



## The Simplant process and NewTom images step by step



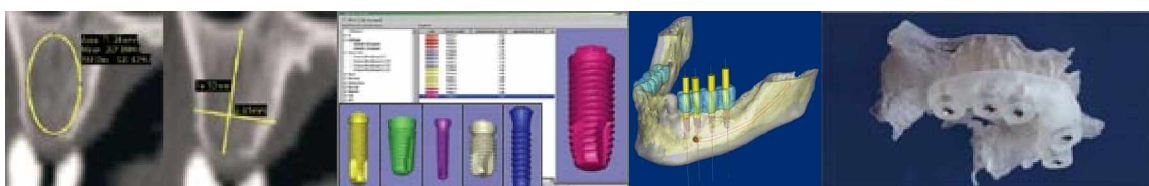
Once you determine that dental implants are an option for your patient's missing or compromised teeth, Materialise suggests following these steps. The result will be proper analysis of the patient's anatomy and development of the treatment plan which best suits your patient's needs and desires.

### Step 1: The Scan Prosthesis

In order to acquire three dimensional, precise information of your patient's anatomy, the patient must have a CT scan taken. The information received from the scan will be 60% more valuable when a Scan Prosthesis is used. The Scan Prosthesis is the proposed tooth restoration, created in a radiopaque material, so it's visible in the scan. Detailed instructions for creating the Scan Prosthesis are available upon request.

### Step 2: The "NewTom" CT Scan

Send your patient, with the scan prosthesis, to have a CT scan on a NewTom 3G or VG. The CT scan takes from 20 to 36 sec. The images from the NewTom 3G or VG are taken with "cone beam" technology. Cone Beam CT scanners are typically found in private dental offices, especially those of Oral Surgeons. A Cone Beam CT scans both jaws in one rotation; however the pricing is per jaw.





### Step 3: After scanning creation of Dicom Images

The operator of NewTom should:

- 1) Create the folder where to export the Dicom images
- 2) Reconstruct from "Volumetric Data" to "Study Data" with the following parameters: axial's slice thickness equal to 0.3 or 0.4 mm without inclination (Angle 0.0°)
- 3) Once the Study is ready (few seconds) after opening it, click on menu "File" à "Save in Dicom format" à "Sequence of axial images" à "512x512"
- 4) Select the folder where to export the sequence of axials in Dicom
- 5) Burn the folder onto a CD/DVD

### Step 4: The Conversion of CT data into a SimPlant Study

The NewTom 3G/VG images must be converted to SimPlant data in order for you to treatment plan. In many cases, the conversion/processing can be handled at the scan site and you will receive the SimPlant study in 1-3 days. In other cases, the data is sent to Materialise for processing and the turn-around time is 3-4 days. The cost for conversion at Materialise is \$200 per jaw, plus shipping. Materialise can provide a list of sites showing which have in-house conversion capabilities (SimPlant Master software) and those that use Materialise's services.

### Step 5: The Use of SimPlant to Treatment Plan

The patient's SimPlant study arrives via CD or email. Using SimPlant, you can assess the bony anatomy and how it relates to the proposed restoration (visualized from the Scan Prosthesis). The software tools allow for identification of vital structures, simulation of grafts, placement of manufacturer specific implants, analysis of bone density and much more. Create multiple treatment plans and present them to colleagues, the Lab and the patient. SimPlant allows the whole team to be involved.

### Step 6: The SurgiGuide Option

Materialise can fabricate a surgical guide directly from the SimPlant treatment plan. The SurgiGuide can be bone supported, tooth supported or mucosa supported, depending upon your surgical style and the patient's anatomy. The SurgiGuide's precise fit guarantees your accuracy when drilling. The SurgiGuide costs \$395 per jaw, plus shipping.

