

A. EFFECTIVE DATE:	6/20/2023
B. PURPOSE:	<p>To outline the nursing responsibilities during Lutetium Lu-177 Dotatate LUTATHERA® injection.</p> <p>Lutetium Lu-177 Dotatate (LUTATHERA®) is a radiolabeled somatostatin analog indicated for the treatment of somatostatin receptor-positive gastroenteropancreatic neuroendocrine tumors (GEP-NETs), including foregut, midgut, and hindgut neuroendocrine tumors in adults.</p>
C. POLICY:	<ol style="list-style-type: none"> <li>1. Lutetium Lu-177 Dotatate (LUTATHERA®) will be administered by the nuclear medicine physician / provider.</li> <li>2. Lutetium Lu-177 Dotatate (LUTATHERA®) injection will take place in the lead –lined patient room on University Tower 6.</li> <li>3. The following radiation safety principles of time, distance, shielding and contamination control must be practiced at all times during care of patient receiving Lutetium Lu-177 Dotatate (LUTATHERA®):             <ol style="list-style-type: none"> <li>a. <b>Time:</b> Minimize time near the radiation source</li> <li>b. <b>Distance:</b> Maximize distance from the radiation source</li> <li>c. <b>Shielding:</b> Use appropriate shielding between yourself and radiation source</li> <li>d. <b>Contamination control:</b> Always wear gloves, gown and shoe covers in the room while handling anything. Assume that everything is potentially contaminated.</li> </ol> </li> <li>4. Declared pregnant workers should contact Radiation Safety at x2250 prior to supporting any Lu-177 treatments. Information regarding the pregnancy declaration process is available on the Office of Radiation Safety website. Individuals wishing to declare may also call the Office of Radiation Safety at x2250.</li> </ol>
D. SCOPE:	Registered Nurses University Tower 6 Oncology of John Dempsey Hospital
E. PROCEDURES, GUIDELINES AND PROTOCOLS:	<ol style="list-style-type: none"> <li>1. Radiation Safety Department will prepare the room.</li> <li>2. RN will:             <ol style="list-style-type: none"> <li>a. Contact the nuclear medicine department upon patient arrival to the unit to coordinate care.</li> <li>b. Contact the pharmacy to request amino acids <b>not</b> be delivered via pneumatic tube system due to excessive bubbling that occurs with agitation during tube transport.</li> </ol> </li> </ol>

- c. Utilize principle of **ALARA** to keep radiation exposure **As Low As Reasonably Achievable**.
- d. Wear a dosimeter.
- e. Remain near the patient for only the amount of time necessary to provide nursing care during and after the administration of with Lutetium Lu-177 Dotatate (LUTATHERA®).
- f. Verify that patients to be treated with Lutetium Lu-177 Dotatate (LUTATHERA®) have not received a long-acting somatostatin analogs for at least 4 weeks before each LUTATHERA® administration.
- g. Verify that if a patient is utilizing short-acting somatostatin analogs, those were stopped for 24 hours before each Lutetium Lu-177 Dotatate (LUTATHERA®) administration.
- h. Explain procedure to patient.
- i. Have patient change out of street clothes and wear a hospital gown so that their gown may be quarantined in the event of a radiation spill.
- j. Instruct patient to remain in room after administration of Lutetium Lu-177 Dotatate (LUTATHERA®) and provide a rationale for such.
- k. Encourage patient to urinate as frequently as possible after administration of LUTATHERA® to help eliminate radioactive material concentrated in the urine.
  - i. Instruct male patients to sit on the toilet to urinate.
  - ii. Instruct all patients to flush toilet twice after use.
- l. Assess baseline vital signs and every 4 hours or as clinically indicated throughout procedure.
- m. Notify dietary department of need for disposable meal trays.
- n. Confirm that a negative pregnancy test (<5 mIU/ml hCG) or documented hysterectomy for any female patient of childbearing age prior to administration of Lutetium Lu-177 Dotatate (LUTATHERA®). A potentially pregnant patient will be

defined as any female between the start of her menses to one year post-menopausal.

- o. Insert 2 peripheral IVs (in opposite limbs if possible). 18-20g preferred. If different gauges are used, RN will reserve the largest bore IV for nuclear medicine use.
- p. Administer ordered anti-emetics ~ 30 minutes prior to start of the amino acid infusion.
- q. Administer ordered amino acid infusion 30 minutes before LUTATHERA® administration and continue during and for at least 3 hours afterwards to reduce the risk of kidney damage. The amount of amino acid solution administered should not be decreased if the LUTATHERA® dose is reduced.
- r. Place all clothes, linens, and food trays used by the patient in containers provided and left in the patient's room until checked by Radiation Safety.
- s. Wear gloves, gown, and shoe covers at all times while in the patient's room.
- t. Dispose of used gloves, gown, shoe covers or other personal protective equipment in the trash containers in the room.
- u. Place all non-disposable items in plastic bag and leave bag in the patient's room until checked by Radiation Safety.
- v. Ensure that any equipment brought into the patients room such as stethoscopes, blood pressure cuffs, thermometers, etc. remains in the patient's room until checked by Radiation Safety.
- w. Verify patient understanding of need to receive an injection of long-acting octreotide as ordered by their provider within 4 to 24 hours after each infusion of Lutetium Lu-177 Dotatate (LUTATHERA®) and every 4 weeks after they complete their Lutetium Lu-177 Dotatate (LUTATHERA®) regimen until either progression of disease, or for up to 18 months following initiation of LUTATHERA® treatment.
- x. Enforce with patient that pre- and post LUTATHERA® infusion care and octreotide injections will be managed by the patient's provider in the ambulatory endocrine neoplasia clinic.

3. Nuclear medicine will administer Lutetium Lu-177 Dotatate (LUTATHERA®) and document infusion in medical record.
  4. RN will:
    - a. Administer remainder of amino acid infusion as ordered.
    - b. Monitor for and immediately report to practitioner any signs and symptoms of neuroendocrine hormonal crisis (a rare but serious adverse reaction to Lutetium Lu-177 Dotatate (LUTATHERA®) treatment.) which include: flushing, diarrhea, bronchospasm and hypotension.
    - c. Assess for nausea and vomiting which can occur during the infusion. All vomitus or other body fluids from a patient who has received Lutetium Lu-177 Dotatate (LUTATHERA®) should be considered radioactive. See emergency procedure below for vomiting / incontinence.
    - d. Immediately notify UConn Health Police and Radiation Safety if patient wishes to leave AMA or leaves the room for any reason.
  5. Radiation Safety will obtain Geiger counter readings and determine time of discharge.
  6. Nuclear medicine and/or Radiation Safety will provide discharge instructions clarifying patient-specific radiation safety precautions.
  7. RN will remove IVs and assess insertion sites prior to discharge.
- Emergency Procedures:
1. Should a patient vomit or become incontinent, RN will:
    - a. Not attempt to clean it up
    - b. Cover the excretions with a sheet or blanket
    - c. Contact Radiation Safety Immediately
  2. For suspected employee skin contact with patient's body fluids, RN will:
    - a. Remain in the immediate area
    - b. Have someone call Radiation Safety immediately to initiate decontamination procedure
  3. Medical emergency:
    - a. RN will follow RADIATION PATIENTS MEDICAL EMERGENCY PROCEDURE below.
  4. For a patient who expires, RN will:

## CLINICAL POLICY

*Lutathera Lutetium Lu-177 Dotatate Infusion*  
Nursing

- a. Notify Radiation Safety
- b. Ensure patient's body remains in room until Radiation Safety arrives
- c. Collaborate with provider to ensure Anatomic Pathology is notified that the body is radioactive.

### RADIATION PATIENTS MEDICAL EMERGENCY PROCEDURE

5. Addressing the patient's condition comes first. However, always attempt to follow established radiation safety procedures.
6. In the event of a MEDICAL EMERGENCY, RN will: Follow established Hospital Medical Emergency procedures.
  - a. Dial x7777, state "medical emergency" followed by "radioactive patient", "UT6", and provide additional applicable clinical information related to the emergency (cardiac arrest, pulmonary arrest, stroke, patient is non-responsive, etc.).
    - i. Page operator will activate the call tree.
  - b. Pregnant personnel will not be allowed to enter the room.
  - c. Personnel entering the room should have a dosimeter (radiation badge) if time allows.
  - d. The recording nurse will restrict the area to essential personnel until the Radiation Safety staff arrives.
  - e. The nurse will also record the names and times of personnel entering the room.
  - f. If the recording nurse, or nurse responsible for the code, has trouble controlling ingress and egress from the area or the room, the staff member is to contact public safety and request an officer to respond to control and hold personnel until radiation safety arrives and releases staff.

F. REFERENCES:	Advanced Accelerator Applications Lutathera monograph and nurse guide
G. RELATED POLICIES:	PERSONAL RADIATION DOSIMETRY POLICY NUMBER 1988-## (11-025) <a href="http://content.research.uconn.edu/pdf/uch/rcs/ehs/Personal-Radiation-Dosimetry-Policy.pdf">http://content.research.uconn.edu/pdf/uch/rcs/ehs/Personal-Radiation-Dosimetry-Policy.pdf</a>  Office of Radiation Safety Declaration of Pregnancy ORS SOP-1 <a href="http://content.research.uconn.edu/pdf/uch/rcs/ehs/PREGWRK.pdf">http://content.research.uconn.edu/pdf/uch/rcs/ehs/PREGWRK.pdf</a>

