

Stereotactic Radiosurgery



Allina Health

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Stereotactic radiosurgery is a type of radiation treatment used to treat brain tumors and vein lesions. A machine called a linear accelerator (LINAC) is used to give the radiation.

Radiosurgery uses a “pencil-like” beam of high dose radiation to destroy the tumor or lesion. The word “stereotactic” describes the process used to find a single point for treatment.

Regular radiation is given over many weeks with low-dose daily treatments. Radiosurgery is done in one treatment and does not harm the normal tissue around the tumor or lesion.

This treatment is painless. It may last from 20 minutes to 2 hours. The time depends on your treatment plan. You will not need general anesthesia or surgery. The treatment is usually done on an outpatient basis.

Positioning

Positioning for this type of treatment is very important. Your health care team will decide the exact setup that is right for you. To make sure you are in the same position on the planning day and treatment day, an open-faced mask and headrest will be created specifically for you.

Having the right positioning will decrease the amount of radiation to the normal tissue around the tumor or lesion.

Before the Simulation (Planning Day)

- You may need to follow a special food and liquid diet before your simulation. Follow any instructions your radiation therapist gives you.
- Tell your doctor and radiation therapist if you have:
 - pain
 - nausea (upset stomach)
 - claustrophobia (not comfortable in closed spaces).

During the Simulation

- You may have an intravenous (IV) line started in your hand or arm.
- You will be asked to lie on a flat table. An open-faced mask and headrest will be created specifically for you.
- You will have a CT (computed tomography) scan and an MRI (magnetic resonance imaging). These scans are only used to plan your treatment. They will help your health care team map out the area to be treated with radiation.
- After the simulation is done you will go home. Your treatment will usually start 4 to 7 days after the simulation.

“Dry run”

- You will be scheduled for a “dry run” sometime after your simulation and before your treatment.
- During this session, your treatment plan will be setup with you in your treatment position. Your open-faced mask and headrest will be used.
- You will not receive any radiation during this session. Think of this session as a “practice run.”

Before the Procedure (Treatment Day)

- You will need to have someone drive you home. You may wish to have someone stay with you the night of your treatment.
- Wear comfortable clothing. You will not need to wear a hospital gown or pajamas.
- You may bring your own CDs or MP3 player to listen to during the procedure.
- Your family and friends are welcome to join you on the day of your procedure. They will be able to see the treatment room and then will need to wait in the waiting room while you are receiving the treatment.

During the Procedure

- You will be positioned in your open-faced mask and headrest on the treatment table.
- A CT scan will be done to match the positioning used on your planning day.
- You may notice a red light. This is part of the machine's monitoring system that is used to track any movement you may make. Treatment will only happen when you are in the correct position.



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You will be positioned on the treatment table using the same positioning from your planning day.

- The red light is not a laser or a light that will affect your safety.
- The light will help your health care team make sure you get safe and accurate treatment.

- Once you are positioned and your doctor has reviewed the CT scan, you will have your first treatment.
- During the treatment, staff members will leave the room. They will watch you on a monitor. They will be able to hear you at all times and talk with you over a microphone.
- You will not see or feel the radiation, but you will hear a “buzz” sound while the machine is on. This is normal.

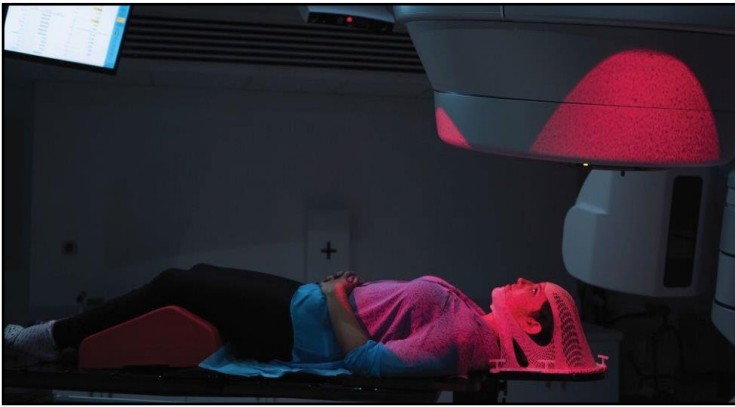


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A machine called a linear accelerator (LINAC) is used to give the radiation.

- The machine will make several arc rotations around you. For each arc rotation, radiosurgery team members will come into the room to make sure it is in the right alignment before starting the next arc.
- The machine may move around you to follow the precise plan created for your treatment.
- The machine may turn off and restart. This is normal.

After the Procedure

- You will receive some medicine prescriptions.
- You will receive home instructions and information about follow-up appointments.
- You will need to have someone drive you home. You may wish to have someone stay with you the night of your treatment.

Treatment Results

- Results of the treatment take time. The tumor or lesion will shrink gradually and may disappear completely.
- Please go to all follow-up appointments.

Side Effects

Side effects are rare. Possible side effects can include:

- nausea
- malaise or depression
- headaches.

If you have any questions or concerns, call one of the radiation oncology nurses Monday through Friday, 7:30 a.m. to 4:30 p.m., at 612-863-4060.

After hours, you may leave a message or speak with the radiation oncologist on call.



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