

CTA Chest - Retrospective Gating Protocol

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In accordance with the ALARA principle, TRA policies and protocols promote the utilization of radiation dose reduction techniques for all CT examinations. For scanner/protocol combinations that allow for the use of automated exposure control and/or iterative reconstruction algorithms while maintaining diagnostic image quality, those techniques can be employed when appropriate. For examinations that require manual or fixed mA/kV settings as a result of individual patient or scanner/protocol specific factors, technologists are empowered and encouraged to adjust mA, kV or other scan parameters based on patient size (including such variables as height, weight, body mass index and/or lateral width) with the goals of reducing radiation dose and maintaining diagnostic image quality.

CTA chest i.e. r/o or f/u thoracic aneurysm, dissection

*** preferred over Prospective for patients with high heart rate / irregular rhythm, or if question about valve, or patient that can not hold breath, contact cardiac reader if any questions**

*** Delayed acquisition may be needed in certain cases (hx of vascular surgery /TEVAR, venous question), check with cardiac reader if any question**

Pre IV Contrast (if pt under 40 ask rad about non contrast)

- Scan from thoracic inlet to hepatic dome
- Pre-contrast 1.5 mm axial soft tissue
- kV of 100 or less

Post Arterial IV Contrast

- Scan from diaphragm to thoracic inlet (Caudocranial)
- Trigger bolus in ascending aorta w/ threshold of 50 - 100 HU (send to **Tera Recon**); for dissection cases be careful of false lumen, may need to manually trigger
- Scanner specific retrospective gating with dose modulation

Reconstructions

- .75mm source axial (vascular) & 2.5mm (soft tissue)
- 2 mm sagittal reformat soft tissue of arterial phase
- 2 mm coronal reformat soft tissue of arterial phase
- multiphase 10 - 90% 2mm of heart in increments of 10% (check with Rad to see if this is necessary)
- Sagittal MIP 5x2 of aorta
- Coronal MIP 5x2 of aorta
- Lung MIP 10x2