

RIH – CAROTID AND BRAIN CTA SIEMENS DEFINITION AS20 PROTOCOL

Indications: carotid/cerebral artery stenosis or aneurysm; non-trauma

Position/Landmark	Supine head first or feet first 1cm superior to skull vertex			
Topogram Direction	Craniocaudal / Craniocaudal			
Respiratory Phase	Any			
Scan Type	Helical			
Ref kV/Ref mAs/Rotation time (sec)	nc brain		cta	
Pitch / Speed (mm/rotation)	Care kV 120/Care Dose4D 250/ 0.5 sec .7:1 , 8.75mm		Care kV 120/Care Dose4D 90/0.5 sec 1.2:1 , 15.00mm	
Safire Strength / Dose Optimization	1 / 3		3 / 11	
Detector width x Rows = Beam Collimation	nc brain 0.625mm x 20 = 12.5mm		cta 0.625mm x 20 = 12.5mm	
Average Tube Output	nc brain ctdi – 35.0 mGy dlp – 600 mGy.cm		cta ctdi – 11.1 mGy dlp – 352 mGy.cm	
First Helical Set	body	thickness/	recon	
Slice Thickness/ Spacing	recon part	spacing	algorithm	recon destination .
Algorithm	1 thick helical brain	5mm x 5mm	J40f medium	
Recon Destination	2 axial brain reformat	5mm x 5mm	J40f medium	pac
	3 axial skull reformat	5mm x 5mm	H60f sharp	pac
	4 coronal brain reformat	5mm x 5mm	J40f medium	pac
	5 thin brain	.75mm x .7mm	J40f medium	terarecon
Second Helical Set	body	thickness/	recon	
Slice Thickness/ Spacing	recon part	spacing	algorithm	recon destination .
Algorithm	1 thin axial neck brain cta	.75mm x .7mm	J30f smooth	pac
Recon Destination	2 thin coronal neck brain cta	.75mm x .7mm	J30f smooth	pac
	3 thin sagittal neck brain cta	.75mm x .7mm	J30f smooth	pac
	4 thick axial neck brain cta mip	10mm x 3mm	J30f smooth	pac
Scan Start / End Locations	nc brain		cta	
DFOV	1cm inferior to skull base skull vertex 25cm		1cm inferior to aortic arch skull vertex 20cm	
	decrease appropriately			
IV Contrast Volume / Type / Rate	90mL Iohexol (Omnipaque 350) / 4mL per second			
Scan Delay	Smart Prep at Aortic Arch			
2D/3D Technique Used	Workstream 4d mpr 5mm x 5mm non con axial brain reformats, axial skull reformats, coronal brain reformats , auto transferred to PACS			
	Workstream 4d mpr axial, sagittal and coronal cta reformats .75 mm x .7mm, thick axial reformats , 10.0mm x 3.0mm, mip mode, auto transferred to PACS			
Images required in PACS	Topograms , 5mm x 5mm axial brain, 5mm x 5mm coronal brain, 5mm x 5mm axial skull, .75mm x .7mm axial neck and brain cta, 10mm x 3mm axial neck and brain cta mip, .75mm x 7mm sagittal neck and brain cta, .75mm x .7mm neck and brain coronal cta, Patient Protocol			