St Luke’s Radiation Oncology Network at
St Luke’s, Beaumont and St James’s Hospitals
Dublin

St Luke’s Hospital, Dublin 6
Tel: (01) 406 5000
Email: radiotherapy.stlukes@slh.ie

St Luke’s Radiation Oncology Centre at
Beaumont Hospital, Dublin 9
Tel: (01) 704 5500
Email: radiotherapy.beaumont@slh.ie

St Luke’s Radiation Oncology Centre at
St James’s Hospital, Dublin 8
Tel: (01) 420 6900
Email: radiotherapy.stjames@slh.ie

Radiotherapy treatment to the
Head & Neck

A guide for patients
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Patient journey for head & neck radiotherapy

Referral and initial consultation with Radiation Oncologist

- Dental assessment (If required)
- Medical oncology review (if required)
- Dietitian review (If required)

Mould room visit

Clinic visit with Radiation Oncologist if needed

- Simulator
- OR
- CT Scan

A treatment plan is checked

Course of treatment begins

Regular check ups whilst on treatment

Follow-up after treatment

Radiotherapy Treatment for Head and Neck Cancer - A Guide for Patients
About this guide

The information in this guide has been written to give you a better understanding about radiotherapy. It contains general information about radiotherapy, as well as more specific detail about the treatment that has been planned for you. It has been prepared with input from doctors, radiation therapists, nurses and patients.

Please share this guide with your family and friends – they have an important role in helping you. It is important that they feel well informed and understand what is happening. There are also DVDs on radiotherapy which you can take home to watch.

It is impossible to include everything you may need to know in this guide. However, your medical team (doctors (radiation oncologists), nurses and radiation therapists) will give you more precise information about your specific treatment.

We hope you find this guide helpful and we welcome your comments so that the next edition can be improved.

You will be attending the ‘St Luke’s Radiation Oncology Network’ for treatment. The network is spread over three hospital sites;

- St Luke’s Hospital, Dublin 6
- St James’s Hospital, Dublin 8
- Beaumont Hospital, Dublin 9

You will receive your radiotherapy at whichever one of these three sites is most suitable for you.
What is radiotherapy and why is it given?

Radiotherapy uses carefully measured doses of radiation to treat many conditions, most of which are cancers. Radiotherapy beams damage cancer cells and stop them from dividing and growing. The beams can be directed very accurately to any area of the body using sophisticated machines. The most commonly used machines are called ‘linear accelerators’ (or linacs). There are other machines called ‘cobalt’, ‘orthovoltage’ or ‘superficial’ depending on the energy of the X-ray beams required (external radiotherapy).

How does radiotherapy work?

A high dose of radiation damages cells and stops them from growing and dividing. Cancer cells, which are abnormal cells, tend not to recover. Normal cells usually recover or repair themselves quite quickly. Any side effects which occur during treatment are usually temporary.
Radiotherapy to the head and neck region

Radiotherapy is frequently used in the treatment of cancers that arise in the head (excluding brain) and neck. Some of these are highlighted in Figure 1, page 5. It may be given following or as an alternative to surgery. It is often combined with chemotherapy.

How is it given?

Radiotherapy is given to the same part of the body each day and each treatment takes a few minutes. It does not hurt. The machine does not touch you and it is very much like having an ordinary X-ray. When receiving radiotherapy you are usually lying on your back. Any variation from this is explained later in the guide or will be discussed with you by your medical team.

Radiotherapy is given as out patient treatment unless you live too far from the centre to travel each day. The duration of radiotherapy may vary but it is usually between three and six weeks. Your medical team will talk to you about which treatment is best for you.

Sometimes you might miss a treatment due to a public holiday or a machine service. This will be taken into consideration by your medical team. However, we encourage you not to miss any other treatments unless it has been discussed and agreed with your medical team.
If you are about to start (or you have already started) a course of radiotherapy please do not make any holiday plans for the immediate future. Talk to your medical team and take their advice about when it will be suitable for you to plan your break.

What are the benefits of radiotherapy?
The purpose of radiotherapy is to destroy the cancer cells while causing as little damage as possible to normal cells. It can be used to treat many kinds of cancer in almost any part of the body.

Radiotherapy is broadly divided into two main categories: radical or palliative. Your doctor can explain which category applies to you.

Radiotherapy plays an important part in the treatment of head and neck cancers. It may be given before or after surgery. It may also be given following or at the same time as chemotherapy. It may be the only treatment you require.

Palliative treatment means that radiotherapy is given to relieve local symptoms from a tumour, for example to lessen pain, or stop bleeding, or to prevent damage to nearby structures such as nerves.
What are the side effects of radiotherapy?
Radiotherapy can damage or destroy normal cells and cause treatment side effects. These are discussed in more detail later in this guide on page 16.

The side effects of radiotherapy can generally be split into two categories:

- **Early** or **acute side effects** develop during or shortly after treatment. These are usually temporary.

- **Late side effects** are those which can develop months or even years after your radiotherapy is finished. The risk of these side effects occurring is small but, whilst they are rarely severe, they may be permanent.

Your doctor will not advise you to have any treatment unless the benefits are greater than the side effects.

If you are a woman of childbearing age you **should not become pregnant** before or during radiotherapy because the treatment may harm the baby, especially in the first three months of a pregnancy. **Please talk to your doctor, nurse or radiation therapist if you think you might be pregnant.** Your doctor will also be able to advise you on how long you should wait after your therapy before becoming pregnant.
Receiving external radiotherapy does not make you radioactive or dangerous to be around. Once you have left the treatment room each day it is completely safe for you to mix with children and pregnant women.

Consent to treatment
You will be asked to sign a consent form but only when you are happy that you have all the information you need and your questions are answered. This is a written record stating that you have agreed to the planned radiotherapy. There is a copy of the consent form in the back of this guide for your reference.

Your medical team
Over the course of your treatment at the radiotherapy centre you will meet various members of the medical team. The team is often referred to as the ‘multidisciplinary team’. The team will have a consultant radiation oncologist, specialist registrars, radiotherapy nurses or clinical nurse specialists and radiation therapists. The radiation therapists operate the treatment machines and give you your radiotherapy. You will not meet the planning and physics staff but they are part of the team that plan your radiotherapy treatment.

All members of your multidisciplinary team work closely together. They can give you help and advice about any aspect of your treatment. Don’t be embarrassed or afraid to ask them anything you are concerned or anxious about.
Dental assessment
You may need to attend the Dublin Dental Hospital for assessment before starting radiotherapy. The dental team will want to make sure your teeth are as healthy as possible before starting treatment. Sometimes this may involve removing some of the teeth. You may also require a ‘stent’ to be made for you. This is placed in your mouth during treatment and may help reduce side effects from your treatment.

Dietitian review
A dietitian will be involved in your care to help you maintain a healthy weight and give you advice about nutrition during treatment. Maintaining a stable weight during treatment is very important in helping you get through your treatment. If you are already having difficulty swallowing, or you are likely to develop this during your treatment, it may be recommended that a small tube (PEG) is inserted into your stomach. This allows liquid food to enter directly into your stomach. Please note that not everyone will require this and feel free to discuss this with your medical team.

Medical oncology review
Your consultant may recommend some chemotherapy as well as radiotherapy. You may have this before and/or during radiotherapy.
Planning your treatment

We have to make sure that the area of your body to be treated includes all of the cancer cells and any areas that might be hiding cancer cells. We try as much as possible to avoid targeting healthy cells.

When you arrive at the treatment centre you should report to the reception desk and show your appointment letter.

Most patients who need treatment to the head and neck have a special plastic shell (also known as a mask or orfit – see Figure 2) while having their treatment. This helps you to keep still during your treatment and ensures that the treatment is given to the same area each day. Many patients, especially if they are claustrophobic, worry about having a shell made.

Be reassured, most people cope very well and help is available if you need it. There are holes in the shell for you to breathe through and see through.

Figure 2
Please note: If you have a beard or moustache, it is advisable to shave it off before you have your mask made. Your mask is created and moulded to fit you as a ‘second skin’ around your head and neck region. Your mask may not fit you as well if you have hair in this region. Please speak to a radiation therapist if you have any concerns regarding this.

Once the shell has been made you will need to have a **CT scan** (while wearing the shell). This is a special X-ray machine that takes a scan of your body. The scans help the doctor decide the exact area within the body that needs treatment.

It may be necessary to perform a simple blood test and give you an injection of dye (**intravenous contrast**) into a vein in the back of your hand just before the scan. Your medical team will discuss this with you if this is recommended.

Once all the scans, pictures and measurements are taken, the rest of the treatment planning will happen behind the scenes over the next few weeks with the help of a **physicist** or **planner**. They assist the doctors in deciding the best way of giving you the amount of radiotherapy you need.
When will treatment begin?

Your treatment will usually start 2-4 weeks after your radiotherapy planning appointment. If you are given a different timeframe the reason for this will be explained by one of the team at your consultation.

During the treatment

At each treatment the radiation therapists will take you into the treatment room and make sure you are in the right position. When they are satisfied with the position, they will leave the room for a short while so that the treatment can be delivered. You will not feel anything but you may hear a bleeping sound. This is quite normal and means that the treatment is happening. During the treatment, the radiation therapists will watch you on a television screen and can talk to you over an intercom. They can also hear you. You are welcome to bring a favourite CD to listen to while you are being treated. Each treatment may take 10-20 minutes.
During your treatment, scans or X-rays will be taken regularly at the treatment unit to monitor your position and the treatment area.

It is very important that you lie still in exactly the same position for each treatment. This will nearly always be on your back.

Some days you might notice some changes in the way the radiation therapists give you your treatment. For example, they might take a scan, a measurement or change the angles of the machine. Every effort will be made to make sure that changes are explained to you beforehand but if you are concerned about anything please just ask.

Illustration B
Undergoing radiotherapy treatment on a linear accelerator.
You will probably meet many other patients in the waiting area each day. Even though you might think your treatment is similar to someone else’s, each patient’s treatment is often very different. Therefore, if you are comparing stories and hear something that worries you, please just ask one of the professional staff.

Although your treatment only takes about 20 minutes each day you may be delayed longer on the days that you see the doctor, nurse or any other health care professional.

Please be assured that we make every effort to keep your waiting times to a minimum. If your treatment is cancelled any day due to a machine service or a machine break down, you will get this treatment session again i.e., you will always get the exact number of treatments your doctor prescribed for you.

You will be seen at least every two weeks by your medical team and on a daily basis by your radiation therapists and nurses.
Side effects

There are always some side effects; they are generally limited to the area being treated and depend on the size of that area and the particular tissues involved. Many of these side effects are treatable. Not all the side effects mentioned below will necessarily happen and your radiation oncologist will discuss these with you on an individual basis.

Side effects usually start off mild and may progress during treatment. Some of the side effects occur immediately, some of them happen soon after the radiotherapy treatment finishes and others can occur months or years later. You will be fully informed of all the expected and potential side effects at the time the consent form is signed.

Remember: your medical team are all available to answer any questions that you may have during your course of radiotherapy.

Please inform any of the medical team as soon as possible if you notice any change in yourself or your normal routine, such as a change in diet, weight, sleeping habits, increased discomfort or pain.

The side effects of radiotherapy to the head, neck and chest region may be aggravated by alcohol and cigarette smoking. Therefore all patients are advised to stop smoking and minimise their alcohol intake. This is especially important during and immediately after treatment.
Early side effects (during and shortly after radiotherapy)

Voice changes
If your larynx (voice box) is in the treatment area, your voice may become hoarse. It may become sore for you to talk. If you have a voice prosthesis such as a Blom-Singer valve or are using a Servox (electronic larynx) your speech may temporarily worsen. A speech therapist can provide further advice on this.

Ear problems
You may find that your hearing is affected by the treatment. This may be due to swelling in the ear caused by the treatment and only happens if part of the ear is in the treatment area. This is a temporary side effect, but it may take a few months to get better.

Inside the ear may also become itchy. It may weep a little. This is a normal reaction. It will settle down three or four weeks after the treatment finishes.
Dry mouth

Radiotherapy to the head, face and/or neck can cause your mouth to become dry and sore. The following may occur; a sticky dry feeling in the mouth, thick string-like saliva, a pain or burning sensation in the mouth or tongue, a dry rough tongue, cracks in the corners of the mouth and lips, difficulty swallowing and difficulty talking.

These effects usually only happen during and after the second week of treatment. Although a dry and sore mouth cannot be completely prevented, there are some ways to reduce the symptoms:

- Always drink plenty of fluids – at least 6 drinks (mug or large glass) a day.
- Keep your mouth fresh and clean using the oral hygiene advice on page 20.
- Eat moist, soft foods as indicated on page 24.
If your mouth is dry:

- Avoid chocolate, pastry and freshly baked bread as these can stick to the roof of your mouth.
- Sip drinks frequently, especially with meals.
- Suck ice cubes or lollies.
- Fizzy drinks can make your mouth feel fresher.
- Suck strongly flavoured pastilles or mints to keep your mouth moist.
- Artificial saliva is available and can be very effective – ask your medical team about this.

If your mouth is sore:

- Avoid things that will hurt or irritate your mouth:
  - Salty or spicy foods
  - Acid fruits and juices such as oranges or grapefruit
  - Coarse or dry foods such as crisps, toast and dry biscuits
  - Alcohol and smoking
  - Food that is very hot or very cold.
- Drink through a straw if lips are sore.
- Discuss pain medication with your doctor or nurse.

Smoking: We strongly advise you not to smoke, especially during your treatment. Smoking will increase the severity of the side effects from the radiotherapy and you will become very sore as a result. Your team are available to help and support you to stop smoking. Nicotine patches and/or medication are available.
Alcohol: Drinking alcohol is not advised. This will increase the severity of your side effects, especially if you drink spirits. Your team are available to help and support you to stop drinking.

Mouth soreness (and hygiene)
Radiotherapy to the mouth and throat area can cause this area to become sore and inflamed, leaving the area open to infection. The dentist will advise you about special care to keep your mouth and teeth clean during your treatment. This care must be taken from the beginning of your treatment. Following the instructions below can help reduce the pain and soreness from the radiotherapy. This will prevent infection and also help you to continue eating and drinking during your treatment.

Good oral hygiene includes gently brushing your teeth and tongue, flossing daily and using a mouthwash regularly. It is also important to keep your mouth moist by drinking plenty of fluids. Omit flossing if it becomes painful. If you notice any bleeding or sore spots in your mouth, consult your radiation therapist, doctor or nurse.
If you have your own teeth:

- Brush your teeth using a soft toothbrush and fluoride toothpaste.
- Rinse the inside of your mouth before and after eating with the mouthwash recommended to you.
- Avoid alcohol-based mouthwashes such as Corsodyl.
- Follow any oral hygiene advice that you may have received from your dentist or dental hygienist.

If you have dentures:

- Dentures need to be cleaned day and night.
- If your mouth is becoming increasingly sore you may find leaving your dentures out during the day more comfortable. Discuss this with your medical team first. If you had dentures in when your mask was made then you will have to keep them in for treatment.

Recommended mouthwash: Dissolve 1 level teaspoon of bicarbonate soda (bread soda) in 1 litre of tepid water. Make a fresh litre of this mouthwash each day. Rinse your mouth before and after eating. Only use the mouthwash that is recommended to you.

In the first few days of treatment you should rinse your mouth before and after every meal. However, it is recommended to increase rinsing to every 2 hours after one week of treatment.
**Medications:** Topical gels/creams, different mouthwashes and pain medication may also be prescribed during your treatment.

**Taste changes**

Taste changes or even loss of taste can be caused directly by the radiation treatment or indirectly by the side effects of the treatment i.e. dry and sore mouth. You may find that all foods taste the same or have a bland taste. This can last 3-8 weeks after you finish your treatment. It is extremely important to try and keep eating throughout your treatment and in the weeks that follow.

Here are some suggestions to help with taste changes:

- Keep your mouth fresh and clean.
- Drink plenty of fluids – at least 6 drinks per day (large glass or mug).
- Make food as attractive as possible so you can still enjoy its appearance and smell. Concentrate on foods you enjoy even if they are different from your usual favourites.
- Sharp or fizzy drinks and fruits may stimulate your taste buds. Herbs and spices add flavour, but be careful if your mouth is sore.
- Try sipping drinks through a straw, as you will avoid some of your taste buds by doing so. This may cut down on unpleasant tastes.
- Pineapple slices may be refreshing but be careful as they may sting your mouth if sore.
• To avoid a metallic taste in your mouth use plastic cutlery and avoid foods that contain artificial sweeteners. Try lemon juice mixed with water before meals.

**Diet and nutrition**

Loss of appetite, loss of weight or eating difficulties can be as a result of your disease or because of the side effects of your treatment. Eating well is extremely important particularly during your treatment, as your body needs the energy and nutrients to rebuild damaged tissue, fight infection and cope with treatment side effects. Furthermore, we would like to keep your weight as stable as possible during radiotherapy in order for you to maintain the same shape and size. This is very important because if your weight or shape changes, your treatment may have to be stopped and replanned.

Please tell your doctor or nurse urgently if you notice difficulty swallowing or weight loss.

Your weight will be monitored carefully throughout your treatment and you may need to visit a dietitian on a regular basis to aid your nutritional management. It is advised that you are aware of your own weight and weigh yourself weekly. If you notice a change in your weight please inform any one of your medical team.
Concentrate on eating soft moist foods such as:

<table>
<thead>
<tr>
<th>Savoury</th>
<th>Sweet</th>
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</thead>
<tbody>
<tr>
<td>• Creamy soups</td>
<td>• Milk puddings (e.g.</td>
</tr>
<tr>
<td>• Fish in sauce</td>
<td>tapioca, semolina,</td>
</tr>
<tr>
<td>• Baked beans</td>
<td>custard, rice pudding)</td>
</tr>
<tr>
<td>• Tender meat casseroles and stews</td>
<td>• Mousses, crème caramel,</td>
</tr>
<tr>
<td>• Minced meat such as</td>
<td>yoghurts</td>
</tr>
<tr>
<td>spaghetti bolognaise and</td>
<td>• Ice-cream</td>
</tr>
<tr>
<td>shepherd’s pie</td>
<td></td>
</tr>
<tr>
<td>• Fish pie or mashed</td>
<td></td>
</tr>
<tr>
<td>tuna with mayonnaise</td>
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</tbody>
</table>

**To Savoury foods add:**
Butter, margarine, cream, cream cheese, block cheese, grated cheese, cottage cheese, evaporated milk or milk powder

**To Sweet foods add:**
Butter, cream, condensed milk, milk powder, sugar, jam, honey or syrup.

**Tip:** To make your own fortified milk add 4 tablespoons of dried milk powder (Marvel, Arrabawn) to 1 pint of full cream milk.

Full fat milk and dairy products (milk, butter, cream and cheese) can be used to give you more energy.
<table>
<thead>
<tr>
<th><strong>Loss of appetite and weight loss:</strong></th>
<th><strong>Making the most of your food:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Try to make the most of when your appetite is good - have regular meals and snacks.</td>
<td>• Enriching your food with nutrients and extra calories is important to help maintain your weight.</td>
</tr>
<tr>
<td>• Try different foods, you may find you like things you would not usually eat.</td>
<td>• Use full fat dairy products, especially milk and yoghurts, instead of low fat types.</td>
</tr>
<tr>
<td>• Do not try to eat large meals. Try eating small amounts more often. Aim for 6 small meals and nourishing snacks each day between meals.</td>
<td>• Add dried milk powder or natural Complan to soups, sauces, milky puddings and custards.</td>
</tr>
<tr>
<td>• Make food as nourishing as possible. If you cannot face solid foods, try a nourishing drink e.g. milk, creamy soup, Complan, Build-up.</td>
<td>• Add cheese and cream to food such as mashed potatoes, creamy sauces and soup.</td>
</tr>
<tr>
<td>• Let people cook for you. Cooking your own food can be tiresome and off-putting. Convenience foods can be useful standbys.</td>
<td>• Use extra spreads or dressings such as full-fat butter, margarine, mayonnaise, peanut-butter, chocolate spread, jam or marmalade.</td>
</tr>
</tbody>
</table>
Loss of appetite and weight loss:

- Try to relax and enjoy what you eat. A short walk before a meal or simply getting some fresh air may help give you an appetite.

Making the most of your food:

- Add white or brown sugar, honey, syrup or treacle to cereals, drinks or desserts.
- Try adding extra gravy, butter or margarine to increase moisture to your food.

**Remember:** Try to drink 6 large glasses of fluids per day especially before, during and after treatment.

**Skin irritation**

A skin reaction is a common side effect of radiotherapy. This occurs because the radiation must pass through the skin in order to treat the part of your body that needs treatment. Only the skin within the treatment area will be affected and this usually occurs from the second week of treatment up to four weeks after you finish radiotherapy. The type of reaction that is likely to be seen is a visible reddening of the area being treated. This may become sore and itchy and may even become blistered in some areas.
The severity of the reaction varies from person to person and there are a variety of different creams, gels and dressings that are available if required. There are also measures you can take to keep your skin in good condition to help it to tolerate the radiotherapy.

**Remember:** a skin reaction will only affect the part of your body being treated, so you only need to follow the Dos and Don’ts for the part of your body in question.

**Dos**

- Wash your skin, but only use simple, non-perfumed soap. Perfumed soaps might make the reaction worse. The area should be washed gently and patted dry with a soft clean towel.
- Use lukewarm water to wash with.

**Don’ts**

- Do not use perfumed soaps or shower gel. These might make your skin sore.
- Do not use any creams, powders, lotions or home remedies on the skin in the treatment area unless we advise you to do so.
- Do not use any cream on broken skin unless advised to do so.
### Dos

- Use an aqueous cream (water-based cream) such as E45 twice a day from the start of your treatment. Increase the number of uses if necessary.
- Wear loose cotton clothing around your neck to avoid friction.
- Use mild detergent to wash your clothes.
- Try to get air to the affected area as this will aid the healing process.
- Make sure you tell us if the area becomes sore or uncomfortable. We will be able to provide you with different creams, gels, dressings or painkillers if required.

### Don’ts

- Do not scrub at the area - scrubbing will make the irritation worse.
- Do not scratch the area.
- Avoid exposure to extreme temperatures, for example ice packs and hot water bottles.
- Do not swim in chlorinated water. Even when your treatment is finished, wait until your skin is fully healed.
- Do not expose your skin to the sun during treatment. **Note**: your skin will always be more sensitive to the sun after radiotherapy so high SPF or even total sun block is advisable.
- Do not use perfume or after-shave on your skin during or for four weeks after treatment.
Women: Do not use makeup in the area that is being treated as this may increase the severity of your skin reaction. Do not use your regular creams, lotions or powders on the treatment area.

Men: Dry shave only, using an electric razor if necessary. Try to reduce the number of times you shave, for example every second day. This will be more gentle on your skin. You will notice the hair in the area that is being treated will stop growing approximately 2-3 weeks into treatment therefore you will not need to shave that area. This hair loss is only temporary and it will eventually grow back.

What about sun exposure?
The skin that has been exposed to radiation therapy might be more sensitive to the sun than it was in the past. You can go out in the sun, but be sure to use a sunblock that is rated SPF 50 or higher on the area that has been treated. Also, try to wear a hat and clothing that will cover the skin.

Tracheostomy care
If you have a tracheostomy (a tube in your neck to help you breathe) the head and neck Clinical Nurse Specialist will be able to give you help and advice about caring for it. While you are on treatment the nurses in the ward or in the radiotherapy department (if you are an out patient) will help you to keep your tracheostomy clean and to keep your airway clear so that you are able to breathe comfortably.

Pain medication
Almost everyone receiving radiotherapy to the head and neck area will experience soreness or pain as a result of the side effects caused by the treatment.
It is extremely important that you inform your radiation therapists, nurse or doctor if you are experiencing pain. We will be able to provide you with adequate pain relief to make you feel as comfortable as possible and to allow you to eat and drink. The pain medication you will require can vary from paracetemol to morphine, depending on what you need.

**Fatigue (tiredness)**

You might feel more tired than usual during your radiotherapy. This is at its worst towards the end of your treatment and immediately after treatment is finished. It is important that you get enough sleep and rest, but there should be no reason to drastically change your lifestyle.

The fatigue you will feel with radiation therapy is not the same kind of tiredness that comes after ‘overdoing it’ which goes away after a good night’s sleep. This treatment-related fatigue might feel like an overall lack of energy and might persist for many weeks or even months.

You might become fatigued during radiation treatment because of a combination of factors, including:

> the effect of radiation on your body
> the demands of keeping to the routine of daily treatments
> the emotional toll of the months since your diagnosis
> lingering physical effects from chemotherapy or surgery
> changes in diet and lifestyle because of the disruption the treatment causes
Combating fatigue

> **Listen to your body.** You should expect to feel fatigued now and then during your radiation treatment. If you acknowledge and expect it, you will better be able to deal with it when it happens.

> **Re-establish a reasonable routine.** You will minimise the stress associated with fatigue if your daily routine is realistic and organised.

> **Try to exercise.** A little bit of exercise should give you more energy. Try to establish a regular routine of walking. If you feel more energetic afterwards, you might be able to increase the amount you do each day. Just don’t overdo it!

> **Get more rest.** Many patients find that short ‘cat naps’ during the day give them more energy overall. Save your energy for only the most important activities during the day.

> **Ask for and accept help.** When you are undergoing treatment for any serious illness, it is a good time to ask for help—at home and in the workplace.
Late side effects (months to years after radiotherapy)

These are the most difficult to predict. The risk of these is small and whilst they are rarely severe, they may be permanent. They are dependant on the area treated, so the rest of this section will only apply to some patients.

- **Salivary Glands**: may produce less saliva, which will lead to a dry mouth and a need to drink more fluid than normal especially when eating. This may mean that the teeth will be more at risk of tooth decay. It is important that teeth are cleaned regularly and that regular dental check-ups are performed. There is also a risk of poor healing and jaw damage if dental extractions are performed after radiotherapy treatment.

> Your regular dentist must be told about the radiotherapy treatment. No dental extractions should be performed without your dentist informing your medical team.

- **Thyroid Gland**: (A hormone gland situated in the lower neck) can also be affected by radiation. It may become under-active or occasionally over-active even many years after treatment. Both these conditions are detectable on a blood test and can easily be corrected by simple daily medication.
• **Pituitary Gland:** Your pituitary gland produces hormones that regulate growth and metabolism in the body. This may be affected and become underactive many years after radiotherapy treatment. Again, this is treatable with medication.

• **Optic Nerve:** In some cases it may be essential to treat the optic (eye) nerve. If this is required then your doctor will explain any expected side effects on an individual basis.

• **Cataract Development:** This may occur because of unavoidable radiation to the eye. Fortunately cataract surgery today is very straightforward and successful and can be performed as a day case. The surgery is done by an eye specialist (Ophthalmologist).

• **Trismus:** If you are receiving radiotherapy to the jaw area, the muscles used to open and close your mouth may become stiff (trismus). Your medical team will let you know if there is a risk of this and may refer you to a Speech & Language Therapist or one of our Physiotherapists for assessment and exercises.

• **Difficulty swallowing:** Many patients have difficulty swallowing before their treatment starts because of the tumour itself, or sometimes after surgery. Radiotherapy can also cause swallowing difficulties, which may progress during treatment. This often improves after treatment but may not recover completely. Some patients will require a PEG tube to be inserted into their stomach for feeding, either before or during treatment. This can usually be removed approximately three months after treatment but some patients may need to use the feeding tube permanently.
• **Hearing loss:** Sometimes after your radiotherapy treatment is finished you may develop reduced hearing in one or both ears. This usually happens gradually and is more common in patients who have also received chemotherapy.

• **Skin:** You may develop some thickening and hardening of the skin and soft tissues in the neck, especially if you have also undergone surgery in the neck.

• **Neck, shoulder or jaw movements:** Over the long term you may feel stiffness in the muscles around your neck, shoulder or jaw area, resulting in reduced movement at these joints. This stiffness can be caused by scar tissue from a combination of surgery and radiotherapy. Scar tissue makes the muscles and soft tissues around these joints tight and less elastic. It may be helpful to continue any stretching exercises you were given after surgery. Referral to a physiotherapist for an exercise program and advice may also be helpful.

• **Rare long term side effects:** There is a very small risk of developing a second cancer often many years later as a result of receiving radiotherapy. This risk is much smaller than the benefit of the radiotherapy in treating your current cancer.
Effects on the spinal cord

Long term spinal cord damage is possible but very rare following radiation. This could cause paralysis to your legs. Please ask your doctor to discuss this in more detail with you.

During your follow-up care we will be looking out for all of these problems. Please feel free to discuss any concerns you have with your doctors during your follow-up appointments.

Your feelings

After your cancer diagnosis and treatment, it’s normal for you to have a range of very mixed feelings including anger, anxiety, fear and sadness. These are all normal reactions that many patients go through. Everyone has their own way of coping. Some find it helpful to talk things over with other people who have been through similar experiences as themselves. Other patients prefer to keep their feelings to themselves.

There is no right or wrong way to cope, but help is there if you need it. Please feel free to talk to a team member about getting support if you feel it would help you. You might find it helpful to contact another support group or organisation.

The Irish Cancer Society
43/45 Northumberland Road, Dublin 4
Tel: 01 231 0500

National Cancer Helpline
1800 200 700
www.cancer.ie
The Irish Cancer Society Information Service offers free, confidential advice, support and information on cancer and related issues to anyone worried about any aspect of cancer prevention, early detection, diagnosis, treatment or follow-on care. Through the Cancer Information Service, people can also access patient support groups and counselling services.

**ARC House**

65 Eccles Street, 559 South Circular Road, Dublin 7, Dublin 8
Tel: 01 8307333 Tel: 01 7078880
www.arccancersupport.ie

ARC is a registered charity offering professional support to people affected by cancer and those who care for them. They are based in Eccles Street and the South Circular Road in Dublin.

### Who you’ll meet

**Consultant and their team**

Your consultant is a Radiation Oncologist who will decide on the type and amount of treatment you will have. In general, you will have been referred to them by another hospital doctor or GP. The most senior doctor is the Consultant who has overall responsibility for your care. Your consultant will have a Senior Registrar or a Registrar working with them. If you are admitted to the hospital, you will also meet the SHO (Senior House Officer), who works with your consultant.
Radiation Therapist
Radiation therapists are specialists who are trained to give you your radiotherapy treatment and to operate the machines that are used to give you your treatment. They are completely involved with your treatment from helping to plan your treatment right through to monitoring all aspects of your daily treatment. They work closely with the doctors and other staff within the department. As they see you every day while you’re having treatment they can answer any questions you have about any aspect of your radiotherapy treatment.

Clinical Nurse Specialist
A Clinical Nurse Specialist is a nurse in clinical practice who has undertaken additional education relevant to their area of specialist practice. Clinical Nurse Specialists provide support for the patient and their family throughout treatment and after discharge from the hospital if necessary. They have up-to-date information about treatment, possible side effects and any other problems or issues that may arise. If you would like to be seen by a Clinical Nurse Specialist please talk to a member of your medical or nursing team to arrange this.

Radiotherapy Nurse
Each consultant has a radiotherapy nurse attached to their team. These are nurses who are specially trained in caring for people with cancer. You will meet one of them when you first attend your treatment centre and then you’ll see them on a very regular basis during your radiation treatment. They are available throughout the working day if you have any concerns.
**Physicist and Planner**
These people are highly trained scientific specialists in the subject of radiotherapy planning. They help the doctors to decide the best way of delivering the radiotherapy you need.

**Diagnostic Imaging Department**
The Diagnostic Imaging, or X-ray department as it is often called, carries out a variety of imaging examinations for both in patients and out patients. These examinations can include plain film X-rays, ultrasound scans, CT Scans (Computed Tomography), a process called Fluoroscopy or Image Guided Biopsies. The imaging examinations play a large part in planning your treatment and they are also used to see how the treatment is working for you. These examinations are carried out by trained radiographers and are viewed and reported by a Consultant Radiologist.

**Social Worker**
A social worker is assigned to each consultant’s team in your treatment centre and they are available to you and your family throughout the course of your treatment. The social worker can provide counselling and emotional support to you and your family in relation to your illness and also in relation to any other issues that might arise while you are on treatment.

They can also help with planning your discharge from hospital and setting up support services in the community. Also, they can give you advice about benefits. Please do not hesitate to ask one of the team to refer you to the social worker.
**Psycho Oncology Service**

The emotional impact of a cancer diagnosis and treatment is very difficult. It is normal to feel stress, anxiety, sadness, anger or a sense of losing control. People deal with their emotions differently. Some people find inner strength and draw support and comfort from friends and family, others might need additional help. Your multidisciplinary team plays an important role in helping you to cope but occasionally you might feel you need additional help from a psychologist.

Psychologists have specialist training in psychological therapies that help people and families who are particularly distressed, anxious or feeling low. You can choose to see a psychologist for a one-to-one session or you can attend relaxation classes, ‘coping’ talks or you could sign up for a group therapy session which are available in St Luke’s Hospital, Rathgar, Dublin 6. Please do not hesitate to ask for the psycho oncology information leaflet or to ask for a referral. Details of services available can be provided by your medical team.

**Dietitian**

Dietitians are health professionals trained to give accurate advice on all aspects of nutrition and diet. During radiotherapy some people might need help with their diet to manage side effects and prevent them losing weight. If you have any concerns about your diet, please ask one of your team to refer you to the dietitian for nutritional advice and support.
Clinical Research Nurse or Research Radiation Therapist

Clinical Research Nurses or Clinical Radiation Therapists are trained in caring for patients with cancer who take part in a clinical research study. You might be approached by a member of the research team who will discuss your standard treatment and study related treatment options.

Clinical research studies are carried out in order to try and find new and better treatments for diseases. A cancer clinical research study is a highly organised study designed for people with cancer; to answer specific questions about a new treatment or a new way of using a known treatment. Each research study aims to increase medical knowledge and to find new ways to treat patients.

Physiotherapist

If you experience any pain or loss of movement of your jaw, neck, or shoulder after surgery or during radiotherapy a physiotherapy assessment may help. During this you may be advised on specific exercises, correct posture and return to function. Please ask your doctor if a referral may be helpful.
Palliative Care or Symptom Control Team
During treatment some patients may be seen by our palliative care or symptom control team. These doctors (Consultant or Registrar) and specialist nurses are specialists in dealing with the symptoms associated with cancer and also its treatment.

Speech Therapist
You may be having difficulty talking and/or swallowing. Speech therapists are specialists in dealing with these types of issues. Please ask any of your medical team for further information or ask your doctor for a referral to a speech therapist.
Useful contacts

Consultant Radiation Oncologist

Consultant’s Secretary

Clinical Nurse Specialist

Other

Contact information for St Luke’s Radiation Oncology Network is listed on back cover

St Luke’s Radiation Oncology Network would like to acknowledge the assistance of our patients and staff in producing this guide.

Edited by Dr Charles Gillham
St Luke's Radiation Oncology Network
St Luke's, Beaumont and St James's Centres

Patient or Guardian Consent to Radiotherapy

Patient Name: ____________________________
Patient D.O.B.: ____________________________
ID Number: ____________________________

Type of Treatment: _____________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

Statement of Patient or Guardian
I agree to the above treatment. I understand what is involved in radiotherapy planning and treatment and I have been given enough time to ask questions.
For females only: I have no reason to think I am pregnant now. I understand there is a risk to the foetus if I become pregnant during treatment.

Signed: ____________________________ Date: ____________________________
Name (PRINT): ____________________________ Relationship to patient (if applicable): ____________________________

Statement of Interpreter (where appropriate)
I have communicated the above information to the patient or their guardian to the best of my ability and in a way in which I believe they can understand.

Signed: ____________________________ Date: ____________________________ Name (PRINT): ____________________________

Statement of Health Professional
(to be completed by a health professional with appropriate knowledge of the proposed treatment)
I have explained the treatment to the patient or their guardian or their interpreter. I have outlined the potential benefits as well as the potential acute and late side effects of treatment. I have discussed the procedures involved in radiotherapy treatment planning and delivery and have provided appropriate written information.

Signed: ____________________________ Date: ____________________________

Irish Medical Council No: ____________________________

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Radiotherapy Treatment for Head and Neck Cancer - A Guide for Patients
Notes and questions
St Luke's Radiation Oncology Network at
St Luke’s, Beaumont and St James’s Hospitals
Dublin

St Luke’s Hospital, Dublin 6
Tel: (01) 406 5000
Email: radiotherapy.stlukes@slh.ie

St Luke’s Radiation Oncology Centre at
Beaumont Hospital, Dublin 9
Tel: (01) 704 5500
Email: radiotherapy.beaumont@slh.ie

St Luke’s Radiation Oncology Centre at
St James’s Hospital, Dublin 8
Tel: (01) 420 6900
Email: radiotherapy.stjames@slh.ie

Radiotherapy treatment to the
Head & Neck

A guide for patients