Patients undergoing radioiodine therapy for differentiated thyroid cancer

Introduction
This leaflet tells you about the procedure known as Radioiodine Therapy. It also tells you about the precautions you should take following your treatment. Please read this leaflet and discuss the treatment with your consultant before you sign the consent form.

Before you have the treatment the Nuclear Medicine Department will ask you to visit their department to discuss the procedure and the precautions you must take afterwards. Please feel free to ask them any questions you have about these precautions.

What is radioiodine therapy?
Radioiodine (I-131) therapy is usually an effective treatment following surgery for certain types of thyroid cancer. Radioiodine is a radioactive substance that travels to and is absorbed by thyroid cells within the body. These may be normal or cancer cells that remain after thyroid surgery or tumour cells that have reappeared or spread. The radioactive particles emitted by radioiodine will help destroy these thyroid cells.

Why do I need radioiodine therapy?
You have or may have thyroid cells within your neck or body that could lead to the return of thyroid cancer. Radioiodine Therapy should destroy these cells.

Are there any alternative treatment options?
Your consultant will have decided that this is the best treatment option. You will also have the opportunity to discuss the treatment with your doctor. If you do not want the procedure carried out, you can decide against it.

Who will be performing the radioiodine therapy?
Clinical Scientists from the Nuclear Medicine Department, who are experienced in giving Radioiodine Therapy, will carry out the procedure.

Where will the procedure take place?
The procedure will take place as an inpatient in a special room on the oncology ward and generally requires a stay of 4 days.
How do I prepare for the radioiodine therapy?
You must not be pregnant or breastfeeding.

If you are on T3 (Triiodothyronine) or T4 (Thyroxine) tablets you will be required to stop taking them for a certain period before the therapy. Your consultant will advise you of the actual period. Typically, you must stop taking T3 2 weeks and T4 for 4 weeks before treatment.

A diet which is rich in iodine can reduce the effectiveness of the treatment. Therefore for 3 weeks before your treatment we recommend the following:

- **Do** eat fresh meat, vegetables, fresh fruit, pasta and rice. These are low in iodine.
- **Avoid** fish, fish oils, kelp and all seafood.
- **Avoid** vitamin supplements and cough medicines containing iodine.
- **Avoid** iodised salt. Ordinary table salt is fine.
- **Do not** eat glacé and maraschino cherries which contain the colouring material E127. This may also be found in some red coloured processed foods. Food coloured by spices is allowed.
- **Try to cut down** on dairy produce such as eggs, cheese, milk and milk products as they all contain some iodine. (A limited amount in tea and on cereal is ok).

Please only have a light meal for 2 hours before your treatment. Please be advised that we also ask you not to eat a meal for 2 hours after your treatment.

You should also read and be familiar with the precautions you should take during your stay in hospital and after your discharge from hospital.

What happens during radioiodine therapy?
The procedure involves swallowing a small capsule similar to an ordinary Paracetamol capsule. You must not chew the tablet. If you have difficulty swallowing tablets you must inform us well before your treatment date.

Once you have been given the capsule, you will be required to stay in your room on the ward until the radioiodine concentration has dropped to a low enough level for you to be discharged. This will usually be for a period of 3 - 4 days following your treatment. Whilst you are in hospital please follow the precautions given below:

- The toilet should be flushed twice. Men should use the toilet sitting down to avoid spills of urine on the floor.
- Wipe up any spilled urine with a tissue and flush it away.
- Ensure that you always wash your hands after using the toilet.
- If you use any urine collection device, take advice on its use from your hospital doctor.
- If you cut yourself, wash away the spilled blood.
- You are allowed adult visitors only. They should stay at least one meter away from you. They should only stay for 15 minutes in any single day. Pregnant women should avoid visiting you.
- Take showers - twice or more a day.
- Drink plenty of fluids during your stay.
Will my belongings become radioactive?
We will check your possessions for spilled radiation before you are discharged. Your clothing, particularly your under garments, are likely to contain some radioiodine. This can be easily removed by washing. This should be done in a separate wash using a large volume of water.

It is highly unlikely that any other personal items will be contaminated. If any are, we will store them for a period of time (1 - 3 months) and let you have them back when the contamination has reduced to an acceptable level.

What do I need to do when I leave hospital?
Your body will still contain radioiodine when you leave hospital. We therefore ask that you take some precautions once you have left hospital. You must attend the Nuclear Medicine Department to discuss these in detail before you have your treatment.

A general list of precautions that may apply to you is given below:

1. You should avoid going to places of entertainment for 1 week.
2. You should avoid close and prolonged contact with adults for 1 week.
3. You should avoid kissing or close and prolonged contact with children and pregnant women for 3 weeks.

If you work, precautions 2 and 3 may require you to take some time off. We will discuss this with you and any other precautions that might apply and for how long, when you attend the Nuclear Medicine Department.

Are there any risks involved in having radioiodine therapy to my family and friends?
The risk to your family and friends is minimal. You will be required to stay in a ward room when the greatest amount of radioiodine is in your body. Observing the precautions advised during your stay in hospital will remove any unnecessary hazard presented to your family and friends from spilled urine and blood.

Your body will still be giving off radiation from the I-131 when you leave hospital. Avoiding prolonged close contact with your family and friends as listed above will reduce any hazard associated with this to a minimum. For most people you come into contact with, the amount of radiation they will receive will be within the variation in natural background radiation over a 1 year period. Your partner may receive a higher level of radiation. This is considered acceptable (with their permission), as they are involved in your care.

Are there any side-effects of having radioiodine therapy?
The side-effects from radioiodine are minimal; however you will not be on your thyroid medication and may experience the effects of this.

Inflammation of the salivary glands can occur resulting in tenderness of the salivary glands. If you chew sweets that promote salivary secretions, this will reduce the likelihood of this occurring. A very slight sore throat may occur and very occasionally there may be some swelling of the neck area.
Are there any risks involved in having radioiodine therapy?
There is a serious risk of damage to the fetus should a woman be pregnant when radioiodine is given. Women must not be pregnant and should not seek to become pregnant for at least 6 months after the treatment. There is also significant risk to infant children should their mothers be breastfeeding. Women must stop breastfeeding altogether before the therapy dose is given.

Radioiodine is present in male sperm. Men are advised not to father a child for at least 4 months after their treatment.

You should ask your doctor whether other risks might exist and how they might affect you.

If you have any queries, or require further information please discuss them with your doctors or the Nuclear Medicine Department. Do satisfy yourself that you have received enough information about the procedure before you sign the consent form.

What will happen next?
7 days after the start of your treatment you will be asked to attend the Nuclear Medicine Department to have some pictures taken of your body using a special camera called a gamma camera.

We will advise you of the time when you are discharged from the Oncology Ward.

Most patients will have a radioiodine whole body scan 6 months after treatment.