

Arden Cancer Centre

Radiotherapy information for patients undergoing treatment to the brain

What is radiotherapy?

Radiotherapy is the use of high-energy radiation to kill cancer cells in the area being treated. Radiotherapy can also damage normal cells in the treatment area. This can cause some side effects, but radiotherapy is planned very carefully to shield as much healthy tissue as possible to reduce these side effects. The tissues usually heal, with an improvement in side effects and symptoms over time.

Radiotherapy is delivered by highly trained staff called therapy radiographers on machines called linear accelerators.

Both male and female staff will treat you. We are a teaching hospital and have student radiographers on placement in radiotherapy who are supervised by trained staff.

For more information about radiotherapy and to watch our department video go to <https://www.uhcw.nhs.uk/our-services-and-people/our-departments/radiotherapy/>

Consent forms

Before you undergo this procedure, you will be required to sign a consent form which indicates that your doctor has explained the treatment procedure and any possible side effects to you, and that you agree to go ahead with treatment.



Pacemakers

If you have a **pacemaker, or implantable defibrillator, please mention this both to your doctor and the radiographers**, before your first treatment. The performance of your device can be altered by the treatment and it may need testing before and after treatment.

Pregnancy

If you are, or become, pregnant at any time before or during your treatment, inform a member of staff as soon as possible. There is a significant risk to an unborn baby from radiotherapy.

For advice on contraception please speak to your consultant or GP.

Chemotherapy

Your doctor may also prescribe chemotherapy to be administered during your course of radiotherapy. You will be given specific written information and consented separately for this. Usually you will need to have weekly blood tests when on chemotherapy and radiotherapy together. If you have not been advised about this, please ask.

What is treatment planning?

A period of planning or preparation is needed before your treatment can start. This is to allow accurate “aiming” of the radiotherapy at the area to be treated, and calculation of how to deliver the correct dose of radiation to it.

This may involve an initial visit, and then a gap of 2 to 3 weeks before your treatment starts. During this time doctors, physics staff and radiographers are preparing your treatment.

CT planning scan

To treat you accurately and reduce side effects, your radiotherapy treatment must be carefully planned. This will involve having a CT scan in the radiotherapy department

Patient Information

Before your CT scan you will need to wear a plastic mask which will cover your head during your treatment. The mask is individually made for you in the radiotherapy mould room on your first visit to the radiotherapy department. It is made by heating a sheet of plastic until it is warm and moulding this to the contours of your face.

This mask has holes so that you can breathe through it. The mask will need to fit quite tightly to help you to keep very still, and to make sure that you are in the same position each time you have your radiotherapy.

If you have a beard, we would recommend that you have this shaved before you attend your mould room appointment. You may need to remove some clothing from around your neck for the mask to be made and whilst wearing it.

After your mask is made, you will have your CT scan on the same day. You will be carefully positioned on the CT couch by the radiographers, lying on your back, wearing your mask. This is the same position that you will be in everyday for your radiotherapy treatments. You will be alone in the room during the scan, but the radiographers will be watching you at all times.

There is then a gap of about 3 weeks before your treatment starts. During this time doctors, physics staff, and radiographers are planning your treatment.

Contrast

Sometimes a contrast medium is used to help the radiographers, doctors and the physics team to see organs more clearly on the CT scan. This can be given orally, injected into a vein or both. You will be told if you need contrast and given information about it.

If you have had contrast before and had any kind of reaction to it, please let your doctor or the radiographers know. This is only required for treatment planning and not while you are on daily radiotherapy.

Treatment

Radiographers will deliver the treatment as prescribed by your consultant. It is important to make sure treatment is given safely and accurately. You will be positioned on the treatment couch in the same way as when your treatment was planned, wearing your mask.

The radiographers will line you up with the machine by dimming the room lights and using laser lights and a bright light from the machine. The machine may move around you during this process but in most cases will not touch you.

When you and the machine are in the correct position, the radiographers will leave the room to switch the machine on. You will need to lie quite still but can breathe as usual. You will not feel anything during the treatment, but the machine will make a buzzing noise.

The treatment times are very short, but images will be taken beforehand to check that the treatment is correct before it is given. The radiographers will be watching you throughout on closed circuit television cameras and can hear you on an intercom. They can switch the machine off and enter the room if you move or call for assistance.

Once the machine has switched off, there is no radiation present. You will not be radioactive and are safe to be near pregnant women and children.

What are the side effects of treatment?

Treatment is painless but can cause some side effects. It is unlikely that you will experience all of the side effects listed below. Treatment affects people in different ways and it can be difficult to predict which side effects will affect you and how severe they will be.

Side effects can be thought of as early (acute) and late (chronic).

Early side effects

These early side effects may happen during your treatment and for a short while afterwards.

Tiredness

- Most people will feel tired because of radiotherapy treatment to the brain. Tiredness will often come on gradually as the treatment progresses and may persist for some weeks after the treatment has finished.
- If you feel tired, try to rest or sleep. If you feel able to, regular exercise can help, such as taking a short walk.
- Occasionally the tiredness can become worse a few weeks after the treatment. This can make you feel irritable and drowsy. This is known as 'somnolence syndrome'. It may last a few weeks but will get better.

Hair loss

- This is likely to begin about 2 weeks into your treatment. You will only lose hair from parts of the head that are treated, although you may have some hair loss on the opposite side of the head where the radiotherapy beam passes through.

Sometimes the hair loss is permanent. Where it does grow back, the hair may be thin and patchy, a different colour, or curly instead of straight. It may take 3 to 6 months after treatment before your hair re-growth is completed.

- You may want to cut your hair short before treatment to make hair loss easier to cope with.
- Wigs are generally not fully funded by the NHS - the cost to patients will depend on the type of wig chosen. However, patients on certain benefits or who are on a low income may be entitled to help with the cost of wigs.

If you would like to see our hairdresser regarding a wig, please ask a member of staff for details.

Some people prefer to wear hats, scarves or turbans.

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Skin irritation

- The skin on the scalp and backs of your ears may become pink and itchy during your treatment and for a short while afterwards.
- To minimise this, we advise that you wash your hair with lukewarm water, using a mild shampoo. Try to avoid washing your hair too often. If you use a hairdryer put it on a cool setting. Avoid exposing your scalp to sun and wind as this can increase any irritation.
- Use an emollient (moisturiser) to soothe and moisturise the skin. If you are unsure about which cream to use please ask one of your treatment radiographers.

Headaches

- For some people the treatment can cause headaches. You may be advised to adjust your medication.

Nausea

- Radiotherapy to the brain can make you feel sick. Please mention this to the radiographers, nurse specialist or your doctor as medication can be prescribed or your steroids adjusted.
- It may help if you drink plenty of fluids, eat small meals and snacks throughout the day, avoid eating or preparing food when you feel sick, and avoid fatty foods. Don't worry if you don't feel like eating much, but you must drink plenty.

Worsening of symptoms

You may find that the symptoms from the brain tumour get worse during and shortly after the radiotherapy has been completed. This is usually due to the radiotherapy causing the brain tissue to swell slightly, resulting in pressure. It may also be because we've asked you to reduce your steroids. Let your doctor, nurse specialist or the radiographers know if this happens; it may be necessary to increase the steroid dose temporarily.

Late side effects

Late effects of radiotherapy can occur months to years after you have completed your treatment. They are determined by many factors such as the radiotherapy dose, the part of the brain treated, and the amount of

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normal brain tissue treated. Your consultant will discuss with you any late effects that may be relevant to your treatment.

Late side effects of radiotherapy to the brain can include:

- Problems thinking clearly or managing tasks you used to be able to do easily.
- Poor memory - in particular short term, which can be mistaken for confusion.
- Intellectual impairment – the ability to think clearly.
- Symptoms you had from your original tumour, such as visual disturbance, limb weakness, speech problems, balance and coordination problems.
- Affects on the pituitary gland - if the pituitary gland is included in the treatment area, this can result in changes in hormone production which can cause a variety of symptoms including issues with fertility. Discuss any changes in the way that you feel after treatment with your doctor.
- The risk of developing cataracts, which causes a clouding of the vision in the affected eye. A small operation under a local anaesthetic can fix this.

Only a small number of people will experience these side effects, your consultant will discuss with you any late effects that may be relevant to your treatment. Where these side effects occur, it is often possible to manage them with medication.

Very rarely, radiotherapy to the brain can cause another brain tumour to develop many years after treatment.

Treatment reviews

At some point during your treatment you may be booked in for a 'treatment review'. This review can be with your specialist nurse, review radiographer, or a doctor. The aim of this review is to discuss any side effects that you may be experiencing as a result of your treatment, and any side effects that may occur as the treatment continues.

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It is not usually possible to give you any information on how effective the treatment so far has been at these review sessions for two reasons:

- Although we take pictures of the treatment area during your radiotherapy, they are to check the position of the treatment field and are not detailed enough to show us how well the treatment is working.
- There is a delay in the way that radiotherapy works, so the effects of treatment can't be assessed until a number of weeks after the treatment has finished.

After treatment

The early side effects from the treatment will continue for several weeks after the treatment course has been completed.

After finishing treatment, you will receive an appointment to see your consultant between 4-8 weeks later. At this appointment any further treatment or investigations will be discussed with you.

If you haven't received an appointment within 3 weeks of completing treatment, please telephone radiotherapy reception on 024 7696 7272.

Some patients have oral chemotherapy before, during or shortly after radiotherapy. If you are unsure about whether you should be taking this, please ask to see your consultant, clinical nurse specialist or the Macmillan Radiotherapy Specialist. If you would like information about chemotherapy, please ask a member of staff.

Many patients take steroids before, during and after treatment. There is a separate information sheet available about steroids, please ask your specialist nurse.

Where is the Arden Centre?

The Arden Centre is part of University Hospital Coventry. The entrance to the Arden Centre is situated to the left of the main hospital entrance. Please visit the University Hospital web site for up-to-date maps and directions: www.uhcw.nhs.uk.

Patient Information

How shall I travel?

By car

Most people referred for radiotherapy to the brain will have been advised not to drive. If in doubt, please check with your consultant or specialist nurse.

Sat Nav postcode: CV2 2DX

At busy times it can be very difficult to park so please allow extra time. There are several visitor car parks across the site and there are drop-off points near the main entrance and the Women's and Children's entrance which allow for 10 minutes of free parking. Disabled car parking facilities are located near the main entrance.

Charges apply in all car parks and Automatic Number Plate Recognition (ANPR) is live across all visitor car parks, this means that our car parks no longer issue tickets at barriers and instead read your number plate as you enter. Payment is then required at one of the payment machines before exiting the car park and can be made using cash, card or contactless. Payment can also be made by telephone or online before midnight, see the trust website for details.

However, **you are entitled to free parking whilst on radiotherapy treatment.** You will need to give your registration number to the Arden Centre receptionist on arrival. If you don't know your registration number, we suggest you make a note of it or take a photo of the number plate. Please note that free parking does not include clinic appointments.

Public transport

Many bus routes include the hospital with buses driving onto the site, stopping close to the main entrance. **For more information about bus services to University Hospital visit <https://www.wmnetwork.co.uk/>**

Or telephone: 0345 303 6760

Hospital transport

Hospital transport is available where there is a medical need, not for social or financial reasons.

Patient Information

If you receive Disability Living Allowance Mobility Component or have a vehicle under the mobility scheme you may not be entitled to access hospital transport.

If you need hospital transport and feel that you are eligible, you will need to book it yourself, giving 48 hours' notice. You will need to telephone:

West Midlands Ambulance Service

01926 310312 (for bookings only)

01926 488410 (for queries on day of travel only)

Leicestershire Ambulance Service / Arriva / Ambuline

0845 2669662

Northamptonshire Ambulance / NSL

0843 2086888

Worcestershire Acute Trust Transport Service

0300 0110017

In most cases you will not be able to bring anyone with you. While your transport will be booked to get you to the hospital for your appointment time, this cannot be guaranteed but you will be treated as soon as possible after you arrive.

Due to the demand on the hospital transport service, patients will often be waiting at the Arden Centre to be taken home for some considerable time. We advise where possible that patients make their own travel arrangements.

If you must rely on the hospital transport service, please make sure you bring food, drinks and any medication that you may need for the day with you. There is a refreshment kiosk available to buy snacks and drinks which is open from 10am-4pm.

Patient Information

Transport Schemes

There are transport schemes operating in some areas. These schemes will charge a mileage rate which varies. For more information, please ask to speak to the Macmillan Radiotherapy Specialist.

Prescriptions

All cancer patients are entitled to free prescriptions. If you don't already have an exemption card, please ask a member of staff for an application form.

Appointments

The department is usually open from 9am – 5pm, Monday to Friday and is closed at weekends and on public holidays.

Radiotherapy treatment machines are very complex. They are maintained by a team of in-house physicists and technicians. Delays in treatment can occur due to machine breakdowns and servicing.

Breaks in treatment due to public holidays and machine maintenance do not affect most people's treatment. However, some patients may be asked to come in for treatment on these days, when a different treatment machine could be used.

It is not advisable for you to miss any other appointments, but if it is unavoidable please talk to the radiographers who are treating you.

The radiographers arrange treatment appointment times. Every effort will be made to give you times that you prefer, but with a heavy workload this cannot be guaranteed.

It is important that we have a contact telephone number for you as we often have to telephone patients at short notice, about appointments or with other information.

If your telephone is set to bar incoming calls from withheld numbers, please give us an alternative telephone number.

Patient Information

Counselling

There is a counselling service available at the Arden Centre. For more information speak to your specialist nurse, doctor or radiographer, or telephone 024 7696 7478.

Further information

Cancer Information Centre 024 7696 6052

We can offer free support, practical advice, and information to anyone affected by cancer. No appointments is needed and an answering machine facility is available. Open Monday to Friday 9am to 4pm. The Centre is located on the ground floor of the main entrance.

Macmillan Cancer Support helpline: 0808 808 0000

www.macmillan.org.uk

You may find these booklets useful:

Understanding Primary Brain Tumours

Understanding Chemotherapy

Coping with Hair Loss

Understanding Radiotherapy

Macmillan Cancer Support also produces fact sheets on different types of brain tumours.

Cancer Research UK: 0300 123 1022

www.cancerresearchuk.org

Useful telephone numbers

Reception, Arden Cancer Centre: 02476 96 7272

Monday to Friday 9am – 5pm

Macmillan Neuro-Oncology Clinical Nurse Specialist: 024 7696 5326

Acute Oncology (24-hour emergency advice only) 024 7696 4000

Ask for Bleep 1641

Patient Information

Radiotherapy Information and advice: 024 7696 7290

Macmillan Radiotherapy Specialists

Monday – Friday 9am – 5pm

Planning Radiographers: 024 7696 7493

NHS advice: use the 111 service.

Patient satisfaction

We hope that you have found this booklet helpful. We welcome your comments on the care that you experience and the service that we offer within the Arden Cancer Centre.

We ask that specific complaints be addressed to a member of staff so that, in line with University Hospitals Coventry and Warwickshire's complaints policy, they can be dealt with quickly and efficiently.

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact Alison Crichton or Julia Biggs on 024 7696 7290 and we will do our best to meet your needs.

The Trust operates a smoke free policy. Please respect other patients and staff and refrain from smoking whilst visiting the hospital.

Stop Smoking services at UHCW. Telephone 024 7696 4760

Help to stop smoking can be obtained from your local NHS Smoke free Service: www.nhs.uk/smokefree

Patient Information

Did we get it right?

We would like you to tell us what you think about our services. This helps us make further improvements and recognise members of staff who provide a good service.

Have your say. Scan the QR code or visit:

www.uhcw.nhs.uk/feedback



Document History

Department:	Arden Cancer Centre
Contact:	27304
Updated:	March 2023
Review:	March 2025
Version:	14
Reference:	HIC/LFT/281/06