

RADIOACTIVE IODINE (I-131) TREATMENT FOR THYROID CANCER

Depending on the specific case, integrated treatment of thyroid cancer often relies on oral administration of a radioactive isotope of iodine (I-131). Radioiodine accumulates in the thyroid and thyroid cancer cells and leads to the destruction of these cells. During treatment, the patient may be hospitalized for up to a week. As an inpatient, the patient will have their own one-person hospital room with WC, sink and shower, a wired and wireless internet connection, telephone, refrigerator, microwave oven and hairdryer.

Following the procedure, the patient will need to follow safety recommendations communicated by the attending physician in charge of the procedure. These recommendations primarily concern temporary restrictions on interactions with people around the patient. Special care must be devoted to preventing exposure of children and pregnant or nursing women.

The indication for treatment is well-differentiated thyroid cancer.

The treatment is contraindicated for women who are pregnant or breastfeeding.

Notify your attending physician and study personnel if:

- you are pregnant;
- you are breastfeeding;
- you have experienced claustrophobia – the fear of enclosed spaces.

Preparing for treatment

At the pre-treatment consultation, you will be briefed on details related to the procedure, the course of the treatment, the expected benefit and potential adverse effects; and you will be given individualized instructions to be followed before and after the procedure. Please take special note of recommendations pertaining to pre-treatment testing, dietary recommendations and following a low-iodine diet for 3–4 weeks, including ceasing use of medications that contain iodine and implementing changes in the usage of other medications taken regularly – discontinue thyroid hormone therapy 3–4 weeks before the procedure and refrain from use of iodine-containing contrast substances, e.g. in computer tomography settings.

Breastfeeding must be discontinued immediately prior to the treatment.

As pregnancy is a contraindication for radioiodine treatment, a pregnancy test will be administered prior to the procedure if necessary. Following radioactive iodine treatment, refrain from conceiving a child for at least six months.

As regards following a low-iodine diet, avoid food containing E127 red food colouring; it is also recommended to avoid salami, ham and other cured meats, cola beverages, prepared cakes, candy, commercially made fruit preserves, dried fruit and foods containing carrageenan, agar agar, algin, alginate and nori, and soy products, red beans, salted nuts, potato crisps (chips), unpeeled potatoes, rhubarb, fish and seafood and egg yolks. Omit from your diet milk and dairy products, including cheese, chocolate, ice cream and margarine. Do not use iodized salt, sea salt, cough syrup, or vitamins and minerals.

In limited quantities, you may eat rice (basmati rice preferred), spinach, broccoli, cabbage, corn and peeled potatoes.

During the low-iodine diet, there is no limitation on fresh meat, fruits and vegetables (except for rhubarb, certain beans, unpeeled potatoes, cabbage and corn), herbs, porridge made with water, pasta products, peach, pineapple and pear preserves, egg whites, oil, soft drinks free of food colouring, or tea and coffee (without cream/milk or non-dairy creamer). Wine and beer is not prohibited.

Administration of treatment

On the day of your treatment, you will again be briefed on the details of the procedure, the course of the procedure and radiation safety requirements related to the treatment. Your medical history will be reviewed and blood tests will be taken. Prior to the procedure, you will be asked to sign a consent form.

You must not eat for **4 hours** before and **1 hour** after the procedure. This will ensure absorption of the radioiodine administered orally in capsule form.

After the procedure

Radioactive iodine is excreted from the body in the urine, saliva and perspiration. To accelerate the excretion of iodine that is not taken up by the thyroid, consumption of plentiful fluids and showers 4–6 times a day are recommended throughout the inpatient period. To promote the production of saliva, we recommend the use of hard candy, chewing gum and lemon.

Follow the safety recommendations from your attending physician:

- for one month, limit close contact with the people around you, particularly babies, young children and pregnant or breastfeeding women;
- discontinue breastfeeding;
- for at least six months, use effective forms of contraception to prevent conception of a child;
- follow your usual diet – there are no dietary restrictions;
- after radioiodine treatment is completed, remain under the supervision of a physician;
- if necessary, you will be given additional individual advice – follow it.

For additional information, please call 617 1221, 617 1216 or 617 1085.

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This information leaflet has been compiled by the Department of Nuclear Medicine of North Estonia Medical Centre (2018).