

**RIH – RENAL DONOR CTA
GE LIGHTSPEED 16 / OPTIMA CT580 PROTOCOL**

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

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	120kv / smart mA (100-440) / 0.5 sec 1.375:1 , 27.50mm 19 / 30 / 30%																								
Detector width x Rows = Beam Collimation	1.25mm x 16 = 20mm																								
Average Tube Output	ctdi – 17.3mGy dlp – 775 mGy.cm																								
Helical Set	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>recon</th> <th>body part</th> <th>thickness/ spacing</th> <th>algorithm</th> <th>recon destination</th> </tr> </thead> <tbody> <tr> <td>Slice Thickness/ Spacing</td> <td>1</td> <td>abd ct angio</td> <td>2.5mm x 2.5mm</td> <td>standard</td> <td>pac</td> </tr> <tr> <td>Algorithm</td> <td>2</td> <td>thin ct angio</td> <td>1.25mm x .6mm</td> <td>soft</td> <td>for dmpr/vr</td> </tr> <tr> <td>Recon Destination</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		recon	body part	thickness/ spacing	algorithm	recon destination	Slice Thickness/ Spacing	1	abd ct angio	2.5mm x 2.5mm	standard	pac	Algorithm	2	thin ct angio	1.25mm x .6mm	soft	for dmpr/vr	Recon Destination					
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Scan Start / End Locations	1 cm superior to diaphragm 2cm inferior to the aortic bifurcation 38cm																								
DFOV	decrease appropriately																								
IV Contrast Volume / Type / Rate	100cc omni 350 4cc/sec																								
Scan Delay	smart prep at celiac artery																								
2D/3D Technique Used	CTA: 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																								