# RIH – Three Phase Liver CT

## GE Lightspeed VCT Protocol

### Indications: HCC, cirrhosis, hypervascular lesions/mets.

<table>
<thead>
<tr>
<th>Position/Landmark</th>
<th>Head first or feet first-Supine Xyphoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topogram Direction</td>
<td>Cranio-caudal</td>
</tr>
<tr>
<td>Respiratory Phase</td>
<td>Inspiration</td>
</tr>
<tr>
<td>Scan Type</td>
<td>Helical</td>
</tr>
</tbody>
</table>

| KV / mA / Rotation time (sec)           | 120 kv / smart mA (120-500) / 0.5 sec |
| Pitch / Speed (mm/rotation)             | .984:1 , 39.37 mm                      |
| Noise Index / ASiR / Dose Reduction    | 11.0 / 70 / 20%                        |
| Detector width x Rows = Beam Collimation | 0.625 mm x 64 = 40 mm                 |
| Average Tube Output                    | Each Helical: ctdi – 10.7 mGy          |
|                                        | dlp – 313 mGy.cm                      |

### First Helical Set

- **Slice Thickness/ Spacing**: Body \( 5 \text{mm} \times 5 \text{mm} \)
- **Algorithm**: Standard
- **Recon Destination**: Pacs

### Second Helical Set

- **Slice Thickness/ Spacing**: Body \( .6 \text{mm} \times .6 \text{mm} \)
- **Algorithm**: Standard
- **Recon Destination**: For dmpr

### Third Helical Set

- **Slice Thickness/ Spacing**: Body \( .6 \text{mm} \times .6 \text{mm} \)
- **Algorithm**: Standard
- **Recon Destination**: For dmpr

### Scan Start / End Locations

- **DFOV**: 1 cm superior to diaphragm iliac crest (scan through entire liver)
- **IV Contrast Volume / Type / Rate**: 100 mL Iohexol (Omnipaque 350) 4 mL/sec

### Scan Delay

- **Non-Contrast**: 40 seconds
- **Arterial**: 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 the contrast series 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

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updated Jan 23, 2017