

Tays / radiotherapy

Prostate brachytherapy

Prostate brachytherapy is an internal form of radiotherapy, during which a high and precise dose of radiation is delivered into the prostate gland. The treatment is carried out by inserting needles in the prostate under general anaesthesia. Each patient's treatment is planned and carried out individually by a professional treatment team consisting of specialists in urology, oncology and anaesthesia, a physicist, anaesthesiologist and radiographer.

Tays Cancer Centre has been accredited with the OECI Cancer Center quality certificate which indicates the high quality of cancer treatments. In accordance with the quality recommendations, a multidisciplinary team at Tays has assessed the status of your prostate cancer and, in accordance with the treatment recommendations, recommended brachytherapy. The multidisciplinary team consists of specialists in urology and oncology, a radiologist, a cancer nurse and a pathologist.

You have made a decision on starting radiation therapy together with the oncology specialist. The treatment is combined with external radiotherapy for three to five weeks, which will be started approximately two weeks after the end of the internal brachytherapy. Many modern studies show that this combination therapy improves the prognosis compared to just external prostate therapy, especially in cases of aggressive prostate cancer. Improved treatment results can be achieved without a significant increase in adverse effects.

Preparing for the treatment

In order to ensure the safety of the treatment, it is important that you fill in the patient history form in good time before the procedure. You can fill in the form electronically in the OmaTays service or on paper.

On the day before the treatment, do not eat foods that contain fibre. Examples of what you can eat: broth, berry soup, biscuits, white bread, mashed potatoes, skinless hot dogs, cooked fish, yoghurt or curd without seeds, soup-like food.

On the evening before the treatment day, insert the suppository (Metalax®) that you were given during your doctor's appointment.

Do not eat or drink anything after midnight on the night before the treatment.

Morning of the treatment day

- take a shower and thoroughly wash your intimate areas.
- do not remove hair from the operation area.
- follow the instructions you have been given on your first visit concerning the use of medication on the day of treatment: if you are taking Marevan®, Eliquis®, Pradaxa®, Xarelto®, Brilique® or Plavix® or Clopidogrel or any other blood-thinning medication, stop taking it as instructed by your doctor.

You can bring personal hygiene products and necessary aids with you to the hospital. Please leave all valuables and jewellery at home.

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Arriving at the inpatient ward RS1

On the morning of your treatment, come to the oncology ward 1, Building R, 2nd floor by 7 a.m. It is best to travel to the hospital by public transport or have someone else drive you as you are not allowed to drive for 24 hours after coming out of anaesthesia.

You can change into the patient gown at the inpatient ward where you will be prepared for the procedure. You will be given another suppository and the pre-medication for the procedure, and a cannula will be inserted to prepare you for anaesthesia.

Implementation of brachytherapy

You will be transferred from the inpatient ward to the radiotherapy unit where you will be given a general anaesthetic. A urinary tract catheter will be inserted, hair will be removed from the operation area, and the hollow needles used in the treatment will be inserted into the prostate. The needles are inserted into the prostate through the perineum into planned positions using ultrasound. Usually there are about 16 needles, measuring 1.9 millimetres in thickness.

The ultrasound imagining helps draw up an individual radiotherapy plan for you. During the treatment, Iridium-192 is used as the radiation source to deliver an exact radiation dose as laid out in the treatment plan. In order to minimise adverse effects, the treatment plan also minimises the radiation exposure to the surrounding organs, such as the bladder and rectum, and considers the urinary tract which runs through the prostate. The actual administration of radiation lasts only about 10–20 minutes and you are under general anaesthesia the whole time.

After the procedure, the needles are removed and three small so-called gold markers are implanted into the prostate to enable the precise targeting of external radiotherapy. After that, you will be transferred to the recovery room, from where you will be transferred back to the inpatient ward after a short observation period. After the procedure, you will not radiate, nor will your urine contain radiation.

Monitoring in the inpatient ward post-treatment

After the treatment, you will stay at the hospital overnight for monitoring to ensure that you have no issues with urination. After the urinary tract catheter is removed, ultrasound is used to examine the residual urine. If the volume of residual urine is high (300 ml or more), a new catheter is inserted and it will be removed approximately 1–2 weeks later during a separate appointment. You will usually be discharged the next morning. You must continue to take medication at home as instructed by the doctor.

Driving a car is not recommended for 24 hours after coming out of anaesthesia. If you feel that your ability to drive has not returned to normal even after 24 hours, start driving only after your condition has improved.

You can see the appointments for follow-up treatment in OmaTays and you will be given them in writing before you are discharged. The appointments include an imagining at the radiotherapy unit to plan the dosage of external radiotherapy. The imagining is carried out about a week after brachytherapy. External radiotherapy usually starts approximately two weeks after the brachytherapy.

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After treatment, it is common to feel irritation in your bladder. You might need to urinate more often and the stream may be weaker. In addition, urine may be bloody for a week and semen may appear brownish bloody for several weeks. Your stomach may also be more active after the procedure. These are normal symptoms and nothing to worry about. After the procedure, you may feel more tired and unwell than usual for a couple of days. Your throat may also feel sore due to the anaesthesia.

Most common side effects after treatment

- More frequent need to urinate
- Blood in urine
- Weaker urine stream due to the swelling of the prostate
- Bruise in the operated area
- Pain in the operated area

How can I best recover from the treatment?

After treatment, make sure you are well hydrated. Drinking plenty of fluids prevents blood clots in the bladder and urinary retention. If you notice blood in your urine after the procedure, it is recommended to drink at least 1.5–2 litres of water per day. Staying hydrated also helps the urinary tract recover. There might still be blood in your urine 1–2 weeks after surgery. The bleeding is due to crusts coming off the surface of the prostate. This is a passing and harmless symptom.

After the brachytherapy, avoid heavy lifting, physical effort, and jolts and shakes for five weeks. Take care not to get cold as this increases the risk of urinary tract infection. Avoid going to the sauna for five weeks. The heat in the sauna increases the hyperaemia of the prostate and causes blood in the urine. Active walking is a recommended form of exercise during recovery.

Excessive pushing related to constipation may cause haematoma. Possible constipation can be prevented through a fibrous diet, sufficient intake of fluids and, if necessary, products that help with bowel movement. Medicines that promote bowel movements are available at pharmacies without a prescription.

If necessary, you may take tamsulosin, which you have an e-prescription for, to alleviate issues related to urination. If necessary, you can take pain medication. If the treatment causes diarrhoea, you can take medication designed for this purpose.

Avoid having intercourse for about a month. The treatment does not generally affect your ability to have intercourse, but you may experience a temporary decrease in sexual desire or potency. After the treatment, you will no longer emit sperm, or it will enter the bladder. This does not affect the sensations related to ejaculation.

If you develop any of the following symptoms

- high temperature
- worsening burning sensation while urinating
- heavy bleeding
- urinary retention

contact the Oncology ward 1, telephone 03 311 63311 or the nearest emergency hospital. Medical Helpline, tel. 116 117.