

# Temporal lobe tumor surgery

- [Hybrid Therapy for Newly Diagnosed and Recurrent Glioblastoma: Staged Procedure Integrating Open Surgical Resection With Laser Interstitial Thermal Therapy](#)
- [Visual hallucinations in neurosurgery: A systematic review and two case insights into Charles Bonnet Syndrome](#)
- [A Rare Case of Brain Metastasis of Gastric Neuroendocrine Carcinoma](#)
- [Gliomagenesis following chronic subdural hematoma: A case report](#)
- [Morphometric and radiomics analysis toward the prediction of epilepsy associated with supratentorial low-grade glioma in children](#)
- [Differentiation of multinodular and vacuolating neuronal tumor and dysembryoplastic neuroepithelial tumor based on MRI](#)
- [A Rare Case of Adult-onset Gangliocytoma in the Parietal Lobe: Case Report and Surveillance, Epidemiology, and End Results Registry Data Analysis](#)
- [Brain Abscess Following Definitive Radiotherapy in Patients With External Auditory Canal Carcinoma: Report of Two Cases](#)

Surgery for a [temporal lobe tumor](#) involves the removal or treatment of abnormal tissue located within the [temporal lobe](#) of the brain.

Here is a general overview of the surgical procedure for a temporal lobe tumor:

## 1. [Preoperative Evaluation](#):

see [Preoperative planning in neurosurgery](#).

**Imaging Studies:** Diagnostic tools such as MRI (Magnetic Resonance Imaging) and CT (Computed Tomography) scans are used to locate and characterize the tumor.

**[Neurological Evaluation](#):** Assessing the patient's neurological function to determine the potential impact of the tumor on specific brain functions.

## 2. Surgical [Approaches](#):

**[Temporal Craniotomy](#):** The most common surgical approach involves a craniotomy, where a portion of the skull is temporarily removed to access the brain.

**[Temporal Lobectomy](#):** In some cases, a portion or the entire temporal lobe may need to be removed, depending on the size and location of the tumor.

## 3. [Intraoperative Monitoring](#):

**Brain Mapping:** Intraoperative mapping may be performed to identify critical areas of the brain responsible for language, motor function, or sensory processing.

**Neurophysiological Monitoring:** Monitoring techniques, such as EEG (Electroencephalogram), may be used to assess brain activity during surgery.

## 4. Tumor Resection:

**Microsurgical Techniques:** The surgeon may use microscopic guidance to visualize and carefully remove the tumor while minimizing damage to surrounding healthy tissue.

**Ultrasonic Aspiration:** An [ultrasonic aspirator](#) may be used to break down and remove the tumor tissue. **Intraoperative Imaging:** Intraoperative MRI or other imaging techniques may be utilized to ensure complete tumor removal.

5. Biopsy (if necessary): In some cases, if complete removal is not feasible, a biopsy may be performed to obtain a tissue sample for pathological analysis.

6. Closure: After tumor resection or biopsy, the bone flap is replaced, and the surgical site is closed with sutures or other closure methods.

7. Postoperative Care: **Monitoring:** The patient is closely monitored in the postoperative period for neurological function, signs of complications, and overall recovery. **Rehabilitation:** Depending on the extent of surgery and the impact on brain function, rehabilitation may be necessary for optimal recovery.

8. Pathological Analysis: The removed tumor tissue is sent for pathological analysis to determine the tumor type, grade, and other relevant characteristics. 9. Follow-up: Regular follow-up appointments and imaging studies are conducted to monitor for any signs of tumor recurrence. The specific details of the surgery will depend on the nature of the tumor, its location within the temporal lobe, and the overall health of the patient. The surgical approach and techniques used aim to balance tumor removal with the preservation of essential brain functions.

---

Surgical access to the [temporal lobe](#) is complex with many [eloquent white fiber tracts](#), requiring careful [preoperative surgical planning](#). Many microsurgical [approaches](#) to the temporal lobes are described, each with their own disadvantages. The adoption of the [endoscope](#) in neurosurgery has increased the options available when treating these difficult access tumors.

Ma et al. from the Department of Neurosurgery, John Radcliffe Hospital, [Oxford](#) University Hospitals NHS Foundation Trust, [United Kingdom](#), present the experience with a novel, minimally invasive, endoscopic approach to resect [temporal lobe tumors](#).

All patients undergoing endoscopic temporal lobe tumor resection between December 1, 2011 and December 1, 2017, with a single surgeon, were included. Tumors were resected through a minicraniotomy using a high-definition rigid endoscope with a 0- and 30-degree viewing angle. Bimanual resection was performed using standard microsurgical technique.

There were 45 patients (22 men and 23 women) with a mean age of 53 years. There were 23 (51%) glioblastoma multiforme, 11 (24%) metastases, 7 (16%) astrocytoma, 3 (7%) anaplastic astrocytoma, and 1 (2%) World Health Organization grade I glioneuronal tumor. In 82.2% of cases (37/45), >95% resection was achieved and 42.2% (19/45) of patients achieving gross total resection.

The endoscope has a role in temporal lobe intraparenchymal tumor surgery, especially in 3 illustrative scenarios: 1) medial temporal, parahippocampal-gyrus low-grade nonenhancing gliomas, 2) subcortical high-grade glioma and metastases medial to the sagittal stratum, and 3) recurrent gliomas with cystic resection cavity. The endoscope offers a safe and useful adjunct to the surgeons' armamentarium in brain tumor surgery. A minimally invasive approach also reduces surgical morbidity and length of stay <sup>1)</sup>.

<sup>1)</sup>

Ma R, Coulter CA, Livermore LJ, Voets NL, Al Awar O, Plaha P. [Endoscopy](#) in [Temporal Lobe Glioma](#) and [Metastasis Resection](#): Is There a [Role](#)? World Neurosurg. 2018 Jun 12. pii: S1878-8750(18)31220-8.

doi: 10.1016/j.wneu.2018.06.006. [Epub ahead of print] PubMed PMID: 29902607.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

[https://neurosurgerywiki.com/wiki/doku.php?id=temporal\\_lobe\\_tumor\\_surgery](https://neurosurgerywiki.com/wiki/doku.php?id=temporal_lobe_tumor_surgery)

Last update: **2024/06/07 02:49**

