



Implant Dentistry  
 June 2010  
 pg 1-2

# The Changing Reality of Implant Dentistry

A series in *Dental Economics*  
 by Gerald Niznick DMD, MSD



Edentulous Jaw Restoration  
 August 2010  
 pg 3-4



Single Tooth Replacement  
 September 2010  
 pg 5-6



Team Approach to Implant Dentistry  
 November 2010  
 pg 7-8

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# About the Author



**Dr. Gerald A. Niznick** was the founder and President of Core-Vent Bio-Engineering and Paragon Dental Implant Company (1982 - 2001) which he sold to Zimmer Dental. The Screw-Vent internal hex implant that he invented in 1986 is still the backbone of Zimmer's dental implant system 25 years later. Barron's Magazine Article on Dental Implant Industry Feb. 15, 2005 referred to Dr. Niznick as "a prosthodontist and entrepreneur who is considered by many as the godfather of American implant dentistry." He started designing and manufacturing a new line of products in 2004 that were launched in October 2006 through Implant Direct International. In just four years, Implant Direct had a significant global presence in the implant industry with 300 employees, sales offices in the US, Canada, Switzerland and Israel, and with distributors in 30 other countries. Dr. Niznick's product and marketing strategy of selling high quality, innovative products with All-in-1 Packaging at about 1/3rd the price of the major implant companies captured about 4% of the global market, doubling the sales volume that Core-Vent/Paragon achieved after 20 years. Through Dr. Niznick's implementation of the industry's only lights-out 24/7 manufacturing and effective use of the internet for technical support and online ordering, he created a price-point shift in the industry, making implant dentistry more affordable for dentists and their patients. In December 2010, Sybron Dental Solutions, a division of Danaher, a 15 billion dollar conglomerate, acquired 75% interest in Implant Direct International, leaving Dr. Niznick the president of a joint venture that also included Sybron's Attachments International and Sybron Implant Solutions business assets. Dr. Niznick graduated from the University of Manitoba Dental School in 1966 and earned a Masters degree in Prosthodontics at Indiana University in 1968. Throughout the 1980's and 90's he personally trained over 10,000 dentists worldwide on the placement and restoration of dental implants using lectures and live surgical demonstrations.

In the 29-year span between Core-Vent (1982) and Implant Direct (2010), Dr. Niznick has had 35 dental implant US patents issued to him including the internal connection patent that has become the cornerstone of modern implant design. His newer patents include ones for micro-threads, double tri-lobe connections, a 1-piece implant with a multi-unit abutment platform and a healing collar retained by a cover-screw. Several pending patents include the GoDirect™ 1-Piece implants and GPS™ abutment system, both compatible with Zest Anchor Company's LOCATOR® Attachment.

Dr. Niznick's significant contributions to the dental implant field have been recognized by academic institutions and dental implant organizations. He has received Honorary Doctorate degrees from the University of Manitoba and from Tel Aviv University, as well as the prestigious Isaah Lew Research award from the American Academy of Implant Dentistry. He was also awarded Alpha Omega Dental Fraternity's highest award, the Achievement Medal, in 2007. The United States Department of Veterans Affairs issued a Commendation to Dr. Niznick for conceiving and funding the largest dental implant study worldwide at 32 VA centers that included 900 patients receiving over 2800 of Dr. Niznick's implants. Special issues of the *Journal of Periodontology* and the *Journal of Oral and Maxillofacial Surgery* were dedicated to publishing the results of this monumental prospective, multi-center clinical study, which added significantly to dental implant knowledge.

# Independent Research



February 2011

## 98% success RePlant/ReActive implants in Maxillary Sinuses

**Effect of Sinus Membrane Perforation on Dental Implant Integration: A Retrospective Study on 128 Patients**  
by Eric Oh, DDS, and Richard A. Kraut, DDS

A common complication of sinus augmentation is perforation of the sinus membrane during augmentation and/or implant placement. This retrospective study examines the effect of sinus membrane perforation with regard to graft survival and implant integration. A total of 175 sinuses were augmented with 115 of the membranes being reported intact at the time of surgery. A total of three infections occurred in patients who sustained perforated sinuses and one infection occurred in a patient who had an intact sinus. All four infections resolved after culture sensitivity and placement of the patient on an appropriate antibiotic for 10 days. Of 438 dental implants placed in the augmented sinuses, five implants failed, four of which were associated with perforated sinuses and one which was not associated with a perforated grafted sinus.

(Implant Dent 2011;20:13–19) Key Words: sinus membrane, perforation, osseointegration



April 2011

## 99% success ScrewPlant/Legacy Implants

**Implant Survival and Radiographic Analysis of Proximal Bone Levels Surrounding a Contemporary Dental Implant**  
by John S. Cavallaro, Jr., DDS

**Objective:** This study was performed to evaluate the performance of a contemporary dental implant. Assessments were made regarding implant survival and radiographic bone changes from surgical placement to subsequent time points.

**Materials and Methods:** Seventy-five patients received 204 dental implants. One hundred and seventy-six implants were placed into healed ridges and 28 implants were inserted into fresh extraction sockets. Implant survival percentages and mean data pertaining to radiographic proximal bone loss for 1 randomly selected implant per patient are presented.

**Results:** The survival rates for implants placed into healed ridges and fresh extraction sockets were 98.6% and 96.4%, respectively. The overall survival rate for all implants in the 75 patients was 99.0%. With respect to proximal bone levels, mesial and distal bone loss from surgical placement to 12 months was 0.96 mm mesially and 0.83 mm distally. From 24 to 36 months follow-up, the mesial and distal bone changes were 0.16 mm and 0.19 mm, respectively. Up to 36 months after implants were placed into fresh extraction sockets, the mean distance from the implant-abutment interface to the first bone to implant contact was 1.01 mm mesially and 1.10 mm distally.

**Conclusion:** With respect to the time frame of the study, assessed parameters were similar to other implant systems that are currently used.

(Implant Dent 2011;20:146–156) Key Words: implant survivability, proximal bone levels, healed ridges, fresh extraction sockets



April 2011

## 100% success Immediate load ScrewIndirect Implants.

**The Effect of Two Different Immediate Loading Protocols in Implant-Supported Screw-Retained Protheses**  
by Heba E. Khorshid, BDS, MS, Hamdy Aboul Fotouh Hamed, BDS, MS, PhD, and Essam A. Aziz, BDS, MS, PhD

**Background:** The aim of this work was to evaluate the changes that occur in the supporting structures of implants placed bilaterally in the posterior mandibular region as a result of 2 different immediate loading protocols: the immediate functional loading protocol and the immediate progressive loading protocol.

**Materials and Methods:** Thirty implants were placed in 5 patients with unmodified mandibular Kennedy Class I. For each patient, 3 implants were placed on each side of the patient's dental arch at the premolar/molar mandibular region. At one side, the implants were immediately loaded following an immediate functional loading protocol, whereas the other side was loaded following an immediate progressive loading protocol. Radiographic evaluation was carried out using dental computed tomography at intervals of 0, 4, 9, and 24 months after implant surgery.

**Results:** Statistical analysis showed a more favorable bone reaction with a statistically significant difference in the crestal bone height ( $P=0.011$ ) and in the crestal periimplant bone density ( $P=0.009$ ) in the immediate progressive loading group than the immediate functional loading group.

**Conclusion:** The immediate progressive loading protocol yields a more predictable bone reaction in the periimplant crestal bone and ensures better implant prognosis than the immediate functional loading protocol; supporting the idea that gradual loading or stimulation will allow bone to mature and grow denser in a 2-year implant follow-up period.

(Implant Dent 2011;20:157–166) Key Words: immediate loading, progressive loading, functional loading, bone density, computed tomography

# The changing reality of implant dentistry

Advances in dental implant technology and increased public awareness have created greater possibilities for general dentists to expand their practices by placing dental implants. Today, many general dentists are realizing that dental implants are an integral part of conventional dentistry and can be offered successfully with a minimum investment of time and money. In this challenging economic environment, as patients encounter financial hardships that limit their discretionary spending, more GPs are realizing the importance of broadening the range of services they are able to offer to the diminishing number of patients with discretionary income.

There are major differences in the cost of dental implants and abutments to GPs versus surgical specialists. The largest implant companies sustain high prices for GPs ordering implants and abutments on a per-patient basis, while discounting heavily to surgical specialists buying in volume. Dentists need to evaluate their options with at least the same degree of diligence as they apply to buying a new car.

Understanding the features, benefits, cost, and support offered with each implant system is important in making an informed decision.

Dentists should begin by selecting the system, then taking the training on that system with a focus on learning how to do the simplest and most predictable applications. These include single-tooth replacement in an extraction socket, and stabilizing a lower denture with two to three implants in the symphysis. Once you can do these procedures, it is a small step to being able to offer Teeth-in-1Day™ procedures and more complex fixed restorations on multiple implants. Organized implant dentistry dates back to the mid-1960s with the start of the American Academy of Implant Dentistry. The popular implants in the 1960s and 1970s were subperiosteal and blade implants. Subperiosteal implants got their name because they consisted of a cast chrome frame made by reflecting the tissue on an edentulous jaw in order to make a bone impression.

A second surgery was required to seat the frame, with the reflected periosteum reattaching through the openings in the frame, locking it in position. Four posts projected through the gingiva to provide support for an overdenture. This procedure was technique-sensitive

because it required an extensive impression. The blade implant, made from titanium, was placed in a slot in the ridge using high speed drills. The blade would then be tapped into place, wedging it between the buccal and lingual plates of bone to achieve initial stability. A post projecting through the tissue could be bent to create parallelism with other blade implants or with preparations on adjacent natural teeth. The implant(s) and natural teeth were splinted with a cemented temporary bridge and put into immediate function.

Soft-tissue encapsulation often resulted around the blade, and failure could not be detected until extensive

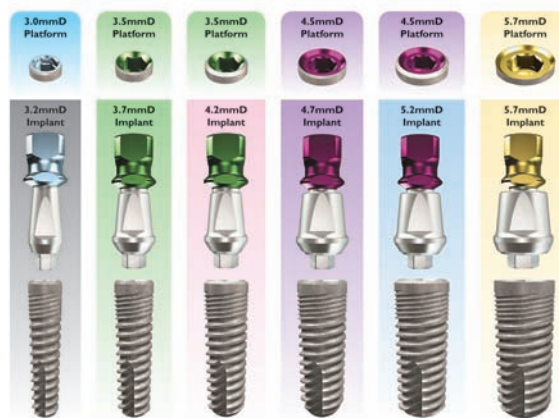
bone loss had occurred. There were some one-piece screw implants available in the 1970s but they were not very popular because of limited applications without the ability to angle or prepare the abutment post.

Straumann introduced an endosseous, hollow-basket, one-piece implant in the late 1970s that also did not allow for angulation or preparation of the post. The post projecting through the tissue was narrower than the body, resulting in an infrabony defect at time of implant placement

that encouraged down-growth of epithelium. Straumann's basket-and-screw titanium implants had a textured surface created by plasma-spraying titanium. This additive process could create a soft-tissue problem if the rough surface became exposed to the soft tissue. By 1980, after a decade of experience with the implant systems described above, I had become disenchanted with their lack of predictability. Necessity being the mother of invention, I focused my attention on solving my most troubling clinical problem as a prosthodontist — stabilizing a lower removable denture.

In 1982, I launched the Core-Vent system and received patents on the implant design and an overdenture attachment that allowed for vertical and rotational movement to reduce the stress on the free-standing implants. It was a radical concept at the time. Today, the American College of Prosthodontists considers this a minimum standard of care.

The Core-Vent implant was made of medical grade titanium alloy for strength, and had a medium rough surface created by blasting and etching for increased bone attachment. Its design included a hollow-basket apical end with external threads in the upper half that maintained the same diameter throughout. The Core-Vent



## The changing reality of implant dentistry

had an internal hex hole for ratcheting to place. The implant was designed to be buried under the soft tissue for a three-to-four month unloaded healing period, after which the top was exposed and an abutment cemented into the hex hole. The Core-Vent system introduced the concept of implant prosthodontics to the dental profession by providing a variety of abutment posts, selected for specific clinical applications.

In 1983, the *Journal of Prosthetic Dentistry* published a series of papers on the Swedish Branemark system that had been presented at a 1982 University of Toronto conference. The conference was restricted by invitation only to academicians from throughout North America. The articles documented the use of the Branemark external-hex, internally threaded implant in Sweden, dating back to the late 1960s.

The system offered a single screw-receiving abutment for fixed detachable restorations in totally edentulous jaws. Four to six implants were placed in the anterior and splinted together with cantilever extensions distally.

The Branemark implant differed from the Core-Vent in several significant ways. It was made of pure titanium, which was weaker than Core-Vent's titanium alloy, resulting in increased risk of fracture. Its machined surface was relatively smooth without blasting, acid etching, or TPS coating to create additional surface texture.

This proved to increase failure in soft bone and has since been replaced by a textured surface. The Core-Vent and Branemark implants shared a common surgical protocol using slow-speed drills to avoid overheating and submerged healing during the critical initial healing period. Both achieved firm anchorage to bone, a process that became known as osseointegration.

The Branemark system initially targeted oral surgeons and prosthodontists, requiring teams to attend a three-day university-sponsored training course with surgical placement restricted to operating in a totally sterile environment. The Core-Vent system, on the other hand, was taught to all dentists in readily

available and affordable one- and two-day courses.

The team approach to implant dentistry has proven successful in North America, but in Europe it is the exception rather than the norm. Many GPs have proven

over the last three decades that they can provide a high quality service to their patients by both placing and restoring dental implants.

Some have taken extensive training in bone grafting procedures and have demonstrated proficiency in more complex cases. Image-guided surgery is shortening the learning curve for placement of implants. General dentists are limited only by their commitment to education and their willingness to expand their horizons with new technology.

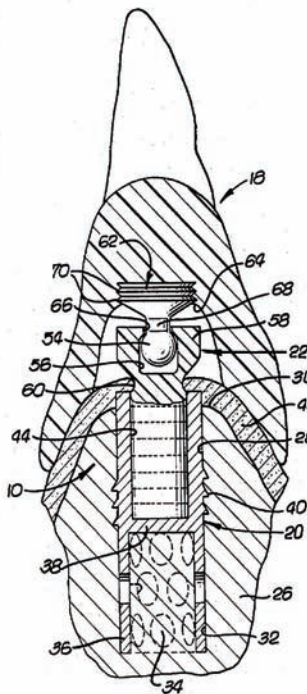
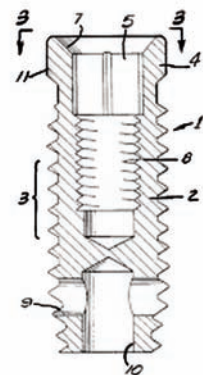
In 1986, Core-Vent launched the Screw-Vent System, and in 1999 offered this implant in a tapered version. Twenty-four years after the Screw-Vent was introduced, it is the mainstay of the Zimmer Dental product line, acquired with its purchase of Core-Vent Corporation's assets in 2001. The Screw-Vent introduced the concept of an internal connection, combining a wrench-engaging surface with internal threads in the same internal shaft (Niznick US Pat. #4,960,381). The internal connection solved the loose screw problems that plagued external hex implants and allowed narrower designs, expanding the clinical applications of dental implants. It provided greater tactile sense when seating an abutment, eliminating the need to take X-rays to confirm full seating.

Over the years, the prosthetic options for internal connection implants have expanded, increasing both functionality and esthetics. This connection has become the cornerstone of modern implant design, licensed to a number of companies including BioHorizons, 3i, Straumann, and Friadent.

A number of foreign companies in countries such as Brazil, Israel, Italy, and Korea, where the patent was never filed, copied the Screw-Vent's lead-in bevel and internal hex connection and are now able to sell in the U.S. as the patent expired in 2007. In 2008, Nobel launched the NobelActive implant with an internal bevel and internal hex, referring to it as the "implant of the future." Implant Direct launched its Legacy system in 2007 and expanded it to include the Legacy3 in 2009. Legacy3 in 6 diameters, with All-in-1 Packaging, includes a cover screw, healing collar, transfer, and preparable abutment. It has progressively deeper body threads and micro-threads near the top for increased initial stability. As shown, it offers color-coded platforms for simplified product identification.

### United States Patent

Niznick  
 Patent Number: 4,960,381  
 Date of Patent: Oct. 2, 1990

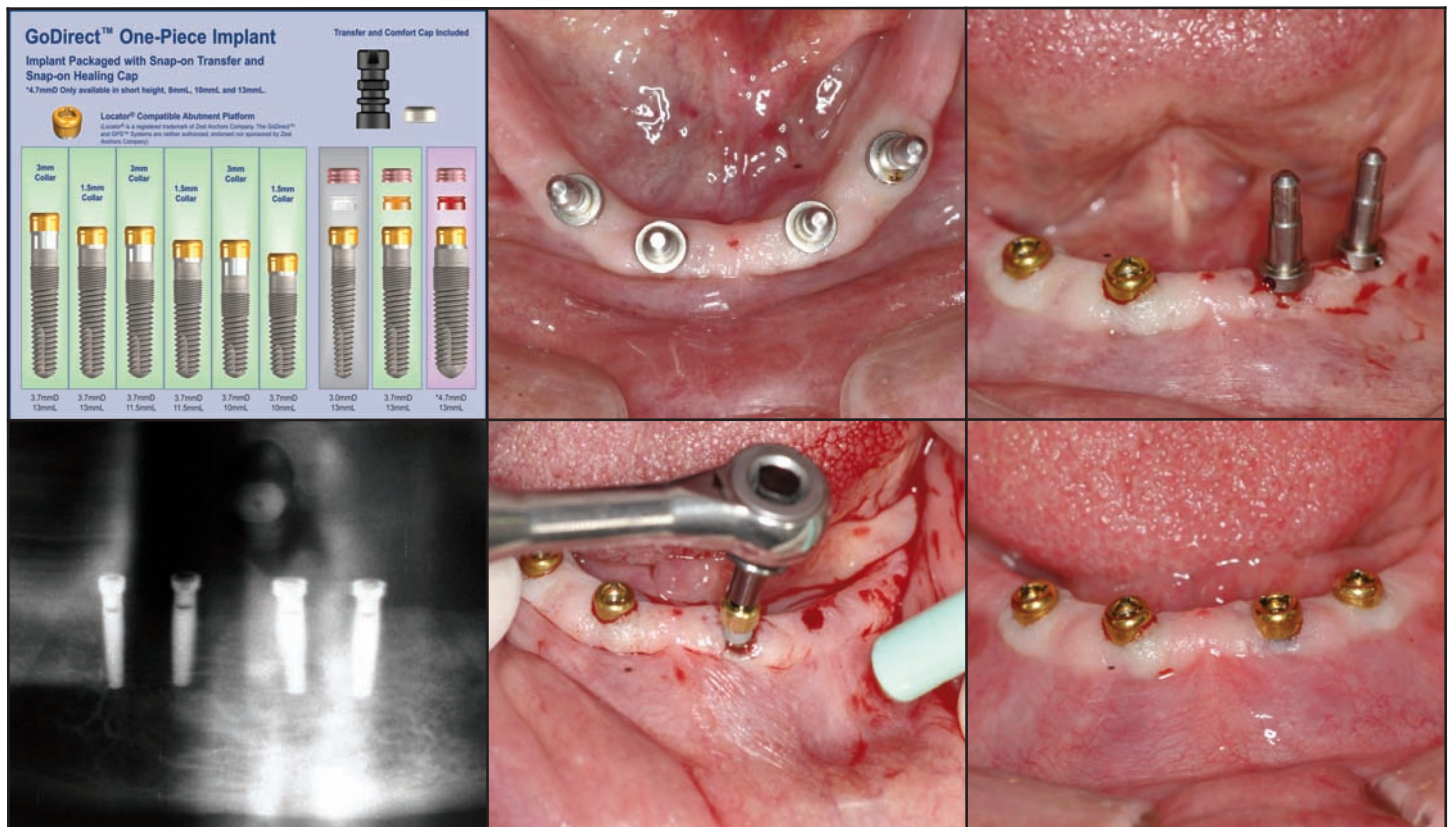


# Restoration of the totally edentulous jaw with application-specific one-piece implants

The highest benefit, lowest risk application for dental implants is the restoration of the totally edentulous lower jaw with two to three free-standing implants to retain an overdenture. The problem of denture stability gets progressively worse with time because of ridge resorption under the pressures of a denture.

ments with the middle one providing indirect retention to prevent the denture from flipping up in the back when the patient bites in the front. The use of four implants with overdenture attachments provides even better denture stability.

Implant Direct's GoDirect™ implant (Pat. Pend.)



The Core-Vent implant and attachment was the first system (1982) to address this problem in a surgically simple and cost-effective way, using two free-standing implants and a snap overdenture attachment. This solution is now considered minimum standard of care by the American College of Prosthodontists. While there are a variety of overdenture attachments available for dental implants, the Zest LOCATOR® Attachment has emerged as the most popular, primarily due to its low profile and ability to accommodate non-parallel implants. This attachment is sold by most major implant companies but the cost of the LOCATOR® Abutment, in combination with any of the implants from the major implant companies, pushes the hardware cost for the minimum number of implants (two) to about \$1,000. The recommended number for denture stability is three implant/attach-

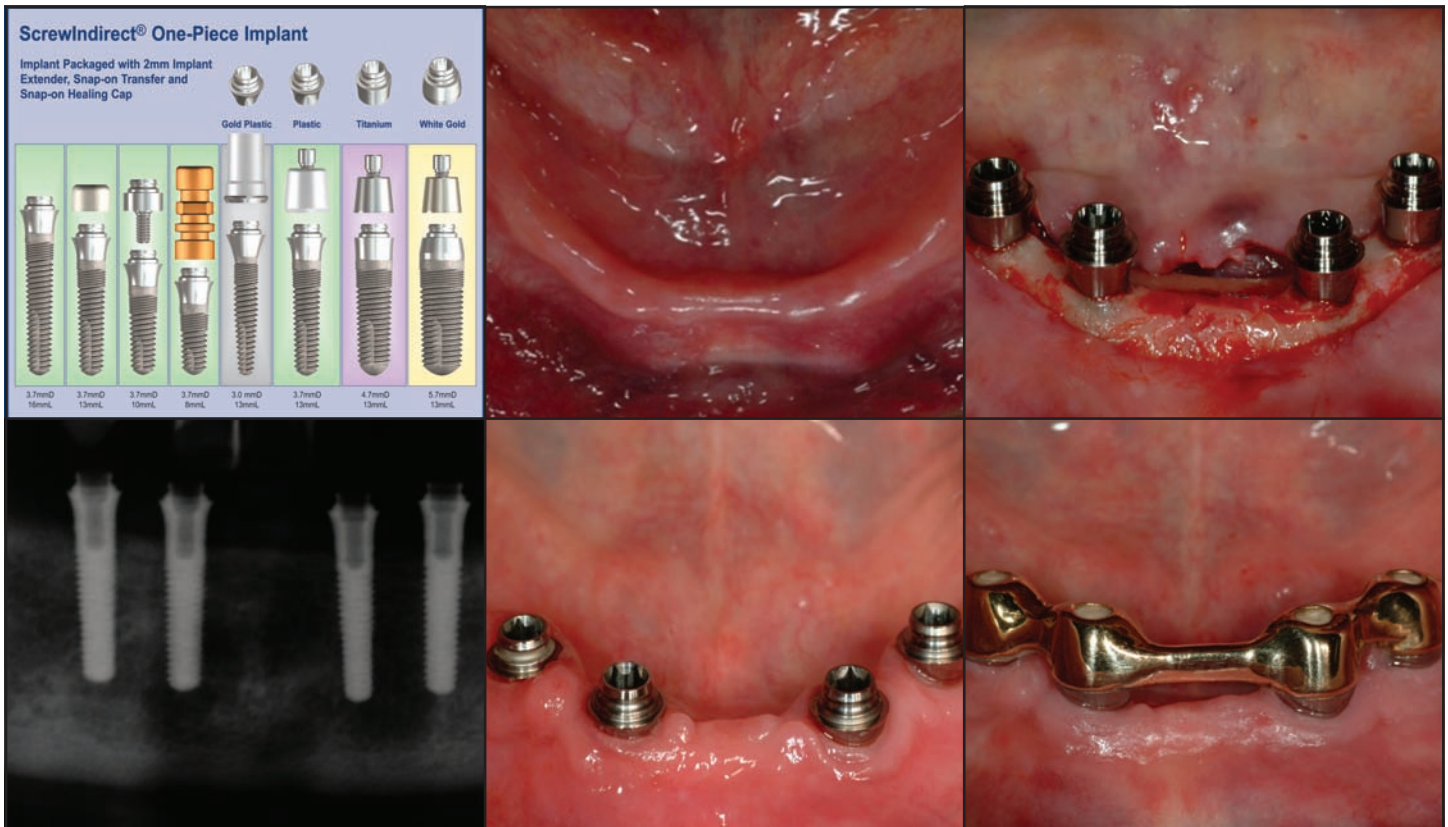
combines the body of a tapered screw implant with mini-threads and a LOCATOR®-compatible abutment platform. Unlike traditional mini-implants of under 3.0mmD with ball attachments, the GoDirect starts at 3.0mmD and includes a 3.7mmD and 4.7mmD option, providing increased strength and surface area with a natural emergence profile to a wider platform. Its tapered body allows the 3.0mmD implant to be inserted into an bone socket prepared to as small as 2.3mmD in soft bone and 2.8mmD in dense bone. This accommodates narrow ridges and facilitate flapless surgical techniques, especially in combination with image guided surgery. Implant Direct will soon launch the GoDirect Prosthetic System ("GPS™") with both a low profile cap attachment and one that combines rotational and vertical stress-breaking features.

## Restoration of the totally edentulous jaw with application-specific one-piece implants

The ultimate goal of implant dentistry is to replace missing teeth in the most natural way. While overdenture attachments like the LOCATOR®, Ball and GPS can provide cost-effective ways to stabilize a removable complete prosthesis, the original Branemark protocol called for splinting four to six implants in the anterior region of the edentulous mandible or maxilla with a prosthesis that could only be removed by the dentist.

Processing denture teeth to a metal superstructure retained by fixation screws is called a “fixed-detachable” or “hybrid” prosthesis. A trend has emerged for treating edentulous jaws with only four implants placed in the

no longer valid. The ScrewIndirect screw-receiving platform allows splinting of implants that have up to 40 degree divergence, allowing distal angulations of up to 20 degrees if desired. Placement of five implants in the lower symphysis and six anterior to the maxillary sinuses can be relatively straight and still support adequate length of distal cantilevers. Four ScrewIndirect implants can also be placed, as shown below, splinted with a distal attachment for retention of an overdenture but providing the patient with a fixed-detachable prosthesis that eliminates the need for removable prosthesis is a more natural solution to restoring an edentulous jaw.



anterior with the distal implants angled toward the distal to reduce the extend of the cantilevers. This “all-on-4” concept of placing the minimum number of required implants can lead to a “none-on-3” result that will be far more costly to deal with than just placing an extra implant or two at the time of surgery and eliminating the need to angle the distal implants to increase the AP spread.

All-on-4 advocates claim that this type of treatment plan reduces cost and saves treatment time, but with the introduction of the ScrewIndirect 1-Piece implant that provides the implant, abutment, comfort cap and transfer at a fraction of the cost of the implant alone from all the major implant companies, the economics argument for using the minimum number of implants is

The ScrewIndirect 1-Piece implant offers a 3.0mmD implant with adequate strength. All four diameter options (3.0mm, 3.7mm, 4.7mm and 5.7mm) have the same 5mmD multi-unit platform. The 3.0mmD implant allows treatment of narrow ridges and simplifies accurate placement during flapless surgery. Providing Teeth-in-1Day™ to edentulous patients and immediate implant placement following extractions is becoming the treatment of choice. The patient’s existing denture is converted to a fixed-detachable prosthesis immediately following implant placement. This is accomplished by attaching titanium sleeves to the implants that project through holes cut in the denture and attaching them to the denture with cold-cure acrylic followed by shortening the denture flanges.

LOCATOR® is a registered trademark of Zest Anchors Company. The GoDirect™ and GPS™ Systems are neither authorized, endorsed nor sponsored by Zest Anchors Company.

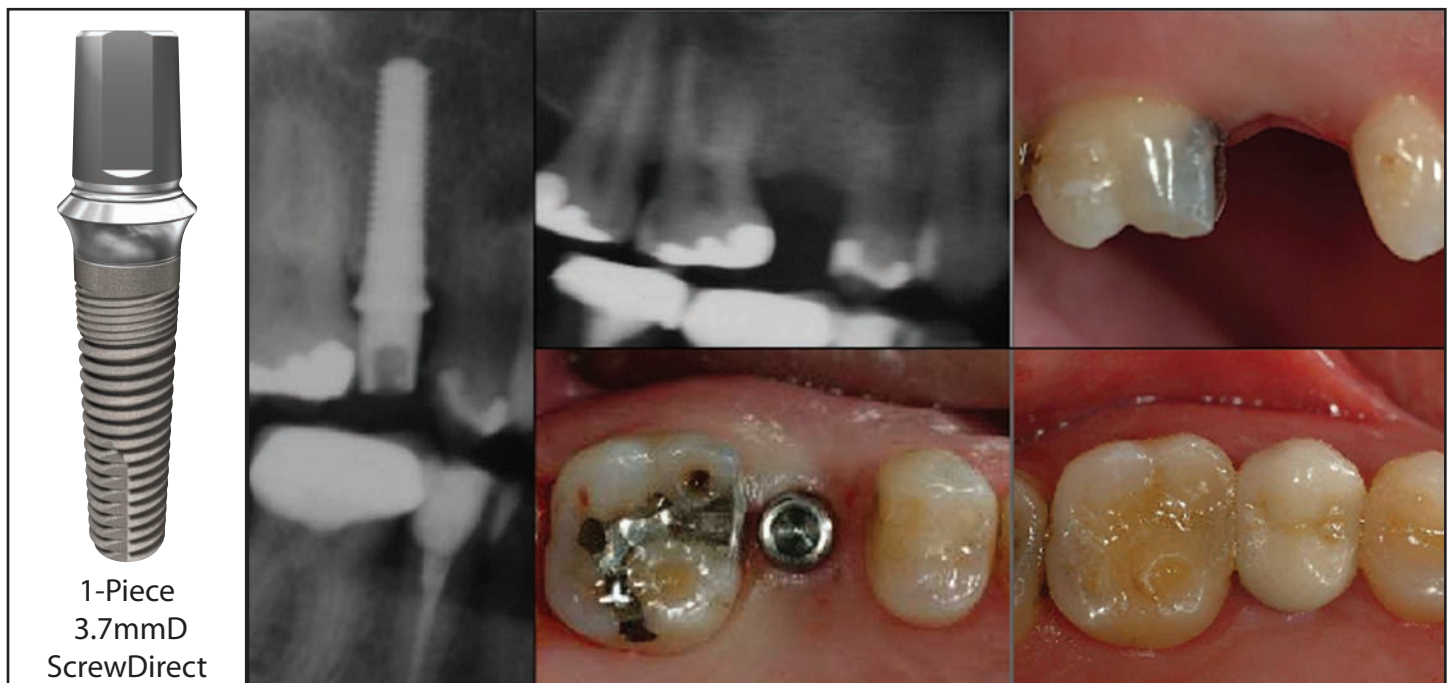
# Implant dentistry – A prosthetic discipline with a surgical component

The replacement of a single missing tooth with a root-form dental implant is a relatively simple surgical procedure that can be performed by GPs. Many GPs are initiated to implant dentistry by placing one-piece mini-implants less than 3mm in diameter using a flapless procedure primarily for stabilizing a complete lower denture. These implants are not approved by the FDA for permanent tooth replacement.

These mini-implants are not well suited for replacing a single missing tooth. They lack strength

tapered implant into a socket prepared with straight drills. Increased initial stability has proven critical for immediate load of free-standing, single tooth replacements, whether into an extraction socket or a healed edentulous area.

The use of a 35Ncm torque wrench is generally accepted to be the quantitative way of determining whether an implant is capable of supporting an abutment with a temporary crown immediately following insertion. Splinting multiple implants that



and surface area to withstand functional loads and do not offer an adequate diameter to create an esthetic emergence profile. Implant Direct offers the ScrewDirect™ 3.0mmD one-piece implant that flares to 3.7mmD above the bone, providing a straight abutment with a shoulder well suited for cementation of a single tooth restoration. This implant also has a retentive groove just above the 45 degree shoulder, and is provided with a snap-on comfort cap for temporary coverage and a snap-on transfer for an abutment level impression.

All of Implant Direct's one- and two-piece implants duplicate the surgical protocol developed by the author a decade ago to optimize initial stability in soft bone. This is accomplished by inserting a slightly

have achieved this level of initial stability has allowed the development of Teeth-in-1Day™ procedures for immediate function of implant supported, detachable prosthesis in edentulous jaws (see Article 2 in this series). The decision to place an implant without laying a flap depends on the clinician's ability to visualize the ridge width in order to determine adequate bone to support the implant without the need for bone grafting. This is accomplished by probing or by the use of a CT scan. Laying a flap allows better visualization and affords the opportunity to do bone grafting or ridge splitting.

Implant Direct's two-piece, bone-level implants are provided on a fixture-mount insertion tool that serves as a transfer and can be shortened for use as a snap-

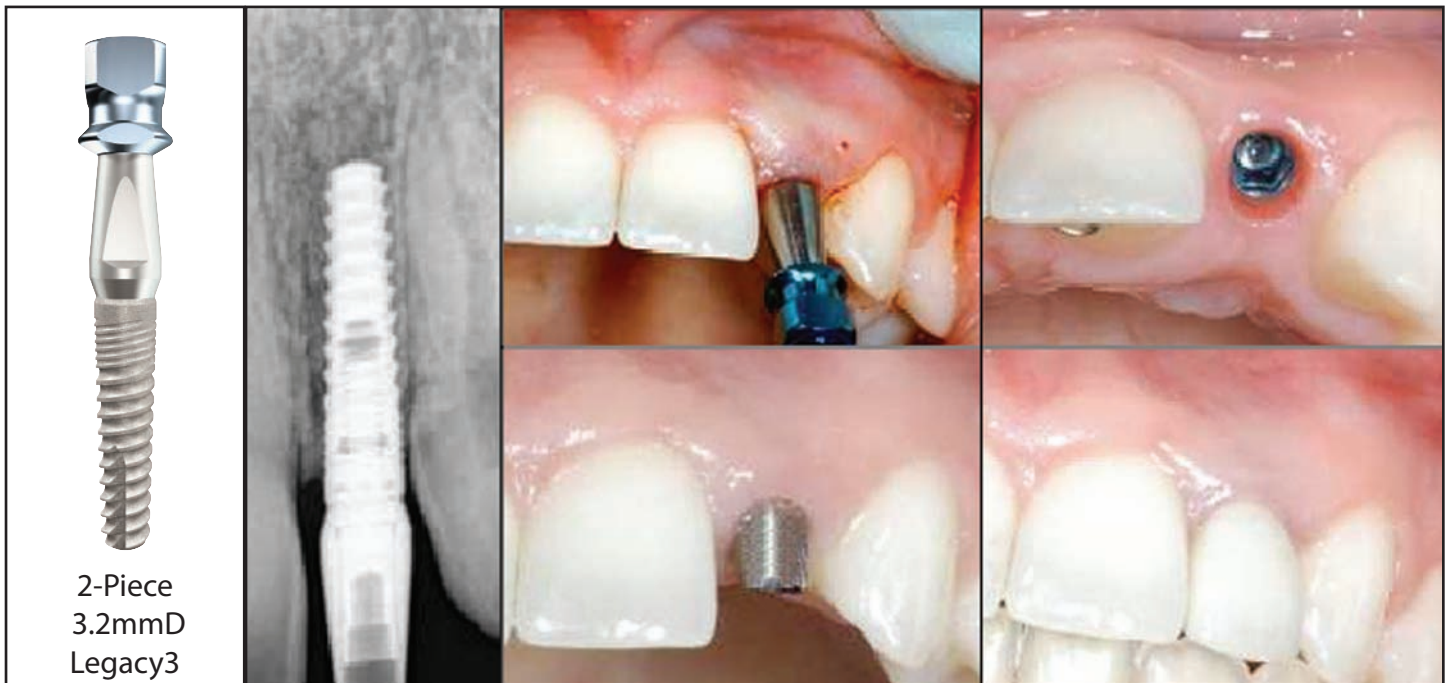
## Implant dentistry – A prosthetic discipline with a surgical component

on or preparable abutment. The fixture-mounts of the ScrewPlant™ and RePlus™ implants, when shortened, provide an abutment that duplicates the head of the ScrewDirect™ one-piece implant. The fixture-mounts of the Legacy™3 and ReActive™ implants, when shortened, provide an abutment that can be modified to a 12 degree angle for esthetics and parallelism. Providing these components free with the implants not only reduces costs but also simplifies inventory, eliminating the need to order additional components.

The Legacy™ implants with the internal bevel/hex connection developed by the author in 1986, are available in diameters ranging from 3.2mmD for narrow ridges to 7.0mmD implants for immediate placement in molar extraction sockets. When inserting implants, the flat of the fixture-mount should be

directed ("indexed") to the labial because Implant Direct's angled and straight abutments with contoured margins are indexed to the flat of the hex or to one of the tri-lobes. This allows stock abutments of varying margin heights and angles to be directed to the lingual for parallelism and esthetics.

This process, called indexing, is important to allow use of stock abutments with minimal preparation, should the free fixture-mount abutments not be suitable. The first choice from a cost factor would be the modified fixture-mount abutment. The second choice from a cost factor would be to modify a stock abutment intra-orally. The use of stock abutments should cost less than custom cast or cad-milled abutments and their use will shorten treatment time. Slight refining of the angle and margin of a stock



abutment, either in the mouth or on the working cast, can achieve the same degree of esthetic results as custom abutments.

Implant Direct is now introducing stock zirconia abutments in 0, 8 and 15 degrees with 1mm and 2mm collars. Unlike most zirconia abutments, the sintered zirconia copings are attached with resin cement to titanium bases, providing the strength and precision fit of machined titanium with esthetic tooth color of zirconia.

# The changing reality of the team approach to implant dentistry

The marketing dynamics within the dental implant industry are changing with regard to oral surgeons and periodontists growing or even maintaining their implant referral practices.

General practice dentists, who have traditionally worked in the team approach to provide optimal treatment for their patients, are realizing that the most profitable way to participate in the implant revolution is to start placing implants. In some cases, this is encouraged by the same implant sales reps who help increase referrals to the surgical specialists who use their implant systems.

The salesperson who offers to increase referrals by providing “technical support” through abutment selection or training on impression procedures, may achieve this objective by directing referrals away from another surgical specialist who does not use that salesperson’s implant system.

This pits one company’s sales force against another and surgical specialists against each other in competition for implant-referring dentists. These same salespeople who help increase implant referrals to a surgical specialist can hold that specialist captive with the veiled threat of redirecting those referrals to another surgical specialist if one does not stay loyal to using that salesperson’s system.

Surgical specialists find themselves victims of this shell game. They have to use three to four different implant systems to retain certain referring dentists and neutralize the threat of the salesperson switching to a surgical specialist more committed to that salesperson’s system.

Through all this, the surgical specialist is unable to select the system that offers the best clinical results and value. The confusion in ordering surgical instruments, implants, and related components for three to four different systems is an expensive and time-consuming problem.

Competition among surgical specialists for referrals is increasing, with some surgical specialists funding educational programs and study clubs. Many of the large implant practices were built by surgical specialists who assume an expanded role in the prosthetic phase. This includes buying and attaching abutments.

Some do this to capture some of the restorative fees at the expense of their referring dentists. Some general

dentists take advanced training in bone grafting procedures to treat cases previously believed to be the domain of the specialist.

These “implantologists” may seek referrals from GPs for placing the implants, or even travel to dental offices to place implants, sharing the surgical fee on a percentage basis. This not only supplements the dental practice income, it reduces the surgical costs to the patients, and saves more of the patients’ money for restorative procedures.

Another concern of surgical specialists is competition from corporate-sponsored implant “super centers” such as ClearChoice™, which is now in 20 U.S. cities. The company markets through TV commercials and full-page newspaper ads with celebrity endorsements. More general dentists also have expanded their marketing efforts for implant patients by advertising reduced prices. These create limitations on the fees of surgical specialists with a more informed public.

One answer for surgical specialists is to make implant dentistry easier and more profitable for their referring dentists, and more affordable for patients. All-in-1 implant packaging offers this solution.

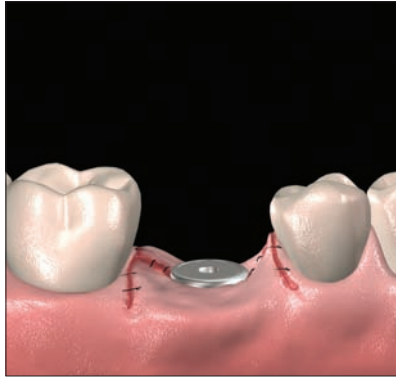
Implant Direct’s Legacy™3 internal hex and ReActive™ internal tri-lobe implants are provided on fixture-mounts that can be shortened to serve as preparable abutments for cemented restorations. Given the wide variety of options for cemented



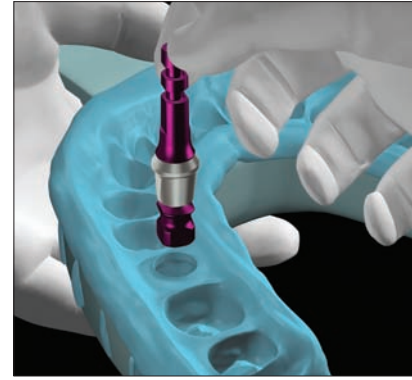
## The changing reality of the team approach to implant dentistry



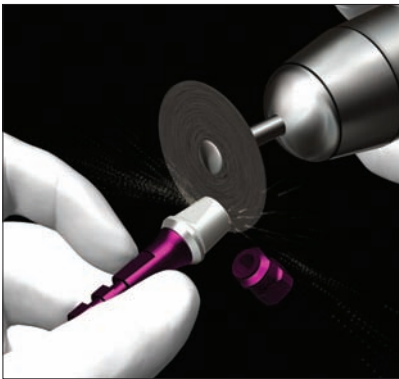
The Legacy3 and ReActive's FMT (fixture-mount/transfer) serve as a transfer and preparable abutment.



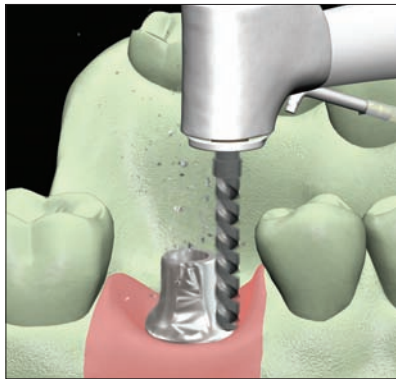
After surgery, the FMT is placed in an implant vial, labeled with tooth number, and sent to the restorative dentist.



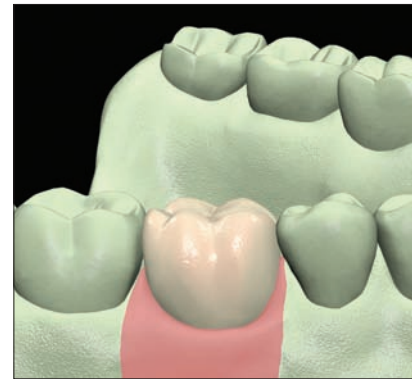
After making impressions, attach the FMT to matching colored implant analog and place in impression.



Section the FMT, removing the colored square with a thin disc, leaving the preparable abutment.



The abutment is prepared to adjust the height, angle, and margins. The dentist could also do this intraorally.



After the crown fabrication, the dentist attaches the abutment to implant at 30Ncm and the crown is cemented.

restorations, sending the transfer/abutment to the dentist is often a wiser decision than the surgeon selecting and attaching the abutment. The key is to involve restorative doctors in the treatment planning, and to educate them on the selection of abutments since this will increase their commitment to working on a team with the surgeon.

This also reduces dependence on salespeople who may not have adequate knowledge. Implant Direct has developed a series of e-mail thank you letters for surgical specialists that include a link to prosthetic procedures specific for the implant system selected. Team communication is further enhanced by transferring the fixture-mount to the dentist via the implant vial, with platform-type and tooth number marked.

Article No. 1 in this series discussed the evolution of the internal connection implant, introduced by the

author in 1982, to the 2009 Legacy3 (shown above) in six diameters and five lengths. Article No. 2 described use of the ScrewIndirect and GoDirect one-piece implants for edentulous applications, which eliminates the need for the restorative dentist to buy and attach an abutment. Article No. 3 described the use of both one- and two-piece implants with prosthetic abutments for cemented restorations

Increased competition dictates that surgical specialists learn more about the restorative requirements of their referring dentists, and choose a system that makes implant dentistry easier and more profitable for the team and patients.

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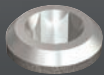
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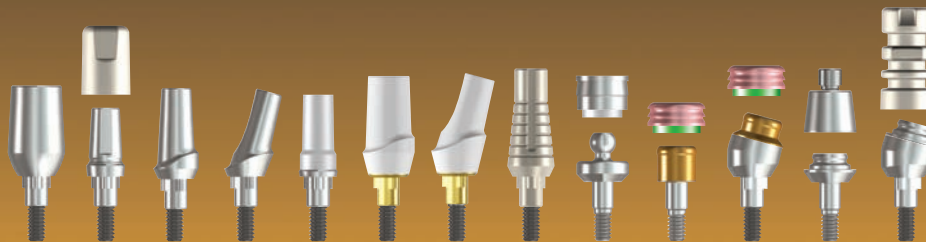
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