

T3 Implant With DCD Implant Clinical Case Presentation

Clinical Treatment by Dr. Tiziano Testori¹ & Dr. Fabio Scutellá¹



Figure 1
Hopeless central incisors.



Figure 2
Two T3 DCD Tapered Implants
5 mm(D) x 4.1 mm(P) x 13 mm(L) placed
immediately after extractions.



Figure 3
Two PrePerformance[®] Provisional Posts
adjusted intraorally.



Figure 4
An acrylic-resin splinted provisional
restoration was cemented to the
PrePerformance Posts.



Figure 5
One month follow-up.



Figure 6
Final result with definitive prosthesis six
months post-extractions and implant
placement. Note the maintenance of the
facio-palatal width.

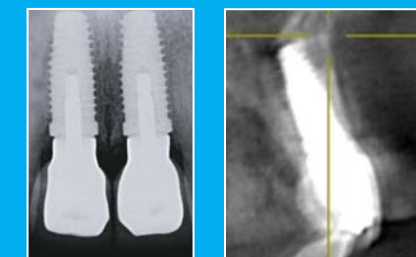


Figure 7
Periapical at six months
follow-up showing bone
preservation both distally
and mesially.

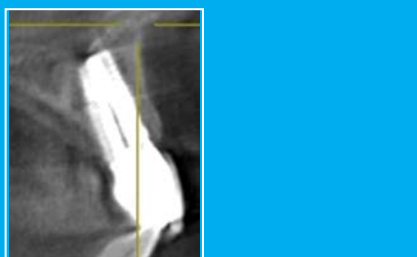


Figure 8
Cone beam images at six months.
Note the facial wall thickness
is maintained at 2.7 mm.



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¹ Dr. Block, Dr. Goené, Dr. Grunder, Dr. Lazzara, Dr. Makigusa, Dr. Meltzer, Dr. Méndez, Dr. Meyenberg, Dr. Nevins, Dr. Östman, Dr. Rodriguez, Dr. Segalá, Dr. Scutellá, Dr. Tarnow, Dr. Testori and Dr. Vela have financial relationships with Biomet 3i, LLC resulting from speaking engagements, consulting engagements and other retained services.

¹ Dr. Gubbi, Mr. Suttin and Mr. Towse contributed to the above research while employed by Biomet 3i.
References 6-10 discuss the Tapered Implant macrodesign, which is incorporated into the T3 Implant. References 10-13 discuss the Osseotite and/or NanoTite Implants' dual acid-etched or DCD technology, which is incorporated into the T3 Implant. References 20-22 discuss PREVAIL[™] Implants with an integrated platform switching design, which is also incorporated into the T3 Implant.

(D) = Diameter
(P) = Platform

Ordering Information



T3

Length	4.0 mm (D) x 3.4 mm (P)	5.0 mm (D) x 4.1 mm (P)	6.0 mm (D) x 5.0 mm (P)
8.5 mm	BOPT4385	BOPT5485	BOPT6585
10 mm	BOPT4310	BOPT5410	BOPT6510
11.5 mm	BOPT4311	BOPT5411	BOPT6511
13 mm	BOPT4313	BOPT5413	BOPT6513
15 mm	BOPT4315	BOPT5415	BOPT6515

T3 With DCD

Length	4.0 mm (D) x 3.4 mm (P)	5.0 mm (D) x 4.1 mm (P)	6.0 mm (D) x 5.0 mm (P)
8.5 mm	BNPT4385	BNPT5485	BNPT6585
10 mm	BNPT4310	BNPT5410	BNPT6510
11.5 mm	BNPT4311	BNPT5411	BNPT6511
13 mm	BNPT4313	BNPT5413	BNPT6513
15 mm	BNPT4315	BNPT5415	BNPT6515

T3

Length	4.0 mm (D) x 3.4 mm (P)	5.0 mm (D) x 4.1 mm (P)	6.0 mm (D) x 5.0 mm (P)
8.5 mm	BOPS4385	BOPS5485	BOPS6585
10 mm	BOPS4310	BOPS5410	BOPS6510
11.5 mm	BOPS4311	BOPS5411	BOPS6511
13 mm	BOPS4313	BOPS5413	BOPS6513
15 mm	BOPS4315	BOPS5415	BOPS6515

T3 With DCD

Length	4.0 mm (D) x 3.4 mm (P)	5.0 mm (D) x 4.1 mm (P)	6.0 mm (D) x 5.0 mm (P)
8.5 mm	BNPS4385	BNPS5485	BNPS6585
10 mm	BNPS4310	BNPS5410	BNPS6510
11.5 mm	BNPS4311	BNPS5411	BNPS6511
13 mm	BNPS4313	BNPS5413	BNPS6513
15 mm	BNPS4315	BNPS5415	BNPS6515

Tapered Implants

T3 Non-Platform Switched

Length	3.25 mm (D) x 3.4 mm (P)	4.0 mm (D) x 4.1 mm (P)	5.0 mm (D) x 5.0 mm (P)	6.0 mm (D) x 6.0 mm (P)
8.5 mm	BOST3285	BOST485	BOST585	BOST685
10 mm	BOST3210	BOST410	BOST510	BOST610
11.5 mm	BOST3211	BOST411	BOST511	BOST611
13 mm	BOST3213	BOST413	BOST513	BOST613
15 mm	BOST3215	BOST415	BOST515	BOST615

T3 Non-Platform Switched With DCD

Length	3.25 mm (D) x 3.4 mm (P)	4.0 mm (D) x 4.1 mm (P)	5.0 mm (D) x 5.0 mm (P)	6.0 mm (D) x 6.0 mm (P)
8.5 mm	BNST3285	BNST485	BNST585	BNST685
10 mm	BNST3210	BNST410	BNST510	BNST610
11.5 mm	BNST3211	BNST411	BNST511	BNST611
13 mm	BNST3213	BNST413	BNST513	BNST613
15 mm	BNST3215	BNST415	BNST515	BNST615

Parallel Walled Implants

T3 Non-Platform Switched

Length	3.25 mm (D) x 3.4 mm (P)	4.0 mm (D) x 4.1 mm (P)	5.0 mm (D) x 5.0 mm (P)	6.0 mm (D) x 6.0 mm (P)
8.5 mm	BOSS385	BOSS485	BOSS585	BOSS685
10 mm	BOSS310	BOSS410	BOSS510	BOSS610
11.5 mm	BOSS311	BOSS411	BOSS511	BOSS611
13 mm	BOSS313	BOSS413	BOSS513	BOSS613
15 mm	BOSS315	BOSS415	BOSS515	BOSS615
18 mm	BOSS318	BOSS418	N/A	N/A

T3 Non-Platform Switched With DCD

Length	3.25 mm (D) x 3.4 mm (P)	4.0 mm (D) x 4.1 mm (P)	5.0 mm (D) x 5.0 mm (P)	6.0 mm (D) x 6.0 mm (P)
8.5 mm	BNSS385	BNSS485	BNSS585	BNSS685
10 mm	BNSS310	BNSS410	BNSS510	BNSS610
11.5 mm	BNSS311	BNSS411	BNSS511	BNSS611
13 mm	BNSS313	BNSS413	BNSS513	BNSS613
15 mm	BNSS315	BNSS415	BNSS515	BNSS615
18 mm	BNSS318	BNSS418	N/A	N/A

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T3[®] Implant

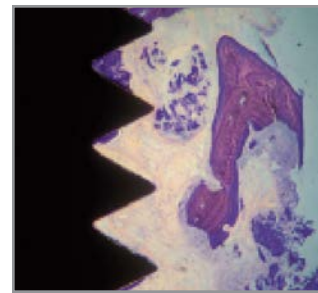
Preservation By Design[®]



Preservation Is Key To Aesthetics

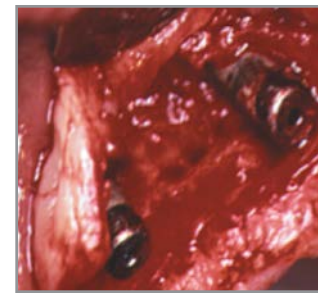
Certain Connection

Traditional Challenges to Aesthetic Outcomes



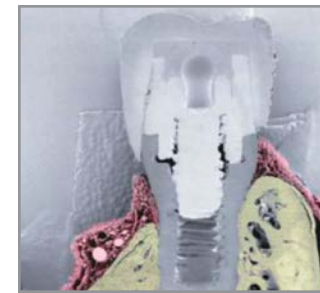
Delayed Osseointegration

Implants lacking a complex surface topography¹ and primary stability require more time for osseointegration.²



Peri-implantitis

The prevalence of implants experiencing peri-implantitis has been reported in excess of 12%.^{3,4}



Crestal Bone Loss

Average implant crestal bone remodeling can exceed 1.5 mm following the first year of function, leading to compromised aesthetics.⁵

T3 Implant is Designed to Deliver Aesthetic Results Through Tissue Preservation



Contemporary Hybrid Surface

Provided by complex multi-surface topography

Seal Integrity

Provided by a stable and tight implant/abutment interface

Integrated Platform Switching

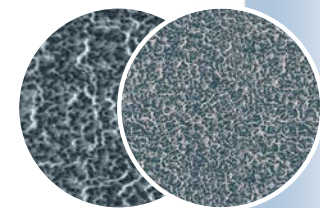
Provided by a medialized implant/abutment junction

Contemporary Hybrid Surface

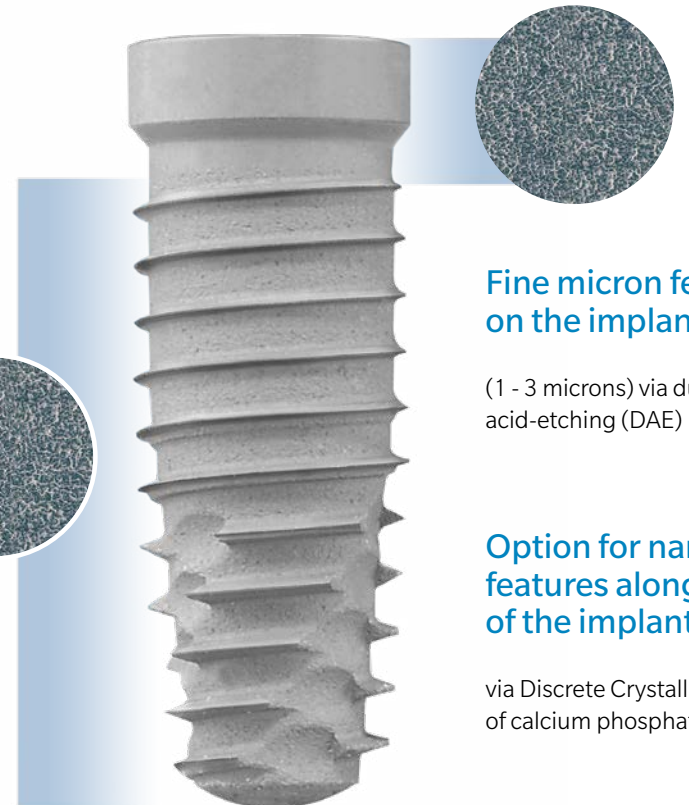
Coarse and Fine Micron Surface Features Create an Average Mean Surface Roughness Value of 1.4 µm in the Threaded Portion of the Implant.¹⁴

Coarse and fine micron features

Coarse: (10+ microns) via resorbable calcium phosphate media blast



Fine: (1 - 3 microns) via dual acid-etching (DAE) on top of the blasted surface



Fine micron features on the implant collar

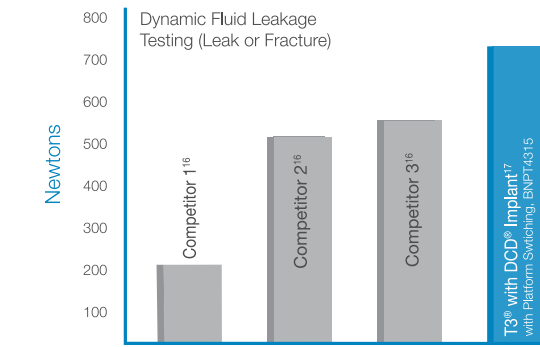
(1 - 3 microns) via dual acid-etching (DAE)

Option for nano-scale features along the full length of the implant

via Discrete Crystalline Deposition (DCD)[®] of calcium phosphate

Seal Integrity

A stable, tight implant/abutment interface minimizes abutment micromotion and reduces potential microleakage.¹⁵



Results of preclinical testing are not necessarily indicative of clinical performance.

- Seal integrity test was performed by Biomet 3i July 2011 - June 2012. In order to test the implant systems, a dynamic - loading leakage test was developed and executed. The test set-up was adapted from ISO 14801, Dentistry - Implants - Dynamic Fatigue Test for Endosseous Dental Implants.
- Five samples each of the three competitive implant systems were evaluated.
- The mean seal strength (N) at which each of the systems leaked or fractured is detailed in the graph.
- Bench test results are not necessarily indicative of clinical performance.

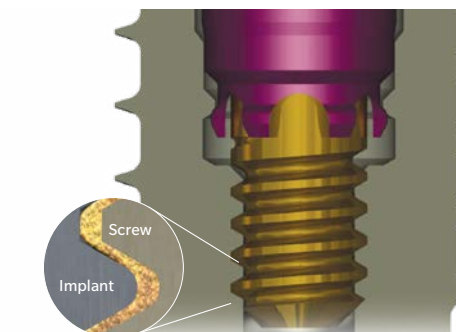
Implant/abutment seal strength

Designed to reduce microleakage through exacting interface tolerances and maximized clamping forces.

Implant/abutment clamping force

Use of the Gold-Tite[®] Screw increases Certain[®] Implant/abutment clamping force by 113% vs. a non-coated screw.¹⁸

Proprietary Gold-Tite Surface Lubrication allows the screw to rotate further, increasing clamping force and maximizing abutment stability.¹⁹



Integrated Platform Switching

Bone remodeling with integrated platform switching

Integrated platform switching medializes the implant/abutment junction (IAJ) inward, creating a biologic width between connective tissue and the IAJ, helping to maintain bone levels.²⁰

Reduced crestal bone loss

Studies show implants with the integrated platform switching feature demonstrated crestal bone loss as low as 0.37 mm.²¹

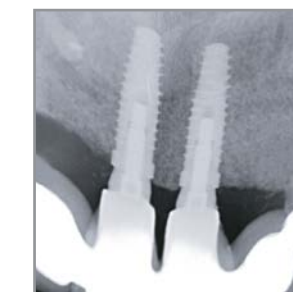
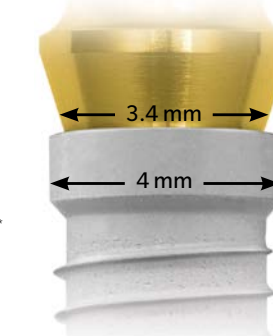


Image courtesy of Dr. Xavier Vela¹, Spain.

Reduction in crestal bone remodeling vs. non platform-switched implants²²

A medialized implant/abutment junction provides support for connective tissue, reducing the potential for recession by 50%.^{*}



Contemporary Hybrid Implant Design

Primary Stability^{6,7,8}

Initial Bone-to-Implant Contact is a major contributor to the implant's stability.⁹The specifications of the T3 Implant are held to rigorous tolerances to provide a closely integrated implant-to-osteotomy fit, creating a dental implant system that helps to achieve primary stability.

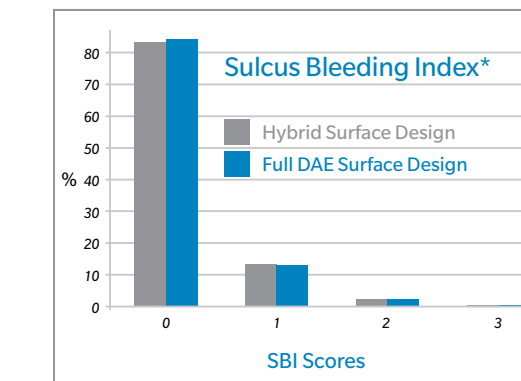
Osseointegration^{10,11}

In preclinical studies^{*}, the T3 with DCD Surface demonstrated increased integration strength throughout the healing phase as compared to less complex surface topographies.¹¹

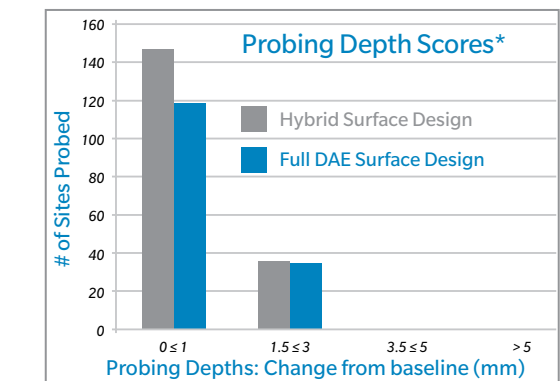
No Increased Peri-implantitis Risk^{12,13}

The T3 Implant utilizes the proven Osseotite[®] Surface technology at the coronal aspect of the implant. In a five-year study^{**}, the dual acid-etched surface of the Osseotite Implant presented no increased risk of peri-implantitis or soft-tissue complications versus a machined surface.¹²

Multicenter, Randomized Controlled 5-Year Study Of Hybrid And Fully Etched Implants For The Incidence Of Peri-Implantitis^{**}



84% of all SBI scores were "0" (absence of bleeding); 13% of scores were "1" - isolated bleeding spot.



No implant (test or control) showed changes in probing depths greater than 3.0 mm.

One hundred twelve patients who were enrolled at seven centers received 139 control and 165 test implants (total: 304 implants).

^{*} Preclinical studies are not necessarily indicative of clinical performance.
^{**} Zetterqvist et al. A Prospective, Multicenter, randomized Controlled 5-Year Study Of Hybrid And Fully Etched Implants For The Incidence Of Peri-implantitis. J Periodontol. April 2010.