

# CT Scan Protocol | Cranium

The patient specific titanium mesh implant is designed using the CT scan of the patient. Good scan data is crucial to the design and manufacture of a high-quality implant. Please carefully review and follow the instructions before proceeding with the CT scan protocol

### Region of Interest

- For cranial defects, the scan area should include the entire skull.
- The Field of View (FOV) should extend from the cranium to the mandible bone, including skin and soft tissue.





## Scanning Parameters

Sliced Thickness: Voxel Size:

Image Type:

Export File:

Pitch:

Reconstructed Slice Increment:

Reconstruction Algorithm:

Gantry Tilt Angle:

Less than 1.0 mm Less than 1.0 mm

Bone Window - Non-Contrast

DICOM and Uncompressed Standard

1 or Less

Less than Sliced Thickness

Bones/ Details

Not allowed for Medical CT scan (Gantry Tilt 0°)

# **Scanning Instruction**

- Helical (spiral) scanning mode is preferred for CT image acquisition
- Scan must be less than 3 months old. (Less than 1 month old for tumor case)
- Capture the complete cranio-maxillofacial region including mandible with condyle, orbital floor, maxilla, zygoma, nose, chin, and cranium bone.
- Align the patient in a way that prevents as many artifacts as possible and do not deform the soft tissue.
- No patient movement. If the patient moves during the scan, it must be repeated.
- All slices must have the same field of view, reconstruction center, and table height.
- Scan with the same slice spacing, less than or equal to the slice thickness.
- Minimize the artifacts caused by metallic dental restorations or orthodontic brackets by aligning the patient's occlusal plane as much as possible with the axial slices.
- Images scanned with no gantry tilt and no oblique reconstruction (i.e. use only primary axial images). No reformatting into coronal or sagittal planes.

### **Data Transfer**

- Provide the complete data set of raw/original DICOM images to the surgeon or Meticuly representatives
- Could be transferred by physical or digital devices
- Data will be anonymized by Meticuly on receipt of the data, after cross-check with prescription of the surgeon to ensure the images of the right patient are provided.

Approved Date: 14 June 2024 SD-DS-42 Rev. 2