

## Kent Oncology Centre

# External Beam Radiotherapy

## Information for patients

We hope this leaflet will help you to understand how we plan and then deliver your radiotherapy treatment. More information about side effects will be made available to you but if you would like to speak to one of the team at any time please feel free to contact them on the numbers below:

### Macmillan Radiotherapy Specialists

Maidstone Hospital

 01622 225094

Kent and Canterbury Hospital

 01227 766877 ext.722 2711

### Macmillan Information Centre

Maidstone Hospital

 01622 227064

## What is external beam radiotherapy?

External beam radiotherapy uses high energy x-rays and similar rays called electrons, to treat abnormal cells such as cancer cells.

External beam radiotherapy is usually given as a series of short, daily treatments (Monday to Friday with a rest at the weekend) in the radiotherapy department using equipment similar to a large x-ray machine. You will be given a list of all your appointments. If possible, we will try to give you a similar time each day but occasionally there may be alterations.

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.

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

### How many treatments will I have?

The number of treatments you have depends on several factors, including:

- your general health
- the type of cancer being treated and where it is in your body
- whether or not you have had, or are going to have, surgery, chemotherapy or hormonal therapy as part of your treatment

Treatment is individually planned for each person so even people with the same type of cancer may have different types of radiotherapy treatment. For example:

- A course of curative (radical) treatment may be given every weekday for two to seven weeks.
- Palliative treatment (for symptom control) may involve only a single session, or possibly a few sessions of treatment.

### External radiotherapy machines

There are several different types of radiotherapy machine that work in different ways. Radiotherapy treatment for most cancers is given by machines called linear accelerators (LinAcs). Your consultant will choose the most appropriate type of machine for your treatment.

Some machines are quicker than others and may give treatment in a very short time, even just as a few seconds, but usually radiotherapy treatment (including the time taken to position you) takes 10–30 minutes.

The radiotherapy machine does not normally touch you, although for some types of cancer it may press against your skin. If you have a specific type of radiotherapy known as **electron treatment**, a small applicator which touches a small area of your skin may be used.

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## Does treatment hurt?

The treatment itself is painless, although it may gradually cause some uncomfortable side effects.

## 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

Patients often feel that the hospital staff are too busy to answer their questions, but it's important for you to be aware of how the treatment is likely to affect you. The staff will make time for you to ask questions.

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.

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It can be helpful to have a friend or relative with you when the treatment is explained, to help you remember the discussion more fully. You may also find it useful to write down a list of questions before you attend any appointments.

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. You are free to choose **not** to have the treatment, and the staff can explain what may happen as a result of that. It's important to tell a doctor or the nurse in charge of this decision so that they can record it in your medical notes. You don't have to give a reason for not wanting to have treatment, but it can help staff if they know so that they can offer the best advice.

### **Pregnant?**

Please tell the medical staff if you might be pregnant as radiation 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. You may have your first treatment on the same day as your planning session, but it's usually necessary to wait a number of days, possibly up to two weeks, while the team prepares the final details of your treatment.

## **Positioning**

During the treatment planning session you will be lying on a fairly hard couch, identical to the one that you will lie on during treatment. The radiographers will make you as comfortable as possible. We need you to lie very still for a few minutes so that accurate measurements can be taken and your exact position recorded. The radiographers can then make sure that you are lying in the correct position each time you have treatment.

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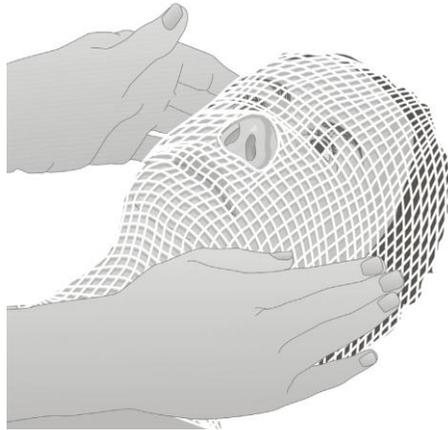
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## Moulds

If you are having treatment to your head or neck area a special device called a 'mask', 'shell' or 'mould' may be needed to help you hold your position very still during your treatment, making it as effective as possible. Guidance marks can be made on the mask instead of on your skin.

The mask will be made and be ready to wear before your first treatment planning session and at each subsequent treatment.

The mask is made of plastic mesh which has been softened in warm water and molded to your head and face. It hardens after a few minutes and is then ready to use. It will fit snugly so it may feel claustrophobic, but you will only wear the mask for a few minutes at a time.



If you have been told you will need a mask please do not wear any hair products, e.g. hairspray, gel or wax on the day of planning; these can make hair stick to the mask during moulding.

## First planning visit

On your first visit to the radiotherapy department you may have a CT (computerised tomography) scan taken of the area to be treated. Please talk to the staff if you think that you may find it difficult to lie in the treatment position for up to 20 minutes and they will discuss this with your doctor. A CT scan takes lots of images from different angles to build up a three-dimensional picture of the area. At the same time, therapy radiographers will take measurements from you. These measurements and the information from the scans are fed into a planning computer that is used to help your doctors plan your treatment more precisely. This session will usually take about 45 - 60 minutes.

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Some special procedures may be necessary to make sure the radiographers get a clear picture; if so, these will be explained to you. For example, to plan treatment to the pelvic area a liquid that shows up on x-ray may be passed into your rectum or bladder, or a tampon may be used to show the exact position of the vagina. It may also be necessary to inject an x-ray dye into a vein in your arm to give more detailed x-ray images. These procedures may be slightly uncomfortable but aren't painful and take only a few minutes. They are used only for planning the treatment, and not during the treatment sessions.

For some conditions, including many skin cancers and palliative treatment, radiotherapy may be planned and given in a very simple way. Your specialist may simply put marks on your skin with a soft pen, where the treatment is needed.

### **Skin markings**

Once the treatment area has been finalised, ink markings are usually made on your skin or mask, pinpointing the exact place where the radiation is to be directed. Unless you are asked not to, these can be washed off after each treatment.

Often two or more permanent tattoo marks are made on the skin; these are the size of a pinpoint and will only be made with your permission. 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.

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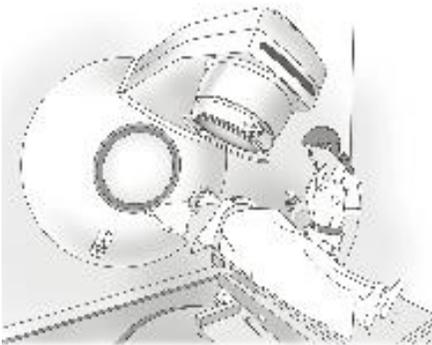
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The sight of large radiotherapy machines can be frightening. Don't be afraid to talk about any fears or worries to the staff; they are there to help you, and the more you understand about your treatment the more relaxed you will be.

Radiotherapy itself is painless and each session may take anything from a few seconds to several minutes. Your positioning is very important so the radiographers may take a little while to get you ready (they may call this 'setting up') and to adjust the height and position of the table. The room may be in semi-darkness while this is happening.

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. Radiotherapy units treat many people and the staff need to keep appointments running on time, so they usually leave the room promptly as soon as you are positioned, keeping your treatment time as short as possible.

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 change your position slightly 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.

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Small changes sometimes have to be made to your treatment plan. Your specialist and the radiographers will explain any changes, and their reasons, to you.

### **Side effects**

Most radiotherapy side effects are mild and usually appear after several treatment sessions. You will be given information about these that is specific to the treatment you have received, and some helpful tips for looking after yourself.

If you have any questions about cancer or your treatment, or you need some support of financial help, please ask to speak to one of the Macmillan Specialist Radiographers or contact the Macmillan Information Centre at Maidstone. There are also trained counselors available on each site to help you cope psychologically with your diagnosis and treatment.



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**Please use this space to write any notes or questions you may have.**

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**Further information, support and advice can be obtained from:**

**Counsellors in the following hospitals:**

Kent and Canterbury  01227 864045

Maidstone  01622 224982

Queen Elizabeth the Queen Mother  01843 225544  
ext 64202

William Harvey  01233 633331  
ext 88790

**Macmillan Cancer Support**

Free phone  0808 808 0000

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

**Kent Oncology Macmillan Cancer Information Centre  
Maidstone Hospital**

 01622 2270964

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

**Kent Oncology Centre**

Website: [www.kentoncologycentre.nhs.uk](http://www.kentoncologycentre.nhs.uk)

**NHS Choices for cancer information prescriptions**

[www.nhs.uk/ipg](http://www.nhs.uk/ipg)

**Cancer Research**

This charity provides information about cancer, treatment and clinical trials

 0808 800 4040

Website: [www.cancerresearchuk.org](http://www.cancerresearchuk.org)

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## Patient Experience Teams 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

☎ 01227 783145

Email: [ekh-tr.patientexperienceteam@nhs.net](mailto:ekh-tr.patientexperienceteam@nhs.net)

**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](mailto: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](http://www.mtw.nhs.uk) or pick up a leaflet from main reception.

Issue date: January 2016

Review date: January 2019

Database reference: RWF-OPLF-PCS19

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