RIH - PARATHYROID 4D NECK
GE LIGHTSPEED VCT 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 , 55.00mm 18.0 / 20 / 20%
Detector width x Rows = Beam Collimation	0.625mm x 64 = 40mm
Average Tube Output	ctdi – 10.7mGy dlp – 915.6 mGy.cm

First – Third Helical Sets Slice Thickness/ Spacing Algorithm Recon Destination					
	recon	body part	thickness/ spacing	algorithm	recon destination.
	1	thin neck	.6mm x .6mm	standard	for dmpr

three groups: 0 seconds, 45 seconds, 75 seconds

Scan Start / End Locations **DFOV**	external auditory meatus mid heart 18cm 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 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, 3mm x 3mm axial and coronal 0 seconds, 3mm x 3mm axial and coronal 45 seconds, 3mm x 3mm axial and coronal 75 seconds, Dose Report

updated Jan 23, 2017