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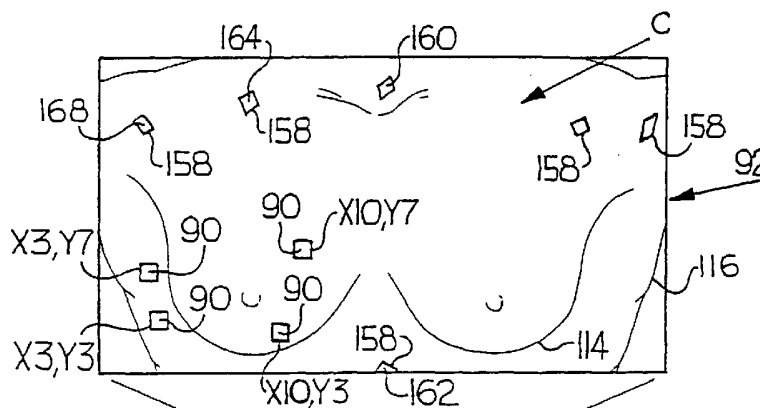
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(54) Title: SYSTEM AND METHOD FOR IDENTIFYING AND CLASSIFYING DYNAMIC THERMODYNAMIC PROCESSES IN MAMMALS AND DISCRIMINATING BETWEEN AND AMONG SUCH PROCESSES



(57) Abstract: An infrared imaging camera (4) acquires a plurality of frames (94) of infrared radiation from a patient (P) positioned in a field-of-view (92) of the camera (4). Each frame (94) is acquired during a corresponding frame sample interval and each frame (94) corresponds to the infrared radiation acquired from an array of optical elements (90) in the field-of-view (92) during its frame sample interval. Plural integrals are determined from infrared radiation received from the array of optical elements (90), with each integral corresponding to the infrared radiation received from the same optical element (90) in at least two frames (94). Each integral is mapped to a color or a shade of gray and the color or shade of gray of each integral is mapped to a position in an image corresponding to the position of the corresponding optical element (90) in the field-of-view (92). The camera (4) can be used for early detection of neoplastic disease process, detection of angiogenesis and/or identification of treatment sites for pain management therapeutic modalities.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/14116

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 5/00

US CL : 250/338.1; 600/431

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)

U.S. : 250/338.1, 339.01, 339.04, 339.11, 339.14, 339.15, 341.8, 330, 332; 600/431, 310, 473-477

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,023,637 A (LIU et al.) 08 FEBRUARY 2000 (08.02.2000), see entire document.	1-21
Y	US 6,241,672 B1 (HOCHMAN et al.) 05 JUNE 2001 (05.06.2001), see entire document.	1-21
Y,P	US 6,671,540 B1 (HOCHMAN) 30 DECEMBER 2003 (30.12.2003), see entire document.	1-21
A	US 5,803,082 A (STAPLETON et al.) 08 SEPTEMBER 1998 (08.09.1998), see entire document.	1-21
A	US 5,603,328 A (ZUCKER et al.) 18 FEBRUARY 1997 (18.02.1997), see entire document.	1-21



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
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"P"	document published prior to the international filing date but later than the priority date claimed		

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Continuation of B. FIELDS SEARCHED Item 3:
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Search terms: infrared camera, imaging, mapping, optical elements, frame, sample interval, color, shade of gray