This is a plain text version of the website text that goes with our video about external beam radiotherapy – a common treatment for breast cancer. After the website text you will find a plain text transcript of the video.

Some small changes have been made to support user experience.

This is a video by Radiotherapy UK and Vertual Ltd. The aim is to help prepare you for the experience of external beam radiotherapy (EBRT) for breast cancer.

This video has images and sounds representing cancer treatment. The VERT software by Vertual Ltd gives a 3D representation of the inside of a patient’s body, including organs.

Remember that each patient and each treatment plan is different. Your experience may be longer or shorter depending on your diagnosis, and you may or may not be given tattoos on your body to help line you up in the right position

Some departments use software known as surface guided radiotherapy (SGRT) where patients do not need tattoos to help their team line them up for their radiotherapy treatment.

Here we have tried to give an overview of some common experiences. But every patient has a unique experience of treatment and side effects. For example, patients with different skin tones can see a wide range of changes in the colour of their skin during and after treatment. There are some examples given in this video, but you may see something different. If in doubt, ask your treatment team!

Ask your therapeutic radiographer team lots of questions. You might also meet some student radiographers during your treatment

The video notes that you could feel cold during treatment. If you have had chemotherapy you might be more sensitive to temperature changes in general

If you have EBRT after surgery, you can sometimes feel more uncomfortable when your arms are above your head for radiotherapy

This video was created by Radiotherapy UK for our PIF-TICK accredited Patients and Families hub, launching in 2024. The 3-D virtual reality footage is thanks to Vertual Ltd, which has chosen Radiotherapy UK as its Charity of the Year. A special thank you to Toral, who worked with us to create the video voiceover.

There is so much to learn about radiotherapy treatment – no single video can cover everything! Below we have included links to resources recommended or created by our clinical and patient engagement groups.

Society of Radiographers: Patient Information sheet on skin reactions:

https://www.sor.org/getmedia/1579daa1-4f35-4f4d-86a6-902a3e2b0480/5056\_-\_sor\_design\_doc\_a\_patient\_infosheet\_-\_skin\_care\_a5\_leaflet\_z-fold\_printready.pdf

Naman Julka-Anderson: Structural racism in radiation-induced skin reaction toxicity scoring:

https://www.jmirs.org/article/S1939-8654(23)01872-6/pdf

Ticking Off Breast Cancer: Radiotherapy checklist:

https://futuredreams.org.uk/radiotherapy-dos-donts-rads-top-ten-pointers/

Respire: Deep Inspiration Breath Hold resources:

https://www.respire.org.uk/resources

Northern Radiotherapy Network resources:

https://northernradiotherapynetwork.nhs.uk/videos

The Whole Picture: preparing and caring for radiotherapy patients and professionals:

https://radiotherapy.org.uk/professionals/rtuk-talks-resources/

Plain text version of video script

Content warning: This video has images and sounds representing cancer treatment. The Vertual software gives a 3D representation of the inside of a patient’s body, including organs.

My name is Toral and this is a video by Radiotherapy UK and Vertual. The aim is to help prepare you for the experience of external beam radiotherapy – a common treatment for breast cancer.

You will see Vertual’s 3D virtual reality software of the treatment room and machinery - known as a linac or linear accelerator. We will also look at possible side effects and how your radiographers will work to minimise them

I had this treatment in 2021, 15 sessions over three weeks, and my team were brilliant.

Radiotherapy uses high-energy x-rays to destroy cancer cells. Each radiotherapy treatment plan is unique and completely individual. Typically, you will be treated every weekday for between one and three weeks.

If you have external beam radiotherapy to treat breast cancer, your treatment will often come from machines that look like this.

You might get cold during radiotherapy. You can bring a warm hat, gloves, and even leg warmers to wear on your arms. You can wear a hospital gown, your own dressing gown, or ordinary clothes to go into the treatment room.

You will then need to take clothing off or move it further down. Some patients wear a vest top to make this easier.

Your therapeutic radiographers will take care to maintain your dignity.

They will help you onto the bed, with your arms supported above your head. Then they will make very small changes to get you in exactly the same position as your CT scan from your planning appointment.

Once you are in the right position, your team will leave the room and you will be alone. As they leave, you will hear a beeping noise.

This is normal and will switch off after a few seconds. The team will be able to see you through a video, and you can hear and speak to each other through an intercom. So if you need to stop at any point, let them know.

The radiotherapy machine will then be started remotely from outside the treatment room.  The team will take x-ray pictures to make sure you are in the correct position. You might notice an arm with an imaging panel coming out. This will not touch you.

The team will make tiny adjustments to your position if they need to, so you might feel the treatment bed move slightly.

You will not feel the radiotherapy beam, but you will hear machine sounds like this.  You can ask your team to play music or an audio book of your choice.

The machine will move around you during the treatment but will not touch you. If it gets close, your team will make sure there is enough space. If you are uncomfortable with tight spaces, let your team know.

This will help the team deliver your treatment safely and accurately.

Now we will look at the way the beam enters the body.

Here, a tumour in the right breast is being treated. You can see the beam is near to the lungs, ribcage and passes through the skin.

You can see here that treatment to the left breast is also near to the heart.

Some patients need to learn ‘deep inspiration breath hold’ for their treatment. This means breathing in and holding your breath for 20 to 30 seconds. This expands the lungs and moves the heart away from the radiation beam to protect it. Your team will coach you if you need to do this.

Radiotherapy is a very precise treatment, and becoming even more accurate as technology develops.

Your team will work hard to plan and deliver your treatment to make sure only the area that needs radiotherapy gets it.

However, delivering some radiation to healthy tissue is unavoidable and this is why you might have some side effects.

Side effects may happen during, after or a long time after treatment.

You might see colour changes to your skin within the radiotherapy treatment area due to a radiation-induced skin reaction.

For brown and black skin, the area can become darker compared to the surrounding skin and change colour across the spectrum.

Brown skin might turn maroon. Black skin may become purple, yellow or grey.

White skin can look pinker, redder or darker than the surrounding area.

Check for texture changes where you have had radiotherapy, like tightness, hardness and warmth.

Speak to your team about any changes and ask how best to manage them.

See the links below this video.

\*Some patients with skin tones that have more melanin experience their side effects starting later than expected. Research is still needed to understand this.

Your breast may swell, known as lymphoedema, and mobility in your arm can be affected. Long term, some patients find their breathing is affected. This is not common though.

Ask your radiotherapy team lots of questions about side effects. Understanding them and knowing what to expect, can help to prepare you for treatment and life afterwards. Your team will be able to offer support if they happen.

I found it really helpful to exercise within two hours of my treatment and drink plenty of water to help with fatigue.

Thank you for watching.

Ends