



Stereotactic Ablative Body Radiotherapy (SABR) for Lung Cancer (CyberKnife)

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 (either 3, 5 or 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 one, sometimes two appointments in the radiotherapy department before starting your treatment. These will generally happen on one day and in total take around two and a half hours.

Appointment one: planning CT scan

You will have two CT scans of the treatment area. The first CT scan will be done with you holding your breath having breathed out and the second with you having breathed in. The Radiographers will practise this with you first. Doing these two scans will enable us to assess how much your tumour moves with breathing. You will be given permanent tattoos (small dots) after the CT to enable us to reproduce the position that you are scanned in for your next appointments.

After the CT scan, the physicists will work to produce a mock plan. This takes around an hour to produce and we will ask you to wait whilst this is done.

Appointment two: dummy run

We will then take you into the CyberKnife unit and ask you to lie down in the same position as before. The radiographers will then leave the room and you will feel the bed moving but will not see or feel anything else. We will ask you to breathe normally for this. The radiographers will take some x-rays. This to check that your tumour is visible on the x-rays and that CyberKnife is suitable for you. This generally takes around twenty minutes.

We will endeavour to do both appointments on one day, but this is not always possible.

What happens when I come for radiotherapy?

SABR is given in 3, 5 or 8 treatments, usually on alternate working weekdays and will start around 2 weeks after your planning CT scan. The treatment is usually completed within three weeks and will last for between 1–2 hours each time.

The radiographers will explain what will happen and then ask you to lie on the treatment couch where they will position you in the same way you were for the planning CT scan. LED markers will be placed on your chest / abdomen to monitor your breathing.

You need to breathe normally for treatment. The more relaxed and uniform your breathing is, the smoother the treatment will go.

X-ray images will be taken in the treatment room before and during treatments so that the radiographers can ensure the radiotherapy is delivered accurately. This involves a very small additional dose of X-rays and ensure that you are in the correct position for accurate treatment which overall serves to reduce the risk of side effects. Assessing these images may take some time and necessitate discussion with other members of the wider team such as physicists and doctors. The images cannot be used to assess how well the treatment is working.



The radiographers may come in and out of the room and adjust your position slightly. You will then see the machine move around you so that the treatment can be delivered from lots of different angles. The machine will only be on for a few minutes at a time. You do not feel anything whilst the treatment is being delivered.

Information for Patients

The radiographers cannot stay in the room with you whilst the machine is on, but they are operating the machine and watching you all the time on cameras and listening to you via an intercom. If for any reason you need the radiographers, then just call out and they will immediately stop the treatment and come in. You are welcome to bring a CD with you, so you have something to listen to whilst you have your treatment.

It is extremely important that you are not pregnant or become pregnant during your course of radiotherapy. Even a small amount of radiation may damage an unborn foetus so it is very important to let the radiographers know at once if you think there is even a possibility that you may be pregnant before any radiation exposures are given on the CT scanner or CyberKnife unit.

Having radiotherapy does not make you radioactive. There is no need to restrict your contact with other people, including children and pregnant women.

CCTV use:

The treatment rooms are monitored during your preparation, positioning and treatment delivery by television cameras. This is part of ensuring the accuracy of your treatment and your safety and wellbeing in the rooms at all times. We assure you that the camera image feed is live, and it is not possible to make a recording. The images are viewable on screens situated in the machine control areas. The control areas are only accessed by authorised radiotherapy staff, some of whom may not be directly involved in your care at the time. If you have any concerns about your privacy or dignity, that you have not already discussed then please do not hesitate to highlight your concerns during the information discussion with the radiographers at your first appointment.

Early side effects of treatment

Early reactions to SABR occur during or up to 6 weeks after completion of your treatment; these are usually temporary and include:

- Tiredness / fatigue
- Skin reactions
- Shortness of breath / cough
- Chest pain

Your Oncologist will go through details of treatment related side effects that are applicable to you.

Other information

Contact details

If you have any problems or questions, please contact the Lung specialist or CyberKnife radiographers.

Lung Specialist Radiographer: Emma Wingate
Telephone : 0121 371 3554

CyberKnife:
Telephone: 0121 371 5060

If there is no answer then please leave a message so one of the radiographers can call you back. This telephone will be checked regularly throughout the week but not checked at weekends.

Car parking

Please use the space below to write down any questions you may have and bring this with you to your next appointment.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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