

Radiation Therapy CT Simulation

General Information

Radiation therapy uses high-energy X-rays aimed at the body part prescribed by your radiation oncologist. Before you receive any treatments, careful planning will be done during a process called simulation.

During a simulation, your radiation therapists and doctor will map out the area to be treated with radiation therapy. This planning session usually lasts one to two hours. If your doctor wants you to have a PET CT scan (positron emission tomography), this will add another two hours to your appointment time and you will need to prepare for it.

You may need special tests (such as a CT scan or MRI) during your simulation. You may be given a contrast (or dye) by mouth or by an intravenous (IV) line. This contrast will help improve the images your doctor needs to plan your treatment.

Before your scan, tell your therapist, nurse or doctor if you:

- have pain or cannot move as well as you normally do (limited range of motion)
- may be pregnant
- if you are not comfortable in closed spaces (claustrophobia)
- have allergies to contrast (CT/MRI) dyes or if you have had a reaction to contrast
- have diabetes
- have a pacemaker or other metal implants.

During the Simulation

- The radiation therapist will have you lie on the scanner table.
- You may be asked to remove clothing if it covers the body part to be treated.
- To make sure your body stays in the proper position during treatment, moldable plastic may be used to keep you from moving. This will only be used for your treatment. It should not be uncomfortable. If you are feeling discomfort or pain, please tell your therapist or nurse.
- If your treatment is to your brain or head and neck area, a plastic mask will be made. A mouth guard or bite block may also be made.
- The radiation therapist will use a marker to mark the area that will be treated. He or she may also take measurements of your body to define the treatment area to be tattooed (be made permanent) on your skin. This involves a small needle stick with ink. The mark will look similar to a freckle. The benefits of a tattoo will be explained to you.
- The radiation therapist may need to leave the room for short periods of time to operate the imaging equipment. During this time, it is important that you lie completely still.

(over)

After the Simulation

- Please do not wash off the marks that were placed on your body during the simulation. The radiation therapist will give you special instructions on how to keep your marks in place.
- Your doctor and other team members (such as dosimetrists and physicists) will plan and design a treatment just for you.
- The radiation therapist will give you an approximate date you can expect to be called to schedule your first treatment.
- The radiation therapist will ask you for the time you prefer for your daily treatments. The staff will do their best to honor your requests, but this is not always possible.