

# The Pediatric Brain Tumor Program

Advanced treatments, innovative research and family-centered care.



*A collaboration between*

**Children's**  
MEMORIAL  
HERMANN  
Hospital

THE UNIVERSITY OF TEXAS  
MD Anderson Cancer Center  
Children's Cancer Hospital®

**Contact us for non-emergent cases and consults:**

Please call MD Anderson Children's Cancer Hospital at 713.792.5410, and a patient access specialist will connect you to a pediatric brain tumor specialist.

**For emergency cases or after hours:**

Please page 713.200.0909, and a pediatric neurosurgeon or physician assistant will promptly return your call.

## The Pediatric Brain Tumor Program

Pediatric brain tumors are the second most common cancer in children, with approximately 2,500 to 3,500 brain tumors diagnosed in the United States each year. Through the collaborative efforts of The University of Texas MD Anderson Children's Cancer Hospital, Children's Memorial Hermann Hospital and affiliated physicians from the UTHealth Medical School, advances are being made in the treatment and survival of patients with these tumors.

### Knowing the signs



Brain tumors in children are often very different from those in adults, in cell type, presentation and responsiveness to treatment. Because a child's brain is still developing, it is important for a child or adolescent to receive diagnosis and treatment from a physician team specializing in pediatric brain tumors.

Tumors present in a variety of ways depending on their location in the brain. The most common signs and

symptoms are headache and vomiting due to elevated intracranial pressure. In infants and young children, irritability or a fontanelle that is fuller than normal may signal elevated intracranial pressure. Other signs and symptoms may include:

- Motor weakness
- Sensory changes
- Personality changes
- Unsteady gait
- Difficulty with muscle control
- Lethargy
- Seizures
- Vision changes
- Speech problems
- Endocrine disorders

## Teaming together to treat brain tumors in children and adolescents

The Pediatric Brain Tumor Program brings together a team of experts affiliated with Children's Memorial Hermann Hospital and MD Anderson Children's Cancer Hospital to serve physicians, patients and families with new and advanced ways to diagnose and treat childhood brain tumors.

The pediatric brain tumor team includes board-certified specialists in:

- Pediatric neuro-oncology
- Pediatric neurosurgery
- Radiation oncology
- Neuroradiology
- Neuropathology
- Neuropsychology
- Survivorship



Additional support is provided by psychologists, nutritionists, social workers and child life specialists as well as developmental and education specialists.

With a family-centered approach, the team treats a variety of brain and spinal tumors, including:

- Medulloblastoma (primitive neuroectodermal tumor)
- Astrocytoma
- Glioblastoma multiforme (GBM)
- Ependymoma
- Choroid plexus papilloma and carcinoma
- Atypical teratoid-rhabdoid tumor (ATRT)
- Craniopharyngioma
- Ganglioglioma
- Dysembryoplastic neuroepithelial tumor (DNET)
- Germ cell tumors



## The pediatric brain tumor team's approach to treatment

Physicians with the Pediatric Brain Tumor Program partner with patients and families to deliver the best treatment tailored to children with brain and spinal tumors. In addition, the patient's pediatrician will stay updated throughout the child's care.

The program includes:

- Surgical treatment by board-certified, fellowship-trained pediatric neurosurgeons
- Comprehensive care provided by subspecialists from pediatric neuro-oncology, pediatric neurosurgery, radiation oncology and neuroradiology
- Expert diagnosis provided by board-certified oncologic neuropathologists
- Minimally invasive endoscopic techniques for resection of brain tumors
- Avoidance of ventriculoperitoneal shunting, when possible, for hydrocephalus
- Endoscopic transnasal and intraventricular approaches for selected tumors
- Access to MD Anderson's BrainSUITE® to allow complex surgeries to be performed with real-time view of the tumor using intraoperative MRI in the operating suite
- Joint tumor board between specialists at Children's Memorial Hermann Hospital and MD Anderson Children's Cancer Hospital
- Proton radiation therapy with pencil-beam scanning and intensity-modulated proton therapy
- Single-center clinical trial for recurrent medulloblastoma, ependymoma and atypical teratoid-rhabdoid tumors using the direct infusion of chemotherapy into the fourth ventricle
- Access to multiple clinical trials for brain tumors
- Survivorship clinic offering integrated, long-term care for patients

## Meet the team

### *Pediatric Neurosurgery*



**David I. Sandberg, M.D.**

Director of Pediatric Neurosurgery, Mischer Neuroscience Institute/  
Children's Memorial Hermann Hospital

Associate Professor, Department of Neurosurgery/Pediatric Surgery  
UTHealth Medical School

Associate Professor, Department of Neurosurgery  
MD Anderson Cancer Center



**Stephen Fletcher, D.O.**

Associate Professor, Department of Pediatric Surgery  
UTHealth Medical School

Children's Memorial Hermann Hospital



**Jeffrey S. Weinberg, M.D.**

Associate Professor, Department of Neurosurgery  
MD Anderson Cancer Center

***Pediatric Neuro-Oncology***



**Soumen Khatua, M.D.**

Assistant Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital  
Section Chief, Pediatric Neuro-Oncology



**Michael Rytting, M.D.**

Associate Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital



**Wafik Zaky, M.D.**

Assistant Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital

***Radiation Oncology***



**David R. Grosshans, M.D., Ph.D.**

Assistant Professor, Department of Radiation Oncology  
MD Anderson Cancer Center



**Anita Mahajan, M.D.**

Professor, Department of Radiation Oncology  
MD Anderson Cancer Center



**Mary Frances McAleer, M.D., Ph.D.**

Associate Professor, Department of Radiation Oncology  
MD Anderson Cancer Center



**Susan L. McGovern, M.D., Ph.D.**

Assistant Professor, Department of Radiation Oncology  
MD Anderson Cancer Center



## ***Neurology***



**John M. Slopis, M.D.**

Associate Professor, Department of Neuro-Oncology  
MD Anderson Cancer Center

## ***Neuropsychology***



**Bartlett D. Moore III, Ph.D.**

Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital

## ***Survivorship and Follow-up Care***



**Joann L. Ater, M.D.**

Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital

## ***Neuropathology***



**Kenneth D. Aldape, M.D.**

Professor and Chair, Department of Pathology  
MD Anderson Cancer Center



**Meenakshi B. Bhattacharjee, M.D.**

Professor, Department of Pathology and Laboratory Medicine  
UTHealth Medical School



**Gregory N. Fuller, M.D., Ph.D.**

Professor, Department of Pathology  
MD Anderson Cancer Center

## ***Neuroradiology***



**Leena M. Ketonen, M.D., Ph.D.**

Professor, Department of Diagnostic Imaging  
MD Anderson Cancer Center

## ***Pediatric Neuroscience Research***



**Joya Chandra, Ph.D.**

Associate Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital



**Vidya Gopalakrishnan, Ph.D.**

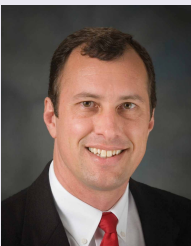
Associate Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital

## ***Neural Immunotherapy***



**Laurence J. Cooper, M.D., Ph.D.**

Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital  
Section Chief, Pediatric Cell Therapy



**Dean Anthony Lee, M.D., Ph.D.**

Associate Professor, Division of Pediatrics  
MD Anderson Children's Cancer Hospital

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