

**RIH – MULTI PHASE LIVER  
SIEMENS DEFINITION AS+ PROTOCOL**

**Indications: HCC, cirrhosis, hypervascular lesions/mets**

<b>Position/Landmark</b>	Head first or feet first-Supine Sternal Notch			
<b>Topogram Direction</b>	Craniocaudal / Craniocaudal			
<b>Respiratory Phase</b>	Inspiration			
<b>Scan Type</b>	Helical			
<b>Ref kV/Ref mAs/Rotation time (sec) Pitch / Speed (mm/rotation) Safire Strength / Dose Optimization</b>	Care kV 120 / Care Dose4D 210 / 0.5 sec .8:1 , 32.00mm 3 / 6			
<b>Detector width x Rows = Beam Collimation</b>	0.625mm x 64 = 40mm (128 x .6mm)			
<b>Average Tube Output</b>	Each Helical: ctdi – 10.7mGy dlp – 313 mGy.cm			
<b>First Helical Set</b>	body thickness/ recon			
Slice Thickness/ Spacing	recon	part	spacing	algorithm destination .
Algorithm	1	<b>non con liver</b>	5mm x 5mm	I40f medium pacs
Recon Destination	2	<b>coronal non con liver</b>	5mm x 5mm	I40f medium pacs
	3	thin nc liver	.75mm x .6mm	I40f medium terarecon
<b>Second Helical Set</b>	body thickness/ recon			
Slice Thickness/ Spacing	recon	part	spacing	algorithm destination .
Algorithm	1	<b>arterial liver</b>	5mm x 5mm	I40f medium pacs
Recon Destination	2	<b>coronal arterial liver</b>	5mm x 5mm	I40f medium pacs
	3	thin arterial liver	.75mm x .6mm	I40f medium terarecon
<b>Third Helical Set</b>	body thickness/ recon			
Slice Thickness/ Spacing	recon	part	spacing	algorithm destination .
Algorithm	1	<b>venous liver</b>	5mm x 5mm	I40f medium pacs
Recon Destination	2	<b>coronal venous liver</b>	5mm x 5mm	I40f medium pacs
	3	thin venous liver	.75mm x .6mm	I40f medium terarecon
<b>Scan Start / End Locations</b>	1 cm superior to diaphragm iliac crest (scan through entire liver)			
<b>DFOV</b>	38cm decrease appropriately			
<b>IV Contrast Volume / Type / Rate</b>	100mL Iohexol (Omnipaque 300) 4mL/sec			
<b>Scan Delay</b>	Non-Contrast -----	Arterial 40 seconds	Venous 70 seconds	
<b>2D/3D Technique Used</b>	Workstream 4D mpr of 5mm x 5mm <b>coronal liver</b> series, auto-transferred to PACS of <b>each phase</b> .			
<b>Comments:</b>	Recon 3 is a thin helical volume of the liver that is archived to the TeraRecon server.			
<b>Images required in PACS</b>	Topograms, 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, Patient Protocol			