

RIH – 4 PHASE LIVER / CHOLANGIO PRE-RESECTION CT GE LIGHTSPEED VCT PROTOCOL

Indications: Hepato-cellular carcinoma, cholangio carcinoma pre surgical work-up

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 (120-500) / 0.5 sec .984:1 , 39.37mm 11.0 / 70 / 20%			
Detector width x Rows = Beam Collimation	0.625mm x 64 = 40mm			
Average Tube Output	Each Helical: ctdi – 10.7mGy dlp – 312 mGy.cm			
First Helical Set	body	thickness/	recon	
Slice Thickness/ Spacing	recon part	spacing	algorithm	destination .
Algorithm	1 non con liver	5mm x 5mm	standard	pacs
Recon Destination	2 thin nc liver	.6mm x .6mm	standard	for dmpr
Second Helical Set	body	thickness/	recon	
Slice Thickness/ Spacing	recon part	spacing	algorithm	destination .
Algorithm	1 arterial liver	5mm x 5mm	standard	pacs
Recon Destination	2 thin arterial liver	.6mm x .6mm	soft	for dmpr/vr
Third Helical Set	body	thickness/	recon	
Slice Thickness/ Spacing	recon part	spacing	algorithm	destination .
Algorithm	1 venous liver	5mm x 5mm	standard	pacs
Recon Destination	2 thin venous liver	.6mm x .6mm	standard	for dmpr
Fourth Helical Set	body	thickness/	recon	
Slice Thickness/ Spacing	recon part	spacing	algorithm	destination .
Algorithm	1 delayed liver	5mm x 5mm	standard	pacs
Recon Destination	2 thin delayed liver	.6mm x .6mm	standard	for dmpr
Scan Start / End Locations	1 cm superior to diaphragm iliac crest (scan through entire liver) 38cm			
DFOV	decrease appropriately			
IV Contrast Volume / Type / Rate	100mL Iohexol (Omnipaque 350) 4mL/sec			
Scan Delay	Non-Contrast	Arterial	Venous	Delay
	----	Smart Prep	65 seconds	15 minutes
2D/3D Technique Used	DMPR, 5mm x 5mm, average mode, coronal of the non con, venous and delayed phase auto transferred to PACS (auto-batch on). DMPR, 3mm x 3mm, average mode, coronal of the arterial phase auto transferred to PACS (auto-batch on). Volume Rendering of arterial anatomy			
Comments:	The second and third helical sets are two separate groups in the contrast series called “dynamic liver”. The arterial phase is started using smart prep at the level of the Celiac artery.			
Images required in PACS	Scouts, 5mm x 5mm axial nc liver, 5mm x 5mm coronal nc liver, 5mm x 5mm axial arterial liver, 3mm x 3mm coronal arterial liver, 5mm x 5mm axial venous liver, 5mm x 5mm coronal venous liver, 5mm x 5mm axial delayed liver, 5mm x 5mm coronal delayed liver, volume rendering of arterial anatomy, Dose Report			