CTA Pulmonary Vein

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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.

If any patient at a TRA outpatient facility requires CT re-imaging, obtain radiologist advice prior to proceeding with the exam.

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Indication: Atrial fibrillation, pre-PVI (pulmonary vein isolation), pre-Watchman, pulmonary vein stenosis, etc.

Patient Position: Supine

Prep: NO medications

Scan Range (CC Z-AXIS):
Arterial: Carina through bottom of heart
Delay: Upper half of the arterial field (to ensure left atrial appendage is included)

IV Contrast:
- < 200 lbs: 80ml
- > 200 lbs: 100ml
- Rate: 3-4cc / sec
- Bolus triggering (Asc Ao, threshold 100HU) or Test bolus 15ml

Acquisitions:
TWO acquisitions typically: EKG gated Arterial and EKG gated Delay
- Breathing Instructions (both phases)**:** End Expiration (NOT like other cardiac CTAs!!)
- Gating (both phases): Scanner specific prospective, manual pulsing, systolic based

1. Arterial
   o Trigger from Asc Ao (threshold of 100HU)

2. Delay
    o Coverage is upper half of arterial FOV (to include left atrial appendage)
    o Perform 10 seconds after arterial scan

Series + Reformats:
   Make sure study is automatically sent to TeraRecon

1. **Arterial**
   - Axial 0.625-1 mm ST or Vascular kernel, FOV coned down to heart (used for post-processing)
   - Axial 2-2.5 mm ST kernel, full Chest CT style FOV
   - Coronal 2 mm ST kernel (from full Chest CT style FOV)
   - Sagittal 2 mm ST kernel (from full Chest CT style FOV)
   - Axial 10 x 2 mm MIP ST kernel

2. **Delay**
   - Axial 0.625-1 mm ST or Vascular kernel, full Chest CT style FOV