

IU Health provides the full spectrum of sub-specialized expertise to treat complex brain and spine tumors

At IU Health, we deliver advanced, multidisciplinary care for complex, benign and malignant cranial and spine tumors—led by Indiana’s only United Council for Neurologic Subspecialties physicians. As the state’s only academic health center, we unite fellowship-trained neuro-oncologic sub-specialists across pathology, diagnostic imaging, neurology, neurosurgery and radiation oncology to create personalized treatment plans according to the latest science. This collaborative model means you can have confidence in our sub-specialists’ ability to manage complex brain and spine tumors—while also knowing you have trusted colleagues at IU Health to support you with expert guidance and open communication throughout your patient’s care journey.

Why choose IU Health



We are Indiana’s only academic health center, partnering with Indiana University School of Medicine to bring patients access to groundbreaking research, clinical trials, and the most coordinated and comprehensive brain and spine tumor care in the state.



We have the only NCI-designated comprehensive cancer center in Indiana. We partner closely with our oncology teams at Indiana University Melvin and Bren Simon Comprehensive Cancer Center.



We use a multidisciplinary team approach—from neuropathology consultative support and advanced diagnostic imaging services to neuro-oncology, neurology, neurosurgery and radiation oncology—to create personalized treatment plans.



We collaborate closely with referring physicians through open communication, offering sub-specialist consultations, second opinions and expert guidance. Our team delivers advanced, complex interventions for your patients.



We leverage exclusive access to advanced imaging and surgical technologies like laser interstitial thermal therapy, magnetoencephalography and intraoperative CT/MRI to guide precision treatment and confirm tumor removal in real time during surgery, such as image-guided brain mapping for complex procedures like simultaneous bilateral craniotomy.



We promote rapid recovery, with most patients discharged within three to four days and quickly resuming daily life—ready to return to you for continued care.

How to make a referral

When advanced care is needed, patients and providers can trust that IU Health Neuroscience Center offers seamless access to the full spectrum of sub-specialized neurosurgical expertise, leading-edge technology, innovative clinical trials and collaborative, multidisciplinary teams. Contact your physician liaison with any questions.

IU Health Neuroscience Center

362 W. 15th St.

Indianapolis, IN 46202

T 317.963.1300 and specify Brain Tumor Program

F 317.222.2012



Indiana University Health

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Our team of neurosurgeons

With leading-edge surgical techniques and state-of-the-art equipment—including frameless stereotactic navigation, intraoperative imaging, fluorescence guidance, O-arm and neurophysiology/neuromonitoring services—the team of neurosurgeons at IU Health is committed to providing safe tumor resection, with the goals of retaining maximal brain functions with the least risk of complications.



Mitesh V. Shah, MD
Chair, Department of Neurological Surgery



Angela M. Richardson, MD, PhD
Director, Surgical Neuro-Oncology



João Paulo Almeida, MD, PhD



Bradley N. Bohnstedt, MD



Brandon C. Lane, MD



James C. Miller, MD



Kenneth A. Moore, MD



Devi P. Patra, MD



Matthew W. Pease, MD

Our team of neuro-oncologists

Our neuro-oncology experts are deeply committed to delivering comprehensive, patient-centered care. Together with your patient, the team discusses diagnosis, treatment options and available clinical trials, healthcare goals and values, and any important next steps. In close collaboration with diagnostic, medical, surgical and radiation specialists, the team applies advanced expertise and utilizes leading-edge diagnostic tools to develop personalized treatment plans. Compassionate support is prioritized to improve outcomes and enhance quality of life for your patients.



Na Tosha N. Gatson, MD, PhD
Director, Medical Neuro-Oncology



Edward J. Dropcho, MD



Kathryn S. Nevel, MD



Jamal M. Mohamud, DO

Our team of neuro-radiation oncologists

Our team of neuro-radiation oncologists plays a vital role in the treatment of brain and spine tumors by delivering highly targeted radiation therapies that aim to destroy cancer cells while preserving surrounding healthy tissue. Their work is essential in both primary and metastatic central nervous system tumors, and they collaborate closely with neuro-oncologists, neurosurgeons, radiologists and pathologists to ensure comprehensive, multidisciplinary care.



Kevin R. Shiue, MD



Michael E. Weisman, MD

Treatment and services we provide

- Awake craniotomies
- Endoscopic skull base approaches
- Neurophysiology and intraoperative neuro-monitoring
- Endovascular brain surgery
- Precision genomics
- Stereotactic navigation
- GammaTile® (intracranial brachytherapy)
- Advanced imaging-guided surgeries
- Robotic surgeries
- Clinical trials and research
- Patient and caregiver support

Tumors we treat

- Benign, malignant, recurrent or complex
- Primary and metastatic brain and spine tumors (i.e., gliomas, meningiomas, lymphomas)
- Leptomeningeal metastases
- Phacomatoses (i.e., NF, TSC, VHL)
- Skull base tumors (i.e., pituitary adenomas, acoustic neuromas, chordomas, chondrosarcomas)

Technology we use

- Laser interstitial thermal therapy (LITT)
- Magnetoencephalogram (MEG)
- Fluorescence-guided surgery
- 3D exoscope
- 3D brain tumor modeling
- fMRI and intraoperative MRI
- SPECT and tractography
- FET PET MRI
- Robot-assisted surgery
- Surgical microscope
- Focused ultrasound



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