CranioTech
PATIENT-SPECIFIC SOLUTIONS

CRANIOPLASTY MOULD – CT SCAN PROTOCOL

Overview

The patient-specific cranioplasty moulds are designed using the **CT scan** of the patient. **CBCT scans** are **NOT** acceptable. Good quality scan data is, therefore, critical to the process of designing an accurate prosthesis and cutting guide.

Please review the following information before proceeding with the CT scanning process. Feel free to contact us if you have any queries about the scanning process or data transfer.

Protocol

Procedure

Remove any non-fixed metal prosthesis or jewelry that might interfere with the scan region.

Instruct the patient to remain still until the scan is complete. Any movement will render the scan unusable.

Ensure that the scan is performed within the scan area and according to the scan parameters as indicated below.

Only axial image data is required. Please provide the scan with slice intervals equal or less than 1mm slice thickness. **Do not reconfigure** the axial slice data into a different (thicker) slice interval.

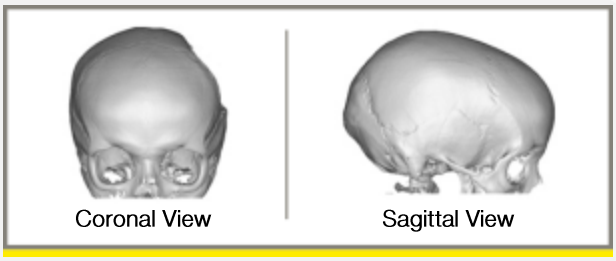
Send the images in **uncompressed standard raw** DICOM format to Craniotech, either digitally or on a CD.

If possible, retain the raw CT data until the scan has been reviewed by Craniotech.

Scan Area

Scan area should include all of the affected anatomical regions. Ensure that the outer limits adhere to the specifications listed below and shown in the image:

- Upper limit – top of the cranium
- Lower limit – C1
- Field of View (FOV) must include both sides of the cranium



Scan Parameters

Scan Area	• Top of cranium to C1 • Include both sides of cranium
FOV	Adjust to best fit patient anatomy
Pitch	1:1
Slice Thickness	≤ 1mm
Gantry Tilt Angle	0°
Matrix	768 x 768
Algorithm	Bone Kernel (±B65s) or High Resolution

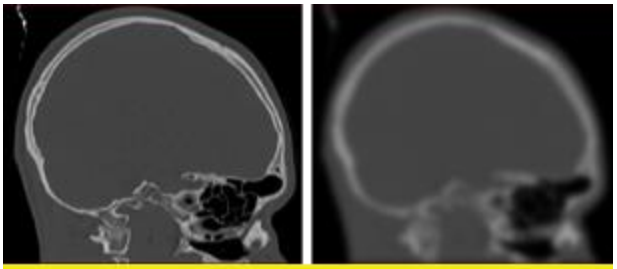
Scan Results

Satisfactory scans have clear, crisp boundaries and bone features. Boundaries between bone and surrounding soft tissue can clearly be observed in these images.

Unsatisfactory scans are blurry and have poor contrast between bone and surrounding tissue. Such images are difficult to segment and run the risk of being unusable.

Refer to the image below.

Satisfactory Scan | Unsatisfactory Scan



POPI

Craniotech respects the POPI Act. Great care is taken to protect all patient information shared with Craniotech.

Ensure that the **patient provides written permission** that allows Craniotech to obtain the patient scan data, as well as use it for the development of patient-specific solutions.