Radiosurgery to the Brain

This information will help you prepare for your radiosurgery treatment.

Radiosurgery is not actually surgery at all. It is a treatment that uses high-powered X-rays (radiation beams) to destroy tumors. It uses 3D planning to shape the radiation dose to the size and shape of the tumor. The treatment machine focuses the radiation only on the area being treated. It does not harm normal tissue.

The radiosurgery team

The radiosurgery team provides care to meet your specific needs. The team includes:

- Physicians
  - Radiation oncologist
  - Neurosurgeon
- Medical physicist and/or dosimetrist who will help plan your treatment with your physician.
- Radiation therapist who will give the radiation treatments.
- Registered nurses who will help you learn about the care you get and help with follow-up needs.

Social workers are available to help with resources. They also offer support and counseling to you and your family.

The radiosurgery process

The radiosurgery process includes a planning session and treatments. In some cases, the planning session and the first treatment may be on the same day. Both the planning session and treatments are done in:

Northwestern Medicine Radiation Oncology Department
Galter Pavilion
251 East Huron Street, lower concourse, Suite LC-178

Garage parking is at 222 East Huron Street, across from Feinberg and Galter pavilions.

For a discounted rate, bring your parking ticket with you. You can get your ticket validated in the waiting area.

Please leave your valuables, such as jewelry, at home.
Planning session
Please arrive at _________ (time) on _____________ (date) for your planning session.

Once you check into the Radiation Oncology Department, we will take you to the waiting area. There, you will change into a hospital gown.

During the planning session, you will have a:
  - Face mask made for you.
  - Computerized tomography (CT) scan.

Custom face mask
It is important to remain still during the planning and treatment sessions. To help your head remain in the correct position, you will wear a face mask. This mask is custom made to fit you. It is made of a soft mesh material that will be wet, and placed on your face and neck. The therapists will mold this to your face shape, and then you will lay still for 30 minutes while the mask forms. **Tell your physician if you have pain or trouble breathing when lying flat on your back or if you are claustrophobic.**

CT scan
Once the mask is made, you will have a CT scan to locate the tumor. This helps determine where the radiation beams will focus during your treatments. The care team may use a special dye (contrast) during the CT scan. If we use contrast, we will tell you if you may eat or drink before the planning session. After you arrive, the care team will put an IV (into the vein) line in your hand or arm. They may draw blood for testing.

Tell your physician if you are:
  - Allergic to contrast dye
  - Taking oral medications for diabetes
If you think you will have trouble lying in the same position for a long time, let us know. The entire CT planning session lasts about 1 to 2 hours.

Depending on where your tumor is and what information the physician needs, you may also have a magnetic resonance imaging (MRI). You will have this test either the same day as the planning CT scan or in the next few days.

**Treatments**

You may need 1 to 5 treatment sessions, depending on where the tumor is. Once we have scheduled your planning tests, we will tell you when your first treatment should be. Treatment times may vary. Most treatments last about 1 hour.

**Day of treatment**

Before your appointment:

- Take your usual medications as instructed by your physician.
- You may bring a small personal music device to listen to during treatment.

After checking in at the front desk of the Radiation Oncology Department, we will bring you to the waiting area. We will ask you to:

- Change into a hospital gown
- Empty your bladder

Then we will take you to the treatment room. The radiation therapist will help you onto a special bed. The team will help position you in the face mask that was made for you.

Please let your therapist know if you have any questions or concerns during your treatment.

Because of the radiation, the team must leave the room before the radiosurgery starts. During the treatment, the physician and therapist will be checking on you through a camera the whole time. You will be able to talk to the team through a 2-way intercom. You will be able to listen to music, if you wish.

**After your treatment**

You may go back to doing your usual activities. It is important to keep all follow-up appointments as instructed.

**Follow-up care**

Before you leave the hospital, you will get specific discharge instructions based on your diagnosis. It is very important to make follow-up appointments since the full effects of the radiosurgery do not happen right away. This care includes physician visits and imaging studies, such as MRI or CT scans. Please review your discharge instructions for information about your follow-up care.
When to call the physician

Call the Radiation Oncology Department at 312.926.2520 (TTY: 711) right away if you have any of these symptoms:

- Mental status changes (changes in your awareness and behavior)
- New onset of severe headaches
- Double vision or vision changes
- Sudden weakness in your arm or leg
- New seizures

During evenings, weekends or holidays, your call will go to the answering service to notify the on-call physician.