

## GA-68 DOTATATE PET-CT

**Special Instructions**      **For patients on long-acting somatostatin analogs, e.g., lanreotide (Somatuline) or octreotide acetate depot injection (Sandostatin LAR), schedule patients for imaging at least 1 week after their last injection. Short-acting analogs of somatostatin should be discontinued for 24 hours before imaging, if feasible. Patients should consult their physician before withholding any medication.**

**Last dose and type (long- or short-acting) of octreotide should be recorded in the technologist comments.**

**To be done at UNMH/OSIS only.**

**Radiopharmaceutical:** Ga-68 DOTATATE

**Dose (Adult/Pediatric):** Refer to Nuclear Medicine Dose Chart

**Route of Administration:** Intravenous.

**Patient Preparation:** For patients on long-acting somatostatin analogs, e.g., lanreotide (Somatuline) or octreotide acetate depot injection (Sandostatin LAR), schedule patients for imaging at least 1 week after their last injection. Short-acting analogs of somatostatin should be discontinued for 24 hours before imaging, if feasible. Patients should consult their physician before withholding any medication.

No other patient preparation needed, including **no need for NPO or glucose check, and no restrictions on movement.**

Patients should drink water and void frequently during the first hours following administration to reduce radiation exposure.

Advise lactating women to interrupt breastfeeding and pump and discard breast milk for 12 hours after Ga 68 DOTATATE administration in order to minimize radiation exposure to a breastfed infant. **Follow UNMH Procedure “Radiology – Nuclear Medicine – Identification and Instruction of Breast-Feeding Patients.”**

All metal must be removed from the patient prior to scanning, including (but not limited to) glasses, bras, dentures, earrings, rings, and watches if arms are left down. For scans involving the pelvis, pants with metal zippers may be pulled down to below the region to be imaged (typically knee level if scanning to thighs), or the patient may wear a gown.

**Equipment Setup:** Time per bed position (minutes):

	OSIS PET-CT	UNMH PET-CT
Any region	4	4

# GA-68 DOTATATE PET-CT

## **PET-CT protocol:**

### **Regions to be imaged:**

**DO-1** = eyes to midhighs, arms up; water oral contrast. No IV. Scan direction: inferior to superior. (Most commonly used)

**DO-4** = top of head to midhighs, arms down; water oral contrast. No IV. Scan direction: superior to inferior. (Preferred for head/neck cases, e.g., evaluation for head/neck paragangliomas)

**DO-WB**: top of head to feet; arms down. Scan direction: superior to inferior.  
\*\* Use sparingly! (Very long imaging time; use only if necessary)

**DO-LTD**: region per radiologist protocol. No IV. Scan direction: inferior to superior.

Additional modifications may be made by the radiologist, e.g., to include extremities. Consult with radiologist if there are any questions about whether additional regions need to be included, e.g., if the patient has obvious involvement of an area not included; if previous Ga-68 DOTATATE PET-CT imaging used a different protocol or field of view, or if the patient mentions a particular concern they or their physician had.

### **Oral contrast (if requested by the radiologist):**

Outpatients and inpatients:

DO-1 and DO-4: routine protocol is water oral contrast during the uptake phase (and for 1 hour prior when possible)

If positive oral contrast is requested by the radiologist:

Outpatient: 1 bottle of Redicat to consume after injection of Ga-68 DOTATATE.

Inpatient: 7 mL Gastrografin in 8 oz water immediately and 30 minutes after injection.

## **Patient Positioning:**

Supine. Head first.

If the extremities are imaged by themselves (either as a limited study or as part of a whole-body examination), a BB must be placed on the right leg or right arm in the imaged field of view.

## **Procedure:**

Imaging time post injection: 60 minutes (as close as possible; acceptable range per manufacturer is 40-90 minutes).

- 1) Inject Ga-68 DOTATATE, and flush with normal saline (10 mL for butterfly needles; 20 mL for angiocatheters, 40 mL or greater for indwelling catheters).
- 2) If applicable, have patient drink oral (usually water) contrast during the 1-hour uptake phase as mentioned above.
- 3) Perform CT examination of region of interest, followed by PET.

Acquisition:

## GA-68 DOTATATE PET-CT

1. On chronicle, enter PET dose, time administered, and time per bed position
2. Load topogram
3. Set parameters for scan
4. Load → move → start
5. When CT is complete (approximately 25 secs), you will be prompted to move patient for PET scan (table moves all the way to the back of the gantry)
6. Options → PET monitor to view scan length if desired (applies to UNMH PET only; displays how long the entire PET scan will take).
7. When acquisition is complete, load fusion on Wizard before sending to PACS, Leonardos, and Intellispace.

After the examination, the patient should be encouraged to drink lots of fluids and void frequently to minimize kidney/bladder/pelvic organ radiation exposure.

### **Processing:**

Follow automatic processing workflow

Process CT in B 5 31 algorithm

Process PET into attenuation corrected and non attenuation corrected PET files

Generate PET-CT fused axial data set

Use “Siemens Microdelta Hot Metal” color scheme

For whole-body images, the kidneys and spleen should be bright pink

### **Items Required For Complete Study:**

- Enter protocol, protocoling physician, Ga-68 DOTATATE dose, and injection site in comments section on PACS
- Processing and transfer of all images to PACS, Leonardo, and Intellispace Portal as appropriate
  - Topogram (to PACS)
  - Fused axial images (to PACS)
  - CT, PET Corrected, and PET Uncorrected to PACS, Leonardo, and Intellispace Portal.
- Complete the examination in RIS