## RIH – PITUITARY GLAND
### GE LIGHTSPEED 16 PROTOCOL

**Indications:** Patient with contraindication to MR. Suspected or known pituitary mass.

| **Position/Landmark** | **Supine head first or feet first**  
| **Zero at outer canthus of eye.** |
| **Topogram Direction** | **Craniocaudal** |
| **Respiratory Phase** | **Any** |
| **Scan Type** | **Helical** |

**KV / mA / Rotation time (sec)**  
- **Pitch / Speed (mm/rotation):** 120kv / smart mA (50-350) / 0.8 sec  
- **Noise Index / ASiR / Dose Reduction:** .562:1, 5.62mm  
- **6.5 / 30 / 30%**

**Detector width x Rows = Beam Collimation**
- **0.625mm x 16 = 10mm**  
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**Average Tube Output**
- **Each Helical:** ctdi – 46.1 mGy  
- **dlp – 742 mGy.cm**

**First Helical Set**  
- **Slice Thickness/ Spacing**  
  - **Algorithm:** thin brain  
  - **Recon Destination:** 1 mm x 1mm standard dmpr

**Second Helical Set**
- **Slice Thickness/ Spacing**  
  - **Algorithm:** skull  
  - **Recon Destination:** 1 mm x 1mm standard bone pacs

**Scan Start / End Locations**
- **DFOV**  
  - **1cm inferior to skull skull vertex  
  - **25cm decrease appropriately**

**IV Contrast Volume / Type / Rate**
- **Scan Delay**  
  - **80cc omni 350 / 2cc per second**
  - **70 seconds**

**2D/3D Technique Used**
- **non con: dmpr 5mm x 5mm** **axial brain reformats** in the glabello-meatal plane (auto-batch off), average mode, auto transferred to PACS

There are four dmpr reformats from the contrast helical data set:  
- **5mm x 5mm contrast axial brain** (auto-batch off), 1mm x 1mm **axial pituitary** (auto-batch off), 1mm x 1mm **coronal pituitary** (auto-batch off), 1mm x 1mm **sagittal pituitary** (auto-batch off)

**Comments:** A non-contrast brain is done first. Then a helical contrast enhanced head is performed. Recon 1 of the contrast helical set will set up direct mpr for the needed post contrast images.

**Images required in PACS**
- **Scouts, 5mm x 5mm axial nc brain, 5mm x 5mm contrast axial brain, 1mm x 1mm axial pituitary, 1mm x 1mm coronal pituitary, 1mm x 1mm sagittal pituitary, Dose Report**

updated Jan 23, 2017