

CIUSSS DE L'ESTRIE – CHUS

## PATIENT GUIDE

Gamma Knife  
Radiosurgery  
Treatment

**Understanding my  
treatment to improve  
my experience**





## Your physician has recommended that you undergo Gamma Knife radiosurgery. It is normal to have questions.

In order to reassure you and to help you prepare for your treatment, the CIUSSS de l'Estrie – CHUS radiosurgery team invites you to read this guide. It outlines every stage of your treatment and contains answers to your questions. Please do not hesitate to contact the Gamma Knife radiosurgery department if you have any questions (see coordinates on page 8).

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## QUESTIONS / ANSWERS

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### 1. WHAT IS GAMMA KNIFE RADIOSURGERY?

Gamma Knife radiosurgery is a safe and effective treatment in which a lesion or other abnormality in the brain is exposed to highly focused precision radiation. It is an alternative to conventional open neurosurgery and fractionated radiotherapy. It requires a high level of precision and the attachment of a stereotactic frame to your head by a physician on the morning of the treatment.

### 2. IS THE TREATMENT PAINFUL?

The treatment is not painful; however, you may experience discomfort when the frame is attached. The installation is made under local anesthesia. Staff may give you a sedative medication for your comfort. You will remain awake during the procedure and a technologist will use a camera to monitor you. You can listen to background music if you wish.

### 3. ARE THERE ANY RISKS OR SIDE-EFFECTS?

The Gamma Knife treatment normally has few or no side-effects. In the days following your treatment, you may experience fatigue, headache, and mild nausea. Those symptoms are caused by stress and the medications administered. Symptoms may vary from person to person. Your physician will discuss the specific risks relevant to your case with you. Do not hesitate to ask for further explanations when in doubt or as needed.

### 4. WHAT ARE THE ADVANTAGES?

#### This treatment:

- helps to cure or control the progression of the disease;
- does not require an incision unlike traditional surgery;
- involves neither general anesthesia nor convalescence;
- is much faster than conventional surgery;
- allows you to leave the hospital on the same day;
- is comfortable, safe, and accurate.



## THE EVENING BEFORE THE TREATMENT

- Wash your hair. Do not apply hairstyling products such as gel, mousse, or hair spray. Do not apply nail polish.
- Make sure you have someone who can accompany you home. You will not be able to drive after your treatment.
- Bring a cold lunch (e.g., sandwich) and snacks if you wish.
- Someone can stay with you on the day of your treatment (maximum one companion per person as per the public health guidelines).



## THE MORNING OF THE TREATMENT

- Have a light breakfast unless you were given specific instructions not to eat or drink during your appointment reminder.
- Do not wear any jewels.
- Take your morning medications and bring those to be taken in the afternoon.
- Bring an up-to-date list of your medications provided by your pharmacist.
- Have your health insurance card and hospital card ready.

# YOUR ARRIVAL: 7:30 a.m.

Plan an entire day for the treatment



## GREETING BY STAFF



45 minutes

- Staff will explain the procedures and answer your questions.
- Your vital signs will be taken.
- A venous line (small, flexible tube inserted into a vein) will be installed.
- You will be administered medications.



## SECURING OF STEREOTACTIC FRAME



5 minutes

- The skin surface at the pin sites will be anesthetized.
- Four screws will secure the frame to your head.
- The stereotactic frame helps to prevent all head movements during the procedure.

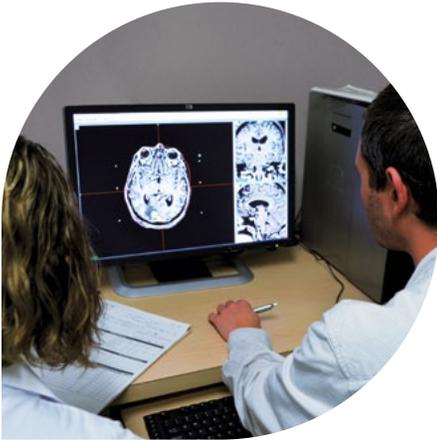


## IMAGING



45 minutes

- Before the treatment, with the frame attached, images will be taken of your head and brain.
- Magnetic resonance imaging (MRI) is the preferred examination method before your treatment to obtain images of the brain.
- Additional imaging may be required depending of your specific condition.



### TREATMENT PLANNING



45 minutes

The medical team will use the radiology images to plan your treatment in order to determine:

- the treatment site;
- the irradiation time required.

Meanwhile, you will wait and can rest and eat with the person accompanying you.



### GAMMA KNIFE TREATMENT



Variable time

- You will be positioned on the treatment table and your frame will be secured to the device.
- You will remain awake while a technologist monitors you with a camera and microphone system.
- Only the treatment site will receive radiation.



### ONCE THE TREATMENT IS COMPLETED



30 minutes

- The frame will be removed.
- You will remain in the observation room for 30 minutes.
- You will be evaluated by the physician.

## YOUR DISCHARGE: 4:00 p.m. or later

# BACK HOME



Have someone stay with you the first night. Sleep with your head raised for a few nights thereafter to prevent headaches.



If you have headache, take two 500 mg acetaminophen tablets (Tylenol®) every six hours until your condition improves.



Remove your bandages the morning after the treatment. Make sure you keep the wounds clean and dry.



If you notice bleeding at the pin sites:

- apply pressure for approximately 5 minutes with the gauze you received;
- put a towel on your pillow to avoid staining it.



Wait for 48 hours before washing your hair. The water you use to wash your hair might be reddish due to blood clots in your hair due to the securing of the stereotactic frame.



If you notice swelling, bruising, pain, or rings caused by the anesthetics and pressure applied while installing the frame, apply cold compresses for 10 minutes every hour.



Wait for 48 hours before driving your vehicle.

**It is recommended that you wait one or two days (depending on your condition) before resuming your regular activities.**



## IF YOU HAVE ANY QUESTIONS OR CONCERNS REGARDING YOUR HEALTH:

To contact the Gamma Knife radiosurgery department team, dial **819-346-1110, ext. 14602 (press 1)**, Monday to Friday from 8:00 a.m. to 3:30 p.m.

Outside regular hours, **call Info-Santé (811)**.

Consult immediately if you have nausea with vomiting, intense headache, convulsions, or seizures.

**Go to your nearest emergency department.**

## Plan ahead:

- A cold meal
- Your hospital and health insurance cards
- Your medications for the day
- An up-to-date list of your medications provided by your pharmacist
- A designated driver to accompany you home
- Recreational item (books, iPod®, tiny games, etc.)

- Follow the specific instructions recommended during your consultation:

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## Your physician:



**Dr. David Mathieu,**  
MD FRCS(C)  
Neurosurgeon



**Dr. Christian Iorio-Morin,**  
MD FRCS(C)  
Neurosurgeon



**Dr. Jocelyn Blanchard,**  
MD FRCS(C)  
Neurosurgeon

## TESTIMONY

**“The team reassured me upon my arrival. The installation of the frame is somewhat unnerving, but the advice given by the professionals alleviated my concerns. It felt as though I hadn’t left my native Gaspésie. The team is composed of warm and friendly people who oversee the well-being of the patient. Contrary to my initial fears, I never felt like a number. I was treated with humanity by humane persons. Thank you!”**

Jean-David Philippe,  
patient treated with the Gamma Knife



# A TEAM OF SPECIALISTS TO TAKE CARE OF YOU

The CIUSSS de l'Estrie – CHUS is a leader in brain radiosurgery and since 2004 has been the only hospital in Québec with a Gamma Knife. Brain radiosurgery involves the non-invasive treatment of intracranial pathologies, including malignant tumours (especially brain metastases) and benign tumours (including meningioma, vestibular schwannoma, and pituitary adenoma), vascular malformations, and facial pain such as trigeminal neuralgia. The latest generation, Gamma Knife Perfexion™, acquired in 2011, is considered the intracranial radiosurgery standard as it enables faster, more accurate, and more effective treatment.

Every year, patients from every region of Québec and from other provinces are treated at the institution. They benefit from the unique expertise of a multidisciplinary team composed of neurosurgeons, radio-oncologists, physicians, nurses, and radio-oncology technicians.

## TO LEARN MORE:

[santeestrie.qc.ca/en](http://santeestrie.qc.ca/en) | [Care and services](#) | [Topics](#) | [Cancer](#) | [Gamma Knife Radiosurgery Treatment](#)



## GAMMA KNIFE RADIOLOGY, RADIO-ONCOLOGY DEPARTMENT

### HÔPITAL FLEURIMONT

3001 12<sup>e</sup> Avenue Nord  
Sherbrooke, Qc J1H 5N4

**Telephone:** 819-346-1110,  
ext. 14602 (press 1)

**Fax:** 819-348-3799

### ACCESS:

Use the main entrance, take elevator 7 or 8, descend to the hospital basement, and go to the reception desk (opens at 7:30 a.m.).

Centre intégré  
universitaire de santé  
et de services sociaux  
de l'Estrie – Centre  
hospitalier universitaire  
de Sherbrooke

Québec 

This booklet has been made available thanks to funding from Fonds Brigitte-Perreault, dedicated to providing safe, quality care.

  
Fondation  
du CHUS | Fonds  
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DÉDIÉ À LA QUALITÉ ET À LA SÉCURITÉ DES SOINS

### Authors

Gamma Knife radiosurgery department team

### Revision and layout

Service des communications

Direction des ressources humaines, des communications et des affaires juridiques

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Centre hospitalier universitaire de Sherbrooke, 2021

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February 2021

(1-6-71589)