

19 novembre 2011 Alessandria



Dr. Ennio Lerda

GESTIONE ODONTOIATRICA DEL PAZIENTE IN TERAPIA CON BF ENDOVENA

DURANTE la terapia



DOPO la terapia

Dental management of patients at risk of osteochemonecrosis of the jaws: a critical review

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UCL Eastman Dental Institute

appropriate risk groups. Marx and coworkers suggested that patients with a history of fewer than 3 years of exposure to oral BP are at extremely low risk of BOJ and can safely receive surgical procedures (Marx et al, 2007). They also suggested that in individuals with a history of greater than 3 years of oral BP use (or less than 3 years with concomitant corticosteroid or chemotherapy use) the evaluation of degree of bone turnover inhibition (via serum C-terminal telopeptide [CTX] levels) could help in identifying subgroups of patients at different degrees of risk (Marx et al, 2007). They recommended deferring the surgery in patients with CTX level lower than 150 pg/mL (this indicates that bone turnover is highly impaired and the risk of osteonecrosis is greater) and planning, together with the prescribing physician, discontinuation of oral BP for 6-9 months (described as a "drug holiday") to allow the CTX value to rise and surgery to be safely performed (Marx et al, 2007). Other researchers have suggested that the discontinuation of oral BP for 1-3 months could help in any case (regardless of the length of exposure and evaluation of bone turnover markers) as the anti-angiogenic effect of BP would be reduced and, consequently, wound healing after surgery would

2008). In cases where planned surgery involves multiple quadrants, they recommend commencing with one quadrant, waiting for 2 months, and if no complication occurs, considering it is safe to treat the remaining quadrants at one time (American Dental Association Council on Scientific Affairs, 2006; Edwards et

McLeod et al, 2007). The evaluation of degree of bone turnover inhibition, as indicated by serum C-terminal telopeptide [CTX] levels, was found to be not relevant in estimating the risk of BOJ in patients on intravenous BP by two separate studies (Bagan et al, 2008; Marx et al, 2007). Other researchers have

recommended the discontinuation of oral BP for 1-3 months in order to allow osteoclast recovery (Van den Wyngaert et al, 2007) and reduce the anti-angiogenic effect of BP (Campisi et al, 2007). They suggested that this would

- BF os < 3 anni: bassissimo rischio.
- BF os > 3 anni o < 3 anni + corticost.: valutare CTX (C-terminal telopeptide).
- CTX < 150 pg/mL: stop BF x 6-9- mesi.
- In ogni caso, se possibile: stop BF x 1-3 mesi potrebbe diminuire l'effetto anti-angiogenetico dei BF (x la mucosa)

- Se necessaria chirurgia nei 4 quadr: prima 1 quadr – ctr x 2 mesi – poi altri quadr (eventualmente anche in contemporanea).

- **BF ev:** il CTX non sembra essere un buon parametro di valutazione del rischio di comparsa di ONJ.
- **BF ev:** in ogni caso interrompere 1-3- mesi in accordo con il Curante per ridurre gli effetti anti-angiogenetici.

CONCLUSIONI ?

significant. For both oral and intravenous BP, none of the suggested risk-reduction strategies have been demonstrated effective and therefore only sensible and practical precautions to reduce bone trauma and to minimize the risk of infection can be recommended. Most importantly, there is need to ensure that patients taking BP are well informed of the oral risks and triggers for BOJ, so they can make informed decisions about undergoing any dental procedures. The

DURANTE la terapia



DOPO la terapia

Cosa posso fare?



SI PUÒ



NON SI PUÒ



SI DEVE



SI PUÒ



SI DEVE

- ➔ **Igiene orale professionale**
- ➔ **Endodonzia e Conservativa**
- ➔ **Chirurgia MUCOSA (preprotetica) PERIOSTIO!**
- ➔ **Protesi FISSA (Endodonzia sui denti vitali)**
- ➔ **Protesi MOBILE (ATTENZIONE!!!!)**

SI PUÒ

SI DEVE

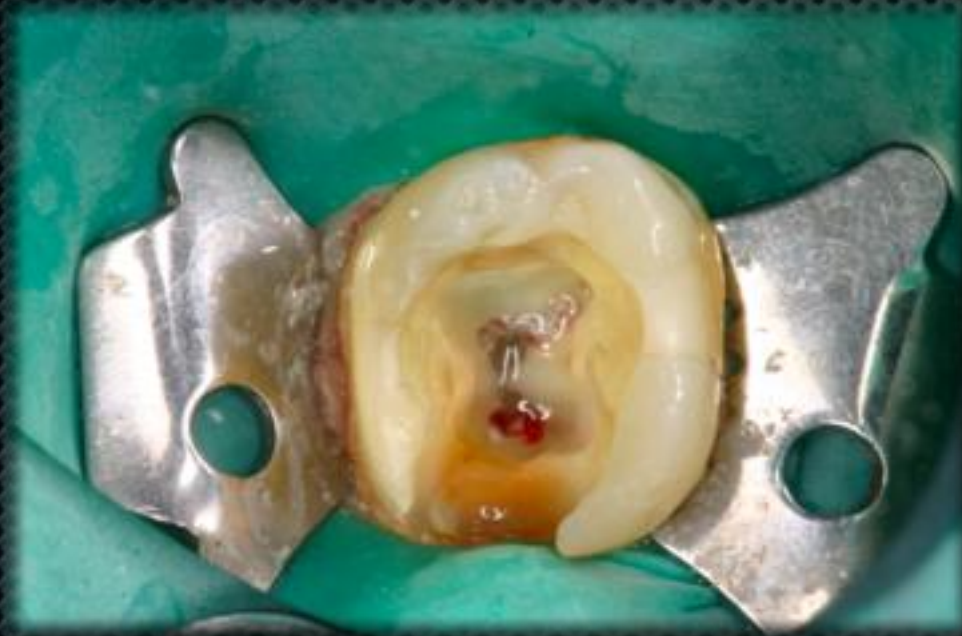
➔ **IGIENE ORALE PROFESSIONALE**
sopragengivale (sottogengivale?) ogni 4-6
mesi, in particolare nei pazienti con parodontite
e che non gestiscono l'igiene orale domiciliare

SI PUÒ

SI DEVE

➔ ENDODONZIA e CONSERVATIVA

....Root canal therapy could postpone or even eradicate the need for dental extractions of carious teeth in patients on bisphosphonates who may develop osteonecrosis of the jaws...

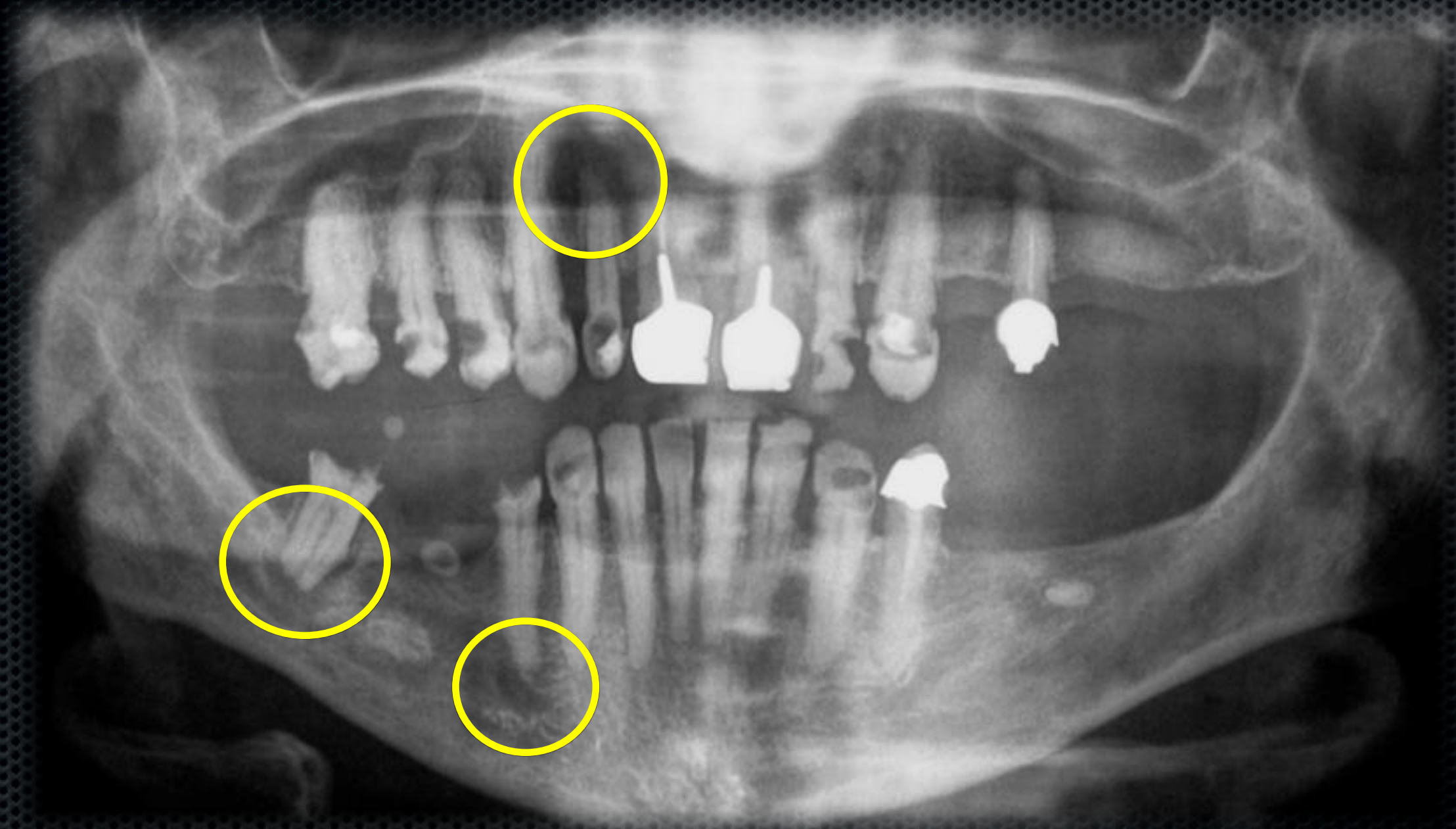


...endodontic treatment is negligible compared with the benefit from avoiding dental extractions...

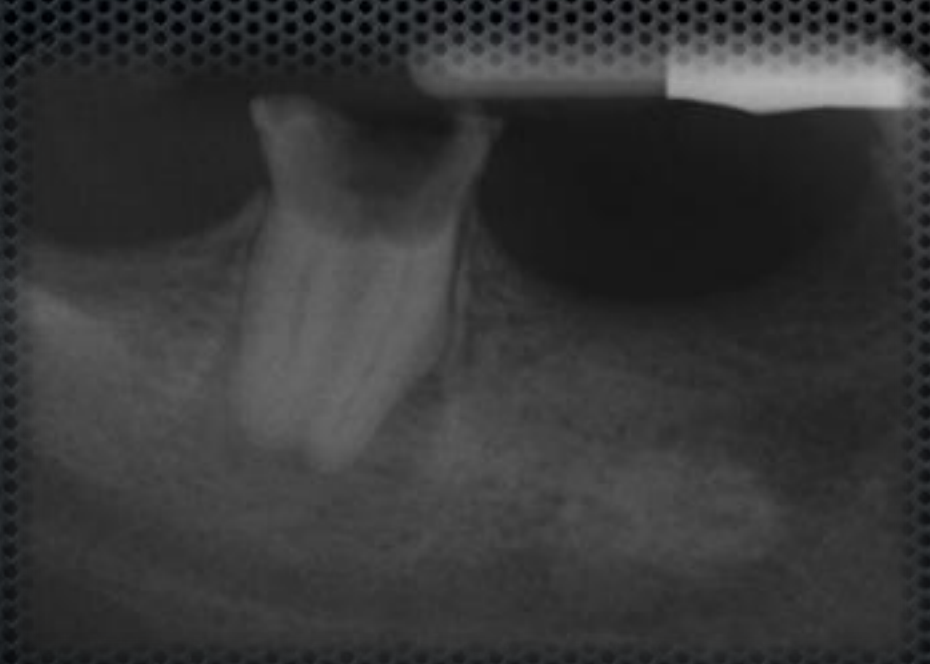
Root canal therapy for the prevention of osteonecrosis of the jaws: an evidence-based clinical update.

Kyrgidis A, Arora A, Lyroudia K, Antoniades K.Aust **Endod J.** 2010 Dec;36(3):130-3.

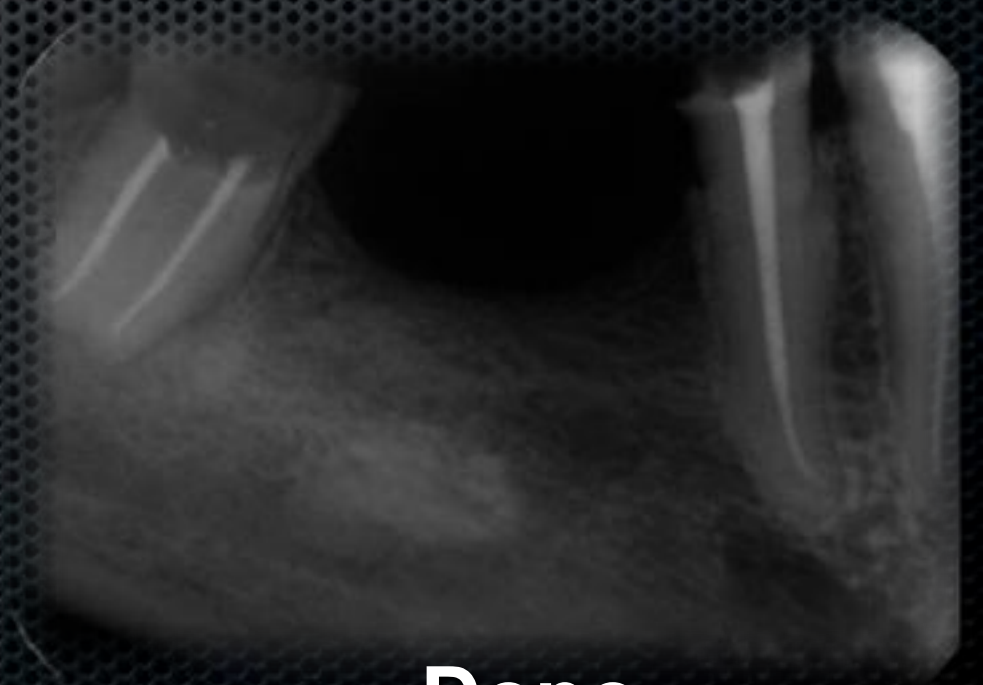
OPT prima visita



Carie multiple con interessamento pulpare
Processi flogistici apicali multipli

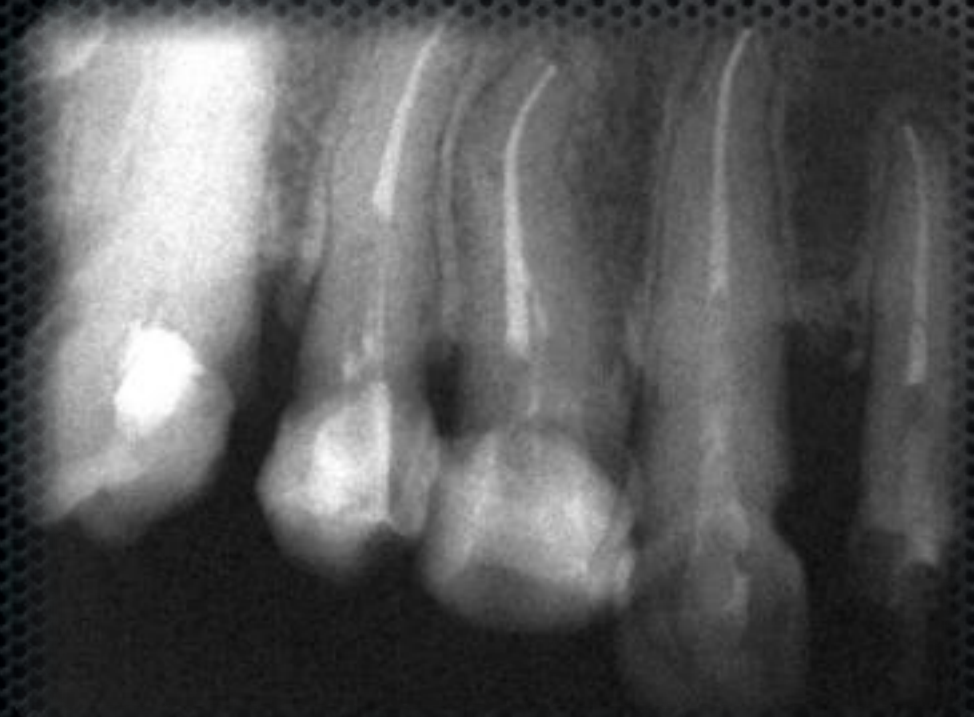


Prima

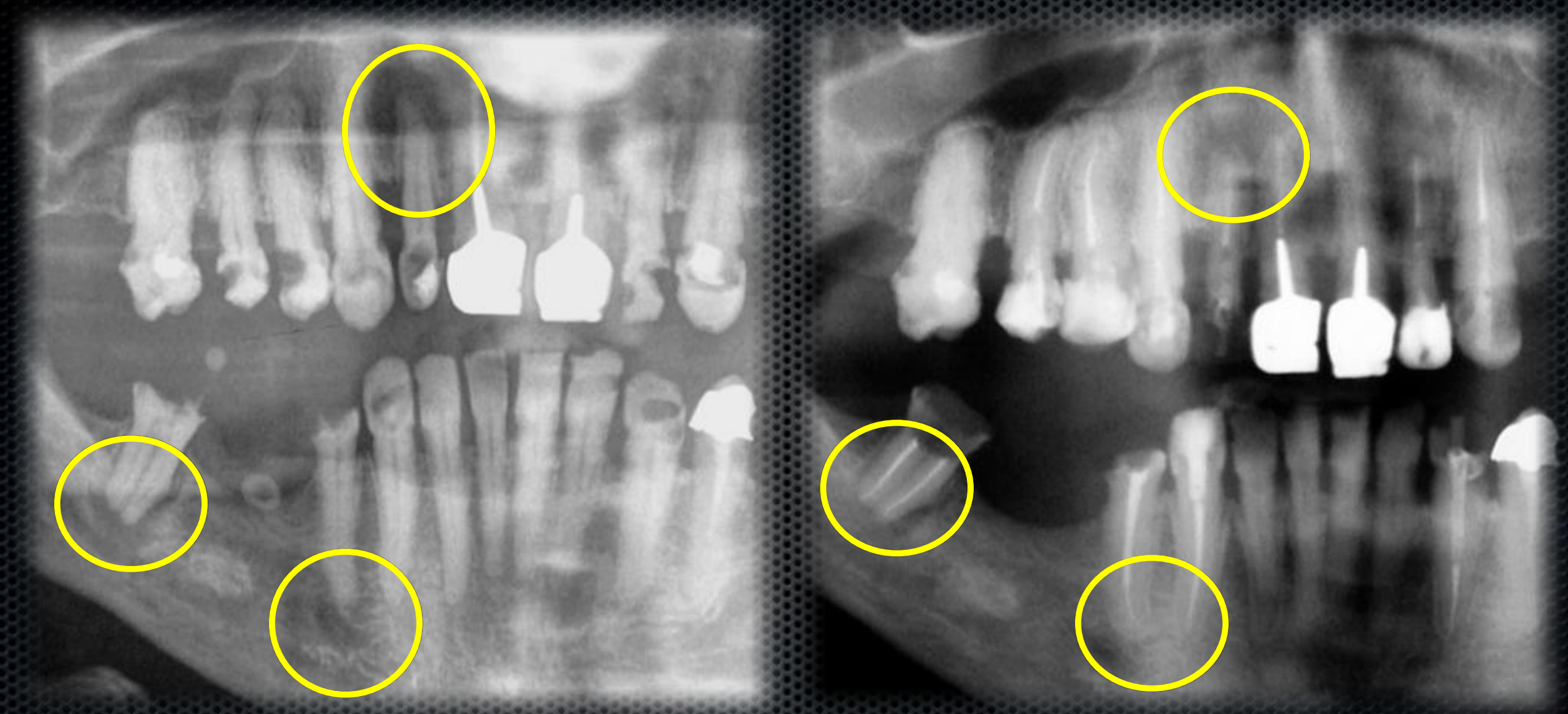


Dopo

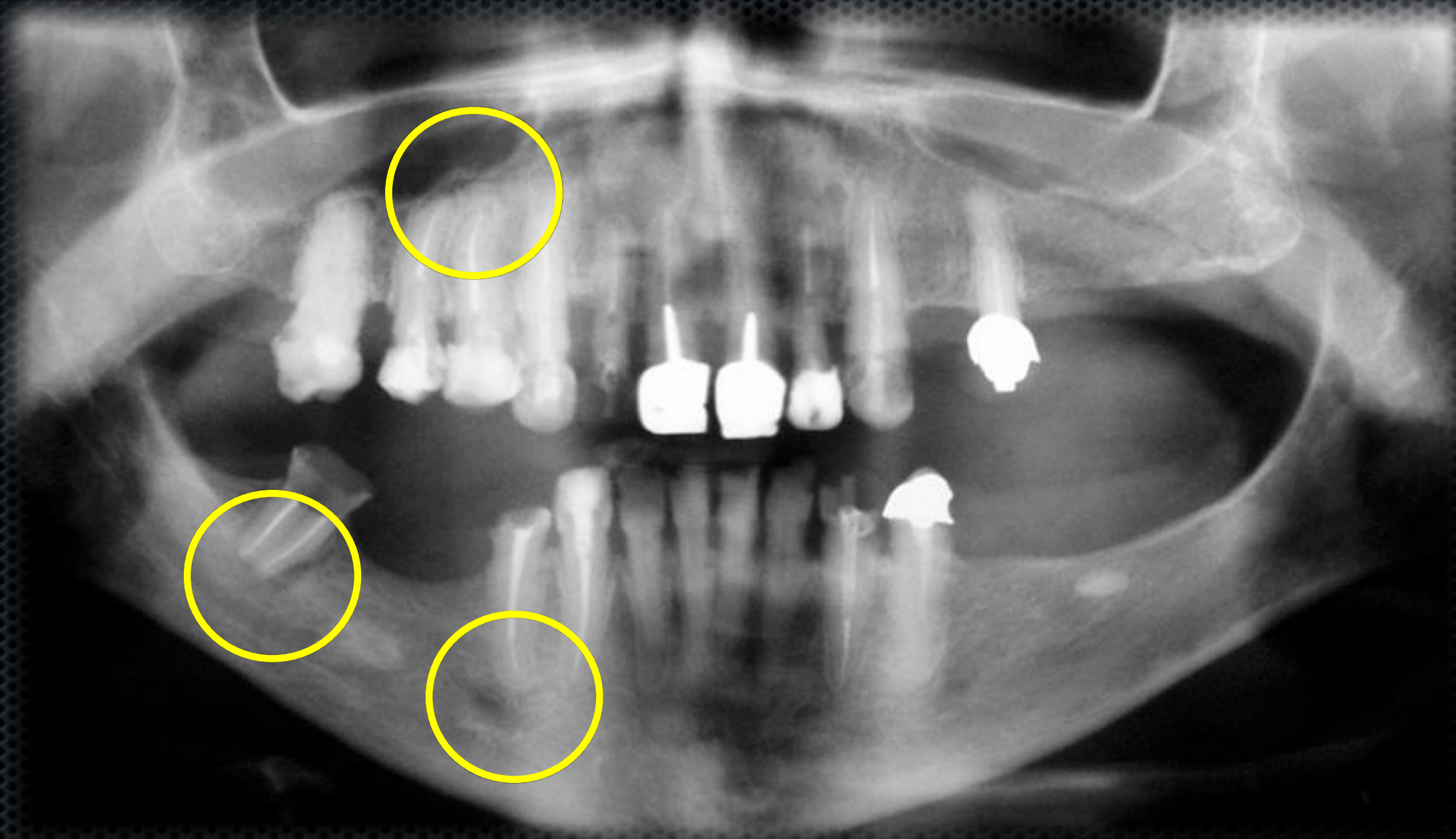
Dopo le terapie endodontiche



3 MESI



OPT pre e post terapie odontoiatriche conservative



CONTROLLO A 24 MESI

SI PUÒ

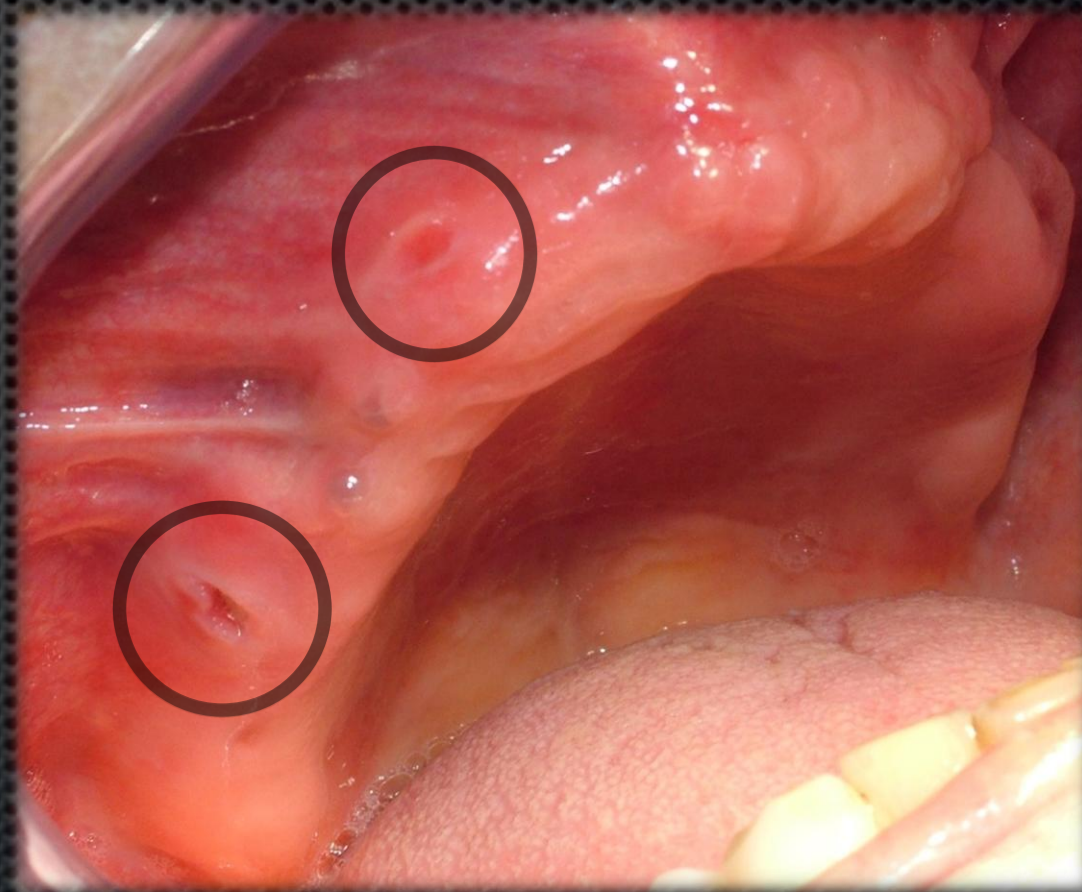
SI DEVE

→ PROTESI FISSA e MOBILE



Protesi MOBILE

ESPOSIZIONE da TRAUMA PROTESICO



Condizioni predisponenti locali

Sedi ad alta densità ossea

tori, linea miloioidea, sinfisi mentoniera

↓ Cellularità

Corticalizzazione

Mucosa sottile

**Non esiste letteratura su
ribasatura morbida o dura**



Marx RE Oral & intravenous Bisphosphonate-induced osteonecrosis of the jaws
Chicago, Quintessence Publishing. 2007

Chern B, Joseph D, Joshua D et al Bisphosphonate infusions: patient preference, safety and clinic use
Support Care Cancer 2004;12:463-466

→ IMPLANTOLOGIA

Letteratura incerta a riguardo

NON SI PUÒ

Table 2. Prospective and retrospective studies on the safety of implant placement in patients treated by oral-BPs

Study/year	Number of patients (test/control)	Age range (years)	BP/dosage	BP intake duration at implant placement	Number of implants (test/control)	Follow-up duration (months)	BRONJ number	Success rate in test group (%)	Success rate in control group (%)
Jeffcoat (2006) Prospective single-blind controlled study	25/25	?	Alendronate Risedronate	1-4 years	102/108	36	0	100	99.2
Fugazzotto et al. (2007) Retrospective analysis	61/100	1-13	Alendronate (2 patients), 70 mg/week (30) 35 mg/week (27) Risedronate (9 patients), 35 mg/week (6) 70 mg/week (3)	1.15 patients 4-5 years 2.36 patients 3 years and more Mean: 3.7 years	105/100	2-11	1 (one case of bone exposition not matching ICDN criteria)	100	No control group
Bell & Bell (2008) Retrospective analysis	42/100	Not communicated	Alendronate (34 patients), Risedronate (6 patients), Ibandronate (2 patients), dosage not communicated	Not communicated	100/124	1-200 average 17	0	97	96.7
Grant et al. (2008) Retrospective analysis	89 patients under BP before implant surgery/1319 female patients with implant surgery	Mean: 67.4	Alendronate (15 patients), Risedronate (21 patients), Ibandronate (2 patients)	38 months	468/1450	18	0		

Carlos Madrid
Mariano Sanz

What impact do systemically administered bisphosphonates have on oral implant therapy?
A systematic review

SOLO BF x OS

CONCLUSION

From the analysis of the one prospective and the three retrospective series (217 patients), the placement of an implant may be considered a safe procedure in patients taking oral BPs 5 years with regard to the occurrence of BRONJ since in this studies no BRONJ has been reported. Moreover, the intake of oral-BPs did not

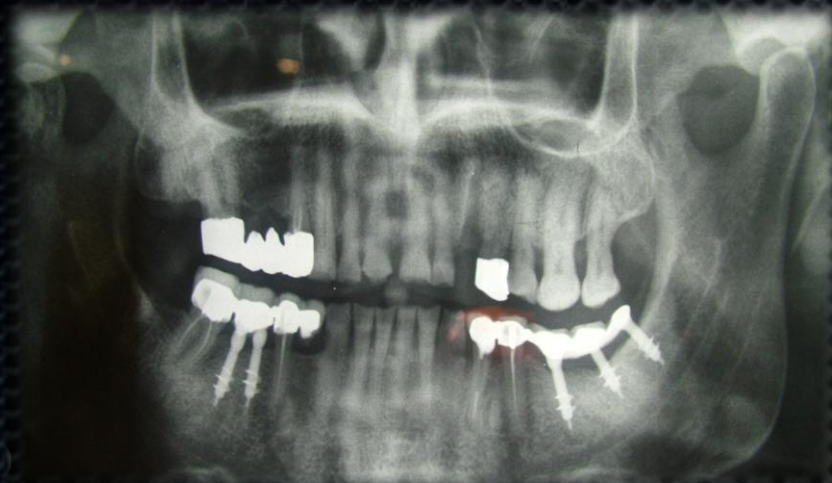
Table 3. Guidelines on implant therapy in cancer and osteoporotic patients taking IV or oral BPs

Guidelines author	Association or Task Force	Implant placement in cancer patient	Implant placement in osteoporotic patient	Antibiotic prophylaxis	Discontinuation of BP before/after placement
Migliorati et al. (2005)	American Academy of Oral Medicine	No position	No position	Not addressed	No position
Chen et al. (2007)	British Association of Oral and Maxillofacial Surgeons	Not recommended	Not recommended	Not addressed	No position
No author listed (2007)	American Dental Association Council on Scientific Affairs	Not addressed	Should be considered carefully before extensive implant placement or GBR at risk	Not recommended. To be considered in risky patients for risky procedures	Not addressed
No author listed (2008)	American Association of Endodontics and Maxillofacial surgeons	Not addressed	BP intake < 3 months: no contraindication BP intake > 3 years or < 3 years + corticosteroids: contraindicated	Not addressed	Oral-BPs: 3 months before 3 months after
Khosla et al. (2007)	American Society of Bone and Mineral Research	Not recommended	Not contraindicated	Not addressed	No data to suggest improvement of outcomes Discontinuation of oral-BP unlikely to have adverse effect Not recommended
2008b)	Association Council on Scientific Affairs		consider treatment options Extensive implant placement or GBR at risk Non-surgical therapy of peri-implantitis	antibiotics prevent BRONJ	
Khan et al. (2008)	Canadian Consensus Practice for BPs associated osteonecrosis of the jaw	Not recommended	Currently not contraindicated	Not addressed	To be considered in case of non-emergent invasive dental procedure: 3-6 months before the procedure and until healing is achieved

BP, bisphosphonate; BRONJ, bisphosphonate-related osteonecrosis of the jaw; IV, intravenous.

Alberto Bedogni MD, Giordana Bettini MD, Andrea Totola DMD, Giorgia Saia MD, Pier Francesco Nocini MD, DDS
Oral Bisphosphonate, Associated Osteonecrosis of the Jaw After Implant Surgery:
A Case Report and Literature Review
Dental implant

OPT 2008



OPT 2009



OPT 2011



Pre



Ctr 3 mesi



2° intervento



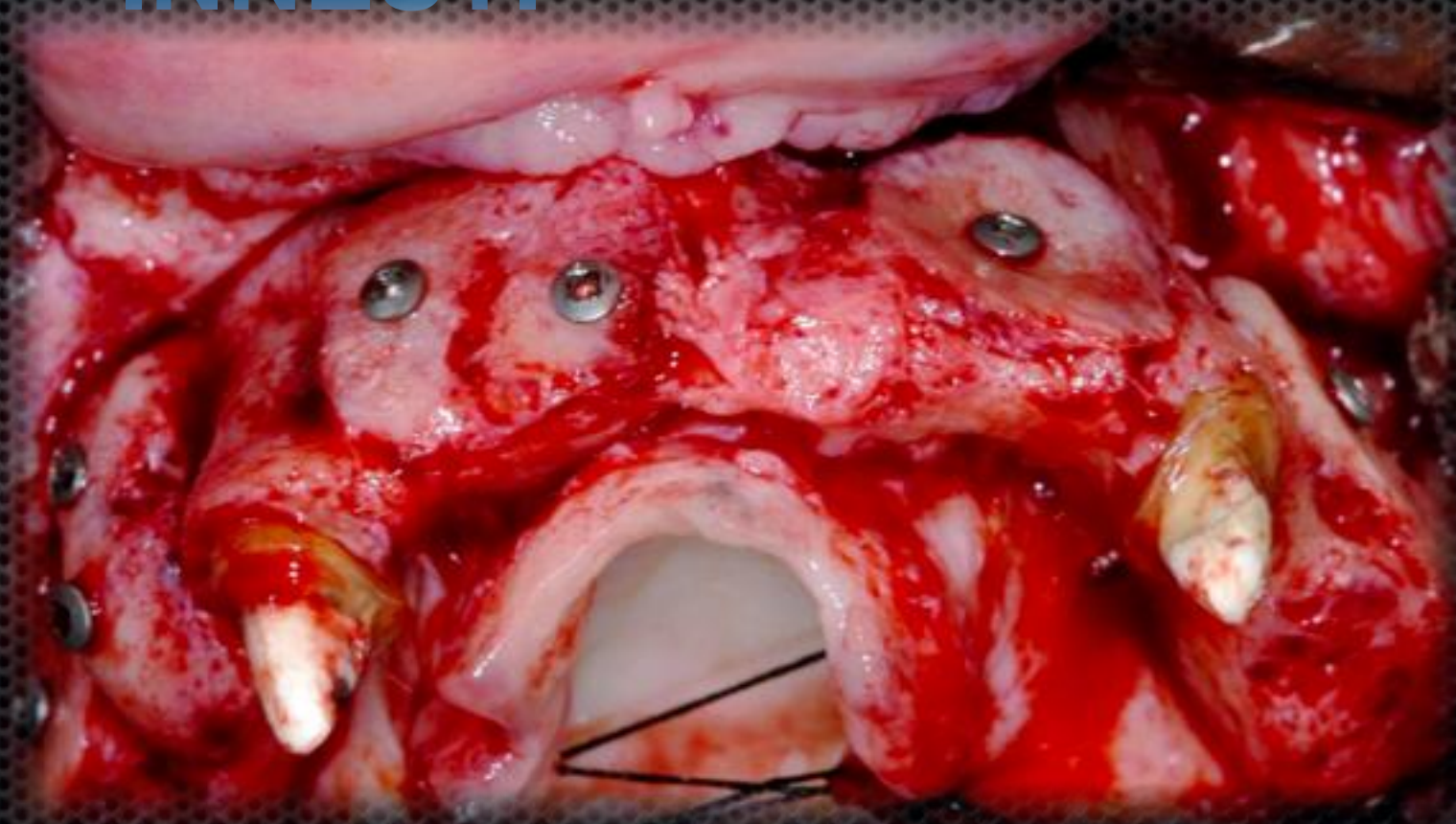
Ctr 24 mesi





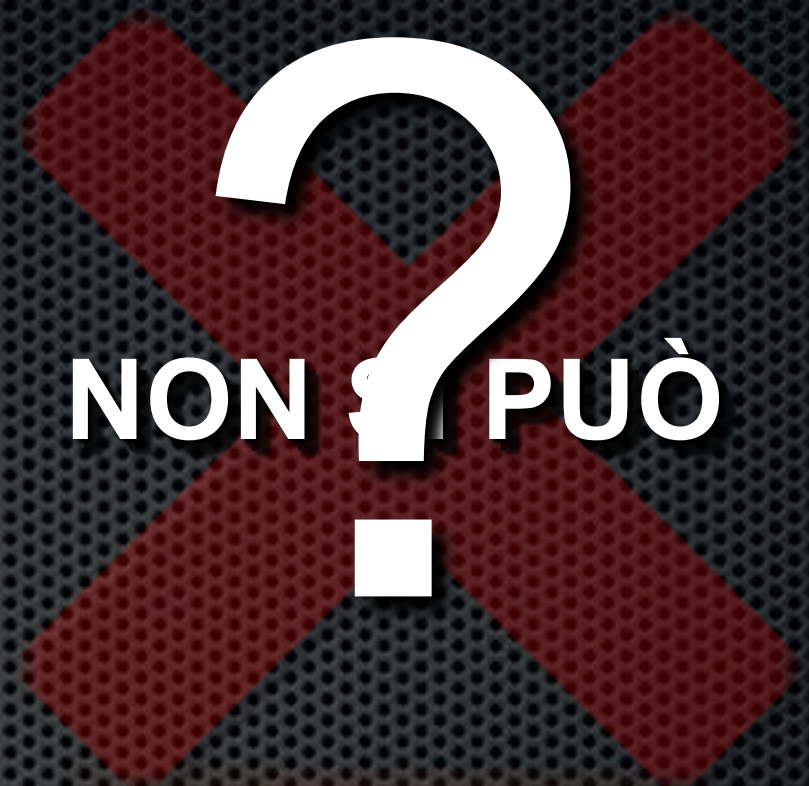
NON SI PUÒ

➔ **RIALZO DI SENO E
INNESTI**



→ ESTRAZIONI

Protocolli di estrazione dentaria con l'ausilio di PRGF



NON SI PUÒ

Letter to the Editor

A dental extraction protocol with plasma rich in growth factors (PRGF) in patients on intravenous bisphosphonate therapy: A case-control study



Scoletta M, Arduino PG and Mozzati M Initial Experience on the Outcome of Teeth Extractions in Intravenous Bisphosphonate-treated Patients: A Cautionary Report.
J Oral Maxillofac Surg. [accepted on Jul 2010]

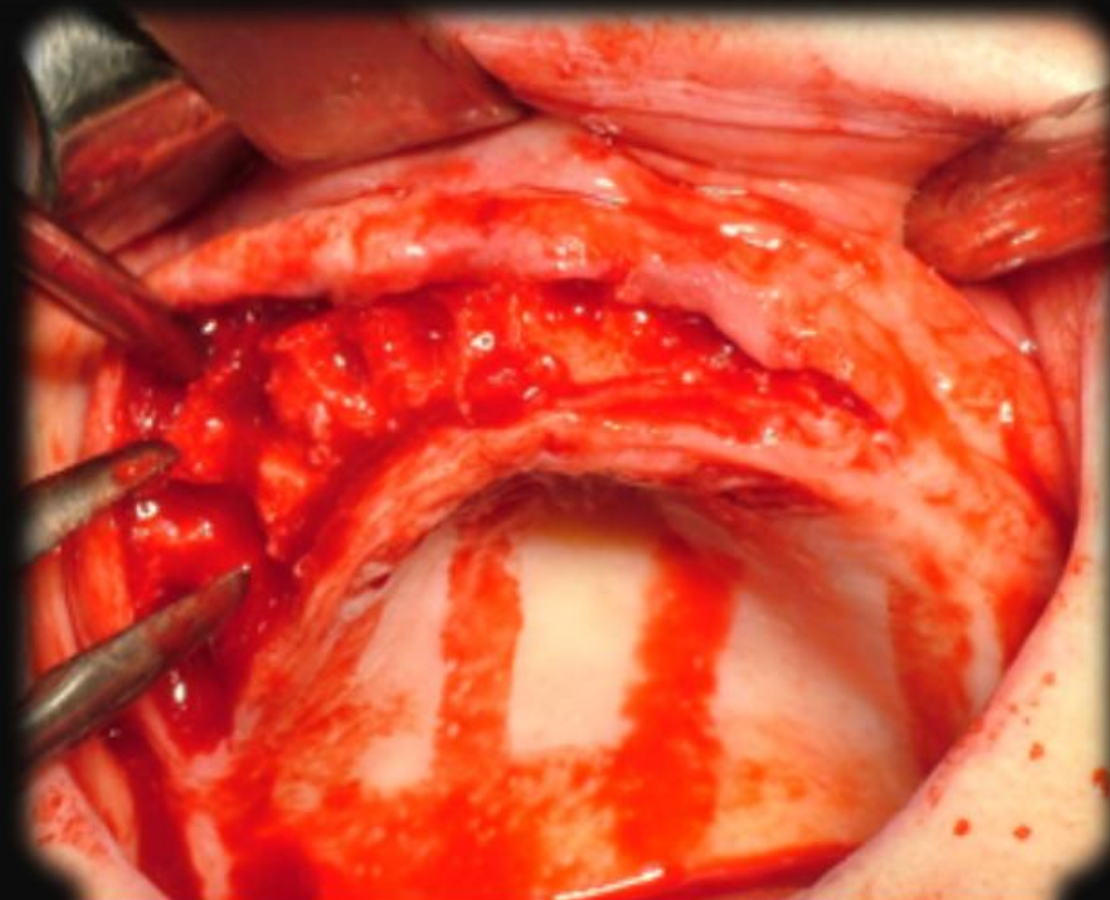
PROTOCOLLO 1

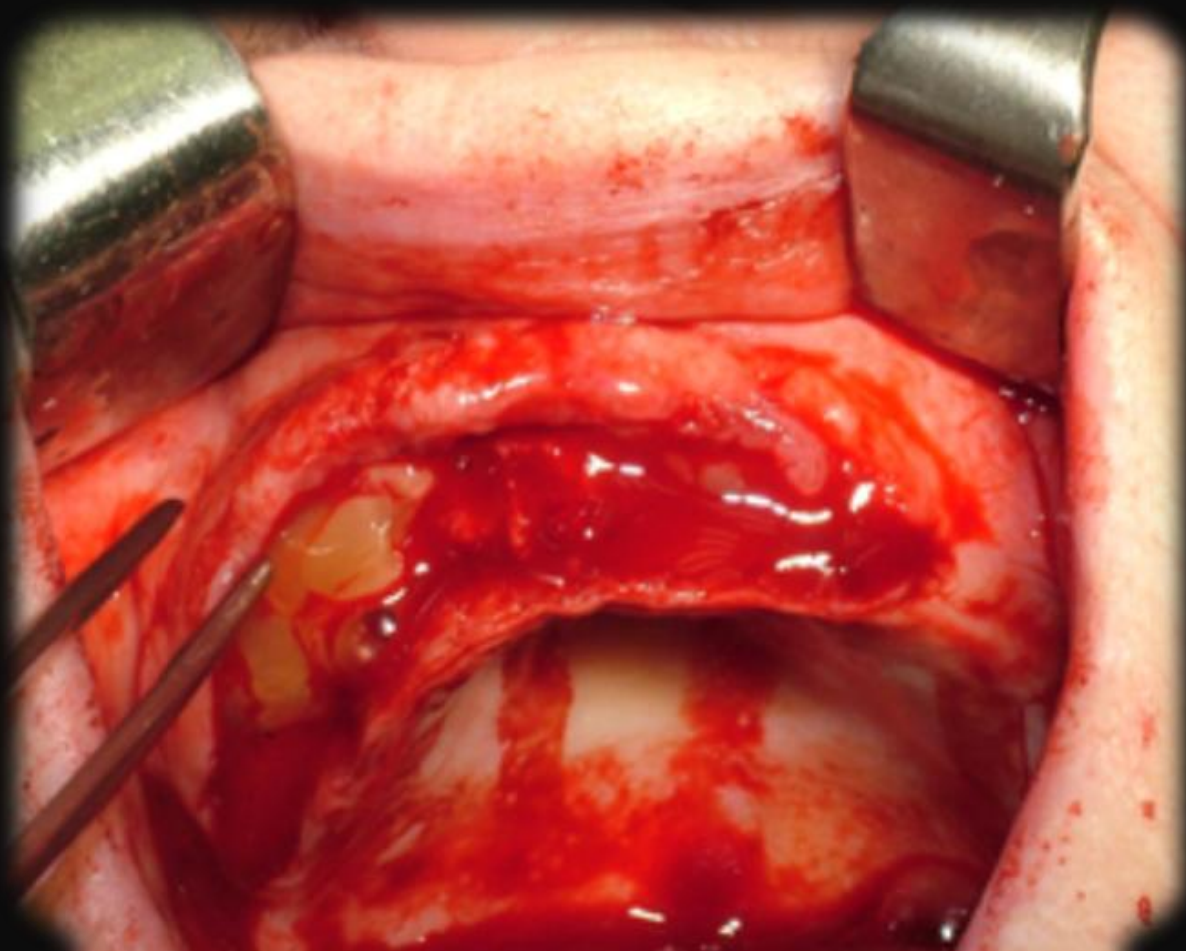
- ◆ **Consenso informato personalizzato**
- ◆ **Rx recenti (OPT e TC), eventualmente rx endorali**
- ◆ **Igiene professionale pre-estrazione**
- ◆ **Terapia ATB dal giorno prima (Augmentin 1x3x6)**
- ◆ **Intervento in sterilità**
- ◆ **Lembo per chiusura per prima intenzione**
- ◆ **Avulsione delicata degli elementi dentari**
- ◆ **Alveoloplastica a mezzo di Piezosurgery**
- ◆ **PRGF**
- ◆ **Sutura a materassaio incrociato**

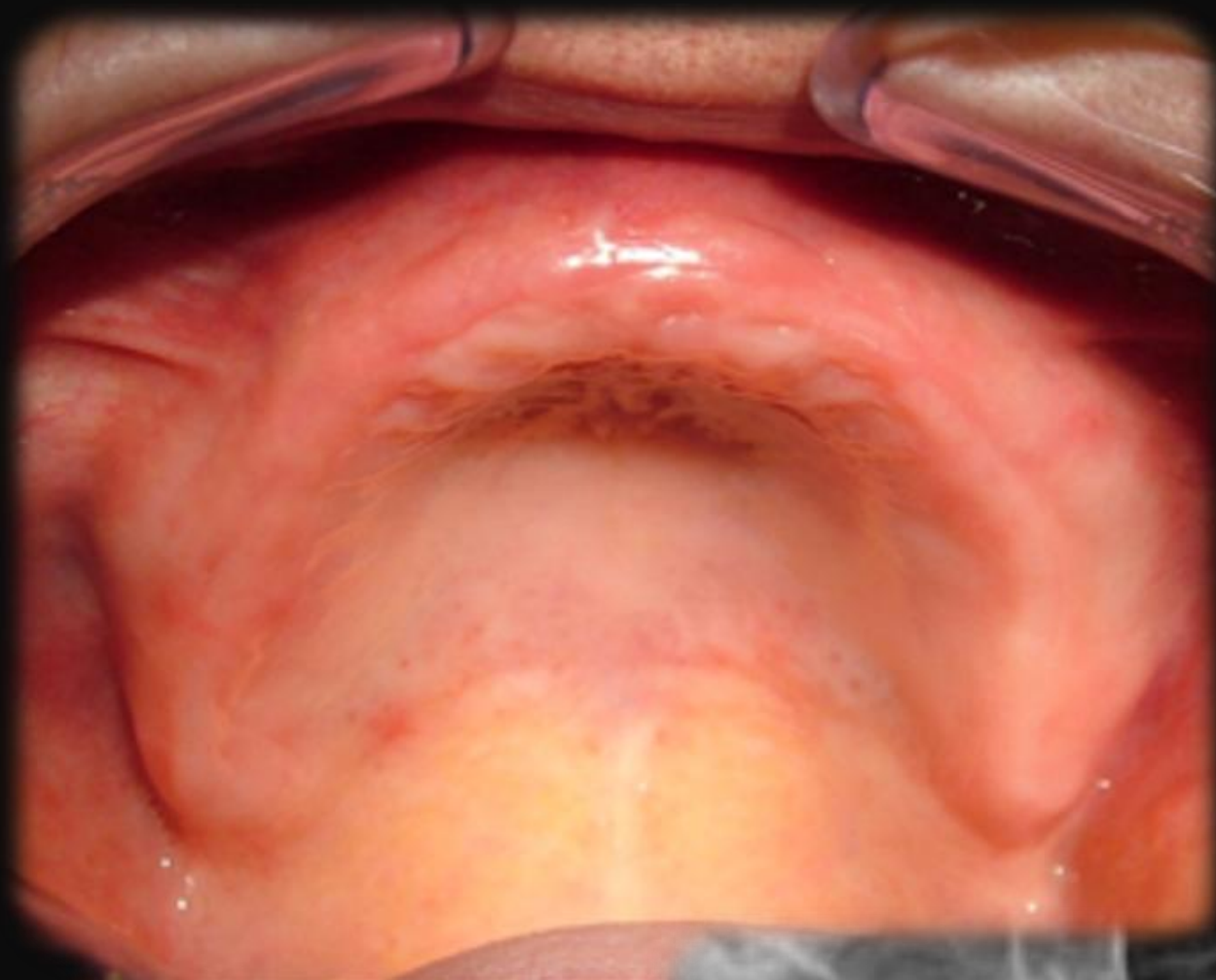


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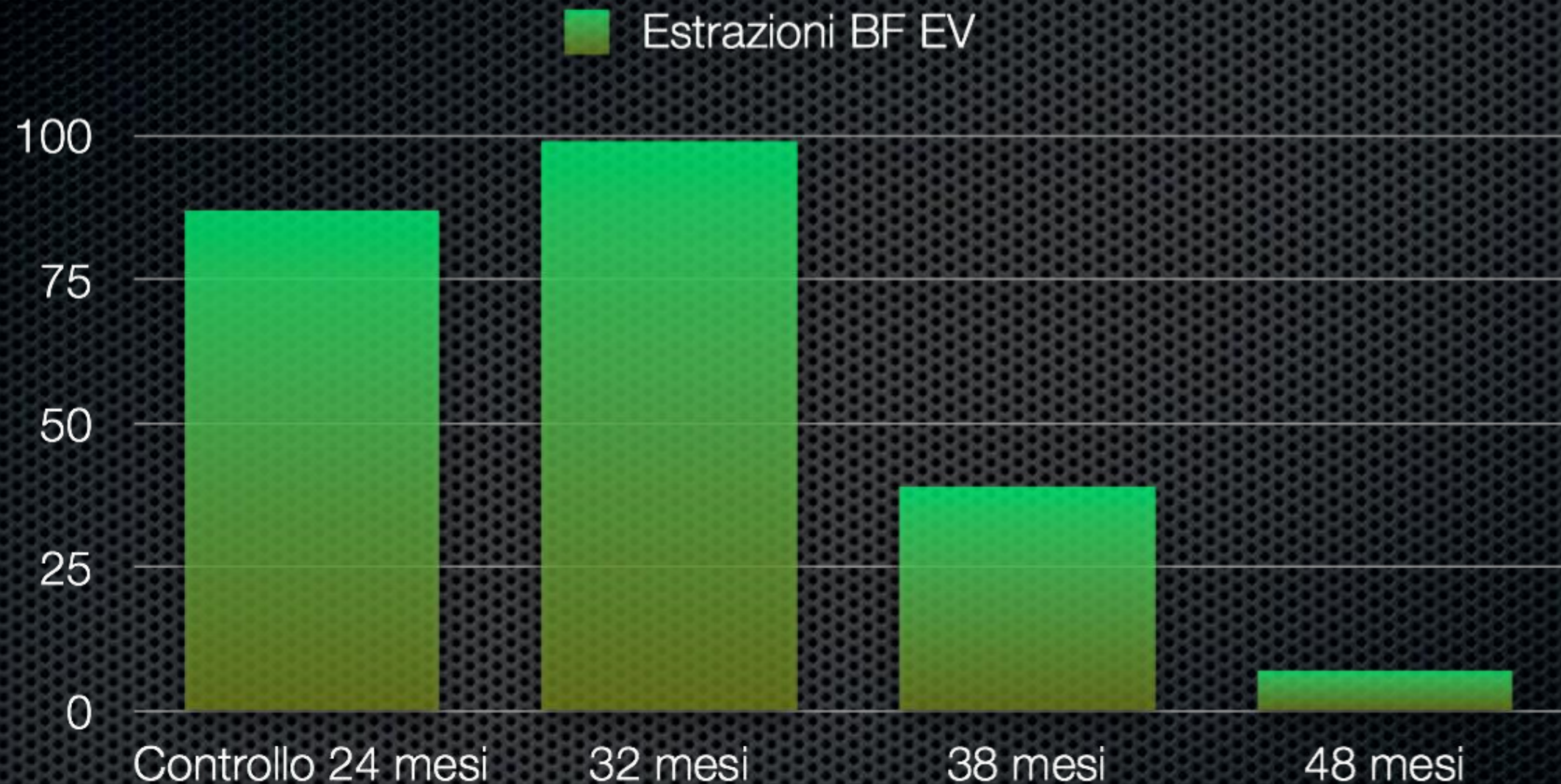
24 MESI



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J:J

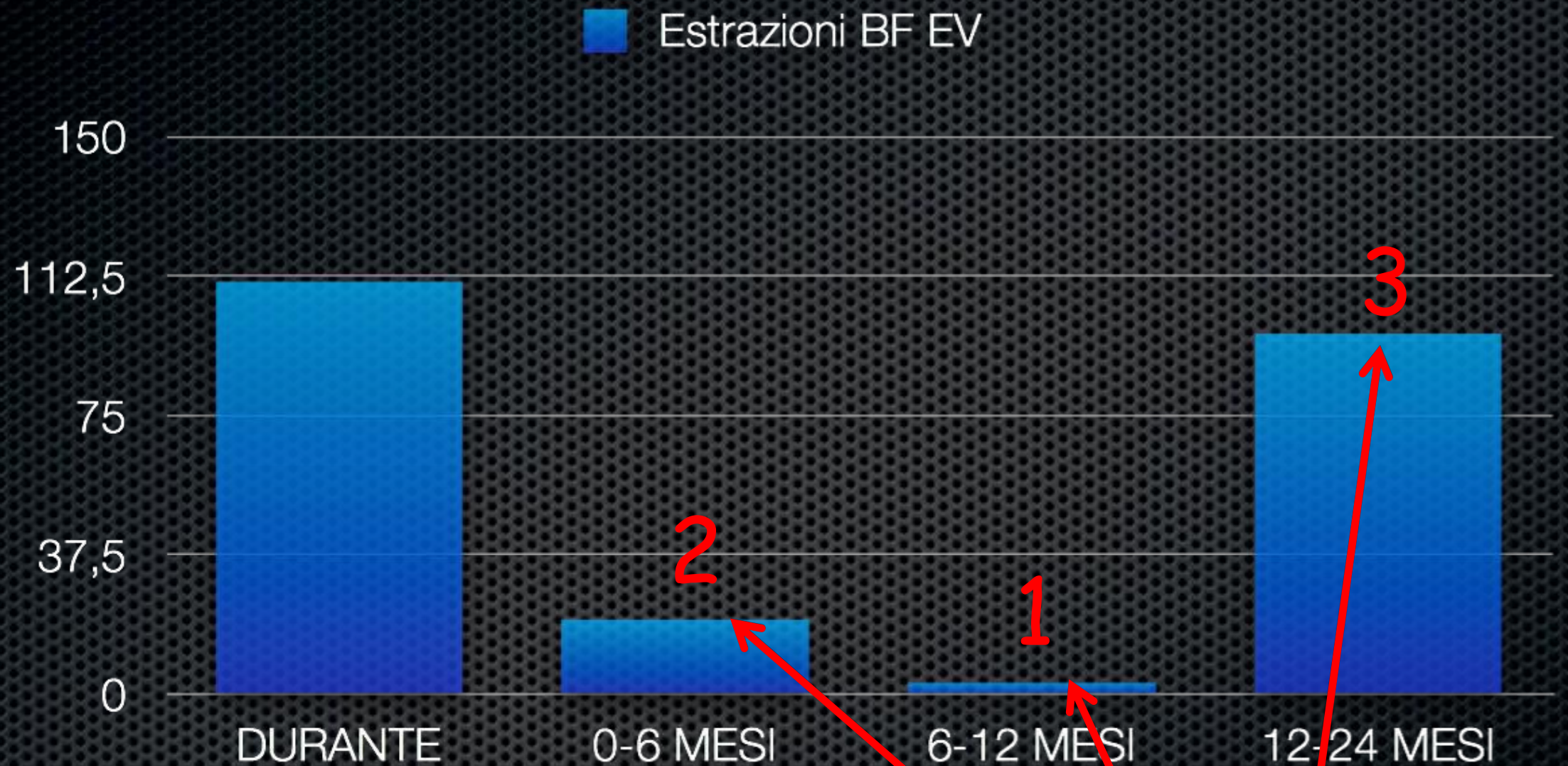
Risultati PROTOCOLLO 1



TOT ESTRAZIONI
231

COMPLICANZE
6

Chirurgia orale DENTAL SCHOOL

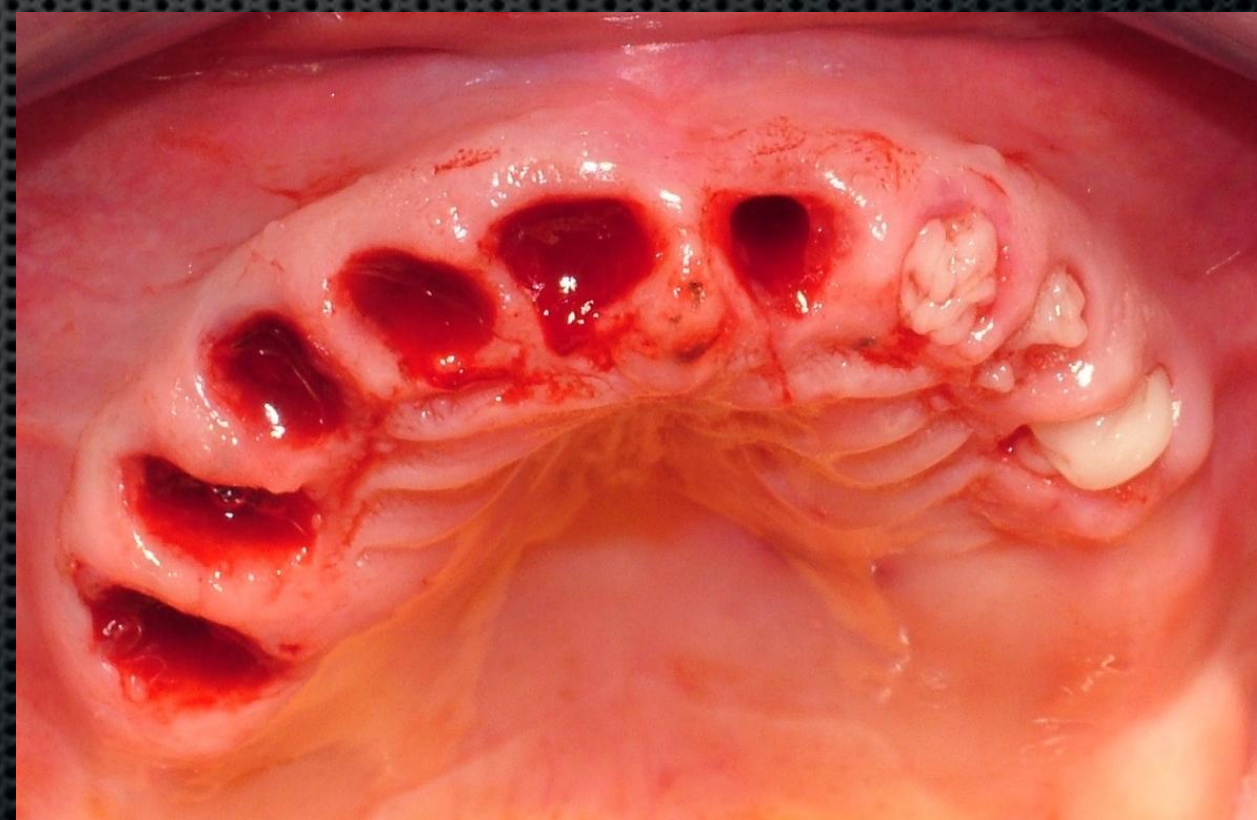
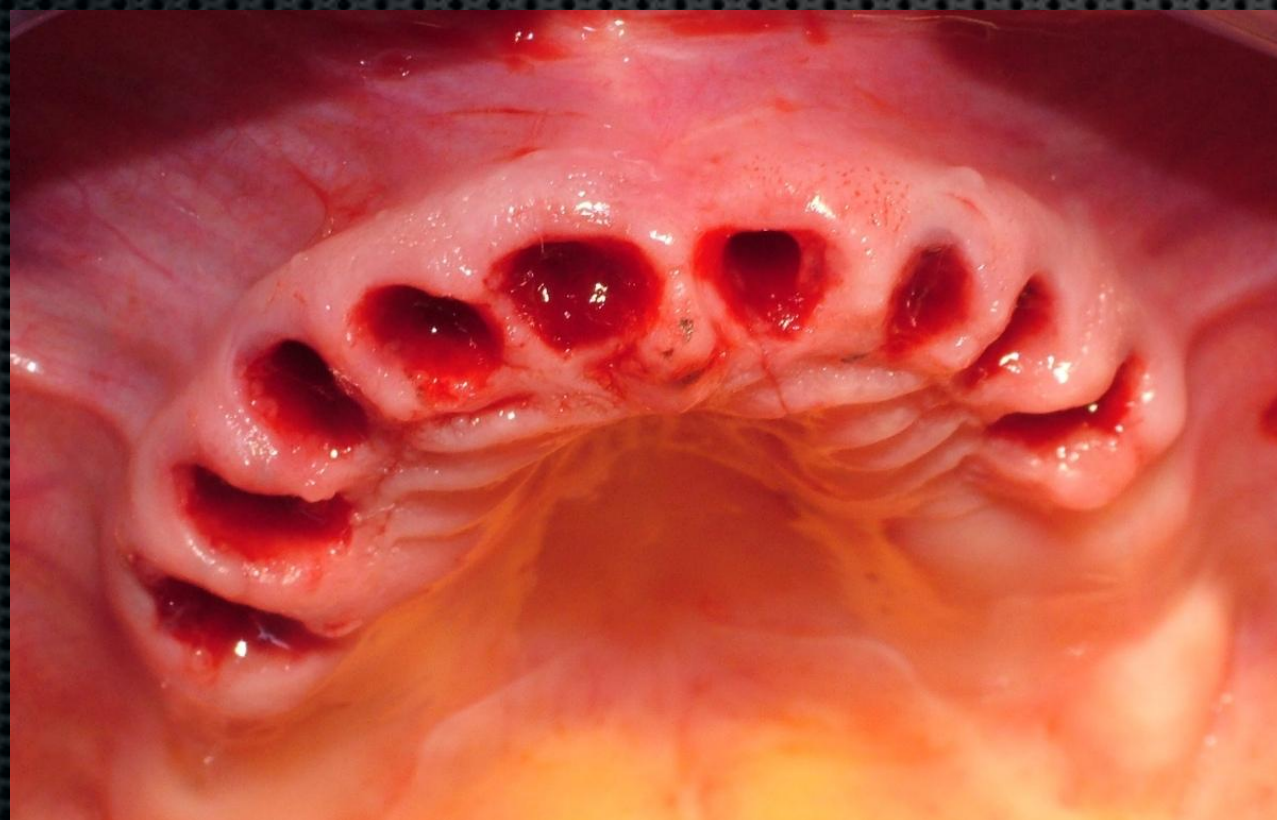
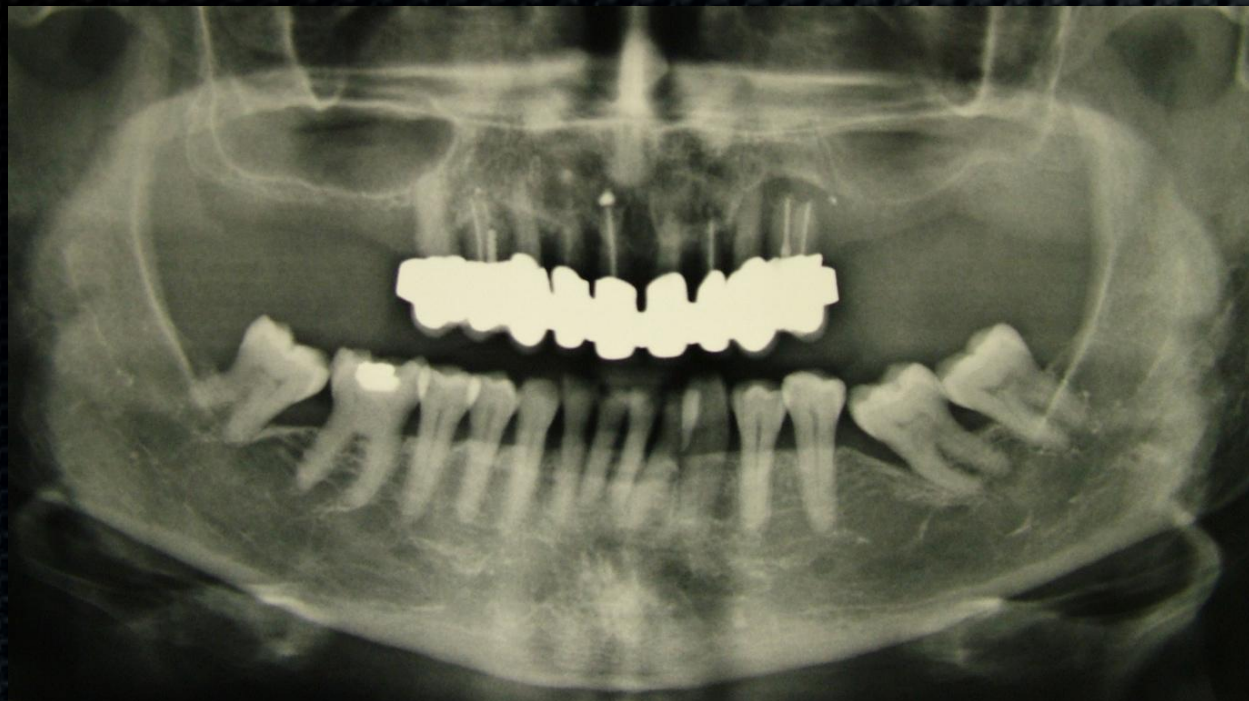


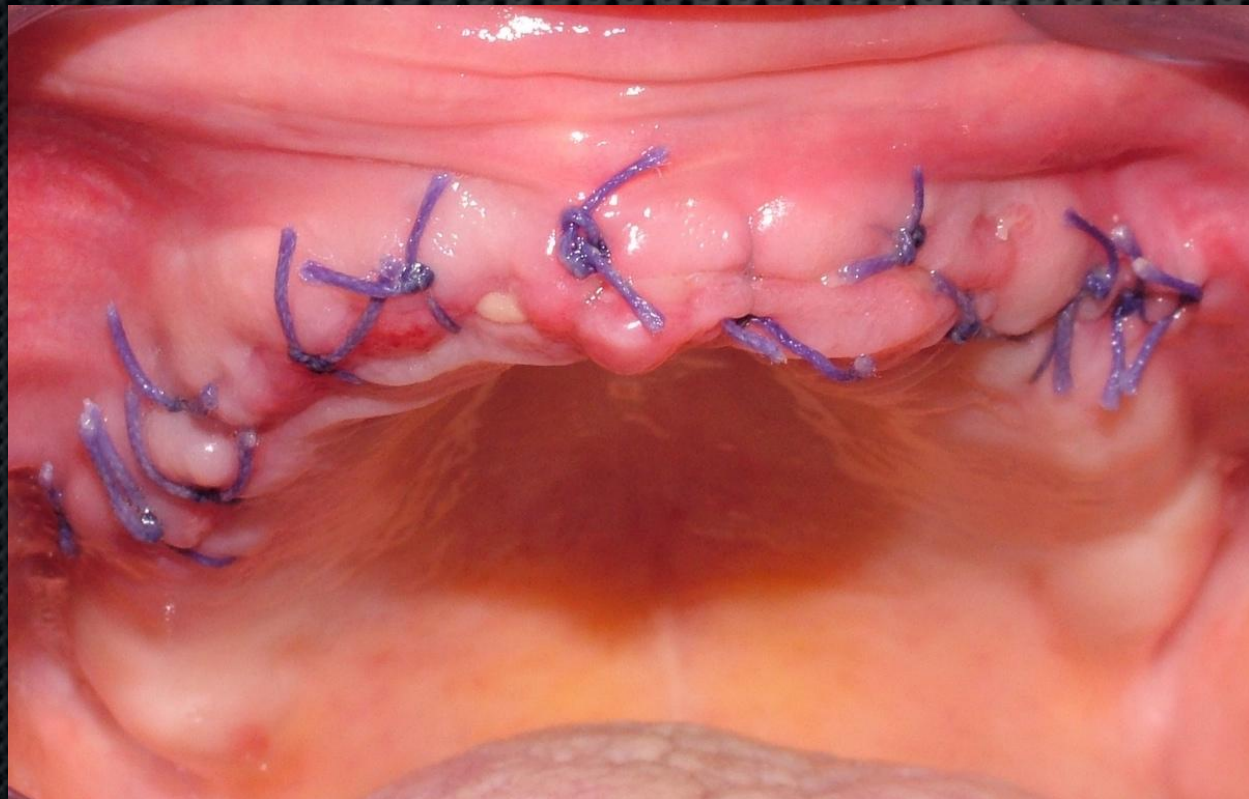
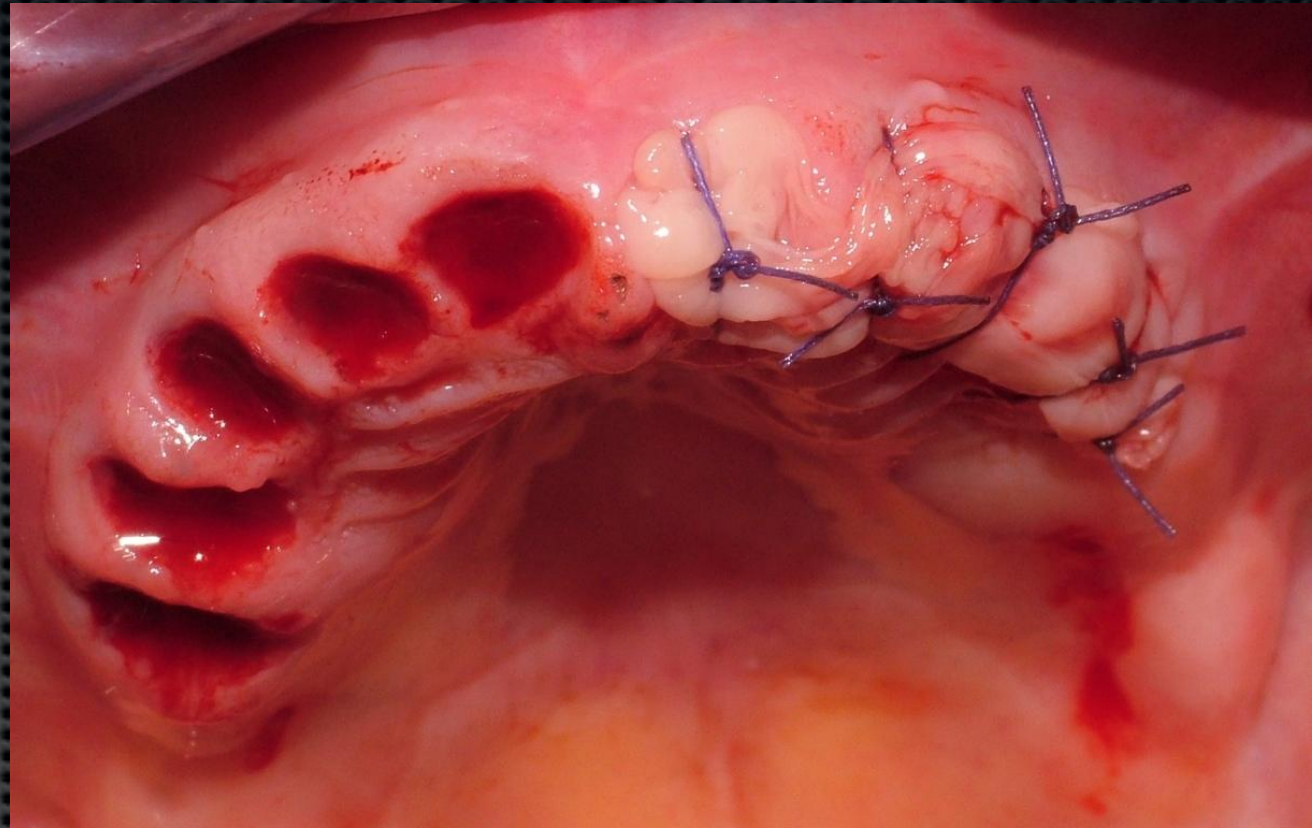
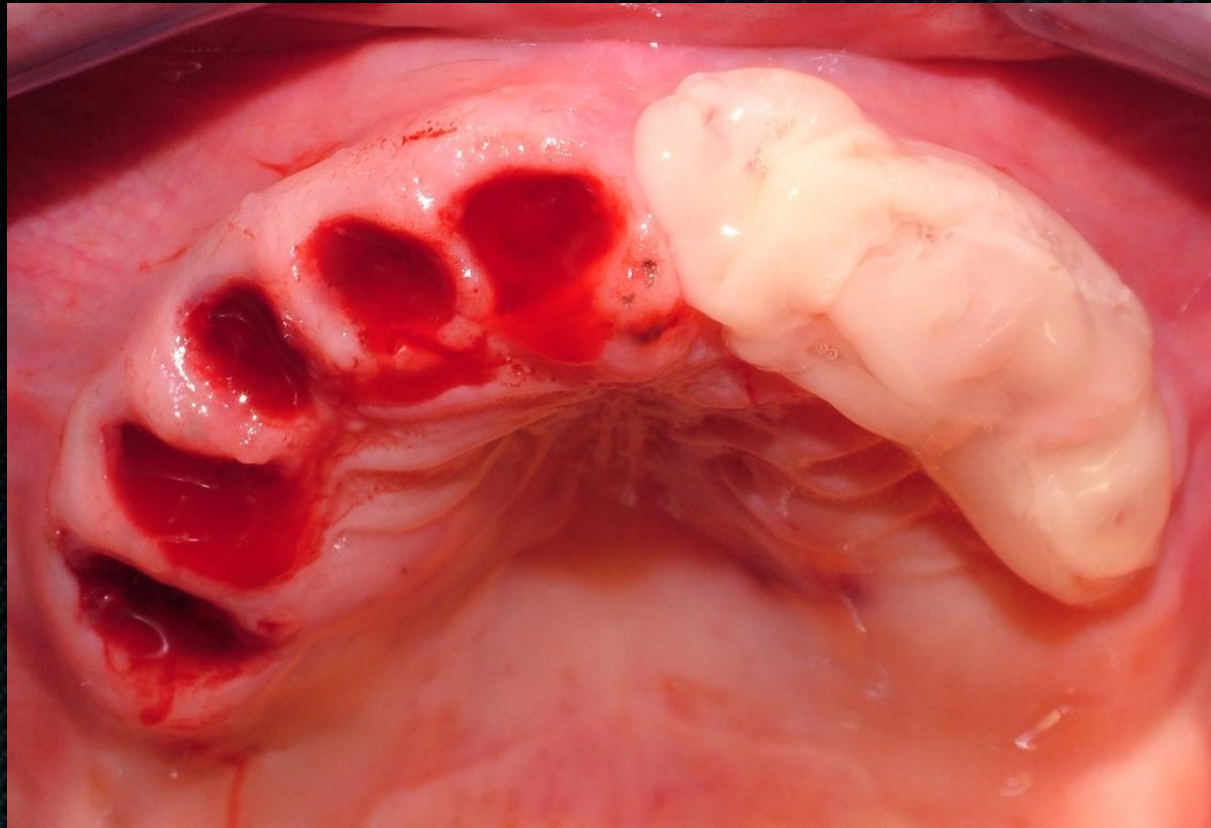
TOT ESTRAZIONI
231

COMPLICANZE
6

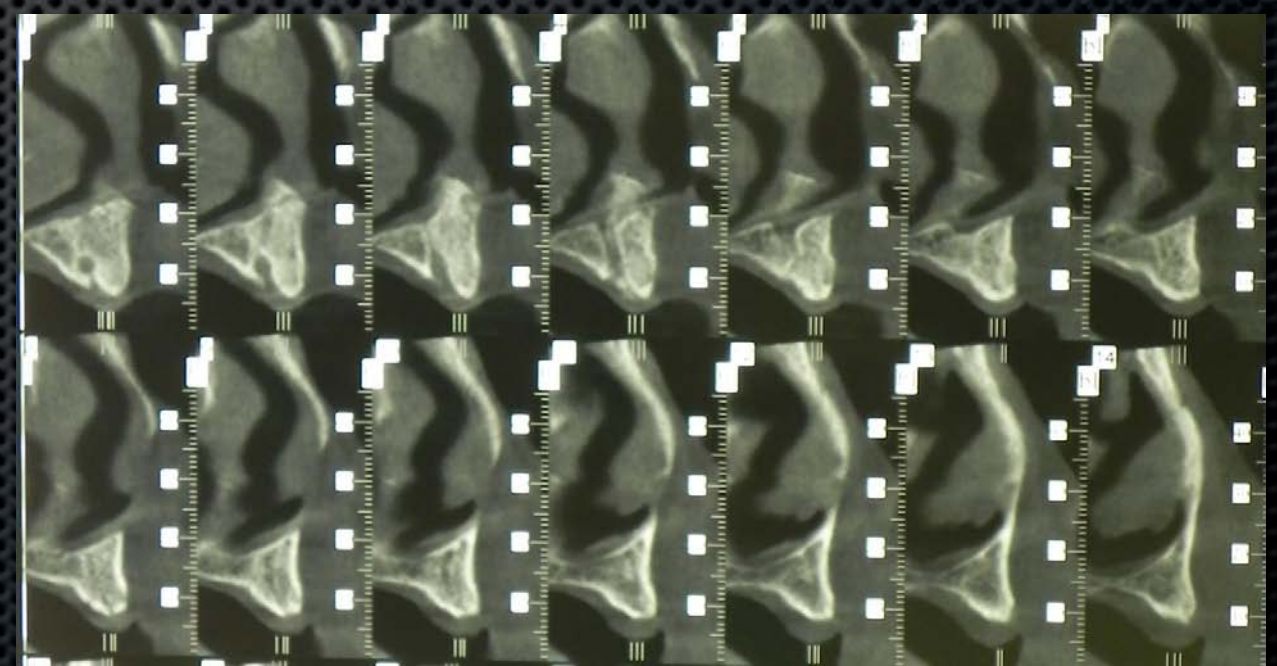
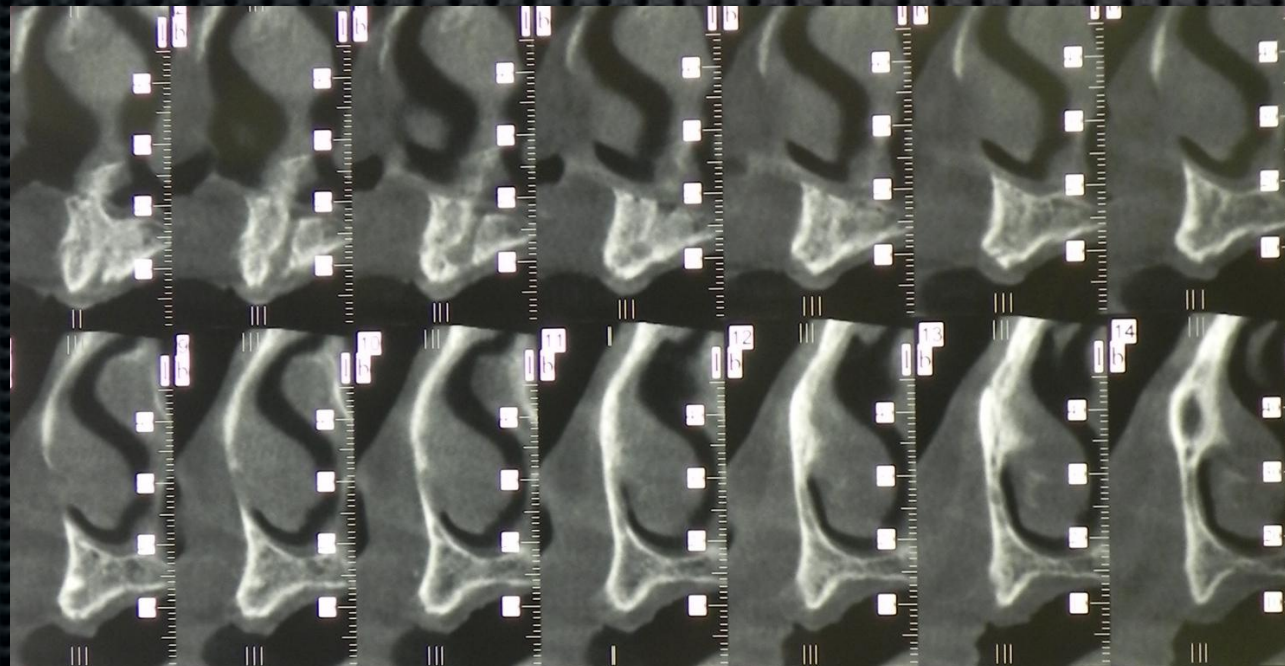
PROTOCOLLO 2

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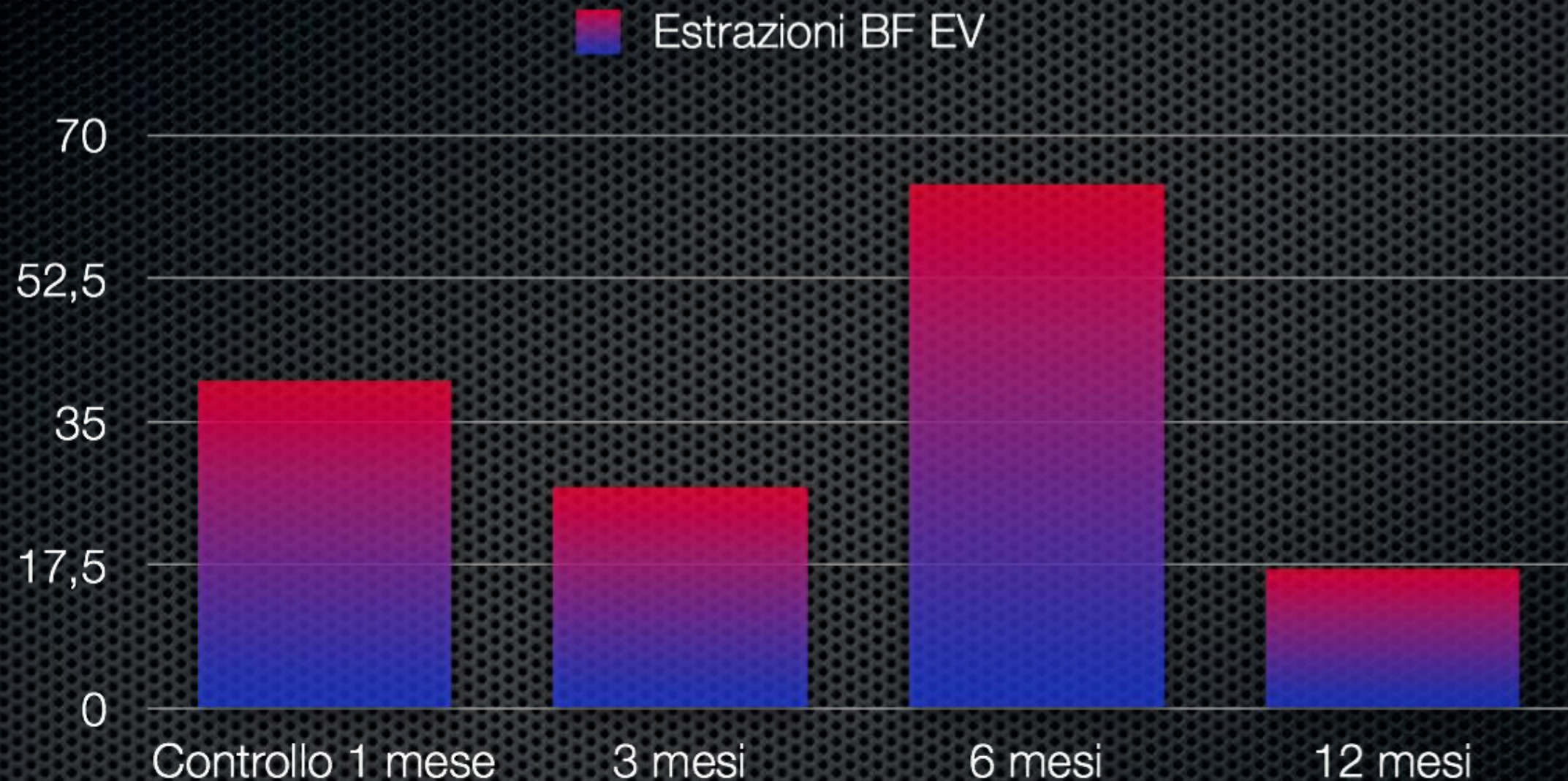




Controllo a 24 MESI



Risultati PROTOCOLLO 2



TOT ESTRAZIONI
148

COMPLICANZE
0

➔ **ORTODONZIA**

NON SI SA



James J. Zahrowski Optimizing orthodontic treatment in patients taking bisphosphonates for osteoporosis
[Orthod Fr 2011;82:279,Äi298](#)

Grazie per l'attenzione

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