



RADIATION THERAPY INFORMATION GUIDE

High-dose-rate brachytherapy
for rectal cancer

Name of my radiation oncologist: _____

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

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

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, a tube is placed at the tumour site. The applicator is then connected to the treatment device. Placement of the applicator is not usually painful, but it can be uncomfortable.

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.

Brachytherapy is painless.

**The device does not release any radioactivity.
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 surgery, external radiation therapy and/or chemotherapy.

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 breakage, manufacturers recommend removing some of these devices during pre-treatment examinations or treatments.



Tube to be partially inserted into the rectum

Treatments

The number of brachytherapy treatments depends on your health condition and your medical file.

You may have 3 to 4 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

1. *Appointment for placement of clips at the site of the rectal tumour.*

- **The clips provide a precise visual reference** of the area to be treated.
- This appointment will take place in gastroenterology, usually the day before or the morning of your first brachytherapy treatment.
- **The gastroenterology team will give you instructions for the bowel prep.**

2. *The day before your treatment*

- The day before each brachytherapy treatment, avoid eating foods that can cause gas, such as:
 - **raw vegetables** (the crunchier they are, the more gas they cause);
 - **cooked cruciferous vegetables** (e.g., cabbage and broccoli);
 - **dietary fibre** (bran, etc.);
 - **legume** (dried peas, lentils, etc.).

What will happen on treatment day

- Follow these instructions regarding diet.
 - You can eat light meals (e.g., toast, cereal, etc.), but stop eating four hours before the treatment.
 - You can drink fluids, but stop drinking two hours before the treatment.
 - Avoid tea, coffee and dairy products.
- Do one (1) Fleet enema **1 hour before the procedure** (2 hours if needed).
 - For patients who live more than 2 hours away, the enema can be done in radiation oncology 1 hour before the procedure. You will need to arrive 1 hour before your appointment.

Brachytherapy:

*** | The whole process should take about 2.5 to 3 hours.**

- You will be placed on the table lying on your back.
- The radiation oncologist will insert the applicator into your rectum.
 - Placement of the applicator is not usually painful, but it is uncomfortable. You may be given medication to help you relax and lessen the discomfort.
- Once the applicator has been inserted, you will have imaging exams to check the position of the applicator and calculate the dose. A PET scan or a MRI can be done to help us locate the area to be treated.
- The radiation source will then be placed inside the applicator.
- After the applicator is removed, you can leave the hospital.



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 chemotherapy, external radiation therapy and/or surgery. However, the effects of these other treatments 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

During treatments

(effects related to insertion of the applicator into the rectum)

Possible effects

- Discomfort and sensitivity in the anus and rectum
- Abdominal cramps

Very rare effects

- Laceration or perforation of the rectum

A few days after the beginning of the treatments

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

Possible side effects

- Pain and/or burning during bowel movements (due to irritation of the rectum and anus, or fissures)
- Abdominal cramps
- Increased rectal discharge
- False urges and anal sensitivity
- Urgent need to defecate
- Mild-to-moderate diarrhea
- Bleeding or blood in the stools
- Vaginal sensitivity (in women)

Very rare but serious side effects

- Poor healing of the inside of the rectum or anus (ulcer)
- Perforation of the rectum
- Opening (fistula) between the bowel and another organ

In the months or years following brachytherapy

Possible side effects

- Narrowing of the rectum or anus with thinned stools and/or more difficult bowel movements
- Pain and/or burning during bowel movements
- More frequent bowel movements
- False urges
- Urgent need to defecate
- Fecal incontinence
- Mild-to-moderate diarrhea
- Bleeding or blood in the stools
- Permanent infertility
- In women:
 - Vaginal dryness
 - Permanent menopause and symptoms of menopause, such as hot flashes

Very rare but serious side effects

- Poor healing of the inside of the rectum or anus (ulcer)
- Rectal bleeding
- Opening (fistula) between the bowel and another organ
- Bowel obstruction
- Perforated bowel



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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.***



Recommendations following treatments



- Continue your normal activities after your treatments.

Smoking



- You should abstain from smoking during your treatments and quit permanently afterwards. Support is available at 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.

Medical follow-up

Most of the time, an appointment will be given with your radiation oncologist 2 weeks after the treatments. He will tell you at this time if other appointments are needed and prescribe you medication if needed.



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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