Understanding Radiotherapy

Caring for people with cancer
This booklet has been written to help you understand more about radiotherapy. It has been prepared and checked by cancer doctors, radiation therapists, other relevant specialists, nurses and patients. The information in this booklet is an agreed view on radiotherapy, how it is given and how this treatment may affect you.

If you are a patient, your doctor, radiation therapist or nurse may go through the booklet with you and mark sections that are important for you. You can make a note below of the contact names and information that you may need quickly.

| Specialist nurse | Tel: |
| Radiation therapist | Tel: |
| Radiation oncologist | Tel: |
| Medical oncologist | Tel: |
| Surgeon | Tel: |
| Family doctor (GP) | Tel: |
| Emergency | Tel: |
| Treatments | Review dates |

If you like, you can also add:

Your name

Address
This booklet has been produced by Nursing Services in the Irish Cancer Society to meet the need for improved communication, information and support for cancer patients and their families throughout diagnosis and treatment. We would like to thank all those patients, families and professionals whose support and advice made this publication possible.

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The following sources were used in the publication of this booklet:

- The Development of Radiation Oncology Services in Ireland, Department of Health and Children, 2003.
- Radiation Therapy and You: Support For People With Cancer, National Cancer Institute, 2008.

Published in Ireland by the Irish Cancer Society.
© Irish Cancer Society 2005, revised 2007, revised 2009
Next revise: 2011

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ISBN 0-95323-690-1

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Introduction

This booklet has been written to help you understand more about radiotherapy.

Radiotherapy may be given as **external** treatment or as **internal** treatment. This means radiation is given to you from outside your body or from the inside. The information in this booklet is divided into sections on both of these types of radiotherapy, what they involve and how to manage some of their more common side-effects. It is important to know that radiotherapy is quite safe. Your treatment will be carefully planned and you will be closely monitored throughout it.

We hope this booklet answers some questions that you may have about radiotherapy. However, treatment practices may vary a little between patients, doctors, hospitals or treatment centres. You are likely to have questions and concerns about your own treatment which this booklet may not answer. It is best to discuss details of your own treatment with your doctor.

The booklet also looks at some of the feelings you and those close to you may have when a diagnosis of cancer is made. At the end of the booklet you will find a list of books that are useful to read. There is also a list of websites and special groups to help and support you at this time. If reading this booklet helps you, why not pass it on to your family and friends who might find it helpful too. The more they know about your illness, the more they will be able to help you cope when you need them.

Reading this booklet

Remember you do not need to know everything about radiotherapy straight away. Read a section about a particular item as it happens to you. Then when you feel relaxed and want to know more, read another section. If you do not understand something that has been written, discuss it with your doctor, radiation therapist or nurse. You can also call the freefone National Cancer Helpline 1800 200 700. If you prefer, you can call the Breast Cancer Information Service 1800 30 90 40 or the Prostate Cancer Information Service 1800 380 380.

### What does that word mean?

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adjuvant treatment</strong></td>
<td>Radiotherapy or chemotherapy given soon after surgery when a diagnosis of cancer is made.</td>
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<tr>
<td><strong>Alopecia</strong></td>
<td>Loss of hair.</td>
</tr>
<tr>
<td><strong>Brachytherapy</strong></td>
<td>A form of treatment where solid radioactive material is placed inside your body on or near your tumour. Also called internal radiotherapy.</td>
</tr>
<tr>
<td><strong>CT scan</strong></td>
<td>A test which uses X-rays to see the organs and tissues inside your body on a computer screen.</td>
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<tr>
<td><strong>External radiotherapy</strong></td>
<td>A form of treatment using a machine that aims high-energy rays at a specific part of your body. Also called external beam radiotherapy. See linear accelerator.</td>
</tr>
<tr>
<td><strong>Fraction</strong></td>
<td>A single dose of radiotherapy treatment.</td>
</tr>
<tr>
<td><strong>Implant</strong></td>
<td>A radioactive material placed inside your body on or near a tumour. It can consist of tubes, wires or seeds and may be temporary or permanent. See also brachytherapy.</td>
</tr>
<tr>
<td><strong>Internal radiotherapy</strong></td>
<td>A form of treatment using either solid radioactive material close to or inside your tumour (brachytherapy) or as a radioactive liquid, given either by mouth or as an injection into a vein.</td>
</tr>
<tr>
<td><strong>Linac</strong></td>
<td>Short name for a linear accelerator.</td>
</tr>
<tr>
<td><strong>Linear accelerator</strong></td>
<td>A machine that uses electricity to create high-energy radiation to treat cancers with great accuracy.</td>
</tr>
<tr>
<td><strong>Mould</strong></td>
<td>A mask made from either clear plastic (Perspex) or thermoplastic to prevent movement of your head and shoulders during treatment. Sometimes the mould is called a mask, orfit or shell.</td>
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<tr>
<td><strong>Neo-adjuvant treatment</strong></td>
<td>Radiotherapy that can be given before surgery to shrink the size of a tumour.</td>
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</table>
Radiotherapy is the treatment of disease using radiation. Radiation or X-rays (as it is also called) can be used to kill cancer cells very accurately. In very small doses X-rays can give doctors a picture of the bones in your body, like in a chest X-ray, to help them make a diagnosis. At high doses, X-rays can be used to treat cancer and other illnesses. When it is used to treat cancer, radiotherapy is also known as radiation oncology.

The aim of radiotherapy is to destroy cancer cells with as little damage as possible to normal cells. With the right amount of treatment, cancer cells do not recover from radiotherapy. Damage to normal cells causes side-effects. Usually the normal tissue recovers quickly and the side-effects do not last long. Sometimes the damage takes longer to repair and the side-effects may be long term.

Radiotherapy is very specific and only affects the area that is being treated. It is unlike chemotherapy which can affect the cells in your entire body.
How is radiotherapy given?

Radiotherapy can be given in two ways: externally and internally.

With **external beam radiotherapy**, the radiation comes from special machines which aim X-rays directly at your tumour or the tumour site after surgery. The radiation is also aimed at a small area of normal tissue around the tumour just in case any cancer cells have spread.

In the case of **internal radiotherapy**, the radiation source is placed inside your body in special applicators on or near your tumour. It is possible to have both external and internal radiotherapy. In general, most people who receive radiotherapy for cancer have external radiotherapy.

Planning your treatment

Planning your treatment is a very important step. Your first visit to the radiotherapy unit will be to plan your treatment only. Radiotherapy must be carefully planned so that the maximum dose is given to the tumour area and as little as possible to the surrounding cells. The first day of planning can be quite long and intensive. But all the staff in the radiotherapy unit will help to make you comfortable and relaxed.

External radiotherapy

In external radiotherapy an important part of the planning process is **simulation**. This involves using a special machine to pinpoint the area to be treated, also called the **treatment field** or area. You may have extra scans or X-rays taken but this is to plan your treatment only. Strictly speaking, these are not tests so there will be no ‘results’ as such. The treatment area will then be marked carefully on your skin. The dose of radiation will be decided and tightly controlled during your treatment.

During treatment you will first be positioned carefully on a treatment table. Then the machine will move around you so that you receive the
precise treatment at different angles. Usually treatment takes several minutes and is painless. External radiotherapy is usually given during outpatient visits to the hospital. The course can be several treatments over a number of days or weeks (6 to 8 weeks) or a single dose for palliative treatment. More details on external radiotherapy are found on page 17.

Internal radiotherapy – brachytherapy
With internal radiotherapy, the radiation source is placed inside your body on or near your tumour. The radiation source is sealed and referred to as an implant. This treatment is also known as brachytherapy. Implants may be temporary or permanent. With temporary implants the radioactive source is removed once the prescribed dose is given. With permanent implants, the radioactive source is very tiny like a grain of rice or a seed. It is permanently implanted, e.g. in the prostate, and gives its radiation dose over a prolonged period of time.

For internal radiotherapy the length of time you spend in the hospital or unit can vary. It will depend on the type of implant used and if it is temporary or permanent. If your doctor decides internal radiotherapy is the best treatment for you, he or she will discuss it with you and give you further information. More details on internal radiotherapy are found on page 26.

Internal radiotherapy – thyroid cancer
For cancer of the thyroid the radiation source may be unsealed (open). It involves using a liquid source of radiation called a radionuclide (or radioisotope). It can be given as an injection into a vein (intravenously) but is more usually taken by mouth as a tablet. Unsealed sources are radioactive until your body gets rid of them. See page 30 for more details on cancer of the thyroid.

Why is radiotherapy given?
The aim of radiotherapy is to destroy cancer cells with as little damage as possible to normal cells. Radiotherapy can be used to treat many kinds of cancer in most parts of your body. It is particularly effective for head and neck cancers, lung and breast cancers, and cancers in the abdomen and pelvic area. Depending on the type and stage of your cancer, radiotherapy has different goals:

- **Curative treatment** – to cure cancer and reduce the risk of it recurring.
- **Palliative treatment** – to relieve symptoms such as pain, pressure or bleeding.

Curative treatment
Curative treatment is when the aim of radiotherapy is to cure cancer and prevent its recurrence. It is called radical treatment when it is the primary treatment, e.g. in the case of early cancer of the larynx. In most cases you attend the hospital for one dose each weekday over a period of time (4 to 8 weeks), depending on your situation.

Palliative treatment
Radiotherapy for palliative treatment can relieve any distressing symptoms you may have, such as pressure, pain or bleeding. If a cure is not likely, palliative treatment can lead to a better quality of life. Often a short course, sometimes only a single treatment, is needed.

Cancer Helpline 1800 200 700
Preparing for bone marrow transplant
If you have leukaemia, radiotherapy may also be given to your entire body. This is part of the preparation for a bone marrow transplant or stem cell transplant. The radiation kills off all bone marrow, including cancer cells, before healthy bone marrow is given back to you. This treatment is called total body irradiation.

What are the benefits and risks of treatment?
With every medical treatment there are benefits and risks. As already mentioned the high doses of radiation will harm not only cancer cells but also normal cells. However, your doctor will discuss with you in advance the benefits of treatment and any possible serious side-effects. The possible treatment side-effects are known to your doctors, radiation therapists and nurses and they will tell you what to expect in the short term and the long term. Also, they will give you advice on how to look after yourself and help relieve any symptoms. See page 31 for more details about side-effects of treatment.

When is radiotherapy given?
Radiotherapy can be given on its own or in combination with other treatments, such as surgery, chemotherapy, and biological therapy. For some cancer patients, radiotherapy is the only treatment needed.

Nowadays radiotherapy is commonly used with surgery to treat cancer. It can be given some weeks before surgery to shrink a tumour and make it easier for surgeons to remove. As a result, you may need less radical surgery, that is, less tissue removed. This is called neo-adjuvant therapy.

In most cases radiotherapy is given after surgery to prevent the growth of any cancer cells that may remain in your body. This is called adjuvant therapy and may also include other treatments such as chemotherapy. In fact, radiotherapy can be given before, during or after chemotherapy. The aim of radiotherapy before chemotherapy is to reduce the size of the tumour. Radiotherapy after chemotherapy aims to kill any remaining cancer cells. Your doctor will decide how much radiotherapy and chemotherapy you should be given based on recognised treatment guidelines.

Where is radiotherapy given?
Radiotherapy is normally given in special cancer treatment centres, usually hospitals or clinics. These centres need highly trained staff and space for the large equipment involved. As a result, the centre may be some distance from the hospital where you received surgery or chemotherapy.

Most people receive radiotherapy as outpatients, travelling to the radiotherapy unit each day. For some internal radiotherapy you may have to stay in hospital for a few days, or in some cases you can receive it in the radiotherapy unit as an outpatient. If you are receiving chemotherapy at the same time as radiotherapy, you may be brought by taxi or ambulance from your hospital to the radiotherapy unit for treatment. Cancer treatments vary throughout the country, so you may find that there is a different practice in your area to the one mentioned in this booklet.

Staff in the radiotherapy unit
The staff you will meet regularly in the radiotherapy unit will be your doctors, radiation therapists and nurses. Depending on your needs, you may also come across physiotherapists, dietitians, speech therapists, medical social workers, clinical psychologists and counsellors.
In some radiotherapy units there are special radiation therapists who give information and support to patients during their course of radiotherapy.

**Radiation oncologist**: A consultant medical doctor who specialises in treating cancer patients using radiotherapy. He/she usually heads a team of doctors.

**Medical oncologist**: A consultant medical doctor who specialises in treating cancer using chemotherapy and biological therapy.

**Radiation physicist**: A radiation expert who helps to plan your treatment with the radiation therapy team. He/she makes sure that the equipment is working properly and that the machine delivers the right about of radiation. Most patients do not meet the radiation physicist.

**Dosimetrist**: A scientist who plans and calculates the proper radiation dose for your treatment. He/she works closely with the radiation oncologist, physicist and radiation therapist. Most patients do not meet the dosimetrist.

**Radiation therapist**: A radiographer who specialises in planning and delivering radiation to patients with cancer and other conditions. He/she will monitor your progress during your treatment, explain any side-effects that may occur and help with any needs you have during treatment.

**Radiographer**: A specially trained person who takes X-rays, CT and MRI scans, mammograms, etc. that you may need during your cancer treatment.

**Oncology nurse**: A nurse who specialises in radiation oncology. He/she will co-ordinate your care, help you learn about your radiation treatment, tell you how to manage the side-effects, and take care of any dressings, medicines or special needs you have.

**Mould room technician**: A specially trained person who makes devices to prevent you moving during treatment. For example, for head and neck cancers, he/she will make a special mask so that your head and shoulders can keep still during treatment. He/she works closely with the radiation therapist.

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To sum up

- Radiotherapy is a treatment used to cure or control cancer.
- Radiotherapy involves careful planning before treatment.
- There are external and internal ways of giving radiotherapy.
- The benefit of radiotherapy is that it can destroy or shrink cancer cells and relieve pressure, pain or bleeding.
- The risk of radiotherapy is that it can temporarily damage or destroy healthy cells leading to short-term and long-term side-effects.
- With radical radiotherapy there is a small risk of some permanent damage.
- Radiotherapy can be used together with surgery and chemotherapy.
External radiotherapy

Your radiation oncologist may decide that external radiotherapy is the best treatment for you. This involves careful planning beforehand.

How does the doctor plan my treatment?

Your doctor and radiotherapy team will decide the type of treatment machine you need. There are different types available which use different sources, for example, X-rays, an electron beam or cobalt-60 gamma rays. Your doctor will select the one most suitable for your type of cancer.

Some machines are better for treating cancers near your skin surface, while others are better for cancers deep inside your body. Linear accelerators, called linacs for short, are most commonly used as they can deliver powerful and precise beams of radiation.

Tests and planning

Before you receive radiotherapy there are many preparations to be made. Planning your treatment may take some weeks – anything from one day to several weeks – and then waiting for treatment may take more time. Don’t be alarmed if you think it is taking too long, as the doctors and staff are only making sure that the treatment is specially...
designed for your needs. Usually there is no planning involved in palliative treatment.

Ask plenty of questions if you are unsure about any part of your treatment planning.

Treatment planning can include:

**Physical exam:** A physical exam will be done to check the general state of your health. You may need to have some X-rays, scans and blood tests done as well. Before starting treatment, make sure to tell your doctor about any medicines you are taking, including herbal remedies. He or she may advise you to stop taking these remedies during your course of radiotherapy. If you have any allergies or sensitive skin, it is worth mentioning these too.

**Simulation:** Your first visit to the radiotherapy unit will involve a planning session called simulation. This is where the radiation therapist uses a machine to locate your treatment field. This is the exact area of your body where the radiation will be aimed each time. Simulation can last for up to 45 minutes.

You will be asked to lie very still on an examining table so make sure to wear comfortable clothes. Some hospitals may provide gowns. The radiation therapist uses a special X-ray machine called a simulator or CT simulator to define the treatment field. Depending on the location of your cancer, you may have one or more treatment fields. The simulator machine will move around you and can be noisy, but it won’t touch or hurt you at all. Just lie still and breathe normally. During the planning, the lights in the room will be switched off and laser lights will become visible. These laser lights are harmless. They are used to position your treatment field with precision and accuracy.

Your doctors may use your previous X-rays or scans to help them plan your treatment. When you are lying in the treatment position you may need more tests, such as up-to-date CT scans. A CT scan (computerised tomography) is a special type of X-ray that builds up a detailed picture of the tissues inside your body, which can then be seen on a computer. The machine that takes the CT scan looks like a giant doughnut. The scan is not painful but you must lie as still as possible during it. Normally it takes between 10 and 30 minutes.

**Immobilisation:** You need to stay as still as possible during the planning and treatment sessions. Every effort will be made to make you as comfortable as possible. Foam pads, special vacuum bags and immobilisation devices may be used to help you stay in the treatment position. Sometimes the mould room technician can make special devices or supports for you.

**Skin markins:** The radiation therapist will put temporary marks on your skin using a special marking pen. This is to reproduce the treatment position on the treatment machine and make sure that your treatment is accurate each time. You may find that the marks rub off a little onto your clothing. However, these marks will wash out of clothes. It is best not to wear good clothes coming for treatment. The radiation therapist will also give you advice on how to care for your skin in the treated area.

Once the treatment plan has been finalised, sometimes the temporary markings will be made permanent. The radiation therapist will mark
Contact radiotherapy

Contact radiotherapy can be used to treat cancers on the surface of your skin. This includes basal cell carcinomas (BCCs), squamous cell carcinomas (SCCs) and other skin conditions. It uses energies much lower than those of the linear accelerators. Sometimes it is used to treat secondaries in the bone, for example in the ribs. Different sizes of applicators can be used, depending on the size of the treated area. The applicator is put into the head of the machine and then placed on the skin surface. This is why it is called contact radiotherapy.

Giving your consent for treatment

Before you receive any radiotherapy (external or internal), your doctor may ask you to sign a form or give verbal permission for the hospital staff to give you the treatment. No medical treatment can be given without your consent. It is important to take time to consider what the treatment involves. The benefits and risks of the treatment should be explained to you, and also any side-effects that may occur. Any alternative treatments that are available should also be discussed. You are also free not to agree to the treatment or to stop it at any time. However, it is best to discuss your reasons and concerns with your doctor first.

Planning for head and neck cancers

Immobilisation

It may be necessary to make a plastic mould or mask to fit the treated area before treatment is given. The mask makes sure that your head and shoulder are kept perfectly still and the radiation delivered accurately each day. Because treatment marks are put on the mask, there is no need to put marks on your skin. The mask can be made from either clear plastic (Perspex) or thermoplastic, which prevents you from moving. On your first visit to the radiotherapy unit, you will be taken to the mould room. The technicians and radiation therapists will explain exactly how the mask is made. Sometimes you may have to visit the mould room several times before your treatment can start. The number of visits depends on the type of mask you need.

For the Perspex mask a plaster cast mould is made first. A mould-release cream will be applied to whatever part of your head and neck is to be treated. Next a plaster of Paris bandage will be laid over the top of this to make a mould. This will feel wet and cold. Your mouth and nose will not be covered so you can breathe normally. This takes a few minutes to set and is then removed. When the plaster has set, Perspex is moulded onto the cast and the mask is formed. This mask will fit your face and neck snugly, with holes cut for your eyes, nose and mouth.
Understanding radiotherapy

weeks. Depending on the hospital you attend, sometimes your appointment can be made for the same time each day. Normally, there is no radiotherapy treatment on Saturdays and Sundays. Each treatment is called a fraction so you will receive, for example, five fractions per week.

When the aim is not to cure cancer but to control its symptoms, the course of treatment is much shorter.

What happens during treatment?
The radiation therapists who deliver the treatment will first explain to you what happens and what to expect – all the sights, sounds and likely side-effects. It is natural to feel anxious about radiotherapy, so every effort will be made to put you at ease. If you have any questions or concerns, no matter how small, talk to your radiation therapist.

First day of treatment
On the day of your first treatment, you will come to the radiotherapy unit. It is best to wear clothing that is comfortable and easy to take off and put on again. Some hospitals may provide gowns. The radiation therapists will help you onto the treatment table and will adjust both the table and the machine to the exact positions that are needed. Because you need to keep still for a few minutes during treatment, they will make you as comfortable as possible.

Special shields or blocks may be put between the machine and certain parts of your body to protect normal tissues and organs. There may also be plaster, plastic or foam pads or vacuum bags to help you stay in the right position. The lights will be turned down while the radiation therapists are setting up the machine and laser lights will be used to align the tattoos daily. Relax as much as you can and just breathe normally.

Cancer Helpline 1800 200 700

How long does treatment take?
The total dose of radiation and the number of treatments you need will depend on:

- The size, location and type of your cancer
- Your general health
- Other medical treatments you are receiving, such as chemotherapy, surgery, or biological therapy

This means that the dosage and length of treatment can vary between patients, even those with the same type of cancer. External radiotherapy is usually given once daily, 5 days a week for 4 to 8

Very often a thermoplastic mask is made. Warm, wet plastic is stretched over your face and possibly your shoulders. This takes just a few minutes to set.

Making the mask may feel a little frightening or claustrophobic at first. But it only takes a short time. You will only have to wear the mask for a few minutes each time you are being treated.

Dental check-up
If you are to receive radiotherapy to the head and neck, you will need a check-up by a dental specialist beforehand. This is to make sure that any mouth infections or extractions are fully healed before radiotherapy begins. If you have dentures they will also be checked to make sure they do not cause trauma or infection.

Radiotherapy to the head and neck can affect your sense of taste, your ability to make saliva, and the muscles in your mouth. As a result, the dentist will give you advice on how to care for your mouth (oral hygiene), on your diet and any physiotherapy exercises that you may need during radiotherapy. The dentist may also take impressions for a special type of gum shield for you to wear during radiotherapy and/or after radiotherapy to deliver fluoride to the teeth. For more details see page 36.
Giving treatment

The radiation therapists will leave the treatment room just before your treatment begins. The radiation machines are operated from outside the room in the control area. This is the only time that you will be left alone. But don’t worry because the radiation therapists will be watching you carefully on a closed-circuit television. They can hear and see you and can talk to you through an intercom. If for any reason you need them, just speak and they will immediately stop the treatment and come in to you. If you are wearing a mask, just wave your hand. The machines can be stopped at any time.

You need to remain as still as possible during the treatment so that radiation only reaches the treatment areas and that the same area is treated each time. Just breathe normally. The machine may move around you and will be operated from outside the room, but it will not touch you. After a few minutes, your treatment will be over for that day.

Receiving radiation is painless – just like having an X-ray. Even though it is painless you still may feel anxious about the machines. They are large and most of them make a buzzing noise as they move around your body aiming at the treatment area from different angles. Some people worry that they will be completely enclosed by the machine, but this does not happen. To help you relax some treatment rooms have music and you can always talk to the radiation therapist at any time during your treatment.

How long will treatment take?

From start to finish, the treatment session may take about 15 minutes, allowing time for getting on and off the treatment table and for the machine to be set up. This routine will go on each weekday until your course of treatment is finished. If you have any problems at home between sessions, the radiation therapist will give you information about who to contact and when.

You must remain as still as possible during treatment – just breathe normally.

Techniques in external radiotherapy

Techniques in external radiotherapy are developing all the time. Ones that are currently available in Ireland include:

Three-dimensional (3D) conformal radiotherapy
This technique uses computers to produce an accurate image of your tumour and nearby organs, so that many radiation beams can be shaped exactly to the shape of the treatment field. Traditionally, this was done by physically placing metal blocks in the path of the radiation beam to alter its shape and match that of your cancer. In recent years a device called a multi-leaf collimator has been used. This uses sheets of metal inside the linac that can be individually adjusted to match your tumour. This device is fixed in the linear accelerator, so there is no need to physically position the metal blocks each day. As the radiation beams are precisely focused in this technique, nearby healthy tissue is spared, resulting in less side-effects. This allows a higher dose of radiation to be given.

Stereotactic radiotherapy
This technique uses very narrow radiation beams, mainly to treat brain tumours. The radiation comes from many different angles so that the dose going directly to the tumour is very high, while the dose going to healthy tissue is very low. Before and during treatment your head is held still in a specially made frame. Treatment usually involves several doses.

Intensity-modulated radiotherapy (IMRT)
With IMRT there is more precise shaping of the radiation beams to match the shape of your tumour. A multi-leaf collimator is also used here, where the layers of the collimator move while the treatment is given. This allows the dose of radiotherapy to be the same over the whole treatment area. Because less radiation is given to the nearby tissues, the side-effects may be reduced. There is also a higher chance that the cancer will not recur.

Image-guided radiotherapy (IGRT)
IGRT uses daily CT scans to make 3-D images on a computer that pinpoint the exact size and location of your tumour. Often tumours can move between and during therapy. For example, when you breathe, swallow or fill your bladder. IGRT allows therapy to take account of these movements and give a more precise and accurate dose of radiation. As a result, there are better cure rates and less side-effects. IGRT is useful for prostate, breast, head and neck, and pelvic cancers.
Internal radiotherapy – brachytherapy

Your radiation oncologist may decide that internal radiotherapy is the best way to treat your type of cancer. In some cases giving both internal and external radiotherapy may be needed.

The benefit of internal radiotherapy is that a high dose of radiation can be given in a shorter space of time than with external radiotherapy. You may need internal radiotherapy only once or a small number of times. Instead of a large radiation machine, the radioactive material is placed as close as possible to your tumour or where the tumour has been removed. It is sealed in an implant, which can be a thin wire, tube, seed or capsule. When implants are used, you may hear it referred to as brachytherapy. It is used to treat cancers of the:

- Head and neck, including mouth and lip
- Breast
- Lung
- Oesophagus, rectum, and bile duct
- Prostate
- Cervix, womb and vagina

The benefit of internal radiotherapy is that a high dose of radiation can be given in a shorter space of time than with external radiotherapy.

Brachytherapy can be given in several ways either as an outpatient or inpatient and depends on the type of implant used. The implants may be either temporary or permanent. Mostly they are temporary. If they are temporary, they are put in your body in an applicator.

Permanent implants can be given in prostate cancer, where the ‘seeds’ are left in and lose their radiation gradually over time. However, they will not affect those around you. See page 29 for more about prostate brachytherapy.

Planning your treatment

You may be admitted to the hospital or radiotherapy unit the day before your treatment.

Tests: Depending on the location of your tumour, you may need extra tests such as blood tests, X-rays, ultrasounds, or CT scans.

Method of delivery: Again depending on the size and location of your tumour, your doctors will decide what kind of implant you need – temporary or permanent. He/she will also decide on how the implant will be placed in your body.

Insertion of applicator or seeds: In most cases you will be brought to theatre for the applicator or seeds to be put in under anaesthetic. For brachytherapy to the pelvis, usually a spinal anaesthetic is given. Applicators may be thin wires or plastic tubes called catheters. The
applicator can be placed directly into the tumor or put into a body cavity, for example the womb. Or it may be placed in the area where your tumor was removed during surgery. Depending on your cancer you may have one or more applicators. Once the applicators are in place, an X-ray or CT scan will be taken to check if they are in the correct place.

**Dosage:** The dose of radiation will be carefully calculated by your radiation oncologist, physicist and dosimetrist. The dose will depend on:

- Your type of cancer
- Your general health
- Where it is located
- Any other cancer treatments you have had

Implants are usually given by high-dose rate (HDR). High-dose rate gives a precise dose of radiotherapy directly to the tumor very quickly, but only a low dose to the nearby normal tissue.

**Consent:** Your doctor may ask you to sign a consent form or give verbal permission before any treatment begins. Again ask as many questions about this treatment as you wish. It can be hard to understand when explained for the first time. Your doctor may draw diagrams to help with any explanations. See page 21 for information on giving consent.

**What happens during treatment?**

You will be taken to a special room for treatment. The applicators will be attached to a machine. When the machine is switched on it passes small radioactive sources into the applicator. You may hear this referred to as ‘afterloading’. What happens during treatment can vary depending on the location of your tumor and the dose you receive. Your doctor, radiation therapist and nurse will carefully explain what will happen during treatment, how long the applicator and implant must stay in place, when you can go home, and any precautions that you must take. In general high-dose rate implants are removed after a few minutes.

**Brachytherapy for prostate cancer**

Brachytherapy to the prostate can be given in two ways: high dose rate (HDR) or low dose rate (LDR). Your doctor will decide which rate you need depending on the stage of your cancer.

**High dose rate** brachytherapy uses a temporary implant. This is where applicators (rods) are put into your tumor to allow a radioactive material to reach the area for a few minutes. After the treatment all the rods are removed. There is no radiation source left in your prostate gland. You will be given a general anaesthetic so you do not feel anything during the operation.

With **low dose rate** brachytherapy, small radioactive seeds (or pellets) are put into your tumor. This happens under general anaesthetic so you will not feel anything. About 50–100 of the seeds are put in using long needles and an X-ray to control where they go. The seeds are left in place and slowly release radiation over several months, but it stops within 1 year. The treatment is usually over in a single visit. You will also have a long tube (catheter) put in to drain your urine. Once the catheter is removed and you can pass urine again, as well as eat and drink, you will be allowed home. You may be prescribed antibiotics to prevent an infection afterwards.
Understanding radiotherapy

What side-effects can I expect?

Radiotherapy will affect normal tissue within the treatment area. Any side-effects you get will depend on which part of your body is being treated and the number of treatments you get. It is important to know that radiotherapy is not painful, but may cause discomfort in the area being treated.

Most side-effects are temporary and are rarely severe. In general side-effects may be short term or long term. The short-term side-effects develop towards the end of treatment or just as treatment has finished. These will last for a few weeks. Long-term side-effects may occur after treatment and may sometimes be permanent. This can include scar tissue or other changes to your tissues.

Before treatment, your doctor will discuss any likely short or long term side-effects with you. Some side-effects are visible while others are hidden. The visible ones may affect your body image. The radiotherapy staff will also give you tips on how to deal with side-effects and how they can be relieved. Being aware of the side-effects beforehand can help you to cope with them if they arise.

What can I do to reduce side-effects?

To make sure that your radiotherapy works as well as possible and to reduce side-effects, it may help to stop smoking during your course of treatment. Your doctor may recommend that you give up alcohol and smoking completely, especially if you are being treated for head and neck or lung cancers. If you would like to stop smoking contact the National Smokers’ Quitline at Callsave 1850 201 203. Advice and help about quitting can also be received from your doctors or nurses.

Cancer Helpline 1800 200 700

Radioisotope treatment for thyroid cancer

The treatment of thyroid cancer usually involves a liquid radioactive source that is given either as a capsule or as an injection into a vein. Sometimes this is referred to as radioisotope treatment. Special care must be taken with this treatment. Before treatment you will be brought to a special room with an ensuite. Here you will be asked to take a capsule of radioactive iodine. You will have to stay in this room for a number of days as your urine and stools will be radioactive. Usually after 3 days you will be allowed home. Your doctor, nurse or physicist will advise you on any precautions that need to be taken and answer any queries you might have about this type of treatment.

To sum up

- Internal radiotherapy uses a radioactive source that is placed inside your body on or near the tumour.
- Internal radiotherapy can be given in a shorter space of time than with external radiotherapy.
- Large treatment machines are not used for internal treatment.
- The radiation source is sealed in an implant, which can be a thin wire, tube, seed or capsule.
- Implants can be either temporary or permanent.
- Temporary implants need an applicator to keep them in place – this can be thin wires or plastic tubes called catheters.
- Permanent implants do not need an applicator but use radioactive seeds placed directly into the tumour.
- Applicators are usually put in during an operation.

Tell your doctor, nurse or radiation therapist about any symptoms or side-effects that you notice.
In general it is important to eat a balanced diet and drink plenty of fluids during treatment to promote healing. Many people think that radiotherapy causes nausea and vomiting, as with chemotherapy. But this is not true. Nausea and vomiting will only occur if your abdomen or pelvic regions are being treated.

Some side-effects can occur no matter what area of the body is being treated. These are called general side-effects. Other side-effects can be specific to the area being treated.

For more information on side-effects, call the National Cancer Helpline 1800 200 700, Breast Cancer Information Service 1800 30 90 40 or the Prostate Cancer Information Service 1800 380 380, and also for a free copy of the DVD Understanding Radiation Therapy: A Patient Pathway.

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**General side-effects**

**Tiredness and fatigue**

Tiredness is quite common during radiotherapy, especially towards the end of treatment. There may be many reasons for feeling tired or fatigued. The body uses a lot of energy for healing during radiotherapy. Travelling to and from the hospital each day for weeks can make you more tired than usual. In general the fatigue may last for some time afterwards.

It is not always necessary to change your routine – just do what you’re able to do. But tell your doctors, radiation therapist or nurse if tiredness becomes a problem for you. They may be able to offer advice on ways to save your energy and cope with everyday activities. More information on how to cope with fatigue is available from the Irish Cancer Society in a booklet called *Coping with Fatigue*. Call the National Cancer Helpline 1800 200 700 for a free copy.

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**Tips & Hints – fatigue**

- Aim to get a good night’s sleep.
- Plan your day so that you get plenty of rest. Build short naps into your daily routine.
- Limit your activities and save your energy for things you enjoy most.
- Accept help from others, particularly with childcare, housework and shopping.
- Light exercise, such as walking, may help with fatigue.

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**Skin care**

People react in all sorts of ways to external radiotherapy and a lot depends on your skin type and the area being treated. Light-skinned people may find that their skin in the treated area becomes red, sore or itchy. Those with dark skin may find that their skin becomes even darker. Or you may have no skin reactions at all.

Skin reactions usually happen after 3 to 4 weeks of treatment. Depending on what part of your body is being treated and the radiation dose, the care of the skin varies. Advice on skin care also tends to vary between hospitals. Some hospitals prefer you not to wash the treated area at all while having treatment. Others may advise you to use only tepid water to wash the area. When drying your skin, you may be told to pat it gently with a soft towel. Continue this for a few weeks after treatment.

At the start of treatment, your radiation therapist and nurse will give you all the advice you need on skin care for the treated area. Ask as many questions as you like, no matter how silly or trivial you think they are. During your treatment, your radiation therapists will also be checking for any skin reactions, but you should also let them know as
Understanding radiotherapy

In general you may find it more comfortable to wear loose, casual clothing made from natural fibres. It is best to avoid tight collars and ties if you receive radiotherapy to the head and neck. Do not wear starched or stiff clothing over the treated area. For radiotherapy to the pelvic area, do not wear girdles, corsets or anything tight. Shoulder straps and bra straps rubbing against treated skin can also cause skin irritation. If your breast area is being treated, it may be more comfortable to wear a vest rather than a bra.

Tips & Hints – skin care

- Do not scratch or rub the treated area as it may become sore.
- Avoid soaps, talcum powders, deodorants, lotions, perfumes as they may irritate the treated area.
- Apply simple moisturisers like E45 cream or aqueous cream to the area.
- Do not apply creams, lotions, dressings, herbal remedies unless prescribed or recommended by your specialist.
- Do not wet shave within the treated area or use an electric razor. Do not use shaving lotion or hair removal products on the treated area.
- Wash the area gently with lukewarm water and pat it dry.
- Protect your skin from cold weather by wrapping up well.
- Never expose the treated area to the sun. Always use a total sunblock on the treated area and use a sunscreen (SPF 30) on non-treated skin. Cover treated skin with light clothing when outdoors.
- Do not apply sunscreen before radiation treatment.
- Do not apply heat or cold (heating pads, hot water bottles, ice packs, etc.) to the treated area. Avoid saunas and steamrooms.
- Do not use adhesive tape on the treated skin. When bandaging use paper tape outside the treated area.

After radiotherapy the treated area is sensitive to extremes of temperature. If you go outdoors make sure to wear protective clothing over the treated area in hot and cold weather. When out in the sun wear a total sunblock on the treated area and apply a sunscreen (SPF 30 or higher) for the rest of your skin.

In general you may find it more comfortable to wear loose, casual clothing made from natural fibres. It is best to avoid tight collars and ties if you receive radiotherapy to the head and neck. Do not wear starched or stiff clothing over the treated area. For radiotherapy to the pelvic area, do not wear girdles, corsets or anything tight. Shoulder straps and bra straps rubbing against treated skin can also cause skin irritation. If your breast area is being treated, it may be more comfortable to wear a vest rather than a bra.

Radiotherapy and chemotherapy – changes to your blood

Radiotherapy rarely causes changes to your blood. If you are receiving chemotherapy as part of your treatment as well, you are more likely to experience anaemia, be more at risk of infection, and bleed or bruise easily. With anaemia, you may feel tired and breathless. The staff at the radiotherapy unit will tell you who to contact and what to do if you become ill at home during the day or at night.

Tips & Hints – blood changes

- Take plenty of rests and breaks if you are feeling tired or fatigued.
- Avoid close contact, such as hugging or kissing, with people who have colds, flu’s and other infections, especially chickenpox, shingles or measles.
- Wash your hands often during the day, especially before eating and after going to the toilet.
- Take care to avoid injury. Use an electric razor when shaving, or wear thick rubber gloves when gardening to protect yourself from cuts.
- Contact the hospital immediately if you have a temperature of 38°C (100.4°F) or higher, shortness of breath or bleeding that cannot be stopped.

Specific side-effects

Depending on which part of your body receives radiotherapy, you may experience specific side-effects. These can either be short term or long
term. This section in particular deals with the side-effects of radiotherapy relating to the:

- **Head and neck region** – larynx, thyroid, brain, etc.
- **Breast**
- **Chest area** – lung, oesophagus
- **Abdomen and pelvic region** – colon and rectum (bowel), anus, prostate, bladder, cervix, etc.

Most side-effects depend on which area of the body is treated.

Radiotherapy to the head and neck region

Depending on the area of the head and neck being treated you may experience some of the following side-effects.

Mouth problems

Radiotherapy to this region can cause a sore mouth and throat because the cells that line these areas are very sensitive to treatment. So it is important that you keep your teeth, gums and mouth very clean, as this will help to control the soreness and reduce the risk of a mouth or throat infection. Keeping your teeth and dentures in good condition will also improve your appearance, comfort and quality of life.

The kind of mouth problems you might experience include:

- Taste changes
- Dry mouth (xerostomia)
- Sticky mucus
- Soreness of mouth and throat
- Dental problems
- Mouth stiffness

Taste changes: Radiotherapy can affect the taste buds in your mouth. Your sense of taste may be greatly reduced or you may find that food tastes salty, metallic or like cardboard. If this happens, you may lose interest in food and not eat as much as you did before treatment. It’s best to eat little and often. Supplement your meals with high-calorie drinks such as Complan, Build-up, Fortisip or Ensure. If your appetite is poor, ask your nurse or radiation therapist to refer you to a dietitian who will check your weight and give you further advice. Your taste and appetite should improve greatly once treatment has ended. But in some cases it may take up to 6 or 9 months to recover after radical radiotherapy to the mouth.

Dry mouth: After a week or two of treatment you may notice that your mouth and throat feel dry all the time. This is because radiotherapy may cause the salivary glands to make less saliva (spit) than usual. This is called xerostomia. The amount of dryness will depend on the overall dose of radiotherapy you receive and the areas treated. You may find that the saliva can become thick and stringy making swallowing and speech a little difficult too. The dryness may improve with time but can be permanent.

It may be helpful to sip cool drinks during the day. Avoid very dry food, e.g. crackers, and use sauces or gravy to make food moist and easier to swallow. Lubricate your lips with aqueous cream. There are many types of artificial saliva available which help to keep your mouth moist. Sugar-free chewing gum may help the remaining salivary gland cells to make more saliva.

Sticky mucus: You may also find that you have a lot of sticky mucus in your throat. If the mucus turns green or yellow, tell your doctor. He/she may want to treat you with medication.

Soreness: Your mouth and throat will probably become red and sore and mouth ulcers may develop (mucositis). Sometimes eating food may become difficult and swallowing painful. Your voice may also become hoarse. Let your doctor or nurse know as soon as possible if your mouth or throat becomes sore. He/she will prescribe painkillers if you need them. Your doctor or dietitian will advise you on how to change your diet to make eating more comfortable.
The mouth/throat may occasionally become too sore to eat or drink during radiotherapy. In this case, you may need to be fed by a nasogastric tube or PEG tube (a tube going directly into your stomach through the muscle wall) for a short while. Within a few weeks of finishing your course of radiotherapy your mouth should be far more comfortable and you should be able to eat well.

Dental problems: You will need to take special care of your teeth as they will be more prone to decay because of the lack of saliva. Decay can happen very quickly and can cause the teeth to break. Avoid sucking sweets when your mouth feels dry as it increases your risk of both tooth decay and thrush. It is better to use water, fruit, e.g. melon or pineapple, or a sugar-free chewing gum. You will usually be asked to put fluoride gel on your teeth every day to help prevent decay. This can be as a mouthwash, special toothpaste or in a special gum shield made by your dentist. If you are likely to develop dental problems, a dental specialist will check your progress during radiotherapy. After radiotherapy, you will need to have regular dental check-ups (every 4–6 months).

It is important to tell your own dentist that you have had radiotherapy before having any dental work after radiation treatment.

Mouth stiffness: Sometimes radiation to the head and neck can cause a stiffness in certain facial muscles. This is called trismus. The stiffness can reduce your mouth opening. You will be shown some simple mouth-opening exercises that should be done at least twice every day to keep your mouth as flexible as possible. A speech and language therapist may also provide other ways to help.

Hair loss (alopecia)
It is true that radiotherapy can cause hair loss, but only in the area being treated. In other cases hair loss may occur where the beam of radiation enters and leaves your body, e.g. at the back of your neck. Your radiation therapist will be able to tell you where your hair will fall out – but ask if you are worried about it.

Most hair loss is temporary and will start to grow back within 2 to 3 months of finishing treatment. The colour and texture might be a little different. For example, it may not be as thick as before.

Hair loss can be upsetting to many people for various reasons. It can be a constant reminder of your illness or you may feel your identity had been lost, particularly if you liked your hair very much.

If you would like more advice, contact the National Cancer Helpline 1800 200 700 for a free copy of the factsheet Cancer and Hair Loss.
Difficulty with eating and drinking
Surgery and radiotherapy to the neck, e.g. the larynx, may cause difficulty with both eating and drinking. You may notice after a week or two of radiotherapy that you have difficulty in swallowing. It may feel like you have a lump in your throat all the time. Food or drink may seem to go down the wrong way, making you cough as you try to swallow.

If you have any difficulty eating or drinking, talk to your doctor, radiation therapist or nurse as soon as possible. They can give you simple advice on how to solve the problem, the best foods to eat or what to gargle with. If the problem gets worse they can also arrange for a dietitian or speech and language therapist to help. Your doctor may also give you medication to take before meals to make swallowing easier. Call the National Cancer Helpline for a free copy of Diet and Cancer.

It is best to put small amounts of food into your mouth and chew properly before you try to swallow. You may find it helpful to eat foods combined with liquid, such as thick soups or stews. If fluids go down the wrong way, there is a powder available which, when added to your drink, makes it thicker and easier to swallow. The discomfort will usually ease 5 to 8 weeks after you finish treatment.

Weight loss
If you continue to lose weight because you have difficulty in eating, you may need to be fed in another way. This may mean that you need to spend a short time in hospital. Liquid food can be given into a vein (intravenously) or by a tube into your stomach called a PEG tube, until you are able to eat properly again. A helpful booklet called Diet and Cancer is available from the Irish Cancer Society. Call the National Cancer Helpline 1800 200 700 for a free copy and advice.

Tips & Hints – eating and drinking
- Drink about 2 litres of fluid (3 to 4 pints) each day.
- Eat when you are hungry, even if it is not mealtme.
- Eat small snacks during the day rather than large meals.
- Increase the calories by adding butter, spreads or cream to your food.
- Vary your meals and try new recipes.
- Keep simple meals in the freezer, ready to use when you feel hungry.
- If you live alone, arrange for a relative or Meals on Wheels to bring food to you. Ask your GP, nurse, medical social worker or community welfare officer if it can be arranged.

Voice changes
Radiotherapy to the neck, in particular the larynx, may cause the sound of your voice to change. Your voice may become quieter or sound hoarse. It may become sore for you to even talk. If this happens, it is best to rest your voice during treatment. If you have a voice prosthesis such as a Blom-singer valve or are using an electro-larynx, you may notice that the quality of your voice is poor. This common effect of treatment is temporary. The quality of your voice should start to improve when you finish treatment. Talk to your speech and language therapist. He or she will explain this side-effect to you in more detail.

Radiotherapy to the breast
If you receive radiotherapy to your breast, you may notice that you develop some changes in the treated area. Side-effects can occur during treatment or immediately afterwards. The short-term side-effects can include breast or nipple soreness, skin reactions, and swelling in the treated area. About 10 to 14 days after treatment starts, skin reactions such as redness, weeping and itchiness can occur in the treated area. Some women feel their breast tissue becomes more sensitive while others have less feeling there. However, for some women there is no

Cancer Helpline 1800 200 700
change to their breast at all. Usually the side-effects disappear within 4 to 6 weeks from the time they occur.

The long-term side-effects can include hyperpigmentation, where the skin on the treated area becomes deeply tanned. A pattern of tiny broken veins called telangiectasia may also be visible on the skin. In some cases, the breast tissue that has been treated becomes more fibrous and harder resulting in breast shrinkage. Sometimes the long-term effects may be permanent. Again it is best to discuss any breast changes with your doctor, radiation therapist or nurse during treatment and afterwards when you come for check-ups. You can also call the Breast Cancer Information Service 1800 30 90 40.

Radiotherapy to the abdomen and pelvis

Diarrhoea or constipation
Diarrhoea and constipation are fairly common side-effects of treatment to this region. You may experience stomach cramps and wind also. If diarrhoea persists, you may find that you become weak and tired. Do tell your radiation therapist or nurse as soon as it occurs because your doctor can prescribe medication that slows down the bowel for you.

You will also be advised to drink lots of fluid during this time. Depending on the severity of your diarrhoea, you may need to change your diet to a bland, low-fibre diet. This means cutting down on fresh fruit and vegetables, e.g. beans and cabbage, and cereals and grains for a while. Eat bananas as they can help stop diarrhoea but avoid them if you are constipated. The diarrhoea or constipation may continue for some weeks after your treatment. Once they settle down, you can eat a normal, healthy diet again.

Bladder discomfort
Sometimes radiotherapy to the pelvis can result in difficulty with passing urine. Usually it can happen with both internal and external radiotherapy. Your bladder may become inflamed (cystitis) after a number of treatment sessions. This may cause pain, discomfort or a burning sensation while passing urine. You may also feel the urge to pass urine frequently but can then only pass very small amounts or none at all. This may disturb your sleep at night. Occasionally, blood may appear in your urine.

If you notice any of these changes, it is important to tell your doctor, radiation therapist or nurse straight away, especially if you cannot pass urine. A urine sample may be taken to check if you have any signs of infection. This may be done regularly during your treatment and antibiotics given if needed.

In the treatment of prostate cancer a narrowing of the tube from the bladder to the penis can occur. This can affect the flow of urine. Radiotherapy can cause slight leakage of urine (urinary incontinence) too, but this is rare nowadays. If you experience any signs of incontinence, your doctor can prescribe medication to help. Some

Skin reactions can occur about 10 to 14 days after treatment starts.

Radiotherapy to the chest region

Difficulty in swallowing and weight loss
With radiotherapy to the lung or oesophagus (gullet), you may find it hard to swallow solid foods. You may also lose weight as a result. It may help to have a soft, plain diet for a while. You can also add high-calorie drinks like Ensure, Build-up or Complan to your diet. You may need to try a number of these drinks to see which ones are easiest to swallow. If swallowing is very uncomfortable your doctor may prescribe painkillers or liquid medicines or antacids. These can be taken before meals to make swallowing easier. After about 5 to 8 weeks the discomfort usually disappears.

Cough and shortness of breath
You may notice that you develop a dry cough and some shortness of breath with radiotherapy to the lung or oesophagus. When you cough, the amount and colour of the mucus may be different. Sometimes this side-effect may not occur until several months after your treatment. Whenever it happens, you should tell your doctor as soon as possible. It is important to report any changes in your breathing at any time during and after your treatment.

Radiotherapy to the abdomen and pelvis

Diarrhoea or constipation
Diarrhoea and constipation are fairly common side-effects of treatment to this region. You may experience stomach cramps and wind also. If diarrhoea persists, you may find that you become weak and tired. Do tell your radiation therapist or nurse as soon as it occurs because your doctor can prescribe medication that slows down the bowel for you.

You will also be advised to drink lots of fluid during this time. Depending on the severity of your diarrhoea, you may need to change your diet to a bland, low-fibre diet. This means cutting down on fresh fruit and vegetables, e.g. beans and cabbage, and cereals and grains for a while. Eat bananas as they can help stop diarrhoea but avoid them if you are constipated. The diarrhoea or constipation may continue for some weeks after your treatment. Once they settle down, you can eat a normal, healthy diet again.

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If you notice any of these changes, it is important to tell your doctor, radiation therapist or nurse straight away, especially if you cannot pass urine. A urine sample may be taken to check if you have any signs of infection. This may be done regularly during your treatment and antibiotics given if needed.

In the treatment of prostate cancer a narrowing of the tube from the bladder to the penis can occur. This can affect the flow of urine. Radiotherapy can cause slight leakage of urine (urinary incontinence) too, but this is rare nowadays. If you experience any signs of incontinence, your doctor can prescribe medication to help. Some
**Tips & Hints – bladder problems**

- Drink as much fluid as possible to help relieve symptoms.
- Drink cranberry juice or lemon barley water.
- Avoid tea, coffee, carbonated drinks and acidic fruit juices such as orange juice.

**Irritation to the ‘back passage’**

Radiotherapy can cause irritation or itchiness to the rectum or ‘back passage’ (proctitis). This is a common side-effect if the area being treated is in the lower pelvis, such as for prostate or bladder cancer. It can cause a feeling of wanting to strain, whether you actually need to pass a bowel motion or not. Your bowel motions may also become looser or more frequent than before your radiotherapy. Slight or severe bleeding from the back passage can sometimes occur or you may notice a slimy mucous discharge. If you already have piles, they may be irritated even more. Local anaesthetic, steroid creams or suppositories may be prescribed to ease your discomfort.

As soon as you develop any bowel problems, let your doctor know. Most likely you will be advised to eat a high-fibre diet to avoid becoming constipated, as this can worsen the irritation.

**Sexual dysfunction and infertility**

For both men and women the side-effects of radiotherapy to the pelvis can include sexual problems. You may experience a lack of erection (impotence) or the lack of desire for sex or intimacy. Infertility may occur in some cases.

During radiotherapy to the pelvis, women will be advised not to have sex. Depending on the radiation dose, their periods may stop as well. Other symptoms such as vaginal itching, burning and dryness can make sex uncomfortable. But there are ways to relieve these problems.

Do talk to your doctor or nurse if you are concerned about these matters. Many people find it embarrassing to talk about these sensitive issues, but help is at hand. See page 47 for more details on how radiotherapy can affect your sex life and page 49 for more information on infertility.

**Loss of appetite and weight loss**

Radiotherapy to the abdomen and pelvis can cause nausea and loss of appetite. This in turn may lead to weight loss. Some people feel sick at the start of a course of treatment but find that nausea disappears within a day or two. Do tell your radiation therapist or your doctor if you suffer from nausea as medication can be given to control it. Eating little and often rather than having large meals three times a day may make it easier for you. If eating becomes a problem for you, your dietitian or doctor will be able to advise you. See page 40 for more details on eating and drinking.

**How will treatment affect my lifestyle?**

Limited radiotherapy services in Ireland may mean that you have to travel some distance to the hospital or radiotherapy centre. You might find all the travelling tiring or even exhausting. This may be even harder if you are experiencing some side-effects of treatment as well.

**Travelling to the radiotherapy centre**

Don’t be afraid to ask for help if you find travelling too difficult. Ask a family member or friend to drive you there and back. If this is not possible, enquire about hospital transport. Some hospitals provide transport and this can be arranged by the radiotherapy staff. Another option is to contact the community welfare officer at your local Health Service Executive (HSE) office. Sometimes the HSE provide transport to hospitals for outpatient appointments and day centres. They may also assist with your transport costs if you have a long distance to travel. Ask your radiation therapist or nurse if you can speak to the
medical social worker at the hospital, who may have suggestions and advice for you. The Irish Cancer Society has two schemes, Travel2Care and Financial Aid, that can help with travelling expenses. Your medical social worker or specialist nurse or GP or hospital doctor can apply on your behalf, or any health professional involved in your care.

**Tips & Hints – passing the time after radiotherapy**
- Bring a book or magazine with you to read.
- Do crossword or other puzzles.
- Bring a radio and listen to your favourite shows.
- Listen to music on a CD player or MP3 player.
- Take a walk with a friend somewhere quiet and peaceful.

**Guest accommodation**
Depending on where you live and your circumstances, it may be possible to stay at the hospital in guest accommodation. Your cancer specialist may have to write a letter requesting this service for you. If hospital accommodation is not possible, you might have to arrange bed and breakfast or hotel accommodation nearby. The radiotherapy staff may be able to help with this too. If not, ask a family member or friend to help you, especially if you are unfamiliar with the location of the radiotherapy centre or hospital.

**Fatigue and work**
The effect of radiotherapy on people tends to vary. Often it depends on your age and the extent of your treatment. Some find that they can carry on as normal and continue working. They may just prefer to take time off for their treatment sessions and return to work following a nap. Others might find it very tiring and prefer to stay at home and take sick leave from work or school or college. Don’t be afraid to ask for help if you feel overwhelmed, especially if you have young children or older parents to care for. Call the National Cancer Helpline 1800 200 700 for a copy of Coping with Fatigue.

**Will treatment affect my sex life?**
Some people go through radiotherapy with no change to their sex lives at all. Others find that their sex lives are temporarily or permanently changed in some way due to treatment. There is no medical reason to stop having sex during radiotherapy, unless you are receiving treatment to the pelvic area and your doctor advises it. For women of child-bearing age, it is important to take good contraceptive precautions while having radiotherapy. Before treatment, talk to your doctor about reliable methods of contraception that you can use.

You might have no interest in sex or intimacy while dealing with the side-effects of treatment, such as fatigue, nausea or anxiety. You might only return to it once the side-effects have disappeared. It may also take some time to resume sex if you have had surgery which has changed your body image. You may feel self-conscious or vulnerable being with your partner. Indeed you may be afraid that your partner – or a future one – will be put off by the changes to your body. As a result, you may not wish anyone to see or touch your body. Naturally, it can take some time to get used to your new image. This is quite normal. Once you return to your usual routine after radiotherapy, your interest in sex is likely to return too. If it does not, your doctor may suggest some specialist help.

Both external and internal radiotherapy to the pelvis does affect the reproductive organs in men and women. So this may cause a few sexual problems. For example, scar tissue may cause pain or discomfort during sex in the long term.

**Advice for women**
Radiotherapy to the pelvic area affects the ovaries and can cause early menopause. Naturally, this can be very distressing, especially if you are a younger woman and not prepared for it.
The menopause usually occurs gradually so you may have finished your treatment when the first symptoms appear. These may include hot flushes, dryness of the skin and the vagina, and less interest in sex. If dryness of the vagina is making sex painful, your doctor may prescribe a cream or ointment to ease the problem. To moisten the vagina you can use KY gel or other lubricants such as Replens, which are available from your pharmacy without a prescription. In some cases, your doctor can prescribe hormone replacement therapy (HRT) to prevent these symptoms.

Occasionally, radiotherapy to the vaginal area makes the vagina narrower. Vaginal dilators and lubricants are very useful for keeping the vagina supple once you have finished treatment. Your nurse will show you how to use the dilators. Regular sex may also help to prevent narrowing of the vagina, but many women do not feel ready to resume a regular sex life until the side-effects of radiotherapy are gone. Using a dilator can be an effective way of keeping your vagina healthy.

**Advice for men**

If you undergo radiotherapy to the bladder or prostate gland combined with surgery or hormone therapy, you are likely to experience loss of interest in sex and also impotence. This is because radiotherapy can damage the nerves that control getting an erection.

A lot of men develop impotence after external radiotherapy treatment for prostate cancer. If you have had surgery or hormone therapy either before or after your radiotherapy, it may also increase your risk further. Impotence may develop months or years after your radiotherapy has finished. It is important that you discuss these issues with your doctor before and when they occur. If you are between check-ups, contact your doctor for advice. Don’t suffer in silence – there are many ways to help you. Your doctor may recommend that you try Viagra or Cialis. These medications help some men especially when they are started early after radiotherapy.

Anxiety may also play a part in your loss of interest in sex and impotence. The anxiety may be related to your cancer, or worries about your future, or because the treatment is making you too tired for sex.

These effects may last for a few weeks after radiotherapy has finished and can be very distressing. But they will pass and you should be able to resume a normal sex life.

**Sharing your worries**

If you are worried that radiotherapy could affect your sex life, discuss it with your radiation oncologist before your treatment begins. He or she can tell you about any likely side-effects of treatment. You can then talk about the main effects of these, if any, on your sex life. You need to know about all aspects of your treatment, and if sex is an important part of your life, it matters that you are fully aware of any possible changes.

If you have a supportive partner, talking about your feelings may help ease your anxiety. Your partner may even have anxieties too and be waiting for a sign that you are ready to discuss them. Even if you do not feel like having sex, you can still enjoy a close and loving relationship with your partner. You should not feel guilty or embarrassed about talking to your doctor or nurse about what is troubling you. Knowing how sensitive this issue can be, he or she will only be glad to help you. Your doctor may refer you for specialist counselling, if you think that would be helpful.

A booklet called *Sexuality and Cancer* is available from the Irish Cancer Society. Call the National Cancer Helpline 1800 200 700 for a free copy or for advice in confidence.

**Will treatment affect my fertility?**

In general for men and women radiotherapy has no effect on fertility or the ability to have children. However, where the ovaries cannot be excluded from the radiation field, short-term or long-term infertility is likely. If you are a woman in your child-bearing years it is important to discuss contraception and fertility issues with your doctor. Even if your treatment is likely to make you infertile, you will still be strongly advised to use contraceptives. You should try not to become pregnant during radiotherapy as the treatment may be harmful to your baby.
Understanding radiotherapy

If you are sexually active and your partner is still young enough to have children, you must use a reliable method of contraception throughout your treatment and for some time afterwards. It is important too that you discuss with your partner and your doctor contraception and fertility issues. Naturally, you may want to get started on treatment straightaway but you should be aware of the risks of radiotherapy.

Sperm can be reduced and damaged if the testicles are in the area being treated by radiation. This can lead to temporary or permanent infertility. Fortunately, it is usually possible to avoid giving radiotherapy to the testicles in cancers most commonly found in younger men. But radiotherapy for prostate or bladder cancers is likely to cause permanent low sperm counts. You may receive treatment for 2 to 3 months before your sperm count is reduced.

You are likely to have other worries as well. If you are able to have children, you may worry that the cancer may be passed on to them. You may also be worried that future babies you have will be harmed as a result of your treatment. It is important to know that these fears are unfounded. Many men go on to father healthy babies after treatment for radiotherapy.

If tests show that your sperm count is satisfactory, it may be possible to store your eggs before treatment begins. The HARI (Human Assisted Reproduction Ireland) Unit at the Rotunda Hospital, Dublin provides a service where eggs can be frozen. Talk to your cancer specialist about this service or call the National Cancer Helpline 1800 200 700 for more information or for a free booklet called Fertility and Cancer.

Female fertility

Radiotherapy to the pelvic region may cause infertility and you may experience the signs of an early menopause. This may come on gradually over a number of months. You may get hot flushes, dryness of the skin and vagina, or other symptoms of the menopause. Depending on your type of cancer, your doctor may prescribe hormone replacement therapy (HRT) for you.

If your periods stop during radiotherapy, it does not always mean that you are permanently infertile.

Remember that if your periods stop during radiotherapy, it does not always mean that you are permanently infertile. Some side-effects of radiotherapy and chemotherapy, such as vomiting and diarrhoea, can make the contraceptive pill less effective. If you are sexually active and of child-bearing years, you must still use a reliable method of contraception throughout your treatment and until all the effects of treatment have disappeared.

When you have finished treatment, there are blood tests that can be done to show if you are fertile or not. These tests are quite straightforward. Talk to your doctor or nurse who can arrange them for you.

If there is a risk that your radiotherapy treatment will cause long-term infertility, you have the option of freezing your eggs before treatment begins. The HARI (Human Assisted Reproduction Ireland) Unit at the Rotunda Hospital, Dublin provides a service where eggs can be frozen. Talk to your cancer specialist about this service or call the National Cancer Helpline 1800 200 700 for more information or for a free booklet called Fertility and Cancer.

Male fertility

For some men, cancer itself rather than treatment can cause infertility. Sperm tests carried out before treatment begins will show if this is the case. Some types of cancer treatment may also cause infertility, such as radiotherapy to the testis and chemotherapy.

Male fertility

If you are sexually active and your partner is still young enough to have children, you must use a reliable method of contraception throughout your treatment and for some time afterwards. It is important too that you discuss with your partner and your doctor contraception and fertility issues. Naturally, you may want to get started on treatment straightaway but you should be aware of the risks of radiotherapy.

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If tests show that your sperm count is satisfactory, it may be possible to store your sperm before treatment begins. The sperm can then be used at a later date. The HARI (Human Assisted Reproduction Ireland) Unit at the Rotunda Hospital, Dublin provides a service where sperm can be frozen. Call the National Cancer Helpline 1800 200 700 if you would like more information, for confidential advice or for the free booklet called Fertility and Cancer.
Understanding radiotherapy

There is great interest today in complementary treatments for cancer. Lots of people find them helpful and beneficial during their illness. In many countries the way cancer is treated depends on the culture in which you live. In Ireland cancer treatments are based on scientific research, which allows the response to treatment, side-effects and the general effect of treatment to be predicted.

You may hear about the following types of treatments or therapies.

Conventional therapies

Conventional therapies are treatments which doctors use most often to treat people with cancer. These standard treatments include surgery, radiotherapy, chemotherapy and biological treatments. They are tried and trusted methods where the experience with patients is over a long period of time. Many of these treatments have been tested in clinical trials.

Complementary therapies

Complementary therapies are treatments that are sometimes given together with conventional treatment. They include therapies such as:
- Meditation
- Relaxation
- Visualisation
- Gentle massage
- Aromatherapy
- Reflexology
- Music, art and dance therapy
- Nutrition therapy
- Shiatsu
- Yoga
- Acupuncture
- Hypnotherapy

Many people find that complementary therapies are very helpful in a number of ways. You may feel more positive about yourself and your illness. You may be better able to cope with the physical side-effects of cancer and the distressing emotions that cancer can often bring. Some complementary therapies also focus on the spiritual dimension of a person to aid healing and promote a sense of well-being.

Nowadays complementary therapies are often provided in hospitals, cancer treatment centres and support centres and can be given safely.
Life after radiotherapy

When treatment finishes many people look forward to life returning to normal. But you may also have mixed feelings. You may be delighted, even exhilarated, but you may also feel a little low. This can seem confusing but it is normal.

By this time you will have become used to your routine of hospital visits. The end of treatment brings changes and a new routine that needs adjusting to – back to work, school or college. You may find that you miss the regular contact with the people who looked after you during your regular visits to hospital. You may even worry about the cancer coming back. For some people, it is only when the treatment is over that they reflect on what they have been through.

You may be surprised at how long it takes to regain your strength and get back to normal. It can take some months, if not a year, to get over the effects of treatment. You may still feel tired and lacking in energy for many months after treatment has ended.

You might not feel ready to lead as active a life as you did before treatment. It is better not to fight these feelings, but to allow your body the time it needs to recover. You may have problems to solve or decisions to make which you deferred because of treatment. These issues may include changing jobs, getting back to work or study and if you can have children or not.

Health-wise, there are things that you can do to speed up your recovery. They can help you to have a good quality of life in the future.

- Attend all follow-up visits to your doctors
- Get enough rest
- Eat well
- Recognise your needs
- Identify sources of stress
- Talk about your problems
- Set aside time for relaxation and leisure
- Plan ahead
- Decide what is important to you
- Use local resources such as support groups
- Explore complementary therapies
- Give yourself rewards or treats

Alternative therapies

Alternative therapies are not conventional cancer treatments used by doctors. Generally they are treatments used instead of conventional treatments. Alternative therapies include:

- Diet therapy
- Megavitamin therapy
- Herbalism

These therapies are not based on scientific evidence so it is very hard to prove if they are generally effective or not. Many doctors, including the medical committee of the Irish Cancer Society, do not believe that such treatments can cure or control cancer and should not be taken instead of conventional treatments. Alternative treatments can interfere with standard treatment and may not be managed properly.
Call the National Cancer Helpline 1800 200 700 for useful advice or books on life after cancer.

**Follow-up**
Follow-up visits to your cancer doctors are very important. They will allow your doctors to check for signs of recurrence of the cancer, or follow up on any side-effects you still have. He or she will also be able to check for signs of any new effects that may develop after you have finished treatment. It is better to be aware of these as soon as possible so that proper treatment can be given. If you are between check-ups or have a symptom or problem that worries you, let your doctor know, especially if you have one of the following:

- A pain that doesn’t go away, especially if in the same place
- New or unusual lumps or swelling
- Nausea, vomiting, diarrhoea, or loss of appetite
- Unexplained weight loss
- A fever or cough that doesn’t go away
- Unusual rashes, bruises or bleeding
- Any symptom you are concerned about
- Any other warning signs mentioned by your doctor or nurse

Make an appointment to see your doctor as early as possible.

**Coping and emotions**

**How can I cope with my feelings?**

After any treatment for cancer it can take a long time to come to terms with your emotions. Not only do you have to cope with the knowledge that you have cancer, but also the physical effects of radiotherapy too.

Even if radiotherapy can have unpleasant side-effects, many people do manage to live a normal life during treatment. You may need to take some time off for your treatment as well as time afterwards to recover. Just do as much as you feel like and take plenty of rest. It is not a sign of failure to ask for help or to feel unable to cope on your own. Once other people understand how you are feeling, they can give you more support. *Who Can Ever Understand? – Talking About Your Cancer* is a booklet written for people with cancer and is available from the Irish Cancer Society. Another useful booklet is *Understanding the Emotional Effects of Cancer*. Call 1800 200 700 for free copies.

**Feelings and emotions**

Sometimes you may feel anxious, frustrated, afraid or even depressed by your illness. The disease itself and the effect of radiotherapy on your life may make you feel low. Often this may happen because of the change to your usual routine, at the side-effects of treatment, or perhaps the risk of infertility. Other times, you may feel nothing or just numb. It is important to know, however, that you are not alone. Many people who have had cancer have experienced similar feelings and emotions.

For other people, the hardest time is when treatment has finished and things are getting back to normal. An end to your hospital visits may make you feel alone and neglected. It is important to remember that recovery time varies between people. You may feel you need the most support at this time.
Seek information
There are ways to help you deal with feeling fearful or discouraged. One of the first things to do is to find out exactly what is causing your feelings. For example, you may feel anxious, asking questions like: ‘Has the radiotherapy worked?’ or ‘Has it had any damaging effect on my body?’ These questions may leave you feeling afraid of the future and what it may bring.

Information can help you overcome your fears.

Once you have identified why you are feeling low, you can start to take action. Information can sometimes help to overcome fear. If you don’t understand something about your illness, the side-effects or results of your treatment, ask your doctor, nurse or radiation therapist. If you don’t understand the explanation they give, keep asking until you do. Most doctors and nurses are very willing to keep you informed and up-to-date.

Spiritual support
When faced with a cancer diagnosis and treatment, you may start thinking about the meaning of life and the purpose of it all. Your illness may affect your spiritual well-being. Indeed you may be afraid that you are going to die, even if your radiotherapy treatment is going well and your doctor, radiation therapist or nurse has reassured you. Talking to a leader or a member of your religious faith can be helpful in this situation. Don’t be afraid to ask your nurse, a family member or a friend if it can be arranged. Some complementary therapies may also help you to focus on being positive and hopeful. Remember your emotional well-being is as important as your physical health.

If you are finding it hard to cope
If you feel that low moods are getting the better of you, try to talk about your feelings with someone close to you who is a good listener. You may find it helpful to discuss your feelings with a trained counsellor, a leader or a member of your religious faith or a social worker. If you feel comfortable discussing personal worries with your doctor or nurse, they may be able to help you air your feelings and seek further help.

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Sometimes, you just may be unable to cope. If you are finding it difficult to get over a period of depression, your doctor may suggest a treatment. Often a short course of antidepressants can be helpful. These can lift your spirits and have few side-effects in the short term. Emotional difficulties linked with cancer are not always easy to talk about. Often they can be hard to share with loved ones. Talking to a counsellor or psychotherapist who is not personally involved in your situation can be a great help. They can help to make sense of your thoughts, feelings and ideas.

A useful booklet called Understanding the Emotional Effects of Cancer has been written for people with cancer and is available from the Irish Cancer Society. Call the National Cancer Helpline 1800 200 700 if you would like a free copy.

How can I cope with my family?
Looking after or supporting a family can be hard work even when you are well. Trying to juggle the roles of father, mother, daughter, son or breadwinner at the same time as coping with cancer and radiotherapy may seem impossible. It is important to be realistic about what you can manage, and to seek help from your partner, family or friends before things become too much for you to cope with.

Be realistic about what you can manage and seek help if you need it.

Depending on your situation, you may need to give up some or all of your responsibilities for a short period of time. That way you can concentrate on yourself and your recovery. If you have strong emotions or anxiety, it may be necessary to give up your role as breadwinner for your family, or carer for an ageing parent, until you feel better. As a parent, you may not be able to do all the things you usually do for your children. This does not mean that you have failed them in any way, but that you must plan your time and save your energy for the most important tasks.
It is important to talk openly with your partner or family about your worries. They may be feeling the same way, but may not want to upset you by bringing up awkward subjects.

How can I talk to my children?

A cancer diagnosis can affect an entire family. It can bring changes that may be either great or small. Even so, it is best to keep family life as normal as possible. Continue with school and other activities, with birthdays and celebrations or work commitments. It may take a while but families can learn to adjust to changes in their lives.

Every family deals with cancer in a different way. You may feel that you do not want your illness to upset family life, or feel guilty that you cannot do activities with your children or that you’re letting the children down. These are all natural feelings to have at this time.

Be honest

The main thing to remember is that being honest with your family really helps. Keeping your illness a secret may not be the best thing for your children. It can put added pressures on your family and lead to confusion. Children are very sensitive to stress and tension and if you try to protect them by saying nothing, they may feel isolated. In fact, they may have greater fears if told nothing.

It is best that you or your partner tell your children about your cancer diagnosis.

It is important to talk openly with your partner or family.

How can my family and friends help?

Families and friends can support people through their cancer journey in different ways. Some family members and friends can offer a listening ear and give advice if needed. Some may gather up-to-date information on cancer so as to know what their loved one can expect and what they are going through. Others may prefer to help in a practical way with travelling to and from the hospital, with childcare, cooking, shopping or housework. It may take time to know which way suits you and your friend or relative best.

How can I talk to someone with cancer?

When someone close to you has cancer it can be hard to know what to do. Their welfare may be a priority for you, but still you might be unsure when to visit or what to talk about. You may be afraid of upsetting them or saying the wrong thing. So it may seem best to pretend that everything is okay and carry on as normal. Sadly, by not talking to your friend or loved one, it can make them feel even more lonely and isolated. Try not to withdraw because you’re afraid of their illness or what might happen in the future. Although some people do die from cancer, many do not. Be honest with own your feelings too.

Often those with cancer do not wish to burden their family and friends with their worries and concerns. Gentle encouragement can sometimes help. But don’t rush into talking about their illness – knowing that you are always ready to listen and give help may reassure them. You may not think you are doing much by just listening. In fact, it is one of the best ways to help.

Sometimes your friend or relative may get cross or irritable for what may seem to be no good reason. These feelings are completely normal. Be as patient and understanding as you can. Give them the space and time to adjust to the changes in their life. Above all, let them know that you are there, if they want to talk or need help. In time, life will begin to be normal again.

Support resources

Who else can help?

There are many people ready to help you and your family throughout treatment and afterwards.

- Medical social worker
- Oncology liaison nurses
- Cancer nurse co-ordinators
- Psycho-oncology services
- Community welfare officer and community health services
- Support groups and cancer support centres
- Irish Cancer Society helpline nurses

Medical social worker: The medical social worker in your hospital can help in many ways. He or she can give support and counselling to you and your family and advice on benefits, entitlements and services available when you go home.

Cancer nurse specialists: Some of the major cancer treatment hospitals have oncology liaison nurses and/or cancer nurse co-ordinators. These specially trained nurses can support you and your families from the time of diagnosis and throughout treatment. These experts along with other members of your medical team work together to meet your needs.

Psycho-oncology services: In some larger hospitals there are special units that provide psycho-oncology services. This means that you are given psychological care and support during your diagnosis, treatment and recovery by a team of experts. Usually the team consists of psychiatrists, clinical psychologists and nurses working closely together.

Community health services: When you go home, there are various community health services available from your local health centre. These centres have family doctors, public health nurses (who can visit
you at home), welfare officers and home-help organisers. If you live far from the hospital where you have been treated, your community welfare officer can also help with practical issues such as transport costs, financial worries, etc. All these people in community health services can provide advice and support. More information on the services is available either from the social worker in the hospital before you go home or at your local health centre.

Support groups and cancer support centres: Joining a support group can put you in touch with people who have been in a similar situation. They can give you practical advice about living with cancer. There are a range of support groups that will support you and your family at time of diagnosis, throughout treatment and afterwards. A list of support groups is given at the back of this booklet. Cancer support centres are found in every county in Ireland and can offer a wide range of services. Some of these are listed at the back of this booklet.

Irish Cancer Society: The staff of the National Cancer Helpline will be happy to discuss any concerns you or your family may have, at any stage of your illness. Call 1800 200 700 for information about any of the services outlined above or for support services in your area.

Remember that there are many people ready to help you.

Health cover

Health cover falls into two categories – cover for medical card holders and cover for all other categories. Details of the following are given here:

- Hospital cover
- Outpatient cover
- Medical card
- GP visit card
- Drug Payments Scheme (DPS)

- Private healthcare cover
- Benefits and allowances

At the end of this section there are also some useful telephone numbers and addresses for further help.

Hospital cover

At present, everyone is entitled to hospital inpatient services in a public ward in all public hospitals. There is a €75 a night charge up to a limit of €750 in 1 year. These charges do not apply to medical card holders. Higher rates apply for semi-private or private care.

Outpatient cover

If you go to the outpatients or A&E unit of a public hospital, without being referred there by a GP, you may be charged €100. There is no charge if you have a medical card or are admitted to hospital as a result of attending the A&E unit first.

Medical card

A medical card usually allows you, your spouse and any child under 16 to free GP services, prescribed drugs and medicines, inpatient public hospital services as well as outpatient services and medical appliances.

To qualify for a medical card depends on a means test. If you are over 70 and your weekly income is €700 or less, you can apply for a card. Financial guidelines are set out each year and are available from your local Health Service Executive (HSE) office. If your means are above but close to the guidelines, you should apply for a card anyway as a card may be granted in some situations. For example, if you have a large amount of medical expenses. Also, you may qualify for a medical card because you have a cancer diagnosis. In this case, your spouse and children will not be covered if your means are over the limit.

GP visit card

If you do not qualify for a full medical card, you may be eligible for a GP visit card. This card covers visits to your doctor only and you will have to pay for drugs, outpatient/inpatient charges and medical appliances yourself. It is means tested but will take into account your after-tax income and certain expenses like childcare, rent/mortgage and travel to work. Check with the medical social worker at the hospital or your HSE office to see if you are eligible.
Drugs Payment Scheme
Under the Drugs Payment Scheme (DPS), individuals and families including spouses and dependant children pay a limit of €100 each month to cover the cost of prescribed drugs, medicines and appliances. You can apply for cover under the scheme by contacting your local HSE office. You can also register for this scheme by filling in a registration form at your local pharmacy.

Private healthcare cover
Private health insurance is used to pay for private care in hospital or from various specialists in hospitals or in their practices. In Ireland, this is available through the VHI, Quinn Healthcare, Hibernian AVIVA Health and other schemes. They provide cover for day care/inpatient treatment and hospital outpatient treatment. Before attending hospital, it is best to check the level of cover provided by your insurance company, both for inpatient and outpatient services.

If you have private insurance, you may not always be able to have your tests done as quickly as you would like. Your health insurer has to approve some tests in advance, e.g. MRI scan, PET scan. In some cases, it may take 24–48 hours to get approval from your health insurer.

Benefits and allowances
Information on the following is given in this section:

- Illness Benefit
- Disability Allowance
- Invalidity Pension
- Carer’s Allowance
- Appliances
- Travel to hospital

Illness Benefit
This is a benefit for insured people. Your eligibility will depend on your PRSI contributions. You must be under 66 and unable to work due to illness. Each week you must send a social welfare medical certificate signed by your doctor to the Dept of Social and Family Affairs, PO Box 1650, Dublin 1. Tel (01) 679 7777. These certificates are available from your GP and from the hospital you attend during inpatient care. You should send your claim to the Department within 7 days of becoming ill and unable to attend work. A delay might result in loss of payment. The benefit lasts for 2 years.

Disability Allowance
You might qualify for disability allowance if you are not eligible for illness benefit and not able to work for at least 1 year. Disability allowance is a weekly allowance paid to people with a disability who are aged between 16 and 66. For this allowance you must satisfy a means test, normally live in Ireland and be medically suitable. To be medically suitable you should have an illness that has continued or may continue for at least 1 year. This means that you are unlikely to be able to work for at least 1 year due to your illness.

You are allowed a free travel companion pass and a home benefits package – including an electricity or gas allowance, telephone allowance and free television licence – and a fuel allowance.

Invalidity Pension
This is a pension paid instead of an illness benefit or disability allowance, if you are unable to work permanently. There are three cases where you can be eligible. (1) If you have been incapable of work for at least 12 months and likely to be incapable for at least another 12 months. (2) If you are permanently incapable of work. (3) If you are over the age of 60 and have a serious illness or incapacity.

Your eligibility will also depend on your PRSI contributions and you must normally live in Ireland. You are allowed a free travel pass and a home benefits package – including an electricity or gas allowance, telephone allowance and free television licence – and a fuel allowance.
You are also entitled to a medical card and assistance under the Supplementary Welfare Allowance Scheme. Application forms are available from the Invalidity Pension Claims Section, Social Welfare Services Office, Government Buildings, Ballinalee Road, Longford. Tel: (043) 45211 or (01) 704 3314, Ext. 48728.

**Carer’s Allowance**

This is an allowance for carers on low incomes who look after someone who needs full-time care and attention. You must be aged 18 or over, normally live in Ireland, satisfy a means test, not be self-employed or work more than 15 hours a week outside the home, and not live in a hospital or nursing home. You are allowed a free travel pass and a home benefits package – including an electricity or gas allowance, telephone allowance and free television licence. You are also entitled to a respite care payment every year. For more advice, talk to your social worker and/or the Dept of Social and Family Affairs. You cannot get this allowance if you are receiving another social welfare payment.

Application forms are available from your social welfare office or from the Carer’s Allowance Section, Social Welfare Services Office, Government Buildings, Ballinalee Road, Longford. Tel: (043) 45211 or Dublin (01) 704 3000.

**Carer’s Benefit**

Under carer’s leave legislation, you may be entitled to unpaid temporary leave from your employment. Or if you are employed but wish to care for a sick relative full time, you may qualify for a carer’s benefit. This is a payment made to insured persons who leave the workforce to care for someone in need of full-time care and attention. You must be employed for 8 weeks in the 26-week period immediately before applying for the benefit. You must be aged 16 or over, normally live in Ireland, not be self-employed or employed while caring for the person, and not live in a hospital or nursing home. More information is available from the Carer’s Benefit Section, Social Welfare Services Office, Government Buildings, Ballinalee Road, Longford. Tel: (043) 45211 / Dublin (01) 704 3000.

**Appliances**

For patients who have medical cards most appliances are free of charge. For example, you are entitled to a new hairpiece or wig every 6 months.

**Travel to hospital**

Patients can be faced with many expenses including travelling to and from hospital. If your travel costs are very expensive, discuss it with your social worker at the hospital. Limited help may also be available from your community welfare officer. Some HSE areas provide transport services to hospitals for outpatient appointments and day centres. Sometimes the HSE may assist with transport costs for a person who has to travel a long distance to a hospital.

In general, those who do not have a medical card may be charged for the service. However, the practice varies between HSE areas and often depends on personal circumstances. Charges may be waived in certain cases, like hardship.

**Further information**

Depending on your circumstances at the time of your illness, there are many other benefits and entitlements that may be relevant to you. Always have your PPS number (old RSI number) to hand when you are enquiring about entitlements and benefits. The most direct way to check your eligibility is to contact:
- Your community welfare officer in your local health centre
- The medical social worker in the hospital you are attending.

**For social welfare queries contact:**

**Information Service**

Dept of Social and Family Affairs
Oisín House
212–213 Pearse Street
Dublin 2
Tel: 1850 662 244
Leaflet line: 1890 202 325
Email: info@welfare.ie
Website: www.welfare.ie

Cancer Helpline 1800 200 700
If you have queries about health and social services, contact the HSE office in your area. The Health Service Executive is based in four regions: HSE Dublin North East, HSE Dublin Mid-Leinster, HSE South, and HSE West. For more information contact:

HSE infoline: 1850 241 850 Email: info@hse.ie Website: www.hse.ie

HSE East Coast Area  
[Co Wicklow, South East Dublin]  
Southern Cross House  
Southern Cross Business Park  
Boghall Road  
Bray  
Co Wicklow  
Tel: 01 201 4200

HSE Northern Area  
[North Dublin]  
Swords Business Campus  
Balheary Road  
Swords  
Co Dublin  
Tel: 01 813 1800

HSE South Eastern Area  
[Co Kildare, West Wicklow, South Dublin]  
Oak House  
Millennium Park  
Naas  
Co Kildare  
Tel: 045 880 400

HSE Midland Area  
[Counties Laois, Offaly, Longford, Westmeath]  
Head Office  
Arden Road  
Tullamore  
Co Offaly  
Tel: 057 932 1868

HSE Mid-Western Area  
[Counties Clare, Limerick, Tipperary North]  
Head Office  
31/33 Catherine Street  
Limerick  
Tel: 061 483 286

HSE North Eastern Area  
[Counties Cavan, Monaghan, Louth and Meath]  
Head Office  
Navy Road  
Kells  
Co Meath  
Tel: 046 928 0500

HSE North Western Area  
[Counties Donegal, Sligo, Leitrim and West Cavan]  
Head Office  
Manorhamilton  
Co Leitrim  
Tel: 071 982 0400 / 1850 636 313

HSE South Eastern Area  
[Counties Carlow, Kilkenny, Wexford, Waterford, South Tipperary]  
Head Office  
Lacken  
Dublin Road  
Kilkenny  
Tel: 056 778 4100

HSE Southern Area  
[Counties Cork and Kerry]  
Head Office  
Wilton Road  
Cork  
Tel: 021 454 5011

HSE Western Area  
[Counties Galway, Mayo and Roscommon]  
Head Office  
Merlin Park Regional Hospital  
Galway  
Tel: 091 751 131

Information is also available from your local Citizens Advice Centre. A list of these centres is available from:

Citizens Information Board (formerly Comhairle)  
7th Floor, Hume House, Ballsbridge, Dublin 4  
Tel: 01 605 9000  
Citizen Information Service: 1890 777 121  
Email: information@ciboard.ie  
Website: www.citizensinformationboard.ie

There are also some booklets available that may help you. These include:

Information Guide to Health Services (published by the Dept of Health and Children). Copies are available from your local HSE area office. Tel: 01 671 4711 for local HSE numbers.

Guide to Social Welfare Services (published by the Dept of Social and Family Affairs). Copies available from the Dept of Social and Family Affairs. Tel: 01 874 8444. Email: info@welfare.ie. 
Website: www.welfare.ie

Entitlements for People with Disabilities (published by Comhairle). Available from Citizens Information Board. Tel: 01 605 9000 / 1890 777 121. Email: www.citizensinformationboard.ie
Irish Cancer Society services

The Irish Cancer Society funds a range of cancer support services that provide care and support for people with cancer at home and in hospital.

- Cancer Information Service (CIS)
- Breast Cancer Information Service
- Prostate Cancer Information Service
- Counselling
- Night nursing
- Oncology liaison nurses
- Homecare nurses
- Cancer support groups
- Cancer information booklets
- Financial aid

Cancer Information Service (CIS)

The Society provides a Cancer Information Service with a wide range of services: the National Cancer Helpline is a freefone service that gives confidential information, support and guidance to people concerned about cancer. It is staffed by specialist cancer nurses who have access to the most up-to-date facts on cancer-related issues. These include prevention of cancer, risk factors, screening, dealing with a cancer diagnosis, different treatments, counselling and other support services. The helpline can also put you in contact with the various support groups that are available. The helpline 1800 200 700 operates Monday to Thursday from 9am to 7pm, and every Friday from 9am to 5pm.

- All queries or concerns about cancer can be emailed to the CIS at helpline@irishcancer.ie.
- The walk-in caller service allows anyone with concerns about cancer to freely visit the Society to discuss them in private.
- CancerForum is a bulletin board on our website (www.irishcancer.ie) that gives you the chance to post your comments.
- The CancerChat service is a live chatroom with a link to a Cancer Information Service nurse.

Breast Cancer Information Service

The Breast Cancer Information Service (formerly Action Breast Cancer) provides breast cancer information and support. It also funds breast cancer research. Its services are free and confidential. They include a national helpline, publications, one-to-one support, breast awareness talks and advocacy. The Breast Cancer Information Service freefone helpline 1800 90 30 40 runs weekdays from 9am to 5pm.

Prostate Cancer Information Service

The Prostate Cancer Information Service provides prostate cancer information and support. A Prostate Cancer Information Service freefone 1800 380 380 runs Monday to Thursday from 9am to 7pm, and every Friday from 9am to 5pm. All queries or concerns about prostate cancer can be emailed to prostate@irishcancer.ie

Counselling

Coping with a diagnosis of leukaemia can be very stressful. Patients and their families sometimes find it difficult to come to terms with the illness. Many people feel that they cannot talk to a close friend or relative. Counselling can provide emotional support in a safe and confidential environment. Call the helpline to find out about counselling services provided by the Irish Cancer Society and services available in your area.

Night nursing

The Irish Cancer Society can provide a night nurse, free of charge, for up to 70 hours (mainly at night) to families who are caring for a seriously ill person at home. If you need help, you can find out more about this service from a member of the homecare team, your GP or local public health nurse.

Oncology liaison nurses

The Irish Cancer Society funds oncology liaison nurses who provide information as well as emotional and practical support to the patient and his or her family. Oncology liaison nurses work as part of the hospital team in specialist cancer centres.
Homecare nurses
Homecare nurses are specialist palliative care nurses who offer advice on pain control and other symptoms. These nurses work with GPs and public health nurses to form homecare teams bringing care and support, free of charge, to patients in their own homes. Based in local hospitals, health centres and hospices, they can be contacted through your GP or public health nurse. The Irish Cancer Society contributes financially to this service.

Cancer support groups
The Irish Cancer Society funds a range of support groups set up to support you and your family at time of diagnosis, throughout treatment and afterwards.

Cancer information booklets
These booklets provide information on all aspects of cancer and its treatment. They also offer practical advice on learning how to cope with your illness. The booklets are available free of charge from the Irish Cancer Society.

Financial aid
A diagnosis of cancer can bring with it the added burden of financial worries. In certain circumstances, the Irish Cancer Society can provide limited financial help to patients in need. You may be suitable for schemes such as Travel2Care or Financial Aid. If you would like to request this kind of help, contact your oncology or medical social worker at the hospital where you have been treated. He/she should then fill in an application form and return it the Irish Cancer Society. If there is no social worker, another health professional involved in your care may apply on your behalf.

Useful organisations

Irish Cancer Society
43/45 Northumberland Road
Dublin 4
Tel: 01 231 0500
National Cancer Helpline: 1800 200 700
Breast Cancer Information Service: 1800 30 90 40
Prostate Cancer Information Service: 1800 380 380
Email: helpline@irishcancer.ie
Website: www.cancer.ie

The Carer’s Association
Prior’s Orchard
John’s Quay
Kilkenny
Tel: 056 772 1424
Freefone 1800 024 0724
Email: ceo@carersireland.com
Website: www.carersireland.com

Citizens Information Board (formerly Comhairle)
7th Floor, Hume House
 Ballsbridge
 Dublin 4
 Citizen Information Service:
 1890 777 121
 Tel: 01 605 9000
 Email: information@iciboard.ie
 Website: www.citizensinformationboard.ie

Dept of Social and Family Affairs – Information Service
Osín House
212–213 Pearse Street
Dublin 2
Tel: 1850 662 244
Email: info@welfare.ie
Website: www.welfare.ie

HARI Unit (Human Assisted Reproduction Ireland)
Rotunda Hospital
Parnell Square

Dublin 1
Tel: 01 807 2732
Website: www.rotunda.ie

Health Promotion HSE
Website: www.healthpromotion.ie

Irish Patients Association
Unit 1, 21 Church Road
Ballybrack
Co Dublin
Tel: 01 272 2552
Out-of-hours emergency: 087 652 9448
Email: info@irishpatients.ie
Website: www.irishpatients.ie

Health insurers
Hibernian AVIVA Health (formerly VIVAS Health)
One Park Place
Hatch Street
Dublin 2
Tel: 1850 717 717
Email: info@hibernianavivahealth.ie
Websites: www.hibernianavivahealth.ie

Quinn Healthcare (formerly BUPA)
Mill Island
Fermoy
Co Cork
Local: 1890 700 890
Fax: 025 42122
Email: info@quinn-healthcare.com
Website: www.quinn-healthcare.com

Voluntary Health Insurance (VHI)
VHI House
Lower Abbey Street
Dublin 1
Tel: 01 872 4499
CallSave 1850 44 44 44
Email: info@vhi.ie
Website: www.vhi.ie

If you would like more information on any of the above services, call the National Cancer Helpline 1800 200 700.
National support groups
Bowel Cancer Support Group
Irish Cancer Society
43/45 Northumberland Road
Dublin 4
Tel: Freefone 1800 200 700
Email: support@irishcancer.ie
Website: www.cancer.ie

CanTeen Ireland
Young Peoples’ Cancer Support Group
Carmichael Centre
North Brunswick Street
Dublin 7
Tel: 01 872 2012
Email: canteen@oceanfree.net
Website: www.canteen.net

Lymphoma Support Ireland
Irish Cancer Society
43/45 Northumberland Road
Dublin 4
Freefone 1800 200 700
Email: info@lymphoma.ie
Website: www.lymphoma.ie

Men Against Cancer (MAC)
c/o Irish Cancer Society
43/45 Northumberland Road
Dublin 4
Freefone 1800 200 700
Email: support@irishcancer.ie
Website: www.cancer.ie

Reach to Recovery
Irish Cancer Society
43/45 Northumberland Road
Dublin 4
Freefone 1800 200 700
Email: support@irishcancer.ie
Website: www.cancer.ie

Support groups & support centres
ARC Cancer Support Centre
ARC House
65 Eccles Street
Dublin 7
Tel: 01 830 7333
Email: info@arccancersupport.ie
Website: www.arccancersupport.ie

Beacon Cancer Support Centre
Suite 15
Beacon Court
Sandyford
Dublin 18
Tel: 01 213 5654

Bray Cancer Support & Information Centre
368 Main Street
Bray
Co Wicklow
Tel: 286 6966
Email: bcscc@iol.ie
Website: www.braycancersupport.ie

Cancer Information & Support Centre
Mid-Western Regional Hospital
Dooradoyle
Co Limerick
Tel: 061 485163
Website: www.midwesterncancercentre.ie

CARE – South Tipperary Cancer Support Centre
14 Wellington Street
Clonmel
Co Tipperary
Tel: 052 82667
Email: caresupport@eircom.net
Website: www.cancercare.ie

Cork ARC Cancer Support House
Clifadale
5 O’Donovan Rossa Road
Cork
Tel: 021 427 6688
Email: karen@corkcancersupport.ie
Website: www.corkcancersupport.ie

The Cuisle Centre
Cancer Support Group
Block Road
Portlaoise
Co Laois
Tel: 057 868 1492
Email: cuislecentre@eircom.net

Dóchas – Offaly Cancer Support
Teach Dóchas
Offaly Street
Tullamore
Co Offaly
Tel: 057 932 8268
Email: dochasoffaly@hotmail.com
Website: www.dochasoffaly.ie

Dundalk Cancer Support Group
Community Office
Dundalk Partnership Court
Park Street
Dundalk
Co Louth
Tel: 042 933 0288
Website: www.dconroy@actioncancer.org

Éist – Carlow Cancer Support Group
Tel: 087 767 3240 / 086 316 3838 / 085144 0510
Website: www.cancercare.ie

Éist – East Inishowen Cancer Support Group
Moville
Co Donegal
Tel: 074 938 2874

The Gary Kelly Support Centre
Georges Street
Drogheda

HOPE
Enniscorthy Cancer Support & Information Centre
22 Upper Weafer Street
Enniscorthy
Co Wexford
Tel: 053 923 8555
Email: mary@hopesupportcentre.ie

Inis Aoibhinn – Cancer Care West
Costello Road
University College Hospital Galway
Tel: 091 545 000
Email: info@cancercarewest.ie
Website: www.cancercarewest.ie

Kinvara – Galway Cancer Support Group
Costello Road
University College Hospital Galway
Tel: 091 545 000
Email: info@cancercarewest.ie
Website: www.cancercarewest.ie

LARCC Retreat Centre
Ballinalack
Mullingar
Co Westmeath
Tel: 044 937 1971
Callsave 1850 719 719
Email: info@larcc.ie
Website: www.larcc.ie
Questions to ask your doctor

Here is a list of questions people often want to ask. There is also some space for you to write down your own questions if you wish. Do ask questions as it is always better to ask than to worry.

- Why do I need radiotherapy?
- How successful is radiotherapy for my cancer?
- How long will my treatment take?
- How long will I have to wait before starting treatment?
- If there is a delay in treatment, will my cancer get worse or will the treatment be less successful?
- Do I have to stay in hospital for radiotherapy?
- What side-effects or after-effects will I have?
- Will I be radioactive?
- Do I need to take any precautions at home?
- Do I need to use contraception during my radiotherapy treatment?
- I already have problems with my health. Will radiotherapy make them worse?
- Do I need to make any changes to my diet, job, lifestyle?
- How will my doctor know if my treatment has worked?
Your own questions

1

Answer

2

Answer

3

Answer

4

Answer

5

Answer

Notes
Acknowledgements

We would like to extend a special word of thanks to the following for their invaluable contributions to this booklet and/or previous editions:
Helen Buckley, Clinical Nurse Specialist Oncology
Caragh Miller, Clinical Specialist Radiotherapist
Mary Kissane, Radiation Therapist
Jennifer Ledwith, Cancer Information Nurse

Special thanks also go to Siemens Ireland for permission to reproduce images of linear accelerators and CT simulator in the booklet.

Would you like more information?

We hope this booklet has been of help to you. If you feel you would like more information or someone to talk to, please phone our National Cancer Helpline 1800 200 700.

Would you like to be a patient reviewer?

If you have any suggestions as to how this booklet could be improved, we would be delighted to hear from you. The views of patients, relatives, carers and friends are all welcome. Your comments would help us greatly in the preparation of future information booklets for people with cancer and their carers.

If you wish to email your comments, have an idea for a new booklet or would like to review any of our booklets, please contact us at reviewers@irishcancer.ie. If you would prefer to phone or write to us, see contact details below.

Would you like to help us?

The Irish Cancer Society relies entirely on voluntary contributions from the public to fund its programmes of patient care, education and research. If you would like to support our work in any way – perhaps by making a donation or by organising a local fundraising event – please contact us.

Irish Cancer Society, 43/45 Northumberland Road, Dublin 4
Tel: 01 231 0500 Email: info@irishcancer.ie Website: www.cancer.ie
The mission of the Irish Cancer Society is to play a vital role in achieving world-class cancer services in Ireland, to ensure fewer people get cancer and those that do have better outcomes. Our goals are focused around prevention, survival and quality of life with three programme areas to achieve them: advocacy, cancer services and research.