

CTA aMaze/Lariat

Updated
5/6/2024

Indications - pre and post operative evaluation for atrial fibrillation.

Bill under CT Angio Cardiac w/ Contrast charge. Do not use CT Angio Coronary w/ Contrast charge.

GENERAL SCAN NOTES

Move the patient's arms over his/her head if possible. Remove any metal from the imaging field of view.

Topogram - lung apices through diaphragm (obtained during end inspiration).

Craniocaudal scan coverage - lung apices through the adrenal glands (**just have patient stop breathing**).

Adjust FOV (field of view) on topogram to smallest without cropping anatomy (target FOV 150-220 mm).

Craniocaudal scan coverage:

Pre contrast - lung apices through adrenal glands (**just have patient stop breathing**).

Angio phase - above pulmonary artery through adrenal glands (**just have patient stop breathing**).

Delay phase - just through left atrium (**just have patient stop breathing**).

EKG gating:

Pre contrast phase - **non gated**.

Cardiac phase - **prospective** preferred (30-60% RR interval) for the angio phase.

Can use retrospective for patients with high or irregular heart rates.

Delay phase - **prospective**.

IV Contrast:

Administer weight-based Omnipaque-350 - **1 mL/kg** up to **150 mL** (100 mL minimum).

Inject at **4 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in AC fossa.

Cardiac phase - bolus track off **pulmonary artery** triggered at **100 HU**.

Delay phase - **30 secs** from start of injection.

SIEMENS PARAMETERS & RECONS

For the **Pre Contrast** phase:

| | Scan Mode | kV | mAs | Care Dose | Care kV & Lvl | Pitch | Acq | Coll | Rot Time | Scan Time |
|-----------|-----------|-----|-----|-----------|---------------|-------|-----|------|----------|-----------|
| Go Top 64 | spiral | 120 | 62 | on | on 80 | 1.20 | 64 | 0.6 | 0.33 | 1.1 |
| Drive 128 | spiral | 120 | 66 | on | on | 1.20 | 128 | 0.6 | 0.5 | 1.6 |
| Force 192 | spiral | 110 | 51 | on | on | 1.20 | 192 | 0.6 | 0.5 | 1.1 |

For the **Cardiac** phase:

| | | | | | | | | | | |
|-----------|--------|-----|-----|----|-------|------|-----|-----|-------|------|
| Go Top 64 | spiral | 100 | 65 | on | on 64 | 0.31 | 64 | 0.6 | 0.33 | 22.2 |
| Drive 128 | spiral | 100 | 282 | on | on | 0.17 | 128 | 0.6 | 0.285 | 6.5 |
| Force 192 | spiral | 100 | 288 | on | on | 0.15 | 192 | 0.6 | 0.25 | 4.3 |

For the **Delay** phase:

| | | | | | | | | | | |
|-----------|--------|-----|-----|----|-------|------|-----|-----|-------|------|
| Go Top 64 | spiral | 100 | 65 | on | on 64 | 0.31 | 64 | 0.6 | 0.33 | 22.2 |
| Drive 128 | spiral | 100 | 282 | on | on | 3.40 | 128 | 0.6 | 0.285 | 0.3 |
| Force 192 | spiral | 100 | 288 | on | on | 0.15 | 192 | 0.6 | 0.25 | 4.3 |

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PRE CONTRAST PHASE

| Name of Series | Thick | Interval | Kernel | Window | IR Lvl | Recon Direction |
|----------------|-------|----------|--------|-------------|--------|-----------------|
| AX SOFT PRE | 3.0 | 3.0 | Br40 | mediastinum | 2 | head/feet |
| AX LUNG PRE | 3.0 | 3.0 | B159 | lung | 2 | head/feet |

CARDIAC PHASE

| | | | | | | |
|----------------|-----|-----|------|---------|---|------------|
| AX HEART 65% | 3.0 | 3.0 | Br40 | cardiac | 3 | head/feet |
| COR HEART 65% | 3.0 | 3.0 | Bv36 | cardiac | 3 | front/back |
| SAG HEART 65% | 3.0 | 3.0 | Bv36 | cardiac | 3 | left/right |
| AX HEART THINS | 1.0 | 1.0 | Br40 | cardiac | 2 | head/feet |

DELAY PHASE

| | | | | | | |
|----------------|------|-----|------|-------------|---|-----------|
| AX DELAY THINS | 0.75 | 0.6 | Br40 | cardiac | 3 | head/feet |
| AX DELAY | 3.0 | 3.0 | Br40 | mediastinum | 3 | head/feet |