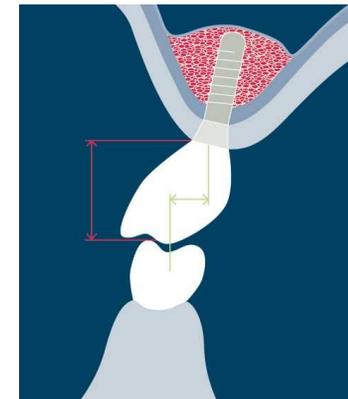
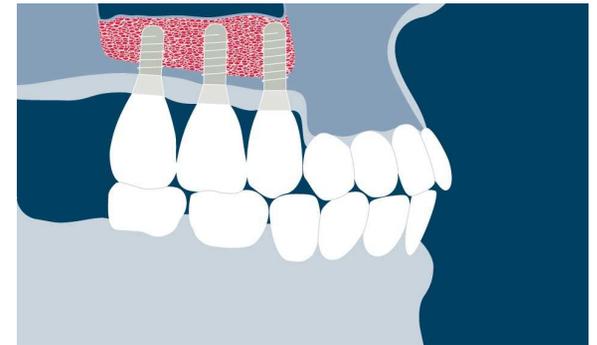


Nivel hueso

Nivel dental

Clinical examination – alveolar ridge

Unfavorable interarch relationship due to vertical and horizontal crestal resorption that may dictate additional three-dimensional site development





Analisi radiologica

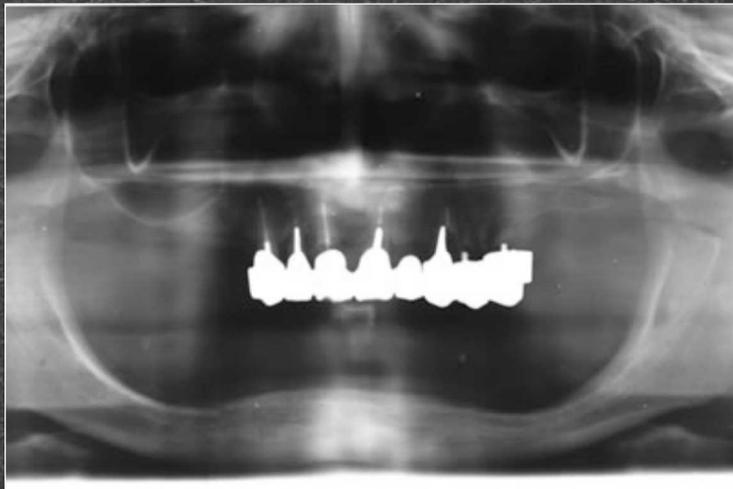
Analisi radiologica

Table 1 Radiographic imaging of the maxillary sinus and posterior maxilla: timing and recommended techniques.

	Periapical radiograph	Panoramic radiograph	CT or CBCT
Initial visit	●	●	
Before surgery	○	○	● (Maxilla/Mandible)
After surgery (after SFE)	●	○	○ (Maxilla)
After surgery (after placement)	●	○	○ (Maxilla)
Long-term monitoring	●	○	Δ
Emergency	Δ	○	●

● recommended, ○ justified, Δ optional

Panoramica OPT



- Distorsione e bi-dimensionale
- Estesa e di screening

Rx endorale periapicale



- Precisione e definizione
- Limitata e bi-dimensionale (canale mandibolare?)

TAC o CBCT



- Precisione e tridimensionale
- Costi maggiori accesso più limitato

Anamnesi



Esame obiettivo



Esami strumentali



diagnosi

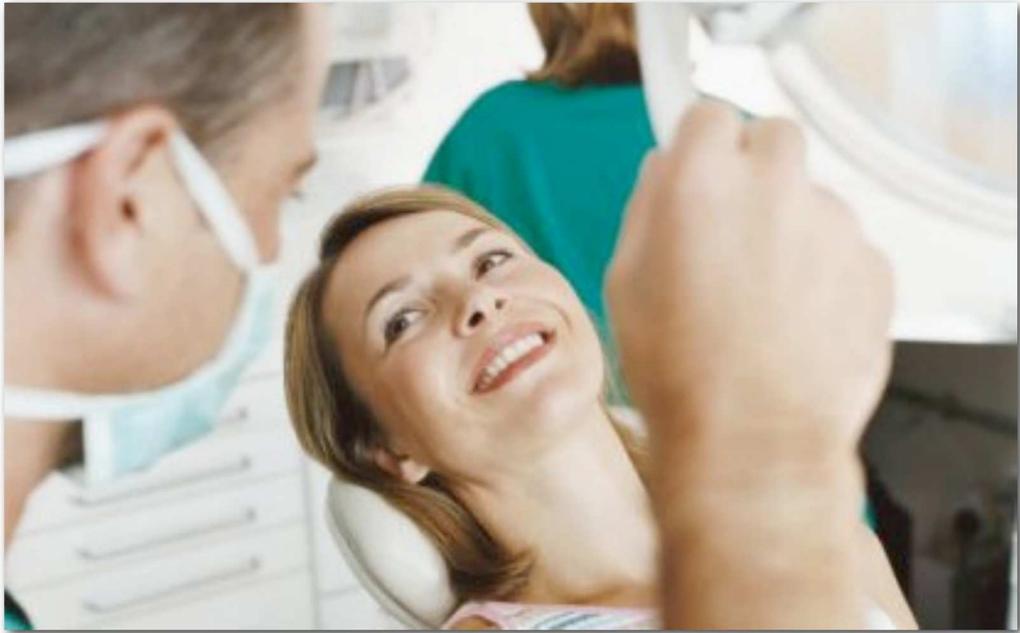


sondaggio
percussione
esami rx
esami di laboratorio



ulteriori esami

Esami volumetrici

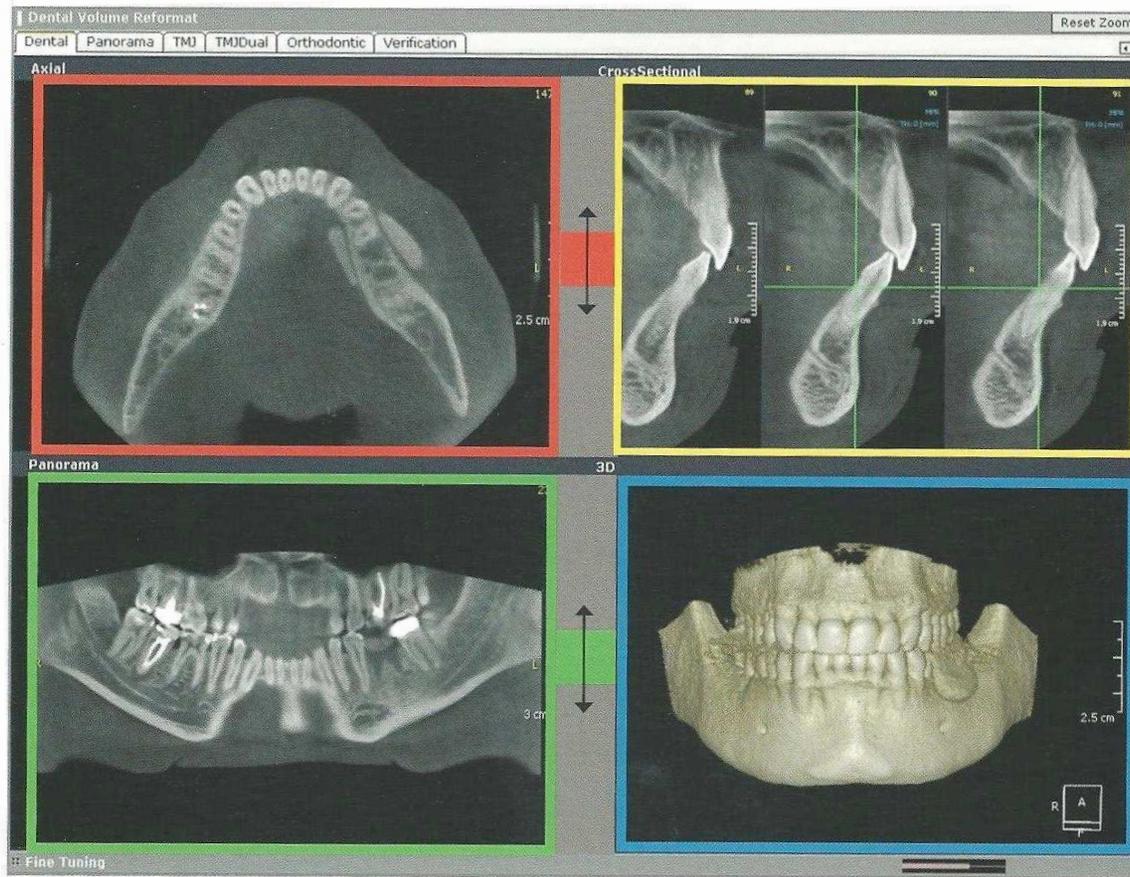


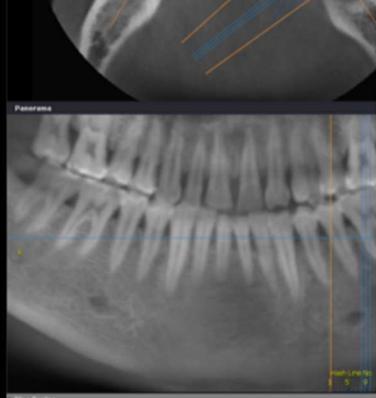
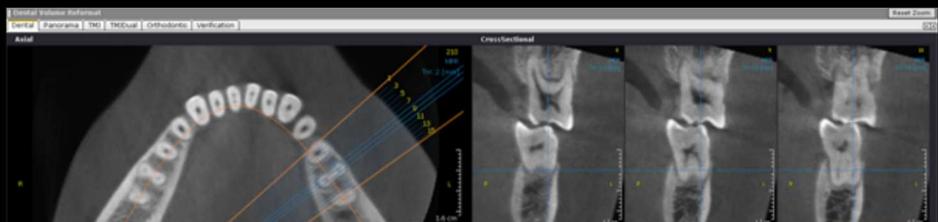
Axial images

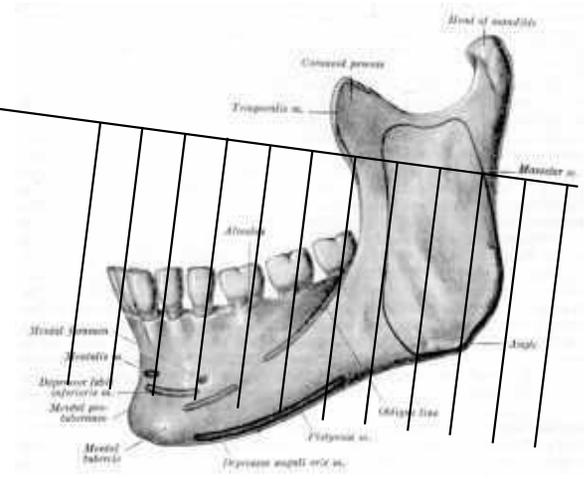
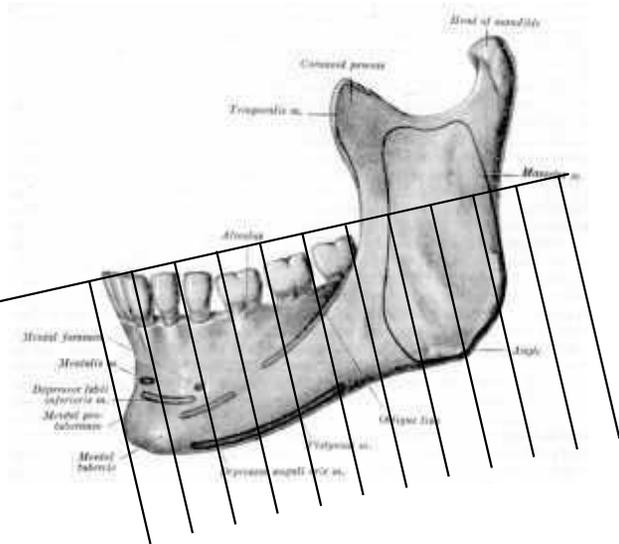
Coronal images (panorex)

Cross sections

The volume in three dimensions







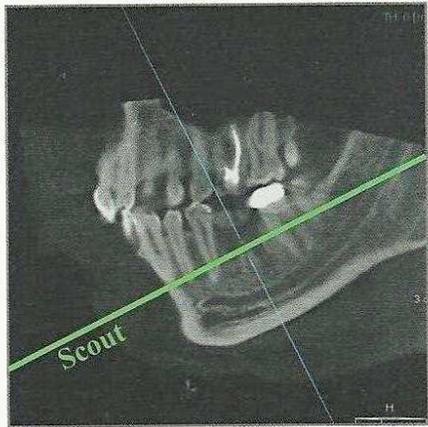


Fig.5-7 The scout plan is parallel to the lower edge of the jaw bone.

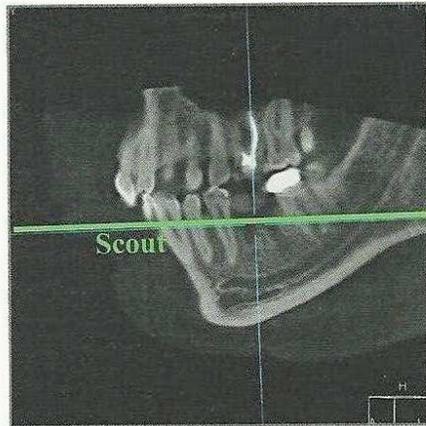


Fig.5-8 The scout plan is almost parallel to the occlusal plane.

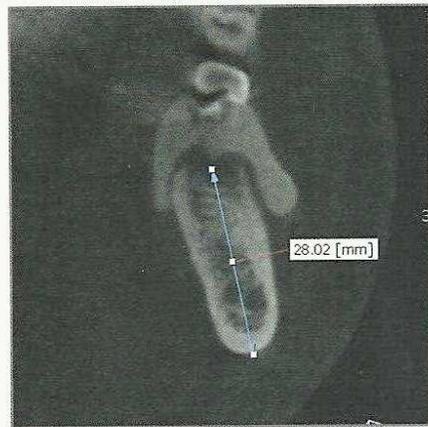


Fig.5-9 Height and profile of the section relative to the scout plan of Fig. 5-7.

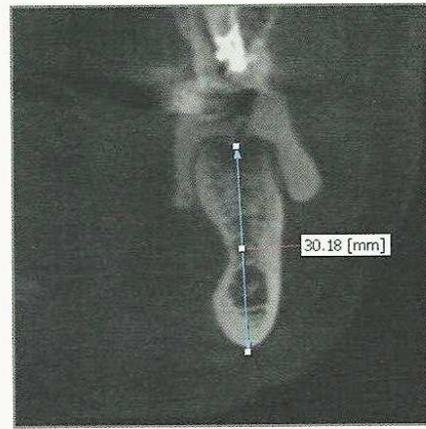


Fig.5-10 Height and profile of the section relative to the scout plan of Fig. 5-8.

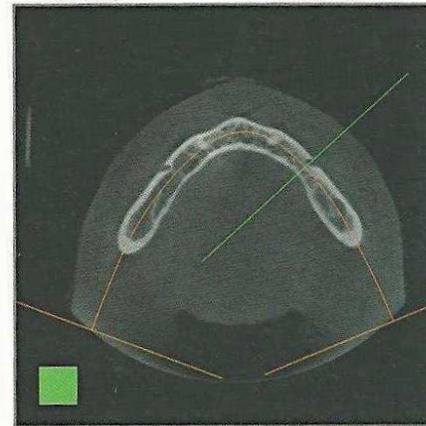


Fig.5-13 The curved line is parallel to the lingual and cortical and is therefore correct.

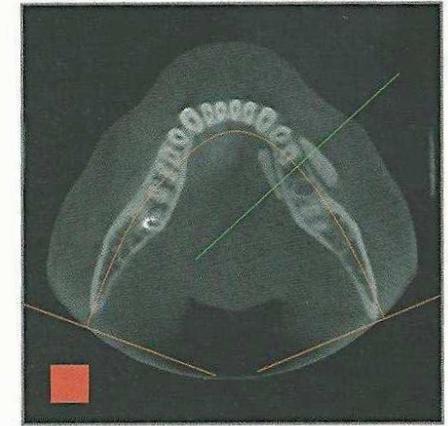


Fig.5-14 The curved line is not parallel to the lingual and cortical and is therefore wrong.

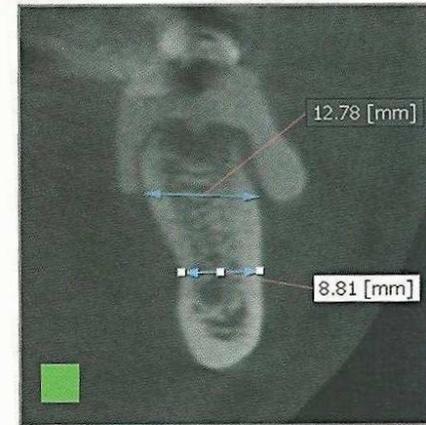


Fig.5-15 The width of the section is the real size.

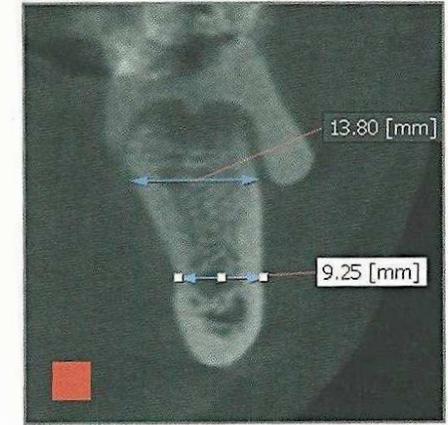
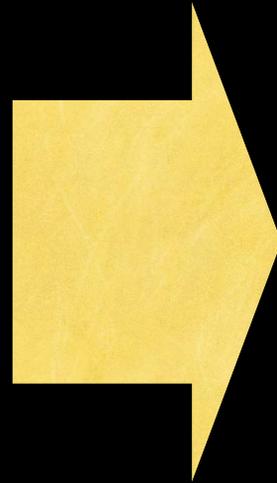


Fig.5-16 The section appears wider than in reality.

~~T.A.C.~~

~~Tomografia
Assiale
Computerizzata~~



D.V.T.

Digital
Volumetric
Tomography

- Dose elevata
- Bassa risoluzione > 1mm
- Rischio di errore scout view

- Dose contenuta
- Alta risoluzione > 76 micron
- No errore da scout view

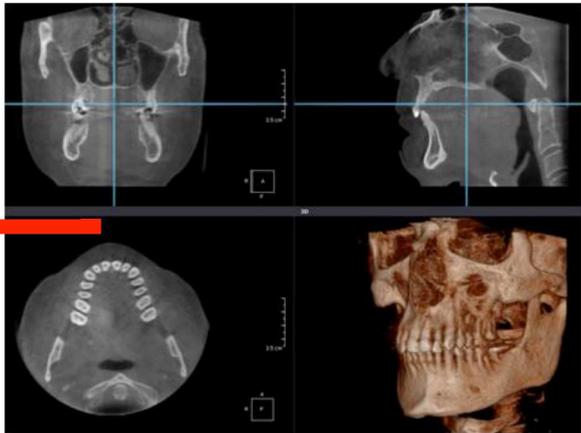
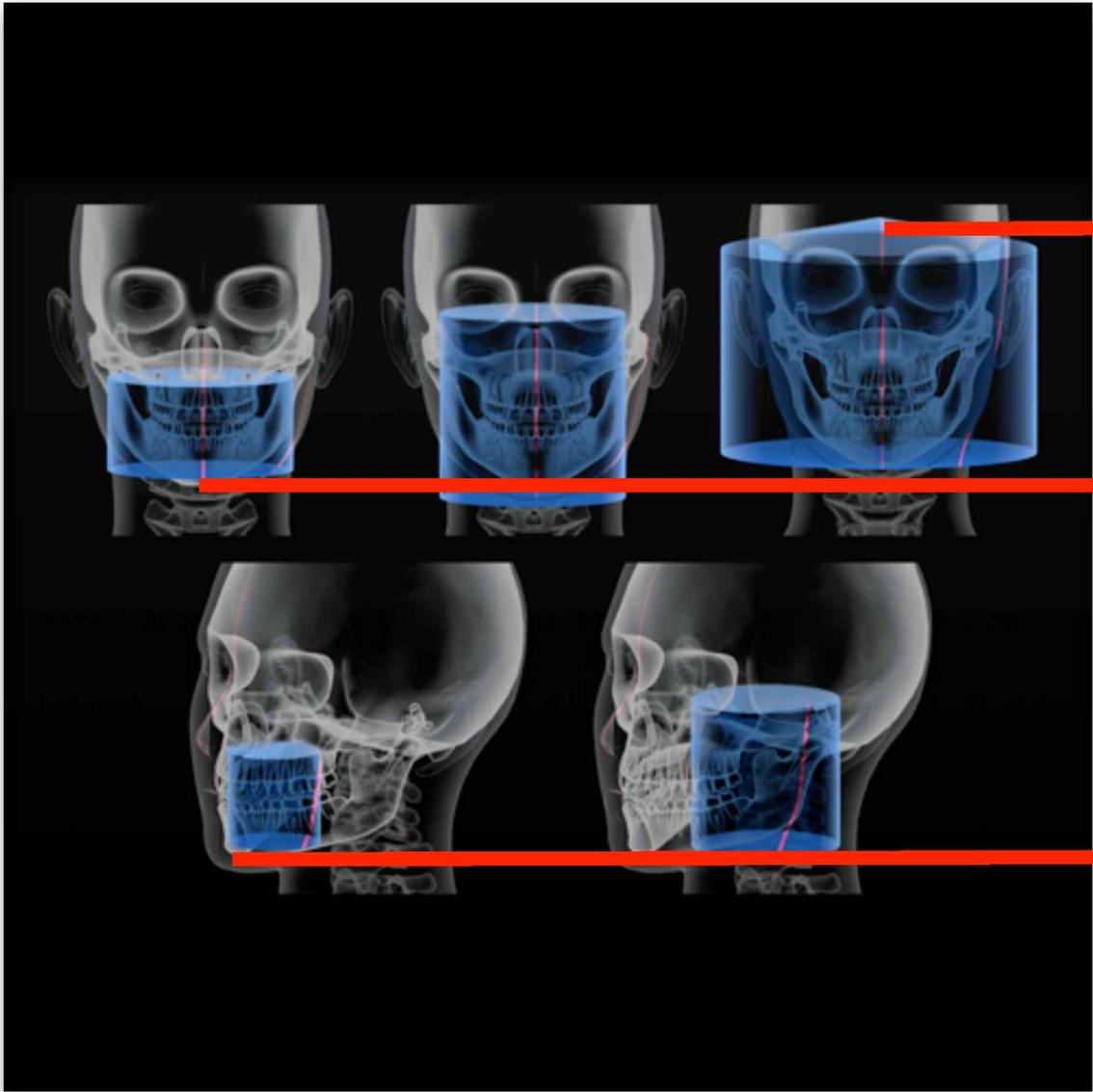
CBCT in Odontoiatria: quali differenze

■ Volume (FOV)

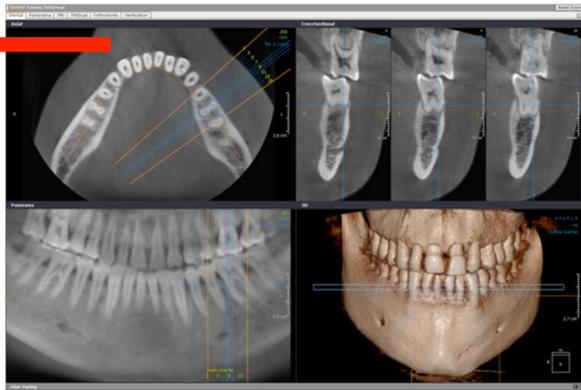
■ Risoluzione

■ Dose

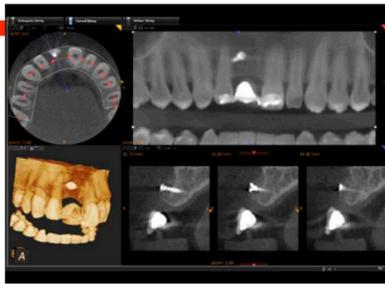




Big
FOV



Med
FOV

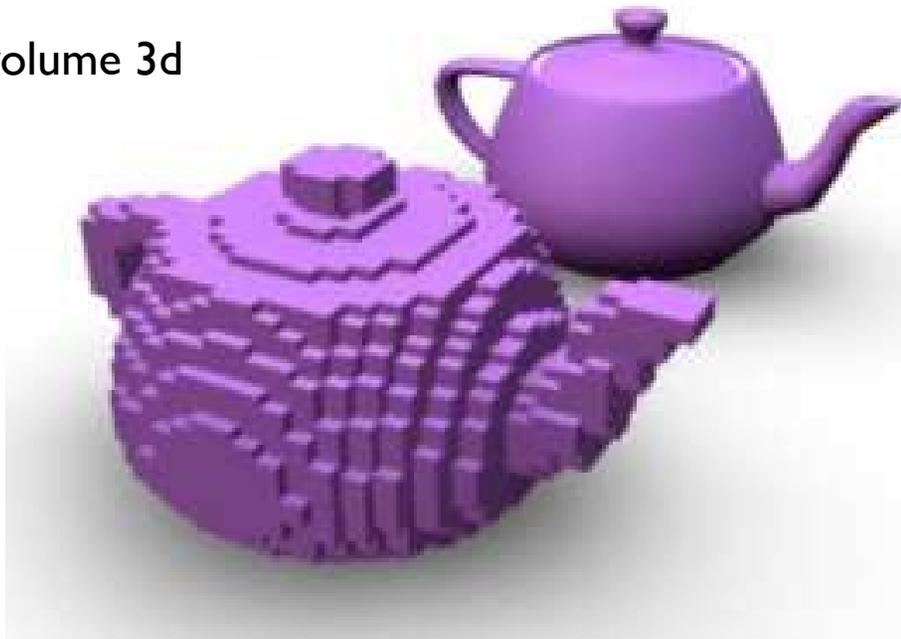


Small
FOV

Risoluzione

Voxel

Mattoncino base del volume 3d



Più piccolo il voxel...
più alta la risoluzione!

Minore è il volume del voxel

Maggiore sarà la
risoluzione

Maggiore il rumore
(scattering)

0.020 mm

1 mm

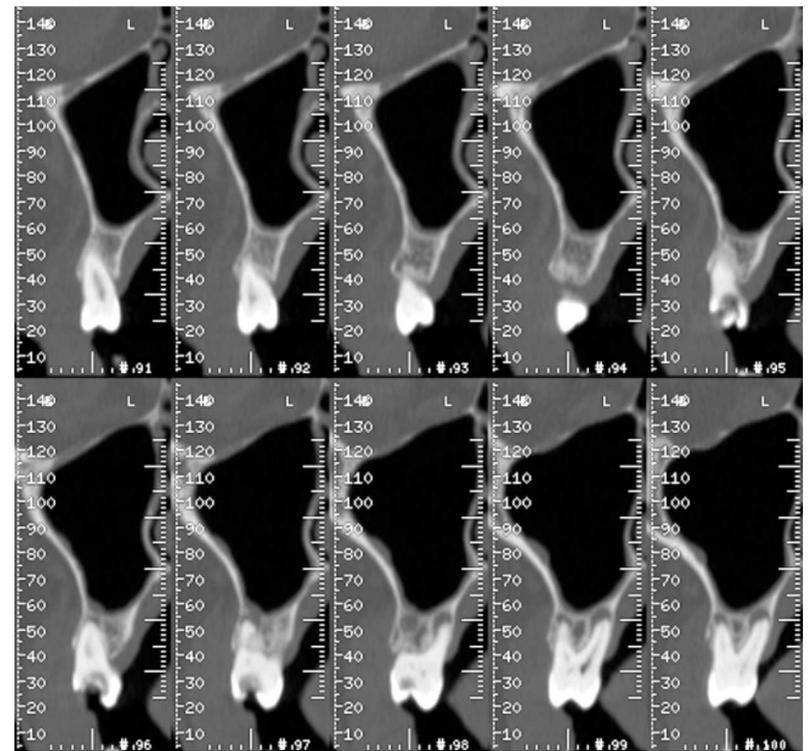
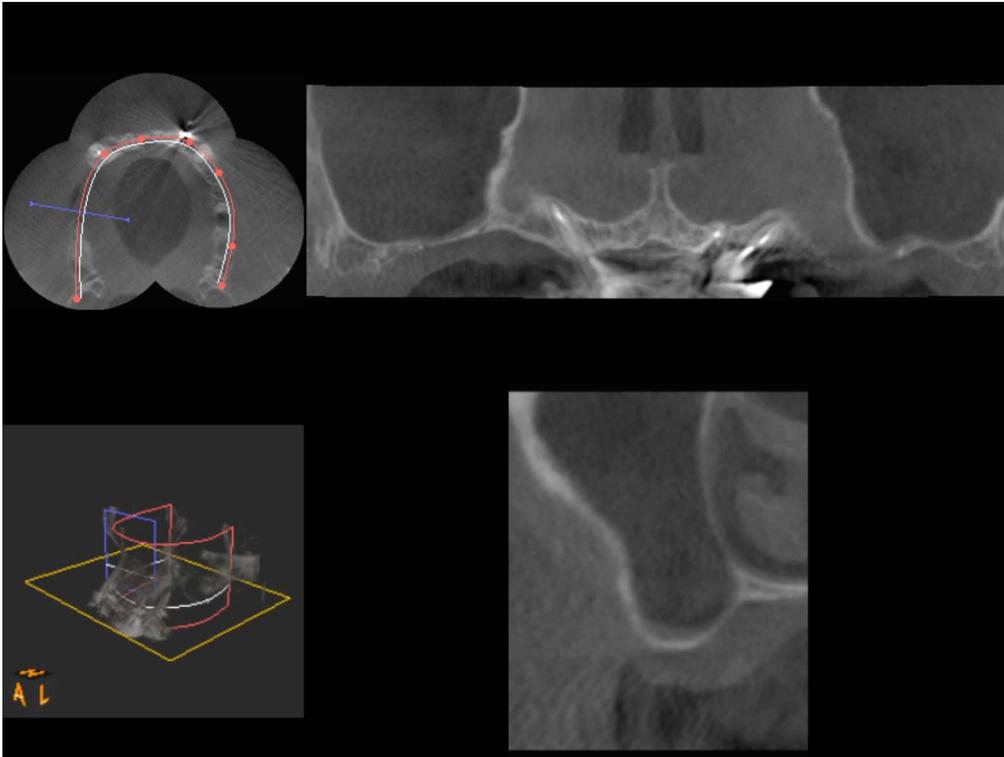


Table 1 Comparison of the effective dose of different radiographic sources and as a percentage of the annual per capita background X-ray dose

Radiographic source	Effective dose (μSv)		Dose as a % annual background radiation	
	ICRP 1990	ICRP 2005	ICRP 1990	ICRP 2005
Cone beam computed tomography				
3D Accuitomo ^a	7.3		0.2	
NewTom 3 G 12" FOV ^b	44.5	58.9	1.2	1.6
Mercuray 9" FOV ^b	288.9	435.5	8	12.1
Mercuray 6" FOV ^b	168.4	283.3	4.7	7.9
i-CAT 12" FOV ^b	134.8	193.4	3.7	5.4
i-CAT 9" FOV ^b	68.7	104.5	1.9	2.9
Conventional computed tomography				
Conventional CT ^c	1400 (max.) 1320 (mand)		38.9% 36.7%	
Conventional radiography				
Panoramic ^d	6.3		0.2%	
Periapical ^c	5		0.14%	
Maxillary occlusal ^c	7		0.2%	
Cosmic radiation on board an aircraft flying a round trip between Paris & Tokyo^e				
	150		4.2%	

^aArai *et al.* 2001.

^bLudlow *et al.* 2006.

^cNgan *et al.* 2003.

^dLudlow *et al.* 2003.

^eBottollier-Depois *et al.* 2003.

J.Simon et al "Differential diagnosis of large periapical lesions using cone-beam computed tomography measurements and biopsy"
J.Endod. 2006;32:833-837



CBCT is indicated for cross-sectional imaging prior to implant placement as an alternative to existing cross-sectional techniques where the radiation dose of CBCT is shown to be lower

D

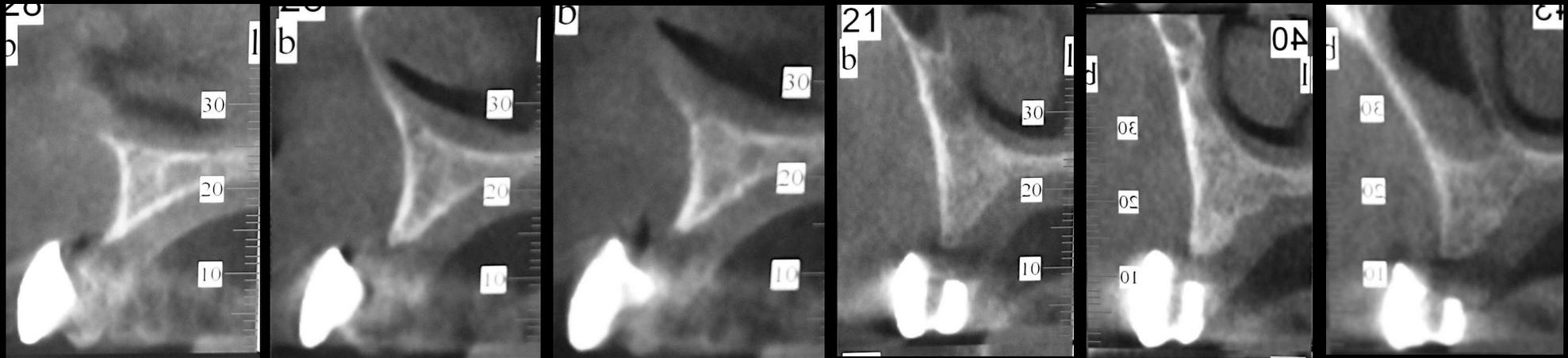
For cross-sectional imaging prior to implant placement, the advantage of CBCT with adjustable fields of view, compared with MSCT, becomes greater where the region of interest is a localised part of the jaws, as a similar sized field of view can be used

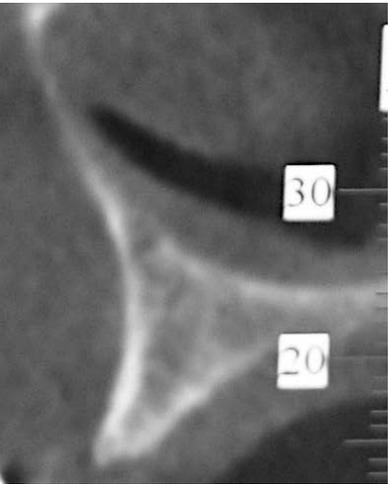
GP

Dime radiologiche e progettazione casi implantari



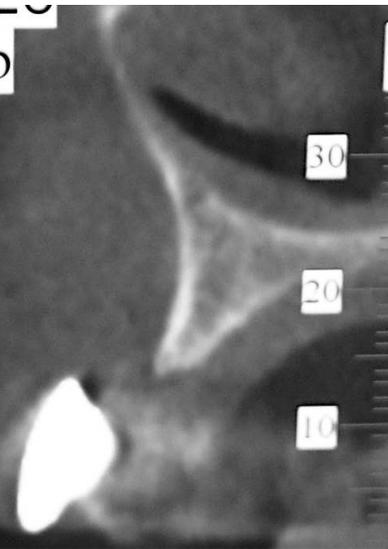
Full-arch bridge





c'è osso?

WRONG!

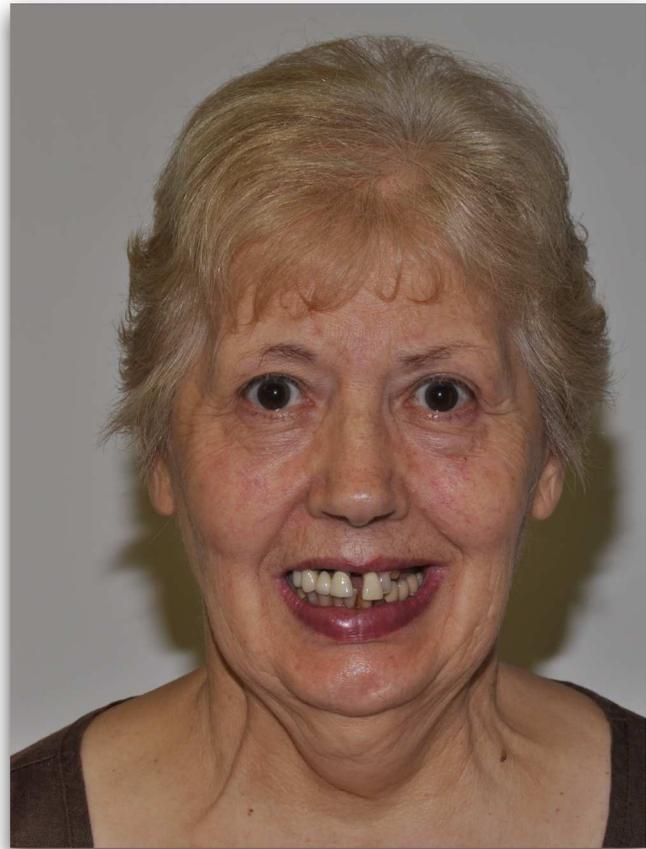


o per inserire
pianto dove mi
serve?

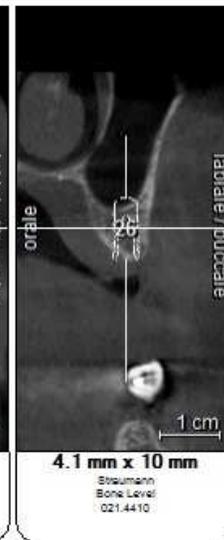
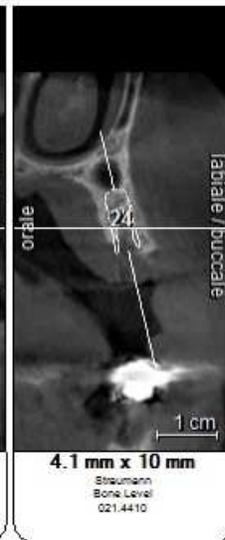
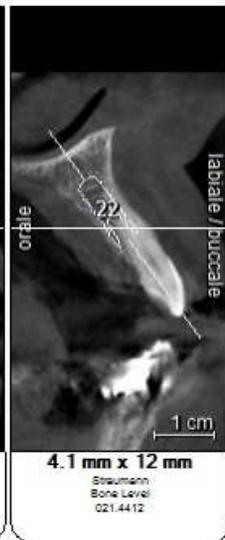
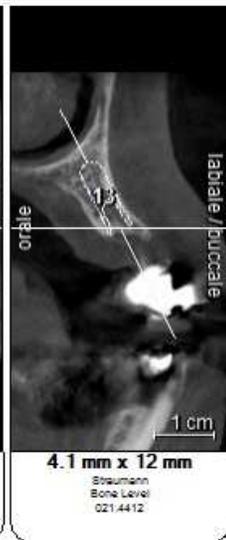
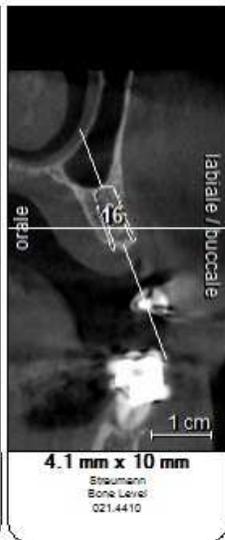
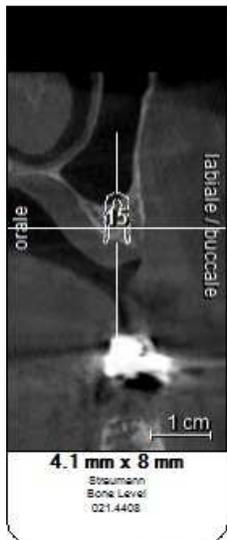
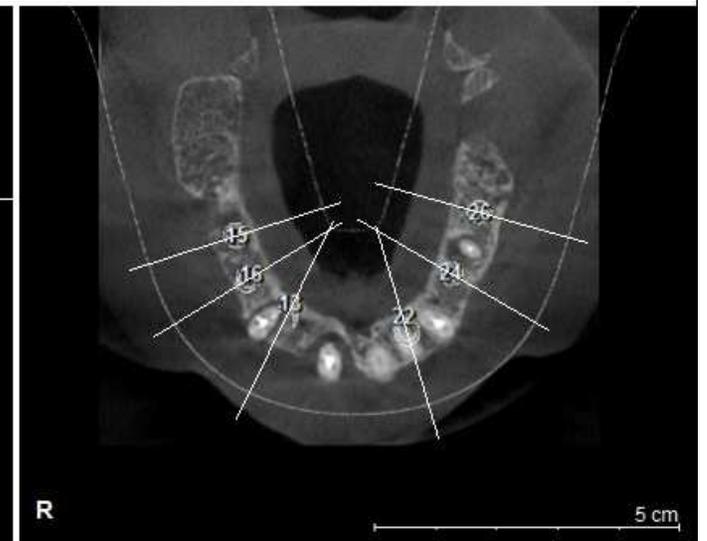
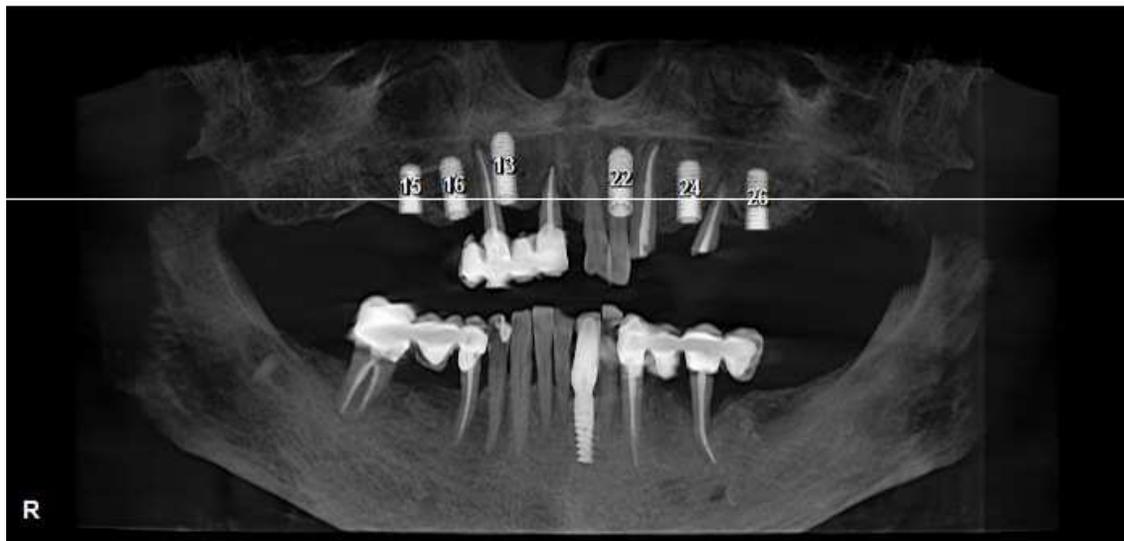
RIGHT!



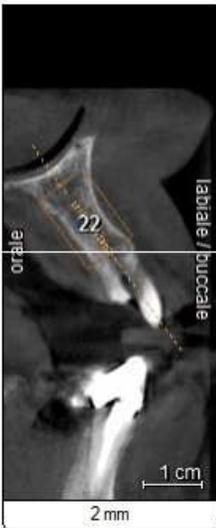
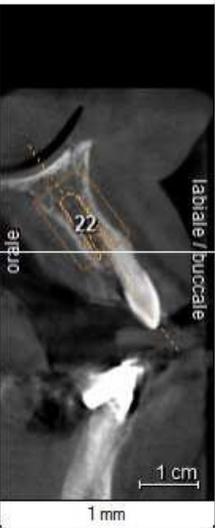
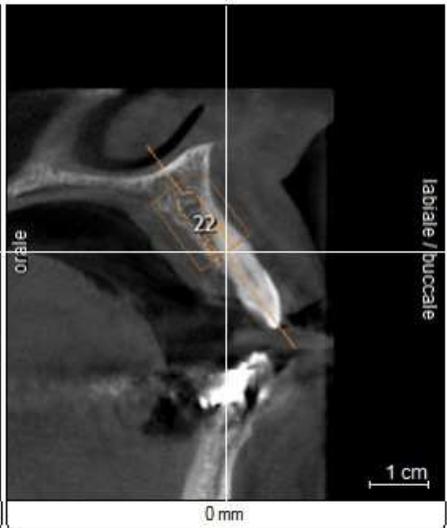
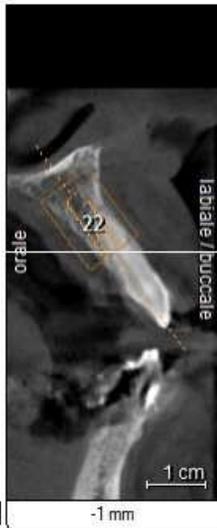
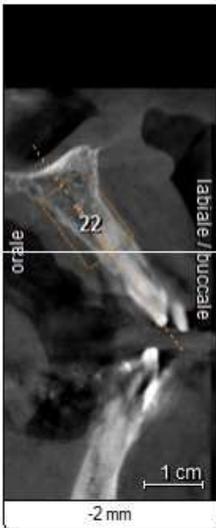
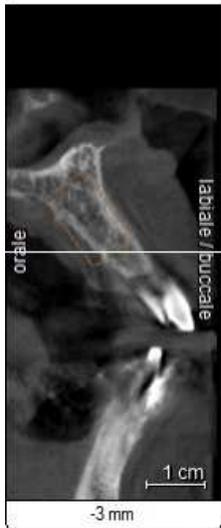
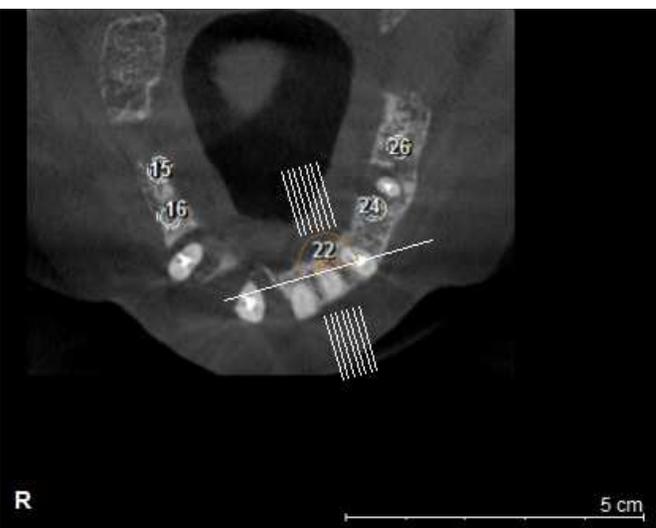
Carico immediato superiore



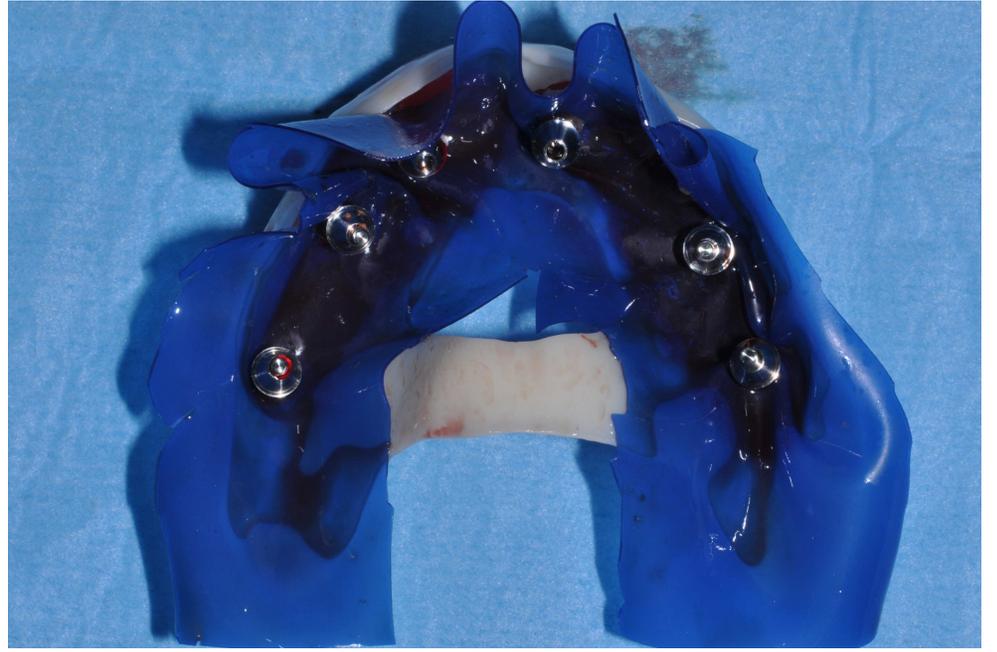
initial situation



Impianto 22	
Diametro occlusale	4.1 mm
Diametro apicale	4.1 mm
Lunghezza	12 mm
Produttore	Straumann
Linea di impianto	Bone Level SLA
Numero di serie	021.4412

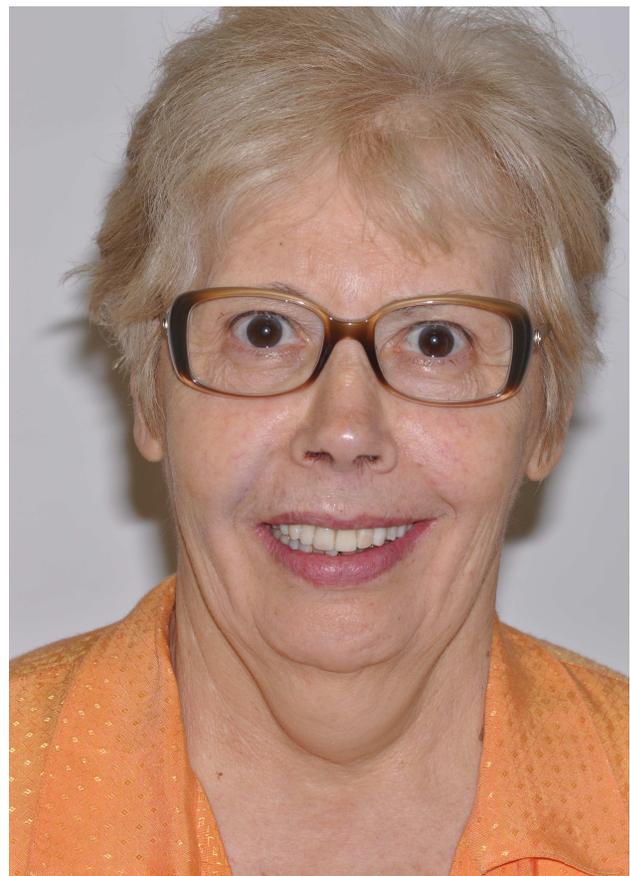




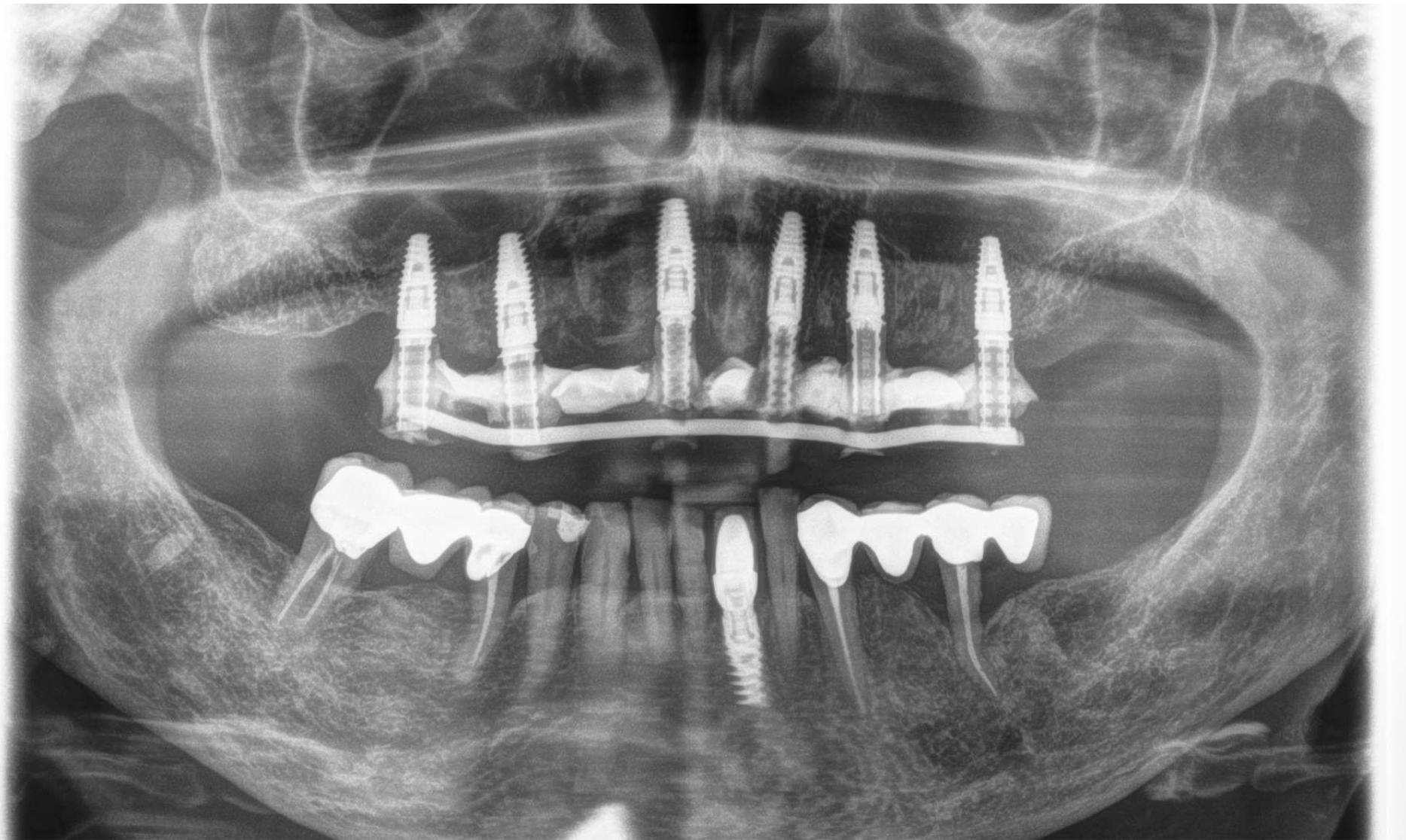


intra operative impression





7 hours after



basi scientifiche

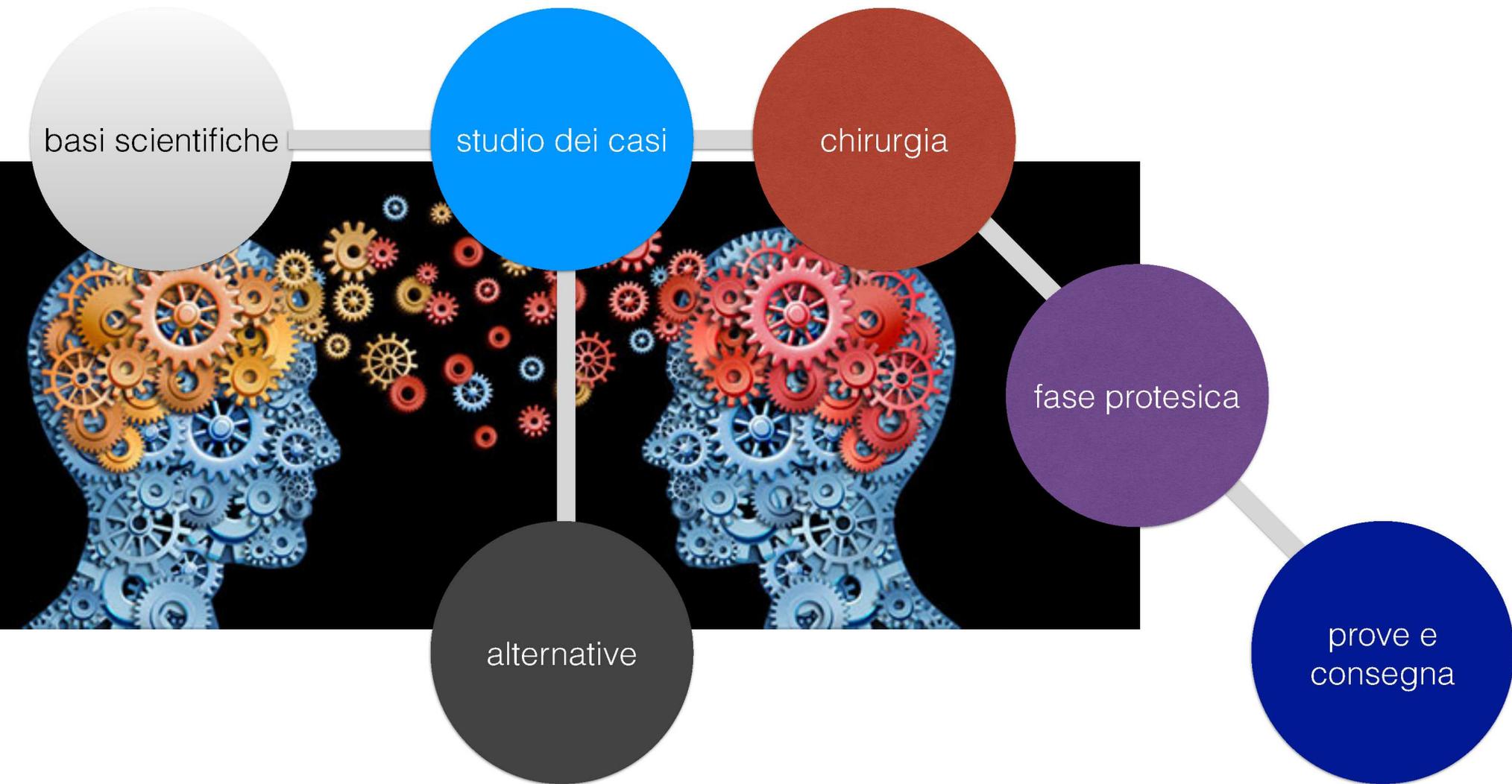
studio dei casi

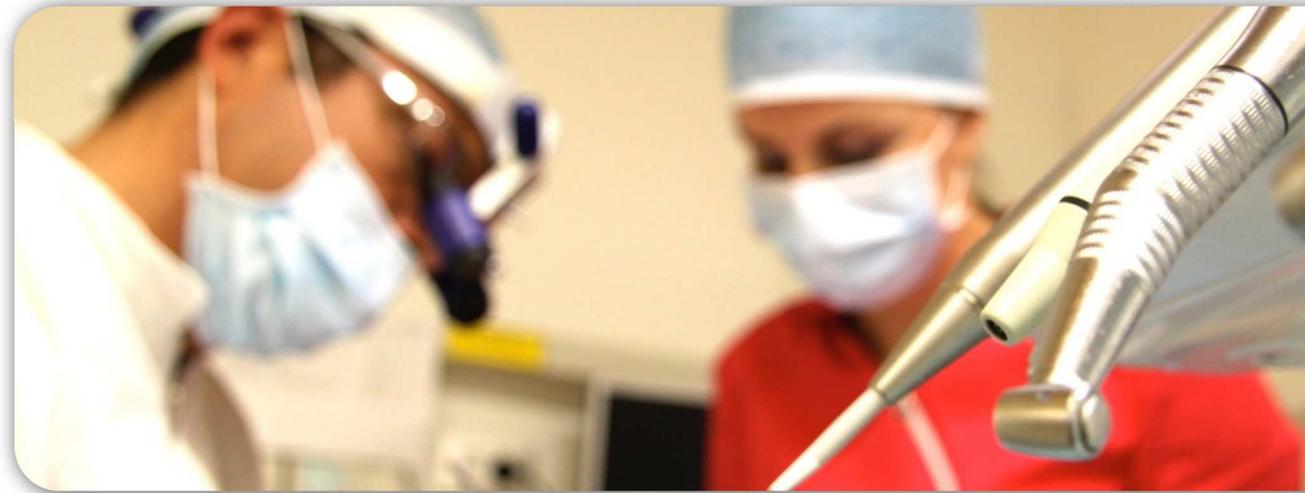
chirurgia

fase protesica

alternative

prove e
consegna





protesi avvitata o
cementata?

*Klaus Gotfredsen
Anselm Wiskott
on behalf of Working
Group 4*

Consensus report - reconstructions on implants. The Third EAO Consensus Conference 2012

Consensus statements

- The present review indicated that both types of reconstructions influenced the clinical outcomes but **none of the fixation methods was clearly advantageous.**
- Cemented and screw-retained **single-unit reconstructions had similar survival rates** of their supporting implants. **Cemented multi-unit reconstructions, however, had lower implant survival rates** than the screw-retained multi-unit reconstructions.
- **Screw-retained single- and multiple-unit reconstructions tended to have lower reconstruction survival rates.**
- **Screw-retained single- and multiple-unit reconstructions had more technical complications than cemented reconstructions.**
- **Cemented reconstructions more frequently exhibited serious biologic complications (bone loss > 2 mm) than screw-retained reconstructions. The risk for this complication increased with the span of the reconstruction.**

*Klaus Gotfredsen
Anselm Wiskott
on behalf of Working
Group 4*

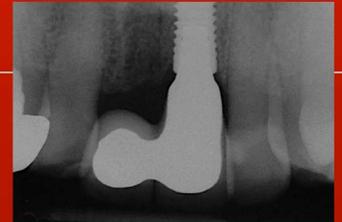
Consensus report - reconstructions on implants. The Third EAO Consensus Conference 2012

Clinical recommendations

- **At single-crowns both types of fixation methods can be recommended.**
- In case of cementation of the reconstructions, proper **removal of cement excess is crucial** to prevent biological complications.
- **Extensive implant reconstructions as partial or full-arch FDPs should be screw-retained.**
- **Screw-retained reconstructions are retrievable**; therefore the technical complications can be repaired more easily. These reconstructions also seem to be preferable from a biological perspective.

Protesi avvitata

- Margini protesici profondi (> 2 mm)
- Distanza inter-arcata inferiore a 6 mm
- Riabilitazioni estese
- Presenza di cantilever
- Provvisori carico/restauro immediato
- Tiled implants



Protesi cementata

- Margini protesici superficiali (< 1,5 mm)
- Distanza inter-arcata superiore a 5 mm
- Casi poco estesi.
- Connessione denti-impianti (con doppie)



impronte in
edentulia totale

**sfruttare la rigidità del
materiale da impronta**

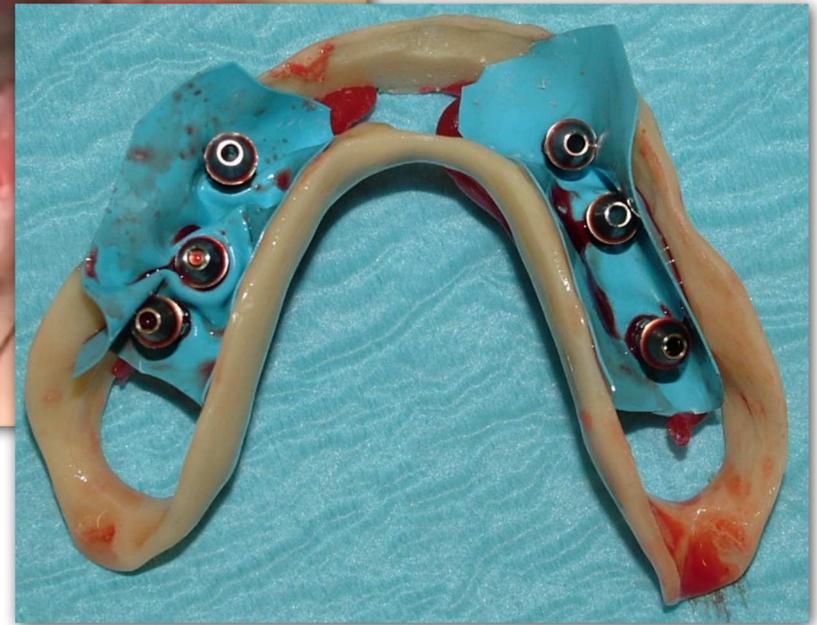
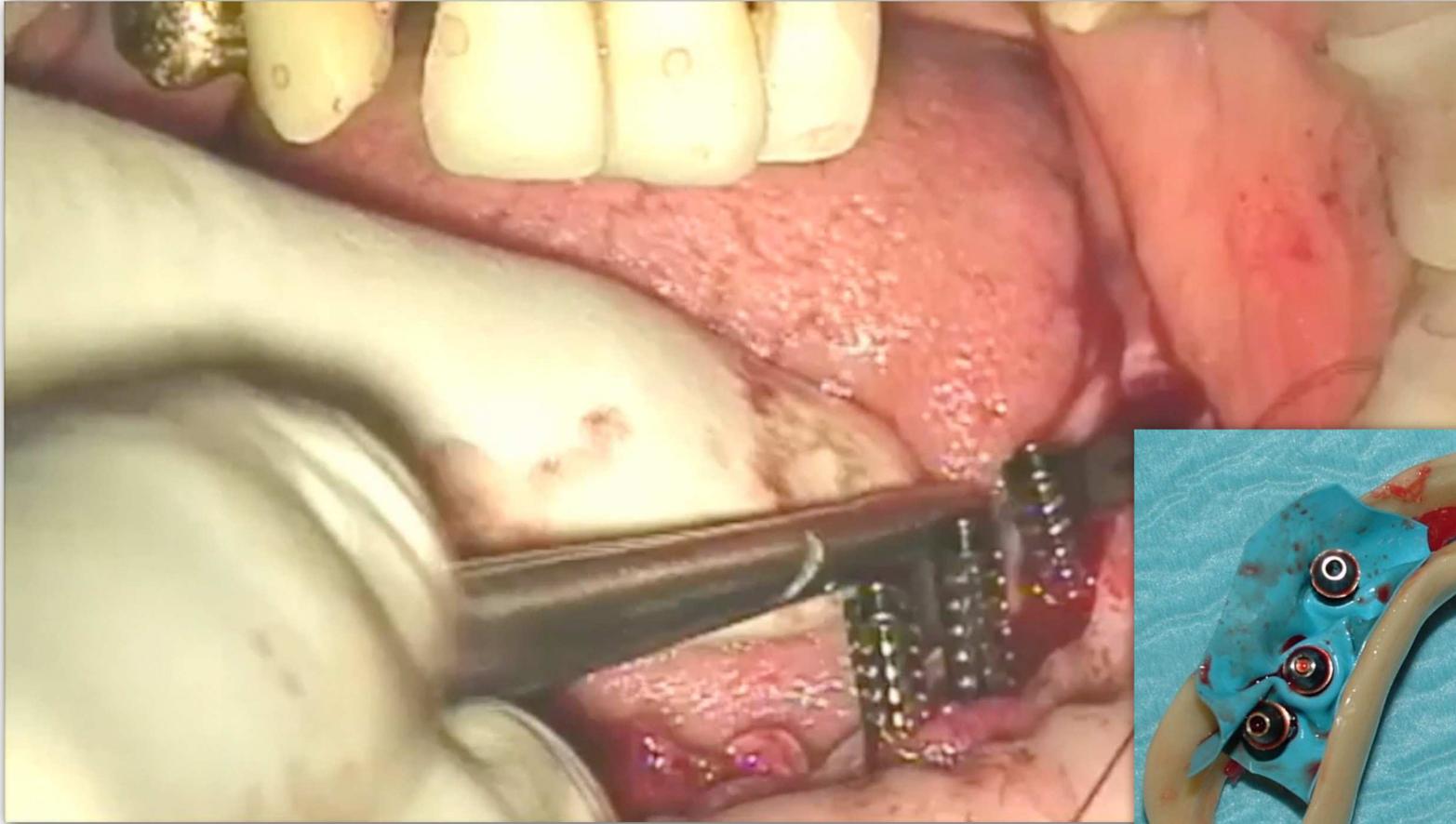


**sfruttare la rigidità del
portaimpronte o della dima**



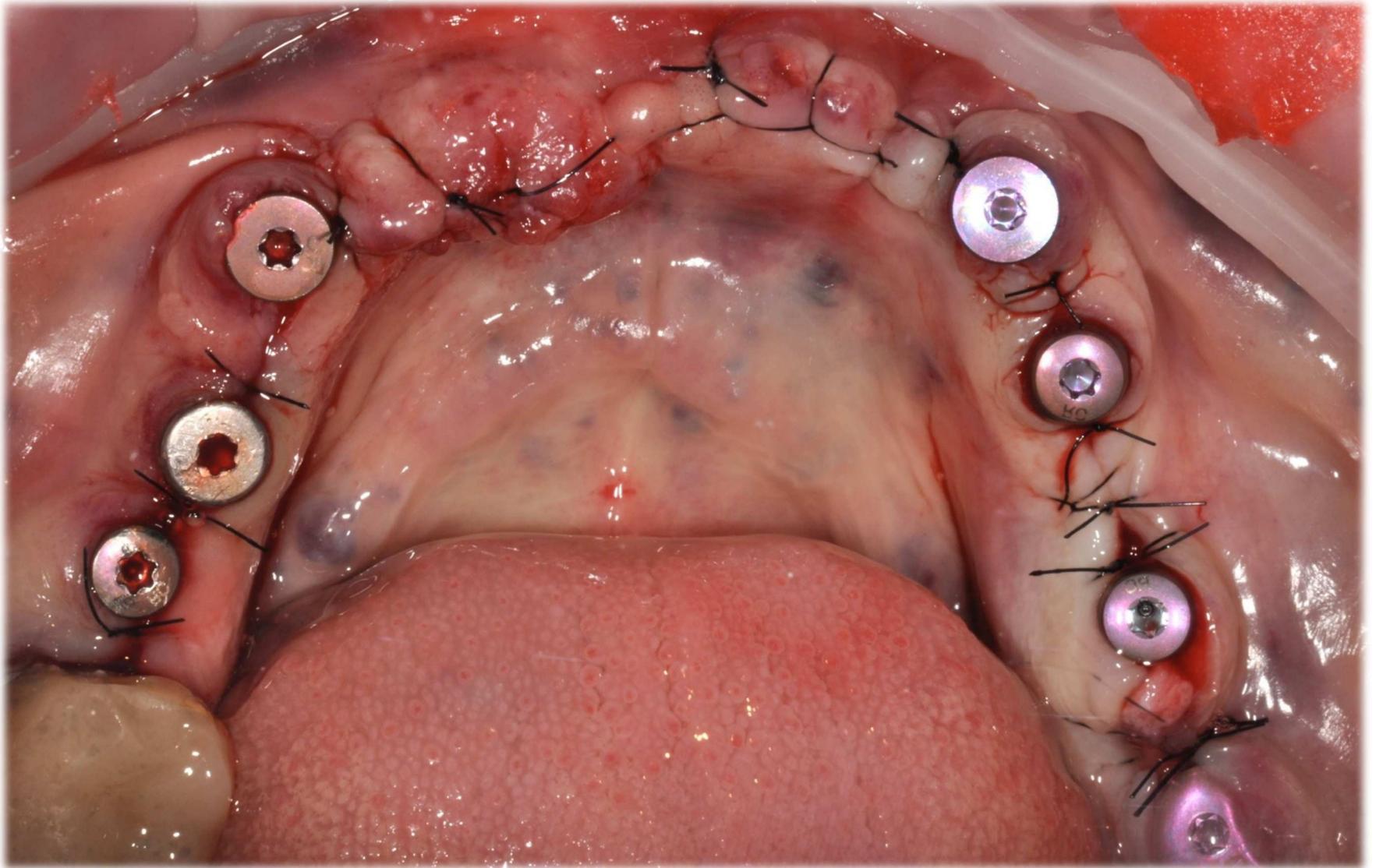
connettere i transfer

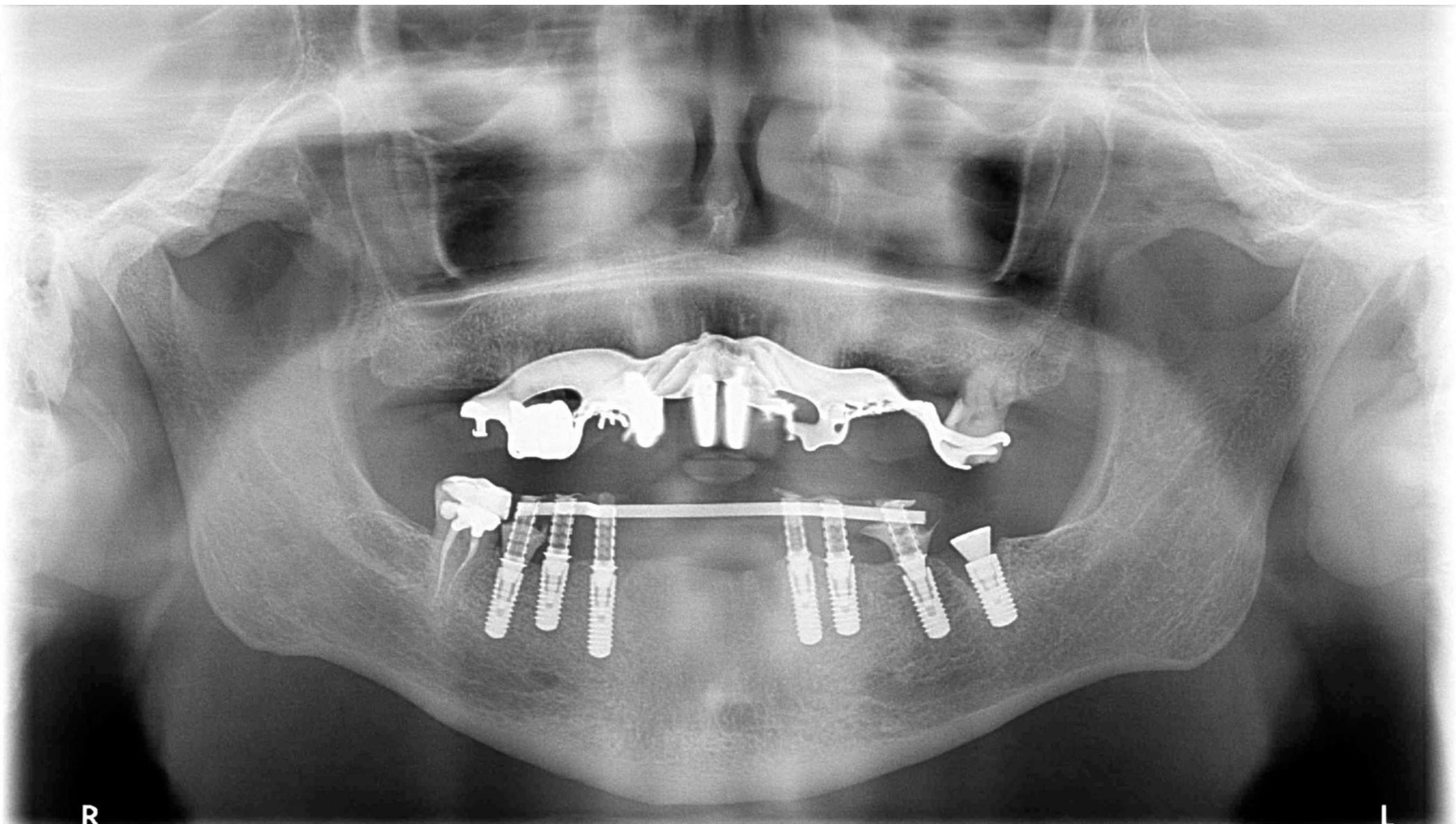




Impronta intra-op



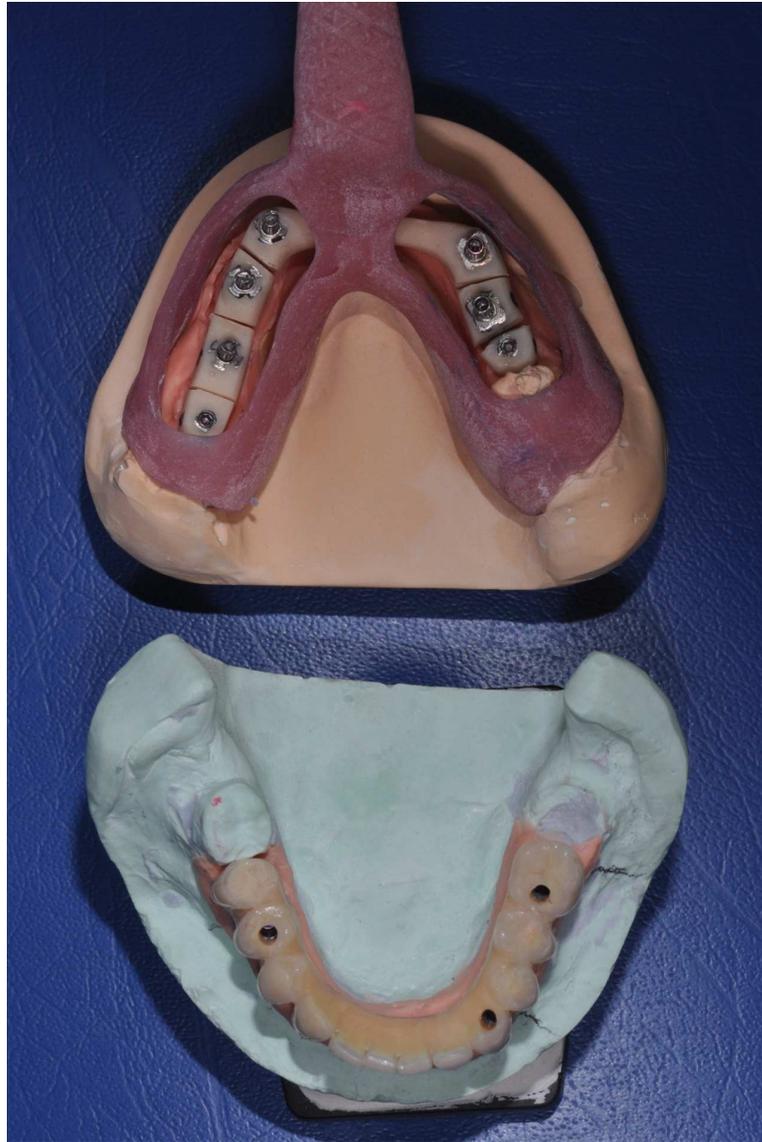




R

L

prove in edentulia totale



Chiave segmentata

- controllo impronta
- passivazione intraorale

Registrazione oclusale

- Registrazione oclusale
- prova estetica
- Impronta tessuti molli

