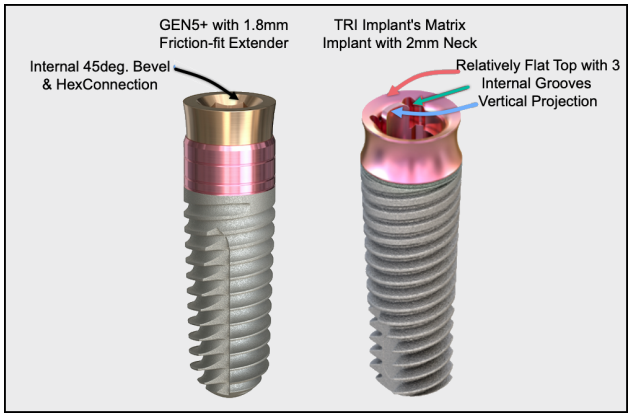
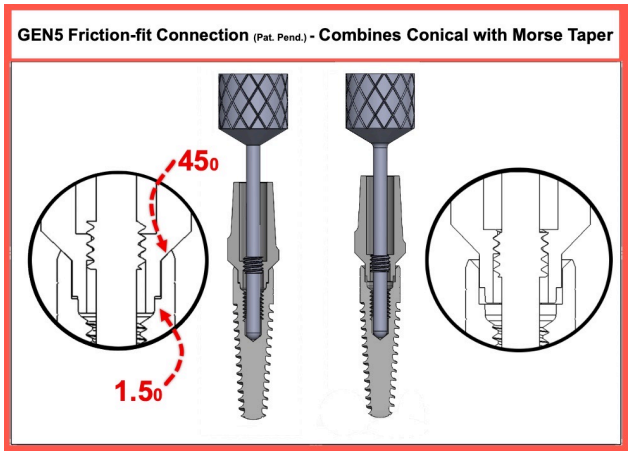
TRI-Dental's Matrix Implant

Patterson Dental announces distributorship of the Matrix implant from Switzerland. The Matrix implant is designed for direct attachment of the restoration to the top of the implant. The Marketing Claim is ***"The Tri Matrix implant technology allows for 3-5x more profit on the immediate crown".***

I take issue with TRI-Implant's marketing Claim "The Tri Matrix implant technology allows for 3-5x more profit on the immediate crown". I have been told that the US price for the Matrix implant will be $350. Paragon's GEN5 implant is set for launch the end of this year. It also has an anodized, extended neck suitable for direct attachment of a screw-retained single or multi-unit restoration. It will have a US list price of $100, adding only $50-$60 for an abutment. Therefore, the cost is about half that of the Matrix implant alone, disproving Matrix's claim of cost savings. If a dentist chooses to connect directly to the top of the Gen5 implant, its internal hex will provide anti-rotation for single unit restorations and its 45 degree, lead in bevel (verses Matrix's relatively flat top) will provide lateral stability.



TRI-Implant claims the Matrix is the first implant approved by the FDA for direct connection of the restoration to the top of the implant. The FDA does not restrict dentists from attaching a restoration directly to the top of any implant, but does restrict fabrication of direct connect restorations for Matrix implants to labs certified by the Tri-Implant Co.



The Conical Conection (Niznick Patent #4,960,381) was first introduced in 1986 with the Screw-Vent implant and became the cornerstone for modern implant designs. Paragon's new internal connection combines the 45 degree lead-in bevel and internal hex with a Morse Taper for friction fit stability. This innovation (Pat. Pend.) is designed to eliminate screw loosening and provide the long-term stability needed to minimize or eliminate micro-leakage that can lead to peri-implantitis. Complications arising from an unstable implant-restoration or implant-abutment connection could dramatically increase re-treatment costs and negatively impact long-term success.

TRI-Dental's Matrix Implant

Tobias Richter started and ran my EU sales from 2008-2010. He is a former employee and a friend. That does not prevent me from being critical of the Matrix implant. Every implant company is looking for USP (unique selling proposition) to differentiate its products from the competition. The Matrix's hook is direct connection to the top of the implant to save the cost of the abutment. This may be innovative from a marketing standpoint but it is fatally flawed for several reasons:

1. If the matrix sells in the US for $350 as I have been told, then it is $100-$200 more than what many companies sell an implant and abutment so there is no savings
2. The stability between the implant and whatever connects to it is critical for long-term success. Screwing a crown or bridge directly to the relatively flat surface of the Matrix implant cannot provide adequate stability and Tobias/Tri-implant should know this because their original implant copied my friction-fit patent that I sold in 2000 along with Core-Vent/Paragon to the predecessor of ZimVie.
3. There is nothing novel or proprietary about connecting the restoration directly to the top of the implant. It can be done as well or better to internal conical connections as to

Tobias S. Richter (He/Him)
Founder & CEO TRI #serialentrepreneur

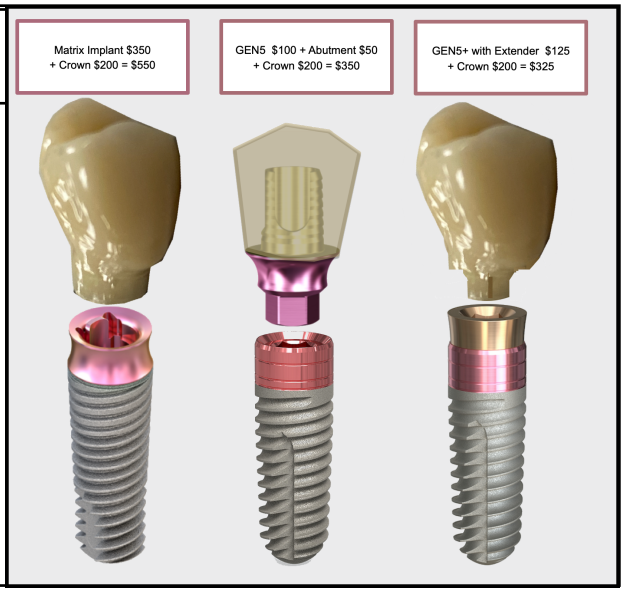
We announce our partnership with US leading **Patterson Dental** for our market entry in the USA🇺🇸! full press release 👉
https://lnkd.in/enfyW_MG

As a Patterson has a strong heritage as leader in chair-side digital dentistry, this partnership will emphasis the multiple benefits of modern day digital implant workflows in dental clinics. Using digital manufacturing technologies such as 3D printers and CAD/CAM milling machines, the TRI Matrix implant technology (NO ABUTMENT, NO CEMENT, NO LIMIT) allows with its TRI® matrix® Scan & Solution for more profit on the immediate crown, reduced chair-side time and immediate esthetic result for the clinician and his/her patient. **https://lnkd.in/**

Gerald Niznick DMD, MSD • `
Dental Implant Pioneer

"NO ABUTMENT, NO CEMENT, NO LIMIT"
…and NO STABILITY or COST SAVINGS

- The GEN5's friction-fit abutment provides the ultimate in stability to maintain the seal.
- The GEN5+ includes a 1.8mm friction-fit Extender that serves as the trans-mucosal base for attachment of abutments or direct attachment of restorations.
- The Extender has the same internal conical connection as the 3.2, 3.7 and 4.2 GEN5 implants. The Implant on far right is 4.7mmD.



GEN5™

PARAGON
IMPLANT COMPANY

40 YEARS OF INNOVATION

NIZPLANT™

* Includes Overdenture Attachment Components

40 YEARS OF INNOVATION

37 PATENTS - 4 SPECIFIC TO GEN5

USE THIS QR CODE TO VIEW THIS DOCUMENT ONLINE AND HAVE ACCESS TO THE LINKS INSIDE

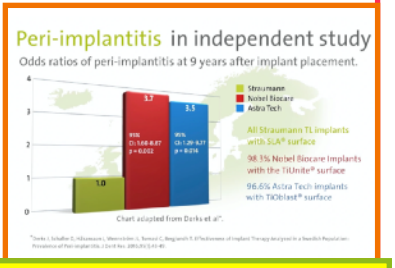
RESEARCH SUPPORTS REDUCTION OF PERI-IMPLANTITIS BY USING A HYBRID DESIGN SURFACE WITH THE IMPLANT-ABUTMENT JUNCTION SUPRA-CRESTAL
Applies to Straumann's TLX implant and Paragon's GEN5 implant BUT not the BLX

Dr. Niznick Article: AO News Vol.33 No. 2, 2022:

"Dr. Buser cites a Swedish 10-year study comparing three implants: Astra, NobelBiocare and Straumann's Tissue Level implant, claiming the latter exhibited significantly less peri-implantitis. Assuming part of the smooth neck of the Straumann TL implant was inserted in bone, this would give it a hybrid bone interface. It also adds the variable that the implant-abutment connection would be supra-crestal… [which] is at least as important a factor in minimizing peri-implantitis as a hybrid surface."

Dr. Michael Dard, Prof. NYU Interview:

1. Explains peri-implantitis and
2. Discusses results of the Derks et al study

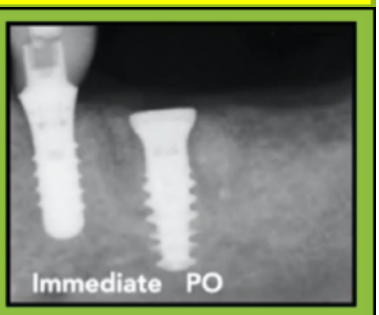


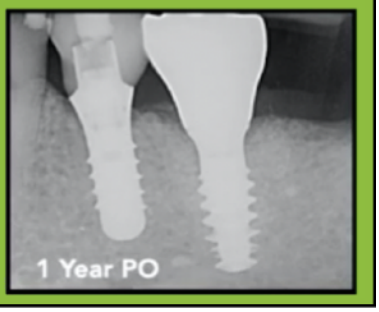
Video Lecture and interview of Dr. Daniel Buser, explaining importance of Hybrid Surface and how he partially submerges smooth neck of "Tissue Level" Implants

Dr. Daniel Buser explains insertion of Straumann's "Tissue Level" implant with 1.8mm of its 2.8mm smooth neck sub-crestal, leaving 1mm and the implant-abutment junction, supra-crestal.

Buser Quote on Straumann's Website:
"The Future of Implant Dentistry is with neck designs combining a smooth surface in the trans-mucosal area with a micro-rough surface inside the bone. As the Derks study showed, moving the micro-gap away from the bone and having a smooth surface in the peri-implant sulcus reduces the risk of peri-implant complications." Derks 9 Year Comparative Study

PARAGON'S GEN5 IMPLANT HAS A 2.5mm ANODIZED, SMOOTH NECK, CONFIGERED TO BE 1mm SUPRA-CRESTAL





Influence of Implant Placement Depth and Soft tissue Thickness on Crestal bone Stability Around Implant with and Without Platform Switching

This case control study measured early crestal bone changes around sub-crestal placed platform-switched implants surrounded by thin soft tissue and compared them with regular, matching-platform implants placed in a supra-crestal position and surrounded by thick soft tissue. After 1 year, mean bone loss was 0.28 mm (SD:0.36 mm; range: 0.1-1.63 mm) in the control group and -0.6 mm (SD:0.55 mm; range: 0.05-1.8 mm) in the test group. Platform-switched implants placed in a subcrestal position in vertically thin soft tissues showed statistically significantly more bone loss than non-platform-switched implants placed supra-crestal with vertically thick tissues.

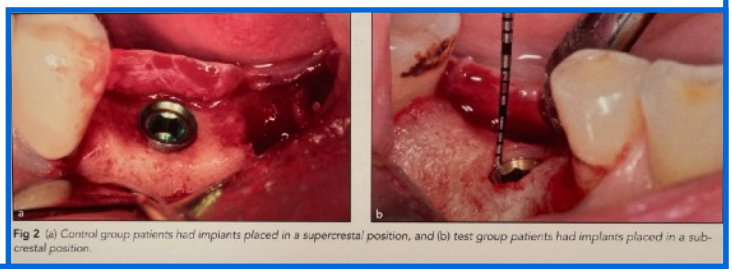
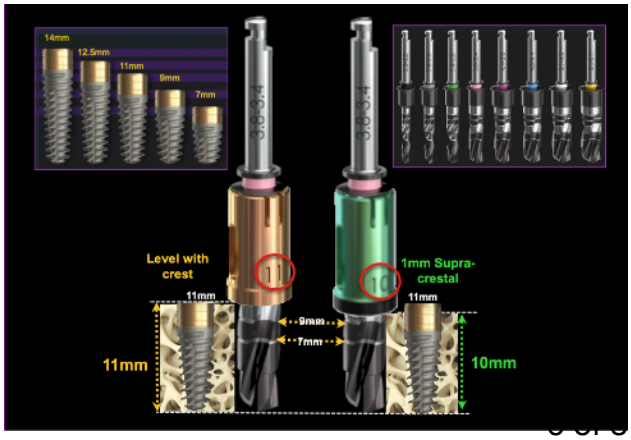
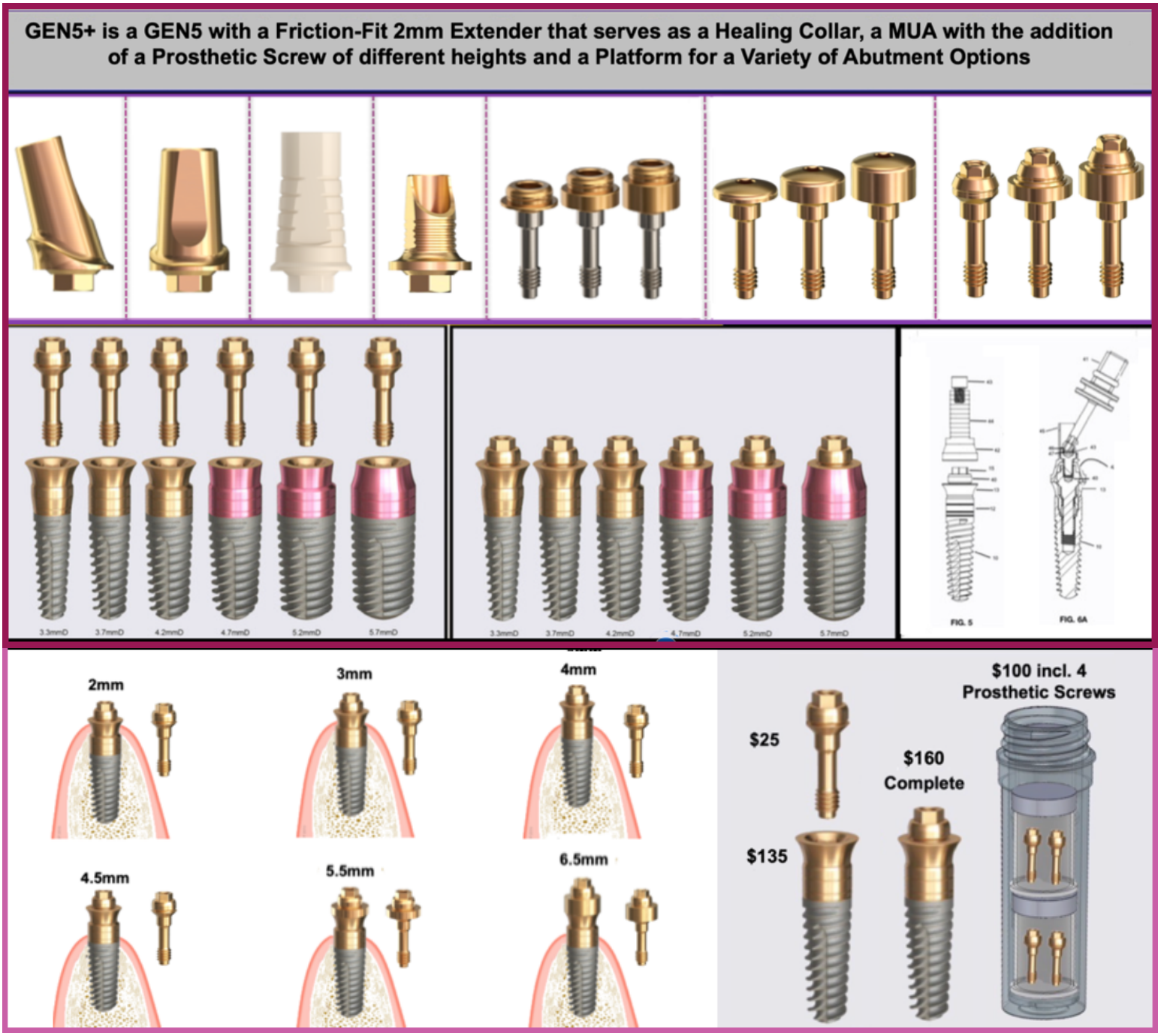


Fig 2 (a) Control group patients had implants placed in a supercrestal position, and (b) test group patients had implants placed in a sub-crestal position.

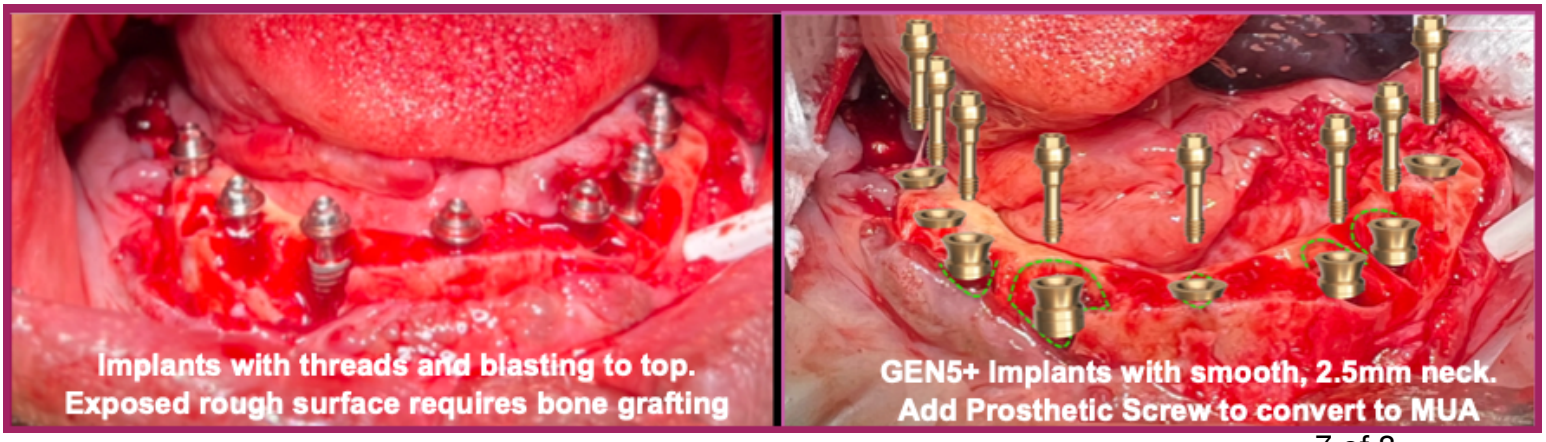
Paragon's GEN5™ , GEN5+ and NizPlant™ implants have the same implant body with a 2.5 mm machined, anodized neck. Depth gauge lines at 1 mm, 2 mm and 2.5 mm from the top (Pat. Pend.), along with 2 depths of drill stops, facilitate placement level with or 1mm above the crest of the ridge. The insertion depth control, in conjunction with the ability to varying the height of the prosthetic screw, minimizes the need and cost of maintaining an inventory of abutment heights. The GEN5+ offers the additional flexibility of a 2 mm friction-fit collar that can serve as the trans-mucosal collar of an abutment or be removed for abutment connection directly to the top of the implant for unprecedented vertical flexibility.

Each Paragon implant is 1 mm longer than the standard lengths of the respective Screw-Vent and Legacy implants. Paragon's surgical system includes two options of drill stops. One is for placement 1mm supra-crestal, which moves the implant-abutment junction away from the bone and and creates a 1mm supra-crestal zone of titanium for undisturbed soft tissue attachment when prosthetic components are attached and removed from the implant. The other drill stop positions the implant level with the highest point on the the ridge, usually on the lingual, leaving the smooth neck exposed if there is bone recession on the labial/buccal. The diameters of the drill stops and the freedom of rotation of the drills within the drill stops allow there use through surgical guide without the need for keys.





Simulated case (right) shows 8 GEN5+ implants replacing exposed implants (left). Little or no bone grafting needed because only smooth surfaces exposed. Attaching a Prosthetic Screw converts platform to standard MUA.

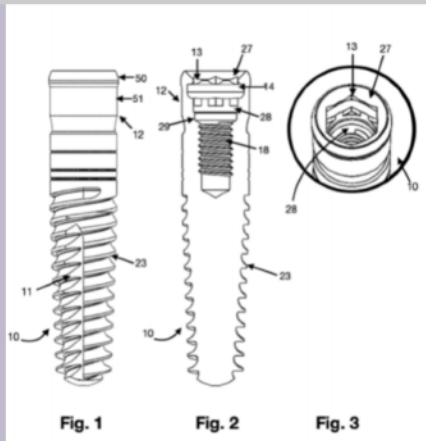


Patented Features of the 1-Piece NizPlant Implant with its Dual-Function Platform

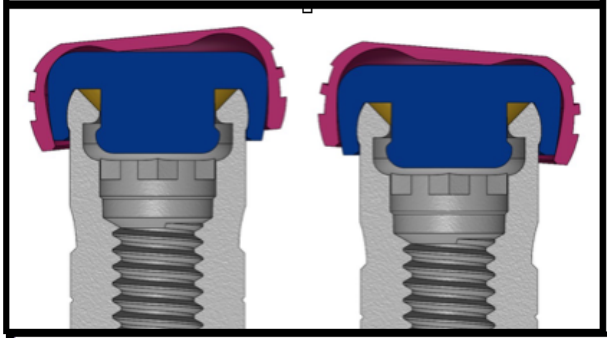
NIZPLANT 1-PIECE IMPLANT WITH DUAL FUNCTION PLATFORM FUNCTION AS OVERDENTURE AND MULTI-UNIT ABUTMENT

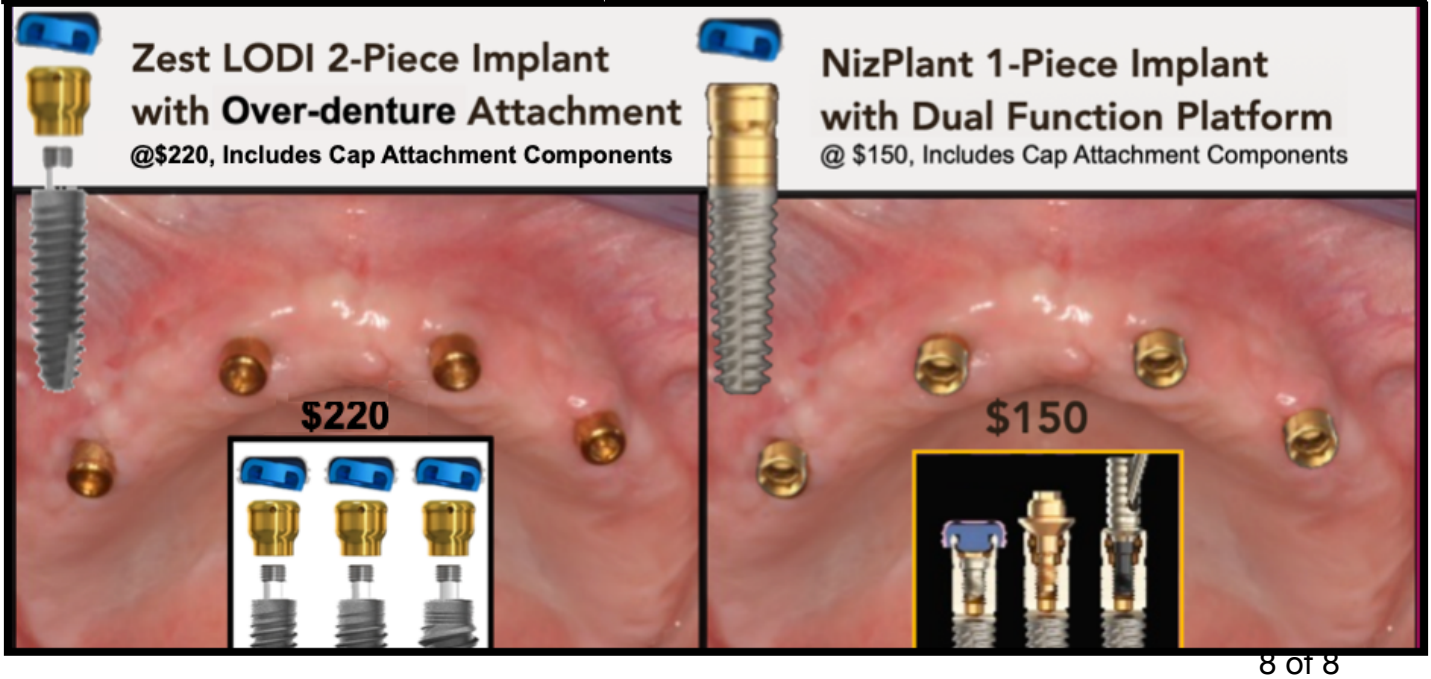
NizPlant 1-Piece Locator Compatible Implant with Internal Threads

ABSTRACT:
A screw-type endosseous dental implant includes, near the top on the implant's external surface, a ridge projecting laterally, and an internally-threaded shaft with a lead-in, beveled opening, an internal wrench-engaging surface located below said lead-in, beveled opening, and, below said internal wrench-engaging surface and above said internal threads, an internal under-cut/groove forming a chamber configured to receive a snap attachment for retention of an over-denture.



NizLoc Attachments Engage both outside and inside of the NizPlant implant. The male projection can be removed to reduce the degree of retention.





TRI-Dental's Matrix Implant

The FDA approved the Matrix Implant on the requirement "the manufacture of these abutments and restorations will be at TRI Dental Implant Int. AG. facilities." Whether that includes dental labs not owned by TRI would be open to question since the requirement refers to "the digital design file of the patient-matched components from the dentist **or dental lab."**

U.S. FOOD & DRUG ADMINISTRATION

December 21, 2021

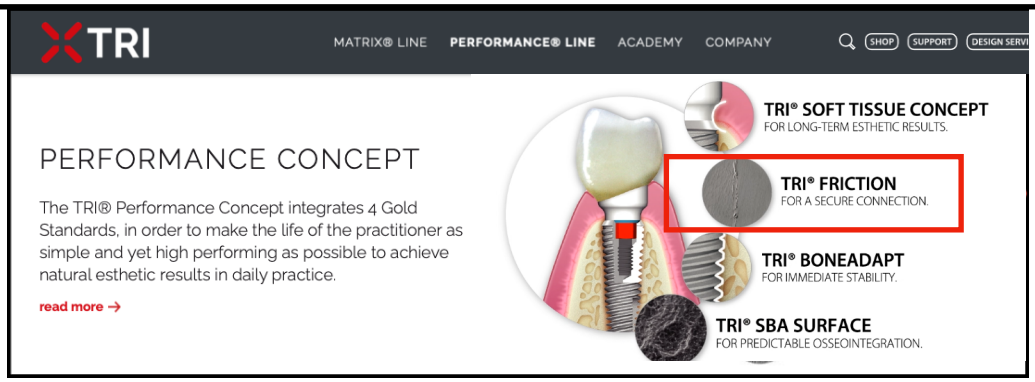
The purpose of this submission is to obtain marketing clearance for the TRI-matrix® Implant Line, a series of bone-level and tissue-level root-form endosseous dental implants, corresponding healing components, abutments, and abutment screws intended for use in the mandible or maxilla to restore chewing function. The permanent abutment design in the product line is a patient-specific abutment manufactured using CAD-CAM technology, which also may be manufactured as a direct final direct restoration. The manufacture of these abutments and restorations will be at TRI Dental Implant Int. AG facilities after receipt of the digital design file of the patient-matched components from the dentist or dental lab.

Crown Abutments are patient-specific abutments, fabricated using CAD/CAM technology at a TRI Dental Implants Int. AG manufacturing site. Each abutment is designed according to prescription instructions from the clinician to support a screw-retained prosthesis. The Crown Abutment is different from a normal Titanium Blank abutment because the implant-abutment connection is manufactured at the same time as the patient-specific portion (i.e., there is no stock component). Crown Abutments are

Before TRI started selling the Matrix implant a year or so ago, it was selling a clone of the Tapered Screw-Vent with the 45 degree lead-in bevel and its friction-fit abutment created by tapering the male hex (Niznick US Patent Sold to ZimVie in 2001). TRI claimed their implant "Performance Concept integrates 4 Gold Standards," one of which was a fiction-fit between the abutment and the internal connection of the implant. Now, to create a unique selling proposition to distinguish its products from the rest of the competitors, it is promoting the Matrix implant, claiming it does not even need an abutment…. Just seat the restoration of the relatively flat shoulder of the implant with a single vertical projection for

What is claimed is:

1. An endosseous dental implant having an internal, multi-sided top opening wherein the sides of said internal top opening are substantially untapered, and are substantially parallel to the longitudinal axis of said endosseous dental implant, and an abutment adapted for use with said dental implant, said abutment including a hollow tubular member of a size and shape adapted for use as an abutment, said tubular member having, at one end, unthreaded retention means for anti-rotationally engaging, interlocking and interfitting with said internal, multi-sided top opening, said unthreaded retention means on said abutment tapering downwardly and inwardly from said one end and locking into said internal, multi-sided top opening when seated in said internal, multi-sided top opening, said tubular member including an internal passage adapted to receive fastener means for engaging complementary fastener means inside said implant.



TRI Implant claims in its Matrix marketing that connecting the restoration "directly on the implant without the use of an abutment" will give the dentist "Peace of Mind". This is a direct contradiction of its claim that a friction-fit abutment was needed "for a secure connection."