



RADIATION THERAPY INFORMATION GUIDE

External radiation therapy for
breast cancer

Name of my radiation oncologist: _____

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

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

Introduction

Your health condition requires you to have radiation therapy.

This pamphlet 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 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 radiation therapy. 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 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 chemotherapy.

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



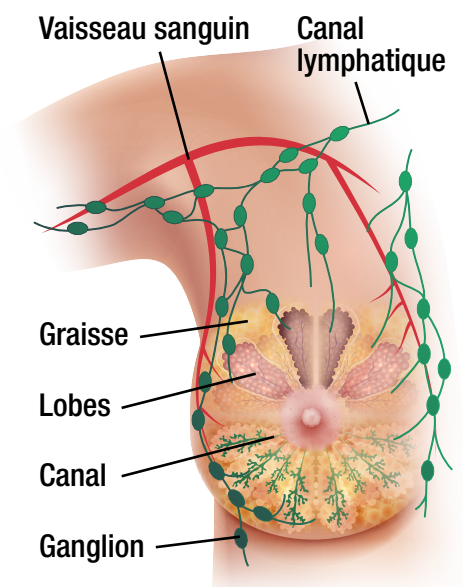
First visit

Review of your medical file

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 he 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 your treatment

These steps take anywhere from 40 to 75 minutes.



1. Molding (if needed)

The radiation therapists will help you find the most comfortable position for your treatments. This is the same position that will be used for all your treatments. Therefore, it's important to mention any discomfort or pain.

2. 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 told how long you need to fast before this test.

Marking

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.

There are two types of marks: **tattoos** and **red ink markings**.

- **The tattoos** are permanent, so there's no risk of them being washed off.
- **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.



3. Pre-treatment waiting period

After the CT scan, 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 6 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.

For accuracy reasons, it's important to lie very still during the treatments. However, you can breathe normally, unless you've been told your treatment will use the deep inspiration breath hold technique. You can watch a video of this technique at: www.chudequebec.ca/patient/maladies,-soins-et-services/traitements-et-examens/traitements/radiotherapie-par-technique-d-inspiration-bloquee.aspx

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.



Some accessories may be used to help you stay in this position.



Side effects

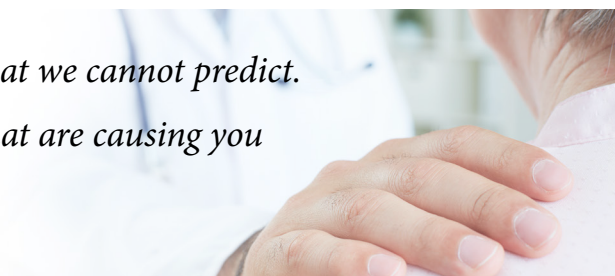
Radiation therapy is a treatment that can affect normal tissue and cause side effects.



418 691-5264

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

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



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 and in the following two weeks

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

- Redness, irritation and dryness of the skin in the treated area (like a sunburn); this may lead to loss of the superficial layer of the skin (peeling)
- Swelling, swollen breast and/or chest wall
- Discomfort, pain in the breast and/or chest wall
- Fatigue

At the end of the treatments and within 6 months:

- Tanning in the treated area
- Swollen breast and/or chest wall
- Discomfort, muscle soreness, pain in the breast and/or chest wall can fluctuate for several months

Rare side effects

(1 in 100 patients: 1%):

- Lung reaction:
 - Can appear in the 6 months following radiation therapy
 - Cough, fever, shortness of breath
 - Disappears spontaneously after a few months or with medication (for uncomfortable side effects)

Very rare side effects

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

- If treated for left breast cancer:
 - Irritation of the covering of the heart (pericarditis)

In the months or years following radiation therapy

Probable side effects:

- Change in breast appearance:
 - Firmer breast
 - Smaller or larger breast
 - Paler or darker nipple or skin
- Discomfort, pain in the breast and/or chest wall
- Chest wall less elastic
- If breast prosthesis: in addition to the side effects described above, risk of formation of a capsule making the prosthesis firmer and more uncomfortable

Rare side effects

(1 in 100 patients: 1%):

- Rib fracture
- Appearance of blood vessels on the surface of the skin
- If treated for **left** breast cancer:
 - Increased risk of heart disease

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

Side effects if lymph nodes are treated:

- Increased risk of swelling in the arm and hand (lymphedema) on the treated side
- Increased risk of shoulder stiffness

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. If you have completed the radiotherapy treatments: you can contact us at 418-691-5264
- 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.
- Bra: you may or may not wear a bra (of your choice).
- You can continue the exercises recommended during and after radiation therapy. You can see the exercises at: <https://www.chudequebec.ca/patient/maladies,-soins-et-services/traitements-et-examens/traitements/programme-d-exercices-pendant-et-apres-la-radiothe.aspx>
- **If you have the potential to get pregnant, use an effective method of birth control during your treatments.**

Hygiene and skin care



- Wash the treated area (in moderation) with warm water and a mild, unscented soap. Do not remove the marks on your skin; they are very important to ensure the quality and accuracy of your treatments.
- Keep the treated area dry. Do not rub the treated skin with a rough towel; pat dry with a soft towel instead. In specific situations, the radiation oncologist will recommend air drying.
- Avoid rubbing the treated areas. Try to wear loose-fitting, cotton clothing. Regularly expose the treated area to the air.
- Do not apply wet compresses to the treated area to soothe pain or itching.
- Apply a fragrance-free moisturizer at least once a day to the treated area. Do not apply cream on your markings as it can erase them. There's no reason to refrain from applying cream before coming for your treatments. You also don't need to wash off any cream before your treatments.
- Avoid shaving the armpit during the treatments. If you must, do so carefully to reduce the risk of irritation and cuts (with a razor or electric shaver).
- It's recommended you use deodorant instead of antiperspirant during the treatments. There's no reason to refrain from applying it before coming for your treatments. (If you're not satisfied with deodorant, you can use antiperspirant.)

- The red marks can be removed with an unscented moisturizer at the end of the radiation therapy treatments. Depending on the intensity of your skin's reaction to radiotherapy, a specific dressing or cream may sometimes be prescribed.

*** | Unless otherwise indicated by your doctor, you can gradually resume your normal personal hygiene routine two weeks after your treatments.**

Sun exposure and swimming

- Do not expose the treated area to the sun during treatments. After the treatments, you should use sunscreen to protect your skin if exposing it to the sun.
- Swimming:
 - If your skin is not irritated/red, you can go swimming.
Make sure your markings don't come off.
 - If your skin is irritated, you can still go in the water, but don't get the treated area wet.
- Spa :
 - Not recommended during treatments and within two weeks after treatments or until skin irritation has resolved.



Smoking

You should abstain from smoking during your treatments and quit permanently afterwards. Support is available at <https://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.



*** | For more information on breast cancer, you can also consult the Breast Disease Center website: www.maladesdusein.ca**



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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