

Brain and Spine Tumors

Approximately 3,100 children in the United States are diagnosed each year with brain and spinal cord tumors. A tumor is best described as an abnormal mass caused by uncontrolled cell growth. Symptoms present themselves once the tumor mass starts to exert pressure on nearby structures or block the normal flow of fluids from the brain. These symptoms include headaches, dizziness, nausea, vomiting, weakness or lack of coordination, seizures or visual changes.

Childhood brain tumors differ greatly from an adult brain tumor. The majority of brain tumors in adults arise in another part of the body, spreading then to the brain. In children, brain and spinal cord tumors originate from the cells of the brain. This origination in children is called a primary tumor. Primary tumors are relatively rare for adults; however, they are the most common solid tumor for children. Children's brain tumors also differ from adults in that a child's brain is still growing and forming connections. This growth makes them both more vulnerable and more resilient than adults. For this reason, it is important to seek out a pediatric neurosurgery team with extensive experience in treating childhood brain and spinal cord tumors.

Our Team

- We are the largest pediatric neurosurgery group in Central Florida consisting of three board-certified Pediatric Neurosurgeons and three Physician Assistants (PAs).
- Our multidisciplinary team is focused solely on the treatment of children and adolescents affected by brain tumors
- Our team has access to some of the country's finest resources within Arnold Palmer Hospital for Children, including a system offering constant information on the latest research in medical care, testing and surgical techniques.
- We perform hundreds of procedures on infants and children with complex neurosurgical problems each year, including brain and spinal cord tumors.

Treatment

Our pediatric neurosurgery team treats a child's tumors depending on the tumor's size and its location. This treatment consists of two steps: surgery to remove the tumor and chemotherapy and/or radiotherapy to destroy any remaining cancerous cells.

Removal of the tumor without harming any critical brain functions is of the utmost importance. **At Arnold Palmer Hospital for Children, we have the absolute best technology in order to help us accomplish this goal, and have operated on hundreds of tumors successfully.** The tools we use for tumor removal include: stealth guidance, intraoperative CT, and minimally invasive brain tumor removal via endoscopy.

Once we have removed the tumor from the body, neuro-oncologists and radiation oncologists from world renowned MD ANDERSON Hospital may perform radiation therapy and chemotherapy. This treatment will help prevent and deter any additional cancerous growth. In some cases, it will help shrink tumors enough to enable surgical resection.

Types of Tumors

Tumors are identified according to the type of cell in which they originate, the location within the brain or spinal cord, the manifestation of the tumor cells, and the rate at which they grow.

Our team is experienced in all tumors, but our main focus consists of the following:

1. Astrocytoma
2. Cerebellar Pilocytic Astrocytoma
3. Choroid Plexus Tumors (papilloma and carcinoma)
4. Craniopharyngioma
5. Diffuse Pontine Glioma
6. Ependymoma
7. Germ Cell Tumors of the brain
8. Glioblastoma Multiforme
9. Medulloblastoma
10. Optic Pathway Glioma

Neurofibromatosis

Our team also specializes in the management of Neurofibromatosis, a disorder of the brain, eyes and skin. Patients with Neurofibromatosis (NF) require close follow up with imaging studies and periodic evaluations. Our group has a special interest in children and adults with NF and related disorders (NF type 1, NF type 2, Tuberous Sclerosis, Von Hippel Lindau, Sturge Weber).

