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) | 120kv / smart mA (100-750) / 0.35 sec
| Pitch / Speed (mm/rotation) | (.\*:1 , * mm
| Noise Index / ASiR / Dose Reduction | -- / 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 | body
| Slice Thickness/ Spacing | thickness/
| Algorithm | spacing
| Recon Destination | algorithm
| part | 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 | just superior to aortic arch
|                           | 2cm inferior to heart
| DFOV | 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

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