

Arden Cancer Centre

Radiotherapy information for patients undergoing treatment to the head and neck

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 which can cause some side effects. However, radiotherapy is planned very carefully to protect as much healthy tissue as possible in order to reduce these side effects. The tissues usually heal, with an improvement in side effects and symptoms over time.

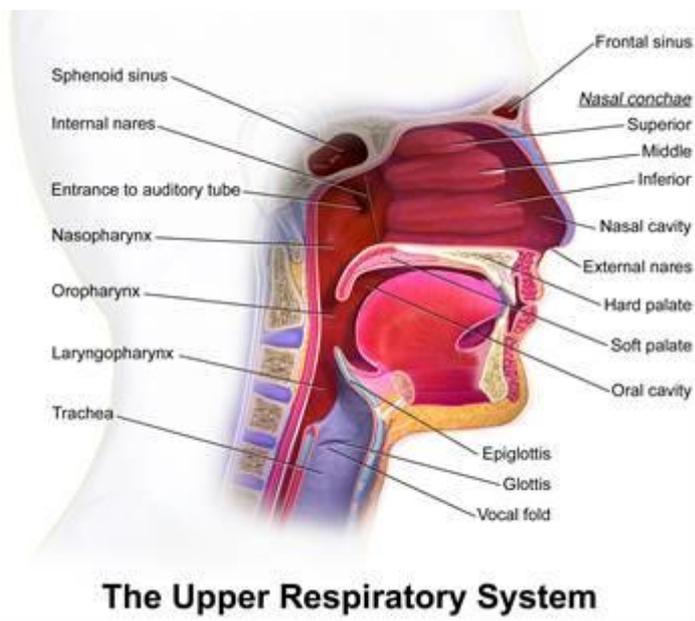


Image from Blausen.com staff (2014). "Medical gallery of Blausen Medical 2014".



Patient Information

Radiotherapy is delivered by highly trained staff called therapeutic radiographers. It is carried out on treatment 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. This 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 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 pregnant or become pregnant at any time before or during your treatment, it is important to 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. It is usually necessary to have weekly blood tests when on chemotherapy and radiotherapy together. If you have not been advised about this please ask a member of staff.

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Preparation before treatment starts

Radiotherapy to the head, neck and mouth is complex and requires considerable preparation.

If your mouth is to be included in the radiotherapy field, we need to make sure your teeth and gums are healthy. Before you start treatment, you will need a full mouth examination. You will be referred to the restorative dentist at the hospital for this.

What will happen at the planning appointment?

A period of planning and preparation is required before your treatment can start. This is to allow accurate “aiming” of the radiotherapy at your tumour and to calculate how to deliver the correct dose of radiation to the tumour.

You will need to wear a plastic mask which will cover your head, neck and shoulders during your treatment. The mask is individually made for you and will be made 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 is perforated 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.

You will be required to remove clothing from your upper chest, shoulders and neck for your planning visit and subsequent treatment. Women might prefer to wear a vest top with straps that be easily moved out of the way. Gowns are available if you need one. If you have a beard, we would recommend that you have this shaved before you attend your mould room appointment.

After your mask is made, you will have a CT scan whilst wearing the mask. This is a specialist CT scan in the radiotherapy department. There is then a gap of about 3 weeks before your treatment starts, during which time doctors, physics staff and radiographers are preparing your treatment.

Contrast

An intravenous contrast medium may be used to help the radiographers, doctors and physics team to see organs more clearly on the CT scan. 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

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required for treatment planning and not whilst you are on daily radiotherapy.

Treatment

Radiographers will deliver the treatment as prescribed by your consultant. It is essential 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. The radiographers will fit your mask and then position you by dimming the room lights and using laser lights and a light from the machine.

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 normally. You will not feel anything during the treatment but the machine will make a buzzing noise and will move around you but will not touch you.

You will be in the treatment room for about 15 minutes. Most of this time is taken up with getting you into the correct position for treatment and taking images to check the accuracy of the treatment.

The treatment itself is very quick and takes just a few minutes. The radiographers will be watching you throughout on closed circuit television cameras and will be able to hear you on an intercom. They can switch the machine off and enter the room if you move or call them.

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

What are the side effects of treatment?

Lying in the mask can be uncomfortable but the treatment itself doesn't hurt. However, it 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).

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Early Side Effects

These early side effects occur during your treatment and for a short while afterwards:

Effects on the skin

Radiotherapy causes changes to the skin during treatment. These changes cannot be prevented but by looking after your skin the onset of symptoms can be delayed.

The skin in the treatment area will gradually become pink and sore after a couple of weeks of treatment. These changes may take 6 weeks to get back to normal after treatment has finished. Please ask your treatment radiographers which parts of the skin are included in the treatment. This may include your face, ears, scalp, the front and back of your neck and upper chest.

Washing:

- You can continue to wash or shower your skin in the treatment area, with care. Use warm water and your usual soap, pat dry with a soft towel, taking care not to rub.
- Use moisturiser, apply frequently. No specific moisturiser can be recommended as there is no evidence to support one over another, if you don't have a moisturiser at home ask the radiographers and they will be able to suggest options for you.
- Do not use other ointments, creams or products on the area being treated, including make-up or after-shave lotion. This is because other products can make your skin more likely to become sore.
- If your skin becomes moist, broken or sore speak to the radiographers as soon as possible. Specialist advice can be given, and dressings applied by the Tissue Viability Team at the Arden Centre.

In general:

- You should wear loose clothing over the treatment area. Where possible, wear pure fabrics such as cotton next to the skin.
- Avoid using hot water bottles, heated pads or ice packs over the treatment area.

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- Avoid exposing the treated area to the sun during and for several weeks after treatment, until any skin reaction has settled.
- You should take care in the future, as your skin in the treated area will be more sensitive to the sun.
- You should use a high factor sun screen or sun block. Avoid scratching, vigorous rubbing and massage of the treated area.
- Do not use a tanning / sun bed.
- Do not swim if you have visibly red or moist skin. If you have no skin reaction and you do swim, shower well before and after and apply your moisturiser afterwards.

Shaving:

- Reduce shaving if possible. Dry shaving with an electric razor is preferable, but stop when the treated skin gets pink and itchy. This usually happens 2 to 3 weeks after the start of treatment. The Radiographers will advise you about this.
- The hair within the treatment site will probably stop growing about three weeks after your first treatment.
- Hair loss may be permanent in the treated area.

Effects on your mouth and throat

If your mouth is included in the treatment area you will experience side effects:

- The saliva in your mouth will start to become thick and later the mouth will become dry.
- Food will become tasteless.
- After 2 weeks the inside of your mouth will become painful and sore and then ulcers can form.
- As your throat becomes dry, swallowing may be difficult.
- You may experience an irritating cough, especially when you lie down. It may be helped by frequent sips of fluid (carry a bottle of water around with you).
- If your voice box is in the treated area it is likely to become hoarse as treatment progresses. We suggest that if this happens you rest your voice as much as possible. Hoarseness is likely to continue for a while after treatment has been completed.
- Avoid drinks that may further dry your mouth such as alcohol.

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- Pain relief medication will be prescribed by your doctor and then continued by your GP.

Mouth care for Patients

During radiotherapy it is very important to:

- Keep your mouth moist with regular sips of water.
- Brush teeth /gums using a small soft toothbrush (and a non-abrasive, fluoride toothpaste if tolerated) at least twice daily.
- Do not use a commercial mouthwash as they may contain alcohol which will dry and irritate your mouth. Mouthwash can be prescribed for you.
- Your lips can also become sore – using your moisturising cream or a lip balm will help.
- You may be prescribed medication to keep your mouth clean and help prevent infections.
- Use your mouthwash as so: gargle, swill it around your mouth and then spit out

The following mouthwashes can be used:

- Use a **salt-water mouthwash** at least 4 times a day to help keep your mouth clean. Mix half a teaspoon of salt in a pint of lukewarm pre-boiled water.
- For thick saliva try using a small amount of a **bicarbonate of soda** mouthwash (not baking powder). Dissolve half a teaspoon of bicarbonate of soda in a small amount of pre-boiled water. Then, top this up with lukewarm water to make 1 pint (568ml).
- Steam inhalation may help with thickened saliva and an irritating cough. Try breathing in steam from a small container of hot water or allowing steam to build up in the bathroom when you shower. This will help to keep your throat moist. **Do not** add any menthol or Vicks.

Denture care

Dentures should be removed and cleaned after each meal.

- Brush your dentures with a mild washing-up liquid using a small, soft toothbrush. This is kinder to all sorts of dentures as it does not scratch them. Rinse thoroughly in cold water.
- Soak your dentures overnight in cold water.

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- You should wear dentures as little as possible during the course of your radiotherapy and afterwards until any soreness in the mouth has completely healed.

Remember - if you are not wearing your dentures you must keep them in water to keep them in good condition.

Smoking

It is very important that you stop smoking. Smoking makes the treatment side effects far more severe and difficult to tolerate and reduces the chance of curing your disease. If you need advice on stopping smoking, ask the Macmillan head and neck nurse specialist or contact your local NHS Stop Smoking Services or your GP.

Alcohol

It is advised that you avoid alcohol during treatment to prevent increased side effects.

Your diet

You may find that it becomes difficult to swallow as your throat becomes sore. It is important that you continue to eat and drink during your treatment in order to aid healing and recovery and maintain your strength. Avoiding weight loss will also help to keep your mask fitted correctly.

Some basic advice to follow includes:

- Avoid food that is rough, hard or sharp. Avoid very spicy, salty or acidic tasting food as it can irritate your mouth.
- Eat little and often to stimulate your appetite
- Avoid food and drink that is very hot or very cold.
- Change the texture of your food by adding extra sauce, mashing or blending.
- You may be prescribed supplement drinks.
- Tube feeding may be needed to support you.

Hair loss

Radiotherapy only causes hair loss from the treated area and occurs after about three weeks of treatment. This may result in patches of hair loss depending on how the treatment is delivered: you will not lose your whole head of hair. Ask the radiographers where you are likely to experience hair loss. Hair loss can be permanent.

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If treatment is below your earlobes you can wash and dry your hair normally and visit your hairdresser. When treatment includes part of the scalp, we suggest that you use a mild shampoo, to avoid irritating this treated area. It is preferable to dry it naturally, rather than use a hair dryer.

Fatigue

Most patients having radiotherapy feel more tired, particularly towards the end of treatment. If you feel tired you may need extra rest. However, evidence suggests that gentle exercise such as a short walk can help tiredness and fatigue.

If you regularly exercise, it is acceptable to continue with your normal exercise routine unless the treatment team advise against this.

These early (acute) effects slowly worsen during the course of the radiotherapy treatment and start to improve after the course has completed. They often improve gradually over 6 to 12 weeks.

Late effects of treatment

Late effects occur months or years after treatment has finished. These include:

- A dry mouth. This may be permanent, but some patients do see some improvement over several years. Your doctor will discuss this with you.
- A change in taste, which may take some time to return to normal. For some patients taste changes can be permanent.
- Sore mouth and skin will recover, but may take 6 to 8 weeks to do so. It is important that you continue the routine of keeping your mouth and teeth very clean during this time.
- If you have problems with swallowing or jaw stiffness, the speech and language therapist may be able to help.
- When your mouth is dry, there is an increased risk of deterioration of your teeth. It is important that you see your dentist and hygienist regularly. Brushing with fluoride toothpaste will help and you may need a fluoride mouthwash. Your restorative dentist will advise you about this.
- On occasion, the jaw bone can be affected by radiotherapy, this is called osteoradionecrosis. This can be a problem if teeth need to be removed in the future. Please discuss this with your doctor.

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- In some cases, hair loss might be permanent. Please ask your consultant if this will affect you.
- There may be some thickening or swelling of the treated skin and underlying tissue which can continue indefinitely after the radiotherapy is complete. The skin may also appear darker in colour in the area treated.
- Depending on the location of your cancer and area receiving radiotherapy, there may be a risk of nerve alteration. Nerve alteration can also be caused by some chemotherapy drugs.
- Hearing may sometimes be affected after treatment for some types of cancer.
- There is very small risk of developing a secondary cancer in the treated area in the years following radiotherapy.
- It is important to discuss all these possible side effects with your doctor.

For more detailed information, we recommend that you read 'Managing the Late Effects of Head and Neck Cancer Treatment' produced by Macmillan Cancer Support. This contains more detailed information on the late effects of head and neck cancer treatment and how to cope with them. Please ask for a copy or visit the Cancer Information Centre in the main hospital entrance.

Treatment Reviews

Every Wednesday when you come for your treatment you will be booked in for a 'treatment review' with the head and neck team which consists of your clinical nurse specialist or radiographer, a dietitian and a speech and language therapist. You will also see your consultant or their registrar periodically during treatment. The aim of these reviews 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.

At your reviews it is not usually possible to give you any information on how well the treatment is working, there are two reasons for this:

- Firstly, although we take images 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.
- Secondly, 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.

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After treatment:

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

After finishing treatment, your Head and Neck Team will continue to support you. You will also receive an appointment to see your consultant in the outpatient department between 6 and 8 weeks later.

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.uhcv.nhs.uk

How shall I travel?

By car

You can drive whilst having radiotherapy treatment unless you have been advised not to for another reason.

Sat Nav postcode: CV2 2DX

At busy times, it can be very difficult to park, so please allow extra time for this.

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.

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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, see the **transport for West Midlands website: <https://www.tfwm.org.uk>**.

Hospital Transport

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

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 266 9662

Northamptonshire Ambulance / NSL

0843 208 6888

Worcestershire Acute Trust Transport Service

0300 011 0017

In most cases you will not be able to bring anyone with you. Whilst 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 that, where possible, patients make their own travel arrangements.

If you have to rely on the hospital transport service, please ensure that 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 from which is open from 10am-4pm.

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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.

Travel costs

The NHS Hospital Travel Cost Scheme enables people in receipt of certain benefits or who are on a low income to claim back some of their travel costs. Please ask to speak to the Macmillan radiotherapy specialist for more information.

Prescriptions

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

Appointments

The department is usually open from 9.00am – 5.00pm Monday to Friday and is closed at weekends and on public holidays.

On the first day of treatment you will be given a written appointment schedule. Please check these dates and notify your treatment radiographers if you need to change any times as soon as possible.

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

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.

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.

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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.

Useful telephone numbers

Reception, Arden Cancer Centre: 024 7696 7272

Monday– Friday 9.00am to 5.00pm

Radiotherapy Ward 35: 024 7696 5528

Ask to speak to the Nurse in Charge – 24 hours

Macmillan Radiotherapy Specialist: 024 7696 7290

Monday – Friday 9.00am to 5.00pm

Radiotherapy Planning: 024 7696 7493

Head and Neck clinical nurse specialist: 024 7696 6452

Speech and language therapy: 024 7696 6449

Dietitian: 024 7696 3861

Information and Support

Cancer Information Centre: 024 7696 6052

We can offer free support, practical advice and information to anyone affected by cancer. No appointments are required and an answering machine facility is available. Open Monday to Friday 9.00am to 4.00pm, the Centre is located on the ground floor of the main entrance, next to the reception desk.

Macmillan Cancer Support: 0808 808 0000

www.macmillan.org.uk

Patient Information

Cancer Research UK:

www.cancerresearchuk.org

NHS advice: use the 111 service

Patient satisfaction

We hope you have found this booklet useful. We welcome your comments on the care you experience, and service 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 NHS Trust Complaints Policy, they can be dealt with quickly and efficiently.

Written by Alison Crichton and Julia Biggs (Macmillan Radiotherapy Specialists)

With help and advice supplied by the Medical Staff of the Arden Cancer Centre, Macmillan Head and Neck Clinical Nurse Specialists, Macmillan Dietitians and Speech and Language Therapist.

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

The Trust operates a smoke free policy.

To give feedback on this leaflet please email feedback@uhcw.nhs.uk

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