

RIH – CAROTID AND BRAIN CTA GE LIGHTSPEED VCT PROTOCOL

Indications: carotid/cerebral artery stenosis or aneurysm; non-trauma

Position/Landmark	Supine head first or feet first Zero at sternal notch.			
Topogram Direction	Craniocaudal			
Scan Type	Helical			
KV / mA / Rotation time (sec) Pitch / Speed (mm/rotation) Noise Index / ASiR / Dose Reduction	nc brain 120kv / smart mA (50-210) / 0.7 sec 0.531:1 , 10.62mm 7.0 / 30 / 30%		neck brain cta 120kv / smart mA (100-450) / 0.5 sec 0.969:1 , 19.37mm 13.0 / 20 / 20%	
Detector width x Rows = Beam Collimation	0.625mm x 32 = 20mm			
Average Tube Output	nc brain ctdi – 35.0 mGy dlp – 600 mGy.cm		cta neck brain ctdi – 10.4 mGy dlp – 365 mGy.cm	
First Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon	body part 1 thin brain	thickness/ spacing .6mm x .6mm	recon algorithm standard destination for dmpr
Second Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon	body part 1 cta carotid/brain 2 carotid cta 3 brain cta	thickness/ spacing .6mm x .6mm 1.25mm x 1.25mm .6mm x .6mm	recon algorithm soft standard soft destination for dmpr pacs pacs
Scan Start / End Locations DFOV	nc brain 1cm inferior to skull base skull vertex 23cm		cta neck brain 1cm inferior to aortic arch skull vertex 23cm decrease appropriately	
IV Contrast Volume / Type / Rate	90mL Iohexol (Omnipaque 350) / 4mL per second			
Scan Delay	Smart Prep at Aortic Arch			
2D/3D Technique Used	Non Con: 5mm x 5mm axial brain reformats in the glabello-meatal plane (auto-batch off), average mode, auto transferred to PACS CTA: Axial reformats, 10.0mm x 3.0mm, mip mode (auto-batch off) Sagittal and coronal reformats 1mm x 1mm, mip mode (auto-batch off) Right and left sagittal/oblique reformats, 1.0mm x 1.0mm, average mode (auto-batch off), average mode, auto-transferred to PACS			
Comments:	For the cta, Recon 1 is a thin soft algorithm for reformats. Axial reformats 10.0mm thick x 3.0mm, mip mode, and sagittal and coronal 1mm thick x 1mm, mip mode, right and left sagittal/oblique reformats, 1.0mm x 1.0mm, average mode using DMPR are routine for this protocol. Recon 2 is from the aortic arch to the circle of willis only. Recon 3 is from C2 through the skull vertex only.			
Images required in PACS	Scouts, 5mm x 5mm axial nc brain, .6mm x .6mm axial brain cta, 10mm x 3mm axial brain cta mip, 1mm x 1mm sagittal brain cta mip, 1mm x 1mm coronal brain cta mip, 1.25mm x 1.25mm axial carotid cta, 1mm x 1mm right sagittal oblique carotid, 1mm x 1mm left sagittal oblique carotid, Dose Report			