

# **Gamma Knife® Frequently Asked Questions**

## **What is Gamma Knife® Radiosurgery?**

The Gamma Knife® is a non-invasive procedure that delivers focused, pinpoint radiation to lesions and abnormalities in the brain. It is used to treat a variety of neurological disorders.

## **What disorders can be treated by Gamma Knife®?**

At the Center for Advanced Radiosurgery at NYU Langone Medical Center, we have extensive experience using the Gamma Knife® to treat all types of intracranial tumors (tumors inside the skull), including brain metastases, meningiomas, acoustic neuromas (vestibular schwannomas), pituitary tumors, gliomas, glomus tumors and many other types of brain tumors or those attached to the skull. Vascular malformations include arteriovenous malformations (AVMs), arteriovenous fistulas, and cavernous malformations. Functional disorders include pain such as trigeminal neuralgia, selected headache types, movement disorders, and some behavioral disorders such as obsessive-compulsive disorder.

## **What is involved in Gamma Knife® treatment?**

Gamma Knife® Radiosurgery is a multidisciplinary procedure performed by a neurosurgeon, a radiation oncologist and a radiation physicist. On the morning of the procedure, the neurosurgeon and his assistant attach a titanium head frame, after which an MRI of the brain is obtained. Following the MRI, you will be brought back to Gamma Knife® Suite and various measurements of your head will be taken. This information is imported into the Gamma Knife® planning computer. The physicians then review the image of your lesion and begin planning the treatment. This can take one to three hours, depending on the size of the tumor and the complexity of your case. During this period you will be resting comfortably on a bed, visiting with your family.

Once the planning is complete, you will be brought into the Gamma Knife® treatment room and placed on the procedure table with your

head attached to the machine. The table's couch will slide in and out of the machine. Your family will be asked to wait outside during your treatment, which can last anywhere from 15 minutes to three hours. Following the treatment, the head frame is removed and a bandage placed around your head. The nurse will then review your discharge instructions with you and your family, after which you'll be released to go home. You must have someone present to pick you up after the procedure is complete.

### **Will I be awake for the procedure?**

You will be awake during the radiosurgery, but you will be comfortably sedated. An IV is placed in your arm prior to the treatment. Medication is then administered through this IV to help you relax. You will also receive a special medicated lollypop. The combination of these two medications will make you extremely comfortable.

### **Will my head be shaved?**

Your head will not be shaved for this procedure.

### **What side effects can I expect from the procedure?**

There are minimal side effects from the procedure itself, although you may feel a little bit sleepy and/or tired afterwards. This is a result of the medication we administer prior to the application of the head frame. Possible side effects from the treatment of the lesion will be reviewed by your radiation oncologist and neurosurgeon when you consult with them prior to your scheduled Gamma Knife® procedure.

### **Can I go home after my treatment?**

Gamma Knife® Radiosurgery is generally an outpatient procedure. The majority of patients are discharged the same day as their treatment.

### **How long does it take for the results of the radiosurgery to become apparent?**

Results of radiosurgery are not immediate and occur over a period of time. These results will be observed on your follow-up imaging studies or during clinical assessments. After your procedure, you will undergo follow-up MRI or CT scans, which your neurosurgeon will review. The time frame for these repeat studies will depend on your diagnosis.

## **Will my insurance cover my treatment?**

Insurance clearance is required by the hospital prior to your admission to the hospital for your procedure. This authorization is obtained by the admitting physician's office.

## **Who do I contact for my appointment?**

Gamma Knife procedure dates are scheduled through your neurosurgeon's office.

## **Where do I go on the day of my procedure?**

Please report to Tisch Hospital Admitting Department at 5:30 am on the scheduled day of your procedure.

*Below are directions to the Tisch Admitting Department:*

Enter NYU Langone Medical Center through the main entrance on 1st Avenue using the revolving doors.

(You will see a security desk directly in the front of you.)

You will go to the left following the path through glass doors.

Walk through the glass doors and you will see an area with chair on the left.

This is the admitting department.

Check in at the desk and you will be asked to fill out paper work.

After being admitted at the desk you will be sent to the Gamma Knife® Suite.

*Below are directions to the Gamma Knife® Suite*

Walk back through the main lobby, passing the security desk on the left.

Continue down the hallway through two sets of glass doors.

Continue again through another set of glass doors. You will see a blood donor bank directly in the front of you, and a security guard / desk on your right.

Take the **"G" elevators to basement.** This is the MRI department.

Follow the signs down the hallway to the Gamma Knife® Suite.