

RIH – CAROTID AND BRAIN CTA SIEMENS DEFINITION AS+ 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 Care kV 120/Care Dose4D 250/ 0.5 sec		cta Care kV 100/Care Dose4D 175/0.5 sec	
Pitch / Speed (mm/rotation)	.7:1 , 8.75mm		1:1 , 40.00mm	
Safire Strength / Dose Optimization	1 / 3		3 / 11	
Detector width x Rows = Beam Collimation	nc brain 0.625mm x 20 = 12.5mm (40 x .6mm)		cta 0.625mm x 64 = 40mm (128 x .6mm)	
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 Slice Thickness/ Spacing Algorithm Recon Destination	recon	body part	thickness/ spacing	recon destination .
	1	thick helical brain	5mm x 5mm	J40f medium
	2	axial brain reformat	5mm x 5mm	J40f medium
	3	axial skull reformat	5mm x 5mm	H60f sharp
	4	coronal brain reformat	5mm x 5mm	J40f medium
	5	thin brain	.75mm x .7mm	J40f medium
				terarecon
Second Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon	body part	thickness/ spacing	recon destination .
	1	thin axial neck brain cta	.75mm x .7mm	J30f smooth
	2	thin coronal neck brain cta	.75mm x .7mm	J30f smooth
	3	thin sagittal neck brain cta	.75mm x .7mm	J30f smooth
	4	thick axial neck brain cta mip	10mm x 3mm	J30f smooth
				pac
				pac
				pac
				pac
Scan Start / End Locations	nc brain 1cm inferior to skull base skull vertex 25cm		cta 1cm inferior to aortic arch skull vertex 20cm	
DFOV	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			