IMPLANT TRIBUNE

The World's Dental Implant Newspaper · U.S. Edition

JUNE 2010 www.implant-tribune.com VOL. 5, NO. 6

Giuseppe Vercellotti, co-owner and chief operating officer of Piezosurgery Incorporated.

What sets Piezosurgery devices apart from others?

Interview: Piezosurgery's Giuseppe Vercellotti

By Sierra Rendon, Managing Editor

Implant Tribune recently had the honor of interviewing Giuseppe Vercellotti, MSc, co-owner and chief operating officer of Piezosurgery Incorporated. Vercellotti's father, Tomaso Vercellotti, is the inventor of the revolutionary technology.

What is Piezosurgery® and where does it originate from?

Piezosurgery is a patented ultrasonic technology specifically engineered for bone surgery. Piezosurgery was developed in the late 1990s by Tomaso Vercellotti, MD, DDS, and Mectron Medical Technology to overcome the limits in precision and safety of traditional bone-cutting instruments.

This technology employs the vibration of piezoelectric ceramics to cut bone but not soft tissues. Despite the fact that they are based on similar physical phenomena, Piezosurgery is so technologically advanced that it has no elements in common with normal ultrasonic ablation devices. The operation of this ultrasonic surgical device is driven by sophisticated software, which controls and optimizes the ultrasonic vibration necessary for bone cutting. The vibration is generated in the handpiece and exerts its cutting action through insert tips specifically designed

→ IT page 2B

Precautions for using zirconia implant abutments

By Moustafa N. Aboushelib, DDS, MSc, PhD, and Rien van Paridon, DDS, PhD

The introduction of zirconia to the dental field opened the design and application limits of all-ceramic restorations.

Thanks to its high strength and fracture toughness, long-span posterior restorations are now possible with high accuracy and success rate. Additionally, its white color allows better reproduction of the required color especially in the anterior zone.

These properties make zirconia an interesting material for the construction of implant abutments and superstructures.[1]

The fabrication of zirconia implant abutments utilizes state-of-the-art CAD/CAM technology, which uses patients' models for the production of an individual customized abutment.[2]

Moreover, the CAD phase allows accurate positioning and angulation of the zirconia abutment ensuring obtaining the best esthetics.

The fabrication of zirconia implant abutments is complicated by the problem of providing adequate fixation to the implant body.

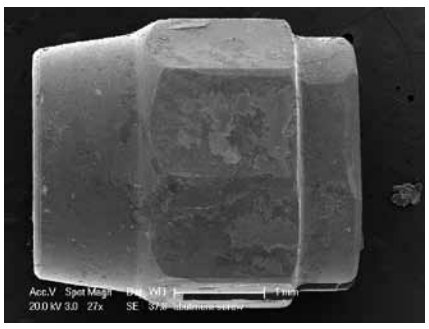


Fig. 1: SEM image, 27x. Internal metallic nut, which depends on friction fit inside the zirconia implant abutment. (Photos/Provided by Dr. Moustafa Aboushelib)

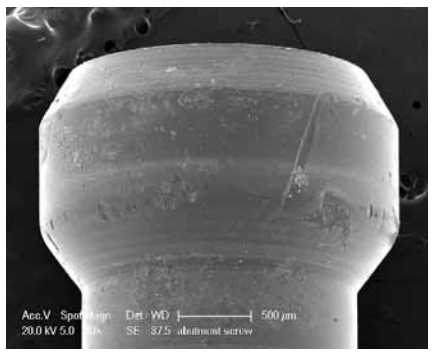


Fig. 2: SEM image, 10x. The metallic fixation screw used to press on the metallic nut for providing adequate retention with the implant body.

For titanium abutments, the fixation screw exerts direct pressure on the abutment, which in turn is provided with external or internal hex to provide connection with the implant body.

On the other hand, zirconia is a brittle material and friction between the fixation screw and the internal surface of the ceramic abutment could produce high internal stresses that could lead to unexpected fracture.[3]

This problem is solved by insertion of a friction fit internal metallic nut (Procera zirconia abutment for Straumann implants), which is equipped with an external hex for establishment of proper contact with the implant body (Fig. 1).

Additionally, the fixation screw interlocks with the metallic nut during tightening procedure (Fig. 2). This

→ IT page 4B

AAIP to host 28th annual meeting

The American Academy of Implant Prosthodontics will hold its 28th annual meeting on Nov. 6 at the Marriott at McDowell Mountains, Scottsdale, Ariz., in association with the Dental Implant Clinical Research Group and Midwestern University College of Dental Medicine.

The theme of the meeting will be "Implant Update — 2010," and feature outstanding dental clinicians and a well-known financial analyst.

Featured speakers at the meeting are Drs. Robert J. Braun, Clement Guarlotti, Leonard I. Linkow, Harold F. Morris, Peter A. Neff and Azfar Siddiqui, and G. Kent Mangelson.

Linkow, considered by many of his colleagues as the "Father of Oral Implantology," will speak on "Five Decades of Dental Implants."

In 1992, New York University College of Dentistry created the first and only endowed chair in implantology in perpetuity with Linkow as the recipient.

Neff, formerly professor and chairperson of the Department of Occlusion at Georgetown University School of Dentistry and author of the popular textbook "TMJ Occlusion and Function," will speak on "Occlusal Considerations in Implant Prosthodontics."

Morris, co-director of the Dental Implant Clinical Research Group and clinical professor of restorative dentistry at Temple University School of Dentistry in Philadelphia will speak on "Recent Advances in Implant Research."

Braun, professor of oral and maxillofacial pathology, medicine and surgery at Temple University School of Dentistry in Philadelphia, will speak on "Systemic Implications of Oral Disease and its Relation to Oral Implantology."

Siddiqui, associate professor of dentistry at Midwestern University College of Dental Medicine, will speak on "Lateral Bone Condensing and Expansion for Dental Implant Placement."

Guarlotti, past president of the American Academy of Implant Prosthodontics, will discuss "New Implants for Old Fixed Prostheses."

Mangelson, CFP, an expert in the area of lawsuit protection and prevention, will speak on "Advanced Lawsuit Protection and Tax Reduction Strategies for Dentists." Man-

→ IT page 14B

← IT page 1B

for drilling, cutting and remodeling mineralized tissues. The cutting action produced by the unique modulated ultrasonic vibration of Piezosurgery is micrometric (extreme precision) and selective (no trauma to soft tissue); additionally, combined with irrigation, the vibration produces a "cavitation effect" that helps to keep the surgical site sterile and bloodless.

Over the years, as the result of Mectron's continuous technological innovation, more than 50 insert tips have been designed and engineered to provide surgeons with the best cutting tools for each anatomical situation. Indeed, Piezosurgery allows one to perform bone surgeries with high precision, greater respect for soft tissues, greater visibility and enhanced healing.

What are the advantages of Piezosurgery in implant and bone surgery?
The surgical advantages of Piezosurgery are many and truly remarkable.[1] First, Piezosurgery delivers high precision. The ultrasonic wave employed by the device is a "microvibration," which compared to the macrovibrations of traditional bone-cutting instruments makes this technology incredibly more precise and safe. Indeed, the cutting action does not require as much pressure and can be interrupted at any time to check the progress of the surgery. The cutting action is then resumed and refined as needed, with precision and safety for both the surgeon and the patient. Second, Piezosurgery's cutting action is harmless to soft tissues. Thanks to the specific resonance range, the device is extremely effective on mineralized tissues but totally harmless to soft tissue, allowing for a safety level never experienced before.

This feature is obviously of crucial importance when operating in proximity of delicate soft-tissue structures, such as blood vessels, nerves, mucosa, etc. Third, thanks to its dual-wave technology, Piezosurgery delivers maximum intraoperatory visibility.

When the "hammering effect" produced by the wave modulation on the insert tip hits the irrigation solution, the latter is converted in a fine spray. The sprayed molecules of the irrigation fluid hit the cutting site, cool it down and produce a temporary hemostatic effect, allowing for maximum visibility during surgery. Once terminated, the surgery bleeding resumes, hence starting all biological processes leading to proper healing. Lastly, one of the greatest advantages of Piezosurgery is the fact it is gentler to the tissues and, in fact, induces faster healing. Histological and biomolecular studies have shown that compared to traditional techniques, the use of Piezosurgery is not only characterized by minimal postoperative bone loss but actually promotes faster healing.[2,3] In my opinion, this incredible feature makes Piezosurgery the preferable instrumentation for most bone surgical applications.

How did your father, Dr. Tomaso Vercellotti, get involved with Piezosurgery?
Prompted by the limitation in precision and safety of traditional bone-cutting instruments, my father pioneered the use of piezoelectric ultrasonic frequencies for bone surgery. Upon realizing that the effectiveness of conventional ultrasonic instruments in cutting bone was extremely limited, he set off, in conjunction with Mectron Medical Technology, to develop a new technology that would allow overcoming such limitations. Their joined efforts resulted in the creation of Piezosurgery, a technology that has truly revolutionized the way we approach bone surgery.

My father's clinical and scientific efforts were truly indispensable to make Piezosurgery into a surgical revolution. First, he wanted to ensure that this new technology would truly benefit surgeons and patients alike, improving surgical predictability and reducing morbidity and complications.

To this goal, my father engaged in several research collaborations with clinicians and institutions across the world. In addition to studies on cutting efficacy of the technology and bone healing response in animal models, fervid clinical research activity has arisen immediately since the initial distribution of the Piezosurgery technology.

To date, Piezosurgery is the only piezoelectric surgical technology that has been demonstrated to be effective and successful by the clinical community through peer-reviewed publications. The number of publications on Piezosurgery increases every day, testimony of the clinicians' understanding of the truly revolutionary nature of this technology.

The results of this research, published in more than 70 scientific articles, prove the advantages of Piezosurgery and make a compelling, evidence-based argument for its adoption in a variety of bone surgical applications.

Why did he get so passionate about this procedure?
My father realized immediately the technology he had developed had remarkable characteristics and understood he had an opportunity to simplify and improve a variety of surgical procedures. Along with several international colleagues, for several years he has been developing new surgical protocols and procedures. As a result, an entirely

→ IT page 11B

IT 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*.

Implant Tribune
The World's Newspaper of Implantology · U.S. Edition

Publisher & Chairman
Torsten Oemus
t.oemus@dental-tribune.com

Vice President Global Sales
Peter Witteczek
p.witteczek@dental-tribune.com

Chief Operating Officer
Eric Seid
e.seid@dental-tribune.com

Group Editor & Designer
Robin Goodman
r.goodman@dental-tribune.com

Editor in Chief
Sascha A. Jovanovic, DDS, MS
sascha@jovanoviconline.com

Managing Editor/Designer
Implant & Endo Tribunes
Sierra Rendon
s.rendon@dental-tribune.com

Managing Editor/Designer
Ortho Tribune & Show Dailies
Kristine Colker
k.colker@dental-tribune.com

Online Editor
Fred Michmershuizen
f.michmershuizen@dental-tribune.com

Account Manager
Humberto Estrada
h.estrada@dental-tribune.com

Marketing Manager
Anna Wlodarczyk
a.wlodarczyk@dental-tribune.com

Marketing & Sales Assistant
Lorrie Young
l.young@dental-tribune.com

C.E. Manager
Julia Wehkamp
j.wehkamp@dental-tribune.com

Dental Tribune America, LLC
213 West 35th Street, Suite 801
New York, NY 10001
Phone: (212) 244-7181, Fax: (212) 244-7185

BPA WORLDWIDE™ BUSINESS

Published by
Dental Tribune America

LIMITED TIME OFFER DURING JULY ONLY!

ACE SURGICAL SUPPLY CO., INC.

800.441.3100

WHEN PERFORMANCE MATTERS.

alloOss

Mineralized Human Bone Block and Particulate

SPECIAL OFFER IN JULY ONLY!

BUY 5 GET 1 FREE*

Buy 5 Vials or 5 Blocks Get the 6th item FREE!

alloOss	Particle Size – Volume	.5 cc	1 cc	2 cc
CANCELLOUS	Small • 250-1000 mic.	01-107-001	01-107-002	01-107-003
	Large • 1000-2000 mic.	01-107-101	01-107-102	01-107-103
CORTICO/ CANCELLOUS	Small • 250-1000 mic.	01-104-001	01-104-002	01-104-003
	Large • 1000-2000 mic	01-104-101	01-104-102	01-104-103
CORTICAL	Small • 250-1000 mic.	01-160-001	01-160-002	01-160-003
	Large • 1000-2000 mic	01-160-101	01-160-102	01-160-103

alloOss	Size of Block	18 x 6 x 8mm	18 x 10 x 8mm	18 x 15 x 8mm
BLOCK GRAFT	Part Number	01-241-006	01-241-010	01-241-015

alloss™ Allograft Block & Particulate

***alloOss*™ Granules** combines natural collagen and minerals with the bony structure of allograft to promote new bone formation. The existence of these natural minerals and collagen facilitate remodeling of the host bone suitable for implantation.

***alloOss*™ Block** – For restoring bone volume in severely resorbed ridges without harvesting of autogenous block graft from the patient.

The complete line of ACE ***alloOss*™** products have been processed and sterilized to the highest standards set forth by both American Association of Tissue Banks (AATB) and FDA, providing one of the purest particulate and blocks available today.

*Mix and match, lowest priced item is FREE. All items must be on the same order.

Offer expires July 31, 2010. Call **1.800.441.3100** or order online @ **www.acesurgical.com**

ACE Surgical Supply Company, Inc. • 1034 Pearl Street, Brockton, MA 02301

www.acesurgical.com

← IT page 1B

design is associated with the problem of generation of internal stresses, which could lead to unexpected fracture of the zirconia implant abutment.

This article will evaluate the fracture causes of several broken zirconia implant abutments. Fractographic analysis of the broken segments will allow recognition of the location and site of the critical fracture.

Case presentations: Case 1

A broken zirconia implant abutment was sent by the treating dentist for fracture analysis. Patient's records indicated that the patient complained of loosening of the implant-supported zirconia-veneered crown (#21).

The treating dentist also complained that the internal metallic nut lost friction contact with the zirconia abutment and that he had to re-assemble the components before screw fixation. The abutment was fractured after two incidents of screw loosening.

The same problem led to fracture of the second abutment, after which the dentist decided to insert a titanium abutment.

Fig. 2a: A broken maxillary premolar was extracted and implant was immediately inserted.

Fig. 2b: Procera zirconia abutment.

Fig. 2c: Procera zirconia veneered crown inserted over the zirconia abutment.

Scanning electron microscopic examination indicated that the abutment was fractured due to pressure from the metallic screw nut.

The solution

Once the metallic nut has lost friction fit with the zirconia abutment, it cannot be correctly reinserted inside the abutment, and areas of friction contact between the improperly assembled components could lead to generation of high internal stresses causing fracture of the zirconia implant abutment as was reported for the two examined abutments. A new abutment should be used in such case.

Case 2

This next case featured a broken zirconia implant abutment. SEM analysis revealed that it was an angled abutment, which corrected the tilt of an implant replacing a maxillary lateral incisor. The entire buccal wall was fractured beneath the temporarily cemented zirconia-veneered crown.

The solution

Zirconia is a brittle ceramic material that must be used in adequate thickness to gain full potential of its high strength. A minimal wall thickness (0.5-0.7 mm) is required in the entire structure of the zirconia implant abutment.

This thickness must be increased in areas of high stresses to avoid unexpected fracture. Tilt correction resulted in over-reduction of the buccal wall (0.3 mm thickness), which resulted in fracture of the weakened segment.

To reduce possibility of fracture, it is recommended to use a metallic abutment for correction of angle of insertion.

Case 3

The final case featured a broken veneer porcelain from a Procera zirconia superstructure. This new design combines both the implant abutment and the framework of the restoration in one single structure, thus reducing the number of components the dentist uses during the prosthetic phase.

This single component zirconia structure does not utilize an internal metallic nut for achieving contact with the implant body.

On the contrary, this single component super structure utilizes the fixation screw to obtain direct fixation to the implant body.

The solution

Using single component superstructures has several advantages as they simplify the handling procedure, do not require anti-rotation feature and reduce the number of structural interfaces of the entire restoration. On the other hand, they require careful design to provide adequate support for the veneer ceramic.

→ IT page 6B

AMD LASERS™

Effective. Practical. Affordable. World Class Lasers.

#1 LASERS IN THE WORLD

EDITOR'S CHOICE 2009 · EDITOR'S CHOICE 2010 · Dental Product Shopper BEST PRODUCT 2009 · Dental Product Shopper BEST PRODUCT 2010 · Dental Products Report TOP 100 · Dentistry Today TOP 100 Products 2010

"...recognized laser leader, superior products."

Larry Rosenthal, D.D.S.
Director, Aesthetic Advantage
New York, New York

"...every dentist should own one."

Ross Nash, D.D.S.
Nash Institute
Charlotte, North Carolina

"...revolutionary, easy-to-use."

George Freedman, D.D.S.
International Lecturer, Author
Toronto, Canada

"...visionary company ...superior laser!"

Howard Glazer, D.D.S.
International Lecturer
Ft. Lee, New Jersey

"...great patient care; extraordinary results."

Nicholas Amigoni, D.D.S.
Periodontist
Chicago, Illinois

"...best value, quality dental laser..."

Arun K. Garg, D.M.D.
Centre for Dental Implants
Aventura, Florida

"...perfect, million dollar smiles."

Gerald Bittner, D.D.S.
Lecturer, Master Laser Trainer
San Jose, California

"...can't practice without it..."

Frank Feng, D.M.D.
International Lecturer
Chicago, Illinois

"...amazing! a must have..."

Marty Zase, D.M.D.
International Lecturer
Colchester, Connecticut

"...world class training and support..."

Glenn van As, D.M.D.
International Lecturer
North Vancouver, Canada

Visit us on: YouTube · Facebook · Twitter

Product Videos

Clinical Videos

Training Videos

"...a must have!"

Fay Goldstep, D.D.S.
International Lecturer
Markham, Canada

"...this laser can do it all..."

Ron Kaminer, D.D.S.
International Lecturer
Hewlett, New York

"...I love it; my patients love it..."

Jim Dunn, D.D.S.
Loma Linda University
Loma Linda, California

"...great laser, great results."

Louis Chmura, D.D.S.
Orthodontist
Marshall, Michigan

"...one laser for the entire world!"

Jesus Ochoa, D.D.S.
CEO, Multident Dental Clinics
Lima, Peru

"...unmatched whitening system..."

Kathy Traub, R.D.H.
Hygienist
Laguna Beach, California

"...changed my practice forever."

Rodrick Loud, D.D.S.
Neighborhood Dentist
Shreveport, Louisiana

"...best performance, price and warranty."

Benjamin Jump, D.D.S.
Neighborhood Dentist
Sevierville, Ohio

"...best laser ever!"

James Jesse, D.D.S.
International Lecturer
Loma Linda, California

"Designed for you, simple to use, great looking and affordable. Your patient's want it and you need it. Welcome to the 21st Century and to the standard of care - a laser for every office and every operatory."

Alan Miller, President/CEO
AMD LASERS™, LLC

T7.JTB-5/6.2010

A USA COMPANY

AMD LASERS™, LLC.
www.amdlasers.com

7405 Westfield Blvd.
Indianapolis, IN 46240, USA

866.**WWW.AMDL**
866.**999.2635**

TEL: 317.202.9530
FAX: 678.868.4108
sales@amdlasers.com

FDA CE 0197
ISO 13485

Fig. 2d: The first and the second Procera zirconia abutments were fractured after a short period of service intra-orally.

Fig. 2e: A new zirconia veneered crown was inserted over a titanium abutment. Observe the grayish color at the cervical margin.

Fig. 3: Digital image demonstrating a fractured zirconia abutment due to over-reduction of the buccal wall.

Fig. 4a: Digital image of a broken veneer porcelain from a four-unit, implant-supported fixed partial denture.

Fig. 4b: Digital image demonstrating the contact surface with the implant body. Antirotation is not required for this fixed partial denture as the whole framework and the implant abutment are joined into a single superstructure.

← IT page 4B

Discussion

Analysis of the broken zirconia implant abutment gave insight about the cause of fracture.

For Procera abutments with the metallic nut, the friction fit system lost adequate retention after a short service time in the mouth leading to loosening of the inserted restorations.

According to complaints of the treating dentists, it is not recommended to reassemble the metallic nut and tighten the fixation screw as this will not result in reliable retention of the restoration. In such case, it is recommended to insert a new abutment from the manufacturer using patient's records.

Moreover, over-tightening the fixation screw beyond the recommended torque could lead to generation of wedging forces inside the zirconia abutment.

The screw head could exert pressure on the metallic nut leading to spreading of its vertical walls.

Using a confirmatory X-ray before tightening the fixation screw and keeping to the recommended torque could prevent such problem. For cases with marked angle correction, it is recommended to use a metallic abutment in order to avoid over-reduction of the axial walls.

On the other hand, using single component zirconia implant superstructure, which is composed of zirconia abutment and the framework as one component, could facilitate easier handling and simplify the insertion procedure due to reduction of the components used.

Moreover, careful design consideration of the requirements of both the abutment and the zirconia framework is mandatory to ensure good function of each element. Lack of adequate support beneath the veneer ceramic or over-reduction of the axial walls of the zirconia abutment could lead to unexpected fracture. IT

References available upon request from s.rendon@dental-tribune.com.

IT About the author

Moustafa N. Aboushelib, DDS, MSc, PhD, Dental Biomaterials department, Faculty of Dentistry, Alexandria University, Egypt

Rien van Paridon, DDS, PhD, Materials Science Department, ACTA, University of Amsterdam and the Free University, The Netherlands

E-mail:
info@aboushelib.org

ATLANTIS™

Patient-specific abutments for all major implant systems

Patient-specific abutments provide several advantages over stock abutments:

- The anatomically optimal emergence profile of the abutment supports long-term esthetics
- Margins can be designed at an ideal level for safe and easy cement removal
- The abutment provides optimal support and retention for the final restoration
- Simple restorative procedure - just take an impression, send it to your laboratory and ask for Atlantis

Ask your laboratory for Atlantis™ on your next implant case.

LATEST ATLANTIS™ ADDITIONS:
Astra Tech - OsseoSpeed™ TX
Nobel Biocare - NobelActive™
Straumann - Bone Level
Biomet 3i - Certain™

Complete information on implant compatibility can be found at **www.atlantisabutment.com**.

ASTRA TECH DENTAL
Get inspired

ASTRA
ASTRA TECH

A company in the AstraZeneca Group

800-531-3481 • www.astratechdental.com

Implant Direct™

simply smarter.

Taking Mini-Implants to a New Dimension

Application Specific Implants with All-in-One Packaging

Hands-On Surgical and Prosthetic Training with Dr. Gerald Niznick, President/Founder of Implant Direct

This course is for Dentists starting to place implants, those who want to expand treatment options beyond conventional mini-implants and for Implantologists or Surgical Specialists who want to minimize bone grafting and offer edentulous patients Teeth-In-1Day™ treatment.

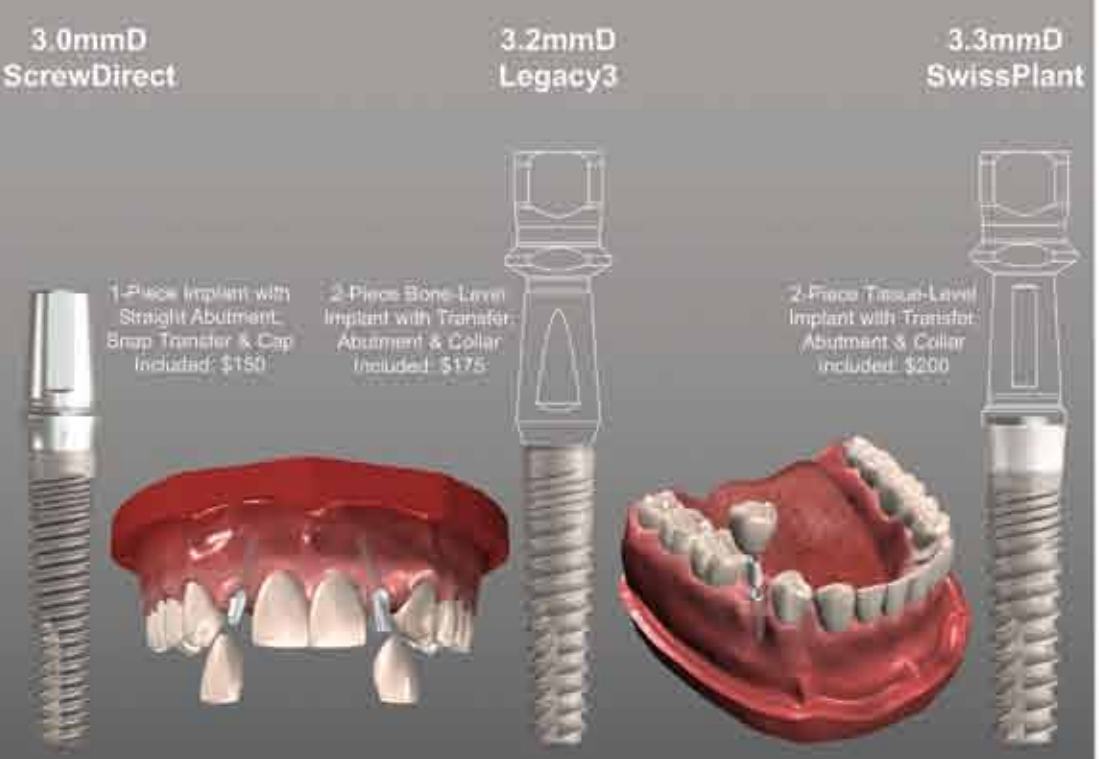
1. **Friday June 25th, Los Angeles, CA**
   Friday July 9th, Los Angeles, CA
   Friday August 20th, Los Angeles, CA
2. **Monday July 12th, Sacramento, CA**
3. **Tuesday July 13th, Portland, OR**
4. **Wednesday July 14th, Seattle, WA**
5. **Monday July 19th, Minneapolis, MN**
6. **Tuesday July 20th, Chicago, IL**
7. **Wednesday July 21st, Saint Louis, MO**
8. **Thursday July 22nd, Oklahoma City, OK**
9. **Saturday August 7th, San Diego, CA**
10. **Monday August 9th, Knoxville, TN**
11. **Tuesday August 10th, Memphis, TN**
12. **Wednesday August 11th, Kansas City, MO**
13. **Thursday August 12th, Denver, CO**
14. **Monday August 23rd, Birmingham, AL**
15. **Tuesday August 24th, New Orleans, LA**
16. **Wednesday August 25th, Houston, TX**
17. **Thursday August 26th, Dallas, TX**
18. **Sunday October 17th, Philadelphia, PA**
19. **Tuesday October 19th, Brooklyn, NY**
20. **Saturday November 13th, Honolulu, HI**
21. **Wednesday December 1st, Cincinnati, OH**
22. **Thursday December 2nd, Columbus, OH**

8 CE Credits for all attending: $ 295.00

Approved PACE Program Provider FAGD/MAGD Credit
Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement.
08/01/2009 to 07/31/2012

Register on-line at www.implantdirect.com

Narrow One- and Two-Piece Implants



1 Additional training dates at Implant Direct's Manufacturing Facility in Los Angeles, CA: 9/11, 10/8, 11/19, 12/17

Limited Attendance - Register Early
www.implantdirect.com
or call 1-888-NIZ-NICK/1-888-649-6425

Tri-Lobe Implants with Prosthetic Compatibility to NobelReplace Implant. Self-tapping for stability and ††Micro-threads for reduced bone loss. *SAVE 65-70% compared to Nobel Biocare, 3i & Astra.

Implant Direct Int'l
8840 W. Russell Road #210,
Las Vegas, NV 89148
Manufacturing/Sales: 1-818-444-3333
www.implantdirect.com

Three Implant Designs and Packaging Options

Implants include Cover Screw

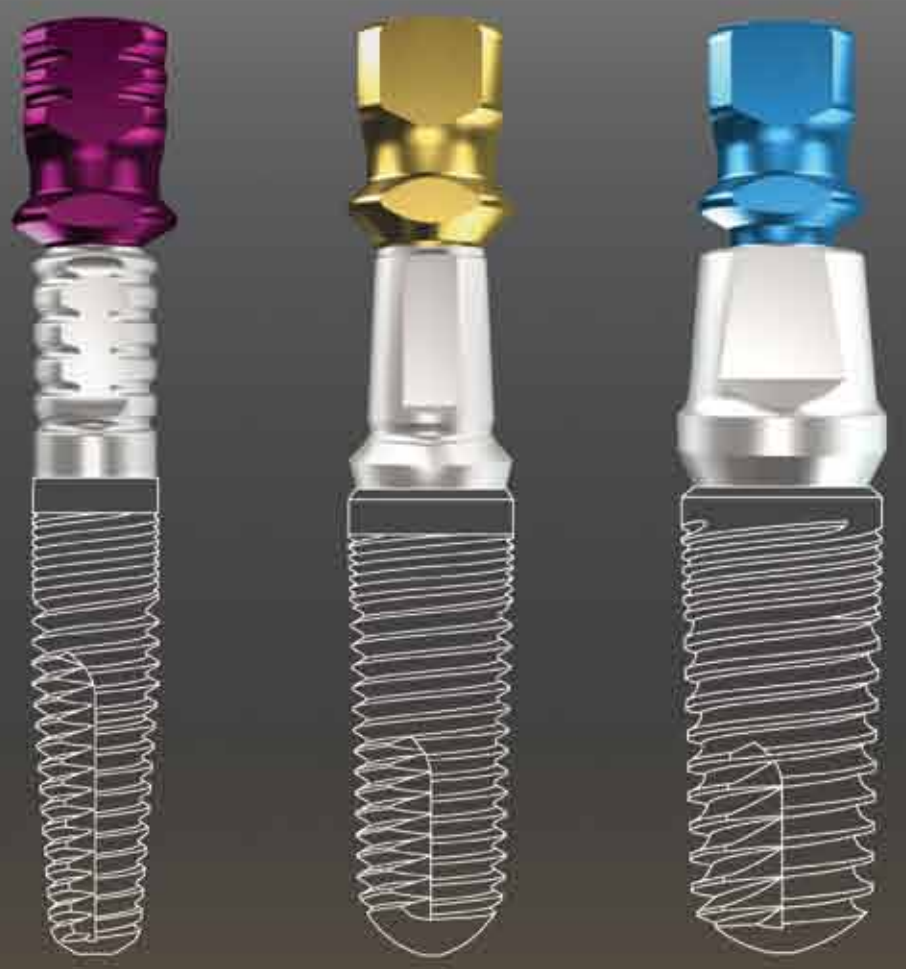
Select Implant based on Price, Packaging and Thread Design

1. RePlant: $150 incudes Temporary Abutment/Transfer
2. RePlus: $175 includes "Snappy" Abutment/Transfer
3. ReActive: $200 includes Preparable Abutment/Transfer

RePlant® Body Dimensions Matches Replace†

RePlus® Body Taper For Bone Expansion

ReActive™ Buttress Threads For Increased Surface



RePlant implant surgically compatible with NobelReplace® Drills

Compare US List Price	Straight Contoured	15° Angled Contoured	Straight Snap-On	Gold w/o Tri-Lobe	Gold with Tri-Lobe	Temporary Abutment	Ball Attachment	Overdenture Attachment	Multiple-Unit w / Cap & Transfer Straight	Multiple-Unit w / Cap & Transfer Angled
Implant Direct	$85	$85	$85	$100	$100	$35	$107	$110	$85	$100
Nobel Biocare	$170	$225	$201	$216	$216	$72	$217	$110	$229	$274
Cost Savings	50%	62%	58%	54%	54%	51%	51%	0%	63%	64%

*US List prices as of 4/23/10

ReActive™ All-in-1 Packaging

INCLUDES: Cover Screw, Transfer and Straight Preparable Abutment. With Platform Shifting, Micro-threads, Deeper Threads and Round Apex.

ReActive USA price = $200

**NobelActive USA price = $694

Free Implants for Nobel Biocare Customers

3 Surgically Compatible, RePlant® Implants with Titanium Transfer/Temporary Abutments plus 2 Contoured Abutments

US List Price for 3 Implants, Abutments and Prosthetic Components:

RePlant = $620

Nobel BioCare* = $1922

FREE Introductory Offers at www.implantdirect.com

Terms and Conditions Apply

* Stig Hansson. The implant Neck: Smooth or Provided with Retention Elements. A Biomechanical Approach. Clin Oral Impl Res 1999;10:394-405