# RIH – HELICAL ADULT BRAIN
# GE LIGHTSPEED 16 / OPTIMA CT580 PROTOCOL

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

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| **Position/Landmark** | Supine head first or feet first<br>Zero at outer canthus of eye. |
| **Topogram Direction** | Craniocaudal |
| **Respiratory Phase** | Any |
| **Scan Type** | Helical |
| **KV / mA / Rotation time (sec)**<br>**Pitch / Speed (mm/rotation)**<br>**Noise Index / ASiR / Dose Reduction** | 120kv / smart mA (50-250) / 0.8 sec<br>.562:1 , 5.62mm<br>10.0 / 30 / 30% |
| **Detector width x Rows = Beam Collimation** | 0.625mm x 16 = 10mm |
| **Average Tube Output** | ctdi – 46.1 mGy<br>dlp – 742 mGy.cm |
| **Helical Set**<br>Slice Thickness/ Spacing<br>Algorithm<br>Recon Destination | recon 1: body part thin brain; thickness/spacing .6 mm x .6 mm; algorithm standard; recon destination dmpr<br>recon 2: body part thin skull; thickness/spacing .6 mm x .6 mm; algorithm bone; recon destination dmpr |
| **Scan Start / End Locations**<br><br>**DFOV** | 1cm inferior to skull base<br>1cm superior to skull vertex<br><br>25cm<br>decrease appropriately |
| **IV Contrast Volume / Type / Rate** | 100mL Iohexol (Omnipaque 350), 1.5mL/sec<br>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<br><br>DMPR 5mm x 5mm **coronal brain reformats** perpendicular to the glabello-meatal plane (auto-batch off), average mode, auto transferred to PACS<br><br>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. These two reformats should be created in a plane parallel to the glabello-meatal line. | |
| **Images required in PACS** | Scouts, 5mm x 5mm axial brain, 5mm x 5mm coronal brain, 5mm x 5mm skull, Dose Report |

updated Jan 23, 2017