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(54) Title: PREDICTING CANCER CELL EXPRESSION BY ANALYZING METHYLATION STATUS OF CTDNA

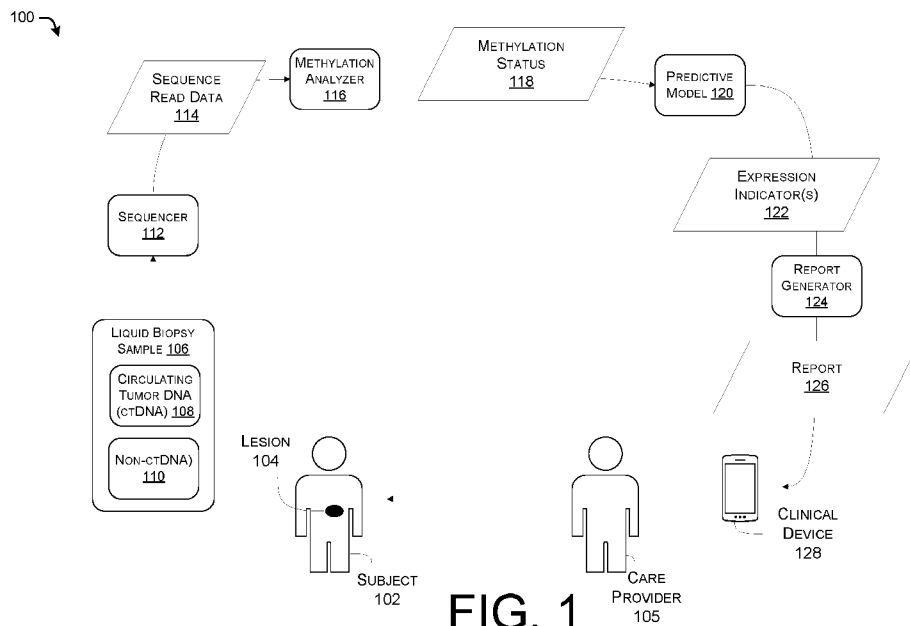


FIG. 1

(57) Abstract: Techniques for predicting expression of cancer cells based on the methylation status of a region of DNA are described. An example method includes identifying data indicative of cell free DNA (cfDNA) from a sample derived from a subject. A methylation status of one or more regions of circulating tumor DNA (ctDNA) among the cfDNA is identified by analyzing the data. The example method further includes inputting input data including the methylation status of the one or more regions into at least one model configured to generate a probability that cancer cells of the subject express a predetermined sequence. In addition, the example method includes generating a report based on the probability that the cancer cells of the subject express the predetermined sequence.



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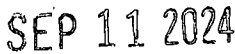
B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 See Search History document
 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 See Search History document
 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2021/0230684 A1 (FREENOME HOLDINGS, INC.) 29 July 2021 (29.07.2021); abstract; para [0006], [0017], [0080], [0086], [0091], [0115], [0117]-[0118], [0126], [0134], [0139], [0143], [0148], [0156]-[0157], [0204], [0227], [0229]-[0230], [0234]-[0235], [0237]-[0238], [0241], [0255], [0296], [0345]; claim 1, 10, 17	1-14, 16-20 ----- 15
Y	US 2023/0057154 A1 (GRAIL, LLC) 23 February 2023 (23.02.2023); abstract; para [0143]	15

Further documents are listed in the continuation of Box C. See patent family annex.

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