Parathyroid Scan

<table>
<thead>
<tr>
<th>Special Instructions</th>
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<tbody>
<tr>
<td>To be performed at UNMH.</td>
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<tr>
<td>To be performed at SRMC on a case by case basis with Attending Radiologist approval.</td>
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</tbody>
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**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