

## Patient information factsheet

# Lung stereotactic ablative body radiotherapy (SABR)

We have given you this factsheet because your doctor has recommended stereotactic ablative body radiotherapy (SABR) as treatment for lung cancer. It explains what SABR treatment is, what to expect at your treatment, and the risks and benefits. We hope it will answer any questions you may have. If you have any further questions, please contact us using the number at the end of this factsheet.

### What is stereotactic radiotherapy?

Radiotherapy is the use of high energy x-rays (radiation) to treat cancer. It damages tumour cells to stop them from growing or causes them to die. The purpose of radiotherapy is to destroy the cancer cells while causing as little damage as possible to normal cells.

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

- fewer treatment sessions (usually three, five or eight)
- smaller more precise radiation fields
- higher doses of radiation

Radiotherapy itself is painless and does not make you radioactive. It is perfectly safe for you to be with other people, including children and pregnant women during the course of your treatment.

### Planning your treatment

Your first appointment will be the planning appointment. This includes a CT (computer tomography) scan of your chest in the treatment position. This CT scan is not a diagnostic scan but it is used by your radiotherapy doctor to produce an individual radiotherapy treatment plan for you.

We will ask you to lie on your back. We will place your hands above your head and support them there. It is very important that you let the staff scanning you know if you have any discomfort. The aim of the planning appointment is to find a position that is as comfortable as possible so that it can be held each time you come back for treatment.

A small monitoring device may also be placed on your chest. This is linked to the scanner. It will monitor your breathing throughout the scan so that we can see any changes in the tumour position during your breathing cycle. It is important that you are comfortable and that you are breathing normally. Please tell a member of the team if you are in any discomfort.

After the scan, the radiographers will mark three to four small dots that are permanent tattoos on your skin. These are essential so that we can reproduce your position when you have your treatment.

## Having your treatment

SABR is usually given in three to eight treatment sessions. Each session will be at least a day apart (for example, Monday, Wednesday and Friday, with a rest at the weekend). Your radiotherapy doctor will tell you how many treatments you will receive.

At each treatment session, the radiographers will position you accurately, moving the treatment couch and machine to direct the treatment at the tumour. The machine will not touch you.

During treatment it is important for you to stay as still as possible and to breathe normally. Once you are in the correct position and all the checks are completed, the radiographers will leave the room to switch on the machine.

The radiographers will be watching you on a closed circuit TV monitor (CCTV) to ensure you are safe during the treatment. The radiographers will check that you are keeping still and that you are not experiencing any problems during your treatment. The radiographers will be able to hear you and talk to you via an intercom during treatment.

Some days the radiotherapy department may be very busy and your appointment time may be delayed. We will keep you informed of any delays.

Your appointment times for radiotherapy may not be at the same time each day and are subject to change. We will give you as much notice as possible of any changes. It is possible that during your course of treatment you may miss a day's treatment due to planned machine maintenance or bank holidays. This will not cause you any harm. It is therefore important to speak to a health care professional before booking a holiday immediately following your radiotherapy.

## What are the potential side effects?

Side effects can vary from patient to patient. Not everyone will experience all of the side effects below but it is important for you to be aware of them. The radiographers will monitor you for any side effects throughout your treatment course and arrange for you to see a doctor if necessary (see below for the potential side effects). It is important to tell the radiographers how you are feeling, particularly if your symptoms worsen, so that you can get the care you need.

If you are a smoker it is important to stop as it can increase the risk of side effects from treatment. We can offer you help with this and your radiotherapy doctor will discuss this with you.

## Early side effects

Some side effects occur during or up to 12 weeks after completion of your treatment. These are usually temporary. Side effects may include:

### Skin reaction

During and after treatment, the area of skin where you are having the treatment may change due to the radiotherapy. It may become a little pink, dry, or itchy. You should:

- treat the area gently
- avoid vigorous rubbing and instead pat skin dry with a soft towel
- avoid very hot or very cold water when you wash

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- use your normal washing products (do not change brands or use a new product while you are having radiotherapy)
- moisturise sparingly with a moisturiser that you have used previously
- wear loose fitting clothes made from natural fibres that will not irritate
- avoid exposing the area to the sun or cold wind

## Tiredness (fatigue)

You may become more tired as your treatment progresses. Try doing gentle exercise and drink plenty of fluids to reduce your fatigue.

## Cough

You may notice that you have a dry or productive cough (a cough which produces phlegm). This is due to the radiotherapy causing inflammation. This reaction should settle down when your treatment is over. However, if the cough is persistent or you have any concerns, please talk to the radiographers who can refer you to the doctor.

## Chest wall pain

If your 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.

## Shortness of breath and/or raised temperature

Occasionally radiotherapy to the lung can produce swelling (inflammation) in the lung tissue. This inflammation or pneumonitis usually appears six to 12 weeks after the treatment has finished. It can often be mistaken for a chest infection but it is not helped by antibiotics.

Symptoms of pneumonitis includes:

- increased shortness of breath
- wheezing
- fever
- cough

Pneumonitis is rare but, if you get these symptoms, please contact the **acute oncology service** at Southampton General Hospital on **023 8120 1345**. Your radiotherapy doctor may start you on oral steroid tablets to help your symptoms and reduce the inflammation.

## Late side effects

Some side effects may happen soon after treatment, but some appear months or years after you have finished radiotherapy.

## Lung scarring/collapse

Lung SABR treatment may cause scarring of the lung in the area where the cancer was treated. This scarring is permanent and may cause a small portion of the lung to collapse. The precise planning of your treatment keeps this amount of lung scarring/collapse to a minimum. However, this scarring/collapse can make you become more short of breath. Having lung SABR may mean that you need to have oxygen for a short period of time. In very rare cases, you may need oxygen therapy permanently as a result of the lung SABR treatment.

There are reports of a few patients who received lung SABR treatment where a collapse of a larger portion of the lung occurs. This can be life threatening, but the risk of this happening is very small and the hospital has the expertise to deal with this.

## Chest wall pain/rib fractures

The radiotherapy may weaken your ribs and cause pain and rib fractures, if your tumour is close to your ribs. This does not cause any symptoms for most patients and will be discovered when you have a scan after the treatment. A small number of patients who have a rib fracture as a result of the lung SABR treatment may need painkillers, sometimes for a long period of time.

## Brachial plexopathy

For tumours close to the top of the lungs, there is a very small risk of the radiotherapy treatment damaging the nerves going to the arm. There may be weakness or numbness in part of the arm which may be permanent. However, the chance of this happening is very small and care is taken to avoid or minimise the doses of radiation to these nerves.

## Second malignancy

Very rarely, people who have received treatment for one particular tumour may develop another type of tumour in the treated area some years later. The radiotherapy doctors will discuss this risk if it is relevant to you.

## Student radiographers

We are a teaching hospital and sometimes we have students observing in the treatment room. Please tell the radiographers if you prefer not to have an observer with you.

## Follow-up

You will have a clinic appointment two to six weeks after finishing your treatment. If you have been referred to us from another hospital, the rest of your follow-up will be with your local team after this appointment.

Your radiotherapy doctor will discuss your follow-up schedule with you, but generally you will be seen every three months for the first year after treatment. After the first year, you will be seen every six months for up to five years.

## Contact us

If you have urgent symptoms relating to your current radiotherapy treatment, please call the **acute oncology service** at Southampton General Hospital on **023 8120 1345**.

This number is answered 24-hours, seven days a week, but is only for treatment-related symptoms. It is **not** for general queries such as rearranging appointments or hospital transport.

If your symptoms are not urgent, you can speak to one of the radiographers when you come to the hospital for your radiotherapy treatment.

In an emergency call **999**.

For any non-urgent queries, please contact the radiotherapy reception.

## Radiotherapy reception

Telephone: **023 8120 8568** (Monday to Friday, 8am to 6pm)

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## Useful links

### British Lung Foundation

Supports people affected by any type of lung disease.

Telephone: **08458 50 50 20**

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

### The Roy Castle Lung Cancer Foundation

Provides practical and emotional support for patients and those affected by lung cancer and smoking.

Telephone: **0800 358 7200**

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

### NHS Smoking Helpline

Offers free information, advice and support to people who are giving up smoking, and those who have given up and don't want to start again.

Telephone: **0800 022 4332**

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

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For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit [www.uhs.nhs.uk/additionalsupport](http://www.uhs.nhs.uk/additionalsupport)