



PENNSYLVANIA CENTER
FOR DENTAL IMPLANTS
AND PERIODONTICS

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Case of the Month: Esthetic Zone Immediate Implant Placement #9 with 5-year Clinical & CBCT follow-up using the 10 Keys to Esthetic Zone Success Principles.

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Before
Smile



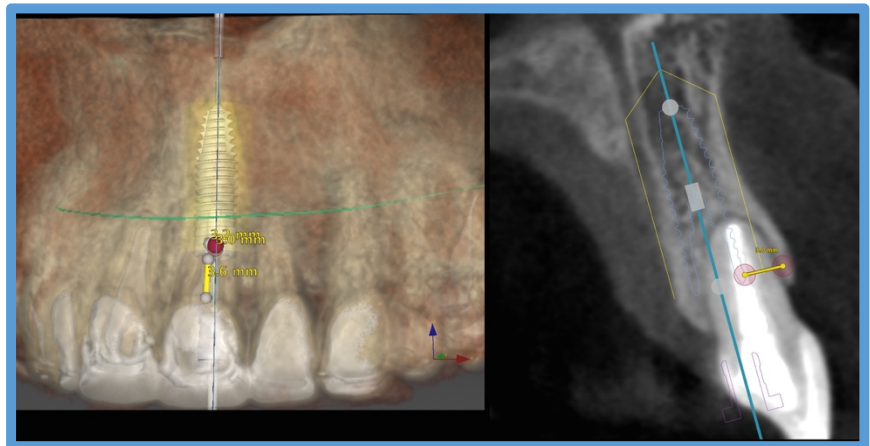
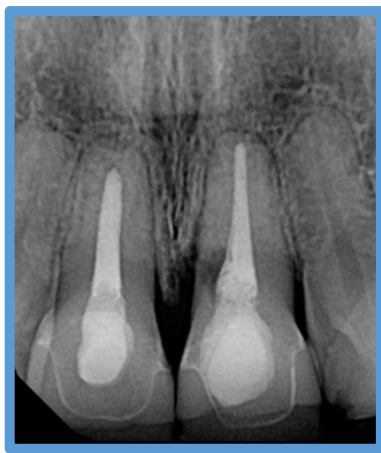
After Smile
(5 years)



***From Publication:** Levine RA, Ganeles J, Kan JY, Fava PL. "10 Keys for successful esthetic-zone single immediate implants: importance of biotype conversion for lasting success." Compendium Cont Ed Dent. 2018; 39 (8): 552-529. Special Issue featuring the 30th Anniversary of the International Society of Periodontal Plastic Surgeons (ISPPS) Annual Meeting 2017.*

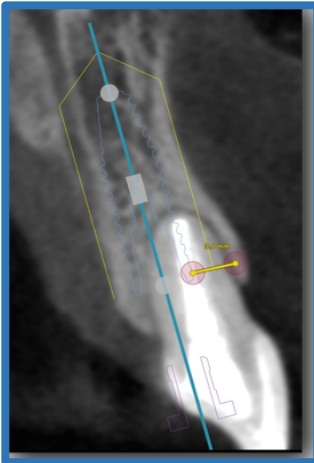
Pretreatment of a failed maxillary central incisor (#9) in a healthy 45-year old non-smoking female (ASA II) due to severe internal-external root resorption.

3-d Pre-txt CBCT Planning with Straumann® Bone Level Implant; note: thick >1mm Buccal



Esthetic Risk Profile (ITI Treatment Guide 1): High

From: Martin WC, Morton D, Buser D. ITI Treatment Guide Vol. 1: Implant Therapy in the Esthetic Zone: Single Tooth Replacements. Berlin: Quintessence, 2007:11-20.

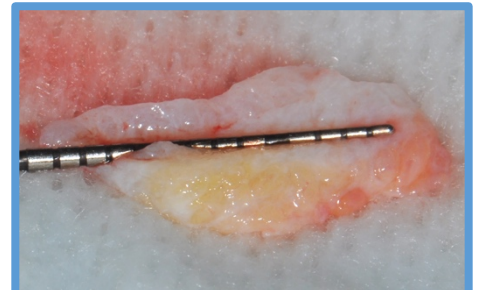
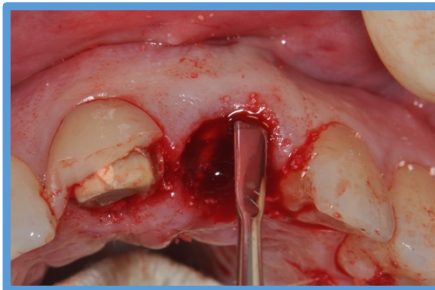
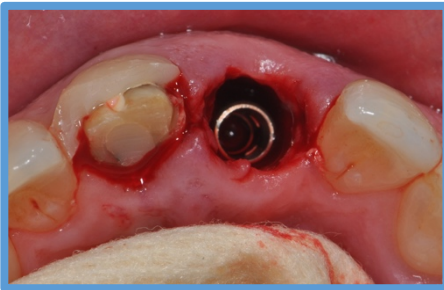


Patient <u>Alison K.</u> IMPLANT ESTHETIC RISK PROFILE			
Esthetic risk factors	Low	Medium	High
Medical status	Healthy patient and intact immune system		Reduced immune system
Smoking habit	Non-smoker	Light smoker < 10 Cig/D	Heavy smoker > 10 Cig/D
Patients esthetic expectations	Low	Medium	✓ High ✓
Lip line	Low	Medium	High
Gingival biotype	Low scalloped Thick	Medium scalloped Medium thick	High scalloped Thin
Shape of tooth crowns	Rectangular	Slightly triangular	Triangular
Infection at implant site	None	Chronic	Acute
Bone level at adjacent teeth	≤ 5mm to contact point	5.5 to 6.5mm to contact point	≥ 7mm to contact point
Restoration status of neighboring teeth	Virgin		Restored
Width of edentulous span	1 tooth ≥ 7mm	1 tooth ≤ 7mm	2 teeth or more
Soft tissue anatomy	Intact soft tissue		Soft tissue defects
Bone anatomy of alveolar crest	No bone deficiency	Horizontal bone deficiency	Vertical bone deficiency



Pre-Surgical: fixed provisional in place #8-9

Surgical Treatment: Immediate extraction #9 with immediate implant placement using an anatomically correct surgical guide along the palatal wall; buccal gap is bone grafted with a slowly resorbing bone graft; palatal CTG placed in envelop flap to the MGJ under buccal flap (*PROVISIONAL restoration now becomes a 2-unit cemented cantilevered acrylic bridge #8-9x (pontic)*)



Delayed Contour Management: Soft tissue emergence profile is developed in a screw-retained provisional connected to the implant #9 at 8 weeks post-surgery; note: gingival soft tissue symmetry is created on the distal & mid-buccal of #9 but needs more acrylic support on the mesial line angles of both #8 & #9 before going to completion with a screw-retained crown. This important provisional step is used for all esthetic demanding cases as it will act as a “blueprint” for the final restoration. The emergence profile will be duplicated using the custom impression coping technique.



Before



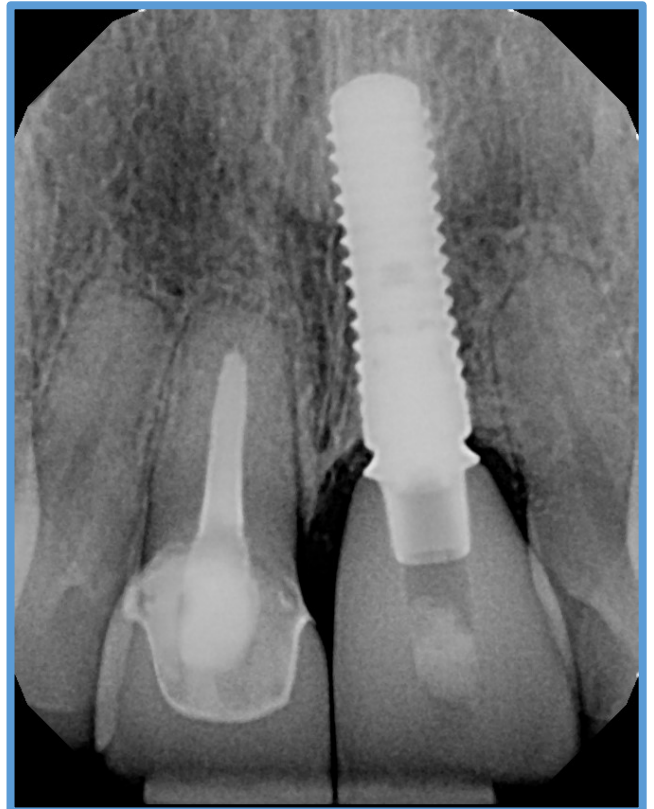
After at 5 years



Before



**Straumann® Variobase
Abutment with E-max crown
(5 years)**



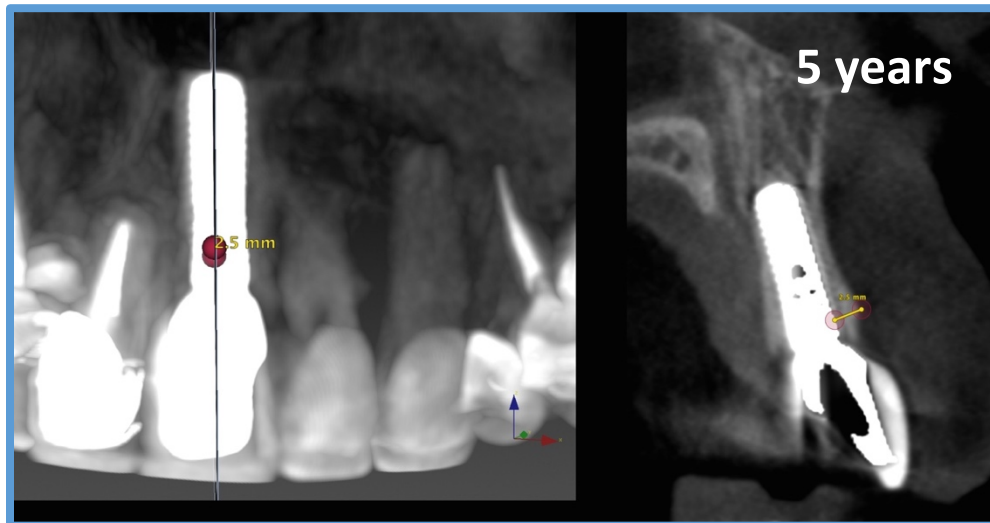
The 10 Keys for successful esthetic zone single immediate implants is an evidenced-based summary for the treatment planning and replacement of a hopeless tooth in the maxillary anterior sextant. The goals of these 10 steps are to minimize soft and hard tissue complications for an optimal long-term esthetic implant restoration. Based on the 10 keys, the management of an immediate implant in the esthetic zone is considered a Complex-SAC procedure.



**Excellent soft tissue convexity
#9 due in part to
“biotype conversion”**

5 years: Straumann® Variobase Abutment with E-max crown;

Note: >2mm thickness of the buccal plate is confirmed



Additional Publications of Interest:

1. Levine RA, Ganeles, J, Gonzaga L, Kan JY, Randel H, Evans C, Chen S. "10 Keys for successful esthetic-zone single immediate implants." *Compendium Cont Ed Dent* 2017; 38(4): 1-14.
2. Levine, RA, Ganeles J, Kan, J, Fava PL. "10 Keys for successful esthetic-zone single immediate implants: Importance of biotype conversion for lasting success." *Compendium Cont Ed Dent* 2018; 39(8):522-529.
3. Levine RA, Huynh-Ba, Cochran DL. "Soft tissue augmentation procedures for mucogingival defects in esthetic sites." *Int J Oral Maxillofac Implants*. 2014; 29 (suppl):155–185.
4. Morton D, Chen ST, Martin WC, Levine RA, Buser D. "Consensus statements and recommended clinical procedures regarding optimizing esthetic outcomes in implant dentistry." *Int J Oral Maxillofac Implants*. 2014; 29 (suppl): 216-220.
5. Cosyn J, Eghbali A, Hermans A, Vervaeke S, De Bruyn H, Cleymaet R. "A 5-year prospective study on single immediate implants in the aesthetic zone". *J Clin Perio* 2016; 43:702-709.



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