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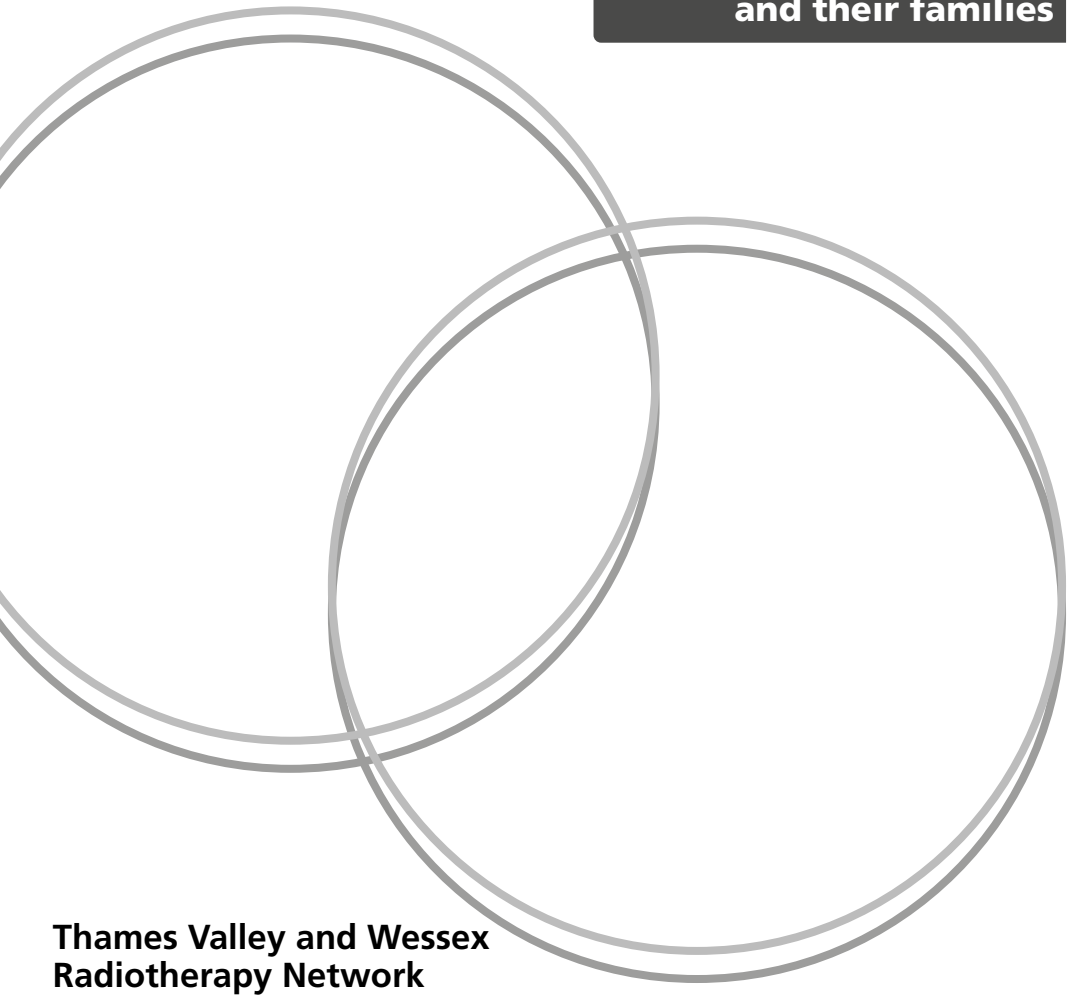
# Stereotactic Ablative Body Radiotherapy (SABR) to the Lung

**Information for patients and their families**



**Thames Valley and Wessex Radiotherapy Network**

# Introduction

This leaflet is for people with lung cancer who are having stereotactic ablative body radiotherapy (SABR) treatment. Family members may also find it helpful. We hope it will help to answer some of the questions you may have. Your clinical oncologist (specialist doctor) will also discuss your treatment with you.

# What is stereotactic radiotherapy?

Radiotherapy is the use of high energy x-rays (radiation) to treat cancer. It damages cancer cells (sometimes also called tumours) 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 normal tissue. It does this by using:

- fewer treatment sessions (usually 3, 5 or 8)
- smaller more precise radiation fields (i.e., for small tumours less than 5cm in size)
- higher doses of radiation.

SABR is different from conventional forms of lung radiotherapy which can involve up to 33 treatment sessions over six and half weeks.

Radiotherapy itself is painless. It 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.

The medical x-ray imaging you will require as part of your radiotherapy treatment will give you a small additional amount of radiation. This will be in addition to the radiation received during your radiotherapy treatment as part of your cancer treatment. Although there are risks and side effects, it is felt that the advantages for you outweigh the disadvantages.

# Pregnancy

Patients with child-bearing capacity should avoid being or becoming pregnant at any time during a course of radiotherapy, as radiation can be harmful to the unborn child. It is important to let your therapeutic radiographers know if you have missed a period or suspect that you may be pregnant, before you are exposed to any radiation.

Patients with child-bearing capacity will be asked to confirm their pregnancy status prior to planning the radiotherapy and again on the first day of radiotherapy treatment.

This applies to all those with child-bearing capacity between the ages of 12-55 years. This is a legal requirement.

# Planning your treatment

Before starting your treatment, you will need to come for a planning appointment in the Radiotherapy Department. This will involve a CT scan,

# Radiotherapy planning CT scan

You will be asked to lie flat on the CT couch, usually with your arms supported above your head. A CT scan will be taken of your chest and upper abdomen. This is to help the radiotherapists treating you decide the best position you will need to be in for your treatment. During the scan you can breathe as normal, you will not need to hold your breath.

You will be given permanent tattoos around your chest (3 small dots). There will be one in the centre of your chest and one on each side of your chest. These are used to make sure that the radiotherapists treating you can put you in the same position you were in when you had your CT scan.

# Having your treatment

This will take approximately 45 minutes for the first treatment and 30 minutes for the remaining sessions.

SABR is given at 3, 5 or 8 treatments on alternate days (for example 5 treatments would be given on days: Monday, Wednesday, Friday, then the next Tuesday and Thursday).

At each session, your therapeutic 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 that 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 radiotherapists will leave the room to switch on the machine.

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

Your therapeutic radiographers will monitor you for any side effects throughout your treatment and arrange for you to see a doctor if necessary.

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. They may also be 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 of treatment?

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.

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

It is important to tell your radiotherapist how you are feeling, particularly if your symptoms worsen, so that you can get the care you need.

# Early side effects

Early reactions to SABR tend to occur during treatment or up to 3 months after completing your treatment. They are usually temporary and include:

### Tiredness

This is common, especially towards the end of treatment. Listen to your body and allow time to rest and sleep. You will gradually feel less tired.

### Skin reactions

Your skin may become red, itchy or dry in the treated area. You will be given skin care advice by the team caring for you.

### Shortness of breath and cough

Sometimes, following radiotherapy to the chest, the lung may become inflamed. This is known as "radiation pneumonitis". It causes shortness of breath and a dry cough usually beginning 6-12 weeks after completion of treatment.

However, this is uncommon and is less likely to happen after SABR than if you had conventional radiotherapy.

If pneumonitis is suspected, your clinical oncologist may prescribe you high-dose oral steroid tablets to reduce the inflammation and help relieve your symptoms. Rarely, you may need inpatient care in hospital for this.

### Chest pain

If the tumour is close to your chest wall you may experience some chest pain following SABR. This can be managed with painkillers such as paracetamol.

### Swallowing difficulties

Rarely, SABR can cause your oesophagus (food pipe) to become inflamed resulting in discomfort and difficulty swallowing. This is not common with SABR compared to conventional radiotherapy. It can be managed with painkillers and choosing soft and bite-sized foods (soft, tender and moist) and will gradually get better.

## Possible long-term side effects

Long-term side effects can occur many months to years after radiotherapy has finished. These late side effects are hard to predict and, unfortunately, if they do occur, can be permanent. To reduce these side effects, we plan your treatment to avoid the areas surrounding the tumour as much as possible.

## Chest wall pain or rib fracture

There is a 10% chance (10 in 100 people) that treatment of tumours close to the chest wall may weaken the ribs, causing pain and possibly rib fractures. This risk is increased in patients with osteopenia and osteoporosis (weakened bones due to low bone density). This may require regular treatment with painkillers for a long period of time.

## Lung scarring

The risk of permanent lung damage is very small. If it does occur, you may need high-dose steroids and oxygen therapy in the long term.

## Upper arm nerve damage

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

## After treatment

Radiotherapy takes time to work. After your treatment has finished you will be asked to return to the Outpatient Clinic for follow-up with your oncologist. It is at this appointment that your doctor will assess and discuss your progress, talk with you about any continuing side effects and plan future appointments.

It is common to feel tired after cancer treatment. Try to eat healthy balanced meals, drink plenty of fluids, rest as needed but aim to be physically active every day.

# How to contact us

If you have any queries during your radiotherapy, please do not hesitate to ask the therapeutic radiographers treating you.

You can also contact us on the two numbers below:

### Radiotherapy Review Team (Oxford)

Telephone: **01865 235 465**

8am-6.30pm, Monday-Friday

### Radiotherapy Review Team (Swindon)

Telephone: **01865 220 680**

8.30am-5pm, Monday-Friday

### Emergency Assessment helpline (Oxford Oncology and Haematology triage)

Telephone: **01865 572 192**

24 hours a day, 7 days a week

# Queries after your treatment course

Please contact the lung cancer nurse practitioner team from your local hospital.

### Great Western Hospital, Swindon, Lung Cancer Nursing Team

Telephone: **01793 604 456** or
**01793 604 351**

8.30am-4pm, Monday-Friday. Messages left after 4pm will be returned the next working day

### Buckinghamshire Healthcare NHS Trust, Lung Cancer Nurse Specialist

Telephone: **01296 315 649**

9am-4pm, Monday-Friday. Messages left after 4pm will be returned the next working day

### Milton Keynes Lung Cancer Advanced Nurse Practitioners

Telephone: **01908 997 334**

8.30am-4.30pm, Monday-Friday. Answering machine available

### Oxford Lung Cancer Nursing Team

Telephone: **01865 226 119**

9-4.30pm, Monday-Friday. Messages left after 3pm will be returned the following day.

# Useful organisations and websites

### British Lung Foundation

Supports people affected by any type of lung disease.

Telephone: **03000 030 555**

Web: **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: **0333 323 7200**

Web: **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 do not want to start again.

Telephone: **0300 123 1044**

Web: **www.nhs.uk/better-health/quit-smoking/**

## Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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