RIH - PARATHYROID 4D NECK
GE LIGHTSPEED 16 / OPTIMA CT580 PROTOCOL

Indication: For localization of parathyroid adenoma

Position/Landmark	Head first or feet first-Supine Sternal Notch
Topogram Direction	Craniocaudal
Respiratory Phase	Inspiration
Scan Type	Helical
KV / mA / Rotation time (sec) **Pitch / Speed (mm/rotation)** **Noise Index / ASiR / Dose Reduction**	120kv / smart mA (100-450) / 0.5 sec 1.375:1 , 27.50mm 17.0 / 20 / 20%
Detector width x Rows = Beam Collimation	1.25mm x 16 = 20mm
Average Tube Output (each scan)	ctdi – 10.7mGy dlp – 915.6 mGy.cm
First – Third Helical Sets Slice Thickness/ Spacing Algorithm Recon Destination	recon: 1 body part: thin dynamic neck thickness/ spacing: 1.2mm x .6mm algorithm: standard recon destination.: for dmpr three groups: 0 seconds, 45 seconds, 75 seconds
Scan Start / End Locations **DFOV**	external auditory meatus mid heart 20cm decrease appropriately
IV Contrast Volume / Type / Rate	100mL Iohexol (Omnipaque 350) , 3mL/sec
Scan Delay	45 seconds
2D/3D Technique Used	DMPR of 3mm x 3mm axial and coronal of each phase of recon 1 auto transferred to PACS. Auto-batch is on for all 6 sets of reformats.

Comments: Recon 1 is three helical groups of the neck for direct mpr. Direct mpr will create axial and coronal images of each series and send them to PACS. This protocol repeats the same scan of the neck at 0 seconds, 45 seconds(late arterial), 75 seconds(perfusion), after iv contrast injection.

Start the iv contrast injection after the non-contrast series (0 seconds) is completed. Place the angiocath for the iv injection in the arm opposite of the patient's symptoms. The patient usually has had a nuclear med study that indicates the area of possible adenoma.

The multiple phases are used to determine the peak enhancement of a parathyroid adenoma.

Images required in PACS	Scouts, 2.5mm x 2.5mm axial and coronal 0 seconds, 2.5mm x 2.5mm axial and coronal 45 seconds, 2.5mm x 2.5mm axial and coronal 75 seconds, Dose Report