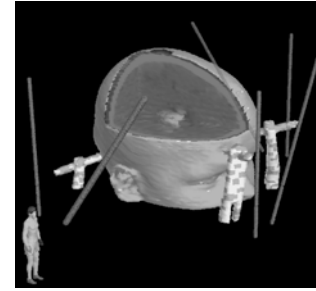


# BrainLAB

## Scan Protocol

### Cranial / Head&Neck



#### How to scan cranial and Head&Neck data for BrainLAB iPlan RT software\*:

<p><b>FoV (Field of View) Scan Range</b></p>	<p><b>All Scans:</b> Recommended: <b>Restrict scan range (total table movement) to necessary length</b></p> <hr/> <p><b>Reference CT-Scan (with localizer):</b></p> <ul style="list-style-type: none"> <li>Zoom in to a sensible FoV, the entire <b>localizer must be visible</b> (all localizer rods visible throughout the complete scan)</li> </ul> <p><b>Pure Cranial Applications</b></p> <ul style="list-style-type: none"> <li>Range <b>from top of the head down to include all critical regions.</b></li> </ul> <p><b>Neck (spine, skull base) Applications:</b></p> <ul style="list-style-type: none"> <li>Range to include region of interest, all images must have all rods.</li> </ul> <hr/> <p><b>All Other Scans (additional CT, MRI...)</b></p> <ul style="list-style-type: none"> <li>No restrictions except must include outer contour</li> </ul> <p><b>For Head and Neck auto-segmentation (CT only)</b></p> <ul style="list-style-type: none"> <li>Range <b>from eyes down to the complete Vertebra T2</b>; if eyes are not complete the algorithm for the segmentation of the eyes will not work.</li> </ul>
<p><b>Slice Distance</b></p>	<ul style="list-style-type: none"> <li><b>Sequential or Spiral/Helical Scans</b> are allowed.</li> <li><b>Note:</b> If you experience localization problems when using a slice distance of less than 2mm, please contact your BrainLAB Service Engineer.</li> <li>Slice distance may be changed during the scan. Max. 3 mm recommended for critical regions</li> <li><b>For automatic segmentation max. 3mm slice distance, complete scan. Recommended: 2 mm scans.</b></li> </ul>
<p><b>Scan Properties</b></p>	<p><b>CT:</b></p> <ul style="list-style-type: none"> <li>Axial only</li> <li>Contrast agent allowed</li> <li>Scan for soft tissue windowing (with Kernel of about 40).</li> </ul> <p><b>MRI:</b></p> <ul style="list-style-type: none"> <li>Axial, sagittal, coronal</li> <li>T1, T2, angiographic possible</li> <li>Contrast agent allowed</li> </ul>
<p><b>Gantry Tilt/Angulation</b></p>	<p><b>Reference CT-Scan (with localizer):</b></p> <ul style="list-style-type: none"> <li><b>Oblique slices (<math>\pm 10^\circ</math>)</b> are possible but <b>not recommended</b></li> </ul> <p><b>All other Scans (additional CT, MRI...)</b></p> <ul style="list-style-type: none"> <li>Any kind of gantry angles can be used. Positive and negative values are allowed, but have to <b>remain the same</b> during scanning.</li> </ul>
<p><b>Patient Orientation</b></p>	<ul style="list-style-type: none"> <li><b>Strict supine</b> position</li> </ul>
<p><b>Scan Direction</b></p>	<ul style="list-style-type: none"> <li>Cranial to caudal or caudal to cranial.</li> </ul>
<p><b>Image/Pixel Size</b></p>	<ul style="list-style-type: none"> <li>Must remain the <b>same</b> during the scan.</li> </ul>
<p><b>Table Height</b></p>	<ul style="list-style-type: none"> <li>Must remain the <b>same</b> during the scan.</li> </ul>
<p><b>Image Compression</b></p>	<ul style="list-style-type: none"> <li>Save images in uncompressed format.</li> </ul>
<p><b>Matrix Size</b></p>	<ul style="list-style-type: none"> <li>Squared recommended, e.g.: <ul style="list-style-type: none"> <li>512 x 512</li> <li>1024 x 1024</li> </ul> </li> </ul>

\* Based on PatXfer 5.2 / RT 1.5 or higher and iPlan RT Software 4.0 or higher

\* If you need additional information please contact your local BrainLAB Support Engineer