Patient Information for:

Total Body Irradiation
Patient information for Total Body Irradiation
This leaflet is for patients receiving radiotherapy to their whole body. It describes the radiotherapy planning and treatment and explains the effects that you may experience during and after treatment, and how best to cope with them.

We treat each patient as an individual and the effects of treatment may vary from one patient to another, therefore the information given here is a guide and does not mean that you will have all the effects described. Your Doctor and radiographers will explain your treatment in detail.

If you need more information or have any questions or problems, please let us know as soon as possible.

Treatment Planning
Before radiotherapy can begin, we need to plan your treatment carefully to produce an individual treatment plan for you. When attending for your radiotherapy avoid wearing any jewellery or metal.

The first visit to the department is to have your treatment planned. You will be asked to lie in the position in which your treatment will be given. This will mean lying on a flat couch on your left side with your left arm above your head and your knees slightly bent up. During this visit, you will be asked to remove any bulky clothing so that the physics staff can measure the thickness of various parts of your body.

One of the doctors will see you and discuss treatment and the side effects with you.

Treatment
You will have treatment using an x-ray machine called a linear accelerator. The staff who operate these machines are called therapy radiographers. They are specially trained professionals who are responsible for planning and delivering your treatment accurately. They will explain everything before treatment starts and check that you know what to expect and how many treatments you will have. There will be seven or eight fractions of radiotherapy. You will have two treatments a day one in the morning about 9 am and one in the afternoon about 4 pm over 3 or 4 days usually between Monday and Thursday.

The treatment is painless and you will feel no differently afterwards. Please speak to the radiographers if you have any questions or problems.
On your first treatment, you will be asked to undress to your briefs only and lie in the treatment position (on your left side with your knees slightly bent up). A member of physics staff will be present and place small plastic envelopes containing dose meters on various parts of your body. Each envelope measures the amount of radiation received by that part of the body during the treatment. The tiny envelopes are stuck loosely to the skin with micropore tape, which is easily and painlessly removed after the first treatment. This process is sometimes repeated. During the rest of your treatment you can keep a vest and briefs on.

The treatment couch will be positioned in front of the treatment machine. The lights in the room will dim for a few minutes while the radiographers position you. They leave the room while the machine is on. The radiographers will monitor you closely on closed circuit TV while you have your treatment. It is important that you stay as still as you can during your treatment and breathe normally. The radiographers will try to make you as comfortable as possible. You will be given a buzzer that you can press at any time if you wish the treatment to be interrupted.

During treatment music can be played in the room and if you wish you can bring a tape or CD from home. The treatment lasts about 20 minutes, 10 minutes with you facing the machine and 10 minutes with your back to the machine. When you have been treated facing the machine the radiographers will come in to the treatment room and turn the couch round so that your back is now facing the machine. You will not feel anything during your treatment. When the machine is on you will hear a beeping noise.

Children attending for treatment are able to bring a parent with them, who will be able to be in the treatment room whilst their child is being positioned and then watch on the close circuit TV monitor whilst the treatment is being delivered.

**General advice during treatment**

- Try to get plenty of rest and sleep, especially when the treatment begins to make you tired.
- Drink plenty of fluids to stop you becoming dehydrated.
- Speak to your radiographers, nursing staff or doctor if you have any questions or problems.
Early effects of radiotherapy

Each patient is individual and you may experience the effects to differing degrees. All patients are different and the following is a general guide to some of the effects you may experience. Children will be inpatients at Yorkhill at this time and will have started their conditioning regimen. These drugs may therefore modify the side effects.

- **Tiredness:** You may begin to feel quite tired during treatment. This will gradually ease a few weeks after finishing your treatment. Try to rest as much as possible.

- **Skin:** The skin will be more sensitive and may become pink or red similar to sunburn. This can be treated with creams; however, it is very important that you use only those prescribed by your doctor here at the cancer centre. 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 before or once treatment has started.

- **Nausea & Vomiting:** Some people experience a feeling of sickness and may even vomit, medication can be prescribed to relieve these symptoms. Let one of the radiographers or the nursing staff on the ward know if this is a problem.

- **Diarrhoea:** This is a common side effect of the treatment and something can be prescribed to relieve these symptoms.

- **Sore mouth:** The inside of your mouth may become dry and you may notice a change in the taste of foods so that some things you normally like taste unpleasant and things that you would not usually eat may taste quite pleasant. Your throat may be sore and cause difficulty in swallowing food and drink, painkillers can be prescribed for this. You may also notice swelling in your neck. This will all settle down a couple of weeks after your treatment is complete.

- **Sexuality:**
  - **Women:** TBI will cause infertility and cause early menopause, this will happen gradually after your treatment. Hormone replacement therapy may be advised.
  - **Men:** TBI will lead to infertility in men. Before treatment may be able to store a sample of sperm for use in the future.
Skin care during treatment

- You may bath or shower, provided the water is not too hot (lukewarm). You may use mild baby soap and pat your skin dry with a soft towel. Avoid adding anything to the bath water, for example bubble bath, dettol, savlon, etc.
- Avoid using perfumed soaps, creams, deodorants, lotions etc as these may irritate your skin.
- 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 outweigh 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. The following effects are a general guide:

They 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 restore 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.

If you have any questions after reading this leaflet please discuss them with the Doctor, nursing staff or radiotherapy staff responsible for your care.
After treatment ends
Any symptoms that have developed during treatment will wear off a few weeks after it ends; however, the tiredness will take a little longer. You may begin washing normally once your skin no longer looks red or feels itchy. 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 by Yorkhill 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

The Beatson Cancer Centre has a Radiotherapy Advice Line available for patients who have completed treatment. This is an answer phone which is checked regularly Monday to Friday. You should leave your name and telephone number and a radiographer will call you back as soon as possible.    Tel: 0141-301 7432

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. There is also a service for children and young people who are having difficulty coping with their relative’s illness. 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** — aims to promote the welfare of those suffering from Leukameia and allied blood disorders. **Careline: 0800 169 6680 (24hrs)**
- **Myeloma UK** — Provides information and support to all those affected by myeloma. **Infoline: 0800 980 3332**
- **Lymphoma Association** — Provides emotional support and information to anyone with lymphatic cancer and to families, carers and friends. **Helpline: 08 08 808 5555**
- **Cancer backup** — Offers telephone information and advice and provides free information booklets about particular cancers and about how to cope. **Tel.: 0808 800 1234**
- **Macmillan Cancer Support** — Develops services to provide specialist care at every stage of illness. Provide an information line and financial help through grants. **Tel.: 0808 8082020**
- **Macmillan Welfare Rights Benefits Project** — Providing free and confidential advice for people affected by cancer and their carers. Based within the Beatson Cancer Centre. **Tel.: 0141 301 7374**