

Understanding radiation therapy

Information for patients



Radiation therapy is a way of treating cancers using X-rays or other types of radiation.

The two main types of radiation therapy are external beam radiation therapy and brachytherapy.

What is radiation therapy?

Radiation therapy is a safe and effective way of treating cancer with high-energy x-rays, or other types of radiation. You might hear it called radiotherapy.

Radiation therapy can be used alone or with treatments such as:

- chemotherapy
- targeted therapy
- immunotherapy
- hormone therapy
- surgery.

How does radiation therapy work?

Radiation therapy works by damaging the DNA (building blocks) in cancer cells. This stops the cancer cells from growing and dividing (multiplying).

Radiation can:

- damage or kill cancer cells
- shrink the cancer
- stop cancer from spreading
- reduce symptoms caused by cancer, such as pain or bleeding.

What happens during the radiation therapy treatment?

Radiation therapy is different for everyone who has it. Your radiation therapy team will speak with you about what to expect.

Radiation therapists are allied health workers who will give you your treatment. They will:

- explain what will happen
- tell you what side effects you may have
- make sure you receive the right amount of radiation to the right area
- work closely with your specialist and nurses to care for you.

Receiving radiation therapy:

- doesn't hurt
- can't be seen, felt or tasted.

Can I continue with my normal daily activities?

- Most people continue with their normal daily activities during treatment, including work, exercise and caring for children.
- If you are having treatment to the brain, or strong medicines during treatment, you may not be able to drive.
- Your radiation oncologist will discuss this with you and your family, friend or carer.

Will I have side effects from radiation therapy?

Most people have some side effects from radiation therapy.

Common side effects include:

- redness and other skin changes in the treatment area
- hair loss in the treatment area
- fatigue.

Ask your doctor, radiation therapist or nurse what side effects to expect, and how to manage them.



Important: treatment side effects

The side effects from radiation therapy are different for each person and will depend on the part of your body being treated. Your treatment team will talk to you about side effects you may experience.

- Side effects usually start gradually and may continue to get worse for up to two weeks after treatment has finished.
- Most side effects will improve within 4-6 weeks after treatment ends.
- There is a small risk of long-term or permanent side effects.

You will see your treatment team regularly to talk about and manage any side effects. Make sure you tell them if you have any.

Who decides if I need radiation therapy?

Your radiation oncologist (doctor who specialises in radiation therapy) is part of a multidisciplinary team of healthcare professionals who specialise in cancer care. This team works together to create the best treatment plan for you.

Your radiation oncologist will order and manage your radiation therapy treatment.



Is all radiation therapy the same?

No. Your radiation oncologist will talk with you about the radiation therapy best for you.

Your radiation therapy will depend on:

- the type, size and location of your cancer
- whether the cancer has spread to another part of your body
- possible side effects
- other treatments you are having, e.g. chemotherapy or surgery
- the aim of your radiation therapy, e.g. to cure or shrink the cancer or to control symptoms.

Ask your radiation oncologist or treatment team to explain anything you do not understand.

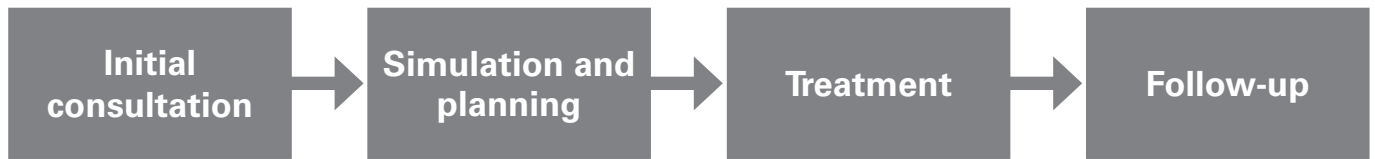
Types of radiation therapy

External beam radiation therapy is a common type of radiation therapy. A large machine called a linear accelerator (LINAC) directs radiation from outside of your body at the cancer. The radiation beam is carefully targeted at the cancer so that there is minimal damage to the surrounding healthy tissue. This type of radiation therapy doesn't make you radioactive. It is safe to be with other people after each treatment, including pregnant women and children.

Brachytherapy delivers radiation therapy from inside your body. It is used to treat several types of cancer. Small radioactive sources send radiation to the cancer cells. Brachytherapy may make you radioactive for a short time. Speak to your treatment team about what you need to do. Brachytherapy can be used alone or with external beam radiation therapy.

What appointments will I need to attend?

There are many appointments to attend as part of your radiation therapy treatment.



! Important

Before radiation therapy begins and during treatment tell your treatment team if you:

- are pregnant (or there is any chance you may be pregnant)
- want to discuss fertility options to be able to have a family in the future
- have a pacemaker, defibrillator or other cardiac device
- have implanted metal such as prosthetic hips or metal plates.



Simulation and planning appointment

Before starting radiation therapy, you may have a simulation (or planning) appointment. To prepare your treatment plan, radiation therapists will help you lie in a suitable position on the bed and will take measurements, scans and photos of the area to be treated.

The simulation appointment usually takes 30 minutes to an hour.

Your radiation oncologist will work with the radiation therapists to plan your treatment, using the information from the simulation appointment. Planning is a detailed process, so there may be days or weeks between your simulation appointment and when you start treatment.

You may have small permanent dots (tattoos) marked on your body to help with daily treatment set-up.

If you are having treatment to the head or neck area, you may have an immobilisation mask (shell) made.

Your radiation oncologist or treatment team will let you know before the appointment if you need to do or bring anything else.



Initial consultation appointment

At this appointment you will see your radiation oncologist and you may have a physical examination. It's a good idea to bring a family member, carer or friend to this appointment for support as a lot of information will be discussed.

Your radiation oncologist will talk with you about:

- your medical history and test results
- the aim of radiation therapy
- benefits and risks of having (or not having) radiation therapy
- possible side effects
- giving consent to have radiation therapy.



Treatment appointments

Treatment is different for each person.

If you are having external beam radiation therapy:

- you will lie on a table under the machine (linear accelerator) which rotates around you and doesn't touch you
- each treatment session takes about 30 minutes
- the amount of treatment you need is divided into separate doses called *fractions*
- the number of fractions you have will depend on:
 - the type of cancer you have
 - the part of your body being treated
 - whether the treatment is meant to control or cure your cancer
- treatment is usually given once a day from Monday to Friday, sometimes over several weeks
- most people can continue working, exercising and participating in social activities.

If you are having brachytherapy:

- your specialist will explain how the radiation will be given
- you may need to stay in hospital or have the treatment as an outpatient
- you will have scans to plan where the radioactive sources will be placed in your body
- you may need to stay away from pregnant women and children until the radiation is complete.

Follow-up appointments

Your radiation oncologist will see you a few weeks after you finish all your treatments. At this appointment they will talk with you about:

- side effects you may have and how to manage them
- how well your treatment has worked
- what to do next.

Things to ask your doctor

- What type of radiation therapy am I having?
- What is the aim of my radiation therapy?
- How many treatments will I need?
- What side effects could I have?
- Will I have other treatments with my radiation therapy?
- How much will treatment cost?
- Will treatment affect my ability to have children or to have sex?
- How will I know if the treatment is working?
- If radiation therapy doesn't work, are there other treatments I can have?
- Who should I contact if I have any questions or concerns?



For information for patient and carers please scan the QR code.