

A guide to radiotherapy



The name of your consultant is:

The radiographer who explained the treatment to you is:

You can contact us on:

What is radiotherapy?

Radiotherapy is the use of X-rays to destroy cancer cells. It can be used alone as a treatment or may be combined with surgery, chemotherapy or hormone therapy. Radiotherapy can be given from outside the body (external radiotherapy) or from within the body (internal radiotherapy).

A large X-ray machine called a linear accelerator gives external radiotherapy. Internal radiotherapy is given by placing a solid radioactive material close to the tumour or by giving a radioactive liquid as a drink or injection. This leaflet is concerned with external radiotherapy.

External radiotherapy destroys the cancer cells in the treated area. It does not make you radioactive and it is safe to be with other people (including children and expectant mothers) throughout your treatment. Normal cells are also affected by the radiotherapy but the damage is usually temporary as they can repair themselves more effectively. Damage to normal cells may cause some unwanted side effects. To reduce this radiotherapy is usually divided into a number of sessions (called fractions), often one session a day for five days with a rest at the weekend. A course of radiotherapy can vary from a single visit to six or seven week's treatment.

The number of treatments you have depends on many factors including the type of cancer being treated and where it is in your body, your general health and whether chemotherapy or surgery is also part of your treatment. For these reasons treatment is planned for each person individually.

Why is radiotherapy given?

Your doctor may prescribe a course of treatment to destroy the tumour with the aim of curing your disease. Radiotherapy may be given before or after surgery as well as before or after chemotherapy. Sometimes radiotherapy may be given at the same time as chemotherapy.

Radiotherapy may also be given to relieve some symptoms, for example pain or breathlessness. This treatment is usually given over a short period of time, sometimes in a single visit and causes few side effects.

Radiotherapy is painless and takes just a few minutes at each visit. Although you need to keep still for your treatment you do not need to hold your breath as you would for an X-ray picture.

Do I need to stay in hospital?

External radiotherapy is usually given as an outpatient. If you have any special problems we may ask you to stay in a ward for the course of your treatment. If you are already an inpatient you will be brought to the department from the ward each day for your treatment by one of our helpers.

How is radiotherapy planned?

Before your radiotherapy can start it needs to be planned by your clinical oncologist (radiotherapy doctor). This will involve having a CT Scan, which will be done in the oncology department. This usually takes between 10 and 20 minutes and during that time you will be lying on a hard couch. Form pads may be used to make you more comfortable. It is important to lie as still as possible to enable the radiographers to complete the scan quickly and to take accurate measurements. You may have recently had a diagnostic CT scan, but a planning scan is still important.

Special procedures may be necessary to make sure the radiographers have a clear picture of the areas to be treated. For example, you may need to drink a

radio-opaque liquid for a picture of your gullet or a vaginal tampon may be used to show the exact position of the vagina. These procedures are not painful and only take a few minutes. Everything that happens will be explained to you in advance.

Skin marking

Once the treatment area has been finalised you will be given one or more permanent pinpoint skin marks. This will only be done with your permission but they are very important. They are very tiny marks, which cannot rub off and enable the radiographers to accurately position you for your treatment each day. You will be told if there are any other skin marks you need to keep on, otherwise you may gently wash the pen marks off.

Having your treatment

Radiotherapy treatment is completely painless and takes anything from a few seconds to several minutes at each visit. The radiographers will take a little while to position you accurately before your treatment. This is called 'setting up'. Although you need to keep still for your treatment you do not need to hold your breath as you would for an X-ray picture.

Once you are in the correct position the radiographers will leave you alone in the room for a short time while the machine is switched on to give the treatment. This is to prevent them being exposed to unnecessary radiation. The radiographers will watch you carefully on a close-circuit television and there is an intercom. If you were to have a problem it is easy to attract the radiographer's attention by raising your hand or calling out and they will come in to help you.

Before your first treatment the radiographers will explain:

- how your treatment will be given
- how long it will take
- about any noises you may hear.

Please remember that most people are anxious when starting treatment but you will soon get used to the routine and relax. Don't be afraid to tell the radiographers any particular worries you may have, as they are there to help

you. The radiographers may need to come into the room to alter your position slightly during treatment or the whole treatment may be given without interruption.

What are the possible side effects?

As radiotherapy destroys cancer cells it also has an effect on the surrounding normal cells within the treatment area, causing side effects. The most common side effects are listed below, but no one person experiences more than a few of them and some people will not have any at all. Before you start your radiotherapy any likely side effects will be explained along with advice on how they can be treated. Most side effects gradually disappear once your course of treatment is completed.

Tiredness

You may find you feel more tired during your radiotherapy. This can seem worse if you are travelling a long way for treatment each day. If you do feel tired allow yourself extra time to rest, spread your chores throughout the week and accept any offers of help! It can be useful to take some gentle exercise, such as a walk in the fresh air. Feelings of fatigue may be a problem for several months after your treatment has finished. However, many people do not experience this at all and many continue to work normally throughout.

Skin reactions

Some people develop a skin reaction while having radiotherapy. This is normally noticeable after 10-14 days. The degree of the reaction depends on the area being treated, the dose of radiation and skin type. Some people have no problem at all while others may experience a reaction similar to sunburn. Everyone having radiotherapy should treat skin in the treatment area gently, using these guidelines:

- wash the area with warm (not hot) water and mild, unscented soap. Pat the area dry using a soft towel. If your hair is within the treatment area do not dry it with a hairdryer
- do not use any creams, lotions or powders in the treatment area. This includes make-up. The Clinical Oncology department will supply you with some aqueous cream to apply to your skin

- the treatment area is sensitive and should not be exposed to the sun or cold winds. You should cover the treatment area in strong sunshine for up to a year after radiotherapy. Even after this time your skin may be more sensitive to the sun and need extra care. Use a high factor sunscreen and cover up whenever possible.
- you may swim during radiotherapy, as long as you do not have an open wound. However you should shower off in clean water immediately afterwards
- men having radiotherapy to their head or neck should avoid wet shaving with a blade and should not apply aftershave to the area
- do not place a heat source, such as a hot water bottle or heat pad against the skin in the treatment area.

You may find that the skin in the treatment area becomes red and sore or itchy, similar to sunburn. The radiographers will be looking for this reaction and will advise you how to look after it. Do not apply any creams or dressings unless recommended by the radiographers or prescribed by your oncologist. Your skin may become weepy and it may peel as the redness fades. This is a normal side effect. The reaction reaches its peak at 10-14 days after treatment has finished and has usually settled by four weeks after treatment.

Eating and drinking

It is important to maintain a healthy, balanced diet and drink plenty of fluid during treatment. You may find you go off your food or that your taste or eating habits change.

It may be easier to have small snacks throughout the day rather than 3 large meals. If you do have problems eating we can arrange for you to see a dietitian who will be able to give you useful advice. If radiotherapy to your mouth or throat makes eating too painful, liquid food supplements can be prescribed.

Changes in your blood

Bone marrow, which produces the different types of blood cells, can occasionally be affected by radiotherapy. If this is considered likely, you will have regular blood tests during treatment. If your blood count is low you may feel tired or 'run down'.

Sore mouth/throat

If the area you are having treated includes your mouth or throat it may become painful after two to three weeks. This is because the cells lining your mouth are sensitive to radiation. Also, the salivary glands may be affected by the treatment causing them to produce less or no saliva. This can make chewing and swallowing uncomfortable. Treatment can also make it easier to develop infections of the mouth, such as thrush, which are easily detected and treated. Your taste buds may be affected by the treatment and you may find that food tastes 'metallic' or that all foods taste the same. Things usually return to normal but may take up to a year.

It is important to take care of your mouth during radiotherapy. Keep your teeth clean using a soft toothbrush and fluoride toothpaste. Soak dentures or dental plates in Sterident and use salt water as a mouthwash. Chewing sugar free gum may help to increase saliva production. Taking frequent sips of a cool drink or sucking ice cubes may also help a dry mouth. Dryness in your mouth may last for several months or may be permanent. If the effects are likely to be permanent this will be discussed with you before you start radiotherapy. Artificial saliva sprays and lozenges can be prescribed to help.

The radiographers and oncologist will monitor the reaction closely and mouthwash or painkillers will be prescribed when necessary.

As your mouth will be more sensitive than usual avoid eating hot, spicy or very cold food and drinks as well as hard or scratchy foods such as toast. An appointment with a dietitian will be arranged for you during the first week of your treatment.

Alcohol, particularly spirits and tobacco, irritate the lining of the mouth and are best avoided during radiotherapy and for a few weeks afterwards.

Voice changes

Radiotherapy to your neck or throat may make your voice become hoarse or husky. These are temporary changes and your voice should return to normal within a few weeks of completing treatment.

Hair loss

With radiotherapy, you will lose hair only within the area that you are having treated. This happens where the radiation beam enters the body and also where it exits. Hair is likely to begin to fall out after two weeks. Hair loss is usually only temporary and it will start to grow back within 2 to 3 months of finishing treatment. Occasionally hair loss can be permanent.

There are several ways of covering up hair loss, including hats and scarves. You will be offered a wig if this is appropriate for you. This will be discussed with you before you start radiotherapy. We understand how upsetting this may be for you and will be happy to talk about it with you at any time.

Difficulty swallowing

Radiotherapy to your chest may make it difficult for you to swallow solid foods because the radiation can irritate the gullet. Your chest may feel tight or it may feel as if you have a 'lump' stopping food going down. This is normally noticeable after 10-14 days of treatment but can start earlier. This is a common reaction to treatment and can be helped by choosing softer foods that are easier to swallow.

A medicine can be prescribed to take before meals to help make eating less uncomfortable. High calorie food supplements may also be useful and you may wish to see the dietitian for more advice. The discomfort usually gets better 2 to 8 weeks after the end of treatment.

Shortness of breath or cough

During radiotherapy to your chest you may feel short of breath or you may develop a cough. These side effects may not occur until after your radiotherapy has finished. However they should always be reported to your doctor, as you may need treatment with steroids or antibiotics.

Nausea and vomiting

Some people find that their treatment makes them feel sick, or they may actually be sick, especially if the radiotherapy is close to the stomach. Your doctor will prescribe anti-sickness drugs (called anti-emetics) for you. Any feeling of sickness or nausea usually stops once the treatment is over.

Diarrhoea

Diarrhoea is a fairly common side effect of treatment to the abdomen and pelvis, as are stomach cramps and wind. It is advisable to drink plenty of fluid and reduce the amount of fibre in your diet. Anti-diarrhoeal drugs will be prescribed for you. Diarrhoea normally disappears after a few days but can continue for some weeks after you treatment. As well as being unpleasant, diarrhoea can also make you feel weak and tired.

If the area being treated is in the lower pelvis, the back passage (rectum) may become irritated. Try to avoid becoming constipated, as this will make the feeling worse. Piles may become uncomfortable and your radiotherapy doctor can prescribe a cream or suppository to help.

Sometimes after pelvic radiotherapy there may be a mucus discharge or some bleeding from the back passage. Let your doctor know if you have these problems.

Urinary problems

Radiotherapy to the lower abdomen may cause irritation of the bladder, leading to a burning sensation or discomfort when you urinate (cystitis). Increasing the amount of fluid you drink will help. You may need to pass water more frequently, including at night. However you should try to avoid tea, coffee, alcohol and acidic fruit juices as these can also irritate the bladder and make the symptoms worse. You may find Cranberry juice or barley water helpful. You will also have regular urine tests to check for infection.

Weight loss

Loss of appetite and weight loss may have many causes, either as a result of your illness or as a side effect of treatment. Sometimes you may not feel like eating or you may not be able to face preparing and cooking meals. Enlist as much help as you can with the cooking. It may be easier to eat small, more frequent meals or snacks, rather than conventional large meals. Food supplements such as Build-Up can be used in place of meals or to add to your calorie intake. We can easily arrange advice from a dietician, at a time to fit in with your radiotherapy, if eating becomes a problem for you.

Sexuality

For women

Radiotherapy to the pelvis can affect the function of the ovaries. Radiotherapy to the ovaries will cause the menopause, which will develop over several months giving the normal symptoms such as hot flushes, vaginal dryness and skin changes. This can be distressing for younger women and will be discussed fully with you before you start radiotherapy. Hormone replacement therapy may be prescribed if appropriate, depending on the type of cancer you have had.

Radiotherapy to the vaginal area can cause the vagina to narrow. The support radiographers or specialist nurse will show you how to use vaginal dilators to keep your vagina supple once you have completed your radiotherapy.

At first you may find sex uncomfortable and a lubricant such as KY jelly, which you can buy from a chemist or supermarket, will help. Many women do not feel ready to return to a regular sex life while they are recovering from their treatment. This is natural and in time your interest in sex should return.

It may help to talk to your partner about your fears and worries and you should not feel embarrassed to talk to the radiotherapy staff if you feel it would be helpful.

For men

While undergoing radiotherapy some men may experience some problems with sex. You may have lost interest or become temporarily impotent because of anxiety about your illness, worries about the future, or because treatment is making you too tired. These effects can last for several weeks after treatment and can be distressing. Try to talk openly with your partner and do not be embarrassed to ask the radiotherapy staff about any problems.

Fertility

Most radiotherapy treatment has no effect on your ability to enjoy sex or have children. Women who wish to conceive after radiotherapy should discuss this with their specialist before becoming pregnant. For women whose ovaries have been included in the treatment area temporary or permanent infertility is likely.

In men, sperm production will be reduced if the testicles are in the treated area. This can lead to temporary or permanent infertility. It is often possible though to avoid treating the testicles in the cancers that are most common in young men. Radiotherapy for prostate and bladder cancer is likely to permanently lower sperm counts.

Your oncologist will discuss fertility with you before you have any radiotherapy if this is likely to be a problem. It may be possible for men to have some of their sperm stored before they have radiotherapy. The sperm can be stored for several years until a couple is ready to have children.

Emotions

It is very common to feel emotional, sad or weepy during and for a while after radiotherapy. You are coming to terms with not only your illness, but also the treatments and often distressing side effects and physical changes, such as possible hair loss, the menopause or infertility.

We all have our own way of coping with difficulties. Some people have a close network of family and friends who provide emotional support. Others prefer to confide in people they are not close to, such as someone in the hospital, a member of a support group or someone from a telephone helpline.

It is important to know where to find help if you need it. Information about local and national support groups is enclosed with your radiotherapy information.

Long- term side effects

All treatments used against cancer (surgery, chemotherapy, hormone therapy and radiotherapy) can result in long-term side effects. Any side effects that you may be at risk of developing will be discussed with you before you begin your treatment. However, modern techniques are designed to reduce the risk of long-term effects as much as possible.

Follow-up

The positive effects of radiotherapy may take some time to become apparent. People sometimes expect an X-ray or scan at the end of treatment but usually this is too soon to be helpful.

After your radiotherapy you will have regular follow-up appointments with your specialist team. The review and support radiographers will also be in touch with you shortly after you finish your treatment to ensure you are beginning to feel better. They are available for you to contact at any time if you have any concerns about your radiotherapy or its side effects, or simply need a chat!

And finally

Everyone having radiotherapy is different. Your treatment is specific to you and so is the way you cope with and react to it. If you are worried about anything at all, however trivial it may seem, please mention it to one of the radiographers and we may be able to help.

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

