**RIH – HIGH RESOLUTION CHEST**  
**GE LIGHTSPEED 16 / OPTIMA CT580 PROTOCOL**

**Indications** - interstitial lung disease, emphysema, bronchiectasis, asbestosis, restrictive lung disease

| **Position/Landmark** | Head first or feet first-Supine  
|                      | Sternal Notch  
| **Topogram Direction** | Craniocaudal  
| **Respiratory Phase** | Inspiration and Expiration  
| **Scan Type** | Helical and Axial  
| **KV / mA / Rotation time (sec)** |  
| Helical | 120kv / smart mA (100-400) / 0.5 sec  
| Axial | 120kv / smart mA (100-400) / 0.5 sec  
| **Pitch / Speed (mm/rotation)** |  
| Helical | 1.75:1 , 35.00mm  
| Axial | 1i  
| **Noise Index** |  
| Helical | 28.00  
| Axial | 30.00  
| **Detector width x Rows = Beam Collimation** |  
| Helical | 1.25mm x 16 = 20mm  
| Axial | 0.625mm x 2 = 1.25mm  
| **Average Tube Output** |  
| Helical | ctld – 9 mGy  
| Axial | ctld – 1 mGy  
| **Helical Set** |  
| **Slice Thickness/ Spacing** | body  
| **Algorithm** | thickness/  
| **Recon Destination** | spacing  
| 1 | thin chest  
| 2 | supine hi res lungs  
| 3 | lungs  
| **First Axial Set** |  
| **Slice Thickness/ Spacing** | body  
| **Algorithm** | thickness/  
| **Recon Destination** | spacing  
| 1 | supine hi res lungs  
| **Second Axial Set** |  
| **Slice Thickness/ Spacing** | body  
| **Algorithm** | thickness/  
| **Recon Destination** | spacing  
| 1 | prone hi res lungs  
| **Scan Start / End Locations** |  
| **DFOV** | lung apices  
| | diaphragm  
| | 35cm  
| **IV Contrast Volume / Type / Rate** |  
| **Scan Delay** |  
| **2D/3D Technique Used** | DMPR of 5mm x 5mm axial and coronal chest series (auto-batch on), average mode, auto-transferred to PACS.  
| **Comments**: There are three scans in this protocol: supine inspiration helical, supine expiration axial, and prone inspiration axial. Every effort must be made to acquire prone images. If the patient cannot hold their breath, please consult a radiologist. A breast shield is used on the supine images.  
| **Images required in PACS** | Scouts, 5mm x 5mm axial chest, 5mm x 5mm coronal chest, 5mm x 5mm axial lungs, 1.25mm x 20mm axial supine inspiration hi res lung, 1.25mm x 20mm axial supine expiration hi res lung, 1.25mm x 20mm axial prone inspiration hi res lung, Dose Report  
| **updated Jan 23, 2017** |  