



RADIATION THERAPY INFORMATION GUIDE

High-dose-rate brachytherapy
for esophageal cancer

Name of my radiation oncologist: _____

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

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

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 **gastroenterologist** will review your file and consult with the radiation oncologist to decide whether you are a candidate for brachytherapy. He will place a catheter in your esophagus for the treatments.
- 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, inside the esophagus. The tube 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. However, the tube is inserted using a gastroscopy, often under sedation.

The device does not release any radioactivity. You will not become radioactive after your treatments, and there is no danger to anyone around you.



Tube to be placed in the esophagus.

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.

Treatments

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

You will have a total of **2 to 4** brachytherapy sessions, **one treatment per week**.

It's important to remember that your treatments are personalized and tailored to your individual needs.



What will happen on treatment day

- * The whole process should take about 4-6 hours.**
- You will need someone to return home with you.**
- A tube is inserted by the gastroenterologist. The guide is placed in the stomach and passes through the nose or the mouth. **The gastroenterology team will give you instructions to prepare for the procedure. The gastroenterologist will identify and measure the location of the start and the end of the tumour to plan the radiation therapy.**
- Imaging exams will be done to calculate the treatment dose.
- The radiation will then be delivered through the tube. This step usually takes between 5 and 10 minutes.
- After the tube is removed, you can leave the hospital.



Side effects

Brachytherapy 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 to a few weeks 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 a feeling of food being stuck in the throat when eating, possibly requiring placement of a feeding tube
- Esophageal pain
- Reflux and heartburn

Less common side effects

- Irritation of the airways (trachea, which is located just in front of the esophagus) with coughing
- Bleeding in the esophagus

Very rare but serious side effects

- Opening (fistula) between the esophagus and another organ

In the months or years following treatment

Possible side effects

- Narrowing of the esophagus
- Pain and a feeling of food being stuck in the throat when eating
- Burning in the esophagus (ulcer)
- Bleeding in the esophagus

Very rare but serious side effects

- Opening (fistula) between the esophagus and another organ
- Perforation of the esophagus



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

Recommendations during and after the treatments

- The sedation may cause difficulty concentrating. It's recommended you avoid driving and operating machinery for 24 hours.
- Continue your normal activities after your treatments.



Smoking

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