

## PREDICTION OF TMS THERAPY RESPONSE IN AUDITORY VERBAL HALLUCINATIONS

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Conventional treatment of auditory hallucinations in patients suffering from schizophrenia is successful in about 60-70% of cases. Therefore repetitive transcranial magnetic stimulation (rTMS) has been suggested to be promising alternative to conventional therapy. However, both positive and negative reports have recently been reported. Thus there seems to be responders and non-responders, but not yet any clear possibility how to identify responders. The aim of this study was to test if cerebral neuronal activity before treatment would be a possible biological marker of response to rTMS. Twenty four medicated patients underwent resting brain perfusion magnetic resonance imaging with arterial spin labeling (ASL) prior to rTMS treatment. Neuronal activity in the left superior temporal gyrus predicted the response to rTMS, suggesting this parameter as a possible bio-marker of response in patients with schizophrenia and auditory hallucinations. Being non-invasive and relatively easy to employ, ASL measurement before treatment might be a clinically relevant way to identify possible responders to rTMS in conventional treatment resistant patients.