



Melbourne Theranostic Innovation Centre

PATIENT INFORMATION

LUTETIUM PSMA THERAPY

WHAT IS LUTETIUM PSMA THERAPY AND HOW DOES IT WORK?

Prostate Specific Membrane Antigen (PSMA) is a type of molecule found on the surface of a cell. It's located on the prostate gland, on some tumours and on normal tissues (salivary glands, tear ducts, small bowel and kidney).

Before treatment, the PSMA molecule is bound with Lutetium-177 (radioisotope). The Lutetium-177 PSMA therapy is radioactive and specifically targets the prostate cancer cells. The radioactive molecule attaches itself to the PSMA receptors of cancer cells and causes them to die.

Lutetium PSMA therapy (treatment) aims to:

- improve your symptoms
- reduce the size of your tumours and
- slow down their growth

Some people experience a long period of remission after treatment, but lutetium PSMA therapy does not cure the cancer.

WHY WOULD I BE OFFERED THIS TREATMENT?

You'll be offered this type of therapy if you have cancer that started in your prostate. It's also used for managing metastatic prostate cancer (cancer that has spread from the prostate), or when other types of treatment are no longer working.

To be deemed eligible for PSMA therapy, you will be required to undergo a PSMA PET/CT scan and a FDG PET/CT scan.

Both of these scans together help your medical team to understand if you will 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. You'll have time to discuss the treatment and side-effects, as well as to ask any questions.

HOW EFFECTIVE IS PSMA THERAPY?

The main treatment goals should be discussed with your treating team.

Some positive effects of PSMA therapy may include:

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

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

HOW MUCH DOES PSMA THERAPY COST?

Lutetium treatment costs on average \$10,000 AUD per cycle. Any out of pocket costs associated with your treatment will be discussed with you in a clear and simple way before you commence treatment.

HOW DO I RECEIVE PSMA THERAPY?

The administration of PSMA therapy will require you to attend an appointment at the Melbourne Theranostic Innovation Centre MTIC (MTIC) which is located on Level 8 of 14-20 Blackwood St in North Melbourne, Victoria.

Treatment will occur approximately every 6 weeks and each course of treatment will require you to visit MTIC two to three times in the same week.

On the day of therapy, you will need to stay within the department at MTIC for approximately 2-4 hours.

The number of cycles required for each individual varies and is dependent upon response to treatment. The decision to continue with PSMA treatment will be determined by a Nuclear Medicine Specialist after taking into account the following: post treatment scans, blood results and how you are feeling. In most cases you will receive between three to six cycles of therapy.

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 are well hydrated before and after attending your treatment.

We encourage you to bring items to keep you occupied such as an iPad, books and magazines while you are here.

PATIENT INFORMATION

PSMA THERAPY

TREATMENT AND CONSULTATION DAYS

SIDE EFFECTS

Day 1 - Treatment Day

Once at MTIC, you will need to attend the reception desk, on level 8. Please speak to our reception staff on arrival. A staff member will guide you into the treatment area.

A nurse or nuclear medicine technologist will insert an intravenous cannula (IVC) into a vein in your arm. The treatment will take 15-20 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. The whole treatment process can take up to 3 hours.

We will give you 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 a script for some discharge medications which you can collect from your local pharmacy. 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 and to have a consultation with the Nuclear Medicine Specialist to discuss your results.

Please come straight to level 8 and check in at reception.

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 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 ¹⁷⁷Lu-PSMA treatment that are not yet known.

RADIATION SAFETY CONSIDERATIONS

PSMA therapy involves the use of radioactivity. After treatment you will be radioactive for a short period of time. You are most radioactive for two 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 below will ensure the safety of you and your loved ones.

For 2 days from the time of treatment

- Avoid close contact with anyone for more than 2 hours a day and keep a distance of 2 meters between you and others. Please do not take long trips on public transport.
- Avoid or minimize close contact with young children and pregnant women. **Please minimize time in short distances and keep a distance of 2 meters between you.**
- You should not sleep in the same bed as another person for 1 day.
- You should take extra care with personal hygiene. When you go to the toilet your urine will still be radioactive. **Consider using the toilet in a seated position to avoid any spray of urine. You should flush the toilet twice after use.** It is always important to wash your hands thoroughly afterwards.

For carers

If your carer provides assistance in the bathroom, they should wear disposable gloves during this time. If urine catheter bags are used, the urine should be emptied into the toilet. If anyone helps clean up urine, they should wear disposable gloves. Hands should always be thoroughly washed afterwards. There is a possibility that your radiation levels could trigger detectors at security checkpoints (such as airports). It is important you always carry written documentation of your recent treatment with you.

WHAT TO EXPECT IN BETWEEN 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 center each time for your blood tests.

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

DO YOU HAVE ANY QUESTIONS?

Should you have any further questions regarding treatment don't hesitate to contact the team on: info@mtic.net.au