THE beatson
WEST OF SCOTLAND CANCER CENTRE

NHS
Greater Glasgow and Clyde

# Radiotherapy to the Pituitary

This leaflet is for patients receiving radiotherapy to the pituitary region of the brain. It describes:

- What radiotherapy is.
- Your radiotherapy planning and treatment.
- The effects that you may experience during and after treatment, and how best to cope with them.

## What is Radiotherapy?

Radiotherapy is the use of carefully measured doses of radiation to treat tumours. 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, by a machine called a linear accelerator. The x-rays are used to treat the tumour and a small surrounding area.

Radiotherapy is often given in several small doses over a specified period of days or weeks.

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

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 shell made (also called a mask), which you will wear for your treatment each day. This is important because:

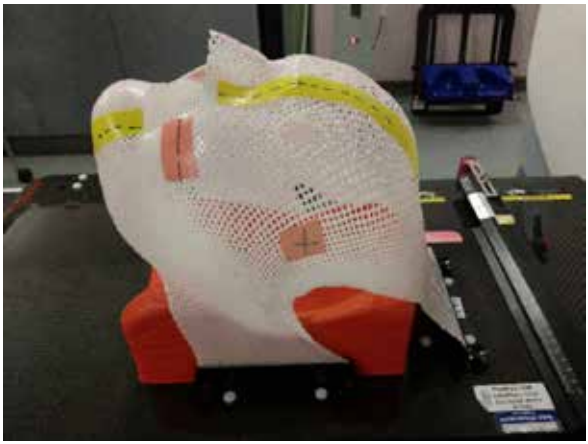
- It allows your radiographers to give your treatment in exactly the correct area each day.
- It helps to support your head and keep it from moving during treatment.
- We put the marks necessary to guide us onto the shell and not your skin.

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

## Mould Room

The type of shell used for radiotherapy treatment to the head is called an orfit shell. It is made of plastic mesh (see Picture 1). It has small holes in it, which allow you to breathe freely.

The process of making the shell will be explained to you in detail by the mould room team at your appointment. Making the shell is completely painless.



**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 on the CT simulator and an MRI scan as well.

## CT Simulator

You will visit the CT simulator. This is very similar to a normal CT scanner and is specially designed for planning radiotherapy treatment.

**Picture 2 - CT Simulator**

Your scan appointment will be on the same day or within a few days of your mould room appointment.

You will wear your shell for the scan. It is important to realise that this is a scan to plan your radiotherapy and does not necessarily give the same information as the scan used to diagnose your condition.

The scan only lasts a couple of minutes and is painless.

## 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 the CT scan. We will then inject the contrast (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 contrast. This is rare but we will ask some questions 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.

Your radiographers will finalise your treatment position and leave the room to begin the scan. They will watch you through a window in the scanning room.

## MRI scan

You will also visit the MRI scanner at the Beatson. This scanner is situated near the mould room on level 0. The MRI scan lasts about 15 minutes. The radiographers will position you lying on your back. You don't have to wear your shell.

You will also have a contrast injection for this scan. Your radiographers will inject the contrast through the cannula that was put in at CT. You won't feel anything during the scan. Some patients find the scanner noisy. Your radiographers working on the scanner may play some music for you.

Once the scan is complete, you will need to wait for 15 minutes before the cannula can be removed. This is to make sure that you feel ok and that you haven't taken a reaction to the contrast. Then you can go home.

## Treatment

Your radiographers will explain everything to you before treatment starts. The radiotherapy will be given in small daily doses, Monday to Friday but not at weekends.

- 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 on. They will be watching you the whole time on closed circuit TV.
- Radiotherapy treatment is painless and you should feel no different afterwards.
- 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.

**Picture 3 - Linear Accelerator**

## Effects of Treatment (Early)

Each patient is an individual and effects of treatment can vary. Generally, however:

- You will get tired during your treatment. This tends to start 2-3 weeks into treatment and will last for several weeks after treatment has ended.
- Skin in the treated area will be more sensitive and may become slightly pink or red as your treatment goes on. Again, this tends to occur a couple of weeks into treatment and settles down after treatment ends.
- As the treatment progresses, hair within the treated area will gradually fall out. This tends to be 2-3 weeks into treatment. In most cases this is minor and the hair will regrow.
- Very rarely, some patients comment on the unusual effects of nausea and altered sensation of taste. Please let us know if this happens. It is possible for your doctor to provide medication to help with the nausea.

## Skin Care During Treatment

- You may bath or shower and wash your hair during treatment. Avoid having the water too hot. Pat your hair dry gently with a soft towel and allow to dry naturally. Try not to rub the treated area. Avoid using a hot brush/tongs etc.
- You should avoid exposing your head to the sun. Sit in the shade or wear a wide brimmed hat.
- Only use creams or lotions on the area being treated which have been recommended or given to you by the staff here in the Beatson. However soothing others may seem they may contain substances which could react with x-rays to make your skin sore.

## Effects of Treatment (late)

We believe that the benefits of your radiotherapy treatment far outweigh any risks involved. However, there are some potential long-term side effects you should be aware of. It is important to point out again that people can experience different side effects and your doctor will discuss specific individual issues to you personally. The following effects can be taken as a general guide:

- As explained earlier, hair loss from the treated area is usually temporary, but a few people may experience long-term hair loss where hair does not grow back.
- 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. 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 30.
- As we are giving radiotherapy to your pituitary, there is a significant chance that there will be damage to this in the future. For that reason, you will be given regular check-ups by an endocrine (hormone) doctor after your treatment. If you show signs of pituitary failure you will be offered drug therapy to correct any problems. If you do not have an appointment with an endocrinologist, please let us know.

- To give the necessary treatment to your pituitary, some small parts of normal brain tissue will receive some of the radiation. There have been reports of visual deterioration (eyesight becoming worse) or some damage to normal parts of the brain. However, it is important to know that these side effects are very rare. By giving the radiotherapy in small daily doses (treatments) over a number of weeks, the possibility of damage is greatly reduced.
- A very rare but potentially important side 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 effects are very rare. Also, if they do occur it is likely to be years after your treatment.

**Remember, we believe that the benefits of your radiotherapy treatment far outweigh the risks described here.**

## 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 6 weeks or so after treatment ends.

## Where Can I Get Help?

### Information and Support

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

- Macmillan Information Radiographer Tel: **0141 301 7423**
- Information and Support Radiographer Tel: **0141 301 7427**

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. Tel: **0141 301 7390**

**The Beatson Cancer Centre** has a **Radiotherapy Advice Line** available for patients who have questions or concerns and have completed treatment. This is an answer phone service, available Monday - Friday. Please leave your name, date of birth and telephone number and a radiographer 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 increases 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 and Clinical Psychology

This leaflet deals with the physical aspects of your treatment, but your emotional well-being 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 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 helpful to you, please ask staff to put you in touch.

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

- **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 Hospital 01236 771199**
- **Maggie's Forth Valley: 01324 868069**

  Maggie's Centre provides a comprehensive cancer suppor programme for people and their families affected by cancer.

- **Cancer Support Scotland - The Calman Centre**, Gartnavel Complex. Freephone **0800 652 4531** or **0141 337 8199**.

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

  **www.cancersupportscotland.org**

- **Beatson Cancer Charity - 0141 301 *7667***

  Provides support for patients and families within the Beatson Cancer Centre. Services available for in-patients.
  Open every day, 9am -9pm.

- **Macmillan Benefits Team** (within the Beatson) **0141 301 7374**

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

- If you are interested in finding out about becoming more active, please visit: www.nhsggc.org.uk/getactive

- **The Beatson West of Scotland Cancer Centre** - if you want to find out more about our Centre please visit **www.beatson.scot.nhs.uk**

- **NHS 24 111**

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