survAUC) of the classifier may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[0026] The clinical significance of the classifier may be based on the Univariable Analysis Hazard Ratio P-value (uvaHRPval). The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier may

be between about 0-0.4. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier may be between about 0-0.3. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier may be less than or equal to 0.40, 0.38, 0.36, 0.34, 0.32. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier may be less than or equal to 0.30, 0.29, 0.28, 0.27, 0.26, 0.25, 0.24, 0.23, 0.22, 0.21, 0.20. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier may be less than or equal to 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[0027] The clinical significance of the classifier may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be between about 0-1. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be between about 0-0.9. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 1, 0.98, 0.96, 0.94, 0.92, 0.90, 0.88, 0.86, 0.84, 0.82, 0.80. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 0.80, 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[0028] The clinical significance of the classifier may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be between about 0 to about 0.60. significance of the classifier may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be between about 0 to about 0.50. significance of the classifier may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 0.50, 0.47, 0.45, 0.43, 0.40, 0.38, 0.35, 0.33, 0.30, 0.28, 0.25, 0.22, 0.20, 0.18, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11, 0.10. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier may be less than or equal to 0.01, 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[0029] The method may further comprise determining an expression profile based on the one or more classifiers. The method may further comprise providing a sample from a subject. The subject may be a healthy subject. The subject may be suffering from a cancer or suspected of suffering from a cancer. The method may further comprise diagnosing a cancer in a subject based on the expression profile or classifier. The method may further comprise treating a cancer in a subject in need thereof based on the expression profile or classifier. The method may further comprise determining a treatment regimen for a cancer in a subject in need thereof based on the expression profile or classifier. The method may further comprise prognosing a cancer in a subject based on the expression profile or classifier.

[0030] Further disclosed herein is a kit for analyzing a cancer, comprising (a) a probe set comprising a plurality of target sequences, wherein the plurality of target sequences comprises at least one target sequence listed in Table 2 or SEQ ID NOs:1-51; and (b) a computer model or algorithm for analyzing an expression level and/or expression profile of the target sequences in a sample. In some embodiments, the kit further comprises a computer model or algorithm for correlating the expression level or expression profile with disease state or outcome. In some embodiments, the kit further comprises a computer model or algorithm for designating a treatment modality for the individual. In some embodiments, the kit further comprises a computer model or algorithm for normalizing expression level or expression profile of the target sequences. In some embodiments, the kit further comprises a computer model or algorithm comprising a robust multichip average (RMA), frozen robust multichip average (fRMA), Single Channel Array Normalization (SCAN), ComBat (Combining Batches of gene expression), probe logarithmic intensity error estimation (PLIER), non-linear fit (NLFIT) quantile-based, nonlinear normalization, or a combination thereof. In some embodiments, the plurality of target sequences comprises at least 2 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of target sequences comprises at least 5 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of target sequences comprises at least 10 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of target sequences comprises at least 15 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of target sequences comprises at least 20 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of target sequences comprises at least 30 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of target sequences comprises at least 35 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 40 target sequences selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and

SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ

ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer.

[0031] Further disclosed herein is a kit for analyzing a cancer, comprising (a) a probe set comprising a plurality of target sequences, wherein the plurality of target sequences hybridizes to one or more targets selected from Table 2 or SEQ ID NOs:1-51; and (b) a computer model or algorithm for analyzing an expression level and/or expression profile of the target sequences in a sample. In some embodiments, the kit further comprises a computer model or algorithm for correlating the expression level or expression profile with disease state or outcome. In some embodiments, the kit further comprises a computer model or algorithm for designating a treatment modality for the individual. In some embodiments, the kit further comprises a computer model or algorithm for normalizing expression level or expression profile of the target sequences. In some embodiments, the kit further comprises a computer model or algorithm comprising a robust multichip average (RMA), frozen robust multichip average (fRMA), Single Channel Array Normalization (SCAN), ComBat (Combining Batches of gene expression), probe logarithmic intensity error estimation (PLIER), non-linear fit (NLFIT) quantile-based, nonlinear normalization, or a combination thereof. In some embodiments, the targets comprise at least 2 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the targets comprise at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the targets comprise at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the targets comprise at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the targets comprise at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the targets comprise at least 30 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the targets comprise at least 35 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the targets comprise comprises at least 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ

ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13,

SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a breast cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer.

[0032] In other embodiments, the present invention provides methods for analyzing a sample from a subject comprising (a) assaying an expression level in a sample from the subject for a plurality of targets, wherein the plurality of targets comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; and (b) comparing the expression level of the plurality of targets in the sample to a control level of the plurality of targets in a control sample. In other embodiments, the methods of the present invention further comprise a computer model or algorithm for analyzing the plurality of targets in the sample.

[0033] In one embodiment, the invention provides for a method of diagnosing, prognosing, determining, predicting a therapeutic regimen or predicting benefit from therapy for metastatic bladder cancer, comprising assaying an expression level in a sample from the subject for a plurality of targets, wherein the plurality of targets comprises two or more targets selected from Table 2 or SEQ ID NOs:1-51; and diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting

benefit from therapy in a subject having cancer based on the expression levels of the plurality of targets. In one aspect, the metastatic bladder cancer has metastasized to at least one lymph node. In another aspect, the plurality of targets comprises a coding target. In an additional aspect, the coding target is an exonic sequence. In a further aspect, the plurality of targets comprises a non-coding target. In certain aspects, the non-coding target comprises an intronic sequence or partially overlaps an intronic sequence. In certain aspects, the non-coding target comprises a sequence within the UTR or partially overlaps with a UTR sequence. In one aspect, the target comprises a nucleic acid sequence. In an additional aspect, the nucleic acid sequence is a DNA sequence or an RNA sequence. In an additional aspect, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In a further aspect, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In one aspect, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In certain aspects, the plurality of targets comprises SEQ ID NOs: 1-51. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ

ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32,

SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3.

[0034] In another embodiment, the present invention provides a method of diagnosing and treating metastatic bladder cancer in a subject, said method comprising:(a) obtaining a sample from a subject, wherein the sample comprises a plurality of differentially expressed targets; (b) processing the sample to isolate or enrich the sample for the targets or cells containing the targets; and (c) detecting the level of expression of one or more targets in said sample by sequencing, nucleic acid hybridization or nucleic acid amplification, (d) diagnosing the subject with metastatic bladder cancer when an increased level of expression of said one or more targets in said sample relative to the level in normal bladder cells is detected; and (e) administering an effective amount of a chemotherapeutic agent or radiation to the diagnosed subject. In one aspect, the metastatic bladder cancer has metastasized to at least one lymph node. In another aspect, the plurality of targets comprises a coding target. In an additional aspect, the coding target is an exonic sequence. In a further aspect, the plurality of targets comprises a non-coding target. In certain aspects, the non-coding target comprises an intronic sequence or partially overlaps an intronic sequence. In certain aspects, the non-coding target comprises a sequence within the UTR or partially overlaps with a UTR sequence. In one aspect, the target comprises a nucleic acid sequence. In an additional aspect, the nucleic acid sequence is a DNA sequence or an RNA sequence. In an additional aspect, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In a further aspect, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In one aspect, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In certain aspects, the plurality of targets comprises SEQ ID NOs: 1-51.

INCORPORATION BY REFERENCE

[0035] All publications, patents, and patent applications mentioned in this specification are herein incorporated by reference in their entireties to the same extent as if each individual publication, patent, or patent application was specifically and individually indicated to be incorporated by reference.

BRIEF DESCRIPTION OF THE DRAWINGS

[0036] FIG. 1 sets forth a flowchart of the development of a genetic classifier of the present invention.

[0037] FIG. 2sets forth box plots indicating the distribution of prediction scores of exemplary signatures of the present invention in LN-negative and LN-positive patients in a discovery set.

[0038] FIG. 3 sets forth box plots indicating the distribution of prediction scores of exemplary signatures of the present invention in LN-negative and LN-positive patients in a validation set.

[0039] FIG. 4 sets forth ROC curves and corresponding AUC of three signatures in the validation set including an exemplary signature of the present invention.

[0040] FIG. 5 sets forth network and pathway analysis with Ingenuity Pathway Analysis (IPA). The barplot in FIG. 5A indicates the significant involvement of KNN51 genes in cancer, cellular growth and movement, regulation of the cell cycle and survival. The bar height is determined by the number of genes in KNN51 that are involved in a given function. The threshold is set at a p-value of 0.05. The network plot in FIG. 5B highlights the role of individual genes of KNN51 in cell transformation, proliferation and the metastatic processes. Up- and downregulated genes in tumors of LN-positive patients are read and green, respectively. The class of the genes, defined by IPA, determines their shape: horizontal oval, transcription regulator; vertical oval, transmembrane receptor; triangle, kinase. Lines and arrows indicate the literature based prediction of involvement: Stimulation and inhibition are orange and blue, respectively.

DETAILED DESCRIPTION OF THE INVENTION

[0041] The present invention discloses systems and methods for diagnosing, predicting, and/or monitoring the status or outcome of a cancer in a subject using expression-based analysis of a plurality of targets. Generally, the method comprises (a) optionally providing a sample from a subject; (b) assaying the expression level for a plurality of targets in the sample; and (c) diagnosing, predicting and/or monitoring the status or outcome of a cancer based on the expression level of the plurality of targets.

[0042] Assaying the expression level for a plurality of targets in the sample may comprise applying the sample to a microarray. In some instances, assaying the expression level may comprise the use of an algorithm. The algorithm may be used to produce a classifier. Alternatively, the classifier may comprise a probe selection region. In some instances, assaying the expression level for a plurality of targets comprises detecting and/or quantifying the plurality of targets. In some embodiments, assaying the expression level for a plurality of targets comprises sequencing the plurality of targets. In some embodiments, assaying the expression level for a plurality of targets comprises amplifying the plurality of targets. In some embodiments, assaying the expression level for a plurality of targets comprises quantifying the plurality of targets. In some embodiments, assaying the expression level for a plurality of targets comprises conducting a multiplexed reaction on the plurality of targets.

[0043] In some instances, the plurality of targets comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises at least about 2, at least about 3, at least about 4, at least about 5, at least about 6, at least about 7, at least about 8, at least about 9, or at least about 10 targets selected from Table 2 or SEQ ID NOs:1-51. In other instances, the plurality of targets comprises at least about12, at least about 15, at least about 17, at least about 20, at least about 22, at least about 25, at least about 27, at least about 30, at least about 32, at least about 35, at least about 37,

or at least about 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 50 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 60 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 100 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 125 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 150 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 175 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 200 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 225 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 250 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 275 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 300 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 350 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 400 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 450 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 500 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 550 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 600 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 650 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 700 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 750 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 800 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ

ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID

NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3.In some instances, the plurality of targets comprises a coding target, non-coding target, or any combination thereof. In some instances, the coding target comprises an exonic sequence. In other instances, the non-coding target comprises a non-exonic or exonic sequence. In some instances, the non-exonic sequence comprises an untranslated region (e.g., UTR), intronic region, intergenic region, antisense, or any combination thereof. Alternatively, the plurality of targets comprises an anti-sense sequence. In other instances, the plurality of targets comprises a non-coding RNA transcript.

[0044] Further disclosed herein, is a probe set for diagnosing, predicting, and/or monitoring a cancer in a subject. In some instances, the probe set comprises a plurality of probes capable of detecting an expression level of one or more targets selected from Table 2 or SEQ ID NOs:1-51, wherein the expression level determines the cancer status of the subject with at least about 45% specificity. In some instances, detecting an expression level comprise detecting gene expression, protein expression, or any combination thereof. In some instances, the plurality of targets comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises at least about 2, at least about 3, at least about 4, at least about 5, at least about 6, at least about 7, at least about 8, at least about 9, or at least about 10 targets selected from Table 2 or SEQ ID NOs:1-51. In other instances, the plurality of targets comprises at least about12, at least about 15, at least about 17, at least about 20, at

least about 22, at least about 25, at least about 27, at least about 30, at least about 32, at least about 35, at least about 37, or at least about 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 50 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 60 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 100 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 125 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 150 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 175 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 200 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 225 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 250 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 275 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 300 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 350 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 400 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 450 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 500 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 550 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 600 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 650 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 700 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 750 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 800 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some

embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43,

SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some instances, the plurality of targets comprises a coding target, non-coding target, or any combination thereof. In some instances, the coding target comprises an exonic sequence. In other instances, the non-coding target comprises a non-exonic or exonic sequence. In some instances, the non-exonic sequence comprises an untranslated region (e.g., UTR), intronic region, intergenic region, antisense or any combination thereof. Alternatively, the plurality of targets comprises an anti-sense sequence. In other instances, the plurality of targets comprises a non-coding RNA transcript.

[0045] Further disclosed herein are methods for characterizing a patient population. Generally, the method comprises: (a) providing a sample from a subject; (b) assaying the expression level for a plurality of targets in the sample; and (c) characterizing the subject based on the expression level of the plurality of targets. In some instances, the plurality of targets comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises at least about 2, at least about 3, at least about 4, at least about 5, at least about 6, at least about 7, at least about 8, at least about 9, or at least about 10 targets selected from Table 2 or SEQ ID NOs:1-51. In other instances, the plurality of targets comprises at least about12, at least about 15, at least about 17, at least about 20, at least about 22, at least about 25, at least about 27, at least about 30, at least about 32, at least about 35, at least about 37,

or at least about 40 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 50 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 60 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 100 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 125 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 150 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 175 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 200 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 225 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 250 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 275 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 300 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 350 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 400 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 450 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 500 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 550 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 600 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 650 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 700 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 750 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 800 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ

ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID

NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some instances, the plurality of targets comprises a coding target, non-coding target, or any combination thereof. In some instances, the coding target comprises an exonic sequence. In other instances, the non-coding target comprises a non-exonic or exonic sequence. In some instances, the non-exonic sequence comprises an untranslated region (e.g., UTR), intronic region, antisense, intergenic region, or any combination thereof. Alternatively, the plurality of targets comprises an anti-sense sequence. In other instances, the plurality of targets comprises a non-coding RNA transcript.

[0046] In some instances, characterizing the subject comprises determining whether the subject would respond to an anti-cancer therapy. Alternatively, characterizing the subject comprises identifying the subject as a non-responder to an anti-cancer therapy. Optionally, characterizing the subject comprises identifying the subject as a responder to an anti-cancer therapy.

[0047] Before the present invention is described in further detail, it is to be understood that this invention is not limited to the particular methodology, compositions, articles or machines described, as such methods, compositions, articles or machines can, of course, vary. It is also to be understood that the terminology used herein is for the purpose of describing particular embodiments only, and is not intended to limit the scope of the present invention.

Definitions

[0048] Unless defined otherwise or the context clearly dictates otherwise, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. In describing the present invention, the following terms may be employed, and are intended to be defined as indicated below.

[0049] The term "polynucleotide" as used herein refers to a polymer of greater than one nucleotide in length of ribonucleic acid (RNA), deoxyribonucleic acid (DNA), hybrid RNA/DNA, modified RNA or DNA, or RNA or DNA mimetics, including peptide nucleic acids (PNAs). The polynucleotides may be single- or double-stranded. The term includes polynucleotides composed of naturally-occurring nucleobases, sugars and covalent internucleoside (backbone) linkages as well as polynucleotides having non-naturally-occurring portions which function similarly. Such modified or substituted polynucleotides are well known in the art and for the purposes of the present invention, are referred to as "analogues."

[0050] "Complementary" or "substantially complementary" refers to the ability to hybridize or base pair between nucleotides or nucleic acids, such as, for instance, between a sensor peptide nucleic acid or polynucleotide and a target polynucleotide. Complementary nucleotides are, generally, A and T (or A and U), or C and G. Two single-stranded polynucleotides or PNAs are said to be substantially complementary when the bases of one strand, optimally aligned and compared and with appropriate insertions or deletions, pair with at least about 80% of the bases of the other strand, usually at least about 90% to 95%, and more preferably from about 98 to 100%.

[0051] Alternatively, substantial complementarity exists when a polynucleotide may hybridize under selective hybridization conditions to its complement. Typically, selective hybridization may occur when there is at least about 65% complementarity over a stretch of at least 14 to 25 bases, for example at least about 75%, or at least about 90% complementarity.

[0052] "Preferential binding" or "preferential hybridization" refers to the increased propensity of one polynucleotide to bind to its complement in a sample as compared to a noncomplementary polymer in the sample.

[0053] Hybridization conditions may typically include salt concentrations of less than about 1M, more usually less than about 500 mM, for example less than about 200 mM. In the case of hybridization between a peptide nucleic acid and a polynucleotide, the hybridization can be done in solutions containing little or no salt. Hybridization temperatures can be as low as 5° C, but are typically greater than 22° C, and more typically greater than about 30° C, for example in excess of about 37° C. Longer fragments may require higher hybridization temperatures for specific hybridization as is known in the art. Other factors may affect the stringency of hybridization, including base composition and length of the complementary strands, presence of organic solvents and extent of base mismatching, and the combination of parameters used is more important than the absolute measure of any one alone. Other hybridization conditions which

may be controlled include buffer type and concentration, solution pH, presence and concentration of blocking reagents to decrease background binding such as repeat sequences or blocking protein solutions, detergent type(s) and concentrations, molecules such as polymers which increase the relative concentration of the polynucleotides, metal ion(s) and their concentration(s), chelator(s) and their concentrations, and other conditions known in the art.

[0054] "Multiplexing" herein refers to an assay or other analytical method in which multiple analytes are assayed. In some instances, the multiple analytes are from the same sample. In some instances, the multiple analytes are assayed simultaneously. Alternatively, the multiple analytes are assayed sequentially. In some instances, assaying the multiple analytes occurs in the same reaction volume. Alternatively, assaying the multiple analytes occurs in separate or multiple reaction volumes.

[0055] A "target sequence" as used herein (also occasionally referred to as a "PSR" or "probe selection region") refers to a region of the genome against which one or more probes can be designed. A "target sequence" may be a coding target or a non-coding target. A "target sequence" may comprise exonic and/or non-exonic sequences. Alternatively, a "target sequence" may comprise an ultraconserved region. An ultraconserved region is generally a sequence that is at least 200 base pairs and is conserved across multiple species. An ultraconserved region may be exonic or non-exonic. Exonic sequences may comprise regions on a protein-coding gene, such as an exon, UTR, or a portion thereof. Non-exonic sequences may comprise regions on a protein-coding, non protein-coding gene, or a portion thereof. For example, non-exonic sequences may comprise intronic regions, promoter regions, intergenic regions, a non-coding transcript, an exon anti-sense region, an intronic anti-sense region, UTR anti-sense region, non-coding transcript anti-sense region, or a portion thereof. The term "target sequence" is used interchangeably with the terms "target", "marker", and "biomarker" throughout the specification.

[0056] As used herein, a probe is any polynucleotide capable of selectively hybridizing to a target sequence or its complement, or to an RNA version of either. A probe may comprise ribonucleotides, deoxyribonucleotides, peptide nucleic acids, and combinations thereof. A probe may optionally comprise one or more labels. In some embodiments, a probe may be used to amplify one or both strands of a target sequence or an RNA form thereof, acting as a sole primer in an amplification reaction or as a member of a set of primers.

[0057] As used herein, a non-coding target may comprise a nucleotide sequence. The nucleotide sequence is a DNA or RNA sequence. A non-coding target may include a UTR sequence, an intronic sequence, antisense, or a non-coding RNA transcript. A non-coding target also includes sequences which partially overlap with a UTR sequence or an intronic sequence. A non-coding target also includes non-exonic or exonic transcripts.

[0058] As used herein, a coding target includes nucleotide sequences that encode for a protein and peptide sequences. The nucleotide sequence is a DNA or RNA sequence. The coding target includes protein-coding sequence. Protein-coding sequences include exon-coding sequences (e.g., exonic sequences).

[0059] As used herein, diagnosis of cancer may include the identification of cancer in a subject, determining the malignancy of the cancer, or determining the stage of the cancer.

[0060] As used herein, prognosis of cancer may include predicting the clinical outcome of the patient, assessing the risk of systemic cancer, determining treatment modality, or determining treatment efficacy.

[0061] "Having" is an open-ended phrase like "comprising" and "including," and includes circumstances where additional elements are included and circumstances where they are not.

[0062] "Optional" or "optionally" means that the subsequently described event or circumstance may or may not occur, and that the description includes instances where the event or circumstance occurs and instances in which it does not.

[0063] As used herein 'NED' describes a clinically distinct disease state in which patients show no evidence of disease (NED') at least 5 years after surgery, 'PSA' describes a clinically distinct disease state in which patients show biochemical relapse only (two successive increases in prostate-specific antigen levels but no other symptoms of disease with at least 5 years follow up after surgery; 'PSA') and 'SYS' describes a clinically distinct disease state in which patients develop biochemical relapse and present with systemic cancer disease or metastases ('SYS') within five years after the initial treatment with radical prostatectomy.

[0064] The terms "METS", "SYS", "systemic event", "Systemic progression", "CR" or "Clinical Recurrence" may be used interchangeably and generally refer to patients that experience BCR (biochemical reccurrence) and that develop metastases (confirmed by bone or CT scan). The patients may experience BCR within 5 years of RP (radical prostatectomy). The patients may develop metastases within 5 years of BCR. In some cases, patients regarded as METS may experience BCR after 5 years of RP. In other cases, patients may exhibit cancer recurrence after radical cystectomy (e.g., bladder cancer recurrence). A further preferred surgery is cystectomy, in particular radical or partial cystectomy. The term "cystectomy" refers to removal of all (radical cystectomy) or part (partial cystectomy) of the urinary bladder. This kind of surgery is usually carried out in invasive bladder cancer, and in particular, muscle invasive bladder cancer.

[0065] As used herein, the term "about" refers to approximately a +/-10% variation from a given value. It is to be understood that such a variation is always included in any given value provided herein, whether or not it is specifically referred to.

[0066] Use of the singular forms "a," "an," and "the" include plural references unless the context clearly dictates otherwise. Thus, for example, reference to "a polynucleotide" includes a plurality of polynucleotides, reference to "a target" includes a plurality of such targets, reference to "a normalization method" includes a plurality of such methods, and the like. Additionally, use of specific plural references, such as "two," "three," etc., read on larger numbers of the same subject, unless the context clearly dictates otherwise.

[0067] Terms such as "connected," "attached," "linked" and "conjugated" are used interchangeably herein and encompass direct as well as indirect connection, attachment, linkage or conjugation unless the context clearly dictates otherwise.

[0068] Where a range of values is recited, it is to be understood that each intervening integer value, and each fraction thereof, between the recited upper and lower limits of that range is also specifically disclosed, along with each subrange between such values. The upper and lower limits of any range can independently be included in or excluded from the range, and each range where either, neither or both limits are included is also encompassed within the invention. Where a value being discussed has inherent limits, for example where a component can be present at a concentration of from 0 to 100%, or where the pH of an aqueous solution can range from 1 to 14, those inherent limits are specifically disclosed. Where a value is explicitly recited, it is to be understood that values, which are about the same quantity or amount as the recited value, are also within the scope of the invention, as are ranges based thereon. Where a combination is disclosed, each sub-combination of the elements of that combination is also specifically disclosed and is within the scope of the invention. Conversely, where different elements or groups of elements are disclosed, combinations thereof are also disclosed. Where any element of an invention is disclosed as having a plurality of alternatives, examples of that invention in which each alternative is excluded singly or in any combination with the other alternatives are also hereby disclosed; more than one element of an invention can have such exclusions, and all combinations of elements having such exclusions are hereby disclosed.

Coding and Non-coding Targets

[0069] The methods disclosed herein often comprise assaying the expression level of a plurality of targets. The plurality of targets may comprise coding targets and/or non-coding targets of a protein-coding gene or a non protein-coding gene. A protein-coding gene structure may comprise an exon and an intron. The exon may further comprise a coding sequence (CDS) and an untranslated region (UTR). The protein-coding gene may be transcribed to produce a pre-mRNA and the pre-mRNA may be processed to produce a mature mRNA. The mature mRNA may be translated to produce a protein.

[0070] A non protein-coding gene structure may comprise an exon and intron. Usually, the exon region of a non protein-coding gene primarily contains a UTR. The non protein-coding gene may be transcribed to produce a pre-mRNA and the pre-mRNA may be processed to produce a non-coding RNA (ncRNA).

[0071] A coding target may comprise a coding sequence of an exon. A non-coding target may comprise a UTR sequence of an exon, intron sequence, intergenic sequence, promoter sequence, non-coding transcript, CDS antisense, intronic antisense, UTR antisense, or non-coding transcript antisense. A non-coding transcript may comprise a non-coding RNA (ncRNA).

[0072] In some instances, the plurality of targets may be differentially expressed. In some instances, a plurality of probe selection regions (PSRs) is differentially expressed.

[0073] In some instances, the plurality of targets comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises at least about 2, at least about 3, at least about 4, at least about 5, at least about 6, at least about 7, at least about 8, at least about 9, or at least about 10 targets selected from Table 2 or SEQ ID NOs:1-51. In other instances, the plurality of targets comprises at least about12, at least about 15, at least about 17, at least about 20, at least about 22, at least about 25, at least about 27, at least about 30, at least about 32, at least about 35, at least about 37, or at least about 40 targets selected from Table 2 or SEQ ID NOs:1-51. The plurality of targets may comprise about 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100 or more targets selected from Table 2 or SEQ ID NOs:1-51. The plurality of targets may comprise about 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475, 500 or more targets selected from Table 2 or SEQ ID NOs:1-51. The plurality of targets may comprise about 500, 525, 550, 575, 600, 625, 650, 675, 700, 725, 750, 775, 800, 810, 820, 830, 840, 850 or more targets selected from Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID

NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6,

SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some instances, the plurality of targets may comprise SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some instances, the plurality of targets comprises a coding target, non-coding target, or any combination thereof. In some instances, the coding target comprises an exonic sequence. In other instances, the non-coding target comprises a non-exonic or exonic sequence. Alternatively, a non-coding target comprises a UTR sequence, an intronic sequence, antisense, or a non-coding RNA transcript. In some instances, a non-coding target comprises sequences which partially overlap with a UTR sequence or an intronic sequence. A non-coding target also includes non-exonic and/or exonic transcripts. Exonic sequences may comprise regions on a protein-coding gene, such as an exon, UTR, or a portion thereof. Non-exonic sequences may comprise regions on a protein-coding, non protein-coding gene, or a portion thereof. For example, non-exonic sequences may comprise intronic regions, promoter regions, intergenic regions, a non-coding transcript, an exon anti-sense region, an intronic anti-sense region, UTR anti-sense region, non-coding transcript anti-sense region, or a portion thereof. In other instances, the plurality of targets comprises a non-coding RNA transcript.

[0074] In some instances, the plurality of targets is at least about 70% identical to a sequence selected from SEQ ID NOs 1-51. Alternatively, the plurality of targets is at least about 80% identical to a sequence selected from SEQ ID NOS 1-51. In some instances, the plurality of targets is at least about 85% identical to a sequence selected from SEQ ID NOS 1-51. In some instances, the plurality of targets is at least about 90% identical to a sequence selected from SEQ ID NOS 1-51. Alternatively, the plurality of targets is at least about 95% identical to a sequence selected from SEQ ID NOS 1-51.

[0075] The plurality of targets may comprise one or more targets selected from a classifier disclosed herein. The classifier may be generated from one or more models or algorithms. The one or more models or algorithms may be Naïve Bayes (NB), recursive Partitioning (Rpart), random forest (RF), support

vector machine (SVM), k-nearest neighbor (KNN), high dimensional discriminate analysis (HDDA), or a combination thereof. The classifier may have an AUC of equal to or greater than 0.60. The classifier may have an AUC of equal to or greater than 0.61. The classifier may have an AUC of equal to or greater than 0.62. The classifier may have an AUC of equal to or greater than 0.63. The classifier may have an AUC of equal to or greater than 0.64. The classifier may have an AUC of equal to or greater than 0.65. The classifier may have an AUC of equal to or greater than 0.66. The classifier may have an AUC of equal to or greater than 0.67. The classifier may have an AUC of equal to or greater than 0.68. The classifier may have an AUC of equal to or greater than 0.69. The classifier may have an AUC of equal to or greater than 0.70. The classifier may have an AUC of equal to or greater than 0.75. The classifier may have an AUC of equal to or greater than 0.77. The classifier may have an AUC of equal to or greater than 0.78. The classifier may have an AUC of equal to or greater than 0.79. The classifier may have an AUC of equal to or greater than 0.80. The AUC may be clinically significant based on its 95% confidence interval (CI). The accuracy of the classifier may be at least about 70%. The accuracy of the classifier may be at least about 73%. The accuracy of the classifier may be at least about 75%. The accuracy of the classifier may be at least about 77%. The accuracy of the classifier may be at least about 80%. The accuracy of the classifier may be at least about 83%. The accuracy of the classifier may be at least about 84%. The accuracy of the classifier may be at least about 86%. The accuracy of the classifier may be at least about 88%. The accuracy of the classifier may be at least about 90%. The p-value of the classifier may be less than or equal to 0.05. The p-value of the classifier may be less than or equal to 0.04. The p-value of the classifier may be less than or equal to 0.03. The p-value of the classifier may be less than or equal to 0.02. The p-value of the classifier may be less than or equal to 0.01. The p-value of the classifier may be less than or equal to 0.008. The p-value of the classifier may be less than or equal to 0.006. The p-value of the classifier may be less than or equal to 0.004. The p-value of the classifier may be less than or equal to 0.002. The p-value of the classifier may be less than or equal to 0.001.

[0076] The plurality of targets may comprise one or more targets selected from a Random Forest (RF) classifier. The plurality of targets may comprise two or more targets selected from a Random Forest (RF) classifier. The plurality of targets may comprise three or more targets selected from a Random Forest (RF) classifier. The plurality of targets may comprise 2, 3, 4, 5, 6, 7, 8, 9, 10,11, 12, 13, 14, 15 or more targets selected from a Random Forest (RF) classifier. The RF classifier may be an RF2, and RF3, or an RF4 classifier. The RF classifier may be an RF15 classifier (e.g., a Random Forest classifier with 15 targets).

[0077] In some instances, the plurality of targets is at least about 70% identical to a sequence selected from a target selected from a RF classifier. Alternatively, the plurality of targets is at least about 80% identical to a sequence selected from a target selected from a RF classifier. In some instances, the

plurality of targets is at least about 85% identical to a sequence selected from a target selected from a RF classifier. In some instances, the plurality of targets is at least about 90% identical to a sequence selected from a target selected from a RF classifier. Alternatively, the plurality of targets is at least about 95% identical to a sequence selected from a target selected from a RF classifier. The RF classifier may be an RF2 classifier. The RF classifier may be an RF15 classifier.

[0078] The RF15 classifier may comprise SEQ ID NO. 1, SEQ ID NO. 2, SEQ ID NO. 3, SEQ ID NO. 4, SEQ ID NO. 5, SEQ ID NO. 6, SEQ ID NO. 7, SEQ ID NO. 8, SEQ ID NO. 9, SEQ ID NO. 10, SEQ ID NO. 11, SEQ ID NO. 12, SEQ ID NO. 13, SEQ ID NO. 14, SEQ ID NO. 15, or a combination thereof. In some instances, the RF2 classifier is selected from Table 11, Table 12, Table 13, Table 14, Table 15, or Table 20. A RF classifier of the present invention may comprise two or more targets comprising two or more targets selected from Table 2 or SEQ ID NOs:1-51.

[0079] The plurality of targets may comprise one or more targets selected from an SVM classifier. The plurality of targets may comprise 2, 3, 4, 5, 6, 7, 8, 9, 10 or more targets selected from an SVM classifier. The plurality of targets may comprise 12, 13, 14, 15, 17, 20, 22, 25, 27, 30 or more targets selected from an SVM classifier. The plurality of targets may comprise 32, 35, 37, 40, 43, 45, 47, 50, 53, 55, 57, 60 or more targets selected from an SVM classifier. The SVM classifier may be an SVM2 classifier.

[0080] In some instances, the plurality of targets is at least about 70% identical to a sequence selected from a target selected from a SVM classifier. Alternatively, the plurality of targets is at least about 80% identical to a sequence selected from a target selected from a SVM classifier. In some instances, the plurality of targets is at least about 85% identical to a sequence selected from a target selected from a SVM classifier. In some instances, the plurality of targets is at least about 90% identical to a sequence selected from a target selected from a SVM classifier. Alternatively, the plurality of targets is at least about 95% identical to a sequence selected from a target selected from a SVM classifier. The SVM classifier may be an SVM2 classifier. In some instances, the SVM2 classifier is selected from Table 11, Table 12, Table 13, Table 14, Table 15, or Table 20. A SVM classifier of the present invention may comprise two or more targets comprising two or more targets selected from Table 2 or SEQ ID NOs:1-51.

[0081] The plurality of targets may comprise one or more targets selected from a KNN classifier. The plurality of targets may comprise 2, 3, 4, 5, 6, 7, 8, 9, 10 or more targets selected from a KNN classifier. The plurality of targets may comprise 12, 13, 14, 15, 17, 20, 22, 25, 27, 30 or more targets selected from a KNN classifier. The plurality of targets may comprise 32, 35, 37, 40, 43, 45, 47, 50, 53, 55, 57, 60 or more targets selected from a KNN classifier. The plurality of targets may comprise 65, 70, 75, 80, 85, 90, 95, 100 or more targets selected from a KNN classifier. The plurality of targets may comprise 125, 150, 175, 200, 225, 250, 275, 300, 325, 350, 375, 390 or more targets selected from a KNN classifier. The KNN classifier may be a KNN2 classifier.

[0082] In some instances, the plurality of targets is at least about 70% identical to a sequence selected from a target selected from a KNN classifier. Alternatively, the plurality of targets is at least about 80% identical to a sequence selected from a target selected from a KNN classifier. In some instances, the plurality of targets is at least about 85% identical to a sequence selected from a target selected from a KNN classifier. In some instances, the plurality of targets is at least about 90% identical to a sequence selected from a target selected from a KNN classifier. Alternatively, the plurality of targets is at least about 95% identical to a sequence selected from a target selected from a KNN classifier. The KNN classifier may be a KNN2 classifier. In some instances, the KNN2 classifier is selected from Table 11, Table 12, Table 13, Table 14, Table 15, or Table 20. A KNN classifier of the present invention may comprise two or more targets comprising two or more targets selected from Table 2 or SEQ ID NOs:1-51.

[0083] The plurality of targets may comprise one or more targets selected from a Naïve Bayes (NB) classifier. The plurality of targets may comprise 2, 3, 4, 5, 6, 7, 8, 9, 10 or more targets selected from an NB classifier. The plurality of targets may comprise 12, 13, 14, 15, 17, 20, 22, 25, 27, 30 or more targets selected from an NB classifier. The plurality of targets may comprise 32, 35, 37, 40, 43, 45, 47, 50, 53, 55, 57, 60 or more targets selected from a NB classifier. The plurality of targets may comprise 65, 70, 75, 80, 85, 90, 95, 100 or more targets selected from a NB classifier. The plurality of targets may comprise 125, 150, 175, 200, 225, 250, 275, 300, 325, 350, 375, 390 or more targets selected from a NB classifier. The NB classifier may be a NB2 classifier.

[0084] In some instances, the plurality of targets is at least about 70% identical to a sequence selected from a target selected from a NB classifier. Alternatively, the plurality of targets is at least about 80% identical to a sequence selected from a target selected from a NB classifier. In some instances, the plurality of targets is at least about 85% identical to a sequence selected from a target selected from a NB classifier. In some instances, the plurality of targets is at least about 90% identical to a sequence selected from a target selected from a NB classifier. Alternatively, the plurality of targets is at least about 95% identical to a sequence selected from a target selected from a NB classifier. The NB classifier may be a NB2 classifier. In some instances, the NB2 classifier is selected from Table 11, Table 12, Table 13, Table 15, or Table 20. An NB classifier of the present invention may comprise two or more targets comprising two or more targets selected from Table 2 or SEQ ID NOs:1-51.

[0085] The plurality of targets may comprise one or more targets selected from a recursive Partitioning (Rpart) classifier. The plurality of targets may comprise 2, 3, 4, 5, 6, 7, 8, 9, 10 or more targets selected from an Rpart classifier. The plurality of targets may comprise 12, 13, 14, 15, 17, 20, 22, 25, 27, 30 or more targets selected from an Rpart classifier. The plurality of targets may comprise 32, 35, 37, 40, 43, 45, 47, 50, 53, 55, 57, 60 or more targets selected from an Rpart classifier. The plurality of targets may comprise 65, 70, 75, 80, 85, 90, 95, 100 or more targets selected from an Rpart classifier. The plurality of

targets may comprise 125, 150, 175, 200, 225, 250, 275, 300, 325, 350, 375, 390 or more targets selected from an Rpart classifier. The Rpart classifier may be an Rpart2 classifier.

[0086] In some instances, the plurality of targets is at least about 70% identical to a sequence selected from a target selected from an Rpart classifier. Alternatively, the plurality of targets is at least about 80% identical to a sequence selected from a target selected from an Rpart classifier. In some instances, the plurality of targets is at least about 85% identical to a sequence selected from a target selected from an Rpart classifier. In some instances, the plurality of targets is at least about 90% identical to a sequence selected from a target selected from an Rpart classifier. Alternatively, the plurality of targets is at least about 95% identical to a sequence selected from a target selected from an Rpart classifier. The Rpart classifier may be an Rpart2 classifier. In some instances, the Rpart2 classifier is selected from Table 11, Table 12, Table 13, Table 14, Table 15, or Table 20. An Rpart classifier of the present invention may comprise two or more targets comprising two or more targets selected from Table 2 or SEQ ID NOs:1-51.

[0087] The plurality of targets may comprise one or more targets selected from a high dimensional discriminate analysis (HDDA) classifier. The plurality of targets may comprise two or more targets selected from a high dimensional discriminate analysis (HDDA) classifier. The plurality of targets may comprise three or more targets selected from a high dimensional discriminate analysis (HDDA) classifier. The plurality of targets may comprise 5, 6, 7, 8, 9, 10,11 ,12, 13, 14, 15 or more targets selected from a high dimensional discriminate analysis (HDDA) classifier.

[0088] In some instances, the plurality of targets is at least about 70% identical to a sequence selected from a target selected from a HDDA classifier. Alternatively, the plurality of targets is at least about 80% identical to a sequence selected from a target selected from a HDDA classifier. In some instances, the plurality of targets is at least about 85% identical to a sequence selected from a target selected from a HDDA classifier. In some instances, the plurality of targets is at least about 90% identical to a sequence selected from a target selected from a HDDA classifier. Alternatively, the plurality of targets is at least about 95% identical to a sequence selected from a target selected from a HDDA classifier.

Probes/Primers

[0089] The present invention provides for a probe set for diagnosing, monitoring and/or predicting a status or outcome of a cancer in a subject comprising a plurality of probes, wherein (i) the probes in the set are capable of detecting an expression level of at least one non-coding target; and (ii) the expression level determines the cancer status of the subject with at least about 40% specificity.

[0090] The probe set may comprise one or more polynucleotide probes. Individual polynucleotide probes comprise a nucleotide sequence derived from the nucleotide sequence of the target sequences or complementary sequences thereof. The nucleotide sequence of the polynucleotide probe is designed such

that it corresponds to, or is complementary to the target sequences. The polynucleotide probe can specifically hybridize under either stringent or lowered stringency hybridization conditions to a region of the target sequences, to the complement thereof, or to a nucleic acid sequence (such as a cDNA) derived therefrom.

[0091] The selection of the polynucleotide probe sequences and determination of their uniqueness may be carried out *in silico* using techniques known in the art, for example, based on a BLASTN search of the polynucleotide sequence in question against gene sequence databases, such as the Human Genome Sequence, UniGene, dbEST or the non-redundant database at NCBI. In one embodiment of the invention, the polynucleotide probe is complementary to a region of a target mRNA derived from a target sequence in the probe set. Computer programs can also be employed to select probe sequences that may not cross hybridize or may not hybridize non-specifically.

[0092] In some instances, microarray hybridization of RNA, extracted from bladder cancer tissue samples and amplified, may yield a dataset that is then summarized and normalized by the fRMA technique. After removal (or filtration) of cross-hybridizing PSRs, and PSRs containing less than 4 probes, the remaining PSRs can be used in further analysis. Following fRMA and filtration, the data can be decomposed into its principal components and an analysis of variance model is used to determine the extent to which a batch effect remains present in the first 10 principal components.

[0093] These remaining PSRs can then be subjected to filtration by a T-test between LN-positive (lympnode metastasis) and LN-negative samples. Using a p-value cut-off of 0.01, the remaining features (e.g., PSRs) can be further refined. Feature selection can be performed by regularized logistic regression using the elastic-net penalty. The regularized regression may be bootstrapped over 1000 times using all training data; with each iteration of bootstrapping, features that have non-zero co-efficient following 3-fold cross validation can be tabulated. In some instances, features that were selected in at least 25% of the total runs were used for model building.

[0094] One skilled in the art understands that the nucleotide sequence of the polynucleotide probe need not be identical to its target sequence in order to specifically hybridize thereto. The polynucleotide probes of the present invention, therefore, comprise a nucleotide sequence that is at least about 65% identical to a region of the coding target or non-coding target selected from Table 2 or SEQ ID NOs:1-51. In another embodiment, the nucleotide sequence of the polynucleotide probe is at least about 70% identical a region of the coding target or non-coding target from Table 2 or SEQ ID NOs:1-51. In another embodiment, the nucleotide sequence of the polynucleotide probe is at least about 75% identical a region of the coding target or non-coding target from Table 2 or SEQ ID NOs:1-51. In another embodiment, the nucleotide sequence of the polynucleotide probe is at least about 80% identical a region of the coding target or non-coding target from Table 2 or SEQ ID NOs:1-51. In another embodiment, the nucleotide sequence of the

polynucleotide probe is at least about 85% identical a region of the coding target or non-coding target from Table 2 or SEQ ID NOs:1-51. In another embodiment, the nucleotide sequence of the polynucleotide probe is at least about 90% identical a region of the coding target or non-coding target from Table 2 or SEQ ID NOs:1-51. In a further embodiment, the nucleotide sequence of the polynucleotide probe is at least about 95% identical to a region of the coding target or non-coding target from Table 2 or SEQ ID NOs:1-51.

[0095] Methods of determining sequence identity are known in the art and can be determined, for example, by using the BLASTN program of the University of Wisconsin Computer Group (GCG) software or provided on the NCBI website. The nucleotide sequence of the polynucleotide probes of the present invention may exhibit variability by differing *(e.g.* by nucleotide substitution, including transition or transversion) at one, two, three, four or more nucleotides from the sequence of the coding target or non-coding target.

[0096] Other criteria known in the art may be employed in the design of the polynucleotide probes of the present invention. For example, the probes can be designed to have <50% G content. The probes can be designed to have between about 25% and about 70% G+C content. Strategies to optimize probe hybridization to the target nucleic acid sequence can also be included in the process of probe selection.

[0097] Hybridization under particular pH, salt, and temperature conditions can be optimized by taking into account melting temperatures and by using empirical rules that correlate with desired hybridization behaviors. Computer models may be used for predicting the intensity and concentration-dependence of probe hybridization.

[0098] The polynucleotide probes of the present invention may range in length from about 15 nucleotides to the full length of the coding target or non-coding target. In one embodiment of the invention, the polynucleotide probes are at least about 15 nucleotides in length. In another embodiment, the polynucleotide probes are at least about 20 nucleotides in length. In a further embodiment, the polynucleotide probes are at least about 25 nucleotides in length. In another embodiment, the polynucleotide probes are between about 15 nucleotides and about 500 nucleotides in length. In other embodiments, the polynucleotide probes are between about 15 nucleotides and about 450 nucleotides, about 15 nucleotides and about 400 nucleotides, about 15 nucleotides and about 350 nucleotides, about 15 nucleotides and about 300 nucleotides, about 15 nucleotides and about 250 nucleotides, about 15 nucleotides and about 200 nucleotides in length. In some embodiments, the probes are at least 15 nucleotides in length. In some embodiments, the probes are at least 15 nucleotides in length. In some embodiments, the probes are at least 20 nucleotides, at least 25 nucleotides, at least 50 nucleotides, at least 75 nucleotides, at least 100 nucleotides, at least 125 nucleotides, at least 150 nucleotides, at least 200

nucleotides, at least 225 nucleotides, at least 250 nucleotides, at least 275 nucleotides, at least 300 nucleotides, at least 325 nucleotides, at least 350 nucleotides, at least 375 nucleotides in length.

[0099] The polynucleotide probes of a probe set can comprise RNA, DNA, RNA or DNA mimetics, or combinations thereof, and can be single-stranded or double-stranded. Thus the polynucleotide probes can be composed of naturally-occurring nucleobases, sugars and covalent internucleoside (backbone) linkages as well as polynucleotide probes having non-naturally-occurring portions which function similarly. Such modified or substituted polynucleotide probes may provide desirable properties such as, for example, enhanced affinity for a target gene and increased stability. The probe set may comprise a coding target and/or a non-coding target. Preferably, the probe set comprises a combination of a coding target and non-coding target.

[00100] In some embodiments, the probe set comprise a plurality of target sequences that hybridize to at least about 5 coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. Alternatively, the probe set comprise a plurality of target sequences that hybridize to at least about 10 coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to at least about 15 coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to at least about 20 coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to at least about 30 coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. The probe set can comprise a plurality of targets that hybridize to at least about 40, 50, 60, 70, 80, 90, 100 or more coding targetns and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. The probe set can comprise a plurality of targets that hybridize to at least about 100, 125, 150, 175, 200, 225, 250, 275, 300 or more coding targetns and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. The probe set can comprise a plurality of targets that hybridize to at least about 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, 575, 600 or more coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. The probe set can comprise a plurality of targets that hybridize to at least about 600, 625, 650, 675, 700, 725, 750, 775, 800, 825, 850 or more coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51.

[00101] In some embodiments, the probe set comprises a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 20% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprises a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 25% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a

plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 30% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 35% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 40% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 45% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 50% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 60% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the probe set comprise a plurality of target sequences that hybridize to a plurality of targets, wherein the at least about 70% of the plurality of targets are targets selected from Table 2 or SEQ ID NOs:1-51.

[00102] The system of the present invention further provides for primers and primer pairs capable of amplifying target sequences defined by the probe set, or fragments or subsequences or complements thereof. The nucleotide sequences of the probe set may be provided in computer-readable media for *in silico* applications and as a basis for the design of appropriate primers for amplification of one or more target sequences of the probe set.

[00103] Primers based on the nucleotide sequences of target sequences can be designed for use in amplification of the target sequences. For use in amplification reactions such as PCR, a pair of primers can be used. The exact composition of the primer sequences is not critical to the invention, but for most applications the primers may hybridize to specific sequences of the probe set under stringent conditions, particularly under conditions of high stringency, as known in the art. The pairs of primers are usually chosen so as to generate an amplification product of at least about 50 nucleotides, more usually at least about 100 nucleotides. Algorithms for the selection of primer sequences are generally known, and are available in commercial software packages. These primers may be used in standard quantitative or qualitative PCR-based assays to assess transcript expression levels of RNAs defined by the probe set. Alternatively, these primers may be used in combination with probes, such as molecular beacons in amplifications using real-time PCR.

[00104] In one embodiment, the primers or primer pairs, when used in an amplification reaction, specifically amplify at least a portion of a nucleic acid sequence of a target selected from Table 2 or SEQ

ID NOs:1-51 (or subgroups thereof as set forth herein), an RNA form thereof, or a complement to either thereof.

[00105] As is known in the art, a nucleoside is a base-sugar combination and a nucleotide is a nucleoside that further includes a phosphate group covalently linked to the sugar portion of the nucleoside. In forming oligonucleotides, the phosphate groups covalently link adjacent nucleosides to one another to form a linear polymeric compound, with the normal linkage or backbone of RNA and DNA being a 3' to 5' phosphodiester linkage. Specific examples of polynucleotide probes or primers useful in this invention include oligonucleotides containing modified backbones or non-natural internucleoside linkages. As defined in this specification, oligonucleotides having modified backbones include both those that retain a phosphorus atom in the backbone and those that lack a phosphorus atom in the backbone. For the purposes of the present invention, and as sometimes referenced in the art, modified oligonucleotides that do not have a phosphorus atom in their internucleoside backbone can also be considered to be oligonucleotides.

[00106] Exemplary polynucleotide probes or primers having modified oligonucleotide backbones include, for example, those with one or more modified internucleotide linkages that are phosphorothioates, chiral phosphorothioates, phosphorodithioates, phosphotriesters, aminoalkylphosphotriesters, methyl and other alkyl phosphonates including 3'-alkylene phosphonates and chiral phosphonates, phosphinates, phosphoramidates including 3'amino phosphoramidate and aminoalkylphosphoramidates, thionophosphoramidates, thionoalkylphosphonates, thionoalkylphosphotriesters, and boranophosphates having normal 3'-5' linkages, 2'-5' linked analogs of these, and those having inverted polarity wherein the adjacent pairs of nucleoside units are linked 3'-5' to 5'-3' or 2'-5' to 5'-2'. Various salts, mixed salts and free acid forms are also included.

[00107] Exemplary modified oligonucleotide backbones that do not include a phosphorus atom are formed by short chain alkyl or cycloalkyl internucleoside linkages, mixed heteroatom and alkyl or cycloalkyl internucleoside linkages, or one or more short chain heteroatomic or heterocyclic internucleoside linkages. Such backbones include morpholino linkages (formed in part from the sugar portion of a nucleoside); siloxane backbones; sulfide, sulfoxide and sulphone backbones; formacetyl and thioformacetyl backbones; methylene formacetyl and thioformacetyl backbones; alkene containing backbones; sulphamate backbones; methyleneimino and methylenehydrazino backbones; sulphonate and sulfonamide backbones; amide backbones; and others having mixed N, 0, S and CH_2 component parts.

[00108] The present invention also contemplates oligonucleotide mimetics in which both the sugar and the internucleoside linkage of the nucleotide units are replaced with novel groups. The base units are maintained for hybridization with an appropriate nucleic acid target compound. An example of such an oligonucleotide mimetic, which has been shown to have excellent hybridization properties, is a peptide

nucleic acid (PNA). In PNA compounds, the sugar-backbone of an oligonucleotide is replaced with an amide containing backbone, in particular an aminoethylglycine backbone. The nucleobases are retained and are bound directly or indirectly to aza-nitrogen atoms of the amide portion of the backbone.

[00109] The present invention also contemplates polynucleotide probes or primers comprising "locked nucleic acids" (LNAs), which may be novel conformationally restricted oligonucleotide analogues containing a methylene bridge that connects the 2'-O of ribose with the 4'-C. LNA and LNA analogues may display very high duplex thermal stabilities with complementary DNA and RNA, stability towards 3'-exonuclease degradation, and good solubility properties. Synthesis of the LNA analogues of adenine, cytosine, guanine, 5-methylcytosine, thymine and uracil, their oligomerization, and nucleic acid recognition properties have been described. Studies of mismatched sequences show that LNA obey the Watson-Crick base pairing rules with generally improved selectivity compared to the corresponding unmodified reference strands.

[00110] LNAs may form duplexes with complementary DNA or RNA or with complementary LNA, with high thermal affinities. The universality of LNA-mediated hybridization has been emphasized by the formation of exceedingly stable LNA:LNA duplexes. LNA:LNA hybridization was shown to be the most thermally stable nucleic acid type duplex system, and the RNA-mimicking character of LNA was established at the duplex level. Introduction of three LNA monomers (T or A) resulted in significantly increased melting points toward DNA complements.

[00111] Synthesis of 2'-amino-LNA and 2'-methylamino-LNA has been described and thermal stability of their duplexes with complementary RNA and DNA strands reported. Preparation of phosphorothioate-LNA and 2'-thio-LNA have also been described.

[00112] Modified polynucleotide probes or primers may also contain one or more substituted sugar moieties. For example, oligonucleotides may comprise sugars with one of the following substituents at the 2' position: OH; F; O-, S-, or N-alkyl; O-, S-, or N-alkenyl; 0-, S- or N-alkynyl; or O-alkyl-O-alkyl, wherein the alkyl, alkenyl and alkynyl may be substituted or unsubstituted C_1 to C_{10} alkyl or C2 to C_{10} alkenyl and alkynyl. Examples of such groups are:$O[(CH_2)_n O]_m CH_3$, $O(CH_2)_n OCH_3$, $O(CH_2)_n NH_2$, $O(CH_2)_n CH_3 ONH_2$, and $O(CH_2)_n ON[((CH_2)_n CH_3)]_2$, where n and m are from 1 to about 10. Alternatively, the oligonucleotides may comprise one of the following substituents at the 2' position: C_1 to C_{10} lower alkyl, substituted lower alkyl, alkaryl, aralkyl, O-alkaryl or O-aralkyl, SH, SCH_3, OCN, Cl, Br, CN, CF_3, OCF_3, $SOCH_3$, $SO_2 CH_3$, ONO_2, NO_2, N_3, NH_2, heterocycloalkyl, heterocycloalkaryl, aminoalkylamino, polyalkylamino, substituted silyl, an RNA cleaving group, a reporter group, an intercalator, a group for improving the pharmacokinetic properties of an oligonucleotide, or a group for improving the pharmacodynamic properties of an oligonucleotide, and other substituents having similar properties. Specific examples include 2'-methoxyethoxy (2'-O--$CH_2 CH_2 OCH_3$, also known as 2'-O-(2-

methoxyethyl) or 2'-MOE), 2'-dimethylaminooxyethoxy (O(CH2)2 $ON(CH_3)_2$ group, also known as 2'-DMA0E), 2'-methoxy (2'-O--CH_3), 2'-aminopropoxy (2'-OCH_2 CH_2 CH_2 NH_2) and 2'-fluoro (2'-F).

[00113] Similar modifications may also be made at other positions on the polynucleotide probes or primers, particularly the 3' position of the sugar on the 3' terminal nucleotide or in 2'-5' linked oligonucleotides and the 5' position of 5' terminal nucleotide. Polynucleotide probes or primers may also have sugar mimetics such as cyclobutyl moieties in place of the pentofuranosyl sugar.

[00114] Polynucleotide probes or primers may also include modifications or substitutions to the nucleobase. As used herein, "unmodified" or "natural" nucleobases include the purine bases adenine (A) and guanine (G), and the pyrimidine bases thymine (T), cytosine (C) and uracil (U).

[00115] Modified nucleobases include other synthetic and natural nucleobases such as 5-methylcytosine (5-me-C), 5- hydroxymethyl cytosine, xanthine, hypoxanthine, 2-aminoadenine, 6-methyl and other alkyl derivatives of adenine and guanine, 2-propyl and other alkyl derivatives of adenine and guanine, 2-thiouracil, 2-thiothymine and 2-thiocytosine, 5-halouracil and cytosine, 5- propynyl uracil and cytosine, 6-azo uracil, cytosine and thymine, 5-uracil (pseudouracil), 4-thiouracil, 8-halo, 8-amino, 8-thiol, 8-thioalkyl, 8-hydroxyl and other 8-substituted adenines and guanines, 5-halo particularly 5-bromo, 5-trifluoromethyl and other 5-substituted uracils and cytosines, 7-methylguanine and 7-methyladenine, 8-azaguanine and 8-azaadenine, 7- deazaguanine and 7-deazaadenine and 3-deazaguanine and 3-deazaadenine. Further nucleobases include those disclosed in U.S. Pat. No. 3,687,808; The Concise Encyclopedia Of Polymer Science And Engineering, (1990) pp 858-859, Kroschwitz, J. I., ed. John Wiley & Sons; Englisch *et al., Angewandte Chemie, Int. Ed.,* 30:613 (1991); and Sanghvi, Y. S., (1993) *Antisense Research and Applications,* pp 289-302, Crooke, S. T. and Lebleu, B., ed., CRC Press. Certain of these nucleobases are particularly useful for increasing the binding affinity of the polynucleotide probes of the invention. These include 5-substituted pyrimidines, 6-azapyrimidines and N-2, N-6 and O-6 substituted purines, including 2-aminopropyladenine, 5- propynyluracil and 5-propynylcytosine. 5-methylcytosine substitutions have been shown to increase nucleic acid duplex stability by 0.6-1.2°C.

[00116] One skilled in the art recognizes that it is not necessary for all positions in a given polynucleotide probe or primer to be uniformly modified. The present invention, therefore, contemplates the incorporation of more than one of the aforementioned modifications into a single polynucleotide probe or even at a single nucleoside within the probe or primer.

[00117] One skilled in the art also appreciates that the nucleotide sequence of the entire length of the polynucleotide probe or primer does not need to be derived from the target sequence. Thus, for example, the polynucleotide probe may comprise nucleotide sequences at the 5' and/or 3' termini that are not derived from the target sequences. Nucleotide sequences which are not derived from the nucleotide sequence of the target sequence may provide additional functionality to the polynucleotide probe. For

example, they may provide a restriction enzyme recognition sequence or a "tag" that facilitates detection, isolation, purification or immobilization onto a solid support. Alternatively, the additional nucleotides may provide a self-complementary sequence that allows the primer/probe to adopt a hairpin configuration. Such configurations are necessary for certain probes, for example, molecular beacon and Scorpion probes, which can be used in solution hybridization techniques.

[00118] The polynucleotide probes or primers can incorporate moieties useful in detection, isolation, purification, or immobilization, if desired. Such moieties are well-known in the art (see, for example, Ausubel *et al.,* (1997 & updates) *Current Protocols in Molecular Biology,* Wiley & Sons, New York) and are chosen such that the ability of the probe to hybridize with its target sequence is not affected.

[00119] Examples of suitable moieties are detectable labels, such as radioisotopes, fluorophores, chemiluminophores, enzymes, colloidal particles, and fluorescent microparticles, as well as antigens, antibodies, haptens, avidin/streptavidin, biotin, haptens, enzyme cofactors / substrates, enzymes, and the like.

[00120] A label can optionally be attached to or incorporated into a probe or primer polynucleotide to allow detection and/or quantitation of a target polynucleotide representing the target sequence of interest. The target polynucleotide may be the expressed target sequence RNA itself, a cDNA copy thereof, or an amplification product derived therefrom, and may be the positive or negative strand, so long as it can be specifically detected in the assay being used. Similarly, an antibody may be labeled.

[00121] In certain multiplex formats, labels used for detecting different targets may be distinguishable. The label can be attached directly (e.g., via covalent linkage) or indirectly, e.g., via a bridging molecule or series of molecules (e.g., a molecule or complex that can bind to an assay component, or via members of a binding pair that can be incorporated into assay components, e.g. biotin-avidin or streptavidin). Many labels are commercially available in activated forms which can readily be used for such conjugation (for example through amine acylation), or labels may be attached through known or determinable conjugation schemes, many of which are known in the art.

[00122] Labels useful in the invention described herein include any substance which can be detected when bound to or incorporated into the biomolecule of interest. Any effective detection method can be used, including optical, spectroscopic, electrical, piezoelectrical, magnetic, Raman scattering, surface plasmon resonance, colorimetric, calorimetric, etc. A label is typically selected from a chromophore, a lumiphore, a fluorophore, one member of a quenching system, a chromogen, a hapten, an antigen, a magnetic particle, a material exhibiting nonlinear optics, a semiconductor nanocrystal, a metal nanoparticle, an enzyme, an antibody or binding portion or equivalent thereof, an aptamer, and one member of a binding pair, and combinations thereof. Quenching schemes may be used, wherein a quencher and a fluorophore as members of a quenching pair may be used on a probe, such that a change in optical parameters occurs

upon binding to the target introduce or quench the signal from the fluorophore. One example of such a system is a molecular beacon. Suitable quencher/fluorophore systems are known in the art. The label may be bound through a variety of intermediate linkages. For example, a polynucleotide may comprise a biotin-binding species, and an optically detectable label may be conjugated to biotin and then bound to the labeled polynucleotide. Similarly, a polynucleotide sensor may comprise an immunological species such as an antibody or fragment, and a secondary antibody containing an optically detectable label may be added.

[00123] Chromophores useful in the methods described herein include any substance which can absorb energy and emit light. For multiplexed assays, a plurality of different signaling chromophores can be used with detectably different emission spectra. The chromophore can be a lumophore or a fluorophore. Typical fluorophores include fluorescent dyes, semiconductor nanocrystals, lanthanide chelates, polynucleotide-specific dyes and green fluorescent protein.

[00124] Coding schemes may optionally be used, comprising encoded particles and/or encoded tags associated with different polynucleotides of the invention. A variety of different coding schemes are known in the art, including fluorophores, including SCNCs, deposited metals, and RF tags.

[00125] Polynucleotides from the described target sequences may be employed as probes for detecting target sequences expression, for ligation amplification schemes, or may be used as primers for amplification schemes of all or a portion of a target sequences. When amplified, either strand produced by amplification may be provided in purified and/or isolated form.

[00126] In one embodiment, polynucleotides of the invention include (a) a nucleic acid depicted in Table 1; (b) an RNA form of any one of the nucleic acids depicted in Table 1; (c) a peptide nucleic acid form of any of the nucleic acids depicted in Table 1; (d) a nucleic acid comprising at least 20 consecutive bases of any of (a-c); (e) a nucleic acid comprising at least 25 bases having at least 90% sequenced identity to any of (a-c); and (f) a complement to any of (a-e).

[00127] Complements may take any polymeric form capable of base pairing to the species recited in (a)-(e), including nucleic acid such as RNA or DNA, or may be a neutral polymer such as a peptide nucleic acid. Polynucleotides of the invention can be selected from the subsets of the recited nucleic acids described herein, as well as their complements.

[00128] In some embodiments, polynucleotides of the invention comprise at least 20 consecutive bases of the nucleic acid sequence of a target selected from Table 2 or SEQ ID NOs: 1-51 or a complement thereto. The polynucleotides may comprise at least 21, 22, 23, 24, 25, 27, 30, 32, 35 or more consecutive bases of the nucleic acids sequence of a target selected from Table 1, as applicable.

[00129] The polynucleotides may be provided in a variety of formats, including as solids, in solution, or in an array. The polynucleotides may optionally comprise one or more labels, which may be chemically and/or enzymatically incorporated into the polynucleotide.

[00130] In one embodiment, solutions comprising polynucleotide and a solvent are also provided. In some embodiments, the solvent may be water or may be predominantly aqueous. In some embodiments, the solution may comprise at least two, three, four, five, six, seven, eight, nine, ten, twelve, fifteen, seventeen, twenty or more different polynucleotides, including primers and primer pairs, of the invention. Additional substances may be included in the solution, alone or in combination, including one or more labels, additional solvents, buffers, biomolecules, polynucleotides, and one or more enzymes useful for performing methods described herein, including polymerases and ligases. The solution may further comprise a primer or primer pair capable of amplifying a polynucleotide of the invention present in the solution.

[00131] In some embodiments, one or more polynucleotides provided herein can be provided on a substrate. The substrate can comprise a wide range of material, either biological, nonbiological, organic, inorganic, or a combination of any of these. For example, the substrate may be a polymerized Langmuir Blodgett film, functionalized glass, Si, Ge, GaAs, GaP, SiO_2, SiN_4, modified silicon, or any one of a wide variety of gels or polymers such as (poly)tetrafluoroethylene, (poly)vinylidenedifluoride, polystyrene, cross-linked polystyrene, polyacrylic, polylactic acid, polyglycolic acid, poly(lactide coglycolide), polyanhydrides, poly(methyl methacrylate), poly(ethylene-co-vinyl acetate), polysiloxanes, polymeric silica, latexes, dextran polymers, epoxies, polycarbonates, or combinations thereof. Conducting polymers and photoconductive materials can be used.

[00132] Substrates can be planar crystalline substrates such as silica based substrates (e.g. glass, quartz, or the like), or crystalline substrates used in, e.g., the semiconductor and microprocessor industries, such as silicon, gallium arsenide, indium doped GaN and the like, and include semiconductor nanocrystals.

[00133] The substrate can take the form of an array, a photodiode, an optoelectronic sensor such as an optoelectronic semiconductor chip or optoelectronic thin-film semiconductor, or a biochip. The location(s) of probe(s) on the substrate can be addressable; this can be done in highly dense formats, and the location(s) can be microaddressable or nanoaddressable.

[00134] Silica aerogels can also be used as substrates, and can be prepared by methods known in the art. Aerogel substrates may be used as free standing substrates or as a surface coating for another substrate material.

[00135] The substrate can take any form and typically is a plate, slide, bead, pellet, disk, particle, microparticle, nanoparticle, strand, precipitate, optionally porous gel, sheets, tube, sphere, container, capillary, pad, slice, film, chip, multiwell plate or dish, optical fiber, etc. The substrate can be any form

that is rigid or semi-rigid. The substrate may contain raised or depressed regions on which an assay component is located. The surface of the substrate can be etched using known techniques to provide for desired surface features, for example trenches, v-grooves, mesa structures, or the like.

[00136] Surfaces on the substrate can be composed of the same material as the substrate or can be made from a different material, and can be coupled to the substrate by chemical or physical means. Such coupled surfaces may be composed of any of a wide variety of materials, for example, polymers, plastics, resins, polysaccharides, silica or silica-based materials, carbon, metals, inorganic glasses, membranes, or any of the above-listed substrate materials. The surface can be optically transparent and can have surface Si-OH functionalities, such as those found on silica surfaces.

[00137] The substrate and/or its optional surface can be chosen to provide appropriate characteristics for the synthetic and/or detection methods used. The substrate and/or surface can be transparent to allow the exposure of the substrate by light applied from multiple directions. The substrate and/or surface may be provided with reflective "mirror" structures to increase the recovery of light.

[00138] The substrate and/or its surface is generally resistant to, or is treated to resist, the conditions to which it is to be exposed in use, and can be optionally treated to remove any resistant material after exposure to such conditions.

[00139] The substrate or a region thereof may be encoded so that the identity of the sensor located in the substrate or region being queried may be determined. Any suitable coding scheme can be used, for example optical codes, RFID tags, magnetic codes, physical codes, fluorescent codes, and combinations of codes.

Preparation of Probes and Primers

[00140] The polynucleotide probes or primers of the present invention can be prepared by conventional techniques well-known to those skilled in the art. For example, the polynucleotide probes can be prepared using solid-phase synthesis using commercially available equipment. As is well-known in the art, modified oligonucleotides can also be readily prepared by similar methods. The polynucleotide probes can also be synthesized directly on a solid support according to methods standard in the art. This method of synthesizing polynucleotides is particularly useful when the polynucleotide probes are part of a nucleic acid array.

[00141] Polynucleotide probes or primers can be fabricated on or attached to the substrate by any suitable method, for example the methods described in U.S. Pat. No. 5,143,854, PCT Publ. No. WO 92/10092, U.S. Patent Application Ser. No. 07/624,120, filed Dec. 6, 1990 (now abandoned), Fodor et al., Science, 251: 767-777 (1991), and PCT Publ. No. WO 90/15070). Techniques for the synthesis of these arrays using mechanical synthesis strategies are described in, e.g., PCT Publication No. WO 93/09668 and U.S.

Pat. No. 5,384,261. Still further techniques include bead based techniques such as those described in PCT Appl. No. PCT/US93/04145 and pin based methods such as those described in U.S. Pat. No. 5,288,514. Additional flow channel or spotting methods applicable to attachment of sensor polynucleotides to a substrate are described in U. S. Patent Application Ser. No. 07/980,523, filed Nov. 20, 1992, and U.S. Pat. No. 5,384,261.

[00142] Alternatively, the polynucleotide probes of the present invention can be prepared by enzymatic digestion of the naturally occurring target gene, or mRNA or cDNA derived therefrom, by methods known in the art.

Diagnostic Samples

[00143] Diagnostic samples for use with the systems and in the methods of the present invention comprise nucleic acids suitable for providing RNAs expression information. In principle, the biological sample from which the expressed RNA is obtained and analyzed for target sequence expression can be any material suspected of comprising cancer tissue or cells. The diagnostic sample can be a biological sample used directly in a method of the invention. Alternatively, the diagnostic sample can be a sample prepared from a biological sample.

[00144] In one embodiment, the sample or portion of the sample comprising or suspected of comprising cancer tissue or cells can be any source of biological material, including cells, tissue or fluid, including bodily fluids. Non-limiting examples of the source of the sample include an aspirate, a needle biopsy, a cytology pellet, a bulk tissue preparation or a section thereof obtained for example by surgery or autopsy, lymph fluid, blood, plasma, serum, tumors, and organs. In some embodiments, the sample is from urine. Alternatively, the sample is from blood, plasma or serum. In some embodiments, the sample is from saliva.

[00145] The samples may be archival samples, having a known and documented medical outcome, or may be samples from current patients whose ultimate medical outcome is not yet known.

[00146] In some embodiments, the sample may be dissected prior to molecular analysis. The sample may be prepared via macrodissection of a bulk tumor specimen or portion thereof, or may be treated via microdissection, for example via Laser Capture Microdissection (LCM).

[00147] The sample may initially be provided in a variety of states, as fresh tissue, fresh frozen tissue, fine needle aspirates, and may be fixed or unfixed. Frequently, medical laboratories routinely prepare medical samples in a fixed state, which facilitates tissue storage. A variety of fixatives can be used to fix tissue to stabilize the morphology of cells, and may be used alone or in combination with other agents. Exemplary fixatives include crosslinking agents, alcohols, acetone, Bouin's solution, Zenker solution, Hely solution, osmic acid solution and Carnoy solution.

[00148] Crosslinking fixatives can comprise any agent suitable for forming two or more covalent bonds, for example an aldehyde. Sources of aldehydes typically used for fixation include formaldehyde, paraformaldehyde, glutaraldehyde or formalin. Preferably, the crosslinking agent comprises formaldehyde, which may be included in its native form or in the form of paraformaldehyde or formalin. One of skill in the art would appreciate that for samples in which crosslinking fixatives have been used special preparatory steps may be necessary including for example heating steps and proteinase-k digestion; see methods.

[00149] One or more alcohols may be used to fix tissue, alone or in combination with other fixatives. Exemplary alcohols used for fixation include methanol, ethanol and isopropanol.

[00150] Formalin fixation is frequently used in medical laboratories. Formalin comprises both an alcohol, typically methanol, and formaldehyde, both of which can act to fix a biological sample.

[00151] Whether fixed or unfixed, the biological sample may optionally be embedded in an embedding medium. Exemplary embedding media used in histology including paraffin, Tissue-Tek® V.I.P.TM, Paramat, Paramat Extra, Paraplast, Paraplast X-tra, Paraplast Plus, Peel Away Paraffin Embedding Wax, Polyester Wax, Carbowax Polyethylene Glycol, PolyfinTM, Tissue Freezing Medium TFMFM, Cryo-GefTM, and OCT Compound (Electron Microscopy Sciences, Hatfield, PA). Prior to molecular analysis, the embedding material may be removed via any suitable techniques, as known in the art. For example, where the sample is embedded in wax, the embedding material may be removed by extraction with organic solvent(s), for example xylenes. Kits are commercially available for removing embedding media from tissues. Samples or sections thereof may be subjected to further processing steps as needed, for example serial hydration or dehydration steps.

[00152] In some embodiments, the sample is a fixed, wax-embedded biological sample. Frequently, samples from medical laboratories are provided as fixed, wax-embedded samples, most commonly as formalin-fixed, paraffin embedded (FFPE) tissues.

[00153] Whatever the source of the biological sample, the target polynucleotide that is ultimately assayed can be prepared synthetically (in the case of control sequences), but typically is purified from the biological source and subjected to one or more preparative steps. The RNA may be purified to remove or diminish one or more undesired components from the biological sample or to concentrate it. Conversely, where the RNA is too concentrated for the particular assay, it may be diluted.

RNA Extraction

[00154] RNA can be extracted and purified from biological samples using any suitable technique. A number of techniques are known in the art, and several are commercially available (e.g., FormaPure nucleic acid extraction kit, Agencourt Biosciences, Beverly MA, High Pure FFPE RNA Micro Kit, Roche

Applied Science, Indianapolis, IN). RNA can be extracted from frozen tissue sections using TRIzol (Invitrogen, Carlsbad, CA) and purified using RNeasy Protect kit (Qiagen, Valencia, CA). RNA can be further purified using DNAse I treatment (Ambion, Austin, TX) to eliminate any contaminating DNA. RNA concentrations can be made using a Nanodrop ND-1000 spectrophotometer (Nanodrop Technologies, Rockland, DE). RNA can be further purified to eliminate contaminants that interfere with cDNA synthesis by cold sodium acetate precipitation. RNA integrity can be evaluated by running electropherograms, and RNA integrity number (RIN, a correlative measure that indicates intactness of mRNA) can be determined using the RNA 6000 PicoAssay for the Bioanalyzer 2100 (Agilent Technologies, Santa Clara, CA).

Kits

[00155] Kits for performing the desired method(s) are also provided, and comprise a container or housing for holding the components of the kit, one or more vessels containing one or more nucleic acid(s), and optionally one or more vessels containing one or more reagents. The reagents include those described in the composition of matter section above, and those reagents useful for performing the methods described, including amplification reagents, and may include one or more probes, primers or primer pairs, enzymes (including polymerases and ligases), intercalating dyes, labeled probes, and labels that can be incorporated into amplification products.

[00156] In some embodiments, the kit comprises primers or primer pairs specific for those subsets and combinations of target sequences described herein. The primers or pairs of primers suitable for selectively amplifying the target sequences. The kit may comprise at least two, three, four or five primers or pairs of primers suitable for selectively amplifying one or more targets. The kit may comprise at least 5, 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 or more primers or pairs of primers suitable for selectively amplifying one or more targets. The kit may comprise at least 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500 or more primers or pairs of primers suitable for selectively amplifying one or more targets. The kit may comprise at least 500, 550, 600, 650, 700, 750, 800, 850 or more primers or pairs of primers suitable for selectively amplifying one or more targets.

[00157] In some embodiments, the primers or primer pairs of the kit, when used in an amplification reaction, specifically amplify a non-coding target, coding target, exonic, or non-exonic target described herein, at least a portion of a nucleic acid sequence depicted in one of SEQ ID NOs: 1-51, a nucleic acid sequence corresponding to a target selected from Table 2, an RNA form thereof, or a complement to either thereof. The kit may include a plurality of such primers or primer pairs which can specifically amplify a corresponding plurality of different amplify a non-coding target, coding target, exonic, or non-exonic transcript described herein, nucleic acids depicted in one of SEQ ID NOs: 1-51, a nucleic acid

sequence corresponding to a target selected from Table 2, RNA forms thereof, or complements thereto. At least two, three, four or five primers or pairs of primers suitable for selectively amplifying the one or or targets can be provided in kit form. In some embodiments, the kit comprises from five to fifty primers or pairs of primers suitable for amplifying the one or more targets.

[00158] The reagents may independently be in liquid or solid form. The reagents may be provided in mixtures. Control samples and/or nucleic acids may optionally be provided in the kit. Control samples may include tissue and/or nucleic acids obtained from or representative of tumor samples from patients showing no evidence of disease, as well as tissue and/or nucleic acids obtained from or representative of tumor samples from patients that develop systemic cancer.

[00159] The nucleic acids may be provided in an array format, and thus an array or microarray may be included in the kit. The kit optionally may be certified by a government agency for use in prognosing the disease outcome of cancer patients and/or for designating a treatment modality.

[00160] Instructions for using the kit to perform one or more methods of the invention can be provided with the container, and can be provided in any fixed medium. The instructions may be located inside or outside the container or housing, and/or may be printed on the interior or exterior of any surface thereof. A kit may be in multiplex form for concurrently detecting and/or quantitating one or more different target polynucleotides representing the expressed target sequences.

Devices

[00161] Devices useful for performing methods of the invention are also provided. The devices can comprise means for characterizing the expression level of a target sequence of the invention, for example components for performing one or more methods of nucleic acid extraction, amplification, and/or detection. Such components may include one or more of an amplification chamber (for example a thermal cycler), a plate reader, a spectrophotometer, capillary electrophoresis apparatus, a chip reader, and or robotic sample handling components. These components ultimately can obtain data that reflects the expression level of the target sequences used in the assay being employed.

[00162] The devices may include an excitation and/or a detection means. Any instrument that provides a wavelength that can excite a species of interest and is shorter than the emission wavelength(s) to be detected can be used for excitation. Commercially available devices can provide suitable excitation wavelengths as well as suitable detection component.

[00163] Exemplary excitation sources include a broadband UV light source such as a deuterium lamp with an appropriate filter, the output of a white light source such as a xenon lamp or a deuterium lamp after passing through a monochromator to extract out the desired wavelength(s), a continuous wave (cw) gas laser, a solid state diode laser, or any of the pulsed lasers. Emitted light can be detected through any

suitable device or technique; many suitable approaches are known in the art. For example, a fluorimeter or spectrophotometer may be used to detect whether the test sample emits light of a wavelength characteristic of a label used in an assay.

[00164] The devices typically comprise a means for identifying a given sample, and of linking the results obtained to that sample. Such means can include manual labels, barcodes, and other indicators which can be linked to a sample vessel, and/or may optionally be included in the sample itself, for example where an encoded particle is added to the sample. The results may be linked to the sample, for example in a computer memory that contains a sample designation and a record of expression levels obtained from the sample. Linkage of the results to the sample can also include a linkage to a particular sample receptacle in the device, which is also linked to the sample identity.

[00165] In some instances, the devices also comprise a means for correlating the expression levels of the target sequences being studied with a prognosis of disease outcome. In some instances, such means comprises one or more of a variety of correlative techniques, including lookup tables, algorithms, multivariate models, and linear or nonlinear combinations of expression models or algorithms. The expression levels may be converted to one or more likelihood scores, reflecting likelihood that the patient providing the sample may exhibit a particular disease outcome. The models and/or algorithms can be provided in machine readable format and can optionally further designate a treatment modality for a patient or class of patients.

[00166] The device also comprises output means for outputting the disease status, prognosis and/or a treatment modality. Such output means can take any form which transmits the results to a patient and/or a healthcare provider, and may include a monitor, a printed format, or both. The device may use a computer system for performing one or more of the steps provided.

[00167] In some embodiments, the method, systems, and kits disclosed herein further comprise the transmission of data/information. For example, data/information derived from the detection and/or quantification of the target may be transmitted to another device and/or instrument. In some instances, the information obtained from an algorithm is transmitted to another device and/or instrument. Transmission of the data/information may comprise the transfer of data/information from a first source to a second source. The first and second sources may be in the same approximate location (e.g., within the same room, building, block, campus). Alternatively, first and second sources may be in multiple locations (e.g., multiple cities, states, countries, continents, etc).

[00168] In some instances, transmission of the data/information comprises digital transmission or analog transmission. Digital transmission may comprise the physical transfer of data (a digital bit stream) over a point-to-point or point-to-multipoint communication channel. Examples of such channels are copper wires, optical fibers, wireless communication channels, and storage media. In some embodiments, the

data is represented as an electromagnetic signal, such as an electrical voltage, radiowave, microwave, or infrared signal.

[00169] Analog transmission may comprise the transfer of a continuously varying analog signal. The messages can either be represented by a sequence of pulses by means of a line code (baseband transmission), or by a limited set of continuously varying wave forms (passband transmission), using a digital modulation method. The passband modulation and corresponding demodulation (also known as detection) can be carried out by modem equipment. According to the most common definition of digital signal, both baseband and passband signals representing bit-streams are considered as digital transmission, while an alternative definition only considers the baseband signal as digital, and passband transmission of digital data as a form of digital-to-analog conversion.

Amplification and Hybridization

[00170] Following sample collection and nucleic acid extraction, the nucleic acid portion of the sample comprising RNA that is or can be used to prepare the target polynucleotide(s) of interest can be subjected to one or more preparative reactions. These preparative reactions can include in vitro transcription (IVT), labeling, fragmentation, amplification and other reactions. mRNA can first be treated with reverse transcriptase and a primer to create cDNA prior to detection, quantitation and/or amplification; this can be done in vitro with purified mRNA or *in situ,* e.g., in cells or tissues affixed to a slide.

[00171] By "amplification" is meant any process of producing at least one copy of a nucleic acid, in this case an expressed RNA, and in many cases produces multiple copies. An amplification product can be RNA or DNA, and may include a complementary strand to the expressed target sequence. DNA amplification products can be produced initially through reverse translation and then optionally from further amplification reactions. The amplification product may include all or a portion of a target sequence, and may optionally be labeled. A variety of amplification methods are suitable for use, including polymerase-based methods and ligation-based methods. Exemplary amplification techniques include the polymerase chain reaction method (PCR), the lipase chain reaction (LCR), ribozyme-based methods, self sustained sequence replication (3SR), nucleic acid sequence-based amplification (NASBA), the use of Q Beta replicase, reverse transcription, nick translation, and the like.

[00172] Asymmetric amplification reactions may be used to preferentially amplify one strand representing the target sequence that is used for detection as the target polynucleotide. In some cases, the presence and/or amount of the amplification product itself may be used to determine the expression level of a given target sequence. In other instances, the amplification product may be used to hybridize to an array or other substrate comprising sensor polynucleotides which are used to detect and/or quantitate target sequence expression.

[00173] The first cycle of amplification in polymerase-based methods typically forms a primer extension product complementary to the template strand. If the template is single-stranded RNA, a polymerase with reverse transcriptase activity is used in the first amplification to reverse transcribe the RNA to DNA, and additional amplification cycles can be performed to copy the primer extension products. The primers for a PCR must, of course, be designed to hybridize to regions in their corresponding template that can produce an amplifiable segment; thus, each primer must hybridize so that its 3' nucleotide is paired to a nucleotide in its complementary template strand that is located 3' from the 3' nucleotide of the primer used to replicate that complementary template strand in the PCR.

[00174] The target polynucleotide can be amplified by contacting one or more strands of the target polynucleotide with a primer and a polymerase having suitable activity to extend the primer and copy the target polynucleotide to produce a full-length complementary polynucleotide or a smaller portion thereof. Any enzyme having a polymerase activity that can copy the target polynucleotide can be used, including DNA polymerases, RNA polymerases, reverse transcriptases, enzymes having more than one type of polymerase or enzyme activity. The enzyme can be thermolabile or thermostable. Mixtures of enzymes can also be used. Exemplary enzymes include: DNA polymerases such as DNA Polymerase I ("Pol I"), the Klenow fragment of Pol I, T4, T7, Sequenase® T7, Sequenase® Version 2.0 T7, *Tub, Taq, Tth, Pfic, Pfu, Tsp, Tfl, Tli* and *Pyrococcus sp* GB-D DNA polymerases; RNA polymerases such as *E. coil,* SP6, T3 and T7 RNA polymerases; and reverse transcriptases such as AMV, M-MuLV, MMLV, RNAse H MMLV (SuperScript®), SuperScript® II, ThermoScript®, HIV-1, and RAV2 reverse transcriptases. All of these enzymes are commercially available. Exemplary polymerases with multiple specificities include RAV2 and *Tli* (exo-) polymerases. Exemplary thermostable polymerases include *Tub, Taq, Tth, Pfic, Pfu, Tsp, Tfl, Tli* and *Pyrococcus sp.* GB-D DNA polymerases.

[00175] Suitable reaction conditions are chosen to permit amplification of the target polynucleotide, including pH, buffer, ionic strength, presence and concentration of one or more salts, presence and concentration of reactants and cofactors such as nucleotides and magnesium and/or other metal ions (e.g., manganese), optional cosolvents, temperature, thermal cycling profile for amplification schemes comprising a polymerase chain reaction, and may depend in part on the polymerase being used as well as the nature of the sample. Cosolvents include formamide (typically at from about 2 to about 10 %), glycerol (typically at from about 5 to about 10 %), and DMSO (typically at from about 0.9 to about 10 %). Techniques may be used in the amplification scheme in order to minimize the production of false positives or artifacts produced during amplification. These include "touchdown" PCR, hot-start techniques, use of nested primers, or designing PCR primers so that they form stem-loop structures in the event of primer-dimer formation and thus are not amplified. Techniques to accelerate PCR can be used, for example centrifugal PCR, which allows for greater convection within the sample, and comprising

infrared heating steps for rapid heating and cooling of the sample. One or more cycles of amplification can be performed. An excess of one primer can be used to produce an excess of one primer extension product during PCR; preferably, the primer extension product produced in excess is the amplification product to be detected. A plurality of different primers may be used to amplify different target polynucleotides or different regions of a particular target polynucleotide within the sample.

[00176] An amplification reaction can be performed under conditions which allow an optionally labeled sensor polynucleotide to hybridize to the amplification product during at least part of an amplification cycle. When the assay is performed in this manner, real-time detection of this hybridization event can take place by monitoring for light emission or fluorescence during amplification, as known in the art.

[00177] Where the amplification product is to be used for hybridization to an array or microarray, a number of suitable commercially available amplification products are available. These include amplification kits available from NuGEN, Inc. (San Carlos, CA), including the WT-OvationTm System, WT-OvationTm System v2, WT-OvationTm Pico System, WT-Ovation'm FFPE Exon Module, WT-OvationTm FFPE Exon Module RiboAmp and RiboAmp ^{Plus} RNA Amplification Kits (MDS Analytical Technologies (formerly Arcturus) (Mountain View, CA), Genisphere, Inc. (Hatfield, PA), including the RampUp PlusTM and SenseAmpTM RNA Amplification kits, alone or in combination. Amplified nucleic acids may be subjected to one or more purification reactions after amplification and labeling, for example using magnetic beads (e.g., RNAClean magnetic beads, Agencourt Biosciences).

[00178] Multiple RNA biomarkers can be analyzed using real-time quantitative multiplex RT-PCR platforms and other multiplexing technologies such as GenomeLab GeXP Genetic Analysis System (Beckman Coulter, Foster City, CA), SmartCycler® 9600 or GeneXpert(R) Systems (Cepheid, Sunnyvale, CA), ABI 7900 HT Fast Real Time PCR system (Applied Biosystems, Foster City, CA), LightCycler® 480 System (Roche Molecular Systems, Pleasanton, CA), xMAP 100 System (Luminex, Austin, TX) Solexa Genome Analysis System (Illumina, Hayward, CA), OpenArray Real Time qPCR (BioTrove, Woburn, MA) and BeadXpress System (Illumina, Hayward, CA).

Detection and/or Quantification of Target Sequences

[00179] Any method of detecting and/or quantitating the expression of the encoded target sequences can in principle be used in the invention. The expressed target sequences can be directly detected and/or quantitated, or may be copied and/or amplified to allow detection of amplified copies of the expressed target sequences or its complement.

[00180] Methods for detecting and/or quantifying a target can include Northern blotting, sequencing, array or microarray hybridization, by enzymatic cleavage of specific structures (e.g., an Invader® assay, Third Wave Technologies, e.g. as described in U.S. Pat. Nos. 5,846,717, 6,090,543; 6,001,567;

5,985,557; and 5,994,069) and amplification methods, e.g. RT-PCR, including in a TaqMan® assay (PE Biosystems, Foster City, Calif., e.g. as described in U.S. Pat. Nos. 5,962,233 and 5,538,848), and may be quantitative or semi-quantitative, and may vary depending on the origin, amount and condition of the available biological sample. Combinations of these methods may also be used. For example, nucleic acids may be amplified, labeled and subjected to microarray analysis.

[00181] In some instances, target sequences may be detected by sequencing. Sequencing methods may comprise whole genome sequencing or exome sequencing. Sequencing methods such as Maxam-Gilbert, chain-termination, or high-throughput systems may also be used. Additional, suitable sequencing techniques include classic dideoxy sequencing reactions (Sanger method) using labeled terminators or primers and gel separation in slab or capillary, sequencing by synthesis using reversibly terminated labeled nucleotides, pyrosequencing, 454 sequencing, allele specific hybridization to a library of labeled oligonucleotide probes, sequencing by synthesis using allele specific hybridization to a library of labeled clones that is followed by ligation, real time monitoring of the incorporation of labeled nucleotides during a polymerization step, and SOLiD sequencing.

[00182] Additional methods for detecting and/or quantifying a target include single-molecule sequencing (e.g., Helicos, PacBio), sequencing by synthesis (e.g., Illumina, Ion Torrent), sequencing by ligation (e.g., ABI SOLID), sequencing by hybridization (e.g., Complete Genomics), in situ hybridization, bead-array technologies (e.g., Luminex xMAP, Illumina BeadChips), branched DNA technology (e.g., Panomics, Genisphere). Sequencing methods may use fluorescent (e.g., Illumina) or electronic (e.g., Ion Torrent, Oxford Nanopore) methods of detecting nucleotides.

Reverse Transcription for QRT-PCR Analysis

[00183] Reverse transcription can be performed by any method known in the art. For example, reverse transcription may be performed using the Omniscript kit (Qiagen, Valencia, CA), Superscript III kit (Invitrogen, Carlsbad, CA), for RT-PCR. Target-specific priming can be performed in order to increase the sensitivity of detection of target sequences and generate target-specific cDNA.

TaqMan® Gene Expression Analysis

[00184] TaqMan®RT-PCR can be performed using Applied Biosystems Prism (ABI) 7900 HT instruments in a 5 1.11 volume with target sequence-specific cDNA equivalent to 1 ng total RNA.

[00185] Primers and probes concentrations for TaqMan analysis are added to amplify fluorescent amplicons using PCR cycling conditions such as 95°C for 10 minutes for one cycle, 95°C for 20 seconds, and 60°C for 45 seconds for 40 cycles. A reference sample can be assayed to ensure reagent and process

stability. Negative controls (e.g., no template) should be assayed to monitor any exogenous nucleic acid contamination.

Classification Arrays

[00186] The present invention contemplates that a probe set or probes derived therefrom may be provided in an array format. In the context of the present invention, an "array" is a spatially or logically organized collection of polynucleotide probes. An array comprising probes specific for a coding target, non-coding target, or a combination thereof may be used. Alternatively, an array comprising probes specific for two or more of transcripts of a target selected from Table 2 or SEQ ID NOs: 1-51 or a product derived thereof can be used. Desirably, an array may be specific for 5, 10, 15, 20, 25, 30, 50, 75, 100, 150, 200 or more of transcripts of a target selected from Table 2 or SEQ ID NOs:1-51. The array may be specific for 200, 225, 250, 275, 300, 325, 350, 375, 400 or more of the transcripts of a target selected from Table 2 or SEQ ID NOs:1-51. The array may be specific for 400, 425, 450, 475, 500, 525, 550, 575, 600 or more of the transcripts of a target selected from Table 2 or SEQ ID NOs:1-51. The array may be specific for 600, 625, 650, 675, 700, 725, 750, 775, 800, 825, 850 or more of the transcripts of a target selected from Table 2 or SEQ ID NOs:1-51. Expression of these sequences may be detected alone or in combination with other transcripts. In some embodiments, an array is used which comprises a wide range of sensor probes for bladder-specific expression products, along with appropriate control sequences. In some instances, the array may comprise the Human Exon 1.0 ST Array (HuEx 1.0 ST, Affymetrix, Inc., Santa Clara, CA.).

[00187] Typically the polynucleotide probes are attached to a solid substrate and are ordered so that the location (on the substrate) and the identity of each are known. The polynucleotide probes can be attached to one of a variety of solid substrates capable of withstanding the reagents and conditions necessary for use of the array. Examples include, but are not limited to, polymers, such as (poly)tetrafluoroethylene, (poly)vinylidenedifluoride, polystyrene, polycarbonate, polypropylene and polystyrene; ceramic; silicon; silicon dioxide; modified silicon; (fused) silica, quartz or glass; functionalized glass; paper, such as filter paper; diazotized cellulose; nitrocellulose filter; nylon membrane; and polyacrylamide gel pad. Substrates that are transparent to light are useful for arrays that may be used in an assay that involves optical detection.

[00188] Examples of array formats include membrane or filter arrays (for example, nitrocellulose, nylon arrays), plate arrays (for example, multiwell, such as a 24-, 96-, 256-, 384-, 864- or 1536-well, microtitre plate arrays), pin arrays, and bead arrays (for example, in a liquid "slurry"). Arrays on substrates such as glass or ceramic slides are often referred to as chip arrays or "chips." Such arrays are well known in the art. In one embodiment of the present invention, the Cancer Prognosticarray is a chip.

Data Analysis

[00189] In some embodiments, one or more pattern recognition methods can be used in analyzing the expression level of target sequences. The pattern recognition method can comprise a linear combination of expression levels, or a nonlinear combination of expression levels. In some embodiments, expression measurements for RNA transcripts or combinations of RNA transcript levels are formulated into linear or non-linear models or algorithms (e.g., an 'expression signature') and converted into a likelihood score. This likelihood score indicates the probability that a biological sample is from a patient who may exhibit no evidence of disease or who may exhibit systemic cancer, such as, for example, lymphnode metastasis. The likelihood score can be used to distinguish these disease states. The models and/or algorithms can be provided in machine readable format, and may be used to correlate expression levels or an expression profile with a disease state, and/or to designate a treatment modality for a patient or class of patients.

[00190] Assaying the expression level for a plurality of targets may comprise the use of an algorithm or classifier. Array data can be managed, classified, and analyzed using techniques known in the art. Assaying the expression level for a plurality of targets may comprise probe set modeling and data pre-processing. Probe set modeling and data pre-processing can be derived using the Robust Multi-Array (RMA) algorithm or variants GC-RMA, frozen robust multichip average (fRMA), Single Channel Array Normalization (SCAN), ComBat (Combining Batches of gene expression), Probe Logarithmic Intensity Error (PLIER) algorithm or variant iterPLIER. Variance or intensity filters can be applied to pre-process data using the RMA algorithm, for example by removing target sequences with a standard deviation of < 10 or a mean intensity of < 100 intensity units of a normalized data range, respectively.

[00191] Alternatively, assaying the expression level for a plurality of targets may comprise the use of a machine learning algorithm. The machine learning algorithm may comprise a supervised learning algorithm. Examples of supervised learning algorithms may include Average One-Dependence Estimators (AODE), Artificial neural network (e.g., Backpropagation), Bayesian statistics (e.g., Naive Bayes classifier, Bayesian network, Bayesian knowledge base), Case-based reasoning, Decision trees, Inductive logic programming, Gaussian process regression, Group method of data handling (GMDH), Learning Automata, Learning Vector Quantization, Minimum message length (decision trees, decision graphs, etc.), Lazy learning, Instance-based learning Nearest Neighbor Algorithm, Analogical modeling, Probably approximately correct learning (PAC) learning, Ripple down rules, a knowledge acquisition methodology, Symbolic machine learning algorithms, Subsymbolic machine learning algorithms, Support vector machines, Random Forests, Ensembles of classifiers, Bootstrap aggregating (bagging), and Boosting. Supervised learning may comprise ordinal classification such as regression analysis and Information fuzzy networks (IFN). Alternatively, supervised learning methods may comprise statistical classification, such as AODE, Linear classifiers (e.g., Fisher's linear discriminant, Logistic regression, Naive Bayes

classifier, Perceptron, and Support vector machine), quadratic classifiers, k-nearest neighbor, Boosting, Decision trees (e.g., C4.5, Random forests), Bayesian networks, and Hidden Markov models.

[00192] The machine learning algorithms may also comprise an unsupervised learning algorithm. Examples of unsupervised learning algorithms may include artificial neural network, Data clustering, Expectation-maximization algorithm, Self-organizing map, Radial basis function network, Vector Quantization, Generative topographic map, Information bottleneck method, and IBSEAD. Unsupervised learning may also comprise association rule learning algorithms such as Apriori algorithm, Eclat algorithm and FP-growth algorithm. Hierarchical clustering, such as Single-linkage clustering and Conceptual clustering, may also be used. Alternatively, unsupervised learning may comprise partitional clustering such as K-means algorithm and Fuzzy clustering.

[00193] In some instances, the machine learning algorithms comprise a reinforcement learning algorithm. Examples of reinforcement learning algorithms include, but are not limited to, temporal difference learning, Q-learning and Learning Automata. Alternatively, the machine learning algorithm may comprise Data Pre-processing.

[00194] Preferably, the machine learning algorithms may include, but are not limited to, Average One-Dependence Estimators (AODE), Fisher's linear discriminant, Logistic regression, Perceptron, Multilayer Perceptron, Artificial Neural Networks, Support vector machines, Quadratic classifiers, Boosting, Decision trees, C4.5, Bayesian networks, Hidden Markov models, High-Dimensional Discriminant Analysis, and Gaussian Mixture Models. The machine learning algorithm may comprise support vector machines, Naïve Bayes classifier, k-nearest neighbor, high-dimensional discriminant analysis, or Gaussian mixture models. In some instances, the machine learning algorithm comprises Random Forests.

Additional Techniques and Tests

[00195] Factors known in the art for diagnosing and/or suggesting, selecting, designating, recommending or otherwise determining a course of treatment for a patient or class of patients suspected of having cancer can be employed in combination with measurements of the target sequence expression. The methods disclosed herein may include additional techniques such as cytology, histology, ultrasound analysis, MRI results, CT scan results, and measurements of PSA levels.

[00196] Certified tests for classifying disease status and/or designating treatment modalities may also be used in diagnosing, predicting, and/or monitoring the status or outcome of a cancer in a subject. A certified test may comprise a means for characterizing the expression levels of one or more of the target sequences of interest, and a certification from a government regulatory agency endorsing use of the test for classifying the disease status of a biological sample.

[00197] In some embodiments, the certified test may comprise reagents for amplification reactions used to detect and/or quantitate expression of the target sequences to be characterized in the test. An array of probe nucleic acids can be used, with or without prior target amplification, for use in measuring target sequence expression.

[00198] The test is submitted to an agency having authority to certify the test for use in distinguishing disease status and/or outcome. Results of detection of expression levels of the target sequences used in the test and correlation with disease status and/or outcome are submitted to the agency. A certification authorizing the diagnostic and/or prognostic use of the test is obtained.

[00199] Also provided are portfolios of expression levels comprising a plurality of normalized expression levels of the target selected from Table 2 or SEQ ID NOs:1-51. Such portfolios may be provided by performing the methods described herein to obtain expression levels from an individual patient or from a group of patients. The expression levels can be normalized by any method known in the art; exemplary normalization methods that can be used in various embodiments include Robust Multichip Average (RMA), frozen robust multichip average (fRMA), Single Channel Array Normalization (SCAN), ComBat (Combining Batches of gene expression), probe logarithmic intensity error estimation (PLIER), non-linear fit (NLFIT) quantile-based and nonlinear normalization, and combinations thereof. Background correction can also be performed on the expression data; exemplary techniques useful for background correction include mode of intensities, normalized using median polish probe modeling and sketch-normalization.

[00200] In some embodiments, portfolios are established such that the combination of genes in the portfolio exhibit improved sensitivity and specificity relative to known methods. In considering a group of genes for inclusion in a portfolio, a small standard deviation in expression measurements correlates with greater specificity. Other measurements of variation such as correlation coefficients can also be used in this capacity. The invention also encompasses the above methods where the expression level determines the status or outcome of a cancer in the subject with at least about 45% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 50% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 55% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 60% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 65% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 70% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 75% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least

about 80% specificity. In some embodiments, t the expression level determines the status or outcome of a cancer in the subject with at least about 85% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 90% specificity. In some embodiments, the expression level determines the status or outcome of a cancer in the subject with at least about 95% specificity.

[00201] The invention also encompasses the any of the methods disclosed herein where the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 45%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 50%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 55%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 60%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 65%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 70%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 75%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 80%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 85%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 90%. In some embodiments, the accuracy of diagnosing, monitoring, and/or predicting a status or outcome of a cancer is at least about 95%.

[00202] The accuracy of a classifier or biomarker may be determined by the 95% confidence interval (CI). Generally, a classifier or biomarker is considered to have good accuracy if the 95% CI does not overlap 1. In some instances, the 95% CI of a classifier or biomarker is at least about 1.08, 1.10, 1.12, 1.14, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 1.22, 1.23, 1.24, 1.25, 1.26, 1.27, 1.28, 1.29, 1.30, 1.31, 1.32, 1.33, 1.34, or 1.35 or more. The 95% CI of a classifier or biomarker may be at least about 1.14, 1.15, 1.16, 1.20, 1.21, 1.26, or 1.28. The 95% CI of a classifier or biomarker may be less than about 1.75, 1.74, 1.73, 1.72, 1.71, 1.70, 1.69, 1.68, 1.67, 1.66, 1.65, 1.64, 1.63, 1.62, 1.61, 1.60, 1.59, 1.58, 1.57, 1.56, 1.55, 1.54, 1.53, 1.52, 1.51, 1.50 or less. The 95% CI of a classifier or biomarker may be less than about 1.61, 1.60, 1.59, 1.58, 1.56, 1.55, or 1.53. The 95% CI of a classifier or biomarker may be between about 1.10 to 1.70, between about 1.12 to about 1.68, between about 1.14 to about 1.62, between about 1.15 to about 1.61, between about 1.15 to about 1.59, between about 1.16 to about 1.160, between about 1.19 to about 1.55, between about 1.20 to about 1.54, between about 1.21 to about 1.53, between about 1.26 to about 1.63, between about 1.27 to about 1.61, or between about 1.28 to about 1.60.

[00203] In some instances, the accuracy of a biomarker or classifier is dependent on the difference in range of the 95% CI (e.g., difference in the high value and low value of the 95% CI interval). Generally, biomarkers or classifiers with large differences in the range of the 95% CI interval have greater variability and are considered less accurate than biomarkers or classifiers with small differences in the range of the 95% CI intervals. In some instances, a biomarker or classifier is considered more accurate if the difference in the range of the 95% CI is less than about 0.60, 0.55, 0.50, 0.49, 0.48, 0.47, 0.46, 0.45, 0.44, 0.43, 0.42, 0.41, 0.40, 0.39, 0.38, 0.37, 0.36, 0.35, 0.34, 0.33, 0.32, 0.31, 0.30, 0.29, 0.28, 0.27, 0.26, 0.25 or less. The difference in the range of the 95% CI of a biomarker or classifier may be less than about 0.48, 0.45, 0.44, 0.42, 0.40, 0.37, 0.35, 0.33, or 0.32. In some instances, the difference in the range of the 95% CI for a biomarker or classifier is between about 0.25 to about 0.50, between about 0.27 to about 0.47, or between about 0.30 to about 0.45.

[00204] The invention also encompasses the any of the methods disclosed herein where the sensitivity is at least about 45%. In some embodiments, the sensitivity is at least about 50%. In some embodiments, the sensitivity is at least about 55%. In some embodiments, the sensitivity is at least about 60%. In some embodiments, the sensitivity is at least about 65%. In some embodiments, the sensitivity is at least about 70%. In some embodiments, the sensitivity is at least about 75%. In some embodiments, the sensitivity is at least about 80%. In some embodiments, the sensitivity is at least about 85%. In some embodiments, the sensitivity is at least about 90%. In some embodiments, the sensitivity is at least about 95%.

[00205] In some instances, the classifiers or biomarkers disclosed herein are clinically significant. In some instances, the clinical significance of the classifiers or biomarkers is determined by the AUC value. In order to be clinically significant, the AUC value is at least about 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, or 0.95. The clinical significance of the classifiers or biomarkers can be determined by the percent accuracy. For example, a classifier or biomarker is determined to be clinically significant if the accuracy of the classifier or biomarker is at least about 50%, 55%, 60%, 65%, 70%, 72%, 75%, 77%, 80%, 82%, 84%, 86%, 88%, 90%, 92%, 94%, 96%, or 98%. In other instances, the clinical significance of the classifiers or biomarkers is determined by the median fold difference (MDF) value. In order to be clinically significant, the MDF value is at least about 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.9, or 2.0. In some instances, the MDF value is greater than or equal to 1.1. In other instances, the MDF value is greater than or equal to 1.2. Alternatively, or additionally, the clinical significance of the classifiers or biomarkers is determined by the t-test P-value. In some instances, in order to be clinically significant, the t-test P-value is less than about 0.070, 0.065, 0.060, 0.055, 0.050, 0.045, 0.040, 0.035, 0.030, 0.025, 0.020, 0.015, 0.010, 0.005, 0.004, or 0.003. The t-test P-value can be less than about 0.050. Alternatively, the t-test P-value is less than about 0.010. In some instances, the clinical significance of the classifiers or biomarkers is determined by the clinical outcome. For example, different clinical outcomes can have

different minimum or maximum thresholds for AUC values, MDF values, t-test P-values, and accuracy values that would determine whether the classifier or biomarker is clinically significant. In another example, a classifier or biomarker is considered clinically significant if the P-value of the t-test was less than about 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01, 0.005, 0.004, 0.003, 0.002, or 0.001. In some instances, the P-value may be based on any of the following comparisons: BCR vs non-BCR, CP vs non-CP, PCSM vs non-PCSM. For example, a classifier or biomarker is determined to be clinically significant if the P-values of the differences between the KM curves for BCR vs non-BCR, CP vs non-CP, PCSM vs non-PCSM is lower than about 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01, 0.005, 0.004, 0.003, 0.002, or 0.001.

[00206] In some instances, the performance of the classifier or biomarker is based on the odds ratio. A classifier or biomarker may be considered to have good performance if the odds ratio is at least about 1.30, 1.31, 1.32, 1.33, 1.34, 1.35, 1.36, 1.37, 1.38, 1.39, 1.40, 1.41, 1.42, 1.43, 1.44, 1.45, 1.46, 1.47, 1.48, 1.49, 1.50, 1.52, 1.55, 1.57, 1.60, 1.62, 1.65, 1.67, 1.70 or more. In some instances, the odds ratio of a classifier or biomarker is at least about 1.33.

[00207] The clinical significance of the classifiers and/or biomarkers may be based on Univariable Analysis Odds Ratio P-value (uvaORPval). The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier and/or biomarker may be between about 0-0.4. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier and/or biomarker may be between about 0-0.3. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier and/or biomarker may be between about 0-0.2. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier and/or biomarker may be less than or equal to 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier and/or biomarker may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Univariable Analysis Odds Ratio P-value (uvaORPval) of the classifier and/or biomarker may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[00208] The clinical significance of the classifiers and/or biomarkers may be based on multivariable analysis Odds Ratio P-value (mvaORPval). The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier and/or biomarker may be between about 0-1. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier and/or biomarker may be between about 0-0.9. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier and/or biomarker may be between about 0-0.8. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier and/or biomarker may be less than or equal to 0.90, 0.88, 0.86, 0.84, 0.82, 0.80. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier and/or biomarker may be less than or equal to 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The multivariable analysis Odds Ratio P-value

(mvaORPval) of the classifier and/or biomarker may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier and/or biomarker may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The multivariable analysis Odds Ratio P-value (mvaORPval) of the classifier and/or biomarker may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[00209] The clinical significance of the classifiers and/or biomarkers may be based on the Kaplan Meier P-value (KM P-value). The Kaplan Meier P-value (KM P-value) of the classifier and/or biomarker may be between about 0-0.8. The Kaplan Meier P-value (KM P-value) of the classifier and/or biomarker may be between about 0-0.7. The Kaplan Meier P-value (KM P-value) of the classifier and/or biomarker may be less than or equal to 0.80, 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The Kaplan Meier P-value (KM P-value) of the classifier and/or biomarker may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Kaplan Meier P-value (KM P-value) of the classifier and/or biomarker may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Kaplan Meier P-value (KM P-value) of the classifier and/or biomarker may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[00210] The clinical significance of the classifiers and/or biomarkers may be based on the survival AUC value (survAUC). The survival AUC value (survAUC) of the classifier and/or biomarker may be between about 0-1. The survival AUC value (survAUC) of the classifier and/or biomarker may be between about 0-0.9. The survival AUC value (survAUC) of the classifier and/or biomarker may be less than or equal to 1, 0.98, 0.96, 0.94, 0.92, 0.90, 0.88, 0.86, 0.84, 0.82, 0.80. The survival AUC value (survAUC) of the classifier and/or biomarker may be less than or equal to 0.80, 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The survival AUC value (survAUC) of the classifier and/or biomarker may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The survival AUC value (survAUC) of the classifier and/or biomarker may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The survival AUC value (survAUC) of the classifier and/or biomarker may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[00211] The clinical significance of the classifiers and/or biomarkers may be based on the Univariable Analysis Hazard Ratio P-value (uvaHRPval). The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier and/or biomarker may be between about 0-0.4. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier and/or biomarker may be between about 0-0.3. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier and/or biomarker may be less

than or equal to 0.40, 0.38, 0.36, 0.34, 0.32. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.30, 0.29, 0.28, 0.27, 0.26, 0.25, 0.24, 0.23, 0.22, 0.21, 0.20. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Univariable Analysis Hazard Ratio P-value (uvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[00212] The clinical significance of the classifiers and/or biomarkers may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be between about 0-1. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be between about 0-0.9. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 1, 0.98, 0.96, 0.94, 0.92, 0.90, 0.88, 0.86, 0.84, 0.82, 0.80. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.80, 0.78, 0.76, 0.74, 0.72, 0.70, 0.68, 0.66, 0.64, 0.62, 0.60, 0.58, 0.56, 0.54, 0.52, 0.50. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.48, 0.46, 0.44, 0.42, 0.40, 0.38, 0.36, 0.34, 0.32, 0.30, 0.28, 0.26, 0.25, 0.22, 0.21, 0.20, 0.19, 0.18, 0.17, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[00213] The clinical significance of the classifiers and/or biomarkers may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be between about 0 to about 0.60. significance of the classifier and/or biomarker may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be between about 0 to about 0.50. significance of the classifier and/or biomarker may be based on the Multivariable Analysis Hazard Ratio P-value (mvaHRPval). The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.50, 0.47, 0.45, 0.43, 0.40, 0.38, 0.35, 0.33, 0.30, 0.28, 0.25, 0.22, 0.20, 0.18, 0.16, 0.15, 0.14, 0.13, 0.12, 0.11, 0.10. The Multivariable Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02, 0.01. The Multivariable

Analysis Hazard Ratio P-value (mvaHRPval) of the classifier and/or biomarker may be less than or equal to 0.01, 0.009, 0.008, 0.007, 0.006, 0.005, 0.004, 0.003, 0.002, 0.001.

[00214] The classifiers and/or biomarkers disclosed herein may outperform current classifiers or clinical variables in providing clinically relevant analysis of a sample from a subject. In some instances, the classifiers or biomarkers may more accurately predict a clinical outcome or status as compared to current classifiers or clinical variables. For example, a classifier or biomarker may more accurately predict metastatic disease. Alternatively, a classifier or biomarker may more accurately predict no evidence of disease. In some instances, the classifier or biomarker may more accurately predict death from a disease. The performance of a classifier or biomarker disclosed herein may be based on the AUC value, odds ratio, 95% CI, difference in range of the 95% CI, p-value or any combination thereof.

[00215] The performance of the classifiers and/or biomarkers disclosed herein may be determined by AUC values and an improvement in performance may be determined by the difference in the AUC value of the classifier or biomarker disclosed herein and the AUC value of current classifiers or clinical variables. In some instances, a classifier and/or biomarker disclosed herein outperforms current classifiers or clinical variables when the AUC value of the classifier and/or or biomarker disclosed herein is greater than the AUC value of the current classifiers or clinical variables by at least about 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.11, 0.12, 0.13, 0.14, 0.15, 0.16, 0.17, 0.18, 0.19, 0.20, 0.022, 0.25, 0.27, 0.30, 0.32, 0.35, 0.37, 0.40, 0.42, 0.45, 0.47, 0.50 or more. In some instances, the AUC value of the classifier and/or or biomarker disclosed herein is greater than the AUC value of the current classifiers or clinical variables by at least about 0.10. In some instances, the AUC value of the classifier and/or or biomarker disclosed herein is greater than the AUC value of the current classifiers or clinical variables by at least about 0.13. In some instances, the AUC value of the classifier and/or or biomarker disclosed herein is greater than the AUC value of the current classifiers or clinical variables by at least about 0.18.

[00216] The performance of the classifiers and/or biomarkers disclosed herein may be determined by the odds ratios and an improvement in performance may be determined by comparing the odds ratio of the classifier or biomarker disclosed herein and the odds ratio of current classifiers or clinical variables. Comparison of the performance of two or more classifiers, biomarkers, and/or clinical variables can be generally be based on the comparison of the absolute value of (1-odds ratio) of a first classifier, biomarker or clinical variable to the absolute value of (1-odds ratio) of a second classifier, biomarker or clinical variable. Generally, the classifier, biomarker or clinical variable with the greater absolute value of (1-odds ratio) can be considered to have better performance as compared to the classifier, biomarker or clinical variable with a smaller absolute value of (1-odds ratio).

[00217] In some instances, the performance of a classifier, biomarker or clinical variable is based on the comparison of the odds ratio and the 95% confidence interval (CI). For example, a first classifier,

biomarker or clinical variable may have a greater absolute value of (1-odds ratio) than a second classifier, biomarker or clinical variable, however, the 95% CI of the first classifier, biomarker or clinical variable may overlap 1 (e.g., poor accuracy), whereas the 95% CI of the second classifier, biomarker or clinical variable does not overlap 1. In this instance, the second classifier, biomarker or clinical variable is considered to outperform the first classifier, biomarker or clinical variable because the accuracy of the first classifier, biomarker or clinical variable is less than the accuracy of the second classifier, biomarker or clinical variable. In another example, a first classifier, biomarker or clinical variable may outperform a second classifier, biomarker or clinical variable based on a comparison of the odds ratio; however, the difference in the 95% CI of the first classifier, biomarker or clinical variable is at least about 2 times greater than the 95% CI of the second classifier, biomarker or clinical variable. In this instance, the second classifier, biomarker or clinical variable is considered to outperform the first classifier.

[00218] In some instances, a classifier or biomarker disclosed herein more accurate than a current classifier or clinical variable. The classifier or biomarker disclosed herein is more accurate than a current classifier or clinical variable if the range of 95% CI of the classifier or biomarker disclosed herein does not span or overlap 1 and the range of the 95% CI of the current classifier or clinical variable spans or overlaps 1.

[00219] In some instances, a classifier or biomarker disclosed herein more accurate than a current classifier or clinical variable. The classifier or biomarker disclosed herein is more accurate than a current classifier or clinical variable when difference in range of the 95% CI of the classifier or biomarker disclosed herein is about 0.70, 0.60, 0.50, 0.40, 0.30, 0.20, 0.15, 0.14, 0.13, 0.12, 0.10, 0.09, 0.08, 0.07, 0.06, 0.05, 0.04, 0.03, 0.02 times less than the difference in range of the 95% CI of the current classifier or clinical variable. The classifier or biomarker disclosed herein is more accurate than a current classifier or clinical variable when difference in range of the 95% CI of the classifier or biomarker disclosed herein between about 0.20 to about 0.04 times less than the difference in range of the 95% CI of the current classifier or clinical variable.

[00220] In some instances, the methods disclosed herein may comprise the use of a genomic classifier (GC) model. A general method for developing a GC model may comprise (a) providing a sample from a subject suffering from a cancer; (b) assaying the expression level for a plurality of targets; (c) generating a model by using a machine learning algorithm. In some instances, the machine learning algorithm comprises Random Forests. In another example, a GC model may developed by using a machine learning algorithm to analyze and rank genomic features. Analyzing the genomic features may comprise classifying one or more genomic features. The method may further comprise validating the classifier and/or refining the classifier by using a machine learning algorithm.

[00221] The methods disclosed herein may comprise generating one or more clinical classifiers (CC). The clinical classifier can be developed using one or more clinicopathologic variables. The clinicopathologic variables may be selected from the group comprising Lymph node invasion status (LNI); Surgical Margin Status (SMS); Seminal Vesicle Invasion (SVI); Extra Capsular Extension (ECE); Pathological Gleason Score; and the pre-operative PSA. The clinicopathologic variables may be selected from the group comprising Tumor Stage (e.g., CIS, Ta, T1, T2, T2a, T2b, T3, T3a, T4a, T4b), Nodal Status (e.g., N0, N1, N2, or N3), Lymphovascular invasion, age, or gender. The method may comprise using one or more of the clinicopathologic variables as binary variables. Alternatively, or additionally, the one or more clinicopathologic variables may be converted to a logarithmic value (e.g., log10). The method may further comprise assembling the variables in a logistic regression. In some instances, the CC is combined with the GC to produce a genomic clinical classifier (GCC).

[00222] In some instances, the methods disclosed herein may comprise the use of a genomic-clinical classifier (GCC) model. A general method for developing a GCC model may comprise (a) providing a sample from a subject suffering from a cancer; (b) assaying the expression level for a plurality of targets; (c) generating a model by using a machine learning algorithm. In some instances, the machine learning algorithm comprises Random Forests.

Cancer

[00223] The systems, compositions and methods disclosed herein may be used to diagnosis, monitor and/or predict the status or outcome of a cancer. Generally, a cancer is characterized by the uncontrolled growth of abnormal cells anywhere in a body. The abnormal cells may be termed cancer cells, malignant cells, or tumor cells. Many cancers and the abnormal cells that compose the cancer tissue are further identified by the name of the tissue that the abnormal cells originated from (for example, bladder cancer, lung cancer, colon cancer, prostate cancer, pancreatic cancer, thyroid cancer). Cancer is not confined to humans; animals and other living organisms can get cancer.

[00224] In some instances, the cancer may be malignant. Alternatively, the cancer may be benign. The cancer may be a recurrent and/or refractory cancer. Most cancers can be classified as a carcinoma, sarcoma, leukemia, lymphoma, myeloma, or a central nervous system cancer.

[00225] The cancer may be a sarcoma. Sarcomas are cancers of the bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue. Sarcomas include, but are not limited to, bone cancer, fibrosarcoma, chondrosarcoma, Ewing's sarcoma, malignant hemangioendothelioma, malignant schwannoma, bilateral vestibular schwannoma, osteosarcoma, soft tissue sarcomas (e.g. alveolar soft part sarcoma, angiosarcoma, cystosarcoma phylloides, dermatofibrosarcoma, desmoid tumor, epithelioid sarcoma, extraskeletal osteosarcoma, fibrosarcoma, hemangiopericytoma, hemangiosarcoma, Kaposi's

sarcoma, leiomyosarcoma, liposarcoma, lymphangiosarcoma, lymphosarcoma, malignant fibrous histiocytoma, neurofibrosarcoma, rhabdomyosarcoma, and synovial sarcoma).

[00226] Alternatively, the cancer may be a carcinoma. Carcinomas are cancers that begin in the epithelial cells, which are cells that cover the surface of the body, produce hormones, and make up glands. By way of non-limiting example, carcinomas include breast cancer, pancreatic cancer, lung cancer, colon cancer, colorectal cancer, rectal cancer, kidney cancer, bladder cancer, stomach cancer, prostate cancer, liver cancer, ovarian cancer, brain cancer, vaginal cancer, vulvar cancer, uterine cancer, oral cancer, penic cancer, testicular cancer, esophageal cancer, skin cancer, cancer of the fallopian tubes, head and neck cancer, gastrointestinal stromal cancer, adenocarcinoma, cutaneous or intraocular melanoma, cancer of the anal region, cancer of the small intestine, cancer of the endocrine system, cancer of the thyroid gland, cancer of the parathyroid gland, cancer of the adrenal gland, cancer of the urethra, cancer of the renal pelvis, cancer of the ureter, cancer of the endometrium, cancer of the cervix, cancer of the pituitary gland, neoplasms of the central nervous system (CNS), primary CNS lymphoma, brain stem glioma, and spinal axis tumors. In some instances, the cancer is a skin cancer, such as a basal cell carcinoma, squamous, melanoma, nonmelanoma, or actinic (solar) keratosis. Preferably, the cancer is a bladder cancer. Alternatively, the cancer may be a thyroid cancer, prostate cancer, or pancreatic cancer.

[00227] In some instances, the cancer is a lung cancer. Lung cancer can start in the airways that branch off the trachea to supply the lungs (bronchi) or the small air sacs of the lung (the alveoli). Lung cancers include non-small cell lung carcinoma (NSCLC), small cell lung carcinoma, and mesotheliomia. Examples of NSCLC include squamous cell carcinoma, adenocarcinoma, and large cell carcinoma. The mesothelioma may be a cancerous tumor of the lining of the lung and chest cavitity (pleura) or lining of the abdomen (peritoneum). The mesothelioma may be due to asbestos exposure. The cancer may be a brain cancer, such as a glioblastoma.

[00228] In some instances, the cancer is a bladder cancer. Bladder cancer is the fourth most common type of cancer in men and the ninth most common cancer in women. Invasive bladder cancer has a propensity for lymphnode metastasis. In some instances, the bladder cancer can be non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer.

[00229] Alternatively, the cancer may be a central nervous system (CNS) tumor. CNS tumors may be classified as gliomas or nongliomas. The glioma may be malignant glioma, high grade glioma, diffuse intrinsic pontine glioma. Examples of gliomas include astrocytomas, oligodendrogliomas (or mixtures of oligodendroglioma and astocytoma elements), and ependymomas. Astrocytomas include, but are not limited to, low-grade astrocytomas, anaplastic astrocytomas, glioblastoma multiforme, pilocytic astrocytoma, pleomorphic xanthoastrocytoma, and subependymal giant cell astrocytoma. Oligodendrogliomas include low-grade oligodendrogliomas (or oligoastrocytomas) and anaplastic

oligodendriogliomas. Nongliomas include meningiomas, pituitary adenomas, primary CNS lymphomas, and medulloblastomas. In some instances,the cancer is a meningioma.

[00230] The cancer may be a leukemia. The leukemia may be an acute lymphocytic leukemia, acute myelocytic leukemia, chronic lymphocytic leukemia, or chronic myelocytic leukemia. Additional types of leukemias include hairy cell leukemia, chronic myelomonocytic leukemia, and juvenile myelomonocytic-leukemia.

[00231] In some instances, the cancer is a lymphoma. Lymphomas are cancers of the lymphocytes and may develop from either B or T lymphocytes. The two major types of lymphoma are Hodgkin's lymphoma, previously known as Hodgkin's disease, and non-Hodgkin's lymphoma. Hodgkin's lymphoma is marked by the presence of the Reed-Sternberg cell. Non-Hodgkin's lymphomas are all lymphomas which are not Hodgkin's lymphoma. Non-Hodgkin lymphomas may be indolent lymphomas and aggressive lymphomas. Non-Hodgkin's lymphomas include, but are not limited to, diffuse large B cell lymphoma, follicular lymphoma, mucosa-associated lymphatic tissue lymphoma (MALT), small cell lymphocytic lymphoma, mantle cell lymphoma, Burkitt's lymphoma, mediastinal large B cell lymphoma, Waldenström macroglobulinemia, nodal marginal zone B cell lymphoma (NMZL), splenic marginal zone lymphoma (SMZL), extranodal marginal zone B cell lymphoma, intravascular large B cell lymphoma, primary effusion lymphoma, and lymphomatoid granulomatosis.

Cancer Staging

[00232] Diagnosing, predicting, or monitoring a status or outcome of a cancer may comprise determining the stage of the cancer. Generally, the stage of a cancer is a description (usually numbers I to IV with IV having more progression) of the extent the cancer has spread. The stage often takes into account the size of a tumor, how deeply it has penetrated, whether it has invaded adjacent organs, how many lymph nodes it has metastasized to (if any), and whether it has spread to distant organs. Staging of cancer can be used as a predictor of survival, and cancer treatment may be determined by staging. Determining the stage of the cancer may occur before, during, or after treatment. The stage of the cancer may also be determined at the time of diagnosis.

[00233] Cancer staging can be divided into a clinical stage and a pathologic stage. Cancer staging may comprise the TNM classification. Generally, the TNM Classification of Malignant Tumours (TNM) is a cancer staging system that describes the extent of cancer in a patient's body. T may describe the size of the tumor and whether it has invaded nearby tissue, N may describe regional lymph nodes that are involved, and M may describe distant metastasis (spread of cancer from one body part to another). In the TNM (Tumor, Node, Metastasis) system, clinical stage and pathologic stage are denoted by a small "c" or "p" before the stage (e.g., cT3N1M0 or pT2N0).

[00234] Often, clinical stage and pathologic stage may differ. Clinical stage may be based on all of the available information obtained before a surgery to remove the tumor. Thus, it may include information about the tumor obtained by physical examination, radiologic examination, and endoscopy. Pathologic stage can add additional information gained by examination of the tumor microscopically by a pathologist. Pathologic staging can allow direct examination of the tumor and its spread, contrasted with clinical staging which may be limited by the fact that the information is obtained by making indirect observations at a tumor which is still in the body. The TNM staging system can be used for most forms of cancer.

[00235] Alternatively, staging may comprise Ann Arbor staging. Generally, Ann Arbor staging is the staging system for lymphomas, both in Hodgkin's lymphoma (previously called Hodgkin's disease) and Non-Hodgkin lymphoma (abbreviated NHL). The stage may depend on both the place where the malignant tissue is located (as located with biopsy, CT scanning and increasingly positron emission tomography) and on systemic symptoms due to the lymphoma ("B symptoms": night sweats, weight loss of >10% or fevers). The principal stage may be determined by location of the tumor. Stage I may indicate that the cancer is located in a single region, usually one lymph node and the surrounding area. Stage I often may not have outward symptoms. Stage II can indicate that the cancer is located in two separate regions, an affected lymph node or organ and a second affected area, and that both affected areas are confined to one side of the diaphragm - that is, both are above the diaphragm, or both are below the diaphragm. Stage III often indicates that the cancer has spread to both sides of the diaphragm, including one organ or area near the lymph nodes or the spleen. Stage IV may indicate diffuse or disseminated involvement of one or more extralymphatic organs, including any involvement of the liver, bone marrow, or nodular involvement of the lungs.

[00236] Modifiers may also be appended to some stages. For example, the letters A, B, E, X, or S can be appended to some stages. Generally, A or B may indicate the absence of constitutional (B-type) symptoms is denoted by adding an "A" to the stage; the presence is denoted by adding a "B" to the stage. E can be used if the disease is "extranodal" (not in the lymph nodes) or has spread from lymph nodes to adjacent tissue. X is often used if the largest deposit is >10 cm large ("bulky disease"), or whether the mediastinum is wider than 1/3 of the chest on a chest X-ray. S may be used if the disease has spread to the spleen.

[00237] The nature of the staging may be expressed with CS or PS. CS may denote that the clinical stage as obtained by doctor's examinations and tests. PS may denote that the pathological stage as obtained by exploratory laparotomy (surgery performed through an abdominal incision) with splenectomy (surgical removal of the spleen).

[00238] TNM classification may be used as the staging system for bladder tumors. In this aspect, the staging system takes into account how deep the tumor has grown into the bladder, whether there is cancer in the lymph nodes and whether the cancer has spread to any other part of the body. According to the TNM staging system, bladder cancer can be staged as follows: In bladder cancer stage 0, cancer cells are confined to the mucosa. In bladder cancer stage I the tumor invades the subepithelial connective tissue/lamina propria. In bladder cancer stage II cancer cells have invaded the muscularis propria but the tumor is still organ-confined. In bladder cancer stage III cancer cells have extended through the bladder wall to the perivesical tissue or to the Prostatic stroma, uterus or vagina. In bladder cancer stage IV cancer cells have proliferated to the lymph nodes, pelvic or abdominal wall, and/or other organs. The "bladder cancer" in the context of the present invention, may encompass any of the aforementioned stages.

Markers for Bladder Cancer

[00239] Several biomarkers for bladder cancer diagnosis have been described. The BTA-Stat test detects complement factor H (CFH) and related proteins (CFH-rp). The nuclear matrix protein 22 (NMP22) test (Matritech, Newton, MA) is a double monoclonal antibody test designed to measure quantitatively the nuclear mitotic apparatus (MUMA) protein. The ImmunoCyt test (Diagno-Cure Inc., Sainte-Foy, Quebec Canada) detects bladder cancer markers present on exfoliated cells using a cocktail of fluorescent antibodies (19A211, M344 and LDQ10). The UroVysion test (Vysis Chicago, IL) employs centromere probes specific to chromosomes 3, 7, 17 and 9 to detect aneuploidy associated with bladder cancer. Other markers for bladder cancer include survivin, cytokeratins, telomerase, BLCA-4, microsatellite detection, hyaluronic acid and hyaluronidase, urine fibronectin, and chorionic gonadotropin. Use of these markers in combination with the markers and genomic classifiers of the present invention are specifically contemplated herein.

Therapeutic regimens

[00240] Diagnosing, predicting, or monitoring a status or outcome of a cancer may comprise treating a cancer or preventing a cancer progression. In addition, diagnosing, predicting, or monitoring a status or outcome of a cancer may comprise identifying or predicting responders to an anti-cancer therapy. In some instances, diagnosing, predicting, or monitoring may comprise determining a therapeutic regimen. Determining a therapeutic regimen may comprise administering an anti-cancer therapy. Alternatively, determining a therapeutic regimen may comprise modifying, recommending, continuing or discontinuing an anti-cancer regimen. In some instances, if the sample expression patterns are consistent with the expression pattern for a known disease or disease outcome, the expression patterns can be used to designate one or more treatment modalities (e.g., therapeutic regimens, anti-cancer regimen). An anti-

cancer regimen may comprise one or more anti-cancer therapies. Examples of anti-cancer therapies include surgery, chemotherapy, radiation therapy, immunotherapy/biological therapy, photodynamic therapy.

[00241] Surgical oncology uses surgical methods to diagnose, stage, and treat cancer, and to relieve certain cancer-related symptoms. Surgery may be used to remove the tumor (e.g., excisions, resections, debulking surgery), reconstruct a part of the body (e.g., restorative surgery), and/or to relieve symptoms such as pain (e.g., palliative surgery). Surgery may also include cryosurgery. Cryosurgery (also called cryotherapy) may use extreme cold produced by liquid nitrogen (or argon gas) to destroy abnormal tissue. Cryosurgery can be used to treat external tumors, such as those on the skin. For external tumors, liquid nitrogen can be applied directly to the cancer cells with a cotton swab or spraying device. Cryosurgery may also be used to treat tumors inside the body (internal tumors and tumors in the bone). For internal tumors, liquid nitrogen or argon gas may be circulated through a hollow instrument called a cryoprobe, which is placed in contact with the tumor. An ultrasound or MRI may be used to guide the cryoprobe and monitor the freezing of the cells, thus limiting damage to nearby healthy tissue. A ball of ice crystals may form around the probe, freezing nearby cells. Sometimes more than one probe is used to deliver the liquid nitrogen to various parts of the tumor. The probes may be put into the tumor during surgery or through the skin (percutaneously). After cryosurgery, the frozen tissue thaws and may be naturally absorbed by the body (for internal tumors), or may dissolve and form a scab (for external tumors).

[00242] As used herein the term "tumor margin" refers to the tissue surrounding a discernible tumor. In the case of surgical removal of a solid tumor, the tumor margin is the tissue cut away with the discernible tumor that usually appears to be normal to the naked eye. More particularly, as used herein, "margin" refers to the edge, border or boundary of a tumor. The margin generally extends from about 1 mm to about 4 mm from the primary tumor but can be greater depending upon the size of the primary solid tumor. As used herein, the terms “surgical margin”, “tumor free margin”, “free margin”, “normal skin margin”, and “normal tissue margin” refer to the visible normal tissue or skin margin that is removed with the surgical excision of a tumor, growth, or malignancy. Surgical margin as read in a pathology report define the histological measurement of normal or unaffected tissue surrounding the visible tumor under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.

[00243] Chemotherapeutic agents may also be used for the treatment of cancer. Examples of chemotherapeutic agents include alkylating agents, anti-metabolites, plant alkaloids and terpenoids, vinca alkaloids, podophyllotoxin, taxanes, topoisomerase inhibitors, and cytotoxic antibiotics. Cisplatin, carboplatin, and oxaliplatin are examples of alkylating agents. Other alkylating agents include

mechlorethamine, cyclophosphamide, chlorambucil, ifosfamide. Alkylating agens may impair cell function by forming covalent bonds with the amino, carboxyl, sulfhydryl, and phosphate groups in biologically important molecules. Alternatively, alkylating agents may chemically modify a cell's DNA.

[00244] Anti-metabolites are another example of chemotherapeutic agents. Anti-metabolites may masquerade as purines or pyrimidines and may prevent purines and pyrimidines from becoming incorporated in to DNA during the "S" phase (of the cell cycle), thereby stopping normal development and division. Antimetabolites may also affect RNA synthesis. Examples of metabolites include azathioprine and mercaptopurine.

[00245] Alkaloids may be derived from plants and block cell division may also be used for the treatment of cancer. Alkyloids may prevent microtubule function. Examples of alkaloids are vinca alkaloids and taxanes. Vinca alkaloids may bind to specific sites on tubulin and inhibit the assembly of tubulin into microtubules (M phase of the cell cycle). The vinca alkaloids may be derived from the Madagascar periwinkle, *Catharanthus roseus* (formerly known as *Vinca rosea*). Examples of vinca alkaloids include, but are not limited to, vincristine, vinblastine, vinorelbine, or vindesine. Taxanes are diterpenes produced by the plants of the genus *Taxus* (yews). Taxanes may be derived from natural sources or synthesized artificially. Taxanes include paclitaxel (Taxol) and docetaxel (Taxotere). Taxanes may disrupt microtubule function. Microtubules are essential to cell division, and taxanes may stabilize GDP-bound tubulin in the microtubule, thereby inhibiting the process of cell division. Thus, in essence, taxanes may be mitotic inhibitors. Taxanes may also be radiosensitizing and often contain numerous chiral centers.

[00246] Alternative chemotherapeutic agents include podophyllotoxin. Podophyllotoxin is a plant-derived compound that may help with digestion and may be used to produce cytostatic drugs such as etoposide and teniposide. They may prevent the cell from entering the G1 phase (the start of DNA replication) and the replication of DNA (the S phase).

[00247] Topoisomerases are essential enzymes that maintain the topology of DNA. Inhibition of type I or type II topoisomerases may interfere with both transcription and replication of DNA by upsetting proper DNA supercoiling. Some chemotherapeutic agents may inhibit topoisomerases. For example, some type I topoisomerase inhibitors include *camptothecins*: irinotecan and topotecan. Examples of type II inhibitors include amsacrine, etoposide, etoposide phosphate, and teniposide.

[00248] Another example of chemotherapeutic agents is cytotoxic antibiotics. Cytotoxic antibiotics are a group of antibiotics that are used for the treatment of cancer because they may interfere with DNA replication and/or protein synthesis. Cytotoxic antiobiotics include, but are not limited to, actinomycin, anthracyclines, doxorubicin, daunorubicin, valrubicin, idarubicin, epirubicin, bleomycin, plicamycin, and mitomycin.

[00249] Chemotherapeutic agents may be used alone or in combination. Examples of therapeutic combinations used to treat bladder cancer include: Gemcitabine and cisplatin; Methotrexate, vinblastine, doxorubicin (Adriamycin), and cisplatin (called M-VAC); Carboplatin and either paclitaxel or docetaxel (for patients with poor kidney function).

[00250] In some instances, the anti-cancer treatment may comprise radiation therapy. Radiation can come from a machine outside the body (external-beam radiation therapy) or from radioactive material placed in the body near cancer cells (internal radiation therapy, more commonly called brachytherapy). Systemic radiation therapy uses a radioactive substance, given by mouth or into a vein that travels in the blood to tissues throughout the body.

[00251] External-beam radiation therapy may be delivered in the form of photon beams (either x-rays or gamma rays). A photon is the basic unit of light and other forms of electromagnetic radiation. An example of external-beam radiation therapy is called 3-dimensional conformal radiation therapy (3D-CRT). 3D-CRT may use computer software and advanced treatment machines to deliver radiation to very precisely shaped target areas. Many other methods of external-beam radiation therapy are currently being tested and used in cancer treatment. These methods include, but are not limited to, intensity-modulated radiation therapy (IMRT), image-guided radiation therapy (IGRT), Stereotactic radiosurgery (SRS), Stereotactic body radiation therapy (SBRT), and proton therapy.

[00252] Intensity-modulated radiation therapy (IMRT) is an example of external-beam radiation and may use hundreds of tiny radiation beam-shaping devices, called collimators, to deliver a single dose of radiation. The collimators can be stationary or can move during treatment, allowing the intensity of the radiation beams to change during treatment sessions. This kind of dose modulation allows different areas of a tumor or nearby tissues to receive different doses of radiation. IMRT is planned in reverse (called inverse treatment planning). In inverse treatment planning, the radiation doses to different areas of the tumor and surrounding tissue are planned in advance, and then a high-powered computer program calculates the required number of beams and angles of the radiation treatment. In contrast, during traditional (forward) treatment planning, the number and angles of the radiation beams are chosen in advance and computers calculate how much dose may be delivered from each of the planned beams. The goal of IMRT is to increase the radiation dose to the areas that need it and reduce radiation exposure to specific sensitive areas of surrounding normal tissue.

[00253] Another example of external-beam radiation is image-guided radiation therepy (IGRT). In IGRT, repeated imaging scans (CT, MRI, or PET) may be performed during treatment. These imaging scans may be processed by computers to identify changes in a tumor's size and location due to treatment and to allow the position of the patient or the planned radiation dose to be adjusted during treatment as

needed. Repeated imaging can increase the accuracy of radiation treatment and may allow reductions in the planned volume of tissue to be treated, thereby decreasing the total radiation dose to normal tissue.

[00254] Tomotherapy is a type of image-guided IMRT. A tomotherapy machine is a hybrid between a CT imaging scanner and an external-beam radiation therapy machine. The part of the tomotherapy machine that delivers radiation for both imaging and treatment can rotate completely around the patient in the same manner as a normal CT scanner. Tomotherapy machines can capture CT images of the patient's tumor immediately before treatment sessions, to allow for very precise tumor targeting and sparing of normal tissue.

[00255] Stereotactic radiosurgery (SRS) can deliver one or more high doses of radiation to a small tumor. SRS uses extremely accurate image-guided tumor targeting and patient positioning. Therefore, a high dose of radiation can be given without excess damage to normal tissue. SRS can be used to treat small tumors with well-defined edges. It is most commonly used in the treatment of brain or spinal tumors and brain metastases from other cancer types. For the treatment of some brain metastases, patients may receive radiation therapy to the entire brain (called whole-brain radiation therapy) in addition to SRS. SRS requires the use of a head frame or other device to immobilize the patient during treatment to ensure that the high dose of radiation is delivered accurately.

[00256] Stereotactic body radiation therapy (SBRT) delivers radiation therapy in fewer sessions, using smaller radiation fields and higher doses than 3D-CRT in most cases. SBRT may treat tumors that lie outside the brain and spinal cord. Because these tumors are more likely to move with the normal motion of the body, and therefore cannot be targeted as accurately as tumors within the brain or spine, SBRT is usually given in more than one dose. SBRT can be used to treat small, isolated tumors, including cancers in the lung and liver. SBRT systems may be known by their brand names, such as the CyberKnife®.

[00257] In proton therapy, external-beam radiation therapy may be delivered by proton. Protons are a type of charged particle. Proton beams differ from photon beams mainly in the way they deposit energy in living tissue. Whereas photons deposit energy in small packets all along their path through tissue, protons deposit much of their energy at the end of their path (called the Bragg peak) and deposit less energy along the way. Use of protons may reduce the exposure of normal tissue to radiation, possibly allowing the delivery of higher doses of radiation to a tumor.

[00258] Other charged particle beams such as electron beams may be used to irradiate superficial tumors, such as skin cancer or tumors near the surface of the body, but they cannot travel very far through tissue.

[00259] Internal radiation therapy (brachytherapy) is radiation delivered from radiation sources (radioactive materials) placed inside or on the body. Several brachytherapy techniques are used in cancer treatment. Interstitial brachytherapy may use a radiation source placed within tumor tissue, such as within

a bladder tumor. Intracavitary brachytherapy may use a source placed within a surgical cavity or a body cavity, such as the chest cavity, near a tumor. Episcleral brachytherapy, which may be used to treat melanoma inside the eye, may use a source that is attached to the eye. In brachytherapy, radioactive isotopes can be sealed in tiny pellets or "seeds." These seeds may be placed in patients using delivery devices, such as needles, catheters, or some other type of carrier. As the isotopes decay naturally, they give off radiation that may damage nearby cancer cells. Brachytherapy may be able to deliver higher doses of radiation to some cancers than external-beam radiation therapy while causing less damage to normal tissue.

[00260] Brachytherapy can be given as a low-dose-rate or a high-dose-rate treatment. In low-dose-rate treatment, cancer cells receive continuous low-dose radiation from the source over a period of several days. In high-dose-rate treatment, a robotic machine attached to delivery tubes placed inside the body may guide one or more radioactive sources into or near a tumor, and then removes the sources at the end of each treatment session. High-dose-rate treatment can be given in one or more treatment sessions. An example of a high-dose-rate treatment is the MammoSite® system. Bracytherapy may be used to treat patients with breast cancer who have undergone breast-conserving surgery.

[00261] The placement of brachytherapy sources can be temporary or permanent. For permament brachytherapy, the sources may be surgically sealed within the body and left there, even after all of the radiation has been given off. In some instances, the remaining material (in which the radioactive isotopes were sealed) does not cause any discomfort or harm to the patient. Permanent brachytherapy is a type of low-dose-rate brachytherapy. For temporary brachytherapy, tubes (catheters) or other carriers are used to deliver the radiation sources, and both the carriers and the radiation sources are removed after treatment. Temporary brachytherapy can be either low-dose-rate or high-dose-rate treatment. Brachytherapy may be used alone or in addition to external-beam radiation therapy to provide a "boost" of radiation to a tumor while sparing surrounding normal tissue.

[00262] In systemic radiation therapy, a patient may swallow or receive an injection of a radioactive substance, such as radioactive iodine or a radioactive substance bound to a monoclonal antibody. Radioactive iodine (131I) is a type of systemic radiation therapy commonly used to help treat cancer, such as thyroid cancer. Thyroid cells naturally take up radioactive iodine. For systemic radiation therapy for some other types of cancer, a monoclonal antibody may help target the radioactive substance to the right place. The antibody joined to the radioactive substance travels through the blood, locating and killing tumor cells. For example, the drug ibritumomab tiuxetan (Zevalin®) may be used for the treatment of certain types of B-cell non-Hodgkin lymphoma (NHL). The antibody part of this drug recognizes and binds to a protein found on the surface of B lymphocytes. The combination drug regimen of tositumomab and iodine I 131 tositumomab (Bexxar®) may be used for the treatment of certain types of cancer, such as

NHL. In this regimen, nonradioactive tositumomab antibodies may be given to patients first, followed by treatment with tositumomab antibodies that have 131I attached. Tositumomab may recognize and bind to the same protein on B lymphocytes as ibritumomab. The nonradioactive form of the antibody may help protect normal B lymphocytes from being damaged by radiation from 131I.

[00263] Some systemic radiation therapy drugs relieve pain from cancer that has spread to the bone (bone metastases). This is a type of palliative radiation therapy. The radioactive drugs samarium-153-lexidronam (Quadramet®) and strontium-89 chloride (Metastron®) are examples of radiopharmaceuticals may be used to treat pain from bone metastases.

[00264] In certain cases, radiation therapy is combined with a chemotherapeutic agent. Examples of chemotherapeutic agents which are used in combination with radiation to treat bladder cancer include Cisplatin; Cisplatin plus fluorouracil (5-FU); and Mitomycin with 5-FU.

[00265] Biological therapy (sometimes called immunotherapy, biotherapy, or biological response modifier (BRM) therapy) uses the body's immune system, either directly or indirectly, to fight cancer or to lessen the side effects that may be caused by some cancer treatments. Biological therapies include interferons, interleukins, colony-stimulating factors, monoclonal antibodies, vaccines, gene therapy, and nonspecific immunomodulating agents.

[00266] Interferons (IFNs) are types of cytokines that occur naturally in the body. Interferon alpha, interferon beta, and interferon gamma are examples of interferons that may be used in cancer treatment.

[00267] Like interferons, interleukins (ILs) are cytokines that occur naturally in the body and can be made in the laboratory. Many interleukins have been identified for the treatment of cancer. For example, interleukin-2 (IL–2 or aldesleukin), interleukin 7, and interleukin 12 have may be used as an anti-cancer treatment. IL–2 may stimulate the growth and activity of many immune cells, such as lymphocytes, that can destroy cancer cells. Interleukins may be used to treat a number of cancers, including leukemia, lymphoma, and brain, colorectal, ovarian, breast, kidney and bladder cancers.

[00268] Colony-stimulating factors (CSFs) (sometimes called hematopoietic growth factors) may also be used for the treatment of cancer. Some examples of CSFs include, but are not limited to, G-CSF (filgrastim) and GM-CSF (sargramostim). CSFs may promote the division of bone marrow stem cells and their development into white blood cells, platelets, and red blood cells. Bone marrow is critical to the body's immune system because it is the source of all blood cells. Because anticancer drugs can damage the body's ability to make white blood cells, red blood cells, and platelets, stimulation of the immune system by CSFs may benefit patients undergoing other anti-cancer treatment, thus CSFs may be combined with other anti-cancer therapies, such as chemotherapy. CSFs may be used to treat a large variety of cancers, including lymphoma, leukemia, multiple myeloma, melanoma, and cancers of the brain, lung, bladder, esophagus, breast, uterus, ovary, prostate, kidney, colon, and rectum.

[00269] Another type of biological therapy includes monoclonal antibodies (MOABs or MoABs). These antibodies may be produced by a single type of cell and may be specific for a particular antigen. To create MOABs, a human cancer cells may be injected into mice. In response, the mouse immune system can make antibodies against these cancer cells. The mouse plasma cells that produce antibodies may be isolated and fused with laboratory-grown cells to create "hybrid" cells called hybridomas. Hybridomas can indefinitely produce large quantities of these pure antibodies, or MOABs. MOABs may be used in cancer treatment in a number of ways. For instance, MOABs that react with specific types of cancer may enhance a patient's immune response to the cancer. MOABs can be programmed to act against cell growth factors, thus interfering with the growth of cancer cells.

[00270] MOABs may be linked to other anti-cancer therapies such as chemotherapeutics, radioisotopes (radioactive substances), other biological therapies, or other toxins. When the antibodies latch onto cancer cells, they deliver these anti-cancer therapies directly to the tumor, helping to destroy it. MOABs carrying radioisotopes may also prove useful in diagnosing certain cancers, such as bladder, colorectal, ovarian, and prostate.

[00271] Rituxan® (rituximab) and Herceptin® (trastuzumab) are examples of MOABs that may be used as a biological therapy. Rituxan may be used for the treatment of non-Hodgkin lymphoma. Herceptin can be used to treat metastatic breast cancer in patients with tumors that produce excess amounts of a protein called HER2. Alternatively, MOABs may be used to treat lymphoma, leukemia, melanoma, and cancers of the brain, breast, lung, kidney, colon, bladder, rectum, ovary, prostate, and other areas.

[00272] Cancer vaccines are another form of biological therapy. Cancer vaccines may be designed to encourage the patient's immune system to recognize cancer cells. Cancer vaccines may be designed to treat existing cancers (therapeutic vaccines) or to prevent the development of cancer (prophylactic vaccines). Therapeutic vaccines may be injected in a person after cancer is diagnosed. These vaccines may stop the growth of existing tumors, prevent cancer from recurring, or eliminate cancer cells not killed by prior treatments. Cancer vaccines given when the tumor is small may be able to eradicate the cancer. On the other hand, prophylactic vaccines are given to healthy individuals before cancer develops. These vaccines are designed to stimulate the immune system to attack viruses that can cause cancer. By targeting these cancer-causing viruses, development of certain cancers may be prevented. For example, cervarix and gardasil are vaccines to treat human papilloma virus and may prevent cervical cancer. Therapeutic vaccines may be used to treat melanoma, lymphoma, leukemia, and cancers of the brain, breast, lung, kidney, ovary, prostate, pancreas, bladder, colon, and rectum. Cancer vaccines can be used in combination with other anti-cancer therapies.

[00273] Gene therapy is another example of a biological therapy. Gene therapy may involve introducing genetic material into a person's cells to fight disease. Gene therapy methods may improve a patient's

immune response to cancer. For example, a gene may be inserted into an immune cell to enhance its ability to recognize and attack cancer cells. In another approach, cancer cells may be injected with genes that cause the cancer cells to produce cytokines and stimulate the immune system.

[00274] In some instances, biological therapy includes nonspecific immunomodulating agents. Nonspecific immunomodulating agents are substances that stimulate or indirectly augment the immune system. Often, these agents target key immune system cells and may cause secondary responses such as increased production of cytokines and immunoglobulins. Two nonspecific immunomodulating agents used in cancer treatment are bacillus Calmette-Guerin (BCG) and levamisole. BCG may be used in the treatment of superficial bladder cancer following surgery. BCG may work by stimulating an inflammatory, and possibly an immune, response. A solution of BCG may be instilled in the bladder. Levamisole is sometimes used along with fluorouracil (5–FU) chemotherapy in the treatment of stage III (Dukes' C) colon cancer following surgery. Levamisole may act to restore depressed immune function.

[00275] Photodynamic therapy (PDT) is an anti-cancer treatment that may use a drug, called a photosensitizer or photosensitizing agent, and a particular type of light. When photosensitizers are exposed to a specific wavelength of light, they may produce a form of oxygen that kills nearby cells. A photosensitizer may be activated by light of a specific wavelength. This wavelength determines how far the light can travel into the body. Thus, photosensitizers and wavelengths of light may be used to treat different areas of the body with PDT.

[00276] In the first step of PDT for cancer treatment, a photosensitizing agent may be injected into the bloodstream. The agent may be absorbed by cells all over the body but may stay in cancer cells longer than it does in normal cells. Approximately 24 to 72 hours after injection, when most of the agent has left normal cells but remains in cancer cells, the tumor can be exposed to light. The photosensitizer in the tumor can absorb the light and produces an active form of oxygen that destroys nearby cancer cells. In addition to directly killing cancer cells, PDT may shrink or destroy tumors in two other ways. The photosensitizer can damage blood vessels in the tumor, thereby preventing the cancer from receiving necessary nutrients. PDT may also activate the immune system to attack the tumor cells.

[00277] The light used for PDT can come from a laser or other sources. Laser light can be directed through fiber optic cables (thin fibers that transmit light) to deliver light to areas inside the body. For example, a fiber optic cable can be inserted through an endoscope (a thin, lighted tube used to look at tissues inside the body) into the lungs or esophagus to treat cancer in these organs. Other light sources include light-emitting diodes (LEDs), which may be used for surface tumors, such as skin cancer. PDT is usually performed as an outpatient procedure. PDT may also be repeated and may be used with other therapies, such as surgery, radiation, or chemotherapy.

[00278] Extracorporeal photopheresis (ECP) is a type of PDT in which a machine may be used to collect the patient's blood cells. The patient's blood cells may be treated outside the body with a photosensitizing agent, exposed to light, and then returned to the patient. ECP may be used to help lessen the severity of skin symptoms of cutaneous T-cell lymphoma that has not responded to other therapies. ECP may be used to treat other blood cancers, and may also help reduce rejection after transplants.

[00279] Additionally, photosensitizing agent, such as porfimer sodium or Photofrin®, may be used in PDT to treat or relieve the symptoms of esophageal cancer and non-small cell lung cancer. Porfimer sodium may relieve symptoms of esophageal cancer when the cancer obstructs the esophagus or when the cancer cannot be satisfactorily treated with laser therapy alone. Porfimer sodium may be used to treat non-small cell lung cancer in patients for whom the usual treatments are not appropriate, and to relieve symptoms in patients with non-small cell lung cancer that obstructs the airways. Porfimer sodium may also be used for the treatment of precancerous lesions in patients with Barrett esophagus, a condition that can lead to esophageal cancer.

[00280] Laser therapy may use high-intensity light to treat cancer and other illnesses. Lasers can be used to shrink or destroy tumors or precancerous growths. Lasers are most commonly used to treat superficial cancers (cancers on the surface of the body or the lining of internal organs) such as basal cell skin cancer and the very early stages of some cancers, such as cervical, penile, vaginal, vulvar, and non-small cell lung cancer.

[00281] Lasers may also be used to relieve certain symptoms of cancer, such as bleeding or obstruction. For example, lasers can be used to shrink or destroy a tumor that is blocking a patient's trachea (windpipe) or esophagus. Lasers also can be used to remove colon polyps or tumors that are blocking the colon or stomach.

[00282] Laser therapy is often given through a flexible endoscope (a thin, lighted tube used to look at tissues inside the body). The endoscope is fitted with optical fibers (thin fibers that transmit light). It is inserted through an opening in the body, such as the mouth, nose, anus, or vagina. Laser light is then precisely aimed to cut or destroy a tumor.

[00283] Laser-induced interstitial thermotherapy (LITT), or interstitial laser photocoagulation, also uses lasers to treat some cancers. LITT is similar to a cancer treatment called hyperthermia, which uses heat to shrink tumors by damaging or killing cancer cells. During LITT, an optical fiber is inserted into a tumor. Laser light at the tip of the fiber raises the temperature of the tumor cells and damages or destroys them. LITT is sometimes used to shrink tumors in the liver.

[00284] Laser therapy can be used alone, but most often it is combined with other treatments, such as surgery, chemotherapy, or radiation therapy. In addition, lasers can seal nerve endings to reduce pain after surgery and seal lymph vessels to reduce swelling and limit the spread of tumor cells.

[00285] Lasers used to treat cancer may include carbon dioxide (CO2) lasers, argon lasers, and neodymium:yttrium-aluminum-garnet (Nd:YAG) lasers. Each of these can shrink or destroy tumors and can be used with endoscopes. CO2 and argon lasers can cut the skin's surface without going into deeper layers. Thus, they can be used to remove superficial cancers, such as skin cancer. In contrast, the Nd:YAG laser is more commonly applied through an endoscope to treat internal organs, such as the uterus, esophagus, and colon. Nd:YAG laser light can also travel through optical fibers into specific areas of the body during LITT. Argon lasers are often used to activate the drugs used in PDT.

[00286] Target sequences can be grouped so that information obtained about the set of target sequences in the group can be used to make or assist in making a clinically relevant judgment such as a diagnosis, prognosis, or treatment choice.

[00287] A patient report is also provided comprising a representation of measured expression levels of a plurality of target sequences in a biological sample from the patient, wherein the representation comprises expression levels of target sequences corresponding to any one, two, three, four, five, six, eight, ten, twenty, thirty, fifty or more of the target sequences corresponding to a target selected from Table 2 or SEQ ID NOs:1-51, the subsets described herein, or a combination thereof. A patient report is also provided comprising a representation of measured expression levels of a plurality of target sequences in a biological sample from the patient, wherein the representation comprises expression levels of target sequences corresponding to 40, 50, 60, 70, 80, 90, 100 or more of the target sequences corresponding to a target selected from Table 2 or SEQ ID NOs:1-51, the subsets described herein, or a combination thereof. or more coding targets and/or non-coding targets selected from Table 2 or SEQ ID NOs:1-51. A patient report is also provided comprising a representation of measured expression levels of a plurality of target sequences in a biological sample from the patient, wherein the representation comprises expression levels of target sequences corresponding to 100, 125, 150, 175, 200, 225, 250, 275, 300 or more of the target sequences corresponding to a target selected from Table 2 or SEQ ID NOs:1-51, the subsets described herein, or a combination thereof. A patient report is also provided comprising a representation of measured expression levels of a plurality of target sequences in a biological sample from the patient, wherein the representation comprises expression levels of target sequences corresponding to 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, 575, 600 or more of the target sequences corresponding to a target selected from Table 2 or SEQ ID NOs:1-51, the subsets described herein, or a combination thereof. A patient report is also provided comprising a representation of measured expression levels of a plurality of target sequences in a biological sample from the patient, wherein the representation comprises expression levels of target sequences corresponding to 600, 625, 650, 675, 700, 725, 750, 775, 800, 825, 850 or more of the target sequences corresponding to a target selected from Table 2 or SEQ ID NOs:1-51, the subsets described herein, or a combination thereof. In some embodiments, the representation of the

measured expression level(s) may take the form of a linear or nonlinear combination of expression levels of the target sequences of interest. The patient report may be provided in a machine (e.g., a computer) readable format and/or in a hard (paper) copy. The report can also include standard measurements of expression levels of said plurality of target sequences from one or more sets of patients with known disease status and/or outcome. The report can be used to inform the patient and/or treating physician of the expression levels of the expressed target sequences, the likely medical diagnosis and/or implications, and optionally may recommend a treatment modality for the patient.

[00288] Also provided are representations of the gene expression profiles useful for treating, diagnosing, prognosticating, and otherwise assessing disease. In some embodiments, these profile representations are reduced to a medium that can be automatically read by a machine such as computer readable media (magnetic, optical, and the like). The articles can also include instructions for assessing the gene expression profiles in such media. For example, the articles may comprise a readable storage form having computer instructions for comparing gene expression profiles of the portfolios of genes described above. The articles may also have gene expression profiles digitally recorded therein so that they may be compared with gene expression data from patient samples. Alternatively, the profiles can be recorded in different representational format. A graphical recordation is one such format. Clustering algorithms can assist in the visualization of such data.

Exemplary embodiments

[00289] Disclosed herein, in some embodiments, is a method for diagnosing, predicting, and/or monitoring a status or outcome of a cancer a subject, comprising: (a) assaying an expression level of a plurality of targets in a sample from the subject, wherein at least one target of the plurality of targets is selected from the group consisting of targets identified in Table 1; and (b) for diagnosing, predicting, and/or monitoring a status or outcome of a cancer based on the expression levels of the plurality of targets. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a bladder cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the method further comprises assaying an expression level of a coding

target. In some instances, the coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some embodiments, the coding target is an exon-coding transcript. In some embodiments, the exon-coding transcript is an exonic sequence. In some embodiments, the method further comprises assaying an expression level of a non-coding target. In some instances, the non-coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the non-coding target is a non-coding transcript. In other instances, the non-coding target is an intronic sequence. In other instances, the non-coding target is an intergenic sequence. In some instances, the non-coding target is a UTR sequence. In other instances, the non-coding target is a non-coding RNA transcript. In some embodiments, the target comprises a nucleic acid sequence. In some embodiments, the nucleic acid sequence is a DNA sequence. In some embodiments, the nucleic acid sequence is an RNA sequence. In other instances, the target comprises a polypeptide sequence. In some instances, the plurality of targets comprises 2 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 5 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 10 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 15 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 20 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 25 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 30 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 35 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 40 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and

SEQ ID NO. 13. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID

NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, assaying the expression level comprises detecting and/or quantifying a nucleotide sequence of the plurality of targets. Alternatively, assaying the expression level comprises detecting and/or quantifying a polypeptide sequence of the plurality of targets. In some embodiments, assaying the expression level comprises detecting and/or quantifying the DNA levels of the plurality of targets. In some embodiments, assaying the expression level comprises detecting and/or quantifying the RNA or mRNA levels of the plurality of targets. In some embodiments, assaying the expression level comprises detecting and/or quantifying the protein level of the plurality of targets. In some embodiments, the diagnosing, predicting, and/or monitoring the status or outcome of a cancer comprises determining the malignancy of the cancer. In some embodiments, the diagnosing, predicting, and/or monitoring the status or outcome of a cancer includes determining the stage of the cancer. In some embodiments, the diagnosing, predicting, and/or monitoring the status or outcome of a cancer includes assessing the risk of systemic cancer, such as, for example, lymph node metastasis. In some embodiments, diagnosing, predicting, and/or monitoring the status or outcome of a cancer may comprise determining the efficacy of treatment. In some embodiments, diagnosing, predicting, and/or monitoring the status or outcome of a cancer may comprise determining a therapeutic regimen. Determining a therapeutic regimen may comprise administering an anti-cancer therapeutic. Alternatively, determining the treatment for the cancer may comprise modifying a therapeutic regimen. Modifying a therapeutic regimen may comprise increasing, decreasing, or terminating a therapeutic regimen.

[00290] Further disclosed, in some embodiments, is method for determining a treatment for a cancer in a subject, comprising: a) assaying an expression level of a plurality of targets in a sample from the subject, wherein at least one target of the plurality of targets is selected from the group consisting of targets identified in Table 1; and b) determining the treatment for a cancer based on the expression levels of the plurality of targets. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a bladder cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some embodiments, the coding target is selected from a sequence listed in Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises assaying an expression level of a coding target. In some instances, the coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some embodiments, the coding target is an exon-coding transcript. In some embodiments, the exon-coding transcript is an exonic sequence. In some embodiments, the method further comprises assaying an expression level of a non-coding target. In some instances, the non-coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the non-coding target is a non-coding transcript. In other instances, the non-coding target is an intronic sequence. In other instances, the non-coding target is an intergenic sequence. In some instances, the non-coding target is a UTR sequence. In other instances, the non-coding target is a non-coding RNA transcript. In some embodiments, the target comprises a nucleic acid sequence. In some embodiments, the nucleic acid sequence is a DNA sequence. In some embodiments, the nucleic acid sequence is an RNA sequence. In other instances, the target comprises a polypeptide sequence. In some instances, the plurality of targets comprises 2 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 5 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 10 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 15 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 20 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 25 or

more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 30 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 35 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 40 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ

ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, assaying the expression level comprises detecting and/or quantifying a nucleotide sequence of the plurality of targets. In some embodiments, determining the treatment for the cancer includes determining the efficacy of treatment. Determining the treatment for the cancer may comprise administering an anti-cancer

therapeutic. Alternatively, determining the treatment for the cancer may comprise modifying a therapeutic regimen. Modifying a therapeutic regimen may comprise increasing, decreasing, or terminating a therapeutic regimen.

[00291] The methods use the probe sets, probes and primers described herein to provide expression signatures or profiles from a test sample derived from a subject having or suspected of having cancer. In some embodiments, such methods involve contacting a test sample with a probe set comprising a plurality of probes under conditions that permit hybridization of the probe(s) to any target nucleic acid(s) present in the test sample and then detecting any probe:target duplexes formed as an indication of the presence of the target nucleic acid in the sample. Expression patterns thus determined are then compared to one or more reference profiles or signatures. Optionally, the expression pattern can be normalized. The methods use the probe sets, probes and primers described herein to provide expression signatures or profiles from a test sample derived from a subject to classify the cancer as recurrent or non-recurrent.

[00292] In some embodiments, such methods involve the specific amplification of target sequences nucleic acid(s) present in the test sample using methods known in the art to generate an expression profile or signature which is then compared to a reference profile or signature.

[00293] In some embodiments, the invention further provides for prognosing patient outcome, predicting likelihood of systemic cancer after cystectomy and/or for designating treatment modalities.

[00294] In one embodiment, the methods generate expression profiles or signatures detailing the expression of the target sequences having altered relative expression with different cancer outcomes. In some embodiments, the methods detect combinations of expression levels of sequences exhibiting positive and negative correlation with a disease status. In one embodiment, the methods detect a minimal expression signature.

[00295] The gene expression profiles of each of the target sequences comprising the portfolio can fixed in a medium such as a computer readable medium. This can take a number of forms. For example, a table can be established into which the range of signals (e.g., intensity measurements) indicative of disease or outcome is input. Actual patient data can then be compared to the values in the table to determine the patient samples diagnosis or prognosis. In a more sophisticated embodiment, patterns of the expression signals (e.g., fluorescent intensity) are recorded digitally or graphically.

[00296] The expression profiles of the samples can be compared to a control portfolio. The expression profiles can be used to diagnose, predict, or monitor a status or outcome of a cancer. For example, diagnosing, predicting, or monitoring a status or outcome of a cancer may comprise diagnosing or detecting a cancer, cancer metastasis, or stage of a cancer. In other instances, diagnosing, predicting, or monitoring a status or outcome of a cancer may comprise predicting the risk of systemic cancer.

Alternatively, diagnosing, predicting, or monitoring a status or outcome of a cancer may comprise predicting mortality or morbidity.

[00297] Further disclosed herein are methods for characterizing a patient population. Generally, the method comprises: (a) providing a sample from a subject; (b) assaying the expression level for a plurality of targets in the sample; and (c) characterizing the subject based on the expression level of the plurality of targets. In some embodiments, the method further comprises assaying an expression level of a coding target. In some instances, the coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some embodiments, the coding target is an exon-coding transcript. In some embodiments, the exon-coding transcript is an exonic sequence. In some embodiments, the method further comprises assaying an expression level of a non-coding target. In some instances, the non-coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the non-coding target is a non-coding transcript. In other instances, the non-coding target is an intronic sequence. In other instances, the non-coding target is an intergenic sequence. In some instances, the non-coding target is a UTR sequence. In other instances, the non-coding target is a non-coding RNA transcript. In some embodiments, the target comprises a nucleic acid sequence. In some embodiments, the nucleic acid sequence is a DNA sequence. In some embodiments, the nucleic acid sequence is an RNA sequence. In other instances, the target comprises a polypeptide sequence. In some instances, the plurality of targets comprises 2 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 5 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 10 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 15 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 20 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 25 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 30 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 35 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 40 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some instances, the plurality of targets comprises SEQ ID

NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46,

SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, assaying the expression level comprises detecting and/or quantifying a nucleotide sequence of the plurality of targets. In some instances, the method may further comprise diagnosing a cancer in the subject. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a bladder cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some instances, characterizing the subject comprises determining whether the subject would respond to an anti-cancer therapy. Alternatively, characterizing the subject comprises

identifying the subject as a non-responder to an anti-cancer therapy. Optionally, characterizing the subject comprises identifying the subject as a responder to an anti-cancer therapy.

[00298] Further disclosed herein are methods for selecting a subject suffering from a cancer for enrollment into a clinical trial. Generally, the method comprises: (a) providing a sample from a subject; (b) assaying the expression level for a plurality of targets in the sample; and (c) characterizing the subject based on the expression level of the plurality of targets. In some embodiments, the method further comprises assaying an expression level of a coding target. In some instances, the coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some embodiments, the coding target is an exon-coding transcript. In some embodiments, the exon-coding transcript is an exonic sequence. In some embodiments, the method further comprises assaying an expression level of a non-coding target. In some instances, the non-coding target is selected from the group consisting of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the non-coding target is a non-coding transcript. In other instances, the non-coding target is an intronic sequence. In other instances, the non-coding target is an intergenic sequence. In some instances, the non-coding target is a UTR sequence. In other instances, the non-coding target is a non-coding RNA transcript. In some embodiments, the target comprises a nucleic acid sequence. In some embodiments, the nucleic acid sequence is a DNA sequence. In some embodiments, the nucleic acid sequence is an RNA sequence. In other instances, the target comprises a polypeptide sequence. In some instances, the plurality of targets comprises 2 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 5 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 10 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 15 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 20 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 25 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 30 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 35 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises 40 or more targets selected from the group of targets identified in Table 2 or SEQ ID NOs:1-51. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In

some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13,

SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some instances, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, assaying the expression level comprises detecting and/or quantifying a nucleotide sequence of the plurality of targets. In some instances, the method may further comprise diagnosing a cancer in the subject. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the bladder cancer is non-invasive bladder cancer, muscle-invasive bladder cancer, or advanced bladder cancer. In some embodiments, the cancer is a prostate cancer. In some embodiments, the cancer is a pancreatic cancer. In some embodiments, the cancer is a bladder cancer. In some embodiments, the cancer is a thyroid cancer. In some embodiments, the cancer is a lung cancer. In some instances, characterizing the subject comprises determining whether the subject would respond to an anti-

cancer therapy. Alternatively, characterizing the subject comprises identifying the subject as a non-responder to an anti-cancer therapy. Optionally, characterizing the subject comprises identifying the subject as a responder to an anti-cancer therapy.

[00299] Further disclosed herein is a method of analyzing a cancer in an individual in need thereof, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; and (b) comparing the expression profile from the sample to an expression profile of a control or standard. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO.

12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30,

SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the method further comprises providing diagnostic or prognostic information to the individual about the cardiovascular disorder based on the comparison. In some embodiments, the method further comprises diagnosing the individual with a cancer if the expression profile of the sample (a) deviates from the control or standard from a healthy individual or population of healthy individuals, or (b) matches the control or standard from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises predicting the susceptibility of the individual for developing a cancer based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises prescribing a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises altering a treatment regimen prescribed or administered to the individual based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the method further comprises predicting the individual's response to a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the deviation is the expression level of one or more targets

from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs: 1-51 or a combination thereof. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises converting the expression levels of the target sequences into a likelihood score that indicates the probability that a biological sample is from a patient who will exhibit no evidence of disease or who will exhibit systemic cancer. In some embodiments, the target sequences are differentially expressed the cancer. In some embodiments, the differential expression is dependent on aggressiveness. In some embodiments, the expression profile is determined by a method selected from the group consisting of RT-PCR, Northern blotting, ligase chain reaction, array hybridization, and a combination thereof.

[00300] Also disclosed herein is a method of diagnosing cancer in an individual in need thereof, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) diagnosing a cancer in the individual if the expression profile of the sample (i) deviates from the control or standard from a healthy individual or population of healthy individuals, or (ii) matches the control or standard from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at

least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32,

SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the

expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises converting the expression levels of the target sequences into a likelihood score that indicates the probability that a biological sample is from a patient who will exhibit no evidence of disease or who will exhibit systemic cancer. In some embodiments, the target sequences are differentially expressed the cancer. In some embodiments, the differential expression is dependent on aggressiveness. In some embodiments, the expression profile is determined by a method selected from the group consisting of RT-PCR, Northern blotting, ligase chain reaction, array hybridization, and a combination thereof.

[00301] In some embodiments is a method of predicting whether an individual is susceptible to developing a cancer, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 1; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) predicting the susceptibility of the individual for developing a cancer based on (i) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (ii) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and

SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ

ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some

embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises converting the expression levels of the target sequences into a likelihood score that indicates the probability that a biological sample is from a patient who will exhibit no evidence of disease or who will exhibit systemic cancer, such as, for example, lymphnode metastasis. In some embodiments, the target sequences are differentially expressed the cancer. In some embodiments, the differential expression is dependent on aggressiveness. In some embodiments, the expression profile is determined by a method selected from the group consisting of RT-PCR, Northern blotting, ligase chain reaction, array hybridization, and a combination thereof.

[00302] In some embodiments is a method of predicting an individual's response to a treatment regimen for a cancer, comprising: (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) predicting the individual's response to a treatment regimen based on (i) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (ii) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO.

34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID

NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the

expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises converting the expression levels of the target sequences into a likelihood score that indicates the probability that a biological sample is from a patient who will exhibit no evidence of disease, who will exhibit systemic cancer, such as, for example, lymphnode metastasis, or who will exhibit biochemical recurrence. In some embodiments, the target sequences are differentially expressed the cancer. In some embodiments, the differential expression is dependent on aggressiveness. In some embodiments, the expression profile is determined by a method selected from the group consisting of RT-PCR, Northern blotting, ligase chain reaction, array hybridization, and a combination thereof.

[00303] A method of prescribing a treatment regimen for a cancer to an individual in need thereof, comprising (a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; (b) comparing the expression profile from the sample to an expression profile of a control or standard; and (c) prescribing a treatment regimen based on (i) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (ii) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some

embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO.

13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas. In some embodiments, the method further comprises a software module executed by a computer-processing device to compare the expression profiles. In some embodiments, the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the deviation is the expression level of one or

more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals. In some embodiments, the method further comprises using a machine to isolate the target or the probe from the sample. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the method further comprises contacting the sample with a label that specifically binds to a target selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the method further comprises amplifying the target, the probe, or any combination thereof. In some embodiments, the method further comprises sequencing the target, the probe, or any combination thereof. In some embodiments, the method further comprises converting the expression levels of the target sequences into a likelihood score that indicates the probability that a biological sample is from a patient who will exhibit no evidence of disease, who will exhibit systemic cancer, such as, for example, lymph node metastasis, or who will exhibit biochemical recurrence. In some embodiments, the target sequences are differentially expressed the cancer. In some embodiments, the differential expression is dependent on aggressiveness. In some embodiments, the expression profile is determined by a method selected from the group consisting of RT-PCR, Northern blotting, ligase chain reaction, array hybridization, and a combination thereof.

[00304] Further disclosed herein is a kit for analyzing a cancer, comprising (a) a probe set comprising a plurality of target sequences, wherein the plurality of target sequences comprises at least one target sequence listed in Table 2 or SEQ ID NOs:1-51; and (b) a computer model or algorithm for analyzing an expression level and/or expression profile of the target sequences in a sample. In some embodiments, the kit further comprises a computer model or algorithm for correlating the expression level or expression profile with disease state or outcome. In some embodiments, the kit further comprises a computer model or algorithm for designating a treatment modality for the individual. In some embodiments, the kit further comprises a computer model or algorithm for normalizing expression level or expression profile of the target sequences. In some embodiments, the kit further comprises a computer model or algorithm comprising a robust multichip average (RMA), frozen robust multichip average (fRMA), Single Channel Array Normalization (SCAN), ComBat (Combining Batches of gene expression), probe logarithmic intensity error estimation (PLIER), non-linear fit (NLFIT) quantile-based, nonlinear normalization, or a combination thereof. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO.

34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID

NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

[00305] Further disclosed herein is a system for analyzing a cancer, comprising (a) one or more probe sets comprising a plurality of target sequences, wherein (i) the plurality of target sequences hybridizes to one or more targets selected from Table 2 or SEQ ID NOs:1-51; or (ii) the plurality of target sequences comprises one or more target sequences selected from Table 2 or SEQ ID NOs:1-51; and (b) a computer model or algorithm for analyzing an expression level and/or expression profile of the target hybridized to

the probe in a sample from a subject suffering from a cancer. In some embodiments, the system further comprises electronic memory for capturing and storing an expression profile. In some embodiments, the system further comprises a computer-processing device, optionally connected to a computer network. In some embodiments, the system further comprises a software module executed by the computer-processing device to analyze an expression profile. In some embodiments, the system further comprises a software module executed by the computer-processing device to compare the expression profile to a standard or control. In some embodiments, the system further comprises a software module executed by the computer-processing device to determine the expression level of the target. In some embodiments, the system further comprises a machine to isolate the target or the probe from the sample. In some embodiments, the system further comprises a machine to sequence the target or the probe. In some embodiments, the system further comprises a machine to amplify the target or the probe. In some embodiments, the system further comprises a label that specifically binds to the target, the probe, or a combination thereof. In some embodiments, the system further comprises a software module executed by the computer-processing device to transmit an analysis of the expression profile to the individual or a medical professional treating the individual. In some embodiments, the system further comprises a software module executed by the computer-processing device to transmit a diagnosis or prognosis to the individual or a medical professional treating the individual. In some embodiments, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 15 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises at least 20 targets selected from Table 2 or SEQ ID NOs:1-51. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID

NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49,

SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some embodiments, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3. In some embodiments, the cancer is selected from the group consisting of a carcinoma, sarcoma, leukemia, lymphoma, myeloma, and a CNS tumor. In some embodiments, the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

[00306] In one embodiment, the invention provides for a method of diagnosing, prognosing, determining, predicting a therapeutic regimen or predicting benefit from therapy for metastatic bladder cancer, comprising assaying an expression level in a sample from the subject for a plurality of targets, wherein the plurality of targets comprises two or more targets selected from Table 2 or SEQ ID NOs:1-51; and diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy in a subject having cancer based on the expression levels of the plurality of targets. In one aspect, the metastatic bladder cancer has metastasized to at least one lymph node. In another aspect, the plurality of targets comprises a coding target. In an additional aspect, the coding target is an exonic sequence. In a further aspect, the plurality of targets comprises a non-coding target. In certain aspects, the non-coding target comprises an intronic sequence, partially overlaps an intronic sequence. a sequence within the UTR or partially overlaps with a UTR sequence. In one aspect, the target comprises a nucleic acid sequence. In an additional aspect, the nucleic acid sequence is a DNA sequence or an RNA sequence. In an additional aspect, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In a further aspect, the plurality of targets comprises

at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In one aspect, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In certain aspects, the plurality of targets comprises SEQ ID NOs: 1-51. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID

NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID

NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3.

[00307] In another embodiment, the present invention provides a method of diagnosing and treating metastatic bladder cancer in a subject, said method comprising:(a) obtaining a sample from a subject, wherein the sample comprises a plurality of differentially expressed targets; (b) processing the sample to isolate or enrich the sample for the targets or cells containing the targets; and (c) detecting the level of expression of one or more targets in said sample by sequencing, nucleic acid hybridization or nucleic acid amplification, (d) diagnosing the subject with metastatic bladder cancer when an increased level of expression of said one or more targets in said sample relative to the level in normal bladder cells is detected; and (e) administering an effective amount of a chemotherapeutic agent or radiation to the diagnosed subject. In one aspect, the metastatic bladder cancer has metastasized to at least one lymph node. In another aspect, the plurality of targets comprises a coding target. In an additional aspect, the coding target is an exonic sequence. In a further aspect, the plurality of targets comprises a non-coding target. In certain aspects, the non-coding target comprises an intronic sequence, partially overlaps an intronic sequence. a sequence within the UTR or partially overlaps with a UTR sequence. In one aspect, the target comprises a nucleic acid sequence. In an additional aspect, the nucleic acid sequence is a DNA sequence or an RNA sequence. In an additional aspect, the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51. In a further aspect, the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51. In one aspect, the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51. In certain aspects, the plurality of targets comprises SEQ ID NOs: 1-51. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16 and SEQ ID NO. 8. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24 and SEQ ID NO. 40. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO.

16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4 and SEQ ID NO. 44. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33 and SEQ ID NO. 13. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46 and SEQ ID NO. 23. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30 and SEQ ID NO. 22. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31 and SEQ ID NO. 29. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32,

SEQ ID NO. 43, SEQ ID NO. 20 and SEQ ID NO. 50. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17 and SEQ ID NO. 37. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38 and SEQ ID NO. 27. In some aspects, the plurality of targets comprises SEQ ID NO. 42, SEQ ID NO. 34, SEQ ID NO. 18, SEQ ID NO. 16, SEQ ID NO. 8, SEQ ID NO. 2, SEQ ID NO. 12, SEQ ID NO. 15, SEQ ID NO. 24, SEQ ID NO. 40, SEQ ID NO. 36, SEQ ID NO. 41, SEQ ID NO. 26, SEQ ID NO. 4, SEQ ID NO. 44, SEQ ID NO. 10, SEQ ID NO. 25, SEQ ID NO. 45, SEQ ID NO. 33, SEQ ID NO. 13, SEQ ID NO. 19, SEQ ID NO. 48, SEQ ID NO. 21, SEQ ID NO. 46, SEQ ID NO. 23, SEQ ID NO. 49, SEQ ID NO. 6, SEQ ID NO. 39, SEQ ID NO. 30, SEQ ID NO. 22, SEQ ID NO. 51, SEQ ID NO. 7, SEQ ID NO. 28, SEQ ID NO. 31, SEQ ID NO. 29, SEQ ID NO. 35, SEQ ID NO. 32, SEQ ID NO. 43, SEQ ID NO. 20, SEQ ID NO. 50, SEQ ID NO. 5, SEQ ID NO. 47, SEQ ID NO. 9, SEQ ID NO. 17, SEQ ID NO. 37, SEQ ID NO. 14, SEQ ID NO. 11, SEQ ID NO. 1, SEQ ID NO. 38, SEQ ID NO. 27 and SEQ ID NO. 3.

EXAMPLES

Example 1: A 51 Marker Genomic Classifier Predicts Lymph Node Metastases After Cystectomy in Bladder Cancer Patients.

[00308] A 51-marker genomic classifier containing biologically relevant RNA sequences using FFPE tumor tissue specimens obtained from a large cohort of patients who underwent radical cystectomy for bladder cancer was developed as follows. Tumor tissue from cystectomy specimens was collected from 199 patients with pT2-4N0-3M0/pT1N1-3M0 urothelial cancer of the bladder who underwent radical cystectomy with extended pelvic lymphadenectomy. No patient received neoadjuvant chemotherapy and all were free of nodal and distant metastasis on pre-operative imaging (cN0M0). All tumor specimens underwent histopathological rereview and were staged according to the sixth International Union Against Cancer (UICC) classification of 2009. Patients were randomly assigned to a discovery set (n=133) and a validation set (n=66).

Sample Processing, Microarray Analysis and Quality Control

[00309] Hematoxylin/eosin-stained sections were used to identify representative areas of tumor for sampling. Using RNeasy FFPE kit (Qiagen, Valencia, CA), total RNA was extracted from a 1 mm diameter core punch of the tumor. The Ovation WTA FFPE system and Encore Biotin Module (NuGen, San Carlos, CA) were used for cDNA amplification and labelling prior to hybridization to GeneChip Human Exon 1.0 ST oligonucleotide microarrays (Affymetrix, Santa Clara, CA) according to the manufacturer's recommendations. Quality control was assessed by Affymetrix Power Tools packages and internally developed metrics.

15-Feature Genomic Classifier (RF15)

[00310] As previously described (Mitra et al. (2014) J Natl Cancer Inst 106), the RF15 genomic classifier was designed to predict post-cystectomy bladder cancer recurrence and outperformed not only clinical models but also previously developed signatures. The gene expression values were determined for all samples and RF15 prediction scores were calculated.

LN20 Signature in Human Exon Array

[00311] The LN20 signature based on Affymetrix U133 arrays was ported to the Human Exon Array and recapitulated using the modeling method described by Smith et al. (2013) Lancet Oncol 12:137. Probesets on the Human Exon Array corresponding to each of the 20 genes in the LN20 signature were gene-summarized and then standardized using a weighed z-score. Trained on the 133 discovery samples, a weighted Nearest Neighbor model was created using the Epanechnikov kernel with Spearman's correlation as the distance metric. For each patient this model scores the probability that the patient is LN positive.

Discovery and Validation of KNN51

[00312] Feature selection was performed on the probeset according to median fold change of gene expression values between LN negative and positive tumors in the discovery set. A median fold change cut off of ±1.4 was used. The expression values were standardized using a weighed z-score as described by Smith et al. (2013) Lancet Oncol 12:137. The tuning was done via 10 fold cross validation in the discovery set using the k nearest neighbor (KNN) method. The generated signature was 'locked' and its performance evaluated in the validation set. A flowchart of the development of the KNN51 genetic classifier is shown in Figure 1.

Biological Network and Pathway Analysis

[00313] Biological networks and pathways of the genes in KNN51 were analyzed with Ingenuity Pathway Analysis (IPA) software (Qiagen, CA, USA). For all genes, p-values and fold changes were calculated and the genes were uploaded into the IPA software.

Statistical analyses

[00314] Statistical analyses were conducted using R Software Package, version 3.1.0. All tests were two-sided with type I error probability of 5%. Univariable abilities of prediction scores of each signature were compared using discrimination boxplots, Wilcoxon rank-sum test and logistic regression. Discrimination abilities of classifiers were compared using AUC on the receiver-operating characteristic (ROC) curves.

Discovery and initial performance of novel genomic-based classifiers

[00315] Clinical characteristics of the cohort of patients analyzed are shown below in Table 1. The 51 genes of the KNN51 genomic classifier are listed in Table 2. KNN51 makes use of parts of the transcriptome that are not captured by protein coding genes, including 15 unannotated features and 9 non-protein coding transcripts. No gene used in LN20 was used in KNN51. Table 3 below lists the genes of the LN20 signature and indicates the p-values for the comparison between LN-negative and LN-positive tumors in the discovery set. The distribution of prediction scores for RF15, LN20 and KNN51 was evaluated in the discovery set for LN-negative and LN-positive tumors, respectively (see Figure 2). All three tested signatures showed a significant discrimination between LN-negative and LN-positive tumors, with the smallest p-value for KNN51.

Independent validation of genomic-based classifiers

[00316] The prognostic performance of the classifiers was then assessed on an independent validation set of 66 patients. Clinical characteristics of patients in the validation and discovery sets were comparable (Table 1). The prediction scores for each signature in the validation set between LN-negative and LN-positive tumors are shown in the boxplots of Figure 3. The median RF15 scores were higher in LN-positive tumors but did not reach statistical significance, whereas LN20 scores did not differ between the two groups. Only KNN51 was able to significantly predict LN involvement in the validation set (see Figure 3, $p<0.001$).

[00317] ROC curves for the three signatures and the corresponding AUC are shown in Figure 4. KNN51 showed the highest prediction of LN involvement of all tested signatures, with an AUC of 0.82 [97.5%CI 0.71–0.93], compared to 0.62 [0.47–0.76] for RF15 and 0.46 [0.32–0.60] for LN20.

[00318] The odds ratios of the three signatures in the validation set were calculated and are shown below in Table 4. Based on a 0.1 unit increase in the signature scores, only KNN51 showed a significant odds ratio (2.65 [97.5%CI 1.68–4.67], p<0.001). P-values for each KNN51 marker for predicting LN metastasis in bladder cancer subjects is shown below in Table 5.

Network analysis of genomic-based classifiers

[00319] Ingenuity pathway analysis (IPA) was carried out to generate the network of genes associated with KNN51. This analysis revealed links that a significant number of genes are involved in cellular movement and cancer and showed that these genes are relevant to the process of metastasis, including proliferation, cellular transformation, tumor growth and metastasis formation (see Figure 5). Interestingly, ENAH has been described as an oncogene important in cancer cell invasion and lung metastasis of breast cancer cells Philippar et al.(2008) Dev Cell, **15:** 813, 2008 (see Figure 5).

[00320]

TABLE 1

	Training Set	**Validation Set**
	Total n (cohort %)	**Total n (cohort %)**
Cohort (row %)	133 (100)	66 (100)
Age		
<70 years	73 (55.0)	33 (50)
≥70 years	60 (45.0)	33 (50)
Gender		
Male	111 (83)	56 (85)
Female	22 (17)	10 (15)
Race		
Caucasian	115 (86)	59 (89)
Non-Caucasian	18 (11)	7 (11)
Tumor Stage		
pT1	3 (2)	3 (5)
pT2	44 (33)	20 (30)
pT3	58 (44)	31 (47)
pT4a	28 (21)	12 (18)
Lymph node metastases		
Absent	88 (66)	41 (62)

Present	45 (34)	25 (38)
Adjuvant Chemotherapy		
Not administered	78 (59)	32 (49)
Administered	54 (41)	34 (51)
Recurrence		
No	65 (49)	33 (50)
Yes	68 (51)	33 (50)

Clinicopathologic characteristics of patients in the discovery and validation cohorts.

TABLE 2

SEQ ID NO.	Affymetrix Probeset ID	Gene	Category	Chromosome	Start	End	Strand
SEQ ID NO. 1	2934158	ACAT2	exonic	chr6	160199266	160199290	+
SEQ ID NO. 2	2851303	CDH10	exonic	chr5	24593508	24593532	-
SEQ ID NO. 3	3454547	METTL7A	exonic_AS	chr12	51324677	51324701	-
SEQ ID NO. 4	2458376	ENAH	exonic	chr1	225692693	225692726	-
SEQ ID NO. 5	3637974	NTRK3	intronic	chr15	88796945	88796969	-
SEQ ID NO. 6	3337703	PPP6R3	exonic	chr11	68355451	68355475	+
SEQ ID NO. 7	3498477	UBAC2	intronic	chr13	99901076	99901100	+
SEQ ID NO. 8	2321235	chr1+:14021882-14021906	intergenic	chr1	14021882	14021906	+
SEQ ID NO. 9	3351432	MLL	exonic	chr11	118370060	118370084	+
SEQ ID NO. 10	2615421	AC116035.1	exonic	chr3	30566931	30566955	+
SEQ ID NO. 11	2802601	TRIO	exonic	chr5	14477122	14477146	+
SEQ ID NO. 12	3326487	EHF	exonic	chr11	34673110	34673157	+
SEQ ID NO. 13	3870139	ZNF347	exonic	chr19	53643603	53643627	-
SEQ ID NO. 14	2627418	ATXN7	intronic	chr3	63951711	63951735	+
SEQ ID NO. 15	2594205	chr2-:200372484-200372510	intergenic	chr2	200372484	200372510	-
SEQ ID NO. 16	4015327	PCDH19	intronic	chrX	99592393	99592417	chrX-:99592393-99592417
SEQ ID NO. 17	2975719	BCLAF1	exonic	chr6	136599040	136599064	-
SEQ ID NO. 18	3109057	AC018442.1	exonic	chr8	100709784	100709808	+
SEQ ID NO. 19	4021820	IGSF1	exonic	chrX	130420413	130420437	chrX-:130420413-130420437
SEQ ID NO. 20	3577841	chr14-:95384951-95384975	intergenic	chr14	95384951	95384975	-
SEQ ID NO. 21	3703849	KLHDC4	exonic	chr16	87790006	87790030	-
SEQ ID NO. 22	2707575	chr3-:181744919-181744943	intergenic	chr3	181744919	181744943	-
SEQ ID NO. 23	2510519	RIF1	exonic	chr2	152300047	152300071	+
SEQ ID NO. 24	3530890	CTD-2251F13.1	exonic_AS	chr14	30585807	30585831	+
SEQ ID NO. 25	3769569	AC005152.2	exonic	chr17	70067415	70067439	-
SEQ ID NO. 26	3544035	LIN52	intronic	chr14	74555214	74555238	+
SEQ ID NO. 27	2790378	SFRP2	exonic	chr4	154707026	154707059	-
SEQ ID NO. 28	2625670	Y_RNA.666	exonic	chr3	57479479	57479503	+
SEQ ID NO. 29	3646405	C16orf71	exonic	chr16	4799325	4799349	+
SEQ ID NO. 30	2918654	RP1-199J3.3	exonic	chr6	99979568	99979592	+
SEQ ID NO. 31	2663553	NUP210	exonic	chr3	13357767	13357827	-
SEQ ID NO. 32	3103484	chr8+:74794718-74794742	intergenic	chr8	74794718	74794742	+
SEQ ID NO. 33	2757491	WHSC1	intronic_AS	chr4	1874442	1874466	-
SEQ ID NO. 34	2401368	TCEA3	exonic	chr1	23735157	23735185	-
SEQ ID NO. 35	3788643	DCC	intronic	chr18	50705492	50705516	+
SEQ ID NO. 36	3219832	EPB41L4B	exonic	chr9	112010036	112010060	-
SEQ ID NO. 37	3198757	chr9-:10969105-10969129	intergenic	chr9	10969105	10969129	-
SEQ ID NO. 38	3753198	chr17-:32509820-32509844	intergenic	chr17	32509820	32509844	-
SEQ ID NO. 39	2902908	SKIV2L	exonic	chr6	31931242	31931266	+
SEQ ID NO. 40	3142559	SNX16	exonic	chr8	82713790	82713814	-
SEQ ID NO. 41	3626882	MYO1E	exonic	chr15	59510260	59510284	-
SEQ ID NO. 42	3433222	chr12+:115644812-115644836	intergenic	chr12	115644812	115644836	+
SEQ ID NO. 43	2991121	BZW2	exonic	chr7	16728170	16728194	+
SEQ ID NO. 44	2959165	chr6-:63886126-63886150	intergenic	chr6	63886126	63886150	-
SEQ ID NO. 45	3546559	chr14+:83266249-83266273	intergenic	chr14	83266249	83266273	+
SEQ ID NO. 46	3020668	CFTR	exonic	chr7	117180371	117180395	+
SEQ ID NO. 47	2397811	RP11-169K16.9	exonic	chr1	16174617	16174641	-
SEQ ID NO. 48	3903427	Y_RNA.297	exonic	chr20	32972037	32972063	-
SEQ ID NO. 49	2595867	PARD3B	intronic_AS	chr2	205425774	205425798	-
SEQ ID NO. 50	3068088	chr7-:111298086-111298110	intergenic	chr7	111298086	111298110	-
SEQ ID NO. 51	3487363	chr13+:43329237-43329261	intergenic	chr13	43329237	43329261	+

Genomic characteristics of markers comprising a genomic classifier for predicting post-cystectomy bladder cancer LN metastasis.

TABLE 3

Gene	P-Value
TOX3	0.013
SLC11A2	0.038
FAM36A	0.042
LIMCH1	0.001
RAB15	0.039
AVL9	0.002

PCMTD2	0.044
PTHLH	0.035
DPP4	0.018
PCDHGA10	0.029
MT1E	0.031
MAP4K4	0.033
SLC16A1	0.022
BST2	0.041
MMP14	0.016
IFI27	0.027
NCLN	0.018
HLA-G	0.022
RRBP1	0.023
ICAM1	0.07

Genes of the LN20 signature and associated p-values for predicting LN-positive tumors in the discovery set..

TABLE 4

	Odds Ratio	**2.50%**	**97.50%**	**P-Value**
RF15	1.21	0.97	1.54	0.098
Smith2011	1.39	0.52	3.77	0.51
KNN51	2.65	1.68	4.67	<0.001

Odds ratios of the three signatures in the validation set.

TABLE 5

Probeset ID	**Gene Name**	**Type of annotation**	**p-value**
2401368	TCEA3	protein coding	0.002
2458376	ENAH	protein coding	0.019
2510519	RIF1	protein coding	0.068
2627418	ATXN7	protein coding	0.377
2663553	NUP210	protein coding	0.151
2790378	SFRP2	protein coding	0.662
2802601	TRIO	protein coding	0.459
2851303	CDH10	protein coding	0.006
2902908	SKIV2L	protein coding	0.077
2934158	ACAT2	protein coding	0.546

2991121	BZW2	protein coding	0.195
3020668	CFTR	protein coding	0.047
3219832	EPB41L4B	protein coding	0.015
3326487	EHF	protein coding	0.006
3337703	PPP6R3	protein coding	0.074
3351432	KMT2A	protein coding	0.285
3498477	UBAC2	protein coding	0.124
3544035	LIN52	protein coding	0.018
3626882	MYO1E	protein coding	0.015
3637974	NTRK3	protein coding	0.215
3703849	KLHDC4	protein coding	0.044
3788643	DCC	protein coding	0.162
3870139	ZNF347	protein coding	0.034
4015327	PCDH19	protein coding	0.002
4021820	IGSF1	protein coding	0.036
2625670	Y_RNA	protein coding	0.144
3903427	Y_RNA	protein coding	0.043
2615421	AC116035.1	lincRNA	0.026
3577841	RP11-179A9.3	lincRNA	0.197
3753198	RP11-215E13.1	lincRNA	0.661
2397811	FLJ37453	antisense	0.237
2918654	TSTD3	antisense	0.102
3142559	SNX16	antisense	0.013
2975719	ABBA01017803.1	pseudogene	0.37
3769569	SOX9-AS1	processed transcript	0.026
3646405	C16orf71	processed transcript	0.159
2321235	N/A	not annotated	0.006
2594205	N/A	not annotated	0.01
2595867	N/A	not annotated	0.073
2707575	N/A	not annotated	0.103
2757491	N/A	not annotated	0.032
2959165	N/A	not annotated	0.021
3068088	N/A	not annotated	0.212
3103484	N/A	not annotated	0.184
3109057	N/A	not annotated	0.002
3198757	N/A	not annotated	0.375
3433222	N/A	not annotated	0
3454547	N/A	not annotated	0.84

3487363	N/A	not annotated	0.116
3530890	N/A	not annotated	0.012
3546559	N/A	not annotated	0.029

P-values for KNN51 markers for predicting post-cystectomy bladder cancer LN metastasis.

[00321] These results showed that whole transcriptome expression profiling could be utilized to stratify risk of lymph node metastases in patients who have undergone radical cystectomy for muscle invasive bladder cancer. These results further showed that a 51-marker genomic classifier (GC) of the present invention surpasses the predictive power of previously reported genomic classifiers in bladder cancer. The results demonstrated that methods and markers of the present invention are useful for predicting risk for lymph node metastasis in subjects with bladder cancer. The results further demonstrated that methods and markers of the present invention would be useful for treating subjects with bladder cancer, including for example treating with neoadjuvant chemotherapy (NAC). These results suggested that the methods and markers of the present invention would be useful for diagnosing, prognosing, determining the progression of cancer, or predicting benefit from therapy in a subject having cancer.

Example 2: Prognostic Value of Single and Combinations of Markers From a 51 Biomarker Panel for Muscle Invasive Bladder Cancer.

[00322] The 51 markers identified in the genomic classifier in Example 1 (Table 2) were assessed individually and in various combinations for their performance for the prediction of lymph node metastasis in bladder cancer patients undergoing radical cystectomy.

[00323] As shown in Table 6, these 51 markers, as univariable classifiers, were statistically significant in a pooled discovery and validation set (n=199; see Example 1) based on the Wilcoxon test (p-value <=0.05) for the Area under the ROC curve (AUC). The probeset ID number of the corresponding markers (Table 6) as provided by Affymetrix (http://www.affymetrix.com/analysis/index.affx) was used to represent each marker.

[00324] The associated p-value provided for the metrics gives a measure of the statistical significance of the corresponding metric. The threshold of P-value <=0.05 is used as a way of defining those features that are statistically significant for the given metric and endpoint. The cut-off used for each marker is indicated. When dichotomization is necessary for a performance metric, the marker expression values are dichotomized using unsupervised clustering in the pamr package.

[00325] The 51 markers of the present invention are useful as univariable predictors; additionally, the combination of subsets of these 51 markers through a machine learning algorithm results in enhanced

performance. As shown in Table 7, pairwise classifiers are predictive of lymph node metastasis in bladder cancer patients.

[00326] Patients with bladder cancer can be candidates for treatment (e.g., neoadjuvant chemotherapy) if high likelihood of lymph node metastasis is observed based on the 51 markers of the present invention. In contrast, patients with bladder cancer may be spared unnecessary treatment if a low likelihood of metastasis is observed from the 51 markers of the present invention.

[00327] These results showed that the methods and markers of the present invention are useful for predicting lymph node metastases in patients with muscle invasive bladder cancer. The results further demonstrated that methods and markers of the present invention would be useful for treating subjects with bladder cancer, including for example treating with neoadjuvant chemotherapy (NAC). These results further showed that the methods and markers of the present invention are useful for diagnosing, prognosing, determining the progression of cancer, or predicting benefit from therapy in a subject having cancer.

TABLE 6

Affymetrix Probeset ID	AUC	Wilcox P-VALUE	KS P-VALUE	MFD	ACCURACY	SENSITIVITY	SPECIFICITY	PPV	NPV
2934158	0.55	0.2142	0.1333	0.73	0.47	0.44	0.48	0.32	0.61
2851303	0.58	0.0599	0.0307	1.80	0.40	0.49	0.34	0.29	0.55
3454547	0.52	0.6836	0.2944	0.07	0.56	0.34	0.68	0.37	0.65
2458376	0.61	0.0062	0.0028	223.39	0.63	0.43	0.74	0.47	0.70
3637974	0.56	0.1079	0.2874	1.19	0.50	0.41	0.54	0.33	0.63
3337703	0.57	0.0711	0.0850	3.00	0.60	0.45	0.68	0.43	0.69
3498477	0.59	0.0344	0.1333	-0.31	0.59	0.45	0.66	0.42	0.69
2321235	0.61	0.0053	0.0033	1.52	0.41	0.30	0.48	0.24	0.55
3351432	0.55	0.1746	0.0551	0.03	0.60	0.49	0.66	0.44	0.70
2615421	0.61	0.0075	0.0124	2.60	0.44	0.40	0.46	0.29	0.58
2802601	0.55	0.2484	0.0247	0.33	0.45	0.40	0.48	0.30	0.59
3326487	0.62	0.0035	0.0049	3.69	0.63	0.43	0.74	0.47	0.70
3870139	0.58	0.0420	0.0490	0.10	0.48	0.29	0.58	0.27	0.60
2627418	0.55	0.2088	0.2238	-1.57	0.48	0.39	0.53	0.31	0.61
2594205	0.60	0.0126	0.0307	0.44	0.44	0.34	0.50	0.27	0.58
4015327	0.63	0.0015	0.0275	0.07	0.61	0.55	0.65	0.46	0.72
2975719	0.54	0.3235	0.1169	-6.40	0.51	0.41	0.56	0.34	0.63
3109057	0.62	0.0035	0.0040	0.60	0.60	0.49	0.66	0.44	0.70
4021820	0.58	0.0429	0.0353	1.65	0.43	0.35	0.48	0.27	0.57
3577841	0.56	0.1713	0.1938	1.06	0.48	0.39	0.53	0.31	0.61
3703849	0.60	0.0143	0.0406	-0.73	0.58	0.55	0.60	0.43	0.71
2707575	0.58	0.0397	0.0490	0.60	0.61	0.51	0.67	0.46	0.71
2510519	0.59	0.0218	0.0052	-0.12	0.48	0.30	0.58	0.28	0.60
3530890	0.63	0.0016	0.0033	0.86	0.59	0.69	0.53	0.45	0.75
3769569	0.61	0.0065	0.0285	0.55	0.60	0.55	0.63	0.45	0.72
3544035	0.62	0.0037	0.0062	1.66	0.43	0.41	0.44	0.29	0.58

2790378	0.56	0.1407	0.0598	2.71	0.61	0.36	0.75	0.45	0.68
2625670	0.58	0.0546	0.1692	-0.98	0.50	0.16	0.69	0.22	0.60
3646405	0.56	0.1608	0.1239	1.68	0.45	0.39	0.49	0.30	0.59
2918654	0.57	0.0715	0.0608	0.53	0.54	0.49	0.57	0.39	0.67
2663553	0.54	0.3256	0.5720	1.47	0.59	0.38	0.70	0.41	0.67
3103484	0.56	0.1088	0.0919	-1.57	0.44	0.43	0.44	0.30	0.58
2757491	0.58	0.0463	0.0157	-2.36	0.46	0.34	0.53	0.28	0.59
2401368	0.63	0.0018	0.0003	-249.42	0.63	0.33	0.79	0.46	0.68
3788643	0.56	0.1484	0.0905	1.37	0.51	0.43	0.56	0.35	0.64
3219832	0.63	0.0016	0.0007	-7.19	0.63	0.48	0.72	0.48	0.71
3198757	0.54	0.2691	0.1912	3.28	0.56	0.55	0.56	0.41	0.69
3753198	0.52	0.5556	0.0905	3.59	0.60	0.50	0.66	0.44	0.70
2902908	0.59	0.0263	0.0048	0.59	0.60	0.53	0.63	0.44	0.71
3142559	0.60	0.0097	0.0163	1.90	0.58	0.53	0.61	0.42	0.70
3626882	0.60	0.0153	0.0062	-0.04	0.61	0.58	0.63	0.46	0.73
3433222	0.64	0.0005	0.0006	2.39	0.43	0.35	0.48	0.27	0.57
2991121	0.56	0.1402	0.2671	-2.86	0.48	0.34	0.55	0.29	0.60
2959165	0.59	0.0290	0.0110	1.93	0.44	0.35	0.50	0.28	0.58
3546559	0.61	0.0090	0.0312	1.54	0.45	0.41	0.48	0.30	0.59
3020668	0.57	0.0685	0.1472	0.67	0.48	0.28	0.60	0.28	0.60
2397811	0.56	0.1419	0.1391	7.13	0.46	0.36	0.51	0.29	0.59
3903427	0.58	0.0494	0.1411	2.07	0.60	0.41	0.70	0.43	0.68
2595867	0.59	0.0229	0.1716	-0.99	0.56	0.50	0.59	0.40	0.68
3068088	0.55	0.2564	0.2016	1.71	0.54	0.30	0.67	0.33	0.63
3487363	0.57	0.0841	0.1579	-0.37	0.58	0.51	0.62	0.43	0.70

Performance of the 51 markers across different metrics for predicting lymph node metastasis in bladder cancer patients.

TABLE 7

CLASSIFIER	AUC	ACCURACY	SENSITIVITY	SPECIFICITY	PPV	NPV	CUTOFF
hdda:2934158 2851303	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2851303	0.52	0.86	0.21	0.78	0.38	0.62	0.45
nb:2934158 2851303	0.58	1.00	0.54	0.37	0.34	0.57	0.36
knn:2934158 2851303	0.57	0.28	0.36	0.85	0.59	0.68	0.50
rpart:2934158 2851303	0.52	0.73	0.18	0.85	0.42	0.63	0.61
svm:2934158 2851303	0.51	1.00	0.75	0.28	0.39	0.65	0.28
hdda:2934158 3454547	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3454547	0.51	0.98	0.29	0.65	0.33	0.60	0.33
nb:2934158 3454547	0.58	1.00	0.68	0.26	0.36	0.57	0.31
knn:2934158 3454547	0.61	0.99	0.32	0.59	0.32	0.59	0.39
rpart:2934158 3454547	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3454547	0.53	0.80	0.43	0.67	0.44	0.66	1.00
hdda:2934158 2458376	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2458376	0.52	1.00	0.64	0.35	0.38	0.62	0.13
nb:2934158 2458376	0.54	1.00	0.54	0.35	0.33	0.55	0.33
knn:2934158 2458376	0.51	0.98	0.46	0.54	0.38	0.63	0.34

rpart:2934158 2458376	0.53	1.00	0.50	0.39	0.33	0.56	0.26
svm:2934158 2458376	0.52	1.00	0.79	0.20	0.37	0.60	0.94
hdda:2934158 3637974	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3637974	0.63	1.00	0.11	0.70	0.18	0.56	0.40
nb:2934158 3637974	0.66	1.00	0.36	0.39	0.26	0.50	0.37
knn:2934158 3637974	0.65	1.00	0.46	0.33	0.30	0.50	0.34
rpart:2934158 3637974	0.64	1.00	0.25	0.52	0.24	0.53	0.33
svm:2934158 3637974	0.60	0.99	0.93	0.22	0.42	0.83	0.21
hdda:2934158 3337703	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3337703	0.53	1.00	0.25	0.61	0.28	0.57	0.31
nb:2934158 3337703	0.56	1.00	0.50	0.37	0.33	0.55	0.33
knn:2934158 3337703	0.50	0.99	0.54	0.48	0.38	0.63	0.33
rpart:2934158 3337703	0.57	1.00	0.50	0.39	0.33	0.56	0.26
svm:2934158 3337703	0.50	0.98	0.46	0.54	0.38	0.63	0.84
hdda:2934158 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3498477	0.51	0.91	0.25	0.74	0.37	0.62	0.41
nb:2934158 3498477	0.54	1.00	0.43	0.46	0.32	0.57	0.36
knn:2934158 3498477	0.53	0.91	0.43	0.63	0.41	0.64	0.38
rpart:2934158 3498477	0.55	0.91	0.21	0.76	0.35	0.61	0.47
svm:2934158 3498477	0.51	1.00	0.64	0.26	0.35	0.55	0.65
hdda:2934158 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2321235	0.53	0.86	0.25	0.76	0.39	0.63	0.44
nb:2934158 2321235	0.53	0.99	0.39	0.57	0.35	0.60	0.41
knn:2934158 2321235	0.56	1.00	0.39	0.48	0.31	0.56	0.37
rpart:2934158 2321235	0.53	0.91	0.36	0.67	0.40	0.63	0.42
svm:2934158 2321235	0.50	1.00	0.82	0.17	0.38	0.62	0.29
hdda:2934158 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3351432	0.55	1.00	0.36	0.46	0.29	0.54	0.30
nb:2934158 3351432	0.58	1.00	0.57	0.35	0.35	0.57	0.36
knn:2934158 3351432	0.60	1.00	0.46	0.41	0.33	0.56	0.28
rpart:2934158 3351432	0.59	0.99	0.14	0.70	0.22	0.57	0.45
svm:2934158 3351432	0.58	1.00	0.96	0.11	0.40	0.83	0.52
hdda:2934158 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2615421	0.51	1.00	0.54	0.39	0.35	0.58	0.12
nb:2934158 2615421	0.53	0.99	0.36	0.59	0.34	0.60	0.35
knn:2934158 2615421	0.52	0.86	0.39	0.67	0.42	0.65	0.36
rpart:2934158 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2615421	0.51	0.99	0.61	0.41	0.39	0.63	1.00
hdda:2934158 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2802601	0.55	0.55	0.39	0.76	0.50	0.67	0.38
nb:2934158 2802601	0.53	1.00	0.61	0.22	0.32	0.48	0.32
knn:2934158 2802601	0.61	0.99	0.75	0.33	0.40	0.68	0.21
rpart:2934158 2802601	0.51	0.46	0.39	0.78	0.52	0.68	0.48
svm:2934158 2802601	0.55	0.73	0.39	0.72	0.46	0.66	1.00
hdda:2934158 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3326487	0.55	1.00	0.54	0.37	0.34	0.57	0.25
nb:2934158 3326487	0.51	1.00	0.68	0.26	0.36	0.57	0.29
knn:2934158 3326487	0.52	1.00	0.54	0.41	0.36	0.59	0.30

rpart:2934158 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3326487	0.61	0.94	0.86	0.35	0.44	0.80	0.59
hdda:2934158 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3870139	0.52	1.00	0.46	0.43	0.33	0.57	0.29
nb:2934158 3870139	0.56	1.00	0.57	0.41	0.37	0.61	0.35
knn:2934158 3870139	0.55	1.00	0.50	0.46	0.36	0.60	0.34
rpart:2934158 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3870139	0.54	0.99	0.54	0.48	0.38	0.63	1.00
hdda:2934158 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2627418	0.53	0.96	0.25	0.70	0.33	0.60	0.48
nb:2934158 2627418	0.60	1.00	0.54	0.35	0.33	0.55	0.37
knn:2934158 2627418	0.59	1.00	0.36	0.50	0.30	0.56	0.38
rpart:2934158 2627418	0.56	0.86	0.29	0.74	0.40	0.63	0.43
svm:2934158 2627418	0.51	1.00	0.71	0.33	0.39	0.65	0.18
hdda:2934158 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2594205	0.53	0.99	0.50	0.50	0.38	0.62	0.24
nb:2934158 2594205	0.60	1.00	0.61	0.30	0.35	0.56	0.28
knn:2934158 2594205	0.53	0.98	0.46	0.54	0.38	0.63	0.35
rpart:2934158 2594205	0.51	1.00	0.50	0.39	0.33	0.56	0.28
svm:2934158 2594205	0.65	0.96	0.71	0.41	0.43	0.70	1.00
hdda:2934158 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 4015327	0.53	1.00	0.57	0.41	0.37	0.61	0.19
nb:2934158 4015327	0.54	1.00	0.54	0.41	0.36	0.59	0.34
knn:2934158 4015327	0.53	1.00	0.54	0.41	0.36	0.59	0.31
rpart:2934158 4015327	0.52	0.96	0.29	0.67	0.35	0.61	0.39
svm:2934158 4015327	0.56	1.00	0.89	0.13	0.38	0.67	0.11
hdda:2934158 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2975719	0.56	1.00	0.46	0.46	0.34	0.58	0.17
nb:2934158 2975719	0.57	1.00	0.50	0.41	0.34	0.58	0.36
knn:2934158 2975719	0.54	1.00	0.50	0.46	0.36	0.60	0.36
rpart:2934158 2975719	0.56	0.98	0.25	0.67	0.32	0.60	0.46
svm:2934158 2975719	0.52	1.00	0.82	0.07	0.35	0.38	-0.37
hdda:2934158 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3109057	0.56	1.00	0.36	0.54	0.32	0.58	0.37
nb:2934158 3109057	0.51	1.00	0.64	0.37	0.38	0.63	0.30
knn:2934158 3109057	0.54	0.96	0.25	0.70	0.33	0.60	0.50
rpart:2934158 3109057	0.53	0.96	0.29	0.67	0.35	0.61	0.53
svm:2934158 3109057	0.54	1.00	0.68	0.35	0.39	0.64	0.44
hdda:2934158 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 4021820	0.51	0.94	0.50	0.57	0.41	0.65	0.28
nb:2934158 4021820	0.56	1.00	0.54	0.35	0.33	0.55	0.35
knn:2934158 4021820	0.55	0.98	0.25	0.67	0.32	0.60	0.50
rpart:2934158 4021820	0.59	0.99	0.11	0.74	0.20	0.58	0.53
svm:2934158 4021820	0.52	0.73	0.07	0.91	0.33	0.62	2.91
hdda:2934158 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3577841	0.57	1.00	0.29	0.57	0.29	0.57	0.24
nb:2934158 3577841	0.60	1.00	0.54	0.26	0.31	0.48	0.31
knn:2934158 3577841	0.58	1.00	0.46	0.35	0.30	0.52	0.30

rpart:2934158 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3577841	0.60	0.91	0.82	0.39	0.45	0.78	1.00
hdda:2934158 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3703849	0.52	0.98	0.25	0.67	0.32	0.60	0.35
nb:2934158 3703849	0.55	0.99	0.21	0.67	0.29	0.58	0.39
knn:2934158 3703849	0.58	1.00	0.46	0.43	0.33	0.57	0.29
rpart:2934158 3703849	0.56	0.98	0.25	0.67	0.32	0.60	0.43
svm:2934158 3703849	0.54	1.00	0.86	0.13	0.38	0.60	0.15
hdda:2934158 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2707575	0.55	1.00	0.64	0.26	0.35	0.55	0.15
nb:2934158 2707575	0.58	0.86	0.21	0.78	0.38	0.62	0.41
knn:2934158 2707575	0.55	0.99	0.43	0.54	0.36	0.61	0.37
rpart:2934158 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2934158 2707575	0.57	0.94	0.54	0.54	0.42	0.66	1.00
hdda:2934158 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2510519	0.57	0.99	0.25	0.63	0.29	0.58	0.38
nb:2934158 2510519	0.59	1.00	0.61	0.20	0.31	0.45	0.36
knn:2934158 2510519	0.57	1.00	0.50	0.37	0.33	0.55	0.39
rpart:2934158 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2510519	0.52	1.00	0.68	0.33	0.38	0.63	0.52
hdda:2934158 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3530890	0.55	0.94	0.39	0.63	0.39	0.63	0.32
nb:2934158 3530890	0.51	1.00	0.46	0.48	0.35	0.59	0.38
knn:2934158 3530890	0.51	0.99	0.54	0.46	0.38	0.62	0.37
rpart:2934158 3530890	0.51	0.86	0.43	0.65	0.43	0.65	0.46
svm:2934158 3530890	0.52	1.00	0.75	0.22	0.37	0.59	0.29
hdda:2934158 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3769569	0.52	0.98	0.29	0.65	0.33	0.60	0.40
nb:2934158 3769569	0.51	0.96	0.54	0.52	0.41	0.65	0.35
knn:2934158 3769569	0.54	1.00	0.50	0.39	0.33	0.56	0.35
rpart:2934158 3769569	0.55	0.98	0.29	0.65	0.33	0.60	0.45
svm:2934158 3769569	0.50	1.00	0.79	0.24	0.39	0.65	0.33
hdda:2934158 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3544035	0.51	0.86	0.32	0.72	0.41	0.63	0.39
nb:2934158 3544035	0.55	1.00	0.50	0.46	0.36	0.60	0.36
knn:2934158 3544035	0.59	1.00	0.36	0.54	0.32	0.58	0.37
rpart:2934158 3544035	0.52	0.73	0.25	0.80	0.44	0.64	0.46
svm:2934158 3544035	0.55	1.00	0.79	0.17	0.37	0.57	0.33
hdda:2934158 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2790378	0.54	1.00	0.36	0.54	0.32	0.58	0.19
nb:2934158 2790378	0.53	1.00	0.50	0.35	0.32	0.53	0.34
knn:2934158 2790378	0.56	1.00	0.32	0.52	0.29	0.56	0.41
rpart:2934158 2790378	0.54	1.00	0.50	0.39	0.33	0.56	0.30
svm:2934158 2790378	0.52	1.00	0.93	0.07	0.38	0.60	0.95
hdda:2934158 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2625670	0.53	0.96	0.39	0.61	0.38	0.62	0.22
nb:2934158 2625670	0.51	1.00	0.68	0.35	0.39	0.64	0.28
knn:2934158 2625670	0.51	0.98	0.50	0.52	0.39	0.63	0.34

rpart:2934158 2625670	0.56	1.00	0.50	0.39	0.33	0.56	0.30
svm:2934158 2625670	0.52	1.00	0.75	0.22	0.37	0.59	-0.09
hdda:2934158 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3646405	0.51	0.96	0.39	0.61	0.38	0.62	0.38
nb:2934158 3646405	0.55	1.00	0.64	0.24	0.34	0.52	0.32
knn:2934158 3646405	0.57	1.00	0.46	0.41	0.33	0.56	0.35
rpart:2934158 3646405	0.52	1.00	0.50	0.39	0.33	0.56	0.28
svm:2934158 3646405	0.60	0.91	0.46	0.61	0.42	0.65	1.00
hdda:2934158 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2918654	0.54	0.98	0.32	0.63	0.35	0.60	0.29
nb:2934158 2918654	0.57	1.00	0.57	0.41	0.37	0.61	0.33
knn:2934158 2918654	0.58	1.00	0.50	0.35	0.32	0.53	0.31
rpart:2934158 2918654	0.55	0.98	0.32	0.63	0.35	0.60	0.41
svm:2934158 2918654	0.53	0.99	0.32	0.59	0.32	0.59	1.00
hdda:2934158 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2663553	0.55	1.00	0.46	0.39	0.32	0.55	0.18
nb:2934158 2663553	0.58	1.00	0.57	0.30	0.33	0.54	0.35
knn:2934158 2663553	0.55	1.00	0.57	0.30	0.33	0.54	0.33
rpart:2934158 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2663553	0.59	0.80	0.43	0.67	0.44	0.66	1.00
hdda:2934158 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3103484	0.54	0.96	0.29	0.67	0.35	0.61	0.27
nb:2934158 3103484	0.57	1.00	0.57	0.28	0.33	0.52	0.31
knn:2934158 3103484	0.62	1.00	0.54	0.33	0.33	0.54	0.32
rpart:2934158 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3103484	0.51	1.00	0.79	0.13	0.35	0.50	0.11
hdda:2934158 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2757491	0.51	1.00	0.68	0.28	0.37	0.59	0.13
nb:2934158 2757491	0.54	1.00	0.64	0.26	0.35	0.55	0.33
knn:2934158 2757491	0.57	1.00	0.36	0.52	0.31	0.57	0.39
rpart:2934158 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2757491	0.55	0.99	0.57	0.46	0.39	0.64	0.98
hdda:2934158 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2401368	0.56	1.00	0.64	0.30	0.36	0.58	0.12
nb:2934158 2401368	0.52	1.00	0.68	0.24	0.35	0.55	0.26
knn:2934158 2401368	0.55	1.00	0.64	0.33	0.37	0.60	0.26
rpart:2934158 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2401368	0.66	1.00	0.75	0.13	0.34	0.46	1.00
hdda:2934158 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3788643	0.55	1.00	0.75	0.28	0.39	0.65	0.15
nb:2934158 3788643	0.60	1.00	0.71	0.24	0.36	0.58	0.29
knn:2934158 3788643	0.52	0.99	0.57	0.43	0.38	0.63	0.27
rpart:2934158 3788643	0.60	1.00	0.50	0.39	0.33	0.56	0.26
svm:2934158 3788643	0.53	1.00	0.89	0.22	0.41	0.77	0.66
hdda:2934158 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3219832	0.54	0.99	0.39	0.57	0.35	0.60	0.24
nb:2934158 3219832	0.53	1.00	0.57	0.33	0.34	0.56	0.30
knn:2934158 3219832	0.54	0.99	0.71	0.35	0.40	0.67	0.34

rpart:2934158 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3219832	0.57	1.00	0.39	0.48	0.31	0.56	0.77
hdda:2934158 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3198757	0.53	0.99	0.46	0.50	0.36	0.61	0.30
nb:2934158 3198757	0.59	0.91	0.11	0.83	0.27	0.60	0.40
knn:2934158 3198757	0.60	1.00	0.61	0.33	0.35	0.58	0.31
rpart:2934158 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3198757	0.53	1.00	0.75	0.30	0.40	0.67	1.00
hdda:2934158 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3753198	0.59	1.00	0.71	0.20	0.35	0.53	0.13
nb:2934158 3753198	0.53	1.00	0.57	0.33	0.34	0.56	0.32
knn:2934158 3753198	0.51	0.64	0.29	0.80	0.47	0.65	0.50
rpart:2934158 3753198	0.55	1.00	0.50	0.39	0.33	0.56	0.29
svm:2934158 3753198	0.56	1.00	0.64	0.26	0.35	0.55	0.14
hdda:2934158 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2902908	0.52	0.96	0.39	0.61	0.38	0.62	0.30
nb:2934158 2902908	0.53	0.96	0.39	0.61	0.38	0.62	0.40
knn:2934158 2902908	0.52	1.00	0.50	0.46	0.36	0.60	0.34
rpart:2934158 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2902908	0.53	1.00	0.54	0.39	0.35	0.58	0.72
hdda:2934158 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3142559	0.51	0.91	0.14	0.80	0.31	0.61	0.47
nb:2934158 3142559	0.58	0.94	0.29	0.70	0.36	0.62	0.39
knn:2934158 3142559	0.51	0.86	0.25	0.76	0.39	0.63	0.43
rpart:2934158 3142559	0.53	0.94	0.18	0.76	0.31	0.60	0.48
svm:2934158 3142559	0.53	1.00	0.86	0.20	0.39	0.69	0.25
hdda:2934158 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3626882	0.55	0.99	0.46	0.50	0.36	0.61	0.19
nb:2934158 3626882	0.54	0.94	0.32	0.67	0.38	0.62	0.40
knn:2934158 3626882	0.57	1.00	0.21	0.61	0.25	0.56	0.42
rpart:2934158 3626882	0.52	0.91	0.11	0.83	0.27	0.60	0.63
svm:2934158 3626882	0.57	1.00	0.89	0.13	0.38	0.67	0.16
hdda:2934158 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3433222	0.60	0.73	0.50	0.65	0.47	0.68	0.30
nb:2934158 3433222	0.52	0.99	0.75	0.33	0.40	0.68	0.30
knn:2934158 3433222	0.50	1.00	0.43	0.48	0.33	0.58	0.33
rpart:2934158 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3433222	0.59	1.00	0.61	0.20	0.31	0.45	0.59
hdda:2934158 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2991121	0.57	1.00	0.21	0.57	0.23	0.54	0.34
nb:2934158 2991121	0.62	1.00	0.32	0.41	0.25	0.50	0.37
knn:2934158 2991121	0.62	1.00	0.29	0.50	0.26	0.53	0.39
rpart:2934158 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2991121	0.61	1.00	0.93	0.17	0.41	0.80	0.42
hdda:2934158 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2959165	0.52	0.86	0.29	0.74	0.40	0.63	0.44
nb:2934158 2959165	0.52	0.99	0.61	0.43	0.40	0.65	0.35
knn:2934158 2959165	0.54	0.94	0.36	0.65	0.38	0.63	0.46

rpart:2934158 2959165	0.51	0.91	0.29	0.72	0.38	0.62	0.49
svm:2934158 2959165	0.53	1.00	0.71	0.28	0.38	0.62	0.27
hdda:2934158 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3546559	0.52	0.99	0.68	0.37	0.40	0.65	0.16
nb:2934158 3546559	0.52	0.91	0.61	0.52	0.44	0.69	0.32
knn:2934158 3546559	0.53	1.00	0.39	0.48	0.31	0.56	0.37
rpart:2934158 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3546559	0.50	1.00	0.82	0.20	0.38	0.64	-0.20
hdda:2934158 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3020668	0.58	0.98	0.29	0.65	0.33	0.60	0.29
nb:2934158 3020668	0.54	1.00	0.64	0.33	0.37	0.60	0.26
knn:2934158 3020668	0.58	1.00	0.25	0.59	0.27	0.56	0.38
rpart:2934158 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3020668	0.51	1.00	0.75	0.28	0.39	0.65	0.71
hdda:2934158 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2397811	0.56	1.00	0.36	0.54	0.32	0.58	0.29
nb:2934158 2397811	0.59	1.00	0.50	0.35	0.32	0.53	0.37
knn:2934158 2397811	0.58	1.00	0.43	0.46	0.32	0.57	0.37
rpart:2934158 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 2397811	0.53	1.00	0.75	0.28	0.39	0.65	0.56
hdda:2934158 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3903427	0.52	0.80	0.14	0.85	0.36	0.62	0.42
nb:2934158 3903427	0.57	0.80	0.14	0.85	0.36	0.62	0.42
knn:2934158 3903427	0.54	0.80	0.25	0.78	0.41	0.63	0.37
rpart:2934158 3903427	0.56	1.00	0.50	0.39	0.33	0.56	0.25
svm:2934158 3903427	0.53	1.00	0.89	0.15	0.39	0.70	0.18
hdda:2934158 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 2595867	0.53	0.94	0.29	0.70	0.36	0.62	0.25
nb:2934158 2595867	0.54	0.99	0.18	0.67	0.25	0.57	0.40
knn:2934158 2595867	0.55	1.00	0.46	0.41	0.33	0.56	0.32
rpart:2934158 2595867	0.56	0.96	0.21	0.72	0.32	0.60	0.48
svm:2934158 2595867	0.55	1.00	0.86	0.17	0.39	0.67	0.36
hdda:2934158 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3068088	0.60	1.00	0.61	0.26	0.33	0.52	0.12
nb:2934158 3068088	0.62	1.00	0.64	0.22	0.33	0.50	0.31
knn:2934158 3068088	0.59	1.00	0.50	0.33	0.31	0.52	0.31
rpart:2934158 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3068088	0.52	1.00	0.89	0.09	0.37	0.57	-0.20
hdda:2934158 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2934158 3487363	0.59	1.00	0.25	0.61	0.28	0.57	0.34
nb:2934158 3487363	0.60	1.00	0.64	0.26	0.35	0.55	0.28
knn:2934158 3487363	0.58	1.00	0.57	0.30	0.33	0.54	0.32
rpart:2934158 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2934158 3487363	0.52	1.00	0.93	0.09	0.38	0.67	-0.21
hdda:2851303 3454547	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3454547	0.51	0.94	0.32	0.67	0.38	0.62	0.45
nb:2851303 3454547	0.58	1.00	0.82	0.09	0.35	0.44	0.27
knn:2851303 3454547	0.51	0.99	0.57	0.46	0.39	0.64	0.35

rpart:2851303 3454547	0.54	0.80	0.32	0.74	0.43	0.64	0.48
svm:2851303 3454547	0.53	0.46	0.29	0.85	0.53	0.66	1.00
hdda:2851303 2458376	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2458376	0.61	0.64	0.43	0.72	0.48	0.67	0.29
nb:2851303 2458376	0.59	1.00	0.82	0.11	0.36	0.50	0.28
knn:2851303 2458376	0.65	0.98	0.68	0.41	0.41	0.68	0.31
rpart:2851303 2458376	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2458376	0.60	1.00	0.71	0.11	0.33	0.38	0.54
hdda:2851303 3637974	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3637974	0.57	1.00	0.54	0.22	0.29	0.43	0.18
nb:2851303 3637974	0.64	1.00	0.32	0.37	0.24	0.47	0.41
knn:2851303 3637974	0.56	1.00	0.43	0.43	0.32	0.56	0.32
rpart:2851303 3637974	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:2851303 3637974	0.58	1.00	0.89	0.11	0.38	0.63	0.02
hdda:2851303 3337703	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3337703	0.52	0.98	0.64	0.43	0.41	0.67	0.25
nb:2851303 3337703	0.58	1.00	0.82	0.09	0.35	0.44	0.27
knn:2851303 3337703	0.59	1.00	0.50	0.39	0.33	0.56	0.30
rpart:2851303 3337703	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3337703	0.51	1.00	0.64	0.37	0.38	0.63	0.72
hdda:2851303 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3498477	0.56	0.91	0.43	0.63	0.41	0.64	0.20
nb:2851303 3498477	0.53	1.00	0.46	0.48	0.35	0.59	0.39
knn:2851303 3498477	0.60	0.96	0.64	0.46	0.42	0.68	0.35
rpart:2851303 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3498477	0.51	0.80	0.04	0.91	0.20	0.61	6.36
hdda:2851303 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2321235	0.62	0.55	0.36	0.78	0.50	0.67	0.41
nb:2851303 2321235	0.54	0.99	0.57	0.46	0.39	0.64	0.39
knn:2851303 2321235	0.61	0.96	0.57	0.50	0.41	0.66	0.36
rpart:2851303 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2321235	0.55	1.00	0.68	0.20	0.34	0.50	0.41
hdda:2851303 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3351432	0.51	0.91	0.50	0.59	0.42	0.66	0.35
nb:2851303 3351432	0.55	1.00	0.82	0.17	0.38	0.62	0.32
knn:2851303 3351432	0.52	0.91	0.39	0.65	0.41	0.64	0.50
rpart:2851303 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3351432	0.55	1.00	0.54	0.26	0.31	0.48	0.23
hdda:2851303 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2615421	0.64	0.86	0.61	0.54	0.45	0.69	0.20
nb:2851303 2615421	0.56	0.99	0.64	0.39	0.39	0.64	0.31
knn:2851303 2615421	0.60	0.80	0.32	0.74	0.43	0.64	0.39
rpart:2851303 2615421	0.58	0.64	0.39	0.74	0.48	0.67	0.31
svm:2851303 2615421	0.62	1.00	0.18	0.59	0.21	0.54	0.58
hdda:2851303 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2802601	0.62	0.06	0.32	0.96	0.82	0.70	0.43
nb:2851303 2802601	0.58	1.00	0.82	0.07	0.35	0.38	0.29
knn:2851303 2802601	0.68	0.80	0.75	0.48	0.47	0.76	0.30

rpart:2851303 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2802601	0.56	1.00	0.71	0.07	0.32	0.27	0.41
hdda:2851303 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3326487	0.60	0.96	0.75	0.39	0.43	0.72	0.18
nb:2851303 3326487	0.64	1.00	0.82	0.13	0.37	0.55	0.27
knn:2851303 3326487	0.65	0.94	0.79	0.39	0.44	0.75	0.31
rpart:2851303 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3326487	0.55	1.00	0.36	0.50	0.30	0.56	0.81
hdda:2851303 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3870139	0.58	0.73	0.29	0.78	0.44	0.64	0.42
nb:2851303 3870139	0.52	1.00	0.61	0.39	0.38	0.62	0.37
knn:2851303 3870139	0.54	0.73	0.36	0.74	0.45	0.65	0.50
rpart:2851303 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3870139	0.53	1.00	0.82	0.22	0.39	0.67	0.30
hdda:2851303 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2627418	0.56	0.91	0.36	0.67	0.40	0.63	0.44
nb:2851303 2627418	0.52	1.00	0.64	0.35	0.38	0.62	0.38
knn:2851303 2627418	0.53	0.94	0.39	0.63	0.39	0.63	0.44
rpart:2851303 2627418	0.52	0.91	0.36	0.67	0.40	0.63	0.40
svm:2851303 2627418	0.56	1.00	0.71	0.30	0.38	0.64	0.43
hdda:2851303 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2594205	0.55	1.00	0.50	0.46	0.36	0.60	0.14
nb:2851303 2594205	0.51	0.80	0.04	0.91	0.20	0.61	0.50
knn:2851303 2594205	0.69	0.20	0.61	0.72	0.57	0.75	0.36
rpart:2851303 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2594205	0.65	1.00	0.71	0.20	0.35	0.53	0.22
hdda:2851303 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 4015327	0.52	0.86	0.21	0.78	0.38	0.62	0.41
nb:2851303 4015327	0.59	1.00	0.71	0.30	0.38	0.64	0.34
knn:2851303 4015327	0.65	0.64	0.64	0.59	0.49	0.73	0.33
rpart:2851303 4015327	0.54	0.96	0.14	0.76	0.27	0.59	0.50
svm:2851303 4015327	0.53	1.00	0.79	0.11	0.35	0.45	0.54
hdda:2851303 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2975719	0.69	0.46	0.39	0.78	0.52	0.68	0.34
nb:2851303 2975719	0.53	1.00	0.71	0.30	0.38	0.64	0.34
knn:2851303 2975719	0.51	0.91	0.39	0.65	0.41	0.64	0.40
rpart:2851303 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2975719	0.61	1.00	0.54	0.28	0.31	0.50	0.79
hdda:2851303 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3109057	0.54	0.86	0.29	0.74	0.40	0.63	0.42
nb:2851303 3109057	0.56	0.91	0.54	0.57	0.43	0.67	0.37
knn:2851303 3109057	0.58	0.73	0.29	0.78	0.44	0.64	0.50
rpart:2851303 3109057	0.53	1.00	0.79	0.24	0.39	0.65	0.20
svm:2851303 3109057	0.55	1.00	0.89	0.07	0.37	0.50	0.50
hdda:2851303 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 4021820	0.56	0.96	0.57	0.50	0.41	0.66	0.28
nb:2851303 4021820	0.52	0.99	0.46	0.52	0.37	0.62	0.40
knn:2851303 4021820	0.57	0.98	0.43	0.57	0.38	0.62	0.38

rpart:2851303 4021820	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:2851303 4021820	0.57	1.00	0.71	0.15	0.34	0.47	0.60
hdda:2851303 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3577841	0.52	0.99	0.61	0.41	0.39	0.63	0.19
nb:2851303 3577841	0.51	0.99	0.57	0.46	0.39	0.64	0.37
knn:2851303 3577841	0.54	1.00	0.71	0.28	0.38	0.62	0.23
rpart:2851303 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3577841	0.53	1.00	0.82	0.17	0.38	0.62	0.72
hdda:2851303 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3703849	0.59	0.86	0.54	0.59	0.44	0.68	0.32
nb:2851303 3703849	0.54	0.80	0.39	0.70	0.44	0.65	0.40
knn:2851303 3703849	0.59	0.36	0.54	0.72	0.54	0.72	0.39
rpart:2851303 3703849	0.58	0.46	0.29	0.85	0.53	0.66	0.62
svm:2851303 3703849	0.59	1.00	0.57	0.24	0.31	0.48	0.57
hdda:2851303 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2707575	0.57	0.94	0.57	0.52	0.42	0.67	0.26
nb:2851303 2707575	0.52	0.91	0.32	0.70	0.39	0.63	0.40
knn:2851303 2707575	0.58	0.96	0.50	0.54	0.40	0.64	0.35
rpart:2851303 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.32
svm:2851303 2707575	0.54	1.00	0.79	0.24	0.39	0.65	0.54
hdda:2851303 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2510519	0.58	0.94	0.54	0.54	0.42	0.66	0.31
nb:2851303 2510519	0.56	1.00	0.82	0.07	0.35	0.38	0.33
knn:2851303 2510519	0.60	1.00	0.71	0.33	0.39	0.65	0.32
rpart:2851303 2510519	0.54	0.80	0.32	0.74	0.43	0.64	0.48
svm:2851303 2510519	0.63	1.00	0.54	0.30	0.32	0.52	0.38
hdda:2851303 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3530890	0.64	0.55	0.54	0.67	0.50	0.70	0.29
nb:2851303 3530890	0.57	0.91	0.68	0.48	0.44	0.71	0.38
knn:2851303 3530890	0.63	0.86	0.32	0.72	0.41	0.63	0.45
rpart:2851303 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3530890	0.59	1.00	0.61	0.30	0.35	0.56	0.77
hdda:2851303 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3769569	0.63	0.36	0.46	0.76	0.54	0.70	0.34
nb:2851303 3769569	0.61	1.00	0.82	0.26	0.40	0.71	0.32
knn:2851303 3769569	0.65	0.80	0.71	0.50	0.47	0.74	0.34
rpart:2851303 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3769569	0.67	1.00	0.75	0.11	0.34	0.42	0.88
hdda:2851303 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3544035	0.56	0.99	0.50	0.50	0.38	0.62	0.21
nb:2851303 3544035	0.52	1.00	0.61	0.28	0.34	0.54	0.32
knn:2851303 3544035	0.54	0.86	0.43	0.65	0.43	0.65	0.40
rpart:2851303 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3544035	0.54	1.00	0.75	0.17	0.36	0.53	0.21
hdda:2851303 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2790378	0.58	0.80	0.57	0.59	0.46	0.69	0.31
nb:2851303 2790378	0.59	1.00	0.82	0.13	0.37	0.55	0.29
knn:2851303 2790378	0.52	1.00	0.71	0.30	0.38	0.64	0.17

rpart:2851303 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2790378	0.52	0.96	0.79	0.37	0.43	0.74	0.62
hdda:2851303 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2625670	0.56	0.80	0.39	0.70	0.44	0.65	0.31
nb:2851303 2625670	0.59	1.00	0.61	0.39	0.38	0.62	0.32
knn:2851303 2625670	0.61	0.94	0.71	0.43	0.43	0.71	0.30
rpart:2851303 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2625670	0.57	0.99	0.32	0.61	0.33	0.60	1.00
hdda:2851303 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3646405	0.60	0.80	0.36	0.72	0.43	0.65	0.39
nb:2851303 3646405	0.54	1.00	0.71	0.28	0.38	0.62	0.36
knn:2851303 3646405	0.60	0.64	0.39	0.74	0.48	0.67	0.45
rpart:2851303 3646405	0.54	0.80	0.25	0.78	0.41	0.63	0.62
svm:2851303 3646405	0.63	1.00	0.57	0.28	0.33	0.52	0.36
hdda:2851303 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2918654	0.56	0.91	0.54	0.57	0.43	0.67	0.32
nb:2851303 2918654	0.52	0.96	0.36	0.63	0.37	0.62	0.40
knn:2851303 2918654	0.53	0.96	0.25	0.70	0.33	0.60	0.50
rpart:2851303 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2918654	0.52	0.96	0.29	0.67	0.35	0.61	0.64
hdda:2851303 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2663553	0.57	0.55	0.43	0.74	0.50	0.68	0.39
nb:2851303 2663553	0.54	1.00	0.82	0.09	0.35	0.44	0.31
knn:2851303 2663553	0.55	1.00	0.75	0.26	0.38	0.63	0.31
rpart:2851303 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2663553	0.56	1.00	0.75	0.15	0.35	0.50	0.34
hdda:2851303 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3103484	0.53	0.94	0.32	0.67	0.38	0.62	0.32
nb:2851303 3103484	0.52	0.55	0.36	0.78	0.50	0.67	0.43
knn:2851303 3103484	0.64	0.94	0.54	0.54	0.42	0.66	0.30
rpart:2851303 3103484	0.51	0.99	0.32	0.61	0.33	0.60	0.38
svm:2851303 3103484	0.56	0.91	0.11	0.83	0.27	0.60	3.21
hdda:2851303 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2757491	0.53	0.80	0.36	0.72	0.43	0.65	0.39
nb:2851303 2757491	0.60	1.00	0.82	0.11	0.36	0.50	0.31
knn:2851303 2757491	0.51	0.86	0.32	0.72	0.41	0.63	0.50
rpart:2851303 2757491	0.54	0.80	0.32	0.74	0.43	0.64	0.48
svm:2851303 2757491	0.54	1.00	0.75	0.11	0.34	0.42	0.17
hdda:2851303 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2401368	0.69	0.14	0.39	0.87	0.65	0.70	0.28
nb:2851303 2401368	0.63	1.00	0.82	0.13	0.37	0.55	0.25
knn:2851303 2401368	0.67	0.14	0.46	0.83	0.62	0.72	0.33
rpart:2851303 2401368	0.70	0.06	0.39	0.91	0.73	0.71	0.48
svm:2851303 2401368	0.72	1.00	0.57	0.09	0.28	0.25	0.75
hdda:2851303 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3788643	0.55	0.46	0.39	0.78	0.52	0.68	0.33
nb:2851303 3788643	0.51	1.00	0.57	0.39	0.36	0.60	0.36
knn:2851303 3788643	0.57	0.73	0.29	0.78	0.44	0.64	0.40

rpart:2851303 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3788643	0.56	1.00	0.57	0.24	0.31	0.48	0.44
hdda:2851303 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3219832	0.64	0.86	0.61	0.54	0.45	0.69	0.26
nb:2851303 3219832	0.60	0.46	0.14	0.93	0.57	0.64	0.50
knn:2851303 3219832	0.66	0.94	0.89	0.33	0.45	0.83	0.30
rpart:2851303 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3219832	0.61	1.00	0.96	0.00	0.37	0.00	0.05
hdda:2851303 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3198757	0.59	0.80	0.39	0.70	0.44	0.65	0.36
nb:2851303 3198757	0.56	0.96	0.11	0.78	0.23	0.59	0.40
knn:2851303 3198757	0.52	0.73	0.57	0.61	0.47	0.70	0.37
rpart:2851303 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3198757	0.60	1.00	0.79	0.15	0.36	0.54	0.60
hdda:2851303 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3753198	0.56	0.94	0.32	0.67	0.38	0.62	0.41
nb:2851303 3753198	0.55	1.00	0.61	0.39	0.38	0.62	0.35
knn:2851303 3753198	0.52	1.00	0.68	0.33	0.38	0.63	0.17
rpart:2851303 3753198	0.54	0.94	0.46	0.59	0.41	0.64	0.43
svm:2851303 3753198	0.67	0.80	0.00	0.93	0.00	0.61	13.59
hdda:2851303 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2902908	0.61	0.96	0.79	0.37	0.43	0.74	0.13
nb:2851303 2902908	0.55	0.80	0.61	0.57	0.46	0.70	0.39
knn:2851303 2902908	0.62	0.64	0.57	0.63	0.48	0.71	0.38
rpart:2851303 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2902908	0.64	1.00	0.39	0.35	0.27	0.48	0.42
hdda:2851303 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3142559	0.51	0.91	0.36	0.67	0.40	0.63	0.37
nb:2851303 3142559	0.52	0.98	0.25	0.67	0.32	0.60	0.38
knn:2851303 3142559	0.52	1.00	0.64	0.33	0.37	0.60	0.17
rpart:2851303 3142559	0.50	0.99	0.18	0.70	0.26	0.58	0.44
svm:2851303 3142559	0.52	1.00	0.71	0.26	0.37	0.60	0.36
hdda:2851303 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3626882	0.51	0.96	0.43	0.59	0.39	0.63	0.32
nb:2851303 3626882	0.51	0.94	0.25	0.72	0.35	0.61	0.42
knn:2851303 3626882	0.51	1.00	0.54	0.41	0.36	0.59	0.28
rpart:2851303 3626882	0.52	0.94	0.25	0.72	0.35	0.61	0.40
svm:2851303 3626882	0.54	0.94	0.64	0.48	0.43	0.69	0.67
hdda:2851303 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3433222	0.55	0.73	0.39	0.72	0.46	0.66	0.37
nb:2851303 3433222	0.58	0.36	0.29	0.87	0.57	0.67	0.44
knn:2851303 3433222	0.59	0.55	0.43	0.74	0.50	0.68	0.41
rpart:2851303 3433222	0.62	0.20	0.39	0.85	0.61	0.70	0.41
svm:2851303 3433222	0.61	1.00	0.61	0.22	0.32	0.48	0.31
hdda:2851303 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2991121	0.51	0.98	0.14	0.74	0.25	0.59	0.42
nb:2851303 2991121	0.55	1.00	0.50	0.28	0.30	0.48	0.32
knn:2851303 2991121	0.54	1.00	0.64	0.28	0.35	0.57	0.31

rpart:2851303 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2991121	0.54	1.00	0.82	0.24	0.40	0.69	0.18
hdda:2851303 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2959165	0.54	0.96	0.57	0.50	0.41	0.66	0.28
nb:2851303 2959165	0.52	1.00	0.75	0.28	0.39	0.65	0.33
knn:2851303 2959165	0.61	0.64	0.46	0.70	0.48	0.68	0.44
rpart:2851303 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:2851303 2959165	0.60	1.00	0.64	0.20	0.33	0.47	0.18
hdda:2851303 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3546559	0.60	0.91	0.68	0.48	0.44	0.71	0.15
nb:2851303 3546559	0.56	0.86	0.61	0.54	0.45	0.69	0.35
knn:2851303 3546559	0.64	0.64	0.64	0.59	0.49	0.73	0.36
rpart:2851303 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3546559	0.59	0.99	0.11	0.72	0.19	0.57	3.07
hdda:2851303 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3020668	0.52	0.99	0.29	0.63	0.32	0.59	0.39
nb:2851303 3020668	0.52	1.00	0.64	0.35	0.38	0.62	0.28
knn:2851303 3020668	0.51	0.99	0.50	0.48	0.37	0.61	0.17
rpart:2851303 3020668	0.53	0.98	0.18	0.72	0.28	0.59	0.48
svm:2851303 3020668	0.51	1.00	0.68	0.20	0.34	0.50	0.54
hdda:2851303 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2397811	0.56	0.73	0.32	0.76	0.45	0.65	0.45
nb:2851303 2397811	0.54	0.98	0.71	0.39	0.42	0.69	0.39
knn:2851303 2397811	0.56	0.73	0.54	0.63	0.47	0.69	0.40
rpart:2851303 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 2397811	0.54	1.00	0.64	0.20	0.33	0.47	-0.17
hdda:2851303 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3903427	0.59	0.64	0.54	0.65	0.48	0.70	0.37
nb:2851303 3903427	0.51	0.94	0.07	0.83	0.20	0.59	0.45
knn:2851303 3903427	0.53	0.99	0.29	0.63	0.32	0.59	0.37
rpart:2851303 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2851303 3903427	0.50	1.00	0.96	0.13	0.40	0.86	0.80
hdda:2851303 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 2595867	0.52	0.86	0.32	0.72	0.41	0.63	0.43
nb:2851303 2595867	0.51	0.91	0.25	0.74	0.37	0.62	0.44
knn:2851303 2595867	0.54	0.98	0.54	0.50	0.39	0.64	0.35
rpart:2851303 2595867	0.52	0.91	0.32	0.70	0.39	0.63	0.34
svm:2851303 2595867	0.53	1.00	0.75	0.20	0.36	0.56	0.29
hdda:2851303 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3068088	0.58	0.94	0.57	0.52	0.42	0.67	0.29
nb:2851303 3068088	0.53	1.00	0.82	0.11	0.36	0.50	0.29
knn:2851303 3068088	0.51	0.99	0.57	0.43	0.38	0.63	0.34
rpart:2851303 3068088	0.54	0.80	0.32	0.74	0.43	0.64	0.48
svm:2851303 3068088	0.51	1.00	0.79	0.17	0.37	0.57	0.52
hdda:2851303 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2851303 3487363	0.52	0.86	0.36	0.70	0.42	0.64	0.40
nb:2851303 3487363	0.54	0.98	0.14	0.74	0.25	0.59	0.44
knn:2851303 3487363	0.50	1.00	0.43	0.48	0.33	0.58	0.36

rpart:2851303 3487363	0.53	0.91	0.25	0.74	0.37	0.62	0.40
svm:2851303 3487363	0.51	1.00	0.75	0.26	0.38	0.63	0.47
hdda:3454547 2458376	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2458376	0.59	0.96	0.46	0.57	0.39	0.63	0.23
nb:3454547 2458376	0.68	0.64	0.64	0.59	0.49	0.73	0.33
knn:3454547 2458376	0.62	0.86	0.36	0.70	0.42	0.64	0.35
rpart:3454547 2458376	0.58	0.14	0.46	0.83	0.62	0.72	0.46
svm:3454547 2458376	0.56	1.00	0.71	0.26	0.37	0.60	0.77
hdda:3454547 3637974	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3637974	0.58	0.99	0.21	0.65	0.27	0.58	0.45
nb:3454547 3637974	0.61	1.00	0.54	0.28	0.31	0.50	0.33
knn:3454547 3637974	0.60	1.00	0.25	0.61	0.28	0.57	0.43
rpart:3454547 3637974	0.62	1.00	0.18	0.59	0.21	0.54	0.49
svm:3454547 3637974	0.59	1.00	0.79	0.24	0.39	0.65	0.20
hdda:3454547 3337703	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3337703	0.59	0.99	0.75	0.33	0.40	0.68	0.09
nb:3454547 3337703	0.60	0.36	0.18	0.93	0.63	0.65	0.37
knn:3454547 3337703	0.52	1.00	0.75	0.22	0.37	0.59	0.31
rpart:3454547 3337703	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3337703	0.61	1.00	0.75	0.09	0.33	0.36	0.64
hdda:3454547 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3498477	0.51	0.98	0.43	0.57	0.38	0.62	0.36
nb:3454547 3498477	0.54	0.99	0.64	0.39	0.39	0.64	0.33
knn:3454547 3498477	0.54	0.64	0.32	0.78	0.47	0.65	0.50
rpart:3454547 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3498477	0.51	0.99	0.71	0.35	0.40	0.67	0.74
hdda:3454547 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2321235	0.61	0.55	0.21	0.87	0.50	0.65	0.42
nb:3454547 2321235	0.58	0.86	0.75	0.46	0.46	0.75	0.34
knn:3454547 2321235	0.60	0.36	0.32	0.85	0.56	0.67	0.50
rpart:3454547 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2321235	0.67	1.00	0.96	0.02	0.38	0.50	0.78
hdda:3454547 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3351432	0.53	0.55	0.36	0.78	0.50	0.67	0.26
nb:3454547 3351432	0.53	1.00	0.43	0.41	0.31	0.54	0.37
knn:3454547 3351432	0.55	0.98	0.79	0.35	0.42	0.73	0.26
rpart:3454547 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3351432	0.58	1.00	0.71	0.20	0.35	0.53	0.63
hdda:3454547 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2615421	0.64	0.64	0.61	0.61	0.49	0.72	0.20
nb:3454547 2615421	0.58	0.91	0.71	0.46	0.44	0.72	0.28
knn:3454547 2615421	0.50	0.73	0.21	0.83	0.43	0.63	0.39
rpart:3454547 2615421	0.65	0.46	0.36	0.80	0.53	0.67	0.48
svm:3454547 2615421	0.52	1.00	0.75	0.17	0.36	0.53	0.58
hdda:3454547 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2802601	0.66	0.55	0.68	0.59	0.50	0.75	0.18
nb:3454547 2802601	0.64	0.36	0.64	0.65	0.53	0.75	0.35
knn:3454547 2802601	0.59	0.98	0.50	0.52	0.39	0.63	0.34

rpart:3454547 2802601	0.59	0.55	0.36	0.78	0.50	0.67	0.49
svm:3454547 2802601	0.64	1.00	0.79	0.13	0.35	0.50	0.65
hdda:3454547 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3326487	0.55	0.36	0.25	0.89	0.58	0.66	0.49
nb:3454547 3326487	0.75	0.28	0.14	0.98	0.80	0.65	0.41
knn:3454547 3326487	0.62	0.98	0.86	0.30	0.43	0.78	0.10
rpart:3454547 3326487	0.59	0.73	0.29	0.78	0.44	0.64	0.45
svm:3454547 3326487	0.66	1.00	0.64	0.15	0.32	0.41	0.24
hdda:3454547 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3870139	0.54	0.96	0.32	0.65	0.36	0.61	0.31
nb:3454547 3870139	0.58	0.98	0.75	0.37	0.42	0.71	0.33
knn:3454547 3870139	0.54	0.98	0.29	0.65	0.33	0.60	0.40
rpart:3454547 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3870139	0.50	0.98	0.39	0.59	0.37	0.61	1.00
hdda:3454547 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2627418	0.53	0.80	0.43	0.67	0.44	0.66	0.20
nb:3454547 2627418	0.54	1.00	0.79	0.20	0.37	0.60	0.33
knn:3454547 2627418	0.53	1.00	0.57	0.39	0.36	0.60	0.35
rpart:3454547 2627418	0.51	0.96	0.25	0.70	0.33	0.60	0.46
svm:3454547 2627418	0.53	1.00	0.61	0.39	0.38	0.62	1.00
hdda:3454547 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2594205	0.51	0.99	0.46	0.52	0.37	0.62	0.23
nb:3454547 2594205	0.51	0.86	0.04	0.89	0.17	0.60	0.46
knn:3454547 2594205	0.58	0.46	0.54	0.70	0.52	0.71	0.34
rpart:3454547 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2594205	0.56	1.00	1.00	0.02	0.38	1.00	-3.20
hdda:3454547 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 4015327	0.53	0.94	0.68	0.46	0.43	0.70	0.19
nb:3454547 4015327	0.59	0.64	0.61	0.61	0.49	0.72	0.35
knn:3454547 4015327	0.52	1.00	0.61	0.35	0.36	0.59	0.32
rpart:3454547 4015327	0.52	0.94	0.36	0.65	0.38	0.63	0.39
svm:3454547 4015327	0.57	1.00	0.79	0.20	0.37	0.60	0.47
hdda:3454547 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2975719	0.59	0.94	0.61	0.50	0.43	0.68	0.22
nb:3454547 2975719	0.52	0.99	0.79	0.33	0.42	0.71	0.33
knn:3454547 2975719	0.52	1.00	0.64	0.37	0.38	0.63	0.34
rpart:3454547 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2975719	0.52	1.00	0.75	0.17	0.36	0.53	0.61
hdda:3454547 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3109057	0.52	0.80	0.46	0.65	0.45	0.67	0.35
nb:3454547 3109057	0.59	0.55	0.39	0.76	0.50	0.67	0.37
knn:3454547 3109057	0.54	0.99	0.64	0.41	0.40	0.66	0.32
rpart:3454547 3109057	0.51	0.96	0.43	0.59	0.39	0.63	0.46
svm:3454547 3109057	0.53	1.00	0.96	0.07	0.39	0.75	0.81
hdda:3454547 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 4021820	0.52	1.00	0.64	0.24	0.34	0.52	0.13
nb:3454547 4021820	0.55	0.96	0.57	0.50	0.41	0.66	0.35
knn:3454547 4021820	0.53	0.99	0.54	0.48	0.38	0.63	0.34

rpart:3454547 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 4021820	0.53	1.00	0.71	0.28	0.38	0.62	0.32
hdda:3454547 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3577841	0.52	1.00	0.75	0.30	0.40	0.67	0.09
nb:3454547 3577841	0.52	1.00	0.50	0.43	0.35	0.59	0.32
knn:3454547 3577841	0.50	0.98	0.86	0.30	0.43	0.78	0.24
rpart:3454547 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3577841	0.56	0.80	0.36	0.72	0.43	0.65	1.00
hdda:3454547 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3703849	0.57	0.86	0.29	0.74	0.40	0.63	0.48
nb:3454547 3703849	0.59	0.73	0.46	0.67	0.46	0.67	0.34
knn:3454547 3703849	0.56	0.86	0.29	0.74	0.40	0.63	0.43
rpart:3454547 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3703849	0.60	1.00	0.82	0.15	0.37	0.58	0.22
hdda:3454547 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2707575	0.52	0.94	0.29	0.70	0.36	0.62	0.38
nb:3454547 2707575	0.53	0.86	0.32	0.72	0.41	0.63	0.35
knn:3454547 2707575	0.52	0.91	0.46	0.61	0.42	0.65	0.34
rpart:3454547 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:3454547 2707575	0.50	1.00	0.75	0.26	0.38	0.63	-0.02
hdda:3454547 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2510519	0.55	0.64	0.50	0.67	0.48	0.69	0.41
nb:3454547 2510519	0.59	1.00	0.86	0.22	0.40	0.71	0.38
knn:3454547 2510519	0.53	0.96	0.25	0.70	0.33	0.60	0.50
rpart:3454547 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2510519	0.51	1.00	0.82	0.22	0.39	0.67	-0.18
hdda:3454547 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3530890	0.62	0.64	0.29	0.80	0.47	0.65	0.40
nb:3454547 3530890	0.62	0.80	0.79	0.46	0.47	0.78	0.32
knn:3454547 3530890	0.58	0.99	0.57	0.46	0.39	0.64	0.36
rpart:3454547 3530890	0.53	0.46	0.18	0.91	0.56	0.65	0.49
svm:3454547 3530890	0.56	1.00	0.71	0.22	0.36	0.56	0.15
hdda:3454547 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3769569	0.58	0.80	0.43	0.67	0.44	0.66	0.26
nb:3454547 3769569	0.65	0.28	0.46	0.78	0.57	0.71	0.36
knn:3454547 3769569	0.53	1.00	0.50	0.46	0.36	0.60	0.35
rpart:3454547 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3769569	0.57	1.00	0.75	0.30	0.40	0.67	0.80
hdda:3454547 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3544035	0.57	0.46	0.39	0.78	0.52	0.68	0.41
nb:3454547 3544035	0.51	1.00	0.79	0.17	0.37	0.57	0.25
knn:3454547 3544035	0.51	0.55	0.39	0.76	0.50	0.67	0.37
rpart:3454547 3544035	0.56	0.73	0.39	0.72	0.46	0.66	0.48
svm:3454547 3544035	0.52	0.64	0.36	0.76	0.48	0.66	1.00
hdda:3454547 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2790378	0.58	0.91	0.43	0.63	0.41	0.64	0.18
nb:3454547 2790378	0.65	0.14	0.29	0.93	0.73	0.68	0.40
knn:3454547 2790378	0.56	0.98	0.29	0.65	0.33	0.60	0.37

rpart:3454547 2790378	0.51	0.96	0.25	0.70	0.33	0.60	0.46
svm:3454547 2790378	0.60	1.00	0.86	0.15	0.38	0.64	0.14
hdda:3454547 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2625670	0.56	1.00	0.64	0.28	0.35	0.57	0.08
nb:3454547 2625670	0.65	0.98	0.82	0.33	0.43	0.75	0.24
knn:3454547 2625670	0.54	1.00	0.54	0.35	0.33	0.55	0.34
rpart:3454547 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2625670	0.56	1.00	0.89	0.17	0.40	0.73	0.59
hdda:3454547 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3646405	0.54	0.98	0.57	0.48	0.40	0.65	0.10
nb:3454547 3646405	0.60	1.00	0.75	0.30	0.40	0.67	0.34
knn:3454547 3646405	0.55	0.91	0.46	0.61	0.42	0.65	0.39
rpart:3454547 3646405	0.52	0.96	0.43	0.59	0.39	0.63	0.42
svm:3454547 3646405	0.59	1.00	0.64	0.24	0.34	0.52	0.08
hdda:3454547 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2918654	0.51	0.91	0.43	0.63	0.41	0.64	0.27
nb:3454547 2918654	0.54	0.98	0.43	0.57	0.38	0.62	0.34
knn:3454547 2918654	0.52	1.00	0.79	0.24	0.39	0.65	0.26
rpart:3454547 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2918654	0.54	0.96	0.50	0.54	0.40	0.64	1.00
hdda:3454547 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2663553	0.55	0.98	0.57	0.48	0.40	0.65	0.12
nb:3454547 2663553	0.55	0.64	0.50	0.67	0.48	0.69	0.36
knn:3454547 2663553	0.62	0.98	0.71	0.39	0.42	0.69	0.31
rpart:3454547 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2663553	0.54	1.00	0.68	0.26	0.36	0.57	0.97
hdda:3454547 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3103484	0.55	0.64	0.25	0.83	0.47	0.64	0.47
nb:3454547 3103484	0.52	0.86	0.32	0.72	0.41	0.63	0.37
knn:3454547 3103484	0.53	0.94	0.14	0.78	0.29	0.60	0.50
rpart:3454547 3103484	0.50	0.86	0.25	0.76	0.39	0.63	0.41
svm:3454547 3103484	0.53	1.00	0.82	0.17	0.38	0.62	0.41
hdda:3454547 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2757491	0.65	0.46	0.61	0.65	0.52	0.73	0.18
nb:3454547 2757491	0.67	0.55	0.61	0.63	0.50	0.73	0.35
knn:3454547 2757491	0.56	0.73	0.32	0.76	0.45	0.65	0.45
rpart:3454547 2757491	0.51	0.96	0.25	0.70	0.33	0.60	0.46
svm:3454547 2757491	0.67	1.00	0.79	0.09	0.34	0.40	0.68
hdda:3454547 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2401368	0.69	0.91	0.89	0.35	0.45	0.84	0.09
nb:3454547 2401368	0.71	0.46	0.14	0.93	0.57	0.64	0.40
knn:3454547 2401368	0.67	0.64	0.75	0.52	0.49	0.77	0.28
rpart:3454547 2401368	0.70	0.14	0.25	0.96	0.78	0.68	0.44
svm:3454547 2401368	0.54	1.00	0.93	0.04	0.37	0.50	0.58
hdda:3454547 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3788643	0.53	0.86	0.39	0.67	0.42	0.65	0.22
nb:3454547 3788643	0.51	1.00	0.50	0.41	0.34	0.58	0.32
knn:3454547 3788643	0.54	0.96	0.61	0.48	0.41	0.67	0.31

rpart:3454547 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3788643	0.51	1.00	0.54	0.39	0.35	0.58	1.00
hdda:3454547 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3219832	0.66	0.64	0.43	0.72	0.48	0.67	0.26
nb:3454547 3219832	0.65	0.55	0.11	0.93	0.50	0.63	0.51
knn:3454547 3219832	0.61	1.00	0.82	0.26	0.40	0.71	0.23
rpart:3454547 3219832	0.69	0.36	0.29	0.87	0.57	0.67	0.47
svm:3454547 3219832	0.57	1.00	0.96	0.00	0.37	0.00	0.56
hdda:3454547 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3198757	0.51	0.91	0.36	0.67	0.40	0.63	0.23
nb:3454547 3198757	0.54	0.96	0.07	0.80	0.18	0.59	0.39
knn:3454547 3198757	0.50	0.94	0.39	0.63	0.39	0.63	0.36
rpart:3454547 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3198757	0.52	1.00	0.96	0.00	0.37	0.00	0.38
hdda:3454547 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3753198	0.51	0.98	0.50	0.52	0.39	0.63	0.29
nb:3454547 3753198	0.59	1.00	0.75	0.30	0.40	0.67	0.31
knn:3454547 3753198	0.50	1.00	0.57	0.39	0.36	0.60	0.28
rpart:3454547 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3753198	0.57	1.00	0.86	0.15	0.38	0.64	0.66
hdda:3454547 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2902908	0.59	0.64	0.46	0.70	0.48	0.68	0.38
nb:3454547 2902908	0.60	0.80	0.43	0.67	0.44	0.66	0.37
knn:3454547 2902908	0.57	0.64	0.36	0.76	0.48	0.66	0.43
rpart:3454547 2902908	0.63	0.55	0.36	0.78	0.50	0.67	0.48
svm:3454547 2902908	0.60	1.00	0.79	0.09	0.34	0.40	0.30
hdda:3454547 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3142559	0.51	0.98	0.25	0.67	0.32	0.60	0.27
nb:3454547 3142559	0.51	0.96	0.21	0.72	0.32	0.60	0.37
knn:3454547 3142559	0.57	1.00	0.14	0.67	0.21	0.56	0.38
rpart:3454547 3142559	0.53	0.91	0.11	0.83	0.27	0.60	0.55
svm:3454547 3142559	0.51	1.00	0.93	0.20	0.41	0.82	0.36
hdda:3454547 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3626882	0.53	0.86	0.18	0.80	0.36	0.62	0.40
nb:3454547 3626882	0.54	0.80	0.32	0.74	0.43	0.64	0.39
knn:3454547 3626882	0.51	1.00	0.50	0.43	0.35	0.59	0.34
rpart:3454547 3626882	0.51	0.73	0.32	0.76	0.45	0.65	0.48
svm:3454547 3626882	0.55	0.96	0.29	0.67	0.35	0.61	0.66
hdda:3454547 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3433222	0.66	0.20	0.39	0.85	0.61	0.70	0.40
nb:3454547 3433222	0.65	0.36	0.39	0.80	0.55	0.69	0.35
knn:3454547 3433222	0.67	0.64	0.79	0.50	0.49	0.79	0.30
rpart:3454547 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3454547 3433222	0.59	1.00	0.75	0.15	0.35	0.50	0.56
hdda:3454547 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2991121	0.54	0.86	0.39	0.67	0.42	0.65	0.31
nb:3454547 2991121	0.55	1.00	0.57	0.28	0.33	0.52	0.30
knn:3454547 2991121	0.55	0.94	0.36	0.65	0.38	0.63	0.43

rpart:3454547 2991121	0.54	0.96	0.39	0.61	0.38	0.62	0.43
svm:3454547 2991121	0.52	1.00	0.89	0.22	0.41	0.77	0.35
hdda:3454547 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2959165	0.53	0.73	0.32	0.76	0.45	0.65	0.56
nb:3454547 2959165	0.56	1.00	0.71	0.30	0.38	0.64	0.34
knn:3454547 2959165	0.56	0.99	0.89	0.26	0.42	0.80	0.26
rpart:3454547 2959165	0.52	0.80	0.25	0.78	0.41	0.63	0.64
svm:3454547 2959165	0.55	1.00	0.46	0.35	0.30	0.52	0.01
hdda:3454547 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3546559	0.55	1.00	0.68	0.35	0.39	0.64	0.10
nb:3454547 3546559	0.58	0.96	0.36	0.63	0.37	0.62	0.36
knn:3454547 3546559	0.57	0.99	0.39	0.57	0.35	0.60	0.34
rpart:3454547 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3546559	0.51	0.94	0.43	0.61	0.40	0.64	1.00
hdda:3454547 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3020668	0.52	1.00	0.68	0.30	0.37	0.61	0.15
nb:3454547 3020668	0.51	1.00	0.68	0.35	0.39	0.64	0.25
knn:3454547 3020668	0.50	0.98	0.43	0.57	0.38	0.62	0.36
rpart:3454547 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3020668	0.51	0.64	0.11	0.91	0.43	0.63	1.86
hdda:3454547 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2397811	0.54	0.96	0.46	0.57	0.39	0.63	0.18
nb:3454547 2397811	0.59	1.00	0.86	0.20	0.39	0.69	0.33
knn:3454547 2397811	0.52	0.99	0.39	0.54	0.34	0.60	0.40
rpart:3454547 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 2397811	0.55	1.00	0.57	0.28	0.33	0.52	1.00
hdda:3454547 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3903427	0.50	0.86	0.25	0.76	0.39	0.63	0.27
nb:3454547 3903427	0.57	0.96	0.14	0.76	0.27	0.59	0.37
knn:3454547 3903427	0.55	0.91	0.43	0.63	0.41	0.64	0.33
rpart:3454547 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3454547 3903427	0.57	1.00	0.89	0.13	0.38	0.67	0.71
hdda:3454547 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 2595867	0.54	0.86	0.36	0.70	0.42	0.64	0.27
nb:3454547 2595867	0.53	0.91	0.36	0.67	0.40	0.63	0.34
knn:3454547 2595867	0.58	0.80	0.39	0.70	0.44	0.65	0.34
rpart:3454547 2595867	0.52	0.64	0.18	0.87	0.45	0.63	0.47
svm:3454547 2595867	0.59	1.00	0.79	0.13	0.35	0.50	0.34
hdda:3454547 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3068088	0.52	1.00	0.71	0.28	0.38	0.62	0.10
nb:3454547 3068088	0.55	0.73	0.00	0.96	0.00	0.61	0.63
knn:3454547 3068088	0.53	0.99	0.50	0.48	0.37	0.61	0.32
rpart:3454547 3068088	0.51	0.96	0.25	0.70	0.33	0.60	0.46
svm:3454547 3068088	0.64	0.46	0.29	0.85	0.53	0.66	1.00
hdda:3454547 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3454547 3487363	0.53	0.99	0.61	0.41	0.39	0.63	0.16
nb:3454547 3487363	0.51	0.98	0.18	0.72	0.28	0.59	0.38
knn:3454547 3487363	0.50	1.00	0.36	0.52	0.31	0.57	0.39

rpart:3454547 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3454547 3487363	0.54	1.00	0.89	0.09	0.37	0.57	0.34
hdda:2458376 3637974	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3637974	0.56	1.00	0.54	0.43	0.37	0.61	0.18
nb:2458376 3637974	0.59	1.00	0.50	0.28	0.30	0.48	0.33
knn:2458376 3637974	0.51	1.00	0.61	0.33	0.35	0.58	0.26
rpart:2458376 3637974	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:2458376 3637974	0.60	1.00	0.75	0.30	0.40	0.67	0.15
hdda:2458376 3337703	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3337703	0.54	0.91	0.32	0.70	0.39	0.63	0.32
nb:2458376 3337703	0.64	0.73	0.61	0.59	0.47	0.71	0.31
knn:2458376 3337703	0.50	1.00	0.50	0.41	0.34	0.58	0.30
rpart:2458376 3337703	0.66	0.20	0.14	1.00	1.00	0.66	0.57
svm:2458376 3337703	0.66	1.00	0.75	0.02	0.32	0.13	0.45
hdda:2458376 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3498477	0.64	0.09	0.46	0.85	0.65	0.72	0.33
nb:2458376 3498477	0.58	0.98	0.54	0.50	0.39	0.64	0.33
knn:2458376 3498477	0.60	0.55	0.50	0.70	0.50	0.70	0.37
rpart:2458376 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3498477	0.55	1.00	0.68	0.26	0.36	0.57	1.00
hdda:2458376 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2321235	0.66	0.09	0.36	0.91	0.71	0.70	0.43
nb:2458376 2321235	0.62	0.96	0.71	0.41	0.43	0.70	0.33
knn:2458376 2321235	0.67	0.28	0.57	0.72	0.55	0.73	0.36
rpart:2458376 2321235	0.66	0.09	0.36	0.91	0.71	0.70	0.50
svm:2458376 2321235	0.61	1.00	0.68	0.07	0.31	0.25	0.56
hdda:2458376 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3351432	0.61	0.80	0.39	0.70	0.44	0.65	0.19
nb:2458376 3351432	0.56	0.94	0.54	0.54	0.42	0.66	0.36
knn:2458376 3351432	0.62	0.64	0.57	0.63	0.48	0.71	0.30
rpart:2458376 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3351432	0.54	1.00	0.64	0.37	0.38	0.63	1.00
hdda:2458376 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2615421	0.72	0.20	0.54	0.76	0.58	0.73	0.23
nb:2458376 2615421	0.62	0.64	0.71	0.54	0.49	0.76	0.29
knn:2458376 2615421	0.70	0.28	0.57	0.72	0.55	0.73	0.30
rpart:2458376 2615421	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2458376 2615421	0.61	1.00	0.68	0.17	0.33	0.47	0.71
hdda:2458376 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2802601	0.68	0.73	0.82	0.46	0.48	0.81	0.11
nb:2458376 2802601	0.66	0.73	0.54	0.63	0.47	0.69	0.34
knn:2458376 2802601	0.67	0.86	0.75	0.46	0.46	0.75	0.30
rpart:2458376 2802601	0.65	0.14	0.29	0.93	0.73	0.68	0.49
svm:2458376 2802601	0.66	1.00	0.50	0.17	0.27	0.36	0.74
hdda:2458376 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3326487	0.66	0.09	0.50	0.83	0.64	0.73	0.11
nb:2458376 3326487	0.69	0.06	0.46	0.87	0.68	0.73	0.33

knn:2458376 3326487	0.71	0.03	0.57	0.83	0.67	0.76	0.36
rpart:2458376 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3326487	0.56	1.00	0.82	0.09	0.35	0.44	-2.66
hdda:2458376 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3870139	0.60	0.80	0.61	0.57	0.46	0.70	0.19
nb:2458376 3870139	0.60	0.80	0.75	0.48	0.47	0.76	0.33
knn:2458376 3870139	0.65	0.64	0.54	0.65	0.48	0.70	0.34
rpart:2458376 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3870139	0.61	1.00	0.71	0.11	0.33	0.38	0.65
hdda:2458376 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2627418	0.66	0.20	0.50	0.78	0.58	0.72	0.34
nb:2458376 2627418	0.55	1.00	0.71	0.20	0.35	0.53	0.32
knn:2458376 2627418	0.59	0.55	0.43	0.74	0.50	0.68	0.37
rpart:2458376 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2627418	0.73	1.00	0.71	0.09	0.32	0.33	0.16
hdda:2458376 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2594205	0.61	0.64	0.57	0.63	0.48	0.71	0.13
nb:2458376 2594205	0.55	0.86	0.04	0.89	0.17	0.60	0.43
knn:2458376 2594205	0.67	0.36	0.46	0.76	0.54	0.70	0.32
rpart:2458376 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2594205	0.50	0.94	0.43	0.61	0.40	0.64	0.85
hdda:2458376 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 4015327	0.50	0.55	0.21	0.87	0.50	0.65	0.49
nb:2458376 4015327	0.61	0.64	0.54	0.65	0.48	0.70	0.35
knn:2458376 4015327	0.64	0.46	0.61	0.65	0.52	0.73	0.32
rpart:2458376 4015327	0.61	0.36	0.61	0.67	0.53	0.74	0.28
svm:2458376 4015327	0.58	1.00	0.86	0.11	0.37	0.56	0.25
hdda:2458376 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2975719	0.71	0.94	0.79	0.39	0.44	0.75	0.13
nb:2458376 2975719	0.58	1.00	0.86	0.24	0.41	0.73	0.30
knn:2458376 2975719	0.61	1.00	0.57	0.37	0.36	0.59	0.34

rpart:2458376 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2975719	0.54	1.00	0.82	0.09	0.35	0.44	0.81
hdda:2458376 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3109057	0.61	0.28	0.50	0.76	0.56	0.71	0.30
nb:2458376 3109057	0.62	0.64	0.39	0.74	0.48	0.67	0.36
knn:2458376 3109057	0.55	0.99	0.43	0.54	0.36	0.61	0.36
rpart:2458376 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3109057	0.51	1.00	0.61	0.26	0.33	0.52	0.54
hdda:2458376 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 4021820	0.61	0.64	0.54	0.65	0.48	0.70	0.18
nb:2458376 4021820	0.61	0.80	0.57	0.59	0.46	0.69	0.35
knn:2458376 4021820	0.64	0.36	0.71	0.61	0.53	0.78	0.32
rpart:2458376 4021820	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:2458376 4021820	0.64	1.00	0.68	0.17	0.33	0.47	0.68
hdda:2458376 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3577841	0.58	0.73	0.46	0.67	0.46	0.67	0.17
nb:2458376 3577841	0.57	0.80	0.46	0.65	0.45	0.67	0.33
knn:2458376 3577841	0.64	0.20	0.54	0.76	0.58	0.73	0.34
rpart:2458376 3577841	0.65	0.28	0.25	0.91	0.64	0.67	0.57
svm:2458376 3577841	0.59	1.00	0.68	0.11	0.32	0.36	0.45
hdda:2458376 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3703849	0.64	0.80	0.57	0.59	0.46	0.69	0.17
nb:2458376 3703849	0.60	0.28	0.32	0.87	0.60	0.68	0.39
knn:2458376 3703849	0.68	0.46	0.64	0.63	0.51	0.74	0.34
rpart:2458376 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3703849	0.66	1.00	0.82	0.04	0.34	0.29	0.91
hdda:2458376 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2707575	0.61	0.96	0.71	0.41	0.43	0.70	0.22
nb:2458376 2707575	0.56	0.86	0.32	0.72	0.41	0.63	0.35
knn:2458376 2707575	0.56	0.94	0.61	0.50	0.43	0.68	0.28
rpart:2458376 2707575	0.51	0.46	0.21	0.89	0.55	0.65	0.49

svm:2458376 2707575	0.56	1.00	0.86	0.07	0.36	0.43	0.29
hdda:2458376 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2510519	0.71	0.64	0.86	0.46	0.49	0.84	0.19
nb:2458376 2510519	0.61	0.46	0.50	0.72	0.52	0.70	0.41
knn:2458376 2510519	0.63	0.86	0.75	0.46	0.46	0.75	0.34
rpart:2458376 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2510519	0.70	1.00	0.25	0.46	0.22	0.50	1.00
hdda:2458376 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3530890	0.69	0.20	0.61	0.72	0.57	0.75	0.16
nb:2458376 3530890	0.67	0.80	0.79	0.46	0.47	0.78	0.32
knn:2458376 3530890	0.56	0.94	0.54	0.54	0.42	0.66	0.30
rpart:2458376 3530890	0.53	0.20	0.21	0.96	0.75	0.67	0.62
svm:2458376 3530890	0.56	1.00	0.79	0.09	0.34	0.40	0.11
hdda:2458376 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3769569	0.70	0.14	0.50	0.80	0.61	0.73	0.14
nb:2458376 3769569	0.70	0.46	0.71	0.59	0.51	0.77	0.33
knn:2458376 3769569	0.72	0.64	0.75	0.52	0.49	0.77	0.33
rpart:2458376 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3769569	0.60	1.00	0.61	0.26	0.33	0.52	1.00
hdda:2458376 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3544035	0.57	0.55	0.32	0.80	0.50	0.66	0.40
nb:2458376 3544035	0.53	1.00	0.46	0.48	0.35	0.59	0.36
knn:2458376 3544035	0.60	0.96	0.68	0.43	0.42	0.69	0.28
rpart:2458376 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3544035	0.58	1.00	0.86	0.15	0.38	0.64	0.40
hdda:2458376 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2790378	0.65	0.28	0.43	0.80	0.57	0.70	0.18
nb:2458376 2790378	0.65	0.14	0.61	0.74	0.59	0.76	0.33
knn:2458376 2790378	0.58	0.55	0.61	0.63	0.50	0.73	0.36
rpart:2458376 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2790378	0.62	0.55	0.39	0.76	0.50	0.67	1.00

hdda:2458376 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2625670	0.65	0.64	0.61	0.61	0.49	0.72	0.13
nb:2458376 2625670	0.63	0.98	0.82	0.33	0.43	0.75	0.23
knn:2458376 2625670	0.66	0.36	0.61	0.67	0.53	0.74	0.32
rpart:2458376 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2625670	0.65	1.00	0.71	0.13	0.33	0.43	0.64
hdda:2458376 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3646405	0.68	0.14	0.46	0.83	0.62	0.72	0.16
nb:2458376 3646405	0.63	0.73	0.61	0.59	0.47	0.71	0.35
knn:2458376 3646405	0.64	0.46	0.46	0.74	0.52	0.69	0.39
rpart:2458376 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3646405	0.60	1.00	0.25	0.59	0.27	0.56	1.00
hdda:2458376 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2918654	0.67	0.36	0.32	0.85	0.56	0.67	0.22
nb:2458376 2918654	0.60	0.80	0.46	0.65	0.45	0.67	0.33
knn:2458376 2918654	0.64	0.46	0.64	0.63	0.51	0.74	0.32
rpart:2458376 2918654	0.56	1.00	0.61	0.39	0.38	0.62	0.27
svm:2458376 2918654	0.64	1.00	0.86	0.09	0.36	0.50	0.59
hdda:2458376 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2663553	0.59	0.55	0.54	0.67	0.50	0.70	0.37
nb:2458376 2663553	0.63	0.28	0.39	0.83	0.58	0.69	0.37
knn:2458376 2663553	0.71	0.02	0.50	0.89	0.74	0.75	0.36
rpart:2458376 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2663553	0.62	1.00	0.54	0.26	0.31	0.48	0.39
hdda:2458376 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3103484	0.61	0.86	0.43	0.65	0.43	0.65	0.22
nb:2458376 3103484	0.57	0.91	0.36	0.67	0.40	0.63	0.35
knn:2458376 3103484	0.61	0.91	0.64	0.50	0.44	0.70	0.29
rpart:2458376 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3103484	0.50	0.98	0.68	0.41	0.41	0.68	0.02
hdda:2458376 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2757491	0.74	0.28	0.64	0.67	0.55	0.76	0.15

nb:2458376 2757491	0.71	0.46	0.64	0.63	0.51	0.74	0.34
knn:2458376 2757491	0.72	0.46	0.89	0.48	0.51	0.88	0.33
rpart:2458376 2757491	0.64	0.28	0.36	0.85	0.59	0.68	0.42
svm:2458376 2757491	0.70	1.00	0.75	0.11	0.34	0.42	0.69
hdda:2458376 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2401368	0.72	0.20	0.57	0.74	0.57	0.74	0.14
nb:2458376 2401368	0.66	0.28	0.25	0.91	0.64	0.67	0.35
knn:2458376 2401368	0.70	0.28	0.57	0.72	0.55	0.73	0.32
rpart:2458376 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2401368	0.68	0.55	0.25	0.85	0.50	0.65	1.00
hdda:2458376 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3788643	0.61	0.80	0.50	0.63	0.45	0.67	0.24
nb:2458376 3788643	0.58	0.64	0.36	0.76	0.48	0.66	0.34
knn:2458376 3788643	0.63	0.28	0.50	0.76	0.56	0.71	0.32
rpart:2458376 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3788643	0.63	1.00	0.86	0.07	0.36	0.43	0.94
hdda:2458376 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3219832	0.66	0.64	0.57	0.63	0.48	0.71	0.26
nb:2458376 3219832	0.65	0.46	0.14	0.93	0.57	0.64	0.46
knn:2458376 3219832	0.70	0.28	0.68	0.65	0.54	0.77	0.33
rpart:2458376 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3219832	0.54	1.00	0.96	0.04	0.38	0.67	0.77
hdda:2458376 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3198757	0.56	0.80	0.18	0.83	0.38	0.62	0.44
nb:2458376 3198757	0.55	0.96	0.11	0.78	0.23	0.59	0.36
knn:2458376 3198757	0.58	0.73	0.54	0.63	0.47	0.69	0.31
rpart:2458376 3198757	0.64	0.14	0.46	0.83	0.62	0.72	0.33
svm:2458376 3198757	0.53	0.99	0.43	0.54	0.36	0.61	1.00
hdda:2458376 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3753198	0.62	0.86	0.50	0.61	0.44	0.67	0.27
nb:2458376 3753198	0.66	1.00	0.75	0.26	0.38	0.63	0.29
knn:2458376 3753198	0.68	0.09	0.50	0.83	0.64	0.73	0.37

rpart:2458376 3753198	0.66	0.14	0.46	0.83	0.62	0.72	0.31
svm:2458376 3753198	0.74	0.80	0.00	0.93	0.00	0.61	7.25
hdda:2458376 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2902908	0.70	0.64	0.61	0.61	0.49	0.72	0.28
nb:2458376 2902908	0.61	0.73	0.46	0.67	0.46	0.67	0.37
knn:2458376 2902908	0.64	0.36	0.54	0.72	0.54	0.72	0.35
rpart:2458376 2902908	0.66	0.14	0.36	0.89	0.67	0.69	0.46
svm:2458376 2902908	0.63	1.00	0.50	0.35	0.32	0.53	1.00
hdda:2458376 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3142559	0.57	0.86	0.39	0.67	0.42	0.65	0.25
nb:2458376 3142559	0.55	0.98	0.25	0.67	0.32	0.60	0.35
knn:2458376 3142559	0.54	0.98	0.32	0.63	0.35	0.60	0.34
rpart:2458376 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2458376 3142559	0.55	1.00	0.86	0.20	0.39	0.69	0.62
hdda:2458376 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3626882	0.59	0.86	0.43	0.65	0.43	0.65	0.22
nb:2458376 3626882	0.58	0.64	0.32	0.78	0.47	0.65	0.38
knn:2458376 3626882	0.61	0.64	0.64	0.59	0.49	0.73	0.28
rpart:2458376 3626882	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:2458376 3626882	0.65	1.00	0.82	0.07	0.35	0.38	0.34
hdda:2458376 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3433222	0.66	0.64	0.43	0.72	0.48	0.67	0.34
nb:2458376 3433222	0.65	0.20	0.36	0.87	0.63	0.69	0.38
knn:2458376 3433222	0.61	0.46	0.29	0.85	0.53	0.66	0.41
rpart:2458376 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:2458376 3433222	0.53	1.00	0.68	0.09	0.31	0.31	0.31
hdda:2458376 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2991121	0.58	0.96	0.61	0.48	0.41	0.67	0.16
nb:2458376 2991121	0.51	1.00	0.57	0.33	0.34	0.56	0.31
knn:2458376 2991121	0.53	0.99	0.61	0.41	0.39	0.63	0.29
rpart:2458376 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2458376 2991121	0.56	1.00	0.86	0.22	0.40	0.71	0.16
hdda:2458376 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2959165	0.60	0.28	0.21	0.93	0.67	0.66	0.49
nb:2458376 2959165	0.63	0.96	0.79	0.37	0.43	0.74	0.32
knn:2458376 2959165	0.69	0.06	0.61	0.78	0.63	0.77	0.38
rpart:2458376 2959165	0.54	0.64	0.32	0.78	0.47	0.65	0.40
svm:2458376 2959165	0.61	1.00	0.79	0.09	0.34	0.40	0.42
hdda:2458376 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3546559	0.63	0.55	0.50	0.70	0.50	0.70	0.16
nb:2458376 3546559	0.60	0.99	0.54	0.48	0.38	0.63	0.31
knn:2458376 3546559	0.67	0.46	0.50	0.72	0.52	0.70	0.34
rpart:2458376 3546559	0.60	0.94	0.61	0.50	0.43	0.68	0.26
svm:2458376 3546559	0.66	1.00	0.75	0.04	0.32	0.22	0.42
hdda:2458376 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3020668	0.54	0.64	0.18	0.87	0.45	0.63	0.38
nb:2458376 3020668	0.52	1.00	0.68	0.33	0.38	0.63	0.24
knn:2458376 3020668	0.53	1.00	0.71	0.30	0.38	0.64	0.26
rpart:2458376 3020668	0.52	0.36	0.32	0.85	0.56	0.67	0.45
svm:2458376 3020668	0.60	1.00	0.79	0.13	0.35	0.50	0.52
hdda:2458376 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2397811	0.63	0.20	0.43	0.83	0.60	0.70	0.32
nb:2458376 2397811	0.62	0.91	0.57	0.54	0.43	0.68	0.36
knn:2458376 2397811	0.67	0.96	0.75	0.39	0.43	0.72	0.29
rpart:2458376 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2397811	0.59	1.00	0.43	0.50	0.34	0.59	1.00
hdda:2458376 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3903427	0.57	0.80	0.32	0.74	0.43	0.64	0.21
nb:2458376 3903427	0.54	0.73	0.14	0.87	0.40	0.63	0.41
knn:2458376 3903427	0.57	0.64	0.43	0.72	0.48	0.67	0.33
rpart:2458376 3903427	0.54	0.64	0.07	0.93	0.40	0.62	0.55
svm:2458376 3903427	0.62	1.00	0.96	0.00	0.37	0.00	-20.95

hdda:2458376 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 2595867	0.62	0.64	0.32	0.78	0.47	0.65	0.30
nb:2458376 2595867	0.59	0.64	0.36	0.76	0.48	0.66	0.36
knn:2458376 2595867	0.60	0.80	0.50	0.63	0.45	0.67	0.30
rpart:2458376 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 2595867	0.54	1.00	0.79	0.17	0.37	0.57	0.45
hdda:2458376 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3068088	0.62	0.80	0.68	0.52	0.46	0.73	0.12
nb:2458376 3068088	0.60	0.73	0.00	0.96	0.00	0.61	0.61
knn:2458376 3068088	0.66	0.28	0.61	0.70	0.55	0.74	0.31
rpart:2458376 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2458376 3068088	0.59	1.00	0.75	0.04	0.32	0.22	0.97
hdda:2458376 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2458376 3487363	0.52	0.99	0.54	0.48	0.38	0.63	0.27
nb:2458376 3487363	0.52	0.91	0.25	0.74	0.37	0.62	0.37
knn:2458376 3487363	0.59	0.96	0.50	0.54	0.40	0.64	0.30
rpart:2458376 3487363	0.55	1.00	0.25	0.61	0.28	0.57	0.38
svm:2458376 3487363	0.54	1.00	0.86	0.22	0.40	0.71	0.08
hdda:3637974 3337703	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3337703	0.59	1.00	0.29	0.59	0.30	0.57	0.32
nb:3637974 3337703	0.61	1.00	0.46	0.28	0.28	0.46	0.32
knn:3637974 3337703	0.52	0.91	0.32	0.70	0.39	0.63	0.40
rpart:3637974 3337703	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3337703	0.50	1.00	0.75	0.28	0.39	0.65	0.22
hdda:3637974 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3498477	0.62	1.00	0.25	0.54	0.25	0.54	0.30
nb:3637974 3498477	0.59	1.00	0.57	0.24	0.31	0.48	0.30
knn:3637974 3498477	0.59	1.00	0.54	0.37	0.34	0.57	0.34
rpart:3637974 3498477	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3498477	0.58	0.96	0.79	0.37	0.43	0.74	0.59
hdda:3637974 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2321235	0.52	0.91	0.14	0.80	0.31	0.61	0.53

nb:3637974 2321235	0.56	1.00	0.50	0.37	0.33	0.55	0.34
knn:3637974 2321235	0.53	0.91	0.11	0.83	0.27	0.60	0.50
rpart:3637974 2321235	0.61	0.94	0.14	0.78	0.29	0.60	0.50
svm:3637974 2321235	0.56	1.00	0.89	0.22	0.41	0.77	0.20
hdda:3637974 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3351432	0.58	1.00	0.43	0.46	0.32	0.57	0.23
nb:3637974 3351432	0.63	1.00	0.46	0.33	0.30	0.50	0.36
knn:3637974 3351432	0.56	1.00	0.46	0.43	0.33	0.57	0.30
rpart:3637974 3351432	0.61	1.00	0.25	0.52	0.24	0.53	0.31
svm:3637974 3351432	0.53	1.00	0.89	0.22	0.41	0.77	0.57
hdda:3637974 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2615421	0.51	1.00	0.43	0.50	0.34	0.59	0.25
nb:3637974 2615421	0.60	1.00	0.46	0.39	0.32	0.55	0.31
knn:3637974 2615421	0.57	1.00	0.54	0.39	0.35	0.58	0.31
rpart:3637974 2615421	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2615421	0.54	1.00	0.79	0.20	0.37	0.60	-0.16
hdda:3637974 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2802601	0.55	0.99	0.25	0.63	0.29	0.58	0.48
nb:3637974 2802601	0.61	1.00	0.50	0.33	0.31	0.52	0.34
knn:3637974 2802601	0.57	0.91	0.36	0.67	0.40	0.63	0.50
rpart:3637974 2802601	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2802601	0.57	1.00	0.57	0.33	0.34	0.56	0.33
hdda:3637974 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3326487	0.56	1.00	0.25	0.52	0.24	0.53	0.21
nb:3637974 3326487	0.58	1.00	0.50	0.26	0.29	0.46	0.31
knn:3637974 3326487	0.56	0.80	0.50	0.63	0.45	0.67	0.33
rpart:3637974 3326487	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3326487	0.58	0.36	0.54	0.72	0.54	0.72	1.00
hdda:3637974 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3870139	0.59	1.00	0.18	0.65	0.24	0.57	0.44
nb:3637974 3870139	0.59	1.00	0.46	0.39	0.32	0.55	0.37
knn:3637974 3870139	0.60	1.00	0.57	0.26	0.32	0.50	0.17

rpart:3637974 3870139	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3870139	0.51	1.00	0.61	0.35	0.36	0.59	0.43
hdda:3637974 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2627418	0.53	0.99	0.43	0.54	0.36	0.61	0.38
nb:3637974 2627418	0.62	1.00	0.50	0.28	0.30	0.48	0.35
knn:3637974 2627418	0.57	1.00	0.43	0.43	0.32	0.56	0.38
rpart:3637974 2627418	0.57	1.00	0.25	0.61	0.28	0.57	0.45
svm:3637974 2627418	0.58	0.99	0.82	0.28	0.41	0.72	0.24
hdda:3637974 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2594205	0.63	1.00	0.25	0.57	0.26	0.55	0.29
nb:3637974 2594205	0.66	1.00	0.46	0.26	0.28	0.44	0.30
knn:3637974 2594205	0.53	0.99	0.39	0.57	0.35	0.60	0.35
rpart:3637974 2594205	0.58	1.00	0.25	0.52	0.24	0.53	0.34
svm:3637974 2594205	0.57	1.00	0.96	0.09	0.39	0.80	-3.09
hdda:3637974 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 4015327	0.58	1.00	0.29	0.59	0.30	0.57	0.38
nb:3637974 4015327	0.60	1.00	0.54	0.33	0.33	0.54	0.33
knn:3637974 4015327	0.55	1.00	0.43	0.50	0.34	0.59	0.34
rpart:3637974 4015327	0.58	0.94	0.14	0.78	0.29	0.60	0.51
svm:3637974 4015327	0.57	1.00	0.96	0.17	0.42	0.89	0.23
hdda:3637974 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2975719	0.57	1.00	0.18	0.59	0.21	0.54	0.41
nb:3637974 2975719	0.64	1.00	0.32	0.39	0.24	0.49	0.39
knn:3637974 2975719	0.68	1.00	0.21	0.54	0.22	0.53	0.40
rpart:3637974 2975719	0.63	1.00	0.14	0.61	0.18	0.54	0.46
svm:3637974 2975719	0.52	0.99	0.75	0.33	0.40	0.68	0.08
hdda:3637974 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3109057	0.55	1.00	0.57	0.37	0.36	0.59	0.32
nb:3637974 3109057	0.54	1.00	0.64	0.33	0.37	0.60	0.29
knn:3637974 3109057	0.53	0.86	0.36	0.70	0.42	0.64	0.50
rpart:3637974 3109057	0.53	0.94	0.21	0.74	0.33	0.61	0.58

svm:3637974 3109057	0.50	0.80	0.00	0.93	0.00	0.61	9.91
hdda:3637974 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 4021820	0.59	1.00	0.39	0.46	0.31	0.55	0.33
nb:3637974 4021820	0.61	1.00	0.43	0.33	0.28	0.48	0.37
knn:3637974 4021820	0.51	0.91	0.54	0.57	0.43	0.67	0.38
rpart:3637974 4021820	0.61	0.99	0.14	0.70	0.22	0.57	0.42
svm:3637974 4021820	0.55	1.00	0.75	0.20	0.36	0.56	0.05
hdda:3637974 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3577841	0.65	1.00	0.25	0.52	0.24	0.53	0.22
nb:3637974 3577841	0.65	1.00	0.54	0.26	0.31	0.48	0.32
knn:3637974 3577841	0.62	0.99	0.18	0.67	0.25	0.57	0.38
rpart:3637974 3577841	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3577841	0.67	1.00	0.93	0.20	0.41	0.82	0.59
hdda:3637974 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3703849	0.58	1.00	0.39	0.41	0.29	0.53	0.24
nb:3637974 3703849	0.59	1.00	0.61	0.26	0.33	0.52	0.31
knn:3637974 3703849	0.51	0.99	0.29	0.61	0.31	0.58	0.42
rpart:3637974 3703849	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3703849	0.56	0.99	0.79	0.33	0.42	0.71	0.94
hdda:3637974 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2707575	0.62	1.00	0.57	0.35	0.35	0.57	0.19
nb:3637974 2707575	0.64	1.00	0.14	0.65	0.20	0.56	0.42
knn:3637974 2707575	0.60	1.00	0.43	0.43	0.32	0.56	0.33
rpart:3637974 2707575	0.64	1.00	0.29	0.52	0.27	0.55	0.39
svm:3637974 2707575	0.62	0.99	0.89	0.24	0.42	0.79	0.41
hdda:3637974 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2510519	0.53	1.00	0.25	0.59	0.27	0.56	0.32
nb:3637974 2510519	0.64	1.00	0.46	0.26	0.28	0.44	0.38
knn:3637974 2510519	0.50	0.86	0.43	0.65	0.43	0.65	0.45
rpart:3637974 2510519	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2510519	0.56	0.98	0.61	0.46	0.40	0.66	0.15

hdda:3637974 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3530890	0.53	1.00	0.29	0.54	0.28	0.56	0.31
nb:3637974 3530890	0.57	1.00	0.32	0.57	0.31	0.58	0.41
knn:3637974 3530890	0.53	0.99	0.36	0.57	0.33	0.59	0.41
rpart:3637974 3530890	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3530890	0.50	0.64	0.04	0.96	0.33	0.62	8.73
hdda:3637974 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3769569	0.60	1.00	0.25	0.54	0.25	0.54	0.36
nb:3637974 3769569	0.57	1.00	0.36	0.43	0.28	0.53	0.36
knn:3637974 3769569	0.57	1.00	0.43	0.39	0.30	0.53	0.34
rpart:3637974 3769569	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3769569	0.57	1.00	0.79	0.24	0.39	0.65	0.48
hdda:3637974 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3544035	0.59	1.00	0.46	0.35	0.30	0.52	0.22
nb:3637974 3544035	0.57	1.00	0.43	0.39	0.30	0.53	0.35
knn:3637974 3544035	0.55	0.98	0.25	0.67	0.32	0.60	0.50
rpart:3637974 3544035	0.51	0.73	0.18	0.85	0.42	0.63	0.54
svm:3637974 3544035	0.56	0.99	0.71	0.35	0.40	0.67	0.33
hdda:3637974 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2790378	0.59	1.00	0.25	0.57	0.26	0.55	0.28
nb:3637974 2790378	0.57	1.00	0.50	0.30	0.30	0.50	0.33
knn:3637974 2790378	0.51	0.98	0.36	0.61	0.36	0.61	0.38
rpart:3637974 2790378	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2790378	0.56	1.00	0.71	0.30	0.38	0.64	0.45
hdda:3637974 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2625670	0.59	1.00	0.25	0.57	0.26	0.55	0.26
nb:3637974 2625670	0.51	1.00	0.50	0.46	0.36	0.60	0.36
knn:3637974 2625670	0.51	0.99	0.50	0.50	0.38	0.62	0.36
rpart:3637974 2625670	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2625670	0.57	0.96	0.50	0.54	0.40	0.64	0.99
hdda:3637974 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3646405	0.62	1.00	0.21	0.57	0.23	0.54	0.28

nb:3637974 3646405	0.61	1.00	0.46	0.28	0.28	0.46	0.35
knn:3637974 3646405	0.60	1.00	0.39	0.46	0.31	0.55	0.38
rpart:3637974 3646405	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3646405	0.53	0.55	0.07	0.96	0.50	0.63	1.43
hdda:3637974 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2918654	0.60	0.99	0.21	0.67	0.29	0.58	0.34
nb:3637974 2918654	0.61	1.00	0.43	0.39	0.30	0.53	0.35
knn:3637974 2918654	0.61	0.96	0.11	0.78	0.23	0.59	0.45
rpart:3637974 2918654	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2918654	0.58	1.00	0.93	0.15	0.40	0.78	-0.17
hdda:3637974 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2663553	0.60	1.00	0.25	0.52	0.24	0.53	0.24
nb:3637974 2663553	0.63	1.00	0.50	0.30	0.30	0.50	0.35
knn:3637974 2663553	0.56	1.00	0.54	0.35	0.33	0.55	0.34
rpart:3637974 2663553	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2663553	0.55	1.00	0.32	0.52	0.29	0.56	0.84
hdda:3637974 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3103484	0.57	1.00	0.54	0.37	0.34	0.57	0.17
nb:3637974 3103484	0.63	1.00	0.46	0.33	0.30	0.50	0.33
knn:3637974 3103484	0.58	1.00	0.46	0.43	0.33	0.57	0.32
rpart:3637974 3103484	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3103484	0.52	1.00	0.89	0.11	0.38	0.63	0.55
hdda:3637974 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2757491	0.53	1.00	0.21	0.59	0.24	0.55	0.37
nb:3637974 2757491	0.60	1.00	0.46	0.30	0.29	0.48	0.35
knn:3637974 2757491	0.55	0.86	0.68	0.50	0.45	0.72	0.38
rpart:3637974 2757491	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2757491	0.55	1.00	0.46	0.39	0.32	0.55	0.12
hdda:3637974 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2401368	0.54	1.00	0.29	0.57	0.29	0.57	0.26
nb:3637974 2401368	0.58	1.00	0.50	0.28	0.30	0.48	0.29
knn:3637974 2401368	0.53	0.64	0.32	0.78	0.47	0.65	0.34

rpart:3637974 2401368	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2401368	0.57	0.94	0.64	0.48	0.43	0.69	0.99
hdda:3637974 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3788643	0.63	1.00	0.29	0.54	0.28	0.56	0.32
nb:3637974 3788643	0.61	1.00	0.43	0.28	0.27	0.45	0.32
knn:3637974 3788643	0.55	0.94	0.36	0.65	0.38	0.63	0.34
rpart:3637974 3788643	0.53	1.00	0.36	0.52	0.31	0.57	0.29
svm:3637974 3788643	0.62	0.96	0.64	0.46	0.42	0.68	1.00
hdda:3637974 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3219832	0.55	0.99	0.25	0.63	0.29	0.58	0.30
nb:3637974 3219832	0.54	1.00	0.54	0.28	0.31	0.50	0.31
knn:3637974 3219832	0.61	0.55	0.61	0.63	0.50	0.73	0.35
rpart:3637974 3219832	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3219832	0.57	1.00	0.61	0.20	0.31	0.45	1.00
hdda:3637974 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3198757	0.62	0.99	0.14	0.72	0.24	0.58	0.36
nb:3637974 3198757	0.62	1.00	0.54	0.30	0.32	0.52	0.24
knn:3637974 3198757	0.61	0.99	0.39	0.54	0.34	0.60	0.37
rpart:3637974 3198757	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3198757	0.66	1.00	0.96	0.11	0.40	0.83	-0.18
hdda:3637974 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3753198	0.61	1.00	0.43	0.35	0.29	0.50	0.24
nb:3637974 3753198	0.59	1.00	0.36	0.39	0.26	0.50	0.36
knn:3637974 3753198	0.51	0.73	0.14	0.87	0.40	0.63	0.53
rpart:3637974 3753198	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3753198	0.58	0.80	0.00	0.93	0.00	0.61	6.67
hdda:3637974 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2902908	0.58	1.00	0.21	0.63	0.26	0.57	0.37
nb:3637974 2902908	0.60	1.00	0.61	0.26	0.33	0.52	0.32
knn:3637974 2902908	0.58	0.86	0.29	0.74	0.40	0.63	0.42
rpart:3637974 2902908	0.61	1.00	0.25	0.52	0.24	0.53	0.38

svm:3637974 2902908	0.53	1.00	0.93	0.13	0.39	0.75	-1.16
hdda:3637974 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3142559	0.59	1.00	0.43	0.46	0.32	0.57	0.25
nb:3637974 3142559	0.59	1.00	0.25	0.57	0.26	0.55	0.37
knn:3637974 3142559	0.59	1.00	0.57	0.33	0.34	0.56	0.30
rpart:3637974 3142559	0.55	0.96	0.25	0.70	0.33	0.60	0.33
svm:3637974 3142559	0.57	0.91	0.86	0.37	0.45	0.81	0.90
hdda:3637974 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3626882	0.61	1.00	0.32	0.52	0.29	0.56	0.29
nb:3637974 3626882	0.53	1.00	0.54	0.41	0.36	0.59	0.34
knn:3637974 3626882	0.59	1.00	0.29	0.43	0.24	0.50	0.32
rpart:3637974 3626882	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3626882	0.54	1.00	0.79	0.20	0.37	0.60	0.43
hdda:3637974 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3433222	0.52	1.00	0.50	0.43	0.35	0.59	0.25
nb:3637974 3433222	0.57	1.00	0.46	0.43	0.33	0.57	0.35
knn:3637974 3433222	0.57	0.98	0.64	0.43	0.41	0.67	0.29
rpart:3637974 3433222	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3433222	0.55	1.00	0.86	0.07	0.36	0.43	-0.16
hdda:3637974 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2991121	0.65	1.00	0.21	0.59	0.24	0.55	0.32
nb:3637974 2991121	0.63	1.00	0.46	0.39	0.32	0.55	0.34
knn:3637974 2991121	0.55	1.00	0.21	0.63	0.26	0.57	0.50
rpart:3637974 2991121	0.62	0.96	0.11	0.78	0.23	0.59	0.52
svm:3637974 2991121	0.56	1.00	0.64	0.37	0.38	0.63	0.11
hdda:3637974 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2959165	0.52	0.94	0.36	0.65	0.38	0.63	0.46
nb:3637974 2959165	0.56	1.00	0.46	0.46	0.34	0.58	0.36
knn:3637974 2959165	0.58	0.99	0.32	0.61	0.33	0.60	0.38
rpart:3637974 2959165	0.51	0.94	0.39	0.63	0.39	0.63	0.45
svm:3637974 2959165	0.51	1.00	0.75	0.22	0.37	0.59	0.50

hdda:3637974 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3546559	0.51	0.96	0.32	0.65	0.36	0.61	0.39
nb:3637974 3546559	0.56	1.00	0.39	0.52	0.33	0.59	0.34
knn:3637974 3546559	0.58	0.94	0.21	0.74	0.33	0.61	0.40
rpart:3637974 3546559	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3546559	0.51	1.00	0.86	0.15	0.38	0.64	0.04
hdda:3637974 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3020668	0.60	0.99	0.14	0.72	0.24	0.58	0.39
nb:3637974 3020668	0.58	1.00	0.39	0.48	0.31	0.56	0.34
knn:3637974 3020668	0.56	0.96	0.21	0.72	0.32	0.60	0.41
rpart:3637974 3020668	0.53	0.94	0.18	0.76	0.31	0.60	0.51
svm:3637974 3020668	0.55	0.96	0.86	0.33	0.44	0.79	0.50
hdda:3637974 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2397811	0.62	1.00	0.25	0.57	0.26	0.55	0.36
nb:3637974 2397811	0.61	1.00	0.43	0.37	0.29	0.52	0.38
knn:3637974 2397811	0.63	1.00	0.46	0.39	0.32	0.55	0.37
rpart:3637974 2397811	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 2397811	0.65	0.94	0.93	0.30	0.45	0.88	0.96
hdda:3637974 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3903427	0.64	1.00	0.32	0.41	0.25	0.50	0.22
nb:3637974 3903427	0.62	1.00	0.54	0.33	0.33	0.54	0.29
knn:3637974 3903427	0.59	1.00	0.29	0.54	0.28	0.56	0.37
rpart:3637974 3903427	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3903427	0.59	0.64	0.71	0.54	0.49	0.76	1.00
hdda:3637974 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 2595867	0.60	1.00	0.43	0.41	0.31	0.54	0.18
nb:3637974 2595867	0.55	1.00	0.61	0.26	0.33	0.52	0.28
knn:3637974 2595867	0.51	0.96	0.39	0.61	0.38	0.62	0.36
rpart:3637974 2595867	0.60	1.00	0.25	0.52	0.24	0.53	0.31
svm:3637974 2595867	0.53	0.86	0.46	0.63	0.43	0.66	1.00
hdda:3637974 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3068088	0.61	1.00	0.25	0.50	0.23	0.52	0.26

nb:3637974 3068088	0.65	1.00	0.43	0.33	0.28	0.48	0.36
knn:3637974 3068088	0.61	0.99	0.36	0.57	0.33	0.59	0.38
rpart:3637974 3068088	0.61	1.00	0.25	0.52	0.24	0.53	0.38
svm:3637974 3068088	0.63	0.64	0.54	0.65	0.48	0.70	1.00
hdda:3637974 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3637974 3487363	0.65	1.00	0.25	0.57	0.26	0.55	0.33
nb:3637974 3487363	0.60	1.00	0.46	0.26	0.28	0.44	0.31
knn:3637974 3487363	0.59	1.00	0.43	0.37	0.29	0.52	0.32
rpart:3637974 3487363	0.65	1.00	0.36	0.39	0.26	0.50	0.31
svm:3637974 3487363	0.65	1.00	0.75	0.26	0.38	0.63	0.94
hdda:3337703 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3498477	0.55	0.98	0.61	0.46	0.40	0.66	0.11
nb:3337703 3498477	0.58	0.96	0.57	0.50	0.41	0.66	0.32
knn:3337703 3498477	0.55	0.91	0.50	0.59	0.42	0.66	0.34
rpart:3337703 3498477	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3498477	0.56	1.00	0.75	0.24	0.38	0.61	0.73
hdda:3337703 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2321235	0.62	0.28	0.54	0.74	0.56	0.72	0.28
nb:3337703 2321235	0.60	0.96	0.71	0.41	0.43	0.70	0.32
knn:3337703 2321235	0.54	1.00	0.71	0.30	0.38	0.64	0.17
rpart:3337703 2321235	0.64	0.20	0.39	0.85	0.61	0.70	0.44
svm:3337703 2321235	0.58	1.00	0.64	0.15	0.32	0.41	0.19
hdda:3337703 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3351432	0.60	0.80	0.57	0.59	0.46	0.69	0.31
nb:3337703 3351432	0.51	1.00	0.54	0.35	0.33	0.55	0.34
knn:3337703 3351432	0.56	0.91	0.71	0.46	0.44	0.72	0.17
rpart:3337703 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3351432	0.52	0.99	0.57	0.43	0.38	0.63	0.45
hdda:3337703 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2615421	0.65	0.80	0.54	0.61	0.45	0.68	0.21
nb:3337703 2615421	0.58	0.99	0.71	0.35	0.40	0.67	0.26
knn:3337703 2615421	0.58	0.86	0.57	0.57	0.44	0.68	0.31

rpart:3337703 2615421	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:3337703 2615421	0.52	1.00	0.68	0.15	0.33	0.44	0.89
hdda:3337703 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2802601	0.61	0.91	0.39	0.65	0.41	0.64	0.31
nb:3337703 2802601	0.64	0.55	0.61	0.63	0.50	0.73	0.33
knn:3337703 2802601	0.58	0.64	0.46	0.70	0.48	0.68	0.50
rpart:3337703 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2802601	0.53	1.00	0.29	0.59	0.30	0.57	0.57
hdda:3337703 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3326487	0.61	0.46	0.36	0.80	0.53	0.67	0.15
nb:3337703 3326487	0.68	0.14	0.29	0.93	0.73	0.68	0.35
knn:3337703 3326487	0.60	0.91	0.57	0.54	0.43	0.68	0.39
rpart:3337703 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3326487	0.70	1.00	0.71	0.02	0.31	0.11	0.59
hdda:3337703 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3870139	0.57	0.96	0.43	0.59	0.39	0.63	0.20
nb:3337703 3870139	0.60	0.86	0.57	0.57	0.44	0.68	0.34
knn:3337703 3870139	0.60	0.73	0.71	0.52	0.48	0.75	0.31
rpart:3337703 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3870139	0.64	1.00	0.61	0.20	0.31	0.45	0.59
hdda:3337703 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2627418	0.60	0.91	0.46	0.61	0.42	0.65	0.16
nb:3337703 2627418	0.52	1.00	0.71	0.22	0.36	0.56	0.32
knn:3337703 2627418	0.52	0.91	0.32	0.70	0.39	0.63	0.37
rpart:3337703 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2627418	0.53	1.00	0.75	0.20	0.36	0.56	0.66
hdda:3337703 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2594205	0.56	0.91	0.29	0.72	0.38	0.62	0.11
nb:3337703 2594205	0.51	0.80	0.11	0.87	0.33	0.62	0.40
knn:3337703 2594205	0.62	0.73	0.39	0.72	0.46	0.66	0.34
rpart:3337703 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3337703 2594205	0.55	1.00	1.00	0.02	0.38	1.00	-17.19
hdda:3337703 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 4015327	0.53	0.96	0.50	0.54	0.40	0.64	0.32
nb:3337703 4015327	0.58	0.80	0.29	0.76	0.42	0.64	0.37
knn:3337703 4015327	0.55	0.80	0.32	0.74	0.43	0.64	0.37
rpart:3337703 4015327	0.56	0.73	0.14	0.87	0.40	0.63	0.50
svm:3337703 4015327	0.57	1.00	0.79	0.17	0.37	0.57	0.70
hdda:3337703 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2975719	0.61	0.80	0.61	0.57	0.46	0.70	0.13
nb:3337703 2975719	0.52	1.00	0.75	0.26	0.38	0.63	0.31
knn:3337703 2975719	0.57	0.94	0.57	0.52	0.42	0.67	0.36
rpart:3337703 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2975719	0.52	0.99	0.54	0.46	0.38	0.62	1.00
hdda:3337703 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3109057	0.53	1.00	0.57	0.35	0.35	0.57	0.19
nb:3337703 3109057	0.60	0.46	0.50	0.72	0.52	0.70	0.34
knn:3337703 3109057	0.63	0.91	0.64	0.50	0.44	0.70	0.32
rpart:3337703 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3109057	0.54	1.00	0.75	0.15	0.35	0.50	0.56
hdda:3337703 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 4021820	0.58	0.96	0.36	0.63	0.37	0.62	0.23
nb:3337703 4021820	0.58	0.91	0.43	0.63	0.41	0.64	0.35
knn:3337703 4021820	0.61	0.96	0.89	0.30	0.44	0.82	0.24
rpart:3337703 4021820	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:3337703 4021820	0.53	1.00	0.39	0.41	0.29	0.53	1.00
hdda:3337703 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3577841	0.54	0.36	0.25	0.89	0.58	0.66	0.36
nb:3337703 3577841	0.52	0.91	0.21	0.76	0.35	0.61	0.35
knn:3337703 3577841	0.53	0.98	0.46	0.54	0.38	0.63	0.30
rpart:3337703 3577841	0.56	0.28	0.32	0.87	0.60	0.68	0.41
svm:3337703 3577841	0.59	0.99	0.79	0.30	0.41	0.70	0.80

hdda:3337703 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3703849	0.54	0.94	0.64	0.48	0.43	0.69	0.25
nb:3337703 3703849	0.56	0.91	0.36	0.67	0.40	0.63	0.34
knn:3337703 3703849	0.53	0.98	0.82	0.33	0.43	0.75	0.23
rpart:3337703 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3703849	0.60	1.00	0.79	0.13	0.35	0.50	0.64
hdda:3337703 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2707575	0.59	0.80	0.50	0.63	0.45	0.67	0.30
nb:3337703 2707575	0.54	0.86	0.04	0.89	0.17	0.60	0.50
knn:3337703 2707575	0.53	0.86	0.21	0.78	0.38	0.62	0.38
rpart:3337703 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:3337703 2707575	0.56	1.00	0.86	0.15	0.38	0.64	0.44
hdda:3337703 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2510519	0.63	0.91	0.61	0.52	0.44	0.69	0.30
nb:3337703 2510519	0.55	0.96	0.50	0.54	0.40	0.64	0.39
knn:3337703 2510519	0.57	0.36	0.50	0.74	0.54	0.71	0.40
rpart:3337703 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2510519	0.60	1.00	0.61	0.17	0.31	0.42	0.60
hdda:3337703 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3530890	0.65	0.28	0.46	0.78	0.57	0.71	0.27
nb:3337703 3530890	0.65	0.94	0.75	0.41	0.44	0.73	0.31
knn:3337703 3530890	0.66	0.80	0.68	0.52	0.46	0.73	0.34
rpart:3337703 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3530890	0.67	1.00	0.68	0.22	0.35	0.53	1.00
hdda:3337703 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3769569	0.63	0.20	0.39	0.85	0.61	0.70	0.20
nb:3337703 3769569	0.63	0.28	0.46	0.78	0.57	0.71	0.35
knn:3337703 3769569	0.59	0.46	0.43	0.76	0.52	0.69	0.36
rpart:3337703 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3769569	0.57	1.00	0.79	0.02	0.33	0.14	0.83
hdda:3337703 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3544035	0.56	0.91	0.39	0.65	0.41	0.64	0.35

nb:3337703 3544035	0.51	1.00	0.61	0.30	0.35	0.56	0.31
knn:3337703 3544035	0.52	0.94	0.54	0.54	0.42	0.66	0.31
rpart:3337703 3544035	0.51	0.80	0.18	0.83	0.38	0.62	0.47
svm:3337703 3544035	0.52	1.00	0.61	0.30	0.35	0.56	1.00
hdda:3337703 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2790378	0.51	0.94	0.43	0.61	0.40	0.64	0.24
nb:3337703 2790378	0.61	0.28	0.32	0.87	0.60	0.68	0.37
knn:3337703 2790378	0.52	0.98	0.50	0.52	0.39	0.63	0.34
rpart:3337703 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2790378	0.55	1.00	0.75	0.13	0.34	0.46	0.24
hdda:3337703 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2625670	0.56	0.91	0.43	0.63	0.41	0.64	0.07
nb:3337703 2625670	0.61	0.99	0.79	0.33	0.42	0.71	0.24
knn:3337703 2625670	0.51	1.00	0.50	0.43	0.35	0.59	0.28
rpart:3337703 2625670	0.56	0.55	0.18	0.89	0.50	0.64	0.44
svm:3337703 2625670	0.55	0.73	0.07	0.91	0.33	0.62	2.61
hdda:3337703 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3646405	0.59	0.91	0.57	0.54	0.43	0.68	0.10
nb:3337703 3646405	0.59	0.91	0.46	0.61	0.42	0.65	0.34
knn:3337703 3646405	0.60	0.73	0.61	0.59	0.47	0.71	0.34
rpart:3337703 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3646405	0.56	1.00	0.71	0.24	0.36	0.58	0.55
hdda:3337703 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2918654	0.56	0.64	0.54	0.65	0.48	0.70	0.23
nb:3337703 2918654	0.55	0.99	0.57	0.46	0.39	0.64	0.31
knn:3337703 2918654	0.59	0.94	0.82	0.37	0.44	0.77	0.26
rpart:3337703 2918654	0.51	1.00	0.64	0.37	0.38	0.63	0.27
svm:3337703 2918654	0.54	1.00	0.79	0.20	0.37	0.60	0.21
hdda:3337703 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2663553	0.53	0.46	0.39	0.78	0.52	0.68	0.23
nb:3337703 2663553	0.59	0.73	0.39	0.72	0.46	0.66	0.35
knn:3337703 2663553	0.58	0.55	0.36	0.78	0.50	0.67	0.37

rpart:3337703 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2663553	0.53	1.00	0.79	0.20	0.37	0.60	0.37
hdda:3337703 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3103484	0.57	0.94	0.39	0.63	0.39	0.63	0.18
nb:3337703 3103484	0.54	0.91	0.39	0.65	0.41	0.64	0.34
knn:3337703 3103484	0.57	0.99	0.64	0.41	0.40	0.66	0.24
rpart:3337703 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3103484	0.54	1.00	0.64	0.28	0.35	0.57	0.77
hdda:3337703 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2757491	0.67	0.46	0.71	0.59	0.51	0.77	0.13
nb:3337703 2757491	0.66	0.55	0.61	0.63	0.50	0.73	0.33
knn:3337703 2757491	0.64	0.99	0.82	0.28	0.41	0.72	0.29
rpart:3337703 2757491	0.53	0.55	0.21	0.87	0.50	0.65	0.44
svm:3337703 2757491	0.61	1.00	0.68	0.15	0.33	0.44	0.77
hdda:3337703 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2401368	0.61	0.55	0.54	0.67	0.50	0.70	0.28
nb:3337703 2401368	0.66	0.46	0.25	0.87	0.54	0.66	0.34
knn:3337703 2401368	0.68	0.86	0.82	0.41	0.46	0.79	0.27
rpart:3337703 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2401368	0.64	1.00	0.21	0.48	0.20	0.50	0.63
hdda:3337703 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3788643	0.53	0.55	0.36	0.78	0.50	0.67	0.30
nb:3337703 3788643	0.51	0.91	0.46	0.61	0.42	0.65	0.32
knn:3337703 3788643	0.57	0.94	0.75	0.41	0.44	0.73	0.17
rpart:3337703 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3788643	0.52	1.00	0.79	0.13	0.35	0.50	0.60
hdda:3337703 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3219832	0.68	0.14	0.68	0.70	0.58	0.78	0.17
nb:3337703 3219832	0.66	0.55	0.11	0.93	0.50	0.63	0.48
knn:3337703 3219832	0.65	0.86	0.86	0.39	0.46	0.82	0.28
rpart:3337703 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3337703 3219832	0.63	1.00	0.68	0.07	0.31	0.25	-0.39
hdda:3337703 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3198757	0.53	0.91	0.36	0.67	0.40	0.63	0.27
nb:3337703 3198757	0.53	0.86	0.07	0.87	0.25	0.61	0.44
knn:3337703 3198757	0.56	0.80	0.54	0.61	0.45	0.68	0.34
rpart:3337703 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3198757	0.52	1.00	0.57	0.41	0.37	0.61	0.78
hdda:3337703 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3753198	0.58	0.73	0.61	0.59	0.47	0.71	0.20
nb:3337703 3753198	0.58	0.80	0.43	0.67	0.44	0.66	0.33
knn:3337703 3753198	0.55	0.91	0.46	0.61	0.42	0.65	0.34
rpart:3337703 3753198	0.56	0.91	0.14	0.80	0.31	0.61	0.50
svm:3337703 3753198	0.68	1.00	0.82	0.09	0.35	0.44	0.12
hdda:3337703 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2902908	0.64	0.86	0.64	0.52	0.45	0.71	0.11
nb:3337703 2902908	0.61	0.91	0.39	0.65	0.41	0.64	0.35
knn:3337703 2902908	0.61	0.91	0.68	0.48	0.44	0.71	0.31
rpart:3337703 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2902908	0.56	0.94	0.29	0.70	0.36	0.62	0.86
hdda:3337703 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3142559	0.52	0.94	0.25	0.72	0.35	0.61	0.24
nb:3337703 3142559	0.51	0.96	0.18	0.74	0.29	0.60	0.38
knn:3337703 3142559	0.51	1.00	0.57	0.41	0.37	0.61	0.26
rpart:3337703 3142559	0.55	0.99	0.25	0.65	0.30	0.59	0.38
svm:3337703 3142559	0.50	1.00	0.75	0.30	0.40	0.67	1.00
hdda:3337703 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3626882	0.51	0.80	0.21	0.80	0.40	0.63	0.43
nb:3337703 3626882	0.55	0.94	0.46	0.59	0.41	0.64	0.33
knn:3337703 3626882	0.53	0.80	0.32	0.74	0.43	0.64	0.50
rpart:3337703 3626882	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:3337703 3626882	0.52	1.00	0.71	0.33	0.39	0.65	0.42

hdda:3337703 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3433222	0.64	0.28	0.39	0.83	0.58	0.69	0.28
nb:3337703 3433222	0.62	0.55	0.46	0.72	0.50	0.69	0.33
knn:3337703 3433222	0.60	0.64	0.29	0.80	0.47	0.65	0.37
rpart:3337703 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3337703 3433222	0.60	1.00	0.61	0.20	0.31	0.45	0.63
hdda:3337703 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2991121	0.51	1.00	0.43	0.41	0.31	0.54	0.14
nb:3337703 2991121	0.55	1.00	0.64	0.28	0.35	0.57	0.28
knn:3337703 2991121	0.55	0.94	0.54	0.54	0.42	0.66	0.34
rpart:3337703 2991121	0.56	0.99	0.39	0.57	0.35	0.60	0.32
svm:3337703 2991121	0.51	0.99	0.46	0.50	0.36	0.61	0.89
hdda:3337703 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2959165	0.55	0.96	0.21	0.72	0.32	0.60	0.45
nb:3337703 2959165	0.57	0.94	0.57	0.52	0.42	0.67	0.34
knn:3337703 2959165	0.62	0.80	0.82	0.43	0.47	0.80	0.17
rpart:3337703 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:3337703 2959165	0.51	1.00	0.82	0.24	0.40	0.69	0.46
hdda:3337703 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3546559	0.58	0.73	0.25	0.80	0.44	0.64	0.20
nb:3337703 3546559	0.58	0.86	0.46	0.63	0.43	0.66	0.33
knn:3337703 3546559	0.59	0.91	0.46	0.61	0.42	0.65	0.31
rpart:3337703 3546559	0.57	0.46	0.21	0.89	0.55	0.65	0.48
svm:3337703 3546559	0.58	1.00	0.82	0.15	0.37	0.58	0.66
hdda:3337703 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3020668	0.54	0.94	0.29	0.70	0.36	0.62	0.21
nb:3337703 3020668	0.51	1.00	0.68	0.35	0.39	0.64	0.25
knn:3337703 3020668	0.51	1.00	0.64	0.35	0.38	0.62	0.26
rpart:3337703 3020668	0.51	0.99	0.43	0.52	0.35	0.60	0.26
svm:3337703 3020668	0.51	0.64	0.07	0.93	0.40	0.62	3.73
hdda:3337703 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2397811	0.55	0.80	0.36	0.72	0.43	0.65	0.29

nb:3337703 2397811	0.56	1.00	0.86	0.15	0.38	0.64	0.28
knn:3337703 2397811	0.55	1.00	0.79	0.24	0.39	0.65	0.28
rpart:3337703 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2397811	0.60	0.98	0.64	0.43	0.41	0.67	0.06
hdda:3337703 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3903427	0.55	0.96	0.18	0.74	0.29	0.60	0.23
nb:3337703 3903427	0.56	0.98	0.18	0.72	0.28	0.59	0.34
knn:3337703 3903427	0.61	0.98	0.57	0.48	0.40	0.65	0.29
rpart:3337703 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3337703 3903427	0.56	1.00	0.93	0.02	0.37	0.33	0.33
hdda:3337703 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 2595867	0.56	0.64	0.21	0.85	0.46	0.64	0.41
nb:3337703 2595867	0.57	0.64	0.25	0.83	0.47	0.64	0.38
knn:3337703 2595867	0.63	0.64	0.64	0.59	0.49	0.73	0.30
rpart:3337703 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 2595867	0.66	1.00	0.61	0.15	0.30	0.39	0.71
hdda:3337703 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3068088	0.54	0.91	0.46	0.61	0.42	0.65	0.17
nb:3337703 3068088	0.54	0.73	0.00	0.96	0.00	0.61	0.65
knn:3337703 3068088	0.55	0.94	0.46	0.59	0.41	0.64	0.31
rpart:3337703 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3068088	0.61	0.91	0.79	0.41	0.45	0.76	1.00
hdda:3337703 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3337703 3487363	0.52	0.91	0.39	0.65	0.41	0.64	0.36
nb:3337703 3487363	0.53	0.96	0.25	0.70	0.33	0.60	0.35
knn:3337703 3487363	0.52	0.91	0.50	0.59	0.42	0.66	0.35
rpart:3337703 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3337703 3487363	0.52	0.99	0.32	0.59	0.32	0.59	0.53
hdda:3498477 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2321235	0.58	0.36	0.46	0.76	0.54	0.70	0.36
nb:3498477 2321235	0.59	1.00	0.79	0.28	0.40	0.68	0.29
knn:3498477 2321235	0.64	0.46	0.54	0.70	0.52	0.71	0.40

rpart:3498477 2321235	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2321235	0.56	1.00	0.61	0.17	0.31	0.42	0.25
hdda:3498477 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3351432	0.53	0.99	0.68	0.39	0.40	0.67	0.12
nb:3498477 3351432	0.50	0.96	0.57	0.50	0.41	0.66	0.36
knn:3498477 3351432	0.51	0.99	0.39	0.57	0.35	0.60	0.34
rpart:3498477 3351432	0.50	0.73	0.14	0.87	0.40	0.63	0.46
svm:3498477 3351432	0.55	1.00	0.89	0.15	0.39	0.70	0.72
hdda:3498477 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2615421	0.64	0.64	0.39	0.74	0.48	0.67	0.28
nb:3498477 2615421	0.56	0.91	0.54	0.57	0.43	0.67	0.30
knn:3498477 2615421	0.54	0.94	0.50	0.57	0.41	0.65	0.34
rpart:3498477 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2615421	0.58	1.00	0.75	0.09	0.33	0.36	0.93
hdda:3498477 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2802601	0.64	0.91	0.86	0.37	0.45	0.81	0.11
nb:3498477 2802601	0.53	0.86	0.64	0.52	0.45	0.71	0.35
knn:3498477 2802601	0.64	0.99	0.86	0.26	0.41	0.75	0.26
rpart:3498477 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2802601	0.55	1.00	0.43	0.50	0.34	0.59	1.00
hdda:3498477 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3326487	0.61	0.96	0.71	0.41	0.43	0.70	0.08
nb:3498477 3326487	0.60	0.94	0.54	0.54	0.42	0.66	0.31
knn:3498477 3326487	0.66	0.64	0.64	0.59	0.49	0.73	0.34
rpart:3498477 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3326487	0.67	1.00	0.54	0.30	0.32	0.52	1.00
hdda:3498477 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3870139	0.51	0.98	0.39	0.59	0.37	0.61	0.24
nb:3498477 3870139	0.54	0.99	0.68	0.39	0.40	0.67	0.33
knn:3498477 3870139	0.54	0.94	0.46	0.59	0.41	0.64	0.38
rpart:3498477 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3498477 3870139	0.53	1.00	0.82	0.22	0.39	0.67	0.99
hdda:3498477 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2627418	0.55	0.94	0.43	0.61	0.40	0.64	0.36
nb:3498477 2627418	0.51	0.98	0.61	0.46	0.40	0.66	0.36
knn:3498477 2627418	0.56	0.94	0.57	0.52	0.42	0.67	0.37
rpart:3498477 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2627418	0.53	0.99	0.75	0.35	0.41	0.70	0.47
hdda:3498477 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2594205	0.53	1.00	0.57	0.35	0.35	0.57	0.09
nb:3498477 2594205	0.53	0.86	0.04	0.89	0.17	0.60	0.49
knn:3498477 2594205	0.55	1.00	0.68	0.33	0.38	0.63	0.26
rpart:3498477 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2594205	0.57	1.00	0.71	0.24	0.36	0.58	0.67
hdda:3498477 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 4015327	0.57	0.80	0.21	0.80	0.40	0.63	0.43
nb:3498477 4015327	0.54	0.96	0.57	0.50	0.41	0.66	0.35
knn:3498477 4015327	0.53	0.94	0.43	0.61	0.40	0.64	0.37
rpart:3498477 4015327	0.55	0.91	0.25	0.74	0.37	0.62	0.41
svm:3498477 4015327	0.55	1.00	0.96	0.07	0.39	0.75	-0.55
hdda:3498477 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2975719	0.52	0.86	0.36	0.70	0.42	0.64	0.20
nb:3498477 2975719	0.50	1.00	0.54	0.41	0.36	0.59	0.35
knn:3498477 2975719	0.50	0.96	0.46	0.57	0.39	0.63	0.37
rpart:3498477 2975719	0.51	0.80	0.14	0.85	0.36	0.62	0.46
svm:3498477 2975719	0.51	0.98	0.32	0.63	0.35	0.60	1.00
hdda:3498477 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3109057	0.51	0.96	0.39	0.61	0.38	0.62	0.23
nb:3498477 3109057	0.57	0.91	0.61	0.52	0.44	0.69	0.31
knn:3498477 3109057	0.59	0.80	0.54	0.61	0.45	0.68	0.40
rpart:3498477 3109057	0.52	0.80	0.29	0.76	0.42	0.64	0.52
svm:3498477 3109057	0.56	1.00	0.61	0.39	0.38	0.62	0.26

hdda:3498477 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 4021820	0.56	0.98	0.43	0.57	0.38	0.62	0.35
nb:3498477 4021820	0.56	0.91	0.54	0.57	0.43	0.67	0.36
knn:3498477 4021820	0.61	0.86	0.39	0.67	0.42	0.65	0.44
rpart:3498477 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 4021820	0.53	1.00	0.75	0.13	0.34	0.46	0.41
hdda:3498477 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3577841	0.59	1.00	0.25	0.61	0.28	0.57	0.41
nb:3498477 3577841	0.51	0.99	0.54	0.46	0.38	0.62	0.33
knn:3498477 3577841	0.50	0.99	0.68	0.37	0.40	0.65	0.26
rpart:3498477 3577841	0.51	0.80	0.14	0.85	0.36	0.62	0.48
svm:3498477 3577841	0.56	0.64	0.32	0.78	0.47	0.65	0.69
hdda:3498477 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3703849	0.55	0.64	0.29	0.80	0.47	0.65	0.29
nb:3498477 3703849	0.55	0.91	0.32	0.70	0.39	0.63	0.36
knn:3498477 3703849	0.58	0.94	0.64	0.48	0.43	0.69	0.34
rpart:3498477 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3703849	0.56	1.00	0.61	0.28	0.34	0.54	0.58
hdda:3498477 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2707575	0.50	0.86	0.36	0.70	0.42	0.64	0.26
nb:3498477 2707575	0.52	0.80	0.25	0.78	0.41	0.63	0.38
knn:3498477 2707575	0.52	0.99	0.54	0.46	0.38	0.62	0.29
rpart:3498477 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:3498477 2707575	0.57	1.00	0.79	0.24	0.39	0.65	0.70
hdda:3498477 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2510519	0.56	0.80	0.50	0.63	0.45	0.67	0.35
nb:3498477 2510519	0.52	0.98	0.32	0.63	0.35	0.60	0.43
knn:3498477 2510519	0.65	0.64	0.71	0.54	0.49	0.76	0.36
rpart:3498477 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2510519	0.52	0.96	0.50	0.54	0.40	0.64	0.88
hdda:3498477 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3530890	0.63	0.73	0.50	0.65	0.47	0.68	0.29

nb:3498477 3530890	0.61	0.80	0.71	0.50	0.47	0.74	0.34
knn:3498477 3530890	0.59	0.73	0.82	0.46	0.48	0.81	0.34
rpart:3498477 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3530890	0.61	1.00	0.75	0.17	0.36	0.53	0.57
hdda:3498477 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3769569	0.59	0.80	0.50	0.63	0.45	0.67	0.24
nb:3498477 3769569	0.62	0.91	0.50	0.59	0.42	0.66	0.35
knn:3498477 3769569	0.58	0.99	0.61	0.43	0.40	0.65	0.35
rpart:3498477 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3769569	0.64	1.00	0.96	0.00	0.37	0.00	-0.21
hdda:3498477 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3544035	0.51	0.86	0.39	0.67	0.42	0.65	0.22
nb:3498477 3544035	0.50	1.00	0.61	0.35	0.36	0.59	0.32
knn:3498477 3544035	0.51	0.99	0.39	0.54	0.34	0.60	0.36
rpart:3498477 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3544035	0.50	1.00	0.68	0.22	0.35	0.53	0.94
hdda:3498477 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2790378	0.52	0.80	0.39	0.70	0.44	0.65	0.28
nb:3498477 2790378	0.59	0.99	0.54	0.48	0.38	0.63	0.33
knn:3498477 2790378	0.55	0.99	0.54	0.46	0.38	0.62	0.33
rpart:3498477 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2790378	0.53	1.00	1.00	0.02	0.38	1.00	-0.93
hdda:3498477 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2625670	0.52	0.99	0.57	0.43	0.38	0.63	0.15
nb:3498477 2625670	0.57	0.98	0.82	0.33	0.43	0.75	0.23
knn:3498477 2625670	0.53	1.00	0.29	0.59	0.30	0.57	0.37
rpart:3498477 2625670	0.50	0.91	0.32	0.70	0.39	0.63	0.45
svm:3498477 2625670	0.56	1.00	0.86	0.15	0.38	0.64	0.59
hdda:3498477 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3646405	0.54	0.94	0.46	0.59	0.41	0.64	0.41
nb:3498477 3646405	0.55	0.99	0.64	0.41	0.40	0.66	0.34
knn:3498477 3646405	0.57	0.73	0.29	0.78	0.44	0.64	0.44

rpart:3498477 3646405	0.50	0.91	0.32	0.70	0.39	0.63	0.45
svm:3498477 3646405	0.56	1.00	0.68	0.28	0.37	0.59	0.15
hdda:3498477 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2918654	0.52	0.80	0.21	0.80	0.40	0.63	0.34
nb:3498477 2918654	0.54	0.96	0.50	0.54	0.40	0.64	0.34
knn:3498477 2918654	0.57	0.99	0.61	0.41	0.39	0.63	0.27
rpart:3498477 2918654	0.51	0.86	0.25	0.76	0.39	0.63	0.41
svm:3498477 2918654	0.52	1.00	0.89	0.17	0.40	0.73	0.65
hdda:3498477 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2663553	0.52	0.99	0.46	0.52	0.37	0.62	0.16
nb:3498477 2663553	0.51	1.00	0.57	0.41	0.37	0.61	0.35
knn:3498477 2663553	0.50	1.00	0.43	0.50	0.34	0.59	0.36
rpart:3498477 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2663553	0.52	1.00	0.86	0.11	0.37	0.56	-0.31
hdda:3498477 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3103484	0.55	0.64	0.50	0.67	0.48	0.69	0.28
nb:3498477 3103484	0.51	1.00	0.29	0.59	0.30	0.57	0.37
knn:3498477 3103484	0.56	1.00	0.50	0.41	0.34	0.58	0.33
rpart:3498477 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3103484	0.59	1.00	0.82	0.11	0.36	0.50	-0.27
hdda:3498477 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2757491	0.63	0.91	0.50	0.59	0.42	0.66	0.15
nb:3498477 2757491	0.56	0.99	0.54	0.48	0.38	0.63	0.35
knn:3498477 2757491	0.55	0.80	0.57	0.59	0.46	0.69	0.36
rpart:3498477 2757491	0.50	0.91	0.32	0.70	0.39	0.63	0.45
svm:3498477 2757491	0.50	1.00	0.68	0.26	0.36	0.57	0.80
hdda:3498477 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2401368	0.63	0.94	0.71	0.43	0.43	0.71	0.10
nb:3498477 2401368	0.56	0.46	0.21	0.89	0.55	0.65	0.37
knn:3498477 2401368	0.63	0.20	0.36	0.87	0.63	0.69	0.36
rpart:3498477 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3498477 2401368	0.61	1.00	0.61	0.24	0.33	0.50	1.00
hdda:3498477 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3788643	0.51	0.73	0.14	0.87	0.40	0.63	0.32
nb:3498477 3788643	0.51	1.00	0.57	0.41	0.37	0.61	0.32
knn:3498477 3788643	0.50	0.86	0.11	0.85	0.30	0.61	0.42
rpart:3498477 3788643	0.50	0.55	0.11	0.93	0.50	0.63	0.60
svm:3498477 3788643	0.56	1.00	0.89	0.13	0.38	0.67	0.05
hdda:3498477 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3219832	0.62	0.55	0.68	0.59	0.50	0.75	0.25
nb:3498477 3219832	0.61	0.46	0.14	0.93	0.57	0.64	0.48
knn:3498477 3219832	0.71	0.28	0.43	0.80	0.57	0.70	0.42
rpart:3498477 3219832	0.54	0.36	0.39	0.80	0.55	0.69	0.44
svm:3498477 3219832	0.60	1.00	0.75	0.13	0.34	0.46	0.52
hdda:3498477 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3198757	0.52	0.99	0.29	0.63	0.32	0.59	0.23
nb:3498477 3198757	0.55	0.96	0.11	0.78	0.23	0.59	0.37
knn:3498477 3198757	0.54	0.96	0.57	0.50	0.41	0.66	0.32
rpart:3498477 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3198757	0.55	1.00	0.79	0.26	0.39	0.67	0.13
hdda:3498477 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3753198	0.57	0.91	0.39	0.65	0.41	0.64	0.32
nb:3498477 3753198	0.58	0.91	0.68	0.48	0.44	0.71	0.31
knn:3498477 3753198	0.54	0.86	0.68	0.50	0.45	0.72	0.30
rpart:3498477 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3753198	0.65	0.80	0.00	0.93	0.00	0.61	20.17
hdda:3498477 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2902908	0.62	0.91	0.54	0.57	0.43	0.67	0.19
nb:3498477 2902908	0.58	0.73	0.54	0.63	0.47	0.69	0.37
knn:3498477 2902908	0.60	0.86	0.71	0.48	0.45	0.73	0.32
rpart:3498477 2902908	0.50	0.91	0.32	0.70	0.39	0.63	0.45
svm:3498477 2902908	0.58	1.00	0.82	0.17	0.38	0.62	0.73

hdda:3498477 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3142559	0.53	0.91	0.21	0.76	0.35	0.61	0.40
nb:3498477 3142559	0.51	0.98	0.21	0.70	0.30	0.59	0.36
knn:3498477 3142559	0.57	0.98	0.21	0.70	0.30	0.59	0.39
rpart:3498477 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3498477 3142559	0.61	0.64	0.50	0.67	0.48	0.69	0.53
hdda:3498477 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3626882	0.50	0.73	0.14	0.87	0.40	0.63	0.42
nb:3498477 3626882	0.54	0.94	0.54	0.54	0.42	0.66	0.32
knn:3498477 3626882	0.55	0.98	0.57	0.48	0.40	0.65	0.32
rpart:3498477 3626882	0.51	0.96	0.14	0.76	0.27	0.59	0.36
svm:3498477 3626882	0.56	1.00	0.71	0.33	0.39	0.65	0.71
hdda:3498477 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3433222	0.65	0.14	0.43	0.85	0.63	0.71	0.38
nb:3498477 3433222	0.63	0.46	0.46	0.74	0.52	0.69	0.35
knn:3498477 3433222	0.57	0.86	0.46	0.63	0.43	0.66	0.39
rpart:3498477 3433222	0.62	0.28	0.21	0.93	0.67	0.66	0.53
svm:3498477 3433222	0.59	1.00	0.75	0.20	0.36	0.56	0.01
hdda:3498477 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2991121	0.54	0.98	0.46	0.54	0.38	0.63	0.22
nb:3498477 2991121	0.55	1.00	0.54	0.39	0.35	0.58	0.32
knn:3498477 2991121	0.52	0.99	0.43	0.54	0.36	0.61	0.38
rpart:3498477 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 2991121	0.57	0.99	0.61	0.41	0.39	0.63	0.45
hdda:3498477 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2959165	0.53	0.96	0.50	0.54	0.40	0.64	0.32
nb:3498477 2959165	0.58	0.73	0.79	0.48	0.48	0.79	0.33
knn:3498477 2959165	0.55	0.96	0.61	0.48	0.41	0.67	0.32
rpart:3498477 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:3498477 2959165	0.55	1.00	0.46	0.48	0.35	0.59	1.00
hdda:3498477 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3546559	0.54	0.96	0.32	0.65	0.36	0.61	0.22

nb:3498477 3546559	0.54	0.99	0.61	0.41	0.39	0.63	0.31
knn:3498477 3546559	0.55	1.00	0.43	0.46	0.32	0.57	0.32
rpart:3498477 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3546559	0.52	1.00	0.75	0.13	0.34	0.46	-0.19
hdda:3498477 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3020668	0.51	0.96	0.25	0.70	0.33	0.60	0.31
nb:3498477 3020668	0.53	1.00	0.68	0.33	0.38	0.63	0.23
knn:3498477 3020668	0.54	0.86	0.18	0.80	0.36	0.62	0.45
rpart:3498477 3020668	0.52	0.91	0.21	0.76	0.35	0.61	0.44
svm:3498477 3020668	0.52	1.00	0.79	0.24	0.39	0.65	0.41
hdda:3498477 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2397811	0.54	0.98	0.32	0.63	0.35	0.60	0.35
nb:3498477 2397811	0.54	0.99	0.64	0.41	0.40	0.66	0.34
knn:3498477 2397811	0.56	0.86	0.50	0.61	0.44	0.67	0.38
rpart:3498477 2397811	0.51	0.80	0.29	0.76	0.42	0.64	0.43
svm:3498477 2397811	0.54	0.96	0.61	0.48	0.41	0.67	1.00
hdda:3498477 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3903427	0.52	0.64	0.29	0.80	0.47	0.65	0.37
nb:3498477 3903427	0.50	0.73	0.14	0.87	0.40	0.63	0.44
knn:3498477 3903427	0.52	0.94	0.39	0.63	0.39	0.63	0.38
rpart:3498477 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3903427	0.52	0.99	0.71	0.37	0.41	0.68	1.00
hdda:3498477 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 2595867	0.52	0.96	0.32	0.65	0.36	0.61	0.27
nb:3498477 2595867	0.52	0.99	0.39	0.57	0.35	0.60	0.33
knn:3498477 2595867	0.55	0.64	0.39	0.74	0.48	0.67	0.39
rpart:3498477 2595867	0.51	0.94	0.36	0.65	0.38	0.63	0.40
svm:3498477 2595867	0.56	1.00	0.79	0.20	0.37	0.60	0.95
hdda:3498477 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3068088	0.54	0.99	0.54	0.46	0.38	0.62	0.29
nb:3498477 3068088	0.51	0.99	0.54	0.46	0.38	0.62	0.33
knn:3498477 3068088	0.52	1.00	0.36	0.54	0.32	0.58	0.36

rpart:3498477 3068088	0.50	0.91	0.32	0.70	0.39	0.63	0.45
svm:3498477 3068088	0.52	1.00	0.68	0.33	0.38	0.63	0.80
hdda:3498477 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3498477 3487363	0.55	0.96	0.36	0.63	0.37	0.62	0.17
nb:3498477 3487363	0.52	0.94	0.18	0.76	0.31	0.60	0.38
knn:3498477 3487363	0.51	1.00	0.68	0.30	0.37	0.61	0.30
rpart:3498477 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3498477 3487363	0.56	0.28	0.36	0.85	0.59	0.68	0.61
hdda:2321235 3351432	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3351432	0.57	0.55	0.32	0.80	0.50	0.66	0.47
nb:2321235 3351432	0.55	0.99	0.75	0.33	0.40	0.68	0.32
knn:2321235 3351432	0.55	0.64	0.39	0.74	0.48	0.67	0.37
rpart:2321235 3351432	0.61	0.64	0.32	0.78	0.47	0.65	0.36
svm:2321235 3351432	0.53	1.00	0.68	0.22	0.35	0.53	0.59
hdda:2321235 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2615421	0.70	0.09	0.64	0.74	0.60	0.77	0.18
nb:2321235 2615421	0.62	0.64	0.68	0.57	0.49	0.74	0.32
knn:2321235 2615421	0.53	1.00	0.71	0.26	0.37	0.60	0.17
rpart:2321235 2615421	0.54	0.64	0.43	0.72	0.48	0.67	0.47
svm:2321235 2615421	0.54	1.00	0.79	0.22	0.38	0.63	0.64
hdda:2321235 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2802601	0.62	0.80	0.46	0.65	0.45	0.67	0.31
nb:2321235 2802601	0.58	0.86	0.75	0.46	0.46	0.75	0.35
knn:2321235 2802601	0.58	0.73	0.57	0.61	0.47	0.70	0.38
rpart:2321235 2802601	0.60	0.80	0.68	0.52	0.46	0.73	0.30
svm:2321235 2802601	0.53	1.00	0.64	0.22	0.33	0.50	0.35
hdda:2321235 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3326487	0.60	0.55	0.50	0.70	0.50	0.70	0.31
nb:2321235 3326487	0.66	0.86	0.75	0.46	0.46	0.75	0.31
knn:2321235 3326487	0.57	1.00	0.36	0.50	0.30	0.56	0.50
rpart:2321235 3326487	0.61	0.20	0.32	0.89	0.64	0.68	0.44

svm:2321235 3326487	0.68	1.00	0.79	0.02	0.33	0.14	0.32
hdda:2321235 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3870139	0.53	0.96	0.36	0.63	0.37	0.62	0.22
nb:2321235 3870139	0.59	0.99	0.68	0.37	0.40	0.65	0.34
knn:2321235 3870139	0.54	0.96	0.36	0.63	0.37	0.62	0.41
rpart:2321235 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3870139	0.53	1.00	0.43	0.43	0.32	0.56	1.00
hdda:2321235 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2627418	0.58	0.96	0.82	0.35	0.43	0.76	0.14
nb:2321235 2627418	0.50	0.99	0.54	0.48	0.38	0.63	0.37
knn:2321235 2627418	0.53	0.91	0.57	0.54	0.43	0.68	0.38
rpart:2321235 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 2627418	0.54	1.00	0.50	0.43	0.35	0.59	1.00
hdda:2321235 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2594205	0.56	0.36	0.50	0.74	0.54	0.71	0.28
nb:2321235 2594205	0.57	0.98	0.75	0.37	0.42	0.71	0.28
knn:2321235 2594205	0.63	0.36	0.36	0.83	0.56	0.68	0.44
rpart:2321235 2594205	0.65	0.20	0.50	0.78	0.58	0.72	0.36
svm:2321235 2594205	0.57	1.00	0.64	0.13	0.31	0.38	0.31
hdda:2321235 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 4015327	0.53	0.80	0.21	0.80	0.40	0.63	0.43
nb:2321235 4015327	0.61	0.73	0.64	0.57	0.47	0.72	0.36
knn:2321235 4015327	0.59	0.86	0.46	0.63	0.43	0.66	0.37
rpart:2321235 4015327	0.52	0.98	0.32	0.63	0.35	0.60	0.38
svm:2321235 4015327	0.58	1.00	0.71	0.15	0.34	0.47	0.05
hdda:2321235 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2975719	0.57	0.80	0.57	0.59	0.46	0.69	0.35
nb:2321235 2975719	0.55	0.86	0.71	0.48	0.45	0.73	0.36
knn:2321235 2975719	0.55	0.96	0.68	0.43	0.42	0.69	0.37
rpart:2321235 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 2975719	0.52	1.00	0.50	0.43	0.35	0.59	1.00

hdda:2321235 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3109057	0.54	0.91	0.57	0.54	0.43	0.68	0.30
nb:2321235 3109057	0.58	0.98	0.71	0.39	0.42	0.69	0.30
knn:2321235 3109057	0.55	0.99	0.75	0.33	0.40	0.68	0.28
rpart:2321235 3109057	0.58	0.64	0.57	0.63	0.48	0.71	0.41
svm:2321235 3109057	0.54	0.99	0.46	0.52	0.37	0.62	0.62
hdda:2321235 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 4021820	0.55	0.80	0.32	0.74	0.43	0.64	0.30
nb:2321235 4021820	0.58	0.64	0.54	0.65	0.48	0.70	0.40
knn:2321235 4021820	0.56	0.86	0.50	0.61	0.44	0.67	0.39
rpart:2321235 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 4021820	0.58	1.00	0.61	0.22	0.32	0.48	0.41
hdda:2321235 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3577841	0.55	0.94	0.61	0.50	0.43	0.68	0.14
nb:2321235 3577841	0.54	0.98	0.75	0.37	0.42	0.71	0.31
knn:2321235 3577841	0.55	0.99	0.64	0.39	0.39	0.64	0.31
rpart:2321235 3577841	0.58	0.80	0.68	0.52	0.46	0.73	0.28
svm:2321235 3577841	0.52	1.00	0.68	0.30	0.37	0.61	0.39
hdda:2321235 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3703849	0.57	0.91	0.50	0.59	0.42	0.66	0.35
nb:2321235 3703849	0.59	0.91	0.68	0.48	0.44	0.71	0.32
knn:2321235 3703849	0.60	0.91	0.61	0.52	0.44	0.69	0.36
rpart:2321235 3703849	0.60	0.73	0.43	0.70	0.46	0.67	0.46
svm:2321235 3703849	0.60	1.00	0.64	0.28	0.35	0.57	0.73
hdda:2321235 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2707575	0.58	0.64	0.29	0.80	0.47	0.65	0.44
nb:2321235 2707575	0.54	0.91	0.39	0.65	0.41	0.64	0.38
knn:2321235 2707575	0.53	0.86	0.36	0.70	0.42	0.64	0.50
rpart:2321235 2707575	0.51	0.55	0.29	0.83	0.50	0.66	0.52
svm:2321235 2707575	0.50	1.00	0.75	0.17	0.36	0.53	0.30
hdda:2321235 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2510519	0.56	0.96	0.46	0.57	0.39	0.63	0.39

nb:2321235 2510519	0.55	0.96	0.57	0.50	0.41	0.66	0.43
knn:2321235 2510519	0.57	0.99	0.57	0.46	0.39	0.64	0.39
rpart:2321235 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 2510519	0.56	1.00	0.68	0.26	0.36	0.57	1.00
hdda:2321235 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3530890	0.68	0.14	0.64	0.72	0.58	0.77	0.38
nb:2321235 3530890	0.62	0.55	0.68	0.59	0.50	0.75	0.37
knn:2321235 3530890	0.61	0.86	0.71	0.48	0.45	0.73	0.39
rpart:2321235 3530890	0.63	0.36	0.57	0.70	0.53	0.73	0.44
svm:2321235 3530890	0.63	0.98	0.18	0.72	0.28	0.59	1.00
hdda:2321235 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3769569	0.64	0.46	0.57	0.67	0.52	0.72	0.30
nb:2321235 3769569	0.63	0.80	0.75	0.48	0.47	0.76	0.33
knn:2321235 3769569	0.63	0.73	0.71	0.52	0.48	0.75	0.37
rpart:2321235 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3769569	0.53	1.00	0.79	0.20	0.37	0.60	0.08
hdda:2321235 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3544035	0.53	0.64	0.36	0.76	0.48	0.66	0.36
nb:2321235 3544035	0.51	1.00	0.61	0.30	0.35	0.56	0.31
knn:2321235 3544035	0.50	0.99	0.36	0.57	0.33	0.59	0.38
rpart:2321235 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3544035	0.50	1.00	0.64	0.26	0.35	0.55	0.98
hdda:2321235 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2790378	0.53	0.96	0.46	0.57	0.39	0.63	0.35
nb:2321235 2790378	0.62	0.96	0.71	0.41	0.43	0.70	0.32
knn:2321235 2790378	0.58	1.00	0.50	0.30	0.30	0.50	0.30
rpart:2321235 2790378	0.67	0.80	0.68	0.52	0.46	0.73	0.30
svm:2321235 2790378	0.65	1.00	0.54	0.17	0.28	0.38	1.00
hdda:2321235 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2625670	0.60	0.73	0.46	0.67	0.46	0.67	0.22
nb:2321235 2625670	0.60	0.99	0.68	0.39	0.40	0.67	0.29
knn:2321235 2625670	0.57	0.86	0.54	0.59	0.44	0.68	0.35

rpart:2321235 2625670	0.62	0.55	0.46	0.72	0.50	0.69	0.43
svm:2321235 2625670	0.55	1.00	0.75	0.17	0.36	0.53	-0.20
hdda:2321235 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3646405	0.54	0.91	0.46	0.61	0.42	0.65	0.38
nb:2321235 3646405	0.54	0.98	0.68	0.41	0.41	0.68	0.35
knn:2321235 3646405	0.60	0.64	0.50	0.67	0.48	0.69	0.45
rpart:2321235 3646405	0.57	0.94	0.46	0.59	0.41	0.64	0.44
svm:2321235 3646405	0.51	1.00	0.57	0.35	0.35	0.57	0.08
hdda:2321235 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2918654	0.56	0.64	0.32	0.78	0.47	0.65	0.45
nb:2321235 2918654	0.58	0.80	0.61	0.57	0.46	0.70	0.36
knn:2321235 2918654	0.53	0.99	0.86	0.26	0.41	0.75	0.27
rpart:2321235 2918654	0.60	0.64	0.36	0.76	0.48	0.66	0.44
svm:2321235 2918654	0.58	1.00	0.89	0.09	0.37	0.57	0.33
hdda:2321235 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2663553	0.53	0.99	0.50	0.48	0.37	0.61	0.29
nb:2321235 2663553	0.57	0.91	0.68	0.48	0.44	0.71	0.37
knn:2321235 2663553	0.56	0.99	0.61	0.41	0.39	0.63	0.32
rpart:2321235 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 2663553	0.52	1.00	0.79	0.07	0.34	0.33	0.33
hdda:2321235 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3103484	0.55	1.00	0.75	0.30	0.40	0.67	0.14
nb:2321235 3103484	0.55	0.99	0.82	0.30	0.42	0.74	0.29
knn:2321235 3103484	0.52	0.94	0.32	0.67	0.38	0.62	0.40
rpart:2321235 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3103484	0.58	1.00	0.57	0.33	0.34	0.56	0.26
hdda:2321235 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2757491	0.63	0.91	0.50	0.59	0.42	0.66	0.44
nb:2321235 2757491	0.60	0.80	0.71	0.50	0.47	0.74	0.36
knn:2321235 2757491	0.66	0.20	0.61	0.72	0.57	0.75	0.50
rpart:2321235 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2321235 2757491	0.61	1.00	0.82	0.09	0.35	0.44	-0.28
hdda:2321235 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2401368	0.70	0.64	0.82	0.48	0.49	0.81	0.13
nb:2321235 2401368	0.61	0.94	0.71	0.43	0.43	0.71	0.29
knn:2321235 2401368	0.70	0.14	0.50	0.80	0.61	0.73	0.34
rpart:2321235 2401368	0.53	0.80	0.32	0.74	0.43	0.64	0.40
svm:2321235 2401368	0.61	1.00	0.79	0.11	0.35	0.45	0.77
hdda:2321235 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3788643	0.59	0.96	0.68	0.43	0.42	0.69	0.19
nb:2321235 3788643	0.58	0.94	0.61	0.50	0.43	0.68	0.36
knn:2321235 3788643	0.56	0.91	0.79	0.41	0.45	0.76	0.30
rpart:2321235 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3788643	0.55	1.00	0.50	0.39	0.33	0.56	1.00
hdda:2321235 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3219832	0.69	0.64	0.82	0.48	0.49	0.81	0.12
nb:2321235 3219832	0.62	0.94	0.71	0.43	0.43	0.71	0.30
knn:2321235 3219832	0.71	0.46	0.79	0.54	0.51	0.81	0.34
rpart:2321235 3219832	0.67	0.03	0.46	0.89	0.72	0.73	0.49
svm:2321235 3219832	0.67	1.00	0.79	0.11	0.35	0.45	0.62
hdda:2321235 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3198757	0.55	0.86	0.68	0.50	0.45	0.72	0.21
nb:2321235 3198757	0.52	0.64	0.07	0.93	0.40	0.62	0.56
knn:2321235 3198757	0.51	0.99	0.82	0.30	0.42	0.74	0.30
rpart:2321235 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3198757	0.51	1.00	0.75	0.30	0.40	0.67	1.00
hdda:2321235 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3753198	0.54	0.86	0.43	0.65	0.43	0.65	0.42
nb:2321235 3753198	0.59	0.96	0.57	0.50	0.41	0.66	0.36
knn:2321235 3753198	0.52	0.99	0.68	0.37	0.40	0.65	0.33
rpart:2321235 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3753198	0.53	1.00	0.86	0.09	0.36	0.50	0.18

hdda:2321235 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2902908	0.62	0.55	0.46	0.72	0.50	0.69	0.22
nb:2321235 2902908	0.60	0.73	0.50	0.65	0.47	0.68	0.40
knn:2321235 2902908	0.64	0.80	0.50	0.63	0.45	0.67	0.38
rpart:2321235 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 2902908	0.67	1.00	0.75	0.07	0.33	0.30	0.32
hdda:2321235 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3142559	0.51	0.86	0.18	0.80	0.36	0.62	0.40
nb:2321235 3142559	0.53	0.94	0.14	0.78	0.29	0.60	0.46
knn:2321235 3142559	0.50	0.94	0.18	0.76	0.31	0.60	0.44
rpart:2321235 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2321235 3142559	0.52	1.00	0.79	0.24	0.39	0.65	0.54
hdda:2321235 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3626882	0.57	0.73	0.46	0.67	0.46	0.67	0.32
nb:2321235 3626882	0.57	0.96	0.75	0.39	0.43	0.72	0.31
knn:2321235 3626882	0.56	0.91	0.25	0.74	0.37	0.62	0.39
rpart:2321235 3626882	0.50	0.86	0.11	0.85	0.30	0.61	0.57
svm:2321235 3626882	0.56	1.00	0.79	0.15	0.36	0.54	0.29
hdda:2321235 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3433222	0.67	0.46	0.21	0.89	0.55	0.65	0.51
nb:2321235 3433222	0.63	0.91	0.82	0.39	0.45	0.78	0.30
knn:2321235 3433222	0.65	0.20	0.36	0.87	0.63	0.69	0.44
rpart:2321235 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:2321235 3433222	0.62	1.00	0.82	0.09	0.35	0.44	-0.23
hdda:2321235 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2991121	0.52	0.96	0.43	0.59	0.39	0.63	0.29
nb:2321235 2991121	0.50	0.99	0.57	0.46	0.39	0.64	0.35
knn:2321235 2991121	0.52	1.00	0.43	0.50	0.34	0.59	0.41
rpart:2321235 2991121	0.58	0.86	0.39	0.67	0.42	0.65	0.42
svm:2321235 2991121	0.51	1.00	0.71	0.33	0.39	0.65	0.60
hdda:2321235 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2959165	0.57	0.86	0.50	0.61	0.44	0.67	0.39

nb:2321235 2959165	0.55	0.86	0.61	0.54	0.45	0.69	0.38
knn:2321235 2959165	0.56	0.86	0.71	0.48	0.45	0.73	0.36
rpart:2321235 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2321235 2959165	0.55	1.00	0.75	0.15	0.35	0.50	0.22
hdda:2321235 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3546559	0.60	0.80	0.29	0.76	0.42	0.64	0.44
nb:2321235 3546559	0.60	0.80	0.50	0.63	0.45	0.67	0.37
knn:2321235 3546559	0.54	0.94	0.43	0.61	0.40	0.64	0.36
rpart:2321235 3546559	0.62	0.46	0.39	0.78	0.52	0.68	0.35
svm:2321235 3546559	0.54	1.00	0.79	0.20	0.37	0.60	0.32
hdda:2321235 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3020668	0.51	0.99	0.32	0.61	0.33	0.60	0.27
nb:2321235 3020668	0.51	0.99	0.61	0.41	0.39	0.63	0.27
knn:2321235 3020668	0.53	0.96	0.18	0.74	0.29	0.60	0.42
rpart:2321235 3020668	0.55	0.73	0.39	0.72	0.46	0.66	0.43
svm:2321235 3020668	0.51	1.00	0.79	0.28	0.40	0.68	0.28
hdda:2321235 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2397811	0.56	0.73	0.61	0.59	0.47	0.71	0.24
nb:2321235 2397811	0.54	0.94	0.68	0.46	0.43	0.70	0.38
knn:2321235 2397811	0.54	0.86	0.25	0.76	0.39	0.63	0.50
rpart:2321235 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 2397811	0.53	1.00	0.79	0.20	0.37	0.60	0.33
hdda:2321235 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3903427	0.54	0.80	0.21	0.80	0.40	0.63	0.43
nb:2321235 3903427	0.57	0.98	0.79	0.35	0.42	0.73	0.27
knn:2321235 3903427	0.55	0.94	0.36	0.65	0.38	0.63	0.36
rpart:2321235 3903427	0.58	0.86	0.21	0.78	0.38	0.62	0.47
svm:2321235 3903427	0.53	1.00	0.68	0.28	0.37	0.59	0.58
hdda:2321235 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 2595867	0.56	0.64	0.21	0.85	0.46	0.64	0.34
nb:2321235 2595867	0.58	0.46	0.54	0.70	0.52	0.71	0.37
knn:2321235 2595867	0.61	0.99	0.75	0.35	0.41	0.70	0.28

rpart:2321235 2595867	0.61	0.80	0.68	0.52	0.46	0.73	0.29
svm:2321235 2595867	0.57	1.00	0.71	0.24	0.36	0.58	1.00
hdda:2321235 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3068088	0.55	0.94	0.71	0.43	0.43	0.71	0.14
nb:2321235 3068088	0.52	0.96	0.71	0.41	0.43	0.70	0.35
knn:2321235 3068088	0.50	0.96	0.29	0.67	0.35	0.61	0.39
rpart:2321235 3068088	0.61	0.80	0.68	0.52	0.46	0.73	0.29
svm:2321235 3068088	0.55	1.00	0.39	0.50	0.32	0.58	1.00
hdda:2321235 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2321235 3487363	0.52	0.91	0.43	0.63	0.41	0.64	0.29
nb:2321235 3487363	0.54	0.98	0.21	0.70	0.30	0.59	0.42
knn:2321235 3487363	0.54	0.98	0.61	0.46	0.40	0.66	0.32
rpart:2321235 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2321235 3487363	0.58	1.00	0.89	0.15	0.39	0.70	0.44
hdda:3351432 2615421	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2615421	0.57	0.64	0.46	0.70	0.48	0.68	0.22
nb:3351432 2615421	0.55	0.98	0.68	0.41	0.41	0.68	0.31
knn:3351432 2615421	0.51	0.94	0.50	0.57	0.41	0.65	0.29
rpart:3351432 2615421	0.60	0.28	0.25	0.91	0.64	0.67	0.56
svm:3351432 2615421	0.58	1.00	0.71	0.24	0.36	0.58	0.90
hdda:3351432 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2802601	0.59	0.98	0.54	0.50	0.39	0.64	0.26
nb:3351432 2802601	0.52	1.00	0.64	0.30	0.36	0.58	0.35
knn:3351432 2802601	0.59	0.99	0.79	0.30	0.41	0.70	0.26
rpart:3351432 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2802601	0.66	1.00	0.68	0.15	0.33	0.44	0.30
hdda:3351432 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3326487	0.56	0.80	0.50	0.63	0.45	0.67	0.37
nb:3351432 3326487	0.58	0.98	0.71	0.39	0.42	0.69	0.32
knn:3351432 3326487	0.67	0.36	0.71	0.61	0.53	0.78	0.28
rpart:3351432 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3351432 3326487	0.57	1.00	0.86	0.13	0.38	0.60	0.60
hdda:3351432 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3870139	0.50	0.86	0.21	0.78	0.38	0.62	0.37
nb:3351432 3870139	0.53	0.86	0.68	0.50	0.45	0.72	0.37
knn:3351432 3870139	0.50	0.94	0.32	0.67	0.38	0.62	0.38
rpart:3351432 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3870139	0.51	1.00	0.75	0.20	0.36	0.56	0.25
hdda:3351432 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2627418	0.50	0.80	0.32	0.74	0.43	0.64	0.28
nb:3351432 2627418	0.55	1.00	0.64	0.33	0.37	0.60	0.37
knn:3351432 2627418	0.55	0.46	0.25	0.87	0.54	0.66	0.46
rpart:3351432 2627418	0.54	0.36	0.25	0.89	0.58	0.66	0.55
svm:3351432 2627418	0.60	1.00	0.71	0.13	0.33	0.43	0.37
hdda:3351432 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2594205	0.55	0.99	0.61	0.41	0.39	0.63	0.15
nb:3351432 2594205	0.61	0.80	0.00	0.93	0.00	0.61	0.63
knn:3351432 2594205	0.64	0.80	0.82	0.43	0.47	0.80	0.30
rpart:3351432 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2594205	0.52	1.00	0.86	0.15	0.38	0.64	0.76
hdda:3351432 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 4015327	0.58	0.64	0.14	0.89	0.44	0.63	0.46
nb:3351432 4015327	0.50	0.98	0.32	0.63	0.35	0.60	0.40
knn:3351432 4015327	0.55	0.64	0.29	0.80	0.47	0.65	0.37
rpart:3351432 4015327	0.50	0.73	0.11	0.89	0.38	0.62	0.53
svm:3351432 4015327	0.50	1.00	0.82	0.02	0.34	0.17	0.10
hdda:3351432 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2975719	0.59	0.64	0.36	0.76	0.48	0.66	0.30
nb:3351432 2975719	0.53	1.00	0.71	0.24	0.36	0.58	0.34
knn:3351432 2975719	0.57	0.73	0.25	0.80	0.44	0.64	0.50
rpart:3351432 2975719	0.58	0.73	0.11	0.89	0.38	0.62	0.60
svm:3351432 2975719	0.61	1.00	0.75	0.17	0.36	0.53	0.34

hdda:3351432 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3109057	0.52	0.91	0.43	0.63	0.41	0.64	0.36
nb:3351432 3109057	0.55	0.96	0.61	0.48	0.41	0.67	0.33
knn:3351432 3109057	0.57	0.98	0.64	0.43	0.41	0.67	0.28
rpart:3351432 3109057	0.53	1.00	0.79	0.24	0.39	0.65	0.21
svm:3351432 3109057	0.54	1.00	0.96	0.09	0.39	0.80	0.69
hdda:3351432 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 4021820	0.51	0.99	0.54	0.48	0.38	0.63	0.26
nb:3351432 4021820	0.50	0.86	0.36	0.70	0.42	0.64	0.42
knn:3351432 4021820	0.58	0.55	0.32	0.80	0.50	0.66	0.40
rpart:3351432 4021820	0.55	0.64	0.25	0.83	0.47	0.64	0.48
svm:3351432 4021820	0.51	1.00	0.79	0.15	0.36	0.54	0.60
hdda:3351432 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3577841	0.52	0.94	0.21	0.74	0.33	0.61	0.22
nb:3351432 3577841	0.52	0.99	0.36	0.57	0.33	0.59	0.37
knn:3351432 3577841	0.56	0.99	0.39	0.54	0.34	0.60	0.36
rpart:3351432 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3577841	0.50	1.00	0.89	0.15	0.39	0.70	0.51
hdda:3351432 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3703849	0.53	0.98	0.54	0.50	0.39	0.64	0.29
nb:3351432 3703849	0.53	1.00	0.29	0.59	0.30	0.57	0.38
knn:3351432 3703849	0.51	1.00	0.57	0.33	0.34	0.56	0.17
rpart:3351432 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3703849	0.57	1.00	0.46	0.48	0.35	0.59	1.00
hdda:3351432 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2707575	0.54	0.80	0.46	0.65	0.45	0.67	0.34
nb:3351432 2707575	0.56	0.86	0.21	0.78	0.38	0.62	0.42
knn:3351432 2707575	0.54	0.86	0.46	0.63	0.43	0.66	0.37
rpart:3351432 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:3351432 2707575	0.57	1.00	0.79	0.15	0.36	0.54	0.29
hdda:3351432 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2510519	0.62	0.91	0.68	0.48	0.44	0.71	0.30

nb:3351432 2510519	0.54	1.00	0.57	0.24	0.31	0.48	0.41
knn:3351432 2510519	0.60	0.86	0.32	0.72	0.41	0.63	0.41
rpart:3351432 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2510519	0.61	1.00	0.71	0.20	0.35	0.53	-0.94
hdda:3351432 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3530890	0.60	0.96	0.54	0.52	0.41	0.65	0.24
nb:3351432 3530890	0.57	0.80	0.57	0.59	0.46	0.69	0.38
knn:3351432 3530890	0.61	0.80	0.36	0.72	0.43	0.65	0.37
rpart:3351432 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3530890	0.63	1.00	0.71	0.09	0.32	0.33	0.09
hdda:3351432 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3769569	0.57	0.80	0.36	0.72	0.43	0.65	0.21
nb:3351432 3769569	0.57	0.91	0.57	0.54	0.43	0.68	0.36
knn:3351432 3769569	0.60	0.55	0.43	0.74	0.50	0.68	0.34
rpart:3351432 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3769569	0.57	1.00	0.79	0.07	0.34	0.33	0.27
hdda:3351432 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3544035	0.52	0.99	0.57	0.46	0.39	0.64	0.16
nb:3351432 3544035	0.51	0.96	0.36	0.63	0.37	0.62	0.44
knn:3351432 3544035	0.51	0.86	0.18	0.80	0.36	0.62	0.45
rpart:3351432 3544035	0.56	0.46	0.18	0.91	0.56	0.65	0.50
svm:3351432 3544035	0.59	1.00	0.93	0.11	0.39	0.71	0.37
hdda:3351432 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2790378	0.51	0.99	0.57	0.43	0.38	0.63	0.18
nb:3351432 2790378	0.54	1.00	0.68	0.30	0.37	0.61	0.34
knn:3351432 2790378	0.59	0.80	0.75	0.48	0.47	0.76	0.31
rpart:3351432 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2790378	0.60	1.00	0.71	0.26	0.37	0.60	0.83
hdda:3351432 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2625670	0.55	0.94	0.32	0.67	0.38	0.62	0.18
nb:3351432 2625670	0.51	0.98	0.79	0.35	0.42	0.73	0.28
knn:3351432 2625670	0.62	0.64	0.21	0.85	0.46	0.64	0.40

rpart:3351432 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2625670	0.54	1.00	0.07	0.72	0.13	0.56	1.12
hdda:3351432 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3646405	0.51	0.80	0.36	0.72	0.43	0.65	0.17
nb:3351432 3646405	0.53	0.99	0.61	0.41	0.39	0.63	0.38
knn:3351432 3646405	0.51	0.55	0.29	0.83	0.50	0.66	0.40
rpart:3351432 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3646405	0.64	1.00	0.64	0.15	0.32	0.41	0.04
hdda:3351432 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2918654	0.50	0.91	0.25	0.74	0.37	0.62	0.38
nb:3351432 2918654	0.52	0.99	0.50	0.50	0.38	0.62	0.36
knn:3351432 2918654	0.59	0.96	0.68	0.43	0.42	0.69	0.27
rpart:3351432 2918654	0.52	0.98	0.25	0.67	0.32	0.60	0.40
svm:3351432 2918654	0.51	1.00	0.86	0.15	0.38	0.64	0.27
hdda:3351432 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2663553	0.50	0.80	0.29	0.76	0.42	0.64	0.25
nb:3351432 2663553	0.55	1.00	0.79	0.20	0.37	0.60	0.34
knn:3351432 2663553	0.59	0.80	0.50	0.63	0.45	0.67	0.33
rpart:3351432 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2663553	0.59	0.64	0.43	0.72	0.48	0.67	1.00
hdda:3351432 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3103484	0.53	0.96	0.71	0.41	0.43	0.70	0.16
nb:3351432 3103484	0.52	0.98	0.29	0.65	0.33	0.60	0.39
knn:3351432 3103484	0.55	0.99	0.57	0.46	0.39	0.64	0.30
rpart:3351432 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3103484	0.56	0.99	0.82	0.28	0.41	0.72	0.94
hdda:3351432 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2757491	0.60	0.80	0.50	0.63	0.45	0.67	0.21
nb:3351432 2757491	0.55	1.00	0.68	0.33	0.38	0.63	0.35
knn:3351432 2757491	0.65	0.55	0.75	0.54	0.50	0.78	0.33
rpart:3351432 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3351432 2757491	0.52	1.00	0.82	0.13	0.37	0.55	0.61
hdda:3351432 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2401368	0.63	0.46	0.57	0.67	0.52	0.72	0.19
nb:3351432 2401368	0.58	0.55	0.14	0.91	0.50	0.64	0.44
knn:3351432 2401368	0.68	0.55	0.57	0.65	0.50	0.71	0.29
rpart:3351432 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2401368	0.59	1.00	0.61	0.24	0.33	0.50	0.58
hdda:3351432 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3788643	0.53	0.94	0.36	0.65	0.38	0.63	0.29
nb:3351432 3788643	0.54	1.00	0.43	0.41	0.31	0.54	0.35
knn:3351432 3788643	0.54	0.73	0.25	0.80	0.44	0.64	0.35
rpart:3351432 3788643	0.53	0.46	0.11	0.96	0.60	0.64	0.56
svm:3351432 3788643	0.60	1.00	0.86	0.07	0.36	0.43	0.40
hdda:3351432 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3219832	0.55	0.86	0.57	0.57	0.44	0.68	0.24
nb:3351432 3219832	0.55	0.55	0.11	0.93	0.50	0.63	0.53
knn:3351432 3219832	0.58	0.86	0.79	0.43	0.46	0.77	0.26
rpart:3351432 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3219832	0.58	1.00	0.75	0.13	0.34	0.46	0.41
hdda:3351432 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3198757	0.52	0.94	0.36	0.65	0.38	0.63	0.18
nb:3351432 3198757	0.61	0.96	0.07	0.80	0.18	0.59	0.39
knn:3351432 3198757	0.54	0.99	0.39	0.54	0.34	0.60	0.31
rpart:3351432 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3198757	0.62	1.00	0.75	0.07	0.33	0.30	0.46
hdda:3351432 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3753198	0.54	0.96	0.46	0.57	0.39	0.63	0.17
nb:3351432 3753198	0.51	1.00	0.46	0.46	0.34	0.58	0.36
knn:3351432 3753198	0.52	0.96	0.57	0.50	0.41	0.66	0.31
rpart:3351432 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3753198	0.62	1.00	0.68	0.17	0.33	0.47	0.01

hdda:3351432 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2902908	0.56	0.99	0.64	0.41	0.40	0.66	0.13
nb:3351432 2902908	0.51	0.94	0.39	0.63	0.39	0.63	0.40
knn:3351432 2902908	0.57	0.64	0.46	0.70	0.48	0.68	0.36
rpart:3351432 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2902908	0.60	1.00	0.71	0.17	0.34	0.50	0.72
hdda:3351432 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3142559	0.50	0.80	0.32	0.74	0.43	0.64	0.25
nb:3351432 3142559	0.53	0.98	0.18	0.72	0.28	0.59	0.40
knn:3351432 3142559	0.52	0.96	0.46	0.57	0.39	0.63	0.30
rpart:3351432 3142559	0.53	0.80	0.07	0.89	0.29	0.61	0.56
svm:3351432 3142559	0.57	1.00	0.86	0.13	0.38	0.60	0.31
hdda:3351432 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3626882	0.50	0.80	0.25	0.78	0.41	0.63	0.30
nb:3351432 3626882	0.50	1.00	0.61	0.39	0.38	0.62	0.32
knn:3351432 3626882	0.51	0.99	0.46	0.50	0.36	0.61	0.29
rpart:3351432 3626882	0.52	0.96	0.14	0.76	0.27	0.59	0.37
svm:3351432 3626882	0.51	1.00	0.89	0.04	0.36	0.40	0.11
hdda:3351432 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3433222	0.64	0.28	0.57	0.72	0.55	0.73	0.25
nb:3351432 3433222	0.59	0.80	0.46	0.65	0.45	0.67	0.38
knn:3351432 3433222	0.67	0.64	0.71	0.54	0.49	0.76	0.27
rpart:3351432 3433222	0.62	0.55	0.11	0.93	0.50	0.63	0.55
svm:3351432 3433222	0.60	1.00	0.71	0.15	0.34	0.47	0.42
hdda:3351432 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2991121	0.51	0.86	0.21	0.78	0.38	0.62	0.42
nb:3351432 2991121	0.58	1.00	0.54	0.33	0.33	0.54	0.34
knn:3351432 2991121	0.52	0.86	0.25	0.76	0.39	0.63	0.39
rpart:3351432 2991121	0.53	0.80	0.21	0.80	0.40	0.63	0.49
svm:3351432 2991121	0.53	0.99	0.18	0.70	0.26	0.58	0.65
hdda:3351432 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2959165	0.53	0.98	0.50	0.52	0.39	0.63	0.29

nb:3351432 2959165	0.51	1.00	0.57	0.35	0.35	0.57	0.36
knn:3351432 2959165	0.60	0.46	0.57	0.67	0.52	0.72	0.35
rpart:3351432 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:3351432 2959165	0.51	1.00	0.86	0.15	0.38	0.64	0.80
hdda:3351432 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3546559	0.50	0.86	0.43	0.65	0.43	0.65	0.18
nb:3351432 3546559	0.53	0.99	0.79	0.30	0.41	0.70	0.28
knn:3351432 3546559	0.58	1.00	0.71	0.33	0.39	0.65	0.21
rpart:3351432 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3546559	0.50	1.00	0.93	0.09	0.38	0.67	0.42
hdda:3351432 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3020668	0.57	0.96	0.04	0.83	0.11	0.58	0.60
nb:3351432 3020668	0.55	1.00	0.64	0.35	0.38	0.62	0.26
knn:3351432 3020668	0.52	0.96	0.11	0.78	0.23	0.59	0.47
rpart:3351432 3020668	0.56	1.00	0.18	0.65	0.24	0.57	0.43
svm:3351432 3020668	0.52	1.00	0.89	0.22	0.41	0.77	0.16
hdda:3351432 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2397811	0.51	0.80	0.29	0.76	0.42	0.64	0.30
nb:3351432 2397811	0.51	1.00	0.57	0.39	0.36	0.60	0.38
knn:3351432 2397811	0.53	0.96	0.29	0.67	0.35	0.61	0.37
rpart:3351432 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 2397811	0.50	1.00	0.79	0.15	0.36	0.54	0.80
hdda:3351432 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3903427	0.54	0.96	0.43	0.59	0.39	0.63	0.17
nb:3351432 3903427	0.53	0.98	0.21	0.70	0.30	0.59	0.38
knn:3351432 3903427	0.57	0.64	0.43	0.72	0.48	0.67	0.33
rpart:3351432 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3903427	0.65	1.00	0.64	0.20	0.33	0.47	0.63
hdda:3351432 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 2595867	0.54	0.55	0.43	0.74	0.50	0.68	0.32
nb:3351432 2595867	0.52	0.80	0.25	0.78	0.41	0.63	0.42
knn:3351432 2595867	0.52	0.94	0.46	0.59	0.41	0.64	0.32

rpart:3351432 2595867	0.52	0.64	0.18	0.87	0.45	0.63	0.47
svm:3351432 2595867	0.62	1.00	0.75	0.15	0.35	0.50	0.57
hdda:3351432 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3068088	0.59	0.91	0.46	0.61	0.42	0.65	0.37
nb:3351432 3068088	0.58	1.00	0.39	0.35	0.27	0.48	0.36
knn:3351432 3068088	0.55	0.96	0.68	0.43	0.42	0.69	0.28
rpart:3351432 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3351432 3068088	0.60	0.64	0.00	0.98	0.00	0.62	6.98
hdda:3351432 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3351432 3487363	0.51	0.98	0.18	0.72	0.28	0.59	0.33
nb:3351432 3487363	0.58	1.00	0.14	0.67	0.21	0.56	0.39
knn:3351432 3487363	0.50	0.96	0.29	0.67	0.35	0.61	0.36
rpart:3351432 3487363	0.57	0.94	0.14	0.78	0.29	0.60	0.44
svm:3351432 3487363	0.57	0.94	0.36	0.65	0.38	0.63	0.86
hdda:2615421 2802601	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2802601	0.61	0.46	0.54	0.70	0.52	0.71	0.29
nb:2615421 2802601	0.59	0.46	0.36	0.80	0.53	0.67	0.36
knn:2615421 2802601	0.61	0.91	0.75	0.43	0.45	0.74	0.29
rpart:2615421 2802601	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2802601	0.56	0.96	0.43	0.59	0.39	0.63	1.00
hdda:2615421 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3326487	0.67	0.14	0.57	0.76	0.59	0.74	0.24
nb:2615421 3326487	0.65	0.80	0.68	0.52	0.46	0.73	0.27
knn:2615421 3326487	0.70	0.36	0.71	0.61	0.53	0.78	0.29
rpart:2615421 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3326487	0.67	1.00	0.86	0.07	0.36	0.43	0.99
hdda:2615421 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3870139	0.57	0.96	0.50	0.54	0.40	0.64	0.11
nb:2615421 3870139	0.55	0.91	0.71	0.46	0.44	0.72	0.29
knn:2615421 3870139	0.52	1.00	0.43	0.50	0.34	0.59	0.33
rpart:2615421 3870139	0.55	0.55	0.11	0.93	0.50	0.63	0.57

svm:2615421 3870139	0.59	0.73	0.25	0.80	0.44	0.64	9.37
hdda:2615421 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2627418	0.62	0.64	0.50	0.67	0.48	0.69	0.28
nb:2615421 2627418	0.51	0.98	0.61	0.46	0.40	0.66	0.31
knn:2615421 2627418	0.51	0.91	0.18	0.78	0.33	0.61	0.38
rpart:2615421 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 2627418	0.52	0.99	0.29	0.63	0.32	0.59	1.00
hdda:2615421 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2594205	0.58	0.80	0.25	0.78	0.41	0.63	0.20
nb:2615421 2594205	0.50	0.96	0.39	0.61	0.38	0.62	0.29
knn:2615421 2594205	0.61	0.86	0.54	0.59	0.44	0.68	0.31
rpart:2615421 2594205	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2594205	0.57	1.00	0.82	0.11	0.36	0.50	0.88
hdda:2615421 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 4015327	0.55	0.94	0.29	0.70	0.36	0.62	0.34
nb:2615421 4015327	0.56	0.94	0.61	0.50	0.43	0.68	0.30
knn:2615421 4015327	0.54	0.91	0.39	0.65	0.41	0.64	0.34
rpart:2615421 4015327	0.54	0.96	0.21	0.72	0.32	0.60	0.46
svm:2615421 4015327	0.55	1.00	0.82	0.17	0.38	0.62	0.18
hdda:2615421 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2975719	0.72	0.03	0.57	0.83	0.67	0.76	0.32
nb:2615421 2975719	0.58	0.99	0.71	0.37	0.41	0.68	0.28
knn:2615421 2975719	0.64	0.55	0.36	0.78	0.50	0.67	0.37
rpart:2615421 2975719	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2975719	0.61	1.00	0.57	0.17	0.30	0.40	0.98
hdda:2615421 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3109057	0.56	0.73	0.57	0.61	0.47	0.70	0.16
nb:2615421 3109057	0.58	0.94	0.50	0.57	0.41	0.65	0.32
knn:2615421 3109057	0.52	0.99	0.46	0.52	0.37	0.62	0.32
rpart:2615421 3109057	0.58	0.80	0.57	0.59	0.46	0.69	0.34
svm:2615421 3109057	0.52	1.00	0.79	0.24	0.39	0.65	0.61

hdda:2615421 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 4021820	0.58	0.86	0.54	0.59	0.44	0.68	0.34
nb:2615421 4021820	0.57	0.96	0.54	0.52	0.41	0.65	0.31
knn:2615421 4021820	0.61	0.73	0.36	0.74	0.45	0.65	0.36
rpart:2615421 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 4021820	0.60	1.00	0.64	0.28	0.35	0.57	0.96
hdda:2615421 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3577841	0.52	0.46	0.25	0.87	0.54	0.66	0.27
nb:2615421 3577841	0.55	0.96	0.43	0.59	0.39	0.63	0.31
knn:2615421 3577841	0.52	0.80	0.32	0.74	0.43	0.64	0.34
rpart:2615421 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3577841	0.57	1.00	0.68	0.22	0.35	0.53	0.96
hdda:2615421 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3703849	0.61	0.73	0.50	0.65	0.47	0.68	0.36
nb:2615421 3703849	0.58	0.73	0.54	0.63	0.47	0.69	0.30
knn:2615421 3703849	0.58	0.98	0.64	0.43	0.41	0.67	0.28
rpart:2615421 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3703849	0.50	1.00	0.93	0.00	0.36	0.00	-2.06
hdda:2615421 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2707575	0.56	0.96	0.43	0.59	0.39	0.63	0.22
nb:2615421 2707575	0.52	0.80	0.36	0.72	0.43	0.65	0.34
knn:2615421 2707575	0.58	0.80	0.57	0.59	0.46	0.69	0.32
rpart:2615421 2707575	0.61	0.99	0.68	0.39	0.40	0.67	0.23
svm:2615421 2707575	0.55	1.00	0.68	0.22	0.35	0.53	0.88
hdda:2615421 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2510519	0.55	0.55	0.32	0.80	0.50	0.66	0.44
nb:2615421 2510519	0.56	1.00	0.71	0.30	0.38	0.64	0.32
knn:2615421 2510519	0.59	0.64	0.43	0.72	0.48	0.67	0.42
rpart:2615421 2510519	0.62	0.36	0.39	0.80	0.55	0.69	0.52
svm:2615421 2510519	0.53	1.00	0.64	0.28	0.35	0.57	0.29
hdda:2615421 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3530890	0.67	0.06	0.46	0.87	0.68	0.73	0.31

nb:2615421 3530890	0.60	0.80	0.50	0.63	0.45	0.67	0.34
knn:2615421 3530890	0.60	0.55	0.50	0.70	0.50	0.70	0.34
rpart:2615421 3530890	0.61	0.20	0.39	0.85	0.61	0.70	0.51
svm:2615421 3530890	0.64	1.00	0.61	0.24	0.33	0.50	0.83
hdda:2615421 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3769569	0.68	0.46	0.25	0.87	0.54	0.66	0.28
nb:2615421 3769569	0.61	0.64	0.57	0.63	0.48	0.71	0.32
knn:2615421 3769569	0.58	0.80	0.57	0.59	0.46	0.69	0.32
rpart:2615421 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3769569	0.60	1.00	0.39	0.46	0.31	0.55	0.86
hdda:2615421 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3544035	0.52	0.80	0.18	0.83	0.38	0.62	0.35
nb:2615421 3544035	0.50	0.99	0.36	0.59	0.34	0.60	0.36
knn:2615421 3544035	0.53	1.00	0.39	0.50	0.32	0.58	0.30
rpart:2615421 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3544035	0.55	1.00	0.71	0.22	0.36	0.56	0.66
hdda:2615421 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2790378	0.61	0.46	0.21	0.89	0.55	0.65	0.26
nb:2615421 2790378	0.61	0.46	0.46	0.74	0.52	0.69	0.34
knn:2615421 2790378	0.59	1.00	0.82	0.26	0.40	0.71	0.26
rpart:2615421 2790378	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2790378	0.56	1.00	0.75	0.17	0.36	0.53	-0.16
hdda:2615421 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2625670	0.61	0.55	0.21	0.87	0.50	0.65	0.23
nb:2615421 2625670	0.57	0.98	0.64	0.43	0.41	0.67	0.25
knn:2615421 2625670	0.55	0.96	0.46	0.57	0.39	0.63	0.29
rpart:2615421 2625670	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2625670	0.59	1.00	0.93	0.09	0.38	0.67	0.99
hdda:2615421 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3646405	0.63	0.46	0.21	0.89	0.55	0.65	0.28
nb:2615421 3646405	0.59	0.64	0.57	0.63	0.48	0.71	0.33
knn:2615421 3646405	0.59	1.00	0.71	0.30	0.38	0.64	0.21

rpart:2615421 3646405	0.56	0.36	0.18	0.93	0.63	0.65	0.50
svm:2615421 3646405	0.54	1.00	0.75	0.13	0.34	0.46	0.40
hdda:2615421 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2918654	0.61	0.36	0.39	0.80	0.55	0.69	0.26
nb:2615421 2918654	0.56	0.64	0.43	0.72	0.48	0.67	0.33
knn:2615421 2918654	0.52	0.94	0.36	0.65	0.38	0.63	0.34
rpart:2615421 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 2918654	0.54	1.00	0.57	0.30	0.33	0.54	1.00
hdda:2615421 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2663553	0.62	0.36	0.46	0.76	0.54	0.70	0.25
nb:2615421 2663553	0.56	1.00	0.68	0.35	0.39	0.64	0.29
knn:2615421 2663553	0.55	0.96	0.61	0.48	0.41	0.67	0.29
rpart:2615421 2663553	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2663553	0.59	1.00	0.93	0.02	0.37	0.33	0.10
hdda:2615421 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3103484	0.57	0.91	0.46	0.61	0.42	0.65	0.15
nb:2615421 3103484	0.51	0.91	0.46	0.61	0.42	0.65	0.31
knn:2615421 3103484	0.52	0.91	0.46	0.61	0.42	0.65	0.31
rpart:2615421 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3103484	0.59	1.00	0.75	0.20	0.36	0.56	0.77
hdda:2615421 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2757491	0.69	0.55	0.54	0.67	0.50	0.70	0.25
nb:2615421 2757491	0.59	0.55	0.46	0.72	0.50	0.69	0.35
knn:2615421 2757491	0.66	0.73	0.75	0.50	0.48	0.77	0.31
rpart:2615421 2757491	0.56	0.36	0.18	0.93	0.63	0.65	0.55
svm:2615421 2757491	0.53	1.00	0.79	0.13	0.35	0.50	-0.32
hdda:2615421 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2401368	0.64	0.55	0.54	0.67	0.50	0.70	0.32
nb:2615421 2401368	0.61	0.64	0.39	0.74	0.48	0.67	0.29
knn:2615421 2401368	0.65	0.64	0.75	0.52	0.49	0.77	0.26
rpart:2615421 2401368	0.55	0.55	0.14	0.91	0.50	0.64	0.51

svm:2615421 2401368	0.54	1.00	0.89	0.07	0.37	0.50	0.03
hdda:2615421 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3788643	0.64	0.46	0.54	0.70	0.52	0.71	0.14
nb:2615421 3788643	0.59	0.55	0.57	0.65	0.50	0.71	0.32
knn:2615421 3788643	0.58	0.73	0.79	0.48	0.48	0.79	0.23
rpart:2615421 3788643	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 3788643	0.69	1.00	0.86	0.11	0.37	0.56	0.83
hdda:2615421 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3219832	0.67	0.46	0.43	0.76	0.52	0.69	0.35
nb:2615421 3219832	0.62	0.36	0.57	0.70	0.53	0.73	0.30
knn:2615421 3219832	0.63	0.91	0.57	0.54	0.43	0.68	0.27
rpart:2615421 3219832	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 3219832	0.64	1.00	0.71	0.11	0.33	0.38	0.80
hdda:2615421 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3198757	0.50	1.00	0.50	0.41	0.34	0.58	0.27
nb:2615421 3198757	0.53	0.96	0.14	0.76	0.27	0.59	0.33
knn:2615421 3198757	0.57	1.00	0.39	0.50	0.32	0.58	0.33
rpart:2615421 3198757	0.56	0.28	0.14	0.98	0.80	0.65	0.55
svm:2615421 3198757	0.57	1.00	0.86	0.02	0.35	0.20	0.18
hdda:2615421 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3753198	0.57	0.91	0.36	0.67	0.40	0.63	0.39
nb:2615421 3753198	0.57	0.96	0.71	0.41	0.43	0.70	0.27
knn:2615421 3753198	0.68	0.64	0.86	0.46	0.49	0.84	0.21
rpart:2615421 3753198	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 3753198	0.65	1.00	0.82	0.04	0.34	0.29	0.59
hdda:2615421 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2902908	0.69	0.14	0.61	0.74	0.59	0.76	0.21
nb:2615421 2902908	0.60	0.55	0.61	0.63	0.50	0.73	0.33
knn:2615421 2902908	0.58	0.46	0.43	0.76	0.52	0.69	0.34
rpart:2615421 2902908	0.68	0.09	0.50	0.83	0.64	0.73	0.40
svm:2615421 2902908	0.57	1.00	0.75	0.11	0.34	0.42	0.62

hdda:2615421 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3142559	0.61	0.86	0.39	0.67	0.42	0.65	0.30
nb:2615421 3142559	0.51	0.96	0.32	0.65	0.36	0.61	0.33
knn:2615421 3142559	0.62	0.86	0.50	0.61	0.44	0.67	0.32
rpart:2615421 3142559	0.52	0.73	0.11	0.89	0.38	0.62	0.52
svm:2615421 3142559	0.61	0.55	0.04	0.98	0.50	0.63	13.11
hdda:2615421 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3626882	0.59	0.46	0.61	0.65	0.52	0.73	0.32
nb:2615421 3626882	0.55	0.94	0.43	0.61	0.40	0.64	0.32
knn:2615421 3626882	0.50	0.98	0.50	0.52	0.39	0.63	0.26
rpart:2615421 3626882	0.51	0.94	0.36	0.65	0.38	0.63	0.29
svm:2615421 3626882	0.52	1.00	0.71	0.28	0.38	0.62	0.77
hdda:2615421 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3433222	0.65	0.36	0.50	0.74	0.54	0.71	0.19
nb:2615421 3433222	0.60	0.94	0.54	0.54	0.42	0.66	0.30
knn:2615421 3433222	0.58	0.55	0.43	0.74	0.50	0.68	0.32
rpart:2615421 3433222	0.51	0.96	0.54	0.52	0.41	0.65	0.24
svm:2615421 3433222	0.62	1.00	0.79	0.07	0.34	0.33	0.26
hdda:2615421 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2991121	0.56	0.55	0.18	0.89	0.50	0.64	0.42
nb:2615421 2991121	0.53	1.00	0.50	0.46	0.36	0.60	0.31
knn:2615421 2991121	0.51	0.80	0.46	0.65	0.45	0.67	0.34
rpart:2615421 2991121	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2991121	0.57	0.46	0.04	1.00	1.00	0.63	6.66
hdda:2615421 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2959165	0.58	0.94	0.50	0.57	0.41	0.65	0.33
nb:2615421 2959165	0.55	0.94	0.54	0.54	0.42	0.66	0.31
knn:2615421 2959165	0.56	0.73	0.29	0.78	0.44	0.64	0.42
rpart:2615421 2959165	0.59	0.55	0.32	0.80	0.50	0.66	0.44
svm:2615421 2959165	0.50	0.94	0.32	0.67	0.38	0.62	0.52
hdda:2615421 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3546559	0.57	0.73	0.43	0.70	0.46	0.67	0.16

nb:2615421 3546559	0.60	0.55	0.46	0.72	0.50	0.69	0.33
knn:2615421 3546559	0.58	0.73	0.43	0.70	0.46	0.67	0.32
rpart:2615421 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3546559	0.59	1.00	0.32	0.54	0.30	0.57	1.00
hdda:2615421 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3020668	0.55	0.86	0.25	0.76	0.39	0.63	0.36
nb:2615421 3020668	0.54	0.99	0.64	0.39	0.39	0.64	0.23
knn:2615421 3020668	0.51	0.91	0.39	0.65	0.41	0.64	0.33
rpart:2615421 3020668	0.52	0.91	0.21	0.76	0.35	0.61	0.34
svm:2615421 3020668	0.51	1.00	0.82	0.07	0.35	0.38	0.50
hdda:2615421 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2397811	0.60	0.46	0.21	0.89	0.55	0.65	0.40
nb:2615421 2397811	0.56	0.86	0.57	0.57	0.44	0.68	0.34
knn:2615421 2397811	0.57	0.86	0.39	0.67	0.42	0.65	0.38
rpart:2615421 2397811	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2397811	0.61	1.00	0.64	0.28	0.35	0.57	-0.03
hdda:2615421 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3903427	0.58	0.91	0.32	0.70	0.39	0.63	0.25
nb:2615421 3903427	0.54	0.86	0.21	0.78	0.38	0.62	0.36
knn:2615421 3903427	0.55	0.91	0.57	0.54	0.43	0.68	0.29
rpart:2615421 3903427	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 3903427	0.56	1.00	0.89	0.07	0.37	0.50	0.53
hdda:2615421 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 2595867	0.58	0.73	0.54	0.63	0.47	0.69	0.22
nb:2615421 2595867	0.54	0.98	0.54	0.50	0.39	0.64	0.29
knn:2615421 2595867	0.54	0.80	0.18	0.83	0.38	0.62	0.39
rpart:2615421 2595867	0.55	0.46	0.21	0.89	0.55	0.65	0.40
svm:2615421 2595867	0.50	1.00	0.86	0.07	0.36	0.43	0.65
hdda:2615421 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3068088	0.57	0.96	0.43	0.59	0.39	0.63	0.12
nb:2615421 3068088	0.53	0.94	0.50	0.57	0.41	0.65	0.32
knn:2615421 3068088	0.58	1.00	0.64	0.30	0.36	0.58	0.28

rpart:2615421 3068088	0.55	0.46	0.11	0.96	0.60	0.64	0.58
svm:2615421 3068088	0.54	0.73	0.00	0.96	0.00	0.61	10.09
hdda:2615421 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2615421 3487363	0.54	0.99	0.50	0.48	0.37	0.61	0.13
nb:2615421 3487363	0.52	0.80	0.14	0.85	0.36	0.62	0.44
knn:2615421 3487363	0.54	1.00	0.50	0.43	0.35	0.59	0.29
rpart:2615421 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2615421 3487363	0.55	0.96	0.18	0.74	0.29	0.60	0.86
hdda:2802601 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3326487	0.61	0.73	0.61	0.59	0.47	0.71	0.34
nb:2802601 3326487	0.75	0.09	0.57	0.78	0.62	0.75	0.33
knn:2802601 3326487	0.67	0.55	0.39	0.76	0.50	0.67	0.38
rpart:2802601 3326487	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3326487	0.53	1.00	0.39	0.50	0.32	0.58	1.00
hdda:2802601 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3870139	0.55	0.98	0.39	0.59	0.37	0.61	0.30
nb:2802601 3870139	0.57	0.96	0.57	0.50	0.41	0.66	0.36
knn:2802601 3870139	0.60	0.64	0.54	0.65	0.48	0.70	0.39
rpart:2802601 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3870139	0.63	1.00	0.50	0.24	0.29	0.44	0.65
hdda:2802601 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2627418	0.63	0.64	0.57	0.63	0.48	0.71	0.27
nb:2802601 2627418	0.53	1.00	0.75	0.20	0.36	0.56	0.34
knn:2802601 2627418	0.62	0.86	0.79	0.43	0.46	0.77	0.30
rpart:2802601 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2627418	0.61	1.00	0.93	0.09	0.38	0.67	0.01
hdda:2802601 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2594205	0.64	0.64	0.68	0.57	0.49	0.74	0.11
nb:2802601 2594205	0.52	0.91	0.00	0.89	0.00	0.59	0.48
knn:2802601 2594205	0.65	0.73	0.82	0.46	0.48	0.81	0.31
rpart:2802601 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2802601 2594205	0.61	1.00	1.00	0.02	0.38	1.00	-9.81
hdda:2802601 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 4015327	0.54	0.94	0.68	0.46	0.43	0.70	0.15
nb:2802601 4015327	0.56	0.96	0.54	0.52	0.41	0.65	0.36
knn:2802601 4015327	0.62	0.80	0.43	0.67	0.44	0.66	0.38
rpart:2802601 4015327	0.50	0.96	0.29	0.67	0.35	0.61	0.34
svm:2802601 4015327	0.60	1.00	0.86	0.07	0.36	0.43	0.04
hdda:2802601 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2975719	0.65	0.55	0.61	0.63	0.50	0.73	0.19
nb:2802601 2975719	0.55	1.00	0.89	0.13	0.38	0.67	0.29
knn:2802601 2975719	0.59	0.91	0.54	0.57	0.43	0.67	0.37
rpart:2802601 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2975719	0.53	1.00	0.93	0.00	0.36	0.00	0.65
hdda:2802601 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3109057	0.53	0.91	0.57	0.54	0.43	0.68	0.35
nb:2802601 3109057	0.57	0.64	0.50	0.67	0.48	0.69	0.35
knn:2802601 3109057	0.65	0.14	0.64	0.72	0.58	0.77	0.41
rpart:2802601 3109057	0.61	0.91	0.39	0.65	0.41	0.64	0.46
svm:2802601 3109057	0.51	1.00	0.64	0.28	0.35	0.57	-0.17
hdda:2802601 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 4021820	0.56	0.99	0.36	0.59	0.34	0.60	0.38
nb:2802601 4021820	0.55	0.96	0.64	0.46	0.42	0.68	0.35
knn:2802601 4021820	0.64	0.46	0.50	0.72	0.52	0.70	0.43
rpart:2802601 4021820	0.55	0.86	0.11	0.85	0.30	0.61	0.50
svm:2802601 4021820	0.54	1.00	0.54	0.35	0.33	0.55	0.30
hdda:2802601 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3577841	0.54	0.98	0.54	0.50	0.39	0.64	0.25
nb:2802601 3577841	0.53	0.91	0.54	0.57	0.43	0.67	0.34
knn:2802601 3577841	0.64	0.55	0.86	0.48	0.50	0.85	0.28
rpart:2802601 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3577841	0.54	0.86	0.36	0.70	0.42	0.64	1.00

hdda:2802601 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3703849	0.64	0.80	0.86	0.41	0.47	0.83	0.17
nb:2802601 3703849	0.60	0.91	0.39	0.65	0.41	0.64	0.35
knn:2802601 3703849	0.67	0.86	0.82	0.41	0.46	0.79	0.34
rpart:2802601 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3703849	0.60	1.00	0.46	0.35	0.30	0.52	1.00
hdda:2802601 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2707575	0.58	0.80	0.57	0.59	0.46	0.69	0.34
nb:2802601 2707575	0.51	0.80	0.29	0.76	0.42	0.64	0.37
knn:2802601 2707575	0.62	0.80	0.57	0.59	0.46	0.69	0.32
rpart:2802601 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2802601 2707575	0.53	1.00	0.96	0.11	0.40	0.83	0.50
hdda:2802601 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2510519	0.65	0.46	0.75	0.57	0.51	0.79	0.28
nb:2802601 2510519	0.54	1.00	0.79	0.20	0.37	0.60	0.39
knn:2802601 2510519	0.57	1.00	0.32	0.54	0.30	0.57	0.50
rpart:2802601 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2510519	0.53	0.91	0.61	0.52	0.44	0.69	0.39
hdda:2802601 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3530890	0.63	0.91	0.46	0.61	0.42	0.65	0.30
nb:2802601 3530890	0.62	0.80	0.82	0.43	0.47	0.80	0.34
knn:2802601 3530890	0.63	0.86	0.64	0.52	0.45	0.71	0.35
rpart:2802601 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3530890	0.65	1.00	0.82	0.09	0.35	0.44	0.26
hdda:2802601 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3769569	0.69	0.46	0.68	0.61	0.51	0.76	0.16
nb:2802601 3769569	0.66	0.91	0.86	0.37	0.45	0.81	0.31
knn:2802601 3769569	0.64	0.55	0.54	0.67	0.50	0.70	0.36
rpart:2802601 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3769569	0.60	1.00	0.46	0.35	0.30	0.52	1.00
hdda:2802601 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3544035	0.57	0.64	0.36	0.76	0.48	0.66	0.36

nb:2802601 3544035	0.50	1.00	0.64	0.26	0.35	0.55	0.31
knn:2802601 3544035	0.59	0.86	0.68	0.50	0.45	0.72	0.32
rpart:2802601 3544035	0.54	0.73	0.32	0.76	0.45	0.65	0.53
svm:2802601 3544035	0.62	1.00	0.61	0.30	0.35	0.56	0.75
hdda:2802601 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2790378	0.57	0.73	0.36	0.74	0.45	0.65	0.42
nb:2802601 2790378	0.70	0.28	0.29	0.89	0.62	0.67	0.38
knn:2802601 2790378	0.56	0.96	0.32	0.65	0.36	0.61	0.40
rpart:2802601 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2790378	0.66	1.00	0.14	0.46	0.14	0.47	1.00
hdda:2802601 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2625670	0.63	0.80	0.61	0.57	0.46	0.70	0.14
nb:2802601 2625670	0.60	0.99	0.79	0.30	0.41	0.70	0.26
knn:2802601 2625670	0.50	0.86	0.39	0.67	0.42	0.65	0.39
rpart:2802601 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2625670	0.51	1.00	0.79	0.09	0.34	0.40	0.00
hdda:2802601 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3646405	0.61	0.64	0.61	0.61	0.49	0.72	0.18
nb:2802601 3646405	0.58	0.91	0.54	0.57	0.43	0.67	0.37
knn:2802601 3646405	0.50	1.00	0.68	0.35	0.39	0.64	0.17
rpart:2802601 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3646405	0.55	1.00	0.82	0.26	0.40	0.71	-0.15
hdda:2802601 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2918654	0.60	0.64	0.57	0.63	0.48	0.71	0.26
nb:2802601 2918654	0.55	0.80	0.61	0.57	0.46	0.70	0.34
knn:2802601 2918654	0.60	0.94	0.57	0.52	0.42	0.67	0.34
rpart:2802601 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2918654	0.58	1.00	0.61	0.26	0.33	0.52	0.25
hdda:2802601 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2663553	0.63	0.64	0.64	0.59	0.49	0.73	0.15
nb:2802601 2663553	0.55	0.91	0.57	0.54	0.43	0.68	0.36
knn:2802601 2663553	0.64	0.99	0.79	0.33	0.42	0.71	0.30

rpart:2802601 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2663553	0.56	1.00	0.61	0.28	0.34	0.54	1.00
hdda:2802601 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3103484	0.56	0.94	0.54	0.54	0.42	0.66	0.34
nb:2802601 3103484	0.55	0.99	0.32	0.61	0.33	0.60	0.36
knn:2802601 3103484	0.59	0.99	0.46	0.52	0.37	0.62	0.35
rpart:2802601 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:2802601 3103484	0.52	1.00	0.93	0.11	0.39	0.71	-2.95
hdda:2802601 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2757491	0.61	0.64	0.46	0.70	0.48	0.68	0.36
nb:2802601 2757491	0.63	0.91	0.71	0.46	0.44	0.72	0.35
knn:2802601 2757491	0.61	0.86	0.57	0.57	0.44	0.68	0.36
rpart:2802601 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2757491	0.62	1.00	0.43	0.35	0.29	0.50	0.54
hdda:2802601 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2401368	0.72	0.64	0.82	0.48	0.49	0.81	0.10
nb:2802601 2401368	0.67	0.36	0.14	0.96	0.67	0.65	0.41
knn:2802601 2401368	0.66	0.94	0.82	0.37	0.44	0.77	0.23
rpart:2802601 2401368	0.61	0.06	0.39	0.91	0.73	0.71	0.38
svm:2802601 2401368	0.71	1.00	0.86	0.02	0.35	0.20	0.30
hdda:2802601 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3788643	0.60	0.36	0.25	0.89	0.58	0.66	0.35
nb:2802601 3788643	0.54	0.91	0.39	0.65	0.41	0.64	0.36
knn:2802601 3788643	0.60	0.98	0.86	0.30	0.43	0.78	0.23
rpart:2802601 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3788643	0.56	1.00	0.57	0.33	0.34	0.56	0.74
hdda:2802601 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3219832	0.71	0.06	0.54	0.83	0.65	0.75	0.24
nb:2802601 3219832	0.72	0.46	0.11	0.96	0.60	0.64	0.52
knn:2802601 3219832	0.69	0.86	0.71	0.48	0.45	0.73	0.33
rpart:2802601 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2802601 3219832	0.66	1.00	0.82	0.13	0.37	0.55	0.51
hdda:2802601 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3198757	0.51	1.00	0.39	0.52	0.33	0.59	0.30
nb:2802601 3198757	0.55	0.91	0.07	0.85	0.22	0.60	0.43
knn:2802601 3198757	0.58	0.94	0.71	0.43	0.43	0.71	0.30
rpart:2802601 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3198757	0.57	1.00	0.93	0.04	0.37	0.50	0.98
hdda:2802601 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3753198	0.61	0.28	0.61	0.70	0.55	0.74	0.35
nb:2802601 3753198	0.57	0.91	0.50	0.59	0.42	0.66	0.35
knn:2802601 3753198	0.62	0.46	0.36	0.80	0.53	0.67	0.50
rpart:2802601 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3753198	0.66	1.00	0.46	0.30	0.29	0.48	0.14
hdda:2802601 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2902908	0.64	0.46	0.54	0.70	0.52	0.71	0.28
nb:2802601 2902908	0.59	0.80	0.50	0.63	0.45	0.67	0.37
knn:2802601 2902908	0.63	0.73	0.57	0.61	0.47	0.70	0.39
rpart:2802601 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2902908	0.51	0.98	0.29	0.65	0.33	0.60	0.55
hdda:2802601 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3142559	0.52	0.94	0.25	0.72	0.35	0.61	0.44
nb:2802601 3142559	0.51	0.98	0.21	0.70	0.30	0.59	0.37
knn:2802601 3142559	0.54	0.99	0.43	0.52	0.35	0.60	0.39
rpart:2802601 3142559	0.55	0.99	0.25	0.65	0.30	0.59	0.38
svm:2802601 3142559	0.54	0.99	0.82	0.28	0.41	0.72	0.38
hdda:2802601 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3626882	0.55	0.80	0.14	0.85	0.36	0.62	0.45
nb:2802601 3626882	0.55	0.91	0.36	0.67	0.40	0.63	0.37
knn:2802601 3626882	0.61	0.86	0.54	0.59	0.44	0.68	0.36
rpart:2802601 3626882	0.50	0.73	0.29	0.78	0.44	0.64	0.34
svm:2802601 3626882	0.51	1.00	0.86	0.17	0.39	0.67	0.26

hdda:2802601 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3433222	0.68	0.14	0.46	0.83	0.62	0.72	0.36
nb:2802601 3433222	0.64	0.28	0.46	0.78	0.57	0.71	0.36
knn:2802601 3433222	0.63	0.80	0.54	0.61	0.45	0.68	0.35
rpart:2802601 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:2802601 3433222	0.58	1.00	0.64	0.15	0.32	0.41	0.08
hdda:2802601 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2991121	0.57	0.91	0.68	0.48	0.44	0.71	0.15
nb:2802601 2991121	0.55	1.00	0.64	0.26	0.35	0.55	0.28
knn:2802601 2991121	0.52	0.80	0.50	0.63	0.45	0.67	0.39
rpart:2802601 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2991121	0.52	1.00	0.64	0.35	0.38	0.62	0.56
hdda:2802601 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2959165	0.57	0.91	0.61	0.52	0.44	0.69	0.30
nb:2802601 2959165	0.56	0.98	0.68	0.41	0.41	0.68	0.35
knn:2802601 2959165	0.62	0.80	0.64	0.54	0.46	0.71	0.32
rpart:2802601 2959165	0.53	0.64	0.25	0.83	0.47	0.64	0.62
svm:2802601 2959165	0.51	1.00	0.61	0.26	0.33	0.52	0.08
hdda:2802601 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3546559	0.62	0.73	0.75	0.50	0.48	0.77	0.16
nb:2802601 3546559	0.58	0.98	0.64	0.43	0.41	0.67	0.31
knn:2802601 3546559	0.63	0.80	0.64	0.54	0.46	0.71	0.36
rpart:2802601 3546559	0.56	0.73	0.36	0.74	0.45	0.65	0.44
svm:2802601 3546559	0.55	1.00	0.64	0.35	0.38	0.62	1.00
hdda:2802601 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3020668	0.53	1.00	0.43	0.50	0.34	0.59	0.27
nb:2802601 3020668	0.50	1.00	0.68	0.33	0.38	0.63	0.25
knn:2802601 3020668	0.51	1.00	0.71	0.33	0.39	0.65	0.21
rpart:2802601 3020668	0.50	0.99	0.43	0.52	0.35	0.60	0.28
svm:2802601 3020668	0.52	1.00	0.68	0.30	0.37	0.61	0.51
hdda:2802601 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2397811	0.61	0.80	0.57	0.59	0.46	0.69	0.20

nb:2802601 2397811	0.60	1.00	0.82	0.17	0.38	0.62	0.33
knn:2802601 2397811	0.64	0.86	0.61	0.54	0.45	0.69	0.39
rpart:2802601 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2397811	0.65	1.00	0.68	0.17	0.33	0.47	0.29
hdda:2802601 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3903427	0.56	0.98	0.71	0.39	0.42	0.69	0.16
nb:2802601 3903427	0.54	0.91	0.18	0.78	0.33	0.61	0.39
knn:2802601 3903427	0.56	0.99	0.68	0.37	0.40	0.65	0.31
rpart:2802601 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2802601 3903427	0.53	0.99	0.61	0.41	0.39	0.63	1.00
hdda:2802601 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 2595867	0.56	0.64	0.36	0.76	0.48	0.66	0.39
nb:2802601 2595867	0.54	0.91	0.29	0.72	0.38	0.62	0.37
knn:2802601 2595867	0.55	0.99	0.79	0.30	0.41	0.70	0.23
rpart:2802601 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 2595867	0.56	1.00	0.75	0.17	0.36	0.53	0.52
hdda:2802601 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3068088	0.56	0.99	0.71	0.35	0.40	0.67	0.13
nb:2802601 3068088	0.50	0.73	0.00	0.96	0.00	0.61	0.62
knn:2802601 3068088	0.66	0.73	0.61	0.59	0.47	0.71	0.30
rpart:2802601 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3068088	0.55	1.00	0.71	0.13	0.33	0.43	0.05
hdda:2802601 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2802601 3487363	0.55	0.99	0.64	0.39	0.39	0.64	0.18
nb:2802601 3487363	0.50	0.99	0.18	0.70	0.26	0.58	0.37
knn:2802601 3487363	0.53	0.99	0.64	0.41	0.40	0.66	0.31
rpart:2802601 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2802601 3487363	0.51	1.00	0.68	0.28	0.37	0.59	0.40
hdda:3326487 3870139	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3870139	0.58	0.96	0.54	0.52	0.41	0.65	0.32
nb:3326487 3870139	0.67	0.80	0.89	0.39	0.47	0.86	0.30
knn:3326487 3870139	0.66	0.46	0.75	0.57	0.51	0.79	0.30

rpart:3326487 3870139	0.51	0.98	0.39	0.59	0.37	0.61	0.31
svm:3326487 3870139	0.57	1.00	0.57	0.24	0.31	0.48	0.85
hdda:3326487 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2627418	0.60	0.73	0.50	0.65	0.47	0.68	0.18
nb:3326487 2627418	0.57	1.00	0.68	0.24	0.35	0.55	0.31
knn:3326487 2627418	0.63	0.73	0.71	0.52	0.48	0.75	0.29
rpart:3326487 2627418	0.60	0.64	0.36	0.76	0.48	0.66	0.44
svm:3326487 2627418	0.62	1.00	0.36	0.46	0.29	0.54	1.00
hdda:3326487 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2594205	0.58	0.64	0.43	0.72	0.48	0.67	0.18
nb:3326487 2594205	0.58	0.73	0.11	0.89	0.38	0.62	0.40
knn:3326487 2594205	0.69	0.09	0.64	0.74	0.60	0.77	0.31
rpart:3326487 2594205	0.62	0.36	0.36	0.83	0.56	0.68	0.43
svm:3326487 2594205	0.56	1.00	0.96	0.04	0.38	0.67	-2.25
hdda:3326487 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 4015327	0.54	0.64	0.25	0.83	0.47	0.64	0.45
nb:3326487 4015327	0.65	0.64	0.68	0.57	0.49	0.74	0.32
knn:3326487 4015327	0.68	0.64	0.68	0.57	0.49	0.74	0.29
rpart:3326487 4015327	0.58	0.86	0.36	0.70	0.42	0.64	0.48
svm:3326487 4015327	0.53	1.00	0.36	0.54	0.32	0.58	0.86
hdda:3326487 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2975719	0.69	0.20	0.46	0.80	0.59	0.71	0.14
nb:3326487 2975719	0.64	1.00	0.71	0.28	0.38	0.62	0.31
knn:3326487 2975719	0.53	0.86	0.54	0.59	0.44	0.68	0.39
rpart:3326487 2975719	0.62	0.28	0.29	0.89	0.62	0.67	0.44
svm:3326487 2975719	0.54	1.00	0.36	0.52	0.31	0.57	1.00
hdda:3326487 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3109057	0.51	0.86	0.43	0.65	0.43	0.65	0.35
nb:3326487 3109057	0.65	0.46	0.43	0.76	0.52	0.69	0.35
knn:3326487 3109057	0.54	0.80	0.25	0.78	0.41	0.63	0.50
rpart:3326487 3109057	0.56	0.64	0.39	0.74	0.48	0.67	0.42

svm:3326487 3109057	0.55	1.00	0.61	0.17	0.31	0.42	0.17
hdda:3326487 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 4021820	0.55	0.64	0.36	0.76	0.48	0.66	0.44
nb:3326487 4021820	0.65	0.73	0.46	0.67	0.46	0.67	0.34
knn:3326487 4021820	0.68	0.36	0.39	0.80	0.55	0.69	0.40
rpart:3326487 4021820	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:3326487 4021820	0.62	1.00	0.68	0.20	0.34	0.50	0.64
hdda:3326487 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3577841	0.51	0.73	0.21	0.83	0.43	0.63	0.23
nb:3326487 3577841	0.60	0.91	0.54	0.57	0.43	0.67	0.30
knn:3326487 3577841	0.61	0.36	0.43	0.78	0.55	0.69	0.36
rpart:3326487 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3577841	0.56	0.98	0.29	0.65	0.33	0.60	1.00
hdda:3326487 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3703849	0.52	0.96	0.29	0.67	0.35	0.61	0.34
nb:3326487 3703849	0.65	0.36	0.29	0.87	0.57	0.67	0.38
knn:3326487 3703849	0.52	0.99	0.57	0.46	0.39	0.64	0.32
rpart:3326487 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3703849	0.64	1.00	0.68	0.15	0.33	0.44	1.00
hdda:3326487 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2707575	0.57	0.91	0.36	0.67	0.40	0.63	0.24
nb:3326487 2707575	0.61	0.73	0.43	0.70	0.46	0.67	0.32
knn:3326487 2707575	0.66	0.55	0.57	0.65	0.50	0.71	0.34
rpart:3326487 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:3326487 2707575	0.59	0.99	0.29	0.61	0.31	0.58	0.59
hdda:3326487 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2510519	0.61	0.86	0.79	0.43	0.46	0.77	0.29
nb:3326487 2510519	0.69	1.00	0.82	0.24	0.40	0.69	0.35
knn:3326487 2510519	0.68	0.64	0.79	0.50	0.49	0.79	0.34
rpart:3326487 2510519	0.58	0.73	0.54	0.63	0.47	0.69	0.40
svm:3326487 2510519	0.54	0.99	0.75	0.35	0.41	0.70	-0.13

hdda:3326487 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3530890	0.64	0.80	0.46	0.65	0.45	0.67	0.24
nb:3326487 3530890	0.69	0.86	0.79	0.43	0.46	0.77	0.30
knn:3326487 3530890	0.61	0.99	0.82	0.28	0.41	0.72	0.32
rpart:3326487 3530890	0.53	0.46	0.18	0.91	0.56	0.65	0.49
svm:3326487 3530890	0.67	1.00	0.79	0.04	0.33	0.25	0.56
hdda:3326487 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3769569	0.69	0.46	0.61	0.65	0.52	0.73	0.11
nb:3326487 3769569	0.71	0.28	0.54	0.74	0.56	0.72	0.33
knn:3326487 3769569	0.62	0.80	0.29	0.76	0.42	0.64	0.43
rpart:3326487 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3769569	0.65	1.00	0.39	0.46	0.31	0.55	1.00
hdda:3326487 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3544035	0.58	0.80	0.25	0.78	0.41	0.63	0.39
nb:3326487 3544035	0.55	1.00	0.57	0.39	0.36	0.60	0.32
knn:3326487 3544035	0.50	0.91	0.29	0.72	0.38	0.62	0.50
rpart:3326487 3544035	0.52	0.64	0.21	0.85	0.46	0.64	0.52
svm:3326487 3544035	0.50	1.00	0.82	0.20	0.38	0.64	-0.16
hdda:3326487 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2790378	0.57	0.96	0.54	0.52	0.41	0.65	0.13
nb:3326487 2790378	0.69	0.14	0.29	0.93	0.73	0.68	0.40
knn:3326487 2790378	0.59	0.55	0.61	0.63	0.50	0.73	0.34
rpart:3326487 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2790378	0.55	1.00	0.50	0.41	0.34	0.58	0.85
hdda:3326487 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2625670	0.58	0.36	0.29	0.87	0.57	0.67	0.29
nb:3326487 2625670	0.65	0.98	0.82	0.33	0.43	0.75	0.22
knn:3326487 2625670	0.62	0.80	0.43	0.67	0.44	0.66	0.31
rpart:3326487 2625670	0.62	0.36	0.29	0.87	0.57	0.67	0.41
svm:3326487 2625670	0.56	0.80	0.39	0.70	0.44	0.65	0.66
hdda:3326487 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3646405	0.65	0.14	0.50	0.80	0.61	0.73	0.25

nb:3326487 3646405	0.69	0.86	0.68	0.50	0.45	0.72	0.32
knn:3326487 3646405	0.64	0.20	0.46	0.80	0.59	0.71	0.39
rpart:3326487 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3646405	0.57	1.00	0.79	0.15	0.36	0.54	0.45
hdda:3326487 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2918654	0.60	0.86	0.43	0.65	0.43	0.65	0.20
nb:3326487 2918654	0.60	0.96	0.50	0.54	0.40	0.64	0.31
knn:3326487 2918654	0.62	1.00	0.61	0.39	0.38	0.62	0.30
rpart:3326487 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2918654	0.65	1.00	0.75	0.04	0.32	0.22	0.92
hdda:3326487 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2663553	0.61	0.64	0.57	0.63	0.48	0.71	0.12
nb:3326487 2663553	0.68	0.64	0.43	0.72	0.48	0.67	0.34
knn:3326487 2663553	0.70	0.09	0.57	0.78	0.62	0.75	0.32
rpart:3326487 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2663553	0.68	1.00	0.61	0.15	0.30	0.39	1.00
hdda:3326487 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3103484	0.58	0.94	0.32	0.67	0.38	0.62	0.24
nb:3326487 3103484	0.59	0.80	0.36	0.72	0.43	0.65	0.34
knn:3326487 3103484	0.62	0.55	0.61	0.63	0.50	0.73	0.28
rpart:3326487 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3326487 3103484	0.60	1.00	0.96	0.13	0.40	0.86	0.33
hdda:3326487 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2757491	0.59	0.80	0.46	0.65	0.45	0.67	0.48
nb:3326487 2757491	0.74	0.46	0.68	0.61	0.51	0.76	0.32
knn:3326487 2757491	0.70	0.55	0.89	0.46	0.50	0.88	0.30
rpart:3326487 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2757491	0.62	1.00	0.43	0.24	0.26	0.41	0.11
hdda:3326487 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2401368	0.69	0.14	0.43	0.85	0.63	0.71	0.15
nb:3326487 2401368	0.72	0.46	0.18	0.91	0.56	0.65	0.38
knn:3326487 2401368	0.67	0.09	0.54	0.80	0.63	0.74	0.35

rpart:3326487 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2401368	0.54	1.00	0.93	0.00	0.36	0.00	0.98
hdda:3326487 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3788643	0.54	0.80	0.43	0.67	0.44	0.66	0.16
nb:3326487 3788643	0.58	0.28	0.39	0.83	0.58	0.69	0.33
knn:3326487 3788643	0.63	0.55	0.64	0.61	0.50	0.74	0.31
rpart:3326487 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3788643	0.62	1.00	0.89	0.00	0.35	0.00	-0.92
hdda:3326487 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3219832	0.59	0.80	0.46	0.65	0.45	0.67	0.33
nb:3326487 3219832	0.70	0.46	0.14	0.93	0.57	0.64	0.46
knn:3326487 3219832	0.75	0.64	0.86	0.46	0.49	0.84	0.26
rpart:3326487 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3219832	0.51	1.00	0.96	0.00	0.37	0.00	0.56
hdda:3326487 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3198757	0.53	0.86	0.18	0.80	0.36	0.62	0.23
nb:3326487 3198757	0.58	0.94	0.14	0.78	0.29	0.60	0.33
knn:3326487 3198757	0.52	1.00	0.21	0.63	0.26	0.57	0.39
rpart:3326487 3198757	0.62	0.28	0.36	0.85	0.59	0.68	0.45
svm:3326487 3198757	0.57	1.00	0.36	0.50	0.30	0.56	1.00
hdda:3326487 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3753198	0.60	0.28	0.54	0.74	0.56	0.72	0.27
nb:3326487 3753198	0.70	0.46	0.68	0.61	0.51	0.76	0.31
knn:3326487 3753198	0.64	0.55	0.57	0.65	0.50	0.71	0.32
rpart:3326487 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3753198	0.55	1.00	0.75	0.13	0.34	0.46	0.22
hdda:3326487 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2902908	0.67	0.73	0.54	0.63	0.47	0.69	0.19
nb:3326487 2902908	0.67	0.64	0.57	0.63	0.48	0.71	0.33
knn:3326487 2902908	0.64	0.91	0.79	0.41	0.45	0.76	0.29
rpart:3326487 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3326487 2902908	0.65	1.00	0.57	0.11	0.28	0.29	0.63
hdda:3326487 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3142559	0.52	0.96	0.25	0.70	0.33	0.60	0.21
nb:3326487 3142559	0.55	0.86	0.36	0.70	0.42	0.64	0.33
knn:3326487 3142559	0.58	0.73	0.61	0.59	0.47	0.71	0.32
rpart:3326487 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3326487 3142559	0.51	1.00	0.96	0.00	0.37	0.00	-0.72
hdda:3326487 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3626882	0.50	0.86	0.29	0.74	0.40	0.63	0.39
nb:3326487 3626882	0.61	0.73	0.43	0.70	0.46	0.67	0.34
knn:3326487 3626882	0.64	0.99	0.71	0.37	0.41	0.68	0.27
rpart:3326487 3626882	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:3326487 3626882	0.59	1.00	0.29	0.52	0.27	0.55	0.62
hdda:3326487 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3433222	0.65	0.28	0.39	0.83	0.58	0.69	0.26
nb:3326487 3433222	0.69	0.09	0.43	0.87	0.67	0.71	0.37
knn:3326487 3433222	0.68	0.02	0.54	0.87	0.71	0.75	0.33
rpart:3326487 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3326487 3433222	0.66	1.00	0.57	0.20	0.30	0.43	0.65
hdda:3326487 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2991121	0.55	0.96	0.50	0.54	0.40	0.64	0.12
nb:3326487 2991121	0.53	1.00	0.57	0.28	0.33	0.52	0.28
knn:3326487 2991121	0.50	0.96	0.21	0.72	0.32	0.60	0.50
rpart:3326487 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2991121	0.52	0.80	0.46	0.65	0.45	0.67	1.00
hdda:3326487 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2959165	0.53	0.80	0.46	0.65	0.45	0.67	0.39
nb:3326487 2959165	0.66	0.98	0.71	0.39	0.42	0.69	0.31
knn:3326487 2959165	0.76	0.46	0.79	0.54	0.51	0.81	0.32
rpart:3326487 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:3326487 2959165	0.65	0.80	0.04	0.91	0.20	0.61	3.58

hdda:3326487 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3546559	0.61	0.73	0.21	0.83	0.43	0.63	0.32
nb:3326487 3546559	0.62	0.91	0.71	0.46	0.44	0.72	0.27
knn:3326487 3546559	0.62	0.09	0.57	0.78	0.62	0.75	0.34
rpart:3326487 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3546559	0.63	1.00	0.86	0.02	0.35	0.20	0.60
hdda:3326487 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3020668	0.52	0.91	0.39	0.65	0.41	0.64	0.27
nb:3326487 3020668	0.53	1.00	0.68	0.35	0.39	0.64	0.23
knn:3326487 3020668	0.56	0.96	0.54	0.52	0.41	0.65	0.32
rpart:3326487 3020668	0.52	0.80	0.14	0.85	0.36	0.62	0.53
svm:3326487 3020668	0.53	1.00	0.71	0.24	0.36	0.58	0.65
hdda:3326487 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2397811	0.60	0.64	0.39	0.74	0.48	0.67	0.23
nb:3326487 2397811	0.67	1.00	0.86	0.24	0.41	0.73	0.30
knn:3326487 2397811	0.71	0.14	0.46	0.83	0.62	0.72	0.38
rpart:3326487 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2397811	0.62	0.94	0.25	0.72	0.35	0.61	1.00
hdda:3326487 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3903427	0.53	0.98	0.61	0.46	0.40	0.66	0.15
nb:3326487 3903427	0.62	0.80	0.21	0.80	0.40	0.63	0.36
knn:3326487 3903427	0.62	0.64	0.68	0.57	0.49	0.74	0.29
rpart:3326487 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3903427	0.54	1.00	0.93	0.04	0.37	0.50	0.60
hdda:3326487 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 2595867	0.59	0.64	0.21	0.85	0.46	0.64	0.37
nb:3326487 2595867	0.62	0.86	0.36	0.70	0.42	0.64	0.33
knn:3326487 2595867	0.67	0.64	0.68	0.57	0.49	0.74	0.29
rpart:3326487 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 2595867	0.59	1.00	0.82	0.15	0.37	0.58	0.45
hdda:3326487 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3068088	0.56	0.91	0.71	0.46	0.44	0.72	0.11

nb:3326487 3068088	0.66	0.64	0.04	0.96	0.33	0.62	0.51
knn:3326487 3068088	0.59	0.99	0.79	0.33	0.42	0.71	0.17
rpart:3326487 3068088	0.61	0.46	0.29	0.85	0.53	0.66	0.43
svm:3326487 3068088	0.68	0.86	0.75	0.46	0.46	0.75	1.00
hdda:3326487 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3326487 3487363	0.57	1.00	0.32	0.48	0.27	0.54	0.30
nb:3326487 3487363	0.55	0.94	0.32	0.67	0.38	0.62	0.33
knn:3326487 3487363	0.54	1.00	0.61	0.39	0.38	0.62	0.26
rpart:3326487 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3326487 3487363	0.57	0.20	0.14	1.00	1.00	0.66	10.57
hdda:3870139 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2627418	0.52	0.96	0.39	0.61	0.38	0.62	0.24
nb:3870139 2627418	0.50	0.94	0.57	0.52	0.42	0.67	0.39
knn:3870139 2627418	0.56	1.00	0.61	0.37	0.37	0.61	0.30
rpart:3870139 2627418	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2627418	0.52	1.00	0.82	0.07	0.35	0.38	0.01
hdda:3870139 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2594205	0.52	0.99	0.43	0.54	0.36	0.61	0.21
nb:3870139 2594205	0.53	1.00	0.43	0.50	0.34	0.59	0.32
knn:3870139 2594205	0.52	0.96	0.39	0.61	0.38	0.62	0.35
rpart:3870139 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2594205	0.58	1.00	0.68	0.30	0.37	0.61	0.63
hdda:3870139 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 4015327	0.51	0.86	0.21	0.78	0.38	0.62	0.42
nb:3870139 4015327	0.55	0.80	0.64	0.54	0.46	0.71	0.36
knn:3870139 4015327	0.51	0.91	0.18	0.78	0.33	0.61	0.50
rpart:3870139 4015327	0.51	0.91	0.25	0.74	0.37	0.62	0.50
svm:3870139 4015327	0.52	1.00	0.82	0.17	0.38	0.62	0.32
hdda:3870139 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2975719	0.55	0.99	0.32	0.61	0.33	0.60	0.28
nb:3870139 2975719	0.55	0.98	0.68	0.41	0.41	0.68	0.35
knn:3870139 2975719	0.58	0.64	0.46	0.70	0.48	0.68	0.50

rpart:3870139 2975719	0.52	0.94	0.25	0.72	0.35	0.61	0.40
svm:3870139 2975719	0.55	0.99	0.64	0.41	0.40	0.66	0.69
hdda:3870139 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3109057	0.51	0.94	0.32	0.67	0.38	0.62	0.31
nb:3870139 3109057	0.57	0.99	0.50	0.50	0.38	0.62	0.33
knn:3870139 3109057	0.59	0.73	0.43	0.70	0.46	0.67	0.44
rpart:3870139 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3109057	0.61	1.00	0.57	0.30	0.33	0.54	0.59
hdda:3870139 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 4021820	0.59	0.55	0.61	0.63	0.50	0.73	0.35
nb:3870139 4021820	0.56	0.80	0.57	0.59	0.46	0.69	0.37
knn:3870139 4021820	0.53	0.73	0.18	0.85	0.42	0.63	0.62
rpart:3870139 4021820	0.51	0.96	0.46	0.57	0.39	0.63	0.36
svm:3870139 4021820	0.60	1.00	0.46	0.33	0.30	0.50	0.48
hdda:3870139 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3577841	0.54	1.00	0.39	0.50	0.32	0.58	0.29
nb:3870139 3577841	0.52	0.94	0.57	0.52	0.42	0.67	0.34
knn:3870139 3577841	0.51	0.80	0.50	0.63	0.45	0.67	0.32
rpart:3870139 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3577841	0.52	1.00	0.86	0.24	0.41	0.73	0.04
hdda:3870139 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3703849	0.56	0.73	0.21	0.83	0.43	0.63	0.48
nb:3870139 3703849	0.59	0.80	0.64	0.54	0.46	0.71	0.34
knn:3870139 3703849	0.61	0.80	0.46	0.65	0.45	0.67	0.39
rpart:3870139 3703849	0.50	0.80	0.21	0.80	0.40	0.63	0.49
svm:3870139 3703849	0.57	1.00	0.82	0.13	0.37	0.55	-0.82
hdda:3870139 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2707575	0.60	0.80	0.50	0.63	0.45	0.67	0.38
nb:3870139 2707575	0.50	0.96	0.29	0.67	0.35	0.61	0.36
knn:3870139 2707575	0.61	0.46	0.43	0.76	0.52	0.69	0.50
rpart:3870139 2707575	0.53	0.99	0.57	0.43	0.38	0.63	0.28

svm:3870139 2707575	0.53	1.00	0.79	0.28	0.40	0.68	0.58
hdda:3870139 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2510519	0.55	0.91	0.39	0.65	0.41	0.64	0.35
nb:3870139 2510519	0.51	0.99	0.71	0.35	0.40	0.67	0.39
knn:3870139 2510519	0.57	1.00	0.61	0.39	0.38	0.62	0.30
rpart:3870139 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2510519	0.55	1.00	0.64	0.26	0.35	0.55	-0.04
hdda:3870139 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3530890	0.59	0.99	0.61	0.43	0.40	0.65	0.20
nb:3870139 3530890	0.58	0.86	0.57	0.57	0.44	0.68	0.37
knn:3870139 3530890	0.58	0.96	0.32	0.65	0.36	0.61	0.40
rpart:3870139 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3530890	0.56	1.00	0.61	0.30	0.35	0.56	0.72
hdda:3870139 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3769569	0.58	0.73	0.29	0.78	0.44	0.64	0.38
nb:3870139 3769569	0.63	0.55	0.43	0.74	0.50	0.68	0.38
knn:3870139 3769569	0.51	0.86	0.25	0.76	0.39	0.63	0.44
rpart:3870139 3769569	0.54	0.80	0.14	0.85	0.36	0.62	0.59
svm:3870139 3769569	0.52	1.00	0.79	0.20	0.37	0.60	0.44
hdda:3870139 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3544035	0.51	0.96	0.39	0.61	0.38	0.62	0.30
nb:3870139 3544035	0.51	1.00	0.43	0.50	0.34	0.59	0.40
knn:3870139 3544035	0.52	0.94	0.32	0.67	0.38	0.62	0.45
rpart:3870139 3544035	0.51	0.96	0.18	0.74	0.29	0.60	0.51
svm:3870139 3544035	0.53	1.00	0.64	0.37	0.38	0.63	0.42
hdda:3870139 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2790378	0.54	0.96	0.46	0.57	0.39	0.63	0.43
nb:3870139 2790378	0.64	0.86	0.54	0.59	0.44	0.68	0.35
knn:3870139 2790378	0.55	0.86	0.46	0.63	0.43	0.66	0.50
rpart:3870139 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2790378	0.58	1.00	0.79	0.13	0.35	0.50	-0.46

hdda:3870139 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2625670	0.56	0.80	0.29	0.76	0.42	0.64	0.38
nb:3870139 2625670	0.57	0.99	0.79	0.30	0.41	0.70	0.24
knn:3870139 2625670	0.50	0.96	0.43	0.59	0.39	0.63	0.30
rpart:3870139 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2625670	0.58	1.00	0.86	0.15	0.38	0.64	0.37
hdda:3870139 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3646405	0.55	0.28	0.54	0.74	0.56	0.72	0.39
nb:3870139 3646405	0.52	0.99	0.68	0.39	0.40	0.67	0.34
knn:3870139 3646405	0.55	0.98	0.54	0.50	0.39	0.64	0.38
rpart:3870139 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3646405	0.53	1.00	0.32	0.54	0.30	0.57	1.00
hdda:3870139 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2918654	0.52	0.99	0.46	0.50	0.36	0.61	0.17
nb:3870139 2918654	0.53	1.00	0.57	0.41	0.37	0.61	0.33
knn:3870139 2918654	0.53	0.99	0.75	0.33	0.40	0.68	0.29
rpart:3870139 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2918654	0.50	1.00	0.93	0.09	0.38	0.67	0.35
hdda:3870139 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2663553	0.51	0.98	0.39	0.59	0.37	0.61	0.19
nb:3870139 2663553	0.52	0.98	0.64	0.43	0.41	0.67	0.36
knn:3870139 2663553	0.55	0.96	0.57	0.50	0.41	0.66	0.33
rpart:3870139 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2663553	0.53	1.00	0.75	0.17	0.36	0.53	0.58
hdda:3870139 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3103484	0.51	0.99	0.64	0.39	0.39	0.64	0.19
nb:3870139 3103484	0.52	1.00	0.18	0.65	0.24	0.57	0.39
knn:3870139 3103484	0.50	1.00	0.57	0.39	0.36	0.60	0.31
rpart:3870139 3103484	0.52	0.86	0.11	0.85	0.30	0.61	0.53
svm:3870139 3103484	0.50	0.99	0.61	0.43	0.40	0.65	1.00
hdda:3870139 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2757491	0.59	0.96	0.64	0.46	0.42	0.68	0.18

nb:3870139 2757491	0.57	0.91	0.79	0.41	0.45	0.76	0.34
knn:3870139 2757491	0.66	0.86	0.21	0.78	0.38	0.62	0.50
rpart:3870139 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2757491	0.75	1.00	0.39	0.26	0.24	0.41	0.63
hdda:3870139 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2401368	0.63	0.73	0.71	0.52	0.48	0.75	0.15
nb:3870139 2401368	0.61	0.91	0.79	0.41	0.45	0.76	0.28
knn:3870139 2401368	0.68	0.28	0.75	0.61	0.54	0.80	0.28
rpart:3870139 2401368	0.52	0.20	0.18	0.98	0.83	0.66	0.54
svm:3870139 2401368	0.62	1.00	0.68	0.11	0.32	0.36	0.68
hdda:3870139 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3788643	0.53	0.98	0.64	0.43	0.41	0.67	0.15
nb:3870139 3788643	0.55	0.98	0.54	0.50	0.39	0.64	0.35
knn:3870139 3788643	0.51	1.00	0.46	0.46	0.34	0.58	0.34
rpart:3870139 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3788643	0.53	0.96	0.68	0.43	0.42	0.69	0.18
hdda:3870139 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3219832	0.65	0.86	0.54	0.59	0.44	0.68	0.26
nb:3870139 3219832	0.60	0.46	0.11	0.96	0.60	0.64	0.52
knn:3870139 3219832	0.67	0.28	0.39	0.83	0.58	0.69	0.43
rpart:3870139 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3219832	0.63	1.00	0.57	0.20	0.30	0.43	0.28
hdda:3870139 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3198757	0.52	1.00	0.39	0.50	0.32	0.58	0.23
nb:3870139 3198757	0.55	0.96	0.07	0.80	0.18	0.59	0.41
knn:3870139 3198757	0.51	1.00	0.54	0.43	0.37	0.61	0.33
rpart:3870139 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3198757	0.62	1.00	1.00	0.02	0.38	1.00	0.96
hdda:3870139 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3753198	0.50	1.00	0.50	0.37	0.33	0.55	0.26
nb:3870139 3753198	0.56	0.99	0.54	0.48	0.38	0.63	0.34
knn:3870139 3753198	0.61	0.73	0.54	0.63	0.47	0.69	0.39

rpart:3870139 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3753198	0.57	1.00	0.54	0.35	0.33	0.55	0.41
hdda:3870139 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2902908	0.58	0.94	0.39	0.63	0.39	0.63	0.31
nb:3870139 2902908	0.59	0.73	0.54	0.63	0.47	0.69	0.38
knn:3870139 2902908	0.62	0.80	0.61	0.57	0.46	0.70	0.36
rpart:3870139 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2902908	0.59	1.00	0.18	0.63	0.23	0.56	0.62
hdda:3870139 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3142559	0.51	0.91	0.54	0.57	0.43	0.67	0.32
nb:3870139 3142559	0.50	0.94	0.39	0.63	0.39	0.63	0.35
knn:3870139 3142559	0.51	0.98	0.43	0.57	0.38	0.62	0.37
rpart:3870139 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3870139 3142559	0.61	1.00	0.68	0.35	0.39	0.64	0.47
hdda:3870139 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3626882	0.53	0.94	0.46	0.59	0.41	0.64	0.34
nb:3870139 3626882	0.55	0.94	0.32	0.67	0.38	0.62	0.40
knn:3870139 3626882	0.51	0.99	0.50	0.50	0.38	0.62	0.35
rpart:3870139 3626882	0.52	0.91	0.11	0.83	0.27	0.60	0.57
svm:3870139 3626882	0.54	1.00	0.82	0.17	0.38	0.62	0.23
hdda:3870139 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3433222	0.66	0.55	0.68	0.59	0.50	0.75	0.22
nb:3870139 3433222	0.65	0.46	0.43	0.76	0.52	0.69	0.39
knn:3870139 3433222	0.58	0.91	0.79	0.41	0.45	0.76	0.29
rpart:3870139 3433222	0.61	0.20	0.39	0.85	0.61	0.70	0.34
svm:3870139 3433222	0.51	0.99	0.64	0.39	0.39	0.64	0.58
hdda:3870139 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2991121	0.52	0.96	0.25	0.70	0.33	0.60	0.31
nb:3870139 2991121	0.54	1.00	0.50	0.46	0.36	0.60	0.35
knn:3870139 2991121	0.53	0.99	0.50	0.50	0.38	0.62	0.35
rpart:3870139 2991121	0.54	0.98	0.18	0.72	0.28	0.59	0.45

svm:3870139 2991121	0.52	1.00	0.93	0.11	0.39	0.71	0.18
hdda:3870139 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2959165	0.55	0.94	0.43	0.61	0.40	0.64	0.37
nb:3870139 2959165	0.56	0.94	0.68	0.46	0.43	0.70	0.34
knn:3870139 2959165	0.52	0.73	0.32	0.76	0.45	0.65	0.45
rpart:3870139 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:3870139 2959165	0.56	1.00	0.75	0.22	0.37	0.59	0.67
hdda:3870139 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3546559	0.55	0.99	0.57	0.46	0.39	0.64	0.18
nb:3870139 3546559	0.59	0.73	0.71	0.52	0.48	0.75	0.33
knn:3870139 3546559	0.52	0.99	0.57	0.46	0.39	0.64	0.35
rpart:3870139 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3546559	0.54	1.00	0.57	0.37	0.36	0.59	1.00
hdda:3870139 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3020668	0.50	0.96	0.54	0.52	0.41	0.65	0.26
nb:3870139 3020668	0.51	0.96	0.50	0.54	0.40	0.64	0.34
knn:3870139 3020668	0.52	0.94	0.43	0.61	0.40	0.64	0.35
rpart:3870139 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3020668	0.51	1.00	0.61	0.39	0.38	0.62	0.46
hdda:3870139 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2397811	0.55	0.80	0.21	0.80	0.40	0.63	0.44
nb:3870139 2397811	0.51	0.99	0.71	0.37	0.41	0.68	0.35
knn:3870139 2397811	0.50	0.86	0.14	0.83	0.33	0.61	0.50
rpart:3870139 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 2397811	0.56	1.00	0.86	0.11	0.37	0.56	0.21
hdda:3870139 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3903427	0.51	0.99	0.32	0.61	0.33	0.60	0.37
nb:3870139 3903427	0.50	0.99	0.14	0.72	0.24	0.58	0.39
knn:3870139 3903427	0.57	1.00	0.29	0.57	0.29	0.57	0.50
rpart:3870139 3903427	0.52	0.98	0.29	0.65	0.33	0.60	0.44
svm:3870139 3903427	0.54	0.99	0.79	0.30	0.41	0.70	0.54

hdda:3870139 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 2595867	0.54	0.98	0.57	0.48	0.40	0.65	0.20
nb:3870139 2595867	0.54	0.86	0.29	0.74	0.40	0.63	0.40
knn:3870139 2595867	0.54	0.73	0.39	0.72	0.46	0.66	0.39
rpart:3870139 2595867	0.52	0.86	0.11	0.85	0.30	0.61	0.52
svm:3870139 2595867	0.54	1.00	0.64	0.20	0.33	0.47	0.01
hdda:3870139 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3068088	0.51	0.98	0.39	0.59	0.37	0.61	0.22
nb:3870139 3068088	0.50	0.99	0.75	0.33	0.40	0.68	0.32
knn:3870139 3068088	0.54	1.00	0.64	0.35	0.38	0.62	0.34
rpart:3870139 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3870139 3068088	0.56	0.98	0.71	0.39	0.42	0.69	0.64
hdda:3870139 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3870139 3487363	0.52	0.73	0.18	0.85	0.42	0.63	0.36
nb:3870139 3487363	0.51	1.00	0.29	0.59	0.30	0.57	0.36
knn:3870139 3487363	0.51	0.96	0.43	0.59	0.39	0.63	0.35
rpart:3870139 3487363	0.55	0.86	0.18	0.80	0.36	0.62	0.49
svm:3870139 3487363	0.52	1.00	0.89	0.09	0.37	0.57	0.50
hdda:2627418 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2594205	0.53	0.86	0.68	0.50	0.45	0.72	0.11
nb:2627418 2594205	0.55	0.86	0.04	0.89	0.17	0.60	0.49
knn:2627418 2594205	0.51	0.64	0.39	0.74	0.48	0.67	0.41
rpart:2627418 2594205	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2594205	0.51	1.00	0.57	0.33	0.34	0.56	0.57
hdda:2627418 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 4015327	0.51	0.73	0.11	0.89	0.38	0.62	0.59
nb:2627418 4015327	0.52	1.00	0.75	0.24	0.38	0.61	0.31
knn:2627418 4015327	0.50	1.00	0.64	0.37	0.38	0.63	0.31
rpart:2627418 4015327	0.53	0.73	0.39	0.72	0.46	0.66	0.39
svm:2627418 4015327	0.53	1.00	0.79	0.17	0.37	0.57	0.51
hdda:2627418 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2975719	0.54	0.73	0.36	0.74	0.45	0.65	0.29

nb:2627418 2975719	0.57	0.99	0.57	0.46	0.39	0.64	0.38
knn:2627418 2975719	0.52	0.99	0.75	0.33	0.40	0.68	0.31
rpart:2627418 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2975719	0.60	1.00	0.96	0.09	0.39	0.80	1.00
hdda:2627418 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3109057	0.51	0.86	0.43	0.65	0.43	0.65	0.40
nb:2627418 3109057	0.54	0.80	0.50	0.63	0.45	0.67	0.38
knn:2627418 3109057	0.53	0.96	0.57	0.50	0.41	0.66	0.39
rpart:2627418 3109057	0.53	0.86	0.39	0.67	0.42	0.65	0.47
svm:2627418 3109057	0.50	0.80	0.18	0.83	0.38	0.62	17.43
hdda:2627418 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 4021820	0.52	1.00	0.50	0.43	0.35	0.59	0.26
nb:2627418 4021820	0.50	0.96	0.54	0.52	0.41	0.65	0.39
knn:2627418 4021820	0.62	0.94	0.75	0.41	0.44	0.73	0.30
rpart:2627418 4021820	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:2627418 4021820	0.57	0.99	0.29	0.63	0.32	0.59	1.00
hdda:2627418 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3577841	0.52	0.96	0.61	0.48	0.41	0.67	0.14
nb:2627418 3577841	0.59	1.00	0.82	0.13	0.37	0.55	0.28
knn:2627418 3577841	0.54	1.00	0.46	0.48	0.35	0.59	0.33
rpart:2627418 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 3577841	0.59	0.96	0.04	0.83	0.11	0.58	3.44
hdda:2627418 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3703849	0.56	0.86	0.36	0.70	0.42	0.64	0.26
nb:2627418 3703849	0.51	0.96	0.32	0.65	0.36	0.61	0.38
knn:2627418 3703849	0.56	0.73	0.36	0.74	0.45	0.65	0.43
rpart:2627418 3703849	0.55	0.86	0.32	0.72	0.41	0.63	0.48
svm:2627418 3703849	0.52	1.00	0.86	0.15	0.38	0.64	0.03
hdda:2627418 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2707575	0.52	0.94	0.36	0.65	0.38	0.63	0.25
nb:2627418 2707575	0.55	0.94	0.32	0.67	0.38	0.62	0.38
knn:2627418 2707575	0.53	0.94	0.32	0.67	0.38	0.62	0.38

rpart:2627418 2707575	0.50	0.64	0.25	0.83	0.47	0.64	0.56
svm:2627418 2707575	0.54	1.00	0.71	0.28	0.38	0.62	0.85
hdda:2627418 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2510519	0.60	0.86	0.82	0.41	0.46	0.79	0.14
nb:2627418 2510519	0.50	1.00	0.75	0.28	0.39	0.65	0.41
knn:2627418 2510519	0.53	1.00	0.57	0.41	0.37	0.61	0.39
rpart:2627418 2510519	0.60	0.86	0.29	0.74	0.40	0.63	0.49
svm:2627418 2510519	0.54	1.00	0.43	0.41	0.31	0.54	0.42
hdda:2627418 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3530890	0.62	0.55	0.46	0.72	0.50	0.69	0.33
nb:2627418 3530890	0.55	0.91	0.61	0.52	0.44	0.69	0.39
knn:2627418 3530890	0.56	1.00	0.64	0.33	0.37	0.60	0.37
rpart:2627418 3530890	0.53	0.64	0.29	0.80	0.47	0.65	0.56
svm:2627418 3530890	0.69	1.00	0.50	0.22	0.28	0.42	0.68
hdda:2627418 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3769569	0.61	0.91	0.39	0.65	0.41	0.64	0.16
nb:2627418 3769569	0.56	0.99	0.71	0.37	0.41	0.68	0.33
knn:2627418 3769569	0.55	0.94	0.71	0.43	0.43	0.71	0.36
rpart:2627418 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 3769569	0.58	1.00	0.79	0.22	0.38	0.63	0.61
hdda:2627418 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3544035	0.57	0.46	0.18	0.91	0.56	0.65	0.56
nb:2627418 3544035	0.53	1.00	0.61	0.22	0.32	0.48	0.30
knn:2627418 3544035	0.58	0.94	0.43	0.61	0.40	0.64	0.37
rpart:2627418 3544035	0.55	0.64	0.32	0.78	0.47	0.65	0.44
svm:2627418 3544035	0.55	1.00	0.82	0.11	0.36	0.50	-0.15
hdda:2627418 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2790378	0.53	0.91	0.25	0.74	0.37	0.62	0.25
nb:2627418 2790378	0.52	1.00	0.86	0.13	0.38	0.60	0.28
knn:2627418 2790378	0.55	0.99	0.75	0.35	0.41	0.70	0.31
rpart:2627418 2790378	0.51	0.86	0.25	0.76	0.39	0.63	0.48

svm:2627418 2790378	0.53	0.96	0.29	0.67	0.35	0.61	1.00
hdda:2627418 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2625670	0.54	0.99	0.46	0.52	0.37	0.62	0.17
nb:2627418 2625670	0.54	0.99	0.71	0.35	0.40	0.67	0.28
knn:2627418 2625670	0.52	0.94	0.61	0.50	0.43	0.68	0.34
rpart:2627418 2625670	0.50	0.80	0.21	0.80	0.40	0.63	0.46
svm:2627418 2625670	0.54	0.99	0.71	0.37	0.41	0.68	1.00
hdda:2627418 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3646405	0.52	0.73	0.46	0.67	0.46	0.67	0.13
nb:2627418 3646405	0.50	1.00	0.71	0.33	0.39	0.65	0.36
knn:2627418 3646405	0.54	1.00	0.57	0.41	0.37	0.61	0.37
rpart:2627418 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 3646405	0.51	0.99	0.32	0.61	0.33	0.60	1.00
hdda:2627418 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2918654	0.51	0.98	0.39	0.59	0.37	0.61	0.21
nb:2627418 2918654	0.51	0.96	0.46	0.57	0.39	0.63	0.38
knn:2627418 2918654	0.51	1.00	0.32	0.54	0.30	0.57	0.36
rpart:2627418 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2918654	0.50	0.99	0.57	0.43	0.38	0.63	1.00
hdda:2627418 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2663553	0.57	0.94	0.61	0.50	0.43	0.68	0.19
nb:2627418 2663553	0.51	1.00	0.75	0.22	0.37	0.59	0.35
knn:2627418 2663553	0.50	0.99	0.50	0.50	0.38	0.62	0.35
rpart:2627418 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2663553	0.50	1.00	0.71	0.17	0.34	0.50	0.93
hdda:2627418 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3103484	0.56	0.99	0.64	0.41	0.40	0.66	0.29
nb:2627418 3103484	0.56	1.00	0.18	0.63	0.23	0.56	0.41
knn:2627418 3103484	0.51	0.94	0.25	0.72	0.35	0.61	0.50
rpart:2627418 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:2627418 3103484	0.52	1.00	0.89	0.11	0.38	0.63	0.31

hdda:2627418 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2757491	0.64	0.64	0.75	0.52	0.49	0.77	0.19
nb:2627418 2757491	0.56	1.00	0.79	0.15	0.36	0.54	0.33
knn:2627418 2757491	0.51	0.64	0.39	0.74	0.48	0.67	0.40
rpart:2627418 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2757491	0.56	0.98	0.75	0.37	0.42	0.71	1.00
hdda:2627418 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2401368	0.65	0.28	0.32	0.87	0.60	0.68	0.36
nb:2627418 2401368	0.55	1.00	0.75	0.17	0.36	0.53	0.27
knn:2627418 2401368	0.55	0.99	0.68	0.37	0.40	0.65	0.26
rpart:2627418 2401368	0.68	0.28	0.32	0.87	0.60	0.68	0.46
svm:2627418 2401368	0.66	1.00	0.82	0.09	0.35	0.44	0.06
hdda:2627418 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3788643	0.56	0.91	0.18	0.78	0.33	0.61	0.34
nb:2627418 3788643	0.59	1.00	0.79	0.22	0.38	0.63	0.31
knn:2627418 3788643	0.63	0.94	0.64	0.48	0.43	0.69	0.32
rpart:2627418 3788643	0.53	0.80	0.14	0.85	0.36	0.62	0.48
svm:2627418 3788643	0.51	0.98	0.50	0.52	0.39	0.63	1.00
hdda:2627418 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3219832	0.56	0.64	0.32	0.78	0.47	0.65	0.41
nb:2627418 3219832	0.59	0.64	0.07	0.93	0.40	0.62	0.55
knn:2627418 3219832	0.58	0.55	0.46	0.72	0.50	0.69	0.40
rpart:2627418 3219832	0.60	0.80	0.29	0.76	0.42	0.64	0.47
svm:2627418 3219832	0.59	1.00	0.64	0.20	0.33	0.47	0.10
hdda:2627418 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3198757	0.53	1.00	0.39	0.50	0.32	0.58	0.18
nb:2627418 3198757	0.55	0.91	0.07	0.85	0.22	0.60	0.46
knn:2627418 3198757	0.55	1.00	0.50	0.39	0.33	0.56	0.32
rpart:2627418 3198757	0.52	0.64	0.25	0.83	0.47	0.64	0.47
svm:2627418 3198757	0.59	1.00	0.89	0.17	0.40	0.73	0.89
hdda:2627418 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3753198	0.55	0.99	0.46	0.50	0.36	0.61	0.29

nb:2627418 3753198	0.52	1.00	0.75	0.28	0.39	0.65	0.31
knn:2627418 3753198	0.56	0.73	0.25	0.80	0.44	0.64	0.43
rpart:2627418 3753198	0.55	0.64	0.11	0.91	0.43	0.63	0.50
svm:2627418 3753198	0.58	0.80	0.00	0.93	0.00	0.61	12.16
hdda:2627418 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2902908	0.60	0.99	0.75	0.35	0.41	0.70	0.12
nb:2627418 2902908	0.52	0.86	0.50	0.61	0.44	0.67	0.40
knn:2627418 2902908	0.52	1.00	0.64	0.35	0.38	0.62	0.36
rpart:2627418 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2902908	0.59	0.86	0.43	0.65	0.43	0.65	1.00
hdda:2627418 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3142559	0.53	0.98	0.18	0.72	0.28	0.59	0.30
nb:2627418 3142559	0.53	0.96	0.18	0.74	0.29	0.60	0.44
knn:2627418 3142559	0.51	0.96	0.50	0.54	0.40	0.64	0.32
rpart:2627418 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.35
svm:2627418 3142559	0.55	1.00	0.89	0.22	0.41	0.77	0.46
hdda:2627418 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3626882	0.53	0.99	0.50	0.48	0.37	0.61	0.33
nb:2627418 3626882	0.54	0.91	0.36	0.67	0.40	0.63	0.39
knn:2627418 3626882	0.58	0.80	0.50	0.63	0.45	0.67	0.37
rpart:2627418 3626882	0.52	0.64	0.29	0.80	0.47	0.65	0.48
svm:2627418 3626882	0.52	1.00	0.86	0.13	0.38	0.60	0.25
hdda:2627418 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3433222	0.64	0.20	0.46	0.80	0.59	0.71	0.26
nb:2627418 3433222	0.58	0.46	0.39	0.78	0.52	0.68	0.40
knn:2627418 3433222	0.63	0.96	0.50	0.54	0.40	0.64	0.31
rpart:2627418 3433222	0.58	0.20	0.39	0.85	0.61	0.70	0.44
svm:2627418 3433222	0.51	0.46	0.36	0.80	0.53	0.67	0.65
hdda:2627418 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2991121	0.52	1.00	0.54	0.43	0.37	0.61	0.17
nb:2627418 2991121	0.56	1.00	0.54	0.35	0.33	0.55	0.34
knn:2627418 2991121	0.57	1.00	0.61	0.35	0.36	0.59	0.34

rpart:2627418 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2991121	0.55	0.73	0.43	0.70	0.46	0.67	1.00
hdda:2627418 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2959165	0.52	0.96	0.46	0.57	0.39	0.63	0.24
nb:2627418 2959165	0.50	1.00	0.79	0.26	0.39	0.67	0.30
knn:2627418 2959165	0.52	0.96	0.57	0.50	0.41	0.66	0.37
rpart:2627418 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:2627418 2959165	0.50	0.99	0.43	0.54	0.36	0.61	1.00
hdda:2627418 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3546559	0.62	0.64	0.18	0.87	0.45	0.63	0.45
nb:2627418 3546559	0.51	0.98	0.57	0.48	0.40	0.65	0.34
knn:2627418 3546559	0.57	0.94	0.46	0.59	0.41	0.64	0.36
rpart:2627418 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 3546559	0.67	1.00	0.71	0.13	0.33	0.43	0.17
hdda:2627418 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3020668	0.50	0.98	0.39	0.59	0.37	0.61	0.28
nb:2627418 3020668	0.53	1.00	0.57	0.39	0.36	0.60	0.30
knn:2627418 3020668	0.53	0.99	0.54	0.48	0.38	0.63	0.32
rpart:2627418 3020668	0.51	0.99	0.43	0.52	0.35	0.60	0.28
svm:2627418 3020668	0.53	0.96	0.32	0.65	0.36	0.61	1.00
hdda:2627418 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2397811	0.60	1.00	0.39	0.41	0.29	0.53	0.28
nb:2627418 2397811	0.58	1.00	0.64	0.28	0.35	0.57	0.36
knn:2627418 2397811	0.60	0.99	0.14	0.72	0.24	0.58	0.50
rpart:2627418 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2397811	0.60	0.99	0.71	0.37	0.41	0.68	0.52
hdda:2627418 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3903427	0.52	1.00	0.39	0.48	0.31	0.56	0.18
nb:2627418 3903427	0.52	0.80	0.14	0.85	0.36	0.62	0.45
knn:2627418 3903427	0.53	0.99	0.57	0.43	0.38	0.63	0.32
rpart:2627418 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2627418 3903427	0.51	1.00	0.89	0.09	0.37	0.57	0.77
hdda:2627418 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 2595867	0.57	0.55	0.39	0.76	0.50	0.67	0.34
nb:2627418 2595867	0.51	0.80	0.32	0.74	0.43	0.64	0.42
knn:2627418 2595867	0.63	0.73	0.61	0.59	0.47	0.71	0.30
rpart:2627418 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 2595867	0.53	1.00	0.79	0.09	0.34	0.40	0.18
hdda:2627418 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3068088	0.51	0.99	0.64	0.41	0.40	0.66	0.13
nb:2627418 3068088	0.54	1.00	0.79	0.17	0.37	0.57	0.33
knn:2627418 3068088	0.62	0.86	0.82	0.41	0.46	0.79	0.28
rpart:2627418 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2627418 3068088	0.59	0.55	0.46	0.72	0.50	0.69	1.00
hdda:2627418 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2627418 3487363	0.54	1.00	0.54	0.35	0.33	0.55	0.16
nb:2627418 3487363	0.57	0.96	0.07	0.80	0.18	0.59	0.45
knn:2627418 3487363	0.55	1.00	0.36	0.48	0.29	0.55	0.35
rpart:2627418 3487363	0.59	1.00	0.29	0.54	0.28	0.56	0.42
svm:2627418 3487363	0.50	0.86	0.46	0.63	0.43	0.66	0.86
hdda:2594205 4015327	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 4015327	0.55	0.73	0.18	0.85	0.42	0.63	0.43
nb:2594205 4015327	0.53	0.91	0.00	0.89	0.00	0.59	0.60
knn:2594205 4015327	0.59	0.86	0.57	0.57	0.44	0.68	0.28
rpart:2594205 4015327	0.51	0.80	0.25	0.78	0.41	0.63	0.38
svm:2594205 4015327	0.58	1.00	0.68	0.24	0.35	0.55	0.49
hdda:2594205 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2975719	0.56	0.80	0.36	0.72	0.43	0.65	0.14
nb:2594205 2975719	0.53	0.91	0.00	0.89	0.00	0.59	0.50
knn:2594205 2975719	0.59	0.96	0.64	0.46	0.42	0.68	0.31
rpart:2594205 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2975719	0.56	1.00	1.00	0.02	0.38	1.00	-1.02

hdda:2594205 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3109057	0.53	0.91	0.32	0.70	0.39	0.63	0.15
nb:2594205 3109057	0.51	0.94	0.36	0.65	0.38	0.63	0.33
knn:2594205 3109057	0.54	0.73	0.43	0.70	0.46	0.67	0.39
rpart:2594205 3109057	0.54	1.00	0.79	0.24	0.39	0.65	0.21
svm:2594205 3109057	0.53	1.00	0.61	0.37	0.37	0.61	0.55
hdda:2594205 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 4021820	0.53	0.99	0.43	0.52	0.35	0.60	0.22
nb:2594205 4021820	0.53	1.00	0.39	0.48	0.31	0.56	0.32
knn:2594205 4021820	0.64	0.64	0.39	0.74	0.48	0.67	0.39
rpart:2594205 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 4021820	0.62	0.73	0.71	0.52	0.48	0.75	1.00
hdda:2594205 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3577841	0.61	0.86	0.21	0.78	0.38	0.62	0.39
nb:2594205 3577841	0.56	0.80	0.00	0.93	0.00	0.61	0.63
knn:2594205 3577841	0.56	0.99	0.36	0.57	0.33	0.59	0.30
rpart:2594205 3577841	0.53	0.64	0.14	0.89	0.44	0.63	0.46
svm:2594205 3577841	0.52	1.00	1.00	0.02	0.38	1.00	-0.68
hdda:2594205 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3703849	0.55	0.96	0.54	0.52	0.41	0.65	0.13
nb:2594205 3703849	0.53	0.86	0.18	0.80	0.36	0.62	0.38
knn:2594205 3703849	0.52	1.00	0.71	0.33	0.39	0.65	0.21
rpart:2594205 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3703849	0.52	1.00	0.75	0.30	0.40	0.67	0.80
hdda:2594205 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2707575	0.53	0.91	0.39	0.65	0.41	0.64	0.34
nb:2594205 2707575	0.54	0.96	0.18	0.74	0.29	0.60	0.37
knn:2594205 2707575	0.55	1.00	0.57	0.39	0.36	0.60	0.21
rpart:2594205 2707575	0.57	0.73	0.54	0.63	0.47	0.69	0.29
svm:2594205 2707575	0.51	1.00	0.68	0.30	0.37	0.61	0.69
hdda:2594205 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2510519	0.59	0.86	0.75	0.46	0.46	0.75	0.17

nb:2594205 2510519	0.51	0.91	0.00	0.89	0.00	0.59	0.56
knn:2594205 2510519	0.62	0.46	0.61	0.65	0.52	0.73	0.40
rpart:2594205 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2510519	0.57	1.00	1.00	0.02	0.38	1.00	-10.78
hdda:2594205 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3530890	0.61	0.80	0.46	0.65	0.45	0.67	0.15
nb:2594205 3530890	0.57	0.91	0.79	0.41	0.45	0.76	0.27
knn:2594205 3530890	0.69	0.20	0.29	0.91	0.67	0.68	0.41
rpart:2594205 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3530890	0.65	1.00	0.75	0.13	0.34	0.46	0.54
hdda:2594205 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3769569	0.54	0.86	0.36	0.70	0.42	0.64	0.24
nb:2594205 3769569	0.55	0.73	0.07	0.91	0.33	0.62	0.50
knn:2594205 3769569	0.62	0.80	0.57	0.59	0.46	0.69	0.32
rpart:2594205 3769569	0.64	0.36	0.36	0.83	0.56	0.68	0.45
svm:2594205 3769569	0.52	0.98	0.43	0.57	0.38	0.62	0.85
hdda:2594205 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3544035	0.56	0.96	0.32	0.65	0.36	0.61	0.37
nb:2594205 3544035	0.56	1.00	0.43	0.41	0.31	0.54	0.33
knn:2594205 3544035	0.52	0.94	0.43	0.61	0.40	0.64	0.35
rpart:2594205 3544035	0.55	0.80	0.32	0.74	0.43	0.64	0.44
svm:2594205 3544035	0.62	0.73	0.50	0.65	0.47	0.68	1.00
hdda:2594205 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2790378	0.51	0.96	0.68	0.43	0.42	0.69	0.19
nb:2594205 2790378	0.55	0.55	0.29	0.83	0.50	0.66	0.38
knn:2594205 2790378	0.60	0.80	0.68	0.52	0.46	0.73	0.28
rpart:2594205 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2790378	0.56	1.00	1.00	0.07	0.39	1.00	-2.23
hdda:2594205 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2625670	0.53	0.98	0.39	0.59	0.37	0.61	0.14
nb:2594205 2625670	0.56	1.00	0.79	0.28	0.40	0.68	0.20
knn:2594205 2625670	0.64	0.64	0.64	0.59	0.49	0.73	0.32

rpart:2594205 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2625670	0.55	1.00	0.96	0.11	0.40	0.83	0.44
hdda:2594205 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3646405	0.55	0.91	0.39	0.65	0.41	0.64	0.14
nb:2594205 3646405	0.50	0.86	0.04	0.89	0.17	0.60	0.48
knn:2594205 3646405	0.67	0.46	0.68	0.61	0.51	0.76	0.34
rpart:2594205 3646405	0.59	0.46	0.36	0.80	0.53	0.67	0.43
svm:2594205 3646405	0.55	0.96	0.50	0.54	0.40	0.64	1.00
hdda:2594205 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2918654	0.51	0.99	0.36	0.59	0.34	0.60	0.24
nb:2594205 2918654	0.52	0.91	0.00	0.89	0.00	0.59	0.49
knn:2594205 2918654	0.61	0.64	0.75	0.52	0.49	0.77	0.29
rpart:2594205 2918654	0.52	1.00	0.64	0.37	0.38	0.63	0.28
svm:2594205 2918654	0.62	0.98	0.82	0.33	0.43	0.75	1.00
hdda:2594205 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2663553	0.54	0.73	0.36	0.74	0.45	0.65	0.22
nb:2594205 2663553	0.53	0.91	0.00	0.89	0.00	0.59	0.53
knn:2594205 2663553	0.59	0.96	0.54	0.52	0.41	0.65	0.32
rpart:2594205 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2663553	0.65	0.55	0.64	0.61	0.50	0.74	1.00
hdda:2594205 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3103484	0.52	0.91	0.50	0.59	0.42	0.66	0.21
nb:2594205 3103484	0.54	0.98	0.21	0.70	0.30	0.59	0.37
knn:2594205 3103484	0.51	1.00	0.50	0.46	0.36	0.60	0.29
rpart:2594205 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:2594205 3103484	0.52	1.00	0.75	0.26	0.38	0.63	0.40
hdda:2594205 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2757491	0.61	0.73	0.57	0.61	0.47	0.70	0.21
nb:2594205 2757491	0.54	0.91	0.00	0.89	0.00	0.59	0.48
knn:2594205 2757491	0.67	0.28	0.50	0.76	0.56	0.71	0.39
rpart:2594205 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2594205 2757491	0.61	1.00	0.75	0.22	0.37	0.59	0.60
hdda:2594205 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2401368	0.61	0.80	0.50	0.63	0.45	0.67	0.12
nb:2594205 2401368	0.56	0.80	0.11	0.87	0.33	0.62	0.41
knn:2594205 2401368	0.63	0.46	0.50	0.72	0.52	0.70	0.31
rpart:2594205 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2401368	0.52	1.00	1.00	0.02	0.38	1.00	-16.43
hdda:2594205 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3788643	0.51	0.96	0.50	0.54	0.40	0.64	0.20
nb:2594205 3788643	0.56	0.86	0.04	0.89	0.17	0.60	0.49
knn:2594205 3788643	0.58	0.94	0.61	0.50	0.43	0.68	0.30
rpart:2594205 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3788643	0.52	0.96	0.36	0.63	0.37	0.62	0.61
hdda:2594205 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3219832	0.63	0.86	0.75	0.46	0.46	0.75	0.07
nb:2594205 3219832	0.57	0.86	0.14	0.83	0.33	0.61	0.39
knn:2594205 3219832	0.66	0.94	0.89	0.33	0.45	0.83	0.28
rpart:2594205 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3219832	0.53	1.00	1.00	0.02	0.38	1.00	-0.37
hdda:2594205 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3198757	0.50	0.98	0.50	0.52	0.39	0.63	0.20
nb:2594205 3198757	0.60	0.99	0.07	0.76	0.15	0.57	0.38
knn:2594205 3198757	0.51	1.00	0.64	0.22	0.33	0.50	0.24
rpart:2594205 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3198757	0.58	1.00	1.00	0.02	0.38	1.00	-11.47
hdda:2594205 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3753198	0.51	0.96	0.54	0.52	0.41	0.65	0.21
nb:2594205 3753198	0.50	0.80	0.00	0.93	0.00	0.61	0.60
knn:2594205 3753198	0.57	0.86	0.32	0.72	0.41	0.63	0.43
rpart:2594205 3753198	0.52	0.64	0.07	0.93	0.40	0.62	0.70
svm:2594205 3753198	0.63	1.00	0.61	0.22	0.32	0.48	0.39

hdda:2594205 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2902908	0.58	0.80	0.68	0.52	0.46	0.73	0.14
nb:2594205 2902908	0.54	0.94	0.36	0.65	0.38	0.63	0.34
knn:2594205 2902908	0.66	0.55	0.75	0.54	0.50	0.78	0.30
rpart:2594205 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2902908	0.60	0.55	0.39	0.76	0.50	0.67	1.00
hdda:2594205 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3142559	0.51	0.98	0.29	0.65	0.33	0.60	0.26
nb:2594205 3142559	0.56	1.00	0.29	0.59	0.30	0.57	0.30
knn:2594205 3142559	0.51	0.99	0.64	0.39	0.39	0.64	0.29
rpart:2594205 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2594205 3142559	0.52	1.00	0.93	0.07	0.38	0.60	-0.41
hdda:2594205 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3626882	0.59	0.99	0.18	0.70	0.26	0.58	0.38
nb:2594205 3626882	0.51	0.91	0.32	0.70	0.39	0.63	0.35
knn:2594205 3626882	0.55	1.00	0.79	0.28	0.40	0.68	0.24
rpart:2594205 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3626882	0.55	0.86	0.61	0.54	0.45	0.69	1.00
hdda:2594205 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3433222	0.60	0.28	0.43	0.80	0.57	0.70	0.24
nb:2594205 3433222	0.52	0.73	0.29	0.78	0.44	0.64	0.36
knn:2594205 3433222	0.65	0.80	0.71	0.50	0.47	0.74	0.23
rpart:2594205 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:2594205 3433222	0.66	1.00	0.46	0.30	0.29	0.48	0.74
hdda:2594205 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2991121	0.55	0.99	0.39	0.54	0.34	0.60	0.19
nb:2594205 2991121	0.61	1.00	0.54	0.28	0.31	0.50	0.28
knn:2594205 2991121	0.53	0.98	0.43	0.57	0.38	0.62	0.34
rpart:2594205 2991121	0.55	1.00	0.61	0.26	0.33	0.52	0.25
svm:2594205 2991121	0.66	0.91	0.71	0.46	0.44	0.72	1.00
hdda:2594205 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2959165	0.53	0.86	0.54	0.59	0.44	0.68	0.37

nb:2594205 2959165	0.53	1.00	0.79	0.28	0.40	0.68	0.27
knn:2594205 2959165	0.62	0.73	0.54	0.63	0.47	0.69	0.37
rpart:2594205 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2594205 2959165	0.63	0.94	0.04	0.85	0.13	0.59	16.65
hdda:2594205 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3546559	0.56	0.94	0.21	0.74	0.33	0.61	0.23
nb:2594205 3546559	0.51	0.99	0.50	0.50	0.38	0.62	0.30
knn:2594205 3546559	0.59	0.80	0.46	0.65	0.45	0.67	0.34
rpart:2594205 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3546559	0.54	1.00	0.86	0.20	0.39	0.69	0.47
hdda:2594205 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3020668	0.56	1.00	0.39	0.52	0.33	0.59	0.12
nb:2594205 3020668	0.57	1.00	0.61	0.37	0.37	0.61	0.25
knn:2594205 3020668	0.52	1.00	0.46	0.41	0.33	0.56	0.28
rpart:2594205 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3020668	0.52	1.00	1.00	0.02	0.38	1.00	-0.07
hdda:2594205 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2397811	0.51	0.98	0.43	0.57	0.38	0.62	0.25
nb:2594205 2397811	0.51	0.73	0.00	0.96	0.00	0.61	0.76
knn:2594205 2397811	0.59	0.86	0.57	0.57	0.44	0.68	0.36
rpart:2594205 2397811	0.60	0.36	0.43	0.78	0.55	0.69	0.43
svm:2594205 2397811	0.64	0.64	0.57	0.63	0.48	0.71	1.00
hdda:2594205 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3903427	0.57	0.91	0.21	0.76	0.35	0.61	0.33
nb:2594205 3903427	0.53	0.98	0.18	0.72	0.28	0.59	0.34
knn:2594205 3903427	0.53	0.99	0.29	0.61	0.31	0.58	0.32
rpart:2594205 3903427	0.55	0.96	0.14	0.76	0.27	0.59	0.41
svm:2594205 3903427	0.55	1.00	0.89	0.09	0.37	0.57	-0.05
hdda:2594205 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 2595867	0.52	0.96	0.25	0.70	0.33	0.60	0.31
nb:2594205 2595867	0.56	0.98	0.21	0.70	0.30	0.59	0.36
knn:2594205 2595867	0.61	0.55	0.43	0.74	0.50	0.68	0.37

rpart:2594205 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 2595867	0.56	0.91	0.64	0.50	0.44	0.70	1.00
hdda:2594205 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3068088	0.51	1.00	0.46	0.48	0.35	0.59	0.10
nb:2594205 3068088	0.55	0.94	0.00	0.87	0.00	0.59	0.57
knn:2594205 3068088	0.59	0.96	0.75	0.39	0.43	0.72	0.26
rpart:2594205 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2594205 3068088	0.53	1.00	0.96	0.17	0.42	0.89	0.69
hdda:2594205 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2594205 3487363	0.56	1.00	0.50	0.39	0.33	0.56	0.11
nb:2594205 3487363	0.57	0.99	0.18	0.67	0.25	0.57	0.35
knn:2594205 3487363	0.55	1.00	0.57	0.37	0.36	0.59	0.30
rpart:2594205 3487363	0.52	1.00	0.57	0.33	0.34	0.56	0.26
svm:2594205 3487363	0.60	1.00	0.86	0.24	0.41	0.73	0.81
hdda:4015327 2975719	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2975719	0.51	0.73	0.11	0.89	0.38	0.62	0.52
nb:4015327 2975719	0.55	0.86	0.64	0.52	0.45	0.71	0.36
knn:4015327 2975719	0.51	0.80	0.07	0.89	0.29	0.61	0.53
rpart:4015327 2975719	0.50	0.96	0.29	0.67	0.35	0.61	0.34
svm:4015327 2975719	0.57	1.00	0.82	0.22	0.39	0.67	0.37
hdda:4015327 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3109057	0.54	0.91	0.29	0.72	0.38	0.62	0.45
nb:4015327 3109057	0.58	0.55	0.36	0.78	0.50	0.67	0.39
knn:4015327 3109057	0.53	0.91	0.43	0.63	0.41	0.64	0.38
rpart:4015327 3109057	0.53	0.73	0.25	0.80	0.44	0.64	0.47
svm:4015327 3109057	0.51	1.00	0.82	0.17	0.38	0.62	0.11
hdda:4015327 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 4021820	0.53	0.98	0.54	0.50	0.39	0.64	0.17
nb:4015327 4021820	0.56	0.94	0.57	0.52	0.42	0.67	0.36
knn:4015327 4021820	0.54	0.86	0.50	0.61	0.44	0.67	0.35
rpart:4015327 4021820	0.51	0.91	0.18	0.78	0.33	0.61	0.47

svm:4015327 4021820	0.53	1.00	1.00	0.11	0.41	1.00	-0.76
hdda:4015327 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3577841	0.54	0.73	0.11	0.89	0.38	0.62	0.58
nb:4015327 3577841	0.56	1.00	0.64	0.37	0.38	0.63	0.32
knn:4015327 3577841	0.52	0.98	0.50	0.52	0.39	0.63	0.29
rpart:4015327 3577841	0.57	0.94	0.21	0.74	0.33	0.61	0.43
svm:4015327 3577841	0.51	1.00	1.00	0.07	0.39	1.00	-1.12
hdda:4015327 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3703849	0.52	0.64	0.21	0.85	0.46	0.64	0.42
nb:4015327 3703849	0.61	0.80	0.21	0.80	0.40	0.63	0.41
knn:4015327 3703849	0.57	0.96	0.64	0.46	0.42	0.68	0.29
rpart:4015327 3703849	0.52	0.98	0.32	0.63	0.35	0.60	0.38
svm:4015327 3703849	0.52	1.00	0.79	0.15	0.36	0.54	0.51
hdda:4015327 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2707575	0.52	0.91	0.61	0.52	0.44	0.69	0.28
nb:4015327 2707575	0.52	0.96	0.36	0.63	0.37	0.62	0.36
knn:4015327 2707575	0.56	1.00	0.36	0.52	0.31	0.57	0.33
rpart:4015327 2707575	0.53	0.91	0.25	0.74	0.37	0.62	0.52
svm:4015327 2707575	0.51	0.99	0.71	0.35	0.40	0.67	0.70
hdda:4015327 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2510519	0.59	0.64	0.54	0.65	0.48	0.70	0.35
nb:4015327 2510519	0.51	0.99	0.61	0.43	0.40	0.65	0.39
knn:4015327 2510519	0.60	0.80	0.54	0.61	0.45	0.68	0.36
rpart:4015327 2510519	0.52	0.80	0.39	0.70	0.44	0.65	0.42
svm:4015327 2510519	0.51	1.00	0.82	0.15	0.37	0.58	0.23
hdda:4015327 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3530890	0.55	0.64	0.14	0.89	0.44	0.63	0.44
nb:4015327 3530890	0.60	0.64	0.75	0.52	0.49	0.77	0.34
knn:4015327 3530890	0.52	0.55	0.32	0.80	0.50	0.66	0.50
rpart:4015327 3530890	0.52	0.86	0.18	0.80	0.36	0.62	0.54
svm:4015327 3530890	0.58	1.00	0.82	0.22	0.39	0.67	0.47

hdda:4015327 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3769569	0.54	0.91	0.21	0.76	0.35	0.61	0.39
nb:4015327 3769569	0.66	0.64	0.57	0.63	0.48	0.71	0.35
knn:4015327 3769569	0.58	0.73	0.82	0.46	0.48	0.81	0.28
rpart:4015327 3769569	0.54	0.96	0.21	0.72	0.32	0.60	0.43
svm:4015327 3769569	0.58	1.00	0.82	0.17	0.38	0.62	0.44
hdda:4015327 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3544035	0.51	0.94	0.57	0.52	0.42	0.67	0.20
nb:4015327 3544035	0.52	0.99	0.61	0.41	0.39	0.63	0.34
knn:4015327 3544035	0.50	1.00	0.61	0.39	0.38	0.62	0.31
rpart:4015327 3544035	0.52	0.73	0.21	0.83	0.43	0.63	0.44
svm:4015327 3544035	0.54	1.00	0.75	0.22	0.37	0.59	0.65
hdda:4015327 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2790378	0.51	0.73	0.11	0.89	0.38	0.62	0.46
nb:4015327 2790378	0.59	0.80	0.46	0.65	0.45	0.67	0.36
knn:4015327 2790378	0.52	0.99	0.54	0.46	0.38	0.62	0.28
rpart:4015327 2790378	0.50	0.73	0.11	0.89	0.38	0.62	0.53
svm:4015327 2790378	0.56	1.00	0.82	0.13	0.37	0.55	-1.04
hdda:4015327 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2625670	0.51	0.91	0.18	0.78	0.33	0.61	0.33
nb:4015327 2625670	0.55	0.98	0.75	0.37	0.42	0.71	0.29
knn:4015327 2625670	0.55	0.99	0.61	0.43	0.40	0.65	0.29
rpart:4015327 2625670	0.50	0.96	0.29	0.67	0.35	0.61	0.34
svm:4015327 2625670	0.57	1.00	1.00	0.07	0.39	1.00	-2.94
hdda:4015327 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3646405	0.54	0.73	0.11	0.89	0.38	0.62	0.49
nb:4015327 3646405	0.55	0.86	0.57	0.57	0.44	0.68	0.36
knn:4015327 3646405	0.50	0.99	0.32	0.61	0.33	0.60	0.36
rpart:4015327 3646405	0.52	0.96	0.29	0.67	0.35	0.61	0.39
svm:4015327 3646405	0.54	1.00	0.75	0.22	0.37	0.59	0.71
hdda:4015327 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2918654	0.53	0.73	0.11	0.89	0.38	0.62	0.67

nb:4015327 2918654	0.55	0.86	0.46	0.63	0.43	0.66	0.36
knn:4015327 2918654	0.59	0.64	0.18	0.87	0.45	0.63	0.45
rpart:4015327 2918654	0.50	0.96	0.29	0.67	0.35	0.61	0.34
svm:4015327 2918654	0.57	1.00	0.93	0.11	0.39	0.71	-0.26
hdda:4015327 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2663553	0.54	0.73	0.11	0.89	0.38	0.62	0.49
nb:4015327 2663553	0.55	1.00	0.64	0.35	0.38	0.62	0.34
knn:4015327 2663553	0.51	0.96	0.46	0.57	0.39	0.63	0.32
rpart:4015327 2663553	0.55	0.94	0.36	0.65	0.38	0.63	0.47
svm:4015327 2663553	0.55	1.00	0.93	0.04	0.37	0.50	-0.43
hdda:4015327 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3103484	0.51	0.99	0.50	0.50	0.38	0.62	0.13
nb:4015327 3103484	0.54	0.86	0.36	0.70	0.42	0.64	0.38
knn:4015327 3103484	0.50	0.94	0.11	0.80	0.25	0.60	0.48
rpart:4015327 3103484	0.52	0.98	0.32	0.63	0.35	0.60	0.38
svm:4015327 3103484	0.50	1.00	0.86	0.20	0.39	0.69	0.39
hdda:4015327 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2757491	0.51	0.73	0.11	0.89	0.38	0.62	0.62
nb:4015327 2757491	0.58	0.98	0.61	0.46	0.40	0.66	0.34
knn:4015327 2757491	0.62	0.80	0.86	0.41	0.47	0.83	0.31
rpart:4015327 2757491	0.52	0.96	0.29	0.67	0.35	0.61	0.50
svm:4015327 2757491	0.51	1.00	0.79	0.13	0.35	0.50	0.35
hdda:4015327 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2401368	0.61	0.91	0.61	0.52	0.44	0.69	0.10
nb:4015327 2401368	0.60	0.46	0.36	0.80	0.53	0.67	0.34
knn:4015327 2401368	0.53	1.00	0.36	0.54	0.32	0.58	0.32
rpart:4015327 2401368	0.54	0.94	0.18	0.76	0.31	0.60	0.42
svm:4015327 2401368	0.55	1.00	0.96	0.00	0.37	0.00	-1.66
hdda:4015327 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3788643	0.52	0.98	0.54	0.50	0.39	0.64	0.13
nb:4015327 3788643	0.55	0.91	0.46	0.61	0.42	0.65	0.35
knn:4015327 3788643	0.59	0.80	0.64	0.54	0.46	0.71	0.27

rpart:4015327 3788643	0.50	0.73	0.11	0.89	0.38	0.62	0.53
svm:4015327 3788643	0.53	1.00	0.96	0.11	0.40	0.83	0.25
hdda:4015327 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3219832	0.57	0.64	0.14	0.89	0.44	0.63	0.43
nb:4015327 3219832	0.60	0.64	0.32	0.78	0.47	0.65	0.37
knn:4015327 3219832	0.63	0.55	0.57	0.65	0.50	0.71	0.32
rpart:4015327 3219832	0.57	0.86	0.39	0.67	0.42	0.65	0.34
svm:4015327 3219832	0.69	1.00	0.79	0.07	0.34	0.33	1.00
hdda:4015327 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3198757	0.58	0.46	0.21	0.89	0.55	0.65	0.39
nb:4015327 3198757	0.55	0.96	0.21	0.72	0.32	0.60	0.32
knn:4015327 3198757	0.51	1.00	0.64	0.26	0.35	0.55	0.26
rpart:4015327 3198757	0.52	0.96	0.29	0.67	0.35	0.61	0.39
svm:4015327 3198757	0.53	1.00	0.79	0.15	0.36	0.54	0.49
hdda:4015327 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3753198	0.51	0.99	0.50	0.50	0.38	0.62	0.19
nb:4015327 3753198	0.57	0.98	0.39	0.59	0.37	0.61	0.35
knn:4015327 3753198	0.54	0.46	0.61	0.65	0.52	0.73	0.35
rpart:4015327 3753198	0.52	0.98	0.32	0.63	0.35	0.60	0.38
svm:4015327 3753198	0.63	0.73	0.00	0.96	0.00	0.61	46.57
hdda:4015327 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2902908	0.54	0.73	0.11	0.89	0.38	0.62	0.46
nb:4015327 2902908	0.58	0.86	0.32	0.72	0.41	0.63	0.41
knn:4015327 2902908	0.52	0.46	0.18	0.91	0.56	0.65	0.50
rpart:4015327 2902908	0.54	0.94	0.18	0.76	0.31	0.60	0.42
svm:4015327 2902908	0.56	1.00	0.86	0.07	0.36	0.43	-0.51
hdda:4015327 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3142559	0.55	0.99	0.29	0.63	0.32	0.59	0.35
nb:4015327 3142559	0.51	0.99	0.29	0.63	0.32	0.59	0.34
knn:4015327 3142559	0.59	0.99	0.29	0.63	0.32	0.59	0.35
rpart:4015327 3142559	0.52	0.91	0.18	0.78	0.33	0.61	0.55

svm:4015327 3142559	0.54	0.94	0.75	0.41	0.44	0.73	0.42
hdda:4015327 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3626882	0.52	0.91	0.46	0.61	0.42	0.65	0.20
nb:4015327 3626882	0.57	0.80	0.50	0.63	0.45	0.67	0.35
knn:4015327 3626882	0.54	0.86	0.32	0.72	0.41	0.63	0.37
rpart:4015327 3626882	0.51	0.80	0.36	0.72	0.43	0.65	0.32
svm:4015327 3626882	0.53	1.00	0.96	0.07	0.39	0.75	-2.88
hdda:4015327 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3433222	0.57	0.36	0.54	0.72	0.54	0.72	0.23
nb:4015327 3433222	0.61	0.64	0.54	0.65	0.48	0.70	0.35
knn:4015327 3433222	0.63	0.46	0.36	0.80	0.53	0.67	0.37
rpart:4015327 3433222	0.50	0.73	0.11	0.89	0.38	0.62	0.53
svm:4015327 3433222	0.53	1.00	0.89	0.04	0.36	0.40	-0.65
hdda:4015327 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2991121	0.58	0.73	0.11	0.89	0.38	0.62	0.58
nb:4015327 2991121	0.53	1.00	0.50	0.46	0.36	0.60	0.34
knn:4015327 2991121	0.53	0.96	0.46	0.57	0.39	0.63	0.34
rpart:4015327 2991121	0.52	0.98	0.32	0.63	0.35	0.60	0.38
svm:4015327 2991121	0.51	1.00	0.79	0.22	0.38	0.63	0.38
hdda:4015327 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2959165	0.50	1.00	0.57	0.41	0.37	0.61	0.16
nb:4015327 2959165	0.52	1.00	0.39	0.46	0.31	0.55	0.37
knn:4015327 2959165	0.51	1.00	0.68	0.35	0.39	0.64	0.26
rpart:4015327 2959165	0.56	0.80	0.46	0.65	0.45	0.67	0.38
svm:4015327 2959165	0.54	1.00	0.86	0.11	0.37	0.56	-0.04
hdda:4015327 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3546559	0.53	0.99	0.46	0.52	0.37	0.62	0.14
nb:4015327 3546559	0.57	0.96	0.82	0.35	0.43	0.76	0.28
knn:4015327 3546559	0.56	0.94	0.50	0.57	0.41	0.65	0.33
rpart:4015327 3546559	0.54	0.80	0.18	0.83	0.38	0.62	0.43
svm:4015327 3546559	0.54	1.00	0.96	0.09	0.39	0.80	0.00

hdda:4015327 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3020668	0.54	0.55	0.18	0.89	0.50	0.64	0.43
nb:4015327 3020668	0.50	1.00	0.64	0.35	0.38	0.62	0.27
knn:4015327 3020668	0.54	0.94	0.21	0.74	0.33	0.61	0.40
rpart:4015327 3020668	0.51	0.80	0.21	0.80	0.40	0.63	0.58
svm:4015327 3020668	0.52	1.00	0.61	0.28	0.34	0.54	0.77
hdda:4015327 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2397811	0.51	0.96	0.29	0.67	0.35	0.61	0.24
nb:4015327 2397811	0.55	0.94	0.54	0.54	0.42	0.66	0.37
knn:4015327 2397811	0.51	0.98	0.64	0.43	0.41	0.67	0.31
rpart:4015327 2397811	0.50	0.96	0.29	0.67	0.35	0.61	0.34
svm:4015327 2397811	0.54	1.00	0.82	0.13	0.37	0.55	0.04
hdda:4015327 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3903427	0.58	1.00	0.25	0.57	0.26	0.55	0.31
nb:4015327 3903427	0.51	0.96	0.32	0.65	0.36	0.61	0.35
knn:4015327 3903427	0.51	0.94	0.32	0.67	0.38	0.62	0.37
rpart:4015327 3903427	0.55	0.86	0.11	0.85	0.30	0.61	0.54
svm:4015327 3903427	0.54	1.00	0.79	0.15	0.36	0.54	0.24
hdda:4015327 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 2595867	0.53	0.80	0.25	0.78	0.41	0.63	0.50
nb:4015327 2595867	0.53	0.55	0.25	0.85	0.50	0.65	0.43
knn:4015327 2595867	0.56	0.80	0.43	0.67	0.44	0.66	0.37
rpart:4015327 2595867	0.53	0.98	0.36	0.61	0.36	0.61	0.37
svm:4015327 2595867	0.65	1.00	0.75	0.15	0.35	0.50	0.24
hdda:4015327 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3068088	0.54	0.73	0.11	0.89	0.38	0.62	0.61
nb:4015327 3068088	0.53	0.99	0.25	0.65	0.30	0.59	0.37
knn:4015327 3068088	0.52	0.91	0.39	0.65	0.41	0.64	0.34
rpart:4015327 3068088	0.50	0.96	0.29	0.67	0.35	0.61	0.34
svm:4015327 3068088	0.50	1.00	0.86	0.11	0.37	0.56	0.49
hdda:4015327 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4015327 3487363	0.51	0.99	0.39	0.54	0.34	0.60	0.18

nb:4015327 3487363	0.52	0.99	0.32	0.61	0.33	0.60	0.36
knn:4015327 3487363	0.51	0.99	0.57	0.46	0.39	0.64	0.27
rpart:4015327 3487363	0.50	0.73	0.11	0.89	0.38	0.62	0.53
svm:4015327 3487363	0.54	1.00	0.75	0.22	0.37	0.59	0.39
hdda:2975719 3109057	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3109057	0.53	1.00	0.75	0.28	0.39	0.65	0.09
nb:2975719 3109057	0.56	0.91	0.50	0.59	0.42	0.66	0.35
knn:2975719 3109057	0.51	1.00	0.68	0.35	0.39	0.64	0.35
rpart:2975719 3109057	0.52	0.94	0.39	0.63	0.39	0.63	0.43
svm:2975719 3109057	0.56	1.00	0.54	0.39	0.35	0.58	1.00
hdda:2975719 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 4021820	0.57	0.86	0.32	0.72	0.41	0.63	0.28
nb:2975719 4021820	0.54	0.96	0.57	0.50	0.41	0.66	0.37
knn:2975719 4021820	0.59	0.73	0.43	0.70	0.46	0.67	0.38
rpart:2975719 4021820	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:2975719 4021820	0.54	1.00	0.75	0.24	0.38	0.61	0.64
hdda:2975719 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3577841	0.51	0.73	0.18	0.85	0.42	0.63	0.22
nb:2975719 3577841	0.50	1.00	0.71	0.33	0.39	0.65	0.32
knn:2975719 3577841	0.50	0.99	0.43	0.54	0.36	0.61	0.35
rpart:2975719 3577841	0.50	0.80	0.11	0.87	0.33	0.62	0.43
svm:2975719 3577841	0.51	1.00	0.57	0.39	0.36	0.60	0.89
hdda:2975719 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3703849	0.56	0.73	0.43	0.70	0.46	0.67	0.21
nb:2975719 3703849	0.55	0.46	0.50	0.72	0.52	0.70	0.37
knn:2975719 3703849	0.53	0.98	0.50	0.52	0.39	0.63	0.38
rpart:2975719 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3703849	0.54	1.00	0.61	0.30	0.35	0.56	0.80
hdda:2975719 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2707575	0.55	0.94	0.36	0.65	0.38	0.63	0.36
nb:2975719 2707575	0.52	0.96	0.25	0.70	0.33	0.60	0.38
knn:2975719 2707575	0.52	0.99	0.57	0.46	0.39	0.64	0.35

rpart:2975719 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2975719 2707575	0.52	1.00	0.96	0.11	0.40	0.83	0.95
hdda:2975719 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2510519	0.64	0.64	0.57	0.63	0.48	0.71	0.33
nb:2975719 2510519	0.53	1.00	0.61	0.37	0.37	0.61	0.41
knn:2975719 2510519	0.52	0.98	0.39	0.59	0.37	0.61	0.41
rpart:2975719 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2510519	0.57	1.00	0.75	0.15	0.35	0.50	-0.11
hdda:2975719 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3530890	0.73	0.20	0.61	0.72	0.57	0.75	0.36
nb:2975719 3530890	0.57	0.80	0.71	0.50	0.47	0.74	0.35
knn:2975719 3530890	0.54	0.94	0.57	0.52	0.42	0.67	0.39
rpart:2975719 3530890	0.56	0.64	0.36	0.76	0.48	0.66	0.39
svm:2975719 3530890	0.61	1.00	0.68	0.15	0.33	0.44	-0.01
hdda:2975719 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3769569	0.65	0.73	0.61	0.59	0.47	0.71	0.18
nb:2975719 3769569	0.62	0.91	0.46	0.61	0.42	0.65	0.37
knn:2975719 3769569	0.57	0.96	0.43	0.59	0.39	0.63	0.40
rpart:2975719 3769569	0.61	0.80	0.57	0.59	0.46	0.69	0.35
svm:2975719 3769569	0.63	1.00	0.46	0.37	0.31	0.53	1.00
hdda:2975719 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3544035	0.59	0.86	0.50	0.61	0.44	0.67	0.31
nb:2975719 3544035	0.51	1.00	0.71	0.28	0.38	0.62	0.30
knn:2975719 3544035	0.52	0.94	0.29	0.70	0.36	0.62	0.41
rpart:2975719 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3544035	0.53	1.00	0.86	0.11	0.37	0.56	0.34
hdda:2975719 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2790378	0.57	0.73	0.57	0.61	0.47	0.70	0.15
nb:2975719 2790378	0.60	0.99	0.75	0.35	0.41	0.70	0.33
knn:2975719 2790378	0.53	1.00	0.79	0.26	0.39	0.67	0.29
rpart:2975719 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2975719 2790378	0.63	1.00	0.96	0.07	0.39	0.75	0.21
hdda:2975719 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2625670	0.61	0.96	0.89	0.30	0.44	0.82	0.14
nb:2975719 2625670	0.58	0.98	0.71	0.39	0.42	0.69	0.31
knn:2975719 2625670	0.56	0.94	0.79	0.39	0.44	0.75	0.32
rpart:2975719 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2625670	0.54	0.80	0.14	0.85	0.36	0.62	1.04
hdda:2975719 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3646405	0.59	0.96	0.64	0.46	0.42	0.68	0.23
nb:2975719 3646405	0.54	0.99	0.82	0.30	0.42	0.74	0.33
knn:2975719 3646405	0.60	0.96	0.64	0.46	0.42	0.68	0.38
rpart:2975719 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3646405	0.57	1.00	0.46	0.41	0.33	0.56	0.94
hdda:2975719 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2918654	0.52	0.28	0.36	0.85	0.59	0.68	0.46
nb:2975719 2918654	0.51	0.99	0.61	0.43	0.40	0.65	0.34
knn:2975719 2918654	0.51	1.00	0.54	0.43	0.37	0.61	0.35
rpart:2975719 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2918654	0.54	1.00	0.57	0.41	0.37	0.61	0.45
hdda:2975719 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2663553	0.57	0.94	0.46	0.59	0.41	0.64	0.19
nb:2975719 2663553	0.54	1.00	0.57	0.33	0.34	0.56	0.37
knn:2975719 2663553	0.53	0.96	0.64	0.46	0.42	0.68	0.35
rpart:2975719 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2663553	0.58	0.99	0.82	0.30	0.42	0.74	0.89
hdda:2975719 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3103484	0.55	0.73	0.43	0.70	0.46	0.67	0.29
nb:2975719 3103484	0.52	0.98	0.25	0.67	0.32	0.60	0.39
knn:2975719 3103484	0.57	0.98	0.18	0.72	0.28	0.59	0.42
rpart:2975719 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:2975719 3103484	0.51	1.00	0.75	0.24	0.38	0.61	0.64

hdda:2975719 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2757491	0.67	0.64	0.36	0.76	0.48	0.66	0.23
nb:2975719 2757491	0.54	1.00	0.79	0.28	0.40	0.68	0.34
knn:2975719 2757491	0.61	0.64	0.68	0.57	0.49	0.74	0.39
rpart:2975719 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2757491	0.66	0.96	0.86	0.33	0.44	0.79	1.00
hdda:2975719 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2401368	0.71	0.06	0.54	0.83	0.65	0.75	0.16
nb:2975719 2401368	0.63	0.99	0.82	0.30	0.42	0.74	0.28
knn:2975719 2401368	0.61	0.99	0.71	0.35	0.40	0.67	0.31
rpart:2975719 2401368	0.70	0.06	0.57	0.80	0.64	0.76	0.32
svm:2975719 2401368	0.60	1.00	0.93	0.02	0.37	0.33	0.93
hdda:2975719 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3788643	0.65	0.55	0.39	0.76	0.50	0.67	0.43
nb:2975719 3788643	0.51	1.00	0.57	0.41	0.37	0.61	0.34
knn:2975719 3788643	0.61	0.80	0.43	0.67	0.44	0.66	0.37
rpart:2975719 3788643	0.61	0.55	0.18	0.89	0.50	0.64	0.57
svm:2975719 3788643	0.52	1.00	0.79	0.26	0.39	0.67	0.23
hdda:2975719 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3219832	0.73	0.02	0.57	0.85	0.70	0.76	0.18
nb:2975719 3219832	0.57	0.46	0.11	0.96	0.60	0.64	0.53
knn:2975719 3219832	0.67	0.46	0.61	0.65	0.52	0.73	0.34
rpart:2975719 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3219832	0.75	1.00	0.50	0.20	0.27	0.39	0.78
hdda:2975719 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3198757	0.51	0.73	0.54	0.63	0.47	0.69	0.15
nb:2975719 3198757	0.55	0.91	0.07	0.85	0.22	0.60	0.44
knn:2975719 3198757	0.51	0.96	0.54	0.52	0.41	0.65	0.37
rpart:2975719 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3198757	0.51	0.99	0.46	0.50	0.36	0.61	1.00
hdda:2975719 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3753198	0.61	0.55	0.57	0.65	0.50	0.71	0.33

nb:2975719 3753198	0.55	1.00	0.68	0.33	0.38	0.63	0.32
knn:2975719 3753198	0.54	0.96	0.61	0.48	0.41	0.67	0.33
rpart:2975719 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3753198	0.63	0.80	0.00	0.93	0.00	0.61	8.53
hdda:2975719 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2902908	0.63	0.55	0.39	0.76	0.50	0.67	0.39
nb:2975719 2902908	0.55	0.94	0.25	0.72	0.35	0.61	0.41
knn:2975719 2902908	0.57	0.86	0.21	0.78	0.38	0.62	0.45
rpart:2975719 2902908	0.60	0.80	0.32	0.74	0.43	0.64	0.46
svm:2975719 2902908	0.63	1.00	0.82	0.20	0.38	0.64	0.11
hdda:2975719 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3142559	0.51	0.91	0.25	0.74	0.37	0.62	0.31
nb:2975719 3142559	0.54	0.94	0.21	0.74	0.33	0.61	0.40
knn:2975719 3142559	0.54	0.96	0.11	0.78	0.23	0.59	0.50
rpart:2975719 3142559	0.52	0.80	0.18	0.83	0.38	0.62	0.51
svm:2975719 3142559	0.53	1.00	0.89	0.22	0.41	0.77	0.25
hdda:2975719 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3626882	0.57	0.96	0.07	0.80	0.18	0.59	0.37
nb:2975719 3626882	0.52	0.86	0.32	0.72	0.41	0.63	0.40
knn:2975719 3626882	0.54	0.91	0.36	0.67	0.40	0.63	0.37
rpart:2975719 3626882	0.53	0.98	0.11	0.76	0.21	0.58	0.52
svm:2975719 3626882	0.53	1.00	0.86	0.20	0.39	0.69	0.58
hdda:2975719 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3433222	0.65	0.28	0.39	0.83	0.58	0.69	0.34
nb:2975719 3433222	0.57	0.36	0.36	0.83	0.56	0.68	0.39
knn:2975719 3433222	0.52	0.94	0.25	0.72	0.35	0.61	0.42
rpart:2975719 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:2975719 3433222	0.62	1.00	0.61	0.22	0.32	0.48	0.55
hdda:2975719 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2991121	0.52	1.00	0.50	0.46	0.36	0.60	0.17
nb:2975719 2991121	0.58	1.00	0.54	0.39	0.35	0.58	0.33
knn:2975719 2991121	0.53	1.00	0.64	0.37	0.38	0.63	0.31

rpart:2975719 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2991121	0.51	1.00	0.68	0.30	0.37	0.61	0.71
hdda:2975719 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2959165	0.55	0.86	0.54	0.59	0.44	0.68	0.39
nb:2975719 2959165	0.50	1.00	0.82	0.22	0.39	0.67	0.29
knn:2975719 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.39
rpart:2975719 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2975719 2959165	0.50	1.00	0.32	0.57	0.31	0.58	1.00
hdda:2975719 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3546559	0.54	0.73	0.21	0.83	0.43	0.63	0.30
nb:2975719 3546559	0.56	0.94	0.50	0.57	0.41	0.65	0.34
knn:2975719 3546559	0.52	0.91	0.57	0.54	0.43	0.68	0.35
rpart:2975719 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3546559	0.52	1.00	0.82	0.17	0.38	0.62	0.16
hdda:2975719 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3020668	0.53	0.80	0.29	0.76	0.42	0.64	0.27
nb:2975719 3020668	0.53	1.00	0.68	0.30	0.37	0.61	0.24
knn:2975719 3020668	0.54	0.96	0.18	0.74	0.29	0.60	0.50
rpart:2975719 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3020668	0.54	1.00	0.86	0.22	0.40	0.71	0.21
hdda:2975719 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2397811	0.54	0.80	0.68	0.52	0.46	0.73	0.18
nb:2975719 2397811	0.51	0.94	0.75	0.41	0.44	0.73	0.36
knn:2975719 2397811	0.51	0.98	0.43	0.57	0.38	0.62	0.40
rpart:2975719 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2397811	0.54	0.98	0.43	0.57	0.38	0.62	1.00
hdda:2975719 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3903427	0.59	0.73	0.61	0.59	0.47	0.71	0.23
nb:2975719 3903427	0.51	0.94	0.11	0.80	0.25	0.60	0.42
knn:2975719 3903427	0.51	0.96	0.18	0.74	0.29	0.60	0.41
rpart:2975719 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2975719 3903427	0.50	1.00	0.54	0.41	0.36	0.59	1.00
hdda:2975719 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 2595867	0.51	0.64	0.25	0.83	0.47	0.64	0.34
nb:2975719 2595867	0.53	0.80	0.25	0.78	0.41	0.63	0.41
knn:2975719 2595867	0.52	0.80	0.21	0.80	0.40	0.63	0.45
rpart:2975719 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 2595867	0.53	1.00	0.79	0.15	0.36	0.54	0.15
hdda:2975719 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3068088	0.52	0.91	0.36	0.67	0.40	0.63	0.18
nb:2975719 3068088	0.57	1.00	0.64	0.33	0.37	0.60	0.34
knn:2975719 3068088	0.52	1.00	0.61	0.28	0.34	0.54	0.34
rpart:2975719 3068088	0.61	0.46	0.32	0.83	0.53	0.67	0.43
svm:2975719 3068088	0.55	1.00	0.25	0.57	0.26	0.55	1.00
hdda:2975719 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2975719 3487363	0.51	0.99	0.39	0.57	0.35	0.60	0.18
nb:2975719 3487363	0.55	0.99	0.14	0.72	0.24	0.58	0.42
knn:2975719 3487363	0.55	0.55	0.25	0.85	0.50	0.65	0.44
rpart:2975719 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2975719 3487363	0.52	0.91	0.43	0.63	0.41	0.64	0.60
hdda:3109057 4021820	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 4021820	0.51	0.64	0.36	0.76	0.48	0.66	0.41
nb:3109057 4021820	0.59	0.64	0.39	0.74	0.48	0.67	0.38
knn:3109057 4021820	0.51	1.00	0.68	0.35	0.39	0.64	0.30
rpart:3109057 4021820	0.54	1.00	0.79	0.24	0.39	0.65	0.20
svm:3109057 4021820	0.61	0.99	0.75	0.33	0.40	0.68	0.32
hdda:3109057 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3577841	0.57	0.99	0.54	0.48	0.38	0.63	0.20
nb:3109057 3577841	0.56	0.80	0.39	0.70	0.44	0.65	0.35
knn:3109057 3577841	0.50	1.00	0.57	0.41	0.37	0.61	0.32
rpart:3109057 3577841	0.53	1.00	0.79	0.24	0.39	0.65	0.18
svm:3109057 3577841	0.53	1.00	0.82	0.20	0.38	0.64	0.30

hdda:3109057 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3703849	0.53	0.99	0.46	0.52	0.37	0.62	0.33
nb:3109057 3703849	0.61	0.55	0.43	0.74	0.50	0.68	0.37
knn:3109057 3703849	0.54	0.96	0.57	0.50	0.41	0.66	0.30
rpart:3109057 3703849	0.51	0.91	0.32	0.70	0.39	0.63	0.44
svm:3109057 3703849	0.58	0.80	0.07	0.89	0.29	0.61	3.32
hdda:3109057 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2707575	0.51	0.73	0.46	0.67	0.46	0.67	0.39
nb:3109057 2707575	0.52	0.86	0.43	0.65	0.43	0.65	0.34
knn:3109057 2707575	0.50	0.94	0.36	0.65	0.38	0.63	0.40
rpart:3109057 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:3109057 2707575	0.58	1.00	0.75	0.22	0.37	0.59	0.19
hdda:3109057 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2510519	0.53	1.00	0.50	0.46	0.36	0.60	0.40
nb:3109057 2510519	0.55	0.55	0.39	0.76	0.50	0.67	0.43
knn:3109057 2510519	0.50	0.98	0.43	0.57	0.38	0.62	0.50
rpart:3109057 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3109057 2510519	0.62	1.00	0.50	0.30	0.30	0.50	1.00
hdda:3109057 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3530890	0.60	0.46	0.46	0.74	0.52	0.69	0.34
nb:3109057 3530890	0.63	0.73	0.71	0.52	0.48	0.75	0.31
knn:3109057 3530890	0.65	0.55	0.61	0.63	0.50	0.73	0.40
rpart:3109057 3530890	0.59	0.64	0.54	0.65	0.48	0.70	0.44
svm:3109057 3530890	0.62	1.00	0.43	0.37	0.29	0.52	0.82
hdda:3109057 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3769569	0.53	0.99	0.57	0.46	0.39	0.64	0.24
nb:3109057 3769569	0.61	0.64	0.46	0.70	0.48	0.68	0.36
knn:3109057 3769569	0.54	0.94	0.50	0.57	0.41	0.65	0.38
rpart:3109057 3769569	0.51	0.99	0.54	0.48	0.38	0.63	0.42
svm:3109057 3769569	0.54	1.00	0.86	0.11	0.37	0.56	0.25
hdda:3109057 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3544035	0.53	0.91	0.46	0.61	0.42	0.65	0.33

nb:3109057 3544035	0.53	0.99	0.54	0.46	0.38	0.62	0.32
knn:3109057 3544035	0.58	0.80	0.39	0.70	0.44	0.65	0.50
rpart:3109057 3544035	0.52	0.91	0.32	0.70	0.39	0.63	0.53
svm:3109057 3544035	0.53	1.00	0.61	0.35	0.36	0.59	1.00
hdda:3109057 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2790378	0.57	1.00	0.32	0.48	0.27	0.54	0.40
nb:3109057 2790378	0.63	0.36	0.50	0.74	0.54	0.71	0.36
knn:3109057 2790378	0.53	1.00	0.61	0.35	0.36	0.59	0.17
rpart:3109057 2790378	0.52	0.99	0.75	0.33	0.40	0.68	0.26
svm:3109057 2790378	0.64	1.00	0.93	0.15	0.40	0.78	0.16
hdda:3109057 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2625670	0.53	1.00	0.79	0.24	0.39	0.65	0.07
nb:3109057 2625670	0.59	0.94	0.82	0.37	0.44	0.77	0.23
knn:3109057 2625670	0.56	0.98	0.54	0.50	0.39	0.64	0.34
rpart:3109057 2625670	0.52	0.99	0.75	0.33	0.40	0.68	0.26
svm:3109057 2625670	0.51	0.91	0.18	0.78	0.33	0.61	1.29
hdda:3109057 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3646405	0.54	1.00	0.64	0.35	0.38	0.62	0.25
nb:3109057 3646405	0.57	0.73	0.36	0.74	0.45	0.65	0.38
knn:3109057 3646405	0.53	0.96	0.61	0.48	0.41	0.67	0.30
rpart:3109057 3646405	0.56	0.96	0.64	0.46	0.42	0.68	0.35
svm:3109057 3646405	0.51	1.00	1.00	0.04	0.39	1.00	0.14
hdda:3109057 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2918654	0.54	0.98	0.68	0.41	0.41	0.68	0.27
nb:3109057 2918654	0.56	0.73	0.46	0.67	0.46	0.67	0.34
knn:3109057 2918654	0.55	0.80	0.57	0.59	0.46	0.69	0.32
rpart:3109057 2918654	0.56	0.64	0.43	0.72	0.48	0.67	0.44
svm:3109057 2918654	0.55	0.99	0.50	0.48	0.37	0.61	0.65
hdda:3109057 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2663553	0.53	0.99	0.57	0.43	0.38	0.63	0.34
nb:3109057 2663553	0.57	0.36	0.46	0.76	0.54	0.70	0.38
knn:3109057 2663553	0.54	0.99	0.54	0.46	0.38	0.62	0.34

rpart:3109057 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3109057 2663553	0.52	1.00	0.86	0.20	0.39	0.69	0.08
hdda:3109057 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3103484	0.51	0.99	0.36	0.59	0.34	0.60	0.32
nb:3109057 3103484	0.58	0.86	0.57	0.57	0.44	0.68	0.32
knn:3109057 3103484	0.51	0.96	0.32	0.65	0.36	0.61	0.50
rpart:3109057 3103484	0.50	1.00	0.79	0.24	0.39	0.65	0.19
svm:3109057 3103484	0.63	0.64	0.86	0.46	0.49	0.84	0.06
hdda:3109057 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2757491	0.62	0.73	0.54	0.63	0.47	0.69	0.30
nb:3109057 2757491	0.60	0.80	0.54	0.61	0.45	0.68	0.34
knn:3109057 2757491	0.59	0.86	0.54	0.59	0.44	0.68	0.42
rpart:3109057 2757491	0.56	1.00	0.79	0.24	0.39	0.65	0.20
svm:3109057 2757491	0.53	0.86	0.04	0.89	0.17	0.60	1.43
hdda:3109057 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2401368	0.55	0.91	0.50	0.59	0.42	0.66	0.30
nb:3109057 2401368	0.65	0.46	0.50	0.72	0.52	0.70	0.30
knn:3109057 2401368	0.65	0.46	0.54	0.70	0.52	0.71	0.34
rpart:3109057 2401368	0.64	1.00	0.79	0.24	0.39	0.65	0.18
svm:3109057 2401368	0.66	1.00	0.43	0.33	0.28	0.48	1.00
hdda:3109057 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3788643	0.52	0.98	0.54	0.50	0.39	0.64	0.29
nb:3109057 3788643	0.57	0.86	0.39	0.67	0.42	0.65	0.34
knn:3109057 3788643	0.58	0.86	0.61	0.54	0.45	0.69	0.30
rpart:3109057 3788643	0.54	1.00	0.79	0.24	0.39	0.65	0.20
svm:3109057 3788643	0.56	1.00	0.71	0.24	0.36	0.58	0.76
hdda:3109057 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3219832	0.65	0.36	0.54	0.72	0.54	0.72	0.23
nb:3109057 3219832	0.64	0.64	0.50	0.67	0.48	0.69	0.33
knn:3109057 3219832	0.71	0.46	0.82	0.52	0.51	0.83	0.33
rpart:3109057 3219832	0.64	1.00	0.79	0.24	0.39	0.65	0.19

svm:3109057 3219832	0.59	1.00	0.57	0.24	0.31	0.48	0.50
hdda:3109057 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3198757	0.53	0.99	0.46	0.50	0.36	0.61	0.29
nb:3109057 3198757	0.50	0.99	0.25	0.63	0.29	0.58	0.31
knn:3109057 3198757	0.56	1.00	0.50	0.41	0.34	0.58	0.35
rpart:3109057 3198757	0.52	1.00	0.79	0.24	0.39	0.65	0.21
svm:3109057 3198757	0.60	0.91	0.39	0.65	0.41	0.64	1.00
hdda:3109057 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3753198	0.55	0.94	0.54	0.54	0.42	0.66	0.33
nb:3109057 3753198	0.57	0.46	0.32	0.83	0.53	0.67	0.37
knn:3109057 3753198	0.64	0.36	0.50	0.74	0.54	0.71	0.50
rpart:3109057 3753198	0.58	0.46	0.43	0.76	0.52	0.69	0.47
svm:3109057 3753198	0.65	1.00	0.43	0.37	0.29	0.52	0.47
hdda:3109057 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2902908	0.57	0.36	0.50	0.74	0.54	0.71	0.37
nb:3109057 2902908	0.58	0.91	0.54	0.57	0.43	0.67	0.35
knn:3109057 2902908	0.51	0.98	0.54	0.50	0.39	0.64	0.30
rpart:3109057 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3109057 2902908	0.58	1.00	0.86	0.11	0.37	0.56	0.87
hdda:3109057 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3142559	0.53	0.91	0.18	0.78	0.33	0.61	0.45
nb:3109057 3142559	0.52	0.98	0.39	0.59	0.37	0.61	0.30
knn:3109057 3142559	0.53	0.91	0.39	0.65	0.41	0.64	0.39
rpart:3109057 3142559	0.52	0.96	0.18	0.74	0.29	0.60	0.47
svm:3109057 3142559	0.56	0.99	0.89	0.24	0.42	0.79	0.50
hdda:3109057 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3626882	0.51	0.99	0.32	0.59	0.32	0.59	0.30
nb:3109057 3626882	0.58	0.80	0.32	0.74	0.43	0.64	0.39
knn:3109057 3626882	0.50	1.00	0.46	0.48	0.35	0.59	0.30
rpart:3109057 3626882	0.51	0.91	0.25	0.74	0.37	0.62	0.47
svm:3109057 3626882	0.54	1.00	0.79	0.26	0.39	0.67	0.37

hdda:3109057 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3433222	0.61	0.46	0.36	0.80	0.53	0.67	0.37
nb:3109057 3433222	0.64	0.73	0.54	0.63	0.47	0.69	0.34
knn:3109057 3433222	0.65	0.73	0.61	0.59	0.47	0.71	0.34
rpart:3109057 3433222	0.58	1.00	0.79	0.24	0.39	0.65	0.21
svm:3109057 3433222	0.57	1.00	0.61	0.26	0.33	0.52	0.28
hdda:3109057 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2991121	0.56	1.00	0.29	0.54	0.28	0.56	0.42
nb:3109057 2991121	0.52	1.00	0.61	0.30	0.35	0.56	0.27
knn:3109057 2991121	0.52	0.98	0.61	0.46	0.40	0.66	0.35
rpart:3109057 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3109057 2991121	0.54	0.99	0.61	0.43	0.40	0.65	0.34
hdda:3109057 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2959165	0.52	0.94	0.25	0.72	0.35	0.61	0.47
nb:3109057 2959165	0.58	0.94	0.50	0.57	0.41	0.65	0.34
knn:3109057 2959165	0.52	1.00	0.54	0.43	0.37	0.61	0.30
rpart:3109057 2959165	0.50	0.80	0.21	0.80	0.40	0.63	0.63
svm:3109057 2959165	0.53	0.91	0.00	0.89	0.00	0.59	2.35
hdda:3109057 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3546559	0.51	0.99	0.21	0.67	0.29	0.58	0.36
nb:3109057 3546559	0.61	0.91	0.68	0.48	0.44	0.71	0.28
knn:3109057 3546559	0.57	0.86	0.36	0.70	0.42	0.64	0.41
rpart:3109057 3546559	0.54	0.91	0.18	0.78	0.33	0.61	0.63
svm:3109057 3546559	0.52	1.00	0.71	0.20	0.35	0.53	0.40
hdda:3109057 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3020668	0.51	0.94	0.43	0.61	0.40	0.64	0.37
nb:3109057 3020668	0.50	1.00	0.64	0.30	0.36	0.58	0.21
knn:3109057 3020668	0.55	0.91	0.50	0.59	0.42	0.66	0.36
rpart:3109057 3020668	0.53	0.91	0.18	0.78	0.33	0.61	0.49
svm:3109057 3020668	0.59	1.00	0.54	0.30	0.32	0.52	0.56
hdda:3109057 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2397811	0.54	0.94	0.61	0.50	0.43	0.68	0.31

nb:3109057 2397811	0.57	0.36	0.50	0.74	0.54	0.71	0.38
knn:3109057 2397811	0.60	0.64	0.43	0.72	0.48	0.67	0.42
rpart:3109057 2397811	0.58	0.64	0.57	0.63	0.48	0.71	0.51
svm:3109057 2397811	0.58	1.00	0.50	0.43	0.35	0.59	0.53
hdda:3109057 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3903427	0.54	0.99	0.46	0.50	0.36	0.61	0.32
nb:3109057 3903427	0.53	0.91	0.29	0.72	0.38	0.62	0.37
knn:3109057 3903427	0.55	1.00	0.64	0.26	0.35	0.55	0.26
rpart:3109057 3903427	0.52	0.99	0.75	0.33	0.40	0.68	0.26
svm:3109057 3903427	0.54	1.00	0.86	0.20	0.39	0.69	0.82
hdda:3109057 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 2595867	0.52	0.73	0.43	0.70	0.46	0.67	0.46
nb:3109057 2595867	0.56	0.98	0.61	0.46	0.40	0.66	0.29
knn:3109057 2595867	0.60	0.36	0.32	0.85	0.56	0.67	0.44
rpart:3109057 2595867	0.58	0.64	0.50	0.67	0.48	0.69	0.46
svm:3109057 2595867	0.56	1.00	0.82	0.24	0.40	0.69	-0.04
hdda:3109057 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3068088	0.53	0.98	0.54	0.50	0.39	0.64	0.32
nb:3109057 3068088	0.54	0.55	0.43	0.74	0.50	0.68	0.36
knn:3109057 3068088	0.52	0.99	0.46	0.50	0.36	0.61	0.36
rpart:3109057 3068088	0.56	0.98	0.50	0.52	0.39	0.63	0.35
svm:3109057 3068088	0.52	1.00	0.82	0.22	0.39	0.67	0.58
hdda:3109057 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3109057 3487363	0.51	0.98	0.50	0.52	0.39	0.63	0.36
nb:3109057 3487363	0.51	0.94	0.46	0.59	0.41	0.64	0.33
knn:3109057 3487363	0.51	1.00	0.68	0.30	0.37	0.61	0.32
rpart:3109057 3487363	0.50	0.96	0.21	0.72	0.32	0.60	0.56
svm:3109057 3487363	0.59	1.00	0.57	0.30	0.33	0.54	0.32
hdda:4021820 3577841	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3577841	0.51	0.73	0.54	0.63	0.47	0.69	0.19
nb:4021820 3577841	0.53	0.91	0.61	0.52	0.44	0.69	0.34
knn:4021820 3577841	0.56	0.94	0.61	0.50	0.43	0.68	0.33

rpart:4021820 3577841	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 3577841	0.56	0.99	0.93	0.22	0.42	0.83	-0.21
hdda:4021820 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3703849	0.58	0.96	0.61	0.48	0.41	0.67	0.19
nb:4021820 3703849	0.59	0.73	0.25	0.80	0.44	0.64	0.41
knn:4021820 3703849	0.59	0.73	0.39	0.72	0.46	0.66	0.40
rpart:4021820 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 3703849	0.62	1.00	0.86	0.15	0.38	0.64	0.75
hdda:4021820 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2707575	0.52	1.00	0.54	0.41	0.36	0.59	0.16
nb:4021820 2707575	0.52	0.98	0.32	0.63	0.35	0.60	0.36
knn:4021820 2707575	0.51	0.91	0.39	0.65	0.41	0.64	0.39
rpart:4021820 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:4021820 2707575	0.58	1.00	0.68	0.22	0.35	0.53	0.05
hdda:4021820 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2510519	0.58	0.96	0.29	0.67	0.35	0.61	0.34
nb:4021820 2510519	0.51	0.96	0.54	0.52	0.41	0.65	0.42
knn:4021820 2510519	0.61	0.94	0.32	0.67	0.38	0.62	0.50
rpart:4021820 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 2510519	0.64	1.00	0.75	0.15	0.35	0.50	0.29
hdda:4021820 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3530890	0.61	0.55	0.43	0.74	0.50	0.68	0.34
nb:4021820 3530890	0.62	0.91	0.68	0.48	0.44	0.71	0.35
knn:4021820 3530890	0.64	0.28	0.57	0.72	0.55	0.73	0.40
rpart:4021820 3530890	0.51	0.96	0.43	0.59	0.39	0.63	0.39
svm:4021820 3530890	0.57	1.00	0.71	0.20	0.35	0.53	0.47
hdda:4021820 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3769569	0.59	0.91	0.39	0.65	0.41	0.64	0.24
nb:4021820 3769569	0.62	0.91	0.43	0.63	0.41	0.64	0.37
knn:4021820 3769569	0.61	0.55	0.57	0.65	0.50	0.71	0.42
rpart:4021820 3769569	0.51	0.91	0.32	0.70	0.39	0.63	0.40

svm:4021820 3769569	0.59	1.00	0.61	0.30	0.35	0.56	0.11
hdda:4021820 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3544035	0.56	0.91	0.57	0.54	0.43	0.68	0.26
nb:4021820 3544035	0.51	1.00	0.61	0.24	0.33	0.50	0.31
knn:4021820 3544035	0.55	0.91	0.57	0.54	0.43	0.68	0.36
rpart:4021820 3544035	0.56	0.98	0.64	0.43	0.41	0.67	0.20
svm:4021820 3544035	0.53	0.80	0.00	0.93	0.00	0.61	5.12
hdda:4021820 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2790378	0.53	0.94	0.32	0.67	0.38	0.62	0.30
nb:4021820 2790378	0.65	0.46	0.50	0.72	0.52	0.70	0.37
knn:4021820 2790378	0.55	0.98	0.86	0.30	0.43	0.78	0.27
rpart:4021820 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 2790378	0.52	0.91	0.25	0.74	0.37	0.62	0.82
hdda:4021820 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2625670	0.54	0.91	0.36	0.67	0.40	0.63	0.21
nb:4021820 2625670	0.59	0.99	0.79	0.33	0.42	0.71	0.29
knn:4021820 2625670	0.55	0.99	0.61	0.41	0.39	0.63	0.33
rpart:4021820 2625670	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 2625670	0.53	0.86	0.04	0.89	0.17	0.60	3.11
hdda:4021820 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3646405	0.55	0.91	0.32	0.70	0.39	0.63	0.26
nb:4021820 3646405	0.54	0.94	0.61	0.50	0.43	0.68	0.36
knn:4021820 3646405	0.55	0.98	0.36	0.61	0.36	0.61	0.39
rpart:4021820 3646405	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 3646405	0.56	1.00	0.71	0.26	0.37	0.60	0.75
hdda:4021820 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2918654	0.54	0.98	0.57	0.48	0.40	0.65	0.27
nb:4021820 2918654	0.53	0.94	0.46	0.59	0.41	0.64	0.36
knn:4021820 2918654	0.52	0.94	0.61	0.50	0.43	0.68	0.30
rpart:4021820 2918654	0.50	0.96	0.39	0.61	0.38	0.62	0.42
svm:4021820 2918654	0.51	1.00	0.79	0.26	0.39	0.67	0.47

hdda:4021820 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2663553	0.54	0.91	0.32	0.70	0.39	0.63	0.27
nb:4021820 2663553	0.52	0.94	0.61	0.50	0.43	0.68	0.36
knn:4021820 2663553	0.59	0.98	0.68	0.41	0.41	0.68	0.35
rpart:4021820 2663553	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 2663553	0.53	1.00	0.29	0.57	0.29	0.57	1.00
hdda:4021820 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3103484	0.51	1.00	0.61	0.39	0.38	0.62	0.16
nb:4021820 3103484	0.51	0.96	0.39	0.61	0.38	0.62	0.37
knn:4021820 3103484	0.51	1.00	0.39	0.50	0.32	0.58	0.34
rpart:4021820 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:4021820 3103484	0.53	1.00	0.61	0.37	0.37	0.61	0.73
hdda:4021820 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2757491	0.62	0.64	0.54	0.65	0.48	0.70	0.30
nb:4021820 2757491	0.58	0.96	0.68	0.43	0.42	0.69	0.35
knn:4021820 2757491	0.63	0.86	0.57	0.57	0.44	0.68	0.39
rpart:4021820 2757491	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 2757491	0.51	1.00	0.86	0.11	0.37	0.56	0.35
hdda:4021820 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2401368	0.58	0.98	0.32	0.63	0.35	0.60	0.36
nb:4021820 2401368	0.63	0.46	0.54	0.70	0.52	0.71	0.31
knn:4021820 2401368	0.71	0.03	0.46	0.89	0.72	0.73	0.37
rpart:4021820 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 2401368	0.50	1.00	0.71	0.33	0.39	0.65	0.47
hdda:4021820 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3788643	0.52	0.96	0.39	0.61	0.38	0.62	0.25
nb:4021820 3788643	0.50	0.86	0.43	0.65	0.43	0.65	0.36
knn:4021820 3788643	0.51	0.99	0.25	0.65	0.30	0.59	0.38
rpart:4021820 3788643	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 3788643	0.59	0.64	0.36	0.76	0.48	0.66	0.84
hdda:4021820 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3219832	0.61	0.91	0.46	0.61	0.42	0.65	0.37

nb:4021820 3219832	0.65	0.55	0.14	0.91	0.50	0.64	0.46
knn:4021820 3219832	0.64	0.64	0.36	0.76	0.48	0.66	0.40
rpart:4021820 3219832	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 3219832	0.51	1.00	0.89	0.17	0.40	0.73	-0.16
hdda:4021820 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3198757	0.52	0.99	0.46	0.52	0.37	0.62	0.23
nb:4021820 3198757	0.56	0.91	0.07	0.85	0.22	0.60	0.42
knn:4021820 3198757	0.51	1.00	0.64	0.24	0.34	0.52	0.29
rpart:4021820 3198757	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 3198757	0.56	1.00	0.93	0.13	0.39	0.75	0.99
hdda:4021820 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3753198	0.51	1.00	0.43	0.50	0.34	0.59	0.20
nb:4021820 3753198	0.55	0.80	0.43	0.67	0.44	0.66	0.37
knn:4021820 3753198	0.50	1.00	0.75	0.28	0.39	0.65	0.29
rpart:4021820 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 3753198	0.53	1.00	0.39	0.52	0.33	0.59	0.53
hdda:4021820 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2902908	0.55	0.99	0.61	0.41	0.39	0.63	0.16
nb:4021820 2902908	0.57	0.98	0.61	0.46	0.40	0.66	0.35
knn:4021820 2902908	0.60	0.98	0.71	0.39	0.42	0.69	0.33
rpart:4021820 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 2902908	0.53	1.00	0.50	0.46	0.36	0.60	0.82
hdda:4021820 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3142559	0.54	1.00	0.46	0.48	0.35	0.59	0.21
nb:4021820 3142559	0.52	0.99	0.18	0.70	0.26	0.58	0.40
knn:4021820 3142559	0.59	0.99	0.18	0.70	0.26	0.58	0.37
rpart:4021820 3142559	0.52	0.96	0.25	0.70	0.33	0.60	0.35
svm:4021820 3142559	0.52	0.99	0.82	0.30	0.42	0.74	0.68
hdda:4021820 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3626882	0.55	0.91	0.36	0.67	0.40	0.63	0.32
nb:4021820 3626882	0.52	0.98	0.43	0.57	0.38	0.62	0.35
knn:4021820 3626882	0.57	0.64	0.25	0.83	0.47	0.64	0.50

rpart:4021820 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 3626882	0.53	1.00	0.82	0.20	0.38	0.64	0.55
hdda:4021820 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3433222	0.65	0.73	0.57	0.61	0.47	0.70	0.24
nb:4021820 3433222	0.63	0.64	0.36	0.76	0.48	0.66	0.39
knn:4021820 3433222	0.66	0.86	0.79	0.43	0.46	0.77	0.26
rpart:4021820 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:4021820 3433222	0.59	1.00	0.82	0.13	0.37	0.55	-0.15
hdda:4021820 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2991121	0.52	1.00	0.36	0.54	0.32	0.58	0.33
nb:4021820 2991121	0.53	1.00	0.68	0.20	0.34	0.50	0.28
knn:4021820 2991121	0.54	1.00	0.50	0.46	0.36	0.60	0.35
rpart:4021820 2991121	0.52	0.80	0.32	0.74	0.43	0.64	0.44
svm:4021820 2991121	0.53	1.00	0.75	0.20	0.36	0.56	0.60
hdda:4021820 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2959165	0.53	0.96	0.75	0.39	0.43	0.72	0.27
nb:4021820 2959165	0.55	0.96	0.64	0.46	0.42	0.68	0.36
knn:4021820 2959165	0.54	0.99	0.68	0.39	0.40	0.67	0.34
rpart:4021820 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:4021820 2959165	0.60	1.00	0.75	0.13	0.34	0.46	-0.08
hdda:4021820 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3546559	0.55	0.94	0.46	0.59	0.41	0.64	0.24
nb:4021820 3546559	0.55	1.00	0.57	0.41	0.37	0.61	0.32
knn:4021820 3546559	0.51	1.00	0.57	0.37	0.36	0.59	0.17
rpart:4021820 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 3546559	0.50	1.00	0.64	0.20	0.33	0.47	0.24
hdda:4021820 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3020668	0.50	1.00	0.50	0.46	0.36	0.60	0.19
nb:4021820 3020668	0.51	1.00	0.57	0.37	0.36	0.59	0.28
knn:4021820 3020668	0.50	0.96	0.50	0.54	0.40	0.64	0.34
rpart:4021820 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:4021820 3020668	0.55	0.86	0.11	0.85	0.30	0.61	22.63
hdda:4021820 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2397811	0.53	0.99	0.71	0.37	0.41	0.68	0.20
nb:4021820 2397811	0.52	0.91	0.68	0.48	0.44	0.71	0.36
knn:4021820 2397811	0.59	0.94	0.64	0.48	0.43	0.69	0.37
rpart:4021820 2397811	0.51	0.91	0.32	0.70	0.39	0.63	0.40
svm:4021820 2397811	0.55	1.00	0.64	0.24	0.34	0.52	0.42
hdda:4021820 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3903427	0.51	1.00	0.46	0.46	0.34	0.58	0.22
nb:4021820 3903427	0.51	0.99	0.32	0.61	0.33	0.60	0.35
knn:4021820 3903427	0.56	1.00	0.46	0.48	0.35	0.59	0.35
rpart:4021820 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 3903427	0.55	1.00	0.71	0.26	0.37	0.60	0.11
hdda:4021820 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 2595867	0.54	0.94	0.54	0.54	0.42	0.66	0.24
nb:4021820 2595867	0.53	0.91	0.36	0.67	0.40	0.63	0.37
knn:4021820 2595867	0.57	0.94	0.36	0.65	0.38	0.63	0.40
rpart:4021820 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 2595867	0.52	1.00	0.75	0.24	0.38	0.61	0.39
hdda:4021820 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3068088	0.50	0.96	0.39	0.61	0.38	0.62	0.23
nb:4021820 3068088	0.51	0.99	0.39	0.57	0.35	0.60	0.36
knn:4021820 3068088	0.58	0.91	0.61	0.52	0.44	0.69	0.36
rpart:4021820 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:4021820 3068088	0.53	1.00	0.96	0.13	0.40	0.86	0.73
hdda:4021820 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:4021820 3487363	0.52	0.94	0.50	0.57	0.41	0.65	0.32
nb:4021820 3487363	0.51	0.96	0.21	0.72	0.32	0.60	0.40
knn:4021820 3487363	0.53	0.99	0.43	0.54	0.36	0.61	0.36
rpart:4021820 3487363	0.55	1.00	0.57	0.33	0.34	0.56	0.26
svm:4021820 3487363	0.52	0.91	0.57	0.54	0.43	0.68	0.84

hdda:3577841 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3703849	0.51	0.98	0.57	0.48	0.40	0.65	0.17
nb:3577841 3703849	0.55	0.94	0.50	0.57	0.41	0.65	0.32
knn:3577841 3703849	0.57	0.98	0.43	0.57	0.38	0.62	0.36
rpart:3577841 3703849	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3703849	0.53	1.00	0.61	0.26	0.33	0.52	0.97
hdda:3577841 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2707575	0.55	0.86	0.36	0.70	0.42	0.64	0.26
nb:3577841 2707575	0.52	0.80	0.32	0.74	0.43	0.64	0.34
knn:3577841 2707575	0.57	1.00	0.68	0.20	0.34	0.50	0.26
rpart:3577841 2707575	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:3577841 2707575	0.61	1.00	0.96	0.09	0.39	0.80	0.52
hdda:3577841 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2510519	0.57	0.91	0.75	0.43	0.45	0.74	0.16
nb:3577841 2510519	0.53	0.99	0.50	0.48	0.37	0.61	0.39
knn:3577841 2510519	0.52	0.86	0.39	0.67	0.42	0.65	0.42
rpart:3577841 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 2510519	0.58	0.99	0.25	0.63	0.29	0.58	0.63
hdda:3577841 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3530890	0.57	0.55	0.50	0.70	0.50	0.70	0.18
nb:3577841 3530890	0.59	0.94	0.75	0.41	0.44	0.73	0.32
knn:3577841 3530890	0.56	0.91	0.68	0.48	0.44	0.71	0.30
rpart:3577841 3530890	0.56	0.64	0.36	0.76	0.48	0.66	0.39
svm:3577841 3530890	0.61	1.00	0.25	0.61	0.28	0.57	0.83
hdda:3577841 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3769569	0.54	0.94	0.32	0.67	0.38	0.62	0.21
nb:3577841 3769569	0.60	0.91	0.64	0.50	0.44	0.70	0.31
knn:3577841 3769569	0.55	0.96	0.43	0.59	0.39	0.63	0.34
rpart:3577841 3769569	0.54	0.73	0.21	0.83	0.43	0.63	0.43
svm:3577841 3769569	0.57	0.99	0.36	0.57	0.33	0.59	1.00
hdda:3577841 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3544035	0.50	0.91	0.25	0.74	0.37	0.62	0.35

nb:3577841 3544035	0.52	1.00	0.71	0.22	0.36	0.56	0.26
knn:3577841 3544035	0.55	1.00	0.32	0.50	0.28	0.55	0.33
rpart:3577841 3544035	0.50	0.91	0.21	0.76	0.35	0.61	0.47
svm:3577841 3544035	0.52	1.00	0.86	0.15	0.38	0.64	0.37
hdda:3577841 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2790378	0.58	0.96	0.32	0.65	0.36	0.61	0.27
nb:3577841 2790378	0.58	0.28	0.18	0.96	0.71	0.66	0.43
knn:3577841 2790378	0.53	0.96	0.43	0.59	0.39	0.63	0.35
rpart:3577841 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 2790378	0.58	1.00	0.50	0.35	0.32	0.53	1.00
hdda:3577841 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2625670	0.56	0.99	0.39	0.54	0.34	0.60	0.17
nb:3577841 2625670	0.57	0.98	0.82	0.33	0.43	0.75	0.23
knn:3577841 2625670	0.53	0.86	0.29	0.74	0.40	0.63	0.34
rpart:3577841 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 2625670	0.52	0.80	0.04	0.91	0.20	0.61	1.70
hdda:3577841 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3646405	0.56	0.80	0.25	0.78	0.41	0.63	0.15
nb:3577841 3646405	0.50	1.00	0.57	0.39	0.36	0.60	0.34
knn:3577841 3646405	0.50	1.00	0.54	0.39	0.35	0.58	0.29
rpart:3577841 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3646405	0.52	0.73	0.39	0.72	0.46	0.66	1.00
hdda:3577841 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2918654	0.53	1.00	0.50	0.41	0.34	0.58	0.11
nb:3577841 2918654	0.52	0.99	0.46	0.50	0.36	0.61	0.32
knn:3577841 2918654	0.50	0.91	0.25	0.74	0.37	0.62	0.39
rpart:3577841 2918654	0.51	1.00	0.64	0.37	0.38	0.63	0.26
svm:3577841 2918654	0.56	0.99	0.79	0.33	0.42	0.71	0.71
hdda:3577841 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2663553	0.54	0.86	0.25	0.76	0.39	0.63	0.17
nb:3577841 2663553	0.53	1.00	0.32	0.54	0.30	0.57	0.35
knn:3577841 2663553	0.53	0.73	0.29	0.78	0.44	0.64	0.38

rpart:3577841 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 2663553	0.55	0.80	0.39	0.70	0.44	0.65	1.00
hdda:3577841 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3103484	0.51	0.98	0.61	0.46	0.40	0.66	0.29
nb:3577841 3103484	0.52	0.98	0.32	0.63	0.35	0.60	0.35
knn:3577841 3103484	0.57	0.99	0.32	0.59	0.32	0.59	0.31
rpart:3577841 3103484	0.51	0.94	0.36	0.65	0.38	0.63	0.32
svm:3577841 3103484	0.55	1.00	0.75	0.20	0.36	0.56	-0.08
hdda:3577841 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2757491	0.58	0.94	0.57	0.52	0.42	0.67	0.12
nb:3577841 2757491	0.56	0.91	0.43	0.63	0.41	0.64	0.34
knn:3577841 2757491	0.68	0.64	0.75	0.52	0.49	0.77	0.35
rpart:3577841 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 2757491	0.53	1.00	0.89	0.13	0.38	0.67	0.77
hdda:3577841 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2401368	0.64	0.64	0.32	0.78	0.47	0.65	0.28
nb:3577841 2401368	0.60	0.46	0.21	0.89	0.55	0.65	0.35
knn:3577841 2401368	0.64	0.46	0.54	0.70	0.52	0.71	0.31
rpart:3577841 2401368	0.67	0.64	0.18	0.87	0.45	0.63	0.47
svm:3577841 2401368	0.58	1.00	0.89	0.07	0.37	0.50	0.32
hdda:3577841 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3788643	0.52	0.99	0.46	0.50	0.36	0.61	0.14
nb:3577841 3788643	0.51	0.99	0.43	0.52	0.35	0.60	0.32
knn:3577841 3788643	0.51	0.91	0.43	0.63	0.41	0.64	0.30
rpart:3577841 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3788643	0.53	0.91	0.57	0.54	0.43	0.68	1.00
hdda:3577841 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3219832	0.58	0.96	0.57	0.50	0.41	0.66	0.25
nb:3577841 3219832	0.57	0.55	0.11	0.93	0.50	0.63	0.49
knn:3577841 3219832	0.67	0.46	0.68	0.61	0.51	0.76	0.34
rpart:3577841 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3577841 3219832	0.51	1.00	0.68	0.24	0.35	0.55	0.63
hdda:3577841 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3198757	0.56	0.99	0.36	0.59	0.34	0.60	0.20
nb:3577841 3198757	0.56	0.98	0.07	0.78	0.17	0.58	0.36
knn:3577841 3198757	0.61	1.00	0.32	0.43	0.26	0.51	0.32
rpart:3577841 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3198757	0.50	1.00	1.00	0.02	0.38	1.00	0.96
hdda:3577841 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3753198	0.51	0.99	0.50	0.50	0.38	0.62	0.18
nb:3577841 3753198	0.58	0.94	0.71	0.43	0.43	0.71	0.31
knn:3577841 3753198	0.57	0.99	0.71	0.37	0.41	0.68	0.27
rpart:3577841 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3753198	0.56	0.99	0.71	0.37	0.41	0.68	1.00
hdda:3577841 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2902908	0.59	0.91	0.79	0.41	0.45	0.76	0.17
nb:3577841 2902908	0.56	0.86	0.36	0.70	0.42	0.64	0.38
knn:3577841 2902908	0.57	0.94	0.79	0.39	0.44	0.75	0.29
rpart:3577841 2902908	0.60	0.80	0.18	0.83	0.38	0.62	0.56
svm:3577841 2902908	0.57	1.00	0.29	0.59	0.30	0.57	2.80
hdda:3577841 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3142559	0.56	0.98	0.18	0.72	0.28	0.59	0.27
nb:3577841 3142559	0.52	0.96	0.11	0.78	0.23	0.59	0.43
knn:3577841 3142559	0.52	0.98	0.61	0.46	0.40	0.66	0.21
rpart:3577841 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3577841 3142559	0.54	1.00	0.82	0.26	0.40	0.71	0.44
hdda:3577841 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3626882	0.58	0.99	0.43	0.54	0.36	0.61	0.26
nb:3577841 3626882	0.51	0.91	0.39	0.65	0.41	0.64	0.35
knn:3577841 3626882	0.53	1.00	0.61	0.39	0.38	0.62	0.17
rpart:3577841 3626882	0.55	0.80	0.29	0.76	0.42	0.64	0.42
svm:3577841 3626882	0.55	1.00	0.86	0.20	0.39	0.69	0.42

hdda:3577841 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3433222	0.60	0.20	0.39	0.85	0.61	0.70	0.40
nb:3577841 3433222	0.61	0.46	0.29	0.85	0.53	0.66	0.38
knn:3577841 3433222	0.62	0.46	0.43	0.76	0.52	0.69	0.33
rpart:3577841 3433222	0.61	0.64	0.11	0.91	0.43	0.63	0.57
svm:3577841 3433222	0.61	1.00	0.64	0.17	0.32	0.44	0.61
hdda:3577841 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2991121	0.64	1.00	0.18	0.59	0.21	0.54	0.23
nb:3577841 2991121	0.63	1.00	0.54	0.26	0.31	0.48	0.30
knn:3577841 2991121	0.54	0.99	0.21	0.67	0.29	0.58	0.50
rpart:3577841 2991121	0.66	1.00	0.61	0.26	0.33	0.52	0.23
svm:3577841 2991121	0.61	0.98	0.75	0.37	0.42	0.71	0.16
hdda:3577841 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2959165	0.52	0.99	0.46	0.52	0.37	0.62	0.34
nb:3577841 2959165	0.50	0.98	0.61	0.46	0.40	0.66	0.34
knn:3577841 2959165	0.51	0.99	0.64	0.39	0.39	0.64	0.26
rpart:3577841 2959165	0.53	0.94	0.36	0.65	0.38	0.63	0.52
svm:3577841 2959165	0.53	1.00	0.89	0.17	0.40	0.73	0.40
hdda:3577841 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3546559	0.53	0.98	0.46	0.54	0.38	0.63	0.24
nb:3577841 3546559	0.56	0.91	0.32	0.70	0.39	0.63	0.36
knn:3577841 3546559	0.56	0.91	0.32	0.70	0.39	0.63	0.35
rpart:3577841 3546559	0.53	0.86	0.25	0.76	0.39	0.63	0.32
svm:3577841 3546559	0.56	1.00	0.71	0.24	0.36	0.58	0.60
hdda:3577841 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3020668	0.55	0.99	0.25	0.63	0.29	0.58	0.18
nb:3577841 3020668	0.54	1.00	0.68	0.35	0.39	0.64	0.23
knn:3577841 3020668	0.57	1.00	0.57	0.37	0.36	0.59	0.17
rpart:3577841 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3020668	0.59	0.64	0.50	0.67	0.48	0.69	0.87
hdda:3577841 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2397811	0.60	1.00	0.32	0.52	0.29	0.56	0.20

nb:3577841 2397811	0.52	1.00	0.75	0.17	0.36	0.53	0.31
knn:3577841 2397811	0.55	0.94	0.25	0.72	0.35	0.61	0.39
rpart:3577841 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 2397811	0.53	1.00	0.82	0.13	0.37	0.55	0.91
hdda:3577841 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3903427	0.56	0.96	0.21	0.72	0.32	0.60	0.22
nb:3577841 3903427	0.50	0.94	0.25	0.72	0.35	0.61	0.34
knn:3577841 3903427	0.56	1.00	0.57	0.39	0.36	0.60	0.26
rpart:3577841 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3903427	0.59	1.00	0.96	0.02	0.38	0.50	0.68
hdda:3577841 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 2595867	0.52	0.91	0.21	0.76	0.35	0.61	0.27
nb:3577841 2595867	0.51	0.91	0.25	0.74	0.37	0.62	0.36
knn:3577841 2595867	0.57	0.86	0.29	0.74	0.40	0.63	0.38
rpart:3577841 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 2595867	0.59	1.00	0.86	0.07	0.36	0.43	0.64
hdda:3577841 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3068088	0.55	0.99	0.46	0.52	0.37	0.62	0.14
nb:3577841 3068088	0.56	0.73	0.00	0.96	0.00	0.61	0.63
knn:3577841 3068088	0.60	1.00	0.39	0.48	0.31	0.56	0.34
rpart:3577841 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3068088	0.56	0.64	0.61	0.61	0.49	0.72	1.00
hdda:3577841 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3577841 3487363	0.58	1.00	0.32	0.46	0.26	0.53	0.17
nb:3577841 3487363	0.55	0.98	0.21	0.70	0.30	0.59	0.36
knn:3577841 3487363	0.58	1.00	0.50	0.37	0.33	0.55	0.27
rpart:3577841 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3577841 3487363	0.56	0.99	0.86	0.28	0.42	0.76	1.00
hdda:3703849 2707575	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2707575	0.52	0.94	0.36	0.65	0.38	0.63	0.27
nb:3703849 2707575	0.52	0.86	0.21	0.78	0.38	0.62	0.43
knn:3703849 2707575	0.53	0.99	0.61	0.43	0.40	0.65	0.33

rpart:3703849 2707575	0.53	0.99	0.18	0.67	0.25	0.57	0.43
svm:3703849 2707575	0.55	1.00	0.79	0.20	0.37	0.60	0.49
hdda:3703849 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2510519	0.55	0.96	0.50	0.54	0.40	0.64	0.39
nb:3703849 2510519	0.56	0.86	0.39	0.67	0.42	0.65	0.42
knn:3703849 2510519	0.66	0.86	0.86	0.39	0.46	0.82	0.37
rpart:3703849 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2510519	0.56	1.00	0.68	0.17	0.33	0.47	-0.27
hdda:3703849 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3530890	0.63	0.86	0.29	0.74	0.40	0.63	0.33
nb:3703849 3530890	0.62	0.96	0.86	0.33	0.44	0.79	0.28
knn:3703849 3530890	0.60	0.46	0.39	0.78	0.52	0.68	0.41
rpart:3703849 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 3530890	0.57	0.99	0.21	0.65	0.27	0.58	0.82
hdda:3703849 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3769569	0.60	0.80	0.64	0.54	0.46	0.71	0.28
nb:3703849 3769569	0.63	0.64	0.32	0.78	0.47	0.65	0.40
knn:3703849 3769569	0.63	0.46	0.64	0.63	0.51	0.74	0.34
rpart:3703849 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 3769569	0.64	1.00	0.68	0.20	0.34	0.50	0.92
hdda:3703849 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3544035	0.53	0.80	0.32	0.74	0.43	0.64	0.38
nb:3703849 3544035	0.55	1.00	0.64	0.35	0.38	0.62	0.30
knn:3703849 3544035	0.50	0.99	0.57	0.46	0.39	0.64	0.34
rpart:3703849 3544035	0.52	0.64	0.25	0.83	0.47	0.64	0.48
svm:3703849 3544035	0.56	1.00	0.75	0.15	0.35	0.50	0.41
hdda:3703849 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2790378	0.53	0.98	0.39	0.59	0.37	0.61	0.18
nb:3703849 2790378	0.61	0.55	0.29	0.83	0.50	0.66	0.40
knn:3703849 2790378	0.53	0.98	0.75	0.37	0.42	0.71	0.30
rpart:3703849 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3703849 2790378	0.63	1.00	0.89	0.04	0.36	0.40	0.56
hdda:3703849 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2625670	0.55	0.96	0.50	0.54	0.40	0.64	0.16
nb:3703849 2625670	0.63	1.00	0.79	0.26	0.39	0.67	0.22
knn:3703849 2625670	0.55	1.00	0.54	0.43	0.37	0.61	0.32
rpart:3703849 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2625670	0.58	0.99	0.57	0.43	0.38	0.63	1.00
hdda:3703849 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3646405	0.56	0.86	0.43	0.65	0.43	0.65	0.19
nb:3703849 3646405	0.55	0.91	0.43	0.63	0.41	0.64	0.35
knn:3703849 3646405	0.54	0.91	0.46	0.61	0.42	0.65	0.40
rpart:3703849 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 3646405	0.51	1.00	0.75	0.26	0.38	0.63	0.00
hdda:3703849 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2918654	0.51	0.98	0.21	0.70	0.30	0.59	0.35
nb:3703849 2918654	0.54	0.99	0.29	0.63	0.32	0.59	0.35
knn:3703849 2918654	0.52	0.96	0.25	0.70	0.33	0.60	0.38
rpart:3703849 2918654	0.53	0.99	0.25	0.65	0.30	0.59	0.42
svm:3703849 2918654	0.64	0.64	0.86	0.46	0.49	0.84	0.21
hdda:3703849 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2663553	0.53	0.86	0.46	0.63	0.43	0.66	0.17
nb:3703849 2663553	0.55	0.91	0.43	0.63	0.41	0.64	0.36
knn:3703849 2663553	0.58	0.99	0.68	0.37	0.40	0.65	0.30
rpart:3703849 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2663553	0.56	1.00	0.86	0.13	0.38	0.60	0.91
hdda:3703849 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3103484	0.50	0.96	0.64	0.46	0.42	0.68	0.18
nb:3703849 3103484	0.50	1.00	0.29	0.59	0.30	0.57	0.34
knn:3703849 3103484	0.54	1.00	0.50	0.39	0.33	0.56	0.29
rpart:3703849 3103484	0.56	0.91	0.46	0.61	0.42	0.65	0.48
svm:3703849 3103484	0.54	1.00	0.82	0.09	0.35	0.44	-0.16

hdda:3703849 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2757491	0.57	0.94	0.71	0.43	0.43	0.71	0.32
nb:3703849 2757491	0.62	0.55	0.18	0.89	0.50	0.64	0.42
knn:3703849 2757491	0.67	0.55	0.50	0.70	0.50	0.70	0.39
rpart:3703849 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2757491	0.58	1.00	0.89	0.15	0.39	0.70	0.90
hdda:3703849 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2401368	0.64	0.73	0.39	0.72	0.46	0.66	0.31
nb:3703849 2401368	0.61	0.73	0.36	0.74	0.45	0.65	0.31
knn:3703849 2401368	0.72	0.09	0.54	0.80	0.63	0.74	0.33
rpart:3703849 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2401368	0.62	1.00	0.36	0.50	0.30	0.56	1.00
hdda:3703849 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3788643	0.53	0.98	0.68	0.41	0.41	0.68	0.14
nb:3703849 3788643	0.54	0.98	0.39	0.59	0.37	0.61	0.33
knn:3703849 3788643	0.57	0.96	0.57	0.50	0.41	0.66	0.32
rpart:3703849 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 3788643	0.54	1.00	0.89	0.20	0.40	0.75	0.59
hdda:3703849 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3219832	0.64	0.20	0.64	0.70	0.56	0.76	0.26
nb:3703849 3219832	0.62	0.36	0.36	0.83	0.56	0.68	0.38
knn:3703849 3219832	0.70	0.36	0.71	0.61	0.53	0.78	0.33
rpart:3703849 3219832	0.58	0.20	0.32	0.89	0.64	0.68	0.46
svm:3703849 3219832	0.67	1.00	0.46	0.30	0.29	0.48	0.60
hdda:3703849 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3198757	0.52	0.96	0.46	0.57	0.39	0.63	0.37
nb:3703849 3198757	0.52	0.99	0.21	0.67	0.29	0.58	0.31
knn:3703849 3198757	0.53	0.98	0.50	0.52	0.39	0.63	0.34
rpart:3703849 3198757	0.53	0.98	0.39	0.59	0.37	0.61	0.43
svm:3703849 3198757	0.51	1.00	0.93	0.02	0.37	0.33	0.03
hdda:3703849 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3753198	0.54	0.99	0.43	0.54	0.36	0.61	0.26

nb:3703849 3753198	0.58	0.73	0.29	0.78	0.44	0.64	0.37
knn:3703849 3753198	0.61	0.36	0.43	0.78	0.55	0.69	0.41
rpart:3703849 3753198	0.54	0.94	0.32	0.67	0.38	0.62	0.40
svm:3703849 3753198	0.51	1.00	0.93	0.07	0.38	0.60	0.40
hdda:3703849 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2902908	0.59	0.91	0.68	0.48	0.44	0.71	0.14
nb:3703849 2902908	0.59	0.98	0.36	0.61	0.36	0.61	0.36
knn:3703849 2902908	0.62	0.80	0.71	0.50	0.47	0.74	0.34
rpart:3703849 2902908	0.63	0.55	0.46	0.72	0.50	0.69	0.44
svm:3703849 2902908	0.55	1.00	0.79	0.28	0.40	0.68	0.08
hdda:3703849 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3142559	0.51	0.86	0.14	0.83	0.33	0.61	0.39
nb:3703849 3142559	0.52	0.96	0.25	0.70	0.33	0.60	0.35
knn:3703849 3142559	0.54	0.91	0.14	0.80	0.31	0.61	0.44
rpart:3703849 3142559	0.54	0.91	0.07	0.85	0.22	0.60	0.54
svm:3703849 3142559	0.52	1.00	0.93	0.13	0.39	0.75	0.18
hdda:3703849 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3626882	0.52	0.91	0.18	0.78	0.33	0.61	0.36
nb:3703849 3626882	0.56	0.86	0.43	0.65	0.43	0.65	0.36
knn:3703849 3626882	0.52	1.00	0.64	0.37	0.38	0.63	0.31
rpart:3703849 3626882	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:3703849 3626882	0.58	1.00	0.75	0.26	0.38	0.63	0.67
hdda:3703849 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3433222	0.65	0.36	0.50	0.74	0.54	0.71	0.30
nb:3703849 3433222	0.64	0.73	0.25	0.80	0.44	0.64	0.42
knn:3703849 3433222	0.69	0.28	0.32	0.87	0.60	0.68	0.41
rpart:3703849 3433222	0.62	0.20	0.39	0.85	0.61	0.70	0.41
svm:3703849 3433222	0.60	1.00	0.86	0.11	0.37	0.56	0.27
hdda:3703849 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2991121	0.52	0.98	0.32	0.63	0.35	0.60	0.31
nb:3703849 2991121	0.55	1.00	0.64	0.28	0.35	0.57	0.27
knn:3703849 2991121	0.53	0.99	0.50	0.48	0.37	0.61	0.35

rpart:3703849 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2991121	0.50	0.99	0.57	0.43	0.38	0.63	0.40
hdda:3703849 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2959165	0.54	1.00	0.50	0.46	0.36	0.60	0.24
nb:3703849 2959165	0.55	0.99	0.29	0.63	0.32	0.59	0.38
knn:3703849 2959165	0.55	0.94	0.64	0.48	0.43	0.69	0.34
rpart:3703849 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:3703849 2959165	0.58	1.00	0.57	0.41	0.37	0.61	1.00
hdda:3703849 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3546559	0.61	0.80	0.50	0.63	0.45	0.67	0.20
nb:3703849 3546559	0.61	0.80	0.46	0.65	0.45	0.67	0.34
knn:3703849 3546559	0.52	0.98	0.64	0.43	0.41	0.67	0.33
rpart:3703849 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 3546559	0.56	1.00	0.93	0.15	0.40	0.78	0.31
hdda:3703849 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3020668	0.53	0.99	0.36	0.57	0.33	0.59	0.23
nb:3703849 3020668	0.51	0.99	0.61	0.41	0.39	0.63	0.28
knn:3703849 3020668	0.52	0.94	0.50	0.57	0.41	0.65	0.32
rpart:3703849 3020668	0.51	0.99	0.43	0.52	0.35	0.60	0.27
svm:3703849 3020668	0.52	1.00	0.86	0.15	0.38	0.64	0.20
hdda:3703849 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2397811	0.50	0.94	0.29	0.70	0.36	0.62	0.40
nb:3703849 2397811	0.56	0.73	0.50	0.65	0.47	0.68	0.37
knn:3703849 2397811	0.52	0.73	0.29	0.78	0.44	0.64	0.50
rpart:3703849 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2397811	0.54	1.00	0.68	0.30	0.37	0.61	0.97
hdda:3703849 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3903427	0.52	0.80	0.18	0.83	0.38	0.62	0.42
nb:3703849 3903427	0.54	0.91	0.39	0.65	0.41	0.64	0.32
knn:3703849 3903427	0.62	1.00	0.43	0.39	0.30	0.53	0.28
rpart:3703849 3903427	0.56	0.98	0.21	0.70	0.30	0.59	0.44

svm:3703849 3903427	0.52	1.00	0.93	0.07	0.38	0.60	-1.21
hdda:3703849 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 2595867	0.54	0.73	0.43	0.70	0.46	0.67	0.24
nb:3703849 2595867	0.54	0.73	0.43	0.70	0.46	0.67	0.34
knn:3703849 2595867	0.56	0.80	0.46	0.65	0.45	0.67	0.33
rpart:3703849 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 2595867	0.57	1.00	0.64	0.15	0.32	0.41	0.19
hdda:3703849 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3068088	0.52	1.00	0.64	0.37	0.38	0.63	0.15
nb:3703849 3068088	0.52	0.80	0.14	0.85	0.36	0.62	0.43
knn:3703849 3068088	0.51	1.00	0.61	0.33	0.35	0.58	0.34
rpart:3703849 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3703849 3068088	0.52	1.00	0.93	0.07	0.38	0.60	0.95
hdda:3703849 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3703849 3487363	0.51	0.98	0.68	0.41	0.41	0.68	0.12
nb:3703849 3487363	0.52	0.99	0.32	0.59	0.32	0.59	0.34
knn:3703849 3487363	0.56	0.96	0.43	0.59	0.39	0.63	0.39
rpart:3703849 3487363	0.55	0.96	0.25	0.70	0.33	0.60	0.45
svm:3703849 3487363	0.52	1.00	0.86	0.15	0.38	0.64	0.62
hdda:2707575 2510519	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2510519	0.53	0.91	0.36	0.67	0.40	0.63	0.42
nb:2707575 2510519	0.51	0.96	0.36	0.63	0.37	0.62	0.40
knn:2707575 2510519	0.56	0.73	0.29	0.78	0.44	0.64	0.46
rpart:2707575 2510519	0.60	0.20	0.43	0.83	0.60	0.70	0.49
svm:2707575 2510519	0.52	0.99	0.64	0.39	0.39	0.64	0.22
hdda:2707575 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3530890	0.62	0.80	0.50	0.63	0.45	0.67	0.36
nb:2707575 3530890	0.56	0.73	0.32	0.76	0.45	0.65	0.40
knn:2707575 3530890	0.62	0.98	0.68	0.41	0.41	0.68	0.17
rpart:2707575 3530890	0.58	0.28	0.39	0.83	0.58	0.69	0.53
svm:2707575 3530890	0.54	1.00	0.68	0.20	0.34	0.50	0.66

hdda:2707575 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3769569	0.59	0.96	0.36	0.63	0.37	0.62	0.33
nb:2707575 3769569	0.58	0.73	0.14	0.87	0.40	0.63	0.45
knn:2707575 3769569	0.56	0.98	0.86	0.30	0.43	0.78	0.27
rpart:2707575 3769569	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3769569	0.50	1.00	0.93	0.13	0.39	0.75	0.72
hdda:2707575 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3544035	0.58	0.91	0.46	0.61	0.42	0.65	0.35
nb:2707575 3544035	0.51	1.00	0.71	0.22	0.36	0.56	0.25
knn:2707575 3544035	0.54	1.00	0.46	0.46	0.34	0.58	0.34
rpart:2707575 3544035	0.51	0.94	0.39	0.63	0.39	0.63	0.29
svm:2707575 3544035	0.57	1.00	0.57	0.35	0.35	0.57	0.73
hdda:2707575 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2790378	0.63	0.55	0.50	0.70	0.50	0.70	0.42
nb:2707575 2790378	0.60	0.46	0.54	0.70	0.52	0.71	0.33
knn:2707575 2790378	0.57	0.73	0.46	0.67	0.46	0.67	0.50
rpart:2707575 2790378	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2790378	0.52	1.00	0.61	0.30	0.35	0.56	0.97
hdda:2707575 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2625670	0.51	0.96	0.36	0.63	0.37	0.62	0.33
nb:2707575 2625670	0.56	1.00	0.86	0.24	0.41	0.73	0.19
knn:2707575 2625670	0.60	0.91	0.39	0.65	0.41	0.64	0.31
rpart:2707575 2625670	0.60	0.14	0.32	0.91	0.69	0.69	0.49
svm:2707575 2625670	0.54	1.00	0.82	0.13	0.37	0.55	0.33
hdda:2707575 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3646405	0.51	0.96	0.36	0.63	0.37	0.62	0.24
nb:2707575 3646405	0.50	0.96	0.32	0.65	0.36	0.61	0.36
knn:2707575 3646405	0.51	1.00	0.75	0.20	0.36	0.56	0.28
rpart:2707575 3646405	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3646405	0.52	1.00	0.79	0.17	0.37	0.57	0.78
hdda:2707575 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2918654	0.51	0.96	0.21	0.72	0.32	0.60	0.38

nb:2707575 2918654	0.51	0.96	0.21	0.72	0.32	0.60	0.38
knn:2707575 2918654	0.52	0.91	0.54	0.57	0.43	0.67	0.33
rpart:2707575 2918654	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2918654	0.55	1.00	0.64	0.30	0.36	0.58	0.24
hdda:2707575 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2663553	0.54	0.96	0.54	0.52	0.41	0.65	0.30
nb:2707575 2663553	0.51	0.86	0.36	0.70	0.42	0.64	0.35
knn:2707575 2663553	0.61	1.00	0.43	0.37	0.29	0.52	0.32
rpart:2707575 2663553	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2663553	0.53	1.00	1.00	0.02	0.38	1.00	-1.16
hdda:2707575 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3103484	0.59	0.98	0.46	0.54	0.38	0.63	0.31
nb:2707575 3103484	0.52	0.94	0.25	0.72	0.35	0.61	0.39
knn:2707575 3103484	0.54	1.00	0.29	0.59	0.30	0.57	0.36
rpart:2707575 3103484	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3103484	0.54	0.99	0.75	0.33	0.40	0.68	1.00
hdda:2707575 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2757491	0.58	0.94	0.36	0.65	0.38	0.63	0.39
nb:2707575 2757491	0.55	0.96	0.36	0.63	0.37	0.62	0.35
knn:2707575 2757491	0.57	0.94	0.25	0.72	0.35	0.61	0.42
rpart:2707575 2757491	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2757491	0.52	1.00	0.79	0.24	0.39	0.65	0.77
hdda:2707575 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2401368	0.59	0.80	0.46	0.65	0.45	0.67	0.21
nb:2707575 2401368	0.60	0.80	0.11	0.87	0.33	0.62	0.45
knn:2707575 2401368	0.60	0.28	0.36	0.85	0.59	0.68	0.37
rpart:2707575 2401368	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2401368	0.53	1.00	0.89	0.15	0.39	0.70	0.67
hdda:2707575 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3788643	0.52	0.94	0.39	0.63	0.39	0.63	0.22
nb:2707575 3788643	0.50	0.86	0.25	0.76	0.39	0.63	0.37
knn:2707575 3788643	0.55	0.99	0.46	0.50	0.36	0.61	0.31

rpart:2707575 3788643	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3788643	0.51	1.00	0.86	0.15	0.38	0.64	0.68
hdda:2707575 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3219832	0.58	0.94	0.46	0.59	0.41	0.64	0.25
nb:2707575 3219832	0.58	0.64	0.21	0.85	0.46	0.64	0.42
knn:2707575 3219832	0.67	0.73	0.75	0.50	0.48	0.77	0.29
rpart:2707575 3219832	0.50	0.64	0.29	0.80	0.47	0.65	0.40
svm:2707575 3219832	0.58	1.00	0.96	0.04	0.38	0.67	-0.03
hdda:2707575 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3198757	0.54	1.00	0.43	0.46	0.32	0.57	0.23
nb:2707575 3198757	0.58	0.99	0.25	0.65	0.30	0.59	0.30
knn:2707575 3198757	0.54	0.99	0.54	0.46	0.38	0.62	0.30
rpart:2707575 3198757	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3198757	0.52	1.00	0.96	0.09	0.39	0.80	0.55
hdda:2707575 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3753198	0.55	0.99	0.54	0.48	0.38	0.63	0.25
nb:2707575 3753198	0.52	0.86	0.29	0.74	0.40	0.63	0.36
knn:2707575 3753198	0.51	0.46	0.25	0.87	0.54	0.66	0.46
rpart:2707575 3753198	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3753198	0.57	0.80	0.00	0.93	0.00	0.61	17.09
hdda:2707575 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2902908	0.55	0.96	0.36	0.63	0.37	0.62	0.27
nb:2707575 2902908	0.54	0.94	0.36	0.65	0.38	0.63	0.37
knn:2707575 2902908	0.54	0.94	0.68	0.46	0.43	0.70	0.31
rpart:2707575 2902908	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2902908	0.51	0.99	0.64	0.41	0.40	0.66	1.00
hdda:2707575 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3142559	0.55	1.00	0.50	0.37	0.33	0.55	0.23
nb:2707575 3142559	0.56	0.99	0.39	0.54	0.34	0.60	0.31
knn:2707575 3142559	0.58	1.00	0.29	0.50	0.26	0.53	0.34
rpart:2707575 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39

svm:2707575 3142559	0.57	1.00	0.86	0.17	0.39	0.67	0.58
hdda:2707575 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3626882	0.52	0.99	0.39	0.57	0.35	0.60	0.31
nb:2707575 3626882	0.51	0.94	0.18	0.76	0.31	0.60	0.41
knn:2707575 3626882	0.55	1.00	0.50	0.37	0.33	0.55	0.30
rpart:2707575 3626882	0.53	0.99	0.32	0.61	0.33	0.60	0.29
svm:2707575 3626882	0.51	1.00	0.89	0.13	0.38	0.67	0.30
hdda:2707575 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3433222	0.63	0.86	0.64	0.52	0.45	0.71	0.18
nb:2707575 3433222	0.59	0.91	0.14	0.80	0.31	0.61	0.45
knn:2707575 3433222	0.63	0.64	0.32	0.78	0.47	0.65	0.42
rpart:2707575 3433222	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3433222	0.58	1.00	0.64	0.15	0.32	0.41	0.12
hdda:2707575 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2991121	0.52	0.91	0.32	0.70	0.39	0.63	0.38
nb:2707575 2991121	0.55	1.00	0.64	0.37	0.38	0.63	0.29
knn:2707575 2991121	0.58	1.00	0.50	0.41	0.34	0.58	0.31
rpart:2707575 2991121	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2991121	0.56	1.00	0.86	0.24	0.41	0.73	0.56
hdda:2707575 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2959165	0.54	0.98	0.39	0.59	0.37	0.61	0.45
nb:2707575 2959165	0.51	0.91	0.25	0.74	0.37	0.62	0.40
knn:2707575 2959165	0.53	0.99	0.36	0.59	0.34	0.60	0.50
rpart:2707575 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2707575 2959165	0.56	1.00	0.75	0.30	0.40	0.67	0.61
hdda:2707575 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3546559	0.53	0.98	0.54	0.50	0.39	0.64	0.19
nb:2707575 3546559	0.56	0.99	0.46	0.52	0.37	0.62	0.31
knn:2707575 3546559	0.53	0.99	0.50	0.50	0.38	0.62	0.30
rpart:2707575 3546559	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3546559	0.52	1.00	0.86	0.20	0.39	0.69	0.67

hdda:2707575 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3020668	0.53	0.96	0.25	0.70	0.33	0.60	0.31
nb:2707575 3020668	0.54	1.00	0.64	0.37	0.38	0.63	0.23
knn:2707575 3020668	0.56	1.00	0.39	0.43	0.30	0.54	0.31
rpart:2707575 3020668	0.57	0.98	0.18	0.72	0.28	0.59	0.50
svm:2707575 3020668	0.59	1.00	0.79	0.22	0.38	0.63	0.28
hdda:2707575 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2397811	0.51	0.99	0.32	0.61	0.33	0.60	0.39
nb:2707575 2397811	0.52	0.96	0.29	0.67	0.35	0.61	0.38
knn:2707575 2397811	0.52	0.99	0.71	0.35	0.40	0.67	0.33
rpart:2707575 2397811	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2397811	0.52	0.94	0.25	0.72	0.35	0.61	0.59
hdda:2707575 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3903427	0.51	1.00	0.46	0.46	0.34	0.58	0.22
nb:2707575 3903427	0.53	0.86	0.14	0.83	0.33	0.61	0.45
knn:2707575 3903427	0.58	1.00	0.36	0.46	0.29	0.54	0.34
rpart:2707575 3903427	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3903427	0.51	1.00	0.64	0.33	0.37	0.60	1.00
hdda:2707575 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 2595867	0.55	0.99	0.43	0.54	0.36	0.61	0.21
nb:2707575 2595867	0.54	0.98	0.36	0.61	0.36	0.61	0.35
knn:2707575 2595867	0.53	0.96	0.32	0.65	0.36	0.61	0.42
rpart:2707575 2595867	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 2595867	0.51	1.00	0.57	0.41	0.37	0.61	1.00
hdda:2707575 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3068088	0.52	0.96	0.43	0.59	0.39	0.63	0.29
nb:2707575 3068088	0.52	0.91	0.04	0.87	0.14	0.60	0.55
knn:2707575 3068088	0.51	1.00	0.50	0.41	0.34	0.58	0.33
rpart:2707575 3068088	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3068088	0.56	1.00	0.93	0.11	0.39	0.71	0.61
hdda:2707575 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2707575 3487363	0.56	0.96	0.57	0.50	0.41	0.66	0.30

nb:2707575 3487363	0.52	0.91	0.25	0.74	0.37	0.62	0.40
knn:2707575 3487363	0.51	1.00	0.64	0.30	0.36	0.58	0.26
rpart:2707575 3487363	0.52	0.98	0.36	0.61	0.36	0.61	0.38
svm:2707575 3487363	0.50	0.99	0.61	0.41	0.39	0.63	0.81
hdda:2510519 3530890	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3530890	0.68	0.09	0.54	0.80	0.63	0.74	0.37
nb:2510519 3530890	0.57	0.91	0.68	0.48	0.44	0.71	0.40
knn:2510519 3530890	0.59	0.91	0.68	0.48	0.44	0.71	0.36
rpart:2510519 3530890	0.56	0.64	0.36	0.76	0.48	0.66	0.39
svm:2510519 3530890	0.58	1.00	0.68	0.22	0.35	0.53	0.42
hdda:2510519 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3769569	0.67	0.20	0.64	0.70	0.56	0.76	0.25
nb:2510519 3769569	0.60	0.80	0.46	0.65	0.45	0.67	0.42
knn:2510519 3769569	0.57	0.86	0.54	0.59	0.44	0.68	0.41
rpart:2510519 3769569	0.62	0.55	0.54	0.67	0.50	0.70	0.42
svm:2510519 3769569	0.56	1.00	0.89	0.04	0.36	0.40	0.27
hdda:2510519 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3544035	0.56	0.80	0.36	0.72	0.43	0.65	0.38
nb:2510519 3544035	0.52	1.00	0.46	0.41	0.33	0.56	0.41
knn:2510519 3544035	0.54	0.91	0.32	0.70	0.39	0.63	0.43
rpart:2510519 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3544035	0.53	1.00	0.71	0.26	0.37	0.60	0.58
hdda:2510519 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2790378	0.60	0.80	0.50	0.63	0.45	0.67	0.31
nb:2510519 2790378	0.62	0.28	0.18	0.96	0.71	0.66	0.50
knn:2510519 2790378	0.54	0.91	0.43	0.63	0.41	0.64	0.41
rpart:2510519 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 2790378	0.54	1.00	0.61	0.35	0.36	0.59	0.60
hdda:2510519 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2625670	0.57	0.64	0.57	0.63	0.48	0.71	0.35
nb:2510519 2625670	0.60	0.99	0.75	0.33	0.40	0.68	0.33
knn:2510519 2625670	0.61	0.94	0.50	0.57	0.41	0.65	0.39

rpart:2510519 2625670	0.56	0.64	0.39	0.74	0.48	0.67	0.50
svm:2510519 2625670	0.56	1.00	0.71	0.13	0.33	0.43	-0.36
hdda:2510519 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3646405	0.63	0.55	0.54	0.67	0.50	0.70	0.25
nb:2510519 3646405	0.54	0.91	0.68	0.48	0.44	0.71	0.42
knn:2510519 3646405	0.63	0.55	0.54	0.67	0.50	0.70	0.44
rpart:2510519 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3646405	0.53	1.00	0.93	0.04	0.37	0.50	0.68
hdda:2510519 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2918654	0.58	0.73	0.57	0.61	0.47	0.70	0.34
nb:2510519 2918654	0.51	0.99	0.64	0.41	0.40	0.66	0.38
knn:2510519 2918654	0.59	0.86	0.50	0.61	0.44	0.67	0.50
rpart:2510519 2918654	0.55	0.64	0.32	0.78	0.47	0.65	0.41
svm:2510519 2918654	0.62	1.00	0.50	0.33	0.31	0.52	0.68
hdda:2510519 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2663553	0.62	0.73	0.68	0.54	0.48	0.74	0.19
nb:2510519 2663553	0.51	1.00	0.64	0.33	0.37	0.60	0.42
knn:2510519 2663553	0.58	1.00	0.82	0.26	0.40	0.71	0.33
rpart:2510519 2663553	0.62	0.64	0.36	0.76	0.48	0.66	0.56
svm:2510519 2663553	0.70	0.73	0.07	0.91	0.33	0.62	2.42
hdda:2510519 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3103484	0.60	0.55	0.57	0.65	0.50	0.71	0.41
nb:2510519 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.42
knn:2510519 3103484	0.59	0.73	0.61	0.59	0.47	0.71	0.39
rpart:2510519 3103484	0.54	0.86	0.43	0.65	0.43	0.65	0.49
svm:2510519 3103484	0.56	1.00	0.39	0.48	0.31	0.56	1.00
hdda:2510519 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2757491	0.52	0.86	0.50	0.61	0.44	0.67	0.42
nb:2510519 2757491	0.57	0.98	0.68	0.41	0.41	0.68	0.41
knn:2510519 2757491	0.61	0.64	0.75	0.52	0.49	0.77	0.41
rpart:2510519 2757491	0.62	0.73	0.39	0.72	0.46	0.66	0.52

svm:2510519 2757491	0.66	0.86	0.79	0.43	0.46	0.77	1.00
hdda:2510519 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2401368	0.70	0.73	0.68	0.54	0.48	0.74	0.23
nb:2510519 2401368	0.62	0.46	0.14	0.93	0.57	0.64	0.45
knn:2510519 2401368	0.52	1.00	0.39	0.50	0.32	0.58	0.30
rpart:2510519 2401368	0.65	0.28	0.43	0.80	0.57	0.70	0.47
svm:2510519 2401368	0.66	1.00	0.82	0.04	0.34	0.29	-0.13
hdda:2510519 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3788643	0.58	0.91	0.54	0.57	0.43	0.67	0.31
nb:2510519 3788643	0.51	0.98	0.43	0.57	0.38	0.62	0.40
knn:2510519 3788643	0.53	0.98	0.54	0.50	0.39	0.64	0.39
rpart:2510519 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3788643	0.58	1.00	0.75	0.22	0.37	0.59	0.56
hdda:2510519 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3219832	0.67	0.80	0.46	0.65	0.45	0.67	0.41
nb:2510519 3219832	0.58	0.46	0.11	0.96	0.60	0.64	0.60
knn:2510519 3219832	0.72	0.80	0.89	0.39	0.47	0.86	0.21
rpart:2510519 3219832	0.69	0.14	0.68	0.70	0.58	0.78	0.43
svm:2510519 3219832	0.69	1.00	0.75	0.13	0.34	0.46	0.32
hdda:2510519 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3198757	0.51	0.96	0.18	0.74	0.29	0.60	0.54
nb:2510519 3198757	0.57	0.94	0.07	0.83	0.20	0.59	0.46
knn:2510519 3198757	0.57	1.00	0.50	0.39	0.33	0.56	0.39
rpart:2510519 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3198757	0.55	1.00	0.64	0.30	0.36	0.58	0.64
hdda:2510519 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3753198	0.54	0.94	0.57	0.52	0.42	0.67	0.33
nb:2510519 3753198	0.53	0.99	0.46	0.50	0.36	0.61	0.40
knn:2510519 3753198	0.66	0.64	0.75	0.52	0.49	0.77	0.37
rpart:2510519 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3753198	0.51	1.00	0.50	0.37	0.33	0.55	0.33

hdda:2510519 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2902908	0.64	0.46	0.46	0.74	0.52	0.69	0.41
nb:2510519 2902908	0.55	0.91	0.32	0.70	0.39	0.63	0.45
knn:2510519 2902908	0.66	0.64	0.61	0.61	0.49	0.72	0.45
rpart:2510519 2902908	0.65	0.28	0.54	0.74	0.56	0.72	0.45
svm:2510519 2902908	0.68	1.00	0.50	0.15	0.26	0.33	0.53
hdda:2510519 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3142559	0.52	0.91	0.29	0.72	0.38	0.62	0.47
nb:2510519 3142559	0.52	0.99	0.25	0.65	0.30	0.59	0.42
knn:2510519 3142559	0.52	1.00	0.54	0.41	0.36	0.59	0.30
rpart:2510519 3142559	0.54	0.96	0.25	0.70	0.33	0.60	0.36
svm:2510519 3142559	0.51	1.00	0.64	0.33	0.37	0.60	0.31
hdda:2510519 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3626882	0.54	0.91	0.50	0.59	0.42	0.66	0.35
nb:2510519 3626882	0.52	0.86	0.36	0.70	0.42	0.64	0.44
knn:2510519 3626882	0.63	0.91	0.61	0.52	0.44	0.69	0.36
rpart:2510519 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3626882	0.53	1.00	0.68	0.13	0.32	0.40	-0.25
hdda:2510519 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3433222	0.72	0.20	0.46	0.80	0.59	0.71	0.26
nb:2510519 3433222	0.62	0.64	0.43	0.72	0.48	0.67	0.42
knn:2510519 3433222	0.64	0.55	0.46	0.72	0.50	0.69	0.43
rpart:2510519 3433222	0.62	0.36	0.21	0.91	0.60	0.66	0.58
svm:2510519 3433222	0.63	1.00	0.61	0.20	0.31	0.45	0.89
hdda:2510519 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2991121	0.52	0.96	0.29	0.67	0.35	0.61	0.39
nb:2510519 2991121	0.60	1.00	0.54	0.30	0.32	0.52	0.37
knn:2510519 2991121	0.52	1.00	0.61	0.39	0.38	0.62	0.39
rpart:2510519 2991121	0.51	0.80	0.39	0.70	0.44	0.65	0.45
svm:2510519 2991121	0.51	0.99	0.79	0.30	0.41	0.70	0.29
hdda:2510519 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2959165	0.57	1.00	0.68	0.35	0.39	0.64	0.29

nb:2510519 2959165	0.54	0.99	0.75	0.33	0.40	0.68	0.39
knn:2510519 2959165	0.59	0.64	0.39	0.74	0.48	0.67	0.50
rpart:2510519 2959165	0.56	0.99	0.36	0.59	0.34	0.60	0.56
svm:2510519 2959165	0.53	1.00	0.57	0.39	0.36	0.60	0.28
hdda:2510519 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3546559	0.60	0.64	0.50	0.67	0.48	0.69	0.25
nb:2510519 3546559	0.55	0.91	0.46	0.61	0.42	0.65	0.41
knn:2510519 3546559	0.52	0.94	0.43	0.61	0.40	0.64	0.50
rpart:2510519 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3546559	0.59	1.00	0.68	0.30	0.37	0.61	0.79
hdda:2510519 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3020668	0.53	0.96	0.43	0.59	0.39	0.63	0.30
nb:2510519 3020668	0.52	1.00	0.68	0.30	0.37	0.61	0.26
knn:2510519 3020668	0.52	0.96	0.29	0.67	0.35	0.61	0.50
rpart:2510519 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3020668	0.51	1.00	0.71	0.33	0.39	0.65	0.38
hdda:2510519 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2397811	0.59	0.55	0.32	0.80	0.50	0.66	0.44
nb:2510519 2397811	0.55	1.00	0.64	0.33	0.37	0.60	0.42
knn:2510519 2397811	0.51	0.98	0.79	0.35	0.42	0.73	0.40
rpart:2510519 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 2397811	0.58	1.00	0.64	0.20	0.33	0.47	0.20
hdda:2510519 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3903427	0.51	0.99	0.50	0.48	0.37	0.61	0.32
nb:2510519 3903427	0.53	0.94	0.14	0.78	0.29	0.60	0.44
knn:2510519 3903427	0.56	0.96	0.61	0.48	0.41	0.67	0.37
rpart:2510519 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3903427	0.53	1.00	0.89	0.17	0.40	0.73	0.90
hdda:2510519 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 2595867	0.64	0.64	0.64	0.59	0.49	0.73	0.31
nb:2510519 2595867	0.54	0.96	0.32	0.65	0.36	0.61	0.41
knn:2510519 2595867	0.57	0.46	0.43	0.76	0.52	0.69	0.50

rpart:2510519 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 2595867	0.55	1.00	0.79	0.15	0.36	0.54	0.51
hdda:2510519 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3068088	0.57	0.98	0.75	0.37	0.42	0.71	0.16
nb:2510519 3068088	0.53	0.73	0.00	0.96	0.00	0.61	0.69
knn:2510519 3068088	0.58	0.99	0.75	0.35	0.41	0.70	0.36
rpart:2510519 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2510519 3068088	0.60	1.00	0.61	0.20	0.31	0.45	0.61
hdda:2510519 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2510519 3487363	0.51	0.99	0.36	0.57	0.33	0.59	0.41
nb:2510519 3487363	0.52	0.99	0.14	0.72	0.24	0.58	0.46
knn:2510519 3487363	0.53	0.99	0.36	0.59	0.34	0.60	0.50
rpart:2510519 3487363	0.58	0.96	0.29	0.67	0.35	0.61	0.52
svm:2510519 3487363	0.56	1.00	0.86	0.24	0.41	0.73	0.40
hdda:3530890 3769569	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3769569	0.67	0.73	0.36	0.74	0.45	0.65	0.22
nb:3530890 3769569	0.65	0.28	0.75	0.61	0.54	0.80	0.34
knn:3530890 3769569	0.69	0.36	0.71	0.61	0.53	0.78	0.37
rpart:3530890 3769569	0.53	0.46	0.18	0.91	0.56	0.65	0.49
svm:3530890 3769569	0.66	1.00	0.54	0.26	0.31	0.48	1.00
hdda:3530890 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3544035	0.58	0.73	0.39	0.72	0.46	0.66	0.34
nb:3530890 3544035	0.54	1.00	0.71	0.30	0.38	0.64	0.29
knn:3530890 3544035	0.61	0.55	0.25	0.85	0.50	0.65	0.50
rpart:3530890 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3530890 3544035	0.51	1.00	0.79	0.17	0.37	0.57	0.35
hdda:3530890 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2790378	0.61	0.94	0.57	0.52	0.42	0.67	0.21
nb:3530890 2790378	0.66	0.94	0.79	0.39	0.44	0.75	0.32
knn:3530890 2790378	0.56	1.00	0.82	0.26	0.40	0.71	0.29
rpart:3530890 2790378	0.57	0.94	0.46	0.59	0.41	0.64	0.39

svm:3530890 2790378	0.60	0.99	0.39	0.57	0.35	0.60	1.00
hdda:3530890 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2625670	0.63	0.80	0.46	0.65	0.45	0.67	0.22
nb:3530890 2625670	0.60	0.99	0.61	0.43	0.40	0.65	0.32
knn:3530890 2625670	0.61	0.86	0.64	0.52	0.45	0.71	0.33
rpart:3530890 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3530890 2625670	0.64	1.00	0.75	0.17	0.36	0.53	0.59
hdda:3530890 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3646405	0.64	0.86	0.68	0.50	0.45	0.72	0.23
nb:3530890 3646405	0.61	0.73	0.68	0.54	0.48	0.74	0.36
knn:3530890 3646405	0.66	0.55	0.61	0.63	0.50	0.73	0.41
rpart:3530890 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3530890 3646405	0.61	1.00	0.32	0.43	0.26	0.51	1.00
hdda:3530890 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2918654	0.60	0.91	0.43	0.63	0.41	0.64	0.18
nb:3530890 2918654	0.61	0.55	0.75	0.54	0.50	0.78	0.33
knn:3530890 2918654	0.56	0.96	0.79	0.37	0.43	0.74	0.32
rpart:3530890 2918654	0.56	0.64	0.36	0.76	0.48	0.66	0.39
svm:3530890 2918654	0.58	1.00	0.57	0.33	0.34	0.56	1.00
hdda:3530890 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2663553	0.61	0.80	0.32	0.74	0.43	0.64	0.40
nb:3530890 2663553	0.63	0.91	0.71	0.46	0.44	0.72	0.35
knn:3530890 2663553	0.58	1.00	0.82	0.17	0.38	0.62	0.29
rpart:3530890 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3530890 2663553	0.53	1.00	0.75	0.17	0.36	0.53	0.62
hdda:3530890 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3103484	0.62	0.80	0.46	0.65	0.45	0.67	0.29
nb:3530890 3103484	0.53	0.96	0.29	0.67	0.35	0.61	0.39
knn:3530890 3103484	0.56	0.80	0.36	0.72	0.43	0.65	0.50
rpart:3530890 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3530890 3103484	0.69	1.00	0.61	0.17	0.31	0.42	0.26

hdda:3530890 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2757491	0.70	0.46	0.43	0.76	0.52	0.69	0.42
nb:3530890 2757491	0.64	0.94	0.79	0.39	0.44	0.75	0.32
knn:3530890 2757491	0.70	0.36	0.64	0.65	0.53	0.75	0.36
rpart:3530890 2757491	0.56	0.64	0.36	0.76	0.48	0.66	0.39
svm:3530890 2757491	0.61	1.00	0.54	0.24	0.30	0.46	0.62
hdda:3530890 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2401368	0.62	0.64	0.46	0.70	0.48	0.68	0.27
nb:3530890 2401368	0.70	0.73	0.86	0.43	0.48	0.83	0.27
knn:3530890 2401368	0.71	0.06	0.54	0.83	0.65	0.75	0.34
rpart:3530890 2401368	0.69	0.09	0.43	0.87	0.67	0.71	0.46
svm:3530890 2401368	0.63	1.00	0.82	0.07	0.35	0.38	0.18
hdda:3530890 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3788643	0.63	0.80	0.57	0.59	0.46	0.69	0.19
nb:3530890 3788643	0.58	0.91	0.75	0.43	0.45	0.74	0.31
knn:3530890 3788643	0.51	0.99	0.57	0.43	0.38	0.63	0.32
rpart:3530890 3788643	0.55	0.55	0.36	0.78	0.50	0.67	0.44
svm:3530890 3788643	0.50	1.00	0.75	0.17	0.36	0.53	0.03
hdda:3530890 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3219832	0.69	0.64	0.36	0.76	0.48	0.66	0.25
nb:3530890 3219832	0.69	0.94	0.79	0.39	0.44	0.75	0.28
knn:3530890 3219832	0.73	0.20	0.64	0.70	0.56	0.76	0.36
rpart:3530890 3219832	0.61	0.55	0.46	0.72	0.50	0.69	0.39
svm:3530890 3219832	0.62	1.00	0.68	0.17	0.33	0.47	0.72
hdda:3530890 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3198757	0.57	0.86	0.50	0.61	0.44	0.67	0.24
nb:3530890 3198757	0.52	0.64	0.07	0.93	0.40	0.62	0.56
knn:3530890 3198757	0.51	1.00	0.75	0.26	0.38	0.63	0.28
rpart:3530890 3198757	0.56	0.64	0.36	0.76	0.48	0.66	0.39
svm:3530890 3198757	0.52	0.99	0.39	0.54	0.34	0.60	1.00
hdda:3530890 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3753198	0.60	0.94	0.50	0.57	0.41	0.65	0.27

nb:3530890 3753198	0.63	0.55	0.79	0.52	0.50	0.80	0.33
knn:3530890 3753198	0.56	0.73	0.54	0.63	0.47	0.69	0.35
rpart:3530890 3753198	0.53	0.46	0.18	0.91	0.56	0.65	0.49
svm:3530890 3753198	0.63	1.00	0.64	0.28	0.35	0.57	0.54
hdda:3530890 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2902908	0.70	0.36	0.46	0.76	0.54	0.70	0.33
nb:3530890 2902908	0.60	0.91	0.68	0.48	0.44	0.71	0.35
knn:3530890 2902908	0.73	0.28	0.46	0.78	0.57	0.71	0.40
rpart:3530890 2902908	0.57	0.20	0.39	0.85	0.61	0.70	0.55
svm:3530890 2902908	0.61	1.00	0.79	0.09	0.34	0.40	-0.07
hdda:3530890 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3142559	0.56	0.46	0.32	0.83	0.53	0.67	0.41
nb:3530890 3142559	0.52	0.91	0.32	0.70	0.39	0.63	0.36
knn:3530890 3142559	0.50	0.99	0.25	0.65	0.30	0.59	0.38
rpart:3530890 3142559	0.52	0.94	0.43	0.61	0.40	0.64	0.29
svm:3530890 3142559	0.59	1.00	0.79	0.20	0.37	0.60	0.36
hdda:3530890 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3626882	0.57	0.80	0.39	0.70	0.44	0.65	0.29
nb:3530890 3626882	0.58	0.80	0.43	0.67	0.44	0.66	0.38
knn:3530890 3626882	0.52	0.73	0.21	0.83	0.43	0.63	0.50
rpart:3530890 3626882	0.52	0.64	0.14	0.89	0.44	0.63	0.59
svm:3530890 3626882	0.53	0.46	0.11	0.96	0.60	0.64	15.62
hdda:3530890 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3433222	0.67	0.46	0.54	0.70	0.52	0.71	0.28
nb:3530890 3433222	0.64	0.86	0.50	0.61	0.44	0.67	0.35
knn:3530890 3433222	0.67	0.80	0.82	0.43	0.47	0.80	0.26
rpart:3530890 3433222	0.62	0.20	0.39	0.85	0.61	0.70	0.41
svm:3530890 3433222	0.61	1.00	0.50	0.24	0.29	0.44	0.80
hdda:3530890 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2991121	0.58	0.86	0.61	0.54	0.45	0.69	0.15
nb:3530890 2991121	0.52	0.86	0.61	0.54	0.45	0.69	0.36
knn:3530890 2991121	0.52	1.00	0.71	0.28	0.38	0.62	0.31

rpart:3530890 2991121	0.56	0.64	0.36	0.76	0.48	0.66	0.39
svm:3530890 2991121	0.55	1.00	0.75	0.20	0.36	0.56	0.08
hdda:3530890 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2959165	0.58	0.46	0.36	0.80	0.53	0.67	0.41
nb:3530890 2959165	0.60	0.91	0.54	0.57	0.43	0.67	0.37
knn:3530890 2959165	0.58	0.86	0.21	0.78	0.38	0.62	0.50
rpart:3530890 2959165	0.55	0.36	0.39	0.80	0.55	0.69	0.48
svm:3530890 2959165	0.52	1.00	0.64	0.30	0.36	0.58	0.45
hdda:3530890 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3546559	0.65	0.46	0.61	0.65	0.52	0.73	0.31
nb:3530890 3546559	0.63	0.94	0.71	0.43	0.43	0.71	0.29
knn:3530890 3546559	0.58	0.55	0.46	0.72	0.50	0.69	0.38
rpart:3530890 3546559	0.58	0.46	0.36	0.80	0.53	0.67	0.44
svm:3530890 3546559	0.65	1.00	0.75	0.11	0.34	0.42	0.59
hdda:3530890 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3020668	0.55	0.91	0.32	0.70	0.39	0.63	0.34
nb:3530890 3020668	0.51	1.00	0.57	0.41	0.37	0.61	0.30
knn:3530890 3020668	0.53	0.80	0.32	0.74	0.43	0.64	0.50
rpart:3530890 3020668	0.50	0.86	0.43	0.65	0.43	0.65	0.33
svm:3530890 3020668	0.52	1.00	0.79	0.13	0.35	0.50	0.12
hdda:3530890 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2397811	0.62	0.64	0.43	0.72	0.48	0.67	0.40
nb:3530890 2397811	0.60	0.73	0.68	0.54	0.48	0.74	0.38
knn:3530890 2397811	0.60	0.80	0.57	0.59	0.46	0.69	0.41
rpart:3530890 2397811	0.53	0.46	0.18	0.91	0.56	0.65	0.49
svm:3530890 2397811	0.57	1.00	0.50	0.33	0.31	0.52	0.45
hdda:3530890 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3903427	0.57	0.94	0.46	0.59	0.41	0.64	0.22
nb:3530890 3903427	0.61	0.73	0.14	0.87	0.40	0.63	0.42
knn:3530890 3903427	0.53	0.99	0.21	0.67	0.29	0.58	0.37
rpart:3530890 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3530890 3903427	0.59	1.00	0.89	0.13	0.38	0.67	0.75
hdda:3530890 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 2595867	0.63	0.36	0.32	0.85	0.56	0.67	0.54
nb:3530890 2595867	0.59	0.46	0.18	0.91	0.56	0.65	0.48
knn:3530890 2595867	0.62	0.80	0.36	0.72	0.43	0.65	0.39
rpart:3530890 2595867	0.55	0.46	0.29	0.85	0.53	0.66	0.51
svm:3530890 2595867	0.59	1.00	0.75	0.07	0.33	0.30	-0.13
hdda:3530890 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3068088	0.65	0.64	0.46	0.70	0.48	0.68	0.31
nb:3530890 3068088	0.56	0.91	0.79	0.41	0.45	0.76	0.33
knn:3530890 3068088	0.58	0.46	0.54	0.70	0.52	0.71	0.38
rpart:3530890 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3530890 3068088	0.61	1.00	0.57	0.24	0.31	0.48	0.69
hdda:3530890 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3530890 3487363	0.57	0.91	0.50	0.59	0.42	0.66	0.26
nb:3530890 3487363	0.55	0.98	0.79	0.35	0.42	0.73	0.28
knn:3530890 3487363	0.57	0.73	0.39	0.72	0.46	0.66	0.40
rpart:3530890 3487363	0.63	0.36	0.32	0.85	0.56	0.67	0.48
svm:3530890 3487363	0.52	1.00	0.75	0.30	0.40	0.67	0.09
hdda:3769569 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3544035	0.58	0.55	0.36	0.78	0.50	0.67	0.32
nb:3769569 3544035	0.56	0.99	0.50	0.50	0.38	0.62	0.36
knn:3769569 3544035	0.54	0.96	0.54	0.52	0.41	0.65	0.35
rpart:3769569 3544035	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 3544035	0.59	1.00	0.71	0.11	0.33	0.38	0.56
hdda:3769569 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2790378	0.61	0.73	0.64	0.57	0.47	0.72	0.13
nb:3769569 2790378	0.65	0.46	0.54	0.70	0.52	0.71	0.35
knn:3769569 2790378	0.57	0.91	0.21	0.76	0.35	0.61	0.41
rpart:3769569 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2790378	0.66	1.00	0.46	0.30	0.29	0.48	1.00

hdda:3769569 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2625670	0.64	0.36	0.39	0.80	0.55	0.69	0.25
nb:3769569 2625670	0.63	0.99	0.82	0.30	0.42	0.74	0.22
knn:3769569 2625670	0.63	0.80	0.46	0.65	0.45	0.67	0.36
rpart:3769569 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2625670	0.63	1.00	0.18	0.63	0.23	0.56	1.00
hdda:3769569 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3646405	0.64	0.73	0.71	0.52	0.48	0.75	0.14
nb:3769569 3646405	0.62	0.91	0.57	0.54	0.43	0.68	0.35
knn:3769569 3646405	0.58	0.86	0.71	0.48	0.45	0.73	0.36
rpart:3769569 3646405	0.65	0.73	0.68	0.54	0.48	0.74	0.35
svm:3769569 3646405	0.53	1.00	0.75	0.22	0.37	0.59	0.58
hdda:3769569 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2918654	0.58	0.96	0.61	0.48	0.41	0.67	0.17
nb:3769569 2918654	0.62	0.94	0.54	0.54	0.42	0.66	0.33
knn:3769569 2918654	0.53	0.96	0.75	0.39	0.43	0.72	0.33
rpart:3769569 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2918654	0.60	1.00	0.57	0.41	0.37	0.61	1.00
hdda:3769569 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2663553	0.60	0.80	0.71	0.50	0.47	0.74	0.16
nb:3769569 2663553	0.62	0.86	0.39	0.67	0.42	0.65	0.37
knn:3769569 2663553	0.62	0.96	0.79	0.37	0.43	0.74	0.31
rpart:3769569 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2663553	0.51	1.00	0.61	0.33	0.35	0.58	0.76
hdda:3769569 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3103484	0.56	0.73	0.32	0.76	0.45	0.65	0.31
nb:3769569 3103484	0.58	0.80	0.61	0.57	0.46	0.70	0.32
knn:3769569 3103484	0.58	0.46	0.50	0.72	0.52	0.70	0.36
rpart:3769569 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3769569 3103484	0.60	1.00	0.71	0.15	0.34	0.47	0.40
hdda:3769569 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2757491	0.69	0.14	0.61	0.74	0.59	0.76	0.21

nb:3769569 2757491	0.66	0.64	0.64	0.59	0.49	0.73	0.35
knn:3769569 2757491	0.65	0.36	0.43	0.78	0.55	0.69	0.44
rpart:3769569 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2757491	0.64	1.00	0.61	0.20	0.31	0.45	0.51
hdda:3769569 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2401368	0.74	0.36	0.43	0.78	0.55	0.69	0.16
nb:3769569 2401368	0.68	0.55	0.57	0.65	0.50	0.71	0.29
knn:3769569 2401368	0.71	0.64	0.82	0.48	0.49	0.81	0.29
rpart:3769569 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2401368	0.71	1.00	0.36	0.33	0.24	0.45	1.00
hdda:3769569 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3788643	0.63	0.80	0.46	0.65	0.45	0.67	0.13
nb:3769569 3788643	0.62	0.55	0.61	0.63	0.50	0.73	0.33
knn:3769569 3788643	0.58	0.73	0.57	0.61	0.47	0.70	0.34
rpart:3769569 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 3788643	0.59	1.00	0.46	0.35	0.30	0.52	1.00
hdda:3769569 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3219832	0.66	0.20	0.64	0.70	0.56	0.76	0.39
nb:3769569 3219832	0.67	0.14	0.54	0.78	0.60	0.73	0.34
knn:3769569 3219832	0.64	0.73	0.68	0.54	0.48	0.74	0.30
rpart:3769569 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 3219832	0.61	1.00	0.82	0.09	0.35	0.44	0.91
hdda:3769569 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3198757	0.57	0.99	0.61	0.41	0.39	0.63	0.11
nb:3769569 3198757	0.55	0.99	0.11	0.74	0.20	0.58	0.35
knn:3769569 3198757	0.52	0.98	0.43	0.57	0.38	0.62	0.35
rpart:3769569 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 3198757	0.61	1.00	0.93	0.09	0.38	0.67	0.18
hdda:3769569 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3753198	0.59	0.99	0.50	0.50	0.38	0.62	0.32
nb:3769569 3753198	0.64	0.91	0.68	0.48	0.44	0.71	0.31
knn:3769569 3753198	0.57	0.73	0.46	0.67	0.46	0.67	0.50

rpart:3769569 3753198	0.56	0.99	0.18	0.70	0.26	0.58	0.39
svm:3769569 3753198	0.57	1.00	0.50	0.28	0.30	0.48	-0.05
hdda:3769569 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2902908	0.71	0.36	0.61	0.67	0.53	0.74	0.33
nb:3769569 2902908	0.67	0.36	0.46	0.76	0.54	0.70	0.39
knn:3769569 2902908	0.68	0.46	0.36	0.80	0.53	0.67	0.44
rpart:3769569 2902908	0.66	0.20	0.61	0.72	0.57	0.75	0.43
svm:3769569 2902908	0.67	1.00	0.54	0.24	0.30	0.46	1.00
hdda:3769569 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3142559	0.59	0.64	0.50	0.67	0.48	0.69	0.22
nb:3769569 3142559	0.57	0.64	0.61	0.61	0.49	0.72	0.30
knn:3769569 3142559	0.54	0.91	0.57	0.54	0.43	0.68	0.31
rpart:3769569 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3769569 3142559	0.56	1.00	0.39	0.43	0.30	0.54	0.90
hdda:3769569 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3626882	0.56	0.91	0.18	0.78	0.33	0.61	0.33
nb:3769569 3626882	0.60	0.73	0.32	0.76	0.45	0.65	0.40
knn:3769569 3626882	0.58	0.86	0.57	0.57	0.44	0.68	0.32
rpart:3769569 3626882	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:3769569 3626882	0.52	1.00	0.82	0.17	0.38	0.62	0.59
hdda:3769569 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3433222	0.69	0.28	0.43	0.80	0.57	0.70	0.40
nb:3769569 3433222	0.67	0.36	0.36	0.83	0.56	0.68	0.40
knn:3769569 3433222	0.65	0.64	0.75	0.52	0.49	0.77	0.26
rpart:3769569 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3769569 3433222	0.61	1.00	0.61	0.15	0.30	0.39	0.52
hdda:3769569 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2991121	0.50	0.96	0.43	0.59	0.39	0.63	0.20
nb:3769569 2991121	0.54	0.99	0.54	0.48	0.38	0.63	0.33
knn:3769569 2991121	0.53	0.99	0.39	0.54	0.34	0.60	0.35
rpart:3769569 2991121	0.53	0.98	0.43	0.57	0.38	0.62	0.35

svm:3769569 2991121	0.59	1.00	0.96	0.00	0.37	0.00	0.46
hdda:3769569 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2959165	0.57	0.73	0.32	0.76	0.45	0.65	0.47
nb:3769569 2959165	0.63	0.96	0.89	0.30	0.44	0.82	0.30
knn:3769569 2959165	0.59	0.94	0.68	0.46	0.43	0.70	0.34
rpart:3769569 2959165	0.59	0.99	0.21	0.67	0.29	0.58	0.52
svm:3769569 2959165	0.57	1.00	0.68	0.28	0.37	0.59	0.27
hdda:3769569 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3546559	0.58	0.64	0.43	0.72	0.48	0.67	0.35
nb:3769569 3546559	0.65	0.46	0.50	0.72	0.52	0.70	0.35
knn:3769569 3546559	0.61	0.80	0.43	0.67	0.44	0.66	0.36
rpart:3769569 3546559	0.51	0.91	0.29	0.72	0.38	0.62	0.45
svm:3769569 3546559	0.61	1.00	0.82	0.07	0.35	0.38	0.02
hdda:3769569 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3020668	0.61	0.73	0.54	0.63	0.47	0.69	0.34
nb:3769569 3020668	0.52	0.99	0.68	0.39	0.40	0.67	0.26
knn:3769569 3020668	0.51	0.98	0.29	0.65	0.33	0.60	0.40
rpart:3769569 3020668	0.53	0.91	0.18	0.78	0.33	0.61	0.55
svm:3769569 3020668	0.52	1.00	0.86	0.15	0.38	0.64	-0.03
hdda:3769569 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2397811	0.56	0.80	0.54	0.61	0.45	0.68	0.34
nb:3769569 2397811	0.63	0.80	0.61	0.57	0.46	0.70	0.36
knn:3769569 2397811	0.54	0.46	0.43	0.76	0.52	0.69	0.43
rpart:3769569 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2397811	0.54	1.00	0.75	0.28	0.39	0.65	0.07
hdda:3769569 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3903427	0.55	0.73	0.18	0.85	0.42	0.63	0.35
nb:3769569 3903427	0.59	0.64	0.39	0.74	0.48	0.67	0.34
knn:3769569 3903427	0.52	0.98	0.21	0.70	0.30	0.59	0.36
rpart:3769569 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3769569 3903427	0.62	1.00	0.93	0.07	0.38	0.60	0.11

hdda:3769569 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 2595867	0.56	0.86	0.36	0.70	0.42	0.64	0.27
nb:3769569 2595867	0.59	0.91	0.43	0.63	0.41	0.64	0.34
knn:3769569 2595867	0.55	0.80	0.25	0.78	0.41	0.63	0.40
rpart:3769569 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 2595867	0.60	1.00	0.82	0.17	0.38	0.62	0.45
hdda:3769569 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3068088	0.56	0.99	0.43	0.54	0.36	0.61	0.17
nb:3769569 3068088	0.59	0.73	0.39	0.72	0.46	0.66	0.36
knn:3769569 3068088	0.59	0.91	0.75	0.43	0.45	0.74	0.29
rpart:3769569 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3769569 3068088	0.56	1.00	0.71	0.24	0.36	0.58	0.52
hdda:3769569 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3769569 3487363	0.55	0.98	0.36	0.61	0.36	0.61	0.21
nb:3769569 3487363	0.56	0.94	0.43	0.61	0.40	0.64	0.34
knn:3769569 3487363	0.51	0.96	0.46	0.57	0.39	0.63	0.27
rpart:3769569 3487363	0.54	0.98	0.36	0.61	0.36	0.61	0.42
svm:3769569 3487363	0.57	1.00	0.64	0.28	0.35	0.57	0.86
hdda:3544035 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2790378	0.51	0.55	0.39	0.76	0.50	0.67	0.36
nb:3544035 2790378	0.56	1.00	0.61	0.35	0.36	0.59	0.33
knn:3544035 2790378	0.50	1.00	0.54	0.41	0.36	0.59	0.32
rpart:3544035 2790378	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 2790378	0.52	0.86	0.04	0.89	0.17	0.60	24.76
hdda:3544035 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2625670	0.50	0.86	0.39	0.67	0.42	0.65	0.20
nb:3544035 2625670	0.58	0.99	0.61	0.41	0.39	0.63	0.30
knn:3544035 2625670	0.55	0.64	0.39	0.74	0.48	0.67	0.39
rpart:3544035 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 2625670	0.54	1.00	0.71	0.11	0.33	0.38	0.71
hdda:3544035 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3646405	0.51	0.73	0.39	0.72	0.46	0.66	0.36

nb:3544035 3646405	0.51	1.00	0.54	0.39	0.35	0.58	0.35
knn:3544035 3646405	0.51	0.86	0.29	0.74	0.40	0.63	0.42
rpart:3544035 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 3646405	0.51	1.00	0.68	0.33	0.38	0.63	1.00
hdda:3544035 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2918654	0.53	0.73	0.25	0.80	0.44	0.64	0.48
nb:3544035 2918654	0.51	0.96	0.39	0.61	0.38	0.62	0.39
knn:3544035 2918654	0.52	1.00	0.71	0.30	0.38	0.64	0.17
rpart:3544035 2918654	0.52	0.80	0.25	0.78	0.41	0.63	0.44
svm:3544035 2918654	0.54	1.00	0.75	0.26	0.38	0.63	0.75
hdda:3544035 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2663553	0.58	0.80	0.43	0.67	0.44	0.66	0.39
nb:3544035 2663553	0.52	1.00	0.68	0.30	0.37	0.61	0.32
knn:3544035 2663553	0.51	0.99	0.54	0.46	0.38	0.62	0.31
rpart:3544035 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 2663553	0.51	0.99	0.57	0.46	0.39	0.64	0.47
hdda:3544035 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3103484	0.53	0.64	0.36	0.76	0.48	0.66	0.36
nb:3544035 3103484	0.52	1.00	0.57	0.41	0.37	0.61	0.33
knn:3544035 3103484	0.53	1.00	0.57	0.33	0.34	0.56	0.21
rpart:3544035 3103484	0.52	0.64	0.18	0.87	0.45	0.63	0.52
svm:3544035 3103484	0.51	0.98	0.61	0.46	0.40	0.66	0.79
hdda:3544035 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2757491	0.62	0.80	0.50	0.63	0.45	0.67	0.37
nb:3544035 2757491	0.52	1.00	0.75	0.20	0.36	0.56	0.27
knn:3544035 2757491	0.63	0.73	0.64	0.57	0.47	0.72	0.36
rpart:3544035 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 2757491	0.51	1.00	0.75	0.17	0.36	0.53	-0.02
hdda:3544035 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2401368	0.60	0.64	0.36	0.76	0.48	0.66	0.30
nb:3544035 2401368	0.53	1.00	0.50	0.39	0.33	0.56	0.30
knn:3544035 2401368	0.59	0.46	0.39	0.78	0.52	0.68	0.32

rpart:3544035 2401368	0.57	0.03	0.32	0.98	0.90	0.70	0.49
svm:3544035 2401368	0.52	1.00	0.75	0.09	0.33	0.36	0.57
hdda:3544035 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3788643	0.55	0.73	0.39	0.72	0.46	0.66	0.34
nb:3544035 3788643	0.51	1.00	0.50	0.46	0.36	0.60	0.36
knn:3544035 3788643	0.60	1.00	0.50	0.35	0.32	0.53	0.17
rpart:3544035 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 3788643	0.56	1.00	0.82	0.20	0.38	0.64	0.60
hdda:3544035 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3219832	0.58	0.46	0.36	0.80	0.53	0.67	0.39
nb:3544035 3219832	0.54	1.00	0.57	0.37	0.36	0.59	0.31
knn:3544035 3219832	0.65	0.46	0.39	0.78	0.52	0.68	0.40
rpart:3544035 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 3219832	0.57	1.00	0.75	0.15	0.35	0.50	0.19
hdda:3544035 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3198757	0.54	0.86	0.32	0.72	0.41	0.63	0.41
nb:3544035 3198757	0.54	1.00	0.54	0.41	0.36	0.59	0.25
knn:3544035 3198757	0.51	0.99	0.64	0.41	0.40	0.66	0.29
rpart:3544035 3198757	0.51	0.96	0.18	0.74	0.29	0.60	0.44
svm:3544035 3198757	0.52	1.00	0.68	0.33	0.38	0.63	0.49
hdda:3544035 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3753198	0.57	0.80	0.46	0.65	0.45	0.67	0.35
nb:3544035 3753198	0.51	1.00	0.61	0.33	0.35	0.58	0.29
knn:3544035 3753198	0.57	0.94	0.68	0.46	0.43	0.70	0.28
rpart:3544035 3753198	0.51	0.94	0.39	0.63	0.39	0.63	0.30
svm:3544035 3753198	0.57	1.00	0.86	0.17	0.39	0.67	0.26
hdda:3544035 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2902908	0.58	0.46	0.32	0.83	0.53	0.67	0.47
nb:3544035 2902908	0.51	1.00	0.64	0.26	0.35	0.55	0.31
knn:3544035 2902908	0.66	0.55	0.71	0.57	0.50	0.76	0.30
rpart:3544035 2902908	0.55	0.20	0.29	0.91	0.67	0.68	0.49

svm:3544035 2902908	0.64	1.00	0.64	0.15	0.32	0.41	0.17
hdda:3544035 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3142559	0.52	0.96	0.57	0.50	0.41	0.66	0.21
nb:3544035 3142559	0.51	1.00	0.46	0.48	0.35	0.59	0.32
knn:3544035 3142559	0.53	0.99	0.25	0.65	0.30	0.59	0.36
rpart:3544035 3142559	0.53	0.80	0.43	0.67	0.44	0.66	0.36
svm:3544035 3142559	0.65	1.00	0.25	0.61	0.28	0.57	3.50
hdda:3544035 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3626882	0.56	0.94	0.39	0.63	0.39	0.63	0.32
nb:3544035 3626882	0.51	0.96	0.57	0.50	0.41	0.66	0.34
knn:3544035 3626882	0.55	0.86	0.54	0.59	0.44	0.68	0.32
rpart:3544035 3626882	0.50	0.86	0.14	0.83	0.33	0.61	0.50
svm:3544035 3626882	0.51	1.00	0.89	0.07	0.37	0.50	0.29
hdda:3544035 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3433222	0.62	0.46	0.64	0.63	0.51	0.74	0.21
nb:3544035 3433222	0.56	0.55	0.57	0.65	0.50	0.71	0.37
knn:3544035 3433222	0.59	0.86	0.43	0.65	0.43	0.65	0.38
rpart:3544035 3433222	0.52	0.86	0.18	0.80	0.36	0.62	0.48
svm:3544035 3433222	0.57	1.00	0.68	0.22	0.35	0.53	0.45
hdda:3544035 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2991121	0.52	0.86	0.32	0.72	0.41	0.63	0.28
nb:3544035 2991121	0.58	1.00	0.43	0.35	0.29	0.50	0.32
knn:3544035 2991121	0.58	0.96	0.25	0.70	0.33	0.60	0.40
rpart:3544035 2991121	0.51	0.73	0.18	0.85	0.42	0.63	0.47
svm:3544035 2991121	0.52	1.00	0.79	0.15	0.36	0.54	0.21
hdda:3544035 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2959165	0.53	0.80	0.25	0.78	0.41	0.63	0.48
nb:3544035 2959165	0.51	1.00	0.64	0.30	0.36	0.58	0.30
knn:3544035 2959165	0.50	1.00	0.64	0.33	0.37	0.60	0.17
rpart:3544035 2959165	0.51	0.73	0.18	0.85	0.42	0.63	0.52
svm:3544035 2959165	0.51	1.00	0.71	0.22	0.36	0.56	0.39

hdda:3544035 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3546559	0.56	0.55	0.21	0.87	0.50	0.65	0.40
nb:3544035 3546559	0.56	0.99	0.57	0.46	0.39	0.64	0.31
knn:3544035 3546559	0.57	0.86	0.57	0.57	0.44	0.68	0.28
rpart:3544035 3546559	0.53	0.36	0.21	0.91	0.60	0.66	0.45
svm:3544035 3546559	0.52	1.00	0.93	0.04	0.37	0.50	-0.26
hdda:3544035 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3020668	0.50	0.86	0.36	0.70	0.42	0.64	0.27
nb:3544035 3020668	0.50	1.00	0.39	0.50	0.32	0.58	0.34
knn:3544035 3020668	0.60	0.98	0.18	0.72	0.28	0.59	0.42
rpart:3544035 3020668	0.53	0.64	0.25	0.83	0.47	0.64	0.39
svm:3544035 3020668	0.50	1.00	0.82	0.15	0.37	0.58	0.18
hdda:3544035 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2397811	0.51	0.94	0.39	0.63	0.39	0.63	0.34
nb:3544035 2397811	0.52	1.00	0.79	0.20	0.37	0.60	0.27
knn:3544035 2397811	0.52	0.96	0.32	0.65	0.36	0.61	0.40
rpart:3544035 2397811	0.51	0.91	0.25	0.74	0.37	0.62	0.46
svm:3544035 2397811	0.56	1.00	0.82	0.17	0.38	0.62	-0.09
hdda:3544035 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3903427	0.56	0.86	0.46	0.63	0.43	0.66	0.38
nb:3544035 3903427	0.52	0.96	0.43	0.59	0.39	0.63	0.36
knn:3544035 3903427	0.53	0.94	0.39	0.63	0.39	0.63	0.35
rpart:3544035 3903427	0.52	0.98	0.11	0.76	0.21	0.58	0.43
svm:3544035 3903427	0.52	1.00	0.61	0.30	0.35	0.56	0.60
hdda:3544035 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 2595867	0.53	0.86	0.54	0.59	0.44	0.68	0.26
nb:3544035 2595867	0.50	0.91	0.61	0.52	0.44	0.69	0.34
knn:3544035 2595867	0.57	0.94	0.57	0.52	0.42	0.67	0.33
rpart:3544035 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 2595867	0.53	1.00	0.79	0.17	0.37	0.57	0.46
hdda:3544035 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3068088	0.50	0.86	0.39	0.67	0.42	0.65	0.27

nb:3544035 3068088	0.53	1.00	0.50	0.41	0.34	0.58	0.36
knn:3544035 3068088	0.59	1.00	0.54	0.37	0.34	0.57	0.28
rpart:3544035 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3544035 3068088	0.55	1.00	0.50	0.41	0.34	0.58	1.00
hdda:3544035 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3544035 3487363	0.52	0.64	0.29	0.80	0.47	0.65	0.41
nb:3544035 3487363	0.50	1.00	0.64	0.28	0.35	0.57	0.28
knn:3544035 3487363	0.55	0.91	0.39	0.65	0.41	0.64	0.36
rpart:3544035 3487363	0.52	0.91	0.25	0.74	0.37	0.62	0.41
svm:3544035 3487363	0.55	1.00	0.79	0.17	0.37	0.57	0.10
hdda:2790378 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2625670	0.54	0.80	0.32	0.74	0.43	0.64	0.15
nb:2790378 2625670	0.62	0.99	0.82	0.30	0.42	0.74	0.23
knn:2790378 2625670	0.60	0.80	0.50	0.63	0.45	0.67	0.34
rpart:2790378 2625670	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 2625670	0.52	1.00	0.86	0.02	0.35	0.20	0.97
hdda:2790378 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3646405	0.57	0.99	0.64	0.41	0.40	0.66	0.18
nb:2790378 3646405	0.62	0.36	0.18	0.93	0.63	0.65	0.44
knn:2790378 3646405	0.59	0.73	0.50	0.65	0.47	0.68	0.36
rpart:2790378 3646405	0.58	0.73	0.50	0.65	0.47	0.68	0.43
svm:2790378 3646405	0.55	1.00	0.79	0.11	0.35	0.45	0.73
hdda:2790378 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2918654	0.51	0.99	0.46	0.52	0.37	0.62	0.24
nb:2790378 2918654	0.59	0.99	0.46	0.52	0.37	0.62	0.33
knn:2790378 2918654	0.56	0.80	0.32	0.74	0.43	0.64	0.38
rpart:2790378 2918654	0.52	0.91	0.39	0.65	0.41	0.64	0.43
svm:2790378 2918654	0.54	1.00	0.75	0.30	0.40	0.67	0.39
hdda:2790378 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2663553	0.54	1.00	0.71	0.33	0.39	0.65	0.10
nb:2790378 2663553	0.60	0.20	0.25	0.93	0.70	0.67	0.42
knn:2790378 2663553	0.53	0.96	0.61	0.48	0.41	0.67	0.32

rpart:2790378 2663553	0.58	0.86	0.25	0.76	0.39	0.63	0.45
svm:2790378 2663553	0.65	1.00	0.50	0.30	0.30	0.50	1.00
hdda:2790378 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3103484	0.51	0.94	0.36	0.65	0.38	0.63	0.32
nb:2790378 3103484	0.56	0.91	0.43	0.63	0.41	0.64	0.34
knn:2790378 3103484	0.52	0.86	0.32	0.72	0.41	0.63	0.50
rpart:2790378 3103484	0.51	0.73	0.25	0.80	0.44	0.64	0.53
svm:2790378 3103484	0.60	1.00	0.75	0.22	0.37	0.59	0.50
hdda:2790378 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2757491	0.60	0.64	0.50	0.67	0.48	0.69	0.43
nb:2790378 2757491	0.68	0.28	0.25	0.91	0.64	0.67	0.40
knn:2790378 2757491	0.60	0.64	0.25	0.83	0.47	0.64	0.43
rpart:2790378 2757491	0.65	0.46	0.50	0.72	0.52	0.70	0.46
svm:2790378 2757491	0.57	1.00	0.82	0.11	0.36	0.50	0.43
hdda:2790378 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2401368	0.62	0.28	0.46	0.78	0.57	0.71	0.22
nb:2790378 2401368	0.65	0.36	0.21	0.91	0.60	0.66	0.40
knn:2790378 2401368	0.55	0.96	0.61	0.48	0.41	0.67	0.29
rpart:2790378 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 2401368	0.62	1.00	0.43	0.33	0.28	0.48	1.00
hdda:2790378 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3788643	0.56	0.91	0.36	0.67	0.40	0.63	0.19
nb:2790378 3788643	0.54	0.28	0.29	0.89	0.62	0.67	0.39
knn:2790378 3788643	0.51	0.98	0.54	0.50	0.39	0.64	0.32
rpart:2790378 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 3788643	0.56	0.99	0.64	0.39	0.39	0.64	0.14
hdda:2790378 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3219832	0.65	0.55	0.64	0.61	0.50	0.74	0.23
nb:2790378 3219832	0.63	0.55	0.14	0.91	0.50	0.64	0.51
knn:2790378 3219832	0.58	0.86	0.36	0.70	0.42	0.64	0.39
rpart:2790378 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2790378 3219832	0.60	1.00	0.68	0.13	0.32	0.40	0.88
hdda:2790378 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3198757	0.51	0.94	0.25	0.72	0.35	0.61	0.27
nb:2790378 3198757	0.56	0.94	0.21	0.74	0.33	0.61	0.33
knn:2790378 3198757	0.59	0.80	0.57	0.59	0.46	0.69	0.32
rpart:2790378 3198757	0.50	0.86	0.21	0.78	0.38	0.62	0.47
svm:2790378 3198757	0.57	1.00	0.50	0.33	0.31	0.52	1.00
hdda:2790378 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3753198	0.51	0.80	0.39	0.70	0.44	0.65	0.39
nb:2790378 3753198	0.64	0.28	0.39	0.83	0.58	0.69	0.37
knn:2790378 3753198	0.50	1.00	0.61	0.33	0.35	0.58	0.17
rpart:2790378 3753198	0.56	0.99	0.18	0.70	0.26	0.58	0.39
svm:2790378 3753198	0.52	1.00	0.68	0.20	0.34	0.50	0.34
hdda:2790378 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2902908	0.59	0.96	0.46	0.57	0.39	0.63	0.23
nb:2790378 2902908	0.63	0.73	0.57	0.61	0.47	0.70	0.36
knn:2790378 2902908	0.60	0.86	0.71	0.48	0.45	0.73	0.33
rpart:2790378 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 2902908	0.53	1.00	0.64	0.20	0.33	0.47	1.00
hdda:2790378 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3142559	0.51	0.96	0.43	0.59	0.39	0.63	0.35
nb:2790378 3142559	0.52	0.96	0.29	0.67	0.35	0.61	0.35
knn:2790378 3142559	0.53	0.98	0.64	0.43	0.41	0.67	0.21
rpart:2790378 3142559	0.59	0.64	0.43	0.72	0.48	0.67	0.41
svm:2790378 3142559	0.53	0.46	0.25	0.87	0.54	0.66	3.14
hdda:2790378 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3626882	0.56	0.94	0.14	0.78	0.29	0.60	0.42
nb:2790378 3626882	0.60	0.73	0.54	0.63	0.47	0.69	0.35
knn:2790378 3626882	0.58	0.96	0.82	0.35	0.43	0.76	0.26
rpart:2790378 3626882	0.53	0.73	0.29	0.78	0.44	0.64	0.41
svm:2790378 3626882	0.52	1.00	0.79	0.28	0.40	0.68	0.13

hdda:2790378 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3433222	0.63	0.73	0.46	0.67	0.46	0.67	0.31
nb:2790378 3433222	0.64	0.55	0.32	0.80	0.50	0.66	0.39
knn:2790378 3433222	0.66	0.80	0.68	0.52	0.46	0.73	0.29
rpart:2790378 3433222	0.55	0.80	0.61	0.57	0.46	0.70	0.35
svm:2790378 3433222	0.58	1.00	0.68	0.26	0.36	0.57	0.64
hdda:2790378 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2991121	0.54	1.00	0.61	0.39	0.38	0.62	0.17
nb:2790378 2991121	0.54	1.00	0.68	0.24	0.35	0.55	0.28
knn:2790378 2991121	0.54	1.00	0.86	0.22	0.40	0.71	0.24
rpart:2790378 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 2991121	0.53	1.00	0.57	0.28	0.33	0.52	1.00
hdda:2790378 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2959165	0.51	0.73	0.32	0.76	0.45	0.65	0.48
nb:2790378 2959165	0.58	0.99	0.68	0.39	0.40	0.67	0.33
knn:2790378 2959165	0.55	0.98	0.86	0.30	0.43	0.78	0.28
rpart:2790378 2959165	0.51	0.91	0.39	0.65	0.41	0.64	0.45
svm:2790378 2959165	0.56	1.00	0.82	0.13	0.37	0.55	0.39
hdda:2790378 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3546559	0.53	0.73	0.21	0.83	0.43	0.63	0.29
nb:2790378 3546559	0.59	0.64	0.32	0.78	0.47	0.65	0.39
knn:2790378 3546559	0.58	0.80	0.61	0.57	0.46	0.70	0.32
rpart:2790378 3546559	0.57	0.64	0.36	0.76	0.48	0.66	0.44
svm:2790378 3546559	0.57	1.00	0.75	0.11	0.34	0.42	0.89
hdda:2790378 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3020668	0.57	1.00	0.39	0.52	0.33	0.59	0.21
nb:2790378 3020668	0.52	1.00	0.68	0.35	0.39	0.64	0.25
knn:2790378 3020668	0.52	1.00	0.18	0.65	0.24	0.57	0.41
rpart:2790378 3020668	0.52	0.99	0.43	0.52	0.35	0.60	0.28
svm:2790378 3020668	0.52	0.98	0.36	0.61	0.36	0.61	1.00
hdda:2790378 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2397811	0.57	0.99	0.57	0.43	0.38	0.63	0.19

nb:2790378 2397811	0.60	0.28	0.25	0.91	0.64	0.67	0.43
knn:2790378 2397811	0.56	1.00	0.79	0.20	0.37	0.60	0.32
rpart:2790378 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 2397811	0.64	1.00	0.57	0.20	0.30	0.43	1.00
hdda:2790378 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3903427	0.51	0.96	0.21	0.72	0.32	0.60	0.25
nb:2790378 3903427	0.62	0.80	0.32	0.74	0.43	0.64	0.36
knn:2790378 3903427	0.60	0.94	0.61	0.50	0.43	0.68	0.30
rpart:2790378 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2790378 3903427	0.51	1.00	0.86	0.20	0.39	0.69	0.96
hdda:2790378 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 2595867	0.53	0.73	0.21	0.83	0.43	0.63	0.38
nb:2790378 2595867	0.60	0.64	0.46	0.70	0.48	0.68	0.35
knn:2790378 2595867	0.56	0.96	0.54	0.52	0.41	0.65	0.34
rpart:2790378 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 2595867	0.52	1.00	0.93	0.04	0.37	0.50	-1.07
hdda:2790378 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3068088	0.50	1.00	0.54	0.41	0.36	0.59	0.15
nb:2790378 3068088	0.60	0.64	0.18	0.87	0.45	0.63	0.41
knn:2790378 3068088	0.56	0.80	0.39	0.70	0.44	0.65	0.35
rpart:2790378 3068088	0.57	0.46	0.25	0.87	0.54	0.66	0.45
svm:2790378 3068088	0.69	1.00	0.46	0.22	0.27	0.40	1.00
hdda:2790378 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2790378 3487363	0.56	1.00	0.50	0.46	0.36	0.60	0.26
nb:2790378 3487363	0.52	0.91	0.32	0.70	0.39	0.63	0.37
knn:2790378 3487363	0.55	1.00	0.68	0.33	0.38	0.63	0.29
rpart:2790378 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2790378 3487363	0.57	1.00	0.82	0.26	0.40	0.71	-0.68
hdda:2625670 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3646405	0.55	0.80	0.29	0.76	0.42	0.64	0.16
nb:2625670 3646405	0.59	0.99	0.75	0.35	0.41	0.70	0.28
knn:2625670 3646405	0.60	0.99	0.79	0.33	0.42	0.71	0.30

rpart:2625670 3646405	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3646405	0.53	0.55	0.32	0.80	0.50	0.66	0.88
hdda:2625670 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2918654	0.54	0.86	0.21	0.78	0.38	0.62	0.24
nb:2625670 2918654	0.56	0.98	0.82	0.33	0.43	0.75	0.25
knn:2625670 2918654	0.58	0.94	0.57	0.52	0.42	0.67	0.31
rpart:2625670 2918654	0.52	1.00	0.64	0.37	0.38	0.63	0.26
svm:2625670 2918654	0.50	1.00	0.93	0.07	0.38	0.60	0.31
hdda:2625670 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2663553	0.54	0.94	0.39	0.63	0.39	0.63	0.09
nb:2625670 2663553	0.58	0.99	0.79	0.33	0.42	0.71	0.27
knn:2625670 2663553	0.59	0.80	0.71	0.50	0.47	0.74	0.34
rpart:2625670 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 2663553	0.57	0.86	0.36	0.70	0.42	0.64	1.00
hdda:2625670 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3103484	0.53	0.99	0.39	0.57	0.35	0.60	0.21
nb:2625670 3103484	0.56	0.99	0.79	0.33	0.42	0.71	0.22
knn:2625670 3103484	0.51	0.94	0.43	0.61	0.40	0.64	0.34
rpart:2625670 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:2625670 3103484	0.53	0.98	0.25	0.67	0.32	0.60	1.00
hdda:2625670 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2757491	0.65	0.80	0.54	0.61	0.45	0.68	0.16
nb:2625670 2757491	0.63	0.99	0.79	0.33	0.42	0.71	0.27
knn:2625670 2757491	0.64	0.46	0.46	0.74	0.52	0.69	0.39
rpart:2625670 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 2757491	0.56	1.00	0.64	0.28	0.35	0.57	0.63
hdda:2625670 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2401368	0.52	0.86	0.46	0.63	0.43	0.66	0.30
nb:2625670 2401368	0.65	0.99	0.79	0.33	0.42	0.71	0.20
knn:2625670 2401368	0.64	0.55	0.36	0.78	0.50	0.67	0.37
rpart:2625670 2401368	0.68	0.36	0.21	0.91	0.60	0.66	0.48

svm:2625670 2401368	0.57	0.64	0.04	0.96	0.33	0.62	5.85
hdda:2625670 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3788643	0.58	0.94	0.39	0.63	0.39	0.63	0.14
nb:2625670 3788643	0.58	0.99	0.79	0.33	0.42	0.71	0.23
knn:2625670 3788643	0.50	0.99	0.43	0.54	0.36	0.61	0.32
rpart:2625670 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3788643	0.59	0.64	0.36	0.76	0.48	0.66	0.64
hdda:2625670 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3219832	0.65	0.73	0.75	0.50	0.48	0.77	0.10
nb:2625670 3219832	0.63	0.98	0.82	0.33	0.43	0.75	0.22
knn:2625670 3219832	0.64	0.64	0.57	0.63	0.48	0.71	0.36
rpart:2625670 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3219832	0.64	1.00	0.64	0.20	0.33	0.47	0.69
hdda:2625670 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3198757	0.53	0.94	0.46	0.59	0.41	0.64	0.14
nb:2625670 3198757	0.55	0.98	0.82	0.33	0.43	0.75	0.17
knn:2625670 3198757	0.53	0.96	0.29	0.67	0.35	0.61	0.37
rpart:2625670 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3198757	0.52	1.00	0.93	0.13	0.39	0.75	0.99
hdda:2625670 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3753198	0.57	0.80	0.39	0.70	0.44	0.65	0.34
nb:2625670 3753198	0.61	0.98	0.79	0.35	0.42	0.73	0.27
knn:2625670 3753198	0.61	0.28	0.29	0.89	0.62	0.67	0.50
rpart:2625670 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3753198	0.70	1.00	0.71	0.17	0.34	0.50	0.33
hdda:2625670 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2902908	0.59	0.73	0.50	0.65	0.47	0.68	0.23
nb:2625670 2902908	0.59	0.99	0.82	0.30	0.42	0.74	0.25
knn:2625670 2902908	0.55	0.99	0.61	0.43	0.40	0.65	0.34
rpart:2625670 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 2902908	0.58	1.00	0.89	0.20	0.40	0.75	0.67

hdda:2625670 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3142559	0.50	0.96	0.25	0.70	0.33	0.60	0.27
nb:2625670 3142559	0.54	0.91	0.39	0.65	0.41	0.64	0.33
knn:2625670 3142559	0.52	0.96	0.39	0.61	0.38	0.62	0.34
rpart:2625670 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2625670 3142559	0.52	1.00	0.89	0.22	0.41	0.77	0.28
hdda:2625670 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3626882	0.52	0.73	0.14	0.87	0.40	0.63	0.44
nb:2625670 3626882	0.59	0.96	0.82	0.35	0.43	0.76	0.23
knn:2625670 3626882	0.52	0.80	0.29	0.76	0.42	0.64	0.35
rpart:2625670 3626882	0.55	0.64	0.29	0.80	0.47	0.65	0.51
svm:2625670 3626882	0.57	1.00	0.75	0.26	0.38	0.63	0.43
hdda:2625670 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3433222	0.64	0.46	0.43	0.76	0.52	0.69	0.18
nb:2625670 3433222	0.62	0.99	0.82	0.28	0.41	0.72	0.21
knn:2625670 3433222	0.51	0.80	0.36	0.72	0.43	0.65	0.41
rpart:2625670 3433222	0.62	0.36	0.21	0.91	0.60	0.66	0.58
svm:2625670 3433222	0.61	1.00	0.54	0.37	0.34	0.57	0.81
hdda:2625670 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2991121	0.53	1.00	0.50	0.46	0.36	0.60	0.11
nb:2625670 2991121	0.51	1.00	0.54	0.43	0.37	0.61	0.29
knn:2625670 2991121	0.53	1.00	0.36	0.52	0.31	0.57	0.35
rpart:2625670 2991121	0.53	1.00	0.61	0.26	0.33	0.52	0.25
svm:2625670 2991121	0.51	0.86	0.46	0.63	0.43	0.66	1.00
hdda:2625670 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2959165	0.56	0.80	0.43	0.67	0.44	0.66	0.38
nb:2625670 2959165	0.58	0.96	0.75	0.39	0.43	0.72	0.27
knn:2625670 2959165	0.58	0.80	0.54	0.61	0.45	0.68	0.37
rpart:2625670 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:2625670 2959165	0.61	1.00	0.79	0.15	0.36	0.54	0.43
hdda:2625670 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3546559	0.53	0.80	0.25	0.78	0.41	0.63	0.19

nb:2625670 3546559	0.59	0.99	0.79	0.33	0.42	0.71	0.22
knn:2625670 3546559	0.59	0.86	0.39	0.67	0.42	0.65	0.35
rpart:2625670 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3546559	0.55	1.00	0.75	0.22	0.37	0.59	-0.13
hdda:2625670 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3020668	0.57	0.96	0.18	0.74	0.29	0.60	0.30
nb:2625670 3020668	0.51	0.98	0.46	0.54	0.38	0.63	0.32
knn:2625670 3020668	0.52	0.99	0.36	0.57	0.33	0.59	0.34
rpart:2625670 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3020668	0.57	1.00	0.89	0.17	0.40	0.73	-0.01
hdda:2625670 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2397811	0.53	0.86	0.64	0.52	0.45	0.71	0.18
nb:2625670 2397811	0.57	0.98	0.75	0.37	0.42	0.71	0.29
knn:2625670 2397811	0.50	0.99	0.50	0.48	0.37	0.61	0.30
rpart:2625670 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 2397811	0.55	0.99	0.68	0.39	0.40	0.67	-0.02
hdda:2625670 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3903427	0.51	0.99	0.50	0.48	0.37	0.61	0.19
nb:2625670 3903427	0.57	0.99	0.82	0.30	0.42	0.74	0.20
knn:2625670 3903427	0.56	0.91	0.57	0.54	0.43	0.68	0.32
rpart:2625670 3903427	0.55	0.96	0.14	0.76	0.27	0.59	0.41
svm:2625670 3903427	0.52	0.99	0.82	0.28	0.41	0.72	0.57
hdda:2625670 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 2595867	0.53	0.80	0.32	0.74	0.43	0.64	0.30
nb:2625670 2595867	0.59	0.98	0.89	0.28	0.43	0.81	0.17
knn:2625670 2595867	0.55	0.96	0.39	0.61	0.38	0.62	0.34
rpart:2625670 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 2595867	0.57	1.00	0.54	0.39	0.35	0.58	1.00
hdda:2625670 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3068088	0.50	0.94	0.50	0.57	0.41	0.65	0.14
nb:2625670 3068088	0.57	0.99	0.79	0.30	0.41	0.70	0.25
knn:2625670 3068088	0.57	0.96	0.68	0.43	0.42	0.69	0.32

rpart:2625670 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3068088	0.56	0.94	0.71	0.43	0.43	0.71	1.00
hdda:2625670 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2625670 3487363	0.55	1.00	0.39	0.52	0.33	0.59	0.14
nb:2625670 3487363	0.56	0.99	0.79	0.33	0.42	0.71	0.23
knn:2625670 3487363	0.52	0.73	0.39	0.72	0.46	0.66	0.36
rpart:2625670 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2625670 3487363	0.57	1.00	0.93	0.13	0.39	0.75	0.14
hdda:3646405 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2918654	0.52	0.99	0.50	0.48	0.37	0.61	0.15
nb:3646405 2918654	0.54	0.99	0.43	0.54	0.36	0.61	0.35
knn:3646405 2918654	0.51	1.00	0.75	0.26	0.38	0.63	0.34
rpart:3646405 2918654	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3646405 2918654	0.54	1.00	0.75	0.30	0.40	0.67	0.60
hdda:3646405 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2663553	0.55	0.73	0.68	0.54	0.48	0.74	0.22
nb:3646405 2663553	0.53	1.00	0.79	0.24	0.39	0.65	0.35
knn:3646405 2663553	0.63	1.00	0.82	0.22	0.39	0.67	0.33
rpart:3646405 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3646405 2663553	0.53	0.64	0.21	0.85	0.46	0.64	3.72
hdda:3646405 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3103484	0.52	0.94	0.36	0.65	0.38	0.63	0.19
nb:3646405 3103484	0.51	0.96	0.32	0.65	0.36	0.61	0.39
knn:3646405 3103484	0.53	0.96	0.32	0.65	0.36	0.61	0.39
rpart:3646405 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3646405 3103484	0.53	1.00	0.68	0.26	0.36	0.57	0.52
hdda:3646405 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2757491	0.68	0.64	0.32	0.78	0.47	0.65	0.24
nb:3646405 2757491	0.62	1.00	0.89	0.20	0.40	0.75	0.32
knn:3646405 2757491	0.62	0.80	0.71	0.50	0.47	0.74	0.39
rpart:3646405 2757491	0.55	0.73	0.29	0.78	0.44	0.64	0.45

svm:3646405 2757491	0.62	1.00	0.96	0.04	0.38	0.67	0.74
hdda:3646405 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2401368	0.68	0.20	0.39	0.85	0.61	0.70	0.18
nb:3646405 2401368	0.63	0.46	0.14	0.93	0.57	0.64	0.40
knn:3646405 2401368	0.65	0.28	0.32	0.87	0.60	0.68	0.38
rpart:3646405 2401368	0.69	0.06	0.57	0.80	0.64	0.76	0.31
svm:3646405 2401368	0.59	0.99	0.21	0.67	0.29	0.58	3.68
hdda:3646405 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3788643	0.56	0.73	0.32	0.76	0.45	0.65	0.20
nb:3646405 3788643	0.53	0.80	0.25	0.78	0.41	0.63	0.38
knn:3646405 3788643	0.51	0.86	0.29	0.74	0.40	0.63	0.39
rpart:3646405 3788643	0.55	0.55	0.14	0.91	0.50	0.64	0.61
svm:3646405 3788643	0.51	1.00	0.75	0.15	0.35	0.50	1.00
hdda:3646405 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3219832	0.67	0.09	0.68	0.72	0.59	0.79	0.10
nb:3646405 3219832	0.64	0.55	0.11	0.93	0.50	0.63	0.50
knn:3646405 3219832	0.71	0.20	0.39	0.85	0.61	0.70	0.40
rpart:3646405 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3646405 3219832	0.69	1.00	0.57	0.15	0.29	0.37	0.64
hdda:3646405 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3198757	0.53	1.00	0.46	0.48	0.35	0.59	0.13
nb:3646405 3198757	0.53	0.96	0.07	0.80	0.18	0.59	0.39
knn:3646405 3198757	0.53	0.96	0.36	0.63	0.37	0.62	0.39
rpart:3646405 3198757	0.54	0.98	0.36	0.61	0.36	0.61	0.46
svm:3646405 3198757	0.59	1.00	1.00	0.02	0.38	1.00	0.99
hdda:3646405 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3753198	0.59	0.73	0.32	0.76	0.45	0.65	0.48
nb:3646405 3753198	0.55	1.00	0.75	0.30	0.40	0.67	0.32
knn:3646405 3753198	0.69	0.28	0.36	0.85	0.59	0.68	0.44
rpart:3646405 3753198	0.56	0.99	0.18	0.70	0.26	0.58	0.39
svm:3646405 3753198	0.67	1.00	0.71	0.15	0.34	0.47	0.58

hdda:3646405 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2902908	0.64	0.64	0.46	0.70	0.48	0.68	0.43
nb:3646405 2902908	0.59	0.64	0.46	0.70	0.48	0.68	0.39
knn:3646405 2902908	0.53	0.80	0.46	0.65	0.45	0.67	0.42
rpart:3646405 2902908	0.63	0.55	0.57	0.65	0.50	0.71	0.44
svm:3646405 2902908	0.63	1.00	0.64	0.26	0.35	0.55	0.06
hdda:3646405 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3142559	0.51	0.94	0.21	0.74	0.33	0.61	0.32
nb:3646405 3142559	0.52	0.86	0.21	0.78	0.38	0.62	0.41
knn:3646405 3142559	0.51	0.94	0.25	0.72	0.35	0.61	0.40
rpart:3646405 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3646405 3142559	0.51	1.00	0.39	0.50	0.32	0.58	1.00
hdda:3646405 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3626882	0.53	0.80	0.14	0.85	0.36	0.62	0.49
nb:3646405 3626882	0.53	0.80	0.39	0.70	0.44	0.65	0.38
knn:3646405 3626882	0.54	0.80	0.32	0.74	0.43	0.64	0.42
rpart:3646405 3626882	0.52	0.73	0.36	0.74	0.45	0.65	0.49
svm:3646405 3626882	0.55	1.00	0.86	0.13	0.38	0.60	0.11
hdda:3646405 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3433222	0.66	0.20	0.39	0.85	0.61	0.70	0.45
nb:3646405 3433222	0.60	0.64	0.36	0.76	0.48	0.66	0.38
knn:3646405 3433222	0.62	0.20	0.36	0.87	0.63	0.69	0.45
rpart:3646405 3433222	0.63	0.14	0.32	0.91	0.69	0.69	0.52
svm:3646405 3433222	0.63	1.00	0.61	0.26	0.33	0.52	0.51
hdda:3646405 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2991121	0.53	1.00	0.50	0.41	0.34	0.58	0.10
nb:3646405 2991121	0.60	1.00	0.54	0.35	0.33	0.55	0.32
knn:3646405 2991121	0.55	1.00	0.50	0.35	0.32	0.53	0.37
rpart:3646405 2991121	0.59	1.00	0.43	0.43	0.32	0.56	0.36
svm:3646405 2991121	0.58	0.80	0.46	0.65	0.45	0.67	1.00
hdda:3646405 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2959165	0.53	0.96	0.43	0.59	0.39	0.63	0.42

nb:3646405 2959165	0.56	0.94	0.50	0.57	0.41	0.65	0.38
knn:3646405 2959165	0.60	0.73	0.64	0.57	0.47	0.72	0.39
rpart:3646405 2959165	0.53	0.94	0.36	0.65	0.38	0.63	0.52
svm:3646405 2959165	0.54	1.00	0.89	0.15	0.39	0.70	-0.24
hdda:3646405 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3546559	0.55	0.96	0.54	0.52	0.41	0.65	0.20
nb:3646405 3546559	0.57	0.96	0.61	0.48	0.41	0.67	0.32
knn:3646405 3546559	0.55	0.91	0.43	0.63	0.41	0.64	0.40
rpart:3646405 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3646405 3546559	0.56	1.00	0.43	0.46	0.32	0.57	1.00
hdda:3646405 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3020668	0.52	0.96	0.25	0.70	0.33	0.60	0.39
nb:3646405 3020668	0.51	1.00	0.68	0.33	0.38	0.63	0.24
knn:3646405 3020668	0.54	0.99	0.75	0.33	0.40	0.68	0.17
rpart:3646405 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3646405 3020668	0.53	0.55	0.04	0.98	0.50	0.63	1.54
hdda:3646405 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2397811	0.51	0.99	0.54	0.48	0.38	0.63	0.29
nb:3646405 2397811	0.51	0.94	0.79	0.39	0.44	0.75	0.35
knn:3646405 2397811	0.54	1.00	0.54	0.41	0.36	0.59	0.38
rpart:3646405 2397811	0.57	1.00	0.39	0.50	0.32	0.58	0.53
svm:3646405 2397811	0.53	0.98	0.39	0.59	0.37	0.61	1.00
hdda:3646405 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3903427	0.51	0.96	0.14	0.76	0.27	0.59	0.39
nb:3646405 3903427	0.52	0.80	0.14	0.85	0.36	0.62	0.43
knn:3646405 3903427	0.54	0.96	0.18	0.74	0.29	0.60	0.43
rpart:3646405 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3646405 3903427	0.55	1.00	0.86	0.15	0.38	0.64	0.19
hdda:3646405 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 2595867	0.50	0.80	0.21	0.80	0.40	0.63	0.36
nb:3646405 2595867	0.51	0.80	0.21	0.80	0.40	0.63	0.42
knn:3646405 2595867	0.50	0.99	0.57	0.46	0.39	0.64	0.36

rpart:3646405 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3646405 2595867	0.54	1.00	0.75	0.24	0.38	0.61	0.99
hdda:3646405 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3068088	0.56	0.73	0.57	0.61	0.47	0.70	0.31
nb:3646405 3068088	0.50	0.73	0.00	0.96	0.00	0.61	0.65
knn:3646405 3068088	0.55	0.86	0.50	0.61	0.44	0.67	0.40
rpart:3646405 3068088	0.59	0.46	0.36	0.80	0.53	0.67	0.44
svm:3646405 3068088	0.57	1.00	0.82	0.15	0.37	0.58	-0.04
hdda:3646405 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3646405 3487363	0.52	0.99	0.46	0.52	0.37	0.62	0.32
nb:3646405 3487363	0.53	0.99	0.14	0.72	0.24	0.58	0.41
knn:3646405 3487363	0.57	0.99	0.50	0.50	0.38	0.62	0.36
rpart:3646405 3487363	0.52	0.98	0.50	0.52	0.39	0.63	0.35
svm:3646405 3487363	0.57	0.99	0.79	0.30	0.41	0.70	0.65
hdda:2918654 2663553	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2663553	0.52	0.64	0.29	0.80	0.47	0.65	0.30
nb:2918654 2663553	0.51	1.00	0.54	0.43	0.37	0.61	0.34
knn:2918654 2663553	0.53	0.99	0.57	0.46	0.39	0.64	0.32
rpart:2918654 2663553	0.53	1.00	0.64	0.37	0.38	0.63	0.28
svm:2918654 2663553	0.54	1.00	0.86	0.13	0.38	0.60	0.08
hdda:2918654 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3103484	0.56	0.94	0.39	0.63	0.39	0.63	0.33
nb:2918654 3103484	0.52	0.96	0.43	0.59	0.39	0.63	0.33
knn:2918654 3103484	0.50	0.98	0.57	0.48	0.40	0.65	0.28
rpart:2918654 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:2918654 3103484	0.52	0.96	0.61	0.48	0.41	0.67	1.00
hdda:2918654 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2757491	0.59	0.91	0.57	0.54	0.43	0.68	0.25
nb:2918654 2757491	0.56	0.91	0.50	0.59	0.42	0.66	0.35
knn:2918654 2757491	0.61	0.55	0.79	0.52	0.50	0.80	0.35
rpart:2918654 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2918654 2757491	0.63	0.99	0.86	0.28	0.42	0.76	1.00
hdda:2918654 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2401368	0.65	0.14	0.61	0.74	0.59	0.76	0.15
nb:2918654 2401368	0.60	0.96	0.64	0.46	0.42	0.68	0.27
knn:2918654 2401368	0.66	0.20	0.50	0.78	0.58	0.72	0.34
rpart:2918654 2401368	0.69	0.14	0.36	0.89	0.67	0.69	0.43
svm:2918654 2401368	0.53	1.00	0.89	0.04	0.36	0.40	0.42
hdda:2918654 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3788643	0.54	0.86	0.46	0.63	0.43	0.66	0.17
nb:2918654 3788643	0.51	0.99	0.54	0.46	0.38	0.62	0.32
knn:2918654 3788643	0.50	1.00	0.50	0.43	0.35	0.59	0.31
rpart:2918654 3788643	0.52	0.73	0.25	0.80	0.44	0.64	0.44
svm:2918654 3788643	0.50	1.00	0.82	0.09	0.35	0.44	0.59
hdda:2918654 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3219832	0.54	0.80	0.57	0.59	0.46	0.69	0.36
nb:2918654 3219832	0.59	0.96	0.50	0.54	0.40	0.64	0.31
knn:2918654 3219832	0.62	0.28	0.32	0.87	0.60	0.68	0.43
rpart:2918654 3219832	0.57	0.36	0.50	0.74	0.54	0.71	0.36
svm:2918654 3219832	0.56	1.00	0.64	0.20	0.33	0.47	0.16
hdda:2918654 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3198757	0.52	0.99	0.43	0.54	0.36	0.61	0.21
nb:2918654 3198757	0.57	0.94	0.11	0.80	0.25	0.60	0.37
knn:2918654 3198757	0.51	0.98	0.32	0.63	0.35	0.60	0.37
rpart:2918654 3198757	0.55	0.64	0.46	0.70	0.48	0.68	0.43
svm:2918654 3198757	0.56	1.00	0.89	0.13	0.38	0.67	0.52
hdda:2918654 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3753198	0.58	0.80	0.50	0.63	0.45	0.67	0.35
nb:2918654 3753198	0.54	0.86	0.46	0.63	0.43	0.66	0.35
knn:2918654 3753198	0.50	0.91	0.50	0.59	0.42	0.66	0.34
rpart:2918654 3753198	0.52	0.80	0.32	0.74	0.43	0.64	0.44
svm:2918654 3753198	0.61	1.00	0.68	0.26	0.36	0.57	0.93

hdda:2918654 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2902908	0.58	0.96	0.64	0.46	0.42	0.68	0.15
nb:2918654 2902908	0.56	0.94	0.57	0.52	0.42	0.67	0.34
knn:2918654 2902908	0.58	0.98	0.75	0.37	0.42	0.71	0.26
rpart:2918654 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2918654 2902908	0.58	1.00	0.68	0.13	0.32	0.40	0.63
hdda:2918654 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3142559	0.56	0.96	0.25	0.70	0.33	0.60	0.32
nb:2918654 3142559	0.52	0.99	0.25	0.65	0.30	0.59	0.35
knn:2918654 3142559	0.57	1.00	0.18	0.65	0.24	0.57	0.37
rpart:2918654 3142559	0.52	0.80	0.14	0.85	0.36	0.62	0.48
svm:2918654 3142559	0.50	1.00	0.89	0.22	0.41	0.77	0.35
hdda:2918654 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3626882	0.53	0.96	0.29	0.67	0.35	0.61	0.28
nb:2918654 3626882	0.52	0.86	0.46	0.63	0.43	0.66	0.34
knn:2918654 3626882	0.51	0.94	0.46	0.59	0.41	0.64	0.33
rpart:2918654 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2918654 3626882	0.53	1.00	0.50	0.46	0.36	0.60	0.61
hdda:2918654 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3433222	0.64	0.28	0.39	0.83	0.58	0.69	0.28
nb:2918654 3433222	0.62	0.46	0.54	0.70	0.52	0.71	0.34
knn:2918654 3433222	0.65	0.55	0.68	0.59	0.50	0.75	0.30
rpart:2918654 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:2918654 3433222	0.65	1.00	0.68	0.20	0.34	0.50	0.53
hdda:2918654 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2991121	0.53	0.98	0.43	0.57	0.38	0.62	0.24
nb:2918654 2991121	0.56	1.00	0.61	0.35	0.36	0.59	0.30
knn:2918654 2991121	0.56	1.00	0.46	0.37	0.31	0.53	0.34
rpart:2918654 2991121	0.51	0.86	0.25	0.76	0.39	0.63	0.49
svm:2918654 2991121	0.55	0.86	0.43	0.65	0.43	0.65	1.00
hdda:2918654 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2959165	0.51	0.99	0.54	0.48	0.38	0.63	0.40

nb:2918654 2959165	0.55	0.96	0.39	0.61	0.38	0.62	0.37
knn:2918654 2959165	0.56	0.96	0.71	0.41	0.43	0.70	0.33
rpart:2918654 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2918654 2959165	0.50	0.99	0.71	0.35	0.40	0.67	0.71
hdda:2918654 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3546559	0.58	0.86	0.14	0.83	0.33	0.61	0.33
nb:2918654 3546559	0.56	0.91	0.68	0.48	0.44	0.71	0.30
knn:2918654 3546559	0.55	0.80	0.50	0.63	0.45	0.67	0.33
rpart:2918654 3546559	0.51	0.91	0.18	0.78	0.33	0.61	0.44
svm:2918654 3546559	0.56	1.00	0.32	0.57	0.31	0.58	1.00
hdda:2918654 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3020668	0.52	0.99	0.18	0.67	0.25	0.57	0.34
nb:2918654 3020668	0.51	1.00	0.68	0.35	0.39	0.64	0.27
knn:2918654 3020668	0.52	0.96	0.39	0.61	0.38	0.62	0.32
rpart:2918654 3020668	0.52	0.91	0.29	0.72	0.38	0.62	0.39
svm:2918654 3020668	0.57	1.00	0.89	0.09	0.37	0.57	0.45
hdda:2918654 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2397811	0.50	0.99	0.54	0.48	0.38	0.63	0.17
nb:2918654 2397811	0.54	0.91	0.54	0.57	0.43	0.67	0.37
knn:2918654 2397811	0.52	0.96	0.57	0.50	0.41	0.66	0.36
rpart:2918654 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2918654 2397811	0.50	1.00	0.89	0.15	0.39	0.70	0.83
hdda:2918654 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3903427	0.53	1.00	0.25	0.61	0.28	0.57	0.33
nb:2918654 3903427	0.52	0.94	0.18	0.76	0.31	0.60	0.38
knn:2918654 3903427	0.51	0.99	0.39	0.57	0.35	0.60	0.34
rpart:2918654 3903427	0.52	1.00	0.64	0.37	0.38	0.63	0.27
svm:2918654 3903427	0.61	0.99	0.82	0.28	0.41	0.72	0.73
hdda:2918654 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 2595867	0.54	0.64	0.29	0.80	0.47	0.65	0.24
nb:2918654 2595867	0.54	0.64	0.25	0.83	0.47	0.64	0.41
knn:2918654 2595867	0.53	0.99	0.50	0.50	0.38	0.62	0.33

rpart:2918654 2595867	0.52	0.96	0.18	0.74	0.29	0.60	0.45
svm:2918654 2595867	0.53	1.00	0.86	0.13	0.38	0.60	0.21
hdda:2918654 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3068088	0.52	0.99	0.36	0.59	0.34	0.60	0.15
nb:2918654 3068088	0.53	1.00	0.46	0.48	0.35	0.59	0.33
knn:2918654 3068088	0.55	1.00	0.50	0.39	0.33	0.56	0.29
rpart:2918654 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2918654 3068088	0.53	1.00	0.96	0.13	0.40	0.86	-0.41
hdda:2918654 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2918654 3487363	0.57	0.99	0.39	0.57	0.35	0.60	0.34
nb:2918654 3487363	0.55	0.91	0.14	0.80	0.31	0.61	0.40
knn:2918654 3487363	0.55	1.00	0.46	0.39	0.32	0.55	0.34
rpart:2918654 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2918654 3487363	0.53	1.00	0.89	0.09	0.37	0.57	-2.46
hdda:2663553 3103484	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3103484	0.52	0.94	0.36	0.65	0.38	0.63	0.22
nb:2663553 3103484	0.50	0.98	0.36	0.61	0.36	0.61	0.37
knn:2663553 3103484	0.52	1.00	0.61	0.39	0.38	0.62	0.28
rpart:2663553 3103484	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:2663553 3103484	0.59	1.00	0.68	0.22	0.35	0.53	0.55
hdda:2663553 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 2757491	0.55	0.94	0.50	0.57	0.41	0.65	0.42
nb:2663553 2757491	0.61	0.73	0.46	0.67	0.46	0.67	0.37
knn:2663553 2757491	0.76	0.94	0.93	0.30	0.45	0.88	0.30
rpart:2663553 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2663553 2757491	0.51	1.00	0.89	0.04	0.36	0.40	0.97
hdda:2663553 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 2401368	0.64	0.06	0.57	0.80	0.64	0.76	0.21
nb:2663553 2401368	0.62	0.46	0.14	0.93	0.57	0.64	0.39
knn:2663553 2401368	0.66	0.96	0.86	0.33	0.44	0.79	0.23
rpart:2663553 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:2663553 2401368	0.65	1.00	0.57	0.17	0.30	0.40	1.00
hdda:2663553 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3788643	0.52	0.91	0.43	0.63	0.41	0.64	0.14
nb:2663553 3788643	0.52	1.00	0.32	0.57	0.31	0.58	0.36
knn:2663553 3788643	0.52	0.99	0.50	0.48	0.37	0.61	0.31
rpart:2663553 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2663553 3788643	0.66	1.00	0.79	0.09	0.34	0.40	0.97
hdda:2663553 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3219832	0.66	0.36	0.68	0.63	0.53	0.76	0.22
nb:2663553 3219832	0.63	0.46	0.11	0.96	0.60	0.64	0.54
knn:2663553 3219832	0.60	0.86	0.79	0.43	0.46	0.77	0.30
rpart:2663553 3219832	0.69	0.36	0.29	0.87	0.57	0.67	0.47
svm:2663553 3219832	0.72	1.00	0.36	0.24	0.22	0.38	1.00
hdda:2663553 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3198757	0.56	0.94	0.14	0.78	0.29	0.60	0.21
nb:2663553 3198757	0.55	0.99	0.07	0.76	0.15	0.57	0.38
knn:2663553 3198757	0.54	1.00	0.71	0.24	0.36	0.58	0.23
rpart:2663553 3198757	0.51	0.96	0.21	0.72	0.32	0.60	0.46
svm:2663553 3198757	0.52	1.00	0.93	0.07	0.38	0.60	0.99
hdda:2663553 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3753198	0.56	0.55	0.61	0.63	0.50	0.73	0.25
nb:2663553 3753198	0.57	1.00	0.75	0.26	0.38	0.63	0.32
knn:2663553 3753198	0.52	1.00	0.54	0.39	0.35	0.58	0.28
rpart:2663553 3753198	0.56	0.99	0.18	0.70	0.26	0.58	0.39
svm:2663553 3753198	0.55	1.00	0.64	0.28	0.35	0.57	0.48
hdda:2663553 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 2902908	0.61	0.80	0.61	0.57	0.46	0.70	0.14
nb:2663553 2902908	0.59	0.73	0.43	0.70	0.46	0.67	0.39
knn:2663553 2902908	0.61	0.96	0.75	0.39	0.43	0.72	0.32
rpart:2663553 2902908	0.64	0.73	0.71	0.52	0.48	0.75	0.30
svm:2663553 2902908	0.58	1.00	0.86	0.09	0.36	0.50	0.80

hdda:2663553 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3142559	0.53	0.94	0.25	0.72	0.35	0.61	0.24
nb:2663553 3142559	0.52	0.98	0.14	0.74	0.25	0.59	0.42
knn:2663553 3142559	0.57	1.00	0.43	0.43	0.32	0.56	0.30
rpart:2663553 3142559	0.55	0.99	0.25	0.65	0.30	0.59	0.38
svm:2663553 3142559	0.56	0.99	0.86	0.28	0.42	0.76	0.03
hdda:2663553 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3626882	0.52	0.91	0.39	0.65	0.41	0.64	0.32
nb:2663553 3626882	0.52	0.86	0.36	0.70	0.42	0.64	0.39
knn:2663553 3626882	0.54	1.00	0.50	0.46	0.36	0.60	0.30
rpart:2663553 3626882	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:2663553 3626882	0.54	0.55	0.11	0.93	0.50	0.63	5.65
hdda:2663553 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3433222	0.53	0.73	0.32	0.76	0.45	0.65	0.40
nb:2663553 3433222	0.60	0.36	0.39	0.80	0.55	0.69	0.38
knn:2663553 3433222	0.58	0.99	0.61	0.43	0.40	0.65	0.32
rpart:2663553 3433222	0.63	0.14	0.21	0.98	0.86	0.67	0.57
svm:2663553 3433222	0.57	1.00	0.79	0.09	0.34	0.40	0.04
hdda:2663553 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 2991121	0.55	1.00	0.46	0.39	0.32	0.55	0.13
nb:2663553 2991121	0.56	1.00	0.57	0.26	0.32	0.50	0.31
knn:2663553 2991121	0.53	1.00	0.64	0.28	0.35	0.57	0.31
rpart:2663553 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2663553 2991121	0.57	1.00	0.96	0.15	0.41	0.88	0.19
hdda:2663553 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 2959165	0.51	0.94	0.43	0.61	0.40	0.64	0.42
nb:2663553 2959165	0.52	0.98	0.68	0.41	0.41	0.68	0.37
knn:2663553 2959165	0.50	0.96	0.39	0.61	0.38	0.62	0.50
rpart:2663553 2959165	0.52	0.80	0.25	0.78	0.41	0.63	0.59
svm:2663553 2959165	0.56	1.00	0.54	0.37	0.34	0.57	0.67
hdda:2663553 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3546559	0.63	0.55	0.43	0.74	0.50	0.68	0.36

nb:2663553 3546559	0.55	0.98	0.68	0.41	0.41	0.68	0.31
knn:2663553 3546559	0.60	0.73	0.43	0.70	0.46	0.67	0.37
rpart:2663553 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2663553 3546559	0.59	1.00	0.39	0.50	0.32	0.58	1.00
hdda:2663553 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3020668	0.55	0.96	0.43	0.59	0.39	0.63	0.35
nb:2663553 3020668	0.54	1.00	0.68	0.33	0.38	0.63	0.25
knn:2663553 3020668	0.55	1.00	0.36	0.54	0.32	0.58	0.50
rpart:2663553 3020668	0.53	0.99	0.43	0.52	0.35	0.60	0.28
svm:2663553 3020668	0.56	0.80	0.11	0.87	0.33	0.62	2.43
hdda:2663553 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 2397811	0.50	0.99	0.54	0.48	0.38	0.63	0.10
nb:2663553 2397811	0.53	1.00	0.86	0.17	0.39	0.67	0.33
knn:2663553 2397811	0.56	0.80	0.46	0.65	0.45	0.67	0.50
rpart:2663553 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2663553 2397811	0.58	1.00	0.50	0.33	0.31	0.52	1.00
hdda:2663553 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3903427	0.51	0.96	0.25	0.70	0.33	0.60	0.19
nb:2663553 3903427	0.50	0.86	0.14	0.83	0.33	0.61	0.41
knn:2663553 3903427	0.55	0.98	0.21	0.70	0.30	0.59	0.37
rpart:2663553 3903427	0.55	0.96	0.14	0.76	0.27	0.59	0.41
svm:2663553 3903427	0.57	1.00	0.89	0.13	0.38	0.67	0.15
hdda:2663553 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 2595867	0.57	0.80	0.21	0.80	0.40	0.63	0.37
nb:2663553 2595867	0.51	0.91	0.36	0.67	0.40	0.63	0.36
knn:2663553 2595867	0.55	0.94	0.54	0.54	0.42	0.66	0.32
rpart:2663553 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2663553 2595867	0.54	1.00	0.82	0.07	0.35	0.38	-0.21
hdda:2663553 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3068088	0.51	0.86	0.50	0.61	0.44	0.67	0.17
nb:2663553 3068088	0.53	0.73	0.00	0.96	0.00	0.61	0.65
knn:2663553 3068088	0.60	0.73	0.57	0.61	0.47	0.70	0.37

rpart:2663553 3068088	0.58	0.36	0.29	0.87	0.57	0.67	0.45
svm:2663553 3068088	0.55	0.73	0.00	0.96	0.00	0.61	5.29
hdda:2663553 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2663553 3487363	0.51	1.00	0.36	0.54	0.32	0.58	0.15
nb:2663553 3487363	0.58	0.98	0.14	0.74	0.25	0.59	0.40
knn:2663553 3487363	0.54	1.00	0.64	0.30	0.36	0.58	0.30
rpart:2663553 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2663553 3487363	0.57	0.99	0.82	0.28	0.41	0.72	1.00
hdda:3103484 2757491	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 2757491	0.58	0.98	0.61	0.46	0.40	0.66	0.15
nb:3103484 2757491	0.53	0.80	0.36	0.72	0.43	0.65	0.39
knn:3103484 2757491	0.53	0.73	0.39	0.72	0.46	0.66	0.39
rpart:3103484 2757491	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 2757491	0.61	1.00	0.86	0.09	0.36	0.50	-0.19
hdda:3103484 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 2401368	0.61	0.99	0.39	0.57	0.35	0.60	0.21
nb:3103484 2401368	0.59	0.94	0.32	0.67	0.38	0.62	0.32
knn:3103484 2401368	0.53	0.96	0.29	0.67	0.35	0.61	0.37
rpart:3103484 2401368	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 2401368	0.52	0.99	0.71	0.37	0.41	0.68	0.29
hdda:3103484 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3788643	0.56	0.86	0.25	0.76	0.39	0.63	0.38
nb:3103484 3788643	0.52	0.80	0.43	0.67	0.44	0.66	0.34
knn:3103484 3788643	0.53	0.96	0.39	0.61	0.38	0.62	0.35
rpart:3103484 3788643	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 3788643	0.52	0.91	0.25	0.74	0.37	0.62	0.60
hdda:3103484 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3219832	0.62	0.94	0.36	0.65	0.38	0.63	0.28
nb:3103484 3219832	0.57	0.91	0.46	0.61	0.42	0.65	0.31
knn:3103484 3219832	0.60	0.99	0.79	0.30	0.41	0.70	0.26
rpart:3103484 3219832	0.50	0.94	0.36	0.65	0.38	0.63	0.38

svm:3103484 3219832	0.62	1.00	0.57	0.35	0.35	0.57	1.00
hdda:3103484 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3198757	0.50	0.91	0.43	0.63	0.41	0.64	0.25
nb:3103484 3198757	0.55	0.99	0.32	0.59	0.32	0.59	0.28
knn:3103484 3198757	0.51	0.96	0.54	0.52	0.41	0.65	0.30
rpart:3103484 3198757	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 3198757	0.57	1.00	0.71	0.28	0.38	0.62	0.64
hdda:3103484 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3753198	0.54	0.99	0.75	0.33	0.40	0.68	0.18
nb:3103484 3753198	0.52	0.98	0.25	0.67	0.32	0.60	0.36
knn:3103484 3753198	0.61	0.80	0.64	0.54	0.46	0.71	0.32
rpart:3103484 3753198	0.56	0.96	0.21	0.72	0.32	0.60	0.43
svm:3103484 3753198	0.62	1.00	0.71	0.17	0.34	0.50	0.48
hdda:3103484 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 2902908	0.57	0.73	0.46	0.67	0.46	0.67	0.35
nb:3103484 2902908	0.55	0.99	0.54	0.46	0.38	0.62	0.32
knn:3103484 2902908	0.52	0.98	0.32	0.63	0.35	0.60	0.39
rpart:3103484 2902908	0.51	0.80	0.21	0.80	0.40	0.63	0.53
svm:3103484 2902908	0.58	1.00	0.61	0.37	0.37	0.61	0.55
hdda:3103484 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3142559	0.51	0.98	0.57	0.48	0.40	0.65	0.20
nb:3103484 3142559	0.51	0.94	0.43	0.61	0.40	0.64	0.33
knn:3103484 3142559	0.53	0.99	0.32	0.59	0.32	0.59	0.33
rpart:3103484 3142559	0.54	0.96	0.25	0.70	0.33	0.60	0.33
svm:3103484 3142559	0.60	0.96	0.86	0.33	0.44	0.79	0.60
hdda:3103484 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3626882	0.51	1.00	0.39	0.48	0.31	0.56	0.23
nb:3103484 3626882	0.52	0.86	0.43	0.65	0.43	0.65	0.36
knn:3103484 3626882	0.58	0.98	0.79	0.35	0.42	0.73	0.23
rpart:3103484 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3103484 3626882	0.51	0.55	0.11	0.93	0.50	0.63	4.43

hdda:3103484 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3433222	0.61	0.96	0.61	0.48	0.41	0.67	0.24
nb:3103484 3433222	0.59	0.73	0.36	0.74	0.45	0.65	0.35
knn:3103484 3433222	0.54	1.00	0.79	0.26	0.39	0.67	0.18
rpart:3103484 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3103484 3433222	0.64	1.00	0.71	0.15	0.34	0.47	0.22
hdda:3103484 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 2991121	0.50	0.98	0.21	0.70	0.30	0.59	0.23
nb:3103484 2991121	0.59	1.00	0.61	0.30	0.35	0.56	0.28
knn:3103484 2991121	0.59	1.00	0.68	0.35	0.39	0.64	0.26
rpart:3103484 2991121	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 2991121	0.57	1.00	0.93	0.15	0.40	0.78	0.58
hdda:3103484 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 2959165	0.55	0.94	0.64	0.48	0.43	0.69	0.28
nb:3103484 2959165	0.52	0.86	0.39	0.67	0.42	0.65	0.37
knn:3103484 2959165	0.61	0.91	0.71	0.46	0.44	0.72	0.17
rpart:3103484 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:3103484 2959165	0.56	1.00	0.43	0.41	0.31	0.54	0.75
hdda:3103484 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3546559	0.62	0.64	0.39	0.74	0.48	0.67	0.39
nb:3103484 3546559	0.53	0.99	0.43	0.54	0.36	0.61	0.33
knn:3103484 3546559	0.55	0.99	0.71	0.35	0.40	0.67	0.26
rpart:3103484 3546559	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 3546559	0.58	1.00	0.79	0.11	0.35	0.45	0.05
hdda:3103484 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3020668	0.51	0.91	0.25	0.74	0.37	0.62	0.38
nb:3103484 3020668	0.53	1.00	0.64	0.35	0.38	0.62	0.24
knn:3103484 3020668	0.52	0.98	0.29	0.65	0.33	0.60	0.38
rpart:3103484 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3103484 3020668	0.55	1.00	0.75	0.26	0.38	0.63	0.33
hdda:3103484 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 2397811	0.52	0.91	0.39	0.65	0.41	0.64	0.33

nb:3103484 2397811	0.55	0.96	0.29	0.67	0.35	0.61	0.39
knn:3103484 2397811	0.51	0.96	0.29	0.67	0.35	0.61	0.38
rpart:3103484 2397811	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 2397811	0.56	1.00	0.64	0.22	0.33	0.50	0.10
hdda:3103484 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3903427	0.51	0.91	0.50	0.59	0.42	0.66	0.26
nb:3103484 3903427	0.52	1.00	0.36	0.54	0.32	0.58	0.32
knn:3103484 3903427	0.54	0.99	0.36	0.59	0.34	0.60	0.39
rpart:3103484 3903427	0.51	0.94	0.36	0.65	0.38	0.63	0.33
svm:3103484 3903427	0.52	1.00	0.46	0.48	0.35	0.59	1.00
hdda:3103484 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 2595867	0.50	0.91	0.50	0.59	0.42	0.66	0.37
nb:3103484 2595867	0.50	0.91	0.43	0.63	0.41	0.64	0.34
knn:3103484 2595867	0.52	1.00	0.64	0.35	0.38	0.62	0.26
rpart:3103484 2595867	0.51	0.64	0.18	0.87	0.45	0.63	0.41
svm:3103484 2595867	0.60	1.00	0.89	0.22	0.41	0.77	0.54
hdda:3103484 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3068088	0.58	0.91	0.54	0.57	0.43	0.67	0.34
nb:3103484 3068088	0.54	0.99	0.32	0.61	0.33	0.60	0.35
knn:3103484 3068088	0.51	0.94	0.32	0.67	0.38	0.62	0.38
rpart:3103484 3068088	0.50	0.94	0.36	0.65	0.38	0.63	0.38
svm:3103484 3068088	0.52	1.00	0.96	0.13	0.40	0.86	0.94
hdda:3103484 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3103484 3487363	0.56	0.64	0.29	0.80	0.47	0.65	0.40
nb:3103484 3487363	0.59	0.99	0.29	0.61	0.31	0.58	0.35
knn:3103484 3487363	0.51	0.80	0.36	0.72	0.43	0.65	0.34
rpart:3103484 3487363	0.53	0.36	0.21	0.91	0.60	0.66	0.49
svm:3103484 3487363	0.57	1.00	0.82	0.07	0.35	0.38	-0.22
hdda:2757491 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 2401368	0.68	0.06	0.46	0.87	0.68	0.73	0.35
nb:2757491 2401368	0.71	0.36	0.14	0.96	0.67	0.65	0.43
knn:2757491 2401368	0.76	0.09	0.32	0.93	0.75	0.69	0.45

rpart:2757491 2401368	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 2401368	0.62	1.00	0.82	0.02	0.34	0.17	-0.06
hdda:2757491 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3788643	0.63	0.55	0.50	0.70	0.50	0.70	0.22
nb:2757491 3788643	0.55	0.80	0.50	0.63	0.45	0.67	0.34
knn:2757491 3788643	0.66	0.73	0.79	0.48	0.48	0.79	0.34
rpart:2757491 3788643	0.52	0.91	0.18	0.78	0.33	0.61	0.47
svm:2757491 3788643	0.62	0.99	0.82	0.28	0.41	0.72	1.00
hdda:2757491 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3219832	0.72	0.46	0.54	0.70	0.52	0.71	0.24
nb:2757491 3219832	0.70	0.55	0.11	0.93	0.50	0.63	0.45
knn:2757491 3219832	0.56	0.91	0.32	0.70	0.39	0.63	0.50
rpart:2757491 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 3219832	0.69	1.00	0.96	0.00	0.37	0.00	-2.32
hdda:2757491 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3198757	0.57	0.80	0.57	0.59	0.46	0.69	0.22
nb:2757491 3198757	0.52	0.96	0.07	0.80	0.18	0.59	0.39
knn:2757491 3198757	0.55	0.99	0.86	0.26	0.41	0.75	0.30
rpart:2757491 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 3198757	0.53	1.00	0.93	0.11	0.39	0.71	0.99
hdda:2757491 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3753198	0.64	0.73	0.61	0.59	0.47	0.71	0.35
nb:2757491 3753198	0.61	0.94	0.71	0.43	0.43	0.71	0.32
knn:2757491 3753198	0.73	0.64	0.75	0.52	0.49	0.77	0.32
rpart:2757491 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 3753198	0.68	0.80	0.00	0.93	0.00	0.61	16.33
hdda:2757491 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 2902908	0.67	0.73	0.71	0.52	0.48	0.75	0.19
nb:2757491 2902908	0.61	0.80	0.43	0.67	0.44	0.66	0.38
knn:2757491 2902908	0.60	0.91	0.86	0.37	0.45	0.81	0.35
rpart:2757491 2902908	0.67	0.14	0.57	0.76	0.59	0.74	0.46

svm:2757491 2902908	0.58	0.91	0.36	0.67	0.40	0.63	0.84
hdda:2757491 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3142559	0.55	0.94	0.25	0.72	0.35	0.61	0.29
nb:2757491 3142559	0.51	0.94	0.43	0.61	0.40	0.64	0.32
knn:2757491 3142559	0.54	0.94	0.71	0.43	0.43	0.71	0.31
rpart:2757491 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2757491 3142559	0.53	0.99	0.79	0.30	0.41	0.70	0.75
hdda:2757491 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3626882	0.57	0.91	0.39	0.65	0.41	0.64	0.26
nb:2757491 3626882	0.55	0.73	0.43	0.70	0.46	0.67	0.37
knn:2757491 3626882	0.62	0.28	0.39	0.83	0.58	0.69	0.44
rpart:2757491 3626882	0.53	0.46	0.32	0.83	0.53	0.67	0.53
svm:2757491 3626882	0.53	1.00	0.86	0.07	0.36	0.43	0.19
hdda:2757491 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3433222	0.67	0.36	0.43	0.78	0.55	0.69	0.40
nb:2757491 3433222	0.66	0.46	0.46	0.74	0.52	0.69	0.36
knn:2757491 3433222	0.72	0.73	0.86	0.43	0.48	0.83	0.31
rpart:2757491 3433222	0.62	0.20	0.39	0.85	0.61	0.70	0.41
svm:2757491 3433222	0.67	1.00	0.54	0.24	0.30	0.46	0.68
hdda:2757491 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 2991121	0.53	0.80	0.39	0.70	0.44	0.65	0.34
nb:2757491 2991121	0.52	1.00	0.61	0.26	0.33	0.52	0.31
knn:2757491 2991121	0.51	0.80	0.43	0.67	0.44	0.66	0.40
rpart:2757491 2991121	0.50	0.55	0.25	0.85	0.50	0.65	0.55
svm:2757491 2991121	0.57	0.64	0.43	0.72	0.48	0.67	1.00
hdda:2757491 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 2959165	0.55	0.96	0.46	0.57	0.39	0.63	0.36
nb:2757491 2959165	0.61	0.99	0.68	0.39	0.40	0.67	0.34
knn:2757491 2959165	0.64	0.64	0.57	0.63	0.48	0.71	0.39
rpart:2757491 2959165	0.57	0.86	0.43	0.65	0.43	0.65	0.38
svm:2757491 2959165	0.59	1.00	0.50	0.28	0.30	0.48	0.37

hdda:2757491 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3546559	0.60	0.80	0.21	0.80	0.40	0.63	0.30
nb:2757491 3546559	0.58	0.94	0.64	0.48	0.43	0.69	0.32
knn:2757491 3546559	0.64	0.73	0.61	0.59	0.47	0.71	0.38
rpart:2757491 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 3546559	0.53	0.99	0.75	0.33	0.40	0.68	1.00
hdda:2757491 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3020668	0.58	0.80	0.54	0.61	0.45	0.68	0.36
nb:2757491 3020668	0.51	1.00	0.68	0.35	0.39	0.64	0.26
knn:2757491 3020668	0.56	0.94	0.64	0.48	0.43	0.69	0.37
rpart:2757491 3020668	0.51	0.86	0.32	0.72	0.41	0.63	0.45
svm:2757491 3020668	0.50	1.00	0.93	0.04	0.37	0.50	0.80
hdda:2757491 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 2397811	0.63	0.55	0.46	0.72	0.50	0.69	0.28
nb:2757491 2397811	0.62	1.00	0.79	0.28	0.40	0.68	0.35
knn:2757491 2397811	0.57	0.73	0.50	0.65	0.47	0.68	0.41
rpart:2757491 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 2397811	0.64	1.00	0.79	0.28	0.40	0.68	0.10
hdda:2757491 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3903427	0.51	1.00	0.50	0.39	0.33	0.56	0.30
nb:2757491 3903427	0.56	0.80	0.14	0.85	0.36	0.62	0.41
knn:2757491 3903427	0.52	0.99	0.46	0.52	0.37	0.62	0.35
rpart:2757491 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 3903427	0.56	1.00	0.54	0.43	0.37	0.61	0.79
hdda:2757491 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 2595867	0.60	0.80	0.25	0.78	0.41	0.63	0.30
nb:2757491 2595867	0.56	0.86	0.21	0.78	0.38	0.62	0.40
knn:2757491 2595867	0.57	0.91	0.29	0.72	0.38	0.62	0.42
rpart:2757491 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 2595867	0.54	1.00	0.61	0.35	0.36	0.59	0.71
hdda:2757491 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3068088	0.59	0.96	0.61	0.48	0.41	0.67	0.15

nb:2757491 3068088	0.56	0.73	0.00	0.96	0.00	0.61	0.63
knn:2757491 3068088	0.58	0.99	0.82	0.28	0.41	0.72	0.29
rpart:2757491 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 3068088	0.53	0.98	0.89	0.28	0.43	0.81	1.00
hdda:2757491 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2757491 3487363	0.50	0.86	0.39	0.67	0.42	0.65	0.39
nb:2757491 3487363	0.50	0.99	0.14	0.72	0.24	0.58	0.38
knn:2757491 3487363	0.53	0.91	0.43	0.63	0.41	0.64	0.41
rpart:2757491 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2757491 3487363	0.53	1.00	0.61	0.35	0.36	0.59	0.32
hdda:2401368 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3788643	0.51	0.99	0.32	0.61	0.33	0.60	0.40
nb:2401368 3788643	0.57	0.28	0.39	0.83	0.58	0.69	0.31
knn:2401368 3788643	0.56	0.55	0.25	0.85	0.50	0.65	0.38
rpart:2401368 3788643	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2401368 3788643	0.57	0.99	0.71	0.35	0.40	0.67	0.37
hdda:2401368 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3219832	0.70	0.36	0.68	0.63	0.53	0.76	0.11
nb:2401368 3219832	0.68	0.46	0.18	0.91	0.56	0.65	0.48
knn:2401368 3219832	0.70	0.55	0.75	0.54	0.50	0.78	0.30
rpart:2401368 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2401368 3219832	0.54	1.00	0.96	0.02	0.38	0.50	0.23
hdda:2401368 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3198757	0.61	0.86	0.50	0.61	0.44	0.67	0.18
nb:2401368 3198757	0.55	0.80	0.21	0.80	0.40	0.63	0.34
knn:2401368 3198757	0.53	0.96	0.54	0.52	0.41	0.65	0.32
rpart:2401368 3198757	0.63	0.91	0.46	0.61	0.42	0.65	0.33
svm:2401368 3198757	0.64	1.00	0.89	0.02	0.36	0.25	0.67
hdda:2401368 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3753198	0.63	0.28	0.54	0.74	0.56	0.72	0.29
nb:2401368 3753198	0.62	0.28	0.14	0.98	0.80	0.65	0.43
knn:2401368 3753198	0.56	0.73	0.57	0.61	0.47	0.70	0.29

rpart:2401368 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2401368 3753198	0.63	1.00	0.43	0.30	0.27	0.47	1.00
hdda:2401368 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 2902908	0.73	0.14	0.43	0.85	0.63	0.71	0.33
nb:2401368 2902908	0.61	0.86	0.50	0.61	0.44	0.67	0.31
knn:2401368 2902908	0.67	0.91	0.82	0.39	0.45	0.78	0.24
rpart:2401368 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2401368 2902908	0.63	1.00	0.25	0.54	0.25	0.54	0.47
hdda:2401368 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3142559	0.56	0.91	0.36	0.67	0.40	0.63	0.25
nb:2401368 3142559	0.53	0.91	0.25	0.74	0.37	0.62	0.35
knn:2401368 3142559	0.62	0.73	0.54	0.63	0.47	0.69	0.30
rpart:2401368 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2401368 3142559	0.55	1.00	0.86	0.24	0.41	0.73	0.61
hdda:2401368 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3626882	0.59	0.80	0.14	0.85	0.36	0.62	0.39
nb:2401368 3626882	0.57	0.86	0.46	0.63	0.43	0.66	0.30
knn:2401368 3626882	0.60	0.80	0.64	0.54	0.46	0.71	0.31
rpart:2401368 3626882	0.51	0.55	0.21	0.87	0.50	0.65	0.50
svm:2401368 3626882	0.51	1.00	0.71	0.24	0.36	0.58	0.61
hdda:2401368 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3433222	0.68	0.20	0.39	0.85	0.61	0.70	0.34
nb:2401368 3433222	0.64	0.64	0.43	0.72	0.48	0.67	0.30
knn:2401368 3433222	0.58	0.94	0.57	0.52	0.42	0.67	0.26
rpart:2401368 3433222	0.64	0.06	0.25	1.00	1.00	0.69	0.56
svm:2401368 3433222	0.65	1.00	0.54	0.26	0.31	0.48	0.76
hdda:2401368 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 2991121	0.56	0.46	0.29	0.85	0.53	0.66	0.29
nb:2401368 2991121	0.53	1.00	0.57	0.28	0.33	0.52	0.26
knn:2401368 2991121	0.55	0.99	0.61	0.43	0.40	0.65	0.28
rpart:2401368 2991121	0.70	0.06	0.57	0.80	0.64	0.76	0.32

svm:2401368 2991121	0.58	1.00	0.96	0.02	0.38	0.50	0.48
hdda:2401368 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 2959165	0.57	0.46	0.29	0.85	0.53	0.66	0.49
nb:2401368 2959165	0.61	0.91	0.75	0.43	0.45	0.74	0.29
knn:2401368 2959165	0.67	0.73	0.79	0.48	0.48	0.79	0.29
rpart:2401368 2959165	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2401368 2959165	0.60	1.00	0.71	0.20	0.35	0.53	0.41
hdda:2401368 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3546559	0.66	0.28	0.50	0.76	0.56	0.71	0.18
nb:2401368 3546559	0.60	0.46	0.39	0.78	0.52	0.68	0.33
knn:2401368 3546559	0.62	0.28	0.29	0.89	0.62	0.67	0.37
rpart:2401368 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2401368 3546559	0.70	1.00	0.79	0.11	0.35	0.45	0.64
hdda:2401368 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3020668	0.53	0.99	0.57	0.46	0.39	0.64	0.20
nb:2401368 3020668	0.54	1.00	0.68	0.35	0.39	0.64	0.21
knn:2401368 3020668	0.55	0.99	0.71	0.35	0.40	0.67	0.19
rpart:2401368 3020668	0.53	0.55	0.14	0.91	0.50	0.64	0.55
svm:2401368 3020668	0.59	1.00	0.86	0.13	0.38	0.60	0.37
hdda:2401368 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 2397811	0.65	0.28	0.43	0.80	0.57	0.70	0.30
nb:2401368 2397811	0.63	0.28	0.18	0.96	0.71	0.66	0.40
knn:2401368 2397811	0.62	0.36	0.43	0.78	0.55	0.69	0.38
rpart:2401368 2397811	0.70	0.09	0.36	0.91	0.71	0.70	0.46
svm:2401368 2397811	0.65	1.00	0.36	0.48	0.29	0.55	1.00
hdda:2401368 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3903427	0.60	0.94	0.43	0.61	0.40	0.64	0.14
nb:2401368 3903427	0.62	0.91	0.25	0.74	0.37	0.62	0.32
knn:2401368 3903427	0.61	0.86	0.71	0.48	0.45	0.73	0.24
rpart:2401368 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2401368 3903427	0.58	1.00	0.50	0.41	0.34	0.58	1.00

hdda:2401368 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 2595867	0.65	0.73	0.32	0.76	0.45	0.65	0.30
nb:2401368 2595867	0.58	0.64	0.39	0.74	0.48	0.67	0.31
knn:2401368 2595867	0.61	0.91	0.79	0.41	0.45	0.76	0.17
rpart:2401368 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2401368 2595867	0.62	1.00	0.79	0.15	0.36	0.54	0.38
hdda:2401368 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3068088	0.60	0.64	0.75	0.52	0.49	0.77	0.11
nb:2401368 3068088	0.64	0.46	0.14	0.93	0.57	0.64	0.42
knn:2401368 3068088	0.55	0.94	0.71	0.43	0.43	0.71	0.26
rpart:2401368 3068088	0.68	0.36	0.29	0.87	0.57	0.67	0.39
svm:2401368 3068088	0.50	1.00	1.00	0.02	0.38	1.00	-4.86
hdda:2401368 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2401368 3487363	0.55	0.91	0.43	0.63	0.41	0.64	0.28
nb:2401368 3487363	0.54	0.98	0.29	0.65	0.33	0.60	0.32
knn:2401368 3487363	0.58	0.73	0.39	0.72	0.46	0.66	0.31
rpart:2401368 3487363	0.70	0.06	0.57	0.80	0.64	0.76	0.30
svm:2401368 3487363	0.51	1.00	0.86	0.13	0.38	0.60	0.26
hdda:3788643 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3219832	0.57	0.64	0.32	0.78	0.47	0.65	0.39
nb:3788643 3219832	0.56	0.28	0.21	0.93	0.67	0.66	0.42
knn:3788643 3219832	0.60	0.46	0.68	0.61	0.51	0.76	0.33
rpart:3788643 3219832	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 3219832	0.56	1.00	0.36	0.54	0.32	0.58	0.58
hdda:3788643 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3198757	0.56	0.91	0.50	0.59	0.42	0.66	0.23
nb:3788643 3198757	0.51	0.98	0.07	0.78	0.17	0.58	0.36
knn:3788643 3198757	0.50	0.96	0.64	0.46	0.42	0.68	0.27
rpart:3788643 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 3198757	0.56	1.00	0.75	0.17	0.36	0.53	0.46
hdda:3788643 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3753198	0.51	0.98	0.43	0.57	0.38	0.62	0.33

nb:3788643 3753198	0.53	0.28	0.29	0.89	0.62	0.67	0.37
knn:3788643 3753198	0.53	0.86	0.50	0.61	0.44	0.67	0.35
rpart:3788643 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 3753198	0.51	1.00	0.71	0.17	0.34	0.50	0.50
hdda:3788643 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 2902908	0.58	0.99	0.64	0.41	0.40	0.66	0.13
nb:3788643 2902908	0.57	0.80	0.54	0.61	0.45	0.68	0.35
knn:3788643 2902908	0.57	0.86	0.46	0.63	0.43	0.66	0.36
rpart:3788643 2902908	0.63	0.46	0.25	0.87	0.54	0.66	0.46
svm:3788643 2902908	0.56	1.00	0.64	0.26	0.35	0.55	0.77
hdda:3788643 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3142559	0.50	0.73	0.21	0.83	0.43	0.63	0.37
nb:3788643 3142559	0.51	0.98	0.25	0.67	0.32	0.60	0.35
knn:3788643 3142559	0.51	0.96	0.39	0.61	0.38	0.62	0.32
rpart:3788643 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3788643 3142559	0.66	1.00	0.89	0.15	0.39	0.70	0.38
hdda:3788643 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3626882	0.59	0.46	0.54	0.70	0.52	0.71	0.29
nb:3788643 3626882	0.54	0.73	0.25	0.80	0.44	0.64	0.42
knn:3788643 3626882	0.54	0.55	0.32	0.80	0.50	0.66	0.36
rpart:3788643 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 3626882	0.62	1.00	0.54	0.35	0.33	0.55	0.78
hdda:3788643 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3433222	0.63	0.46	0.39	0.78	0.52	0.68	0.34
nb:3788643 3433222	0.61	0.73	0.21	0.83	0.43	0.63	0.40
knn:3788643 3433222	0.60	0.99	0.79	0.30	0.41	0.70	0.18
rpart:3788643 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 3433222	0.60	1.00	0.61	0.28	0.34	0.54	0.71
hdda:3788643 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 2991121	0.55	0.91	0.21	0.76	0.35	0.61	0.30
nb:3788643 2991121	0.61	1.00	0.71	0.24	0.36	0.58	0.25
knn:3788643 2991121	0.56	1.00	0.43	0.46	0.32	0.57	0.31

rpart:3788643 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 2991121	0.54	1.00	0.89	0.17	0.40	0.73	0.39
hdda:3788643 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 2959165	0.52	0.94	0.18	0.76	0.31	0.60	0.48
nb:3788643 2959165	0.53	0.96	0.82	0.35	0.43	0.76	0.31
knn:3788643 2959165	0.51	0.91	0.18	0.78	0.33	0.61	0.46
rpart:3788643 2959165	0.51	0.91	0.11	0.83	0.27	0.60	0.68
svm:3788643 2959165	0.62	1.00	0.93	0.20	0.41	0.82	-0.16
hdda:3788643 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3546559	0.55	0.91	0.46	0.61	0.42	0.65	0.20
nb:3788643 3546559	0.55	0.99	0.50	0.50	0.38	0.62	0.31
knn:3788643 3546559	0.53	0.98	0.54	0.50	0.39	0.64	0.29
rpart:3788643 3546559	0.58	0.46	0.32	0.83	0.53	0.67	0.45
svm:3788643 3546559	0.52	1.00	0.86	0.11	0.37	0.56	0.70
hdda:3788643 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3020668	0.50	0.96	0.54	0.52	0.41	0.65	0.12
nb:3788643 3020668	0.50	1.00	0.68	0.33	0.38	0.63	0.22
knn:3788643 3020668	0.53	1.00	0.54	0.37	0.34	0.57	0.29
rpart:3788643 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 3020668	0.51	0.64	0.11	0.91	0.43	0.63	10.87
hdda:3788643 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 2397811	0.56	0.80	0.29	0.76	0.42	0.64	0.39
nb:3788643 2397811	0.53	1.00	0.46	0.46	0.34	0.58	0.36
knn:3788643 2397811	0.50	0.98	0.32	0.63	0.35	0.60	0.41
rpart:3788643 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 2397811	0.54	1.00	0.75	0.17	0.36	0.53	0.39
hdda:3788643 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3903427	0.52	0.99	0.50	0.50	0.38	0.62	0.18
nb:3788643 3903427	0.52	0.86	0.18	0.80	0.36	0.62	0.37
knn:3788643 3903427	0.52	0.73	0.25	0.80	0.44	0.64	0.41
rpart:3788643 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3788643 3903427	0.52	1.00	0.93	0.11	0.39	0.71	-0.07
hdda:3788643 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 2595867	0.56	0.55	0.29	0.83	0.50	0.66	0.31
nb:3788643 2595867	0.53	0.96	0.36	0.63	0.37	0.62	0.33
knn:3788643 2595867	0.51	0.86	0.21	0.78	0.38	0.62	0.42
rpart:3788643 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 2595867	0.52	1.00	0.79	0.22	0.38	0.63	0.59
hdda:3788643 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3068088	0.55	0.99	0.61	0.41	0.39	0.63	0.10
nb:3788643 3068088	0.57	0.99	0.43	0.54	0.36	0.61	0.33
knn:3788643 3068088	0.61	0.86	0.68	0.50	0.45	0.72	0.27
rpart:3788643 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3788643 3068088	0.60	1.00	0.71	0.17	0.34	0.50	0.95
hdda:3788643 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3788643 3487363	0.54	0.99	0.32	0.61	0.33	0.60	0.35
nb:3788643 3487363	0.58	0.91	0.21	0.76	0.35	0.61	0.38
knn:3788643 3487363	0.52	0.73	0.25	0.80	0.44	0.64	0.41
rpart:3788643 3487363	0.53	1.00	0.57	0.33	0.34	0.56	0.25
svm:3788643 3487363	0.53	0.98	0.32	0.63	0.35	0.60	0.57
hdda:3219832 3198757	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3198757	0.57	0.73	0.39	0.72	0.46	0.66	0.45
nb:3219832 3198757	0.56	0.91	0.21	0.76	0.35	0.61	0.34
knn:3219832 3198757	0.59	0.20	0.36	0.87	0.63	0.69	0.50
rpart:3219832 3198757	0.69	0.36	0.57	0.70	0.53	0.73	0.42
svm:3219832 3198757	0.70	1.00	0.96	0.02	0.38	0.50	0.65
hdda:3219832 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3753198	0.62	0.55	0.36	0.78	0.50	0.67	0.40
nb:3219832 3753198	0.70	0.46	0.11	0.96	0.60	0.64	0.52
knn:3219832 3753198	0.58	0.73	0.50	0.65	0.47	0.68	0.37
rpart:3219832 3753198	0.52	0.91	0.39	0.65	0.41	0.64	0.29
svm:3219832 3753198	0.67	0.80	0.00	0.93	0.00	0.61	6.92

hdda:3219832 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 2902908	0.70	0.73	0.82	0.46	0.48	0.81	0.10
nb:3219832 2902908	0.64	0.64	0.54	0.65	0.48	0.70	0.33
knn:3219832 2902908	0.65	0.73	0.29	0.78	0.44	0.64	0.42
rpart:3219832 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3219832 2902908	0.70	1.00	0.43	0.26	0.26	0.43	1.00
hdda:3219832 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3142559	0.53	0.96	0.21	0.72	0.32	0.60	0.39
nb:3219832 3142559	0.53	0.96	0.18	0.74	0.29	0.60	0.39
knn:3219832 3142559	0.55	0.86	0.11	0.85	0.30	0.61	0.43
rpart:3219832 3142559	0.55	0.99	0.25	0.65	0.30	0.59	0.38
svm:3219832 3142559	0.61	1.00	0.82	0.15	0.37	0.58	0.12
hdda:3219832 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3626882	0.54	0.64	0.25	0.83	0.47	0.64	0.38
nb:3219832 3626882	0.60	0.55	0.54	0.67	0.50	0.70	0.32
knn:3219832 3626882	0.57	0.73	0.46	0.67	0.46	0.67	0.32
rpart:3219832 3626882	0.51	0.80	0.11	0.87	0.33	0.62	0.59
svm:3219832 3626882	0.53	1.00	0.71	0.13	0.33	0.43	0.20
hdda:3219832 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3433222	0.70	0.20	0.39	0.85	0.61	0.70	0.28
nb:3219832 3433222	0.66	0.14	0.43	0.85	0.63	0.71	0.35
knn:3219832 3433222	0.67	0.46	0.54	0.70	0.52	0.71	0.33
rpart:3219832 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3219832 3433222	0.65	1.00	0.64	0.22	0.33	0.50	0.58
hdda:3219832 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 2991121	0.63	0.86	0.79	0.43	0.46	0.77	0.09
nb:3219832 2991121	0.54	1.00	0.75	0.26	0.38	0.63	0.24
knn:3219832 2991121	0.54	0.99	0.71	0.37	0.41	0.68	0.33
rpart:3219832 2991121	0.50	0.91	0.39	0.65	0.41	0.64	0.38
svm:3219832 2991121	0.57	1.00	0.96	0.04	0.38	0.67	0.97
hdda:3219832 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 2959165	0.58	0.46	0.32	0.83	0.53	0.67	0.50

nb:3219832 2959165	0.60	0.96	0.79	0.37	0.43	0.74	0.29
knn:3219832 2959165	0.59	0.20	0.36	0.87	0.63	0.69	0.50
rpart:3219832 2959165	0.54	0.46	0.29	0.85	0.53	0.66	0.61
svm:3219832 2959165	0.63	1.00	0.75	0.11	0.34	0.42	0.09
hdda:3219832 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3546559	0.62	0.46	0.21	0.89	0.55	0.65	0.37
nb:3219832 3546559	0.60	0.99	0.50	0.50	0.38	0.62	0.30
knn:3219832 3546559	0.65	0.64	0.79	0.50	0.49	0.79	0.29
rpart:3219832 3546559	0.61	0.20	0.46	0.80	0.59	0.71	0.43
svm:3219832 3546559	0.70	1.00	0.61	0.17	0.31	0.42	1.00
hdda:3219832 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3020668	0.57	0.94	0.46	0.59	0.41	0.64	0.24
nb:3219832 3020668	0.53	1.00	0.68	0.35	0.39	0.64	0.22
knn:3219832 3020668	0.62	0.91	0.57	0.54	0.43	0.68	0.32
rpart:3219832 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3219832 3020668	0.61	1.00	0.57	0.24	0.31	0.48	0.37
hdda:3219832 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 2397811	0.65	0.46	0.64	0.63	0.51	0.74	0.25
nb:3219832 2397811	0.60	0.55	0.11	0.93	0.50	0.63	0.51
knn:3219832 2397811	0.67	0.80	0.39	0.70	0.44	0.65	0.43
rpart:3219832 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3219832 2397811	0.58	1.00	0.64	0.24	0.34	0.52	0.01
hdda:3219832 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3903427	0.59	0.64	0.32	0.78	0.47	0.65	0.33
nb:3219832 3903427	0.61	0.64	0.36	0.76	0.48	0.66	0.34
knn:3219832 3903427	0.60	0.73	0.32	0.76	0.45	0.65	0.36
rpart:3219832 3903427	0.65	0.64	0.36	0.76	0.48	0.66	0.40
svm:3219832 3903427	0.52	1.00	0.96	0.04	0.38	0.67	-2.69
hdda:3219832 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 2595867	0.65	0.64	0.57	0.63	0.48	0.71	0.32
nb:3219832 2595867	0.59	0.55	0.36	0.78	0.50	0.67	0.39
knn:3219832 2595867	0.56	0.55	0.36	0.78	0.50	0.67	0.37

rpart:3219832 2595867	0.60	0.86	0.36	0.70	0.42	0.64	0.43
svm:3219832 2595867	0.54	0.64	0.04	0.96	0.33	0.62	10.43
hdda:3219832 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3068088	0.61	0.91	0.71	0.46	0.44	0.72	0.12
nb:3219832 3068088	0.62	0.64	0.11	0.91	0.43	0.63	0.53
knn:3219832 3068088	0.61	0.94	0.61	0.50	0.43	0.68	0.31
rpart:3219832 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3219832 3068088	0.58	0.73	0.04	0.93	0.25	0.61	20.44
hdda:3219832 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3219832 3487363	0.53	0.80	0.39	0.70	0.44	0.65	0.30
nb:3219832 3487363	0.57	0.55	0.21	0.87	0.50	0.65	0.45
knn:3219832 3487363	0.53	1.00	0.46	0.48	0.35	0.59	0.31
rpart:3219832 3487363	0.51	0.73	0.36	0.74	0.45	0.65	0.43
svm:3219832 3487363	0.55	1.00	0.89	0.07	0.37	0.50	0.30
hdda:3198757 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3753198	0.51	0.99	0.36	0.57	0.33	0.59	0.25
nb:3198757 3753198	0.54	0.96	0.07	0.80	0.18	0.59	0.37
knn:3198757 3753198	0.56	0.80	0.39	0.70	0.44	0.65	0.38
rpart:3198757 3753198	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3198757 3753198	0.61	0.73	0.00	0.96	0.00	0.61	12.22
hdda:3198757 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 2902908	0.55	0.96	0.32	0.65	0.36	0.61	0.29
nb:3198757 2902908	0.53	0.99	0.43	0.52	0.35	0.60	0.28
knn:3198757 2902908	0.54	0.99	0.64	0.41	0.40	0.66	0.32
rpart:3198757 2902908	0.64	0.46	0.50	0.72	0.52	0.70	0.45
svm:3198757 2902908	0.52	1.00	0.71	0.20	0.35	0.53	0.98
hdda:3198757 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3142559	0.51	0.99	0.32	0.59	0.32	0.59	0.36
nb:3198757 3142559	0.55	0.91	0.14	0.80	0.31	0.61	0.41
knn:3198757 3142559	0.55	1.00	0.11	0.70	0.18	0.56	0.38
rpart:3198757 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39

svm:3198757 3142559	0.52	0.99	0.68	0.39	0.40	0.67	1.00
hdda:3198757 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3626882	0.52	0.73	0.39	0.72	0.46	0.66	0.27
nb:3198757 3626882	0.52	0.96	0.32	0.65	0.36	0.61	0.32
knn:3198757 3626882	0.52	0.80	0.46	0.65	0.45	0.67	0.34
rpart:3198757 3626882	0.50	0.80	0.18	0.83	0.38	0.62	0.57
svm:3198757 3626882	0.53	1.00	0.86	0.20	0.39	0.69	0.30
hdda:3198757 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3433222	0.61	0.36	0.43	0.78	0.55	0.69	0.34
nb:3198757 3433222	0.54	0.86	0.25	0.76	0.39	0.63	0.33
knn:3198757 3433222	0.54	0.91	0.50	0.59	0.42	0.66	0.32
rpart:3198757 3433222	0.62	0.28	0.29	0.89	0.62	0.67	0.57
svm:3198757 3433222	0.57	1.00	0.75	0.17	0.36	0.53	-0.13
hdda:3198757 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 2991121	0.58	1.00	0.36	0.54	0.32	0.58	0.19
nb:3198757 2991121	0.60	1.00	0.61	0.22	0.32	0.48	0.20
knn:3198757 2991121	0.61	1.00	0.43	0.41	0.31	0.54	0.31
rpart:3198757 2991121	0.55	0.86	0.25	0.76	0.39	0.63	0.44
svm:3198757 2991121	0.54	0.99	0.71	0.37	0.41	0.68	1.00
hdda:3198757 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 2959165	0.53	1.00	0.54	0.43	0.37	0.61	0.34
nb:3198757 2959165	0.51	0.94	0.07	0.83	0.20	0.59	0.42
knn:3198757 2959165	0.52	0.99	0.75	0.33	0.40	0.68	0.31
rpart:3198757 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:3198757 2959165	0.51	0.99	0.57	0.43	0.38	0.63	0.74
hdda:3198757 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3546559	0.59	0.99	0.36	0.57	0.33	0.59	0.37
nb:3198757 3546559	0.54	0.80	0.07	0.89	0.29	0.61	0.46
knn:3198757 3546559	0.54	1.00	0.46	0.48	0.35	0.59	0.33
rpart:3198757 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3198757 3546559	0.50	1.00	0.75	0.20	0.36	0.56	-0.17

hdda:3198757 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3020668	0.55	1.00	0.21	0.63	0.26	0.57	0.23
nb:3198757 3020668	0.55	1.00	0.64	0.33	0.37	0.60	0.18
knn:3198757 3020668	0.53	0.99	0.43	0.54	0.36	0.61	0.31
rpart:3198757 3020668	0.52	0.91	0.29	0.72	0.38	0.62	0.46
svm:3198757 3020668	0.55	1.00	0.89	0.17	0.40	0.73	0.98
hdda:3198757 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 2397811	0.53	0.94	0.50	0.57	0.41	0.65	0.16
nb:3198757 2397811	0.56	0.94	0.07	0.83	0.20	0.59	0.42
knn:3198757 2397811	0.54	0.99	0.36	0.57	0.33	0.59	0.38
rpart:3198757 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3198757 2397811	0.53	1.00	0.54	0.43	0.37	0.61	1.00
hdda:3198757 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3903427	0.56	1.00	0.29	0.59	0.30	0.57	0.18
nb:3198757 3903427	0.58	0.91	0.21	0.76	0.35	0.61	0.35
knn:3198757 3903427	0.57	1.00	0.46	0.41	0.33	0.56	0.32
rpart:3198757 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3198757 3903427	0.60	1.00	0.93	0.17	0.41	0.80	0.34
hdda:3198757 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 2595867	0.52	0.94	0.36	0.65	0.38	0.63	0.23
nb:3198757 2595867	0.53	0.99	0.18	0.70	0.26	0.58	0.34
knn:3198757 2595867	0.51	1.00	0.29	0.59	0.30	0.57	0.37
rpart:3198757 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3198757 2595867	0.52	1.00	0.75	0.20	0.36	0.56	0.77
hdda:3198757 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3068088	0.54	1.00	0.21	0.59	0.24	0.55	0.23
nb:3198757 3068088	0.57	0.96	0.07	0.80	0.18	0.59	0.43
knn:3198757 3068088	0.54	1.00	0.46	0.46	0.34	0.58	0.32
rpart:3198757 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3198757 3068088	0.60	1.00	0.96	0.09	0.39	0.80	0.99
hdda:3198757 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3198757 3487363	0.55	1.00	0.36	0.50	0.30	0.56	0.25

nb:3198757 3487363	0.57	0.80	0.18	0.83	0.38	0.62	0.41
knn:3198757 3487363	0.62	1.00	0.61	0.30	0.35	0.56	0.31
rpart:3198757 3487363	0.59	0.98	0.11	0.76	0.21	0.58	0.55
svm:3198757 3487363	0.59	1.00	1.00	0.07	0.39	1.00	-2.85
hdda:3753198 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 2902908	0.54	1.00	0.46	0.39	0.32	0.55	0.20
nb:3753198 2902908	0.58	0.91	0.43	0.63	0.41	0.64	0.37
knn:3753198 2902908	0.58	0.46	0.32	0.83	0.53	0.67	0.43
rpart:3753198 2902908	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3753198 2902908	0.55	0.99	0.68	0.39	0.40	0.67	1.00
hdda:3753198 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3142559	0.53	0.99	0.54	0.48	0.38	0.63	0.20
nb:3753198 3142559	0.50	0.94	0.29	0.70	0.36	0.62	0.33
knn:3753198 3142559	0.56	1.00	0.43	0.50	0.34	0.59	0.31
rpart:3753198 3142559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3753198 3142559	0.51	1.00	0.68	0.22	0.35	0.53	0.10
hdda:3753198 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3626882	0.54	1.00	0.50	0.41	0.34	0.58	0.23
nb:3753198 3626882	0.56	0.99	0.64	0.39	0.39	0.64	0.29
knn:3753198 3626882	0.56	0.94	0.39	0.63	0.39	0.63	0.35
rpart:3753198 3626882	0.52	0.73	0.29	0.78	0.44	0.64	0.49
svm:3753198 3626882	0.64	1.00	0.79	0.15	0.36	0.54	0.36
hdda:3753198 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3433222	0.71	0.36	0.79	0.57	0.52	0.81	0.25
nb:3753198 3433222	0.66	0.36	0.29	0.87	0.57	0.67	0.41
knn:3753198 3433222	0.71	0.14	0.57	0.76	0.59	0.74	0.37
rpart:3753198 3433222	0.58	0.20	0.32	0.89	0.64	0.68	0.46
svm:3753198 3433222	0.69	1.00	0.46	0.13	0.25	0.29	0.09
hdda:3753198 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 2991121	0.52	0.91	0.46	0.61	0.42	0.65	0.24
nb:3753198 2991121	0.52	1.00	0.57	0.37	0.36	0.59	0.30
knn:3753198 2991121	0.50	0.64	0.25	0.83	0.47	0.64	0.45

rpart:3753198 2991121	0.58	0.73	0.18	0.85	0.42	0.63	0.49
svm:3753198 2991121	0.52	1.00	0.79	0.13	0.35	0.50	0.44
hdda:3753198 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 2959165	0.52	0.94	0.46	0.59	0.41	0.64	0.37
nb:3753198 2959165	0.58	0.99	0.82	0.30	0.42	0.74	0.29
knn:3753198 2959165	0.53	0.94	0.46	0.59	0.41	0.64	0.39
rpart:3753198 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:3753198 2959165	0.57	0.91	0.04	0.87	0.14	0.60	6.88
hdda:3753198 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3546559	0.54	0.96	0.61	0.48	0.41	0.67	0.20
nb:3753198 3546559	0.59	0.96	0.64	0.46	0.42	0.68	0.29
knn:3753198 3546559	0.56	0.86	0.36	0.70	0.42	0.64	0.37
rpart:3753198 3546559	0.53	0.94	0.61	0.50	0.43	0.68	0.25
svm:3753198 3546559	0.52	1.00	0.89	0.07	0.37	0.50	0.51
hdda:3753198 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3020668	0.52	1.00	0.57	0.41	0.37	0.61	0.19
nb:3753198 3020668	0.51	0.96	0.61	0.48	0.41	0.67	0.28
knn:3753198 3020668	0.55	0.91	0.79	0.41	0.45	0.76	0.17
rpart:3753198 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3753198 3020668	0.55	1.00	0.79	0.20	0.37	0.60	0.59
hdda:3753198 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 2397811	0.52	0.98	0.46	0.54	0.38	0.63	0.39
nb:3753198 2397811	0.55	0.96	0.71	0.41	0.43	0.70	0.35
knn:3753198 2397811	0.56	1.00	0.57	0.41	0.37	0.61	0.35
rpart:3753198 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3753198 2397811	0.54	1.00	0.86	0.22	0.40	0.71	1.00
hdda:3753198 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3903427	0.53	1.00	0.32	0.52	0.29	0.56	0.33
nb:3753198 3903427	0.52	0.80	0.18	0.83	0.38	0.62	0.38
knn:3753198 3903427	0.52	0.99	0.46	0.50	0.36	0.61	0.30
rpart:3753198 3903427	0.57	0.91	0.18	0.78	0.33	0.61	0.54

svm:3753198 3903427	0.62	0.86	0.00	0.91	0.00	0.60	8.84
hdda:3753198 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 2595867	0.56	0.73	0.46	0.67	0.46	0.67	0.40
nb:3753198 2595867	0.55	0.80	0.21	0.80	0.40	0.63	0.40
knn:3753198 2595867	0.54	0.98	0.57	0.48	0.40	0.65	0.29
rpart:3753198 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3753198 2595867	0.61	0.80	0.00	0.93	0.00	0.61	9.67
hdda:3753198 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3068088	0.53	0.96	0.54	0.52	0.41	0.65	0.19
nb:3753198 3068088	0.51	0.94	0.57	0.52	0.42	0.67	0.33
knn:3753198 3068088	0.52	0.91	0.36	0.67	0.40	0.63	0.36
rpart:3753198 3068088	0.56	0.99	0.18	0.70	0.26	0.58	0.39
svm:3753198 3068088	0.62	0.80	0.00	0.93	0.00	0.61	29.16
hdda:3753198 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3753198 3487363	0.51	0.94	0.39	0.63	0.39	0.63	0.36
nb:3753198 3487363	0.50	0.91	0.21	0.76	0.35	0.61	0.38
knn:3753198 3487363	0.56	0.64	0.54	0.65	0.48	0.70	0.37
rpart:3753198 3487363	0.58	1.00	0.57	0.33	0.34	0.56	0.26
svm:3753198 3487363	0.53	0.86	0.00	0.91	0.00	0.60	41.71
hdda:2902908 3142559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3142559	0.56	0.96	0.18	0.74	0.29	0.60	0.35
nb:2902908 3142559	0.52	0.94	0.36	0.65	0.38	0.63	0.34
knn:2902908 3142559	0.51	0.96	0.54	0.52	0.41	0.65	0.33
rpart:2902908 3142559	0.55	0.99	0.25	0.65	0.30	0.59	0.38
svm:2902908 3142559	0.51	1.00	0.64	0.37	0.38	0.63	1.00
hdda:2902908 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3626882	0.61	0.64	0.46	0.70	0.48	0.68	0.25
nb:2902908 3626882	0.55	0.99	0.46	0.52	0.37	0.62	0.34
knn:2902908 3626882	0.61	0.55	0.43	0.74	0.50	0.68	0.36
rpart:2902908 3626882	0.51	0.73	0.29	0.78	0.44	0.64	0.31
svm:2902908 3626882	0.51	1.00	0.68	0.15	0.33	0.44	0.06

hdda:2902908 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3433222	0.69	0.28	0.39	0.83	0.58	0.69	0.28
nb:2902908 3433222	0.64	0.73	0.71	0.52	0.48	0.75	0.33
knn:2902908 3433222	0.71	0.64	0.71	0.54	0.49	0.76	0.32
rpart:2902908 3433222	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:2902908 3433222	0.63	1.00	0.54	0.24	0.30	0.46	0.68
hdda:2902908 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 2991121	0.54	0.80	0.54	0.61	0.45	0.68	0.19
nb:2902908 2991121	0.54	1.00	0.57	0.41	0.37	0.61	0.33
knn:2902908 2991121	0.53	0.91	0.39	0.65	0.41	0.64	0.40
rpart:2902908 2991121	0.52	0.86	0.18	0.80	0.36	0.62	0.53
svm:2902908 2991121	0.61	1.00	0.64	0.15	0.32	0.41	0.72
hdda:2902908 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 2959165	0.56	0.96	0.46	0.57	0.39	0.63	0.37
nb:2902908 2959165	0.57	0.86	0.54	0.59	0.44	0.68	0.37
knn:2902908 2959165	0.58	0.99	0.54	0.48	0.38	0.63	0.35
rpart:2902908 2959165	0.51	0.94	0.43	0.61	0.40	0.64	0.52
svm:2902908 2959165	0.52	0.98	0.36	0.61	0.36	0.61	1.00
hdda:2902908 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3546559	0.63	0.46	0.21	0.89	0.55	0.65	0.46
nb:2902908 3546559	0.60	0.80	0.75	0.48	0.47	0.76	0.31
knn:2902908 3546559	0.61	0.64	0.57	0.63	0.48	0.71	0.35
rpart:2902908 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2902908 3546559	0.55	1.00	0.71	0.22	0.36	0.56	0.61
hdda:2902908 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3020668	0.54	0.91	0.32	0.70	0.39	0.63	0.27
nb:2902908 3020668	0.52	1.00	0.68	0.28	0.37	0.59	0.24
knn:2902908 3020668	0.53	0.99	0.57	0.46	0.39	0.64	0.28
rpart:2902908 3020668	0.51	0.55	0.32	0.80	0.50	0.66	0.37
svm:2902908 3020668	0.53	1.00	0.68	0.20	0.34	0.50	0.53
hdda:2902908 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 2397811	0.57	0.80	0.50	0.63	0.45	0.67	0.36

nb:2902908 2397811	0.56	0.99	0.25	0.65	0.30	0.59	0.42
knn:2902908 2397811	0.58	0.80	0.32	0.74	0.43	0.64	0.46
rpart:2902908 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2902908 2397811	0.52	1.00	0.79	0.26	0.39	0.67	0.11
hdda:2902908 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3903427	0.61	0.91	0.18	0.78	0.33	0.61	0.36
nb:2902908 3903427	0.55	0.99	0.46	0.50	0.36	0.61	0.32
knn:2902908 3903427	0.52	0.99	0.43	0.54	0.36	0.61	0.36
rpart:2902908 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2902908 3903427	0.56	1.00	0.79	0.13	0.35	0.50	0.32
hdda:2902908 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 2595867	0.59	0.80	0.21	0.80	0.40	0.63	0.42
nb:2902908 2595867	0.54	0.91	0.36	0.67	0.40	0.63	0.37
knn:2902908 2595867	0.53	0.86	0.39	0.67	0.42	0.65	0.42
rpart:2902908 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2902908 2595867	0.54	1.00	0.79	0.15	0.36	0.54	0.31
hdda:2902908 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3068088	0.56	1.00	0.61	0.39	0.38	0.62	0.14
nb:2902908 3068088	0.52	0.96	0.36	0.63	0.37	0.62	0.38
knn:2902908 3068088	0.55	0.91	0.43	0.63	0.41	0.64	0.35
rpart:2902908 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2902908 3068088	0.53	1.00	0.79	0.24	0.39	0.65	0.81
hdda:2902908 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2902908 3487363	0.54	0.94	0.43	0.61	0.40	0.64	0.25
nb:2902908 3487363	0.52	0.98	0.36	0.61	0.36	0.61	0.36
knn:2902908 3487363	0.51	1.00	0.54	0.43	0.37	0.61	0.34
rpart:2902908 3487363	0.51	0.91	0.43	0.63	0.41	0.64	0.42
svm:2902908 3487363	0.50	1.00	0.86	0.17	0.39	0.67	0.10
hdda:3142559 3626882	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 3626882	0.53	0.55	0.32	0.80	0.50	0.66	0.34
nb:3142559 3626882	0.52	0.91	0.32	0.70	0.39	0.63	0.37
knn:3142559 3626882	0.54	0.91	0.25	0.74	0.37	0.62	0.39

rpart:3142559 3626882	0.51	0.64	0.21	0.85	0.46	0.64	0.51
svm:3142559 3626882	0.52	1.00	0.64	0.28	0.35	0.57	0.20
hdda:3142559 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 3433222	0.57	0.94	0.46	0.59	0.41	0.64	0.27
nb:3142559 3433222	0.52	0.91	0.36	0.67	0.40	0.63	0.33
knn:3142559 3433222	0.59	0.80	0.64	0.54	0.46	0.71	0.23
rpart:3142559 3433222	0.57	0.86	0.32	0.72	0.41	0.63	0.44
svm:3142559 3433222	0.51	1.00	0.75	0.15	0.35	0.50	0.23
hdda:3142559 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 2991121	0.59	0.94	0.18	0.76	0.31	0.60	0.42
nb:3142559 2991121	0.59	0.94	0.18	0.76	0.31	0.60	0.40
knn:3142559 2991121	0.65	0.99	0.18	0.70	0.26	0.58	0.41
rpart:3142559 2991121	0.55	0.99	0.25	0.65	0.30	0.59	0.38
svm:3142559 2991121	0.50	0.99	0.25	0.63	0.29	0.58	0.49
hdda:3142559 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 2959165	0.52	0.99	0.39	0.57	0.35	0.60	0.38
nb:3142559 2959165	0.52	0.91	0.32	0.70	0.39	0.63	0.35
knn:3142559 2959165	0.59	1.00	0.29	0.46	0.24	0.51	0.32
rpart:3142559 2959165	0.53	0.73	0.11	0.89	0.38	0.62	0.62
svm:3142559 2959165	0.57	0.99	0.86	0.28	0.42	0.76	0.62
hdda:3142559 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 3546559	0.52	0.96	0.39	0.61	0.38	0.62	0.30
nb:3142559 3546559	0.53	0.91	0.36	0.67	0.40	0.63	0.33
knn:3142559 3546559	0.52	0.98	0.54	0.50	0.39	0.64	0.30
rpart:3142559 3546559	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3142559 3546559	0.51	1.00	0.82	0.15	0.37	0.58	0.57
hdda:3142559 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 3020668	0.57	0.96	0.14	0.76	0.27	0.59	0.39
nb:3142559 3020668	0.53	0.98	0.14	0.74	0.25	0.59	0.44
knn:3142559 3020668	0.63	0.96	0.14	0.76	0.27	0.59	0.43
rpart:3142559 3020668	0.52	0.91	0.14	0.80	0.31	0.61	0.47

svm:3142559 3020668	0.61	1.00	0.89	0.22	0.41	0.77	0.19
hdda:3142559 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 2397811	0.57	0.91	0.29	0.72	0.38	0.62	0.44
nb:3142559 2397811	0.51	0.98	0.25	0.67	0.32	0.60	0.39
knn:3142559 2397811	0.57	0.86	0.32	0.72	0.41	0.63	0.42
rpart:3142559 2397811	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3142559 2397811	0.51	1.00	0.93	0.20	0.41	0.82	0.49
hdda:3142559 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 3903427	0.52	0.99	0.54	0.48	0.38	0.63	0.27
nb:3142559 3903427	0.52	0.91	0.21	0.76	0.35	0.61	0.40
knn:3142559 3903427	0.53	0.73	0.29	0.78	0.44	0.64	0.37
rpart:3142559 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3142559 3903427	0.52	1.00	0.93	0.11	0.39	0.71	0.06
hdda:3142559 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 2595867	0.55	0.73	0.32	0.76	0.45	0.65	0.30
nb:3142559 2595867	0.52	0.96	0.29	0.67	0.35	0.61	0.35
knn:3142559 2595867	0.58	1.00	0.39	0.52	0.33	0.59	0.32
rpart:3142559 2595867	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3142559 2595867	0.53	1.00	0.93	0.11	0.39	0.71	0.10
hdda:3142559 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 3068088	0.51	0.98	0.18	0.72	0.28	0.59	0.32
nb:3142559 3068088	0.53	0.99	0.07	0.76	0.15	0.57	0.44
knn:3142559 3068088	0.51	0.99	0.43	0.52	0.35	0.60	0.31
rpart:3142559 3068088	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3142559 3068088	0.52	1.00	0.93	0.02	0.37	0.33	-2.93
hdda:3142559 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3142559 3487363	0.52	0.96	0.14	0.76	0.27	0.59	0.37
nb:3142559 3487363	0.52	0.98	0.14	0.74	0.25	0.59	0.42
knn:3142559 3487363	0.54	0.94	0.21	0.74	0.33	0.61	0.37
rpart:3142559 3487363	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:3142559 3487363	0.61	0.96	0.89	0.30	0.44	0.82	0.51

hdda:3626882 3433222	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 3433222	0.59	0.64	0.36	0.76	0.48	0.66	0.37
nb:3626882 3433222	0.62	0.55	0.50	0.70	0.50	0.70	0.36
knn:3626882 3433222	0.61	0.98	0.68	0.41	0.41	0.68	0.24
rpart:3626882 3433222	0.53	0.64	0.32	0.78	0.47	0.65	0.39
svm:3626882 3433222	0.51	1.00	0.46	0.48	0.35	0.59	0.54
hdda:3626882 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 2991121	0.54	0.98	0.25	0.67	0.32	0.60	0.40
nb:3626882 2991121	0.54	1.00	0.64	0.30	0.36	0.58	0.27
knn:3626882 2991121	0.53	0.99	0.54	0.48	0.38	0.63	0.34
rpart:3626882 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3626882 2991121	0.62	1.00	0.89	0.11	0.38	0.63	0.54
hdda:3626882 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 2959165	0.52	0.86	0.50	0.61	0.44	0.67	0.29
nb:3626882 2959165	0.56	0.80	0.25	0.78	0.41	0.63	0.42
knn:3626882 2959165	0.58	0.73	0.36	0.74	0.45	0.65	0.40
rpart:3626882 2959165	0.56	0.64	0.43	0.72	0.48	0.67	0.51
svm:3626882 2959165	0.54	1.00	0.79	0.20	0.37	0.60	0.44
hdda:3626882 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 3546559	0.55	0.94	0.54	0.54	0.42	0.66	0.14
nb:3626882 3546559	0.58	0.86	0.43	0.65	0.43	0.65	0.35
knn:3626882 3546559	0.54	0.73	0.29	0.78	0.44	0.64	0.41
rpart:3626882 3546559	0.51	0.55	0.14	0.91	0.50	0.64	0.62
svm:3626882 3546559	0.53	1.00	0.79	0.17	0.37	0.57	0.32
hdda:3626882 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 3020668	0.55	1.00	0.43	0.41	0.31	0.54	0.21
nb:3626882 3020668	0.50	1.00	0.68	0.33	0.38	0.63	0.24
knn:3626882 3020668	0.57	0.99	0.25	0.65	0.30	0.59	0.36
rpart:3626882 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3626882 3020668	0.52	1.00	0.89	0.11	0.38	0.63	0.27
hdda:3626882 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 2397811	0.52	0.99	0.18	0.70	0.26	0.58	0.35

nb:3626882 2397811	0.51	0.98	0.29	0.65	0.33	0.60	0.39
knn:3626882 2397811	0.56	1.00	0.18	0.65	0.24	0.57	0.43
rpart:3626882 2397811	0.53	0.99	0.04	0.78	0.09	0.57	0.58
svm:3626882 2397811	0.55	0.99	0.86	0.28	0.42	0.76	-0.07
hdda:3626882 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 3903427	0.51	0.86	0.32	0.72	0.41	0.63	0.32
nb:3626882 3903427	0.50	0.91	0.29	0.72	0.38	0.62	0.38
knn:3626882 3903427	0.53	0.55	0.43	0.74	0.50	0.68	0.41
rpart:3626882 3903427	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:3626882 3903427	0.50	1.00	0.71	0.24	0.36	0.58	0.50
hdda:3626882 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 2595867	0.52	0.98	0.50	0.52	0.39	0.63	0.18
nb:3626882 2595867	0.54	0.91	0.29	0.72	0.38	0.62	0.39
knn:3626882 2595867	0.52	0.99	0.50	0.50	0.38	0.62	0.31
rpart:3626882 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3626882 2595867	0.54	1.00	0.68	0.28	0.37	0.59	0.66
hdda:3626882 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 3068088	0.52	0.94	0.14	0.78	0.29	0.60	0.39
nb:3626882 3068088	0.50	0.73	0.29	0.78	0.44	0.64	0.41
knn:3626882 3068088	0.55	0.96	0.32	0.65	0.36	0.61	0.37
rpart:3626882 3068088	0.52	0.96	0.14	0.76	0.27	0.59	0.44
svm:3626882 3068088	0.57	0.99	0.86	0.28	0.42	0.76	0.53
hdda:3626882 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3626882 3487363	0.53	0.91	0.54	0.57	0.43	0.67	0.27
nb:3626882 3487363	0.51	0.99	0.39	0.54	0.34	0.60	0.35
knn:3626882 3487363	0.53	1.00	0.61	0.37	0.37	0.61	0.32
rpart:3626882 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3626882 3487363	0.53	1.00	0.71	0.33	0.39	0.65	1.00
hdda:3433222 2991121	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 2991121	0.59	0.28	0.39	0.83	0.58	0.69	0.38
nb:3433222 2991121	0.52	1.00	0.64	0.30	0.36	0.58	0.28
knn:3433222 2991121	0.56	0.28	0.29	0.89	0.62	0.67	0.50

rpart:3433222 2991121	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3433222 2991121	0.56	1.00	0.61	0.24	0.33	0.50	0.55
hdda:3433222 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 2959165	0.63	0.46	0.36	0.80	0.53	0.67	0.36
nb:3433222 2959165	0.63	0.55	0.39	0.76	0.50	0.67	0.39
knn:3433222 2959165	0.59	0.86	0.43	0.65	0.43	0.65	0.36
rpart:3433222 2959165	0.61	0.73	0.50	0.65	0.47	0.68	0.36
svm:3433222 2959165	0.53	1.00	0.79	0.22	0.38	0.63	0.31
hdda:3433222 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 3546559	0.59	0.36	0.39	0.80	0.55	0.69	0.31
nb:3433222 3546559	0.62	0.46	0.50	0.72	0.52	0.70	0.34
knn:3433222 3546559	0.59	0.20	0.36	0.87	0.63	0.69	0.38
rpart:3433222 3546559	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3433222 3546559	0.66	1.00	0.75	0.07	0.33	0.30	0.22
hdda:3433222 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 3020668	0.56	0.36	0.29	0.87	0.57	0.67	0.41
nb:3433222 3020668	0.54	1.00	0.71	0.28	0.38	0.62	0.20
knn:3433222 3020668	0.56	0.94	0.43	0.61	0.40	0.64	0.34
rpart:3433222 3020668	0.56	0.80	0.29	0.76	0.42	0.64	0.47
svm:3433222 3020668	0.60	1.00	0.82	0.09	0.35	0.44	0.35
hdda:3433222 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 2397811	0.63	0.20	0.39	0.85	0.61	0.70	0.28
nb:3433222 2397811	0.60	0.55	0.36	0.78	0.50	0.67	0.39
knn:3433222 2397811	0.52	0.28	0.21	0.93	0.67	0.66	0.58
rpart:3433222 2397811	0.62	0.28	0.25	0.91	0.64	0.67	0.55
svm:3433222 2397811	0.59	1.00	0.71	0.17	0.34	0.50	0.25
hdda:3433222 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 3903427	0.56	0.28	0.39	0.83	0.58	0.69	0.38
nb:3433222 3903427	0.57	0.64	0.43	0.72	0.48	0.67	0.34
knn:3433222 3903427	0.56	0.86	0.57	0.57	0.44	0.68	0.29
rpart:3433222 3903427	0.65	0.20	0.54	0.76	0.58	0.73	0.38

svm:3433222 3903427	0.60	1.00	0.61	0.22	0.32	0.48	0.66
hdda:3433222 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 2595867	0.63	0.36	0.54	0.72	0.54	0.72	0.24
nb:3433222 2595867	0.58	0.86	0.43	0.65	0.43	0.65	0.34
knn:3433222 2595867	0.55	0.91	0.57	0.54	0.43	0.68	0.32
rpart:3433222 2595867	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3433222 2595867	0.61	1.00	0.71	0.13	0.33	0.43	0.47
hdda:3433222 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 3068088	0.65	0.46	0.39	0.78	0.52	0.68	0.31
nb:3433222 3068088	0.56	0.46	0.43	0.76	0.52	0.69	0.36
knn:3433222 3068088	0.64	0.55	0.43	0.74	0.50	0.68	0.34
rpart:3433222 3068088	0.62	0.20	0.39	0.85	0.61	0.70	0.41
svm:3433222 3068088	0.53	0.64	0.07	0.93	0.40	0.62	2.10
hdda:3433222 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3433222 3487363	0.60	0.46	0.57	0.67	0.52	0.72	0.34
nb:3433222 3487363	0.56	0.94	0.36	0.65	0.38	0.63	0.35
knn:3433222 3487363	0.62	0.55	0.25	0.85	0.50	0.65	0.50
rpart:3433222 3487363	0.65	0.20	0.54	0.76	0.58	0.73	0.38
svm:3433222 3487363	0.62	1.00	0.61	0.26	0.33	0.52	0.64
hdda:2991121 2959165	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 2959165	0.54	0.99	0.18	0.70	0.26	0.58	0.38
nb:2991121 2959165	0.58	1.00	0.61	0.30	0.35	0.56	0.30
knn:2991121 2959165	0.56	1.00	0.36	0.48	0.29	0.55	0.39
rpart:2991121 2959165	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:2991121 2959165	0.58	1.00	0.86	0.13	0.38	0.60	-0.08
hdda:2991121 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 3546559	0.50	0.86	0.36	0.70	0.42	0.64	0.34
nb:2991121 3546559	0.51	0.99	0.54	0.48	0.38	0.63	0.31
knn:2991121 3546559	0.51	0.98	0.36	0.61	0.36	0.61	0.37
rpart:2991121 3546559	0.54	0.86	0.25	0.76	0.39	0.63	0.44
svm:2991121 3546559	0.59	0.73	0.46	0.67	0.46	0.67	1.00

hdda:2991121 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 3020668	0.60	0.86	0.32	0.72	0.41	0.63	0.31
nb:2991121 3020668	0.57	1.00	0.43	0.46	0.32	0.57	0.30
knn:2991121 3020668	0.56	0.98	0.29	0.65	0.33	0.60	0.38
rpart:2991121 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2991121 3020668	0.54	1.00	0.89	0.20	0.40	0.75	0.56
hdda:2991121 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 2397811	0.59	1.00	0.43	0.46	0.32	0.57	0.32
nb:2991121 2397811	0.60	1.00	0.54	0.33	0.33	0.54	0.34
knn:2991121 2397811	0.60	1.00	0.21	0.63	0.26	0.57	0.45
rpart:2991121 2397811	0.55	0.94	0.29	0.70	0.36	0.62	0.45
svm:2991121 2397811	0.59	0.96	0.68	0.43	0.42	0.69	0.68
hdda:2991121 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 3903427	0.55	0.64	0.21	0.85	0.46	0.64	0.40
nb:2991121 3903427	0.55	1.00	0.57	0.30	0.33	0.54	0.27
knn:2991121 3903427	0.58	1.00	0.50	0.28	0.30	0.48	0.29
rpart:2991121 3903427	0.56	0.94	0.25	0.72	0.35	0.61	0.44
svm:2991121 3903427	0.51	1.00	0.86	0.15	0.38	0.64	0.64
hdda:2991121 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 2595867	0.52	0.86	0.32	0.72	0.41	0.63	0.35
nb:2991121 2595867	0.51	1.00	0.64	0.22	0.33	0.50	0.23
knn:2991121 2595867	0.53	0.91	0.43	0.63	0.41	0.64	0.37
rpart:2991121 2595867	0.54	0.94	0.36	0.65	0.38	0.63	0.42
svm:2991121 2595867	0.55	1.00	0.79	0.17	0.37	0.57	0.35
hdda:2991121 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 3068088	0.55	0.99	0.25	0.65	0.30	0.59	0.26
nb:2991121 3068088	0.60	1.00	0.61	0.26	0.33	0.52	0.28
knn:2991121 3068088	0.59	1.00	0.57	0.30	0.33	0.54	0.31
rpart:2991121 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2991121 3068088	0.53	1.00	0.79	0.15	0.36	0.54	0.63
hdda:2991121 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2991121 3487363	0.57	0.99	0.25	0.63	0.29	0.58	0.26

nb:2991121 3487363	0.60	1.00	0.64	0.33	0.37	0.60	0.27
knn:2991121 3487363	0.61	1.00	0.43	0.50	0.34	0.59	0.36
rpart:2991121 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2991121 3487363	0.50	1.00	0.43	0.48	0.33	0.58	0.86
hdda:2959165 3546559	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2959165 3546559	0.54	0.96	0.50	0.54	0.40	0.64	0.28
nb:2959165 3546559	0.59	0.96	0.64	0.46	0.42	0.68	0.31
knn:2959165 3546559	0.50	0.99	0.29	0.63	0.32	0.59	0.35
rpart:2959165 3546559	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2959165 3546559	0.56	1.00	0.86	0.11	0.37	0.56	0.35
hdda:2959165 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2959165 3020668	0.52	0.73	0.14	0.87	0.40	0.63	0.55
nb:2959165 3020668	0.53	0.98	0.61	0.46	0.40	0.66	0.28
knn:2959165 3020668	0.55	0.91	0.50	0.59	0.42	0.66	0.30
rpart:2959165 3020668	0.54	0.55	0.29	0.83	0.50	0.66	0.52
svm:2959165 3020668	0.54	1.00	0.79	0.13	0.35	0.50	0.24
hdda:2959165 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2959165 2397811	0.50	0.99	0.39	0.54	0.34	0.60	0.38
nb:2959165 2397811	0.52	0.99	0.61	0.43	0.40	0.65	0.36
knn:2959165 2397811	0.56	0.98	0.64	0.43	0.41	0.67	0.38
rpart:2959165 2397811	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:2959165 2397811	0.51	1.00	0.61	0.39	0.38	0.62	0.26
hdda:2959165 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2959165 3903427	0.50	0.99	0.50	0.50	0.38	0.62	0.38
nb:2959165 3903427	0.56	0.91	0.11	0.83	0.27	0.60	0.43
knn:2959165 3903427	0.50	0.91	0.50	0.59	0.42	0.66	0.37
rpart:2959165 3903427	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:2959165 3903427	0.51	1.00	0.68	0.26	0.36	0.57	0.31
hdda:2959165 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2959165 2595867	0.54	0.94	0.61	0.50	0.43	0.68	0.35
nb:2959165 2595867	0.56	0.98	0.39	0.59	0.37	0.61	0.35
knn:2959165 2595867	0.55	0.99	0.68	0.37	0.40	0.65	0.32

rpart:2959165 2595867	0.51	0.96	0.46	0.57	0.39	0.63	0.37
svm:2959165 2595867	0.51	1.00	0.57	0.37	0.36	0.59	0.66
hdda:2959165 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2959165 3068088	0.52	0.80	0.39	0.70	0.44	0.65	0.45
nb:2959165 3068088	0.52	0.99	0.61	0.43	0.40	0.65	0.34
knn:2959165 3068088	0.53	0.86	0.25	0.76	0.39	0.63	0.42
rpart:2959165 3068088	0.53	0.80	0.39	0.70	0.44	0.65	0.44
svm:2959165 3068088	0.51	1.00	0.89	0.15	0.39	0.70	0.70
hdda:2959165 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2959165 3487363	0.51	0.91	0.21	0.76	0.35	0.61	0.43
nb:2959165 3487363	0.51	0.91	0.14	0.80	0.31	0.61	0.44
knn:2959165 3487363	0.52	0.99	0.39	0.54	0.34	0.60	0.30
rpart:2959165 3487363	0.50	0.86	0.25	0.76	0.39	0.63	0.47
svm:2959165 3487363	0.56	1.00	0.79	0.20	0.37	0.60	-0.08
hdda:3546559 3020668	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3546559 3020668	0.53	0.94	0.50	0.57	0.41	0.65	0.22
nb:3546559 3020668	0.53	1.00	0.61	0.37	0.37	0.61	0.26
knn:3546559 3020668	0.53	0.98	0.61	0.46	0.40	0.66	0.31
rpart:3546559 3020668	0.51	0.80	0.32	0.74	0.43	0.64	0.34
svm:3546559 3020668	0.51	0.98	0.36	0.61	0.36	0.61	1.00
hdda:3546559 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3546559 2397811	0.52	0.73	0.25	0.80	0.44	0.64	0.35
nb:3546559 2397811	0.56	0.99	0.75	0.35	0.41	0.70	0.30
knn:3546559 2397811	0.54	0.94	0.32	0.67	0.38	0.62	0.37
rpart:3546559 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3546559 2397811	0.57	1.00	0.79	0.13	0.35	0.50	0.58
hdda:3546559 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3546559 3903427	0.55	0.94	0.32	0.67	0.38	0.62	0.20
nb:3546559 3903427	0.56	0.91	0.21	0.76	0.35	0.61	0.37
knn:3546559 3903427	0.54	0.91	0.36	0.67	0.40	0.63	0.34
rpart:3546559 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.34

svm:3546559 3903427	0.54	1.00	0.89	0.13	0.38	0.67	-0.15
hdda:3546559 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3546559 2595867	0.54	0.91	0.36	0.67	0.40	0.63	0.24
nb:3546559 2595867	0.55	0.91	0.32	0.70	0.39	0.63	0.37
knn:3546559 2595867	0.52	0.94	0.61	0.50	0.43	0.68	0.29
rpart:3546559 2595867	0.52	0.73	0.32	0.76	0.45	0.65	0.42
svm:3546559 2595867	0.56	1.00	0.82	0.22	0.39	0.67	0.29
hdda:3546559 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3546559 3068088	0.57	0.80	0.32	0.74	0.43	0.64	0.18
nb:3546559 3068088	0.53	0.98	0.61	0.46	0.40	0.66	0.31
knn:3546559 3068088	0.54	1.00	0.71	0.33	0.39	0.65	0.29
rpart:3546559 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3546559 3068088	0.63	1.00	0.82	0.26	0.40	0.71	0.95
hdda:3546559 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3546559 3487363	0.54	0.46	0.39	0.78	0.52	0.68	0.30
nb:3546559 3487363	0.53	0.91	0.43	0.63	0.41	0.64	0.35
knn:3546559 3487363	0.50	0.80	0.46	0.65	0.45	0.67	0.35
rpart:3546559 3487363	0.52	0.91	0.36	0.67	0.40	0.63	0.39
svm:3546559 3487363	0.51	1.00	0.79	0.15	0.36	0.54	0.68
hdda:3020668 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3020668 2397811	0.55	0.96	0.14	0.76	0.27	0.59	0.31
nb:3020668 2397811	0.51	1.00	0.68	0.35	0.39	0.64	0.26
knn:3020668 2397811	0.53	0.99	0.50	0.48	0.37	0.61	0.30
rpart:3020668 2397811	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3020668 2397811	0.52	1.00	0.89	0.17	0.40	0.73	0.08
hdda:3020668 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3020668 3903427	0.57	0.91	0.14	0.80	0.31	0.61	0.35
nb:3020668 3903427	0.55	1.00	0.61	0.37	0.37	0.61	0.25
knn:3020668 3903427	0.61	1.00	0.57	0.35	0.35	0.57	0.21
rpart:3020668 3903427	0.52	0.86	0.25	0.76	0.39	0.63	0.44
svm:3020668 3903427	0.60	1.00	0.93	0.20	0.41	0.82	0.59

hdda:3020668 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3020668 2595867	0.51	0.96	0.43	0.59	0.39	0.63	0.25
nb:3020668 2595867	0.51	1.00	0.75	0.26	0.38	0.63	0.18
knn:3020668 2595867	0.51	0.99	0.43	0.52	0.35	0.60	0.30
rpart:3020668 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3020668 2595867	0.52	0.99	0.71	0.35	0.40	0.67	0.20
hdda:3020668 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3020668 3068088	0.55	1.00	0.39	0.52	0.33	0.59	0.16
nb:3020668 3068088	0.55	1.00	0.68	0.35	0.39	0.64	0.25
knn:3020668 3068088	0.55	1.00	0.54	0.39	0.35	0.58	0.30
rpart:3020668 3068088	0.50	0.94	0.25	0.72	0.35	0.61	0.46
svm:3020668 3068088	0.52	1.00	0.79	0.26	0.39	0.67	0.39
hdda:3020668 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3020668 3487363	0.54	0.91	0.39	0.65	0.41	0.64	0.27
nb:3020668 3487363	0.53	1.00	0.57	0.37	0.36	0.59	0.25
knn:3020668 3487363	0.54	0.86	0.25	0.76	0.39	0.63	0.41
rpart:3020668 3487363	0.53	0.73	0.29	0.78	0.44	0.64	0.44
svm:3020668 3487363	0.56	0.91	0.25	0.74	0.37	0.62	8.39
hdda:2397811 3903427	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2397811 3903427	0.52	0.94	0.25	0.72	0.35	0.61	0.36
nb:2397811 3903427	0.50	0.73	0.14	0.87	0.40	0.63	0.45
knn:2397811 3903427	0.52	0.91	0.43	0.63	0.41	0.64	0.38
rpart:2397811 3903427	0.53	0.96	0.25	0.70	0.33	0.60	0.39
svm:2397811 3903427	0.52	1.00	0.86	0.22	0.40	0.71	0.98
hdda:2397811 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2397811 2595867	0.51	0.80	0.21	0.80	0.40	0.63	0.37
nb:2397811 2595867	0.54	0.86	0.25	0.76	0.39	0.63	0.42
knn:2397811 2595867	0.54	0.91	0.32	0.70	0.39	0.63	0.41
rpart:2397811 2595867	0.52	0.98	0.46	0.54	0.38	0.63	0.56
svm:2397811 2595867	0.54	1.00	0.79	0.15	0.36	0.54	0.25
hdda:2397811 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2397811 3068088	0.55	0.96	0.25	0.70	0.33	0.60	0.19

nb:2397811 3068088	0.56	1.00	0.82	0.20	0.38	0.64	0.33
knn:2397811 3068088	0.53	0.96	0.46	0.57	0.39	0.63	0.37
rpart:2397811 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2397811 3068088	0.56	1.00	0.93	0.17	0.41	0.80	0.91
hdda:2397811 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2397811 3487363	0.53	0.94	0.29	0.70	0.36	0.62	0.41
nb:2397811 3487363	0.51	0.98	0.14	0.74	0.25	0.59	0.43
knn:2397811 3487363	0.58	1.00	0.43	0.50	0.34	0.59	0.36
rpart:2397811 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2397811 3487363	0.53	1.00	0.75	0.24	0.38	0.61	0.27
hdda:3903427 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3903427 2595867	0.51	0.99	0.36	0.59	0.34	0.60	0.20
nb:3903427 2595867	0.52	0.91	0.36	0.67	0.40	0.63	0.34
knn:3903427 2595867	0.51	0.86	0.39	0.67	0.42	0.65	0.33
rpart:3903427 2595867	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3903427 2595867	0.65	0.96	0.89	0.30	0.44	0.82	0.11
hdda:3903427 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3903427 3068088	0.53	0.98	0.21	0.70	0.30	0.59	0.26
nb:3903427 3068088	0.54	0.96	0.14	0.76	0.27	0.59	0.39
knn:3903427 3068088	0.50	0.99	0.57	0.46	0.39	0.64	0.32
rpart:3903427 3068088	0.55	0.96	0.14	0.76	0.27	0.59	0.41
svm:3903427 3068088	0.57	1.00	0.93	0.07	0.38	0.60	-0.09
hdda:3903427 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3903427 3487363	0.52	1.00	0.50	0.43	0.35	0.59	0.16
nb:3903427 3487363	0.51	0.86	0.21	0.78	0.38	0.62	0.41
knn:3903427 3487363	0.53	1.00	0.46	0.43	0.33	0.57	0.32
rpart:3903427 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3903427 3487363	0.58	1.00	0.86	0.22	0.40	0.71	0.69
hdda:2595867 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2595867 3068088	0.50	0.64	0.21	0.85	0.46	0.64	0.44
nb:2595867 3068088	0.52	0.80	0.21	0.80	0.40	0.63	0.40
knn:2595867 3068088	0.55	0.80	0.32	0.74	0.43	0.64	0.40

rpart:2595867 3068088	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:2595867 3068088	0.51	0.73	0.00	0.96	0.00	0.61	9.51
hdda:2595867 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:2595867 3487363	0.52	0.91	0.29	0.72	0.38	0.62	0.35
nb:2595867 3487363	0.53	0.91	0.21	0.76	0.35	0.61	0.42
knn:2595867 3487363	0.53	0.96	0.32	0.65	0.36	0.61	0.39
rpart:2595867 3487363	0.52	0.94	0.36	0.65	0.38	0.63	0.41
svm:2595867 3487363	0.52	1.00	0.57	0.41	0.37	0.61	1.00
hdda:3068088 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.50
rf:3068088 3487363	0.51	0.99	0.57	0.46	0.39	0.64	0.22
nb:3068088 3487363	0.59	0.99	0.14	0.70	0.22	0.57	0.39
knn:3068088 3487363	0.53	1.00	0.43	0.50	0.34	0.59	0.35
rpart:3068088 3487363	0.50	1.00	1.00	0.00	0.38	#N/A	0.34
svm:3068088 3487363	0.54	1.00	0.86	0.22	0.40	0.71	0.86

Performance of pairwise combinations of the 51 markers across different metrics for predicting lymph node metastasis in bladder cancer patients.

TABLE 8 shows the sequences for SEQ ID NOs:1-51 and the corresponding Affymetrix™ Probeset ID, which correspond to the Sequence identifiers in TABLE 2.

TABLE 8

SEQ ID NO.	AFFYMETRIX PROBESET ID	SEQUENCE
SEQ ID NO. 1	2934158	CTGTCTCTGCTGCAATAGTTAAAGA
SEQ ID NO. 2	2851303	AAATAATGTTCAGAAGGACGCCTGT
SEQ ID NO. 3	3454547	TAAGGATGGAATTCAACTTTACCTA
SEQ ID NO. 4	2458376	TTTTTGACAACAGGTCCTATGATTCATTACACAG
SEQ ID NO. 5	3637974	CTTGGATTCTGAGAGGCCATCAGGA
SEQ ID NO. 6	3337703	CTTCAACGATGAGAAGTTTGCAGAT
SEQ ID NO. 7	3498477	GGTCCAGAGTCTCATTTCCTGATGA
SEQ ID NO. 8	2321235	CGCAGCCAAAAGTGCCTATGACGCG

SEQ ID NO. 9	3351432	GTGGACTTTGAAGGAATCAGCTTGA
SEQ ID NO. 10	2615421	TTCAGAAGACTGGTAGAGGCTCAAG
SEQ ID NO. 11	2802601	GTCACTGGTTTGTCAGATTAAAGGA
SEQ ID NO. 12	3326487	GGAAAGACGAGAACTATTTATATGACACCAACTATGGTAGCAC AGTAG
SEQ ID NO. 13	3870139	CAAATGTAACGTGTGGAAAGTTCTA
SEQ ID NO. 14	2627418	GGTTGCAGAACGACTTGATTCTTAG
SEQ ID NO. 15	2594205	ATGCACTACGCTGTCAAGAAAGAAGAT
SEQ ID NO. 16	4015327	ATCCTGTGCTTTCTACTGGTGTATT
SEQ ID NO. 17	2975719	TCCTCGTTTTATCCTGATGGTGGAG
SEQ ID NO. 18	3109057	AGCGAGAACATGCAAGAGATCAAGA
SEQ ID NO. 19	4021820	GGATGAGTCTGGGTATGACATCAAT
SEQ ID NO. 20	3577841	TCTCATCCTCTTTGCAGTTCTTCCT
SEQ ID NO. 21	3703849	GAGGTGAATATTTCAACGGCCAAAA
SEQ ID NO. 22	2707575	ATGAATCCATACTTCCCATTTACAG
SEQ ID NO. 23	2510519	TTTCTCAGTTTGGAATCACTTGTAG
SEQ ID NO. 24	3530890	GTCTCCATCCGAGCTCTGAGCTCCA
SEQ ID NO. 25	3769569	ACTGCTAGATGATCCTTCTCTTTTT
SEQ ID NO. 26	3544035	CTGTACCTGGCCCAATAACTTTACT
SEQ ID NO. 27	2790378	TGATGACAACGACATAATGGAAACGCTTTGTAAA
SEQ ID NO. 28	2625670	CTCATTATTGGGTACTTGACCAGTC
SEQ ID NO. 29	3646405	CACCTTTTTAATGCCAGTAACCTCA
SEQ ID NO. 30	2918654	AAGTAAAACCATCCAAATCTGACAG
SEQ ID NO. 31	2663553	CCTTGCATATTACTTGAGCTTAAACTGACAACCTGGATGTAAA TAGGAGCCTTTCTACTGG
SEQ ID NO. 32	3103484	AGACAGTTCAGTCACCAACAGTTTG
SEQ ID NO. 33	2757491	CAAGGCTTGAAAGTCTGTGAAGCAG

SEQ ID NO. 34	2401368	TCCTCTCCAAAAAGACCATCGGTGGAAAG
SEQ ID NO. 35	3788643	TATGAAAAGGAACGGGCCACATTTA
SEQ ID NO. 36	3219832	AAATCCAGAAGTCCATAATTACCAG
SEQ ID NO. 37	3198757	AGCCCTTCAAGACAAGGTGAACTGA
SEQ ID NO. 38	3753198	GCAGGTGGTGATTGAAATTATTCCA
SEQ ID NO. 39	2902908	CCCCTGGAGCACTATCTTTTCACAG
SEQ ID NO. 40	3142559	CATGCTTAAGTTTTAGTGAACCTGA
SEQ ID NO. 41	3626882	TTAGCTTTTCCTGCATATCTGCTAG
SEQ ID NO. 42	3433222	GGAAAGGAGACTTTCCAGAGCTGCA
SEQ ID NO. 43	2991121	AATCAGTAGTCACCTGGACTGGATA
SEQ ID NO. 44	2959165	AGGATTGGTAGCCCTAAGTTTCCAG
SEQ ID NO. 45	3546559	ATGGCTCAGAGCAGACTTGAGCAGG
SEQ ID NO. 46	3020668	GACTCTCTTGGAGCAATAAACAAAA
SEQ ID NO. 47	2397811	TGAAATGCTCGATGATCTTCTCTTC
SEQ ID NO. 48	3903427	CAACTGCTGCACTGGTATTTACAACTA
SEQ ID NO. 49	2595867	TCTGTAAAGCAAAGGCCATGTCTTA
SEQ ID NO. 50	3068088	TATGGATGTGAAAGATGATACAGAG
SEQ ID NO. 51	3487363	TTCTGAGGAATAGTAAAGCTGGAAA

CLAIMS

What is claimed is:

1. A method of diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy in a subject having cancer, comprising:

(a) assaying an expression level in a sample from the subject for a plurality of targets, wherein the plurality of targets comprises two or more targets selected from Table 2 or SEQ ID NOs:1-51; and

(b) diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy in a subject having cancer based on the expression levels of the plurality of targets.

2. The method of claim 1, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

3. The method of claim 1, wherein the cancer is a bladder cancer.

4. The method of claim 1, wherein the plurality of targets comprises a coding target.

5. The method of claim 4, wherein the coding target is an exonic sequence.

6. The method of claim 1, wherein the plurality of targets comprises a non-coding target.

7. The method of claim 6, wherein the non-coding target comprises an intronic sequence or partially overlaps an intronic sequence.

8. The method of claim 6, wherein the non-coding target comprises a sequence within the UTR or partially overlaps with a UTR sequence.

9. The method of any claim 1, wherein the target comprises a nucleic acid sequence.

10. The method of claim 9, wherein the nucleic acid sequence is a DNA sequence.

11. The method of claim 9, wherein the nucleic acid sequence is an RNA sequence.

12. The method of claim 1, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

13. The method of claim 1, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

14. The method of claim 1, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

15. The method of claim 1, wherein the plurality of targets comprises SEQ ID NOs: 1-51.

16. The method of claim 1, wherein the diagnosing, prognosing, determining progression of cancer, predicting therapeutic regimen or predicting benefit from therapy includes assessing the risk of cancer recurrence.

17. The method of claim 1, further comprising sequencing the plurality of targets.

18. The method of claim 1, further comprising hybridizing the plurality of targets to a solid support.

19. The method of claim 18, wherein the solid support is a bead or array.

20. A probe set for assessing a cancer status of a subject comprising a plurality of probes, wherein the probes in the set are capable of detecting an expression level of one or more targets selected from Table 2 or SEQ ID NOs:1-51, wherein the expression level determines the cancer status of the subject with at least 40% specificity.

21. The probe set of claim 20, wherein the one or more targets comprises SEQ ID NOs: 1-51.

22. The probe set of claim 20, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

23. The probe set of claim 20, wherein the cancer is a bladder cancer.

24. The probe set of claim 20, wherein the probe set further comprises a probe capable of detecting an expression level of at least one coding target.

25. The probe set of claim 24, wherein the coding target is an exonic sequence.

26. The probe set of claim 20, wherein the probe set further comprises a probe capable of detecting an expression level of at least one non-coding target.

27. The probe set of claim 26, wherein the non-coding target is an intronic sequence or partially overlaps with an intronic sequence.

28. The probe set of claim 26, wherein the non-coding target is a UTR sequence or partially overlaps with a UTR sequence.

29. The probe set of claim 20, wherein assessing the cancer status includes assessing lymphnode metastasis risk.

30. The probe set of claim 20, wherein the target is a nucleic acid sequence.

31. The probe set of claim 30, wherein the nucleic acid sequence is a DNA sequence.

32. The probe set of claim 30, wherein the nucleic acid sequence is an RNA sequence.

33. The probe set of claim 20, wherein the probes are between about 15 nucleotides and about 500 nucleotides in length.

34. The probe set of claim 20, wherein the probes are at least 15 nucleotides in length.

35. The probe set of claim 20, wherein the probes are at least 25 nucleotides in length.

36. The probe set of claim 20, wherein the non-coding target is a non-coding RNA transcript and the non-coding RNA transcript is non-polyadenylated.

37. A system for analyzing a cancer, comprising:

(a) a probe set comprising a plurality of target sequences, wherein

(i) the plurality of target sequences hybridizes to one or more targets selected from Table 2 or SEQ ID NOs:1-51; or

(ii) the plurality of target sequences comprises one or more target sequences selected from Table 2 or SEQ ID NOs:1-51; and

(b) a computer model or algorithm for analyzing an expression level and/or expression profile of the target hybridized to the probe in a sample from a subject suffering from a cancer.

38. The system of claim 37, wherein the plurality of target sequences comprises SEQ ID NOs: 1-51

39. The system of claim 37, further comprising a label that specifically binds to the target, the probe, or a combination thereof.

40. The system of claim 37, wherein the plurality of target sequences comprises at least 5 target sequences selected from Table 2 or SEQ ID NOs:1-51.

41. The system of claim 37, wherein the plurality of target sequences comprises at least 10 target sequences selected from Table 2 or SEQ ID NOs:1-51.

42. The system of claim 37, wherein the plurality of target sequences comprises 51 target sequences selected from Table 2 or SEQ ID NOs:1-51.

43. The system of claim 37, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

44. A method of analyzing a cancer in an individual in need thereof, comprising:

(a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51; and

(b) comparing the expression profile from the sample to an expression profile of a control or standard.

45. The method of claim 44, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

46. The method of claim 44, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

47. The method of claim 44, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

48. The method of claim 44, wherein the plurality of targets comprises SEQ ID NOs: 1-51.

49. The method of claim 44, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

50. The method of claim 44, further comprising providing diagnostic or prognostic information to the individual about the cancer based on the comparison.

51. The method of claim 44, further comprising diagnosing the individual with a cancer if the expression profile of the sample (a) deviates from the control or standard from a healthy individual or population of healthy individuals, or (b) matches the control or standard from an individual or population of individuals who have or have had the cancer.

52. The method of claim 44, further comprising predicting the susceptibility of the individual for developing a cancer based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer.

53. The method of claim 44, further comprising prescribing a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer.

54. The method of claim 44, further comprising altering a treatment regimen prescribed or administered to the individual based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer.

55. The method of claim 44, further comprising predicting the individual's response to a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer.

56. The method of claim 55, wherein the deviation is the expression level of one or more targets from the sample is greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals.

57. The method of claim 55, wherein the deviation is the expression level of one or more targets from the sample is at least about 30% greater than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals.

58. The method of claim 55, wherein the deviation is the expression level of one or more targets from the sample is less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals.

59. The method of claim 55, wherein the deviation is the expression level of one or more targets from the sample is at least about 30% less than the expression level of one or more targets from a control or standard derived from a healthy individual or population of healthy individuals.

60. The method of claim 44, further comprising using a machine to isolate the target or the probe from the sample.

61. The method of claim 44, further comprising contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof.

62. The method of claim 44, further comprising amplifying the target, the probe, or any combination thereof.

63. The method of claim 44, further comprising sequencing the target, the probe, or any combination thereof.

64. A method of diagnosing cancer in an individual in need thereof, comprising:

(a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51;

(b) comparing the expression profile from the sample to an expression profile of a control or standard; and

(c) diagnosing a cancer in the individual if the expression profile of the sample (i) deviates from the control or standard from a healthy individual or population of healthy individuals, or (ii) matches the control or standard from an individual or population of individuals who have or have had the cancer.

65. The method of claim 64, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

66. The method of claim 64, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

67. The method of claim 64, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

68. The method of claim 64, wherein the plurality of targets comprises SEQ ID NOs: 1-51

69. The method of claim 64, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid

cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

70. The method of claim 64, further comprising a software module executed by a computer-processing device to compare the expression profiles.

71. The method of claim 64, further comprising using a machine to isolate the target or the probe from the sample.

72. The method of claim 64, further comprising contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof.

73. The method of claim 64, further comprising amplifying the target, the probe, or any combination thereof.

74. The method of claim 64, further comprising sequencing the target, the probe, or any combination thereof.

75. A method of predicting whether an individual is susceptible to developing a cancer, comprising:

(a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51;

(b) comparing the expression profile from the sample to an expression profile of a control or standard; and

(c) predicting the susceptibility of the individual for developing a cancer based on (i) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (ii) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer.

76. The method of claim 75, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

77. The method of claim 75, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

78. The method of claim 75, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

79. The method of claim 75, wherein the plurality of targets comprises SEQ ID NOs:1-51.

80. The method of claim 75, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

81. The method of claim 75, further comprising a software module executed by a computer-processing device to compare the expression profiles.

82. The method of claim 75, further comprising using a machine to isolate the target or the probe from the sample.

83. The method of claim 75, further comprising contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof.

84. The method of claim 75, further comprising amplifying the target, the probe, or any combination thereof.

85. The method of claim 75, further comprising sequencing the target, the probe, or any combination thereof.

86. A method of predicting an individual's response to a treatment regimen for a cancer, comprising:

(a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51;

(b) comparing the expression profile from the sample to an expression profile of a control or standard; and

(c) predicting the individual's response to a treatment regimen based on (a) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (b) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer.

87. The method of claim 86, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

88. The method of claim 86, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

89. The method of claim 86, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

90. The method of claim 86, wherein the plurality of targets comprises SEQ ID NOs:1-51.

91. The method of claim 86, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

92. The method of claim 86, further comprising a software module executed by a computer-processing device to compare the expression profiles.

93. The method of claim 86, further comprising using a machine to isolate the target or the probe from the sample.

94. The method of claim 86, further comprising contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof.

95. The method of claim 86, further comprising amplifying the target, the probe, or any combination thereof.

96. The method of claim 86, further comprising sequencing the target, the probe, or any combination thereof.

97. A method of prescribing a treatment regimen for a cancer to an individual in need thereof, comprising:

(a) obtaining an expression profile from a sample obtained from the individual, wherein the expression profile comprises one or more targets selected from Table 2 or SEQ ID NOs:1-51;

(b) comparing the expression profile from the sample to an expression profile of a control or standard; and

(c) prescribing a treatment regimen based on (i) the deviation of the expression profile of the sample from a control or standard derived from a healthy individual or population of healthy individuals, or (ii) the similarity of the expression profiles of the sample and a control or standard derived from an individual or population of individuals who have or have had the cancer.

98. The method of claim 97, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

99. The method of claim 97, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

100. The method of claim 97, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

101. The method of claim 97, wherein the plurality of targets comprises SEQ ID NOs:1-51.

102. The method of claim 97, wherein the cancer is selected from the group consisting of bladder cancer, skin cancer, lung cancer, colon cancer, pancreatic cancer, prostate cancer, liver cancer, thyroid cancer, ovarian cancer, uterine cancer, breast cancer, cervical cancer, kidney cancer, epithelial carcinoma, squamous carcinoma, basal cell carcinoma, melanoma, papilloma, and adenomas.

103. The method of claim 97, further comprising a software module executed by a computer-processing device to compare the expression profiles.

104. The method of claim 97, further comprising using a machine to isolate the target or the probe from the sample.

105. The method of claim 97, further comprising contacting the sample with a label that specifically binds to the target, the probe, or a combination thereof.

106. The method of claim 97, further comprising amplifying the target, the probe, or any combination thereof.

107. The method of claim 97, further comprising sequencing the target, the probe, or any combination thereof.

108. The method of claim 97, further comprising converting the expression levels of the target sequences into a likelihood score that indicates the probability that a biological sample is from a patient who will exhibit no evidence of disease, who will exhibit systemic cancer, or who will exhibit cancer recurrence.

109. The method of claim 97, wherein the target sequences are differentially expressed the cancer.

110. The method of claim 109, wherein the differential expression is dependent on aggressiveness.

111. The method of claim 97, wherein the expression profile is determined by a method selected from the group consisting of RT-PCR, Northern blotting, ligase chain reaction, array hybridization, and a combination thereof.

112. A kit for analyzing a cancer, comprising:

(a) a probe set comprising a plurality of target sequences, wherein the plurality of target sequences comprises at least one target sequence listed in Table 2 or SEQ ID NOs:1-51; and

(b) a computer model or algorithm for analyzing an expression level and/or expression profile of the target sequences in a sample.

113. The kit of claim 112, further comprising a computer model or algorithm for correlating the expression level or expression profile with disease state or outcome.

114. The kit of claim 112, further comprising a computer model or algorithm for designating a treatment modality for the individual.

115. The kit of claim 112, further comprising a computer model or algorithm for normalizing expression level or expression profile of the target sequences.

116. The kit of claim 112, further comprising a computer model or algorithm comprising a robust multichip average (RMA), frozen robust multichip average (fRMA), Single Channel Array Normalization (SCAN), ComBat (Combining Batches of gene expression), probe logarithmic intensity error estimation (PLIER), non-linear fit (NLFIT) quantile-based, nonlinear normalization, or a combination thereof.

117. The kit of claim 112, wherein the cancer is a bladder cancer.

118. The kit of claim 112, wherein the plurality of targets comprises SEQ ID NOs:1-51.

119. A method of diagnosing, prognosing, determining, predicting a therapeutic regimen or predicting benefit from therapy for metastatic bladder cancer, comprising:

(a) assaying an expression level in a sample from the subject for a plurality of targets, wherein the plurality of targets comprises two or more targets selected from Table 2 or SEQ ID NOs:1-51; and

(b) diagnosing, prognosing, determining progression of cancer, predicting a therapeutic regimen or predicting benefit from therapy in a subject having cancer based on the expression levels of the plurality of targets.

120. The method of claim 119, wherein the metastatic bladder cancer has metastasized to at least one lymph node.

121. The method of claim 119, wherein the plurality of targets comprises a coding target.

122. The method of claim 121, wherein the coding target is an exonic sequence.

123. The method of claim 119, wherein the plurality of targets comprises a non-coding target.

124. The method of claim 123, wherein the non-coding target comprises an intronic sequence or partially overlaps an intronic sequence.

125. The method of claim 123, wherein the non-coding target comprises a sequence within the UTR or partially overlaps with a UTR sequence.

126. The method of any claim 119, wherein the target comprises a nucleic acid sequence.

127. The method of claim 126, wherein the nucleic acid sequence is a DNA sequence.

128. The method of claim 126, wherein the nucleic acid sequence is an RNA sequence.

129. The method of claim 119, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

130. The method of claim 119, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

131. The method of claim 119, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

132. The method of claim 119, wherein the plurality of targets comprises SEQ ID NOs: 1-51.

133. A method of diagnosing and treating metastatic bladder cancer in a subject, said method comprising: (a) obtaining a sample from a subject, wherein the sample comprises a plurality of differentially expressed targets; (b) processing the sample to isolate or enrich the sample for the targets or cells containing the targets; and (c) detecting the level of expression of one or more targets in said sample by sequencing, nucleic acid hybridization or nucleic acid amplification, (d) diagnosing the subject with metastatic bladder cancer when an increased level of expression of said one or more targets in said sample relative to the level in normal bladder cells is detected;

and (e) administering an effective amount of a chemotherapeutic agent or radiation to the diagnosed subject

134. The method of claim 133, wherein the metastatic bladder cancer has metastasized to at least one lymph node.

135. The method of claim 133, wherein the plurality of targets comprises a coding target.

136. The method of claim 135, wherein the coding target is an exonic sequence.

137. The method of claim 133, wherein the plurality of targets comprises a non-coding target.

138. The method of claim 137, wherein the non-coding target comprises an intronic sequence or partially overlaps an intronic sequence.

139. The method of claim 137, wherein the non-coding target comprises a sequence within the UTR or partially overlaps with a UTR sequence.

140. The method of any claim 133, wherein the target comprises a nucleic acid sequence.

141. The method of claim 140, wherein the nucleic acid sequence is a DNA sequence.

142. The method of claim 140, wherein the nucleic acid sequence is an RNA sequence.

143. The method of claim 133, wherein the plurality of targets comprises at least 5 targets selected from Table 2 or SEQ ID NOs:1-51.

144. The method of claim 133, wherein the plurality of targets comprises at least 10 targets selected from Table 2 or SEQ ID NOs:1-51.

145. The method of claim 133, wherein the plurality of targets comprises 51 targets selected from Table 2 or SEQ ID NOs:1-51.

FIGURE 1

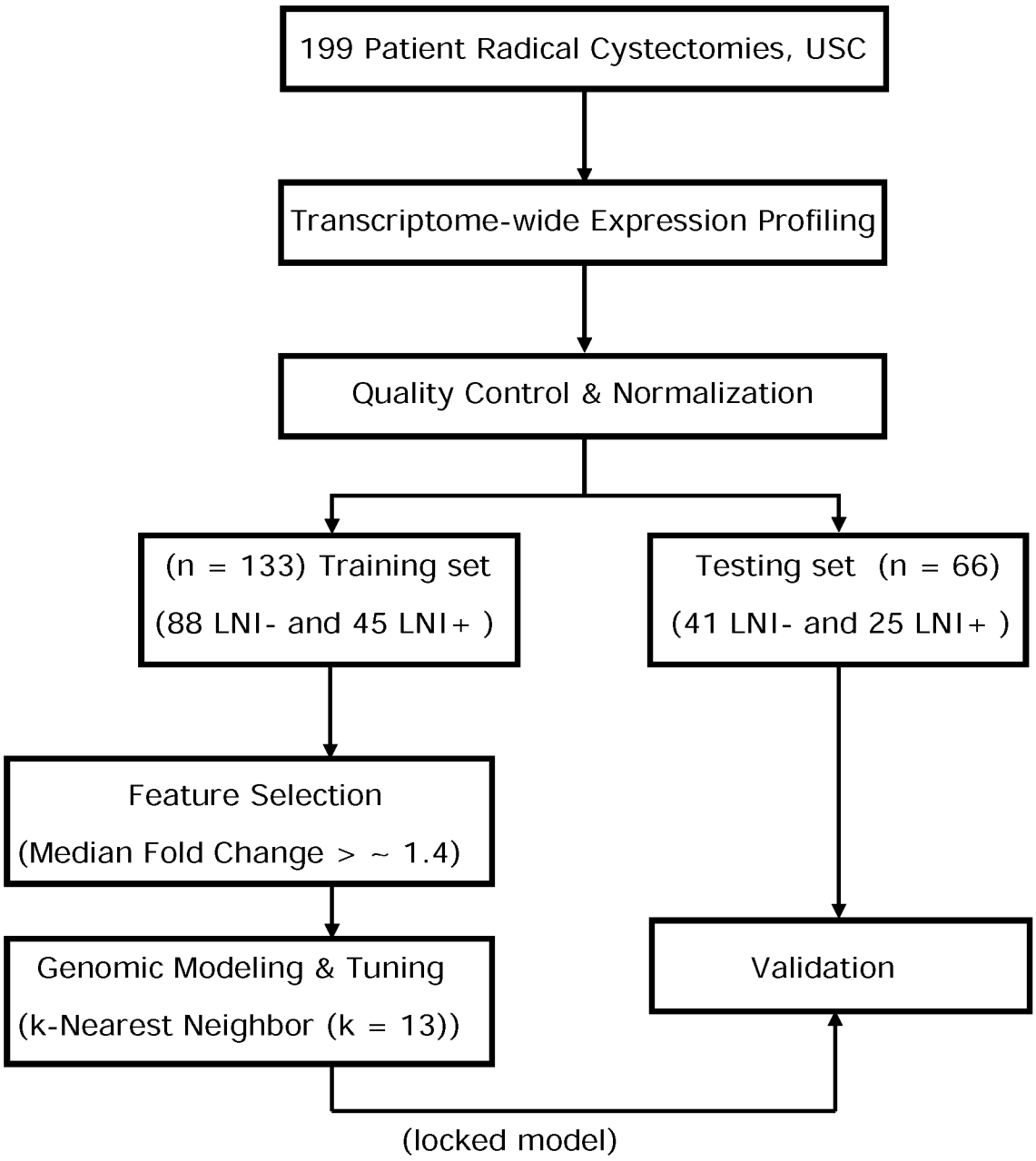
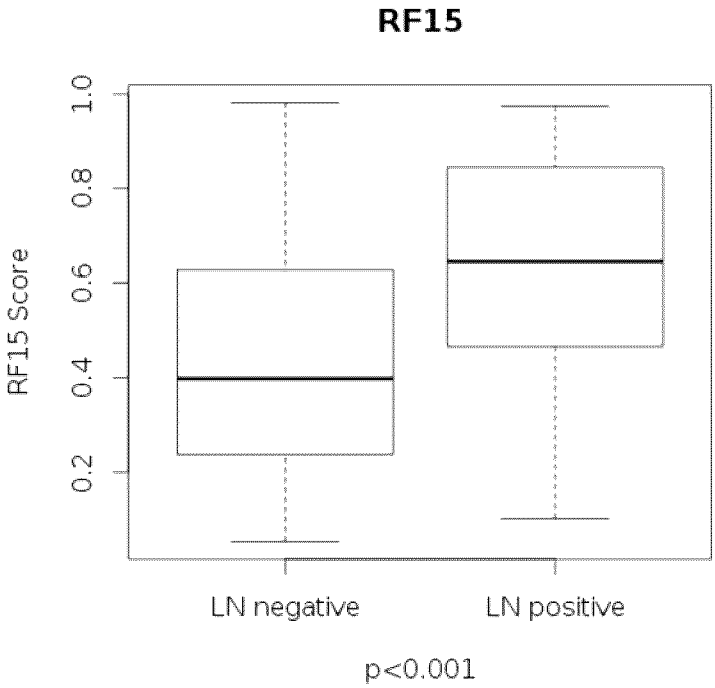

199 Patient Radical Cystectomies, USC
Transcriptome-wide Expression Profiling
Quality Control & Normalization
(n = 133) Training set
(88 LNI- and 45 LNI+)
Testing set (n = 66)
(41 LNI- and 25 LNI+)
Feature Selection
(Median Fold Change > ~ 1.4)
Genomic Modeling & Tuning
(k-Nearest Neighbor (k = 13))
Validation
(locked model)

FIGURE 2


RF15
RF15 Score
0.2
0.4
0.6
0.8
1.0
LN negative
LN positive
p<0.001

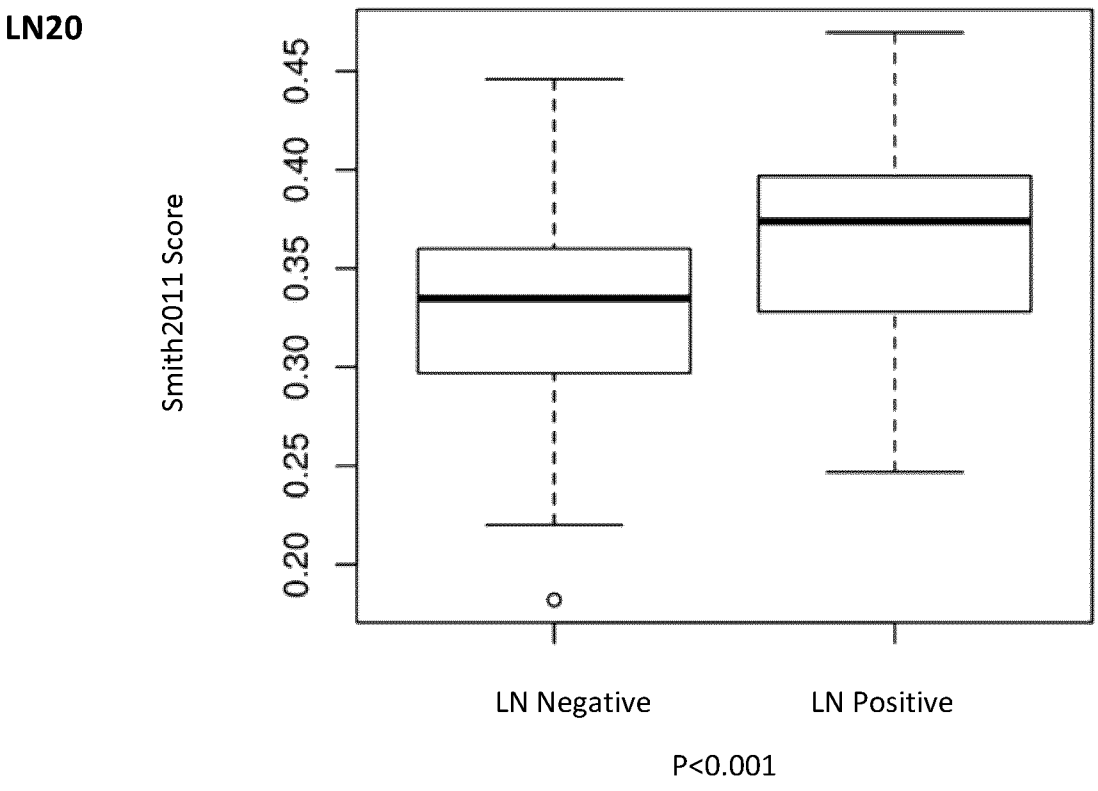

LN20
Smith2011 Score
0.20
0.25
0.30
0.35
0.40
0.45
LN Negative
LN Positive
P<0.001

FIGURE 2 (continued)

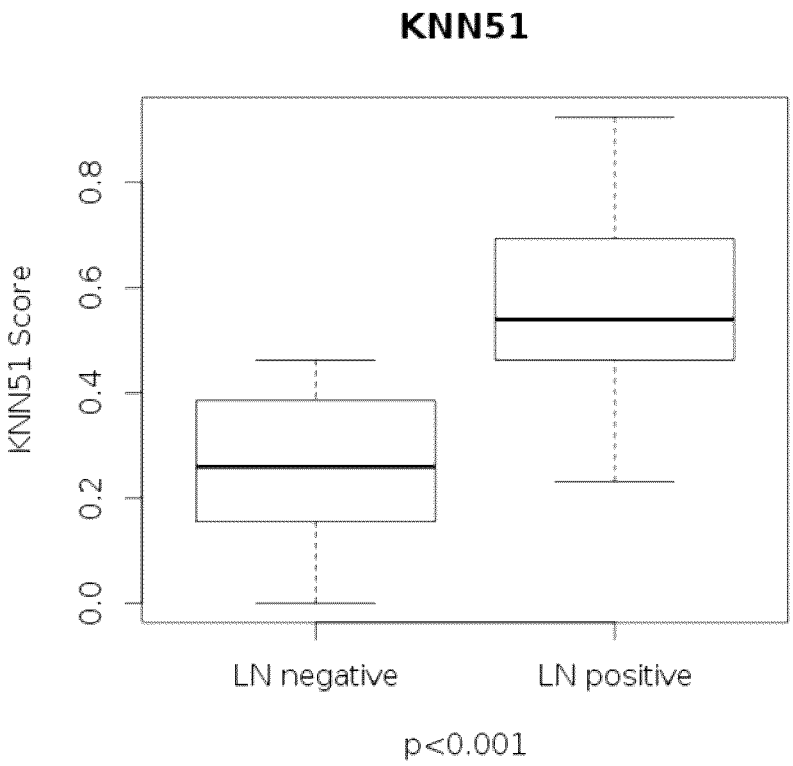


FIGURE 3

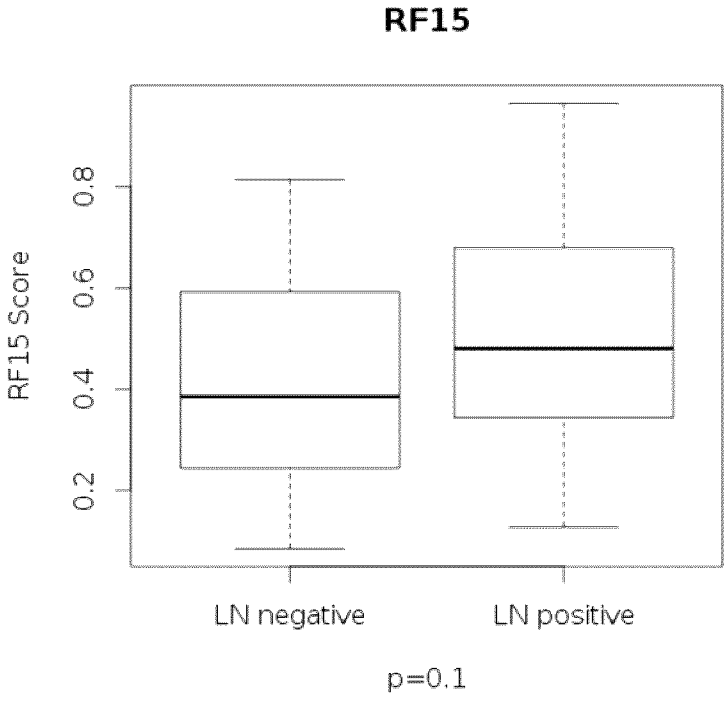
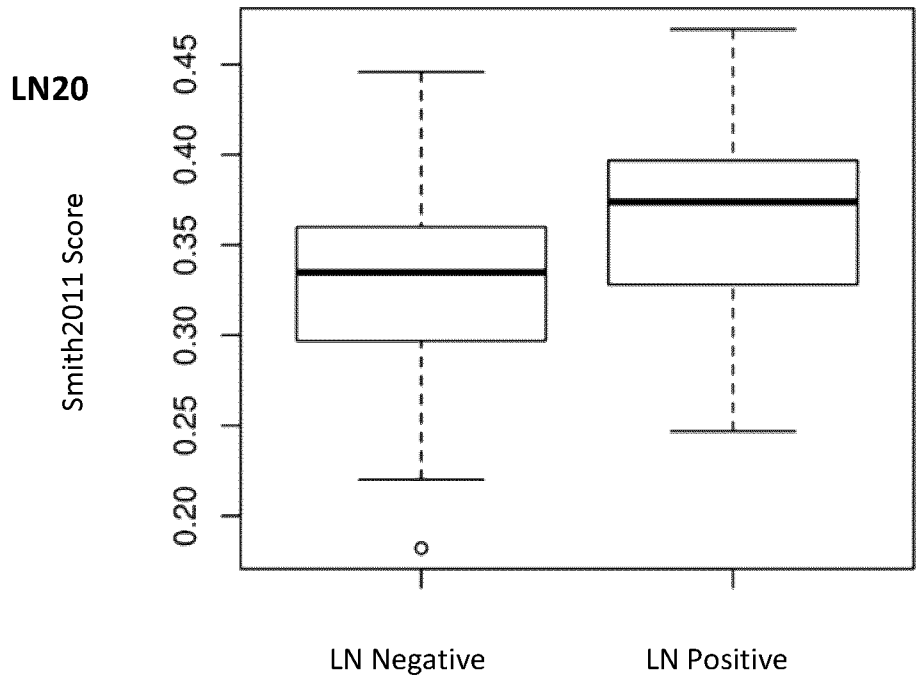


FIGURE 3 (continued)



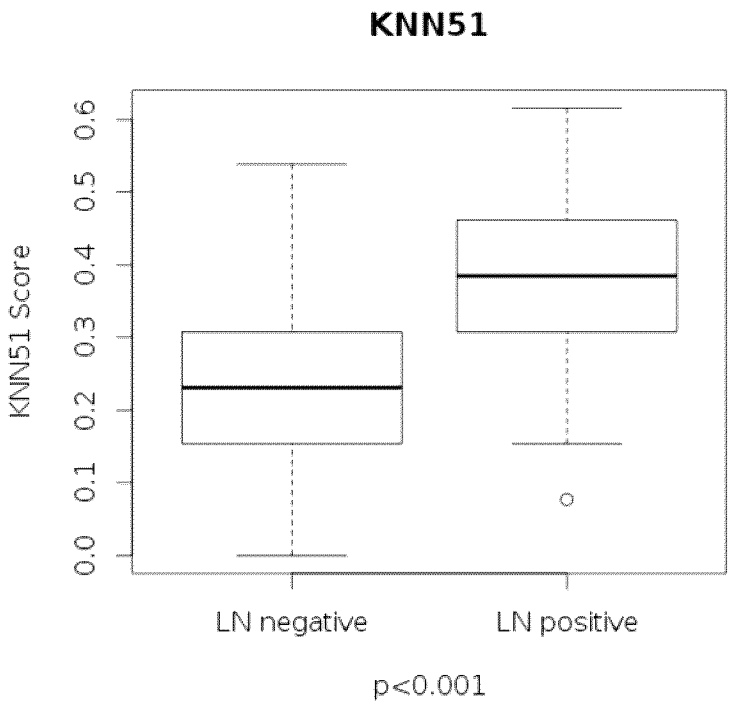


FIGURE 4

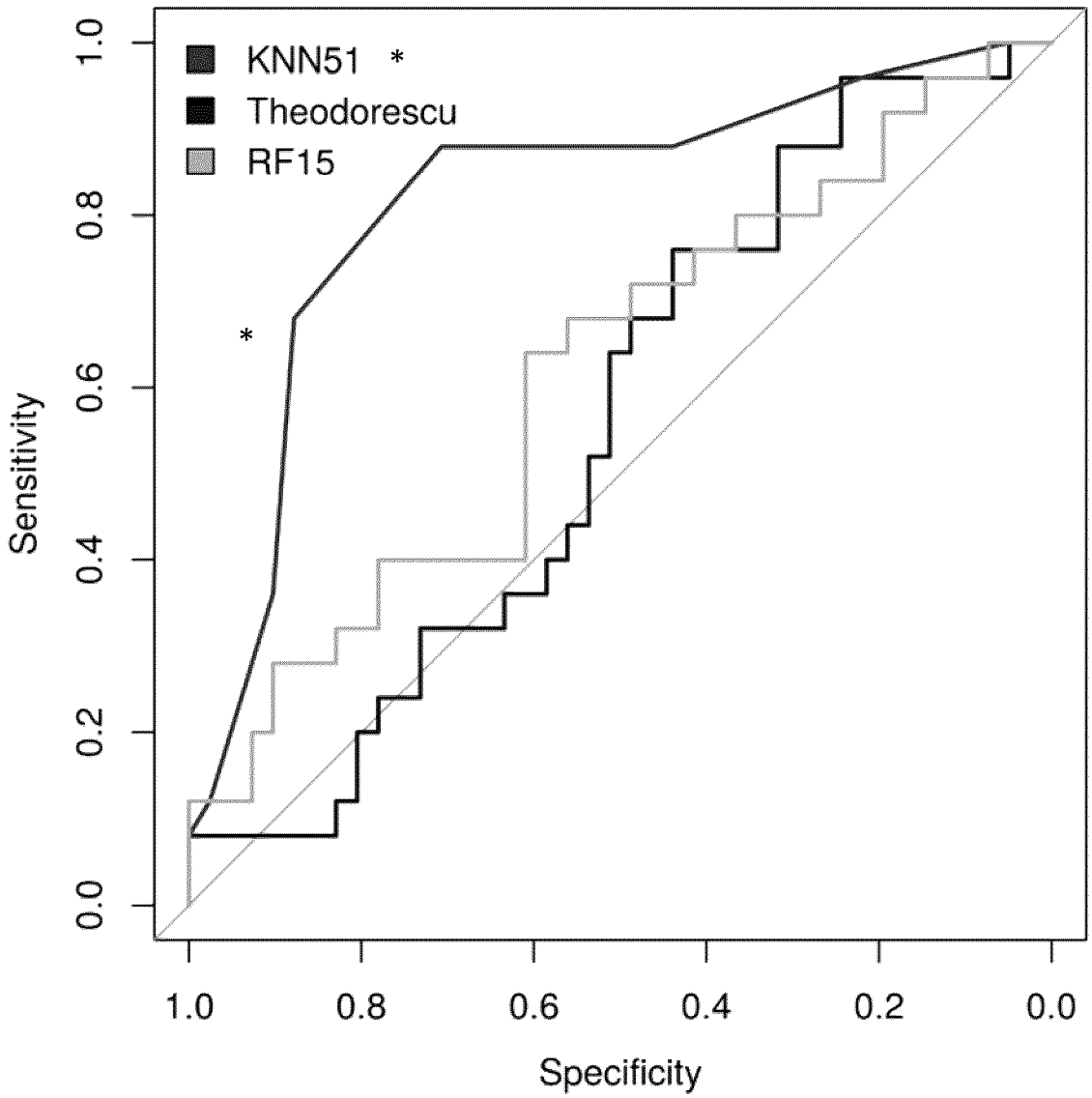

KNN51 *
Theodorescu
RF15
*
Sensitivity
1.0
0.8
0.6
0.4
0.2
0.0
1.0
0.8
0.6
0.4
0.2
0.0
Specificity

FIGURE 5A

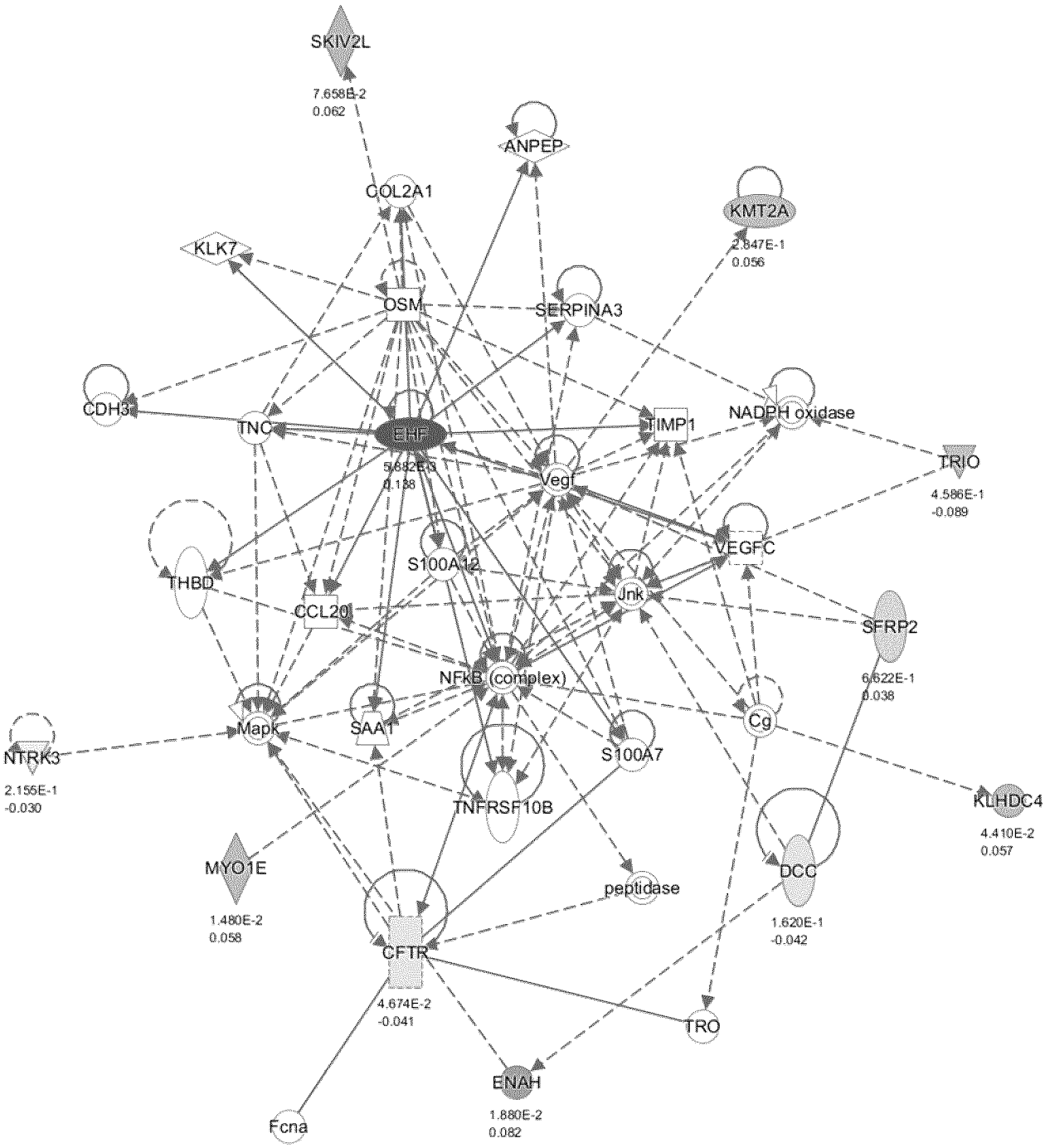
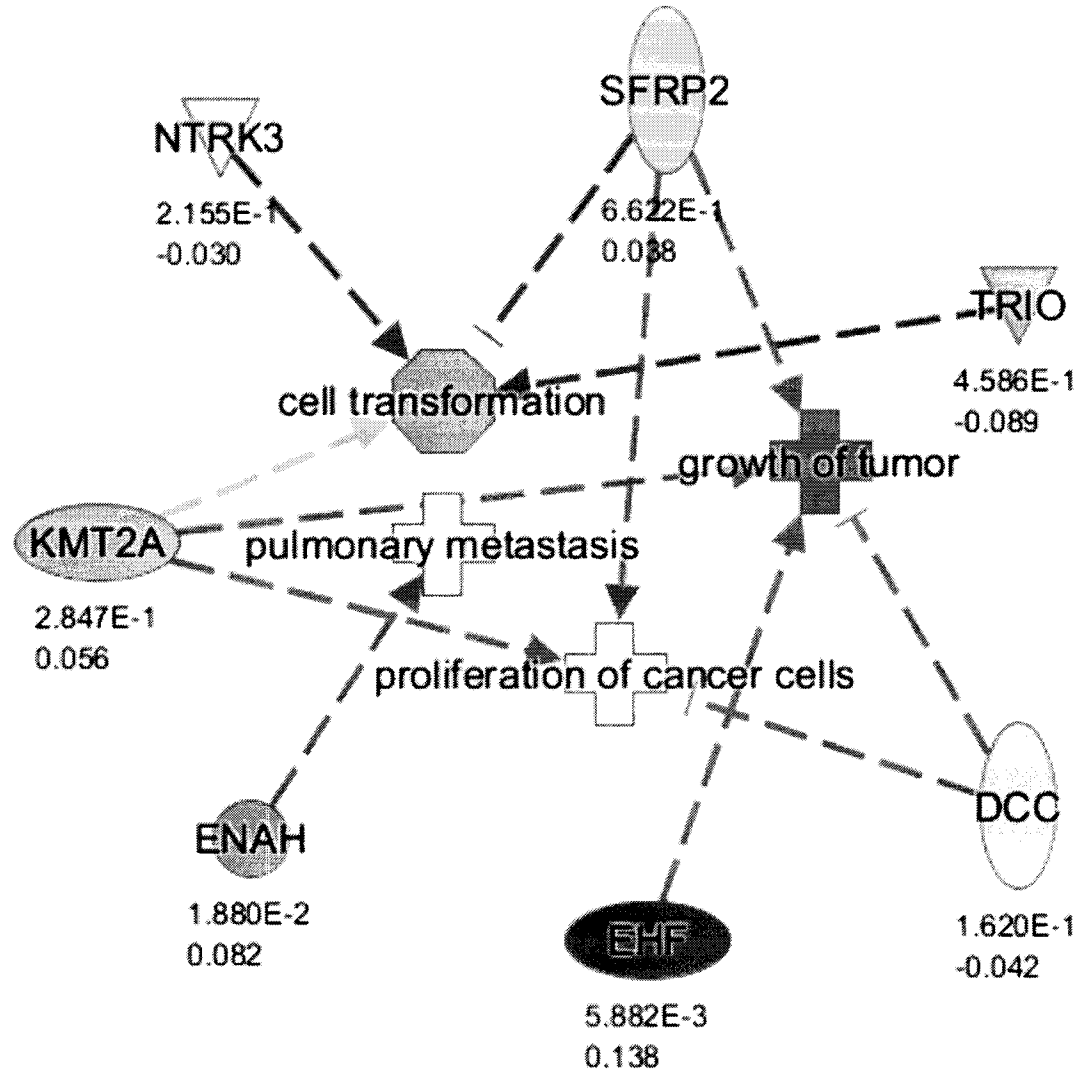

SKIV2L
7.658E-2
0.062
ANPEP
COL2A1
KMT2A
2.847E-1
0.056
KLK7
OSM
SERPINA3
CDH3
TNC
EHF
5.682E-3
0.138
TIMP1
NADPH oxidase
TRIO
4.586E-1
-0.089
Vegf
VEGFC
S100A12
THBD
Jnk
CCL20
SFRP2
6.622E-1
0.038
NFkB (complex)
Cg
MapK
SAA1
S100A7
NTRK3
2.155E-1
-0.030
TNFRSF10B
KLHDC4
4.410E-2
0.057
MYO1E
1.480E-2
0.058
peptidase
DCC
1.620E-1
-0.042
CFTR
4.674E-2
-0.041
TRO
ENAH
1.880E-2
0.082
Fcna

FIGURE 5B


SFRP2
NTRK3
2.155E-1
-0.030
6.622E-1
0.038
TRIO
4.586E-1
-0.089
cell transformation
growth of tumor
KMT2A
pulmonary metastasis
2.847E-1
0.056
proliferation of cancer cells
DCC
ENAH
1.880E-2
0.082
EHF
5.882E-3
0.138
1.620E-1
-0.042
Upregulated genes
Downregulated genes
Transcription Regulator
Transmembrane Receptor
Kinase
Stimulation
Inhibition

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2017/050656

A. CLASSIFICATION OF SUBJECT MATTER
IPC: ***C40B 40/06*** (2006.01) , ***C07H 21/04*** (2006.01) , ***C12M 1/34*** (2006.01) , ***C12Q 1/68*** (2006.01) , ***C40B 30/04*** (2006.01) , ***G01N 33/48*** (2006.01) , **G06F 19/20** (2011.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Keywords used across the whole IPC.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)

PubMED, Questel Orbit, Scopus, Canadian Patent Database, Google Scholar: ((((((Rhabdoviruses and (oncolytic or vesicular stomatitis virus or Maraba virus)) and pseudotype) and (glycoprotein and (arenavirus or lymphocytic choriomeningtitis virus or Lassa virus or Junin virus))) and (complement inhibitor or C3 inhibitor or C5a inhibitor or C5aR inhibitor or C3aR inhibitor or factor D inhibitor or factor B inhibitor or C4 inhibitor or C1q inhibitor)) and (tumor or cancer or metastasis)) or (MG1 or VSVd51))

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SEILER R, LAM LL, ERHO N, TAKHAR M, MITRA AP, BUERKI C, DAVICIONI E, SKINNER EC, DANESHMAND S, BLACK PC, "*Prediction of Lymph Node Metastasis in Patients with Bladder Cancer Using Whole Transcriptome Gene Expression Signatures*". The Journal of Urology, available online 19 April 2016 (19-04-2016), Vol. 196 (4), pp. 1036 - 1041, [online] [retrieved on 10 July 2017 (10-07-2017)]. Retrieved from the Internet: <https://linkinghub.elsevier.com/retrieve/pii/S0022-5347(16)30204-X>	1 - 145

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent but published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report 26 July 2017 (26-07-2017)
Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 819-953-2476	Authorized officer Antonio Candeliere (819) 639-7769

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2017/050656

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of the first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☑ Claim Nos.: 133 – 145(partly)
because they relate to subject matter not required to be searched by this Authority, namely:

Claims 133 - 145 (partly) are directed to a method for treatment of the human or animal body by surgery or therapy, which the International Searching Authority is not required to search under PCT Rule 39.1(iv). However, this Authority has carried out a search based on the alleged effect or purpose/use of the product defined in claims 133 - 145 (partly).

2. ☐ Claim Nos.: 1 – 145 (partly)
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

The International Searching Authority has not carried out a complete search for claims 1 - 145, under Article 17(2)(b) of the PCT. The description, claims, and drawings fail to comply with the prescribed requirements to such an extent that a meaningful search could not be carried out. Claims 1 - 145 so lack support that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been established for the parts of the application which appear to be fully supported, namely a 51-marker genome signature (KNN51) for stratifying risk of lymph node metastasis in patients who have undergone radical cystectomy for muscle invasive bladder cancer.

3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claim Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claim Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.