

SurgiGuide Assures Accuracy

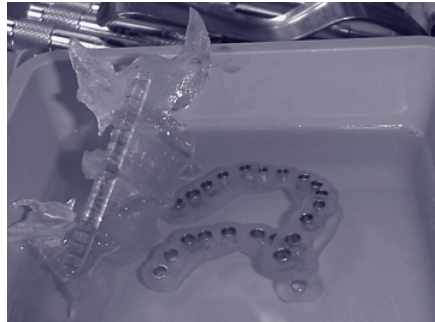
One of Dr. Mills' surgical cases performed during the 2001 Maxi Course proved to be a model for the new Materialise SurgiGuide technique.

The patient, a 48 year-old Hispanic female, was totally edentulous. This woman held a prestigious position in the business world and aesthetics were very important to her. She came with full upper and lower dentures that, due to bone atrophy, continued to become increasingly bothersome. The treatment plan was to place fourteen maxillary and six mandibular implants to restore functionality and pleasing aesthetics for the patient.

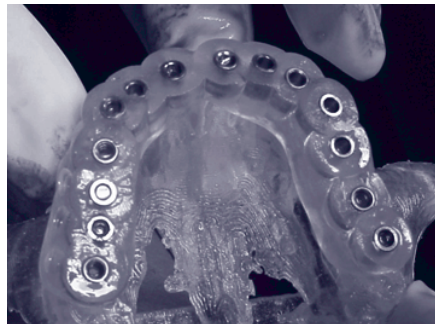
Dr. Mills initiated the treatment plan based on SimPlant, the surgical planning software. Dr. Mills references his studies during surgical procedures, just as surgeons refer to the x-ray view box during operations.

This particular case was being used as a teaching tool so many students observed while Dr. Mills began the procedure. The maxilla was done first. The mucoperiosteum flap was incised and reflected exposing the bone. Typically, even with the use of "homemade" templates, clinicians must use a starter bur and, for each implant, create a pilot osteotomy through the cortex. With SurgiGuide, this step is eliminated. Additionally, due to the accuracy of the guide there is no longer a need for intraoperative radiographs or orientation techniques such as parallel pins. Dr. Mills proceeded by placing the initial guide on the surgical site and began the osteotomy with a pilot drill. Once the fourteen sites had been initialized, the intermediate guide was placed on the bone and again drilled.

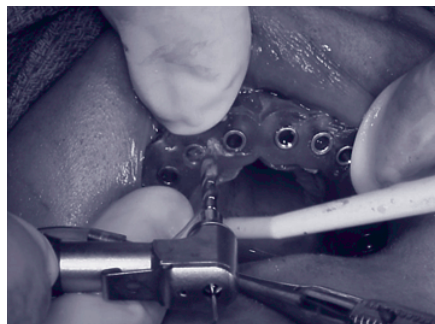
The third guide completed the osteotomy to the final implant specifications. The duration of the maxillary osteotomy was approximately an hour, unheard of for a case of this magnitude.



Pre-surgical preparation of guides. _____



Guide for fourteen maxillary implants. _____



Using the SurgiGuide. _____



Placement of healing attachments. _____

The only deviation from the original plan was the doctor's choice to move the placement of one upper left implant site. This was done successfully.

The mandibular surgery, although somewhat less complex, was still interesting and went well.

Dr. Mills was able to complete the entire surgery, upper and lower, in much less time than had he operated without the SurgiGuides. When asked how he felt about the surgery, he responded: *"With the guides, the surgery went better than I had anticipated. Of course, there is no other technology that comes close to the accuracy and precision of SurgiGuide, but still, I was pleasantly surprised at how well everything went."* Dr. Mills, who has been placing implants for twenty-five years, felt that the complexity of the case, the amount of bone atrophy and the number of implants being placed warranted the use of SurgiGuide. He recommends the use of this technology to experienced clinicians as well as those new to implantology. Will he use SurgiGuide again? "Definitely."

About Edward Mills, D.D.S., FAAID of Atlanta, Georgia. In addition to 25 years in private practice Dr. Mills is also Director of the Hospital-Based Residency Program at Emory Adventist Hospital and Director of MCG/AAID Maxi-Course (Medical College of Georgia/ American Academy of Implant Dentistry). This comprehensive 10-month course exposes general dentists, periodontists, oral surgeons, and prosthodontists to the knowledge and techniques involved in implant dentistry. In the final weeks of the course, students are invited to sit for the AAID Associate Fellow Membership examination. The last weekend is devoted to practical learning in which the students observe and assist clinicians, such as Dr. Mills, in an actual implant surgery.