

FACT SHEET
THE NEUROSCIENCE AND GAMMA KNIFE CENTER
AT JOHNSTON-WILLIS

THE GAMMA KNIFE®

The Gamma Knife® allows physicians to treat brain abnormalities without making an incision. It delivers 201 cobalt-60 ionized radiation beams to a single focal point, enabling physicians to better target diseased tissue without damaging surrounding healthy tissue.

GAMMA KNIFE® TREATMENT

The Gamma Knife® can be used to treat a range of brain disorders including:

- Brain tumors
- Intracranial tumors
- Trigeminal neuralgia
- Chronic pain
- Epilepsy
- Parkinson's disease
- Vascular malformation

ADVANTAGES OF THE GAMMA KNIFE®

- There is no incision, so the risks of infection, hemorrhage and adverse reactions to anesthesia are minimal.
- The surrounding healthy tissue is spared unnecessary radiation.
- Because there is no incision, recovery time is reduced and many patients leave the hospital the same day as the treatment. This makes Gamma Knife® treatment more cost effective than traditional brain surgery.

CHOOSING GAMMA KNIFE® TREATMENT

The Gamma Knife® is a safe and effective treatment for patients who are high-risk for standard surgery because of age, illness, tumor location or tumor size. It can be used as a primary treatment or in conjunction with surgery or radiation therapy.

THE GAMMA KNIFE® PROCEDURE

Gamma Knife® treatment is a four-step process:

- A headframe is attached to the patient to ensure stability and accuracy.
- The patient undergoes imaging to determine the size and shape of the target.
- Using software models, the physicians develop a treatment plan.
- The patient undergoes Gamma Knife® treatment, which takes 30 minutes to an hour.

AFTER GAMMA KNIFE® TREATMENT

Some patients may experience a mild headache or minor swelling after treatment, but most report no problems. Most patients are discharged within 24 hours and return to their normal routines in one to two days.

