

Understanding radiation therapy simulation (radiation planning)

Information for patients



What is radiation therapy simulation?

Radiation therapy is individually planned for each person. Radiation therapy simulation is part of the preparation and planning for radiation therapy.

At your simulation appointment the radiation therapy team will work out the position you need to be in to receive your treatment. This position is important for the radiation therapy to be delivered precisely to the right area of your body at each treatment.

Preparing for your simulation appointment

Your radiation therapy team will tell you if you need to do anything to prepare for the simulation appointment.

Things to take to your appointment

You may need to bring several things to your appointment, including:

- your Medicare card or any concession cards that you may have
- any relevant imaging scans
- a list of your current medications and allergies
- your device information ID card if you have a pacemaker or an implantable cardioverter defibrillator (ICD).

Ask the radiation therapy team if there is anything else you need to bring.

! Important information

BEFORE your appointment tell your radiation therapy team if you:

- are pregnant or if there is any chance that you may be pregnant
- have an implantable cardioverter device (ICD) or pacemaker
- have implanted metal or devices such as prosthetic hips or metal plates.

During your simulation appointment

The simulation appointment will usually take between 30 minutes to an hour. Sometimes it may take longer.

At the appointment, you may be asked to:

- change into a gown
- remove jewellery and hair clips
- remove dentures or hearing aids if you have them.

The radiation therapy team will then work out the right position for you to be in for treatment.

They will get you to lie on the simulation table/bed and adjust your position. Sometimes the team will use special props or equipment such as:

- foam sponges
- tape
- mask.

This equipment will help you to stay in the same position during each treatment.

More information

Some people will need an immobilisation mask for their radiation therapy.



You may want to read our information sheet on [Immobilisation masks for radiation therapy simulation and treatment](#).

You will need to stay in this position for about 20 minutes while having your radiation therapy treatment, so if it is too uncomfortable tell the team.

The team will take measurements of your body and they may take photos to confirm your position.

Simulation imaging scan

When your team have you in the right position, they may do an imaging scan.

The imaging scan is only used to plan your radiation therapy. You will not be given any results from the scan. The imaging scan can be either a CT or MRI scan.

It gives a detailed picture of the part of your body to be treated, including:

- the cancer, or the area where the cancer was before surgery or other treatments
- any nearby internal organs.

While you are having the scan:

- the team will leave the room
- the team can see, hear, and talk to you
- they may give you special breathing instructions
- it is important to lie still during the scan
- the bed will move, and you will hear whirring or thumping sounds.

The scan usually takes 1-2 minutes but can take up to 15 minutes.

! Important information

- You will not see or feel anything during the scan.
- The scan does not hurt.
- The scan will not make you radioactive.
- You are NOT being given treatment during the imaging scan.

More information

Some people will need IV contrast for their simulation imaging scan.



You may want to read our information sheet on [Intravenous \(IV\) contrast for radiation therapy simulation](#).

Skin markings and tattoos

During your appointment you may have some marking put on our skin. These are used as reference marks to help position you correctly for each treatment.

These marks can be:

- temporary – made with a marker pen or special stickers.
- permanent – tattoos.

Not all people will need permanent marks (tattoos) for their treatment. If you do, they will be very small markings, about the size of a freckle.

Tattoos are made by putting a small amount of ink on your skin and a thin needle is used to prick the skin.

If you have any concerns about having tattoos talk to your team.

After your simulation appointment

After your appointment, your radiation oncologist and radiation therapists will use the information from your simulation appointment to plan your radiation therapy.

This is a detailed process, and it may be days or weeks from your simulation appointment until you start radiation therapy.

Sometimes you may also need to have other imaging scans and appointments, for example MRI or PET scans. Your radiation therapy team will tell you if these are needed.

The radiation therapy team will tell you when treatment will start and about your appointments.

Things to ask your radiation therapy team

- How long will my appointment go for?
- What problems should I tell you about?
- Do I need to pay for simulation?
- Do I need to do any preparation before my radiation therapy simulation or treatment?
- What do I need to bring with me?
- Is there any parking, and how much does it cost?
- Is there anything I need to do after my radiation therapy simulation?
- When will I be given my radiation therapy treatment start date and future appointments?
- How do I contact the radiation therapy department?
- Who do I talk to if I have any questions or concerns? What is their phone number?



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



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