

CTA CHEST 16Sensation

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|---------------------------------------|--|--------------|----------------------|-----------------|-------------|----------------------|--------------|
| Indications | trauma, acute aortic syndrome, suspected aneurysm/dissection | | | | | | |
| Diagnostic Task | Detect aneurysms, aortic dissections and | | | | | | |
| Scan mode | Helical | | | | | | |
| Position/Landmark | Head first-Supine 1cm to shoulders/inspiration | | | | | | |
| Topogram | AP 50mA 120kV | | | | | | |
| kVp/Reference mass | 120kv 200mas/Care Dose ON/100kv if pt under 140lbs | | | | | | |
| Rotation time/pitch | 0.5/pitch 1.0 | | | | | | |
| Detector Configuration | 16x0.75 | | | | | | |
| Table Speed/Increment | 12 | | | | | | |
| Dose reduction | CareDose 4D | | | | | | |
| Allowed CTDI ranges* | 7mGy-50mGy | | | | | | |
| XR29 Dose Notification value | 50mGy | | | | | | |
| Helical Set 1 NON CONTRAST | recon | body part | thickness spacing | kernel | window | recon destination | |
| | 1 | chest | 1.5mmx 1.5mm | 31medium smooth | mediastinum | pacs | |
| | if patient under 40 ask about non contrast images | | | | | | |
| Helical Set 2 ARTERIAL | recon | body part | thickness spacing | kernel | window | recon destination | |
| | 1 | chest cta | 2mmx 2mm | 31medium smooth | mediastinum | pacs/TR | |
| | 2 | lung | 1.5mmx 1.5mm | 70 very sharp | lung | pacs | |
| | 3 | thin chest | 1mmx.8mm | 31medium smooth | mediastinum | for mpr/TR | |
| | 4 | lung | 1mmx0.8mm | 70 very sharp | lung | mpr | |
| Helical Set 3 60seconds | recon | body part | thickness spacing | kernel | window | recon destination | |
| | 1 | chest | 1.5mmx 1.5mm | 31medium smooth | mediastinum | pacs | |
| | If stent/graft, s/p TEVAR, venous evaluation | | | | | | |
| Scan start/End location | 2cm superior to lung apices | | | | | | |
| DFOV | Diaphragm(include entire stent on delay) | | | | | | |
| | 40cm | | | | | | |
| | decrease appropriately | | | | | | |
| 3D Technique Used | 2x2 coronal and sag coronal chest reformats from recon 3 | | | | | | |
| | 5x2 oblique coronal and oblique sag aorta MIP from recon 3(optional 3d aorta) | | | | | | |
| | 10x2 axial mip lung from recon 4 | | | | | | |
| IV contrast volume/type | <200lbs 80ml isovue 370 >200lbs 100ml isovue 370 @3-4ml/sec | | | | | | |
| Scan delay | Bolus Tracking at descending aorta(level just inferior to carina) Trigger is +100HU | | | | | | |
| | Comments: Being able to locate the descending aorta is important. The monitoring phase will not trigger properly and the scan will not start correctly if the roi is not placed on the correct anatomy | | | | | | |
| | Patient size | weight(kg) | weight(lbs) | | | | CTDIvol(mGy) |
| | SMALL | 50-70 | 110-155 | | | | 4-10 |
| | AVERAGE | 70-90 | 155-200 | | | | 8-16 |
| | LARGE | 90-120 | 200-265 | | | | 14-22 |
| NOTE* | *The AAPM recommended NEMA XR29 Dose Notification value for an adult torso is 50mGy. Dose Notification levels less than the AAPM recommended can be set. The maximum CTDI vol should match the dose notification value. Exams with CTDI vol values less than the minimum allowed range should not be performed unless approved by a radiologist. | | | | | | |

