

Custom Acetabulum Orthopaedic CT Scan Protocol

Thank you for taking the time to read this protocol. The quality of the CT scan is the most important aspect of creating patient specific anatomical models. Your observation of the recommendations made in this protocol will have a significant impact on the accuracy of the final model. Please do not hesitate to contact Ossid on (+64) 3 365 7369 with any questions or prior to using this protocol for the first time.

SCAN REQUIREMENTS:

Scanner type:	Any conventional brand of CT machine can be used.
Anatomy to be scanned:	The complete pelvis needs to be scanned, being from <u>just above the most superior point of the ilium</u> down to <u>just below the most inferior point of the ischium</u>
Patient position and posture	<ul style="list-style-type: none"> - Patient lying on the back, fully straight. - Both legs nicely mutually aligned. - No un-natural tilt or lift of the pelvis - Arms folded upward away from the pelvis.
Slice thickness and spacing:	<p>Choose and maintain a fixed value between 0.625 and 1.25mm</p> <ul style="list-style-type: none"> - <i>The smaller value the better for creating accurate patient specific anatomical models</i> - <i>If using a multidetector scanner please be sure to reconstruct images at thin sections (<2.00mm, 0.65-1.25mm is ideal).</i> - <i>If using a single slice scanner please do not reconstruct images to slices that are thinner than the original acquisition. This simply interpolates between slices and does not improve the resolution of the exam. If using a single slice scanner, please scan the patient with the thinnest slice thickness possible (<2.0mm, 0.625- 1.25mm is ideal).</i> - <i>All slices must be contiguous or overlapping, table increment can be dependent on anatomy.</i>
Field of view (FOV):	<p>Can depend on size of anatomy. Magnify or zoom the image so it fills the entire screen without cutting off any of the anatomy for imaging. Include the entire pelvic girdle</p> <p><i>Guideline: aim for obtaining cubic voxels in the resulting image data set (Preferred: = 1.5 x 1.5 x 1.5 mm³)</i></p>
Table Position:	<p>Keep one stable CT couch position during scanning.</p> <p>Gantry tilt 0°</p> <p>IMPORTANT: Do not change FOV, table position or X and Y centering between slices during scanning</p>
Reconstruction algorithm(s):	A STANDARD or SOFT TISSUE algorithm, without edge enhancement should be used.
File format:	The image data of any CT machine must be provided in standard axial DICOM format.
Transfer scan data to OSSIS:	<p>DVD or CD-ROM couriered to Ossid physical address, contact us to arrange courier.</p> <p>For cases where scan can be uploaded to the PAX system, upload to PAX system and let Ossid know. Ossid will download the scan from PAX.</p>

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