

## Lutetium Lu 177 Dotatate (Lutathera®)

This is a form of Peptide Receptor Radionuclide Therapy (PRRT). It is targeted radiation that enters cancer cells and kills them.

### How PRRT Works

The treatment is given through an IV infusion. It travels to neuroendocrine tumor cells. It attaches to receptors on the surface of the tumor cells and enters the cell. The radiation then kills the cell from within.

### How It Is Given

It is given into a vein (IV) as 4 infusions, 8 weeks apart. Each infusion visit lasts 6-8 hours. Treatment also includes an amino acid infusion to help protect your kidneys from radiation. The amino acid infusion is given over 4 hours. The Lutetium Lu 177 dotatate is infused over 30-40 minutes. An injection of long-acting somatostatin analog (octreotide/lanreotide) will also be given after the amino acid infusion.

### Side Effects

Side effects are possible during and shortly after the infusion. Not everyone will experience these.

- **Nausea and vomiting:** This can be caused by the amino acid infusion. Medicine is given to help prevent this.
- **Discomfort at the IV site:** Tell your nurse if you have discomfort anytime during the infusions.
- **Hormonal gland problems (carcinoid crisis):** You may have symptoms caused by the release of hormones from your cancer. Symptoms include:
  - flushing,
  - sweating,
  - palpitations,

- difficulty breathing,
- low blood pressure, or
- an increase in diarrhea.

If this happens during treatment, you may get other medicine to help manage the symptoms. These symptoms typically do not last more than 24 hours after the infusion. If you have these symptoms at home, contact your healthcare team.

- **Fatigue:** You may feel tired for a few weeks after therapy.

### Important Safety Information

- **Radiation exposure:** Exposure to radiation increases risk of cancer. Radiation can be detected in your urine for up to 30 days after treatment.
- **Bone marrow problems:** This treatment may cause a decrease in your blood cells. This could include lower red blood cells (anemia), platelets (thrombocytopenia), and white blood cells (neutropenia). These cells carry oxygen through the body, clot blood, and fight infection. This occurs 4-6 weeks after treatment. It may last around 10 days. You will be monitored for these changes before every treatment. Other conditions you may experience include:
  - a bone marrow disorder (myelosuppression), and
  - blood and bone marrow cancers (myelodysplastic syndrome or MDS, and leukemia).
- **Kidney problems:** Treatment with PRRT exposes your kidneys to radiation. This may cause kidney

problems. People with kidney problems before treatment are at a higher risk for these effects. An amino acid infusion is given to protect your kidneys. Your kidney function will be monitored throughout treatment with blood tests.

- **Liver problems:** Your liver function will be monitored throughout treatment with blood tests.
- **Potassium and glucose problems:** Decreased potassium levels and increased glucose in the bloodstream may occur.
- **Fertility problems:**
  - Treatment with PRRT may cause infertility.
  - PRRT can harm an unborn baby. Please tell your doctor if you are pregnant or plan to become pregnant.
  - Use effective birth control methods during treatment and for 7 months (for females) and 4 months (for males) after treatment. If you are of child-bearing age, a pregnancy test is done before treatment.
  - You should not breastfeed during PRRT treatment and for 2 ½ months after your final PRRT treatment.

### **Somatostatin Injections During PRRT**

Often times people get somatostatin analog (octreotide and lanreotide) injections between Lutetium Lu 177 dotatate treatments. These medicines affect how well PRRT works. Long-acting somatostatin analogs should not be used 4 weeks before PRRT. Short-acting somatostatin analogs can be used up to 24 hours before PRRT. Discuss your injection schedule with your doctor.

### **Precautions When on PRRT**

This is a radioactive treatment. The radiation comes out in your bodily fluids. Your radiation levels are low, but you must follow the precautions below to protect others.

#### **During the infusion:**

- You will change into a gown to protect your clothing.
- You will have a private room. Your family and/or caregivers may be with you during your treatment but will be asked to leave the room during the 30-40 minute infusion.
- Drink 8 ounces of fluid every hour while awake. (Do not count caffeinated drinks toward your 8 ounces.) Empty your bladder often; aim for hourly. This helps to flush out the radiation and protects your kidneys.

#### **For 3 days after treatment:**

- Continue to drink 8 ounces of fluid (no caffeine) every hour. (Do not count caffeinated drinks toward your 8 ounces.) Empty your bladder often; aim for hourly while awake. During the night, try to empty your bladder at least 2 times. Try to drink 16 ounces of fluid during the night.
- Shower daily.
- Sleep in a separate room or a separate bed from others.
- Avoid prolonged close contact (under 3 feet) with children less than 18 years old, pregnant women, and the elderly. Hugs are ok.
- Use a separate bathroom if possible.
- Men and women should sit to urinate. Use toilet paper afterwards.
- Close the toilet lid and flush 2 times after you use the toilet.
- Wash your hands well with soap and water after using the toilet.

- If you use disposable undergarments or pads, place them in a closed plastic bag after using. Take them out to the garbage bin. Avoid leaving them in your bathroom.
- Do not share eating utensils until they are washed.
- If any clothing or bedding gets soiled, wash as soon as possible. Wash separately from other people's items.
- Wash your bed linens 3 days after you receive treatment. Wash separately from other people's items.

### **When and Who to Call**

Call the Carbone Cancer Center RN Triage Line at **608-265-1700 (option 3)** if you develop:

- A fever of 100.4°F or higher, or chills.
- Signs of allergic reaction.
- Shortness of breath.
- Increased bleeding or bruising.
- Uncontrolled nausea or vomiting.
- Unable to urinate.
- Other concerning symptoms

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright ©7/2020 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#8158.