

LYMPHOSCINTIGRAPHY (lymphangiogram, not sentinel node imaging)
UPDATED: APRIL 2016

CPT CODE: 78195

Indications:

- Evaluation of chronic lymphedema of a swollen extremity, where scan is used to differentiate primary or secondary lymphedema (primary has neither lymphatic nor proximal LN visualization, secondary has interstitial lymphatic uptake but poor visualization of proximal lymph channels and nodes)
- Identification of patent lymph channels prior to lymphovenous anastomosis
- Determination of lymph node drainage
- Evaluation of blockage, blockage by tumor or blockage by trauma.

Patient Prep:

If the patient wears elastic stockings these should generally be removed 3-4 hours prior to the study. If this cannot be done, it should be noted and considered in the interpretation.

Scheduling:

Allow 3 hours. Check with NM physician after initial study to determine if delayed images may be needed. Allow 60 minutes for each delayed imaging set.

Radiopharmaceutical & Dose:

Tc-99m sulfur colloid suspension (filtered) with a particle size ≤ 220 nm (small particle size prepared by passing through a 220 nanometer Millipore filter.

- Adults and pediatric up to 1.5 mCi/region

Note: Dose in children is determined by the Nuclear Medicine physician on a case by case basis.

Dose/injection for all: 520 μ Ci/0.12 mL dispensed in each of four 1cc TB syringes.

Note: This injection has a validated retention of ~ 300 μ Ci in the hub of the syringe; the actual administered dose per syringe used is ~ 200 μ Ci. One injection per syringe and one to two injections are made per extremity. Those validating the doses will enter into NMIS that actual reading from the dose calibrator without accounting for retention.

Injection:

First, identify the patient using two approved methods. Fully explain the procedure to the patient, and answer all their questions. Obtain patient's verbal approval. Identify the area to be injected, with the patient's confirmation. Apply lidocaine cream to the area to be injected approximately 15 minutes prior to injection. Do not use ice for pain control as it will slow the lymphatic flow.

NM Physician, NM Resident, or Radiology Resident injects the doses, as described below.

Inject tracer subcutaneously in the webs between toes and/or fingers (2 sites per extremity).

- Inject both feet subcutaneously in the webs between 1st-2nd and 2nd-3rd toes.
- Inject both hands subcutaneously in the webs between 2nd-3rd and 3rd-4th fingers.

The patient should move and/or massage the injected limbs post injection.

Imaging Device:

The preferred cameras include the GE Infinia I, II, III or the GE Millennium VG with the LEHR collimators. The GE Millennium can be used for upper extremities.

Imaging Procedure: Use Lymphangiogram protocol located under lymphoscintigraphy folder.

FOOT IMAGING: 15 minutes post injection, a whole body image is acquired at 7 cm/min. After acquisition of the first whole body wait 30 minutes and acquire a second whole body image at 7 cm/min. Upon completion of whole body images check with physician to see if other images are needed. Acquire all images with the oldest cobalt sheet transmission source under the table to outline the body.

Check with a NM staff or resident physician to determine if additional views are indicated.

HAND IMAGING: 15 minutes post injection, a whole body image is acquired at 7 cm/min (knees up). After acquisition of the first whole body wait 30 minutes and acquire a second whole body image at 7 cm/min. Upon completion of whole body images check with physician to see if other images are needed.

Check with a NM staff or resident physician to determine if additional views are indicated.

Display: Use factory whole body display for processing with dual intensities. Screen Cap

PACS: All raw data and screen caps should be sent to the PACS.

Interpretation: Radiopharmaceutical should promptly ascend up the appropriate lymph node chains. Asymmetry in lymph node uptake may indicate obstruction.

Comments: A Nuclear Medicine staff or resident physician should be consulted to determine if additional views are indicated.

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