

**RIH – THREE PHASE LIVER CT
GE LIGHTSPEED 16 / OPTIMA CT580 PROTOCOL**

Indications: HCC, cirrhosis, hyper vascular lesions/metastases.

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 13.5 / 30 / 30%			
Detector width x Rows = Beam Collimation	1.25mm x 16 = 20mm			
Average Tube Output	Each Helical: ctdi – 12.7mGy dlp – 333 mGy.cm			
First Helical Set	recon	body part	thickness/ spacing	recon destination
Slice Thickness/ Spacing				
Algorithm	1	non con liver	5mm x 5mm	standard pacs
Recon Destination	2	thin nc liver	1.25mm x .6mm	standard for dmpr
Second Helical Set	recon	body part	thickness/ spacing	recon destination
Slice Thickness/ Spacing				
Algorithm	1	arterial liver	5mm x 5mm	standard pacs
Recon Destination	2	thin arterial liver	1.25mm x .6mm	standard for dmpr
Third Helical Set	recon	body part	thickness/ spacing	recon destination
Slice Thickness/ Spacing				
Algorithm	1	venous liver	5mm x 5mm	standard pacs
Recon Destination	2	thin venous liver	1.25mm x .6mm	standard for dmpr
Scan Start / End Locations	1 cm superior to diaphragm iliac crest (scan through entire liver)			
DFOV	38cm decrease appropriately			
IV Contrast Volume / Type / Rate	100cc omni 350 4cc/sec			
Scan Delay	Non-Contrast -----	Arterial 40 seconds	Venous 70 seconds	
2D/3D Technique Used	DMPR of 5mm x 5mm coronal liver series (auto-batch on), average mode, auto-transferred to PACS of each phase.			
Comments:	The second and third helical sets are two separate groups in series 4 called “dynamic liver”			
Images required in PACS	Scouts, 5mm x 5mm axial nc liver, 5mm x 5mm coronal nc liver, 5mm x 5mm axial arterial liver, 5mm x 5mm coronal arterial liver, 5mm x 5mm axial venous liver, 5mm x 5mm coronal venous liver, Dose Report			