RIH – RENAL DONOR CTA
GE LIGHTSPEED VCT PROTOCOL

Indications: Evaluation of kidneys/renal arteries of a potential renal transplant donor; and evaluation of renal artery stenosis or anuerysm

Position/Landmark	Head first or feet first-Supine Xyphoid
Topogram Direction	Craniocaudal
Respiratory Phase	Inspiration
Scan Type	Helical
KV / mA / Rotation time (sec) **Pitch / Speed (mm/rotation)** **Noise Index / ASiR / Dose Reduction**	Maximum lateral diameter **> 40 cm** **120kv** / smart mA (120-450) / 0.5 sec .984:1 , 39.37mm **16.0** / 70 / 30%
KV / mA / Rotation time (sec) **Pitch / Speed (mm/rotation)** **Noise Index / ASiR / Dose Reduction**	Maximum lateral diameter **< 40 cm** **100kv** / smart mA (120-450) / 0.5 sec .984:1 , 39.37mm **17.5** / 70 / 30%
Detector width x Rows = Beam Collimation	0.625mm x 64 = 40mm
Average Tube Output	ctdi – 11.3mGy dlp – 616 mGy.cm
Helical Set Slice Thickness/ Spacing Algorithm Recon Destination	recon / body part / thickness/ spacing / algorithm / recon destination . 1 **renal donor cta** 2.5mm x 2.5mm standard pacs 2 thin ct angio .6mm x .6mm soft for dmpr/3d
Scan Start / End Locations **DFOV**	1 cm superior to diaphragm 2cm inferior to the aortic bifurcation (level of L5-S1) 38cm decrease appropriately
IV Contrast Volume / Type / Rate	100mL Iohexol (Omnipaque 350) 4mL/sec
Scan Delay	smart prep at celiac artery
2D/3D Technique Used	DMPR of 2mm x 2mm **coronal ct angio** series (auto-batch on), mip mode, and 2mm x 2mm **sagittal aorta** series (auto-batch off), mip mode, auto-transferred to PACS. **Volume Rendering** of the arterial anatomy.
Comments: The cta is done using a smart prep at the level of the celiac artery. The threshold for smart prep is +100 HU. Also, use this recon to make a volume rendering of the arterial anatomy (vessel only) and then a 20 image rotation series.	
Images required in PACS	Scouts, 2.5mm x 2.5mm axial ct angio, 2mm x 2mm coronal ct angio, 2mm x 2mm sagittal arterial aorta, volume rendering of the arterial anatomy (20 image spin), Dose Report