University of Tokyo Hospital

- Glycine-to-aspartic acid mutation at codon 51 in Snca disrupts the synaptic localisation of α-synuclein and enhances its propensity for synucleinopathy
- World's First Artificial Intelligence-Based Evaluation of Rist Catheter Stability in Transradial Procedures: A Feasibility Study
- Prediction Model to Optimize Long-Term Antithrombotic Therapy Using Covert Vascular Brain Injury and Clinical Features
- Prevalence, Pathophysiology, and Prognostic Importance of Malnutrition Risk in Early-Stage Patients With Heart Failure and Preserved Ejection Fraction
- Endothelial cells-derived SEMA3G suppresses glioblastoma stem cells by inducing c-Myc degradation
- Comprehensive Genome Analysis Facilitates the Diagnosis of Ependymoma With ZFTA::NCOA2 Fusion
- Stereotactic Body Radiation Therapy for Oligometastatic Recurrent Esophageal Squamous Cell Carcinoma: A Retrospective Cohort Study From a Single Tertiary Center
- Sex differences on cerebrovascular complications in hospitalized COVID-19 patients: a meta-analysis

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The University of Tokyo Hospital is one of Japan’s most prestigious medical institutions, and its Department of Neurosurgery is renowned for both clinical excellence and cutting-edge research.

 University of Tokyo Hospital – Department of Neurosurgery Overview: 1. Clinical Focus Areas: The department handles a wide range of neurosurgical conditions, including:

Brain tumors (gliomas, meningiomas, metastatic tumors)

Cerebrovascular diseases (aneurysms, AVMs, Moya-Moya disease)

Functional neurosurgery (epilepsy surgery, deep brain stimulation for Parkinson’s disease)

Skull base surgery

Spine and spinal cord diseases

Pediatric neurosurgery

Trauma and emergency neurosurgery

2. Techniques and Technologies: Advanced neuronavigation systems

Intraoperative MRI and CT

Minimally invasive and endoscopic surgery

Intraoperative neuromonitoring

Fluorescence-guided surgery (5-ALA)

AI-assisted diagnostic tools (in research phase)

3. Academic and Research Contributions: The department has a strong academic output in high-impact journals.

Research topics include:

Neuro-oncology (e.g. tumor genomics, immunotherapy)

Neurovascular pathophysiology

Brain-machine interfaces and neuroengineering

Regenerative medicine (e.g. stem cell therapy for spinal cord injury)

It collaborates with global institutions and participates in international clinical trials.

4. Education and Training: Offers residency and fellowship programs that attract trainees from across Japan and abroad.

Many neurosurgeons trained here go on to leadership roles in other hospitals.

Training includes a strong emphasis on microsurgical skills, academic writing, and clinical decision-making.

5. Leadership: As of recent years, the department has been led by Prof. Nobuhito Saito, a globally respected figure in neuro-oncology and skull base surgery.