RIH – RETROSPECTIVE GATED CORONARY CTA
GE LIGHTSPEED VCT PROTOCOL

Applications: Bypass graft patency, stent patency, cardiomyopathy, anomalous arteries, family history of cardiac disease, equivocal stress test results.

Position/Landmark	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 (100-750) / 0.35 sec (.*):1 , * mm -- / 20 / 20% ***CTA pitch/speed is based on each patient's heart rate**
Detector width x Rows = Beam Collimation	0.625mm x 64 = 40mm
Average Tube Output	ctdi – 31.5 mGy dlp – 705.4 mGy.cm
Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon / body part / thickness/ spacing / algorithm / recon destination . 1 **gated cta** small fov 18-22cm / 0.6mm x 0.6mm / standard / workstation/pacs 2 **lungs** full fov / 2.5mm x 2.5mm / lung / pacs
Scan Start / End Locations **DFOV**	just superior to aortic arch 2cm inferior to heart 18-22cm
IV Contrast Volume / Type / Rate	60mL Iodixanol (Visipaque 320) / 5.5mL per second 50mL Iodixanol (Visipaque 320) / 4mL per second 40mL saline / 4mL per second **use warmest Visipaque possible** **do not use cold Visipaque**
Scan Delay	Test bolus at Aortic Root at level of Left Main Coronary Artery: peak +10 seconds
2D/3D Technique Used	Volume rendering of the heart, vessel analysis of the coronary arteries, 2.5mm x 2.5mm axial and coronal chest reformats
Comments: This protocol is a retrospective gated ct angiogram of the coronary arteries. Retro-recons are: • .625mm, small fov series 40%, 45%, 50%, 70%, 75%, and 80% for vessel analysis at workstation. • 2.5mm, small fov series 0% to 90% by 10's for ejection fraction at workstation. • .625mm, 38cm fov series 75% for axial and coronal reformats, pacs and workstation. **Workstation is RITRAQGT_AE for all these retro-recons.** • If there are sternal wires visible on the scouts, the scan should be started at the bottom of the neck in order to scan the entire by-pass graft**.** • The cardiac monitor leads should be below the clavicles and just below the curvature of the left ribs.	
Images required in PACS	Scouts, axial gated small fov coronary cta, full chest fov 2.5mm x 2.5mm axial and coronal gated 75% cta, volume rendering of the heart, vessel analysis of the coronary arteries, lung windows, Dose Report