

Three large, teal-colored arcs of varying radii on the left side of the page, partially overlapping each other.

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

A horizontal teal bar with a white, curved cutout on the left side.

Radiotherapy

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## **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.



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.

If you have any general enquiries prior to starting your treatment, please contact the Information and Support Radiographer at Clatterbridge Cancer Centre - Wirral, Monday to Friday during office hours on **0151 556 5314**.

## 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

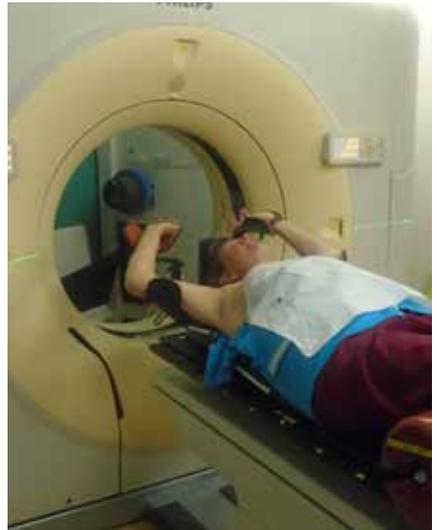
- Following a wide local excision (WLE) or lumpectomy, an extra treatment (called a 'boost') may be required. The boost is targeted at the area where the cancer used to be (the tumour bed) and will be given at the same time that you receive radiotherapy treatment to the whole breast. The decision to 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 clinical nurse specialist service

The Macmillan Clinical Nurse Specialist (CNS) is available to support patients attending the centre for treatment and their families. If you think this service may help you, please talk to a member of staff involved in your care who can arrange a referral.

## 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. This way of treating is relatively new, but research has shown that it is better than the free-breathing method.

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.

The use of CT scanning, IMRT computers and treatment machines allow us to design and deliver increasingly more complex treatments. One of the advantages of IMRT is that we are able to safely give less radiation to the tissues outside the breast/chest wall tissues which helps to reduce side effects.

DIBH in combination with IMRT offers us more options in the treatment design etc.

You may decide that you do not want to be treated using the DIBH method. This is an option you can choose and you will be able to discuss this with your oncologist before your treatment starts.

If you find it impossible to hold your breath as required, we will continue with a standard scan. 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 20 seconds. A

special camera monitors your breathing with the help of a sensor (a small plastic box 6.5 x 3x 3cm) 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 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.

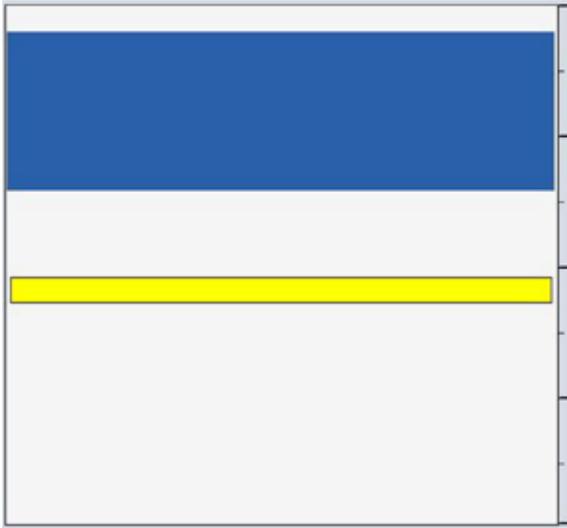
Now, when holding your breath, you should move the bar into the area at the top of the screen (blue box) and it will change colour (green).

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 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 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 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 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 ask your radiographer or nurse for advice if your skin becomes uncomfortable.

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



**You can help yourself by:**

- Attending the information class(es)
- Applying an unscented moisturiser to your skin on the treated area. We will supply you with a suitable product. If you experience any discomfort or allergic reaction, (a rare event) you should stop using the cream and tell your treatment radiographer. At the beginning of your treatment, apply the cream twice a day and then apply more frequently as your skin becomes drier as it is important to keep your skin well moisturised
- During treatment, only applying creams recommended by your radiographer, nurse or doctor
- Washing the treated area very gently with lukewarm water and/or a mild unperfumed soap, e.g. baby soap, using your hand instead of a flannel. Pat the area dry using a soft towel and do not rub the area. Those who have had a WLE or lumpectomy should pay particular attention to drying the area under your breast. A shower is preferable to a bath, if possible. If you prefer to have a bath, do not soak the skin of the treated area
- If you are having radiotherapy to your breast, chest wall or armpit area, you must not use an ordinary deodorant in, or around, the treatment area. You may use a deodorant that does not contain metals, for example Pitrock Natural, Alra, Naturally Fresh deodorant Crystal roll-on, Forever Living Aloe Ever-Shield, Crystal Body deodorant stick, Bionsen. Suitable products are available in our pharmacy (PharmaC) next to the front entrance at CCC- Wirral, supermarkets, health food shops, larger

chemists. STOP using the deodorant if your skin becomes red or sore

- Not shaving or using creams under your arm on the treated side to remove hair during your treatment, and afterwards, until any skin reaction has settled
- For those not also receiving chemotherapy, should your skin reaction cause you discomfort, you can use an over the counter painkiller that you know suits you, e.g. paracetamol. Report the use of painkillers to your treatment staff and ask for more advice, if necessary
- Wearing loose fitting clothes that do not rub the skin of the treated area. For women, this includes the bra. (See later - information on bra, lingerie and swimwear)
- If you have had a mastectomy, using your breast prosthesis as little as possible until after any skin reaction has settled. If this is necessary, try to limit use to short periods and use the softie rather than the silicon type
- Female patients should think about the type of bra worn as the straps of a bra can rub the skin. If you have a smaller cup size, you may find that wearing a crop or camisole top would still give you enough support/be comfortable without causing rubbing on the skin. However, if you have a larger cup size, these types of garments may not be comfortable. Wearing a looser fitting bra during treatment may be more comfortable. Return to using your normal bra type once any skin reaction has settled



- Not exposing the treated area to bright sunlight (natural or from a sunbed) during radiotherapy and for several months after your treatment has finished. Protect the skin in the treated area by using a high factor or total block sun cream and covering the area with your clothes. Clothes made of material that blocks sunlight are now available, but tend to be more expensive

### **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 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

If your skin is very sore at the end of treatment, staff at the centre will arrange for a District Nurse to attend to you. 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 Macmillan Information Centre (sited in the main entrances of the Clatterbridge Cancer Centres in Wirral and Aintree).



## Information on bra, lingerie and swimwear

Following surgery (and particularly for those having a mastectomy), some women need/want to try different styles of bras etc. Your Breast Care Nurse, the local Macmillan 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.

### **The Clatterbridge Cancer Centre Breast Clinical Nurse Specialist**

0151 556 5142

### **The Clatterbridge Cancer Centre NHS Foundation Trust**

0151 556 5000 or [www.clatterbridgecc.nhs.uk](http://www.clatterbridgecc.nhs.uk)

### **Macmillan Cancer Support**

Tel: 0808 808 0000

[www.macmillan.org.uk](http://www.macmillan.org.uk)

### **Macmillan Cancer Information and Support at**

**Clatterbridge Cancer Centre - Wirral** 0151 556 5570

**Clatterbridge Cancer Centre - Aintree** 0151 556 5959

### **Breast Cancer Care**

Tel: 0808 800 6000

[www.breastcancercare.org.uk](http://www.breastcancercare.org.uk)

## 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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