

NEURAL NETWORK CHARACTERISTICS OF GLUTAMATE METABOLIC ABNORMALITIES IN SCHIZOPHRENIA

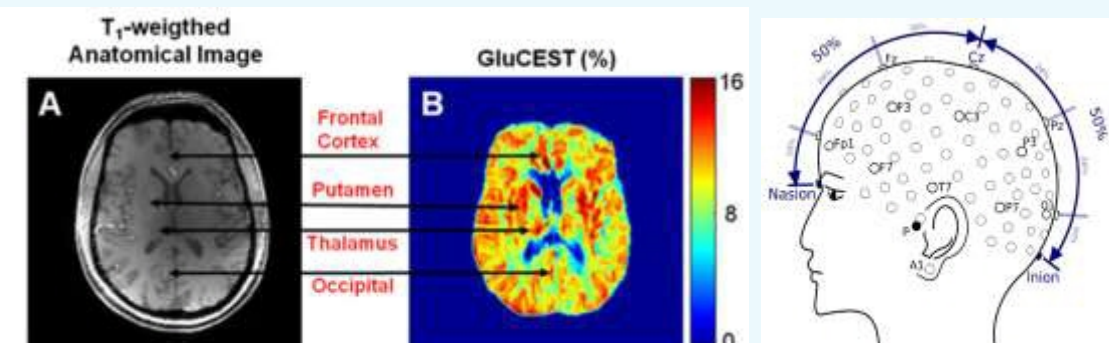
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Introduction:

Glutamatergic dysfunction and brain network abnormalities are both implicated in the pathophysiology of schizophrenia, yet the cross-level mechanisms linking glutamate metabolism, network connectivity, and cognitive deficits remain unclear.

Objectives and Methods:

		
Participants	Multimodal Assays	Clinical Evaluate
52 first-episode schizophrenia (FES) patients and 50 age- and sex-matched healthy controls (HC).	Glutamate was mapped via GluCEST; Network changes were derived from EEG source-level analysis.	Cognitive function was evaluated using the MATRICS Consensus Cognitive Battery (MCCB).

Results:

FES patients showed reduced glutamate in orbitofrontal cortex, alongside decreased beta-band orbitofrontal-temporal connectivity. Left orbitofrontal glutamate positively correlated with this connectivity, which in turn predicted cognitive performance.

