

**RIH – PEDI CAROTID CTA, CHEST ABD PELVIS, SPINES
SIEMENS DEFINITION AS20 PROTOCOL**

Position/Landmark	Head first or feet first-Supine 1cm superior to skull vertex																																																		
Topogram Direction	Craniocaudal / Craniocaudal																																																		
Scan Type	Helical																																																		
Ref kV/Ref mAs/Rotation time (sec) Pitch / Speed (mm/rotation) Safire Strength / Dose Optimization	<table border="0"> <tr> <td align="center">Neck</td> <td align="center">Chest Abd Pelvis</td> </tr> <tr> <td align="center">Care kV 100/Care Dose4D 160/.5sec</td> <td align="center">Care kV 100/Care Dose4D 150/.5sec</td> </tr> <tr> <td align="center">1.2:1 , 15.00mm</td> <td align="center">.8:1 , 16.00mm</td> </tr> <tr> <td align="center">3 / 7</td> <td align="center">3 / 6</td> </tr> </table>	Neck	Chest Abd Pelvis	Care kV 100/Care Dose4D 160/.5sec	Care kV 100/Care Dose4D 150/.5sec	1.2:1 , 15.00mm	.8:1 , 16.00mm	3 / 7	3 / 6																																										
Neck	Chest Abd Pelvis																																																		
Care kV 100/Care Dose4D 160/.5sec	Care kV 100/Care Dose4D 150/.5sec																																																		
1.2:1 , 15.00mm	.8:1 , 16.00mm																																																		
3 / 7	3 / 6																																																		
Detector width x Rows = Beam Collimation	0.625mm x 20 = 12.5mm 1.25mm x 16 = 20mm																																																		
Average Tube Output	First Helical: ctdi – 5.7mGy Second Helical: ctdi – 7.0mGy dlp – 205.6 mGy.cm dlp – 556 mGy.cm																																																		
First Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	<table border="0"> <tr> <td></td> <td align="center">body</td> <td align="center">thickness/ spacing</td> <td></td> <td align="center">recon</td> </tr> <tr> <td></td> <td align="center">recon</td> <td align="center">part</td> <td align="center">algorithm</td> <td align="center">destination .</td> </tr> <tr> <td>1</td> <td align="center">axial neck cta</td> <td align="center">2mm x 2mm</td> <td align="center">B30s medium</td> <td align="center">pacs</td> </tr> <tr> <td>2</td> <td align="center">axial cervical spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>3</td> <td align="center">coronal neck cta</td> <td align="center">2mm x 2mm</td> <td align="center">B30s medium</td> <td align="center">pacs</td> </tr> <tr> <td>4</td> <td align="center">coronal cervical spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>5</td> <td align="center">sagittal cervical spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>6</td> <td align="center">thin neck</td> <td align="center">.75mm x .7mm</td> <td align="center">B30s medium</td> <td align="center">terarecon</td> </tr> </table>		body	thickness/ spacing		recon		recon	part	algorithm	destination .	1	axial neck cta	2mm x 2mm	B30s medium	pacs	2	axial cervical spine	3mm x 3mm	I70f very sharp	pacs	3	coronal neck cta	2mm x 2mm	B30s medium	pacs	4	coronal cervical spine	3mm x 3mm	I70f very sharp	pacs	5	sagittal cervical spine	3mm x 3mm	I70f very sharp	pacs	6	thin neck	.75mm x .7mm	B30s medium	terarecon										
	body	thickness/ spacing		recon																																															
	recon	part	algorithm	destination .																																															
1	axial neck cta	2mm x 2mm	B30s medium	pacs																																															
2	axial cervical spine	3mm x 3mm	I70f very sharp	pacs																																															
3	coronal neck cta	2mm x 2mm	B30s medium	pacs																																															
4	coronal cervical spine	3mm x 3mm	I70f very sharp	pacs																																															
5	sagittal cervical spine	3mm x 3mm	I70f very sharp	pacs																																															
6	thin neck	.75mm x .7mm	B30s medium	terarecon																																															
Second Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	<table border="0"> <tr> <td></td> <td align="center">body</td> <td align="center">thickness/ spacing</td> <td></td> <td align="center">recon</td> </tr> <tr> <td></td> <td align="center">recon</td> <td align="center">part</td> <td align="center">algorithm</td> <td align="center">destination .</td> </tr> <tr> <td>1</td> <td align="center">axial chest abd pelvis</td> <td align="center">3mm x 3mm</td> <td align="center">I40f medium</td> <td align="center">pacs</td> </tr> <tr> <td>2</td> <td align="center">axial t and l spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>3</td> <td align="center">lungs</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>4</td> <td align="center">coronal chest abd pelvis</td> <td align="center">3mm x 3mm</td> <td align="center">I40f medium</td> <td align="center">pacs</td> </tr> <tr> <td>5</td> <td align="center">coronal t spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>6</td> <td align="center">coronal l spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>7</td> <td align="center">sagittal t spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> <tr> <td>8</td> <td align="center">sagittal l spine</td> <td align="center">3mm x 3mm</td> <td align="center">I70f very sharp</td> <td align="center">pacs</td> </tr> </table>		body	thickness/ spacing		recon		recon	part	algorithm	destination .	1	axial chest abd pelvis	3mm x 3mm	I40f medium	pacs	2	axial t and l spine	3mm x 3mm	I70f very sharp	pacs	3	lungs	3mm x 3mm	I70f very sharp	pacs	4	coronal chest abd pelvis	3mm x 3mm	I40f medium	pacs	5	coronal t spine	3mm x 3mm	I70f very sharp	pacs	6	coronal l spine	3mm x 3mm	I70f very sharp	pacs	7	sagittal t spine	3mm x 3mm	I70f very sharp	pacs	8	sagittal l spine	3mm x 3mm	I70f very sharp	pacs
	body	thickness/ spacing		recon																																															
	recon	part	algorithm	destination .																																															
1	axial chest abd pelvis	3mm x 3mm	I40f medium	pacs																																															
2	axial t and l spine	3mm x 3mm	I70f very sharp	pacs																																															
3	lungs	3mm x 3mm	I70f very sharp	pacs																																															
4	coronal chest abd pelvis	3mm x 3mm	I40f medium	pacs																																															
5	coronal t spine	3mm x 3mm	I70f very sharp	pacs																																															
6	coronal l spine	3mm x 3mm	I70f very sharp	pacs																																															
7	sagittal t spine	3mm x 3mm	I70f very sharp	pacs																																															
8	sagittal l spine	3mm x 3mm	I70f very sharp	pacs																																															
Scan Start / End Locations DFOV	<table border="0"> <tr> <td align="center">neck</td> <td align="center">chest abd pelvis</td> </tr> <tr> <td align="center">aortic arch</td> <td align="center">1cm superior to lung apices</td> </tr> <tr> <td align="center">through circle of willis</td> <td align="center">lesser trochanters</td> </tr> <tr> <td align="center">18cm</td> <td align="center">38cm</td> </tr> <tr> <td></td> <td align="center">decrease appropriately</td> </tr> </table>	neck	chest abd pelvis	aortic arch	1cm superior to lung apices	through circle of willis	lesser trochanters	18cm	38cm		decrease appropriately																																								
neck	chest abd pelvis																																																		
aortic arch	1cm superior to lung apices																																																		
through circle of willis	lesser trochanters																																																		
18cm	38cm																																																		
	decrease appropriately																																																		
IV Contrast Volume / Type / Rate	Contrast volume is 1cc per pound of body weight Omnipaque300 / 4cc per second or hand injection if necessary																																																		
Scan Delay	18 seconds or just after hand bolus is completed																																																		
2D/3D Technique Used	Coronal carotid reformats 2.0mm x 2.0mm, mip mode Sagittal/oblique carotid reformats , 2.0mm x 2.0mm, mip mode 5mm x 5mm coronal chest, abdomen, pelvis series , average mode 3mm x 3mm sagittal, and coronal reformats of the cervical, thoracic and lumbar spines , average mode																																																		
Images required in PACS	Topograms, 2mm x 2mm axial carotid cta, 2mm x 2mm left sagittal/oblique carotid, 2mm x 2mm right sagittal/oblique carotid, 2mm x 2mm coronal carotids, 3mm x 3mm axial chest abdomen pelvis, 3mm x 3mm coronal chest abdomen pelvis, 3mm x 3mm axial lungs, 3mm x 3mm axial, sagittal, and coronal cervical, thoracic and lumbar spines, Patient Protocol																																																		