



Royal Berkshire  
NHS Foundation Trust

# Radiotherapy to the brain

Information for patients  
beginning radiotherapy  
treatment

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## **You have been recommended radiotherapy treatment – this leaflet explains what happens next...**

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In the clinic today, you and your doctor agreed that you are going to have radiotherapy treatment for your cancer. This booklet discusses what you can expect during and after your treatment and gives some general advice and information.

You will be given time to discuss any concerns with the radiographer (a person trained to give radiotherapy) at your planning appointment.

You may be given an appointment at your clinic appointment, or you may be contacted by telephone to arrange an appointment for the CT scan which forms part of the planning of your radiotherapy treatment and can take up to two hours. During this telephone call please mention if:

- You have a pacemaker or other implanted cardiac device as radiotherapy can affect some types of cardiac device.
- You have not had a blood test taken in the last 12 weeks, as we may require you to take one prior to the planning scan date.
- You have any problems with travel or appointment times and we will do our best to help you.

If you have any questions regarding your CT scan appointment, then you can contact us on the number below:

**Telephone: 0118 322 7872, Monday-Friday 8.30am-4.30pm**

**Email: [Radiotherapy.planning@nhs.net](mailto:Radiotherapy.planning@nhs.net)**

### **Brain tumours and driving**

Once you have been diagnosed with a brain tumour **you must not drive** and you **must** inform the DVLA of your diagnosis. The DVLA can be contacted by telephone on 0300 123 0883. Full details and advice are also available on the DVLA website [www.gov.uk/brain-tumour-and-driving](http://www.gov.uk/brain-tumour-and-driving). For further information please ask your clinical nurse specialist.

## **What are the benefits of radiotherapy?**

Radiotherapy works by using high energy x-rays to kill cancer cells. Our bodies are made up of different cells, and all cells have the ability to divide and grow. If radiation hits a cell that is dividing, it will be damaged. Unlike normal cells, cancer cells are much less able to repair the damage which means that more of them will be destroyed.

**When recommending radiotherapy, your doctor will have taken into account the risks and benefits of the treatment. Although there are risks and side effects, it is felt that the advantages for you outweigh the disadvantages.**

## **Radiotherapy for cancerous brain tumours**

Depending on the results of your surgery or biopsy, your oncologist (specialist cancer doctor) will discuss with you the number of treatments you need. Your treatment will be given daily, Monday to Friday.

## **Chemotherapy**

Your oncologist may recommend combination therapy. This is radiotherapy alongside chemotherapy.

Chemotherapy is the use of drugs to treat cancer cells. If your doctor feels you might benefit from this treatment, he or she will discuss this with you. Your clinical nurse specialist will arrange a 'Pre-Chemo Assessment' to explain the regime and potential side effects.

This will be further supported by written information for you to take home and read.

## **Pregnancy**

**Patients with childbearing capacity must not be pregnant or become pregnant at any time during a course of radiotherapy** as radiation can be harmful to the unborn child. It is important to let the radiographers know if you have missed a period or suspect that you may be pregnant, before you are exposed to any radiation. Patients with childbearing capacity will be asked to confirm their pregnancy

status prior to planning the radiotherapy and again on the first day of radiotherapy treatment. This applies to all those with childbearing capacity between the ages of 10-56 years and is a legal requirement.

## **Planning your radiotherapy treatment**

Before you can start radiotherapy treatment, it needs to be carefully planned. The radiotherapy department staff will explain what to expect and answer any of your questions.

Once you have been referred for radiotherapy, you will either be given an appointment in clinic or a member of the radiotherapy team will telephone you with an appointment to attend the radiotherapy department in the Berkshire Cancer Centre (BCC) or Bracknell HealthSpace for a CT scan, which is the first stage in planning your treatment. If you have any problems with travel or appointment times, please mention these when we contact you about your CT scan appointment. We will do our best to help you. You may also provide a car registration number if you or a friend or relative drives you to the hospital for your appointments, this will ensure you receive free parking in the multi-storey carpark and the carpark location on London Road. Please do this at the radiotherapy reception desk. Whilst you have access to free parking, it does not guarantee a parking space. Parking availability at the Royal Berkshire Hospital and Bracknell HealthSpace can be very limited.

At the start of your planning appointment you will meet our specialist team who will explain what is going to happen and answer any of your questions. Our planning and treatment teams are comprised of male and female radiographers. You may also meet radiography students and apprentices involved with the delivery of your treatment under close supervision as The Berkshire Cancer Centre is a training centre. Your planning appointment is divided into two halves. For the first half we make a mask for your treatment and in the second half you have a CT scan wearing that mask, this scan helps us plan your treatment.

## **Making the mask:**

It is very important that you keep as still as possible during the radiotherapy so we make a mask that helps keep you in place for your radiotherapy planning and treatment. We also put markings on the mask to help plan the treatment.

You will be asked to lie down on the couch on your back. We have a variety of different neck rests in order to support your neck so if it does feel uncomfortable please let the team know and we will try and change it.

Please remove necklaces or earrings for your planning appointment. False teeth or dental plates may also need to be removed.

The mask begins as a flat piece of plastic with lots of holes in it. This is placed in warm water and stretched over your head and neck. It then cools and sets into a personalised mask with plenty of air holes. This takes about eight minutes.

People may feel anxious or claustrophobic when wearing the mask. If you have concerns about this or experience these feelings, please let the radiotherapy team or the neuro oncology cancer nurse specialists know. There is often something we can do to help

## **CT scan**

The CT scan takes place in the radiotherapy department, and the scan itself takes only a few minutes. You will be wearing your mask during the scan and once you are positioned correctly on the bed, we will take a few measurements and put some marks on the mask.



We will then let you know that we are leaving the room to start the scan but we are able to see you throughout the whole procedure. The scan takes two to three minutes. It does not hurt and it is very important that you stay very still during the scan. The radiographers are watching you throughout the whole procedure so if you did need them you only need to raise a hand and they can come straight in. Once the scan is finished, we will come back in and remove the mask.

## **Contrast injection ('dye')**

The doctor may have requested that you have an injection of contrast for the scan. Not everyone will have this but for some it is helpful.

You may have had an injection of contrast for scans before. It involves having a cannula, which is a bendy tube inserted into your arm or hand using a needle. The needle is used only to position the cannula and is removed once the cannula is in place. The cannula left in your vein is used to inject the contrast through. The radiographers will let you know when the injection is about to start.

The contrast injection may create a very warm feeling for about 20 seconds. This is often concentrated around the pelvis and groin area spreading down the thighs. It may also give you a metallic taste in your mouth. These are all common and disappear quickly. The cannula will be removed about 30 minutes after your CT scan is finished.

**If you have had an allergic reaction to contrast dye before, you must tell the radiographers before your scan.**

Once you have completed your planning appointment there will be a period of 3-4 weeks before your treatment will begin. This is because it takes time for the team to prepare your treatment plan.

## **Your first radiotherapy treatment**

When you arrive for your treatment, please check in at the treatment area reception. On your first treatment you will have a chat with one of the team of radiographers who will be treating you. They will:

- Check your details.

- Give you a list of the first week's appointment times.
- Discuss the treatment procedure.
- Outline the potential side effects.
- Tell you which day your doctor and clinical nurse specialist will see you during the treatment.
- Answer any questions you may have.

Sometimes, this conversation will happen the day before your first appointment, on the telephone

## **What happens during treatment?**

Each time you attend we need to make sure we are treating the correct person. As you enter one of the treatment rooms, the radiographers will ask you to identify yourself by giving your name, date of birth and first line of your address.

The radiographers will check this information against your electronic treatment record.

You may be asked to change into a hospital gown before treatment. Alternatively, you may bring your own dressing gown with you. You will be asked to remove jewellery such as chains, necklaces and earrings. False teeth or dental plates will need to be removed for the treatment if they were removed when you had the mask made.

The radiographers will take you into the treatment room and position you on the treatment couch in the same position as your planning scan. All measurements for your treatment will then be set and checked.

This preparation may take quite a bit of time, and is often longer than the treatment itself. As part of this preparation, you will hear the radiographers checking some numbers and measurements. This is how they check your position. Once the radiographers are happy with your position, the treatment machine and imaging equipment will then be moved into position. The treatment machine will not touch you.

It is **very important** you remain still, breathing and swallowing as normal during your treatment, as during the CT scan.

The radiographers will leave the room, take a scan to check your treatment position and then start the treatment. Although you are alone in the room, you will be monitored on a TV via cameras during your treatment. If you need a radiographer during the treatment, raise your hand clearly and a radiographer will stop the machine and come into the room.

The machine will move around you and give you treatment from different angles. This is controlled by the radiographers outside. They may enter the room during the treatment. If so, please try to keep as still as possible. You will not feel anything during the treatment, but you will hear a buzzing noise as the treatment is delivered.

The total time of your first treatment will be approximately 30 minutes. Following treatments should take between 10 and 15 minutes.

Once we have started your course of radiotherapy treatment, we aim to complete it without any breaks or days off.

Treatment is usually given Monday to Friday. Sometimes, treatment is given on Bank Holidays.

Due to servicing of the machines it may sometimes be necessary to treat you on a different machine. Please be assured that all the machines give the same treatment.

It is very important that you do not miss treatment days as this may make your treatment less effective. If you feel you are unable to attend for any reason please discuss the problem with a radiographer, or phone your neuro oncology cancer nurse specialists.

Each week, while you are having radiotherapy, you will see a doctor and clinical nurse specialist. The purpose of these visits is to support you through treatment and help with any side-effects that you may be having. If you feel you need to be seen at any other time, please speak to a radiographer who will arrange for you to be seen.

Radiotherapy does not make you radioactive and it is perfectly safe for you to be with other people, including children, after treatment.



## **Possible side effects**

Side effects and their intensity will vary from patient to patient – everyone is different and reacts differently to treatment. It is important that you let the radiographers know of any side effects that you get.

Most side effects will gradually start from approximately 3-4 weeks into your treatment and may continue 6-12 weeks after treatment is completed. Not everyone will experience all of the side effects listed here. If you do experience any of the following side effects, do not worry, they are a normal reaction to treatment and are temporary. Please let staff how you are feeling so that they can help you.

**Fatigue (chronic tiredness):** Radiotherapy can make you feel very tired. Tiredness may start during your treatment and continue for a number of weeks / months after treatment. Allow extra time for a rest, for example, an afternoon nap. If possible, spread your chores out over the week. There is no reason why you shouldn't continue with your usual daily activities; just remember to take a rest in between.

**Headaches:** Radiotherapy may cause some swelling around the tumour at first. This can make your symptoms a little worse and some patients can experience headaches and nausea. A couple of weeks after treatment you should notice that your symptoms will start to improve. If you experience symptoms, please tell your specialist nurse or doctor. You may be advised to take a steroid called dexamethasone, as steroids help to reduce swelling.

**Hair loss:** You will lose your hair in the area being treated. Hair should begin to grow back a few months after the treatment is over. Hair regrowth may be a little patchy, particularly at first. Sometimes, hair grows back with a slightly different colour and texture and perhaps not as thickly as before. In the meantime, hats, wigs or hairpieces are some practical suggestions for coping with hair loss. Please ask a member of staff to discuss this with you, as there is a wig service available.

**Washing your hair:** Once radiotherapy has started you may wash your hair very gently with lukewarm water. Baby shampoo may be used.

Dry the hair and scalp very gently using a soft towel. Do not rub your head or use a hair dryer.

**Sickness:** Rarely, the treatment may make you feel nauseous or cause vomiting. To alleviate this, the oncologist will prescribe an anti-sickness tablet. If you continue to feel nauseous, please let your nurse or consultant know so we can suggest some treatment.

**Skin reaction:** For about two weeks after your radiotherapy treatment your scalp may become dry, itchy, red and tender. It is advisable to protect your head from both the sun and cold weather. You may want to wear a hat. You will find it more comfortable to have a hat made of natural fibres e.g. cotton or silk, while you are having the treatment.

**Seizures:** Some people may have seizures because of their brain tumour. If you suffer from seizures, your oncologist or GP will prescribe you anti-seizure medication. Radiotherapy can cause some temporary swelling to the brain. This can cause the seizures to return or increase in frequency. Please continue to take your prescribed medication and notify your nurse specialist.

Patients may notice mild seizures (focal seizure – affecting one part of the brain) that last a few seconds or minutes. For example, facial twitching, arm/leg twitching, staring into space or word finding difficulty. **If this happens, please contact your nurse specialist or GP. This is not a medical emergency but may require treatment.** Monday to Friday please contact your GP or nurse specialist. Out of hours please call NHS 111.

Sometimes, a focal seizure can spread to the whole brain (generalised tonic clonic seizure). The person will fall to the floor and shake all over. They may bite their tongue and be incontinent. The shaking normally lasts less than five minutes and stops on its own. The time a seizure lasts is from the onset of the shaking until the shaking stops. A person will appear drowsy after a seizure but they should start to slowly recover.

You need to call for emergency help and **dial 999** if any of the following occurs:

- If it is the first time someone has a generalised tonic clonic seizure.
- The generalised tonic clonic seizure lasts for more than five minutes.
- The person doesn't regain full consciousness, or has several seizures without regaining consciousness.
- The person has trouble breathing afterwards.
- The person is injured during the seizure.

Your specialist nurse or the seizure nurse specialist can give you further advice on seizure first aid.

## Long-term side effects

It is possible for some types of reaction to occur months or years after the treatment has finished, although this will depend on the type of treatment you have had. Some patients may notice short-term memory loss. Other late effects will depend on the part of the brain treated. Your doctor will discuss any possible late effects with you.

## Contact details

Neuro Oncology Nurse Specialists: 0118 322 8542

Email: [neurooncologynurse@royalberkshire.nhs.uk](mailto:neurooncologynurse@royalberkshire.nhs.uk)

Radiotherapy Clinic: 0118 322 7890 (9am-5pm)

Berkshire Cancer Centre: 0118 322 7888 (9am-5pm)

Macmillan Cancer Information Centre: 0118 322 8700

Sue Ryder/Macmillan Clinical Nurse Specialist:

\_\_\_\_\_ Tel: \_\_\_\_\_

GP: Dr \_\_\_\_\_ Tel: \_\_\_\_\_

District Nurse: \_\_\_\_\_ Tel: \_\_\_\_\_

## Further information

- Brainstrust charity and Brainstrust Reading brain tumour support group. Tel: 01983 292 405 [www.brainstrust.org.uk](http://www.brainstrust.org.uk)
- The Brain Tumour Charity [support@thebraintumourcharity.org](mailto:support@thebraintumourcharity.org)  
0808 800 0004
- Macmillan Support Line. Call free on [0808 808 00 00](tel:08088080000)  
(7 days a week 8am to 8pm). [www.macmillan.org.uk](http://www.macmillan.org.uk)
- The Newbury and District Cancer Care Trust for people living in West Berkshire [www.newburycancercare.org.uk](http://www.newburycancercare.org.uk)
- Shine cancer support for 20s 30s 40s [info@shinecancersupport.co.uk](mailto:info@shinecancersupport.co.uk)
- Royal Berkshire NHS Foundation Trust PALS Team: 0118 322 8338 [PALS@royalberkshire.nhs.uk](mailto:PALS@royalberkshire.nhs.uk)

## Notes

To find out more about our Trust visit [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

**Please ask if you need this information in another language or format.**

Author: Lisa O'Sullivan, RBFT Berkshire Cancer Centre, April 2015.

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