RIH – PROSEPCTIVE 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. Thoracic aorta aneurysm and pulmonary embolism.

Position/Landmark	Feet first-Supine Sternal Notch
Topogram Direction	Craniocaudal
Respiratory Phase	Inspiration
Scan Type	Cine
KV / mA / Rotation time (sec) **Pitch / Speed (mm/rotation)** **Noise Index / ASiR / Dose Reduction**	120kv / 600 mA / 0.35 sec 40.00mm - / 30 / 20%
Detector width x Rows = Beam Collimation	0.625mm x 64 = 40mm
Average Tube Output	ctdi – 18.5mGy dlp – 411 mGy.cm
Cine Set Slice Thickness/ Spacing Algorithm Recon Destination	recon: 1 — body part: **gated cta** — thickness/ spacing: 0.6mm x 0.6mm — algorithm: standard — recon destination: workstation/pacs
Scan Start / End Locations **DFOV**	just superior to aortic arch 2cm inferior to heart 20-25cm
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 Do not use less than a 20 second scan delay
2D/3D Technique Used	2.5mm x 2.5mm, average mode, **axial and coronal big fov reformats**. Volume rendering of the heart, vessel analysis of the coronary arteries

Comments: The heart-rate must be below 65 bpm to properly perform this study.
The Padding time needs to correspond with the patient's heart rate: 30-39 bpm 175ms, 40-49 bpm 150ms, 50-59 bpm 125ms, 60+bpm 100ms
R**etro-recons:** .62mm, small fov of the common phases for vessel analysis and .62mm big fov for axial and coronal 2.5mm reformats of the entire chest. **Please create a 2.5mm, full chest field of view, lung algorithm in retro-recon and send it to pacs.**

- 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.

Networking: The entire exam should be sent to TeraRecon (RITRAQGT_AE)

Images required in PACS	Scouts, small fov .6mm x .6mm gated chest cta, 2.5mm x 2.5mm axial big fov gated chest cta, 2.5mm x 2.5mm coronal big fov gated chest cta volume rendering of the heart, vessel analysis of the coronary arteries, 2.5mm x 2.5mm axial full chest fov lung window, Dose Report

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