

Department of Neurosurgery

Topic list (2021 /2022):

Supervisor	Topic
Dr. Pál Barzó:	Surgical treatment of neurovascular syndromes (trigeminal neuralgia).
Dr. Pál Barzó:	Morphological and functional studies of the cortical neuronal network.
Dr. Tamás Németh, Dr. Pál Barzó	Management of complex (and giant) aneurysms: endovascular treatment modalities.
Dr. Tamás Németh, Dr. Pál Barzó	Surgical management of intracranial aneurysms.
Dr. Dávid Kis:	Preoperative functional MRI and DTI-based tractography investigation of brain tumors affecting motor and speech areas.
Dr. Dávid Kis:	Non-invasive examination methods of central nervous system pathologies affecting subcortical eloquent areas (thalamus, brainstem), especially probabilistic connectivity examinations based on diffusion MRI.
Dr. Dávid Kis:	Detection of biomarkers of long-term prognosis in severe traumatic brain injury with modern MRI techniques (connectivity examination, tractography, voxel-based morphometry).
Dr. Dávid Kis:	The role of diffusion MRI-based probabilistic connectivity examinations in the surgical treatment of movement disorders (Parkinson's disease, essential tremor).
Dr. Dávid Kis:	Surgical treatment options (deep brain stimulation, ablative surgery) of movement disorders (Parkinson's disease, essential tremor) and evaluation of the long-term treatment efficacy.
Dr. Dávid Kis:	Detection of biomarkers for the objective evaluation of the efficacy of analgesic treatments in chronic low-back pain with the help of modern MRI techniques (functional MRI, tractography, voxel-based morphometry) and neuropsychological examinations.
Dr. Dávid Kis:	Evaluation of long-term effectiveness of minimally invasive analgesic treatment methods, especially nerve blocks and neurotomy in patients with chronic pain syndrome.
Dr. Dávid Kis:	Retrospective work-up of gliomas.

Dr. Zoltán Mencser:	Incidence of epilepsy in different neurosurgical diagnostic group of patients.
Dr. Péter Elek, Dr. Tamás Tóth, Dr. Kerim Watfa:	Retrospective follow-up studies of surgical treatment of degenerative cervical spine.
Dr. Péter Elek, Dr. Tamás Tóth, Dr. Kerim Watfa:	Treatment options of degenerative cervical spine.
Dr. Péter Elek, Dr. Tamás Tóth, Dr. Kerim Watfa:	Diagnostic and treatment options of hydrocephalus.
Dr. Péter Elek, Dr. Tamás Tóth, Dr. Kerim Watfa:	Endoscopic neurosurgery.