Clinical benefits of the Inclusive Tooth Replacement Solution

By Darrin W. Wiederhold, DMD, MS, and Bradley C. Bockhorst, DMD

A hallmark of the most successful modern clinicians is the ability to strike a balance between a daily load of 12 to 16 patients and maintain the same high standard of care. This is no easy task when it comes to implant cases.

Currently the manufacturer is responsible for the components and the laboratory for the restoration — after receiving the impressions.

Restoratively, that’s like erecting a house on an existing foundation, limiting the builder. Proper esthetics requires soft tissue contouring that begins at implant placement, making stock components less than ideal.

With the new Inclusive® Tooth Replacement Solution from Glidewell Laboratories, custom-designed temporary components allow for immediate provisionalization specific to each patient, and a matching custom impression coping communicates the final gingival architecture to the laboratory.

Add the implant, surgical drills, prosthetic guide, final custom abutment and final BruxZir® Solid Zirconia restoration (Glidewell), and the clinician receives all the components necessary to place, provisionalize and restore the implant.

The Inclusive Tooth Replacement Solution supports a streamlined workflow that ensures predictability and long-term success. Armed with the end game vision that ensures predictability and long-term success. Armed with the end game vision specific to each patient, patients alike can place and restore dental implants with greater confidence than ever before.

Implant treatment workflow
- Consultation and data collection
  • Full-mouth radiographs (panoramic and CBCT scan, as needed). NOTE: If you do not have a CBCT scanner, refer patient to an imaging center.
  • Bite registration
  • Full-mouth radiographs (panoramic and CBCT scan, as needed). NOTE: If you do not have a CBCT scanner, refer patient to an imaging center.
  • Shade match of existing dentition
  • Preoperative photos

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- Full-arch upper/lower impressions (PVS)
- Bite registration
- Full-mouth radiographs (panoramic and CBCT scan, as needed). NOTE: If you do not have a CBCT scanner, refer patient to an imaging center.
- Shade match of existing dentition
- Preoperative photos

Once you’ve selected a diameter and length of implant, forward the diagnostic materials (impressions, models, bite registration, shade, implant size) to Glidewell for fabrication of the custom components. The laboratory will pour and articulate the models and assemble the components, delivered to you in an all-inclusive box (Fig. 1), including:

- Prosthetic guide (Fig. 2a)
- Custom temporary abutment (Fig. 2a)
- BioTemps® provisional crown (Glidewell) (Fig. 2a)
- Custom healing abutment (Fig. 2a)
- Custom impression coping (Fig. 2a)
- Surgical drills (Fig. 2a)
- Inclusive Tapered Implant (Glidewell) (Fig. 2a)

Day of surgery protocol
Place the box contents alongside your usual surgical armamentarium. Confirm that the provisional guide fits snugly around the teeth. Visually confirm that the proposed location of the implant osteotomy correlates with your planned location.

After placing the implant, decide based on the level of primary stability whether to place the custom healing abutment or the custom temporary abutment and accompanying BioTemps crown. Either option will begin sculpting the soft-tissue architecture around the implant to develop the future emergence profile.

If there is adequate attached tissue, use a tissue punch to remove the soft tissue over the osteotomy site; otherwise, reflect a flap.

Note that the margin of the custom temporary abutment is set at approximately 2 mm. Depending on the thickness of the soft tissue, the abutment can be adjusted and BioTemps crown relined. The custom healing abutment or BioTemps crown must be 1 mm to 1.5 mm out of occlusion to avoid occlusal stress.

Store custom impression coping with patient chart for the restorative phase.

Healing phase
Schedule monthly follow-up appointments to ensure osseointegration is progressing and to adjust the provisional restoration.

Restorative phase: final impressions
Upon successful osseointegration, the restorative phase begins. Contours of the custom impression coping match those of the custom healing abutment or custom temporary abutment, so it’s simple to remove the custom abutment, seat the impression coping and take an accurate full-arch final impression using a closed-tray or open-tray.

Complete a simple prescription form included with the original box, select your final custom abutment and final shade for your BruxZir or IPS e.max® (Ivoclar Vivadent, Amherst, NY) restoration and simply forward these items to Glidewell. There are no additional laboratory fees.

Delivery of final prosthesis
On the day of delivery, remove the custom temporary abutment and clean all debris from inside and around the implant. Try in the final Inclusive Custom Abutment (Glidewell) and BruxZir or IPS e.max crown (Fig. 3). Check the contours, contacts and occlusion and adjust as needed.

The final occlusion should be light on the implant-retained crown, with forces directed along the long axis to minimize lateral forces. The abutment screw is tightened to 35 Ncm, head of the abutment screw covered, and crown cemented. All excess cement must be removed. Instruct your patient about home care, and set a recall schedule.
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*Price does not include shipping. # Not a trademark of Glidewell Laboratories. The implant shown is NobelReplace.

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Log onto www.zestanchors.com/sneakpeek/it and raise the curtain to see our new innovative product.
MIS Implants Technologies has recently launched the new C1 implant system. This new system brings a combination of proven and innovative design features to market, including a conical connection and abutments that utilize a platform-switching concept.

The 6-degree conical connection ensures a secure fit between the abutment and implant. By minimizing micro-movement at that junction bone loss at the crestal level is reduced. There is a six-position cone index within the conical connection to help orient the implant during insertion as well as placing the abutment into the proper position.

Implants, abutments and tools are color-coded according to platform size for easy identification. The standard platform refers to the 3.75 and 4.2 mm diameter implants, while the 5 mm diameter implant is the wide platform. Lengths for all of the diameters come in 8, 10, 11.5, 13 and 16 mm.

The C1 implant (as all of the MIS implants) is made from a titanium alloy that contains titanium, aluminum and vanadium known as Ti-6Al-4V-ELI (Grade 23). This alloy has excellent fatigue strength and is highly biocompatible. Similar to commercially pure titanium implants (Grades 1-4), the outer surface of these implants consists of a thin layer of pure titanium oxide (TiO2).

The unique geometry of the C1 implant encourages primary stability with mild bone compression at the upper 2/3 of the implant. The final drill, used during preparation of the osteotomy, is designed to drill in such a way to allow less compression by the threads at the apical third of the implant, which will enable rapid bone growth in that area. These two characteristics have been put in place to minimize the period of time between initial mechanical stability and long-term biologic stability.

Platform switching is a restorative concept that has been shown to minimize crestal bone loss. It has been theorized that moving the junction of the implant/abutment connection away from the outer edge of the implant platform reduces the bacterial component that could lead to loss of vertical height. For those clinicians who prefer to utilize platform switching in the restorative phase, the C1 abutments have been designed to allow this.

As with other MIS Implant products, the surface treatment consists of both large particle blasting and acid etching. This not only creates micro- and nano-surface morphology, but also ensures a high-quality, contaminant-free surface that has been shown to achieve superb osseointegration results. The apex of the C1 implants is dome-shaped to help prevent damage to the mandibular nerve, as well as avoiding perforation of the sinus membrane.

Packaged with each C1 implant is a sterile, single-use final drill, a cover screw and a temporary PEEK abutment. Each implant (including these additional components) is sold for $249.

MIS Technologies is headquartered in Fair Lawn, N.J. To contact the local representative in your area or to receive more information about the C1 or other MIS products, call (866) 733-1333. Additional information is also available at www.misimplants.com.
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New ZONEfree temporary dental cement uses reflective color blending nanofillers

ZONEfree is a new temporary dental cement. (Photo Provided by DUX Dental)

**ZONEfree**

**DUX Dental introduces first translucent zinc oxide non-eugenol cosmetic dental cement**

DUX Dental recently introduced a new temporary dental cement that contains prismatic color blending nanofillers that act like tiny beads of glass to reflect the color of any adjacent surface. The new product, called ZONEfree, is the only zinc oxide non-eugenol cosmetic cement that is translucent. Its unique formulation combines the aesthetic benefits of reflective nanofillers and translucency, creating a natural look that blends with the color of the patient’s own teeth, crowns or other surfaces. ZONEfree is now available for order through major dental dealers.

The desire for a superior esthetic result now overshadows the simple need to replace a broken tooth. Television, print media and the successful esthetic results seen among friends and co-workers have raised the public’s expectation about what it will get from their health-care provider,” said Michael Durda, vice president of clinical affairs of DUX Dental in Oxnard, Calif. “Because ZONEfree combines both reflective and translucent proprieties in one formula, the dental team can easily achieve a beautiful, natural-looking result.”

ZONEfree has the reliable hallmarks of a zinc oxide non-eugenol cement in that it is easy to apply, easy to clean up and remove and provides excellent retention strength. When ZONEfree is dispensed and applied, the cement has a pearly white appearance, giving it enough color to allow the dentist or assistant to place it precisely and see excess cement during clean up and removal.

Yet, when ZONEfree is spread thin, the cement blends with the adjacent surfaces, creating a “chameleon effect” that results in a natural esthetic look. As the only translucent zinc oxide non-eugenol temporary cement, dentists can use ZONEfree without worrying about resin on resin build up and other issues common to resin-based temporary cements, the company says.

“From my perspective, the most important feature of ZONEfree is the reflective nanofillers that get an excellent result with temporaries. That to me is very unique about ZONEfree,” said Dr. Gary Radz, DDS, of Cosmetic Dentistry of Colorado. “In our office, we are focused on patient satisfaction and providing beautiful esthetic dentistry. I can be confident that we achieve both when using ZONEfree.”

Other benefits and specifications of ZONEfree temporary cement include:

- It is Triclosan-free. Triclosan is currently under review by the FDA for safety concerns.
- It has a working time of one and a half minutes. The cement self cures in two minutes with no need for a curing light.
- ZONEfree comes in a 4 gm. automix syringe that provides accurate placement and minimal waste. It includes eight application tips.
- The manufacturer’s product number is 27041 and the MSRP is $45.

About DUX Dental

DUX Dental has been manufacturing and distributing the highest level of dental products worldwide for more than 50 years. Based in the coastal city of Oxnard, Calif., with additional manufacturing and distribution facilities in Europe, DUX Dental is home to a world-class team of innovators who produce and service a portfolio of hundreds of dental products and supplies, the company says. DUX Dental is well-known for its series of industry firsts, including Zone Temporary Cement, Identic TM Alginate and Bib-eze TM disposable bib holders, as well as its award-winning PeelVue+ sterilization pouches.

Visit www.duxdental.com or contact duxoffice@duxdental.com for more information about DUX Dental products.
Defining a Modern Algorithm for Implant Success and Esthetics

November 8-9, 2012 | Hilton Hotel - Los Angeles, CA

Day 1: $185.00 8 CE credits

Defining a Modern Algorithm for Implant Success and Esthetics
Dr. Maurice Salama
Clinical Assistant Professor of Periodontics at University of Pennsylvania and the Medical College of Georgia

New technologies, techniques and materials allow missing teeth in the “esthetic zone” to be replaced with the form, function and beauty of the natural dentition. Dr. Salama’s presentation focuses on a defined algorithm for the interdisciplinary team (restorative dentist, periodontist and oral surgeon) to successfully reconstruct the soft tissue foundation for successful anterior implant placement. Diagnosis of deficiencies as well as varied treatment options will be discussed, including soft and hard tissue augmentation as well as the emerging field of bioactive modifiers and bioengineering.

Building the Foundation for the Ideal Implant Site – Strategies for Long Term Success
Dr. Jin Kim
Lecturer at UCLA School of Dentistry

A variety of clinical cases will be presented illustrating principles of hard and soft tissue regeneration, as well as the evidence on contemporary materials and techniques. Gadgets, devices and instrumentation, including ultrasonic piezoelectric surgical devices will be discussed.

Implant Design and Early Osseointegration: Effects of Macromechanics, Microgeomechanics and Surgical Instrumentation
Dr. Paulo Coelho
Assistant Professor of Biomaterials and Biomechanics/Director of Research Department of Periodontology and Implant Dentistry, New York University

The geometric differences in implant designs have been shown to play significant roles on the early healing of bone around implants. The significant healing differences that are observed around implants with varying macrogeometric dimensions will be discussed.

Day 2: $1,250.00 8 CE credits


Location: TBD (will be in close proximity to LAX)

Adequate volume and quality of bone in the implant recipient site is crucial to the success of implant dentistry, and the potential need for bone grafting has to be determined in any given case. Once the need for augmentation is determined, the least invasive and most conservative technique to attain adequate bone is the goal. Three main techniques will be featured: Extraction socket grafting, GBR and Onlay Block Grafting. Detailed and simplified techniques will be discussed including site evaluation, anatomy, flap design, harvest techniques, suturing and the required armamentarium to perform these techniques.

To Register Call: 877-373-8904 or Email us: info@dowelldentalproducts.com
SimPlant GO: new solution in guided implant surgery

Materialise Dental just launched a new user-friendly implant planning solution. With SimPlant GO, there are no surprises during surgery because you have optimally planned the implants in the bone — and with SurgiGuide, this planning is then transferred into a fully predictable surgery.

SimPlant GO’s intuitive navigation, 3-D images and simple four-step process is so straightforward that you can learn it over lunchtime, during a break or in-between appointments, the company said. This software is made for dentists who have only a few minutes to become familiar with this easy 3-D implant-planning software.

SimPlant has been hugely successful during the past 20 years in addressing the needs of the implant specialists, the company said. However, some dentists who were placing implants less frequently felt overwhelmed by the amount of flexibility that SimPlant has offered. SimPlant GO has been designed to specifically address their needs.

The solution has been specifically designed for dentists without the cone-beam scanners in their office. “Although cone beam is the way of the future, not everybody is willing to invest in it yet. And now dentists have a great, low-threshold solution to start with computer-guided implantology,” said Bert Van Roie, SimPlant product manager for Materialise Dental.

“We strongly believe there is a place for our earlier products, so we will continue to invest in their future, and new versions of SimPlant Planner, Pro and Master will be released this fall,” said Bart Swaelens, CEO at Materialise Dental.

“Expanding our portfolio is our way of ensuring that the best implant planning software and surgical guides on the market reach the widest audience possible.” Part of the scan-plan-guide process, SimPlant GO is more than just a fancy new computer software program; it’s part of a full solution for your cases. “On top of this, the process is a cool and smooth user experience,” he added. Find out more by visiting www.simplantgo.com.

The latest from OSADA: Enac Model OE-F15

Company launches its enhanced bone-cutting specialist with extended boosting power

OSADA developed and introduced Enac in the United States in 1984, a piezoelectric ultrasonic system, multi-purpose instrument that can be used in various applications in the dental field. Utilizing the dynamic nature of piezoelectric ultrasonic system, Enac has been used extensively in endodontic and periodontic treatments, OSADA says. Because it is automatically tuned, the Enac system is user-friendly. It provides continuously stable oscillation at any level of power with any of the chosen tips. Its ease of operation enhances the users’ technique in achieving excellent results, the company says.

The clinical application of the ultrasonic device in the oral surgery field has been seen in a variety of different contexts, including ultrasonic scalpels, apicectomy and bone surgery in the maxillofacial area, to name a few.

In particular, bone surgery, which uses the piezoelectric element (the dynamic energy in the ultrasonic wave), ensures minimal invasion to biological tissues including blood vessels and nerves, which in turn leads to faster healing after surgery.

Upon the introduction of the OSADA Enac OE-W10, featuring extended power setting No. 10 through No. 12 and sterile irrigation by the peristaltic pump, many extended applications in oral surgery became easily attainable, including atrumatic tooth extractions, osteotomy, osteoplasty, sinus lift, split ridge, crown extension, implant preparation, corticotomy and more.

With OSADA’s latest model, Enac OE-F15, the focus is on the powerful but safe bone cutting (power No. 10 through No. 15). The surgical tips (also known as ultrasonic scalpels) enable the surgeons to present fine and precise cutting results. Combined with newly introduced stronger tips, the OE-F15 makes the minimally invasive surgical procedures easier to attain by cutting the bone faster but leaving the adjacent soft tissue, blood vessels, nerves, etc., with minimal injury, the company said.

The ergonomically designed SE15 handpiece stays cool and its LED illuminates the surgical area. The built-in peristaltic pump with simultaneous irrigation minimizes temperature increases on the handpiece, tips and the surgical area.

For more information, visit www.osadausa.com.