

Lutetium-177 PSMA (Lu-PSMA) Therapy

Information For Men with Advanced Prostate Cancer

May 2023

What is Lu-PSMA therapy?

- This therapy is a treatment for men with advanced prostate cancer. It is used when the disease has spread and other treatments have been poorly tolerated or failed.
- This therapy aims to reduce the size of the tumour(s) and stop them from multiplying, as well as to ease the symptoms that people may get with these tumours. In some patients, it appears to be able to produce long term remission.

How does Lu-PSMA therapy work?

- PSMA (prostate specific membrane antigen) is a type of protein found on the surface of cells on the prostate gland. In someone with prostate cancer there is an increased amount of the PSMA protein on the cell. If the prostate cancer has spread to other parts of the body the PSMA will also appear in those areas.
- Lutetium-177 emits beta radiation which can kill cells. When combined with PSMA to form Lu-PSMA, this radioactive molecule will specifically attach to cells with high amounts of PSMA on the surface of the cells and deliver radiotherapy to these sites.
- Nearly all types of prostate cancer will produce excessive PSMA, however prior to starting the therapy a diagnostic scan is performed (PSMA PET-CT) to ensure the radiation will target the right areas during treatment.

Are there any side effects from the treatment?

- As well as the prostate gland and cancer cells, PSMA is found in the salivary glands, lacrimal glands, kidneys and small intestine. The adverse effects to these areas, however, is minimal and temporary. Side effects can include dry mouth, dry eyes, nausea, tiredness and a brief decline in blood cell production. Blood tests are performed intermittently to ensure the radiation is not damaging healthy tissue.

What do I need to do if I am referred to have this therapy?

- You will be seen by a Nuclear Medicine specialist who will explain the procedure in detail to you and provide you with written information.
- You will need to have had a baseline PSMA PET-CT within 3 months of planned therapy.
- You will need blood tests including full blood count, renal function tests and PSA. To proceed, you will need normal kidney function and normal bone marrow function.
- **For more information please contact our San Radiology and Nuclear Medicine team:**
 - **Enquiries:** (02) 9480 9850 or theranostics@sah.org.au
 - **Appointments:** (02) 9480 9840

Nuclear Medicine/PET-CT – Level 3, San Clinic
Fax: (02) 9480 8755

San Radiology – Level 3, Tulloch Building
Fax: (02) 9480 9845