

Magnetic Resonance (MR) in Radiation Treatment

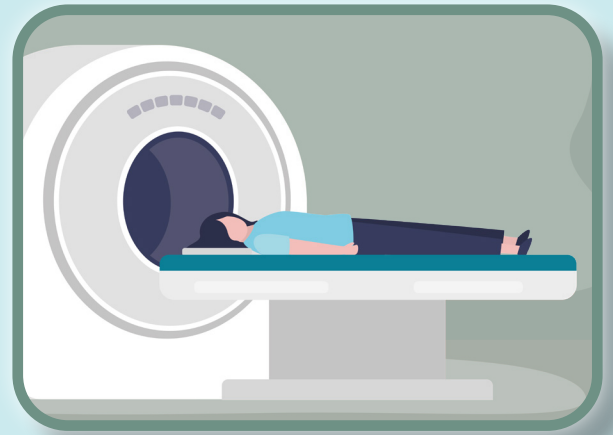
What is MR imaging in radiation treatment?

MR imaging uses magnetic fields to take pictures of the inside of your body. You are being given this information sheet because MR is part of your care plan.

MR imaging is like CT (computerized tomography) imaging. MR and CT imaging see different kinds of body organs better. Depending on where your cancer is and the type of organs in that area, your team may use MR imaging or MR and CT imaging.

Your plan may include:

- MR-Simulation to prepare for external beam radiation treatment or brachytherapy.
- External beam radiation treatment with an MR-Linac.



What is MR-Simulation (MR-Sim)?

MR-Sim uses a machine that takes MR images to plan your radiation treatments. CT-Simulation may also be used for planning radiation treatment.

Radiation therapists will take the images they need. The images are then used to identify where to treat, and areas or tissues to avoid.

Your team will let you know what type of imaging will be used for your treatment planning.

What is an MR-Linac?

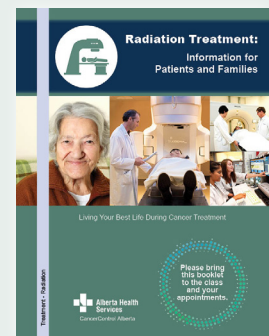
It is a machine that combines radiation treatment with MR imaging. This imaging helps your team see the position and shape of your organs during radiation treatment. Your healthcare team will let you know if an MR-Linac will be used during your treatment appointments.

Are there side effects with MR-Linac treatment?

Radiation treatment may have side effects. They will depend on the area of your body being treated. You can get more information on side effects in the “Radiation Treatment: Information for Patients and Families” book.

When radiation treatment includes MR imaging, the MR can activate nerve endings and produce a tingling feeling anywhere in your body.

Learn more about simulation, preparing for radiation treatment, and possible side effects of radiation treatment by watching videos or reading the ‘Radiation Treatment: Information for Patients and Families’ book.



Ask your healthcare team or look online www.ahs.ca/cancertreatment then choose “Radiation Treatment”.

Call your healthcare team if you develop any redness or skin irritation after having MR in radiation treatment.

Are there any risks with MR in radiation treatment?

Yes. The machine has a very strong magnet in it, so any metal objects in the room will be pulled toward the machine, which could cause you harm.

Your healthcare team wants to keep you as safe as possible. Before each treatment appointment you will:

- Be asked safety related questions. We will ask you about any changes to your medical history and if you have any metal objects on, or inside, your body (like staples from surgery).
- Remove all metal objects and leave them with your clothes and belongings in the space provided.
- Change into hospital clothing before you enter the MR (Sim or Linac) area.



Before entering the MR area, **remove all metallic and incompatible objects** including:

Electronic devices	Hair elastics, barrettes, or clips	Partial denture plates
Watch and jewellery	Blood glucose monitor	Eyeglasses
Body piercings or pins	Hearing aids	Coloured contact lenses
Credit and other cards	Dentures	Prosthetics

What can I expect when MR is part of my care plan?

- Radiation therapists will care for you during your appointments.
- When the MR is on it makes many different loud noises. You will be given hearing protection, such as ear plugs or headphones. You need to wear the hearing protection you are given throughout the procedure.
- You will lie down on a table that moves in and out of the tube where imaging and treatment happen. The tube is open at both ends and well lit.
- Your radiation therapist will work with you to get you into position. They will place something called a coil near the part of your body being treated. The coil is needed to make the high-quality MR images. The radiation therapists may also add pads and pillows around your body.
- You will need to stay still throughout imaging or treatment.
- When the radiation therapists are outside the room they will be able to see you. They will also be able to hear you through an intercom. When the MR is on, it is too loud to use the intercom. You will have a 'call bell' you can use anytime you need them.

Radiation treatment with an MR Linac takes 30 to 90 minutes. Each of your appointments may take a different amount of time.

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