**Information for patients having Radioactive Iodine Therapy for Thyroid Cancer**

Radioactive iodine therapy is given as a small capsule that you swallow. It is an important part of the treatment plan for some people who have had cancer of the thyroid gland. Thyroid cells take up and are destroyed by radioactive iodine.

***Is radioactive iodine treatment safe?***

Radioactive iodine has been used to treat thyroid cancer for over 50 years. The greatest danger from radioactive iodine is to the thyroid gland, but as your thyroid has been removed, it is not at risk. The treatment is meant to destroy any thyroid cells that may have escaped surgical removal. The precautions that are described below are intended to protect other people, particularly pregnant women and young children. These precautions are designed to reduce the exposure of others to less than half the annual amount of radiation everyone receives naturally.

***Are there any side effects from radioactive iodine treatment?***

Most people do not have side effects form radioactive iodine treatment. Some individuals may experience a feeling of tightness in the throat and/or feel flushed, which usually lasts for no more than 24 hours. If this persists please inform the nursing staff. An anti-inflammatory drug can be given to relieve this problem.

Some people may lose their sense of taste slightly or develop a dry mouth. This can happen a few weeks after the treatment and should only last a few days. Drinking plenty of water after the treatment helps to wash out the radioactivity and reduces this problem. It is also recommended that you chew chewing gum in the days following the radioactive iodine therapy to keep saliva flowing around your mouth.

***Female patients: What if I am pregnant or breast feeding?***

It is very important that you do not have radioactive iodine treatment if you are pregnant, or think there is a good chance that you may be. Please let your medical staff know if you are unsure before you have any treatment. It is important not to become pregnant when having treatment for thyroid cancer. You should use a reliable contraceptive for at least 6 months after radioactive iodine treatment. Long term, your fertility will not be affected even after repeated doses of radioactive iodine.

If you are breast-feeding, you should stop at least 6 weeks and preferably 8 weeks before you have the radioactive iodine treatment and breast feeding should not be restarted afterwards.

***Male patients: Will radioactive iodine treatment affect my ability to have children?***

Men are advised not to try for children (get their partners pregnant) for 4 months following radioactive iodine treatment. Long term your fertility should not be affected but there may be a small risk if repeated radioactive iodine therapy is needed. Please discuss this with your specialist consultant or a member of the treatment team before trying for a family following this treatment: specialist advice and help is available.

***What impact does COVID-19 have on my treatment?***

A small proportion of people with COVID-19 become very unwell and require admission to hospital. These individuals are highly infectious and require specialist precautions to be taken to prevent transmission of the coronavirus to other patients and staff. It is very important that people who have received radioactive iodine do not develop severe COVID in the days after treatment, because nursing someone who is both radioactive and highly contagious would be extremely challenging.

If you are vaccinated and/or at low risk of severe COVID, then there is no requirement to self-isolate before radioactive treatment. However, it is very important that you inform us immediately if you have any symptoms that could be related to COVID, for example a new cough, shortness of breath, headache, temperature, sore throat, loss of taste or loss of smell. You will also be asked about these symptoms on the day of admission to the hospital.

If you are not vaccinated and are at high risk of severe COVID, we will ask that **you should formally self-isolate for two weeks prior to the treatment; other individuals in your household should also self-isolate for this period**. This is to ensure that you or other people in your household do not come into contact with coronavirus in the run-up to treatment. As above, you must inform us immediately if you have any symptoms that could be related to COVID and you will be asked about these symptoms on the day of admission to hospital.

***Before my radioactive iodine therapy, what should I eat?***

A diet which is rich in iodine can reduce the effectiveness of the treatment. Therefore, one week before coming in to hospital we recommend the following:

* **Do eat** fresh meat, vegetables, fresh fruit, pasta and rice. These are low in iodine.
* **Do not eat** glace and maraschino cherries which contain the colouring material E127. Food coloured by spices is allowed.
* **Do not take** cough medicine, iodised table salt, or sea salt as these contain iodine. Ordinary table salt is allowed.
* **Try to cut down** on dairy produce such as eggs, cheese, milk and milk products, as they all contain some iodine.
* **Avoid** fish, kelp and all seafood
* **Avoid** vitamin supplements which contain iodine

On the day of treatment you should **avoid** consuming a large meal 4 hours before radioiodine treatment (a light breakfast or sandwich is allowed).

***Before having radioactive iodine treatment what medication/tablets should I take?***

Most people receiving radioactive iodine should continue to take **all** their medication as normal, **including your Levothyroxine tablets.**

If you are taking any other tablets you should carry on doing so and bring a supply with you on admission and show them to the doctor and nurse team. If you are taking any vitamin, mineral supplements or cod liver oil stop taking them around three weeks before your therapy to help reduce your iodine levels.

***Will I need any other medication before the radioactive iodine therapy?***

Yes, most people will require two injections of a hormone called Thyrogen (recombinant Thyroid Stimulating Hormone). Thryogen is given to maximise the uptake of radioactive iodine into any remaining thyroid cells. It is given as an intra-muscular injection and so needs to be administered by a nurse. An injection of Thyrogen is given on each of the two days preceding the radioactive iodine therapy. If you live in Edinburgh or its surroundings, the Thyrogen will be given in the Cancer Assessment Unit at the Western General Hospital. On the first of these days, a nurse will take some details from you, as part of the pre-admission process; the nurse will also take a COVID swab. If you live further afield, such as in the Borders, Fife or Dumfries & Galloway, we shall make arrangements for you to receive the Thyrogen and have the COVID swab taken at a local hospital.

***Do I have to come into hospital for radioactive iodine treatment?***

Yes, you will be admitted to the Cancer Assessment Area of the Western General Hospital, Edinburgh. The duration of stay in hospital is variable, depending on your dose of radioactive iodine, but tends to be 2 – 4 days. How soon you go home depends on how quickly the radioactive iodine leaves your body.The hospital accommodation comprises a single room with en suite facilities. During your stay you will have to be confined to your room for most of the time.

If you have any queries about specific items that you wish to bring in, or other issues you want to discuss, please ring the Cancer Assessment Area on 0131 537 4050and ask to speak to the nurse in charge.

***What should I bring into the therapy room with me?***

In the therapy room there is a TV and DVD player. You may wish to bring additional reading material and other items to occupy your time. There is no fridge in the room, but you are allowed to bring your own food/drinks in with you although you will not be allowed to take them home.

You can bring your mobile phone in with you, however, it will need to be covered by Medical Physics staff to reduce the risk of contamination. WiFi is available via the hospital network.

It is advisable to bring in a small holdall (carry-on luggage size) as there is limited storage in the room. If you can it is advisable to bring in travel size toiletries and a toothbrush which can be disposed when you leave. It is recommended that you bring slippers/sandals that you can wear when walking around the room.

Please do not bring hairdryers or hair straightners as these items are difficult to cover and protect from contamination.

It is recommended that you do not bring in items which have a sentimental or monetary value to you due to the risk of contamination.

We advise that you bring old clothing (pyjamas/loungewear) to wear as the clothing worn during your stay will be regarded as contaminated and must be washed separately or stored (by yourself) for 2 months before re-use.

You can wear your glasses, hearing aids etc. when in the room as these will not be shared with anyone else.

***What happens on admission?***

We shall ask you to come to the Metabolic Unit, Anne Ferguson Unit, WGH on the day of admission. There, you will be seen by one of the doctors who will complete the admission documents and ensure that you are well enough to receive the radioiodine treatment. Please do inform the doctor if you are not feeling well. If you are a woman of reproductive age, we shall carry out a pregnancy test on a sample of urine. You will then be asked to go directly to the Cancer Assessment Area where you will be issued with a hospital name band to wear, with your hospital registration number and a few details on it. One of the nursing staff will take your blood pressure, pulse and temperature as a routine procedure.

You will be given an explanation of the treatment and details about the room you will be staying in. You will have the opportunity to ask any questions that you might have.

***Who gives the radioactive iodine treatment?***

The Medical Physics department is responsible for dealing with the radioactive iodine treatment. One of their staff will come to the ward to give you the capsule (which is about the size of an antibiotic capsule) or the liquid (which is colourless and tasteless).

***What happens next?***

For the first hour after taking the radioactive iodine you should refrain from eating and drinking, to allow time for the radioactive iodine to be absorbed. After this time you should eat as normal and drink as much as possible so that you pass urine frequently. This will flush the excess radioactive iodine out of your system.

Radioactive iodine can be concentrated in the salivary glands and this can lead to a drier mouth in the weeks following treatment, especially in the very small number of people who have received more than one dose of radioactive iodine. Periodically sucking on a ‘sour’ sweet, like lemon sherbets, can help clear the radioactive iodine from the salivary glands; it is recommended that you start doing this no earlier than 12 hours after the treatment is given.

***Are there any restrictions?***

As the treatment you have received is radioactive, young children or pregnant women are absolutely not allowed to visit.Generally, visitors are not allowed during your stay in hospital. However, if you feel you may need a visitor for any reason, please discuss this with Medical Physics before your treatment. Because you are radioactive, staff will only spend short periods of time in your room. Do not expect staff to stay and chat for long periods of time, but do not hesitate to contact them if you need anything.

***What happens at mealtimes?***

The nursing staff will bring you meals in your room and they will be served to you via a small hatch in the room. These meals may be served on paper plates and you may need to use plastic cutlery. When you have finished your meal these should be disposed of in the bin provided. If there is any unwanted food this needs to be sealed in a plastic bag and disposed of in the bin.

***What self-washing/hygiene should I do?***

As you should be drinking a lot, you should also be using the toilet frequently. All your bodily fluids are radioactive so you must flush the toilet twice after each use. Men are also advised to sit when using the toilet. If you spill or splash urine, please contact the nursing staff. Your sweat is also radioactive, so we advise you take a shower daily.

Clothing worn during your stay in hospital will be regarded as contaminated and will have to be either washed separately, or stored (by yourself) for 2 months before re-use. In view of this you may wish to use old clothes during your stay.

***How will the nursing staff keep a check on me in the room?***

As noted above, the nursing staff will only spend short periods of time in the room. However, if you are in need of urgent assistance, there is a call button and medical and/or nursing staff will attend if needed. The room is separated from the rest of the ward by electrically-operated sliding doors, which are lined with lead. This is to prevent any radiation entering the main ward area. For your safety and to permit the nurses to monitor your well being, there is a closed-circuit camera in the room. This camera links to a monitor at the nurses’ station. **The camera is not linked to any recording equipment.** There is no camera in the toilet/shower room, so it is completely private in that part of thesuite. The camera can be switched off at your request, but we advise strongly against that because this will inevitably mean that your wellbeing cannot be monitored as closely by the nursing team.

***When can I go home?***

The staff from Medical Physics will come to the ward to take measurements and they can then work out how much radioactive iodine is still in your body and if you are at a safe level to go home. You must stay in the isolation room until that time. If you have brought any items (e.g. books, mobile phone) in with you which you would like to take home, they will need to be checked for contamination before they can be removed from your room.

Just before you go home, you will be taken to the ‘Nuclear Medicine’ department at the WGH; this is situated just across the corridor from the Metabolic Unit. You will have a special scan called a ‘Whole Body Scan’. This scan tells us which parts of the body have taken up the radioactive iodine. The scan is not invasive and simply involves you lying on a special couch over which an arch will pass. It is not claustrophobic and your body is not enclosed at any stage.

Once the scan is complete, you shall be able to go home. Occasionally, the technicians in the scanning department may ask you to return the following week for an additional scan. This is not something to be concerned about; it is a routine part of the scanning process that occasionally a second scan is required to allow a clearer interpretation of the scan pictures.

# *Are there any restrictions placed on me after discharge from hospital?*

After your discharge it is important that you take some simple precautions to avoid exposing others to radiation, especially children and women who are pregnant.

The following precautions should be taken:

1. Avoid any close contact with pregnant women or children for 5 days. It is quite safe to be in the same room provided you remain at least 1 metre away most of the time.
2. Do not sleep with an adult in the same bed for 5 days.
3. Most people can return to work the day after they leave hospital.
4. For 5 days, wash your hands thoroughly before preparing food, so that food is not contaminated with your sweat.
5. There is no restriction on the use of public transport. It is possible that radioactive iodine may trigger sensitive airport security systems. If you are planning to travel by air in the first three months after treatment, you will be given a card which you can show to the airport staff.

**If you are likely to have extended periods of close contact with children or pregnant women then precautions may need to be taken for longer periods. The Medical Physics Staff will advise you before you are discharged.**

If you would like to ask any questions, before your treatment, about the precautions you may need to take then please phone the Medical Physics Department on 0131 537 2155 and ask to speak to a Medical Physics Technician.

***Will I have to come back to the hospital?***

Depending on your personal circumstances and the level of radioactive iodine on discharge, you may have to return to the Medical Physics department a few days after your discharge to have your radioactive iodine level rechecked. You will be advised about this before you leave hospital.

Following discharge, you will receive a telephone call a few days later with the scan results. You will also receive an appointment to return to the thyroid cancer clinic at the Royal Infirmary of Edinburgh, which will be approximately 3 months after the date of the radioiodine treatment. If you have not received an appointment approximately 2 months after the radioiodine treatment, please ring the Endocrine Clinic (0131 242 1480). If you live in the Borders, Fife or Dumfries and Galloway, your local hospital team will usually make arrangements to see you in clinic.

***Will I need Radioactive Iodine treatment again?***

Most people require radioactive iodine therapy on only one occasion, but some people may require further treatments.

Please remember that the amount of radiation people in contact with you receive is very low. All these procedures are to protect others in case they should need to have radiation treatment in the future. The aim is to keep everybody's exposure to a minimum

If you have any general queries about your treatment or diagnosis please ring the Endocrine Clinic (0131 537 2810) and ask to speak to Professor Strachan.

**Patient Consent for RADIOACTIVE IODINE TREATMENT**

**Patient Name:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Address:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**CHI Number**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Activity (±10%) of 131I to be administered**:

\_\_\_\_\_\_\_\_\_\_\_\_MBq

**Changes in drug therapy prior to administration of radioiodine (discussed with patient)**

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**Statement of Doctor prescribing treatment**

COVID vaccine status: Fully vaccinated Partially vaccinated Not vaccinated

Is the patient at high risk of severe COVID? No Yes

Does the patient need to ‘self-isolate’ prior to treatment? No Yes

* I have discussed the patient’s treatment with him / her.
* I have considered other potential medical conditions (in particular incontinence and pregnancy) which may affect treatment. The following medical condition(s) require risk assessment:
* I have considered non-medical factors (such as household members and employment) which may affect treatment. The following non-medical factors require risk assessment:
* I have checked that the patient has not had IV contrast imaging in the last 8 weeks.
* I have checked that the patient is not currently taking amiodarone and/or has not taken it within the previous 12 months
* I have supplied a copy of the appropriate ‘Information for Patients’ and, where relevant, the ‘Information for Carers’ and I have discussed the precautions he / she should take to minimise the radiation exposure of other people (in particular the requirement to avoid contact with children and pregnant women and to take time off work).
* I have informed the patient that they can withdraw their consent for treatment at any time.

Doctor’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dept: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(PRINT)

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Statement of patient or person with responsibility for patient**

* I have read and understood the Information for Patients, in particular I understand the precautions I must take to minimise the radiation exposure of other people.
* I give my consent to receive radioactive iodine treatment.
* I understand that there is a closed-circuit camera in the room and consent to its use during my stay in hospital.

*For individuals who require to self-isolate*

* I have read and understood the ‘Self-Isolating Guidance’, I understand the precautions I must take to minimise the risk of contracting COVID-19 before treatment.

*For women of reproductive age*

* I confirm that I am not pregnant and that I will tell the hospital staff if I become pregnant before I receive the radioactive iodine treatment.
* I understand that I should not receive radioactive iodine treatment when I am pregnant and I should avoid pregnancy for at least 6 months after receiving the radioactive iodine treatment.

*For men*

* I understand that I should avoid fathering a child for at least 4 months after receiving the radioactive iodine treatment.

Patient’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(PRINT)

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Has a copy of this consent been taken by patient? Yes / No (please circle)**