

INSTRUCTIONS FOR PATIENTS

University Clinical Hospital in Białystok

Treatment with radioactive iodine I-131 in hospital conditions

The information below will make your stay in the hospital during radioactive iodine treatment easier. Here you will find recommendations that should be followed during your stay in the Intensive Surveillance and Radioisotope Therapy Room (hereinafter referred to as SINiTR) and after being discharged home. Your understanding is important. If you have any doubts, please ask the staff of the Department of Nuclear Medicine and the Department of Endocrinology.

What is radioactive iodine treatment and why does the patient need to be isolated?

Radioactive iodine treatment is used in patients after surgical treatment of thyroid cancer. The administered radioactive iodine accumulates selectively in thyroid cancer cells and/or within metastatic foci. The radioiodine isotope emits high-energy beta radiation, damaging cells and leads to their death. The effect of this therapy is destruction of cancer foci and achieving disease remission.

The patient takes a medicinal capsule of iodine-131 at SINiTR. From the moment of taking radioiodine, the patient must stay in an isolated room because it becomes a source of radiation. For this reason treated patient only uses the rooms intended for him. Doctors, nurses and other staff only enter a patient's room when absolutely necessary.

Due to the patient's safety, he remains under constant video surveillance and contacts the staff via internal telephone.

Can family and friends visit the patient during his or her stay in the ward?

Due to the safety of people in contact with the treated patient, visitors are strictly prohibited. Patients can take their mobile phone with them and use it during their stay in the hospital.

What is in the patient's room?

The patient's room is monitored, has basic equipment and a TV set, which is turned on after purchasing a subscription (approx. PLN 30 for 3 days). There is a bathroom at the patient's disposal. The patient communicates with the ward staff via an intercom. Upon admission, the patient will be instructed on how to use it. The patient is monitored by camera (except in the bathroom). During treatment, the patient stays in his or her room and the door must be closed. All patient secretions such as urine, sweat, saliva, feces, blood and breast milk will contain radioactive iodine, so it is very important to follow the recommended precautions. Most of the radioactive iodine is excreted from the body in the urine. Therefore, when meeting your physiological needs, you should only use the toilet in the bathroom adjacent to the bed room

and urinate while sitting. All waste: used paper napkins, sanitary pads, disposable towels should be collected in designated containers.

The bathroom is equipped with a negative pressure sewage disposal system due to the high activity of the isotope excreted in urine.

Please remember when using the toilet:

- to urinate directly into the toilet bowl while sitting (also men) without making the area around it dirty,
- if you accidentally get dirt around the ear bowls, remove it yourself,
- removal of excretions and secretions is performed by the patient wearing gloves using lignin,
- avoid getting your underwear dirty,
- if it gets dirty, immediately replace it with a spare one,
- flush the water twice after using the toilet,
- wash your hands twice after each use of the toilet.

ATTENTION: it is forbidden to throw anything other than toilet paper into the toilet!

How the patient receives meals and what he can eat and drink

The patient in the room has a table on wheels with a top placed next to a protective screen, on which the staff brings meals and possibly medicines in disposable dishes. After a meal, the patient throws disposable tableware into a waste bag. No waste may be taken outside SINiTR without dosimetric control. Since you should drink plenty of fluids during treatment, please take an appropriate amount of water with you (approx. 2 liters a day).

There will be cylindrical containers in the room into which please throw all sharp objects, e.g. a fork and a disposable knife.

What things should a patient take with him to the hospital?

All clothes that the patient will wear during treatment and toiletries after the treatment will be destroyed due to radioactive iodine contamination. For this reason, we recommend taking only the necessary things to the hospital: pyjamas, slippers, two/three small towels, toothpaste, soap, hair shampoo in quantities that the patient will use during his stay at SINiTR. If necessary, you can take a hairdryer. You should not take large sums of money, jewelry or other valuables with you.

In addition, the patient should equip himself with:

- approx. 2 liters of fluids a day,
- lemon, sour candies or chewing gum, which alleviate symptoms in the event of swelling of the salivary glands,
- you can take tea or coffee and a mug as there will be an electric kettle in the room.
- a warm sweatshirt for people who like higher temperatures,
- newspapers, crosswords, old books,
- **a clean set of clothes without metal elements (with flip-flops and a towel) to change into on the day of discharge, secured in a plastic bag.**

Should the patient take any medications with him?

If the patient takes medications on a permanent basis, he should take them with him and report it to the doctor after admission to the clinic. The doctor will decide whether the patient can take them during iodine treatment.

How is a patient admitted to hospital?

On the day of the scheduled treatment, the Patient reports to the Emergency Room of the University Clinical Hospital for admission to SINiTR. The patient leaves outerwear in the patient's clothing warehouse.

The patient should be fasting on the day of admission.

People treated for other chronic diseases are asked to take their medications in the morning as on other days.

From the moment of admission to the clinic, the patient should not leave it until he is discharged home. After completing the admission formalities, the patient is examined by a doctor. During the meeting, the doctor provides detailed information about the treatment and explains the specific rules of stay at SINiTR, including the rules of radiological protection.

Please listen carefully and ask questions if you have any doubts.

How is isotope medicine administered?

The activity of radioactive iodine is determined by a nuclear medicine specialist after examining the patient and after analyzing all the information obtained during the qualification visit. Iodine-131 is administered in the form of a gel capsule, which in shape and size resembles a typical medicinal capsule. During the initial examination after admission to hospital, the staff explains exactly how to swallow the capsule. The medicine is delivered to SINiTR in a lead container. The patient swallows the medicinal capsule with water in the presence of the doctor. After taking the capsule, you can drink, but do not eat for about 2 hours. It is advisable to increase the amount of fluids consumed on the day of taking the drug to accelerate the removal from the body of excess iodine-131 that has not accumulated in the thyroid remnants and/or in the treated focal lesions. Whenever possible, it is recommended to chew sour products: lemon, gum and/or sucking sour candies, which increases salivation. This reduces irradiation of the salivary glands.

After intaking iodine-131, the patient does not leave the room for at least three days. It is recommended during the stay at SINiTR:

- to drink plenty of fluids,
- to eat acidic products
- to take a shower twice a day,
- to use soap from a dispenser,
- after using the toilet, to rinse the sanitary device twice with water.

AFTER ADMINISTRATION OF RADIOIODINE, IT IS ABSOLUTELY PROHIBITED TO LEAVE SINiTR.

How is the patient treated and discharged from the hospital?

Treatment usually begins on Friday around 12, and usually ends on Monday (in exceptional situations it may be extended by 1-2 days). On the day of discharge, the patient in the morning around at 7.00 he should take a shower, dry himself with a clean towel and change into clean clothes. Then the employee measures radioactivity from a distance of 1 m and decides whether the patient remains in the hospital for the next day. If the patient is discharged on a given day, post-therapeutic scintigraphy will also be performed in the Department of Nuclear Medicine (2nd floor). The patient remains fasting until blood is collected.

The patient usually receives the discharge letter after 12, it contains the results of all tests performed, including post-therapeutic whole-body scintigraphy.

The patient will have to leave contaminated items at the hospital.

Then the patient receives a discharge letter from the hospital with information about the administration of the isotope.

The doctor informs you where and when you should go for check-ups.

The patient leaves all his clothes that he wore during his stay at SINiTR in the room and places them in a plastic bag provided by the staff of the Department of Nuclear Medicine. After checking the level of iodine-131 activity in the items left behind, they will be sent for extinguishment or given to the patient on the day of discharge if they have not been contaminated.

How to behave after radioisotope treatment after leaving the hospital

To limit exposure, follow these rules:

1. During two weeks (especially in the first days) after leaving the hospital, you should avoid contact with people under 18 and pregnant women.
2. The room in which the patient stays is not exposed to radiation. However, if possible, the patient should stay and sleep in another room. If living conditions do not allow staying and sleeping in a separate room, the patient should keep a distance of at least 1 meter from other household members, because he himself is a source of radiation.
3. Breastfeeding women- should stop breastfeeding 3 weeks before the planned treatment. In cases that justify the need for urgent radioisotope treatment, pharmacological inhibition of lactation should be used. Lactation should not be resumed after treatment.
4. People of reproductive age should not plan to have children within 6 months of administering the isotope.
5. It is recommended within 7 days from the day the capsule is taken:
 - to drink plenty of fluids,
 - to take a shower every day
 - to use soap from a dispenser,

- after using the toilet, to rinse twice with water or, if necessary, wash the sanitary equipment after yourself,
- to use a separate set of cutlery washed separately,
- to wash clothes, underwear and bedding separately,
- to avoid staying in public places (cinema, theater, church),
- to avoid traveling by public transport.

Information for people taking care for patients who have undergone diagnostics or treatment using radioisotopes.

The radiopharmaceutical we administered (a drug containing a radioisotope- a radioactive substance) has accumulated in the patient's body and therefore for some time (depending on, among other things, the type of administered radioisotope and activity) the patient is a source of ionizing radiation. Some of this invisible radiation escapes from the patient's body to a distance of several meters. It doesn't matter much for adults.

contacting/caring for a patient who has received diagnostic doses, subject to certain exceptions. Even small amounts of radiation can be harmful to pregnant women (especially to the developing fetus) and small children. Therefore, pregnant women should absolutely not take care of a loved one who has undergone a diagnostic test or, even more so, radioisotope therapy.

Pregnant women are prohibited from entering the Nuclear Medicine Laboratory . Pregnant women cannot accompany the patient or take care of the child during the preparation of the child for the radioisotope test and during the test, therefore they are kindly asked to arrange another person to care for the child at the PMN premises.

It is necessary to follow the following rules to limit the risk of radiation to people caring for patients who have been administered a radiopharmaceutical:

1. Avoiding contact between children under 18 years of age and pregnant women with a patient - a person who is immediately after radioisotope diagnosis or treatment for the period specified in the discharge card or specified by the doctor. Depending on the type of radioisotope, this period may vary, e.g.

a) in the case of standard diagnostics using compounds labeled with technetium-99m, it is a maximum of two days,

b) in the case of iodine-131, it is a much longer time, depending largely on the dose (activity) administered to the patient and other factors- information will be provided by the doctor. It is not necessary to avoid contact between other adults and the patient, but you should maintain a greater distance in personal contacts and try to reduce the time spent with the patient immediately after the administration of the radioisotope, remembering that the patient is the most powerful radioactive source immediately after the administration of the radioisotope and on each subsequent day after the administration of the radioisotope. its radiant activity decreases, which is a benefit for the surroundings.

2. Avoiding sleeping together in the same bed or in close proximity, mainly in the days following the administration of the radiopharmaceutical, in accordance with the information

provided to the patient by the staff. The greater the distance from the patient, the lower the radiation intensity and, as a result, the lower exposure of the person caring for the patient.

3. Bear in mind that body excretions (e.g. urine, tears, sweat, saliva) and blood may also contain radioactive isotopes, therefore hygiene rules must be strictly observed by both the patient and those caring for him.

4. The room where the patient is staying is not irradiated unless it is permanently contaminated with the patient's body secretions (in such a case, the dirt should be washed thoroughly and rinsed using disposable gloves). Similarly, people who come into contact with a sick person do not transmit radiation to other household members, as long as they follow hygiene rules and there is no contamination with secretions (contamination).

5. During all patient's personal hygiene procedures, it is necessary to flush sanitary equipment with large amounts of water and wash them thoroughly.

We hope that the tips will help you understand what radioisotope therapy is and what a stay at SINiTR is like, and thus facilitate the treatment process. Please follow the recommendations because the safety of both patients and people around them depends on it.

In the case of adverse events or unforeseen circumstances, please inform your doctor and/or contact the Department of Nuclear Medicine of the University Clinical Hospital in Białystok.

Phone number: 85 831 8615, e-mail: nukleo@umb.edu.pl