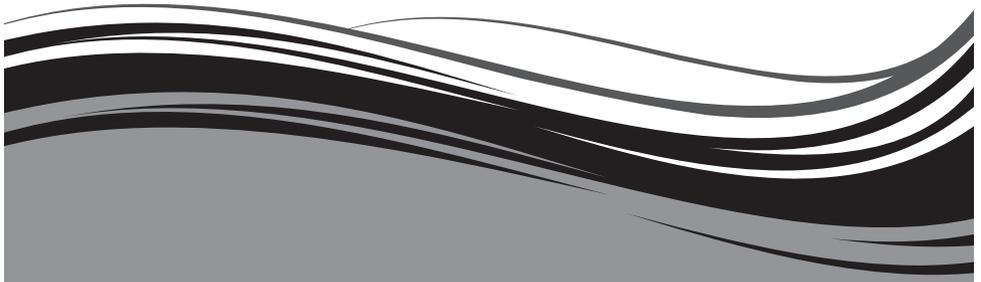


Patient Information for
Total Body Irradiation



Patient information for Total Body Irradiation

This leaflet is for patients who are having total body irradiation (TBI). You are having radiotherapy as part of your treatment regimen for your transplant. This leaflet explains:

- What is radiotherapy?
- How radiotherapy is planned and delivered.
- The side effects you may experience during and after treatment, and how best to cope with them.

It aims to cover any possible questions or concerns you might have. If you have further questions or concerns, please let your doctor or radiographer know.

What is radiotherapy?

Radiotherapy is the use of high energy x-rays to destroy cancer cells. Treatment with TBI aims to destroy any malignant cells or abnormal cells, and to suppress the immune system, in preparation for your transplant.

The treatment is painless and each appointment lasts 20-30 minutes. You will be admitted to the ward while undergoing your radiotherapy.

Treatment Planning

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

Your planning appointment will be in the 'mark-up room'. You will meet a radiographer and two members of our physics team. They will ask you to lie on a flat couch on your right side with your knees slightly bent up. Adults will be asked to place their left arm above their head with their hand resting on their head. Children will have their arms crossed in front of their chest. We will also ask you to remove any bulky clothing so that our physics staff can measure the thickness of various parts of your body. This allows us to calculate your individual treatment.

Your doctor will meet with you at this appointment to discuss your treatment and the side effects you may experience.

When attending for your radiotherapy planning and treatment, please remove any jewellery, glasses, false teeth containing metal or piercings.

Treatment

Your radiographers will explain everything before treatment starts and check that you know what to expect. You will have 1- 8 radiotherapy treatments. If you are having more than one treatment, you will be treated twice a day. Treatment times are usually about 9am and again about 4pm.

Each day you attend for treatment we will ask you to undress to your underwear only (ladies please wear a thin camisole top – no underwire bras) and lie in the treatment position as you did at your planning appointment. Your back and soles of your feet will rest on a Perspex screen. This will also provide support and help your radiographers to position you. A second Perspex screen is placed in front of you during treatment, but it will not touch you.

Your treatment is delivered in two parts. The second Perspex screen is only in place for the first part of the treatment.



Picture 1- Treatment position 1

The lights in the room will dim for a few minutes while the radiographers ensure you are in the exact position for your treatment.

When your radiographers are happy, they will leave the room to start part one of your treatment. They monitor you closely on closed circuit TV. You will hear a buzzing sound while the machine is on. It is important that you stay as still as you can and breathe normally. Your radiographers will come into the treatment room and turn the couch around. They will remove the second Perspex screen at this point. They will check your position again, and then leave the room to switch the machine on for the second part of your treatment.



Picture 2- Treatment position 2

On your first day a member of the physics team will place small measuring devices on various parts of your body. These devices measure the amount of radiation received during your treatment. These measurements may be repeated on your second treatment (if you are having more than one treatment).

During your treatment music can be played in the room. You will be in the treatment room for about 20 minutes but the machine is only on for approximately 10 minutes in total.

Children attending for treatment can bring a parent or carer with them, who can be in the treatment room while they are being positioned and then watch on the close circuit TV monitor as the treatment is being delivered.

Early effects of radiotherapy

Each patient is an individual and the effects of treatment may vary from one patient to another. The following is a general guide to some of the effects you **may** experience.

Children will be in-patients at The Royal Hospital for Children at this time and will have started their conditioning regimen. These drugs may therefore modify the side effects.

- **Tiredness:** You will begin to feel quite tired during treatment. Try to rest as much as possible.
- **Skin:** Your skin will be more sensitive and may become pink or red similar to sunburn. You may also experience an itching sensation. This can be treated with creams; however, while on treatment, it is very important that you use only those prescribed by your doctor here at the Beatson. Once your radiotherapy has finished, you can use your normal products. Please tell us if you have any problems.
- **Hair:** There will be a loss of all body hair. This is *usually* temporary, although in some patients it may not grow back. It is likely to take six months to return to its normal state and there may be a change in texture or colour after treatment. A wig can be arranged.
- **Nausea & Vomiting:** Some people feel sick and may even vomit. You will be given medication to help this by the ward staff before you come for your treatment.
- **Diarrhoea:** This is a common side effect of the treatment and something can be prescribed to relieve these symptoms.
- **Sore mouth and throat:** The inside of your mouth may become dry and you may notice a change in the taste of foods. Things you normally like may taste unpleasant, and things that you would not usually eat may taste quite pleasant. Your throat may be sore and this can cause difficulty in swallowing food and drink. If this is a problem, painkillers can be prescribed.
- You may also notice swelling in your face. This will all settle down a couple of weeks after your treatment is complete.

- **Fertility:** TBI will cause infertility. Fertility preservation/sperm storage may be possible. Your Doctor will discuss this with you.

It will also cause early menopause. This will happen gradually after your treatment. Hormone therapy may be advised.

Skin care during treatment

- You may bath or shower, provided the water is not too hot (lukewarm). Pat your skin dry with a soft towel. Avoid adding anything to the bath water, for example bubble bath, dettol, savlon, etc.
- You will find that you may be more comfortable if you wear loose fitting clothes, preferably with cotton next to your skin.

Late effects of radiotherapy

We believe that the benefit of your radiotherapy treatment outweighs any longer term risks involved. However, you should be aware of these **potential** long-term effects. It is important to point out again that effects can vary from person to person and your doctor will explain specific individual issues to you personally.

In general, these late effects depend to a certain extent on the age of the patient at the time of treatment. For patients after the age of puberty, periods are likely to stop and hormone replacement therapy may be advised. In both men and women, sterility is likely to occur.

Cataracts may develop after total body irradiation. If you do develop these, a relatively minor operation can be done to improve vision.

Tests will be required to check your thyroid gland has not been affected, if there are signs it is not working properly, you may require Thyroxine tablets to replace the normal hormone produced by the thyroid gland.

Your doctor may also arrange other tests to check specific hormone levels following radiotherapy. This will be discussed with you if necessary.

If you have any questions after reading this leaflet please discuss them with the Doctor, nursing or radiotherapy staff responsible for your care.

After treatment ends

Any symptoms that have developed during treatment will wear off a few weeks after completion; however, the tiredness will take a little longer. Once you have completed your course of radiotherapy and had your transplant you will be closely followed up at the transplant unit and seen back at the Beatson by your radiotherapy consultant about 4 months after treatment has finished.

Children are followed up at The Royal Hospital for Children or their own paediatric unit until they are old enough to be seen within the adult care sector.

Where Can I Get Help?

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 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**
- Information Centre (Level 1) Tel: **0141 301 7390**

The Beatson Cancer Centre has a Radiotherapy Advice Line available for patients who have completed treatment. This is an answer phone service and covered Monday to Friday. Please leave your name and telephone number 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 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 distressing time for you and those closest to you. At times it can also be difficult coping with treatment but you do not have to cope on your own. Within the department we have a counselling and clinical psychology service that may be able to help with worries and difficulties you might be having before, during or after treatment. 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:

Leukaemia Care – 08088 010 444 (24 hrs) aims to promote the welfare of those suffering from leukaemia and allied blood disorders.

Myeloma UK – 0800 980 3332 provides information and support to all those affected by myeloma.

Lymphoma Action – 0808 808 5555 provides emotional support and information to anyone with lymphatic cancer and to families, carers and friends.

Children's Cancer and Leukaemia Group (CCLG) can be contacted via www.cclg.org.uk or Tel : **0116 252 5858**.

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 support programme for people and their families affected by cancer

Cancer Support Scotland – (Tak Tent), 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

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 would like to know more about our Centre please visit www.beatson.scot.nhs.uk

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