Neurological surgery which is related to surgery of brain, spinal cord and peripheral nerve is constantly advancing field. In particular, many new insight is accumulating in the filed of brain research. We have conducted various basic research about brain tumor, cerebrovascular disease and involuntary movement. Our goal is applying these research progress in a clinical setting.

**Tumor group**
1. Analysis of invasion and angiogenesis in malignant glioma
2. Gene therapy and oncolytic viral therapy for brain tumor
3. Molecular analysis of glioma biomarkers

**Cell transplantation, neurogenesis and Stereotactic surgery group**
1. Cell therapy for the central nervous system disorders
2. Electrical stimulation for the central nervous system disorders
3. Neuroprotective effects of potential drugs on the central nervous disorders
4. Clinical study for Parkinson’s disease

**Vascular group**
1. Pathophysiology in intracranial environment after aneurysmal subarachnoid hemorrhage
2. Treatment to enhance angiogenesis in moyamoya disease
3. Neuroendovascular therapy with multi-modality support systems

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