



Pediatric Neurosurgery

The Division of Pediatric Neurosurgery at Cincinnati Children's Hospital Medical Center is an international referral center for the surgical treatment of rare and complex neurological diseases and disorders. Our pediatric neurosurgery program is one of the largest, most comprehensive in the United States. Using technology unavailable elsewhere, our team of pediatric neurosurgeons is able to remove certain deep-seated tumors and other brain lesions previously considered inoperable.

CONTACT US

For patient referrals and non-urgent consultation during business hours, contact the program directly:

Phone: **513-636-4726**
neurosurgery@cchmc.org

International

Phone: **+1-513-636-3100**
international@cchmc.org

Above: Dr. Mangano performs neurosurgery in our Brainsuite® operating room with intraoperative MRI (iMRI).

Division Leadership

Francesco T. Mangano, DO, FACS, FACOS
Director

Full Spectrum of Conditions Treated

In collaboration with pediatric neurologists and other pediatric subspecialists at Cincinnati Children's, our neurosurgeons evaluate and treat virtually every pediatric neurological disease and disorder, including:

- Arachnoid cysts
- Blood vessel lesions, such as aneurysms and arteriovascular malformations
- Brain tumors and other neuro-oncology conditions
- Chiari malformations
- Complex cervical spine disorders
- Craniofacial abnormalities
- Dystonia
- Hydrocephalus and other congenital cysts or lesions of the brain and spine
- Intractable epilepsy
- Movement disorders
- Spasticity
- Spina bifida/myelomeningocele
- Spinal cord tumors
- Spinal disorders
- Tethered cord
- Traumatic and post-traumatic disorders of the brain and spine



Cincinnati Children's is ranked fourth in the nation for neurology and neurosurgery in the 2012-13 Best Children's Hospitals issue of *U.S. News & World Report*.

Surgical Expertise

We offer traditional, open procedures for many conditions, such as:

- **Epilepsy**
 - Brain mapping with selective cortical resection
 - Corpus callosotomy
 - Hemispherectomy
 - Hemispherotomy
 - Vagus nerve stimulation
- **Movement Disorders**
 - Deep brain stimulation
- **Neuro-Oncology Conditions**
 - Brain resection
 - Spinal tumor resection
- **Spasticity**
 - Baclofen pump
 - Selective dorsal rhizotomy
- **Fetal repair of myelomeningocele**

Neurosurgeons at Cincinnati Children's also use minimally invasive techniques to treat a variety of conditions, including arachnoid cysts, brain tumors, craniosynostosis and hydrocephalus, among others. These technologies minimize the trauma of neurological surgery for the patient and the nervous system. We use Stereotactic Minimal Access Resection Technique (SMART) surgery, which was pioneered by Cincinnati Children's neurosurgeon Kerry R. Crone, MD. SMART utilizes stereotactic navigation to implant temporary balloon catheters into the brain, creating a small tunnel to allow for the safe removal of tumors and other lesions previously thought to be inoperable.

Our sophisticated surgical technology also includes the Brainsuite® operating room featuring an integrated neurosurgical microscope, multimodality intraoperative MRI and a stereotactic guidance system. A specialized bed allows for safe intraoperative images while maintaining the sterility of the operative field. This technology optimizes safety for surgical manipulation and tissue resection during surgery to remove lesions that cause intractable epilepsy and brain and spinal cord tumors.

Current Research

Cincinnati Children's conducts basic, clinical and translational research to help advance the treatment of a variety of neurological conditions. Cincinnati Children's is a member of the Pediatric Brain Tumor Consortium, a national research organization committed to the rapid development of novel therapies for children with brain tumors.

Our researchers are conducting research in the following areas:

- Therapies to improve outcomes following traumatic brain injury in children
- Pre-surgical evaluations and outcomes for pediatric epilepsy
- The outcomes, benefits and risks of surgery used to treat tethered spinal cord
- A national registry that studies children with Chiari malformations and syringomyelia

Cincinnati Children's is the principal site for the study of the use of MR imaging in the field of hydrocephalus, funded by the National Institutes of Health.

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link at **1-888-987-7997**.

www.cincinnatichildrens.org