

CT scan protocol

for head and neck bone tissue

The CT scan quality is critical for the creation and production of accurate patient specific implants, surgical guides and/or anatomical models. So please read and apply following steps with care to assure an optimal image quality. If there are any questions please do not hesitate to contact us at all times at **+31 644 670 942**

Patient Preparation



- ✓ Remove non-fixed metal parts like jewels, prostheses, ...
- ✓ Make the patient comfortable on the scan table and provide instructions to the patient to remain completely still during the whole scan procedure. Image distortion from patient motion will severely compromise the accuracy of a model and the images will be useless for the modelling of implants. So if patient motion occurs the scan must be restarted. No exceptions.

Image modality

Helical CT scanning

Scan range

Minimally 2 cm across the defect region on both sides.

FOV

FOV as small as possible with preservation of patient's outside contour.

Patient Position

- For head regions the occlusal plane should ideally be parallel to the gantry.
- Assure no positioning pillow is pressing onto the defect area; brain shifting or soft tissue movement will occur which will cause bad modelling references.
- If dental structure is important scan the patient with a non-visible spacer between upper and lower dental bow.
- Images can be distorted/scattered by previous placed implants or (dental) fillings; if necessary position the patient in such way that the defect is free of scattering.

Scan Parameters



Matrix

512 x 512

Radiation

120 kV, mAs as given by automatic system

Gantry tilt

0°

Slice thickness

0.75-1.25 mm (or thinnest possible collimation)

Slice increment

Contiguous slices

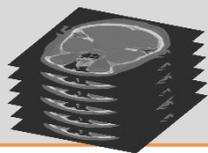
Pitch

≤ 1

Window

Bone or Detail algorithm

Export Data



- ✓ Export the raw axial images in DICOM- format and return the complete data file to the surgeon.
- ✓ NO secondary reconstructions; images must be scanned at the preferred parameters or smaller.
- ✓ Lossy compression is NOT allowed (ISO_10918_1, ISO_14495_1, ISO_15444_1 or ISO_13818_1).

Transfer scan data to Xilloc*

- ✓ Go to <https://medx.xilloc.com> and create a "User Account"
- ✓ Create a new "Patient Specific Implant" or "Anatomical Model" case
- ✓ Fill in all "Case Details"
- ✓ "Secure Upload"
- ✓ Fill in "Contact Details"
- ✓ "Request Quotation"



* File to be delivered by the surgeon. Privacy: all efforts are undertaken to guarantee privacy of the patient's information in the framework of the ISO 13485 quality system and other NEN which apply. Personal information contained in this order form will be identified by assigning a unique case number. By providing the patient data, you confirm that your disclosure of any information is done in accordance with applicable privacy regulations and legislation. The general terms-and-conditions of Xilloc Medical B.V. are applicable on all orders and deliveries.



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