

Information about ...

# Radiotherapy for a Primary Brain Tumour

# **Radiotherapy for a Primary Brain Tumour**

This leaflet is for patients receiving radiotherapy for a primary brain tumour. It describes:

- What is Radiotherapy?
- Your radiotherapy planning and treatment.
- The 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.

We treat each patient 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.

## **What is Radiotherapy?**

Radiotherapy is the use of carefully measured doses of radiation to treat cancer. It damages the cells and stops them dividing and growing. Most patients having radiotherapy are treated using a high energy beam of x-rays delivered to a precise area. The x-rays are used to treat the tumour and a small surrounding area.

Therapy radiographers operate the radiotherapy planning and treatment machines and will be able to answer any questions or concerns that you may have.

You will receive a list of appointments which will include planning and treatment dates and times.

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

## **Preparation for Treatment**

Before you begin your treatment we must carefully plan it. You will need to have a beam directional shell (BDS) made. You will wear it for your planning appointment and your treatment each day.

This is important because:

- It allows your radiographers to give your treatment accurately.
- It helps to support your head and keep it from moving during treatment.
- The marks necessary to position you each day for treatment will be put on the shell and not your skin.

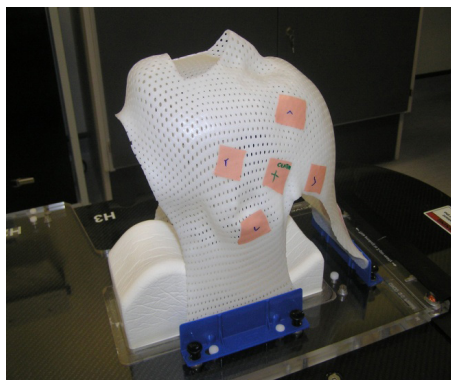
**The shell is made to fit you in the Mould Room by the Mould Room technicians.**

## **Mould Room**

The type of shell used for radiotherapy treatment to the head is called an orfit shell. Before beginning the technicians will explain everything in detail. They will help you to lie flat on their couch. When you are comfortable, they will start to make your shell.

The technicians will use a warm, softened sheet of plastic to take an impression of your head and face. There is an opening to ensure your nose and mouth remain uncovered. This allows you to breathe freely.

The plastic will begin to harden as it cools down. As it cools, it shrinks a little so you will feel it getting a little bit tighter. The shell should feel firm, but not too uncomfortable. Making the shell is painless. This appointment will last around 30 minutes.



Picture 1- Shell

## Treatment Planning

Before your course of radiotherapy can begin, we need to produce an individual treatment plan for you.

The planning process will involve appointments for brain scans. This will include a CT scan at the CT simulator and possibly an MRI scan as well.

## CT Simulator

You will visit the CT simulator. This may be on the same day as your shell is made. This is very similar to a normal CT scanner and is specially designed for planning radiotherapy treatment. It is important to realise it does not necessarily give the same information as the scan used to diagnose your condition.



Picture 2- CT Simulator

Your radiographers will make sure you are comfortable on the scanning couch. They will place your shell on. You may be aware of them putting some markers on your shell. They will then move the couch into the scanner and leave the room to begin the scan. Scanning usually takes around five minutes and during this time your radiographers will watch you closely.

## Contrast Injection

For this scan you may need to have an injection of contrast (dye) that will help us to see the area we want to treat more clearly.

Your doctor or radiographer will put a small needle (cannula) into a vein, usually on the back of your hand or arm. The needle will be removed and will leave a small tube of plastic in your vein. It will be taped in place and will stay in during your CT scan. They will then inject the dye through this plastic. It may feel a little cold but you should not feel any discomfort.

Some people can have an allergic reaction to the dye. This is rare but we will ask some questions before beginning to ensure it is unlikely to happen to you. Your radiographers will keep a close check on you during the injection and scan, so if you feel anything unusual please tell us.

## MRI scan

If you require an MRI you will visit the MRI scanner at the Beatson. This scanner is located near the Mould Room on level 0. The MRI scan lasts about 15 minutes. You will also have a contrast injection for this scan.

Your radiographers will inject the dye through the cannula that was put into your vein at CT.

You won't feel anything during the scan. Some patients find the scanner noisy. The radiographers working on the scanner may play some music for you.



Picture 3- MRI Scanner

## Treatment

The number of treatments you have can vary, but as a guide it is usually between 5 and 30 treatments given over 1 to 6 weeks. The radiotherapy will be given in small daily doses, Monday to Friday but not at weekends.

You will have your treatment on a Linear Accelerator, which is a special type of x-ray machine.



Picture 4- Linear Accelerator,

Your radiographers will explain everything to you before treatment starts and check that you know what to expect.

- Your radiographers will ask you to lie on the couch, just as you were in the CT simulator. Once they have put your shell on they will dim the lights in the room while they position you for your treatment.
- Your radiographers will leave the room while the machine is switched on. They will be watching you the whole time on closed circuit TV.
- Sometimes your radiographers may have to come back into the room and move the machine into the correct position for the next part of your treatment.
- Radiotherapy treatment is painless.
- The whole process only takes between 10 and 15 minutes.
- If you have any questions or are unsure about anything to do with your treatment, please speak to your radiographers.

- You will be seen on a regular basis, usually once a week, by a member of the team (i.e. Consultant Radiographer, Nurse Specialist or Doctor). This will ensure your treatment is going smoothly, and any concerns are being attended to.

## **Caring for your skin and hair during treatment**

While you are having your radiotherapy and for a few weeks after it is finished you should:

- Wash your hair with lukewarm water using your normal shampoo. If your skin becomes irritated we may advise you to stop using shampoo.
- Pat your hair dry gently with a soft towel and allow it to dry naturally.
- Do not use a hairdryer as this will irritate your scalp.
- Avoid using curling tongs or straighteners.
- If part of your face or forehead is in the treatment area, avoid using cosmetic products on this area.
- It is important you protect the treatment area from the sun when the weather is hot by wearing a hat and sitting in the shade. This is because your skin and scalp will be much more sensitive during and after radiotherapy. You will need to be especially careful for the first year after your treatment has finished as this area will always be much more sensitive to the sun. We advise you use Sunscreen with both UVA/UVB protection and minimum SPF 50.
- Do not use any creams or lotions on the treatment area unless we have advised you or given you them.

## General Advice during Treatment

There is no reason to change your lifestyle during treatment but it may help to:

- Try to get enough rest and sleep, especially when the treatment begins to make you feel tired. It is also important that you try to continue with some of your normal daily activities. 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.
- Eat a normal healthy diet.
- Keep hydrated. Aim to drink at least 2 litres a day.

## Effects of Treatment

Each patient is an individual and the effects of treatment can vary. This is a list of all the effects but it does not mean that you will experience all of them.

- **Tiredness:** You may get tired as your treatment progresses. This tends to be a couple of weeks into treatment and can last for several weeks after treatment has ended.
- **Skin:** Skin in the treated area will be more sensitive and may become pink or red as your treatment goes on. Again this tends to be a couple of weeks into treatment and settles down after treatment is finished. If this becomes a problem we can give you cream to help.
- **Hair Loss:** As the treatment progresses hair within the treatment area will gradually fall out. This tends to be 2 to 3 weeks into treatment. The hair may not grow back again in this area.
- **Nausea:** Some patients comment on the unusual effects of nausea and altered sensation of taste. If you experience this please let us know. Your doctor will prescribe medication to help with nausea.



- **Headache:** You may experience headaches during your treatment. These can be controlled with steroids. Please let a member of the team know should this be a problem.
- **Steroids:** Many patients will take steroid medication during their radiotherapy treatment and for some weeks afterwards. These can cause a number of side-effects which are explained in detail in our patient information leaflet on Steroid Therapy. Do not stop taking your steroids suddenly. Talk to your doctor, nurse or consultant radiographer about reducing the dose.

## Late Effects of Treatment

We believe that the benefits of your radiotherapy treatment outweigh any longer term risks involved. However, there are some potential long-term effects you should be aware of. It is important to point out that effects can vary from person to person and your doctor will explain specific individual issues with you personally.

The following effects are a general guide:


- Hair loss can be permanent after radiotherapy. It depends on the dose of radiotherapy you have had. Your doctor will talk to you in more detail about this.
- To give the necessary treatment to your brain tumour some parts of normal brain tissue will receive a small amount of radiation and this could cause some damage. The chance of this occurring and the possible consequences will depend on many factors such as where the tumour is, how big it is and how much radiation is necessary. Your doctor will discuss this with you personally. By dividing the total radiotherapy dose into many small doses (treatments) given over a number of weeks, the possibility of damage is greatly reduced.
- Some patients notice some deterioration in their short-term memory after a course of radiotherapy. Your consultant will discuss this in more detail with you.

- A very rare but potentially important effect is that radiation can cause tumours. Although this is a serious possible consequence of your radiotherapy, it is important to bear in mind that the chance of this happening is **very small**. If it does occur it is likely to be many years after treatment.

**Remember we believe that the benefits of radiotherapy treatment for your condition far outweigh the risks described here and your doctor will discuss this in more detail with you.**

## **After Treatment Ends**

Any symptoms which have developed during treatment will wear off a few weeks after it ends, however the tiredness will take a little longer. You may begin to wash normally once your skin no longer looks red or feels itchy. Your radiotherapy doctor will arrange to see you 4-6 weeks after treatment ends. If your hair does not regrow, you will always have to protect your scalp from strong sunlight.




**If you should feel unwell after your treatment is finished please contact your GP or NHS 24 on  111. Your GP and NHS 24 are able to contact the Beatson any time night or day should they require information or advice regarding your care.**

## Where can I get help?

You will probably have lots of questions and concerns about your diagnosis and treatment. You may also feel that you need some extra support to help you through this worrying and difficult time. The professionals and organisations listed can help you with any issues you might have and provide you with the information and support that you want.

## Information and Support

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

- **Neuro-Oncology Nurse Specialist:**  
 **0141 301 7602**
- **Macmillan Information Radiographer and Counsellor:**  
 **0141 301 7423**
- **Information and Support Radiographer:**  
 **0141 301 7427**

This leaflet deals with the physical aspects of your treatment, but your emotional wellbeing is just as important to us. Being diagnosed with cancer can be a deeply distressing time for you and those closest to you. Within the Centre 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 helpful to you, please ask staff to put you in touch.

**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. Open Monday to Friday 8.15am to 4.15pm.  **0141 301 7390**


The Centre has a **Radiotherapy Advice Line** available for patients who have completed their treatment. It is an answer phone service. Please leave a message and your contact details and we will call you back as soon as possible. This service is available Monday - Friday only.

**Radiotherapy Advice Line:**  **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

Please call the following:

Beatson 8:00am-8:00pm  **0141 301 7990**


National 8:00pm-8:00am  **0800 917 7711**

## Other Support








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

- **Macmillan Cancer Support:**  **0808 808 0000**  
 **[www.macmillan.org.uk](http://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 Hospital:**  
 **01236 771 199**

- **Maggie's Forth Valley:** ☎ 01324 868069  
Maggie's Centre provides a comprehensive cancer support programme for people and their families affected by cancer. 🌐 [www.maggies.org](http://www.maggies.org)
- **Cancer Support Scotland (Tak Tent), 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](http://www.cancersupportscotland.org)
- **Brain Tumour Action: Helpline** ☎ 0131 466 3116.  
Provides information, support and counselling to patients, families and friends.  
🌐 [www.braintumouraction.org.uk](http://www.braintumouraction.org.uk)
- **Braintrust:** ☎ 01983 292405. Provides information, support and advice at the point of diagnosis and beyond.  
🌐 [www.braintrust.org.uk](http://www.braintrust.org.uk)
- **The Brain Tumour Charity:** ☎ 0808 800 0004. Provide a variety of information and support and fund research to address the needs of brain tumour patients.  
🌐 [www.thebraintumourcharity.org](http://www.thebraintumourcharity.org)
- **Epilepsy Scotland:** ☎ 0808 800 2200. Provides information, help and emotional support to those affected by epilepsy. 🌐 [www.epilepsyscotland.org.uk](http://www.epilepsyscotland.org.uk)
- **Headway, Brain Injury Association:** ☎ 0808 800 2244.  
Provides help and support for those affected by brain injury.  
🌐 [www.headway.org.uk](http://www.headway.org.uk)
- **Headway Glasgow:** ☎ 0141 332 8878  
Headway Glasgow, affiliated to the wider Headway network, works with people who have an acquired brain injury, their families and carers in the Glasgow area.  
🌐 [www.headwayglasgow.co.uk](http://www.headwayglasgow.co.uk)

- **Headway Ayrshire:**  **01292 618090**  
Offers support, information and services for brain/ head injured patients.  
 **[www.headway-ayrshire.org.uk](http://www.headway-ayrshire.org.uk)**
- **DVLA Medical Advisor,** Drivers medical enquiries  
 **0300 790 6806** DVLA, Swansea, SA99 1TU.
- **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](http://www.beatson.scot.nhs.uk)**
- **Scottish Adult Neuro-Oncology Network (SANON).**  
Aims to link together health professionals, patients and their families/carers, voluntary sector representatives, and external companies to design and deliver the best service to patients and carers in Scotland.  **[www.sanon.scot.nhs.uk](http://www.sanon.scot.nhs.uk)**
- **NHS 24**  **111**

**You may find some useful information on the websites listed above. However, it is important to note that The Beatson West of Scotland Cancer Centre cannot accept responsibility for the quality and content of any information provided by other organisations.**

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