Title (en)

SELECTIVE SAMPLING FOR ASSESSING STRUCTURAL SPATIAL FREQUENCIES WITH SPECIFIC CONTRAST MECHANISMS

Title (de)

SELEKTIVE ABTASTUNG ZUR BEURTEILUNG VON STRUKTURELLEN RAUMFREQUENZEN MIT SPEZIFISCHEN KONTRASTMECHANISMEN

Title (fr)

ÉCHANTILLONNAGE SÉLECTIF POUR ÉVALUER DES FRÉQUENCES SPATIALES STRUCTURALES AVEC DES MÉCANISMES DE CONTRASTE SPÉCIFIQUES

Publication

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Application

EP 18805648 A 20180521

Priority

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Abstract (en)

[origin: WO2018217658A1] The disclosed embodiments provide a method for acquiring MR data at resolutions down to tens of microns for application in in vivo diagnosis and monitoring of pathology for which changes in fine tissue textures can be used as markers of disease onset and progression. Bone diseases, tumors, neurologic diseases, and diseases involving fibrotic growth and/or destruction are all target pathologies. Further the technique can be used in any biologic or physical system for which very high-resolution characterization of fine scale morphology is needed. The method provides rapid acquisition of signal at selected values in k-space, with multiple successive acquisitions at individual k- values taken on a time scale on the order of microseconds, within a defined tissue volume, and subsequent combination of the multiple measurements in such a way as to maximize SNR. The reduced acquisition volume, and acquisition of only signal values at select places in k-space, along selected directions, enables much higher in vivo resolution than is obtainable with current MRI techniques.

IPC 8 full level

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CPC (source: EP)

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