



RADIATION ONCOLOGY

Simulation

An important part of your radiation treatment planning is simulation, which produces special x-rays using a CT scan machine or another special x-ray machine called a Ximatron. These machines imitate the actual radiation treatment. The images from the simulation help your doctor locate the tumor and better identify the treatment area.

- Special devices help keep your body correctly positioned and still during your simulation and treatments. These devices may include a body mold or cradle, mask, head rest, belly board, or bolster to support your knees and ankles.
- First, we will make ink marks on your skin around the area to be treated. Later these are often replaced with tiny permanent tattoos. These ink marks or tattoos act as a target for the harmless laser beams and help to position your body for the treatment. This helps ensure that the radiation aims at the exact same place each time.
- Other markers, such as metal balls or wires, may be placed on or in your body. These help work with the x-rays to position your body correctly. The markers, if used, are removed when the simulation is complete.
- Simulation usually takes 30 to 60 minutes to complete. In special situations, it could take longer. During the simulation you will lay on a hard, flat surface. If you have pain and think that lying still for this long could be difficult for you, please let your doctor or nurse know in advance. We can then make arrangements for you to receive pain medication so that you are comfortable throughout the procedure.
- If you are receiving radiation to your head or neck region, it will be necessary for a special mask to be made that fits snugly over your head and face. The mask contains holes so that you can breathe while it is in place. However if you have trouble with small, close places or nausea, let your doctor know in advance. He or she can then decide about whether the mask is absolutely necessary or not.
- You may need an IV in your arm so we can give you some contrast medication. If you have an IV for CT simulation, please drink plenty of liquids for 24 hours following the simulation. Avoid caffeine and alcohol during this time.
- If you are going to receive radiation to the pelvis for cancers such as prostate cancer, rectal cancer, or cervical cancer, the simulation procedure requires some preparation in advance. It also requires some additional procedures during the simulation. Please see the other side for that special information.

Instructions for CT Simulation for Male Pelvic Radiation

We need to have you do the following things so that we can complete your treatment planning:

The evening before your appointment

- Eat a light evening meal before 7 p.m. You should eat such things as eggs, salad, cheese, or Jell-o™. Do NOT eat any meat or bread.
- After 7 p.m., only drink liquids. You may eat solid food again once your simulation is over.
- Use 1 Fleet's® enema (supplied) according to the directions before bedtime.

The morning of your appointment

- Use 1 Fleet's® enema (supplied) 2 to 3 hours before you come for your simulation.
- Please come to your appointment with a full bladder. It should not be so full that it is uncomfortable. Once you start your daily radiation treatments you should come each day with a full (but not uncomfortable) bladder.
- Part of the simulation includes a retrograde urethrogram test. This requires a small catheter to be placed into your bladder through the penis to instill "contrast" into your bladder and urethra. Once the contrast is in your bladder, we will remove the catheter. The contrast allows the doctor to see your body structures more clearly on the x-rays.
- A small amount of contrast (called barium) will also be placed in your rectum using a small catheter. This catheter also will be removed immediately following the simulation.

Instructions for CT Simulation for Female Pelvic Radiation

We need to have you do the following things so that we can complete your treatment planning:

The evening before your appointment

- Eat a light evening meal before 7 p.m. You should eat such things as eggs, salad, cheese, or Jell-o™. Do NOT eat any meat or bread.
- After 7 p.m., only drink liquids. You may eat solid food again once your simulation is over.

The morning of your appointment

- Please come to your appointment with a full bladder. It should not be so full that it is uncomfortable. Once you start your daily radiation treatments you should come each day with a full (but not uncomfortable) bladder.
- Based on the location of your cancer your physician may request that you have certain procedures done. These may include use of some of the following:
 - a catheter inserted into your bladder
 - a small catheter placed in your rectum
 - a "marker" placed in your vagina (similar to a tampon)

These allow us to administer contrast which allows the doctor to see your body structures more clearly on the x-rays and assists with radiation planning. These items are removed immediately following the simulation.

Due to these procedures you may have some urinary discomfort or constipation for 24 hours following your simulation. Drink lots of fluids for the 24 hours following your simulation. Avoid caffeine and alcohol during this period. If these symptoms last longer than 24 hours, please call the clinic at 720-848-0167.

Feel free to contact your nurse for any other questions or concerns.