



RADIATION THERAPY INFORMATION GUIDE

High-dose-rate brachytherapy
for prostate cancer

Name of my radiation oncologist: _____

Department phone no.: **418-691-5264**

Consult this document on: www.chudequebec.ca/Curietherapie_prostate

Introduction

Your health condition requires you to have brachytherapy.

This guide contains information about:

- what brachytherapy is;
- the steps involved in planning your treatments;
- what will happen during your treatments;
- the possible side effects;
- recommendations during and after the treatments.

The centre

The radiation oncology centre at CHU de Québec-Université Laval is a supraregional centre with a mission to:

- provide quality treatments;
- promote research;
- participate in student training;
- evaluate new technologies.

You may be asked to participate in research projects during your treatments. You may also be seen by students during your appointments. Students are always closely supervised by a health professional in their field.

Your team

- The **radiation oncologist** (your doctor) will meet you for a consultation. After reviewing your file, speaking to you and examining you, the doctor will decide whether you are a candidate for brachytherapy. He will oversee every step of your treatment.
- The **nurse** will be involved in assessing your physical and mental condition and will manage your symptoms during your treatments.
- **Radiation therapists** will be there to support you during your brachytherapy treatments (from preparation to administration).
- **Medical physicists** will calculate your brachytherapy dose.
- Depending on your condition, you may need to see other team members before or after your brachytherapy treatments, including a **nutritionist, social worker, psychologist** or **pivot nurse**.



What is high-dose-rate brachytherapy?

High-dose-rate brachytherapy (HDR-BT) is a procedure that involves placing a high dose of radiation directly into the tumour to preserve as much of the surrounding normal tissue as possible. The objective is to maximise the control of the disease with minimal side effects.

In HDR-BT, catheters are placed directly into the tumor or in the area where doctors think there is a risk of recurrence. The catheters are then connected to the treatment device.

The device contains a radioactive source of iridium-192. The radioactive source moves to different positions inside the applicator. At the end of the treatment, the source returns to its sealed capsule. This device lets us administer a very high dose of radiation in a short period of time.

You will not become radioactive after your treatments, and there is no danger to anyone around you.

Brachytherapy and other treatments

For some types of tumours, brachytherapy is used on its own. In other cases, it's used in combination with external radiation therapy and/or hormone therapy.

The treatment choice is based on accepted practices and a joint decision between you and your doctors.

First visit



Review of your medical file

You will not have any treatment at your first radiation oncology visit. Your radiation oncologist will review your medical file and examine you, after which he will prescribe the appropriate treatment.

At this visit, it's important to tell your doctor if you have an implantable electronic or other medical device (e.g., pacemaker, insulin pump, hearing aid). To avoid malfunction, manufacturers recommend removing some of these devices during pre-treatment examinations or treatments.

Treatments

The number of treatments depends on the assessment of your health condition and your file. **Most often, only one treatment will be needed.**

If you are receiving both external radiation therapy and brachytherapy, your radiation oncologist will decide on the best time for your brachytherapy treatments.

You will meet other patients during your visits, but it's important to remember that your treatments are personalized and tailored to your individual needs.



Pre-treatment steps

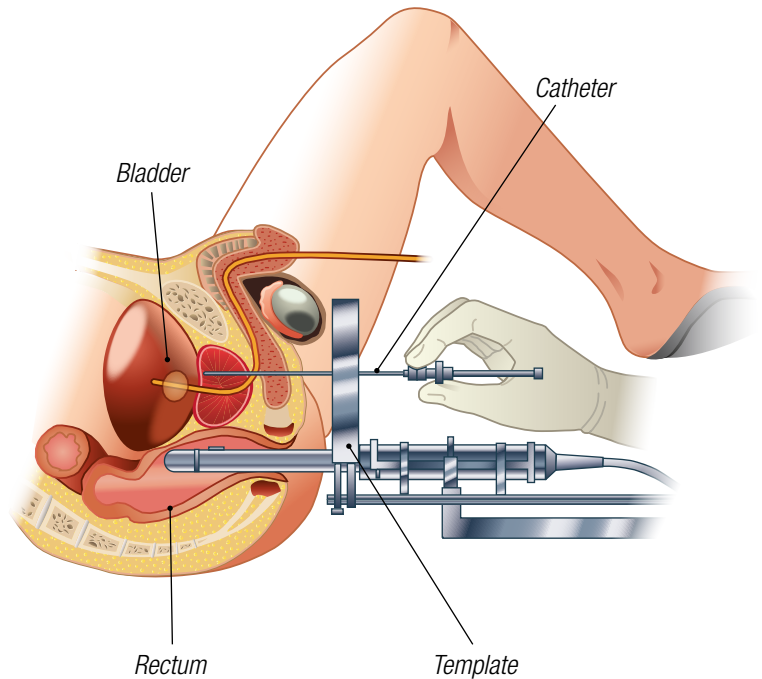
- During the initial consultation, the nurse will meet with you to collect your medical information. Based on that information, she will let you know whether you need any other tests before your brachytherapy.
- The nurse will give you instructions to follow for the brachytherapy procedure.
- The pre-op team will call you to schedule the tests and give you the instructions to follow before the procedure. You may need to see other specialists before your treatments.

What will happen on treatment day

*** Plan to spend the entire day at the hospital. Depending when your procedure takes place, you will leave the hospital in the late afternoon or evening.**

You will need someone to return home with you.

- You will need to do two enemas (bowel preparation) at home, 90 minutes before your appointment.
- A urinary catheter will be inserted at the start of the procedure, while you are under anesthesia. After the procedure, the urinary catheter will be removed or left in place, depending on the nurse's assessment. If you go home with the catheter, it will be removed the next day.
- To reach the prostate, catheters must be inserted through the perineum (space between the scrotum and the anus). This procedure is usually performed under general anesthesia. You will not feel any pain when the catheters are inserted.
- Once the catheters have been inserted, you will have a CT scan in the brachytherapy room to check the position of the catheters and calculate the dose. A MRI can be done to help us locate the area to be treated.
- The radiation will then be delivered into the prostate through the catheters.
- The catheters will be removed by your radiation oncologist once the treatments are completed.
- After the catheters are removed, you will be kept for observation until you're ready to leave the hospital.



*** There will be times during the day when you will have to wait, so you should consider bringing a book, music, etc.**



Side effects

Brachytherapy is a treatment that can affect normal tissue and cause side effects.

The side effects of brachytherapy can also be affected by external radiation therapy. The effects of this other treatment will not be discussed here.

These side effects don't always happen. Their seriousness depends on the person, the type of disease, the dose of radiation, and the area treated.

Here is a list of possible side effects and when they tend to appear

Immediately and in the weeks following brachytherapy

Most common side effects

- Blood in the urine
- Bruising on the testicles and penis
- More frequent urination with or without burning
- More frequent urination at night
- Anal irritation with loose stools and/or blood in the stools

Rare side effects

(≤ 5 in 100 patients: ≤ 5%)

- Complete urinary blockage requiring a urinary catheter
- Urinary tract/prostate infection

In the months or years following brachytherapy

Possible side effects

- Impotence
- More frequent urination
- Decreased urinary stream
- Change in bowel habits

Less common side effects

(≤ 5 in 100 patients: ≤ 5%)

- Blood in the urine
- Blood in the stools

Rare side effects

- Narrowing of the urethra (leading to decreased urinary stream or urinary tract obstruction)

Very rare side effects

(< 1 in 1,000 patients: < 0.1%)

- Cancer caused by radiation therapy (the benefits of treatment outweigh this very low risk)
- Opening (fistula) between the urethra and the rectum



418 691-5264

Rarely, other side effects may occur that we cannot predict.

However, if you develop side effects that are causing discomfort, feel free to contact us.



Medical follow-up

You will be given the date of your next appointment with your radiation oncologist before you leave the hospital.

Recommendations following treatments



- You must not be alone for 24 hours after your treatment.
- The sedation may cause difficulty concentrating. It's recommended you avoid driving and operating machinery for 24 hours.
- Once you're back at home, you can gradually resume your normal activities (eating when you're hungry and taking your usual medications), unless your doctor says otherwise.
- You will need to drink 1 to 1.5 litres (4 to 6 cups) of water per day for the next few days.
- Avoid alcohol for 48 hours after your treatment.
- Avoid contact sports and intense physical activity. Avoid lifting heavy weights (over 20 lb.) for at least 1 week after your treatment.
- You can take a bath or shower the day after the procedure. Avoid swimming for 72 hours.
- Remember to take the prescribed antibiotic the day after the procedure, at the specified time.
- If you feel pain, you can take Tylenol (or another pain reliever, as prescribed by your radiation oncologist).
- To reduce the risk of urinary tract obstruction, remember to take the medication recommended by your radiation oncologist on the evening of the procedure and to keep taking it until your doctor tells you to stop.
- You may notice blood in your urine for a few days after the treatment. If you're worried, you can call us during business hours or go to the nearest Emergency department.
- If you have a urinary tract obstruction or notice blood clots or large amounts of blood in your urine, go to the nearest Emergency department and tell them you had brachytherapy on your prostate.
- If you develop a fever in the week after your treatment, call us or go to the nearest Emergency department and tell them you had brachytherapy on your prostate.



Radio-oncologie

This guide contains recommendations consistent with the scientific information available at the time of publication in september 2023. However, these recommendations are no replacement for medical advice. If you have any questions, please speak to your health provider.

This document may not be reproduced, in whole or in part, without written authorization from the CHU de Québec-Université Laval.



The translation of the Information Guides is courtesy of the User committee of CHU de Québec-Université Laval.

© CHU de Québec-Université Laval, 2023

09/23, produced by the communications department

Printed on FSC®-certified, ECOLOGO®-certified, and chlorine-free



100 % post-consumer recycled paper



Manufactured using biogas energy