

I131 Radioactive Iodine to Treat Thyroid Cancer

What to expect and how to prepare

This handout gives instructions for patients who will receive radioactive iodine to help treat thyroid cancer.

What is radioactive iodine?

Radioactive iodine (also called Iodine-131 or I131) is a substance that is used to treat thyroid cancer. Both thyroid cancer and thyroid tissue absorb iodine. This helps us find and treat areas of active thyroid cancer.

How does it work?

We will ask you to swallow a capsule that contains a dose of I131. It will enter your bloodstream very quickly.

Your thyroid gland and any thyroid cancer tissue will absorb the I131 from your blood. Most of the I131 that is not absorbed will leave your body in your urine over the next 24 to 48 hours. The I131 absorbed by your thyroid or thyroid cancer will stay in your body longer.

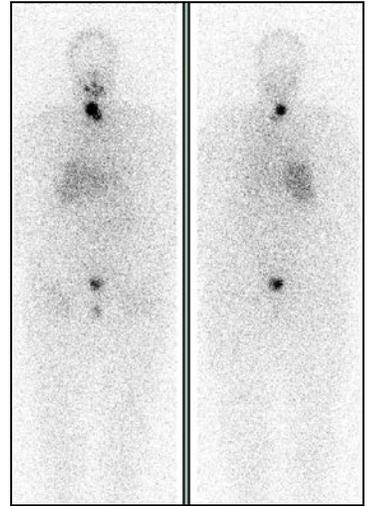
The I131 in your thyroid tissue will give off *beta particles* (tiny particles that some radioactive atoms give off). These beta particles will enter your thyroid tissue or cancer sites, very close to where they are given off (within about 1 millimeter).

The beta particles damage tissue, and this damage will cause your thyroid gland and any thyroid cancer cells to die over time. It takes up to a few months for this treatment to have its full effect.

What can I expect?

Before you have I131 therapy, you must have a **thyroid cancer survey**. (Please read the handout “Thyroid Cancer Survey Using I123” or “Thyroid Cancer Dosimetry Using I131.”)

If you are having treatment for residual thyroid tissue or residual sites of thyroid cancer:



These images, taken with a special camera, show dark areas where I131 is absorbed by the body.

You will return to Nuclear Medicine either on the same day or within 3 days of your thyroid cancer survey scan. At that time, you will swallow 1 or more small capsules that contain a dose of I131.

I131 treatment can be done as an outpatient procedure. But, you may have to stay in the hospital if the radiation safety precautions will be hard to follow at home. There will be radiation in your body and body fluids after your treatment. It can be hard to protect the people you live with from this radiation. We will talk with you about what will work best for you.

What should I know about I131 treatment?

This treatment has some side effects. You may have:

- Nausea
- Soreness in your neck and salivary glands
- A metallic taste in your mouth, which may last 2 to 3 weeks

We will give you tips on how to lessen these symptoms. If you stay in the hospital overnight, we will treat your symptoms. If you go home after your treatment, we will give you prescriptions for anti-nausea medicine.

Special Notes for Women

- If you are of childbearing age, you must have a pregnancy blood test before taking I131.
- If you are pregnant, you cannot receive radioactive iodine, since it would harm your unborn baby. You must tell us if you are pregnant, even if you do not plan to complete the pregnancy.
- You must also tell us if you are breastfeeding. If you are breastfeeding, you may not have I131 therapy. The radiation will collect in your breast milk. It will pass to your child and also expose your breasts to high levels of radiation. You must stop breastfeeding for 3 months before you take your I131 dose.

Low-Iodine Diet

Starting 1 week before your diagnostic thyroid cancer survey and I131 therapy, you **must** follow a low-iodine diet. For instructions, visit www.thyca.org/rai.htm#diet. If you do not use the internet, ask your doctor or nurse for a printed copy of these instructions.

Day of Your I131 Dose

At Home

- **For 2 hours before and after your dose**, do **not** eat any solid foods or drink anything but water.
- You may have breakfast before you come to the hospital, if it is more than 2 hours before your I131 dose.

- Water is OK to drink. We encourage you to drink plenty of water to help flush the radiation from your body.

What to Bring to the Hospital

- You must have 2 forms of ID, including at least 1 with your photo, such as a driver's license.
- If you will be staying in the hospital after your dose, also bring:
 - Any medicines you usually take. Bring only enough to last 3 days.
 - Sour hard candy, such as lemon drops.
 - A set of clothes to wear home.
- You may also bring your laptop, cell phone, and other electronic devices, if other people do not use them. If you bring these things, you can cover them with plastic to keep them from being exposed to contamination from radioactive material. You may also bring your wedding ring, eyeglasses, contact lenses, and personal medical devices.

What to Leave at Home

- Do **not** bring valuable personal items.
- If other people use your laptop, cell phone, or other electronic devices, do **not** bring them with you.

At the Hospital

- Go to Nuclear Medicine at your scheduled time. Nuclear Medicine is on the 2nd floor of the hospital, near the Pacific elevators.
- If your thyroid cancer survey is on the same day as your I131 dose, you will have the survey first.
- You will then meet with a Nuclear Medicine doctor and Radiation Safety officer. They will talk with you about your treatment and radiation safety. They will decide how much I131 to order based on your scan.

Outpatients

After your I131 dose is decided, we will order your custom dose from the radiopharmacy in Seattle. It takes 1½ to 2 hours for this dose to be prepared and delivered.

If you will not be staying overnight the hospital, we will ask you to return to Nuclear Medicine about 1½ to 2½ hours after your scan. A Nuclear Medicine doctor will give you your dose at this time.

Inpatients

If you will be staying overnight in the hospital after your treatment:

- Check in at about 12 noon at Admitting Reception in the lobby on the main (3rd) floor of UWMC, just behind the Information Desk.

- Plan to stay in the hospital up to 3 days.

Your room will be on the 6th or 7th floor. Your room looks like other hospital rooms, but it was specially designed to protect against radiation. Your door will be open, but visitors may **not** come into the room. Visitors can bring you items and talk with you from the doorway.

You will likely receive your I131 dose in the afternoon.

After Your Dose

Diet

- **For 2 hours after you swallow the capsule:** Do **not** eat any solid foods. An empty stomach helps your body absorb the radioactive iodine. Drink **only** water.
- **For 3 days after you swallow the capsule:** Follow your low-iodine diet. You may resume your normal diet after 3 days.
- **For 1 or 2 days after your dose:** Avoid fatty or rich foods to help ease any nausea. We suggest taking an antacid like Zantac or Prilosec for nausea. You can buy these without a prescription at most drugstores.

Other Guidelines

- **Starting 12 hours** after your dose: Start eating sour hard candy, such as lemon drops. This will make your salivary glands secrete some of the radioactive iodine they might have picked up. This will help make your neck less sore. **Do not start earlier than 12 hours.**
- **For 24 hours** after your dose:
 - **Drink at least 1 glass (8 ounces) of clear fluids such as water or juice every hour.** Keep drinking plenty of clear fluids such as water or juice for at least the first 3 days.
 - **Flush the toilet 2 times** every time after you urinate.
- **For 8 to 12 hours** after your dose: Empty your bladder every hour.
- **The first night** after your dose: Get up at least once during the night to empty your bladder. After the first night, you do not need to do this.
- **For the first week** after your dose: It is important to have regular bowel movements in the week after your treatment to clear the I131 from your colon. Constipation often occurs when your thyroid hormone is low.

Most laxatives will work well and are OK while you are on a low-iodine diet. Ask us about constipation and laxatives if you have any questions.

Radiation Precautions After Your Dose

When You Are Around Other People

Follow each radiation safety precaution for the number of days shown:

Follow this precaution:	For this many days after your I131 dose:
Do not travel by airplane or other public transportation such as a bus or train.	3 days
Do not travel on car trips longer than 4 hours with others in the car.	3 days
Sleep in a separate bed, at least 6 feet away from other adults.	Up to 6 days (depending on dose)
Sleep in a separate bed, at least 6 feet away from pregnant women, infants, or children.	7 to 14 days (depending on dose)
Stay at least 3 feet away from all adults. Allow only short periods of closer contact.	4 days
Stay at least 6 feet away from pregnant women, infants, and young children.	Up to 7 days (depending on dose)

Body Fluid Precautions

This Body Fluid Precautions table gives basic precautions for most people who receive I131 treatment. You may have to follow special precautions if your situation is different. Follow each precaution the number of days shown:

Follow this precaution:	For this many days after your I131 dose:
Because there may be radioactivity in your saliva: <ul style="list-style-type: none"> • Do NOT share silverware, glasses or cups, plates, food, etc. with anyone, especially children. • Do not let others handle your dishes or silverware. • Rinse all of the silverware, glasses, cups, and dishes you use apart from other dirty dishes. After they are rinsed, they can be washed in a dishwasher with other dishes and silverware. • Do not use disposable plates, utensils, cups, etc. 	4 days
The bathroom you use should be for your use ONLY . No one else should use this bathroom. (<i>Exceptions can sometimes be made for an adult-only household.</i>)	2 days
Avoid any intimate contact, including kissing and sexual relations.	7 days
Wash your hands well and often. Use soap and warm running water for at least 20 seconds.	7 days

Special Precautions for Women

- **Do not get pregnant for 1 year after your I131 treatment.** This is in case you need to be treated with I131 again. Also, your thyroid replacement medicine level must be adjusted and stabilized before you get pregnant.
- **If you are breastfeeding:**
 - Stop nursing for 3 months before your I131 dose. I131 will collect in your breast milk and cause high radiation exposure to your breasts.
 - Do not breastfeed your child after your dose. It will harm your baby.

Follow-Up Visits

- You may need to have a blood draw for lab tests after you leave the hospital. Check with your Endocrine Clinic treatment coordinator.
- You will need to schedule a **follow-up thyroid cancer survey** 7 to 10 days after your I131 dose. We will take images of your body to see where the I131 dose collected. This appointment will last 1 to 2 hours. You do not need to prepare for this study.
- You will need a **follow-up visit with your endocrinologist** 4 to 6 weeks after your treatment. This is the soonest we would expect your thyroid hormone levels to become stable. Your endocrinologist will monitor your thyroid hormone replacement dose. Be sure to make this follow-up appointment. If you are a patient at UWMC or SCCA, we can help you schedule this appointment.
- You may need a follow-up I131 diagnostic thyroid cancer survey in 6 to 12 months. If you do, your endocrinologist will refer you for this scan.

To Learn More

To learn more about I131 radioactive iodine and how it is used to treat thyroid cancer, visit the Thyroid Cancer Association website: www.thyca.org.

Who to Call

University of Washington Medical Center (UWMC) Patients

UWMC Imaging Services 206.598.6200
UWMC Nuclear Medicine206.598.4240

After hours and on weekends and holidays, call 206.598.6190 and ask for the Nuclear Medicine Resident on call to be paged.

Seattle Cancer Care Alliance (SCCA) Patients

SCCA Endocrine Clinic..... 206.288.1160

After hours and on weekends and holidays, call 206.598.6190 and ask for the Nuclear Medicine resident on call to be paged.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

See "Who to Call" on this page for UWMC and SCCA phone numbers and how to get help when these departments are closed.