# RIH – HELICAL ADULT BRAIN
## GE LIGHTSPEED VCT PROTOCOL

**Indications:**
- Non contrast: cva, intracranial bleed, mental status change, trauma, hydrocephalus
- Contrast: suspicion of mass, known primary brain lesion, metastases

| Position/Landmark | Supine head first or feet first  
<table>
<thead>
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<tbody>
<tr>
<td></td>
<td>Zero at outer canthus of eye.</td>
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<tr>
<td>Topogram Direction</td>
<td>Craniocaudal</td>
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<tr>
<td>Respiratory Phase</td>
<td>Any</td>
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<tr>
<td>Scan Type</td>
<td>Helical</td>
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| **KV / mA / Rotation time (sec)** | 120kv / smart mA (50-210) / 0.7 sec  
| **Pitch / Speed (mm/rotation)** | 0.531:1 , 10.62mm  
| **Noise Index / ASiR / Dose Reduction** | 7.0 / 30 / 30%  
| **Detector width x Rows = Beam Collimation** | 0.625mm x 32 = 20mm  
| **Average Tube Output** | ctdi – 35.0 mGy  
|                  | dlp – 600 mGy.cm  
| **Helical Set**  |  
| **Slice Thickness/ Spacing** | Recon 1: thin brain  
|                  | Recon 2: thin skull  
| **Algorithm**    | standard  
| **Recon Destination** | dmpr  
| **Scan Start / End Locations** | 1cm inferior to skull base  
|                  | 1cm superior to skull vertex  
| **DFOV**         | 25cm  
|                  | decrease appropriately  
| **IV Contrast Volume / Type / Rate** | 100mL Iohexol (Omnipaque 350), 1.5mL/sec  
|                  | if needed  
| **Scan Delay**   | minimum of 2 minutes  
| **2D/3D Technique Used** |  
|                  | DMPR 5mm x 5mm axial brain reformats in the glabello-meatal plane (auto-batch off), average mode, auto transferred to PACS  
|                  | DMPR 5mm x 5mm coronal brain reformats perpendicular to the glabello-meatal plane (auto-batch off), average mode, auto transferred to PACS  
|                  | DMPR 5mm x 5mm axial skull reformats in the glabello-meatal plane (auto-batch off), average mode, auto transferred to PACS  
| **Comments:** | Recon 1 is a thin helical set of the brain for reformats in the desired plane. Recon 2 is a thin helical set of the skull for reformats in the desired plane.  
| **Images required in PACS** | Scouts, 5mm x 5mm axial brain, 5mm x 5mm coronal brain, 5mm x 5mm axial skull, Dose Report  

updated Jan 23, 2017