

Parathyroid Scan

Special Instructions **To be performed at UNMH.
To be performed at SRMC on a case by case basis with Attending Radiologist approval.**

Radiopharmaceutical: Tc-99m Sestamibi

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

Route of Administration: Intravenous

Patient Preparation: None.

Equipment Setup: Collimator (all cameras): High resolution

Computer setup:

Planar images:

- Acquire on Head 1
- Static acquisition
- 256 x 256 matrix
- Zoomed image (neck):
 - ZOOM 2.67, 10 min/image
- Non-zoomed image (Head/neck/chest):
 - ZOOM 1.0, 5 min/image

SPECT images:

- High resolution collimator
- 128 x 128 matrix
- ZOOM = 1.0
- 180 degrees, CW (clockwise)
- 64 steps, 15 sec/step
- Noncircular, continuous

Patient Positioning: Feet first, supine.

Make sure that the patient is comfortable and will not move his/her neck during the imaging (may need a pillow to prop his/her neck; **use a cervical collar if performed on a SPECT only camera to ensure same positioning as for CT).**

Procedure:

- Acquire anterior planar zoomed (neck) and non-zoomed (head/neck/chest) images with arms down, 10 minutes and 2 hours after injection.
- 4-hour delayed images are no longer required.

Parathyroid Scan (continued)

- Acquire SPECT images of the neck/upper chest with arms down immediately after the initial planar images.
- For SPECT-CT, the CT acquisition to the region goes from the nose through the base (bottom) of the heart.
- For SPECT only cameras, images should be acquired in a cervical collar. Obtain planar and SPECT images first, and then confirm the region to CT with the radiologist (under a neck CT acquisition with arms down, 3-5 mm sections, nose through the base of the heart)

Processing:

Generate one savescreen of both planar time points with zoomed images above (immediate, 2 hour) and non-zoomed images below (immediate, 2 hour).

SPECT or SPECT-CT:

- Follow automatic processing workflow

If SPECT-CT:

- Process CT in soft tissue (B30) and bone (B60) algorithm; should have attenuation corrected and non attenuation corrected SPECT tomo files

Items Required For Complete Study:

- Processing and transfer of all images to PACS and/or Leonardo as appropriate
 - Raw data of all planar images to PACS
 - Planar:
 - Lightbox/savescreen of all planar images to PACS, processed as above
 - SPECT-CT:
 - Attenuation Corrected and Non Attenuation Corrected Tomo Reconstructions, CT (B30 and B60) to Leonardo and PACS
- Complete the examination in RIS