

## Arden Cancer Centre

# Radiotherapy information for patients undergoing stereotactic ablative body radiotherapy (SABR) to the lung

### What is radiotherapy?

Radiotherapy is the use of high-energy radiation to kill cancer cells in the treatment area. Radiotherapy can also damage normal cells in the treatment area. This can cause some side effects.

We plan radiotherapy very carefully to protect as much healthy tissue as possible and reduce these side effects. The tissues usually heal with side effects and symptoms improving over time.

Radiotherapy is delivered by highly trained staff called therapy radiographers. It is delivered 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:

[www.uhcw.nhs.uk/our-services-and-people/our-departments/radiotherapy/](http://www.uhcw.nhs.uk/our-services-and-people/our-departments/radiotherapy/)



### **What is stereotactic ablative radiotherapy (SABR)?**

SABR is a way of delivering radiotherapy that allows us to give a higher dose of radiation to the tumour than traditional radiotherapy. This increases the chance of controlling the tumour without causing more side effects.

Not everyone is suitable for SABR treatment. Your oncologist will discuss this with you.

As we can deliver a higher dose of radiation each session, the number of sessions for SABR is much shorter than for standard radiotherapy. Patients will have 3, 5 or 8 SABR treatment sessions. However, treatment sessions for SABR take longer than for standard radiotherapy.

### **Consent forms**

Before you have this procedure, you will need to sign a consent form. This indicates that:

- your doctor has explained the treatment procedure and any possible side effects to you, and
- you agree to go ahead with treatment.

### **Pacemakers**

**If you have a pacemaker, or implantable defibrillator, please tell your doctor and the radiographers before your first treatment.** Treatment can alter the performance of your device. It may need testing before and after treatment is given.

### **Pregnancy**

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

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

### **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 your tumour
- calculation of how to deliver the correct dose of radiation to the tumour

### **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 in the Arden Centre. This is a normal CT scan, but it is used to show areas we need to treat and those we need to avoid. You will not be given any results from this scan.

You will need to remove the clothing from your chest for the scan. Women might like to wear a small crop top which can then be pulled down when needed. You may be asked to lie with your arms up beside your head in a specially made support. You will be in the same position for all your treatments.

Some patients with tumours near the neck may need a plastic face and neck mask to wear during treatment. This helps to keep your head and neck still so that we don't have to put pen marks on your neck. You will need to wear the mask for the CT scan and later treatments. The mask will be made for you, and there is a separate booklet describing how the mask is made. Please ask for more information if this applies to you.

There may then be a gap of 3 to 4 weeks before your treatment starts. During this time, doctors, physics staff and radiographers are preparing your treatment.

### **Contrast**

Sometimes an intravenous contrast medium is used. This helps the radiographers, doctors, and physics team to see organs more clearly on the CT scan. This will involve putting a needle into your arm before the CT scan. You will be told if you need contrast and given information about it.

## Patient Information

**If you've had contrast before and had any reaction to it, please let the doctor or the radiographers know.** Contrast is only needed for treatment planning and not for daily radiotherapy.

### Skin marks

At the CT scan, you will have felt tip pen marks put onto your skin. These are used as a reference for the planning process and during treatment. With your permission, we can put tiny permanent dots of dye beneath the skin called tattoos. These will not wash off. If we cannot do this, you will need to keep felt tip pen marks on your skin for all your treatment.

### Treatment

The radiographers will deliver the treatment as prescribed by your consultant. You will need to remove the clothing from your chest and lie down. You will then lie in the same position you were in when you had your CT planning scan. The bed is raised so it is closer to the machine.

The radiographers will dim the lights and use laser lights to line up your tattoos. Once you and the treatment machine are in the correct position, the radiographers leave the room to switch the machine on. You need to lie quite still, but you can breathe normally.

During treatment, the machine will move around you but nothing will touch you. You will not feel anything during the treatment. The machine will make a buzzing noise.

The treatment times are about 45 minutes each. Images are taken before to check that the treatment is correct before its given. The radiographers watch you all the time on a screen. They will turn the machine off and enter the room if you move or call for help.

On your first appointment, we may need to carry out more checks on the images we take. If this happens, the first session is classed as a 'practice' session. You will not receive any treatment on this day. Your treatment will then begin at your next appointment.

## Patient Information

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

### **Side effects of treatment**

Treatment is painless, but it can cause some side effects. Treatment affects people in different ways. It's difficult to predict which side effects will affect you and how severe they will be. Side effects can be early (acute) and late (chronic).

### **Early effects**

These happen during your treatment and for a short while afterwards.

#### **Tiredness:**

- Most people feel tired because of radiotherapy treatment. Tiredness will often come on gradually as the treatment progresses. It may last for some weeks after treatment has finished.
- If you feel tired, try to rest or sleep. Regular exercise like taking a short walk can help if you're up to it.

#### **Coughing and breathlessness:**

- You may develop a cough. You may produce some sputum which changes in colour or contains some blood.
- A tickly cough may be relieved with frequent sips of fluid, especially at night. Sometimes codeine linctus can help.
- You may also feel more breathless.
- Continuing to smoke may make your symptoms worse.

#### **Hair loss:**

- You will only lose hair in treatment area e.g., chest hair.
- This is likely to happen about two weeks into your treatment.
- This hair loss is usually temporary. In some cases this may be permanent.

## Patient Information

### Effects on the skin

The effects of radiotherapy on the skin are usually minimal for this type of treatment.

Your skin may become gradually pinker or darker in the treatment area. This can happen towards the end of treatment and for the first one or two weeks after. This may be red, dry and itchy.

We advise that you:

- Wash the treated area daily with your usual soap or shower gel
- Don't have the water too hot or soak for too long
- Use a soft towel to pat your skin dry
- Avoid wearing tight clothes in the area being treated
- Do not use sunbeds
- Do not swim if your skin is visibly red
- Use a moisturising cream to soothe and moisturise the skin
- Avoid extremes of temperature – hot and cold
- Keep the treated area out of the sun during treatment. Take care in the future by using a high factor sun cream – factor 50 or above
- Avoid shaving in the area being treated. If you must shave, use an electric razor for dry shaving only.

When the skin becomes visibly red, stop shaving.

Do no wet shave. Do not use hair removal creams, lasers or wax.

### Late side effects

Late side effects can happen months to years after you have completed treatment.

### Breathlessness

- Radiation can cause inflammation of the lungs (radiation pneumonitis). Radiation pneumonitis can happen 6-12 weeks after finishing treatment. This can cause:

## Patient Information

- shortness of breath
- fever
- cough

It can be mistaken for a chest infection but does not resolve after a course of antibiotics. Radiation pneumonitis can be treated with steroids to reduce the inflammation.

This is rare but contact your Lung Specialist Nurse if you have these symptoms.

- Scarring (fibrosis) of the lung can happen after 6 months. This scarring is permanent and can cause a small part of the lung to collapse.
- Please discuss these side effects with your specialist lung nurse. They can advise you on techniques to help make breathing easier. You may need to see your GP for antibiotics or other drug treatment to help.

## Damage to the bones

- Radiotherapy can make your bones fragile in the treatment area (ribs). This can lead to osteoporosis.

## Heart damage

- Occasionally, radiotherapy to the chest can cause:
  - inflammation of the lining surrounding the heart (pericarditis)
  - some weakening of the heart muscle (myopathy)

This results in chest pain and shortness of breath.

Heart damage is rare and may need further investigation and treatment.

## Spinal cord damage

- This is extremely rare, but radiotherapy near the spinal cord carries a risk of nerve damage.

## Brachial Plexopathy:

- For tumours close to the top of the lung, there is a very small chance of damage to the nerves in the upper arm. This could result in weakness or numbness of part of the arm.

## Patient Information

The risk of both spinal cord damage and brachial plexopathy is very small. We take great care to avoid or minimise the dose to these structures.

### **Second malignancy**

- There is a very small risk of developing a second cancer in the area treated 10 years or more after treatment.

Please discuss any new symptoms you experience after your treatment with your consultant in the follow-up clinic.

Please call 024 7696 7290 and speak to your consultant, your clinical nurse specialist or the Macmillan radiotherapy specialist if:

- If you are concerned about the late effects of radiotherapy treatment
- you'd like more information

### **After treatment**

The early side effects will continue for several weeks after the treatment is complete. You will receive an appointment to see your consultant 4-6 weeks after finishing treatment. 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, contact your consultant's secretary.

If you have any problems with your radiotherapy treatment, contact the Macmillan radiotherapy specialist on 024 7696 7290.

### **Where is the Arden Centre?**

The Arden Centre is part of University Hospital Coventry. The entrance to the Arden Centre is to the left of the main hospital entrance. Please ask staff, or visit the Hospital website for up-to-date maps and directions:

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



### How should 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

It can be very difficult to park at busy times, so please allow extra time to do so. There are several visitor car parks across the site. There are also drop-off points near the Arden Centre and the main entrance. These allow 10 minutes of free parking. Disabled car parking facilities 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.

**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, make a note of it or take a photo of the number plate.

Please note that free parking does not include:

- clinic appointments
- counselling appointments

### Public transport

Many bus routes stop at the hospital. Buses drive onto the site and stop close to the main entrance. For more information about bus services, visit the Transport for West Midlands website: <https://www.tfwm.org.uk/>

### Hospital transport

Hospital transport is available for radiotherapy treatment where there is a medical need. It is not available for your CT planning scan or blood tests. It is not available for social or financial reasons.

## Patient Information

You may not be entitled to access hospital transport if you:

- receive Disability Living Allowance Mobility Component, or
- have a vehicle under the mobility scheme.

If you need hospital transport and think 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 2669 662

### **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. Your transport will be booked to get you to the hospital for your appointment time, but this cannot be guaranteed. You will be treated as soon as possible after you arrive.

Patients will often have to wait at the Arden Centre to be taken home for some time. This is due to the demand on the hospital transport service. We advise that patients make their own travel arrangements where possible.

If you are relying on the hospital transport service, bring food, drinks and any medication you may need with you.

## **Transport schemes**

Volunteer transport schemes are operating in some areas. These schemes may 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 lets people who receive certain benefits or are on a low income 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 need an exemption card, please ask a member of staff for an application form.

### **Appointments**

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

You will be given a written appointment schedule on the first day of treatment. Please check these dates. Notify your treatment radiographers as soon as possible if you need to change any dates or times. We'll try our best to give you the times you prefer, but 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 happen due to machine breakdowns and servicing.

There may be breaks in treatment due to public holidays and machine maintenance. We may ask some patients to come in on these days for treatment. A different treatment machine could be used.

It is not advisable for you to miss any other appointments. If this is unavoidable, please talk to the radiographers treating you.

We need to have a contact number for you. We may have to call patients about appointments or with other information at short notice. If your telephone is set to stop incoming calls from withheld numbers, please give us a different telephone number.

## Patient Information

### **Counselling**

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

### **Smoking**

It is strongly recommended that you **stop smoking completely** whilst undergoing radiotherapy. Smoking can make treatment side effects more severe, the treatment harder to tolerate and less effective.

For help to stop smoking contact the hospital's stop smoking service: 0800 122 3780 or 07377 558 478.

### **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. The Centre is located on the ground floor in the main entrance.

Open Monday to Friday, 9am to 4pm.

### **Useful telephone numbers:**

**Lead SABR Radiographers:** 024 7696 7269

Monday to Friday, 9am to 5pm

**Arden Cancer Centre:** 024 7696 7272

Monday to Friday, 9am to 5pm

**Radiotherapy Planning:** 024 7696 7493

Monday to Friday, 9am to 5pm

**Macmillan Radiotherapy Specialists:** 024 7696 7290

Monday – Friday, 9am to 5pm

## Patient Information

### **Acute Oncology** (evenings and weekends)

UHCW switchboard: 024 7696 4000

Ask to bleep acute oncology on 1641

**NHS advice** - use the 111 service

**Macmillan Cancer Support:** 0808 808 00 00

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

**Cancer Research UK:** 0808 800 4040

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

**British Lung Foundation:** 03000 030 555

[www.blf.org.uk](http://www.blf.org.uk)

**The Roy Castle Lung Cancer Foundation:** 0333 323 7200

[www.roycastle.org](http://www.roycastle.org)

## **Patient satisfaction**

We ask that specific complaints are addressed to a member of staff. This is so they can be dealt with quickly and efficiently in line with UHCW NHS Trust's complaints policy.

If you need help, information, or advice during or after your course of treatment has finished, speak to the Macmillan radiotherapy specialist. Contact 024 7696 7290 on Monday to Friday, 9am to 5pm.

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact 024 7696 7272 and we will do our best to meet your needs.

This Trust operates a smoke-free policy.

## 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](http://www.uhcw.nhs.uk/feedback)



### Document History

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