RIH – BRAIN CTA
GE LIGHTSPEED VCT 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) **Pitch / Speed (mm/rotation)** **Noise Index / ASiR / DoseReduction**	nc brain brain cta 120kv / smart mA (50-210) / 0.5 sec 120kv / smart mA (100-450) / 0.5 sec 0.531:1 , 10.62mm 0.969:1 , 19.37mm 6.5 / 20 / 20% 10.0 / 20 / 20%
Detector width x Rows = Beam Collimation	0.625mm x 32 = 20mm
Average Tube Output	nc brain cta brain ctdi – 35.0 mGy ctdi – 11.1 mGy dlp – 600 mGy.cm dlp – 252 mGy.cm

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

Second Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon	body part	thickness/ spacing	algorithm	recon destination .
	1	**cta brain**	.6mm x .6mm	soft	for dmpr/pacs

Scan Start / End Locations **DFOV**	nc brain cta brain 1cm inferior to skull base level of C3 skull vertex skull vertex 25cm 18cm decrease appropriately
IV Contrast Volume / Type / Rate	80mL Iohexol (Omnipaque 350) / 4mL 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

updated Jan 23, 2017