

CTA BRAIN 16 sensation

Indications	Severe Headache, dizziness, memory loss, slurred speech, blurred vision, weakness						
Diagnostic Task	Detect Vascular disease, aneurysm evaluation, Acute Stroke						
Scan Mode	Helical						
Position/Landmark	Head first -Supine 1cm superior to skull vertex-Craniocaudal						
Topogram	Lat						
kVp/Reference mass	nc brain: 120 kV 320 350mA//CTA 120kV 300mA						
Rotation time/pitch	NC brain 1/0.6//CTA 0.5/.6						
Detector Configuration	NC brain 16x0.75//CTA 16x.75						
Table Speed/Increment	NC brain 7.2//CTA 7.2						
Dose reduction	na//CareDose 4D						
Allowed CTDI ranges*	30mGy-80mGy						
XR29 Dose Notification value	80mGy						
Helical Set		body	thickness				recon
Non-con brain	recon	part	spacing	kernel	window		destination
	1	brain	1mmx 1mm	31medium	smooth	cerebrum	pac
	2	skull	1mmx1mm	H60	sharp	neuro bone	pac
	3	axial brain	5mmx 5mm	31medium	smooth	cerebrum	pac
	4	thin brain	0.75x0.7mm	31medium	smooth	cerebrum	mpr
3d technique	1mmx1mm sag/coronal brain from recon 4						
Helical Set		body	thickness				recon
	recon	part	spacing	kernel	window		destination
	1	brain cta	.75mmx.7	20	smooth	mediastinum	pac/mpr
3d technique	20x5mm axial MIP from recon 1						
	5x2mm sag/coronal MIP from recon 1						
	1x1mm sag/coronal MPR from recon 1						
Scan Start	NC brain 1cm below maxilla in include sinus//CTA two inches below base of skull						
end	NC brain 1cm above skull vertex//CTA 1cm above skull vertex						
DFOV	nc brain:25cm cta:18cm						
	decrease appropriately						
IV contrast volume/rate	80ml isovue 370 4cc/sec						
	contrast should be injected into RT arm if possible						
Scan Delay	bolus track at c3, trigger is + 60						

note*

The Diagnostic Reference Dose (CTDI vol) is 75mGy(with 16cm CTDI phantom). The pass/fail limit (ACR and Washington state) is 80mGy. Most routine head scans on modern scanners have CTDIvol ranges between 40 and 60mGy.

*The AAPM recommended NEXA XR29 Dose Notification Value for an adult head is 80mGy. The maximum CTDIvol 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.