

## Having radiotherapy treatment to a sarcoma of a limb

### Your treatment decision

Your doctors have recommended that you have treatment using radiotherapy. Radiotherapy can be used before or after surgery, or on its own. Your clinical oncology (radiotherapy) team will discuss the reasons and aims of delivering radiotherapy in your case.

This factsheet provides information about your radiotherapy treatment so that you know what the treatment involves and what the possible side effects are. We will ask you to sign a consent form that confirms that you agree to receive this treatment. You can change your mind at any time; however it is strongly recommended that you complete a course of treatment once you have started. There is a risk that the radiotherapy would fail unless the full course is completed.

### What is radiotherapy?

Radiotherapy is a type of radiation treatment using x-rays. The treatment is given using a machine called a linear accelerator and treatment delivery is completely painless. It takes between 10–20 minutes to deliver the treatment.

### How does radiotherapy work?

Radiation damages cells that grow and divide rapidly. Only the cells in the area of the body receiving treatment are affected, and modern treatment methods mean that we can avoid treating normal cells as much as possible. The healthy, normal cells can repair themselves, while it is hoped that the abnormal cancer (sarcoma) cells cannot recover.

### Planning your radiotherapy treatment (pre-treatment)

Before starting the radiotherapy, we may need to make a cast (or shell) of the treatment limb. This will ensure that the limb is in the same position for every treatment. We will take a CT scan while you lie in the treatment position so we can design the radiotherapy according to your individual needs. Please see The Royal Marsden factsheet *Having a CT scan for radiotherapy planning* for further information and to check what time you need to arrive before your scheduled appointment, so that we can make any preparations needed.

The treatment will be planned specifically for you, to make sure that the sarcoma is accurately targeted with the least amount of normal tissues included. This planning can sometimes take up to four weeks to complete. Your treatment start date will be the earliest time that we can safely get the treatment ready.

**The CT scan will usually take about 30 minutes.**



After your planning session, we will confirm a time and date to start the radiotherapy treatment.

## **Radiotherapy treatment**

You will need to report to the receptionist in the Radiotherapy Department every day when you arrive. The receptionist will let the radiographers working on your machine know that you have arrived. On your first visit, please arrive twenty minutes before your treatment time so that the radiographers can talk to you about the treatment and can answer any extra questions you may have.

You will receive your radiotherapy treatment every day, Monday to Friday. A pre-operative radiotherapy course of treatment is usually delivered over five weeks (25 treatments). A post-operative radiotherapy course of treatment lasts up to six or six and a half weeks (30 – 33 treatments). Palliative radiotherapy treatment can be delivered over one to three weeks.

At each visit, the radiographers will take you into the treatment room and position you on the treatment couch as you were for the planning scan. The radiographers will explain what they need to do and may ask you to make small movements so that the marks that were put on your skin during the planning stage line up with laser lights in the treatment room. When they are happy with the position, the staff will leave the room to deliver the treatment.

You will be alone in the room for a few minutes while the radiotherapy machine is switched on. The radiographers can see and hear you at all times when you are in the treatment room. If you have any problems, they will advise you to call out or raise your hand for attention and they will come in to help you. Some treatment machines have background music playing to help you feel more comfortable.

The radiotherapy machine will move around you into different positions but it will not touch you. Although you can hear a buzzing noise when the treatment is being delivered, you will not be able to feel anything happening.

**Please see our policy on monitoring in the radiotherapy department in The Royal Marsden booklet *Radiotherapy; your questions answered***

## **Care during your course of treatment**

The radiographers who you see each day can give you advice if you have any problems. They can also contact someone from the radiotherapy team to come and see you for specialist advice. Other members of the team include the clinical nurse specialists for sarcomas, physiotherapists and the radiotherapy nurses. There may be times when you feel anxious, depressed or generally more emotional – this is quite normal. If you feel you would benefit from extra support, please ask for help. We will see you in the clinic regularly to make sure that you are managing your treatment.

## **Side effects of radiotherapy**

Side effects can occur during the treatment or can appear several months or years after the treatment.

**Early side effects** (during and immediately after your course of treatment)



- **Skin reaction** – Your skin in the treatment area may become pink or, if you have more pigmented skin, it may become darker. You may develop dry and itchy skin. If a skin crease is included in the treatment, the skin may become very sore and it might breakdown and require specialist care.

You can use a light moisturiser on the skin in the treatment area. Avoid using thick creams, oils or medicated creams. If the skin becomes too sore and tender, do not use cream in the area. We will give you more information on skincare when you start your treatment. Please refer to The Royal Marsden factsheet *Skin care guidance for patients receiving radiotherapy treatment* for more details.

- **Hair loss** – You will only lose hair in the area being treated. Hair loss will occur about two to three weeks into treatment. This loss may be temporary or permanent. Your doctor will advise you if the lost hair is likely to re-grow or not.
- **Swelling of the limb** – You may experience swelling, stiffness and tenderness in your limb as treatment progresses. This is due to local inflammation of the tissue caused by the radiotherapy. You should try to keep the limb being treated raised whenever possible, both during and after radiotherapy.
- **Tiredness** (fatigue) is common. The tiredness will slowly improve after your treatment has finished.

All these symptoms will settle within a few weeks of completing the treatment.

#### **Intermediate side effects** (one to two months after pre-operative radiotherapy)

- **Post-operative wound complications** – You may experience increased fluid collection (seroma) or infection at this site after surgery. These are common even for those who receive surgery alone, but may be prolonged if you have received pre-operative radiotherapy.
- **Delayed wound healing** – Because of the increased possibility of post-operative wound complication, it may take much longer for your wound site to heal.

#### **Late side effects** (from three months following treatment)

- **Swelling of the limb (lymphoedema)** – The limb at or below the surgery site may become swollen and radiotherapy will increase the risk, especially in the leg. Prolonged standing and being overweight will increase the tendency to swelling. You may be referred for specialist lymphoedema advice and care.
- **Fibrosis** – You may develop long-term fibrosis (thickening) of the muscle and tissue that has been treated. The skin in the area being treated may feel 'leathery' due to a loss of elasticity and suppleness. Regular stretching exercises, good skin care, the use of water-based moisturisers and avoiding the sun can minimise these effects.
- **Fracture** – There is a small risk that the bone in the area treated will be at an increased risk of fracture, and there may be problems with healing any fracture.
- **Joints** – If a joint has to be included in the treatment area, there is a risk of increased joint stiffness and increased wear and tear (arthrosis). Regular exercise and movement may help to reduce this and you are encouraged to lead as normal a life as possible. If you are at a higher risk for this, your doctor will tell you.
- **Nerve damage** – This can lead to loss of strength or impaired sensation.



- **Blood vessels** – After many years (maybe twenty or more), blood vessels can age earlier than under normal circumstances following radiotherapy. This is known as arteriosclerosis. This could result in a reduced blood supply to your limb and may require further specialist treatment. There are other conditions which can increase this risk, for example smoking, high blood pressure, diabetes and high cholesterol.
- **Second malignancy** – The use of radiotherapy does carry a small risk of causing a new different cancer in the treated area. This is something that may happen many years later, but it is a small risk for most patients.

### Special circumstances

The clinical oncology team will explain if the following are applicable to you:

- Upper limb – Myelitis/ plexopathy (nerve damage)
- Lower limb – Infertility, perineal soreness, pelvic symptoms (altered bowel and or bladder function).

**Remember, these are possible side effects, and you may not experience any of them.**

### Follow up after your treatment

If you have received radiotherapy before surgery, you will have an MRI of the limb and repeat imaging of the chest four weeks after completion of treatment. You will also have an appointment with the clinical oncology and surgical teams a few days after these scans to confirm the timing of surgery. If you have received radiotherapy after surgery, or with no scheduled surgery, you will usually be seen by the clinical oncology team six weeks after the end of your radiotherapy. You will be asked to attend the joint sarcoma clinic every four months for the first two years, every six months up to year five, and annually up to year ten.

At your follow up visits, the medical team will examine you for any signs of recurrence and monitor for longer term side effects. They will offer advice or a referral to other specialists (for example, physiotherapy or lymphoedema specialists) if necessary. They will also advise you on any exercises, especially stretching, that may be beneficial. All patients will need regular chest x-rays or CT scans at each visit when attending for follow up.

It is important that you feel comfortable with what you have been told. If you have any further questions or concerns about your treatment, you can contact your clinical nurse specialist.

### Contact details

Your consultant is .....

If you have any questions or concerns about your treatment, you can contact your Clinical Nurse Specialist (CNS).

Your CNS is .....

Telephone .....



Alternatively, contact The Royal Marsden switchboard on **020 8642 6011** and ask to speak to your consultant's secretary. We can then arrange for one of the team to speak with you.

Alternatively, please call:

**The Royal Marsden Macmillan Hotline:** 020 8915 6899

(available 24 hours a day, 7 days a week)

If you need to change your radiotherapy appointment, please phone the radiotherapy bookings team on **020 8915 6018** (Monday to Friday, 9am–5pm).

