

## MRA Thoracic Aorta Protocol

**Reviewed By:** Daniel Verdini, MD

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**Contact:** (866) 761-4200

**Standard uses:** Aortic dissection or aneurysm, aortic coarctation, venous evaluation, etc

**Contrast:** 0.1mmol/kg of MultiHance; 3cc/sec

Each exam needs to be protocolled by a cardiac radiologist.

Do with cardiac package with ECG gating if possible

1. Scout/3 plane localizer
2. Axial T2 dark blood images from above arch through the aortic valve, 8 mm, no skip, with breath hold; if signal is not voided within the lumen, double inversion recovery w/ diastolic acquisition can be utilized
3. Axial bSSFP (true FISP white blood (flip angle > 70)) images through chest, 8 mm, no skip, with breath hold
4. Optional (If there is any history of aortic valve pathology): 2 chamber, 4 chamber, short axis and aortic outflow tract views cine True FISP white blood. Use these to plan Q flow through aortic valve (3 slices in increments of 6mm just below, at, and above valve)
5. 3D bSSFP Candy Cane aorta and Coronal oblique (LVOT). On Toshiba, if there is susceptibility artifact from metal (sternal wiring) use FBI 3D
6. Precontrast and post-contrast 3D spoiled GRE (Toshiba – FFE 3D hisSR) MRA aorta using candycane view; low TR, low TE, flip angle 25-45. 2 sets of post-contrast breath-hold MRA images should be setup in case first acquisition is too early. If there is a venous question, obtain a set at 60 sec delay
7. Post-contrast coronal plane T1-weighted fat-saturated 3D images. (Siemens - VIBE or Toshiba- FFE; w/ flip angle 10-15deg, or whatever works best).

Perform 3D reconstructions of post-contrast images.