



University of Michigan
C.S. Mott Children's Hospital

Solid Tumor Oncology Program Neuroblastoma

Neuroblastoma- is a disease in which malignant (cancer) cells form in primitive nerve tissue called “ganglions” or in cells in the adrenal glands. There are two adrenal glands present in all of us, one above each kidney and they typically produce important hormones that help control heart rate, blood pressure, blood sugar and the way the body reacts to stress. In addition to the adrenal glands, other common neuroblastoma sites include the chest or nerve tissue near the spine or spinal cord. Neuroblastoma is the third most common cancer of childhood, occurring in approximately 600-800 children each year in the United States and is the most common solid tumor cancer in infants. Neuroblastoma is rare in children older than 10 years of age, however, it does occur occasionally in adults. Neuroblastoma cancer cells can spread (metastasize) quickly to other areas of the body (i.e., lymph nodes, liver, lungs, bones, central nervous system, and bone marrow). Approximately 70 percent of all children diagnosed with neuroblastoma will have some metastatic disease

Symptoms may include:

- Abdominal mass, either felt during an examination or seen as swollen abdomen
- Pain, limping, paralysis, or weakness may indicate bone marrow involvement
- Fever
- Tumors in the face or head can cause swelling and bruising of the area around the eyes and uncontrolled eye movement

Diagnosis

Diagnosing Neuroblastoma begins with a thorough health history and performing a comprehensive physical examination. Some testing will be required and will include blood work and a urine test as well as a CT scan and/or MRI as well as an MIBG and bone scan. The tumor will then be biopsied or completely excised to determine its exact pathology. Bone marrow aspirates and biopsies will also be performed to assess if there is involvement within the bone marrow.

If Neuroblastoma is the diagnosis, your doctor will stage the tumor, which determines if and how far the cancer has spread. Staging the tumor will help determine a treatment plan.

Treatment

Every child's treatment plan is individualized, based on the patient's needs and the specifics of the tumor. Treatment options include (alone or in combination):

- surgery (to remove all or part of the tumor, metastatic disease and removal of involved lymph nodes)
- chemotherapy
- radiation
- bone marrow and peripheral stem cell transplant
- antibody therapy
- supportive care medications (to control pain, nausea, and infections)
- continuous follow-up care (to determine response to treatment, detect recurrent disease and manage late effects of treatment)

Last Revised 8/2013