Welcome From The President

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Global Education And Events
- IIRD Europe, Middle East And Africa Asia Pacific
I hope you had a wonderful summer and are enjoying the fall season. All of us at BIOMET 3i look forward to seeing you at the different academy based meetings that take place during this time of year as it is always a good time to meet and discuss the latest industry information.

In this issue of Eye on BIOMET 3i, please take a moment to read about our latest implant introduction: OSSEOTITE®2. This new dental implant, a parallel walled implant based on the legacy OSSEOTITE® Design, has been engineered with greater surface area and specific cutting flutes to assist with Bone-to-Implant Contact. Within this publication, we have also included clinical information to give you a firsthand look at this implant being used in clinical practice. We have developed DIEM®2, an expansion of our DIEM® Guidelines that can give you a practice differentiator by offering full arch rehabilitation in one day.* We are also pleased to announce and share with you the launch of BellaTek* – innovative digital technologies that are designed to offer clinicians the ability to treat their patients with less chairtime resulting in aesthetic precision. You won’t want to miss new information about the BellaTek® Encode® Impression System used in conjunction with intraoral scanning to alleviate the need for impression material, hence making the whole experience more enjoyable for both patient and clinician. As BIOMET 3i continues to invest in Digital Dentistry technology and research, the BellaTek® Portfolio will continue to grow.

For those clinicians looking for the latest regenerative therapies, we are pleased to announce an addition to the BIOMET 3i Regenerative Portfolio – the new OsseoGuard Flex™ Membrane. This collagen membrane is flexible enough for grafting procedures like ridge augmentations, easy to handle, clinically manageable and kind to the soft-tissue. BIOMET 3i recently launched its full service social media landscape via Facebook, YouTube and Twitter. If you haven’t already, please remember to sign up to follow our latest news. In addition, we now offer iPad and iPhone applications for dental professionals to present the implant option to patients. Read more about how you can download these “Apps” to stay close to the latest in clinical, patient and product information.

On the professional education front, we hope that you will be one of the first to experience the new Institute for Implant and Reconstructive Dentistry (IIIRD™); the leading source for continuous learning and information in dental care for all dental specialties and providers. The IIIRD™ serves as an important vehicle to disseminate substantial educational offerings in an effort to increase clinician perspectives and to enhance dental providers’ skills and capabilities.

I hope you enjoy this issue of Eye on BIOMET 3i.

Warm regards,

Maggie Anderson,
President

*Not all patients are candidates for immediate load procedures.
Is On Better Solutions With The Implant

Today, due to patient treatment expectations, there are increasing demands on dental implant designs and performance. BIOMET 3i has answered these demands with an implant designed to help achieve better primary stability: the new Parallel Walled Implant.

The new Parallel Walled Implant is based on macrogeometric design enhancements of the legacy OSSEOTITE® Implant and is designed for more Immediate Bone-to-Implant Contact (IBIC) to potentially increase primary stability. The new design has a longer parallel walled section for more direct implant body contact with the osteotomy walls. The shorter apical taper and cutting flutes provide more apical stability, while the long and narrow thread profile for the 5.0mm and 6.0mm implants generates an anchoring “bite-in-bone” engagement. This helps to reduce the risk of excessive micromovement early in the healing process. In addition, a clinical evaluation of OSSEOTITE2 Implants indicates at least 98% success rates.*

Parallel Walled Implants are available in 3.25, 4.0, 5.0 and 6.0mm configurations and are manufactured from biocompatible commercially pure titanium. To facilitate a transition to the new design, existing OSSEOTITE® Parallel Walled Prosthetic Components, Drilling Instrumentation and Guidelines remain compatible with OSSEOTITE2 Implants with one exception; tapping with new Dense Bone Taps for 5.0 and 6.0mm OSSEOTITE2 Implants is required.

If You Are Looking To Increase The Potential Of Achieving Primary Stability With A Straight Walled Implant, Please Contact Your BIOMET 3i Sales Representative For More Information About The OSSEOTITE2 Parallel Walled Implant.

* A Prospective Clinical Evaluation Of The OSSEOTITE® 2 Dental Implant System: Effectiveness Assessment. James N. Kenealy, Pharm. D.

**These clinicians have a financial relationship with BIOMET 3i LLC resulting from speaking engagements, consulting engagements and other retained services.

“The Implant provides a nice stable feeling. I believe it’s the best straight wall implant I have ever placed.”
– Dr. Pär-Olov Östman,** Sweden

“In my opinion, the OSSEOTITE2 Certain® Implant can be a great help in achieving better primary stability in soft bone.”
– Dr. Michael Christgau,** Germany

“I found the implant provided higher primary stability, particularly in immediate placement scenarios!”
– Dr. Tiziano Tealdo,** Italy
Introducing BellaTek™ -
The Aesthetic ABC’s Of Dentistry™

As Biomet 3i celebrates 25 years in implant dentistry, a new portfolio of premium digital dentistry solutions that help to promote aesthetic precision is unveiled: BellaTek™.

Through a series of non-exclusive collaborations with digital dentistry leaders such as 3M™ ESPE™, 3Shape™, Align Technologies, Inc. and Renishaw®, dental professionals now have access to the following technological innovations:
**BellaTek™ Encode® Impression System**

The patented BellaTek™ Encode® Impression System allows clinicians to create a BellaTek® Abutment (formerly known as an Encode® Definitive Abutment) by making a conventional impression or taking a digital scan through an intraoral scanner. Special codes on the BellaTek® Encode® Healing Abutment (formerly known as the Encode® Healing Abutment) pinpoint the implant placement for a highly aesthetic definitive precise abutment design. Conventional impressions may also receive placement of the implant analog robotically (Robocast) for definitive restoration fabrication. A Robocast is also available as a standalone service to be used with the broad array of BIOMET 3i Products including GingiHue® Abutments, UCLA Abutments and Preformance® Provisional Components.

**BellaTek™ Laboratory Designed Abutments**

With BellaTek™ Laboratory-Designed Abutments (formerly known as Encode® Laboratory-Designed Abutments), the dental technician uses a Dental Scanner and BIOMET 3i Scan Caps to design their own precise beautiful abutments from implant level impressions. These are then sent to a BIOMET 3i Facility to be centrally milled.

**BellaTek™ Bars**

Dental technicians simply send in their verified master casts and BellaTek® – Technicians and BIOMET 3i design and mill BellaTek® Bars (formerly known as CAM StructSURE® Precision Milled Bars) in an array of precise designs.

**BellaTek™ Copings & Frameworks**

Available in six beautiful shades of zirconia, clinicians can offer their patients beautifully aesthetic, natural teeth restorations with BellaTek® Copings and Frameworks (formerly known as 3i® incise™). Technicians using Renishaw®, 3Shape™ or enhanced ProceraForte® Scanners can scan and design copings and frameworks and either centrally mill at a Production Center or mill in their laboratory on a Renishaw Mill.

**Looking For The Aesthetic ABC’s Of Dentistry™?**

*Try BellaTek® By Contacting Your Local BIOMET 3i® Sales Representative Today!*
Expanded Indications And New Packaging For Endobon® Xenograft Granules

Endobon® Xenograft Granules –

*Expanded indications to include sinus elevation procedures and new packaging for convenience, safety and value!*

Endobon® Xenograft Granules are hydroxyapatite derived from cancellous bovine bone and are fully deproteinated by a two-step high temperature manufacturing process for safety from bacteria, viruses and prions. The osseoconductive properties facilitate bone growth directly on the particle surface and through the entire graft. It’s slow resorption profile is designed to facilitate maximum bone volume retention.

Endobon® Xenograft Granules have more than 10 years of combined use in oral maxillofacial and orthopedic procedures and are available in large and small granule sizes to accommodate the defect size that you are treating.
The NEW Endobon® Xenograft Granules packaging features:

- A sturdy, inner dish that is easier to open without spilling material; particles don’t stick to the lid.
- A dish that doubles as a dappen dish, which can be placed directly into the sterile field.
- Convenient value packs of individually sealed 1.0ml dishes for the large granules that deliver value on every case without compromising the product’s sterility.
- A red dot on the label to indicate sterility of every pack.

Endobon® Xenograft Granules are now conveniently packaged in easy-to-open dishes!

To Try The NEW Endobon® Xenograft Granules Packaging, Please Contact Your Local Biomet 3i® Sales Representative Today!

Manufactured By: Biomet France SARL
The NEW OsseoGuard Flex™ Membrane is a resorbable collagen matrix membrane derived from highly purified Type I and Type III bovine dermis collagen. Based on technology similar to that of the OsseoGuard® Membrane, the NEW OsseoGuard Flex™ Membrane is engineered to yield flexibility, yet also retain a suitable resorption profile for procedures that necessitate a longer resorption time, such as Guided Bone Regeneration (GBR) procedures. Importantly, OsseoGuard Flex™ is also designed to be biocompatible and to effectively exclude undesirable soft-tissue cells from a defect site.

Many drapable membranes are difficult to handle because they may fold and stick to themselves at times. OsseoGuard Flex™ is flexible enough for grafting procedures like ridge augmentations, easy to handle and is clinically manageable. The dermis collagen used to create OsseoGuard Flex™ requires less extrinsic crosslinking, thus creating a balance between flexibility and resorption profile.

This membrane is an option for defects in which more drapability may be advantageous. In fact, at least 8 out of 10 participants in a recent evaluation reported that they prefer the performance of the OsseoGuard Flex™ Membrane at placement when compared to Bio-Gide®, Ossix® Plus or Conform®.

OsseoGuard Flex™ is designed to facilitate aesthetic outcomes because it is flexible enough to drape over defects, limiting the occurrence of the edges of the membrane protruding through the soft tissue. In addition, the membrane is designed to allow soft tissue epithelialization in the event of an exposure.

As a result of these characteristics, in a clinical evaluation, 9 out of 10 clinicians rated the overall performance of OsseoGuard Flex™ Membranes better than or equal to Bio-Gide® Membranes at the follow-up appointment.

OsseoGuard Flex™ is intended for use in oral surgical procedures as a resorbable membrane material in the following applications:

- Peri-implant defects in immediate or delayed extraction sockets
- Filling of bone defects
- Localized ridge augmentation
- GBR in dehiscence defects
- Alveolar ridge reconstruction
- GTR in periodontal defects

Manufactured By: Collagen Matrix Inc.

For A Membrane That Is Flexible And Supports Soft-Tissue Healing, Please Contact Your Local Biomet 3i® Sales Rep Today!
Do You Want To Grow Your Practice? DIEM® 2 Can Help!

Many patients seek full arch rehabilitation to quickly regain their confidence and quality of life. You can help these patients by offering DIEM® 2 Solutions for immediate full arch rehabilitation.

BIOMET 3i previously offered options for immediate full arch rehabilitation in the mandible with the original DIEM® Guidelines. This has now been expanded with NEW DIEM® 2 to offer rehabilitation for both arches utilizing innovative products to deliver fixed provisional prostheses in as little as one day.*

Why Does DIEM® 2 Offer A Better Alternative For Patients And The Dental Practice?

For Patients:
- Eliminates dentures for patients with hopeless dentition
- Eliminates loose fitting or painful dentures
- Enables patients to return home on the day of surgery with prostheses that look aesthetically pleasing and function normally
- Reduces the number of procedures and follow-up visits
- Allows for a fixed interim prosthesis to aid in overall self confidence and a sense of well being

For Clinicians:
- Decreases surgical morbidity
- Reduces the need for bone augmentation
- Offers an additional innovative procedure for the dental practice
- Allows for implant dentistry access to a large edentulous or partially edentulous patient population
- Is designed to increase implant treatment acceptance due to a single day procedure
- Increases practice productivity and efficiency by reducing chairside visits for each case

To Offer Your Patients Full Arch Rehabilitation In One Day*, Get Started With DIEM® 2 By Contacting Your Local BIOMET 3i Sales Representative Today!

*Not all patients are candidates for immediate load procedures.
Although high success rates have been reported for implants placed with immediate-loading procedures, this approach places high demands on clinicians. Experienced surgeons can obtain the best primary stability and clinical results by choosing a combination of implants and drilling procedures that suits the bone conditions at the implant sites.

The OSSEOTITE® Certain® Implants were recently introduced to help surgeons meet this goal. These implants are manufactured from commercially pure titanium and are dual-acid-etched (DAE) to impart the OSSEOTITE® Surface from the apex to the top of the collar. The OSSEOTITE® Surface is characterized by one- to three-micron peak-to-peak irregularities. This complex micron-scale topography has been theorized to aid in blood-clot retention, platelet activation and de novo bone interdigitation.

Like Full OSSEOTITE® Implants (FOSS), OSSEOTITE® Certain® Implants have the etched surface all the way to the top of the implant. An altered microtexture in the coronal part of an implant might have a bone-preserving effect on the coronal bone bed.

OSSEOTITE® Certain® Implants are available in lengths of 8.5mm to 15mm and diameters of 3.25mm, 4.0mm, 5.0mm and 6.0mm. Compared to earlier OSSEOTITE® Certain® Implants, the 3.25mm and 4.0mm diameter OSSEOTITE® Certain® Implants have a longer straight-wall section, a reduced apical taper, and shorter, narrower implant-length-specific cutting flutes. The 5.0mm and 6.0mm OSSEOTITE® Certain® Implants incorporate these design changes and also have the same thread design as BIOMET 3i Tapered Implants, with a narrower thread pattern, a 35-degree thread angle and a 0.8mm thread pitch.

CASE PRESENTATION
The following clinical case presentation demonstrates placement of OSSEOTITE® Certain® Implants used in the treatment of a 57 year old female patient who presented with several recently extracted and missing teeth in the maxilla. She desired fixed restorations. The treatment plan accepted by the patient included implant placement and immediate provisional restoration of multiple implants. The treatment rendered for the maxillary left posterior quadrant is shown in this case presentation.

A midcrestal incision was made (Fig. 1), and the soft-tissue flaps were reflected to expose the residual ridge. An ACT® Pointed Starter Drill was used first to begin preparation of the
osteotomies (Fig. 2). Preparation of the osteotomies continued with use of a 2mm diameter twist drill (Fig. 3), followed by use of a 3mm diameter twist drill (Fig. 4). The quality of the residual alveolar bone in the maxillary left posterior quadrant was deemed Type IV (soft) and therefore a clinical decision was made to undersize the osteotomies. The final drill used was 3.85mm diameter. Two 5.0mm diameter OSSEOTITE® Certain® Implants were placed into the prepared osteotomies in tooth sites 12 and 14 [24 and 26] (Figs. 5-7). An OSSTELL ISQ was placed to measure the ISQ value of the implants to determine primary stability (Fig. 8).

4mm diameter Low Profile Abutments were chosen for the 5mm diameter implants to provide for platform switching. The abutments were placed into the internal interface of the implants using the ASYST® Abutment Placement Tool (Fig. 9). The Low Profile Abutments were tightened to 20Ncm using a Standard Abutment Driver Tip and a torque device (Fig. 10). QuickBridge® Titanium Temporary Cylinders were placed onto the abutments (Fig. 11), followed by the placement of QuickBridge® Caps (PEEK) (Figs. 12 and 13). A vacuum-formed template made presurgically was filled with self-curing composite resin and inserted over the Abutment/Temporary Cylinder/QuickBridge® Caps complex. Once the material set, per the manufacturer’s instructions, the template was removed, followed by the provisional restoration. The QuickBridge® Caps were picked up in the provisional restoration. The provisional restoration was trimmed, polished and reseated intraorally.

Two months after implant placement and immediate provisionalization, the patient returned for impressions and fabrication of the definitive restorations. The provisional restoration was removed revealing healthy soft tissue surrounding the Low Profile Abutments (Fig. 14). Impressions were made of the abutments, and a three-unit BellaTek™ Copy Mill Framework/Porcelain restoration was fabricated (Fig. 15). Periapical radiographs were taken (Fig. 16) and demonstrated good preservation of the crestal bone due to platform switching (4mm diameter abutments on 5mm diameter implant restorative seating surfaces). The patient was given oral hygiene instructions and released.

A one-year interim report on a prospective clinical and radiographic study of OSSEOTITE® Certain® Implants was recently published in the Journal of Implant and Reconstructive Dentistry® (JIRD®). To read it, please visit www.JIRD.com.

Pär-Olov Östman, DDS, PhD received his dental degree from the University of Umeå, Sweden. He received his PhD degree in the department of Biomaterials, Institute for Surgical Sciences, Sahlgrenska Academy, Gothenberg University, Gothenberg, Sweden. He is head of the “Team Holmgatan” private practice clinic in Falun, Sweden and Assistant Professor in the Department of Biomaterials, Institute for Surgical Sciences, Sahlgrenska Academy, Gothenberg University, Gothenberg, Sweden.

†The contributing clinician has a financial relationship with BIOMET 3i LLC resulting from speaking engagements, consulting engagements, and other retained services.
Dr. Jason Kennedy Shares His Experience With Rehabilitation Of The Full Arch Using DIEM® Guidelines

**Q:** In what clinical situations do you plan for implant placement and immediate occlusal loading with immediate provisional restorations?

**A:** Edentulous patients who have trouble tolerating removable prostheses and partially edentulous patients with hopeless dentition who are destined to become edentulous are natural candidates. Dentate patients benefit significantly by avoiding/eliminating any part of a denture experience. In general, placing implants and provisional restorations immediately after tooth extraction offers great benefits to patients.

**Q:** What protocol do you follow?

**A:** We place NanoTite™ Tapered PREVAIL® Implants, and following the DIEM® Guidelines, we place Low Profile Abutments immediately after implant placement to support a provisional prosthesis. The provisional restoration is screw-retained and preferably supported by six implants in the maxilla and four-five implants in the mandible. In about half the procedures, however, we use screw retention for four of the implants and QuickBridge® Components for the other two.

**Q:** Has that volume been consistent from the start? If not, what was the catalyst for growth?

**A:** The volume has definitely built throughout time. One of the catalysts has been the BIOMET 3i Synergy Training Program® (STP®). We’ve sponsored both Dr. Bruce Ouellette and Dr. Vic Martel (West Palm Beach, Florida) as the speakers. In a series of programs, they provided the theoretical, clinical and laboratory knowledge that enabled our referring dentists to become confident in the protocol. Another catalyst has been the Lunch and Learn sessions that we have conducted with the help of our BIOMET 3i Sales Representative. We carefully documented the step-by-step restorative procedures for immediate provisional restorations following the DIEM® Guidelines to show referring dentists and their staffs.

**Q:** How do you coordinate the restorative aspect of the immediate provisional restoration clinical cases you are performing?

**A:** Immediate provisional restorations are now generally fabricated in the referring dentists’ offices immediately following surgery. For restorative dentists’ first experience with this protocol, he or she comes to our surgical office and we provide instruction and work together to provisionally restore the patient with the support of our in-house laboratory.

**Q:** What type of definitive prostheses are being fabricated for these clinical cases?

**A:** Our restorative colleagues use a variety of restorative designs for the definitive restorations. The majority of the prostheses are designed as fixed hybrid prostheses with CAD/CAM frameworks (BetaTek™ Bars). If there is inadequate vertical space, zirconia or porcelain-fused-to-metal restorations are fabricated. If a patient’s clinical situation requires more lip support, the preferred treatment plan is a bar and overdenture.

**Q:** How are potential candidates for this procedure finding out about it?

**A:** The large majority of our referring dentists have been in practice providing excellent dentistry for more than 15 years. As their patients’ conventional crown-and-bridge
restorations and/or teeth fail, they ask about this new treatment protocol. The general practitioners are increasingly interested in learning it. After all, they have a large pool of potential patients within their own recare program; people who have trusted them with their dental care for decades.

Q: Which implants and restorative components are you using for this treatment, and why have you selected these products to be used for immediate full-arch rehabilitation?
A: We are placing 95 to 99% of our immediately loaded cases using BIOMET 3i NanoTite™ Tapered PREVAIL® Implants because of the high primary stability we achieve with this implant design. We have found that NanoTite™ Tapered PREVAIL® Implants preserve bone levels so well and so consistently that our entire practice has switched to placing these implants. The inherent platform switching is especially beneficial for single units. We set the insertion torque value of the handpiece at 20Ncm. Then we raise that to 25Ncm, then go up in 5Ncm increments, topping out at 50Ncm. We then use the High Torque Indicating Ratchet Wrench for anything above 50Ncm. Our quality-control analysis has indicated a 98% survival rate for implants that are immediately loaded with these torque values.

We feel the restorative options are also superior. For example, angled abutments provide a lot of restorative latitude when anatomy dictates less than optimal, parallel implant placement.

Q: Are you using CT Guidance for these full arch cases?
A: At first, we were designing all our treatment plans free-hand using CT Scans. But, we have done more and more guided surgery because it is more predictable and the morbidity rate is lower. The BIOMET 3i Navigator® Guided Surgery System is now available for Tapered Implants. At times we place either a prefabricated interim laboratory-fabricated prosthesis, or we may convert the existing denture to a DIEM® Prosthesis, or fabricate a new immediate denture for chairside pick-up to optimize the occlusion and vertical dimension.

Q: Who is educating potential patients about this procedure and developing the treatment plan?
A: Initially, we were doing all of the education and treatment work-ups. Now, we actually provide the restorative doctors with carefully selected (patient friendly) photographs of minimally invasive surgery before, during and after, with the implant abutments emerging through the soft tissue. The clinical case examples include photographs of the provisional prostheses and the definitive prostheses (fabricated typically 2-3 months after implant placement in the mandible and 4-6 months in the maxilla). These clinical examples help the restorative clinicians and their staffs present this treatment modality to the patient with confidence.

Jason Kennedy, DMD received his dental degree from the University of Louisville Dental School in Louisville, Kentucky and completed his residency at the University of Tennessee Medical Center, Department of Oral and Maxillofacial Surgery, in Knoxville, Tennessee. He is a Diplomate of the Board of Oral and Maxillofacial Surgery and in private practice with Southeast Oral Surgery in Maryville, Tennessee.
Treatment of Maxillary Jaws with Dental Implants: Guidelines for Treatment

Carl Drago, DDS, MS† & Joseph Carpentieri, DDS†


Maxillary implant prosthetic treatments may be considerably more difficult to accomplish when compared to the corresponding treatments for patients with edentulous or partially edentulous jaws. The objectives of this article include descriptions of diagnostic records and their impact on treatment success, and criteria clinicians should use to determine whether fixed or removable prostheses are the treatment of choice in any given situation. Specific criteria and clinical guidelines will be identified for use in the treatment planning process. Determination of optimal tooth positions and their relationships to residual ridges or extraction sites are one of the critical factors in determining designs for maxillary implant prostheses. Prosthetic designs (fixed or removable) should be determined by clinicians prior to placing implants; removable prostheses should not be considered to be the “fall-back” treatment option if fixed treatments become unavailable secondary to loss of implants or other clinical complications.

Inherent differences between fixed and removable prosthetic treatments are critical for clinicians to understand, as they often include key points for clinicians explaining the features of fixed/removable-implant prostheses to patients. Appreciation of the differences between fixed and removable prostheses is critical for patients and clinicians to make informed decisions.

The Clinical and Histologic Efficacy of Xenograft Granules for Maxillary Sinus Floor Augmentation

Myron Nevins, DDS, Marcelo Camelo, DDS, Nicola De Angelis, DDS, James J. Hanratty, DDS, Wahn G. Khang, DMD, Jong-Jin Kwon, DDS, PhD, Giulio Rasperini, DDS, Isabella Rocchietta, DDS, Peter Schupbach, PhD, David M. Kim, DDS, DMSc

The International Journal of Periodontics & Restorative Dentistry Volume 31, Number 3 (2011) 227-235

The objective of this study was to investigate the potential of xenograft (cancellous bovine bone) granules to form vital bone in non-natural boneforming areas of maxillary sinuses. Fourteen sinus augmentations were performed in 14 patients. Surgical outcomes were uneventful, and sufficient radiopaque volume was present radiographically to place dental implants in all sites. Clinical reentry at 6 months revealed bone formation at the osteotomy site. Histologic evaluation of the obtained bone cores revealed that xenograft granules were integrated and surrounded by woven bone and lamellar bone that were in close contact with the particles. The average percentage of newly formed bone at 6 months was 27.5% ± 8.9%. Vital bone formation using the xenograft granules was supported by both clinical and histologic evidence.

†Clinicians have a financial relationship with BIOMET 3I, LLC resulting from speaking engagements, consulting engagements and other retained services.
Immediate occlusal loading (IOL) in edentulous jaws has been reported in numerous publications with implant cumulative survival rates consistent with conventional, unloaded healing protocols. Computed Tomography (CT)-guided surgery has more recently been developed and accepted as an additional treatment modality for maxillary and mandibular implant placement, with or without IOL. Reports as to the accuracy of planned versus actual implant placement in CT-guided surgeries have indicated that CT-guided surgery is not 100% accurate; standard deviations have been reported with values between 1 and 2 mm in terms of actual versus planned placement. The purpose of this article is to review the clinical parameters associated with IOL, and CT-guided surgery in edentulous jaws; and to present a clinical case illustrating the clinical and laboratory phases of treatment. The illustrated treatment was accomplished with an IOL protocol and includes fabrication and placement of a laboratory-processed provisional maxillary prosthesis. This particular protocol had slightly increased costs relative to conventional implant placement; however, the clinicians and patient benefited from improved accuracy of the provisional prostheses and decreased chairtime for the clinical procedures. The benefits and limitations of this treatment protocol are also discussed.

A Prospective Clinical Evaluation Of The OSSEOTITE® 2 Dental Implant System: Effectiveness Assessment

James A. Kenealy, Pharm.D., Clinical Research, Principal Scientist, BIOMET 3i

BIOMET 3i ART1153 OSSEOTITE 2 White Paper

Evolutions in dental implant design have led to improved performance outcomes despite the expanded use of implant therapy across a wider range of patients. Implant materials, surfaces, abutment connection systems and the components used to place the implants have all contributed to maintaining good performance while more patients and complicated cases are considered for implant therapy. Historically, the pioneering implant cases were organized as multi-unit fixed prostheses where the connection across implants provided stabilization. Recognized as essential for successful osseous fixation, initial implant stability remains a primary design consideration. For contemporary implant cases, such as immediate replacement of extraction sites, immediate loading¹, single-tooth replacements² and placement in grafted sites³, conditions for optimal initial stability are less likely. To address increasing expectations for effectiveness, engineering enhancements on dental implants to increase initial stability are therefore essential⁴.

¹Clinicians have a financial relationship with BIOMET 3i, LLC resulting from speaking engagements, consulting engagements and other retained services.
This randomized-controlled study evaluates the treatment of maxillary edentulism with fixed prostheses supported by immediately-loaded implants with either NanoTite™ or OSSEOTITE® surfaces (BIOMET 3i, Palm Beach Gardens, FL). The study specifically assesses the integration success and duration of failure-free function of implants and prostheses to determine if the addition of a surface nanotopography feature can improve performance for this treatment modality.

MATERIALS AND METHODS
Patients are randomly assigned to receive either test (NanoTite™) or control (OSSEOTITE®) implants. All implants are made from Ti-alloy having an internal Certain® connection, a 4-mm diameter straight-wall threaded body, and having an expanded collar providing an integrated platform-switch function (PREVAIL®). The immediate-loading approach required installation of full-arch provisional prostheses supported by 4 to 8 implants within 48 hours of implant placement. The final prostheses are inserted at 6 months and follow-up clinical and radiological evaluations continue annually for up to 5 years.

RESULTS
A total of 18 cases were treated separately by 3 clinicians. Eight cases were supported by 51 test implants and 10 cases were supported by 65 control implants. 72.7% of test implants were placed in bone assessed as soft, 27.3% in normal bone and no test implants were placed in dense bone. Of the control implants, 75.4% were in soft bone, 15.4% in normal and 9.2% in dense bone. According to location, 43.1% of test implants and 53.8% of control implants are in posterior sites while 56.9% of test implants and 46.2% of control implants are in anterior sites. Similarity in baseline variables allows a comparison of performance and success rates between groups. All NanoTite™-surfaced implants integrated successfully and maintained function yielding a 3-year cumulative survival rate of 100% and there were no reports of prosthetic failures. For control implants, 3 were declared failures for a CSR of 95.3%.

CONCLUSIONS
In this study, NanoTite™-surfaced implants perform better than OSSEOTITE®-surfaced implants suggesting that the surface nanotopography may play a role in outcomes for cases of immediate-loading in edentulous maxillae.
The Institute for Implant & Reconstructive Dentistry (IIRD™) Opens to Serve Dental Professionals Worldwide

Dental professionals worldwide can hone their skills, learn about the latest techniques and share information – online or on location – through the new Institute for Implant and Reconstructive Dentistry (IIRD™). The state-of-the-art facility opened its doors to the dental community on November 16, 2011 at the South Florida campus of BIOMET 3i®.

Education and knowledge sharing of evidence-based dentistry using leading-edge technology is at the heart of IIRD™. World-renowned leaders in the fields of implant and reconstructive dentistry comprise the faculty and guest-speaker panel. The facility is equipped with state-of-the-art dental and educational technology to maximize experiential learning through live surgeries, tele-surgeries, hands-on training, educational programs, lectures and information sharing. The IIRD™ also will conduct online educational programs, including lecture series, university partnership programs, and industry events and meetings.

“The Institute for Implant and Reconstructive Dentistry is designed to serve dental professionals as a trusted educational partner. However, we go beyond providing ‘continuing education’ courses,” explained Anthony Singleton, BIOMET 3i Global Director, the Institute for Implant and Reconstructive Dentistry. “Regardless of their experience level, dental professionals will be able to fine-tune their skills, build their confidence with the latest dental technology and, perhaps, be challenged by new perspectives on patient care. All this can lead to growing their practices and enhancing patient outcomes.”

The IIRD™ is the culmination of the vision of BIOMET 3i co-founder Richard J. Lazzara, DMD, MScD, who passionately believes education, evidence-based research, and leading-edge dental techniques are essential to providing the best dental solutions and care to patients. Dr. Lazzara is one of many world-class dental professionals who will serve as faculty of the Institute. Subject matter ranging from treatment-planning advances in digital dentistry, implant dentistry innovations, implant restoration, CT-guided surgery, treatment planning, and advanced diagnostics and complex case management provide a comprehensive education continuum for all levels of dental specialists and clinicians.

Visit IIRD.COM to take a virtual tour of the facility, learn more about IIRD™ course offerings and online registration, as well as to review insightful articles, research, videos, interviews and links to the Journal of Implant & Reconstructive Dentistry® (JIRD®), the official publication of the IIRD™.
Now, BIOMET 3i Has An App* For That!

BIOMET 3i has developed a free App for the iPad and iPhone, Android and Blackberry smartphones.

The BIOMET 3i App was developed to add a level of convenience to the clinician’s user experience and enhance the accessibility of rich media educational resources for the patient. The App consists of two portals: one for the clinician and one for the patient.

The Clinician Portal provides immediate access to BIOMET 3i Product and Service Solutions for clinicians. Convenient libraries offer a wide variety of PDFs and links to BIOMET 3i Social Media Sites, up-to-date BIOMET 3i Educational Opportunities, access to the Journal of Implant and Reconstructive Dentistry® (JIRD®) and convenient online ordering.

The Patient Portal is an interactive version of the BIOMET 3i Patient Education Brochure with easy to understand animated information tailored to the patient. This information covers everything from the overall oral environment and treatment options to various dental implant therapies and is designed for clinicians to utilize during patient consultations.

Download the BIOMET 3i App for free today for iPads from iTunes or download the BIOMET 3i App for free for smartphones and iPads from the BIOMET 3i Website at http://apps.biomet3i.com

*Wifi is required.
Active Articulation™ Dual Mobility Hip System

Dislocation is second to infection as the main early complication following THA. Dual mobility constructs have demonstrated long-term clinical success in Europe reducing risk of dislocation. The Active Articulation™ E1® Hip System defines the next generation of dual mobility constructs as it is specifically indicated for patients at risk for dislocation and the only dual mobility system to utilize Antioxidant Infused Technology.

• **Dislocation Resistance**

• **Ultra-Low Wear** - 95% less wear than traditional THA, even when cup is at 60° inclination

• **Large Range of Motion** - Provides up to 165 degrees

• **Oxidative Stability** - E1® Antioxidant Infused Technology prevents oxidative degradation of polyethylene.

• **Clinically Proven Cup** - The fully-hemispheric M2a-Magnum™ cup contains clinically proven PPS® coating and fins to provide fixation and stability

8. Ongoing, multi-center study demonstrated 99.6% survivorship at 2.5 years. Data on file at Biomet.
Participates In Local Community Events

In May, a total of 87 Team Members signed up and donated blood to the Community Blood Center of Florida, Inc. Just one donation can save up to three lives!

BIOMET 3i was part of the 2011 Heart Walk of the Palm Beaches. The community fundraiser took place on October 1st at the Meyer Amphitheatre in West Palm Beach. NBC's Today Show Host, Natalie Morales, was the Grand Marshall for this run/walk event. This fundraising challenge benefited the American Heart Association and BIOMET 3i Team Members raised approximately $34,000 for the cause.
Accelerate your ability to keep on top of the fast-evolving science of implant dentistry. The IIRD™ uses the latest educational technology to help you stay ahead of what’s ahead. This state-of-the-art facility is located in Palm Beach Gardens, Florida and provides distance learning opportunities around the world. Let IIRD™ help take you where you want to go.

UPCOMING COURSES:

Digital Dentistry For Surgeons
January 20, 2012
Palm Beach Gardens, Florida
Faculty: Dr. Michael Block

For more information, please visit www.iird.com

Accelerated Treatment
February 3, 2012
Palm Beach Gardens, Florida
Faculty: Dr. Dennis Tarnow

For more information, please visit www.iird.com

Sinus Elevation With Hands-On
January 27-28, 2012
Palm Beach Gardens, Florida
Faculty: Dr. Stephen Wallace

For more information, please visit www.iird.com

Digital Dentistry
February 17, 2012
Palm Beach Gardens, Florida
Faculty: Dr. Christopher Ramsey

For more information, please visit www.iird.com

The Institute for Implant and Reconstructive Dentistry is a Training and Education Facility of BIOMET 3i LLC.
Europe, Middle East And Africa

1st EUROPEAN BIOMET 3i Symposium - A Global Event
January 13-14, 2012
Madrid, Spain

For more information, please visit
www.biomet3ieuropeansymposium.com

The Columbus Bridge Protocol™
Immediate Functional Loading In Full Arch Restoration
March 2-3, 2012
Santo Stefano Belbo, Italy
Faculty: Dr. Marco Bevilacqua, Dr. Francesco Pera,
Prof. Paolo Pera, Dr. Tiziano Tealdo

For more information, please visit
http://www.biomet3i.com

Lake Como Institute®:
Contemporary Treatment Of The Atrophic Maxilla: Maxillary Sinus Surgery And Alternatives In Treatment
March 21-22, 2012
Como, Italy
Faculty: Prof. Tiziano Testori, Dr. Steve Wallace

For more information, please contact
education.eu@biomet.com

Asia Pacific

IDEM – Singapore
April 20-22, 2012
Singapore International Conference Center
Singapore, ROS

Faculty: Dr. Dennis Tarnow

For more information, please visit:
http://www.idem-singapore.com/
Some Products May Not Be Available In All Markets. Please Consult With Your Local BIOMET 3i Sales Representative For Availability.

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