GUNDERSEN HEATLH SYSTEM
NUCLEAR MEDICINE DEPARTMENT
PROTOCOL MANUAL

PROCEDURE: **PARATHYROID IMAGING**

SECTION: **ENDOCRINOLOGY 3.5**

ORIGINAL DATE: **12 - 29 - 99**

DATE REVISED: **3 – 13 - 19**

REVIEWED: **ANNUAL**

Indications	Detect and localize parathyroid adenomas; The Nuclear Medicine Technologists will check patient's EPIC History for prior 'CT with 4D CT parathyroid protocol' scans done within the past 3-6 months of the Tc-Sestimibi scan. -If not, talk with radiologist, who may then suggest patient have CT imaging 1st unless there are underlying clinical reasons not to.
Contraindications	none
Exam time length	Initially: 45 min Delayed : 45 min
Patient Preparation	None
Radiopharmaceutical & Dose	Tc-99m-sestamibi. Dose: Adult: 25 mCi (925 MBq). Pediatric: 0.3 mCi/kg (Dosing Range 1 - 25 mCi)
Administration Technique	Technique of administration: Standard intravenous injection. using a intermittent I.V. to ensure non-infiltrated dosing. Lymphatic drainage of infiltrated dose may lead to visualization of lymph nodes under arm.

STATIC ACQUISITION PARAMETERS	
Time interval between tracer injection and imaging	None
Collimator	LEHR
Patient position	Supine with head and neck extended and immobilized
Energy	140 kev
Matrix	128
Time /View	600 sec for all zoomed; 300sec non-zoom; 30sec Co-57 marker
Images taken	Early ANT 2 min post injection non-zoom – neck and chest Early non-zoom marker – marker on SS notch Early SPECT/CT see SPECT acquisition Instructions Delay ANT 3hr non-zoom-neck and chest Delay SPECT/CT
Screen caps to make	All stats. Add marker image to neck and chest image
Send to FUJI	Stats screen cap
Send to Dr. PET	Screen caps

SPECT ACQUISITION & PROCESSING PARAMETERS	
Time interval between tracer injection and imaging	SPECT/CT imaging at Early and 3 hrs post dose
Camera/Collimator	LEHR
Patient position	Supine – head first
Energy	140 kev
Matrix	128
Pixel size	4.4mm
Number of projections	60
CW or CCW	CW or CCW
Orbit type	Contour
Start Angle	0 or as camera starts after CT
End Angle	360 or as camera ends after CT and SPECT
Time per view	40 sec
Gating (Y/N)	NA
Gating frames	NA
R to R window	NA
Uniformity and COR	NA
Prefilter Type	Hanning
Filter cutoff/power	0.9,0
Motion correction	NA
Attenuation correction Y/N	Y – with CT atten correction
Normal database used Y/N	N
Reconstruction filter	Hanning 0.9,10
Screen caps to make	None
Send to FUJI	SPECT/CT – NM axail, Fused axial,axial CT and MIP
Send to Dr. PET	Entire study

**** Show completed exam to radiologist prior to patient leaving.

Data Acquisition- Parathyroid SPECT/CT

When performing a SPECT acquisition where the pallet is NOT supported by the rollers in the gantry, the system applies a “table sag” correction to the data. In this scenario, we can use the body part “head or neck”. If the pallet is advanced far enough during the acquisition set-up where it is supported by the rollers, then use “other” for body part.

To change, as needed, per above:
Under SPECT/CT acquisition Tomo Key Parameters, click “More Parameters”.
Click on “Tomo Admin Parameters”,
Under “Image Orientation: Change ‘Body Part” needed by clicking on the drop down.

Data Processing- Parathyroid SPECT/CT

See General SOP - **XELERIS SPECT/CT PROCESSING**