

Meckel Scan

Special Instructions At the discretion of the referring clinician, patients may be pretreated with an H₂-blocker or proton pump inhibitor. See below for suggested pretreatment regimens.

To be performed at UNMH and SRMC.

Radiopharmaceutical: Tc-99m pertechnetate

Dose (Adult/Pediatric): Refer to Nuclear Medicine Dose Chart for radiopharmaceutical doses.

Suggested pharmacologic pretreatment regimens (to be prescribed by the referring clinician, at his/her discretion). Oral medications should be given for 2 days prior to imaging; IV medications should be completed 1 hour prior to imaging.

Any ONE (oral or IV) of the following may be used. Confer with the radiologist if questions.

A. Cimetidine

1. Oral (2 days)

Neonates: 10–20 mg/kg/day po

Infants and older children: 20 mg/kg/day po

Adults: 300 mg 4 times per day po

2. Intravenous (one dose; complete 1 hour before imaging)

300 mg in 100 mL of 5% dextrose IV over 20 min

B. Ranitidine

1. Oral (2 days)

Children: 2 mg/kg po

Adults: 150 mg po

2. Intravenous (one dose; complete 1 hour before imaging)

Infants, children, and adults: 1 mg/kg IV (max 50 mg) over 20 min

C. Famotidine

1. Oral (2 days)

Children: 0.5 mg/kg/day po

Adults: 20 mg by mouth

2. Intravenous (one dose; complete 1 hour before imaging)

Children: 0.5 mg/kg/day IV

Adults: 20 mg IV or 0.25 mg/kg IV

(reference: Spottswood SE et al., “SNMMI and EANM Practice Guideline for Meckel Diverticulum Scintigraphy 2.0,” J Nucl Med Technol 2014; 42: 163-169)

Proton pump inhibitors may alternatively be used at the discretion of the referring clinician; no specific recommendations for dose or duration are provided.

Meckel Scan (continued)

Route of Administration: Intravenous

Patient Preparation: None.

Equipment Setup: Gamma Camera: ZOOM in small children as appropriate

Collimator:

- Orbiter: LEAP
- SPECT-CT/E-CAM/Evo/Symbia E: High resolution

Computer setup:

Anterior:

- Dynamic acquisition
- 128 x 128 matrix
- Zoom 1.0 (greater for small children)
- 1 min/image, 60 images

Lateral (if needed):

- Dynamic acquisition
- 128 x 128 matrix
- Zoom 1.0 (greater for children)
- 2 min/image, 1 image

Patient Positioning: Supine, stomach at top right of screen

Procedure:

- Begin imaging immediately after injection
- Anterior dynamic images for 60 minutes as above
- Check with radiologist to see if additional images are necessary (e.g., laterals) before releasing the patient

Processing:

Anterior 1-hour dynamic images:

- Merge each 5 images together to display 5-min/frame
- Labeled savescreens/lightboxes of any additional views or delayed images

Items Required For Complete Study:

- Raw data of all images to PACS
- Lightbox/savescreen of anterior images merged to 5 min/image
- Static display of any additional projections/delayed images
- Transfer all digital images to PACS
- Complete the examination in RIS

Meckel Scan (continued)