

Modern Technologies of Neuroimaging (Lecture)

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Abstract

Modern methods of neuroimaging deals not only with structural changes of CNS. They are also used for evaluating of cerebral blood flow (macro- and microcirculation), diffusion processes, cerebral metabolic processes, cerebral cortex functioning. In this article, we describe our own experience and review state of the art neuroimaging technics such as diffusion and perfusion methods (DWI, DTI, MR-tractography, CT/MR-perfusion), susceptibility-weighted imaging (SWI), functional MRI (including resting state fMRI), MRI-morphometry.

Key words: Neuroimaging, CT-perfusion, MR-perfusion, Diffusion-Weighted Imaging, Diffusion-Tensor Imaging, Susceptibility-Weighted Imaging, Functional MRI, Resting State fMRI, MRI-morphometry.

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