



PSMA Therapy Patient Information

What is Prostate Cancer?

Prostate cancer occurs when abnormal cells develop within the prostate gland. In some circumstances, this type of cancer can be treated with surgery or radiation. Prostate cancer can also spread to other parts of the body (known as metastatic disease). Metastatic prostate cancer can be treated with hormone therapy and chemotherapy, but it can become resistant to these treatments. More information on prostate cancer can be found on the Cancer Council website cancer.org.au.

When the standard treatments for metastatic prostate cancer are no longer effective, an innovative therapy known as PSMA therapy is one of the newest treatments your Oncologist might consider.

What is PSMA?

Prostate Specific Membrane Antigen (PSMA) is a protein expressed on the surface of prostate cancer cells. PSMA is also present on the cells of your salivary glands, tear ducts, small bowel and kidneys. PSMA is used as a target by radioactive molecules that can kill these prostate cancer cells. With the use of a PET/CT scanner and an injected radiotracer that attaches to PSMA, we are able to see where the cancer is in your body and create a three dimensional picture. This picture helps your medical team understand if your prostate cancer may be suitable to receive PSMA therapy.

What is PSMA Therapy?

For PSMA Therapy, we use a PSMA targeting molecule similar to the one used for imaging, but instead of highlighting where the cancer is, its role is to kill the cancer. The most commonly used radiotracer is called Lutetium-177 (¹⁷⁷Lu-PSMA). Once it is injected into your vein, it finds its way to prostate cancer cells wherever they are in your body. Lutetium-177 is a form of radiation that is strong enough to kill cancer cells. This type of radiation therapy directly affects the cancer cells whilst causing minimal damage to other healthy cells.

Videos and more information explaining PSMA therapy can be found on the internet by visiting petermac.org/prostic.

Is PSMA Therapy right for you?

Different types of PSMA therapy continue to be investigated as part of clinical trials being run in Australia and overseas. If you are not participating in a clinical trial, and have tried other standard treatments, such as chemotherapy and hormone therapy, you may be eligible to have PSMA therapy as your next treatment option. Off trial treatments are performed as part of a registry, which collects additional information.

Each trial and the registry have a separate consent and information form with further details.

To be deemed eligible for PSMA therapy, in addition to the first PSMA PET/CT scan, you will be required to undergo a second scan called a FDG PET/CT. Both of these scans together help your medical team understand if you are going to benefit from this treatment. Approximately 30% of men will be deemed not suitable for this form of treatment.

We will arrange a consultation, either in a clinic or via telehealth for you to speak to a Nuclear Medicine specialist. They will explain the benefits and risks of PSMA Therapy, and if it is right for you.

What does PSMA Therapy involve?

PSMA Therapy is a treatment that requires you to visit the Cancer Imaging department on level 5 at Peter Mac Parkville Campus, for a number of visits.

- Each treatment requires 2 visits to Peter Mac in the same week. You will not be required to stay in hospital overnight.
- The treatment is given every 6 weeks
- You could have up to 6 cycles of treatment to start with but this is tailored to each patient. If the treatment is effective, some patients can have beyond 6 cycles.

How effective is PSMA Therapy?

The main goals of treatment should be discussed with your treating team, they may include;

- Reduce your pain, fatigue and other symptoms that may be caused by your prostate cancer.
- Reduce the size and growth rate of your tumours.
- Improve your quality of life.
- Living longer.

Your specialist will measure your response by assessing how you feel, your blood tests and your scan results.

How much does PSMA Therapy cost?

At Peter Mac we provide access to PSMA therapy at no charge for Victorian patients. This is made possible due to a generous donation from the US-based Prostate Cancer Foundation, support from the Peter MacCallum Foundation and funding from the Peter MacCallum Cancer Centre. Medicare does not cover this treatment.

What preparation is required?

There is no specific preparation required. Please eat and drink as normal and take your regular medications as prescribed. We ask you to drink plenty of fluids before and after attending your treatment to help eliminate the PSMA therapy from your body. We encourage you to bring items to keep you occupied such as an iPad, books and magazines while you are here.

What happens during each cycle of Therapy (Day 1&2)?

Day 1: Treatment Day

- On arrival at Peter Mac, you will need to attend the admissions desk, on the ground floor. At this time, you will be required to sign some paperwork.
- You will then make your way to Level 5, Cancer Imaging. Please speak to our reception staff on arrival.
- A staff member will guide you into the treatment area.
- A nurse will insert an intravenous cannula (IVC) into a vein in your arm.
- The whole process can take up to 3 hours.
- The radiotracer treatment will take 10-15 minutes. This will then be followed by IV fluids.
- For safety reasons, we do not allow visitors in the treatment area whilst you are receiving therapy. Your carer/partner will be asked to wait in the waiting area during this time.
- Once the treatment has been given, you are able to go home when you have passed urine.
- We will give you written radiation safety instructions to follow when you are at home. We will also make an appointment for your scan the following day.
- You may receive some discharge medications to take with you. Please follow the instructions given with those medications.

Day 2: Scanning and Consultation Day

- You will return the next day at the scheduled time for a SPECT/CT scan to evaluate where the treatment has gone in the body. After the scan you will also have a consultation with the Nuclear Medicine Specialist to discuss your results.
- Please come straight to level 5C and check in at reception.

What happens between my treatments?

You will be asked to have follow up blood tests. Your nuclear medicine team will tell you when these need to be completed. Generally these are done around 3 and 5 weeks post treatment. We recommend you try to attend the same pathology centre each time for your blood tests.

It is important for you to maintain appointments with your treating Oncologist or Specialist while having PSMA treatment at Peter Mac. These visits should be arranged directly with your Oncologist.

What are the side-effects of treatment?

Your side effects will be carefully monitored by your health care team.

Mild side effects may include:

- Dry mouth
- Dry eyes
- Tiredness
- Nausea
- Reduced hemoglobin (red blood cells that carry oxygen in the body)
- Reduced platelet counts (blood cells that aid blood clotting)

Other possible side effects:

- Vomiting
- Increased pain
- Loss of appetite
- Increased risk of infection
- Reduced kidney function

Possible long term side effects:

- Exposure to radiation may increase the risk of developing new and different cancers after a period of many years.
- It is possible that there are other side effects of PSMA therapy that are not yet known.

Radiation safety precautions

PSMA therapy involves the use of radioactivity. After treatment you will be radioactive for a short period of time. You are most radioactive for 2 hours after your treatment. Your level of radiation will continue to decrease as time passes. Most of the radiation you are given will leave your body when you first pass urine after treatment.

Once you go home, following the guidelines will ensure the safety of you and your loved ones.

I'm travelling to Peter Mac from a rural area, is accommodation available?

There is an accommodation coordinator at Peter Mac who can assist and advise you of benefits available to patients.

Please contact the accommodation coordinator on:

P: (03) 8559 7454

E: accommodationcoordinator@petermac.org

Transport

In order to be eligible for patient transport, you are required to have either a pension card, DVA card or ambulance cover. Once authorised for transport, you will be required to organise transport for your ongoing appointments. Patients are required to book transport require a minimum 72 hours ahead of time.

We recommend calling to confirm with the transport team, 48 hours prior to your appointments at Peter Mac.

Please contact the transport coordinator on:

P: (03) 8559 5015

E: Transport@petermac.org

Do you require more information?

In the first instance you should discuss any questions with your treating Oncologist or Specialist.

All patients with cancer are able to attend the Peter MacCallum Cancer Centre after being referred by their general practitioner or specialist.

You can find further information on referrals here:

<https://www.petermac.org/referrals>

You can find more information on the Prostate Cancer Theranostics and Imaging Centre of Excellence (ProsTIC) here: <https://petermac.org/prostic>

You can find out more about supporting research through the Peter MacCallum Foundation here:

<https://foundation.petermac.org/>

The ProsTIC nurse can be contacted:

Monday - Friday 8.00am – 4.00pm

Phone: 61 3 8559 8617

Email: prostic@petermac.org

Website: petermac.org/prostic