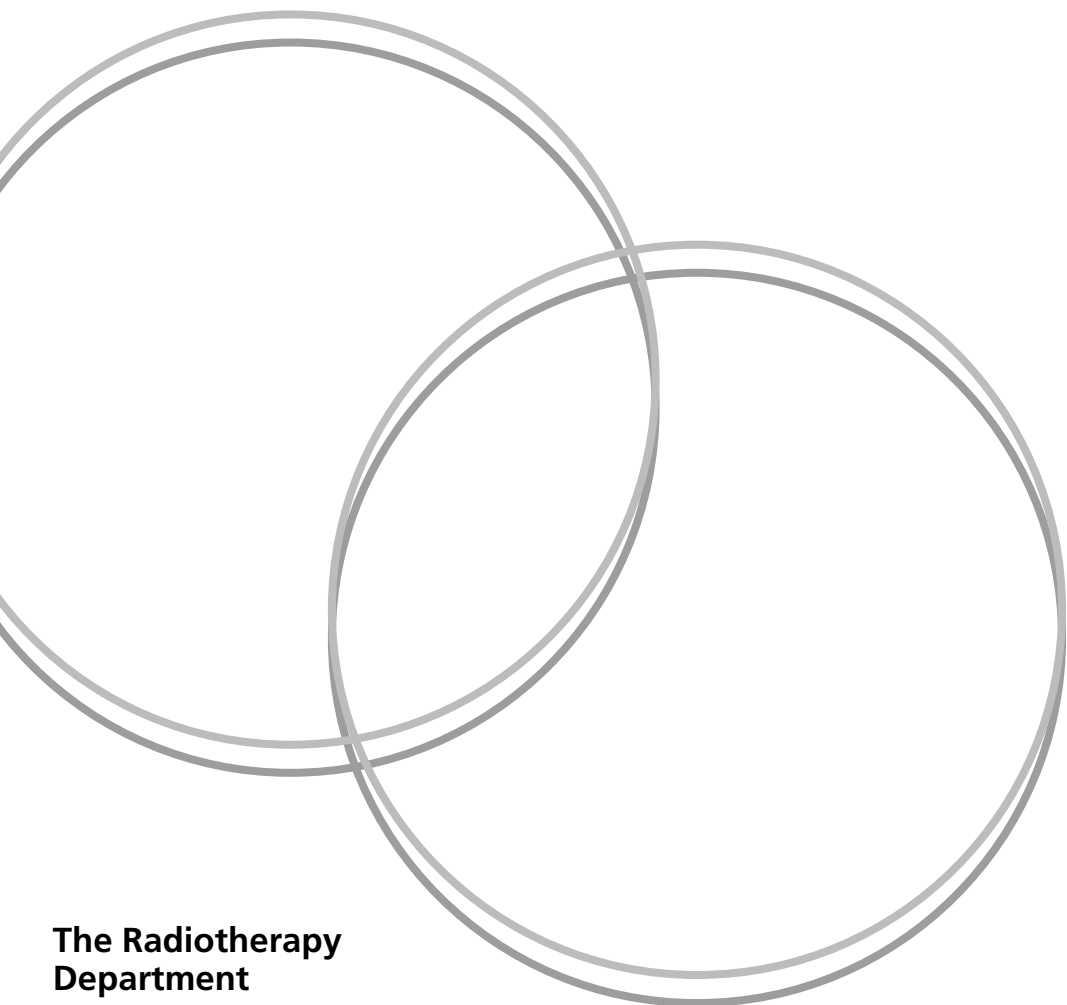




Oxford University Hospitals  
NHS Foundation Trust

# Radiotherapy to a limb

**Information for patients**



**The Radiotherapy  
Department**

You have been given this leaflet as you have been recommended treatment with radiotherapy to a limb.

The **general Radiotherapy leaflet** will explain what having the treatment involves, common side effects and some general information about the department.

This leaflet will provide more detail, specific to the type of treatment planned for you and how you can help yourself during and after treatment.

The timing and effects of treatment may vary from one person to another. This leaflet will highlight the key points of the discussions you will have had with your doctor and treatment team. Family members and friends may also find it helpful.

Treatment for sarcoma can be a combination of radiotherapy and surgery. Your individual situation will determine the order of these treatments.

## Radiotherapy before surgery

Your doctors may suggest you have radiotherapy before surgery. It can shrink the sarcoma and make it easier to remove. It is given to reduce the risk of the cancer coming back in the future at the same place.

You will usually have daily treatments as an outpatient for five weeks. This is called **neoadjuvant radiotherapy**.

The dose of radiotherapy you have before surgery is smaller than when you have it after surgery. Research has shown that this smaller dose results in less side effects in the years following treatment. However, research into radiotherapy before surgery has also shown that it can increase the risk of wound complications after your operation, particularly for sarcomas in the leg. The oncologist will talk with you about the risks and benefits.

If you are having radiotherapy before your operation your oncologist will organise for you to have an MRI scan four weeks after you have completed the radiotherapy. This is to plan your surgery.

You are likely to have your surgery six weeks after completing the radiotherapy.

## Radiotherapy after surgery

Radiotherapy is often used after surgery to reduce the chance of the cancer coming back at the same place. This is called **adjuvant radiotherapy**. You will usually have daily treatments as an outpatient for six weeks. The treatment will not begin until your wound has completely healed, as the radiotherapy would slow down the healing process.

## Radiotherapy for advanced sarcomas

If your cancer has spread or come back after it was first treated, it may not be possible to get rid of it completely. However, it may be possible to control the growth of the cancer for a while with radiotherapy and sometimes chemotherapy.

A growing cancer can cause symptoms by pressing on nerves and other body tissues. Radiotherapy can relieve these symptoms by shrinking the tumour, reducing the pressure. This is called **palliative radiotherapy** and you may just have a few treatments.

## Treatment planning

To make sure the radiotherapy is as effective as possible, it has to be carefully planned. Planning helps to make sure the radiotherapy X-rays are aimed precisely at the cancer and cause the least possible damage to the surrounding healthy tissues.

You may need to have a plastic mould made of your limb. The mould helps to keep the limb still during your CT planning scan and radiotherapy treatment sessions. Your doctor or specialist nurse will tell you more about moulds, if you need one.



As part of the planning, you will have a CT scan (computerised tomography) taken of the area to be treated. At the same time, therapeutic radiographers will take measurements from you, which are needed for treatment planning. This session will usually take about 60 minutes.

Often, very small tattoo marks are made on the skin. These marks are permanent and will only be done with your permission. It is a little uncomfortable while the tattoo is being made, but it is a very good way of making sure that treatment is directed accurately.

## **Early side effects**

Radiotherapy treatment is painless. However, there are some common side effects which are associated with radiotherapy. You may notice one or more of them gradually developing over the course of treatment.

If anything is worrying you, however small, **during** your treatment, please tell your therapeutic radiographer or radiotherapy nurse practitioner, either at your visit or by phoning the department.

### **Tiredness**

You may feel tired, especially toward the end of the course of treatment. Listen to your body and if necessary allow yourself extra time to rest or sleep. The tiredness will wear off over a few weeks, once the treatment ends.

### **Skin reaction**

Most people develop a skin reaction in the area being treated, especially at the back of the treatment site. The skin may become red, dry, sensitive or begin to peel. You will be given guidance on how to care for the skin in this area.

It is usual for the skin reaction to begin two to three weeks after the beginning of a radiotherapy course. It will last for a small number of weeks after radiotherapy is complete.

## **Hair loss**

This happens **only** in the area treated. The hair may grow back. If it does, then it can take up to a year and it may be patchy.

### Swelling of the limb

This may happen during the treatment. It is normal and often settles after treatment finishes, although rarely it may continue. This may be improved by gentle exercise and remaining active during treatment.

## **Stiffness**

You may experience muscle or joint stiffness in your limb, due to the radiotherapy causing slight swelling. This may be improved by gentle exercise and remaining active during treatment.

## **Wound breakdown**

After neoadjuvant radiotherapy and surgery there is an increased chance that your wound may be slow to heal and may need regular dressing changes. Rarely it may require another operation.

The side effects you have experienced may become worse for a short while and slowly settle over a few weeks. Please do not worry as this is quite normal. During this time you should continue to follow the advice you have been given during your treatment. Continue to take any prescribed medication for the side effects until they settle down.

## **Possible long term side effects**

Long term side effects can occur many months to years after radiotherapy has finished. These side effects are hard to predict and unfortunately if they do occur can be permanent. You should always report them to your GP or hospital team for assessment and referral for specialist advice and treatment.

We carefully plan the treatment to avoid the surrounding areas around the tumour as much as possible, to reduce the risk of these side effects.

### **Swelling of the limb (lymphoedema)**

The radiotherapy damages the small tubes (lymphatic vessels) that circulate tissue fluid (lymphatic fluid) around the body, causing them to become blocked. Fluid builds up behind the blockage and causes swelling in the tissues close to where the radiotherapy was given – known as lymphoedema. Oncologists now try to prevent this by leaving a strip of untreated tissue along the length of your arm or leg, to help the lymphatic fluid to continue to flow.

Lymphoedema can't be cured, but the earlier it is diagnosed, the easier it is to control. Regular walking should help to reduce it and you will need to be careful not to injure the area.

If you do get swelling in your arm or leg after radiotherapy, tell your oncologist. You may be referred to your local lymphoedema team for advice and treatment.

### **Skin changes**

The skin in the treated area may become darker and drier after treatment.

### **Thickening of tissue and muscle (fibrosis)**

The muscle and surrounding tissues in the area treated can become thickened. Regular stretching and gentle massage of the area using a moisturiser can reduce this side effect.



## **Stiff joints**

Radiotherapy treatment to a joint, such as a knee or elbow, can make it stiff by causing hardening of tissues. Regular exercise and using the joint as normal will help to stop it from stiffening up.

## **Fracture**

There is a small risk that the bone in your treated limb may become weak and lead to a fracture. If necessary, your bone could be pinned to prevent or treat a break.

## **Second malignancy**

Radiotherapy is associated with a small risk of causing a second cancer many years later.

## **After treatment**

After your treatment has finished you will be asked to return to the Outpatient Clinic to be reviewed by your oncologist or their team. Radiotherapy takes time to work, so it is at this appointment when your doctor will assess and discuss your progress and any continuing side effects. They will plan any further appointments needed.

## How to contact us

If you have any queries during your radiotherapy, or before your follow-up appointment, please speak to the therapeutic radiographer treating you or a radiotherapy nurse practitioner.

### **Radiotherapy Nurse Practitioners**

Tel: **01865 253 472**

(during normal working hours)

Alternatively, outside of these hours, please contact:

### **Oxford triage assessment team**

Tel: **01865 572 192**

After your treatment has finished you can contact the Macmillan musculoskeletal cancer nurse practitioners.

Tel: **01865 738 282**

**01865 737 861**

Bleep: 0300 304 7777 Ask for bleep 7173/ 7221

## Helpful websites

[www.ouh.nhs.uk/oxfordsarcomaservice](http://www.ouh.nhs.uk/oxfordsarcomaservice)

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

[www.maggiescentres.org/our-centres/maggies-oxford](http://www.maggiescentres.org/our-centres/maggies-oxford)



## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

Author: Sally Trent, Consultant Oncologist, Radiotherapy  
November 2021  
Review: November 2024  
Oxford University Hospitals NHS Foundation Trust  
[www.ouh.nhs.uk/information](http://www.ouh.nhs.uk/information)



*Making a difference across our hospitals*

[charity@ouh.nhs.uk](mailto:charity@ouh.nhs.uk) | 01865 743 444 | [hospitalcharity.co.uk](http://hospitalcharity.co.uk)

OXFORD HOSPITALS CHARITY (REGISTERED CHARITY NUMBER 1175809)

