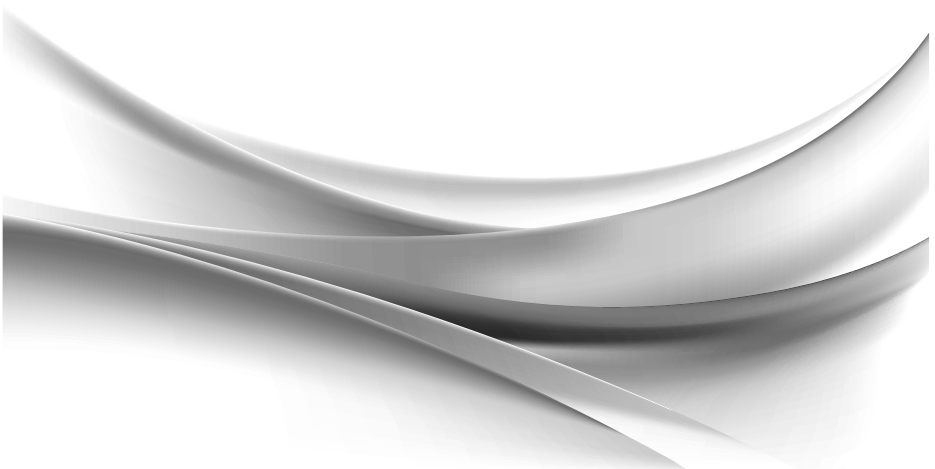


Information for patients receiving cardiac SABR



This leaflet is for patients receiving cardiac SABR (Stereotactic Ablative Radiotherapy). It describes:

- What is radiotherapy?
- Your radiotherapy planning and treatment.
- The side effects that you may experience during and after treatment, and how best to cope with them.
- Who to contact if you have any questions or concerns.

If you are in doubt about anything or have any questions or problems, please let us know as soon as possible.

What is SABR?

SABR uses many small, focused beams of radiation. The beams are directed precisely at the area in your heart that is causing irregular heartbeats or heart arrhythmias. This means that this area gets a high dose of radiation, while surrounding healthy tissues get a much lower dose. This lowers the risk of damage to normal cells.

SABR is commonly used to treat certain types of cancer. However, recently it has been proven to be helpful in the treatment of non-cancerous conditions. This includes the treatment of significant heart arrhythmias (ventricular tachycardia).

Patients having cardiac SABR will usually receive a single treatment. This can be done as either an inpatient or outpatient.

How is my radiotherapy planned?

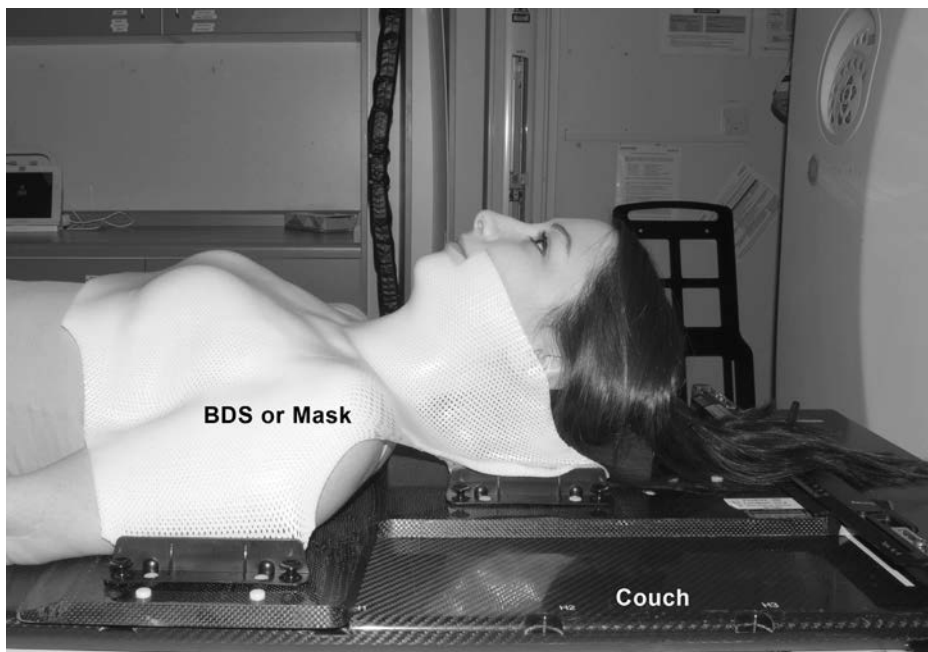
Compression belt

When you breathe, your chest and organs move. If we can limit this movement, we can target the correct area of your heart more precisely. This is done by using abdominal compression.

This involves a piece of equipment that looks like a belt. We will wrap it around your abdomen and gently inflate it. You will feel it getting a little snugger around you. It is not painful. You will still be able to breathe. It will be used for your CT scan and your treatment.

Preparation for treatment- Mould Room

It is very important that you are in exactly the same position each day for treatment. Before your treatment can begin, you will receive an appointment to attend the mould room. The mould room technicians will make a beam directional shell (BDS) for you.



Picture 1- Beam directional shell

The shell keeps your head and shoulders still during treatment. This allows your radiographers to give your treatment accurately. You will wear your shell for each appointment.

The process of making your shell is painless. The mould room staff will warm a special sheet of plastic until it becomes soft and flexible. It is then laid over your chin, neck and chest and gently moulded around your features. The plastic will feel warm and slightly wet. It shouldn't feel uncomfortable. As it cools down, it starts to harden and set. They will then remove it. You will have to remove your clothes from the waist up. The staff will cover you whenever possible.

Planning CT scan

Your next appointment will be at the CT Simulator for a CT scan of your chest. This scan is only used by your doctor to plan your radiotherapy treatment. There are no results from it.



Picture 2: CT scanner

Your radiographers will show you into the scanning room and ask you to lie on the couch. They will make sure you are comfortable before fitting the compression belt and your shell. They will put some pen marks and stickers on your shell.

Your radiographers will then leave the room to begin your scan. They will monitor you closely and you will not feel anything other than the couch moving gently. It is very important that you remain as still and relaxed as you possibly can. The scan appointment will take approximately 15 minutes.

Treatment

The machine used to deliver your radiotherapy is called a linear accelerator or linac.



Picture 3- Linear accelerator

You will lie in the same position you were in for your CT scan. Your radiographers will fit the compression belt and your shell. They will move you into position under the machine. Once you are in the correct position and all the checks are completed, your radiographers will leave the room. They will monitor you continually on closed circuit TV. The machine will move around you but it will not touch you.

Your radiographers will take a scan to check your position before they start your treatment. You may feel the couch moving slightly while they do this. It can take a few minutes to look at this scan, but it is essential to ensure that your treatment is accurate. When your radiographers are happy, they will start your treatment. You won't feel anything.

Your treatment appointment will last about 30 minutes.

Is there any preparation for treatment?

We may ask you to fast (not eat or drink) for 2 hours before your treatment. At other times please eat and drink as you normally would.

You should continue to take your prescription tablets or medicines unless we advise otherwise.

We strongly recommend that you stop smoking completely. Smoking can make the radiotherapy reaction worse and make your recovery slower. The NHS Stop Smoking Service can be contacted on ☎ 0800 84 84 84.

Are there any side effects from the treatment?

Side effects vary from person to person. Not everyone will experience all of the effects listed below. Your doctor or consultant radiographer will explain specific issues with you personally. The following effects are a general guide.

Early side effects of treatment

These side effects may occur during radiotherapy or up to 12 weeks after. Side effects can peak 7-10 days after your treatment and should gradually improve. They include:

Skin: Your skin in the treatment area may become slightly pink, dry and occasionally itchy. Wash your skin normally but don't have the water too hot. Pat your skin dry with a soft towel. Please only use creams or lotions on your skin that have been recommended by staff at the Beatson. Following completion of your treatment, use sunscreen with both UVA/UVB protection and minimum SPF 50 when out in the sun.

Tiredness: It is quite common to feel tired during radiotherapy and for several weeks after the completion of the treatment. If necessary, accept offers of help from family and friends. Drink plenty of fluids. A sensible balance between rest and activity can be most beneficial.

Coughing: The treatment may irritate your chest wall or the lining of your lung (pleura). You may therefore experience a cough. A mild linctus can help to settle this.

Chest pain: You may experience chest pain. This can usually be relieved with some mild pain relief such as paracetamol. Please speak to the radiotherapy team if your pain is more severe.

Inflammation of lungs: Sometimes treatment can cause inflammation of your lungs. This may occur 6-12 weeks after treatment finishes. The signs of this can include breathlessness, a cough and flu-like symptoms. This should get better on its own within a few weeks. However, some patients may need a short course of oral steroid tablets. If the side effects continue, or if you have any concerns, please contact your clinical oncologist consultant or GP.

Nausea and vomiting: In the hours following treatment you may get a feeling of nausea and occasionally vomiting may occur.

Swallowing: You may experience some inflammation of the gullet. This may make swallowing uncomfortable. You may also feel like you have a lump in your throat. You may experience indigestion. We can prescribe lubricating medicines, antacids or pain relief to help with these effects. You may also need to modify your diet to eat softer foods. In the months after treatment there may be some scarring of the tissues. Very rarely, significant damage or perforation (a hole) can occur in the gullet if it is located close to the area of treatment.

Stomach issues: In the weeks after treatment there may be some inflammation of the stomach. This may cause indigestion. We can prescribe antacids and pain relief medication to help with this. In the months after treatment there may be some scarring of the tissues. Very rarely, significant damage or perforation (a hole) in the stomach can occur if it is near the area of treatment.

Bowel: You may notice a change in your bowel habit, this could be diarrhoea or constipation. We can give you some medicine to help in both cases.

Heart: Your treatment is carefully planned to target areas of your heart that already have damage. Every effort is made to avoid healthy heart tissue. We therefore do not expect you to experience any early decline in your heart function. However, there is a risk that some parts of your heart may be affected in the months and years after the treatment. These can include:

- Coronary arteries
- Electrical conduction system
- Valves.

If these are affected, you may experience:

- A heart attack
- Worsening heart failure
- Heart beating with in an irregular or abnormal rhythm (arrhythmias)
- Buildup of extra fluid around the heart (pericardial effusion)
- A blackout
- Breathlessness.

Late side effects

Late side effects may occur after 3 months or more following completion of treatment. These may include:

Lung scarring or lung collapse: The radiotherapy may cause some scarring (fibrosis) and possibly some collapse of the lung tissue in the treatment area. This can cause breathlessness. In a very small number of cases oxygen therapy may be required to help with this.

Chest pain / rib fractures: For treatments close to the ribs, there is a chance that the radiation may weaken your ribs. This can cause pain and possibly rib fractures. A small number of patients who have a rib fracture may need to take pain killers. These may be needed for a long period of time.

Scarring: In the months after treatment there may be some scarring of the gullet, stomach and bowels. Very rarely, significant damage or perforation can occur if these organs are located close to the area of SABR treatment.

Heart: There is a risk that nearby structures within the heart might be affected in the months and years after the treatment. These structures include:

- Coronary arteries
- Electrical conduction system
- Valves.

If these are affected, you may experience:

- Dizziness
- A heart attack
- Worsening heart failure
- Heart beating with in an irregular or abnormal rhythm (arrhythmias)
- Buildup of extra fluid around the heart (pericardial effusion)
- A blackout
- Breathlessness.

Cancer: A very rare but potential effect is that radiation can cause cancer. Although this is a serious possible consequence of your radiotherapy, it is important to bear in mind that it is extremely rare. If it does happen it is likely to be many years after treatment has ended.

Will I see someone once I have had my treatment?

Your specialist or consultant radiographer will offer you a phone call after you have had your treatment. They will provide advice and support until you see your doctor again.

You will be given an appointment to see your doctor once your treatment has finished. This will be at the Golden Jubilee National Hospital and/or the Beatson Oncology Centre, and likely also at your local hospital.

Where can I get information or support?

All our staff are here to make sure your treatment goes as smoothly as possible and will try to help with any questions or problems you may have. Further specialist help is available from:

Golden Jubilee National Hospital Cardiology Department:

If you need information please contact Dr. Gareth Padfield at the Golden Jubilee National Hospital ☎ 0141 951 5000.

If it out of hours you may contact the coronary care unit for advice ☎ 0141 951 5202.

NHS 24: ☎ 111

Your own GP can also help with questions or concerns you may have.

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