

General CTA Information for VIR Protocols

- Call the IR radiologist 10-20 minutes before you are ready to start scanning at x26798 (Parkland Angio Control Room). Do NOT page anyone unless asked specifically to do so. If no one is reached at x26798, then call 214 645-8990 (Angio Academic Offices) and ask for the Interventional Radiologist who is covering Parkland CTA studies.
- These protocols are for the GE Lightspeed 16
- All Studies are to be done without oral contrast, except mesenteric which will use 16 ounces of water just before placing the patient on the CT scanner.
- Smart Prep is to be used on all studies (except renal), empirical timing to be done only with the supervision of a VIR physician!!!!
- Contrast: Iodine concentration of 350 or greater.
- IV access: 20 gauge or larger in an acceptable appearing vein, preferably in the antecubital fossa or forearm.
- Coach all patients on breath holding and its importance during scanning (for studies involving the chest or abdomen or pelvis)!!!! This is an important step and does make a difference in the quality of the studies!!!
- No filming. Just send study to both Vitrea workstations (PMH Vitrea and the Vitrea workstation at our academic office) immediately after the scan has been reconstructed on the CT scanner computer
- Problems with transmission of scan to the workstation should be directed to Tom Lane, PhD AND notify the Interventional Radiology Academic office at 214 645-8990
- Please FAX all paperwork (the CT request and radiology requisition) immediately after the study to Interventional Radiology Academic office at 214 645-8998

AAA and Endograft CTA

- 120 kVp
- 250-350 mAs
- Diaphragm to bottom of femoral heads.
- For Chest/Abdomen/Pelvis use the same parameters, just begin at the lung apices.

NON Contrast

- **2.5 mm** Collimation
- **2.5 mm** Interval
- Scan time <20 sec

Contrast

- **2.5 mm** Collimation
- **1.25 mm** Interval
- Scan time <20 sec
- Contrast Delay: use Smart Prep with the threshold set around **100 HU** at about the upper (supra-renal) abdominal aorta.
- Contrast Injection: **4cc/sec** for **120cc**.

Delayed

- **90 sec delay** scan from the initial time of injection.
- Same parameters as Contrast acquisition.

TOSHIBA: 180 HU

Renal Artery CTA

- 120 kVp
- 250-350 mAs
- Top of diaphragm to sacrum
- Coach patient on breath holding and its importance!!!

NON Contrast

- **5mm** collimation
- **5mm** interval

Contrast

- **1.25mm** collimation
- **0.625mm** interval
- Contrast Delay: Test Bolus Technique
 - **4cc/sec** for **28cc**
 - **Time** the bolus to a region of interest at the renal arteries for **HU > 100**
 - **Delay** is going to be **Time + 2** seconds
- Contrast Injection: **4cc/sec** for **100cc**.

Delayed Contrast

- **5mm** collimation
- **5mm** interval
- **90sec** delay

TOSHIBA: 180 HU

Mesenteric CTA

- 120 kVp
- 250-350 mAs
- Top of diaphragm through pelvis
- 16 ounces water for oral contrast. 8oz 1hour-30 minutes before and 8 oz right before.

NON Contrast

- **5mm** collimation
- **5mm** interval

Contrast

- **1.25mm** collimation
- **0.625mm** interval
- Contrast Delay: use Smart Prep with the threshold set around **100 HU** at about the upper (supra-renal) abdominal aorta
- Contrast Injection: **4cc/sec** for **100cc**.

Delayed (portal)

- **2.5mm** collimation
- **1.25mm** interval
- Delay of **70 sec** from time of beginning of arterial injection.

Send all images to Vitrea workstations and do not film.

TOSHIBA: 180 HU

Aorta Long Leg (AOLL)

- 120 kVp
- 250-350 mAs
- Diaphragm to toes. Please place feet with heels together and toes pointing outward if possible-like a duck. (May tape them together if needed.)

Contrast Study only

- **1.25mm** collimation
- **1.0mm** interval
- Contrast Delay: use Smart Prep with the threshold set around **100 HU** at about the lower abdominal aorta.
- Contrast Injection: Use dual injector. **4cc/sec** for **75cc** then **2cc/sec** for **75cc** then **2cc/sec** of **70cc** of **normal saline**.
- For patients with suspected poor cardiac output/bad disease/severely diseased arteries, pause the scanner at the femoral heads for **10-15 seconds**.

CHEST + AOLL

- Same as above except use supra-renal aorta for your ROI for Smart Prep and decrease pause at femoral heads in half for those with poor heart function, etc.

TOSHIBA: 180 HU