



What You Should Know About Stereotactic Radiosurgery for Treatment of Brain Tumors

In 2003, more than 190,600 people were diagnosed with brain tumors in the United States, according to the American Brain Tumor Association. There are a number of treatment options available to combat brain tumors. Stereotactic radiosurgery is a method used for the treatment of primary brain tumors such as meningiomas, pituitary adenomas, pineal tumors, acoustic neuromas and cancerous tumors that arise from brain cells as well as tumors in the brain that have metastasized from other parts of the body.

"Before recommending a course of treatment, your doctor will conduct a thorough evaluation including a medical history, physical examination and evaluation, diagnostic tests, as well as certain radiologic and electrical studies to determine the nature and extent of the tumor," said Howard Weiner, MD, a member of the American Association of Neurological Surgeons.

Stereotactic radiosurgery is a treatment option that delivers a high concentration of radiation directly to the tumor in order to stop its growth while giving only a minimal dose of radiation to the surrounding tissue. Unlike conventional surgery, stereotactic radiosurgery does not involve an operation in which an incision is made.

This treatment delivers multiple beams of low-dose radiation while matching the shape of the delivered radiation to the lesion. More radiation can be given to the tumor and less to

the surrounding normal brain, improving safety and efficacy. There are two devices commonly used for delivering stereotactic radiosurgery—a linear accelerator (LINAC) and a Gamma Knife. The LINAC will deliver focused X-ray beams to the tumor. The Gamma Knife (not a standard "knife," but rather a large machine) delivers gamma rays at low intensity to the tumor.

During recovery after stereotactic radiosurgery, small bandages are placed over the pin sites of the stereotactic frame. These may be removed the following day. You may be observed for a specified time after your surgery before you go home the same day, or you may be kept in the hospital overnight for observation. Some people experience a minimal amount of tenderness and swelling around the pin sites.

If swelling occurs, you should keep your head elevated and apply an ice pack. Tylenol may also be helpful. Very often, you can return to everyday activities the following day if you do not experience significant swelling or discomfort. However, be sure to check with your neurosurgeon if you want to perform any heavy lifting.

For more information about stereotactic radiosurgery or to find a board-certified neurosurgeon in your area, visit the public Web site of the American Association of Neurological Surgeons at www.NeurosurgeryToday.org.