

# A Patient Education Guide for Perfexion<sup>®</sup> Stereotactic Radiosurgery



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Patient Education  
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**Author: Angela Cashell and Messeret Tamerou**

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University Health Network  
Toronto General Hospital Toronto Western Hospital Princess Margaret Hospital

**You are scheduled for MRI:**

On \_\_\_\_\_ at \_\_\_\_\_ on the 1B level

**You are scheduled for Radiosurgery treatment:**

On \_\_\_\_\_ at \_\_\_\_\_ on the 2B level

**Please enter PMH using the Murray Street entrance and take the glass elevators.**

On your treatment day please have a seat in the waiting room by the glass elevators. A Nurse or Radiation Therapist will meet with you and prepare you for the procedure.

**How should I prepare for my treatment?**

- Bring your blue hospital card.
- Bring your Ontario Health card.
- Do not wear make-up.
- Take your regular morning medications.
- Bring the medications that you need to take during the day in their original containers, and a list of ALL the medications you are taking.
- Plan to spend most of the day at the hospital. The planning and treatment times vary for each patient. **Please note:** You will be cared for in our **Radiation Nursing Clinic**.
- Have a family member or adult friend come with you and stay at the hospital during your treatment. They must drive you home after your treatment.
- Bring something to eat.
- Bring something to read, crafts, DVDs or other items to help pass the time. (Please note, you will not be able to wear glasses while the frame is on.)
- Bring your iPod or a CD to listen to during your treatment.

**If you need a wheelchair and use a lift at home:**

- Come in pajamas.
- Leave the lift sling underneath you for easy transfers.

## What is the Perfexion® Stereotactic Radiosurgery?



The Perfexion® (Gamma Knife) treatment uses very precise beams of radiation to treat the tumors in your brain. The concentrated radiation affects the tumor in a way that aims to stop it from growing. Because the beams are precisely pinpointed on the tumor, exposure to radiation in surrounding brain tissue is reduced.

There are 5 steps to radiosurgery.

1. MRI
2. Putting on the frame
3. CT
4. Treatment planning
5. Treatment

### 1. MRI

The MRI is done the day before your radiosurgery, and a contrast medicine (dye) is injected into your veins during the scan to better see your tumor(s) in your brain. For the MRI, please tell us if you have any implanted devices in your body, or if you have ever worked with metal products or may have any metallic objects in your body. The staff will complete a questionnaire with you before the scan can go ahead. The MRI images will be used to plan your treatment.

## 2. Putting on the head frame



The stereotactic head frame is an important part of radiosurgery. The frame lets us accurately pinpoint the tumor in your brain. The frame stays on your head for the entire procedure. We use it to keep you in a stable position during imaging and treatment. A Neurosurgeon and Radiation Therapist will attach the lightweight frame to your head using adjustable posts and pins the morning of your treatment. You will be given local anesthetic injections to numb the skin which may sting for about 30 seconds. You may feel pressure as the pins are tightened. This usually lasts 5 to 10 minutes.

## 3. Imaging – CT

After your frame is in place, we will take images of your brain and skull using a CT scanner. We will take you to the imaging area by wheelchair. During the time that we are taking CT images, we will put a transparent box over your head. This will give us measurement points on the images for planning your treatment. After we take all the images that we need, we will take this box off and you will go back to the Radiation Nursing Clinic to rest.

## 4. Treatment Planning

To develop your treatment plan we use the images from both your MRI and CT. Your treatment planning team includes a:

- Neurosurgeon
- Radiation Oncologist
- Medical Physicist

We will transfer your images to a specially designed computer. From here, your health care team decides which area to treat, how much radiation to give, and how they will target the radiation to treat the tumor.

The treatment planning step can take one to several hours depending on the size and shape of the area you need to have treated.

While we are planning your treatment you:

- will stay in the Radiation Nursing Clinic
- can eat, drink and rest
- can use the washroom
- **may not** walk around the clinic

### **Please note:**

On the day that you come for radiosurgery, there may be other patients having the same treatment. For example, you may have your imaging step before another patient but have your treatment after that same patient. We appreciate your cooperation with this process.

## 5. Treatment – what can I expect?

When your treatment plan is complete, the team checks it for precision and safety. Then we will take you to the Perfexion® Unit for your treatment. During treatment, you will not feel anything. The radiation treatment is painless. The treatment step can take several hours to complete. Be prepared for at least 1 hour of treatment and sometimes up to 3 or more hours. The Radiation Therapists will be there at all times. They will help you get settled in the machine and make you comfortable. The Radiation Therapists will leave the treatment room while you receive your treatment. To keep in touch and keep you safe and secure, you will have a microphone near your head to communicate. We also have 3 cameras in the room and can see you all the times.

During your treatment, the couch (the place where you lie) will automatically move you into the next position. You can listen to music during the treatment and you can bring your own CD.



## What can I expect after my treatment?

After your treatment, you will go back to the Radiation Nursing Clinic.

- The Radiation Oncologist will remove your head frame.
- We will put bandages on the pin sites of your forehead. Try to keep the pin areas dry for the next 24 hours.
- You may have some bleeding or oozing in the areas where the pins were placed.
- We will monitor you for 1 hour after we remove your head frame. Then you may go home.
- You may get a headache or minor swelling where the frame was attached.

When you go home, you can go back to doing your usual activities, as you feel able.

## What are the Possible Side Effects?

Your doctor or therapist will explain the short and long term side effects of radiosurgery and how to cope with them. Each patient may experience different side effects. The most common side effects and how to manage them are listed in the chart.

Possible Side Effects You May Have	What You Can Do
<b>Fatigue:</b> Tiredness is a common side effect of radiation therapy. The day of your treatment will be a long day and can be very tiring.	Pace your activities and rest as needed. A well balanced diet and plenty of fluids may help.
<b>Headaches:</b> Many patients get headaches from wearing the frame.	You may take Tylenol/Advil or a prescription pain reliever from your doctor as needed.
<b>Swelling:</b> You may notice swelling around your eyes. The local anesthetic can cause this.	You can apply a cool compress to your eyes to ease the swelling.
<b>Bleeding or discharge of fluid from the pin sites:</b> There maybe some blood or fluid leaking from the pin sites for 2 or 3 days after treatment.	<b>This is not a sign of anything serious.</b> For bleeding, apply pressure with gauze for 5 minutes and it should stop. If pin sites are leaking, clean the area with alcohol and cover with band-aids or steri-strips.
<b>Nausea and vomiting:</b> You may have nausea and vomiting, but it is uncommon. Tell your healthcare provider if you have an upset stomach. Medication is available to relieve nausea and vomiting.	Tell your healthcare provider if you have an upset stomach. Medication is available to relieve nausea and vomiting.
<b>Hair Loss:</b> Some patients experience hair loss in a small area of the scalp, but this is not common.	You can expect your hair to grow back within the next few months.



### **Swelling in the Brain:**

In the weeks to months after radiosurgery, the treatment can also cause swelling in your brain. This may cause headaches, nausea and vomiting. To help with some of these symptoms, we often prescribe Decadron®, a steroid medicine to reduce the swelling. You should take this medication after meals or with a snack, not on an empty stomach.

We also recommend that you take your dose in the morning and at lunch because Decadron can disturb your sleep. Decadron may also interfere with your blood sugar levels. Please let your doctor know if you have a history of diabetes. For the next 4 weeks, your doctor recommends that you take Decadron in the following schedule. If your symptoms get worse as you take less Decadron, please call the brain metastases clinic and we will talk with you about trying another schedule.

Week 1 ..... mg/day

Week 2.....mg/day

Week 3.....mg/day

Week 4.....mg/day

Some other possible side effects of Decadron® may include: heartburn or indigestion, sore mouth, yeast infections, swelling of face, hands, upper back and neck area, weakness in legs causing difficulty going up stairs or getting out of a chair, irritability or other changes in mood, increased appetite, trouble sleeping and/or restlessness, and skin rash.

### **Questions and Concerns**

The Perfexion Radiosurgery process video can be viewed online at [www.elekta.com/patient\\_us\\_gamma\\_knife\\_surgery.php](http://www.elekta.com/patient_us_gamma_knife_surgery.php)

You can call us with any questions or concerns you may have.  
Monday to Friday: 8:30 a.m. – 4:30 p.m., call:

PMH number: Renee Grant (416) 946 4501 ext. 6325

Evenings, weekends and holidays, you can call either the Neurosurgeon or Radiation Oncologist.

**Neurosurgeon on-call** (416) 340-3155

(Ask for the neurosurgeon on-call)

or

**Radiation Oncologist on-call** (416) 946-2000

(Ask for the radiation oncologist on-call)

