RIH – NECK CTA, CHEST ABDOMEN PELVIS AND C, T, L SPINES
GE LIGHTSPEED VCT PROTOCOL

Indication: This is a comprehensive ct scan for multiple trauma patients

Position/Landmark	Head first or feet first-Supine Sternal Notch
Topogram Direction	Craniocaudal
Respiratory Phase	Inspiration
Scan Type	Helical
KV / mA / Rotation time (sec) **Pitch / Speed (mm/rotation)** **Noise Index / ASiR / Dose Reduction**	120kv / smart mA (100-450) / 0.7 sec 1.375:1 , 55.00mm 10.0 / 20 / 20% (neck) 11.0 / 30 / 30% (chest abd pelvis)
Detector width x Rows = Beam Collimation	0.625mm x 64 = 40mm
Average Tube Output	First Helical: ctdi – 10.7mGy Second Helical: ctdi – 11.0mGy dlp – 305.6 mGy.cm dlp – 866 mGy.cm
First Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon / body part / thickness/ spacing / algorithm / recon destination 1 **carotid cta** 2.5mm x 2.5mm standard pacs 2 thin carotids .6mm x .6mm soft for dmpr 3 c spine 2.5mm x 2.5mm bone pacs 4 thin c spine .6mm x .6mm bone for dmpr
Second Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon / body part / thickness/ spacing / algorithm / recon destination 1 **chest abd pelvis** 5mm x 5mm standard pacs 2 thin chest abd pel .6mm x .6mm standard for dmpr 3 **t and l spines** 2.5mm x 2.5mm bone pacs 4 thin t and l spines .6mm x .6mm bone for dmpr 5 **lung** 5mm x 5mm lung pacs
Scan Start / End Locations **DFOV**	**carotid cta** **chest abdomen pelvis** aortic arch 1cm superior to lung apices through circle of willis lesser trochanters 18cm 38cm decrease appropriately
IV Contrast Volume / Type / Rate	30mL Iohexol (Omnipaque 350) followed by 40mL of saline prior to scouts then 5 minute delay then 100mL Iohexol (Omnipaque 350) , 4mL/sec
Scan Delay	smart prep at aortic arch, the trigger is +100 HU
2D/3D Technique Used	Coronal carotid reformats 2.0mm x 2.0mm, average mode Sagittal/oblique carotid reformats, 2.0mm x 2.0mm, average mode 5mm x 5mm coronal chest, abdomen, pelvis series , average mode 2.5mm x 2.5mm sagittal, and coronal reformats of the cervical spine 2.5mm x 2.5mm sagittal, and coronal reformats thoracic and lumbar spines, average mode
Comments: The patient's arms should be brought up during the delay between the cta neck and the chest abd pelvis scan whenever possible.	
Images required in PACS	Scouts, 2.5mm x 2.5mm axial carotid cta, 2mm x 2mm left sagittal/oblique carotid, 2mm x 2mm right sagittal/oblique carotid, 2mm x 2mm coronal carotids, 5mm x 5mm axial chest abdomen pelvis, 5mm x 5mm coronal chest abdomen pelvis, 5mm x 5mm axial lungs, 2.5mm x 2.5mm axial, sagittal, and coronal cervical, thoracic and lumbar spines, Dose Report