

Using the voluntary breath-hold technique for radiotherapy to the breast

Your doctor has recommended that you have radiotherapy to your breast whilst holding your breath. This is called the voluntary breath-hold technique. Breathing in and holding your breath moves the heart away from the radiotherapy beam, and studies have shown that using this technique can reduce the dose of radiation to the heart during radiotherapy to the breast.

What is the voluntary breath-hold technique?

This is a technique in which you hold your breath for a short period of time. It involves breathing in and out twice before holding your breath for a minimum of 20 seconds. We will give you instructions using a microphone from outside the room. The voluntary breath-hold technique will be used at your radiotherapy CT scan appointment and during your radiotherapy.

What happens during the CT planning scan?

We will show you the technique and ask you to try holding your breath for 5, 10, 15 and 20 seconds. If you find it comfortable and are able to hold your breath for 20 seconds or more, we will carry out a CT scan with you using the breath-hold technique. You will then have the radiotherapy treatment using the technique.

What happens if I am unable to use the breath-hold technique during the CT planning scan?

If you are unable to hold your breath for at least 20 seconds, we will carry out a CT scan with you breathing normally. We can still plan your treatment accurately. You will have your treatment breathing normally because we scanned you that way too.

What happens during radiotherapy treatment?

If you are able to hold your breath for 20 seconds then we will ask you to have your treatment using the technique. You will be asked to hold your breath up to eight times during the radiotherapy treatment. Some of these breath-holds may be shorter than 20 seconds.

What are the possible side effects?

The breathing technique may feel a little uncomfortable at first and it may take some practice to get used to it; the radiographers in the CT scanner will help you with this. If at any time you wish to breathe normally, you can easily alert the radiographers by raising a hand.



How can I prepare before the CT planning scan?

Some patients find it helpful to practise holding their breath at home before their appointment. It is best to practise while lying on your back (as you will be for the CT scan and your treatment), and increase the length of time you are comfortable holding your breath. Perhaps try 5 seconds first, then increase to 10, 15 and up to a maximum of 20 seconds.

Contact details

If you have any questions or concerns about the information in this factsheet, please call:

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