

Analysis of the Shortcomings of Zest's Locator Implant System and "Fixed" Solution

Zest's Overdenture implant is a tapered screw with a threaded post projecting upwards from an external hex used to insert the implant. The threaded projection limits the function of this implant to the attachment of a locator abutment. Because the implant does not have an internal shaft, it can be made in two diameters under 3.0mm. The smaller the diameter, the less engagement with and support from the bone. Small diameter implants are also more vulnerable to fracture and overloading. Internal conical connection implants are in wide clinical use because of the stability and versatility of the connection. Unlike the Zest implant, internal conical connection implants allows attachment of a variety of straight and angled abutments for overdentures, screw-retained bridges and cemented restorations. Insertion of Zest Overdenture implants are a dead-end solution in that they offer no options should the patient wish to upgrade from an overdenture to a fixed prosthesis. Furthermore, if the bone dictates the need to insert the implant at an angle to avoid the sinus or other vital structures, the Zest Implant/abutment connection does not allow for angle correction.

\$220 if ordered as All-in-1 Packaging; \$270 if implant and abutment ordered separately Compared to \$150 For NizPlant with All-in-1 Packaging




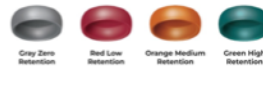


All-Inclusive Package



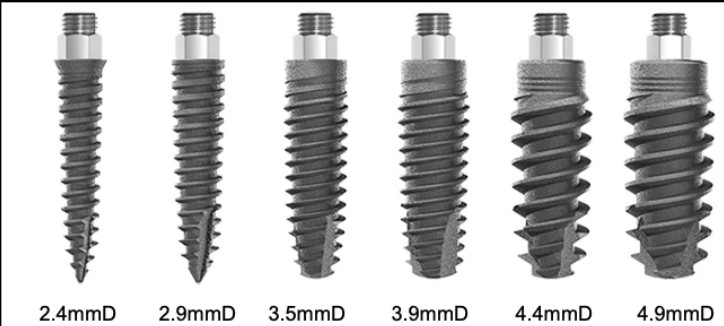
Includes: 1 Implant, 1 LOCATOR Abutment, 1 Processing Pack

All-in-1 packaging should simplify the ordering and add value but in Zest's case, packaging of the Locator abutment with the implant adds a layer of complexity that is unavoidable. With 6 implant diameters, 4 implant lengths and 5 abutment heights, the dentist wanting to take advantage of the All-in-1 \$50 savings over buying the Implant and abutment separately, has **a total of 120 combinations to choose from**. While the dentist can select the right length and diameter of implant based on treatment planning with a Cone Beam CT scan, one cannot predict the thickness of the tissue prior to surgery. The height of the abutment provided in the All-in-1 package may need to be changed, necessitating the dentist also inventory a selection of abutment heights to substitute for the one that came with the implant. To further add confusion and cost, Zest offers two different types of locator abutments for its Implants with the Locator R-Tx adding another \$50 to the cost. This price difference cannot be justified since the cost of manufacturing the R-Tx abutment relative to the Locator abutment is probably less than a few dollars more.

This problem compounds itself because the dentist needs to keep an inventory of both the Standard Inserts that can accommodate 20 degrees of divergence, the Extended Range Inserts that can accommodate 40 degrees of divergence and the R-Tx abutments (adding \$220 to the cost of the \$100 Implant) can accommodate 60 degrees of divergence. Zest does not offer angled Locator or R-Tx abutments to correct the mis-alignment at time of

<p>10° 20° 10° Standard Inserts</p> <p>Dual retention to maximize stability and pivoting action that accommodates up to 20 of total divergence between two implants</p>   <p>Blue Low Retention Pink Medium Retention Clear High Retention</p>	<p>20° 40° 20° Extended Range Inserts</p> <p>Pivoting action accommodates up to 40 of the total divergence between two implants.</p>   <p>Gray Zero Retention Red Low Retention Orange Medium Retention Green High Retention</p>	 <p>\$169.99 LOCATOR Overdenture Implant System Abutment</p>  <p>\$219.99 LOCATOR R-Tx for LOCATOR Overdenture Implant System</p>
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Below are the 5 Locator abutment height options and the 6 Zest implant diameter options, each available in only 4 lengths. The 6mm high Locator and all 5 heights of R-Tx abutments can only be purchased individually. On the right are the prepackaged options for the 3.5mmD Implant. In total, the dentist has to choose from 96 pre-packaged combinations with 240 in total.



3.5mm

Part	Length	Cuff
07501-02	8mm	2.5mm
07502-02	10mm	2.5mm
07503-02	12mm	2.5mm
07504-02	14mm	2.5mm
07501-03	8mm	3mm
07502-03	10mm	3mm
07503-03	12mm	3mm
07504-03	14mm	3mm
07501-04	8mm	4mm
07502-04	10mm	4mm
07503-04	12mm	4mm
07504-04	14mm	4mm
07501-05	8mm	5mm
07502-05	10mm	5mm
07503-05	12mm	5mm
07504-05	14mm	5mm
07501	8mm	Implant Only
07502	10mm	Implant Only
07503	12mm	Implant Only
07504	14mm	Implant Only

Compare the NizPlant with 24 implants to the Zest System

The NizPlant implant comes packaged with all the overdenture attachment components for only \$150. NizPlant has 5 lengths and 6 diameters for 30 variations with the abutment platform of this 1-piece implant the same for all implants. The variation in tissue depth is managed by the placement depth of the implant and is determined chair-side as the implant approaches full seating. This is made possible because the implant has a 2.5mm long smooth neck with score lines and, like the GEN5 implants, the implant portion adds 1mm to the length of each implant. To this is added an additional 3mm of height for the abutment portion of the 1-piece implant. If the dentist prepares the site for a 13mm implant, 4 mm will project above the bone. If the site is prepared to a drill depth of 11.5mm, 5.5mm will project above the bone. Alternately, if the 11.5mm implant is selected but the site is prepared to the 13mm line on the drill, only 2.5mm will project above the bone, corresponding to the shortest abutment height offered with the Locator implant system. An additional 1.5mm of height can be gained by adding the extender abutment that duplicates the cap-engaging outer surface of the implant platform.

The platform of the NizPlant serves a dual function as a 1-piece implant with an overdenture attachment platform and a 2-piece implant with a 45 degree lead-in bevel plus a internal hex and threads. By removing its internal set screw and attaching an abutment or coping, the NizPlant can be converted to a MUA. The coping includes an Angled Screw Channel for 25 degree angle correction.



GEN5™



PARAGON IMPLANT COMPANY 40 YEARS OF INNOVATION

NizPLANT™

* Includes Overdenture Attachment Components



PARAGON

Simply Smarter™

GERALD NIZNICK, DMD, MSD

40 YEARS OF INNOVATION 37 PATENTS - 4 SPECIFIC TO GEN5



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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:

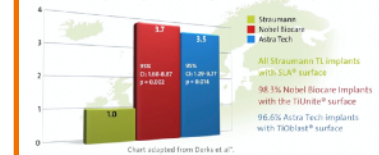
"Dr. Buser cites a Swedish 10-year study comparing three implants: Astra, NobelBiocare and Straumann's Tissue Level implant, claiming the latter exhibited significantly less peri-implantitis. Assuming part of the smooth neck of the Straumann TL implant was inserted in bone, this would give it a hybrid 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](#)

Peri-implantitis in independent study

Odds ratios of peri-implantitis at 9 years after implant placement.



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

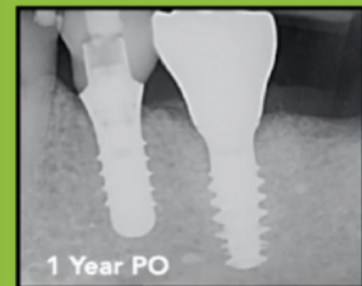
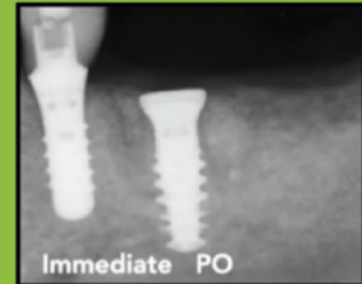
Dr. Daniel Buser explains insertion of Straumann's "Tissue Level" implant with 1.8mm of its 2.8mm smooth neck sub-crestal, leaving 1mm and the implant-abutment junction, supra-crestal.



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, CONFIGURED 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.**

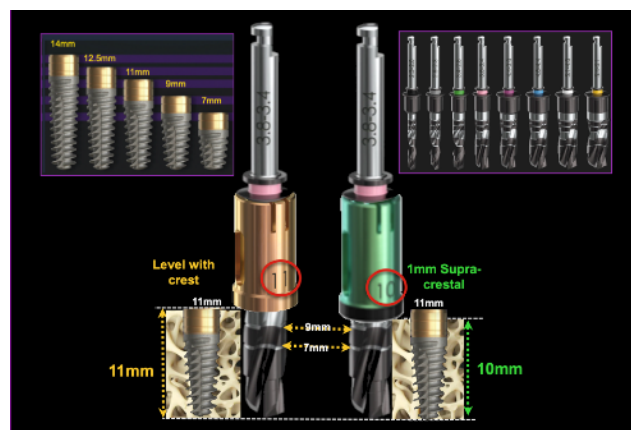


Fig 2 (a) Control group patients had implants placed in a supercrestal position, and (b) test group patients had implants placed in a sub-crestal position.

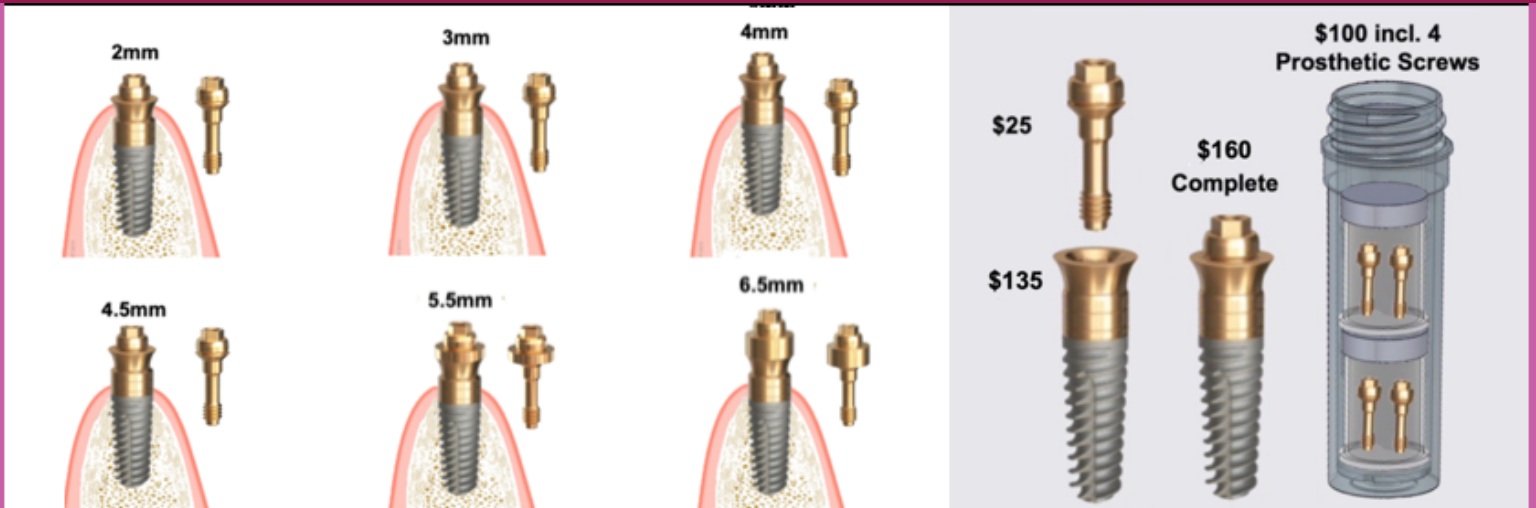
Paragon's GEN5™, GEN5+ and NizPlant™ implants have the same implant body with a 2.5 mm machined, anodized neck. Depth gauge lines at 1 mm, 2 mm and 2.5 mm from the top (Pat. Pend.), along with 2 depths of drill stops, facilitate placement level with or 1mm above the crest of the ridge. The insertion 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.



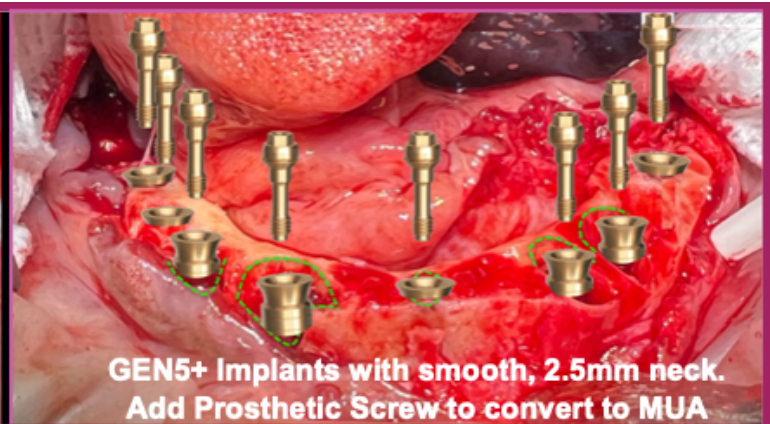
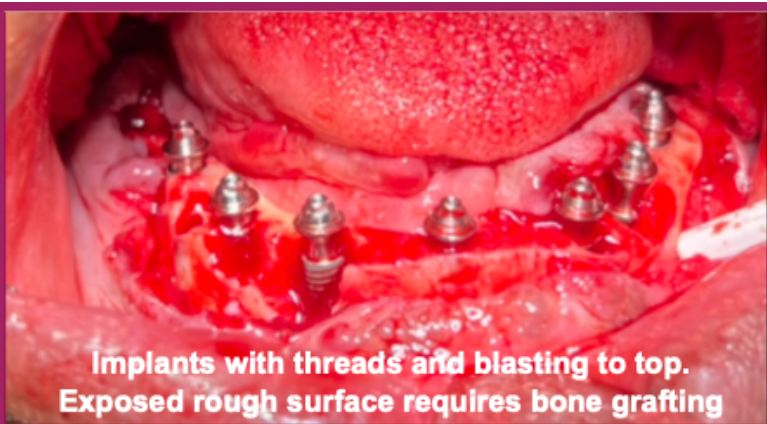
Each Paragon implant is 1 mm longer than the standard lengths of the respective Screw-Vent and Legacy implants. Paragon's surgical system includes two options of drill stops. One is for placement 1mm supra-crestal, which moves the implant-abutment junction away from the bone and creates a 1mm supra-crestal 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 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.



GEN5+ is a GEN5 with a Friction-Fit 2mm Extender that serves as a Healing Collar, a MUA with the addition of a Prosthetic Screw of different heights and a Platform for a Variety of Abutment Options



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 undercut/groove forming a chamber configured to receive a snap attachment for retention of an over-denture.

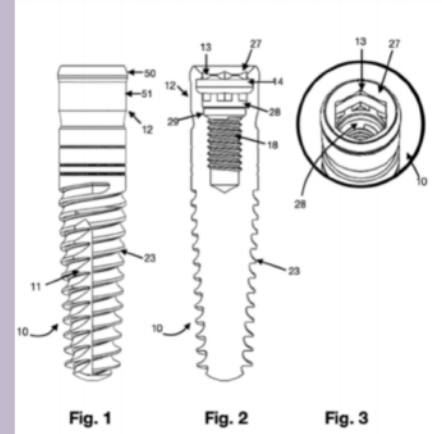
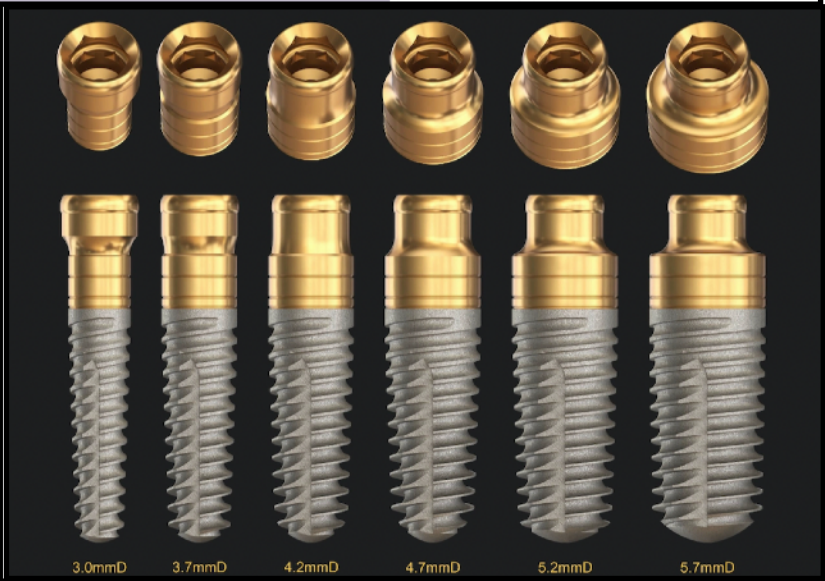
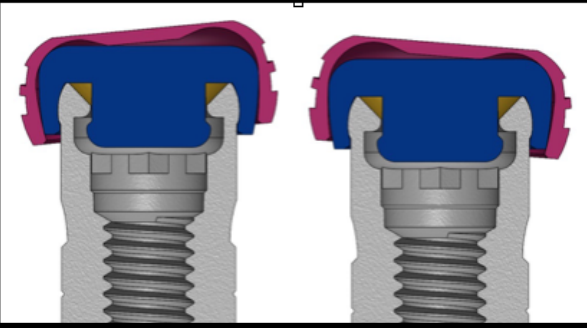


Fig. 1 Fig. 2 Fig. 3



Cap Attachment MUA ASC Abutment

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



Zest LODI 2-Piece Implant with Over-denture Attachment
@ \$220, Includes Cap Attachment Components

NizPlant 1-Piece Implant with Dual Function Platform
@ \$150, Includes Cap Attachment Components

