central nervous system cancer

Central Nervous System cancer—also known as CNS cancer—can affect your brain, your spinal cord, or both. In some cases, CNS cancer has spread to the brain from another part of the body.

Fortunately, not all central nervous system tumors are malignant, or cancerous. Certain tumors are slow-growing, and are easily curable.

The Central Nervous System

Together, your brain and spinal cord form your central nervous system. Your brain—which consists of soft tissue and nerves—includes your cerebrum, cerebellum and brainstem. Your spinal cord is the collection of nerve fibers (protected by your spine) that connects your brain with the nerves in the rest of your body.

Signs and Symptoms

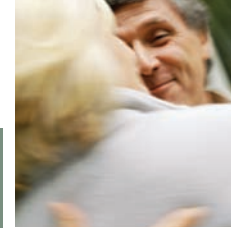
If you have CNS cancer, you may be experiencing:

- Headaches
- Mood swings
- Loss of senses
- Numbness
- Disorientation
- Seizures
- Weakness
- Hallucinations
- Confusion
- Problems with your speech, memory or vision

Screening and Diagnosis

To diagnose Central Nervous System cancer, we will start with a thorough neurological exam, including questions and activities designed to help pinpoint the location of a problem within your central nervous system. We will test your memory, speech, balance, vision, reflexes and muscle function. Following this exam, we may order a CT or MRI scan to get a detailed image of your brain and spinal cord.

Depending on the results of these tests, you may also need a biopsy. During a biopsy, a neurosurgeon collects tissue, which is then reviewed under a microscope to determine which specific CNS tumor is causing the problems. Because cancers from other parts of the body can spread to the brain, we may also check other parts of your body to see if there are any signs of cancer anywhere else.



Treatment Options

External Beam Radiation Therapy. This treatment option uses high-energy rays to destroy cancer cells and shrink tumors. A machine called a linear accelerator creates the radiation beam, which is typically only "on" for a minute or two per treatment. The treatments are fast, safe, and do not make you radioactive—it is fine for family members and friends to be around you. We use Intensity Modulated Radiation Therapy (IMRT) and 3D radiation techniques, both of which allow us to deliver a higher dose of radiation. While side effects are minimized, they may include a temporary worsening of neurological symptoms, and temporary hair loss.

Gamma Knife Radiation Therapy. Gamma Knife, which is used to treat brain disorders, also provides a higher dose of radiation with minimal side effects. This non-invasive technique delivers an extremely precise dose of radiation using approximately 200 narrow radiation beams all focused at the same point, which minimizes the risk of damage to the surrounding healthy tissue (side effects may include a temporary worsening of neurological symptoms). Gamma Knife is also known as a radiosurgery technique, or stereotactic radiosurgery, and is designed for the treatment of vascular malformations, benign tumors, metastases and other malignant tumors as well as functional disorders. Dr. Dhiren K. Shah performs this specialized service at Roswell Park.

Steroids. Steroids can reduce inflammation and swelling, which may help eliminate some of the symptoms of CNS cancer.

Chemotherapy Drugs. Chemotherapy drugs are effective in treating some CNS cancers. These drugs may be delivered through an IV into your veins, or taken in pill form. If you are being treated with chemotherapy, you may also go for radiation therapy, as these two types of treatment work well together to treat certain CNS cancers.

Surgery. In some cases, you may need to see a neurosurgeon—a surgeon who specializes in brain surgery and similar procedures. A neurosurgeon may try to remove part or all of the tumor, using special surgical techniques and imaging equipment to avoid damaging critical nerves.

Your physician and the Patient Advocates at Cancer Care of Western New York can answer any additional questions you may have, and help you determine which treatment is right for you.

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