

**RIH – ACUTE STROKE BRAIN AND CAROTIDS MULTI-PHASE(ELVO)  
SIEMENS DEFINITION AS+ PROTOCOL**

**Indications: carotid/cerebral artery stenosis or blockage; non-trauma**

<b>Position/Landmark</b>	Supine head first or feet first 1cm superior to skull vertex
<b>Scan Type</b>	Helical
<b>Ref kV/Ref mAs/Rotation time Pitch / Speed (mm/rotation) Safire Strength /Dose Optimization</b>	nc brain cta Care kV 120/Care Dose4D 250/ 0.5 sec Care kV 100/Care Dose4D 175/0.5 sec .7:1 , 8.75mm 1 / 3 1:1 , 40.00mm 3 / 11
<b>Detector width x Rows = Beam Collimation</b>	nc brain cta 0.625mm x 20 = 12.5mm 0.625mm x 64 = 40mm
<b>Average Tube Output</b>	nc brain cta neck brain peak/late venous brain ctdi – 35.0 mGy ctdi – 10.4 mGy ctdi – 11.4 mGy dlp – 600 mGy.cm dlp – 365 mGy.cm dlp – 175 mGy.cm
<b>First Helical Set</b> Slice Thickness/ Spacing Algorithm Recon Destination	body thickness/ recon recon part spacing algorithm destination . 1 <b>non angle head ct</b> 5mm x 5mm J40f medium pacs 2 <b>axial brain reformat</b> 5mm x 5mm J40f medium pacs 3 <b>coronal brain reformat</b> 5mm x 5mm J40f medium pacs 4 thin brain .75mm x .7mm J40f medium terarecon
<b>Second Helical Set</b> Slice Thickness/ Spacing Algorithm Recon Destination	body thickness/ recon recon part spacing algorithm destination . 1 <b>thin axial neck brain cta</b> 1mm x 1mm J30f smooth pacs 2 <b>thick axial neck brain cta mip</b> 24mm x 4mm J30f smooth pacs 3 <b>coronal neck brain cta</b> 5mm x 2mm J30f smooth pacs 4 <b>thin sagittal neck brain cta</b> 1mm x 1mm J30f smooth pacs
<b>Third Helical Set</b> Slice Thickness/ Spacing Algorithm Recon Destination	body thickness/ recon recon part spacing algorithm destination . 1 <b>axial peak venous brain mip</b> 24mm x 4mm J30f smooth pacs
<b>Fourth Helical Set</b> Slice Thickness/ Spacing Algorithm Recon Destination	body thickness/ recon recon part spacing algorithm destination . 1 <b>axial late venous brain mip</b> 24mm x 4mm J30f smooth pacs
<b>Scan Start / End Locations</b> <b>DFOV</b>	brain cta neck brain 1cm inferior to skull base/skull vertex 1cm inferior to aortic arch/skull vertex 23cm 23cm
<b>IV Contrast Volume / Type / Rate</b>	80mL Iohexol (Omnipaque 350) / 4mL per second
<b>Scan Delay</b>	Bolus Tracking at Aortic Arch
<b>2D/3D Technique Used</b>	<b>Non Con:</b> 5mm x 5mm <b>axial and coronal brain reformats</b> in respect to the glabello-meatal plane, average mode <b>CTA:</b> <b>axial reformats</b> 24mm x 4mm, mip mode, width 1000 level 200 <b>coronal reformats</b> 5mm x 2mm, mip mode, width 1000 level 200 <b>sagittal reformats</b> 1mm x 1mm, mip mode, width 1000 level 200 <b>Peak/Late:</b> <b>axial reformats</b> 24mm x 4mm, mip mode, width 1000 level 200
<b>Comments:</b> Four helical scans: NC Brain, CTA Neck and Brain, Peak Venous Brain, Late Venous Brain <b>If the cta is performed, PA and Lateral Scouts of the Chest Abd Pelvis will be done at the end of the study to serve as a metallic foreign body screening for MRI. The scouts need to cover from base of neck to groin. The PA scout uses 120kV and 40mA and the Lateral scout uses 120kV and 80mA</b>	
<b>Images required in PACS and RIHOSPSTROKE</b>	Topograms, 5mm x 5mm head, 5mm x 5mm axial nc brain, 5mm x 5mm coronal nc brain, 1.2mm x 1.2mm axial neck and brain cta, 24mm x 4mm axial neck brain cta mip, 1mm x 1mm sagittal neck brain cta mip, 5mm x 2mm coronal neck brain cta mip, 24mm x 4mm axial peak venous brain mip, 24mm x 4mm axial late venous brain mip, pa and lateral chest abd pelvis topograms, Patient Protocol