

Title (en)

METHOD FOR DETERMINING FUNCTIONAL VOLUMES FOR DETERMINING BIOKINETICS

Title (de)

VERFAHREN ZUR BESTIMMUNG DER FUNKTIONELLEN VOLUMINA FÜR BESTIMMUNG DER BIOKINETIK

Title (fr)

PROCEDE DE DETERMINATION DE VOLUMES FONCTIONNELS POUR LA DETERMINATION DE BIOCINETIQUES

Publication

**EP 2859479 A1 20150415 (FR)**

Application

**EP 13728700 A 20130604**

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- EP 2013061512 W 20130604

Abstract (en)

[origin: WO2013186090A1] The invention relates to a method for determining functional volumes for searching for kinetics that represent the variation in the concentration of a radioactive tracer in a biological tissue area, wherein the method is applied to spatial components (106) and includes the following steps, which are applied iteratively (111) according to a Markov chain Monte-Carlo method: a step (108) for generating a set (formula A) consisting of a set of candidate kinetics associated with probability values for the occurrence of said kinetics, said values depending on the radioactive tracer concentration  $\lambda$ ; a labeling step (109) during which, for each spatial component of index  $k$  (106), the selection probabilities for the kinetics of the set (formula B) are weighted (102) by inserting a function  $\lambda \kappa$  therein that is representative of the radioactive tracer concentration in said component, so as to obtain a set of indicator values (103), an indicator value  $D_k$  denoting the kinetics with which the spatial component  $k$  is associated; and a step (110) for constructing functional volumes, a functional volume  $VF_j$  consisting of the set of spatial components that share the same indicator value  $D_k$ .

IPC 8 full level

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