

## Scan Protocol - Cranial MR for Adaptive Hybrid Surgery Analysis

How to Scan Cranial MR Data for Adaptive Hybrid Surgery Analysis with Curve™ and Brainlab Planning Stations:

- **Adaptive Hybrid Surgery Analysis 1.x and higher**

<b>FOV (Field of View) / Scan Range</b>	<ul style="list-style-type: none"> <li>• Range from top of the head down to include all critical regions.</li> <li>• Include region of interest</li> <li>• FoV must remain the same during the scan</li> <li>• Do not include the table or headrest in the field of view.</li> <li>• Include all fiducial markers / landmarks (defined by responsible surgeon)</li> <li>• Surface matching: include the face containing forehead, eyes and the complete nose (<b>tip of nose must not be cut off!</b>)</li> <li>• No restraints across face or ears (across chin is acceptable)</li> </ul>
<b>Scan Properties</b>	<ul style="list-style-type: none"> <li>• Axial, sagittal, coronal</li> <li>• T1, T2, angiographic possible</li> <li>• 3D SPGR T1, 3DT2w CISS</li> <li>• Scan patient with eyes closed</li> <li>• Sequential scans 1-2 mm (1 mm recommended)</li> <li>• Square pixel only</li> <li>• Pixel size, matrix size, and table height must remain the same during the scan</li> <li>• Surface matching: The skin surface must be displayed evenly, well contrasted and with low distortion</li> <li>• The resulting scan must be usable for stereotactic navigation: use distortion filter if available</li> </ul>
<b>Gantry Tilt / Angulation</b>	<ul style="list-style-type: none"> <li>• Reference MR no angulations, pure axial images</li> <li>• Positive and negative values are allowed, but must remain the same during scanning</li> </ul>
<b>Patient Orientation</b>	<ul style="list-style-type: none"> <li>• Supine</li> </ul>
<b>Image Compression</b>	<ul style="list-style-type: none"> <li>• If transferring via CD-ROM, save images in uncompressed format</li> </ul>
<b>Matrix Size</b>	<p>Any, but squared recommended, e.g.:</p> <ul style="list-style-type: none"> <li>• 256 x 256</li> <li>• 512 x 512</li> </ul>
<b>Special</b>	<ul style="list-style-type: none"> <li>• 3D MR, Angio MR allowed</li> </ul>

If you need additional information, please contact local Brainlab support

