

Lutetium-177 Octreotate Therapy

For Somatostatin Positive Tumours



Patient Information Guide



"to improve quality of life and restore hope"

- Theranostics Australia

What Is Lutetium-177 Octreotate Therapy?

Lutetium-177 Octreotate Therapy is used as a treatment for people with tumours that emerge from the endocrine or nervous system; these are called neuroendocrine tumours (NETs) or carcinoids. 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 a number of patients this can lead to long term remission of the disease.

How Does Lutetium-177 Octreotate Therapy Work?

The body has many different types of receptors, and these help in the communication of signals between the body and the environment. The nervous system is responsible for transmitting these signals, and the endocrine system's job is to produce the hormones in the body. Somatostatin is the name of a hormone which helps to transmit signals in the body, and controls the production of many other hormones. If a tumour is present in the neuroendocrine system, the tumour cells often express a large number of somatostatin receptors.

Octreotate is chemically similar to somatostatin; however it does not occur naturally in the body. Once it is in the body, it works in a similar way to somatostatin and travels to the neuroendocrine tumour cells. In Lutetium-177 Octreotate Therapy, the octreotate is bound with an isotope called Lutetium-177, which emits beta radiation. It is this radiation that destroys the cancer cells. The octreotate acts as a means of transporting the radiation to the tumour site, so that the whole body does not get exposed to the radiation. This is often referred to as Peptide Receptor Radionuclide Therapy (PRRT).

Is This Treatment Safe?

The radiation used in this therapy is designed to damage and kill the cancer cells. As most of the octreotate travels to the tumour locations, it targets the unhealthy cells in the neuroendocrine system, and any damage to healthy tissue is kept to a minimum. The radiation may, however, impact the kidneys and bone marrow, affecting the production of red blood cells. Blood results are monitored regularly to keep track of any changes in the blood chemistry. If deemed necessary by the physician, amino acids may be given during the treatment, to minimise the effects on the kidneys.

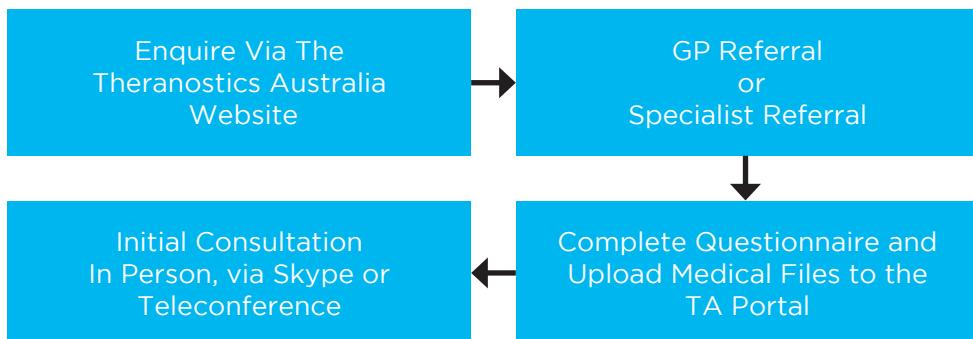
Possible side effects of this therapy may include fatigue, nausea, and a temporary increase in the common symptoms caused by the tumour. Some people may also experience slight hair loss, however this is not permanent. Despite these concerns, we now have over a decade of experience administering Lutetium-177 Octreotate Therapy. Compared to other forms of cancer treatments, patients on PRRT experience minimal and less severe long term side effects.

When Would I Consider Using This Treatment?

Lutetium-177 Octreotate Therapy is primarily used to treat people with NETs when other types of treatment, such as surgery or chemotherapy, are not suitable or are ineffective. This may be due to the size, location and number of tumours present. Lutetium-177 Octreotate is a very specific therapy that can only be used when tumours express a large number of somatostatin receptors. Most NETs show an increase in somatostatin receptors. Other tumours such as head and neck cancers, non-small cell lung cancer, small cell lung cancer and Merkel cell cancer may also express somatostatin receptors. If this therapy is being considered, a diagnostic scan is performed (Gallium Octreotate PET CT) to distinguish if the tumours are positive for somatostatin receptors.

What Do I Do Now? What Is The Process?

- Step 1:** Enquire via the Theranostics Australia (TA) Website.
- Step 2:** Obtain a referral from a General Practitioner or Specialist
- Step 3:** Access the TA Portal with credentials assigned to you by Theranostics Australia or an approved Medical Provider.
- Step 4:** Complete the Patient Questionnaire and upload requested medical files to your account.
- Step 5:** Organise an initial consultation with a TA physician either in person, teleconference or via Skype.
- Step 6:** The TA physician will advise of your options. If you meet the therapy criteria and agree to the various consents, your treatment can commence.



How Do I Contact Theranostics Australia?

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