



# Stereotactic ablative body radiotherapy to the lung

Patient information leaflet

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## Introduction

This leaflet aims to provide information for patients and relatives about stereotactic ablative body radiotherapy (SABR) in lung cancer treatment.

This leaflet explains:

- General information on SABR
- Planning and delivery of the treatment
- The side effects you may experience during and after treatment
- Who to contact for advice

Your clinical oncologist will discuss your treatment in detail with you answering any additional questions you may have.

## What is stereotactic ablative body radiotherapy?

Radiotherapy is a treatment for cancer using high energy radiation, in the form of X-rays. It works by damaging tumour cells to stop them from growing or causes them to die. The purpose of radiotherapy is to destroy the cancer cells whilst causing as little damage as possible to normal cells.

SABR is an effective way of giving focussed radiotherapy increasing the chance of controlling the tumour whilst sparing the normal tissues. It does this by using:

- Fewer treatment sessions (usually 3-8)
- Smaller radiation fields
- Higher doses of radiation

Conventional radiotherapy is the typical alternative treatment to SABR which usually consists of 20 treatments over 4 weeks. Other alternatives include radiotherapy to help control your symptoms or no treatment at all, both of which result in poorer tumour control.

## Planning your treatment

You will need to attend two appointments in the radiotherapy department before starting your treatment. These include:

### Appointment one: Planning your treatment – this will take approximately 2 hours

During the planning session, you will be asked to lie on a couch with your arms above your head; please let the radiographers know if you are unable to manage this as you will need to be able to lie in exactly the same position for the duration of your planning session and treatments.

As the tumour in the lung moves with breathing you will be asked to breathe in a coordinated way using a metronome (device that produces regular beats). Your breathing will be assessed on a machine called a simulator.

Occasionally, due to the tumour movement, some patients are not suitable for this treatment. If you are not suitable an alternative treatment will be offered.

Following your breathing coordination you will have a CT scan of the treatment area.

You will be given permanent tattoos (4 small dots) after the CT to enable us to reproduce the position that you are scanned in for your next appointments.

### Appointment two: Pre-treatment run – this will take approximately 1 hour

This is a final check appointment in the treatment room to ensure you are comfortable in the treatment position and check your radiotherapy plan.

You may wish to bring your regular medication with you and something to eat, drink and read. If you have any pain, it may help to take some painkillers 30 minutes to one hour before each session.

A team of doctors, physicists and radiographers work together in the simulators, CT scanner and treatment rooms.

## Delivering your treatment

SABR is given over 3 to 8 treatments, usually on alternate working days and will last for about an hour. You will be required to breathe to the beat of the metronome as practised in the planning sessions. The treatment is usually completed within two weeks. Scans will be taken in the treatment room before, after and occasionally during treatments so that the radiographers can ensure the radiotherapy treatment is delivered accurately.

## Early side effects of treatment

Early reactions to SABR occur during or up to 12 weeks after completion of your treatment; these are usually temporary and include:

### Tiredness/fatigue

- It is common to feel more tired than usual in the weeks following completing your radiotherapy
- Ensure you drink plenty of fluids and rest. This will gradually resolve

### Skin reactions

- After the first 3 treatments, the skin may become slightly red, itchy and dry. Very rarely, if the tumour being treated is close to the chest wall, the skin may break down
- Follow the instructions in the radiotherapy skin care leaflet
- If your skin becomes uncomfortable, ask the radiotherapy team for advice

## Shortness of breath and/or raised temperature

- Sometimes following radiation treatments for tumours within the chest, the lung tissue may become inflamed. This lung inflammation from radiotherapy is termed 'radiation pneumonitis'. It can result in symptoms of breathlessness, wheezing, cough or fever usually 6-12 weeks following completing the treatment, and can be mistaken for a chest infection
- Pneumonitis is rare, and is less likely to happen in lung SABR than in conventional radiotherapy. If pneumonitis is suspected, your Clinical Oncologist may prescribe you oral steroid tablets to reduce the inflammation and help to relieve your symptoms

## Chest pain

- If your lung tumour is close to the chest wall, you may experience some chest pain following SABR. This is usually mild and relieved with simple painkillers such as paracetamol. If the pain is more severe, please seek advice from your radiotherapy team

## Swallowing difficulties

- SABR can occasionally cause your gullet to become inflamed resulting in some discomfort and difficulty in swallowing
- This is uncommon in SABR compared to conventional radiotherapy and can normally be managed by drinking lots of fluids and eating soft foods. Seek advice from your radiotherapy team if you are not managing

## Late side effects of treatment

Late reactions occur after 3 months following completion of treatment some of these are permanent; your clinical oncologist will discuss the late side effects with you.

Some late side effects include:

## Lung scarring/collapse

- Occasionally, part of the treated lung may eventually collapse. This collapse generally effects only a small portion of the lung
- If a portion of the lung collapses, you may feel short of breath and may need to receive oxygen. Rarely, a few patients may require oxygen therapy permanently as a result of SABR. The chance of this happening is very small
- The risk of lung damage and breathing problems following SABR is likely to be smaller than the risk after conventional radiotherapy treatment

## Chest wall pain/rib fractures

- There is a small chance that radiotherapy to tumours close to the ribs may weaken the ribs, causing pain and possibly rib fractures
- This does not cause symptoms in most patients however a small number of patients with a rib fracture as a result of SABR may experience pain requiring painkillers, sometimes for a long period of time

## Upper arm nerve damage

- For tumours close to the top of the lung, there is a very small chance of the radiotherapy damaging the nerve bundles (brachial plexus) going to the arm. This may result in weakness or numbness in part of the arm. The risk of this is very small as great care is taken to avoid or minimise radiation doses to these nerves

## Contacts

Your clinical oncologist will see you regularly during and after your treatment. If you have any problems or questions please contact the radiographers on the telephone number quoted on your appointment card.





The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit [www.uhb.nhs.uk/health-talks.htm](http://www.uhb.nhs.uk/health-talks.htm) or call 0121 371 4957.

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**Cancer Services**  
**University Hospitals Birmingham NHS Foundation Trust**  
Mindelsohn Way, Edgbaston  
Birmingham B15 2GW  
Telephone: 0121 627 2000

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