

RIH – BRAIN CTA

GE LIGHTSPEED 16 / OPTIMA CT580 PROTOCOL

Application: Cerebral artery aneurysm or stenosis

Position/Landmark	Supine head first or feet first Zero at outer canthus of eye.			
Topogram Direction	Craniocaudal			
Respiratory Phase	Any			
Scan Type	Helical			
KV / mA / Rotation time (sec)	120kv / smart mA (50-210) / 0.5 sec		120kv / smart mA (100-400) / 0.5 sec	
Pitch / Speed (mm/rotation)	.562:1 , 5.62mm		938:1 , 9.37mm	
Noise Index / ASiR / Dose Reduction	10 / 20 / 20%		7 / 20 / 20%	
Detector width x Rows = Beam Collimation	0.625mm x 16 = 10mm			
Average Tube Output	nc brain ctdi – 51.1 mGy dlp – 872 mGy.cm		cta brain ctdi – 11.1 mGy dlp – 252 mGy.cm	
First Helical Set	body thickness/ recon recon part spacing algorithm destination .			
Slice Thickness/ Spacing	1	thin brain	.6mm x .6mm	standard for dmpr
Algorithm				
Recon Destination				
Second Helical Set	body thickness/ recon recon part spacing algorithm destination .			
Slice Thickness/ Spacing	1	cta brain	.6mm x .6mm	soft for dmpr/pacs
Algorithm				
Recon Destination				
Scan Start / End Locations	nc brain 1cm inferior to skull base skull vertex 25cm		cta brain level of C3 skull vertex 18cm	
DFOV	decrease appropriately			
IV Contrast Volume / Type / Rate	80cc omni 350 / 4cc per second			
Scan Delay	Smart Prep at Aortic Arch			
2D/3D Technique Used	DMPR: 5mm x 5mm axial brain reformats in the glabello-meatal plane (auto-batch off), average mode, auto transferred to PACS Axial reformats, 10.0mm x 3.0mm, mip mode (auto-batch on) Sagittal and coronal reformats 1.0 mm x 1.0, mip mode (auto-batch on) All of these reformats should be done using DMPR.			
Comments:	A non-contrast brain is done first. The cta recon 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 using DMPR are routine for this protocol.			
Images required in PACS	Scouts, 5mm x 5mm axial nc brain, .6mm x .6mm axial brain cta, 10mm x 3mm axial cta mip, 1mm x 1mm sagittal cta mip, 1mm x 1mm coronal cta mip, Dose Report			