

CT SCANNING PROTOCOL – CUSTOM IMPLANTS & BIOMODELS

Thank you for reviewing this protocol. The quality of CT scan is a critical component for the production of a high quality custom implant or Surgical BioModel (plastic anatomical replica). Please contact Anatomics on **+61 (0)3 9529 8088** if you require further clarification.

REQUIREMENTS

- 1) Perform a high-resolution 3D Helical CT scan according to the following guidelines;
- 2) Archive the original high-resolution fine slice acquisition data in DICOM format to CD or DVD.

CT SCANNING GUIDELINES

- Only provide the **original sub-millimetre spaced fine slice data** on disc, **NOT REFORMATS**.
- Do not use Cone Beam CT (due to insufficient contrast resolution).
- The patient must remain completely still during the scan. If the patient moves during the scan, it must be repeated.
- The following table outlines appropriate slice thickness and spacing combinations in millimetres:

Anatomy	Slice Thickness	Spacing	Example
Face	0.5 (or nearest to)	0.4	Orbits, Mandible, CTA
Spine	1.0 (or nearest to)	0.6	C. Spine, L. Spine
Skull	1.0 (or nearest to)	0.8	Cranial Implant
Large structures	1.0 (or nearest to)	0.8	Chest, Pelvis, Forearm

- **Algorithm:** Use '**BONE**' for facial scans and '**SOFT TISSUE**' for all others.
- **Gantry tilt:** Zero.
- **Dose:** Use a low mA for bony structures of the head and limbs.
Use a higher mA for soft tissue, chest, spine or pelvis.
- **Field of View (FOV):** To include only the structures of interest to surgeon.
For cranial implants, include the entire skull.
- **Chest Implants:** For custom chest implants, scan patient with **ARMS DOWN BY SIDES** to ensure normal position of chest anatomy.
- **Vascular Structures:** If vascular anatomy is required, perform a CT Angiogram (CTA) with IV contrast administered by pressure injector.
- **Archive:** Archive only the sub-millimetre spaced fine slice acquisition data to CD or DVD in DICOM format.
- **Delivery Options:** Download AnatomicsRx ordering portal software from the Anatomics website for electronic transmission or post disc.

Version: QR-72-01-15 Rev C