This leaflet aims to help you and your family understand more about your radiotherapy to the breast or chest wall.

It will be given to you in addition to the information you will receive from your Clinical Oncologist (who is a specialist doctor in cancer treatment). Their team will be caring for you during your treatment. This team may include radiographers, nurses, social workers and physiotherapists.

The leaflet describes radiotherapy planning and treatment. It also explains the side-effects which you may experience during and after treatment. Each person’s treatment will vary, so the information given is a general guide. The healthcare team looking after you will explain your treatment and the side-effects in detail. You may have already had surgery with a lumpectomy or mastectomy, and/or chemotherapy/hormone therapy. Occasionally radiotherapy may be the first and only treatment for breast cancer.

If you hear any words or phrases that you do not understand, please ask your doctor or a member of your healthcare team what it means. It does not matter how many times you ask. Staff will make every effort to meet your individual needs or will direct you to the person who can help.

Please do not bring any valuables into hospital with you as the Trust cannot accept liability for loss or theft.
What is radiotherapy?

Radiotherapy is the use of high energy X-rays and other types of radiation, to treat cancer and early cancer changes (referred to as ductal carcinoma in situ or DCIS). The organs and tissues of the body are made up of tiny building blocks called cells. Radiotherapy causes physical and chemical damage to the cells in the treated area. Normal cells can repair themselves and are able to recover but cancer cells are not.

Radiotherapy is a local treatment that reduces the chances of breast cancer returning in the areas that are treated. This means it only affects the part of the body that is treated. When you are having your radiotherapy you do not feel anything and does not make you radioactive. It is perfectly safe for you to be with other people, including children and pregnant women, throughout your treatment. You will have your radiotherapy on a treatment machine called a linear accelerator as shown here in the photograph.

Radiotherapy is given by male and female therapy radiographers, who are highly trained in the accurate planning and delivery of radiotherapy treatment.

You will see your radiographers at each treatment session and they will be happy to answer any questions you may have.
If you would like to visit the radiotherapy department before your treatment starts please call 0113 206 7603 to arrange a time. This visit can be very useful as you can find out more information about radiotherapy. It is a good opportunity to visit the hospital and tour the simulators and treatment areas. You will also have the opportunity to ask questions.

‘I was so pleased to see the machines before my treatment and the staff were so helpful and really put my mind at rest.’

Students
Please be aware that the radiotherapy department is a training centre for radiographers. Students may be present on the treatment units. However, they are supervised at all times. If you do not wish students to be present during your treatment please speak to a member of staff. This will not affect your treatment or care.

Pregnancy
Women should not become pregnant whilst having treatment because radiotherapy can have an effect on the unborn child. It is suggested that you use a barrier form of contraception (e.g. condoms).

Please do not hesitate to ask your doctor or nurse if you have any questions or concerns about these issues. There is a leaflet available called Contraception and risk of pregnancy during cancer treatment, please ask if you would like a copy.
Planning your treatment

Your first appointment for radiotherapy will be a planning appointment. This will be used to gather all the information we need to accurately plan your treatment. You will be contacted by phone, with an appointment for your radiotherapy planning session. This visit may take 1-2 hours to complete. If you have been given a radiotherapy consent form, please bring this with you. If you have not signed a consent form yet, you will do so at this appointment.

What to bring with you

- a list of all questions you may have;
- an up-to-date list of all the medications you are taking (including inhalers, sprays, vitamins or herbal products);
- any medication that you may need during your visit;
- something to eat and drink and something to occupy yourself with (you may be with us for up to two hours).

Your planning scan

If you are asked to bring a bra with you, please ensure it is non underwired. In order to plan your treatment you will have a CT scan. This is done on a machine called a CT Simulator, shown on the next page. This scan is not used for diagnostic purposes and will not be reported on as such. This CT scanner allows the images to be sent to the radiotherapy computer planning system so that we can plan your radiotherapy. The radiographers will take a ID photograph which will be attached to your electronic radiotherapy prescription. This is used as part of our identity checks. If you would prefer not to have your photograph taken please let the radiographers know.
You will be asked to undress to the waist and given a gown to wear, or you may wish to bring your own dressing gown from home. The radiographers will help you into the correct position for planning and treatment. You will be asked to lie as still as you can during this process but breathe normally.

To define the treatment area, the radiographers place three small crosses on your chest; two on your front (breast bone) and one at the side of the breast being treated. At the end of the scan these crosses will be replaced by black ink and a tiny pinprick using a sterile needle. This leaves a permanent mark usually no bigger than a freckle (shown here in the picture). These marks are used to position you each day for your treatment.

All of the information taken at this stage is used to produce your treatment plan. Each person attending for radiotherapy has a treatment plan which is tailor made to their own needs. We plan your treatment carefully to make sure we are treating all of the areas necessary, while avoiding other structures such as your heart and lungs as much as we possibly can.
Following the scan the radiographers will give you the times of your first appointments on the treatment machine, this may be in a few weeks’ time. The radiographers will talk to you about any further appointments you have.

**Seroma**

A seroma is a collection of fluid that can develop after your surgery. Small seromas are common after breast surgery and the fluid is usually reabsorbed by the body. If you have a large seroma, your surgical team may remove some of the fluid from it using a syringe. This is called aspiration. The fluid can build up again after it has been aspirated.

It is important that your shape does not change between your planning CT scan and radiotherapy. If you do change shape, your planning scan and plan would have to be re-done. Please contact the radiotherapy department as soon as possible if your seroma increases in size or you are recommended to get it aspirated at any point between your planning scan and your radiotherapy.

Tel: 0113 206 8940
Having your treatment

When you arrive for your treatment you should go to the reception at the entrance of the radiotherapy department. You will be given directions to your treatment machine.

The radiographers will explain what will happen and answer any questions that you may have. The number of treatments you will be having will be confirmed and you will be given a list with all the appointments you need.

Radiotherapy is given once a day (not weekends or bank holidays) for three to four weeks. You will have a total of 15-20 treatments, this will depend on the type of surgery you had. Your doctor will have explained this to you when you consented for treatment.

Treatment is normally given daily, Monday to Friday however your treatment may not start on a Monday. Whenever possible you will be treated at the time of day that suits you, but this cannot always be arranged or guaranteed. There may be occasions when you may have a longer stay in the department or be asked to attend at a different time, e.g. to see your oncologist.

Treatment takes about 15 minutes each day depending on the type of treatment you are having. The treatment machine is only switched on for a fraction of this time.
For most of the time the radiographers are carefully placing you and the machine in the correct position for your treatment. The machine will move around you but does not touch you. Although you have the small permanent marks on your skin, the radiographers may need to draw around them each time you come for treatment. This is part of the quality checking procedure for your treatment. If you have pen marks on your skin please do not scrub at them to remove as this may irritate your skin. You may prefer to wear older clothing as the marks may discolour fabric. It is also generally advisable to wear loose clothing around the treated area.

Once you are in the correct position the radiographers will leave the room to switch on the machine. Although you have to lie still, you can breathe normally during your treatment. You will only be alone for a few moments at a time.

The radiographers will be watching you on a closed circuit TV monitor (CCTV) during treatment. The CCTV camera is not recording or saving any images.

There is also an intercom system so the radiographers can talk to you. Please let them know if you would like to use the intercom system.

The machine stops automatically after your prescribed dose of treatment has been given. The machine can also be stopped at any time if needed. The treatment machines make a buzzing sound when they are switched on. You do not feel pain, heat or any other sensation.
During the treatment course, please tell the radiographers how you are feeling. If you have any problems or questions, please let them know.

Some days the Radiotherapy Department may be very busy and your appointment time may be delayed. We will keep you informed of any delays. Please see the information screens and notice boards in the waiting areas.

Your appointments for radiotherapy may not be all at the same time each day and are subject to change. It is also possible that during your course of treatment you may miss a day’s treatment due to machine maintenance or bank holidays. It is therefore important to speak to a health care professional before booking a holiday immediately following your radiotherapy.

For appointment queries please telephone the Radiotherapy Reception Desk on 0113 206 8940 for further advice.
Side-effects of radiotherapy

Side-effects can be divided into short term (acute) effects that happen during or soon after your treatment, and long term side-effects occurring months or years later.

Short term side-effects

Some side-effects are common, whilst others are rare. As your treatment progresses you may experience some side-effects. Not everyone will experience all of these reactions. If you do experience any of the following side-effects, do not worry, they are normal reactions to treatment and are temporary. They usually begin about half way through the course of treatment, may last for several weeks after it has finished and then slowly settle down. Please tell us how you are feeling, particularly if your symptoms worsen, so that we can advise and treat you.

Tiredness (fatigue)

Radiotherapy can make you feel more tired than usual, especially if you have to travel a long way for treatment each day. Fatigue usually improves between six months to a year after treatment. Some people find that fatigue can last longer, up to two years or more.

**There are things you can do to help yourself:**

- Gentle exercise can help reduce the symptoms of fatigue.
- Having enough to drink can prevent tiredness from dehydration.
- Small meals or snacks eaten more often than three times a day may be easier to manage.
- Try to get a good night’s sleep where possible, a daytime nap may help.
• Try to ‘pace’ yourself, listen to what your body is telling you, rest if you need to.
• Pick out the things that you enjoy, and try to delegate other tasks. Little and often is the rule of thumb.

Try to continue with some of your normal routines and activities if possible. If you usually work you may find this can help maintain your mood but you may find it better to reduce your hours or take some time off.

There is a Macmillan information leaflet available ‘Coping with fatigue’. If you would like a copy, or support with your fatigue please ask a member of staff.

Skin reaction

10 to 12 days after starting your treatment, the skin where you are having your treatment may change. You will be given a leaflet which will give you more information about this. Another leaflet will give you information on how to care for your skin after your radiotherapy. The radiographers will give you this leaflet when you have finished your course of treatment.

To avoid irritation to the skin of your armpit please do not shave or use hair removal products on the side being treated.

If you are concerned about your skin reaction please talk to your radiographers or contact the nursing staff in Princess Royal Suite on 0113 206 7587
**Swelling**
Your breast or chest wall and underarm may become a little swollen during and after treatment. Fluid drainage from the breast can be slower after surgery to the armpit (axilla). Radiotherapy can cause a build-up of fluid into your body tissues resulting in swelling. Sometimes the scar area can feel hard and irregular, and can take some months to settle.

**Pain**
After radiotherapy you may have some discomfort in the treated area, this is not usually severe. You may also get a sharp pain that lasts only for a few seconds. This is quite common and may be due to healing nerves. Please tell your radiographer or nurse if pain becomes severe (this is not a common side-effect).

**Late side-effects of treatment**
Long term side-effects can happen months to years after your radiotherapy. We believe that the benefits of your radiotherapy treatment outweigh the risks involved. The list below can seem alarming, but please remember serious late side-effects are very rare. The effects can vary from person to person and not all reactions occur in all people.

**Skin changes**
It is common to notice a slight change in the colour of your skin some months after treatment has finished. This is usually very mild and does not cause any problems, but may last.

A less common change in the skin is called Telangiectasia. This is where tiny blood vessels called capillaries are visible under the skin. This appears to be more common in patients
following lumpectomy where a ‘boost’ is given. Although these changes are permanent, they do not cause any health risk or problem.

**Scar tissue**
After surgery and radiotherapy, scar tissue (Fibrosis) may form. This tends to be more noticeable around your surgical scar. In the months and years following treatment you may notice an alteration of the shape around the treated area. For example, after a lumpectomy and radiotherapy, the treated breast may become a little firmer, smaller and higher. If you are at all unsure about any changes to your breast area please contact your breast care nurse for advice.

**Lymphoedema**
A swelling of the arm or hand may develop due to a build-up of fluid, this is called lymphoedema.

If this occurs, it is usually mild and comes and goes. Sometimes the problem is more severe. The chances of developing this are related to the type of surgery you have had in the armpit (axilla), and whether the armpit is included in the radiotherapy treatment area.

There are simple precautions you can take to help prevent lymphoedema occurring.

*These include:*
- regular gentle stretching exercise of the arm;
- avoiding heavy lifting with that arm (e.g. heavy shopping bags);
- use the opposite arm where possible for blood tests, blood pressure readings and injections;
• wear protective clothing and gloves when gardening etc. to avoid cuts and grazes;
• if you have a cut or graze to the affected arm wash immediately and apply an antiseptic cream. If the cut or graze appears infected please seek medical advice for a course of antibiotics.

Pain or discomfort
A rare side-effect is a general ache and tenderness in the breast, ribs or chest wall. These pains usually respond to painkillers such as paracetamol. If the pain continues a doctor can provide advice and further medication if needed.

Please read the information leaflet enclosed with any medications, this will explain any side-effects you may experience when taking them. If you are at all concerned about any side-effects you are experiencing please talk to your pharmacist, nurse specialist or GP.

Very rare side-effects
After radiotherapy your ribs, breast bone or collar bone in the treated area may become more brittle. Although this may cause some pain, you may be unaware of it. This effect is very rare.

There has been worry in the past about the effect of radiotherapy on the heart and lungs. The likelihood of such problems is now very low, because modern techniques reduce the dose of radiotherapy to the heart and lungs.

Very rarely, radiotherapy can cause tumours. Although this is a serious possible side-effect of your treatment it is important to bear in mind that this is very rare. If it does happen, it is likely to be many years after your treatment.
An extremely rare effect is damage to the nerves that run from the neck down to the arm (Brachial Plexus Injury). This can cause pain, numbness and weakness in the arm. This occurs very rarely when radiotherapy is given to the root of the neck or armpit following an operation known as an axillary clearance. If you need this area treated it will be discussed with you when you consent for treatment.

Remember, you should consider the possibility of these risks against the potential problems of not having the treatment that has been recommended for you. Your healthcare professional will discuss this in detail with you in the Oncology clinic.

**Exercises to help you with your radiotherapy**

Following your breast surgery your chest and arm on the affected side may feel very tight. Gentle exercises will help to give you more freedom of movement. At first you will experience discomfort as the tight structures begin to stretch. If you exercise carefully, gradually increasing the range of movement, you will not harm yourself and you will regain normal use of your arm.

Regular short sessions of approximately five minutes every 2-3 hours, are best for effective stretching. All the exercises should be done slowly. Do not force a movement, instead gradually try to increase it. It is OK for the stretch to feel tight or a little uncomfortable but not painful.

You should receive examples of appropriate exercises following your surgery. The following exercises will be helpful for your radiotherapy position.
Look at the photograph here showing the position for your radiotherapy.

You will not be able to have your radiotherapy unless you can reach this position.

This may seem very difficult at first but becomes easier with repeated exercise and gentle stretches. It is important to do these exercises regularly even if you are doing light housework.

If you have had a breast reconstruction with either a Latissumus Dorsi flap or a TRAM (Transverse Rectus Abdominis Muscle) flap, please follow the exercises in your exercise leaflet instead.

You will naturally feel protective towards your scar area but try not to carry your arm across your chest. It makes you round shouldered and leads to tightening in the armpit and elbow.

Take your shoulders backwards without lifting them. Try to let your arms swing naturally when you walk.
The following are stretching exercises. To gain maximum benefit these positions should be held. Gradually increase the hold for each exercise as much as you can tolerate, 20-40 seconds will give you maximum benefit.

Lying on your back, grasp a stick with both hands apart.

The non-affected arm can help control the movement.

Raise both arms overhead as far as possible.

Gradually increase the hold as much as you can tolerate, 20-40 seconds will give you maximum benefit. Repeat 5-10 times.

Everyday light housework is good for arm movement. Start gradually and increase the amount you do as your stamina and arm movements improve.

Even when radiotherapy is completed continue a short daily programme of stretching exercises to help maintain good arm movements. A five-minute session will be most helpful.
If you have any difficulties with the exercises or would like help or advice with arm movements, please contact the physiotherapist on: **0113 206 7992.**

Support services
This leaflet deals with the physical aspects of your treatment, but your emotional well-being is also important. Some people have a close network of family and friends who provide emotional support. Others would rather seek help from people who are not involved with their illness. Either way, it is important to know that help is available if you need it. Please discuss any difficulties or worries you may have with a member of staff.

*Listed below are the people who are available to help you.*

Breast Care Nurses
You will usually have had contact with your breast care nurse from the time of your surgery. They can explain about radiotherapy and its side-effects before you come for treatment and are available to support you.

Review Clinic Nurses
These nurses look after radiotherapy outpatients’ general needs, give information and advice, manage difficult side-effects and apply dressings.

Physiotherapists
Physiotherapists are available at the hospital if required.
Lymphoedema Service
This is a team of specialist physiotherapists and nurses you can be referred to by your consultant. If you are aware of more swelling on the treated side after you have received treatment, discuss this with the doctor, nurse or radiographer you see in clinic or when you see your breast care nurse.

Macmillan Radiographer and Nurse Specialists
These professionals can help you find ways to cope if things feel difficult for you. They can offer advice and direct you onto other support if needed.

Psychological Support
It is common for people with cancer to be distressed at certain times during their treatment. However, if your problems persist you may benefit from psychological support and this can be arranged.
Leeds Cancer Support

Leeds Cancer Support complements care provided by your clinical team. We offer access to information and a wide range of support, in a welcoming environment for you, your family and friends.

We can be found in the information lounges in Bexley Wing and also in the purpose built Sir Robert Ogden Macmillan Centre.

The Sir Robert Ogden Macmillan Centre

The Centre is on the St James’s Hospital site and offers a variety of support services including counselling, support groups and complementary therapies. These therapies include Reiki, relaxation and visualisation, hand and foot massage and many others. You can just drop in for a coffee and a chat anytime. Open from 10am - 4pm Monday to Friday.

Contact numbers for Leeds Cancer Support

Information Centre Level 1 Outpatients Department

Open from 10am - 4pm. Tel: (0113) 206 8816

Information Lounge Level -2 Radiotherapy Department

Open from 8.00am - 6.00pm Tel: (0113) 206 7603

Sir Robert Ogden Macmillan Centre

Open from 10am - 4pm. Tel: (0113 206 6498)

All the above services can be emailed on: leedsth-tr.Cancersupport@nhs.net
Helpful organisations

Breast Cancer Haven
The Yorkshire Haven, 4-5 The Gateway West, East Street, Leeds, LS9 8DA.
Tel: 0113 284 7800
www.thehaven.org.uk

Breast Cancer Care
Helpline 0808 800 6000
www.breastcancercare.org.uk
Mon-Fri 9am-4pm, Sat 9am-1pm

Macmillan Cancer Support
Freephone 0808 808 0000, 9am to 8pm Mon - Fri.
A textphone service for deaf and hard of hearing people on 10800 0808 808 0000
www.macmillan.org.uk

Car Parking
If you are coming by car follow the signs for St James’s Hospital, Bexley Wing. There is a drop-off point in the Plaza outside the main entrance and parking in the multi-storey car-park next to Bexley Wing.

There is a pedestrian walkway from the car park leading to the main entrance.

When you are coming for radiotherapy planning and treatment your car parking is free.
• You should enter the car park via the lane indicated for visitors, take a ticket and park as usual (disabled parking spaces are on Level 0).
• When exiting use the left hand lane next to the ticket office. Take your parking ticket and appointment letter to the attendant.
• They will process your ticket so that when you insert it at the barrier no charge will be made.
• If you need assistance or are unable to leave your car please press the button at the barrier.

Hotel Bexley Wing

The hotel is located on the 8th floor of Bexley wing and offers single and double rooms each with an en-suite, tea and coffee making facilities and digital television. Single rooms with wheel chair access are also available.

Patients are able to stay free of charge. There is a charge for relatives if they are staying in their own room.

For further details please contact the Hotel Co-ordinator on 0113 206 7687.

Out of hours please contact the Non-surgical Oncology Nurse Practitioner through main switch board on 0113 243 3144.