



**TECHNICAL
INSTRUCTION
VETERINARY TAC**

Code: ITDM-125

Date: 10/11/2021

Revision:0

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**TECHNICAL INSTRUCTION FOR
VETERINARY TOMOGRAPHY**

Thank you in advance for taking the time to read this protocol. The quality of the tomography is the most important aspect in the design and production of high quality and accurate custom devices or biomodels; therefore, the configuration of the scanner and the following of this protocol will determine the accuracy of the final model. This CT technical instruction describes the guidelines to follow to perform a tomography study required by Osteophoenix S.L.

Characteristics of the tomography (CT):

- 1- The tomography must be exported complete, NEVER segmented.
- 2- The format of the files must be the original Dicom.
- 3- The CT scan must be of higher than standard quality (HiFi or HiRes).
- 4- The CT scan should be of the entire area to be treated, never partial.
- 5- If the patient has temporary metallic elements, they must be removed before the tomography.
- 6- The restorations that the patient has at the time of the CT scan should be the same as at the time of surgery.
- 7- CT slices should be a maximum of 0.6 mm in distance and slice thickness.

**PARAMETERS FOR MEDICAL
TOMOGRAPHS:**

Parameter	Value/comment
Area	Complete area to be treated (Skull, extremities)
Algorithm	Standard
Gantry Angle	0 degrees
Pitch	1:1
Slice Thickness (Slice Thickness)	0.09 - 0.6 mm
Slice spacing	0.09 - 0.6 mm
Power	85 Kw 90-120 Kw (if there are no metallic elements)
File Type	DICOM (unzipped)

DELIVERY:

The entire image set or complete study must be delivered in uncompressed DICOM format via internet using free tools or on a stored on a removable device such as a CD or DVD.

It may happen that the CT received does not meet the basic specifications for the design of a device, in which case a new CT should be sent.

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The reasons why you may not comply with the protocol are:

- 1.- Excessive noise
- 2.- Date (>6 months)
- 3.- Cuts
- 4.- Power
- 5.- Structural change that affects bone remodeling, post CT (e.g., extractions, restorations, accidents, cancer, etc.).

When the CT scan is more than 6 months old and the specialist also wants to design the device, even knowing that it will not be carried out with the accuracy required by the protocol, the specialist will be asked to sign a **design consent form**. This consent will be valid for up to two more months, establishing a maximum of 8 months from the date of the CT scan to carry out the design and the surgical procedure, since the patient's bone morphology may change, and it is possible that the device will not adapt with the same precision after this time has elapsed.

CTs that will not be accepted:

- Prior to structural changes that affect the patient's bone remodeling (e.g., CT scans prior to extractions, restorations, accidents, cancer, etc.). That is to say, the restorations that the patient has at the time of the CT scan must be the same as at the time of the surgery.

However, in the case of minor and/or recent changes, each patient's case will be assessed individually, and the user will be informed of the risk-benefit ratio of the device and a **consent form will be** drawn up for their case. In any circumstance, the risk-benefit ratio must be positive.

- When they do not comply with the characteristics and/or parameters established in these instructions. However, in the case of an insignificant difference, the design team and the technical manager will evaluate each case and may accept the CT, as long as the safety and operational function of the device is not affected in any way.