**RIH – GATED AORTA AND ABDOMEN PELVIS CTA (TAVI)**  
**GE LIGHTSPEED VCT PROTOCOL**

| Position/Landmark          | Feet first-Supine  
<table>
<thead>
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<tbody>
<tr>
<td></td>
<td>Sternal Notch</td>
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<tr>
<td><strong>Topogram Direction</strong></td>
<td>Craniocaudal</td>
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<tr>
<td><strong>Respiratory Phase</strong></td>
<td>Inspiration</td>
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<tr>
<td><strong>Scan Type</strong></td>
<td>Helical</td>
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</tbody>
</table>

1. **KV / mA / Rotation time (sec)**  
2. **Pitch / Speed (mm/rotation)**  
3. **Noise Index / ASiR / Dose Reduction**  
   - 120kv / smart mA (160-650) / 0.4 sec  
   - 0.20:1 , 10.4mm  
   - -- / 20 / 20%

| **Detector width x Rows = Beam Collimation** | 0.625mm x 64 = 40mm |
| **Average Tube Output** | Gated Chest CTA  
|                            | Abd/Pelvis CTA  
|                            | ctdi – 31.5 mGy  
|                            | ctdi – 7mGy  
|                            | dlp – 796.4 mGy.cm  
|                            | dlp – 255.3 mGy.cm |

| **First Helical Set** | body  
| Slice Thickness/ Spacing | recon  
| Algorithm | part  
| Recon Destination | thickness/spacing  
| 1 | thin gated cta  
| 2 | gated chest cta  
| 3 | lungs  
| 2.5mm x 2.5mm | standard  
| 2.5mm x 2.5mm | lung  
| .6mm x .6mm | standard  
| 2.5mm x 2.5mm | pacs  
| 2.5mm x 2.5mm | pacs  

| **Second Helical Set** | body  
| Slice Thickness/ Spacing | recon  
| Algorithm | part  
| Recon Destination | thickness/spacing  
| 1 | thin abd/pelvis cta  
| 2 | abd/pelvis cta  
| 2.5mm x 2.5mm | standard  
| 2.5mm x 2.5mm | standard  
| .6mm x .6mm | standard  
| 2.5mm x 2.5mm | pacs  
| 2.5mm x 2.5mm | pacs  

| **Scan Start / End Locations** | lung apices  
| DFOV | lesser trochanters  
| 38cm |

| **IV Contrast Volume / Type / Rate** | 60mL Iohexol (Omnipaque 350) / 4.5mL per second  
|                            | 70mL Iohexol (Omnipaque 350) / 3mL per second  
|                            | 50mL saline / 3mL per second |

| **Scan Delay** | smart prep at aortic arch |

| **2D/3D Technique Used** | .6mm, 25% - 45% r to r retro-recon, 5% increment, of only the chest cta.  
| Send these retro-recons to TeraRecon (RITRAQGT_AE) |

**Comments:** The ct angiogram will be in two groups. The first is the gated scan from the lung apices to the bottom of the heart. The max mA is set to occur at 25% to 45% of r to r. The second is a routine helical from the bottom of the heart to the lesser trochanters. A breast shield is not needed for this scan.  
- The cardiac monitor leads should be below the clavicles and just below the curvature of the left ribs.  
- **There cannot be a gap between the start and stop points of the two scans. The two scans should have the same centering and field of view.**

| **Images required in PACS** | From CT scanner: Scouts, 2.5mm axial chest abd pelvis cta, lung windows, Dose Report  
|                            | From 3d lab: Aortic valve measurements, Aorta/Iliac measurements, Curved reformats of aorta/iliacs. |

updated Jan 23, 2017