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

<table>
<thead>
<tr>
<th>Position/Landmark</th>
<th>Head first or feet first-Supine Xyphoid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topogram Direction</strong></td>
<td>Craniocaudal</td>
</tr>
<tr>
<td><strong>Respiratory Phase</strong></td>
<td>Inspiration</td>
</tr>
<tr>
<td><strong>Scan Type</strong></td>
<td>Helical</td>
</tr>
<tr>
<td><strong>KV / mA / Rotation time (sec)</strong></td>
<td>120kv / smart mA (120-500) / 0.5 sec</td>
</tr>
<tr>
<td><strong>Pitch / Speed (mm/rotation)</strong></td>
<td>.984:1 , 39.37mm</td>
</tr>
<tr>
<td><strong>Noise Index / ASiR / Dose Reduction</strong></td>
<td>11.0 / 70 / 20%</td>
</tr>
<tr>
<td><strong>Detector width x Rows = Beam Collimation</strong></td>
<td>0.625mm x 64 = 40mm</td>
</tr>
<tr>
<td><strong>Average Tube Output</strong></td>
<td>Each Helical: ctdi – 10.7mGy dlp – 312 mGy.cm</td>
</tr>
</tbody>
</table>

**First Helical Set**
- **Slice Thickness/ Spacing**
  - non con liver: 5mm x 5mm
  - thin nc liver: .6mm x .6mm
- **Algorithm**
  - standard
- **Recon Destination**
  - pacs

**Second Helical Set**
- **Slice Thickness/ Spacing**
  - arterial liver: 5mm x 5mm
  - thin arterial liver: .6mm x .6mm
- **Algorithm**
  - soft
- **Recon Destination**
  - for dmpr/VR

**Third Helical Set**
- **Slice Thickness/ Spacing**
  - venous liver: 5mm x 5mm
  - thin venous liver: .6mm x .6mm
- **Algorithm**
  - standard
- **Recon Destination**
  - for dmpr

**Fourth Helical Set**
- **Slice Thickness/ Spacing**
  - delayed liver: 5mm x 5mm
  - thin delayed liver: .6mm x .6mm
- **Algorithm**
  - standard
- **Recon Destination**
  - 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 65 seconds
- Arterial 15 minutes
- Venous Delay Smart Prep

**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