Cranio Maxillo Facial CT Scan Protocol

MedCAD uses advanced image processing and manufacturing techniques to create an exact 3D replica of the patient specific structures from CT data. The accuracy of the 3D model depends on the quality of CT images. Adherence to the recommended protocol has significant impact on the quality of the final models produced.

Key requirements

1. **Patient immobilization:** Please **immobilize** the patient completely through the complete scanning process. **If any motion is detected during the scan please restart the scan** as any motion artifact will severely compromise the image data and render it unusable.
2. **Remove all metal** jewelry, partial dentures, and other metallic articles that can obscure the anatomy in the region of interest.
3. **Do not use any gantry tilt.**
4. **Position occlusal plane parallel to the Gantry (Figure 1).**
5. **Completely scan the region of interest (ROI) including about 2cm above and below the ROI.**
6. **Please use a bit wafer to separate the maxillary and mandibular dentition.**
7. **Take the complete scan in one pass.**
8. **Transfer the complete data to a removable media as CD or DVD and forward to MedCAD for further processing.**

Data Acquisition

1. Use a high spatial resolution with contiguous images with slice thickness of 0.625mm to 1.25mm.
2. No overlap and no spacing between slices.
3. For helical CT Scanners use low pitch.
4. Use sufficient milliamperes (mA) for soft tissue delineation.
5. Do not reconstruct to lower slice thickness than the original acquired slice thickness. This does not improve the resolution of the data.
6. For traditional CT scans uses 1:1 pitch.
7. Use a standard filter. No bone algorithm is required.

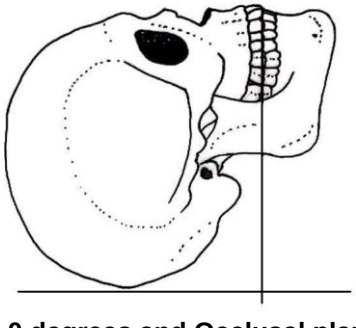

Figure 1. Gantry tilt = 0 degrees and Occlusal plan parallel to Gantry.