

External beam radiotherapy (EBRT) to the breast/chest wall

Radiotherapy

A guide for patients and carers

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This information is for patients who are going to receive EBRT to the breast/chest wall for the treatment of breast cancer. This leaflet will explain when radiotherapy is used and what to expect when you attend.

You may find it helpful to read our patient information booklet called 'Radiotherapy', which explains how radiotherapy works.

The Clatterbridge Cancer Centre Hotline 0800 169 5555

If you are unwell during, or up to six weeks following your cancer treatment, please call The Clatterbridge Cancer Centre Hotline. Your call will be answered by a dedicated nurse advisor. This line is available 24 hours a day, 7 days a week.

Why you need radiotherapy

Radiotherapy is given to reduce the risk of your breast cancer returning after surgery.

It is given:

- To the whole breast/chest wall after the cancer, or pre-cancerous changes, have been removed (lumpectomy, wide local excision or mastectomy)
- To the lymph gland areas, i.e. lower neck/collarbone area and sometimes the armpit (axilla). Whether or not you need lymph gland radiotherapy depends on the results of the lymph gland surgery
- Following a wide local excision (WLE) or lumpectomy, an extra treatment (called a 'boost') may be required. The boost is targeted at the area where the cancer used to be (the tumour bed) and will be given at the same time that you receive radiotherapy treatment to the whole breast. The decision to give a boost depends on your age and the results of your surgery

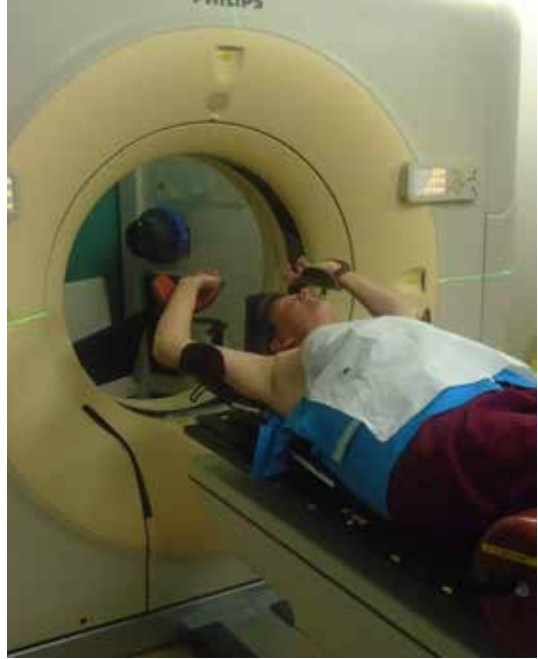
Arm exercises after your operation

Your arm and shoulder on the affected side may be stiff and sore for a few weeks and is more likely to occur following a mastectomy. You will be asked to do exercises to help you regain a full range of movement.



It is usual to have a CT scan when you attend for your pre-treatment (planning) appointment. The preferred position for you to lie in for the scan is shown on the image opposite.

If you have had a mastectomy and think you will have difficulty lying in this position, please contact the breast care nurse at the hospital where you had your surgery for advice. If you have a limited range of movement due to another health problem, e.g. arthritis, please tell the radiographer who deals with you.



Chemotherapy

Depending on the results of your surgery, some patients require chemotherapy (drug treatment) in addition to radiotherapy. Radiotherapy is usually given towards the end of, or after, the final chemotherapy treatment. Some chemotherapy drugs, e.g. epirubicin, docetaxel (Taxotere) and paclitaxel (Taxol), may increase the side effects of radiotherapy. A gap of approximately 3 weeks

is left between finishing these chemotherapy drugs and starting radiotherapy. However, it is quite safe to start the pre-treatment planning process before chemotherapy is finished.

Some chemotherapy drugs, e.g. 'CMF', do not seem to increase the radiotherapy side effects too much and can therefore be given quite safely at the same time as the radiotherapy.

Breast cancer in men

Although it is rare, men do develop breast cancer. Breast Cancer Care and Macmillan have information written especially for men. See later – list of contacts.

Information classes

We hold 2 information classes (Exercise and Advice and Lymphoedema Awareness). You will automatically be booked into the Exercise and Advice class. Information leaflet(s) will be attached to your radiotherapy appointments list. Alternatively, both leaflets can be found on our website; <http://www.clatterbridgecc.nhs.uk/patients/general-information/patient-leaflets/rehabilitation-and-support>.

Radiotherapy at The Clatterbridge Cancer Centre

We use a method called 'Deep Inspiration Breath Hold' (DIBH) using Intensity Modulated Radiotherapy (IMRT).



DIBH is a way of delivering radiotherapy when a patient is in breath-hold rather than breathing freely.

By holding your breath, your chest stays still and your lungs become expanded, moving your breast/chest wall away from the heart. In most people, this is helpful in reducing the dose of radiotherapy to the lung tissue and heart (more relevant if you are having radiotherapy to the left side), whilst ensuring that the breast/chest wall area receives the full dose as prescribed.

It is important to take a large comfortable breath you can manage to hold for approximately 20 seconds. It is therefore a good idea to practice holding your breath a few times a day at home for several days before attending for your pre-treatment planning appointment. Practice will also help to improve your confidence and the ability of your lungs to take in and hold the breaths.

Please do not worry if you are not able to hold your breath as required, accurate and safe treatment will still be given using a normal breathing pattern.

The radiotherapy design will still ensure that the breast/chest wall is treated adequately, whilst including as little lung and heart tissue as possible.

Pre-treatment planning appointment

The CT scan procedure takes about 15-20 minutes.

We will ask you to lie you on the scanner bed in the preferred position. Before the scan (which takes only about 20 seconds), we

will help you to practice your breathing as required, by asking you to hold your breath a few times for approximately 30 seconds. A camera monitors your breathing with the help of a sensor (a small plastic box 6.5 x 3x3cm) which is placed on your chest.

After a few practice breath-holds, we will then provide you with a small screen which shows you a picture representation of your breathing. The pictures on the next page show what you will see. Please note that the colours on the screen may differ from those we have described.

During the practice time, the Therapeutic Radiographers look at your breathing pattern and set the height of the blue area which relates to your breath-hold position. This is why it is important that you take in a big breath to expand your lungs as much as possible, but also that you can easily reproduce this breath. The display will help you to see if you are taking enough air into your lungs.

The yellow bar shows the movement of your chest and will move up and down as you breathe in and out.

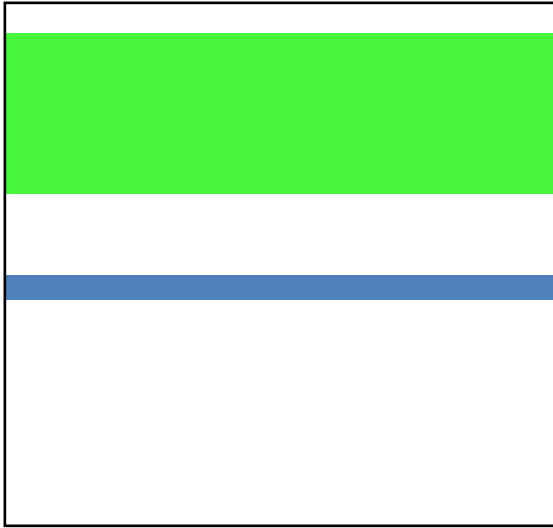
Now, when holding your breath, you should move the bar into the area at the top of the screen (blue box) and it will change colour (green).

When we are ready to do the scan, we will ask you to hold your breath; the scan will start when the bar has changed colour.

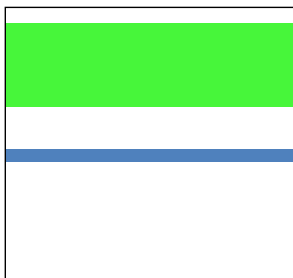
When the scan has finished, we will tell you to breathe normally. At this point, it is not necessary to watch the screen.



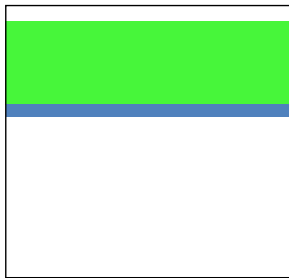
This is the view you will see on the screen



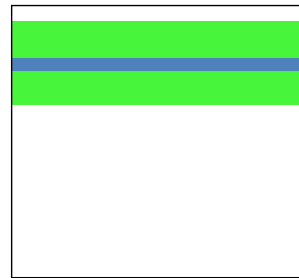
This image shows the screen view of someone taking a breath to hold:



**Normal breath
position**



**Taking in
a breath**



**Holding
the breath**

Radiotherapy treatment appointment

Once you have been positioned on the treatment bed, we will ask you to hold your breath several times. When the Therapeutic Radiographers are happy with your breathing pattern and have finished their checks, the screen will be switched on, and they will inform you they are ready to leave the room.



Before the radiotherapy is given, the treatment machine will move around you and you will hear a noise from the machine. Please lie still and breathe normally. The Therapeutic Radiographers will talk to you, via an intercom system, to let you know when they are ready to begin the treatment, and will ask you to take a deep breath in and hold, to move the bar into the blue box. When you hold your breath, you will see on the screen that the bar has changed colour. This is the signal for the treatment machine to turn on and deliver the radiotherapy. When the radiotherapy has been given, we will ask you to breathe normally. At this point, it is not necessary to watch the screen.



If you breathe out during the delivery of the radiotherapy, the machine will automatically turn off. Usually, it is possible to give the radiotherapy in only a couple of 'breath-holds'. The Therapeutic Radiographers will instruct you to breathe normally in between sections of the treatment.

Please remember that you cannot make the machine treat you incorrectly. If your breath has not raised the bar high enough, the treatment machine will not turn on. The Therapeutic Radiographers will also monitor you the whole time, can see and hear you and will help guide you through the procedure.

The treatment procedure takes about 10-15 minutes.

General information about side effects of treatment

Many patients have few or no side effects during their treatment and are able to carry on their normal activities. Every patient is different and you may not have the same side effects as somebody else. Your oncologist will discuss with you any side effects you may experience.

During your treatment, you can raise any concerns with your treatment staff. Clinic appointments with the On-treatment Review Advance Practitioner will also be booked to discuss how your treatment is going and any side effects etc.

Side effects during and immediately after completion of radiotherapy

Side effects commonly start about 10 days after the first treatment and are usually most troublesome about 10 days after the last treatment. After that, the healing process begins. The side effects usually settle quickly over the following 2-3 weeks.

The skin in the treated area may become dry, red and itchy, a reaction similar to mild sun burn. Some patients have a more severe skin reaction when the skin may break down and become moist and painful. However, now, with the use of IMRT, this occurs less frequently.

If you are having, or have had, chemotherapy, the severity of your skin reaction may be increased. **Please speak to the Therapeutic Radiographers if your skin becomes uncomfortable or you experience any skin changes.**

If you have radiotherapy to the area around the collarbone/lower neck, a small area of skin on the back as well as the front may be affected.

If you have had a wide local excision or lumpectomy:

- The treated breast may feel heavier and swollen during radiotherapy (this is more likely to occur if you have larger breasts) and it may take many weeks for these symptoms to settle
- If you have a boost dose of radiotherapy, the skin around the area of surgery may experience a heightened skin reaction in comparison to the whole breast



Are you a smoker?

If so, you should be aware that there is evidence that side effects are worse if you smoke. We can support you in giving up smoking; please ask your treatment staff or speak to the staff in PharmaC for more information. Continuing to smoke puts you at risk of developing many serious health conditions.

Tiredness

It is quite common to feel more tired than usual during your treatment and for several weeks after your treatment has finished (tiredness can be worse if you have had recent chemotherapy). It is important to rest when you feel the need to do so and ask your family and friends to help when they can. If you live alone, do only the things that are necessary. Gradually, you will get back to normal activities.

Feeling sick (nausea)

Radiotherapy to your breast/chest wall very rarely makes you feel sickly. However, it can happen when the lower end of the treatment includes a small area of the upper abdomen (tummy) to ensure the breast/chest wall is treated properly. If you do feel sickly, let the Therapeutic Radiographer or nurse know so that they can give you advice and/or any medication, if necessary.

Later and permanent side effects of radiotherapy

These can happen and may develop months or many years after treatment.

Common effects

- Some people may have breast/chest wall pain and tenderness, tiredness and fatigue for several months after completion of treatment

Permanent effects

- May include a change in the colour of the treated skin, usually becoming darker. Following a WLE or lumpectomy, sometimes the treated breast feels slightly firmer and may also shrink, though this may only be noticeable to you

Uncommon effects

- Some shoulder stiffness on the affected side
- Your surgeon will have explained that lymphoedema (swelling of the arm of the affected side) may occur after surgery to the axilla (armpit). Radiotherapy may increase the likelihood of developing lymphoedema, particularly when the lymph gland area is treated
- Following a WLE or lumpectomy, more noticeable breast shrinkage can occur
- Some damage to the lungs causing shortness of breath. Changes to your lung may be detected on a chest X-ray or a chest CT scan, but you may never experience any breathlessness. You should mention that you have had radiotherapy if you have a chest X-ray or CT scan in the future



Rare effects

- Tiny red streaks in the skin may develop, caused by changes in the tiny blood vessels in the skin. This is called telangiectasia; it affects the appearance of your skin but does not usually cause other problems
- Possible damage to a small area of the heart (after treatment to the left breast). We produce an individual treatment map and great care is taken to treat as little (if any) of your heart as possible
- Some damage to the ribs making them fragile and painful

Very rare effects:

- Damage to the nerves (brachial plexus neuropathy) which can cause numbness, pain and weakness in the arm and hand of the treated side

Completion of radiotherapy and follow-up

Sometimes, your skin reaction may worsen after your treatment has finished.

You will receive a follow-up appointment to attend your local hospital. The appointment will be made for you as you complete your radiotherapy (unless you are continuing to receive chemotherapy). It is usually 4-6 weeks later.

Continue to follow the advice given in the information class(es).

Continue to be "Breast Aware" by examining both the left and

right breast/chest wall regularly. Leaflets on how to do a breast examination are available from The Clatterbridge Cancer Centre, or from the Practice Nurse at your GP surgery. Contact your GP if you have any concerns.

Following a diagnosis of breast cancer, it is usual to have regular mammograms and these will be arranged by your breast surgeon or oncologist. The first one is usually done a year after your operation.

It may take many months before you feel that you have recovered fully and are able to do all the things you did before your diagnosis and treatment. If you are feeling low or experience mood swings, it may be useful to talk your GP or oncologist. Some patients find it useful to have the support of others who have experience of breast cancer by attending a local support group. Contact the local Macmillan Information & Support Centre for more details. Alternatively, if you are familiar with using the internet, the major cancer charity websites have online communities.

Macmillan booklets about coping and living with cancer and treatment side effects are available free of charge. These can be ordered by telephoning 0808 808 00 00 or by visiting a Cancer Information and support Centre - Liverpool (sited in the main entrances of the Clatterbridge Cancer Centres in Wirral, Liverpool and Aintree).



Information on bra, lingerie and swimwear

Following surgery (and particularly for those having a mastectomy), some individuals may need/want to try different styles of bras etc. Your Breast Care Nurse, the local Cancer Information and Support Centre or Breast Cancer Care have details of suppliers and events. If possible, wait until any skin reaction has settled before attending appointments etc.

Contact details

If you are unsure of the telephone number or name of your Breast Care Nurse and need to contact them, ring the local hospital where you had your surgery and ask for the Breast Care Nurse Service.

Clatterbridge Cancer Centre - Liverpool

65 Pembroke Place, Liverpool, L7 8YA

Tel: 0151 556 5000

www.clatterbridgecc.nhs.uk

Clatterbridge Cancer Centre - Wirral

Clatterbridge Road, Bebington, Wirral, CH63 4JY

Tel: 0151 556 5000

www.clatterbridgecc.nhs.uk

Clatterbridge Cancer Centre - Aintree

Lower Lane, Fazakerley, Liverpool, L9 7AL

Tel: 0151 556 5959

www.clatterbridgecc.nhs.uk

Macmillan Cancer Support

89 Albert Embankment, London, SE1 7UQ

www.macmillan.org.uk

Telephone 0808 808 0000

Cancer Information and Support Centre:**Clatterbridge Cancer Centre – Liverpool**

Tel: 0151 318 8805

Maggie's Centre - Wirral

Tel: 0151 334 4301

Society of Radiographers

www.sor.org



Notes



How we produce our information

All of our leaflets are produced by staff at The Clatterbridge Cancer Centre and this information is not sponsored or influenced in any way. Every effort is made to ensure that the information included in this leaflet is accurate and complete and we hope that it will add to any professional advice you have had. All our leaflets are evidence based where appropriate and they are regularly reviewed and updated. If you are concerned about your health in any way, you should consult your healthcare team.

We rely on a number of sources to gather evidence for our information. All of our information is in line with accepted national or international guidelines where possible. Where no guidelines exist, we rely on other reliable sources such as systematic reviews, published clinical trials data or a consensus review of experts. We also use medical textbooks, journals and government publications.

References for this leaflet can be obtained by telephoning 0151 556 5570.

If you need this leaflet in large print, Braille, audio or different language, please call 0151 556 5570.

If you have a comment, concern, compliment or complaint, please call 0151 556 5203.

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