

Psychiatric diagnosis is moving away from symptom-based classification and towards multi-dimensional, biologically-based characterization, or biotyping.

A large body of research obtained with structural and functional magnetic resonance imaging, positron emission tomography/Single-photon emission computed tomography, and optical imaging has demonstrated regional and illness-specific brain changes at the onset of psychiatric disorders and in individuals at risk for such disorders. Many studies have shown that psychiatric medications induce specific measurable changes in brain anatomy and function that are related to clinical outcomes. As a result, a new field of radiology, termed psychoradiology, seems primed to play a major clinical role in guiding diagnostic and treatment planning decisions in patients with psychiatric disorders.

Lui et al., present the state of the art in this area, as well as perspectives regarding preparations in the field of radiology for its evolution. Furthermore, this article will (a) give an overview of the imaging and analysis methods for psychoradiology; (b) review the most robust and important radiologic findings and their potential clinical value from studies of major psychiatric disorders, such as depression and schizophrenia; and © describe the main challenges and future directions in this field. An ongoing and iterative process of developing biologically based nomenclatures with which to delineate psychiatric disorders and translational research to predict and track response to different therapeutic drugs is laying the foundation for a shift in diagnostic practice in psychiatry from a psychologic symptom-based approach to an imaging-based approach over the next generation. This shift will require considerable innovations for the acquisition, analysis, and interpretation of brain images, all of which will undoubtedly require the active involvement of radiologists <sup>1)</sup>.

<sup>1)</sup>

Lui S, Zhou XJ, Sweeney JA, Gong Q. Psychoradiology: The Frontier of Neuroimaging in Psychiatry. Radiology. 2016 Nov;281(2):357-372. PubMed PMID: 27755933.

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