

# RADIATION THERAPY



In this section, you will learn about:

- What is radiation therapy
- External beam radiation therapy
- What to expect from your CT planning appointment
- What to expect from your treatments
- Your radiation therapy schedule
- Frequently asked questions



## My Radiation Treatment Overview

You will be receiving radiation treatment to your:
The type of cancer you have is a(n):
The radiation is usually given every day, Monday to Friday, for a total of _____ treatments*. Treatments are given from 7:30 a.m. - 6:30 p.m. <i>*Your total number of treatments can change during the planning process. The number of treatments will be confirmed on your first day of treatment.</i>
Your radiation oncologist (radiation doctor) is:
Your primary care nurse is:
<b>APPOINTMENT INFORMATION:</b>
Your radiation CT planning appointment (CT Sim) is on (DATE:) ..... <i>You may receive a phone call with your appointment. On the day of your appointment, please go to Level 1 of the cancer centre and check in at Radiation Therapy Reception.</i>
Other appointments needed to plan your radiation treatment: <input type="checkbox"/> None 1..... (DATE:)..... 2..... (DATE:).....
You will be starting radiation treatment on (DATE:)..... <i>You usually receive your start date and time at your planning appointment.</i>
Other appointments needed to plan your radiation treatment: <input type="checkbox"/> Take all of your regular medications, as prescribed: 1..... 2.....

## What is Radiation Therapy?

Radiation therapy is a type of cancer treatment that uses high-energy radiation to destroy cancer cells.

Almost half of cancer patients will get some type of radiation therapy. It may be used alone or together with surgery, drug therapy, hormone therapy, or other treatments.

### How Does Radiation Therapy Work?

- Radiation is targeted at the cancer cells.
- Cells that are very active, such as cancer cells, are usually more sensitive to radiation.
- Normal cells in the treatment area may also receive some radiation. This is why you may have side effects.
- Normal cells are able to recover from the damage better than the cancer cells.

### How is Radiation Given?

There are two different ways to deliver radiation:

1. External beam radiation therapy.
2. Internal radiation therapy (brachytherapy) - radiation is placed inside your body or near the tumour.

This section will focus on external beam radiation therapy. If you are receiving brachytherapy, you will be given more information by a member of your health care team.

## External Beam Radiation Therapy

External beam radiation therapy is one way to deliver radiation from outside the body.

It is called a **local treatment** because the radiation is used for one specific part of the body. The radiation comes from a large machine called 'Linac'.

Usually, patients get radiation once a day, five days a week, Monday through Friday. The number of treatments depend on your type of cancer, where it is in your body, your general health, and other factors.

### What will I hear and feel?

- You will hear a buzzing sound when the machine is on.
- The machine moves around you but does not touch you.
- You will not feel anything, just like when you get an x-ray.
- Radiation treatments will not hurt you.



## Side Effects from Radiation Therapy

The side effects you have from radiation therapy depend on the type of radiation you have, how much radiation you get, where the radiation is targeted, and your overall health. Different people may have different side effects even if they are being treated in the same area. You only get radiation side effects in the area of treatment.

Your health care provider will discuss what side effect you can expect and may provide you with information to take home. You can also see the 'Side Effects' section for more information.

### When will the side effects from radiation therapy start?

Most side effects start gradually, usually toward the end of the second week of treatment. Side effects will continue throughout the rest of your treatment. They will slowly disappear about a month after your treatment is done.

## What to Expect at Your CT Planning Appointment

Your first visit is called your **CT planning appointment** or **simulation**.

During your **simulation**, your treatment is planned using a machine called a **CT scanner**. The CT scanner is used to outline the area for radiation treatment using x-rays. If you were given special instructions to follow before your CT planning appointment, please be sure to follow them.

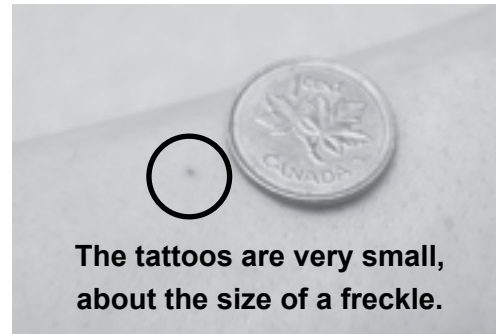
### On the day of your CT planning appointment:

- Check-in at the radiation reception desk, located on Level 1.
- A radiation therapist will take you to the CT scanner. You may be asked to change and take off any jewelry within the treatment area.
- You will be asked to lie on the simulator bed in the same position as you will be in for your treatment.
- If you are receiving treatment to your breast, chest or abdomen, you may have to raise your arms over your head. Practise this at home laying on a bed or couch with your arms over your head, working your way up to 20 minutes. It is helpful to do this multiple times in the days before your planning appointment.
- To help you stay still and feel more comfortable during your treatments, the team may make you a special piece of equipment. This may be a **mask** or a **custom pillow** for your body depending on the area being treated.

Your CT planning appointment usually takes 1 hour.



- A radiation therapist will put some marks on your skin with a marking pen. Since these marks will wash off, permanent marks or tattoos need to be made.
- These tattoos are very small and are made using a small sterile needle. You will feel a slight pinch when your tattoo marks are made. These tattoos are used to help position you and will not come off when bathing or showering.



### What happens after my CT Planning appointment?

Information from your CT planning appointment and your completed diagnostic tests will help your radiation oncologist decide exactly where the radiation will be given and how much radiation each area of your body will receive. This planning process makes sure that the targeted areas receive the necessary dose of radiation and that the surrounding organs receive the minimum amount in order to reduce damage. The total planned dose will be spread out over several radiation treatments so that you only receive a small dose each day.

A team works with the radiation oncologists to create your own individual treatment plan. This is a very complicated process and it can take many days to develop your plan. This process usually takes about 2 weeks. Your radiation plan is unique to you and includes information such as the position of the machine, radiation dose, strength of the dose and shape of the radiation beam. Several quality checks are done to make sure that you receive the best possible treatment.

After your CT Planning appointment, you will be given a time for your first treatment or you will receive a phone call with the appointment date and time. You will get a phone call within 2 weeks of your planning appointment.

### What to Expect for Your Treatments

On the day of your first treatment, plan to be at the cancer centre for about 1 hour. After your first treatment, the radiation therapists can give you a better idea of how long your treatments will take.



- Remember to complete any preparations beforehand, such as filling your bladder, that you were told to do at your planning appointment.
- Check-in at the radiation reception desk, located on Level 1.



- You will be given a pager and asked to sit in the waiting room.
- When your pager goes off, a radiation therapist will be waiting at the reception desk to meet you.



- You may be asked to change into a gown or hospital pants just like you did at your radiation planning appointment.



- The radiation therapists will bring you into the treatment room and position you on the table.
- You will be asked to lie down in the same position as you were during CT simulation.
- Staff will help make you as comfortable as they can. Try to stay still and breathe normally.

- The therapists will leave the treatment room and go to the control room. They will review the information from your treatment plan and take another image to make sure that none of your organs have shifted since the last image. They will make any necessary adjustments at this time.
- The treatment usually takes 15-30 minutes. Most of the time is spent getting you into the correct position. The machine is usually on for less than 5 minutes and you must remain still the entire time. The machine will move around you in two arcs, counterclockwise and clockwise to deliver your required daily dose.
- The therapists will be watching you the entire time through a video monitor and they can stop the radiation at any time, if needed.



### What will the rest of my treatment days be like?

Your treatment is the same every day. A team of radiation therapists will monitor your well-being and be prepared to answer any questions you have.

### Why do I have more than one treatment?

Radiation is similar to a drug prescription. This means that the dose of radiation may be spread over a number of days. The number of treatments is determined by the radiation oncologist. It depends on many factors such as your type of cancer, where in your body you are having treatment and the goal of the radiation treatment. The number of treatments is not an indicator of how severe your cancer is.



### Patient Review Clinic

You will be seen by a nurse in the **Patient Review Clinic** while on treatment. Your Radiation Oncologist or another physician from your team may be at some of these appointments. Your Radiation Oncologist will determine how often you need to come to the Patient Review Clinic while you are on

treatment. While you are on treatment, you can also schedule an appointment

in this clinic as needed (ie. because of side effects related to your treatment). At these appointments, you will be able to talk about any concerns you have with your treatment or side effects. Please write down any questions that you may have and bring them to your review appointment.

### Some things you might want to talk about during your patient review appointments are:

- Questions about your treatment
- Side effects from radiation therapy
- Prescription renewal (for prescriptions related to your treatment/side effects)
- Coping with treatment
- Available support systems

### Radiation Therapy Appointments



#### LRCP Radiation Hours:

Monday-Friday from 7:30 a.m. - 6:30 p.m.

- Your appointment times **will not** be the same each day.
- You will get a schedule every week.
- The time of our schedule is your treatment time. Please be ready before your appointment begins.

Coming in every day for treatment is a big time commitment for you. The following questions and answers may help you learn more about how radiation therapy appointments are booked.

### How are Appointments Booked?



Many factors affect the scheduling of appointment times. On the first day of treatment, the radiation therapist will confirm the number of treatments ordered and the scheduled end date. You will be asked to about times of day that work best for you to help us schedule your appointments. However, we cannot always guarantee that your

preferred appointment schedule will be possible due to the number of patients and the coordination required with other medical appointments.

Call the radiation therapy reception desk if you need to change your appointment. Please give the booking clerks as much notice as possible.

## Who Do I Call With Concerns?

### Regular Business Hours:

Call the radiation reception desk and they will direct your call to the right person on your health care team.

**If it is after hours, a holiday, or on a weekend,** call CAREChart@home after-hours nursing line (1-877-681-3057), your family doctor, Telehealth Ontario or go to your nearest Emergency Department.



## Frequently Asked Questions

### Can you tell me if the treatments are working?

No, your radiation therapy team cannot tell you if treatments are working while you are on treatment. Radiation takes time to work. It keeps destroying cancer cells for up to two weeks after you have finished your treatment. You will see your radiation oncologist for a follow-up visit to talk about how well you responded to treatment.

### Am I radioactive?

No, you are not radioactive or dangerous to family and friends.

### Can I smoke?

It is recommended that you do not smoke. Radiation works best with more oxygen in your body and smoking lowers your oxygen levels. If you choose to smoke, you should not smoke at least two hours before and after treatment.

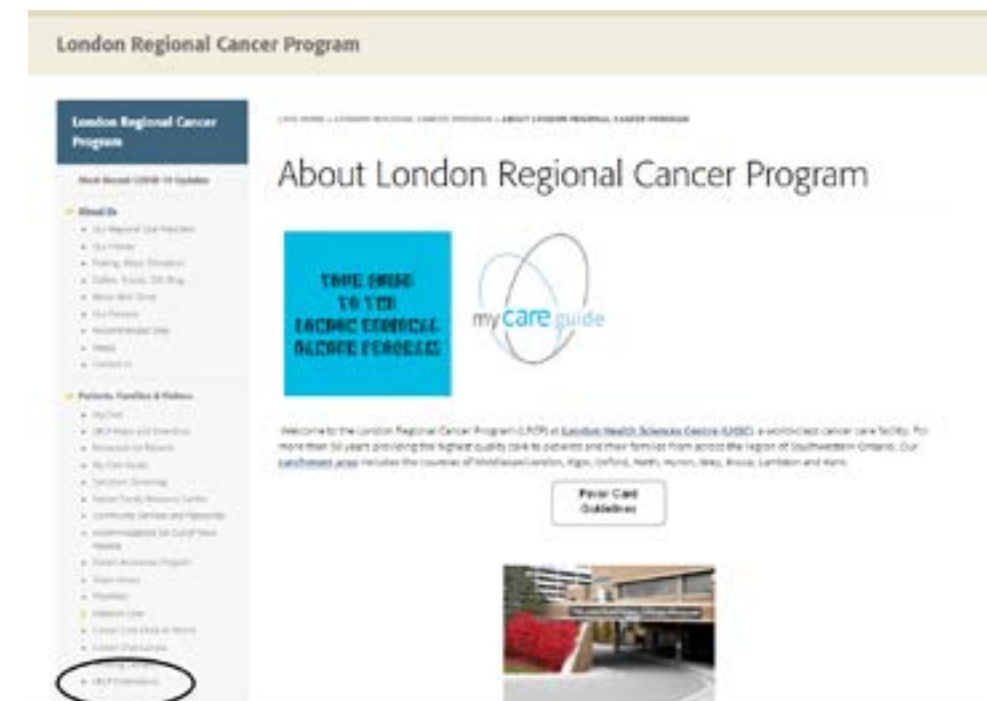
### Can I drink alcohol?

Alcohol may make your side effects worse, depending on your treatment area. Ask your radiation therapy team.

## Recommended Resources

Please view the 'Introduction to Radiation' video on the LRCP website. Follow along with this section of the guide and make notes as you go.

- Go to the LRCP Public Website at: <https://www.lhsc.on.ca/london-regional-cancer-program/about-london-regional-cancer-program>
- Scroll down and click on the 'LRCP orientations' icon on the left side.



Direct link: <https://lrcp.tours.lhsc.on.ca/intro-to-radiation/about-radiation-therapy>

Visit the Canadian Cancer Society website to view the "Radiation Therapy" booklet at <https://www.cancer.ca/en/cancer-information/diagnosis-and-treatment/radiation-therapy/?region=on>