This clinical case required optimal implant placement based upon a restoratively driven treatment plan and guided surgery. To achieve this goal, we made use of CT scans, SimPlant planning software, the new Zimmer guided surgery instrumentation and the new Materialise Dental Immediate Smile model.

The patient was a 49-year-old white female in good health, completely edentulous in the maxilla and wearing a complete upper denture. On the lower, she wore an implant-retained overdenture.

The planning phase for the case began with a CT scan utilizing the i-Cat and the Materialise Dental Dual Scan protocol. The patient's existing denture was transformed into a scan prosthesis by gluing eight Dual Scan Markers (Materialise Dental) on the surface. A radiolucent bite index was made to secure the prosthesis in the correct position.

The patient was scanned in the i-Cat 17-19 while wearing the convert prosthesis and the bite index. In a second scan, the convert prosthesis was scanned alone. The resulting CT data were loaded into SimPlant, and the scan prosthesis was superimposed upon the study using the SimPlant Dual Scan wizard (Fig. 1).

Using SimPlant, the optimum implant positions were determined based upon available bone, a minimum of 5 mm between implants, and the design of the final restoration (Fig. 2). The resulting treatment plan was submitted to Materialise Dental for fabrication of a SurgiGuide and a Materialise Dental Immediate Smile model.
Dr. Philippe Russe offered the keynote lecture on navigating narrow spaces in the esthetic zone. Other lecture highlights included Dr. Zeev Ormoller on the Tapered Screw Vent Implant; Dr. Maurizio Tonetti on mucogingival tissue management in periodontal and implant therapy; Dr. Richard Kraut's presentation on vertical bone augmentation; and Wang's presentation on recent advances in sinus lift augmentation.

Also speaking were Dr. Joseph Massad on treatment options for the edentulous patient; Dr. Henry Salama on abutment protocol in implant therapy; Dr. Edgard El Chaar on advanced socket-preservation techniques and materials; Dr. Katya Archambault on advanced tissue grafting techniques; Dr. Paul Petrungaro on localized ridge augmentation with allogenic block grafts; and Dr. Markus Schlee on early clinical experience with a new porous material.

The audience for the event was composed primarily of practicing clinicians from around the world — those who already possessed established competencies in implantology but who were seeking to further their skills and expertise.

Of course, no advancements in the ability to treat patients would be possible without the best possible equipment. That's why, between lectures, meeting participants visited tables in the lobby displaying Zimmer Dental's various offerings, which cover the gamut from surgical products to regenerative materials to restorative tools.

According to Michael Collins, vice president of research, development and education for Zimmer Dental, the symposium offered participants an opportunity to experience new products and see where things are going. Even more importantly, he said, the week offered attendees the opportunity to stay on the cutting edge.

"If it weren't for International Implantology Week, it would be impossible to find this kind of education all in one place," Collins said.

Wang said that in addition to offering an unparalleled learning opportunity, the event also offered attendees the chance to expand their horizons by making global contacts.

Attendees were able to bond with each other during breaks for meals, and during the welcome reception and opening dinner at the Sheraton Ballroom.

The week concluded with a closing dinner at Brasserie 8½ in Midtown Manhattan.

Between sessions at International Implantology Week, meeting attendees were able to view exhibits of products available from Zimmer Dental.

Dr. Philippe Russe presents his keynote lecture on navigating narrow spaces in the esthetic zone.

Meeting attendees network with colleagues between lectures.

Tell us what you think!

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Corrections

Implant Tribune strives to maintain the utmost accuracy in its news and clinical reports. If you find a factual error or content that requires clarification, please report the details to Managing Editor Sierra Rendon at s.rendon@dental-tribune.com.
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Dr. Egon Euwe leads gIDE Implant Master Program students during a hands-on soft-tissue grafting workshop in Athens, Greece. (Photo/Provided by gIDE)

The Global Institute for Dental Education’s (gIDE’s) one-year master clinician program in implant dentistry just wrapped up its second session in Athens, Greece, where students spent four days learning all aspects of soft-tissue management and grafting before, during and after implant placement. Leading the lectures and hands-on workshops was gIDE’s faculty, Dr. Egon Euwe and Dr. Stavros Pelekanos.

Day one of the session covered topics ranging from periodontal considerations to minimally invasive soft-tissue techniques. Euwe demonstrated optimal implant placement during the live surgery on day two. The students got their feet wet on day three with a hands-on workshop in upper porcine models highlighting different soft-tissue management and grafting procedures.

The session came to a close on day four with Pelekanos conducting the final workshop on framework fit. As a program requirement, the students each presented a case out of their practice on an implant treatment plan for the posterior zone with minimum of one implant placement.

At gIDE’s next session, the third, students will present an additional case on a treatment plan for the anterior zone with minimum of one implant placement and moderate bone and/or soft-tissue grafting.

This master program in Greece is just one of six programs gIDE conducts each year in implant dentistry. Another session two began the first week of March in Tokyo, Japan, led by LLU Professor in Restorative and Implant Dentistry Dr. Joseph Kan, Dr. Y Matsushita and Dr. Sascha Jovanovic via live broadcast, and the following week in Beijing, China, with Professor Paul Lin and Dr. Keng Mun Wong. At the end of March more second sessions occurred in both Australia with Euwe and Dr. Glen Liddelow, and North America with Jovanovic and Dr. Harel Simon.

All six programs will come together in September for a final week at UCLA in California. Students will receive a gIDE Master Program Certificate and a UCLA Certificate in Implant Dentistry for all their hard work.

gIDE was founded in 2003 as a private dental institute blending online digital education with hands-on learning. Its founders, world-renowned implant dentist, Jovanovic and colleagues, are dedicated to the advancement of clinicians and the healthcare of their patients worldwide. It is the No. 1 academically ranked online dental education institute with an elite group of 102 faculty members published in more than 2,000 peer-reviewed journals. gIDE is a certified provider of ADA CERP continuing education credits.

For more information regarding gIDE’s one-year master clinician programs, visit www.gidedental.com or call (310) 696-9025.

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Henry Schein Dental, ACE Surgical launch miniMARK miniature dental implant system

ACE Surgical Supply and Henry Schein Dental recently introduced the miniMARK™ Miniature Dental Implant System. This is the first mini implant system on the market that includes the renowned LOCATOR® Attachment, a trusted name in securing implant-fixed dentures.

The miniMARK system is available as a mini implant Ø2.5 mm, a standard body Ø3.25 mm, or as a one-piece Ø2.5 mm with a preapable head that can be used for mandibular anterior single tooth applications.

The miniature implant system offers clinician proficiency and patient satisfaction thanks to the incorporation of the renowned LOCATOR attachment by Zest Anchors — a trusted name in securing implant-fixed dentures. The LOCATOR product line is known as a premier over-denture attachment in the dental industry.

“The miniMARK implant system enables dentists to provide denture stability with a minimally invasive procedure, all within the comfort of their dental office,” said the company’s vice president of marketing, Chris Carchidi.

Ace Surgical Supply is supporting new miniMARK system users with live training and 7 C.E. credits through a multi-city series of hands-on seminars that will provide the skills needed to place, restore and market the procedures. For more information, including educational opportunities, visit www.minimarkimplant.com

About ACE Surgical Supply

For more than 35 years, ACE Surgical Supply (www.acesurgical.com) company has been known for developing and manufacturing high-quality, state-of-the-art products for bone regeneration, bone surgery/collection and wound dressing. Most recently, the company introduced the miniMARK Miniature Dental Implant System, which is designed to restore dental function with a minimally-invasive, same-day procedure.

For more information, including educational opportunities, visit www.minimarkimplant.com. The miniMARK Dental Implant System is available exclusively through Henry Schein Dental. To place an order, call (877) 537-8862.

About Nobel Biocare

Nobel Biocare (www.nobelbiocare.com) is the world leader in innovative and evidence-based dental solutions. Nobel Biocare is a part of the AGS Group (www.agsinvest.se). Nobel Biocare is the Dental Implant Division of Straumann (www.straumann.com). Nobel Biocare products may not be regulatory cleared/registered for sale in all markets. Please contact the local Nobel Biocare sales office for current product availability and the lastest information on Nobel Biocare products.

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I received the Immediate Smile model, which contained a duplicate of the scan prosthesis, a bone model with a silicone soft tissue, and a mucosa-supported SurgiGuide. The bone model came with eight openings corresponding to each of the eight implant positions as designed in the SimPlant plan and corresponding exactly in size to the dimensions of Zimmer analogs.

The bone model comes with a screw fixation system, which allows me to recover the analogs. The silicone soft tissue on the model also corresponds to the realistic soft tissue. I also received written drilling instructions and a prolongation report detailing the depth and size of each osteotomy.

Zimmer analogs were placed in the Immediate Smile model (Fig. 3). The duplicate of the scan prosthesis was used to mount the bone model with the soft tissue on an articulator (Fig. 4), giving correct orientation and vertical dimension. This made it possible to fabricate a provisional that would be used for immediate loading following implant placement.

The mounted model was then used to create an orientation jig for the SurgiGuide (Fig. 5). The jig assures that the SurgiGuide is positioned in the mouth exactly the same way as the scan prosthesis was positioned in the mouth.

This is a very important step for a mucosa-supported SurgiGuide because of the flexibility of the soft tissue (mucosa). Both the duplicate of the prosthesis and SurgiGuide fit perfectly onto the Immediate Smile model, allowing for fabrication of an accurate orientation jig on an articulator.

The surgical guide was placed in the patient’s mouth, and the tissue was punched utilizing a tissue punch (Figs. 6-8). Then the surgical guide was again oriented in her mouth with the orientation jig created on the articulator and stabilized with three SurgiGuide fixation screws (Fig. 9). Utilizing the Zimmer Guided Surgery Instrumentation and guided surgery drills (Fig. 10), all eight osteotomies were created and completed using mini-
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mally invasive flapless surgery (Figs. 11, 12). The Zimmer guide is a SAFE system, accurately providing for depth as well as size.

The right and left molar (#3 and #14) osteotomies were created short of the maxillary sinus. Then using the new Zimmer Sinus Crestal Approach (SCA) sinus lift kit, I extended these two osteotomies into the left and right maxillary sinuses. Alloplastic bone (Puros) was placed into the sinus cavity through the osteotomy and spread using the paddle-shaped spreading bur. Then all eight implants were placed. Each had initial stability exceeding 35 ncm.

The decision was made to immediately load only the six implants that did not involve the sinus cavity. Therefore, healing heads were placed on implants #3 and #14, and non-engaging titanium temporary cylinders were placed on #5, #6, #8, #9, #11 and #12 (Fig. 15). The provisional, which the laboratory fabricated, was attached to the titanium cylinders using cold cure acrylic, thus creating a screw-retained provisional (Figs. 14, 15).
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![Fig. 17: Completed screw-retained provisional.](image1)

![Fig. 18: Postoperative CT scan.](image2)

A postoperative CT scan showed how accurately the eight implants were placed in the bone using a mucosa-supported SurgiGuide with orientation jig (made on the Immediate Smile model) (Figs. 16–18).

The accuracy and success of this case was achieved through CT scanning, SimPlant planning with restorative model overlay, the Zimmer Guided Surgery Instrumentation and the Materialise Dental Immediate Smile model.

The surgical guide allowed for minimally invasive surgery and greatly reduced time of surgery. The Immediate Smile also reduced chair time by allowing for fabrication of the temporaries well in advance of surgery.

Acknowledgements

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