Delivering sub-specialized expertise to manage complex benign and malignant cranial tumors

The team of neuro-oncology specialists at IU Health delivers high quality care using the most advanced and innovative technologies in brain tumor care. With our experienced, multidisciplinary team, we provide care for the full spectrum of brain tumors, both malignant and benign.

As one of the largest academic healthcare systems in the Midwest, we provide a collaborative approach to care. Our neurosurgeons, neuro-oncologists, radiation oncologists, neuro-endocrinologists, neuro-otologists, neurologists, neuroradiologists and neuropathologists work together with local specialists to develop a comprehensive individualized treatment plan for each patient.

We utilize the latest diagnostic tools (tumor pathology, molecular profile, imaging characteristics) to identify the medical, surgical, and /or radiation treatment options most likely to provide an optimal outcome. Our neurosurgeons have sub-specialized expertise in complex brain tumor surgery and have the skills and experience to safely remove primary and metastatic brain tumors. The availability of intraoperative adjuncts allows for maximal safe resection of eloquent region and skull base tumors. Our partnership with Indiana University School of Medicine supports research and clinical trials bringing leading-edge brain tumor care to the people of Indiana.

Our treatments and services

Our tumor program is committed to providing maximal safe tumor resection, with the goal of preserving neurologic function. Minimally invasive methods are used as appropriate to minimize complications.

Most of our patients have a three- to four-day length of stay after surgery or treatment so they can recover sooner and get back to life as they know it.

- Open craniotomies
- Endoscopic approaches to the skull base
- Awake surgeries
- Neurophysiology and interoperative neuro-monitoring services
- Medical therapy including clinical trials
- Endovascular brain surgery
- Stereotactic navigation
- GammaTile (intercranial brachytherapy)
- Advanced imaging-guided surgeries
- Robotic surgeries
- Patient and caregiver support

Tumors we treat

- Primary brain tumors including gliomas
- Metastatic tumors
- Meningiomas
- Primary and recurrent tumors
- Pituitary adenomas
- Chordomas and chondrosarcomas
- Acoustic neuromas/ schwannomas
- Skull base tumors

Talk to a specialist

Call IMACS at **800.622.4989** and ask for the cranial neurosurgeon on call. **If ready to make a referral for your patient,** please call **317.963.1300** and specify our brain tumor program.

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Indiana University Health

Technology used

We offer unique, advanced imaging modalities to guide surgeries for our patients. Because of our specialists' depth of knowledge and experience, each operation will involve the least invasive approach possible.

- GammaKnife
- LITT (laser interstitial thermal therapy)
- Fluorescence guidance
- 3D Exoscope (Modes V)
- fMRI and interoperative MRI
- SPECT and tractography
- FET PET MRI
- Robot-assisted surgeries
- NICO Myriad device
- Microscope (Zeiss OPMI Pentero)
- Focused ultrasound (coming soon)

Making a referral

Referring physicians can expect a multidisciplinary team with specialized training, individualized patient treatment plans and convenient, follow-up communication. Patients with brain tumors can expect a preliminary consult to determine the best treatment approach. In some cases, a biopsy may be needed to make a clear diagnosis prior to definitive treatment.

Experience is key when managing complex brain tumors. When choosing to refer to IU Health, you can trust that our subspecialists have the knowledge and skills to safely treat all types of complex brain tumors. With our expertise, your patients can receive a level of care and attention found only at one of the largest academic medical centers in the U.S. right here in Indiana.

The neuro-oncologic team at IU Health is an experienced, academic, trusted resource for you and your patients. You can reach us directly as follows:

Inpatient transfers:
T 877.247.1177 24 hours a day, seven days a week

Outpatient referrals: T 317.963.1300 | **F** 317.222.2012

Our team of subspecialized neurosurgeons

Mitesh V. Shah, MD
Specialties: Neurosurgery and Spine Surgery
Conditions and treatments: Spine surgery, pituitary & skull base surgery, minimally invasive surgery, cerebrovascular surgery, brain tumors and aneurysms

Aaron A. Cohen-Gadol, MD, MBA, MSc
Specialty: Neurosurgery
Conditions and treatments: Brain tumors, aneurysms, artiovenous malfunctions and microvascular decompression surgery for hemifacial spasms and trigeminal neuralgia, complex intercranial surgery, skull-base and cerebrovascular surgery

Jesse J. Savage, MD, PhD
Specialty: Neurosurgery and Spine Surgery
Conditions and treatments: Surgical neuro-oncology, brain tumors, pituitary and skull base surgery, Gamma Knife radiosurgery

Angela M. Richardson, MD, PhD
Specialty: Neurosurgery
Conditions and treatments: Surgical neuro-oncology, brain tumors, pituitary and skull base surgery, Gamma Knife radiosurgery

Brandon C. Lane, MD
Specialty: Neurosurgery and Spine Surgery
Conditions and treatments: Brain tumors, skull base tumors, cerebrovascular surgery

James C. Miller, MD
Specialties: Neurosurgery and Spine Surgery
Conditions and treatments: Brain tumors, gamma knife radiosurgery, spinal tumors, degenerative spinal disease, peripheral nerve disorders

IU Health Neuroscience Center | 362 W. 15th St. | Indianapolis, IN 46202 | **iuhealth.org**

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