



A Patient Guide to Stereotactic Spine Radiosurgery

An Innovative Treatment Option for Spine Tumors

The diagnosis of cancer is given to more than 1 million people in the United States every year. Of these, more than two-thirds will develop skeletal metastases — lesions from the spread of cancer to the body's bones, which can mean painful symptoms and invasive treatment procedures. Now, there is a revolutionary treatment option for metastases located on the spine. Called stereotactic spine radiosurgery, this innovation can provide pain relief through a noninvasive outpatient procedure that has nearly no recovery time.

Effects of Spinal Metastases

Metastases to the spine can cause severe, persistent pain. If left untreated, they can destroy the bones of the spine, which leads to a loss of stability of the spinal column and, often, compression of the spinal cord or nerves. This can cause disabling pain, injury to nerves or the spinal cord and, ultimately, paralysis.

A New Treatment Option

Because of the serious consequences of spinal metastases, early treatment is essential. Beyond analgesics (medications that reduce or eliminate pain), traditional treatment options including surgery, conventional radiation therapy over days or weeks, and chemotherapy may help control spine tumor(s) and associated pain. Now, stereotactic spine radiosurgery can be used as a stand-alone treatment for spinal metastases or as a supplement to another treatment.

How It Works

The Rose Ella Burkhardt Brain Tumor and Neuro-Oncology Center at Cleveland Clinic has established a Stereotactic Spine Radiosurgery Program to treat patients with spinal metastases. Unique Novalis® technology is used to deliver a high dose of radiation to the spinal tumor(s). Both benign and malignant (cancerous) tumors can be treated. The procedure is able to target the tumor very precisely, thereby

minimizing the radiation dose to nearby normal structures. This highly selective radiation dose often results in effective pain and/or tumor control. The treatment can be as simple as one session given on an outpatient basis.

Advantages of the Procedure

Stereotactic spine radiosurgery is a noninvasive outpatient procedure that requires virtually no recovery time. It often results in rapid pain control that can significantly and meaningfully improve your functionality.

Stereotactic spine radiosurgery can be used for:

- durable relief from cancer pain
- first line of treatment of spine tumors
- treatment of any residual tumor left after surgery
- recurrence following conventional treatment
- another option when other treatments haven't been successful

After-Surgery Care

Following your surgery, you will schedule an MRI scan and a follow-up appointment with your neurosurgeon or radiation oncologist. Routine follow-up appointments and regularly scheduled MRI scans may be necessary, depending on your condition. If your symptoms change at any time following the procedure, notify your surgeon's office immediately.

Typical Results

Our experienced team of medical professionals collaborates on comprehensive, individualized treatment strategies to maximize favorable outcomes. The success rate depends on the type of tumor we are treating. In general, we achieve 80 to 85 percent local pain relief in patients within one month or less of treatment. Local tumor growth control rates are normally between 80 and 90 percent.

Frequently Asked Questions

Will the treatment hurt?

No, the treatment does not cause any pain. Patients have described the experience as similar to having a chest X-ray.

What is the recovery time?

Patients usually report some fatigue after spending a day at the hospital. Other than this, there is essentially no recovery time, and you can resume normal activities as soon as you feel able.

How will I be limited after treatment?

There are no limitations to your normal level of activity because of the treatment.

What special instructions will I have to follow before and after treatment?

There are no special instructions.

Can I receive (or will I need) the treatment more than once?

You can potentially receive the treatment more than once. Whether you will need to will be determined based on your clinical condition and MRI scans.



Arrow denotes location of a spinal tumor.

Rose Ella Burkhardt Brain Tumor and Neuro-Oncology Center

Part of the Cleveland Clinic Neurological Institute, the Burkhardt Brain Tumor Center is a nationally recognized leader in the diagnosis and treatment of primary and metastatic tumors of the brain, spine and nerves, and their effects on the nervous system. The center collaborates with the Taussig Cancer Institute and Center for Spine Health to provide innovative solutions for these complex problems, utilizing the latest technology. More than 3,000 patients with brain and spine tumors and other related conditions are treated at Cleveland Clinic annually. The latest diagnostic and treatment modalities, including intraoperative MRI, computer-guided surgical navigation, Novalis®, Gamma Knife® and AutoLITT™, provide patients with the most advanced care possible. Our physicians and researchers are dedicated to studying the causes of brain and spine tumors and making the most promising new therapies available to patients earlier in their treatment.



The Novalis® stereotactic spine radiosurgery equipment moves around the patient's body, delivering a highly targeted dose of radiation to the tumor from a variety of angles.

Contact Us

Cleveland Clinic is one of only a few locations in the country to offer stereotactic spine radiosurgery. To schedule an appointment, please call **216.636.5860** or toll free at **866.588.2264**, or visit us online at clevelandclinic.org/spinetumor.