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Magnetic Resonance Fingerprinting: Quantifying Relaxation Times and Fat Signal Fraction in the Breast

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Magnetic Resonance Fingerprinting (MRF) promises quantitative tissue analysis based on the relaxation times. Spiral undersampling is employed with MRF to yield short scan times. However, it is prone to blurring artifacts in the presence of field inhomogeneities, especially if both aqueous and fatty tissues are present. In this contribution, we extend MRF to quantify the fat signal fraction and simultaneously correct for spiral blurring. Thereby, improved spatial information about the tissue relaxation times as well as the fat signal fraction is retrieved. We present the application to female breast imaging.

Primary author: NOLTE, Teresa (Philips Research Eindhoven, The Netherlands AND Department of Physics of Molecular Imaging Systems, Institute of Experimental Molecular Imaging, RWTH Aachen University, Germany)

Co-authors: Ms DONEVA, Mariya (Philips Research Hamburg, Germany);   Mr GROSS-WEEGE, Nicolas (Department of Physics of Molecular Imaging Systems, Institute for Experimental Molecular Imaging, RWTH Aachen University, Germany);   Mr KOKEN, Peter (Philips Research Hamburg, Germany);   Mr SCHULZ, Volkmar (Department of Physics of Molecular Imaging Systems, Institute of Experimental Molecular Imaging, RWTH Aachen University, Germany)

Presenter: NOLTE, Teresa (Philips Research Eindhoven, The Netherlands AND Department of Physics of Molecular Imaging Systems, Institute of Experimental Molecular Imaging, RWTH Aachen University, Germany)

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