

## Qualification protocol for surgical treatment of epilepsy

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The purpose of the qualification process for the surgical treatment of epilepsy is to assess whether the patient has a single epileptogenic focus which is located outside the eloquent areas of the brain and can be safely removed without causing significant neurological deficit. The most common location of the epileptogenic zone in adults is the temporal lobe. In the case of refractory temporal lobe epilepsy associated with hippocampal sclerosis, surgery is the most effective treatment option. The process of qualifying for surgical treatment of epilepsy includes: clinical history and physical examination, EEG and long-term video-EEG, structural and functional neuroimaging, neuropsychological assessment, and neurosurgical consultation. A key element of the qualification process is to determine whether the observed clinical episodes are epileptic and whether the epilepsy is refractory. The next

step is to determine the semiology of the seizures. Based on video-EEG studies, one can preliminarily define the epileptogenic zone. Sometimes it is necessary to perform invasive EEG. Neuroimaging optimally should confirm the presence of organic damage to the CNS (NMR study) and metabolic dysfunction of the epileptogenic zone (PET). A neuropsychological evaluation is performed in order to determine the baseline cognitive deficits and to predict the risk of post-operative cognitive deficits. In the case of the correlation of clinical, electrophysiological, radiological data that confirm a single organic epileptogenic zone, the patient is qualified for classical resective surgery. In other cases, one should consider performing palliative procedures.

**Key words:** epilepsy, qualification, surgery