



# RADIATION THERAPY INFORMATION GUIDE

External radiation therapy  
for prostate cancer

Name of my radiation oncologist: \_\_\_\_\_

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

Consult this document on: [www.chudequebec.ca/Radiotherapie\\_prostate](http://www.chudequebec.ca/Radiotherapie_prostate)

# Introduction

Your health condition requires you to have radiation therapy.  
This guide contains information about:

- What radiation therapy is;
- The steps involved in planning your treatments;
- What will happen during your treatments;
- The possible side effects;
- Recommendations during 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 visits. 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 radiation therapy. They 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 radiation therapy treatments (from preparation to administration).
- Depending on your condition, you may need to see other team members before or during your radiation therapy treatments, including a **nutritionist**, **social worker**, **psychologist** or **pivot nurse**.

## What is radiation therapy?

Radiation therapy is a treatment that uses high energy x-rays or electrons to treat tumours (benign or malignant).

A machine called a linear accelerator is placed near your body. This machine gives a predetermined dose of radiation at the part of the body where the tumour is located. It can be moved in different directions.



Your treatment team checks the machines daily to make sure they're accurate and working properly.

The goal of the treatment is to destroy the cancer cells, while protecting the surrounding healthy tissue as much as possible.

Radiation therapy is painless, odourless and invisible. As soon as the treatment is over, the machine stops releasing radiation. You will not become radioactive after your treatments, and there is no danger to anyone around you.

## Radiation therapy and other treatments

For some types of tumours, radiation therapy is used on its own. In other cases, it is used in combination with surgery 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*

In most cases, 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 they will prescribe the appropriate treatment.

It's important to know that other steps need to be taken before your first treatment, which explains the delay between your first appointment and your first 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.





## Second visit

### *Planning the treatment*

These steps take anywhere from 3 to 4 hours.



#### 1. CT scan

A CT scan will be done to pinpoint the area to be treated. It will give measurements to decide the best way to administer the radiation needed to treat your tumour.

**You must lie completely still during the CT scan.**

Your doctor may order a CT scan with contrast (iodine injection). If so, you'll be given the instructions for this test. Contrast fluid may be injected through the urinary tract.

The position you're placed in for the test is the same one that will be used for all your treatments. So, it's important to mention any discomfort or pain.

Marks will be drawn on your skin. They will be used as landmarks by the radiation therapists during your treatments. Don't worry—the marks are often bigger than the area to be treated.

- **The red markings are temporary.** You will need to keep them on throughout your treatments. Do not remove them, as they are needed to ensure accuracy.

#### **A few tips:**

- When washing, do not place your marks directly under the running water.
- Pat yourself dry with a towel. Do not rub the skin.
- The ink will stain clothing.

**If the marks look like they're fading,** call the radiation oncology department. We will tell you what to do.

- **A few dots can be tattooed on your skin.** These are permanent, so there's no risk of them being washed off.



#### 2. MRI

A MRI can be done to help us locate the area to be treated.

**You must lie completely still during the MRI.**

#### 3. Pre-treatment waiting period

After those exams, there will be a delay while the team plans your treatment. The radiation therapists will let you know how long this will take. It may take longer if your doctor is waiting for test results. In all cases, we will adhere to the standards set by the Ministère de la Santé et des Services sociaux.

You will be notified by phone of the date and time of your first treatment. Treatments can begin any day of the week.



## Treatments

### Number of treatments required

The number of radiation therapy treatments depends on the assessment of your health condition and your file. This number is not a reflection of the seriousness of your cancer.

Treatments are usually given daily, five days a week, from Monday to Friday. They last from 1 to 8 weeks, depending on the type of cancer.

Your machine may be out of commission one day or two for maintenance. In that case, you will be notified a few days in advance.

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.

### During the treatment

You will always be greeted by radiation therapists. They are familiar with your treatment plan. They will take the time to answer your questions.

Based on the marks on your skin, you will be lined up under the machine in the proper position.

If you were told to come to your treatments with a full bladder, it's important you follow the instructions you received at your planning appointment (CT scan). If you have difficulty following the bladder instructions, please do not hesitate to talk to the technologists responsible for your treatment.

For accuracy reasons, it's important to lie very still during the treatments. However, you can breathe normally.

The radiation therapists will leave the room while the machine is running. They will be in an adjacent control room watching you on a screen. They can hear everything you say and speak to you over an intercom.

The radiation lasts only a few minutes. However, it takes about 20 minutes to get set up.

Verification images are taken at each treatment to check your position. They are not meant to see how your tumour is responding to treatment.



## Side effects

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

*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

#### *A few days after the start of the treatments*

Most of these side effects are temporary and will disappear within a few weeks after the radiation therapy.

##### **Most common side effects**

- Fatigue
- Mild-to-severe diarrhea
- Pain and/or burning during bowel movements
- False urges and urgent need to defecate
- Abdominal cramps
- More frequent urination
- Pain or burning during urination
- Permanent infertility

*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.*



**418 691-5264**

#### *In the months or years following radiation therapy*

These effects can be **permanent**.

##### **Most common side effects**

- More frequent bowel movements
- More frequent urination
- Erectile dysfunction
- Permanent infertility

##### **Less common side effects**

(< 5 in 100 patients: < 5 %)

- Diarrhea or loose stools
- Burning during urination
- Blood in the stools or urine

**For patients who have had a prostate ablation procedure:**

- Increased risk of urinary incontinence

##### **Rare side effects**

- Bowel obstruction that could require surgery
- Risk of hip fracture

##### **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

## Medical follow-up

During your treatments, your radiation oncologist will meet with you about once a week. No appointments are necessary. A schedule is posted in the waiting room each week indicating the day your radiation oncologist will see you. This schedule will be explained at your first treatment.

## Recommendations during treatments

### *General advice*

- Tell the radiation therapist, the nurse or the radiation oncologist if you develop any side effects.
- Make sure you get plenty of rest but still stay active.
- Maintain your weight. If you notice that you've lost weight, it's important to mention this to your doctor.
- If you are receiving radiation therapy after prostate surgery, ask about Kegel exercises to reduce the risk of urinary incontinence.



### *Nutrition*

- Here are some general tips to reduce the amount of air in your intestines and minimize flatulence, which will make your treatments easier.

**This is not long-term advice; follow it only for as long as you're undergoing radiation therapy.**

1. **Eat slowly and chew your food well.** When you eat fast, you swallow a lot of air, which ends up in your intestines.
  2. **Ingest less air:** Avoid chewing gum and drinking sparkling water, beer, sparkling wine and other carbonated beverages. You should also avoid drinking through a straw.
  3. **Limit gassy and fermentable foods:**
    - **Certain vegetables:** onions, garlic, radishes, peas, corn, turnips and rutabaga
    - **Cruciferous vegetables:** cabbage, brussels sprouts, cauliflower, broccoli, sauerkraut
    - **Certain fruits:** prunes, plums
    - **Legumes:** lentils, chickpeas, kidney beans, pea soup, baked beans
    - **Sorbitol:** sorbitol is found in some sugar-free products, such as sugar-free candy, chocolate, cookies, etc.
  4. **Avoid becoming constipated.** It's important to have a bowel movement as soon as you feel the urge. Good hydration and an active lifestyle can also reduce the risk of constipation. If the radiation oncologist prescribed medication to keep you regular, it's important to respect the dosage, start taking the medication 48 hours before the planning appointment (CT scan), and stop taking it at the end of the treatments (or before, if you develop diarrhea).
- The nutritionist will meet with you as needed.
  - We recommend drinking at least 1 liter of fluid per day (spread throughout the day) to stay well hydrated during your treatment. **Please note: This guideline does not apply to people who already need to limit their water intake for medical reasons, such as those with heart failure, kidney failure, or those undergoing hemodialysis. If necessary, you can discuss this with your radiation oncologist.**



## Smoking



- You should abstain from smoking during your treatments and quit permanently afterwards. Support is available at [www.tobaccofreequebec.ca/iquitnow](http://www.tobaccofreequebec.ca/iquitnow) or by calling 1-866-JARRETE (1-866-527-7383). You can also talk to your doctor or pharmacist about other resources to help you quit.

## Notes

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## Notes

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## 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.

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