



Stereotactic Ablative Body Radiotherapy (SABR) to the Liver using a linear accelerator

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Introduction

This leaflet aims to provide information for patients and relatives about stereotactic ablative body radiotherapy (SABR) in liver cancer treatment on a linear accelerator.

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) over 2–3 weeks
- 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 three appointments in the radiotherapy department before starting your treatment.

These include:

Appointment one: Planning your treatment – this will take approximately 1 hour

Mould room:

During the planning session, you will be asked to lie on a couch with your arms above your head resting on a board and a bean bag; 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.

We have a device which attaches to the treatment couch and is then adjusted to create some pressure on your abdomen. This is to try to minimise the amount of movement of your liver caused by breathing motion. Using this device should not be painful but it will press firmly onto your abdomen.

Filling and emptying of the stomach and digestive system can cause distortion (alteration of the original shape) of the liver. However, it is important that you have eaten on the day as prolonged fasting causes a build-up of gas. We ask you to have a light snack 2 hours before your scan or treatment time e.g. small sandwich, couple of biscuits.

Appointment two: Pre-treatment appointment – this will take approximately 3 hours

Prior to the CT scan you will have oral contrast to drink and IV contrast injected into a vein to help us see the treatment area more clearly. Following this you will have 2 CT scans with the device fitted over your abdomen and will be given breathing instructions that you must follow.

- The first scan will be taken whilst holding your breath.
- The second scan will be taken whilst breathing normally.
- In order to reproduce your position for each treatment we would like to give you some permanent reference marks (pin sized tattoos) on your skin.

You may wish to bring your regular medication with you and something to read. If you have any pain, it may help to take some painkillers 30 minutes to one hour before each planning appointment as well as treatment.

Appointment 3 – Day 0 in radiotherapy treatment room

This is a final check appointment in the treatment room to check your radiotherapy plan by completing another CT scan in the treatment position.

Treatment

Your SABR treatment is given over 3 to 8 treatments, usually on alternate working days and will last for about an hour. The treatment is usually completed within 2–3 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.

We will ask you to lie still and breathe normally in treatment room. A team of radiographers are watching you all the time on cameras from outside the room as you will be alone in the treatment room when radiation is delivered.

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:

- Nausea and vomiting: this can happen just a few hours after treatment or at any time during the treatment course.
- Change in bowel habit: you may experience some changes in bowel habits such as diarrhoea. Drinking plenty of liquid will replace lost fluids if this happens.
- Pain: you may experience increased pain temporarily in the area treated.
- Tiredness (fatigue): you may feel more tired than usual for several weeks after your treatment has finished.
- Skin reactions: the skin where you are having the radiotherapy may change. Skin reactions can vary but the common symptoms are redness, dryness and itchiness.

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

Late reactions occur after 3 months following completion of treatment, and some of these reactions might be permanent. Your clinical oncologist will discuss these side effects with you.

- Liver and or kidney damage: this can be monitored using blood tests.
- Damage to bowel: this may lead to a blockage or perforation in the bowel (gut) requiring an operation.

Contacts

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

Other information

Car parking

Car park D is directly opposite the doors to the Cancer Centre on the hospital drive. If you park here and bring in the ticket you have taken to access the car park, the radiographers on the treatment room will exchange this for a prepaid one so you can exit the car park. This has only been negotiated for patients who are attending for radiotherapy planning or treatment appointments so unfortunately the radiographers will not be able to give you a ticket if you are attending for a follow up appointment.

Appointment times

We are a very busy department so we apologise, but it is not possible for us to always accommodate appointment time preferences.

Radiographers

Radiotherapy is delivered by both male and female Radiographers. We are a teaching hospital and have student radiographers who are supervised by trained staff in the department every day. Please inform staff at your first appointment if you would prefer not to have students present or if your cultural or religious beliefs restricts the gender of staff treating you.

Other treatments

Other treatments are available dependent on disease location/size. This pathway is primarily for patients receiving SABR on a linear accelerator. Some patients may be treated on the Cyberknife unit with SABR.



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 or call 0121 371 4323.

RADIOTHERAPY

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