

Radiotherapy department

Stereotactic ablative body radiotherapy (SABR) to the lung

This leaflet aims to help patients and their carers understand more about stereotactic ablative body radiotherapy (SABR) for lung cancer treatment. Please read this leaflet alongside The Christie booklets 'Radiotherapy – a guide for patients and their carers' and 'Radiotherapy to the lung'. Your clinical oncologist (specialist doctor) or lung advanced clinical practitioner (ACP) will also discuss the treatment with you.

This leaflet will provide the following information:

- what SABR is and what the benefits of this treatment are
- planning of your treatment
- what happens on the day of your treatment
- side effects of treatment
- details of who to contact when you need advice

What is SABR and what are the benefits of this treatment?

SABR is an effective way of giving more accurate radiotherapy to the chest, over fewer treatment sessions than standard radiotherapy. A high dose of radiation is delivered to the tumour, while avoiding the normal tissues in the chest as much as possible and reducing symptoms more effectively than standard radiotherapy. This increases the chances of controlling the tumour.

Planning your treatment

You will have appointments in the radiotherapy department before you start the treatment. During your visit, you will have a radiotherapy treatment planning scan on a CT scanner. The scans to plan your radiotherapy aim to give enough information to plan the radiotherapy accurately. These scans are not diagnostic and therefore do not give sufficient information to assess the status of your cancer or any other abnormalities.

During this planning session, we will ask you to lie on the bed with your arms above your head, your arms will be supported by a special board. The position you lie in has to be exactly the same on each day of your treatment and the radiographers will help you with this. Some patients require a plastic shell (mould) to be made for their treatments. This is made for you before your scan. You will lie with your arms down by your side and the mould will cover your chin, neck, shoulders and upper chest.



During this visit, the radiographers will draw marks on your skin to ensure you are in the correct position for each treatment. These pen marks will wash off therefore we would like to make these permanent. We call these radiotherapy tattoos and they are done with a small needle and some ink.

During your scan, an IV (intravenous) contrast will be given which is injected through a cannula (small tube in the vein) in the back of your hand. Please make sure you are well hydrated before and after your visit.

The appointment may take up to 2 hours. Please bring your regular medication with you and maybe something to read, eat and drink. You can take painkillers 30 minutes before this session if you have any pain.

Consent

We will ask you to sign a consent form agreeing to accept the treatment that you are being offered. The basis of the agreement is that you have had The Christie's written description of the proposed treatment and that you have been given an opportunity to discuss any concerns. You are entitled to request a second opinion from another doctor who specialises in treating this cancer. You can ask your own consultant or your GP to refer you. Your consent may be withdrawn at any time before or during this treatment. Should you decide to withdraw your consent then a member of your treating team will discuss the possible consequences with you.

When will I start my treatment?

Treatment will usually start a couple of weeks after your planning session. You will be given a list of treatment appointments when you attend for your CT planning scan.

What happens on the day of treatment?

SABR is normally given over 1, 3, 5 or 8 treatments, usually on alternate working days. The treatment course is usually completed within 2 weeks, but may occasionally take up to 3 weeks to complete.

A team of radiographers, physicists and clinicians work together in the CT scanner and treatment rooms and you may hear them sharing information and giving instructions relating to your treatment.

You will need to be positioned as you were in your planning session.

A scan of the area you are having treated will be taken before and sometimes during each treatment. These scans are purely to check that you are in the correct position and not to check how the tumour is responding to treatment.

You will be alone in the radiotherapy treatment room while the machine moves around you and delivers treatment. CCTV on the control desk gives the radiographers a clear view of you and they will be watching you all the time. If you feel the need to cough or sneeze the radiographers will tell you beforehand how to let them know. They will switch off the machine and come in immediately. You will not feel the treatment and it is important that you stay as still as possible during the treatment process, and breathe normally. Treatment can take between 30-45 minutes.

Side effects of treatment

As your treatment progresses you may experience some side effects or reactions. Not everyone will have all of these reactions. These are normal reactions and usually temporary. They usually begin after the first 3 treatments and may last for several weeks (usually up to 6) after the end of treatment. Please tell us if your symptoms are troublesome.

Short term side effects

(during or up to 12 weeks after your treatment)

- **Tiredness (fatigue)** – you will feel more tired than usual for several weeks after the radiotherapy has been completed.
- **Skin reactions** – usually 10-12 days after starting treatment (often after the first 3 treatments) the skin where you are having the radiotherapy may change. Skin reactions can vary, but the common symptoms are redness, dryness and itchiness. Very rarely, the skin may break down if the tumour being treated is close to the chest wall.
- **Chest pain** – if your lung tumour is close to the chest wall, you can have some pain after your radiotherapy treatment. This is usually mild and relieved with simple painkillers such as paracetamol. If the pain is more severe, please contact your clinical oncologist or lung cancer specialist nurse during working hours.
- **Shortness of breath and/or raised temperature** – occasionally, radiotherapy to the lung can produce inflammation in the lung tissue. This inflammation (pneumonitis) can cause symptoms of increased shortness of breath, wheezing, fever or cough, usually 4-16 weeks after treatment has finished. It can often be mistaken for a chest infection but it is not helped by antibiotics. Pneumonitis is rare and is less common in lung SABR compared to standard radiotherapy. However, if you get these symptoms, please contact your clinical oncologist or lung cancer specialist nurse as we would wish to see you in clinic as soon as possible. If your clinical oncologist suspects you have pneumonitis, you may be prescribed oral steroid tablets to help your symptoms and reduce the inflammation.
- **Difficulty swallowing** – this is uncommon in lung SABR compared with normal lung radiotherapy. However, if you get these symptoms, you may find that foods that are 'easy to chew' are more comfortable and manageable. For further information, please see The Christie booklet 'Eating a regular, easy to chew diet'. Sometimes the timing and co-ordination of the swallow may be affected. If you experience the following symptoms, you may have a swallowing difficulty:
 - coughing on swallowing food or fluids
 - difficulty breathing after eating or drinking
 - wet or gurgly voice after eating or drinking
 - pocketing food in mouth
 - unexplained chest infections

Drinking plenty of fluids should also help. We may prescribe painkillers to enable you to continue eating and drinking normally.

Tell the radiographers if you experience any of these side effects or have any new symptoms. They will make sure that you receive the support and any medication that you may need.

Late side effects

(may occur after 3 months)

- **Lung scarring/collapse** – a possible effect of this can be eventual collapse of a part of the treated lung. Although this collapse generally affects a small part of the lung, this appears to be permanent. Every effort will be made to reduce this risk, but if it happens you may have shortness of breath. Rarely, a few patients may need oxygen therapy permanently as a result of SABR. The chance of this happening is very small.
- **Chest wall pain/rib fractures** – for tumours close to the ribs, there is a small risk that the radiotherapy may weaken the ribs and cause pain and a rib fracture. For most patients, this does not cause any symptoms and is incidentally discovered. A small number of patients who have a rib fracture as a result of this treatment can experience pain and need to take 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 damage caused by radiotherapy to the nerve bundles going to the arm. This would mean that there may be weakness or numbness in part of the arm. The chances of this happening are very small. Great care is taken to avoid or minimise the doses of radiation to these nerves.

Are there any alternatives to SABR?

A typical alternative to SABR is standard radiotherapy with either 20 treatments over 4 weeks or 15 treatments over 3 weeks. Other alternatives are palliative radiotherapy over 1-10 treatments or no treatments at all, both of which result in poorer tumour control.

Follow up

You will be seen by your SABR consultant between 6-12 weeks after your SABR treatment has finished. After this, you may not routinely see your SABR consultant or lung ACP, but may continue with follow-up appointments with your referring doctor.

Contact details (via consultant's secretary)

Michelle Bewley

Lung advanced clinical practitioner – **0161 956 1212**

Dr D Abdulwahid – **0161 446 3337**

Dr K Banfill – **0161 446 3336**

Dr C Barker – **0161 918 7442**

Dr N Bayman – **0161 446 3337**

Dr C Chan – **0161 918 7442**

Dr J Coote – **0161 918 7442**

Prof C Faivre-Finn – **0161 446 8200**

Dr M Harris – **0161 446 3302**

Dr A Horne – **0161 446 8580**

Dr J King – **0161 918 7442**

Dr L Pemberton – **0161 918 7442**

Dr H Sheikh – **0161 446 3223**

Dr D Woolf – **0161 446 3336**

Clinical nurse specialist team – **0161 918 2595**

For queries about radiotherapy appointments, contact The Christie site you are being treated at:

The Christie at Withington – **0161 446 3486**

The Christie at Oldham – **0161 918 7700**

The Christie at Salford – **0161 918 7800**

The Christie at Macclesfield – **0161 956 1700**

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard. If you would like to have details about the sources used please contact **the-christie.patient.information@nhs.net**

For information and advice visit the cancer information centres at Withington, Oldham, Salford or Macclesfield. Opening times can vary, please check before making a special journey.



Contact The Christie Hotline for
urgent support and specialist advice
The Christie Hotline: 0161 446 3658
Open 24 hours a day, 7 days a week