THE beatson
WEST OF SCOTLAND CANCER CENTRE

NHS
Greater Glasgow and Clyde

Patient Information Sheet

Radiotherapy to the Lung - SABR

The Beatson West of Scotland Cancer Centre
1053 Great Western Road
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Radiotherapy to the Lung - SABR

This leaflet is for patients receiving SABR (Stereotactic Ablative Radiotherapy) to their lung.

What is SABR?

Radiotherapy is the use of carefully measured doses of radiation to treat cancer. It damages the cells and stops them dividing and growing or causes them to die.

SABR is an effective way of giving focused radiotherapy, increasing the chance of controlling the tumour while sparing the normal tissues. It does this by using:

- Fewer treatment sessions (usually 3, 5 or 8).
- A smaller, more precise treatment area.
- Higher doses of radiation.

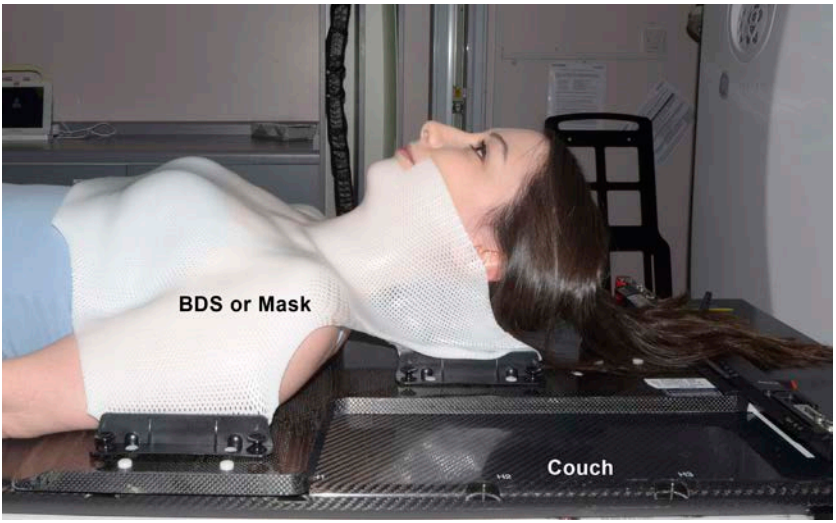
This leaflet describes your radiotherapy planning and treatment. It also explains the effects that you may experience during and after treatment, and how best to cope with them. We treat each person as an individual and the effects of treatment may vary from one person to another. Your doctor, radiographer, and clinical nurse specialist will explain specific aspects of your treatment.

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

Appointment 1: Mould Room

Your first appointment will be for the Mould Room to have a beam directional shell (BDS) made.

Picture 1: Beam directional shell



The shell keeps your head and shoulders still during the 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 and will be explained to you in detail by the Mould Room team when you go for your appointment.

If you have a beard we advise you to shave it off before coming to the Mould Room. It is important that your skin is smooth before we start to make your shell.

Appointment 2: Planning CT scan

Your next appointment will be at the CT Simulator for a CT scan of your chest. This is not a diagnostic scan and 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 your shell. They will place a small monitoring device on your chest. This device is linked to the scanner and will monitor your breathing throughout the scan. This allows us to see how much the tumour moves with your breathing. It is important that you are comfortable and breathing normally.

Your radiographers will 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 will take approximately 15 minutes.

Appointment 3: Treatment

Your treatment is usually given in 3-8 treatments on alternate days, with a rest at the weekend. Each appointment will last about 30 minutes.

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. It is important that you stay as still as possible and breathe normally. Once you are in the correct position and all the checks are completed, your radiographers will leave the room to start your treatment. 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 the 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 you are treated accurately. When your radiographers are happy, they will start the treatment. You won't feel anything.

General advice during treatment

There is no reason to change your lifestyle during treatment. A sensible balance between rest and activity may be most beneficial. Research has shown that gentle exercise is also beneficial for people who have had a cancer diagnosis both in the short and longer term. There are programmes available that can help with this. Please let us know if you are interested in finding out more.

If you are a smoker and continue to smoke during treatment, all side effects are made worse. For this reason, we would always recommend that you stop smoking. If you cannot stop completely we would ask you to cut down as much as possible. We appreciate this may be hard but it will help you if you can. Advice and support to help you stop smoking is available so please discuss this with us if you feel this may be helpful for you.

Side effects of treatment

Side effects vary from person to person. Not everyone will experience all of the side effects below but it is important for you to be aware of them. Your doctor or consultant radiographer will explain specific issues to you personally. The following effects are a general guide:

Effects of Treatment (early)

- **Tiredness/Fatigue:** Most people do not suffer from tiredness or fatigue, however for the few who do, this usually happens gradually as your treatment progresses and may last for several weeks after your treatment ends.
- **Chest Wall Pain:** A few patients experience some pain in the chest wall area during the radiotherapy and for a few weeks after treatment. This is usually mild, does not usually require treatment and should settle quite quickly. It may feel like bruised or tender ribs.
- **Skin:** Your skin, in the area we are treating, may become a little pink, dry and/or itchy. Wash your skin normally but don't have the water too hot. Pat your skin dry with a soft towel.

Please do not put any creams or lotions onto your skin as not all creams are appropriate to use whilst having radiotherapy. Your radiographers, doctor or a member of the nursing staff will give you some if required. Do not expose the treated area to sunshine. Following completion of your treatment, use sunscreen with both UVA/UVB protection and minimum SPF 50.

- **Cough and Shortness of Breath:** Some patients notice an increase in their cough, shortness of breath and/or production of spit. This is quite normal, but if it is causing you difficulty, please let your radiographers know as they can offer advice.
- **Discomfort in the Gullet (Oesophagitis):** Discomfort when swallowing or heartburn can occur in a small number of patients. This is related to the position of the area being treated. If this is likely to be an issue for you, it will be discussed before treatment begins and the team will make sure you have some medication that will help. The discomfort should settle 4-6 weeks after treatment finishes.
- **Nausea:** You should not be sick with the treatment, but some patients find that they feel a little nauseous. If sickness becomes a problem during treatment, your doctor can prescribe some medication to help reduce this feeling.
- **Nerve tingling/pain (brachial plexopathy):** If the area being treated with SABR is close to the group of nerves called the brachial plexus, there is a risk of these nerves becoming damaged. These nerves begin in the neck area and come down into the chest area. You may feel tingling in your thumb or fingers or you may experience pain in your shoulder or arm. Please let the team know if you notice any changes.

After treatment ends

Most of the effects you may have experienced during treatment will wear off within a couple of weeks of finishing your treatment; however any tiredness may take a little longer to settle.

Your oncology team will arrange to see you after the end of your

treatment. Your Doctor will discuss this with you.

If you become unwell after your treatment has finished you should contact The Cancer Treatment Helpline (number below), your G.P. or NHS 24.

Late Effects

Your doctor has recommended this treatment because they feel that the benefits of your radiotherapy treatment far outweigh any risks involved. However you should be aware of these potential long-term effects which may affect a small number of people.

- The portion of your lung treated with radiotherapy may not work as well as before and you might notice an increase in breathlessness. This is due to scarring of the lung tissue (fibrosis) in and around the tumour area. If the rest of your lung works well then any symptoms you may notice will be very mild.
- Radiation pneumonitis (inflammation of the lung) can typically occur 6-12 weeks after treatment finishes. This can cause shortness of breath, fever and cough. It can be mistaken for a chest infection but does not improve after a course of antibiotics. This is rare, but do contact your doctor or specialist nurse if you have these symptoms. It can be treated with steroids to reduce the inflammation.
- An increase in breathlessness can present 3-9 months after treatment is finished. You will be seeing your consultant at your local hospital and can discuss any breathing issues you have with them if they happen.
- If the tumour lies very close to a rib, then this rib will also receive a dose of radiotherapy. There is an increased risk of fracturing this rib in the future.
- Chest wall pain can occur in a small number of patients 6 months or more after treatment. This can be uncomfortable and may require pain killers.

- If the area being treated is close to a group of nerves called the brachial plexus, there is a risk of these nerves becoming damaged. These nerves begin in the neck area and come down into the chest area. You may feel tingling in your thumb or fingers or you may experience pain in your shoulder or arm. Please inform your doctor if you become aware of these changes.
- A very rare but potential effect is that radiation can cause tumours. Although this is a serious possible risk of your radiotherapy, it is important to bear in mind that the effect is **very rare.** If it does happen it is likely to be many years after treatment.

Remember, any of these small risks should be balanced against the problems of not treating the tumour with radiotherapy.

Where can I get help?

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 that you may have. Further specialist help is available from:

- Clinical Nurse Specialists in Lung Cancer
  Tel. 0141 301 7601/ 0141 301 7598
- Macmillan Information Radiographer and Counsellor
  Tel. 0141 301 7423
- Information & Support Radiographer **Tel. 0141 301 7427**
- NHS 24 **111**

If you have any problems you can also contact your GP or your local Lung Clinical Nurse Specialist.

The Macmillan Information & Support Centre is on Level 1 at the main entrance of the Beatson. They offer emotional support, information and signposting to services within and near to the Beatson and in your own local area. Please visit or phone on **0141 301 7390**. Open Monday to Friday 8.15am to 4.15pm.

The Cancer Centre has a **Radiotherapy Advice Line** available for all patients who have completed treatment. This is an answer phone service available Monday – Friday. Please leave your name,

telephone number and a short message and we will call you back as soon as possible. **Tel: 0141 301 7432**

The Cancer Centre also has a **Cancer Treatment Helpline** for **urgent calls**. This is for patients on or within 6 weeks of treatment who have urgent or severe symptoms such as -

- Shivering or flu-like symptoms.
- Temperature greater than 37.5°C.
- Gum/nose bleeds or unusual bruising.
- Worsening or sudden breathlessness.
- Leg weakness/difficulty walking.
- Severe nausea/vomiting/diarrhoea/constipation.
- Sudden increased or uncontrolled pain.
- Other concerning symptoms associated with your cancer treatment.

The line is available 24 hours for emergencies, although it would be helpful if you called early in the day if this is at all possible.

For Urgent Calls:

Beatson 8am-8pm Tel: 0141 301 7990

National 8pm-8am Tel: 0800 917 7711

Counselling & Clinical Psychology

This leaflet deals with the physical aspect of your treatment, but your emotional well being is just as important to us. Being diagnosed with cancer can be a distressing time for you and those closest to you. Within the department we have a counselling and clinical psychology service that can help with worries and difficulties you might be having. If you think this may be of help to you, please ask a member of staff to put you in touch.

There are also voluntary organisations providing information and support. These include:

- **Roy Castle Lung Cancer Foundation**

  Tel: 0333 323 7200

  www.roycastle.org

  Providing information and support for those affected by lung cancer.
- **British Lung Foundation:** Helpline 03000 030 555 or visit www.blf.org.uk Provides information and publications.
- **Macmillan Cancer Support.** 0808 808 0000

  www.macmillan.org.uk

  Providing practical, medical, emotional and financial advice for those affected by cancer.
- **Maggie's Gartnavel:** 0141 357 2269
- **Maggie's Lanarkshire,** Monklands General Hospital 01236 771 199
- **Maggie's Forth Valley:** 01324 868 069

  Maggie's centre provides a comprehensive cancer support programme for people and their families affected by cancer.
- **Cancer Support Scotland, The Calman Centre, Gartnavel Complex. Freephone 0800 652 4531**

  Provides emotional and practical support on a one-to-one basis and through community based groups. Complementary therapies available.

  www.cancersupportscotland.org
- **Smokeline** 0800 84 84 84

  Provides support and guidance to help you stop smoking.
- **Macmillan Benefits Team** (within the Beatson) 0141 301 7374

  Provides free and confidential advice for people affected by cancer and their carers.

- **Beatson Cancer Centre** – if you want to find out more about our Centre please visit www.beatson.scot.nhs.uk
- **NHS 24** - 111
- If you are interested in finding out about becoming more active, please visit:

  www.nhsggc.org.uk/getactive

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