



Maidstone and
Tunbridge Wells
NHS Trust


Kent Oncology Centre


Radiotherapy to the Lung: Side Effects and Management

We hope this leaflet will help you understand radiotherapy treatment to the lung, the side effects that may occur and ways to manage these effects. If you would like to speak to one of the radiotherapy team please feel free to contact them on the numbers given below:

Maidstone Hospital

Macmillan Radiotherapy Specialists
Appointment enquiries

 01622 225094


 01622 225080

Kent & Canterbury Hospital

Macmillan Radiotherapy Specialists
Appointment enquiries

 01227 766877

Ext 722 2711

 01227 783010

What is radiotherapy?

Radiotherapy uses high energy x-rays and similar rays called electrons, to treat abnormal cells such as cancer cells. It is usually given as a series of short, daily treatments, Monday to Friday, in the radiotherapy department using a machine called a linear accelerator, also known as a 'Lin Acc'. The machine does not touch the body but you will be brought closer to it. You do not go 'into the machine' but it will move around you whilst you lie on the couch.

Treatment is individually planned for each person so even people with the same type of cancer may have different types of radiotherapy treatment and different numbers of treatments

Each treatment is called a 'fraction'. Giving the treatment in fractions ensures that normal cells are damaged less than cancer cells. The damage to normal cells is mainly temporary, but still causes radiotherapy side effects.

Radiotherapy **does not** make you radioactive so it is safe for you to be with people, including children, after each treatment.

Radiotherapy is painless, although it may gradually cause some uncomfortable side effects which will be discussed later in this leaflet.

How will I feel after treatment?

Radiotherapy affects people differently; some find that they can carry on working, only needing time off for their treatment, while others find it too tiring and prefer to stay at home. If you have a family to look after you may find you need extra help.

Don't be afraid to ask for help, whether it's from your employer, family and friends, social services, or the staff in the radiotherapy department. As your treatment progresses, you'll have a better idea of how it makes you feel, so you can make any necessary changes to your daily life.

Giving your consent

Before you have radiotherapy your doctor will explain the aims of the treatment to you. You will be asked to sign a form saying that you give your permission (consent) for the hospital staff to give you the treatment; no medical treatment can be given without your consent. Before you're asked to sign the form you should have been given full information about:

- the type and extent of the treatment you are advised to have
- the advantages and disadvantages of the treatment
- any other treatments that may be available
- any significant risks or side effects of the treatment

If there is anything you don't understand let the staff know straight away so that they can explain. Some cancer treatments are complex, so it's not unusual for people to need repeated explanations. You do not have to make a decision when the treatment is first explained, you can always ask for more time to think it through.

Before you have your first treatment, staff will check again that you still give consent to have treatment and will ask whether you have any further questions. You are free to choose **not** to have the treatment, and the staff will explain what may happen as a result of that.

Pregnant?

Please tell the medical staff if you might be pregnant as radiotherapy can harm the developing baby.

Planning your treatment

Careful planning ensures that the radiotherapy is as effective as possible and that the radiotherapy rays are aimed precisely at the cancer, causing the least possible damage to the surrounding healthy tissues.

The treatment is planned by your clinical oncologist, a physicist and therapy radiographers. It is usually necessary to wait a number of days, possibly up to two weeks, for treatment to start because of the preparation required.

CT planning scan

A CT planning scan is the first part of the process of planning your treatment. A CT scan is a type of x-ray. You will be lying on a couch which will move through a wide ring so that many images from different angles can build up a three-dimensional picture of the area. This session usually takes about 45-60 minutes.

In order to obtain very clear images, it may be necessary to inject a dye (contrast) into a vein. The radiographers will discuss this with you and ask for your consent. A cannula will be placed into your arm so that the dye can be given when you are in the scanner. This is for the planning scan only and not for treatment. We advise that you do not have anything to eat for two hours before this scan.

Positioning

You will be taken into the scanner room and the radiographers will ensure you are lying in the correct position on a fairly hard couch. This will be identical to the one that you will lie on during treatment.

The radiographers will explain what they are doing and will make you as comfortable as possible before leaving the room to take the scan which lasts a few minutes and is painless. They will

watch you from outside the room. We need you to lie very still for a few minutes so that accurate measurements can be taken and your exact position recorded. The measurements and the information from the scans are fed into a planning computer that is used to help your consultant plan your treatment precisely.

Skin markings

Finally, the radiographers will ask for your consent to make three permanent tattoo marks on your skin; these are the size of a small mole or freckle and are used each day by the treatment radiographers to ensure you are lying in the correct position. It's a little uncomfortable while the tattoo is being done, but it's a good way of making sure that treatment is directed accurately.

The tattoo marks are also useful once treatment has finished as they indicate the area where the radiotherapy was given; if further radiotherapy is required in the future the team will be able to avoid the exact same area.

Having your treatment

Before your first treatment the radiographers will explain to you what you will see and hear. It's quite normal to feel anxious about having your treatment, but as you get to know the staff and understand what is going on it should become easier. It is fine to have eaten just before your treatment.

The radiographers will advise you where to lie on the couch before it is raised up to a higher position. Your positioning is very important so the radiographers may take a little while to get you ready (they may call this 'setting up'). The room may be in semi-

darkness while this is happening and the radiographers will be talking to each other and calling out measurements.

As soon as you are positioned correctly the staff will need to leave the room to prevent them from being exposed to any unnecessary radiation.

During treatment you will be alone for a few minutes but there will be a radiographer watching you during this time on a monitor camera. To protect your privacy, nobody else will be able to see you. If you have any problems you can raise your hand to attract the radiographer's attention and they will come in to help you.

The radiographers may come into the treatment room to re-position equipment in the middle of your treatment.

Most radiotherapy machines can rotate around your body, giving treatment from several different directions. This and the sound of the machine can be unsettling at first. Some treatment rooms have CD players so that you can listen to music to help you relax while having your treatment and there may be a screen you can see which will display pictures.

The radiographers may tell you on some days that they are 'taking pictures'. This check ensures that the treatment still matches the original plan.

Occasionally small changes sometimes have to be made to your treatment plan; the radiographers will explain any changes, and their reasons, to you.

Side effects of radiotherapy to the lung

Some side effects may occur, usually towards the end of the course of treatment and also during the first few weeks after treatment has finished. Treatments given over several weeks give more side effects than a short course of treatment.

These side effects can be upsetting and may require you to make some adjustments to your normal life, but most are

temporary and will gradually disappear after a few weeks. However, some side effects may continue for, and some may only become apparent after, months or years following treatment. It is important to discuss these with your consultant as help may be available.

Short term side effects

You will be monitored throughout your treatment by the radiotherapy team. Please let them know if you experience any of the following problems:

Tiredness

Radiotherapy can make you tired so you may need more rest than usual, especially if you have to travel a long way for treatment every day. Rest as needed, but it is good to try to get some exercise each day, however gentle.

Loss of appetite and sickness

Some people lose their appetite as an effect of radiotherapy. It is often better to try to eat little and often. It is also important to drink plenty of fluids, e.g. water, squash, fruit juice, milk and soups.

If you struggle to eat much, it is a good idea to supplement your meals with nutritious high-calorie drinks. These are available on prescription or can be bought from the chemists. The radiographers can arrange for you to see a dietitian who can advise you on your diet.

Occasionally radiotherapy can make you feel sick (nauseous). This can often be helped by drinking more fluids but medication can be prescribed if needed.

Difficulty swallowing

Radiotherapy can make your gullet inflamed, causing discomfort. You may not be able to swallow properly for a while; medicines can be prescribed to help. We recommend you eat soft food and avoid smoking, drinking spirits and eating hot or spicy foods. You should drink plenty of bland, cool fluids e.g. milk and water.

Skin changes

Skin reactions in the treatment area should be mild, with slight redness and itching, but your skin reaction can be affected by the dose and type of treatment that your consultant has prescribed. It can also be dependent on your type of skin, your shape, any existing conditions such as diabetes and especially if you smoke.

Tips for helping your skin include:

- Wash the skin gently using soap or aqueous cream and gently pat dry.
- To reduce irritation to the treatment area you may use a moisturiser sparingly.
- Wear loose fitting natural fibre clothing next to the skin.
- Avoid heating and cooling pads/ice.
- Avoid hair removal products.
- Avoid adhesive tape.
- Ensure the treated skin is covered when out in the sun. Your skin may be more sensitive to the sun especially in your first year after treatment; it is advisable to apply a high factor sun screen.

After finishing treatment you may be aware of your skin reaction becoming worse for up to another two weeks. Continue with the suggested skin care tips, returning gradually to your usual skin care regime when your skin has returned to normal.

Cough

It is quite common to develop a cough during or after radiotherapy for lung cancer. You may have a 'sticky' cough with mucous to bring up, or you may have a dry, tickly cough. You can ask your GP or consultant for cough medicine, but these may not help much.

The cough should go soon after treatment is complete. However, if it persists and you feel feverish or unwell you should tell your GP. The cough may be due to an infection rather than the treatment, and you may need antibiotics.

Chest pain

You may experience chest pain when you are having radiotherapy to the chest in one or two doses. It usually occurs within 24 hours of having the treatment. It is nothing to worry about and goes away by itself, but it is important that you tell your GP or radiotherapy team in case the pain is caused by something else. Painkillers can be prescribed.

Temperature and shivering

You may have a raised temperature and feel shivery if you have treatment in one or two doses. Paracetamol will usually stop the shivering and bring down your temperature. Tell your GP if you have these symptoms as they can sometimes be due to a chest infection.

Hair loss

You will only lose hair in the area being treated, i.e. your chest. The hair usually grows back within a few months, but it can be patchy.

Still smoking?

Smoking during treatment could reduce the success of your treatment and cause some side effects to be worse.

Please ask for help if this is a problem for you.

Late side effects

These effects are likely to be permanent and your consultant will refer you to appropriate specialists.

- Breathlessness
- Narrowing of your gullet (oesophagus)

Unfortunately doctors can't tell beforehand who will develop long term side effects and who won't. People vary quite widely in their reactions to radiotherapy and a few seem to be more than usually sensitive. It is important to remember that treating your cancer is the priority. However, your radiotherapy specialist team will do all they can to reduce the risk of any long term side effects. They will discuss any possible side effects with you before you agree to have treatment.

Further information and advice

Kent Oncology Macmillan Cancer Information Centre, Maidstone Hospital

Offers support and information to anyone who has concerns about cancer (patients, relatives, friends or carers).

☎ 01622 227064

Macmillan Cancer Support

Provide practical, medical and financial information

☎ 0808 808 0000 (Freephone)

Website: www.macmillan.org.uk

Cancer Research

This charity provides information about cancer, treatment and clinical trials.

☎ 0808 800 4040

Website: www.cancerresearchuk.org

Patient Experience Teams (PALS) for East Kent patients

Kent and Canterbury Hospital

Desk at the outpatient's entrance of the hospital

Queen Elizabeth the Queen Mother Hospital

Office at the main entrance of the hospital (Ramsgate Road)

William Harvey Hospital

Desk at the main entrance of the hospital

☎ 01227 783145 or 01227864314

Email: ekh-tr.patientexperienceteam@nhs.net

*The information in this leaflet has been taken from information provided by Macmillan Cancer Support.

MTW NHS Trust is committed to making its patient information accessible in a range of languages and formats. If you need this leaflet in another language or format please ask one of your clinical care team or the Patient Advice and Liaison Service (PALS). We will do our best to arrange this.

Maidstone and Tunbridge Wells NHS Trust welcomes all forms of feedback from our service users. If the standard of service you have received from the Trust does not meet your expectations, we want to hear from you. Please speak with the ward manager or the nurse in charge in the first instance, or you can contact the **Patient Advice and Liaison Service (PALS)** on:

Telephone: ☎ 01622 224960 or ☎ 01892 632953

Email: mtw-tr.palsoffice@nhs.net

or visit their office at either Maidstone or Tunbridge Wells Hospital between 9.00am and 5.00pm, Monday to Friday.

You can be confident that your care will not be affected by highlighting any areas of concern or making a complaint. The Trust will retain a record of your contact, which is held separately to any medical records. If you are acting on behalf of a patient, we may need to obtain the patient's consent in order to protect patient confidentiality. More information on PALS or making a complaint can be found on the Trust's website: www.mtw.nhs.uk or pick up a leaflet from main reception.

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