

LRS Custom implant Solutions (CiS) are designed using patient CT data, hence it is important to ensure that the image quality of the CT data is to a level required for radiological evaluations of the bone.

The information in this document is provided as a guide to ensure optimal quality scans. Should a recent patient CT scan of no older than 2 months already be available, and it matches the requirements outlined below, this can be used instead to avoid an unnecessary scan.

Please read the following instructions carefully before scanning. Feel free to contact us should you have any questions.

Scan Requirements

Please ensure that the patient remains completely still during scanning. Any movement will prevent accurate anatomical reproduction and could render the scan unusable.

Remove any items that could interfere with the scan region, such as jewellery, zippers or any non-fixed metal prosthesis.

Left and right anatomies are requested. Please include contralateral side scans where possible.

IMPORTANT

- **NO** reconstruction. Please use true axial slices.
- **DO NOT** alter X or Y centering between scans.
- **DO NOT** change table positioning between images.
- **DO NOT** change FOV.

Patient Positioning

Forearm & Hand

Position the patient prone, arms in front, and with palms facing each other in a neutral position. Alternatively, position the patient in the supine position with both arms above the head.

Clavicle

Position the patient in a supine position, arms at sides of body, and neutral shoulder rotation. Make sure that the cervical spine is in a neutral position.

Humerus

Position the patient in a supine position, arms at sides of body, and neutral shoulder rotation. Make sure that the cervical spine is in a neutral position.

Scapula

Position the patient in a supine position, arms at sides of body. Rotate the palm of the hand upwards. If this is not possible, position the patient with a neutral shoulder position and palms facing the sides of the body.

Scan Parameters

Forearm & Hand

Region of Interest	Radius/Ulna: From elbow joint line to carpometacarpal joint line Metacarpal & Phalanges: Full hand, including radiocarpal joint
Slice Thickness	≤ 0.625mm
Pitch	≤ 1
FOV	Use smallest FOV that includes the complete bony anatomy of interest.
Matrix	512 x 512
Algorithm	Moderate / Soft Tissue / High Resolution / Bone Kernel. No edge enhancement.
Gantry Tilt	0°

Shoulder & Humerus

Region of Interest	Clavicle: Full clavicle, acromioclavicular & sternoclavicular joints. Acromion: Full scapula & proximal humerus. Humerus: 1cm below & above most distal & proximal points of humerus, respectively.
Slice Thickness	≤ 1.0mm
Pitch	≤ 1
FOV	Use smallest FOV that includes the complete bony anatomy of interest.
Matrix	512 x 512
Algorithm	Moderate / Soft Tissue / High Resolution / Bone Kernel. No edge enhancement.
Gantry Tilt	0°

Providing Scan Data

Obtained CT scan data can be sent to LRS digitally or on a CD/USB. Please ensure that the images are in an **uncompressed standard raw DICOM** format. No other file formats will be accepted.

Please ensure that the patient has given written permission allowing LRS Implants to use their CT scan data for the design and development of their CiS implant. Great care is taken to protect all patient information shared with LRS Implants, ensuring compliance with the POPI Act.

Contact Details

Unit C18, Prime Park
Mocke Rd, Diep River
Cape Town
South Africa
7800

www.lrsimplants.com
info@lrsimplants.com

+27 72 291 5475