NHS
Maidstone and
Tunbridge Wells
NHS Trust

Kent Oncology Centre

Radiotherapy to the Brain Side Effects and Management

We hope this leaflet will help you understand radiotherapy treatment to the brain; 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	☎ 01622 225094
Appointment enquiries	☎ 01622 225080
Kent & Canterbury Hospital	
Macmillan Radiotherapy Specialists	☎ 01227 766877 Ext 722 2711
Appointment enquiries	☎ 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.

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.

Treatment mask

You are likely to need a special device called a mask to help you hold your position very still during your treatment, making it as effective as possible. This will be made on your first visit. 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. Please do not wear any hair products, e.g. hairspray, gel or wax on the day of planning as these can make hair stick to the mask during moulding.

CT planning scan

Once your mask has been made, you will then have a CT planning scan. 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. The mask you are wearing will be fastened to the couch you are lying on. 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 but we like you to have had plenty to drink.

Positioning

The CT couch 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. Guidance marks can be made on the mask instead of on your skin. 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.

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. If you wish, you can eat before your treatments.

The radiographers will advise you where to lie on the couch, gently fitting your mask on you before raising the couch 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'. Over the course of treatment you may lose a little weight and this regular 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 from radiotherapy to the brain

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. It is good to try to get some exercise each day, however gentle.

Four to ten weeks after finishing radiotherapy you may find that you slow down, have very little energy and feel much less active. You may feel drowsy and spend more time sleeping. This gradually gets better over a few weeks.

Loss of appetite

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 soup. 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.

Occasionally radiotherapy can cause nausea (feeling sick). This is often helped by drinking more fluids but medication can be prescribed if necessary.

Headaches/seizures

Some people experience headaches and/or seizures while they are having their radiotherapy. These can be controlled with painkillers and steroids which will be prescribed and monitored by your consultant. You may also be prescribed anti-convulsant tablets.

Hair loss

You will lose your hair in the treated area. Most hair loss is temporary, usually starting to grow back within two to three months of finishing treatment, but for some people this is permanent. This depends on the dose of treatment you receive. Hair only falls out where the x-ray beam enters and leaves the body. Sometimes hair grows back with a slightly different colour and texture and perhaps not as thickly as before. You can be referred for a wig consultation; please ask about this.

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. Advice can be provided to help you stop smoking.
Tips for helping your skin include:

- Wash your scalp and hair gently with lukewarm water and a baby shampoo and pat dry.
- If required moisturise skin across the forehead and around the ears with a moisturiser.
- Avoid exposing the area to extremes of temperature such as hair dryers (unless on a cool setting), heat pads, saunas or ice packs during treatment.

The skin on your head is sensitive so it is best not to over-expose it to the sun or cold winds. Try wearing a soft cotton or silk scarf or hat to cover the area when you go outside.

Worsening symptoms

Some people find the symptoms of the brain tumour temporarily get worse after the treatment has finished, leading them to think the tumour is getting worse. This is often a reaction to the radiotherapy or may be because steroid treatment has been reduced or stopped.

If you find this is happening to you, or you have concerns about any continuing side effects, it is important to discuss it with your consultant, nurse specialist or radiographer who will be able to provide the right treatment and support.

Please note: if you are having radiotherapy to your brain you may be unable to drive. Your consultant will advise you as you may be legally required to inform the DVLA of your condition.

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

Contact details

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 01227 864314
Email: 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

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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