

Barrow Radiation Oncology

Post Gamma Knife Radiosurgery for AVM Treatment



What to Expect

Gamma Knife radiosurgery is a focused radiation treatment administered directly to the arteriovenous malformation (AVM). Some AVMs are treated in a single treatment session, while others are treated with volume staging (having several treatments over a certain period of time, such as once every six months or yearly). The goal of Gamma Knife treatment is complete obliteration (wiping out) of the AVM. It may take up to two to three years to see the results of this treatment. MRI/MRA imaging is completed every six to 12 months for surveillance post Gamma Knife treatment.

Arteriovenous Malformation (AVM)

AVMs are abnormal tangles of blood vessels that blood does not flow through normally. Blood going into the AVM flows from arteries into the veins and does not go into the brain tissue. Arteries have a higher blood pressure than veins so this abnormal blood flow puts a lot of pressure onto the veins. This can result in the AVM rupturing (bursting open). Roughly 2 to 4% of

people who have an AVM may have a rupture during any given year. The risk of AVM rupture remains present post Gamma Knife treatment. To reduce the risk of rupture, systolic blood pressure (the top number) should remain under 120mmHg. This is typically managed by a primary care/family physician. Having a blood pressure cuff at home to monitor blood pressure is helpful.

Symptoms

AVMs can cause symptoms such as headaches, seizures, muscle weakness, imbalance, decreased vision, or memory loss. After receiving treatment with Gamma Knife for AVM, you may experience fatigue, headache, nausea, or increased or new seizure activity. Resume normal activity slowly and follow the recommendations of the endovascular team for return to activity post angiogram. Light activity is recommended, such as walking.

AVM treatment with Gamma Knife may cause edema (swelling) around the area that was treated. Sometimes a long-acting steroid (Decadron, or dexamethasone) is prescribed to help with this edema. Your physician will discuss the need for steroids with you on the day of treatment.

Seizures and AVM Treatment

If seizures are present prior to AVM treatment, there may be increased seizure activity post treatment. Increasing the dose of antiepileptic medication may be indicated. Work with the physician who is currently managing the antiepileptic medication to adjust the dosing of medication in order to control seizure activity. In the event of new-onset seizure activity, we recommend evaluation by emergency room staff and consideration of initiating antiepileptic medication.

