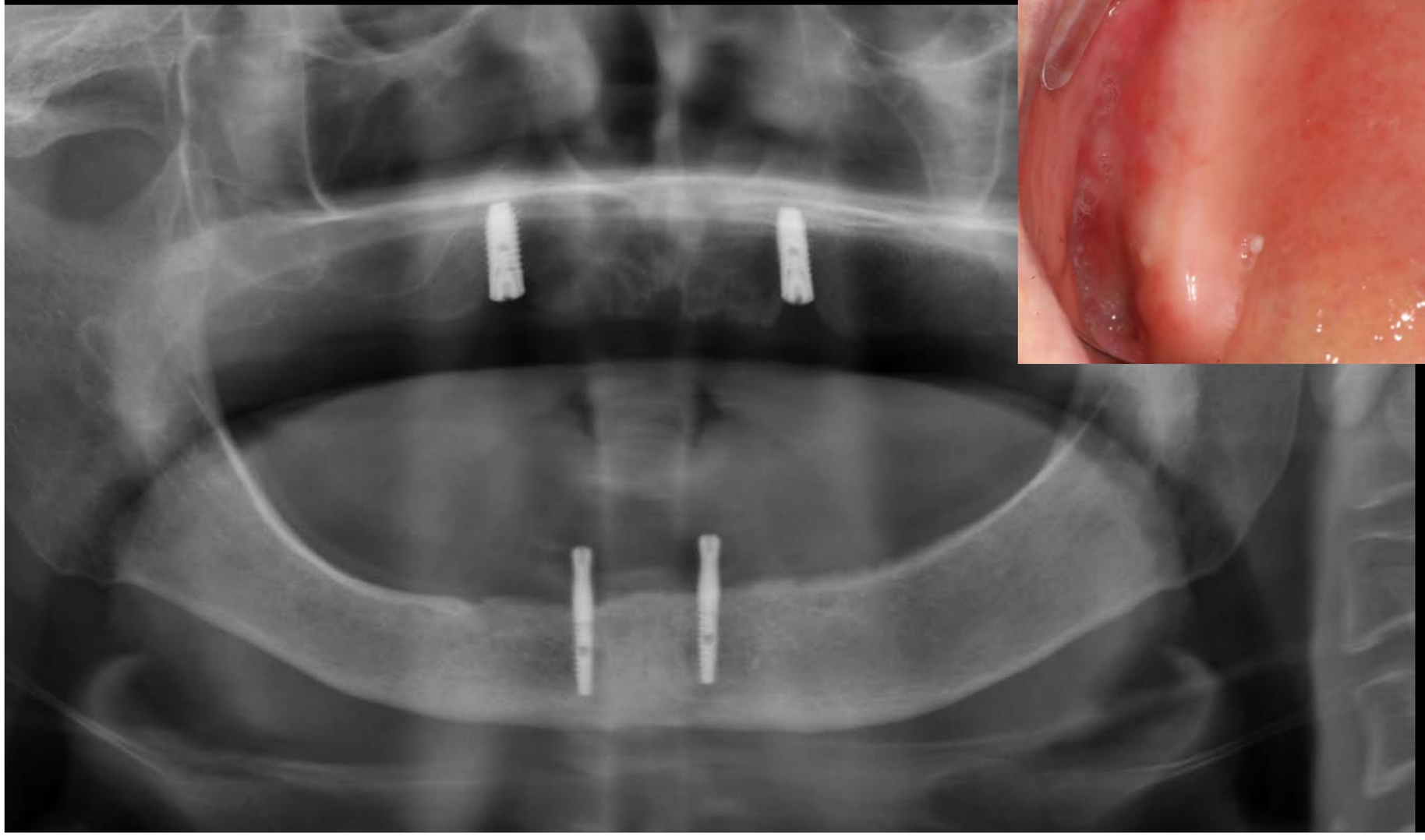
Tx of Edentulous



Dr SM Chung

Founder of Dentium and Genoss
Faculty of KyungHee Univ in Korea
Faculty of LomaLinda Univ in USA
Researcher of Tuebingen Univ in Germany

Tx of Edentulous

Dr SM Chung

Final prosthesis

Age increase

General systemic disease

Bone and soft tissue quality and quantity

Economic situation

About edentulous

Complex

Variety of tx

Complete denture
Overdenture
Fixed prosthesis

Complete denture as you know

Retention, stabilization and occlusion

Functionally and psychologically disabled

Contents

Introduction

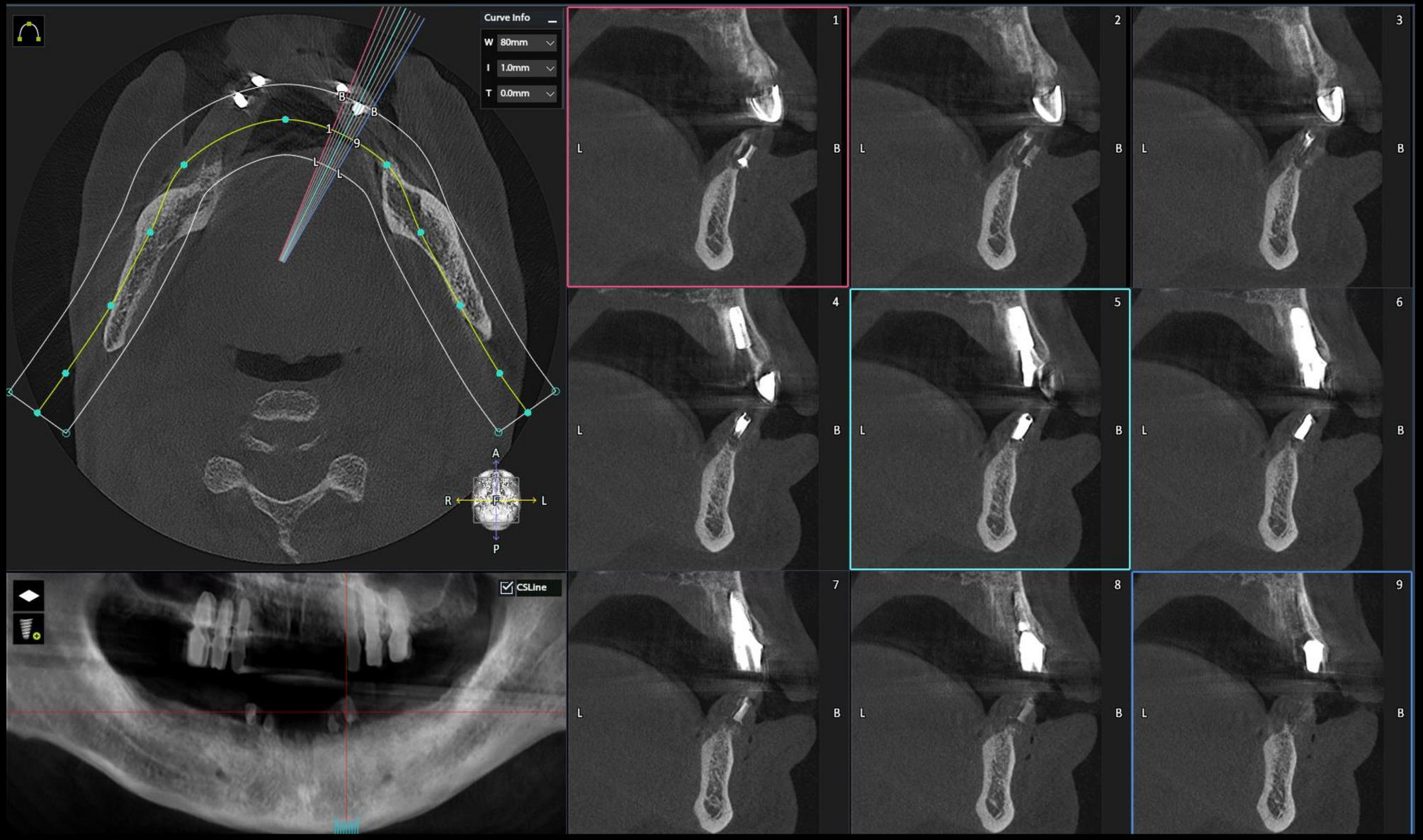
Over denture

Fixed prosthesis

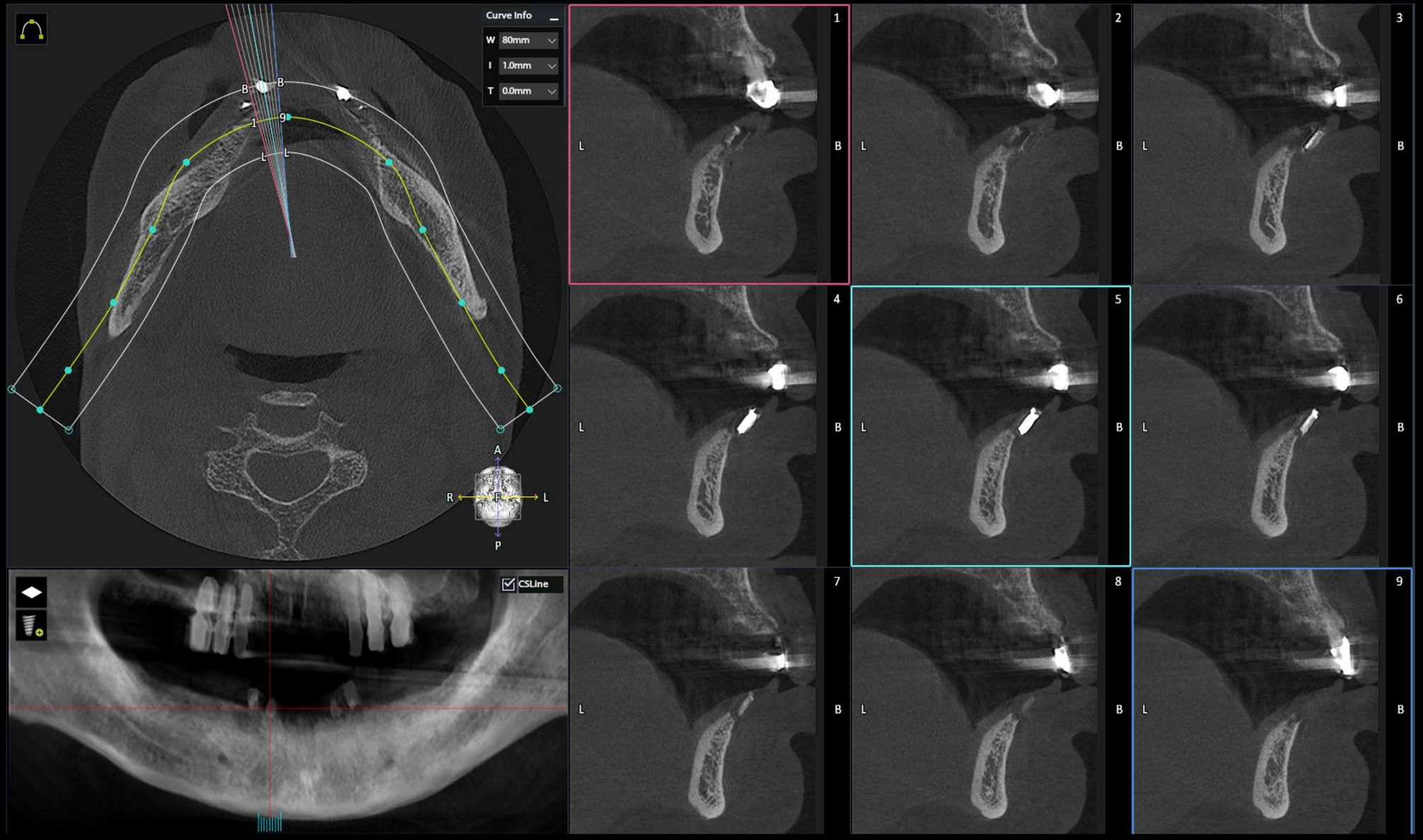
Digita concepts

and application for full mouth reconstruction

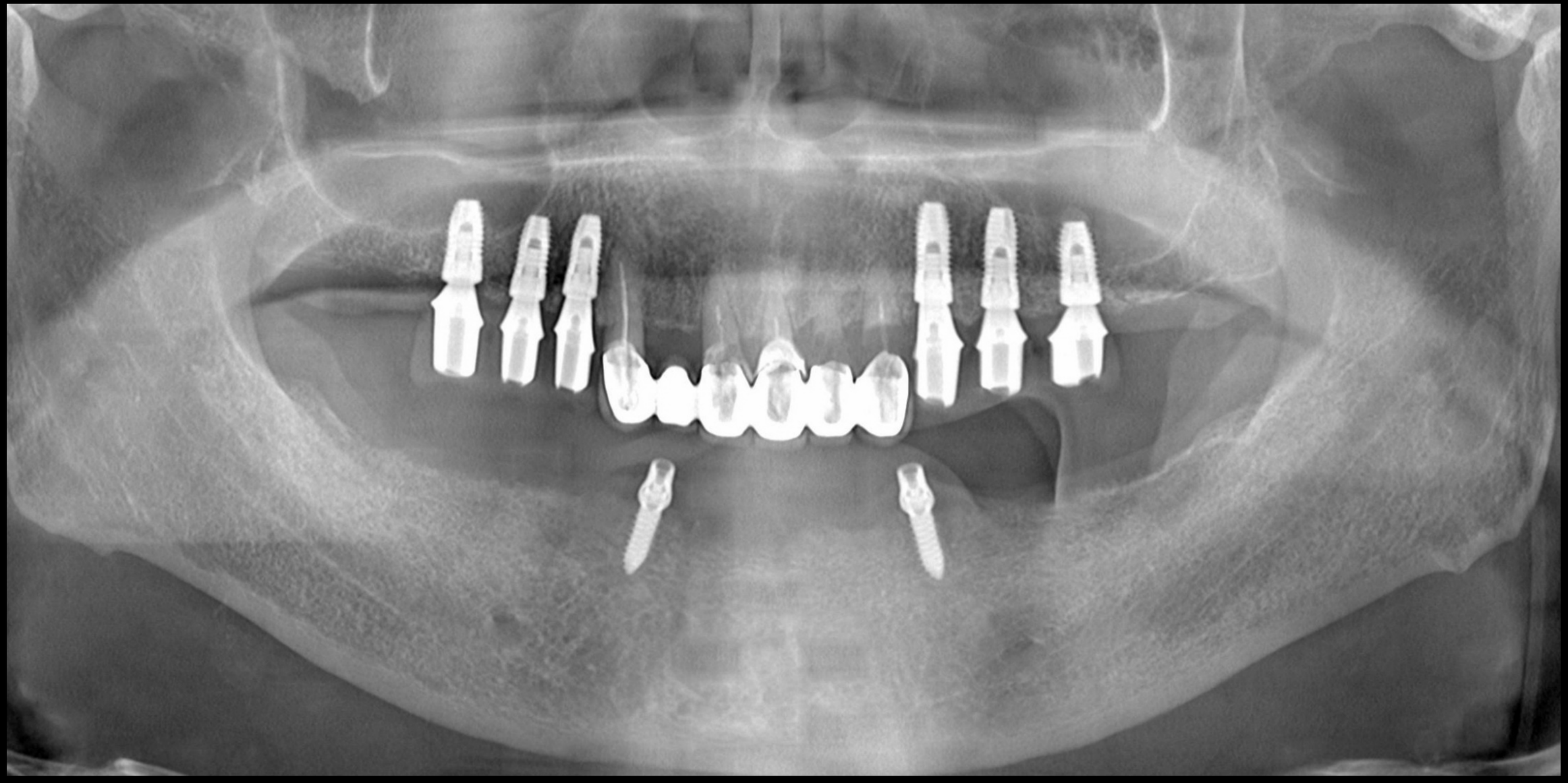
#34 Pre-op with Radiographic guide (2021-05-06)



#43 Pre-op with Radiographic guide (2021-05-06)

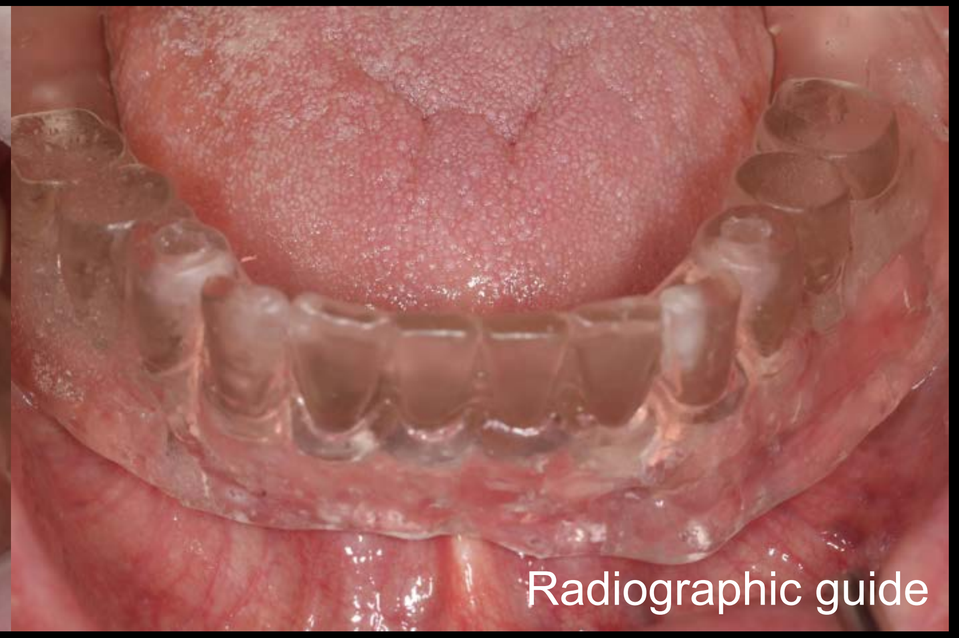


Post-op (2021-05-13)



Pre-op (2021-05-06)

Pre-op (2021-05-06)

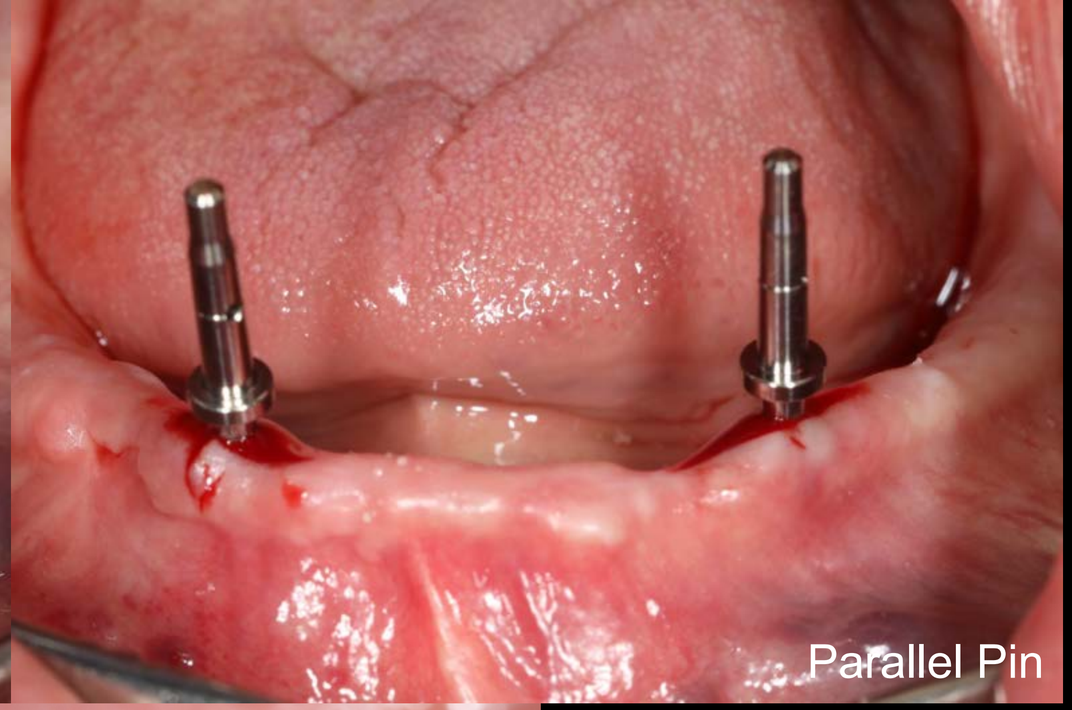


Radiographic guide

GP cone marking

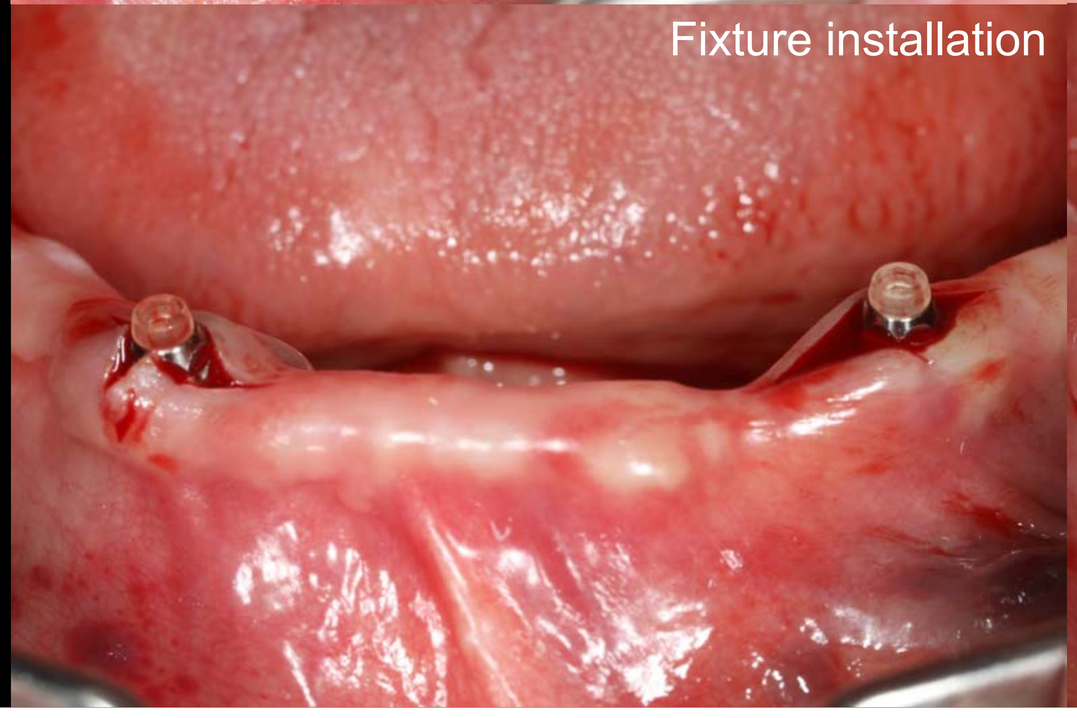
Surgery (2021-05-06)

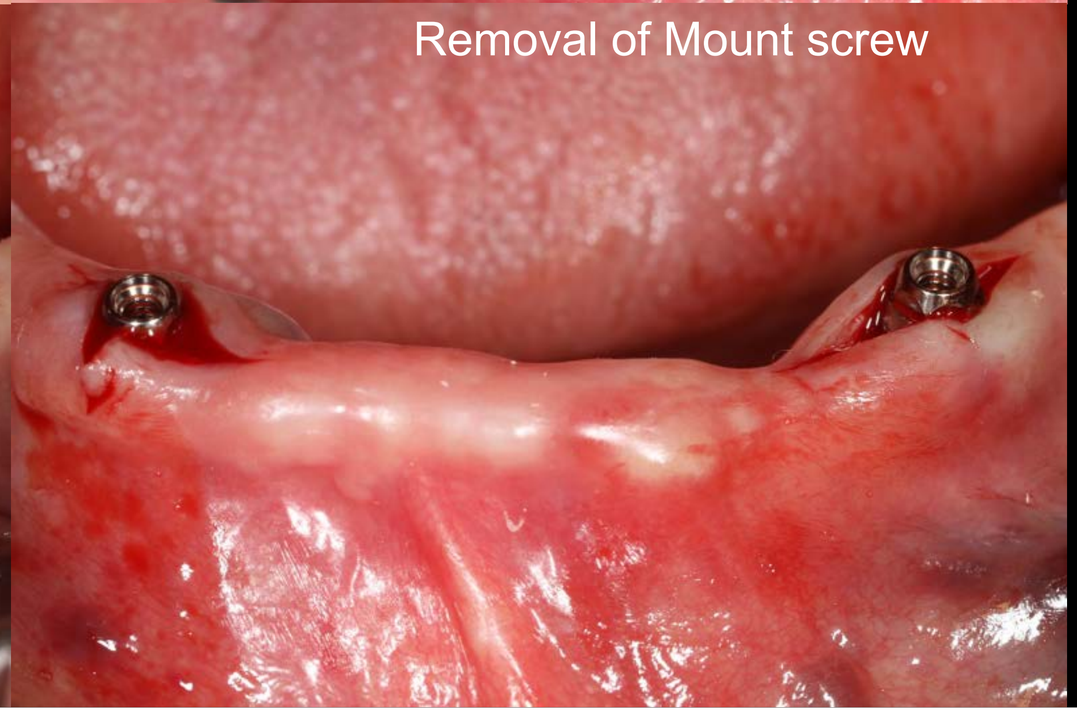
Guide drilling



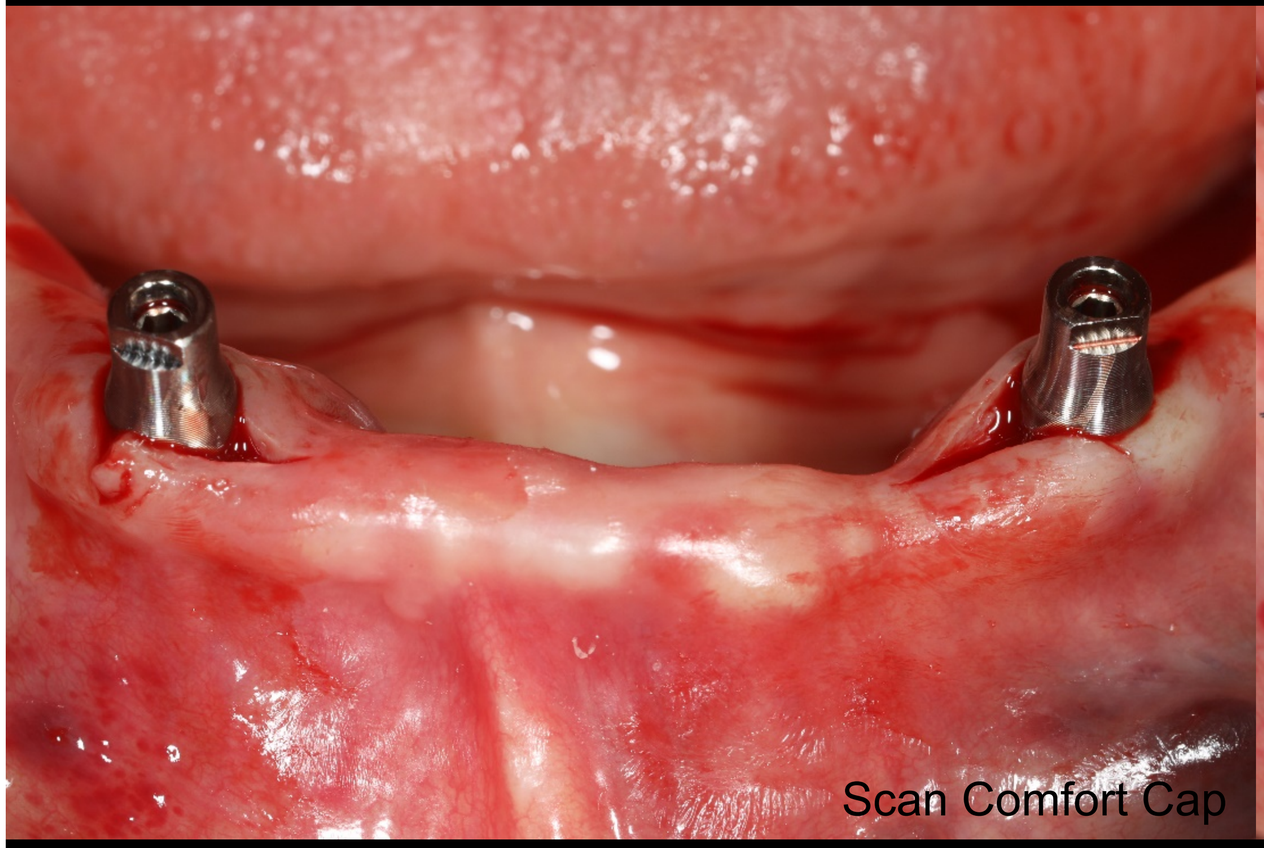
Parallel Pin

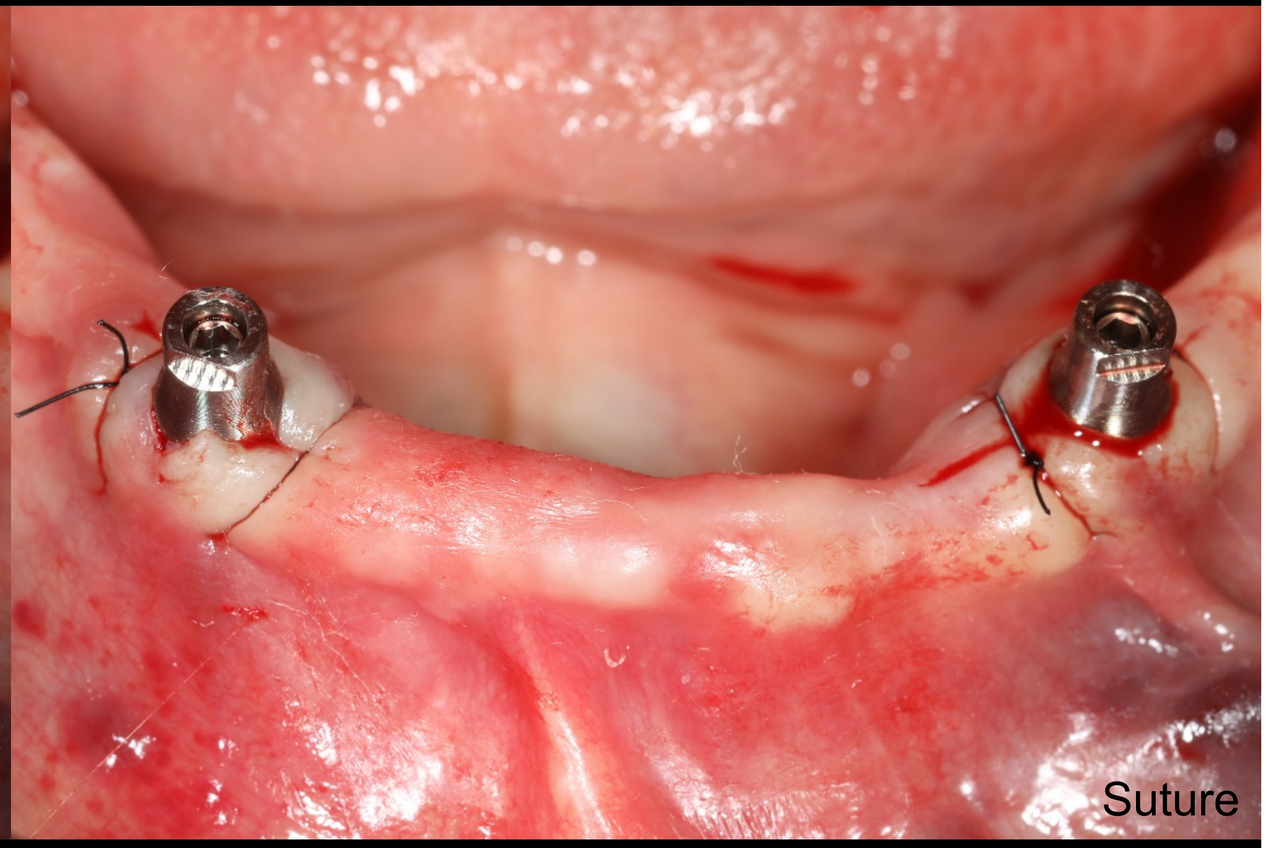
NTI383009


Fixture installation


Removal of Mount screw

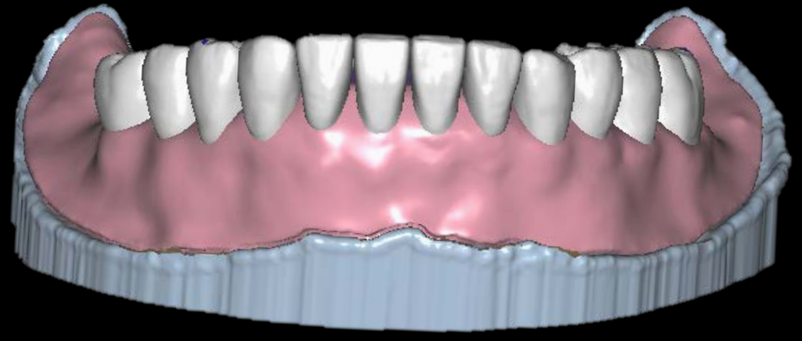
Surgery (2021-05-06)

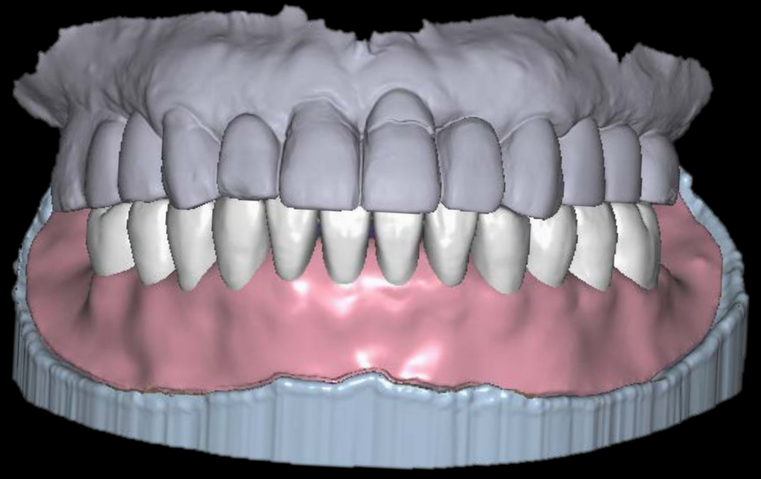




Intraoral Scanning with Denture

Denture design





3D Printing Denture

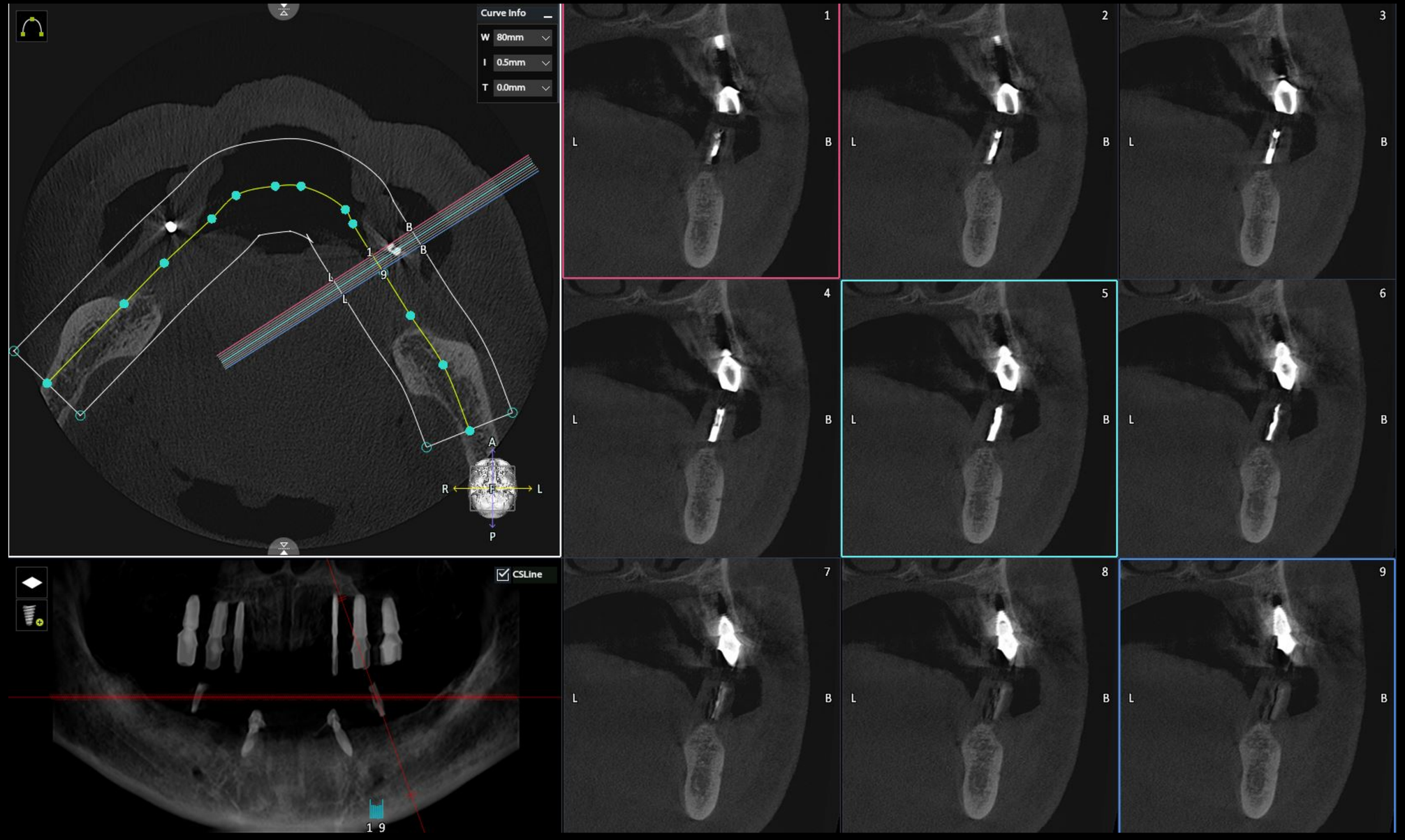
Ball Abutment Connection (2021-05-17)

O-ring Connection with 3D Printing Denture

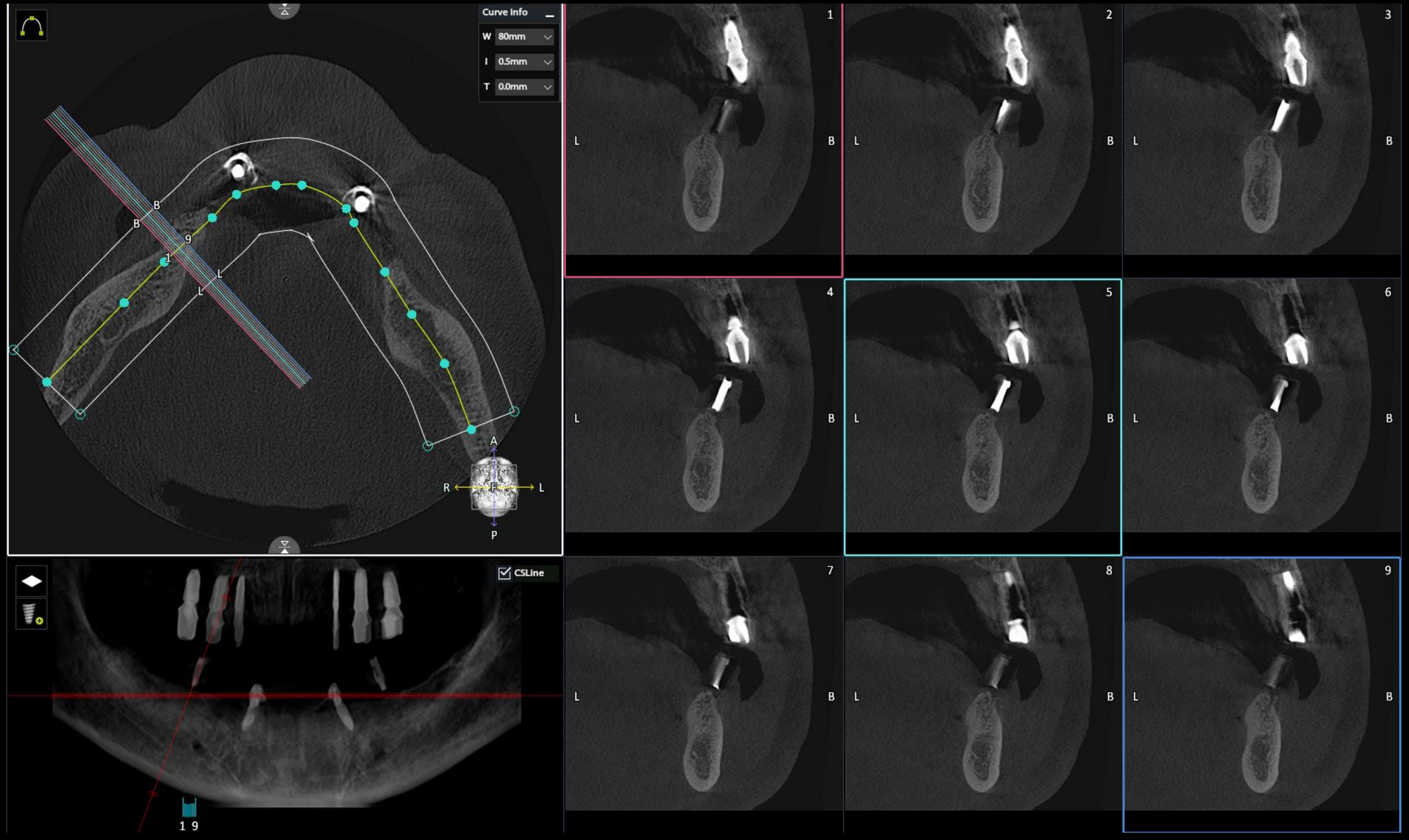
Overdenture adaptation (2021-05-17)

Follow up : 4 months (2021-09-15)

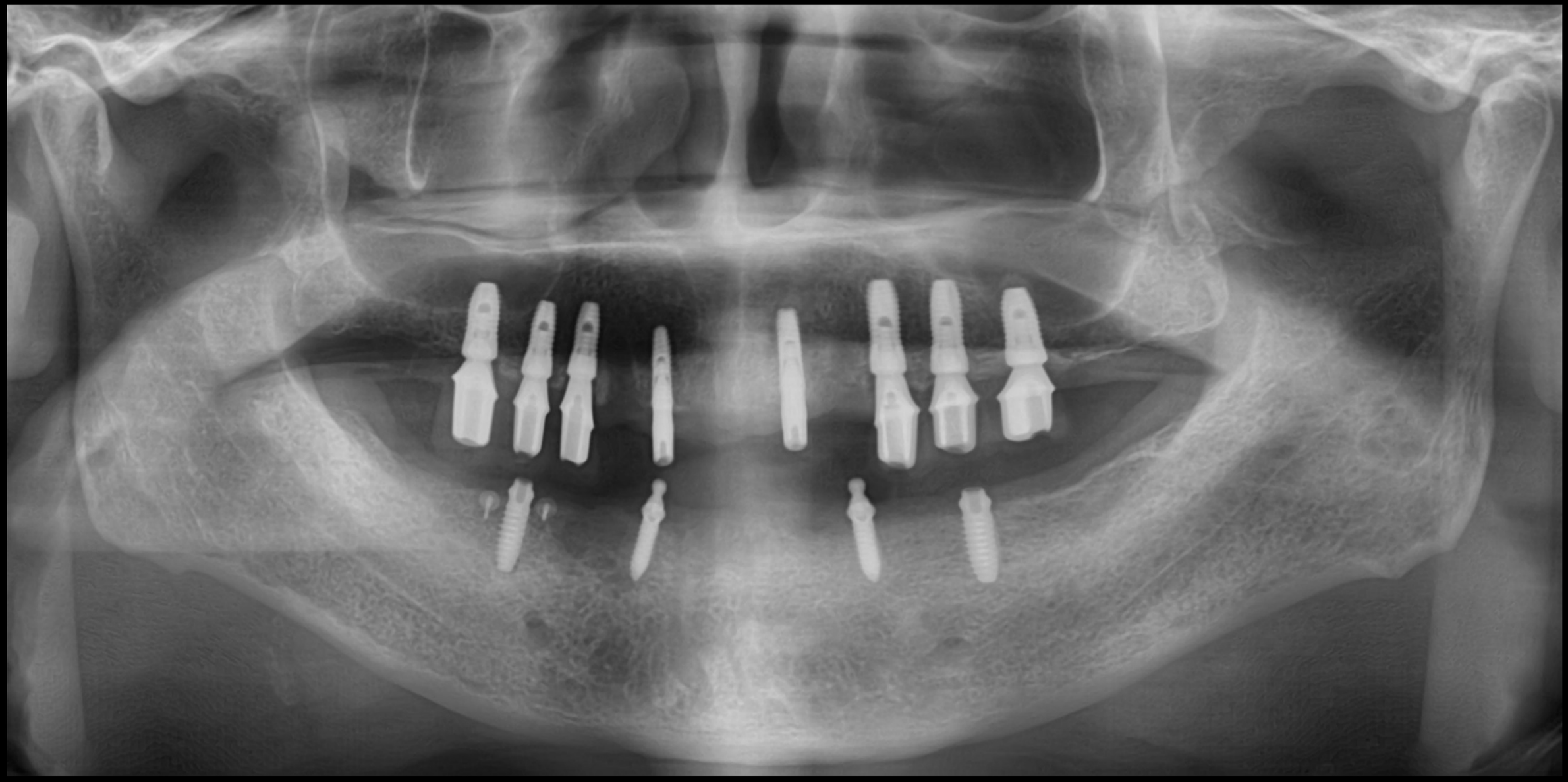
#36 Pre-op with 3D Printing Denture (2021-10-06)



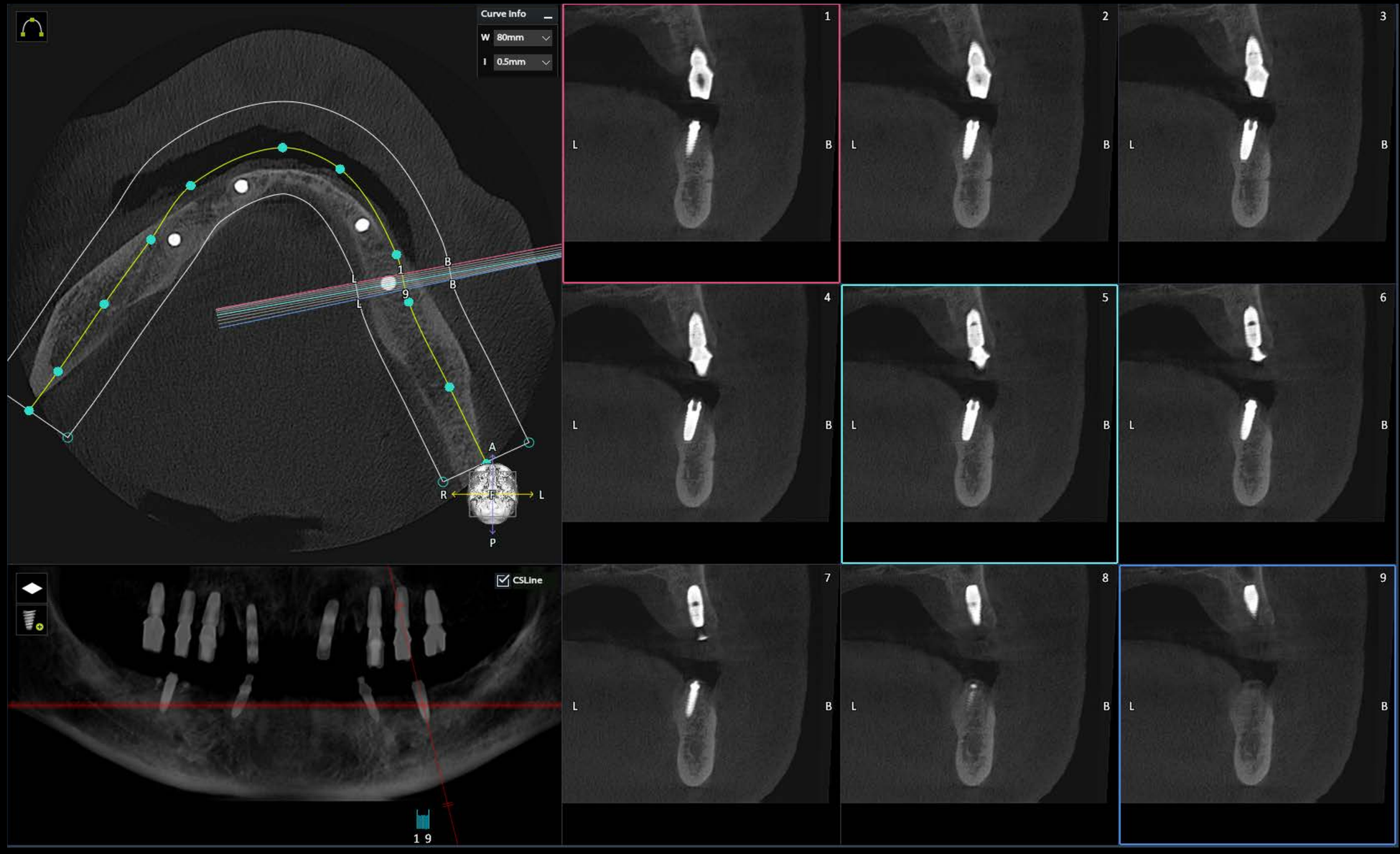
#46 Pre-op with 3D Printing Denture (2021-10-06)



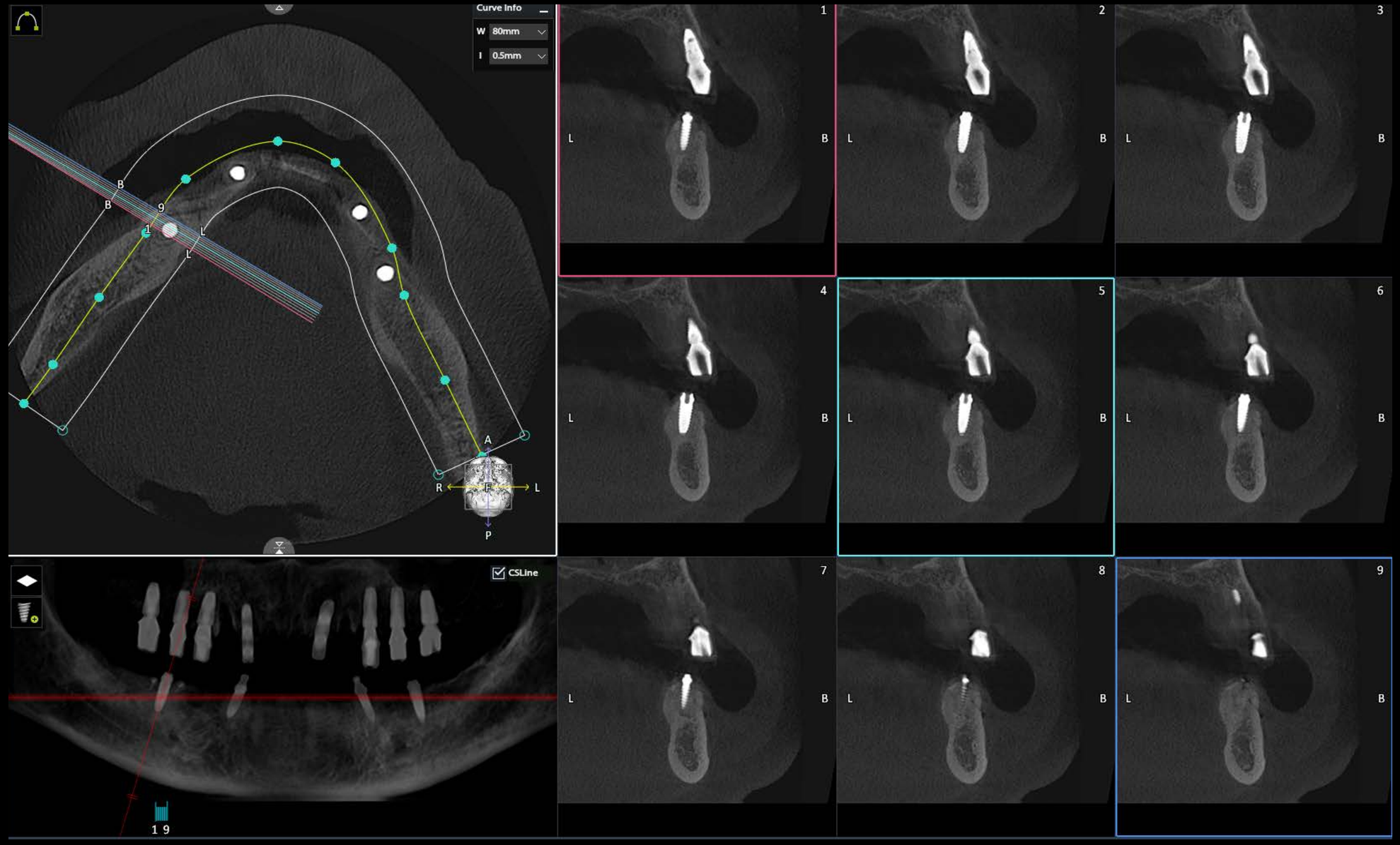
Post-op (2021-10-08)



#36 Post-op (2021-10-08)



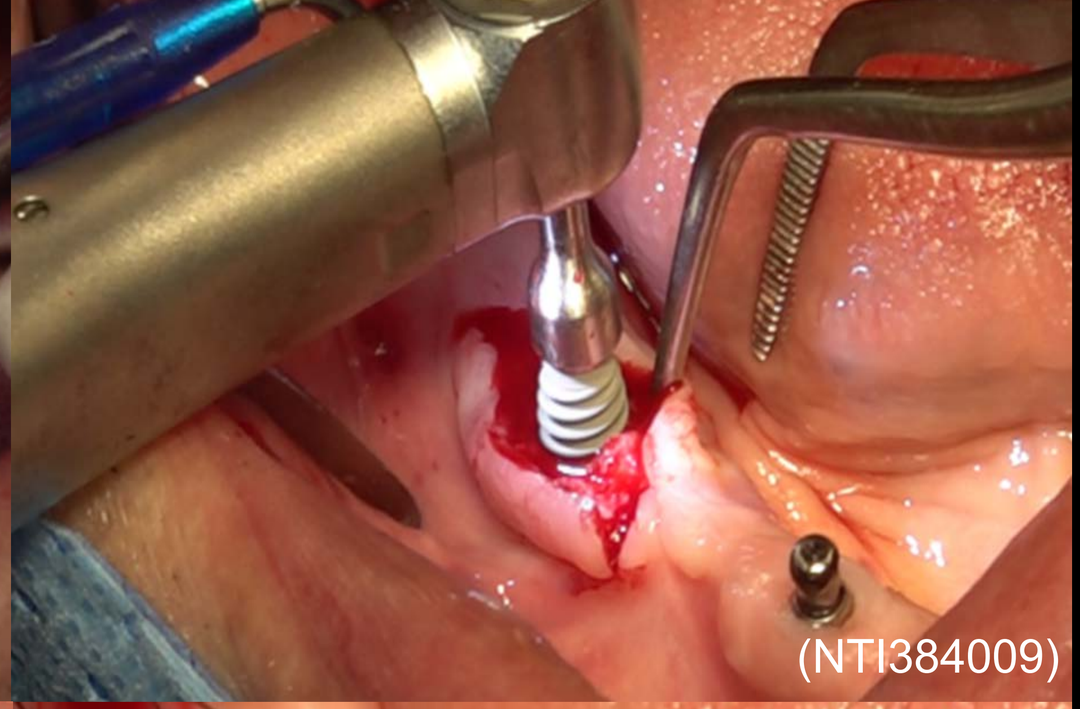
#46 Post-op (2021-10-08)



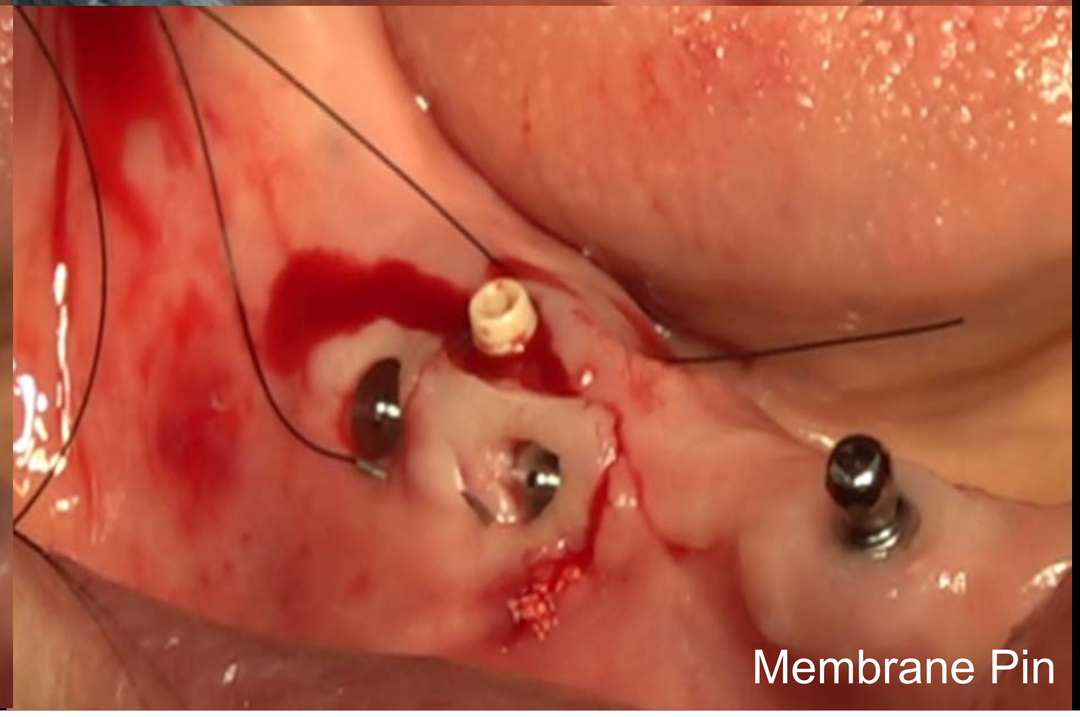
Final prosthesis (2022-05-16)

Surgery (2021-10-08)

3D Printing Denture

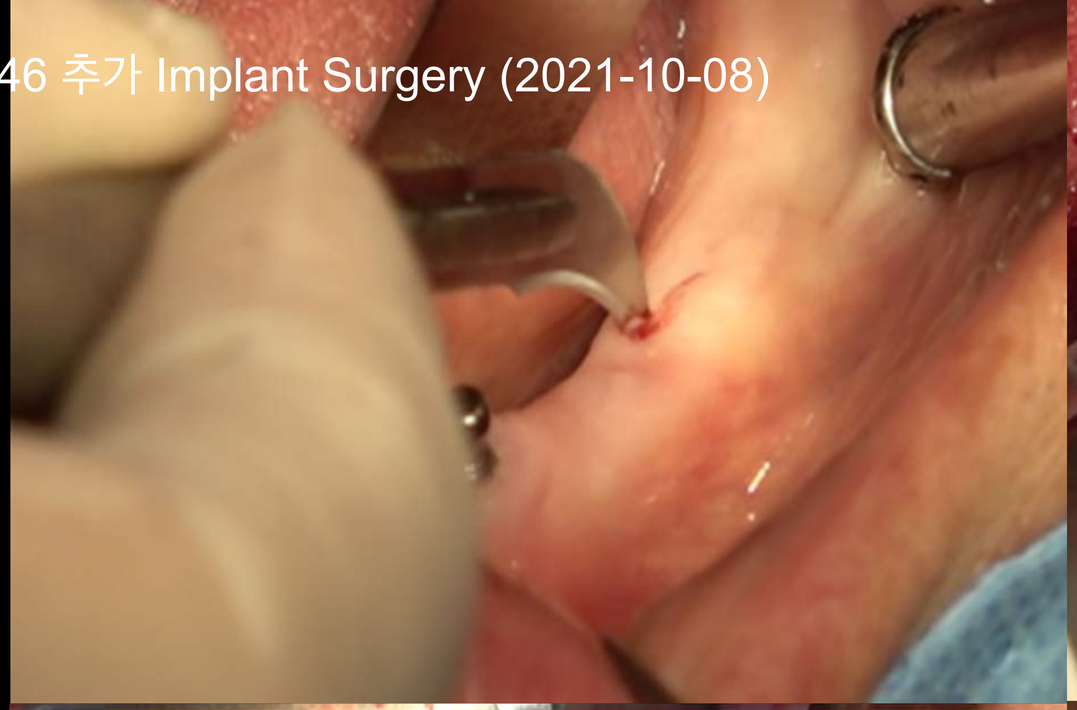


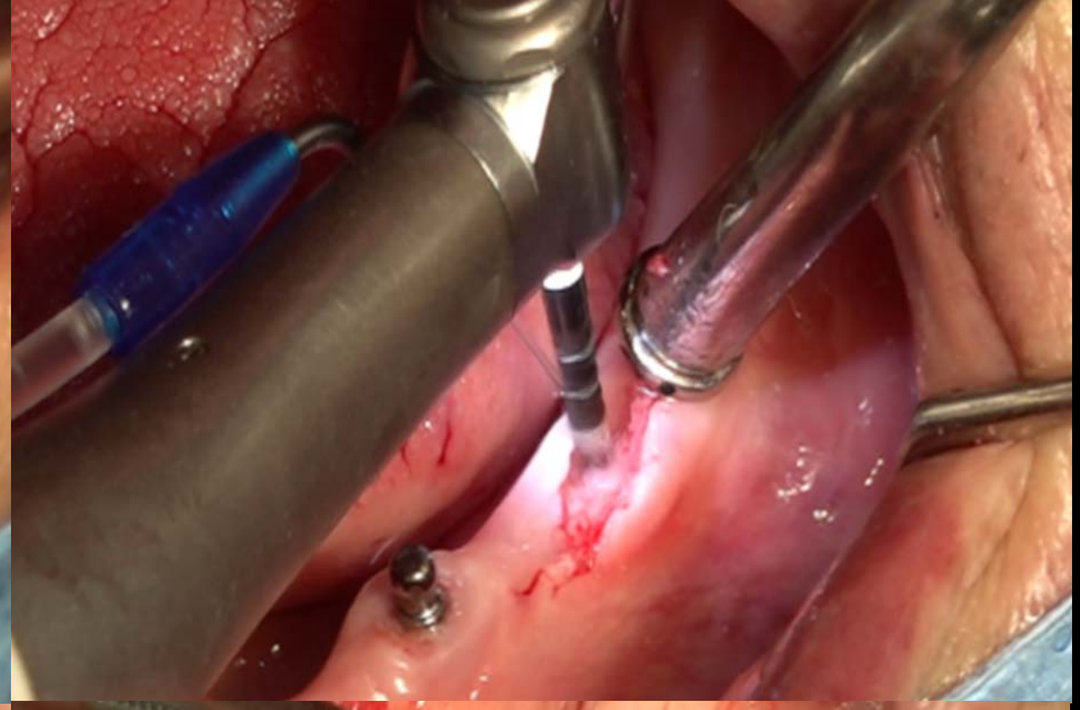
(NTI384009)

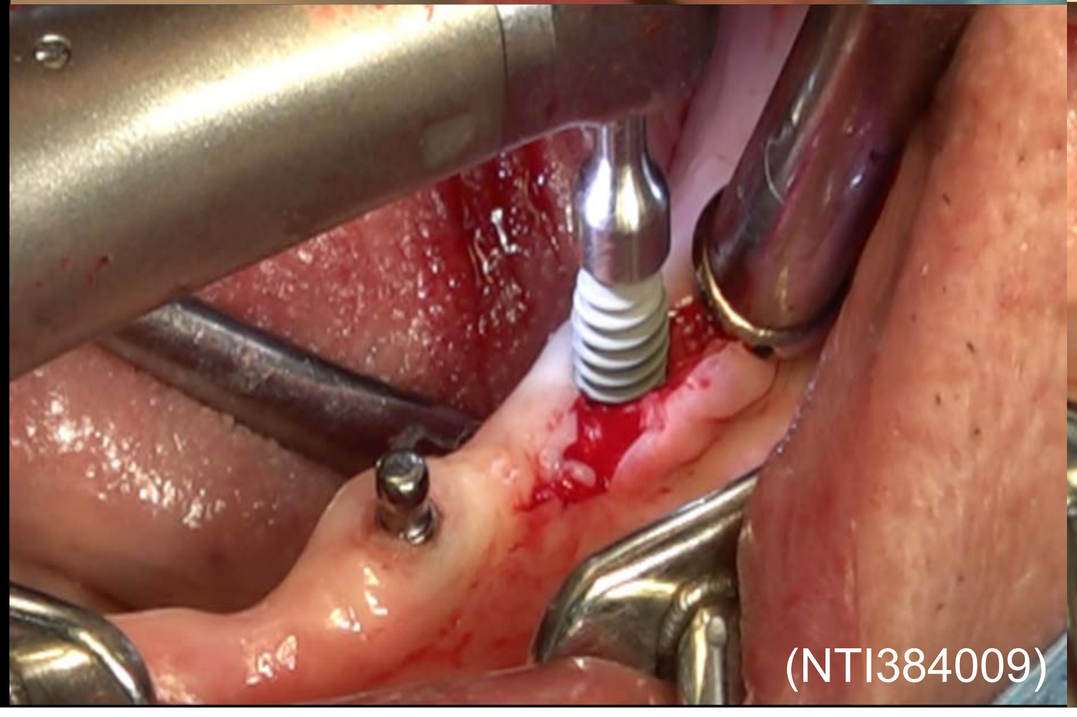


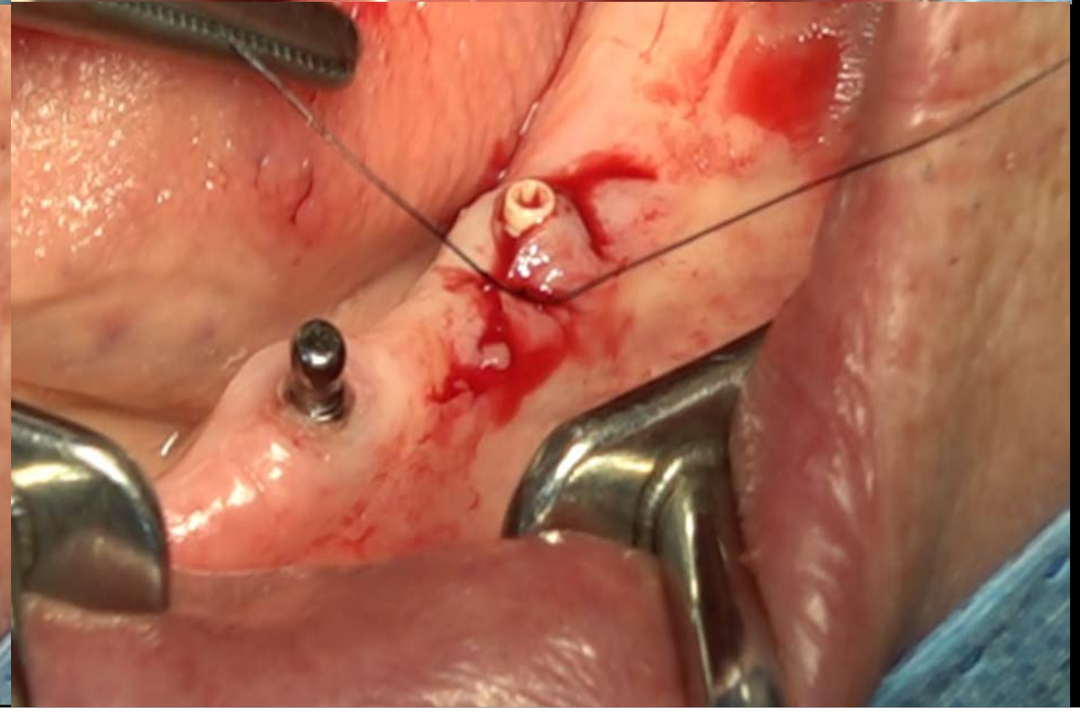
Membrane Pin

#36,46 추가 Implant Surgery (2021-10-08)







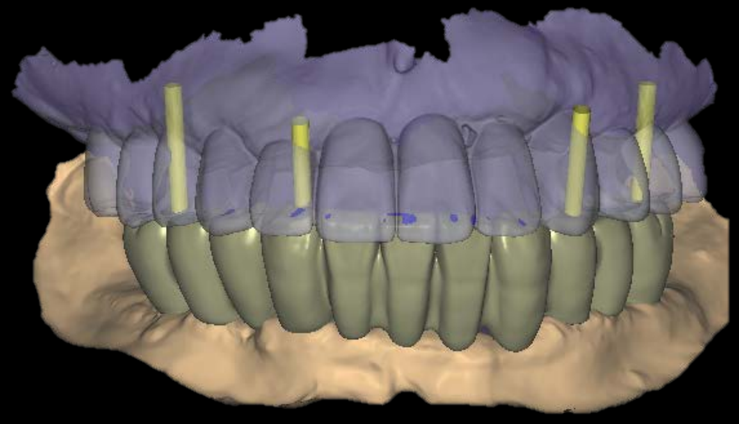


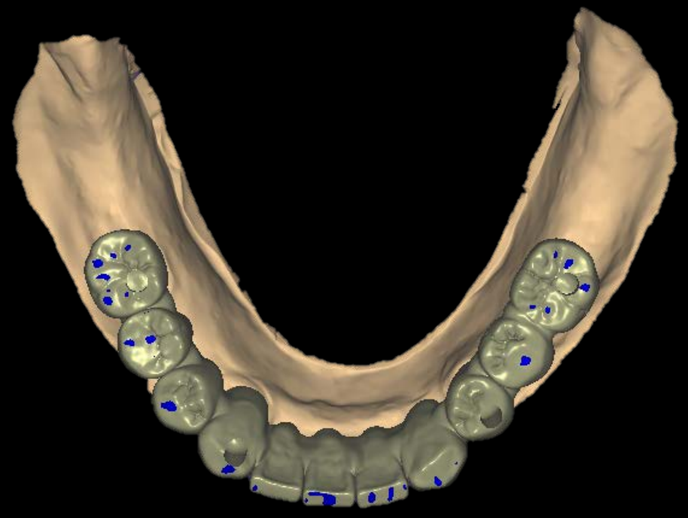
(NTI384009)

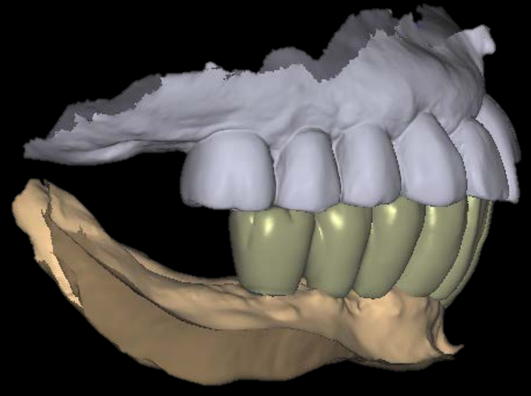
Healing : 5 days (2021-10-13)

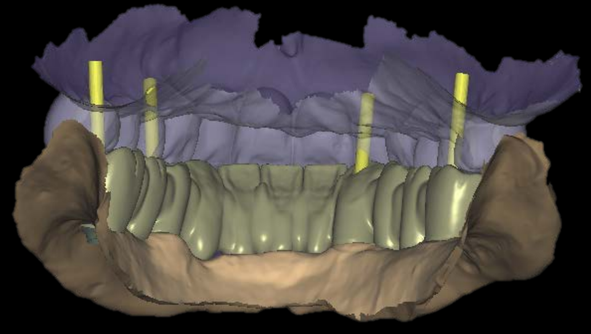
Healing : 2 months (2021-12-01)

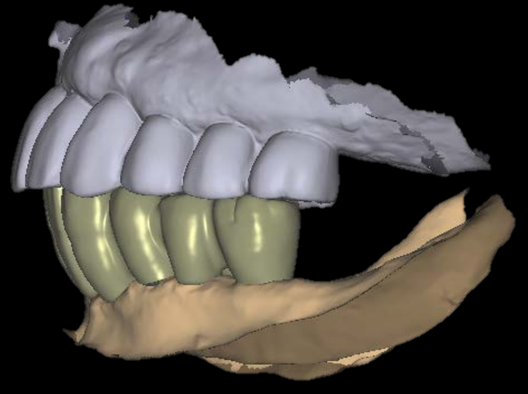
CAD design (Temporary)





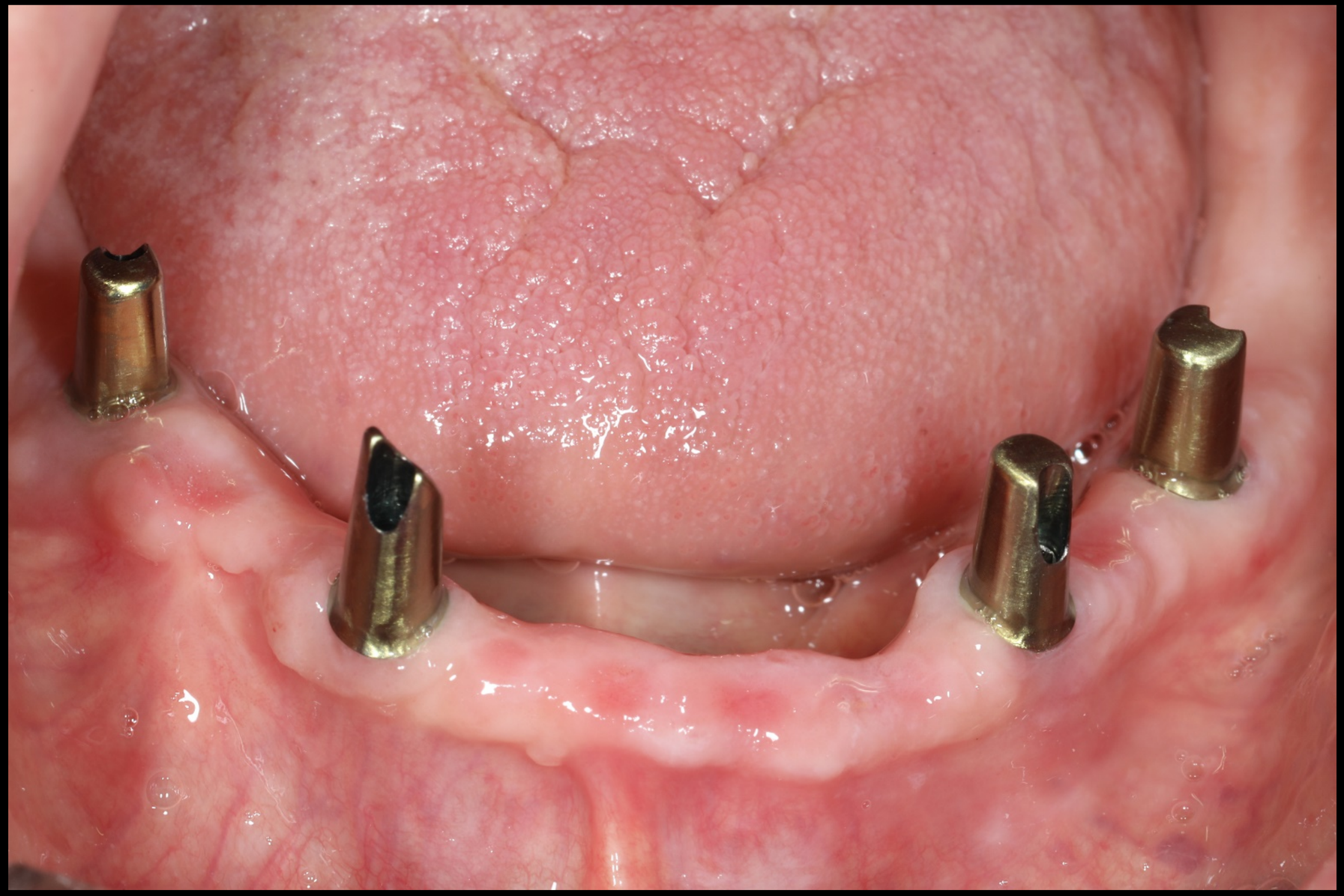






Provisional restoration & Customized abutment

Customized abutment (2021-12-16)



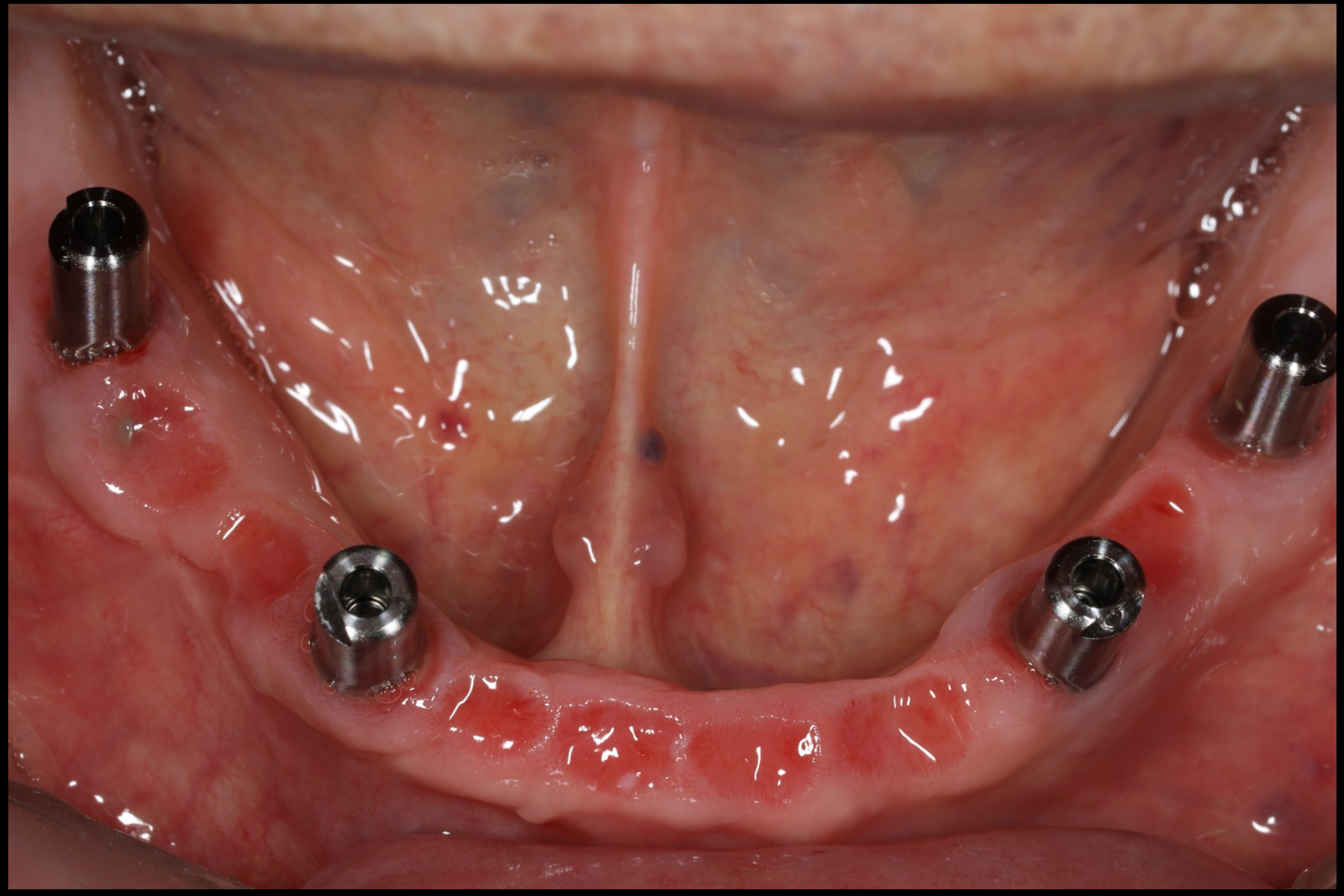
Provisional restoration (2021-12-16)

Provisional restoration (2021-12-16)

How to transfer temporary well adapted occlusion

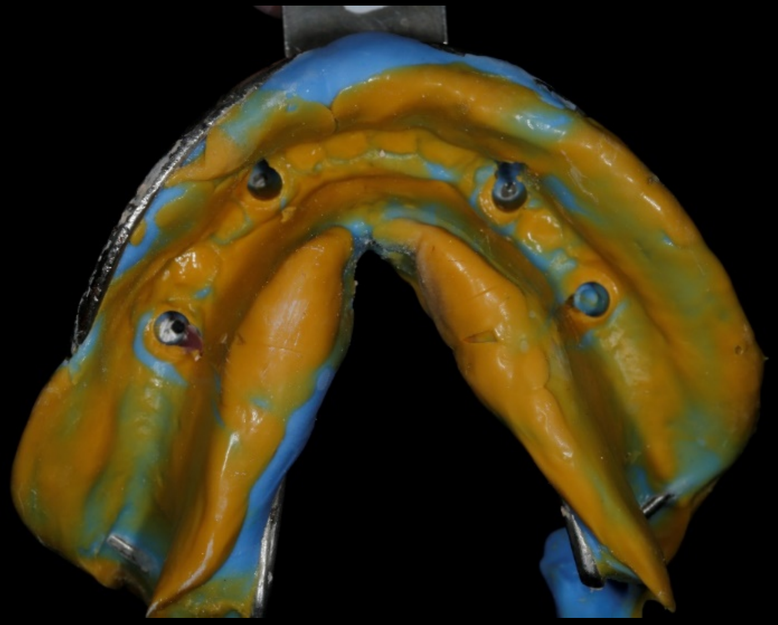
into permanent prosthesis occlusion

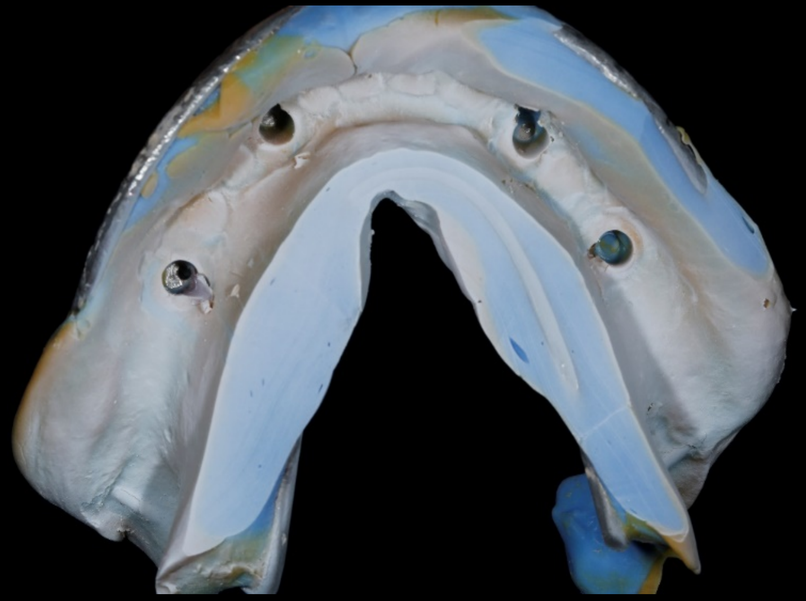
Impression (2022-03-23)



Shade taking

Impression / Scan spray fot Scan



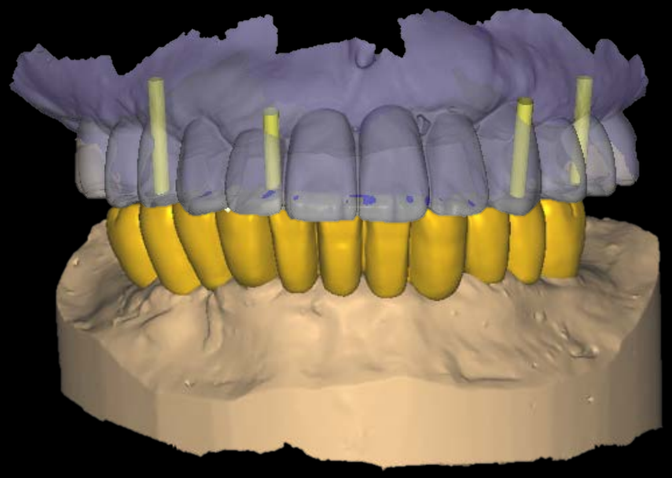


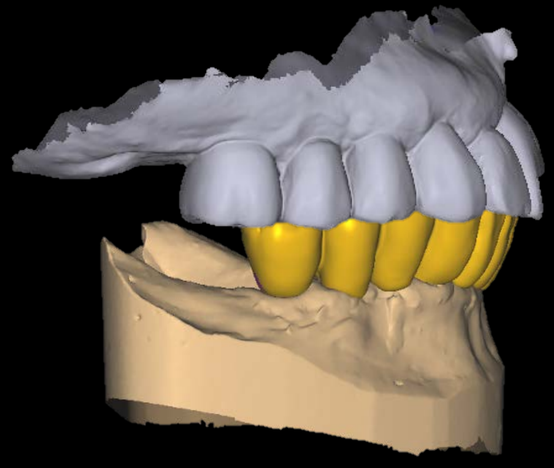
Milling

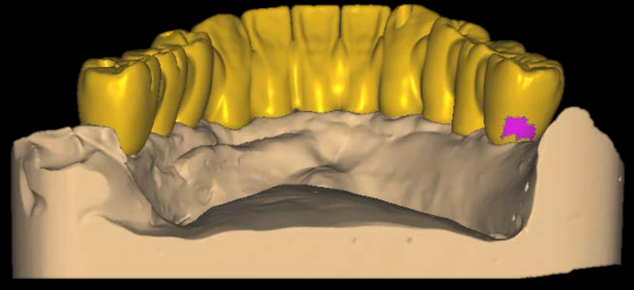
Sintering

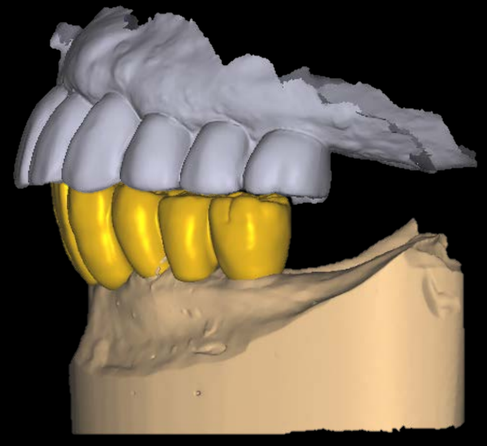
Finishing

CAD design (Fianl prosthesis)





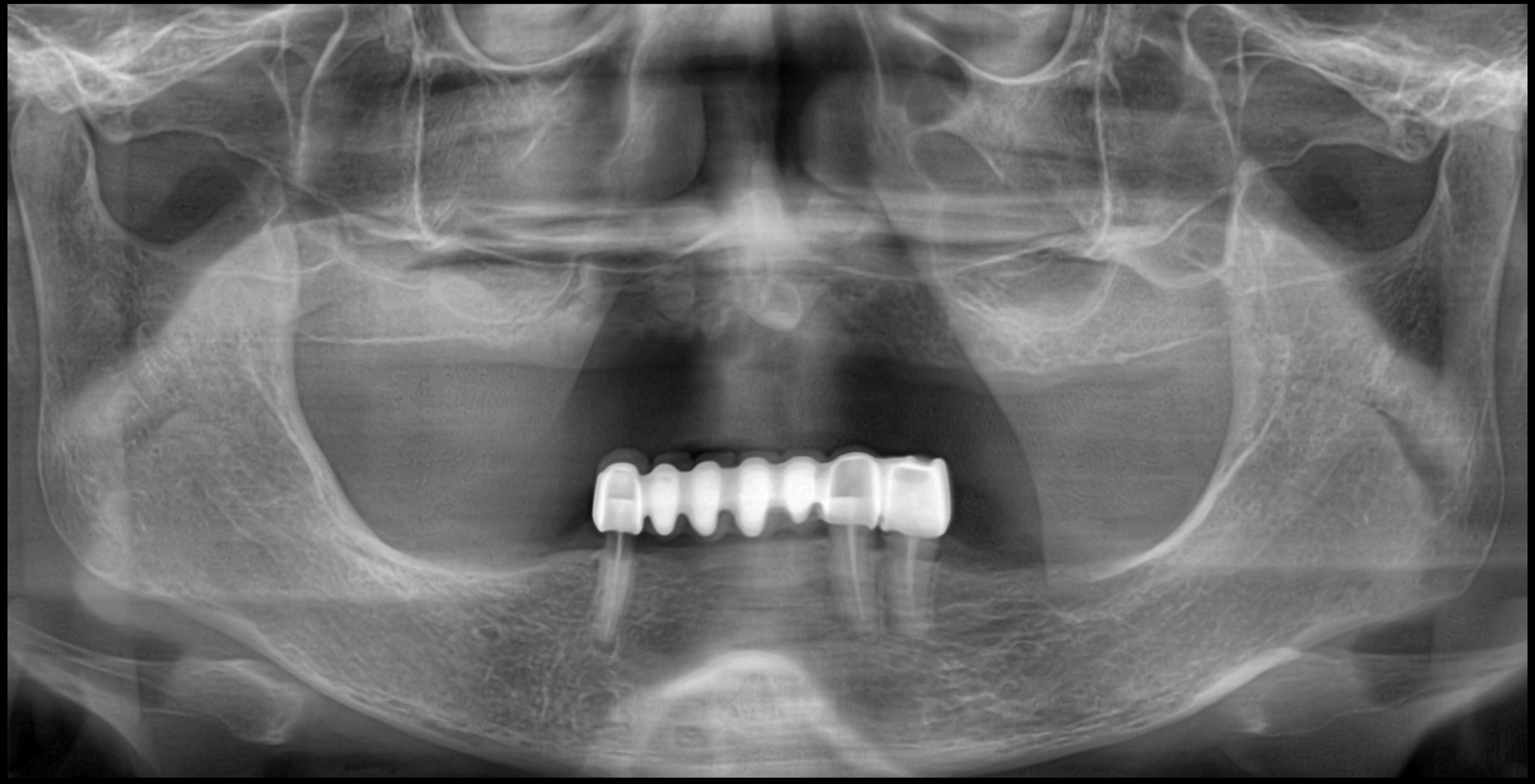




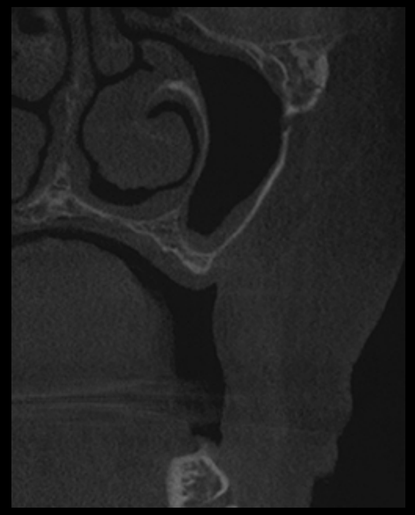
Final prosthesis

HRF (2022-07-11)

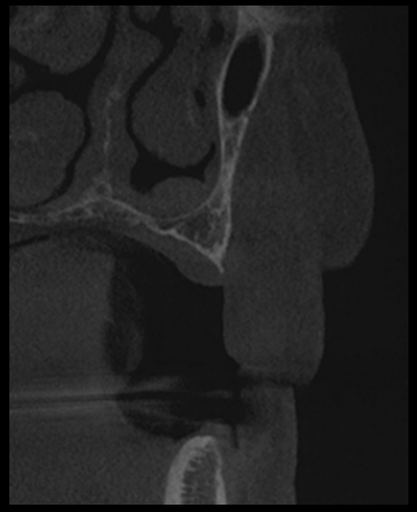
Pre-op (2021-10-22)



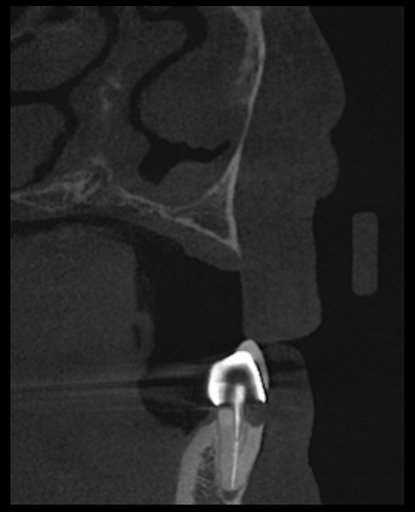
Pre-op CT (2021-10-22)



#16

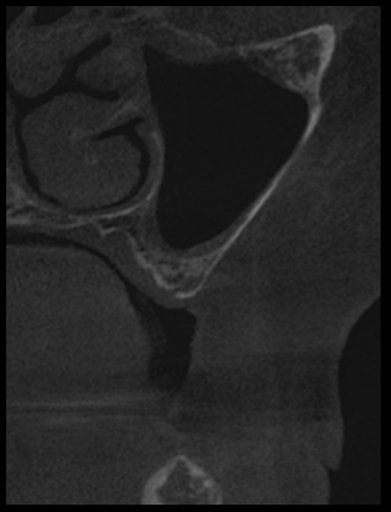


#14



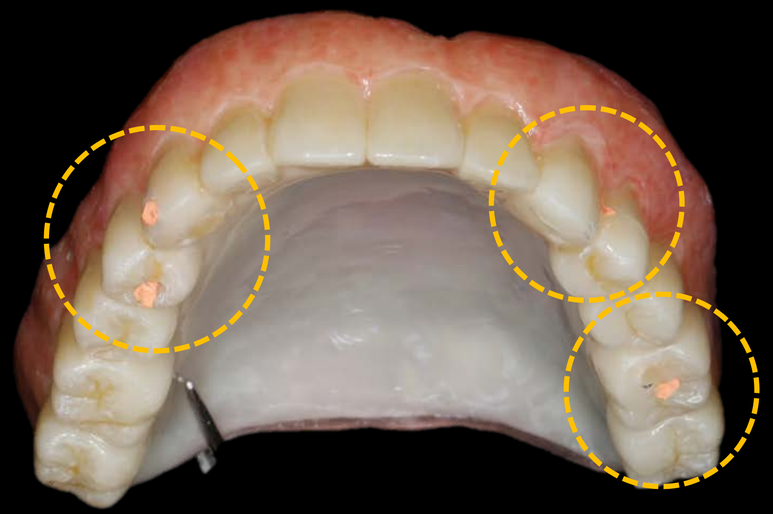
#13

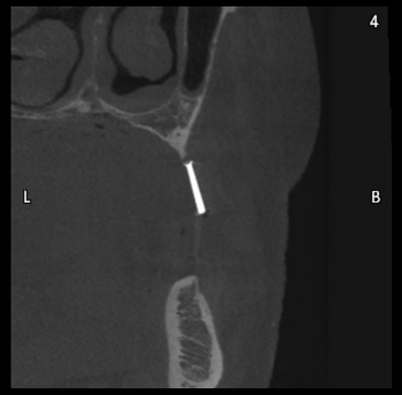
#23



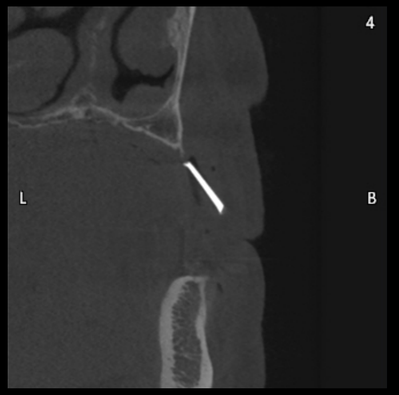
#26

GP cone marking & CT taking (2021-11-03)





#14

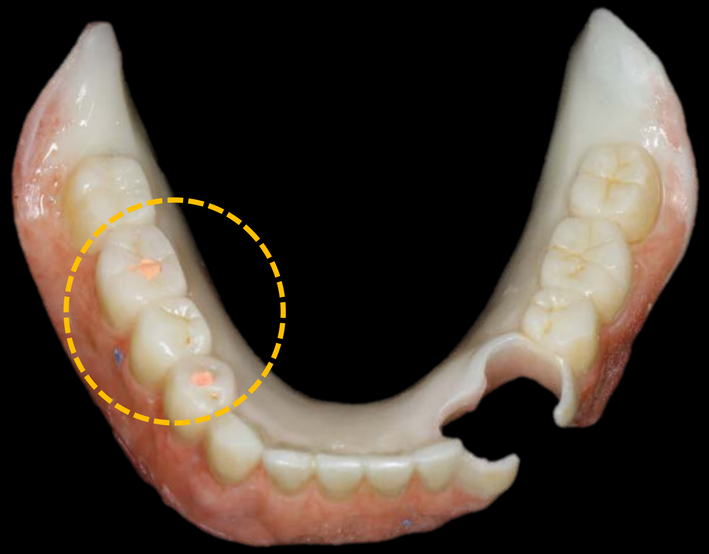


#13

#23

#25

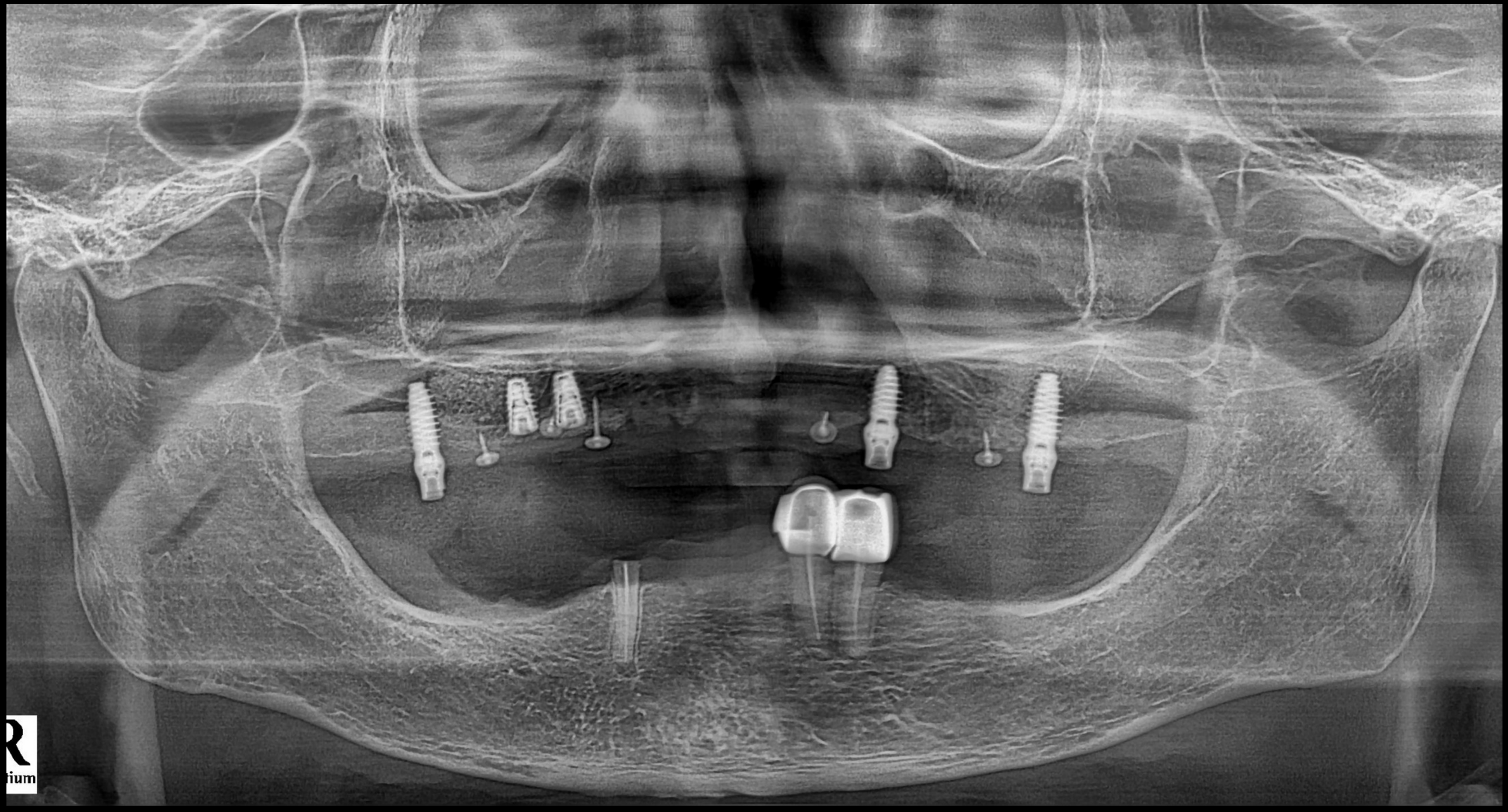
GP cone marking & CT taking (2021-11-03)



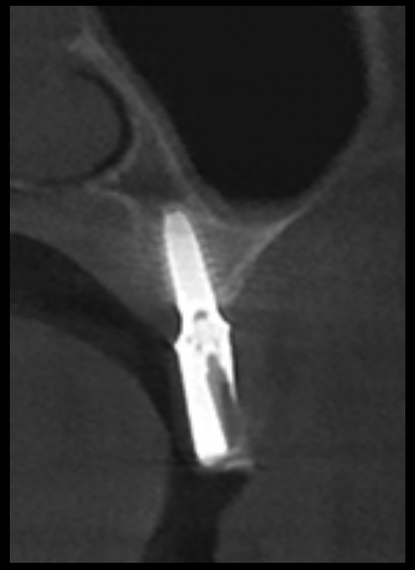
#46

#44

Post-op (2021-11-05)



#16 Custom abutment, Provisional restoration CT (2022-10-05)

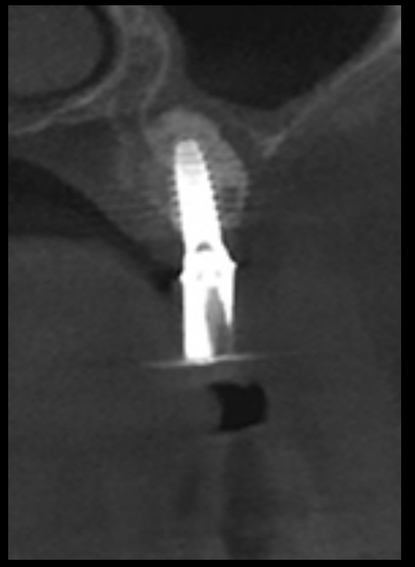


#16

#14

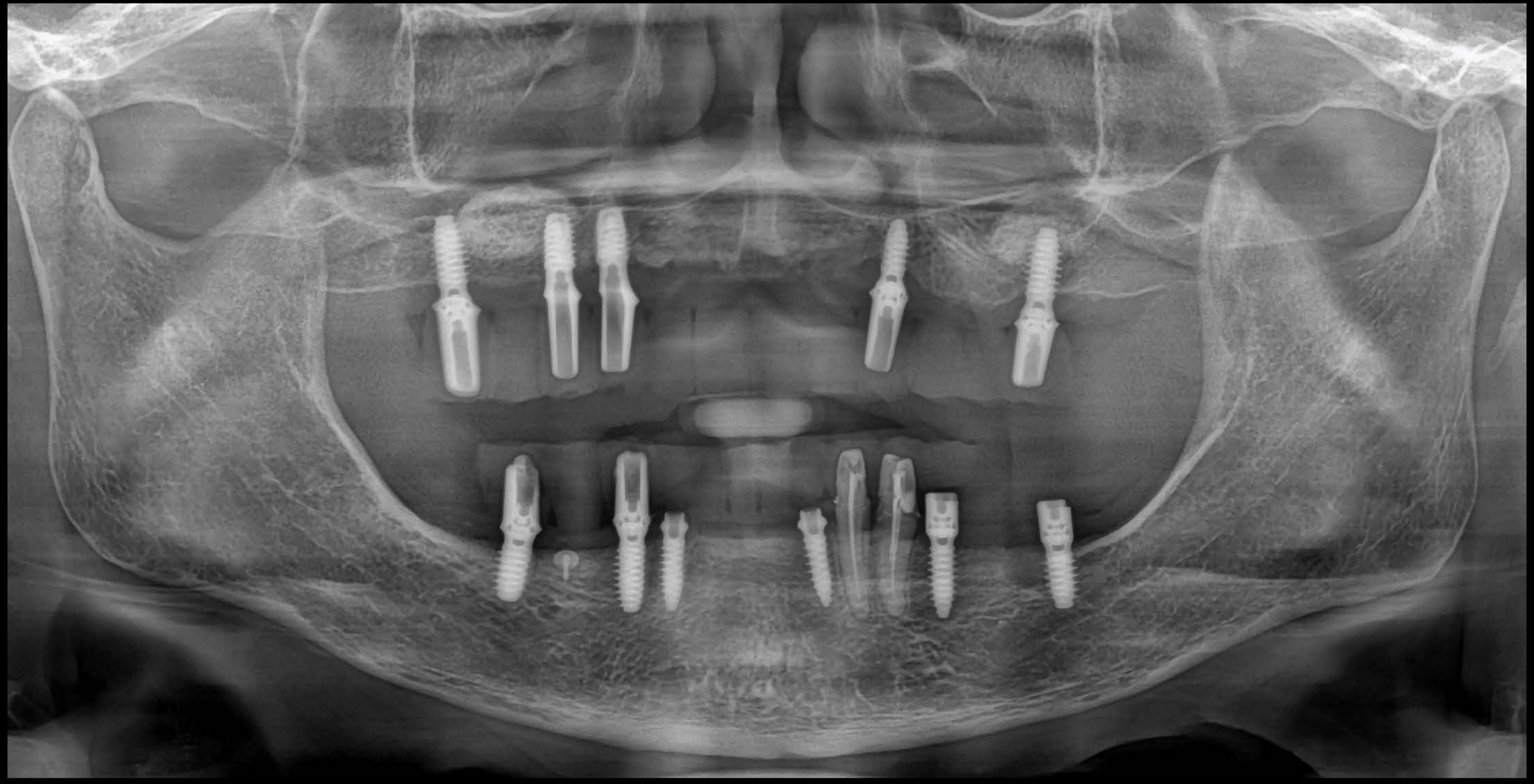
#13

#23



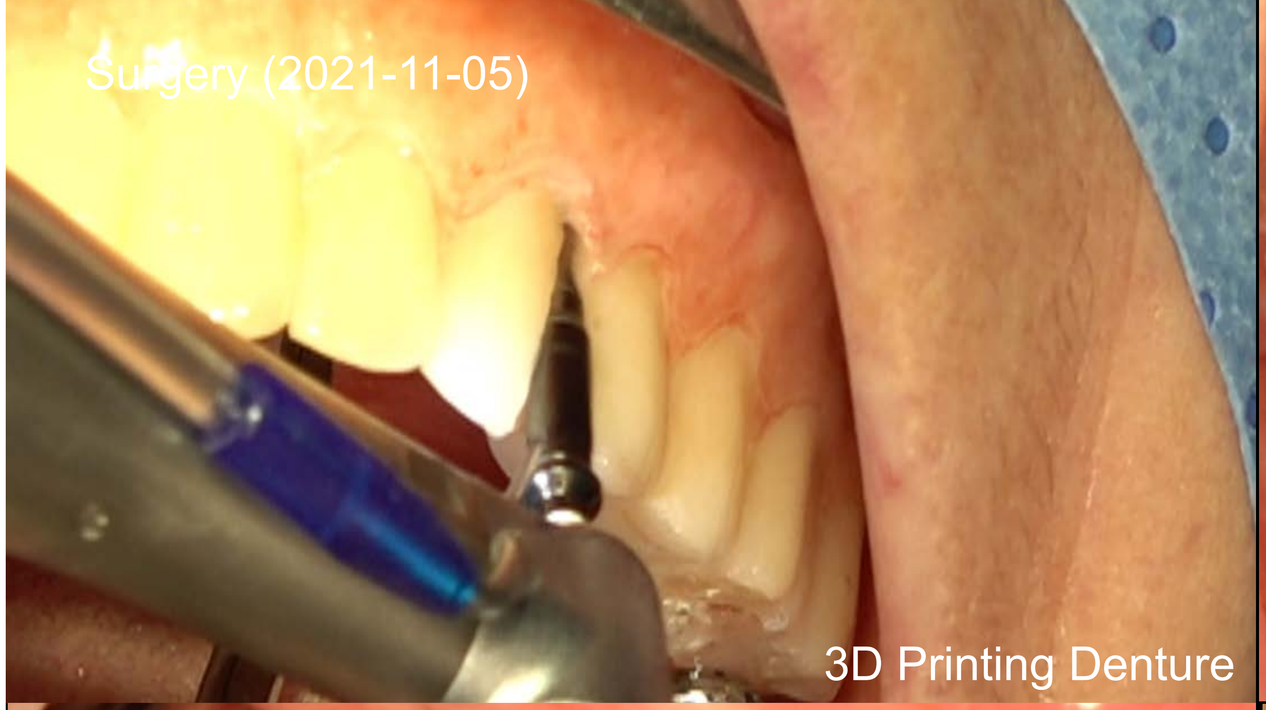
#26

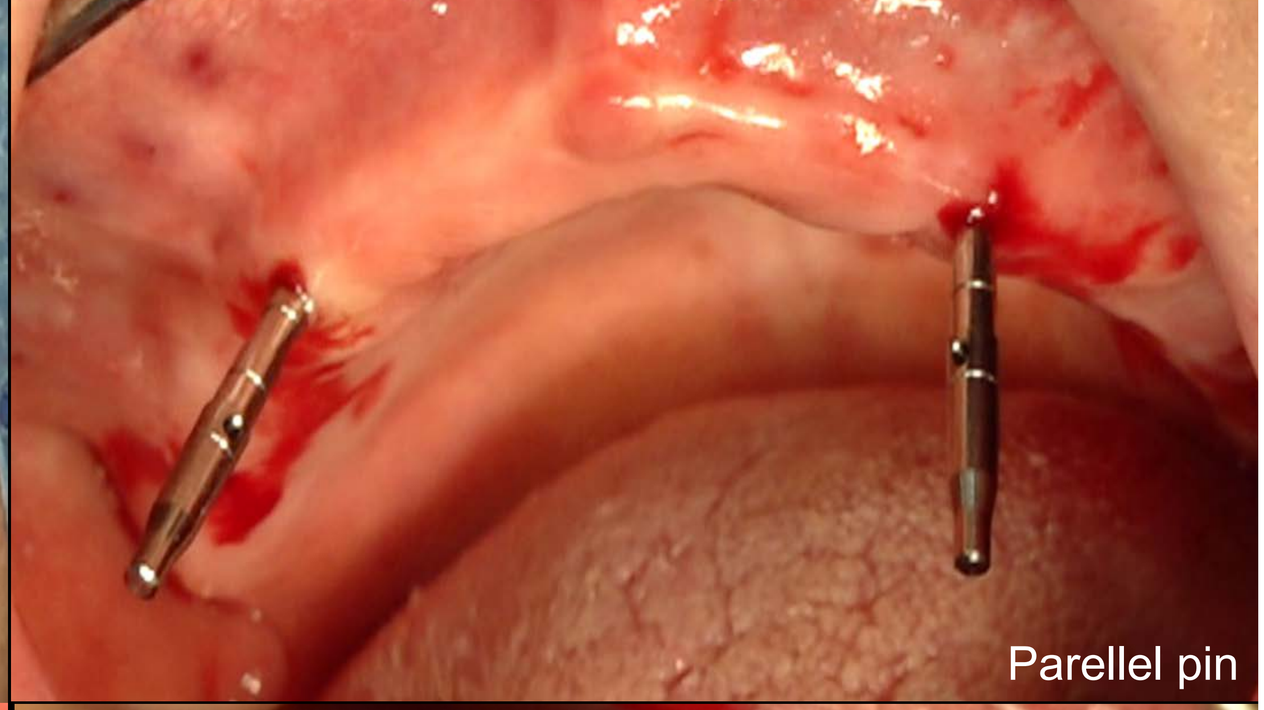
Custom abutment, Provisional restoration (2022-09-01)

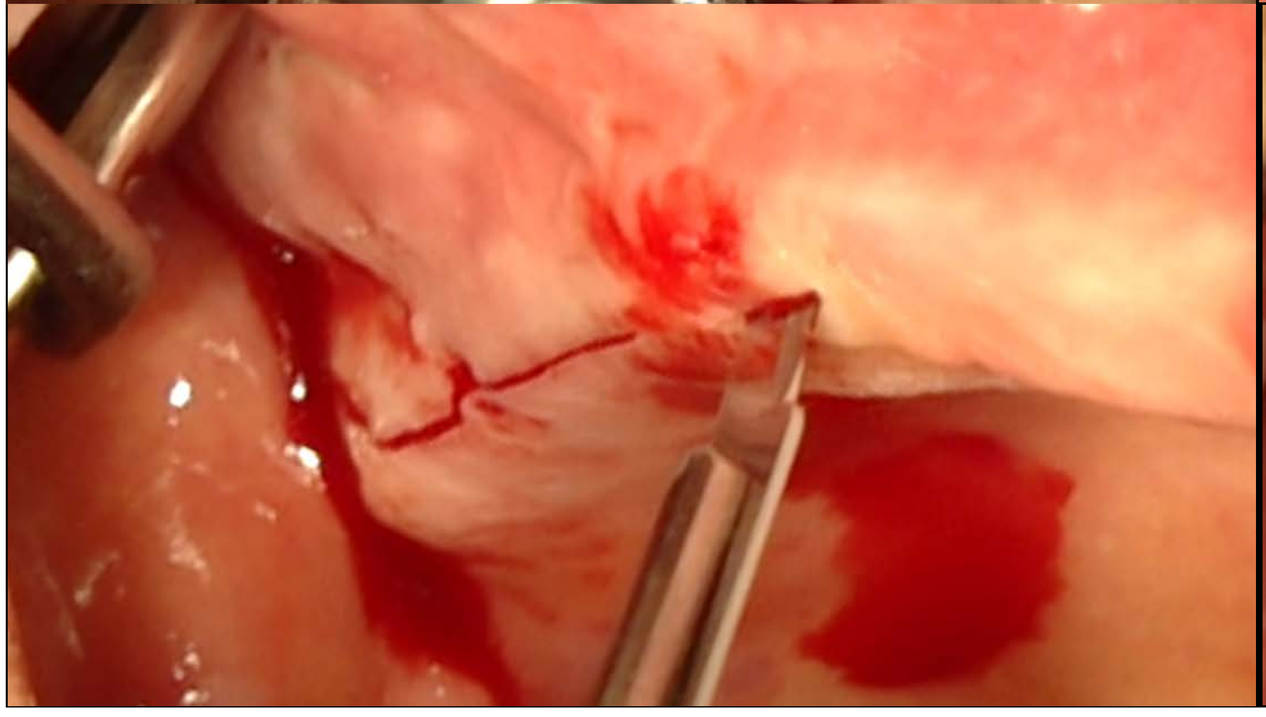


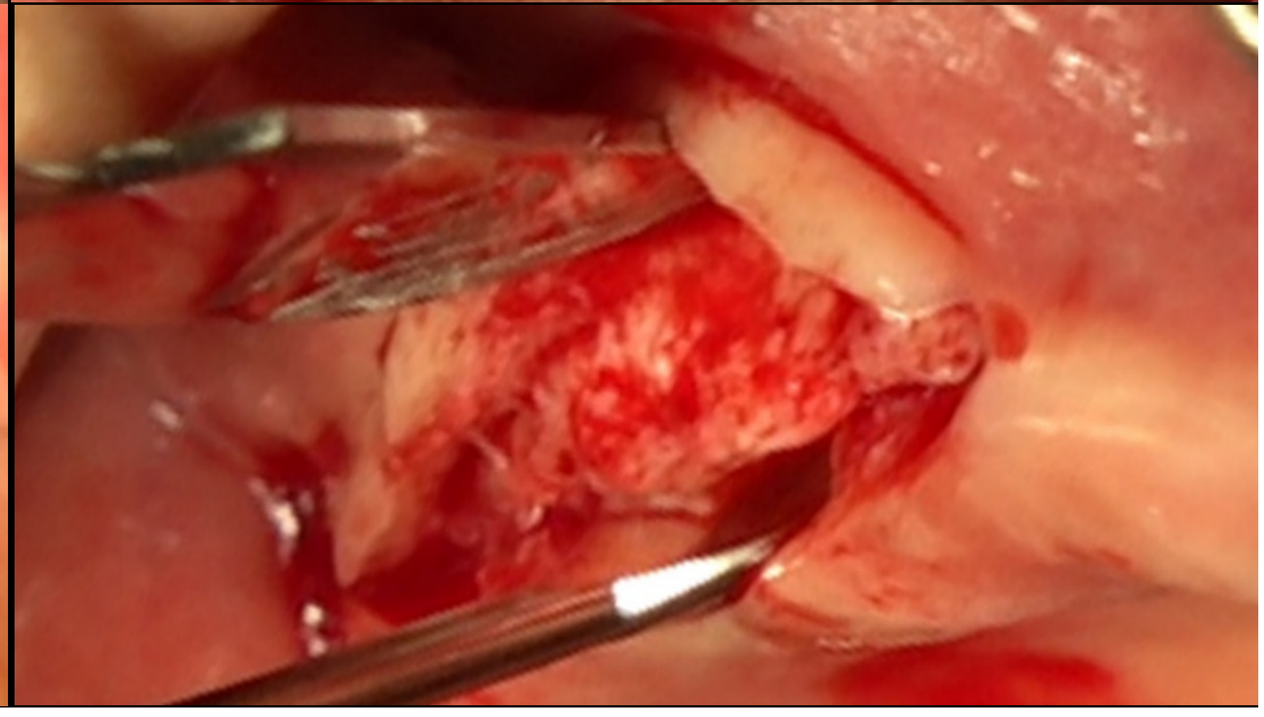
Final prosthesis (2022-12-28)

Pre-op (2021-10-20)

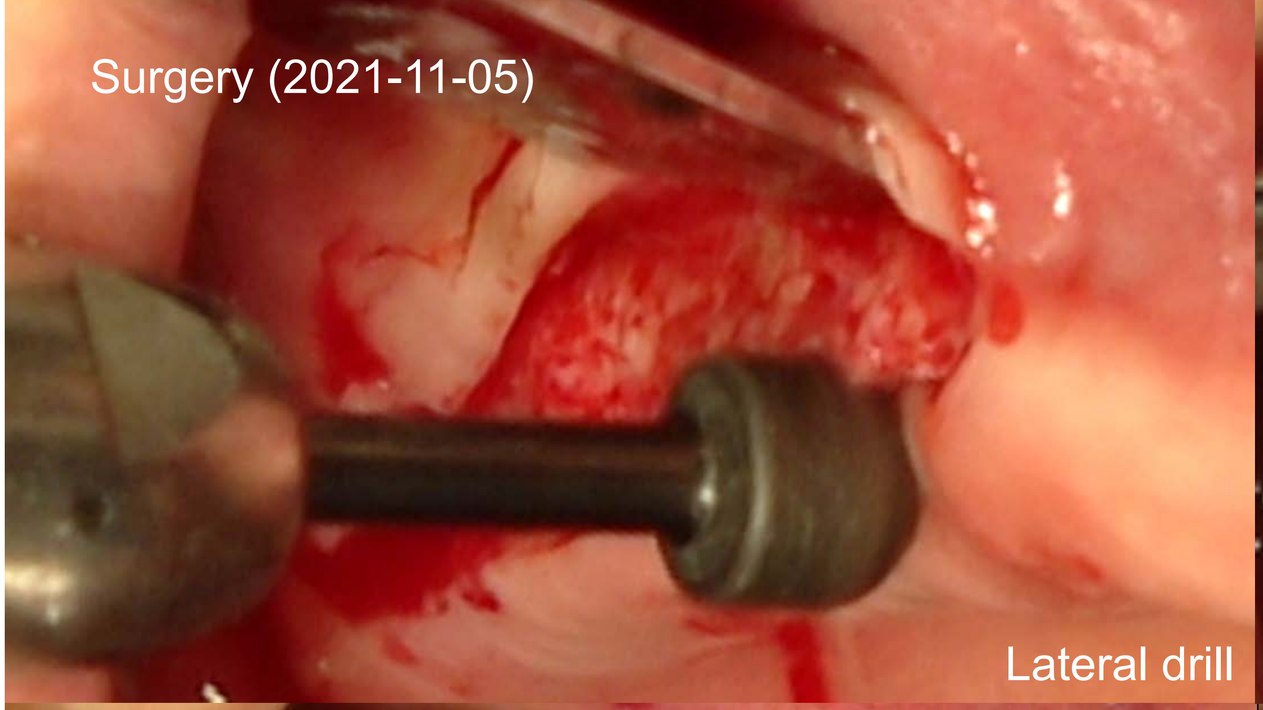

Surgery (2021-11-05)
3D Printing Denture


Parellel pin

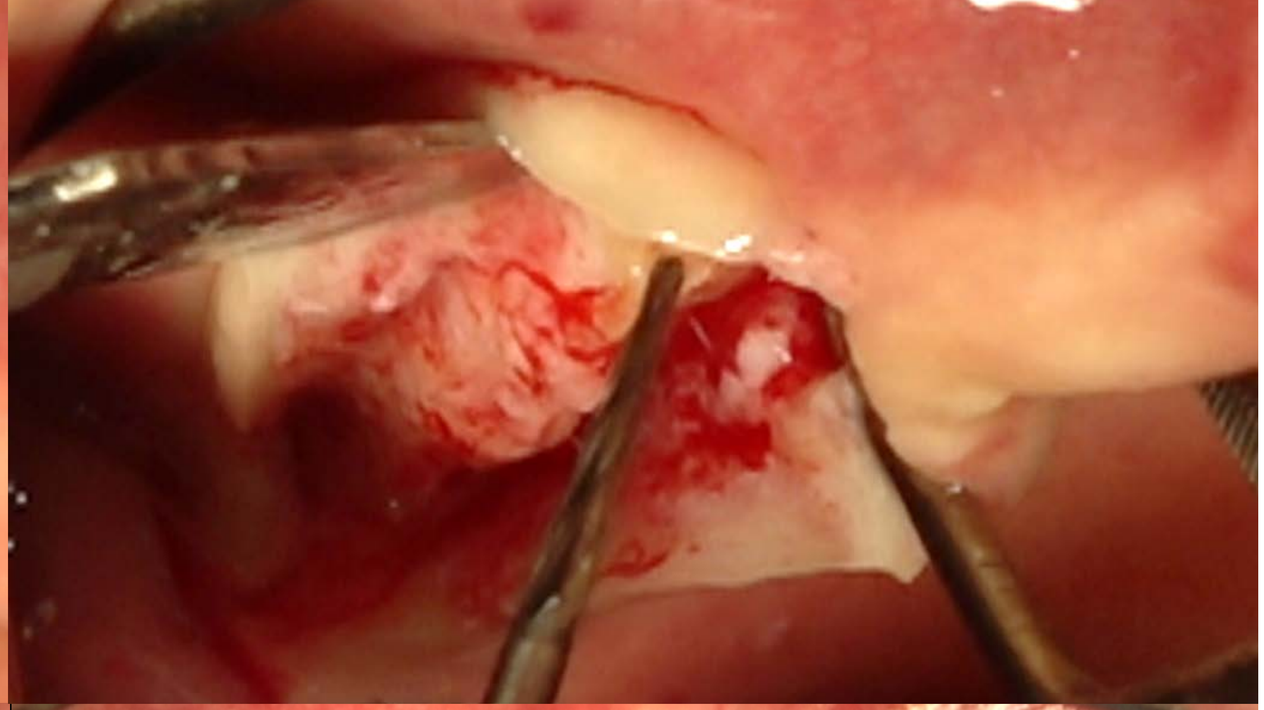


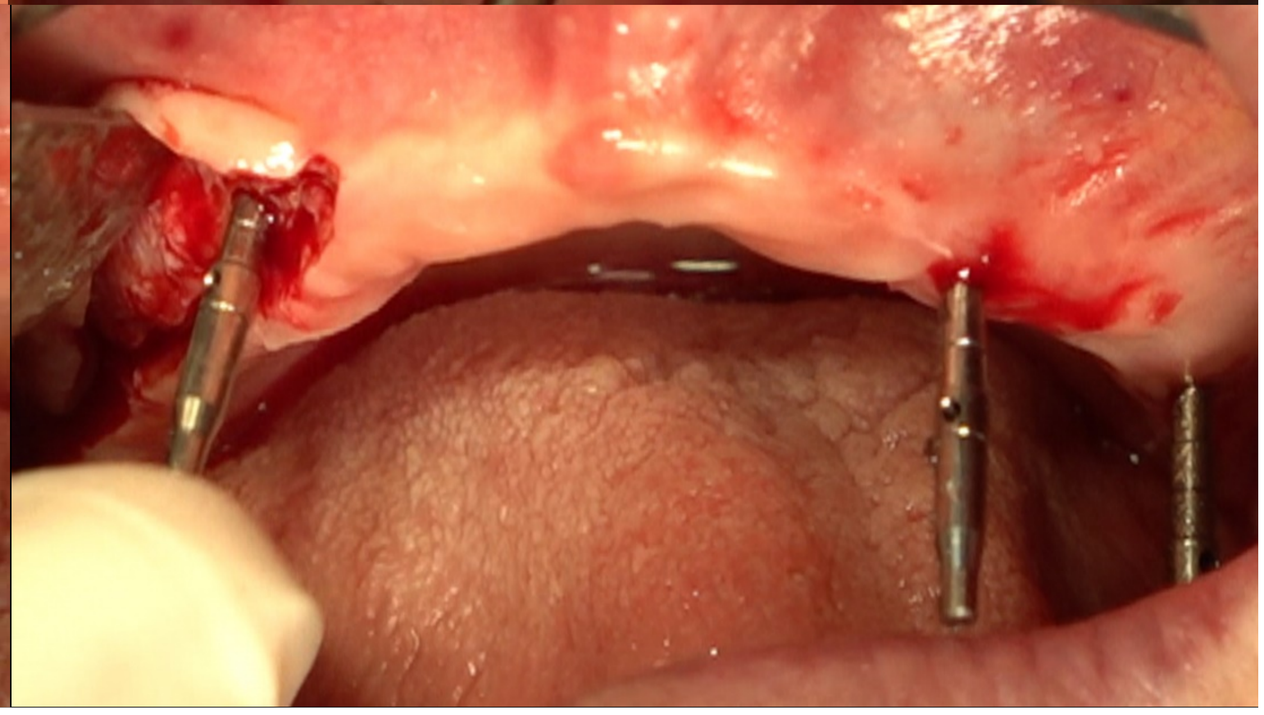


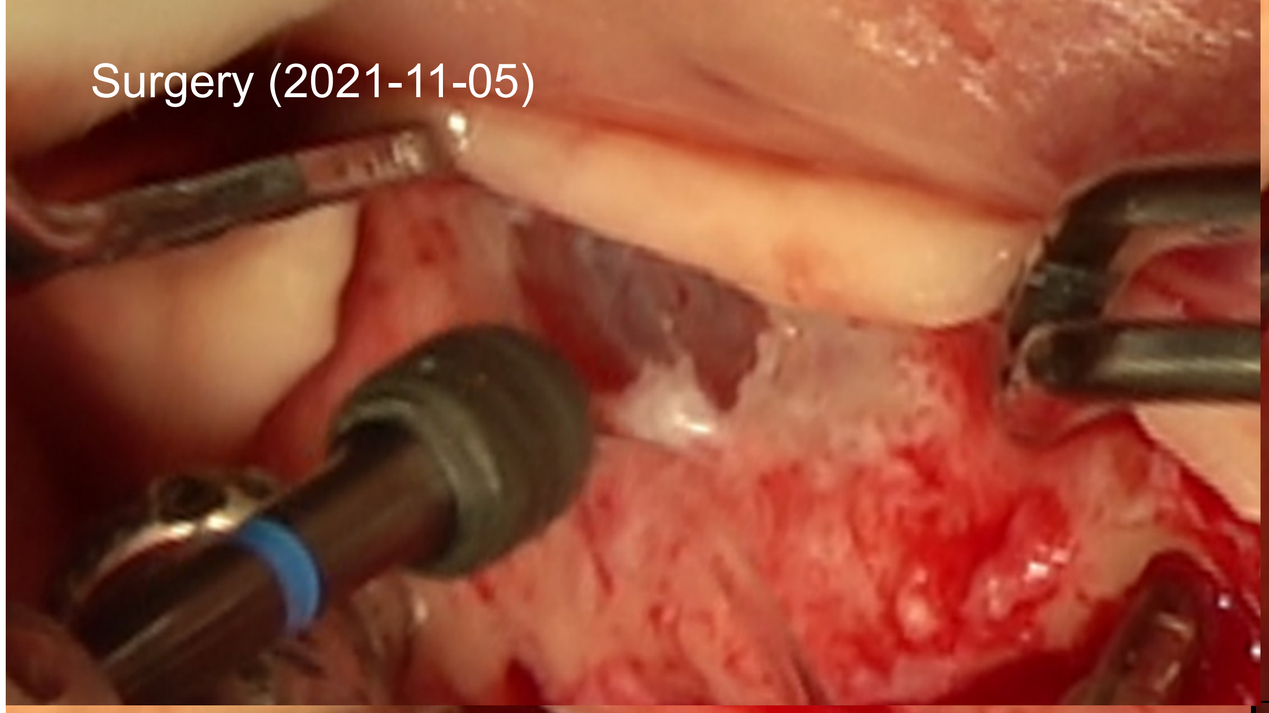
Surgery (2021-11-05)

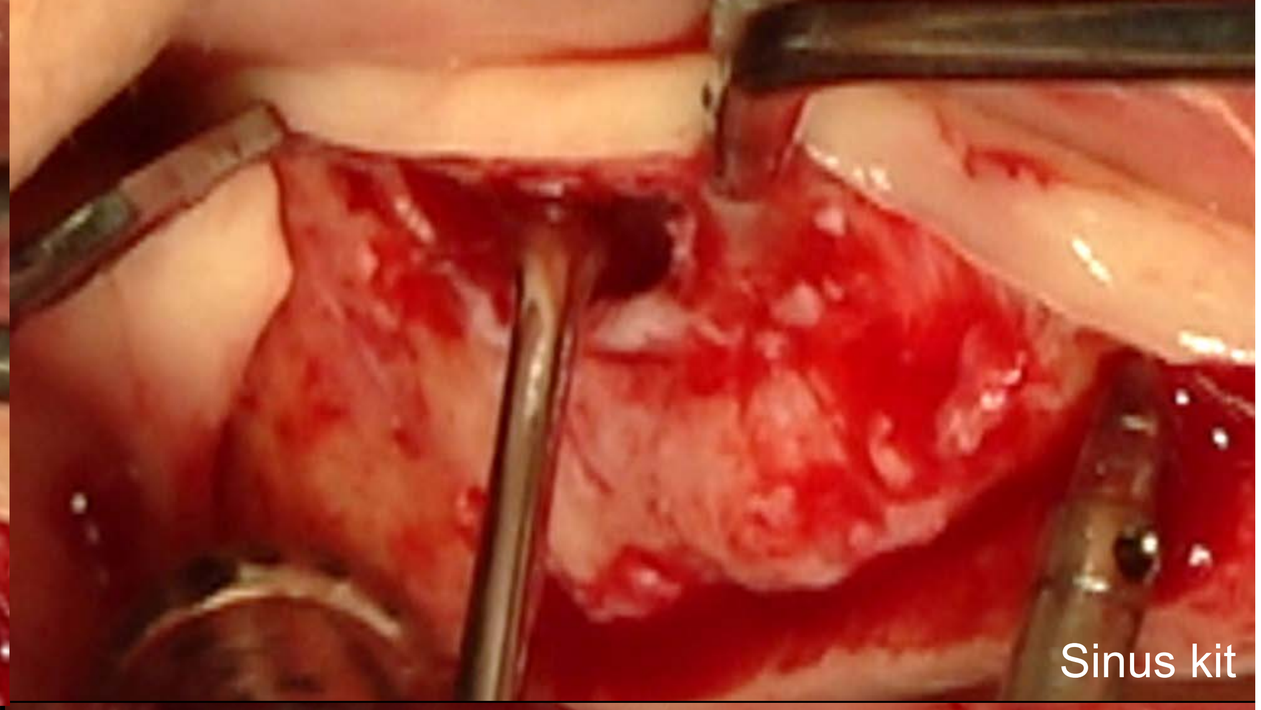


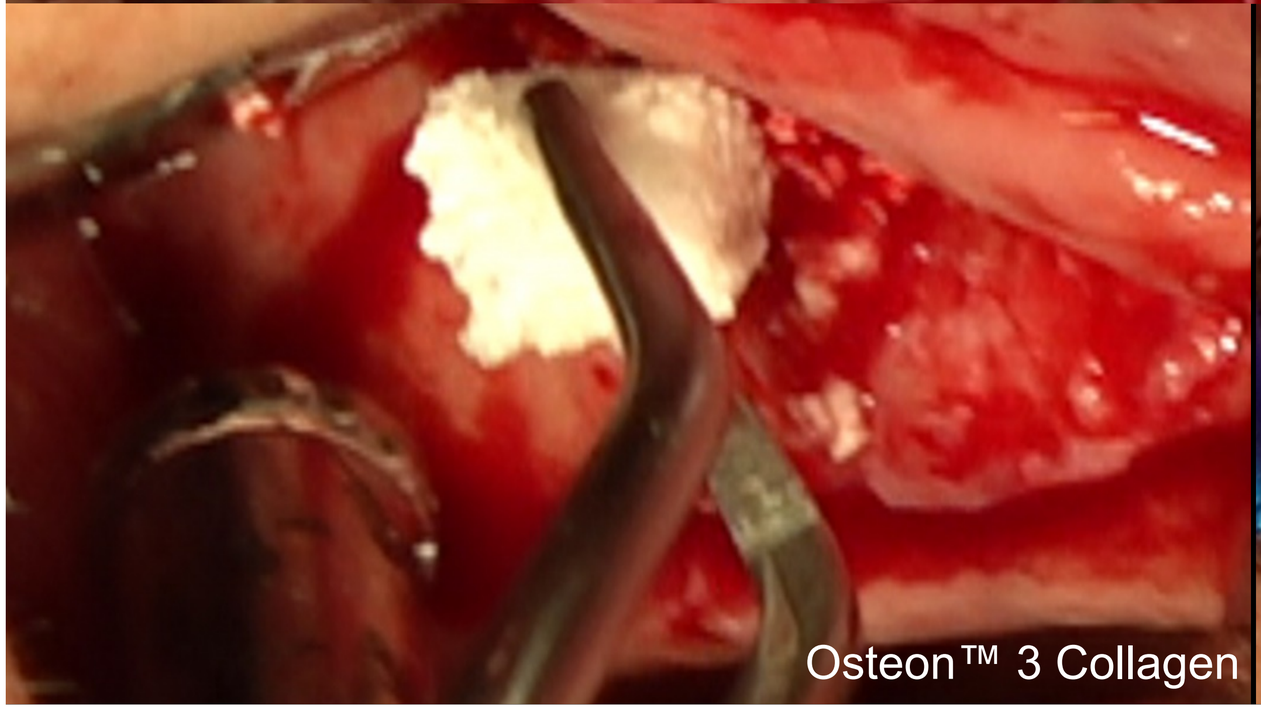
Lateral drill

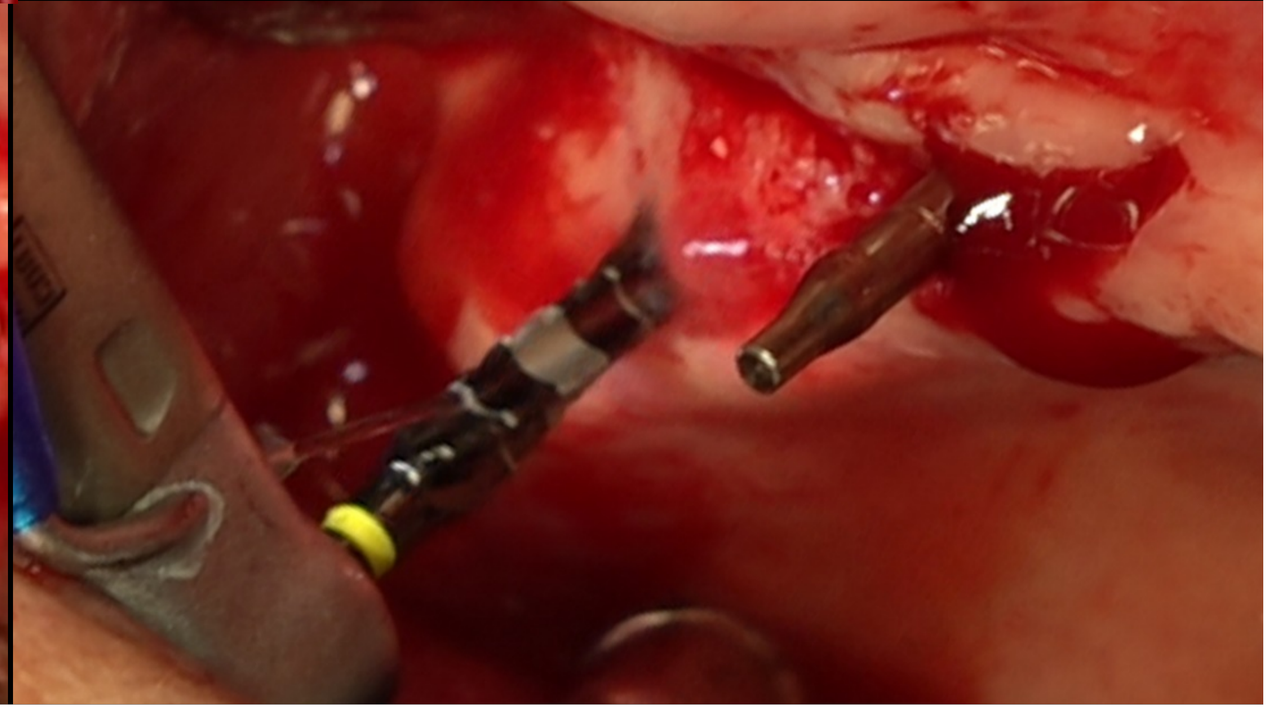


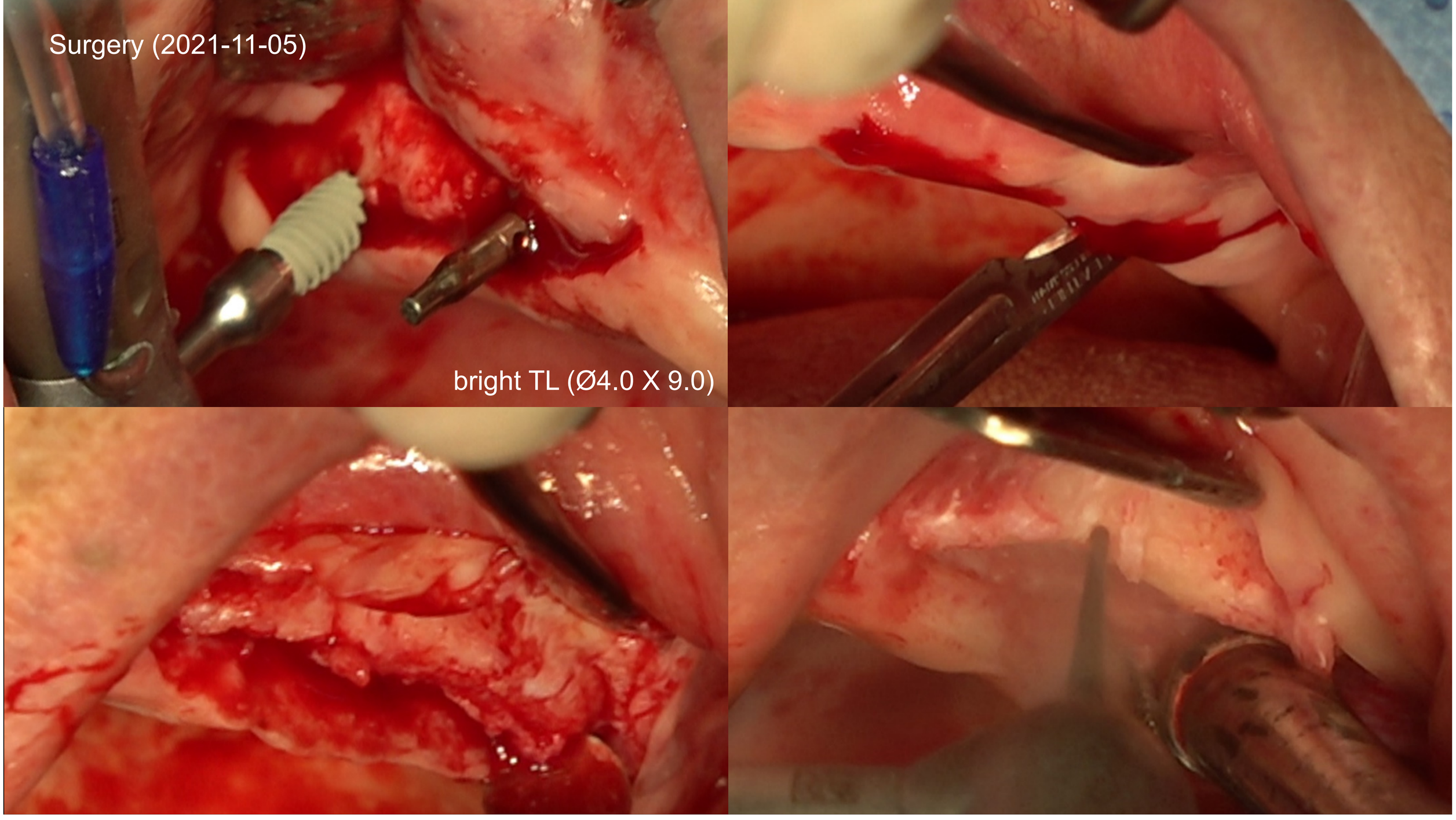


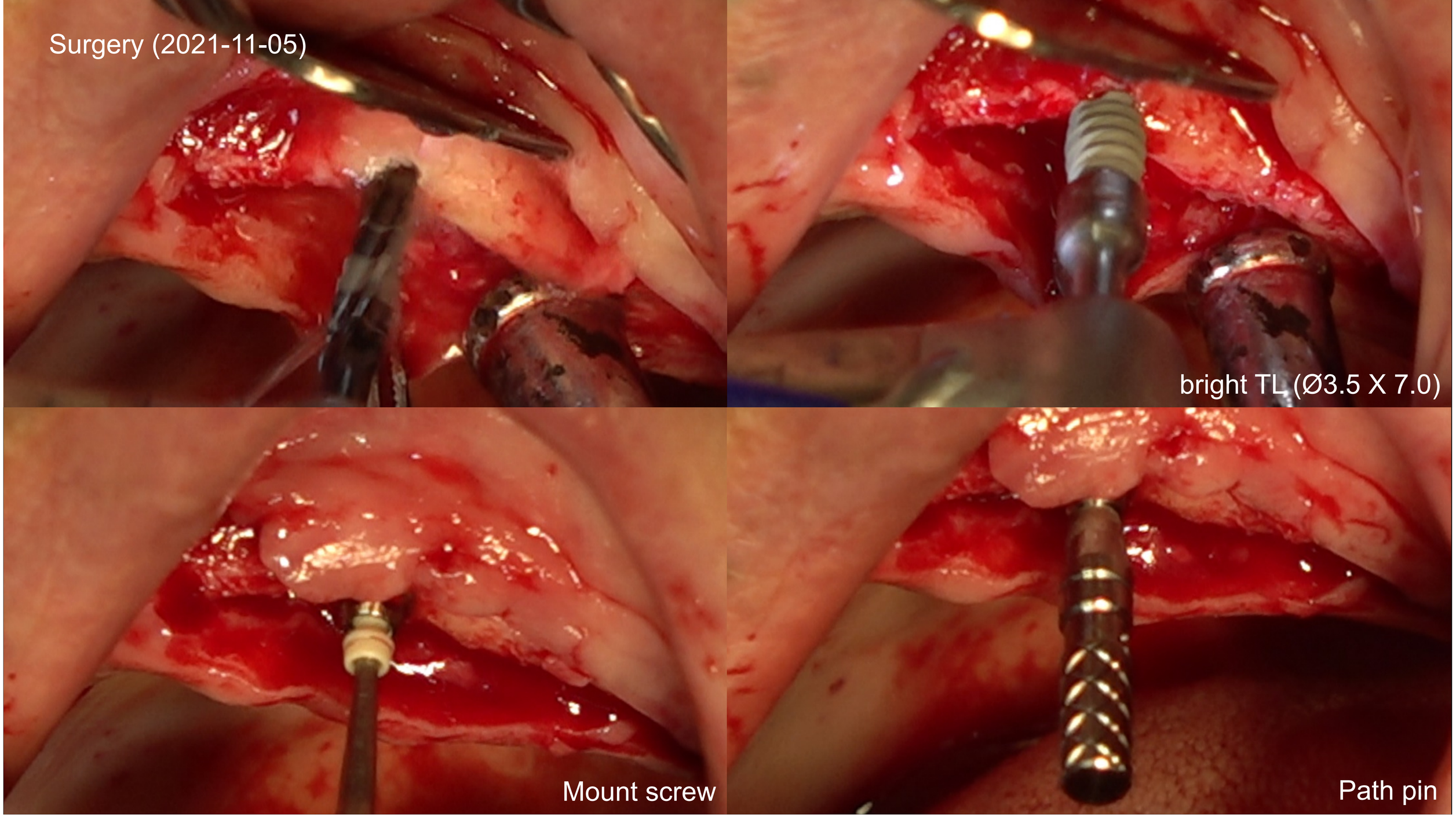

Surgery (2021-11-05)

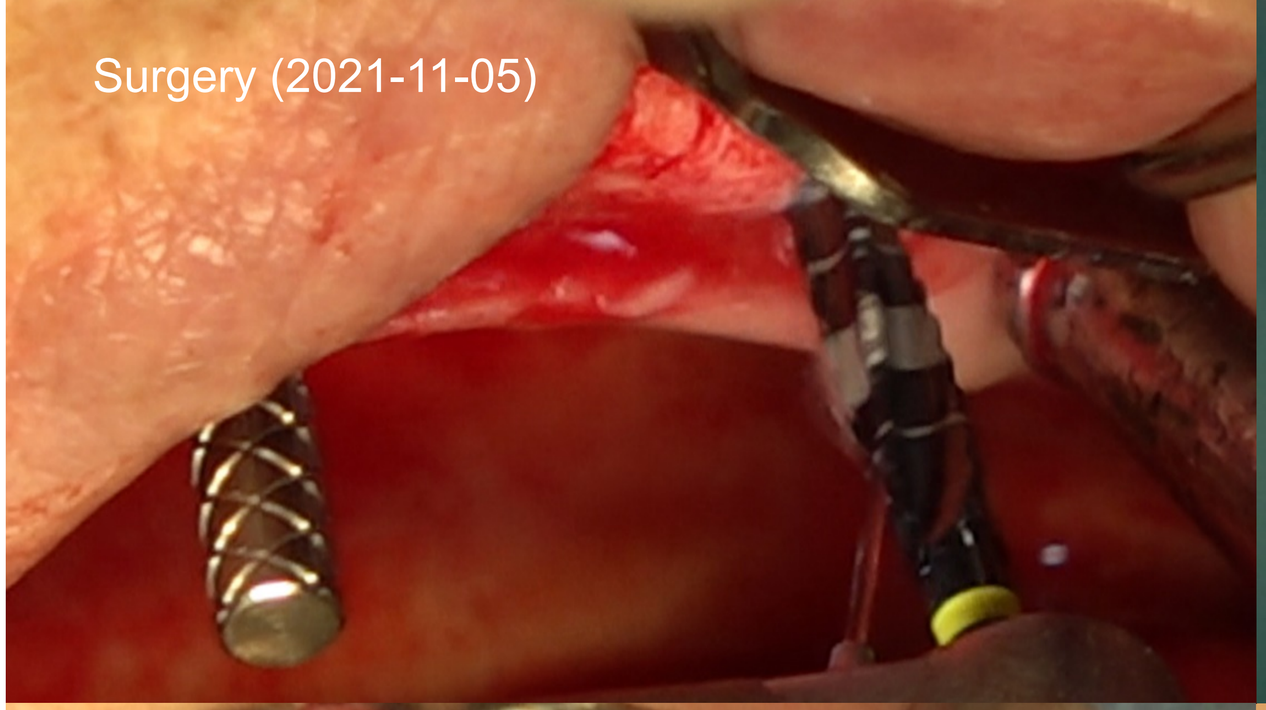

Sinus kit


Osteon™ 3 Collagen

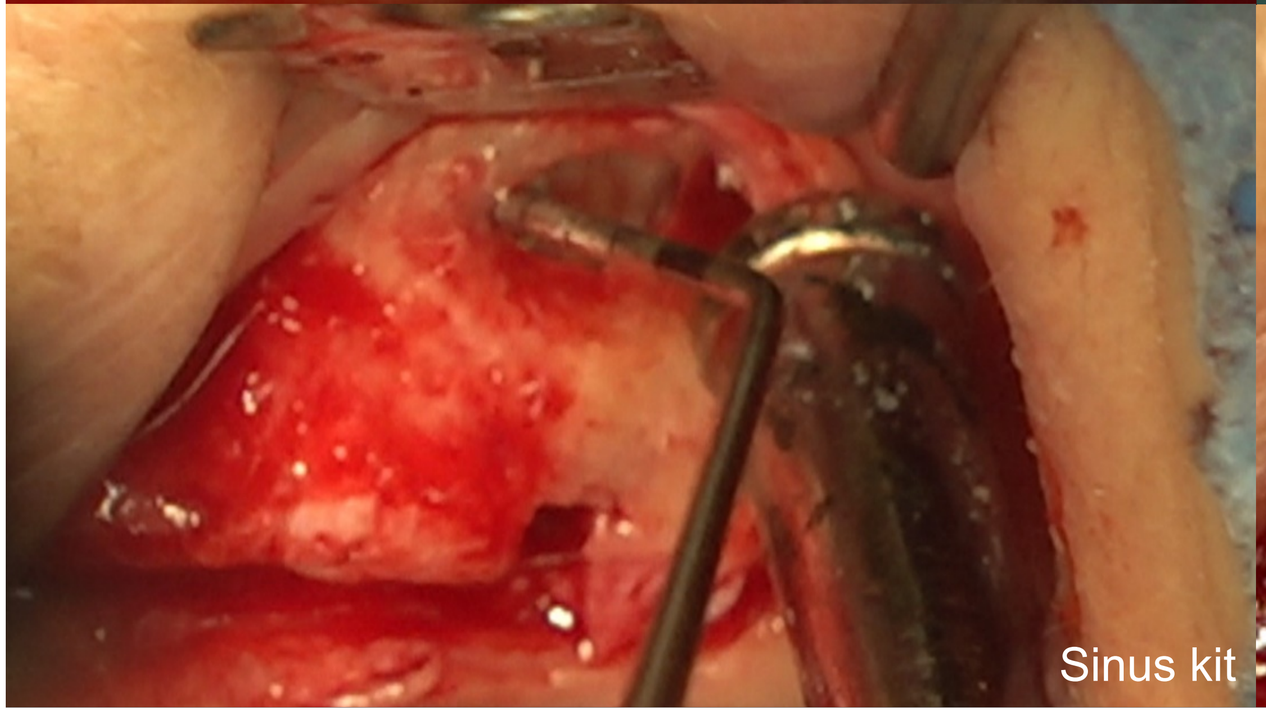


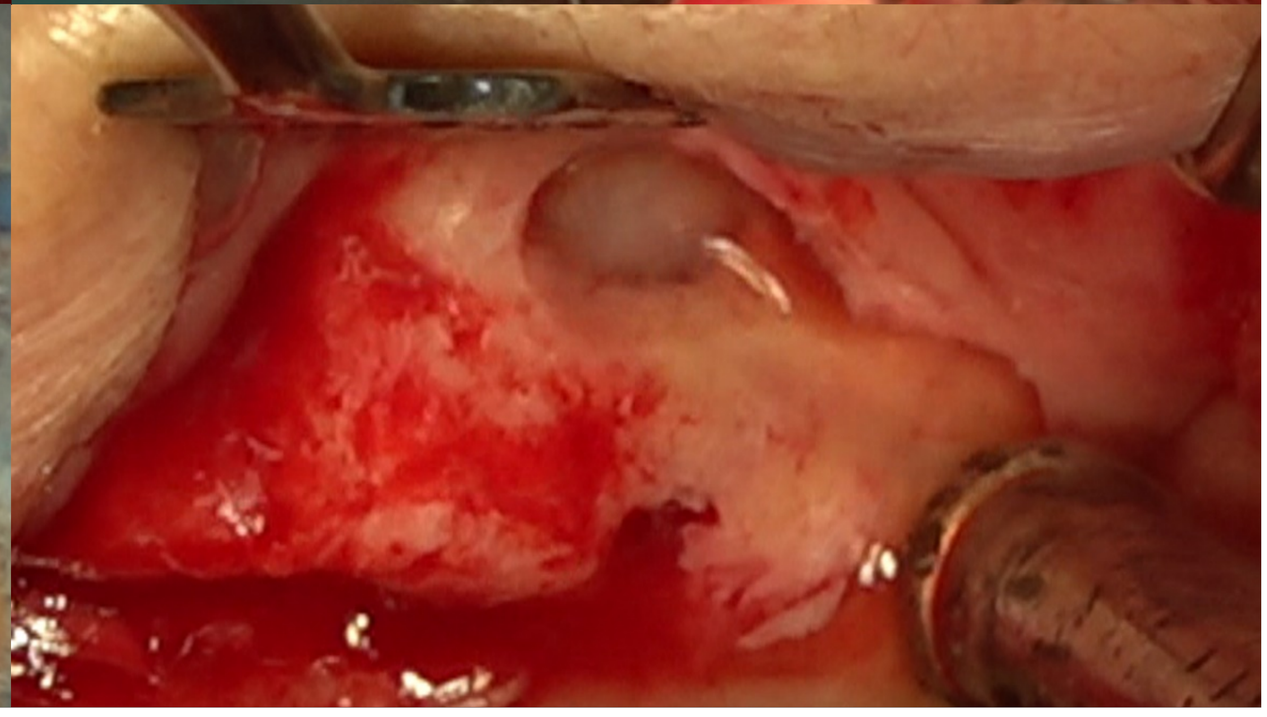

Surgery (2021-11-05)
bright TL (Ø4.0 X 9.0)

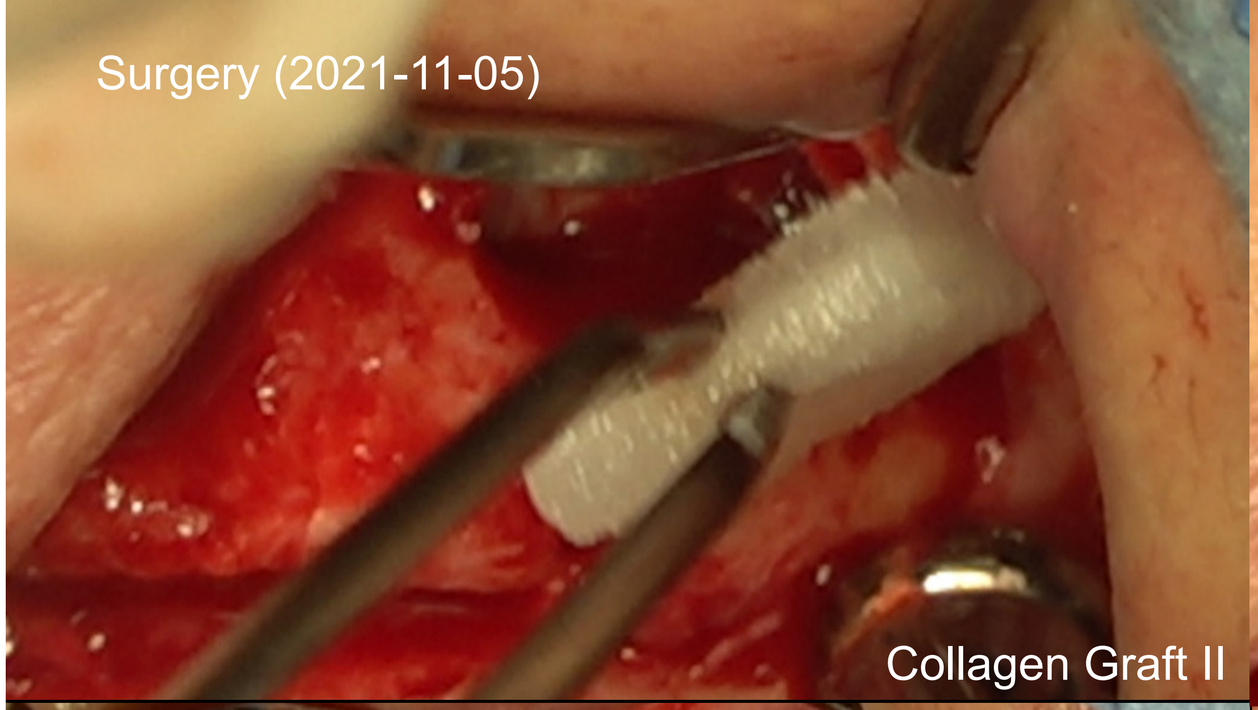

Surgery (2021-11-05)
bright TL (Ø3.5 X 7.0)
Mount screw
Path pin

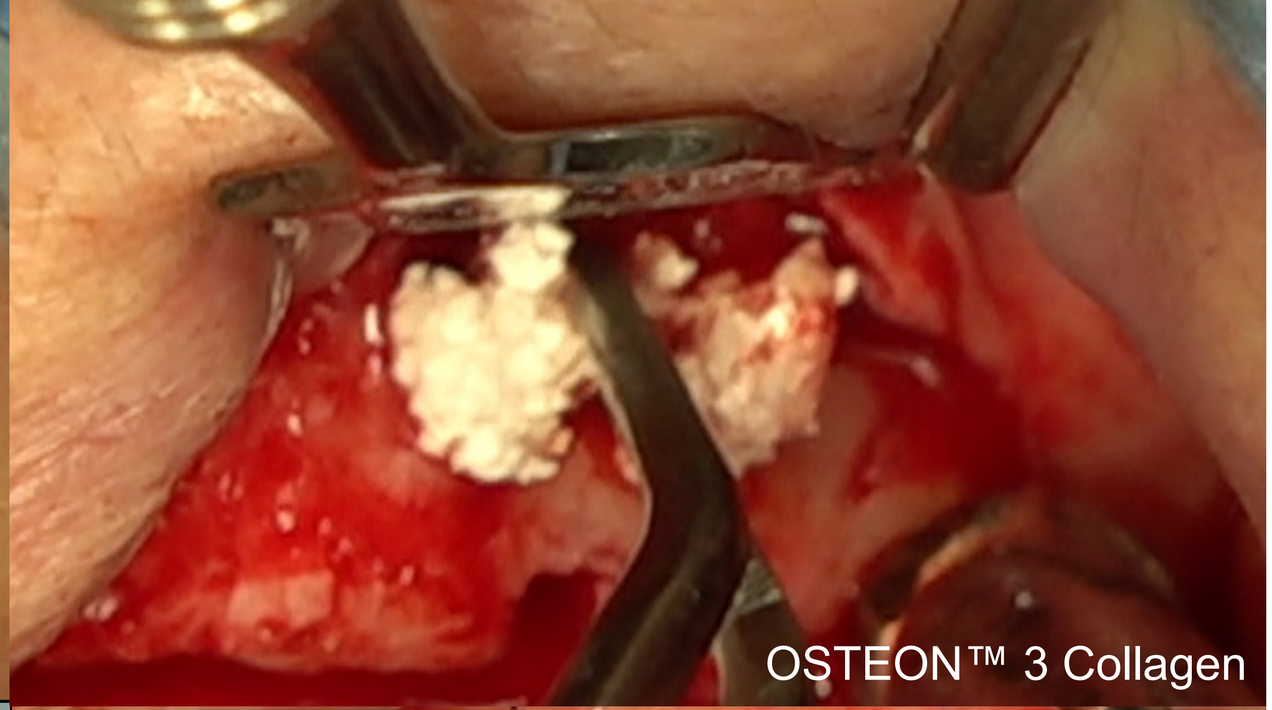

Surgery (2021-11-05)

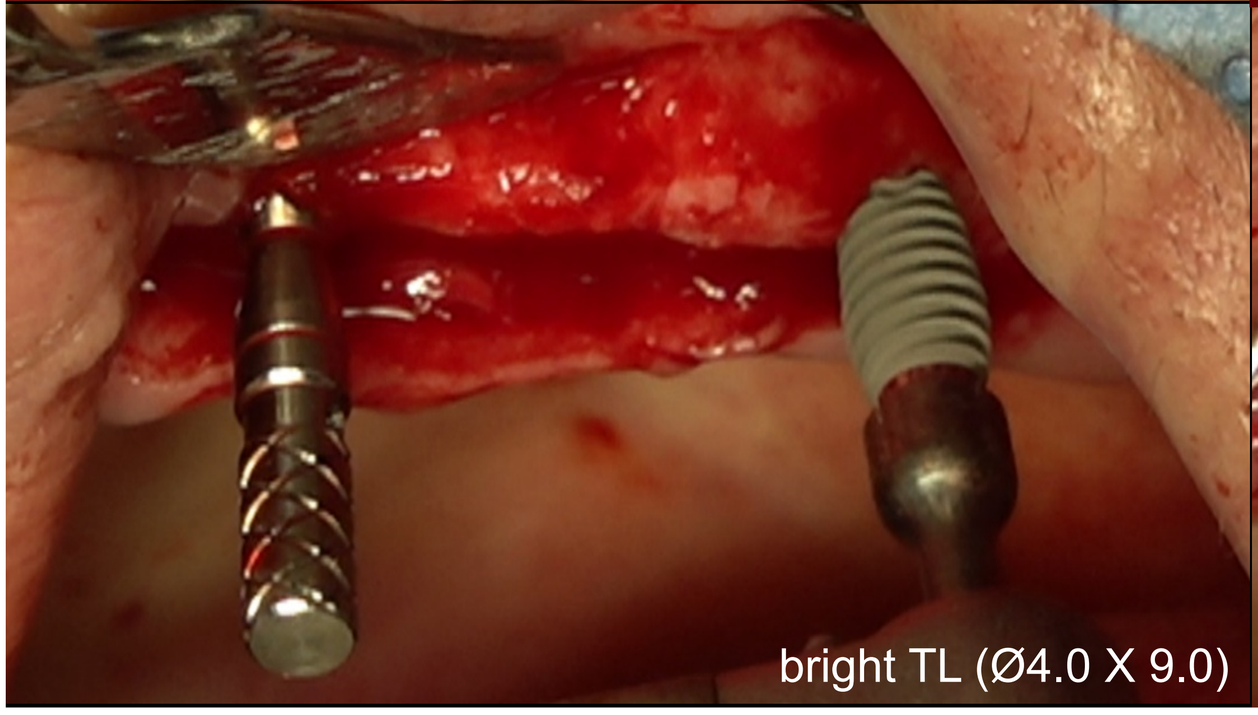
Lateral drill

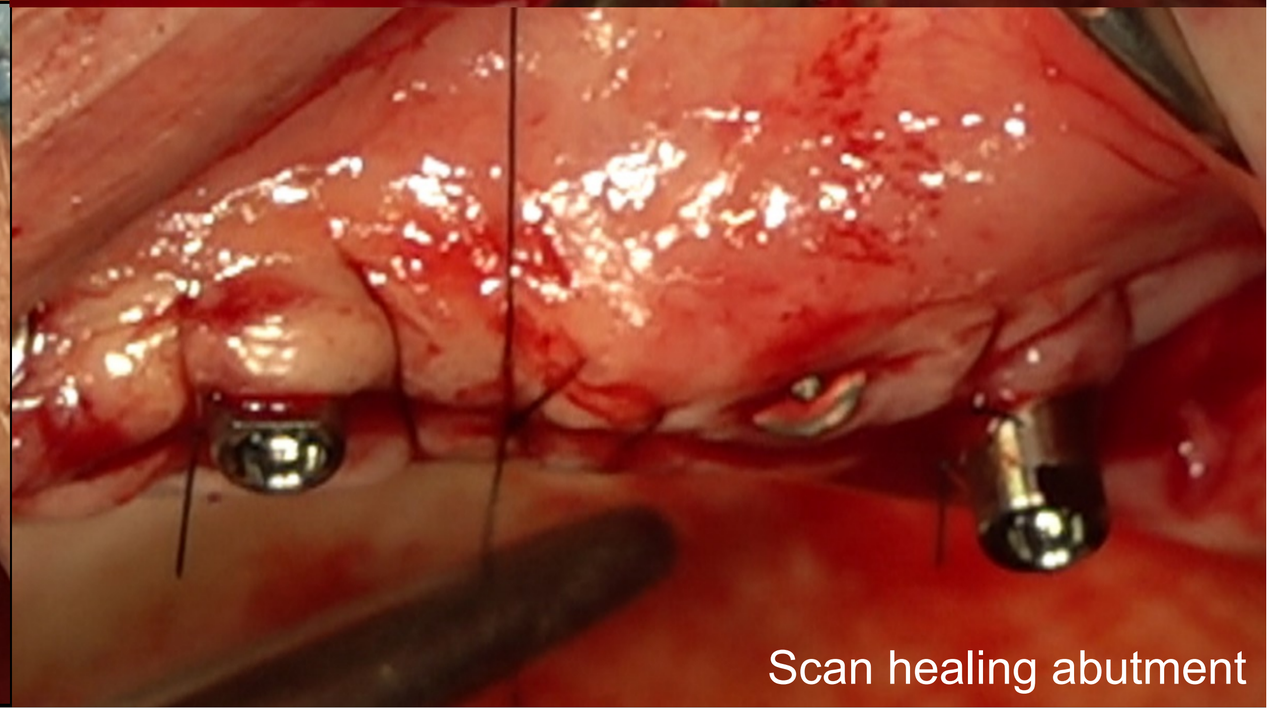

Sinus kit



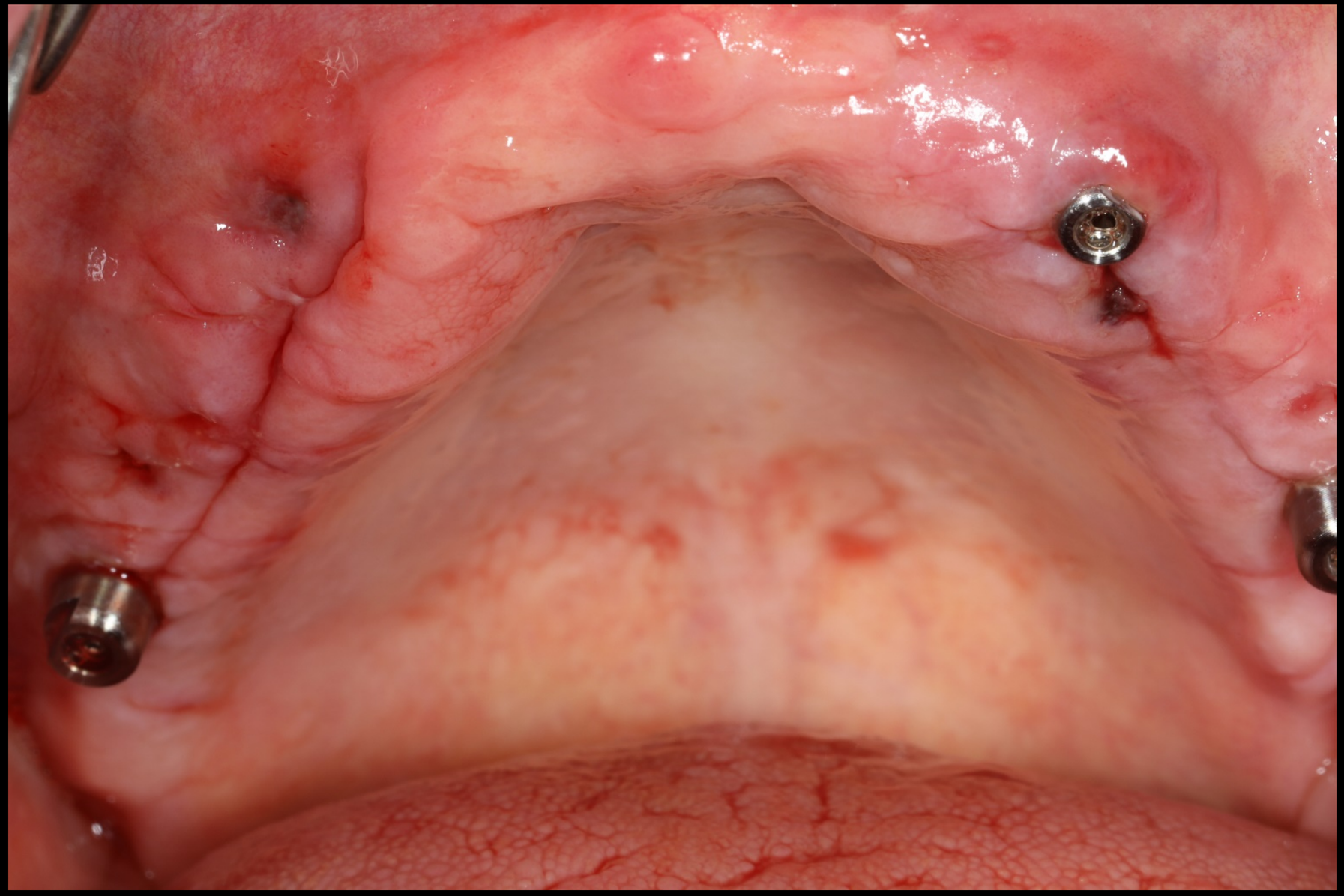

Surgery (2021-11-05)
Collagen Graft II


OSTEON™ 3 Collagen


bright TL (Ø4.0 X 9.0)

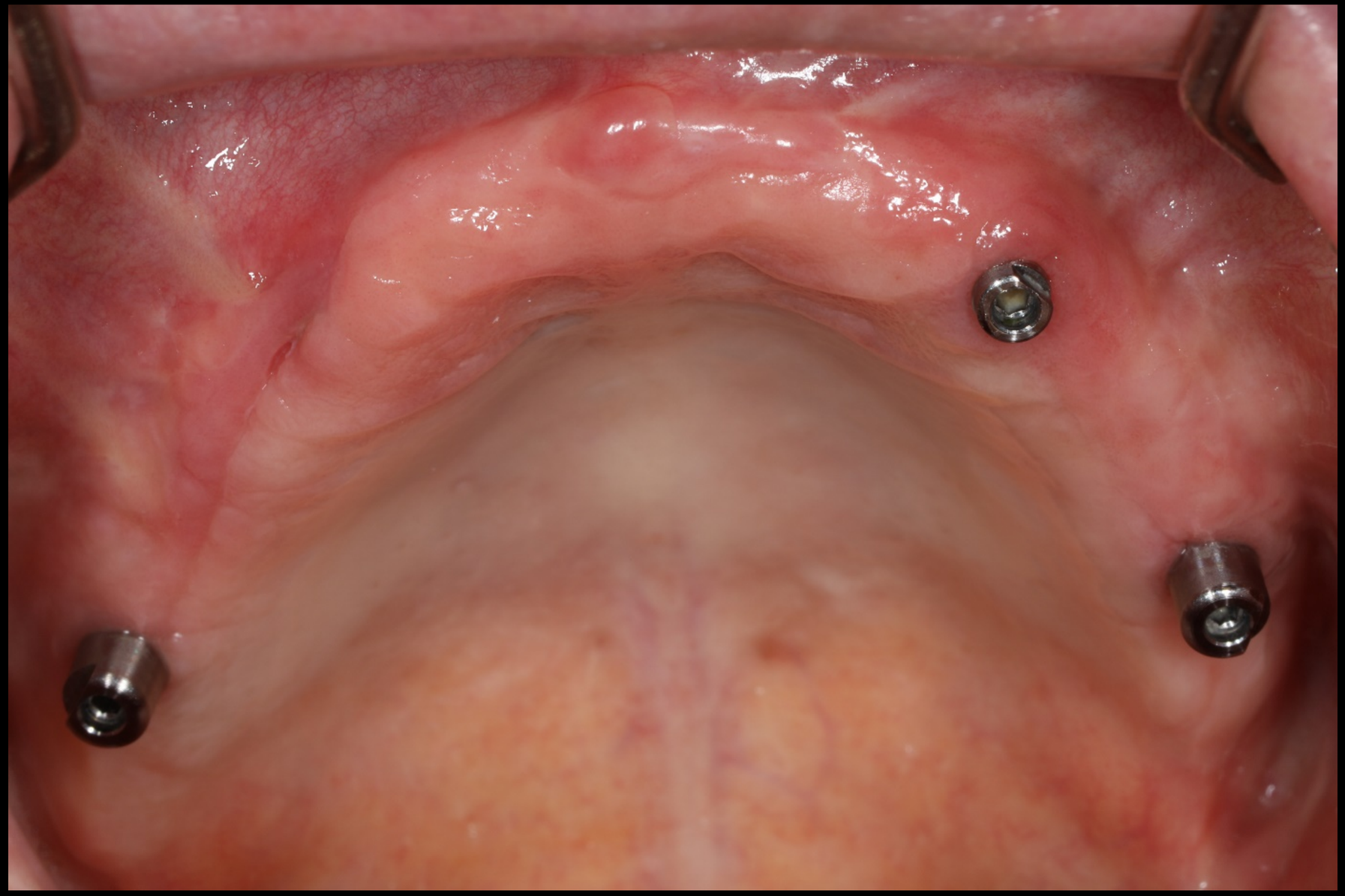

Scan healing abutment

Healing : 2 weeks (2021-11-17)

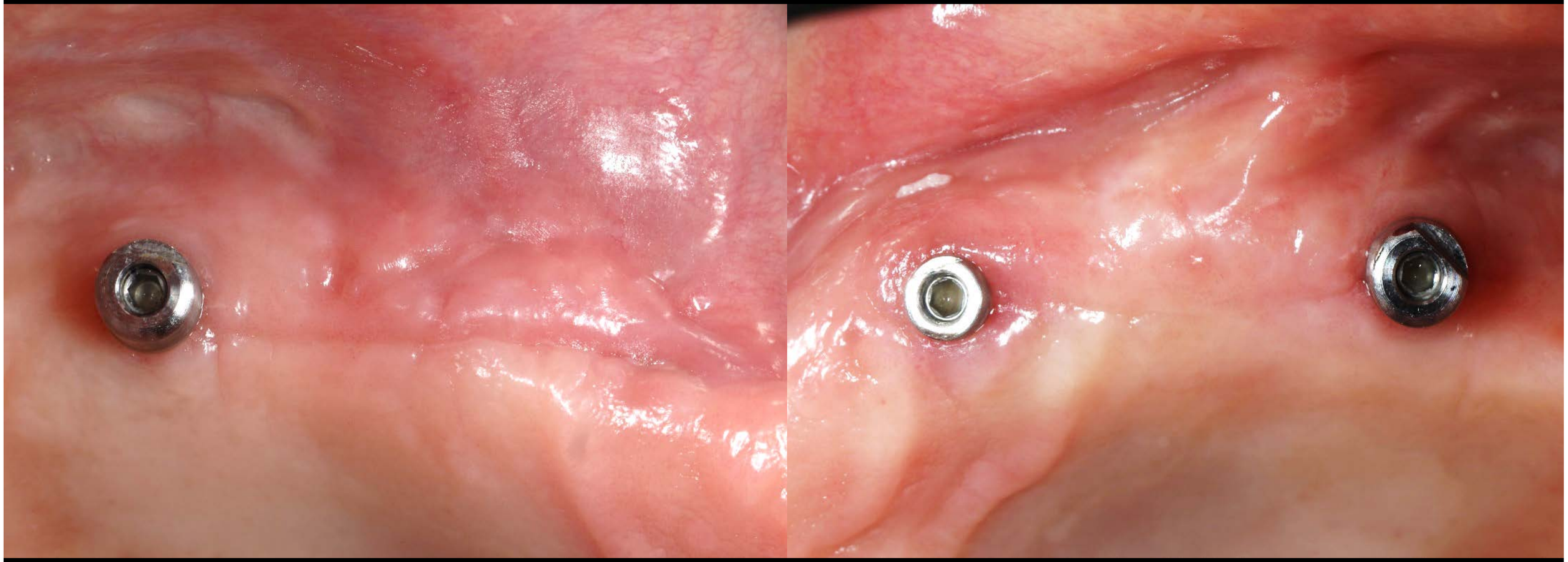


Temporary denture delivery (2021-11-17)

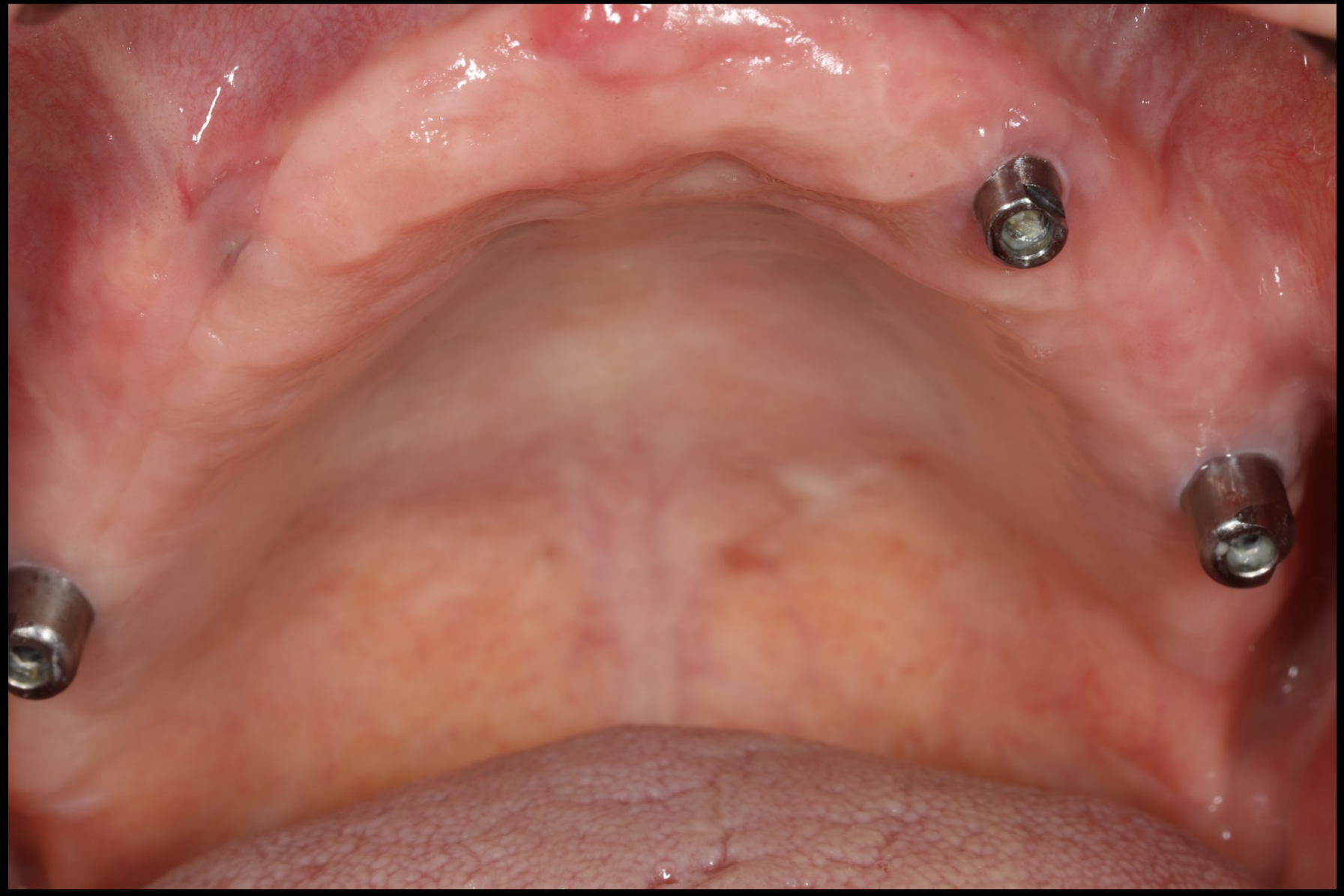
Healing : 1 months (2021-12-15)



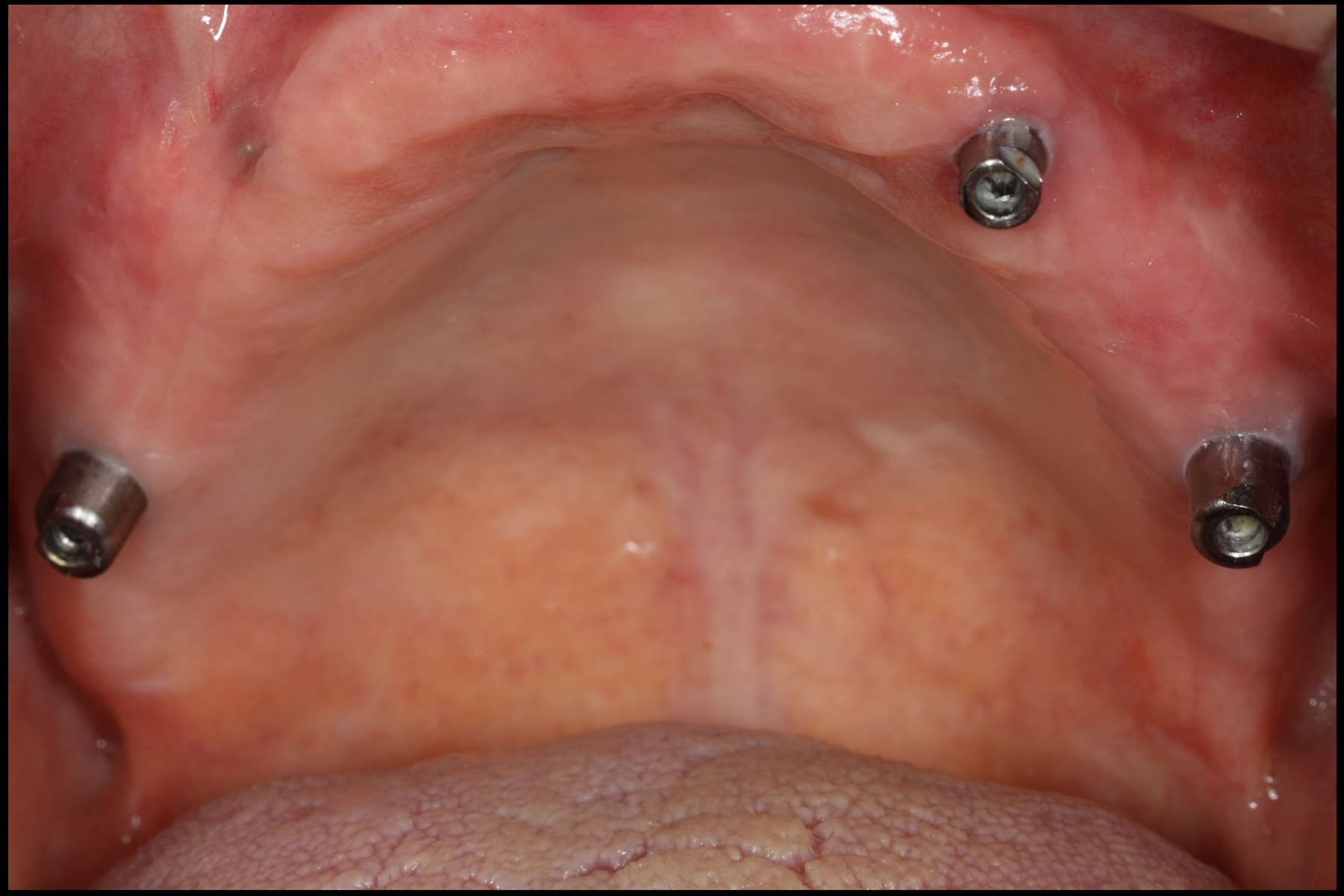
Healing : 1 months (2021-12-15)



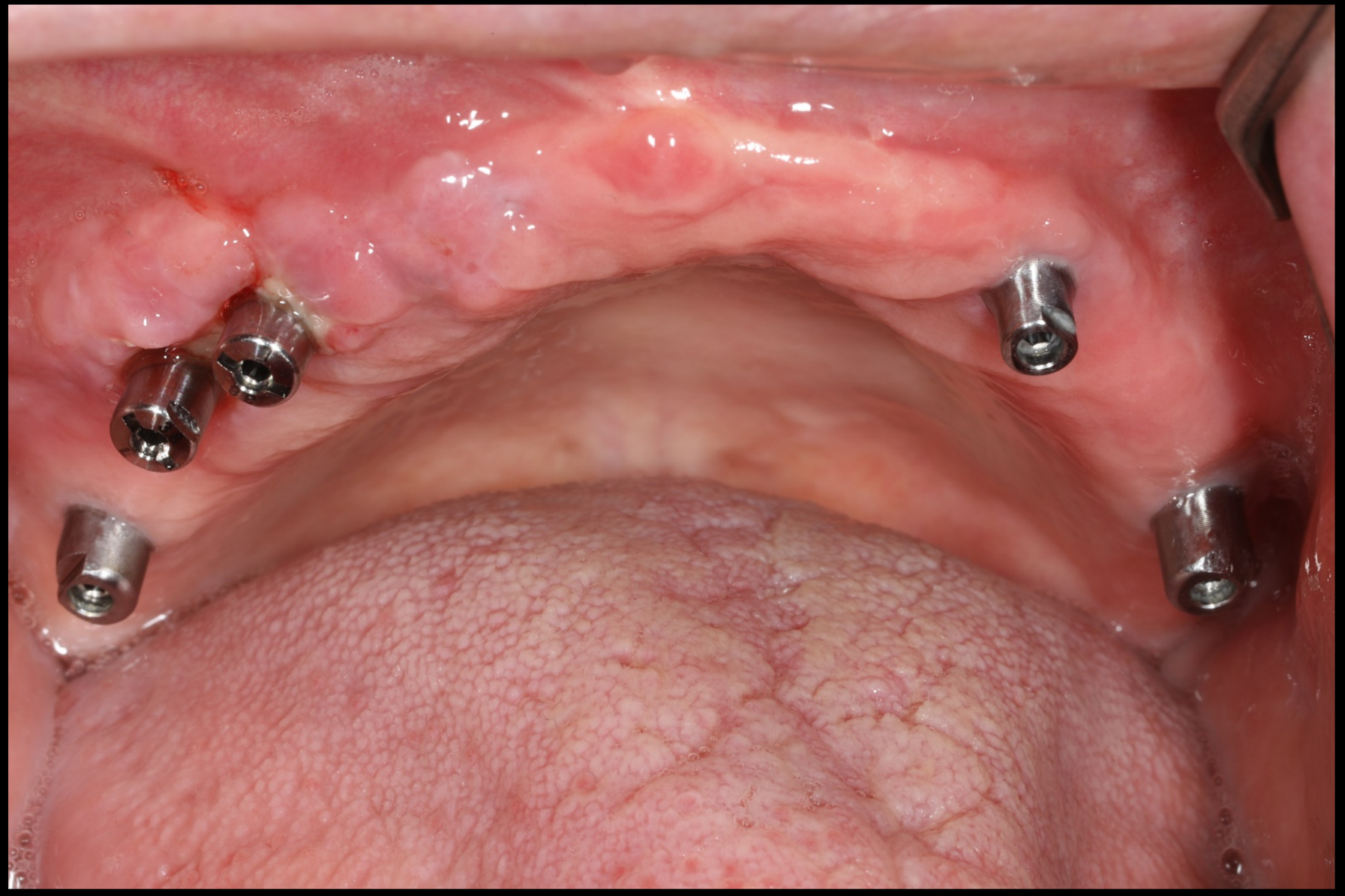
Healing : 5 months (2022-04-06)



Healing : 6 months (2022-05-04)

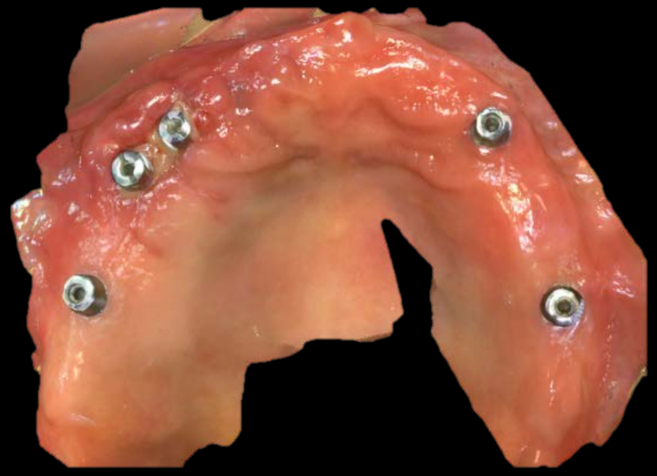


#13,14 2nd surgery (Healing : 6 months) (2022-05-18)



Healing : 7 months (2022-06-17)

Intra-oral scan



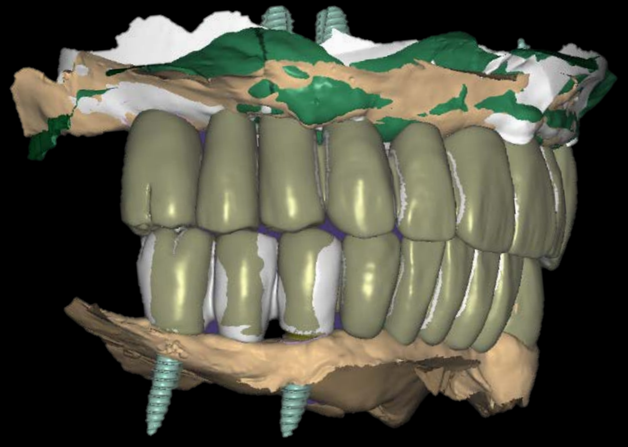
Working model

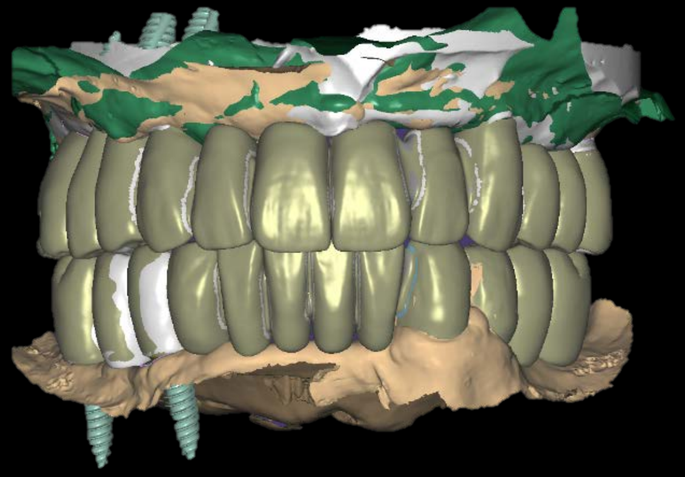
Scan Model

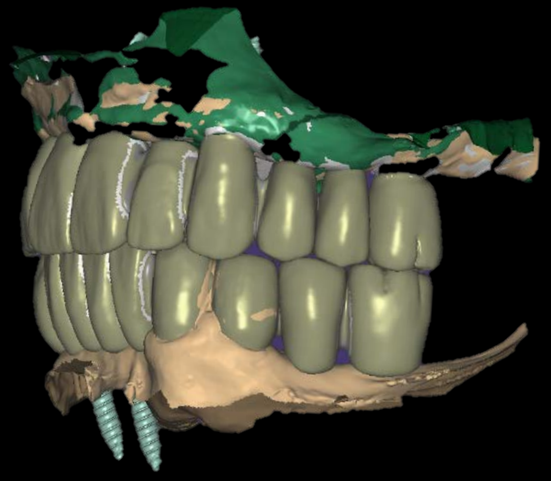
CT

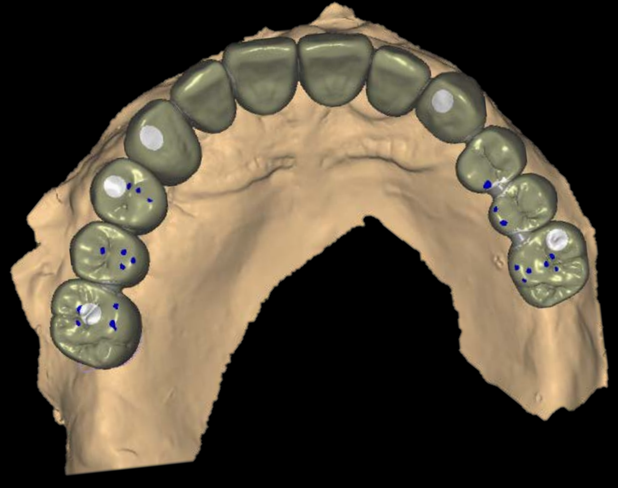
Stitching

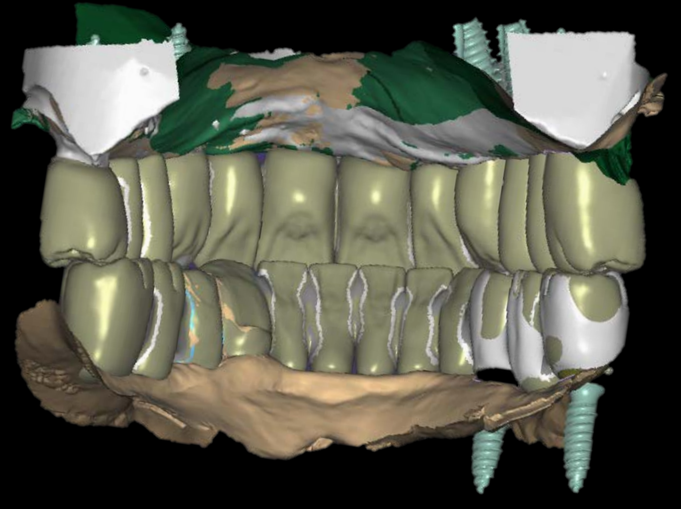
CAD (Temporary)











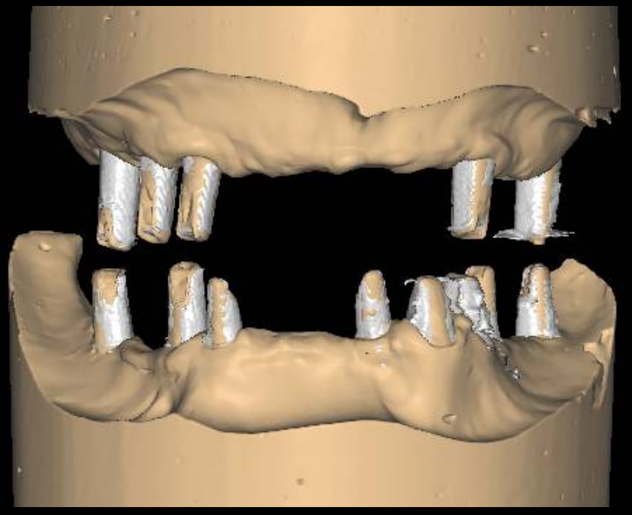
Temporary

Provisional restoration (2022-10-05)

Shade taking

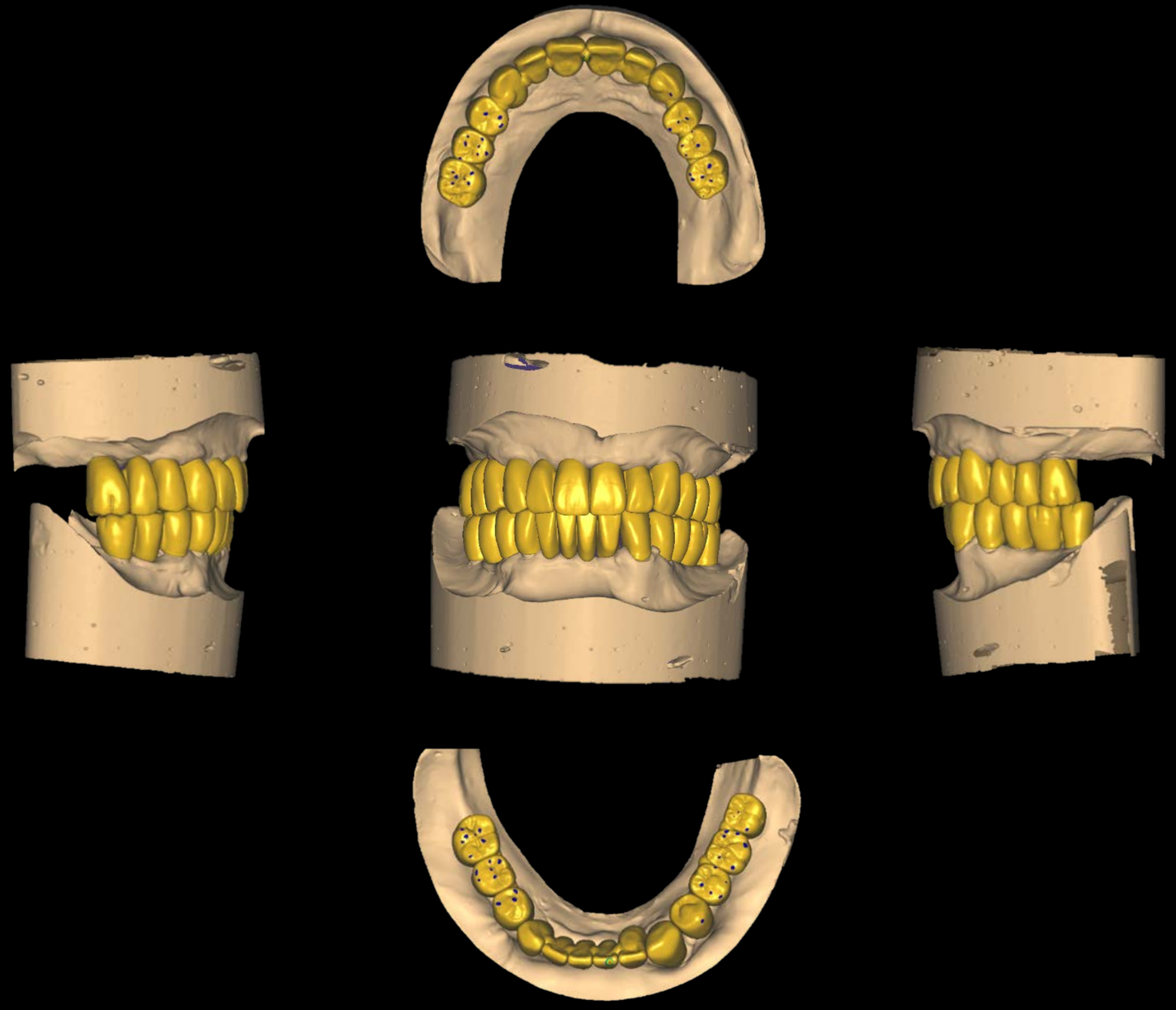
Working model

&

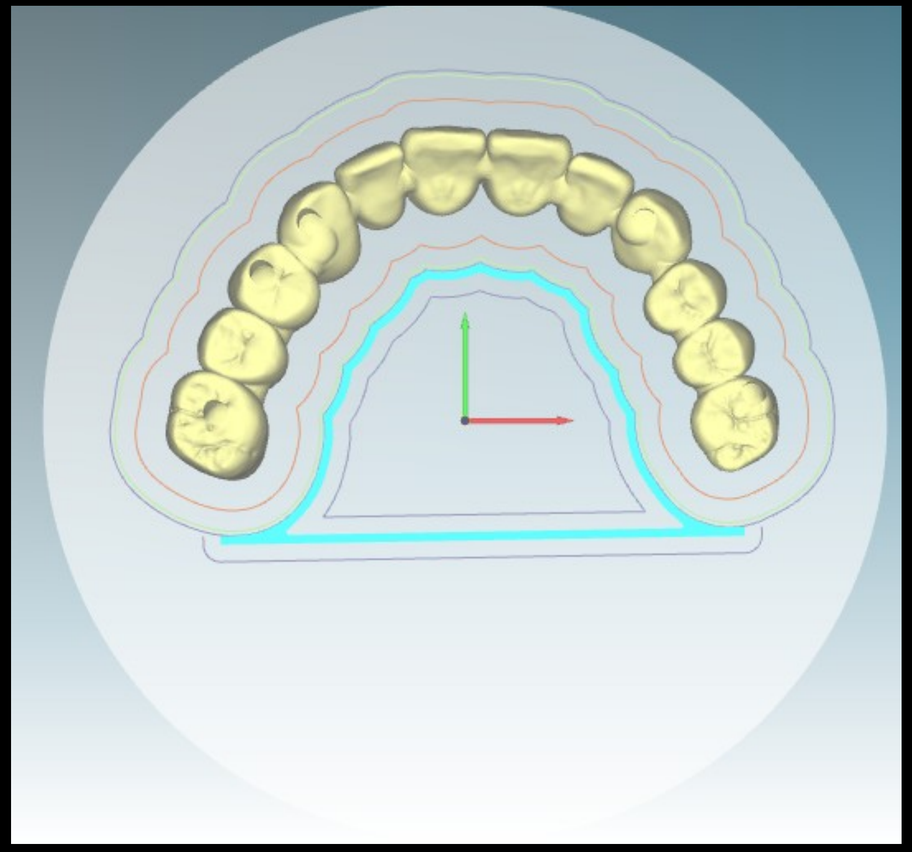


Scan Model **CT** **Stitching**

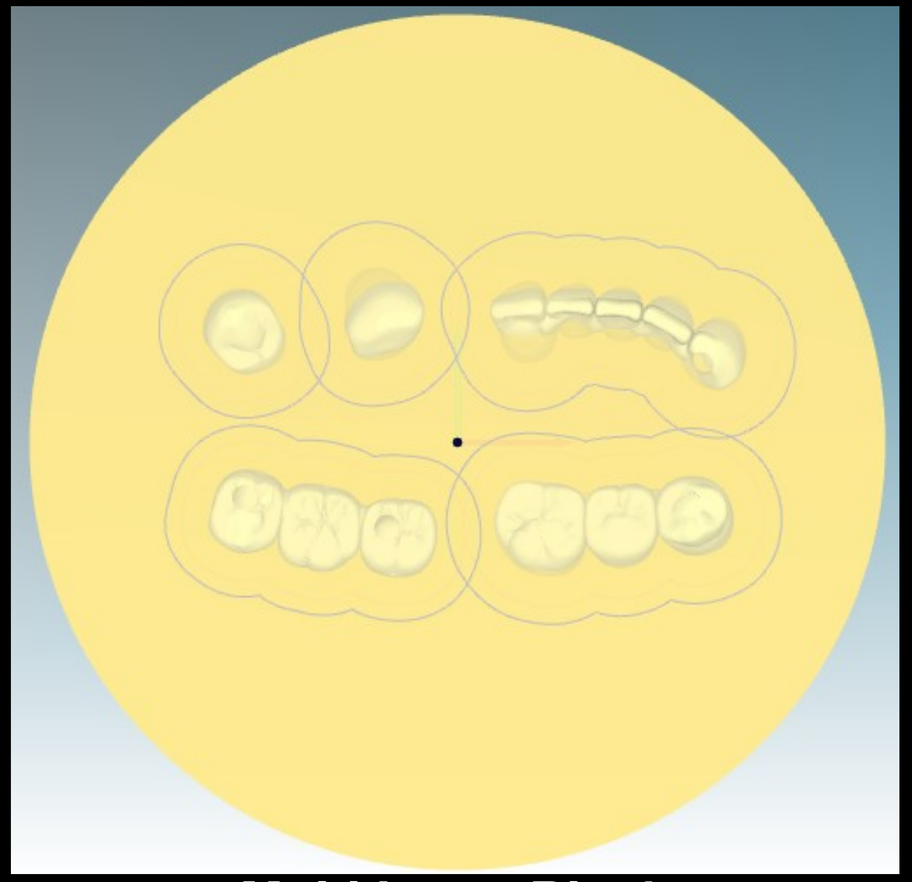
CAD (Temporary)



hyperDENT



Shine T block



Multi Layer Block

Milling

Brushing

Sintering / Finishing

Final prosthesis (2022-12-28)

Final prosthesis (2022-12-28)

Contents

Introduction

Over denture

Fixed prosthesis

Digita concepts

and application for full mouth reconstruction

Overdenture

Good for function
Implant position are not always optimal
Various option , positioned is best
Patient wants fixed prosthesis

Overdenture is good in function

But psychologically we'll not accepted

Various overdenture attachment option is diverse depending on doctor's preference, but must be practical

Still many factors to repair is depend on Overdenture attachment

With launching of bright implant tx can be easier even in overdenture, also we need detailed guideline is required and maintenance concept

With bright implant

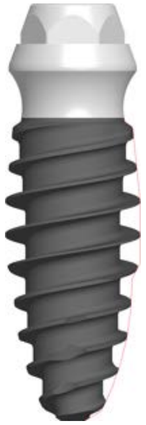
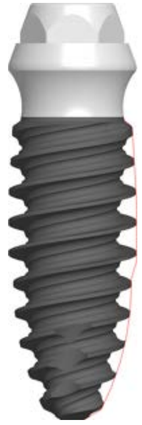
Tx can be simplified even in fixed or overdenture

But in aged, depend on dexterity, tx guideline is required

bright

2023.07.04

✓ Fixture 인허가 진행 현황

	Bone Level		Tissue Level			
	bright 1	bright 2	bright 1	bright 2	G/H 2.5	Angled Neck
Shape						
국가 별 인허가	KFDA : 완료 CE : 완료 FDA : 24’ 03 CFDA : 25’ 03				KFDA : 23’ 09 (7월 1차 보완) CE : 24’ 09 FDA : 24’ 03 CFDA : 26’ 03	KFDA : 23’ 12 (9월 1차 보완) CE : 24’ 12 FDA : 24’ 03 CFDA : 26’ 06

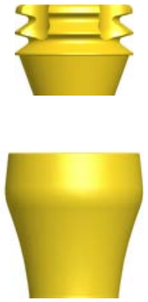
snu eden - 2025년 12월 22일

Prosthetic Line-up

bright

2023.07.04

✓ 미래 Overdenture
- Magnetic Sunken Type 적용

	Positioner	Ball Abutment	Magnetic (Sunken Type)	Screw Abutment Components	
				Positioner	Magnetic (Sunken Type)
Shape					
Diameter	Ø3.6	Ø3.8	Ø6.2	Ø3.6	Ø6.2
G/H	1.0 / 2.0 / 3.0 / 4.0 / 5.0	0.5 / 1.0 / 2.0 / 3.0 / 4.0 / 5.0	1.0 / 2.0 / 3.0 / 4.0 / 5.0	2.5 / 3.5 / 4.5	3.0/ 4.0 / 5.0
비 고	SuperLine Overdenture Component 호환		-	SuperLine Overdenture Component 호환	-

bright

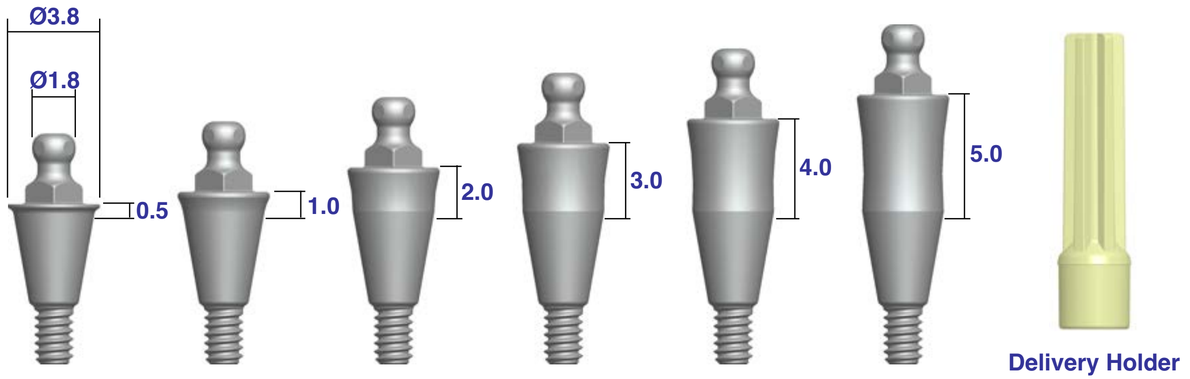
2023.07.04

Overdenture Components

Bone Level

✓ Ball Abutment (Ø1.8 Ball)

Diameter	G/H	Art. No.
Ø3.8	0.5	BBAB380518
	1.0	BBAB381018
	2.0	BBAB382018
	3.0	BBAB383018
	4.0	BBAB384018
	5.0	BBAB385018



양산

Prosthetic Line-up

bright

2023.07.04

✓ Magnetic Attachment – Sunken

KFDA : 23’ 10

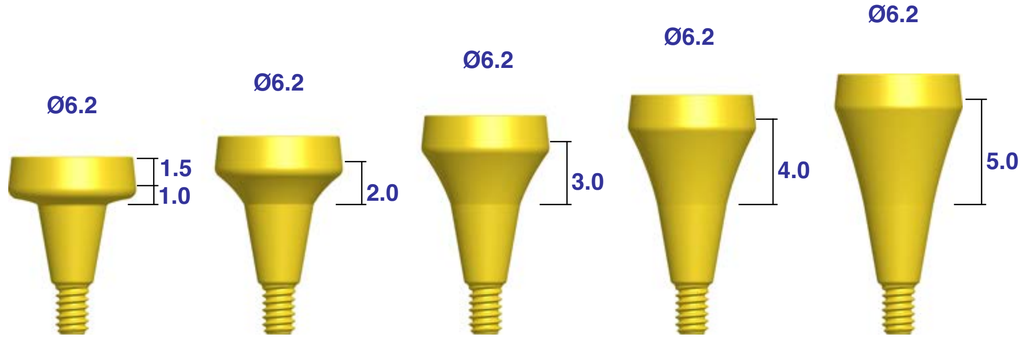
Magnetic Assay

Diameter	H	Art. No.
Ø5.65	4.50	XMG5545S

Bone Level

Implant Keeper Diameter Ø6.2

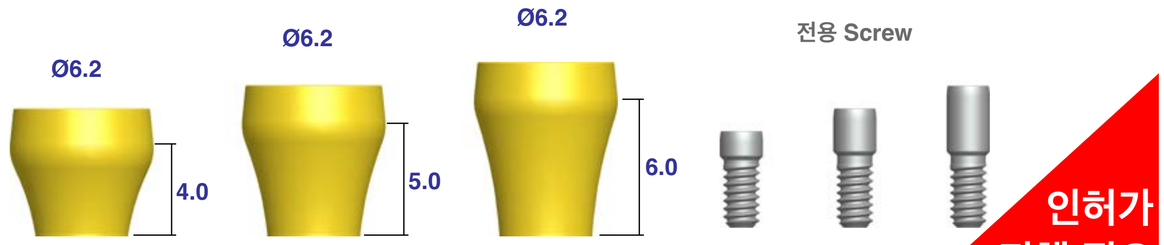
Diameter	G/H	Art. No.
Ø6.2	1.0	BMK6210S
	2.0	BMK6220S
	3.0	BMK6230S
	4.0	BMK6240S
	5.0	BMK6250S



Tissue Level

Implant Keeper Diameter Ø6.2

Diameter	G/H	Art. No.
Ø6.2	4.0	BSMK6240S
	5.0	BSMK6250S
	6.0	BSMK6260S



인허가 진행 필요

bright

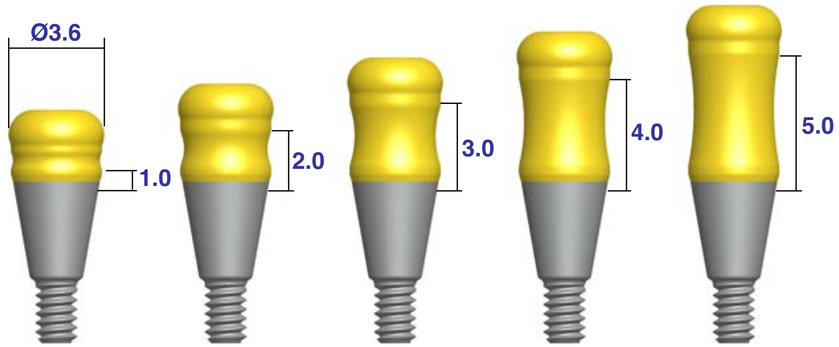
2023.07.04

Overdenture Components

Bone Level

✓ Positioner Abutment

Diameter	G/H	Art. No.
Ø3.6	0.5	BPAB3605
	1.0	BPAB3610
	2.0	BPAB3620
	3.0	BPAB3630
	4.0	BPAB3640
	5.0	BPAB3650



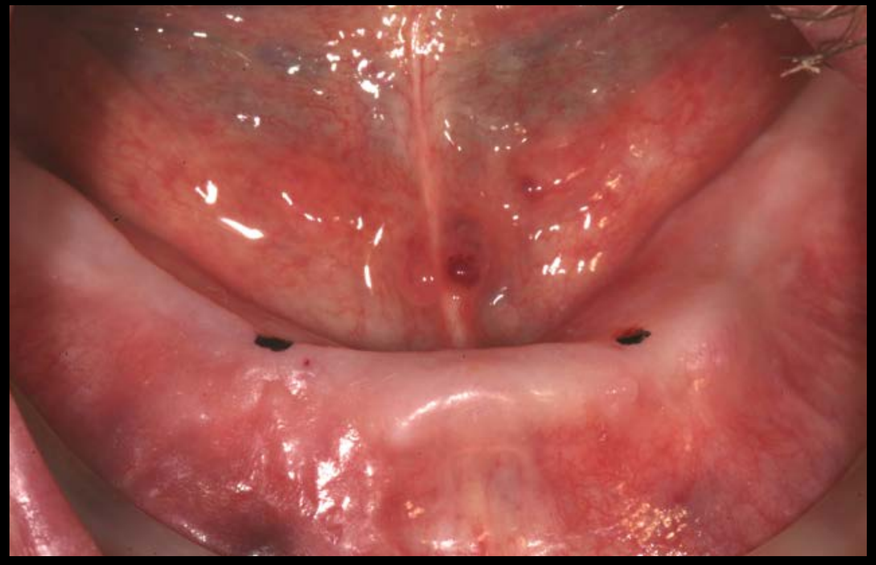
✓ Positioner Metal Socket – Dentium 품목 활용

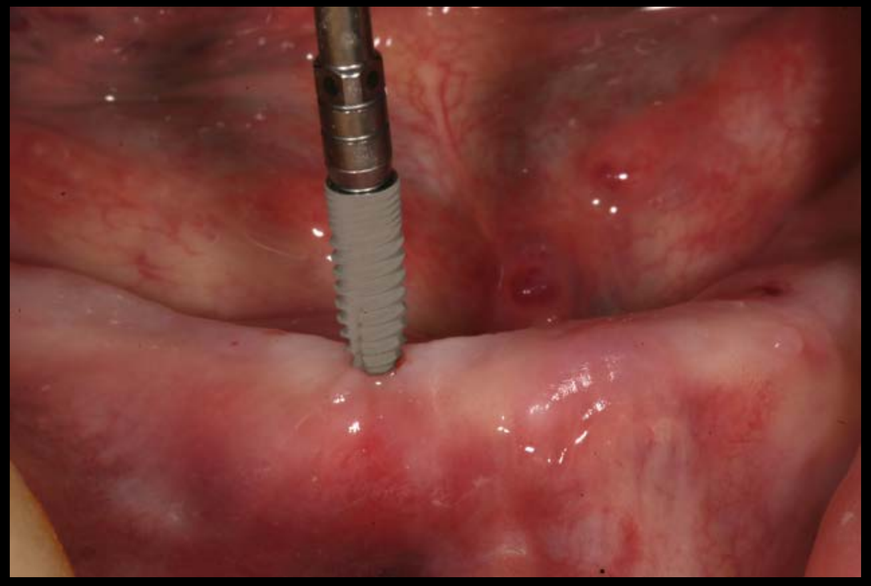
Art. No.
FSMH

✓ Plastic Socket – Dentium 품목 활용

Art. No.	Force
MSHP	1000gf
MSMP	500gf
MSLP	300gf
MSOP	100gf

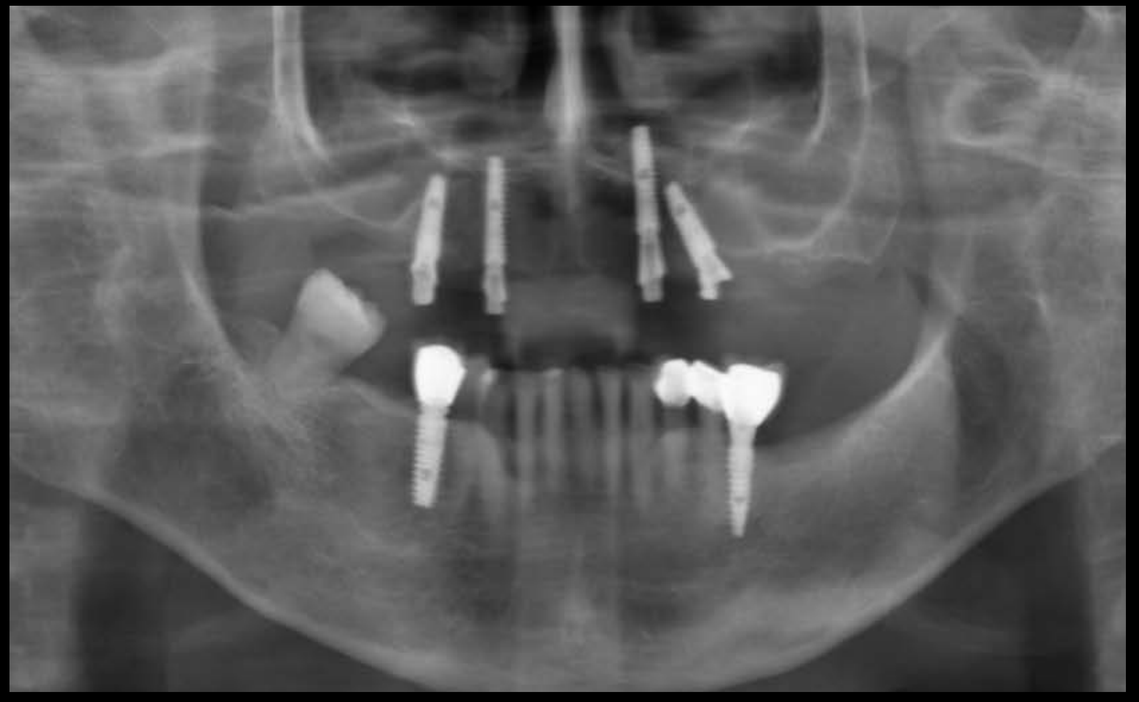
양산

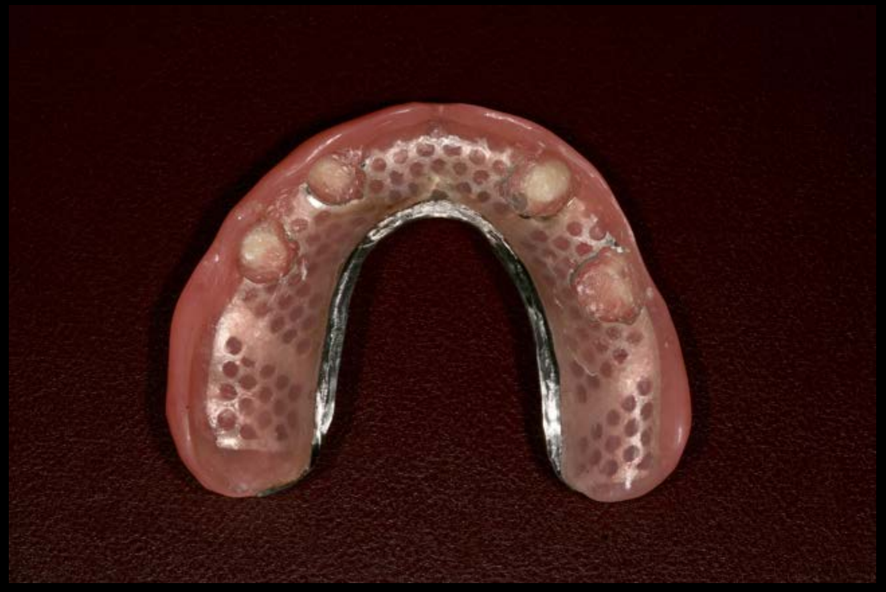




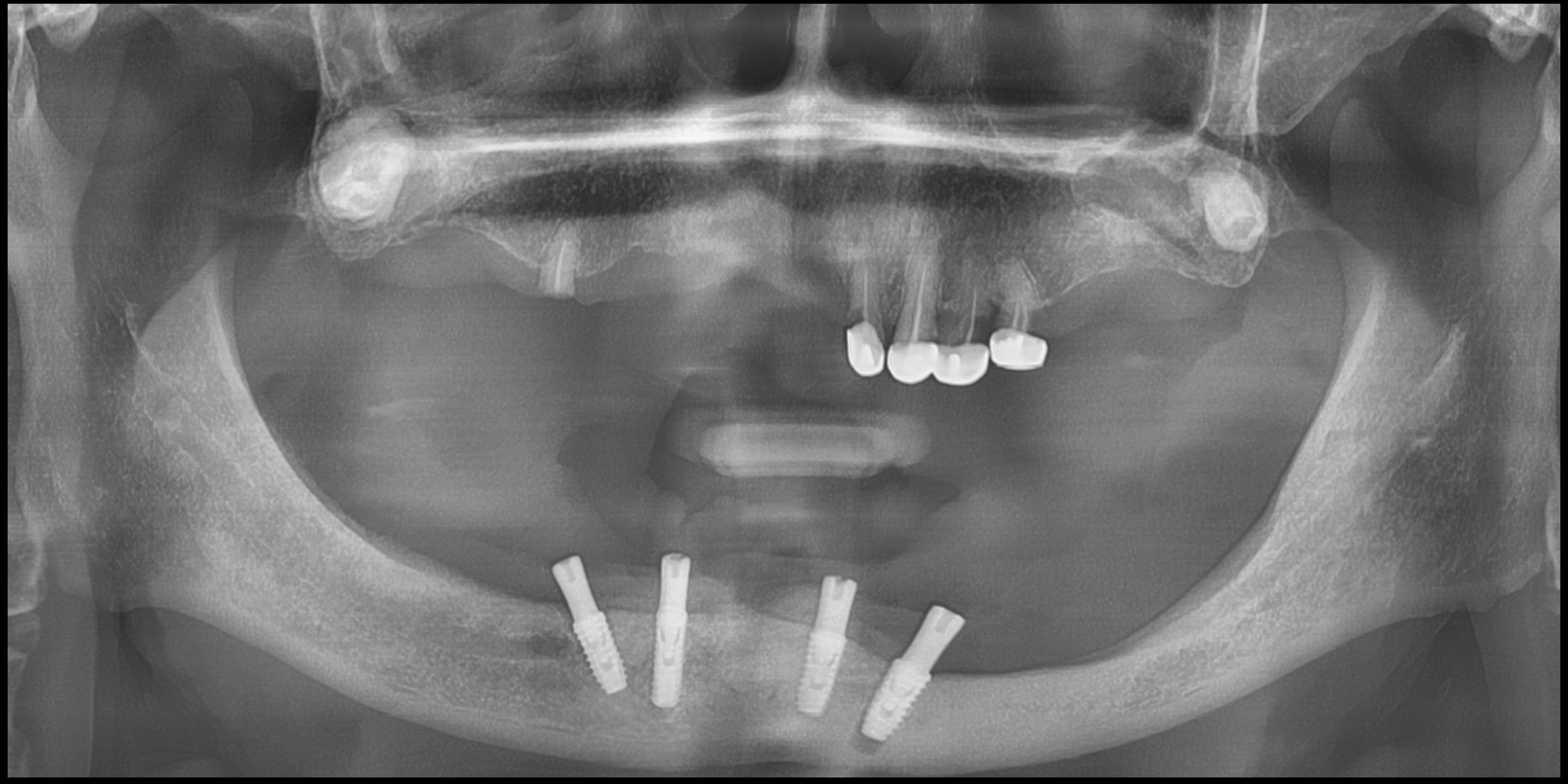
Fixture 식립 torque는 35N/cm이상이었고, 식립 즉시 magnetic attachment를 연결하여 loading을 가하였다.

Magnetic attachment는 fixture에 측방력이 가해지지 않기 때문에 Immediate loading에 유리하다.

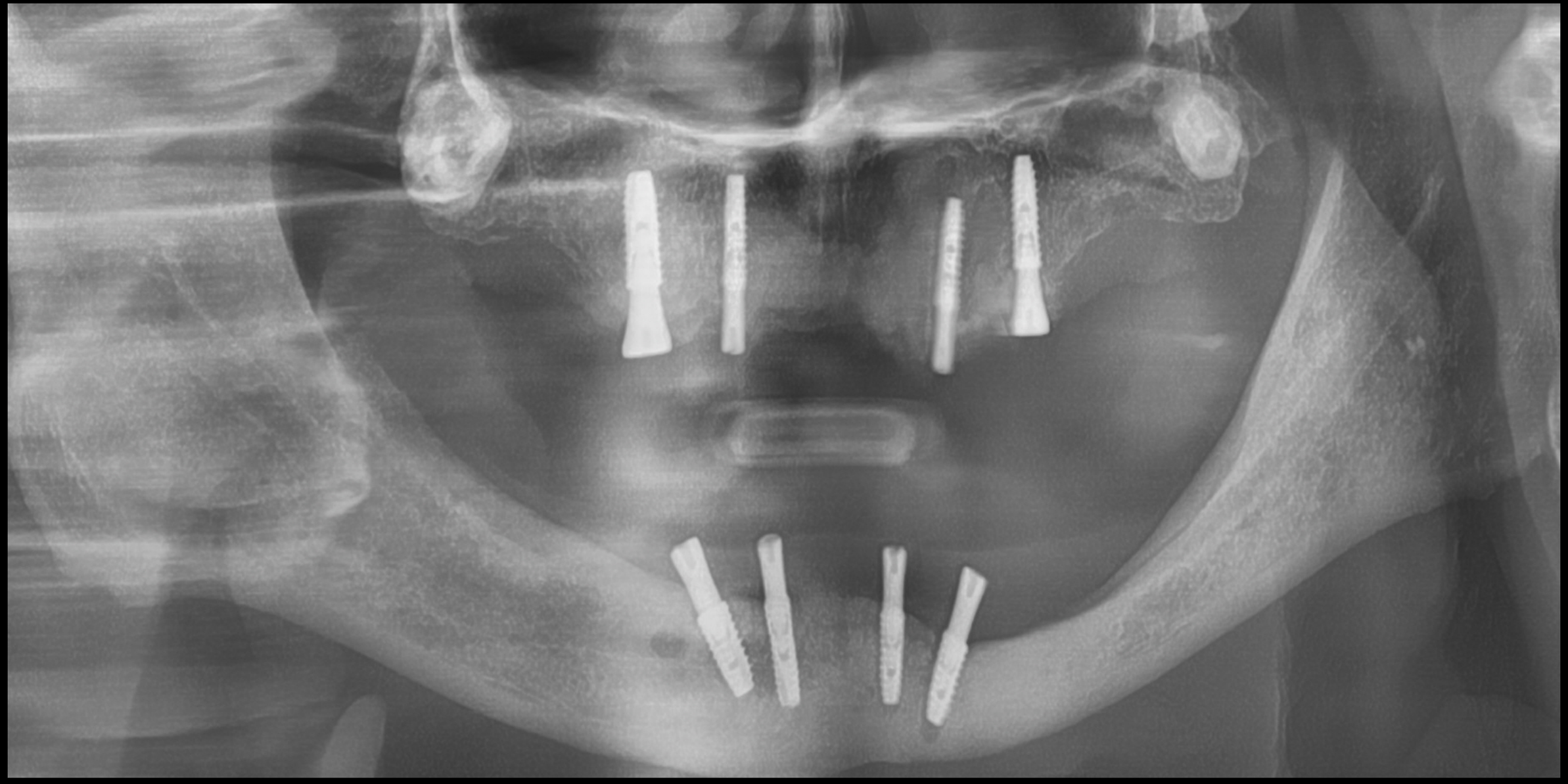




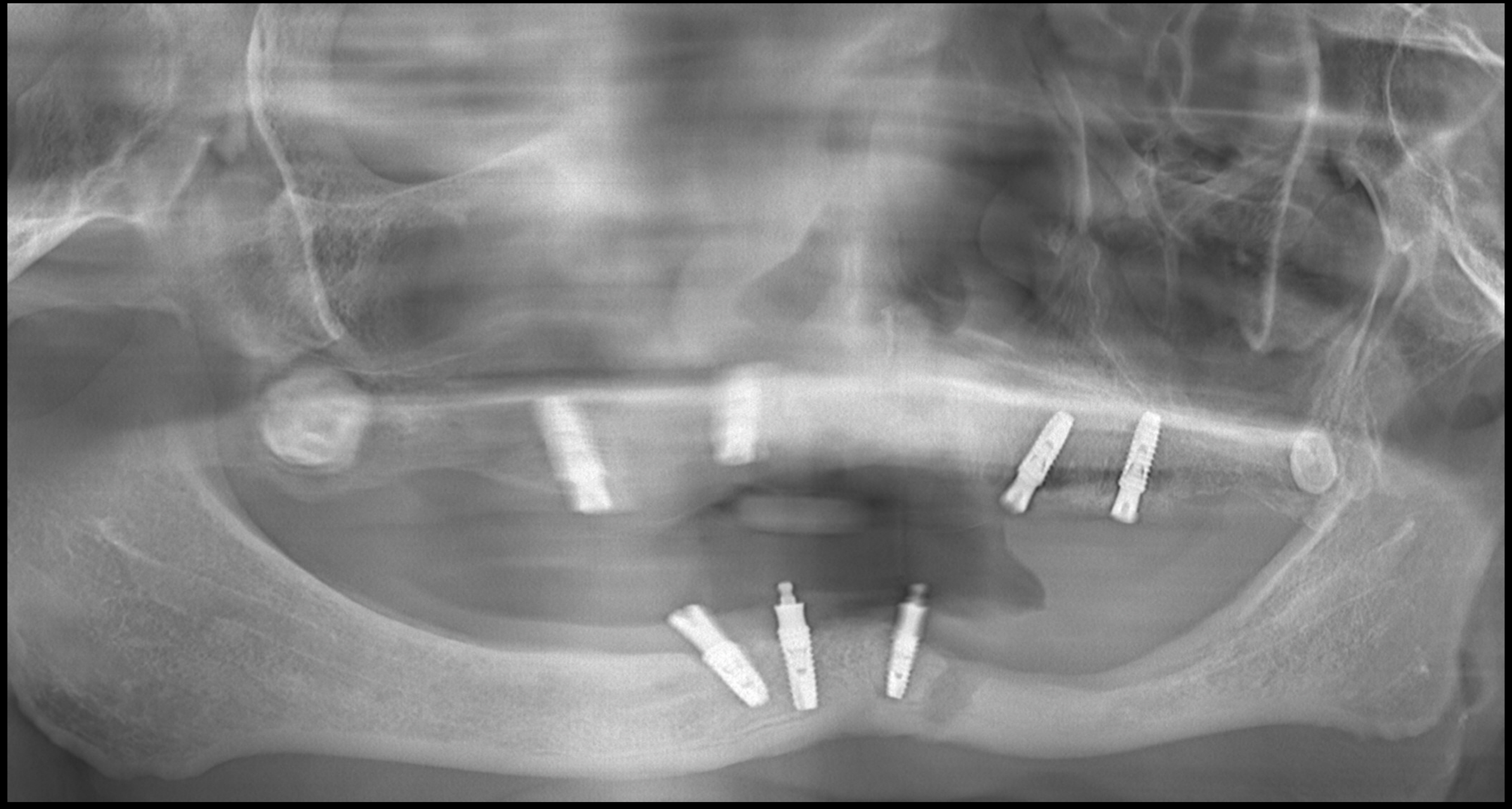
Pre-op (2016-10-28)



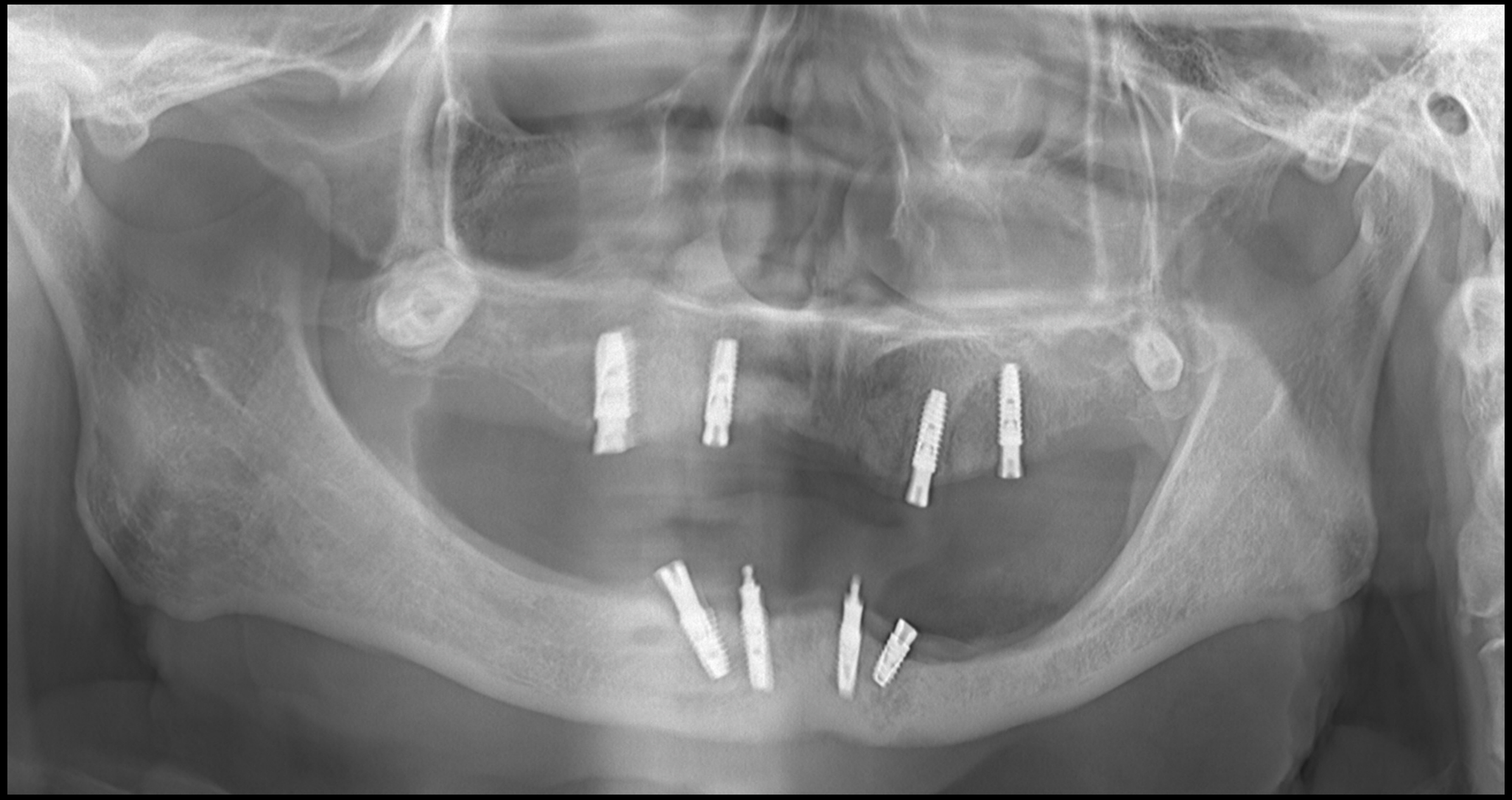
Post-op (2016-11-18)



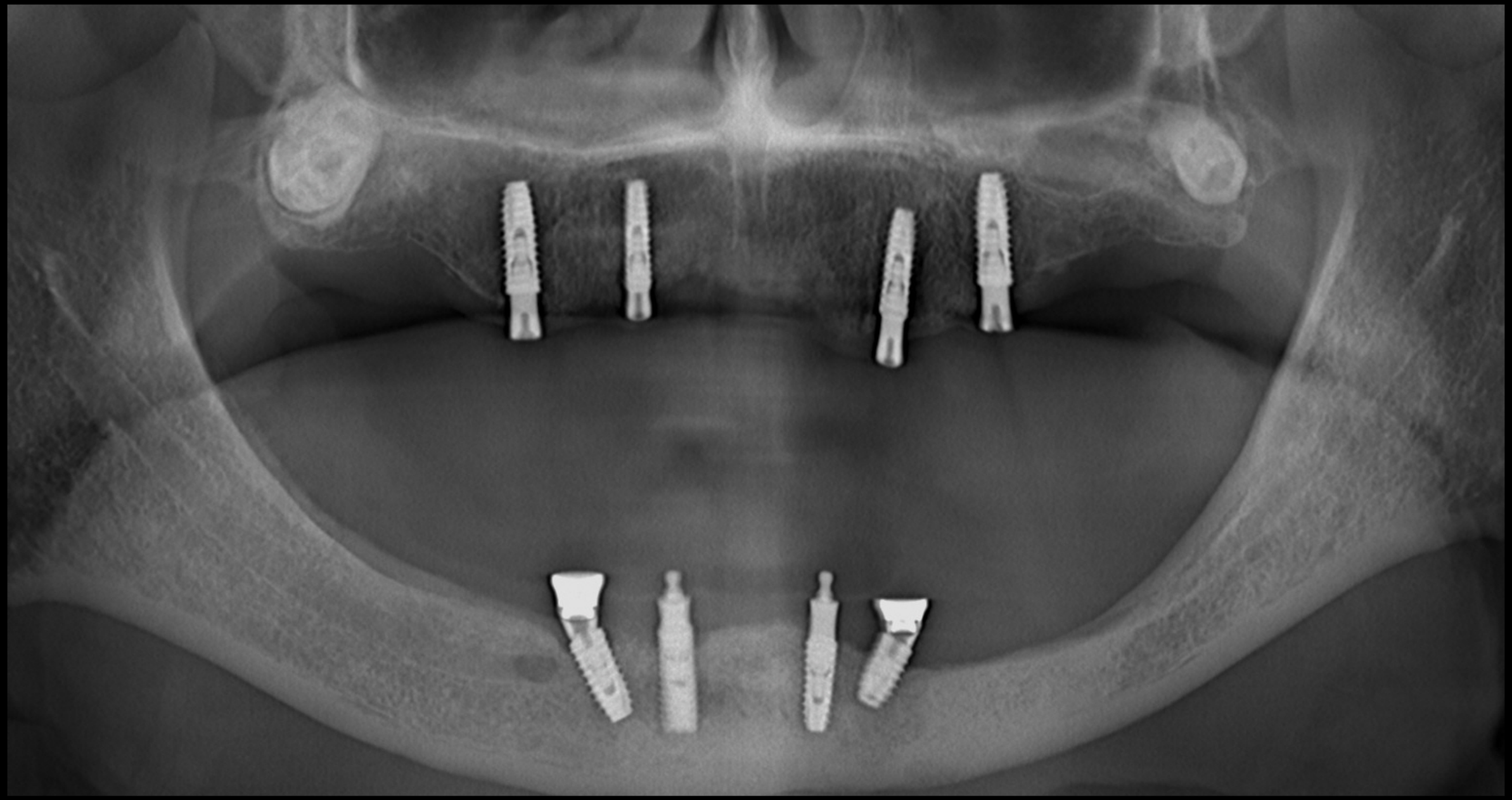
Final prosthesis (2017-04-03)



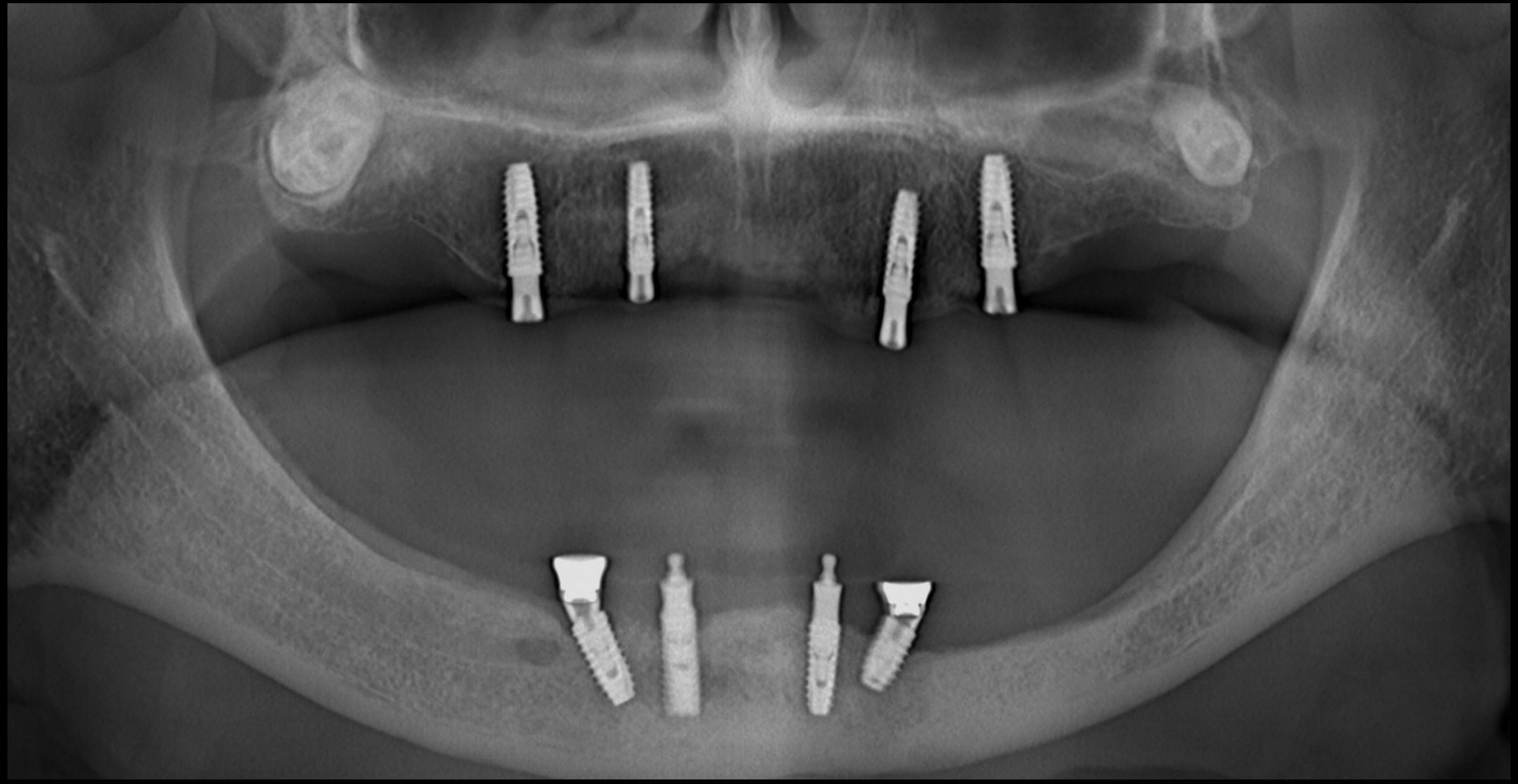
Follow up : 1 year 4 months (2018-08-27)



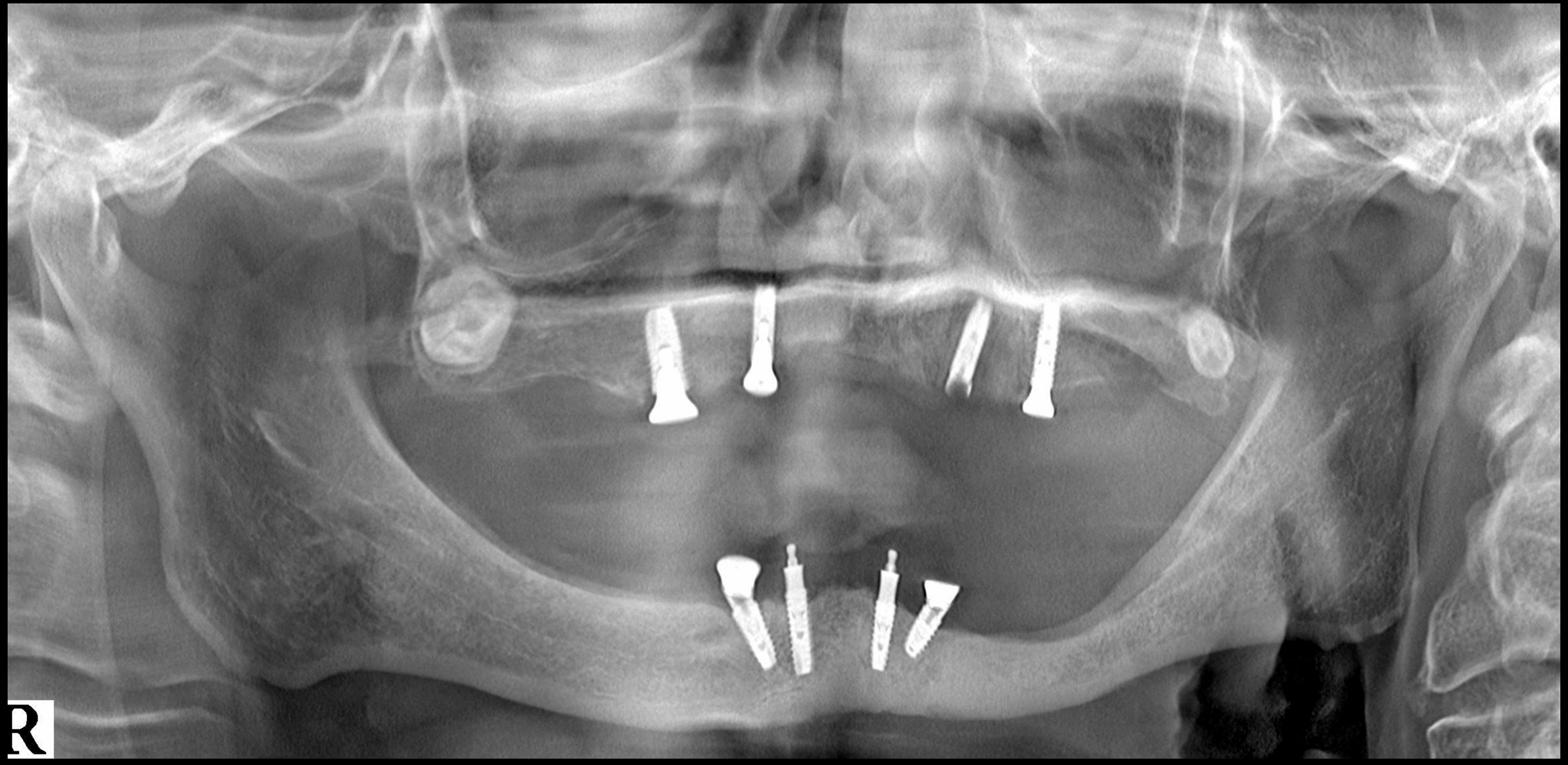
Follow up : 1 year 8 months (2018-11-30)



Follow up : 1 year 8 months (2018-11-30)

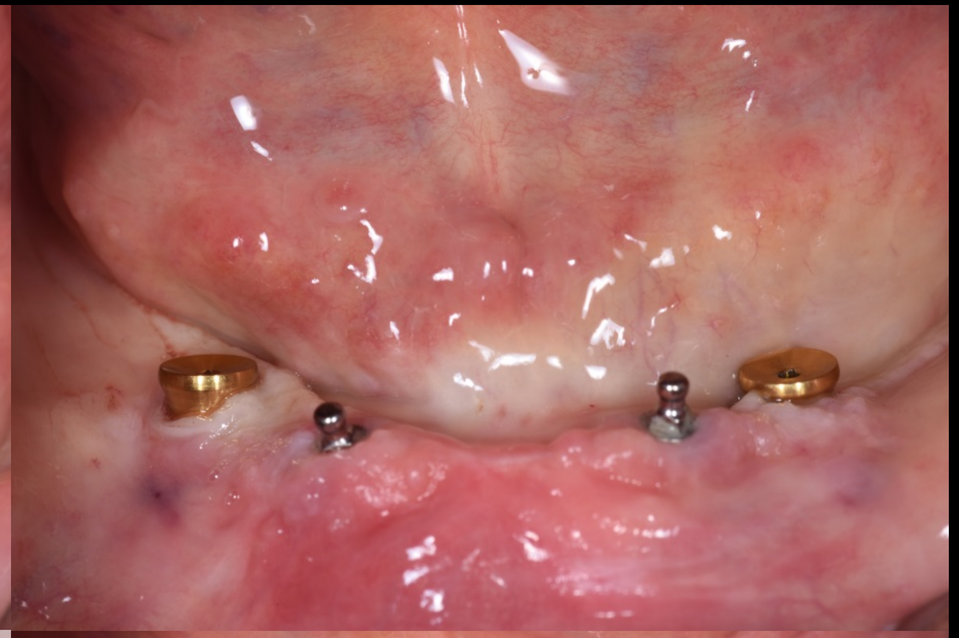


Follow up : 4 years (2021-04-16)

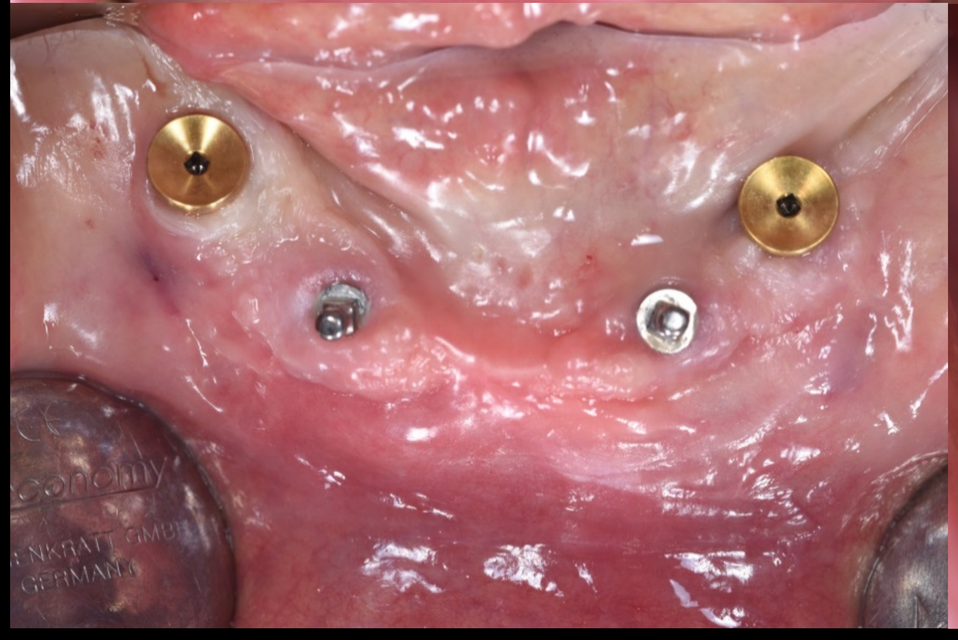


Angled Magnetic Abutment

Final prosthesis (2018-11-30)



Angled magnetic abutment



Final prosthesis (2018-11-30)

Follow up : 10 months (2019-09-11)

Follow up : 2 years 5 months (2021-04-23)

2. Implant Attachment 의 종류

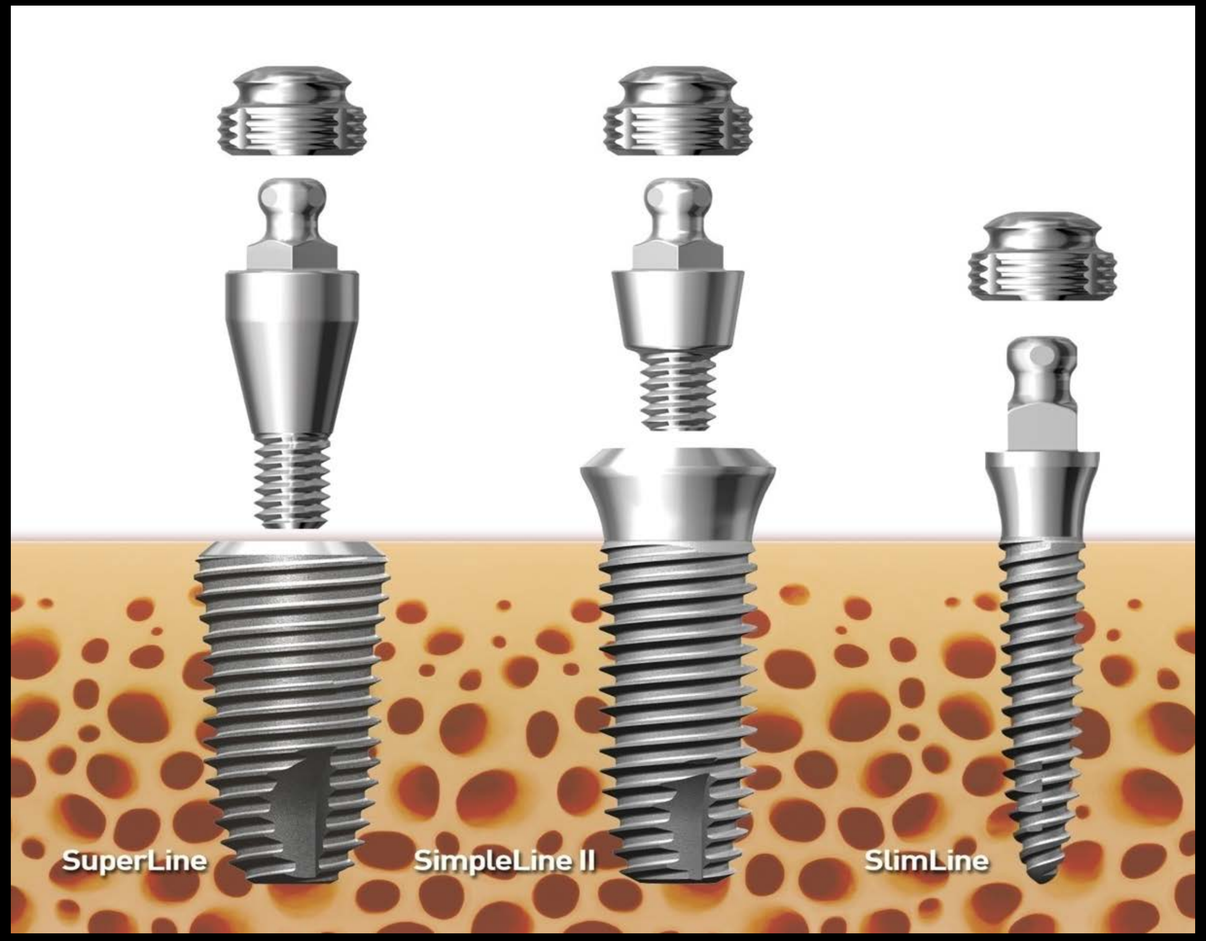
- Mini Ball Attachment

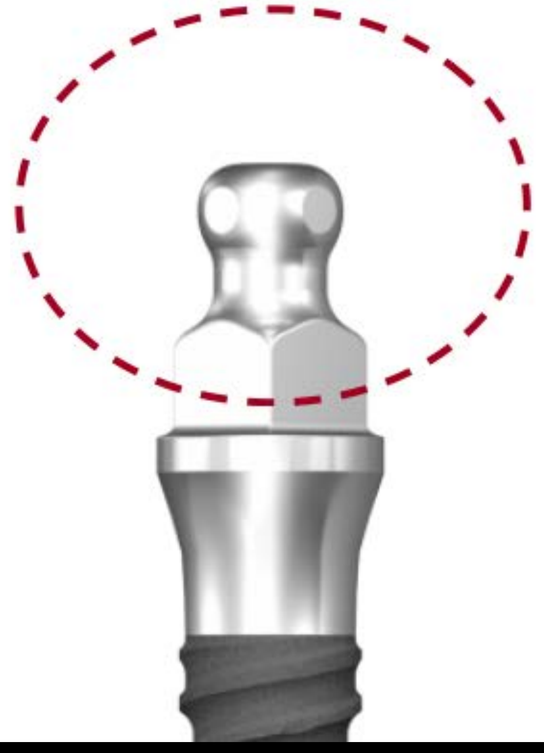
- Angled Mini Ball Attachment (NR Line)

- Magnetic attachment

- Positioner

Mini Ball Attachment





Minimal-size

Denture Socket

(Only Denture)

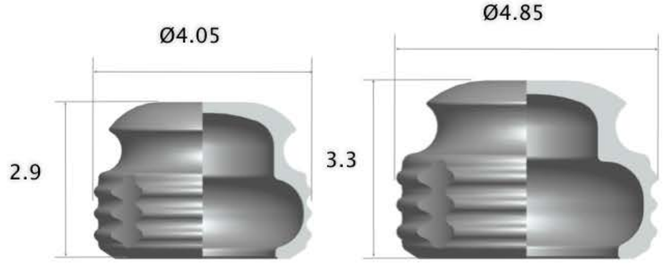
Mini ball size Ø1.8

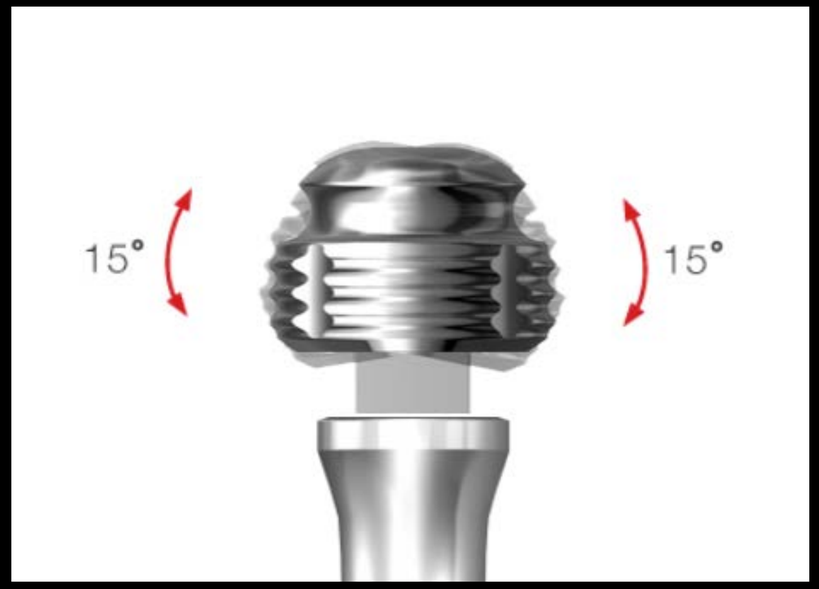
Mini Ball size (Ø 1.8)

Mini o-ring type denture socket.

Minimal size denture socket.

Mini o-ring can be replaced.



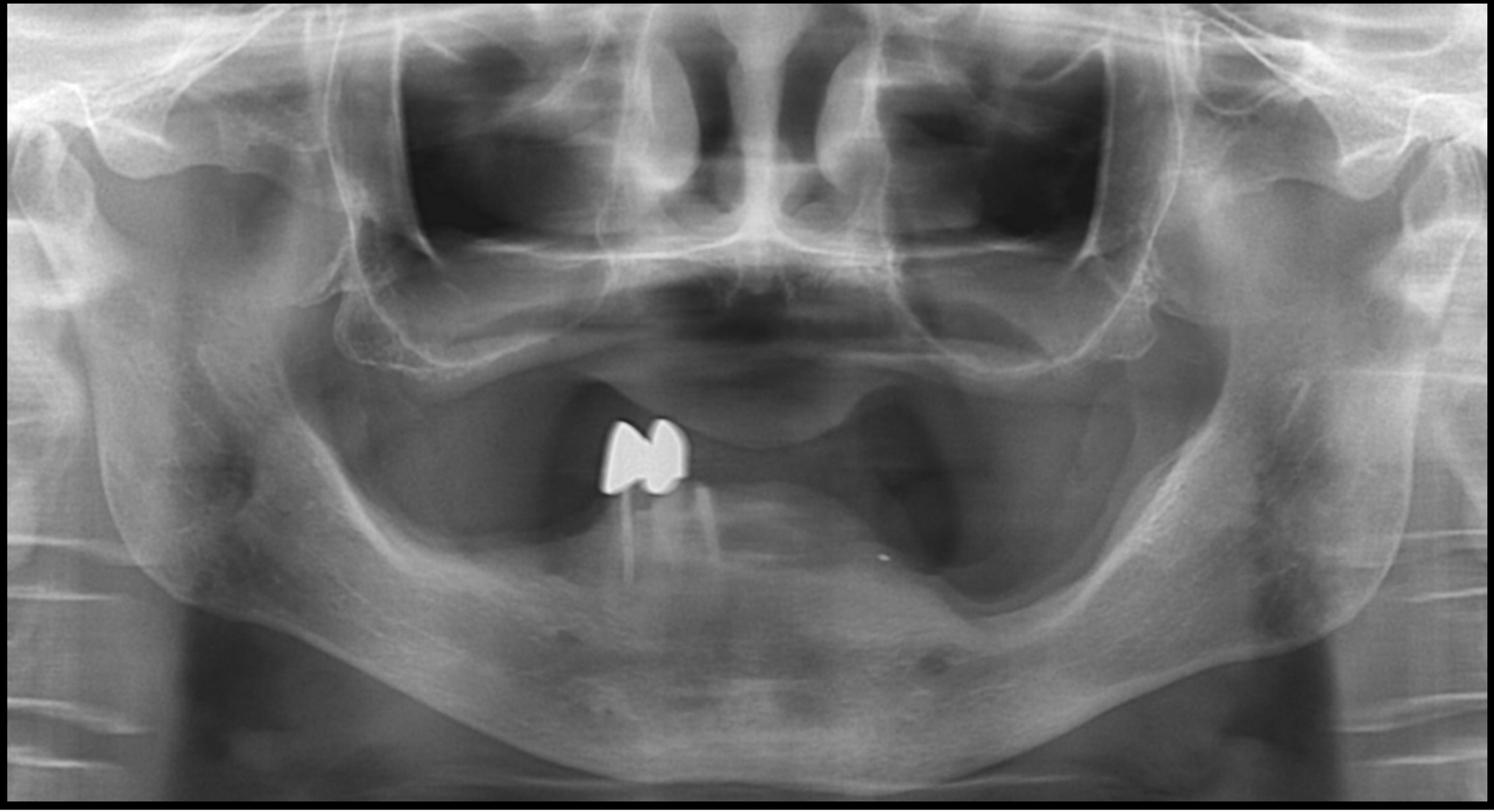


Tilting Angulation 30°

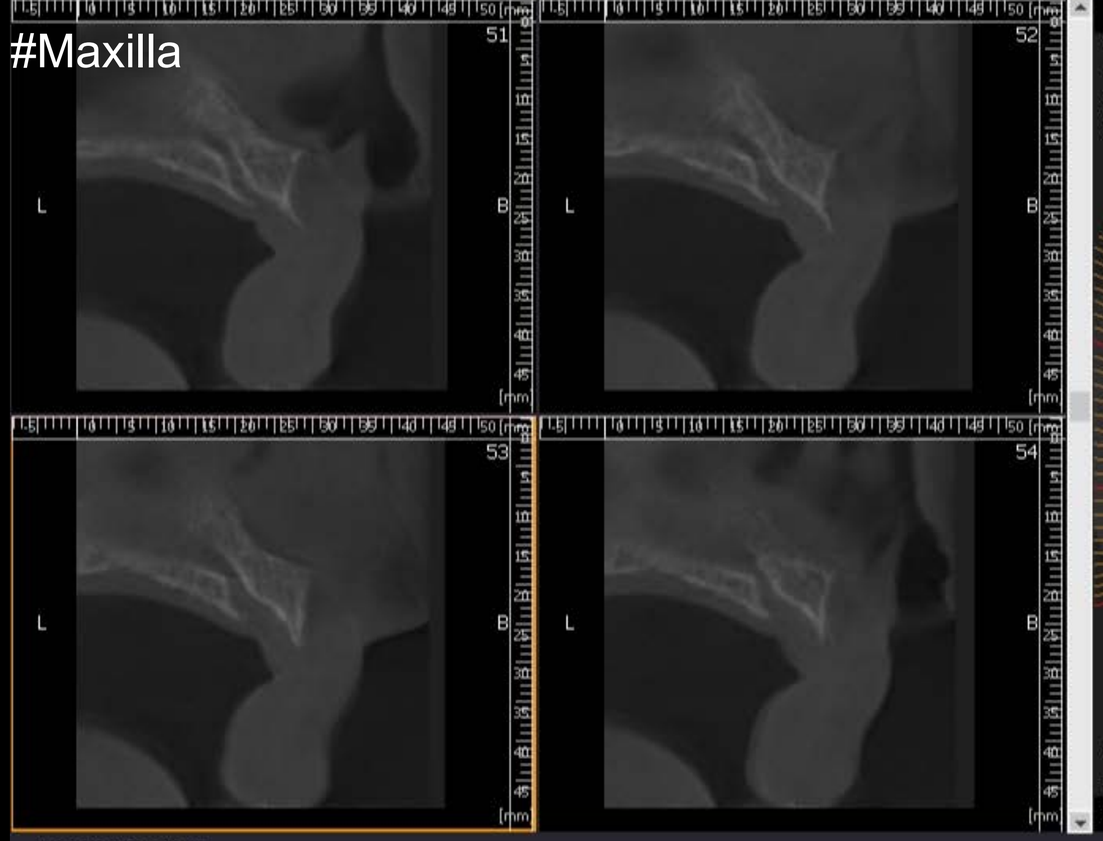
NBR: acrylonitrile-butadiene rubber

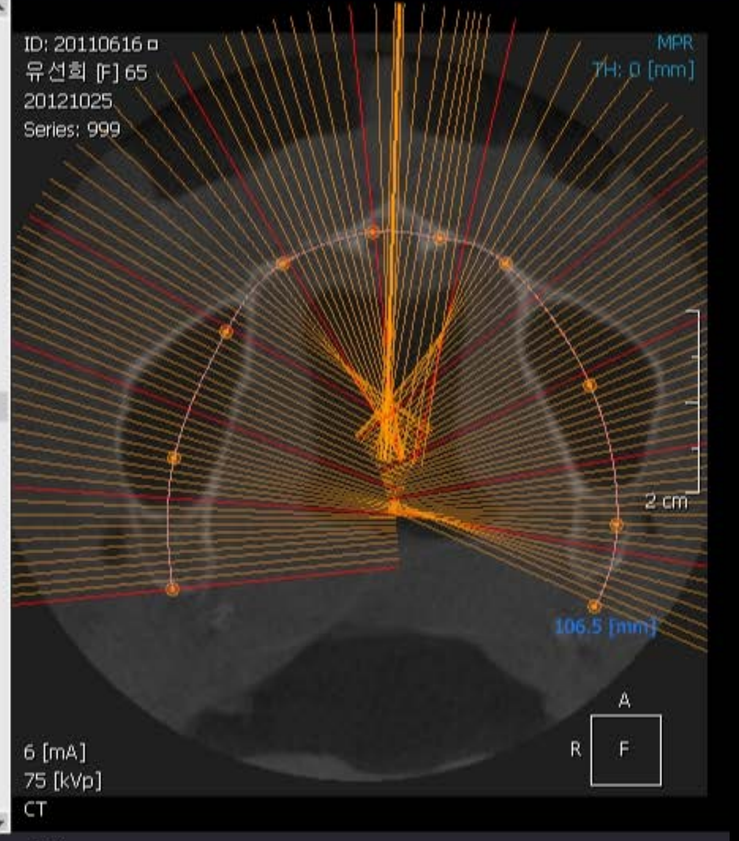
Attachment의 위치를 삽입로에 가능하면 평행하게 하는 것이 중요하다.

Pre-op (2011-06-16)



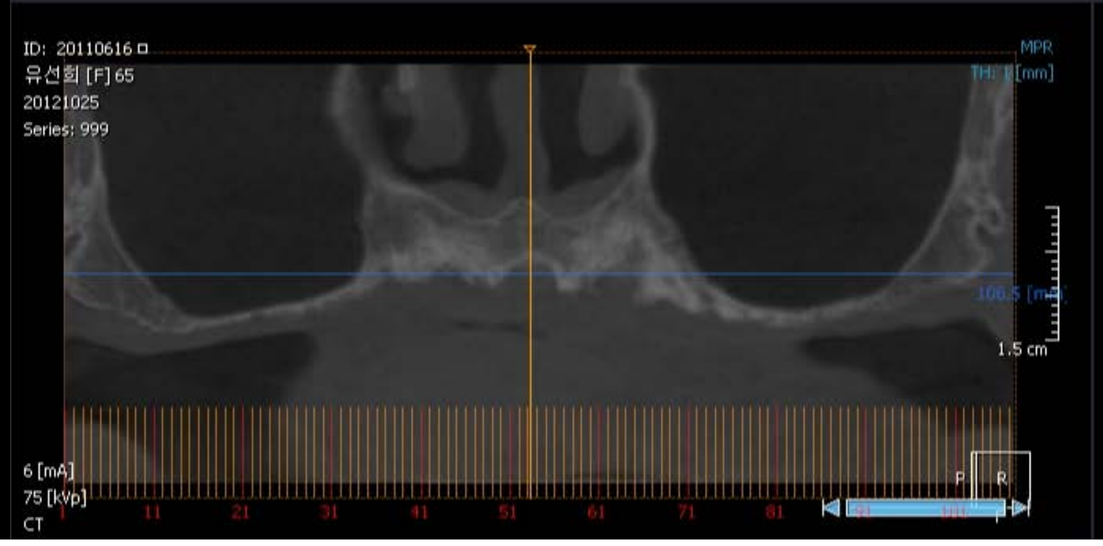
#Maxilla

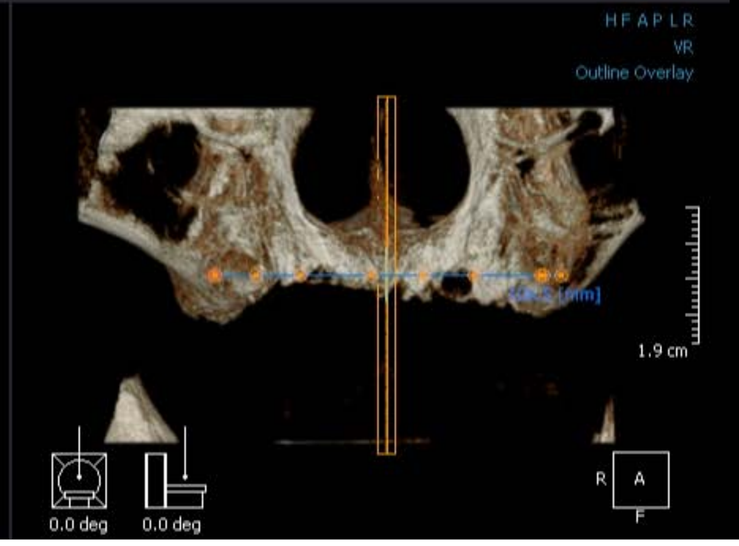




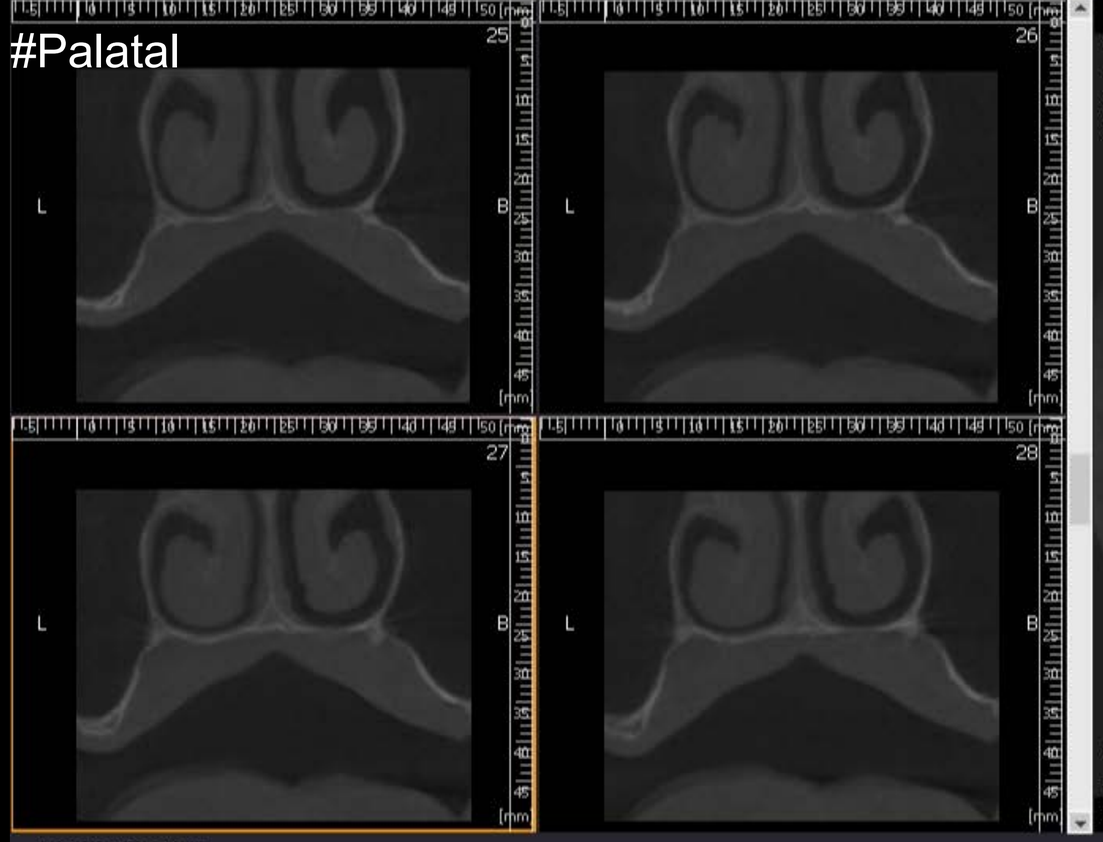
Panoramic View

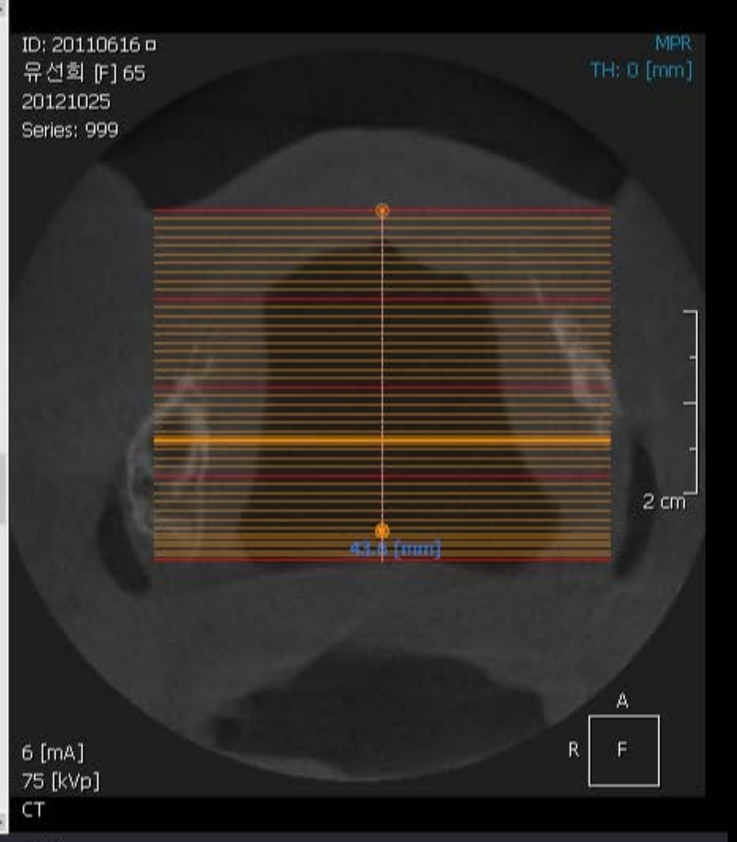
3D



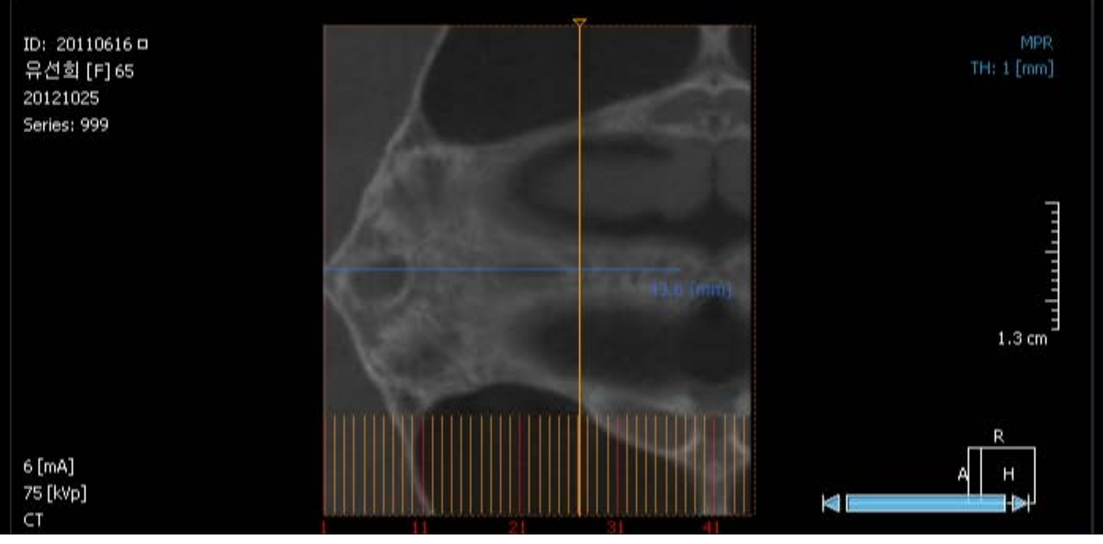


#Palatal

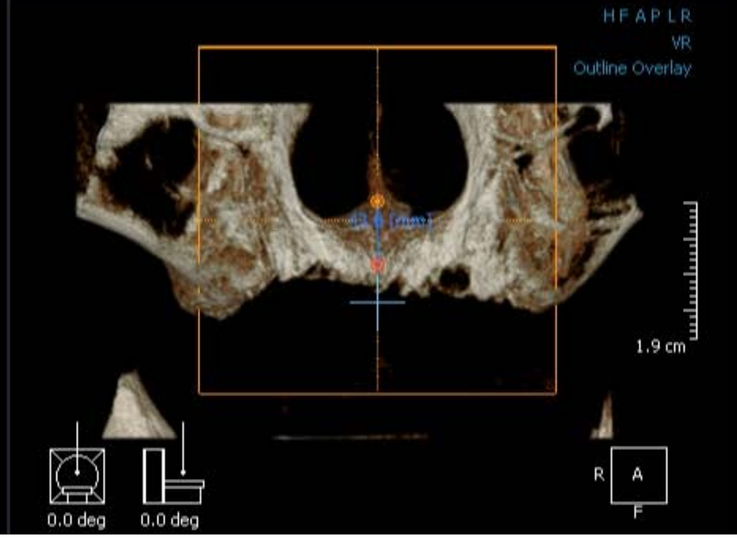




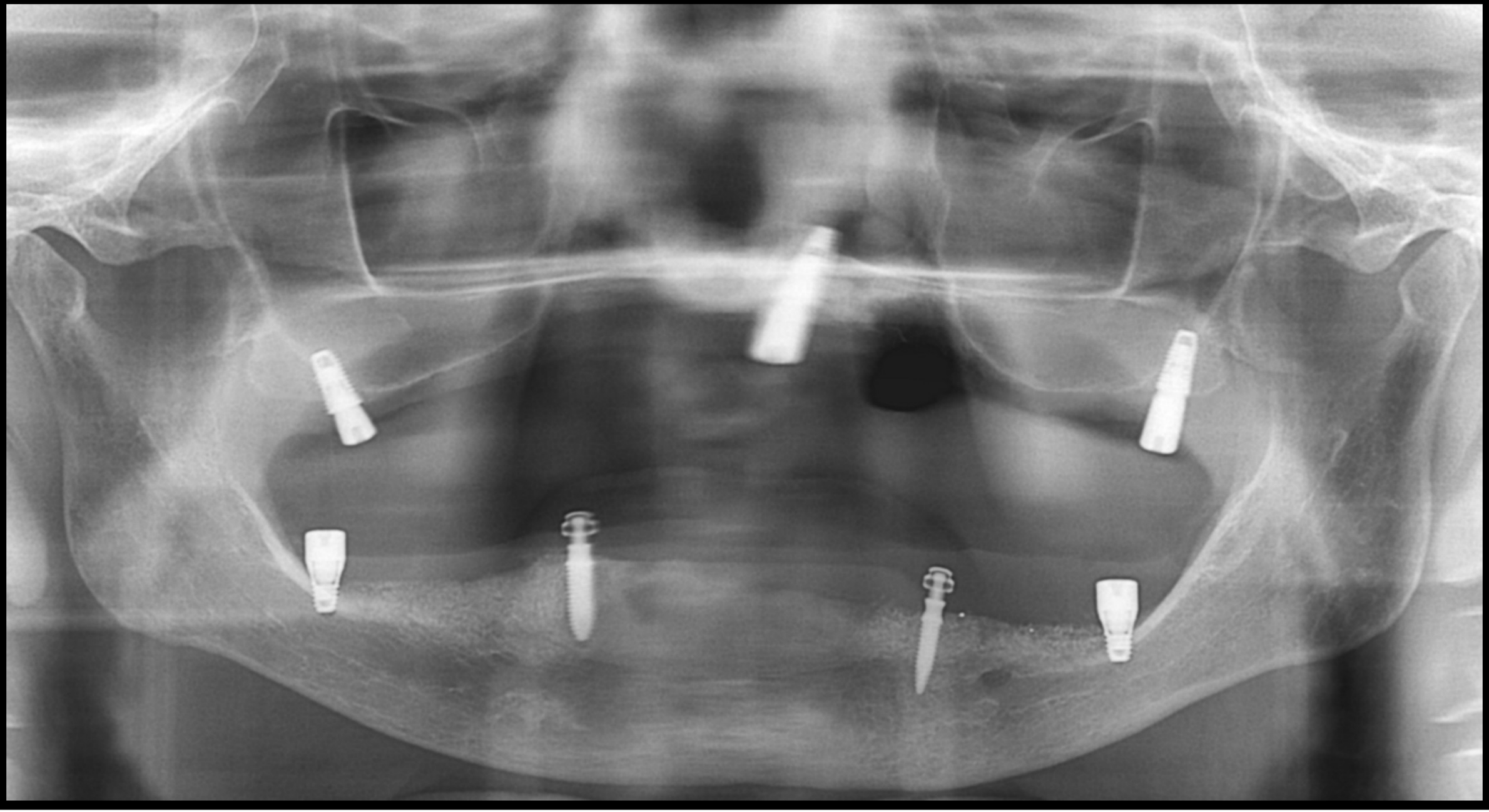
Panoramic View



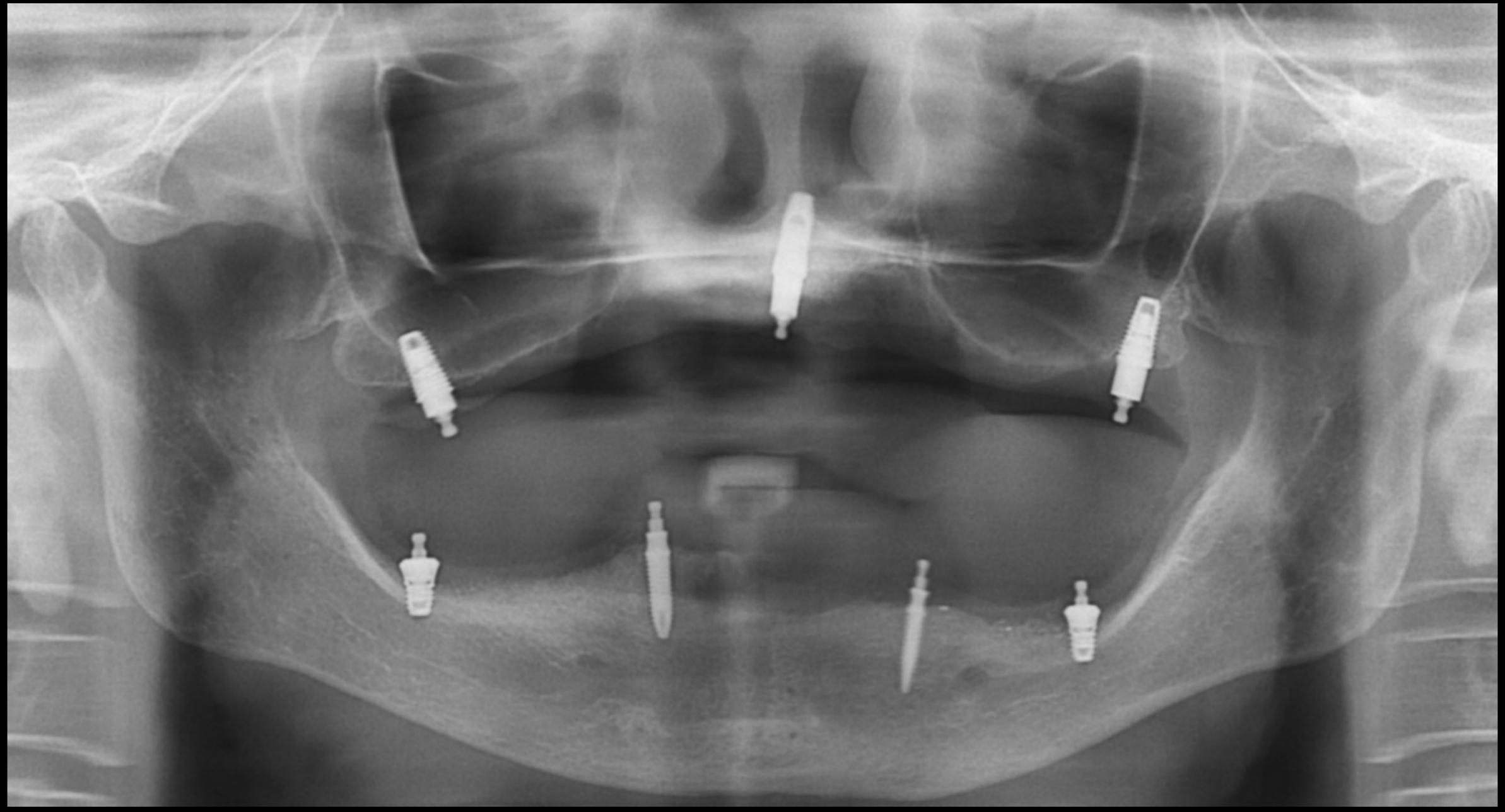
3D



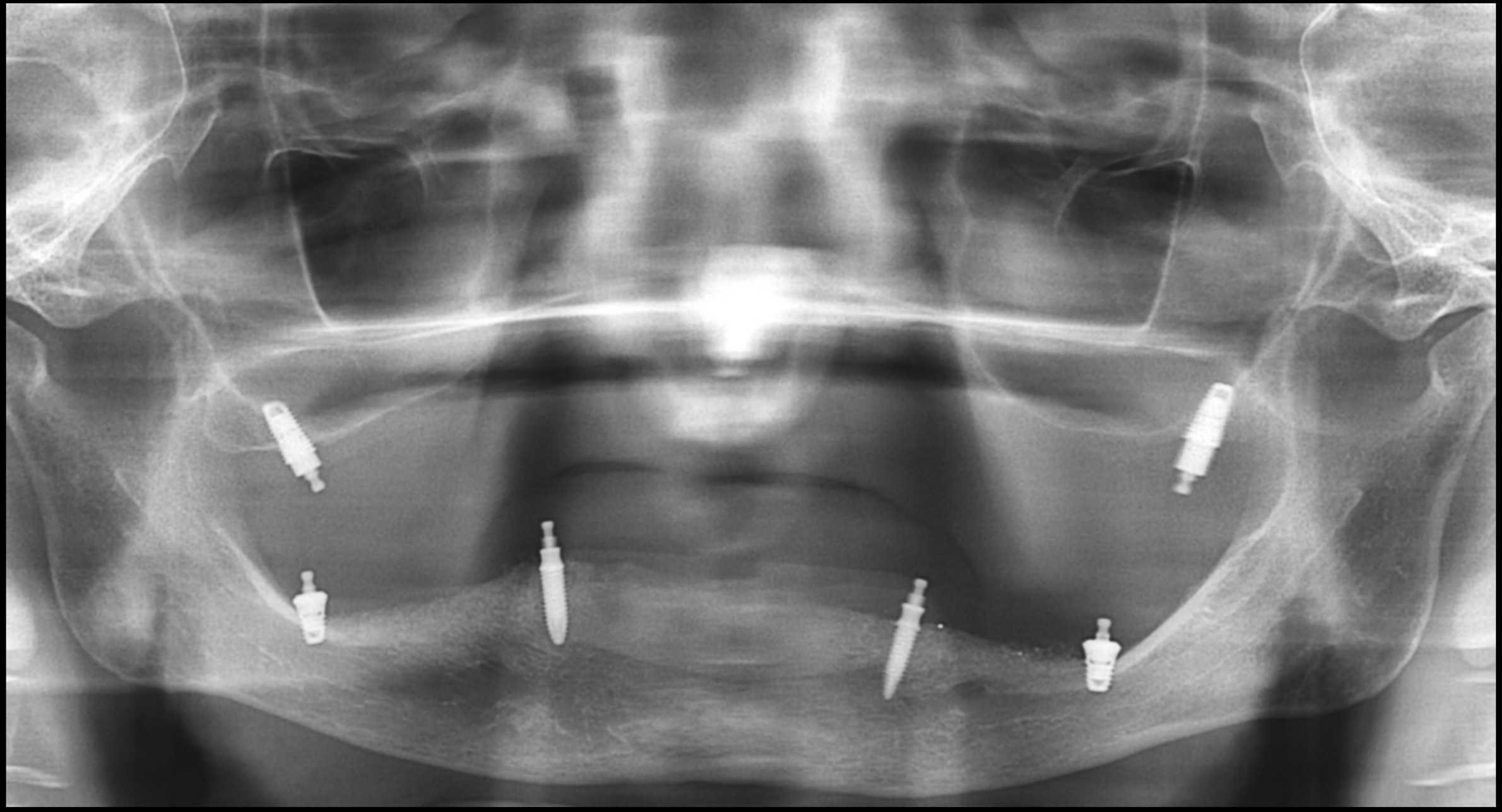
Post-op (2012-11-05)



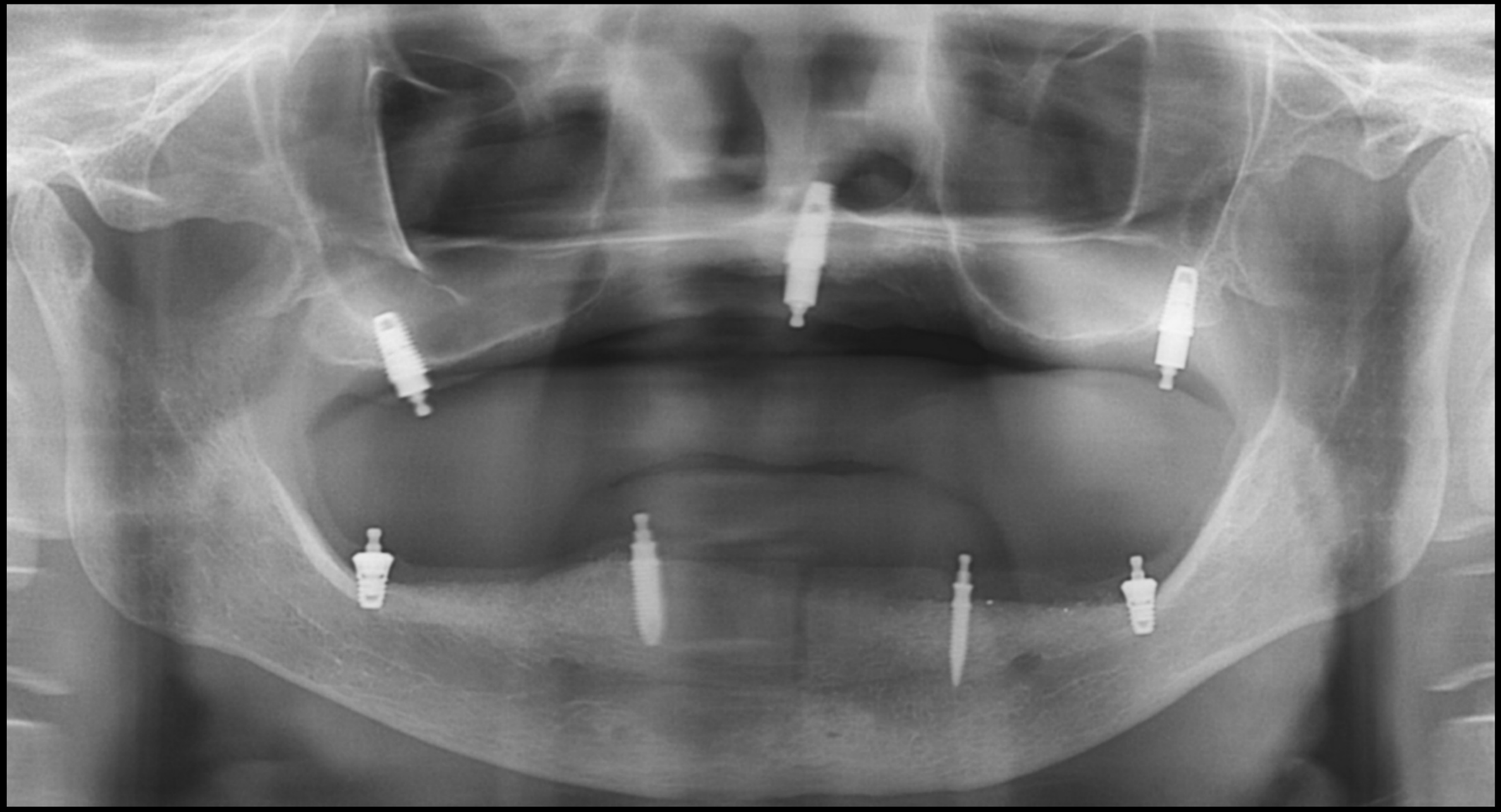
Mini ball attachment connection (2012-12-06)



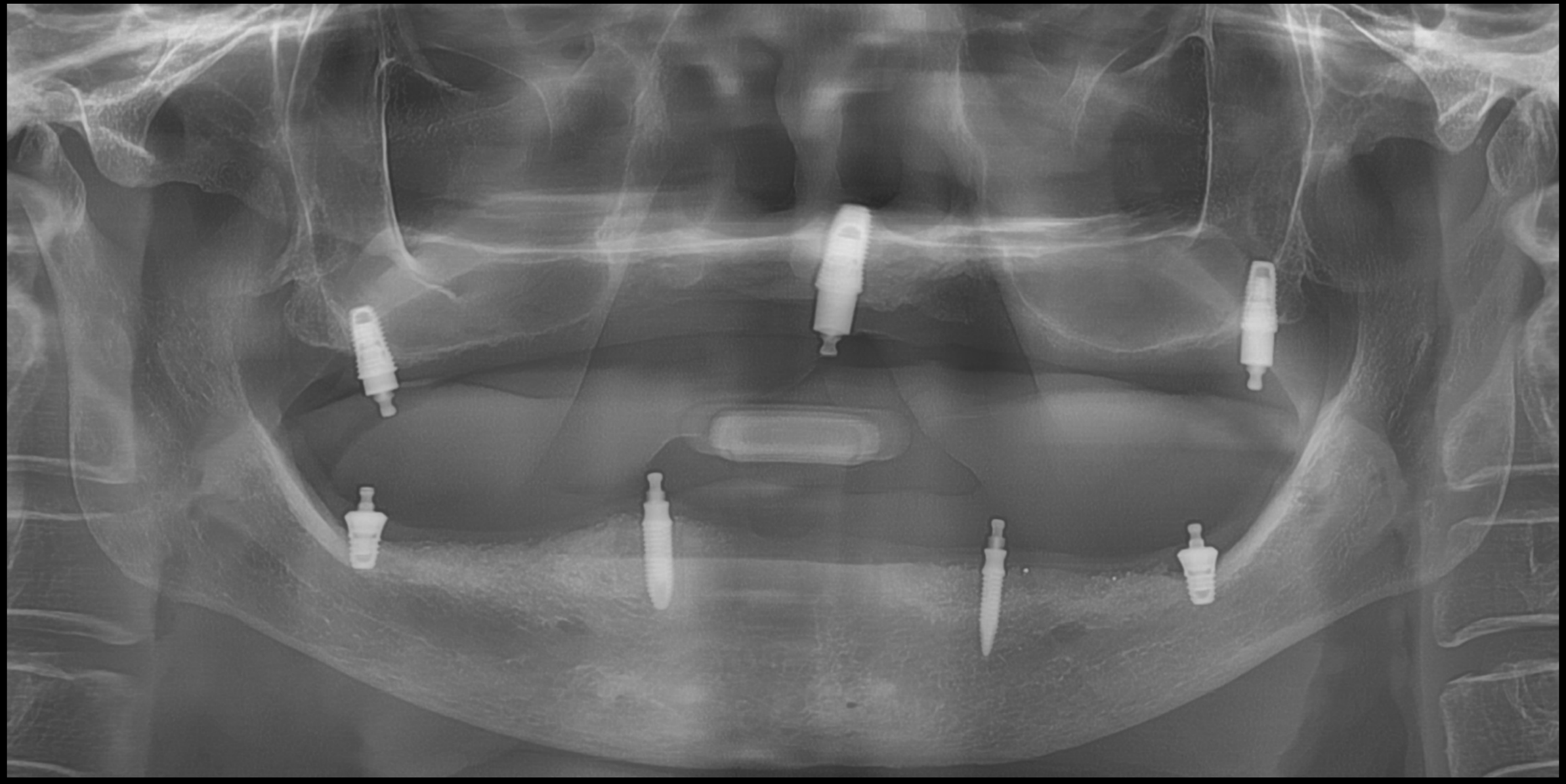
Follow up : 1 month (After Final prosthesis) (2013-04-15)



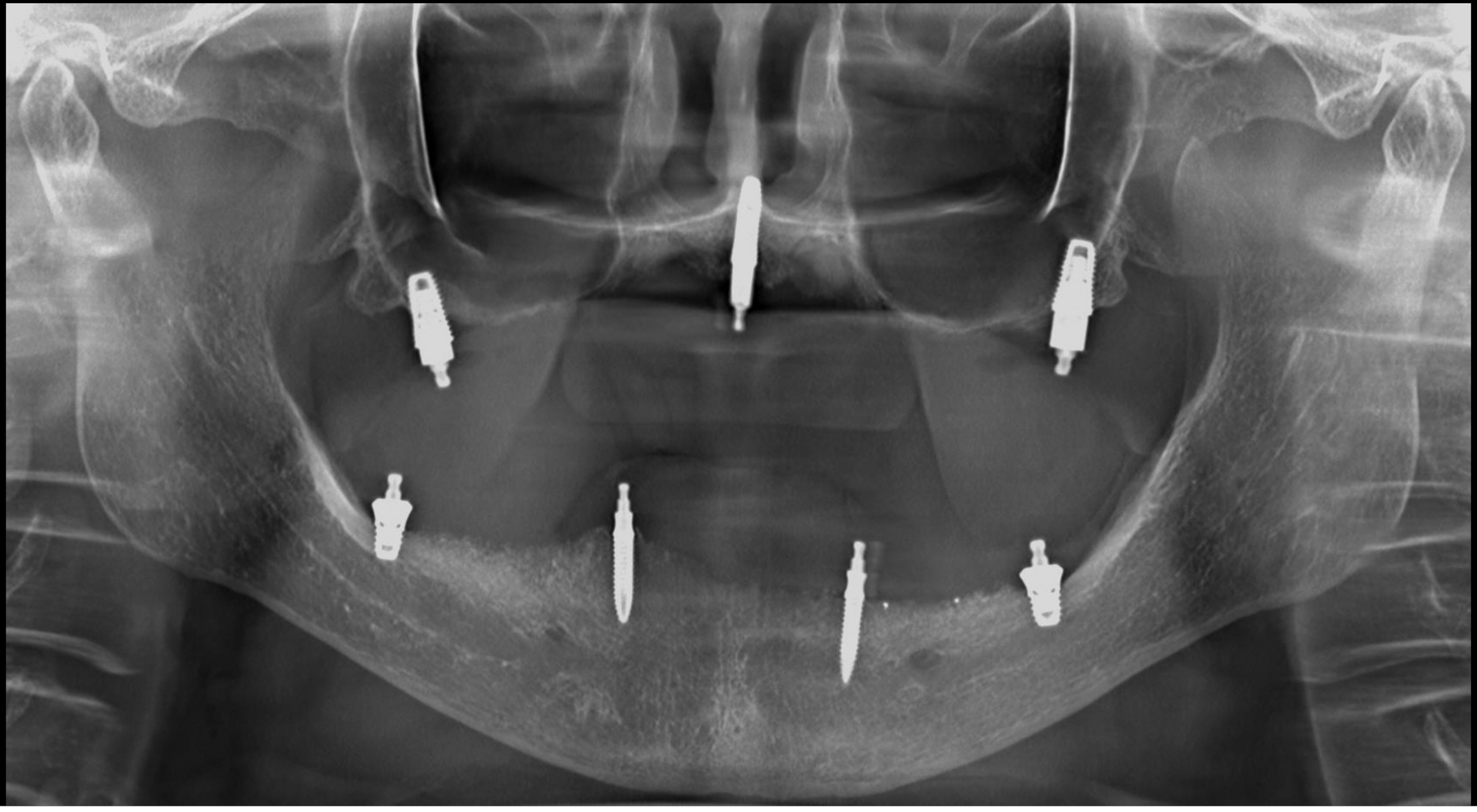
Follow up : 1 year (2014-02-21)



Follow up : 3 years 8 months (2016-10-05)

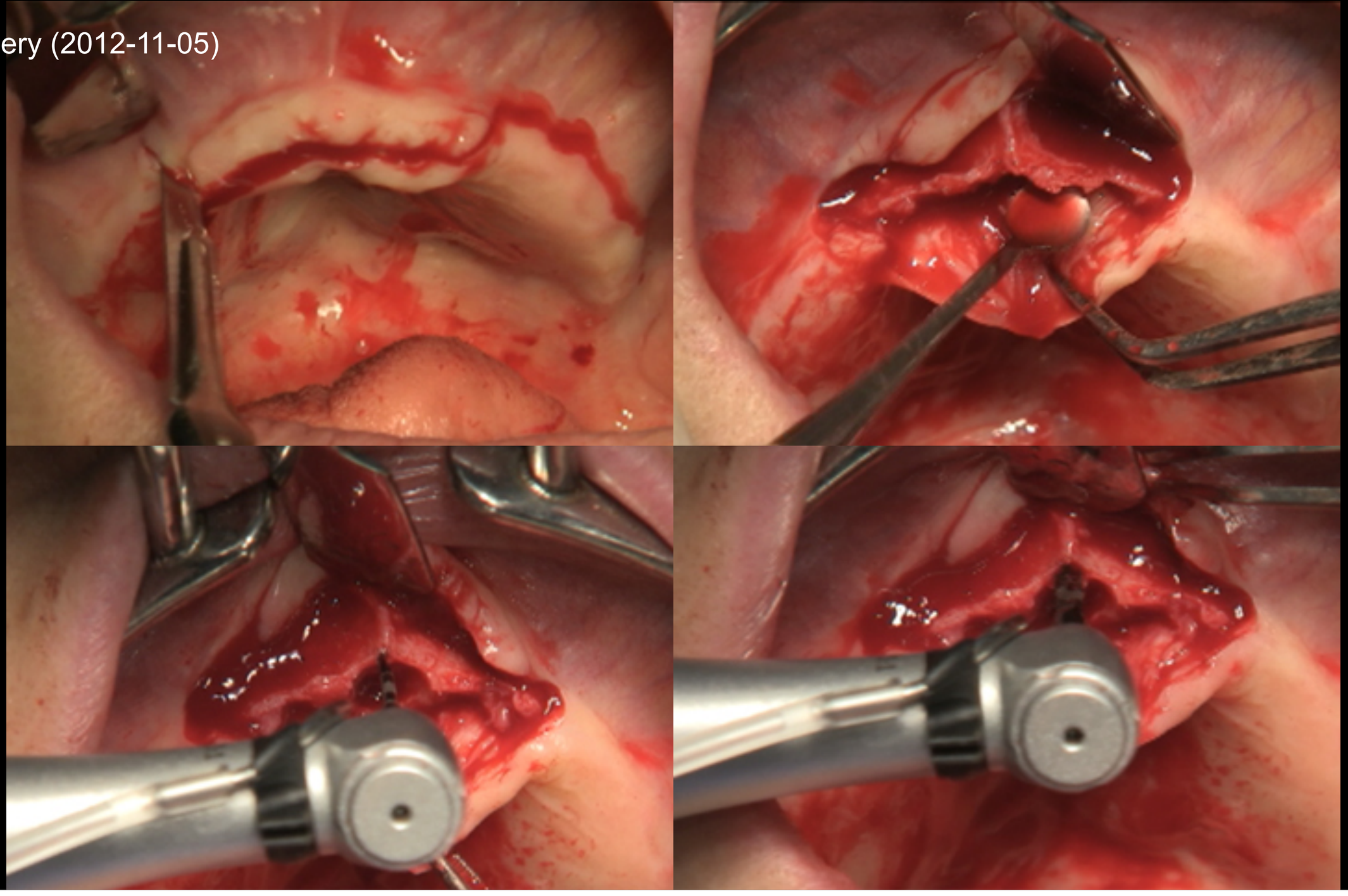


Follow up : 6 years 10 months (2019-12-06)

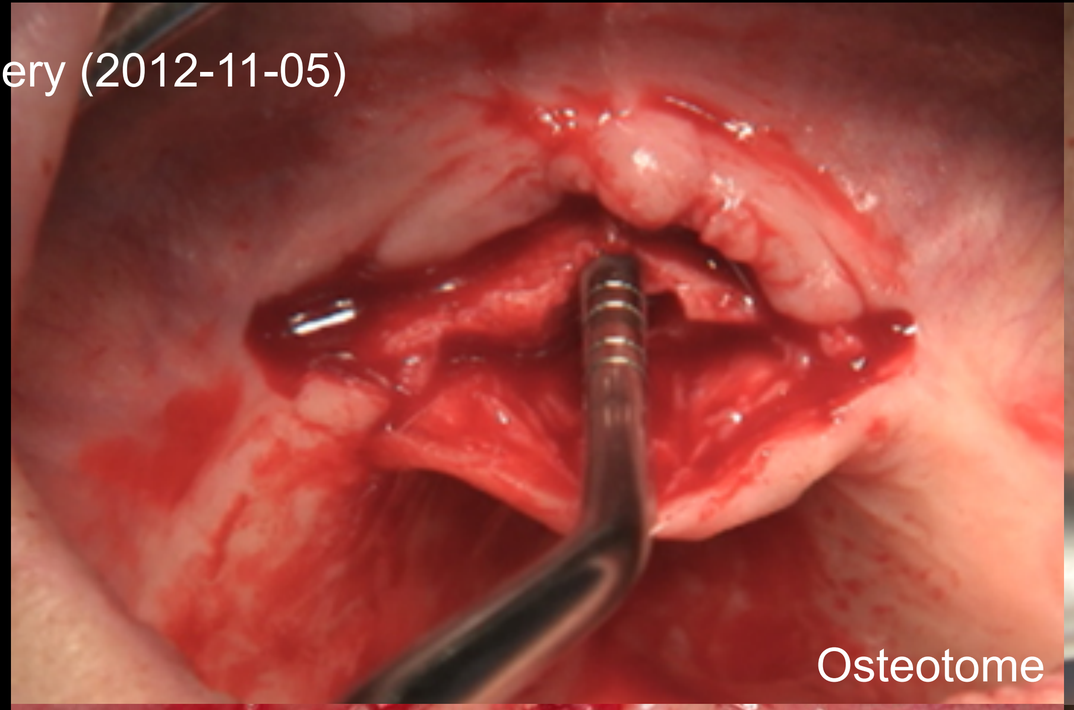


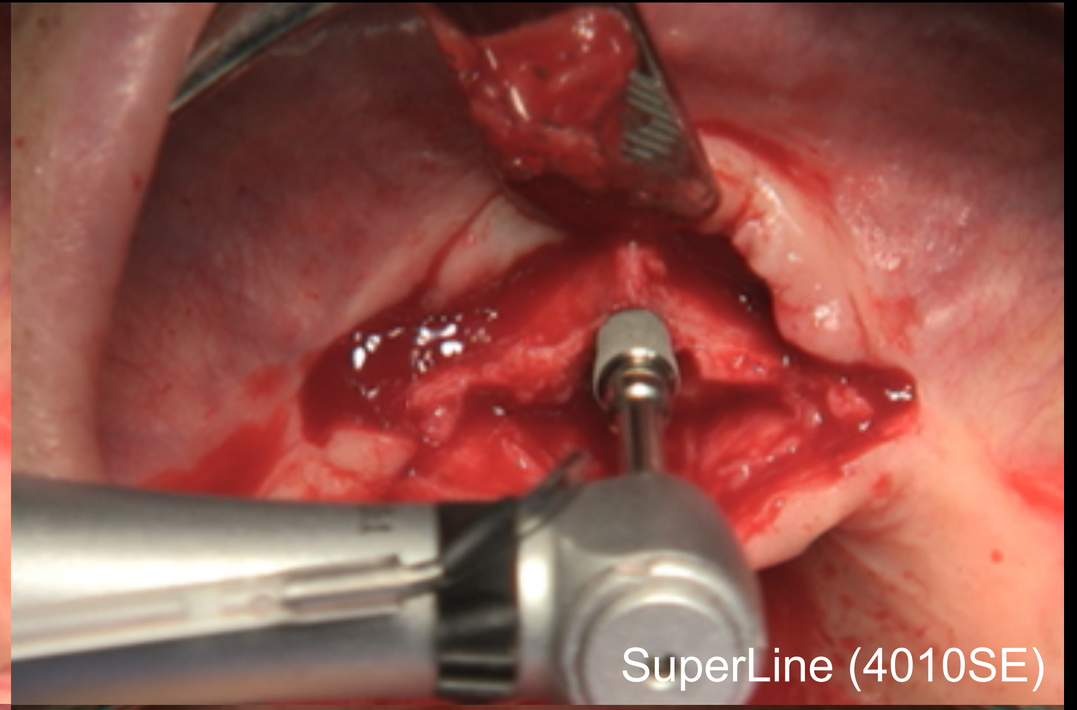
Pre-op (2012-10-25)

Surgery (2012-11-05)



Surgery (2012-11-05)

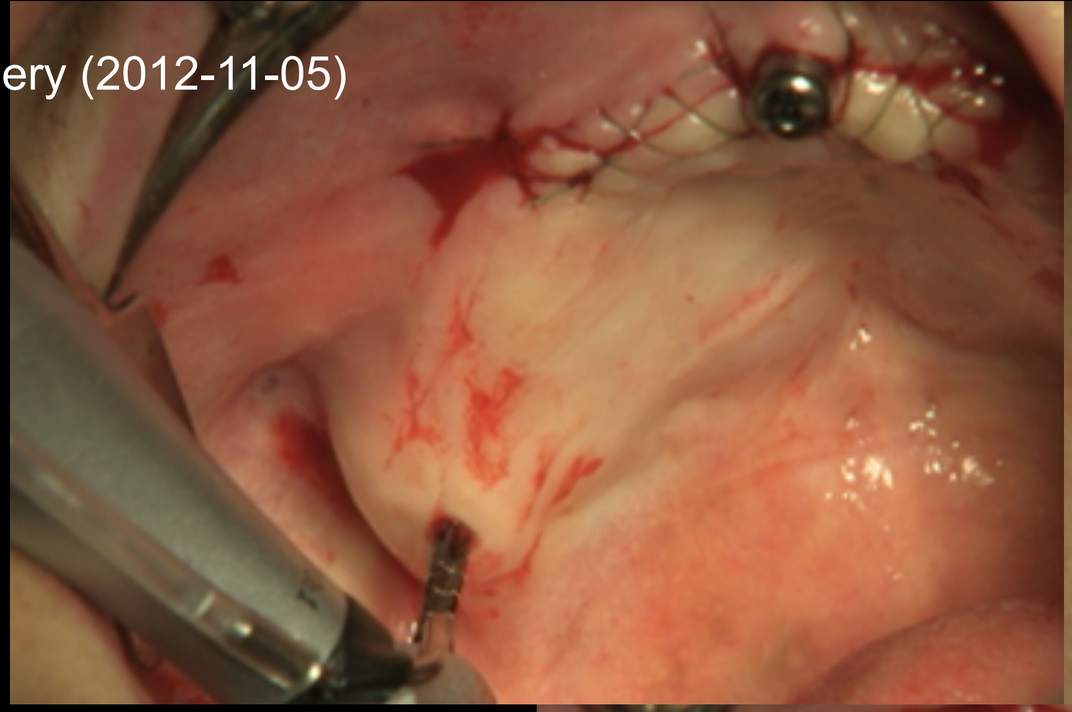

Osteotome

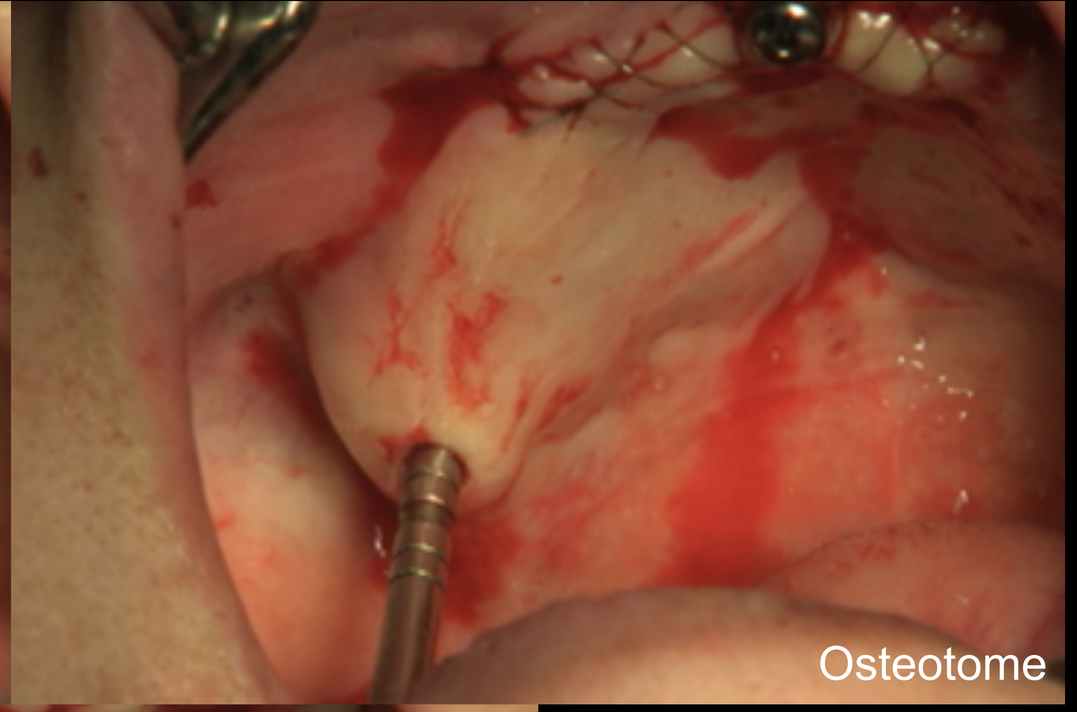

SuperLine (4010SE)

OSTEON™ II Collagen

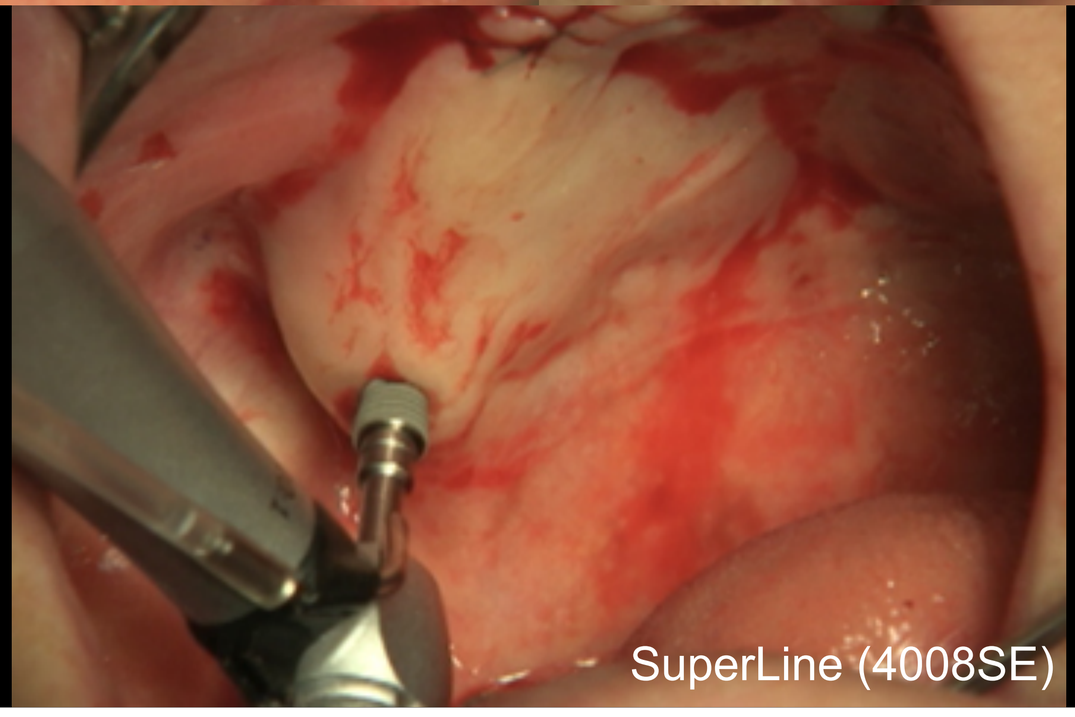
Suture

Surgery (2012-11-05)



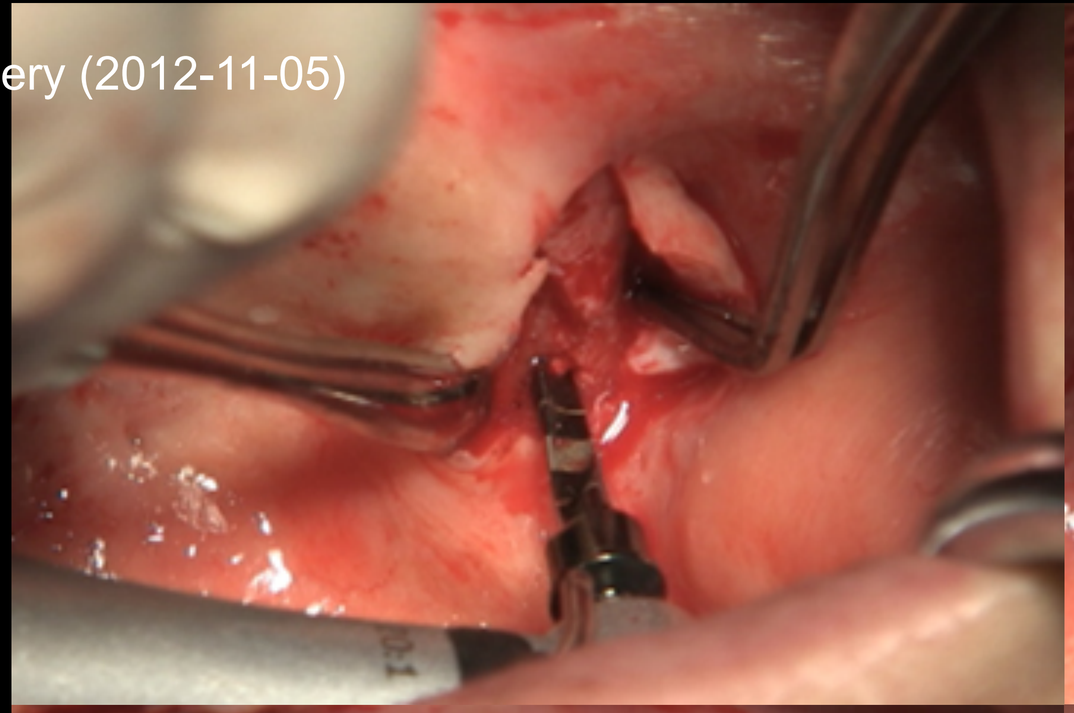


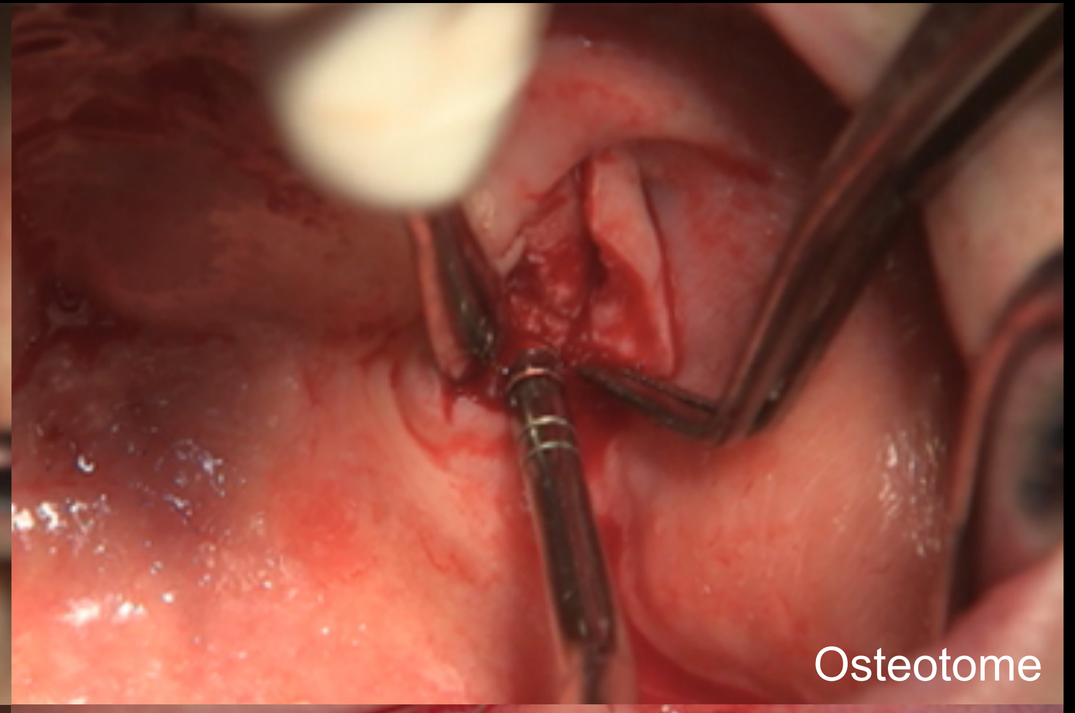
Osteotome



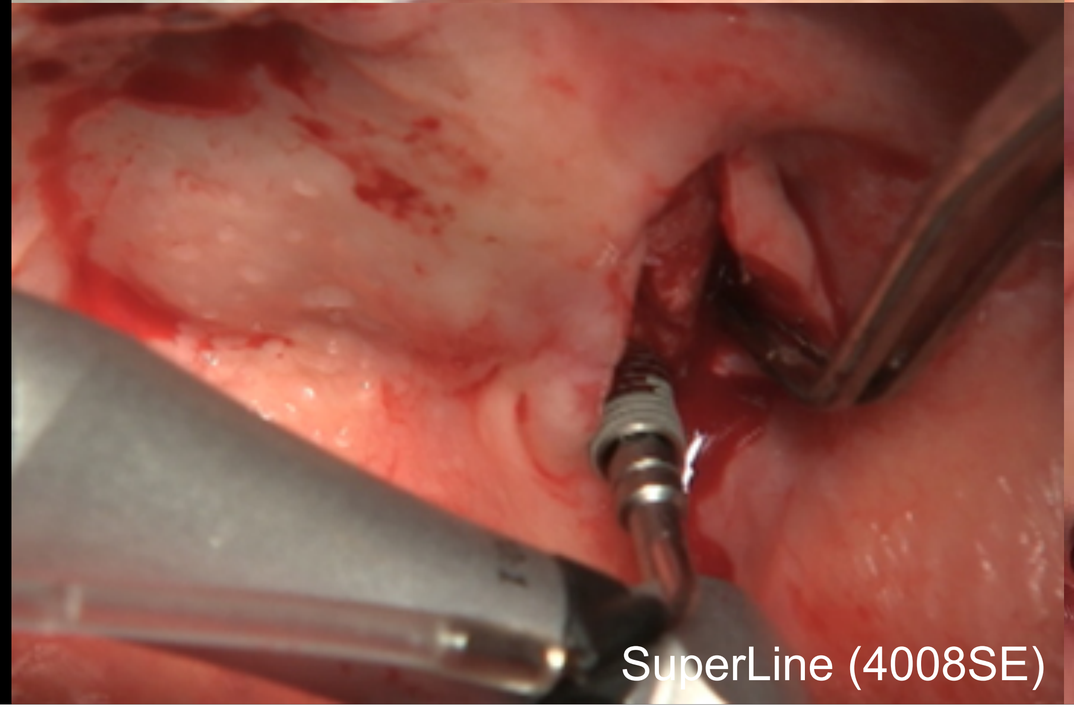
SuperLine (4008SE)

Surgery (2012-11-05)

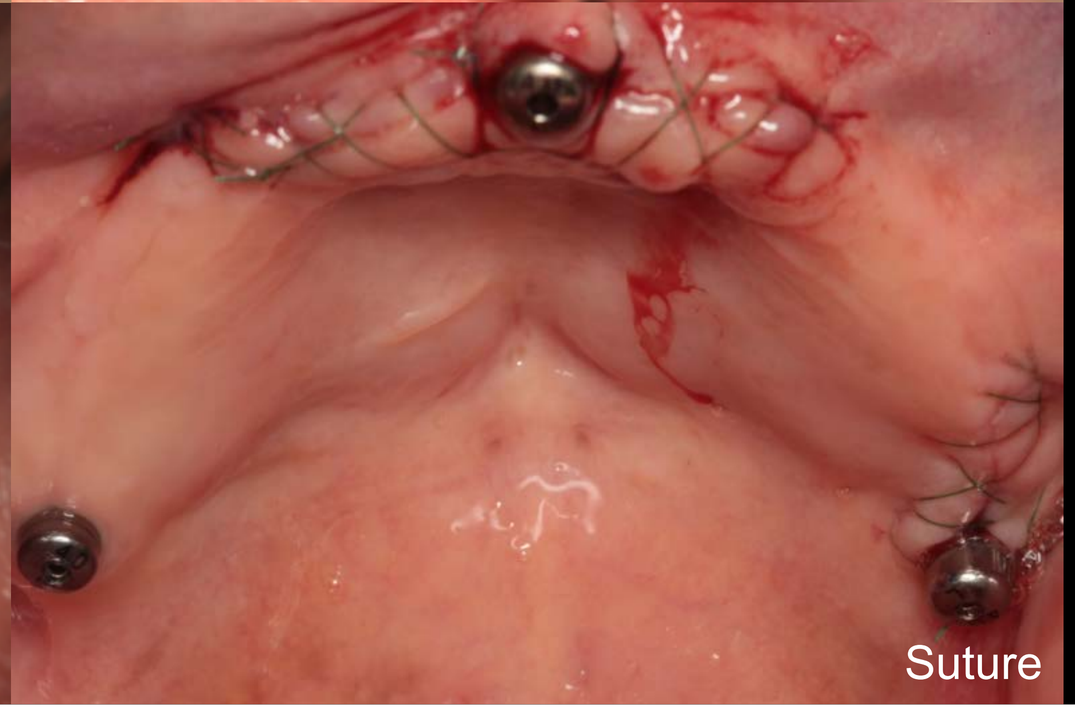




Osteotome



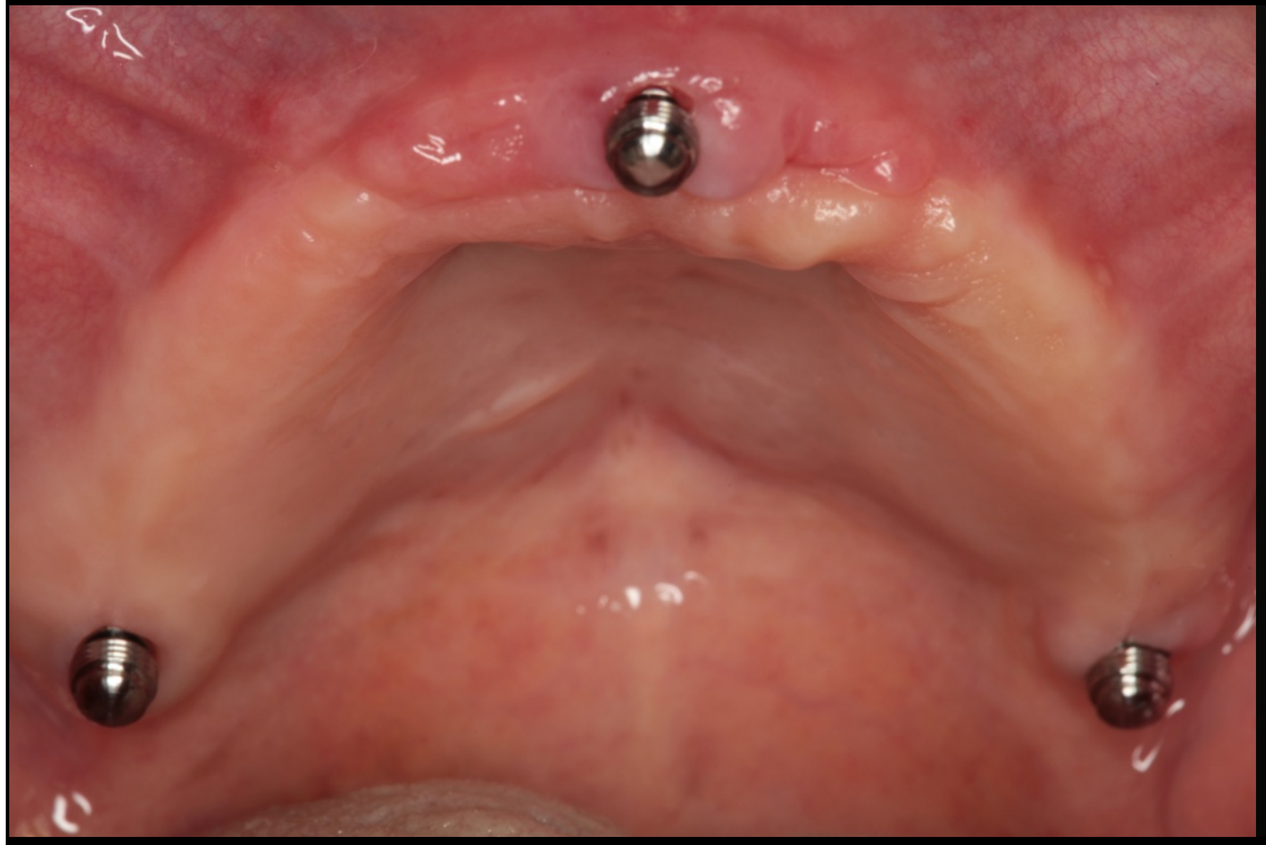
SuperLine (4008SE)

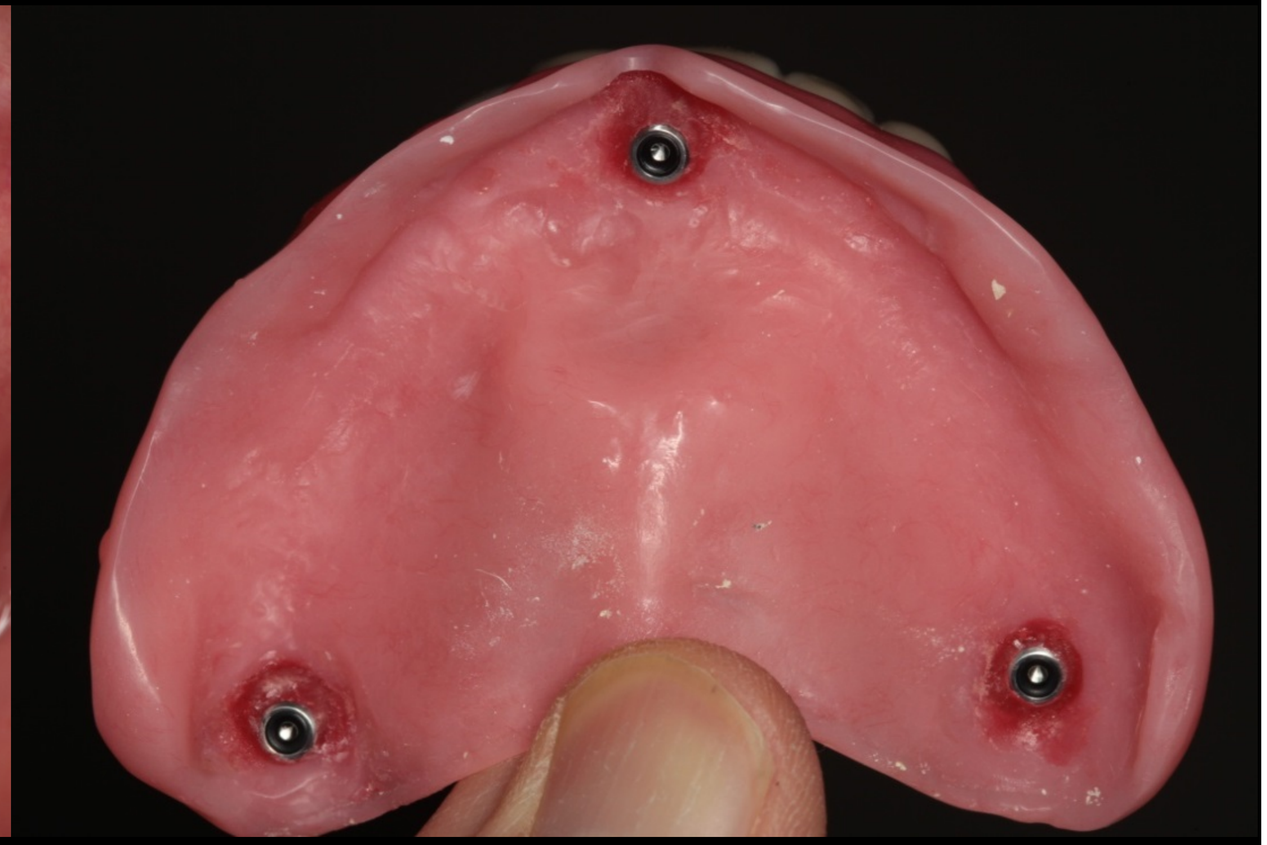


Suture

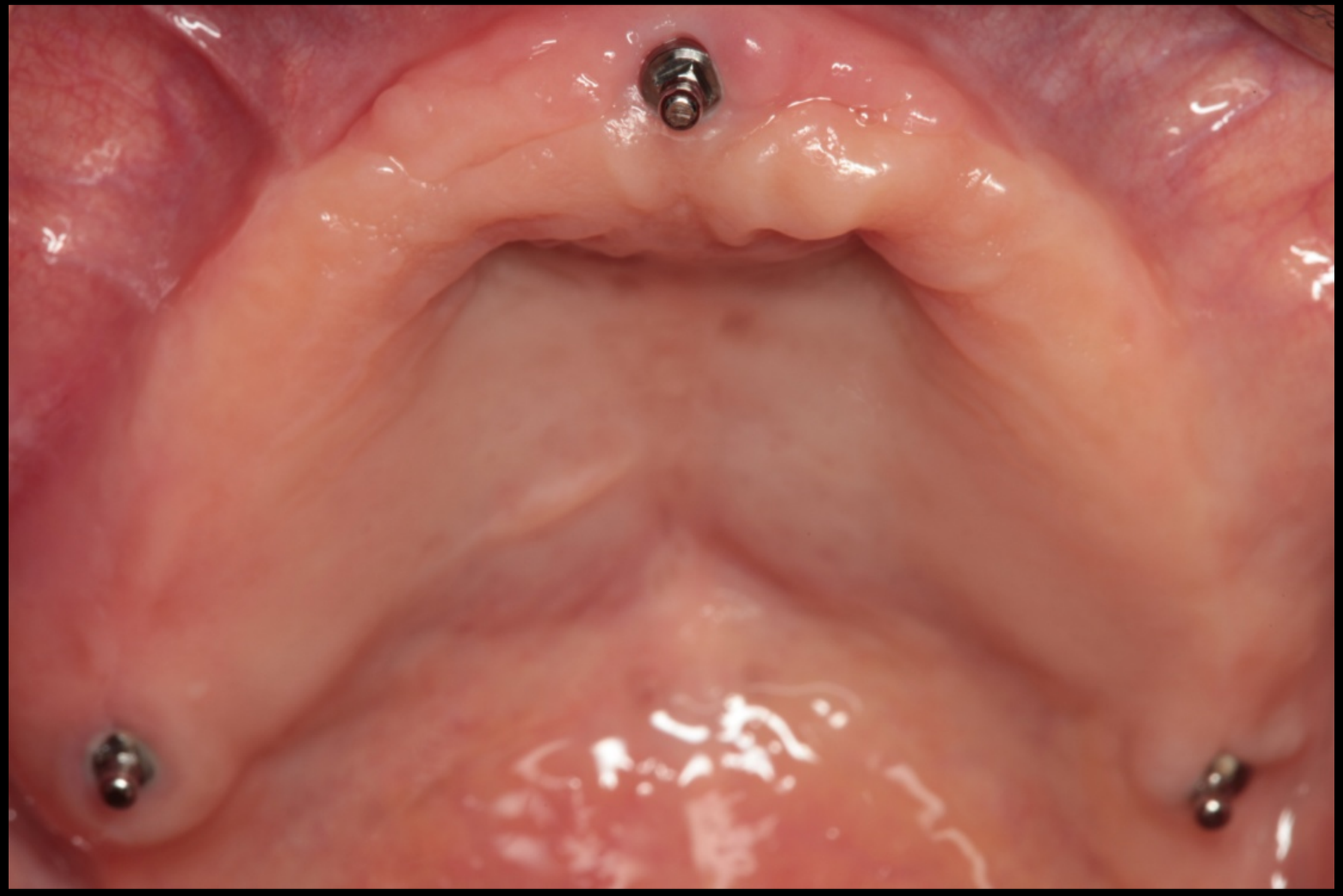
Healing : 2 weeks (2012-11-19)

Healing : 1 month (2012-12-03)



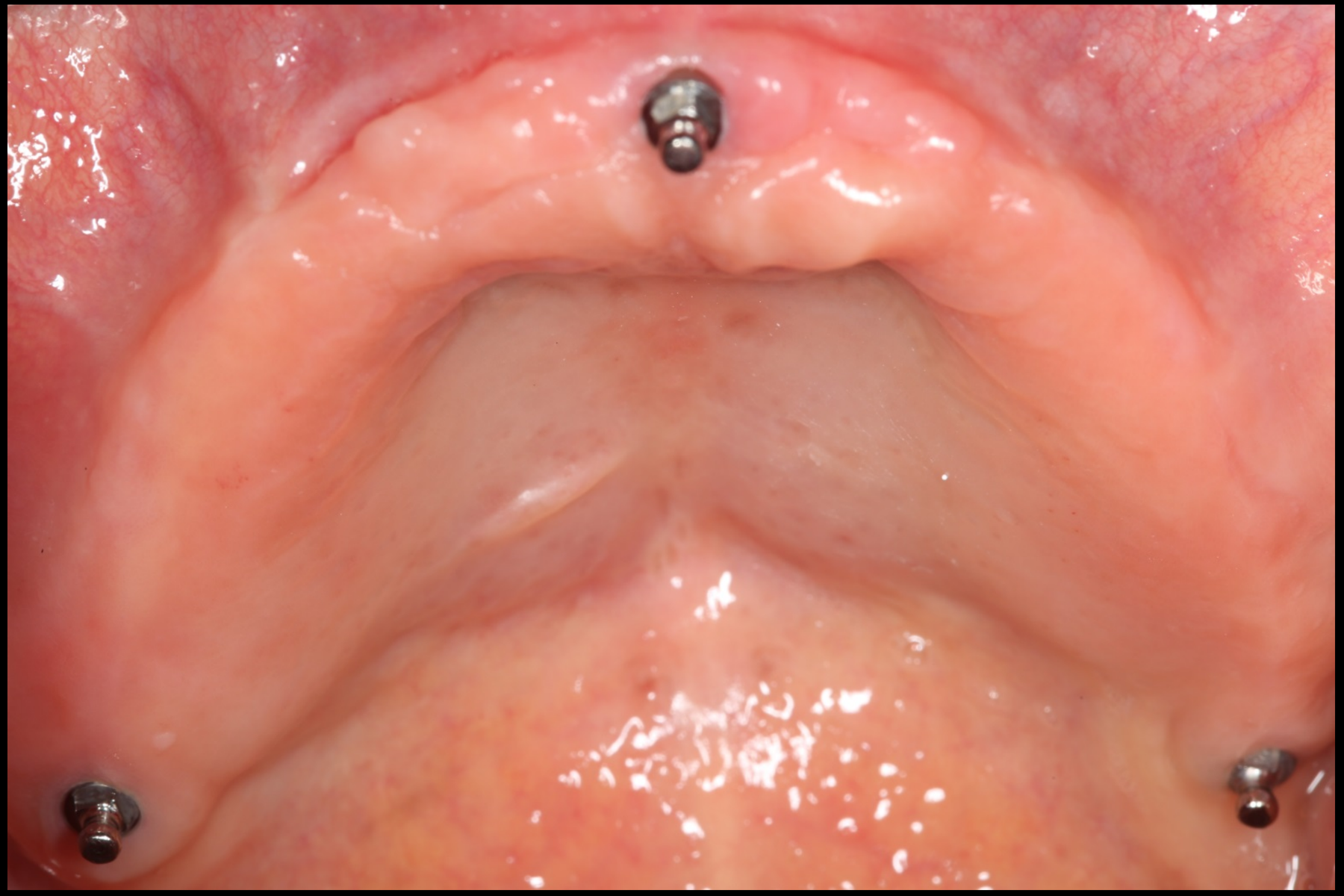


Healing : 2 months (2013-01-14)

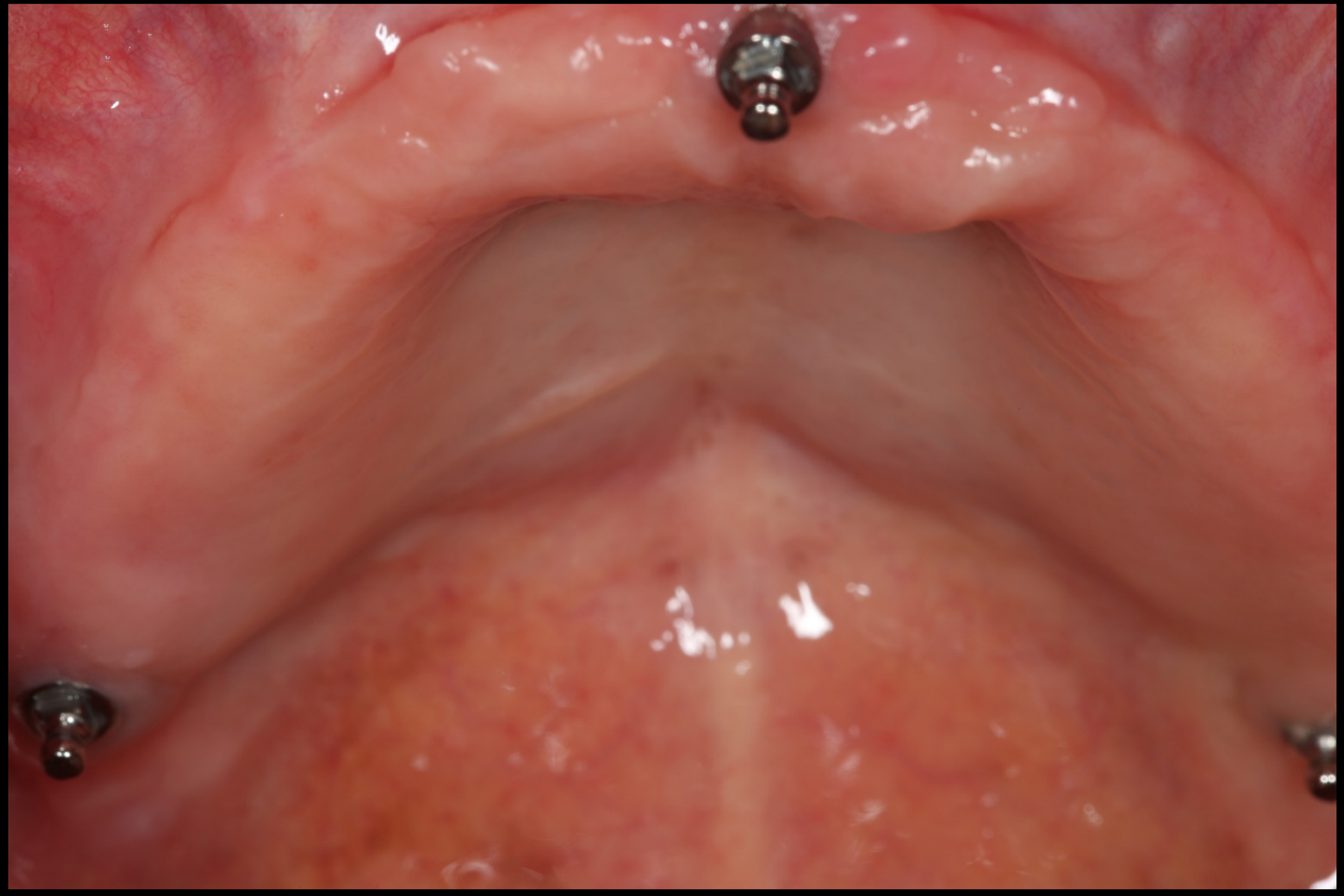


Follow up : 1 month (after Final prosthesis) (2013-04-15)

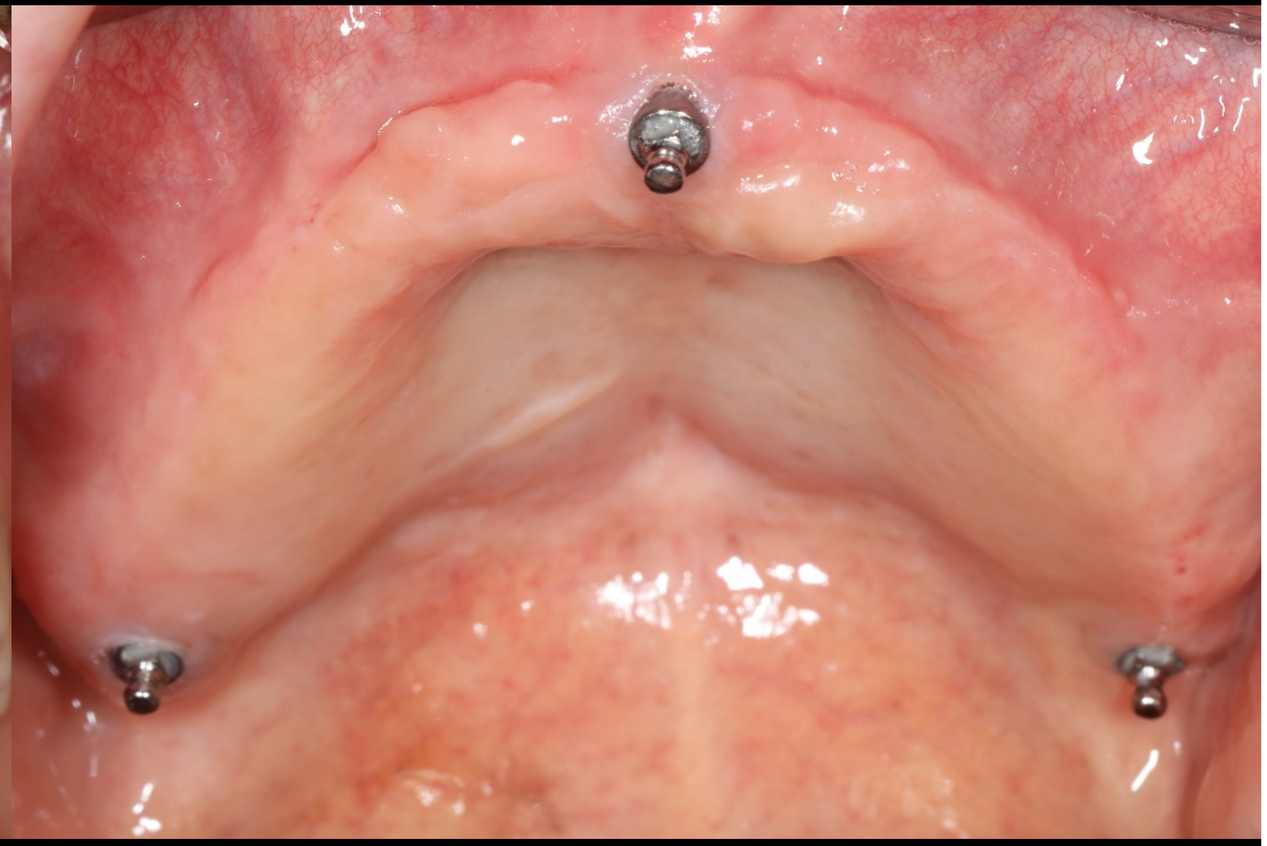
Follow up : 1 year (2014-02-21)



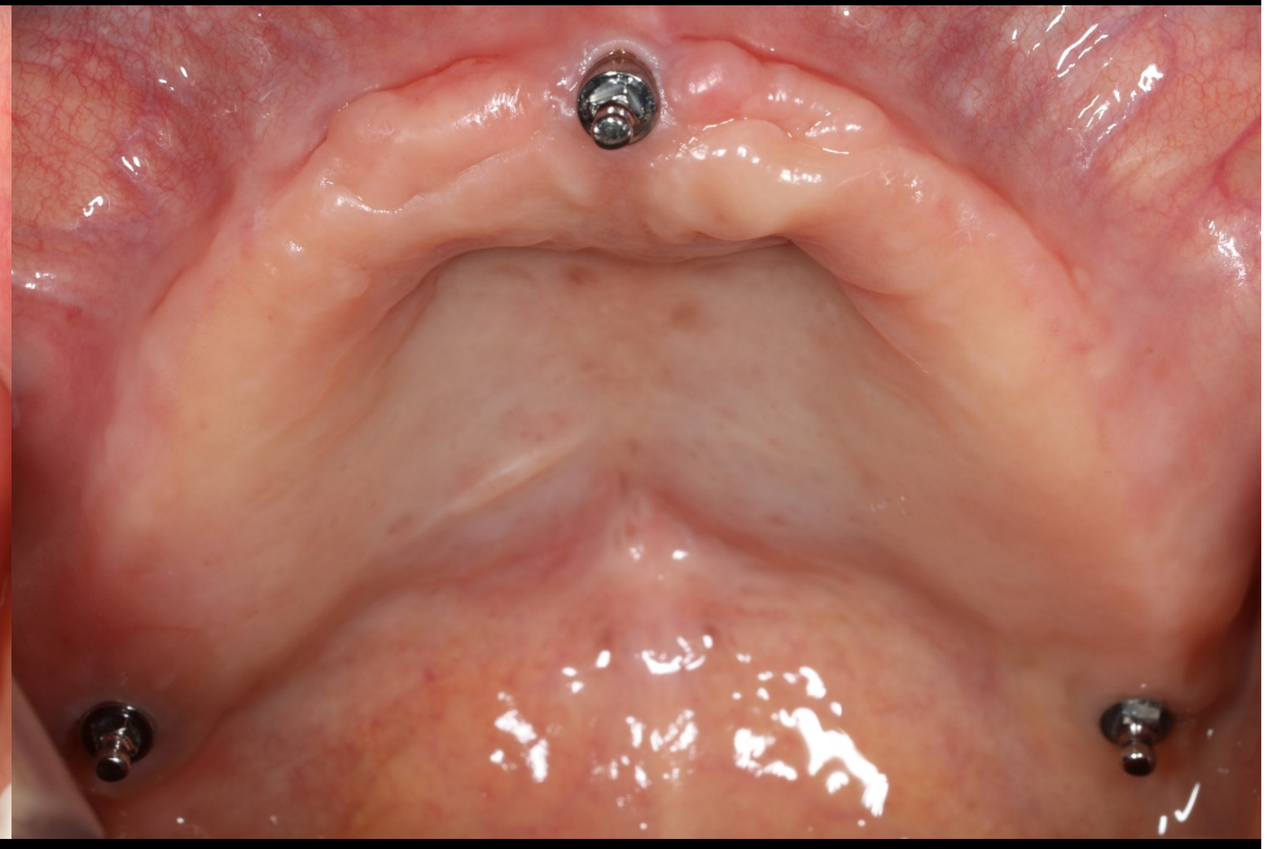
Follow up : 3 years 10 months (2016-10-05)



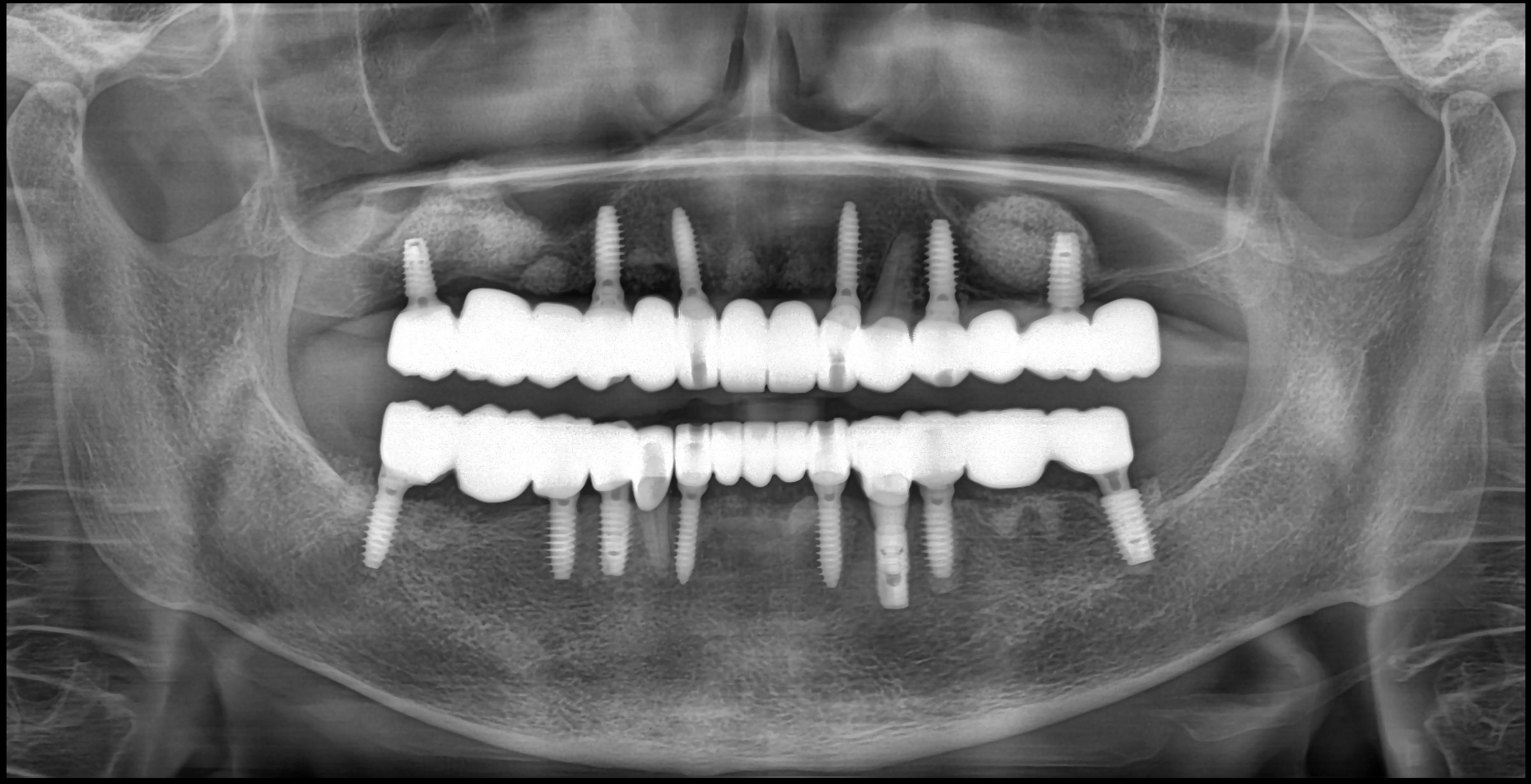
Remake / Follow up : 4 years (2016-12-07)



Follow up : 4 years 3 months (2017-03-24)



Final prosthesis (2023-04-28)



Final prosthesis (2023-04-28)

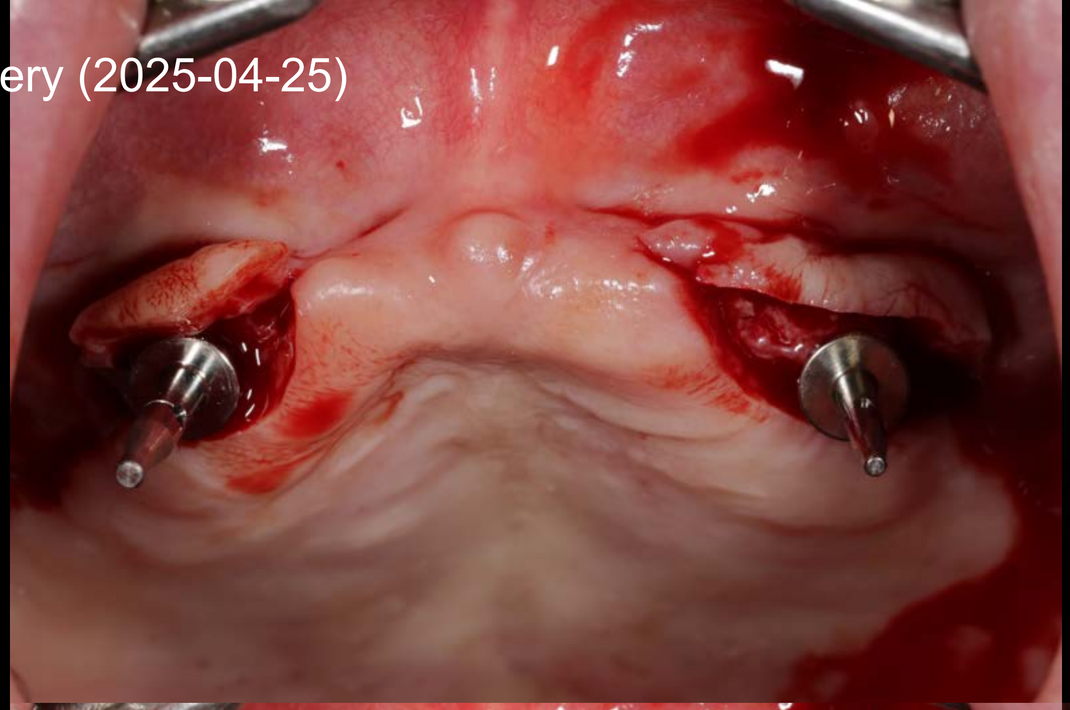
Follow up 1 year (2022-10-14)

Follow up : 1 year 6 months (2023-04-19)

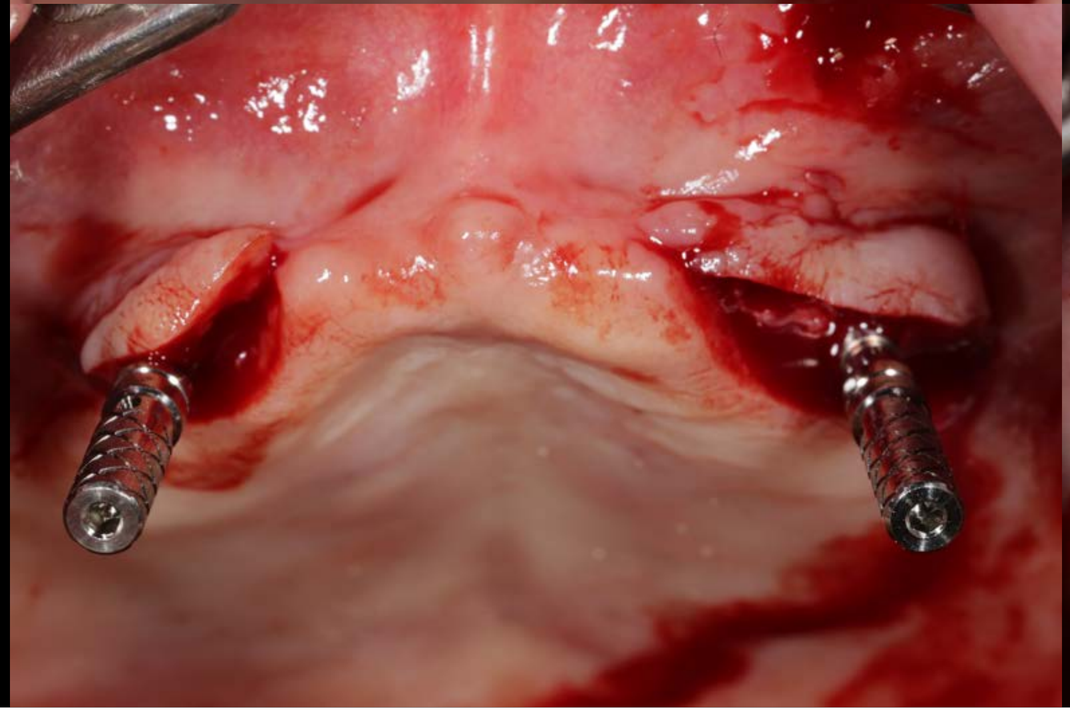
Pre-op (2025-02-07)

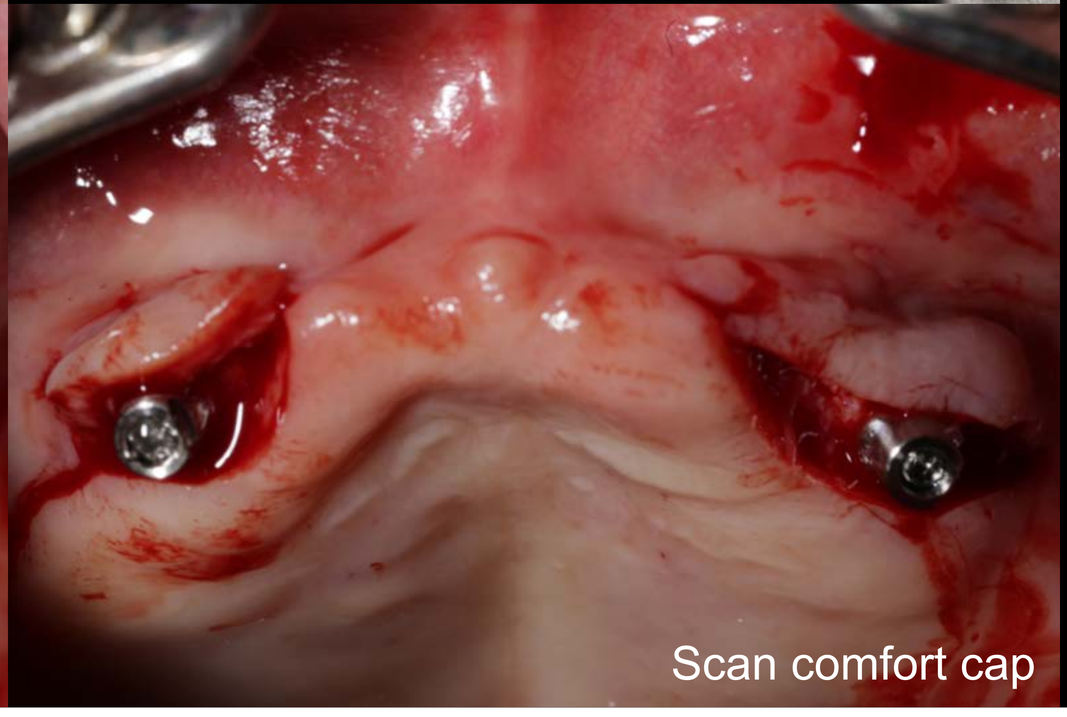
Pre-op (2025-04-25)

Surgery (2025-04-25)



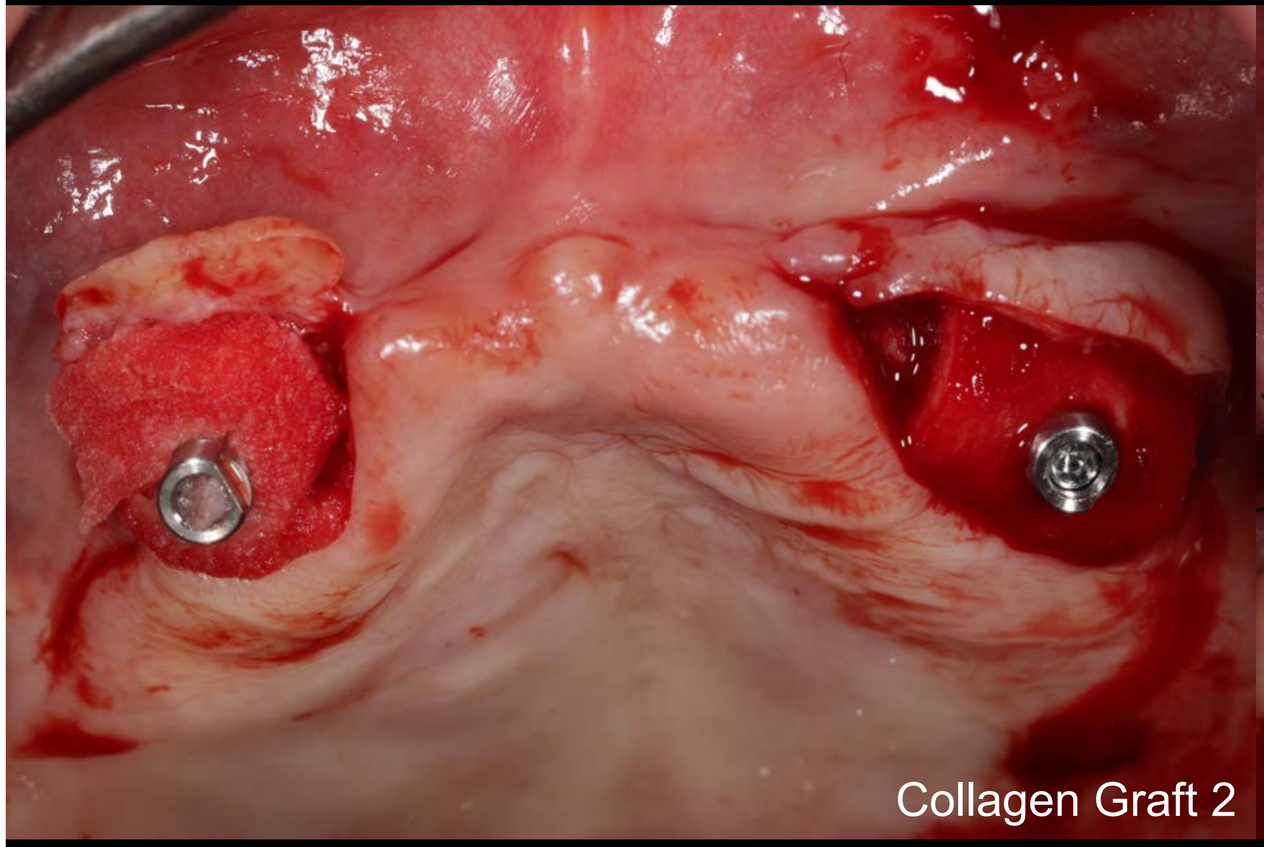
bright BL (Ø3.5 X 7.0B)



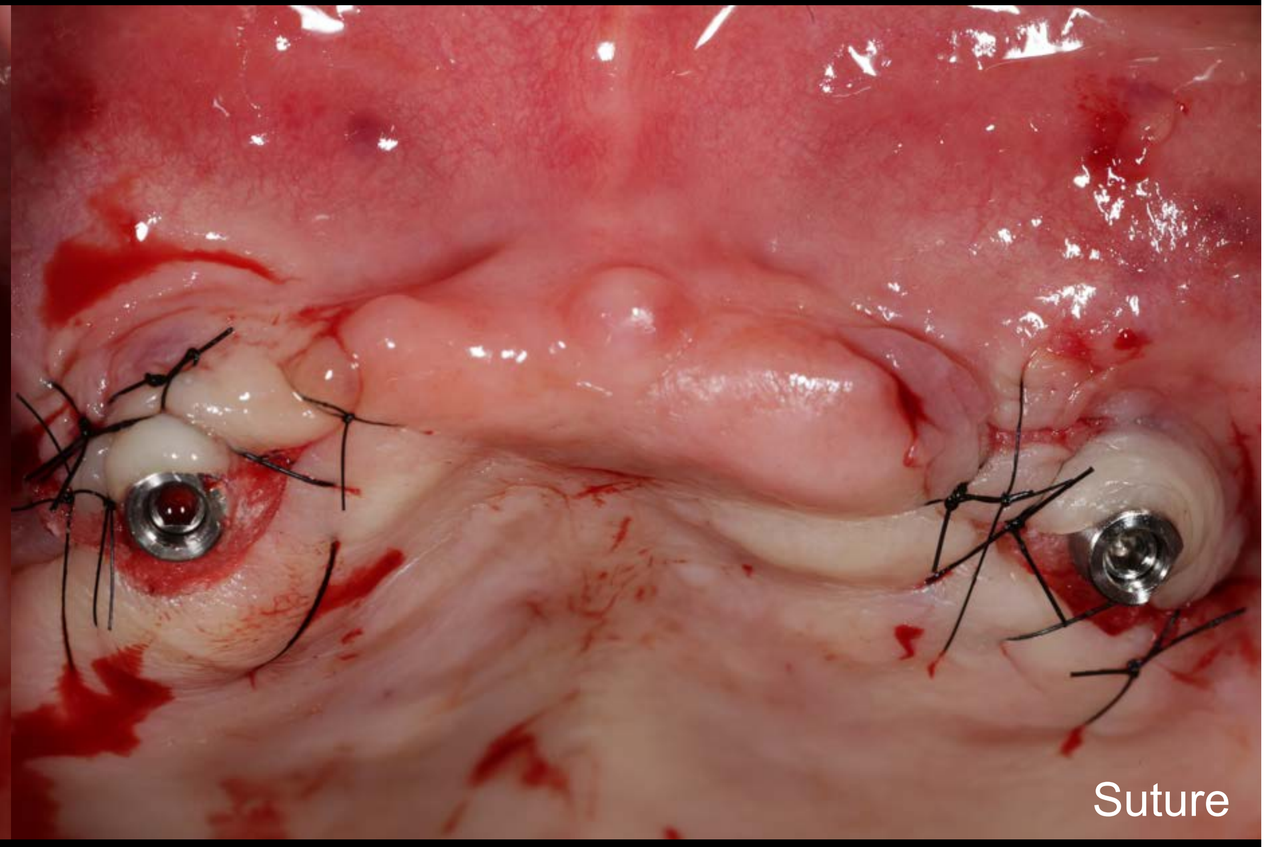


Scan comfort cap

Surgery (2025-04-25)



Collagen Graft 2

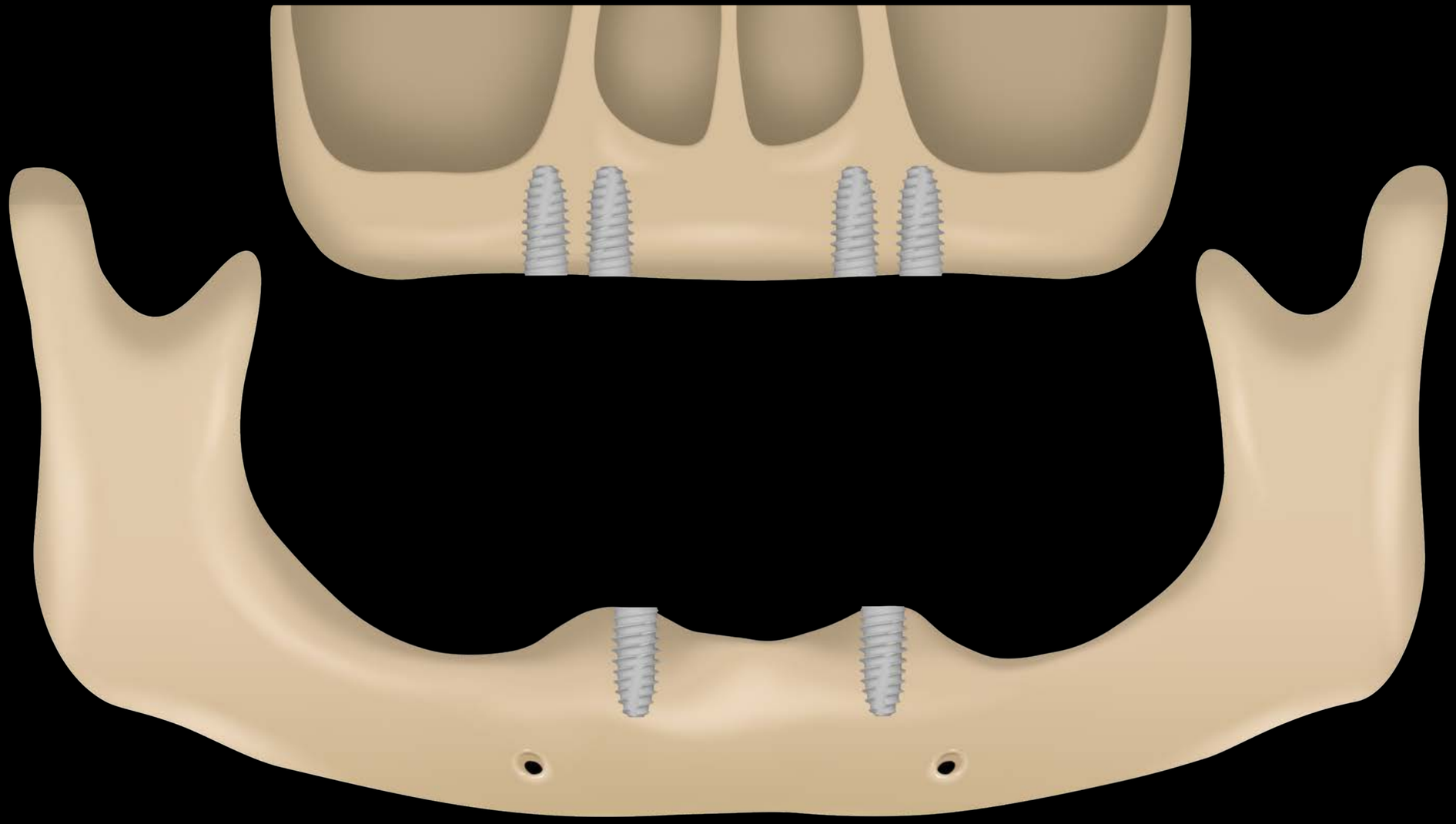


Suture

Temporary Denture (2025-05-02)

Temporary Denture delivery (2025-05-02)

Overdenture Options with bright Implant



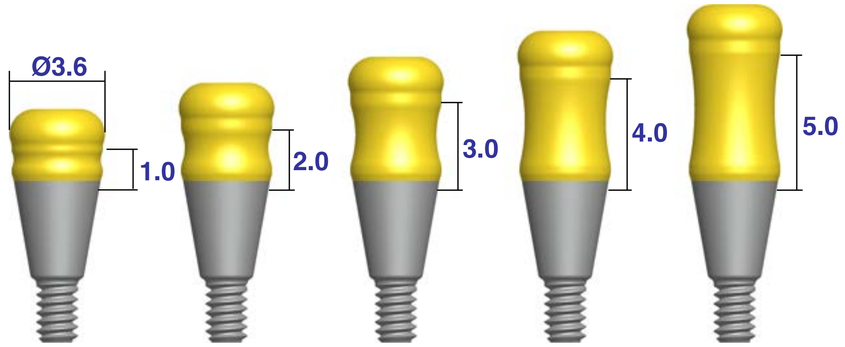
Prosthetic Line-up

Overdenture Components

Bone Level

✓ Positioner Abutment

Diameter	G/H	Art. No.
Ø3.6	1.0	BPAB3610
	2.0	BPAB3620
	3.0	BPAB3630
	4.0	BPAB3640
	5.0	BPAB3650



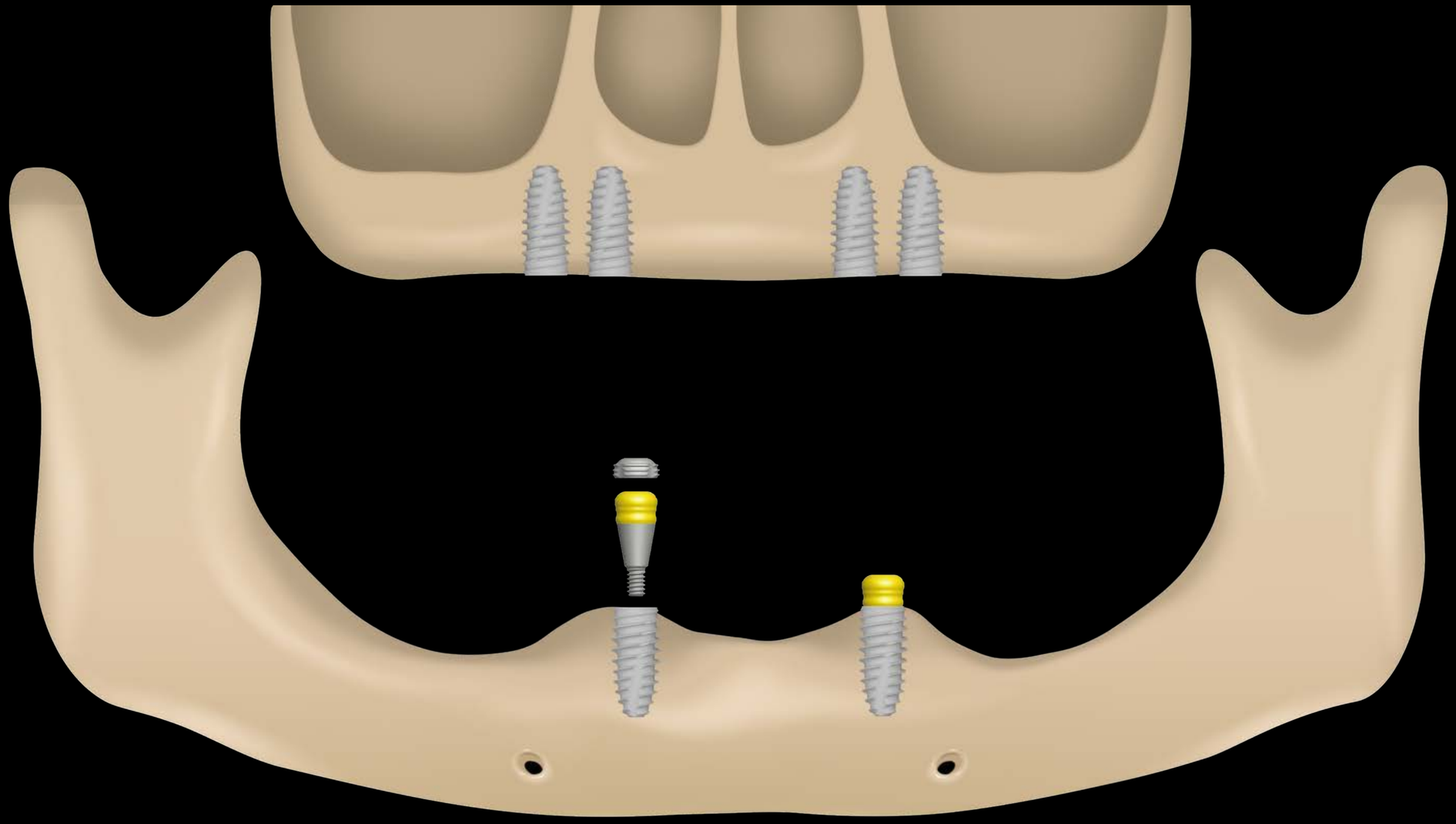
✓ Positioner Metal Socket

Art. No.
FSMH

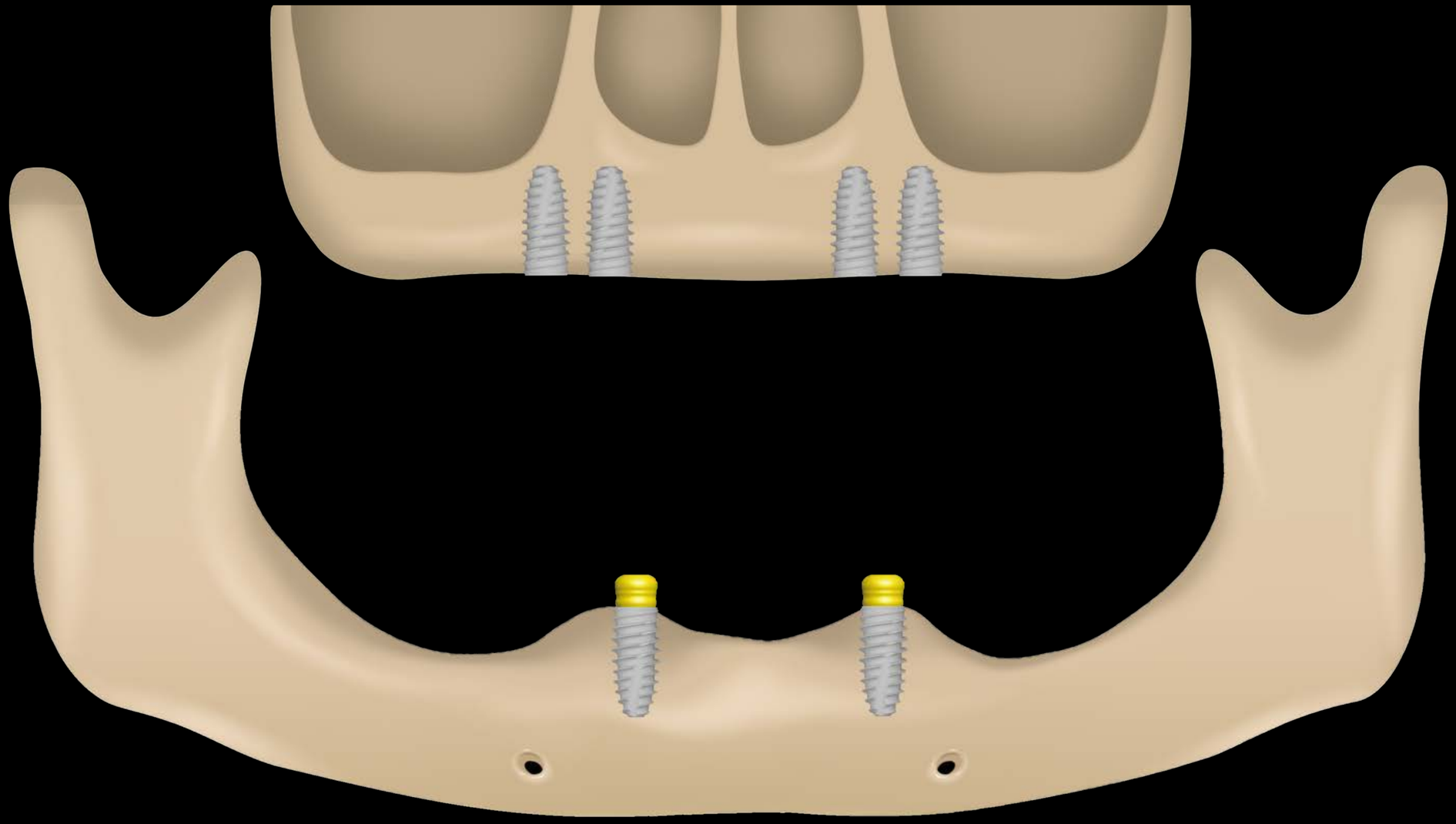
✓ Plastic Socket

Art. No.	Force
MSHP	1000gf
MSMP	500gf
MSLP	300gf
MSOP	100gf

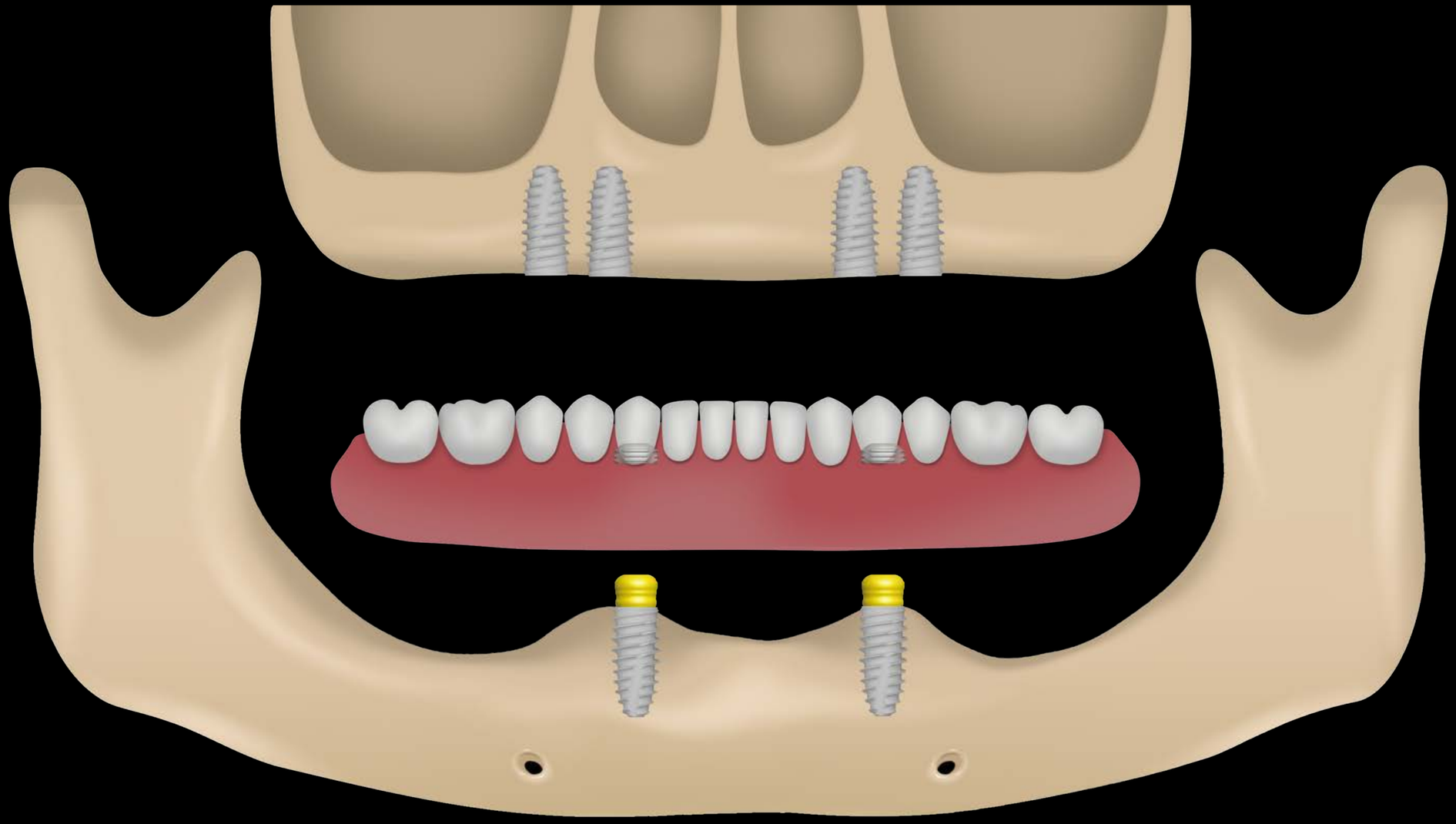
Overdenture Options with bright Implant



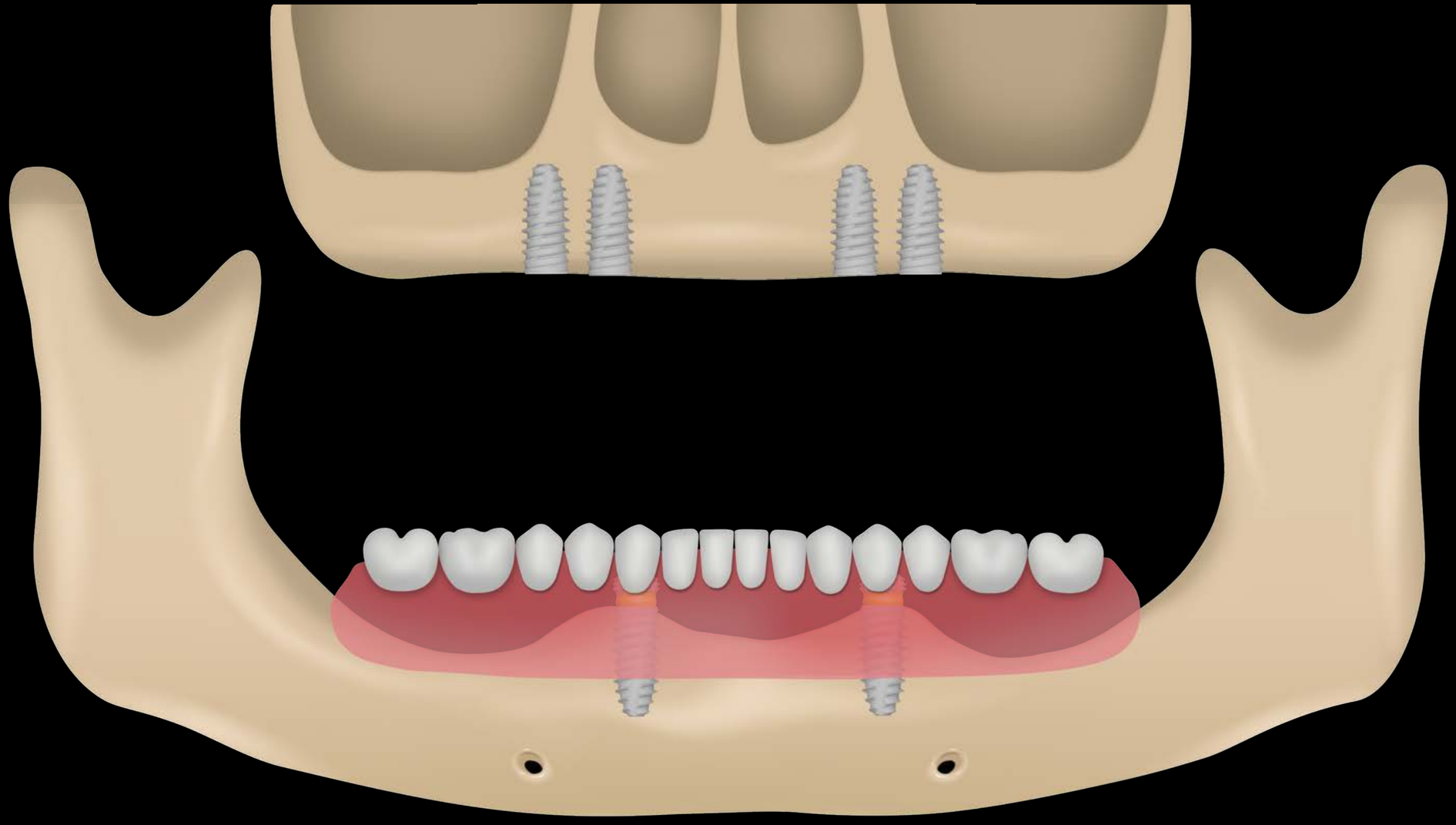
Overdenture Options with bright Implant



Overdenture Options with bright Implant



Overdenture Options with bright Implant



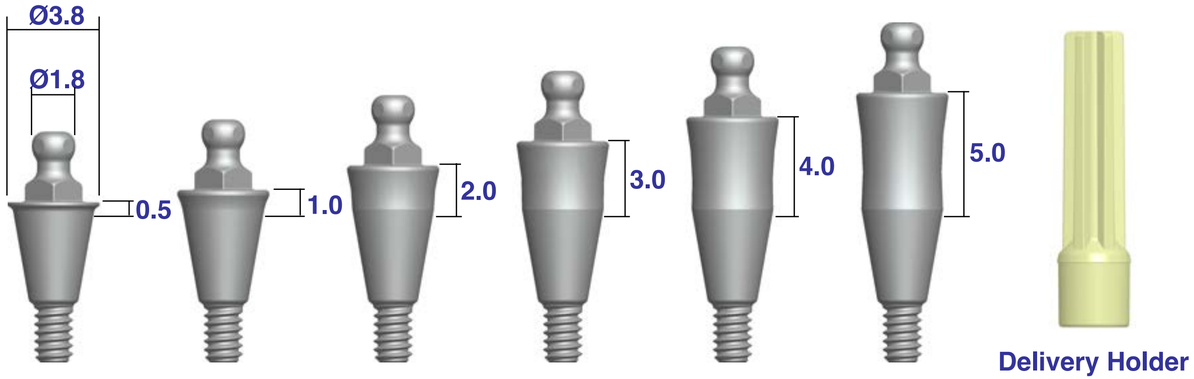
Prosthetic Line-up

Overdenture Components

Bone Level

✓ Ball Abutment (Ø1.8 Ball)

Diameter	G/H	Art. No.
Ø3.8	0.5	BBAB380518
	1.0	BBAB381018
	2.0	BBAB382018
	3.0	BBAB383018
	4.0	BBAB384018
	5.0	BBAB385018



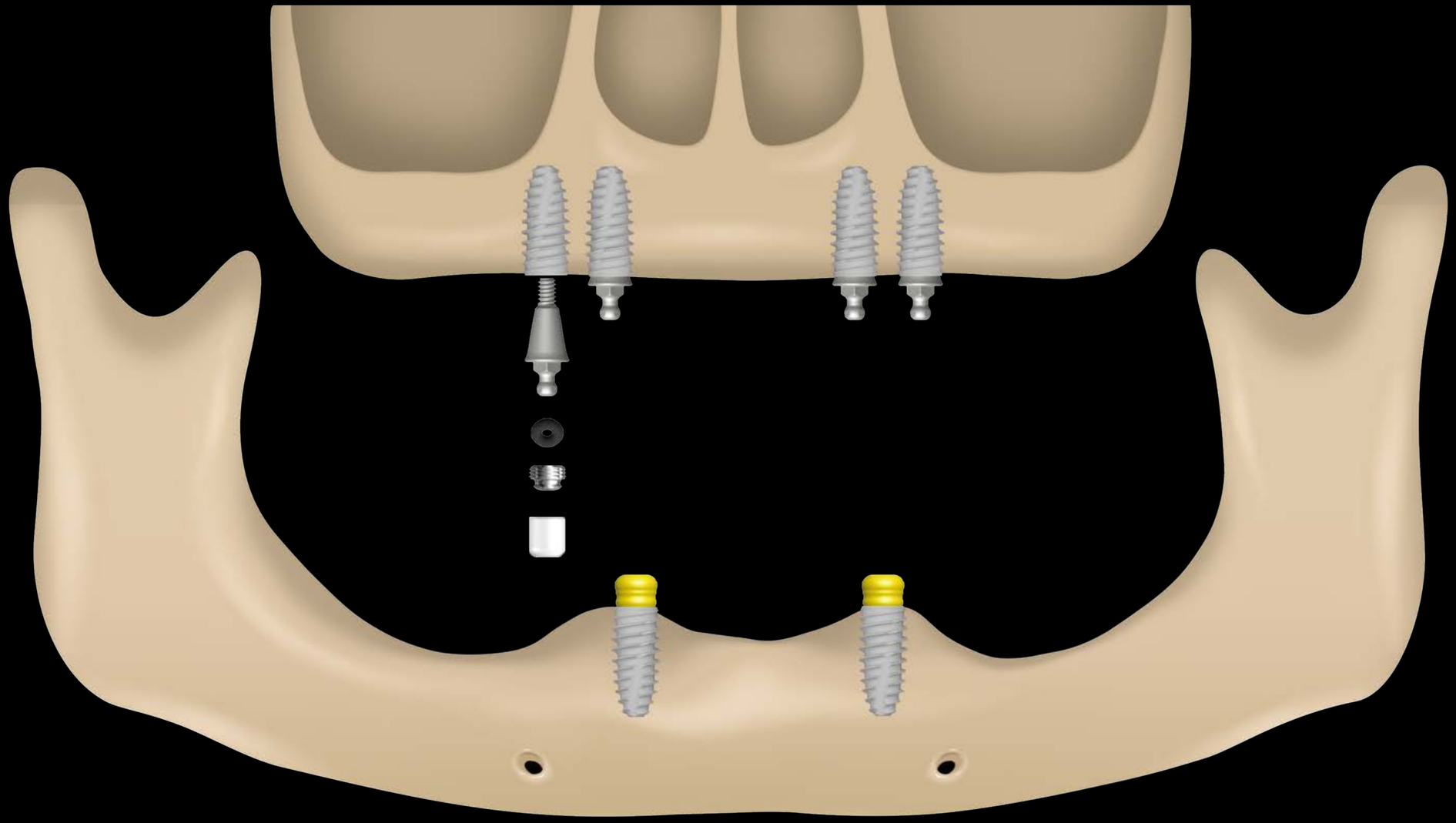
Delivery Holder

✓ SuperLine 공용

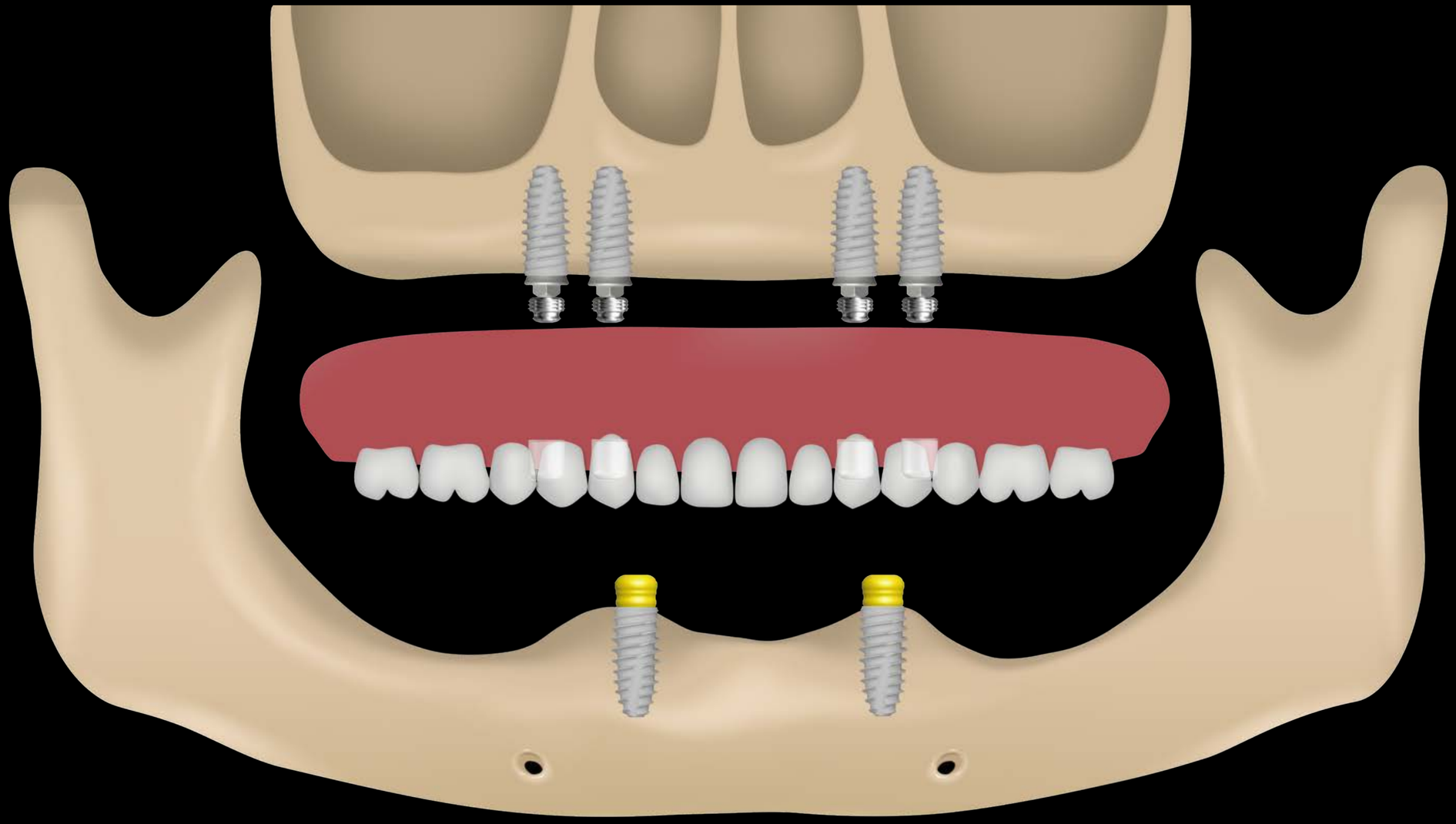
<Female Socket>

<Socket Spacer>

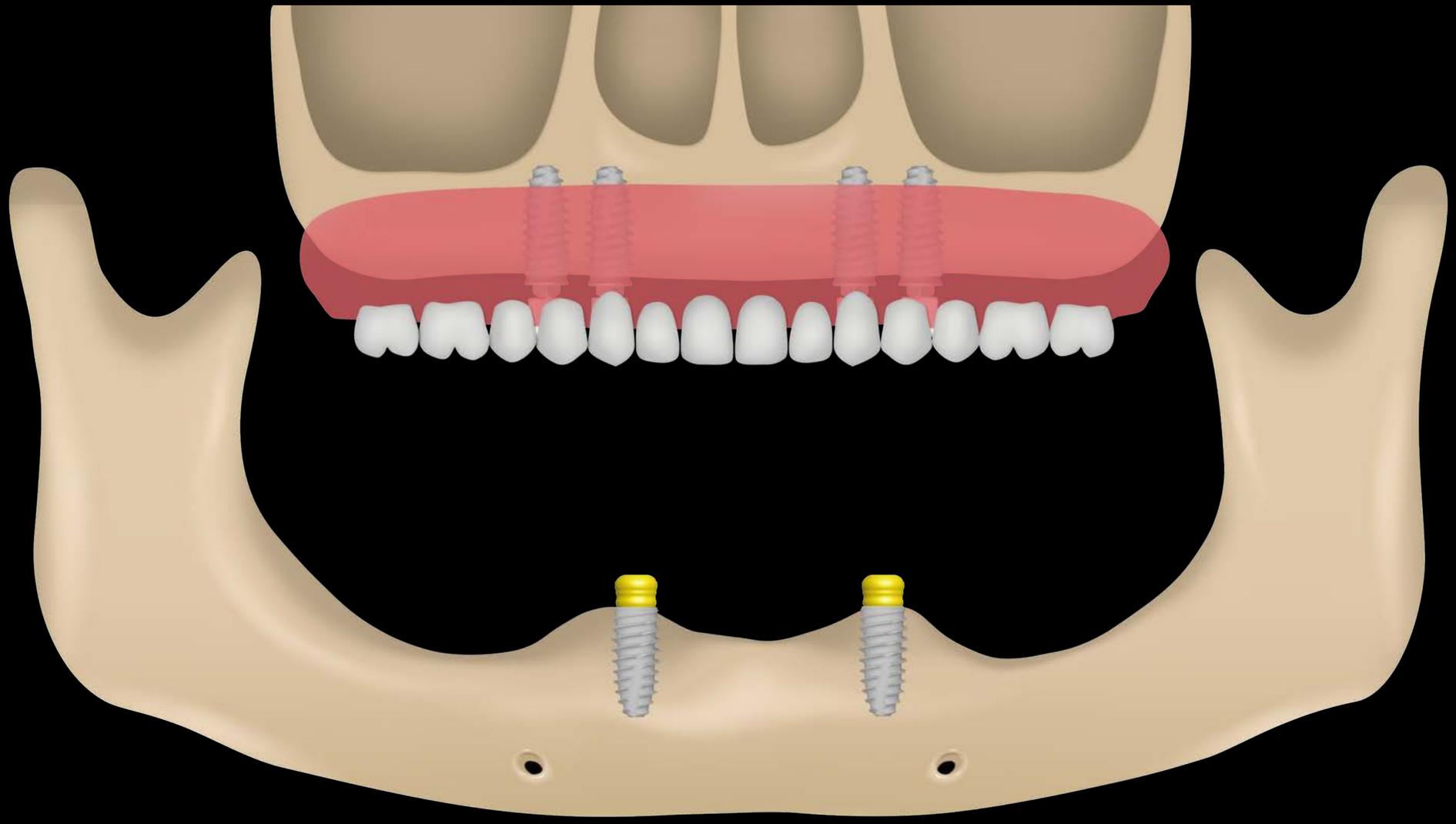
Overdenture Options with bright Implant



Overdenture Options with bright Implant



Overdenture Options with bright Implant



Prosthetic Line-up

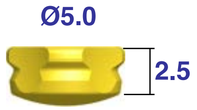
Magnetic Attachment Components

Bone Level

✓ Magnetic Attachment – Dome Type

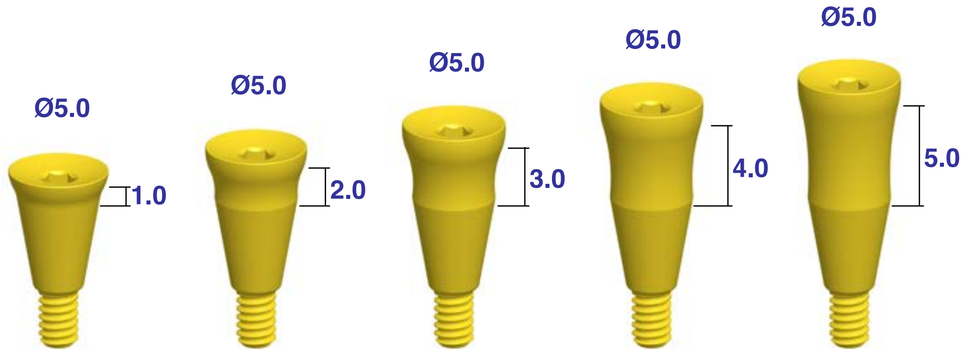
Magnetic Assay

Diameter	H	Art. No.
Ø5.0	2.5	BMGT5025D

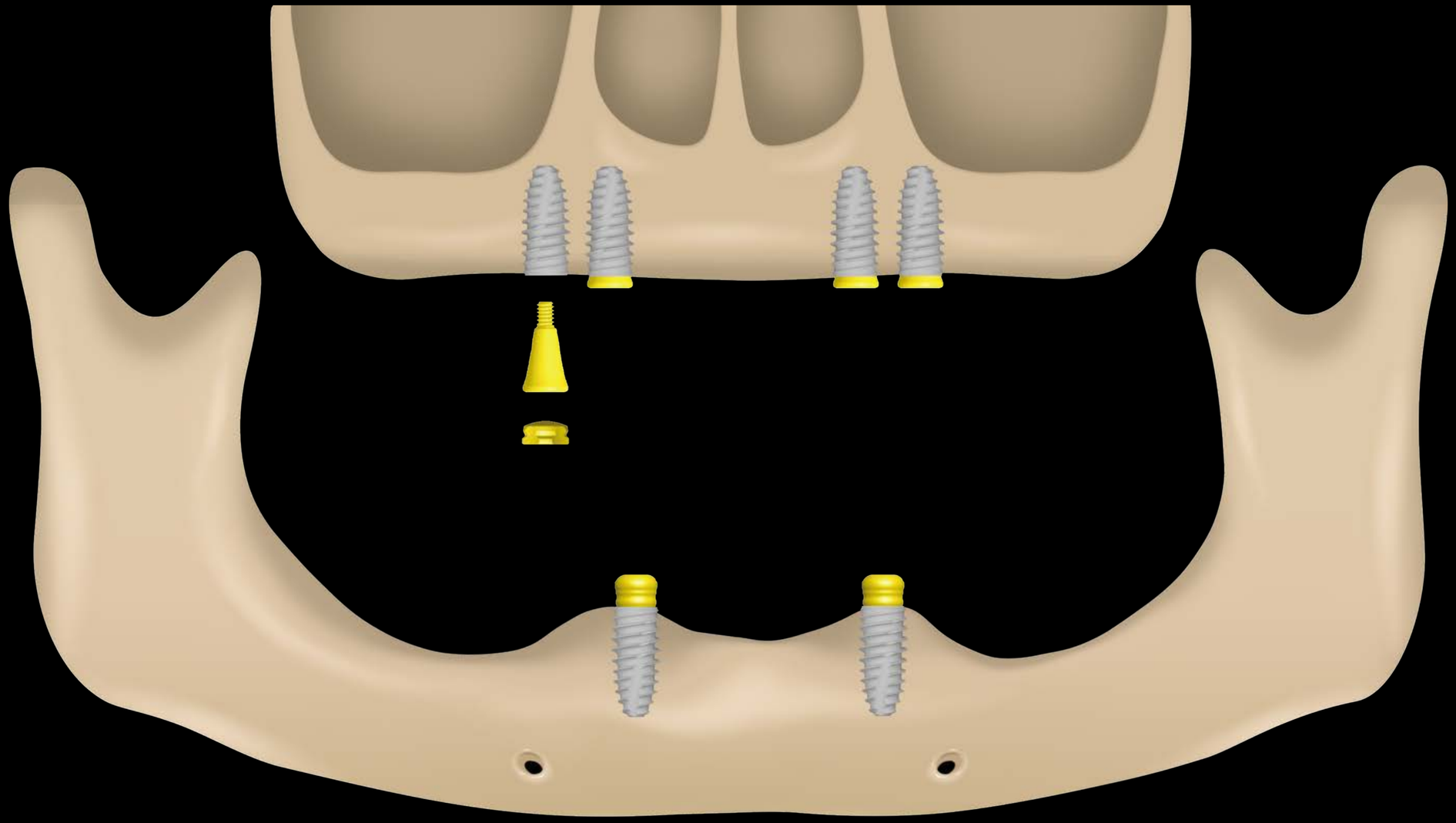


Implant Keeper Diameter

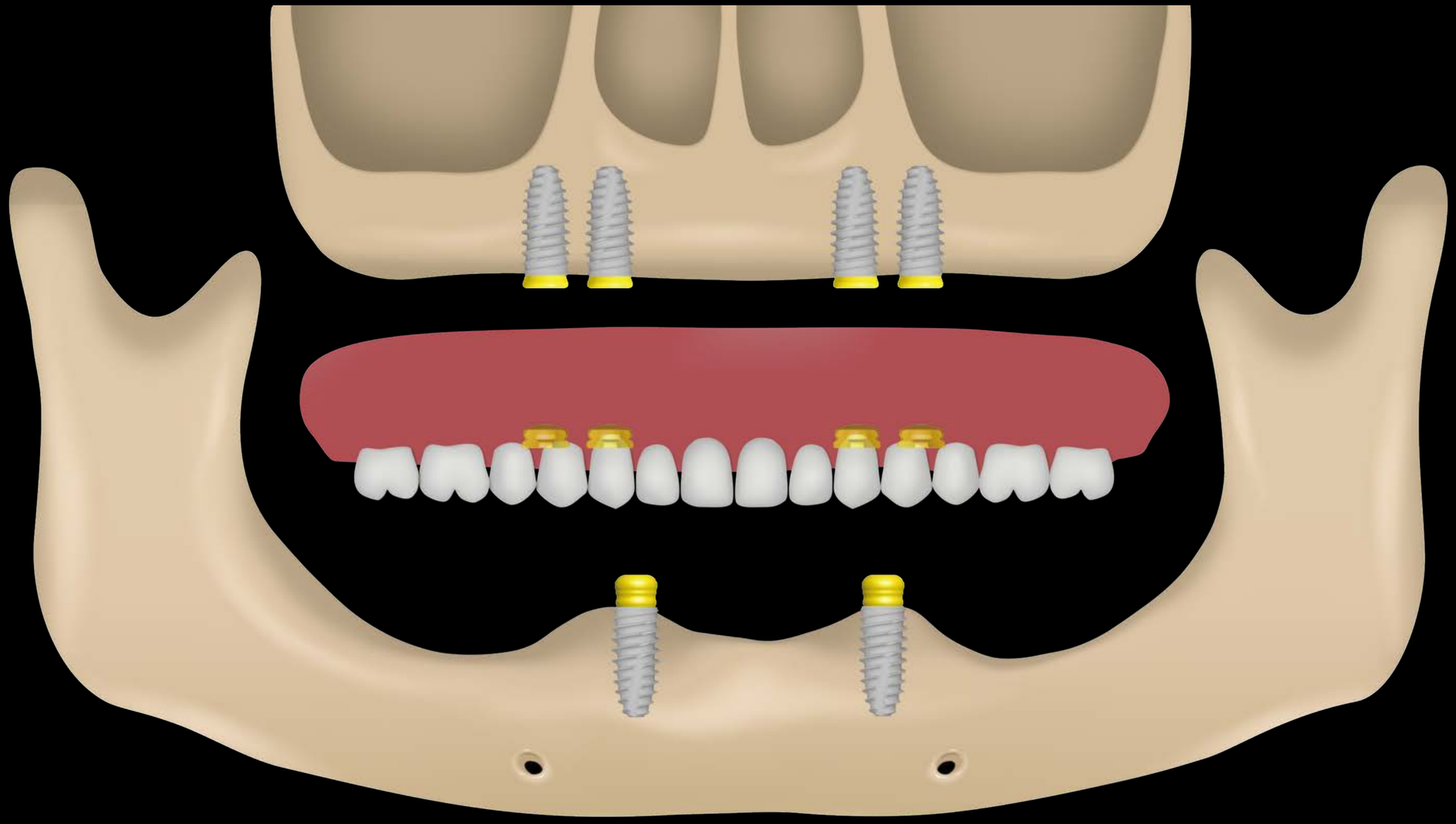
Diameter	G/H	Art. No.
Ø5.0	1.0	BMK5010D
	2.0	BMK5020D
	3.0	BMK5030D
	4.0	BMK5040D
	5.0	BMK5050D



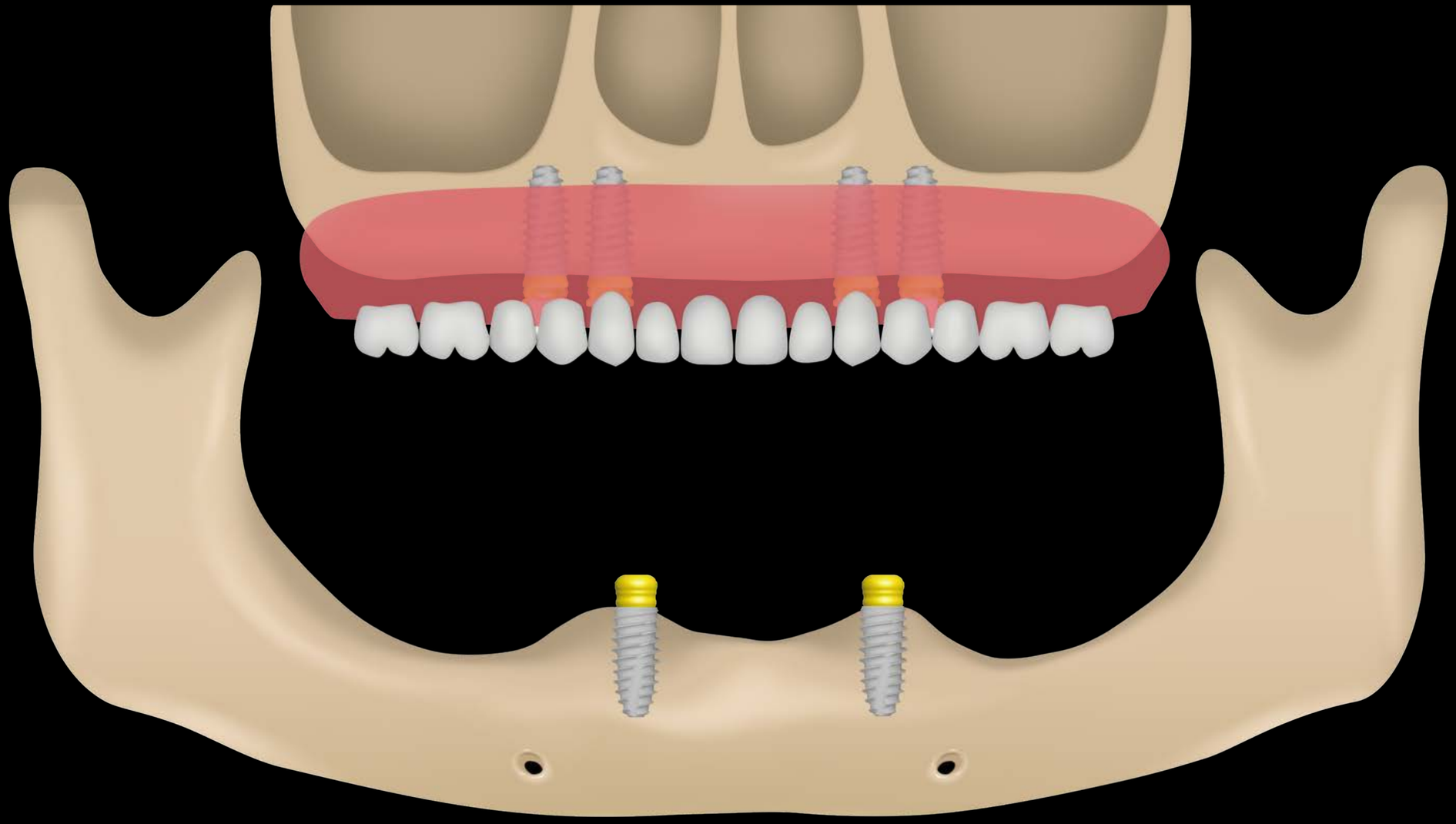
Overdenture Options with bright Implant



Overdenture Options with bright Implant



Overdenture Options with bright Implant



Contents

Introduction

Over denture

Fixed prosthesis

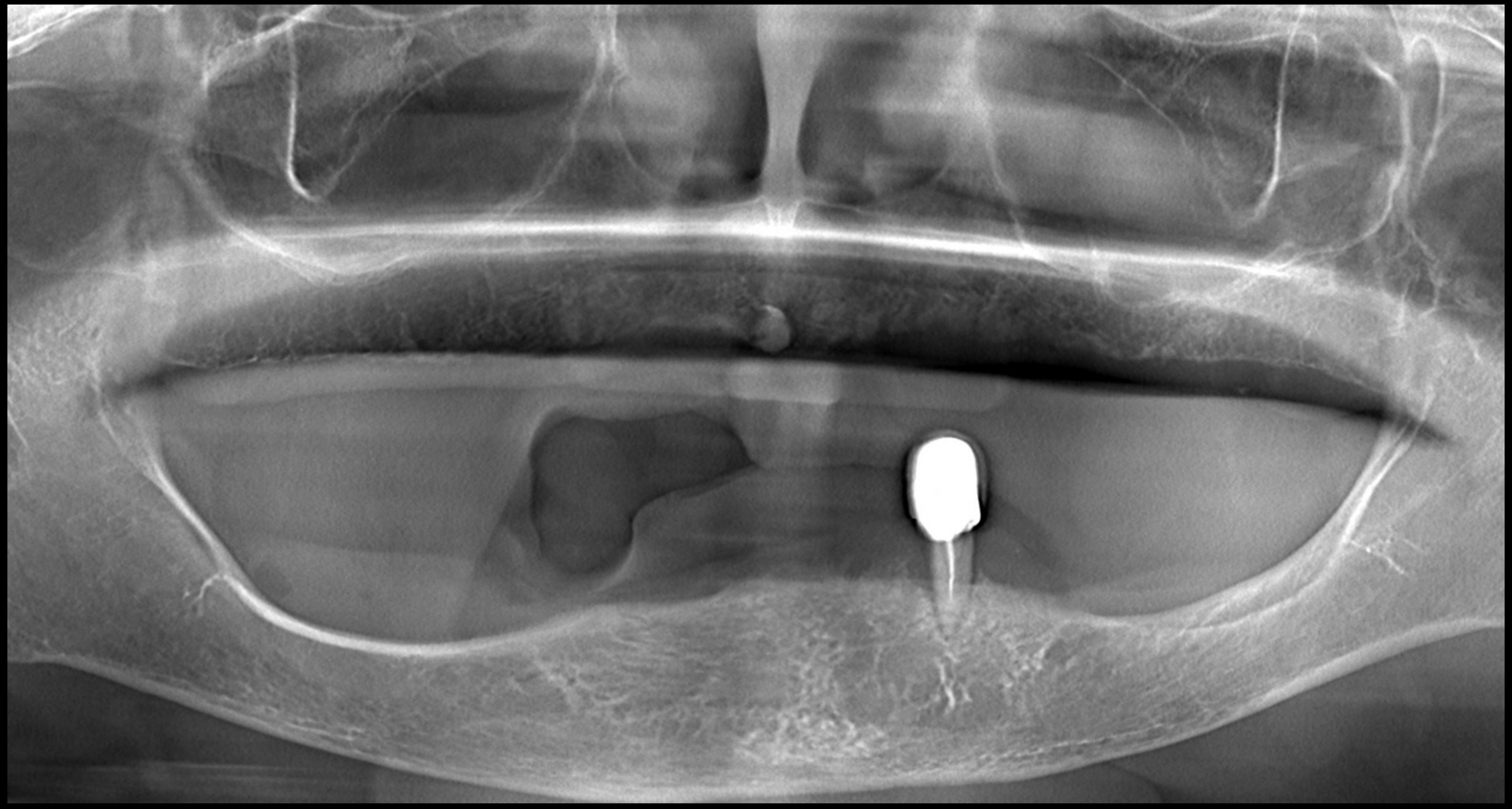
Digita concepts

and application for full mouth reconstruction

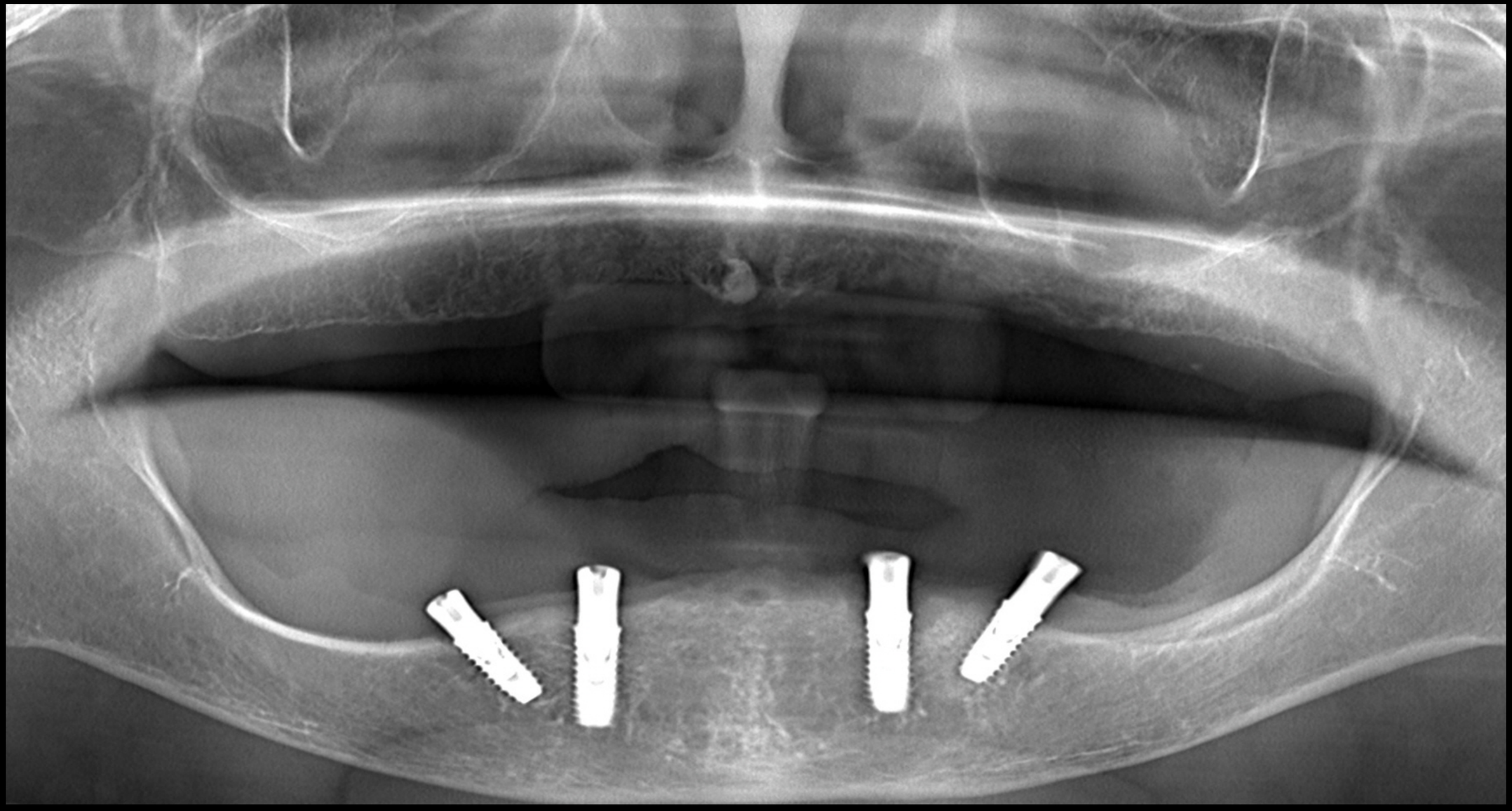
Fixed prosthesis

Difficult in prosthesis
Implant is difficult
Bone condition . Very thin and narrow
Systemic contion and drugs

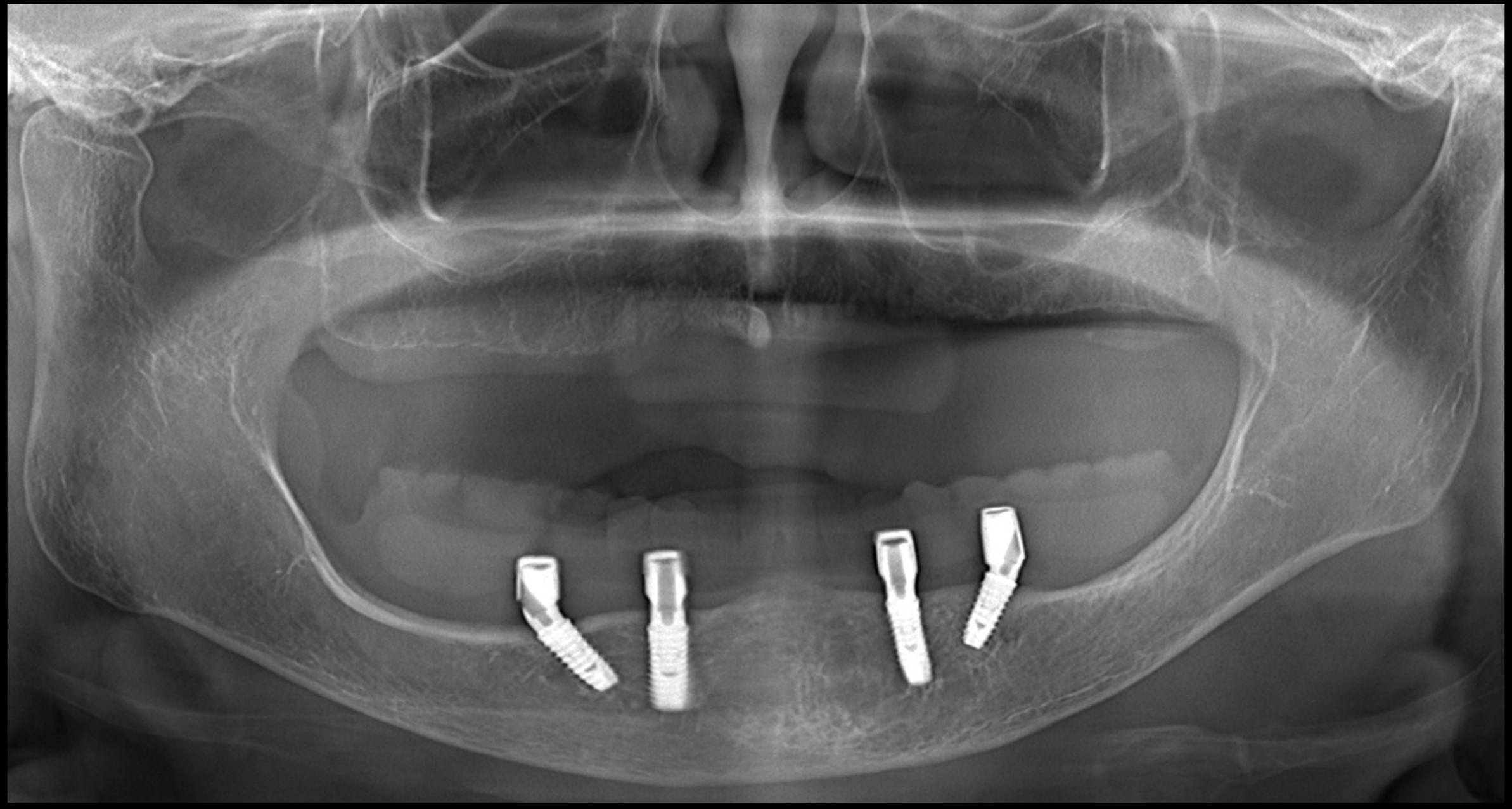
Pre-op (2018-02-19)



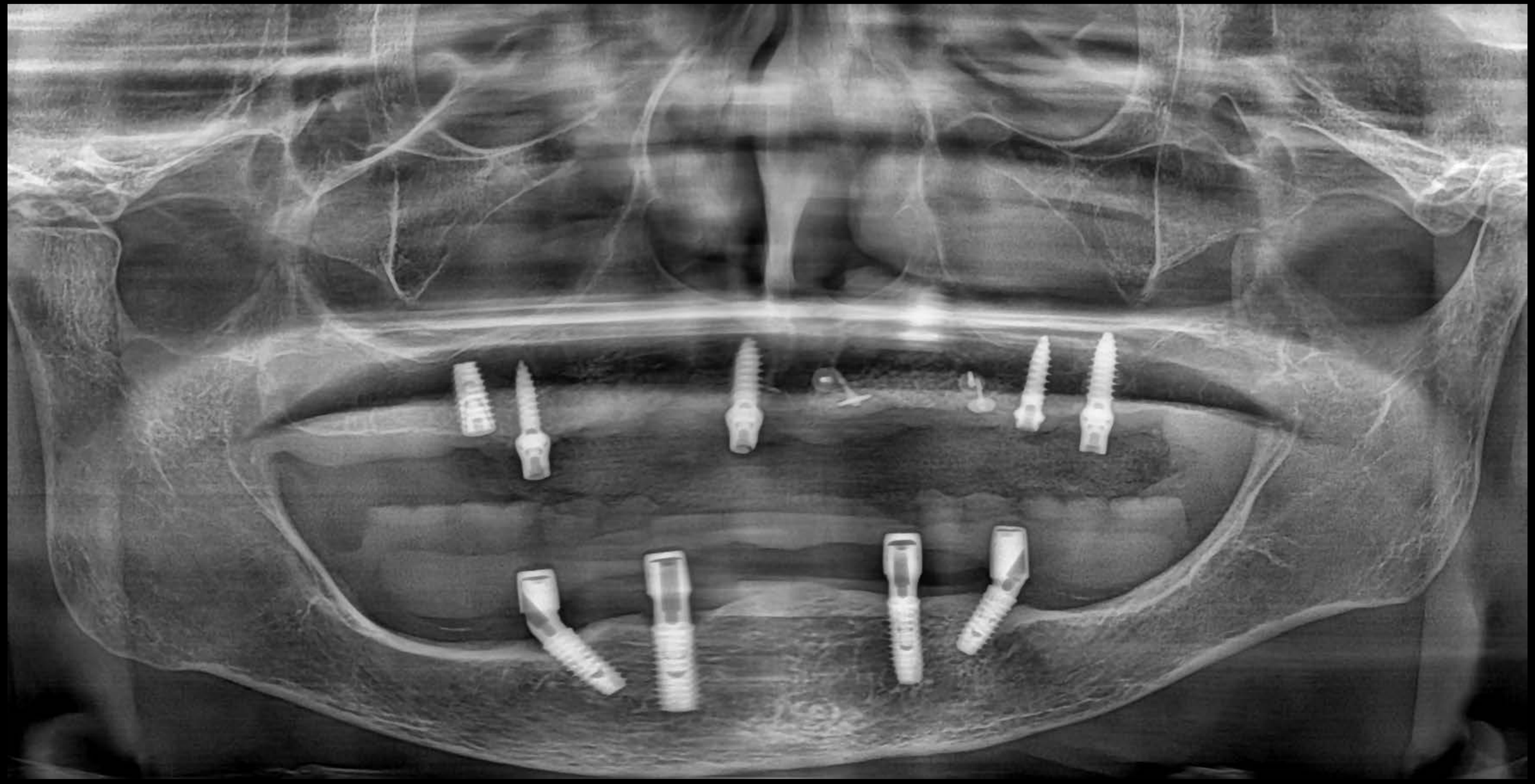
Post-op (2018-02-19)



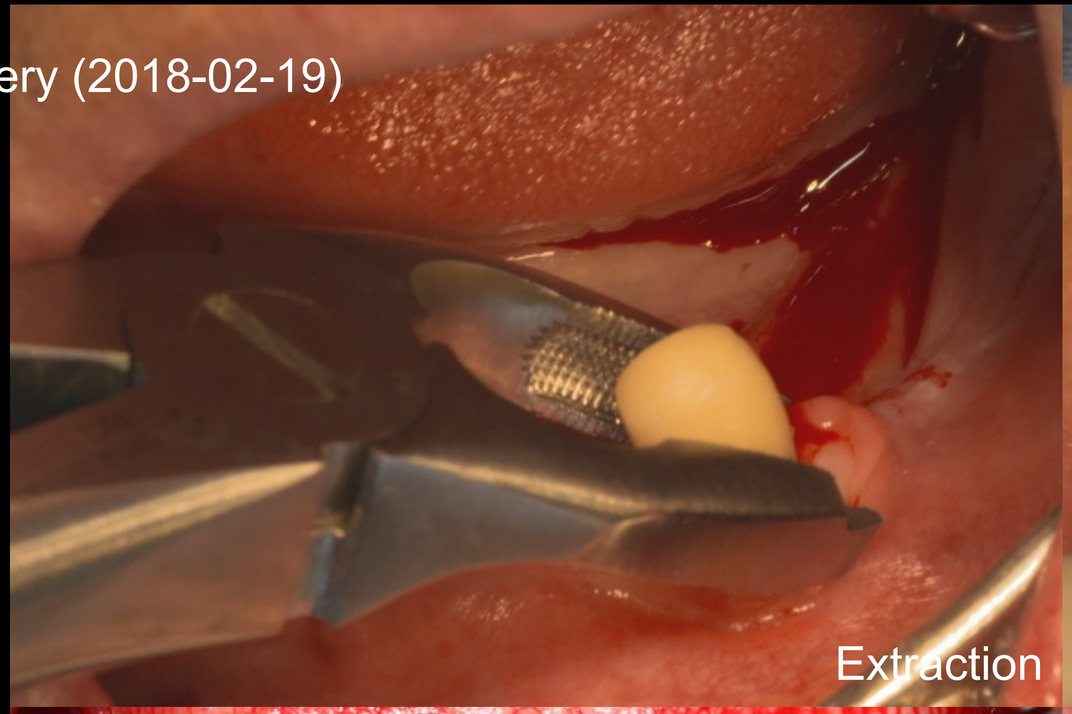
Follow up : 1 year 4 months (2019-06-24)

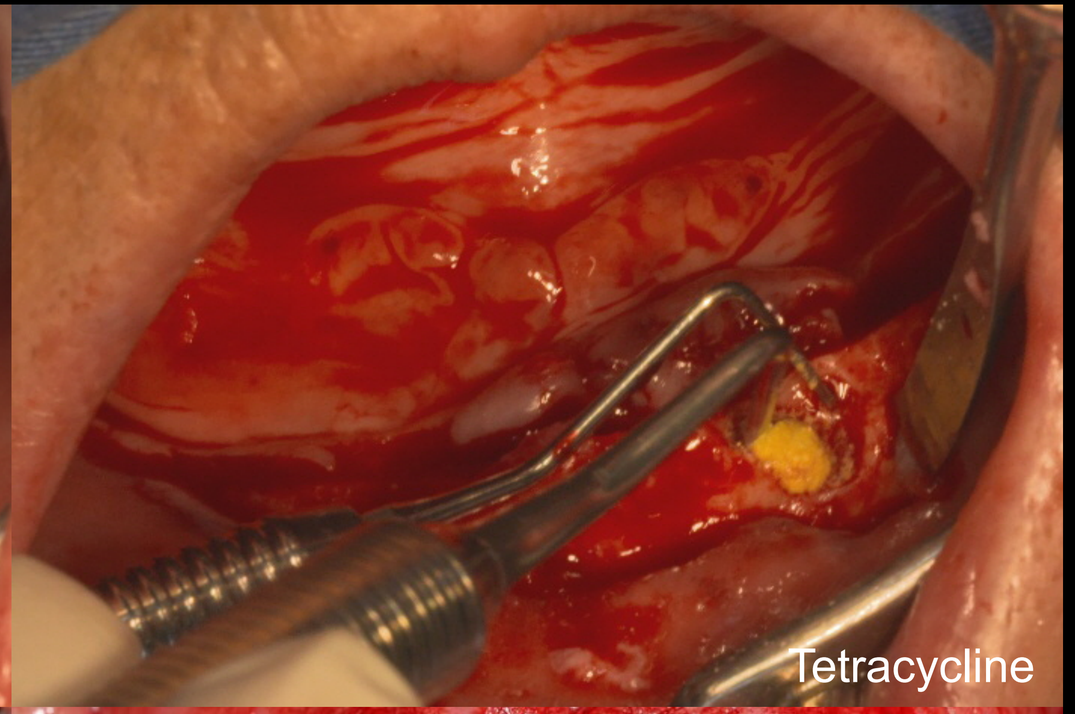


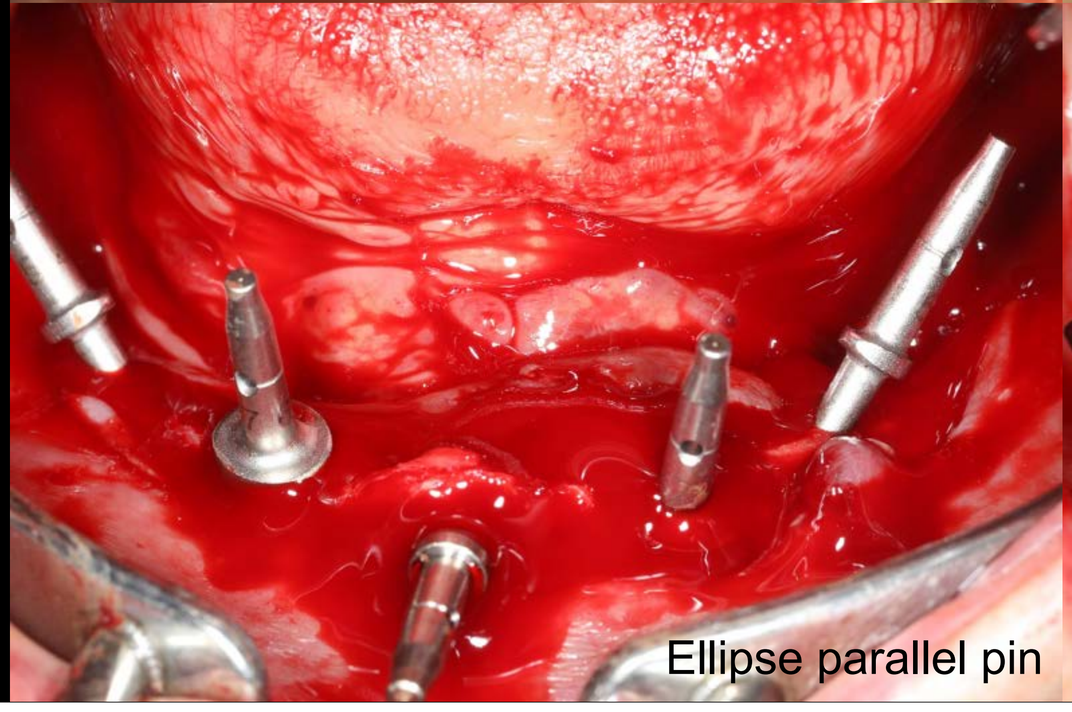
Follow up : 4 year 8 months (2022-11-05)

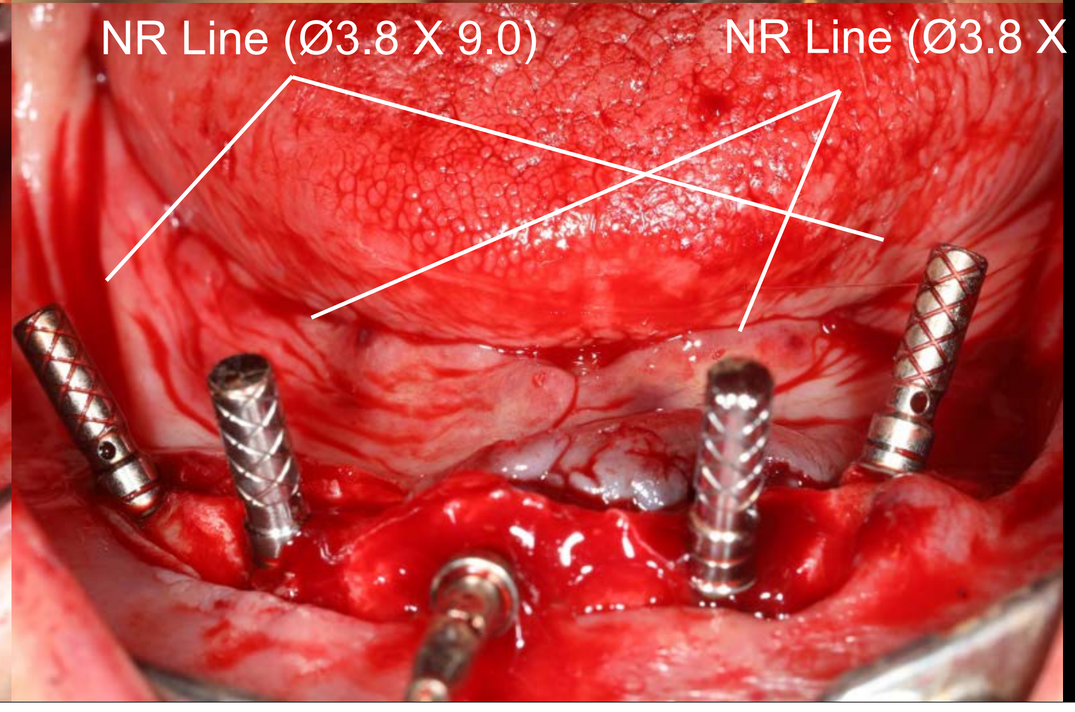


Surgery (2018-02-19)





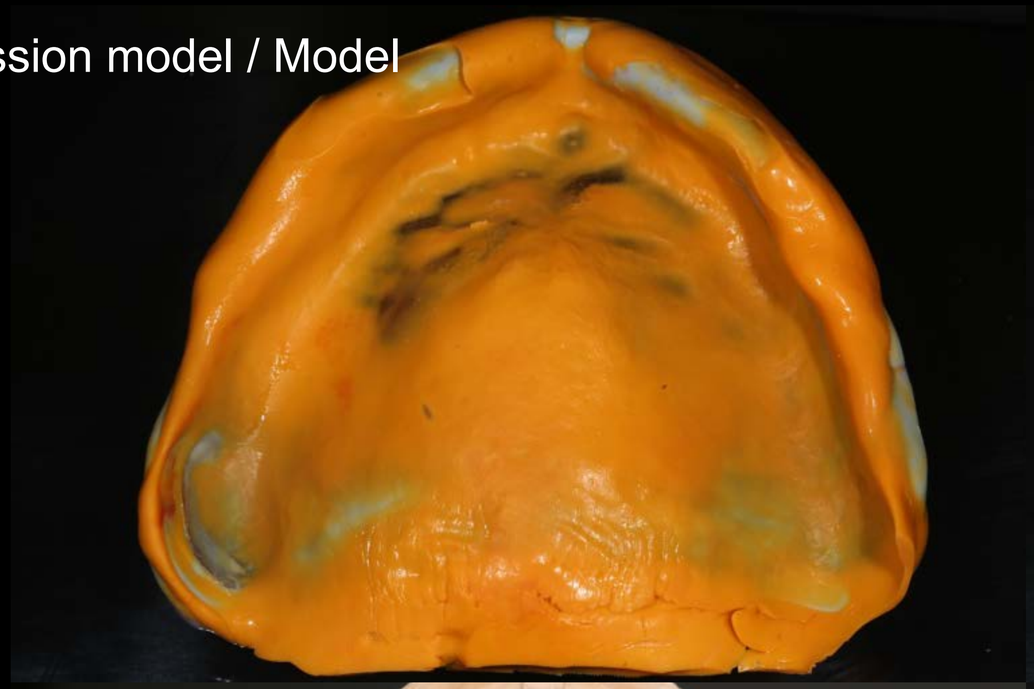


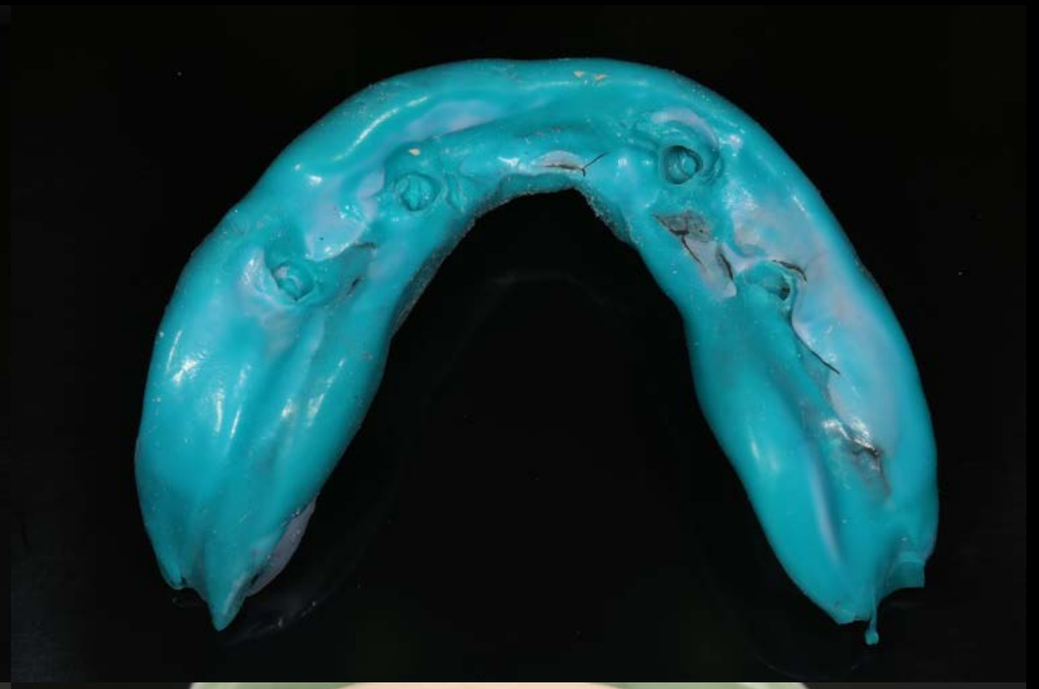


Provisional denture (2018-03-22)

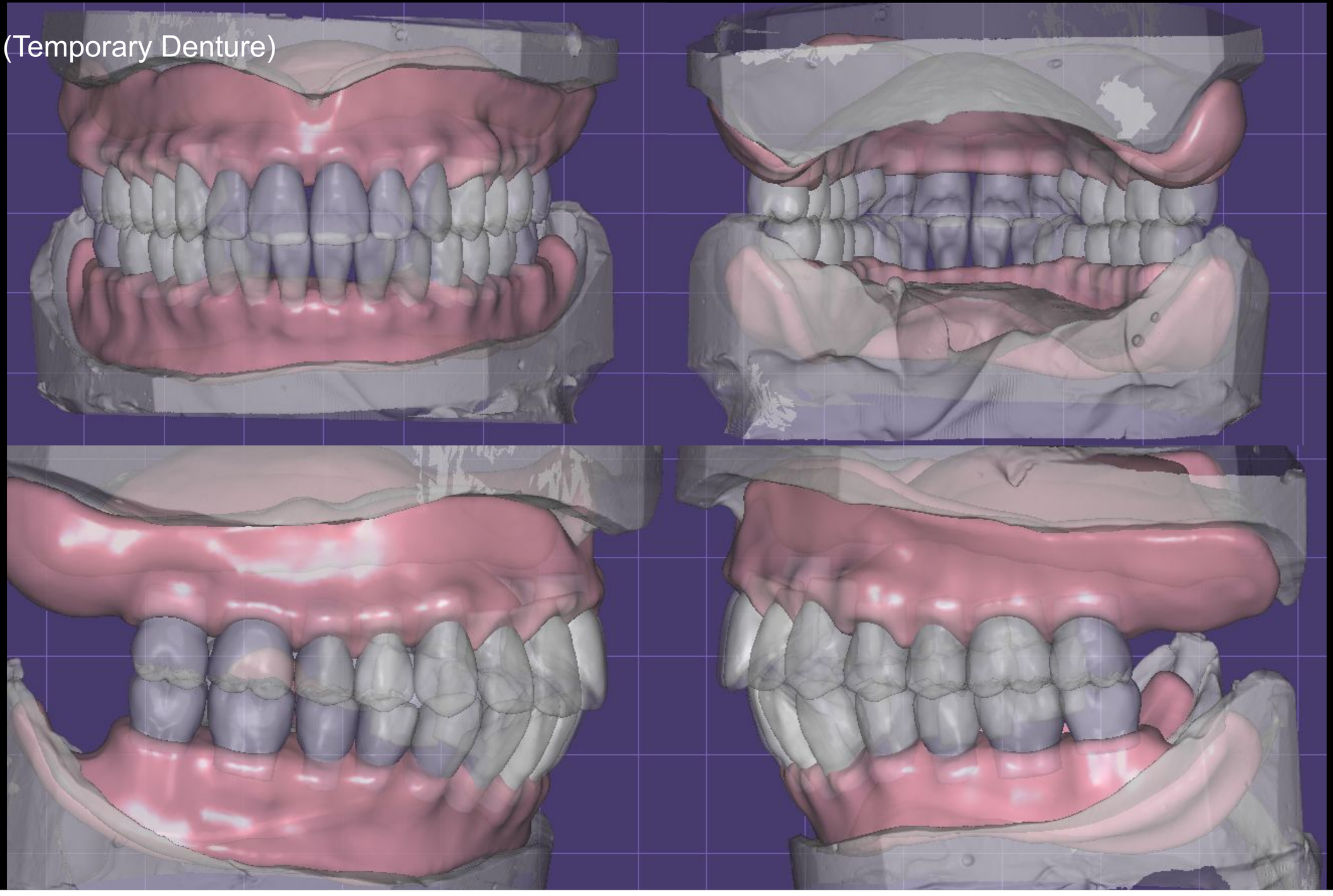
Denture Model

Impression model / Model

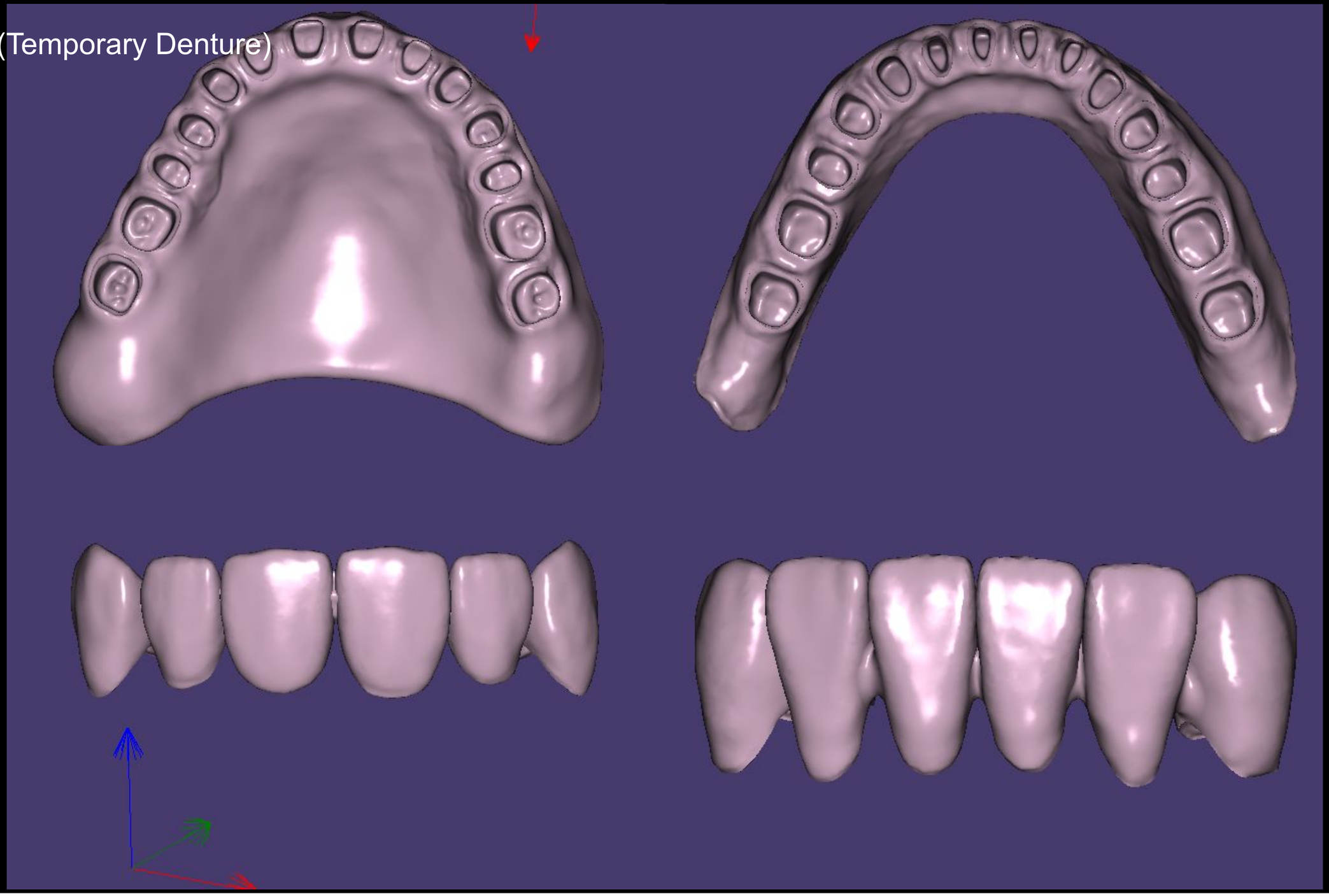




CAD (Temporary Denture)

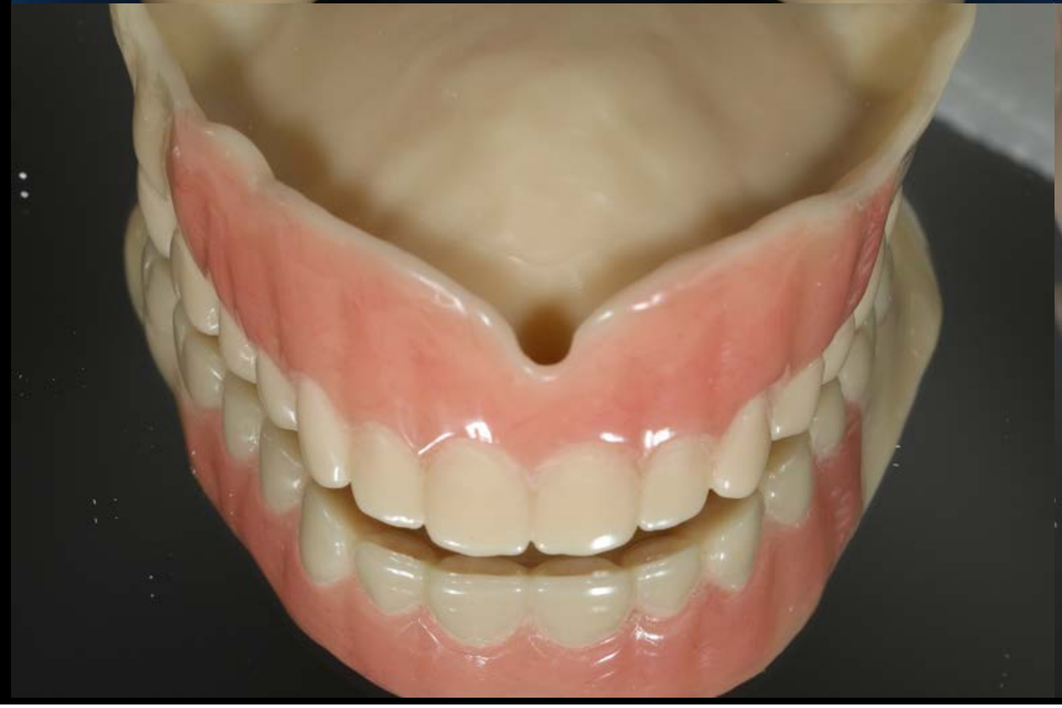


CAD (Temporary Denture)



Milling

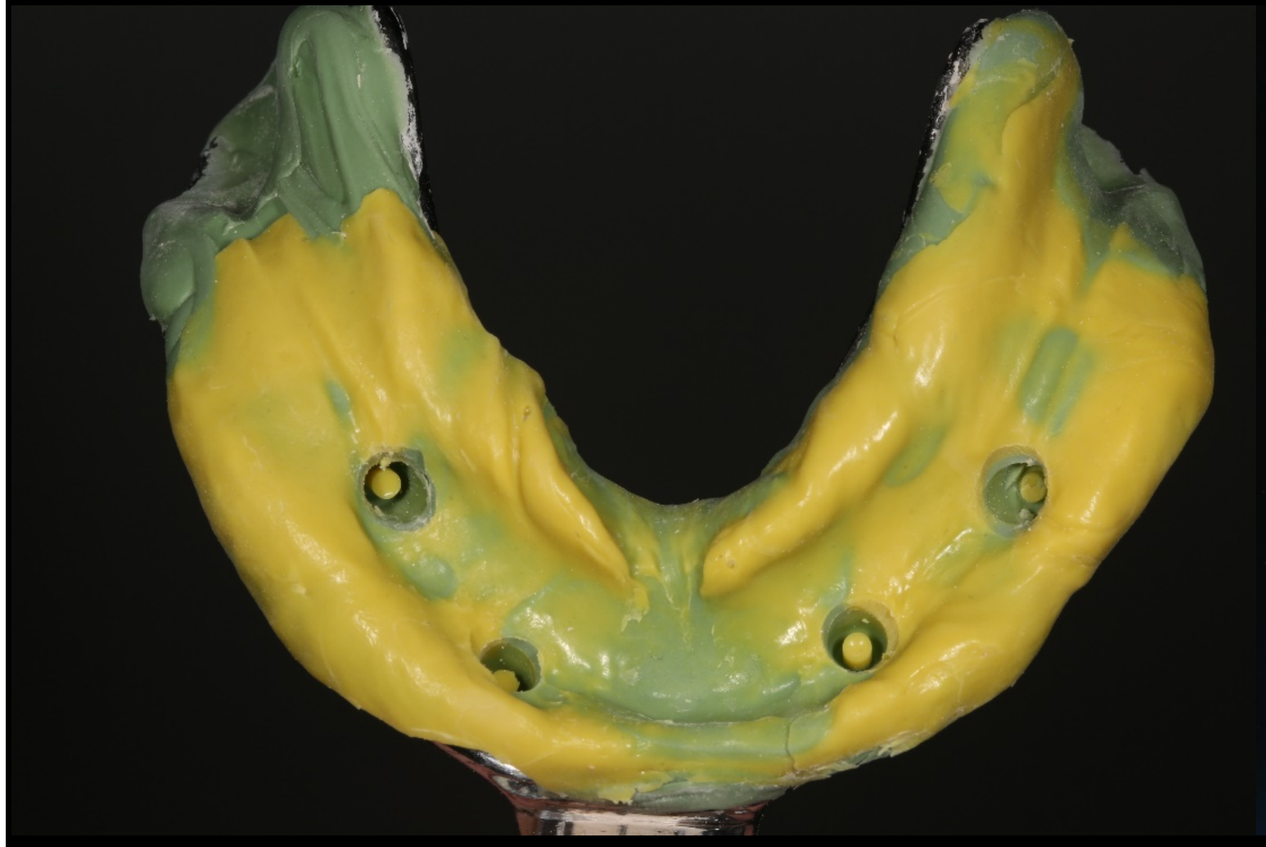
Pink resin adding



Provisional denture (2018-03-22)

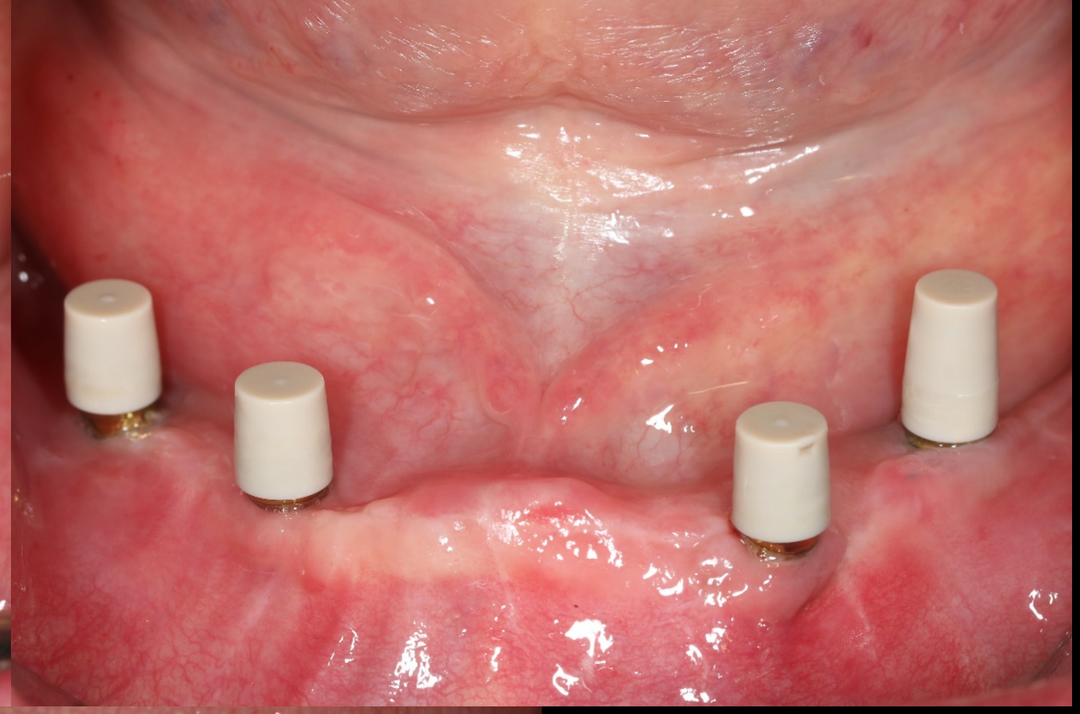
Provisional denture (2018-03-22)

Impression model / Model

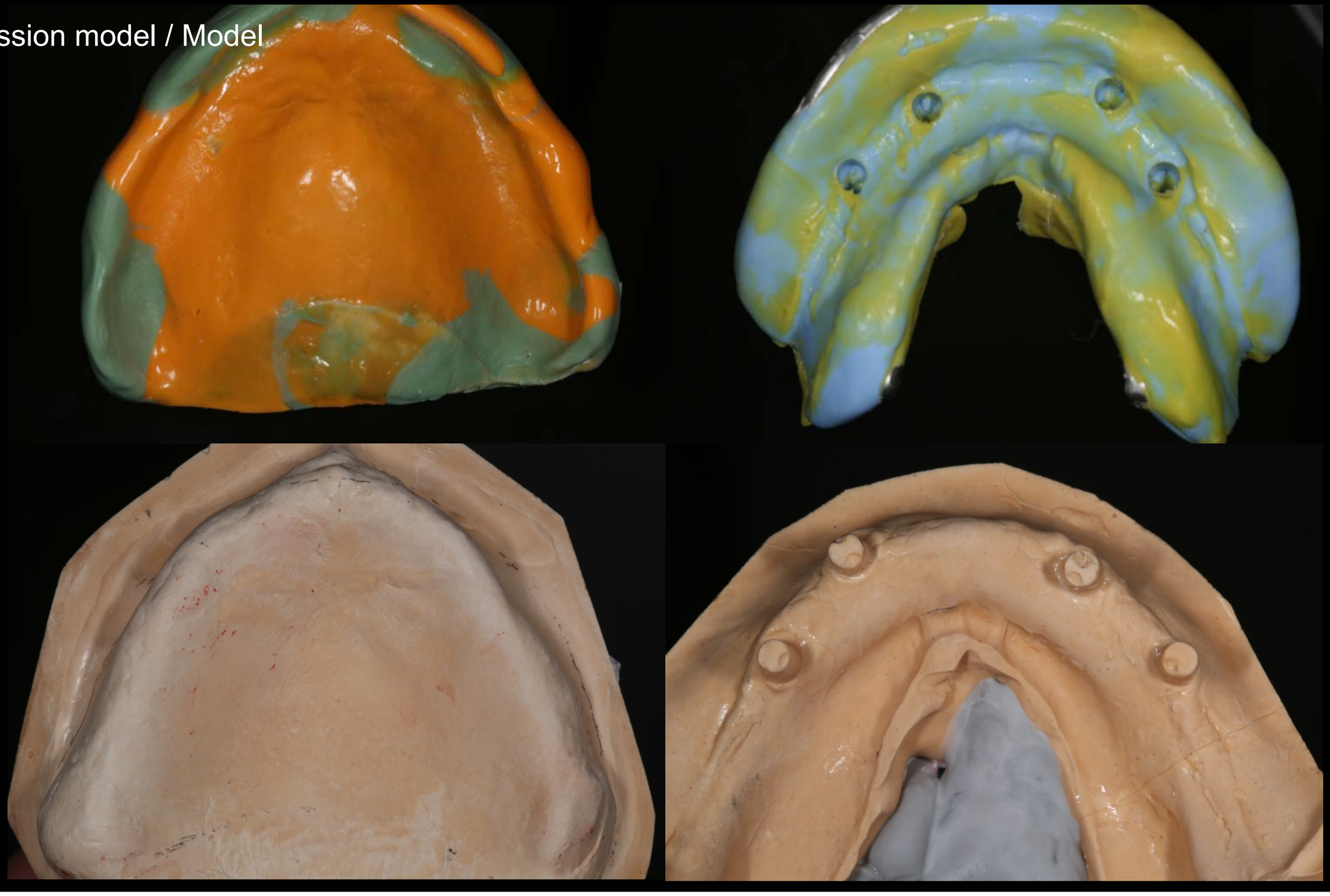


Abutment / Temporary

Provisional restoration (2018-05-23)

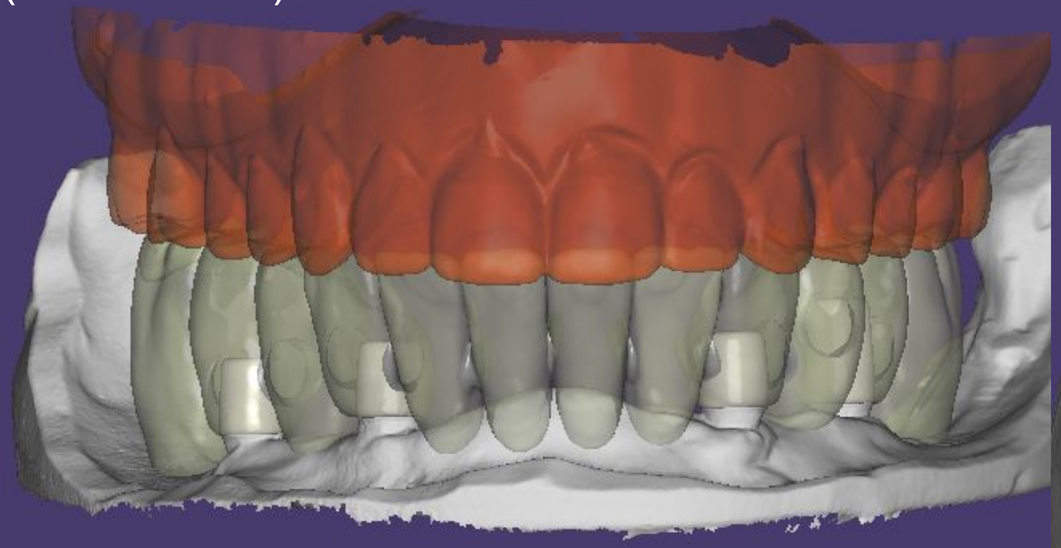


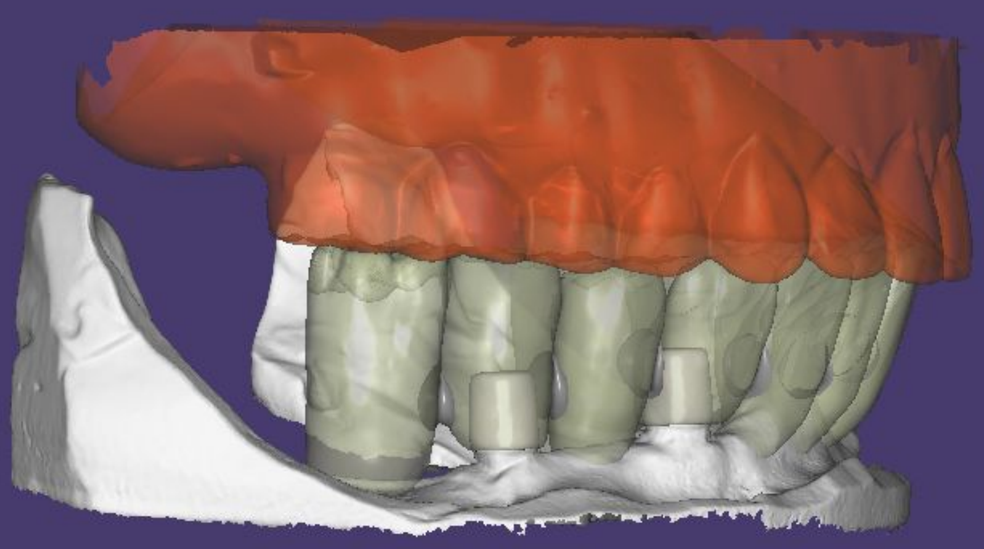
Impression model / Model

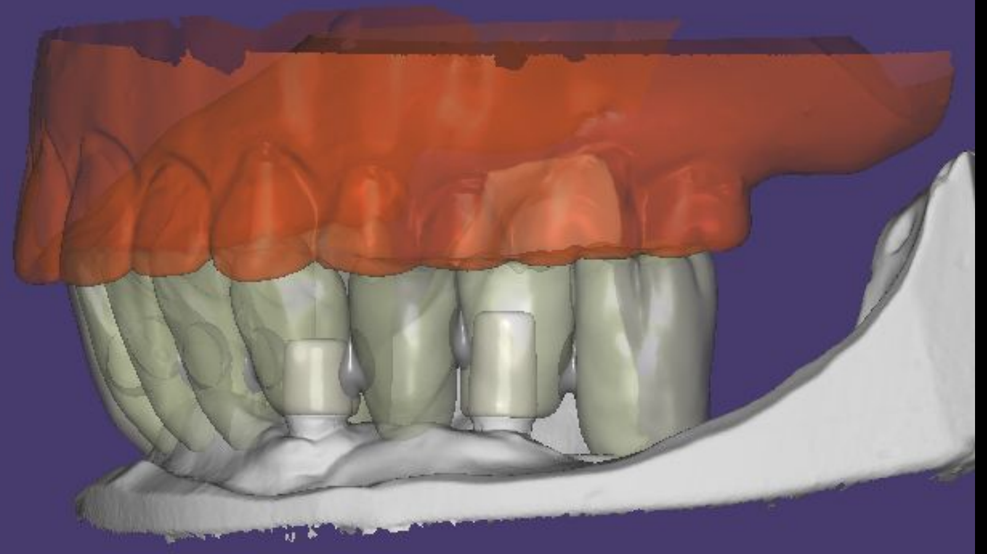


Wax Lim

CAD (Inner Crown)

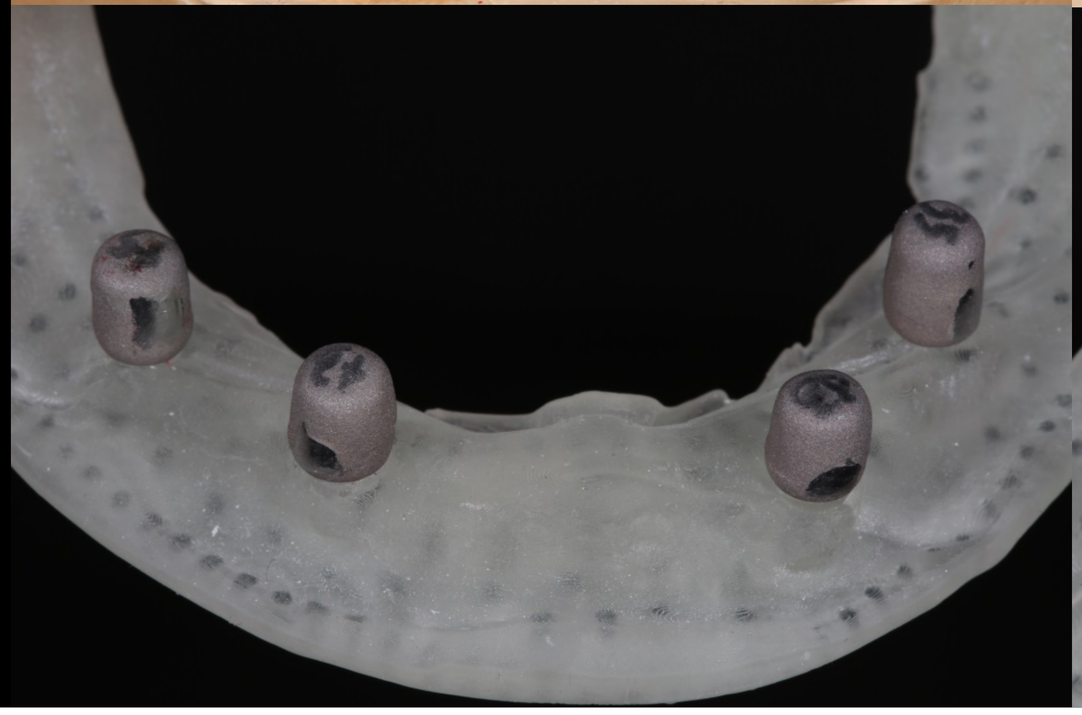






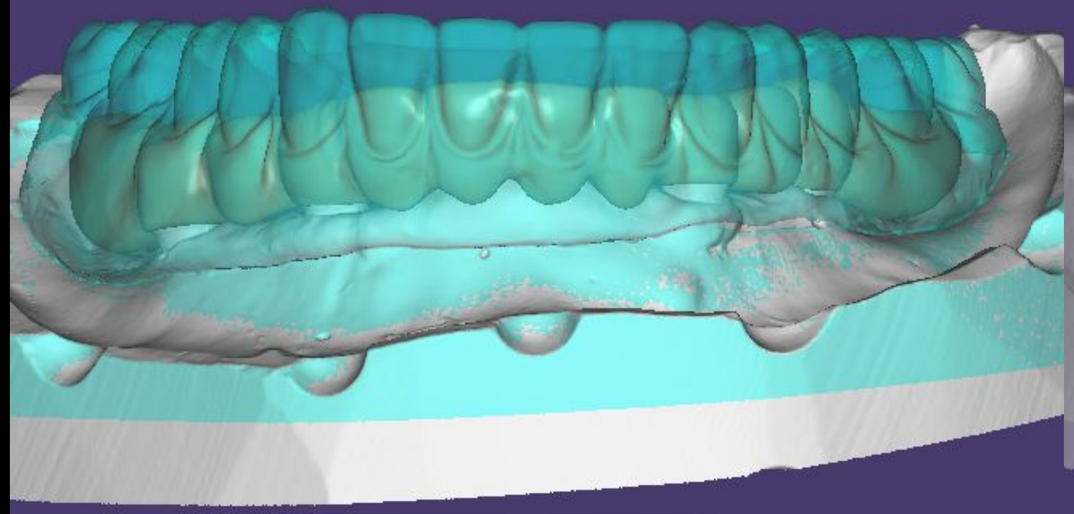
Inner Crown

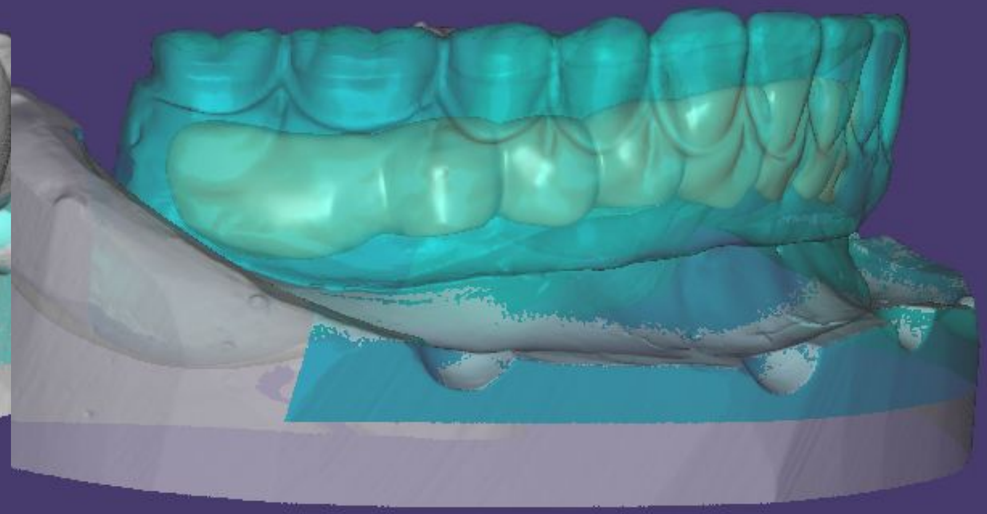
Titanium

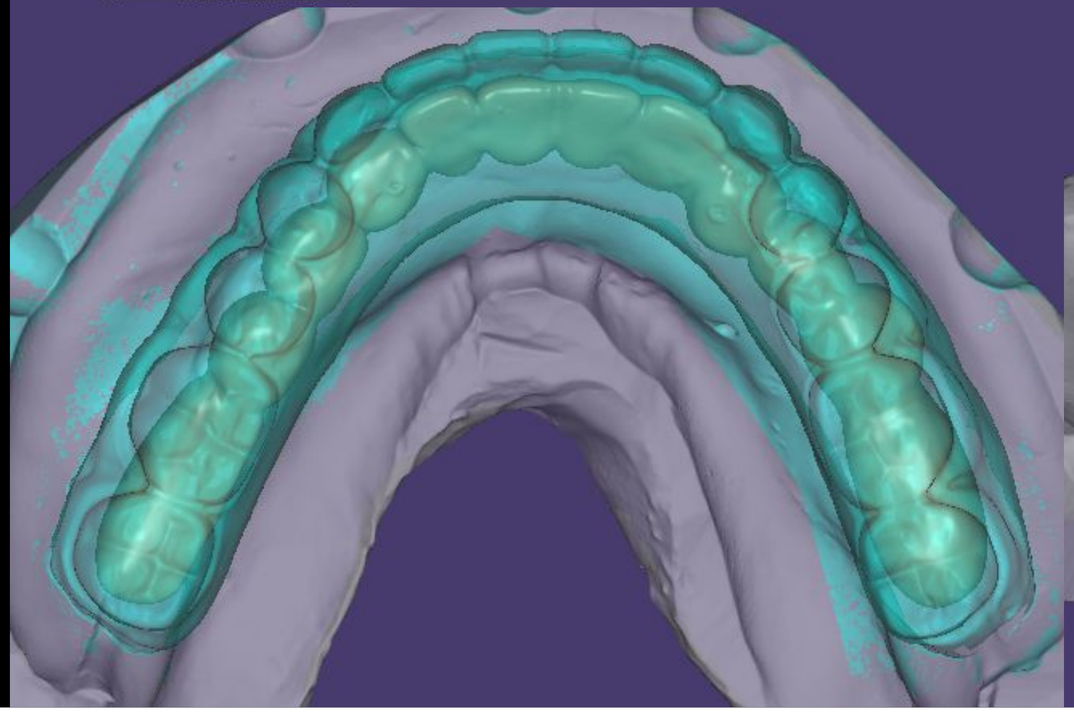


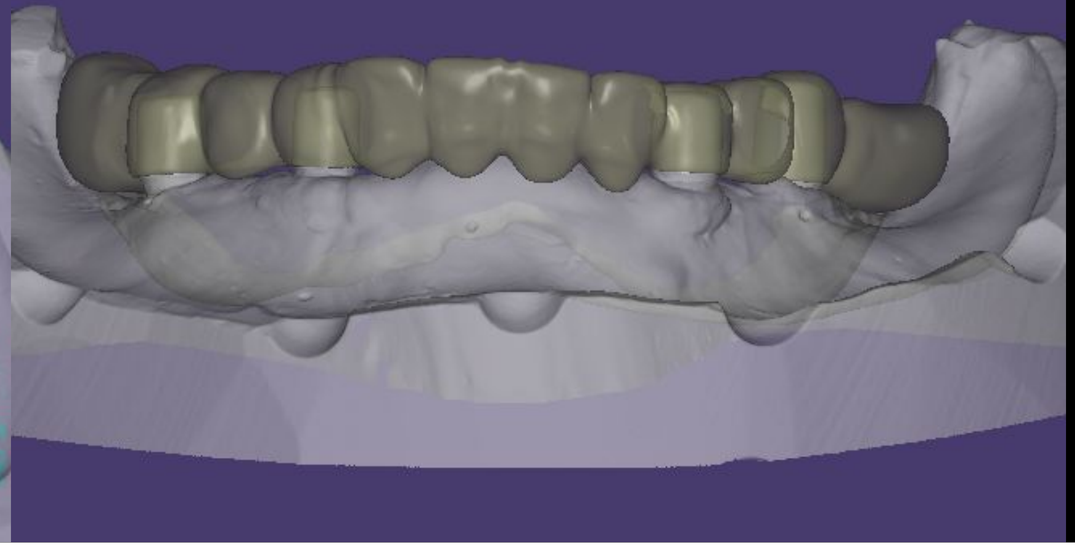
Cr-Co

CAD (Final Denture)









Pekkton Frame

Resin Curing

Final Denture

Final Denture (2018-10-17)

Final Denture (2018-10-17)

Follow up : 1 year 4 months (2019-06-24)

Follow up : 1 year 7 months (2019-09-19)

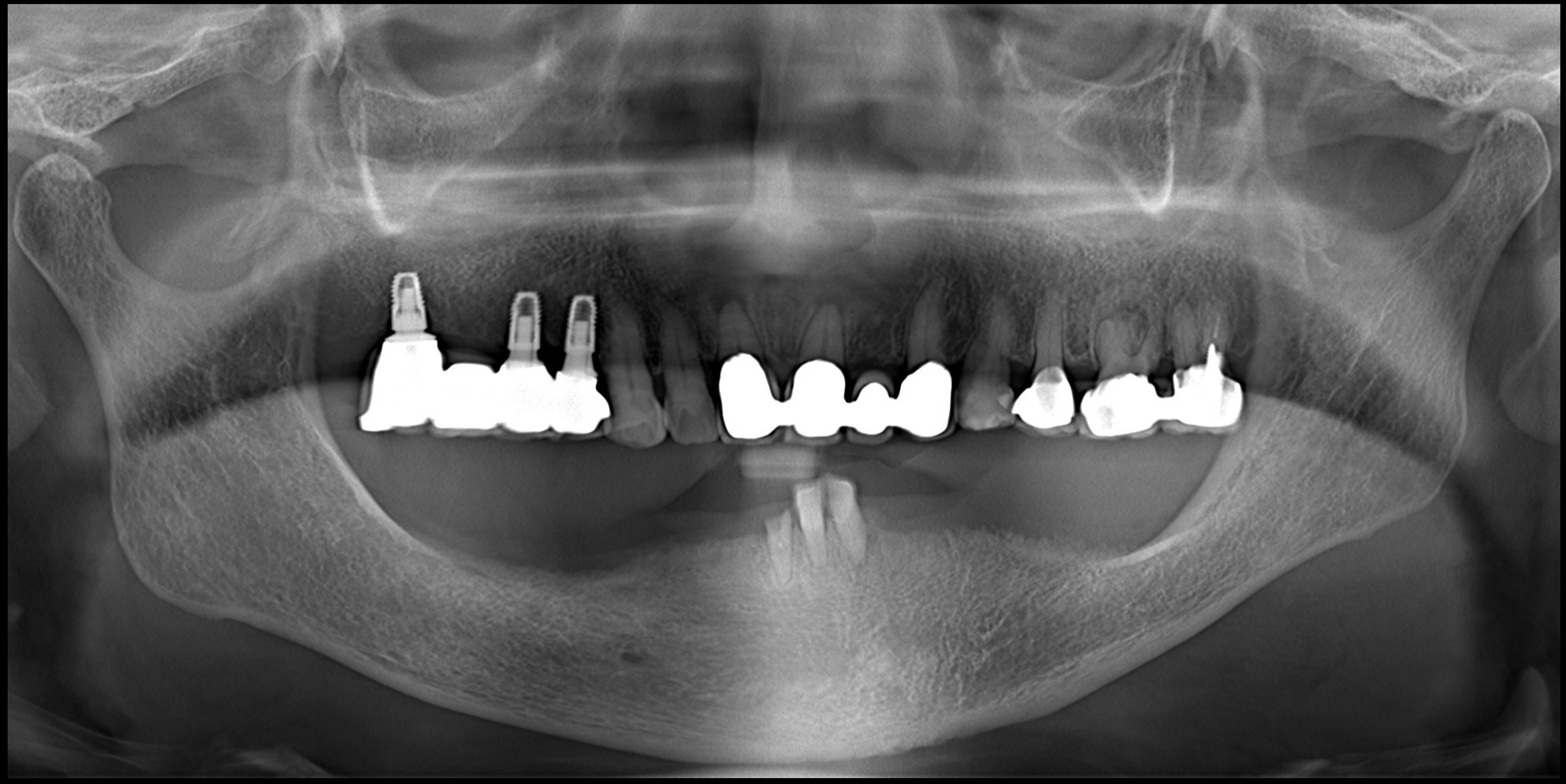
Follow up : 4 year 8 months (2022-11-05)

Extraction & Implantation in Full mouth case (Mandible)

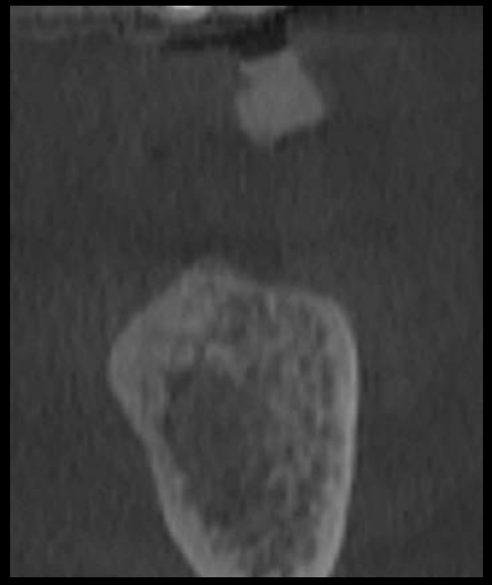
(NR Line, OSTEON™ 3 Collagen, Collagen Membrane, Collagen Graft, Digital Guide(F))

Case 3

Pre-op (2019-04-24)

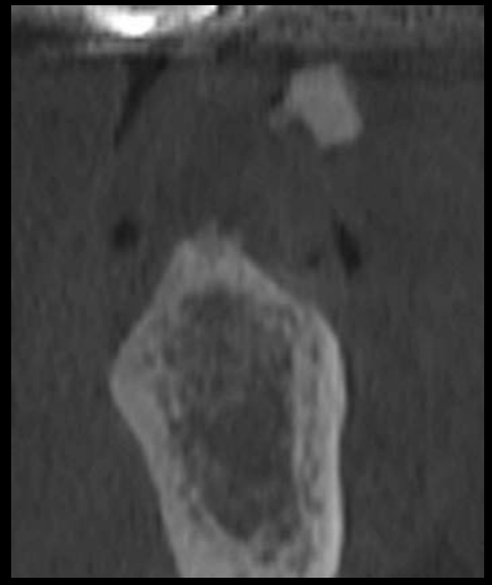


Pre-op (2019-05-09)

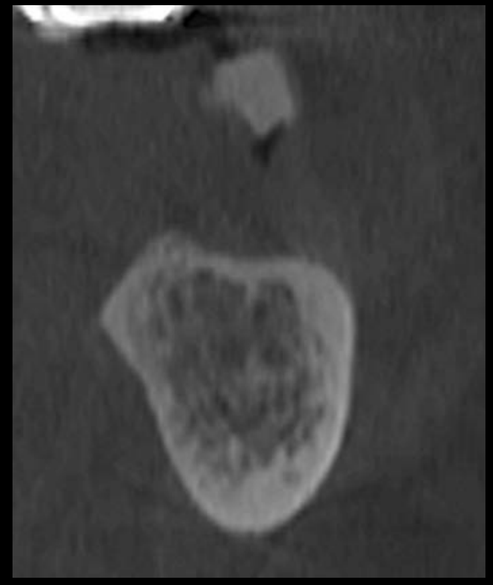


#46

#44

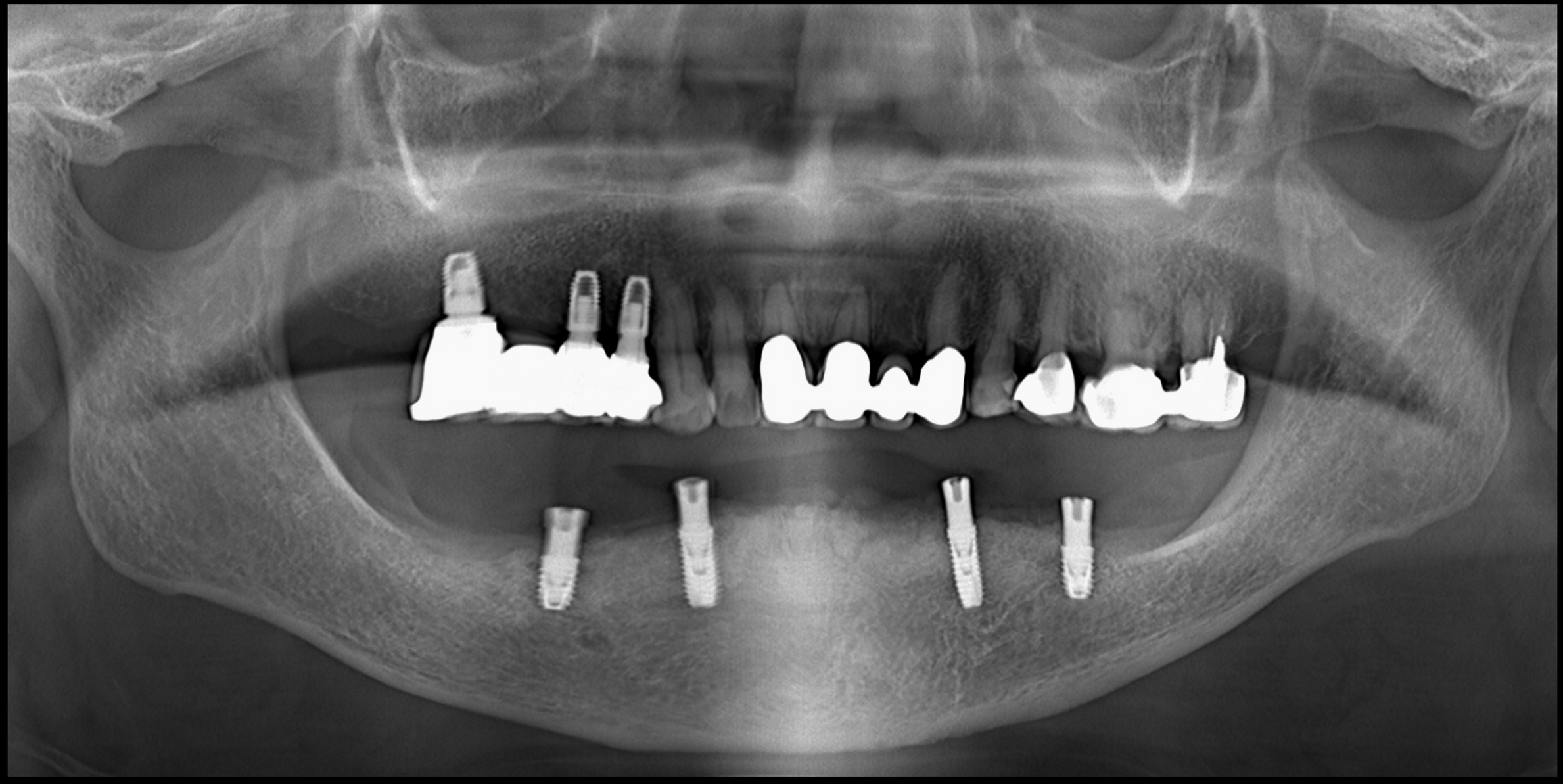


#34

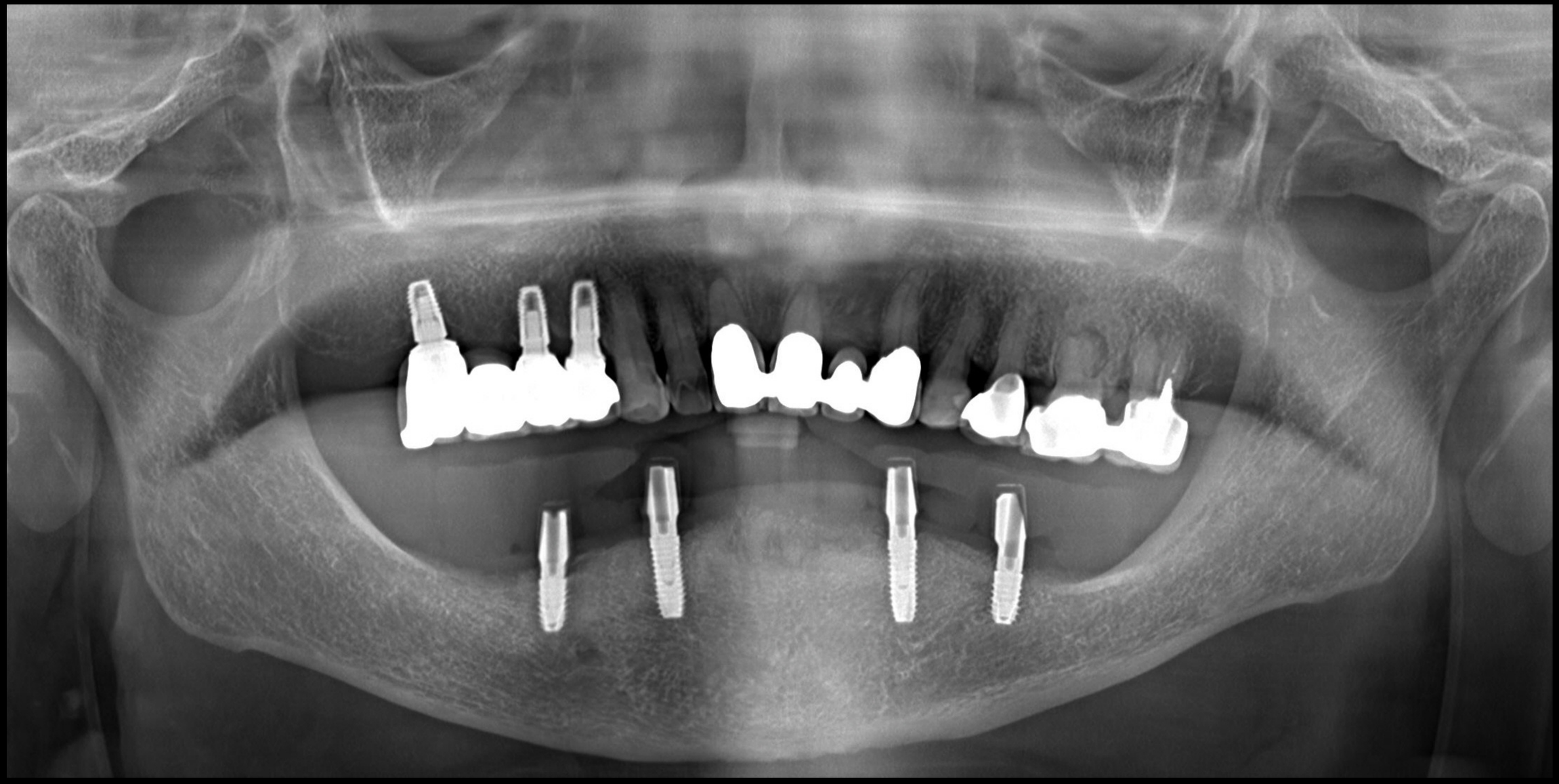


#36

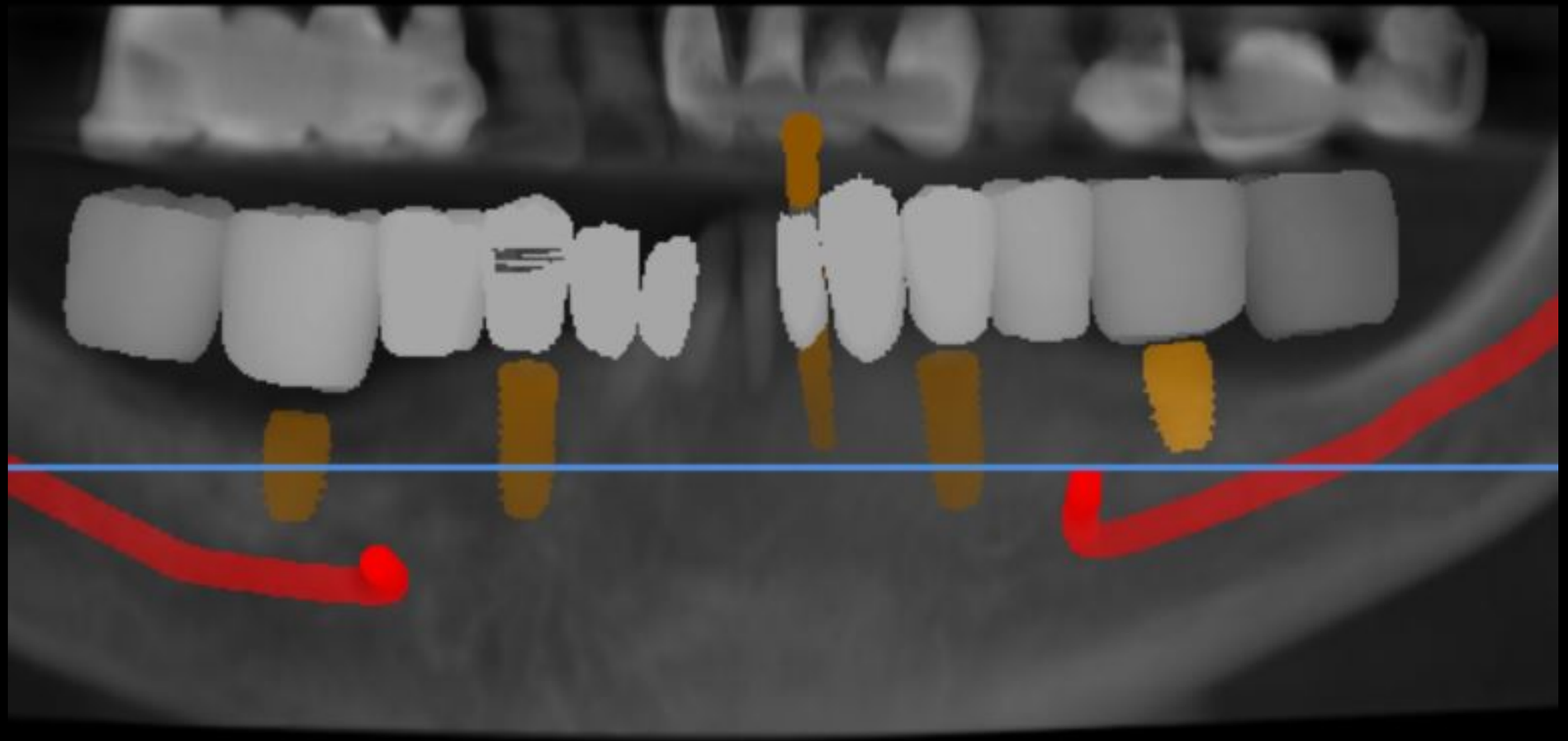
Post-op (2019-05-22)



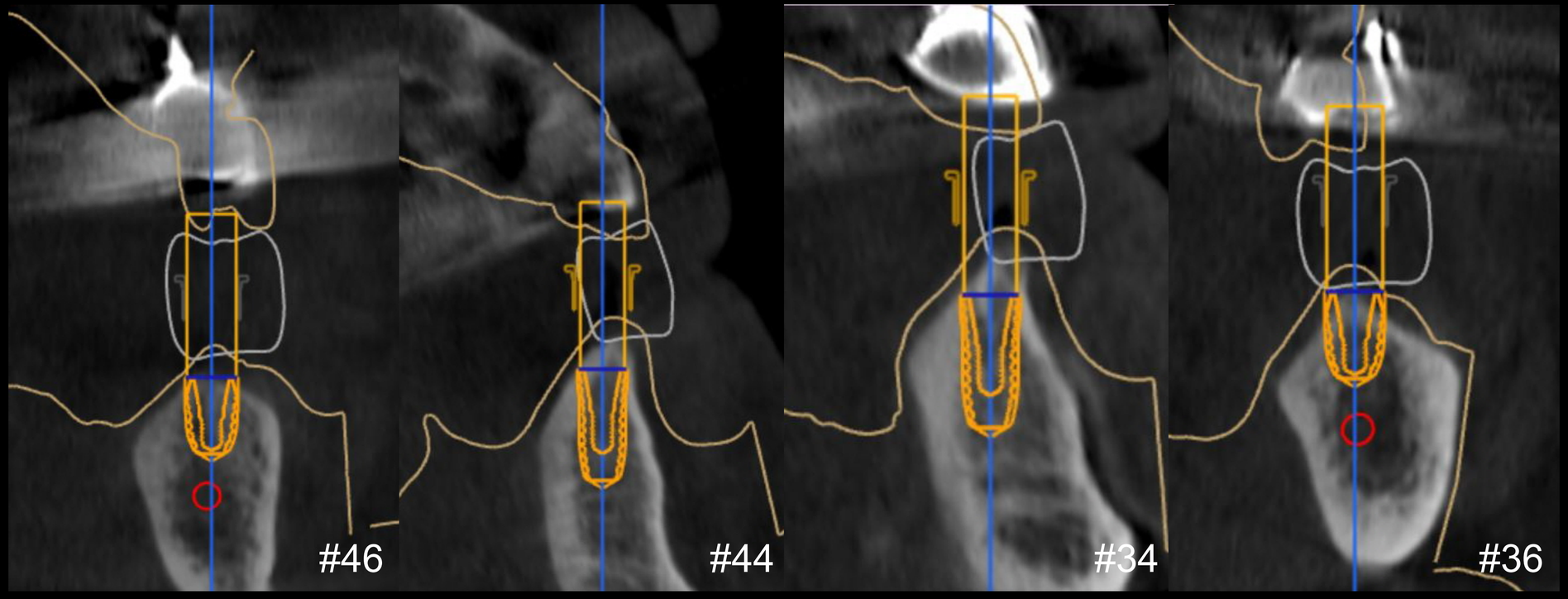
Provisional restoration : 2 months (2019-08-14)



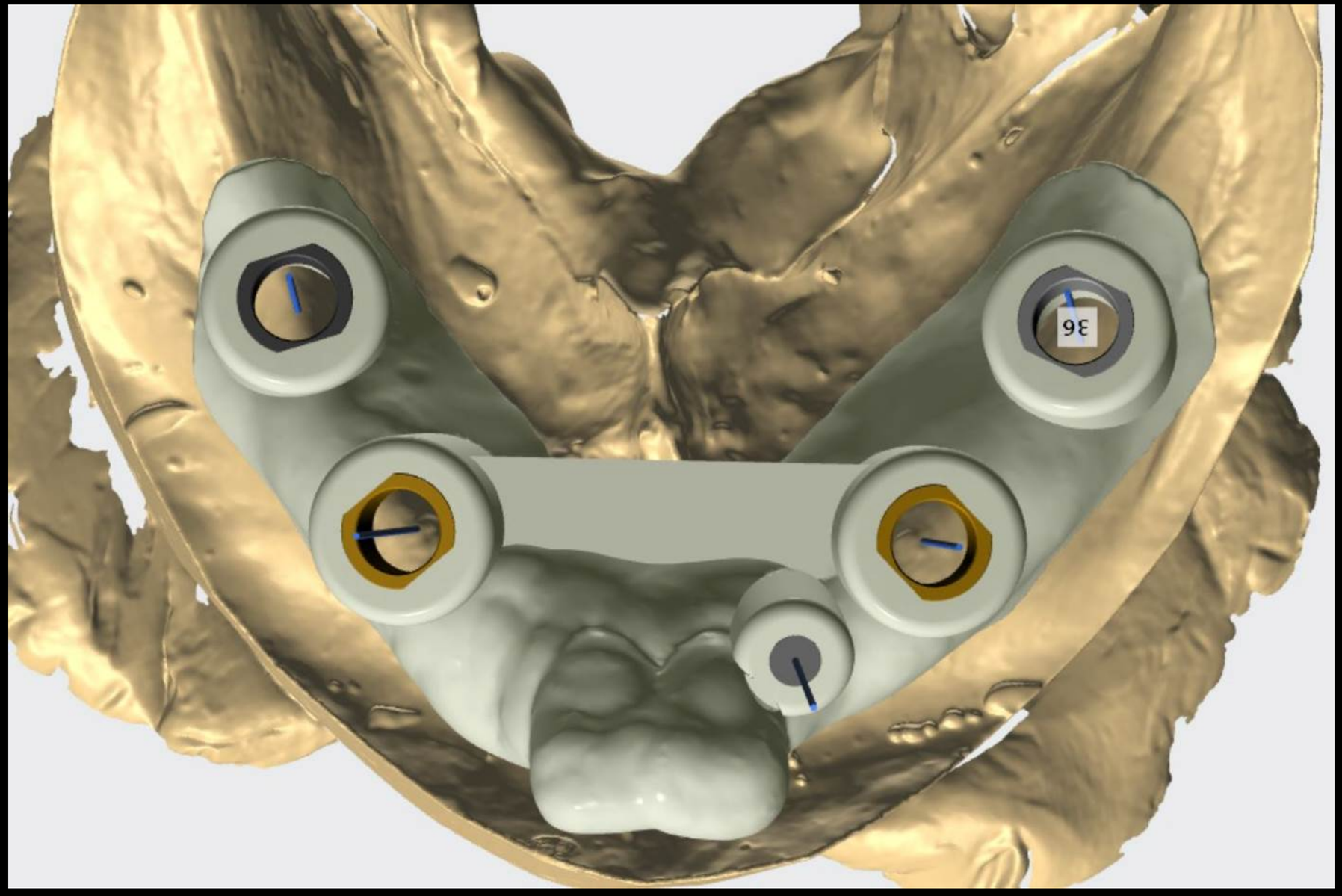
Implant Planning



Implant Planning



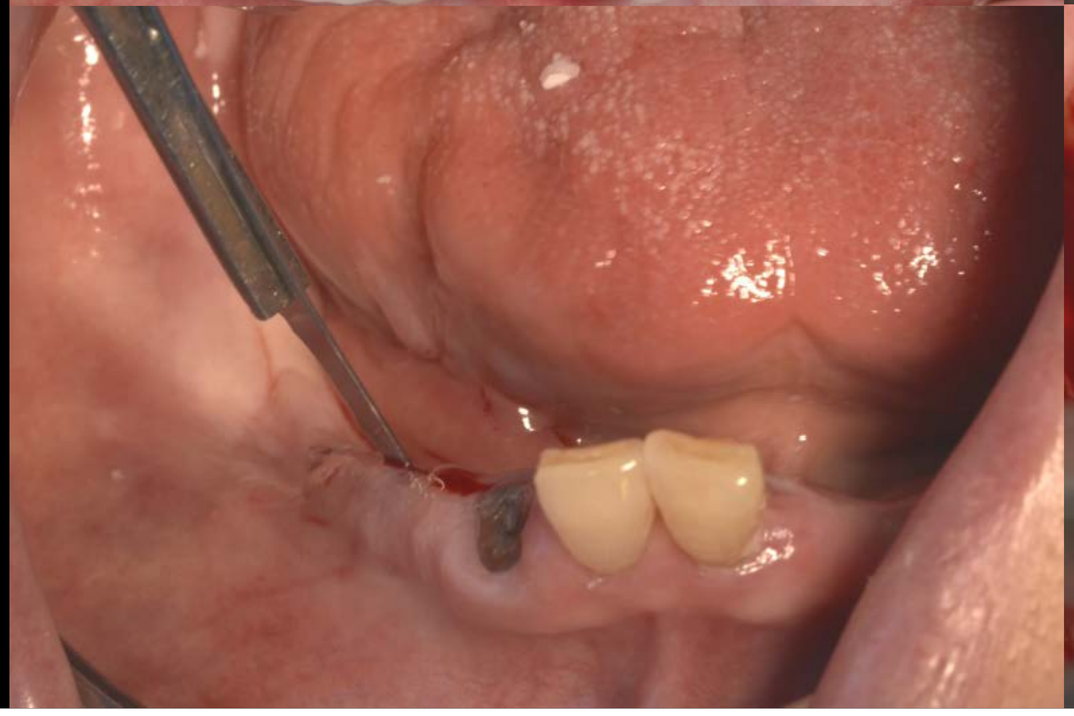
Stent Design

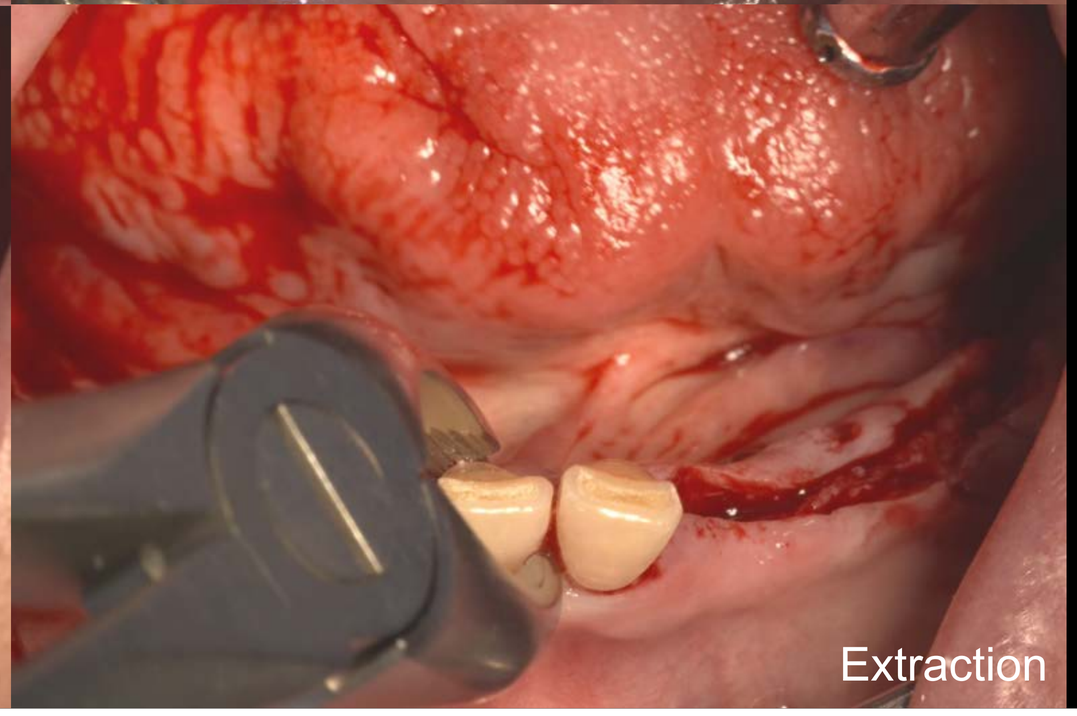


Pre-op (2019-05-22)

Surgery (2019-05-22)

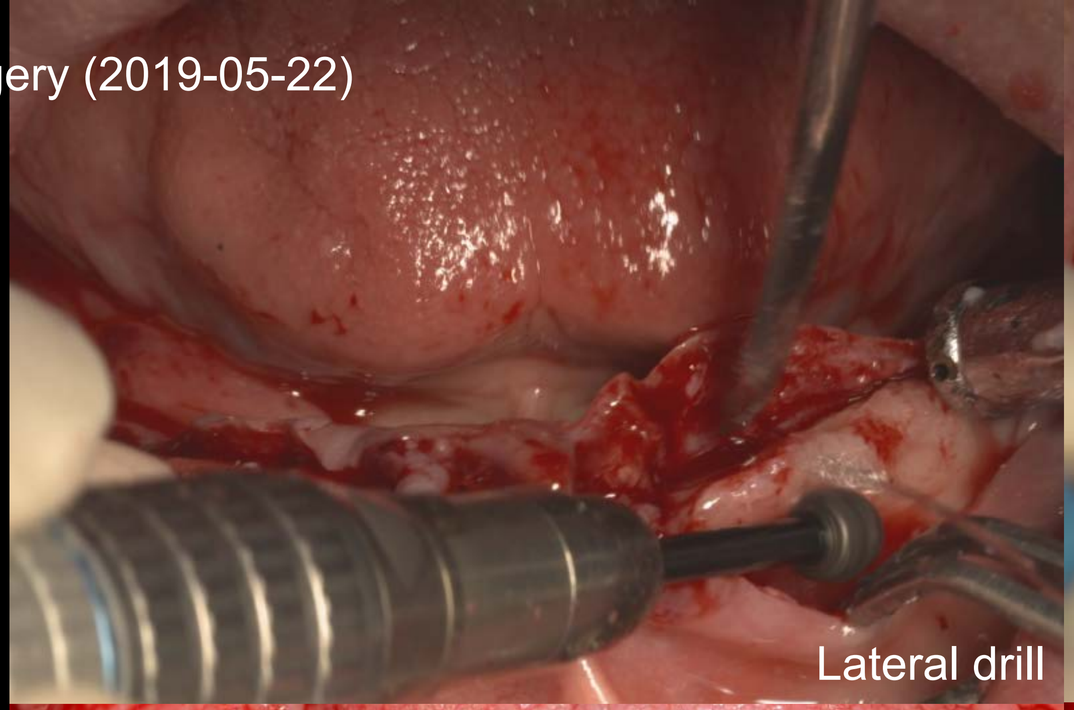
Digital Guide (Full Kit)





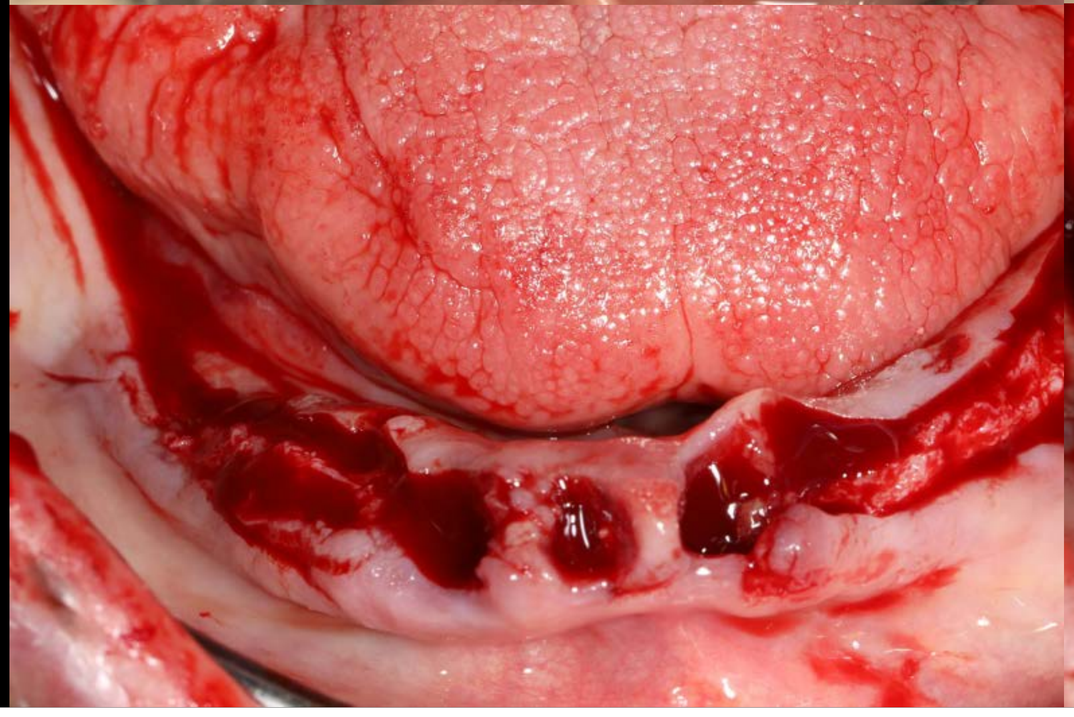
Extraction

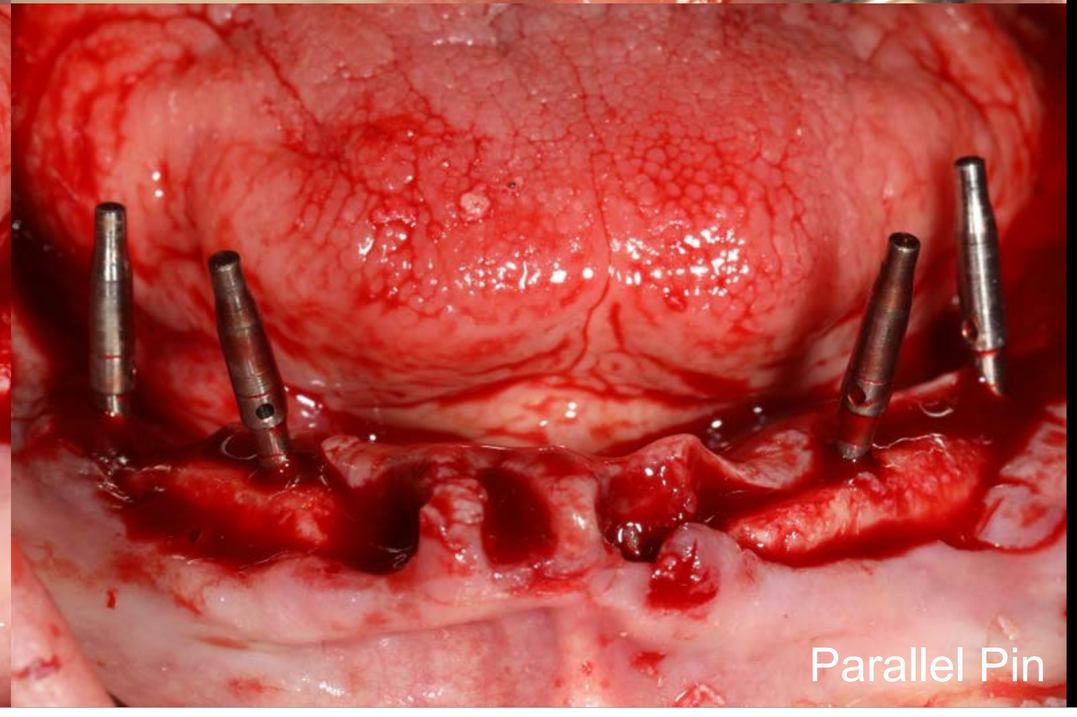
Surgery (2019-05-22)



Lateral drill

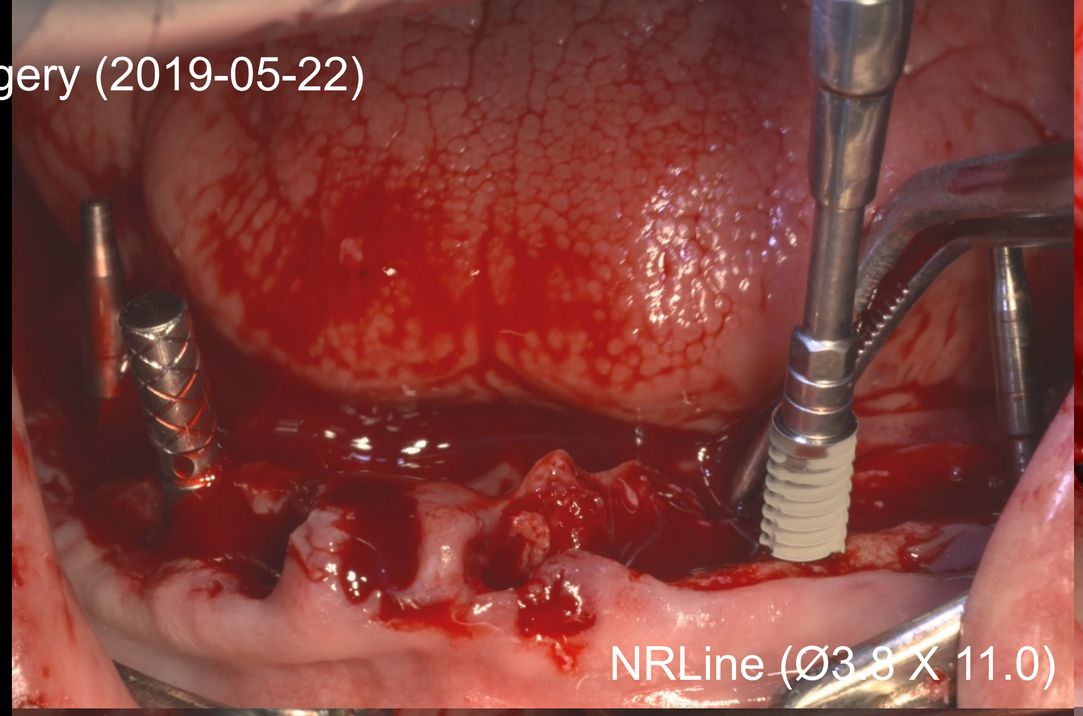
Tetracycline



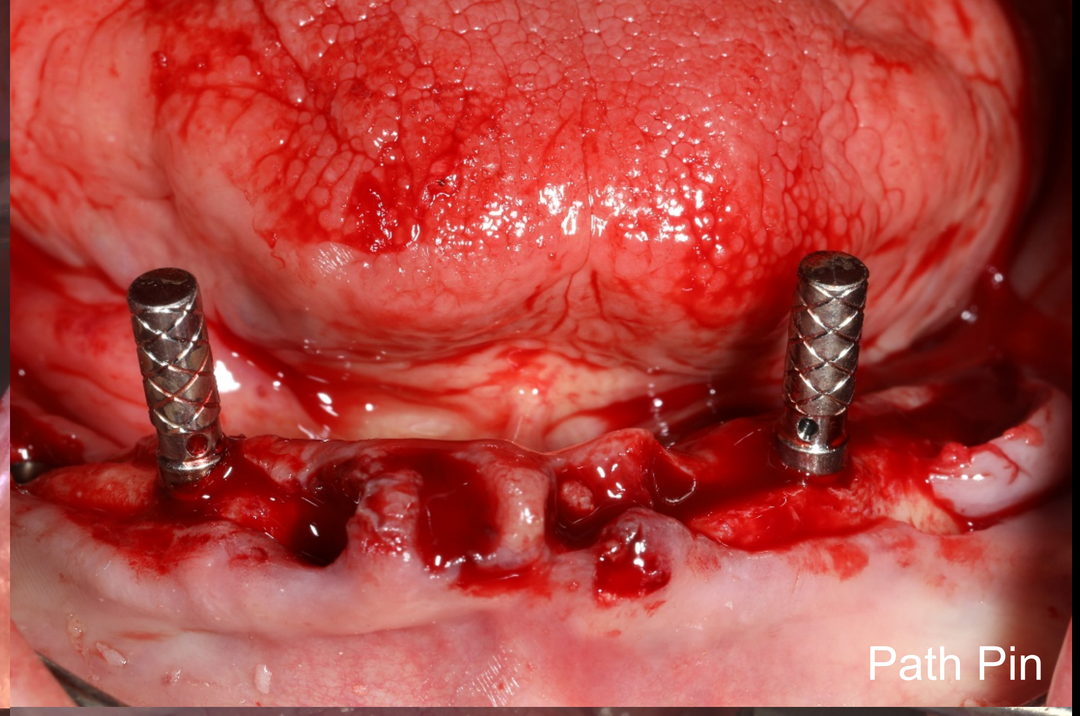


Parallel Pin

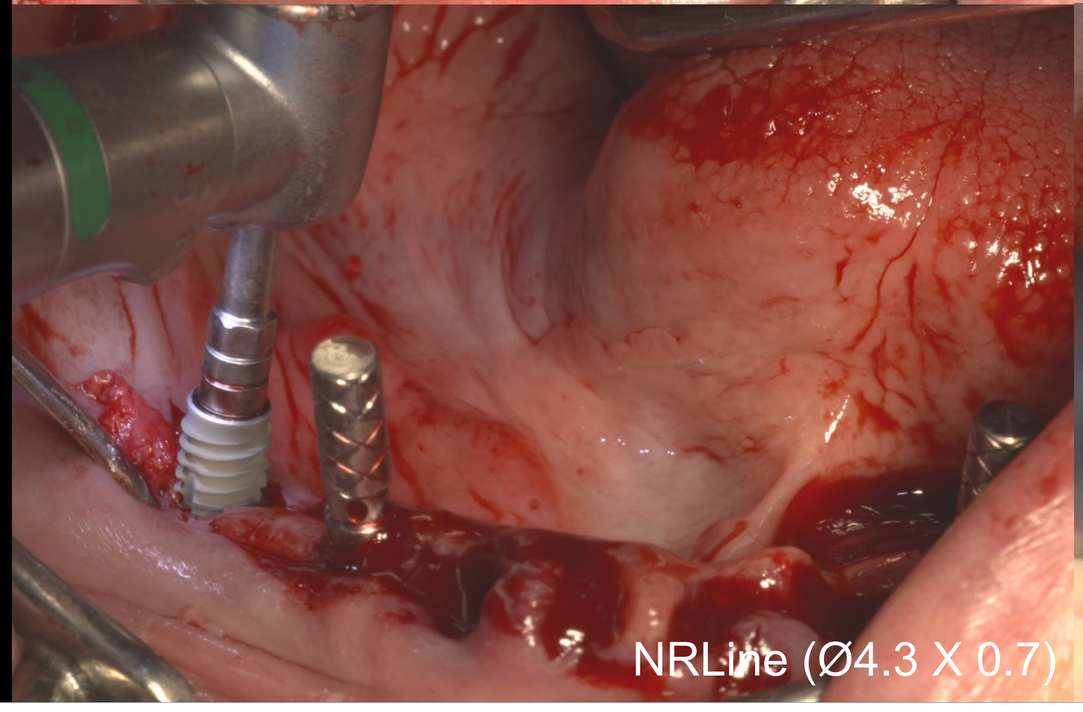
Surgery (2019-05-22)



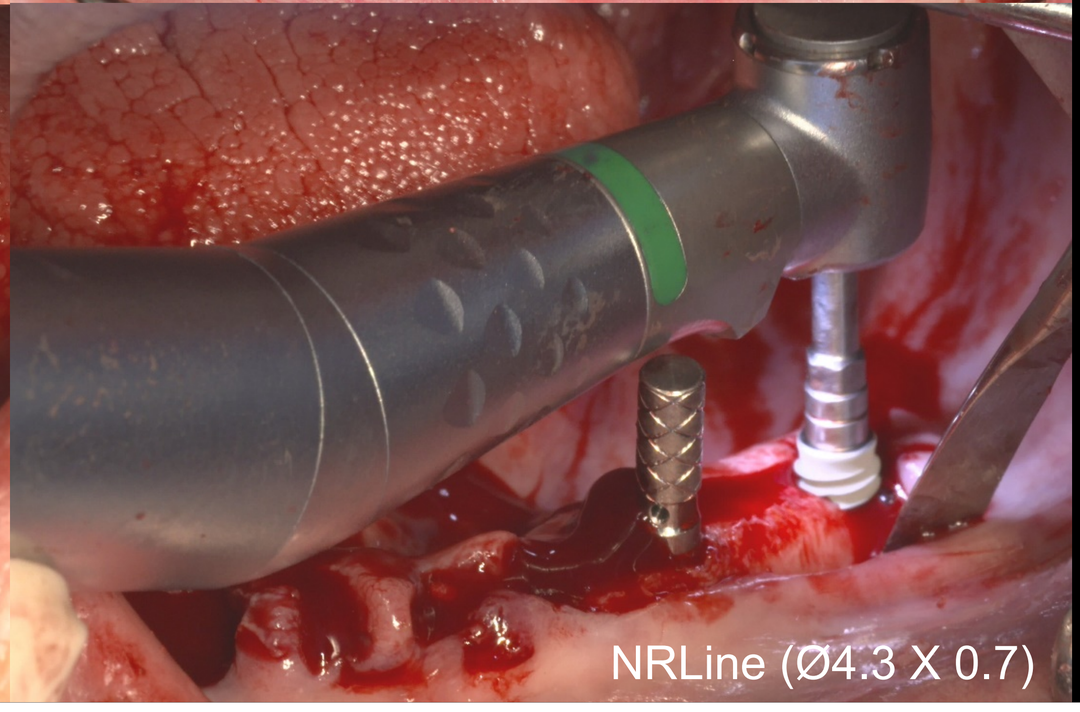
NRLine (Ø3.8 X 11.0)



Path Pin



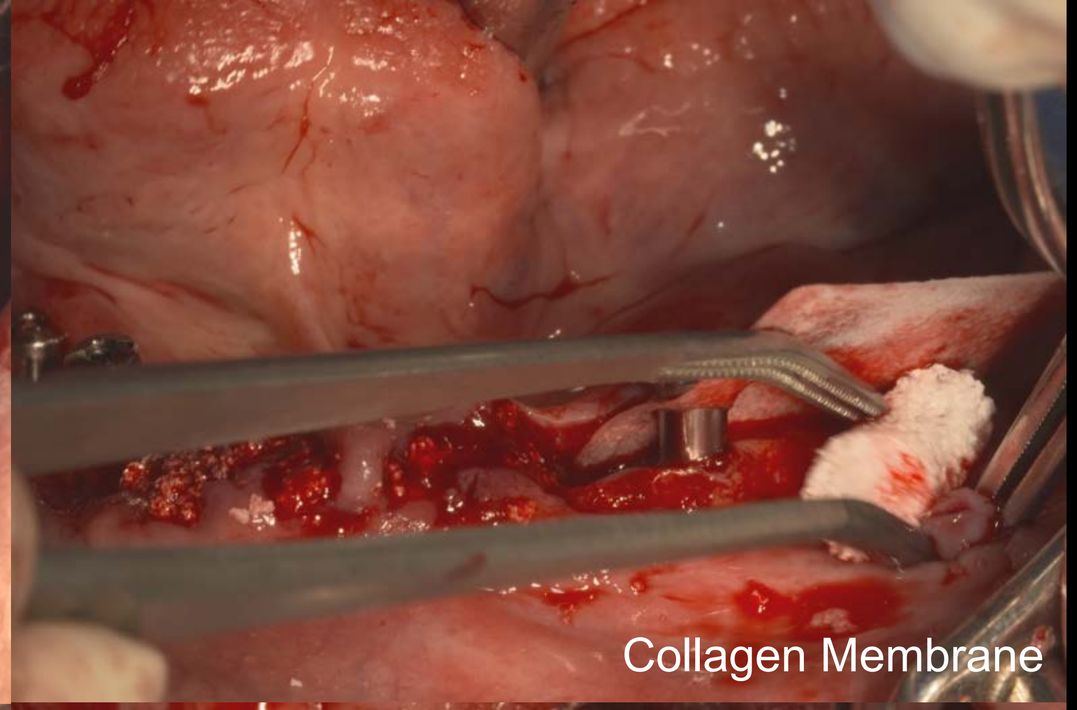
NRLine (Ø4.3 X 0.7)



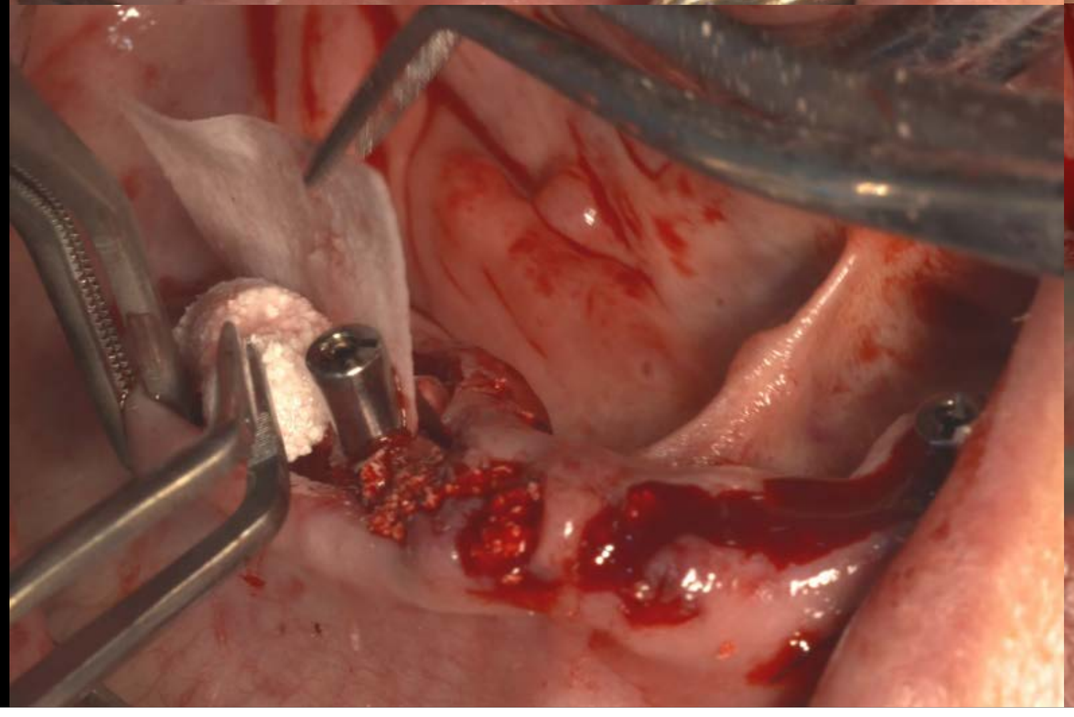
NRLine (Ø4.3 X 0.7)

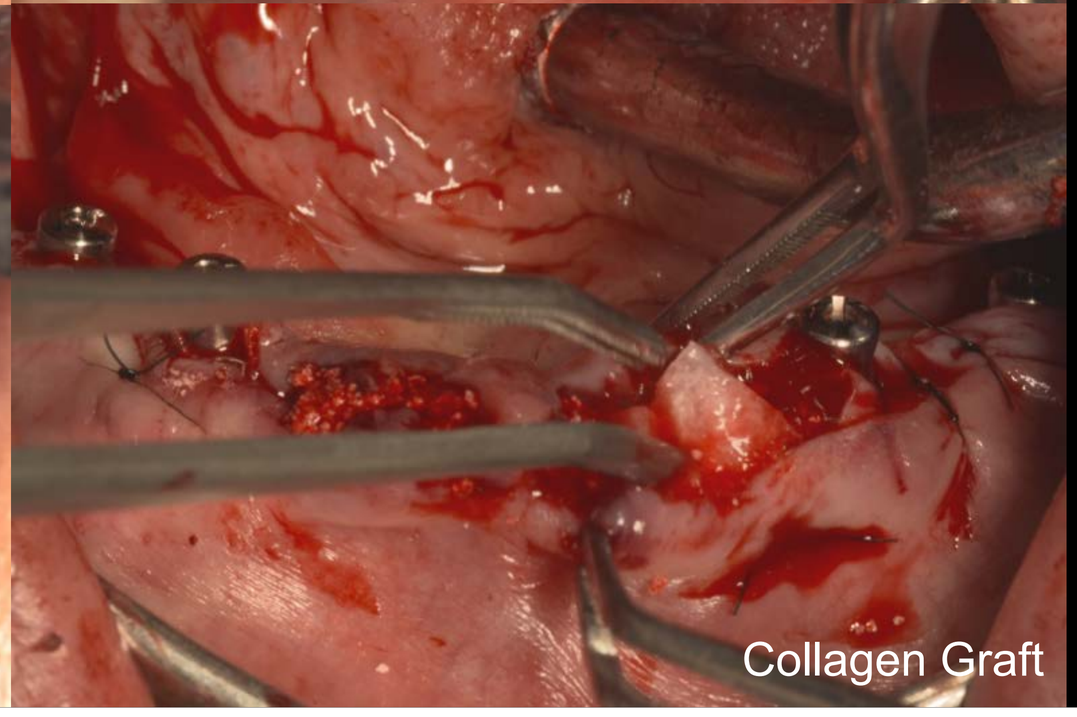
Surgery (2019-05-22)

OSTEON™ 3 Collagen



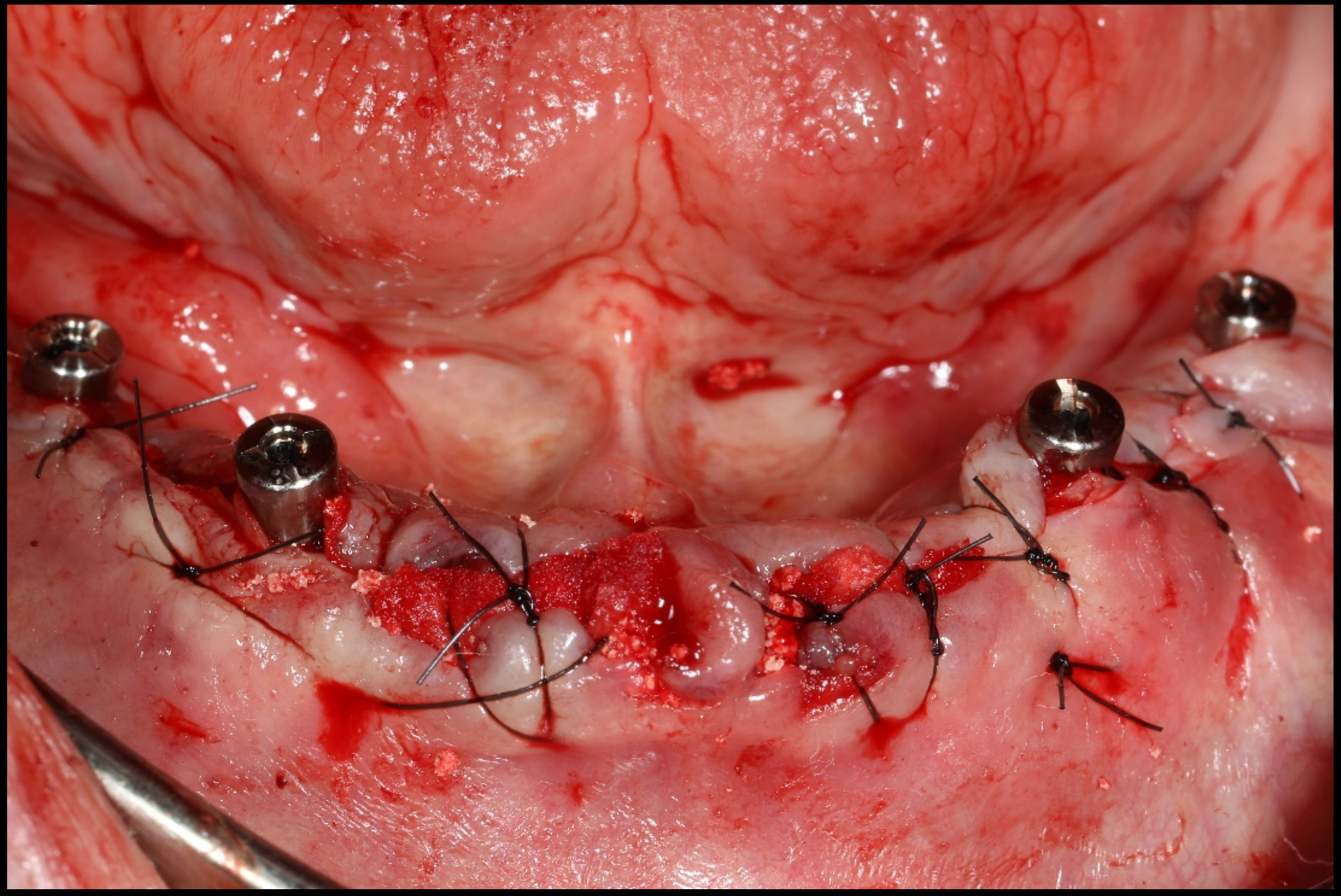
Collagen Membrane





Collagen Graft

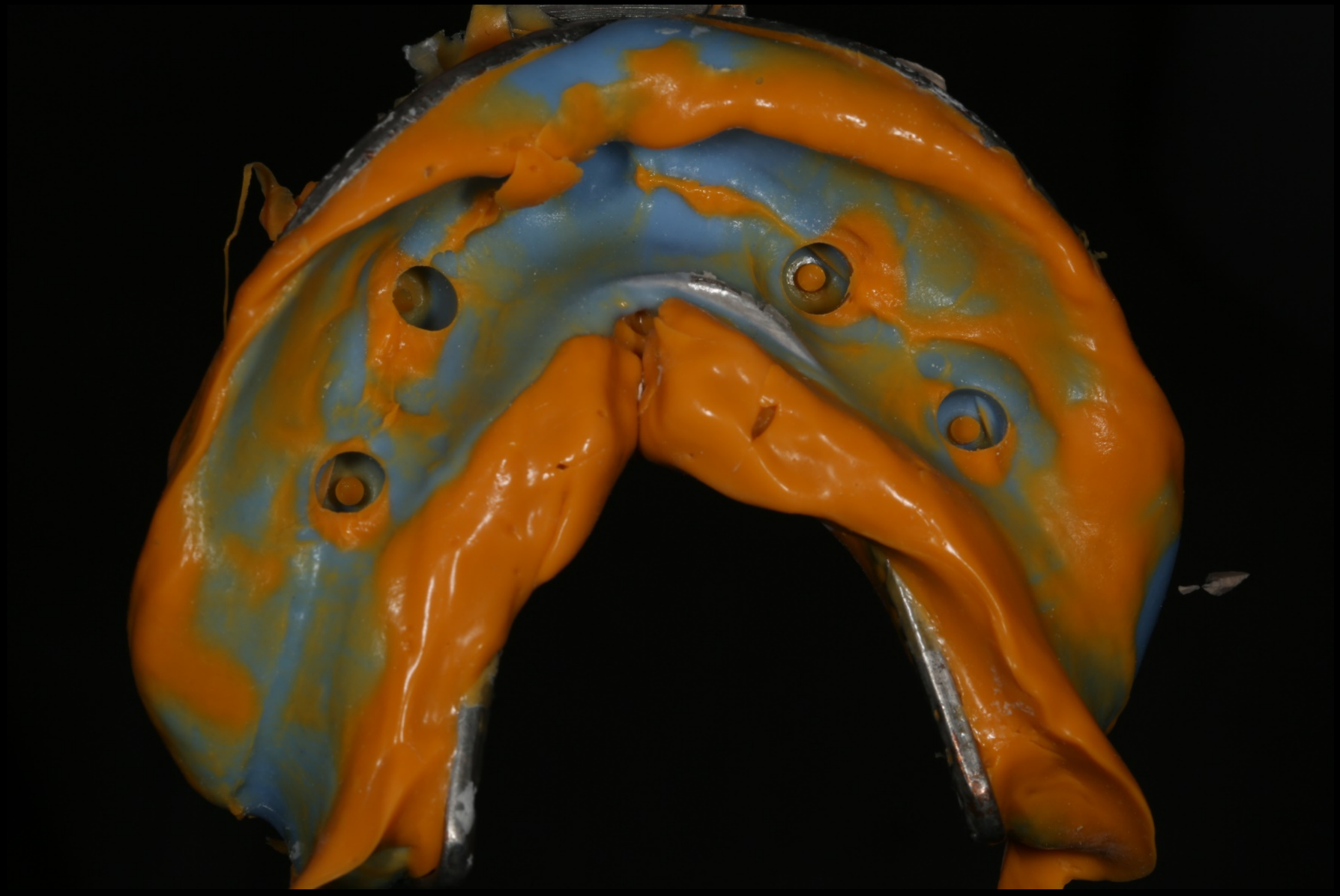
Post-op (2019-05-22)



Healing : 2 weeks (2019-06-05)

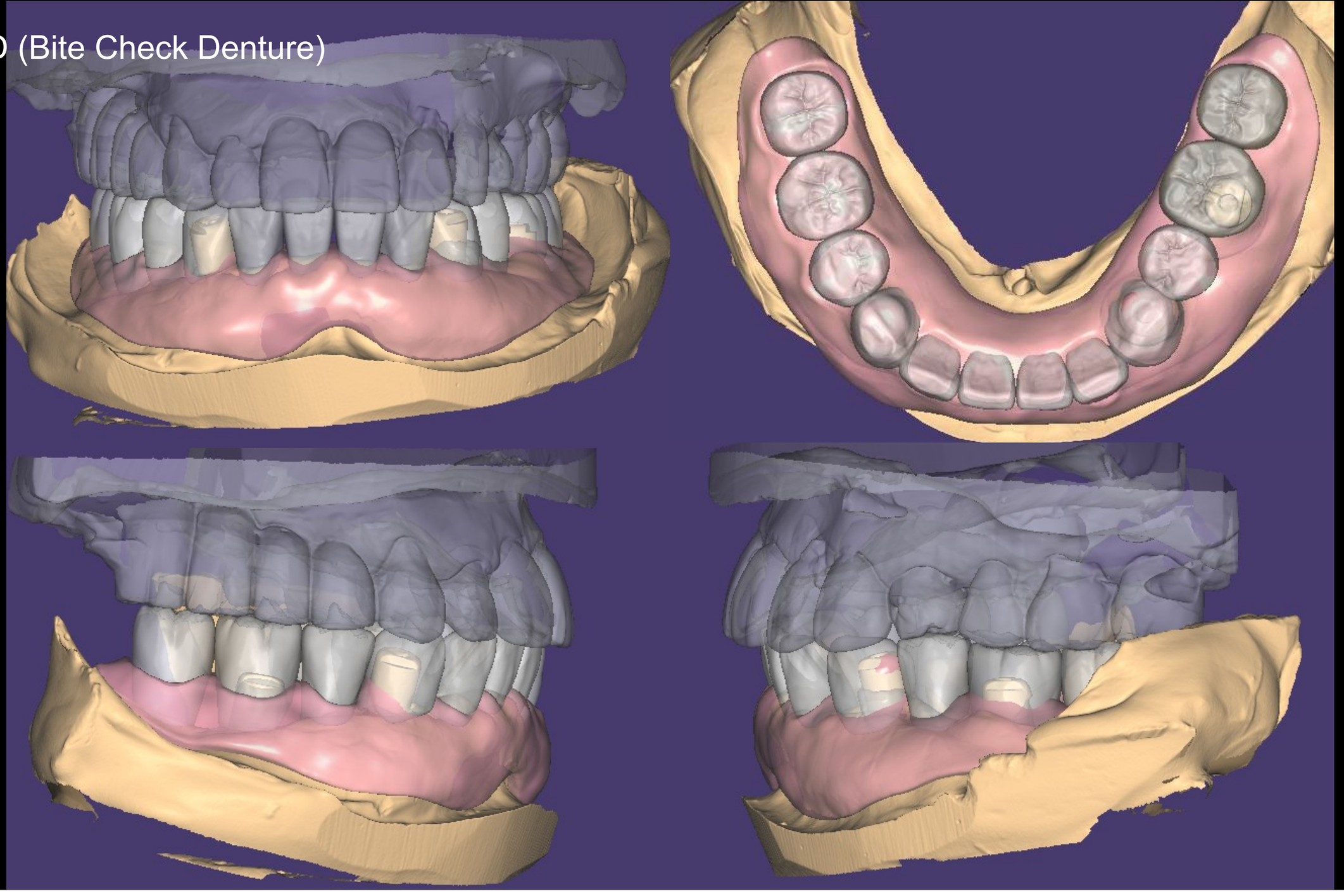
Healing : 3 weeks (2019-06-13)

Impression model



Model

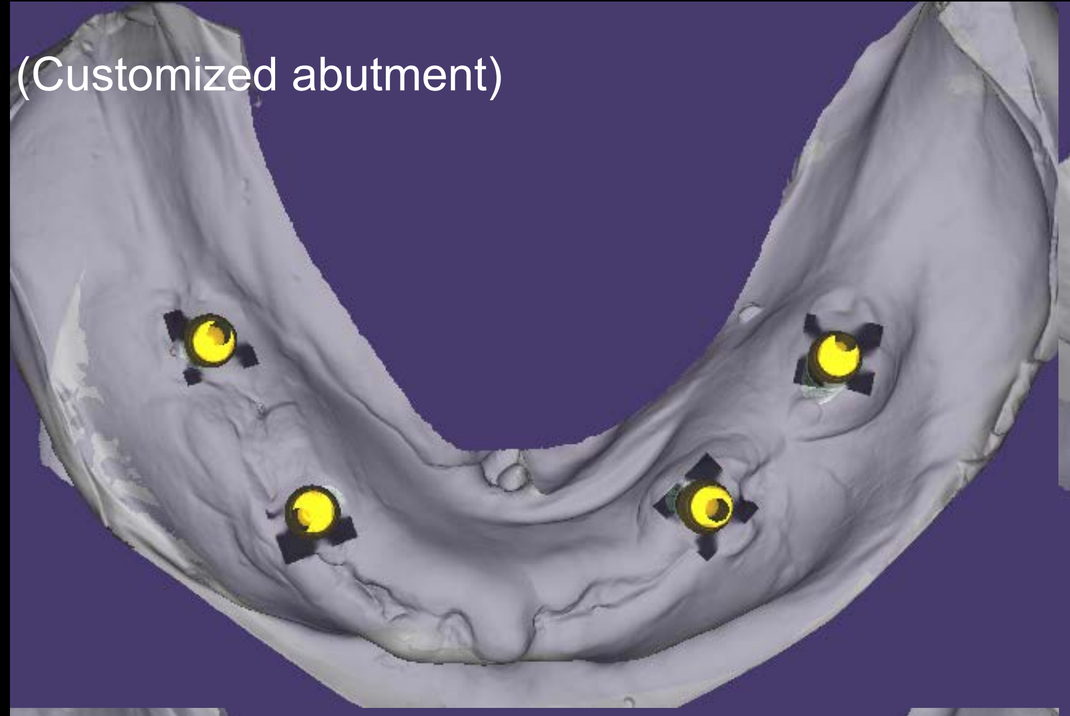
CAD (Bite Check Denture)

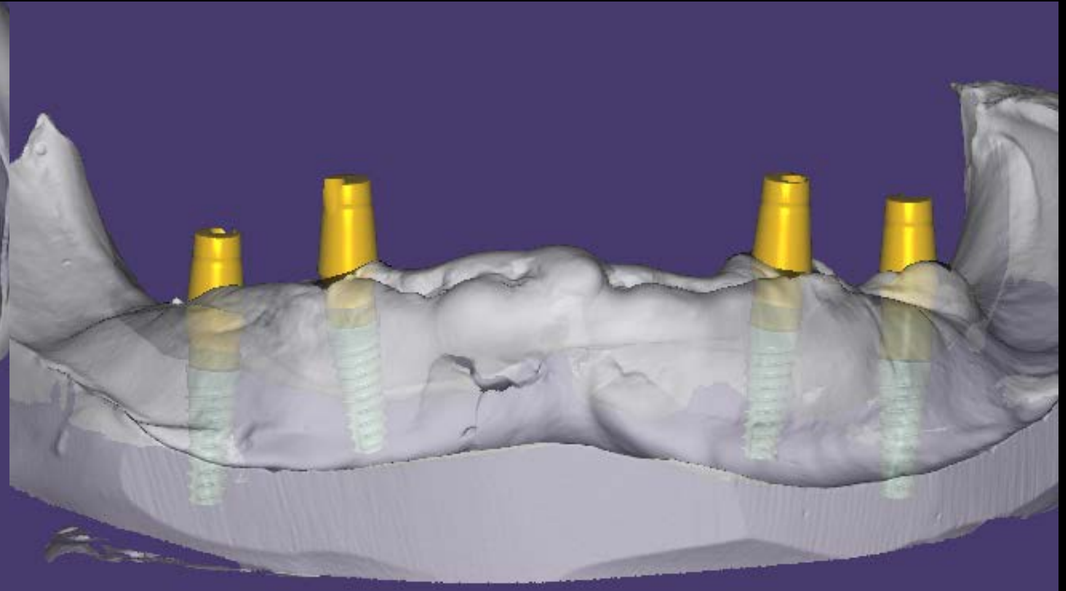


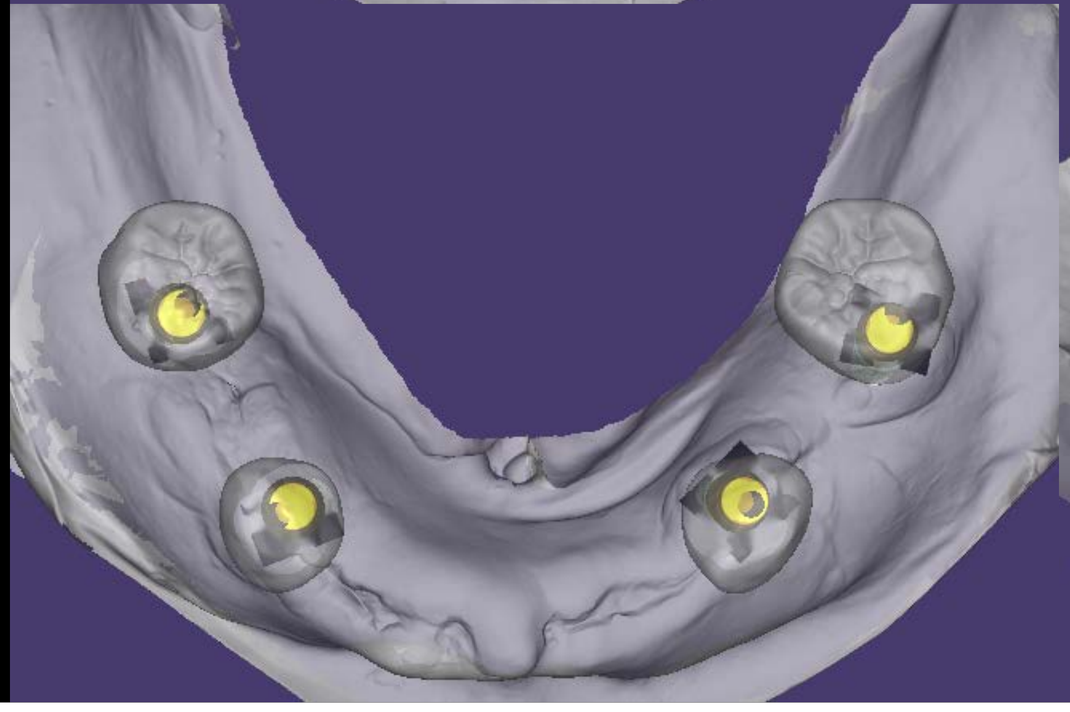
Milling

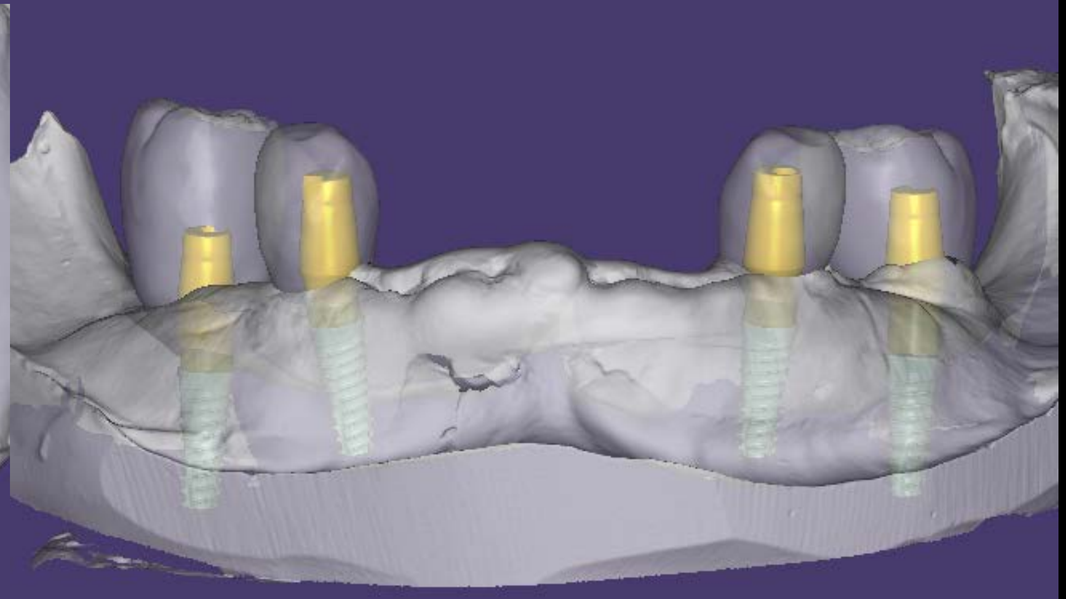
VD Check (using Milling Denture) (2019-06-20)

CAD (Customized abutment)

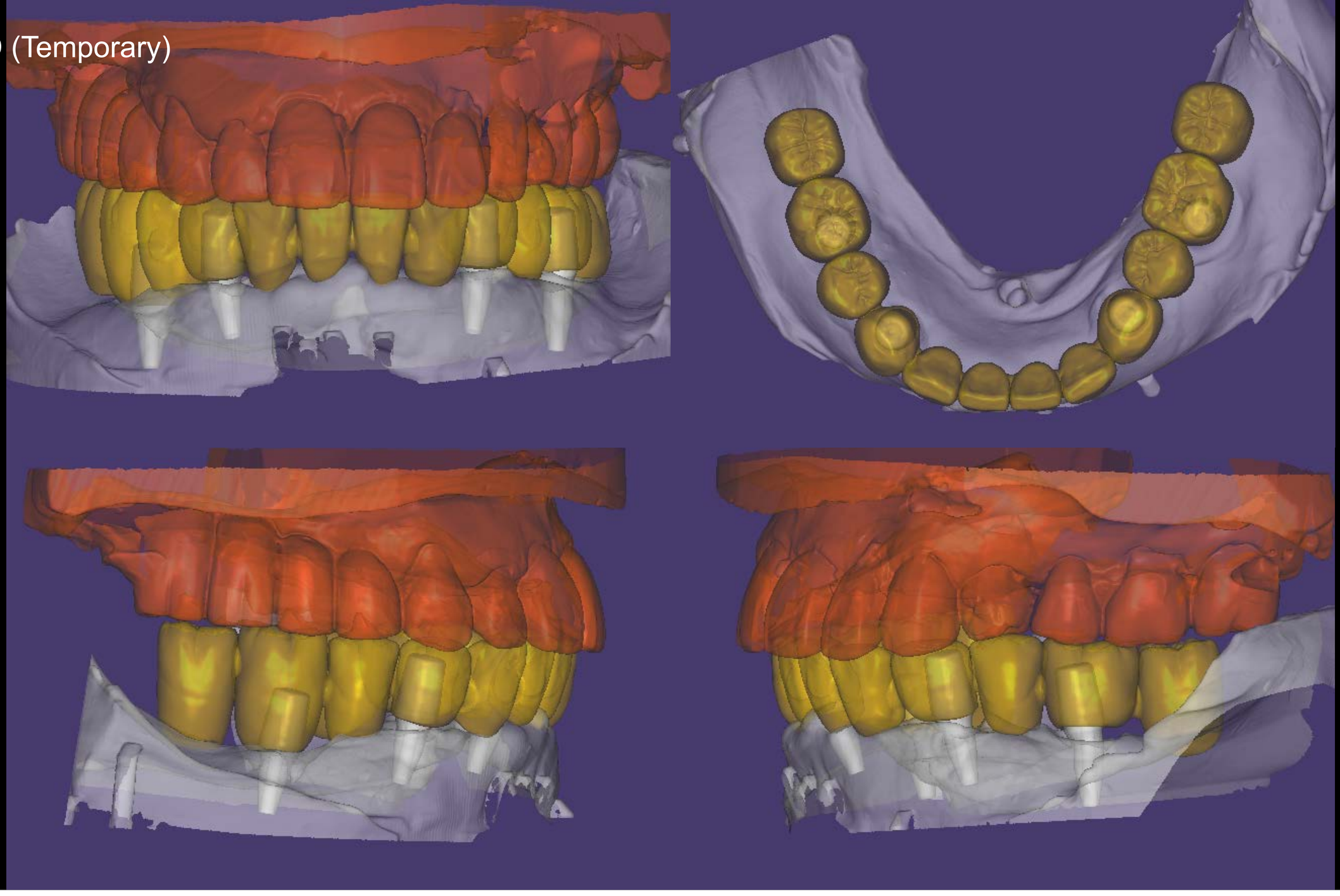








CAD (Temporary)

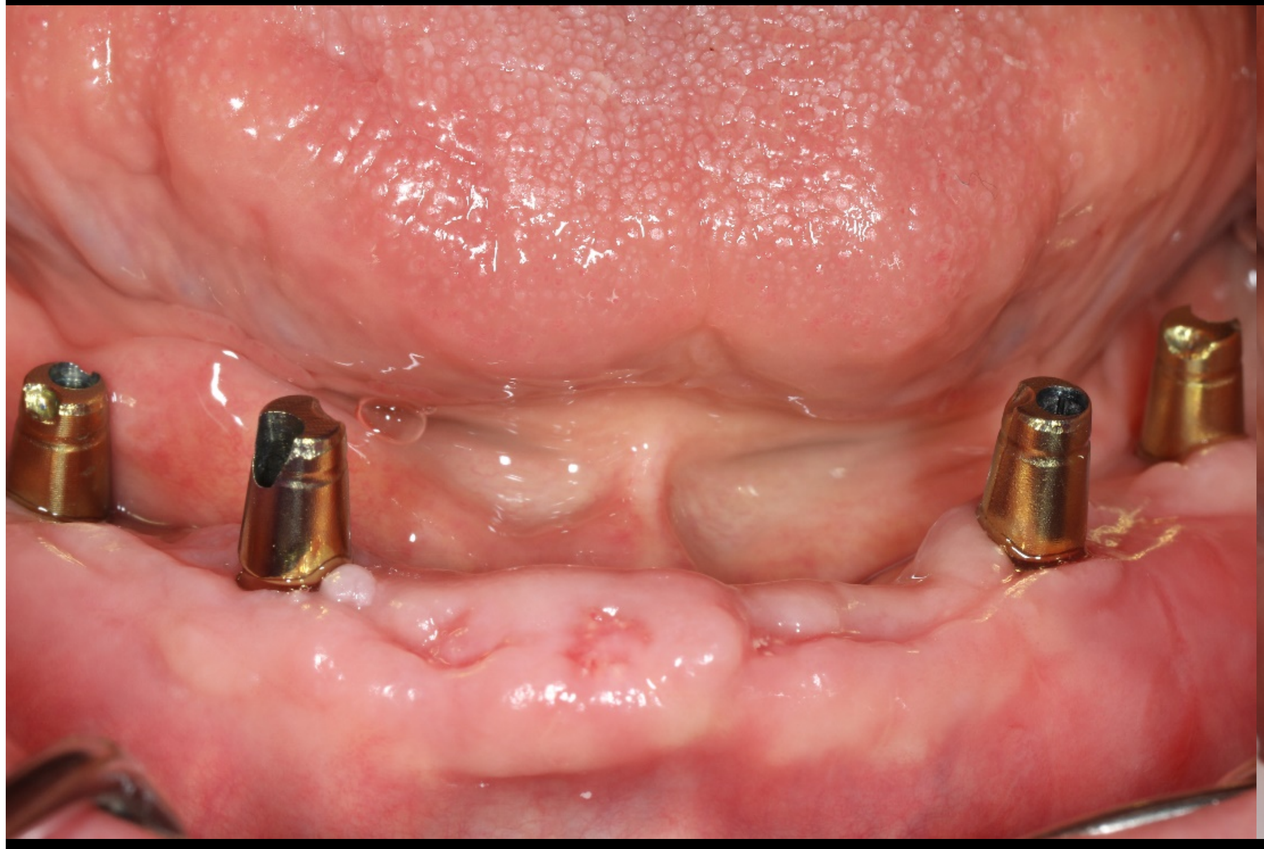


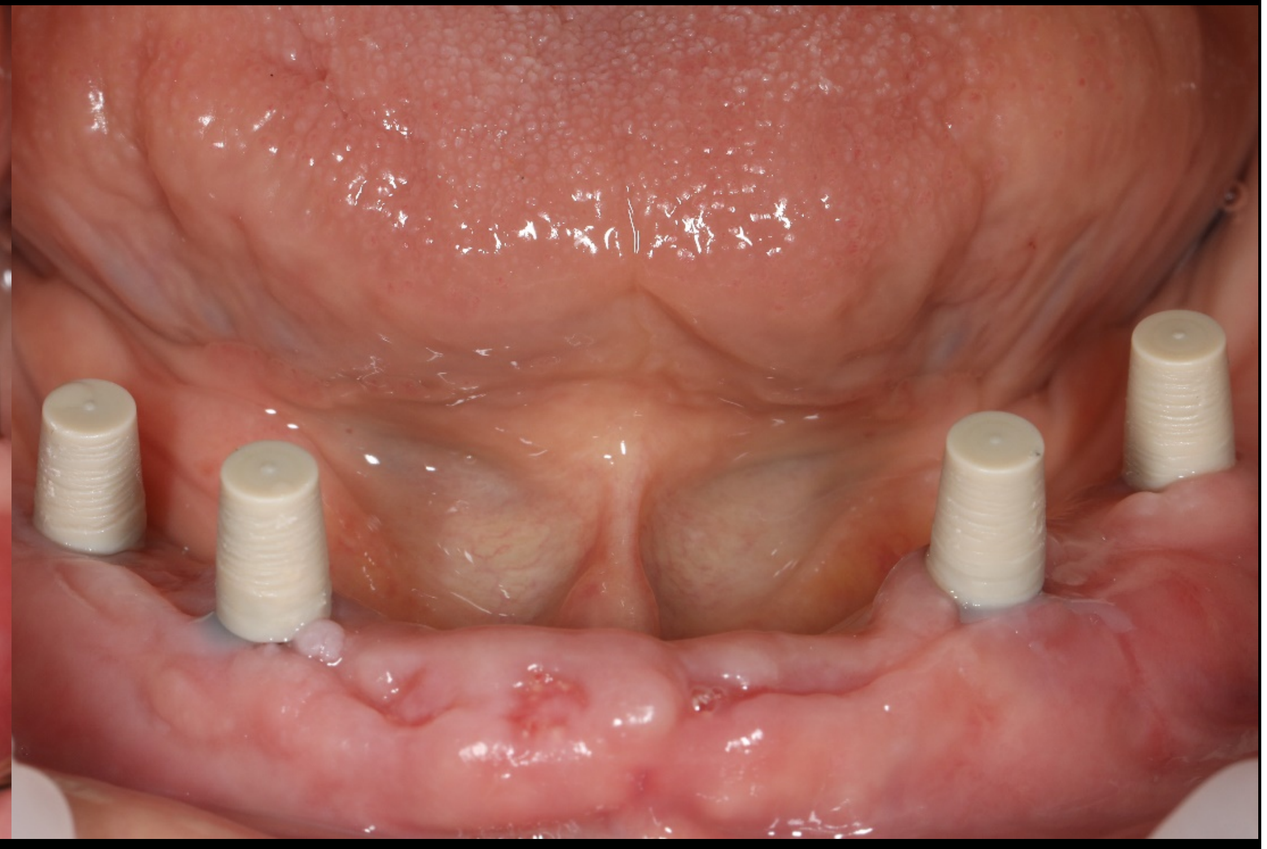
Jig / Abutment

Pekkton cap

Temporary

Abutment / Pekkton cap adaptation (2019-06-27)

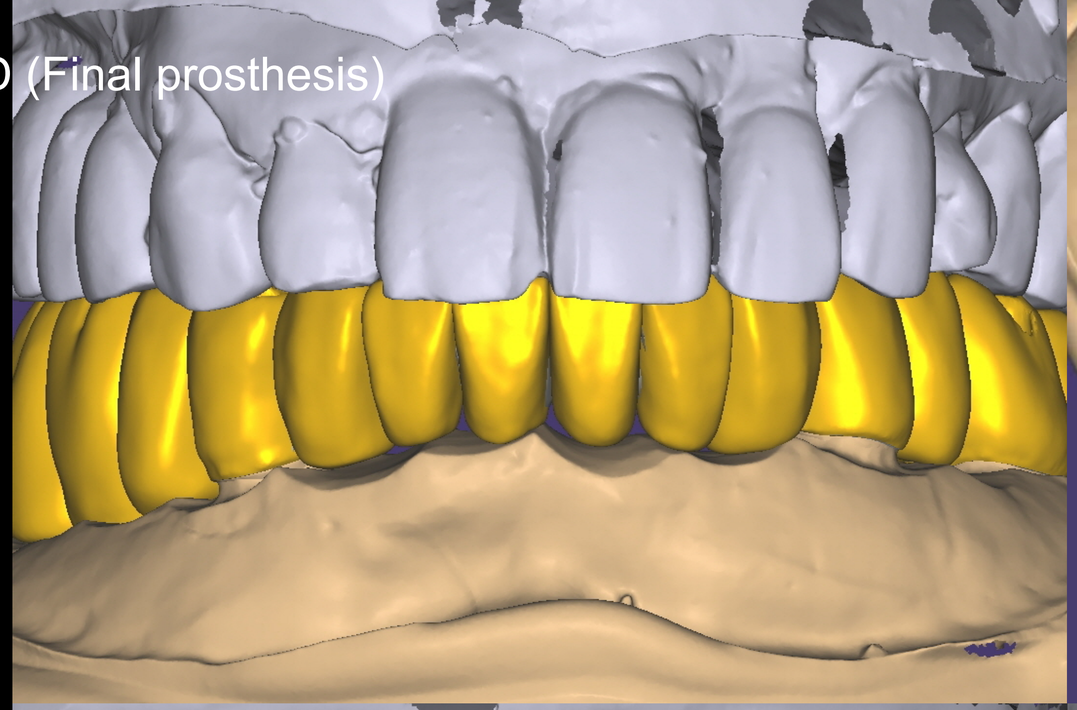


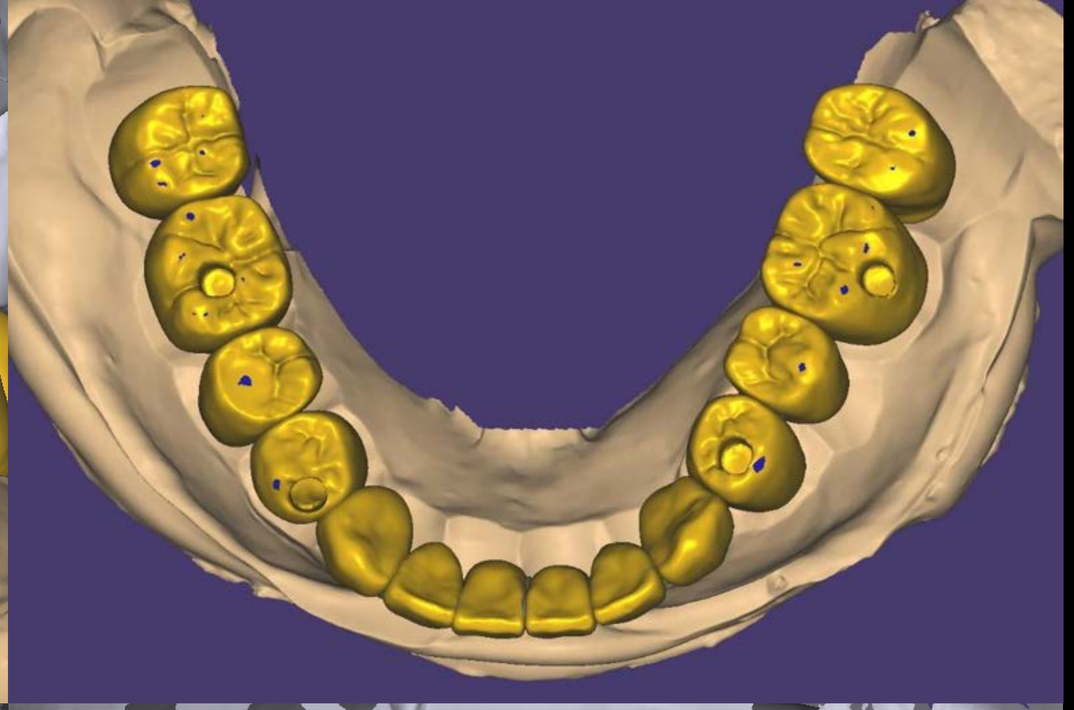


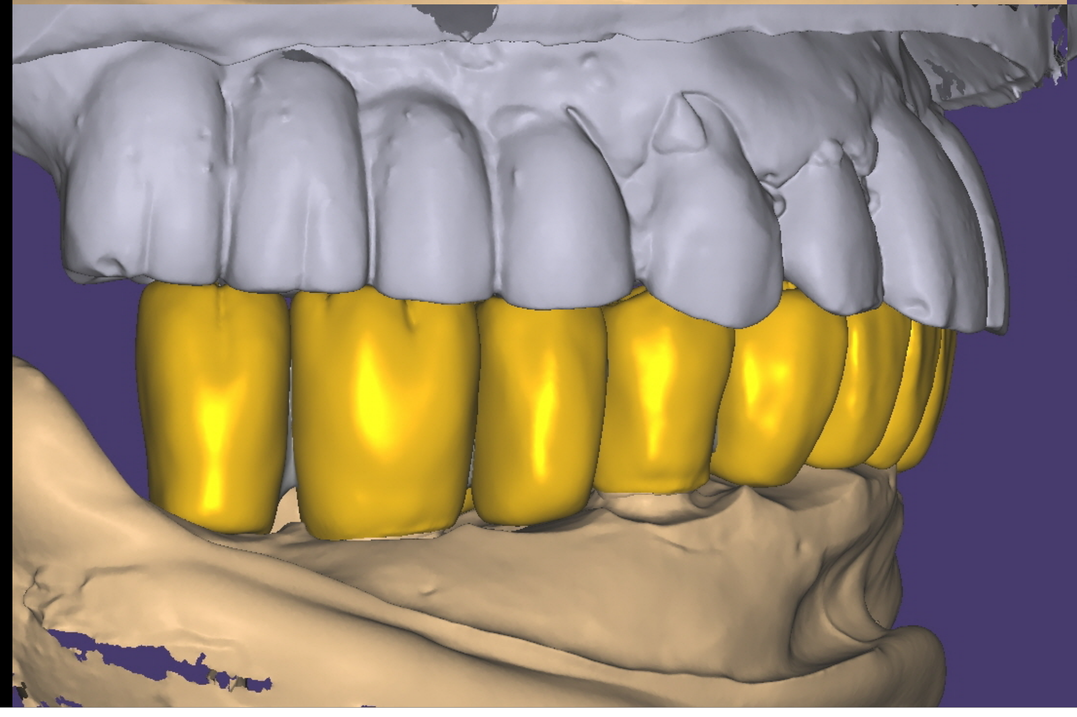
Provisional restoration (2019-06-27)

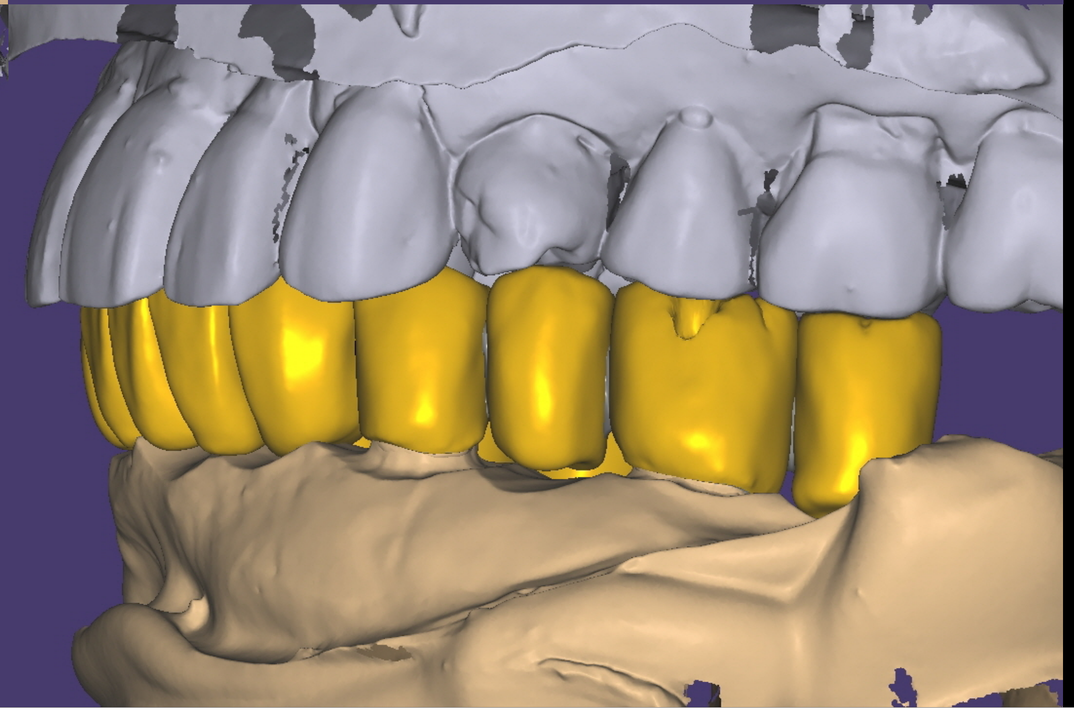
Provisional restoration : 6 months (2019-12-20)

CAD (Final prosthesis)

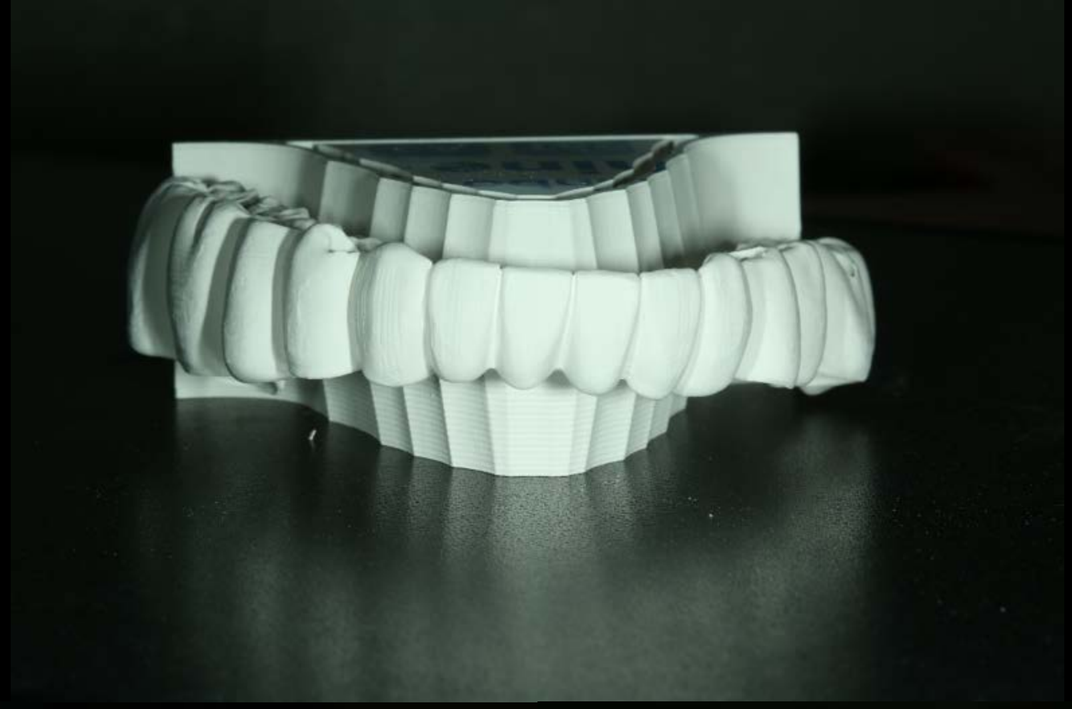


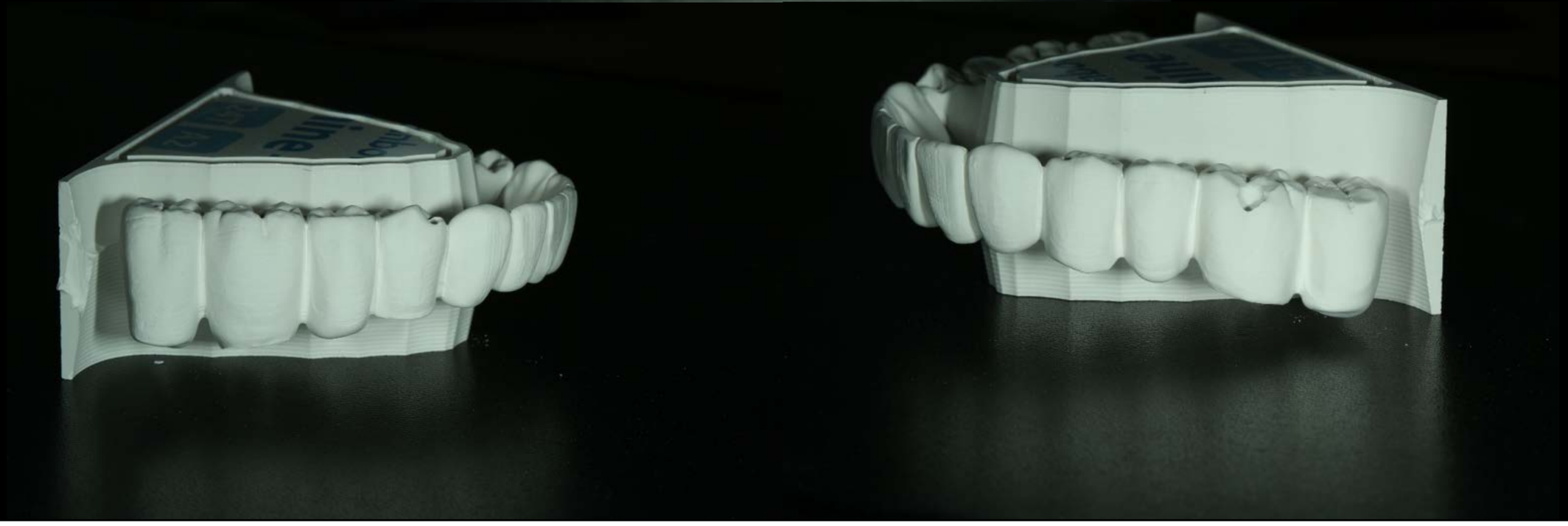






Milling





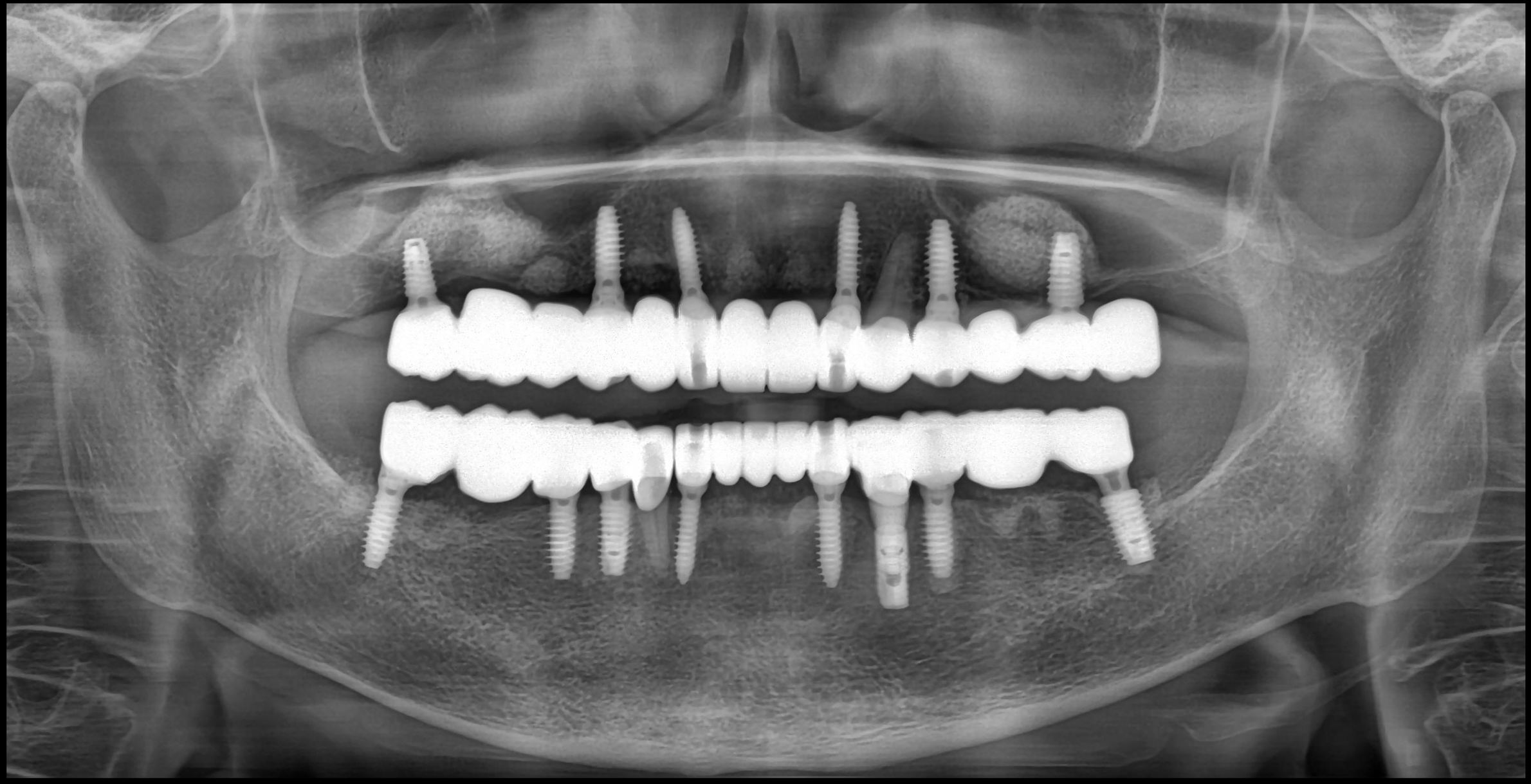
Brushing

Sintering

Finishing

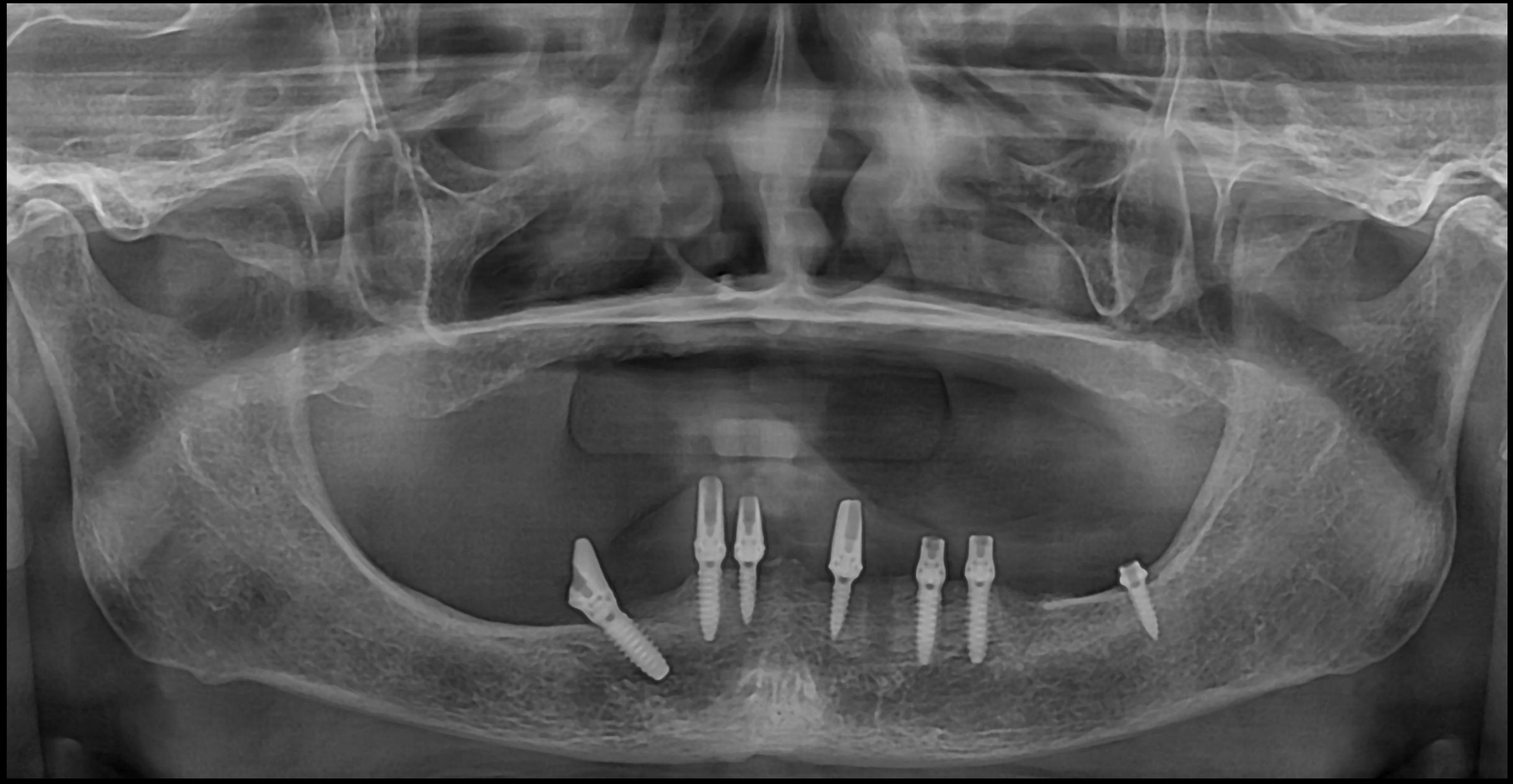
Final prosthesis (2020-01-17)

Final prosthesis (2023-04-28)

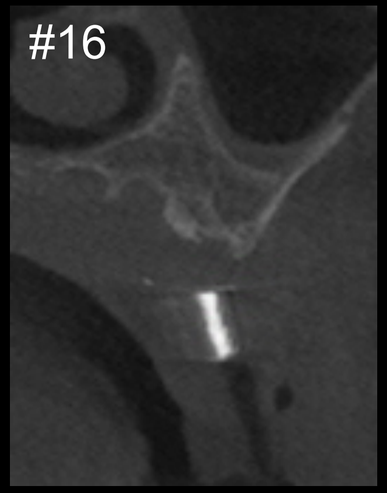


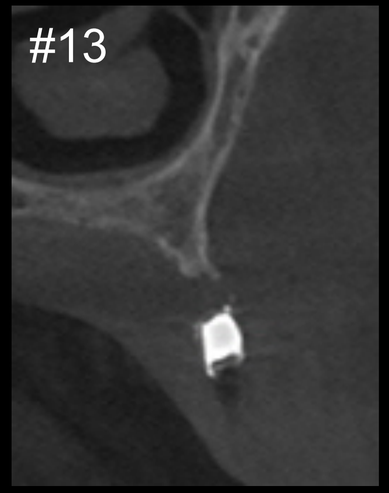
Final prosthesis (2023-04-28)

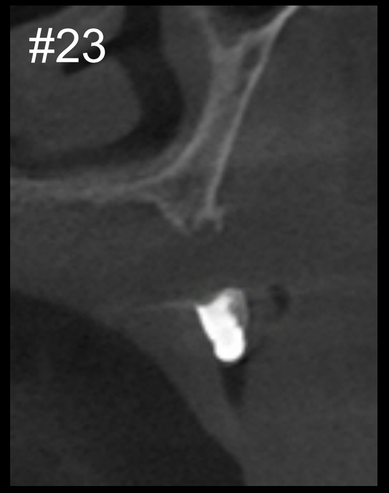
Pre-op (2021-08-25)

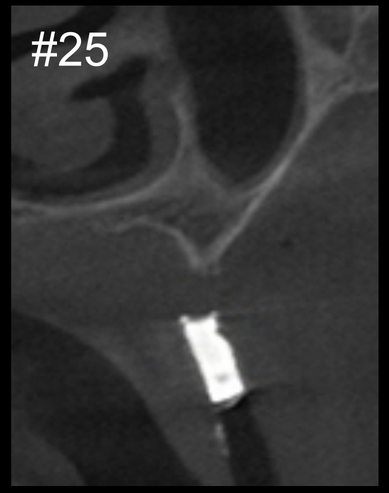


Pre-op CT (2021-11-24)

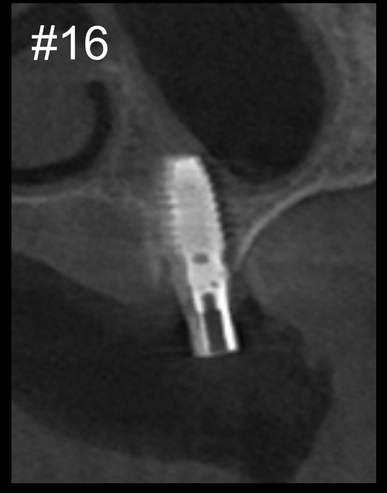


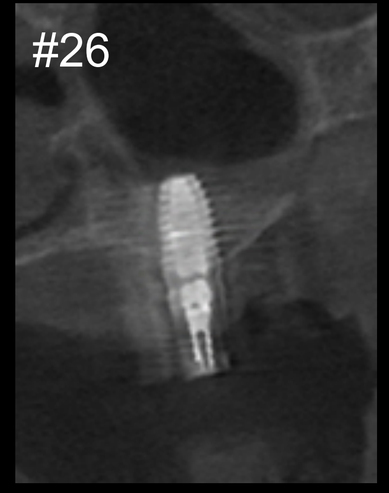




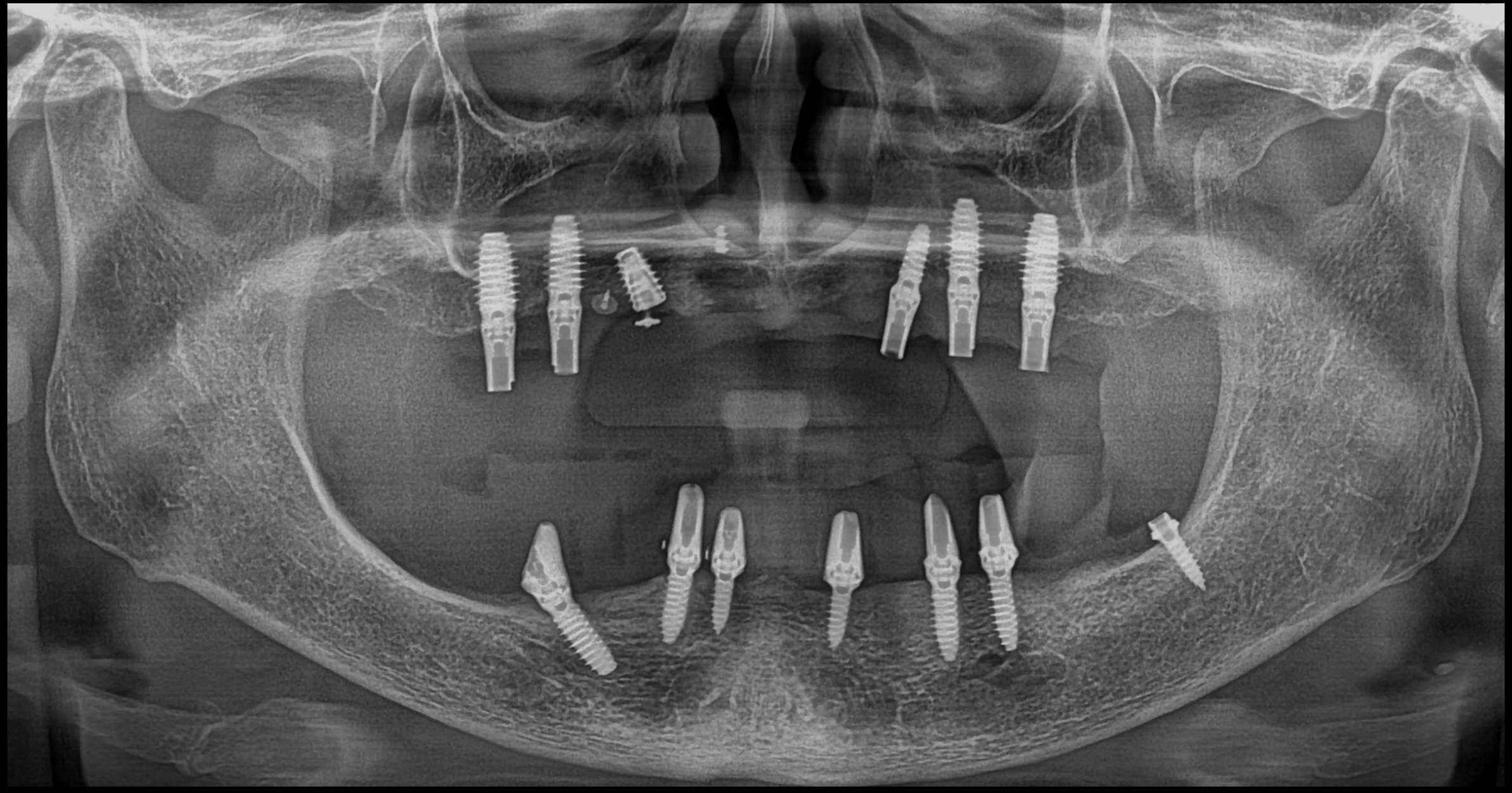


Post-op CT (2021-11-24)

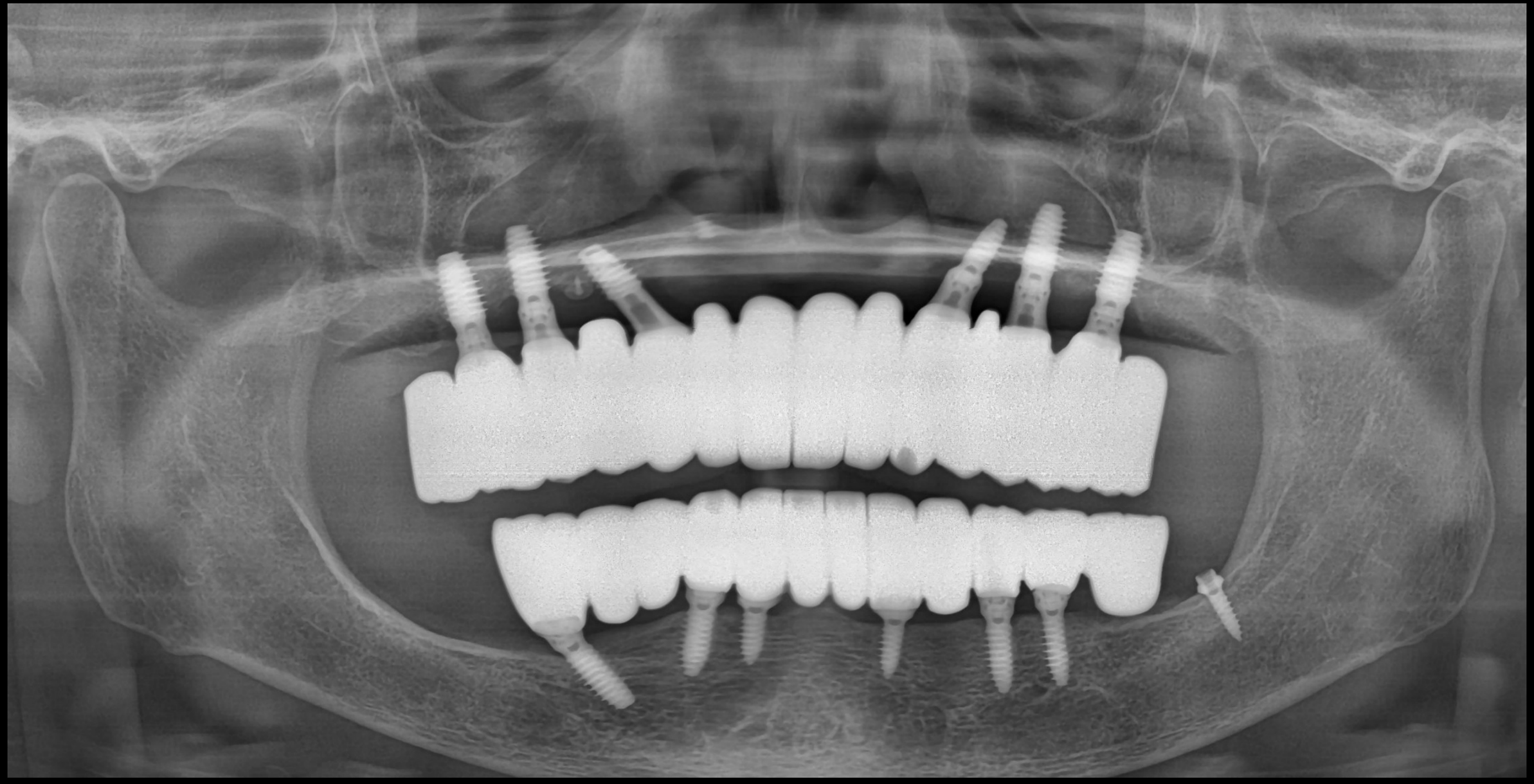




Post-op (2021-11-24)



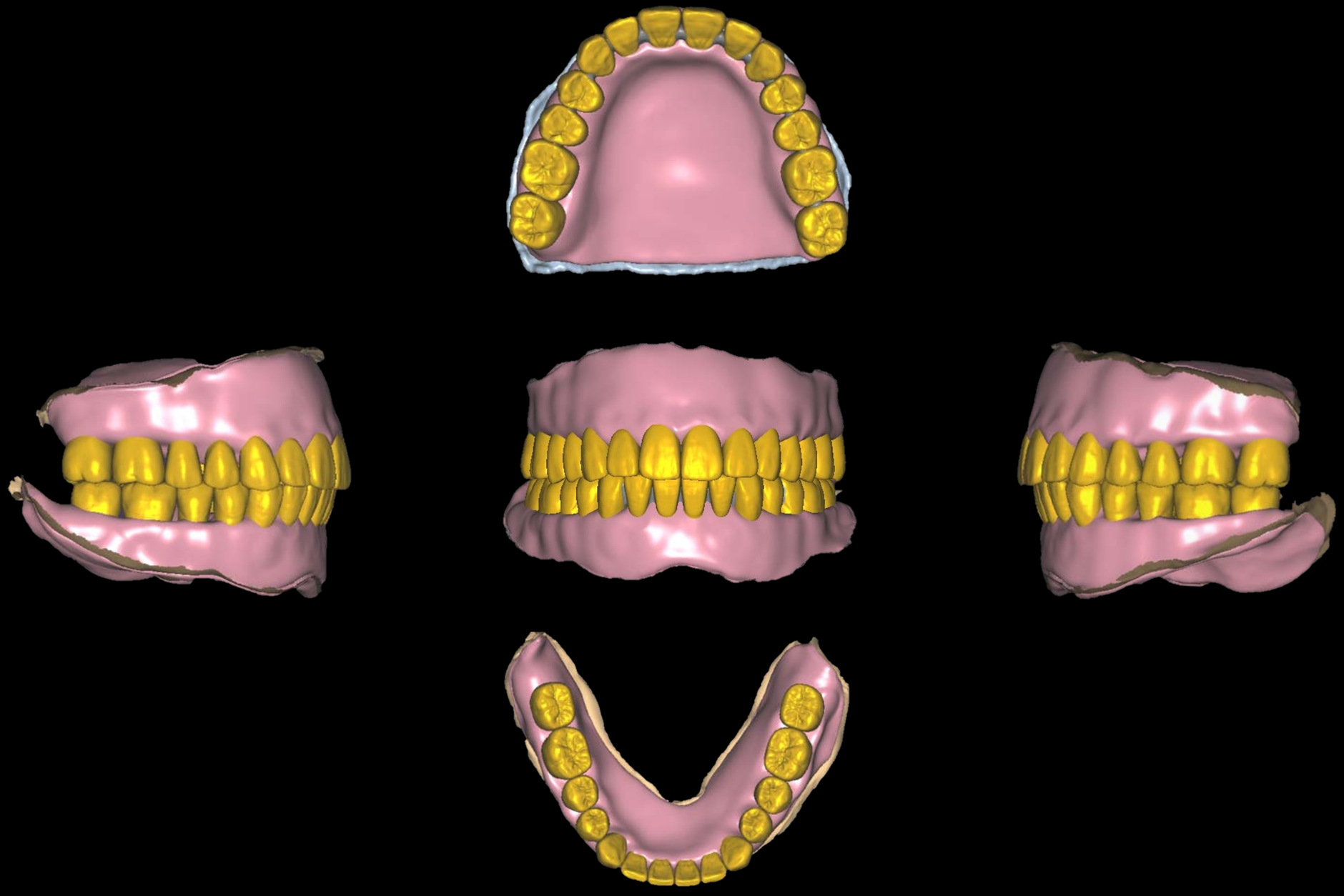
Final prosthesis (2022-11-09)



Pre-op (2021-11-24)

Intra oral scanning

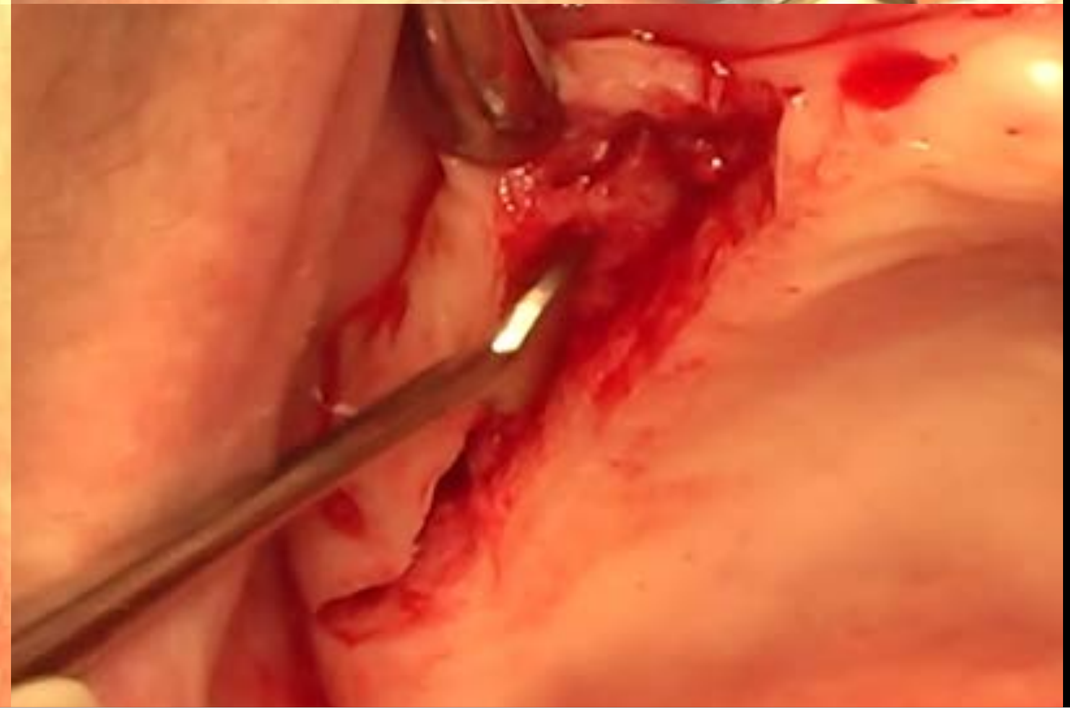
CAD (Temporary denture)



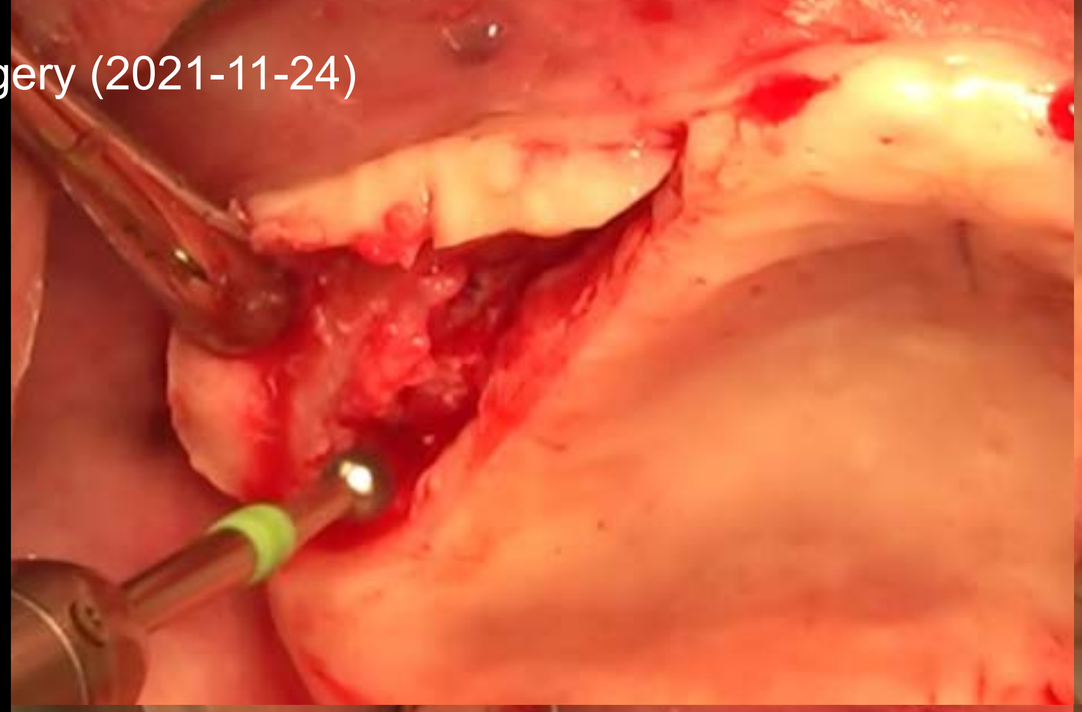
Denture Hole making (2021-11-24)

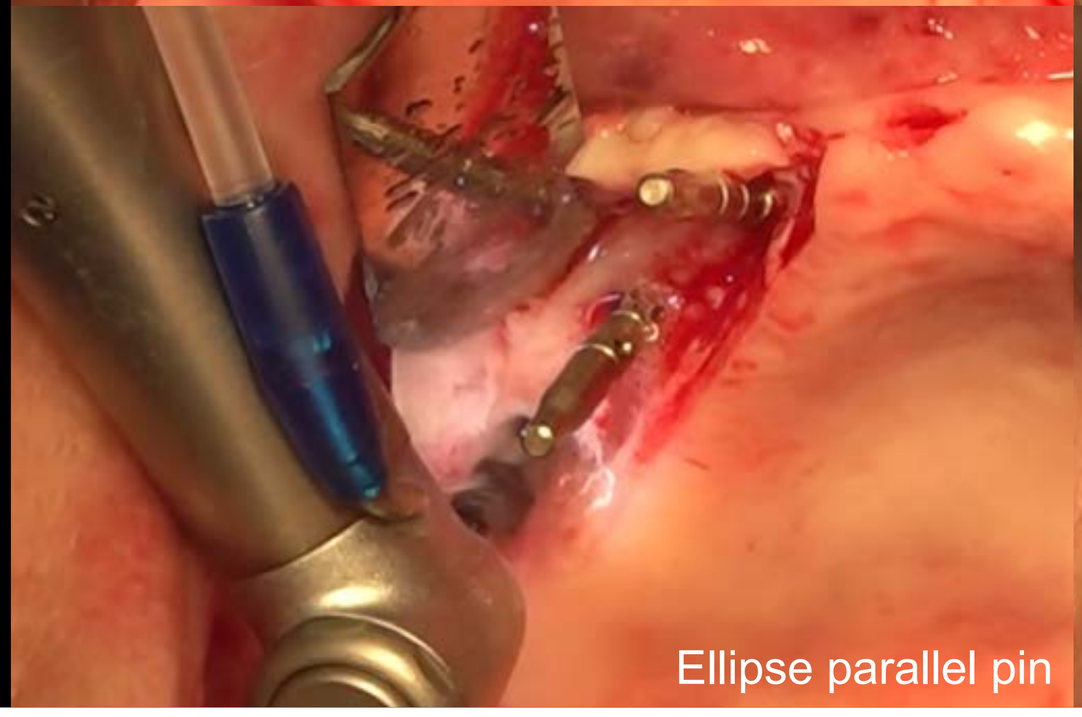
Surgical guide fabricated 3D printing denture (2021-11-24)

Surgery (2021-11-24)

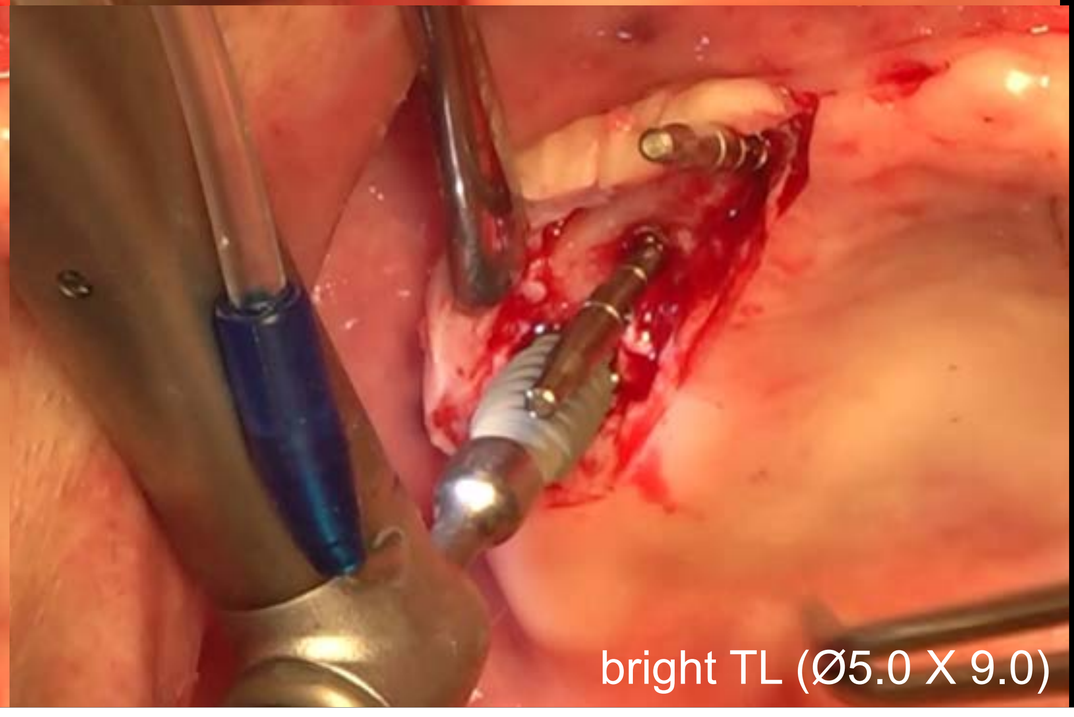


Surgery (2021-11-24)



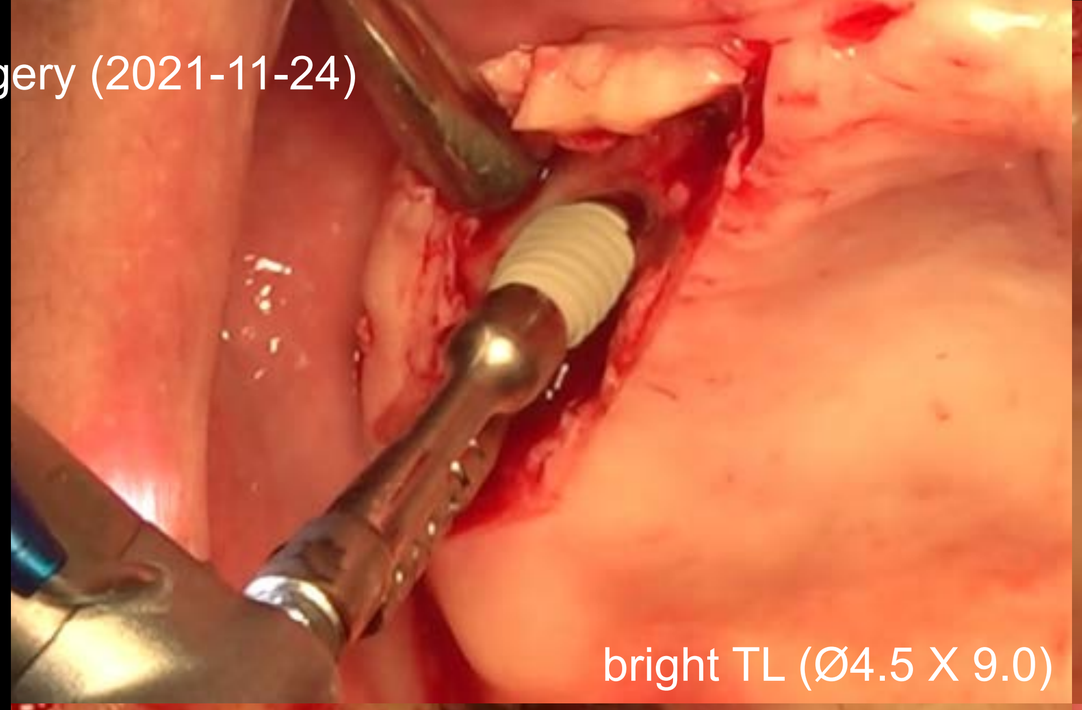


Ellipse parallel pin

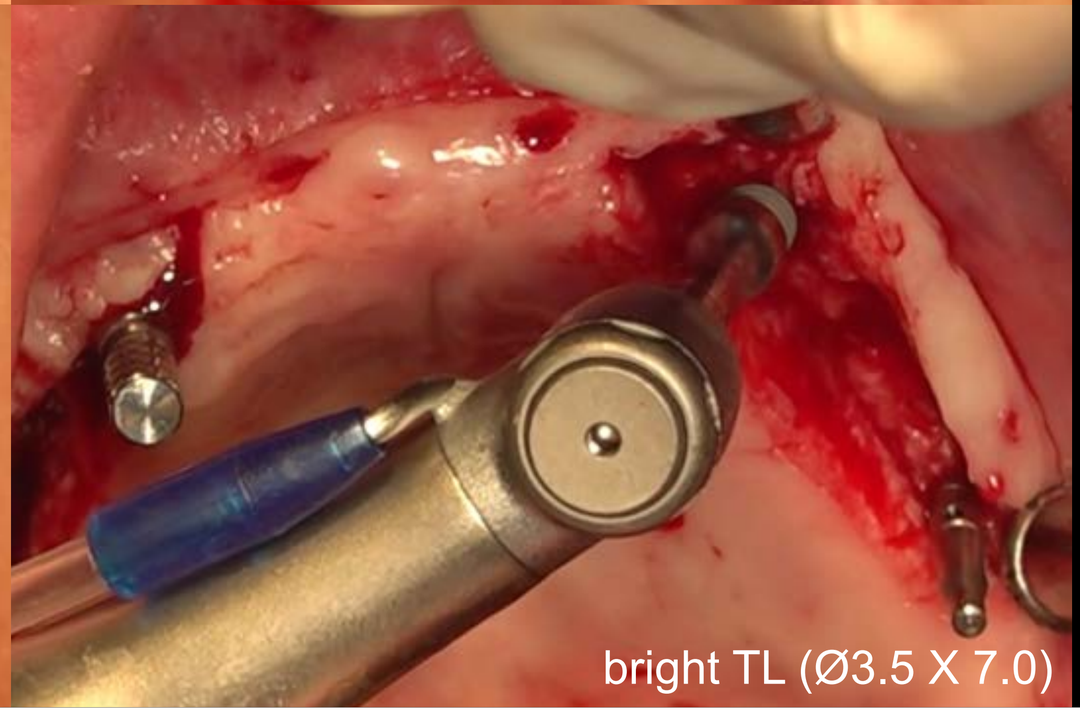


bright TL (Ø5.0 X 9.0)

Surgery (2021-11-24)

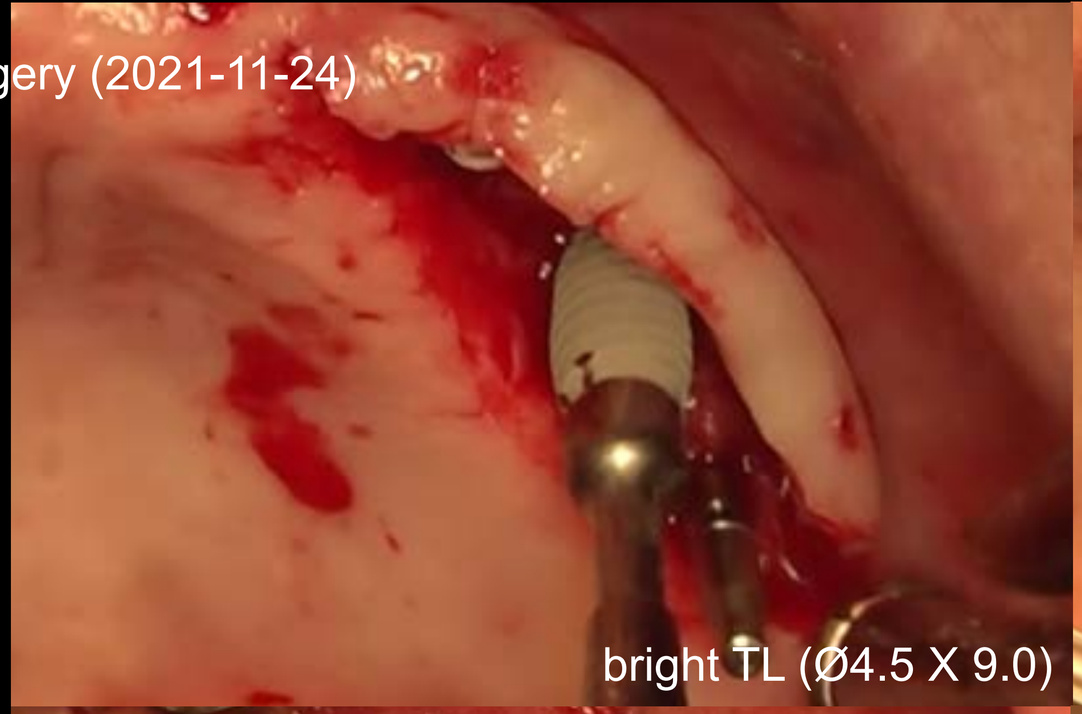


bright TL (Ø4.5 X 9.0)

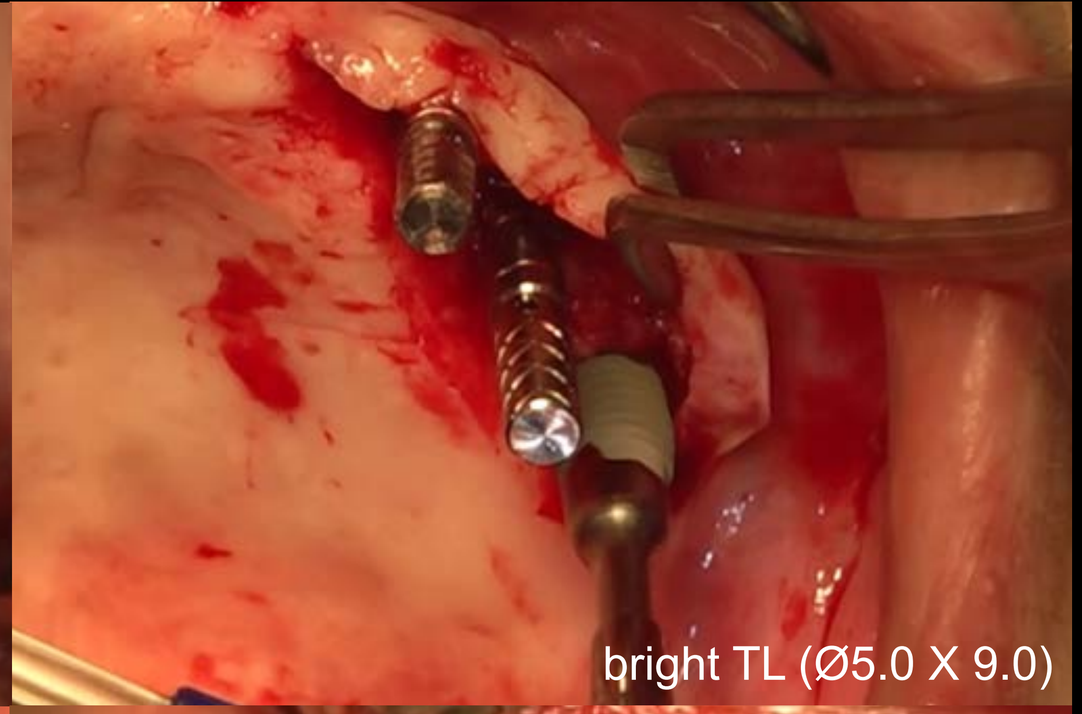


bright TL (Ø3.5 X 7.0)

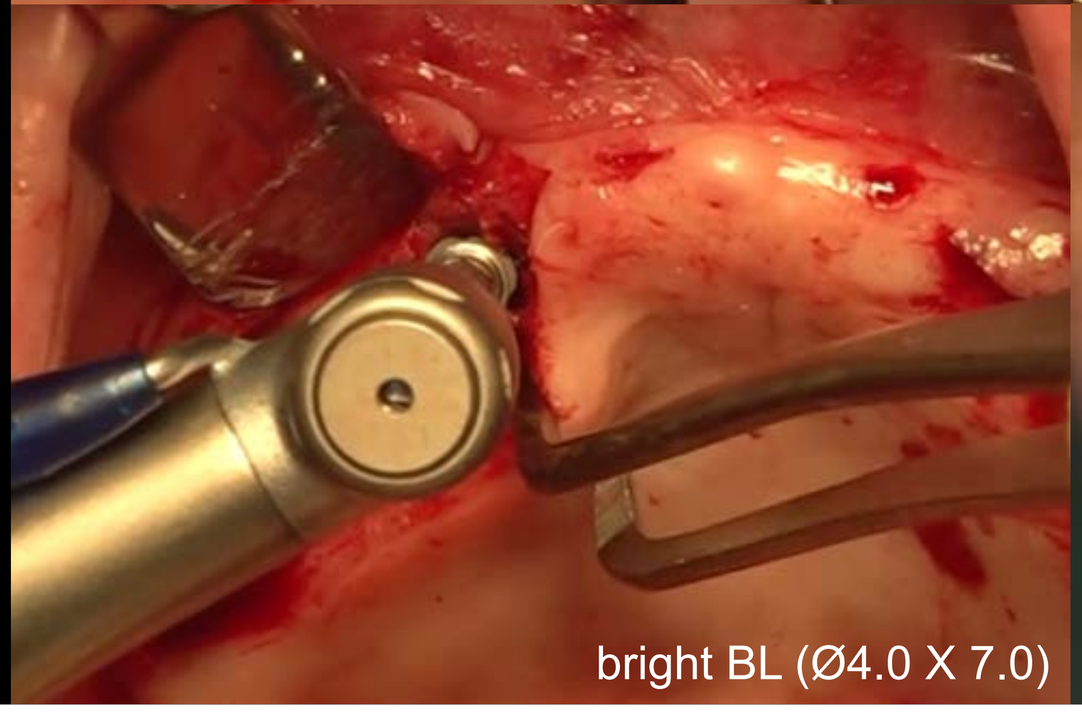
Surgery (2021-11-24)



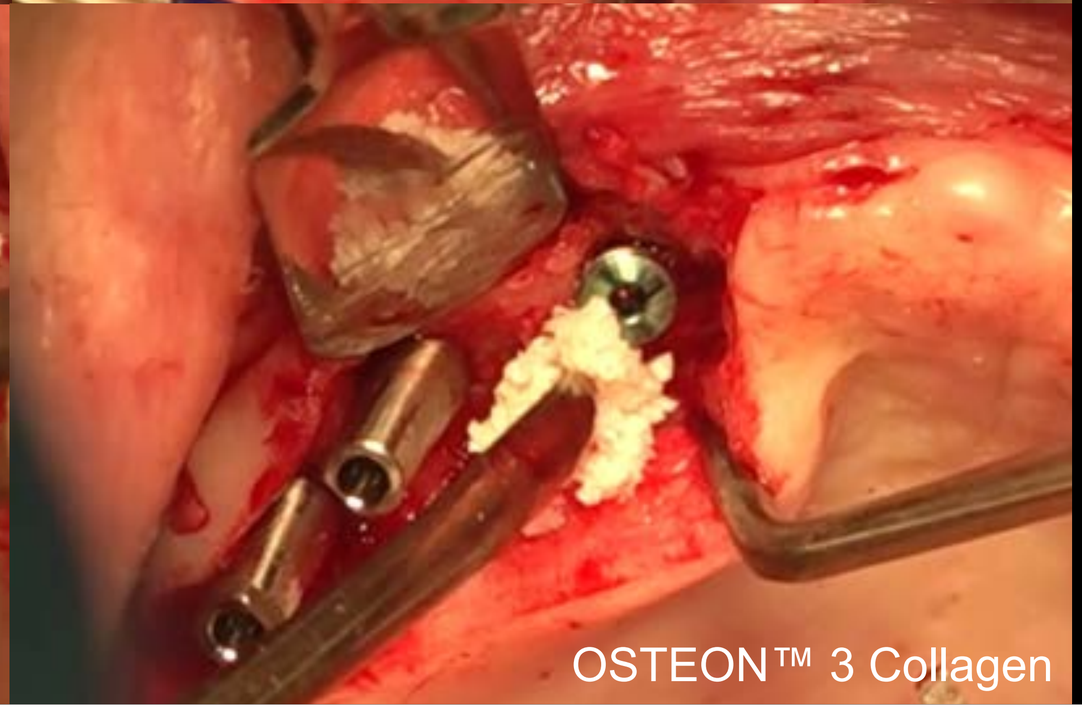
bright TL (Ø4.5 X 9.0)



bright TL (Ø5.0 X 9.0)

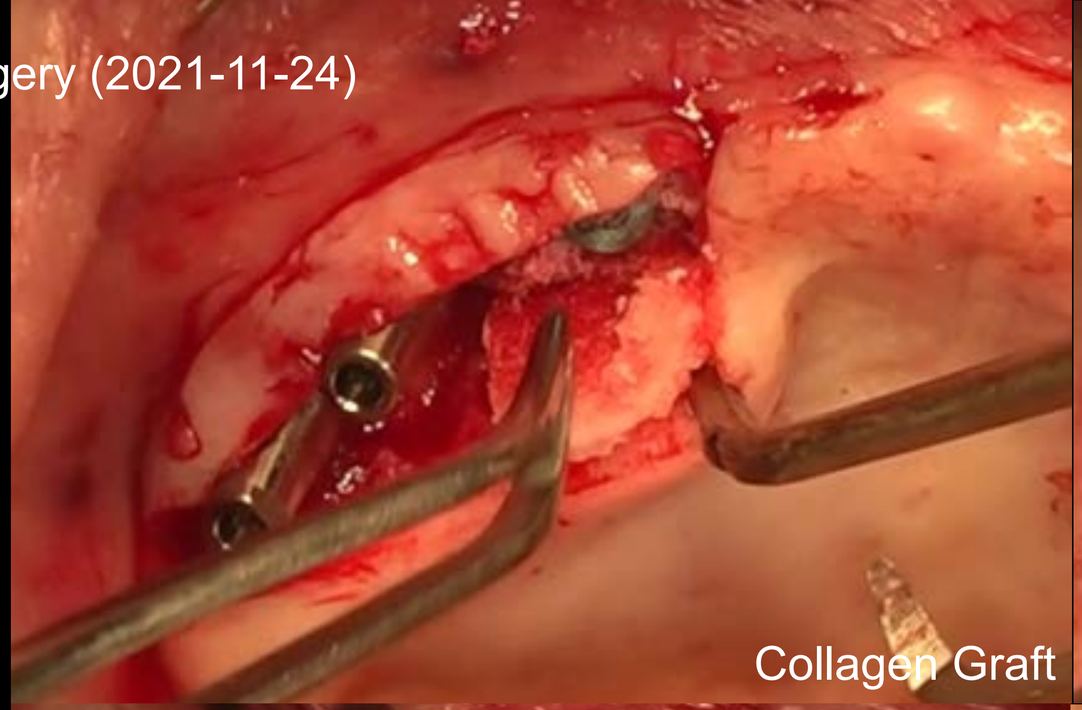


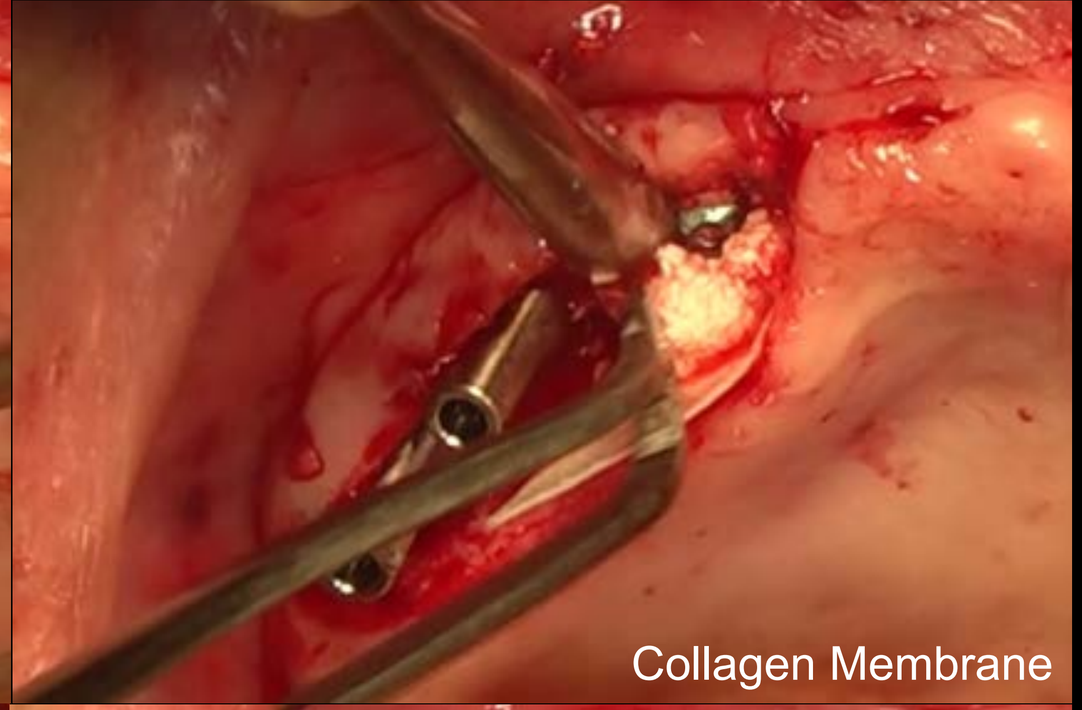
bright BL (Ø4.0 X 7.0)

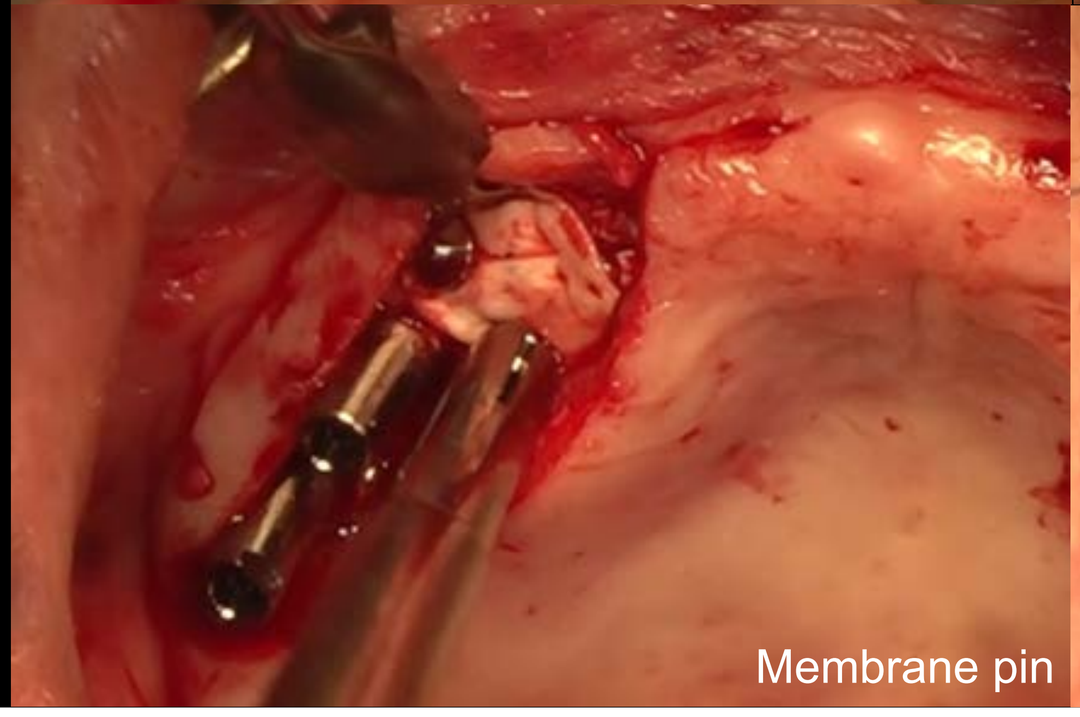


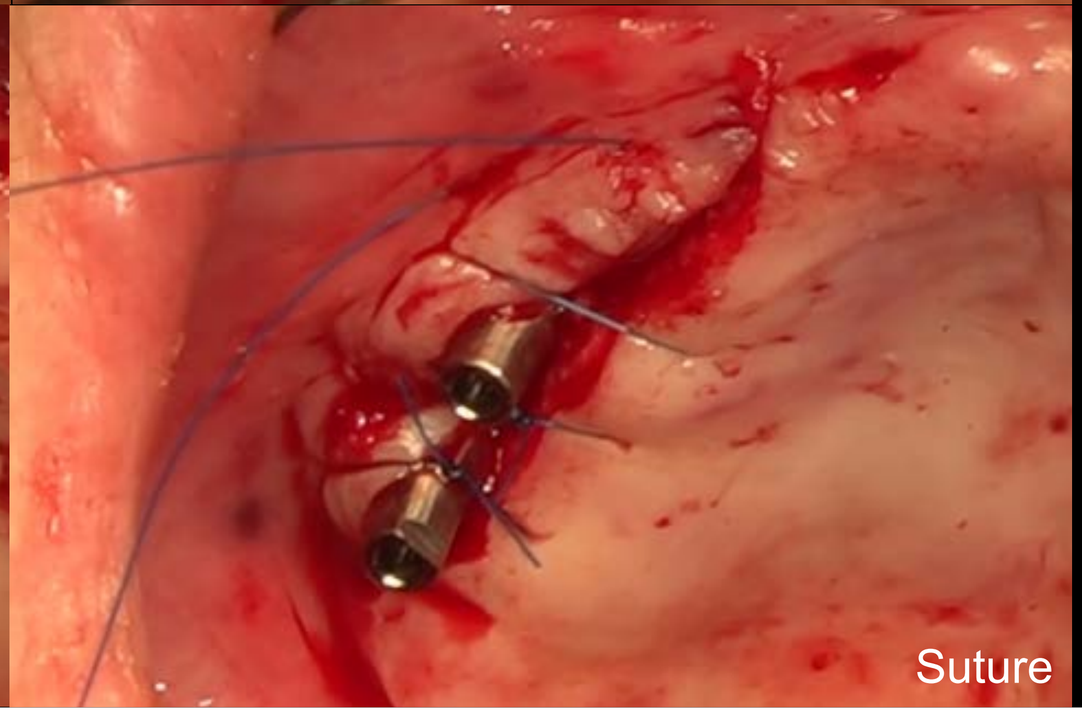
OSTEON™ 3 Collagen

Surgery (2021-11-24)

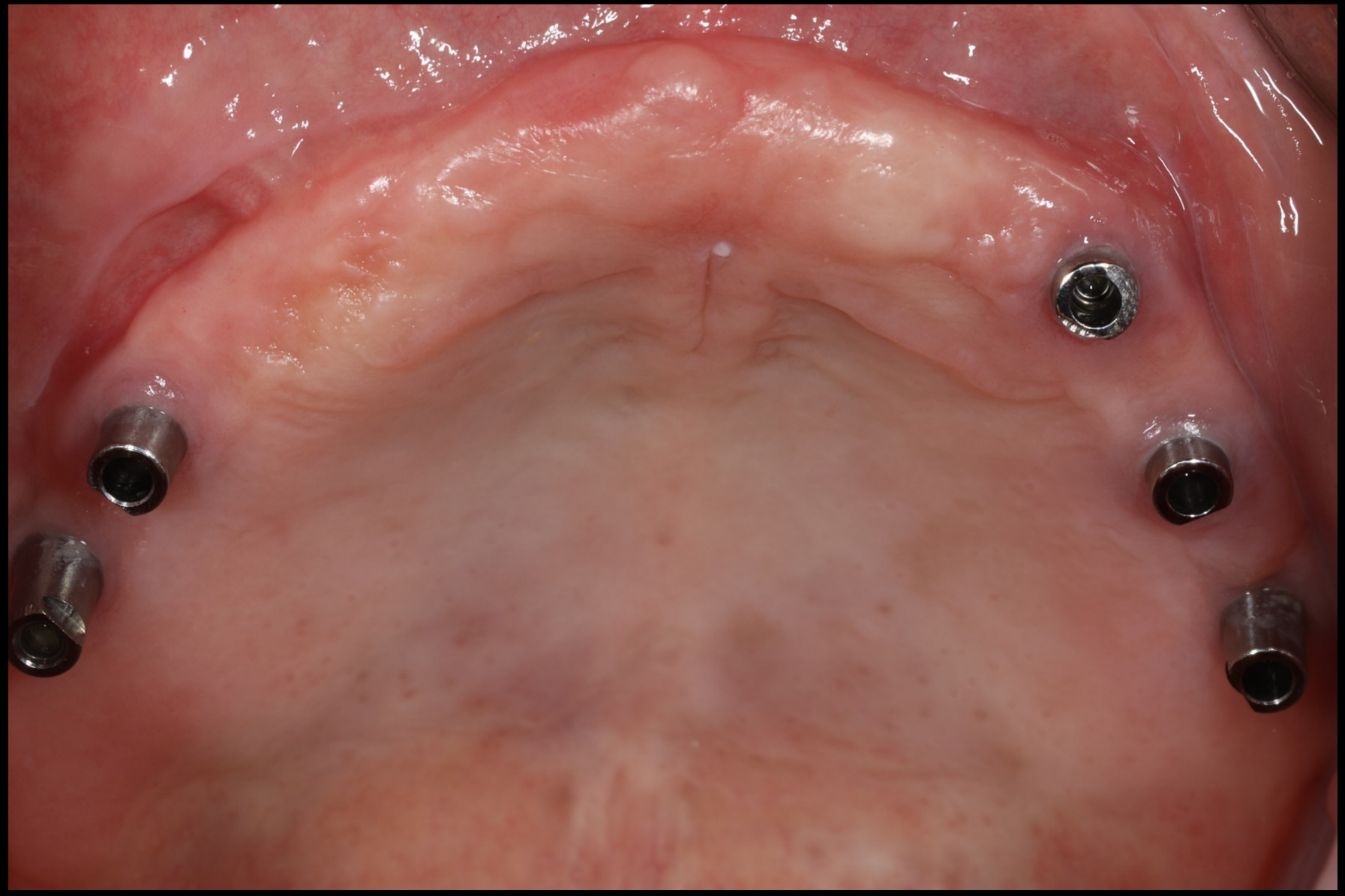




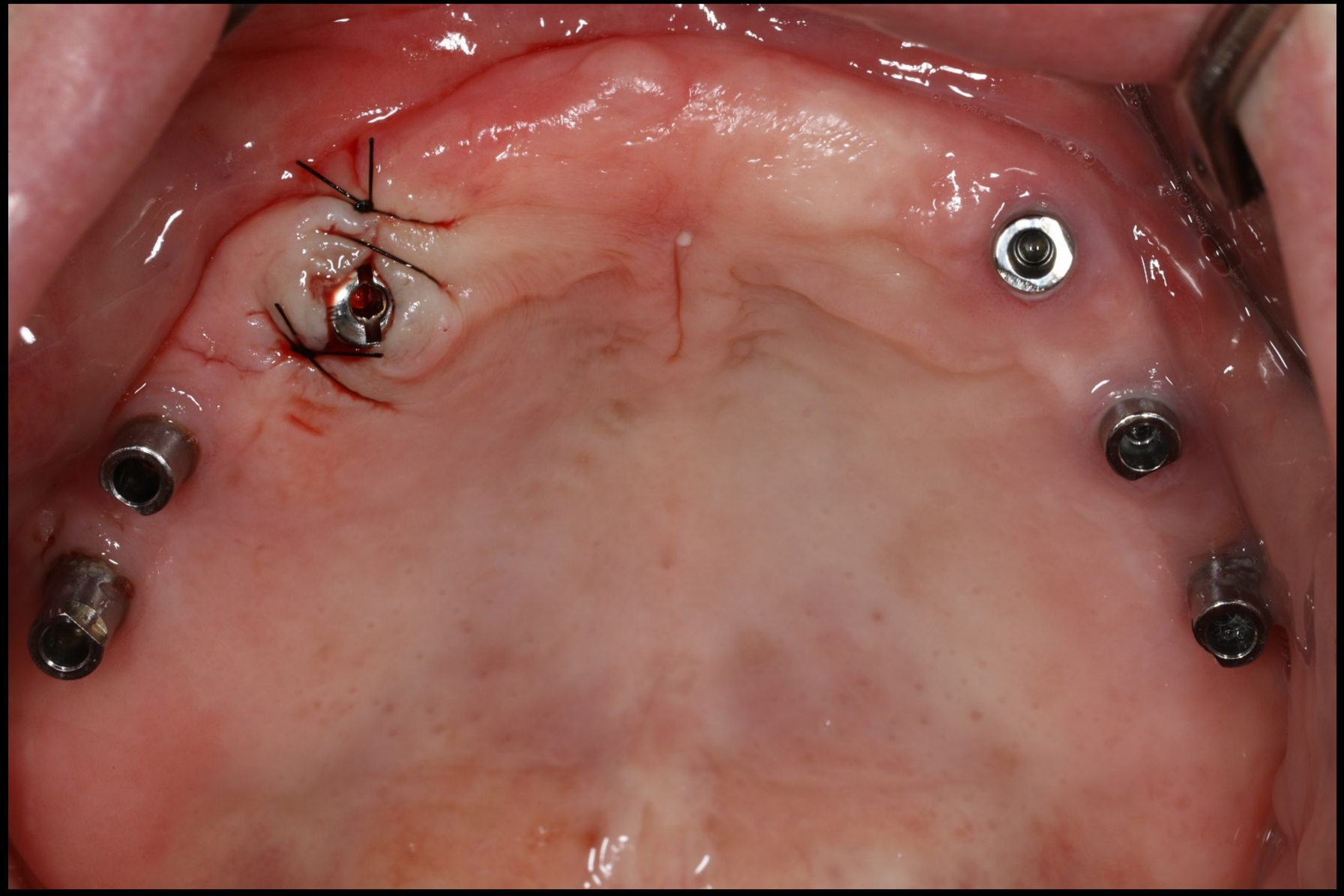




Healing : 6 months (2022-05-25)

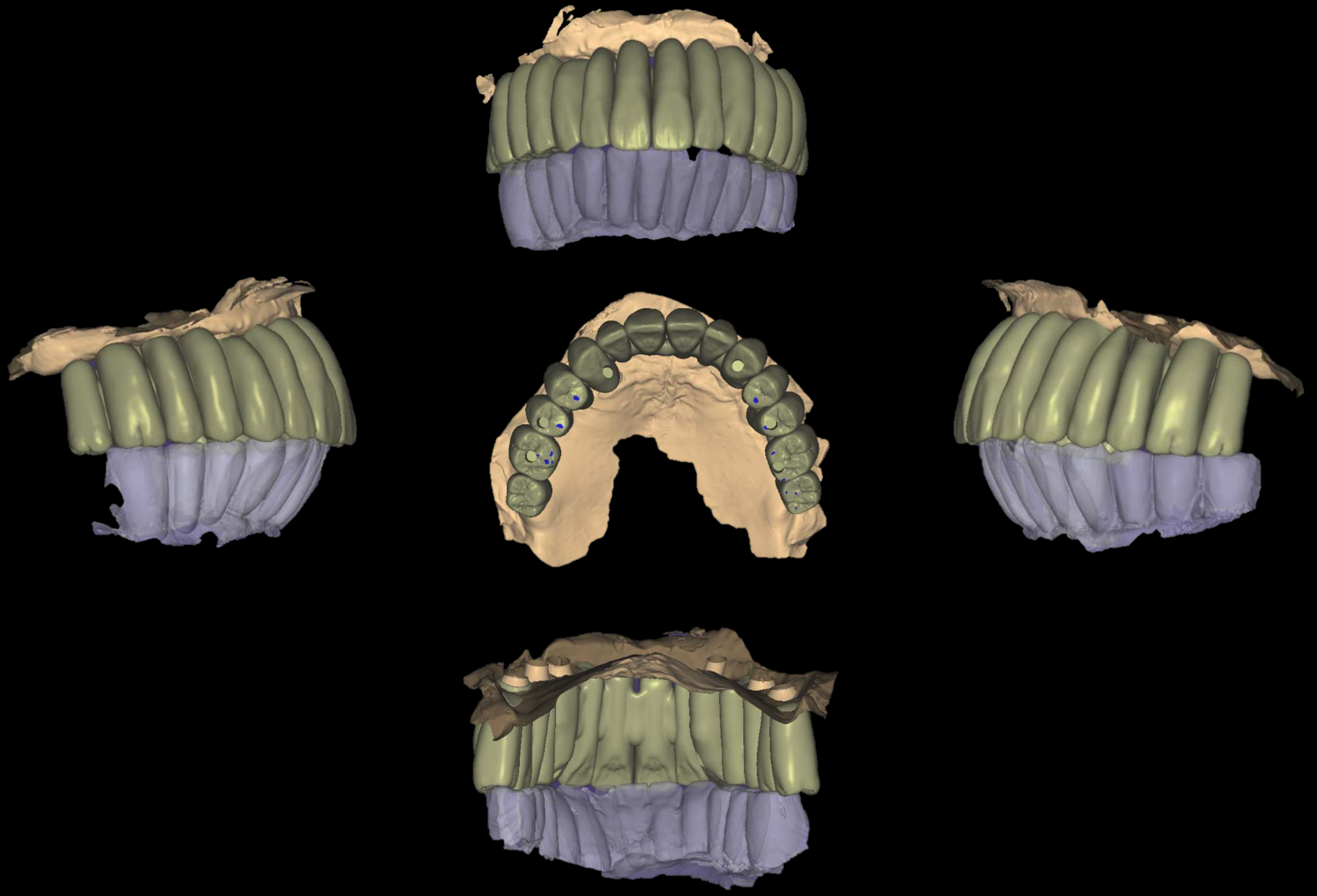


#13 2nd Surgery (2022-05-25)



Healing 2 weeks (After #13 2nd Surgery) (2022-06-03)

CAD (Temporary)



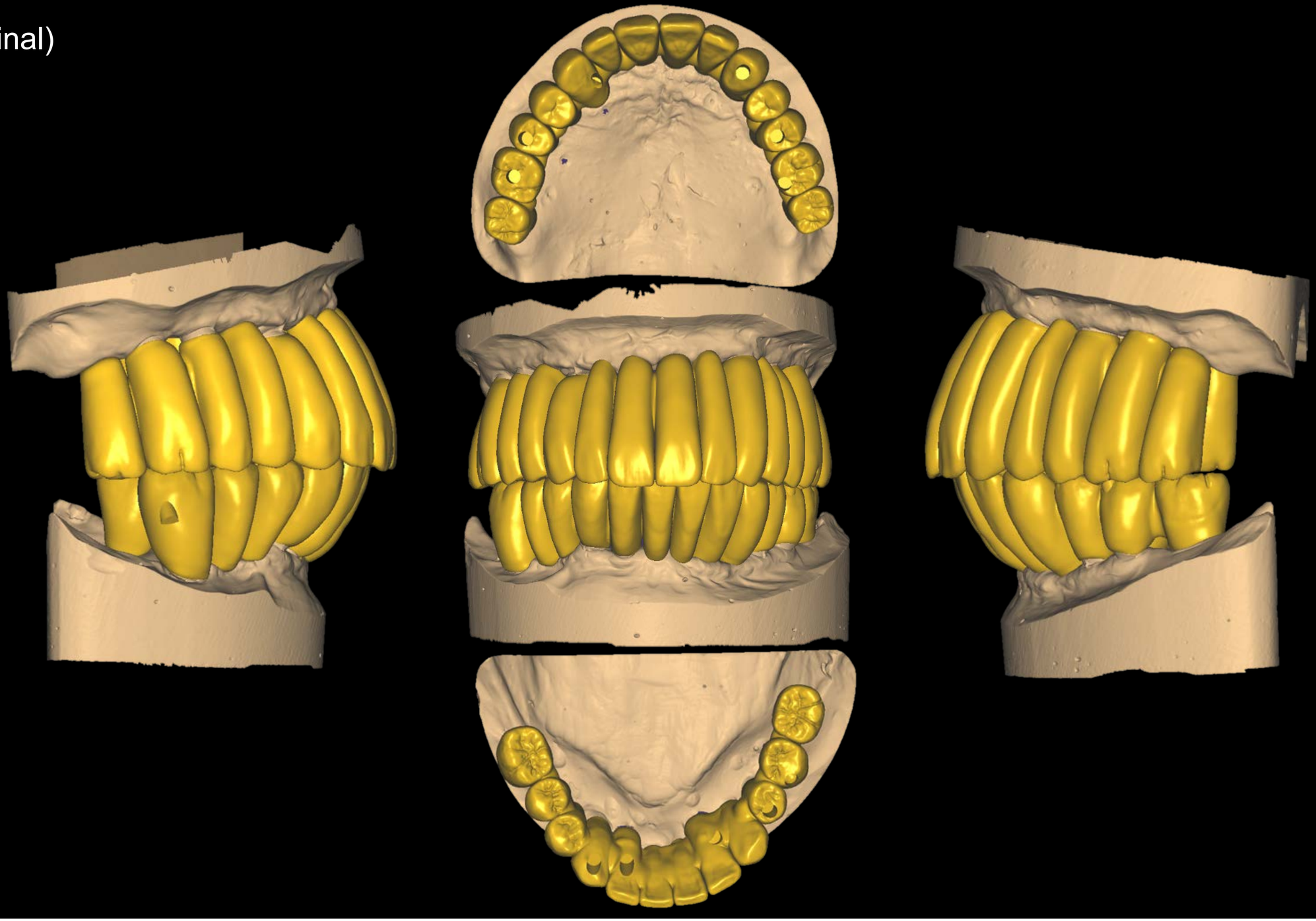
Temporary

Provisional restoration (2022-08-12)

New Provisional restoration (2022-09-16)

Custom abutment (2022-10-05)

CAD (Final)



Milling / Coloring

Finishing

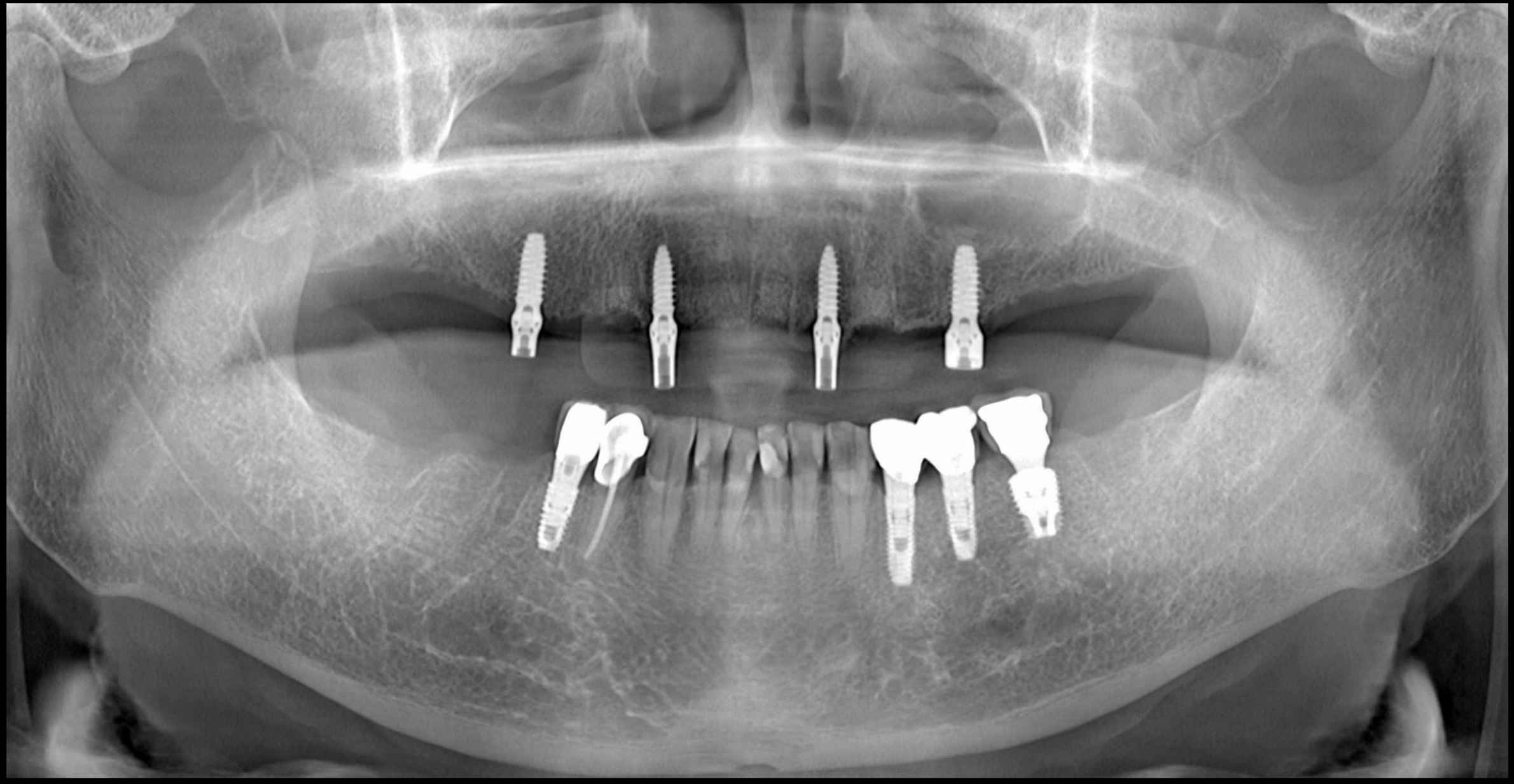
Final prosthesis (2022-11-09)

Pink Resin Adding

Final prosthesis (Re-make) (2019-12-18)

Pre-op (2021-04-07)

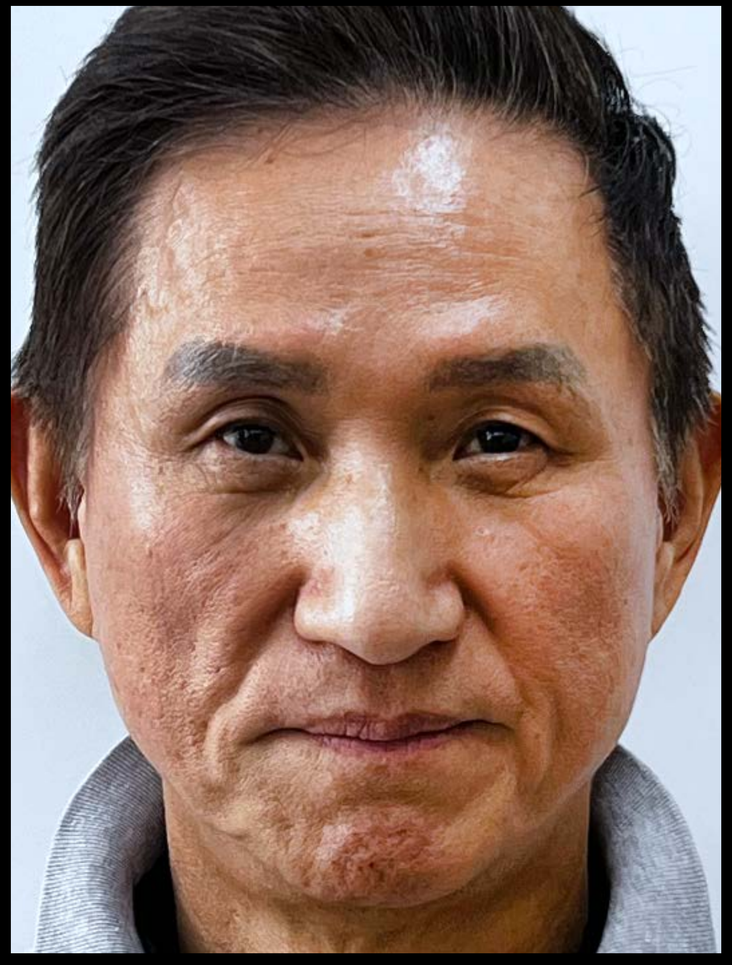
Post-op (2021-05-07)



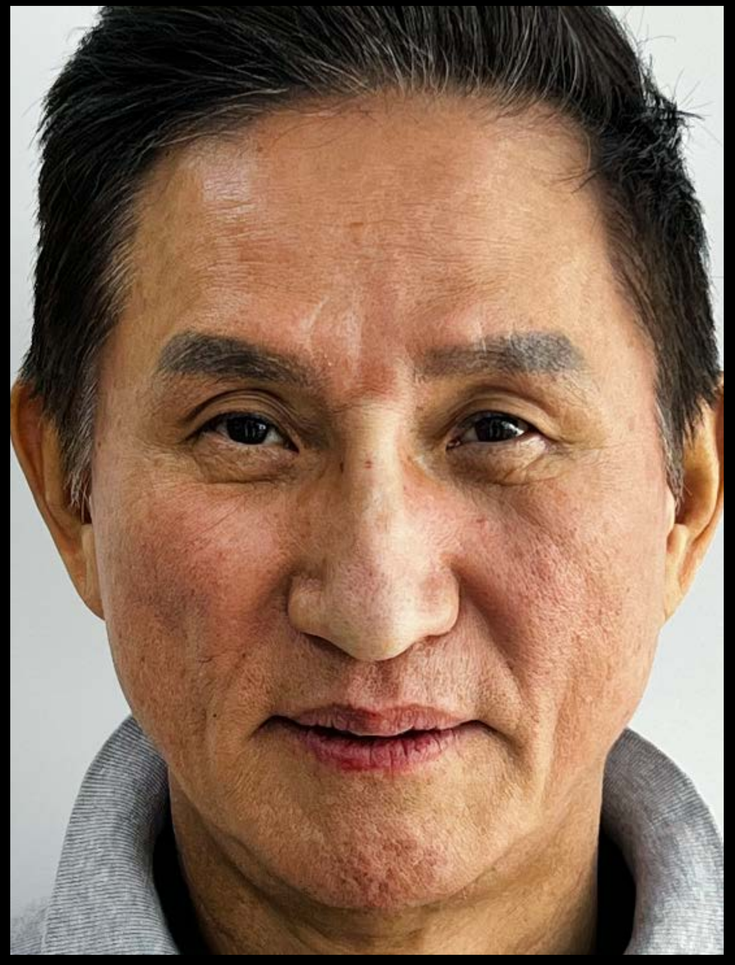
Follow up 1 year (2022-10-14)

Final prosthesis (2021-10-08)

Before

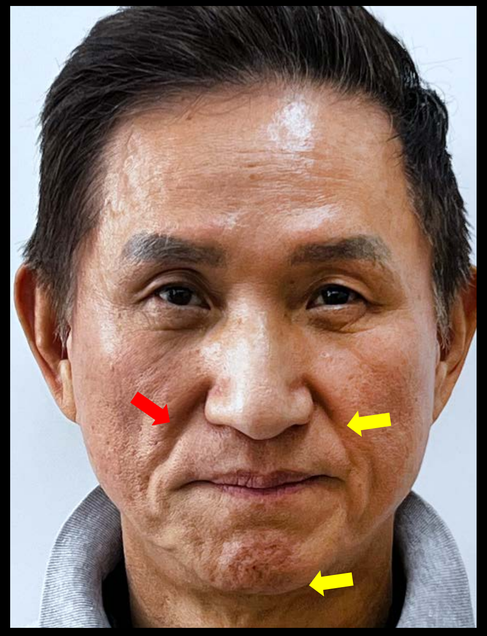


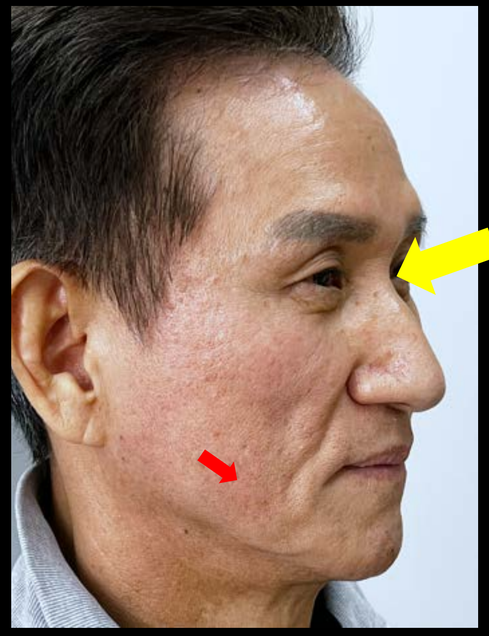
After



1 Month Later

before

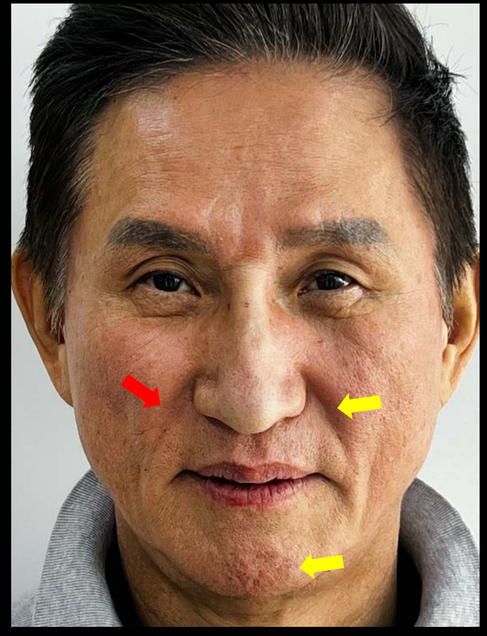


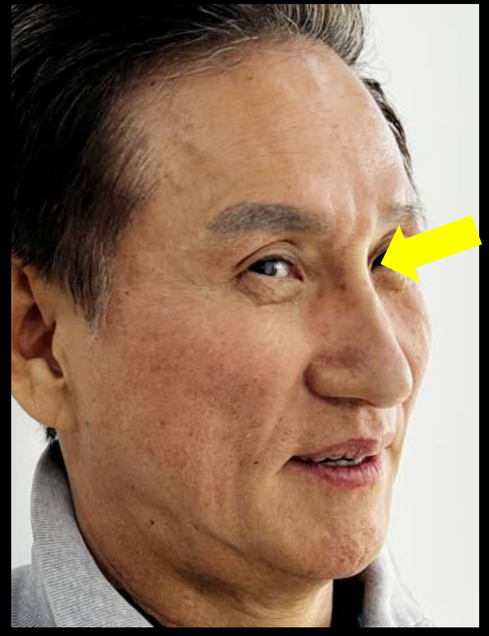


High
- Nose
- Nasolabial folds
- Chin

Smile
- Nasolabial folds
- Marionette lines

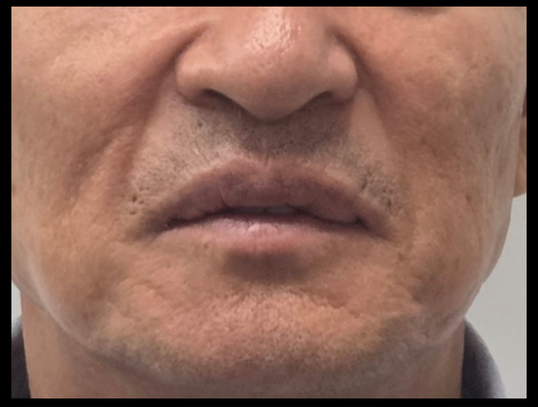
after





High elastic hyaluronic acid filler

Clinical case : Lip, Chin, Nasolabial fold

Before			
After			
1M After			

Contents

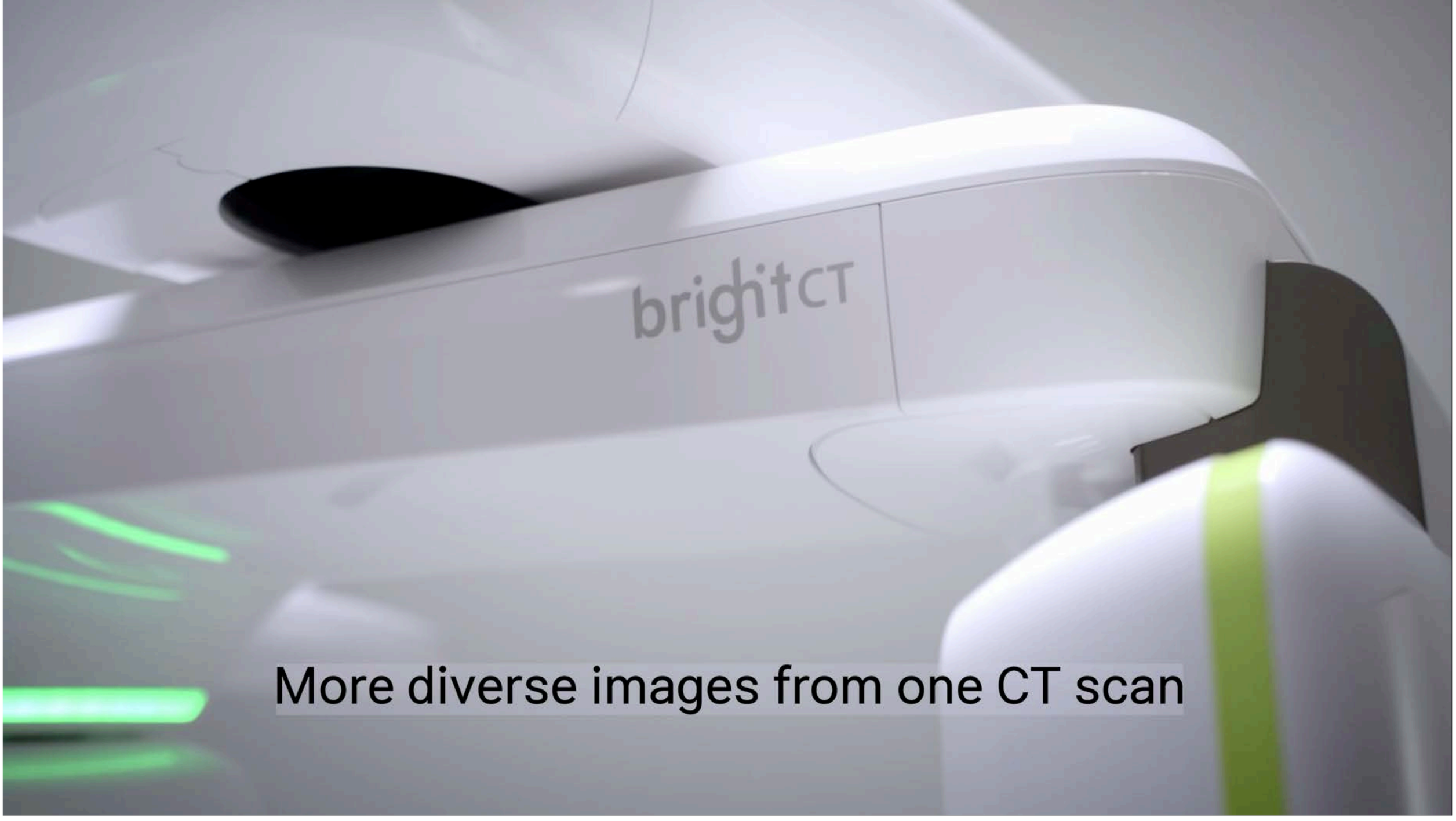
Introduction

Over denture

Fixed prosthesis

Digita concepts

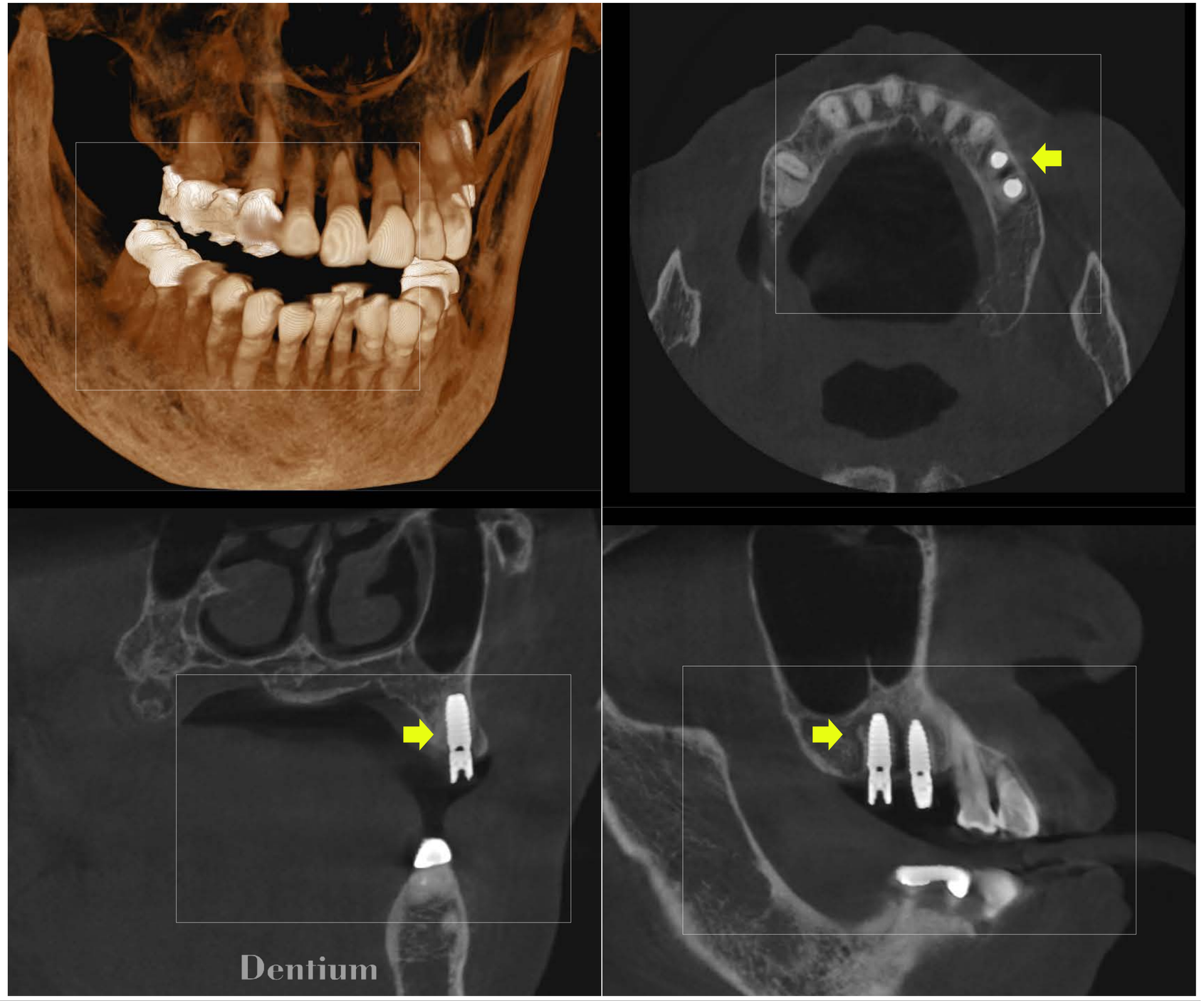
and application for full mouth reconstruction


brightCT
More diverse images from one CT scan

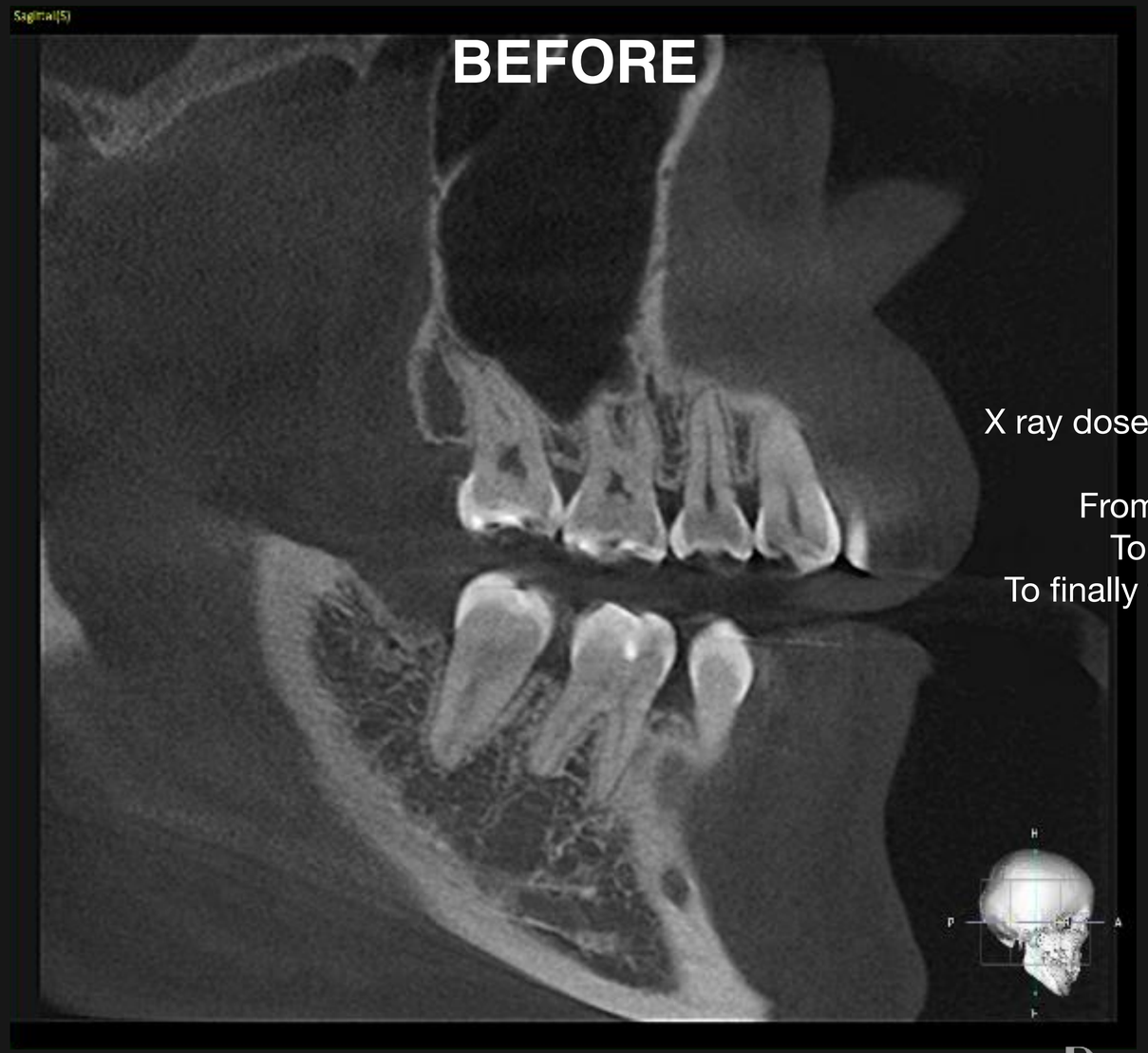
CT viewer
Bright CT and Rainbow CT

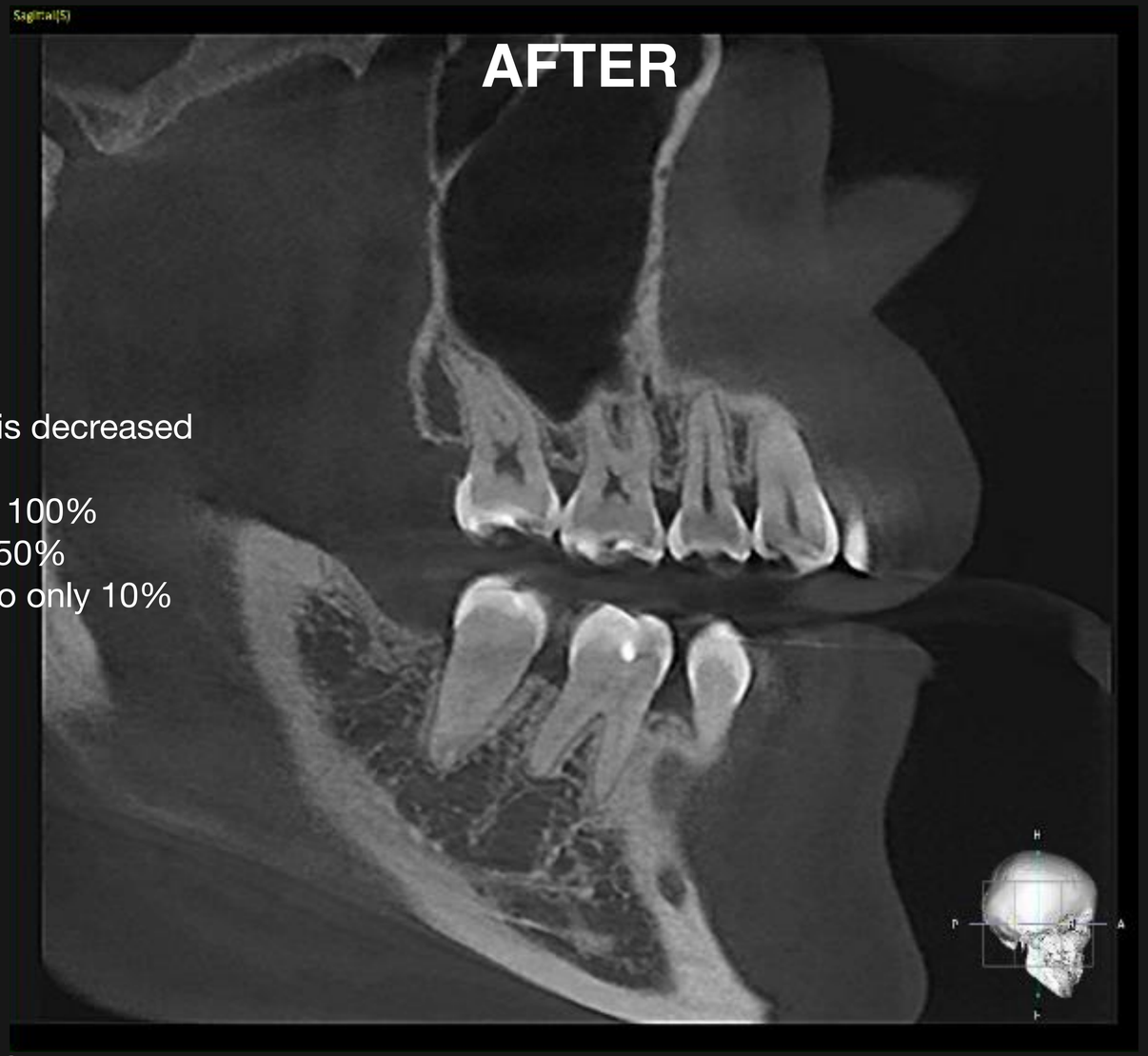
CT viewer of
Bright CT
Rainbow CT

MAR
(Metal Artifact Reduction)



CT Image Upgrade De-noising with A.I



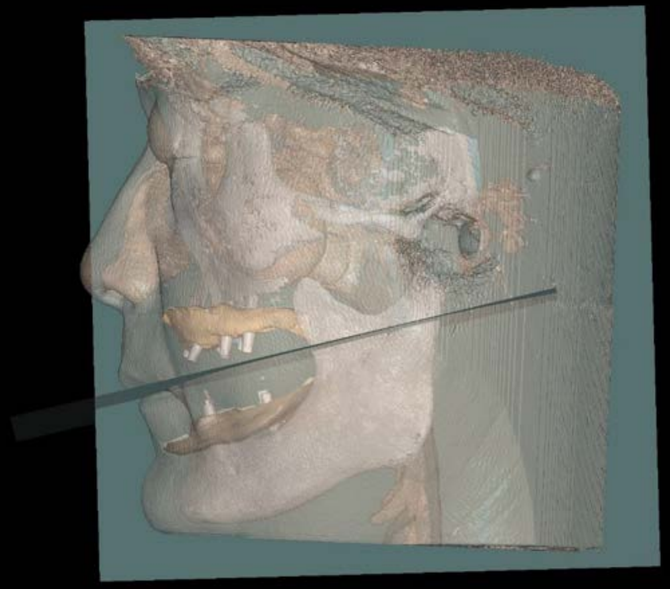


X ray dose is decreased

From 100%
To 50%
To finally to only 10%

Dentium

rainbow™ 3D Viewer



Digital dentistry with AI

AUTO AUTO AUTO AUTO

3D Viewer **AI Occlusal Plane**

Auto Set occlusal plane from anatomical landmark on CT

3D Viewer **AI Occlusal Plane**

AUTO

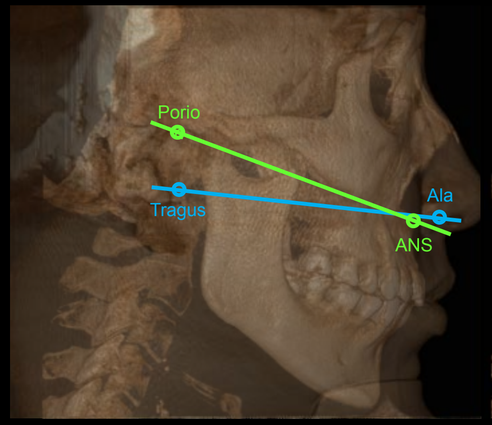
Auto Set occlusal plane from anatomical landmark on CT

1) Auto Set the plane

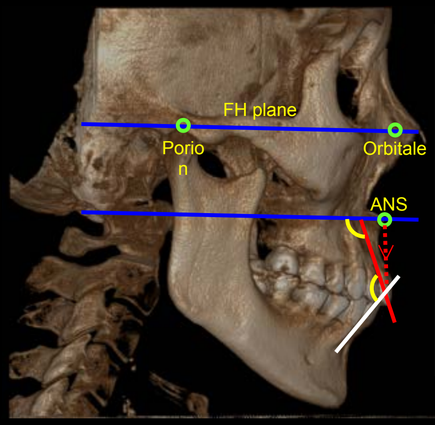
2) Export the CT data

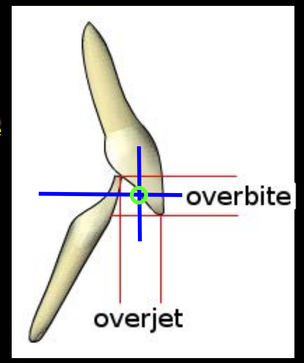
3) All of data stitching

4) Prosthesis Design



1) Occlusal plan angle





overbite, overjet : 2~3mm

2) Occlusal plan Vertical height

Dentium

3D Viewer **AI Occlusal Plane**

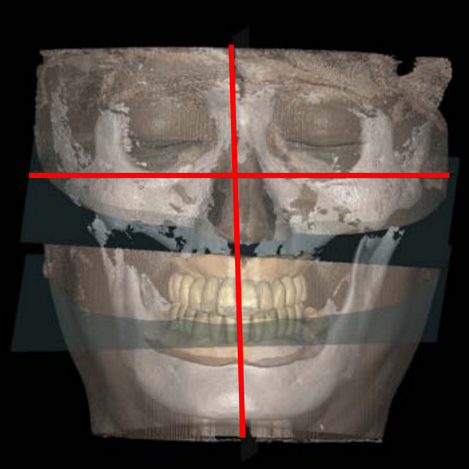
Auto Set occlusal plane from anatomical landmark on CT

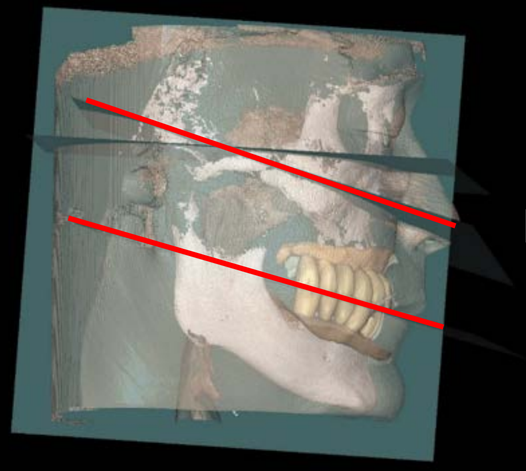
1) Auto Set the plane

2) Export the CT data

3) All of data stitching

4) Prosthesis Design



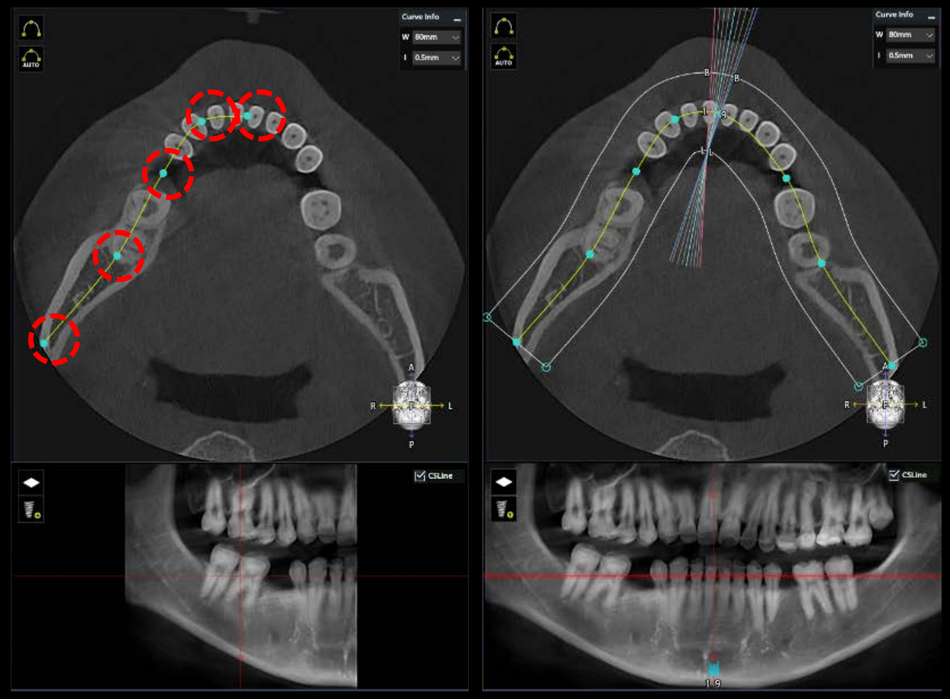


Final prosthesis

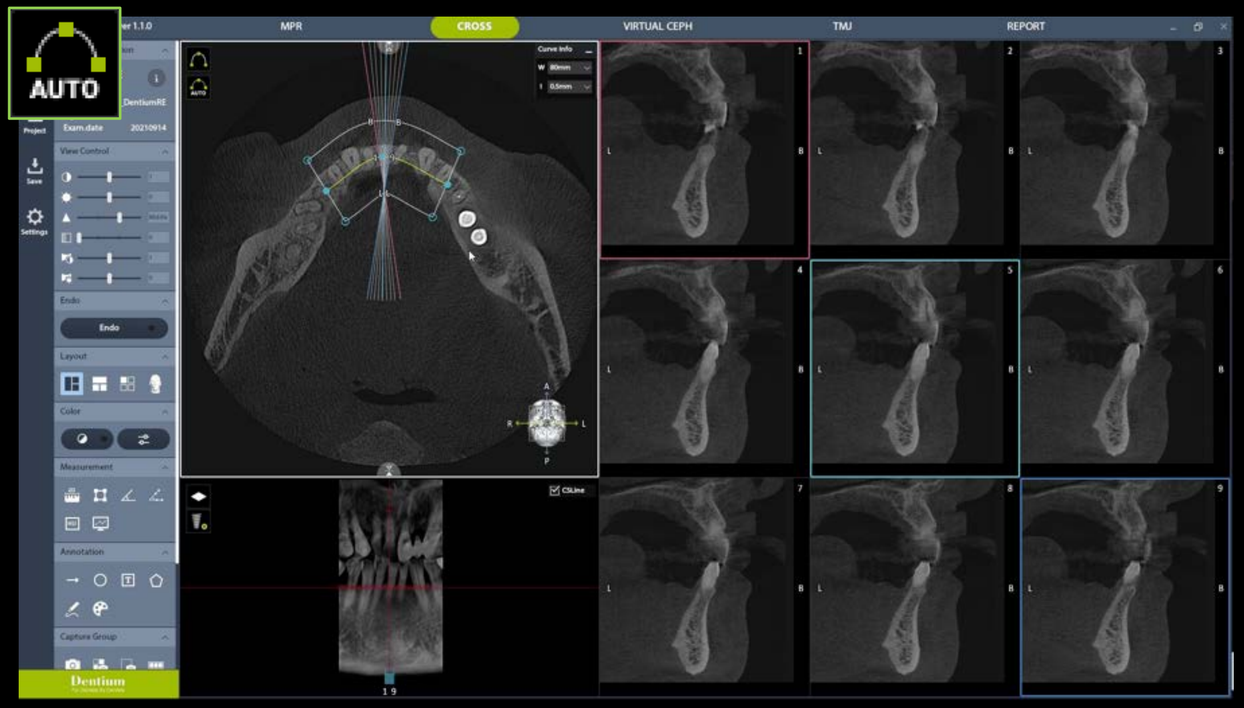
Dentium

3D Viewer **AI Auto Arch Detection**

AI Auto Arch Detection



Manual

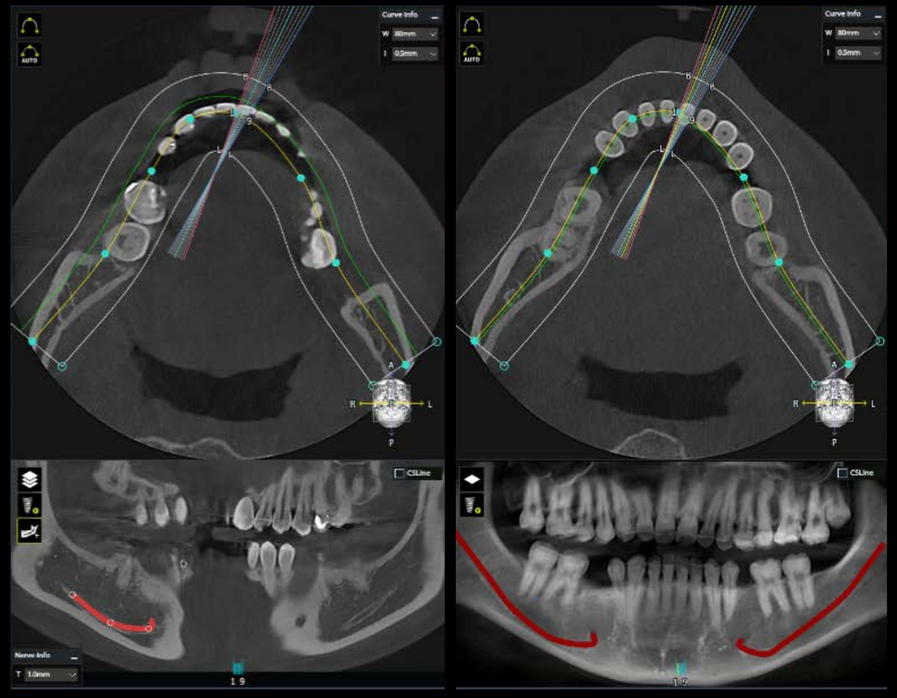


AI dental arch auto detection, error <1.14mm

Dentium

3D Viewer **AI Auto Nerve Detection**

AI Auto Nerve Detection



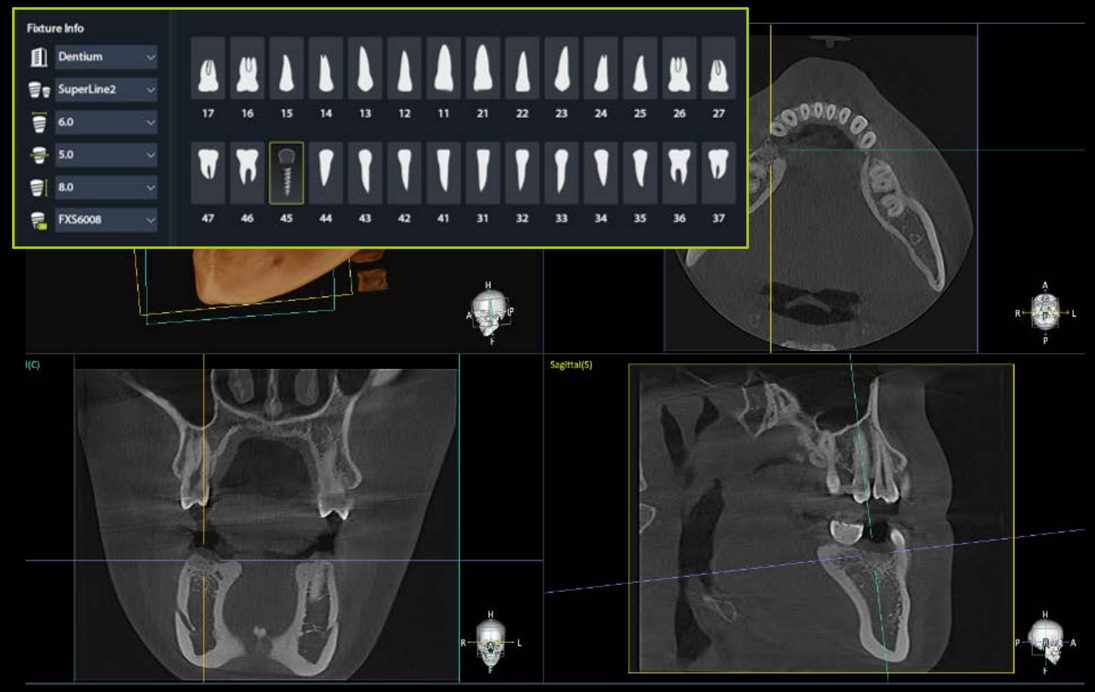
Manual

AI nerve auto detection, error < 0.42mm

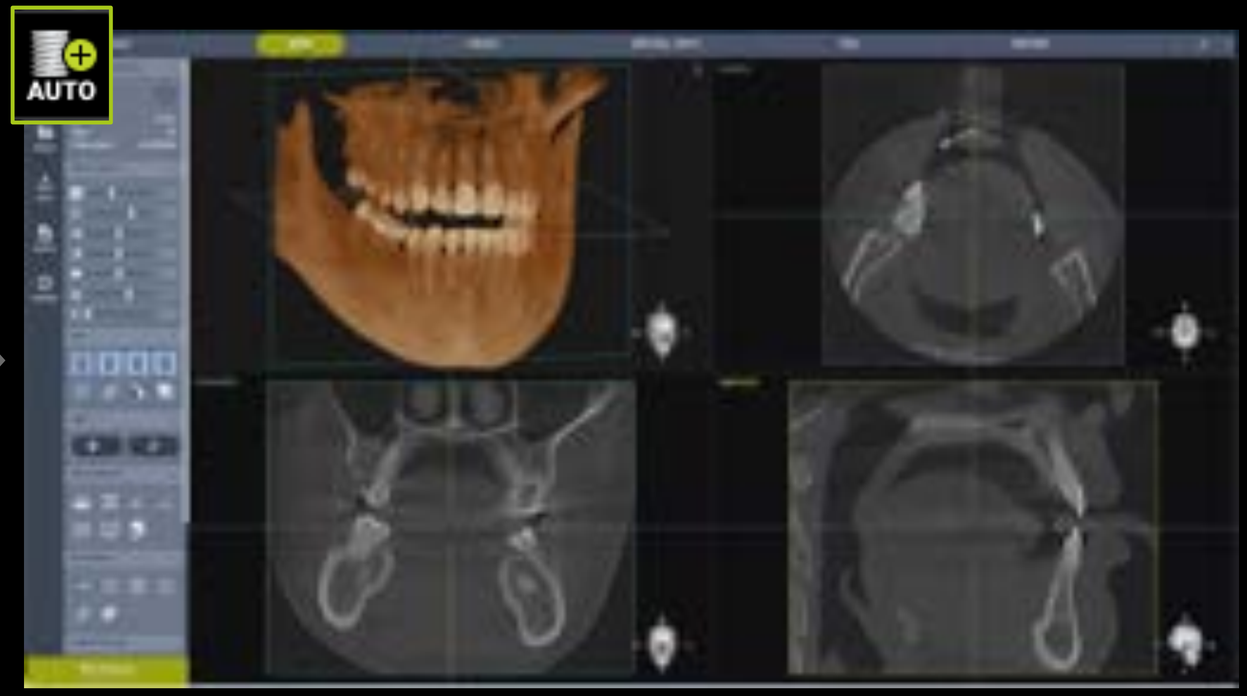
Dentium

3D Viewer **AI Auto Fixture Placement**

AI Auto Fixture Placement



Manual



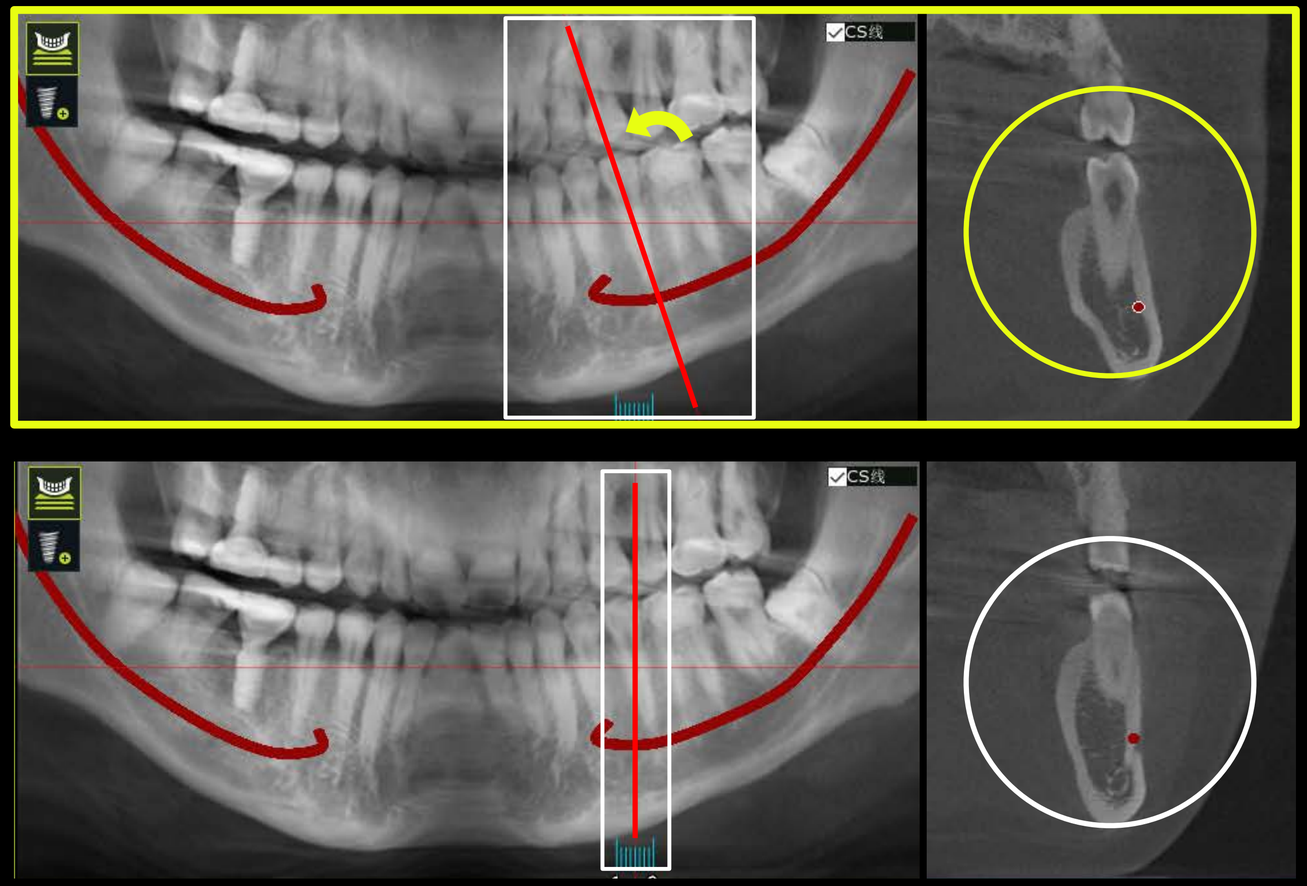
AI Fixture Initial Positioning

Dentium

3D Viewer **Root Axis Viewer**

Root Axis Viewer

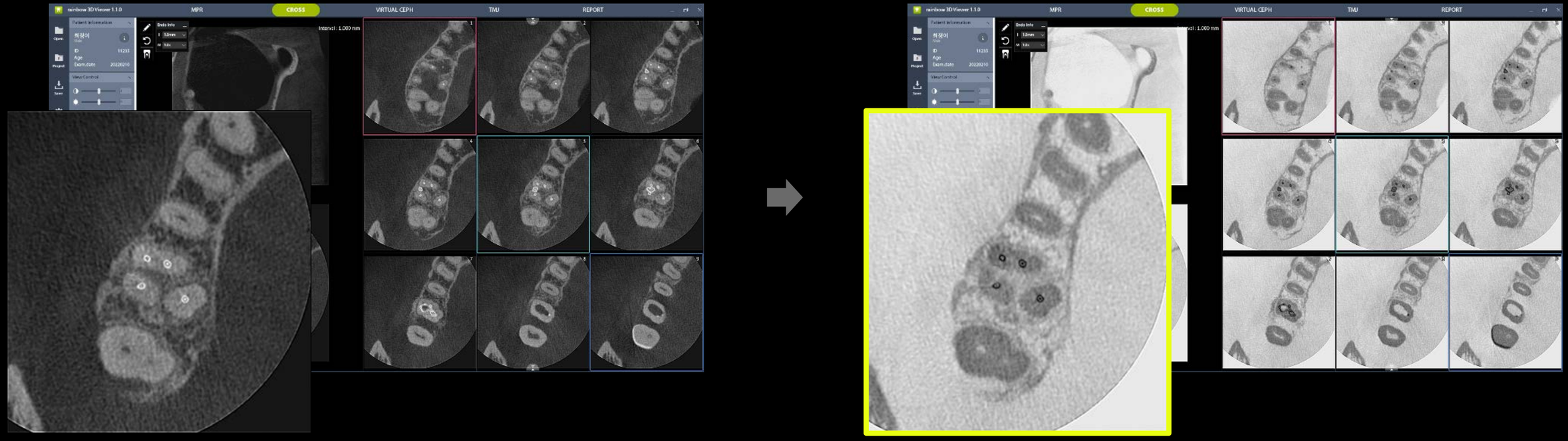
Supports cross-sectional images base on the root axis in panorama



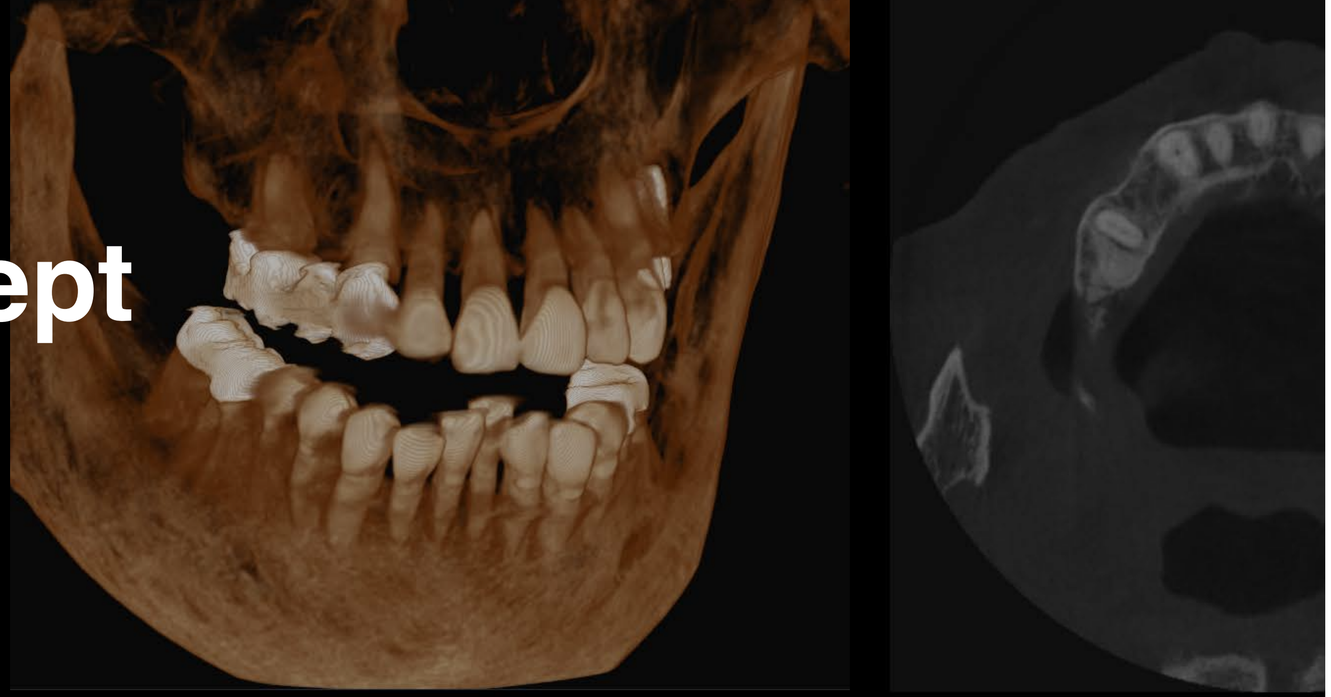
Dentium

3D Viewer **Endo View Visualization**

Endo View Visualization

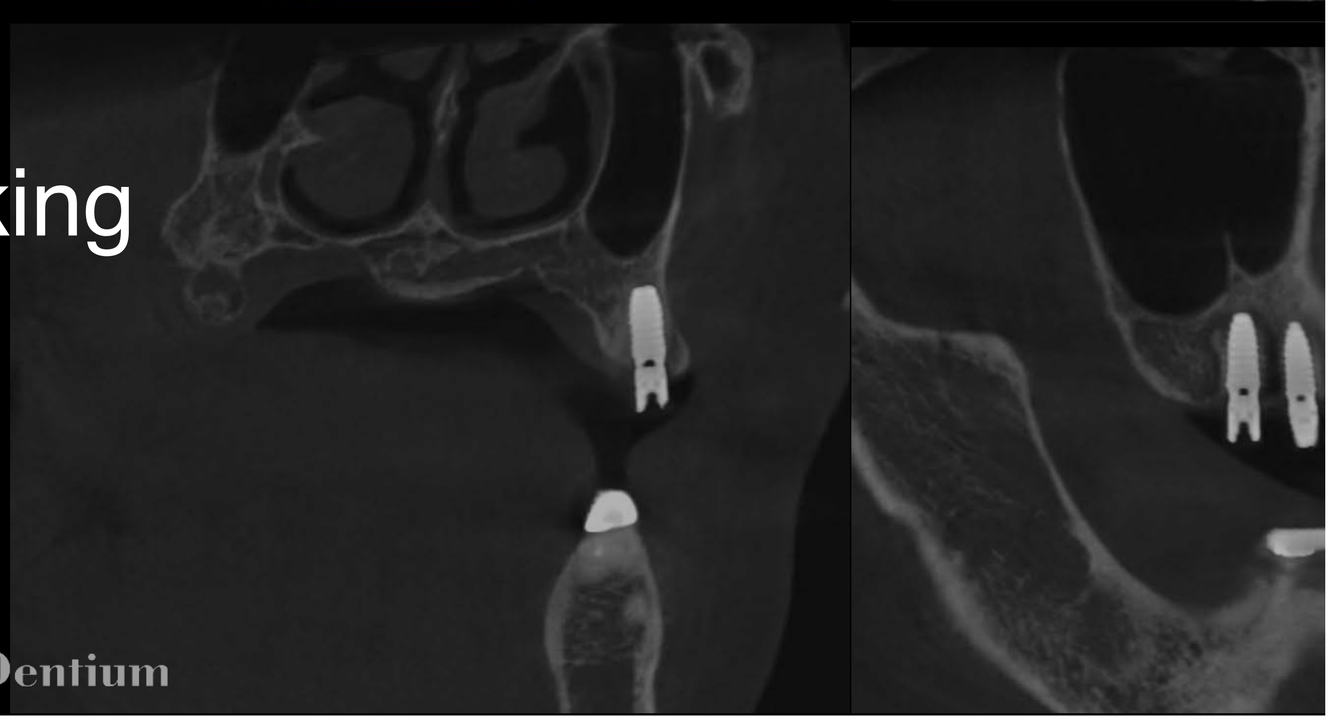


Practical digital concept



Utilization of CT data

- CT stitching for bite taking
- AI Occlusal plane



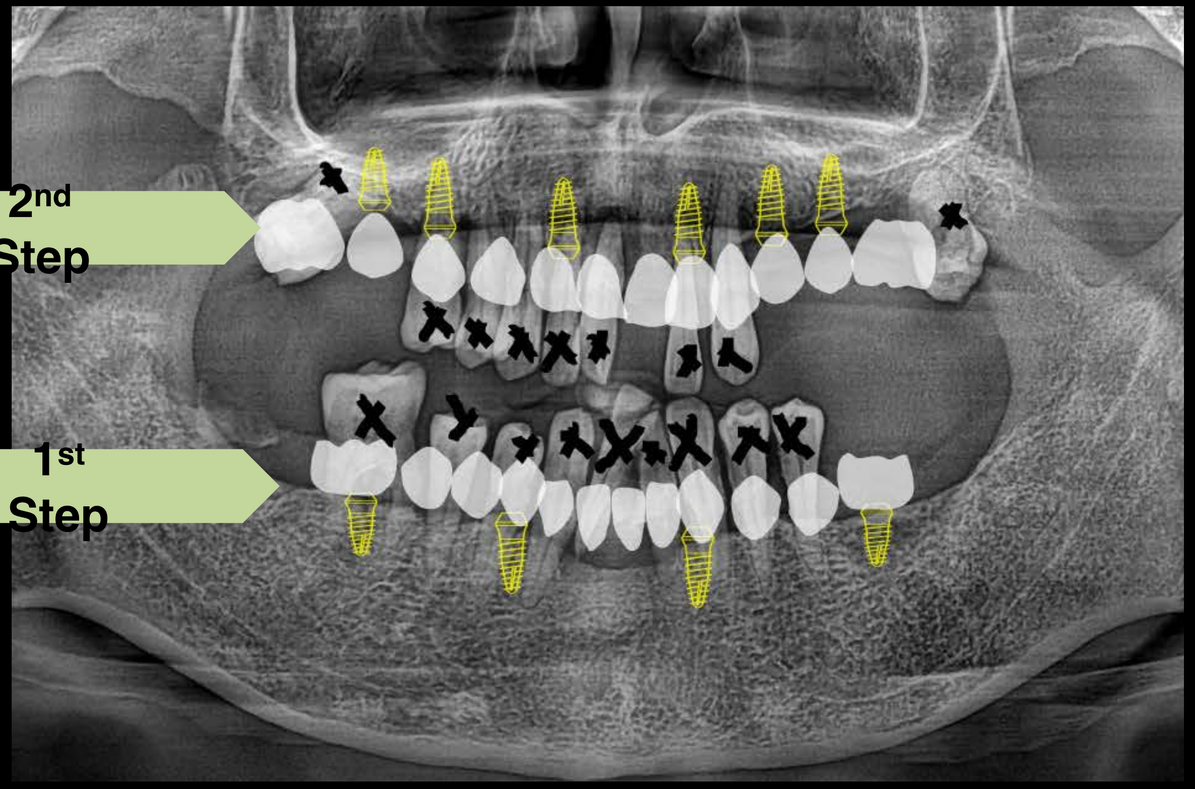
Dentium

Pre-op (2023-08-08)

PMH
Heart stent transplants,
diabetes, hyperlipidemia

Pre-op (2023-08-10)

Surgery plane with X-ray



1st Step

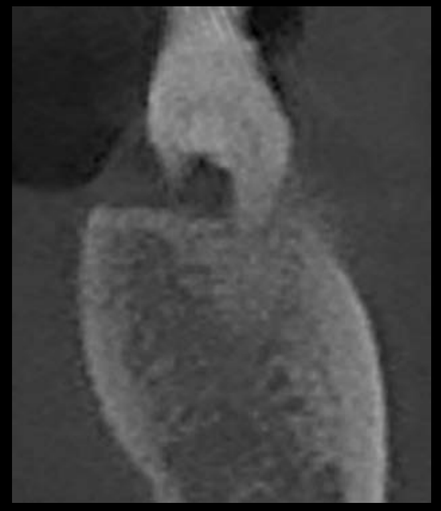
Full mouth extraction

All on 4 immediate implantation on **Lower** arch

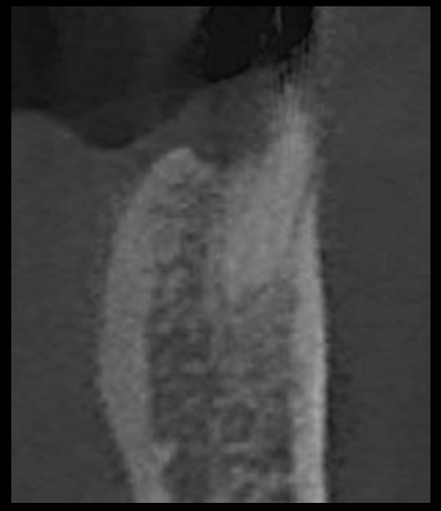
2nd Step

All on 6 implantation on **upper** arch

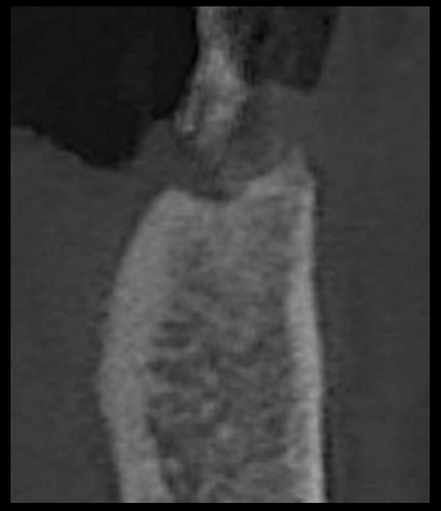
Pre-op CT (2023-08-10)



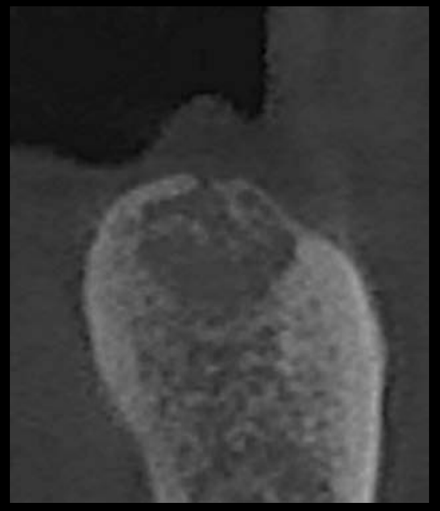
#46



#33



#43



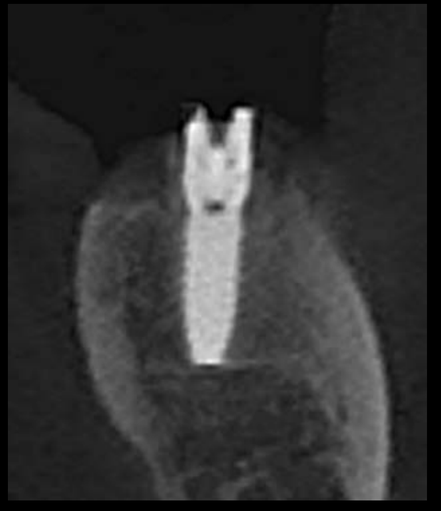
#46

Post-op CT (2023-08-10)

#46

#33

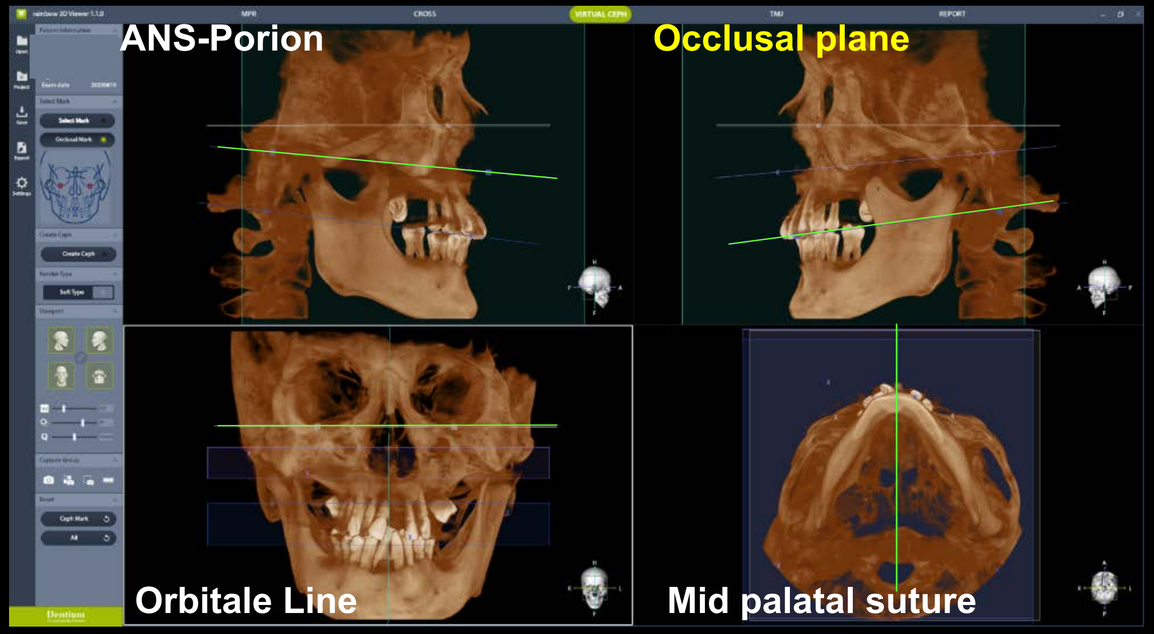
#43



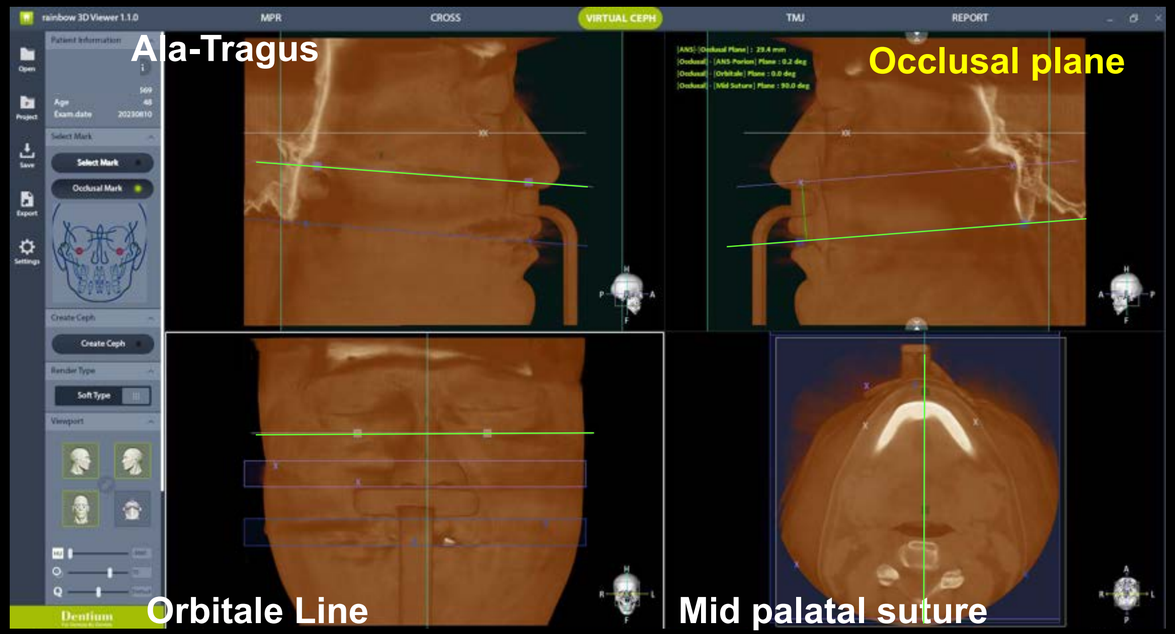
#46

CT viewer 활용 평면 설정

Hard tissue

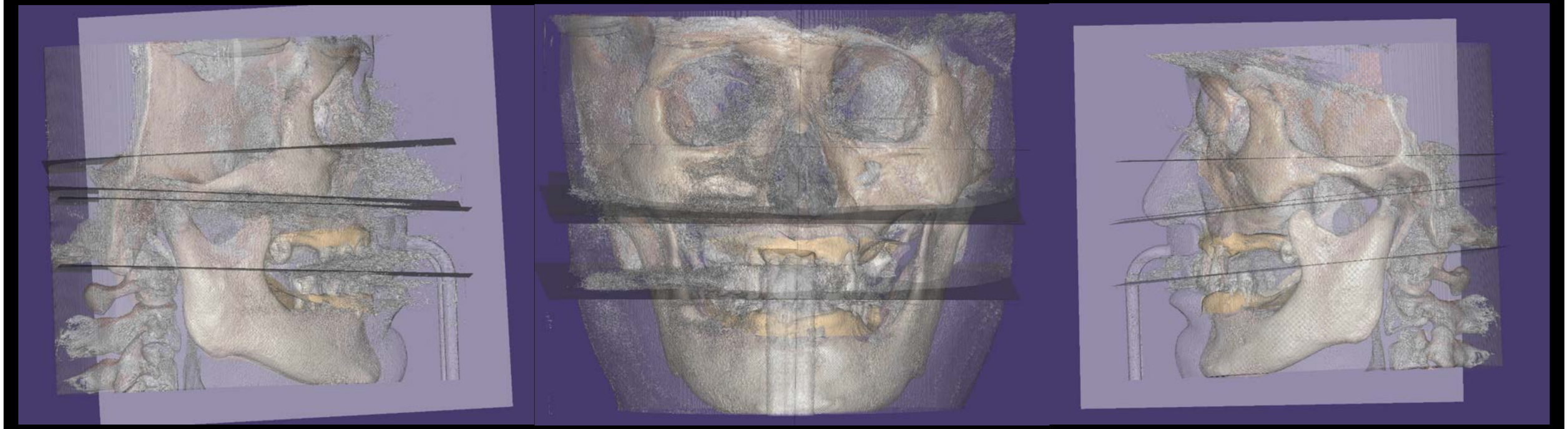


Soft tissue



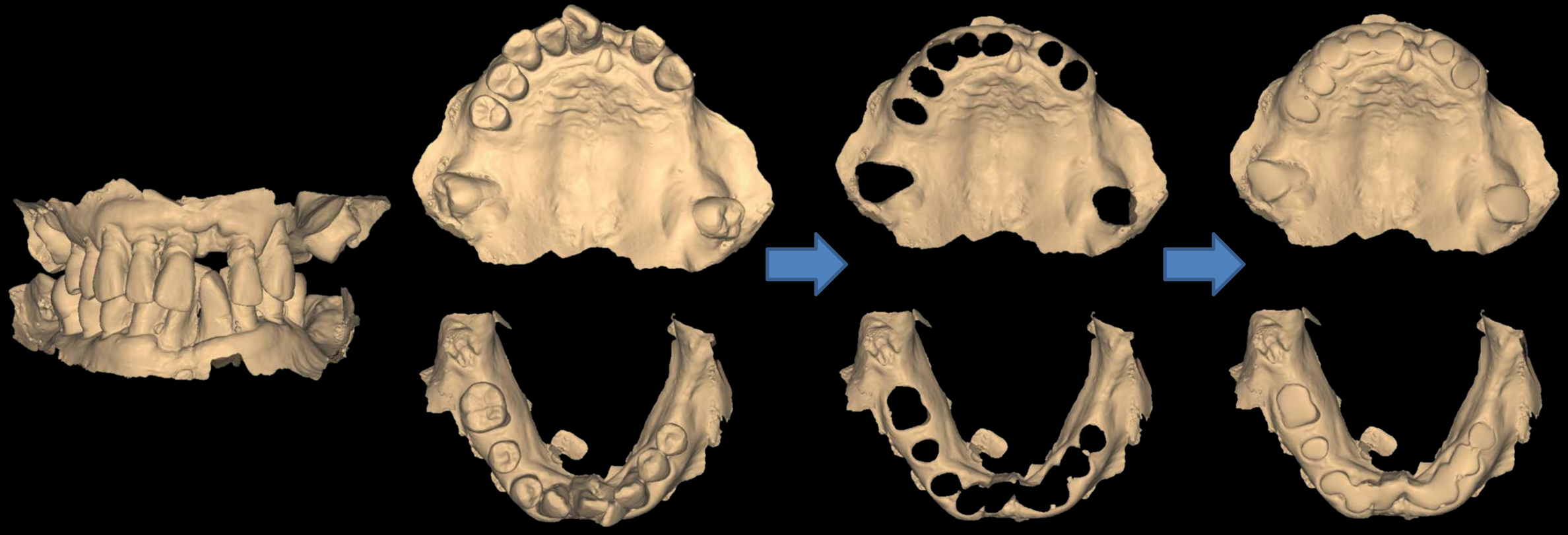
HU값 조절을 통해 Hard/ Soft tissue 모두 pointing 가능

Data stitching
(CT DICOM + CT plane STL + working model)

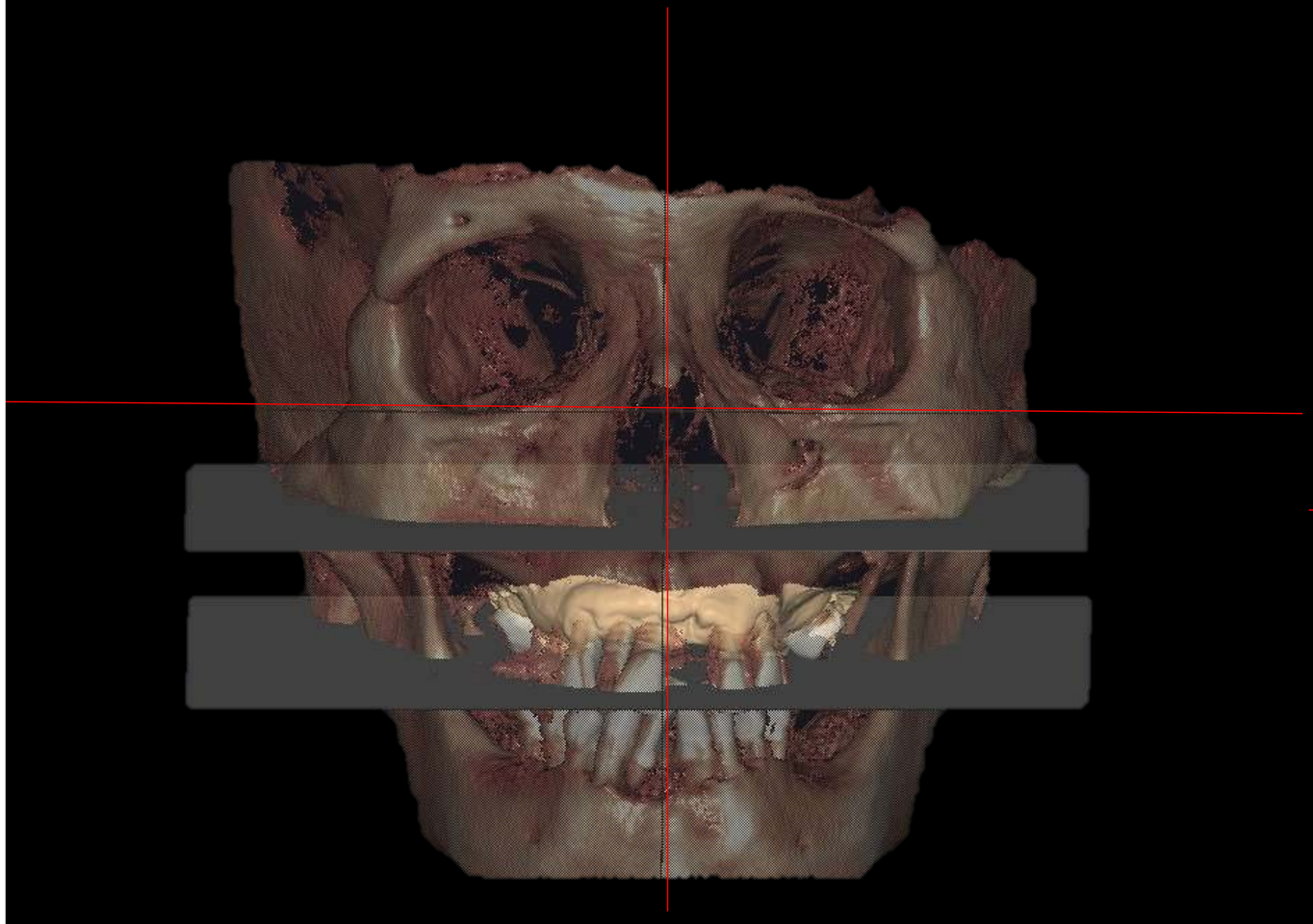


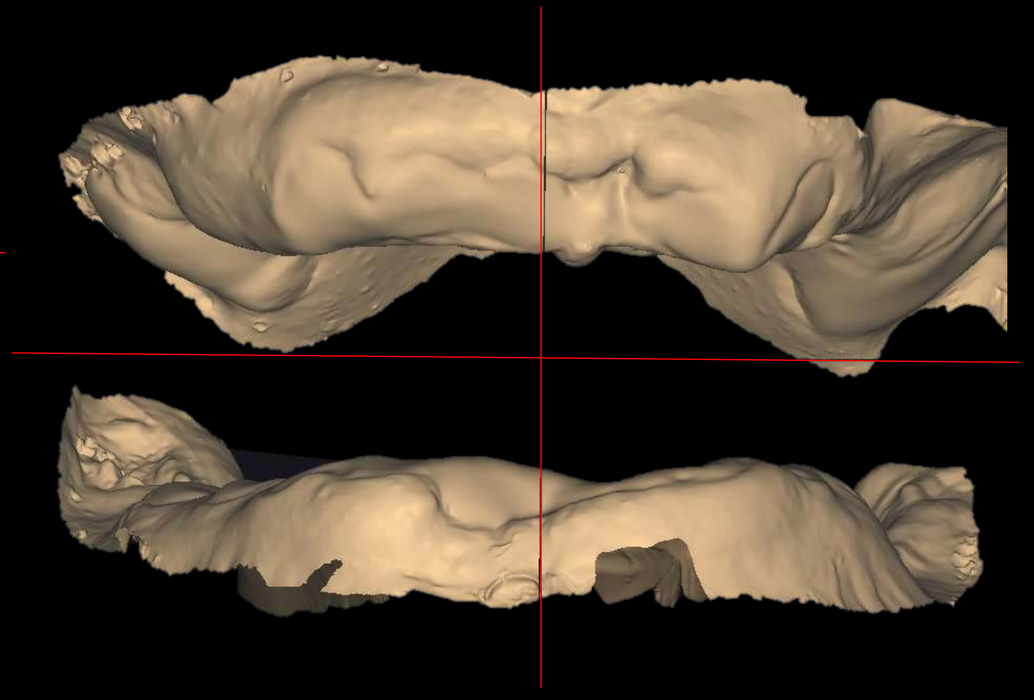
CT STL (soft / hard) + plane STL + IOS

Working model
(Intra Oral Scan data editing)

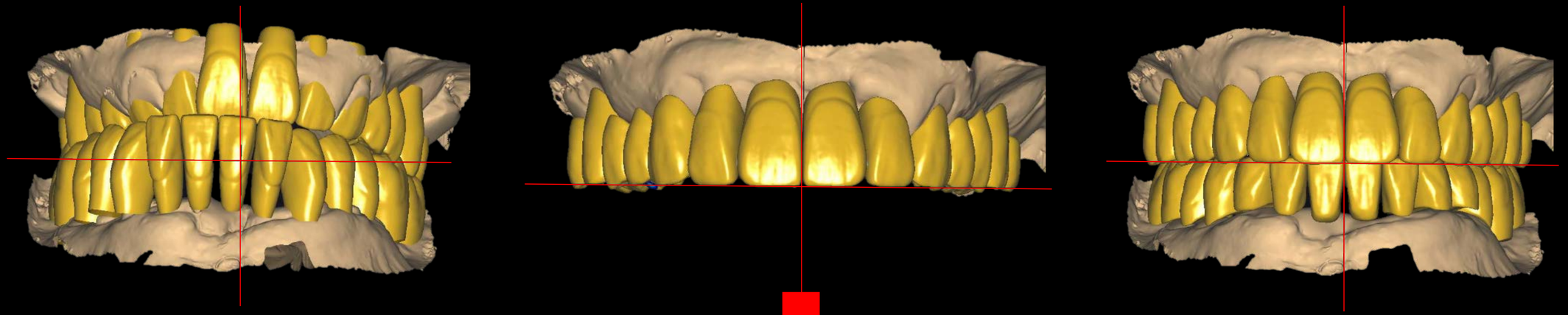


Data stitching
(CT DICOM + CT plane STL + working model)

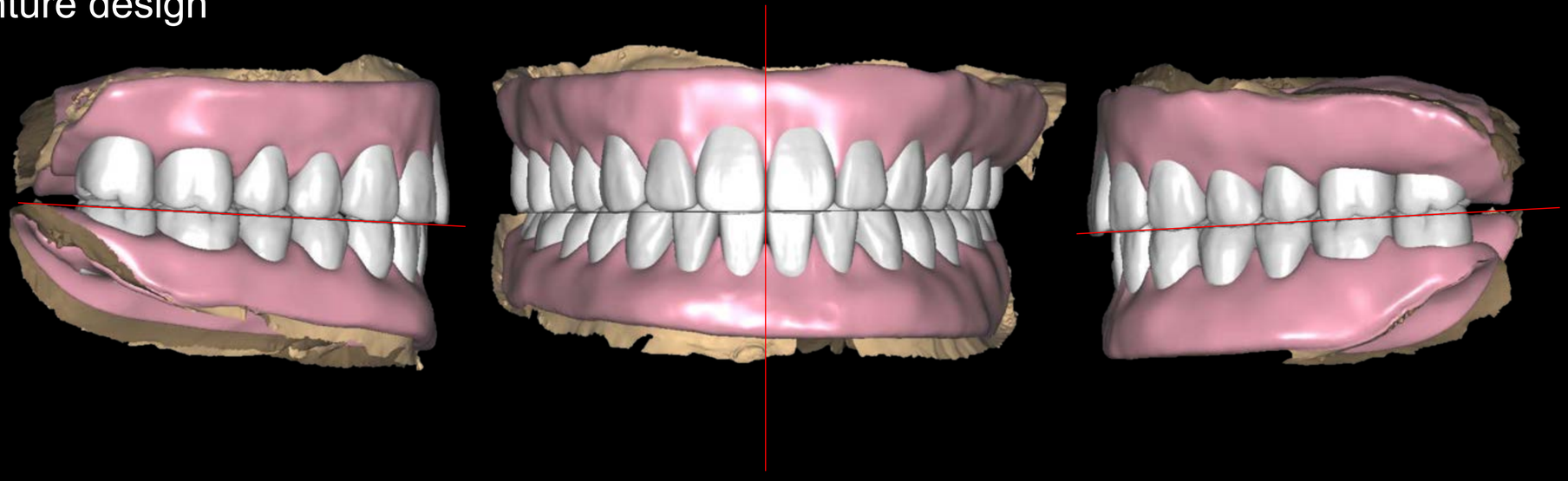




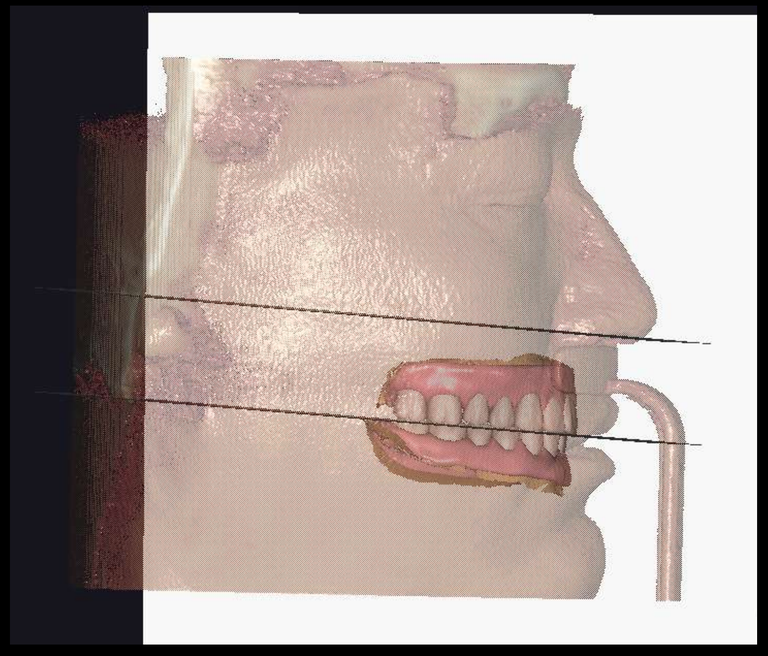
Virtual Set-up

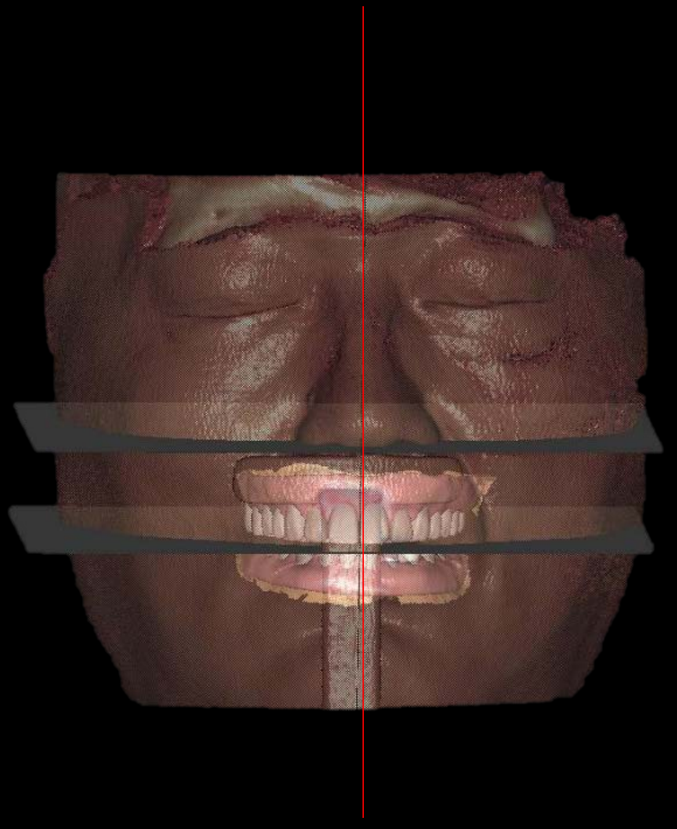


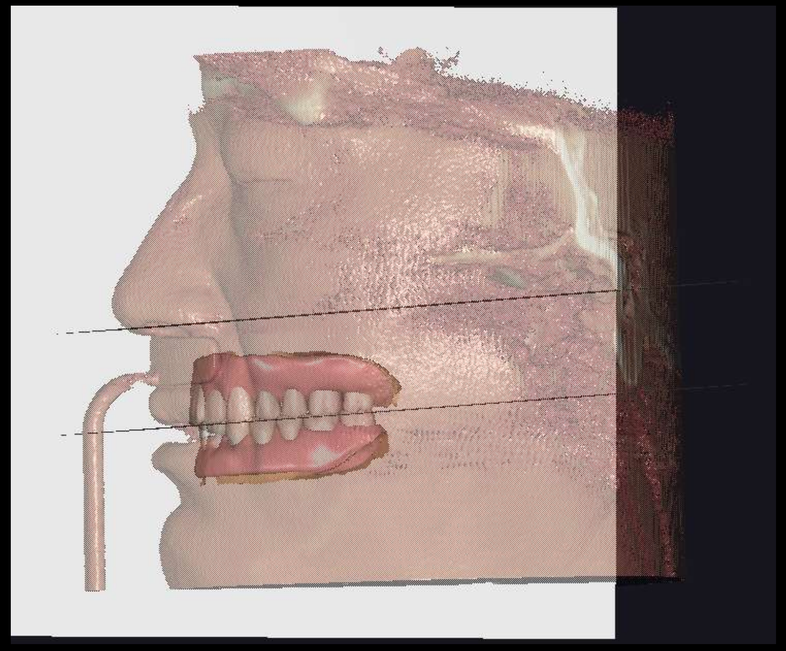
Temporary denture design



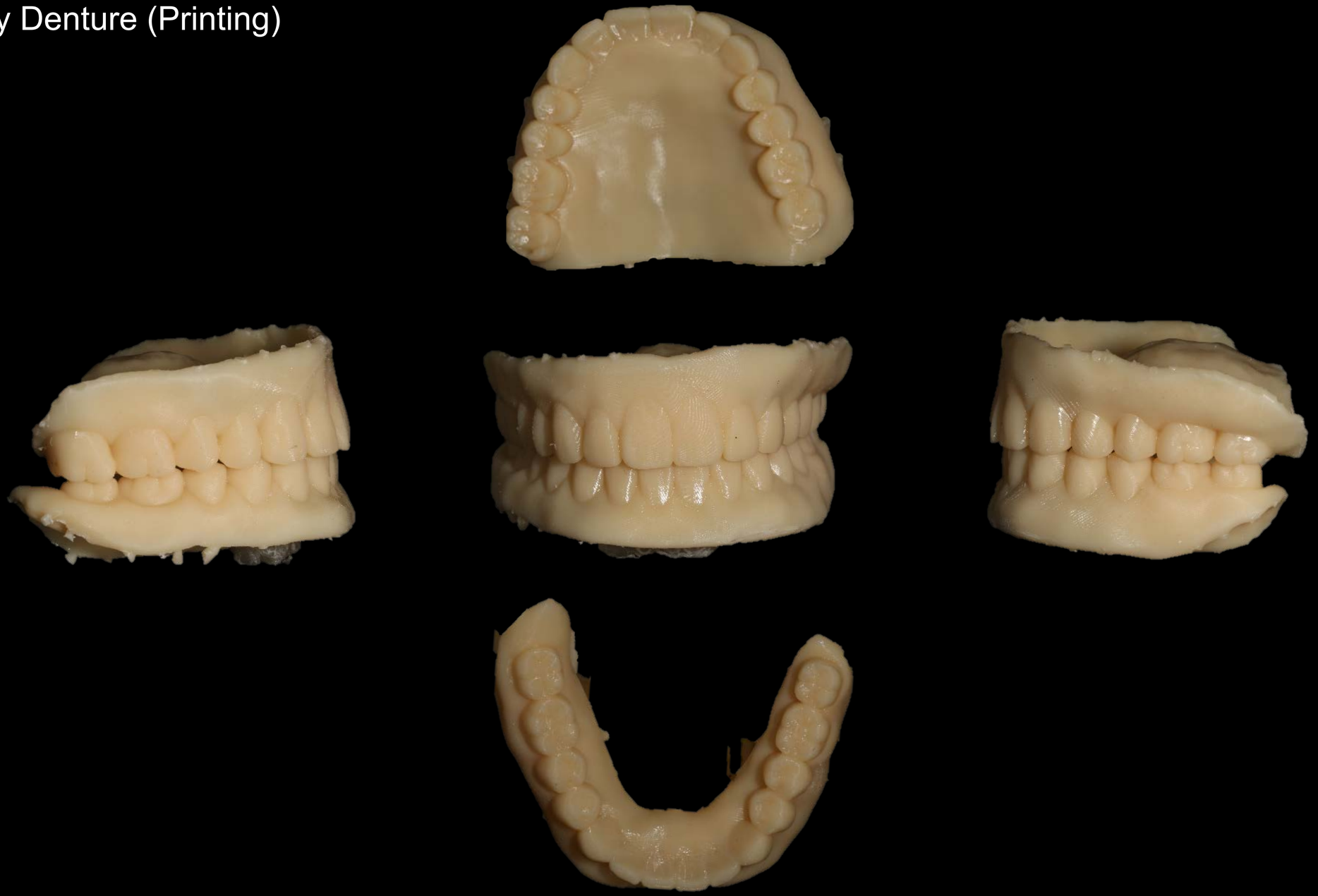
Temp denture design





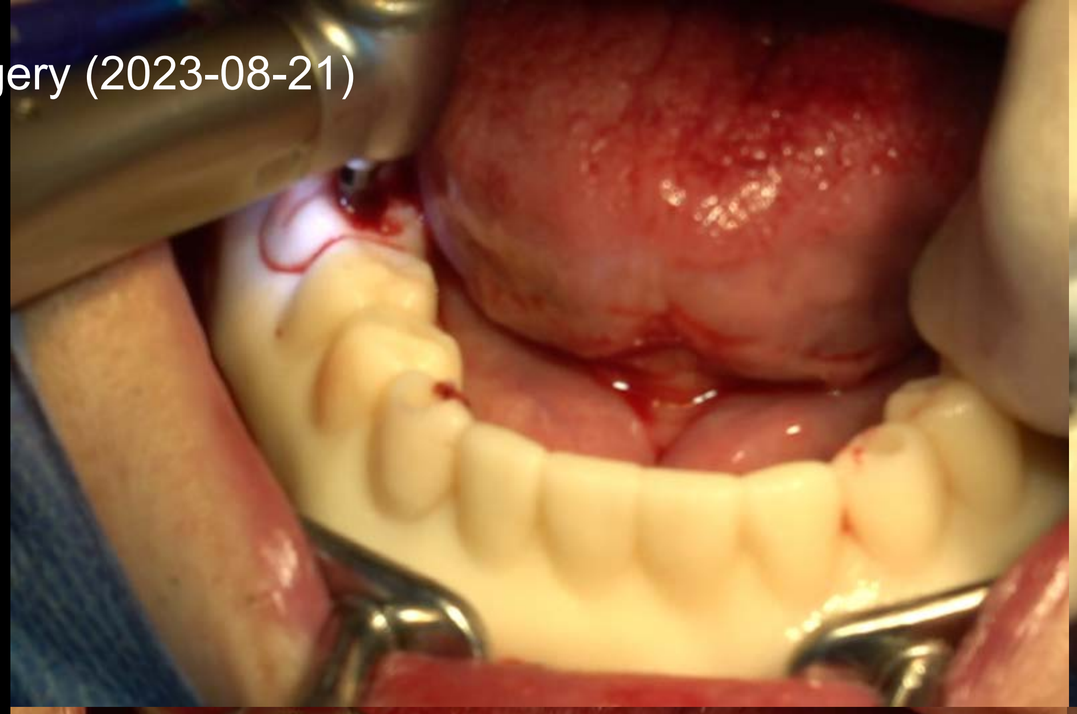


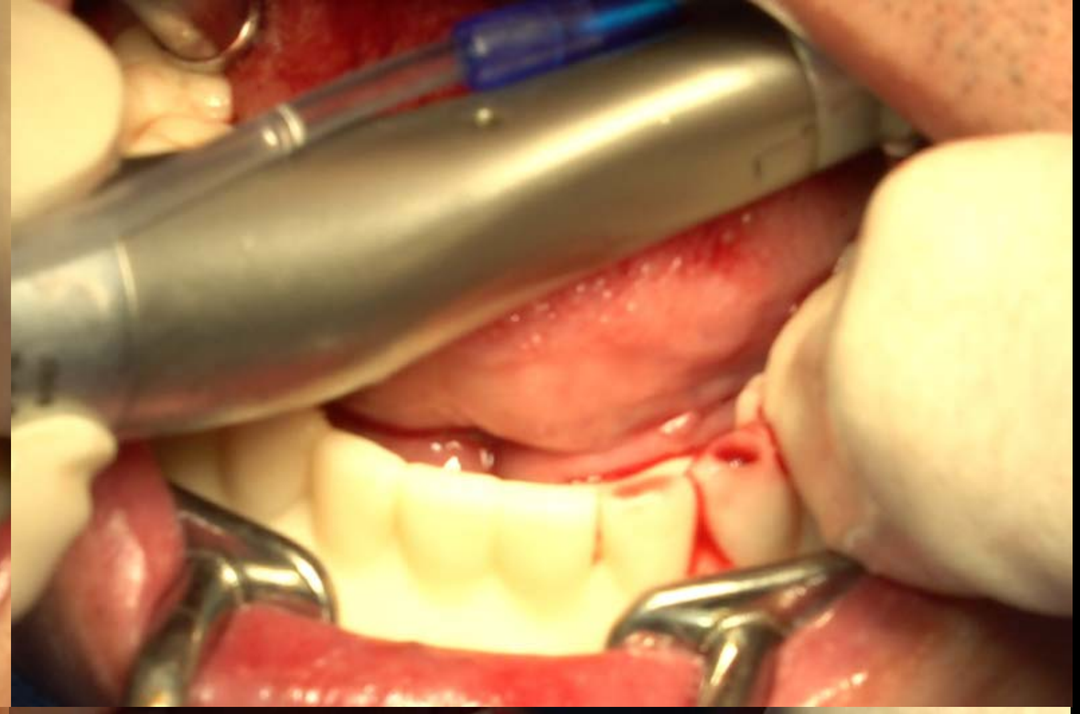
Temporary Denture (Printing)

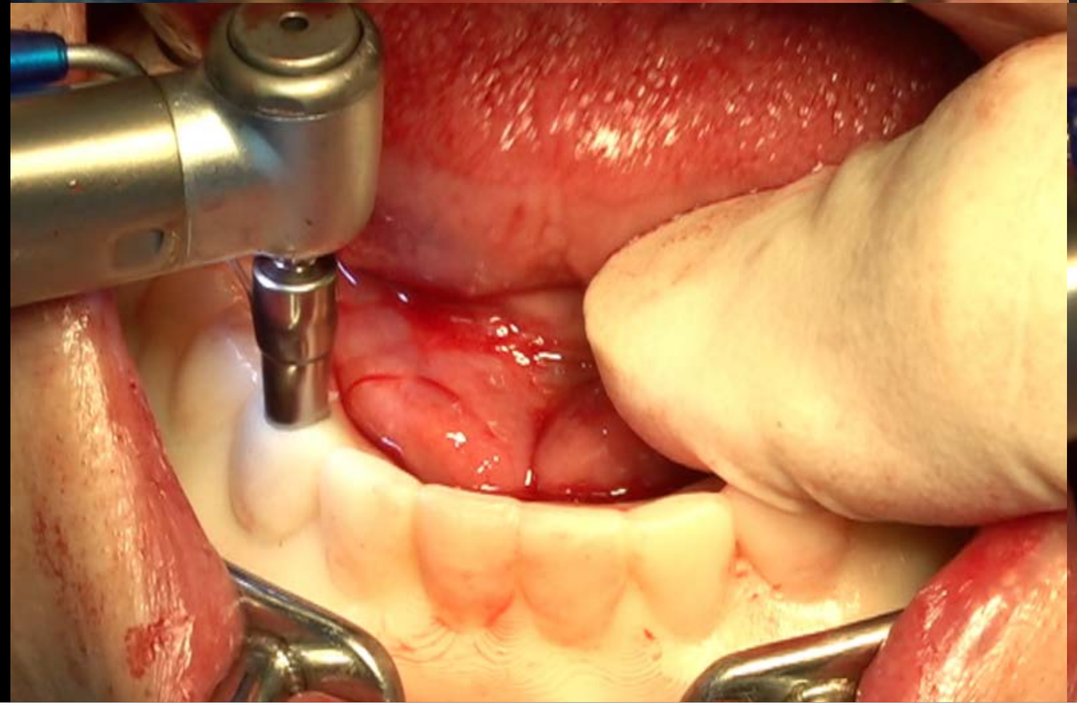


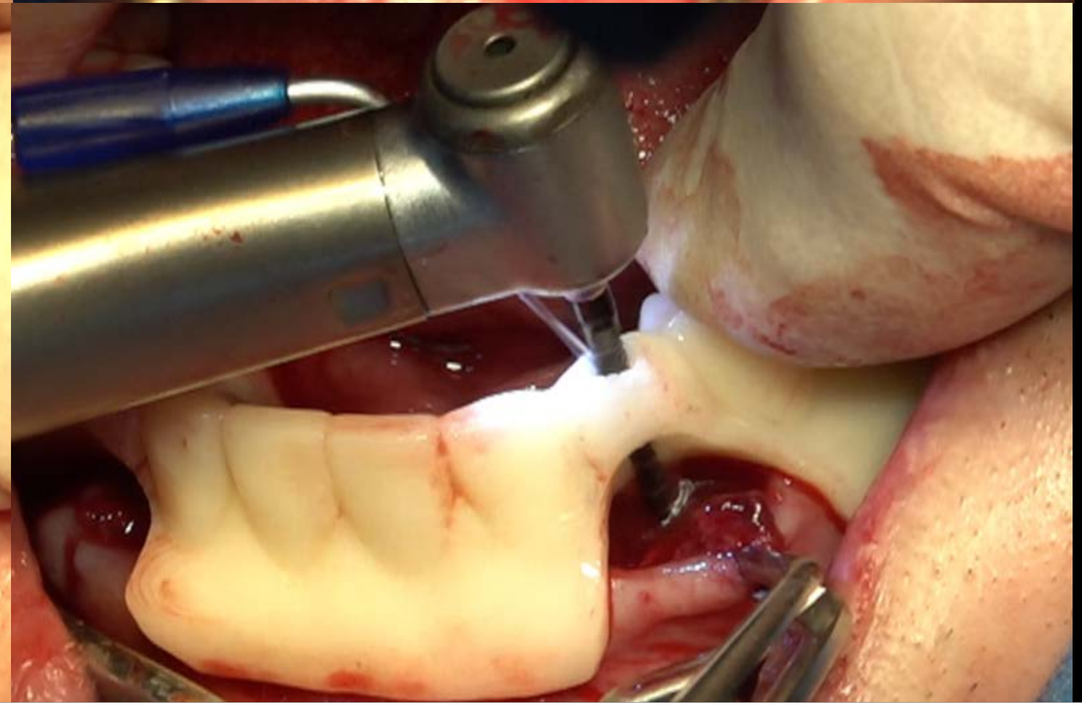
Marking hole on Lower printing denture

Surgery (2023-08-21)

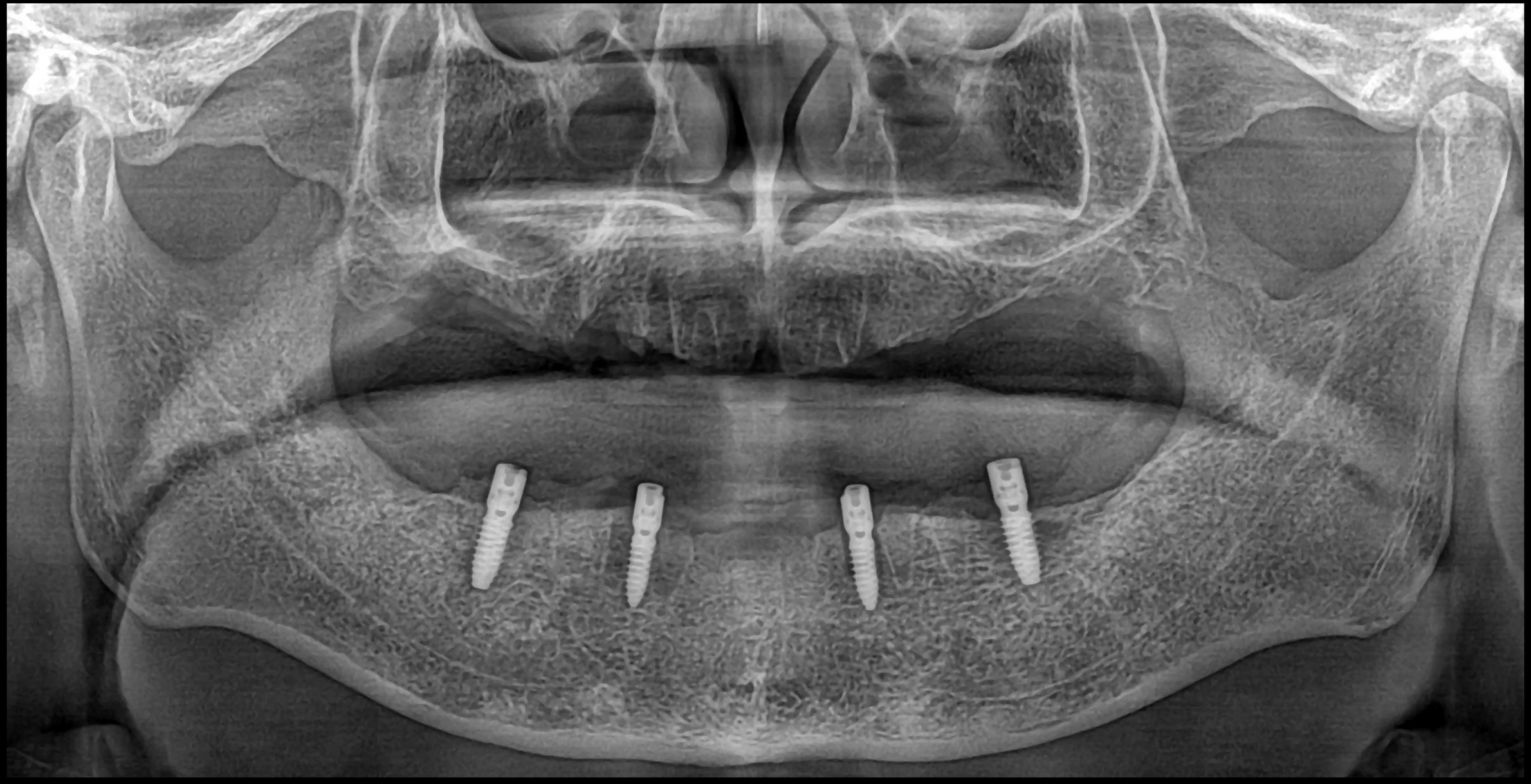


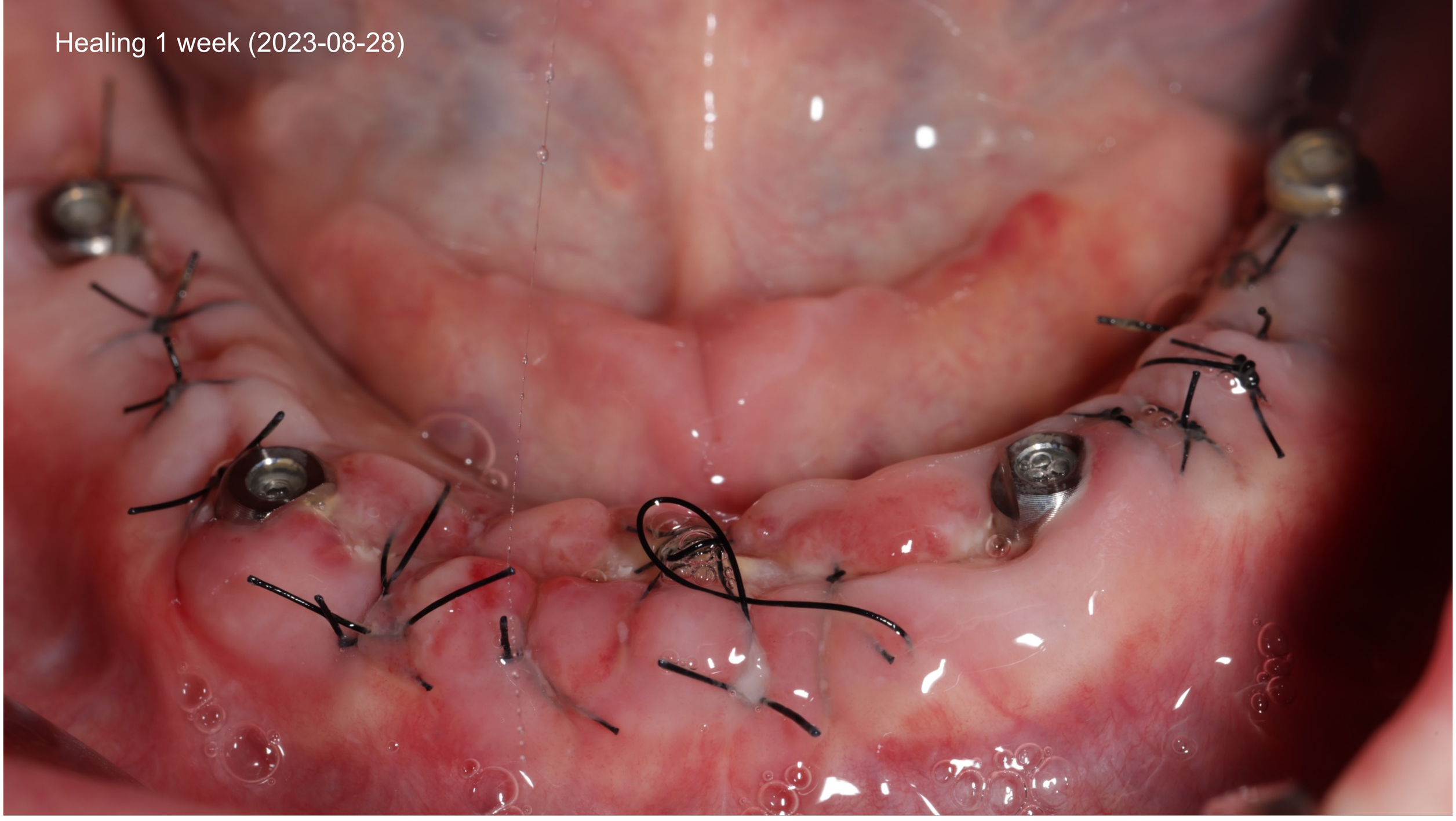






Post-op (2023-08-21)

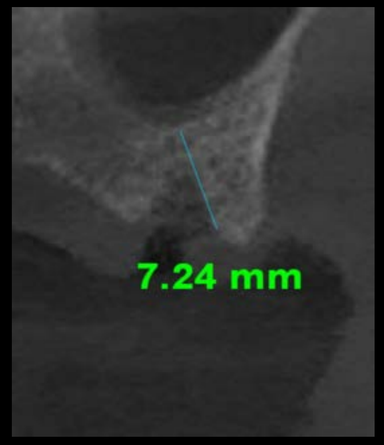



Healing 1 week (2023-08-28)

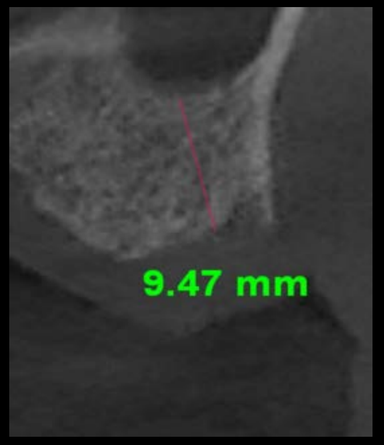
Pre-op (2023-08-28)
Healing 1 week after extraction

Marking hole on upper printing denture

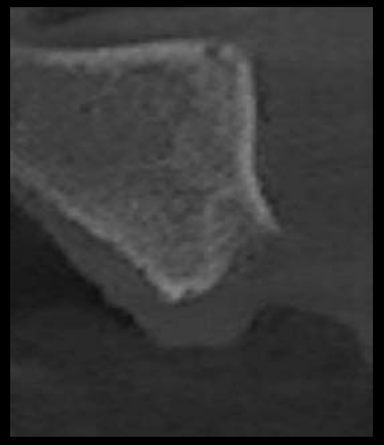
Pre-op CT (2023-08-21)



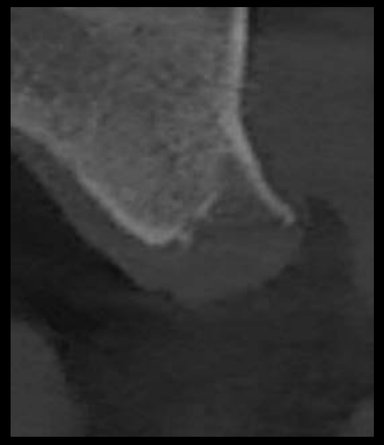
#15



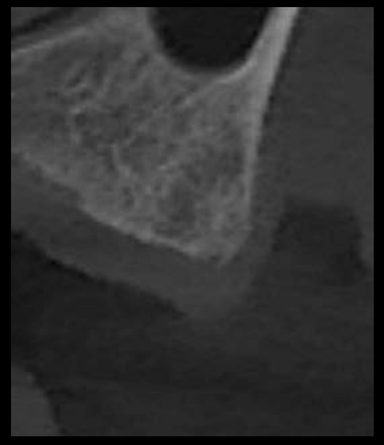
#14



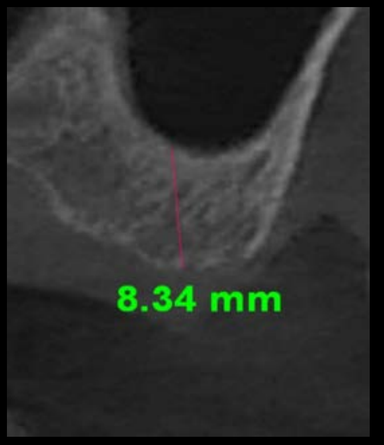
#12



#22



#24



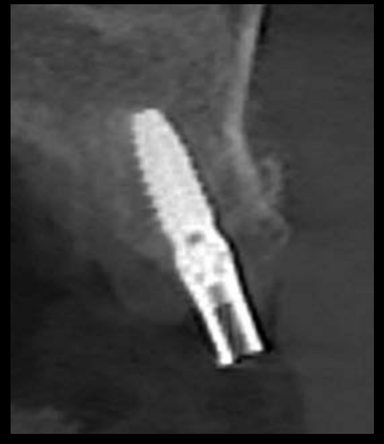
#25

Post-op CT (2023-08-28)

#15

#14

#12

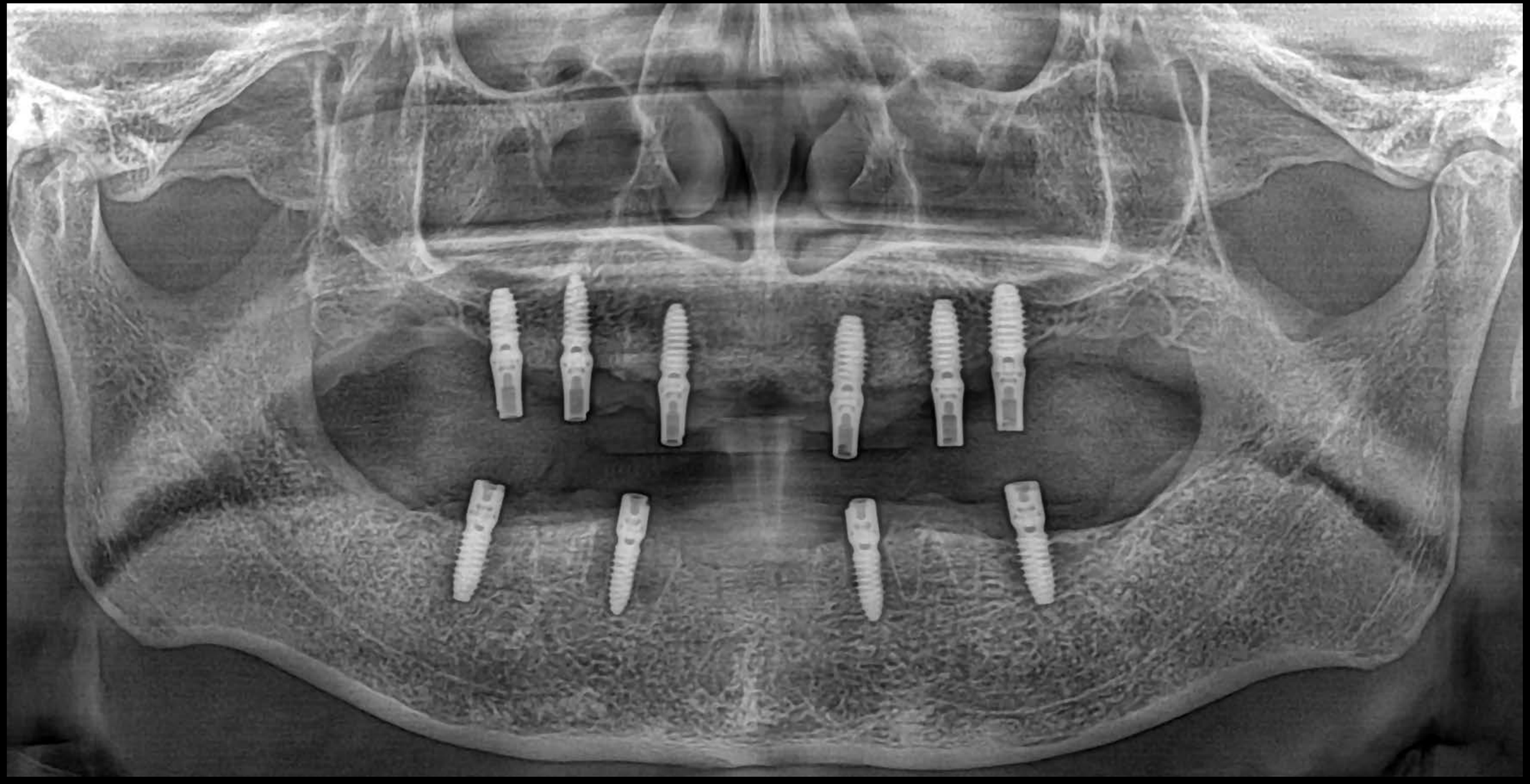


#22

#24

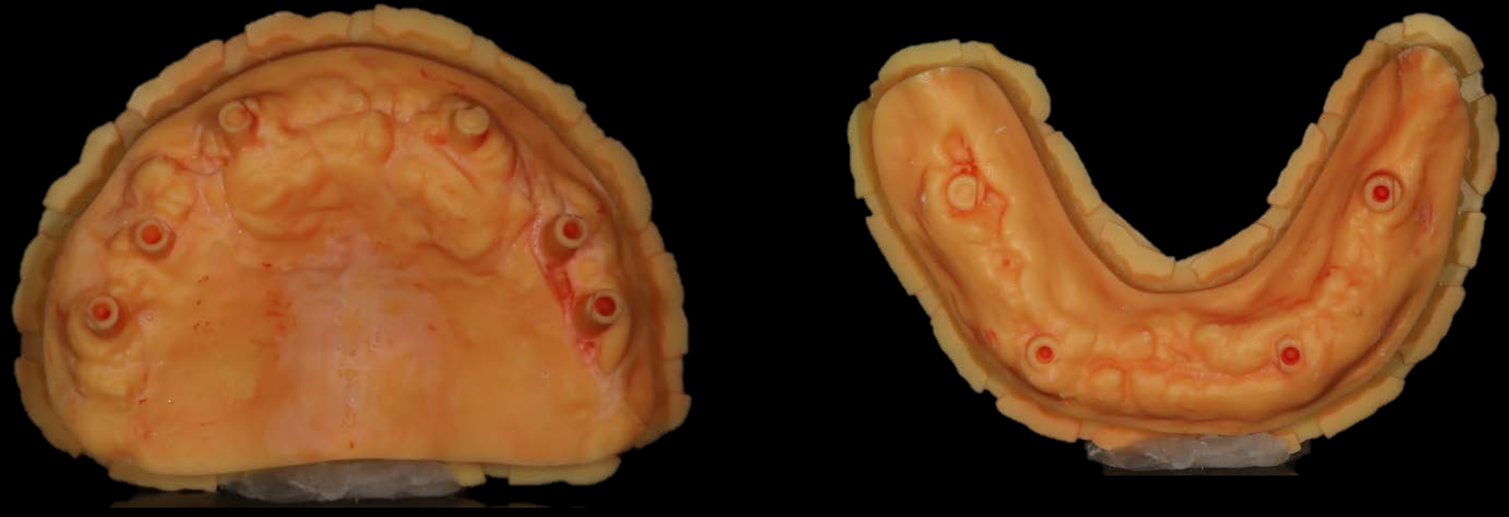
#25

Post-op (2023-08-28)

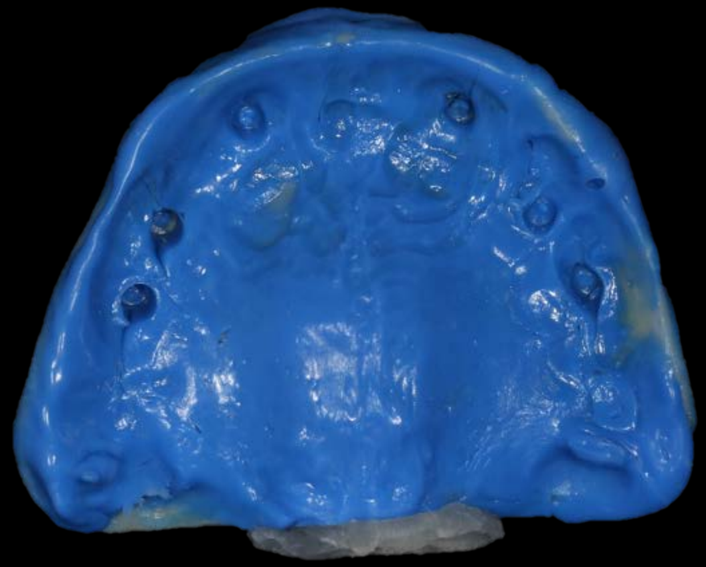


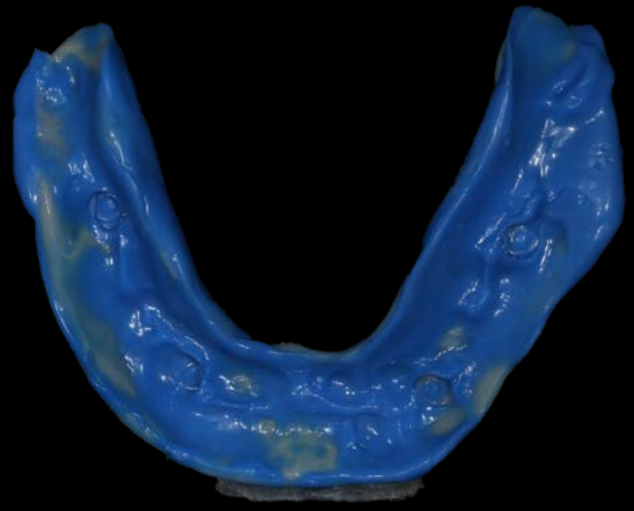
IOS for printing model

Printing model for Temporary denture relining

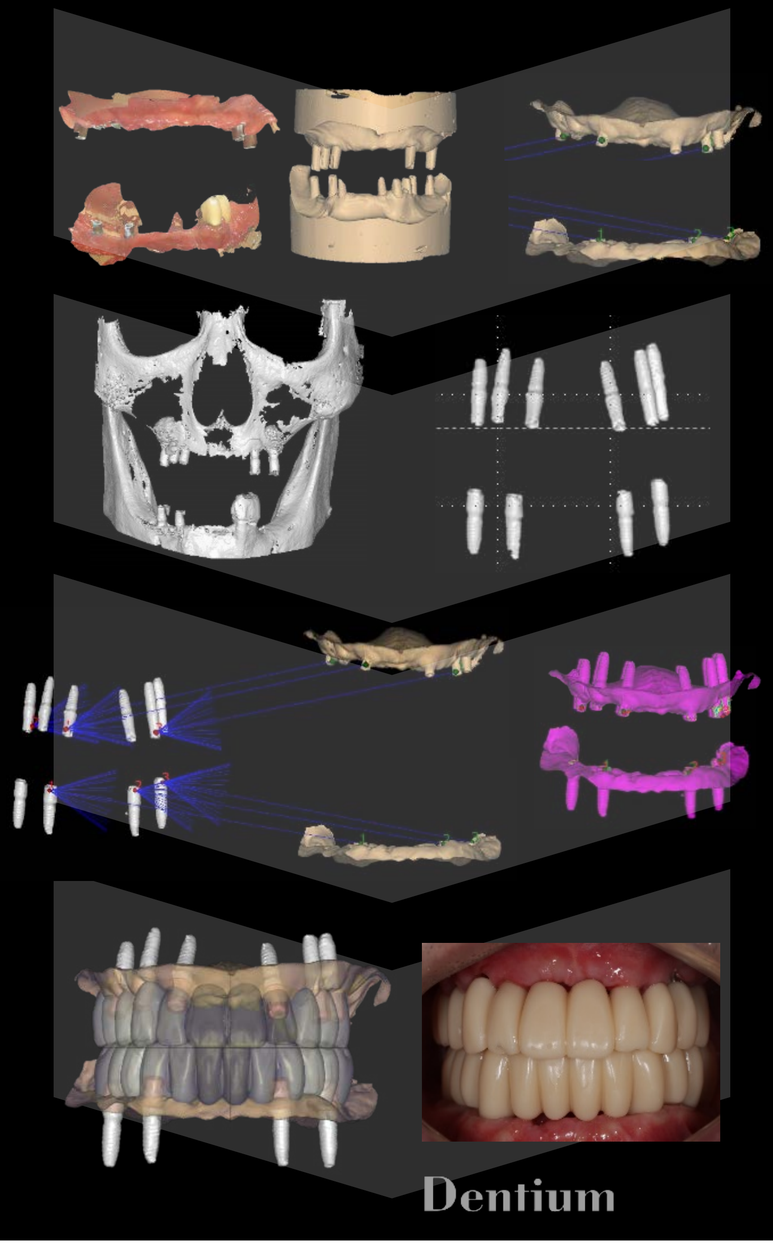


Denture duplication for Provisional prosthesis





CT stitching for bite taking Process



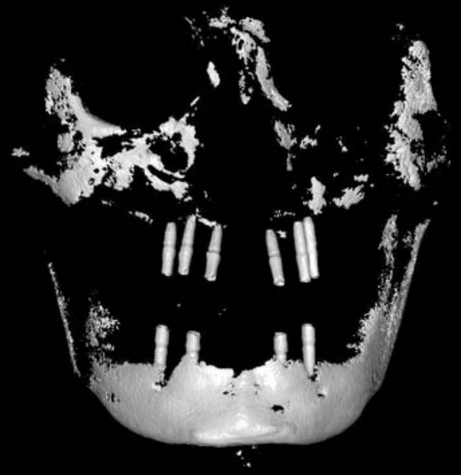
1) Impression taking
(IOS, model scan, impression scan etc.)

2) CT DICOM → STL export & editing

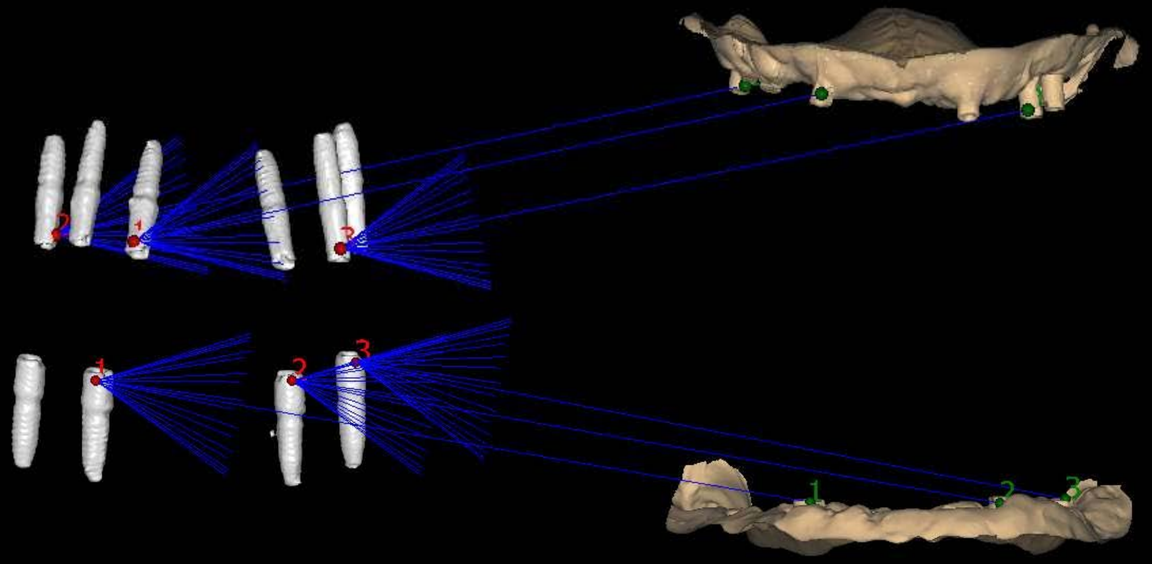
3) CT STL + Impression data stitching

4) Dental CAD design & prosthesis delivery

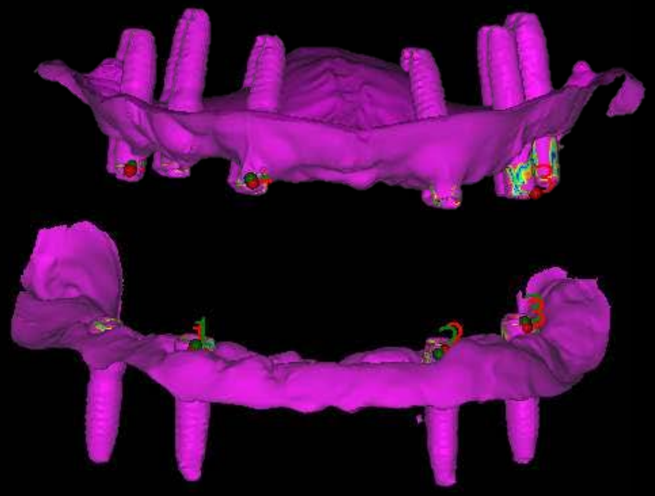
CT stitching

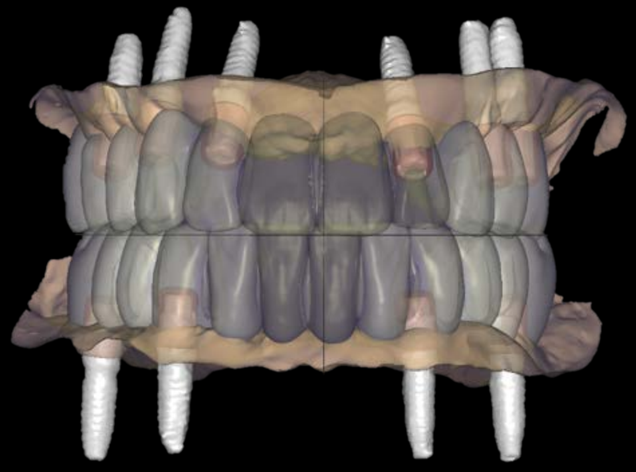


CT STL export & editing



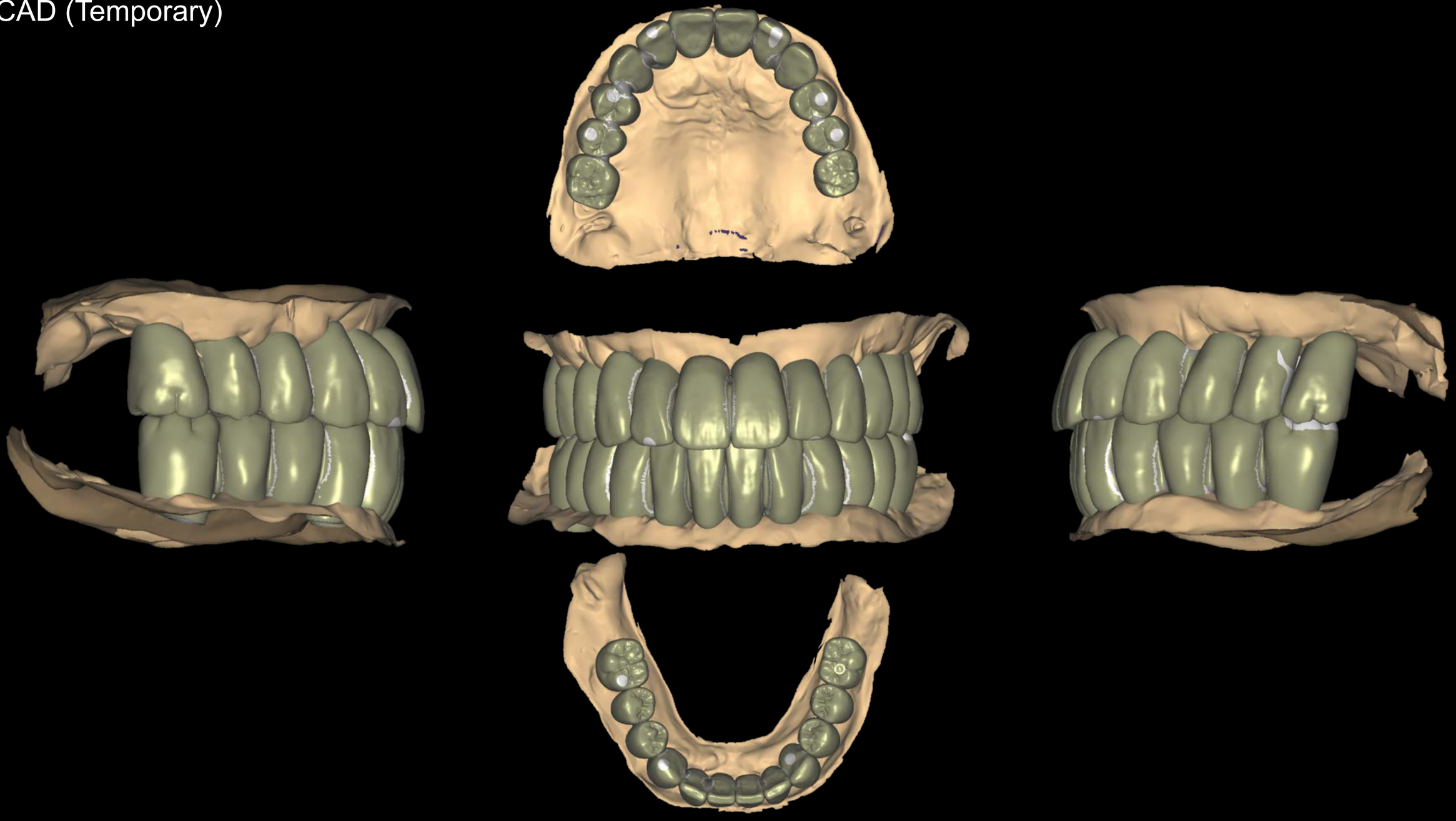
CT STL & working model stitching

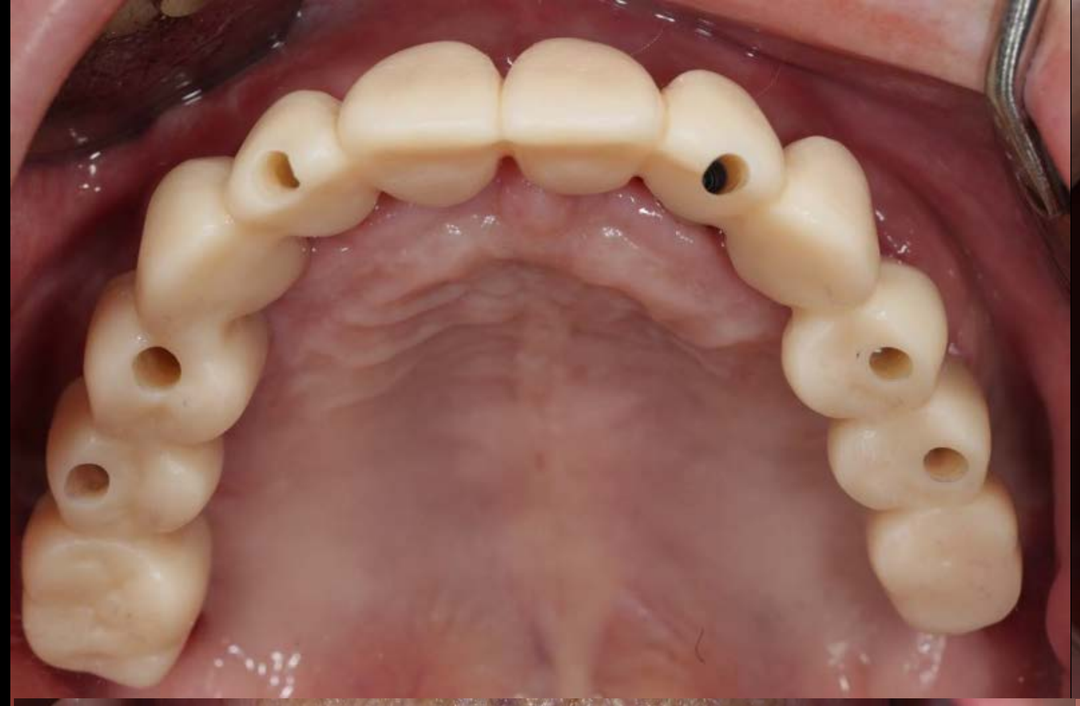




Crown design

CAD (Temporary)

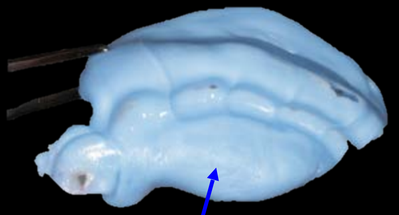




Final impression process with Digital

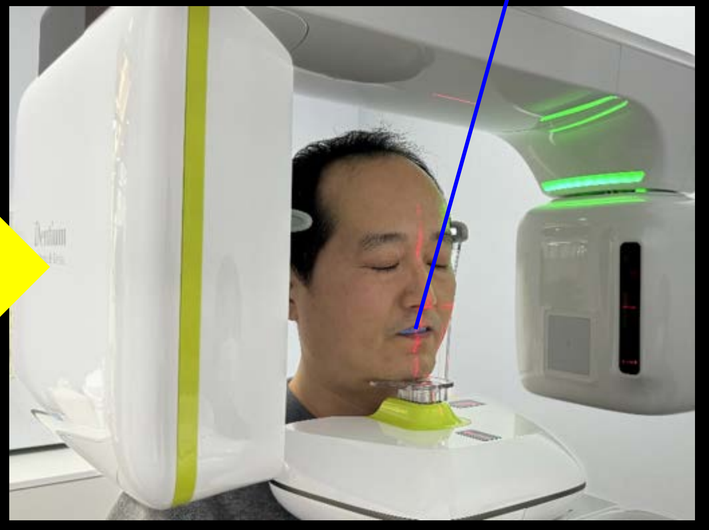
1) CT taking with putty index

Purpose of fixing the precise occlusal state



Putty index

Bite checking

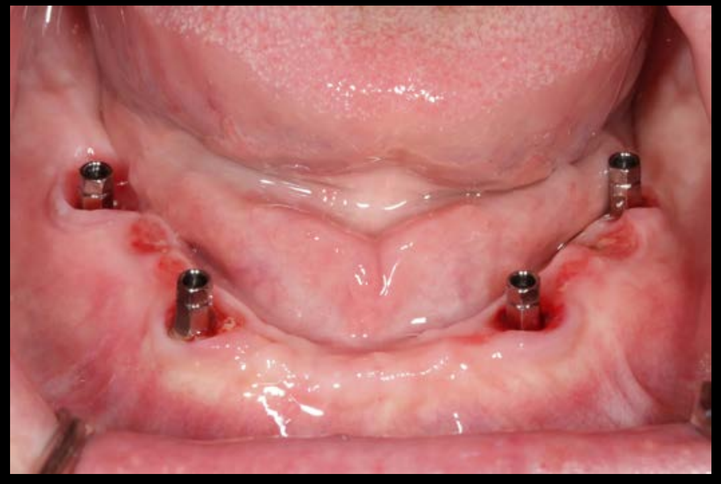


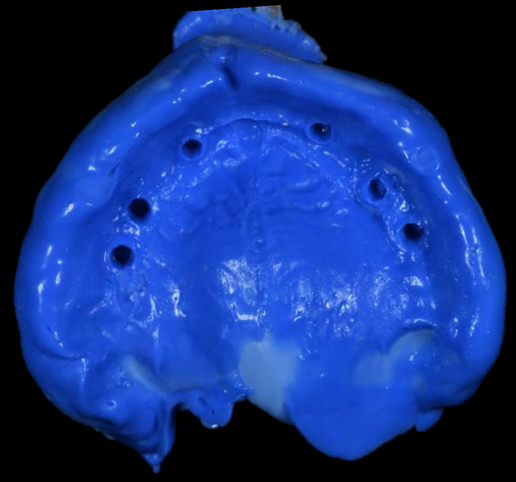
CT taking

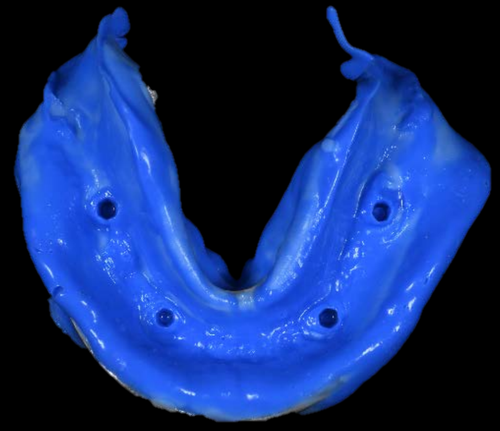
Final impression process with Digital

2) 2 Step impression

1 step : putty impression
2 step : regular body impression

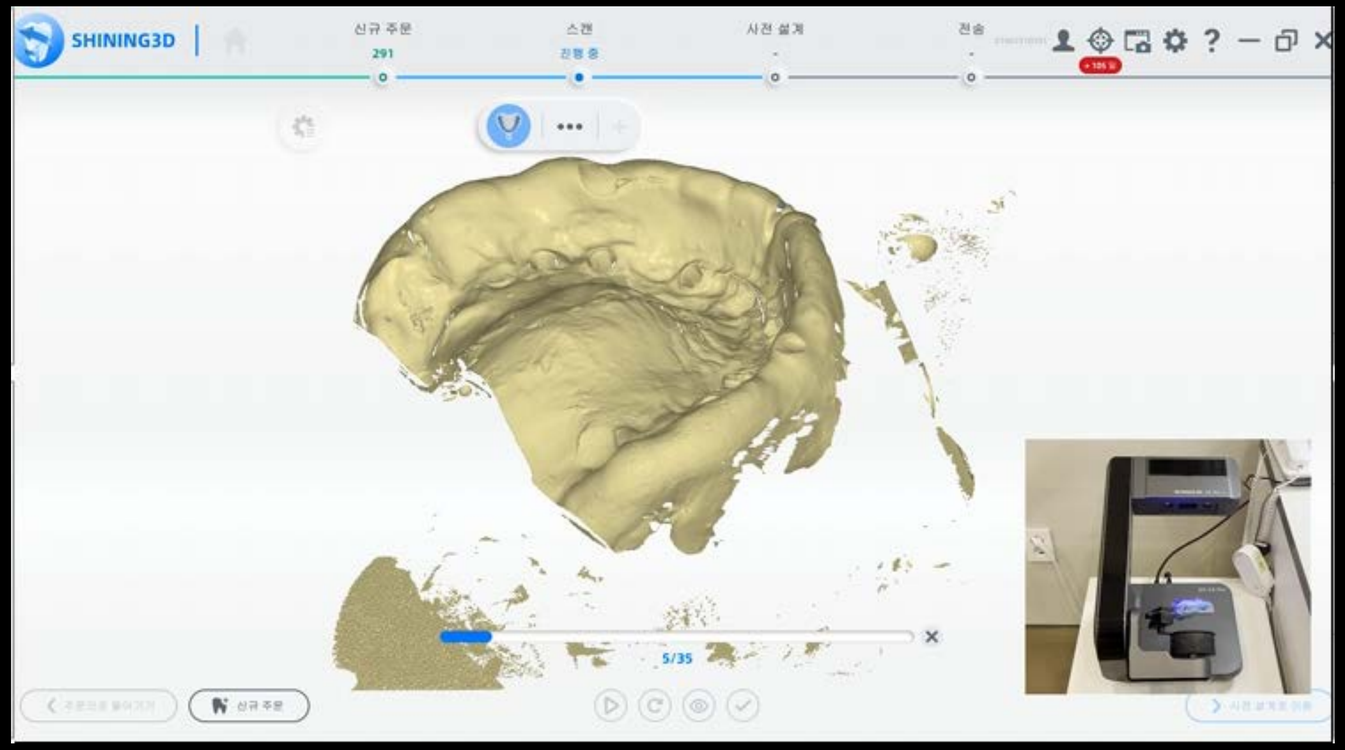




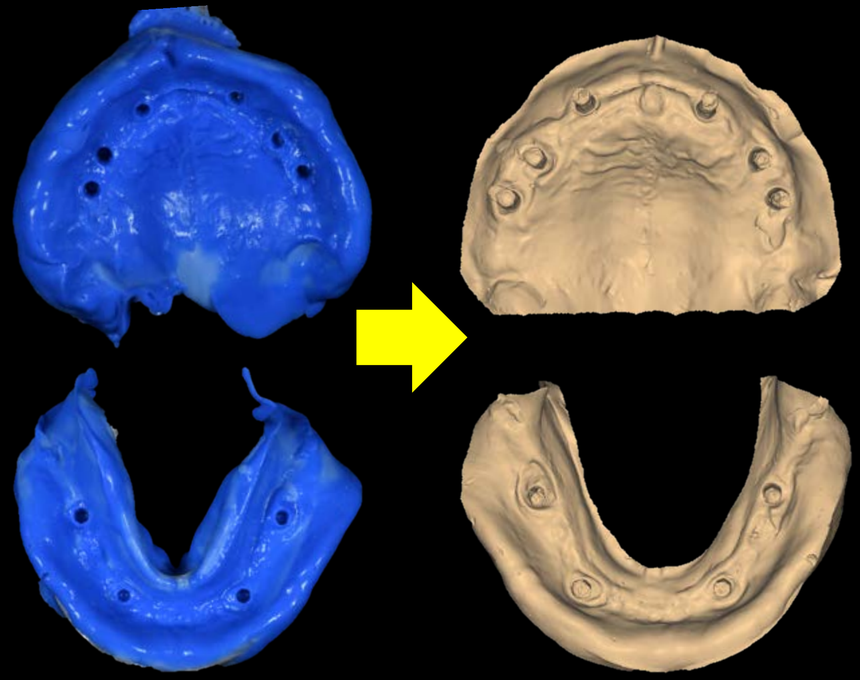


Final impression process with Digital

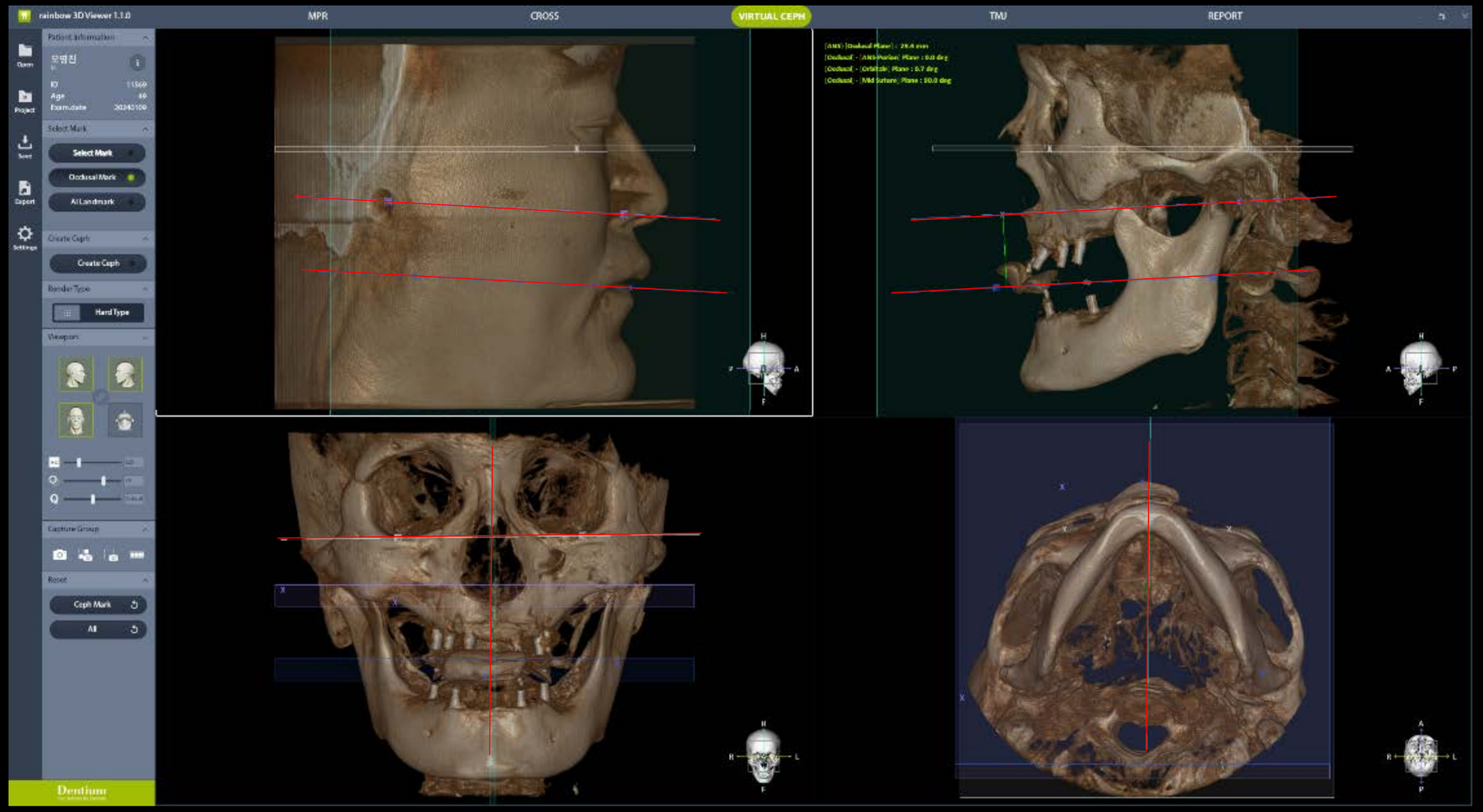
3) Impression scan without model



Impression scan with model scanner



4) Rainbow 3D viewer : CT data 활용

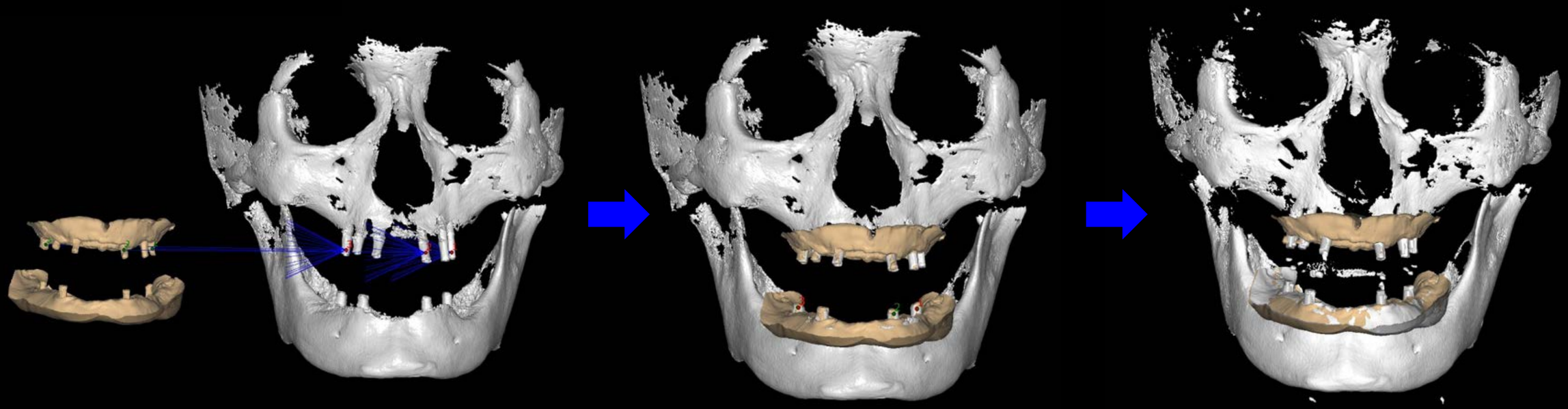


AI Occlusal plane

4) Rainbow 3D viewer : CT data 활용

CT STL export

5) Dental CAD : data stitching for Digital mounting



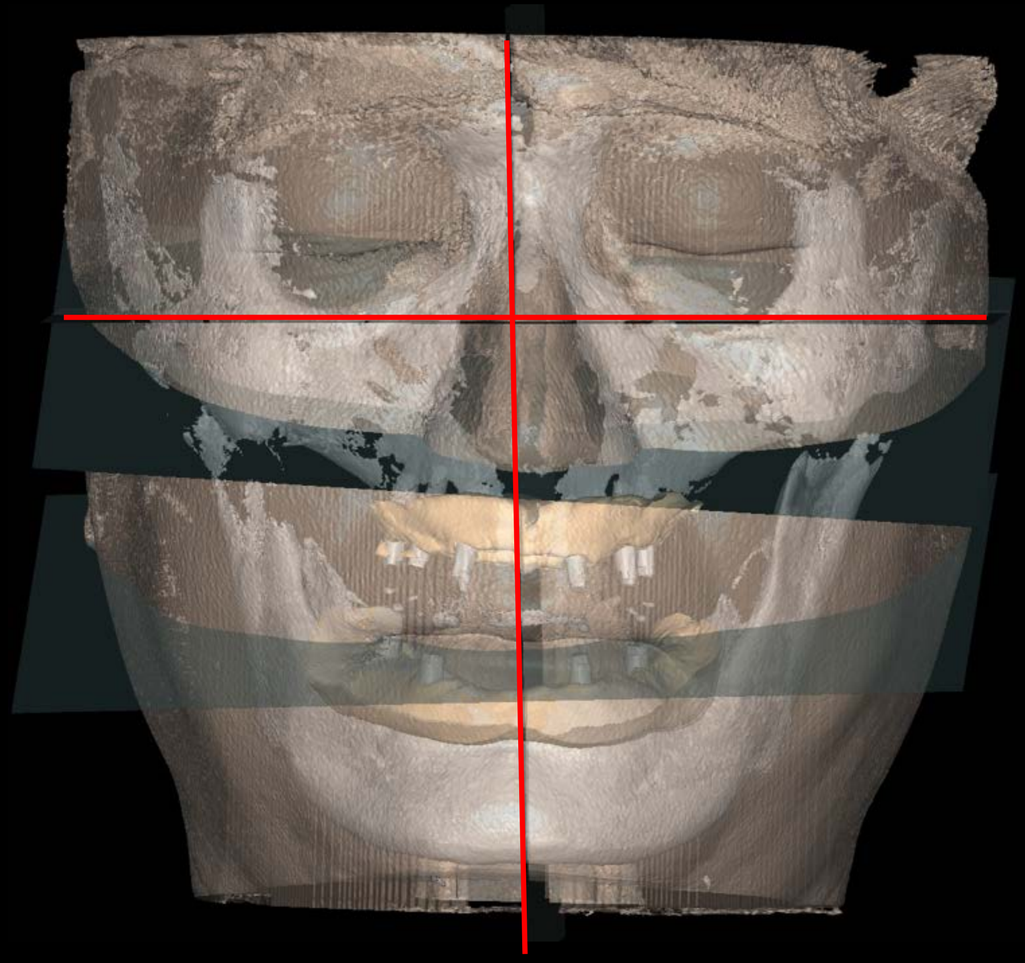
CT STL (Hard tissue) + working model

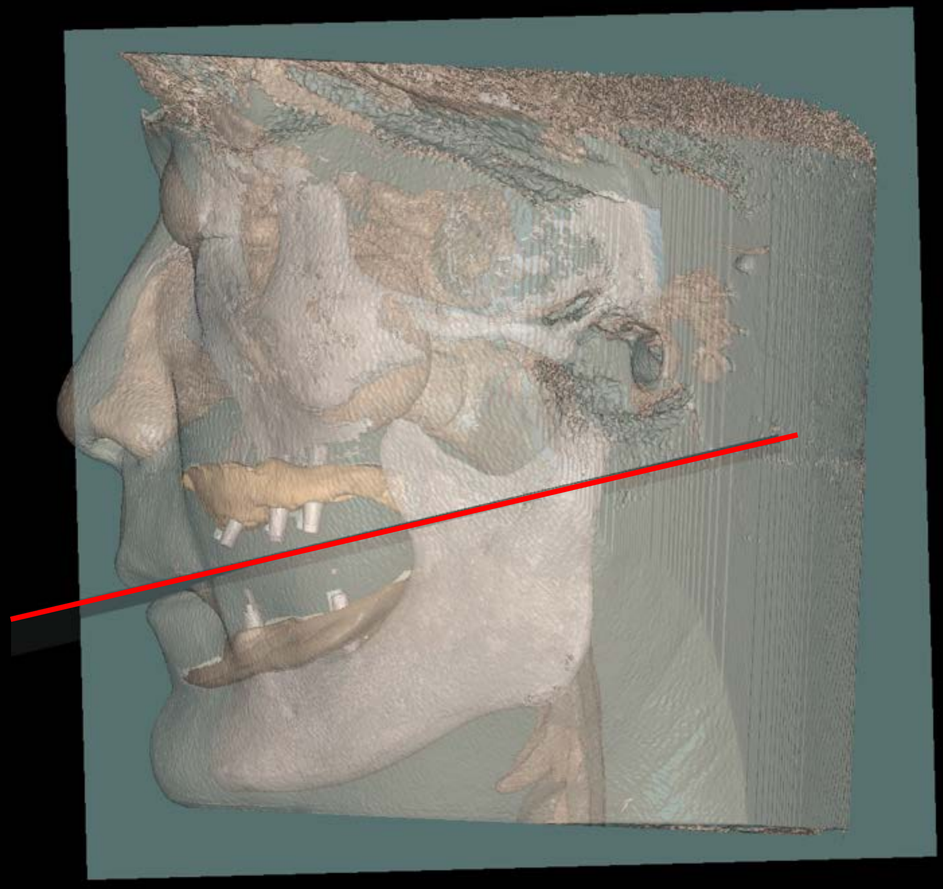
→ CT의 교합관계 기준으로
working model 정합

abutment (Ti-base) library stitching

Final impression process with Digital

5) Dental CAD : data stitching

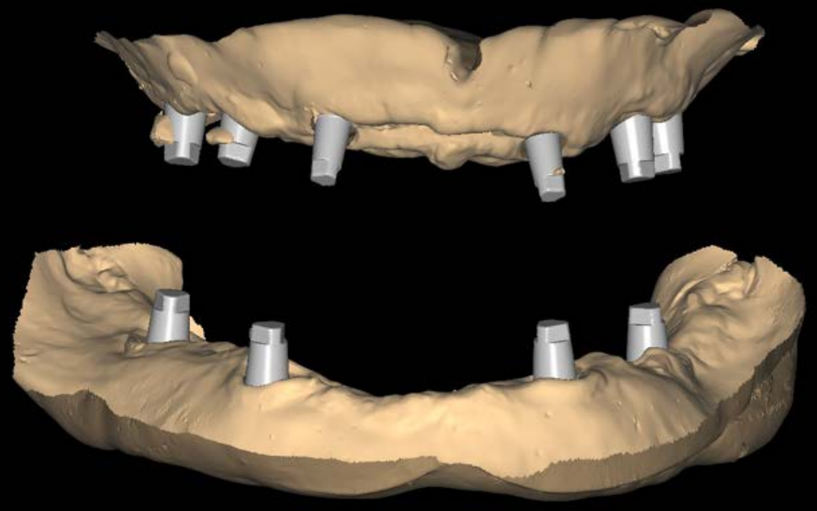


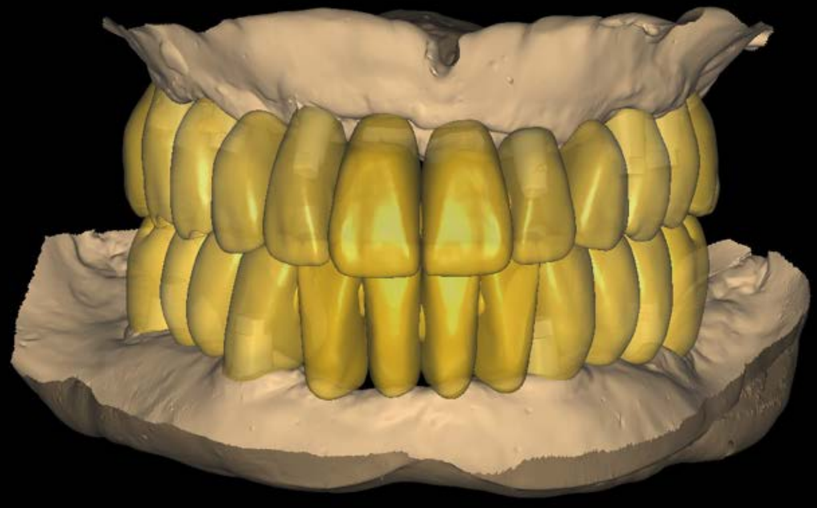


CT STL(hard tissue, soft tissue) + Plane + working model

Final impression process with Digital

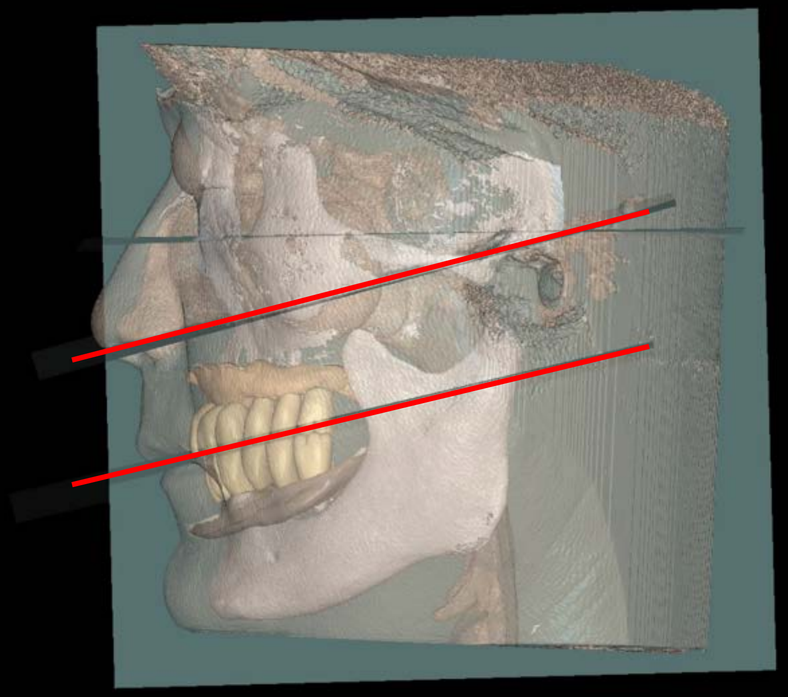
5) Dental CAD : Crown design

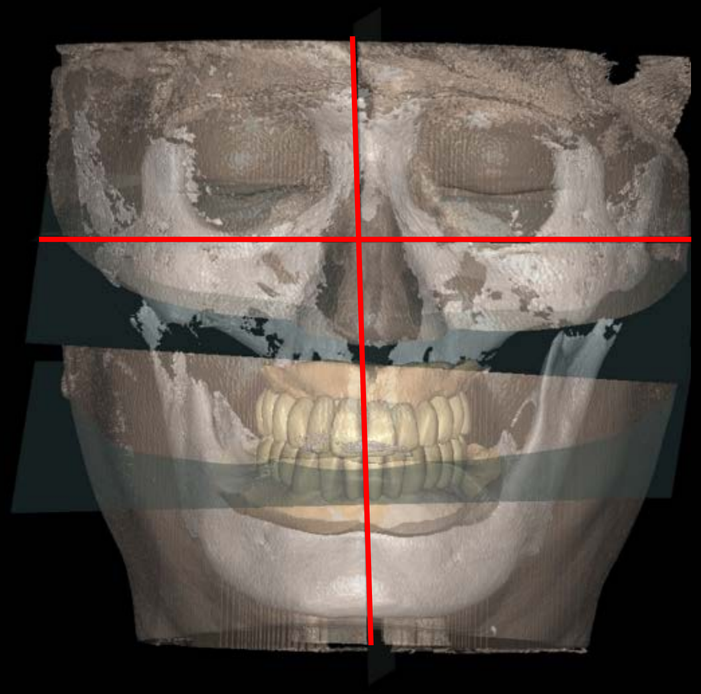


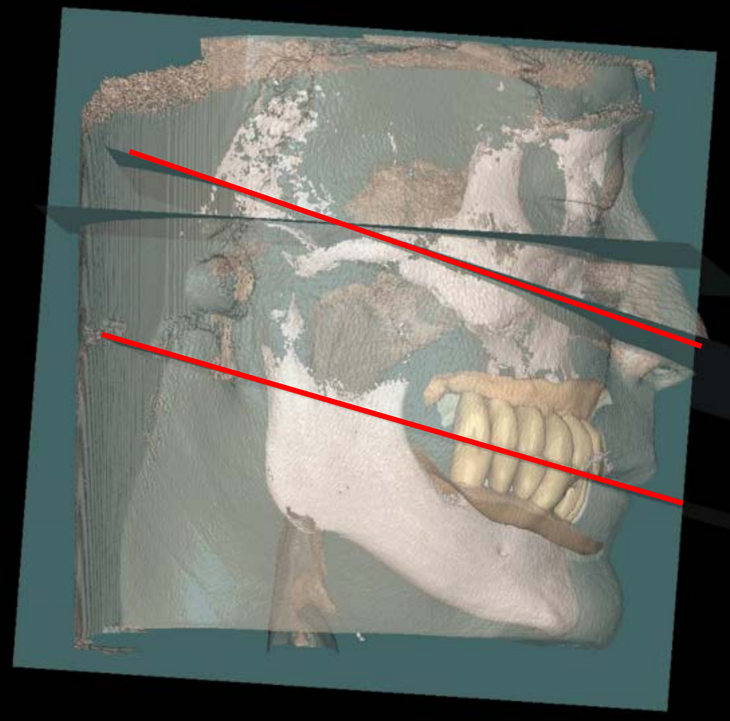


Final impression process with Digital

5) Dental CAD : Crown design



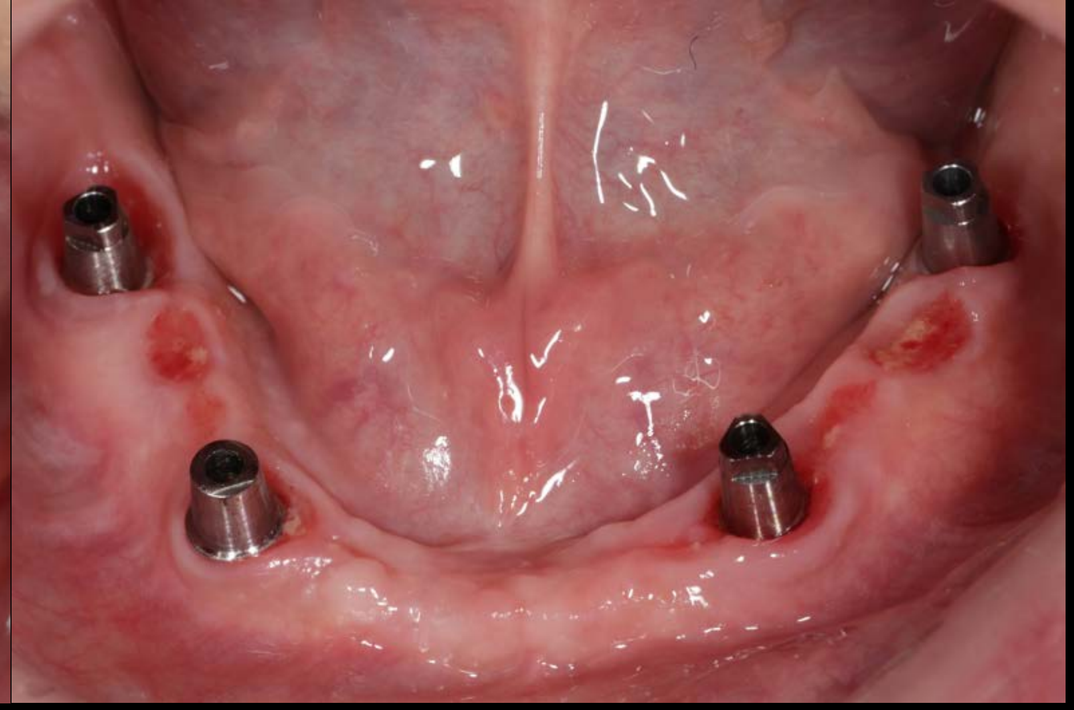




Milling / coloring / Sintering / Glazing

Milling / coloring / Sintering / Glazing

Final prosthesis (2024-01-21)

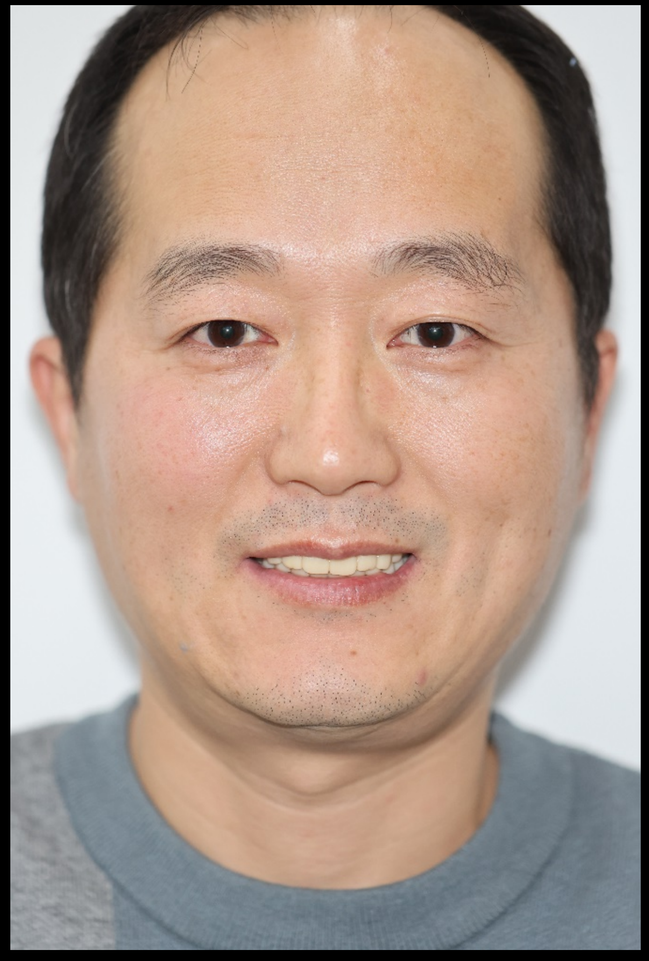


Final prosthesis (2024-01-21)

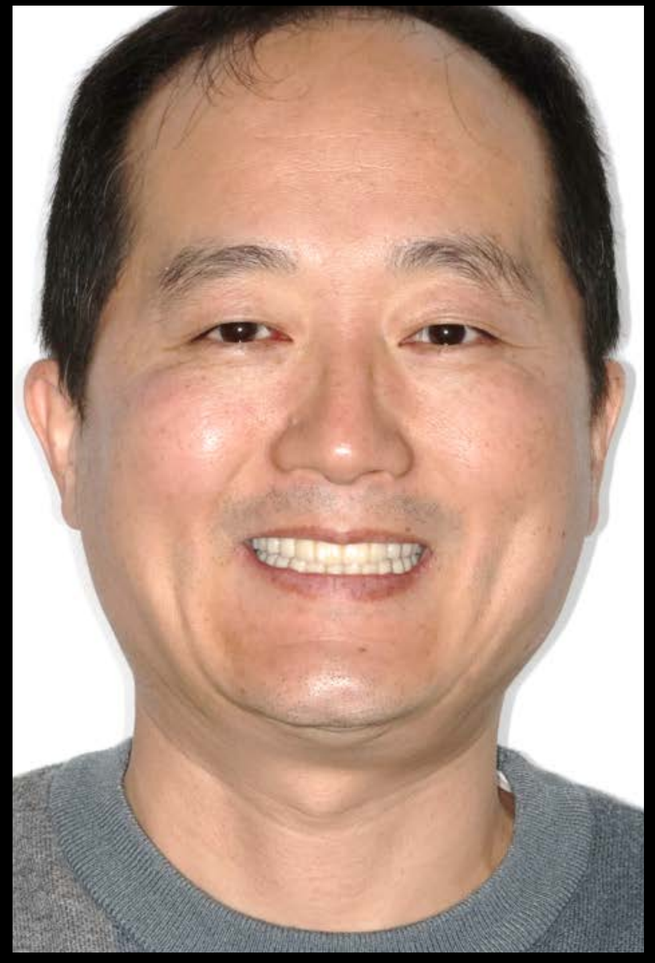
Final prosthesis (2024-01-21)

Final prosthesis (2024-01-21)

Initial State



Provisional restoration



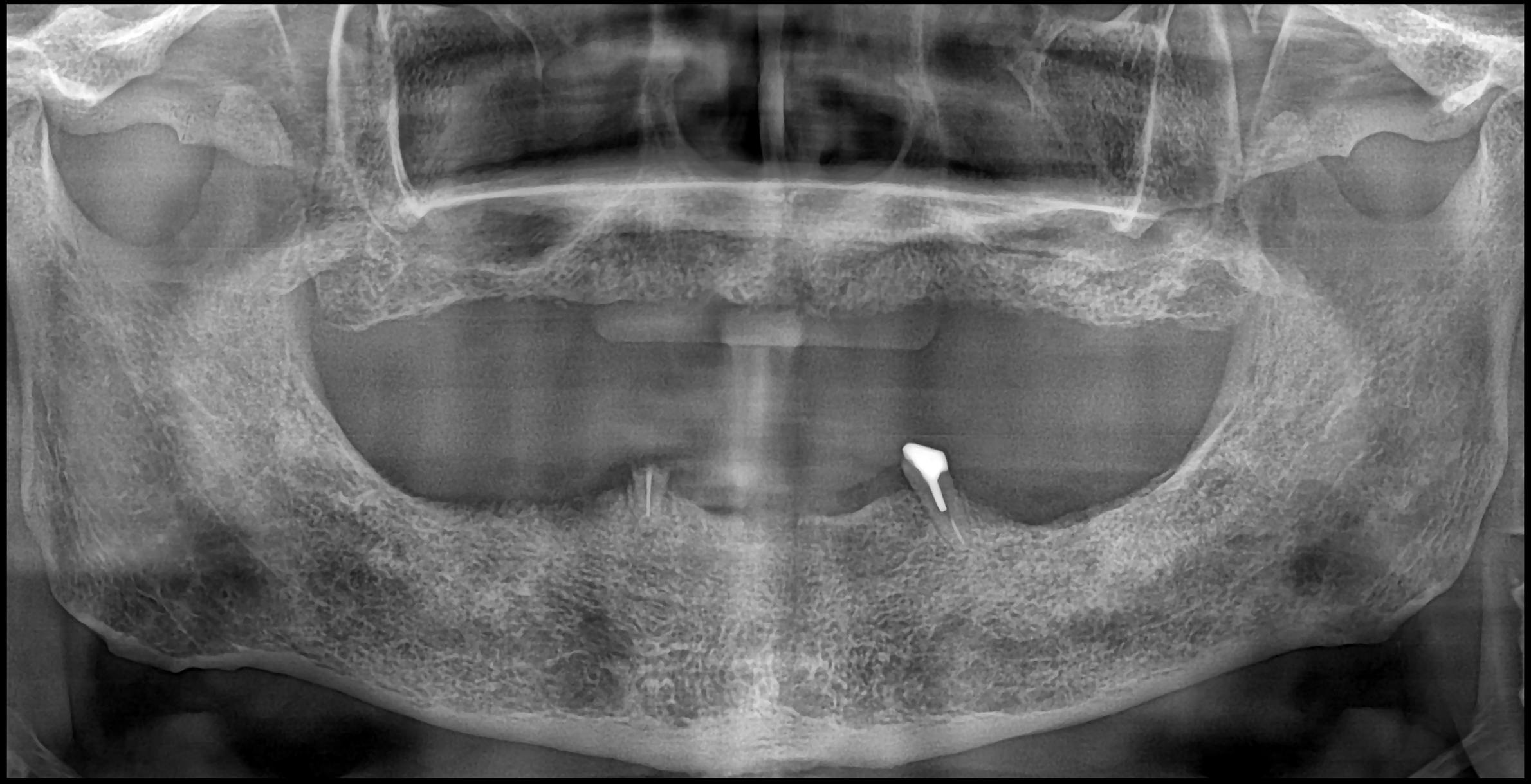
Final prosthesis

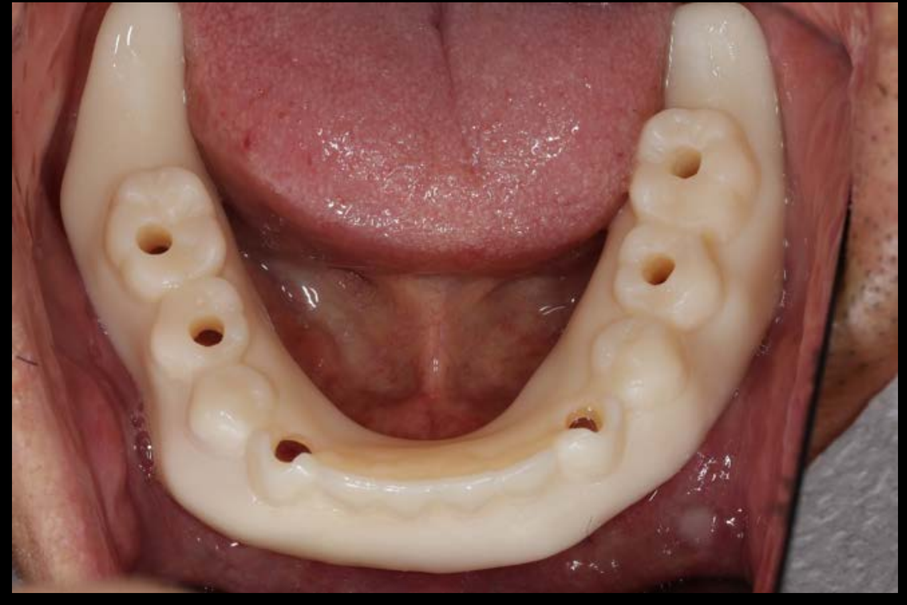
Bite check (2024-02-20)

Bite check (2024-02-20)

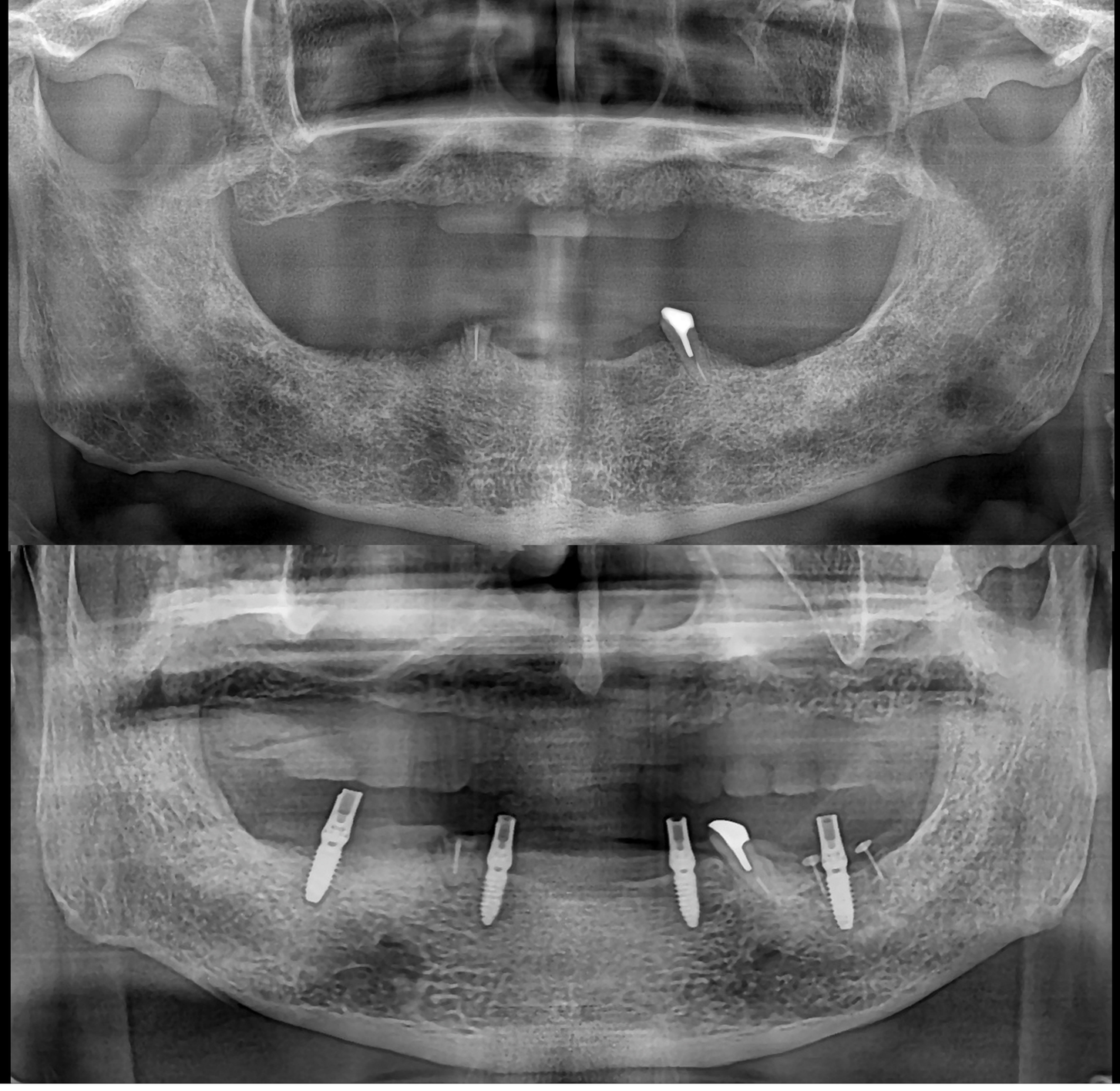
Final prosthesis (2024-01-16)

Pre-op (2025-07-08)

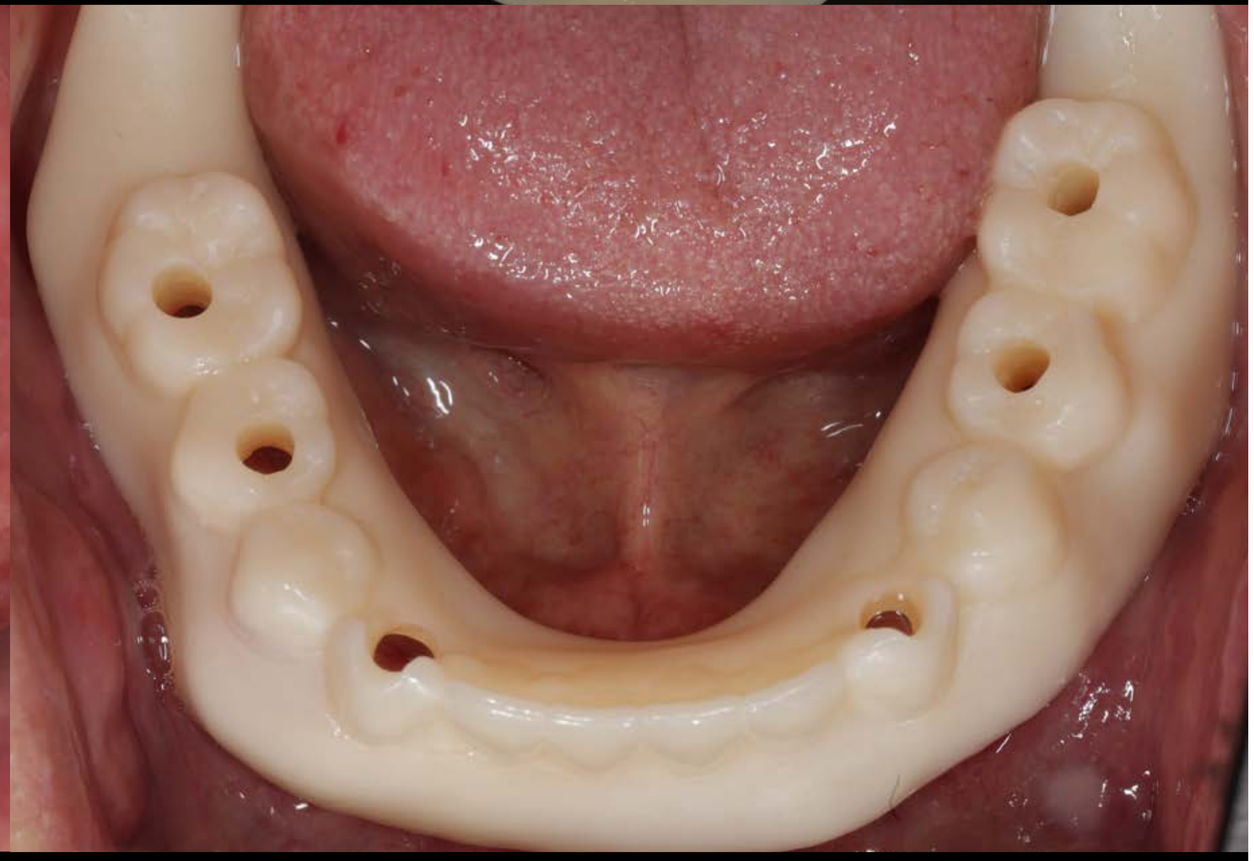


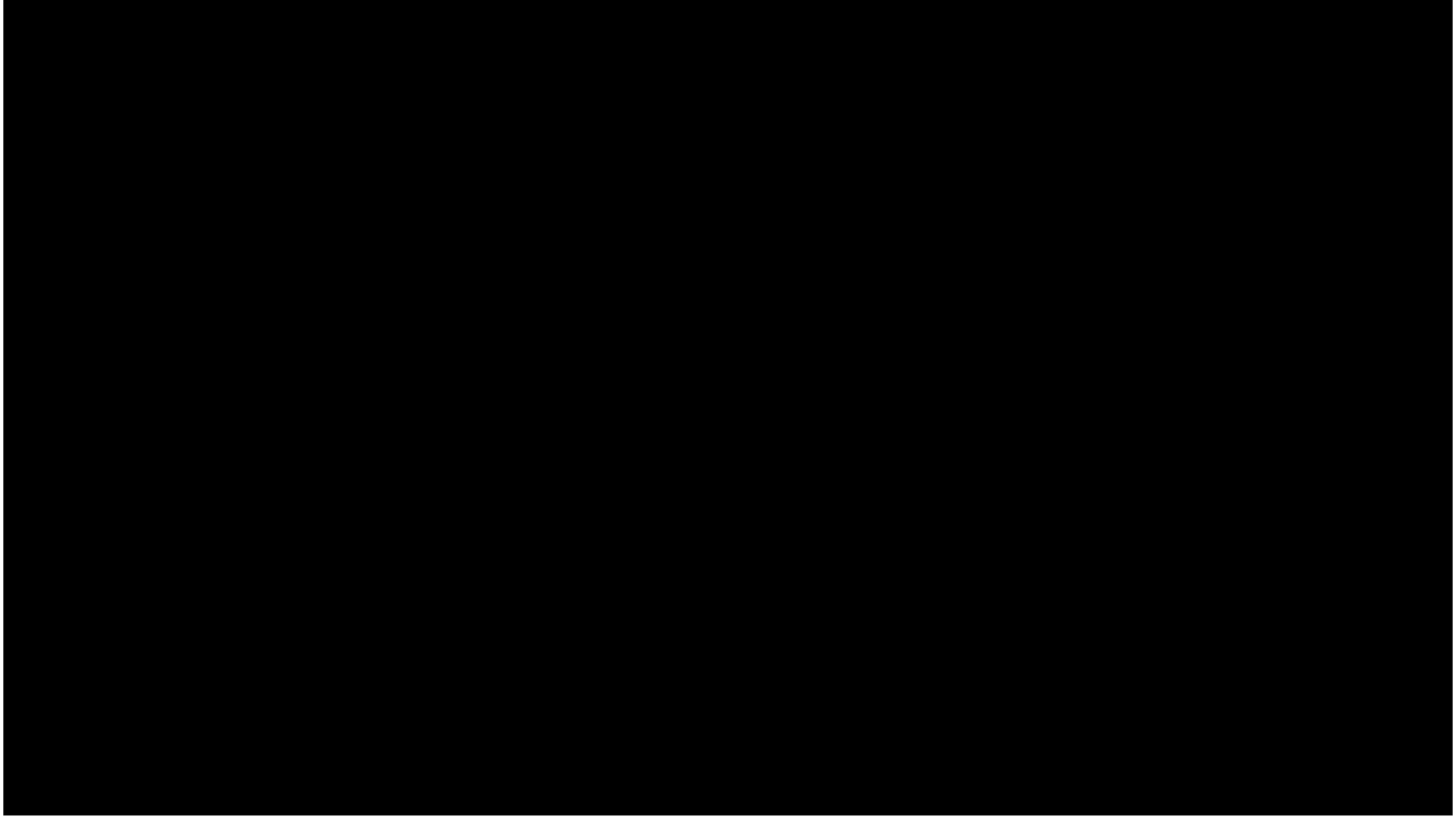


Pre-op (2025-07-08)

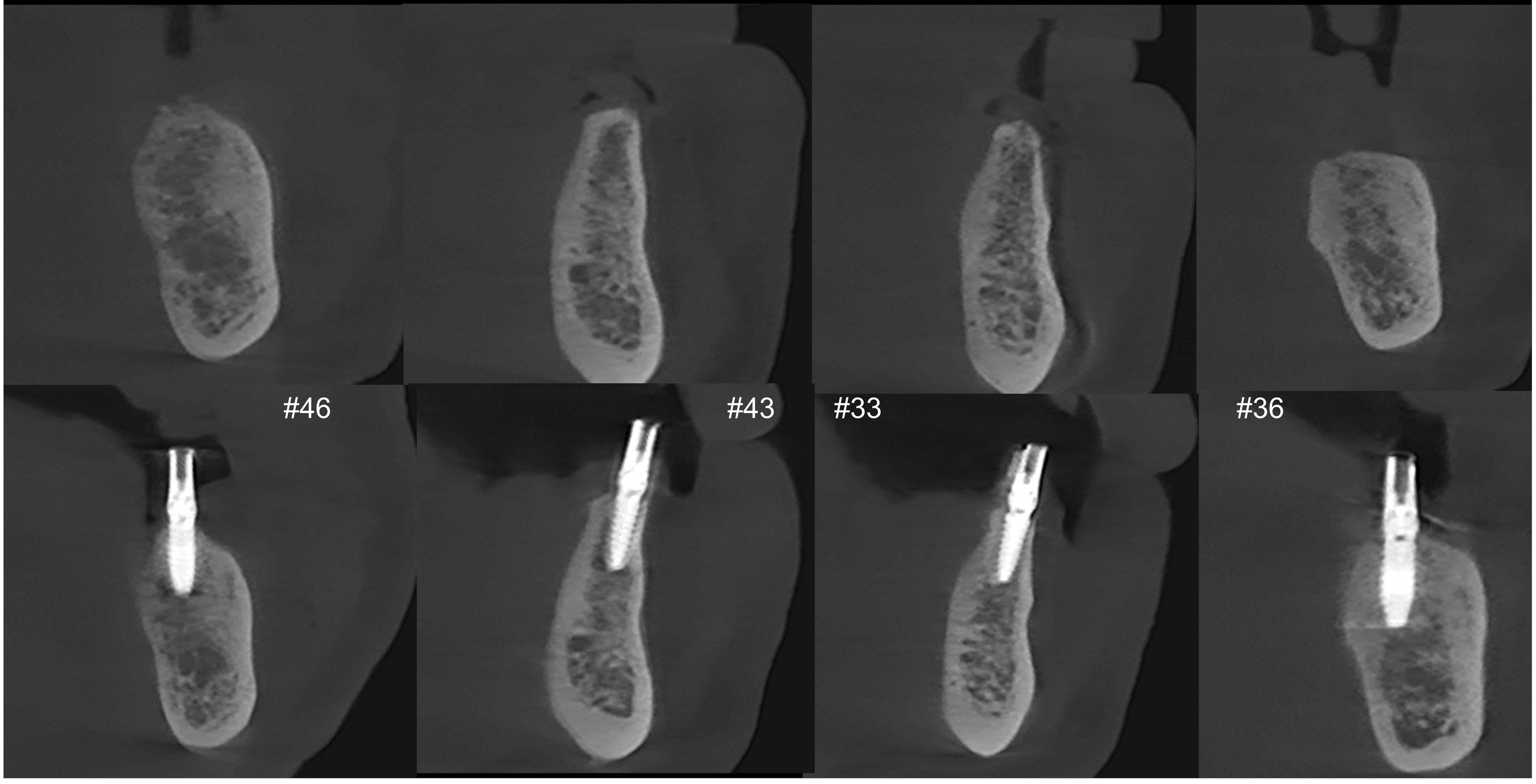


Pre-op (2025-07-22)

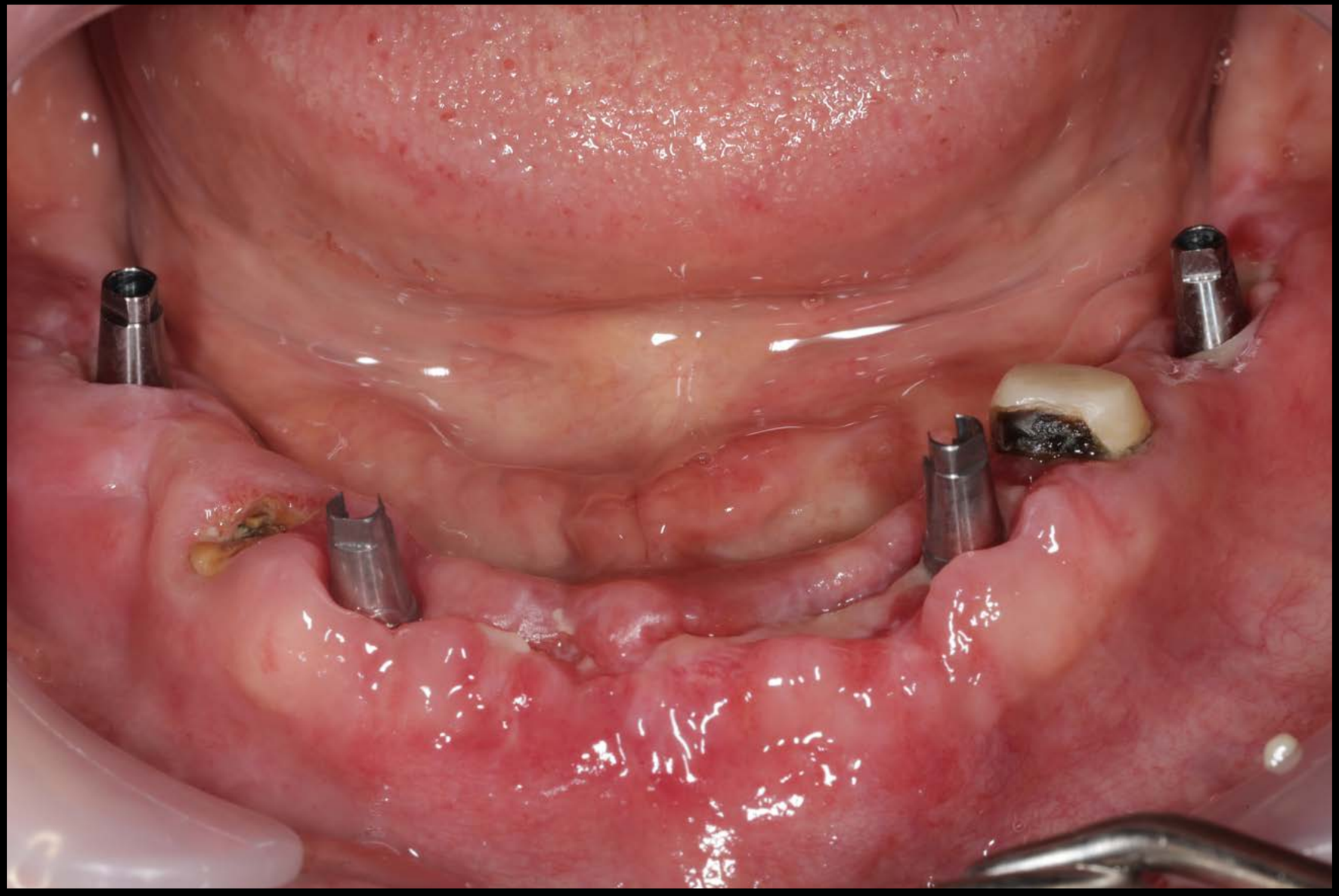


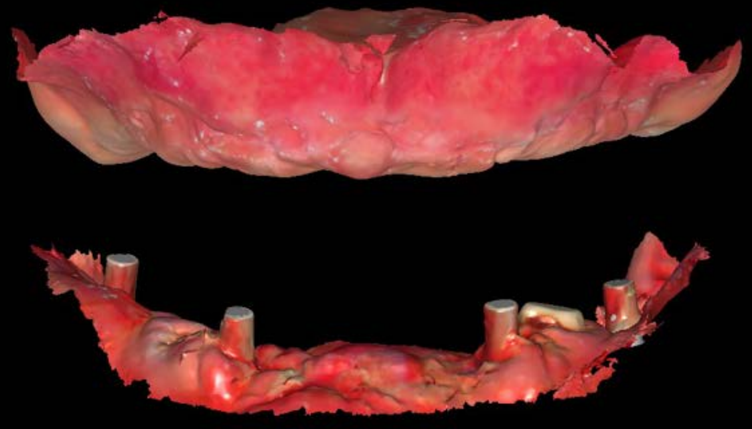


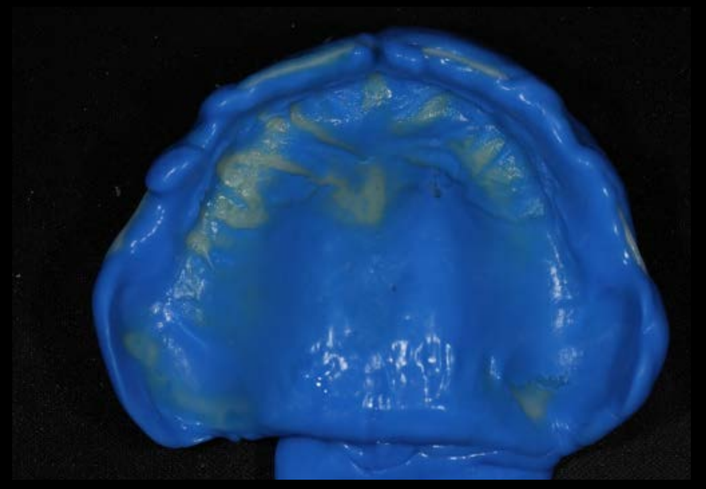
Pre-op CT (2025-07-22)

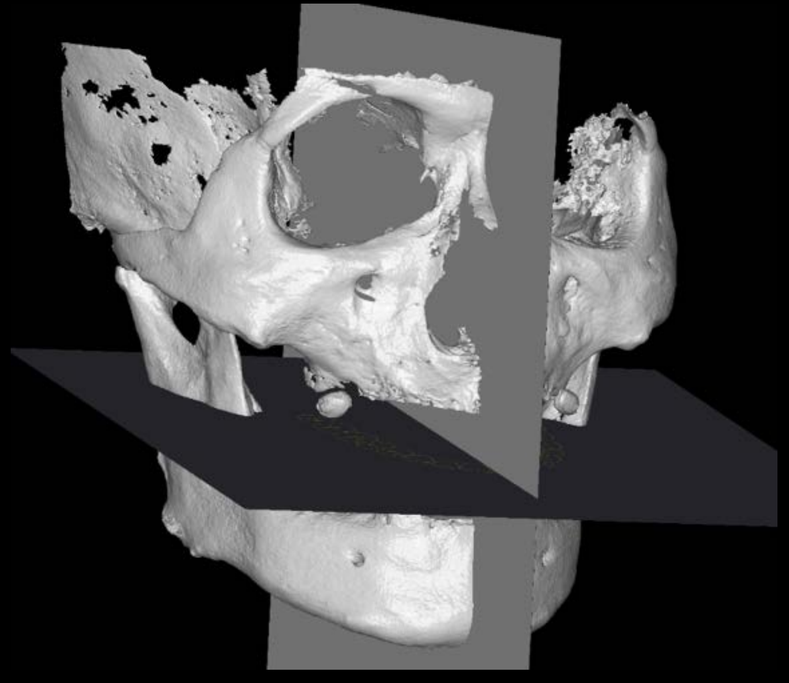


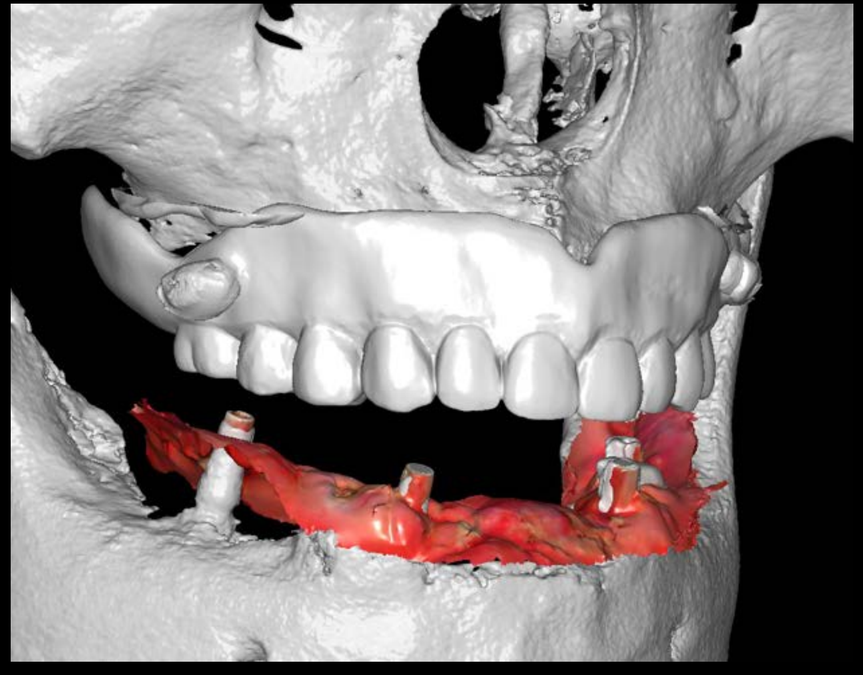
Healing : 2 weeks (2025-08-06)

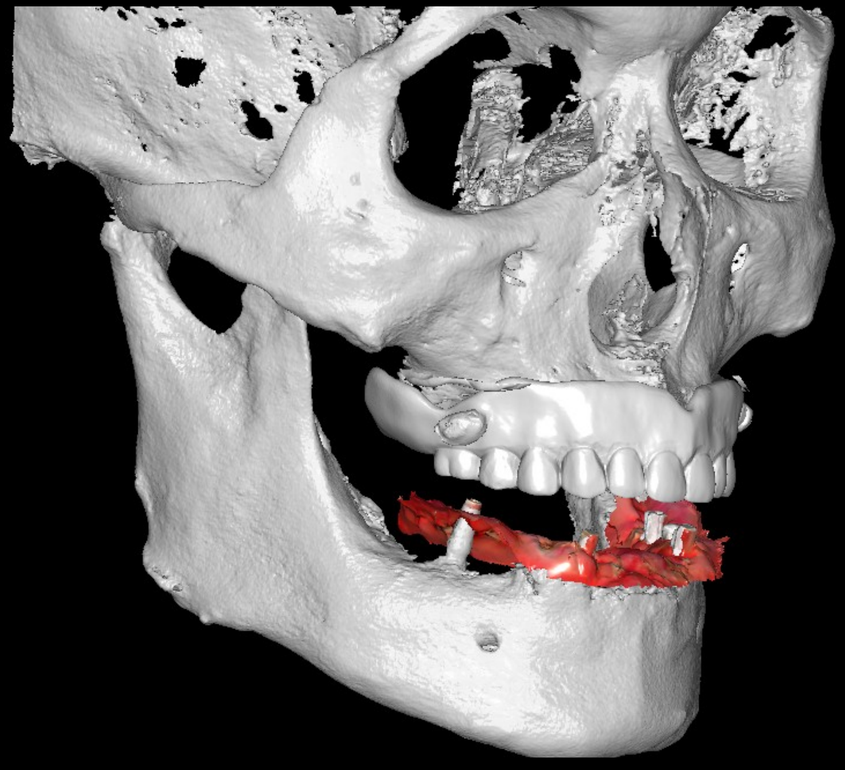


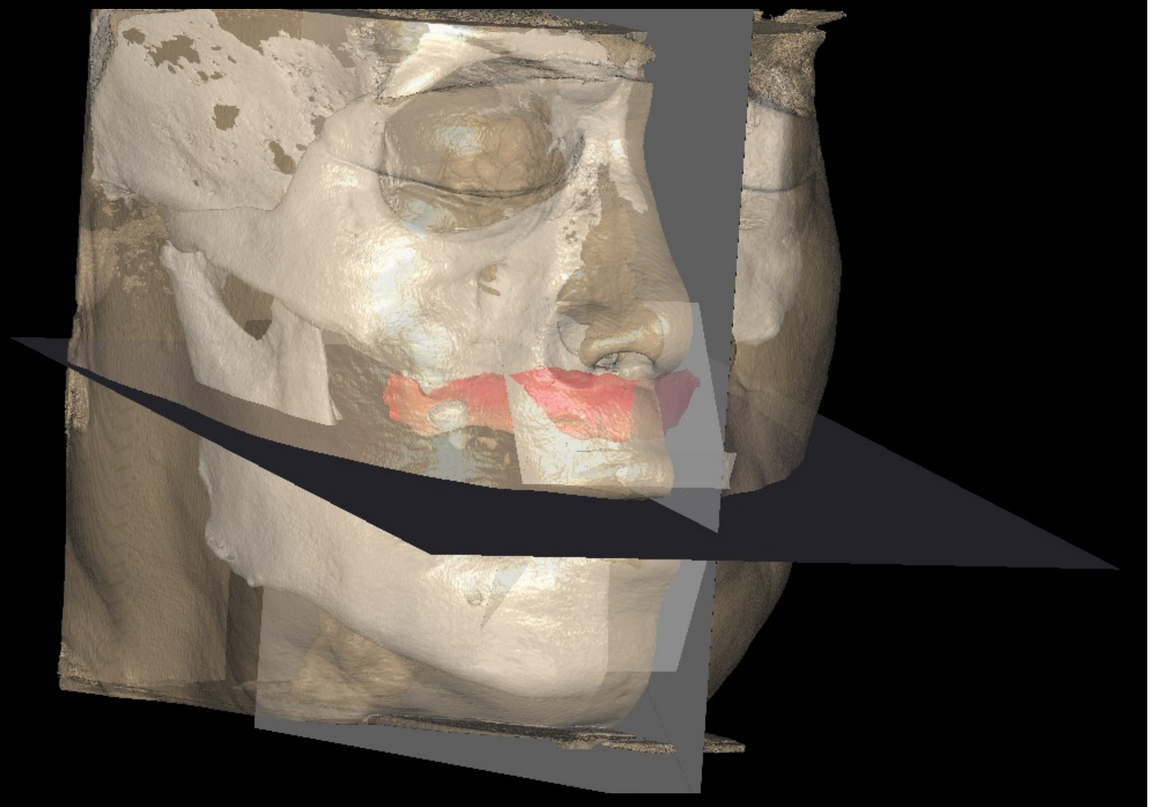


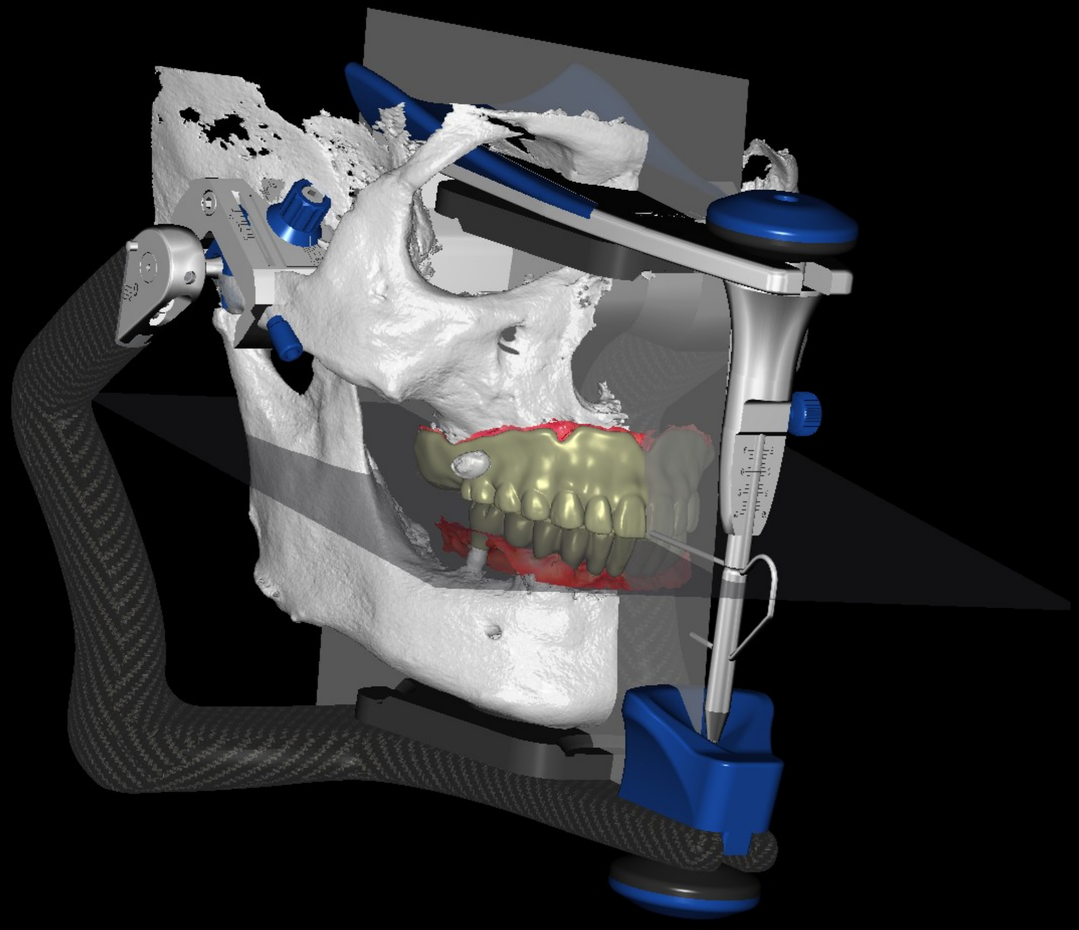








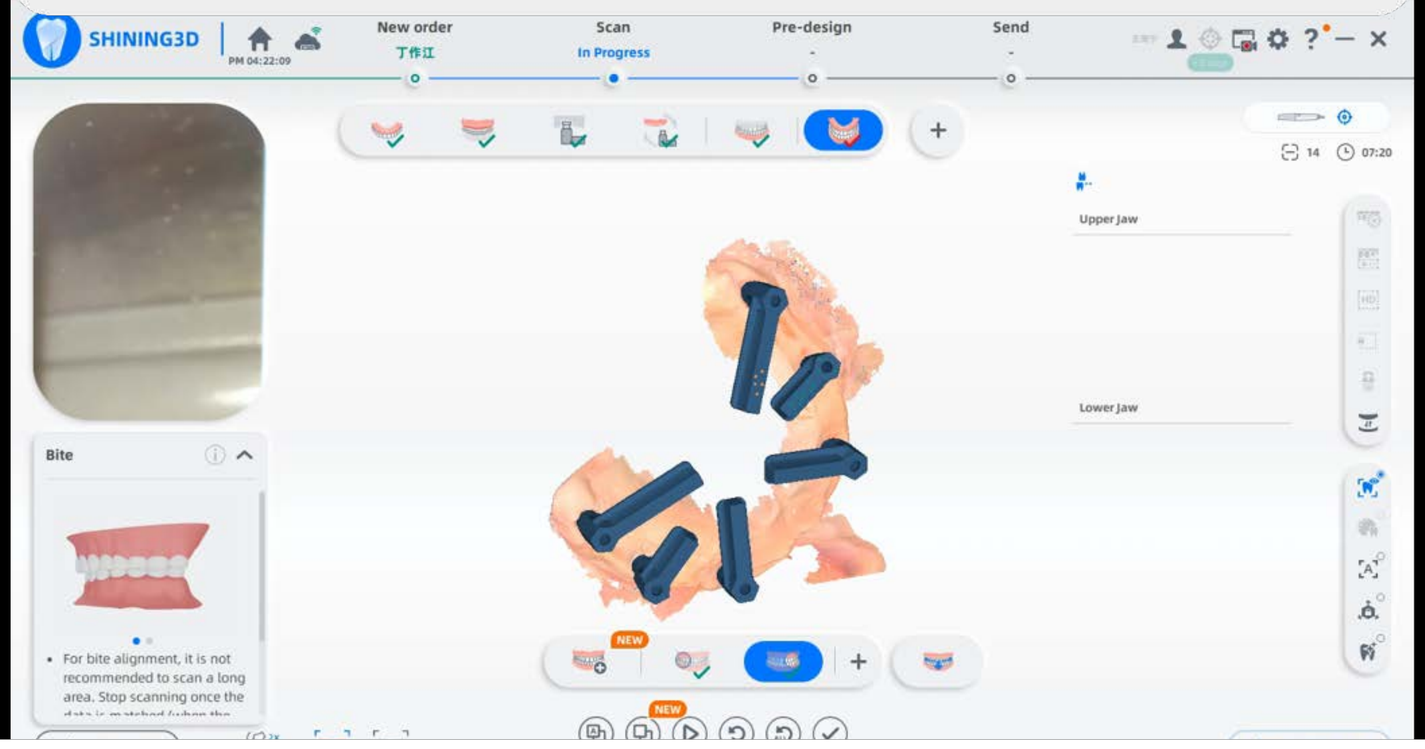


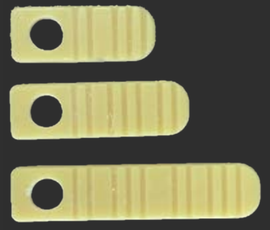


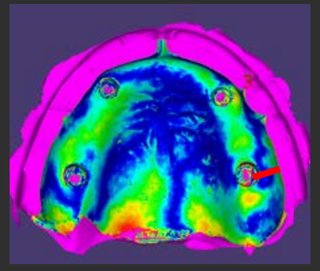
3D Prininting Resin

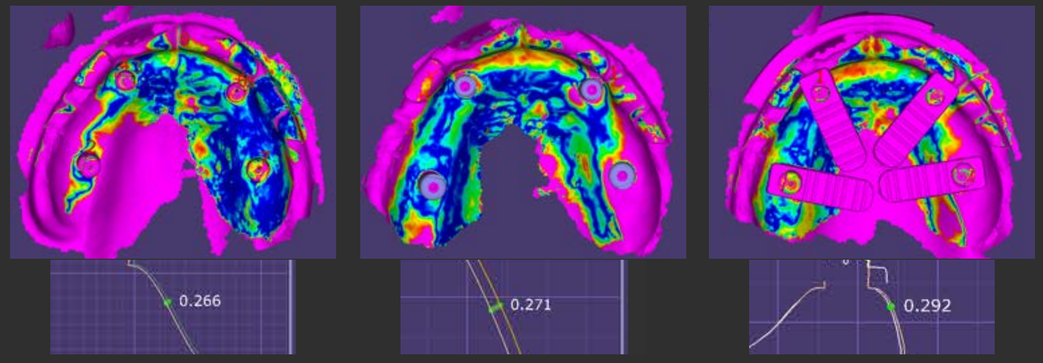
Provisional restoration (2025-08-06)

Photogramatory





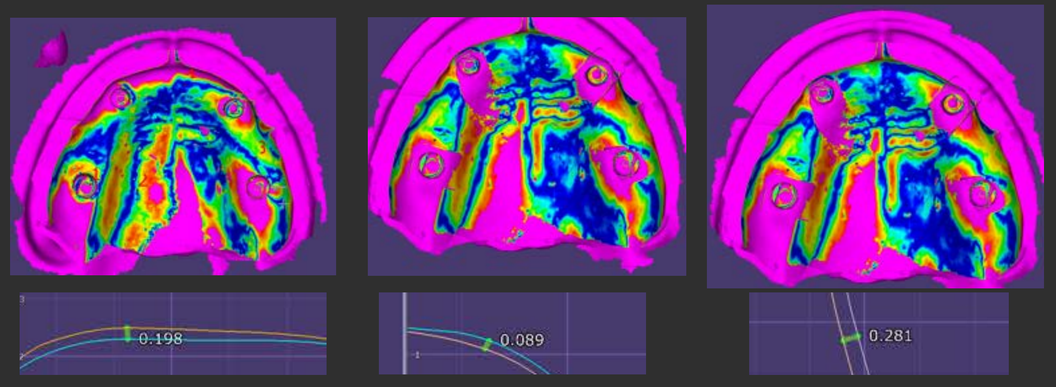




BTS = BOS

Photogrammatory jig and simple jig are similar and fit well

Without Jig is less hittable



Contents

Introduction

Over denture

Fixed prosthesis

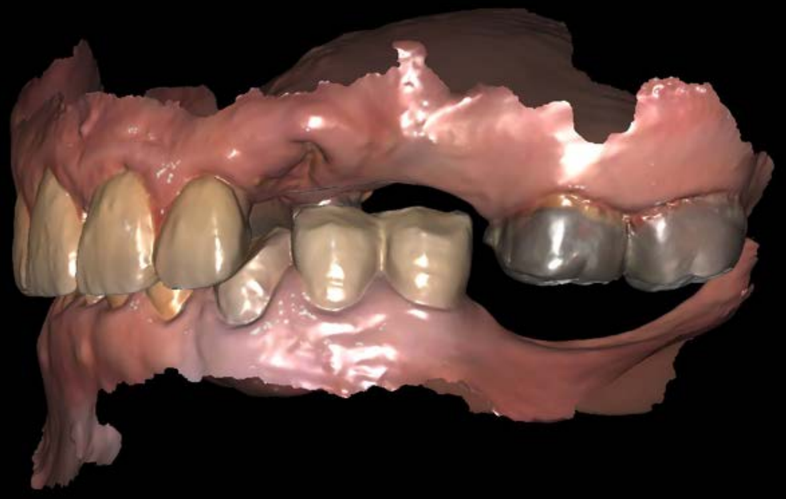
Digita concepts

and application for full mouth reconstruction

Pre-op (2024-07-24)

초진 (2024-07-24)

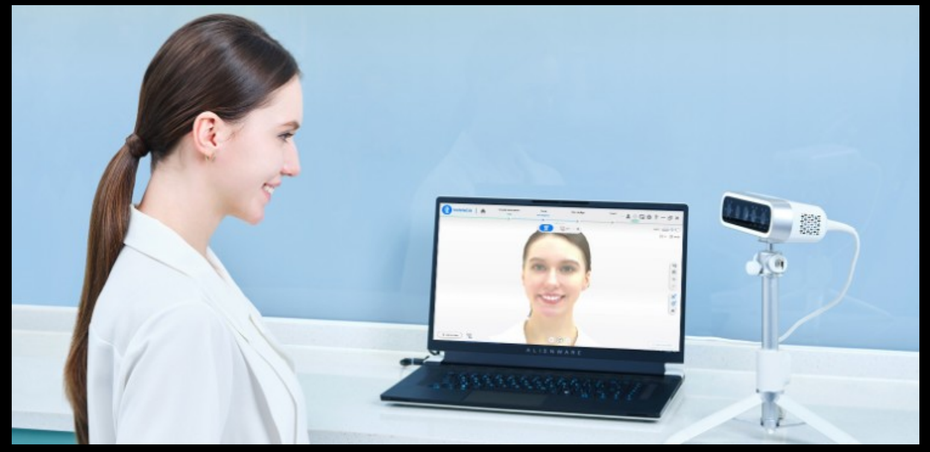
Pre Op



CC: RPD를 장기간 사용하지 않으시고 잔존치아의 마모가 심해지면서 교합이 무너진 case

Virtual Set up

Shining 3D AoralScan3 wireless



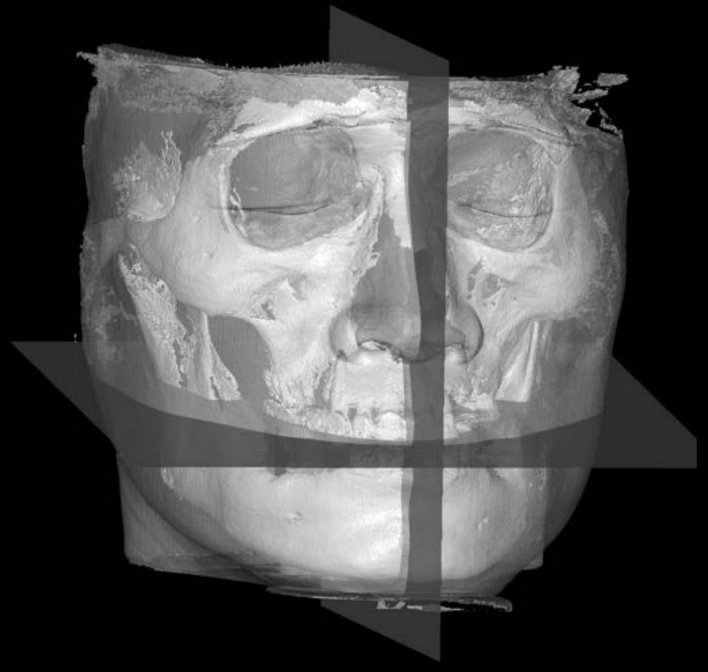
Shining 3D MetiSmile

bright CT

Virtual Set up

Shining 3D AoralScan3 wireless

Shining 3D MetiSmile



bright CT
(AI Occlusal Plane)

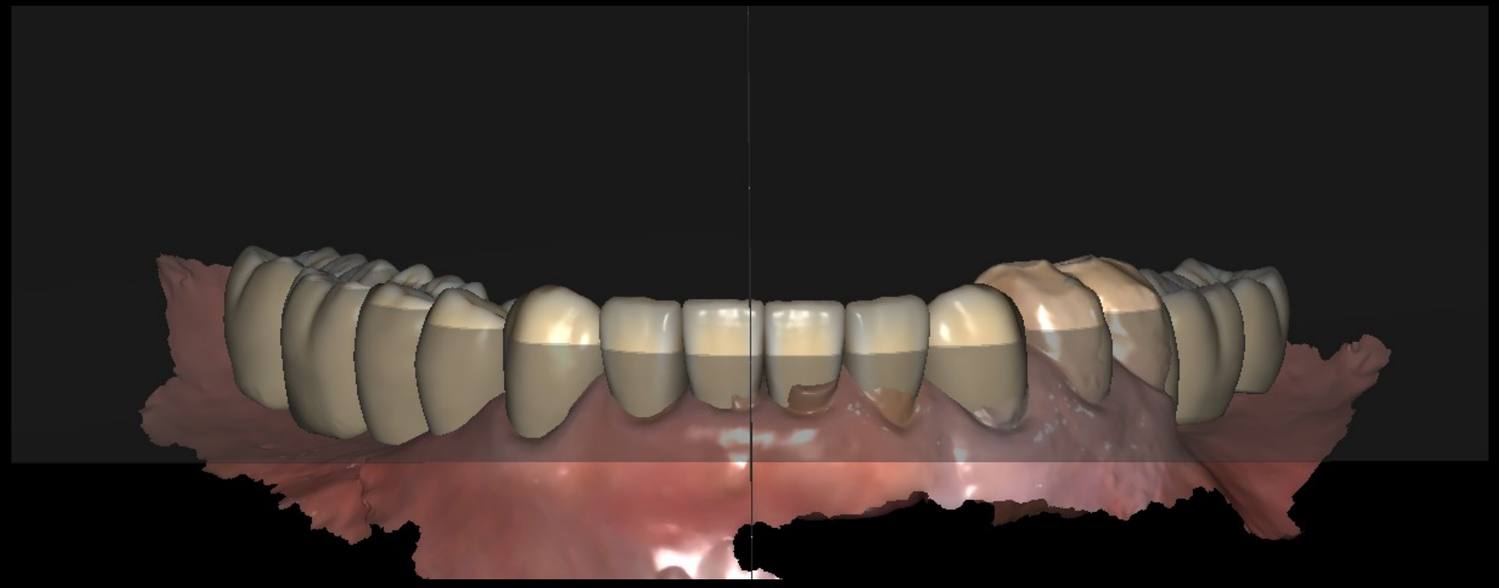
Virtual Set up

Facial data + Ios data + CT data Stitiching

Virtual Set up

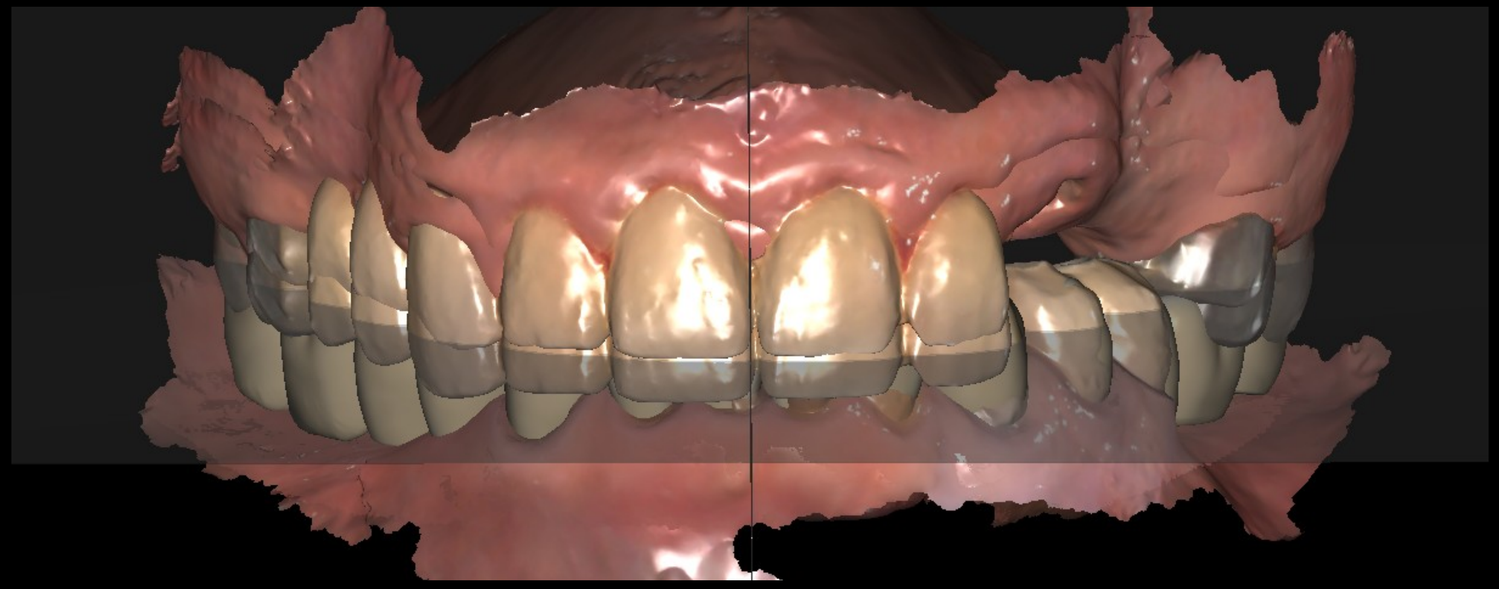
AI Occlusal Plane 을 이용한 현재 구강 상태 진단

Virtual Set up



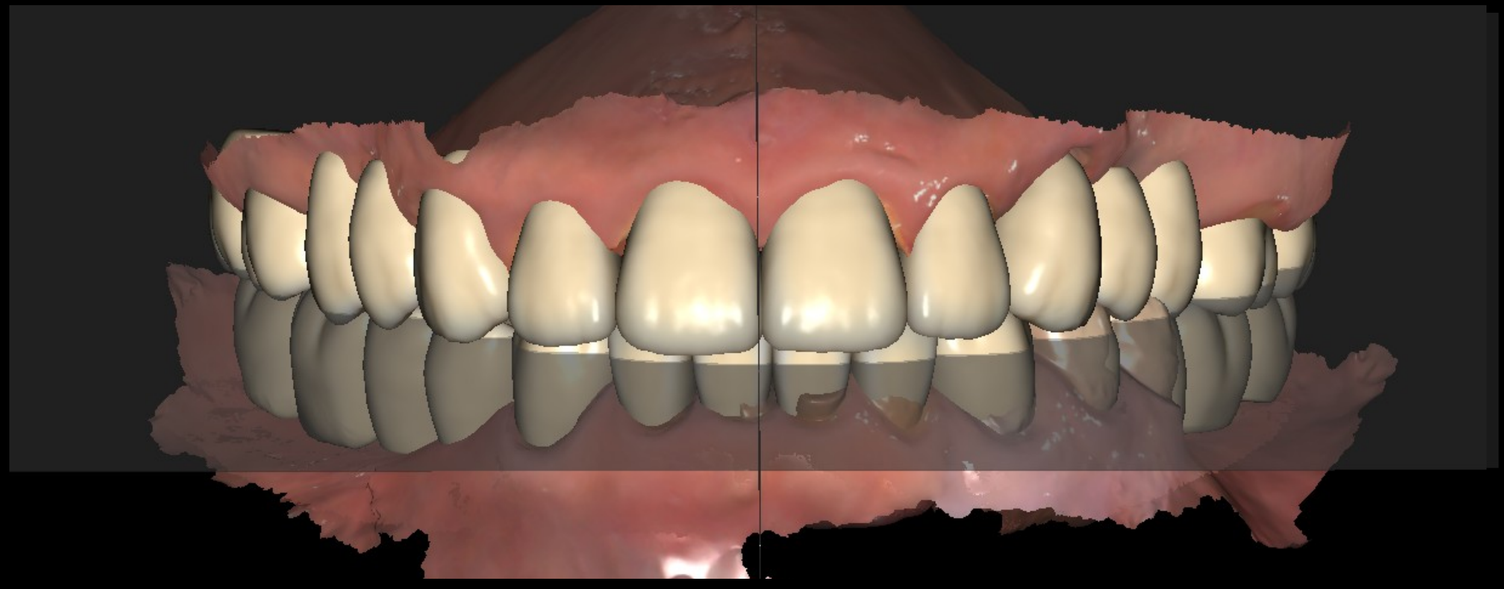
교합 재구성을 위한 VD 4mm up 하여 Set-up 진행

Virtual Set up



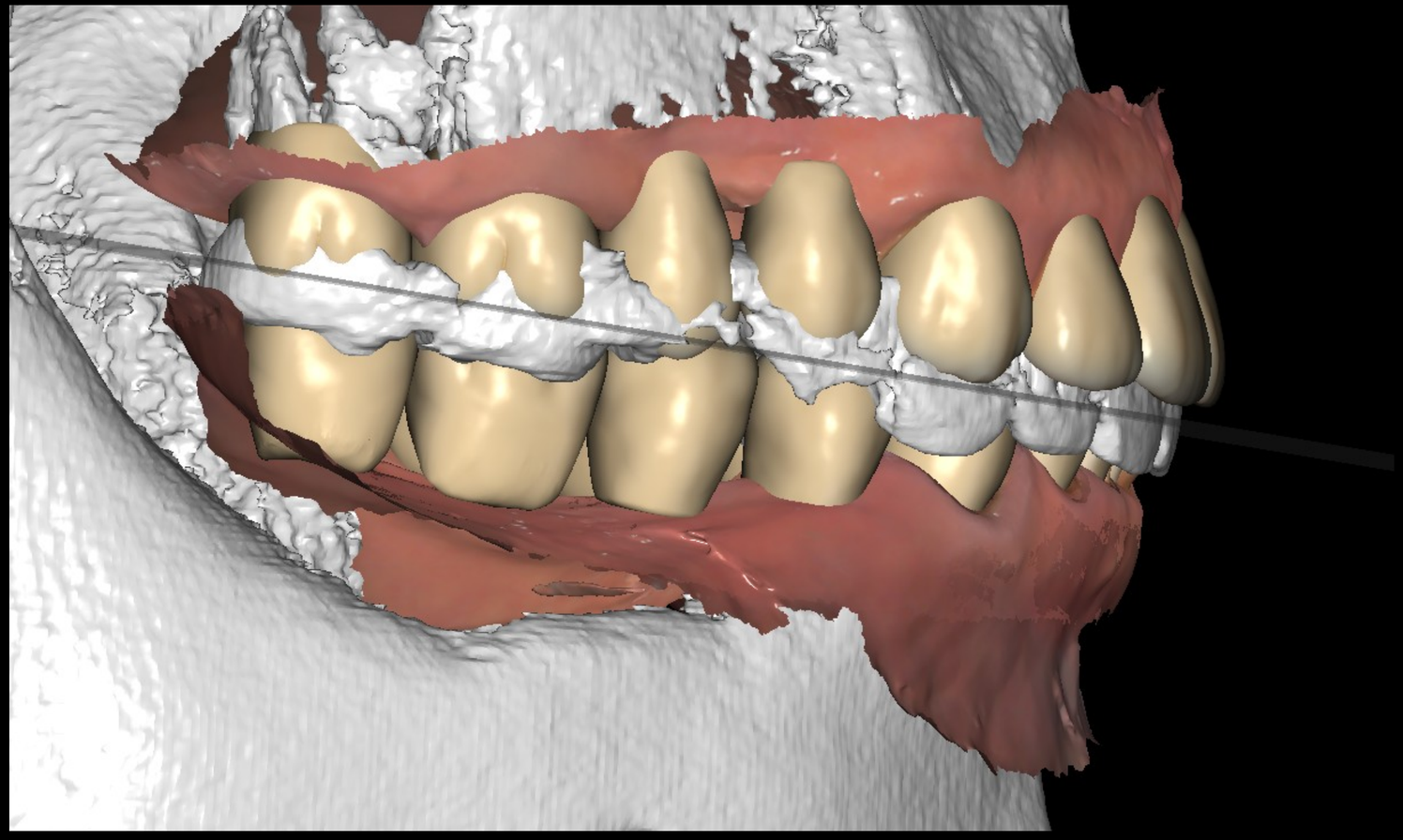
교합 재구성을 위한 VD 4mm up 하여 Set-up 진행

Virtual Set up



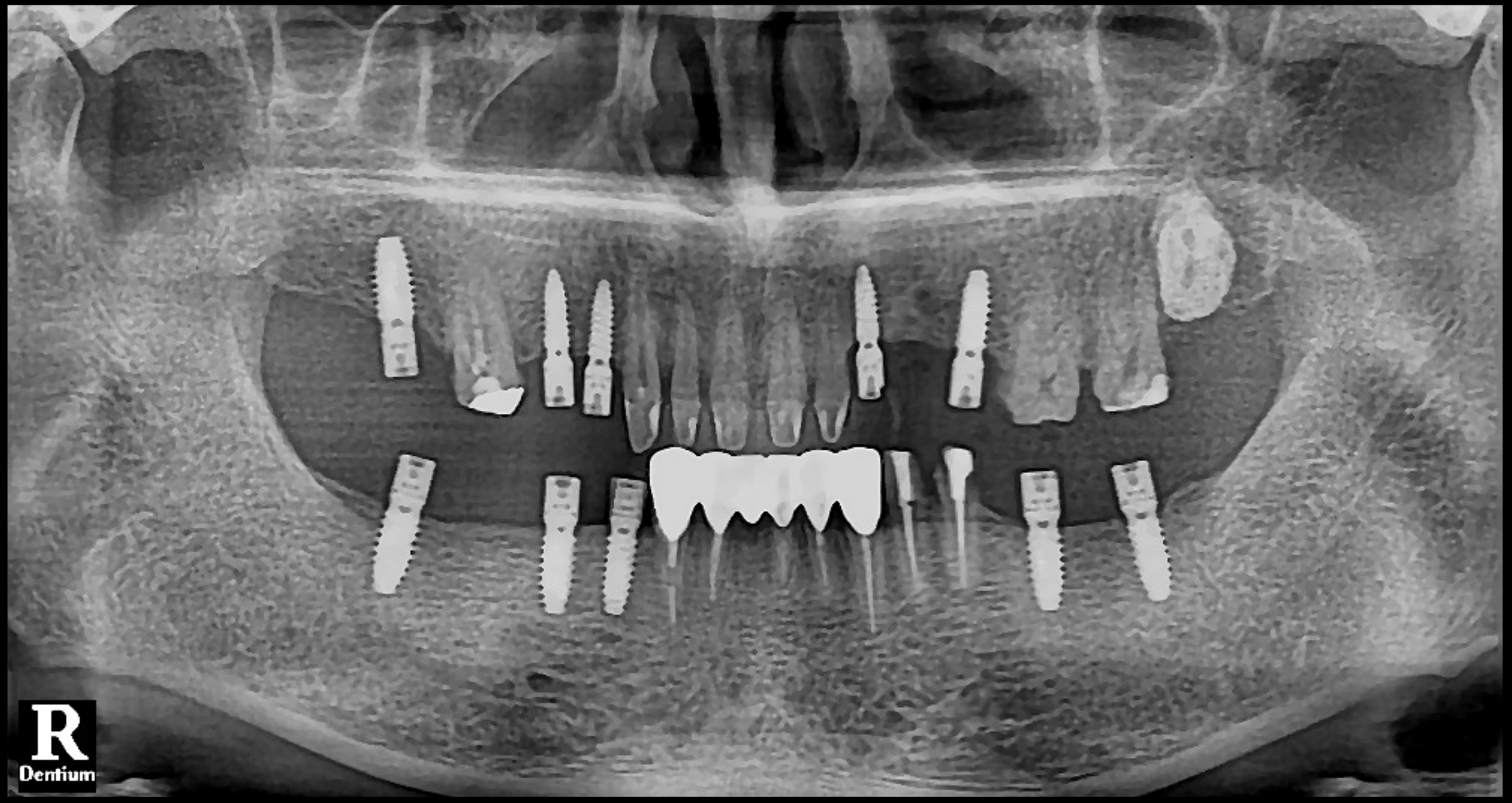
교합 재구성을 위한 VD 4mm up 하여 Set-up 진행

Virtual Set up



기존 CT data 와 함께 보면 VD의 변화를 직관적으로 확인 가능

Post-op (2025-10-30)



CT to PANORAMA

Final prosthesis (2025-12-10)

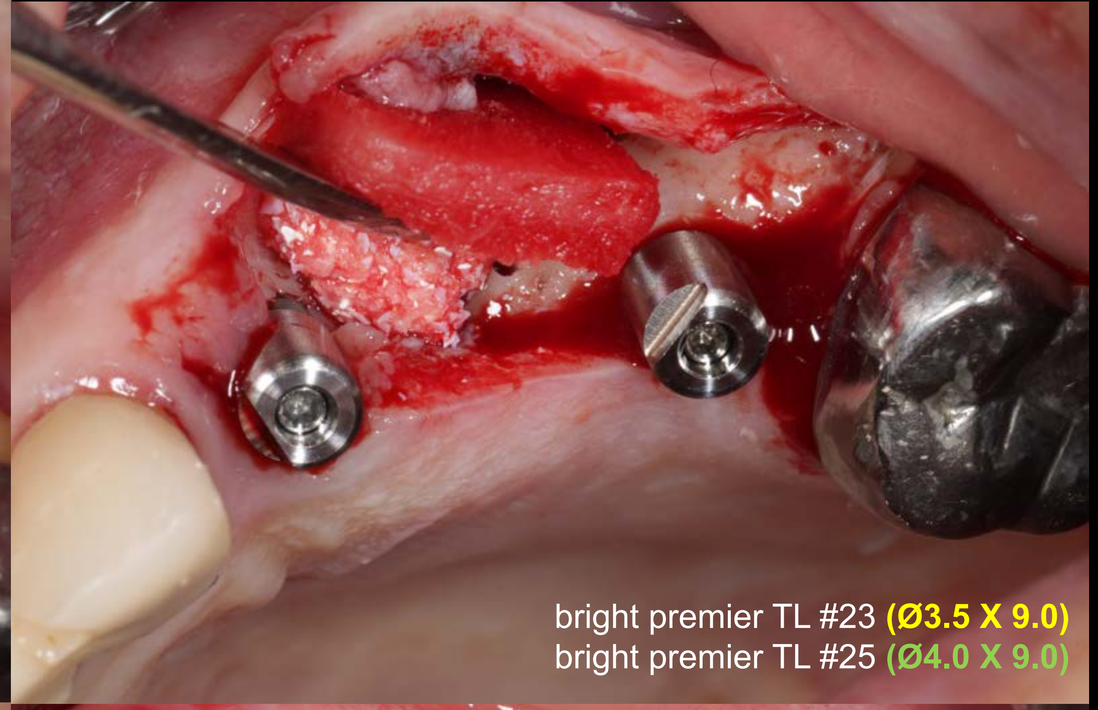
치료 전/후 Bite 비교 (1년5개월)

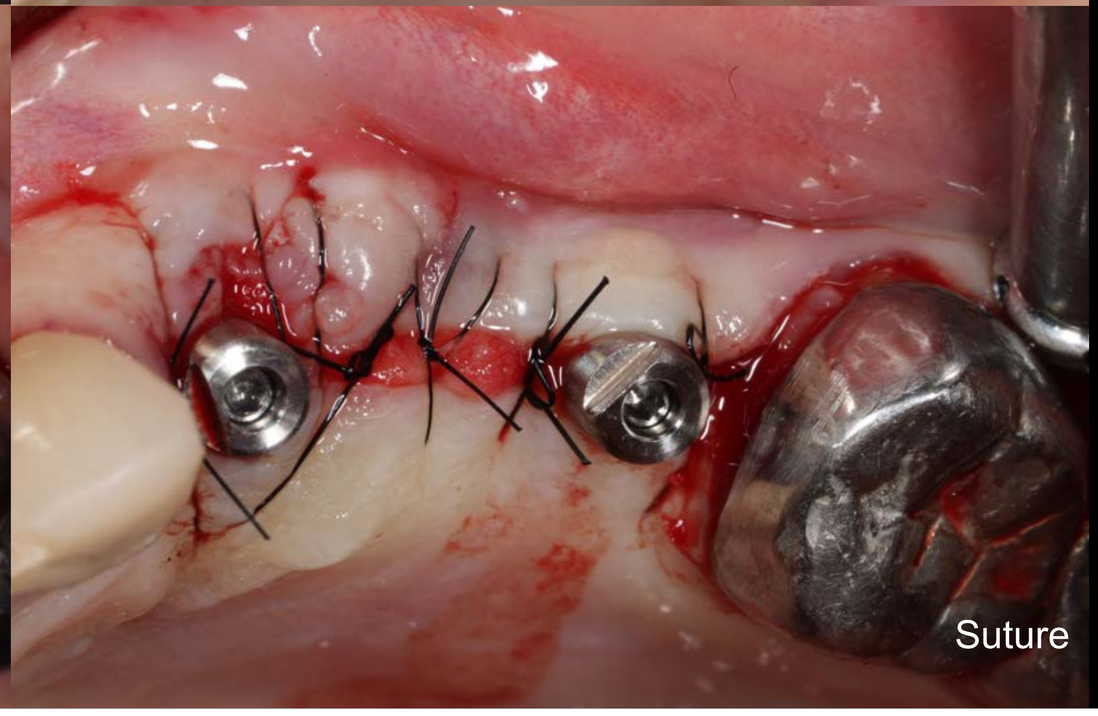
Pre-OP

Post-OP

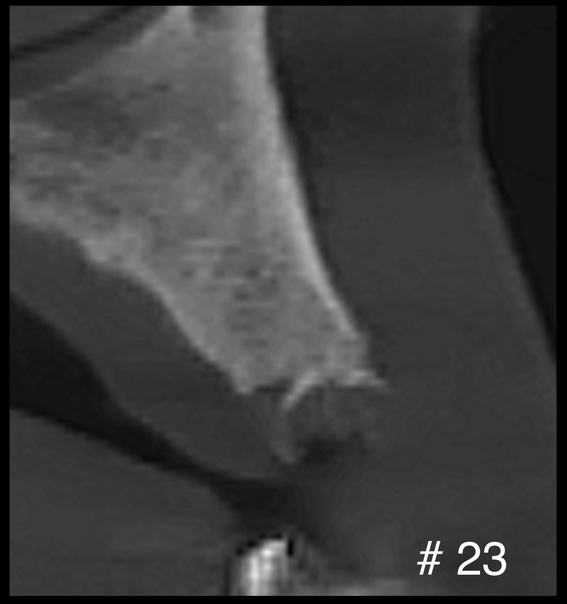
Panorama 비교

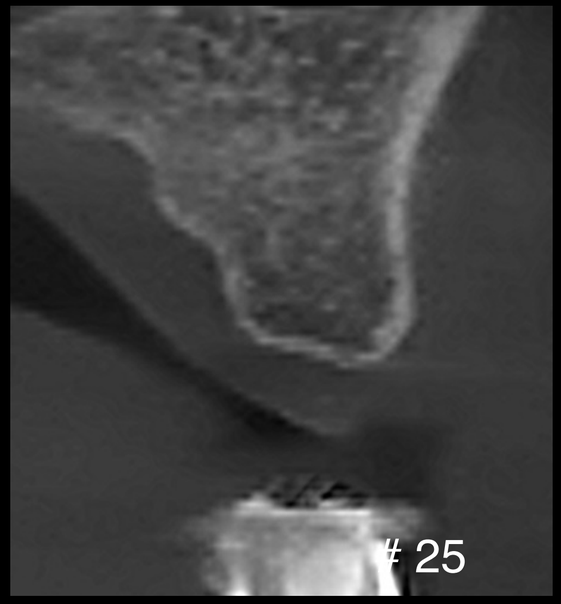
#23 #25 Surgery (2024-08-07)



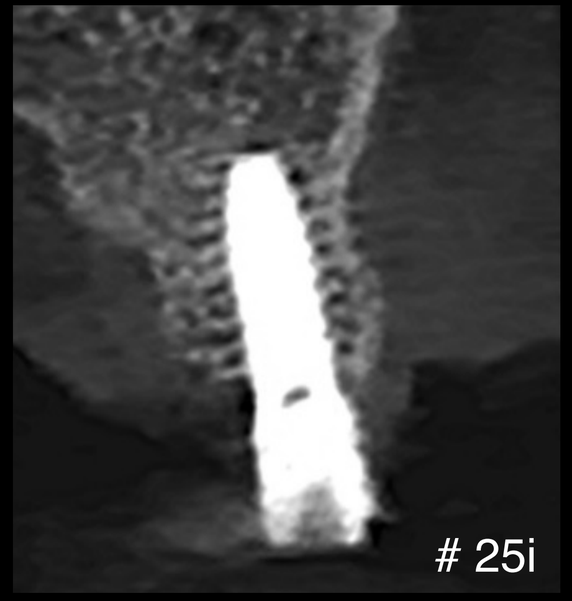


CT Taking (2024-08-07)





Pre - OP

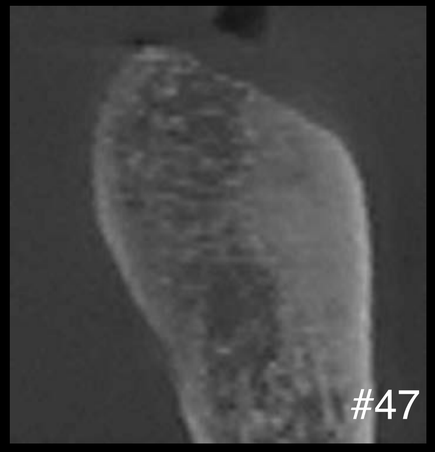


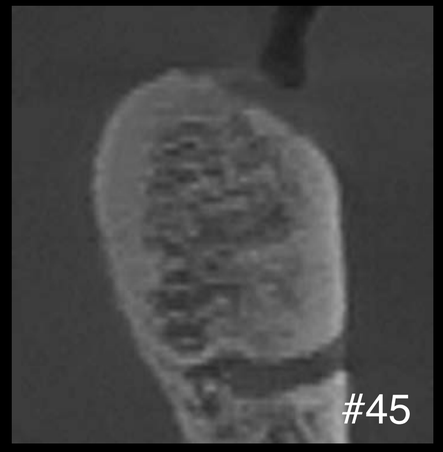
Post - OP

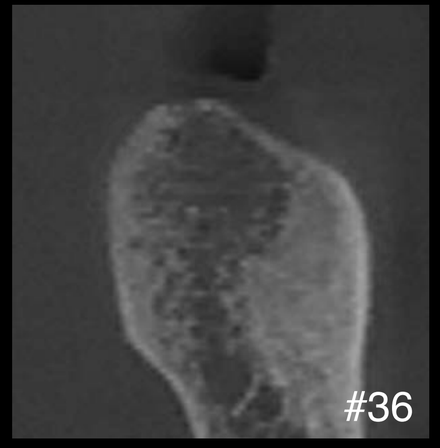
#47 #45 #44 # 36 #37 Surgery (2024-08-07)

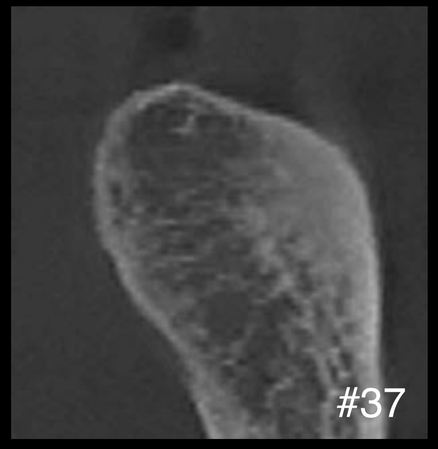
CT Taking (2024-08-07)

Pre - OP

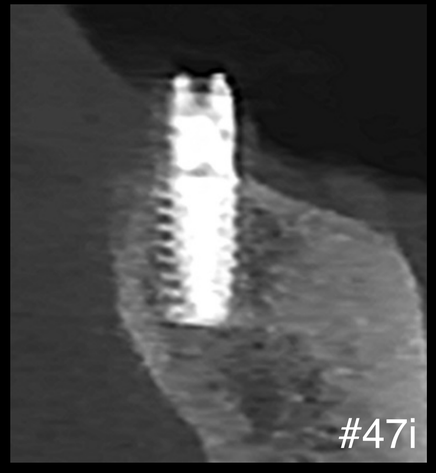


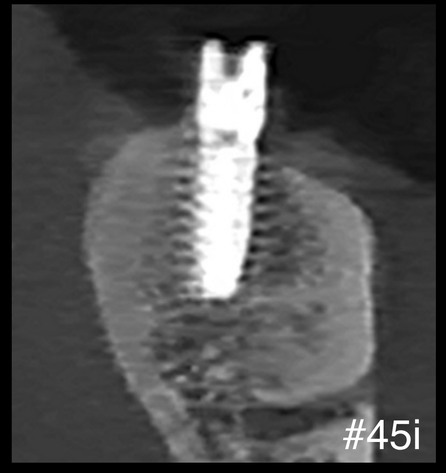


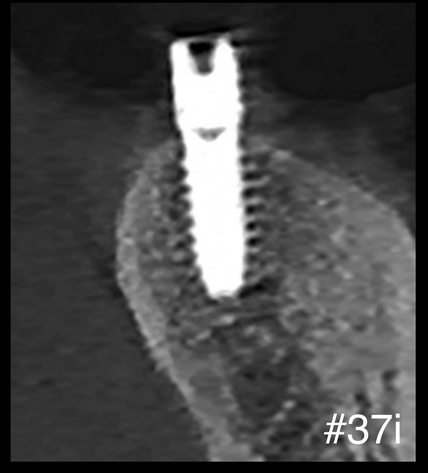




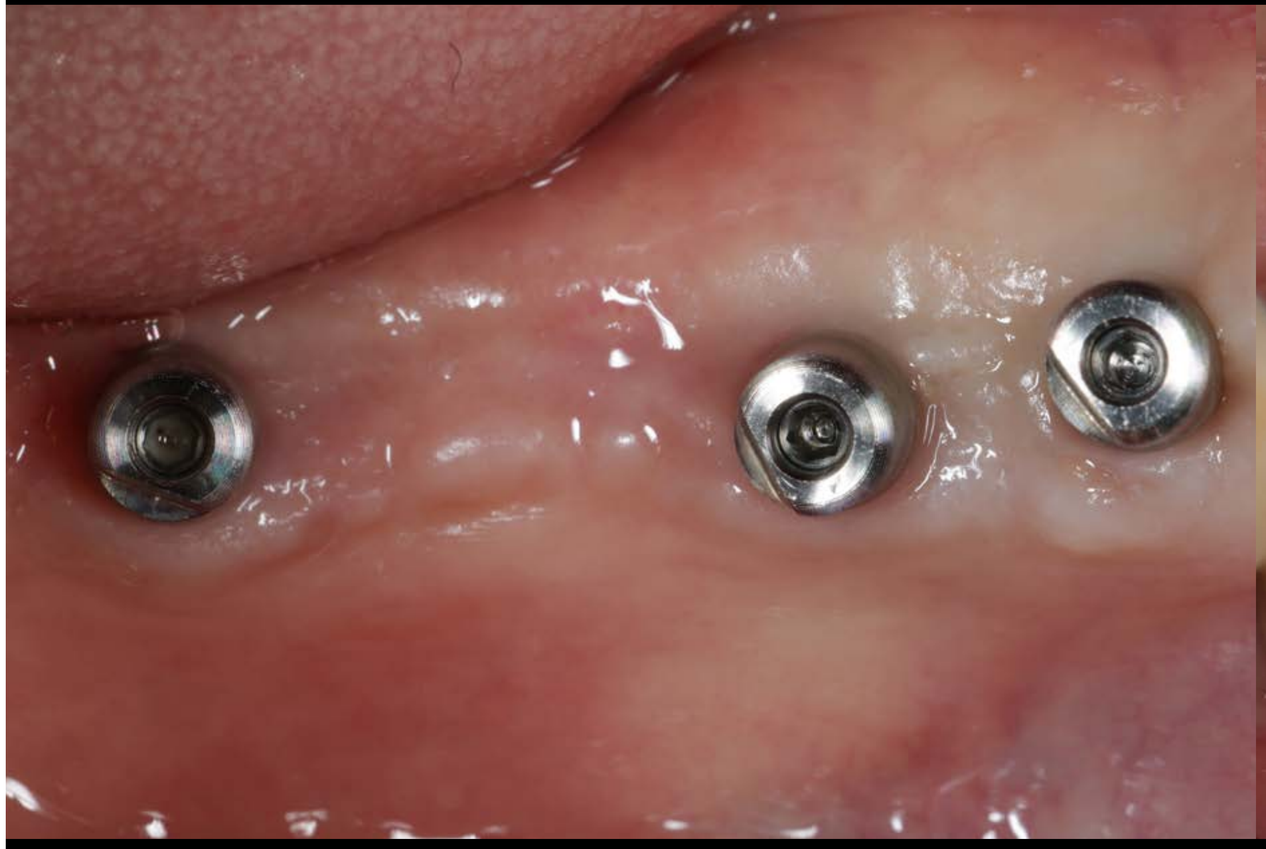
Post - OP







Healing : 3 weeks (2024-08-29)



40 번대

30 번대

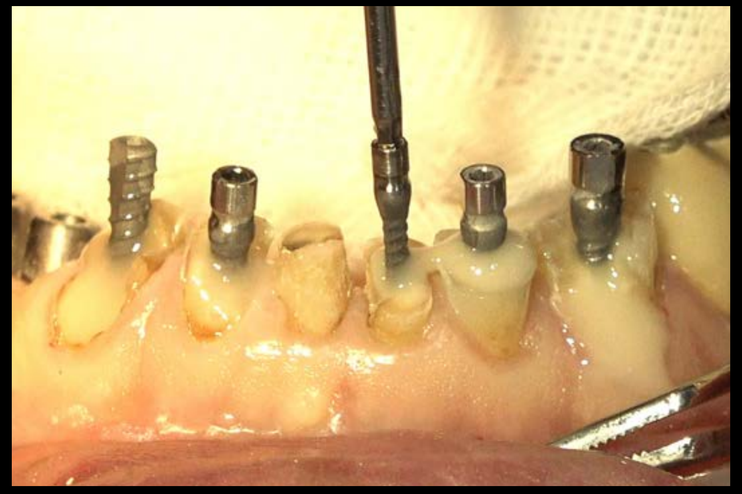
Mandible Anterior Post Core (w. Dentium Root Canal Implant)

Pre - OP

Drilling

Etching (w. bright Etchant)

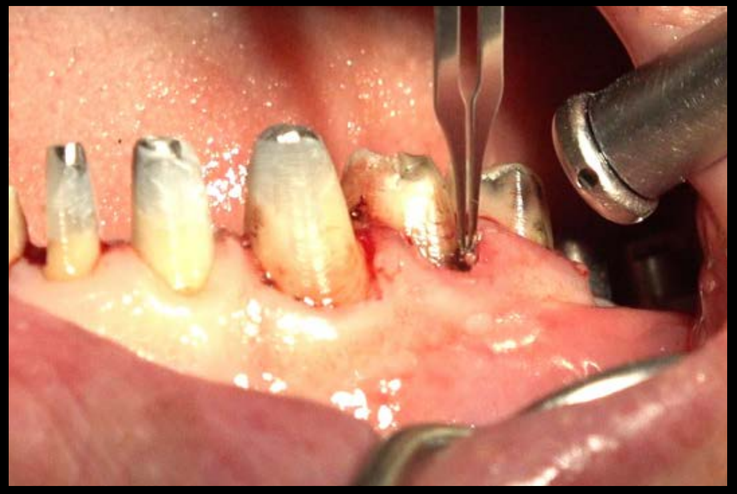
Bright Core



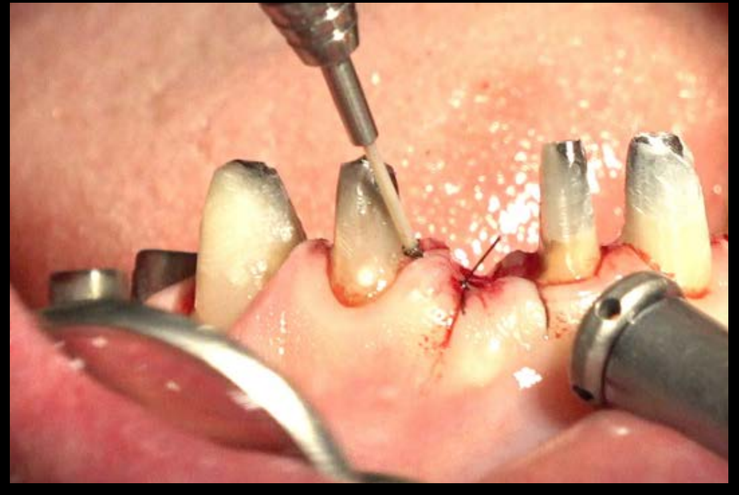
하악 4전치 **Ø1020** 하악 견치 **Ø1430**

Post & Core Build UP

#41 EXT 및 Crown lengthening (w. Electro Surgery, Hu-Laser)

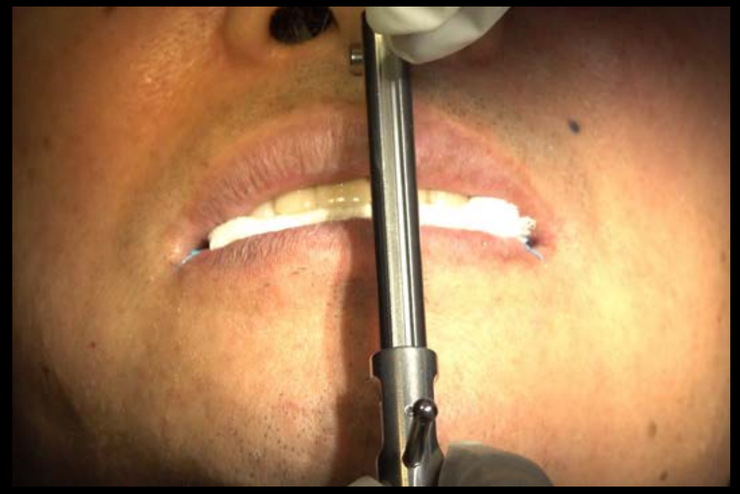


#41 Extraction



Post-op (2024-08-29)

SCAN for Provisional Crown (2024-08-29)

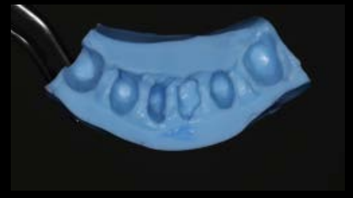


VD UP 위하여 **Gauze** 활용

Gauze bite 상태 →

구치부 Rubber Bite 채득

Rubber Bite 고정 후 전치부 Index 제작(w.Putty)



Putty Index

Rubber Bite

SCAN for Provisional Crown (2024-08-29)

Aoralscan3 wireless

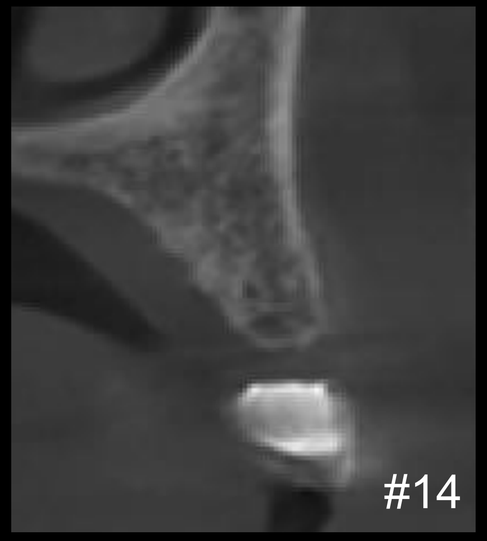
전치부 Index **장착 후** bite 채득

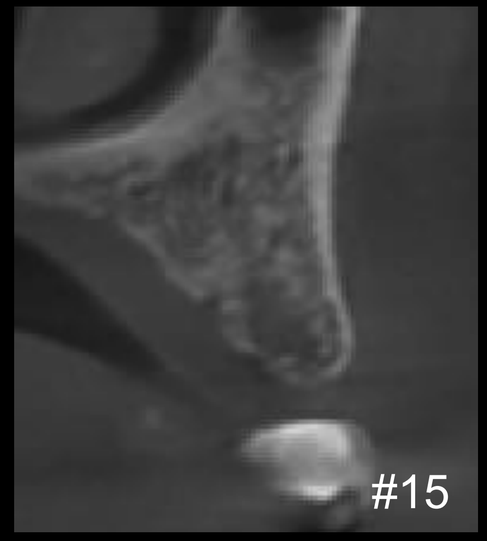
Mandible Anterior Provisional Crown restoration (2024-08-30)

40번대 Provisional Crown restoration (2024-08-30)

30번대 Provisional Crown restoration (2024-08-30)

#17 EXT 및 #14 #15 Surgery(2024-08-30)

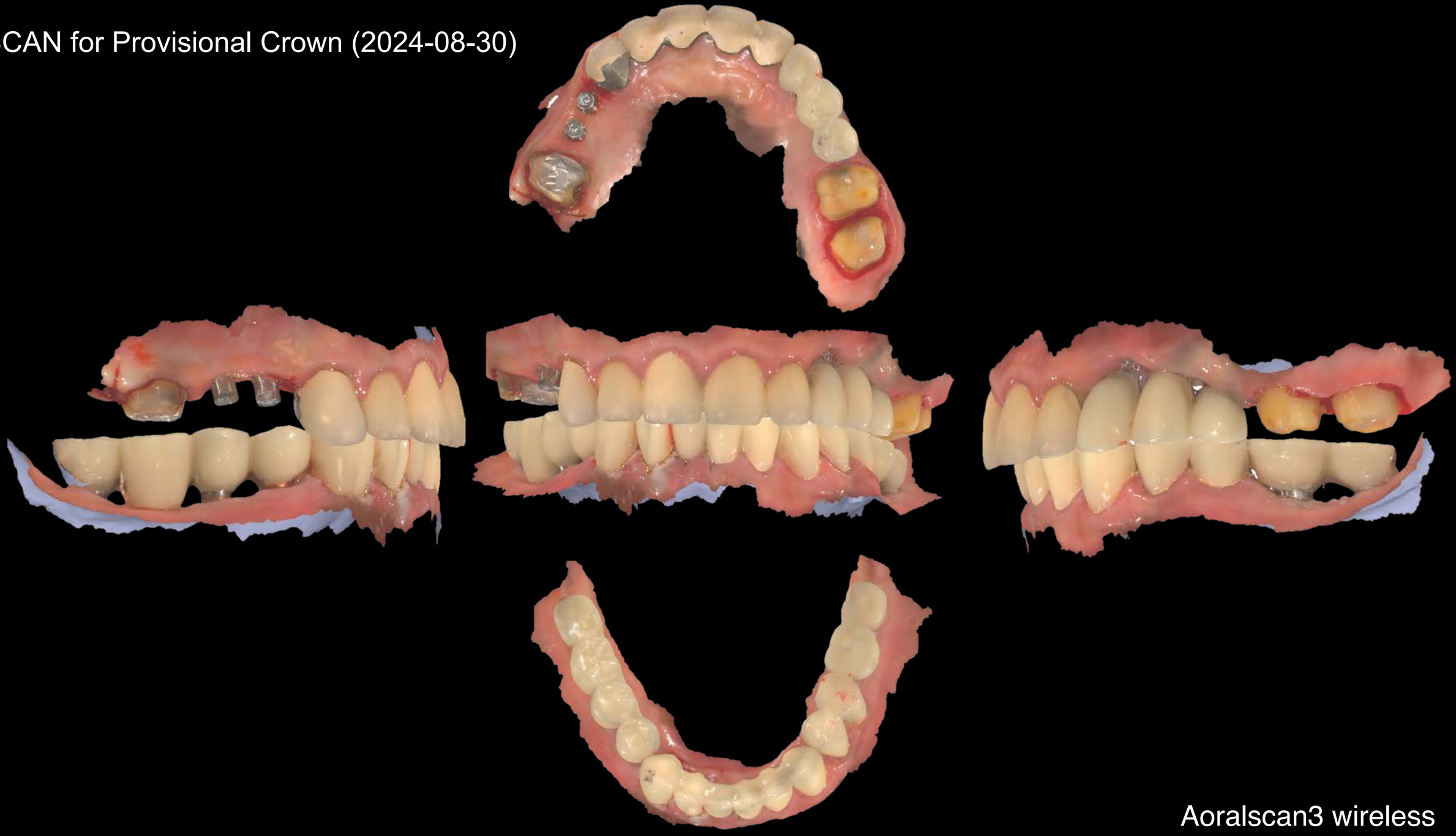




Pre - OP

Post - OP

SCAN for Provisional Crown (2024-08-30)



Aoralscan3 wireless

Provisional Crown restoration (2024-08-31)

Provisional Crown restoration (2024-08-31)

Maxillary Anterior CLP (w. Hu-Laser) & SCAN (2024-11-01)

Pre - OP

Post - OP

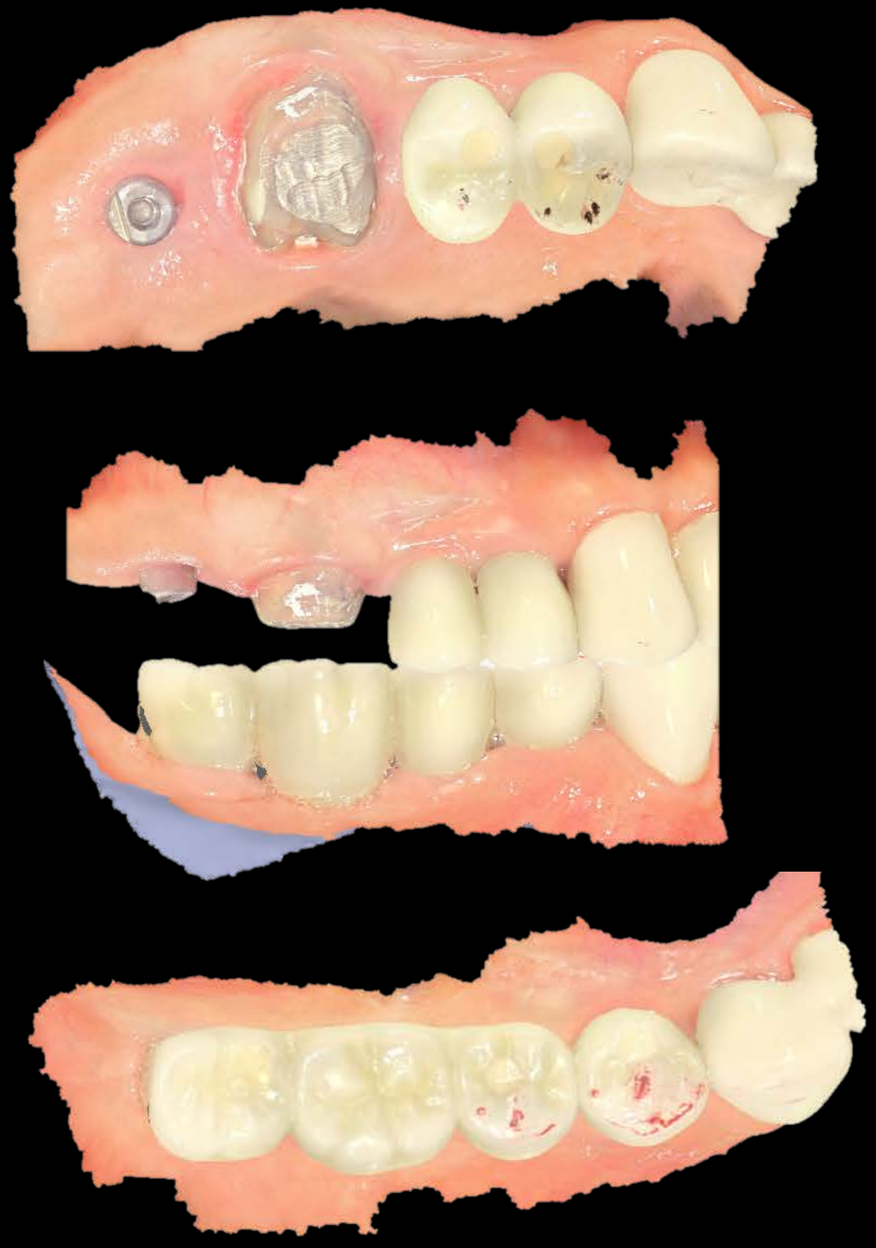
Healing : 1 week (2024-11-12)

#17 Surgery (2025-05-09)

Pre - OP

Post - OP

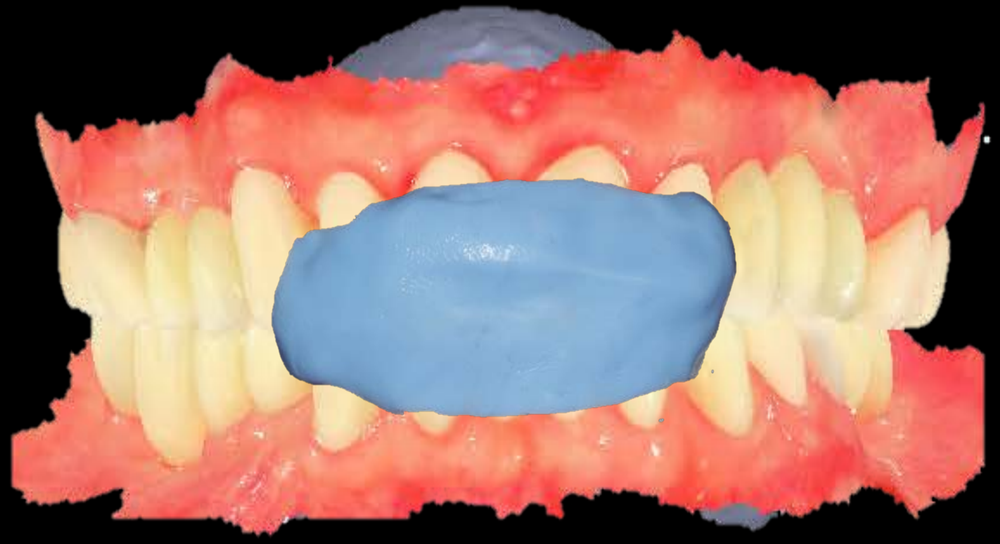
SCAN for Provisional Crown(2025-05-23)



Aoralscan3 wireless

Provisional Crown restoration (2025-06-03)

Final Impression 전 준비(w. Putty Index) (2025-10-30)



임시치아 제거 전

Index 제작

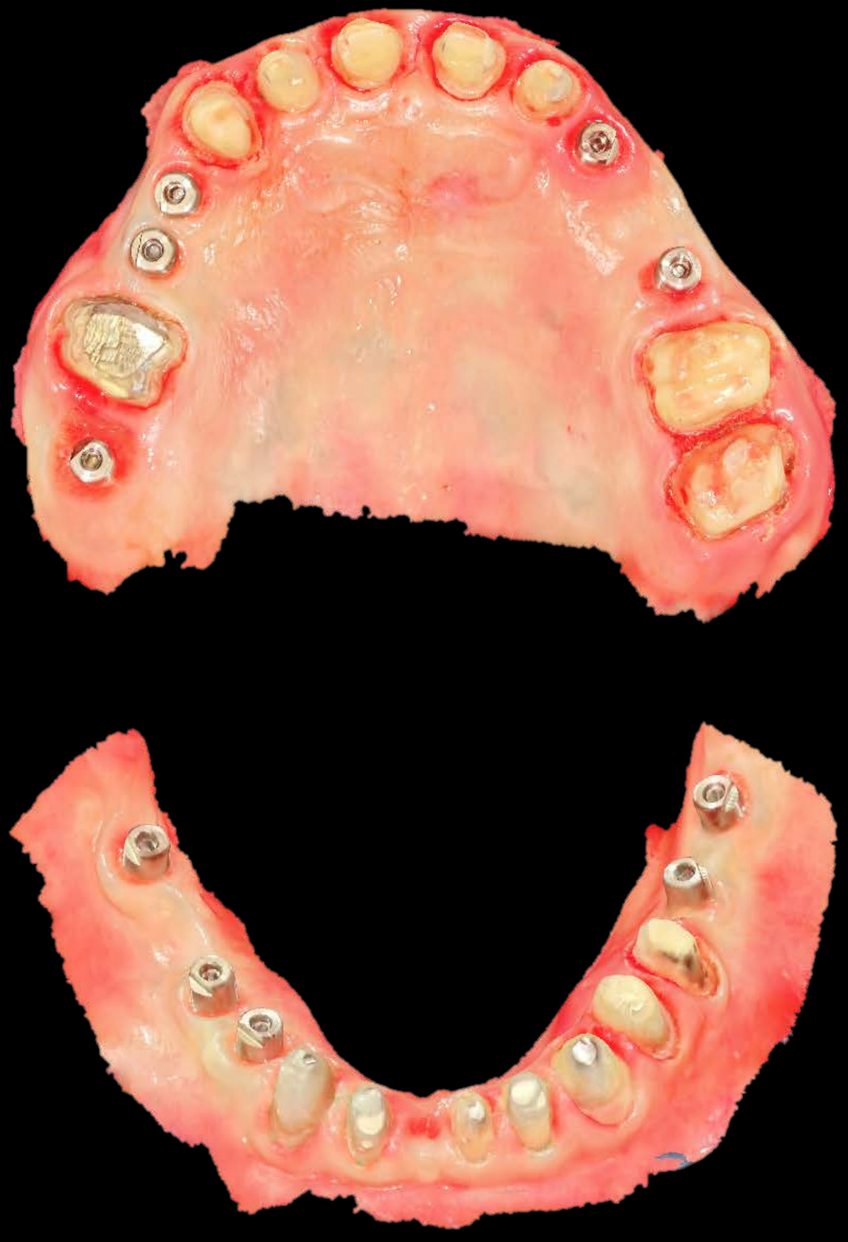
Final Impression 전 준비(w. CT Taking) (2025-10-30)

Index 부분 제외
1차 SCAN

CT 촬영(w. Index)
-Skull Mode-
Index

Final Impression (2025-10-30)

Final Impression (2025-10-30)



Aoralscan3 wireless

Anterior Temporary 제거 후

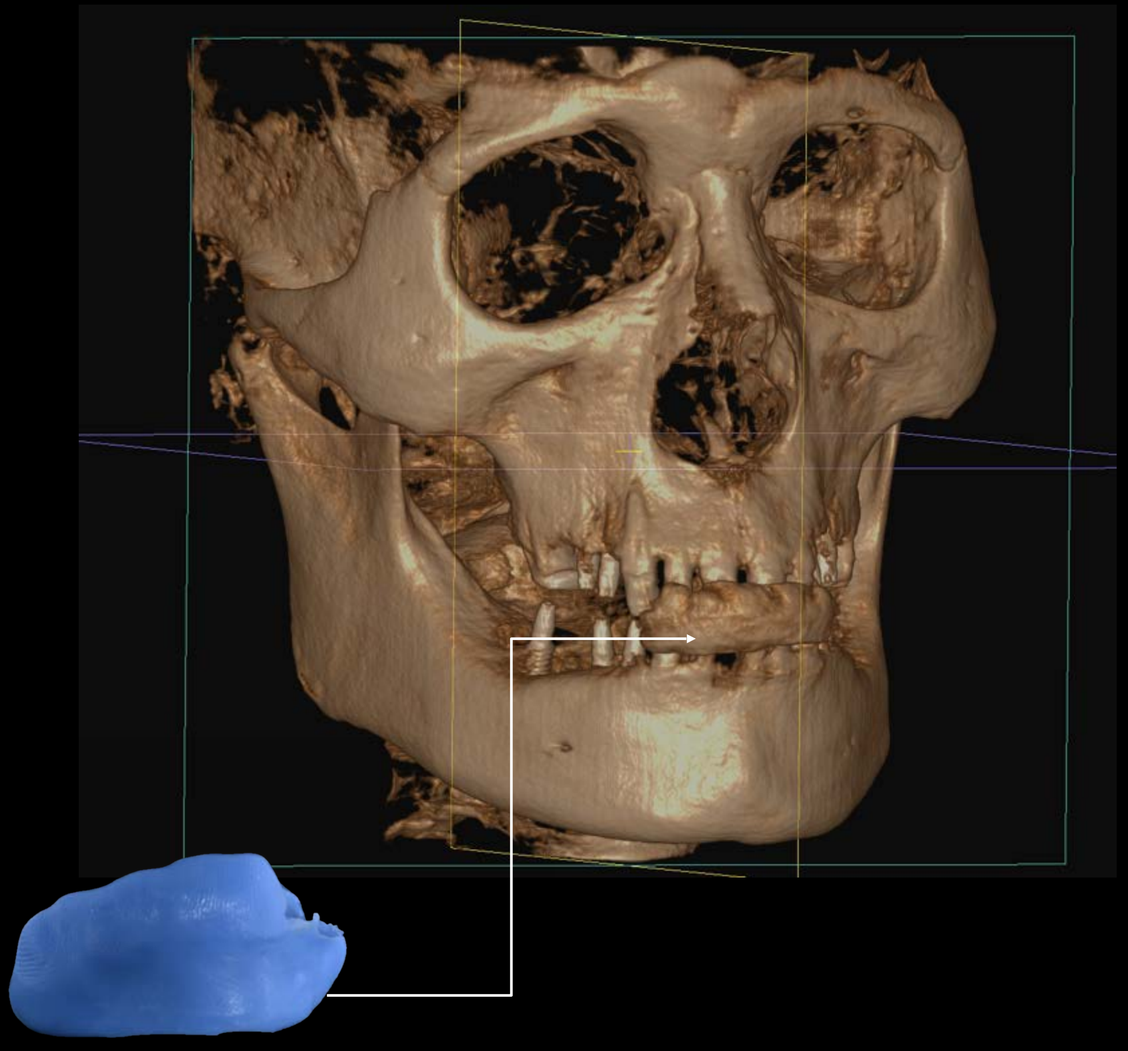
Bite SCAN 없이

상,하악 FULL SCAN

→ CT bite 데이터 활용

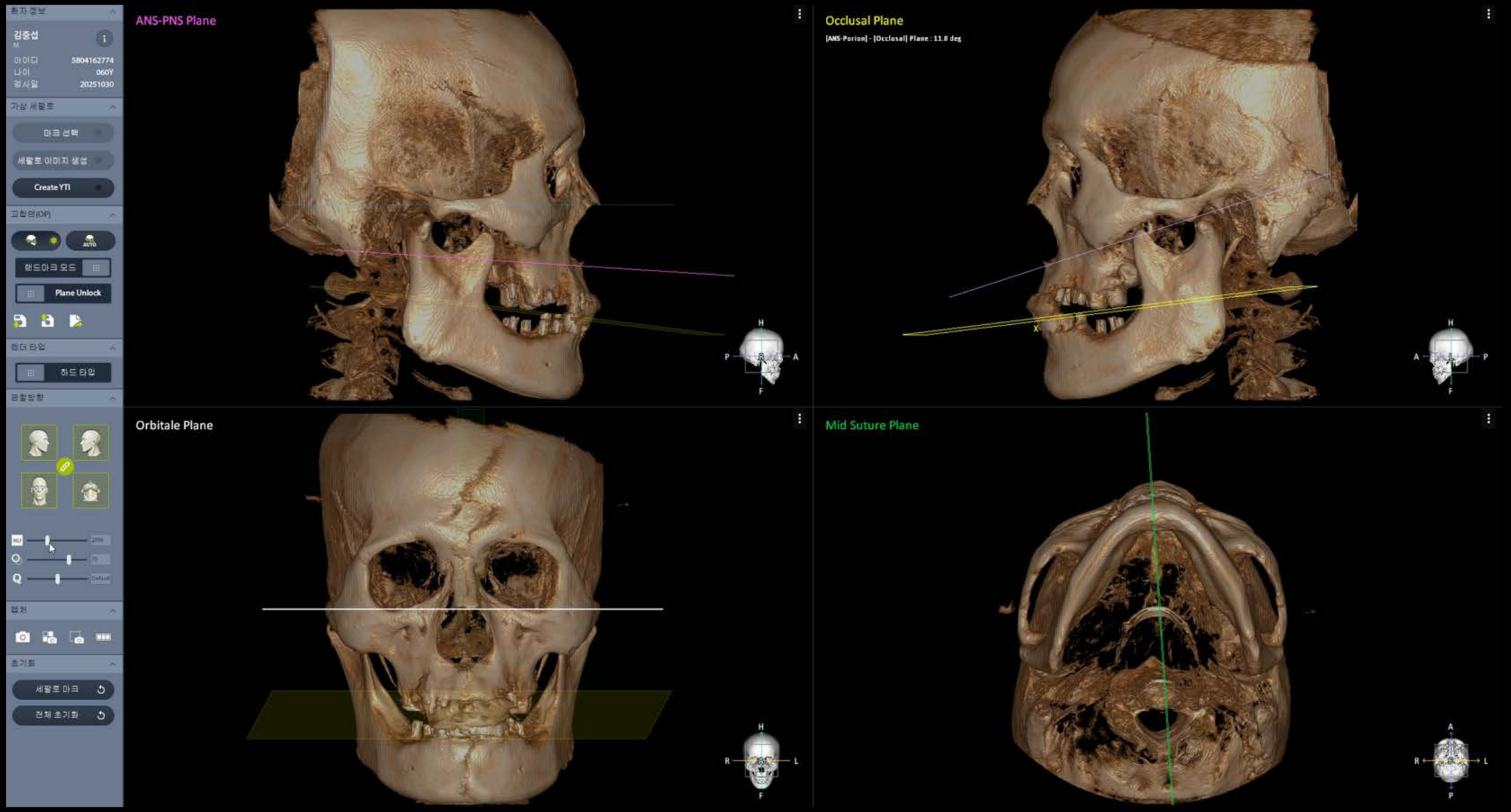
CT Check Bite

Provisional restoration 의 교합관계를 CT Check Bite 를 이용하여 최종 보철물 제작의 활용



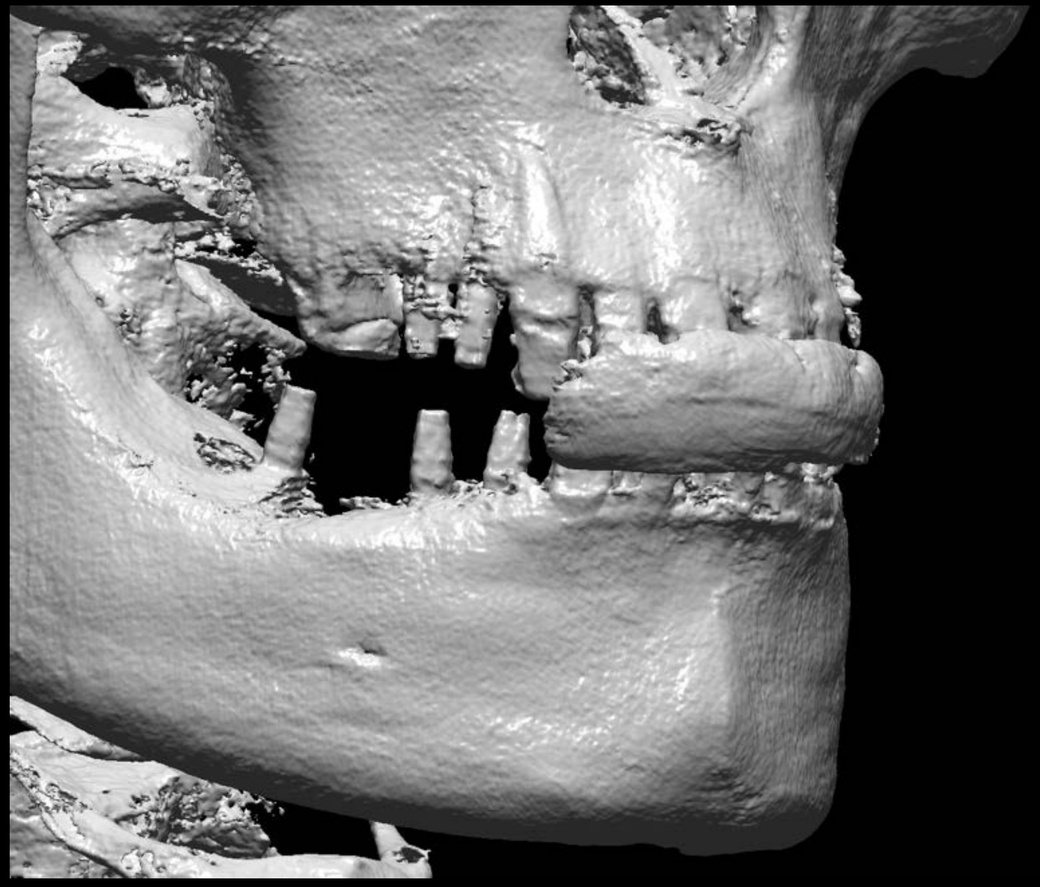
Putty Index 를 이용하여 현재 교합관계를 CT Taking

Dentium CT Viewer



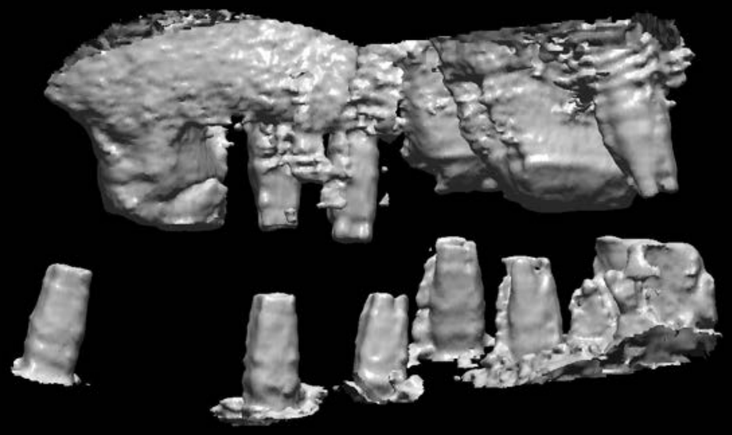
AI Occlusal Plane

CT Check Bite



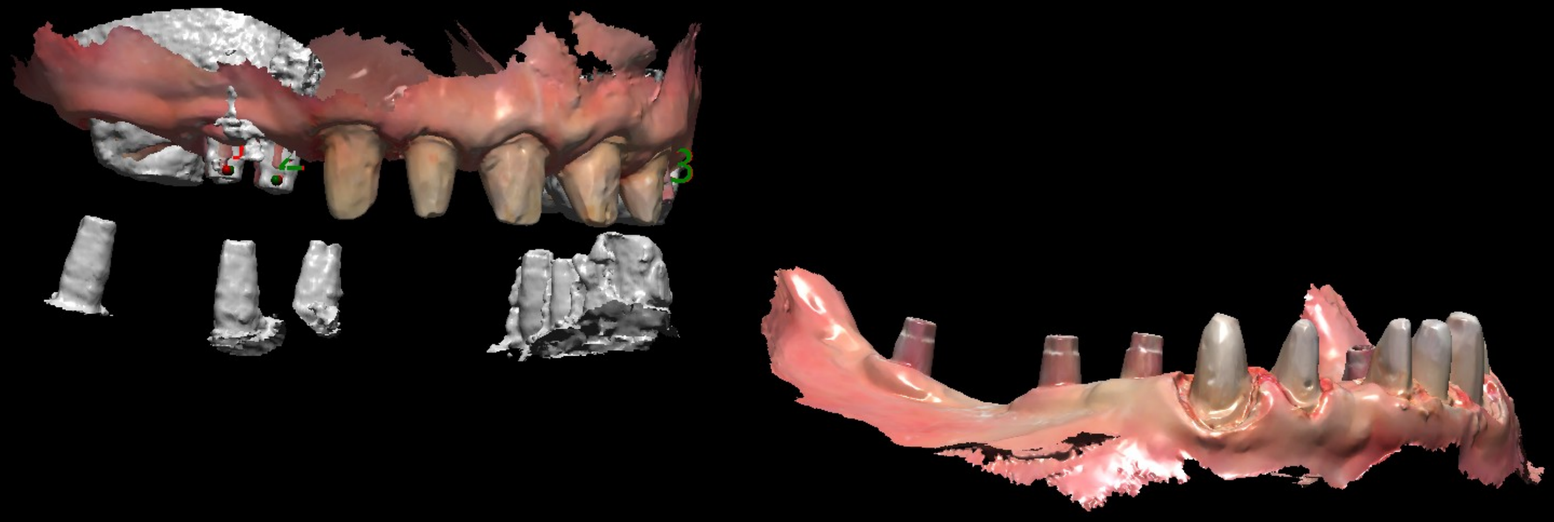
CT Check Bite Dicom – STL Data Stitching

CT Check Bite



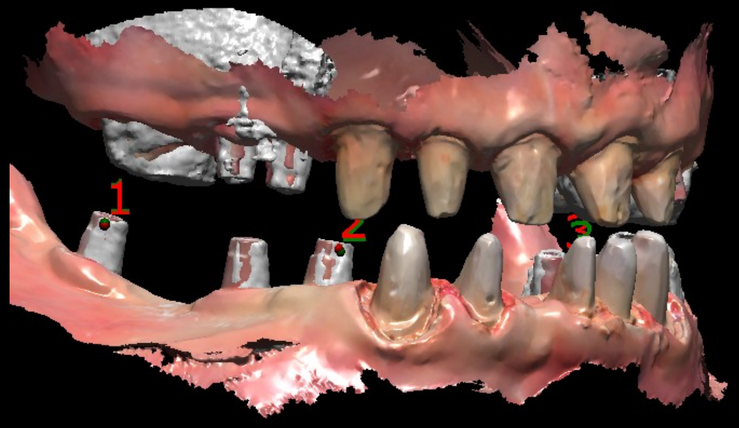
CT Check Bite Dicom – STL Data Stitching

CT Check Bite



CT Check Bite Dicom – STL Data Stitching

CT Check Bite



CT Check Bite Dicom – STL Data Stitching

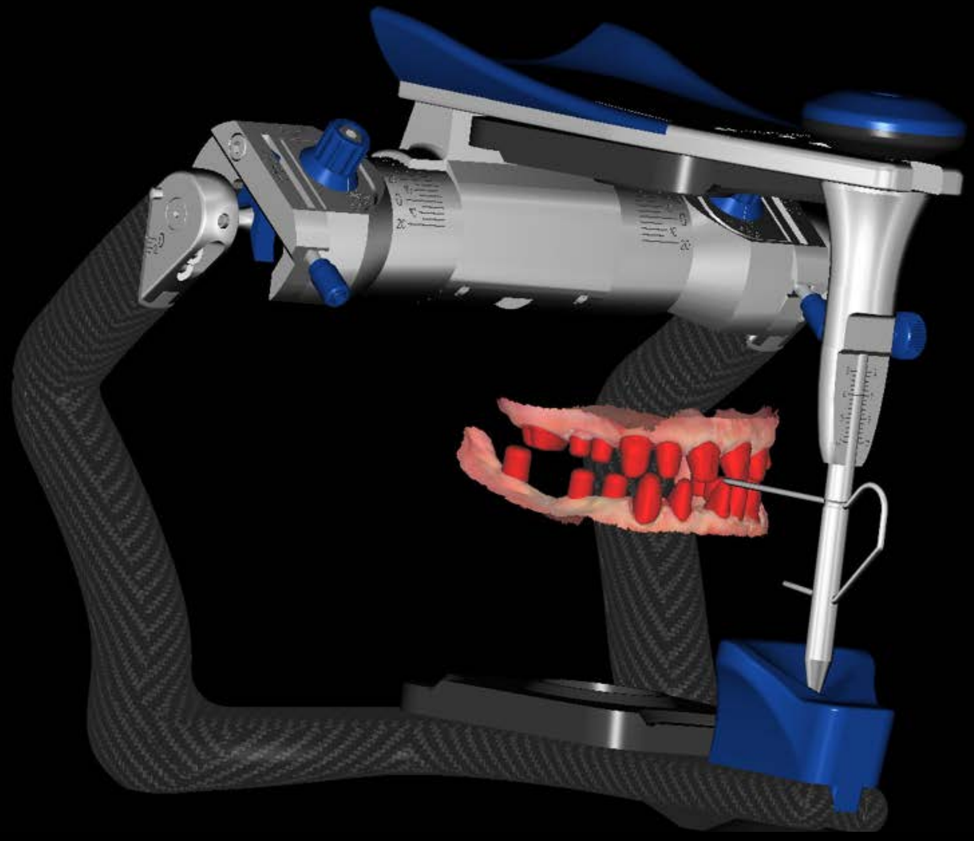
Cad Design

Provisoanl crown

Final Ios Scan

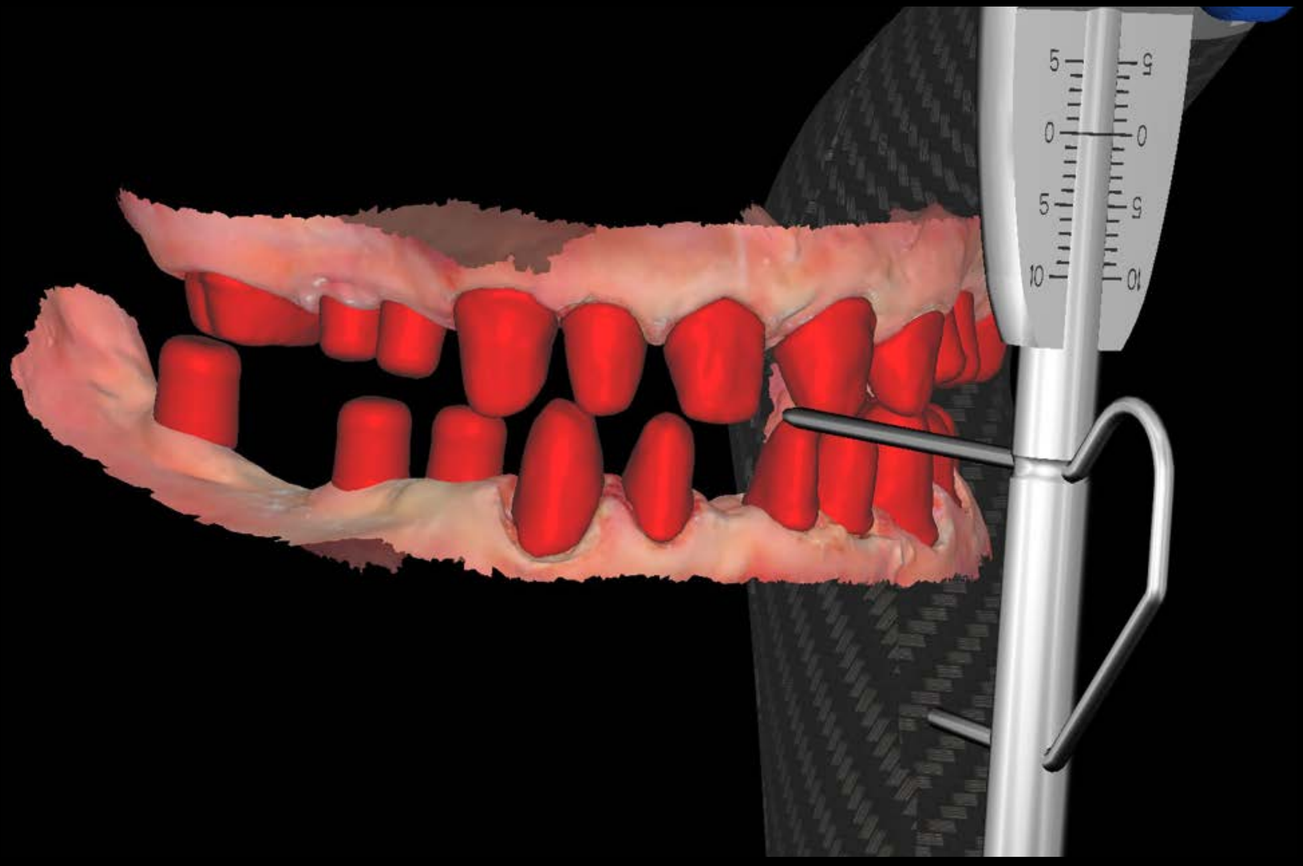
Virtual Articulator 를 이용하여 VD 2mm up

Virtual Articulator



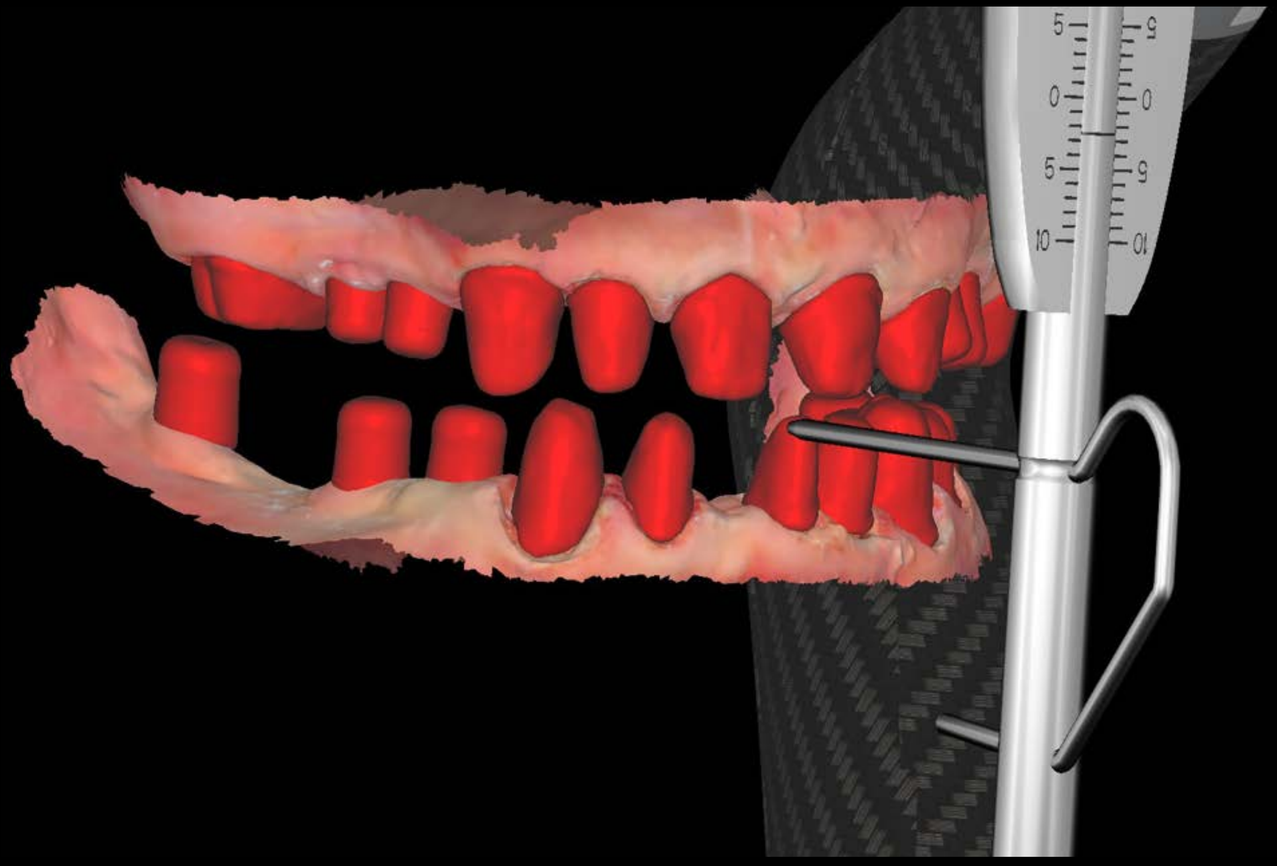
CT Check Bite - VD 2mm up

Virtual Articulator



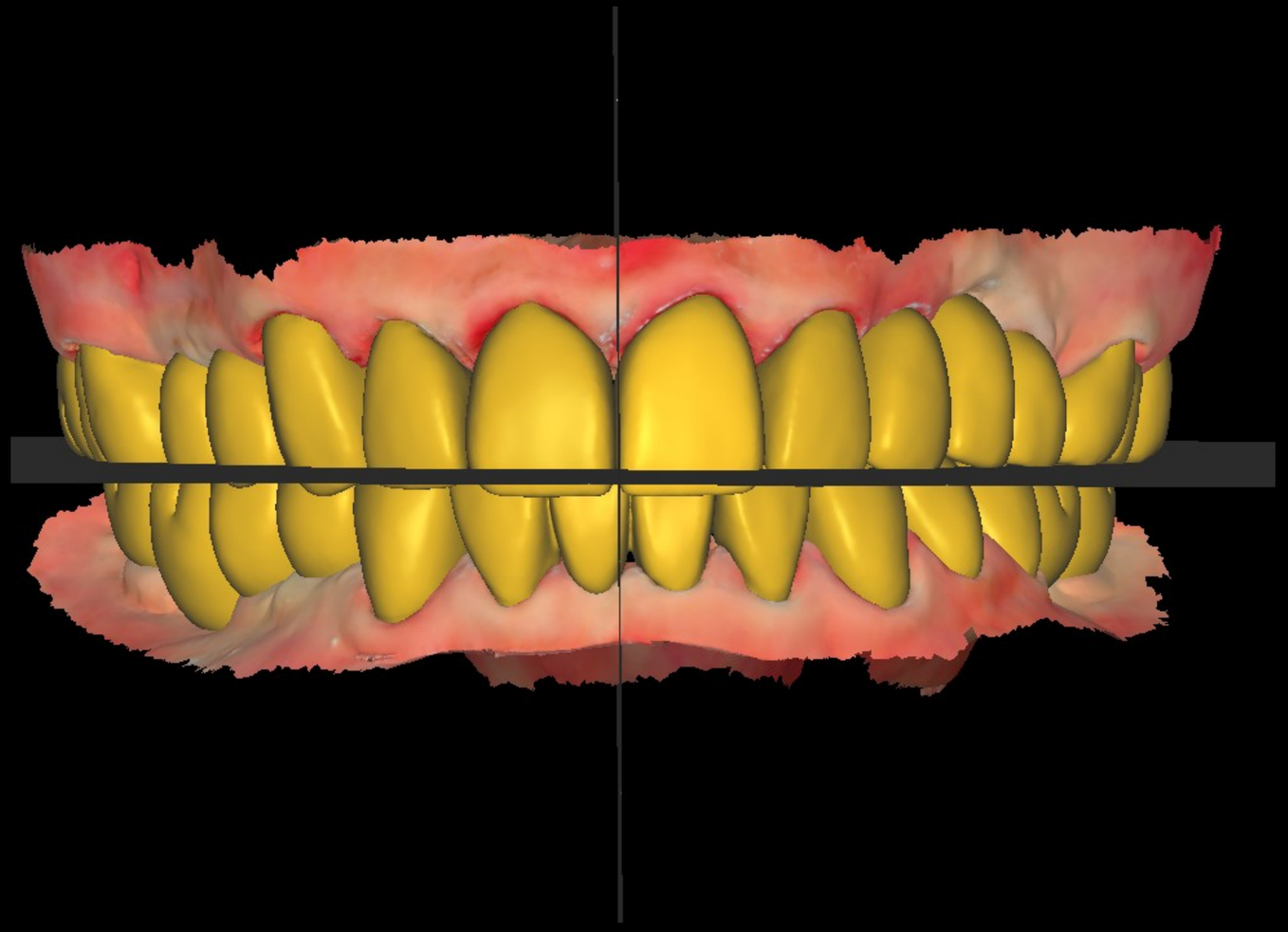
CT Check Bite - VD 2mm up

Virtual Articulator

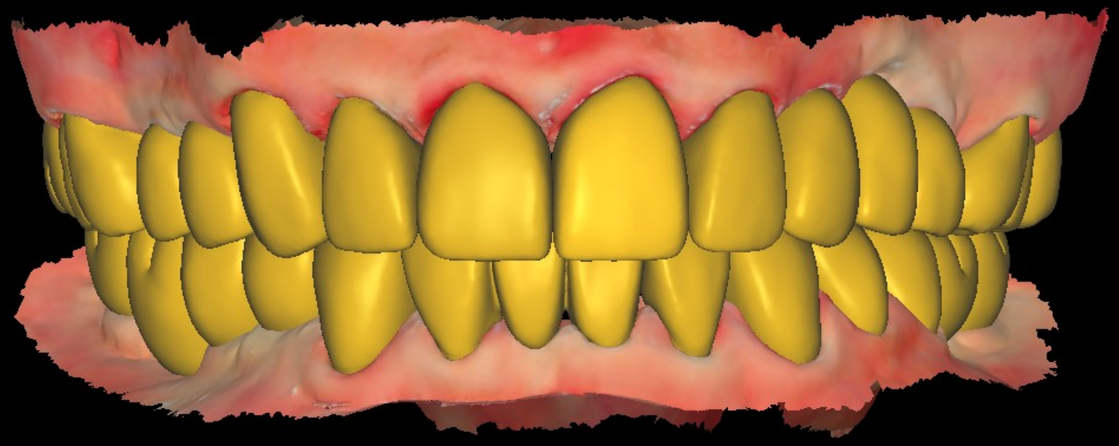


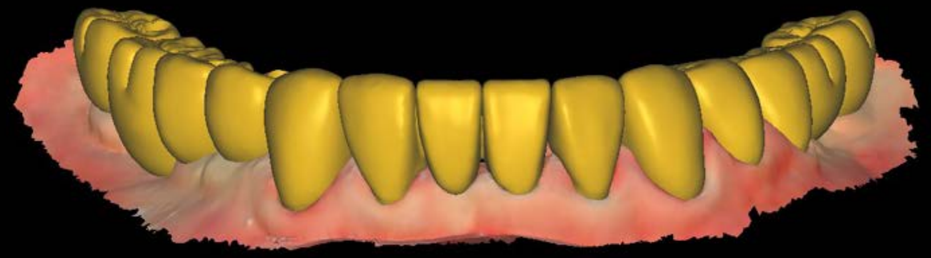
CT Check Bite - VD 2mm up

Cad Design

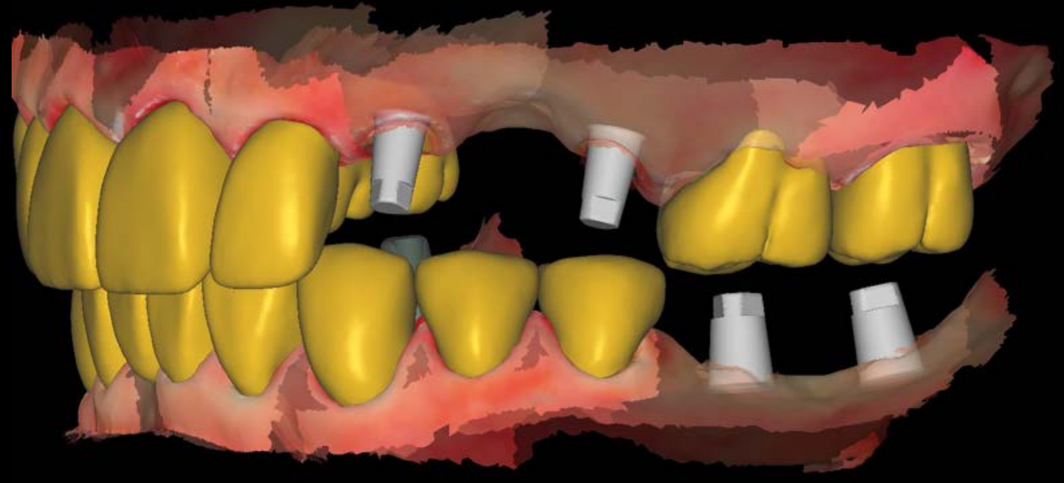


Cad Design



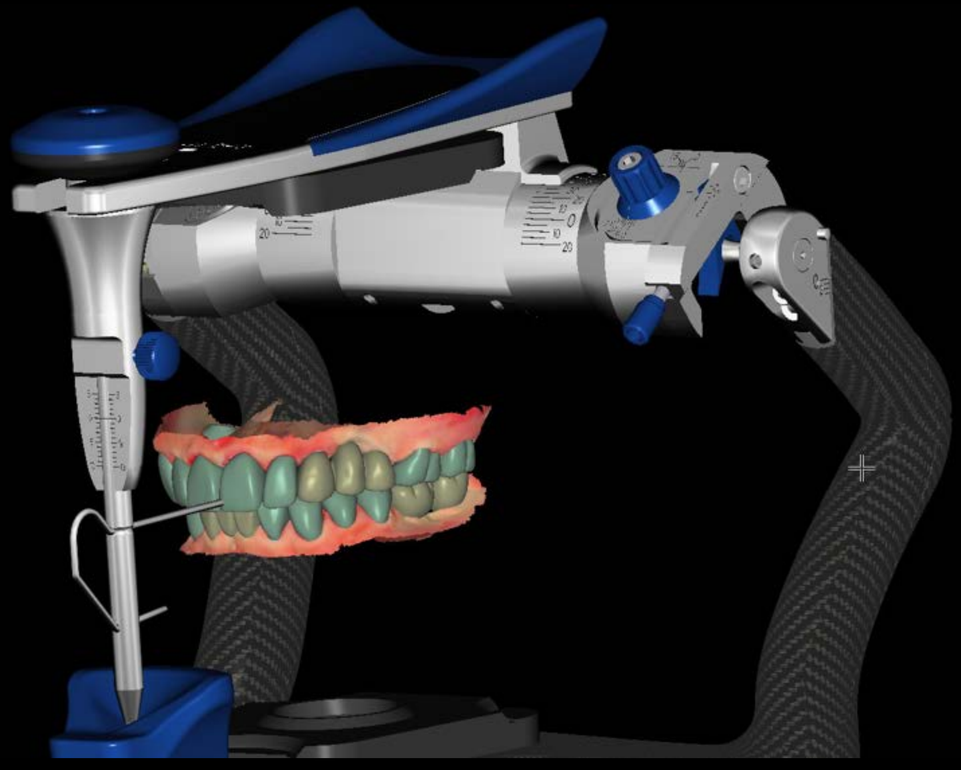


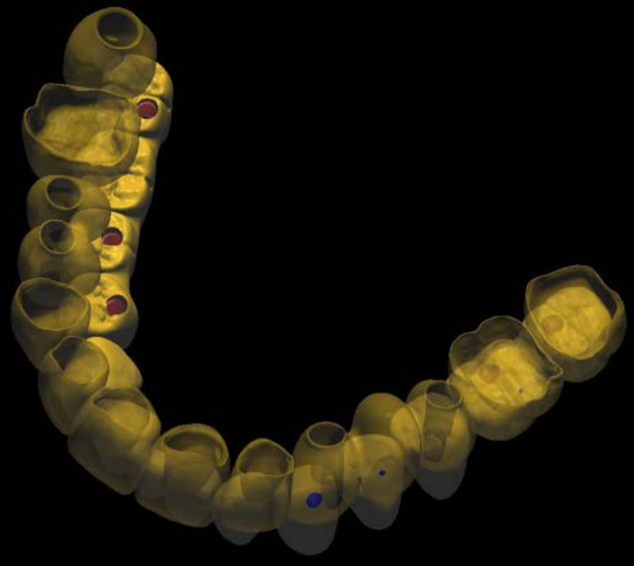
Cad Design



bright Ti-base Abutment & Custom Abutment

Virtual Articulator

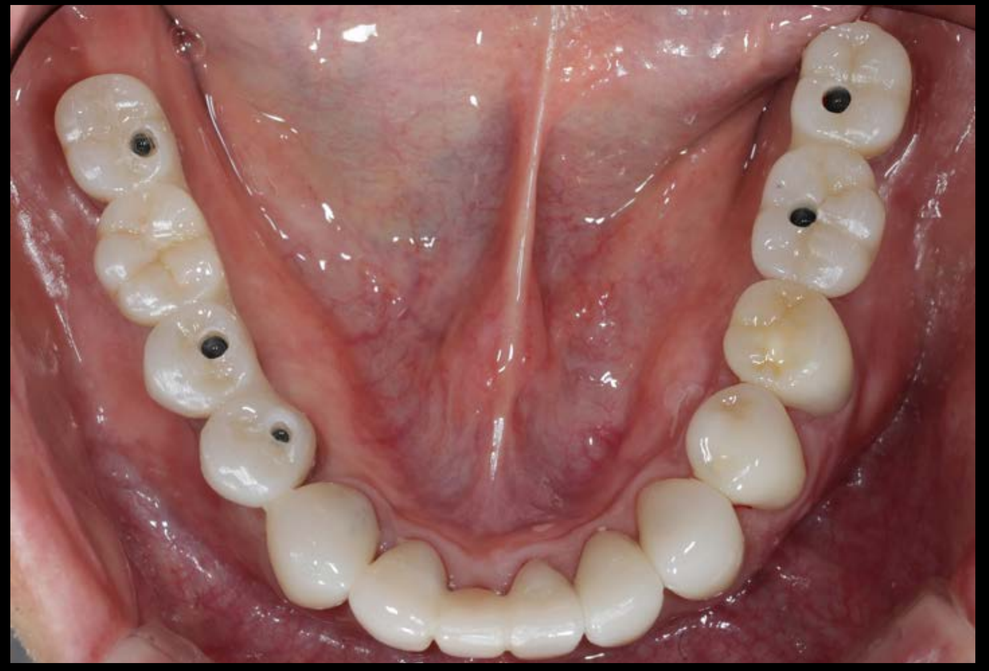




bright 3-Layer

bright 3-Layer

Final Prosthesis



bright 3 Layer Block (multi layer block)
bright TL Ti-base Abutment & Custom Abutment

Final Prosthesis

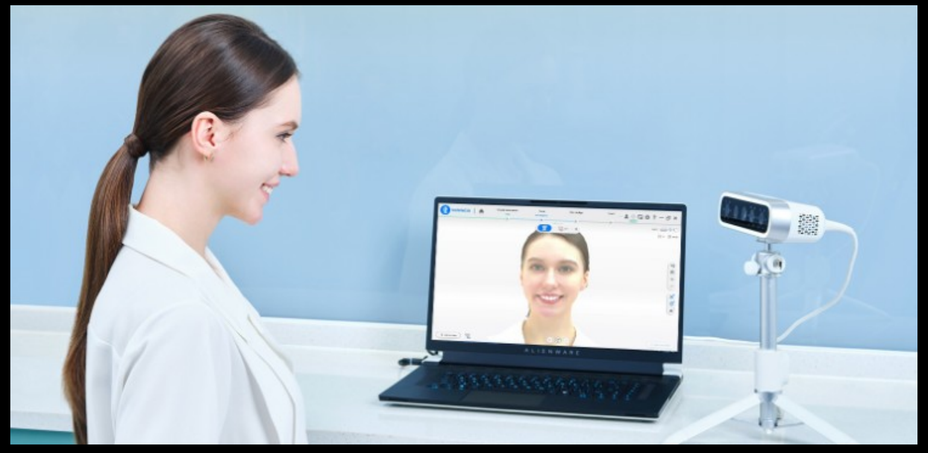
bright 3 Layer Block (multi layer block)
bright TL Ti-base Abutment & Custom Abutment

Final Prosthesis

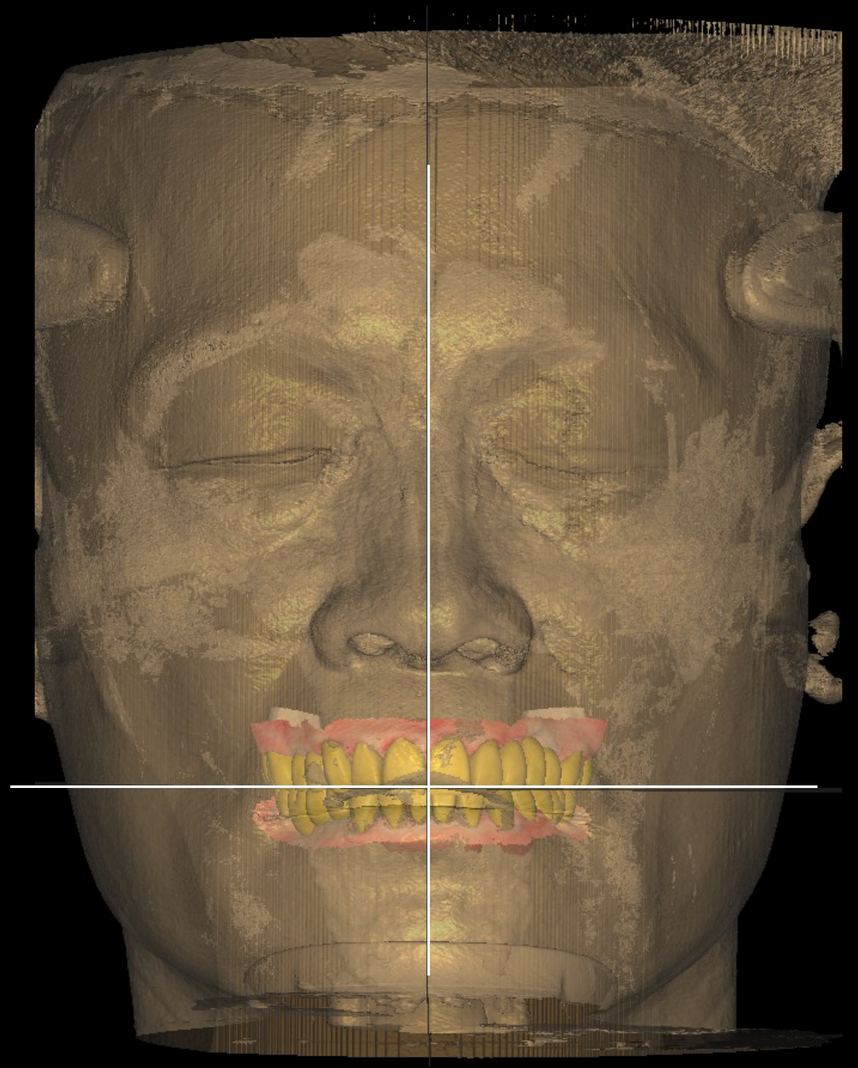
Full mouse Model-less Shining 3d AoralElite Wireless with Virtual Articulator & Transfer CT Check Bite

Final Prosthesis

Smile Creator



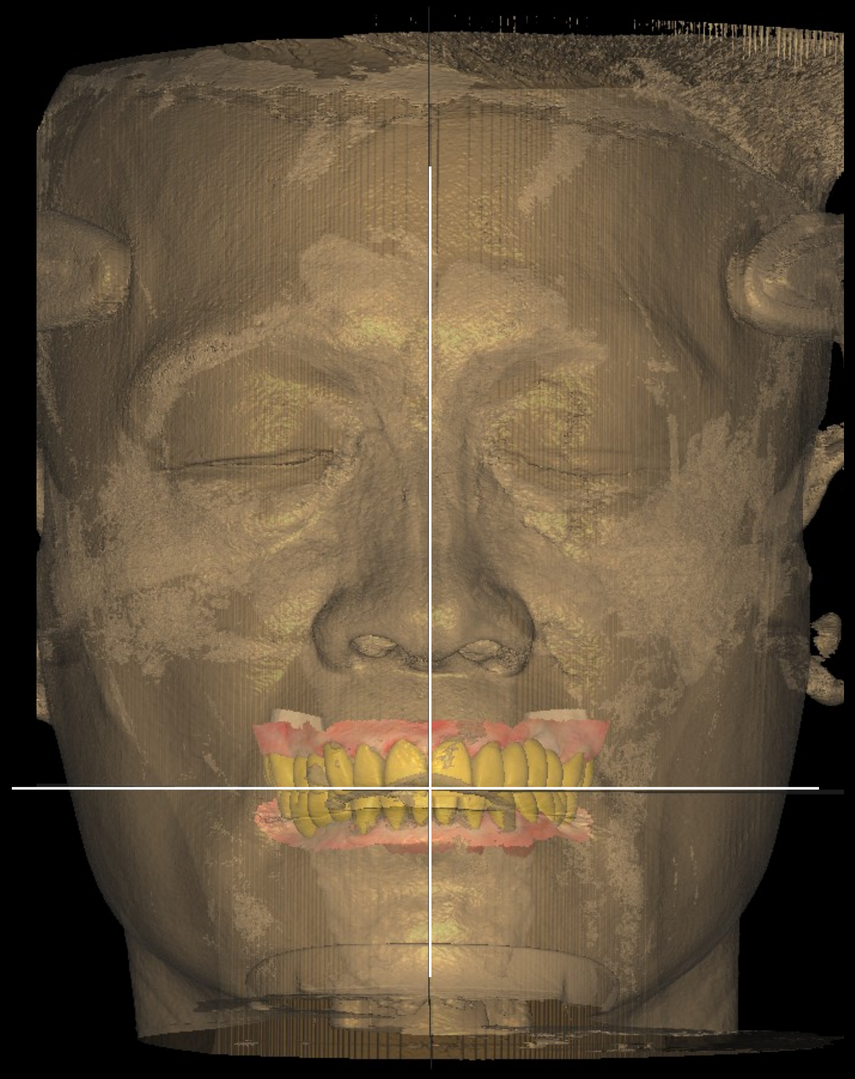
No use Smile Creator Design & Facial Data



Only CT Data (AI Occlusal Plane)& CT Check Bite

bright TL Ti-base Abutment & Custom Abutment Full mouse Model-less Shining 3d AoralElite Wireless

Final Prosthesis



bright TL Ti-base Abutment & Custom Abutment Full mouse Model-less Shining 3d AoralElite Wireless

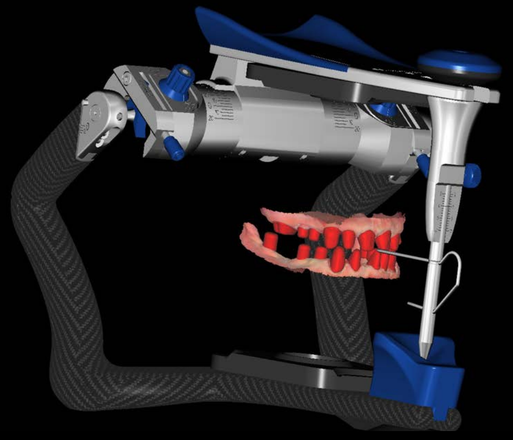
Vertical Dimensiom Follow up

Pre Op

VD up 4mm
provisional Restoration

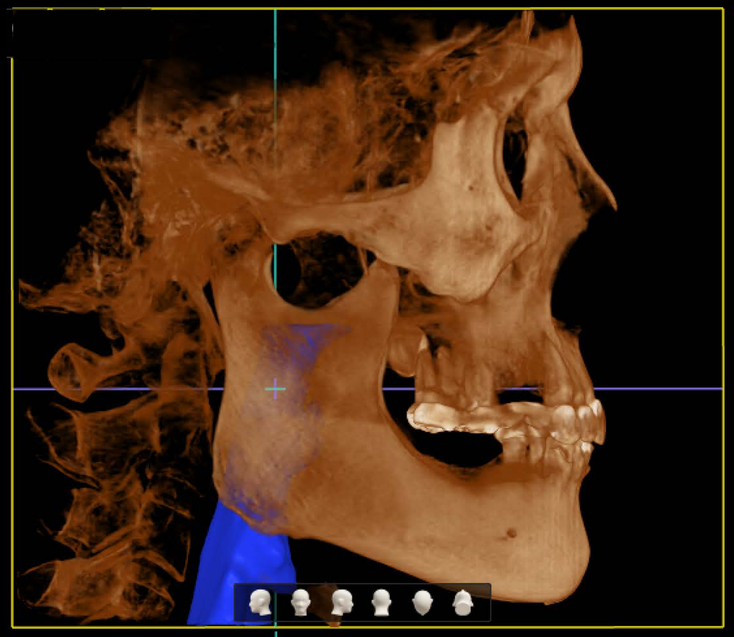
Additional VD up 2mm
Final prosthesis

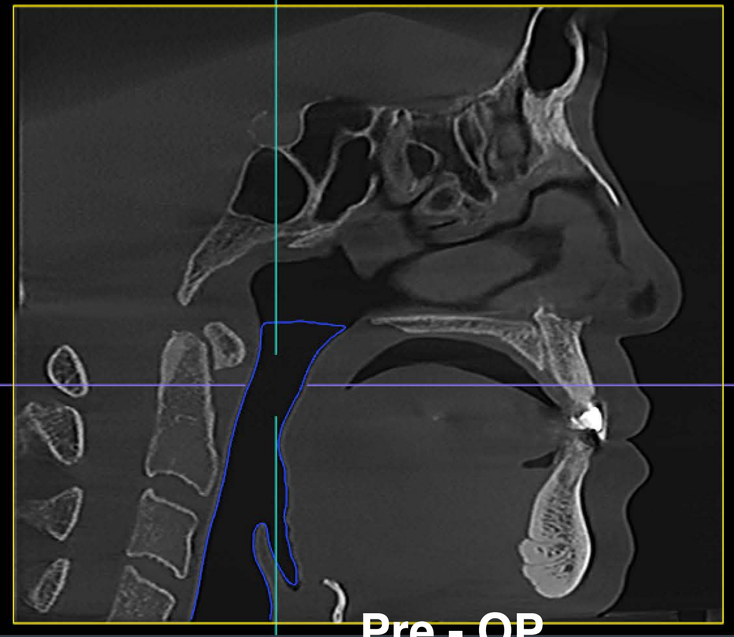
Total VD 6mm up



Permanent Crown (2025-12-10)

Air-way

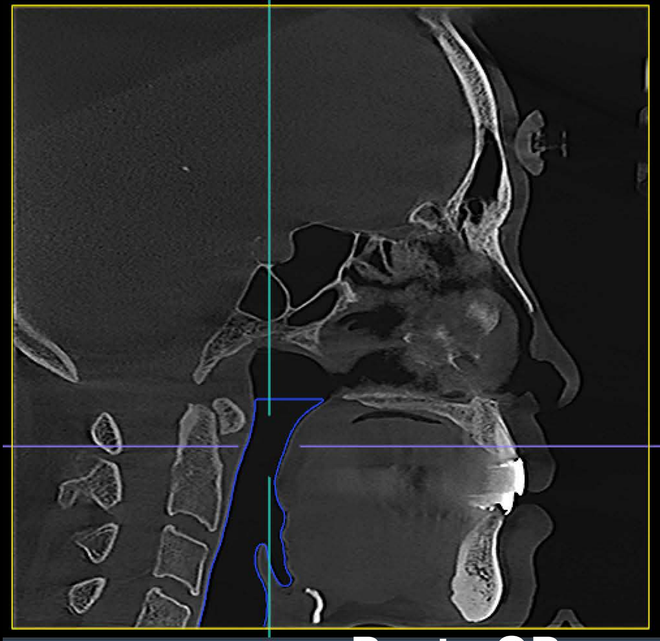




Total Vol.: 37.32 cc
Min Area: 362.10mm²
Area: 385.13 mm²
AP: 14.80 mm
LR: 35.60 mm

100 300

Pre - OP



Total Vol.: 44.54 cc
Min Area: 364.46mm²
Area: 364.46 mm²
AP: 15.00 mm
LR: 36.20 mm

100 300

Post - OP

Thank you

Xie xie

자료에 도움을 준

덴티움 치과 위생사 기공사

임상자문단 개발 마케팅팀에 감사합니다