

Overview

When radiation treatment is given to the chest or abdomen, the normal movement made by breathing air in and out of your lungs may cause the targeted area to move. Usually your doctors have to make up for this movement by radiating a slightly larger area. With the use of a special machine called a SDX™ device, we can treat you while you hold your breath, and the target area is still. This means you are given a more precise dose of radiation to the target area, and less to your normal tissues.

Learning to use the SDX™ device

You will have time to practice holding your breath to see what it feels like. It is normal to feel some anxiety about being able to hold your breath and use this device. We will work with you during this process, and at any point you can breathe normally. The use of the SDX™ device gets easier during treatment. You can practice at home by taking long slow deep breaths in and exhaling slowly out of your mouth. This helps your lungs to expand. During your simulation you will be asked to hold your breath for as long as you can. This will help us determine how long your breath can be held during treatment. After this initial practice and lesson your instructions will be the same for both simulation and treatment.

Breathing instructions:

1. You will be told to breathe normally.
2. When the therapist is ready to start, you will be told to take one deep breath. This is to prepare you for a breath hold.
3. As you breathe, the breathing device will measure the air and once you reach the desired lung volume, you will be asked to hold your breath.
4. When the CT scan is complete, you will be told to breathe normally.



Desired lung volume

If the target area is your chest, your treatment will be delivered with an inhale breath hold. If your abdomen is being treated, your treatment will be delivered with an exhale breath hold.

Using the SDX device during treatment

The number of breath holds for treatment will vary depending on the dose the doctor prescribes and the amount of time you can hold your breath. The treatment beam is turned on and the radiation is given, only during the time when your breath is being held. For example, the longer you can hold your breath, the fewer breaks there will be between breath holds, and the treatment time will be shorter. The length of your breath hold can be changed. If you feel like you can hold your breath longer, or need the breath hold to be shorter, let your radiation therapists know. It is important that you are comfortable with this process and the length of time you are asked to hold your breath.

Who to call with questions

On weekdays (8:00 am to 4:00 pm; Monday-Friday) contact the Radiation Oncology Department at (734) 936-4300.

After 4:00 pm on weekdays, weekends, or holidays, contact the paging operator at (734) 936-6267. Ask to have the On-Call Radiation Oncology Resident paged.

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