

CUSTOMIMPLANTS[®]

CT HUMERUS

PROTOCOL FOR COMPUTED TOMOGRAPHY

CUSTOMIMPLANTS®

INDEX

PRELIMINARY	4-5
Patient preparation	4
Recommendations for data collection	4
Scanning parameters	5
DATA MANAGEMENT	5



CONTACT



Telephone
(+34) 900 377 266

Working time
Monday to Friday
08:00 to 20:00



Email
comunicacion@customimplants.es



www.customimplants.es



Calle 16, nave 13. Polígono Industrial San Cibrao das Viñas. 32901 - Ourense



CT scan quality can directly affect the design of guides and implants. Please, ensure that all protocol steps are followed for optimum scan quality.

PRELIMINARY

This CT protocol consists of a localizer and a detailed axial scan of humerus. The CT scan quality –with clear bony edges and details- is critical to the production of accurate patient-specific surgical instruments. Deviations from this protocol may result in an unusable scan and delay of the surgery.

Please contact the CUSTOMIMPLANTS® support team if further clarification is required.

Patient preparation

- ▷ Remove any non-fixed metal prosthesis, jewelry, zippers and/or any other metal piece that may interfere with the region to be scanned.
- ▷ Inform the patient on the procedure.
- ▷ Make him/her comfortable but always minimizing the movement.
- ▷ Patient positioning: a bilateral scan -left and right humerus- is requested. In order to reduce the scanned area, make two acquisitions having the arm in 90 degrees abduction, one after the other one. If this is not possible, put the patient in supine position, arms at the sides of the body and with the shoulder in neutral rotation.
- ▷ Always place a marker indicating the side. Use a marker that does not hinder the quality of the CT scan.

Recommendations for data collection

TABLE POSITION

Set the table height so that the area to be scanned is centered in the scan field.
Do not change the table position between images so that all images create one unified volume.

FIELD OF VIEW (FOV)

If possible, capture the full humerus and provide two separate image sets with a maximum FOV of 20cm. Scan all slices with the same FOV, reconstruction center and table height. (coordinate system). Capturing all of the soft thickness is unnecessary. Only bone regions are of interest. Use a soft/moderate tissue reconstruction algorithm, with no edge enhancement.

RECONSTRUCTION

No secondary reconstructions; images must be scanned at the given parameters or more precise. No reformatting into coronal or sagittal planes. No MRP's. No 3D reconstructions. No obliqueness; no gantry tilt. No oblique reconstructions.

Scanning parameters

Region of interest	Humerus
Slice thickness	1.25mm or smaller
Slice increment	≤½ of slice thickness (50% overlap)
kVp	90-120
mAs	As given by the automatic system
Pitch	1 or smaller
Field of View	20cm or smaller
Matrix	512x512
Kernel/Algorithm	Moderate/soft tissue



DATA MANAGEMENT

Your site should keep and archive (PACS) copy of the CT exams, in uncompressed DICOM format and the original scanning parameters.



- ▷ Provide 1 localizer + 1 complete data set of images.
- ▷ Only true axial scanning is required.
- ▷ For processing purposes, only uncompressed DICOM is accepted. No .jpg images or other formats are acceptable. Do not submit any other types of reconstructed or reformatted images.
- ▷ Lossy compression is NOT allowed. (ISO_10918_1, ISO_14495_1, ISO_15444_1 or ISO_13818_1).
- ▷ 3D images or similar that may seem beneficial for diagnosis are accepted, if available. Submit them separately.

- ▷ Do not erase patient name and ID.
- ▷ Ensure necessary rights are obtained for transfer of data to CUSTOMIMPLANTS®.
- ▷ Data will be anonymized by CUSTOMIMPLANTS® on receipt of the data, after cross-check with prescription of the surgeon to ensure images of the right patient are provided.



We recommend building a "CUSTOMIMPLANTS® HUMERUS protocol" in your CT with the appropriate ranges and parameters.

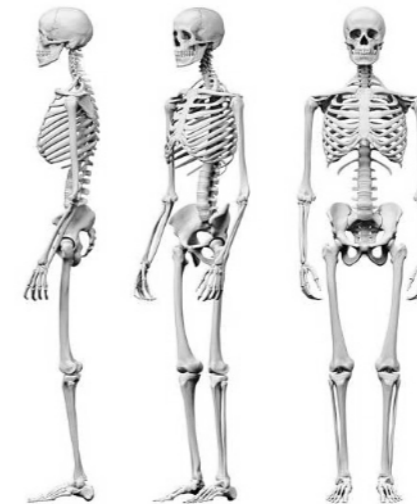
Disclaimer

The information is intended exclusively for healthcare professionals. A healthcare professional should always rely on his or her clinical and professional opinion when deciding which product is most suitable to treat a patient.

Custom Implants SL do not provide medical advice and recommend that healthcare professionals be trained in the use of any particular product before using it in a procedure or in surgery.

Before using any product from Custom Implants SL, the healthcare professional must always read the instructions which are inside the package, the label of the product and/or the instructions for use, included those for cleaning and sterilization, when applicable. The information provided is for the purpose of showing specific products as well as the wide range of Custom Implants products.

It may occur that not every product be available in all markets due to their availability is subject to the medical or regulatory practice.



Shaping the future
www.customimplants.es

ci3d[®]
Customplants

materialise
innovators you can count on