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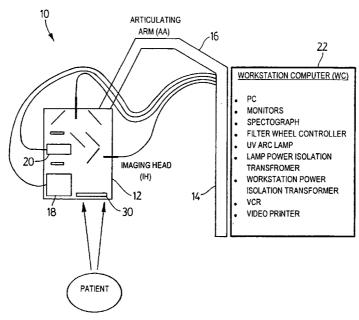
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(54) Title: MULTI-SPECTRAL FLUORESCENCE IMAGING AND SPECTROSCOPY DEVICE



(57) Abstract: The present invention provides a multi-spectral optical, open-field detection system utilizing light-induced-fluorescence imaging and point spectroscopy for use in in-situ diagnosis and treatment of diseased tissue with reduced sensitivity to changes in light source-target-detector geometry. The light excitation and detection optics share a common coaxial optical path which makes the present system very robust to changes in illumination-target-detector geometry. The apparatus may be used for the detection and localization of tumors or other pathological tissues both prior to treatment and for the detection of residual diseases during or after surgery or other treatments to remove or destroy the diseased tissue.



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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) $IPC \ 7 \ A61B$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

Category °	Citation of document, with indication, where appropriate, of the relevant passages	1,2,4, 11,12, 30, 34–36,39	
X	US 5 833 617 A (FUJI) 10 November 1998 (1998-11-10) cited in the application		
Υ	column 31, line 41 -column 34, line 20	20-22, 24-26,29	
Y	DE 198 19 516 A (ASAHI) 12 November 1998 (1998-11-12) the whole document	20-22, 24-26,29	
Α	US 5 999 844 A (ACCUMED) 7 December 1999 (1999-12-07) cited in the application column 3, line 59 -column 10, line 3	1-4,12, 15,16, 30-35, 37,38	
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Special categories of cited documents: A* document defining the general state of the art which is not considered to be of particular relevance E* earlier document but published on or after the international filing date 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) 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	 '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 "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 "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. "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Lemercier, D

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