Title: METHOD FOR TRACKING OF CONTRAST ENHANCEMENT PATTERN FOR PHARMACOKINETIC AND PARAMETRIC ANALYSIS IN FAST-ENHANCING TISSUES USING HIGH-RESOLUTION MRI

Abstract: A method for performing a high-resolution pharmacokinetic analysis for calculation of tissue parameters for a fast-enhancing tissue enables medical personnel to accurately determine pharmacokinetic parameters in fast-enhancing tissues (1200). The method includes obtaining mask image data of the tissue when it is in a steady state condition, obtaining a time series of image data of the tissue when the contrast agent is flowing in the tissue, and increasing a spatial resolution (1220) of the time series of image data using the mask image data to obtain a time series of increased spatial resolution image data. The method further includes performing a pharmacokinetic (1230) analysis to obtain data including at least one parameter that characterizes the tissue, providing multiparameter look-up table derived from a combination of two or more parameters, and providing a display including one parameter or a parametric image, where the parametric image is derived from the look-up table.
before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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.

(88) Date of publication of the international search report:
28 December 2006
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC: G06K 9/00

USPC: 382/128,129,130,131,132,133
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.: 382/128,129,130,131,132,133

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

Electronic database consulted during the international search (name of database and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 7,003,343 B2 (WATTS et al) 21 February 2006, column 6, line 56 through column 7, line 6.</td>
<td>1-9, 11-20, 22-23</td>
</tr>
<tr>
<td>Y</td>
<td>US 7,049,140 B1 (HALLAHAN) 23 May 2006, column 52, lines 29-55.</td>
<td>1-9, 11-20, 22-23</td>
</tr>
</tbody>
</table>

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

Date of the actual completion of the international search
02 October 2006 (02.10.2006)

Date of mailing of the international search report
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