

CT/CBCT SCAN PROTOCOL- ORTHOPEDICS

Please keep in mind the following key points

- Please use a 3D scanning routine that provides high resolution images as would be suitable for image guided surgery, stereotactic planning or other 3D applications. It may be useful to consult with your CT vendor's Application Specialist for advice on optimal parameters for your machine that provide the best scan with acceptable radiation dose levels. Scans should not be taken more than 6 months prior to the surgery date.
- Acquire scans at a high spatial resolution. Series should be acquired with thin, contiguous image slices (equivalent thickness and spacing of 2.5 mm or less) and as small a field of view (FOV) as possible while still including the patient's anatomy of interest.
- Please provide images in the original scanning plane. If software post-processing is performed to reorient or reformat the scan volume, then a series of thin slice images in the original acquisition plane MUST be included.
- Do not use gantry tilt during image acquisition. Images acquired with gantry tilt then post-processed to reorient images (i.e. "take out" tilt) are not acceptable.
- Please ensure that scans are free from motion artifact. Patient must remain completely still through the entire scan. If patient motion occurs, the scan must be restarted. Image distortion from patient motion can severely compromise the accuracy of a model.
- Image artifact caused by metallic implants can obscure anatomy of interest. Please take steps to minimize artifact from the presence of metal.
- Archive the entire study in uncompressed DICOM format on CD-R or DVD for shipping. It is also possible to transfer image data via the internet. Please contact us at (844) 643 1001 for details.

Recommended protocol for medical CT scanners

Slice Spacing:	2.5 mm or less (equal to slice thickness)
Pixel Size:	0.60 mm or less
Field of View:	Set field of view to include entire area of interest
Algorithm: (examples)	GE: Standard (not bone or detail) Siemens: H30s Toshiba: FC20 Philips: B
Gantry Tilt:	0°
Archive Media:	CD or DVD
File Type:	DICOM (uncompressed)
Series:	Original / Primary / Axial (no recon, reformat or post process data)

