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(54) Method and apparatus for ultrasound imaging of a biopsy needle or the like during an ultrasound imaging examination of a body of biologic tissues

(57) A method and apparatus for ultrasound imaging of a biopsy needle or the like during an ultrasound imaging examination of a body of biologic tissues, including the following steps:

- a. Alternately performing one or more imaging scans with ultrasound transmit and receive parameters which are adapted for optimized imaging and visualization of the needle and one or more imaging scans with ultrasound transmit and receive parameters adapted for optimized imaging and visualization of a body comprising biological tissues or details thereof, in which the needle is inserted.

Characterized in that it includes the additional steps of

- b. Injecting contrast agents in the region to be examined before imaging;
c. Setting ultrasound transmit and receive parameters adapted for optimized imaging and visualization of the body or details thereof, wherein the needle is inserted, so that these parameters are optimized for imaging ultrasound bad reflector tissues or particulars or fluid flows within the body.

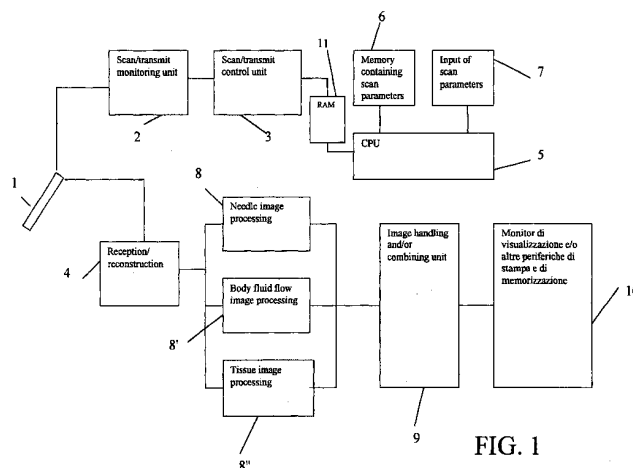


FIG. 1



European Patent Office

PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 02 01 4145 shall be considered, for the purposes of subsequent proceedings, as the European search report

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
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| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.7) |
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| | * column 6, line 30 - line 42 * --- | | |
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| | | | TECHNICAL FIELDS SEARCHED (Int.Cl.7) |
| | | | A61B |
| INCOMPLETE SEARCH | | | |
| <p>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.</p> <p>Claims searched completely :</p> <p>Claims searched incompletely :</p> <p>Claims not searched :</p> <p>1-26,38-46</p> <p>Reason for the limitation of the search:</p> <p>Article 52 (4) EPC - Method for treatment of the human or animal body by surgery</p> | | | |
| Place of search | Date of completion of the search | Examiner | |
| MUNICH | 16 December 2003 | Martelli, L | |
| CATEGORY OF CITED DOCUMENTS | | T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | |
| X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | | |

EPO FORM 1503 03.02 (P/04/07)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 01 4145

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| 专利名称(译) | 用于在生物组织的身体的超声成像检查期间对活检针等进行超声成像的方法和设备 | | |
| 公开(公告)号 | EP1281368A3 | 公开(公告)日 | 2004-03-03 |
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| CPC分类号 | A61B8/481 A61B8/0833 A61B8/0841 A61B10/0233 A61B90/36 A61B2090/378 G01S7/52038 G01S7/52039 G01S7/52041 G01S7/52046 G01S15/895 G01S15/8993 | | |
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摘要(译)

一种用于在生物组织的身体的超声成像检查期间对活检针等进行超声成像的方法和设备，包括以下步骤：a. 交替执行一个或多个成像扫描，其中超声发射和接收参数适于优化成像和针的可视化，并且一个或多个成像扫描具有超声发射和接收参数，适于优化成像和包括生物组织或细节的身体的可视化其中插入了针头。其特征在于它包括b的附加步骤。在成像前在待检查区域注射造影剂；c. 设置超声发射和接收参数，其适于优化成像和身体的可视化或其细节，其中插入针，使得这些参数被优化用于成像超声不良反射器组织或细节或体内流体流动。

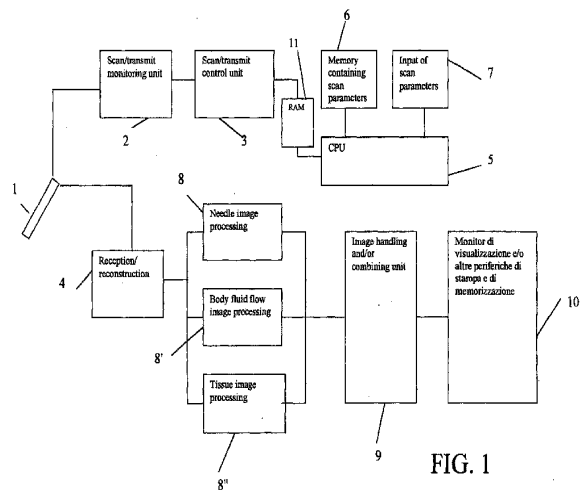


FIG. 1