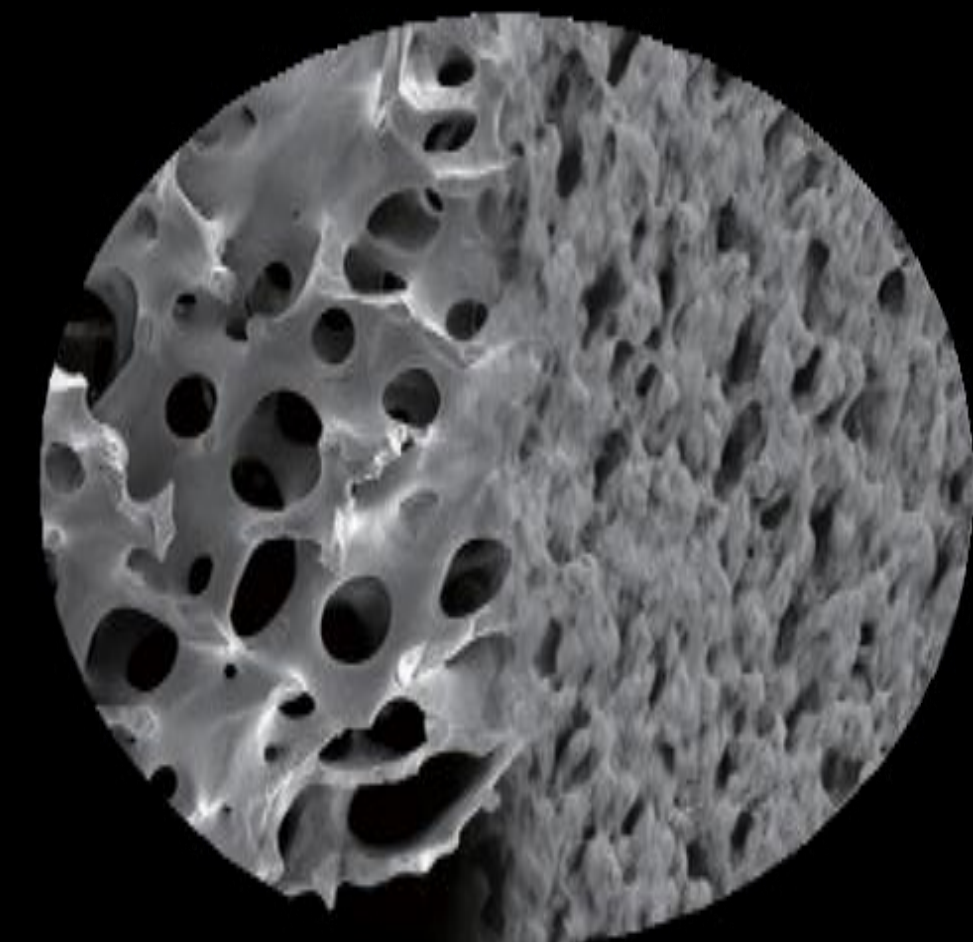
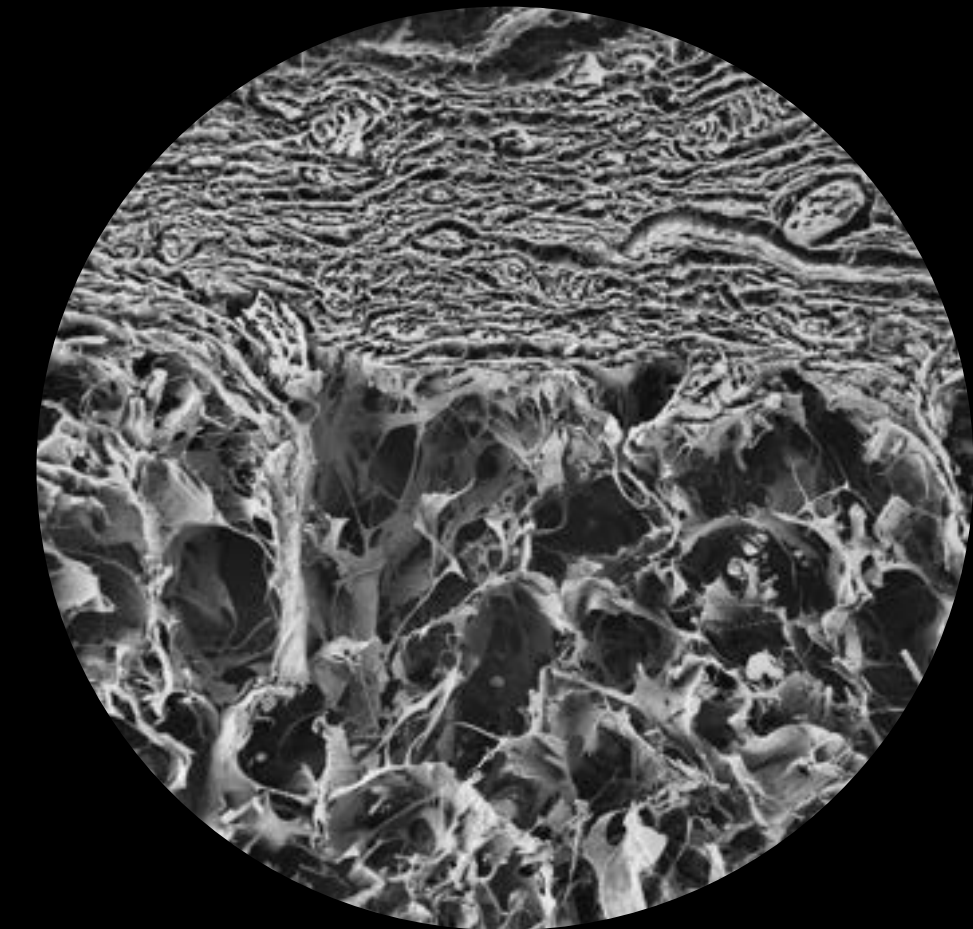
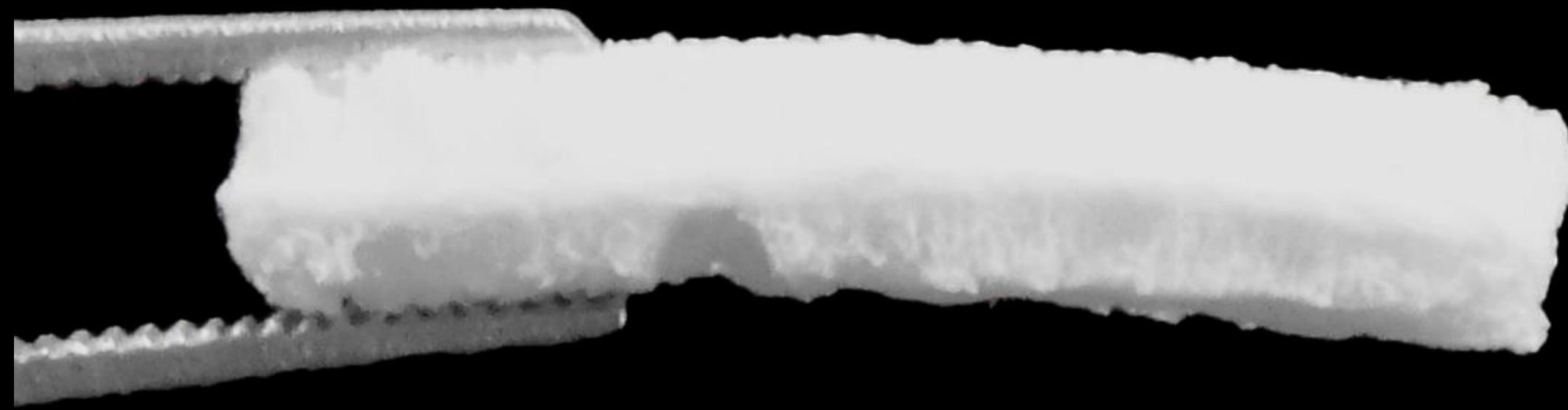


Correlation between industrialization and clinical applications



Clinician

Conservative approach based on evidence

Industrialization

Inspirational approach for minimalism

Implant in a next? - **minimalism**

Minimalism in dental implants

Optimal results with the least amount of

Surgical intervention - simplicity

Material use - efficiency

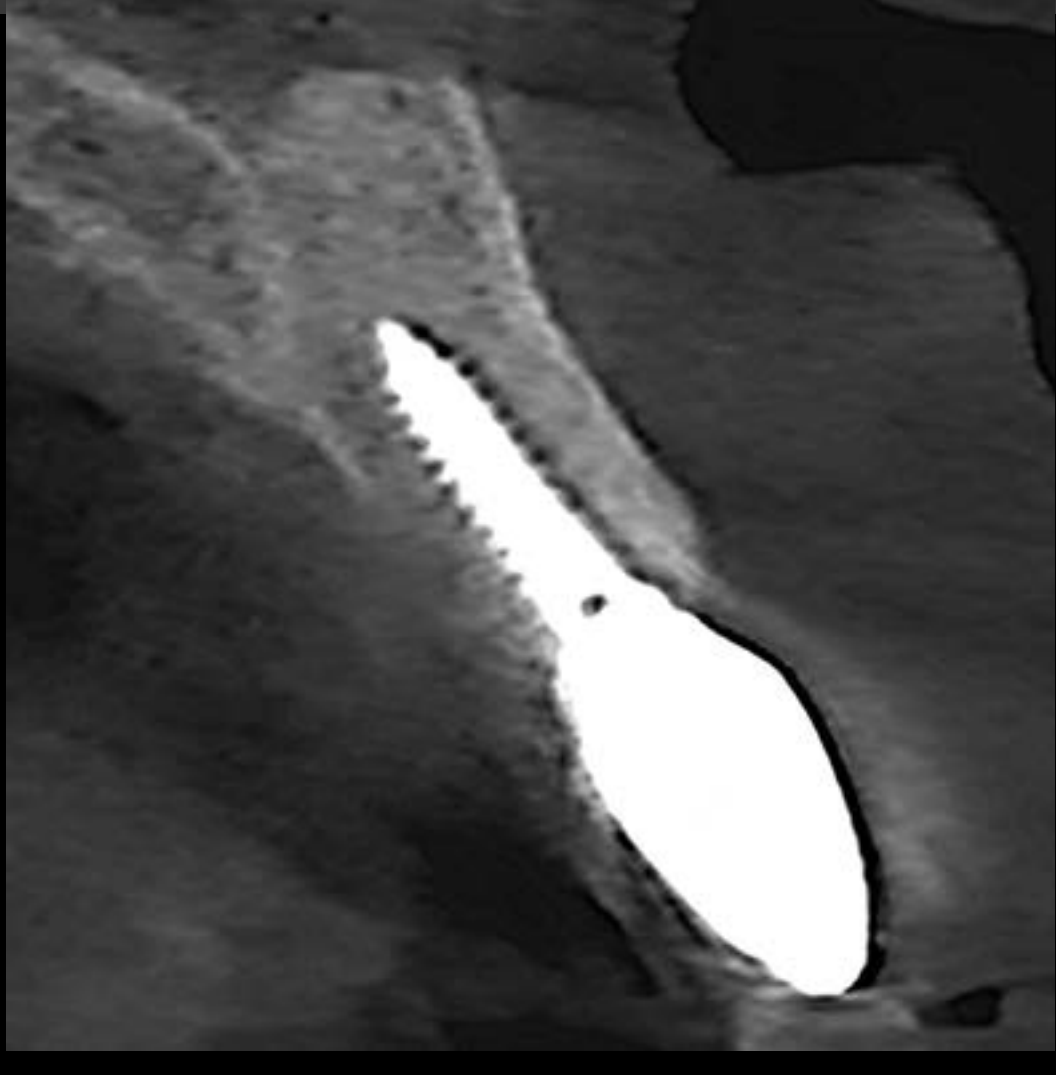
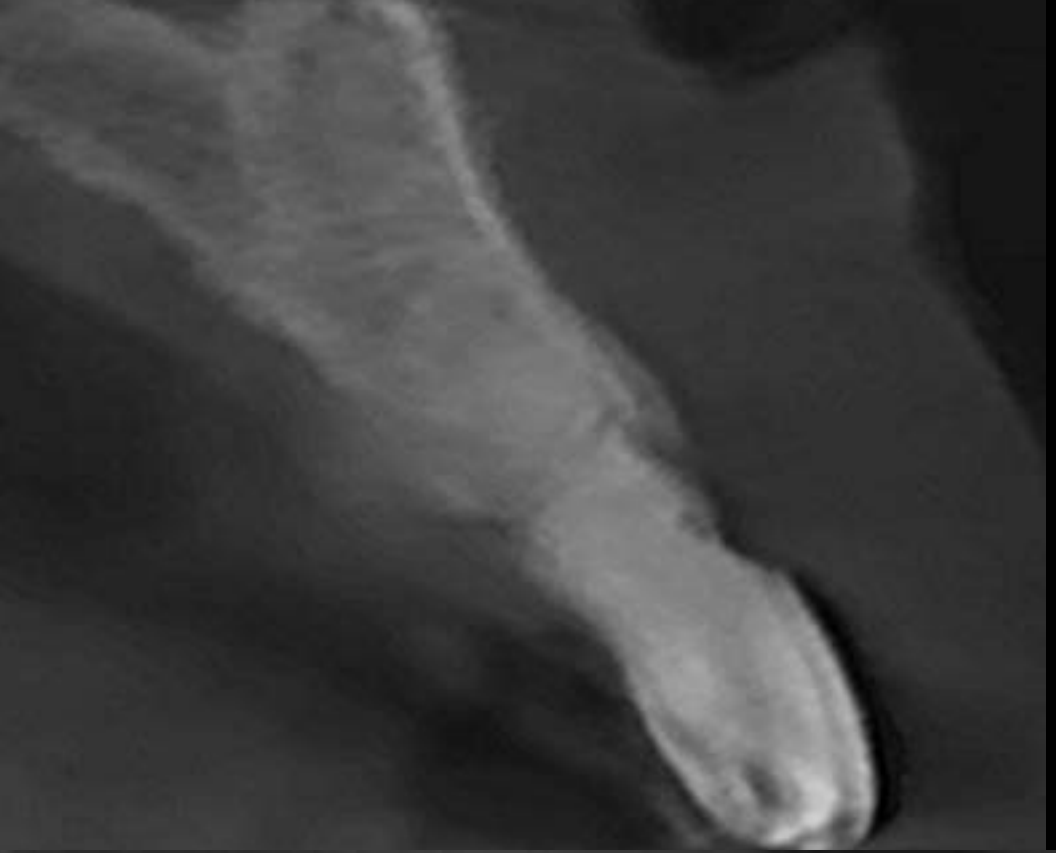
Patient discomfort - patient centered care

Post-op (2025-07-16)



Virtual panorama from CT

Final prosthesis (2025-09-17)



Pre-op (2025-07-16)



Final prosthesis (2025-09-17)

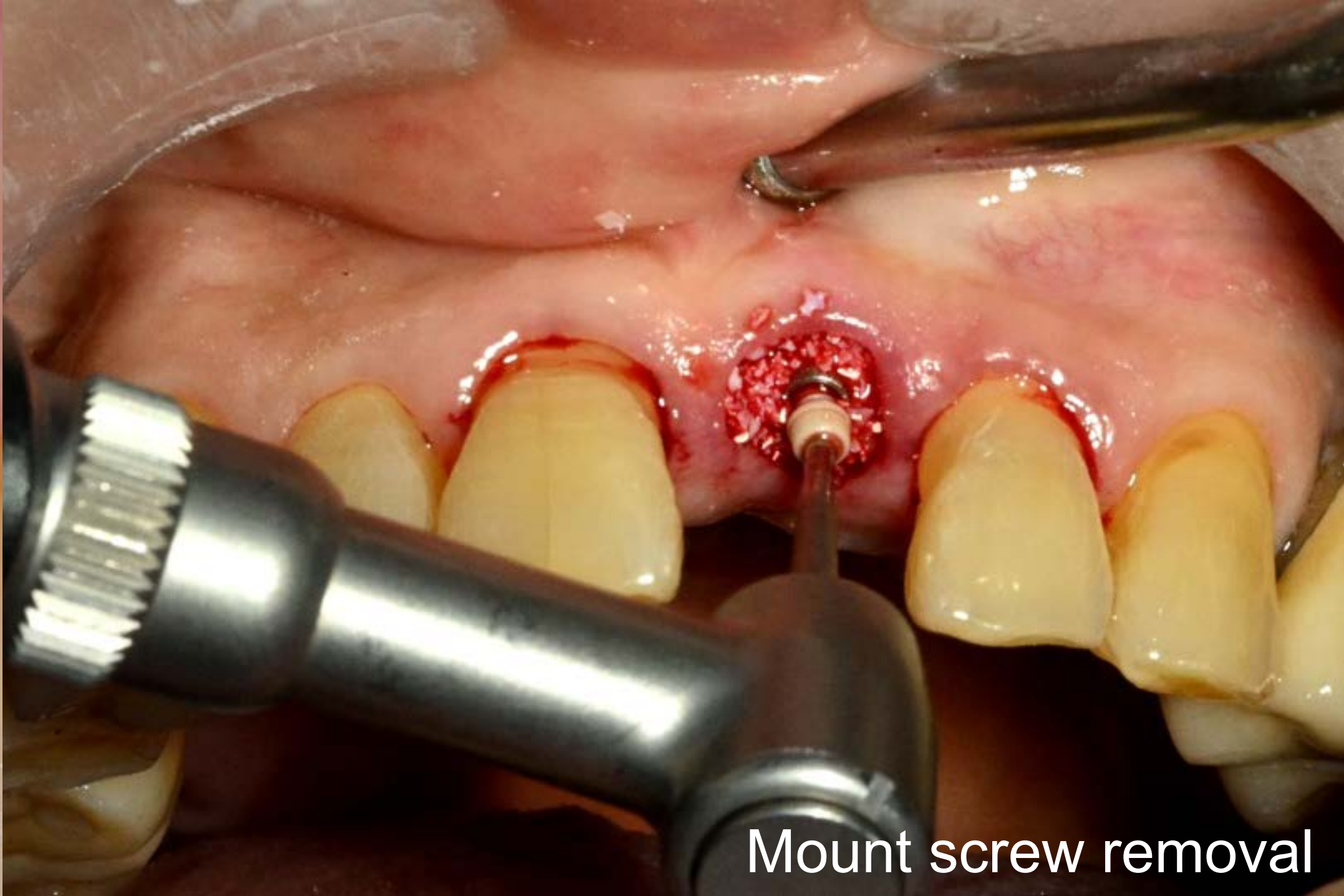


Immediate Implantation using Pin Guide & GBR

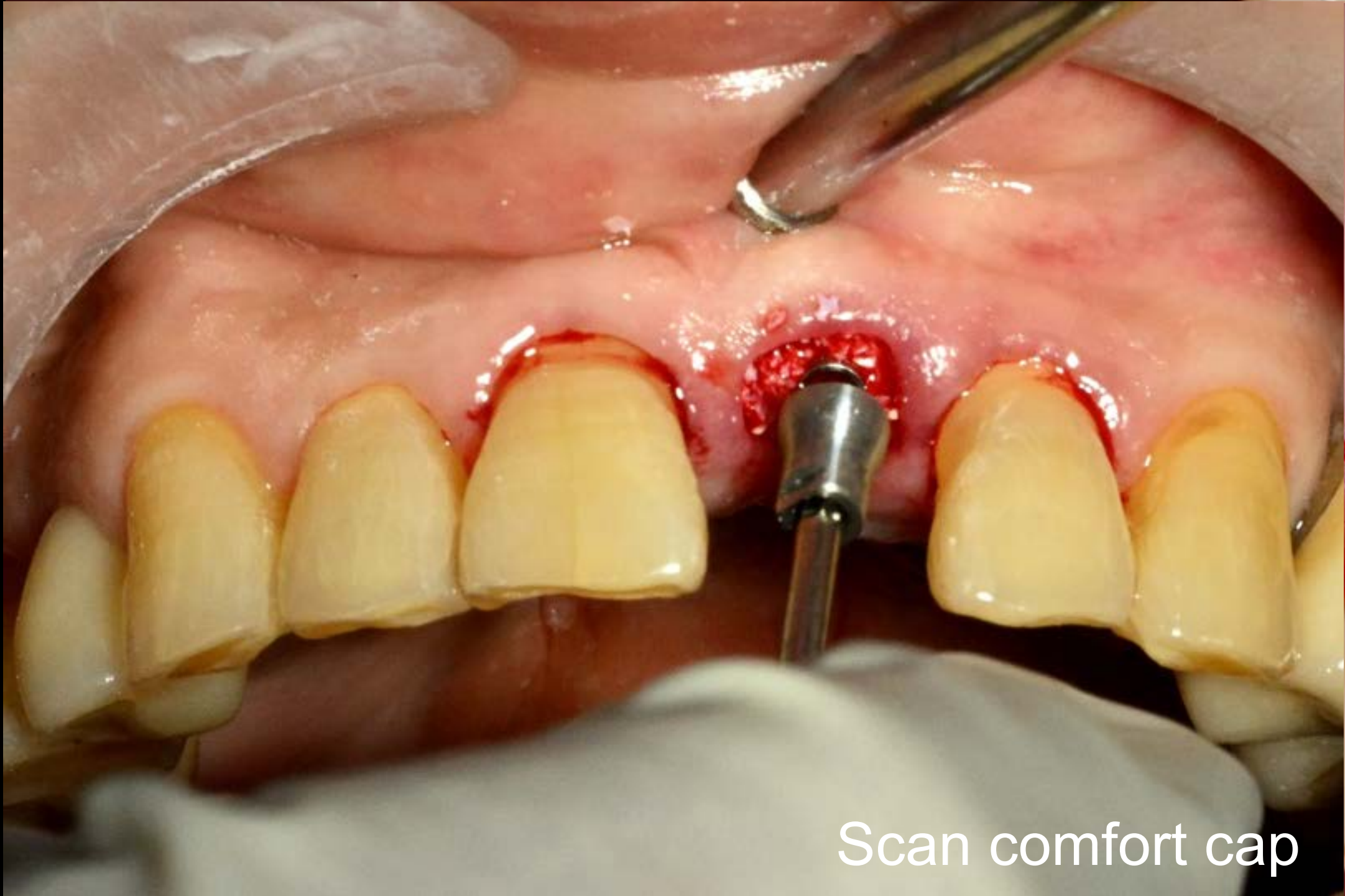


Dentium dental Clinic
Dr. SM Chung

Surgery (2025-07-16)



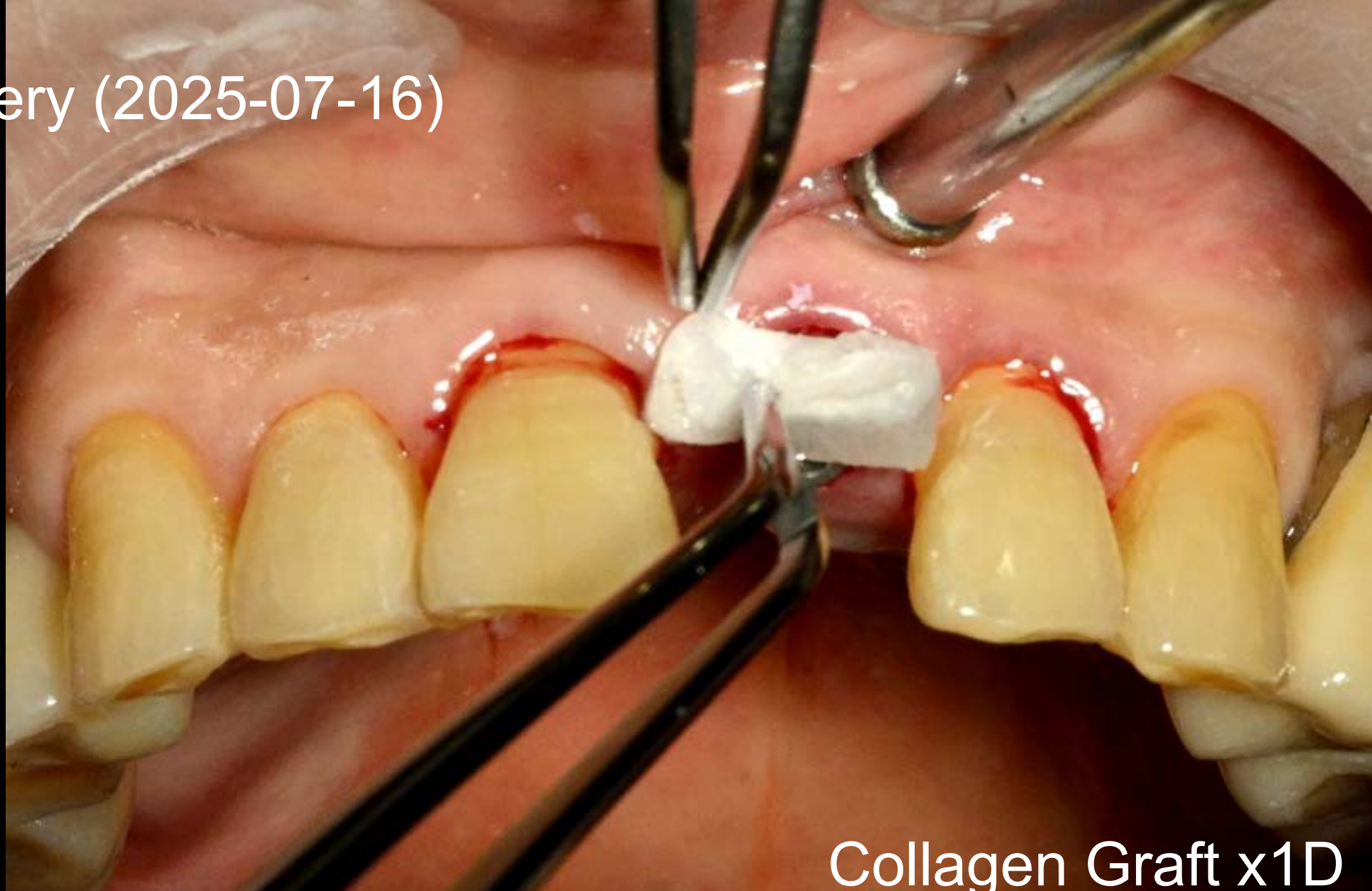
Mount screw removal



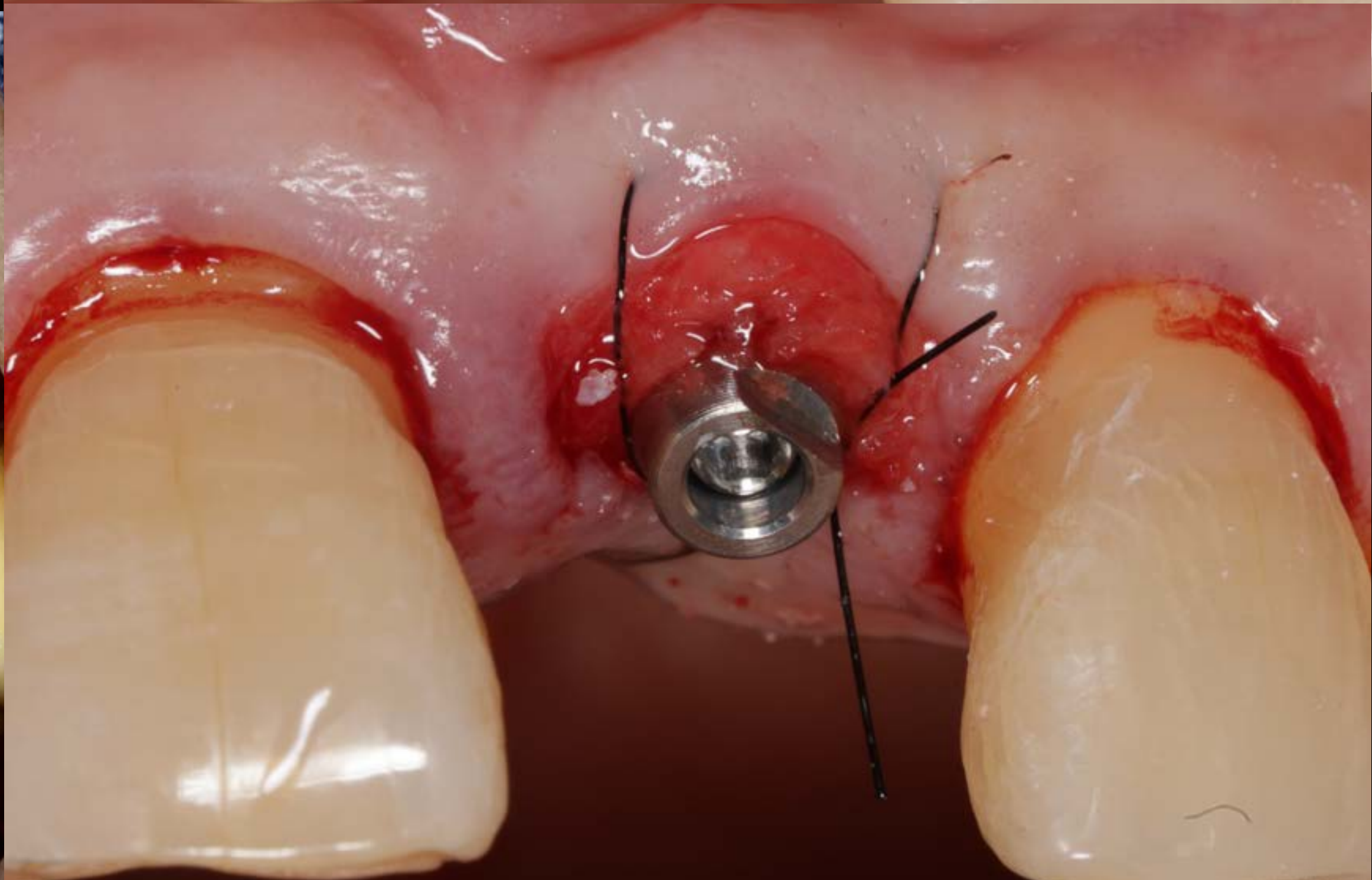
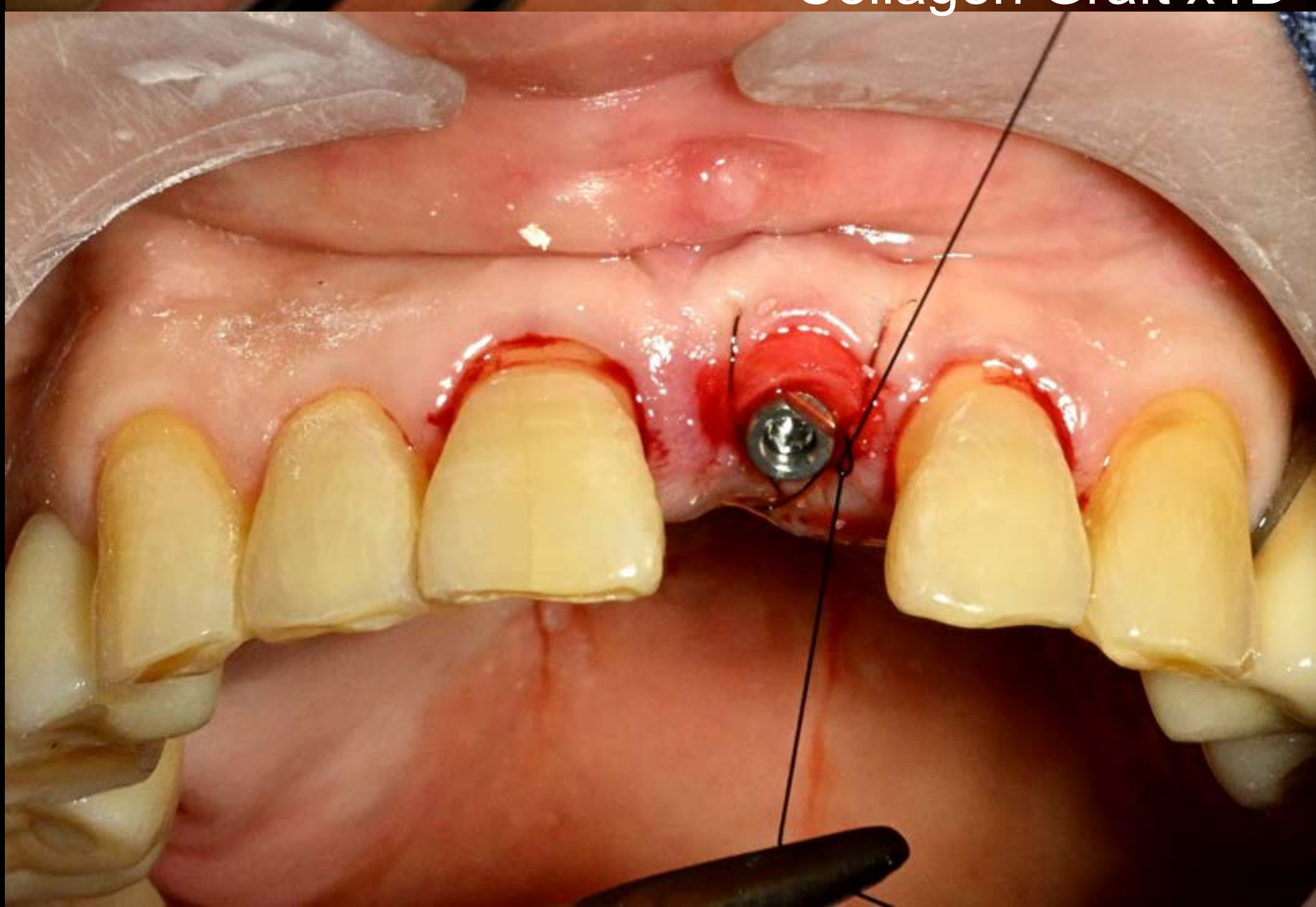
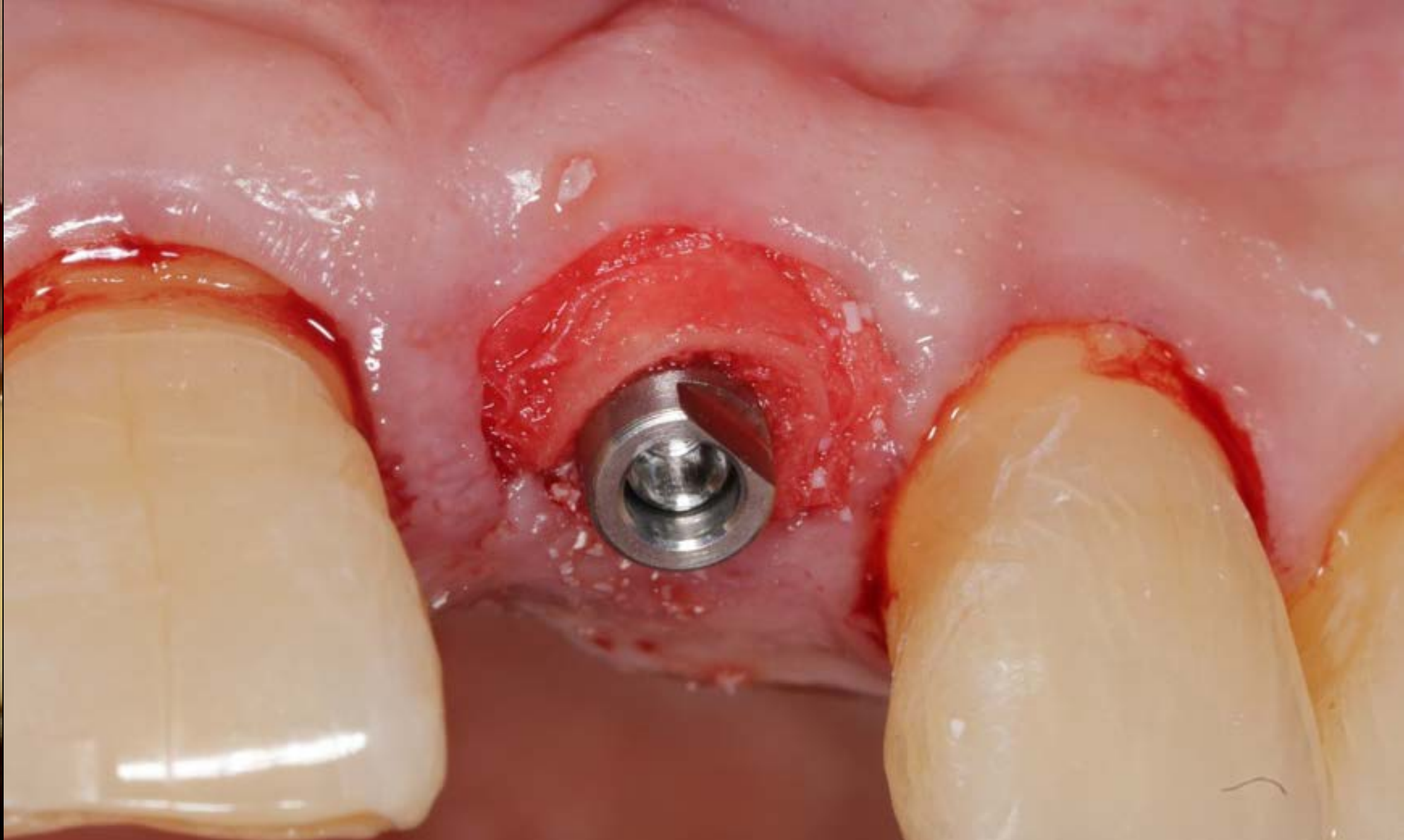
Scan comfort cap



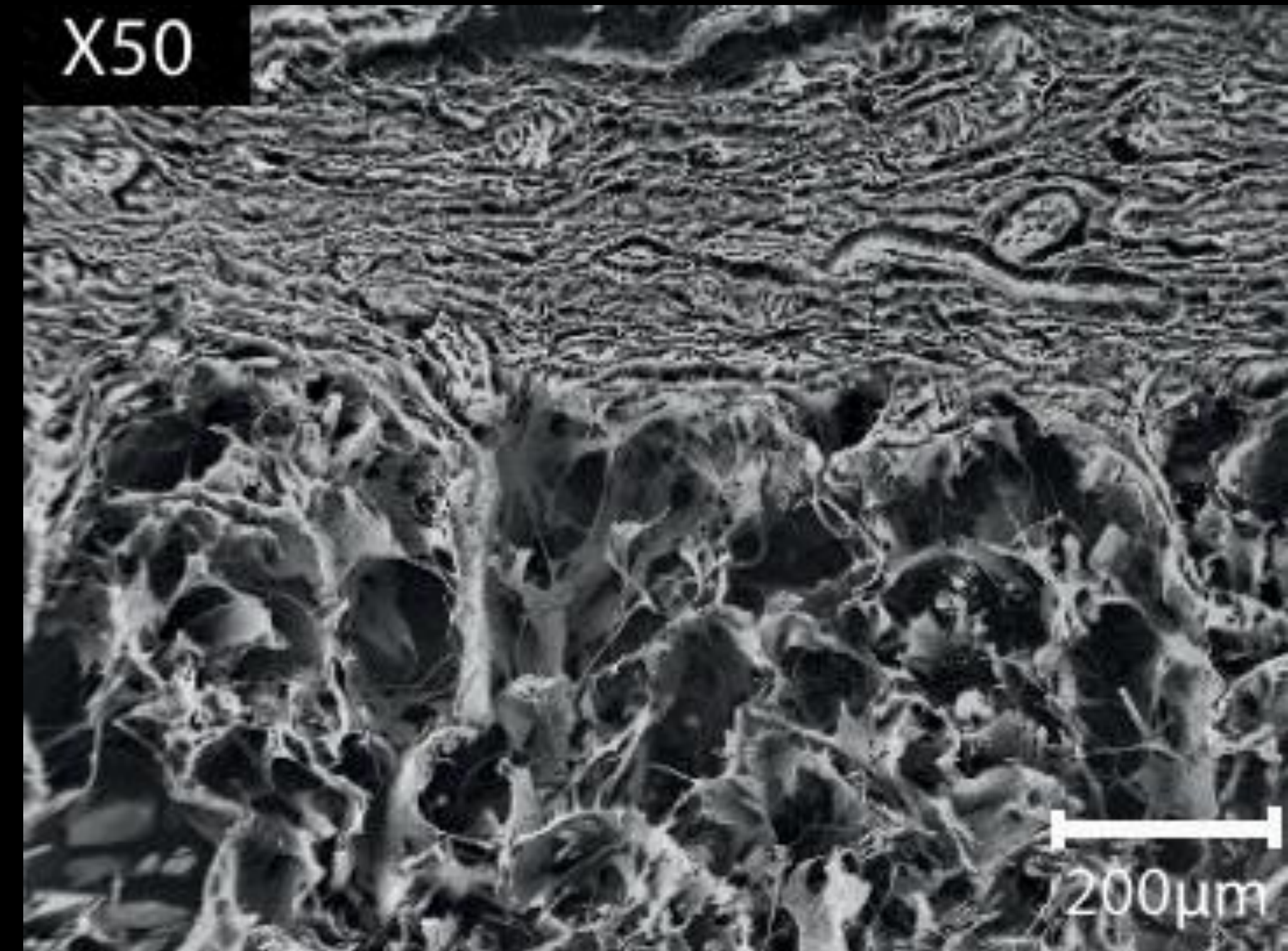
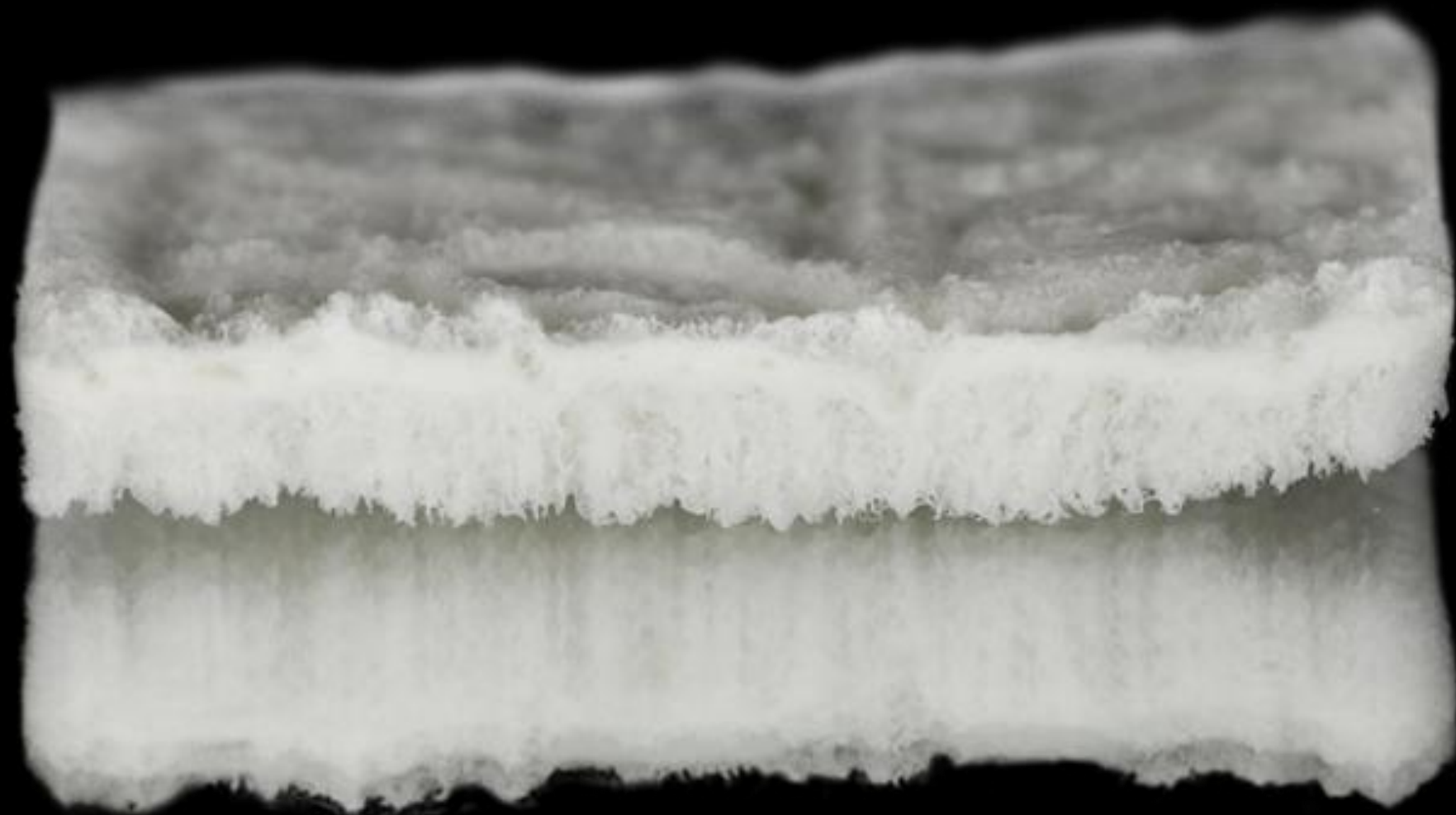
Surgery (2025-07-16)



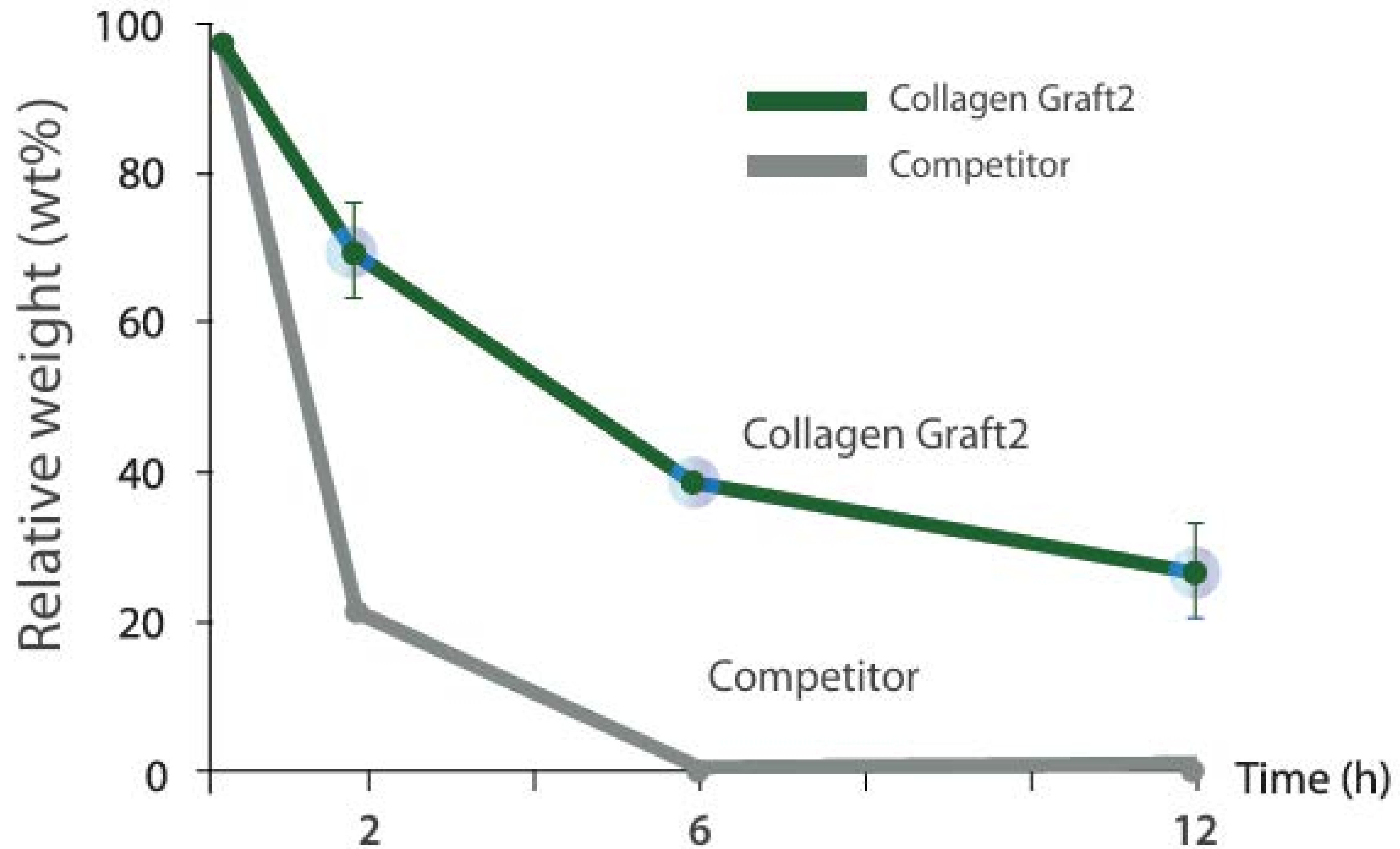
Collagen Graft x1D

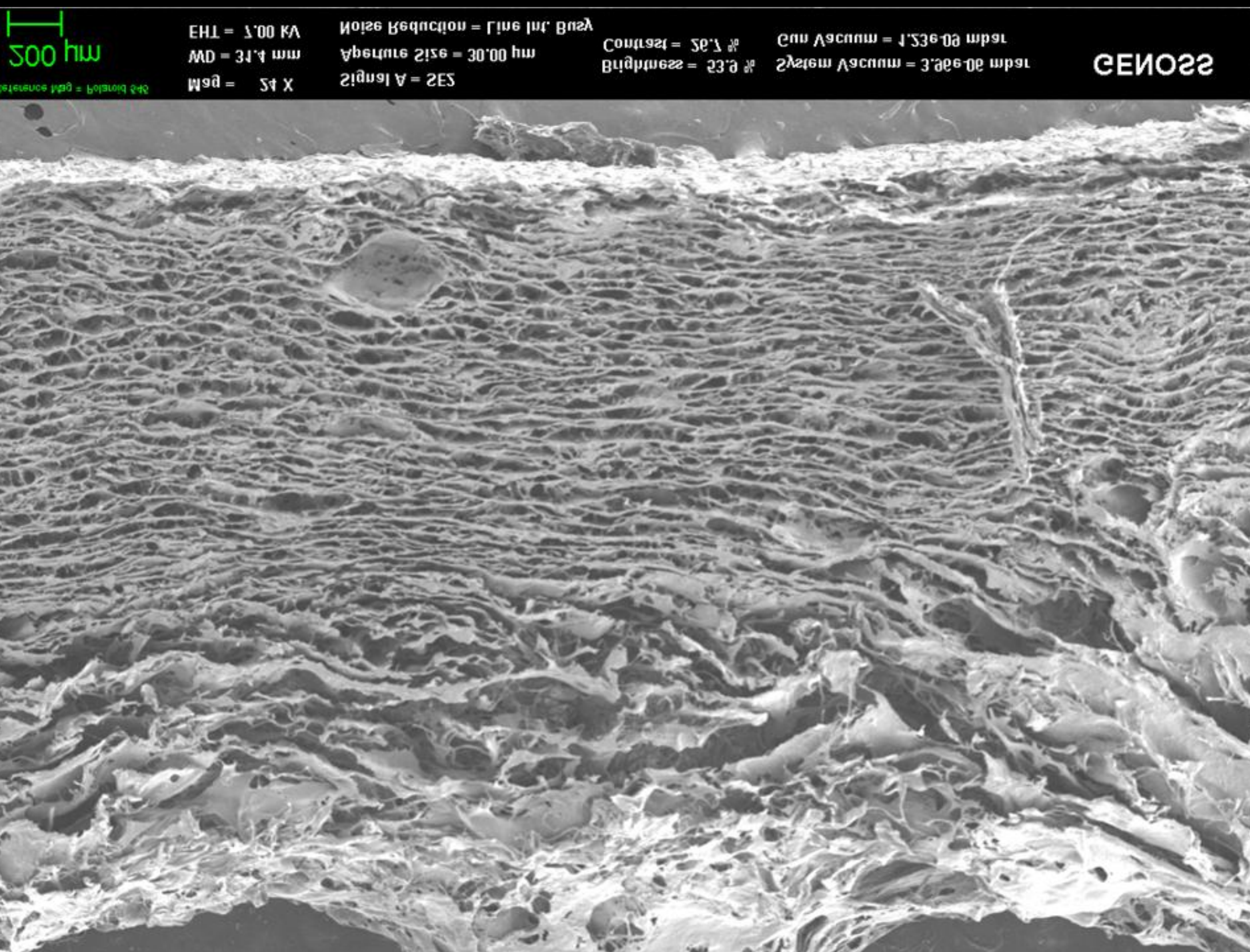


Structure of collagen graft

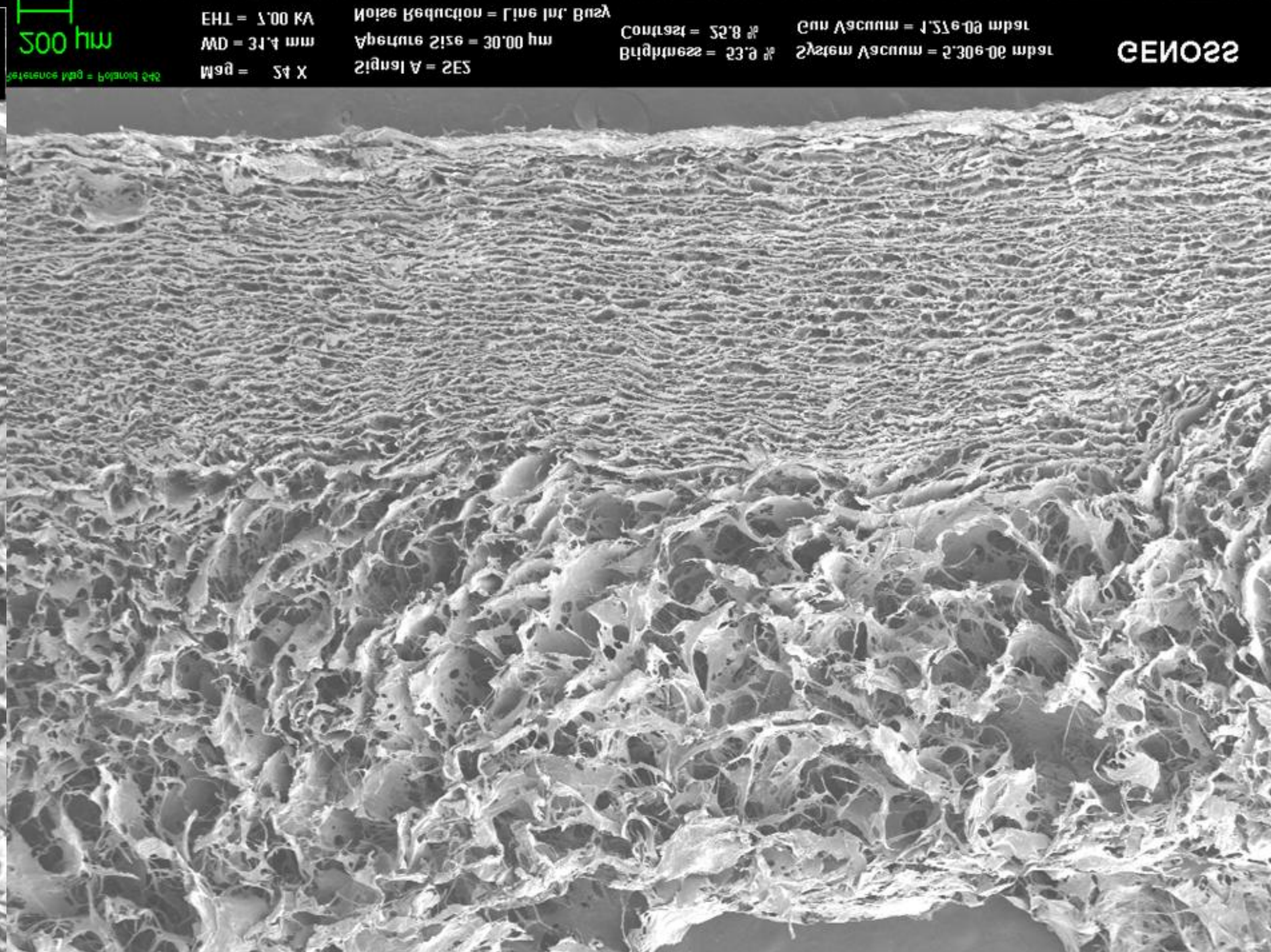


Weight loss in collagenase





Collagen graft x1D

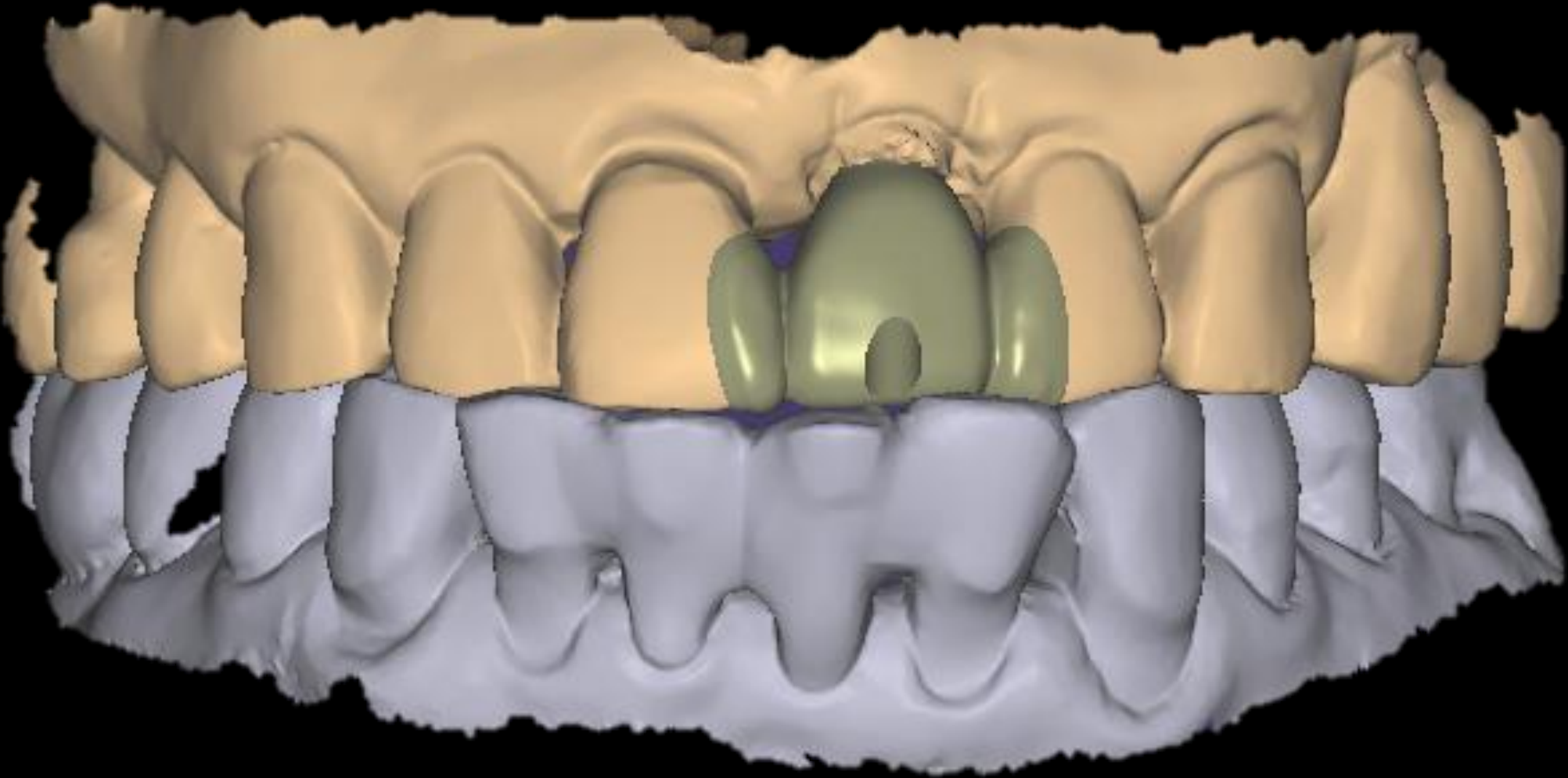


Collagen graft x2D

Gap filling between fixture and labial bone is with bone graft

Between healing abutment and labial gingiva is with collagen graft

Intra Oral Scan



Provisional Restoration (2025-07-16)



Bright Etchant



HRF

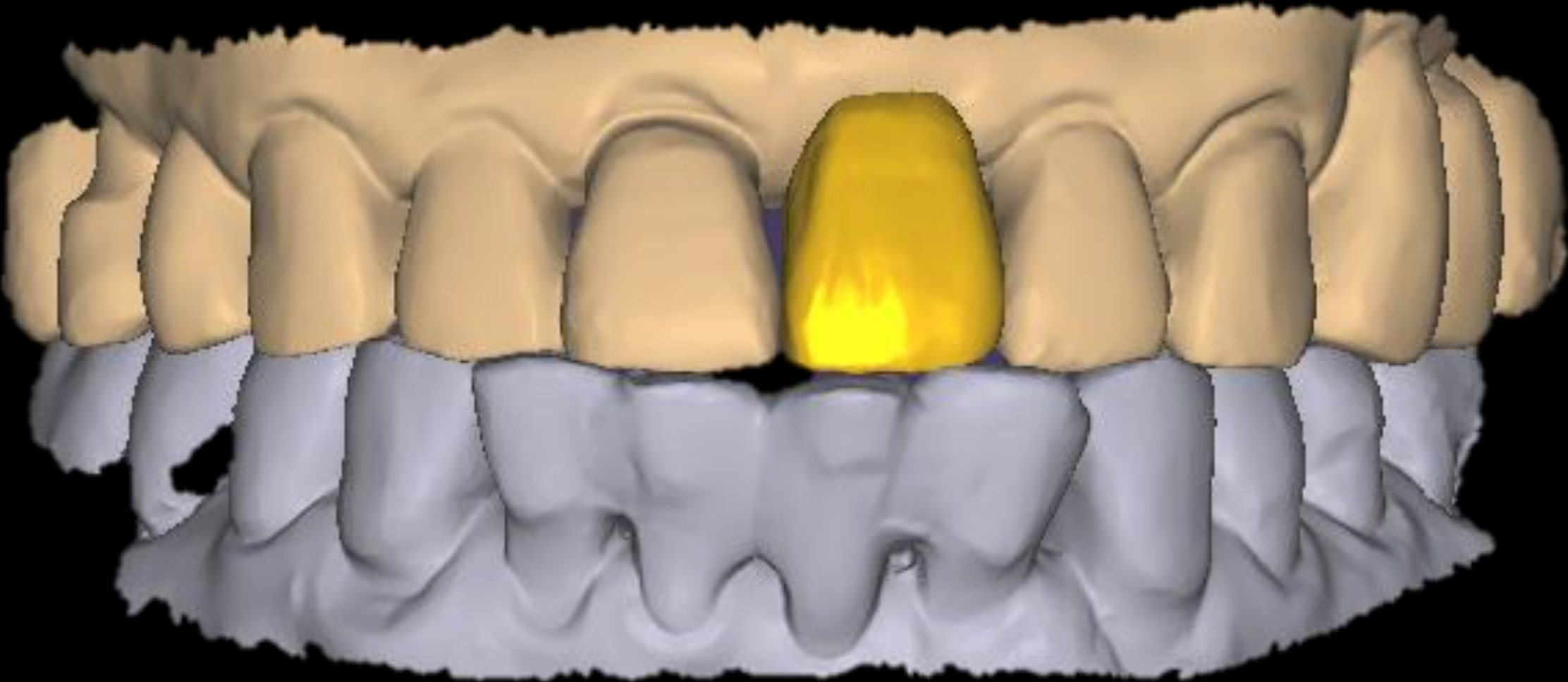
Immediate loading with temporary is required for esthetics

But occlusal force must be spreader with adjacent natural teeth

Healing : 1 month (2025-08-13)



Intra Oral Scan

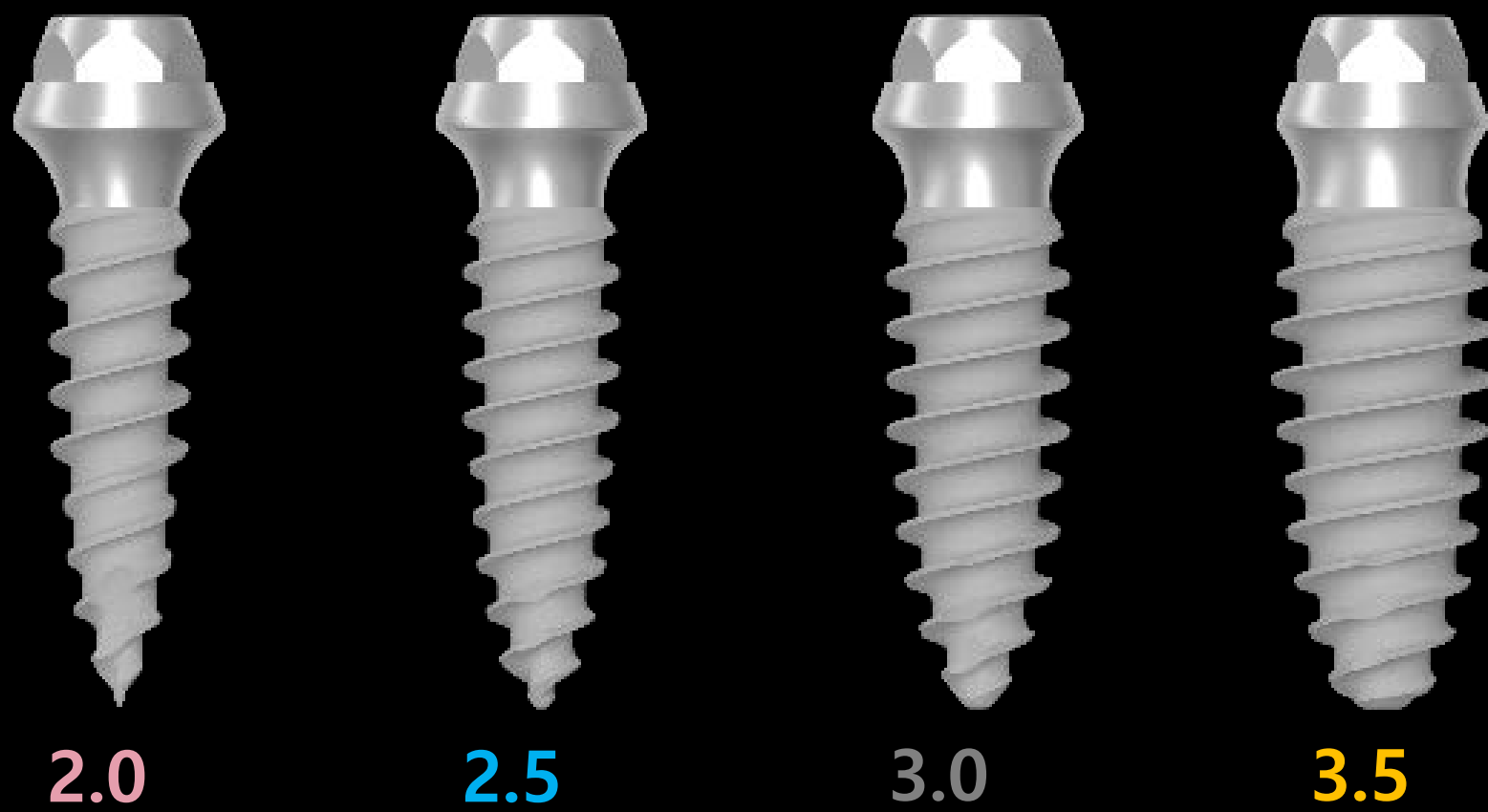


Final prosthesis (2025-09-17)



Bright implant

- Narrow but strong enough
- Short but stable



Narrow diameter is very effective in ant thin bone

Thin labial bone to fixture can be maintained thin fixture

- the ideal labial bone from fixture is different with fixture diameter

ex) over 4mm - 2mm, 3.5mm - 1.5mm, less 3mm - 1mm

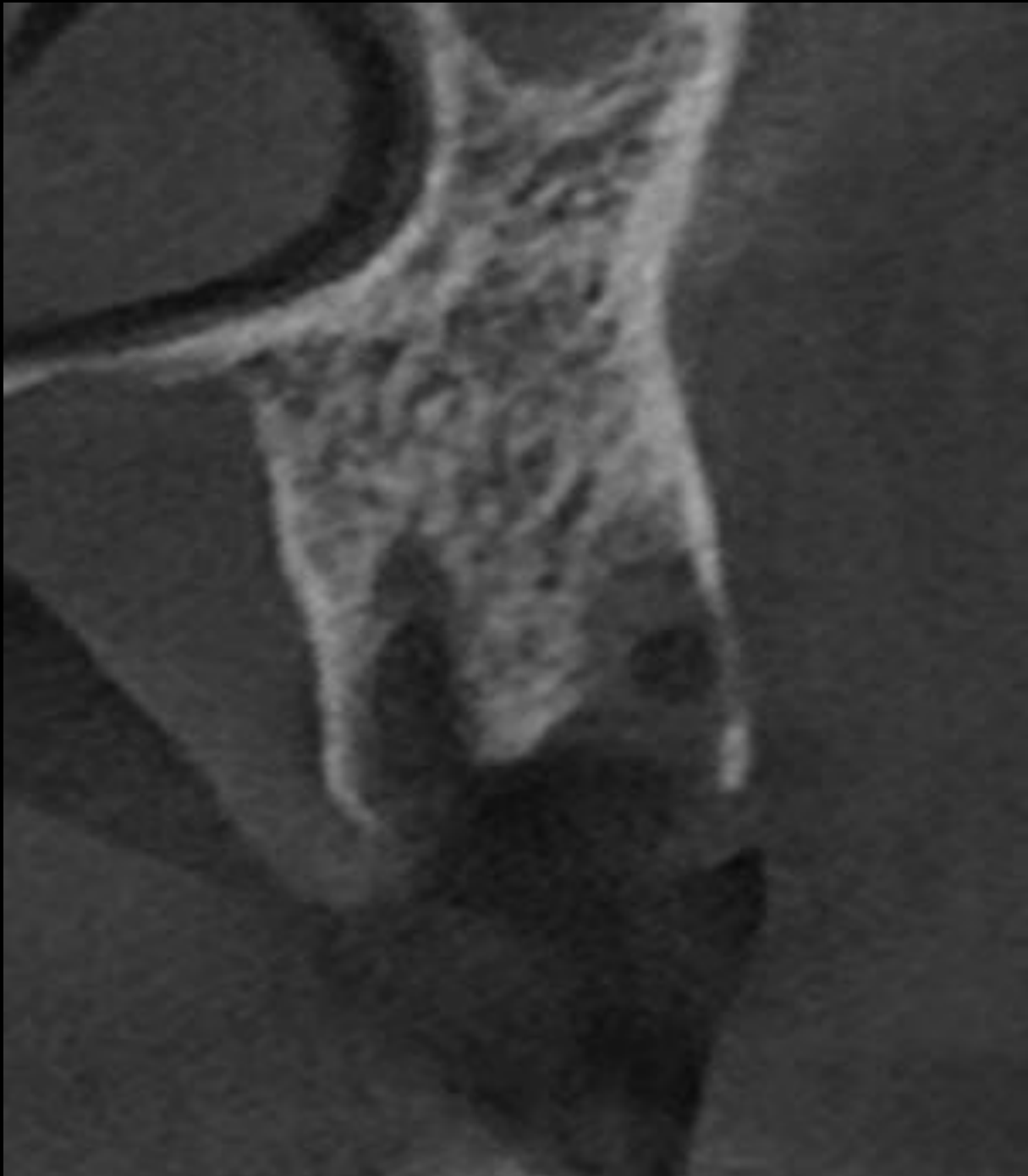
Oral exam (2024-12-07)



Healing : 1 week (2025-01-03)



Pre-op CT (2024-12-27)



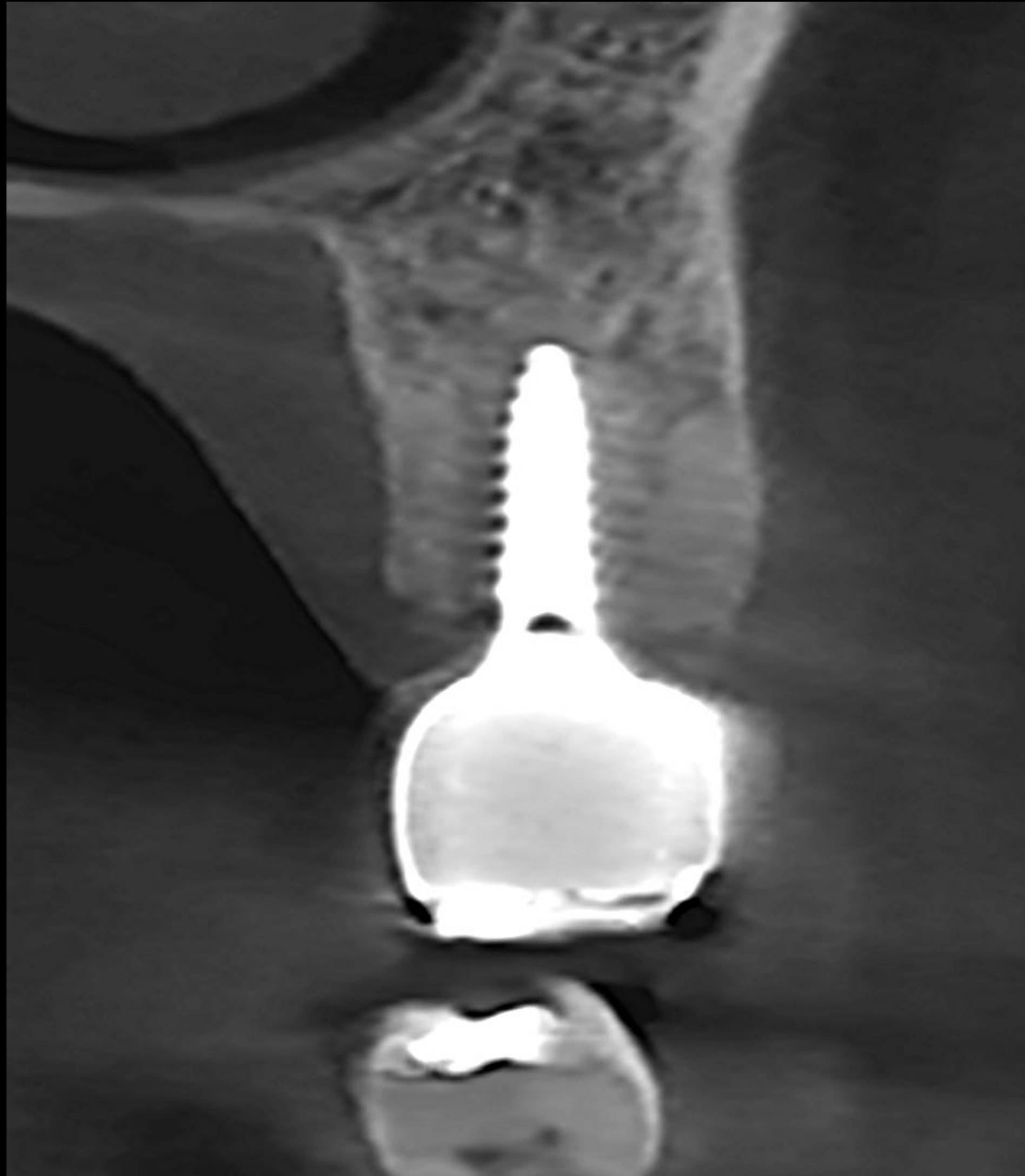
#26

Post-op CT (2024-12-27)

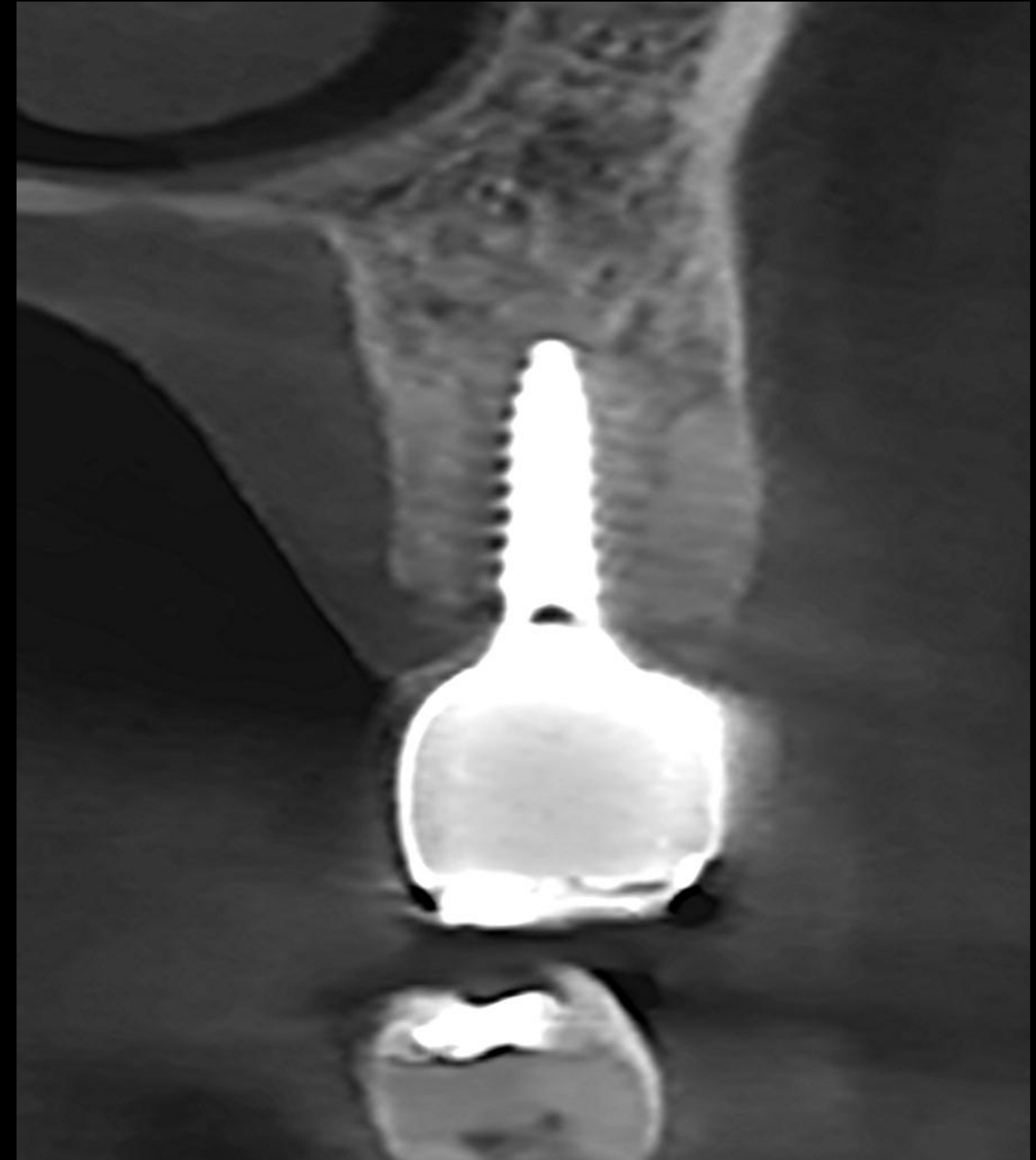


#26

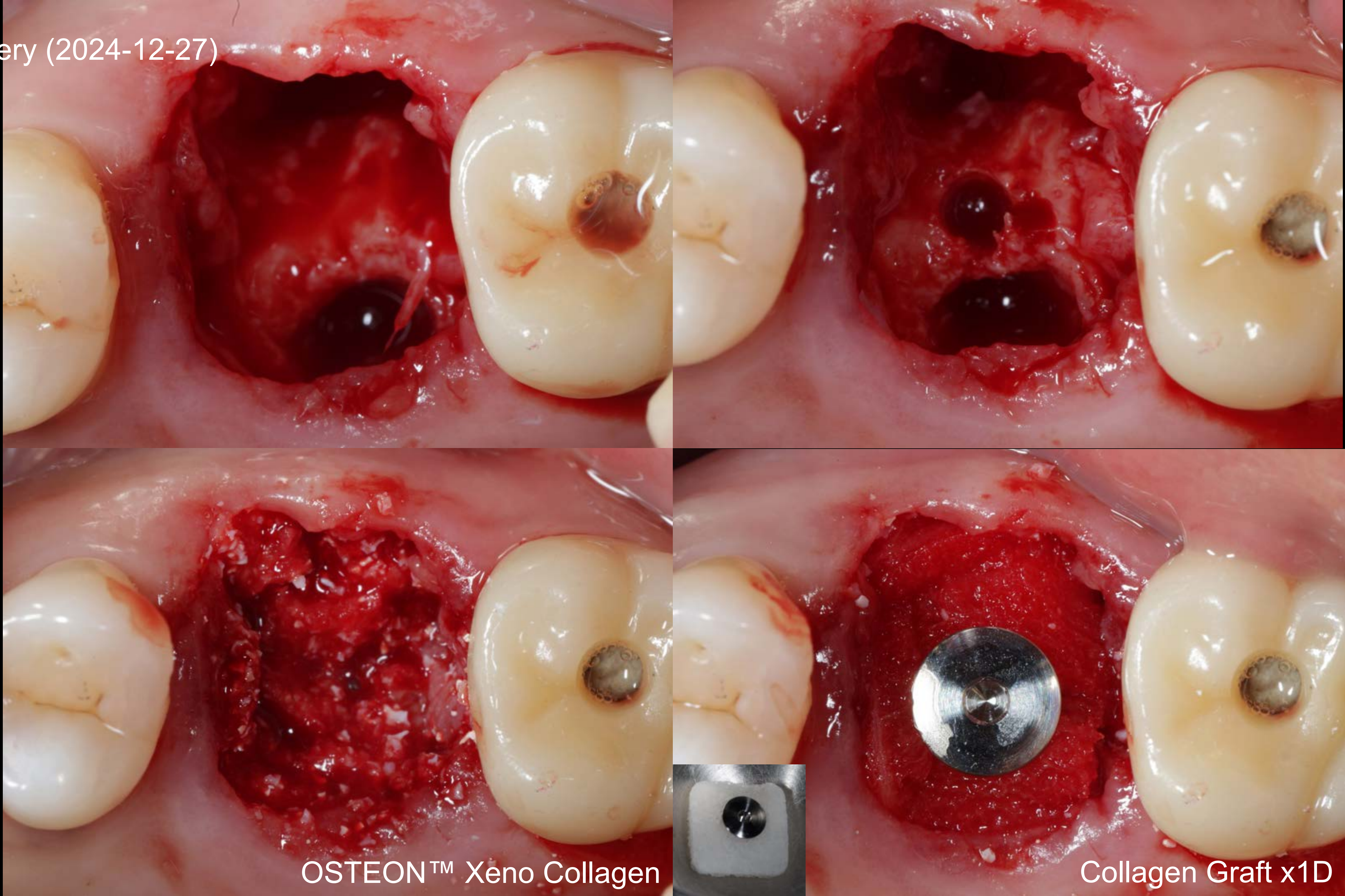
Follow up CT : 4 months (2025-08-13)



Follow up CT : 7 months (2025-10-31)



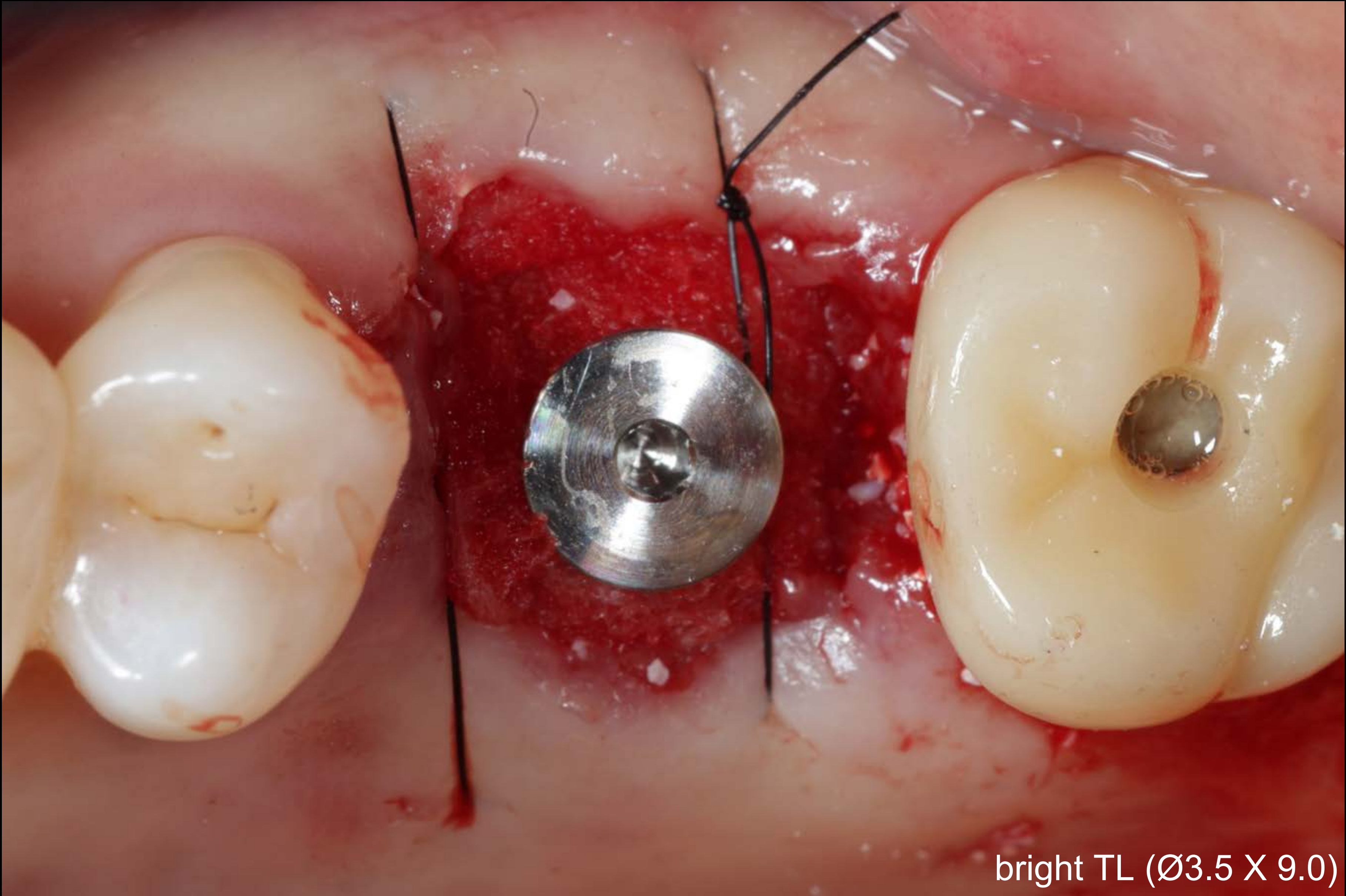
Surgery (2024-12-27)



OSTEON™ Xeno Collagen

Collagen Graft x1D

Post-op (2024-12-27)

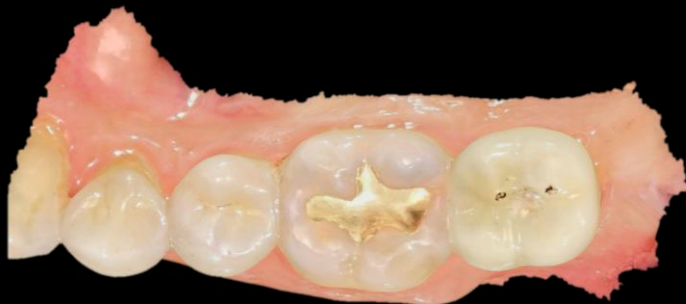
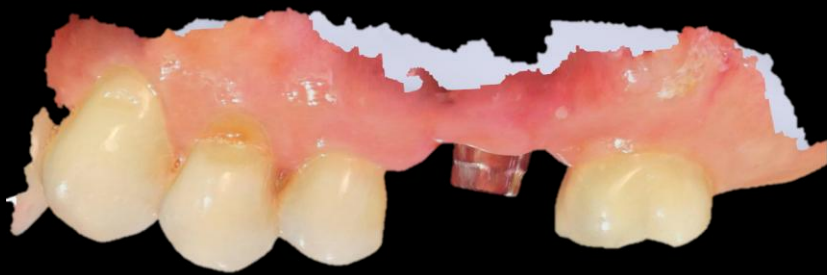


bright TL (Ø3.5 X 9.0)

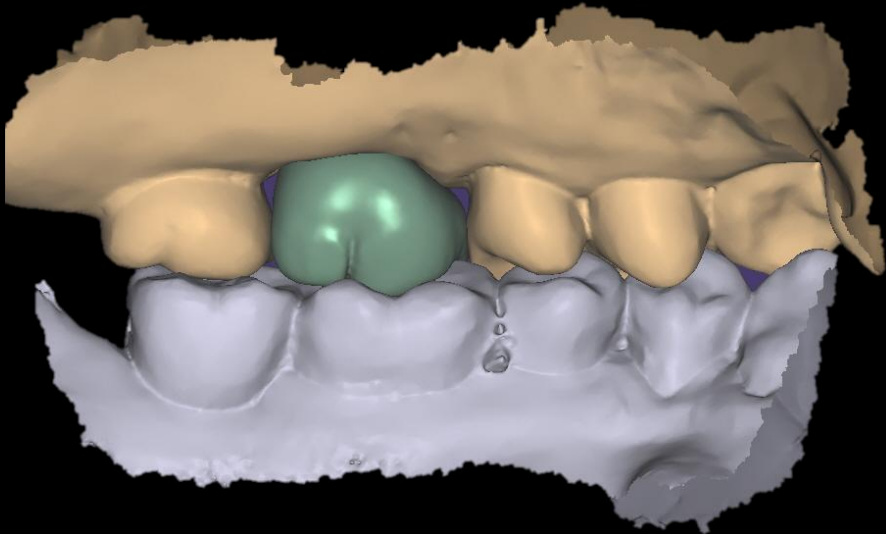
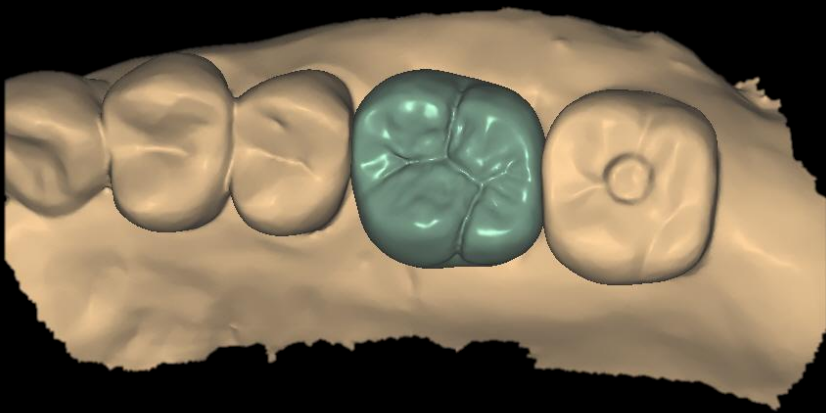
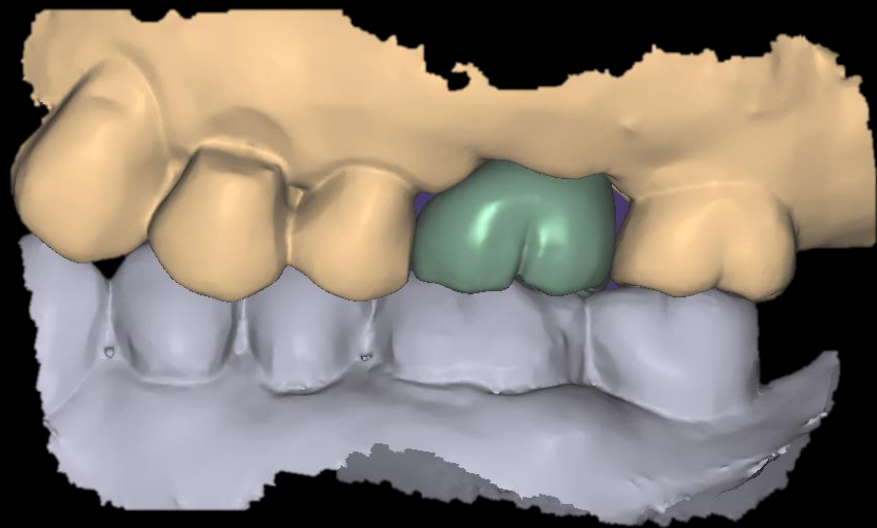
Healing : 1 week (2025-01-03)



Intra Oral Scan



Virtual set up



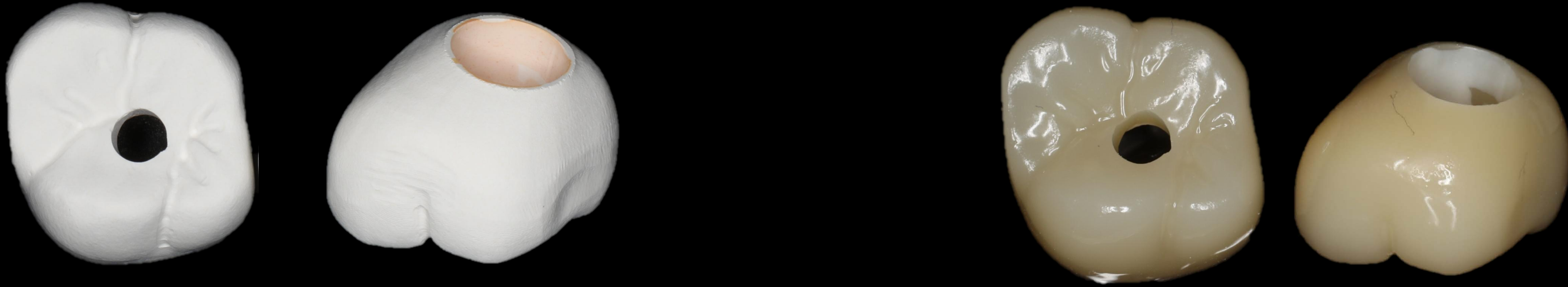
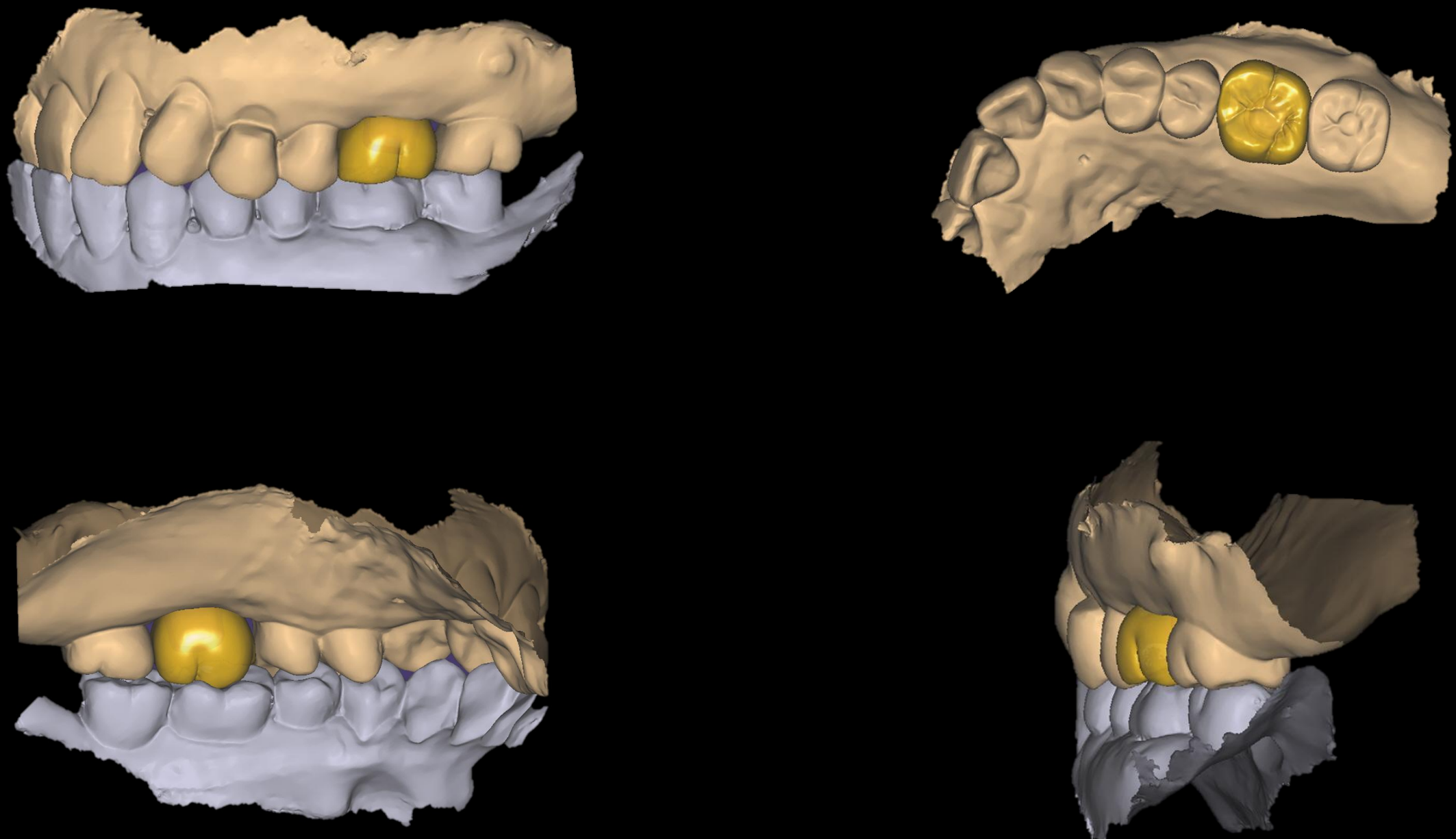
Provisional restoration (2025-02-06)



Intra Oral Scan



CAD (Final prosthesis)



Final prosthesis (2025-04-10)



Follow up : 4 months (2025-08-13)



Follow up : 7 months (2025-11-05)



Socket preservation

Oral exam (2024-10-30)





Pre-op (2025-06-25)



Post-op (2025-06-25)



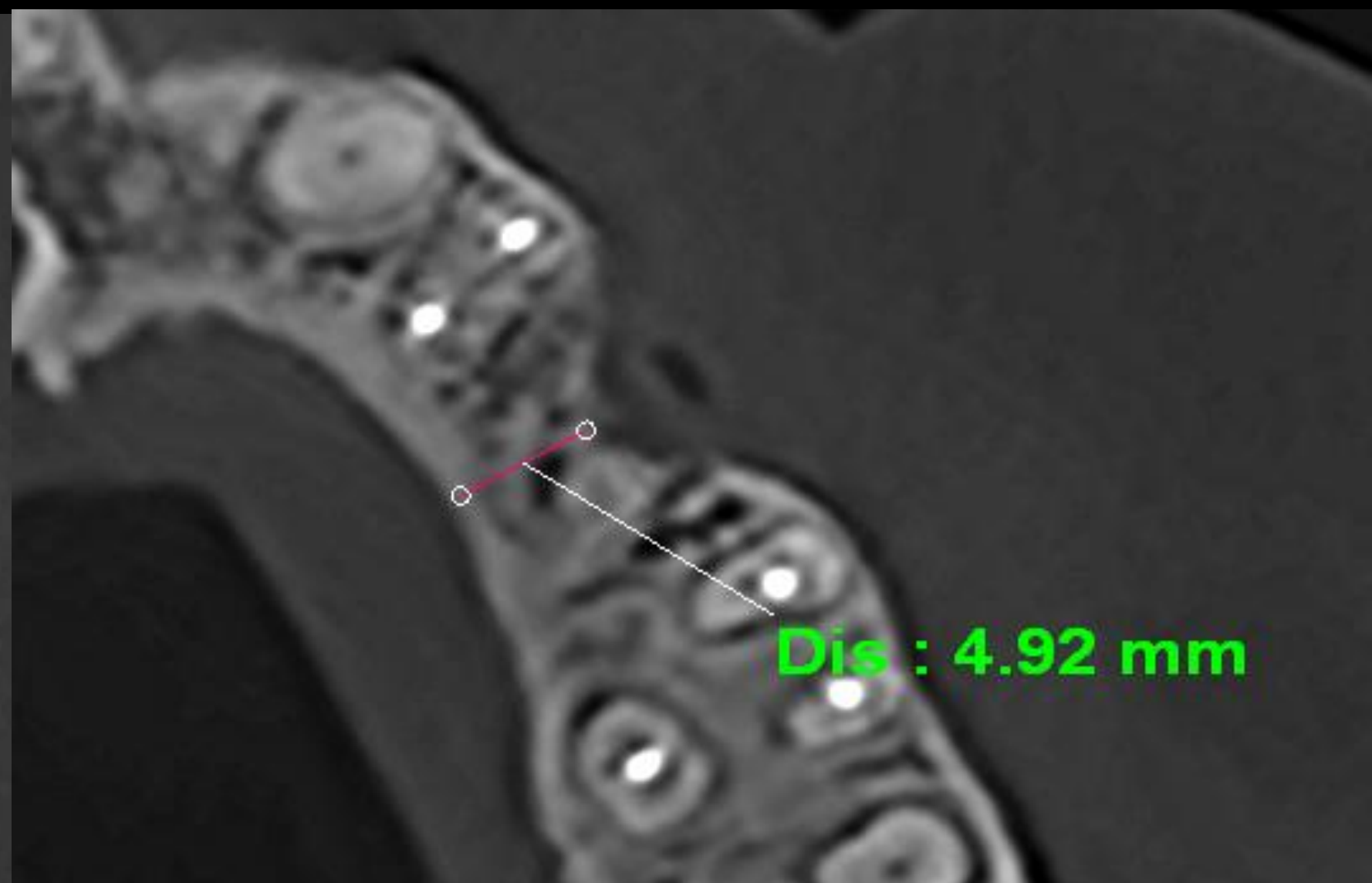
Final prosthesis (2025-10-01)



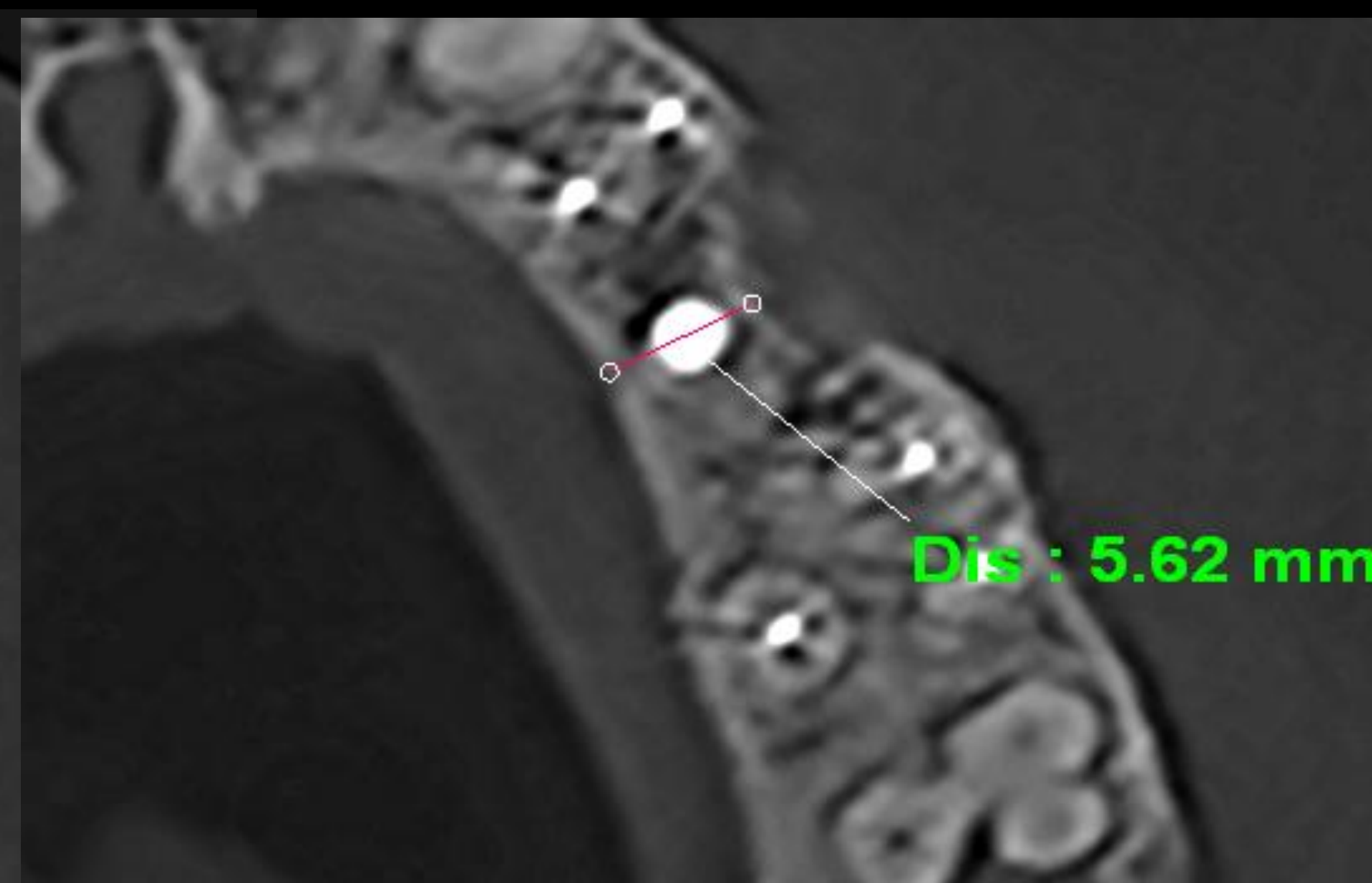
Pre-op CT (2024-10-30)



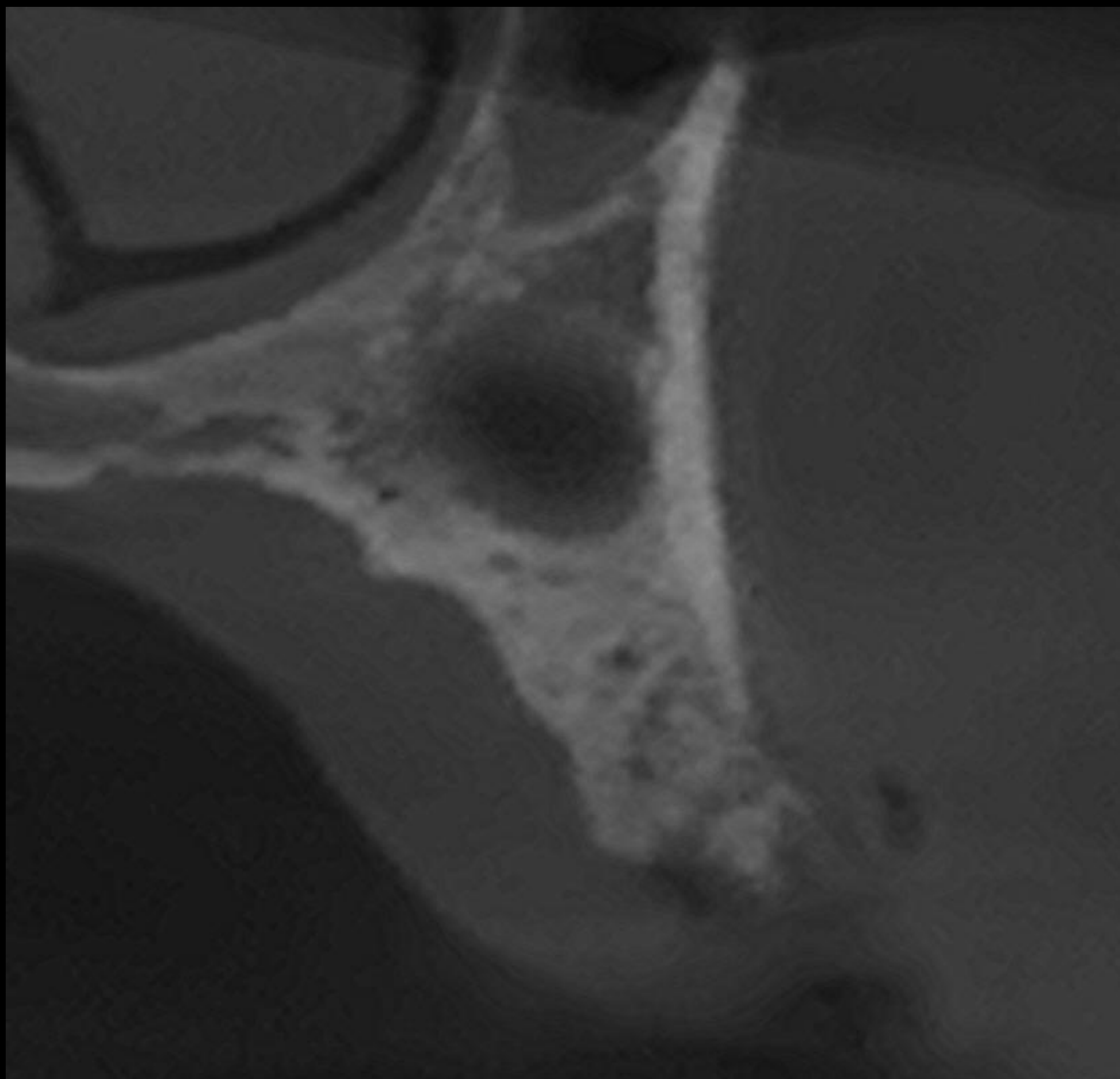
Easy Bone Graft



Post-op CT (2025-06-25)



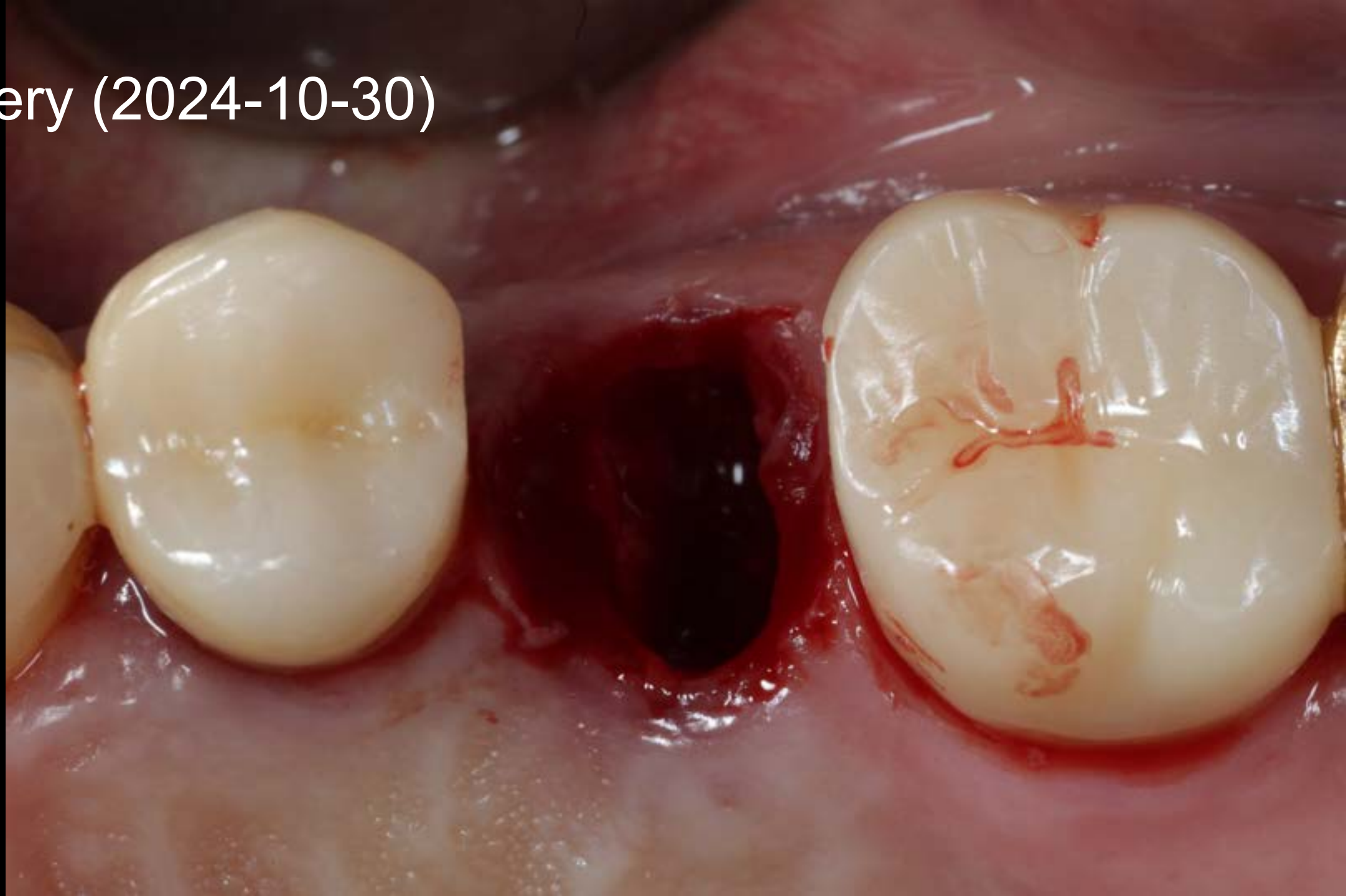
Pre-op CT (2025-06-25)



Post-op CT (2025-06-25)



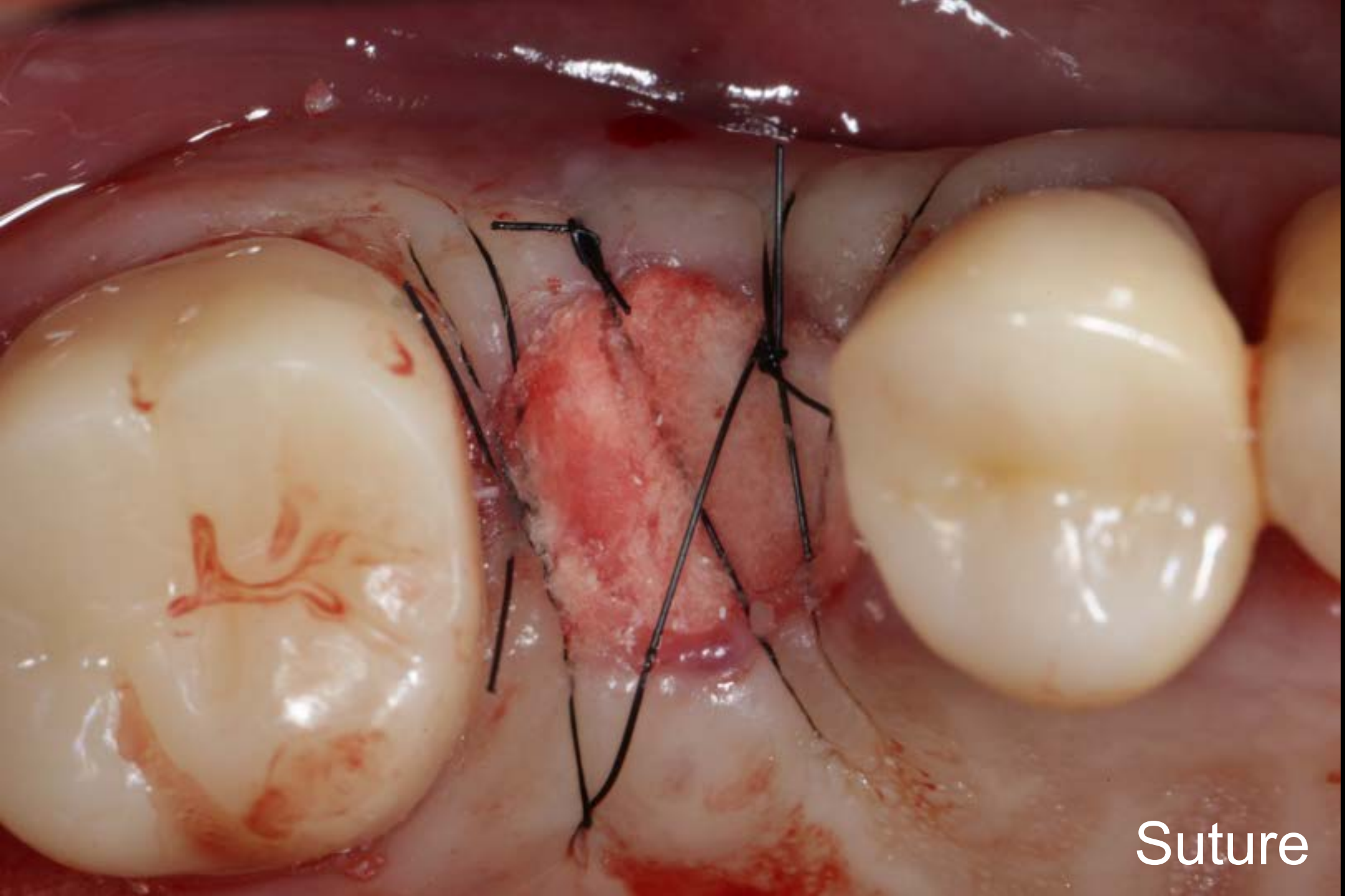
Surgery (2024-10-30)



Collagen Graft x1D



OSTEON™ Xeno Collagen



Suture

Healing : 1 week (2024-11-06)



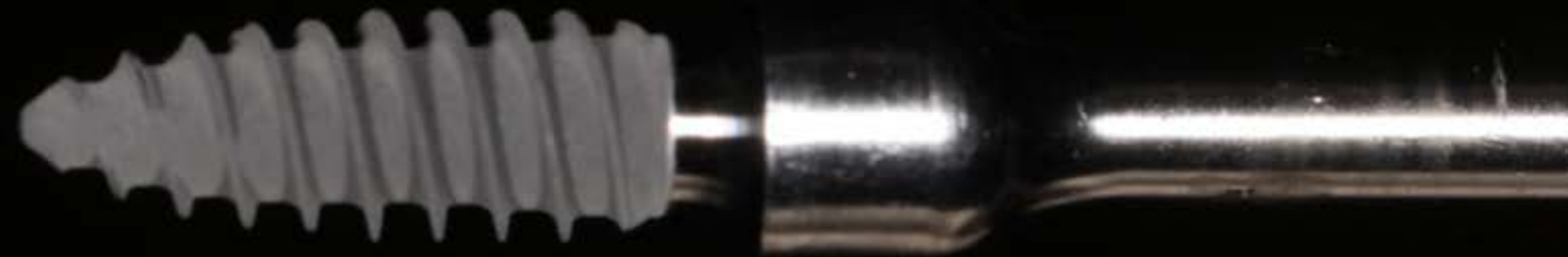
2nd Surgery (2025-06-25)



Incision

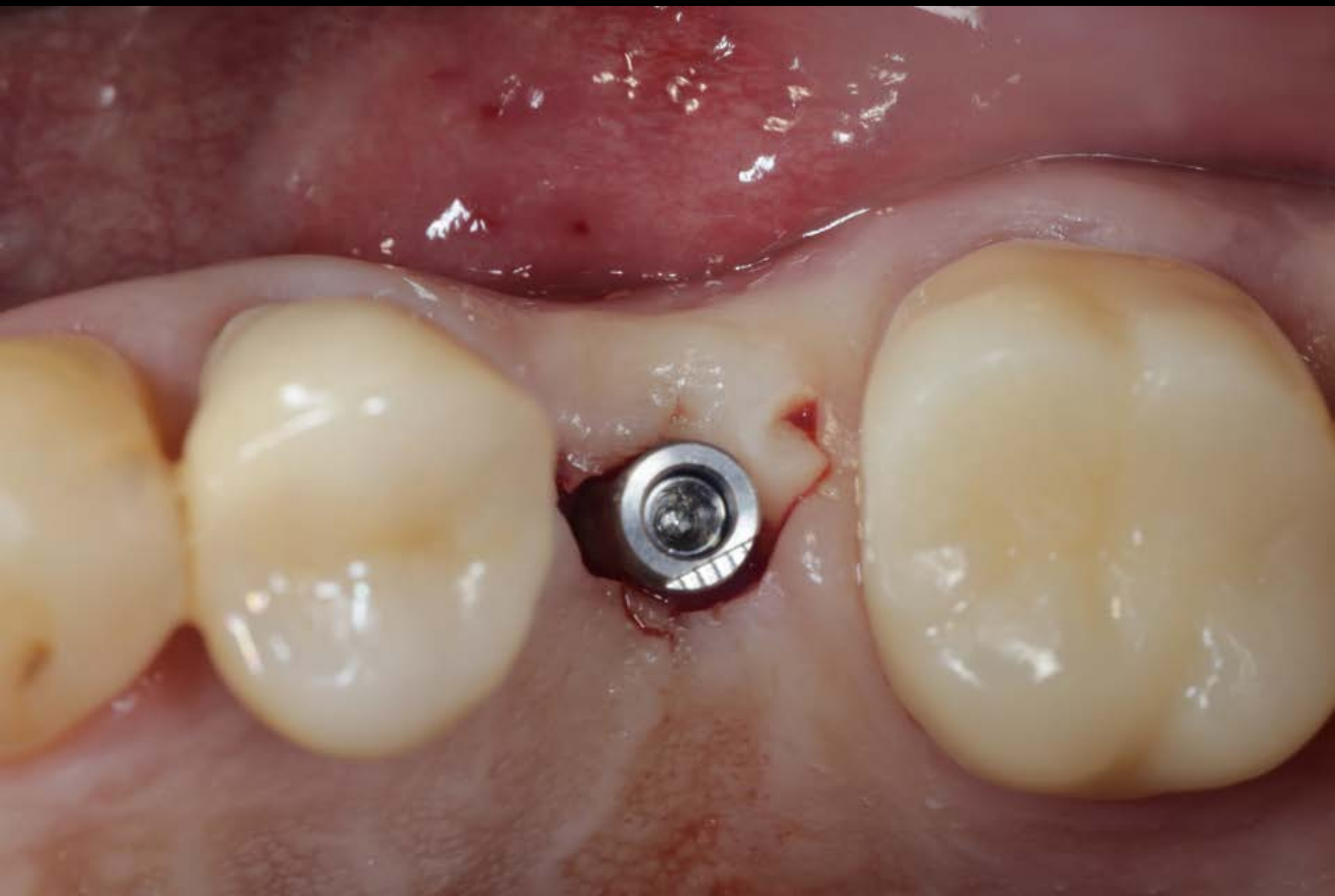


Parallel pin



bright TL (Ø3.0 X 9.0)

Post-op (2025-06-25)



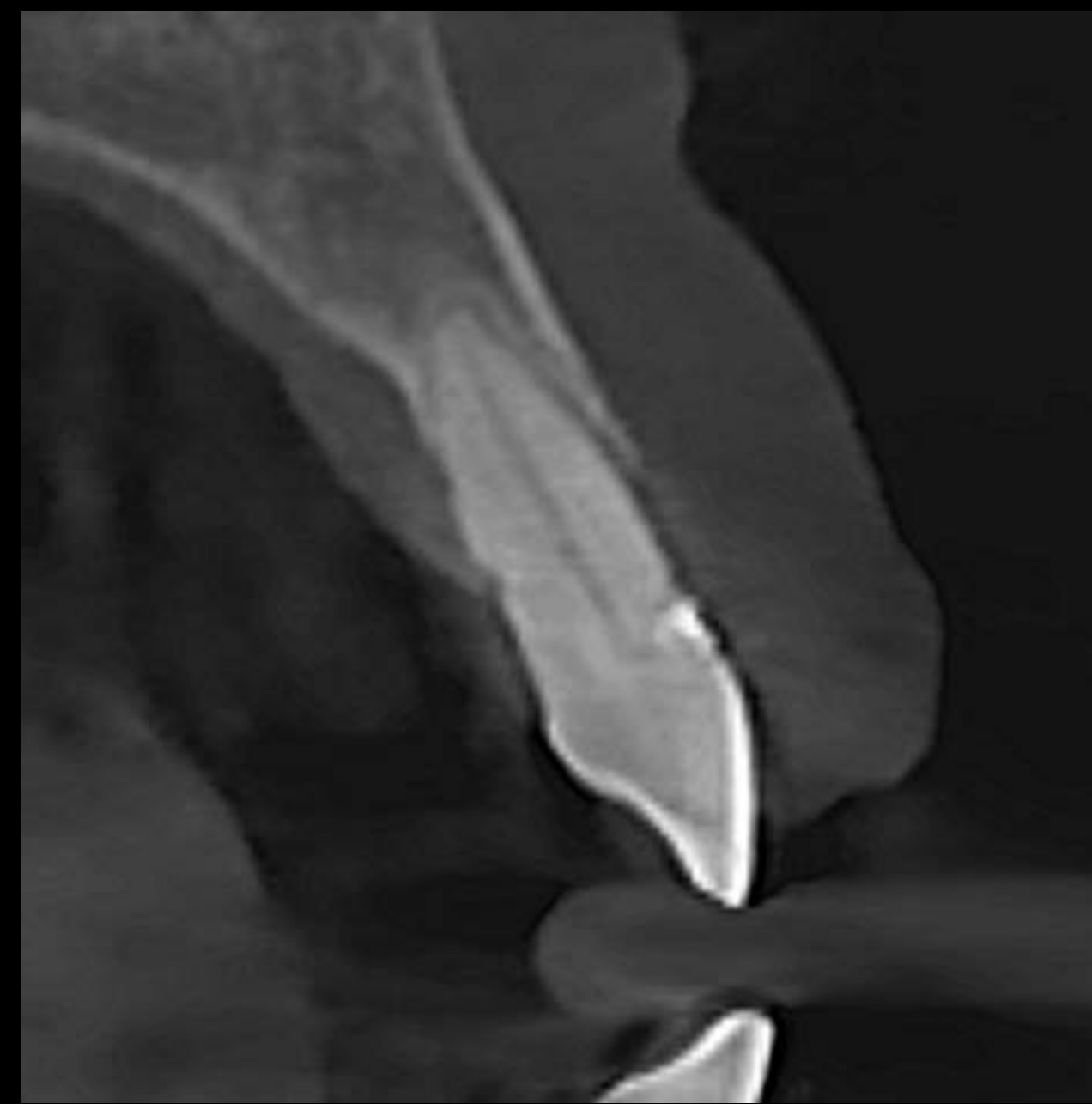
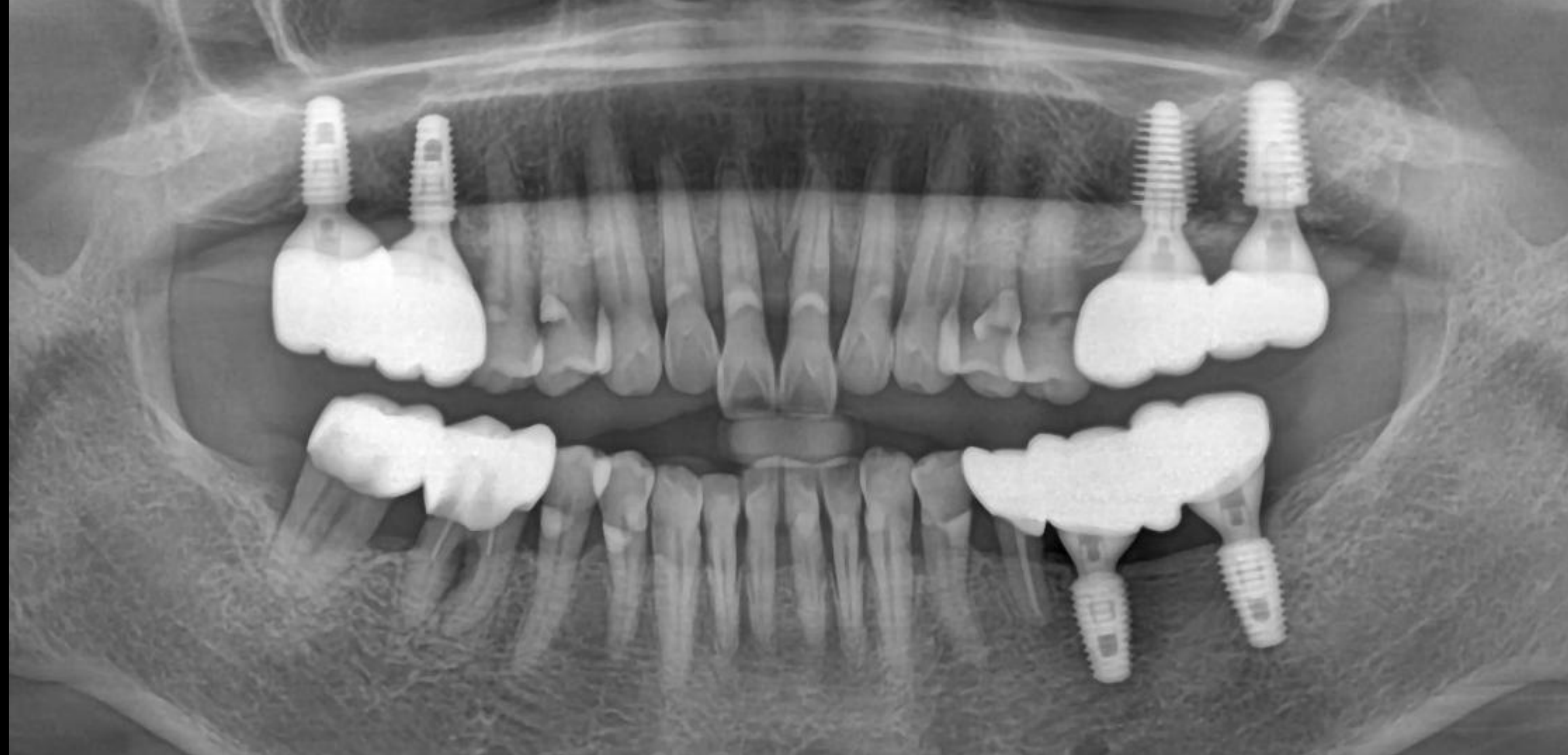
Provisional restoration (2025-07-16)



Final prosthesis (2025-10-01)



Pre-op (2023-10-28)



Pre-op (2023-11-11)



Surgery (2023-11-11)

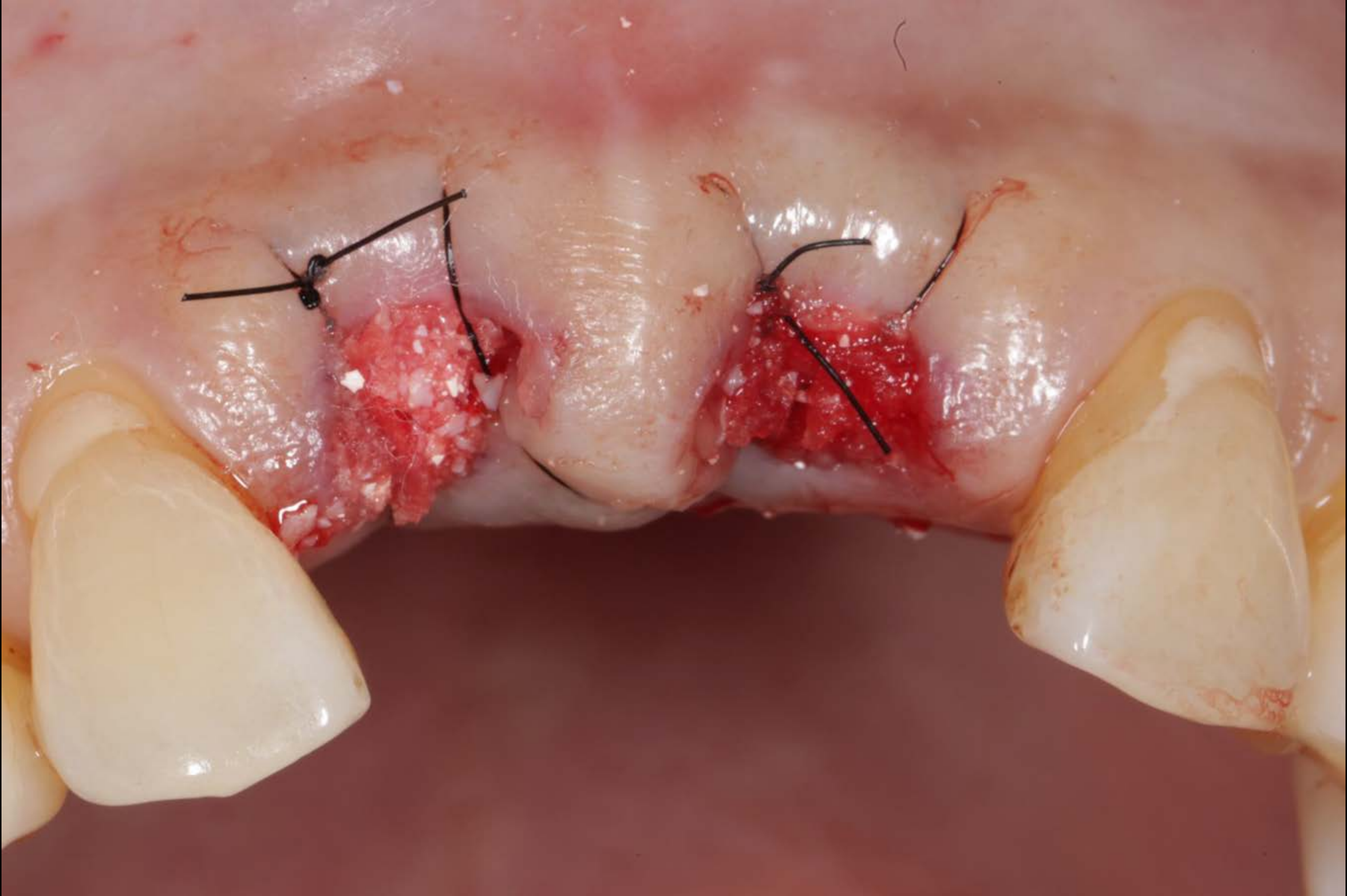




Surgery (2023-11-11)



Post-op (2023-11-11)



Maryland bridge (2023-11-11)



Healing : 1 week (2023-11-22)



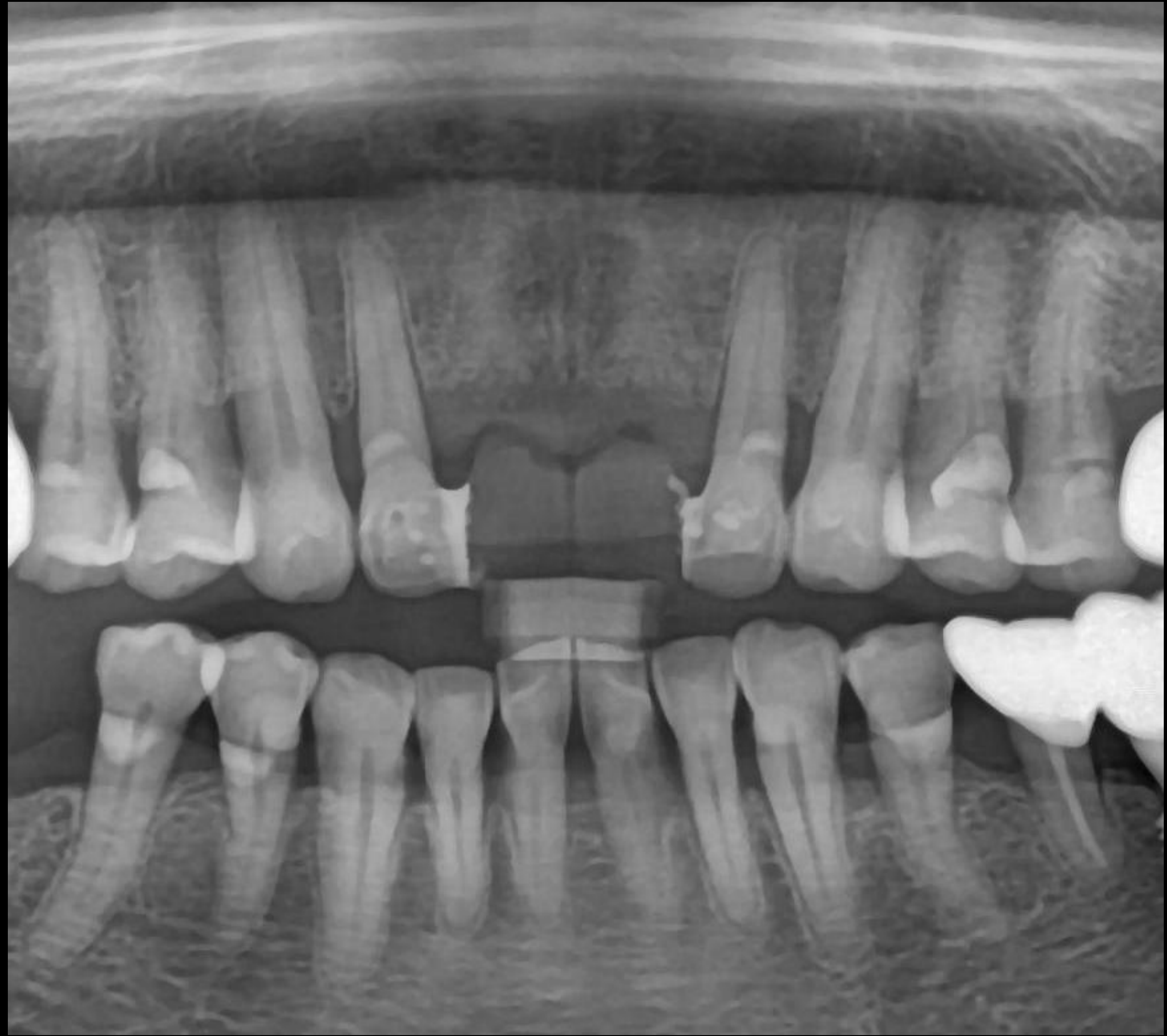
Healing : 1 month (2023-12-28)



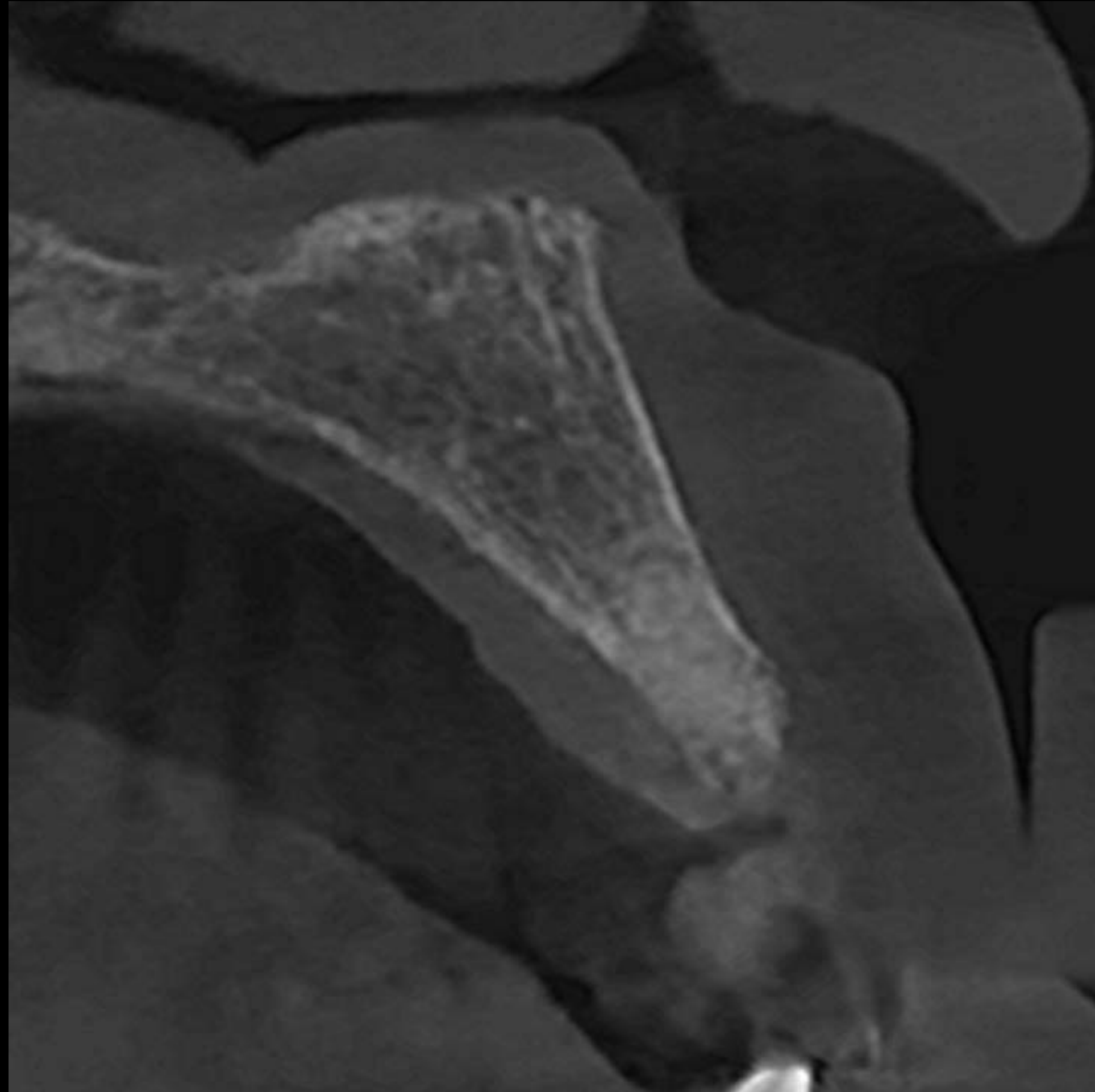
Post-op (2023-11-22)



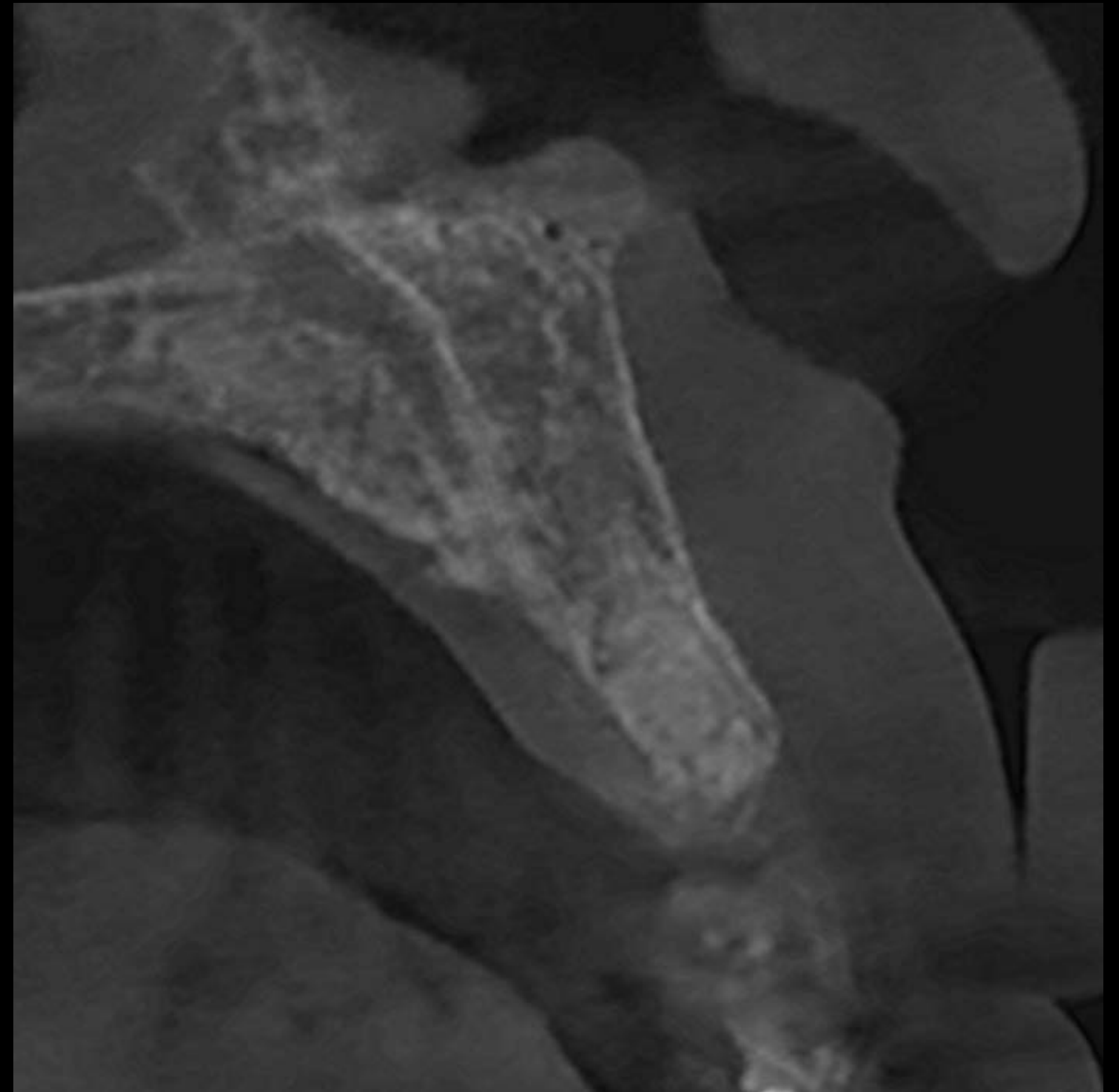
Healing : 3 months (2024-02-28)



Healing CT : 3 months (2024-02-28)



#11

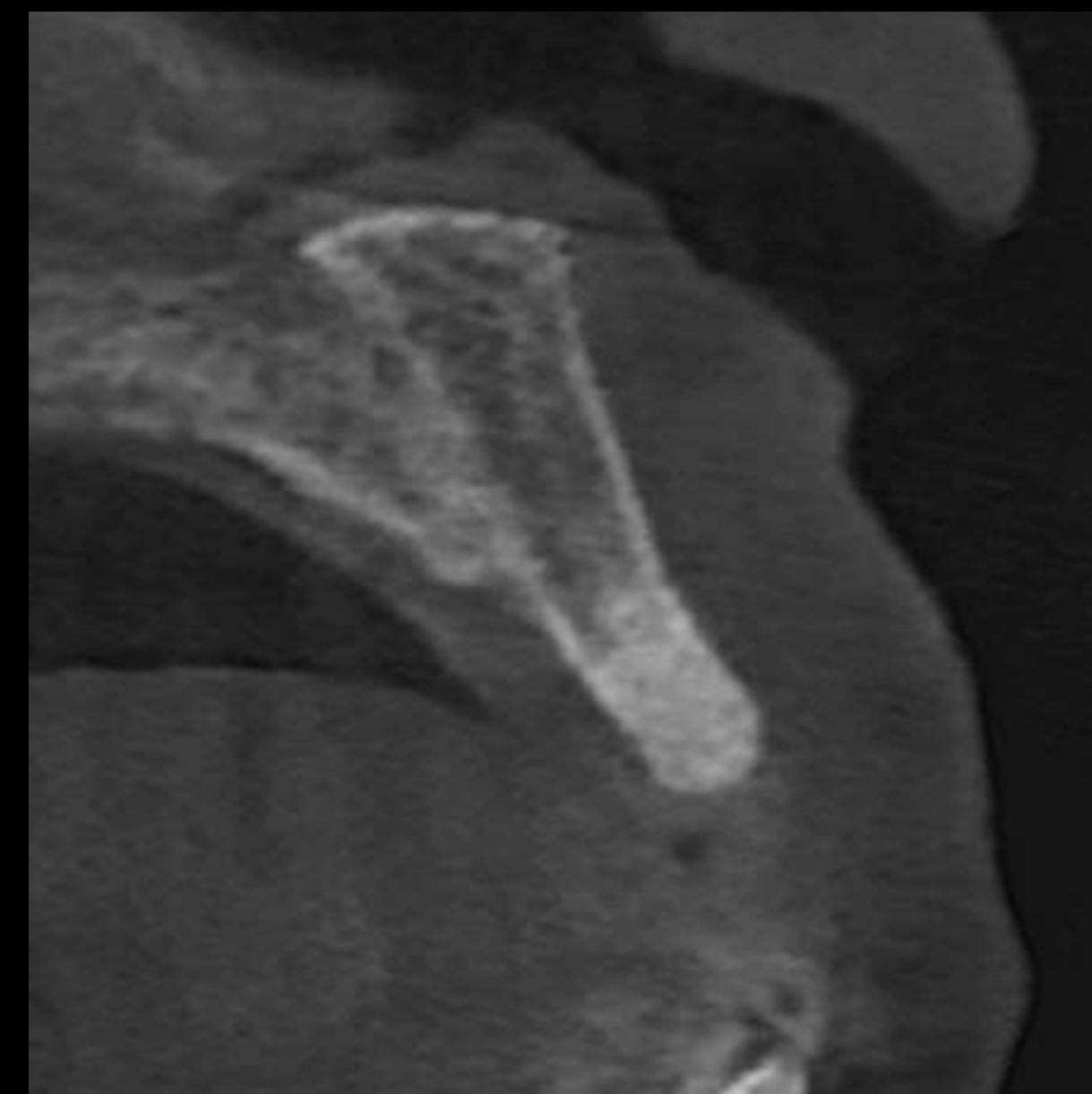


#21

Pre-op CT (2025-02-21)

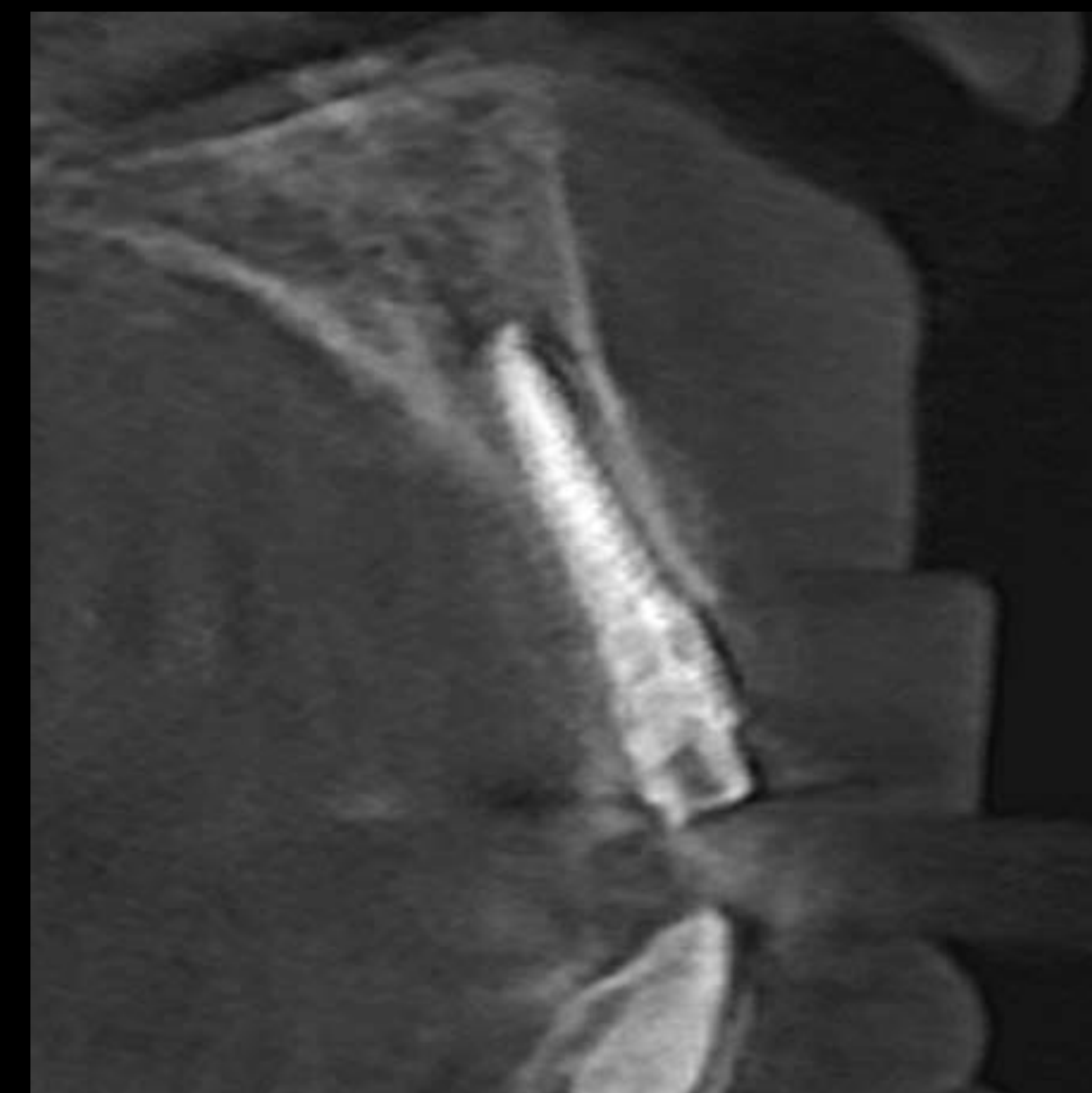
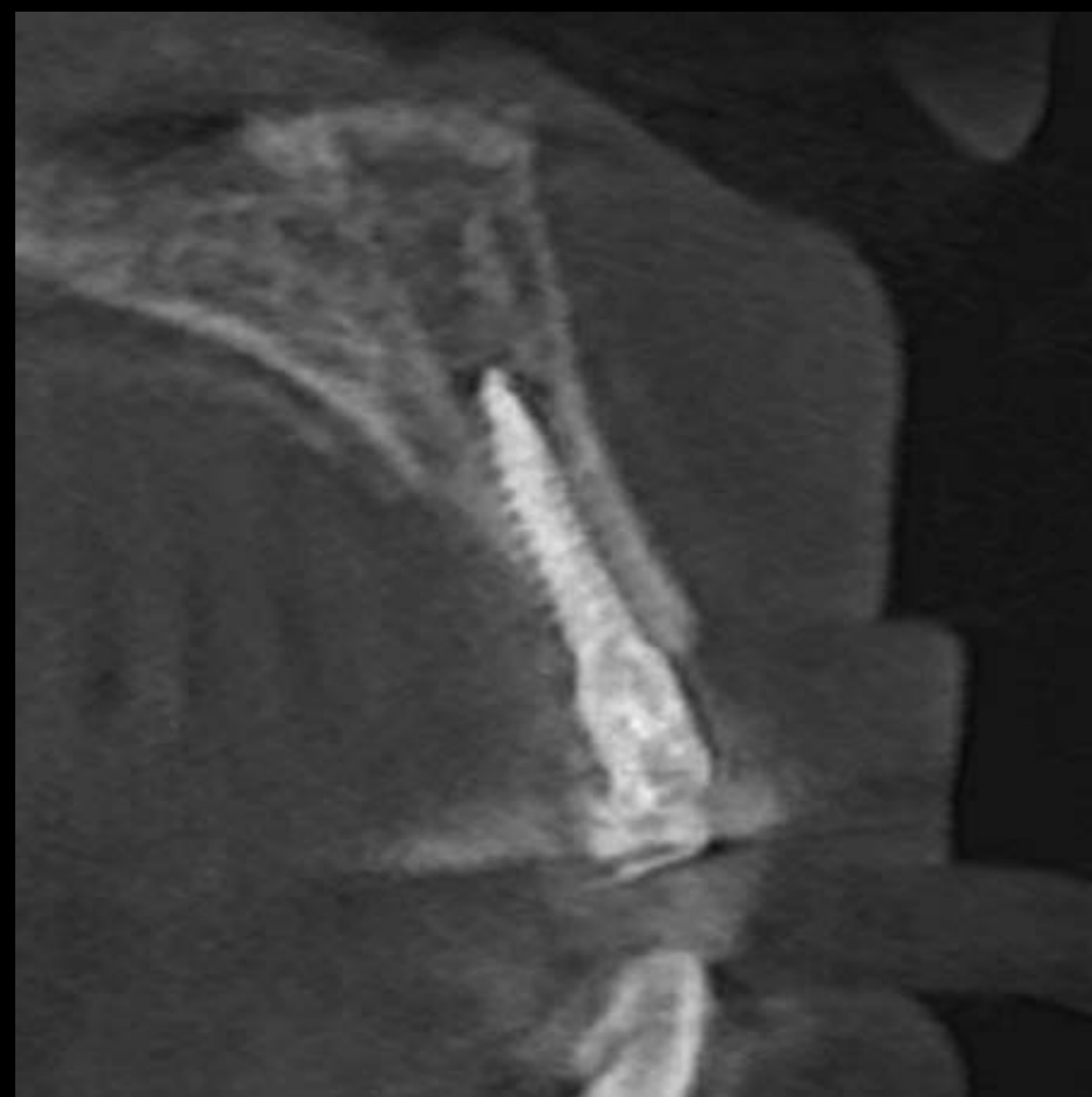


#11



#21

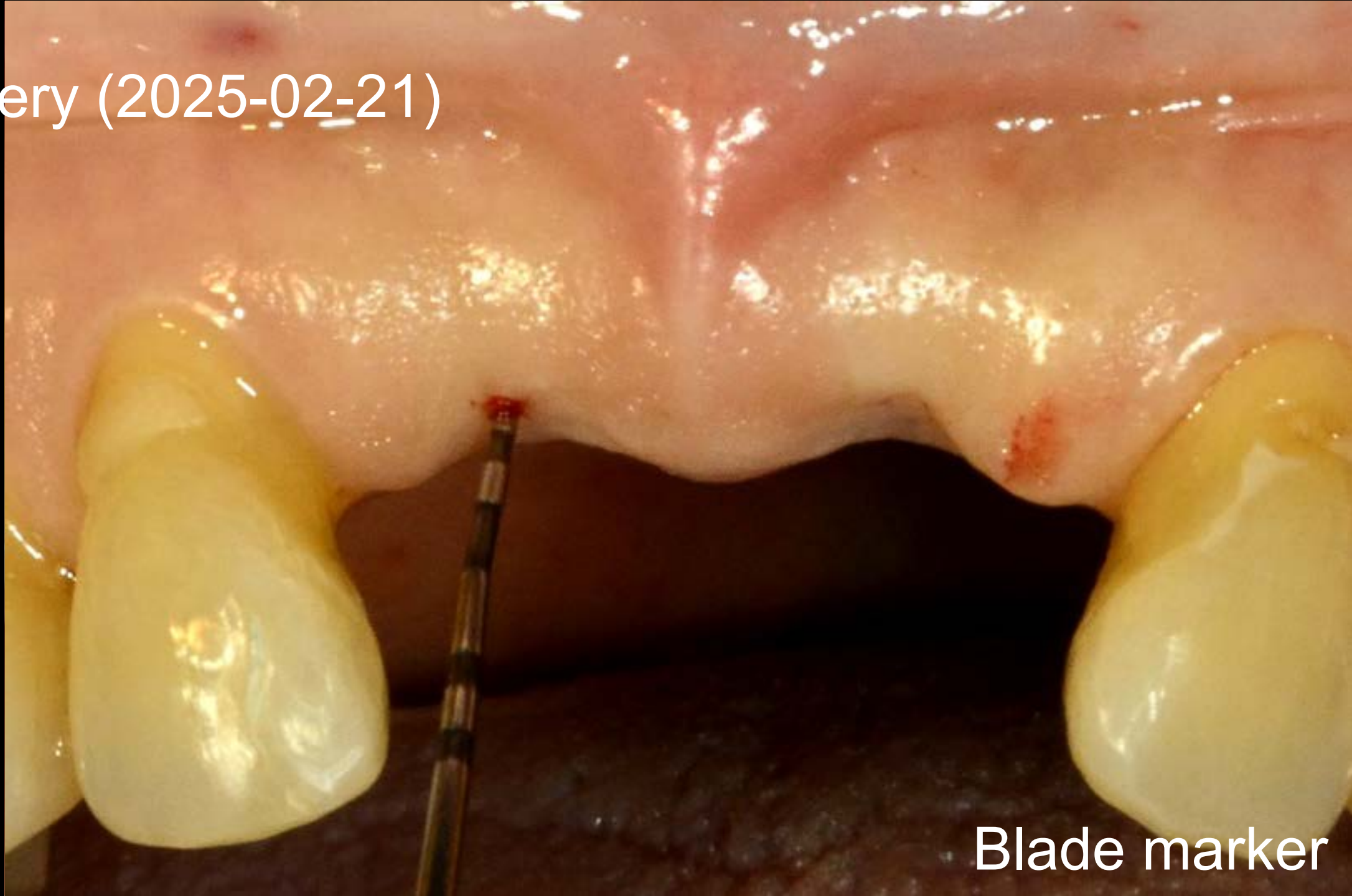
Post-op CT (2025-02-21)



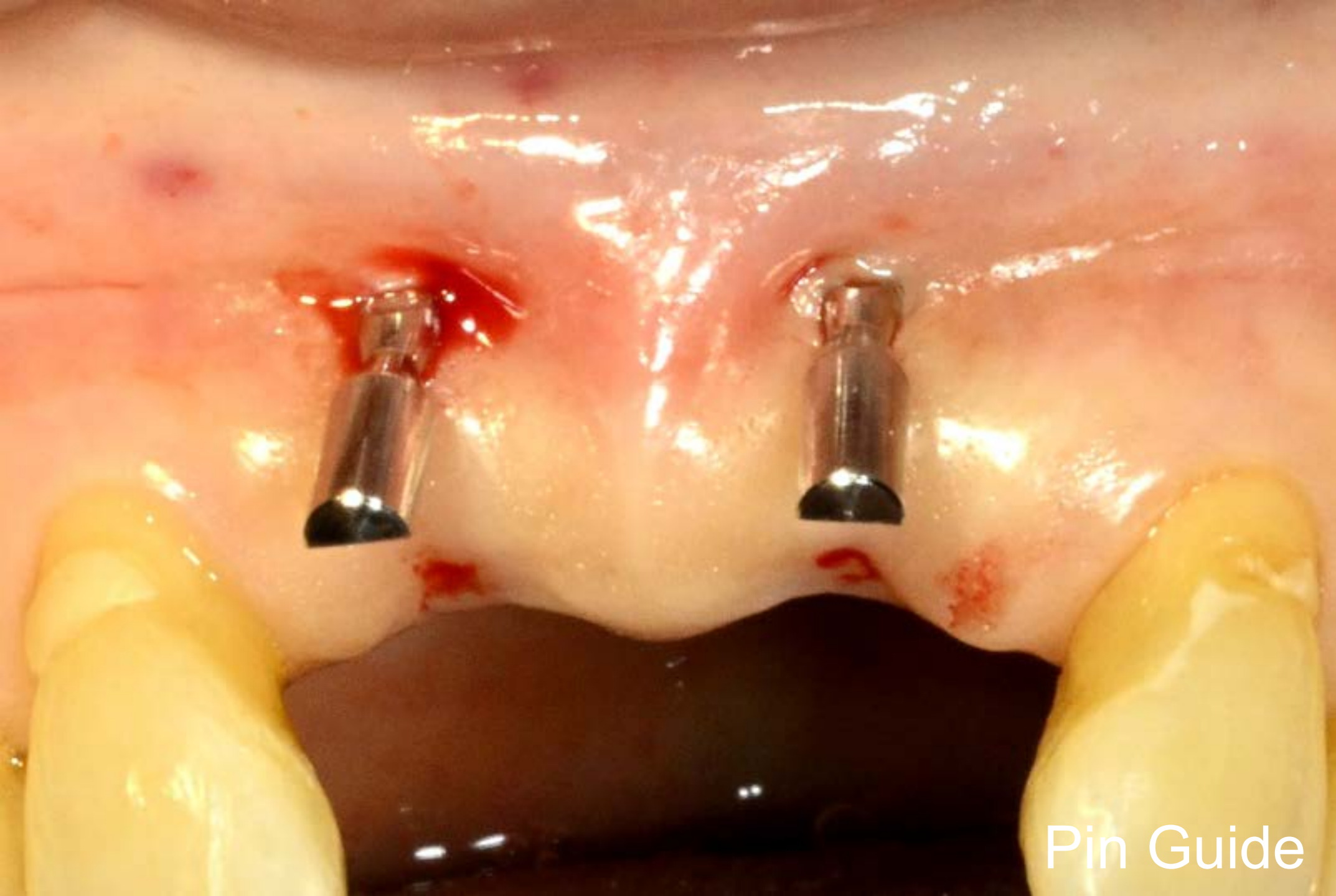
Pre-op (2025-02-21)



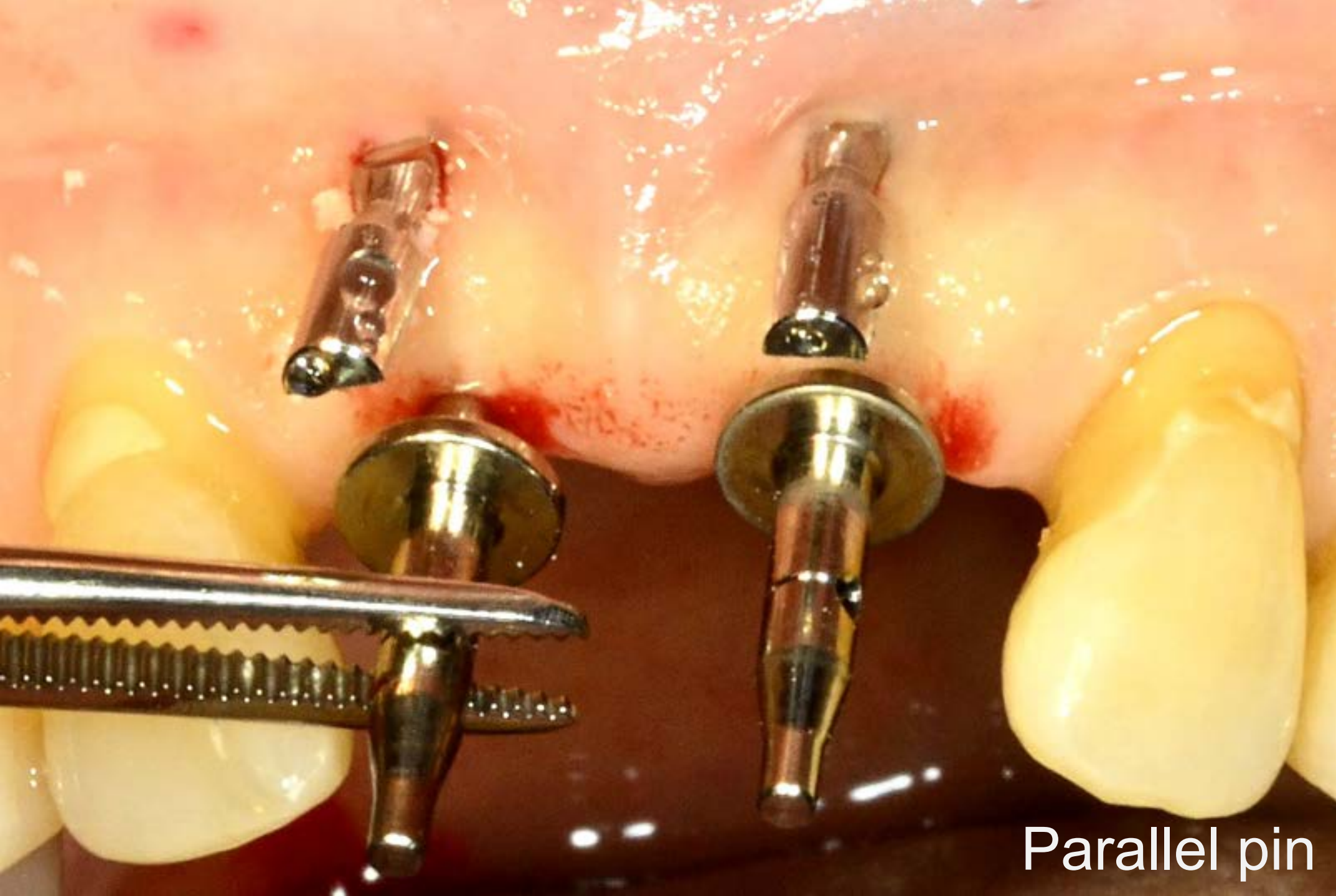
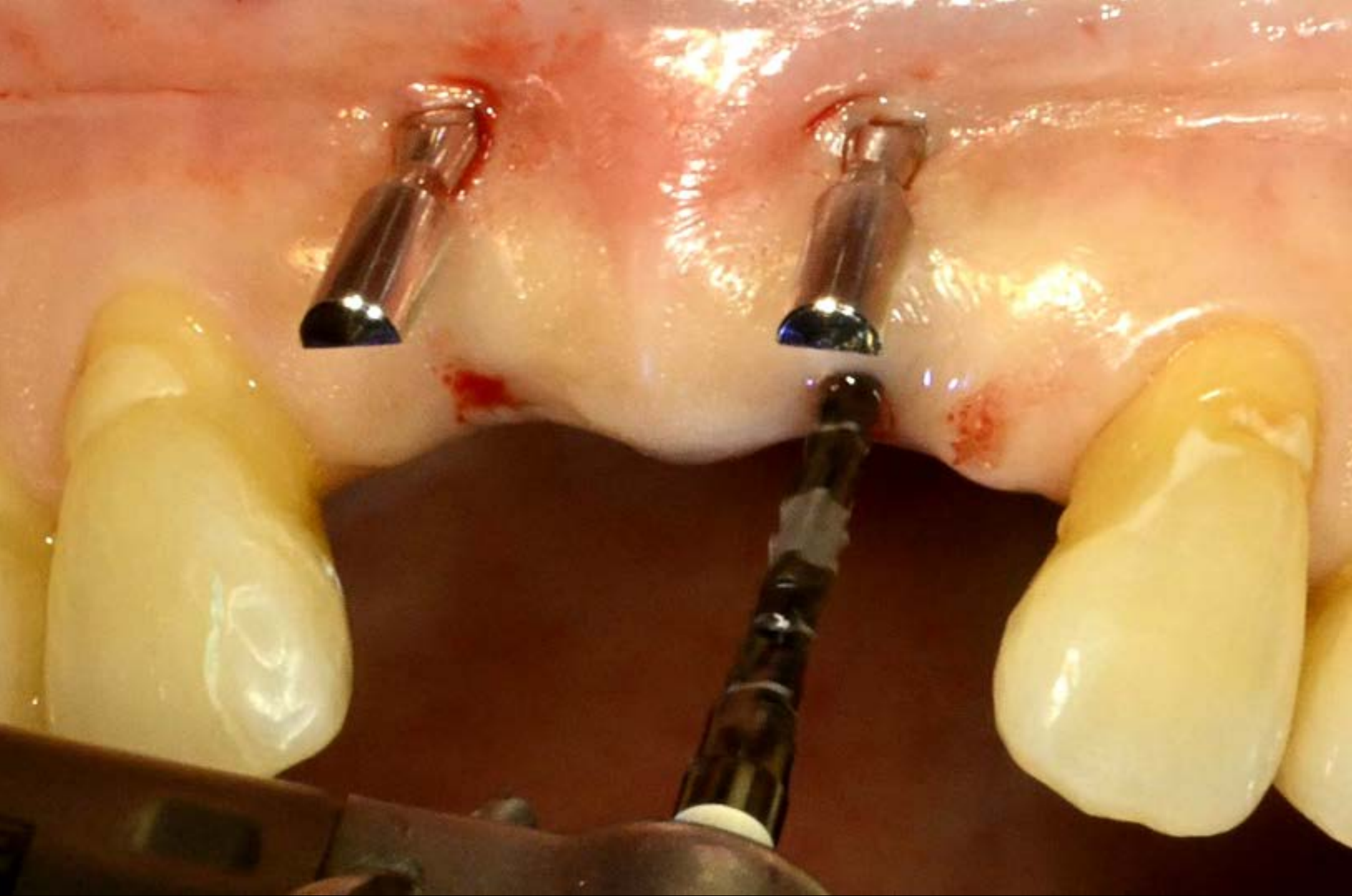
Surgery (2025-02-21)



Blade marker



Pin Guide



Parallel pin

ery (2025-02-21)

bright TL (Ø3.0 X 11.0)

Scan Comfort Cap

ery (2025-02-21)

bright TL (Ø3.0 X 11.0)

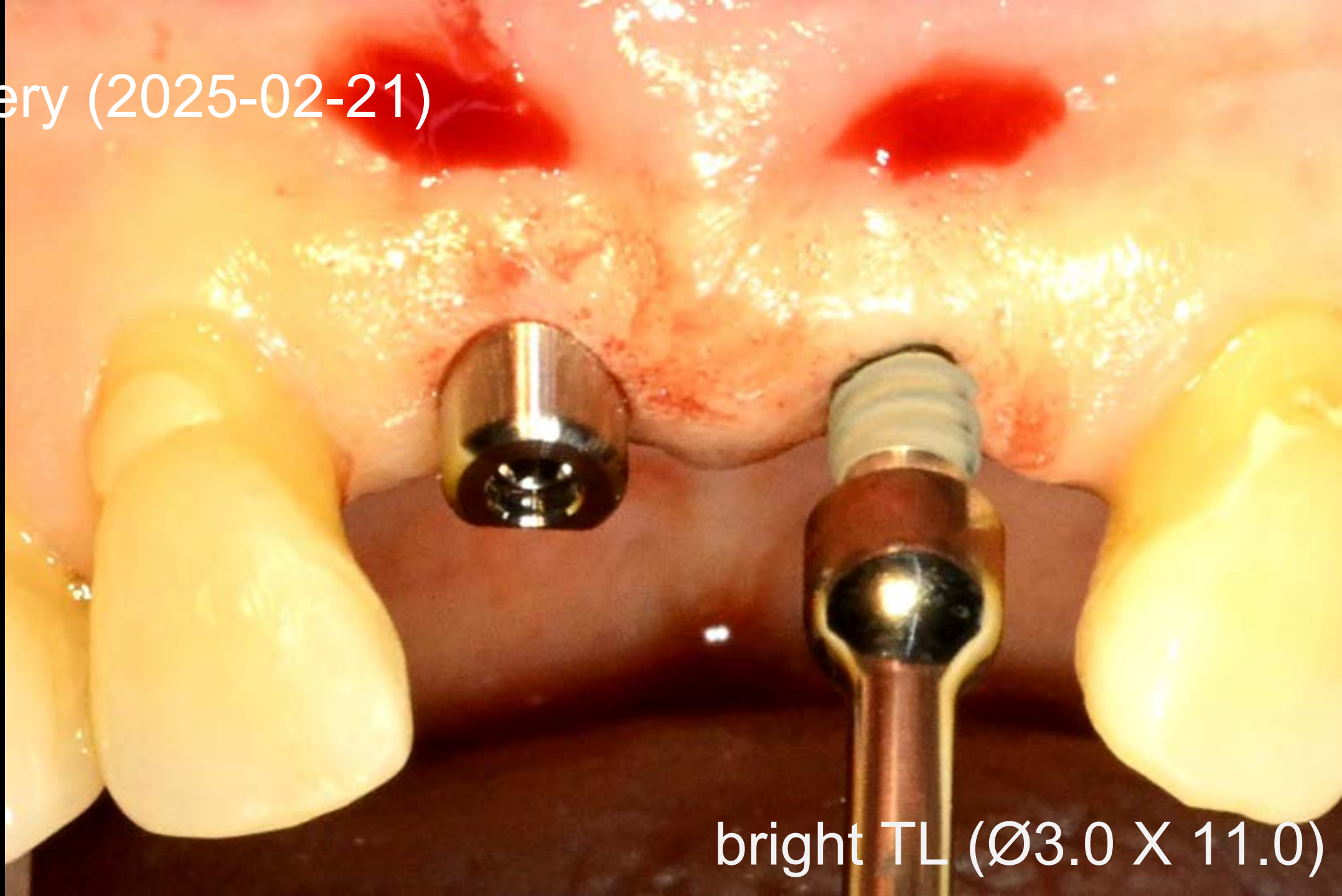
Scan Comfort Cap

ery (2025-02-21)

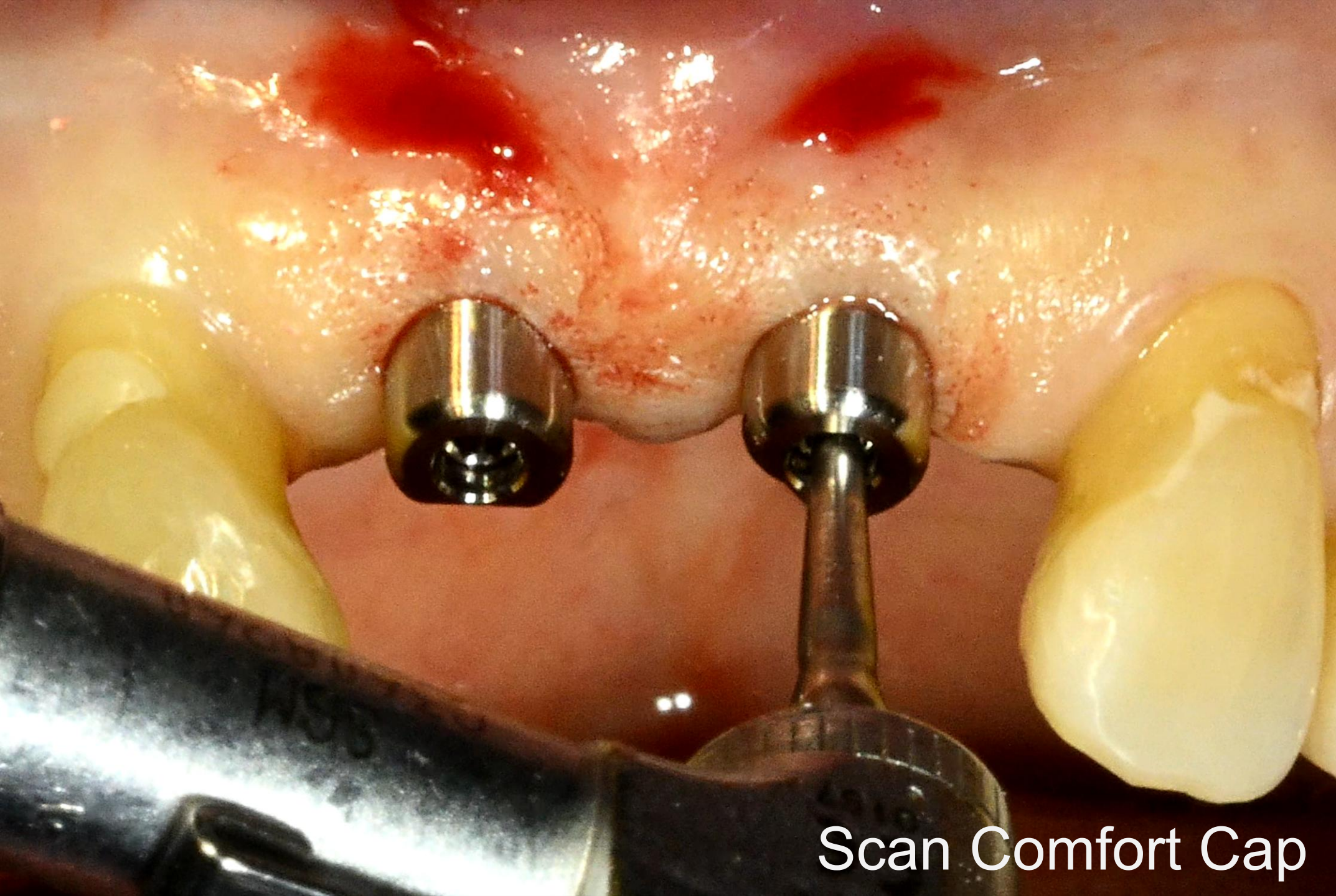
bright TL (Ø3.0 X 11.0)

Scan Comfort Cap

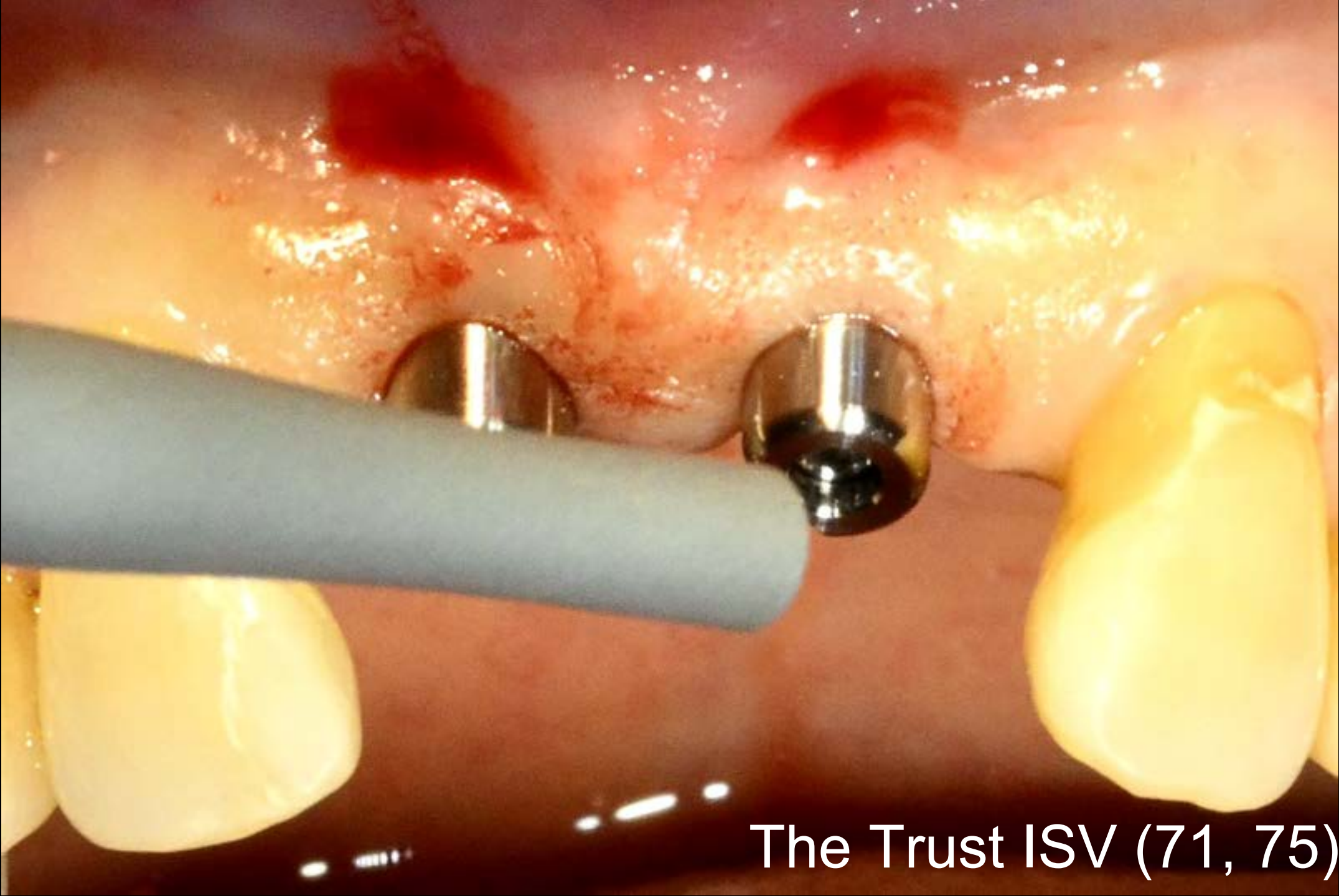
Surgery (2025-02-21)



bright TL (Ø3.0 X 11.0)



Scan Comfort Cap

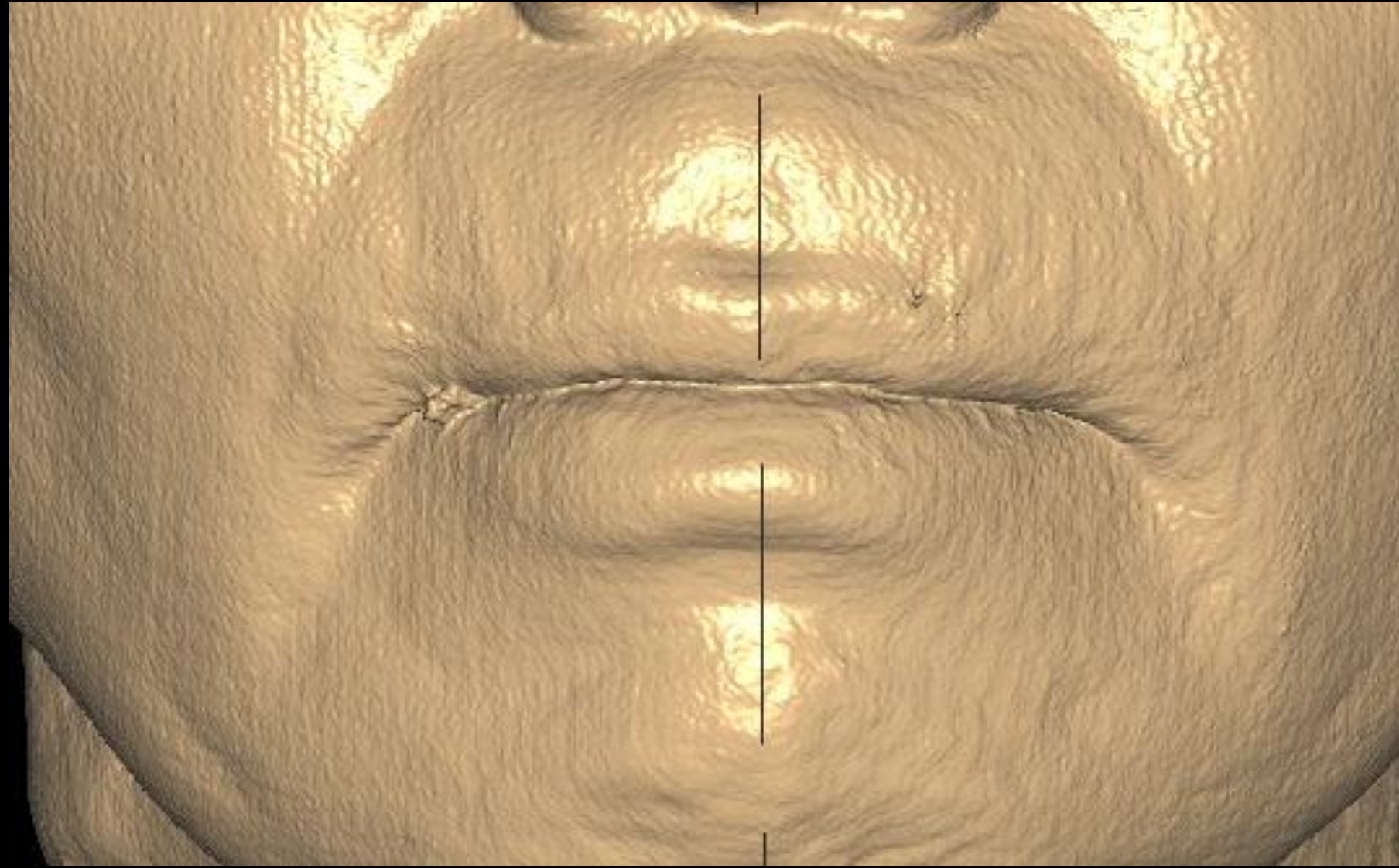


The Trust ISV (71, 75)

Final prosthesis (2025-04-25)



Final prosthesis (2025-04-25)



**Shining 3d Aoral Elite scan data use to model-less with
CT data (Ai Occlusal Plane)**

Follow up : 1 month (2025-05-23)



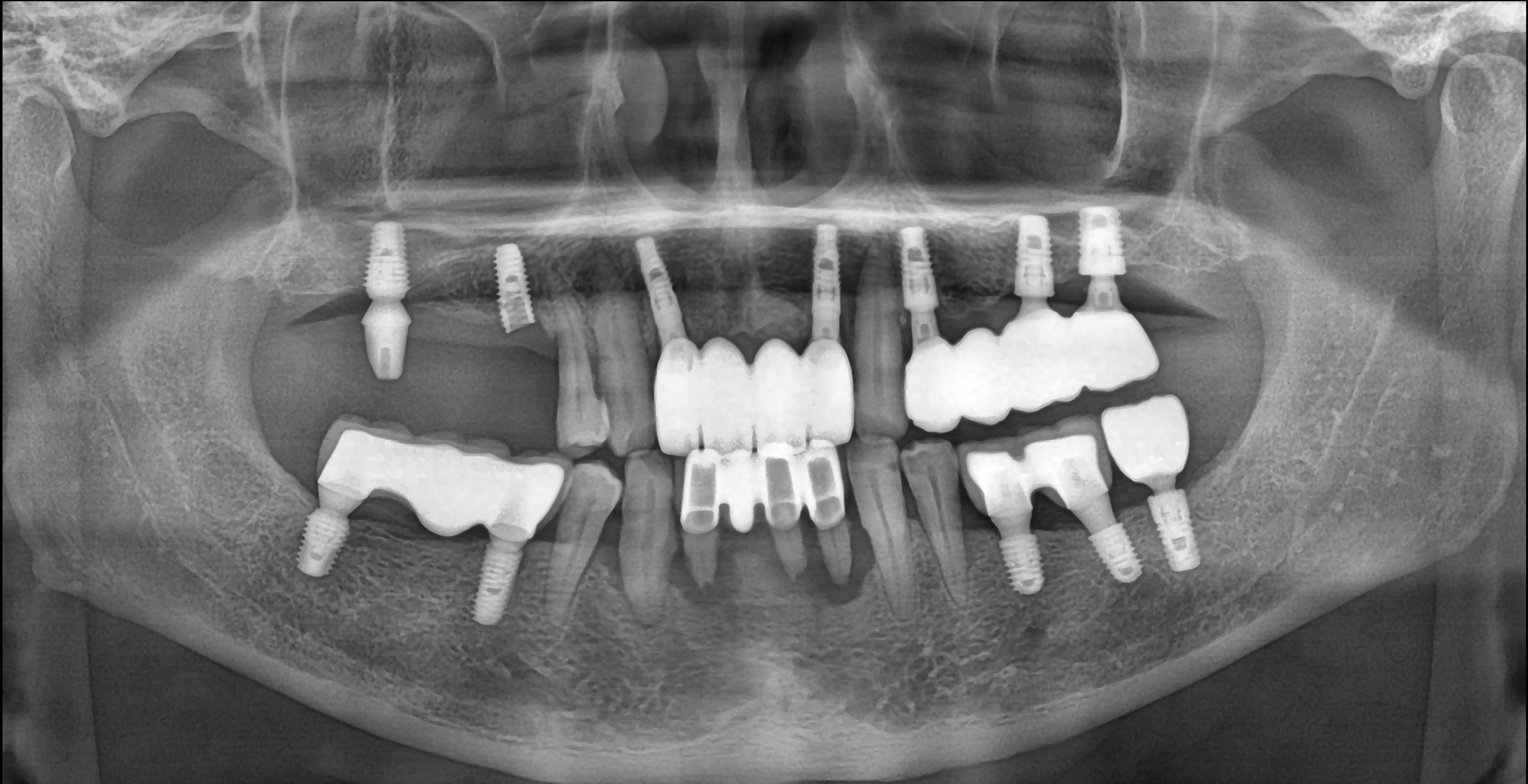


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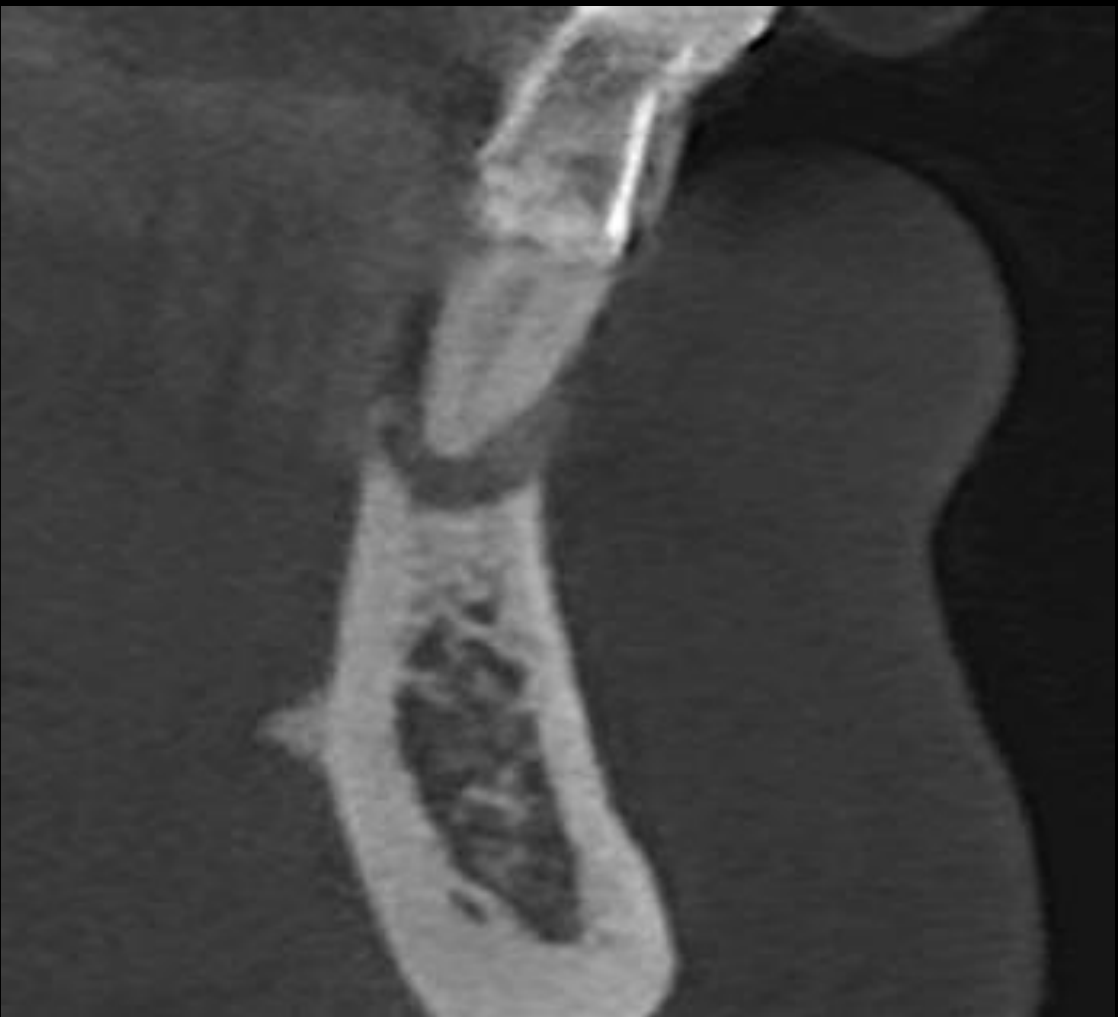
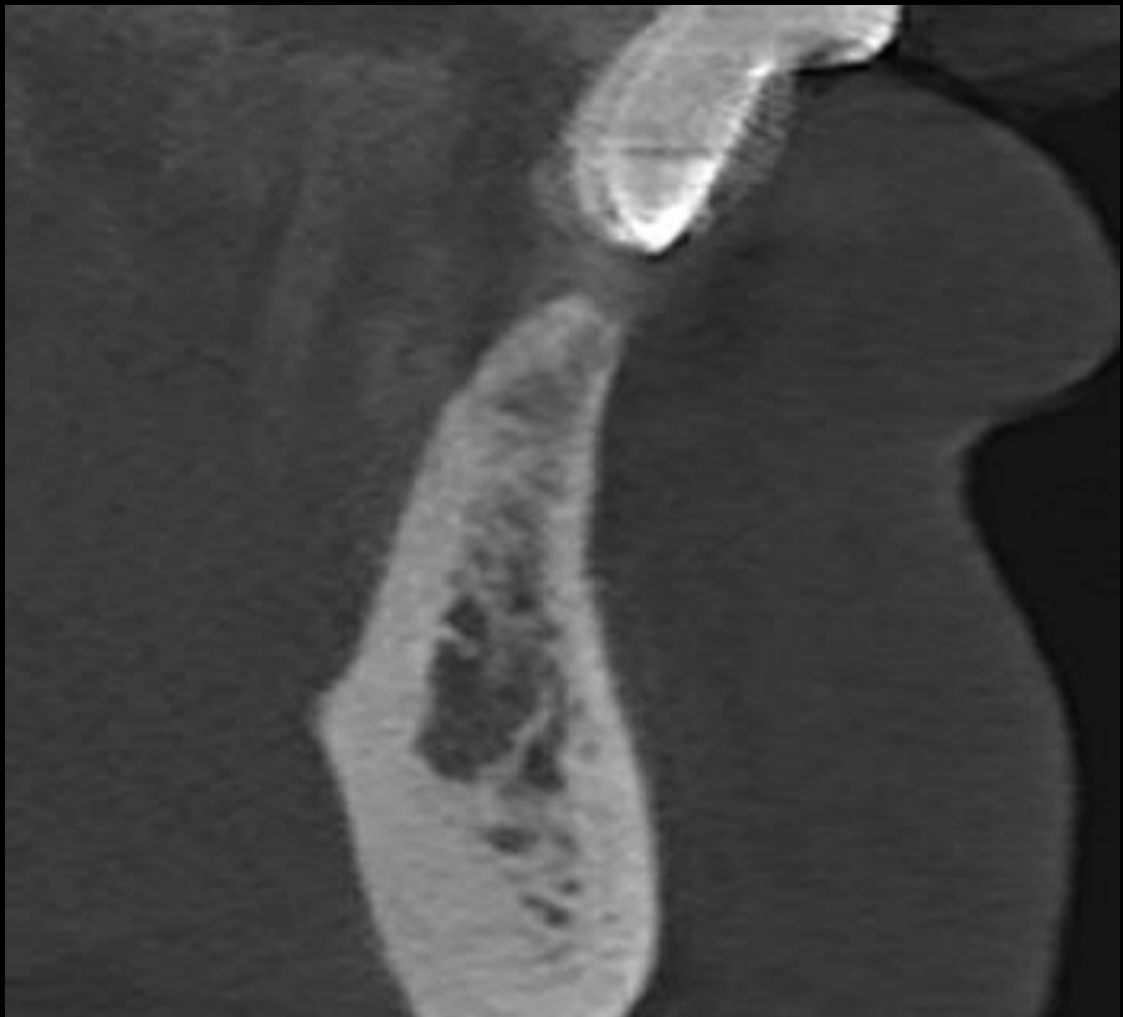


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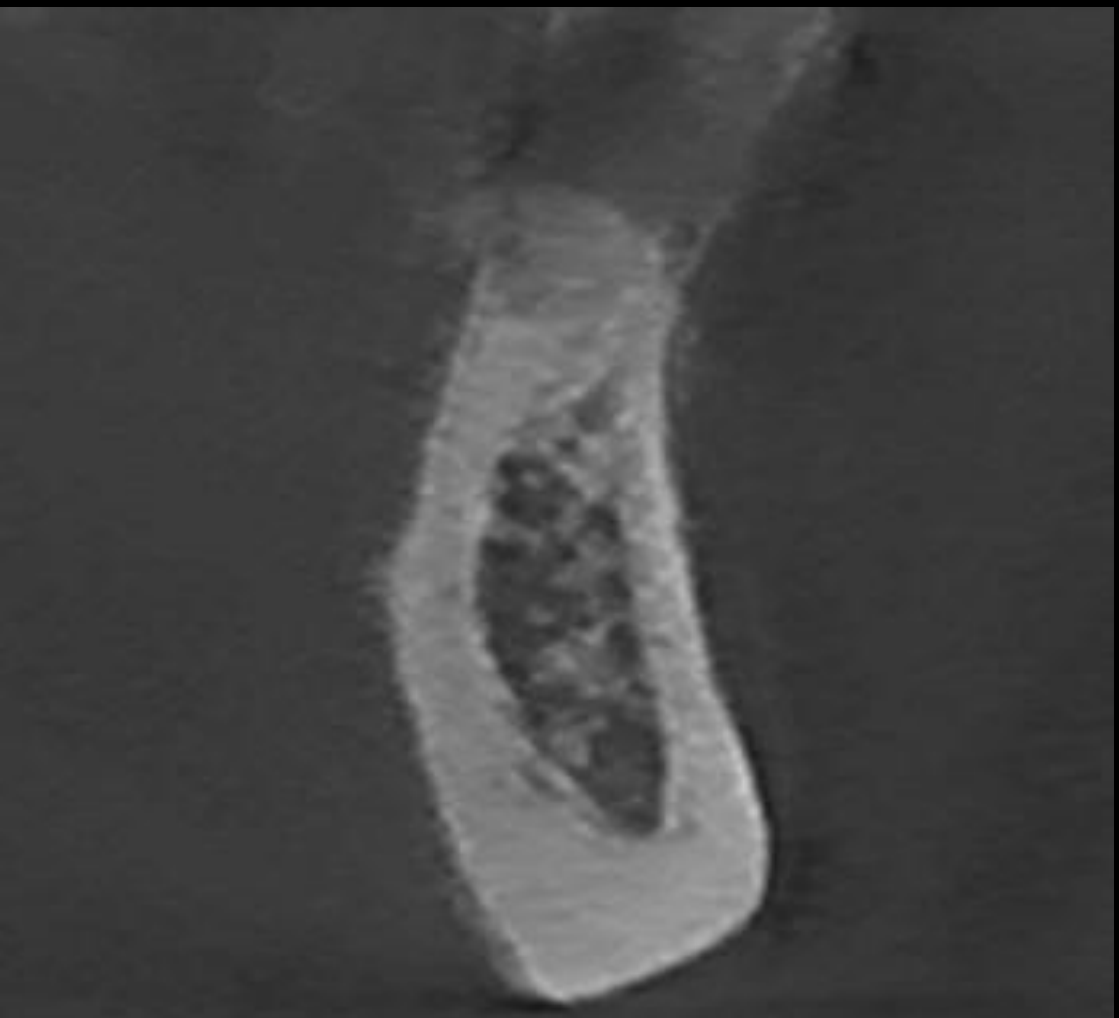
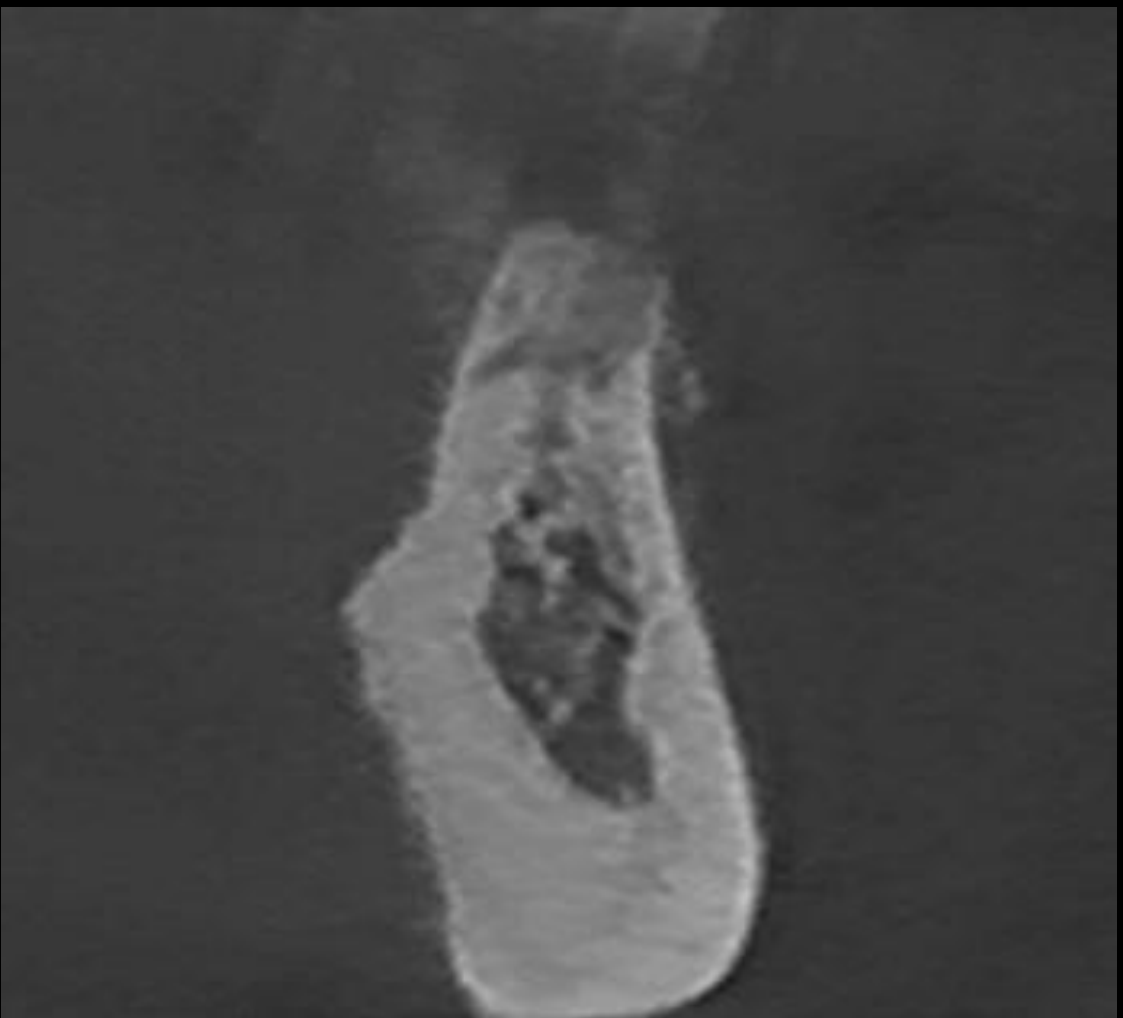
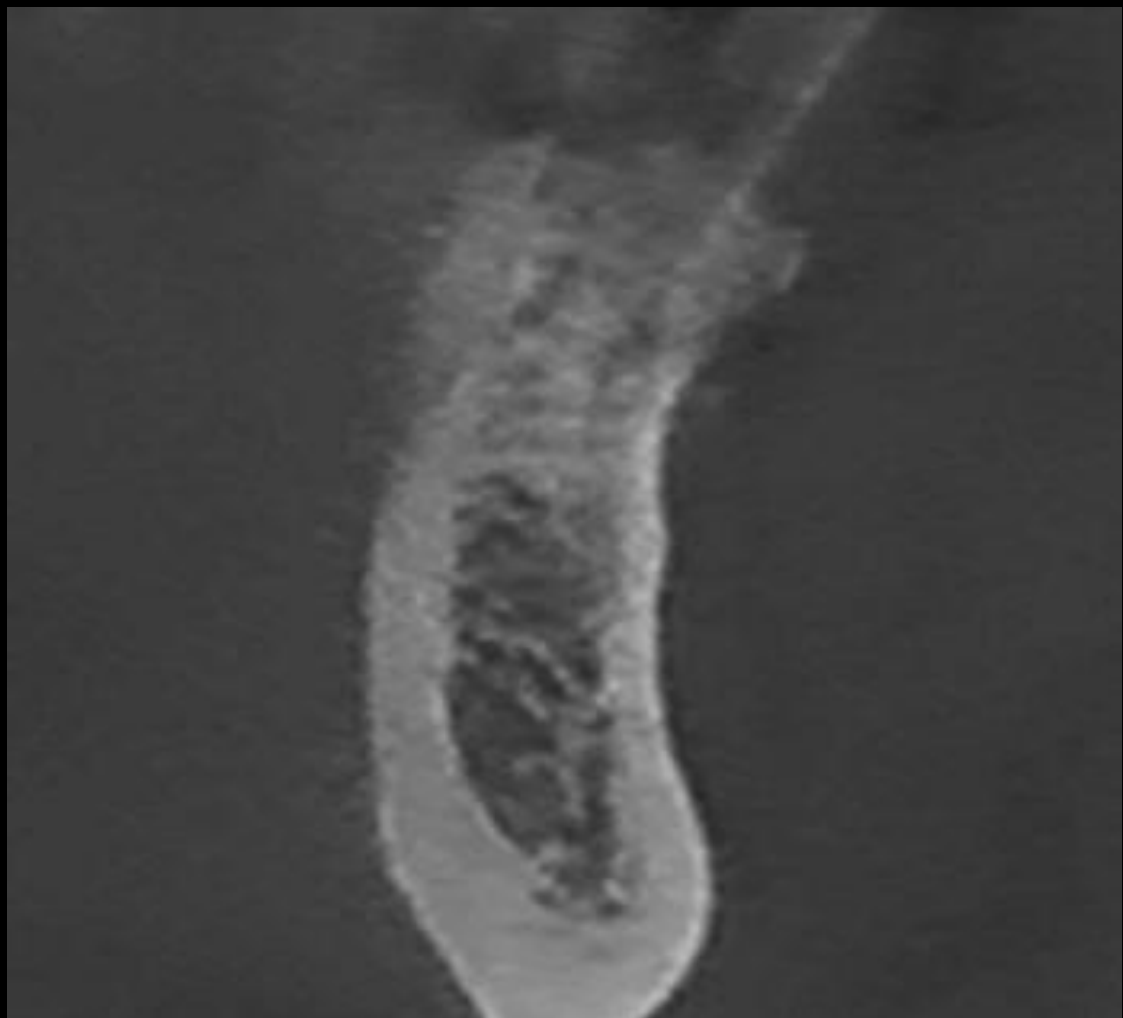
Pre-op (2025-04-24)



Pre-op CT (2025-04-24)



Post-op CT (2025-04-24)



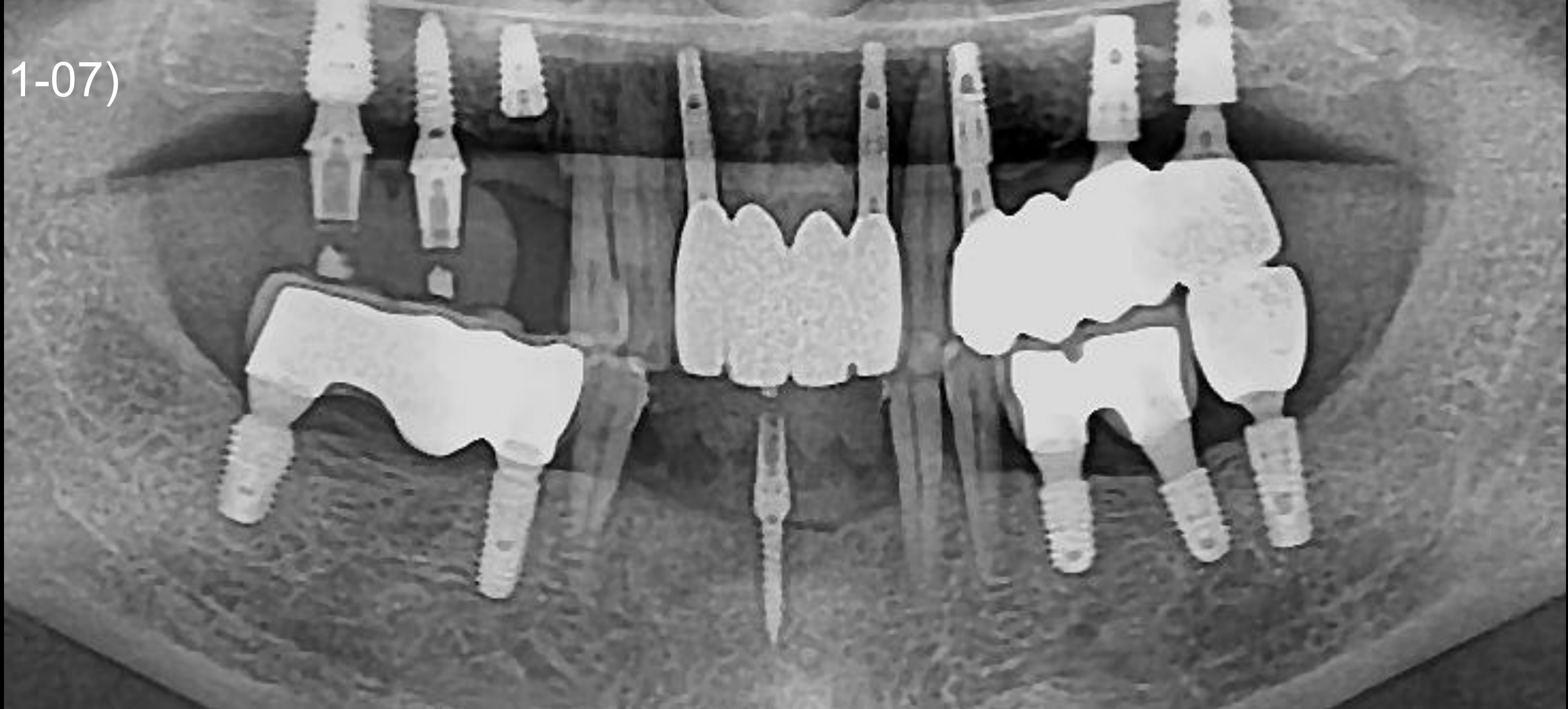
#42

#41

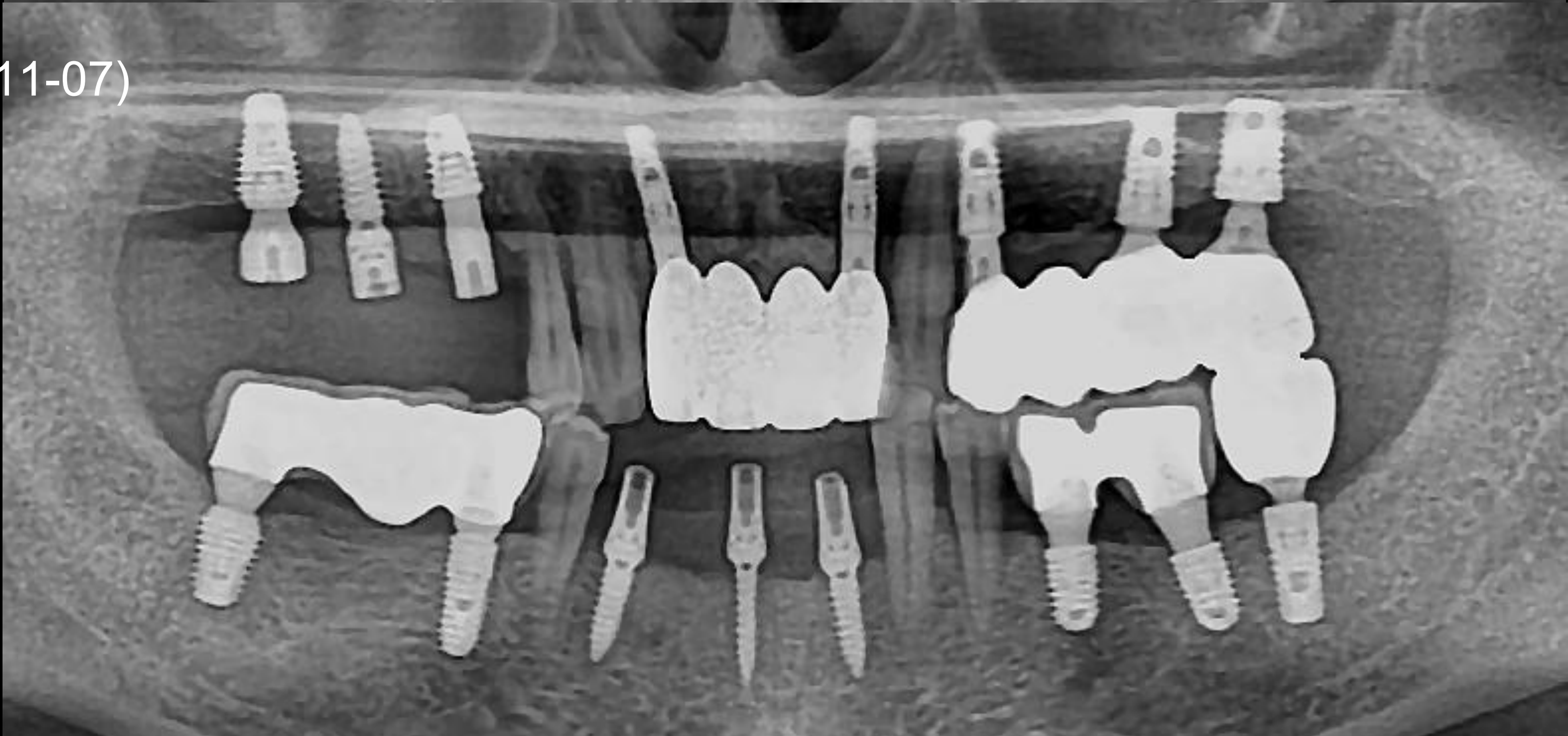
#31

#32

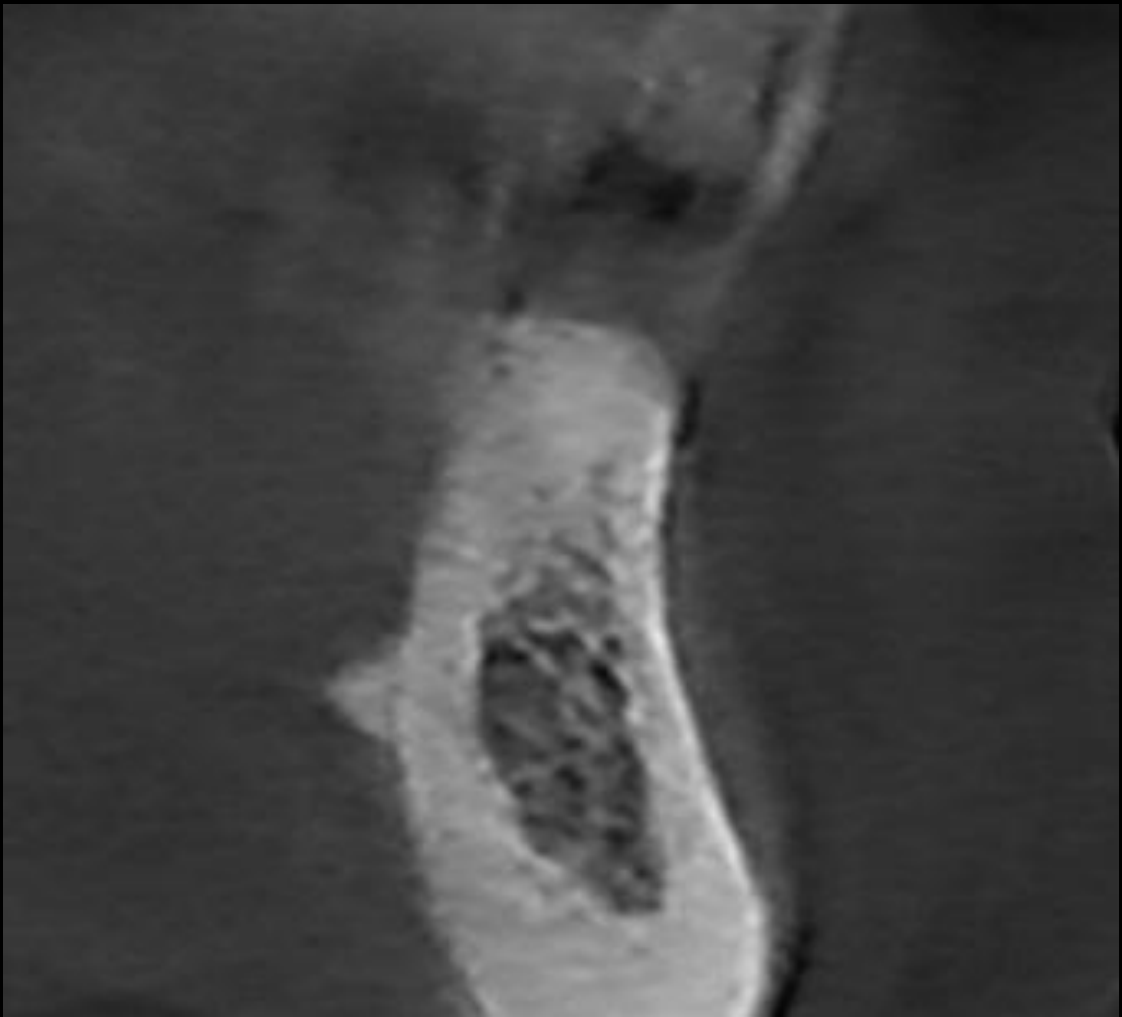
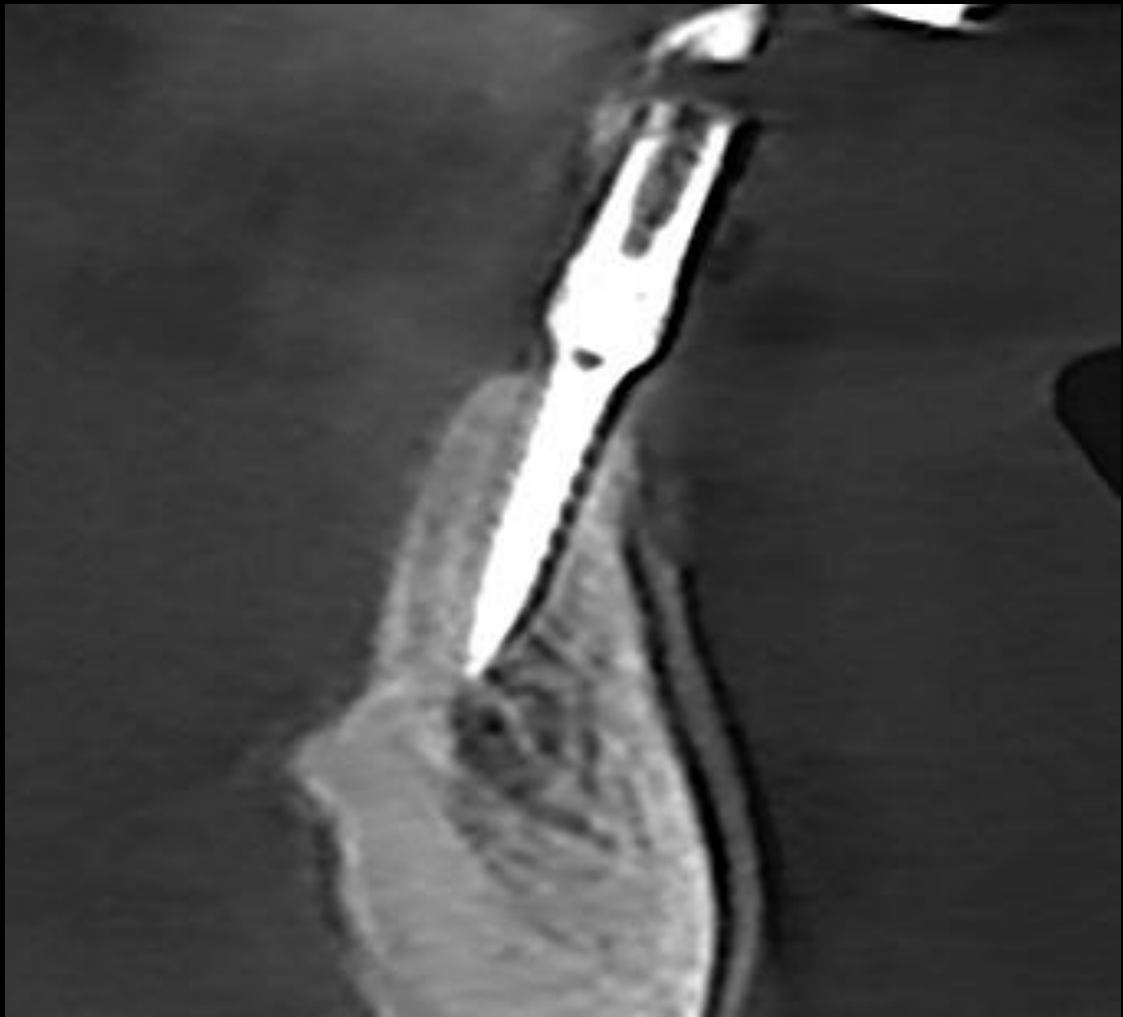
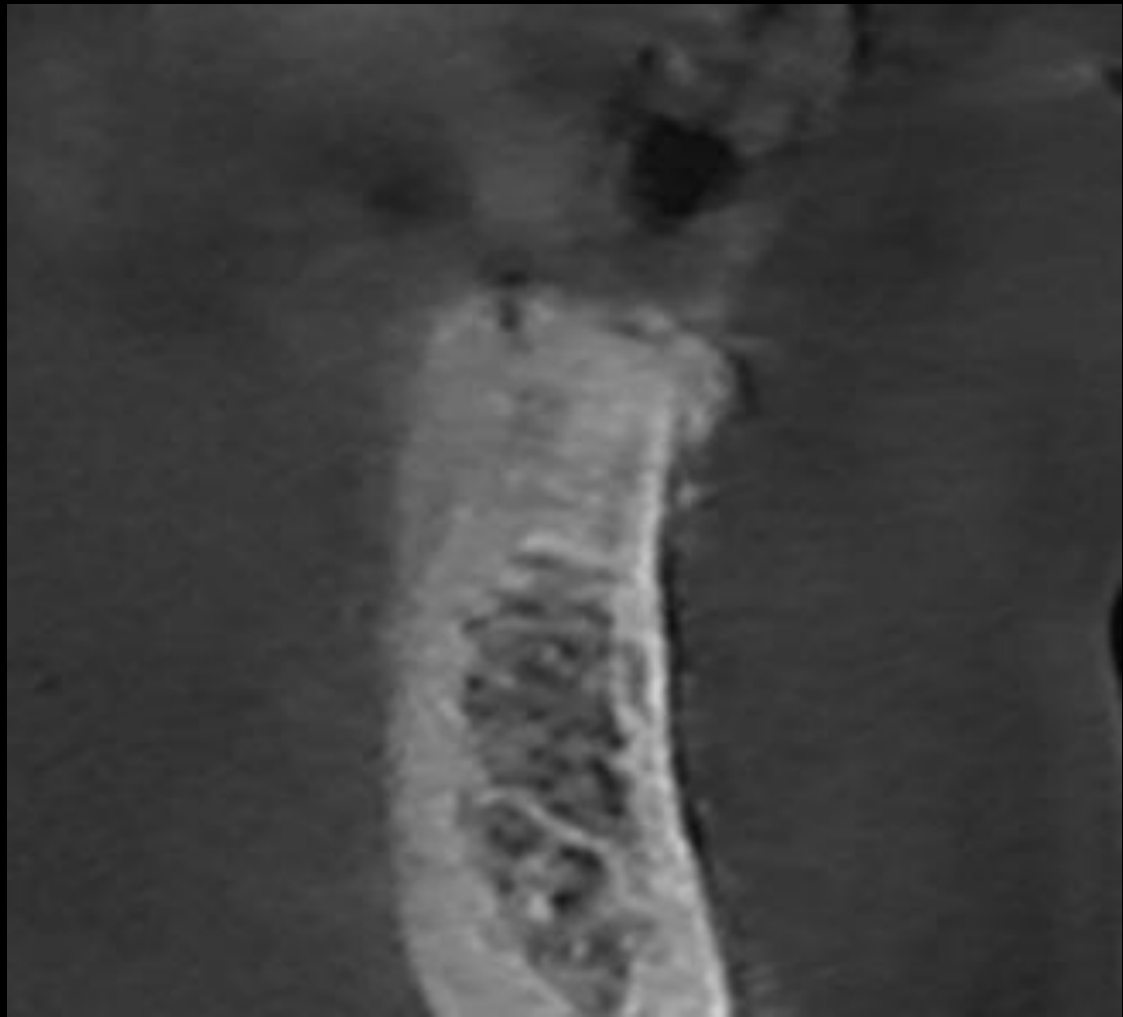
Pre-op : I.S (2025-11-07)



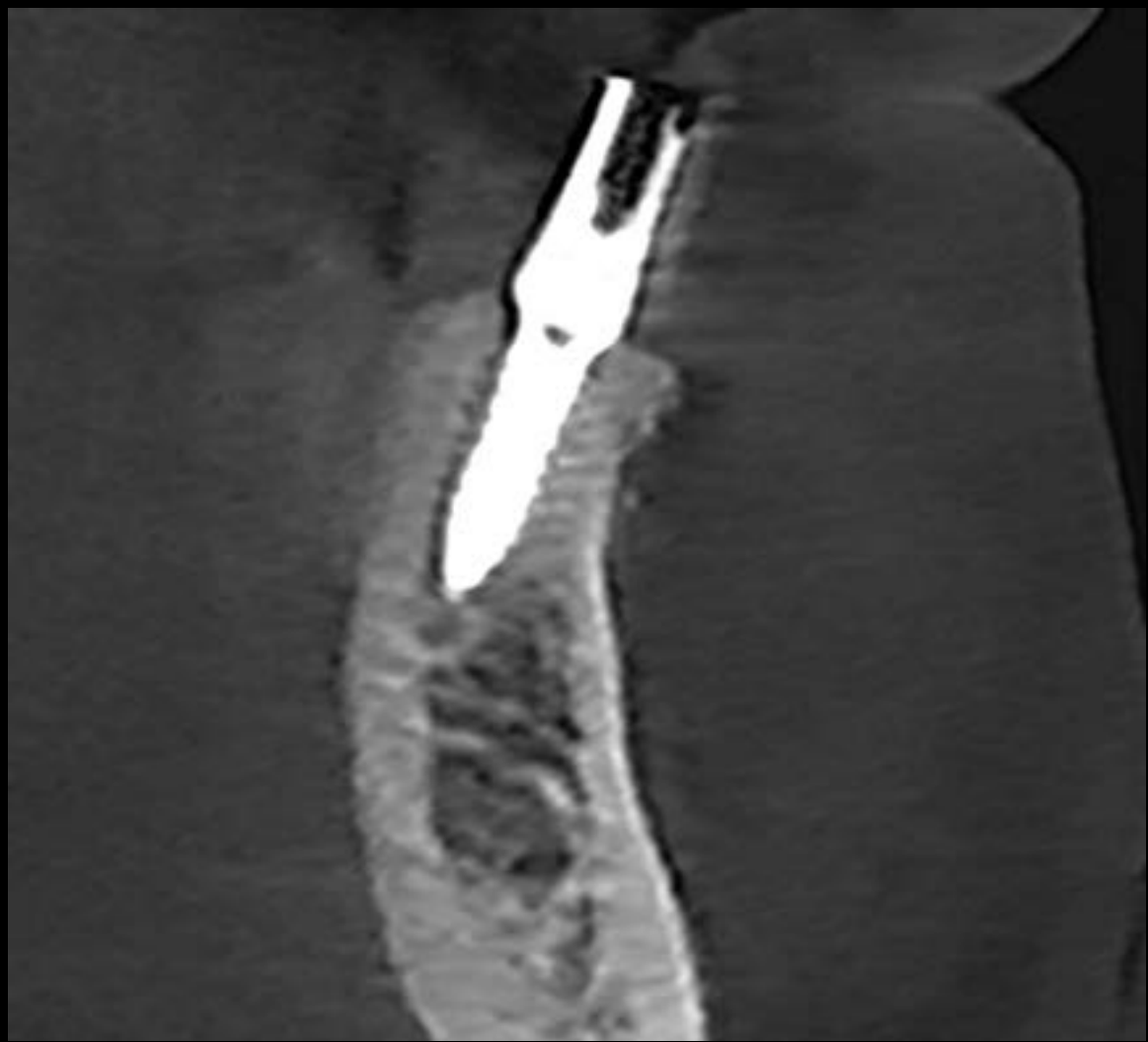
Post-op : I.S (2025-11-07)



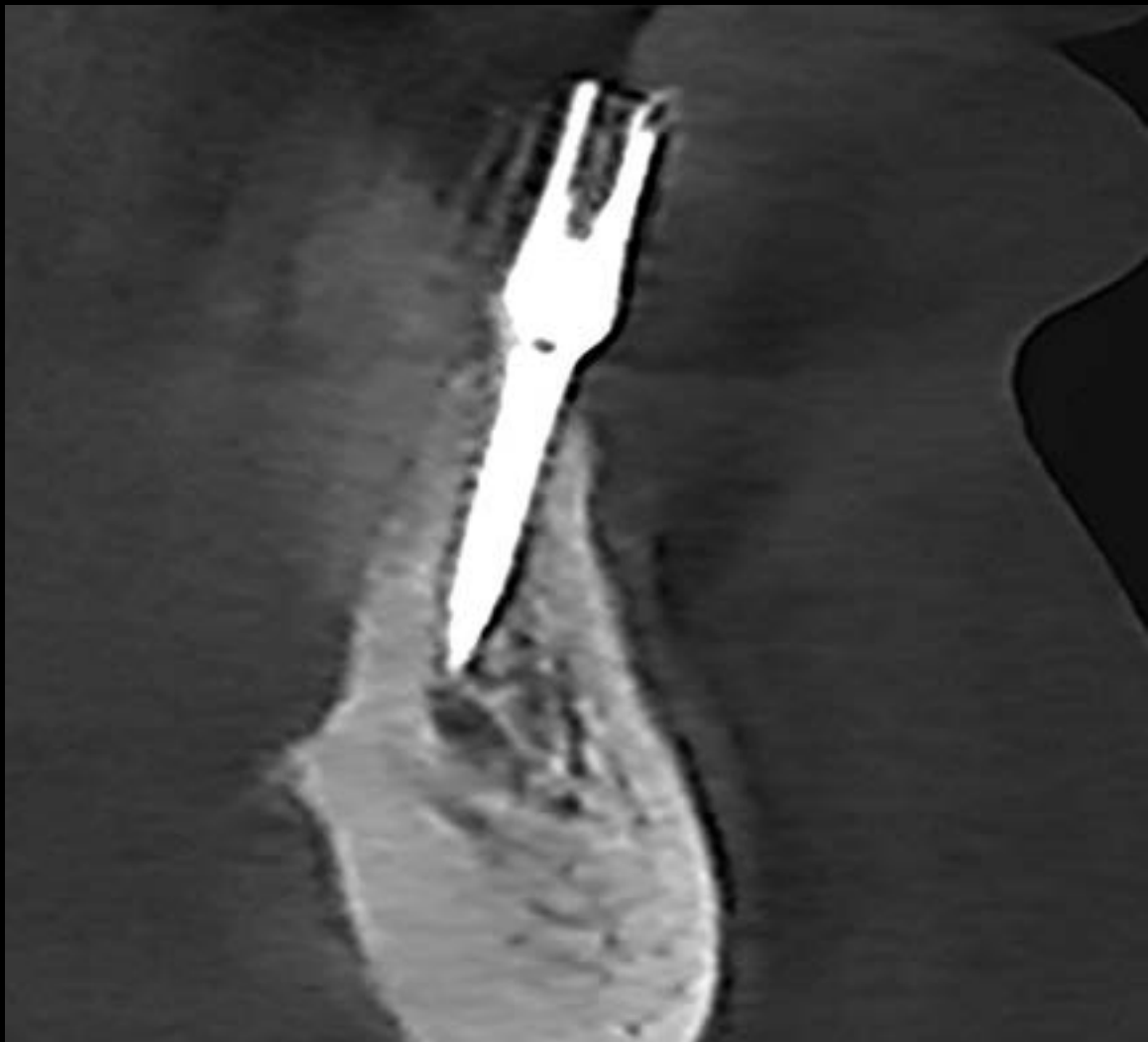
Pre-op CT : I.S (2025-11-07)



Post-op CT : I.S (2025-11-07)



#43



#41



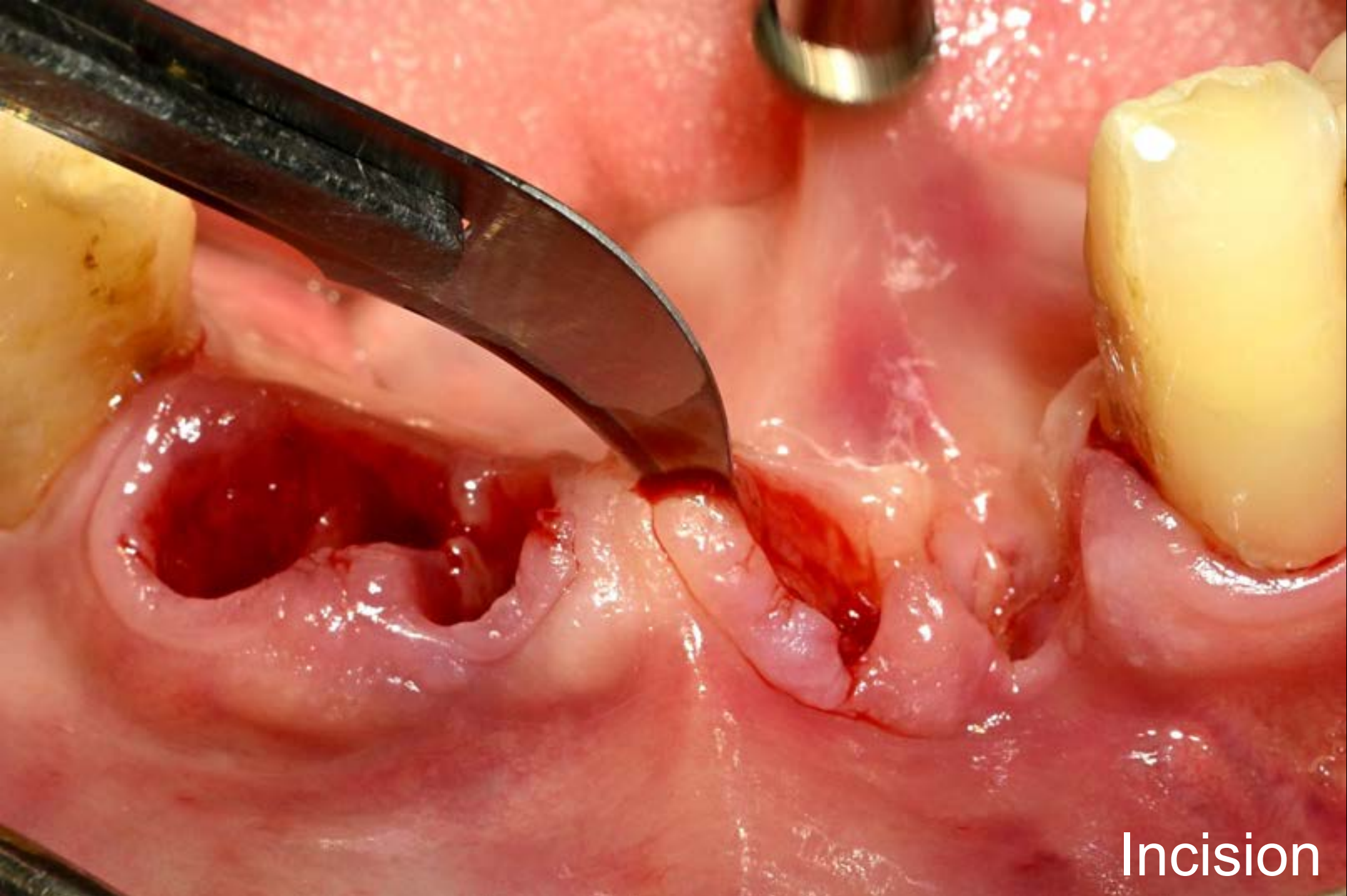
#32

Pre-op (2025-04-24)

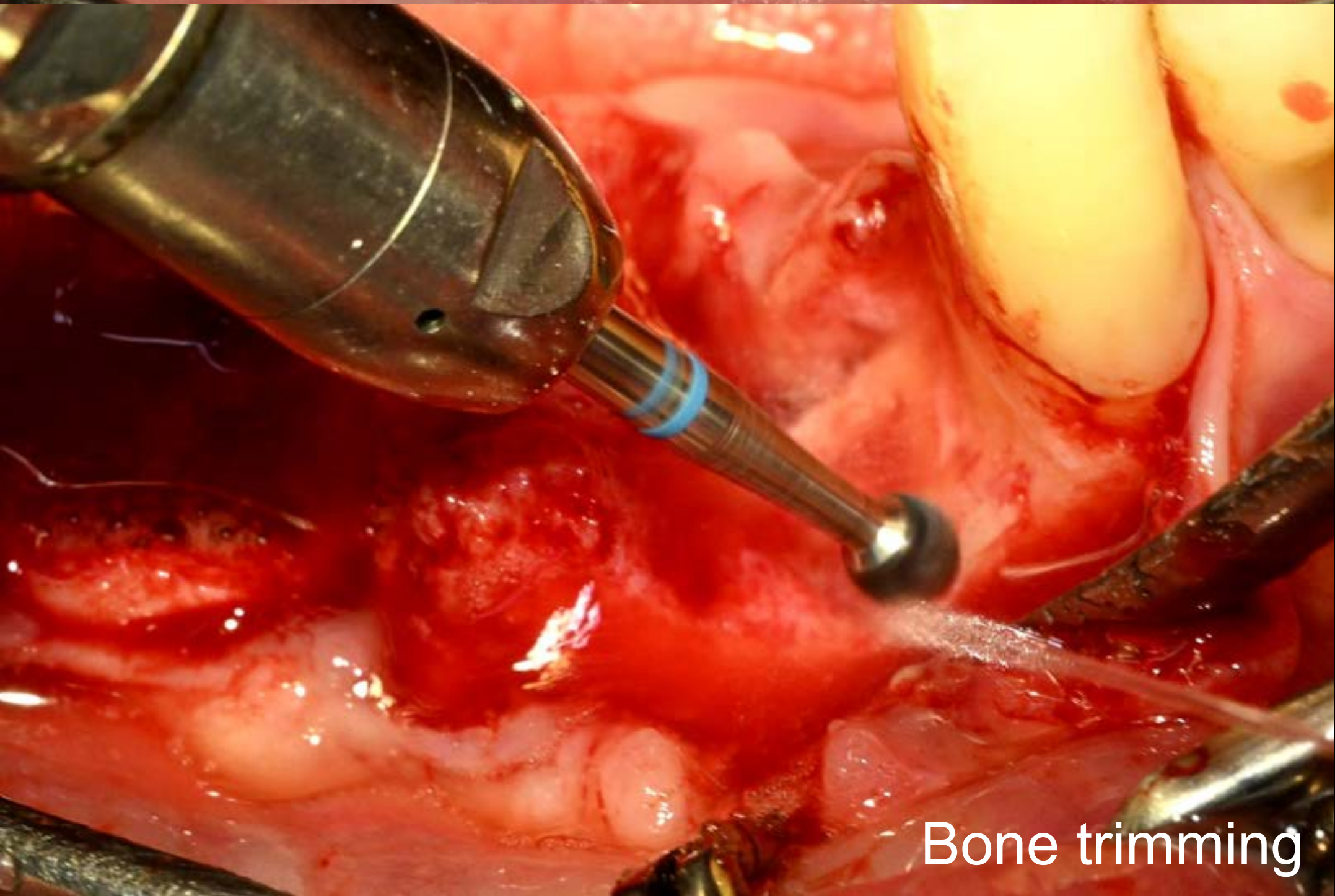
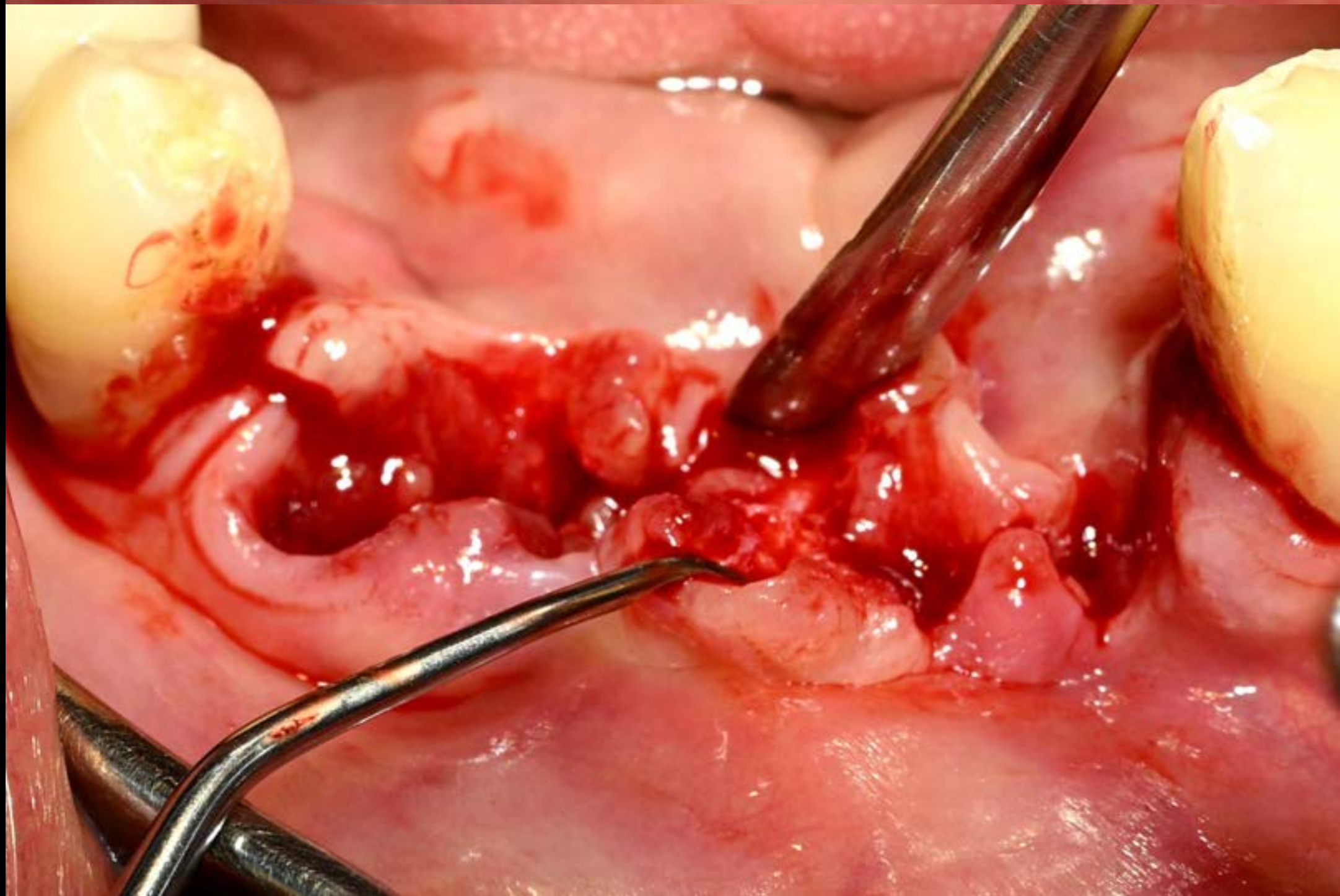




Extraction

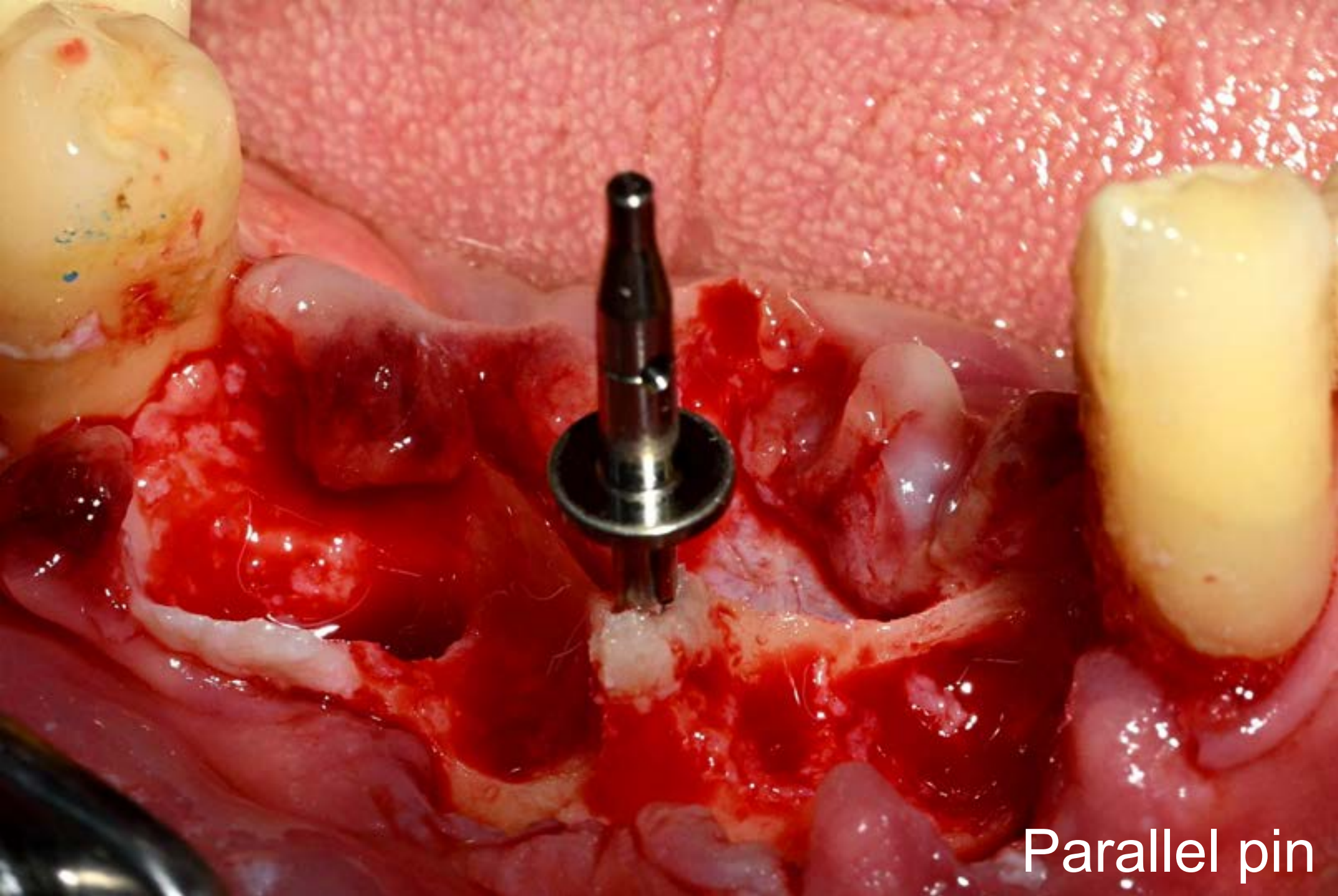
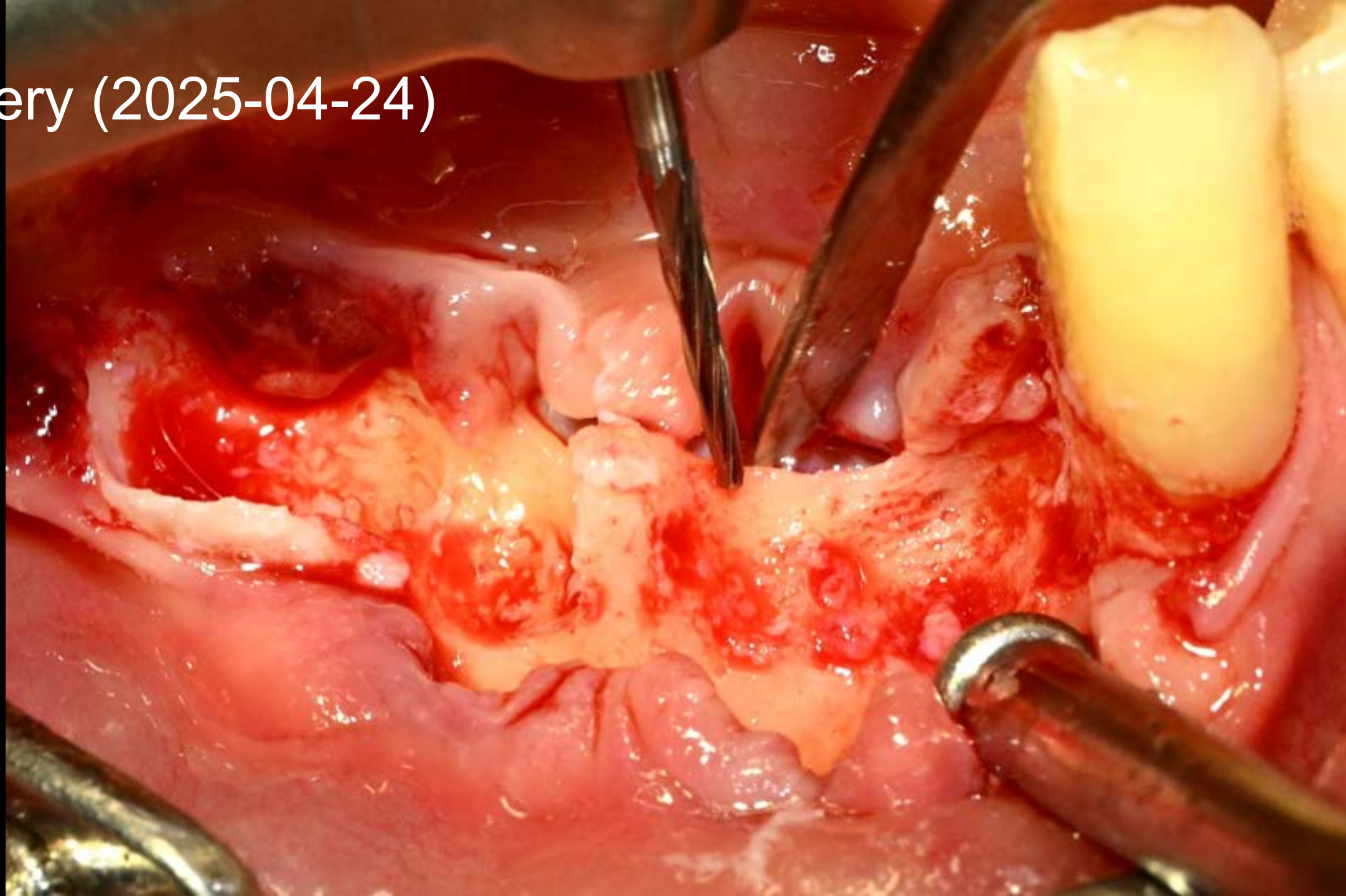


Incision

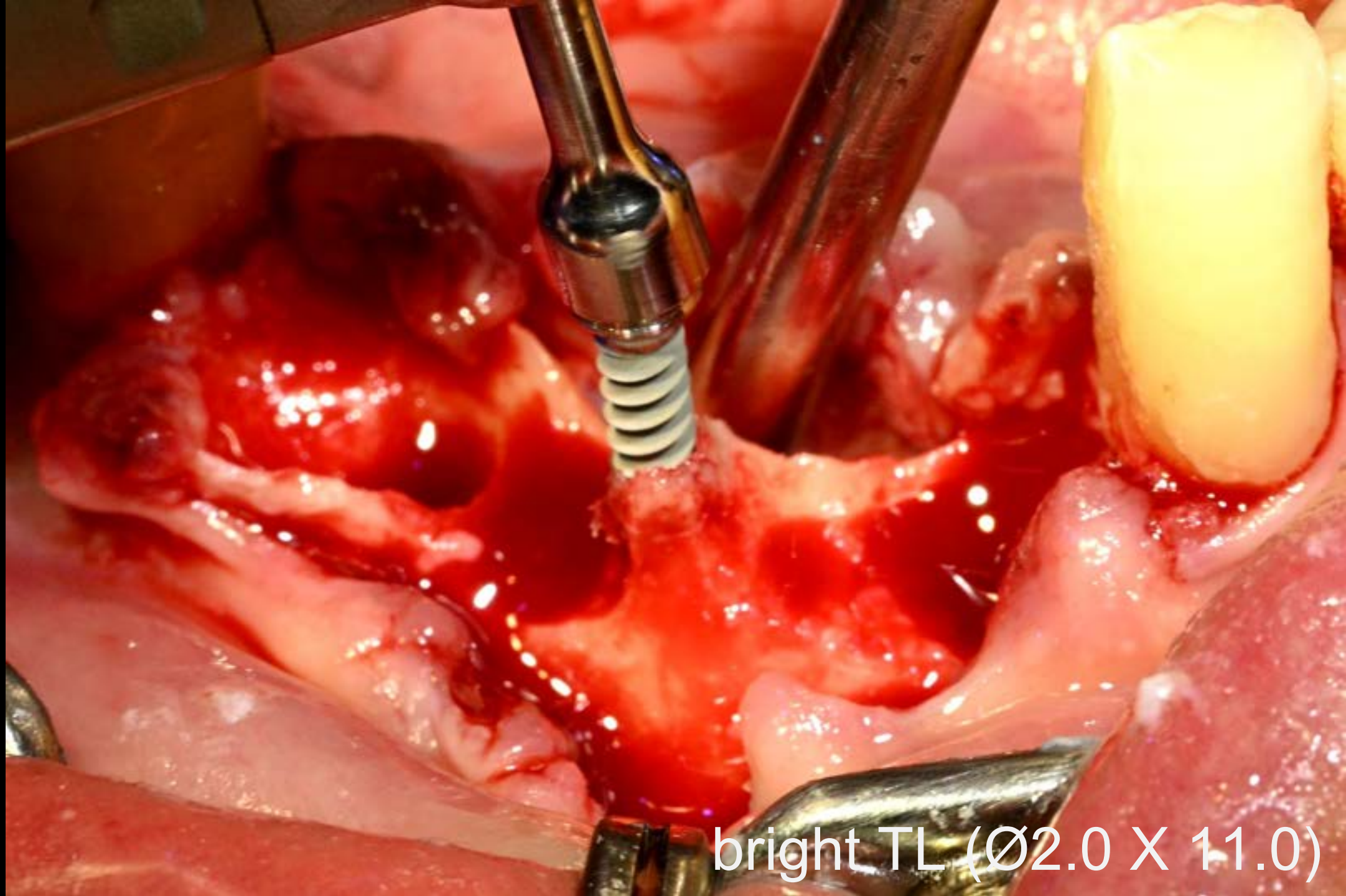


Bone trimming

Surgery (2025-04-24)



Parallel pin

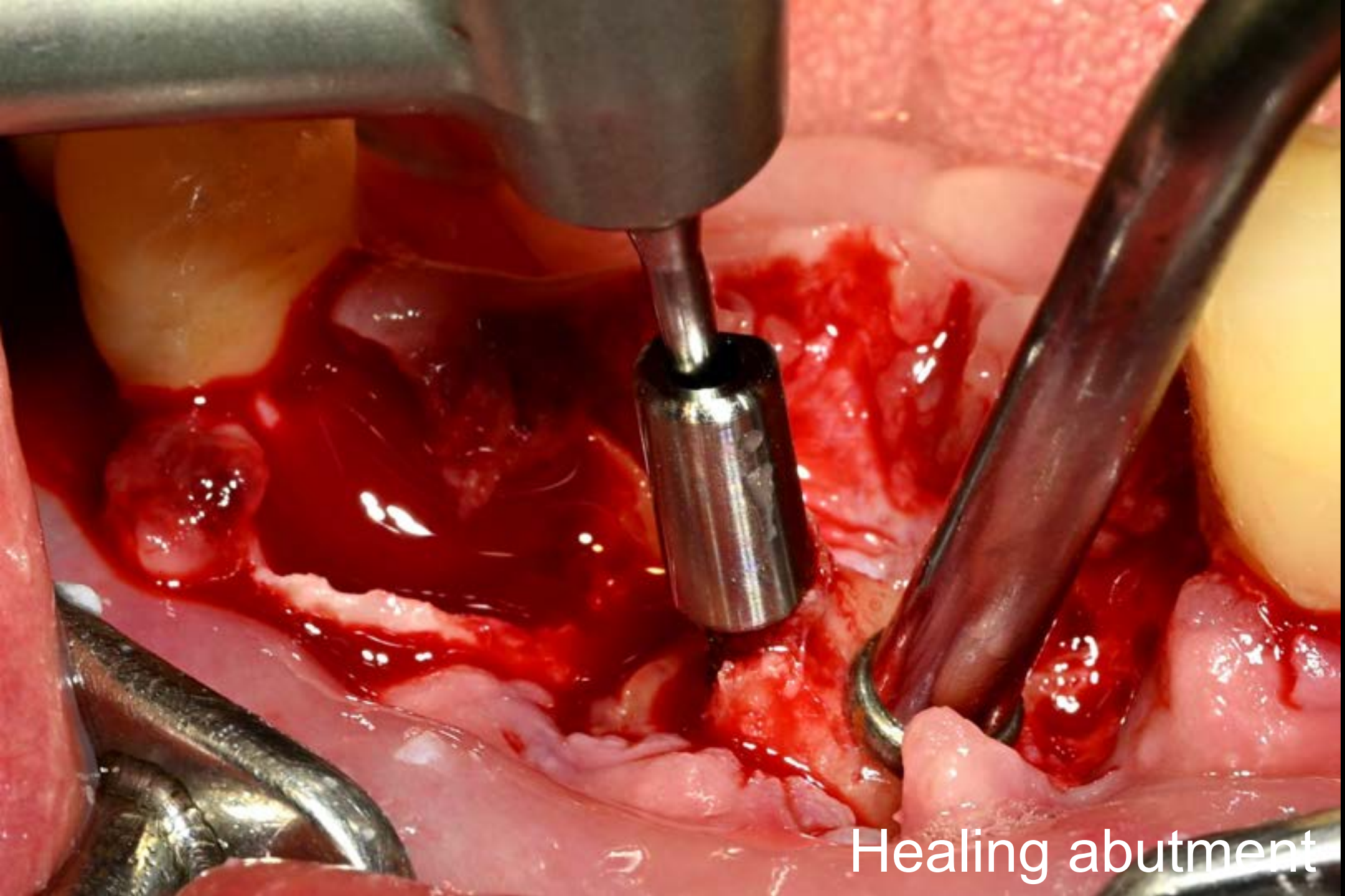
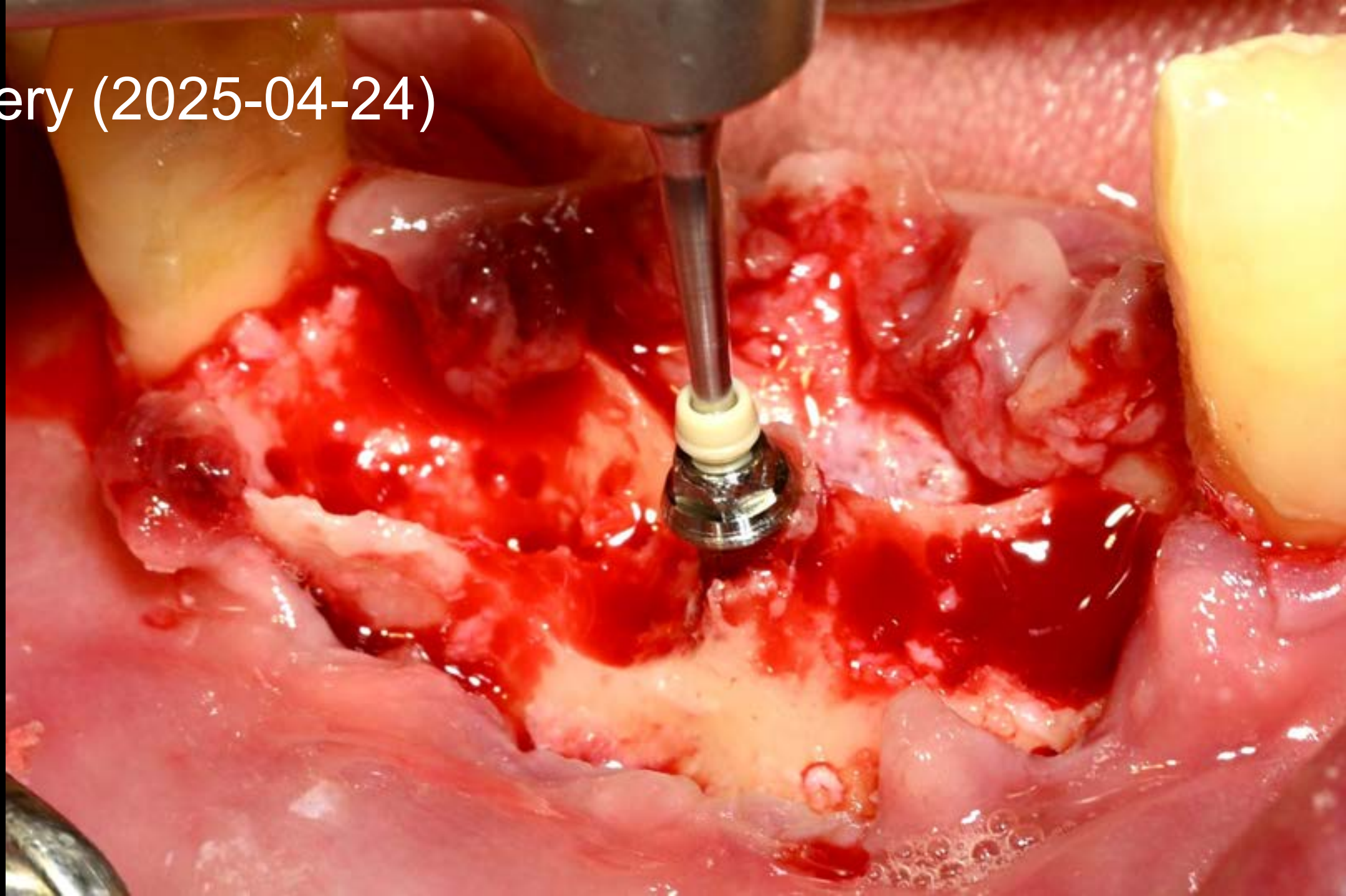


bright TL (Ø2.0 X 11.0)

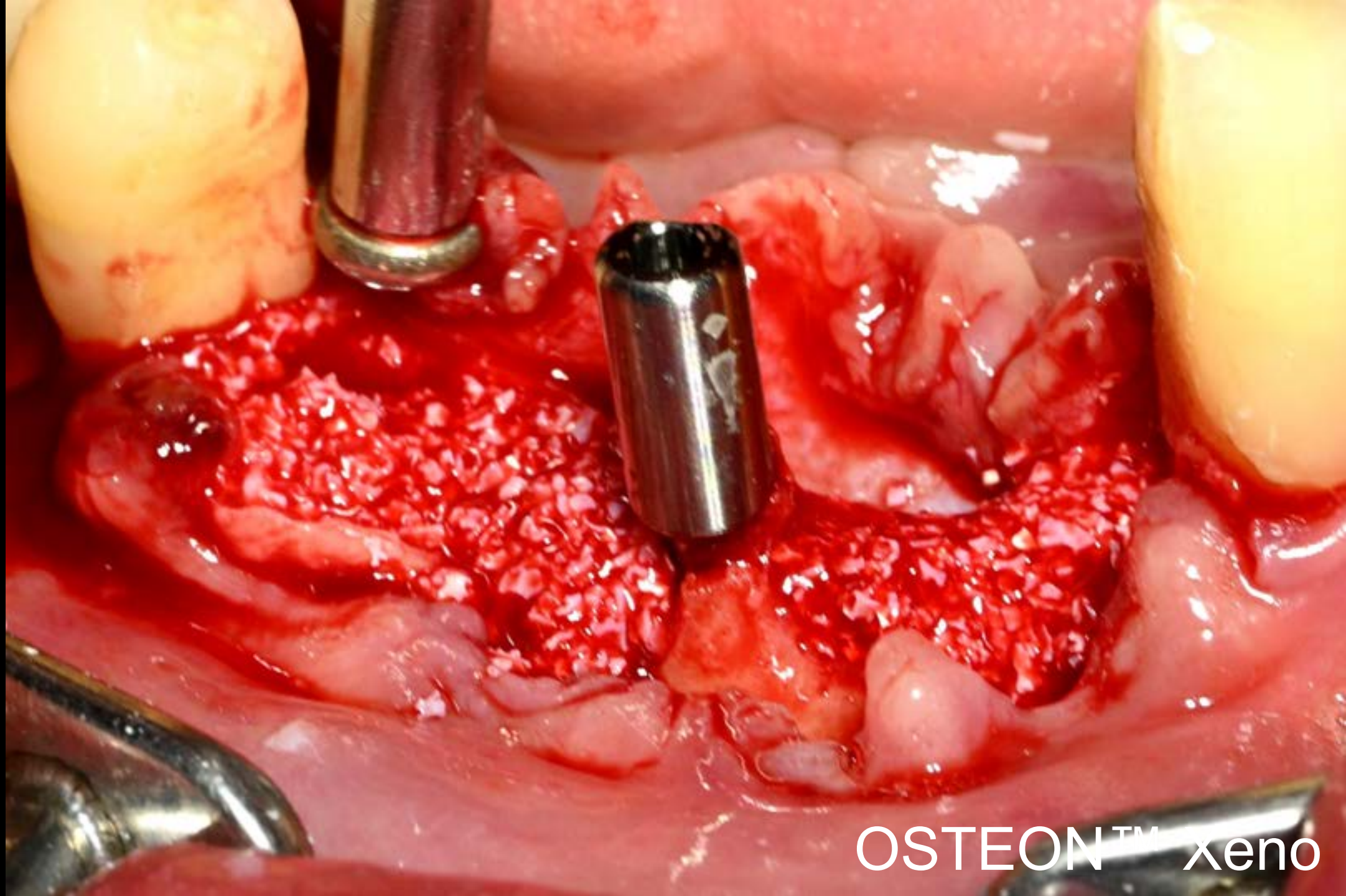


Intramarrow penetration

Surgery (2025-04-24)



Healing abutment

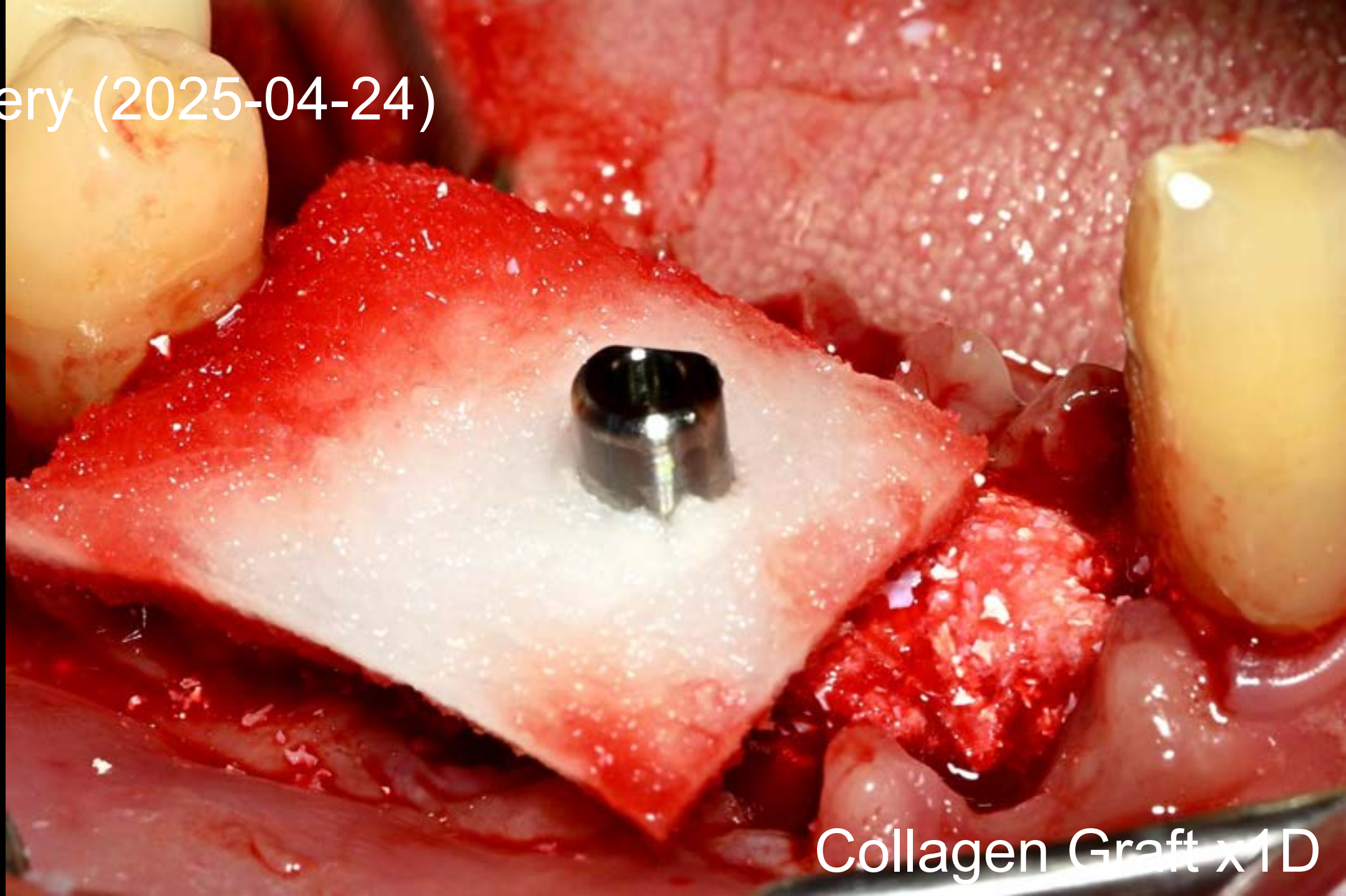


OSTEON™ xeno

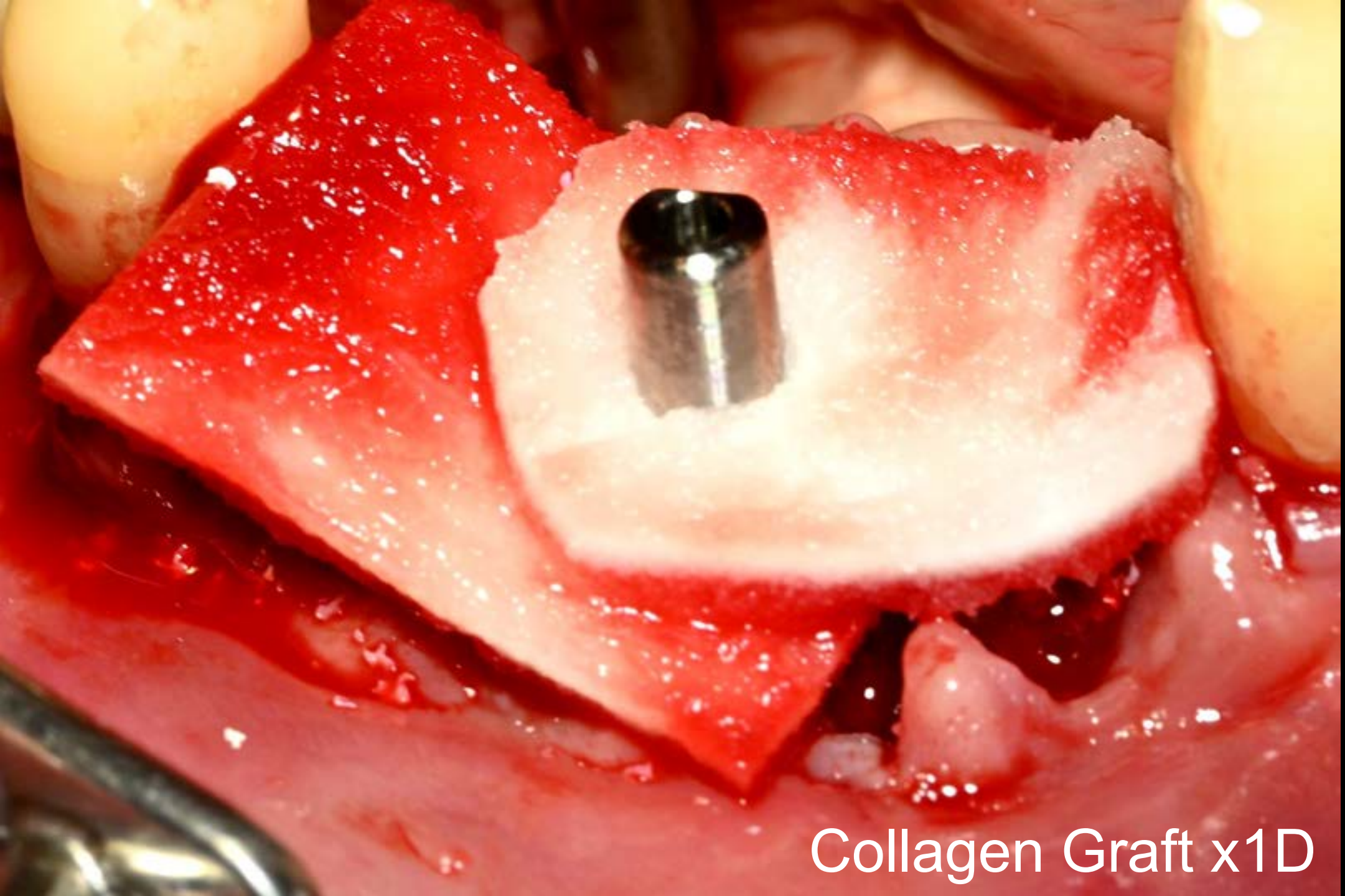


OSTEON™ xeno collagen

Surgery (2025-04-24)



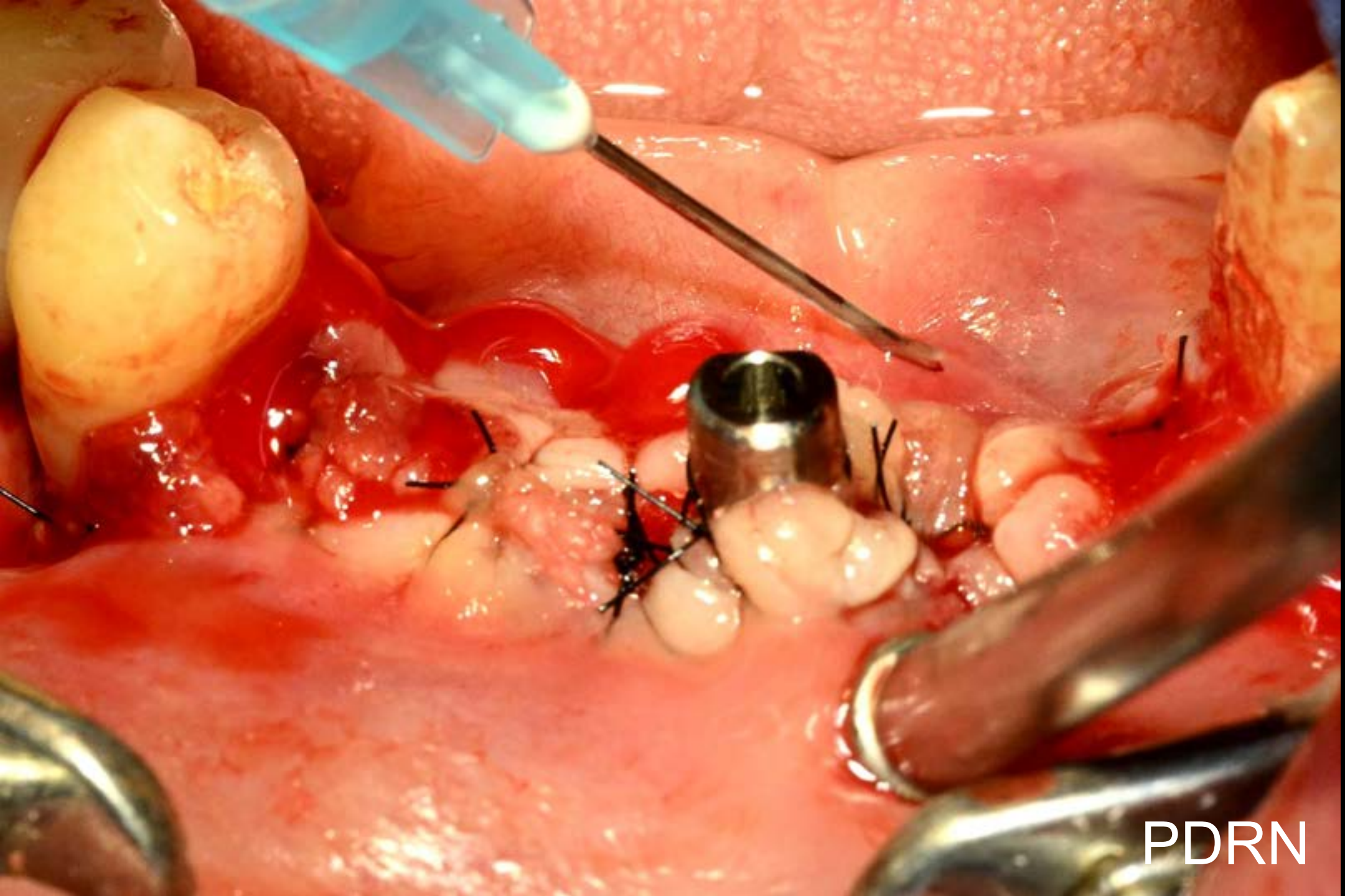
Collagen Graft x1D



Collagen Graft x1D



Suture



PDRN

Post-op (2025-04-24)



Healing : 5 days (2025-04-29)



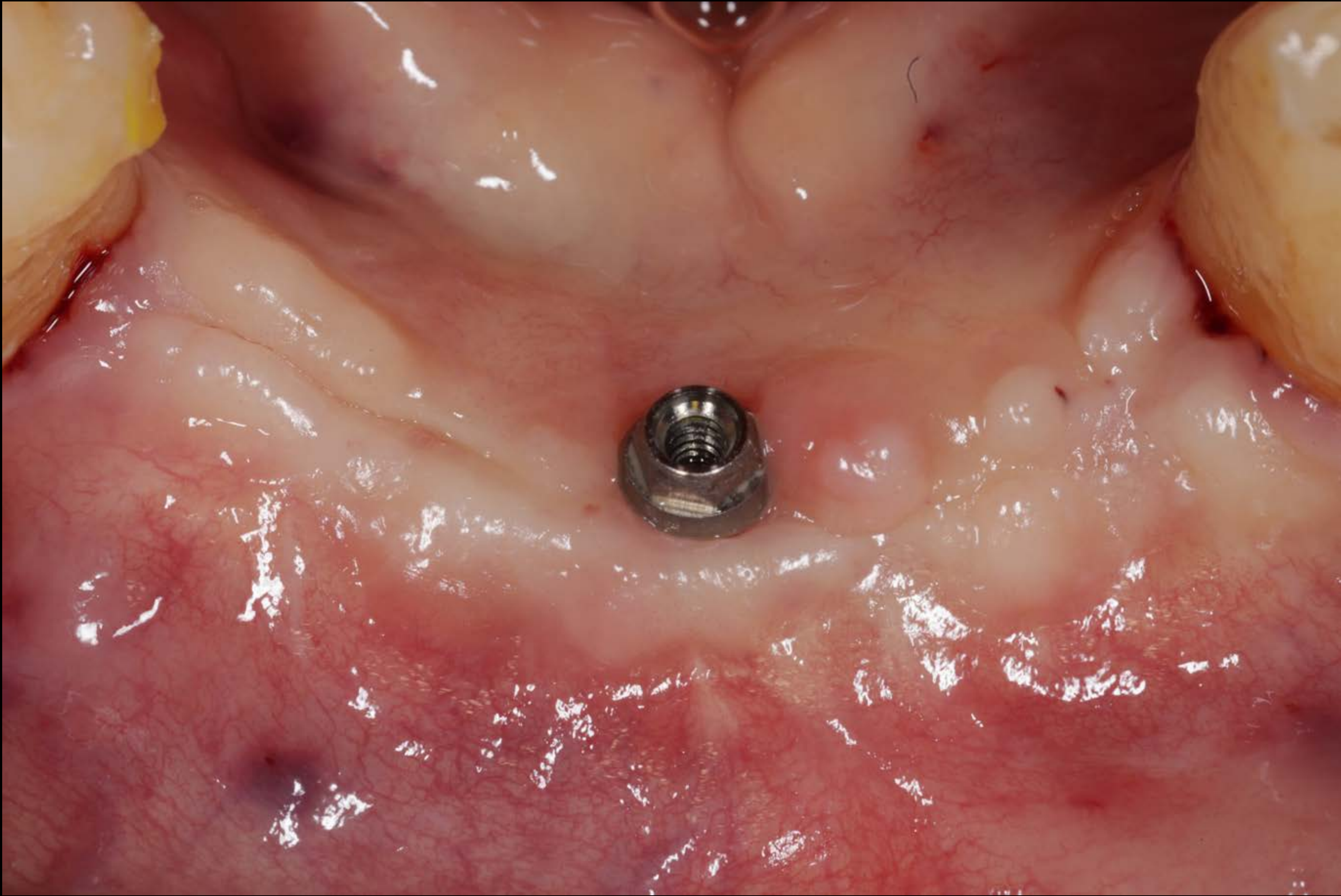
Provisional restoration (2025-04-30)



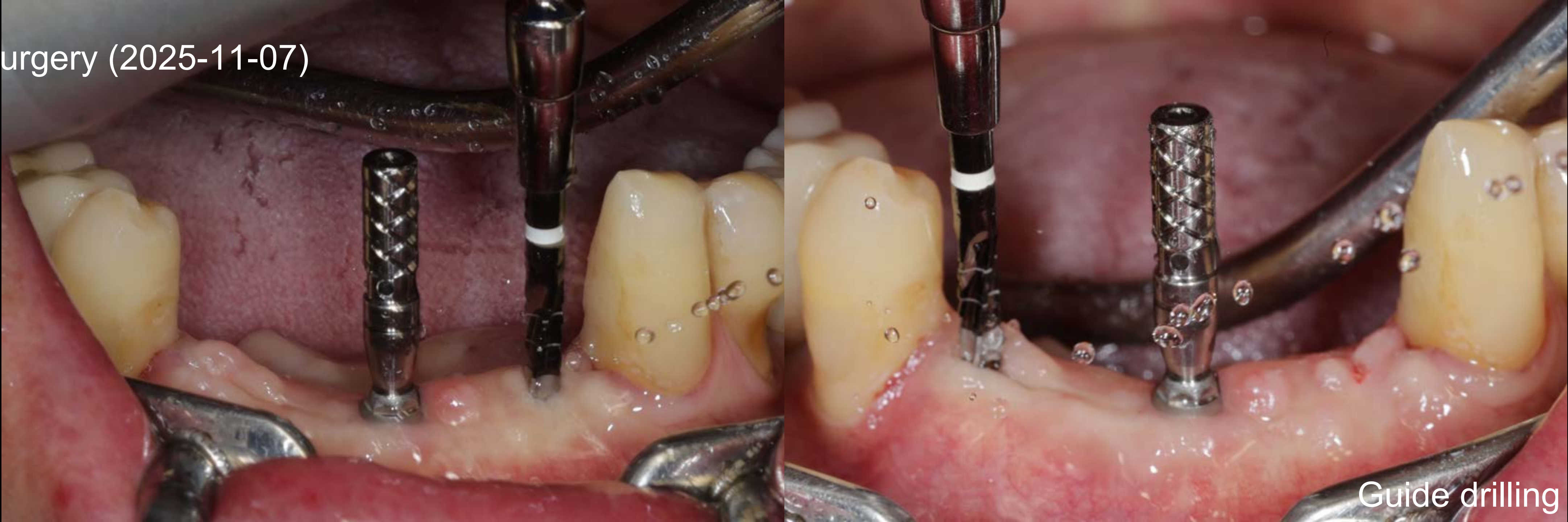
Healing : 2 weeks (2025-05-13)



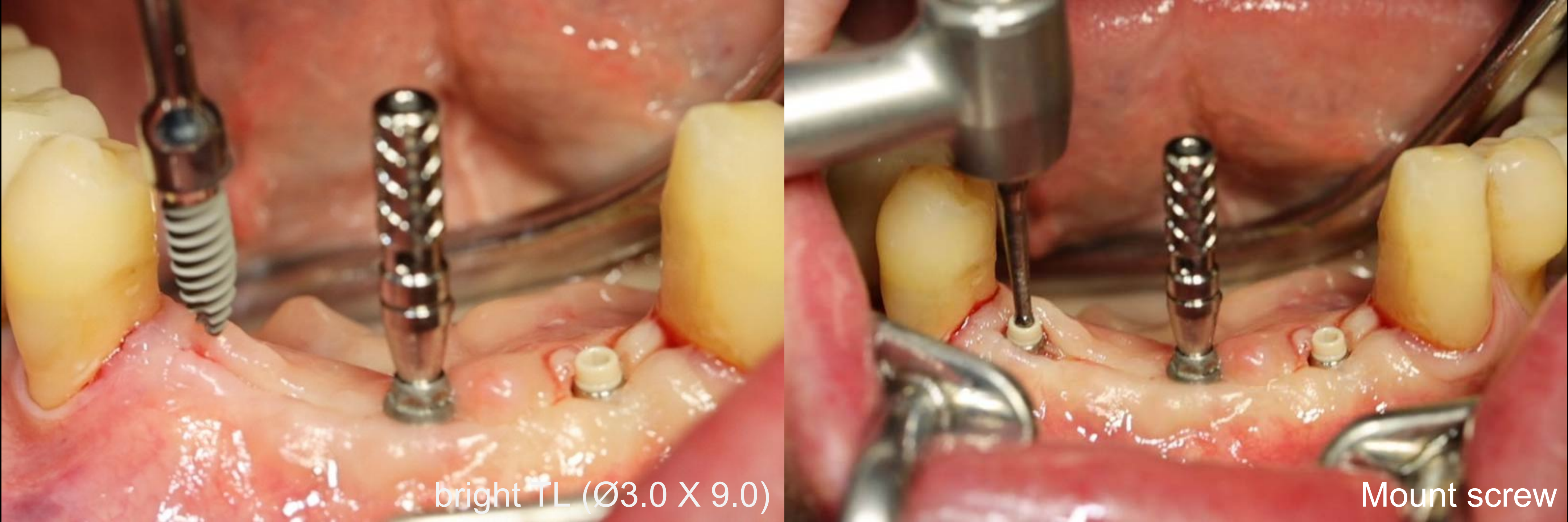
Pre-op : 2nd Surgery (2025-11-07)



2nd Surgery (2025-11-07)



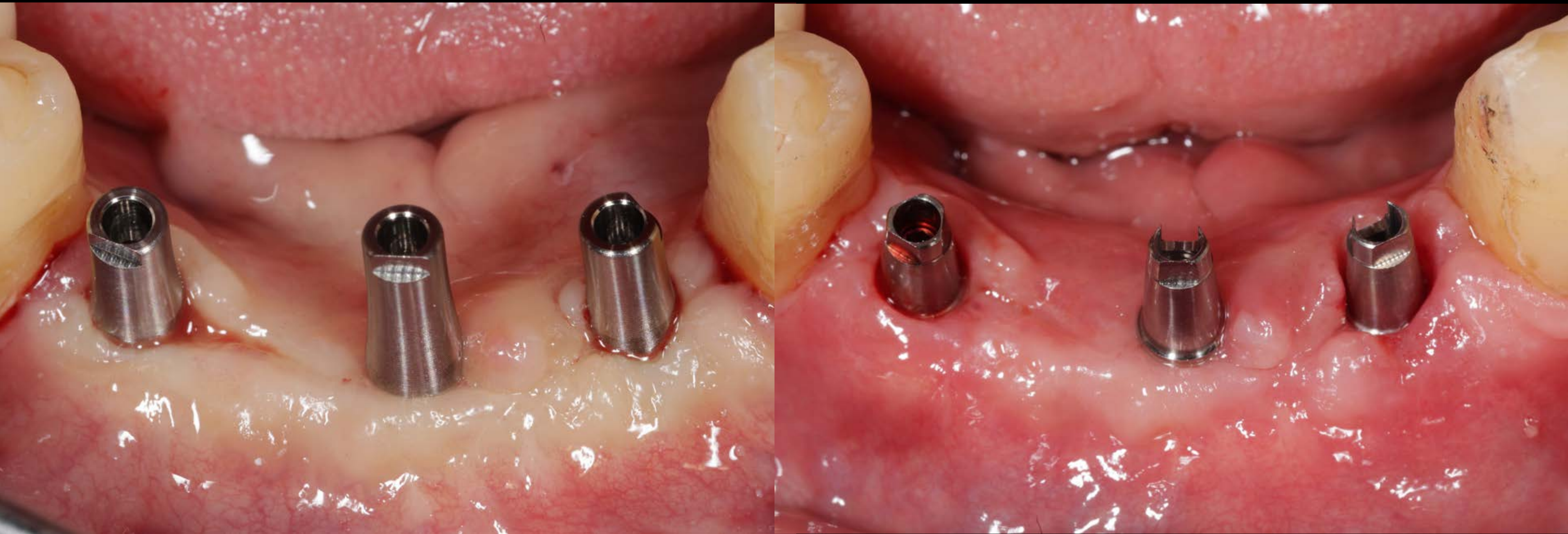
Guide drilling



bright TL (Ø3.0 X 9.0)

Mount screw

Healing : 1 week (2025-11-14)



Provisional restoration (2025-11-14)



6-Diameters

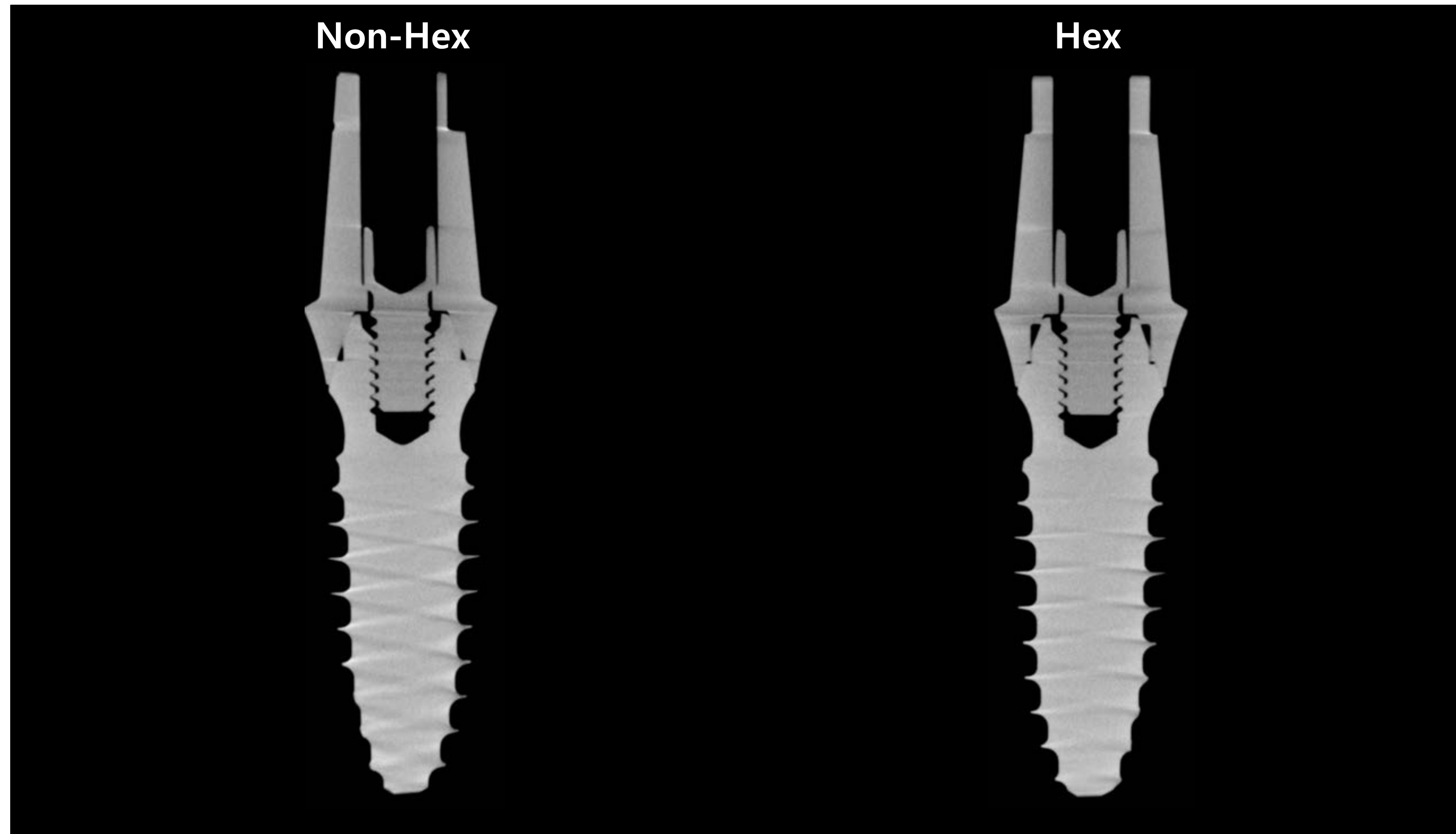


Indication Incisor / Canine / Premolar

Premolar / Molar

20° External Taper Fit | External Hex Connection

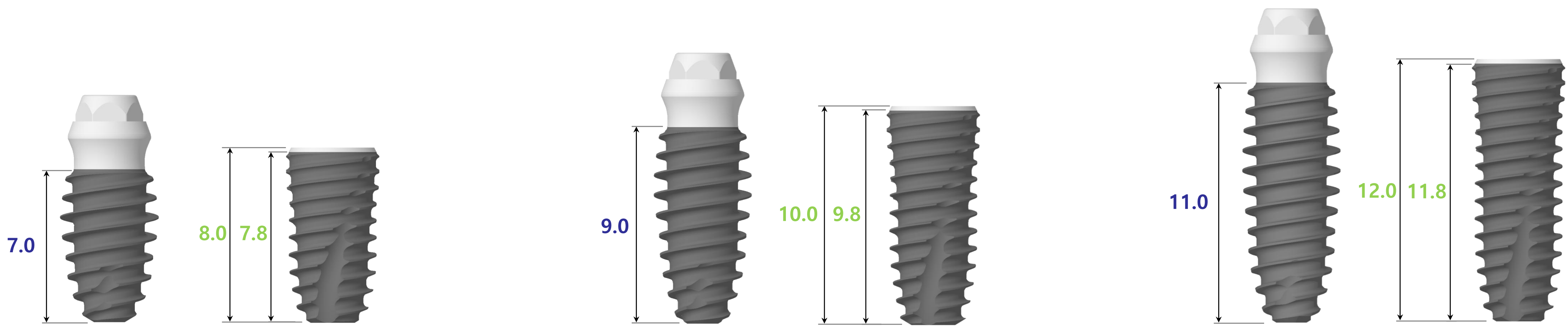
- Excellent Joint Stability



Comparison of fixture surface area

bright VS SuperLine2

- ✓ **Bone-engaging surface area** comparison
- ✓ - **Conclusion** : Despite having an overall length that is **1 mm shorter** than the **SuperLine2**, the **bright TL Fixture** provides a **larger bone-engaging (bone-contact) surface area**



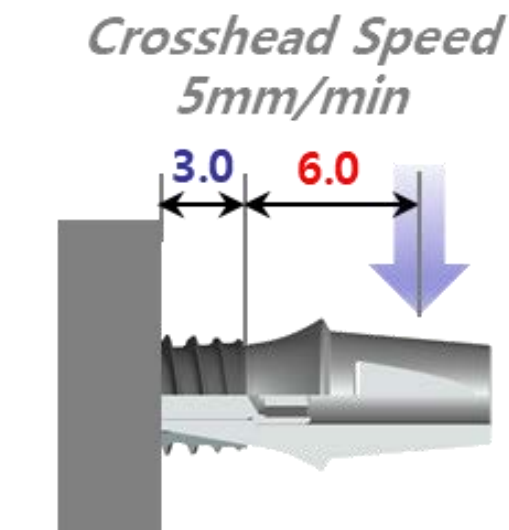
Unit : mm ²		
직경	L	
	bright TL	SuperLine2
	7.0mm	8.0mm
FX35 / FX36	98.33	107.44
FX40	123.51 ^{+3.1%}	119.80
FX45	135.81 ^{+0.8%}	134.80
FX50	163.81 ^{+2.4%}	160.05

Unit : mm ²		
직경	L	
	bright	SuperLine2
	9.0mm	10.0mm
FX35 / FX36	128.65	136.57
FX40	160.50 ^{+5.5%}	152.19
FX45	176.90 ^{+2.7%}	172.29
FX50	215.68 ^{+11.7%}	193.01

Unit : mm ²		
직경	L	
	bright	SuperLine2
	11.0mm	12.0mm
FX35 / FX36	165.87	167.01
FX40	204.74 ^{+9.7%}	186.72
FX45	224.37 ^{+5.3%}	221.00
FX50	273.35 ^{+13.7%}	240.48

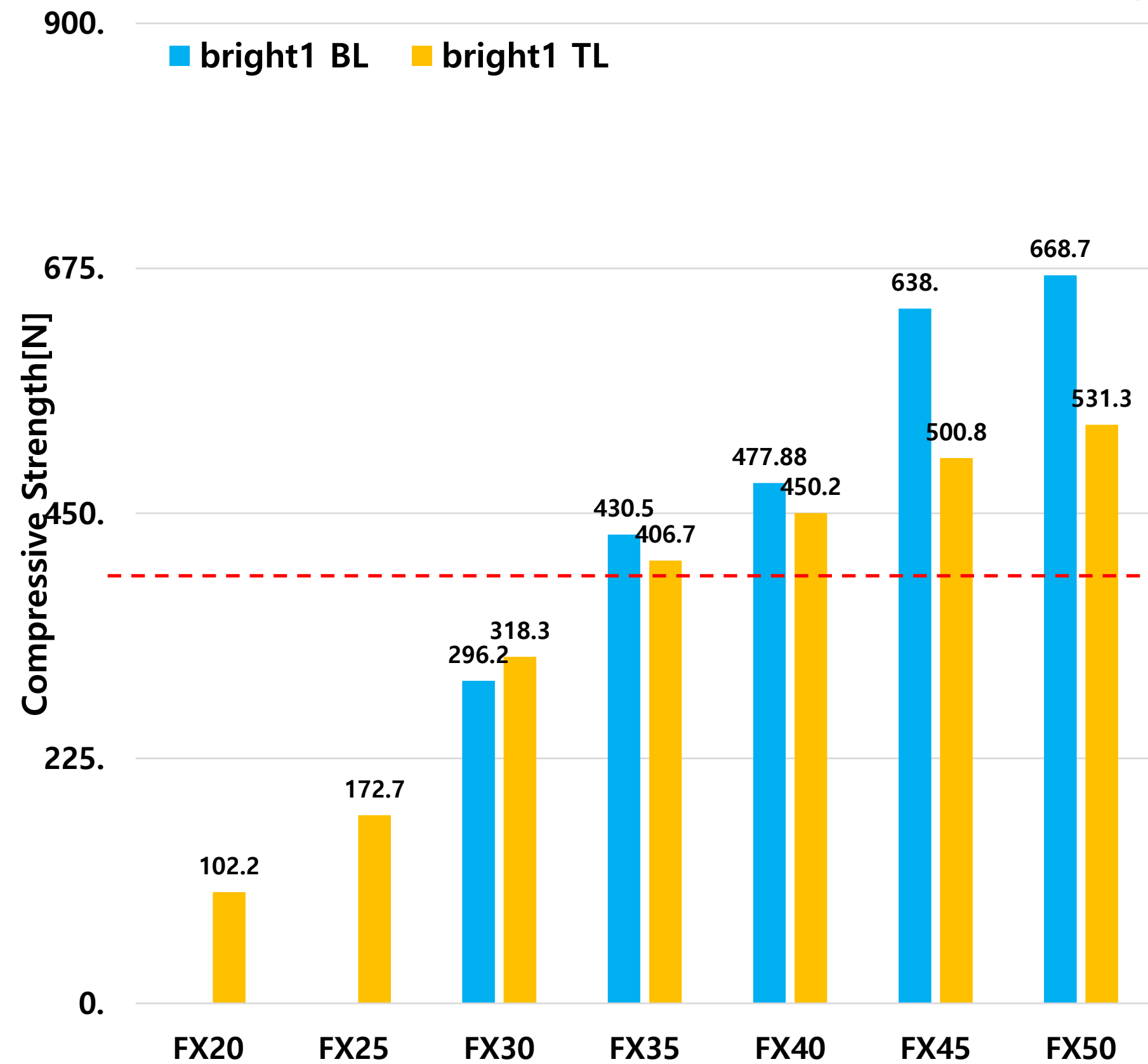
Evaluation of fixture strength

✓ Strength evaluation results under **bone-loss conditions**



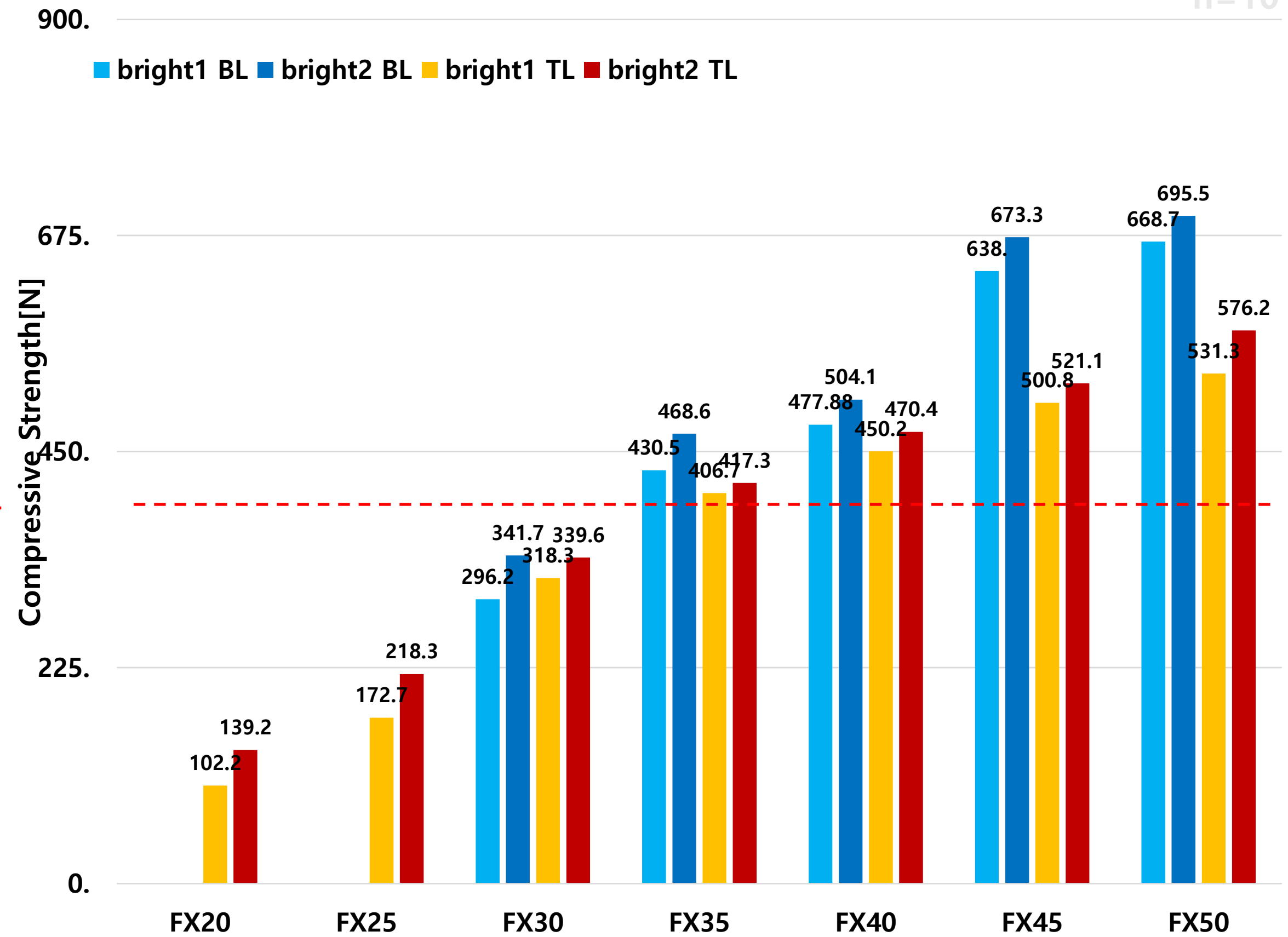
bright1

*n=10



bright1,2

*n=10



Posterior
Single Restoration

GBR

Most complex - patient, doctors and materials dependent

Very diverse technique

Needs for technique, materials and tools RD

Pre-op (2018-10-12)



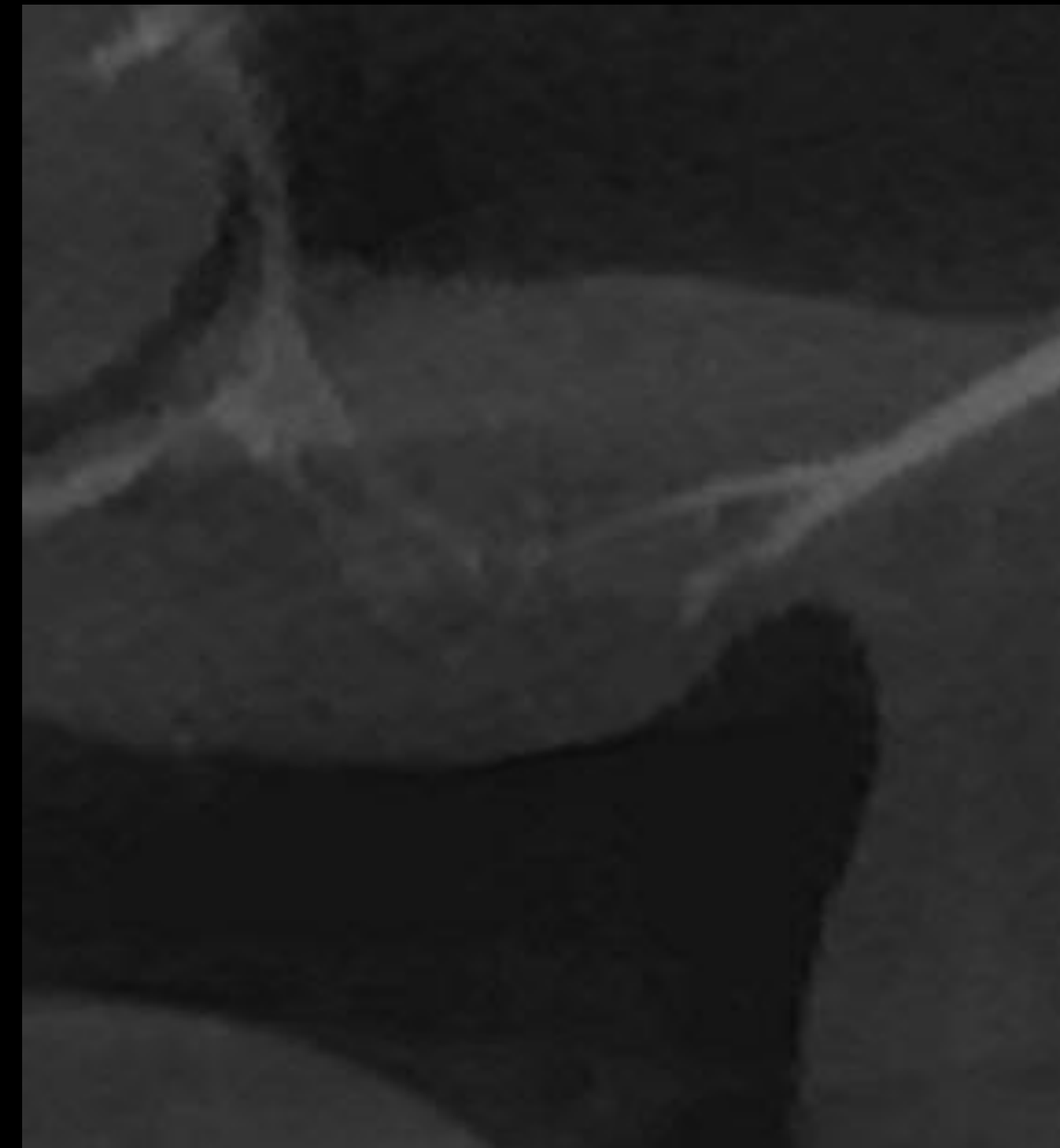
Post-op (2018-11-19)



Pre-op CT (2018-10-18)



#16



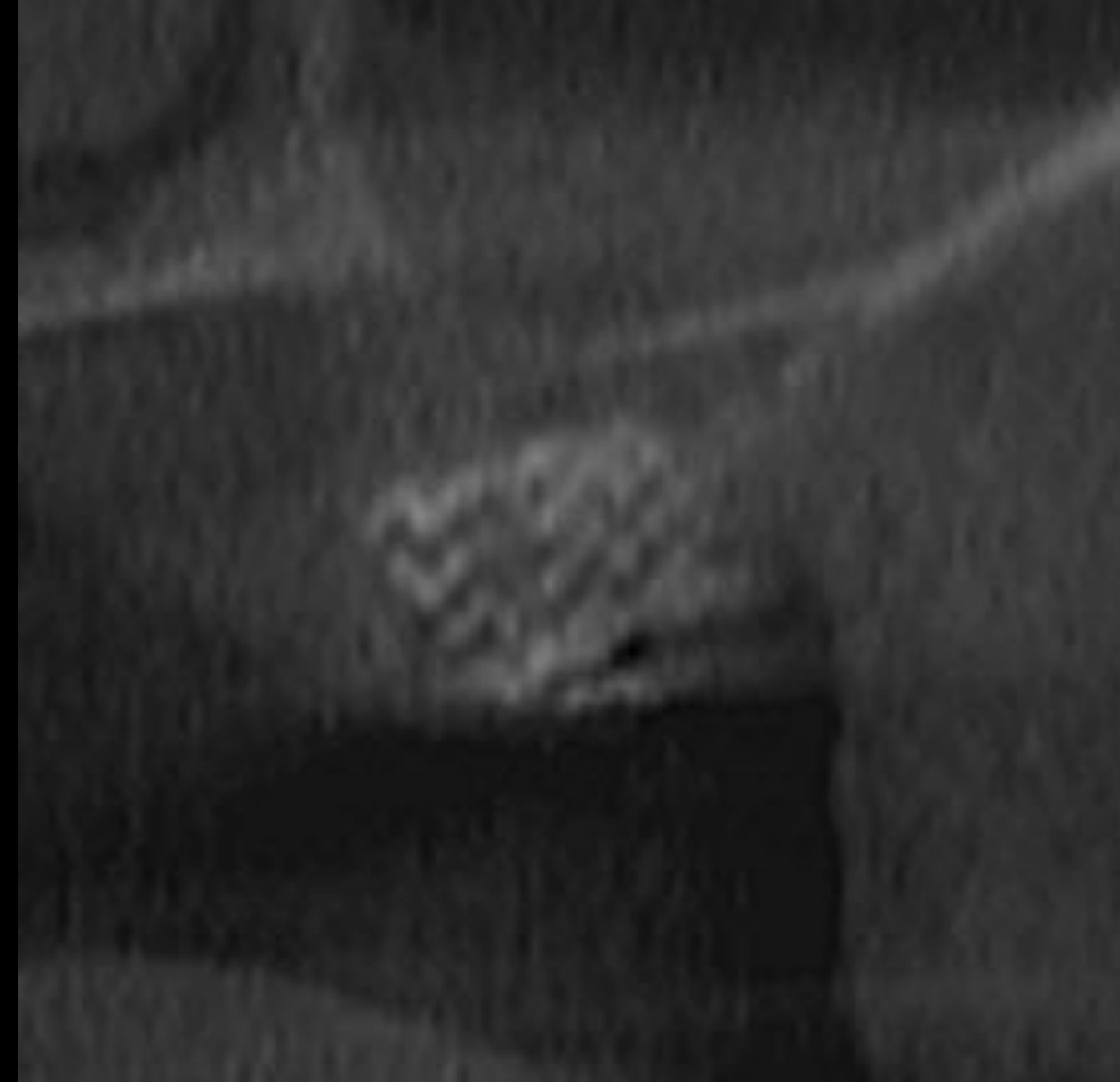
#17

Healing : 5 months (2019-04-15)

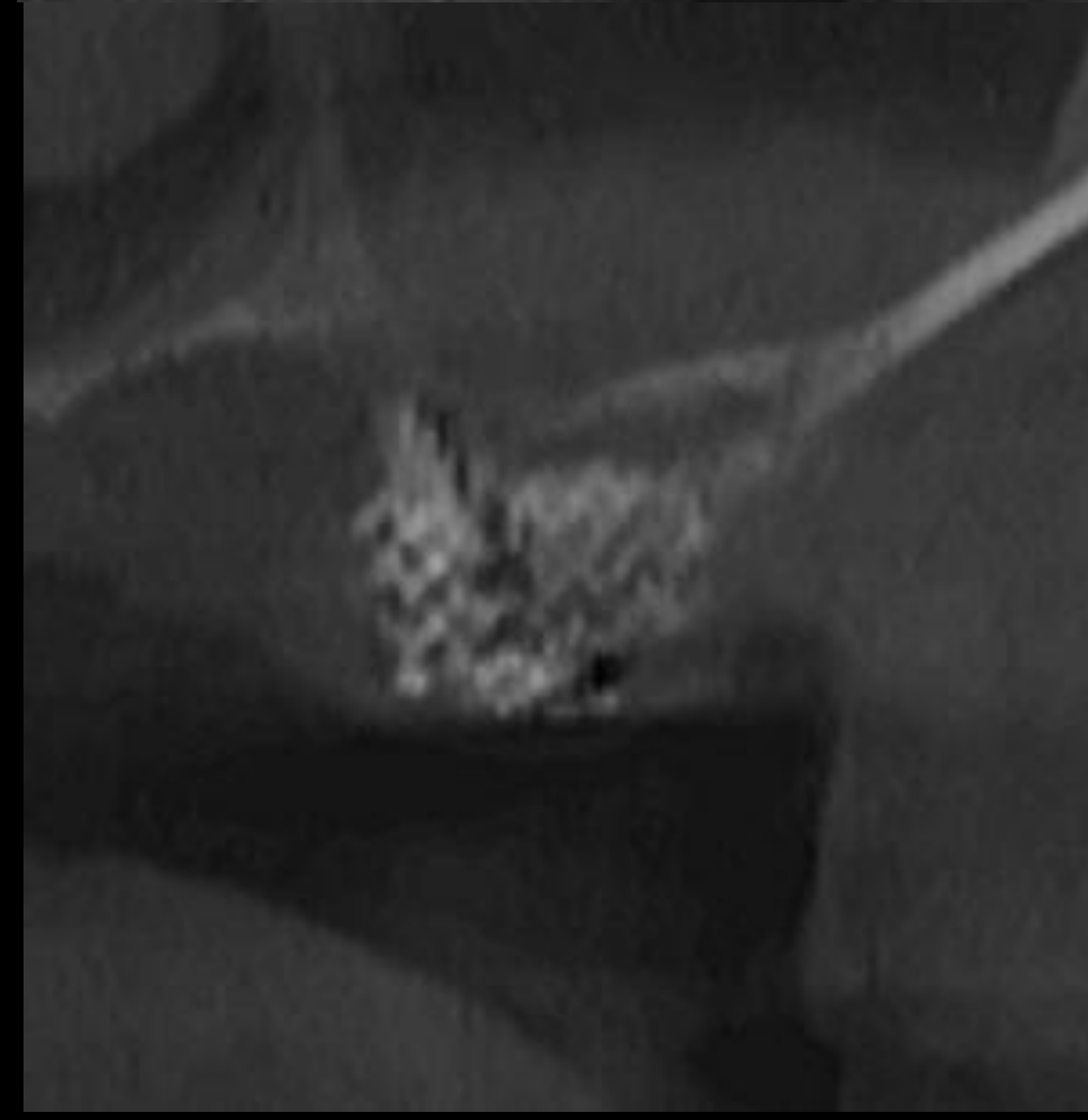
#16



#17



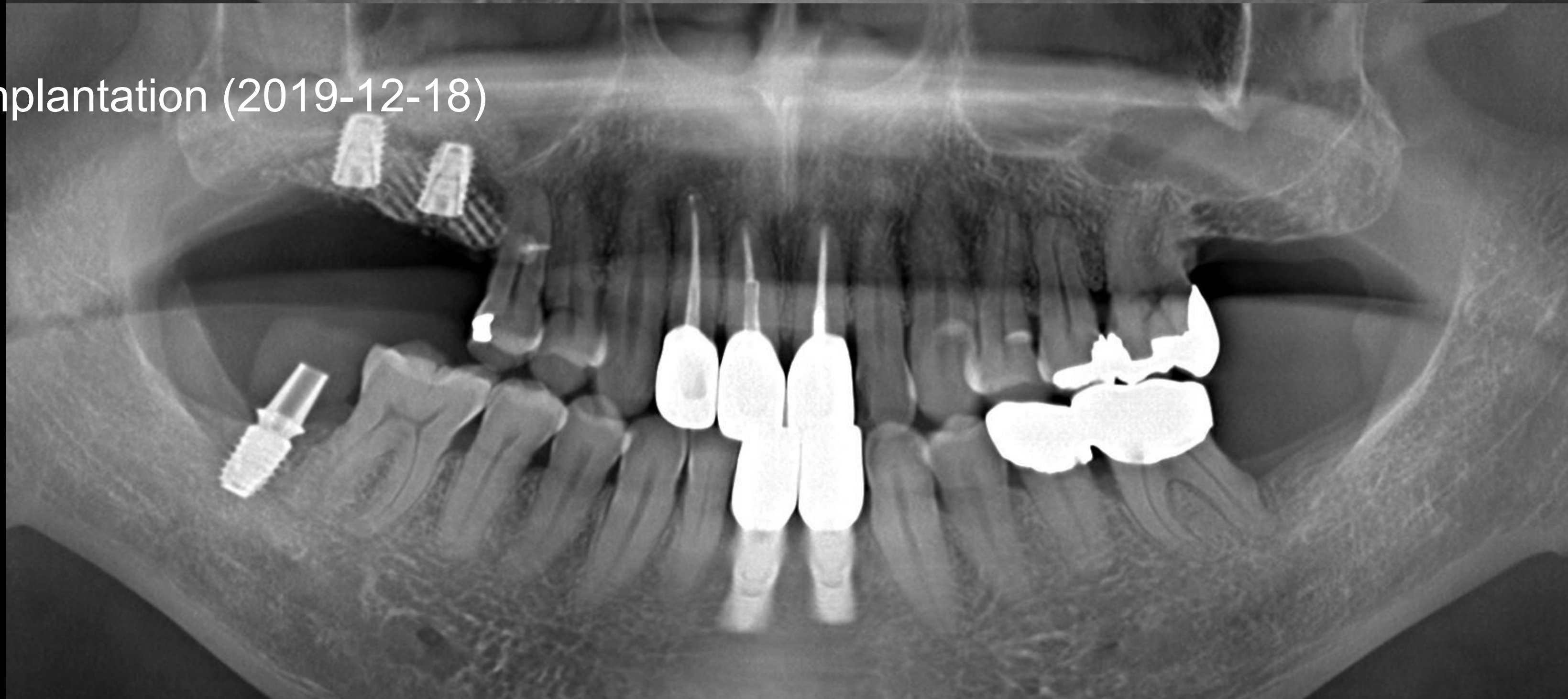
Healing : 11 month (2019-12-02)



Healing : 11 month (2019-12-02)



Implantation (2019-12-18)



Final prosthesis (2020-07-23)



Follow up : 1 year (2021-07-29)

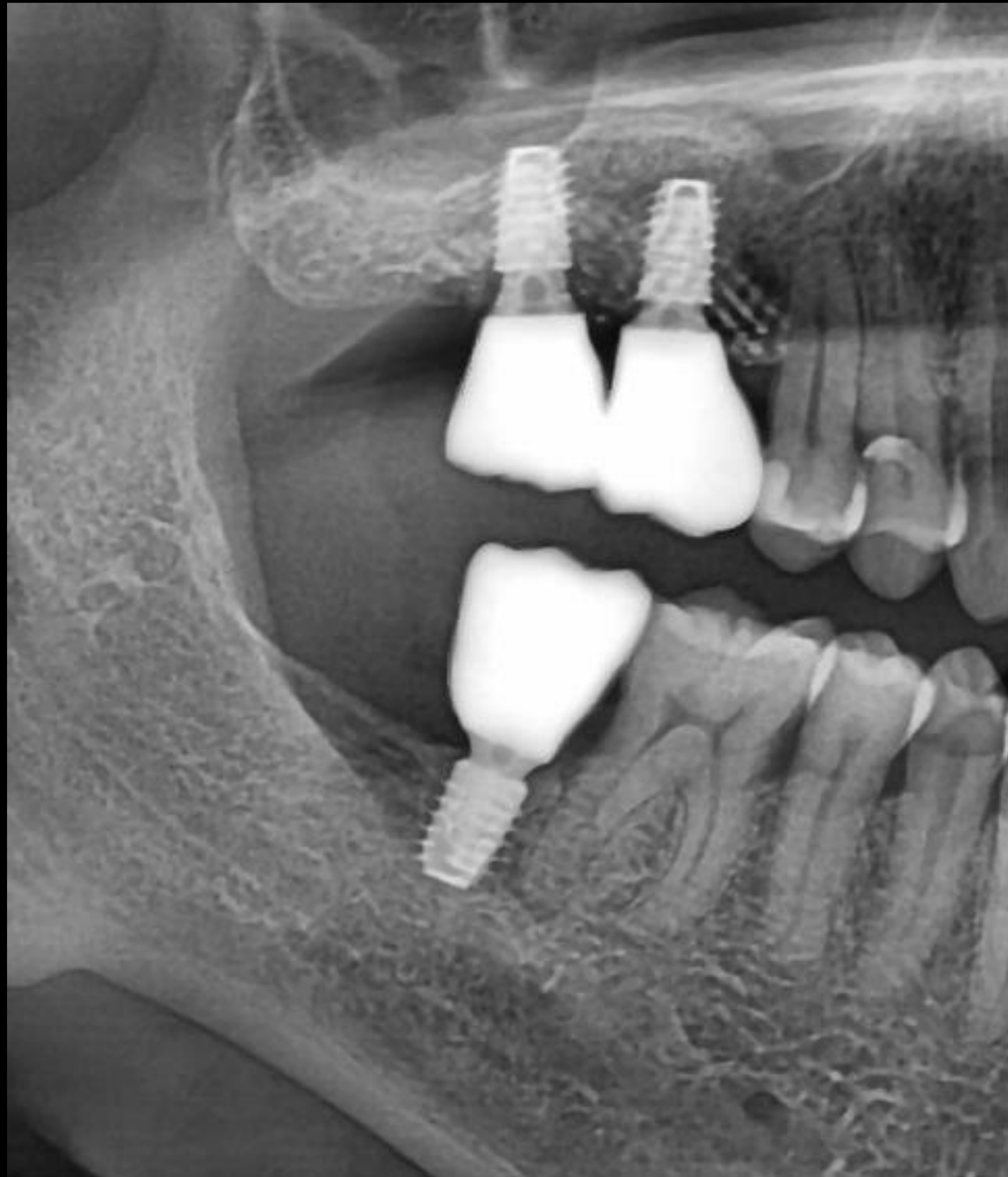


#16

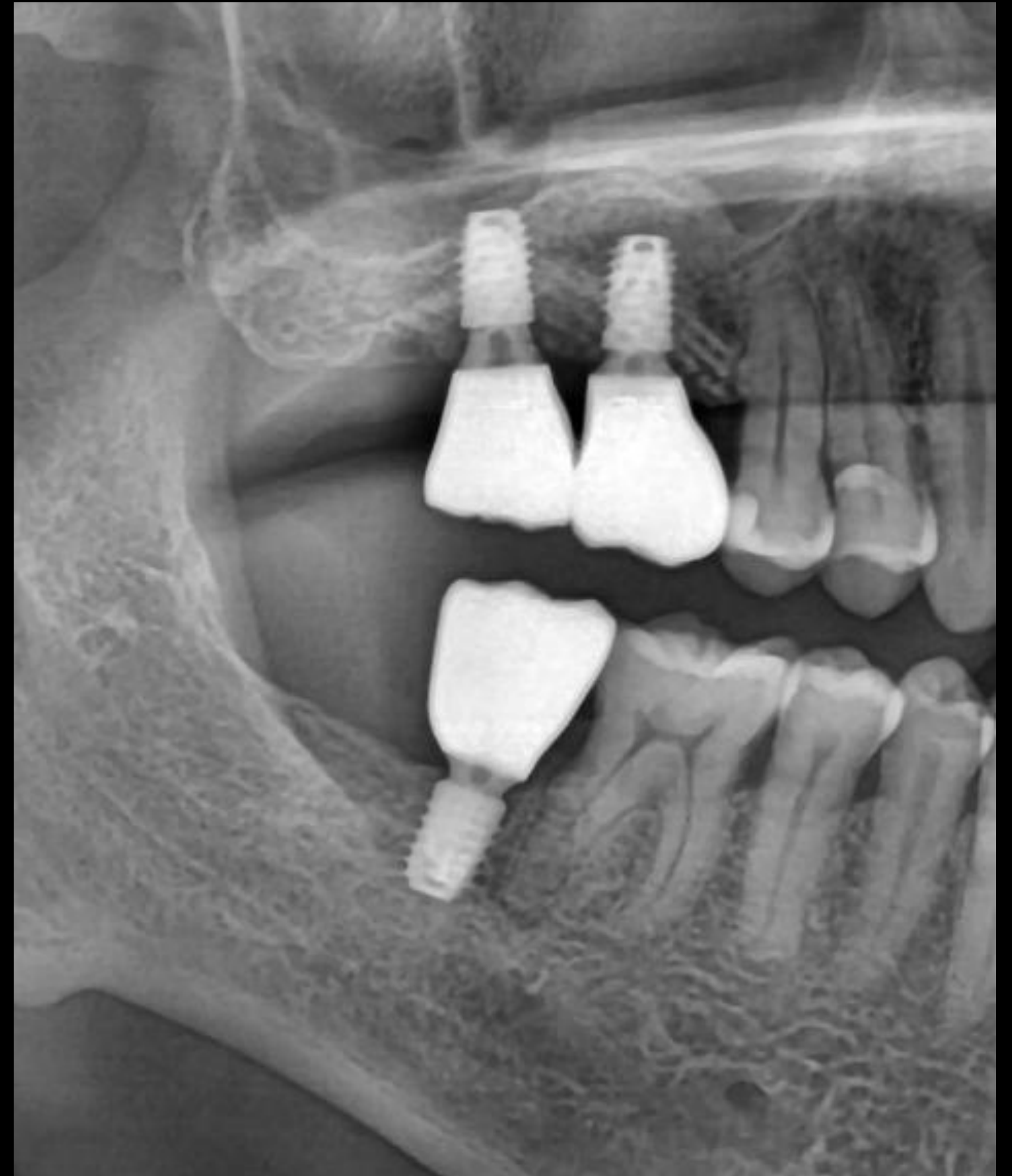


#17

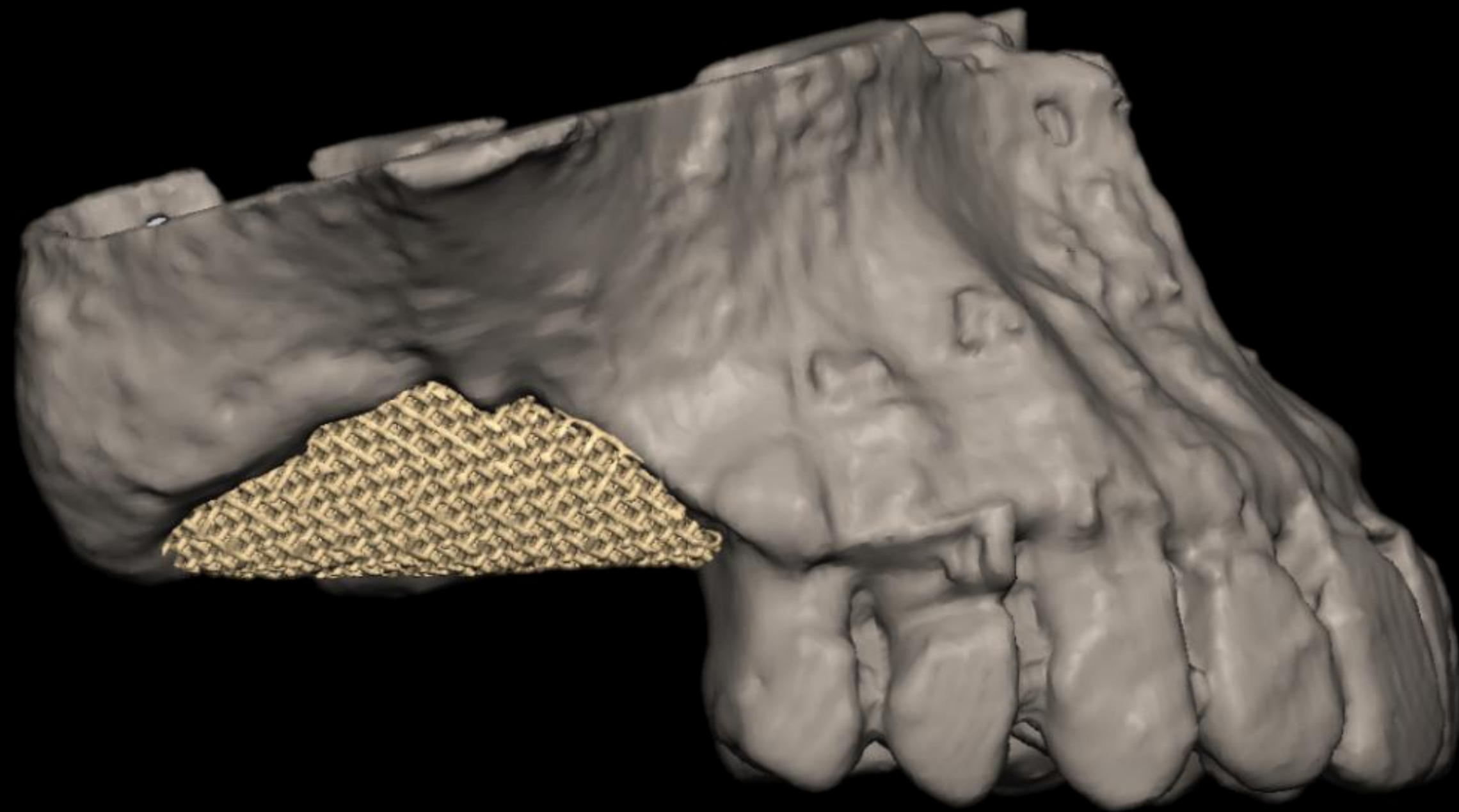
Follow up : 1 year 6 months (2022-02-07)



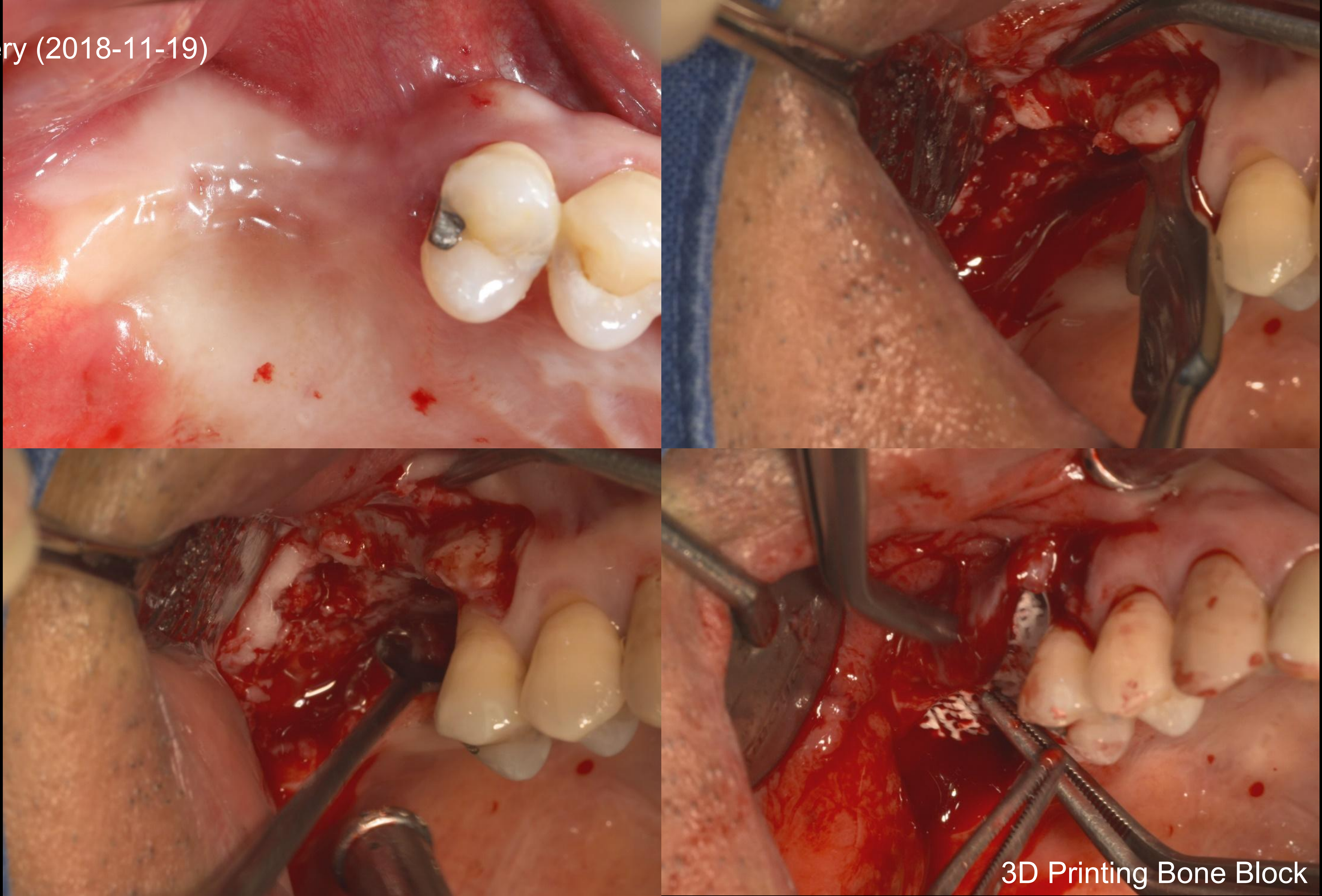
Follow up : 3 years 6 months (2024-01-25)



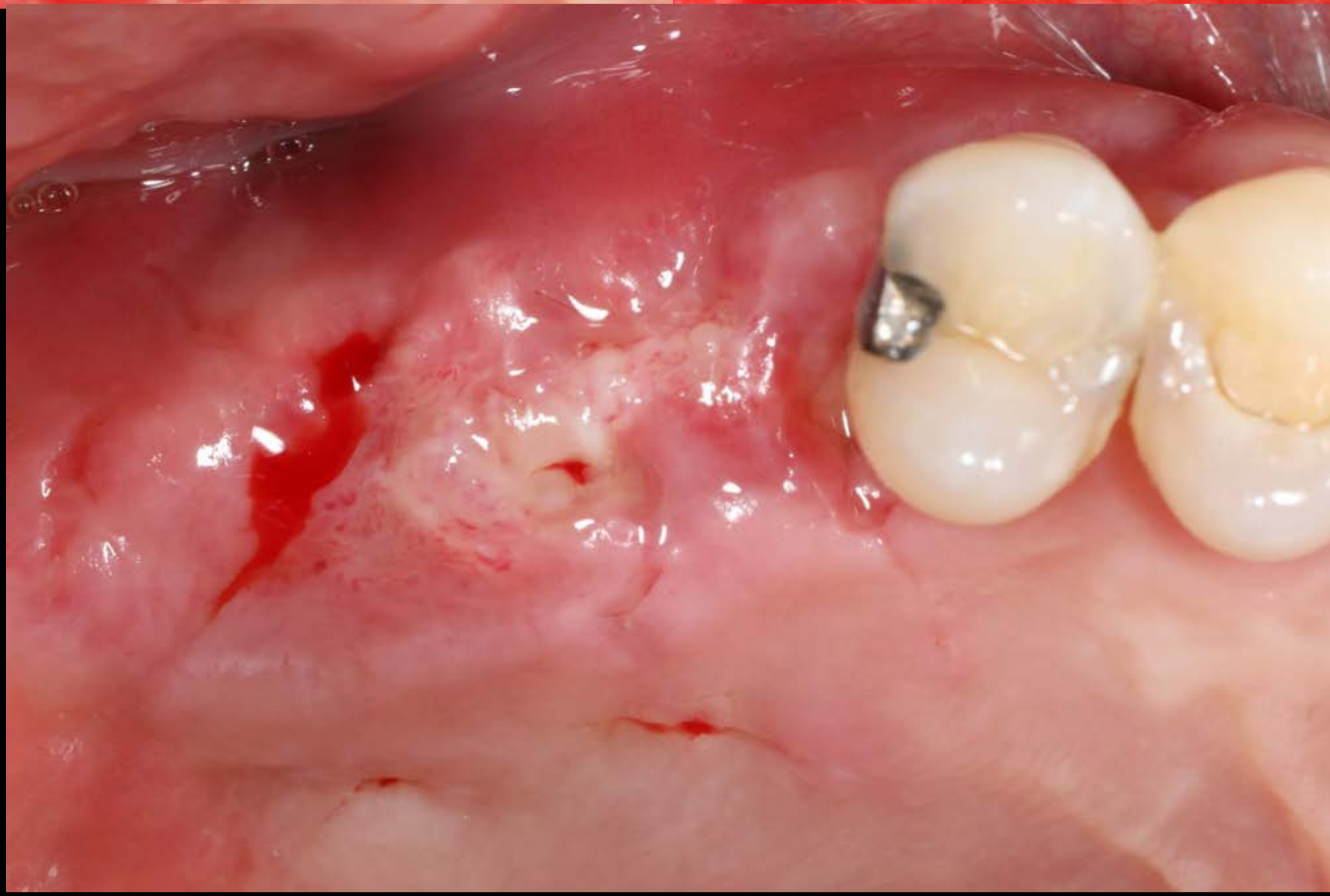
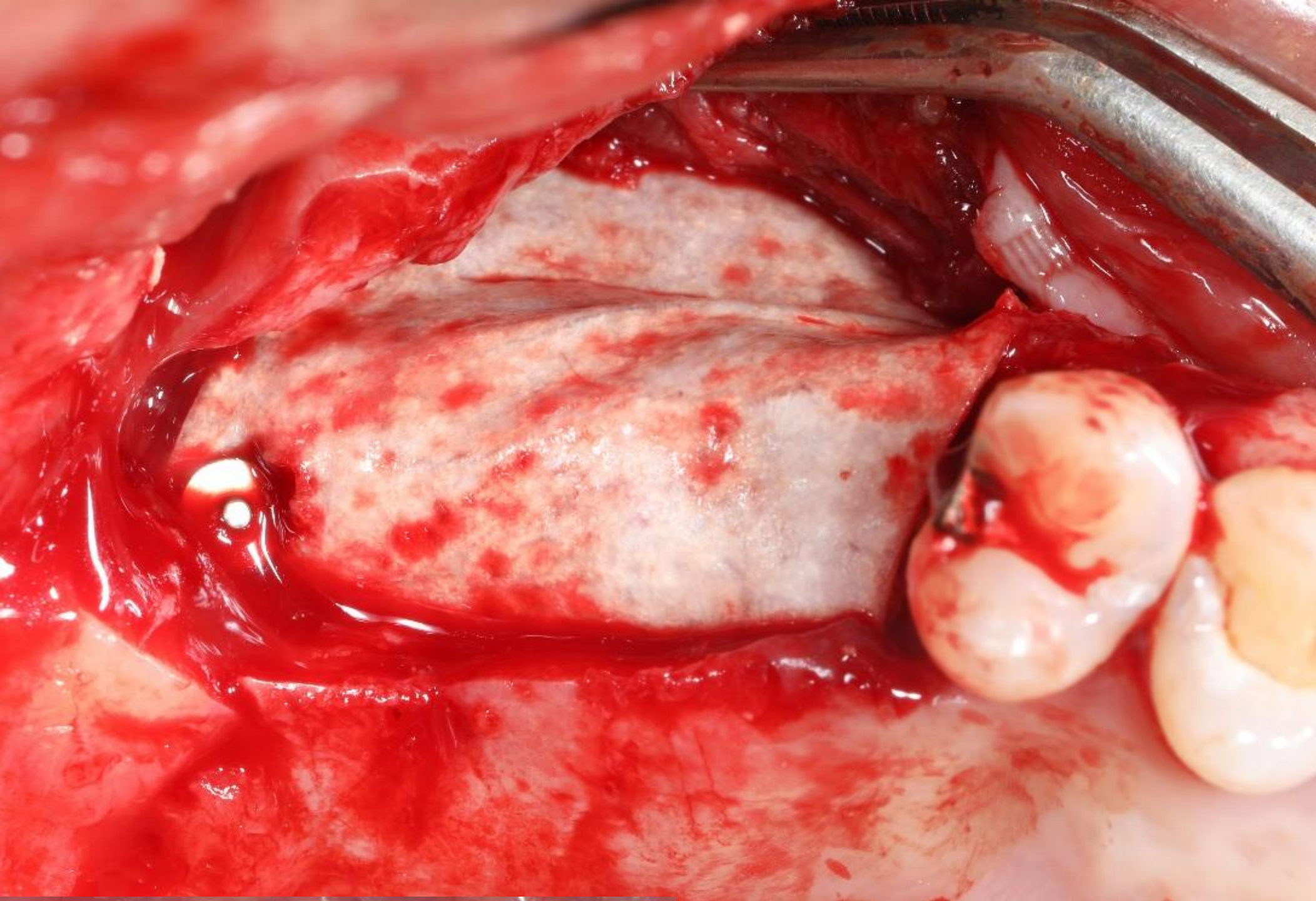
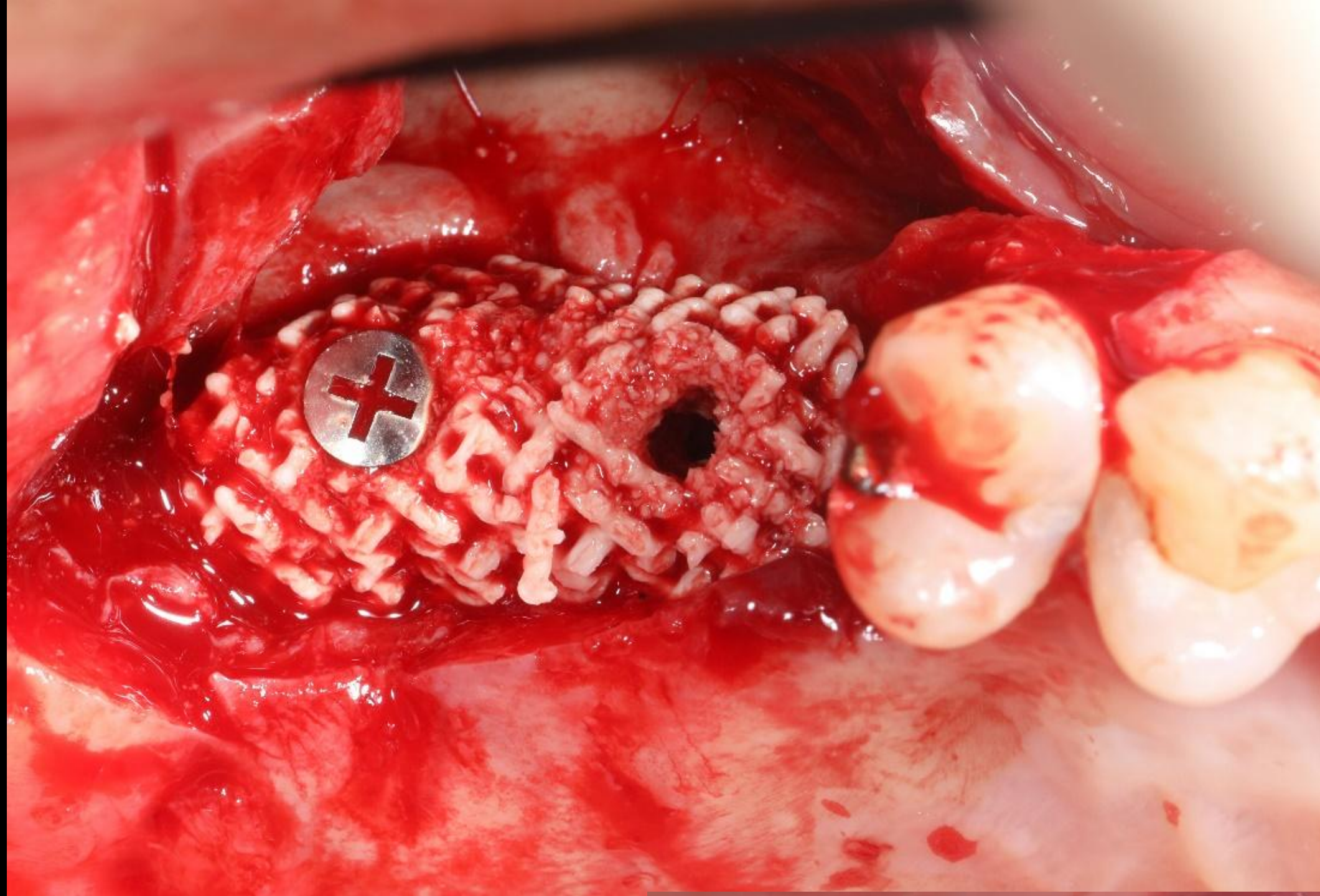
3D Printing Bone Block



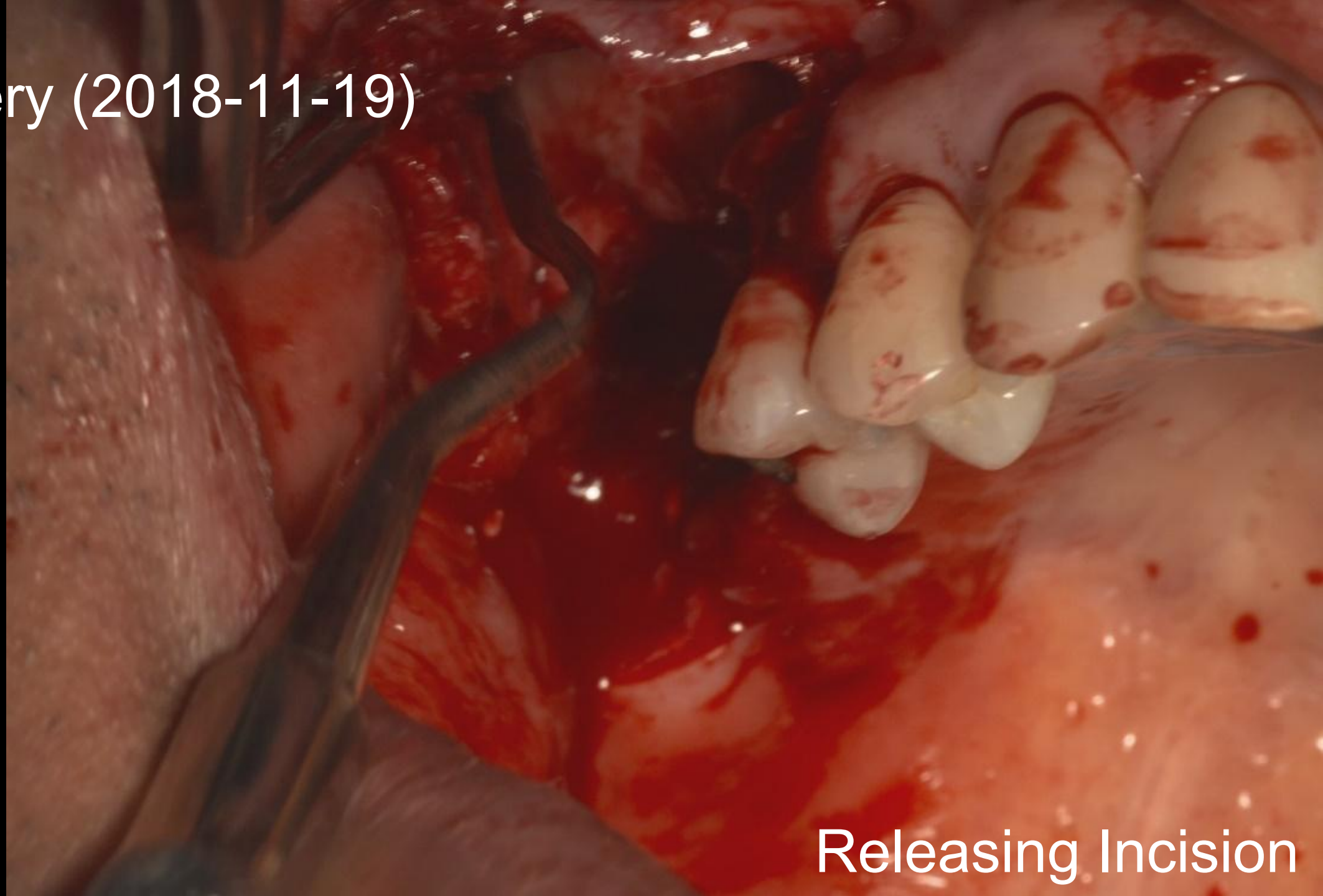
Surgery (2018-11-19)



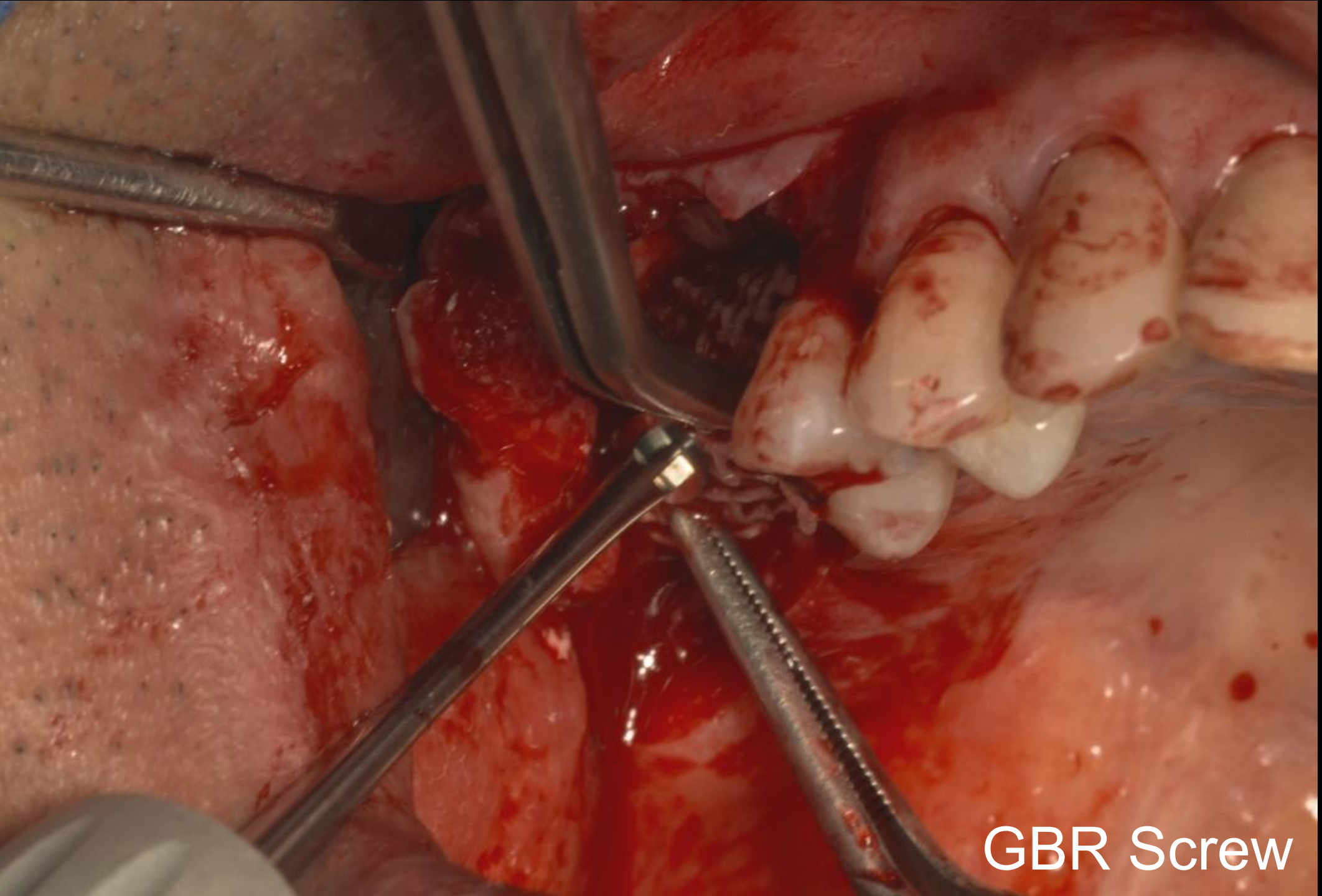
3D Printing Bone Block



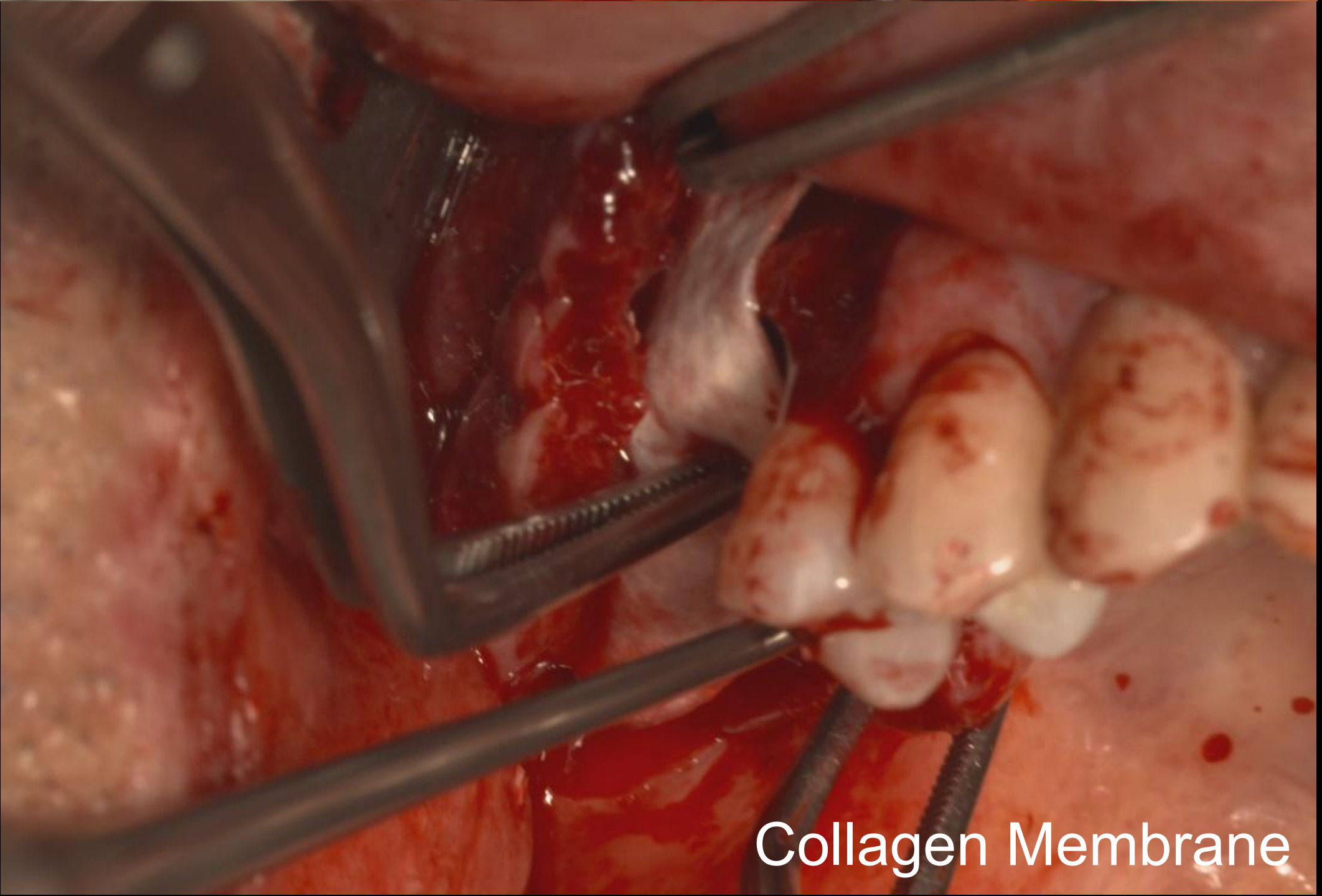
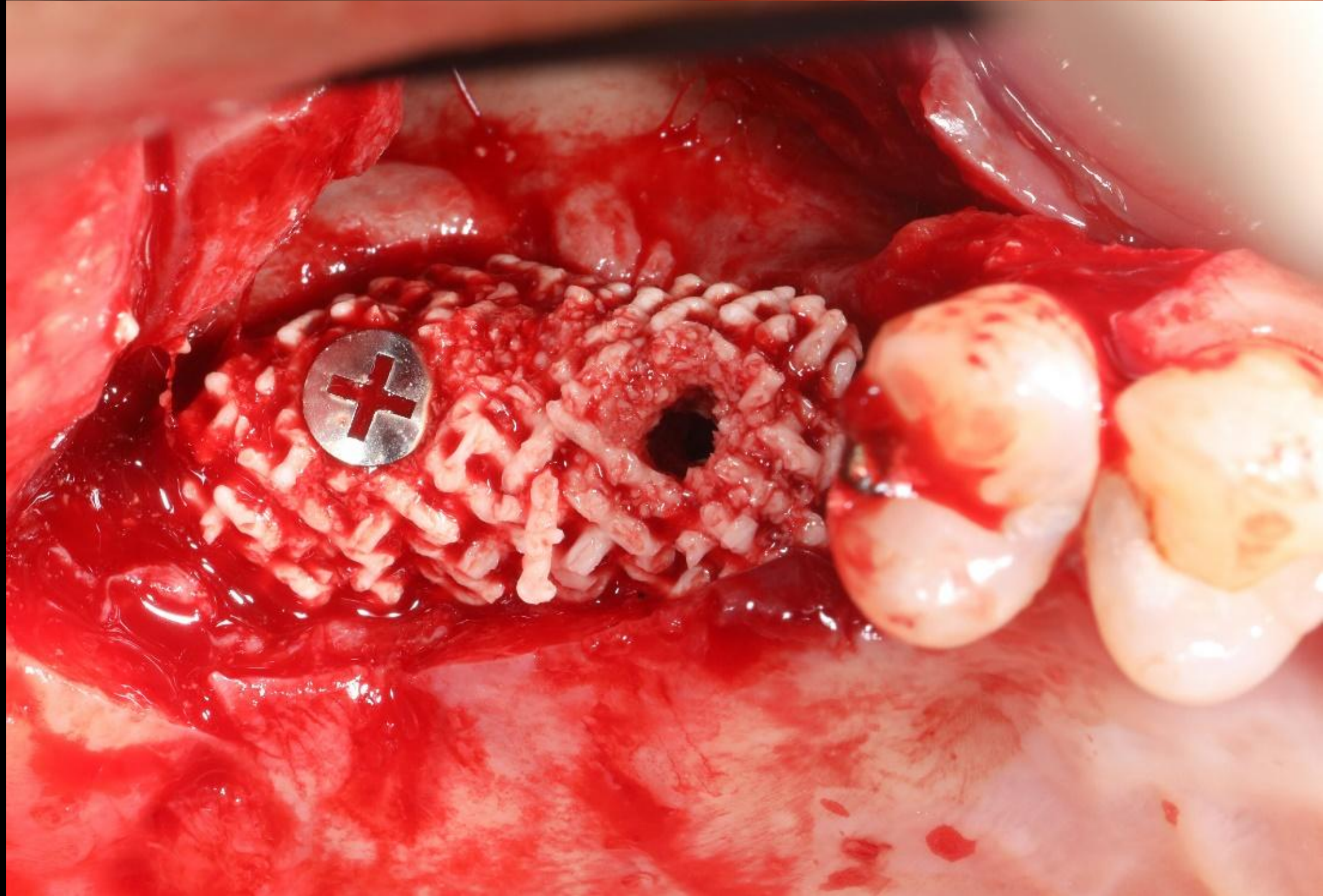
Surgery (2018-11-19)



Releasing Incision

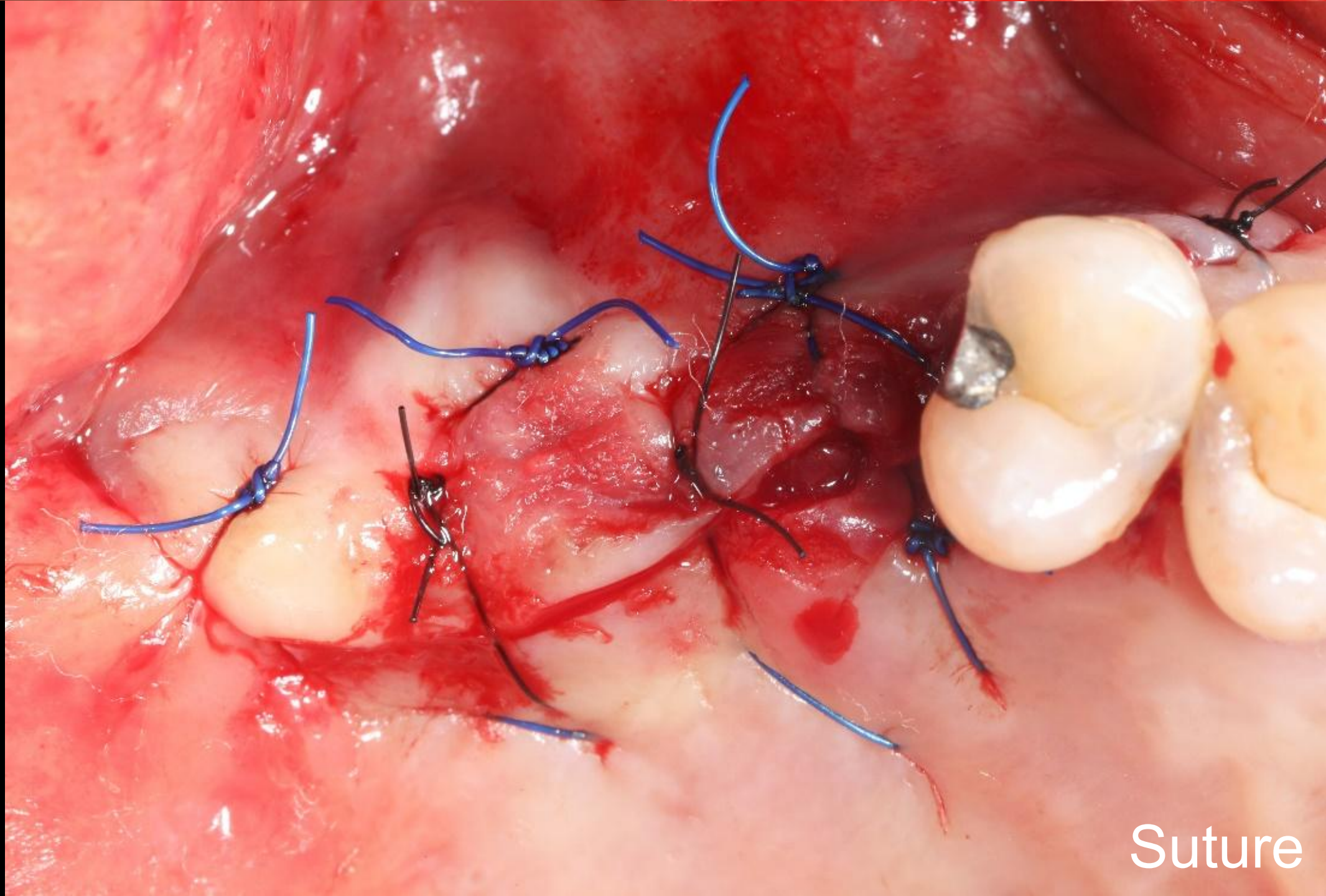
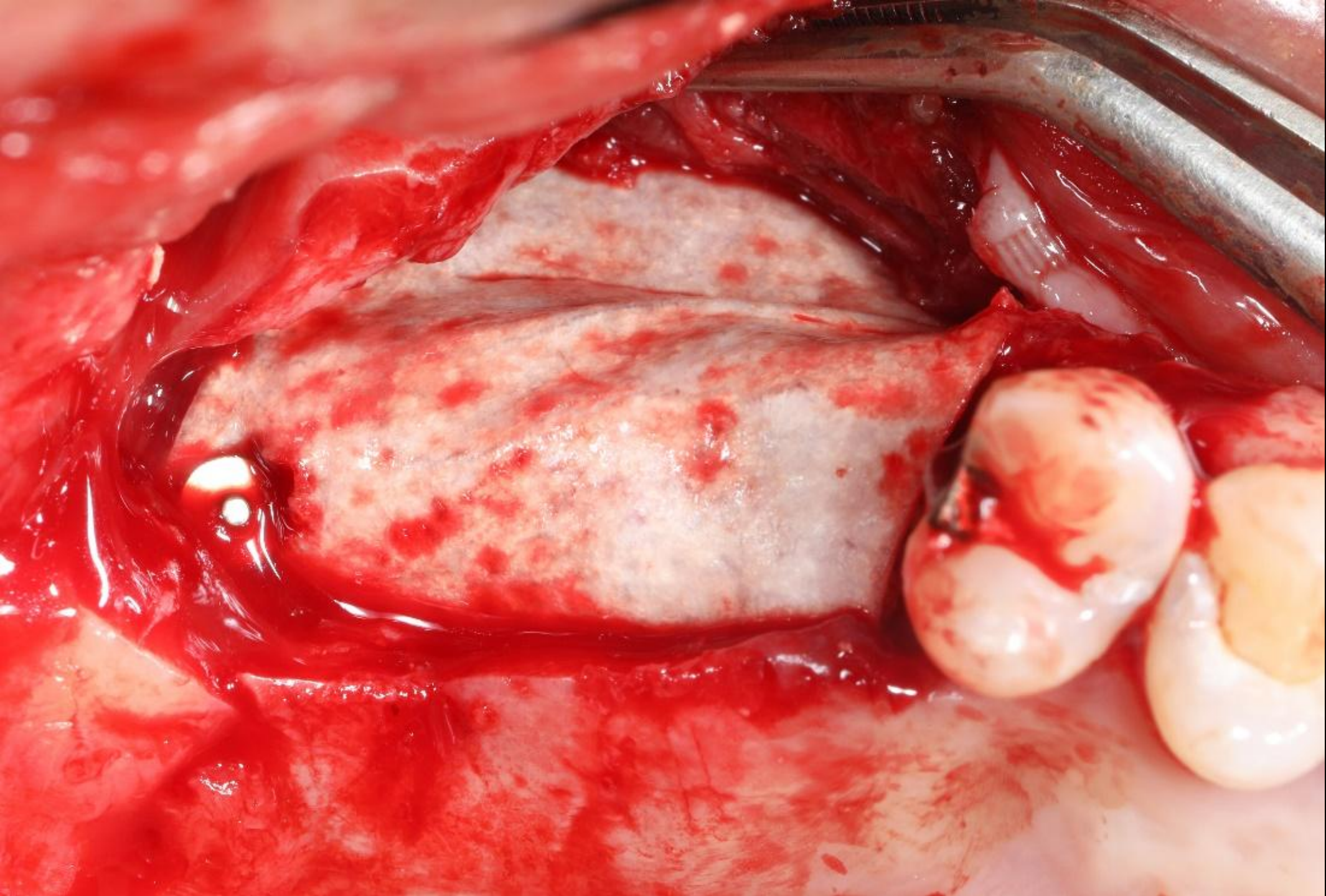


GBR Screw



Collagen Membrane

Surgery (2018-11-19)



Healing : 2 weeks (2018-12-03)



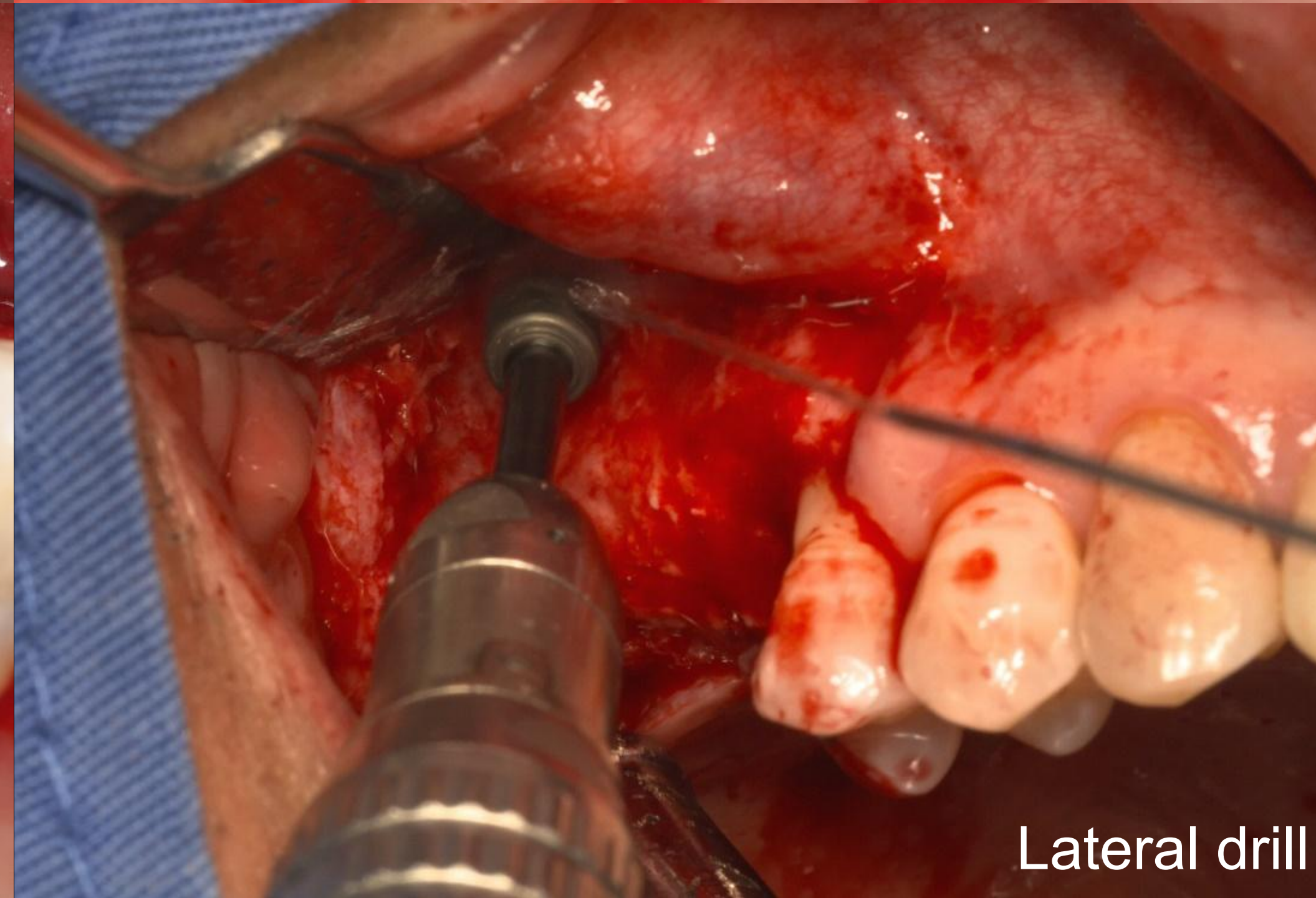
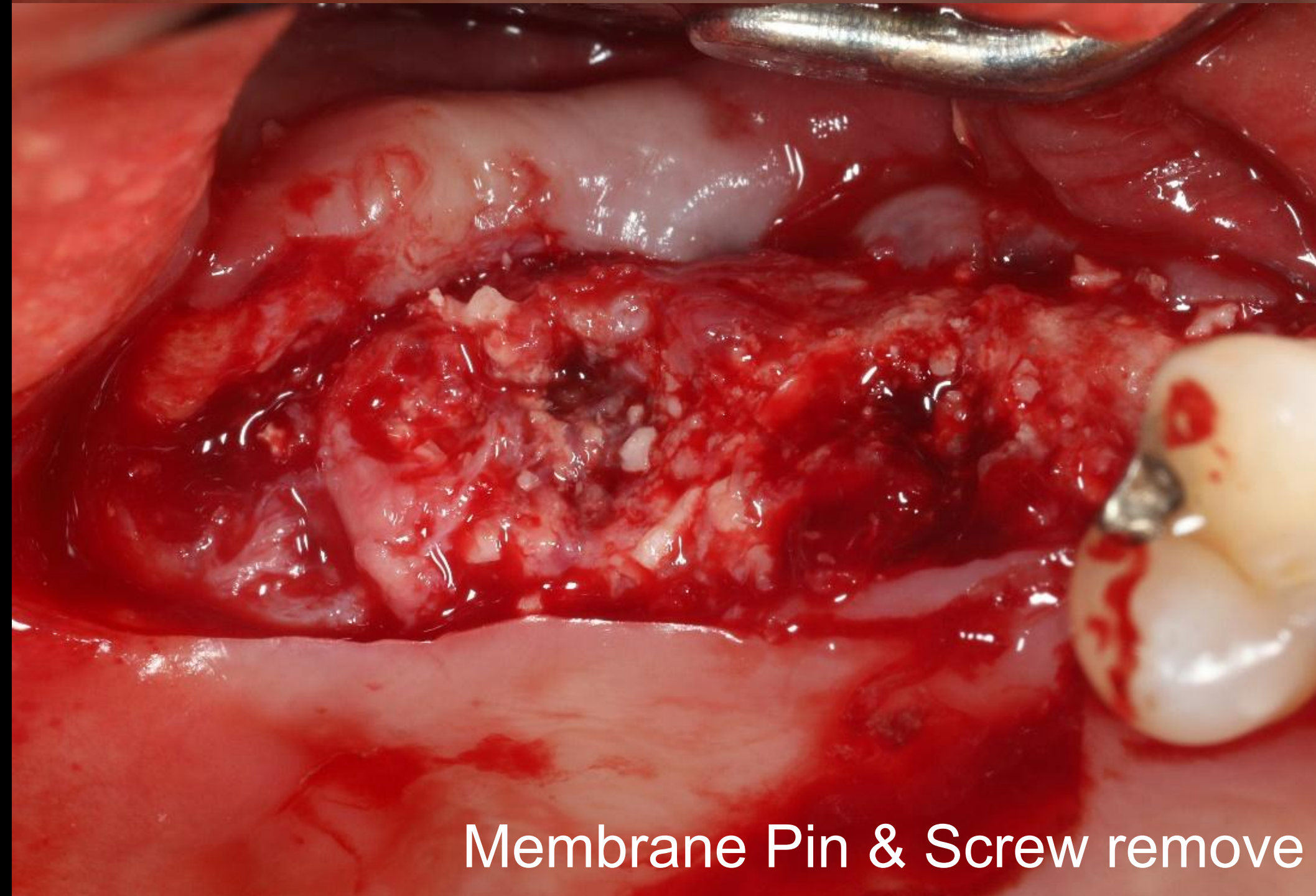
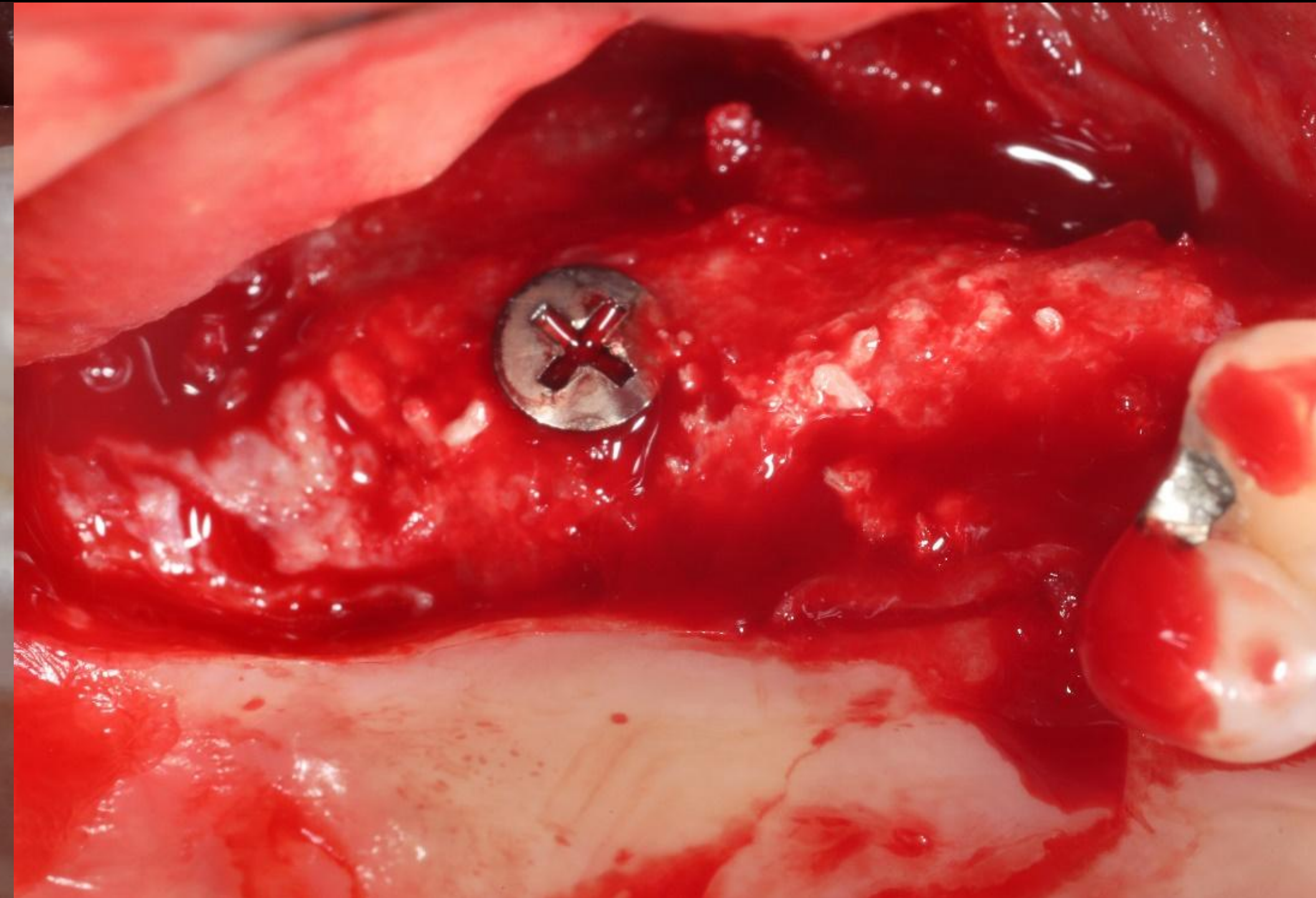
Healing : 1 year (2019-12-18)



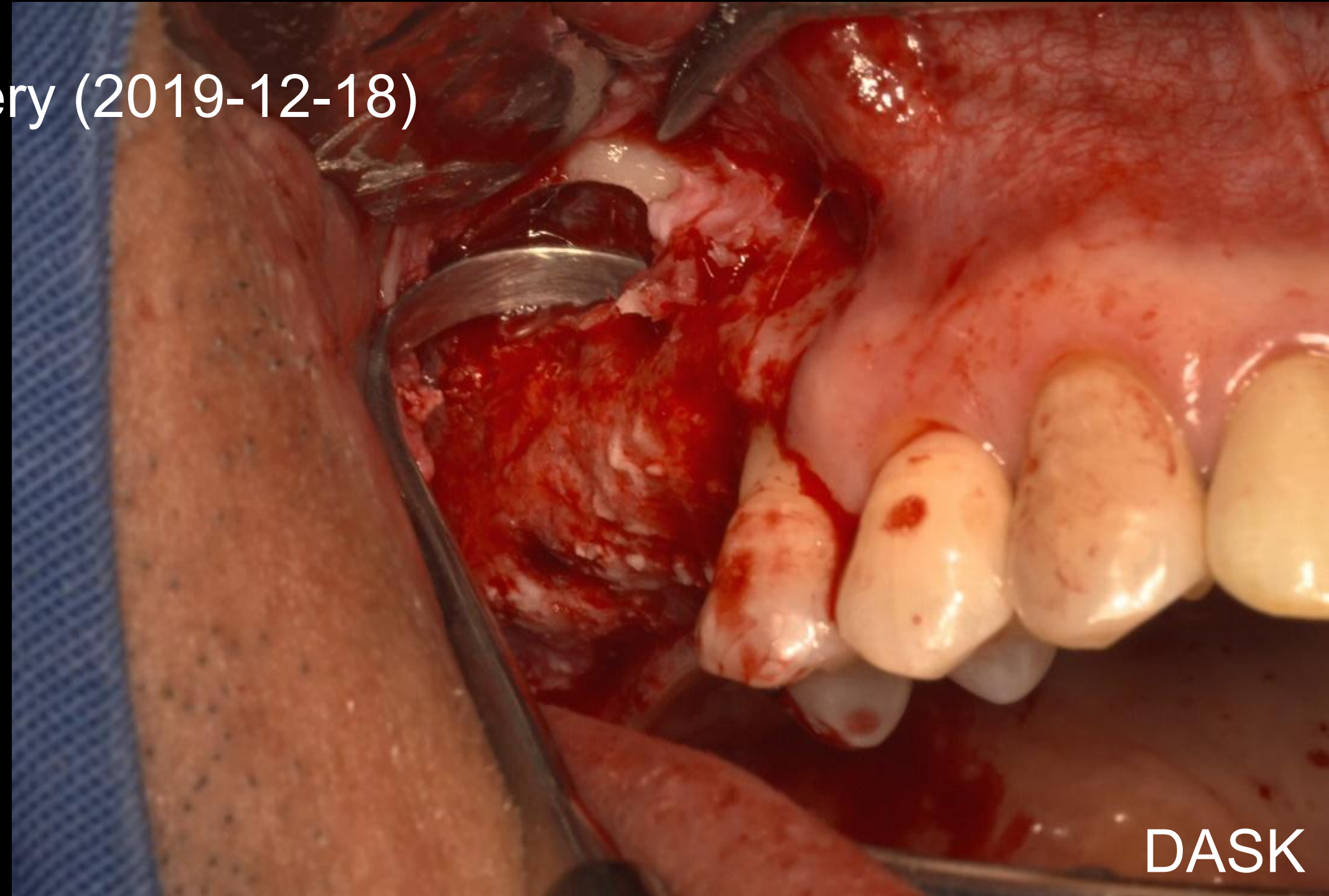
Follow up : 3 years 6 months (2024-01-25)



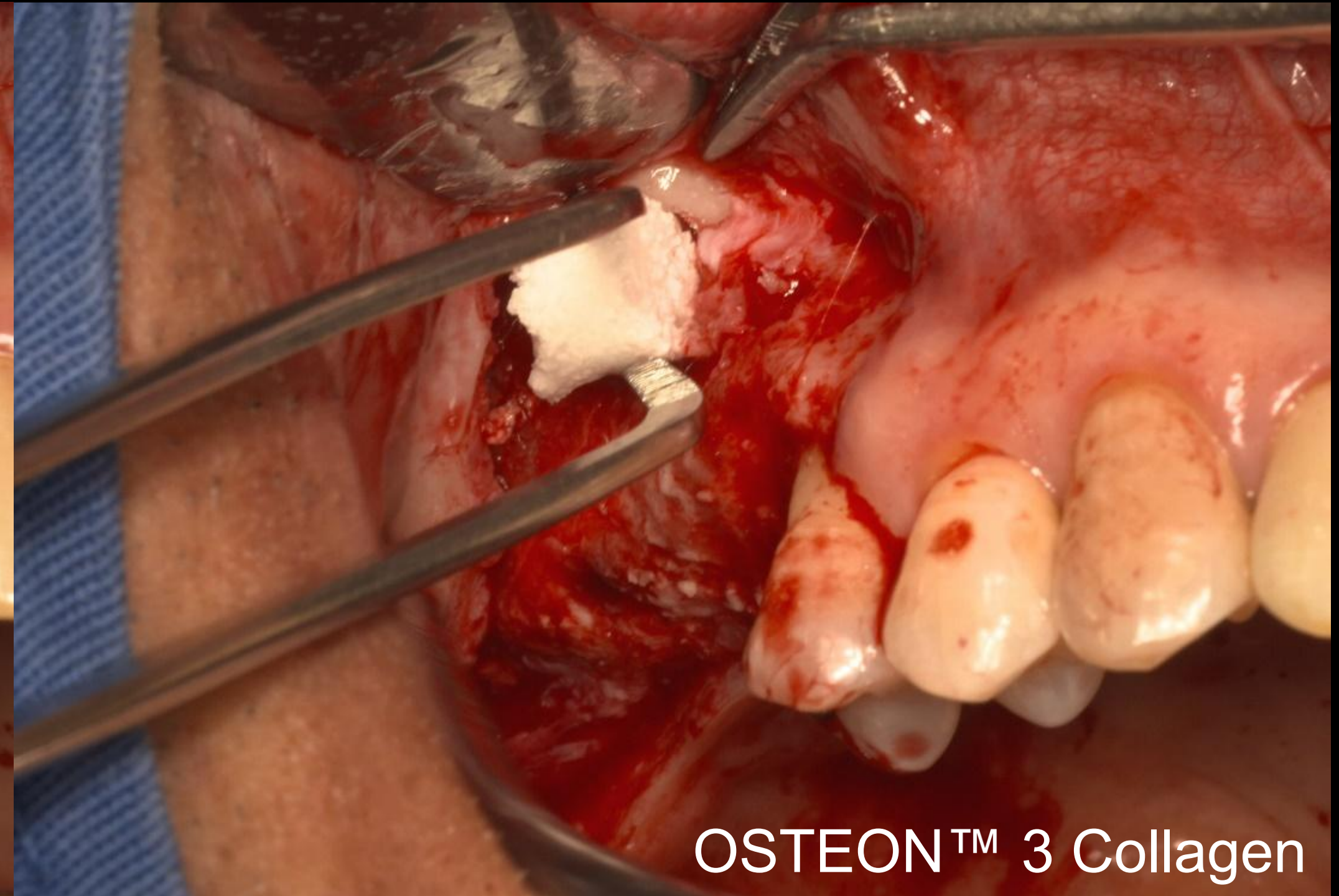
Surgery (2019-12-18)



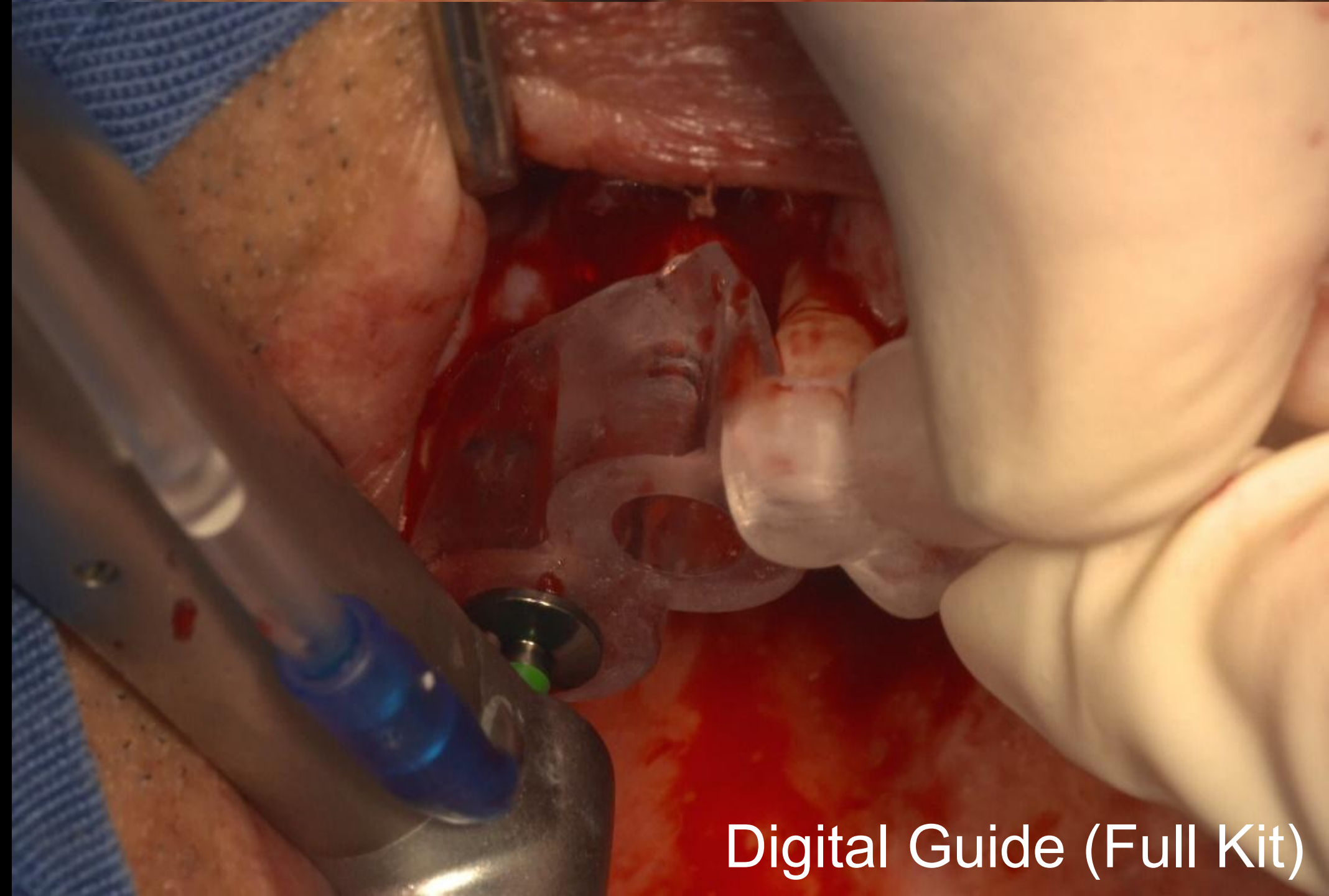
Surgery (2019-12-18)



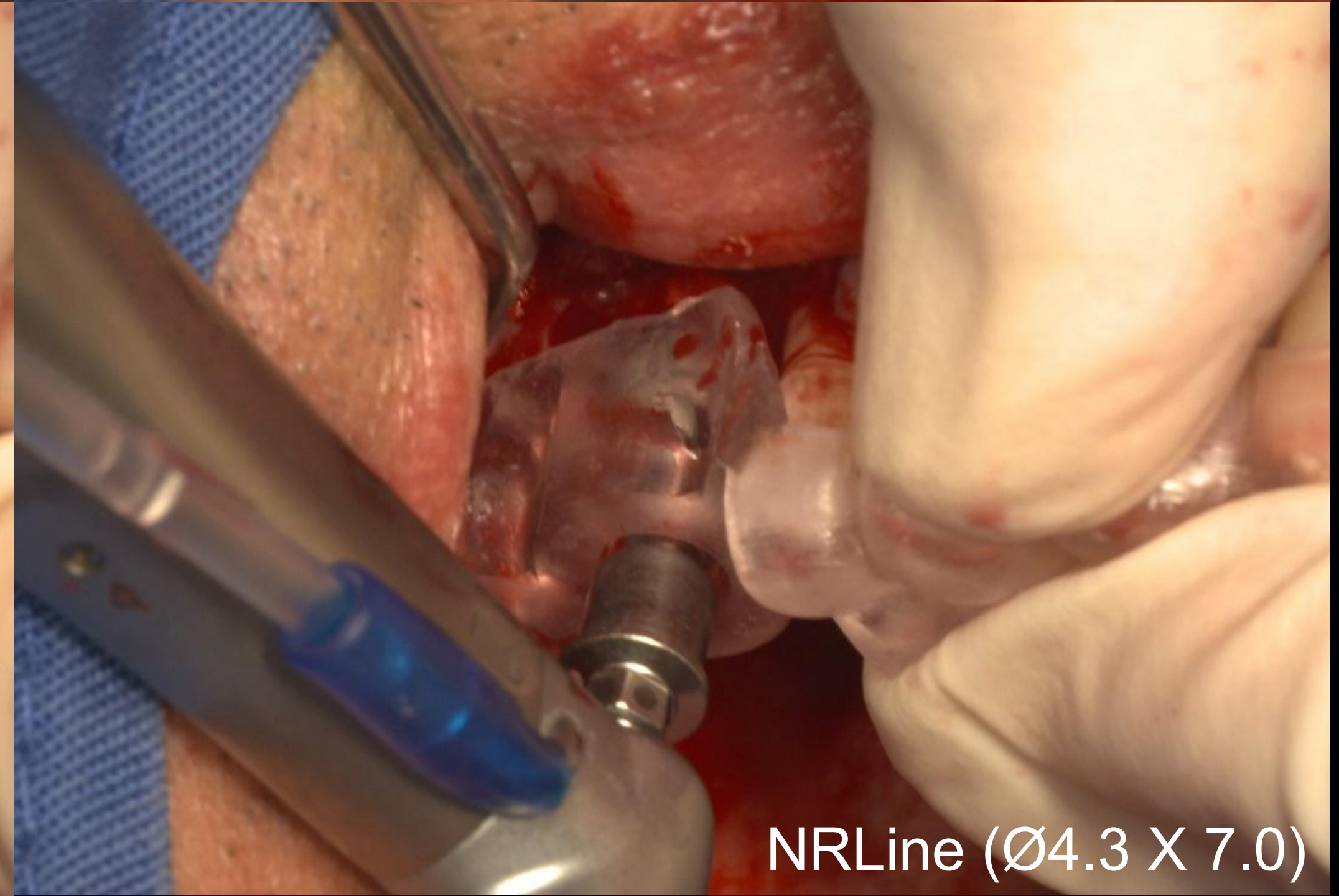
DASK



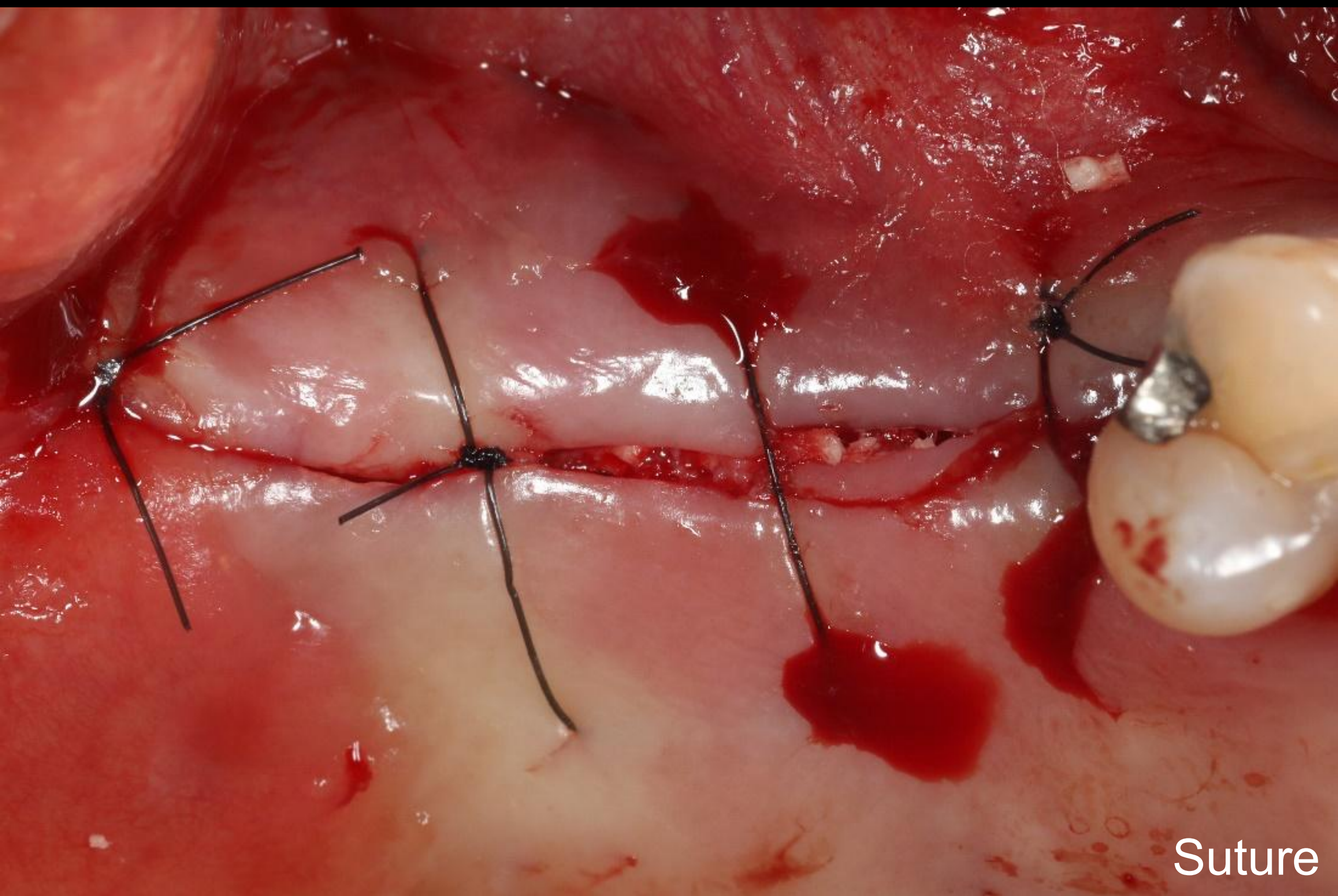
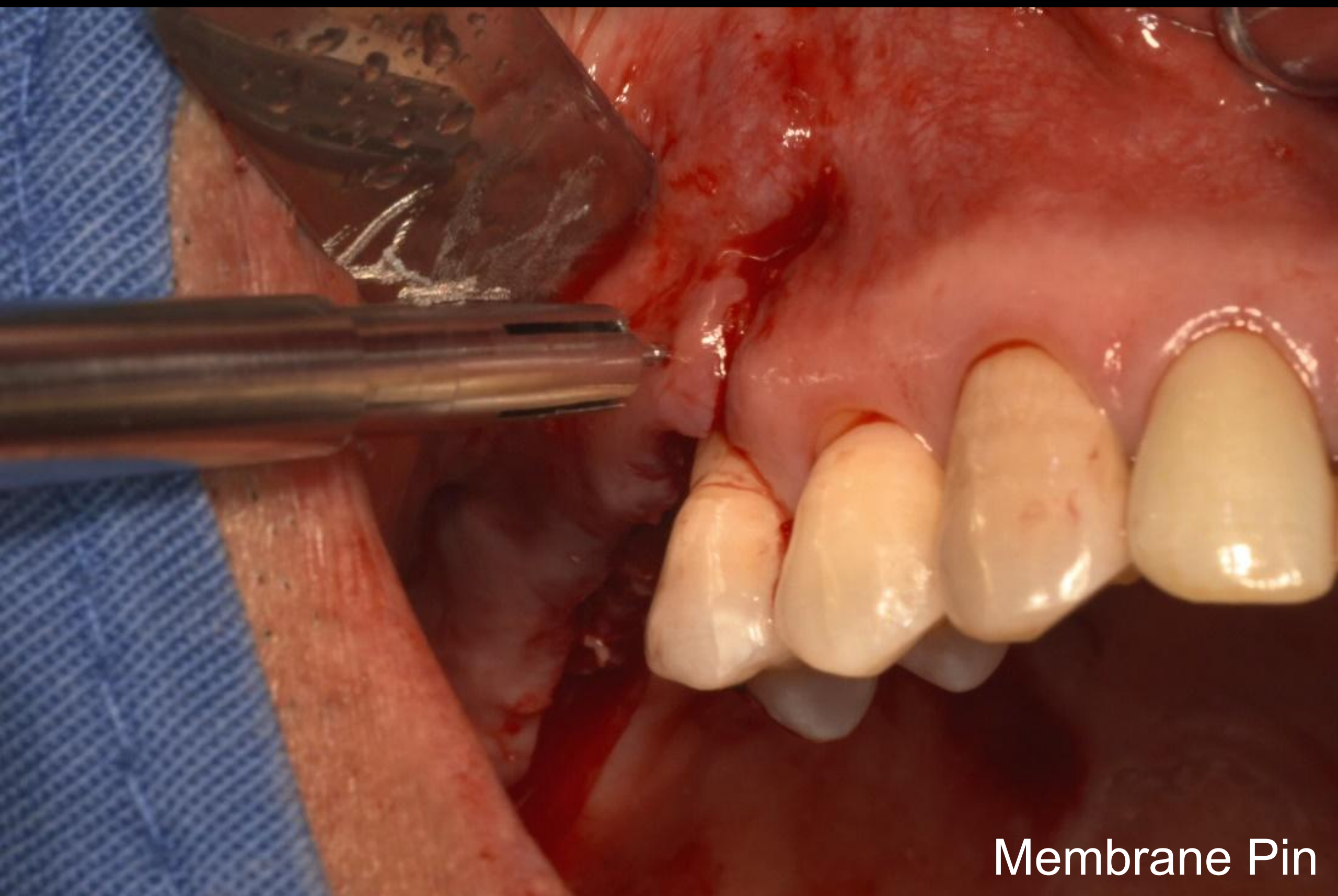
OSTEON™ 3 Collagen



Digital Guide (Full Kit)



NRLine (Ø4.3 X 7.0)



Healing : 2 months (After #16 2nd Surgery) / #17 2nd Surgery (2020-03-26)



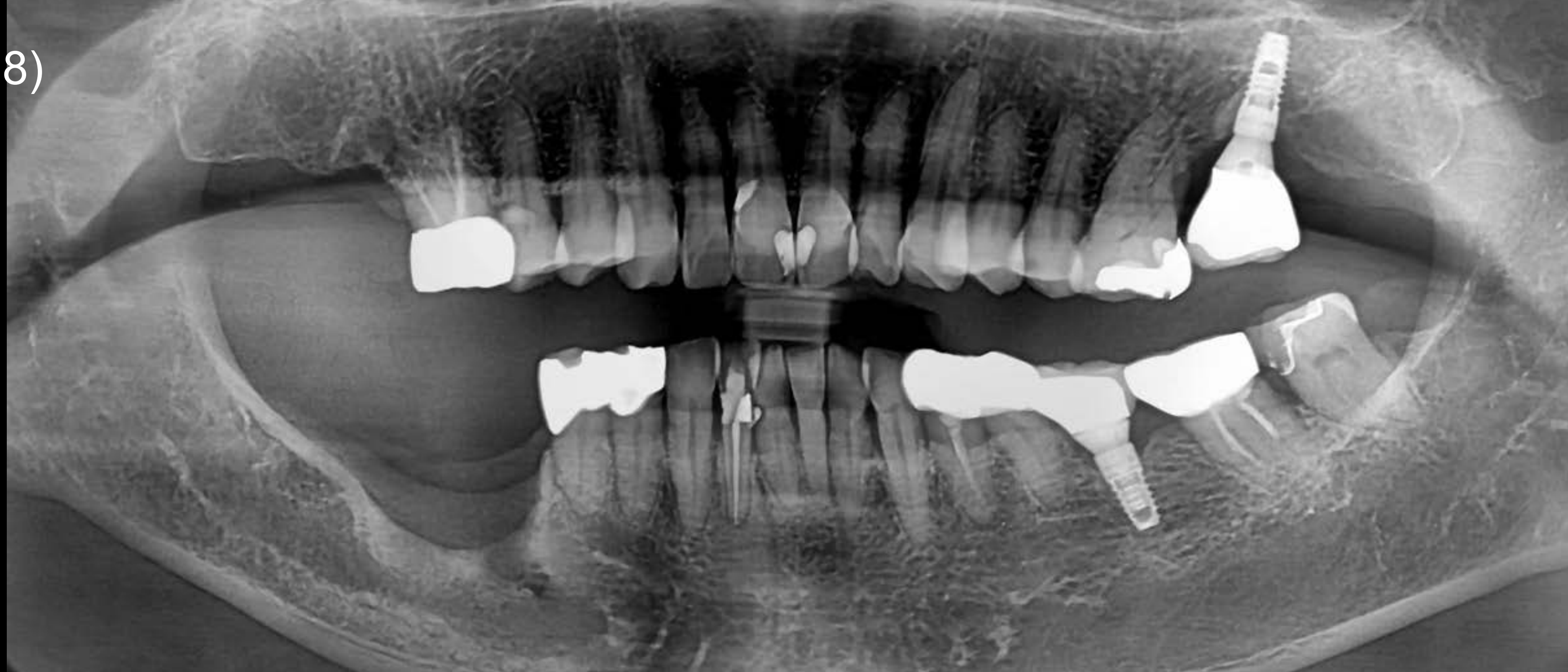
Final prosthesis (2020-07-23)



Follow up : 6 months (2021-01-28)



Oral-exam (2022-04-28)

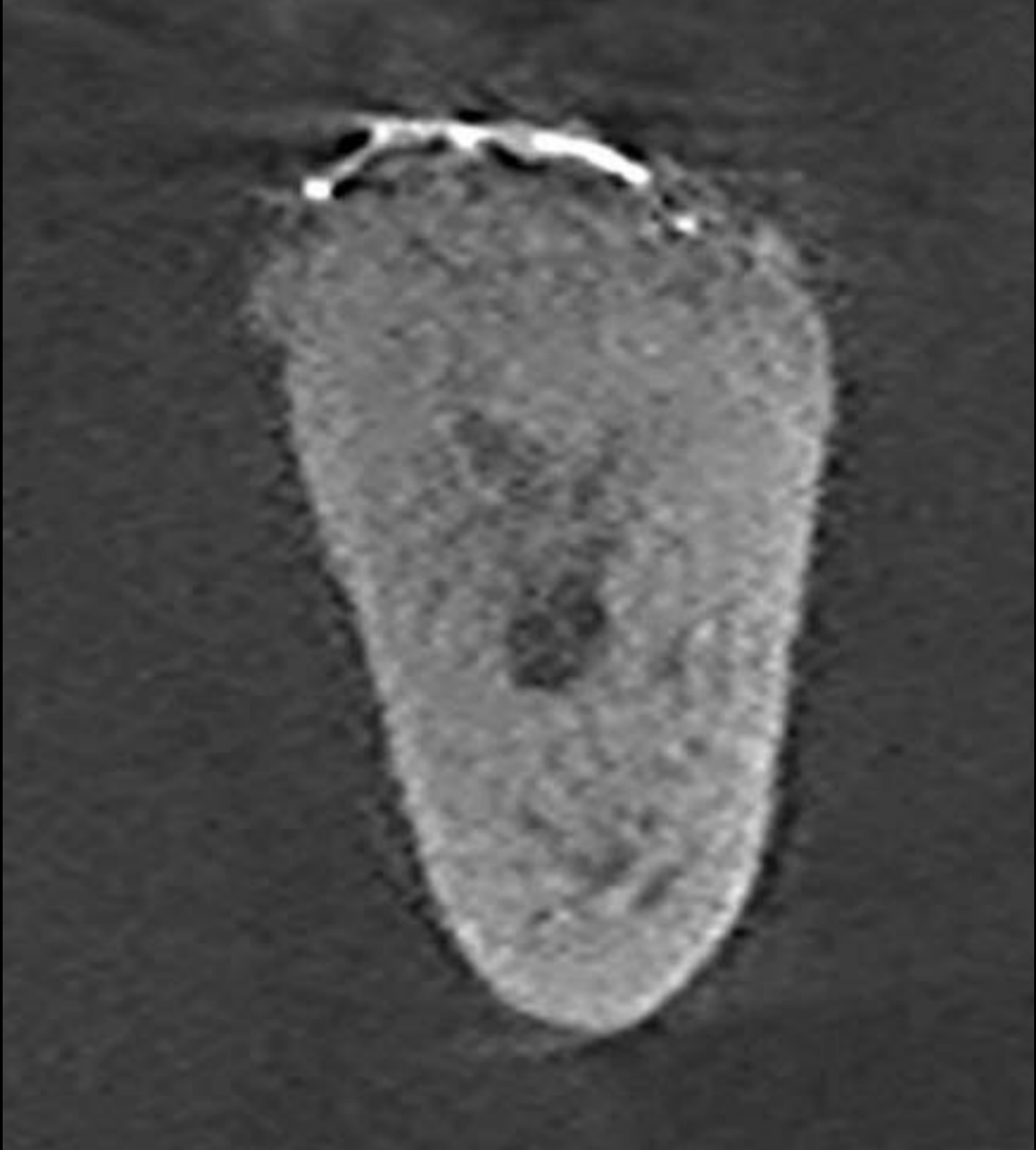


Follow up : 1 year 2 months (2024-11-07)

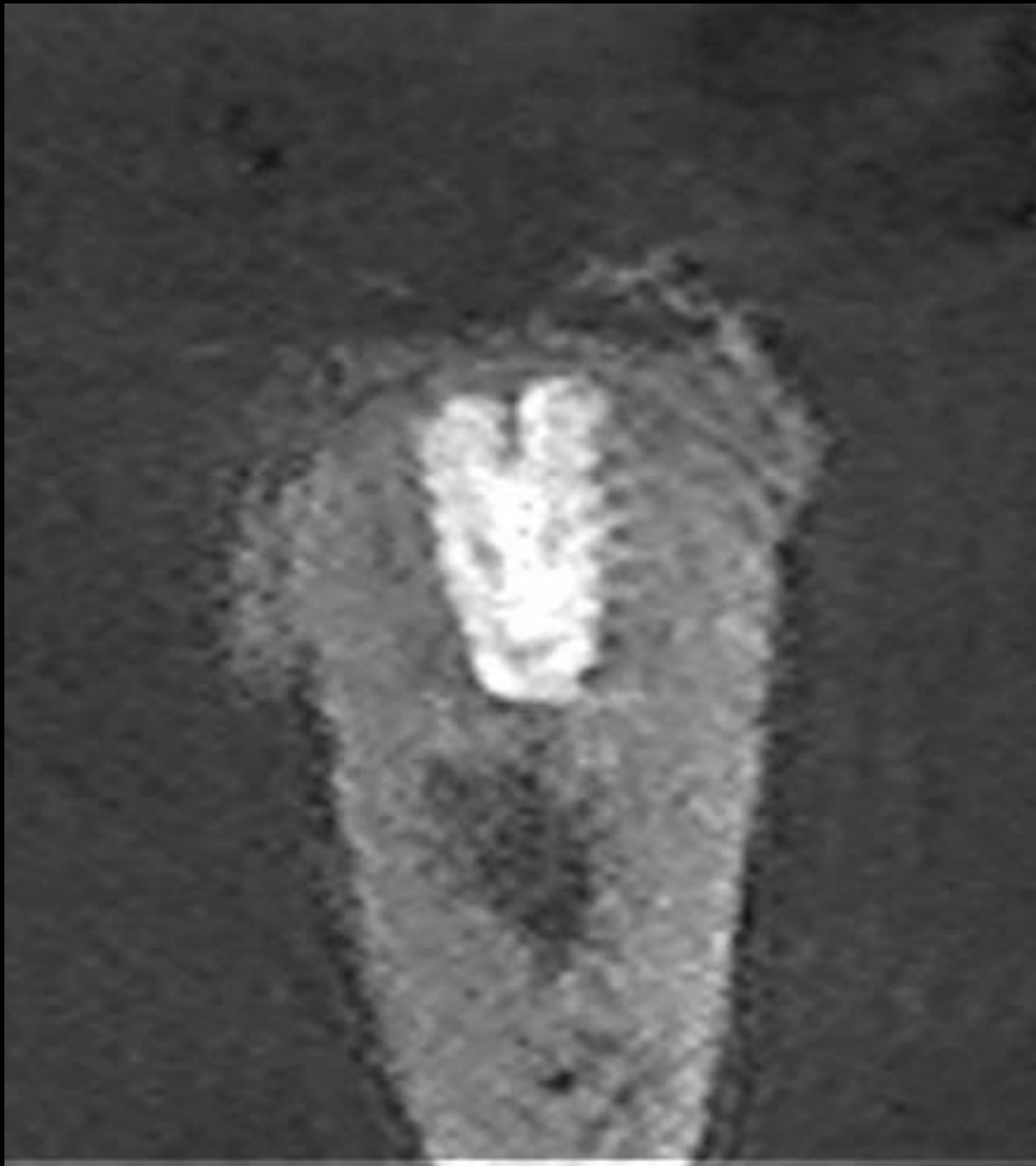
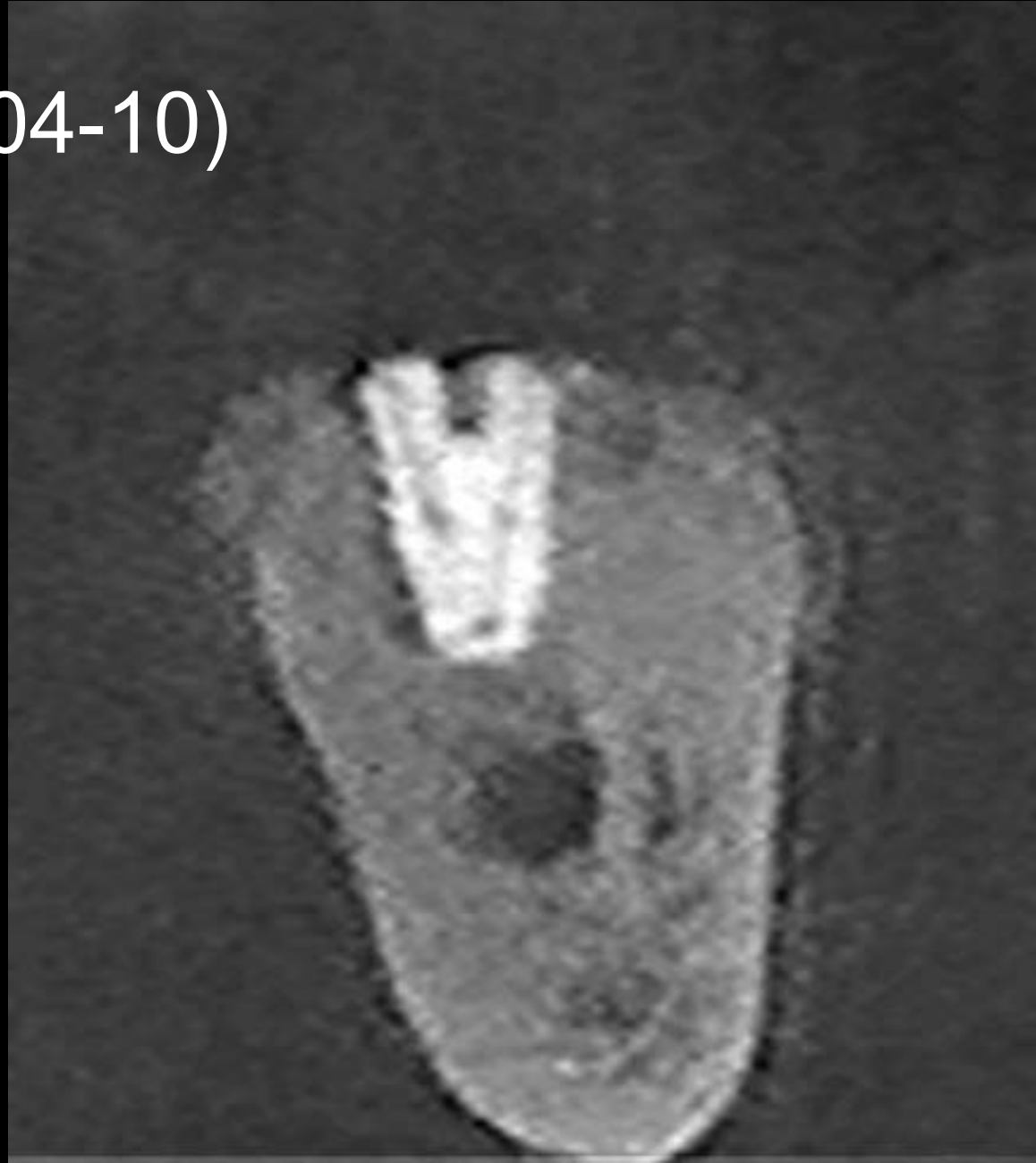




Pre-op CT (2023-04-10)

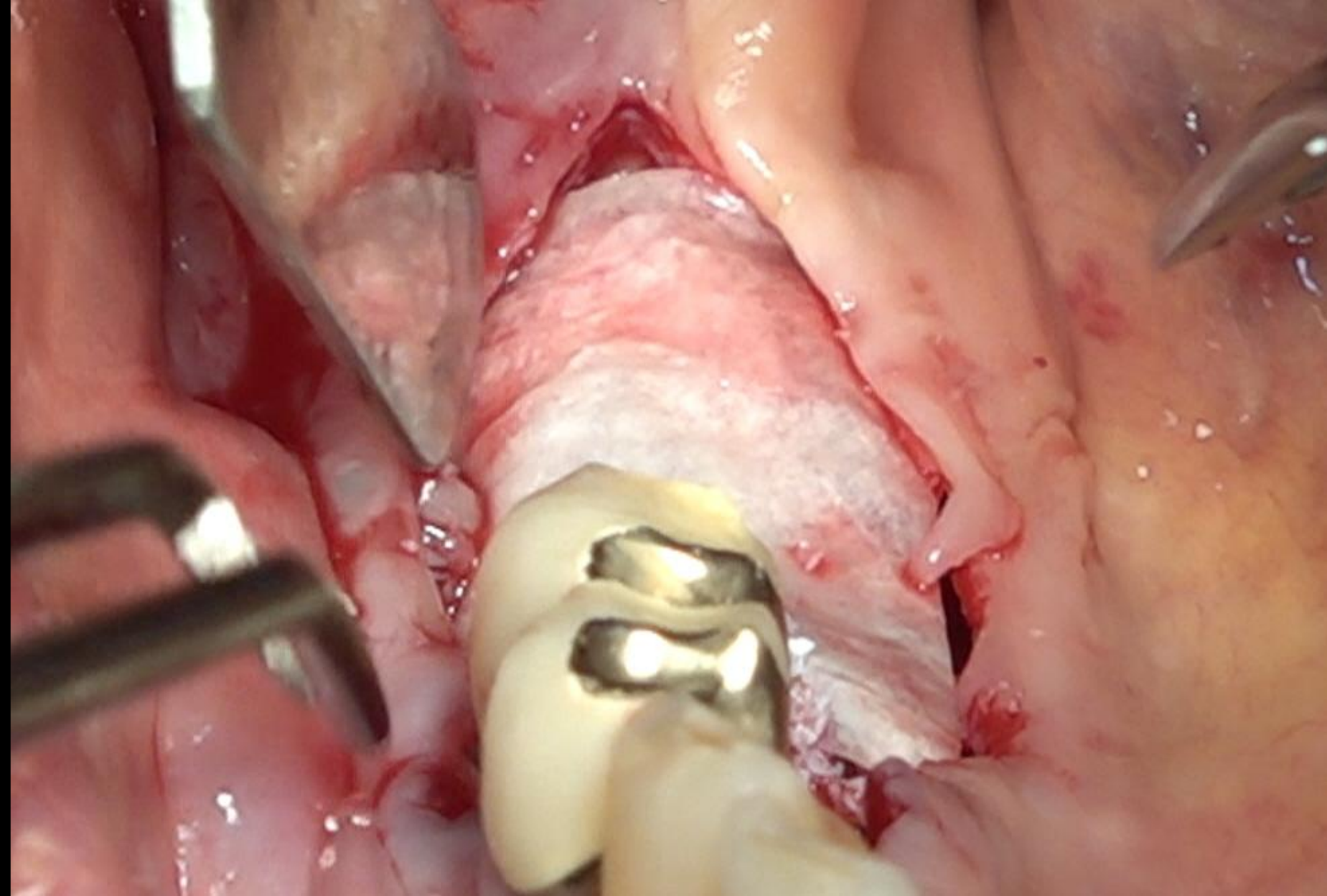
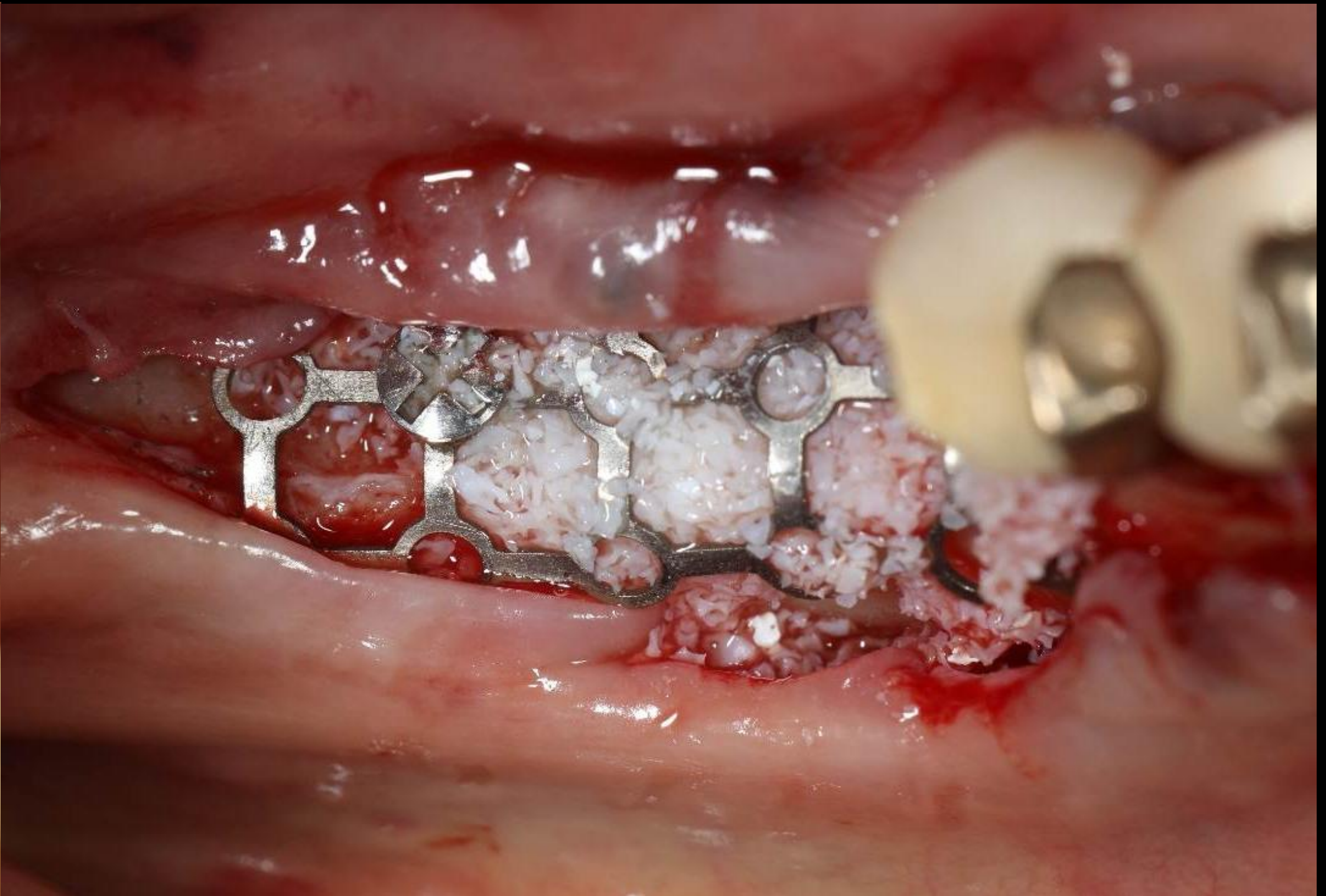
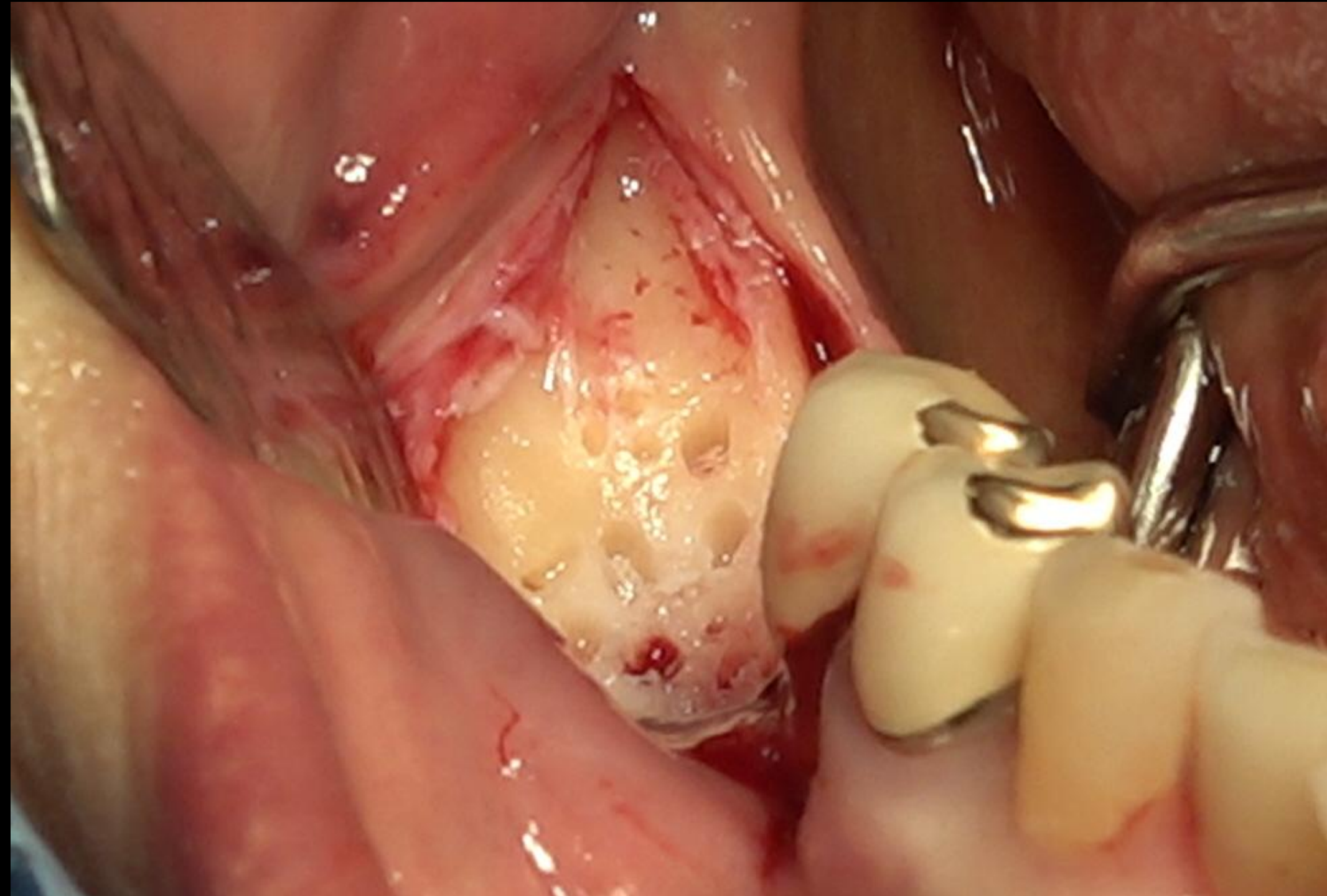


Post-op CT (2023-04-10)

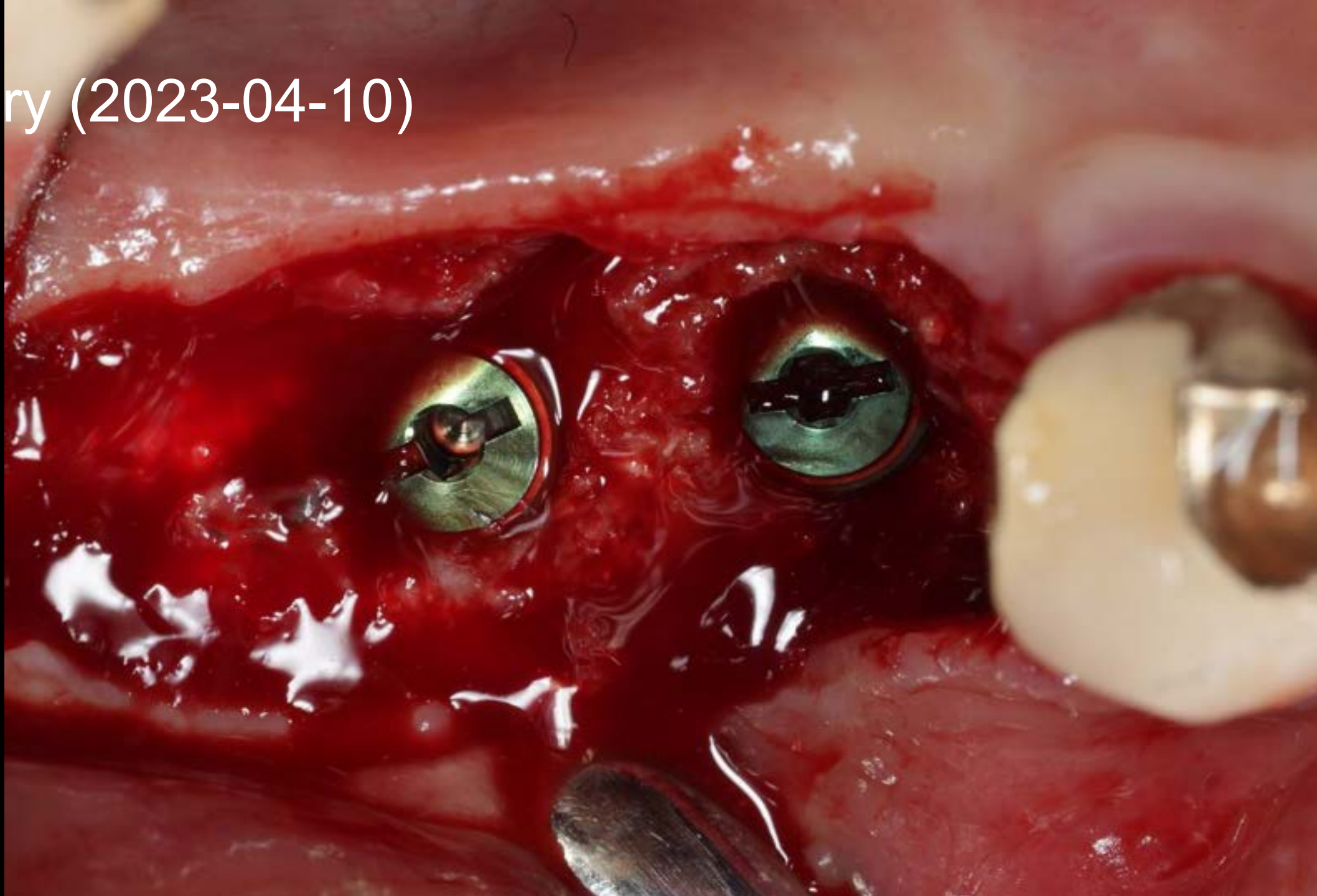


#47

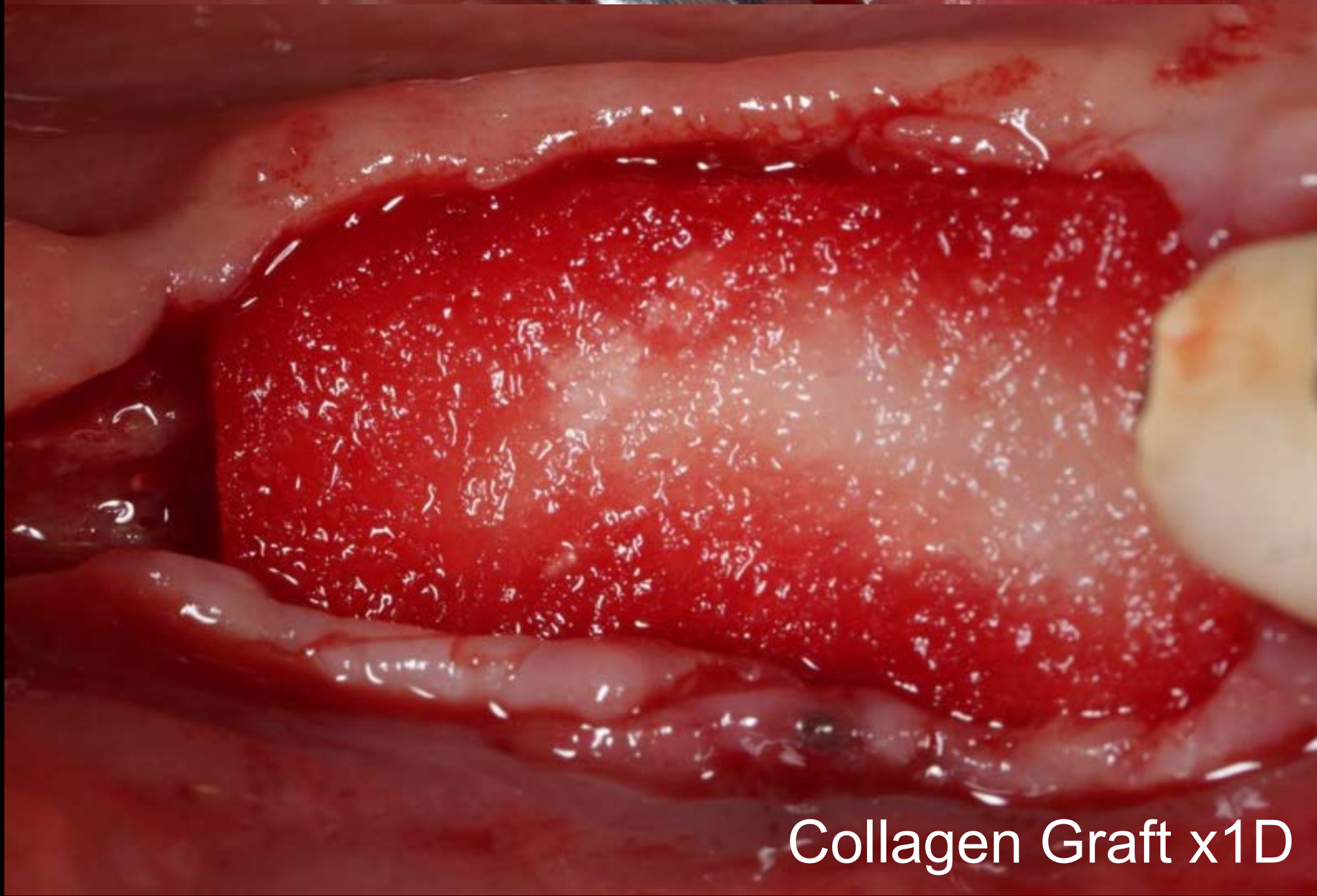
#46



Surgery (2023-04-10)



OSTEON™ 3 Collagen



Collagen Graft x1D



Suture

Healing : 1 week (2023-04-17)



Healing : 3 months (2023-06-26)





Oral exam (2025-02-12)



Pre-op (2025-07-24)



Pre-op CT (2025-07-24)

#36



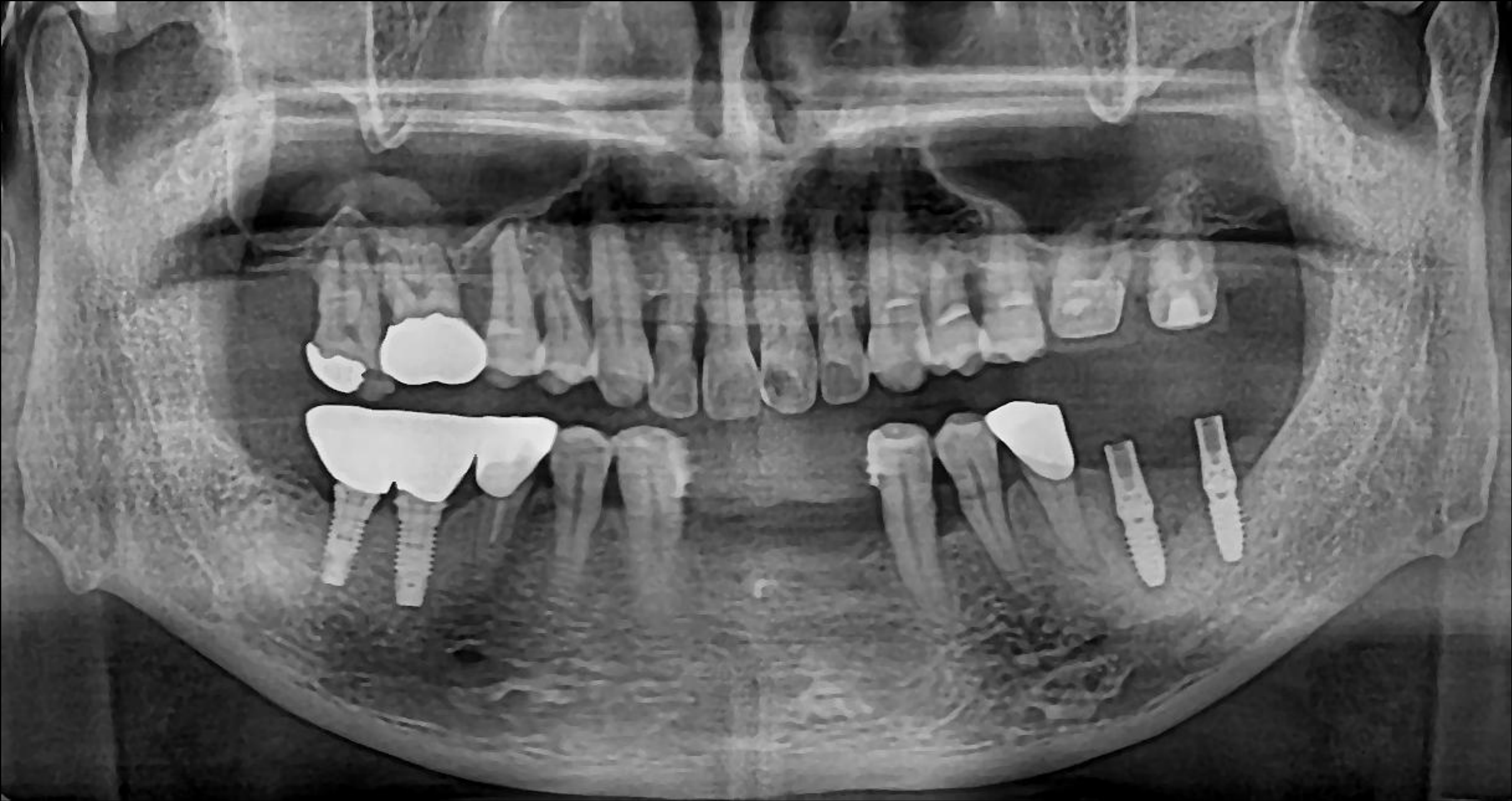
Post-op CT (2025-07-24)



#37



Post-op (2025-07-24)



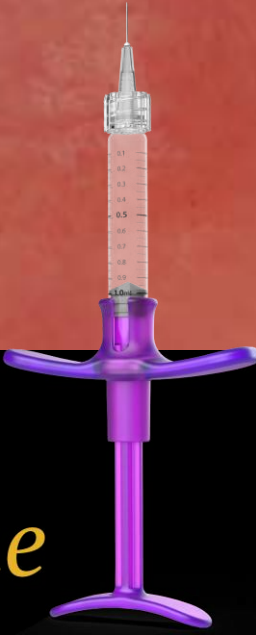
Before tissue expand (2025-06-04)



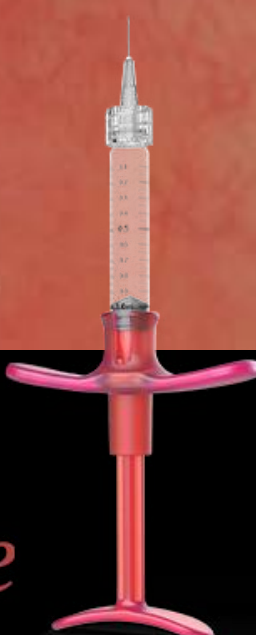
After tissue expand (2025-06-04)



Volume



Rose



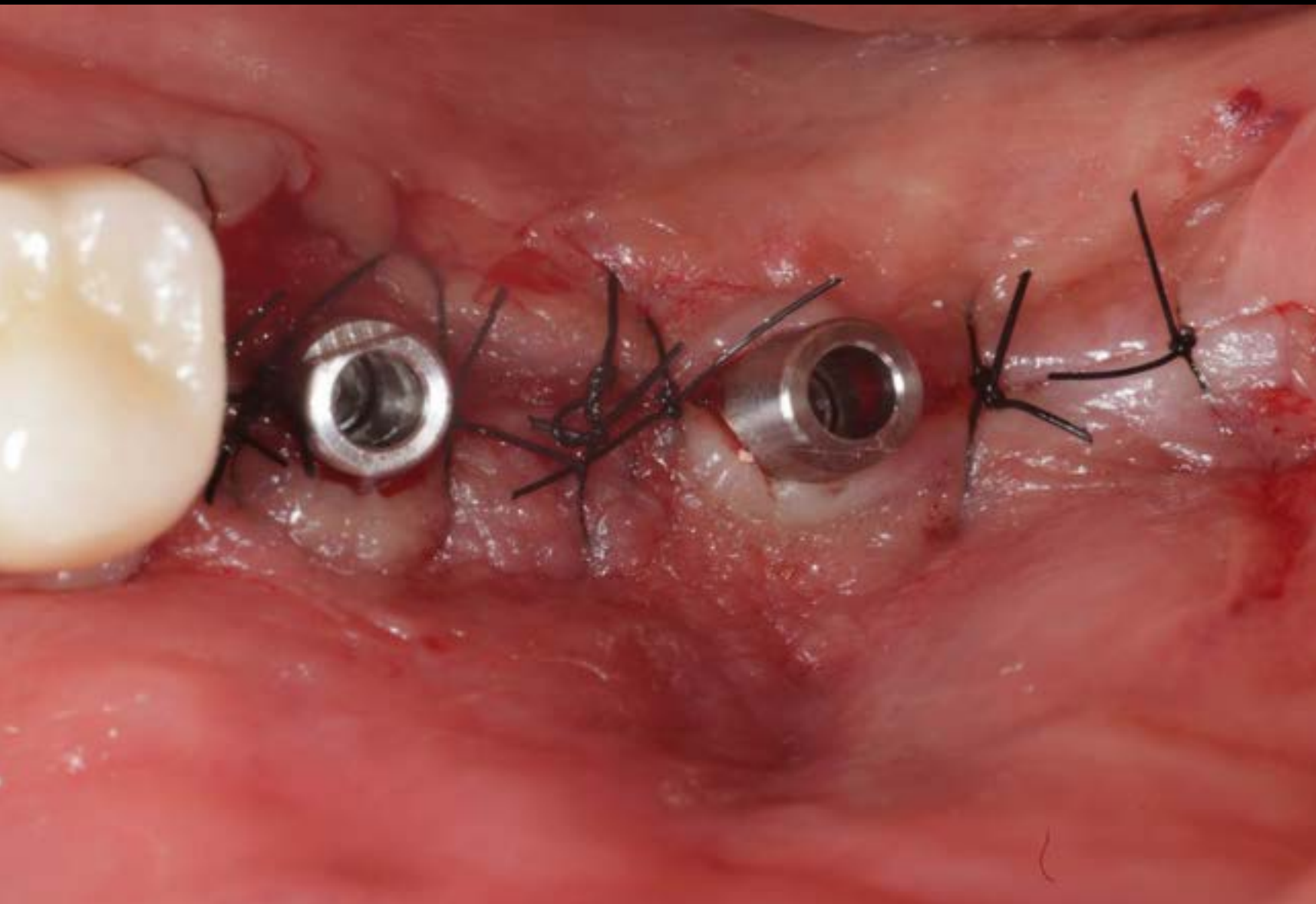
Surgery (2025-07-24)

bright TL (Ø4.0 X 7.0)

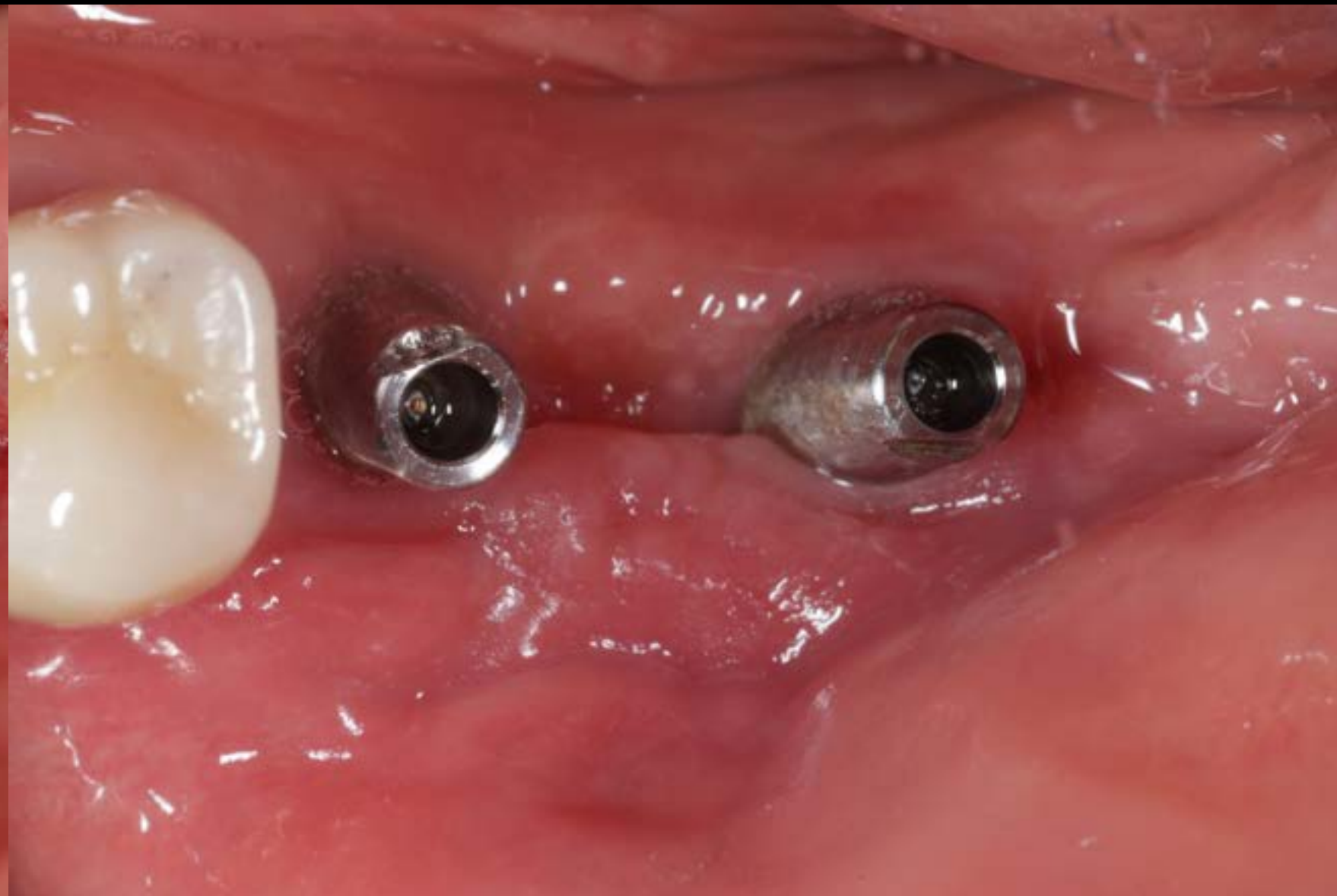
OSTEON™ Xeno Collagen

Collagen Graft x1D
Collagen Graft x2D

Post-op (2025-07-24)



Healing : 1 month (2025-09-09)



Healing : 2 months (2025-09-23)



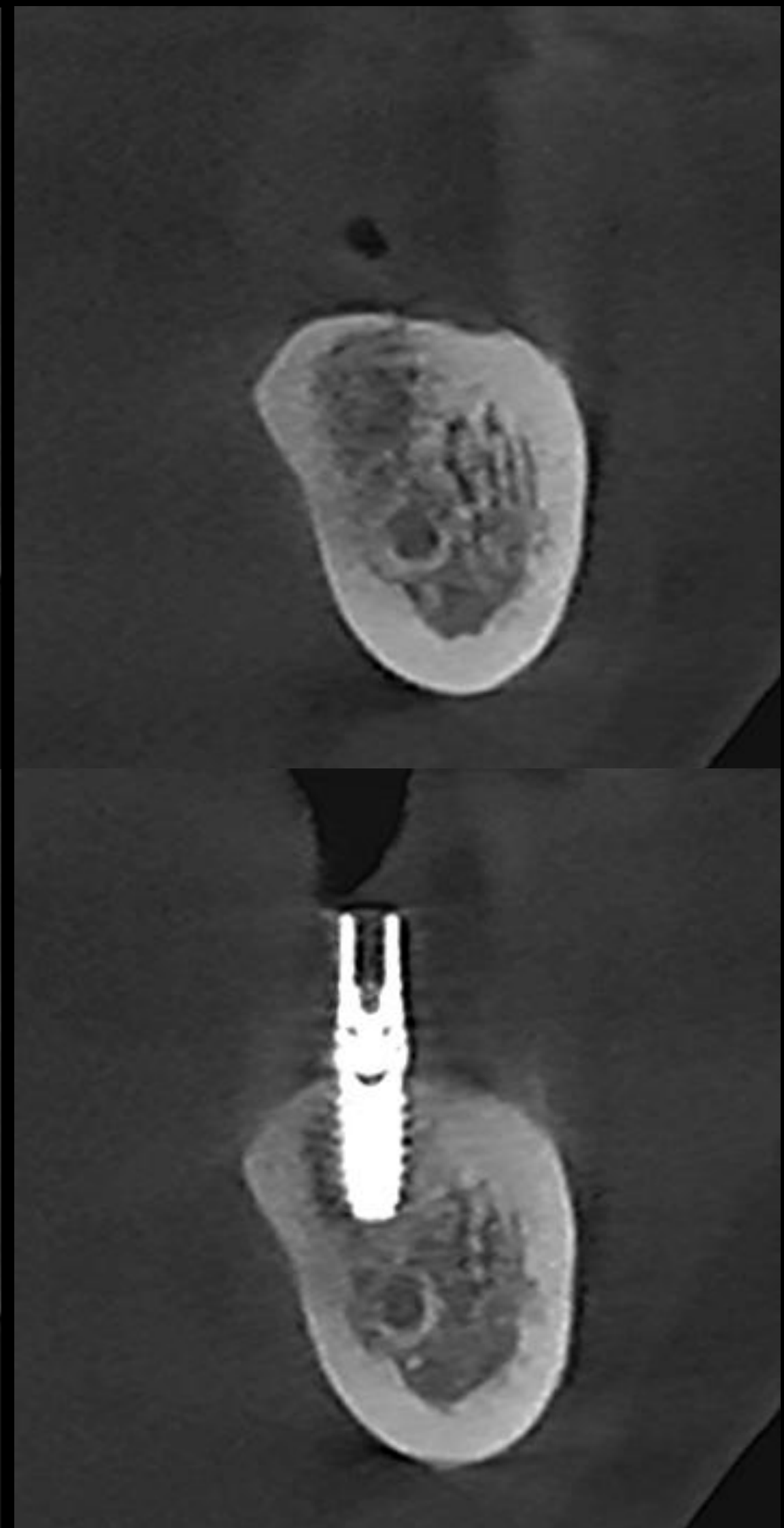
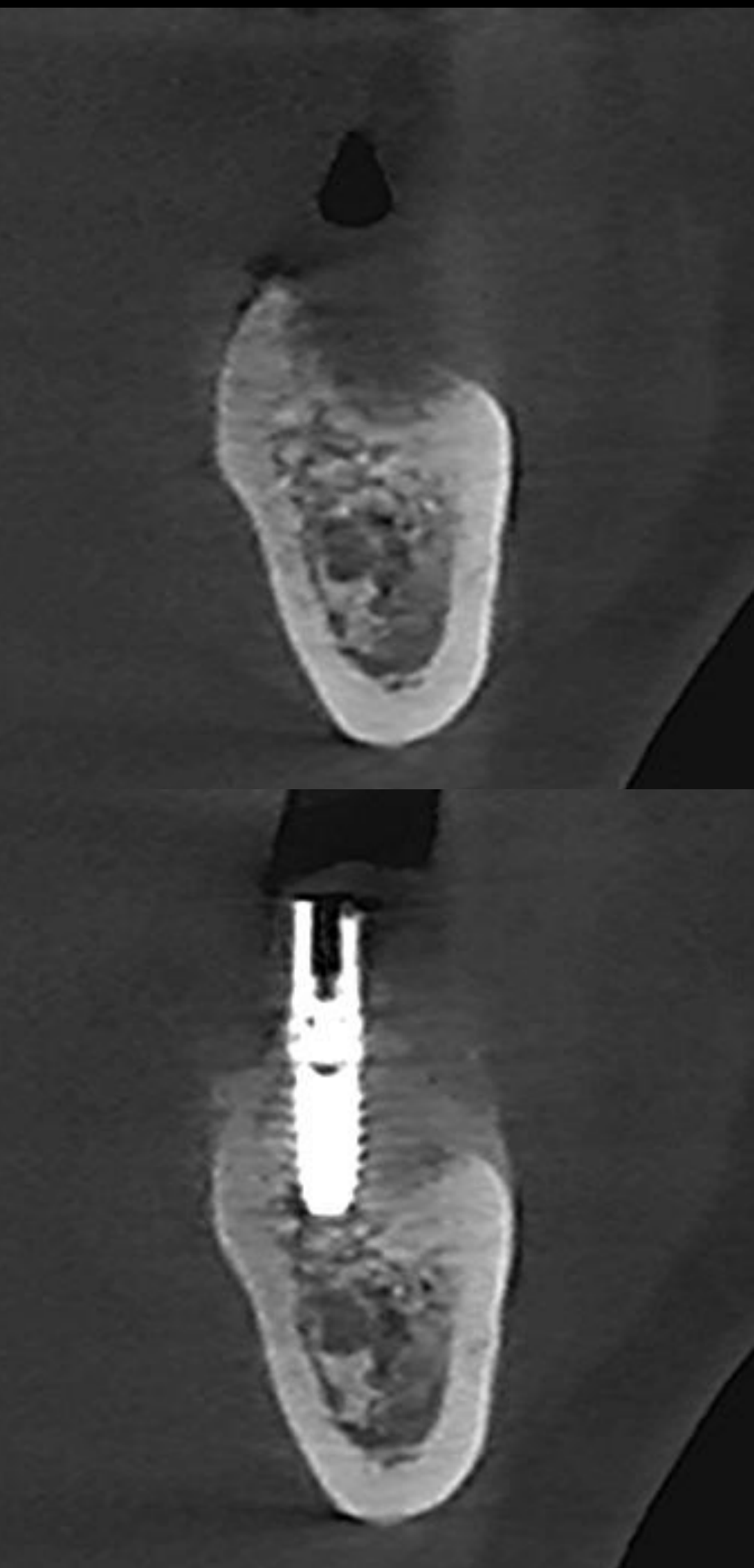
Provisional restoration (2025-09-23)



Healing : 3 months (2025-11-04)



Pre-op (2025-10-31)



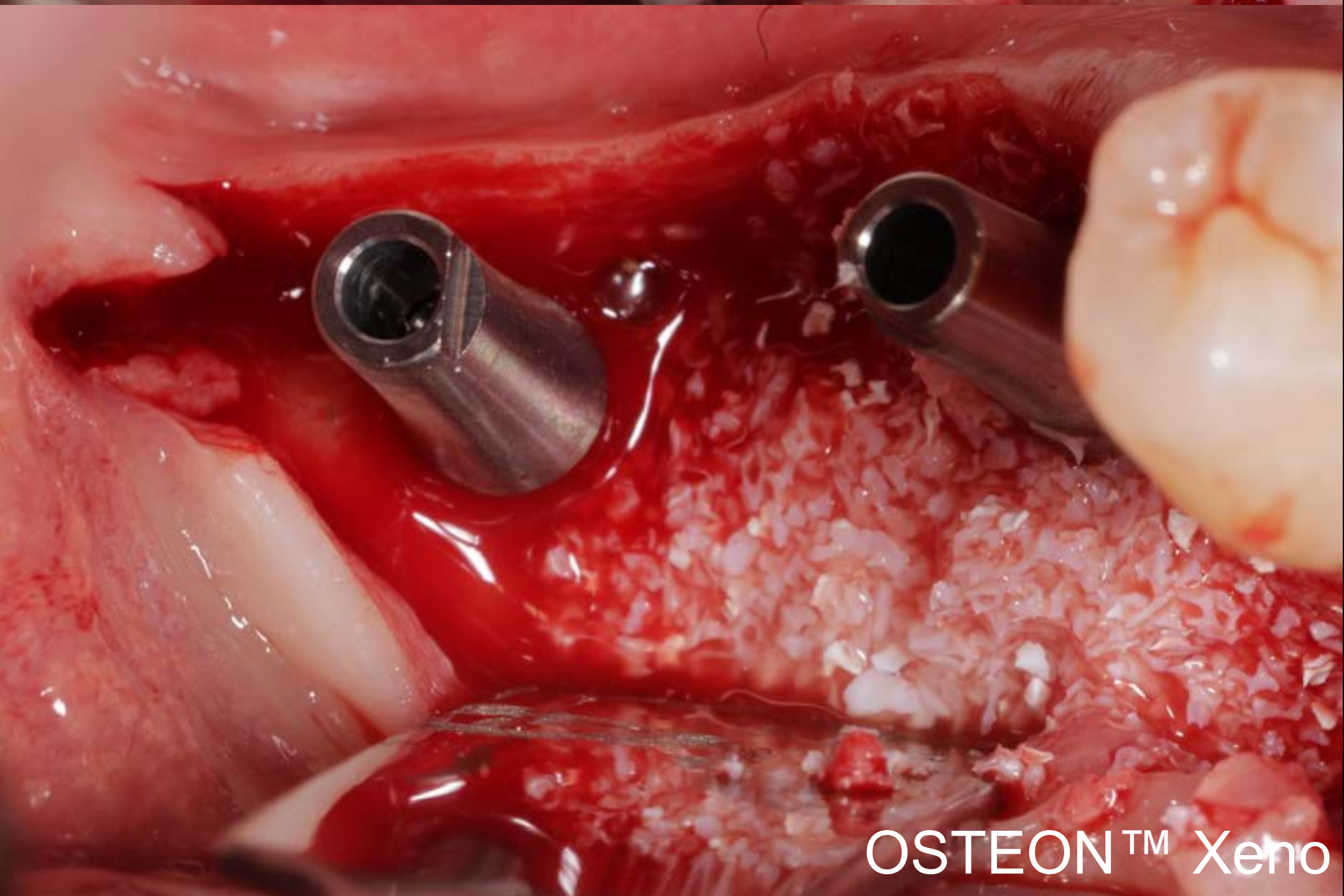
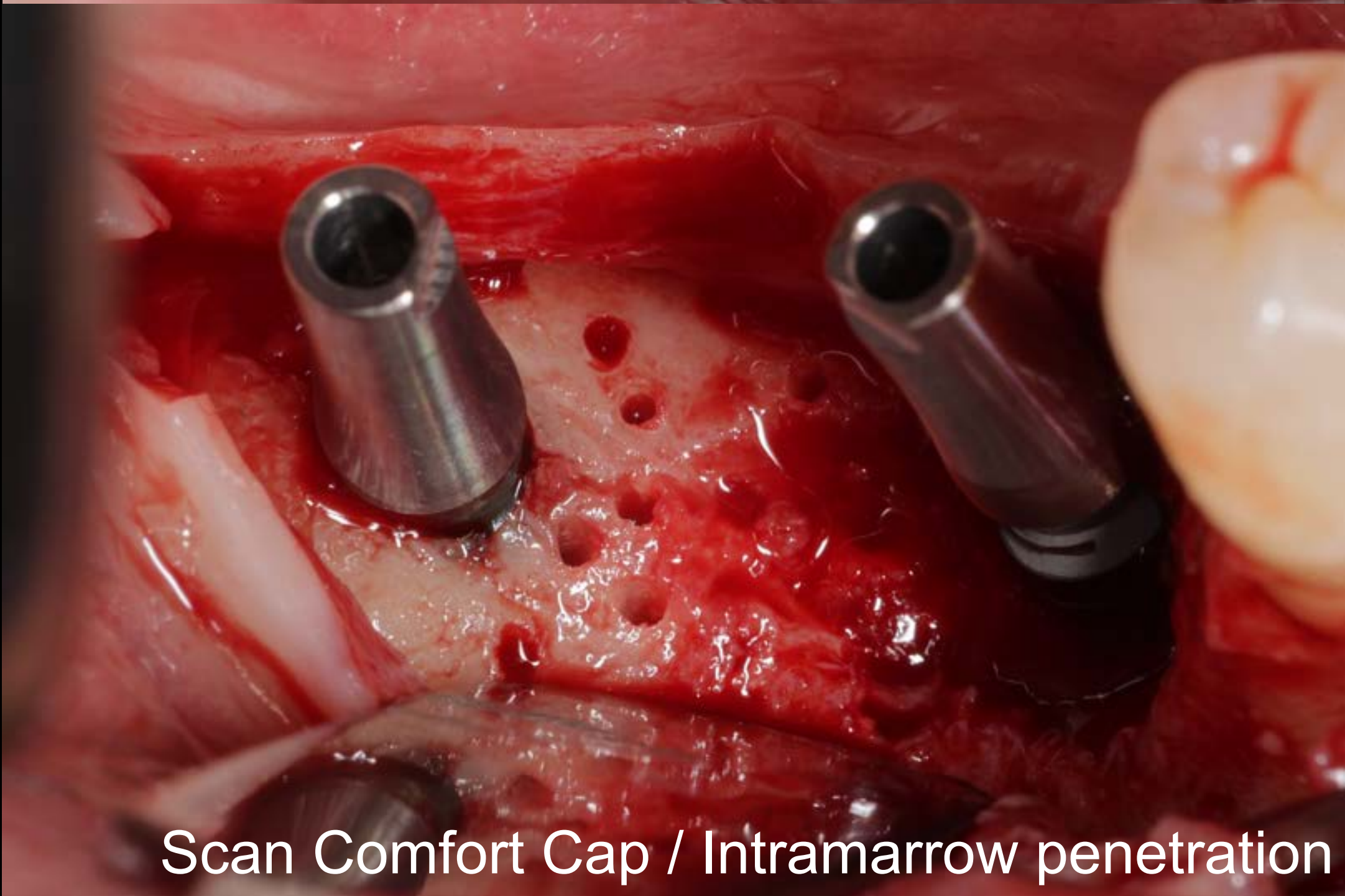
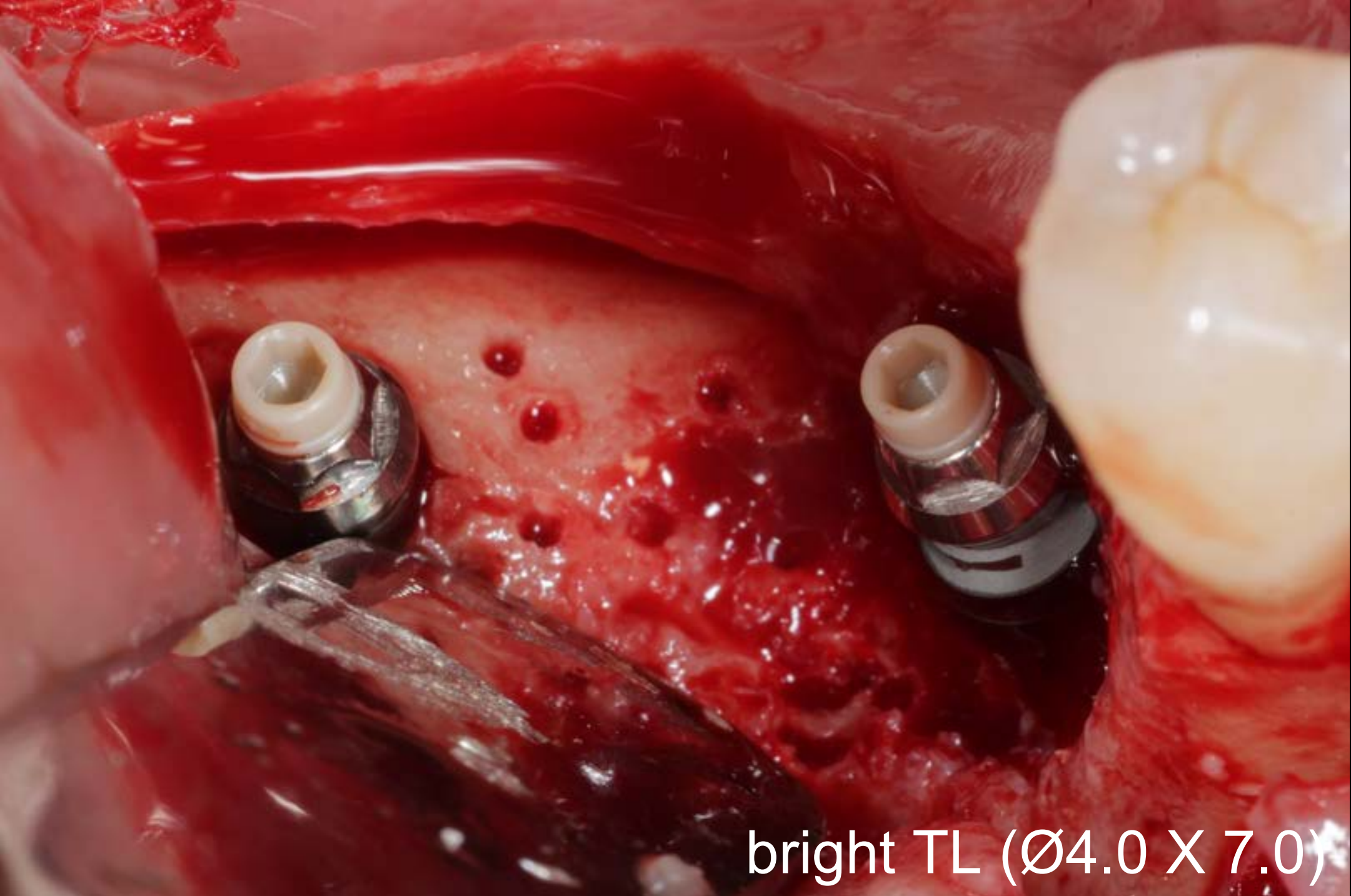
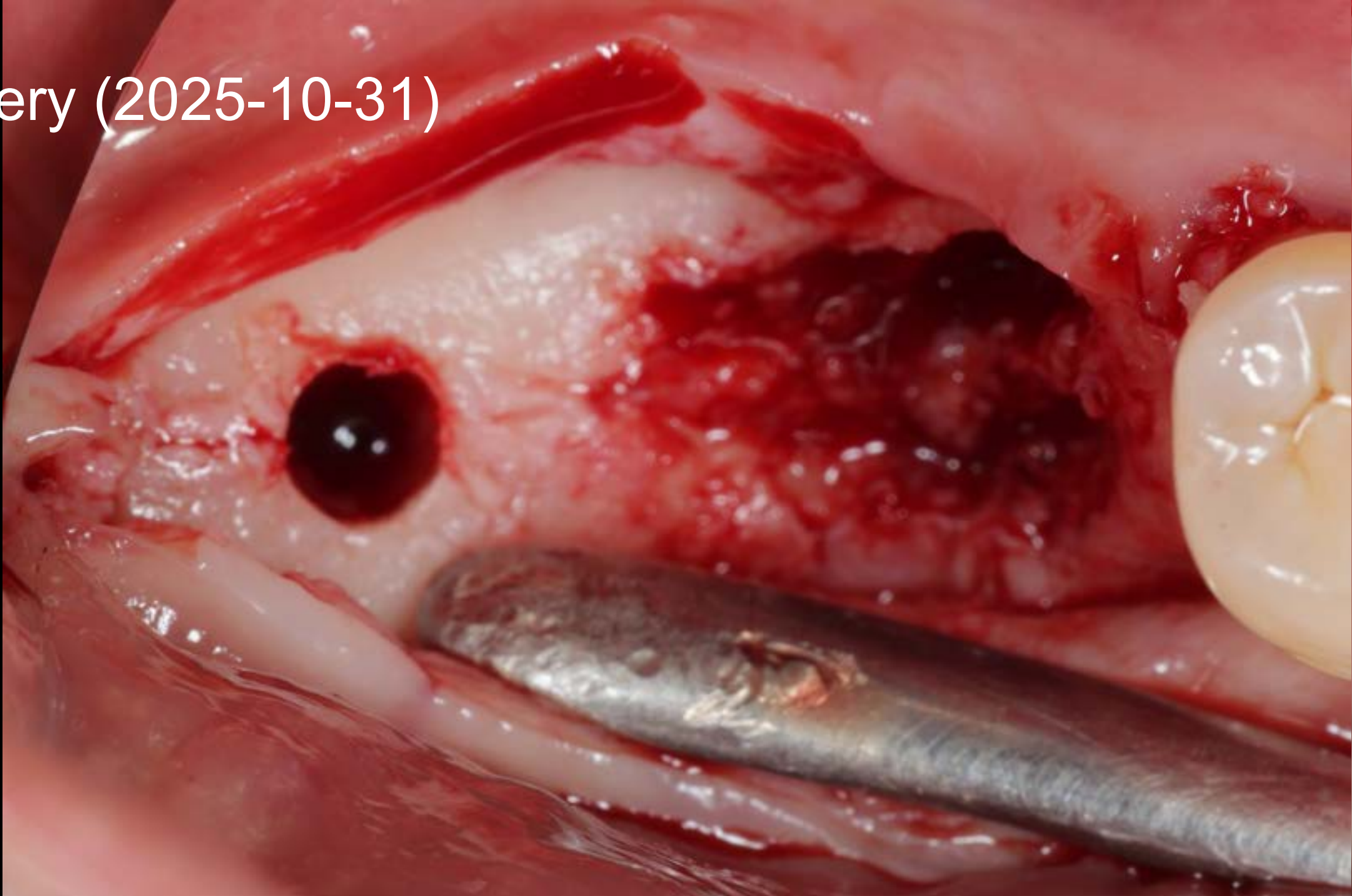
#46

#47

Pre-op (2025-10-31)



Surgery (2025-10-31)



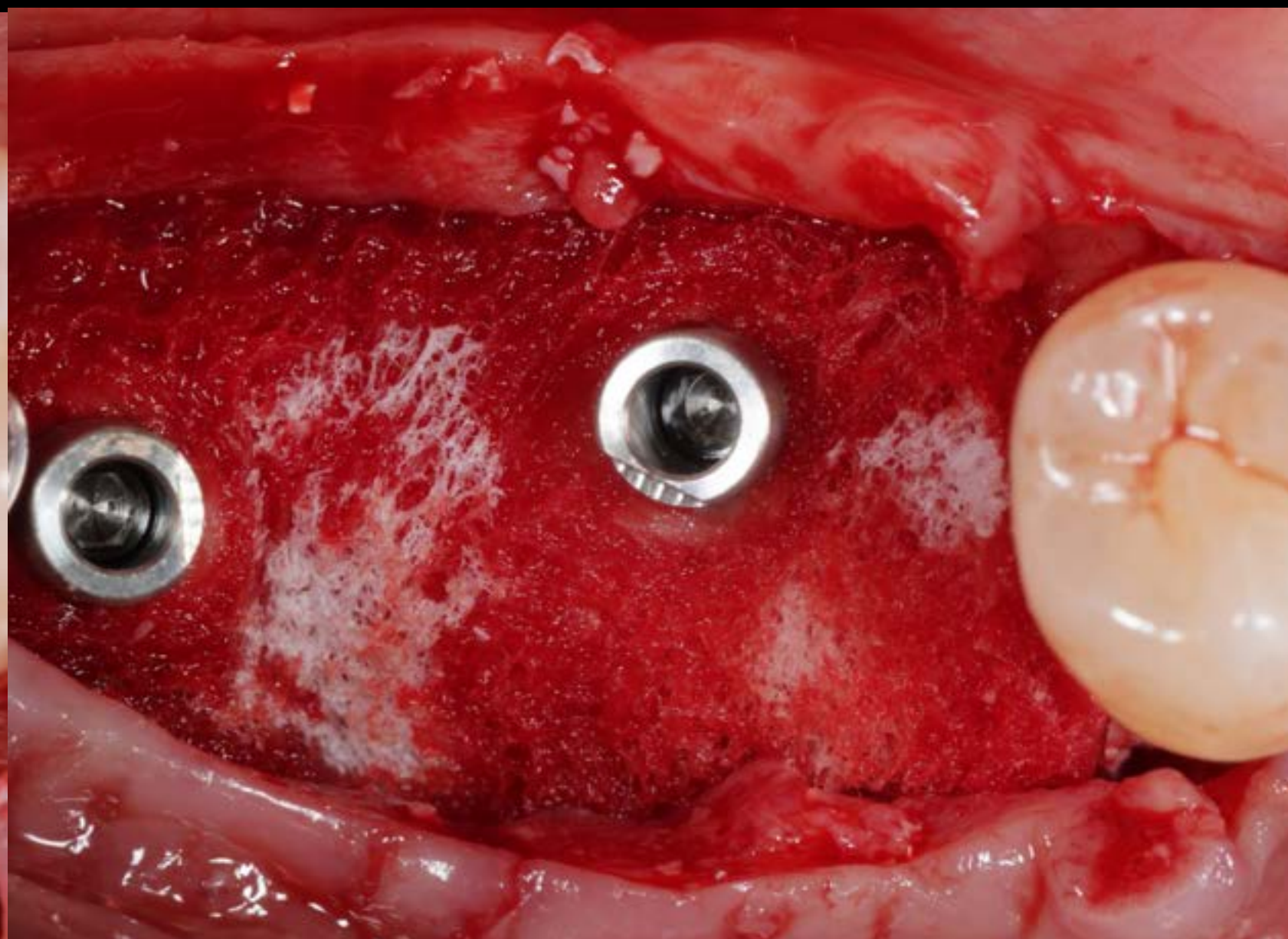
Scan Comfort Cap / Intramarrow penetration

OSTEON™ Xeno

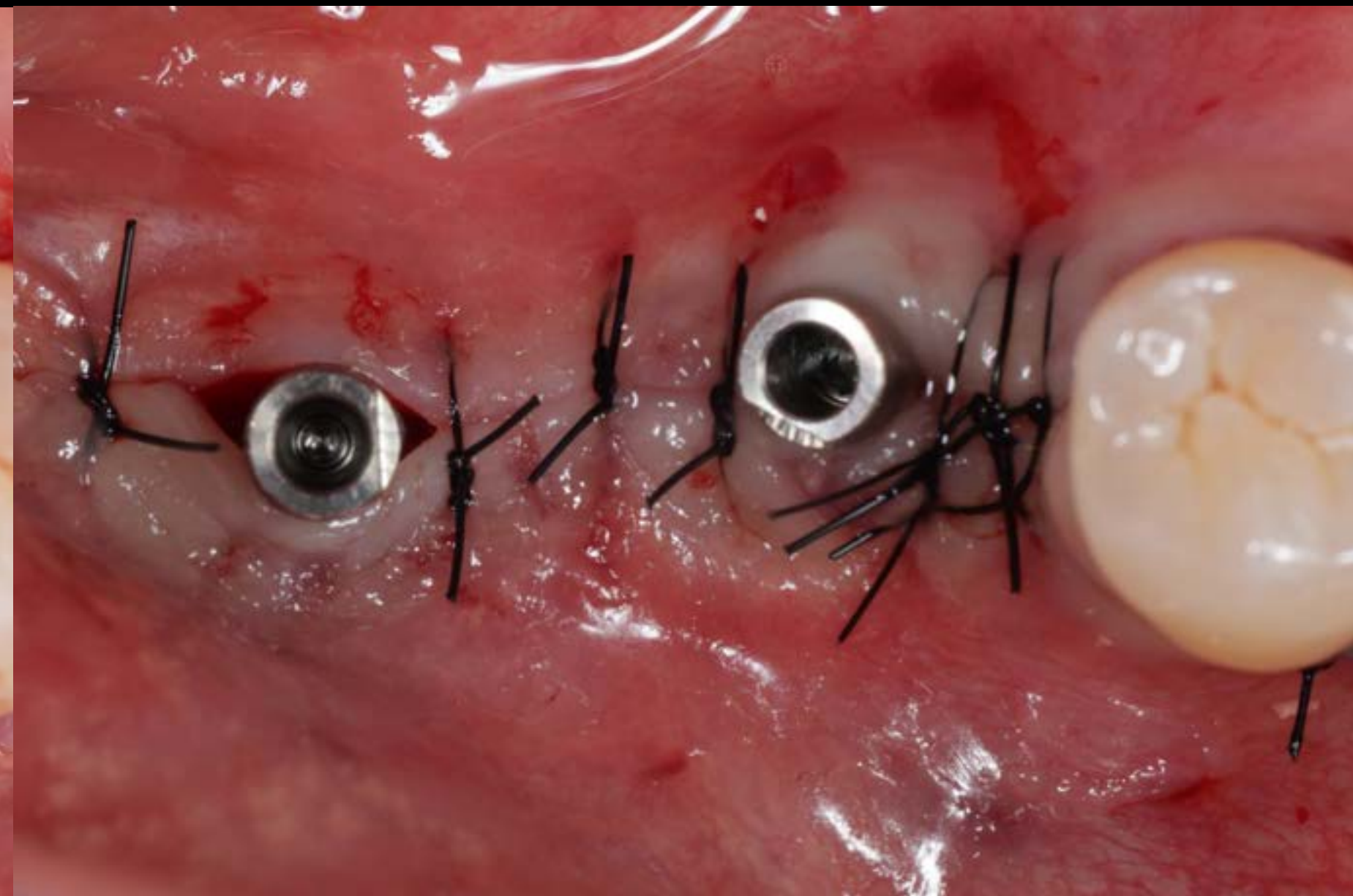
Surgery (2025-10-31)



OSTEON™ Xeno Collagen



Collagen Graft x1D



2005

OSTEON

70% Hydroxyapatite
30% β -tricalcium phosphate

Good space maintenance



2011

OSTEON II

30% Hydroxyapatite
70% β -tricalcium phosphate

Highly resorbable



2015

OSTEON 3

60% Hydroxyapatite
40% β -tricalcium phosphate

Space maintenance
Highly resorbable



2022'04

OSTEON Xeno

100% Hydroxyapatite
Bovine derived

Space maintenance
Highly resorbable
Similar to human bone



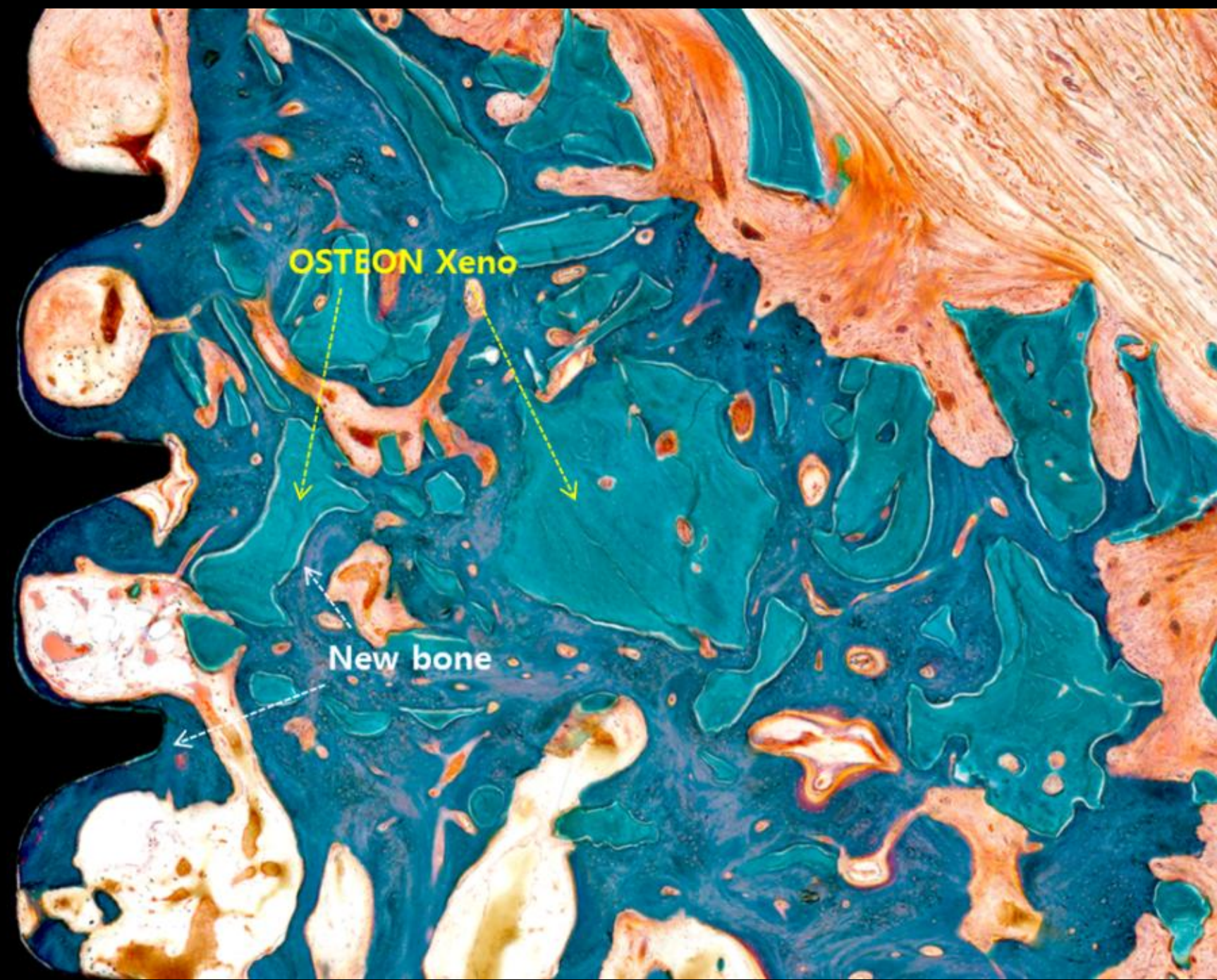
History of osteon development

Osteon Xeno

Macro interconnectivity

Micro roughness

Low crystallite of HA or ratio of HA and TCP
or very small contents of Si, Mg

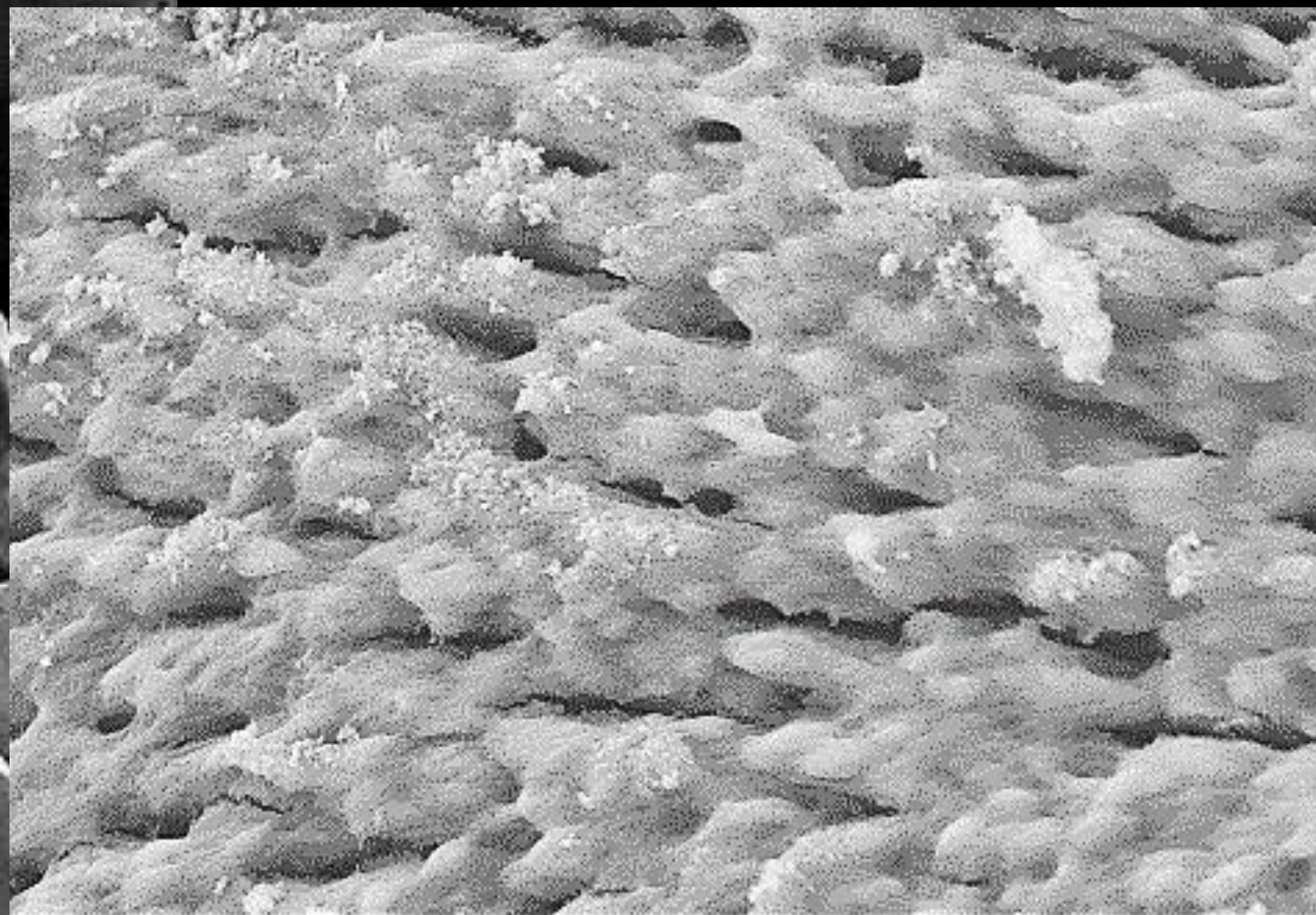
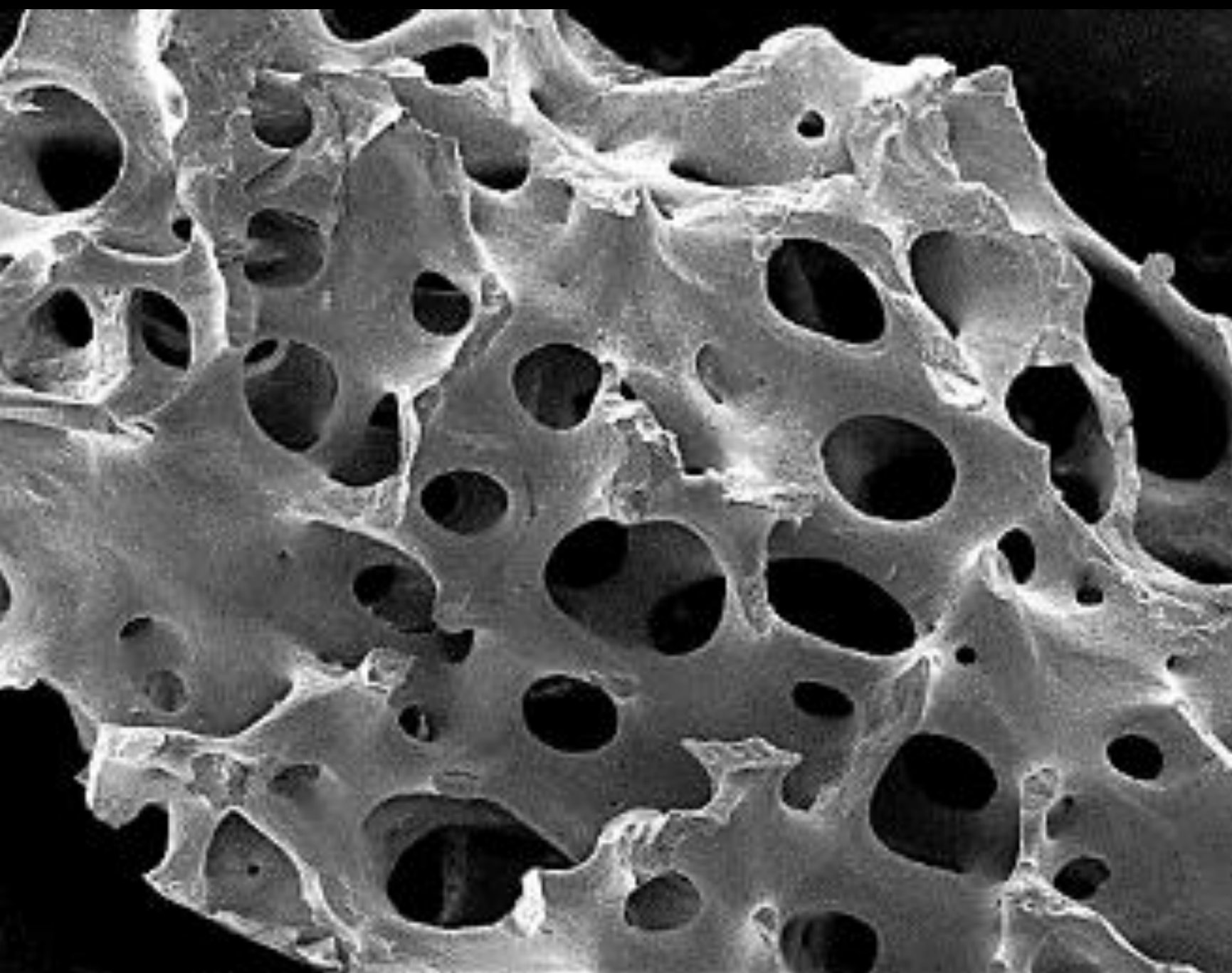


Osteon Xeno

wettability is dependent on amount of crystallinity and B-TCP

In next, antibacterial effect combined with bioactive glass

SiO_2 , Na_2O , CaO , P_2O_5 - antibacterial and apatite, bone formation



Mag = 10 X
WD = 10.4 mm
SHT = 10.00 kV
Signal A = SE2
Aperture Size = 30.00 µm
Brightfield = 50.0 %
Contrast = 20.0 %
System Vacuum = 1.10e-05 mbar
Gun Vacuum = 1.20e-05 mbar
Noise Reduction = 1.00 (Auto) mag

GENOSS
Date: 21 Dec 2020

Reference Mag = 1000 X
2 µm
Mag = 5000 X
WD = 6.5 mm
PHT = 1.00 kV
Signal A = SE2
Aperture Size = 30.00 µm
Noise Reduction = Line In. Busy
Brightness = 50.0 %
Contrast = 20.0 %
System Vacuum = 6.31e-06 mbar
Gun Vacuum = 1.20e-05 mbar

GENOSS
Date: 6 Jul 2021

Osteon Xeno - Rabbit calvaria 8, 16 wks



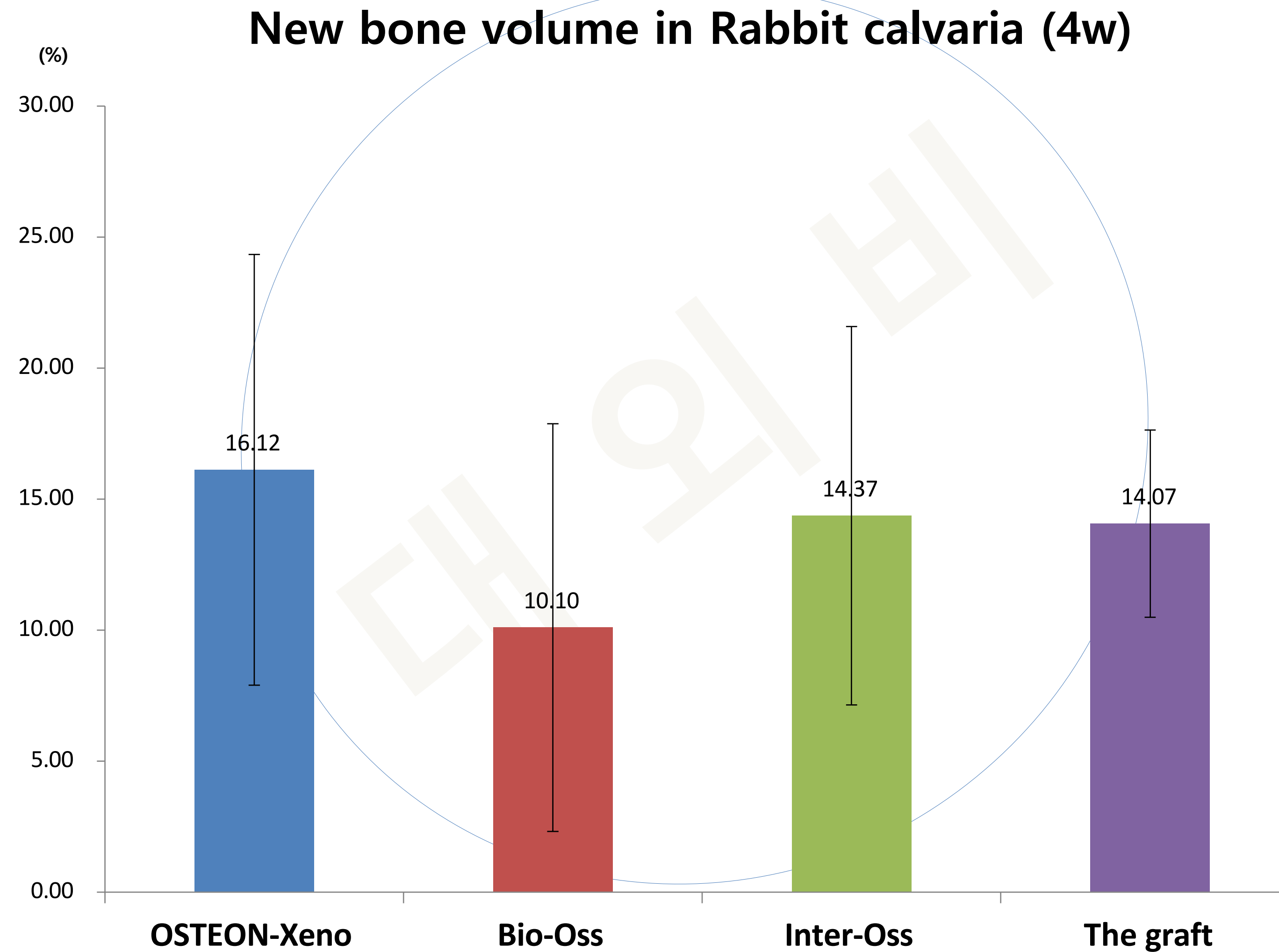
8wks



16wks



Tissue quantitative analysis



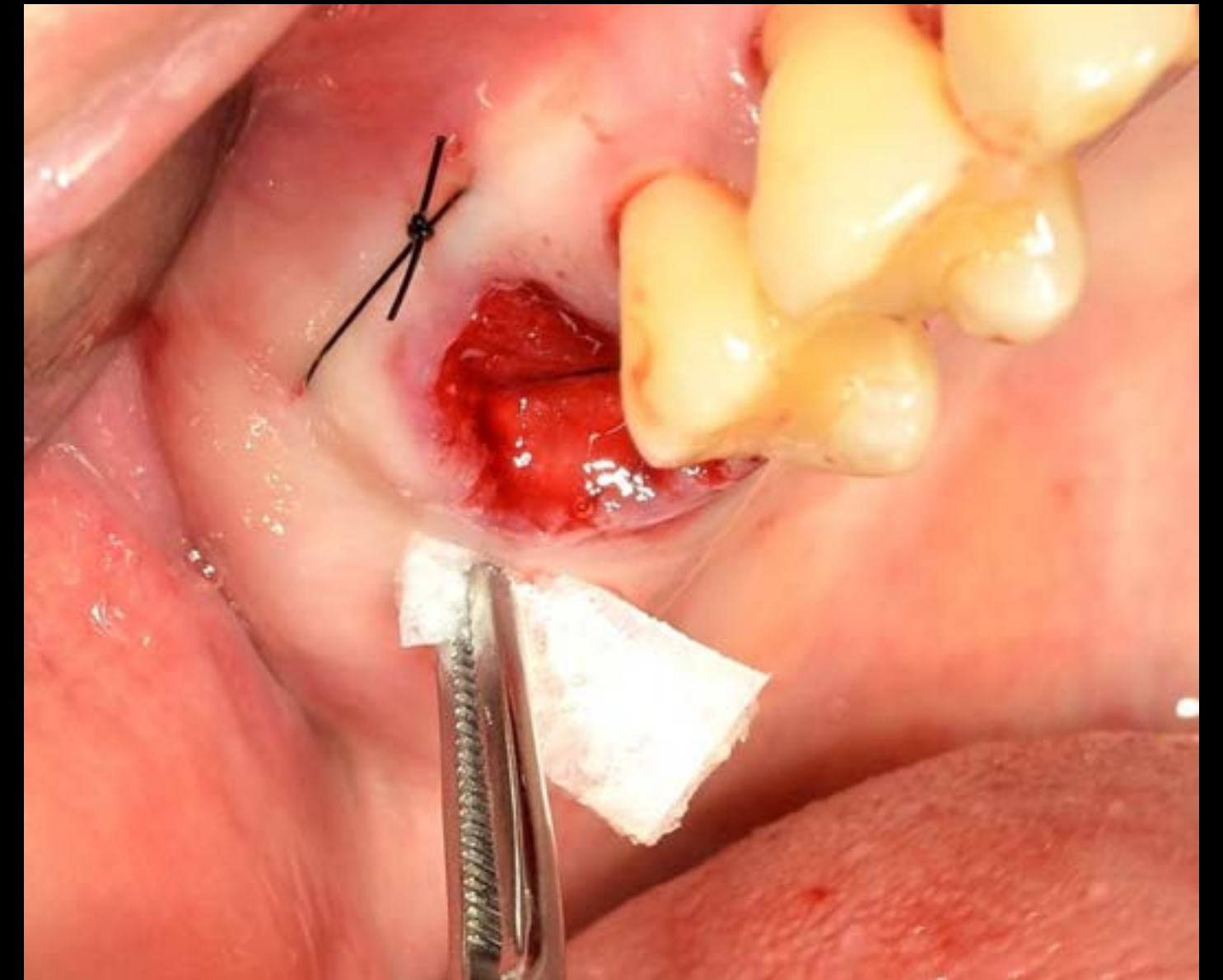
Sinus

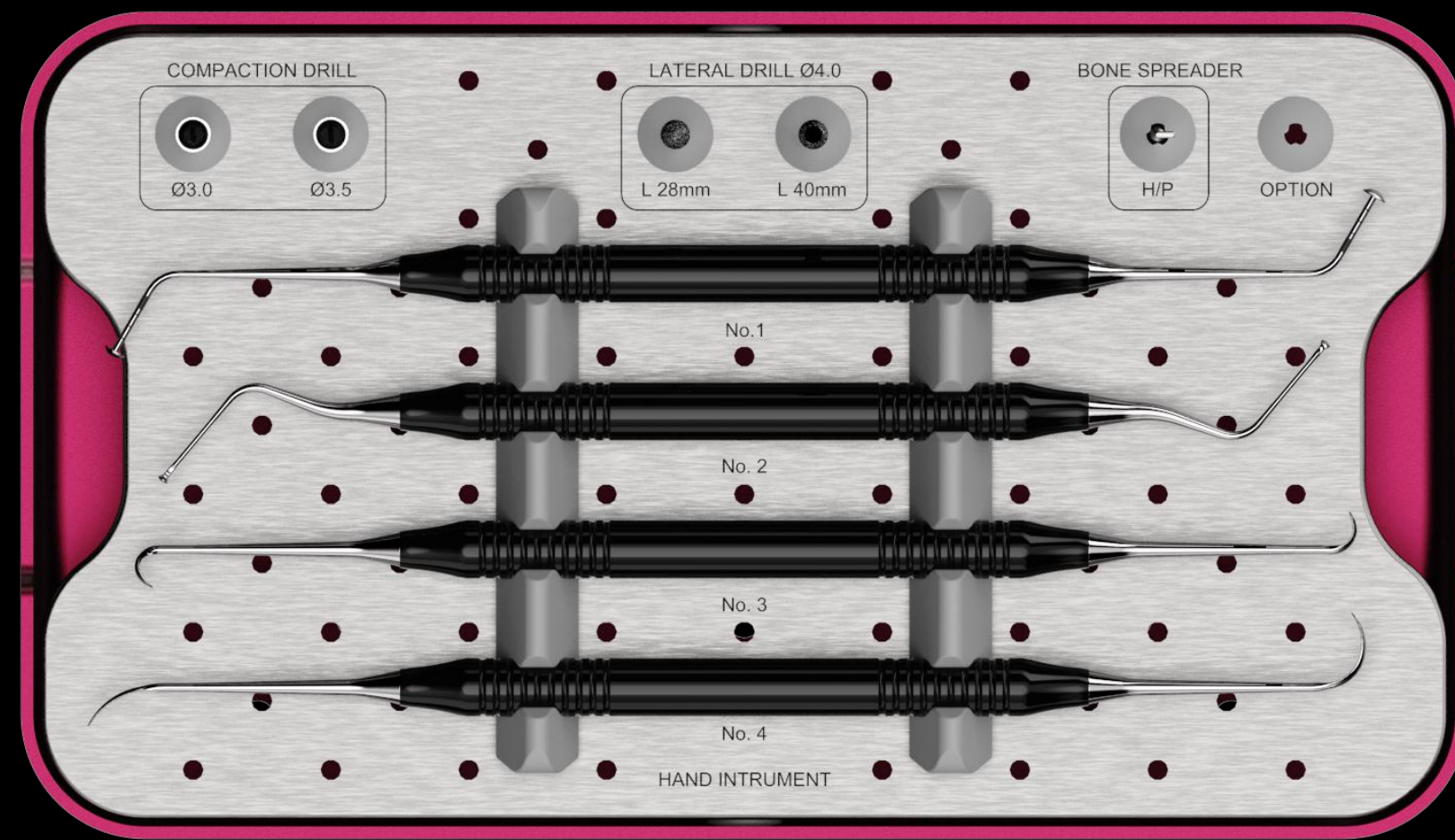
Before, complications

Now, simple and ease

Compaction drill of DASK simple

Osteon collagen





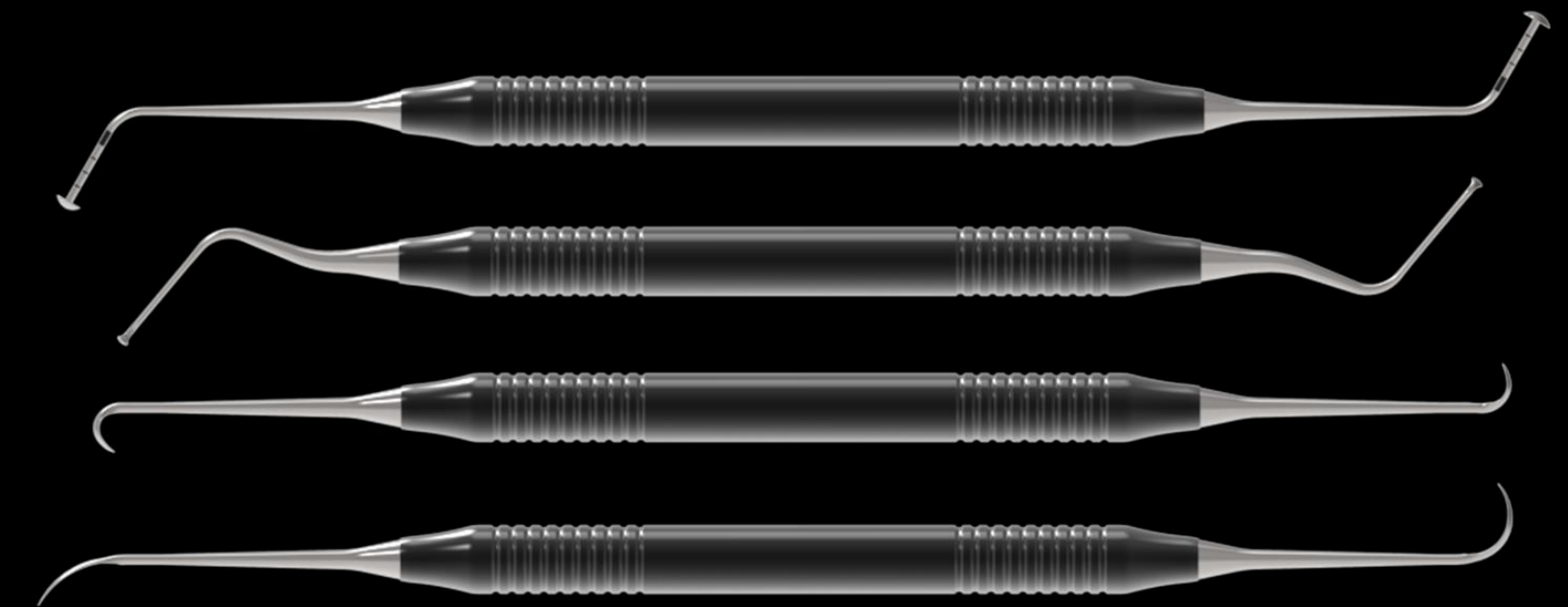
Compaction Drill



Lateral Drill



Bone Spreader

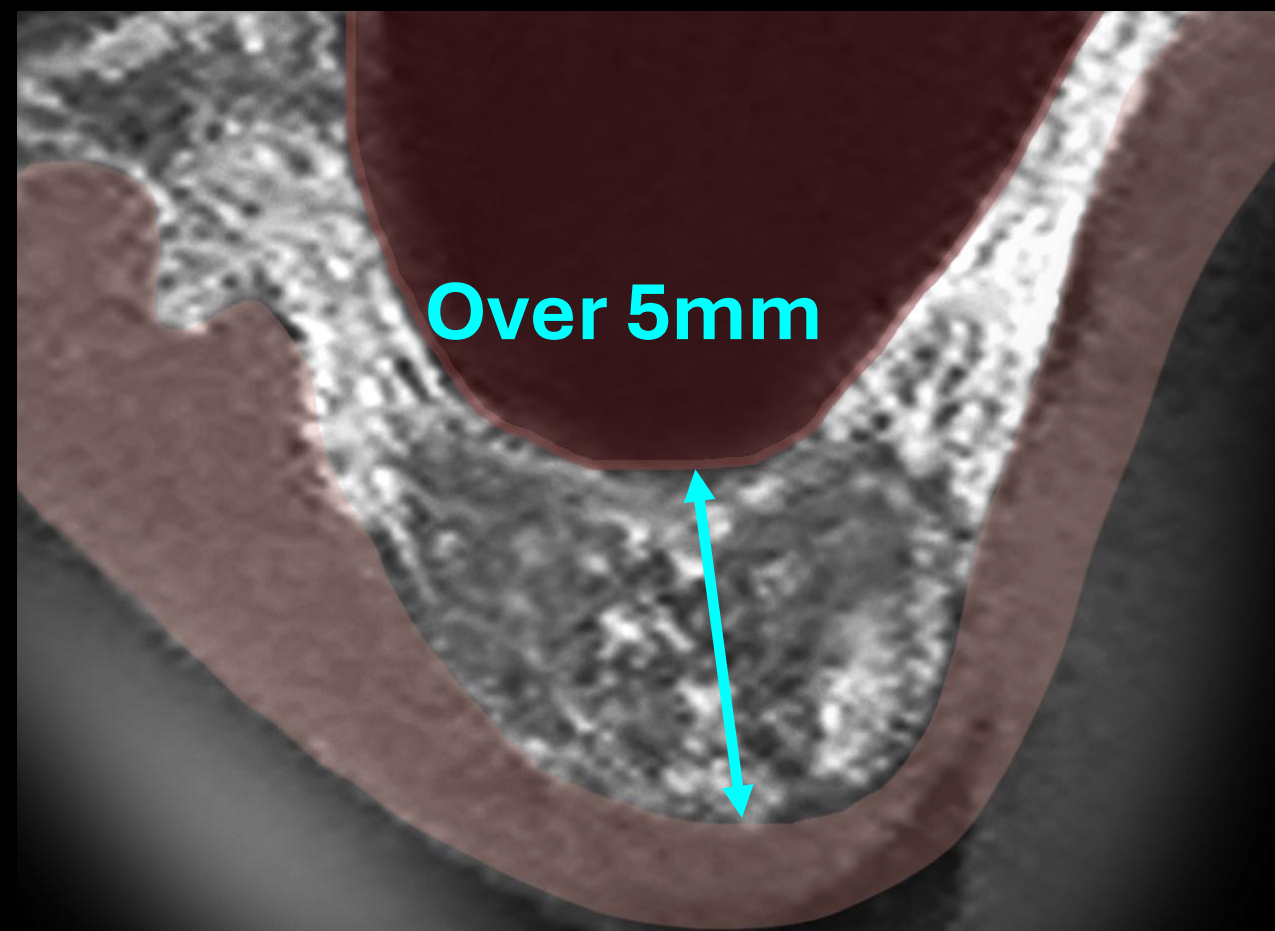


Hand Instruments

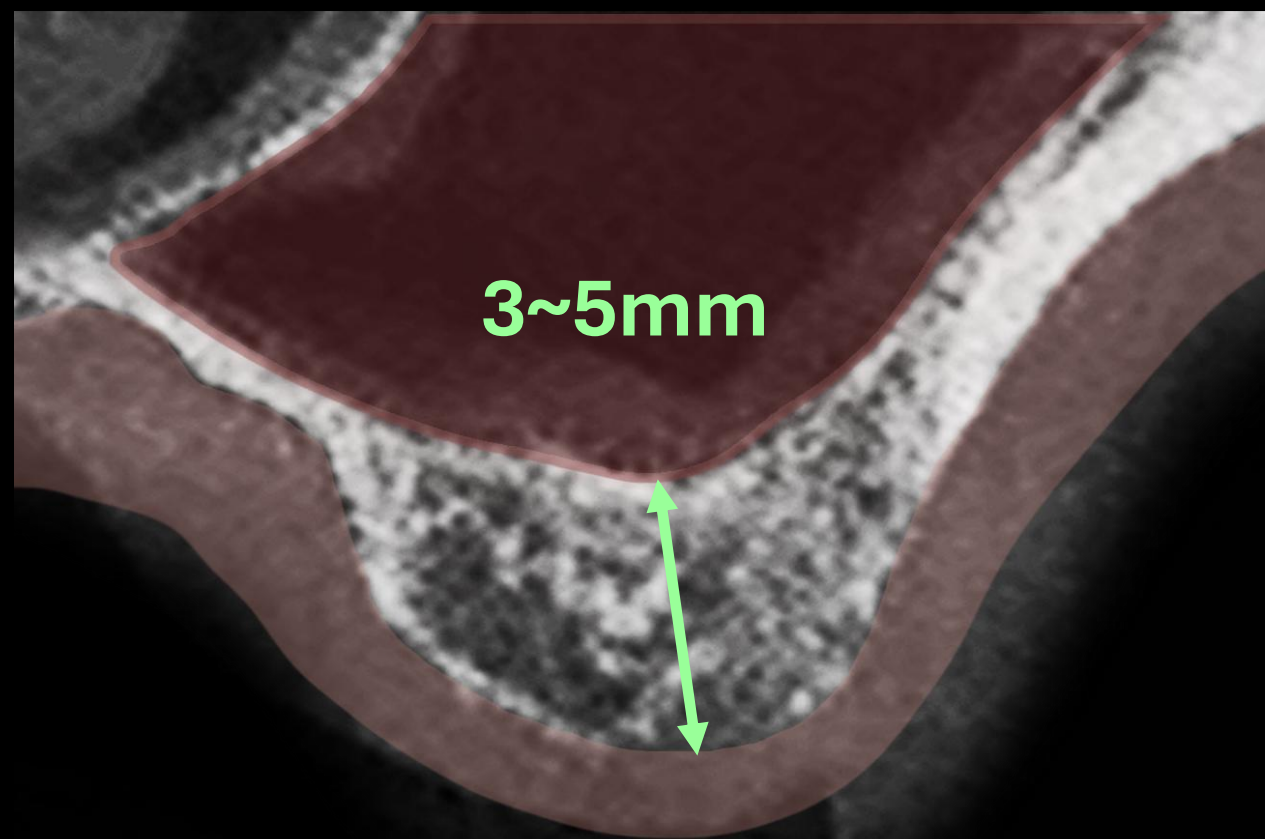
DASK Simple is designed to facilitate safe, efficient and minimally invasive **sinus lift** procedures

Dentium's classification of sinus elevation based on residual bone height

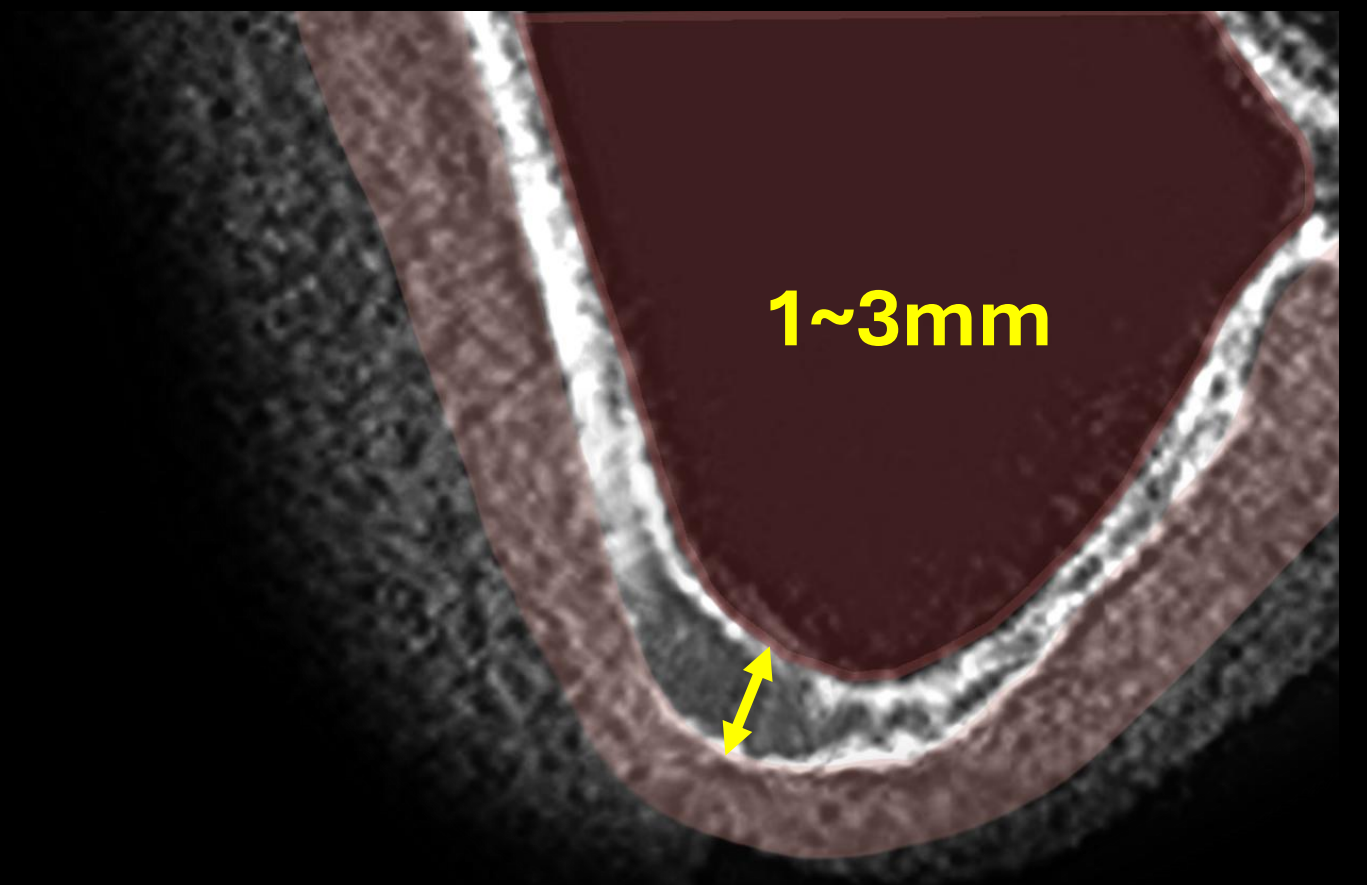
Bicortical Fixation



Crestal Approach



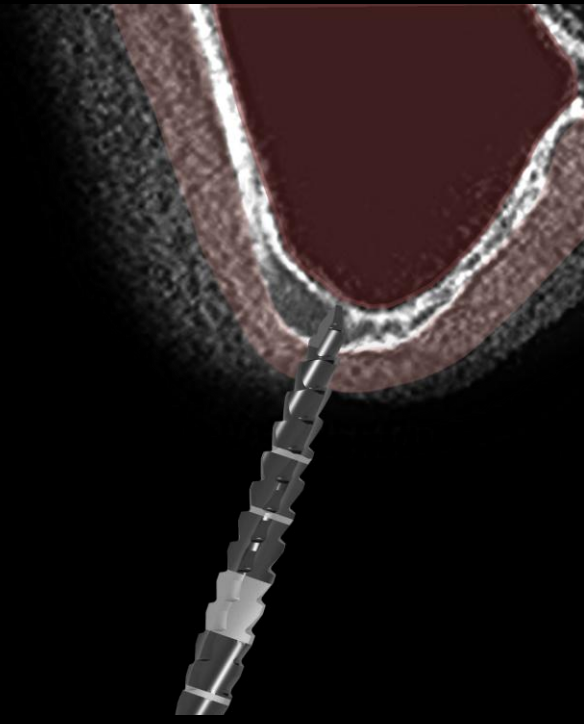
Lateral Approach



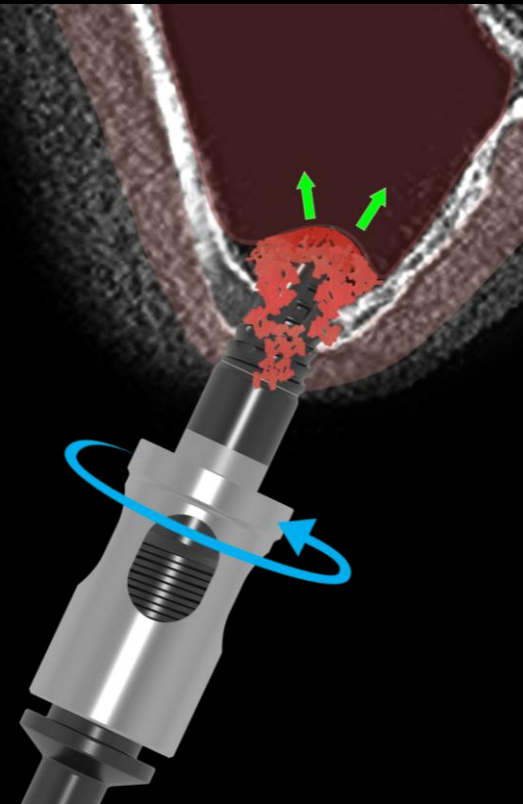
Crestal Approach

Residual bone height 1~3 mm

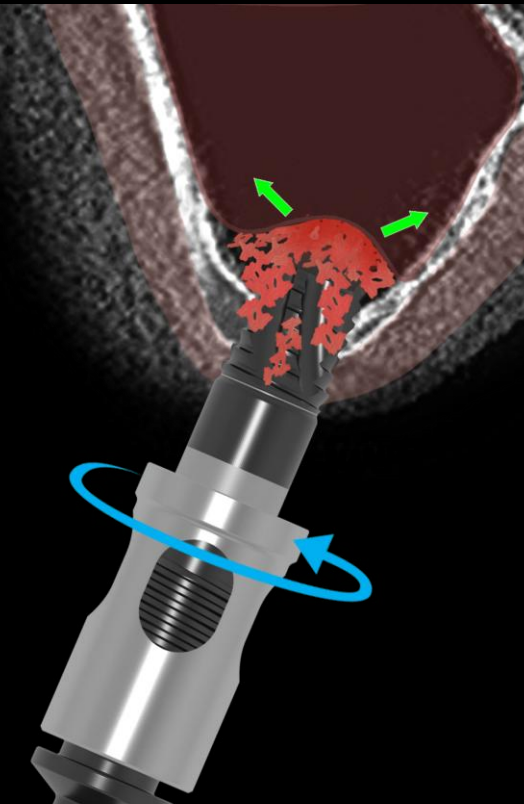
Dentium



Initial drilling



Compaction drill Ø3.0



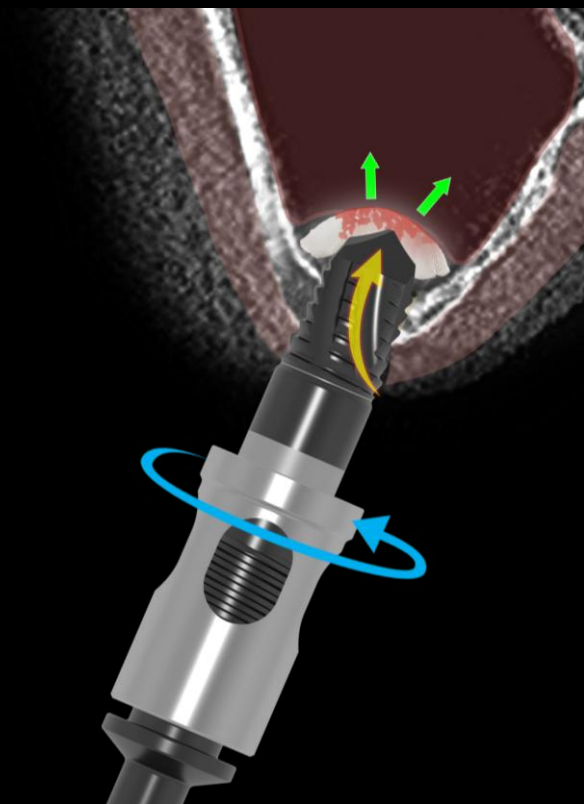
Compaction drill Ø3.5



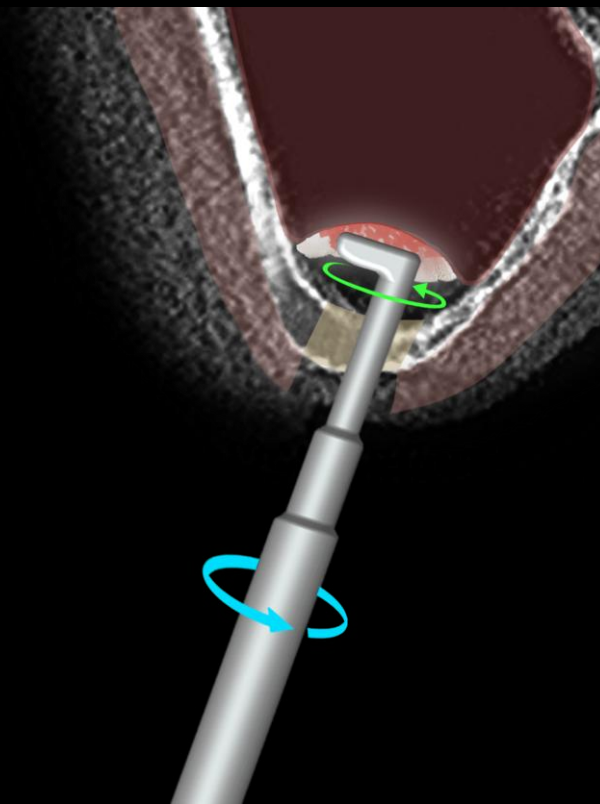
Membrane detaching



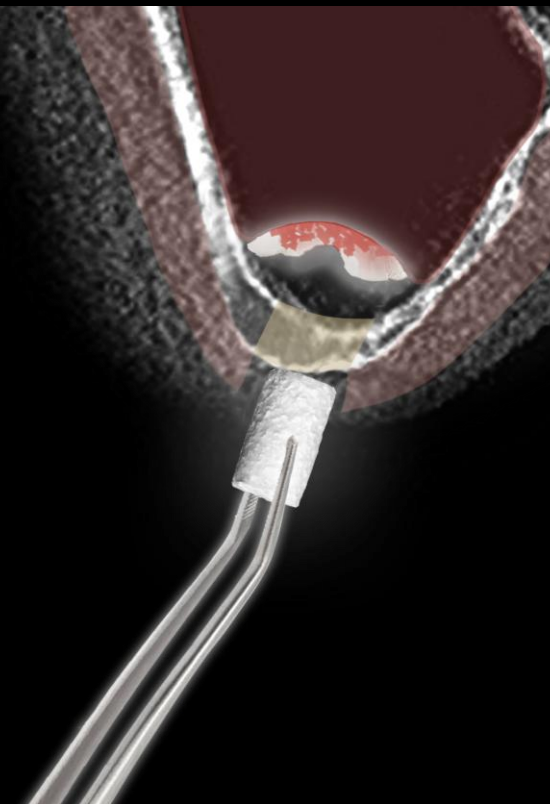
Collagen Graft x1D



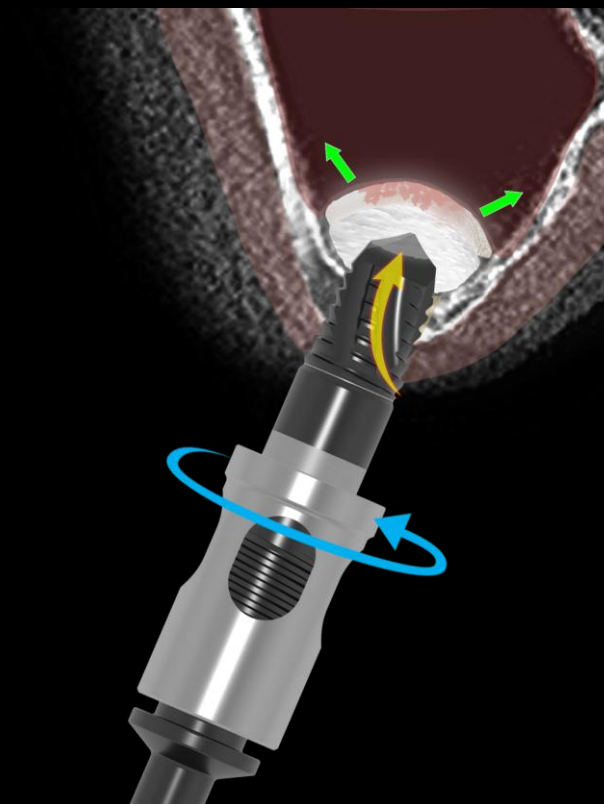
Lifting with
Compaction drill



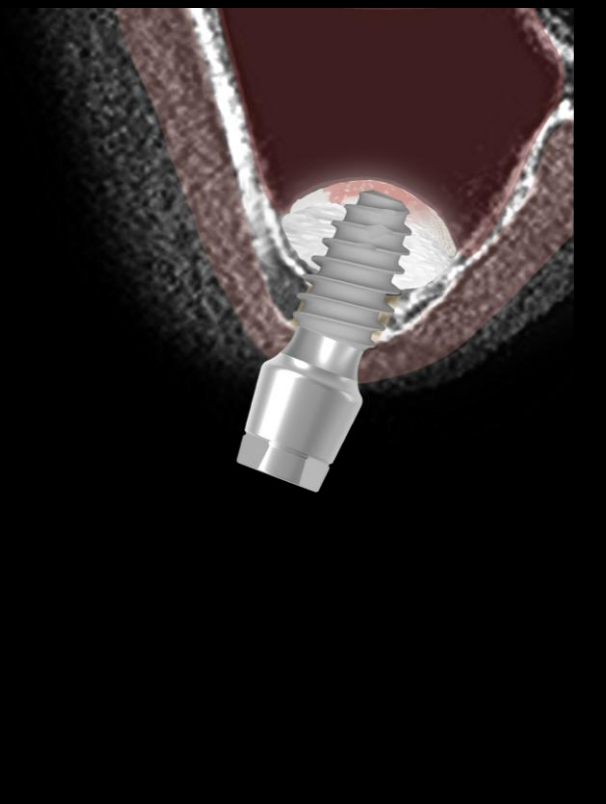
Spreading with
Bone spreader



OSTEON™ Xeno
Collagen



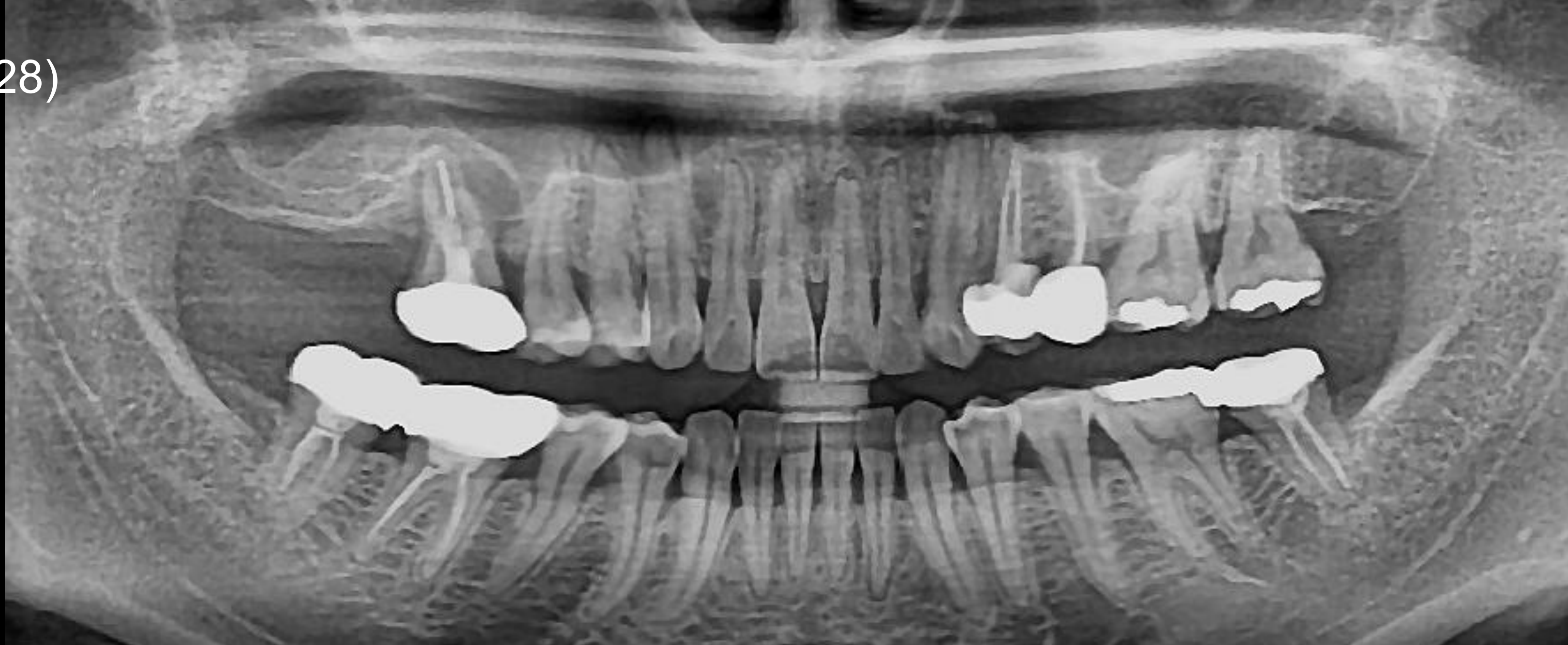
Lifting with
Compaction drill



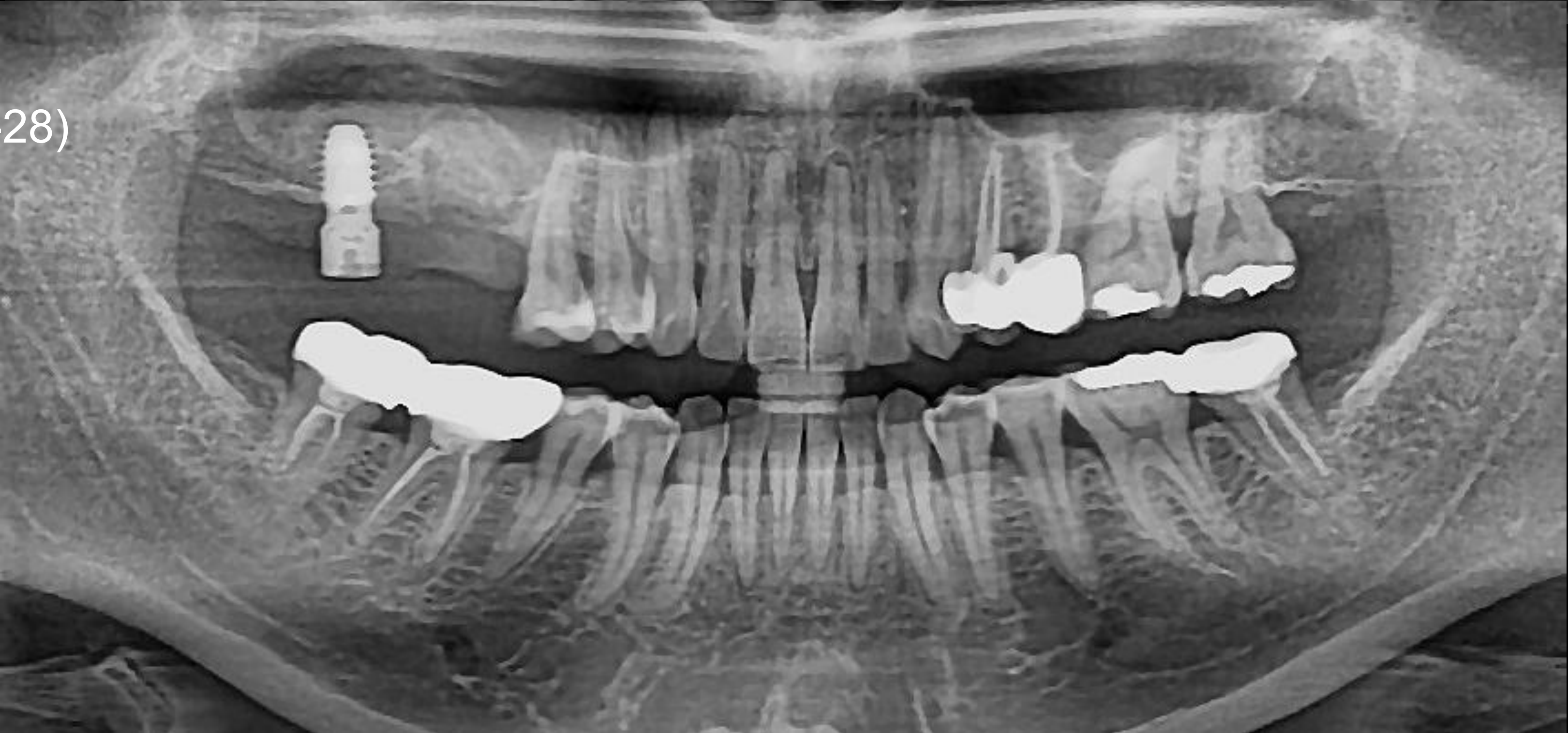
Implantation
bright TL (Ø4.5 X 7.0)

- The **sinus membrane** can be safely elevated by **spreading** and **tenting** a **collagen graft**, which minimizes the risk of **membrane perforation** and facilitates controlled **sinus elevation**

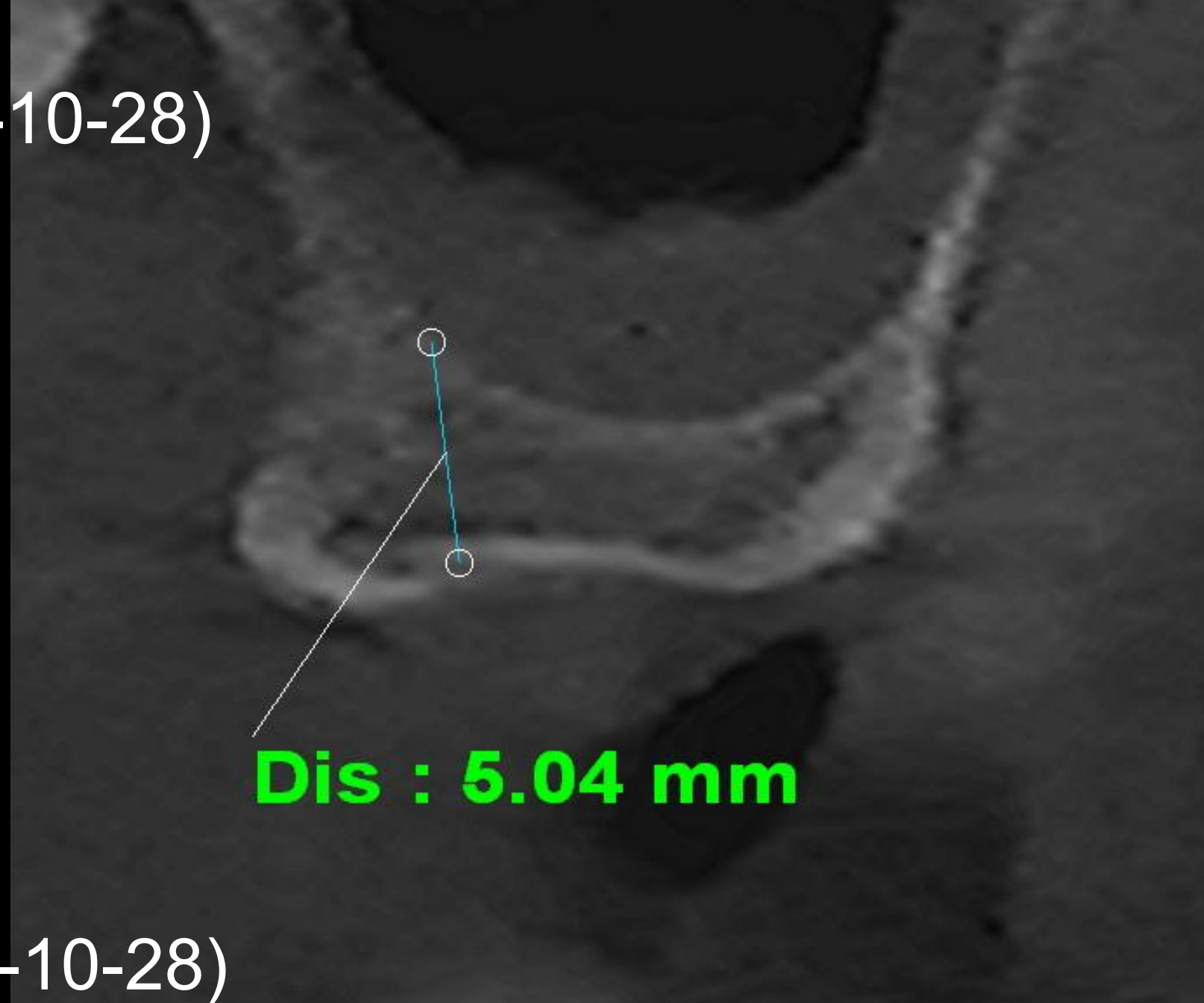
Pre-op (2025-10-28)



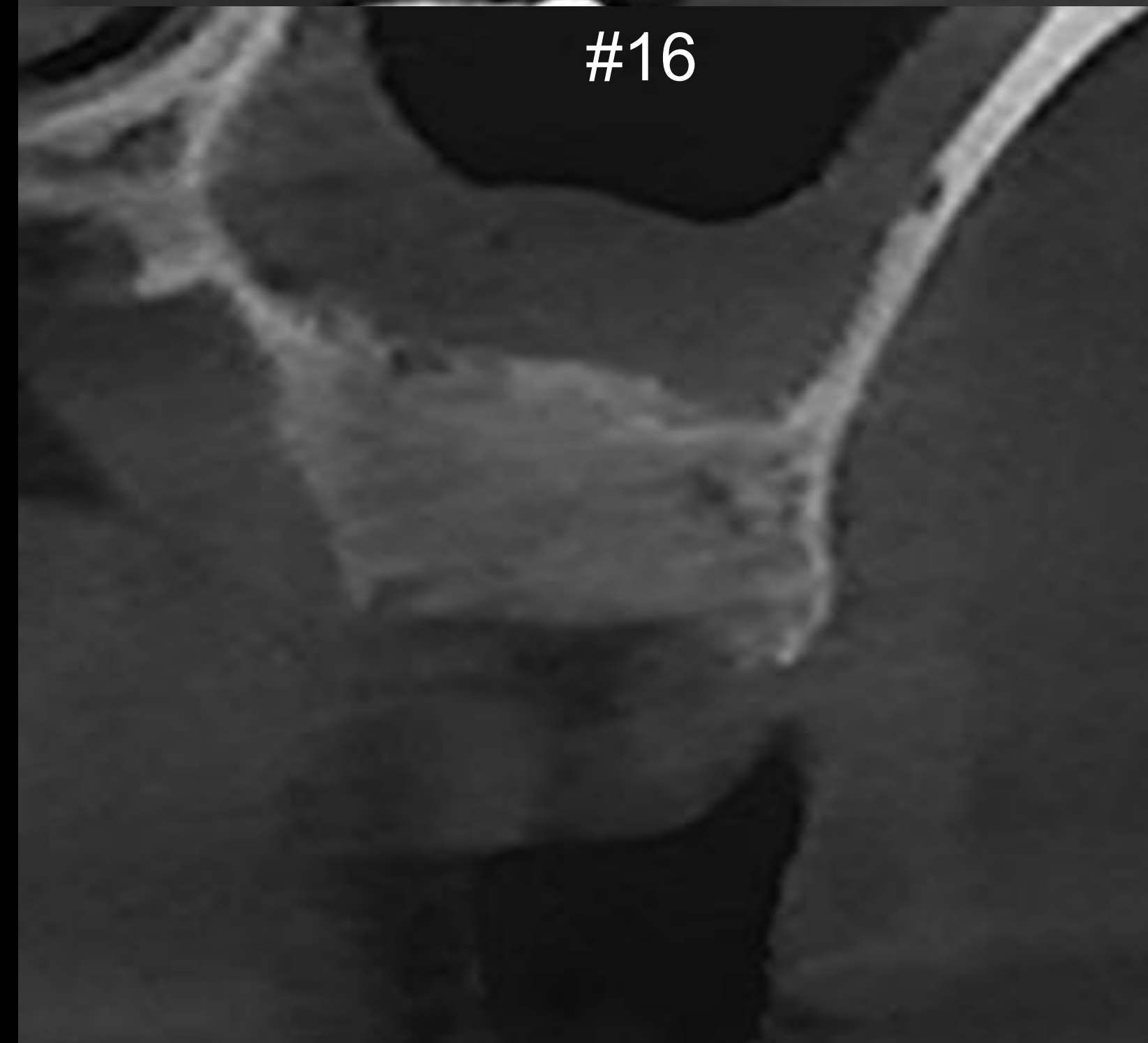
Post-op (2025-10-28)



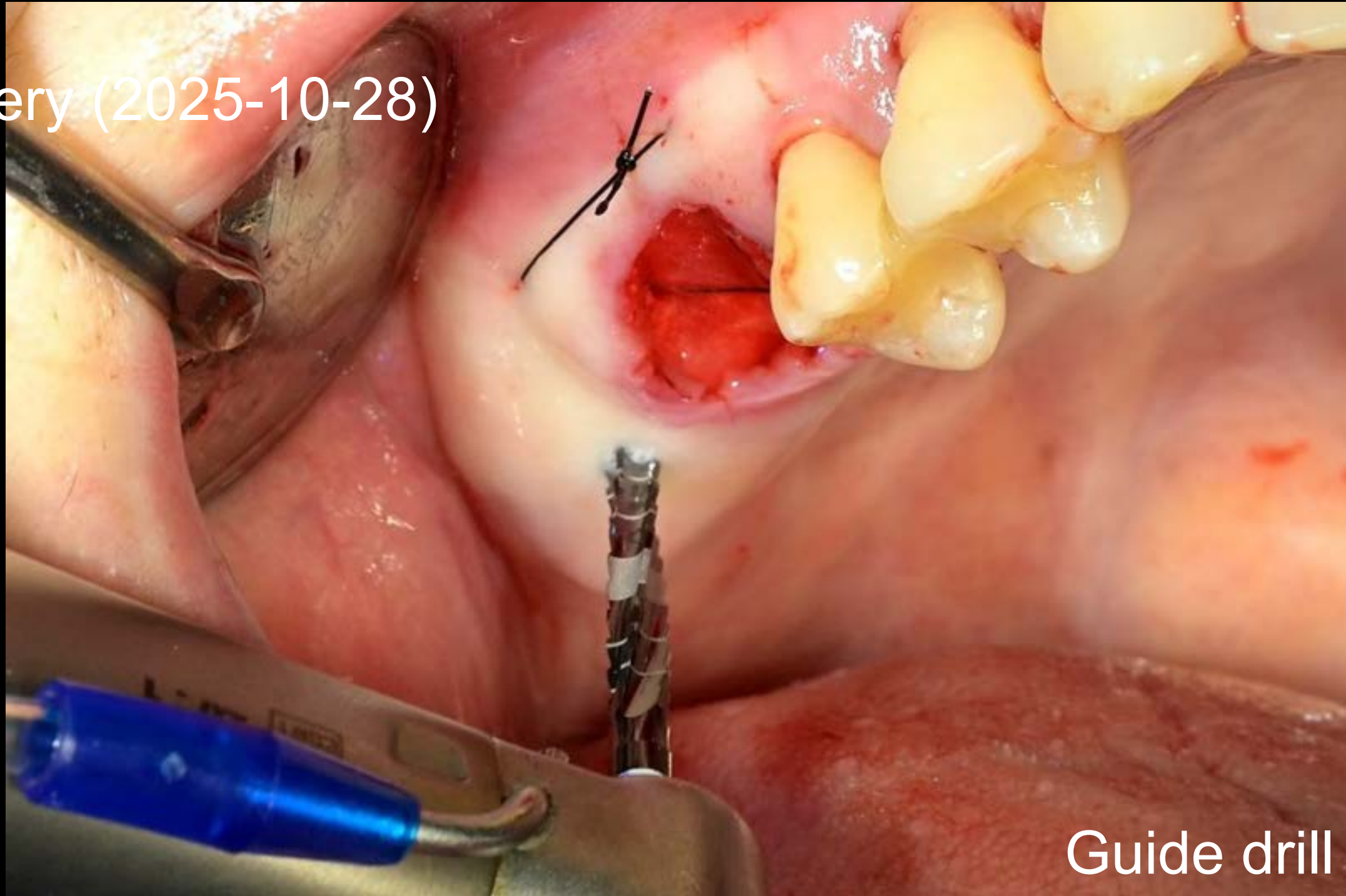
Pre-op CT (2025-10-28)



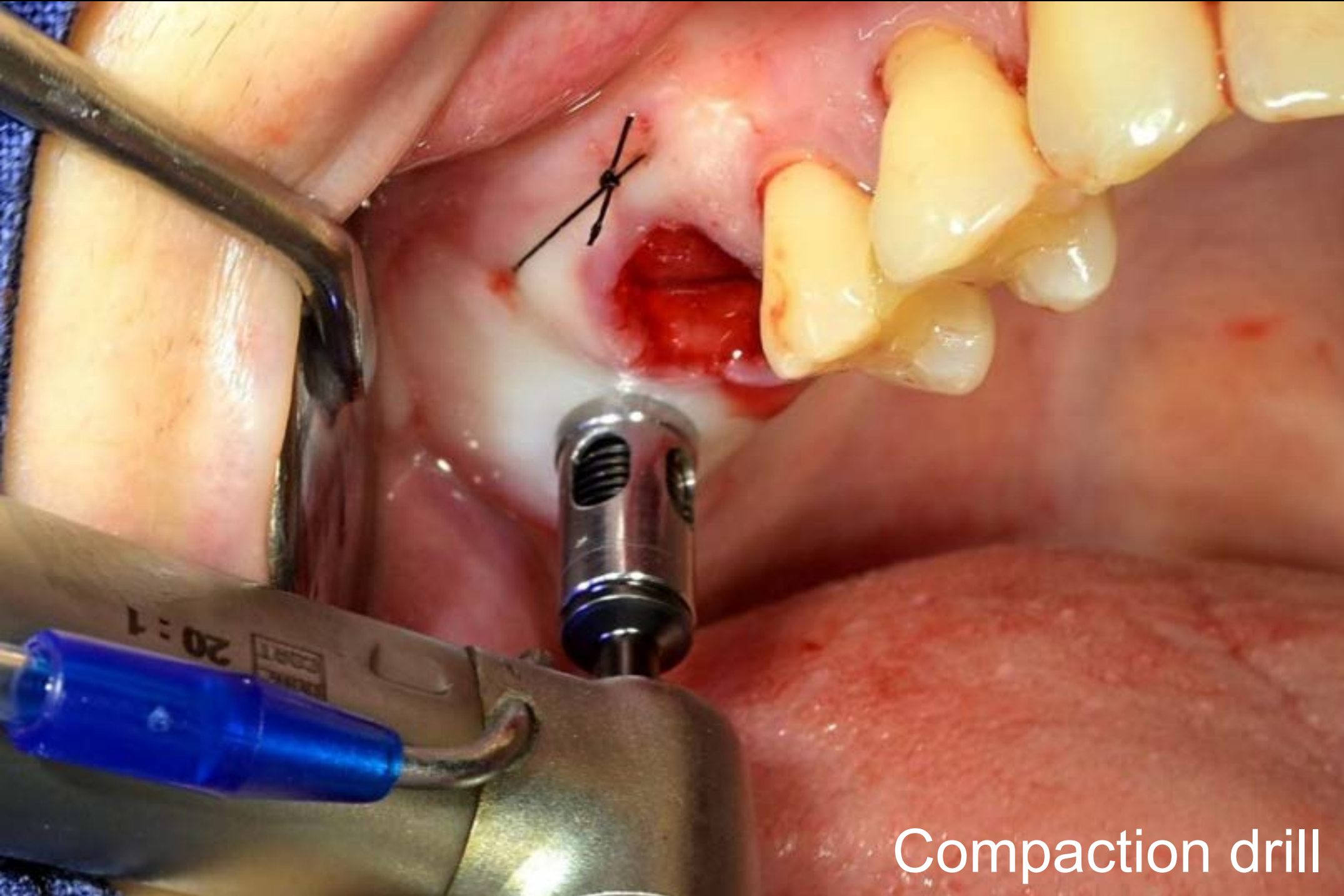
Post-op CT (2025-10-28)



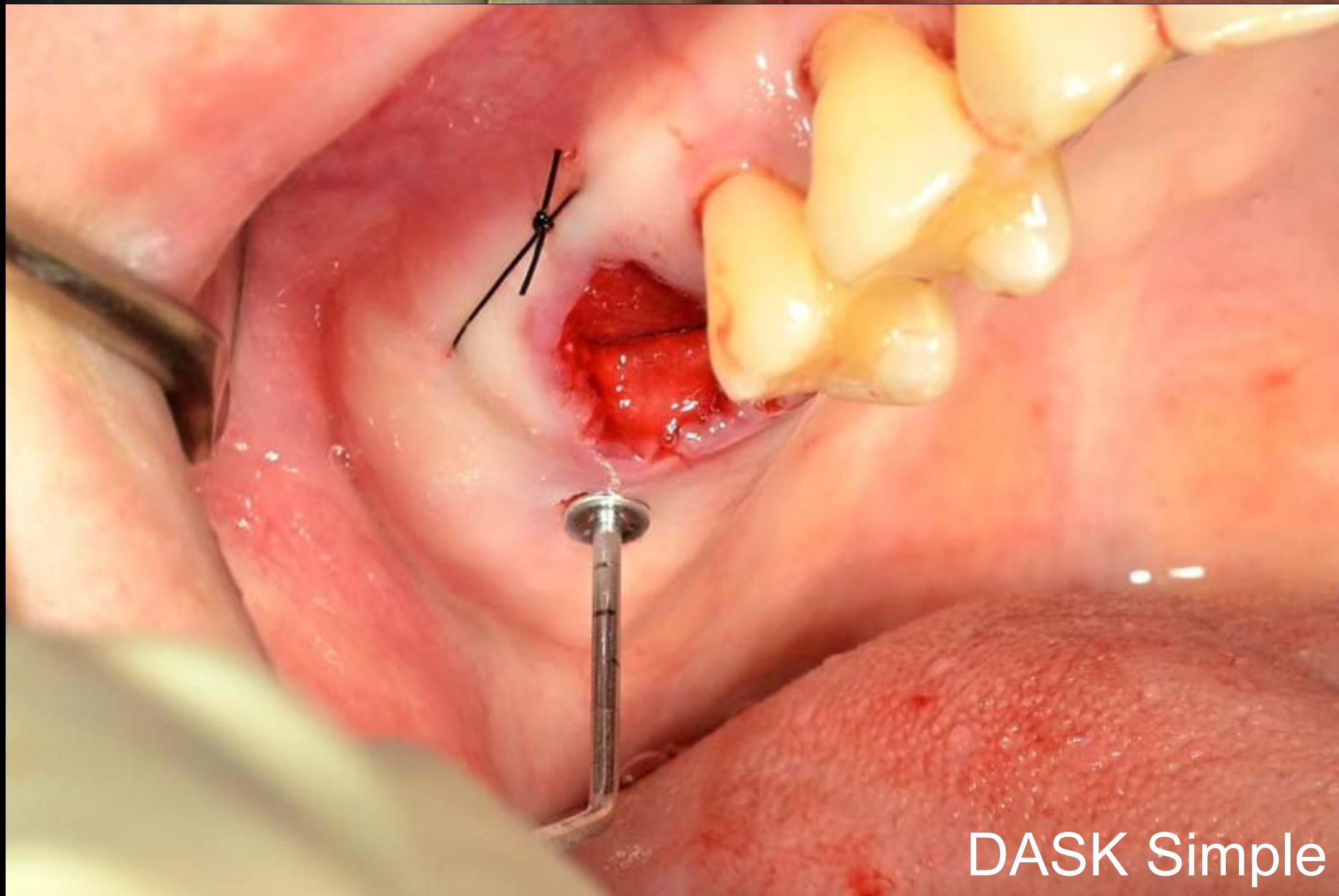
Surgery (2025-10-28)



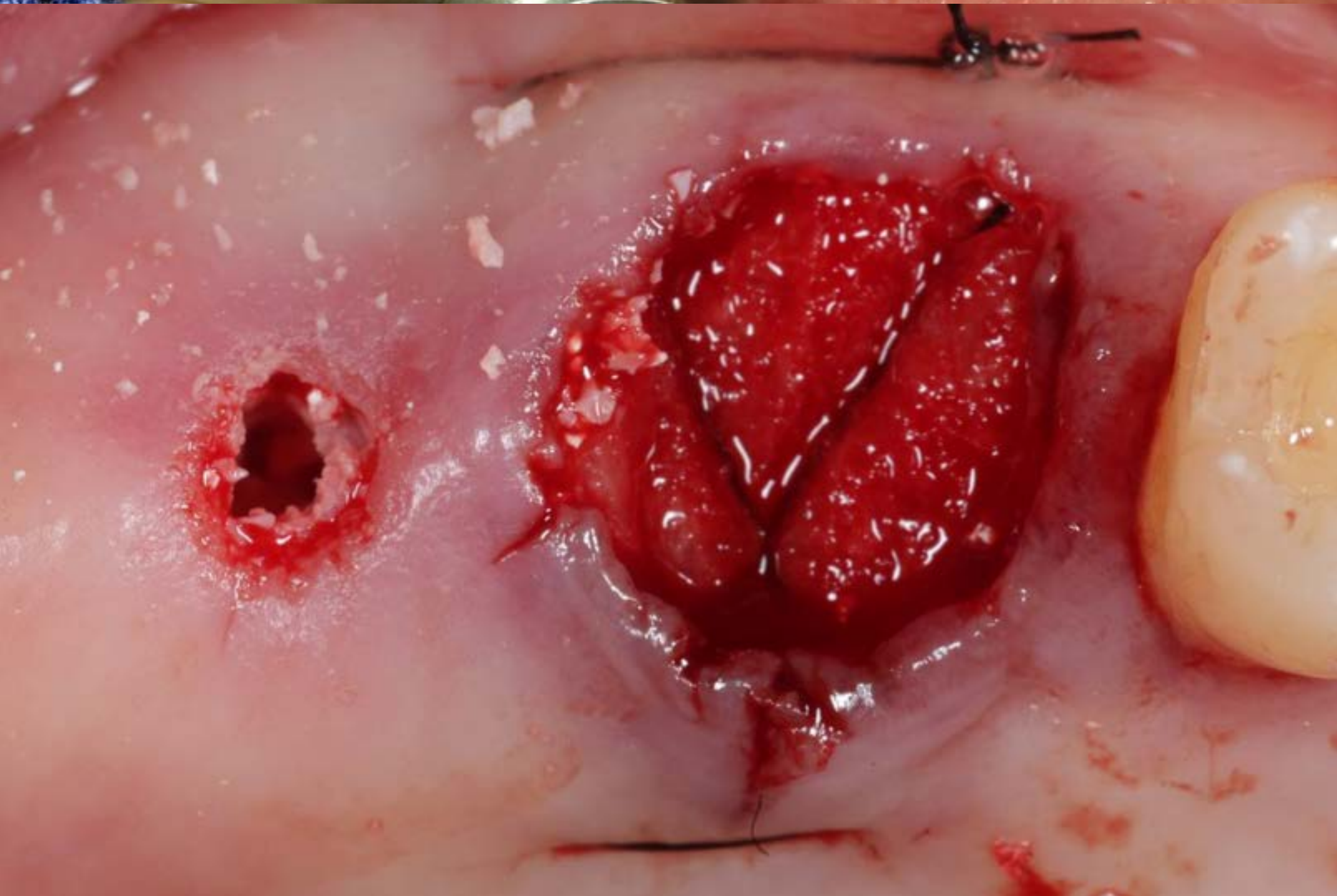
Guide drill



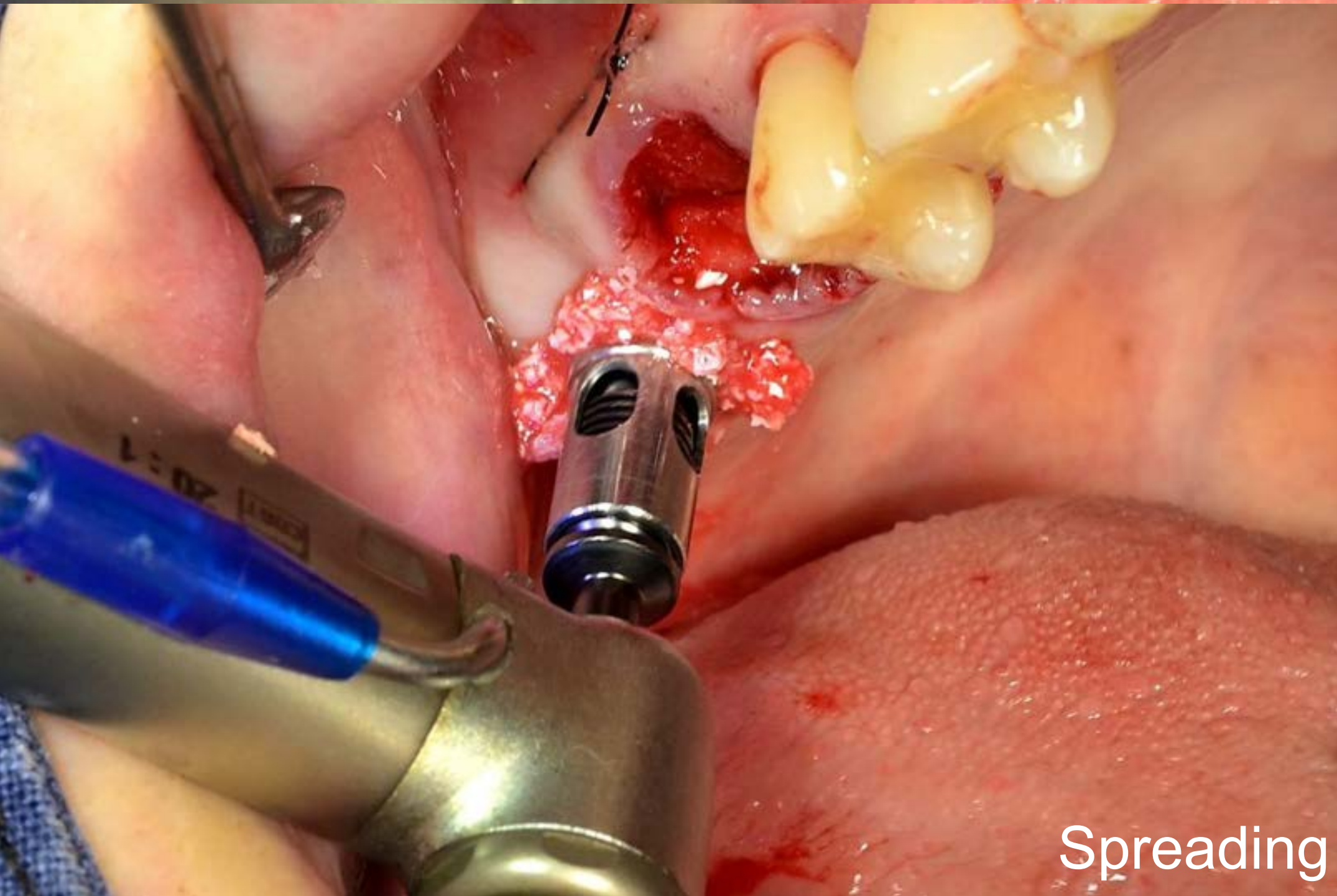
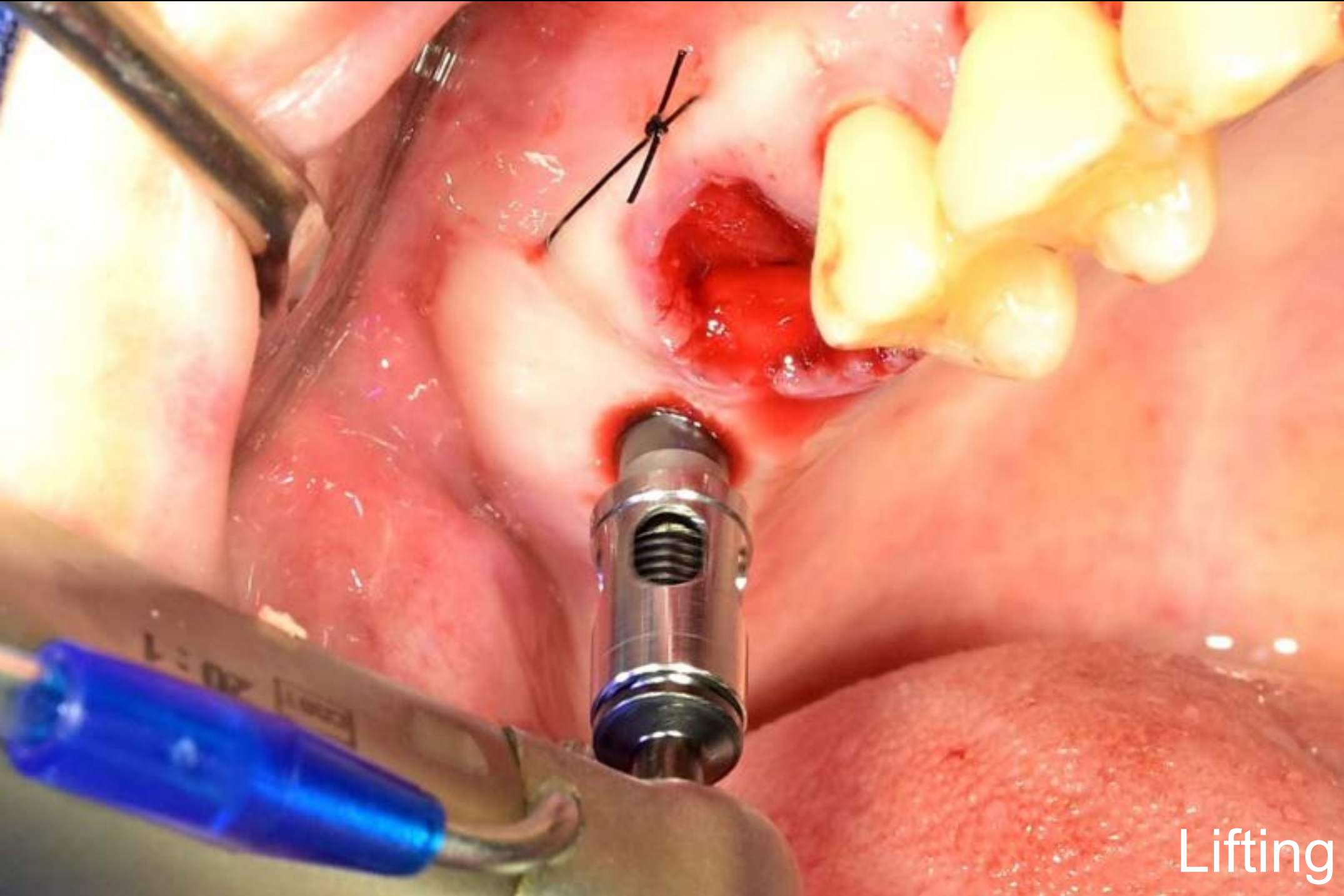
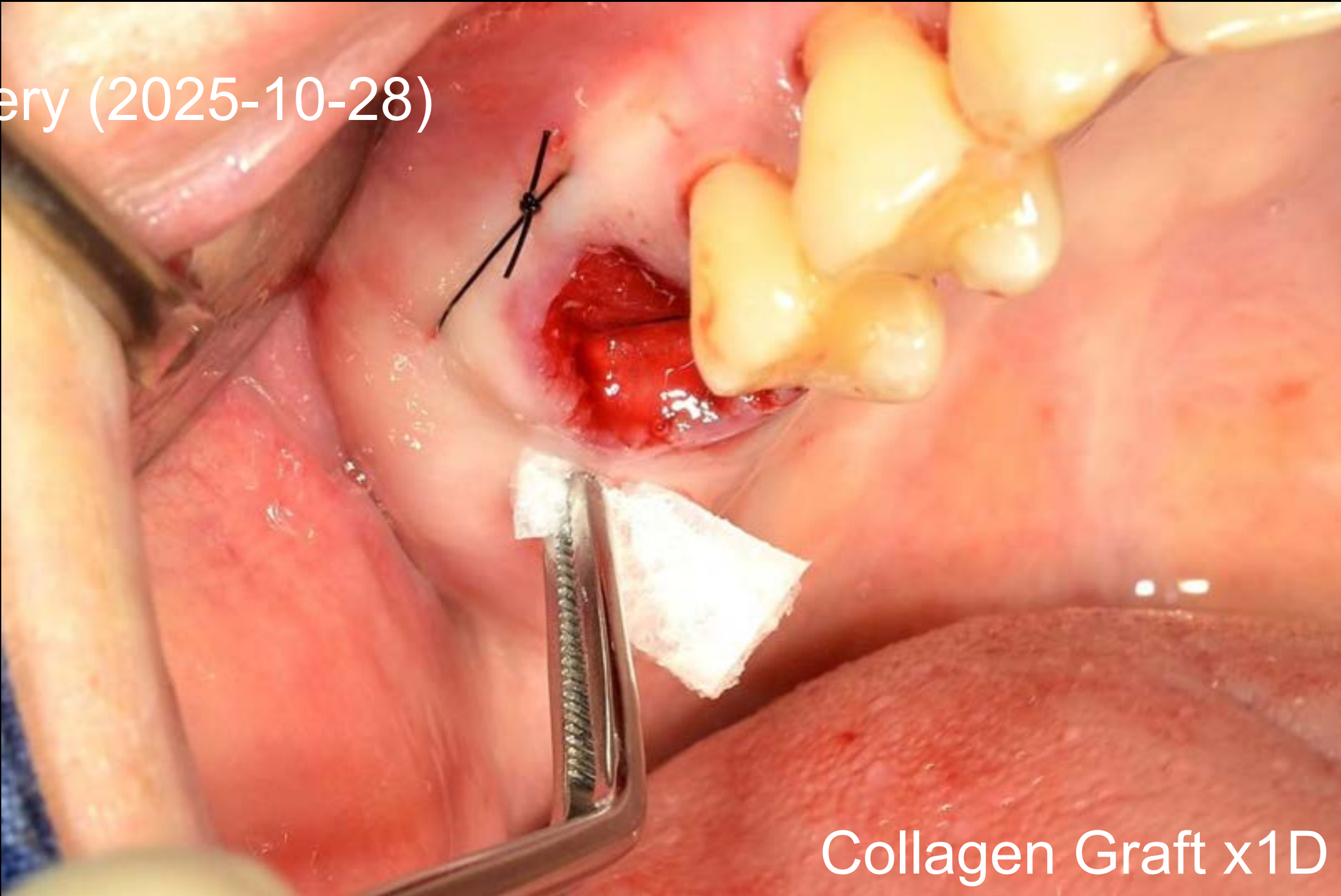
Compaction drill



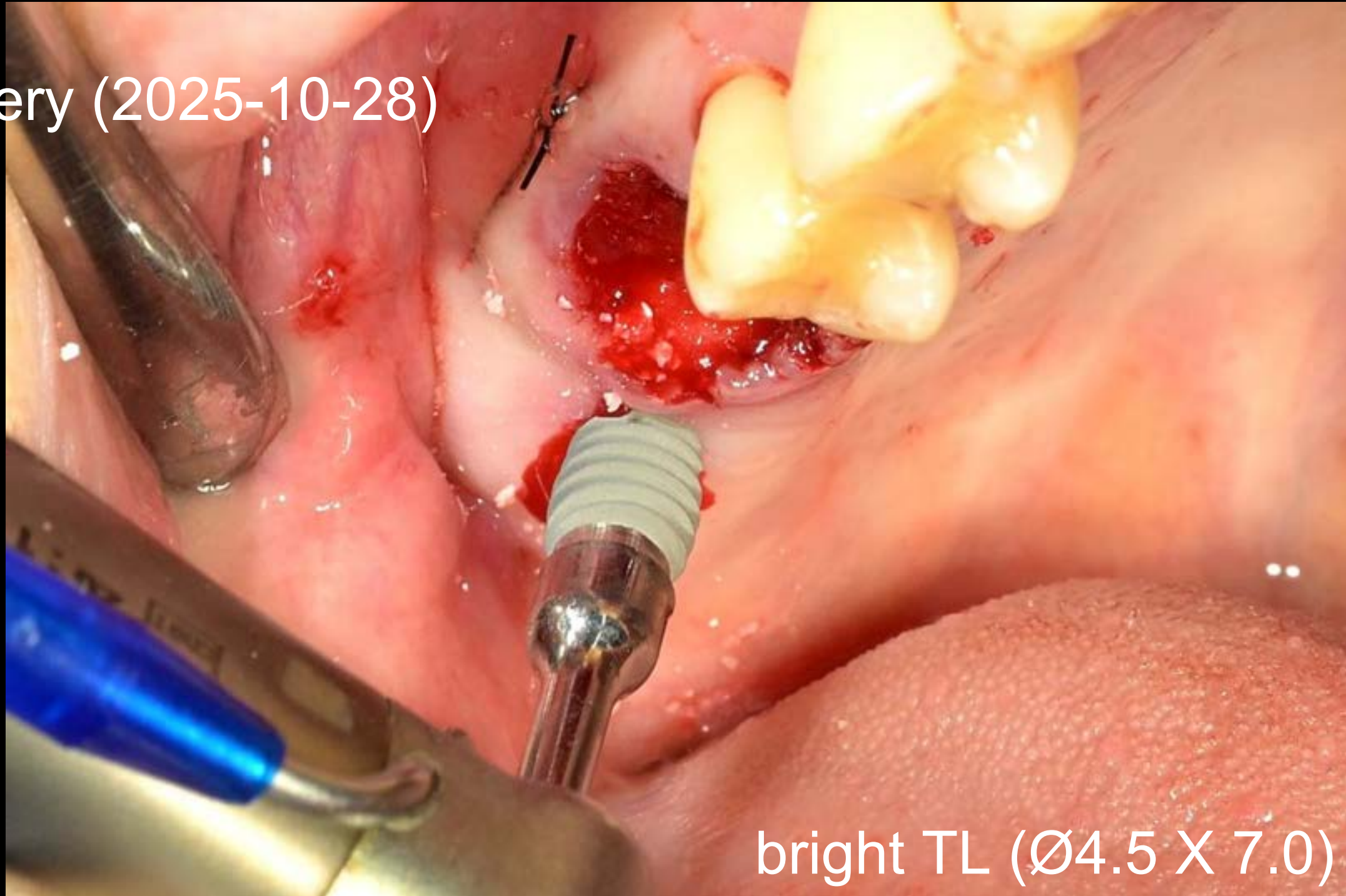
DASK Simple



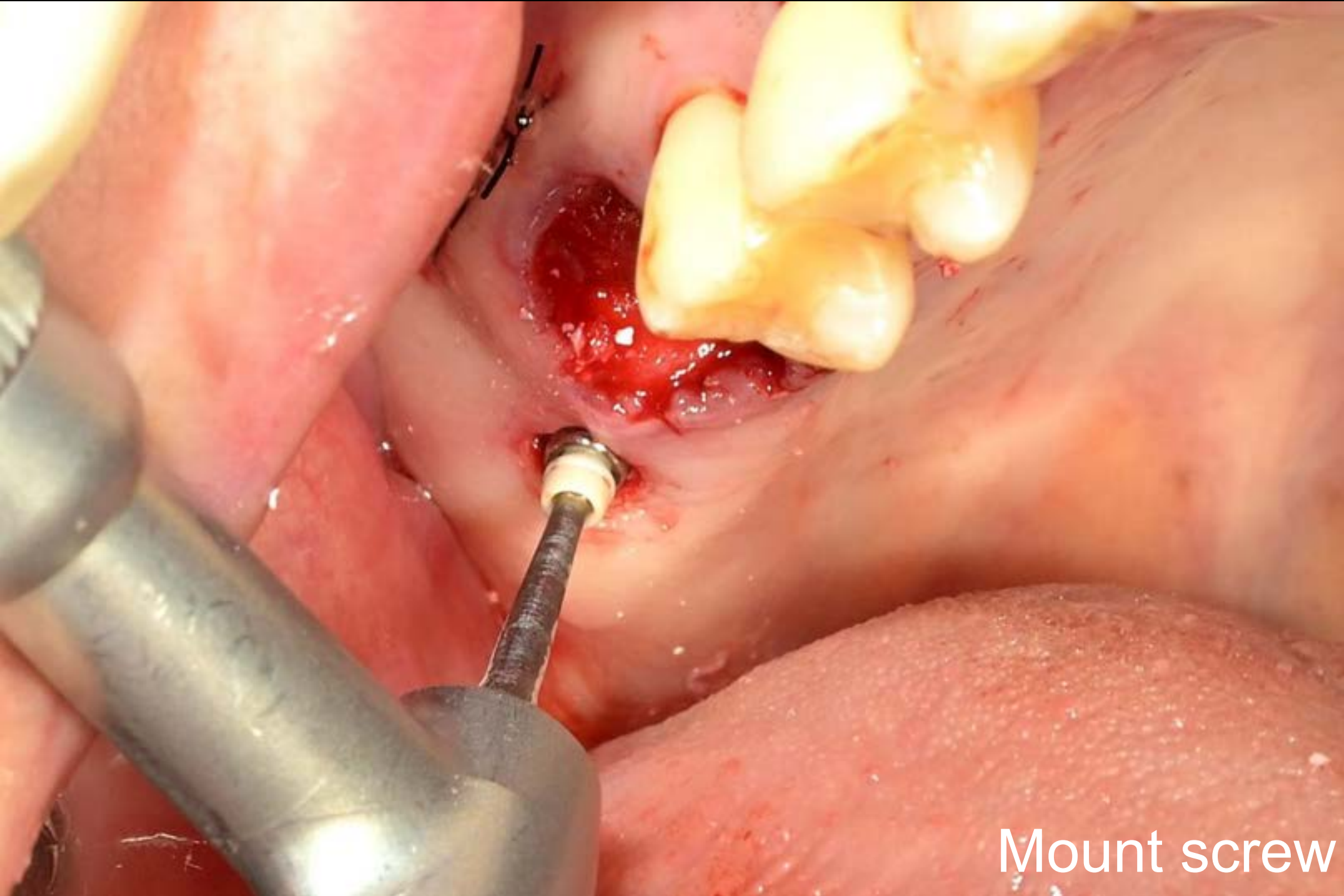
Surgery (2025-10-28)



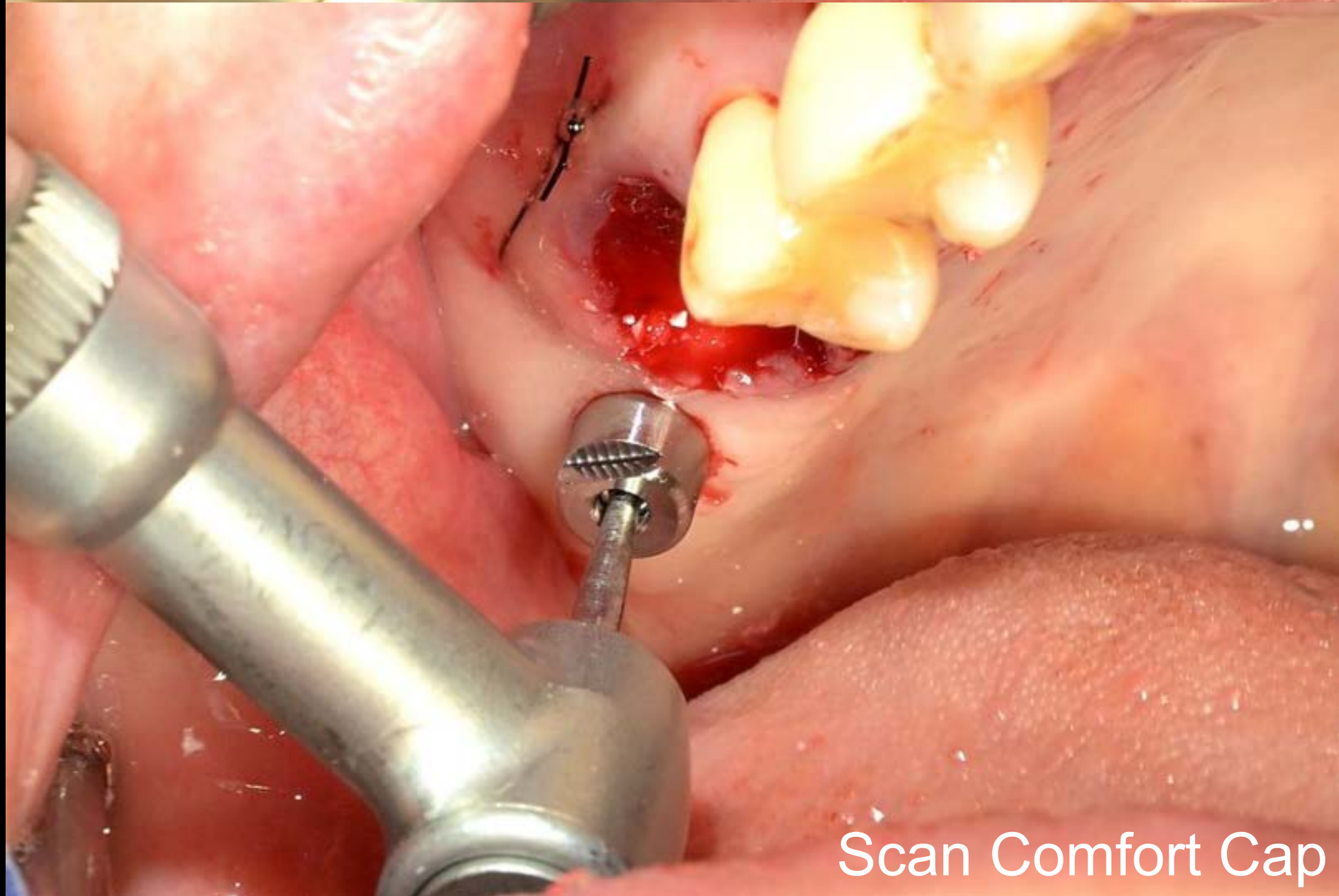
Surgery (2025-10-28)



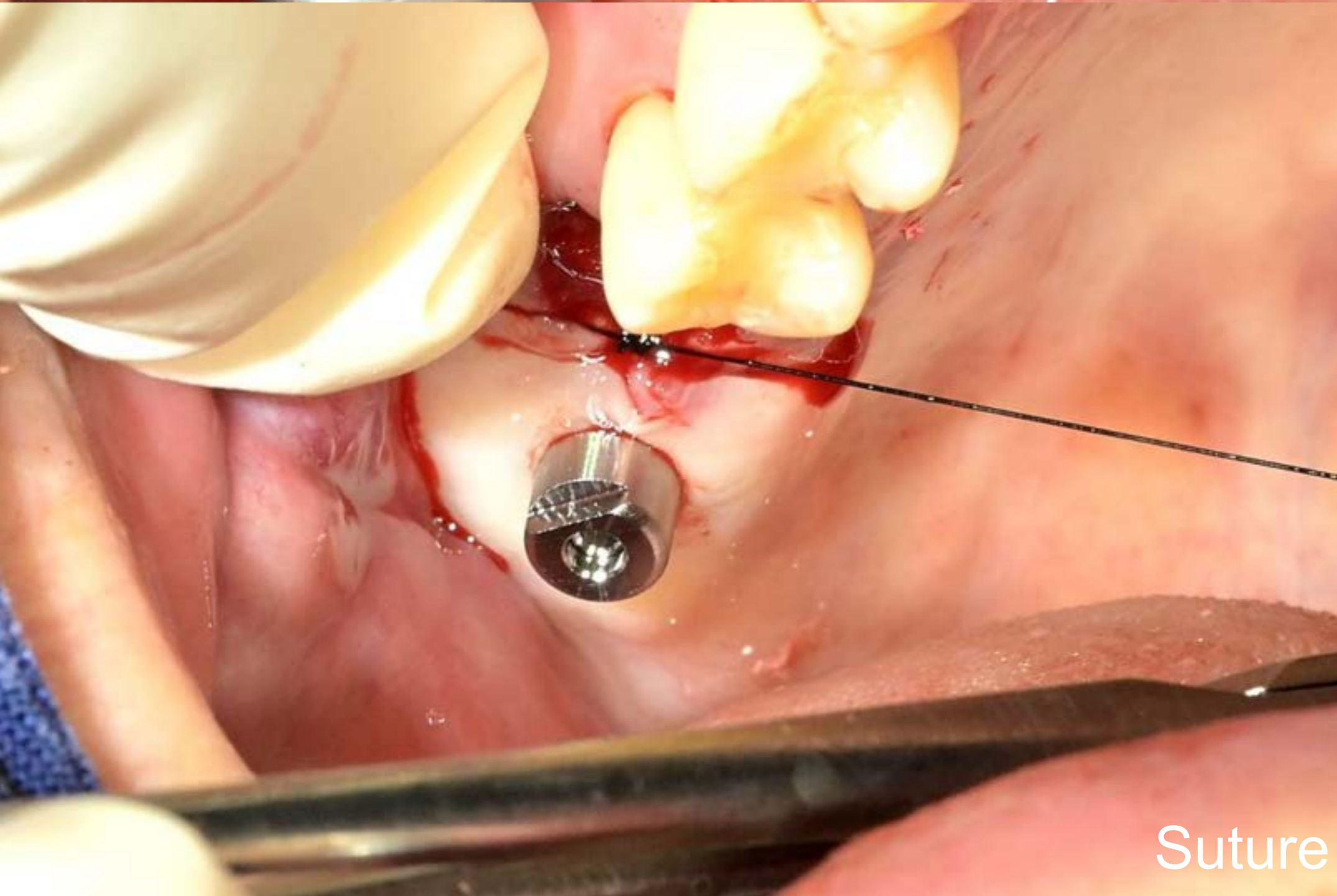
bright TL (Ø4.5 X 7.0)



Mount screw

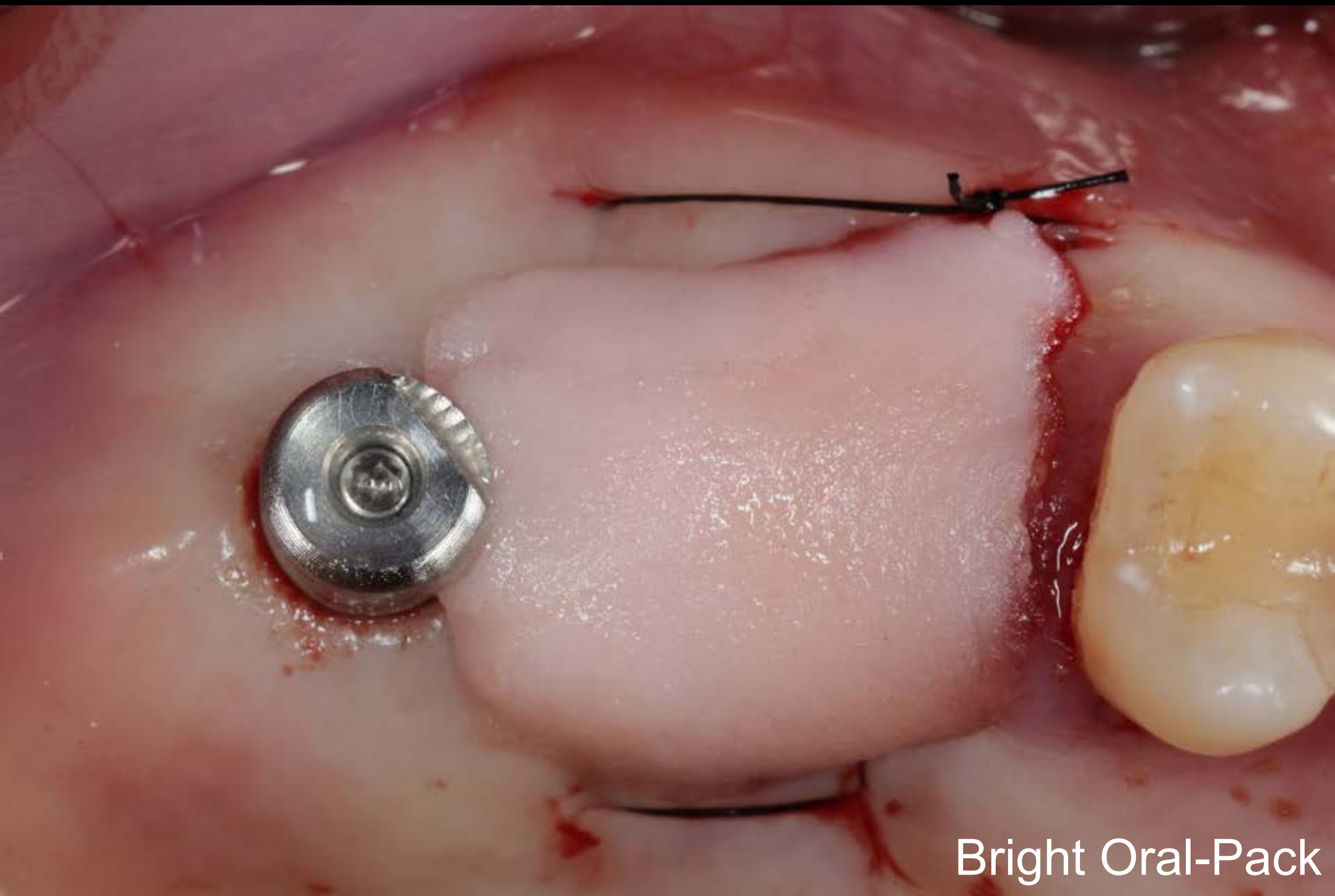
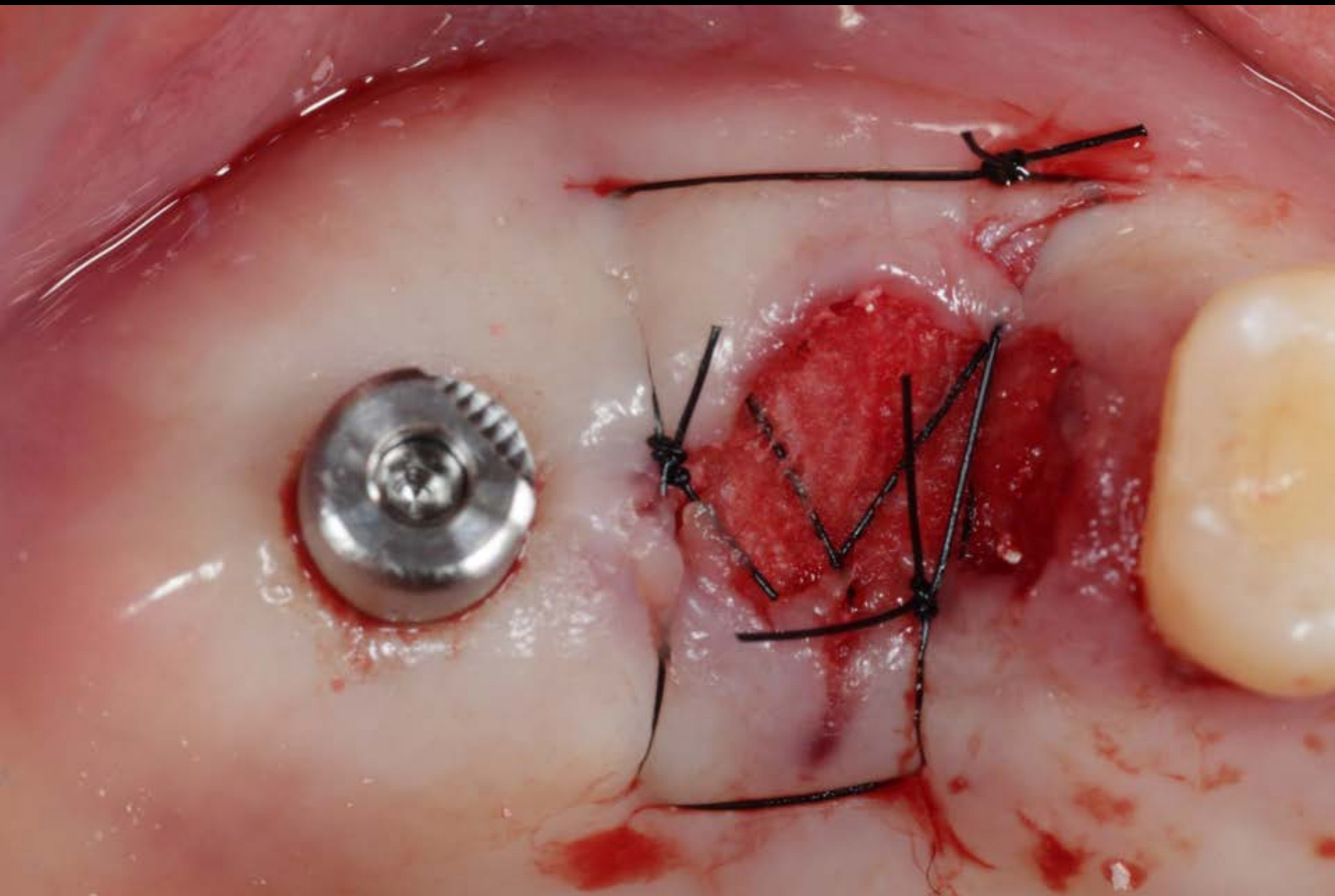


Scan Comfort Cap

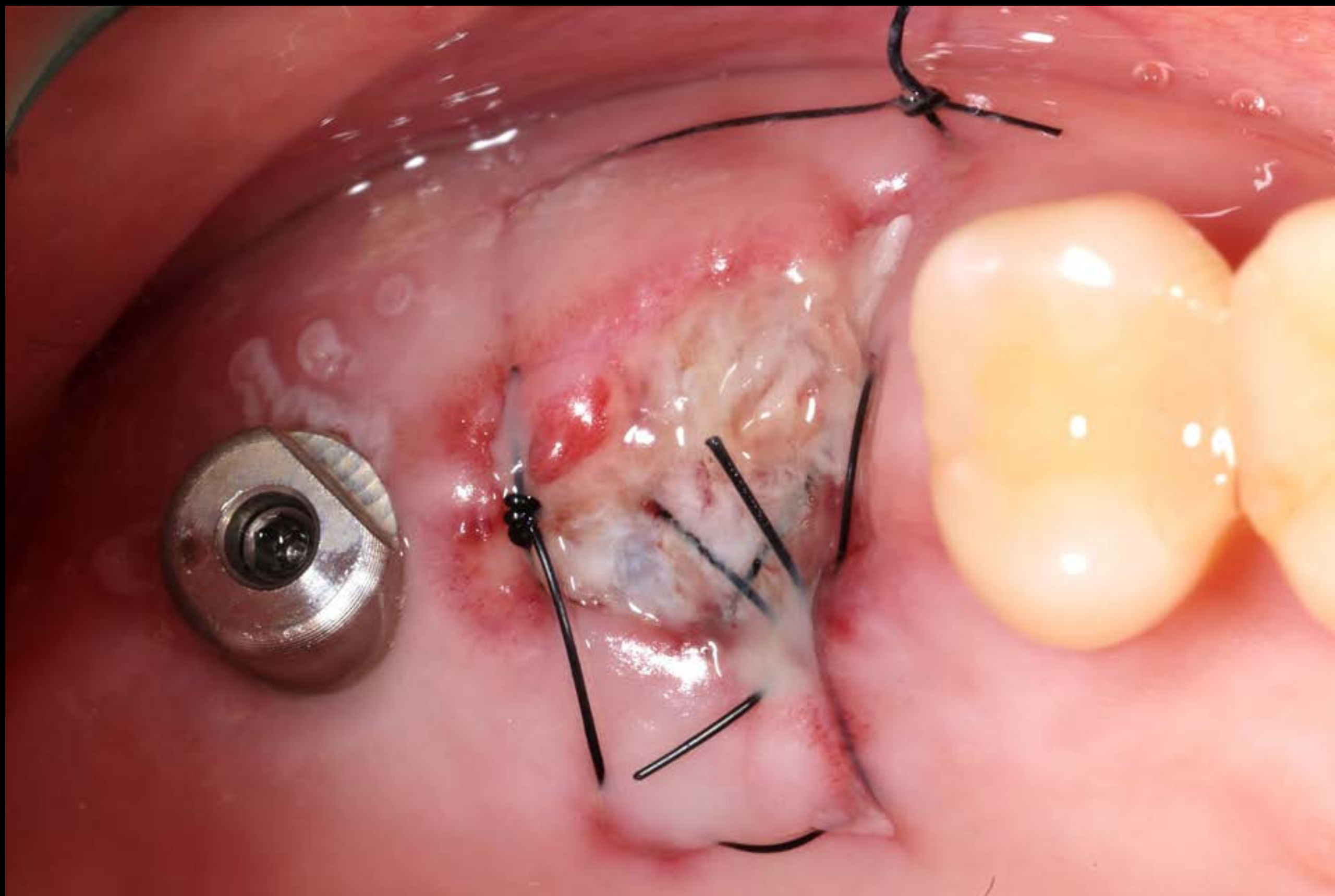


Suture

Post-op (2025-10-28)



Healing : 4 days (2025-11-01)



Healing : 10 days (2025-11-08)



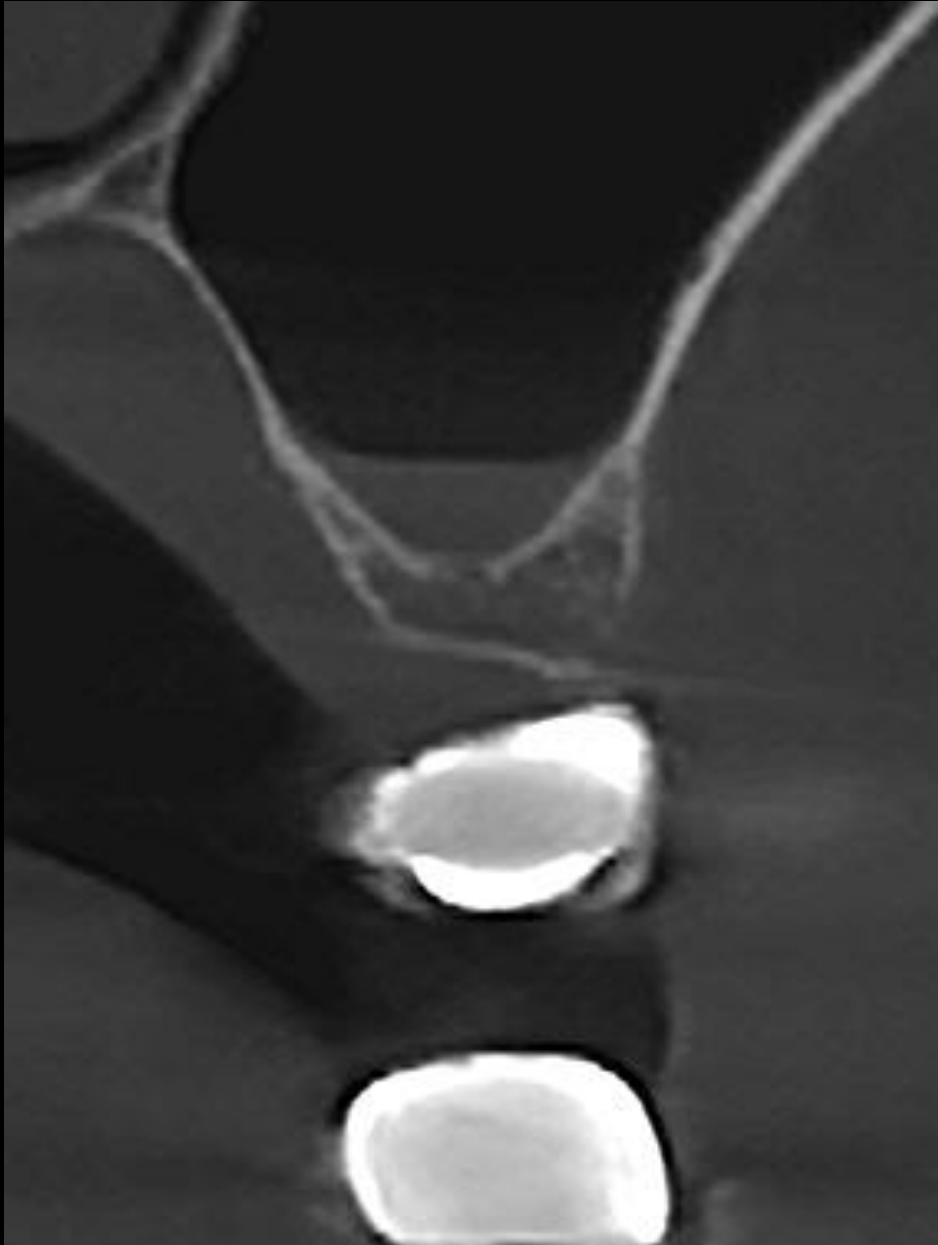
Oral exam (2024-08-28)



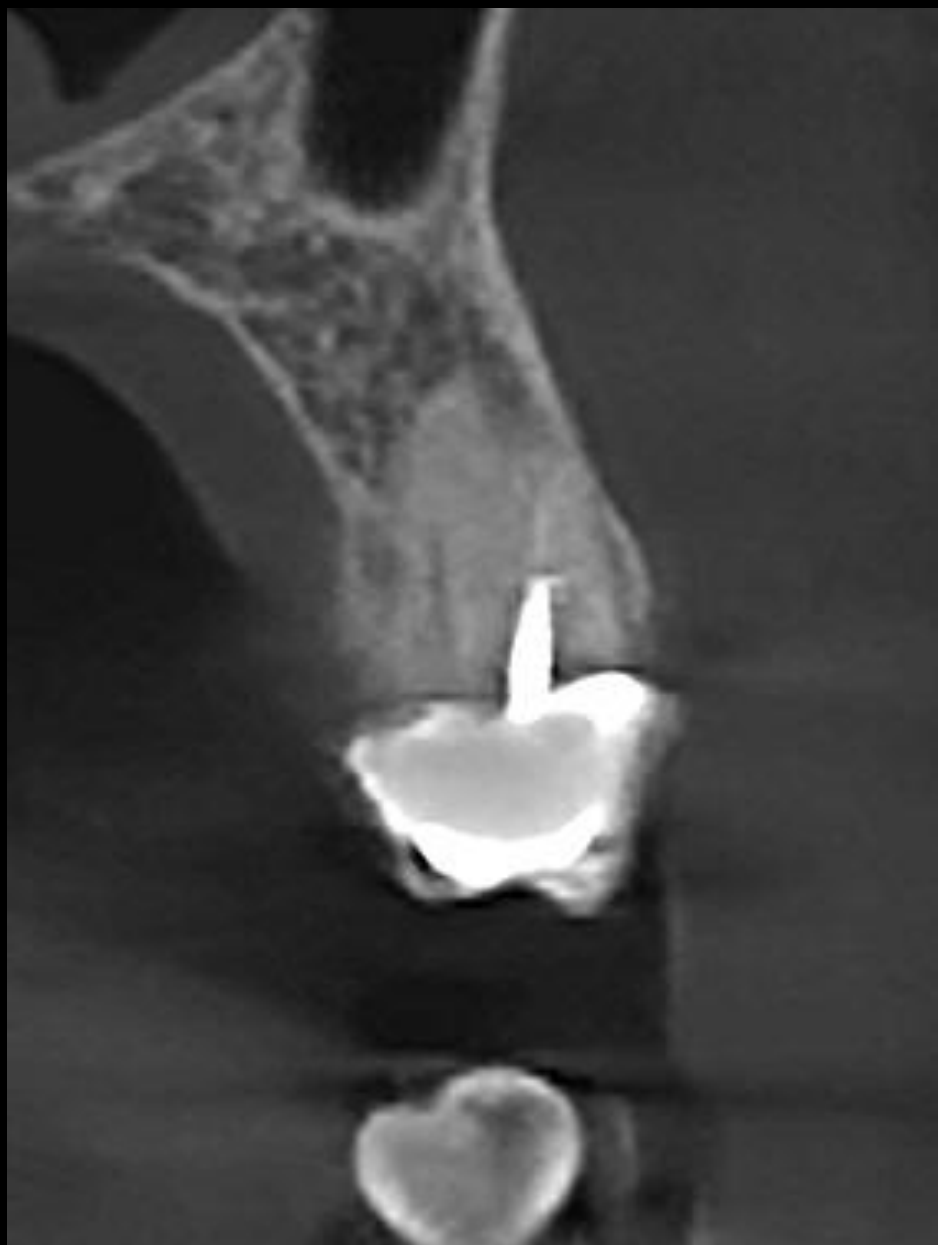
Post-op (2024-10-02)



Pre-op CT (2024-09-25)

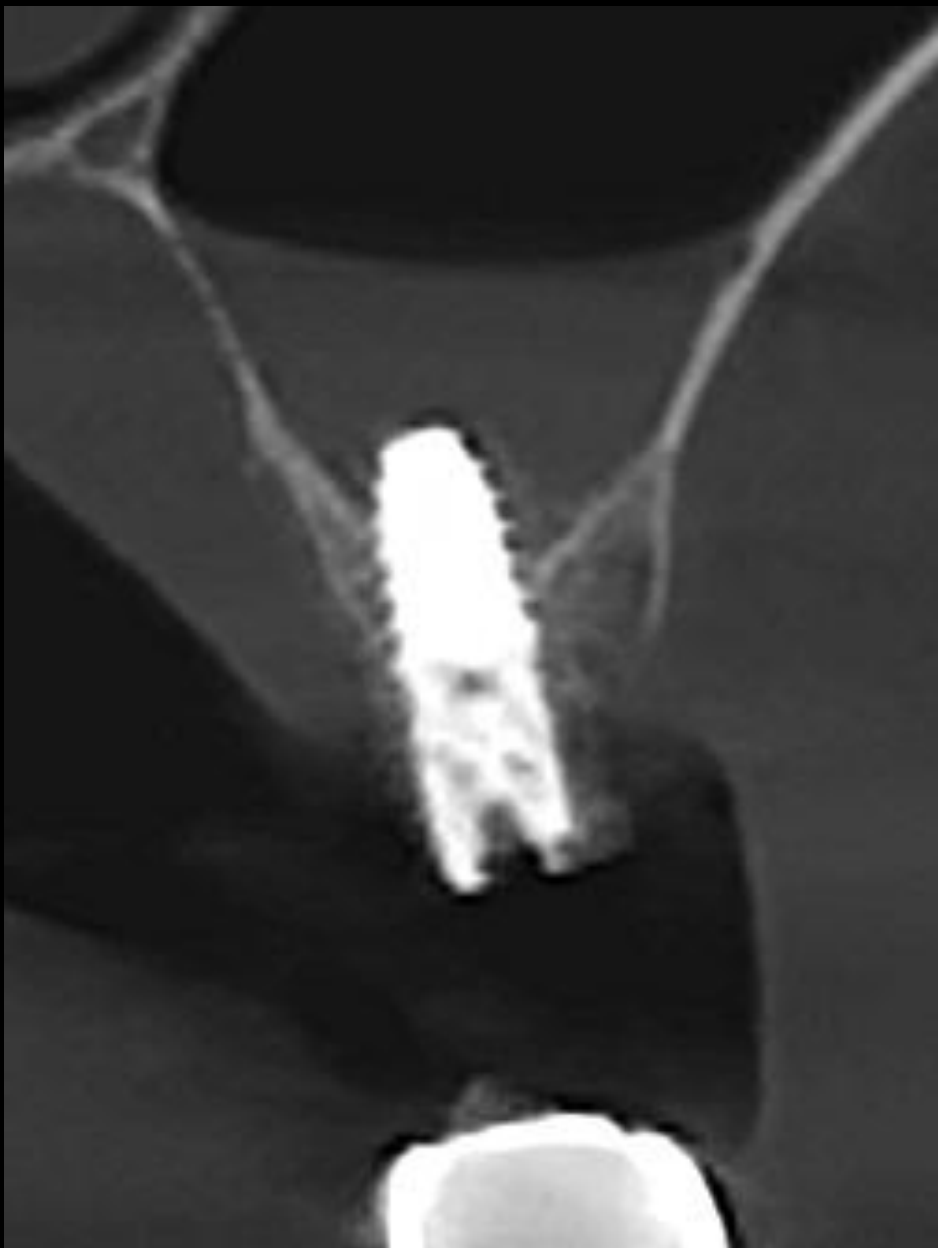


#16

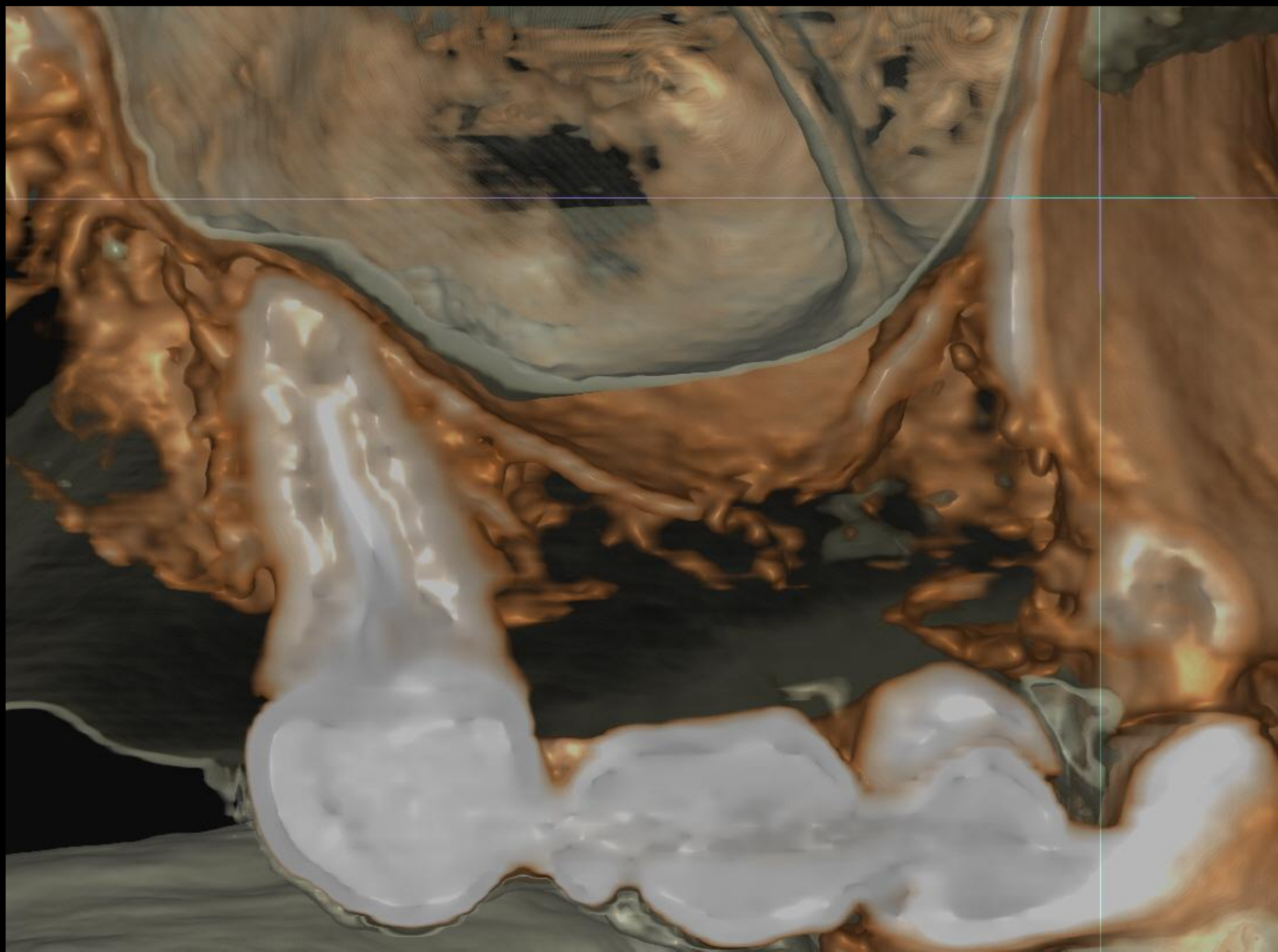


#14

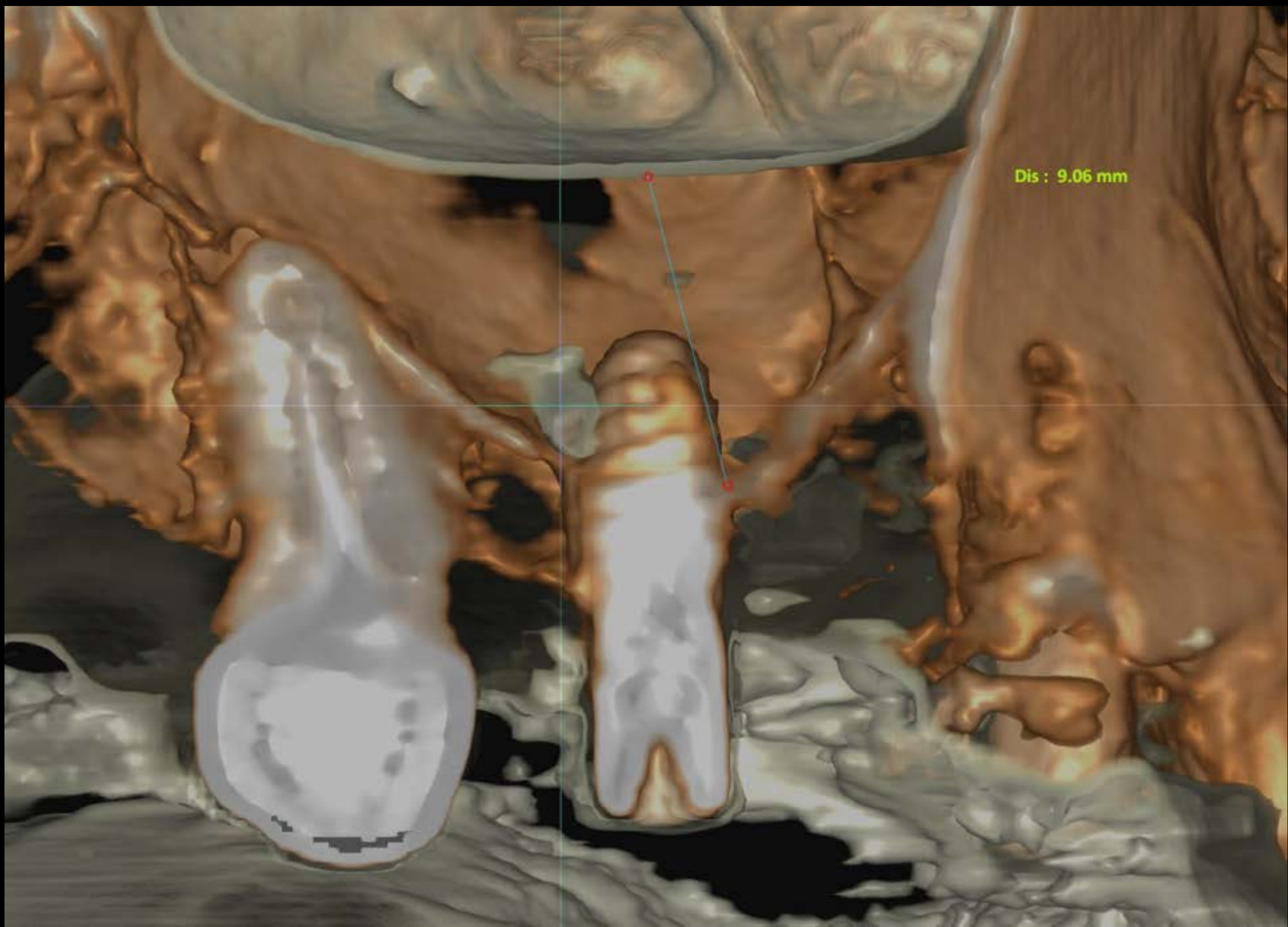
Post-op CT (2024-09-25)



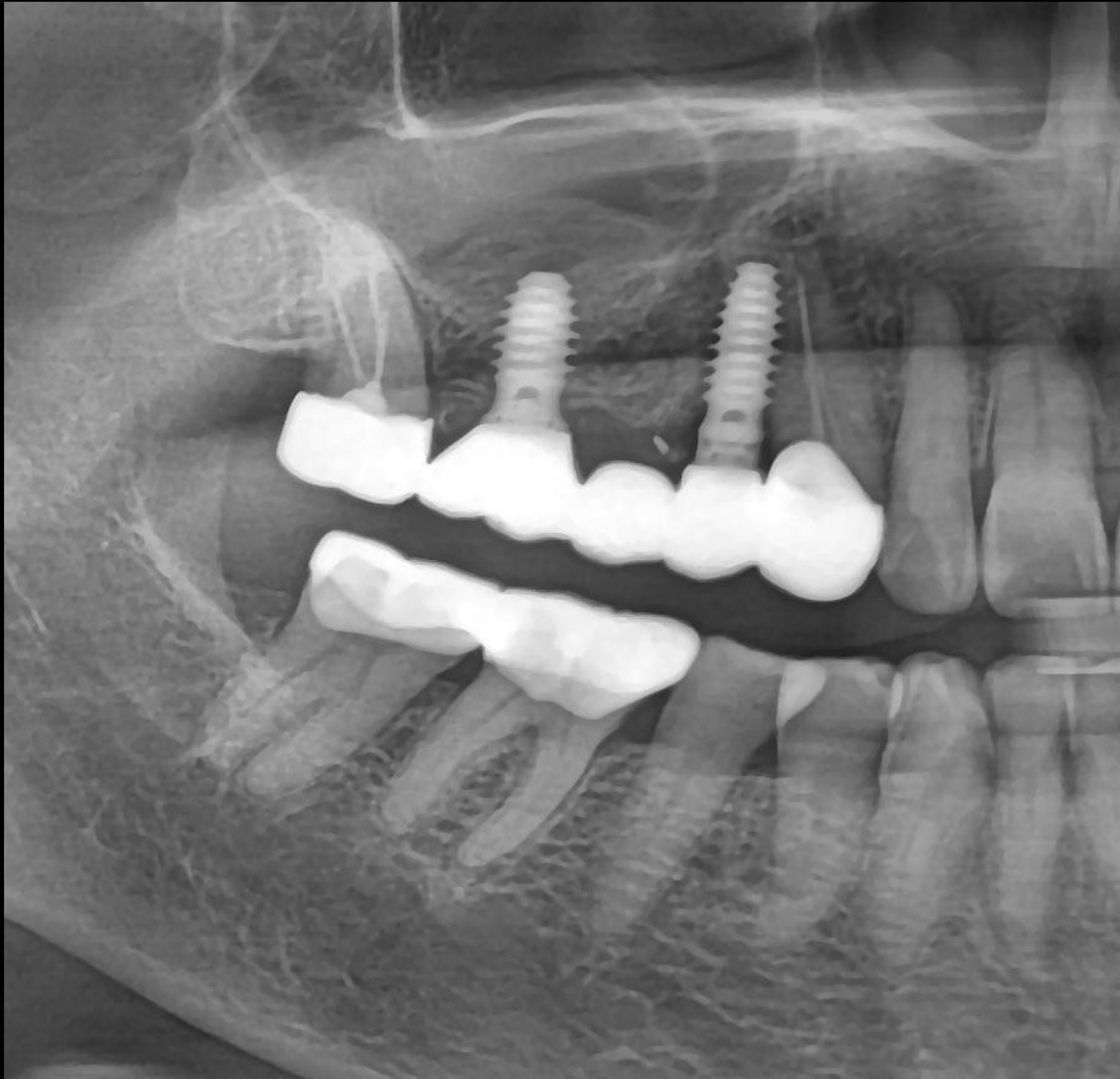
Pre-op CT (2024-09-25)



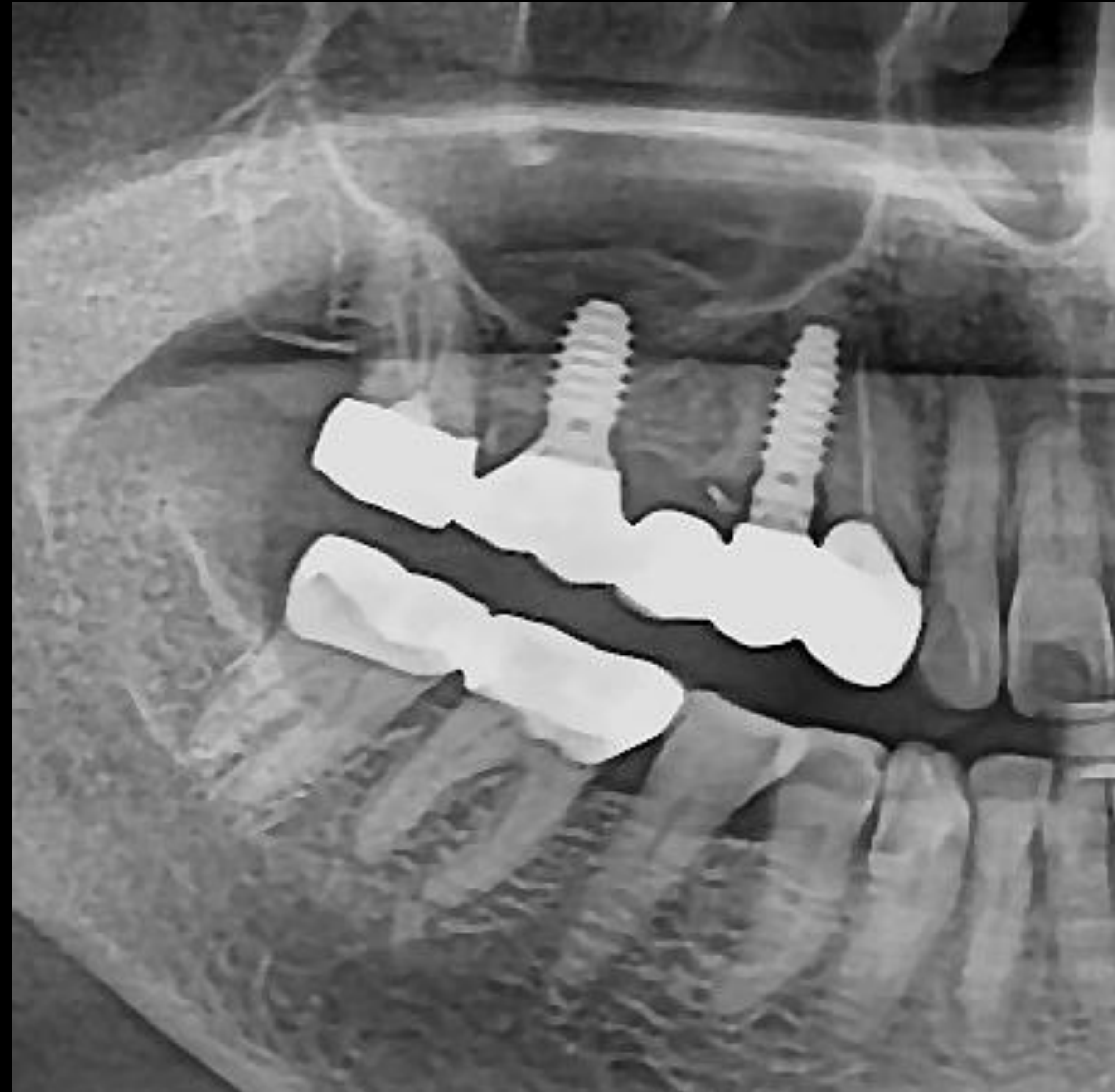
Post-op CT (2024-09-25)



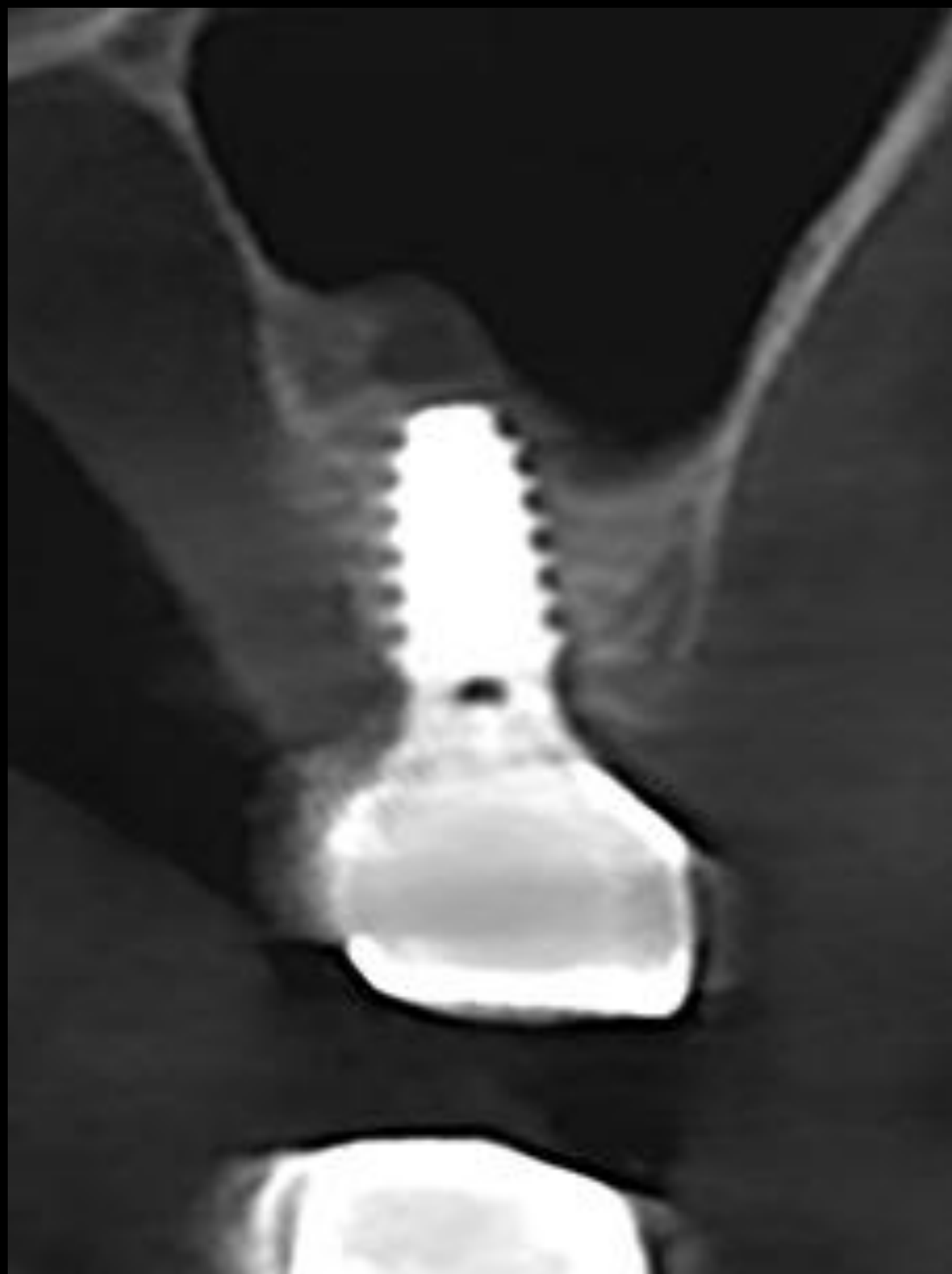
Final prosthesis (2025-02-21)



Follow up : 6 months (2025-08-22)



Follow up CT : 6 months (2025-08-22)

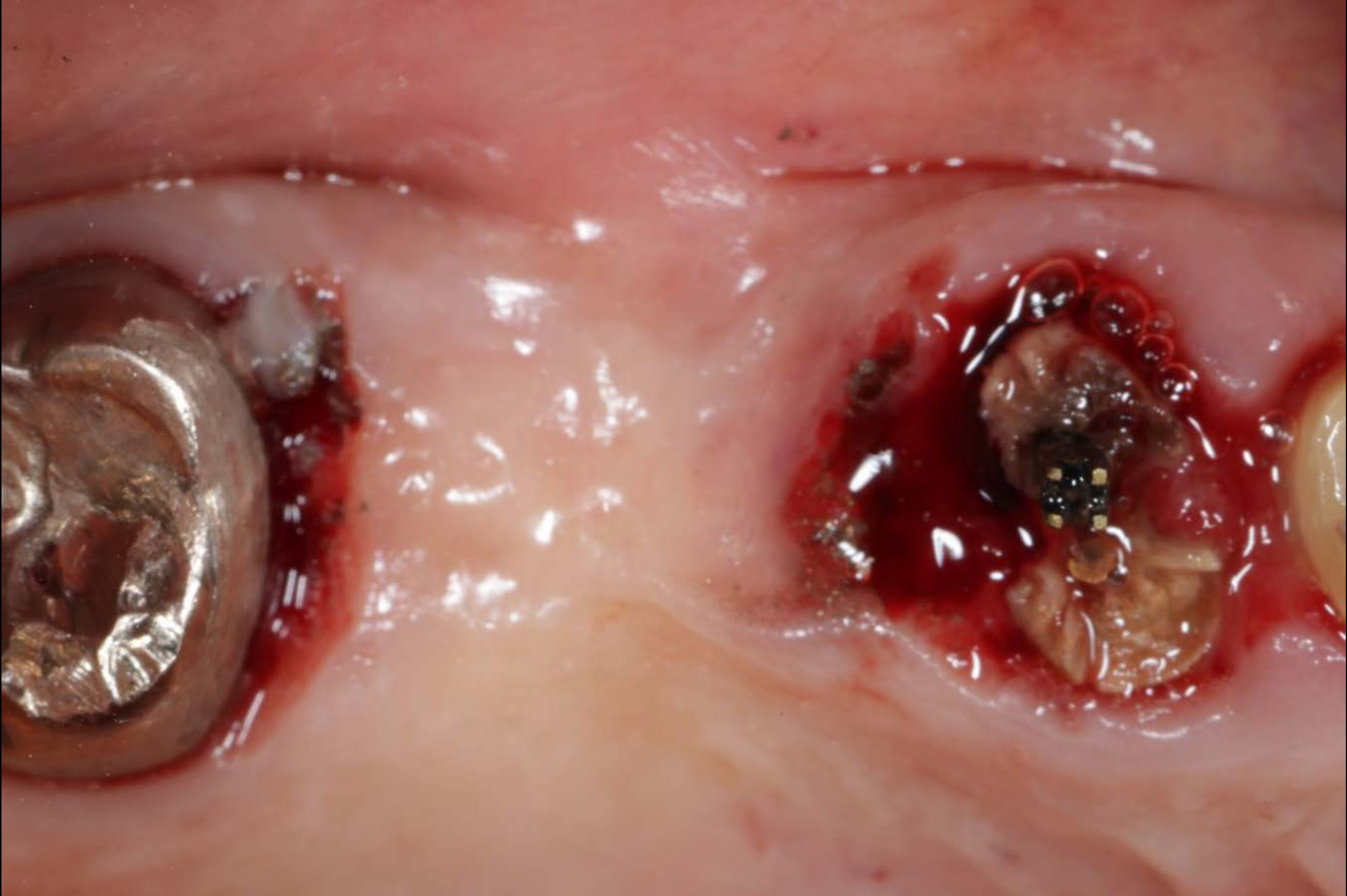


#16

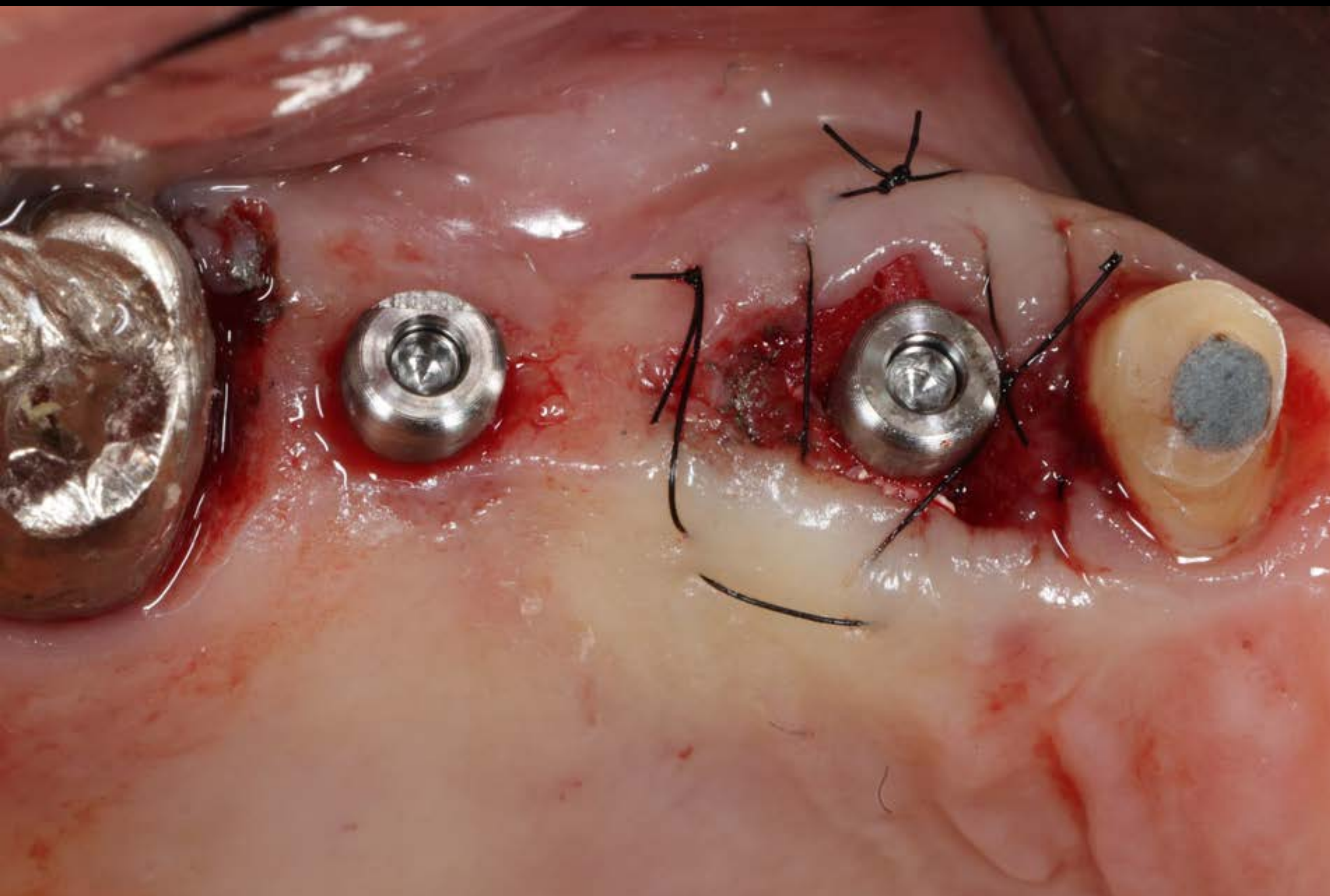


#14

Pre-op(2024-09-25)



Post-op (2024-09-25)



Healing : 1 week (2024-10-02)



An intraoperative photograph showing a dental procedure. A white, cylindrical implant (DASK Simple) is visible, partially covered by a translucent, pinkish-red membrane. The surrounding tissue is reddish and appears to be in the process of being sutured or secured. The background is dark, suggesting a surgical field.

Crestal Approach with DASK Simple

Dentium Dental Clinic
Dr. SM Chung

**** Surgery VOD 2**

Milling / Coloring / Sintering / Glazing

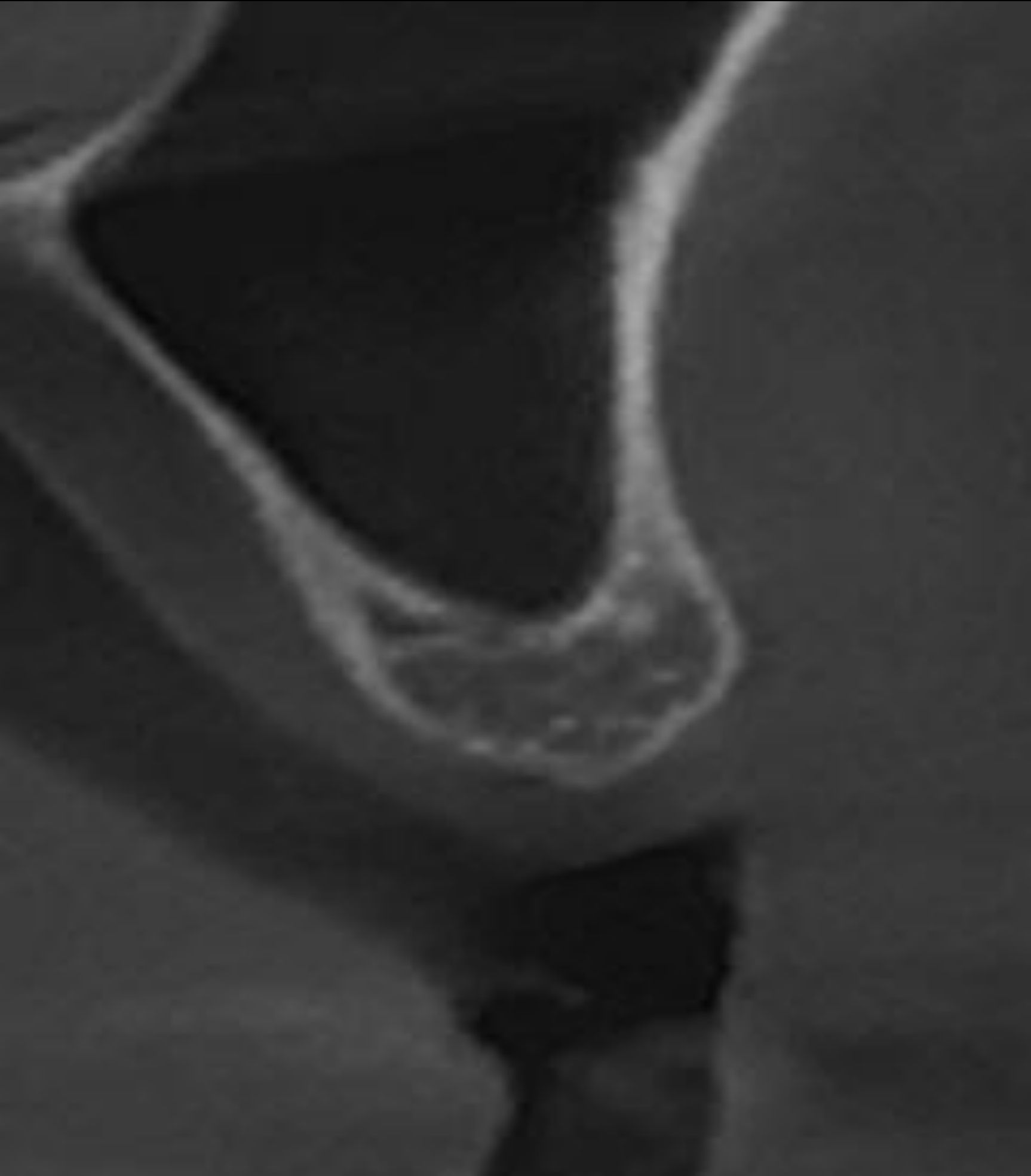


Final prosthesis (2025-02-21)



Follow up : 6 months (2025-08-22)

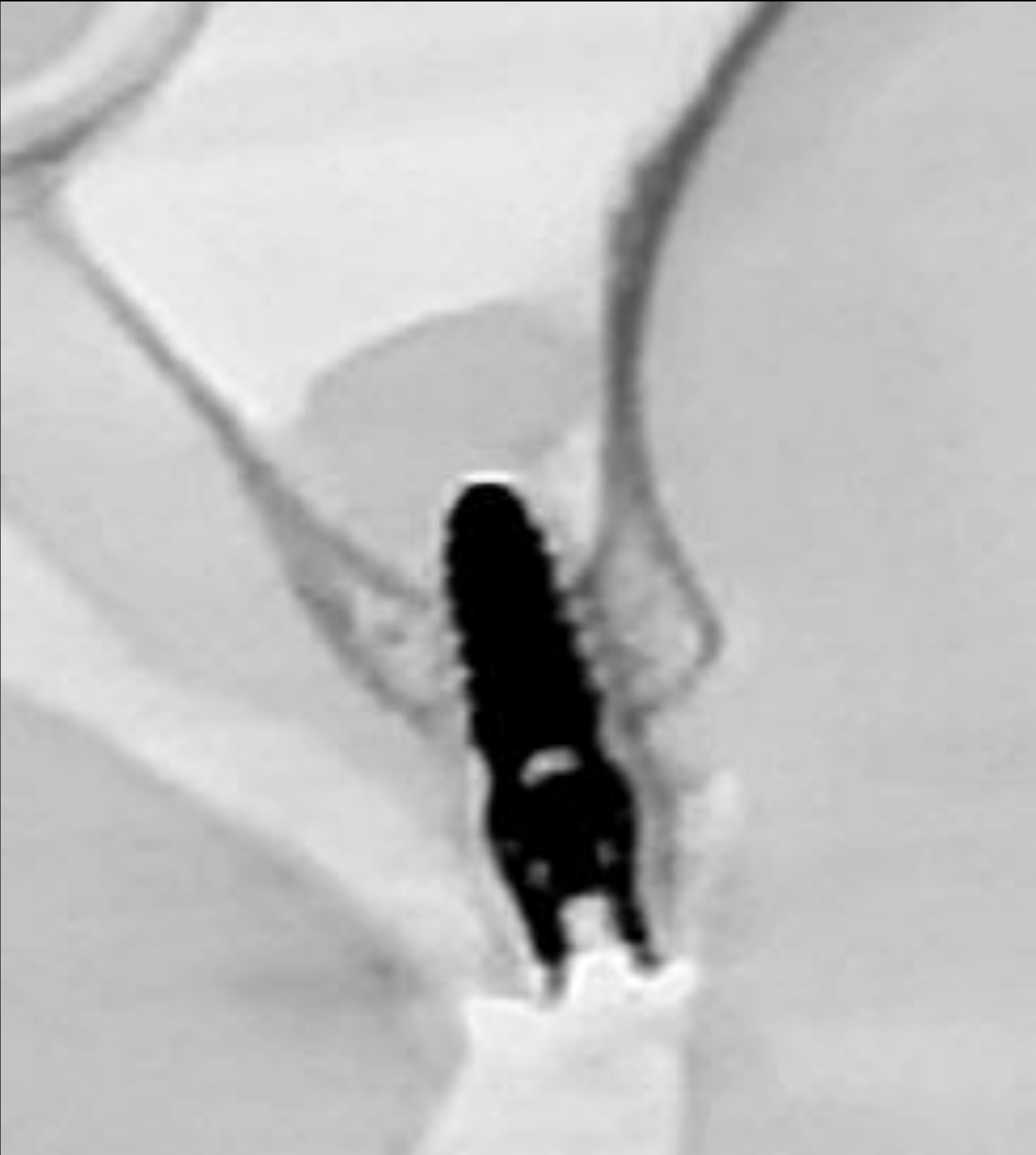




Post-op CT (2024-11-30)



#25

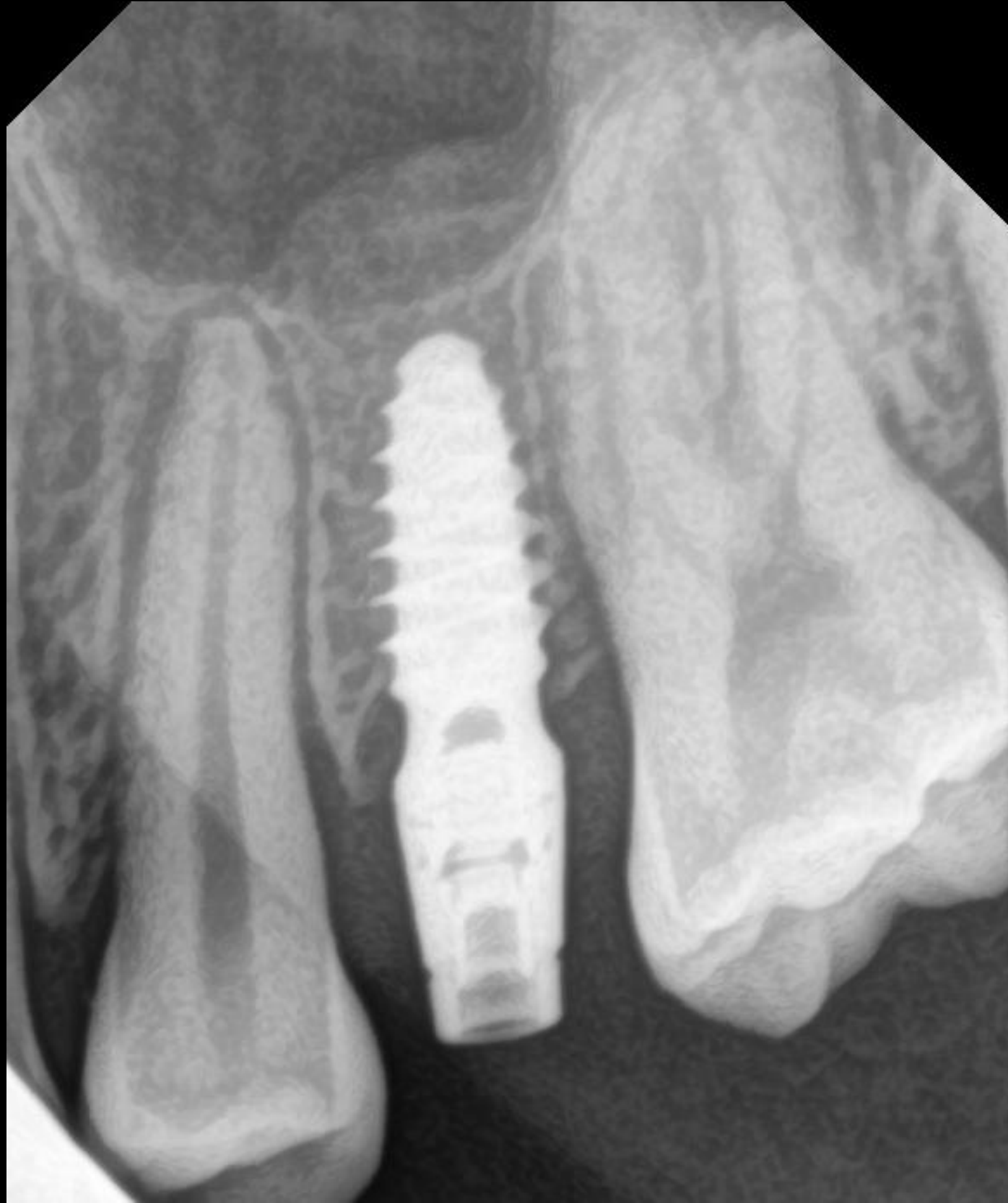


#25

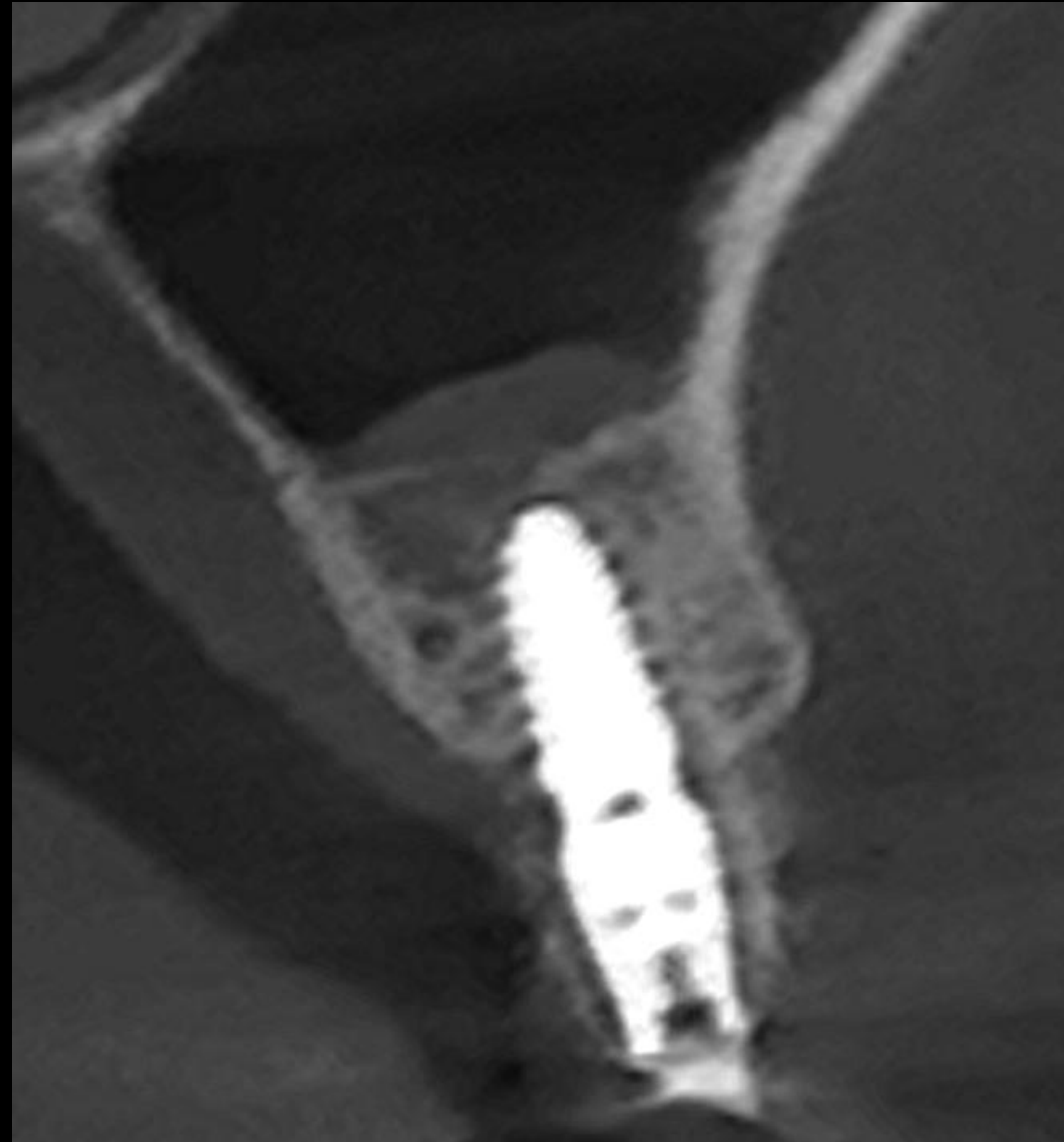
Healing CT : 3 months (2025-02-15)



Healing : 6 months (2025-06-14)



Healing CT : 6 months (2025-06-14)

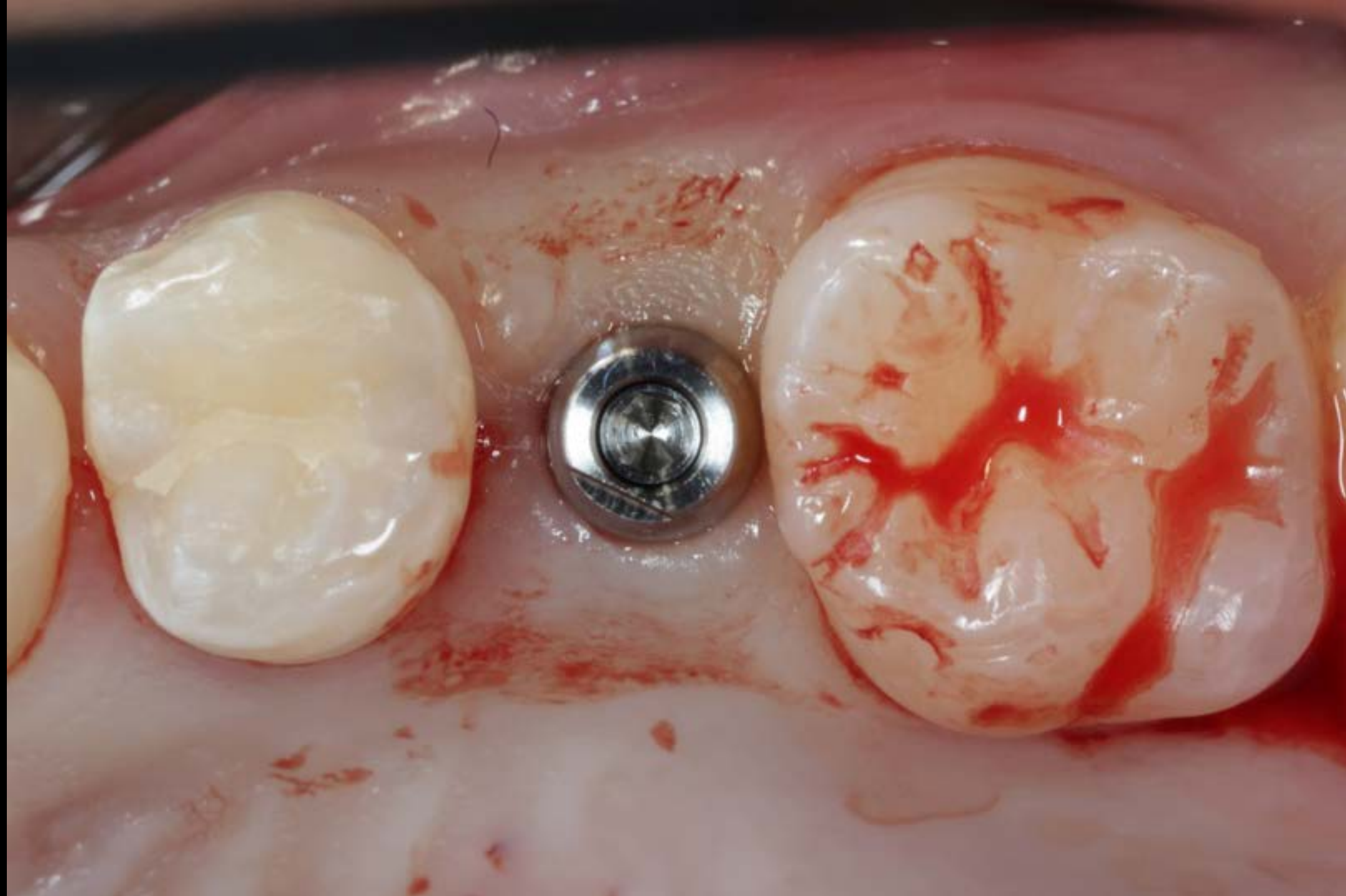


Healing : 10 months (2025-10-16)



#25

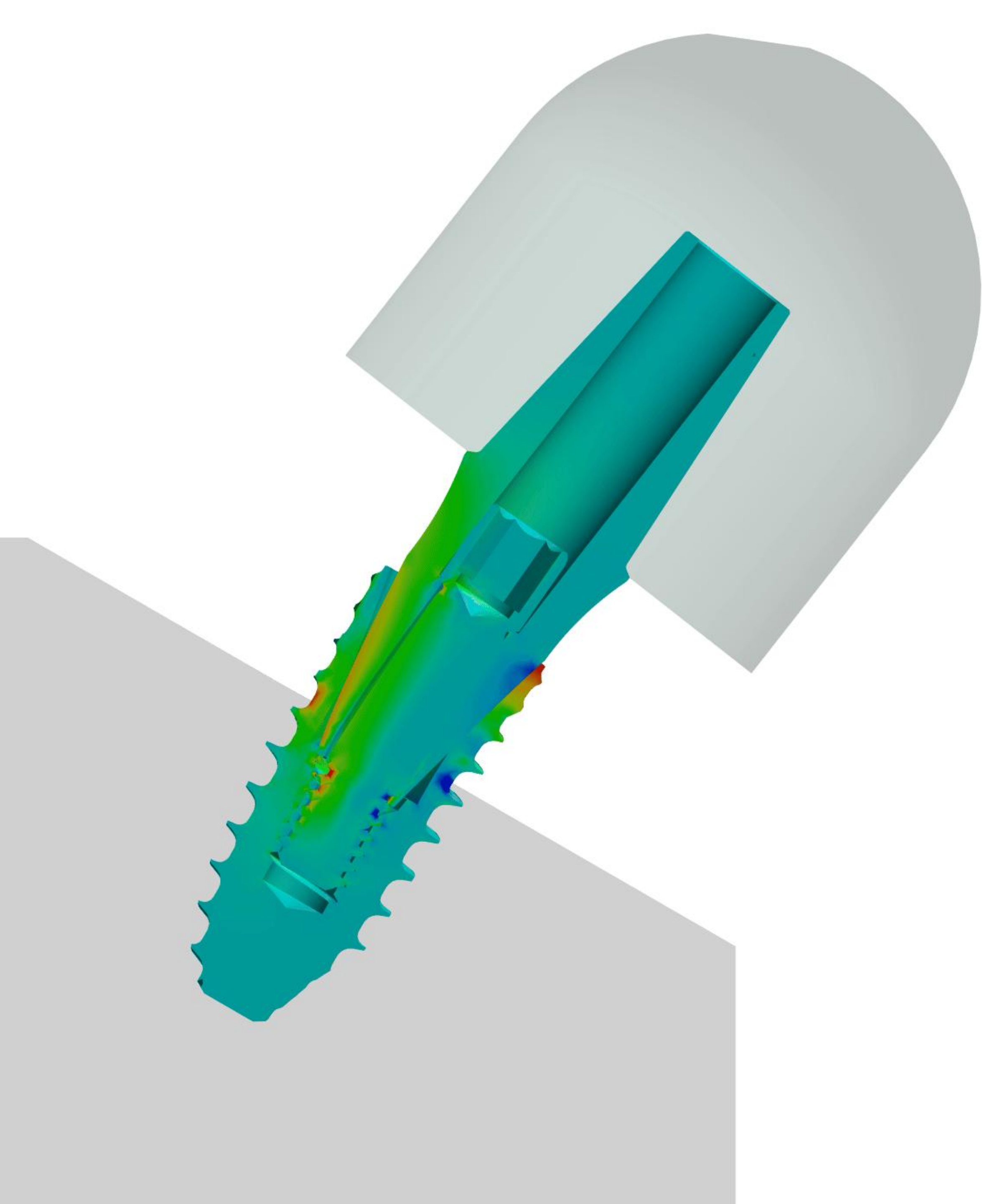




In Crestal approach,

Blind technique, perforation and irregular augmentation is problem

With collagen graft, over 5mm augmentation is safe and even elevation



Thank you for your attending
To members of clinics, marketing
and RD teams