

RIH – ACUTE STROKE BRAIN AND CAROTIDS MULTI-PHASE(ELVO) GE LIGHTSPEED VCT PROTOCOL

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

Position/Landmark	Supine head first or feet first Zero at sternal notch.			
Scan Type	Helical			
KV / mA / Rotation time (sec) Pitch / Speed (mm/rotation) Noise Index / ASiR / Dose Reduction	nc brain 120kv / smart mA (50-210) / 0.5 sec 0.531:1 , 10.62mm 3.5 / 20 / 20%	neck brain cta 120kv / smart mA (100-450) / 0.7 sec 0.984:1 , 39.37mm 15.0 / 20 / 20%		
Detector width x Rows = Beam Collimation	0.625mm x 32 = 20mm		0.625mm x 64 = 40mm	
Average Tube Output	nc brain ctdi – 35.0 mGy dlp – 600 mGy.cm	cta neck brain ctdi – 10.4 mGy dlp – 365 mGy.cm	peak/late venous brain ctdi – 11.4 mGy dlp – 175 mGy.cm	
First Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	body recon part	thickness/ spacing	algorithm	recon destination .
	1 non angled head	5mm x 5mm	standard	pacs
	2 thin brain	.6mm x .6mm	standard	for dmpr/terarecon
Second Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	body recon part	thickness/ spacing	algorithm	recon destination .
	1 thin cta carotid/brain	.6mm x .6mm	soft	for dmpr/terarecon
	2 axial neck brain cta	1.2mm x 1.2mm	standard	pacs
Third Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	body recon part	thickness/ spacing	algorithm	recon destination .
	1 thin peak venous brain	.6mm x .6mm	soft	for dmpr/terarecon
Fourth Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	body recon part	thickness/ spacing	algorithm	recon destination .
	1 thin late venous brain	.6mm x .6mm	soft	for dmpr/terarecon
Scan Start / End Locations DFOV	brain 1cm inferior to skull base/skull vertex 25cm	cta neck brain 1cm inferior to aortic arch/skull vertex 25cm		
IV Contrast Volume / Type / Rate	80mL Iohexol (Omnipaque 350) / 4mL per second			
Scan Delay	Smart Prep at Aortic Arch			
2D/3D Technique Used	<p>Non Con: 5mm x 5mm axial and coronal brain reformats in respect to the glabello-meatal plane, average mode</p> <p>CTA: axial reformats 24mm x 4mm, mip mode, width 1000 level 200 coronal reformats 5mm x 2mm, mip mode, width 1000 level 200 sagittal reformats 1mm x 1mm, mip mode, width 1000 level 200</p> <p>Peak/Late: axial reformats 24mm x 4mm, mip mode, width 1000 level 200</p>			
Comments:	<p>Four helical scans: NC Brain, CTA Neck and Brain, Peak Venous Brain, Late Venous Brain</p> <p>If the cta is performed, PA and Lateral Scouts of the Chest Abd Pelvis will be done at the end of the study to serve as a metallic foreign body screening for MRI. The scouts need to cover from base of neck to groin. The PA scout uses 120kV and 40mA and the Lateral scout uses 120kV and 80mA</p>			
Images required in PACS and RIHOSPSTROKE	Scouts, 5mm x 5mm head, 5mm x 5mm axial nc brain, 5mm x 5mm coronal nc brain, 1.2mm x 1.2mm axial neck and brain cta, 24mm x 4mm axial neck brain cta mip, 1mm x 1mm sagittal neck brain cta mip, 5mm x 2mm coronal neck brain cta mip, 24mm x 4mm axial peak venous brain mip, 24mm x 4mm axial late venous brain mip, pa and lateral chest abd pelvis scouts, Dose Report			