

# Radiation Therapy

# Cancer Treatments: Radiation Therapy

Radiation Therapy is a treatment that uses radiation from high-energy X-ray machines to kill cancer cells. Most people call it radiation. It is also known as radiotherapy, X-ray therapy, or irradiation. Radiation is one of many ways to treat cancer, and sometimes other diseases.

## How does radiation therapy work?

Your 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 cannot 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 is given to the specific area where the cancer is present or might spread. 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 recommended for me?

For some kinds of cancers, radiation is given on its own. Radiation therapy may:

- Control your cancer for awhile
- Reduce the chance of cancer coming back
- Help stop or decrease cancer symptoms, such as pain

**What are your questions? Please ask.  
We are here to help you.**

Radiation therapy is sometimes used with other treatments such as surgery and systemic therapy (which includes chemotherapy, hormone and biological therapies). Your radiation oncologist (a doctor who has special training in treating people with cancer using radiation) might suggest that you have radiation to shrink the cancer before you have surgery to remove it. Sometimes, people have radiation after surgery, to kill any cancer cells that may have been left behind when the cancer was removed. Your radiation oncologist will explain why radiation is recommended for you.

## What are the different types of radiation treatment?

### Where?

From outside your body  
this is called External beam  
radiation

### How?

- The treatment machine will be set up above, behind, or beside you. The machine may move around you during the treatment.
- External beam radiation is usually given as a series of treatments, 5 days a week.

From inside your body  
this is called Brachytherapy  
(pronounced brack-ee-ther-a-pee)

- Brachytherapy is a form of internal radiation treatment. It uses radioactive seeds or sources that are placed in or near the cancer itself. In some cases, you may need to go to the operating room to have special applicators put into place to deliver the treatment.

## How long will I need to have radiation?

How many treatments you will have depends on:

- The type of cancer you have
- The type of radiation treatment you are having
- How well your cancer responds to the radiation
- The goal of treatment (for example, to stop pain or to cure your cancer)
- You may have one treatment or you may have many weeks of treatment

## **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. Treatments are not given on weekends and holidays. You may have one treatment or many weeks of treatment.

If you are having brachytherapy, the number of treatments you will have depends on the type of cancer you have. It can range from 1 to 10 treatments. Sometimes it is best to deliver the treatments once or twice a day from Monday to Friday. In this case, you would need to stay in the hospital until your treatments are finished. If your treatments are only once a week, you will probably not need to stay in the hospital, but only come to the Cancer Centre the day of your treatment.

## **Where will I get my radiation treatments?**

There are two cancer centres in Nova Scotia (the Nova Scotia Cancer Centre and the Cape Breton Cancer Centre) where radiation treatment is given. The cancer centre in Halifax is located in the Dickson Building, at the VG site. The cancer centre in Sydney is located in the Cape Breton Regional Hospital.

Both cancer centres have external beam radiation treatments, but brachytherapy is only available in Halifax.

## **How will I get ready for external beam radiation?**

First, you will meet with a radiation oncologist to talk about the treatment that is best for you. You will also meet the radiation nurse (a nurse who is trained to support you and help you understand about your cancer and treatment) at that time.

You will then go to the cancer centre 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 who helps plan and deliver the radiation treatments) works with the radiation oncologist to take X-rays or a CT scan of the part of your body that will be treated with radiation.
- The radiation therapist may need to use special equipment that will keep you still for your treatments. Some examples are: a plastic cast for your head and neck, or a body mold to help position your arms or legs.

- The radiation therapist will place marks on your skin. These marks help to position you for your simulation and treatment. These marks may be ink or they may be small permanent tattoos.

Your treatments are planned by your radiation oncologist, radiation therapists and physicists. Once the planning of your treatments is completed and a time has been booked for the radiation treatment machine, you will be notified of your start date.

Every reasonable effort will be made to start your treatments as soon as possible.

### **What happens during external beam radiation?**

Radiation therapists give you the treatment. There are usually at least two radiation therapists with you each day. 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 may last only a few minutes, it can take 15 or more minutes to set up for it. You should plan to be there for about 30 minutes. Sometimes it takes less than this.

You must be in exactly the right position and the machine must be set up accurately. Once this is done, you will need to stay very still. You do not need to hold your breath.

If you have to move or cough, just tell or signal to the therapist. The radiation therapist will turn off the machine and help you. During the treatment, you will not see or feel the radiation. The machine will move around you. It may come close to you, but it will not touch you.

Although you will be alone in the room when the treatment machine is turned on, the radiation therapists will watch you all the time on a TV monitor. The radiation therapist can also hear you over an intercom. The radiation therapists will be watching you and listening to you all the time.

The team member 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 treatment?**

At each daily treatment, your radiation therapist is there to answer your questions and talk to you about any problems you may be having.

Once a week while on treatment, you will have an appointment with your doctor and/ or nurse. This is a time when your doctor and nurse can ask you about how

you are coping with your treatments. It is a good idea to make a list of questions you may have, or bring a friend or family member along to hear what the doctor has to say. As well, a doctor or nurse is always available to see you more often to help deal with any problems.

### **What are the side effects of radiation?**

Radiation is aimed at the cancer cells. It can also affect 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 (may be permanent or temporary) in the part of your body that is being treated
- Having skin irritation on the part of your body that is being treated

You may also have other side effects depending on the area of your body that is being treated. You will be given information specific to the side effects you may have. Most of your healthy cells will go back to normal after radiation. For most people, the side effects go away gradually after the radiation ends, usually within 4 to 6 weeks. While you are having treatment, your doctor may prescribe something to help deal with the side effects. Your health care team will give you more details about the specific side effects 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.**

### **What is the difference between radiation and other cancer treatments?**

Like surgery, radiation only affects (or kills) cancer cells in the part of the body that is being treated. Systemic therapy (also includes chemotherapy, hormone and biological therapies) treats cancer cells in the whole body. Radiation uses high-energy X-rays and other kinds of radiation to treat cancer. Systemic therapy, on the other hand, uses drugs to treat cancer.

## **How can I cope with my cancer and radiation therapy?**

It is normal for you and your family to have many feelings at this time. Talk with your doctor, nurse, or radiation therapist about your feelings. Your health care team is there to answer your questions and to help you.

If you are having trouble coping with your cancer diagnosis or treatments, there are other health care professionals at the Cancer Centre who can help (such as social workers and spiritual care counsellors). As well, there are support groups you can attend, where you can talk with, or listen to, others who are going through or have gone through, a similar diagnosis and treatment. If you are interested in talking with someone about your feelings and experiences, tell a member of the health care team so he/she can connect you with the appropriate person or group. Your emotional health and well-being are very important.

## **Questions to ask your health care team**

- Why is radiation recommended for me?
- What are the benefits and risks of radiation for me?
- How and where will I get my treatments?
- Who can be with me during the treatment?
- Will I be able to work when I am having radiation?
- Can I keep doing things that I used to do?
- How often will I see my cancer doctor during my treatments?
- What happens when the radiation ends?
- How will we know if the radiation worked?
- Will radiation affect whether or not I can have children?

## **Looking for more information on this topic?**

You can contact the Canadian Cancer Society at [www.cancer.ca](http://www.cancer.ca) or call the Cancer Information Service of the Cancer Society at 1-888-939-3333. You can also contact your local public library for books, videos, magazine articles and online health information. For a list of public libraries in Nova Scotia go to <http://publiclibraries.ns.ca>.

For more information visit the Nova Scotia Cancer Care Program website at [www.nscancercare.ca](http://www.nscancercare.ca).





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