Functional neuroradiology : principles and clinical applications / Scott H. Faro, Feroze B. Mohamed, editors

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Abstrak

Functional neuroradiology : principles and clinical applications, is a follow-up to Faro and Mohamed's groundbreaking work, Functional (BOLD) MRI : basic principles and clinical applications. This new 49 chapter textbook is comprehensive and offers a complete introduction to the state-of-the-art functional imaging in Neuroradiology, including the physical principles and clinical applications of diffusion, perfusion, permeability, MR spectroscopy, positron emission tomography, BOLD fMRI and diffusion tensor imaging.

With chapters written by internationally distinguished neuroradiologists, neurologists, psychiatrists, cognitive neuroscientists, and physicists, functional neuroradiology is divided into 9 major sections, including : physical principles of all key functional techniques, lesion characterization using diffusion, perfusion, permeability, MR spectroscopy, and positron emission tomography, an overview of BOLD fMRI physical principles and key concepts, including scanning methodologies, experimental research design, data analysis, and functional connectivity, eloquent cortex and white matter localization using BOLD fMRI and diffusion tensor imaging, clinical applications of BOLD fMRI in neurosurgery, neurology, psychiatry, neuropsychology, and neuropharmacology, multi-modality functional neuroradiology, beyond proton imaging, functional spine and CSF imaging, a full-color neuroanatomical brain atlas of eloquent cortex and key white matter tracts and BOLD fMRI paradigms.

By offering readers a complete overview of functional imaging modalities and techniques currently used in patient diagnosis and management, as well as emerging technology, Functional Neuroradiology is a vital information source for physicians and cognitive neuroscientists involved in daily practice and research.