


CT Scan Protocol

Hand Bones

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 | Complete hand (including phalanges, metacarpal and carpal bones) |  |
| Body side | Both left and right hands | |
| Matrix size | 512 x 512 | |
| Voxel size | 0.3 – 0.5 mm | |
| Slice thickness | 0.625 mm or smaller | |
| Feed per rotation | 0.625 mm or smaller | |
| Pitch | 1 or less | |
| Reconstructed slice increment | 0.3 mm | |
| Reconstruction algorithm | Bone / Details | |
| Export File | DICOM | |
| File Format | Uncompressed standard | |

CT Scanning Instruction

- Helical (spiral) scanning mode is preferred for CT image acquisition
- Both hands could be CT scanned with a single acquisition. If possible, try to position patient's hands as close together as possible to fit into the FOV and with patient's palms facing each other in the neutral position. If CT scans of left and right hands are taken separately, both scans should be done with approximately the same setting.
- In case of bone tumour treatment, additional MR imaging is also requested (optional) to allow the pre-operative planning of the resection around the tumour.
- 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.
- 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.
- Scan quality with clear bony edges and details

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.