

Radiation therapy is a cancer treatment that uses high-energy radiation from x-ray machines to kill cancer cells. Many people call it **radiation**. It is also known as **radiotherapy, x-ray therapy, or irradiation**.

Radiation is one of many ways to treat cancer.

How does radiation therapy work?

Our body is made up of many types of cells. Each cell works in a special way to keep us healthy. Cancer forms when a group of cells that are not normal grow and spread out of control. These abnormal cells can affect the way your body normally works.

Because your body can't stop or control the growth of the cancer cells by itself, your doctor may suggest that you have radiation to kill the cancer cells.

Radiation therapy works to kill cancer cells in a certain part of your body. For this reason, it is called a **local** treatment.

Radiation can:

- stop cancer cells from growing and spreading
- control or slow down the growth and spread of cancer cells
- shrink the size of the cancer.

Why is radiation therapy best for me?

For some kinds of cancers, radiation is the best treatment. It may:

- Cure your cancer.
- Control your cancer for awhile.
- Reduce the risk of cancer coming back.
- Help you get rid of or cope with cancer symptoms, such as pain.

Radiation therapy is sometimes used with surgery and chemotherapy. Your doctor might suggest that you have radiation to shrink the cancer **before** you have surgery to remove it. Sometimes, doctors suggest that people have radiation **after** surgery, to kill any cancer cells that were left behind when the cancer was removed.

Your health care team will explain why radiation is the best treatment for you.

How long will I need to have radiation?

How long you have radiation depends on:

- the type of cancer you have
- the kind of radiation treatment you are having

- how well your cancer responds to the radiation
- how well you feel when you are having radiation.

How and where will I get my radiation treatment?

There are two main ways that radiation treatment is given: with External beam radiation, or with Brachytherapy. The way that you get radiation depends on the kind of cancer you have.

Where?	How?
From outside your body - this is called External beam radiation	The x-ray machine will be set up above, behind, or beside you. The machine may move around you during the treatment. You will need to go to a hospital or cancer clinic on the days when you have treatment. External beam radiation is usually given as a series of treatments every day. You may only have one treatment or you may have several weeks of treatments. Your doctor will explain what is best for you.
From inside your body - this is called Brachytherapy (pronounced brack-ee-ther-a-pee)	Brachytherapy is when a small instrument that gives off radiation is put inside your body, on or near the cancer. In most cases, you will have this done in an operating room at the hospital. You may need to stay in the hospital for a few hours or a few days afterwards.

How often will I need to have radiation?

If you are having external beam radiation, you will likely have it each day, Monday to Friday. The number of treatments you get depends on how much radiation you need.

With brachytherapy, you will need to be in the operating room or hospital as long as it takes to

get the exact amount of radiation that your doctor thinks you need.

Your radiation therapist will watch you closely when you are having treatments, to make sure you are able and willing to continue.

How will I get ready for external beam radiation?

- You will meet with a **radiation oncologist** (a cancer doctor who treats patients with radiation) to talk about the treatment that is best for you.
- Then you will go to the hospital or cancer clinic for **simulation**. This is a time set aside to help you get ready for the treatment. Here's what will happen:
 - A **radiation therapist** (a health care professional at the hospital or cancer clinic who gives radiation treatments) will take x-rays of the part of your body that needs radiation.
 - Based on where your cancer is, you may have a cast or mask made for you. The purpose of the cast (or mask) is to help you stay still during the treatment.
 - The radiation therapist will make marks on your skin to show where you will get the treatment. These marks may be in ink or they may be very small tattoos.
- After simulation, you will need to wait a week or two while the cancer clinic or hospital staff plan your treatment.

What happens during external beam radiation?

Your radiation therapist will give you the treatment. During the treatment, you will not see or feel the radiation. Most people do not feel any pain when they are having the treatment.

You may need to change into a hospital gown so that the radiation therapist can get to the part of your body that is being treated. Although the treatment itself may last only a few minutes, it can take up to 20 minutes to get set up for it. You should plan to be there for about 30 minutes. Sometimes it takes less time than this.

You must be in exactly the right place and the

machine must be set up perfectly. Once this is done, you will need to stay **very** still. If you have to move or cough, just tell or signal to the therapist. He or she will turn off the machine before you move.

Although you will be alone in the room when the treatment machine is turned on, the radiation therapist will watch you all the time on a TV screen. In most hospitals, you can talk to staff through a two-way speaker.

The staff working with you will explain what is going on, step-by-step. If you have any questions, feel free to ask.

Will I see my doctor during the treatment?

Once a week, after your treatment, you will have an appointment with your doctor and nurse. In the meantime, your health care team is there to answer

your questions or to talk about any problem you may have with the treatment.

What are the side effects of radiation?

Radiation is aimed at the cancer cells. But it can also damage healthy cells near the cancer. This may cause you to have **side effects**. Some people do not have any side effects. Other people have a few or many side effects.

No one knows exactly which side effects you will have until you begin radiation.

The side effects you may have depend on the part of the body that is being treated. Some of the most common side effects are:

- feeling very tired (**fatigue**)
- losing hair in the part of your body that is being treated
- having skin rashes on the part of your body that is being treated.

Most of your healthy cells will go back to normal after radiation. For most people, the side effects go away soon after the treatment ends.

While you are having radiation therapy, your doctor may be able to prescribe something to reduce the side effects.

Your health care team will give you more details about the side effects that you might have and how to cope with them.

Please keep in mind that side effects are NOT a sign of how well the radiation is working against your cancer.



This fact sheet is meant to support the information that your health care team gives you. It is also meant to encourage you to ask questions to your health care team. This fact sheet does **not** replace any information that your healthcare team gives you.

Living Well With Cancer is a partnership among several people living with cancer, health care professionals, people who represent cancer and professional organizations, and Ortho Biotech. The LWWC partnership gratefully acknowledges the input of the QEII Health Sciences Centre in this fact sheet.

Living Well With Cancer Information Centre

Tel: 1.877.909.5992 (LWWC); Fax: 1.877.909.5991; E-mail: info@livingwellwithcancer.com

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