CT Scan Protocol

Knee

The CT scan quality is critical to the production of accurate personalized implants and patient-specific guides. Deviations from this protocol may result in an unusable scan and delay of surgery. Please contact Meticuly team for further clarification.

Scanning Parameters

Region of interest	Distal 1/3 of femur through proximal 1/2 of tibia with entire patella (approx. 25 cm above and below knee)	
Body side	Both left and right legs	
Matrix size	512 x 512	
Voxel size	0.5 – 1 mm	
Slice thickness	maximum 1 mm	
Feed per rotation	maximum 1 mm	
Pitch	1 or less	
Reconstructed slice increment	maximum 1 mm	
Reconstruction algorithm	Bone	
Export File	DICOM	
File Format	Uncompressed standard	

CT Scanning Instruction

- Helical (spiral) scanning mode is preferred for CT image acquisition. A conventional CT can be used if minimum requirements stated above could be fulfilled.
- Both left and right sides should be scanned with approximately the same setting
- Position the patient to maximize comfort and minimize motion. If possible, position the patient as follows: supine, feet first, patellae pointing forward and the knees in maximal extension, toes pointing straight up.
- Use the smallest field of view possible to capture the whole regions of the required bones. Capturing all soft tissue is unnecessary, only the bony regions are of interest.
- Images scanned with no gantry tilt and no oblique reconstruction (i.e. use only primary axial images). No reformatting into coronal or sagittal planes.
- 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.

Data Transfer

- Provide the complete data set of raw/original DICOM images to the surgeon
- Do not erase patient name and ID. 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.

Meticuly Co., Ltd.
Rm.606, Centennial Memorial Bldg., Faculty of Engineering
Chulalongkorn University, Bangkok, THAILAND 10330
Tel. +66(0)2-024-9602 info@meticuly.com

METICULY