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Medulloblastoma - Childhood - Diagnosis [1]

This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 05/2014

ON THIS PAGE: You will find a list of the common tests, procedures, and scans that doctors can use to find out what?s wrong and identify the cause of the problem. To see other pages, use the menu on the side of your screen.

Doctors use many tests to diagnose a tumor and find out if it has spread to another part of the body, called metastasis. Some tests may also determine which treatments may be the most effective. For most types of tumors, a biopsy or removal of the tumor with surgery is the only way to make a definitive diagnosis. If a biopsy or surgery to remove the tumor is not possible or medically safe, the doctor may suggest other tests that will help make a diagnosis. Imaging tests may be used to find out whether the tumor has spread. This list describes options for diagnosing medulloblastoma, and not all tests listed will be used for every child. Your child?s doctor may consider these factors when choosing a diagnostic test:

- Age and medical condition
- Type of tumor suspected
- Signs and symptoms
- Previous test results

In addition to a physical examination, the following tests may be used to diagnose medulloblastoma:

Biopsy [3]. A biopsy is the removal of a small amount of tissue for examination under a microscope. Other tests can suggest that a tumor is present, but looking at the tumor tissue removed during a biopsy, sometimes using surgery (see below), is the only way to make a definite diagnosis. The sample removed during the biopsy is analyzed by a pathologist. A pathologist is a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease.

Surgical removal of the tumor [4]. During surgery, a neurosurgeon removes as much of the tumor as possible for examination under a microscope (see the Treatment Options [5] section). A neurosurgeon is a doctor who specializes in removing a tumor from the brain or spine with surgery. The sample removed during surgery is then analyzed by the pathologist.

Computed tomography (CT or CAT) scan [6]. A CT scan creates a three-dimensional picture

of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. A CT scan can also be used to measure the tumor?s size. Sometimes, a special dye called a contrast medium is given before the scan to provide better detail on the image. This dye can be injected into a patient?s vein or given as a pill to swallow.

Magnetic resonance imaging (MRI) [7]. An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. MRI can also be used to measure the tumor?s size. A special dye called a contrast medium is given before the scan to create a clearer picture. This dye can be injected into a patient?s vein or given as a pill to swallow.

Lumbar puncture (spinal tap). A lumbar puncture is a procedure in which a doctor uses a needle to take a sample of cerebral spinal fluid (CSF) to look for cancer cells, blood, or tumor markers. Tumor markers are substances found in higher than normal amounts in the blood, urine, or body tissues of people with certain kinds of cancer. CSF is the fluid that flows around the brain and the spinal cord. The child is given an anesthetic that numbs the lower back before the procedure. For patients with medulloblastoma, doctors usually perform a lumbar puncture after the tumor is removed through surgery (see the Treatment Options [5] section).

After diagnostic tests are done, your child?s doctor will review all of the results with you. If the diagnosis is medulloblastoma, these results also help the doctor describe the tumor; this is called staging.

The next section helps explain the different stages for medulloblastoma. Use the menu on the side of your screen to select Stages, or you can select another section, to continue reading this guide.

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