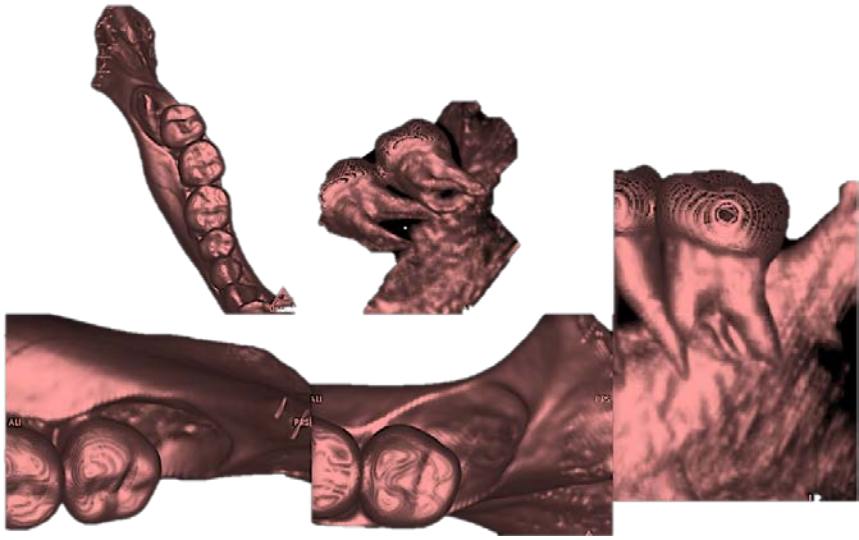
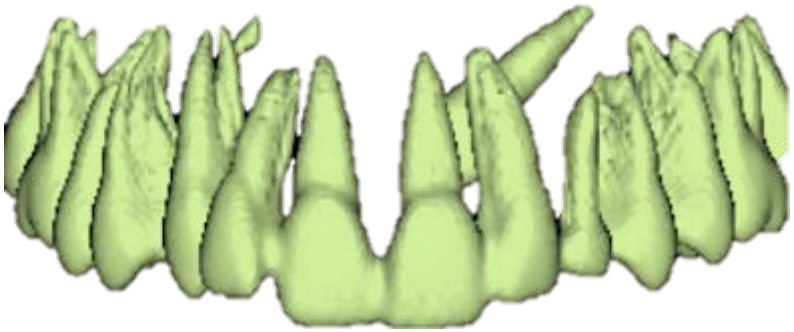
Inclusioni dentarie

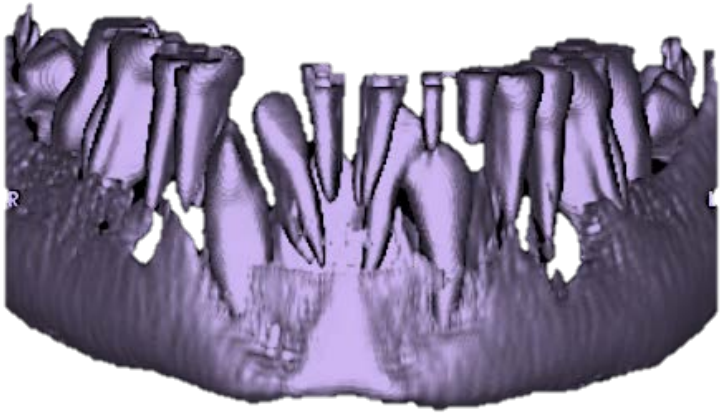
terzo molare



canino superiore 0.8-2 %

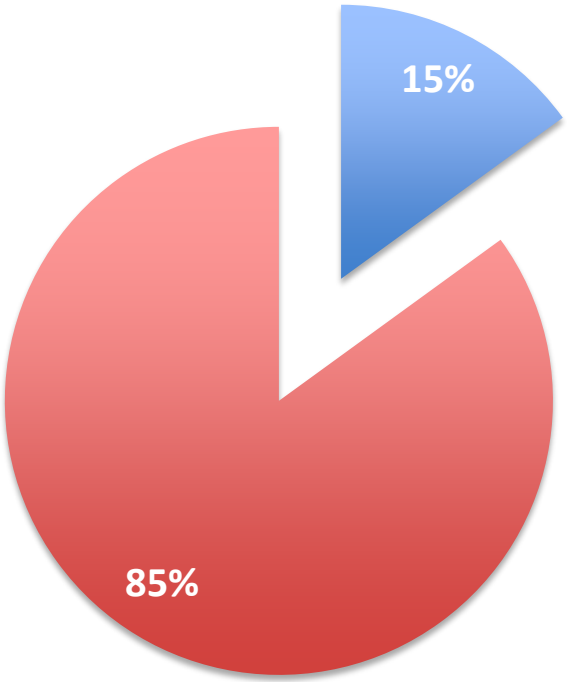


canino inferiore



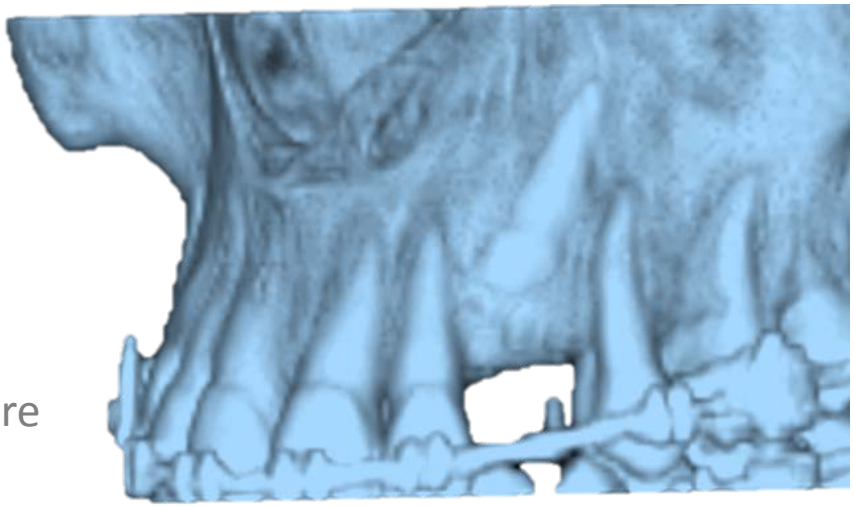
Bishara SE. Impacted maxillary canines: a review. Am J Orthod Dentofac Orthop 1992; 101:159-71

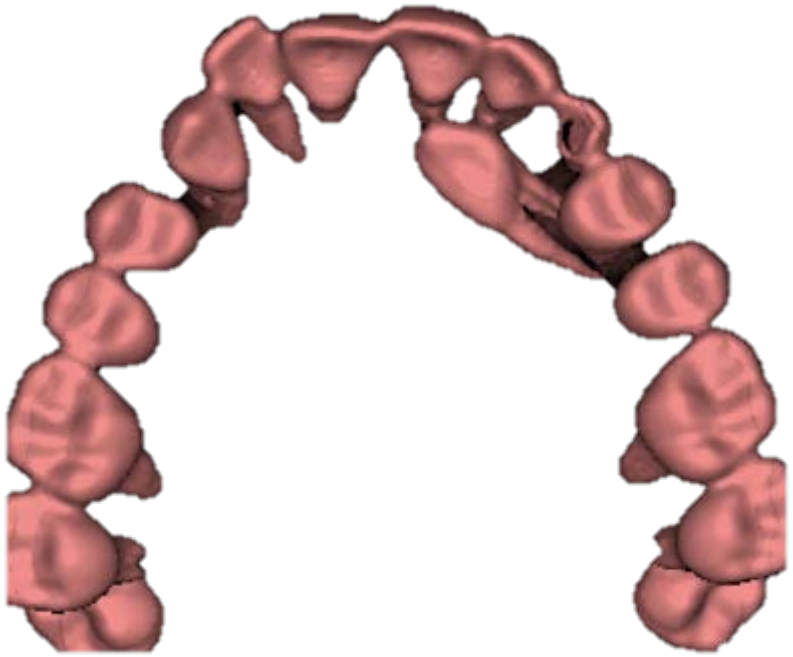
prevalenza arcata superiore



vestibolare

palatale



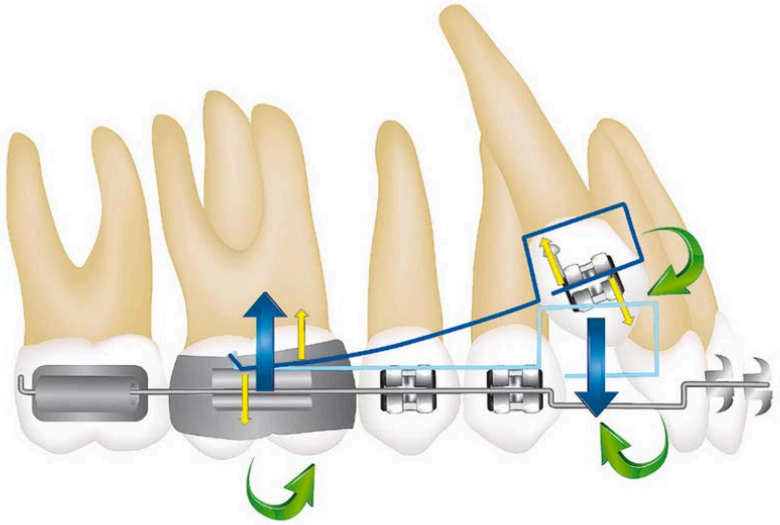


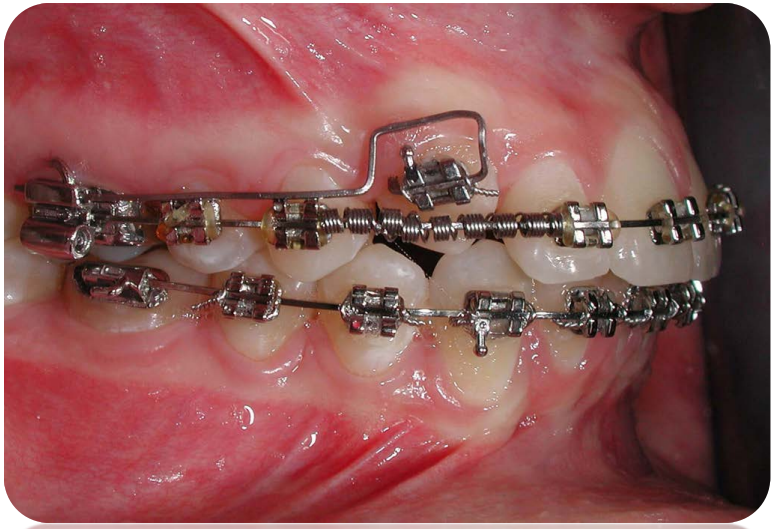
2 : 1 nelle femmine

Funzionalità ed estetica

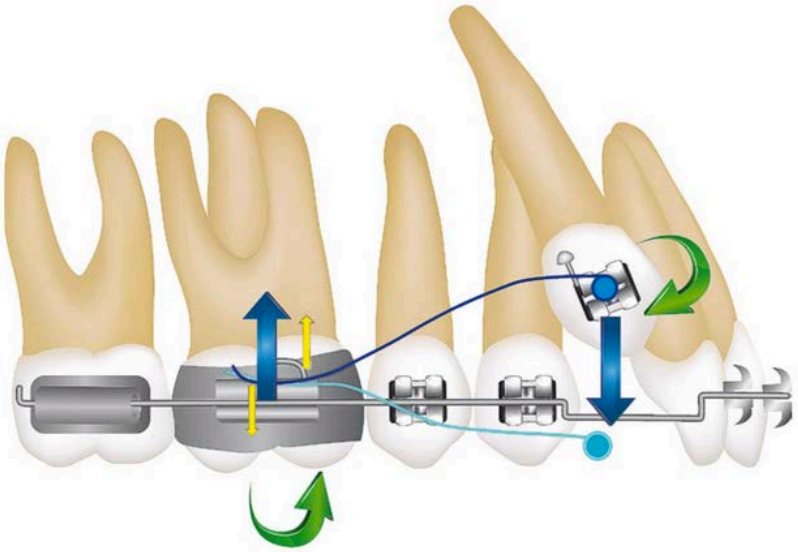
il trattamento dei canini inclusi palatalmente è molto richiesto

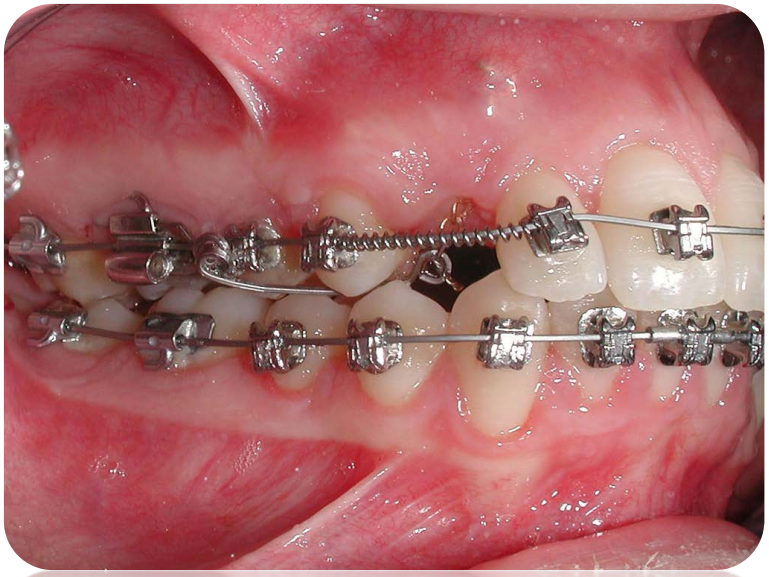
Biomeccanica

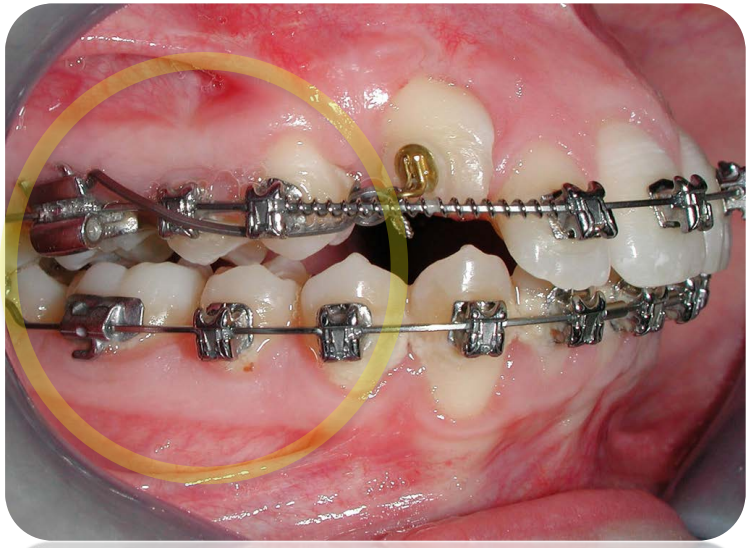




Effetti indesiderati!





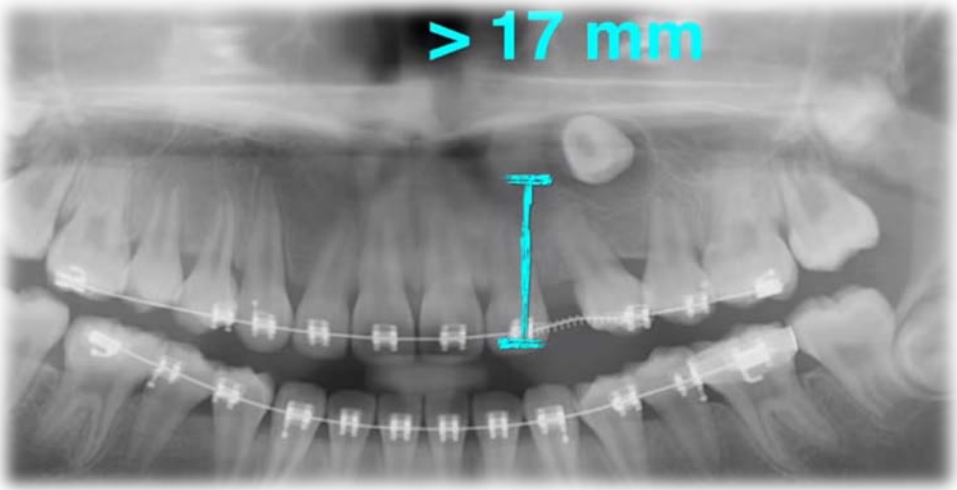


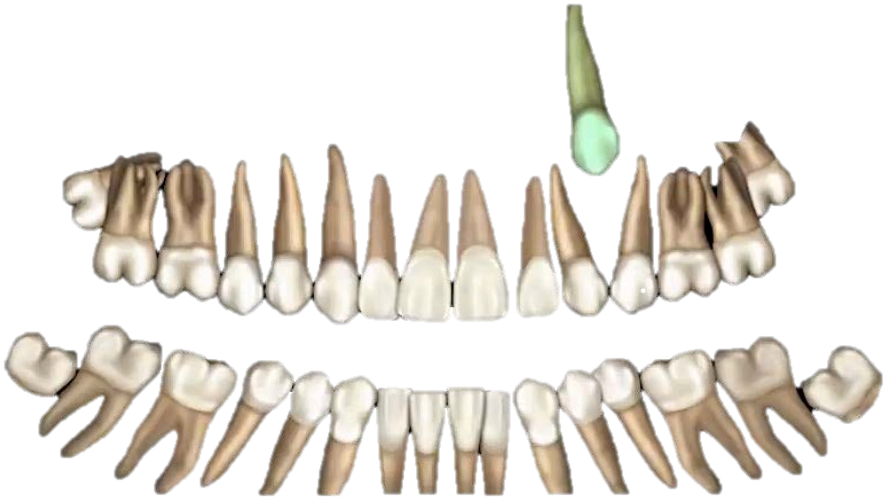
04-2007

⇧ **Tempo trattamento**

07-2007

11-2007

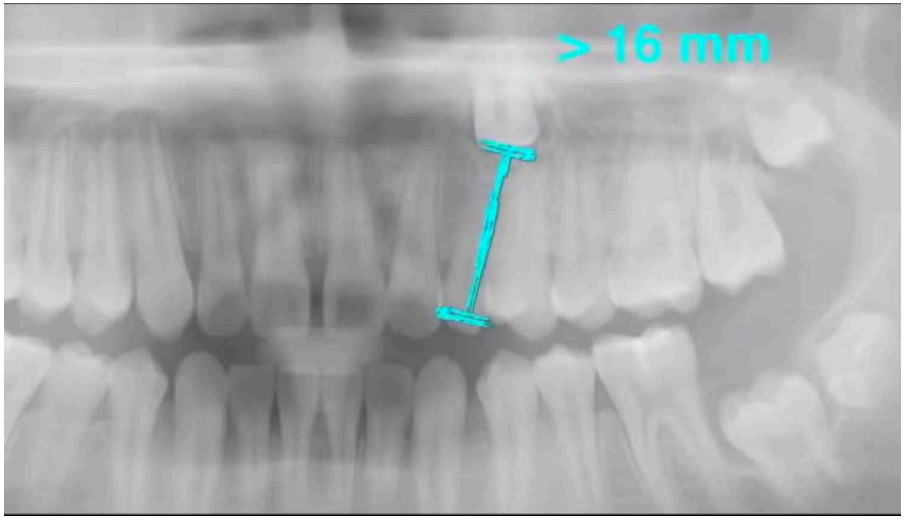


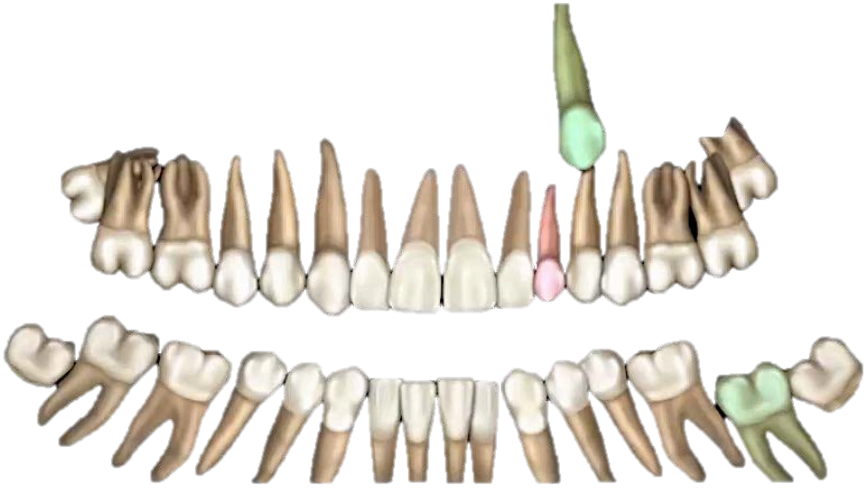


TEMPO

< 14mm ± 24 mesi

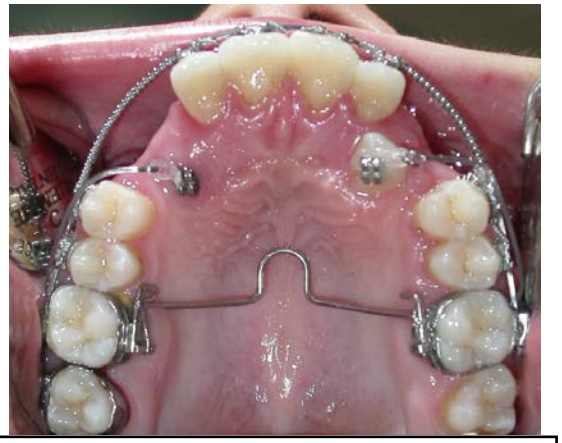
> 14 mm > 30 mesi

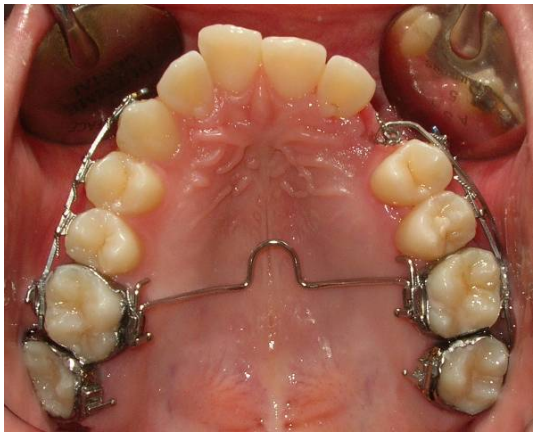




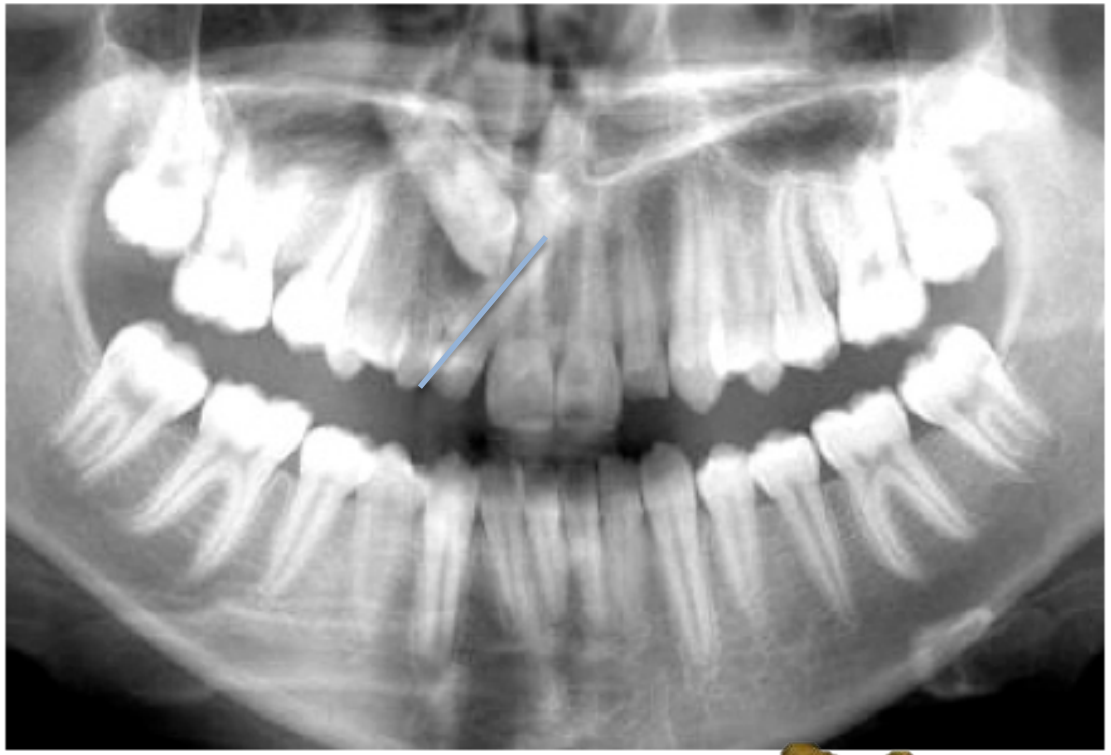
Stewart JA et al. Factors that relate to treatment duration for patients with palatally impactedmaxillary canines. AJODO 2006; 119:216-225

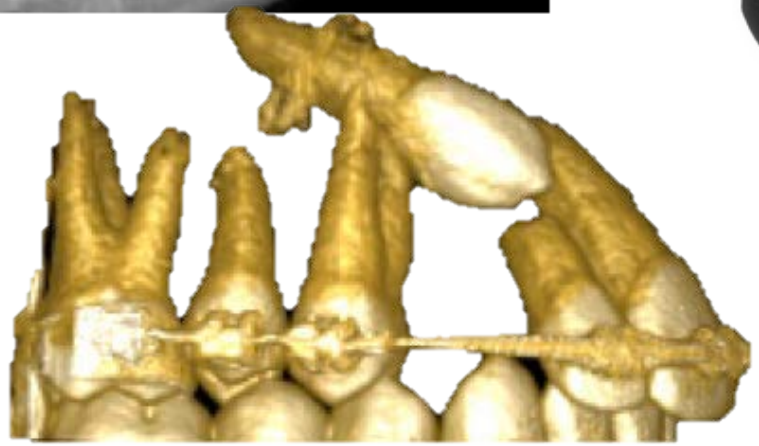
Necessità di Unità di Ancoraggio



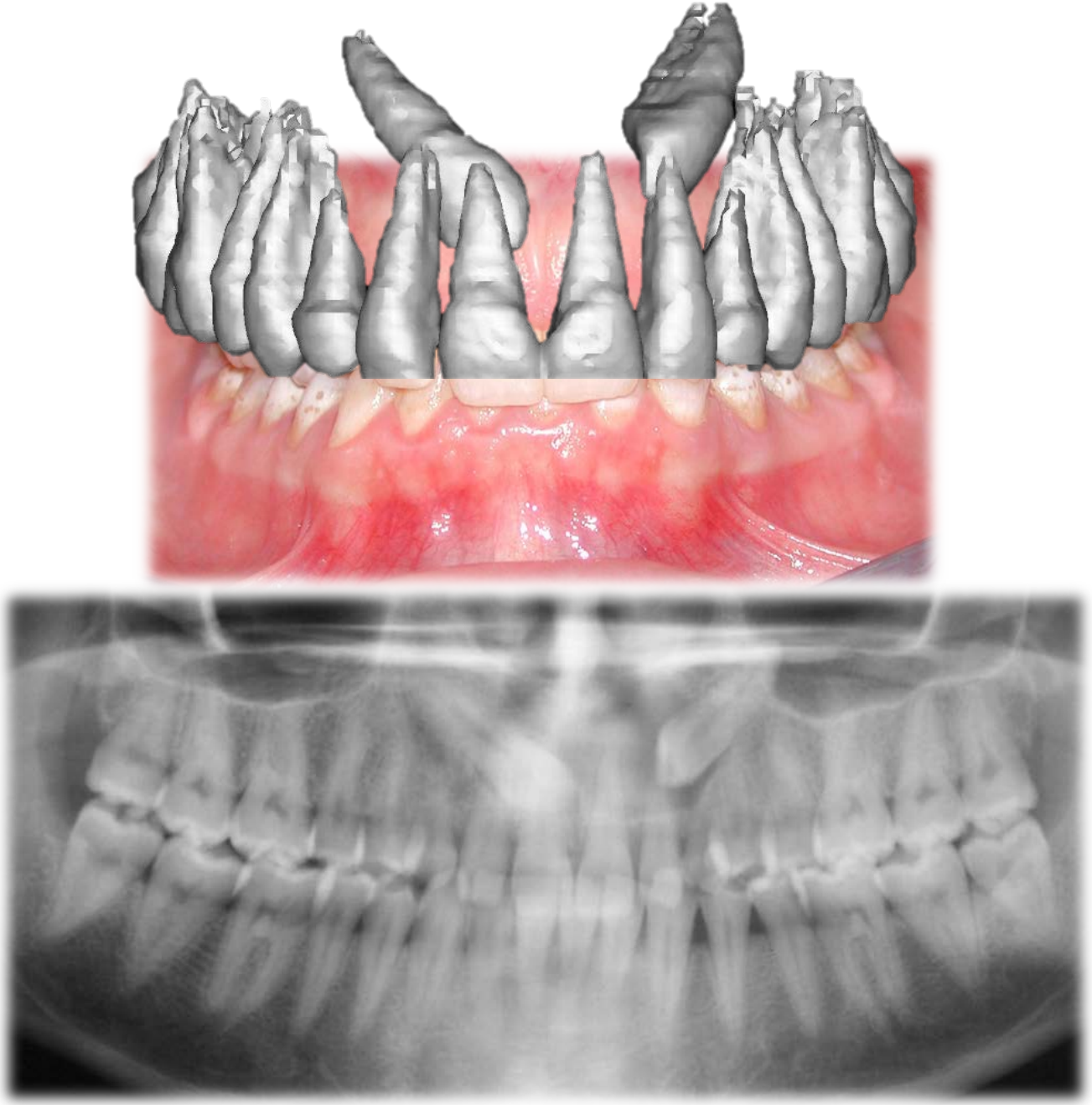


Rischio Riassorbimento radicolare!



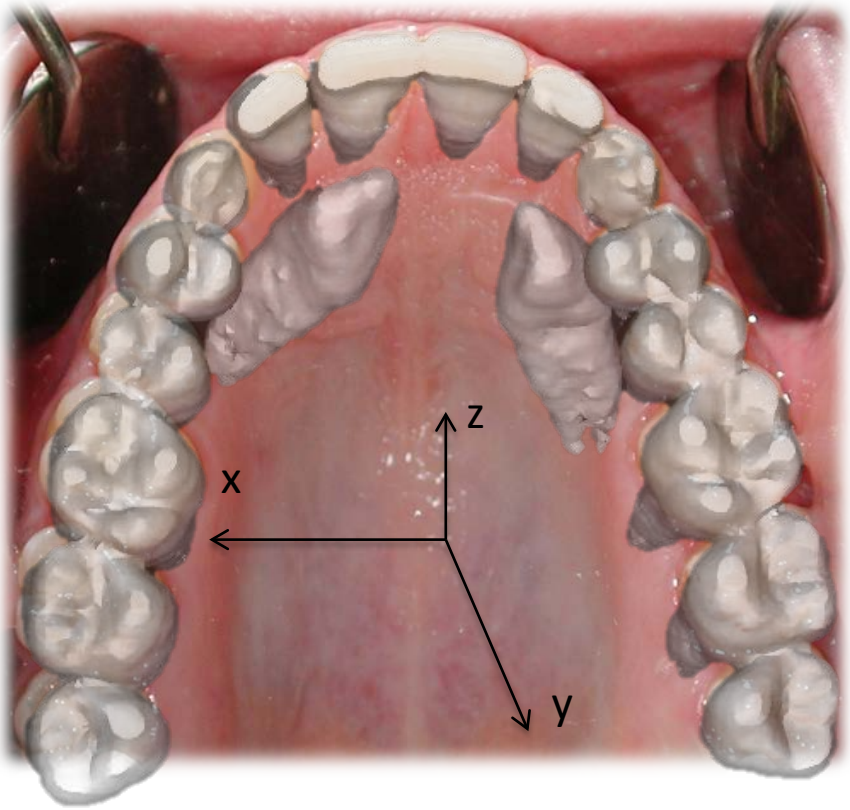


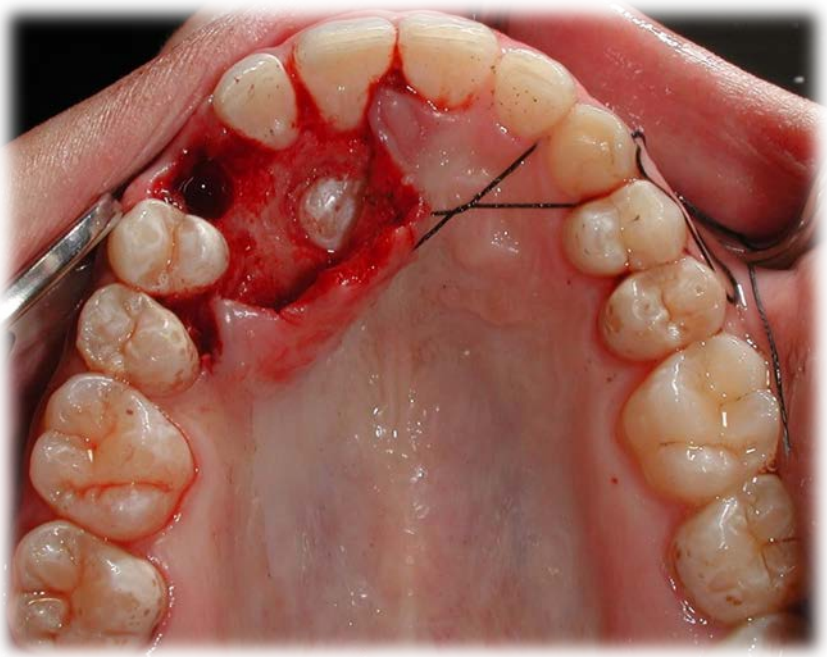
Rischio di Anchilosi!

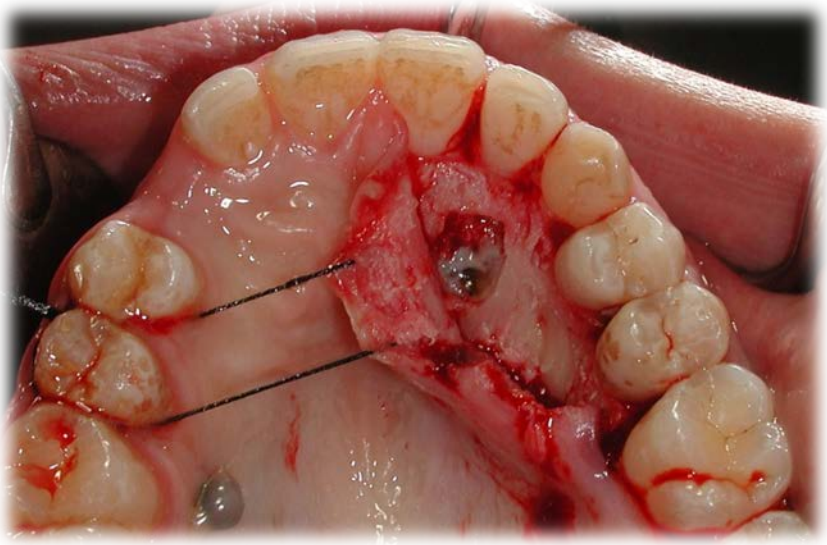


Ericson S, Kurol J. Resorption of maxillary lateral incisors caused by ectopic eruption of the canines. A clinical and radiographic analysis of predisposing factors. AJODO 1988;94:503-13.

Tecniche di Imaging consentono



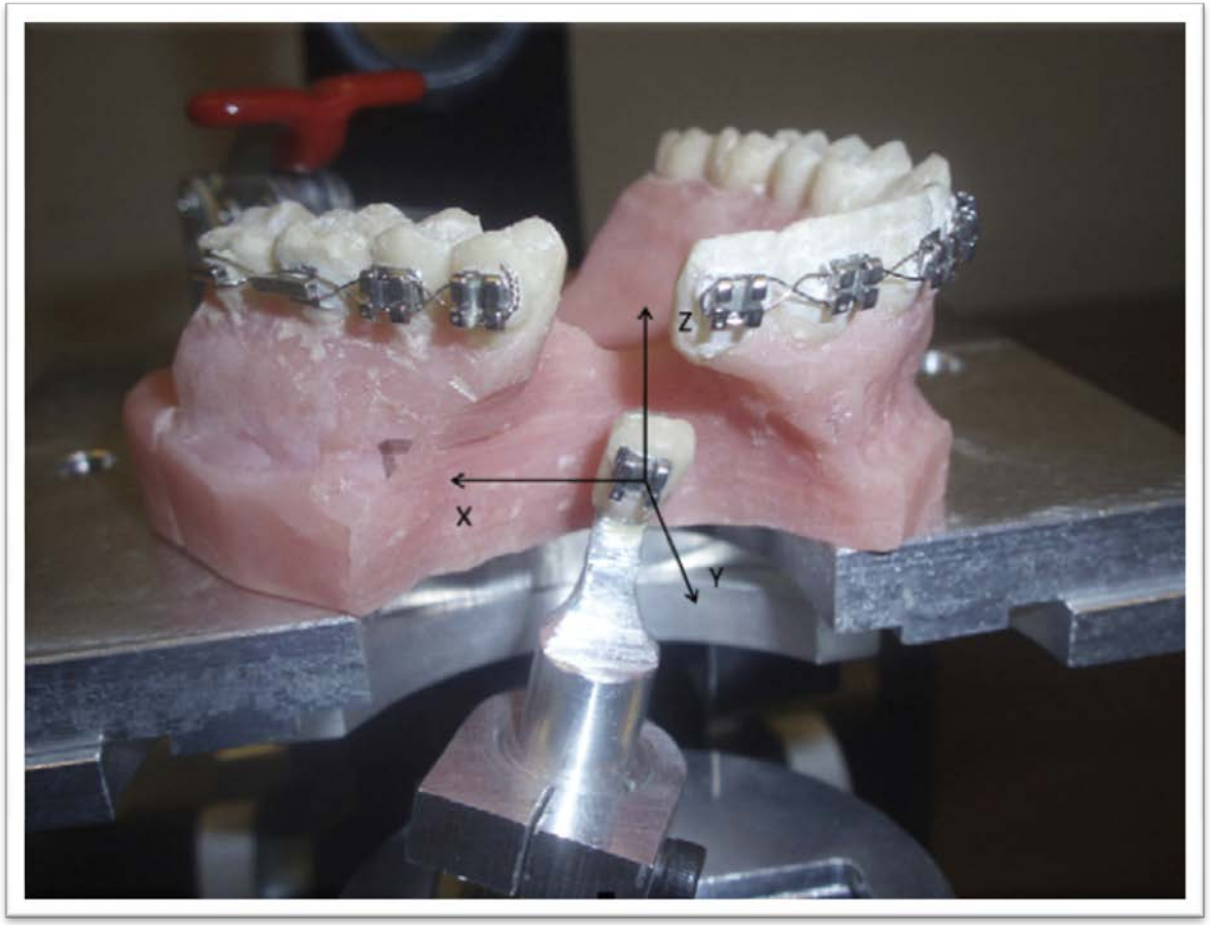




localizzazione in 3D dell'elemento incluso

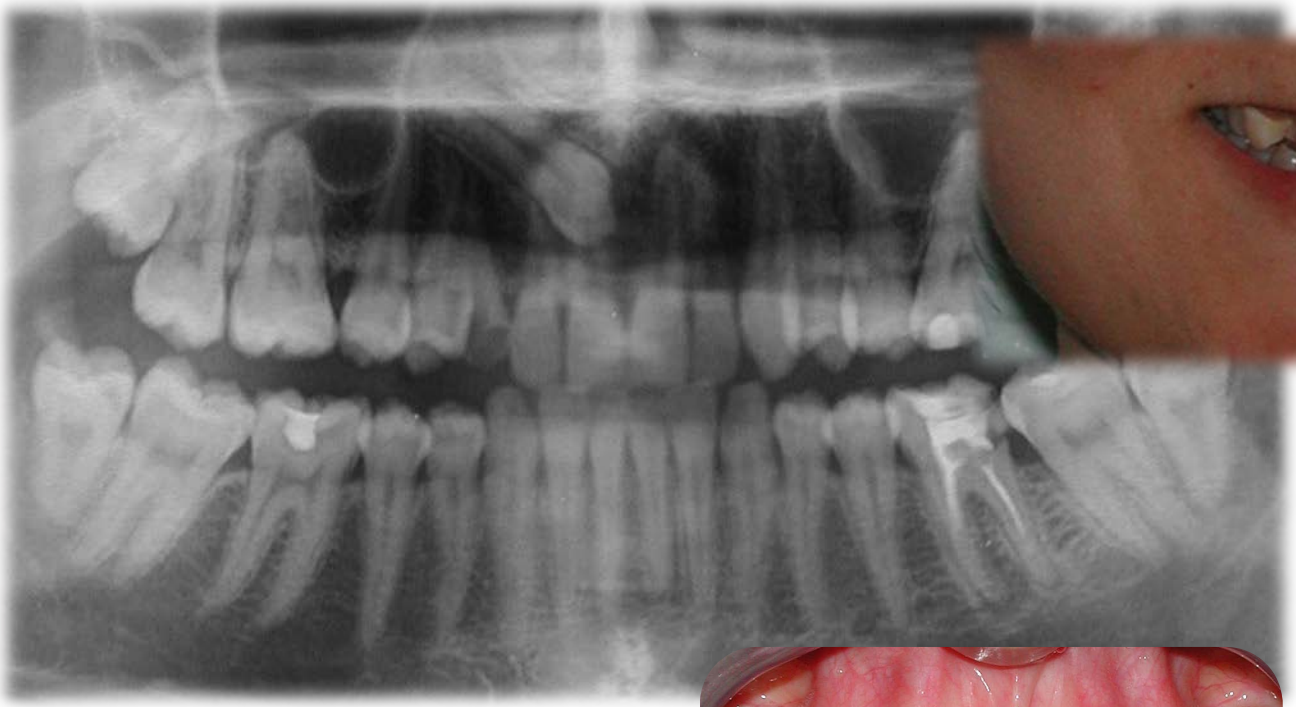
Caprioglio A, Siani L, Caprioglio C. Guided eruption of palatally impacted canines through combined use of 3-dimensional computerized tomography scans and the easy cuspid device. World J Orthod 2007;8:109-21

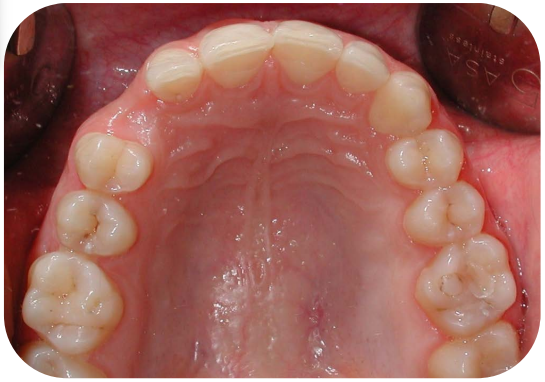
Sistema di Forze



Optimal orthodontic force to erupt the impacted teeth might be as subtle as 50 grams, and preferably not over 150 grams

CONTINUA e COSTANTE



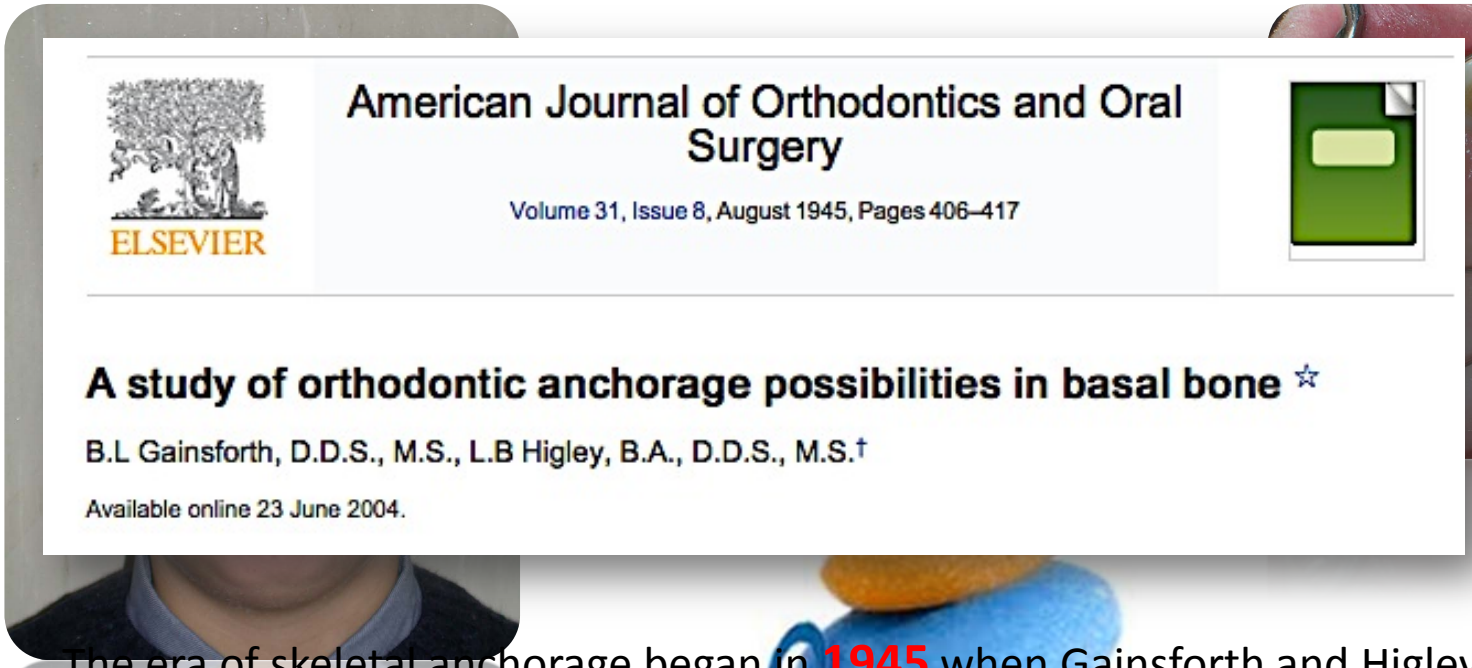


- ✓ diagnosi di certa anchilosi
- ✓ senza dover riccorrere all'apparecchiatura fissa
- ✓ ridotto discomfort
- ✓ ridurre durata tx fissa

Semplificare il sistema?

Sito di inserzione?

tipologia di Forza applicata?



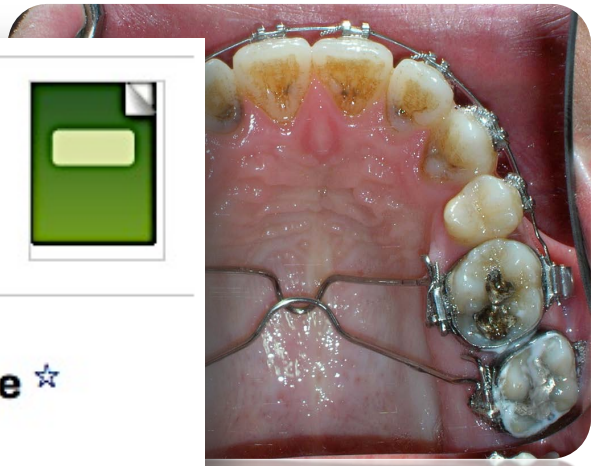
American Journal of Orthodontics and Oral Surgery

Volume 31, Issue 8, August 1945, Pages 406–417

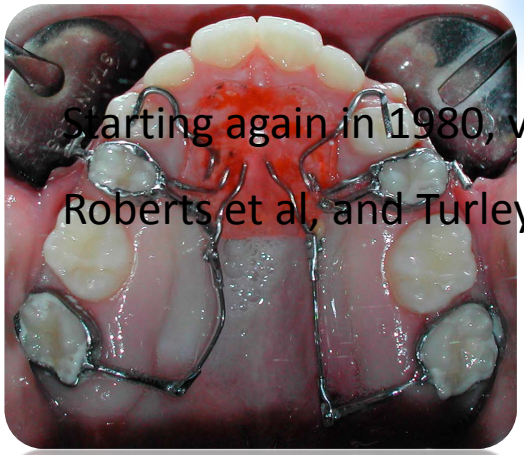
A study of orthodontic anchorage possibilities in basal bone ☆

B.L Gainsforth, D.D.S., M.S., L.B Higley, B.A., D.D.S., M.S.†

Available online 23 June 2004.

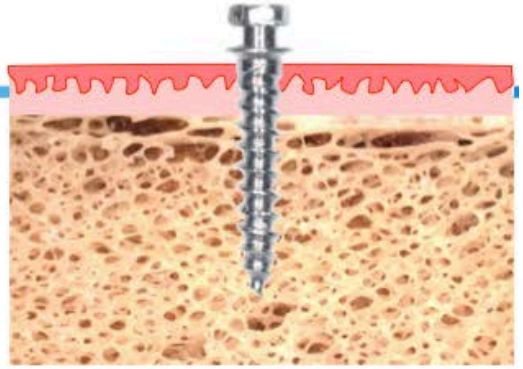


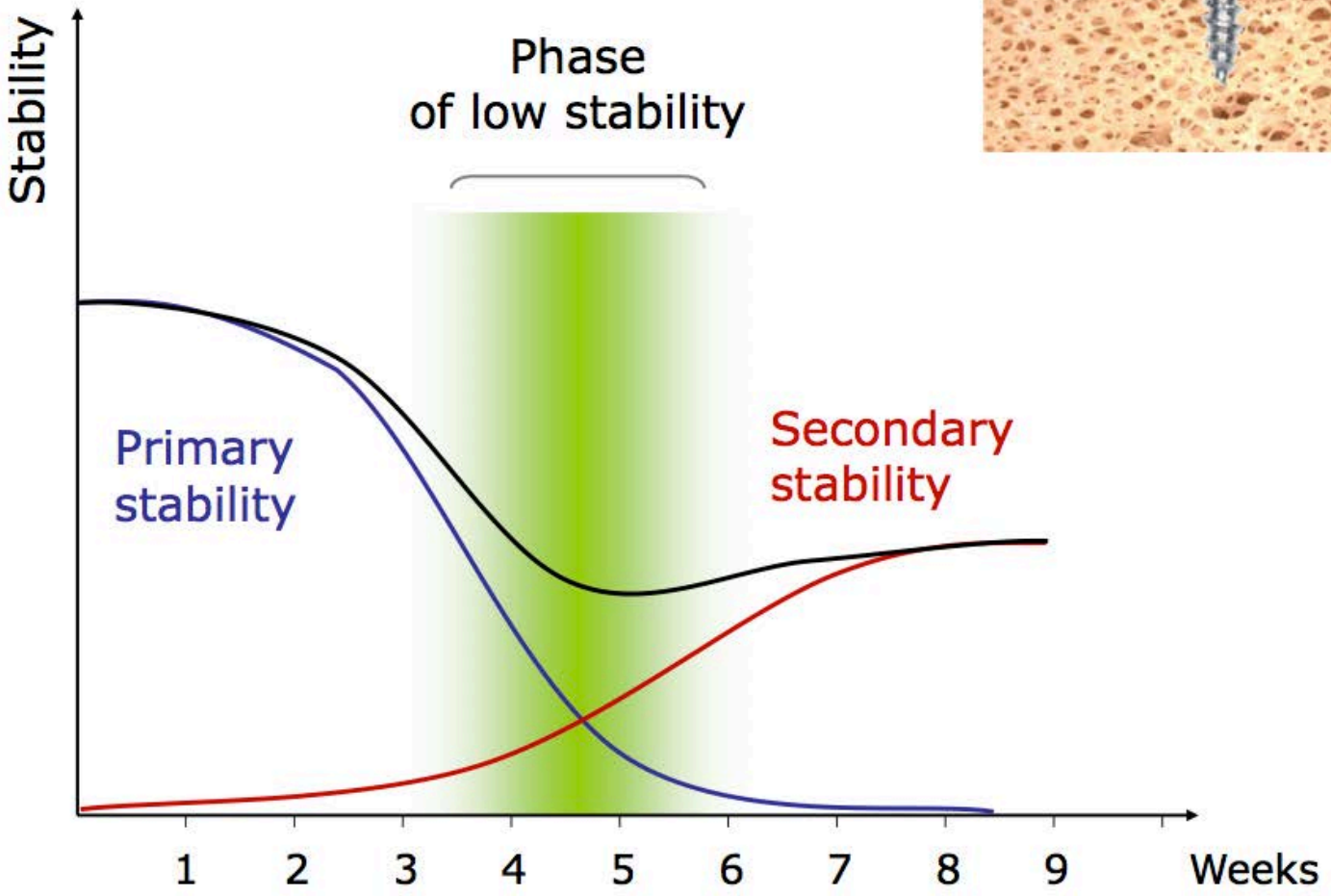
The era of skeletal anchorage began in **1945** when Gainsforth and Higley inserted screws into jawbone. Many experiments were unsuccessful, and the method had become virtually obsolete by the late 1970s.

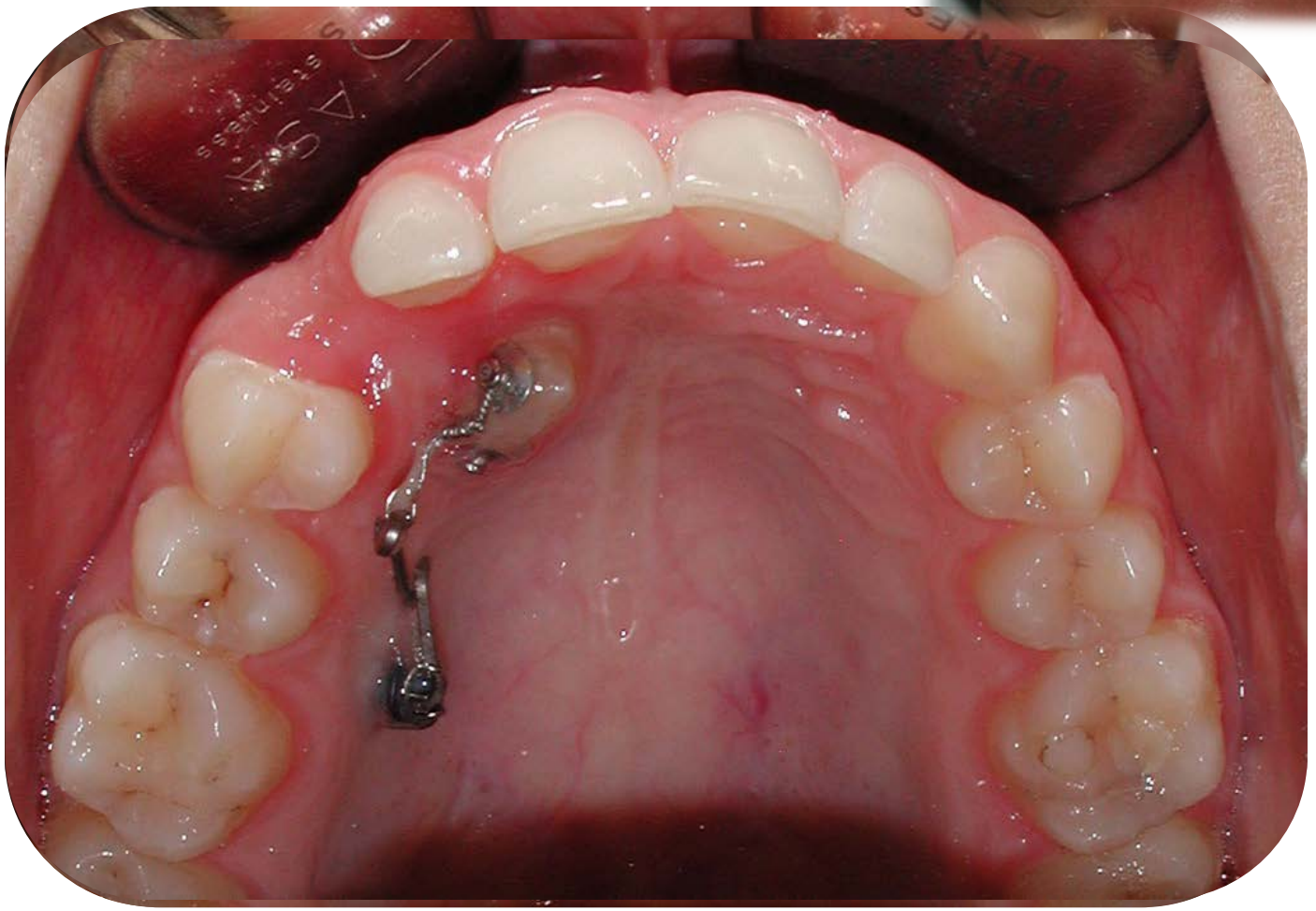


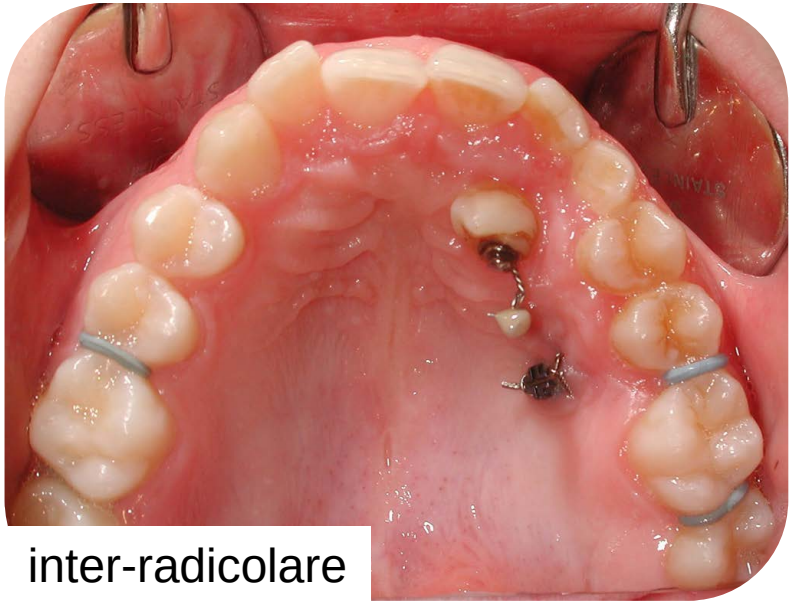
Starting again in 1980, various research groups (such as Creekmore and Eklund, Roberts et al, and Turley et al) took up the subject once more.

Stability of Mini-implants

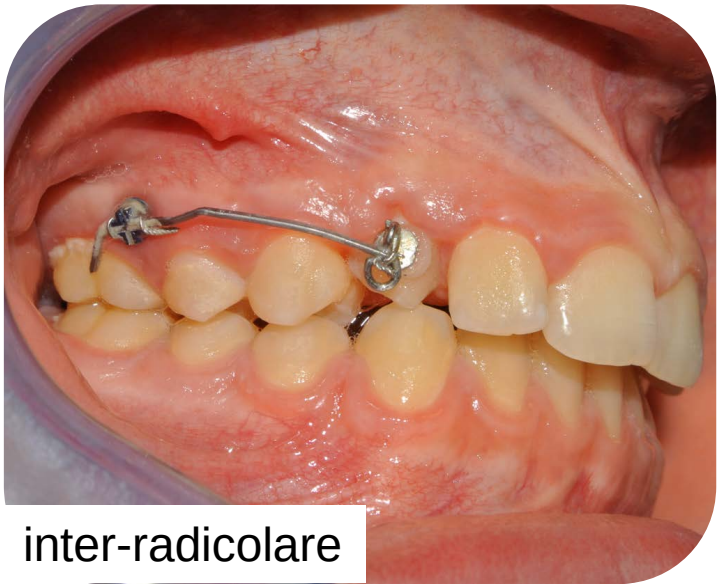








inter-radicolare

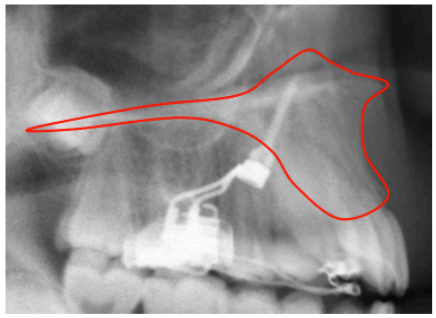


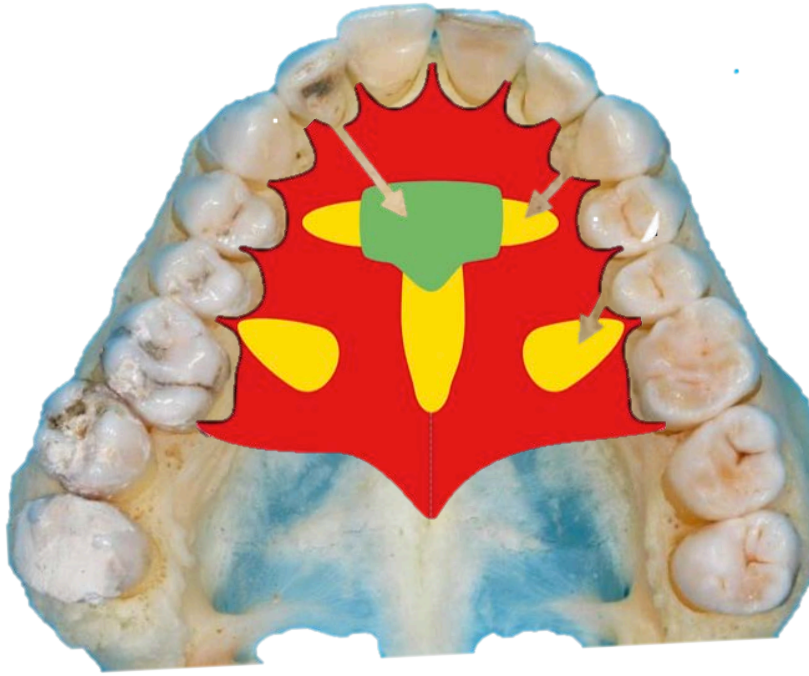
inter-radicolare

Success rate in the anterior palate: 97.9%

Karagkiolidou A, Ludwig B, Pazera P, Gkantidis N, Pandis N, Katsaros C. Survival of palatal miniscrews used for orthodontic appliance anchorage: A retrospective cohort study.

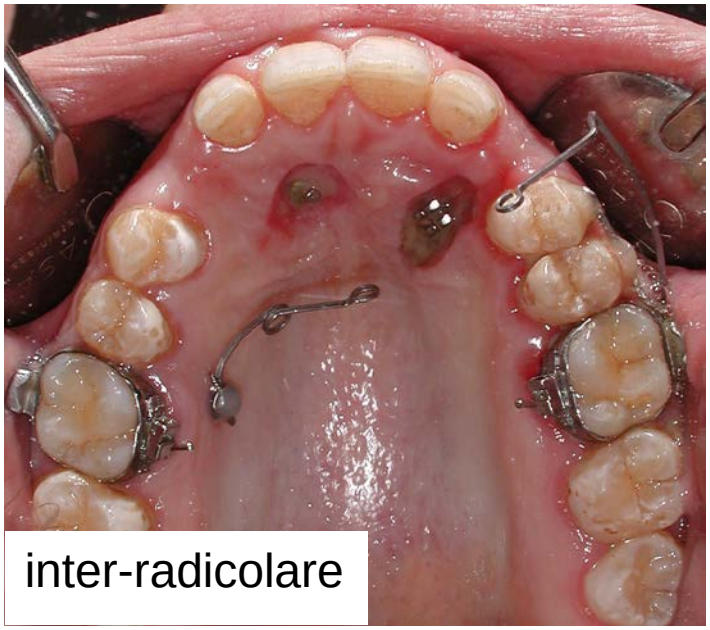
Am J Orthod Dentofacial Orthop. 2013



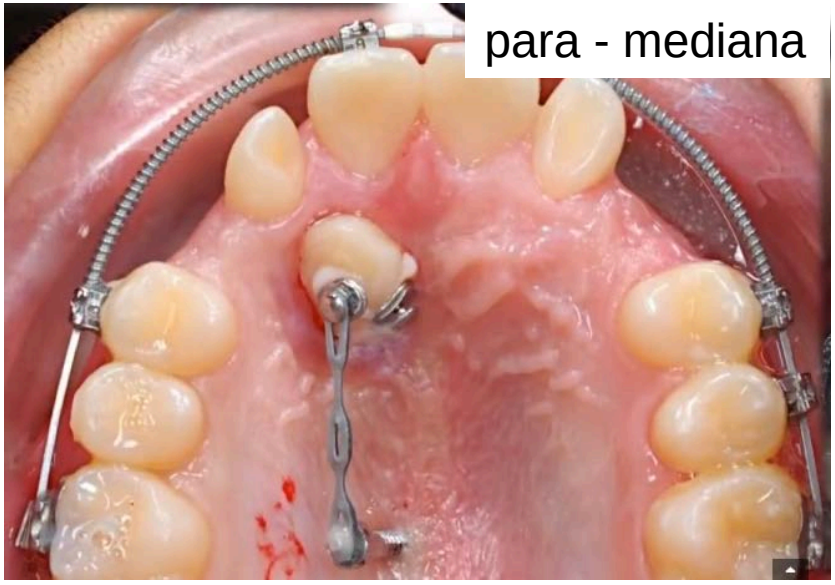


Riduce la % di fallimento

Nessun danno alle radici

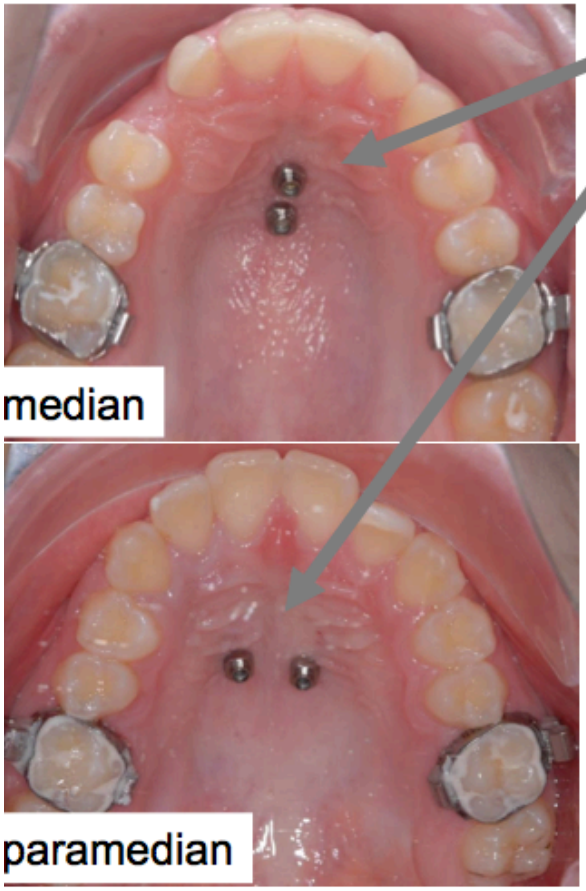


inter-radicolare



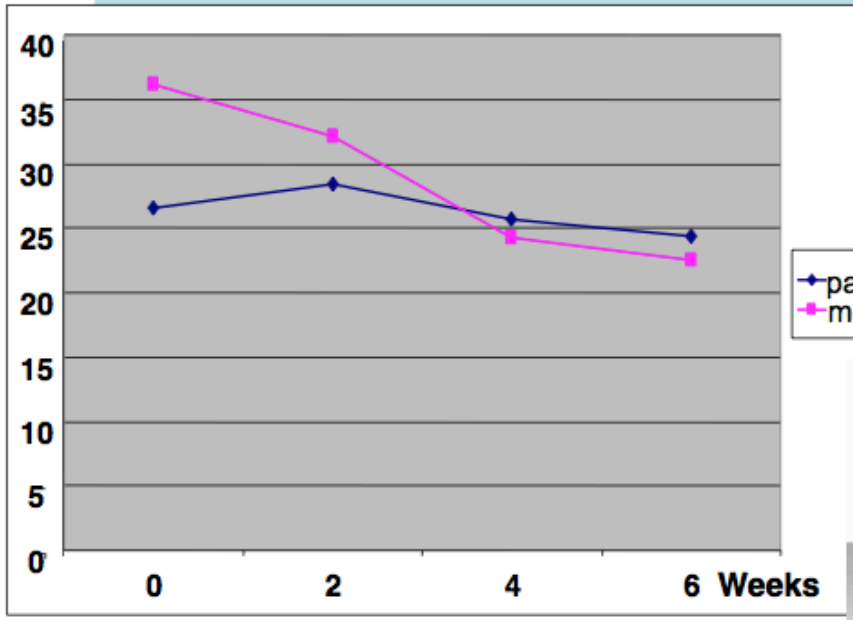
para - mediana

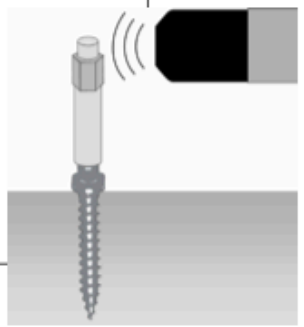
Sito di inserzione?



Insertion site?

→ No difference between median and paramedian insertion





Nienkemper M, Pauls A, Wilmes B, Drescher D. ***Development of mini-implant stability over the initial healing period: A prospective clinical pilot study.*** Angle Orthod. 2013

Nienkemper M, Pauls A, Wilmes B, Drescher D. ***Effect of implant length on mini-implant stability during the initial healing period: A prospective clinical study,*** *Head and Face Med 2013*

Nienkemper M, Pauls A, Ludwig B, Drescher D. ***Stability of paramedian inserted palatal mini-implants at the initial healing period: a controlled clinical study****. Clin Oral Implants Res. 2013*

Semplificare il sistema?

Sito di inserzione?

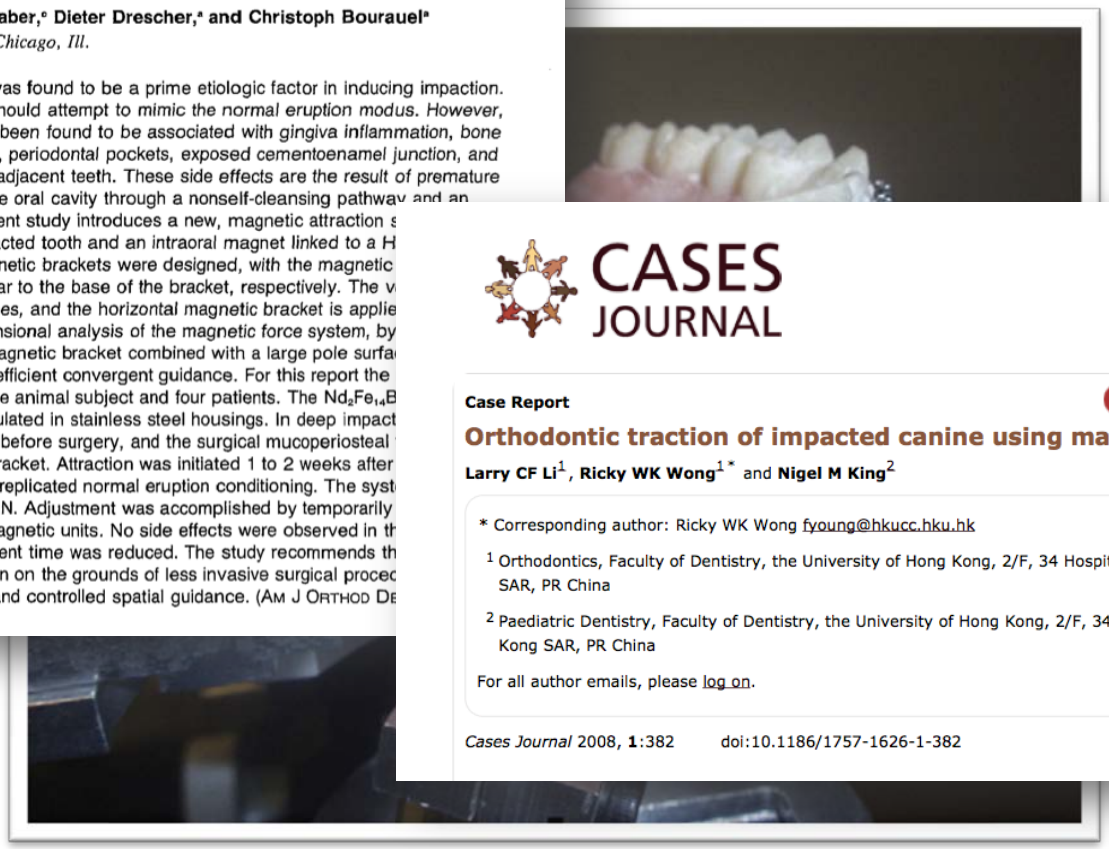
Tipologia di Forza applicata?

Sistema di Forze Magnetiche

Rare earth magnets and impaction

Alexander D. Vardimon,[a,b] T.M. Graber,[c] Dieter Drescher,[a] and Christoph Bourauel[a]
Bonn, Germany, Tel Aviv, Israel, and Chicago, Ill.

Aberration in the eruption process was found to be a prime etiologic factor in inducing impaction. Thus an ideal treatment approach should attempt to mimic the normal eruption modus. However, conventional traction methods have been found to be associated with gingiva inflammation, bone recession, reduced attached gingiva, periodontal pockets, exposed cementoenamel junction, and root resorption of the impacted and adjacent teeth. These side effects are the result of premature exposure of the impacted tooth to the oral cavity through a nonself-cleansing pathway and an uncontrolled force system. The present study introduces a new, magnetic attraction s magnetic bracket bonded to an impacted tooth and an intraoral magnet linked to a H retainer. Vertical and horizontal magnetic brackets were designed, with the magnetic magnetized parallel and perpendicular to the base of the bracket, respectively. The v used for impacted incisors and canines, and the horizontal magnetic bracket is applie premolars and molars. A three-dimensional analysis of the magnetic force system, by OMSS apparatus, found the small magnetic bracket combined with a large pole surfa intraoral magnet to exhibit the most efficient convergent guidance. For this report the eruption device was examined on one animal subject and four patients. The $Nd_2Fe_{14}B$ coated with parylene and/or encapsulated in stainless steel housings. In deep impact magnetic bracket was cold-sterilized before surgery, and the surgical mucoperiosteal sutured over the bonded magnetic bracket. Attraction was initiated 1 to 2 weeks after tooth emergence into the oral cavity replicated normal eruption conditioning. The syst an attractive force level of 0.2 to 0.5 N. Adjustment was accomplished by temporarily magnetic spacer between the two magnetic units. No side effects were observed in th number of treated cases, and treatment time was reduced. The study recommends th magnets in the treatment of impaction on the grounds of less invasive surgical proced attractive forces at short distances, and controlled spatial guidance. (Am J Orthod Dentorthop 1991;100:494-512.)



CASES JOURNAL

Case Report Highly accessed Open Access

Orthodontic traction of impacted canine using magnet: a case report

Larry CF Li[1], **Ricky WK Wong**[1*] and **Nigel M King**[2]

* Corresponding author: Ricky WK Wong fyoung@hkucc.hku.hk

[1] Orthodontics, Faculty of Dentistry, the University of Hong Kong, 2/F, 34 Hospital Road, Sai Ying Pun, Hong Kong SAR, PR China

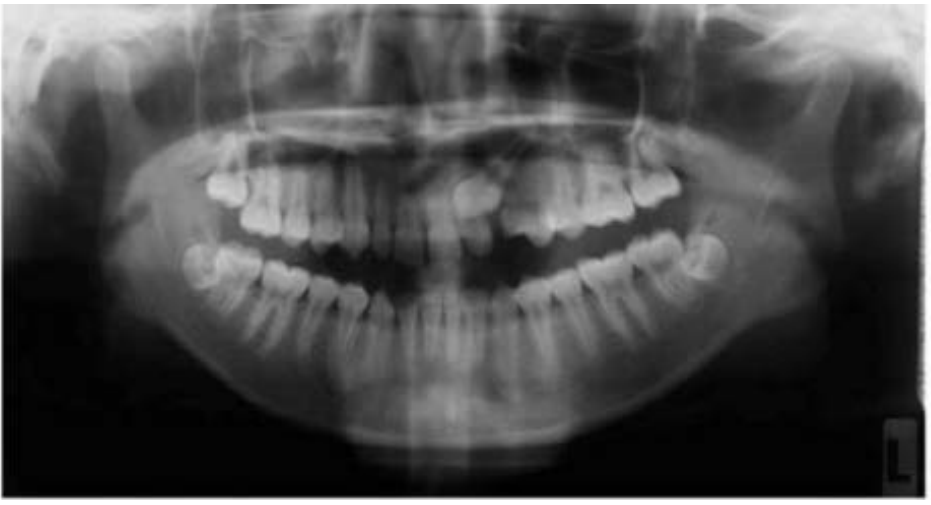
[2] Paediatric Dentistry, Faculty of Dentistry, the University of Hong Kong, 2/F, 34 Hospital Road, Sai Ying Pun, Hong Kong SAR, PR China

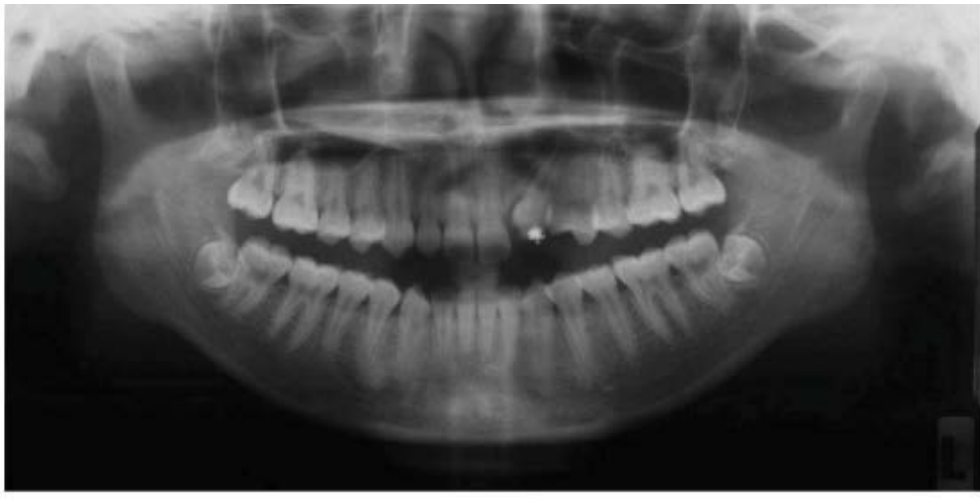
For all author emails, please log on.

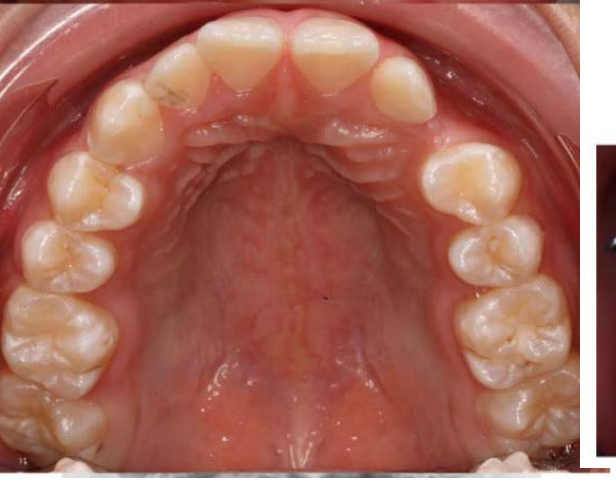
Cases Journal 2008, **1**:382 doi:10.1186/1757-1626-1-382

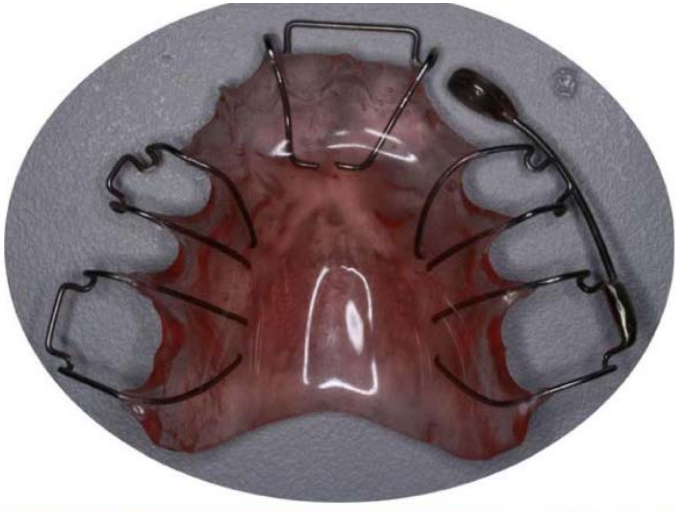
Optimal orthodontic force to erupt the impacted teeth might be as subtle as 50 grams, and preferably not over 150 grams

CONTINUA e COSTANTE



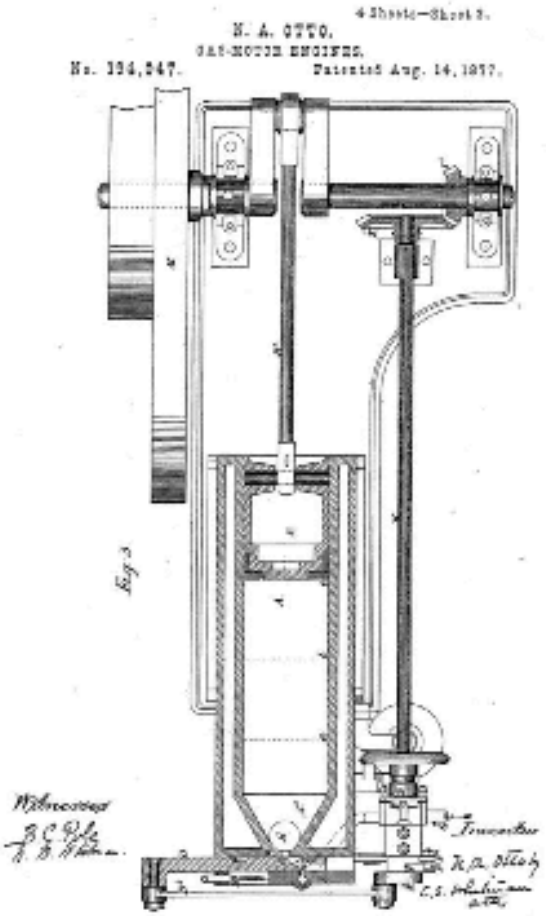




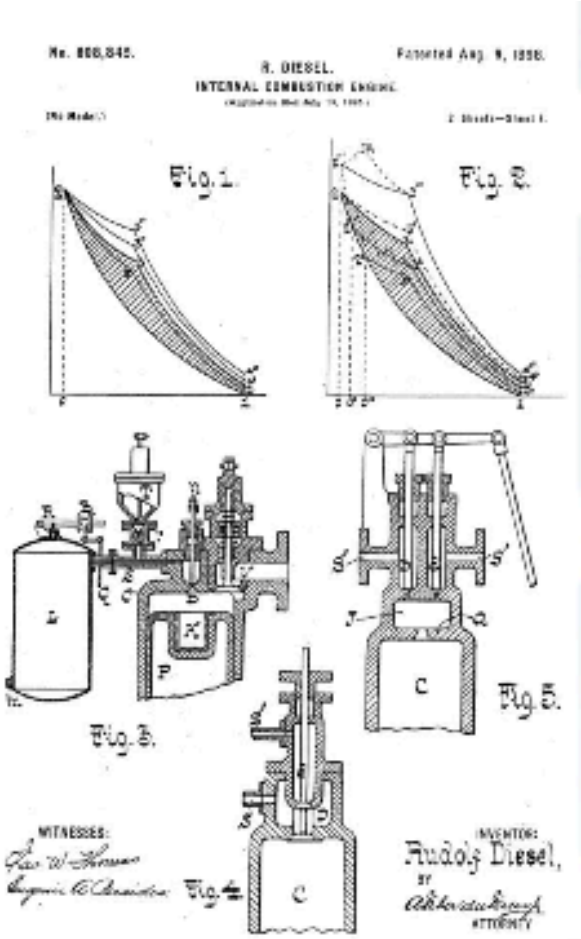


Magnete $Nd_2Fe_{14}B$

Forza attrattiva generata va dai 0.2 ai 0.5 N



Motore a combustione interna – Otto – US – 1877



Motore a combustione interna Diesel – US – 1898

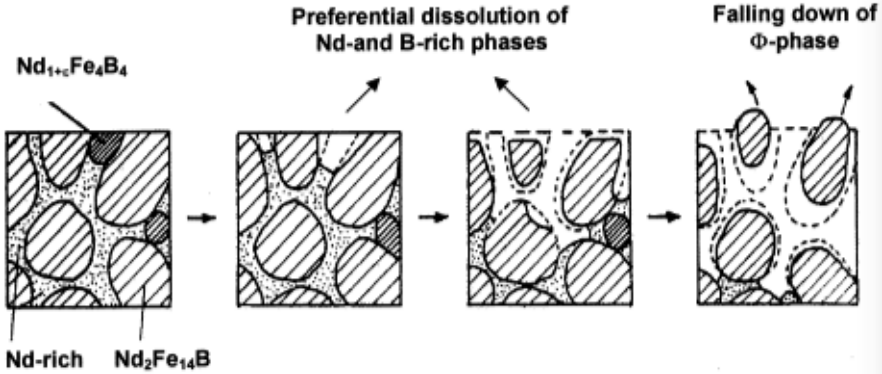


fig. 4.1.2 Illustrazione del meccanismo di corrosione preferenziale di un magnete NdFeB

Corrosion resistance and friction of sintered NdFeB coated with Ti/TiN multilayers

Yuanyuan Cheng [a], Xiaolu Pang [a,*], Kewei Gao [a], Huisheng Yang [a], Alex A. Volinsky [b]

[a] Department of Materials Physics and Chemistry, University of Science and Technology Beijing, Beijing 100083, China
[b] Department of Mechanical Engineering, University of South Florida, Tampa, FL 33620, USA

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ABSTRACT

Ti/TiN multilayers were deposited on sintered NdFeB by radio frequency magnetron sputtering. The film grain size decreased with the number of multilayers in the stack. Corrosion current density of sintered NdFeB with Ti/TiN multilayers was much lower than bare NdFeB. NdFeB with six periods of Ti/TiN multilayers exhibited good corrosion resistance in artificial saliva. Wear properties were characterized followed by the open circuit potential measurements. Friction and corrosion are interdependent. The Ti/TiN multilayers enhanced the corrosion resistance and decreased the wear volume. The joint action of corrosion and mechanical loading boosted the wear rate.

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FACOLTÀ DI INGEGNERIA

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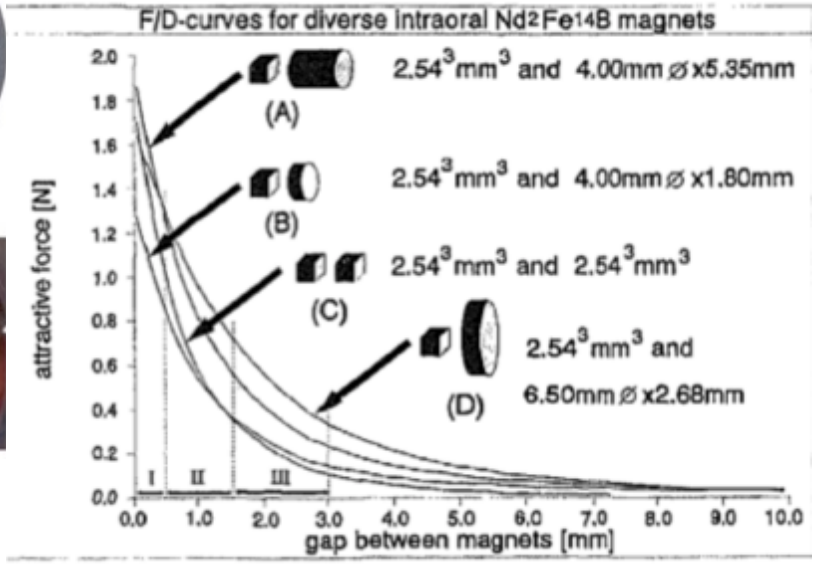
RELATORE: *Prof. Gabriele Marchesi*
LAUREANDO: *Bozzato Filippo*

ANNO ACCADEMICO 2009-2010

Magnete $Nd_2Fe_{14}B$



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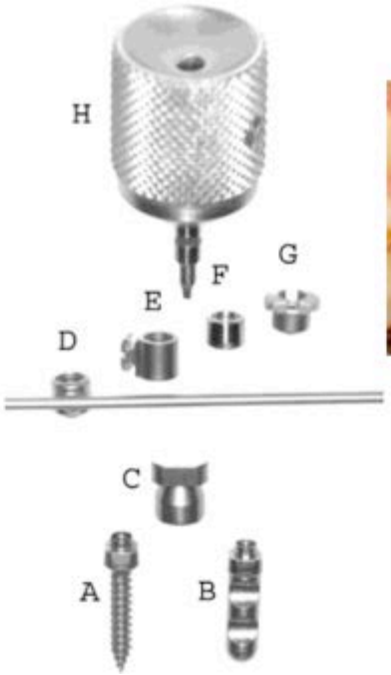

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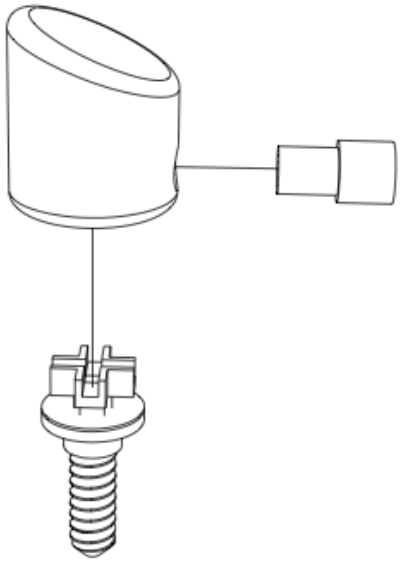

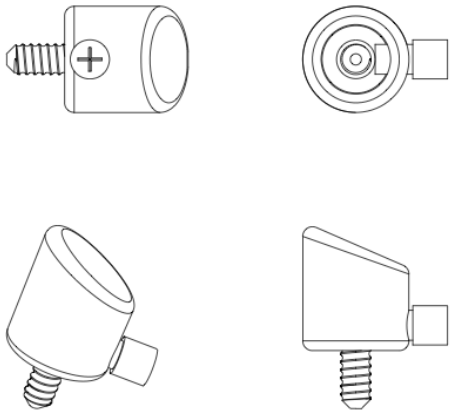

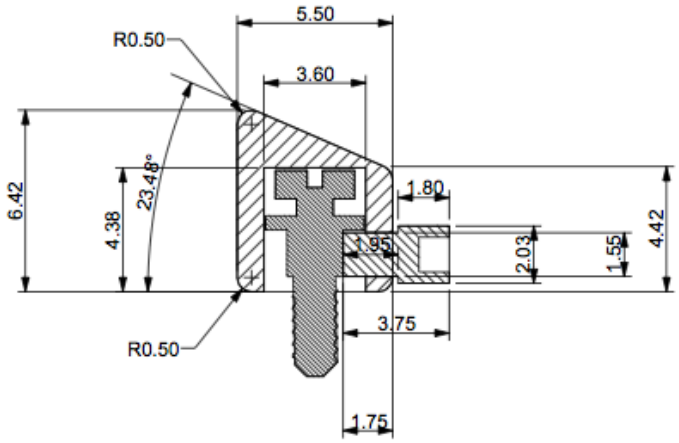

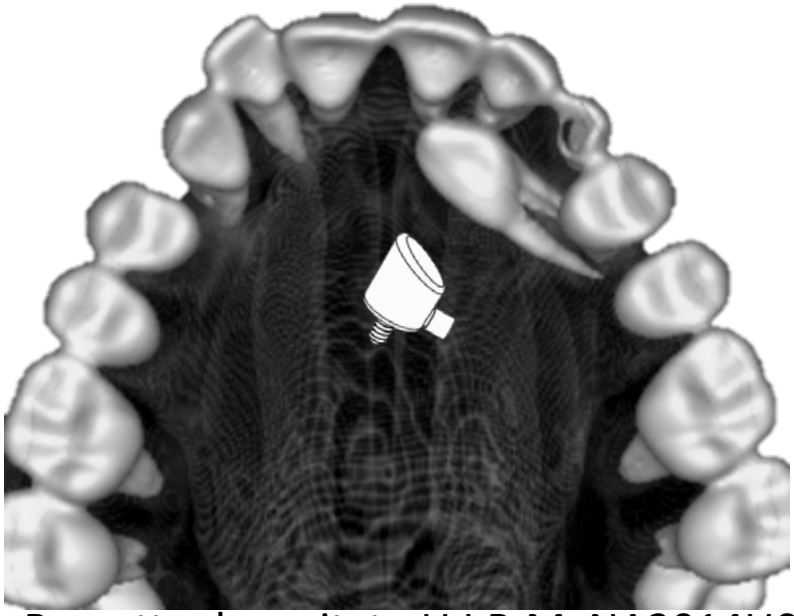

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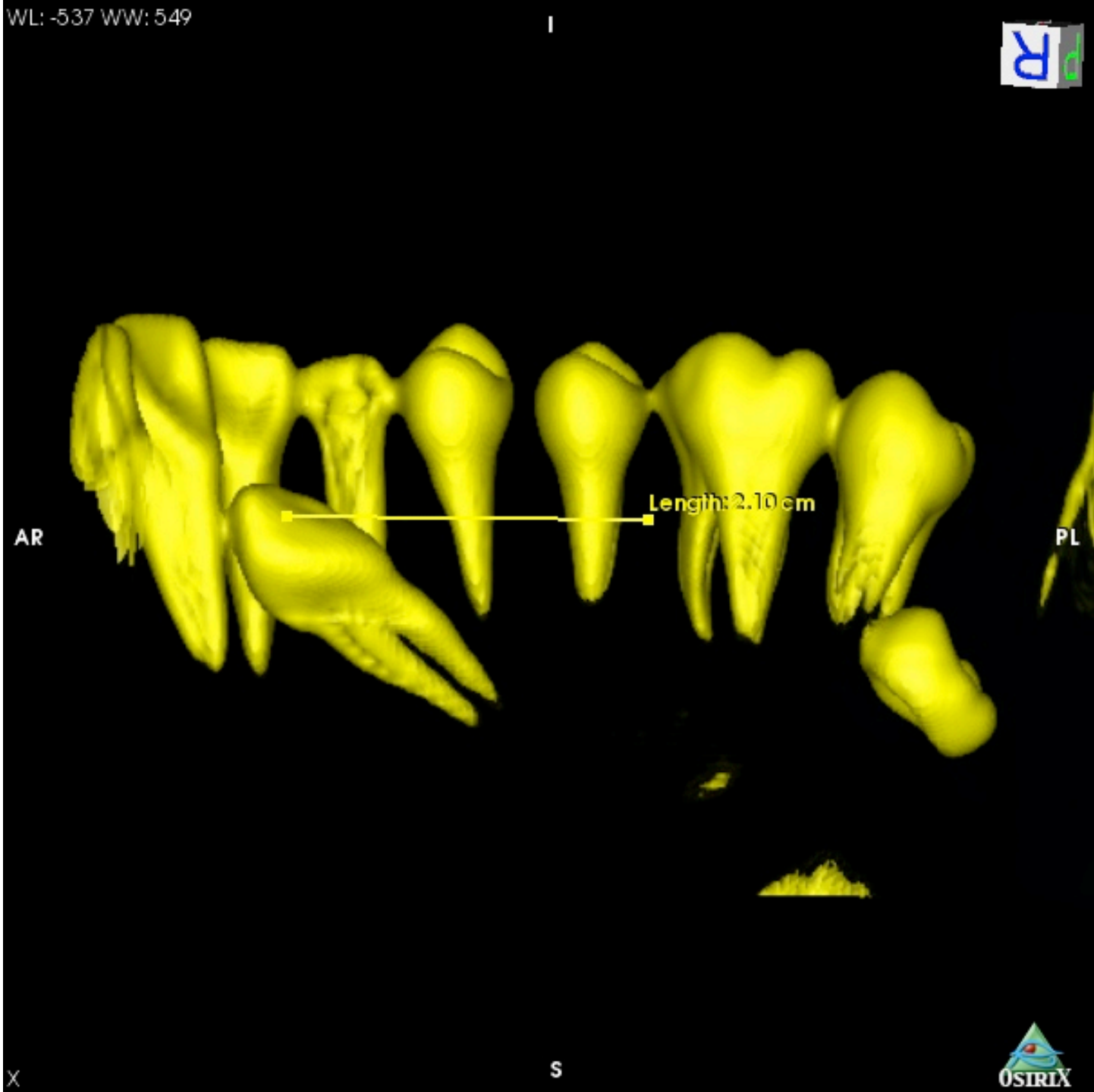
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