TMJ CONCEPTS

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TMJ Concepts CT Scanning Protocol

This protocol is to ensure that accurate 3-D bone models can be created and used for the design and manufacture of patient-fitted temporomandibular joint prostheses. This protocol is not intended for use with cone beam scanners. TMJ Concepts does not accept cone beam scans for models that are intended to be used for the fabrication of TMJ prostheses. Please review the following information before proceeding with the scanning process.

If you have any questions, please contact our modeling vendor, **ProtoMED**, at 303-466-5610 or TMJ Concepts at 805-650-3391 (Toll free 800-504-9527) prior to scanning the patient. TMJ Concepts can be visited on the web at www.tmjconcepts.com.

Pre-Scan Checklist

- Remove any jewelry that is in the scan area.
- Stabilize the patient with sponges, tape, and any other accessories that will not cause injury to the patient or affect the quality of the scan. It is extremely important that the patient does not move or swallow during the scanning process.
- Position the patient so that he/she lay supine.
- Patient should be scanned in good occlusion when possible. Patients that cannot achieve a good occlusal position should be scanned with a bite jig or other apparatus to stabilize and separate the teeth. If there is any question regarding what is appropriate, please contact the ordering surgeon.

Procedure

- Inform the patient when the actual scanning process starts. Instruct them to not move or swallow until the scan is complete. If there is movement, the patient must be re-scanned.
- Take a scout view and locate the first slice position. Make sure the head is positioned symmetrically so that the first slice is positioned correctly for both the left and right TMJ.
- Start the scan a minimum of 5mm above the roof of the fossae. Be sure that both inferior orbital borders and EAC's are included. Scan through the tip of the chin.
- Scans must **not** be provided with greater than 1mm slice intervals. If your standard scanning parameters are .5mm, .625mm, or .75mm slice intervals, please provide the greatest level of detail scanned. Do **not** reformat axial slice data into a different slice interval.
- Only axial image data is required. If possible, retain the raw CT data until the scan has been reviewed by TMJ Concepts.
- Data should be archived onto a CD or optical disk in an uncompressed DICOM format using a standard-type algorithm. Do **not** use a Detail or Bone algorithm. Preferred algorithms for common scanners are shown in the table at the right.
- Label the disk with surgeon name, patient name, date of scan, technician name, scanner type, scan site name and phone number.
- Send data to TMJ Concepts via overnight shipping or via ftp. For instructions on uploading CT data via ftp, contact TMJ Concepts.

Helical Scanning Parameters	
Scan Area	TMJ/Mandible/Maxilla (per diagram below)
Algorithm	Standard (Do **not** use Detail or Bone)
	Preferred Algorithms GE.............Standard Phillips ......B Siemens....H30s Toshiba .....FC30 or FC03*
FOV	20 cm (may be adjusted to best fit patient anatomy)
Pitch	1:1
Slice Interval	0.5mm to 1mm **Do Not Reformat**
Slice Thickness	Same as slice interval
mAs	120-180 (maximize without overheating tube)
Archival	**Uncompressed DICOM image data on CD**

5mm above roof of the fossa

Desired Scan Area