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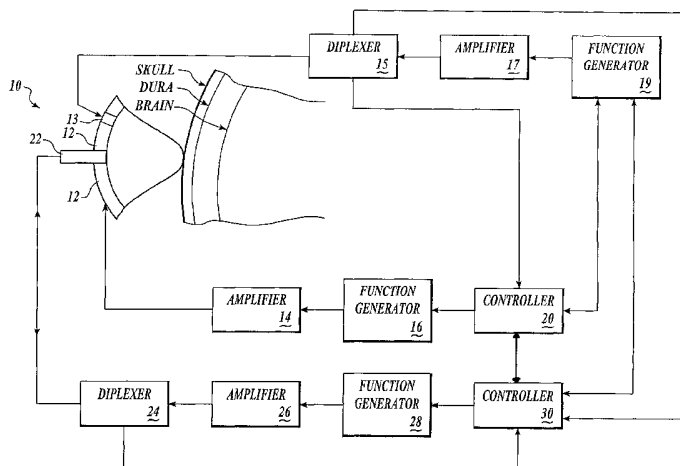
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(54) Title: SYSTEMS AND METHODS FOR MAKING NON-INVASIVE PHYSIOLOGICAL ASSESSMENTS



(57) Abstract: Systems and methods for assessment of tissue properties, noninvasively, by acquiring data relating to at least one aspect of intrinsic and/or induced tissue displacement, or associated biological responses, are provided. Data relating to tissue displacement and associated biological changes may be acquired by detecting acoustic properties of tissue using ultrasound interrogation pulses, preferably in a scatter or Doppler detection mode. Based on this data, tissue properties are assessed, characterized and monitored. Specific applications for systems and methods of the present invention include non-invasive assessment and monitoring of intracranial pressure (ICP), arterial blood pressure (ABP), CNS autoregulation status, vasospasm, stroke, local edema, infection and vasculitis, as well as diagnosis and monitoring of diseases and conditions that are characterized by physical changes in tissue properties. Methods and systems for localizing physiological condition(s) and/or biological response(s), such as pain, by targeting and selectively palpating tissues using the application of acoustic radiation forces are also provided.



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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.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 8/00
US CL : 600/443

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. : 600/443, 447, 437, 444

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,110,114 A (NOCK et al) 29 August 20, see entire document.	1-48
X	US 6,042,545 A (HOSSACK et al) 28 March 2000, see entire document.	1-35

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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"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		

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