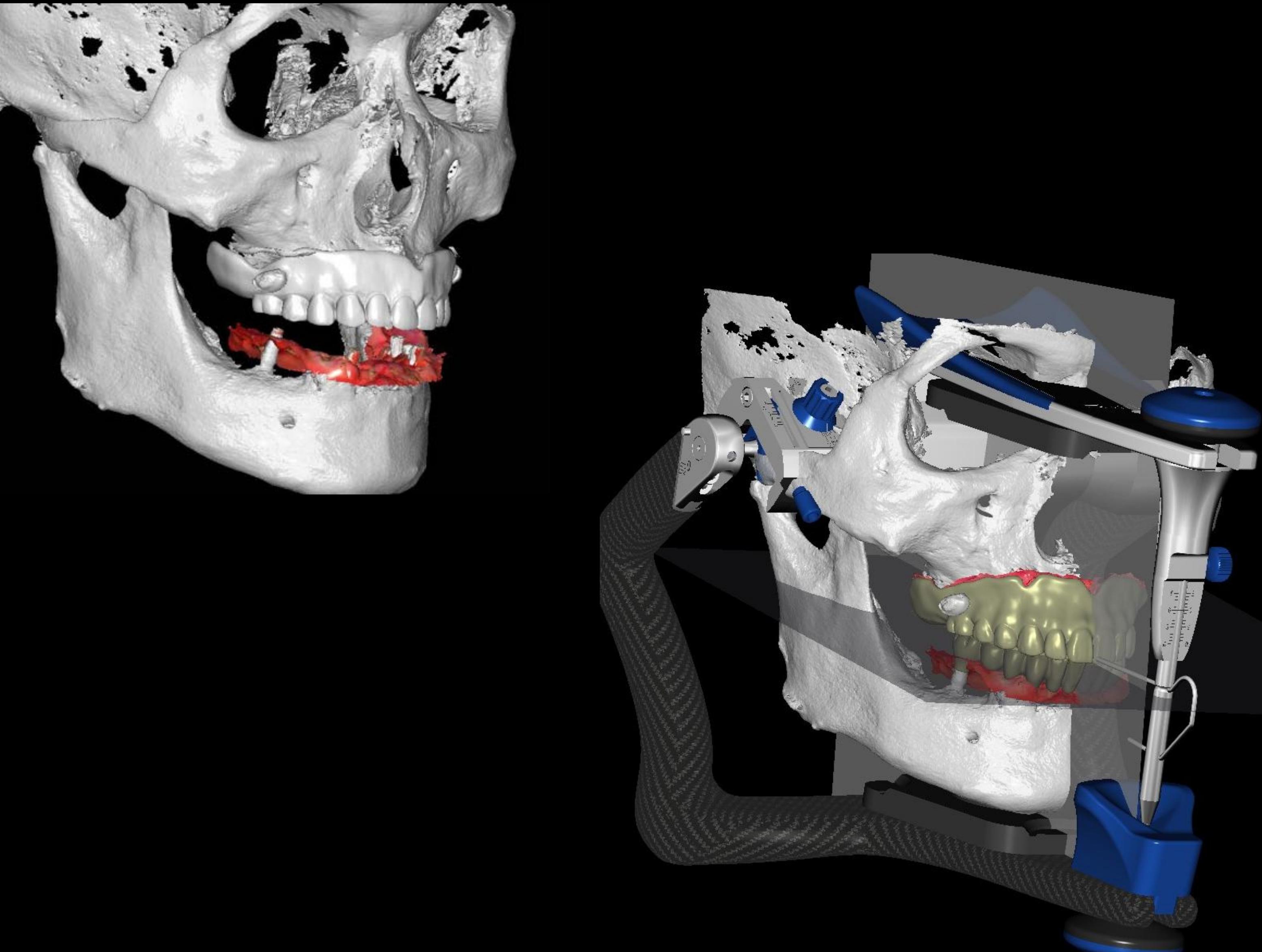


# Digital transformation through minimalism



## Implant trends -minimalism

Short and narrow for less invasive

Digital for accuracy and efficiency

# Contents

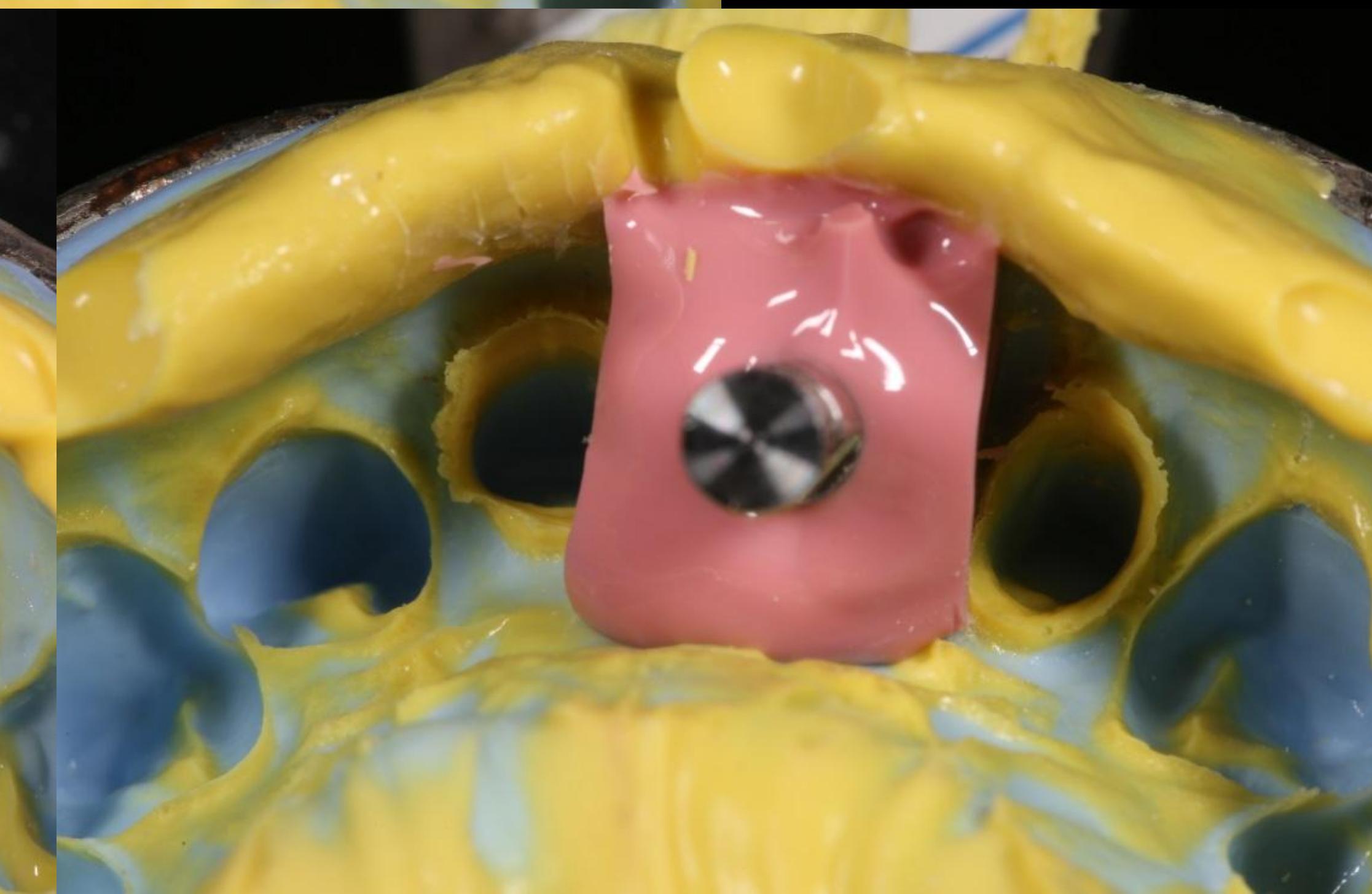
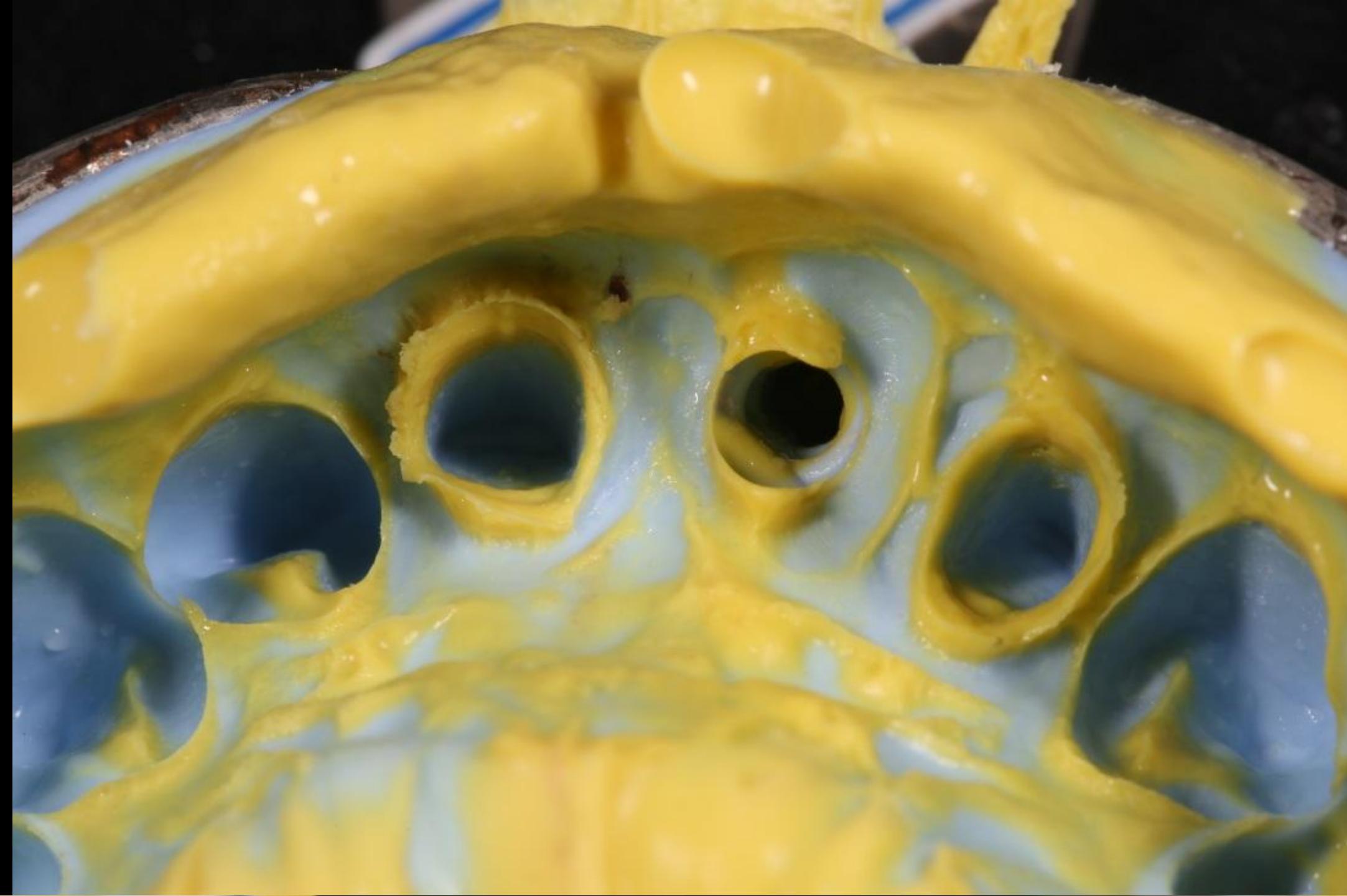
Introduction

Tooth oriented

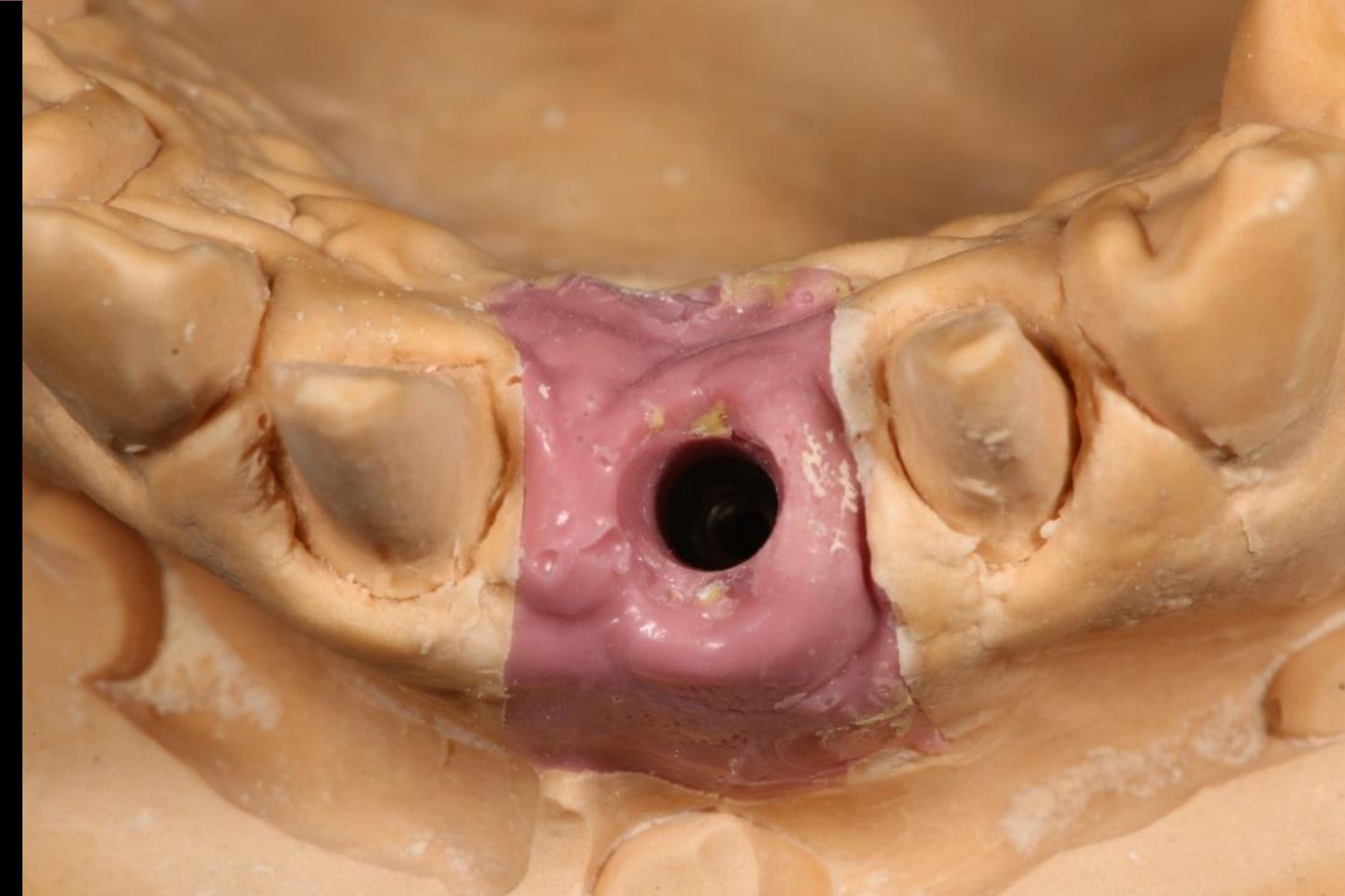
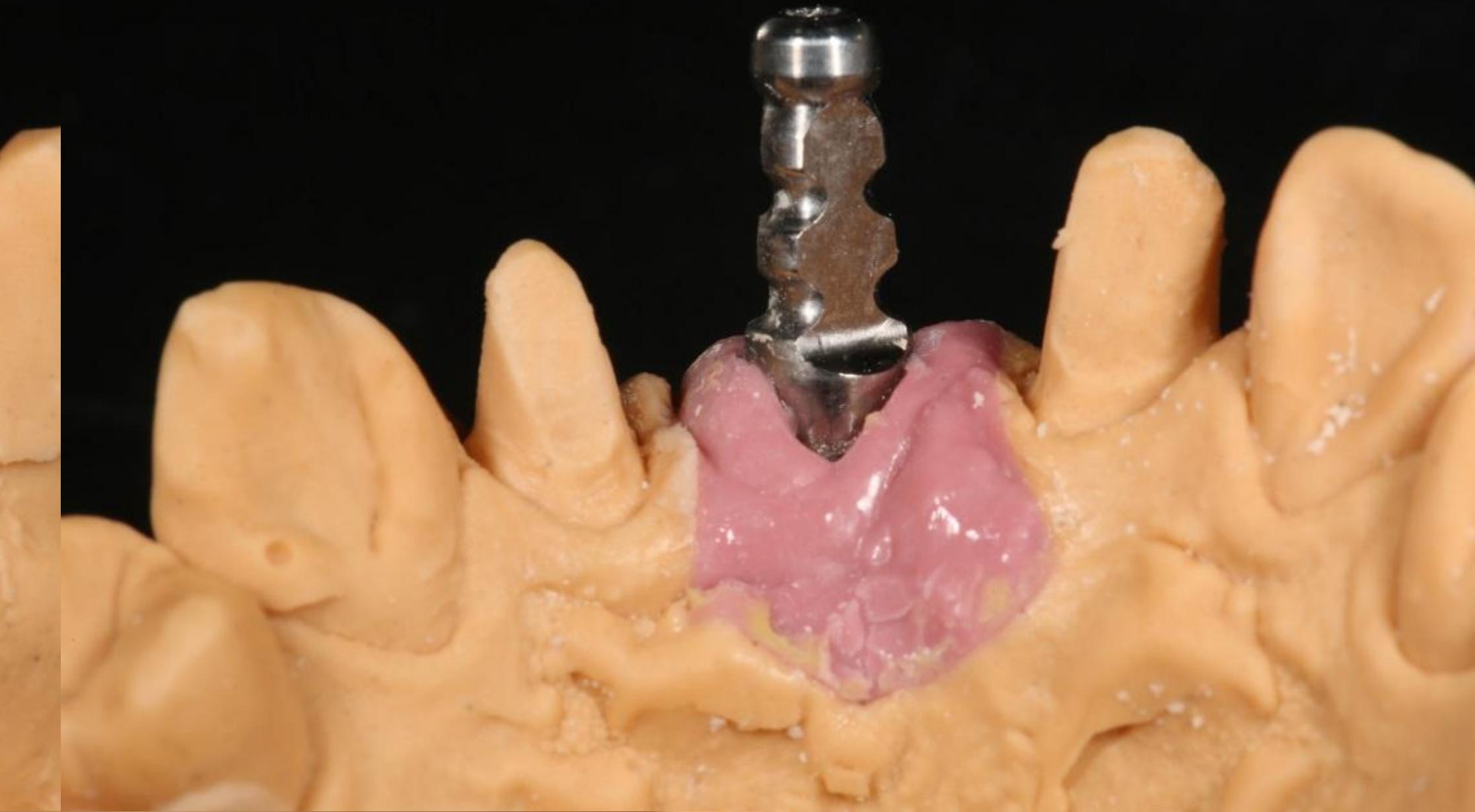
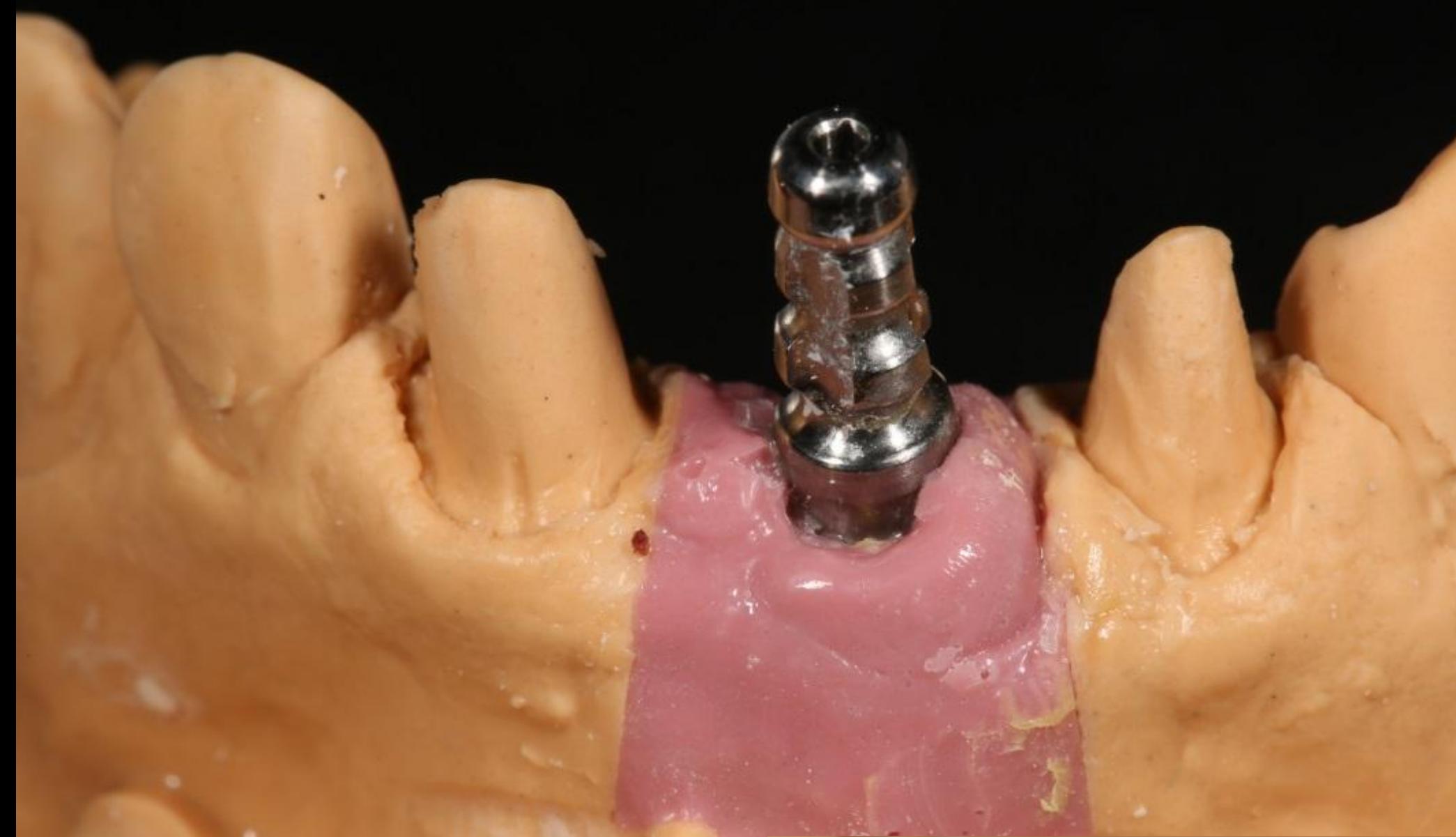
Facial driven

CT centered

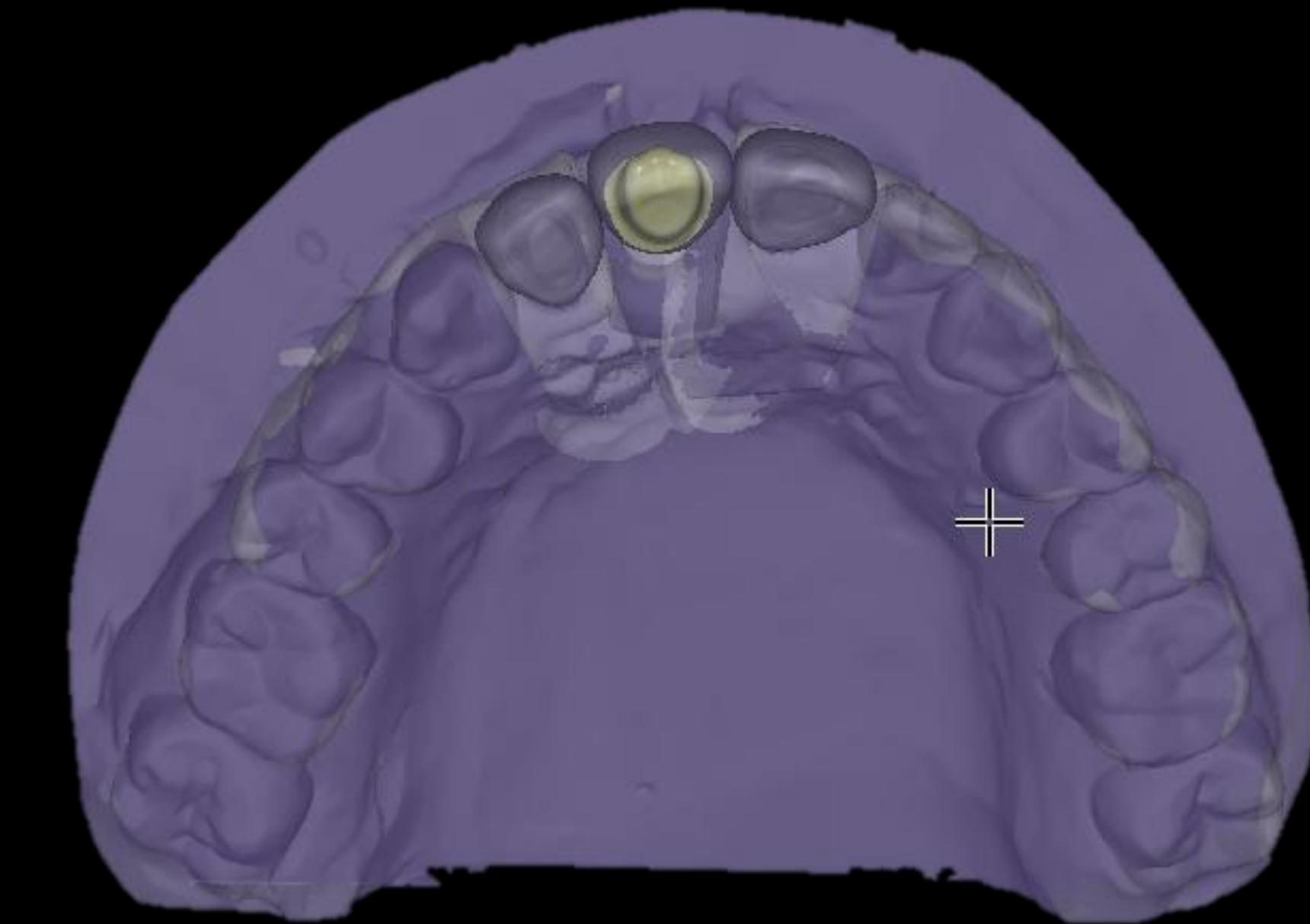
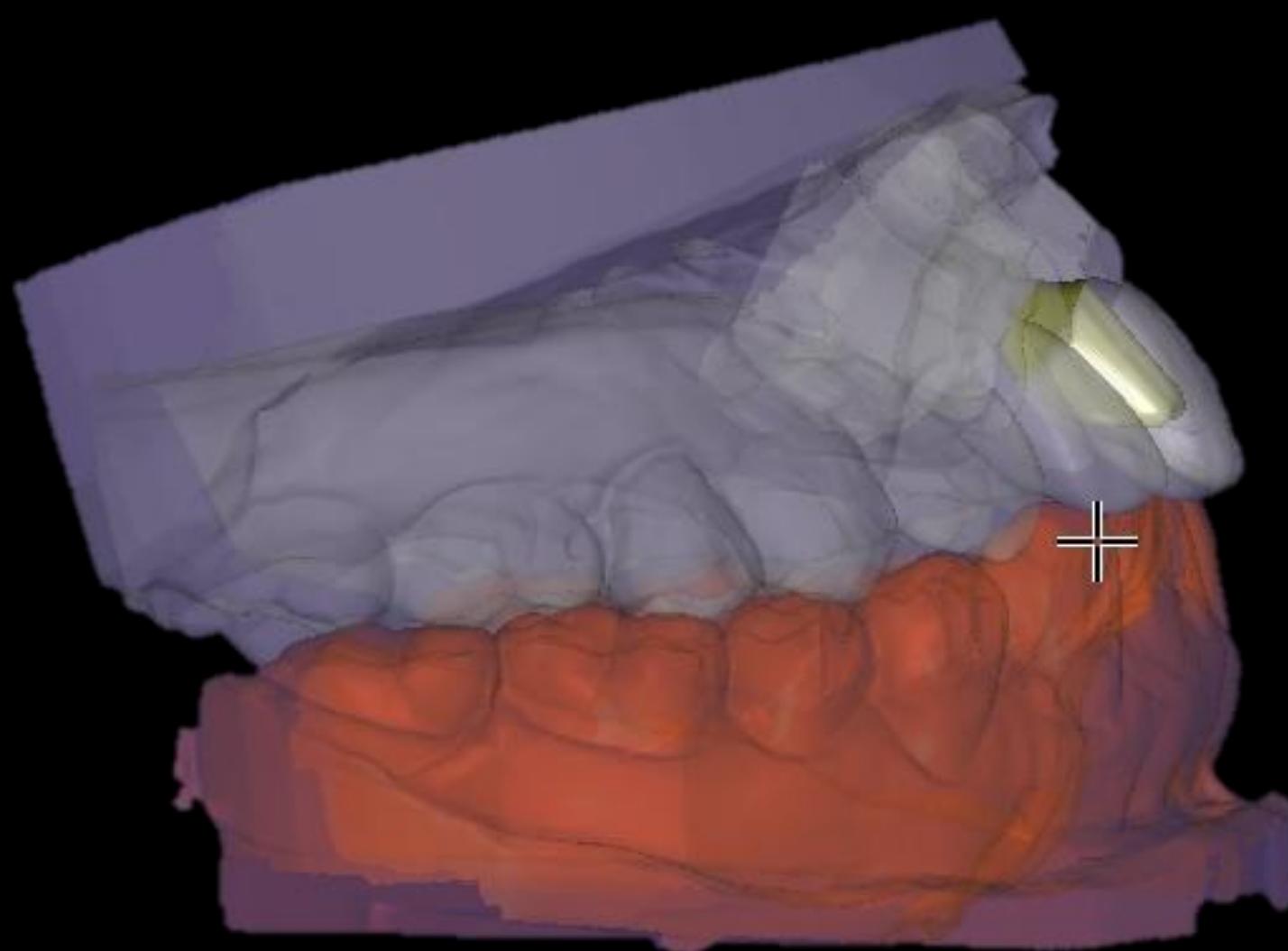
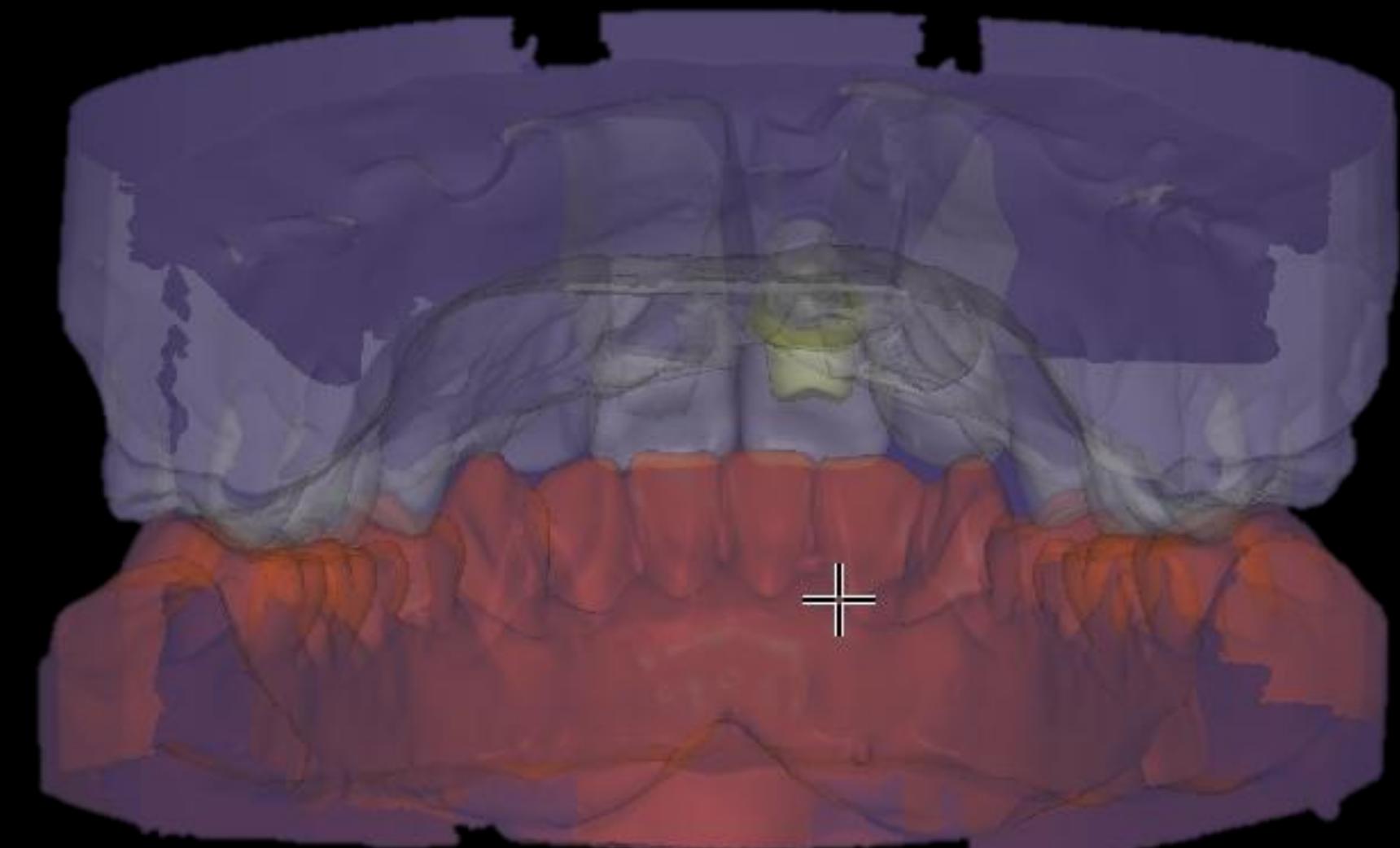
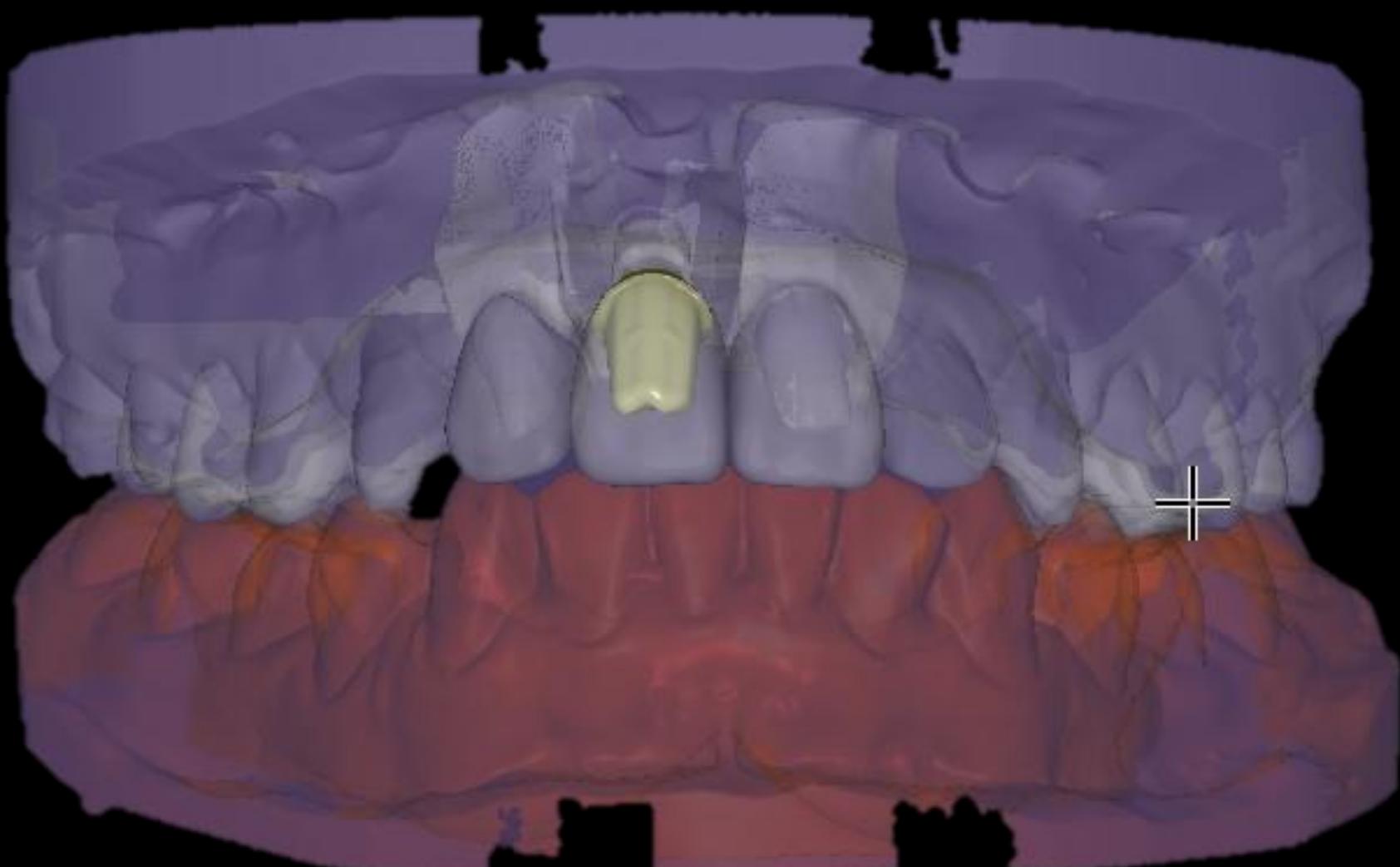
Impression Model



Model



CAD (Customized abutment)



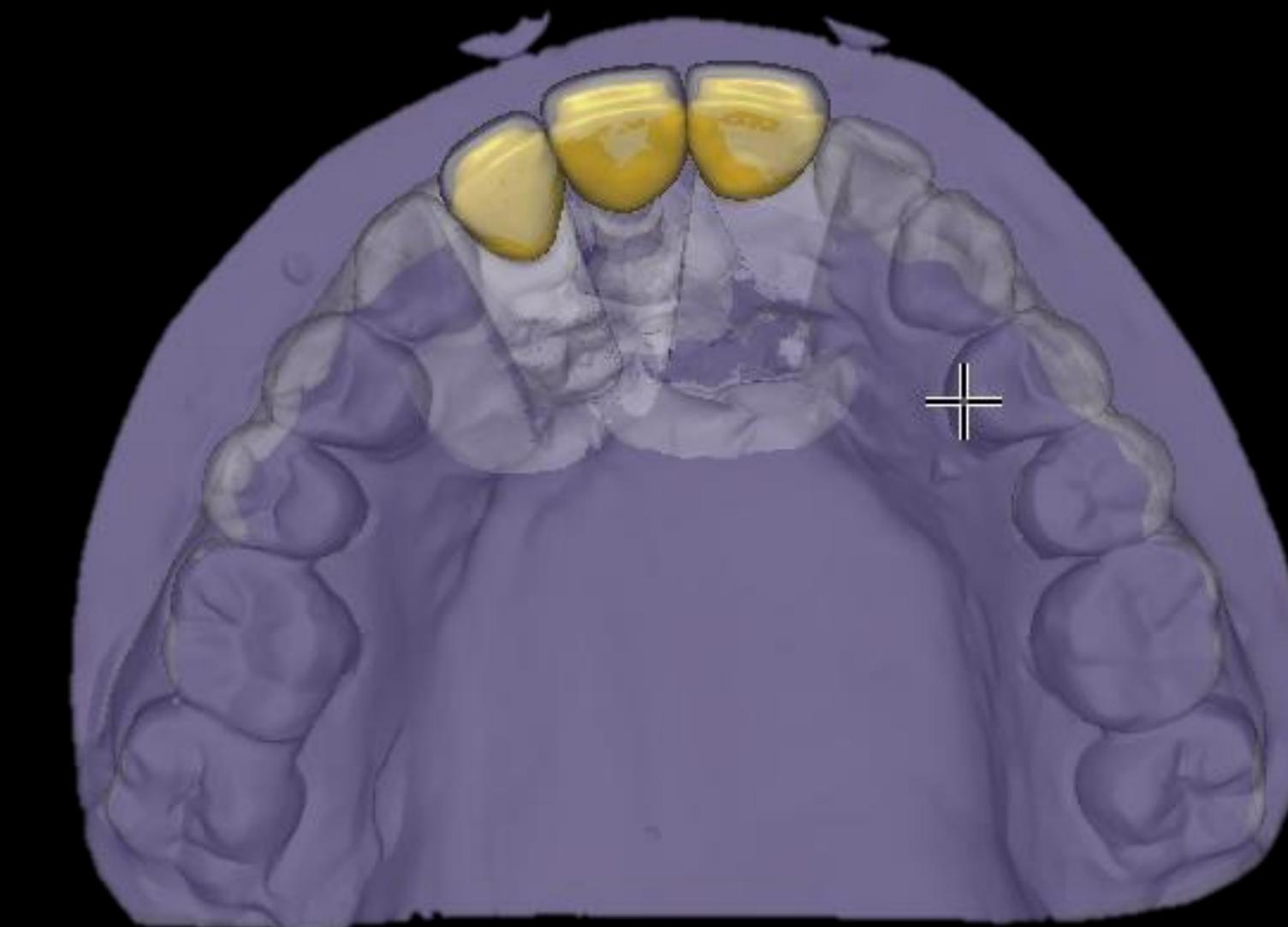
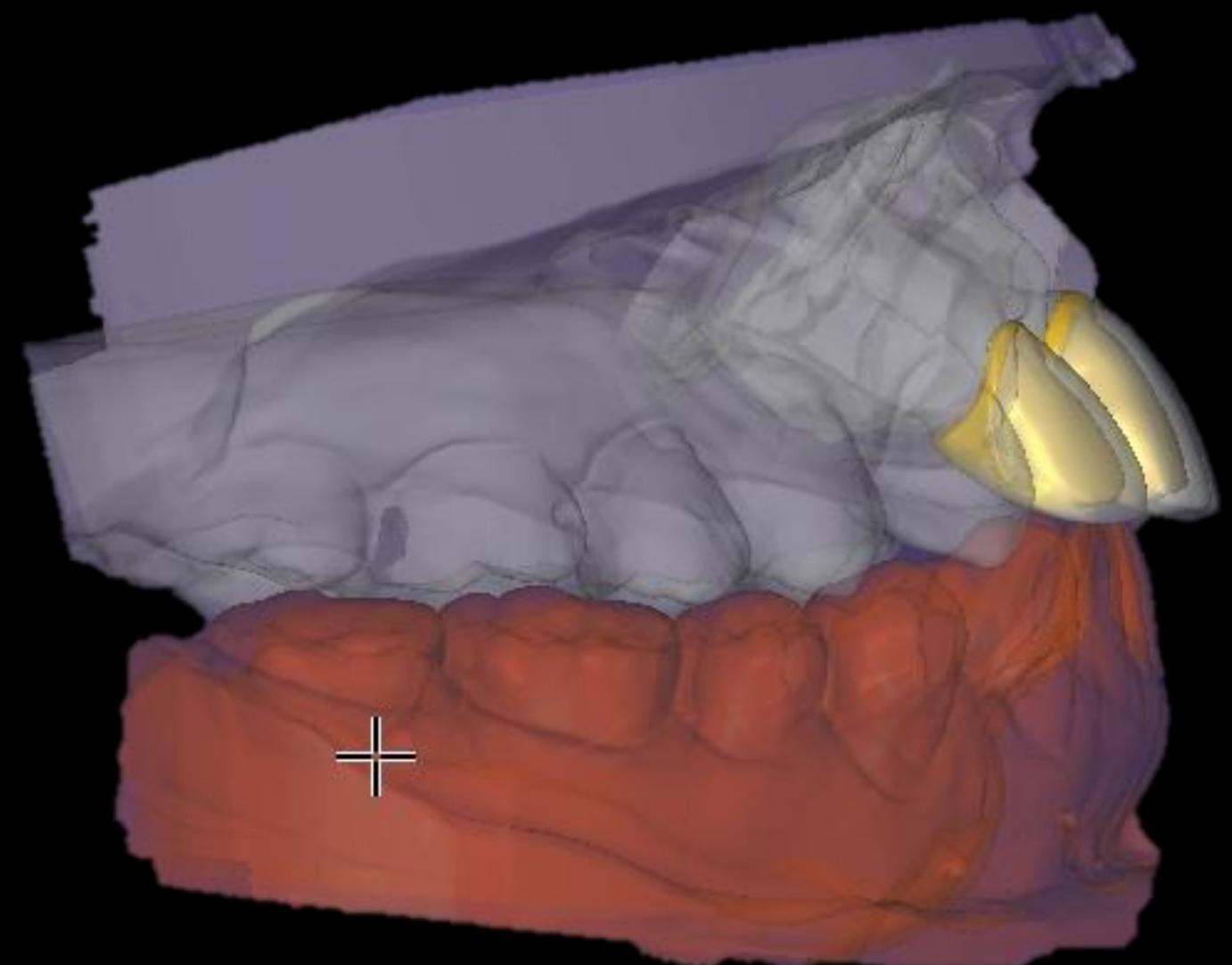
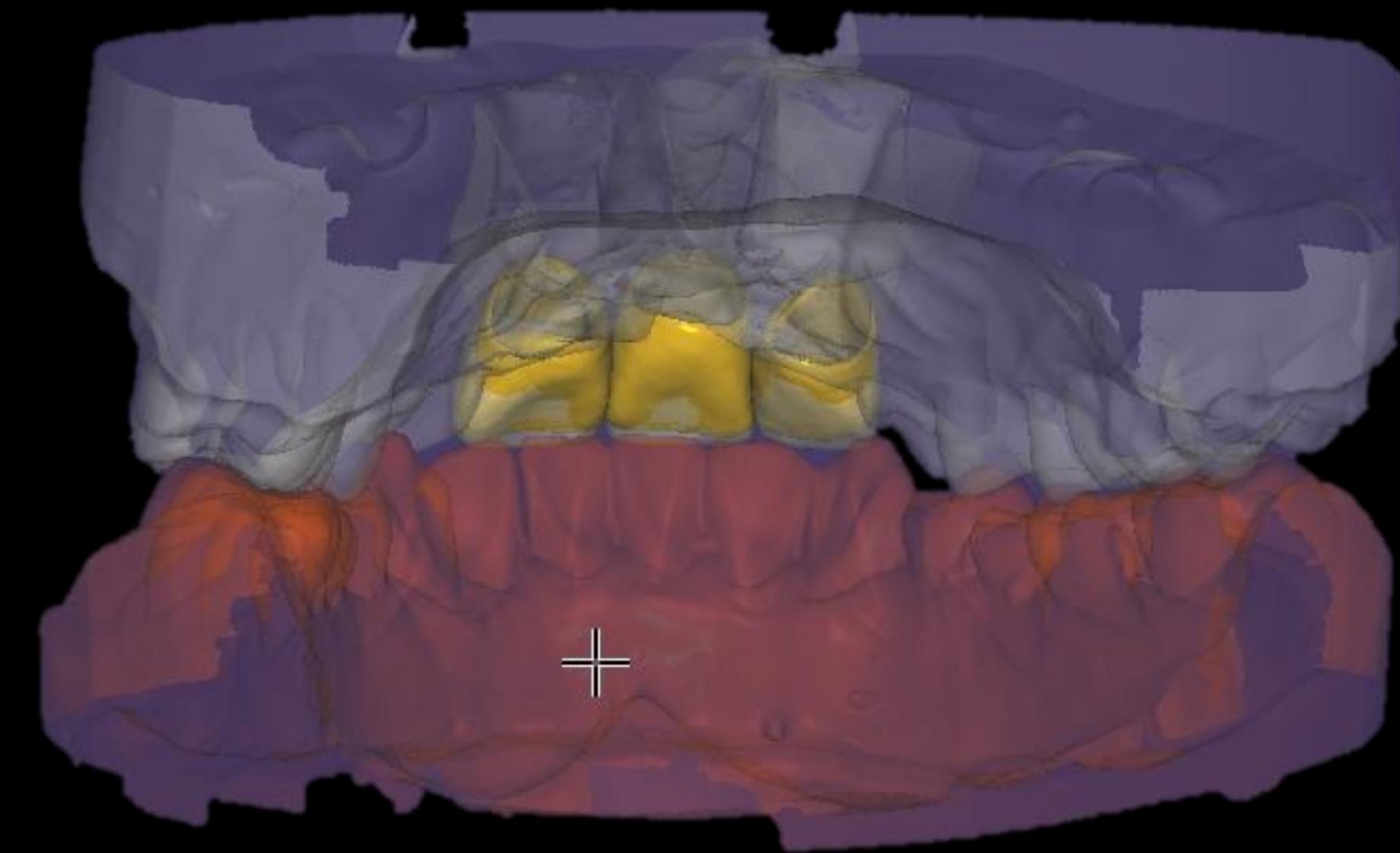
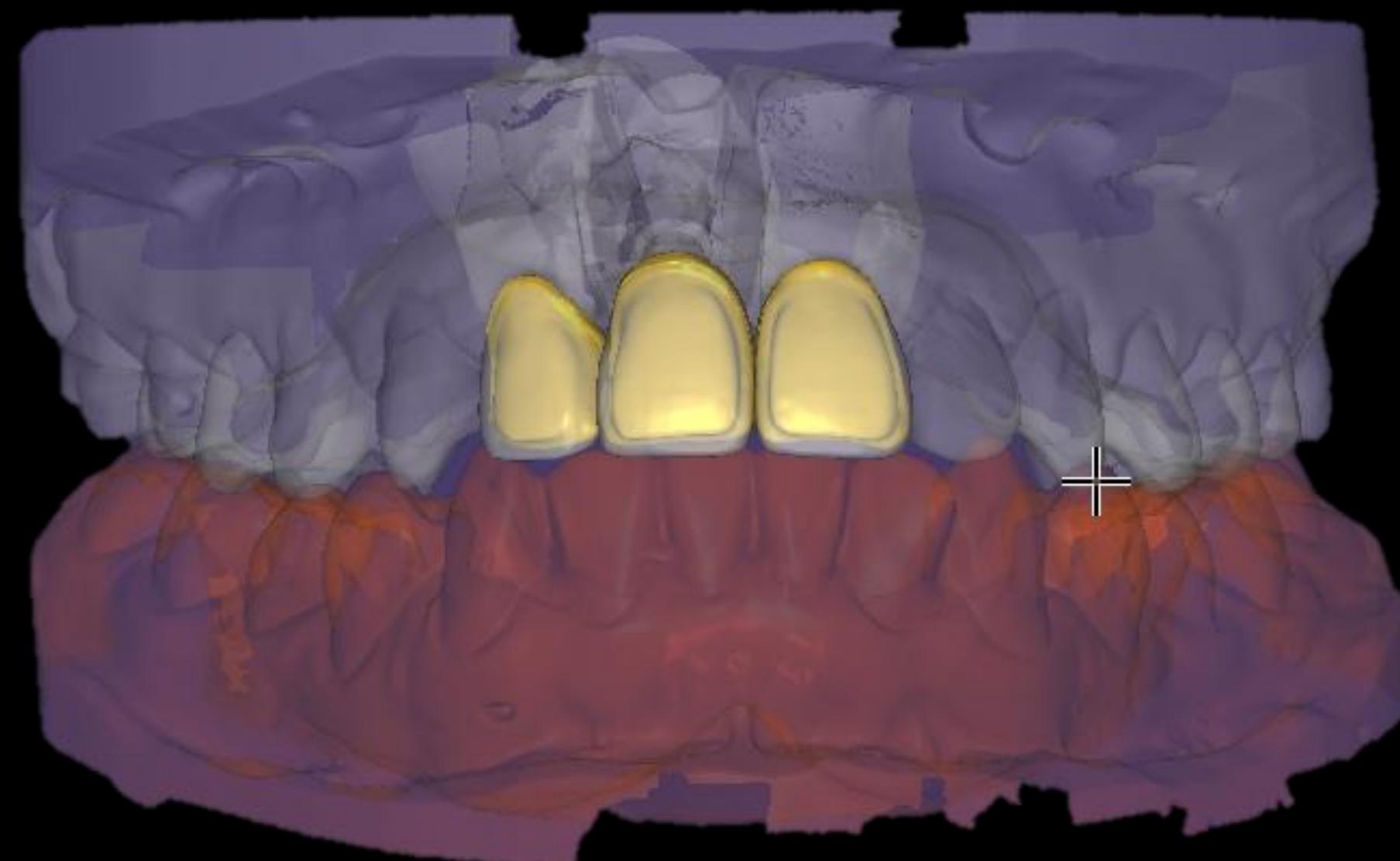
Customized abutment adaptation



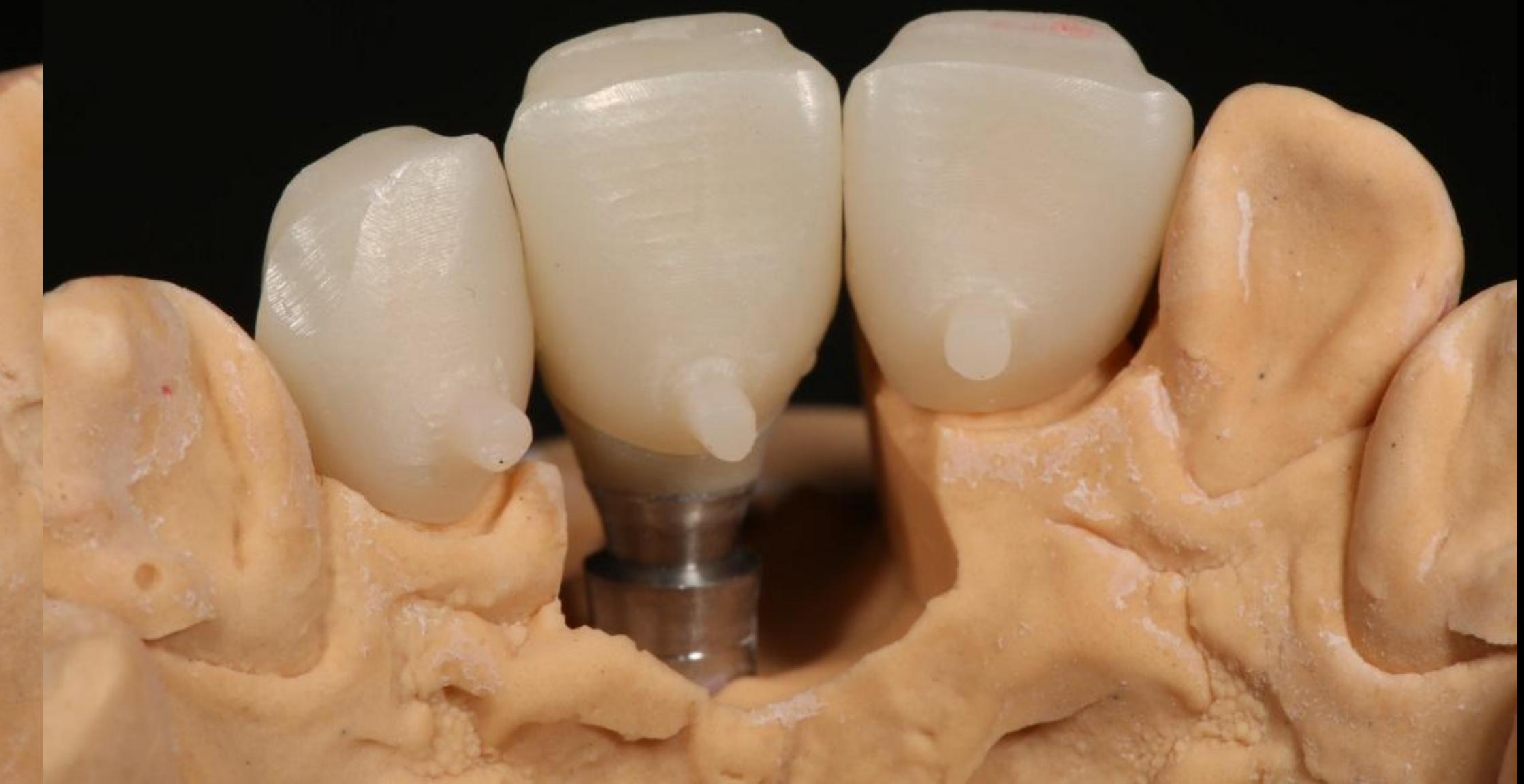
Wax-up (2017-03-17)



CAD (Final prosthesis)



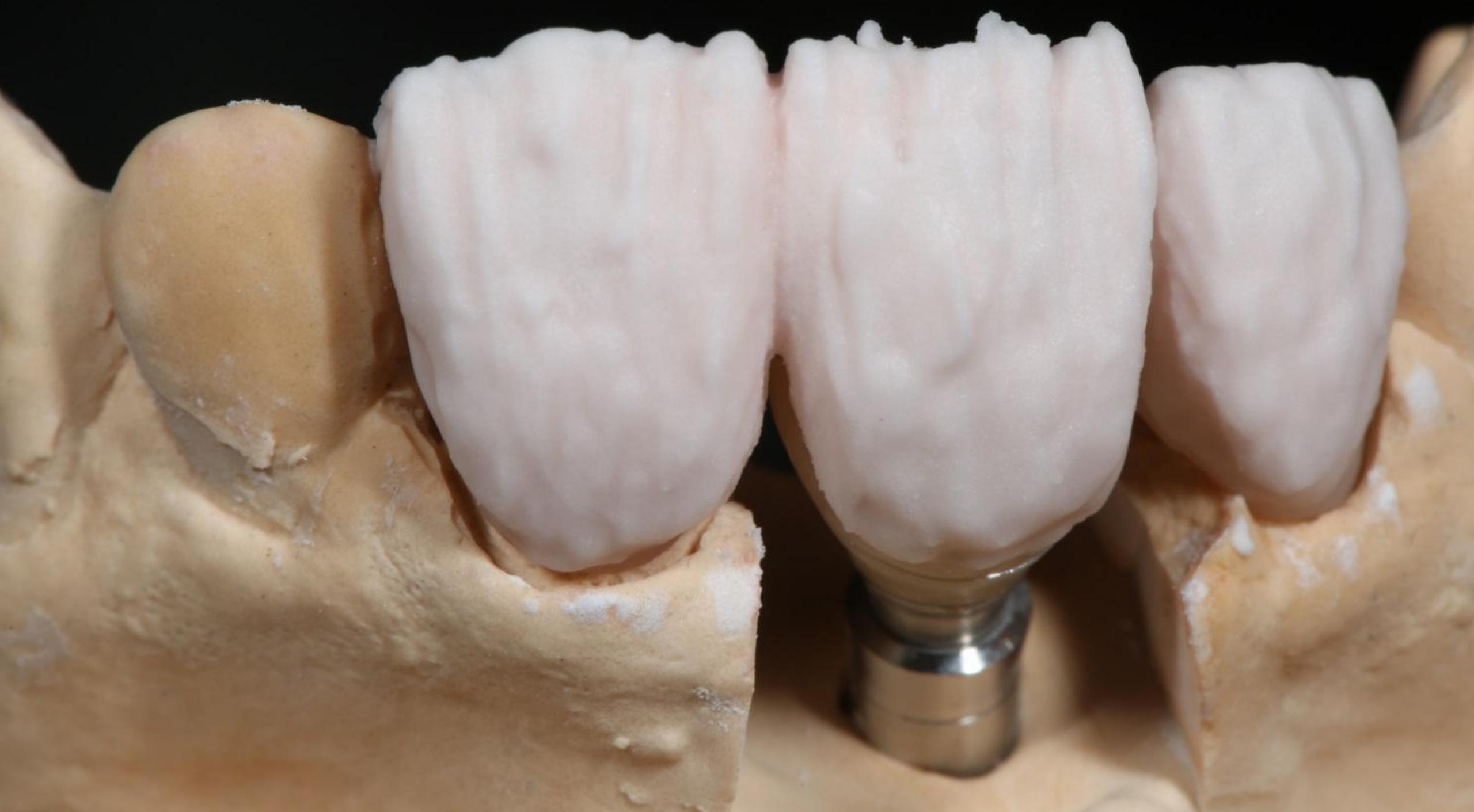
## Milling / Sintering



Porcelain build up



# Glazing

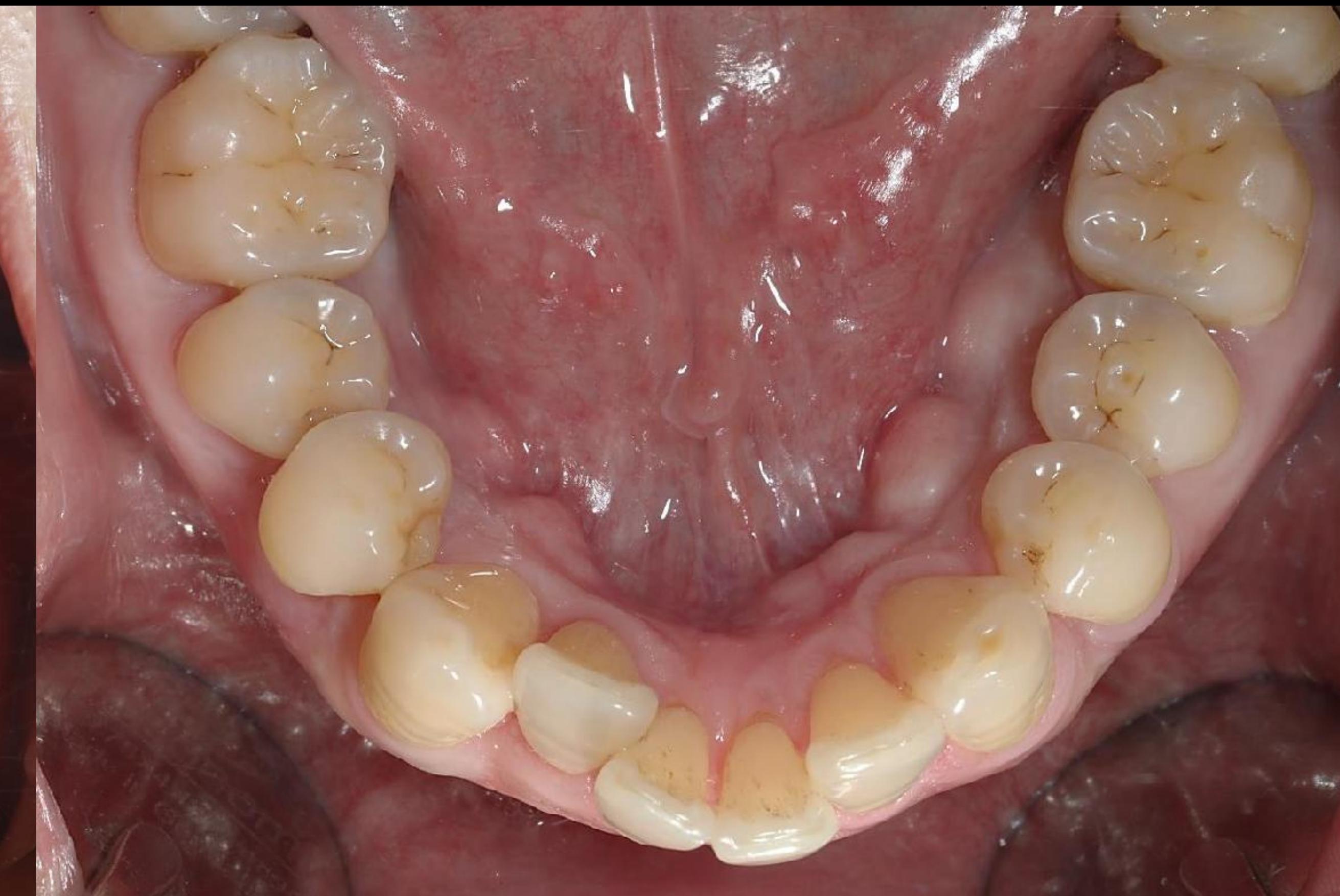




## Oral exam



## Oral exam



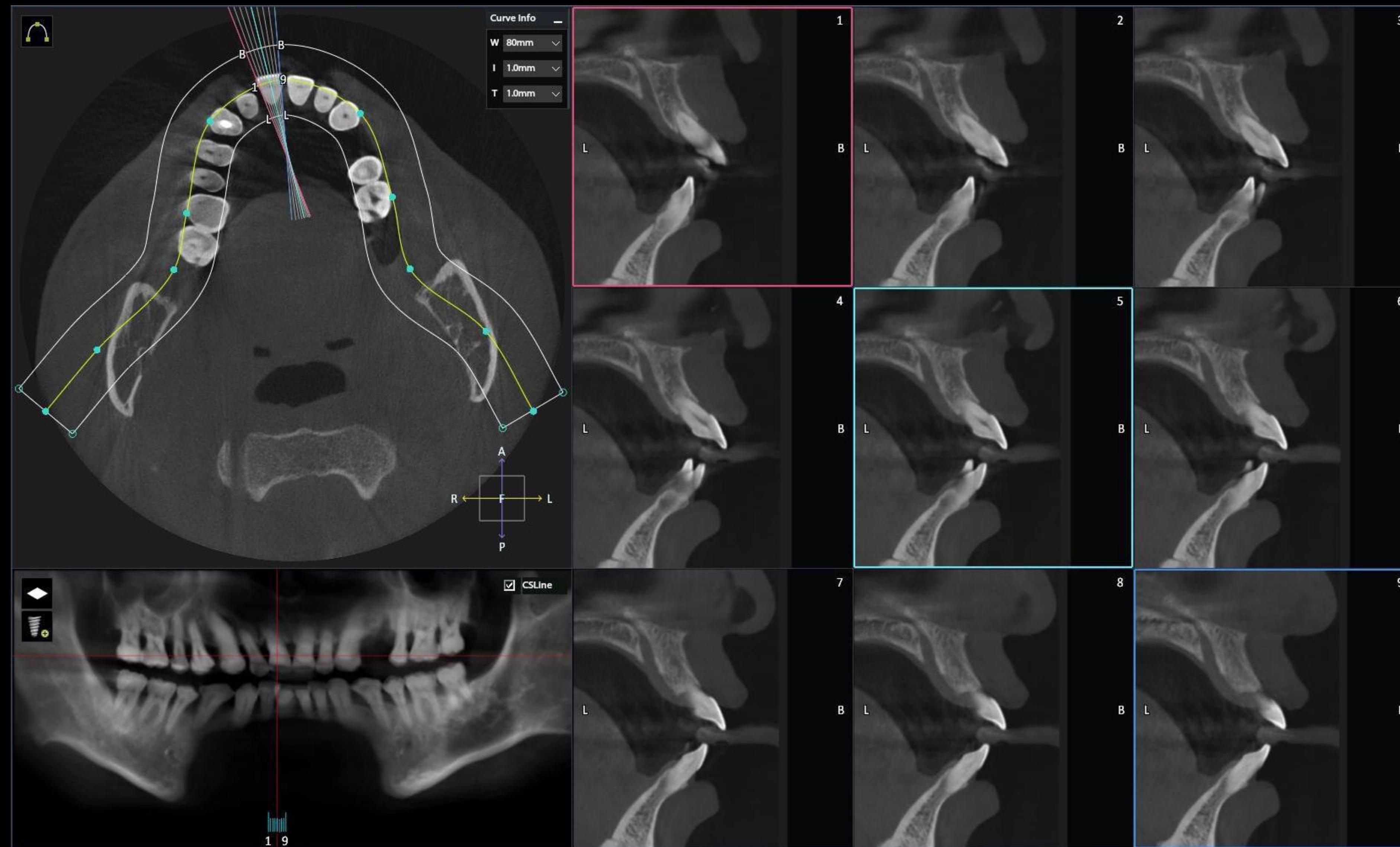
## Oral exam



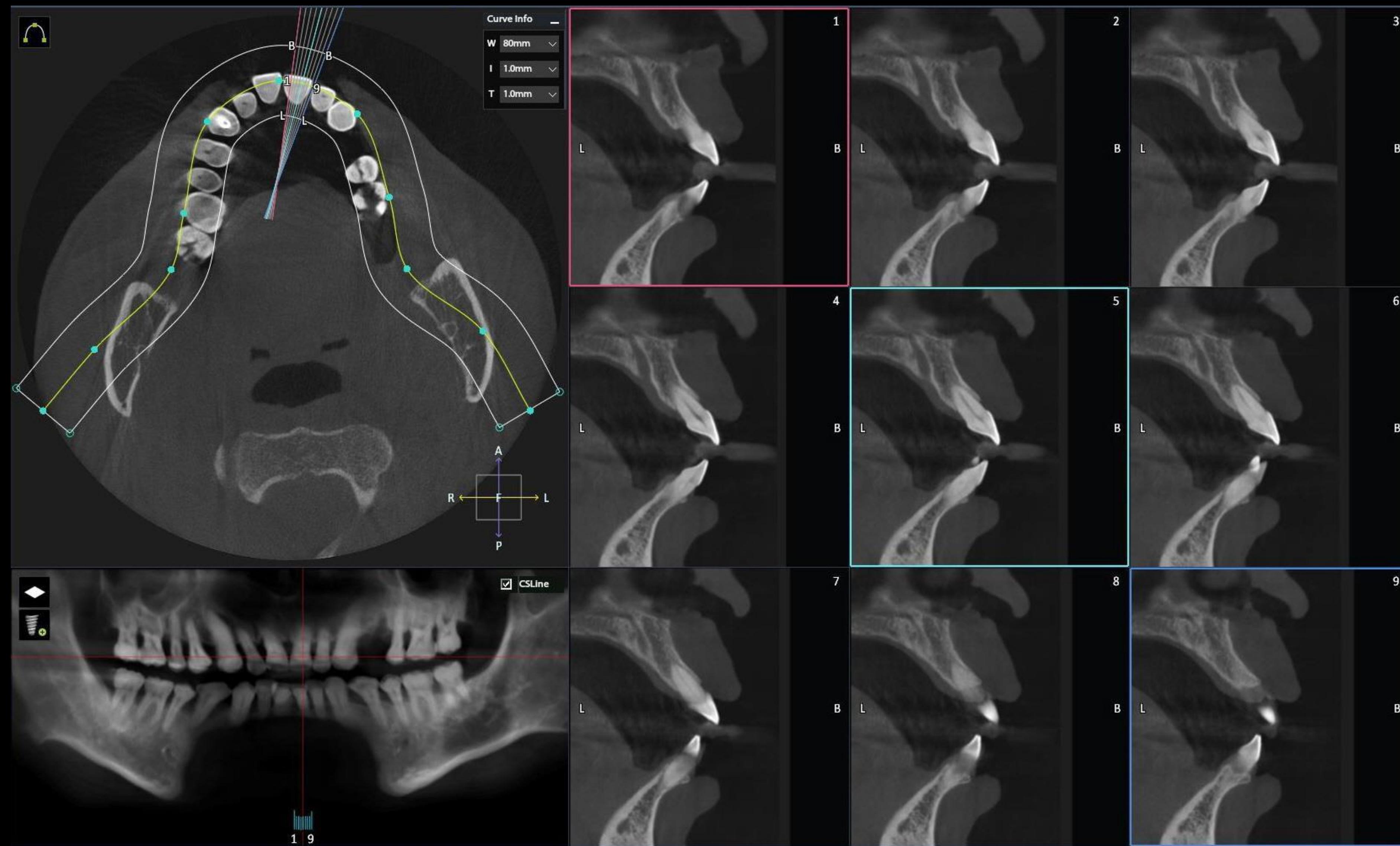
Pre-op



# #11 Pre-op



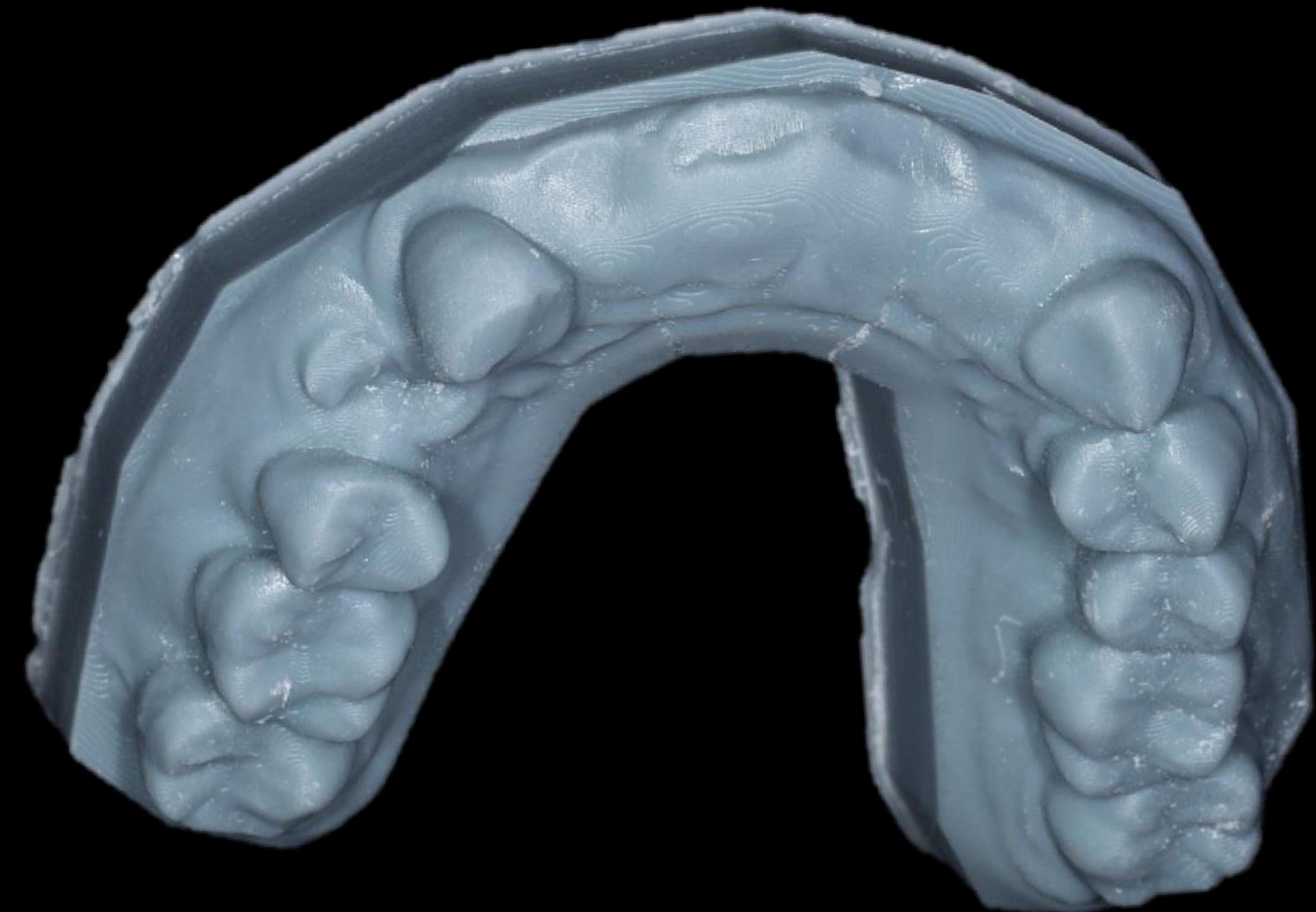
## #21 Pre-op



# Intra Oral Scanning



## 3D Printing Model / Milling Stent



## Maryland Bridge



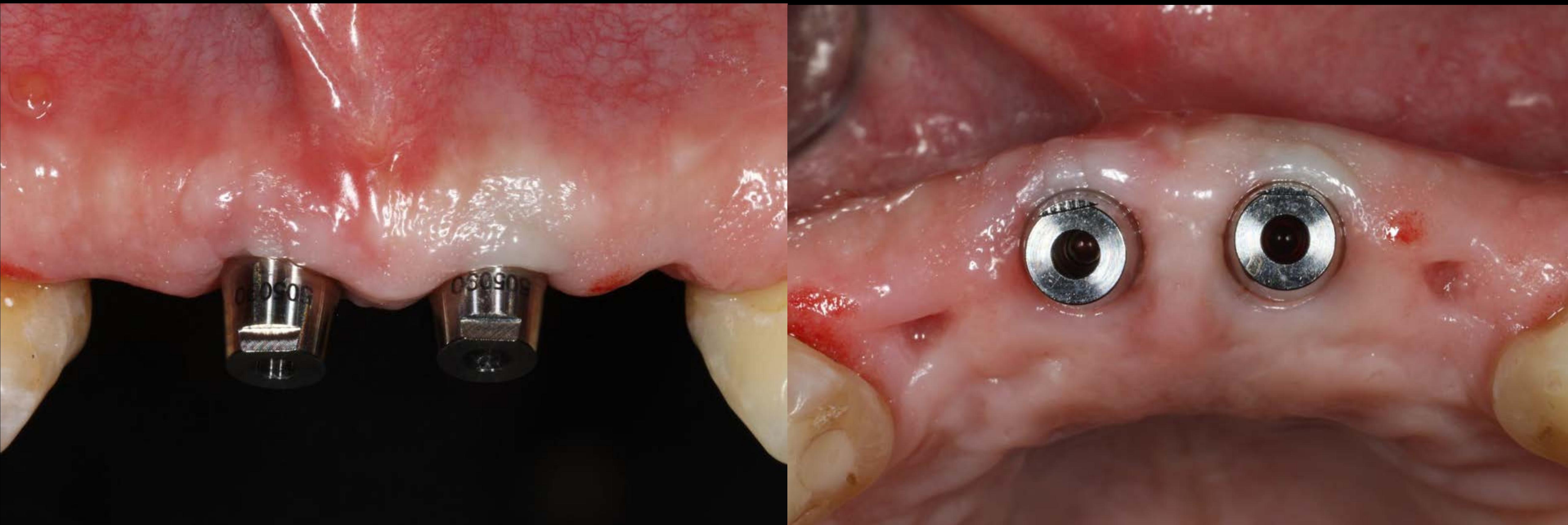
Post-op

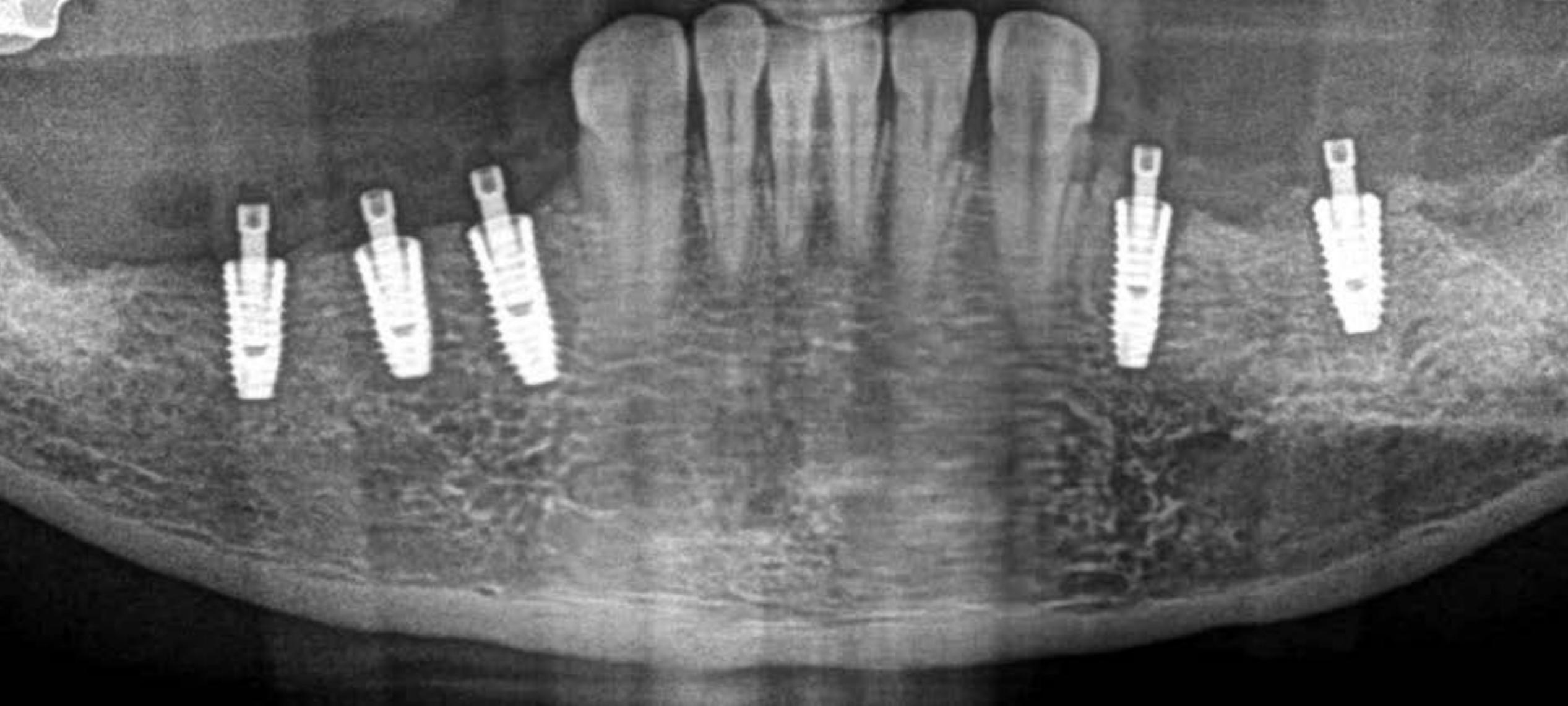
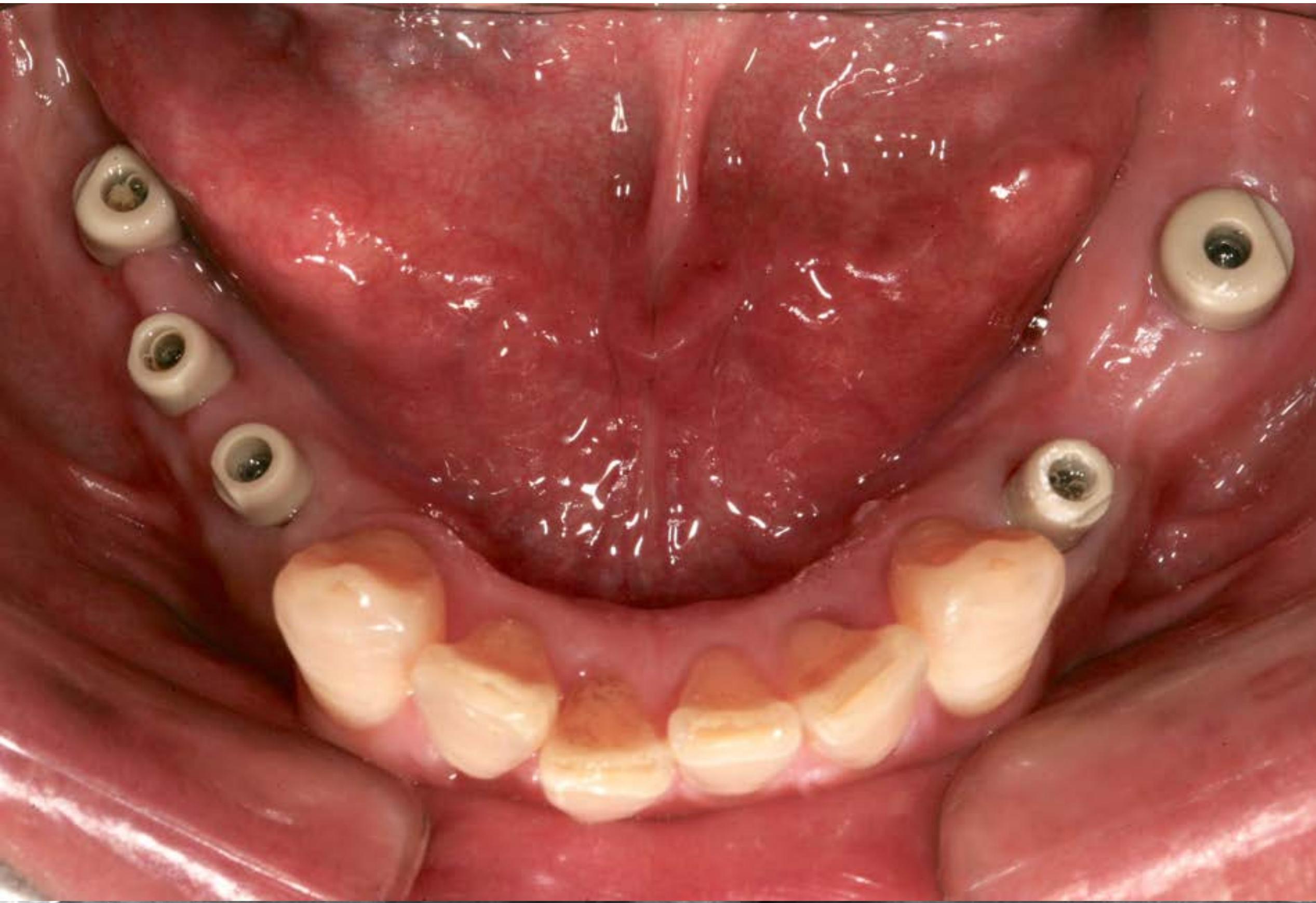


Healing : 1 week

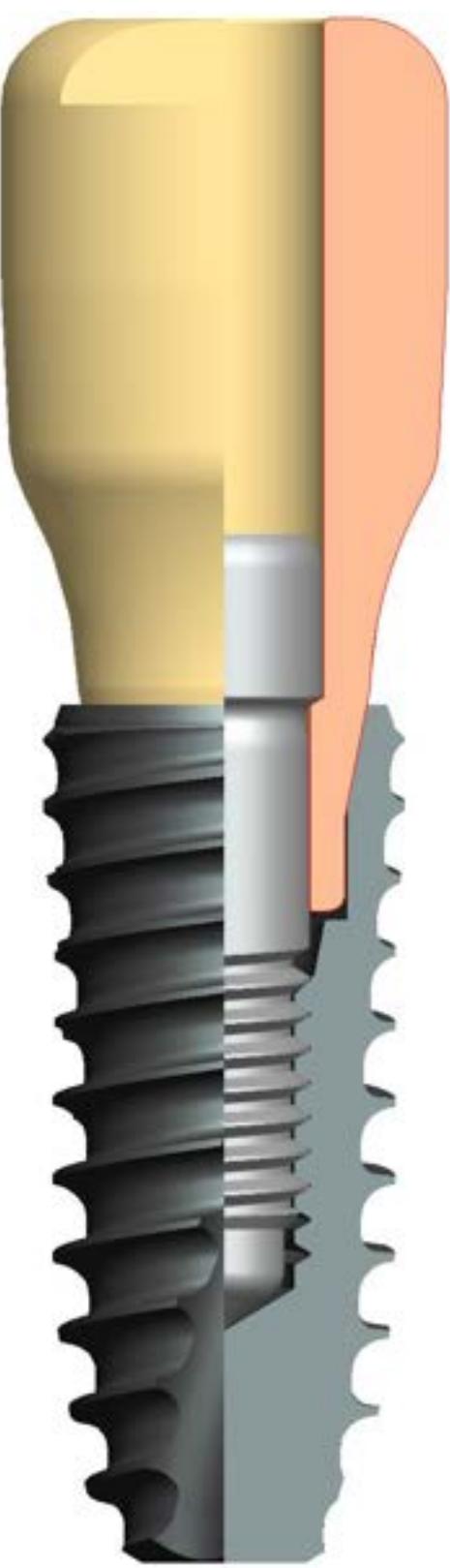


Healing : 5 weeks





## Scan Abutment

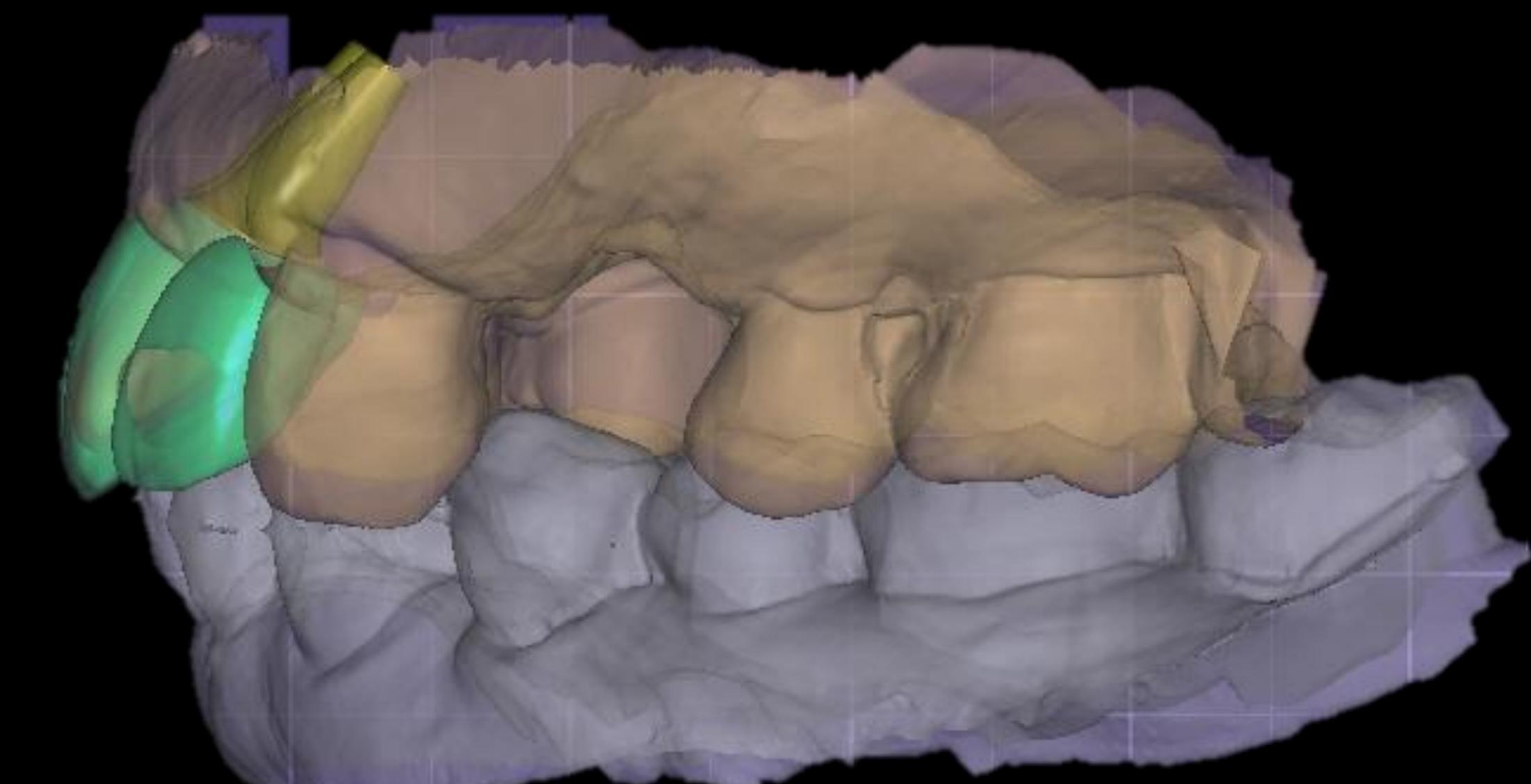
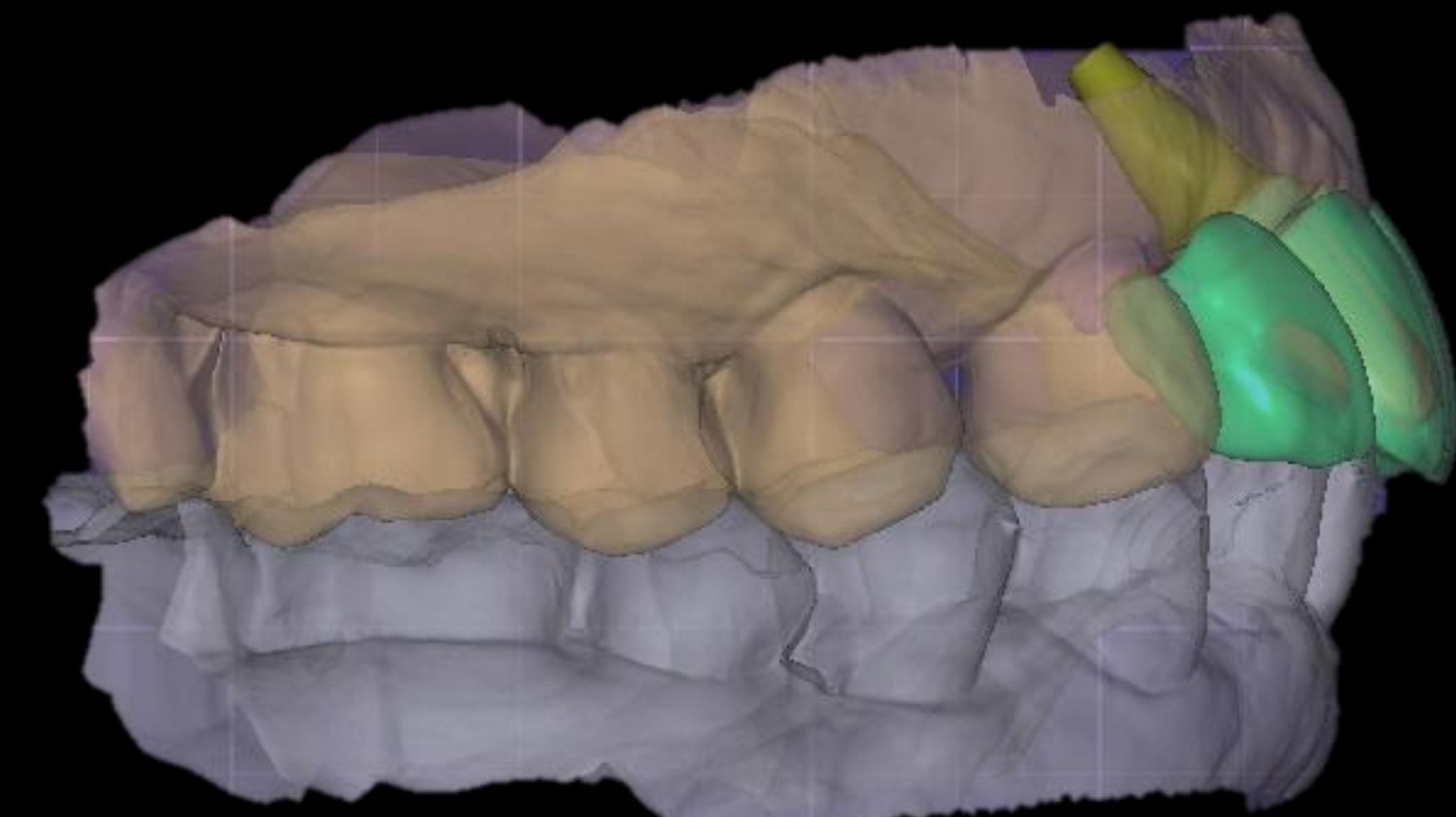
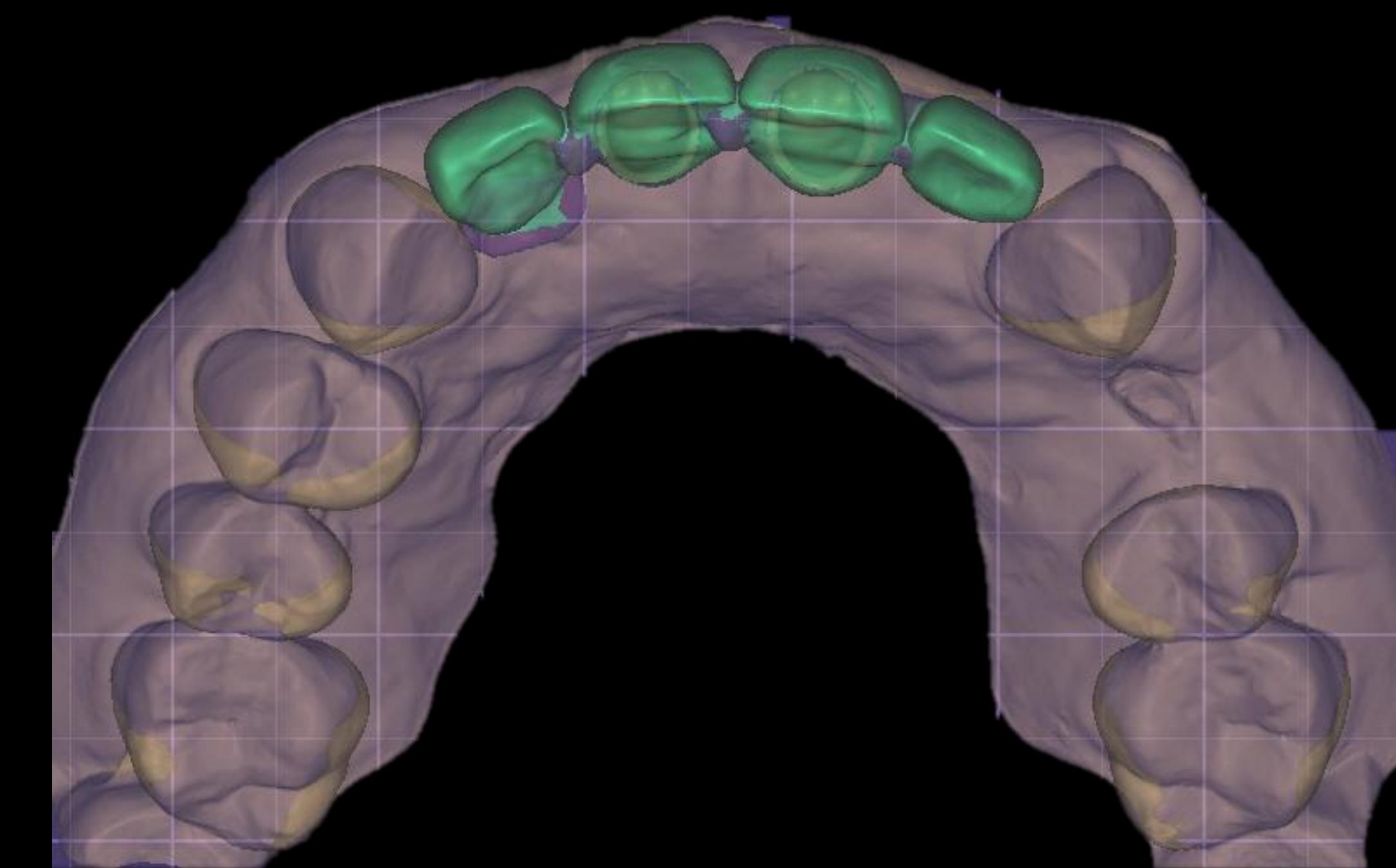
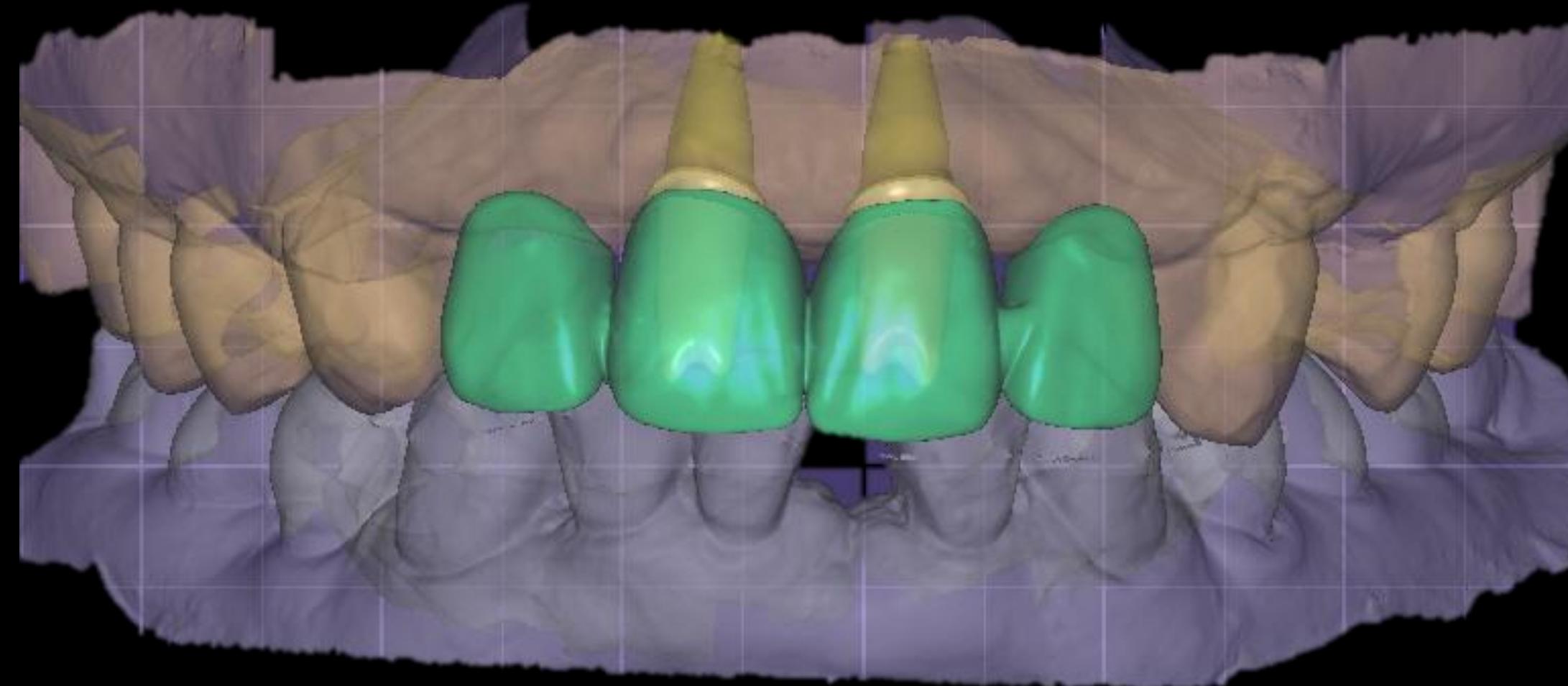


Impression and scan abutment  
Polymer or metal

Intra Oral Scanning for temporary



CAD Design (Customized abutment, Temporary)



## Provisional restoration



# Impression



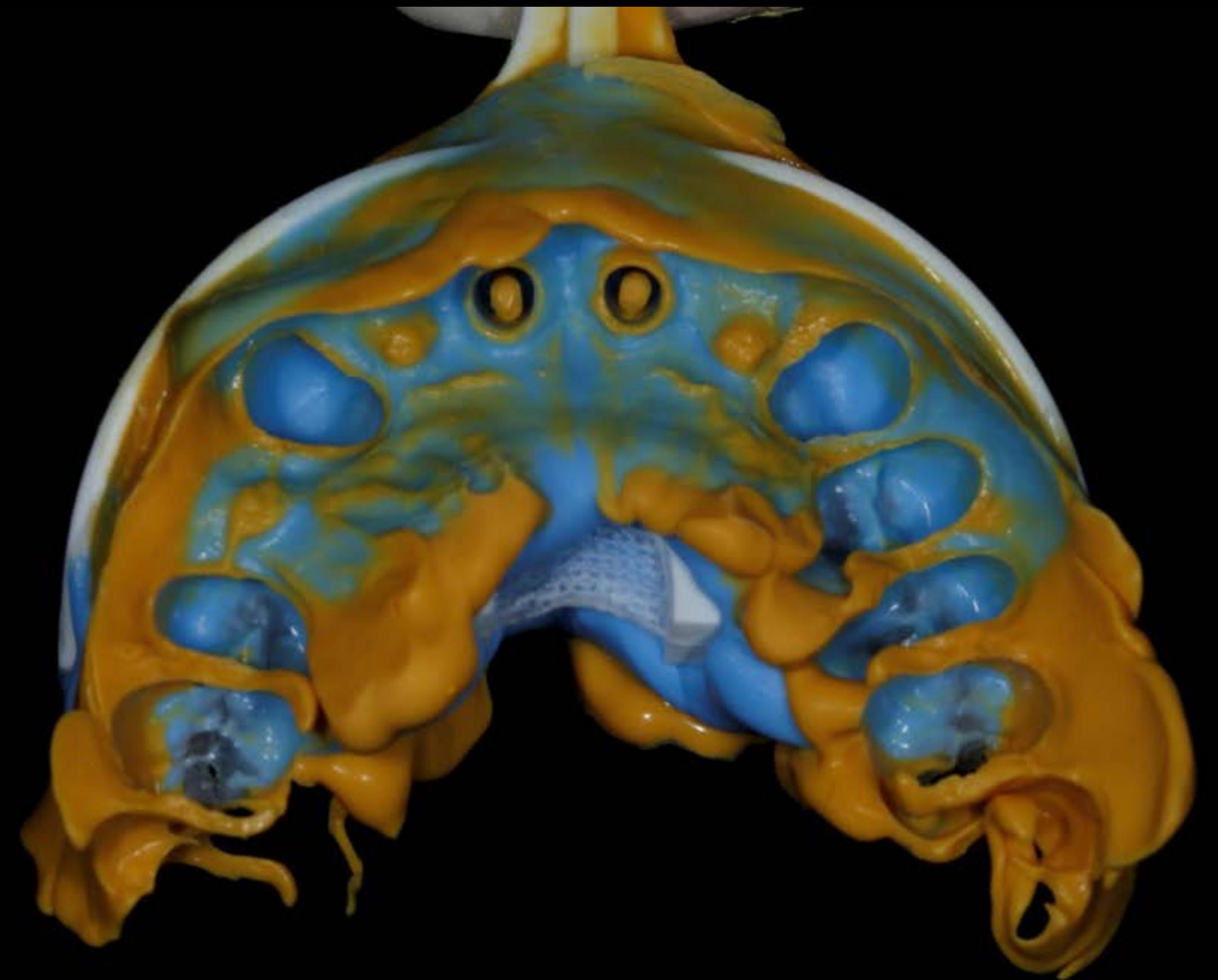
## Bite Tray Impression for Final prosthesis

Upper arch

Lower arch

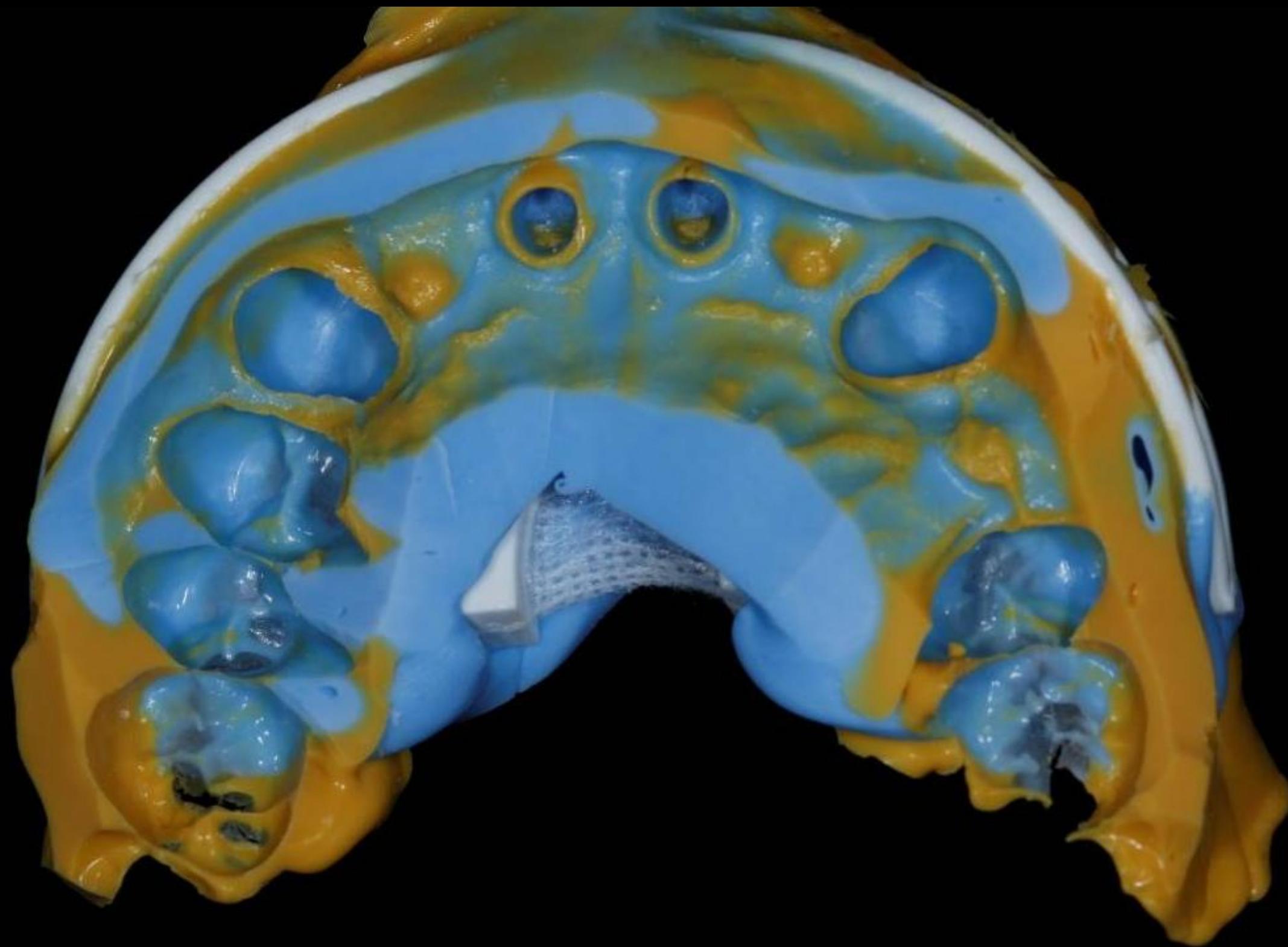
Check bite

All

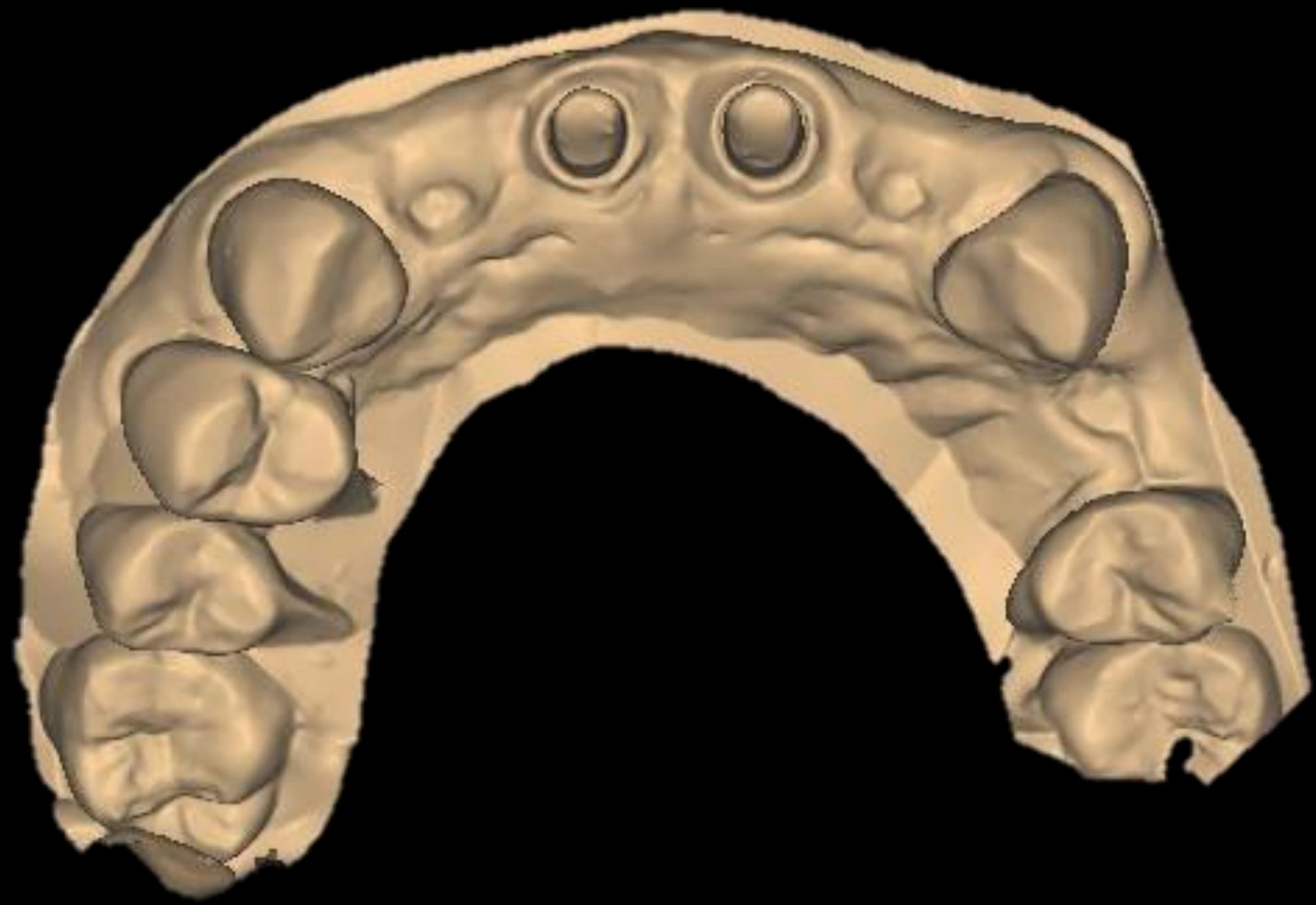
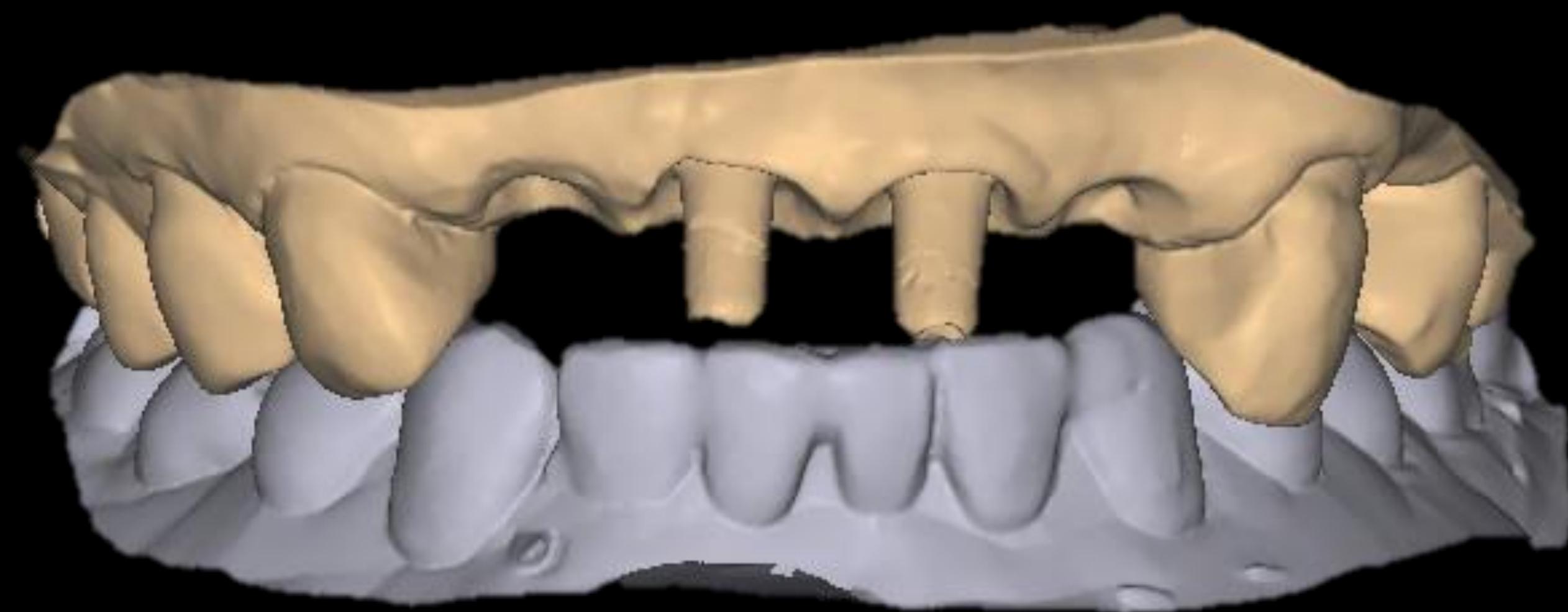


Impression / Trimming

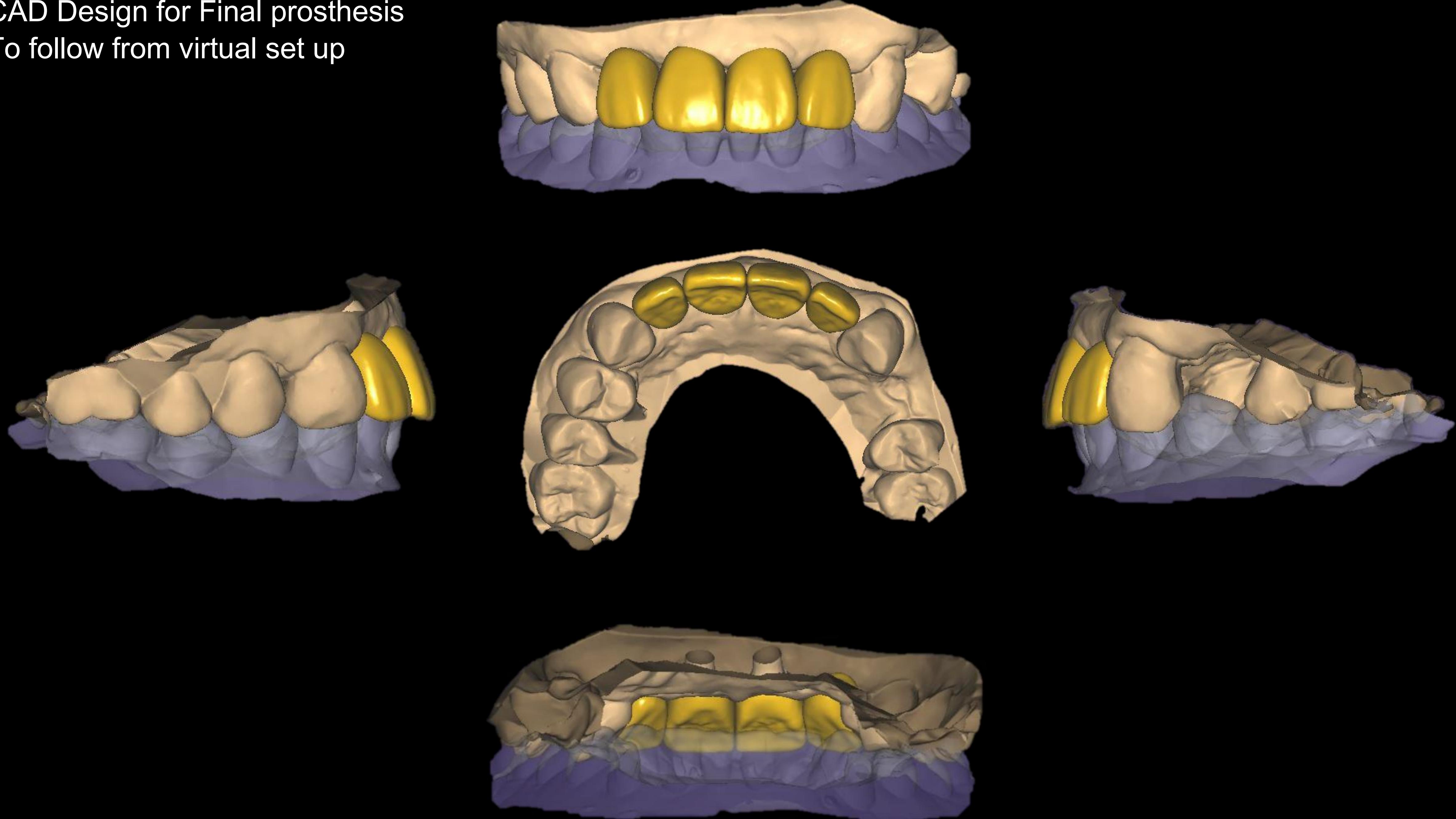
Powder spray for Impression scanning



Convert of impression scan into model in software



CAD Design for Final prosthesis  
To follow from virtual set up



**Milling**



**Sintering**



**Glazing**



Final prosthesis



Digital work

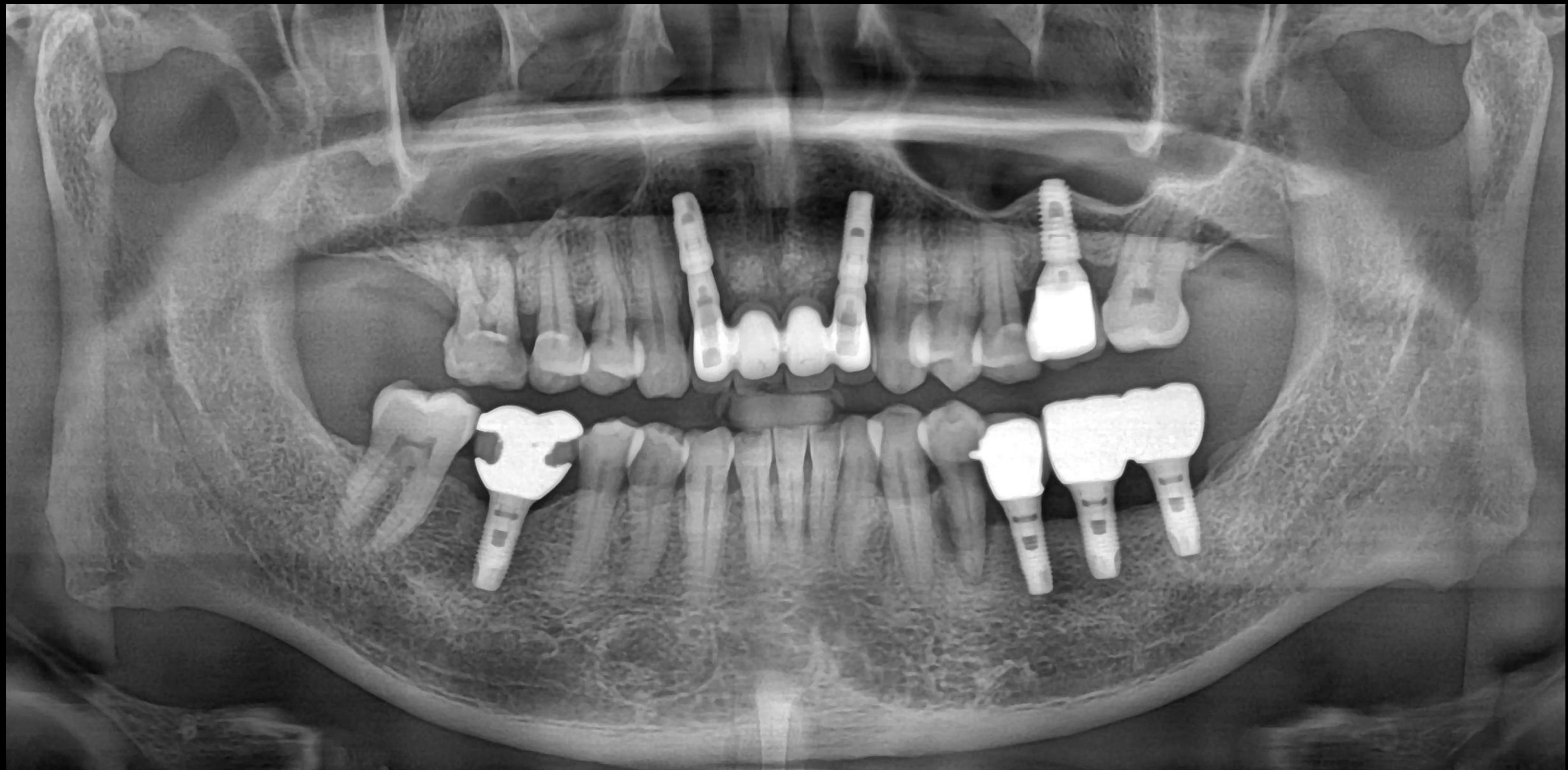
Digital guide

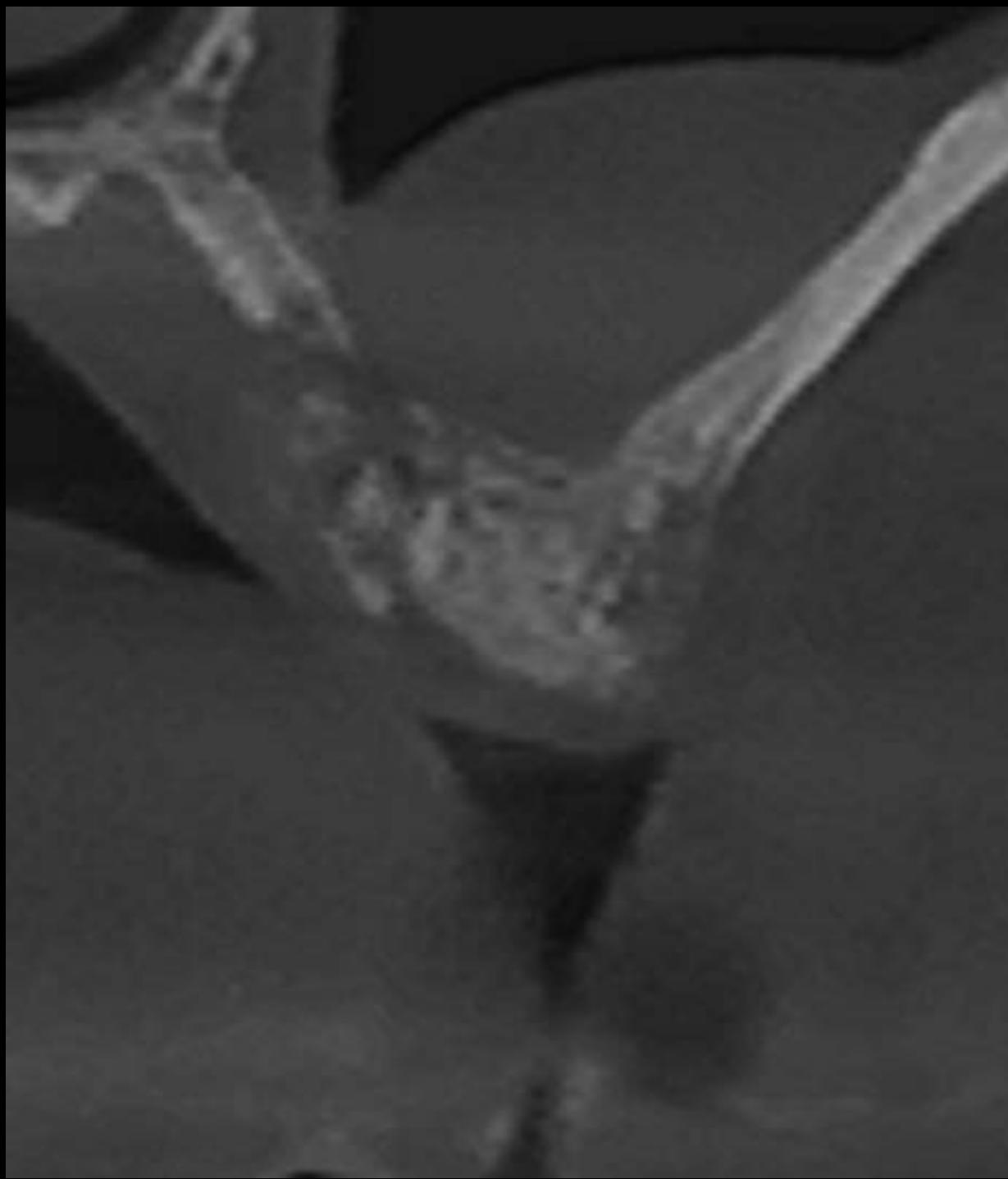
Custom abutment

Temporary crown

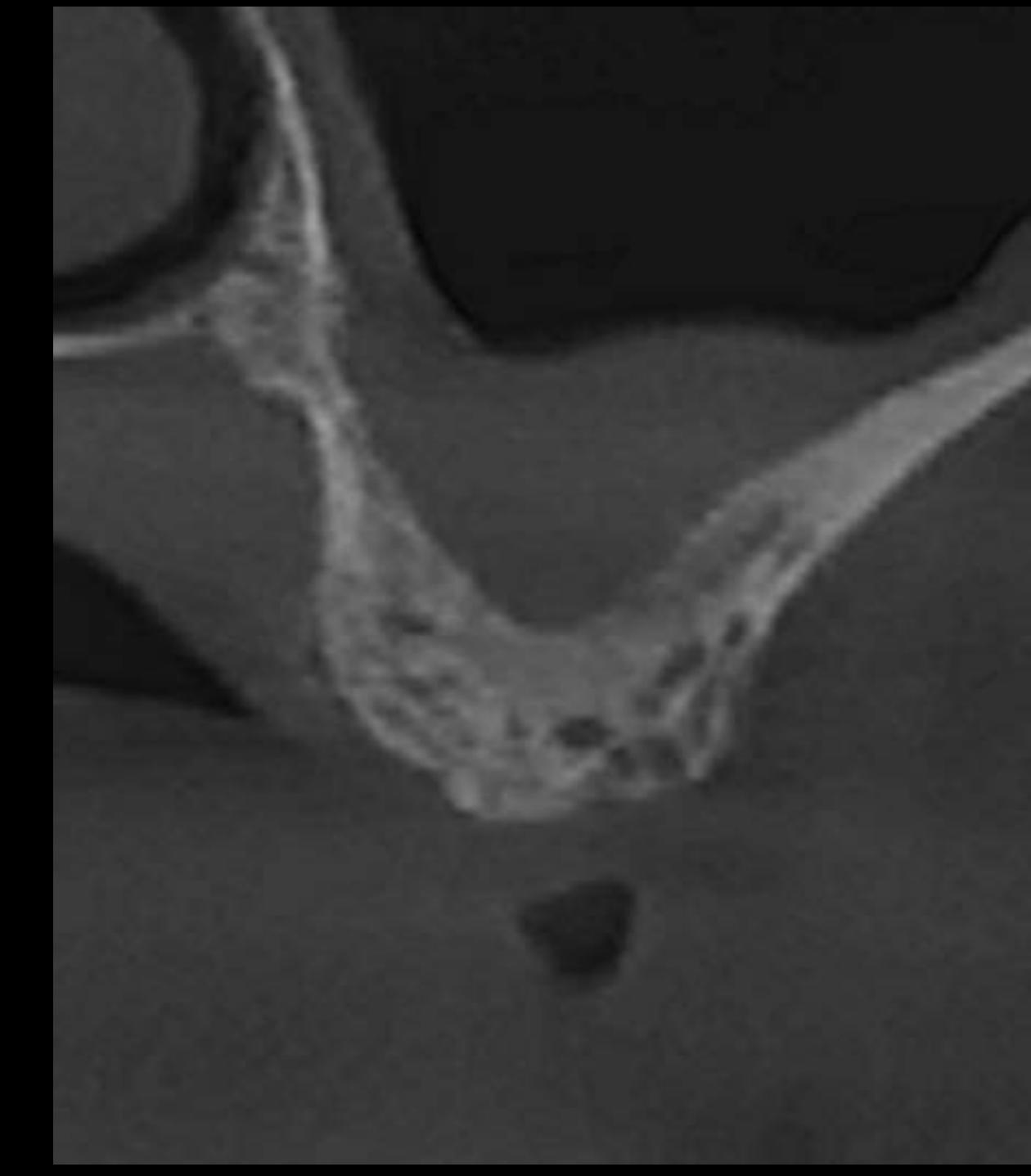
Permanent crown

Pre-op (2024-02-02)





#16



#17

Post-op CT (2024-08-02)

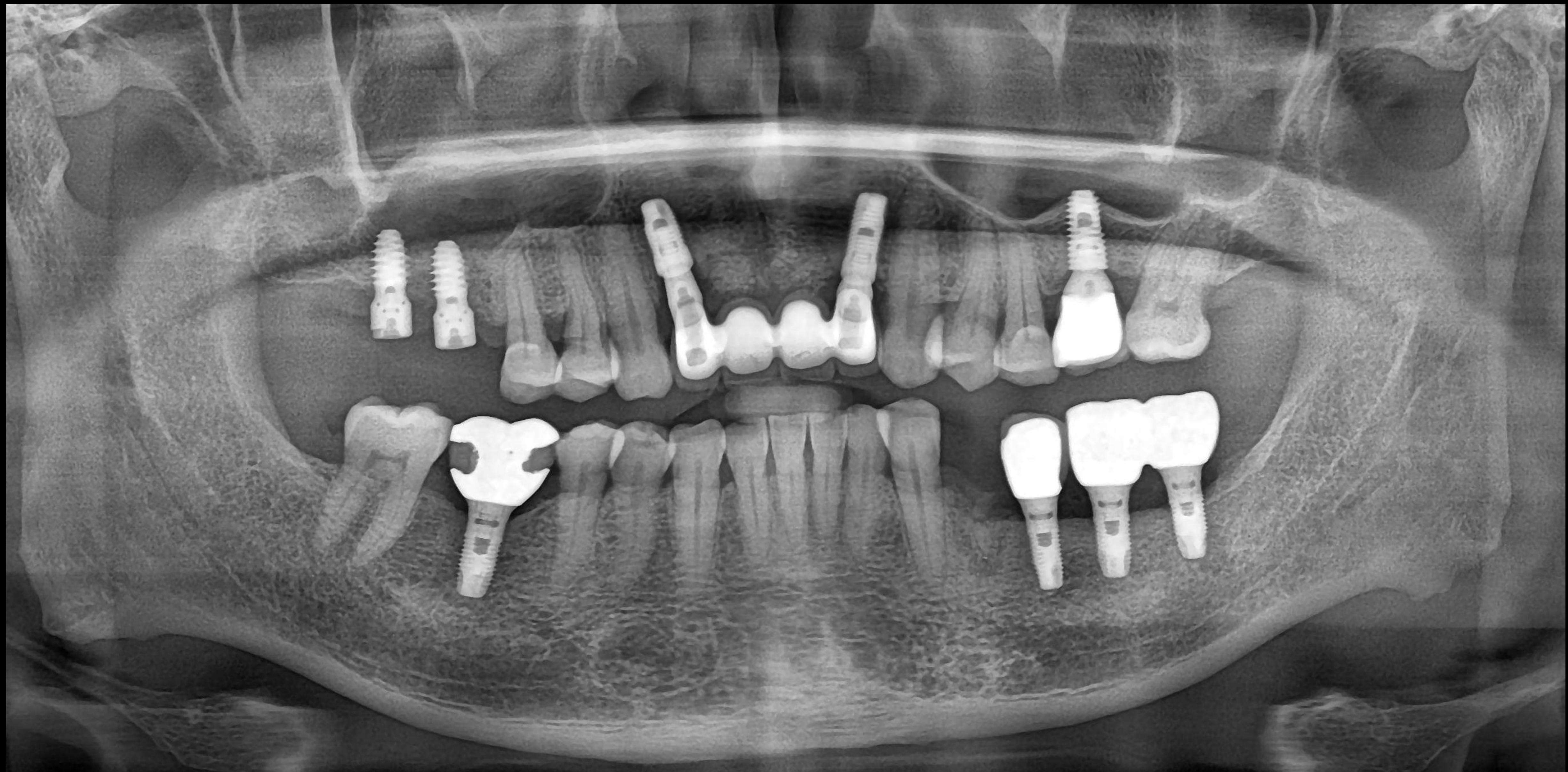


#16

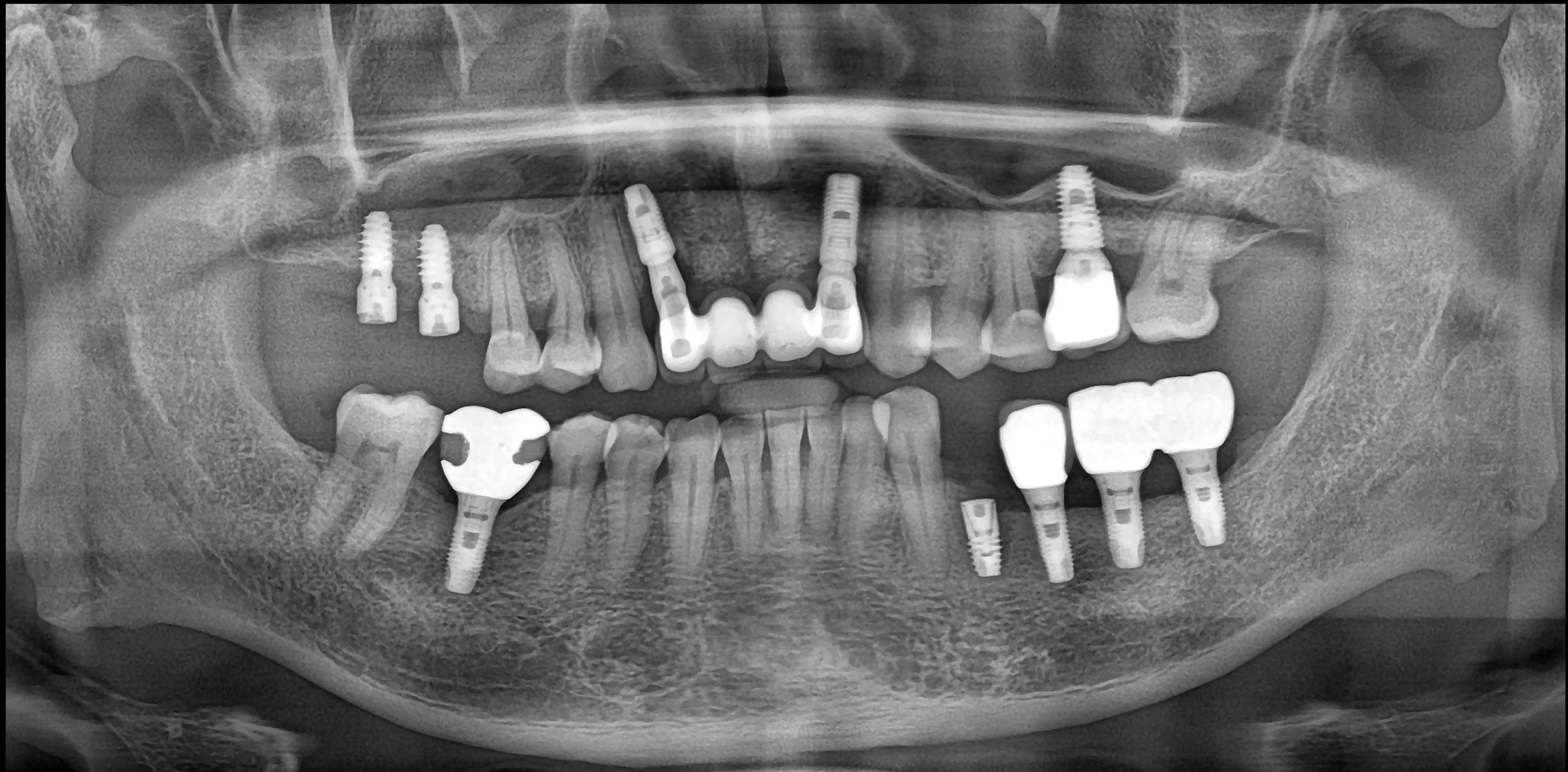


#17

Post-op (2024-08-13)



Healing : 2 weeks (2024-08-20)



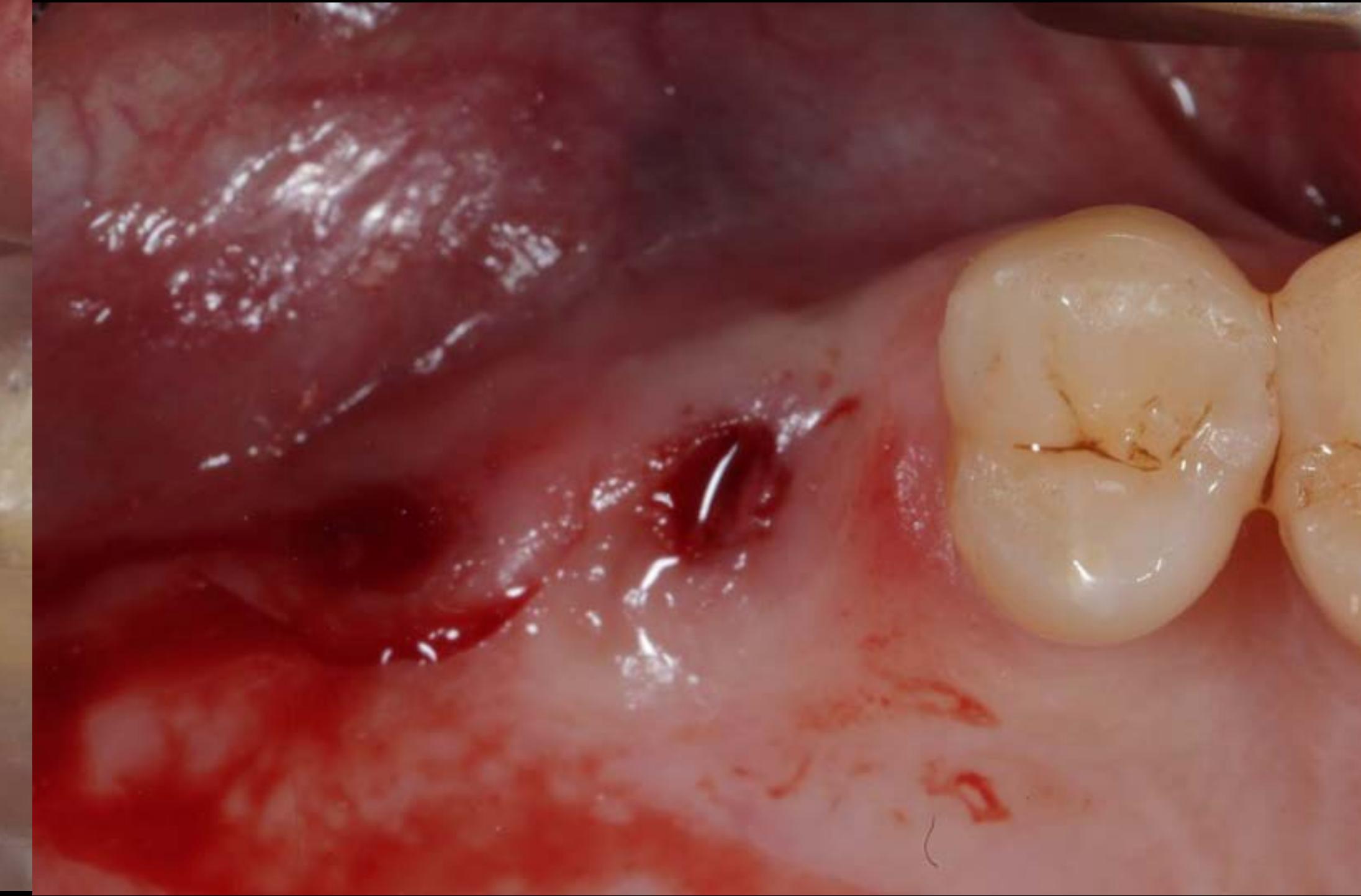
Pre-op(2024-08-02)



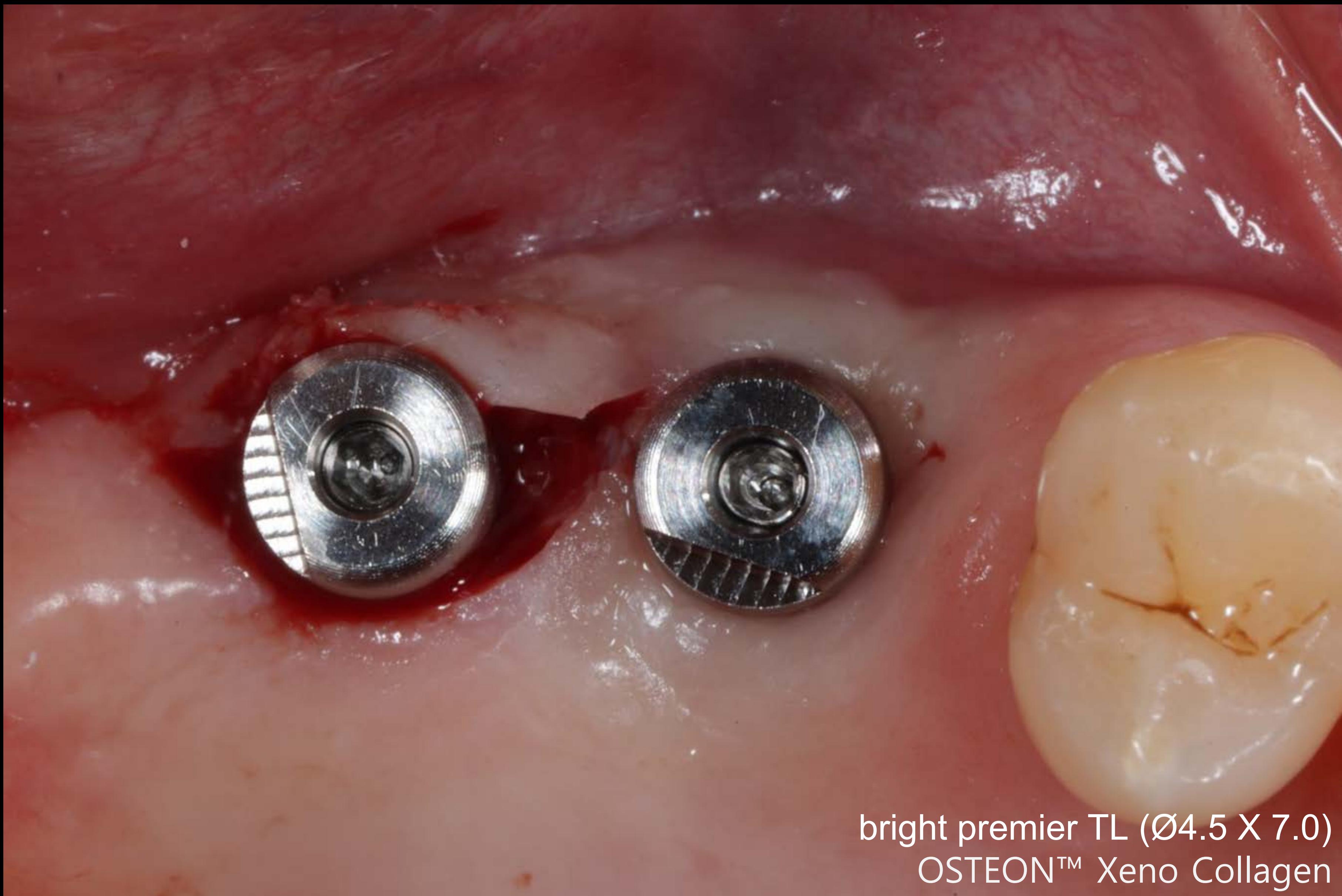
Surgery (2024-08-02)



Digital guide

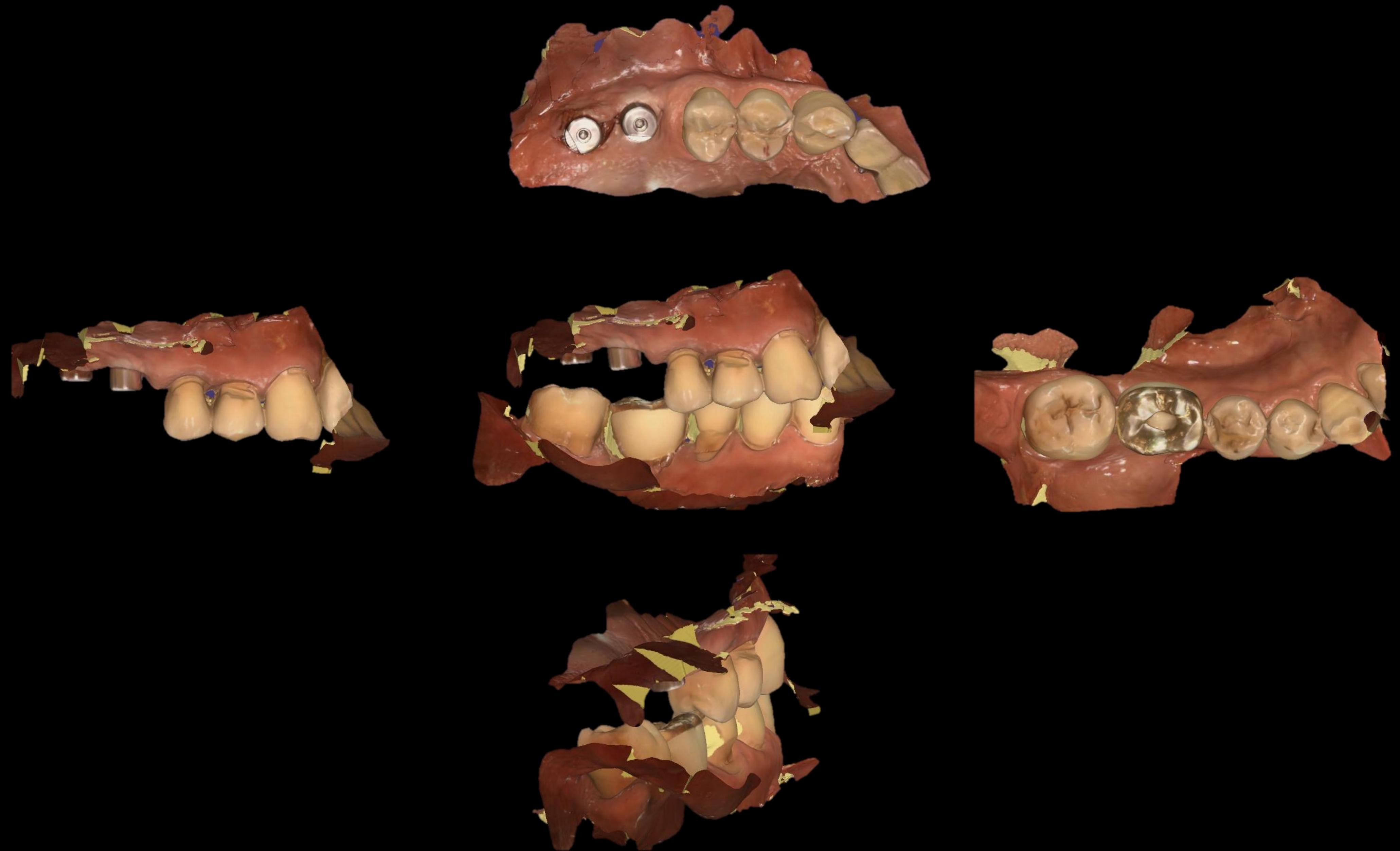


Surgery (2024-08-02)

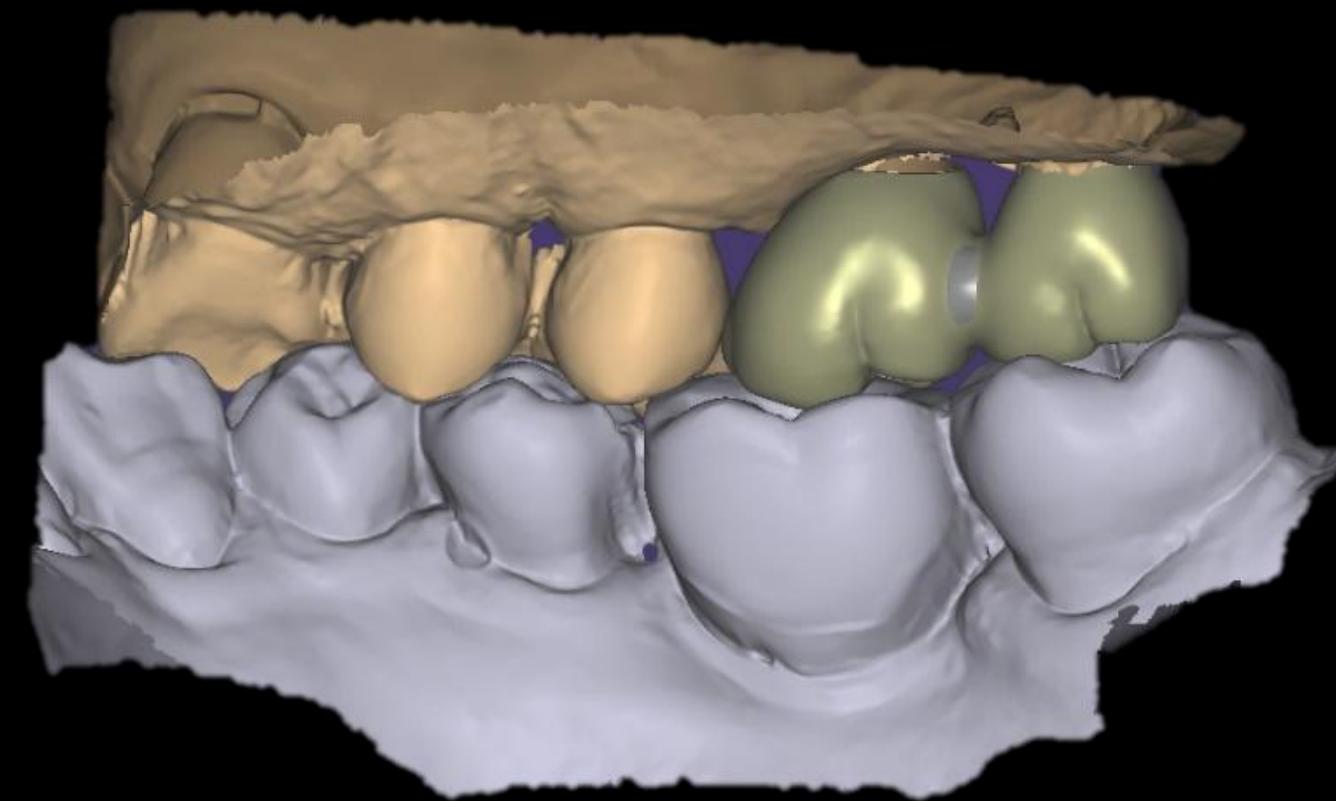
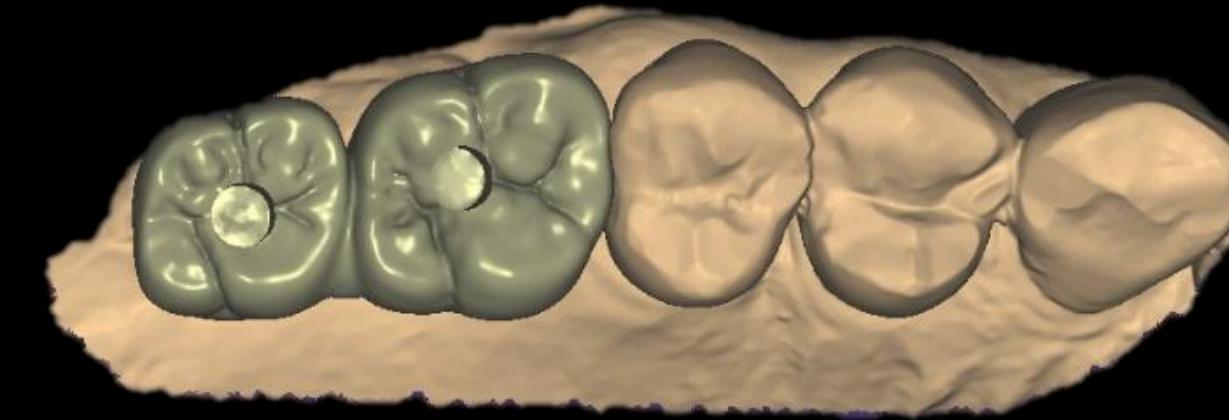
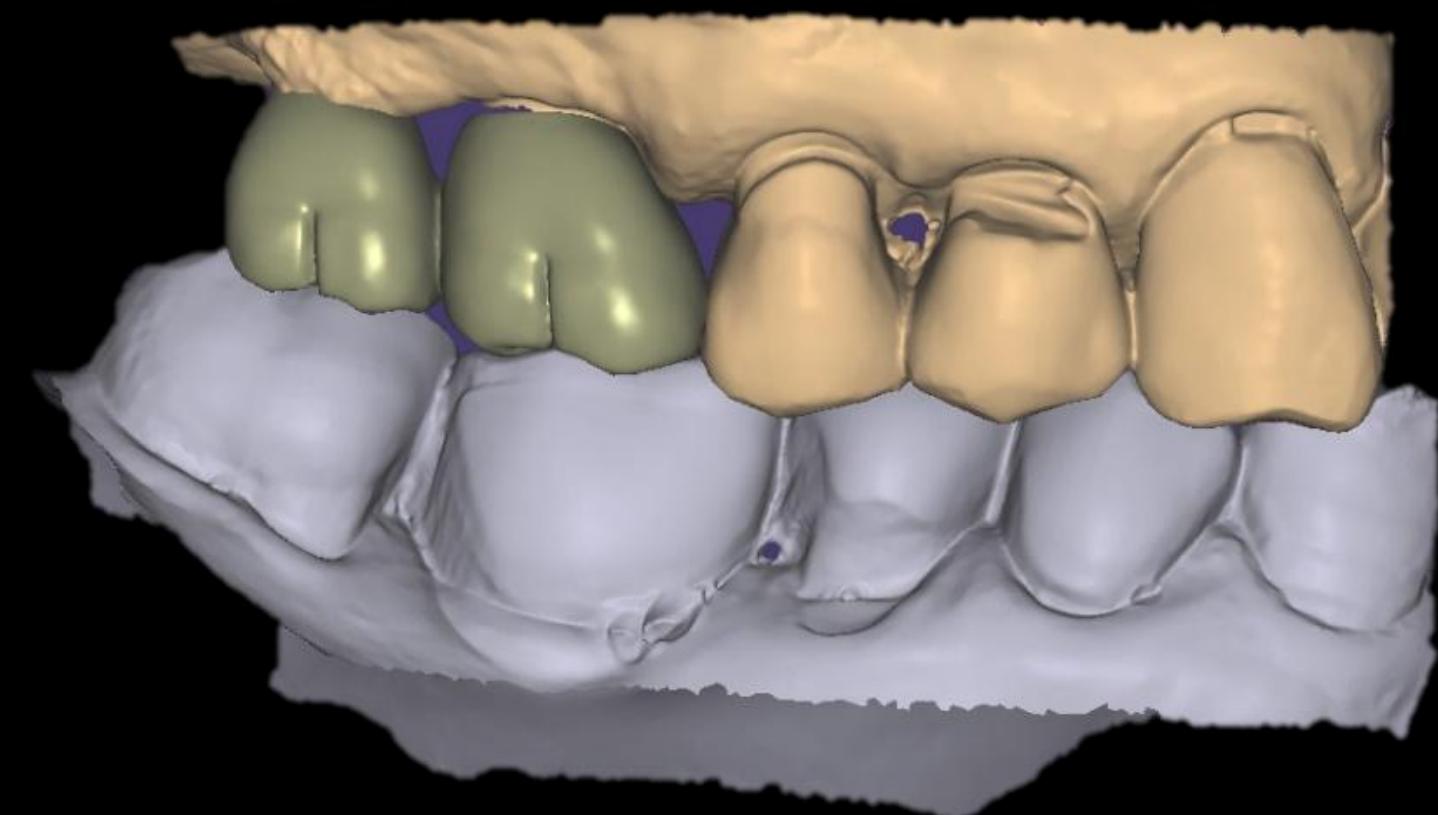


bright premier TL ( $\varnothing 4.5 \times 7.0$ )  
OSTEON™ Xeno Collagen

# Intra Oral Scan



CAD (Temporary)



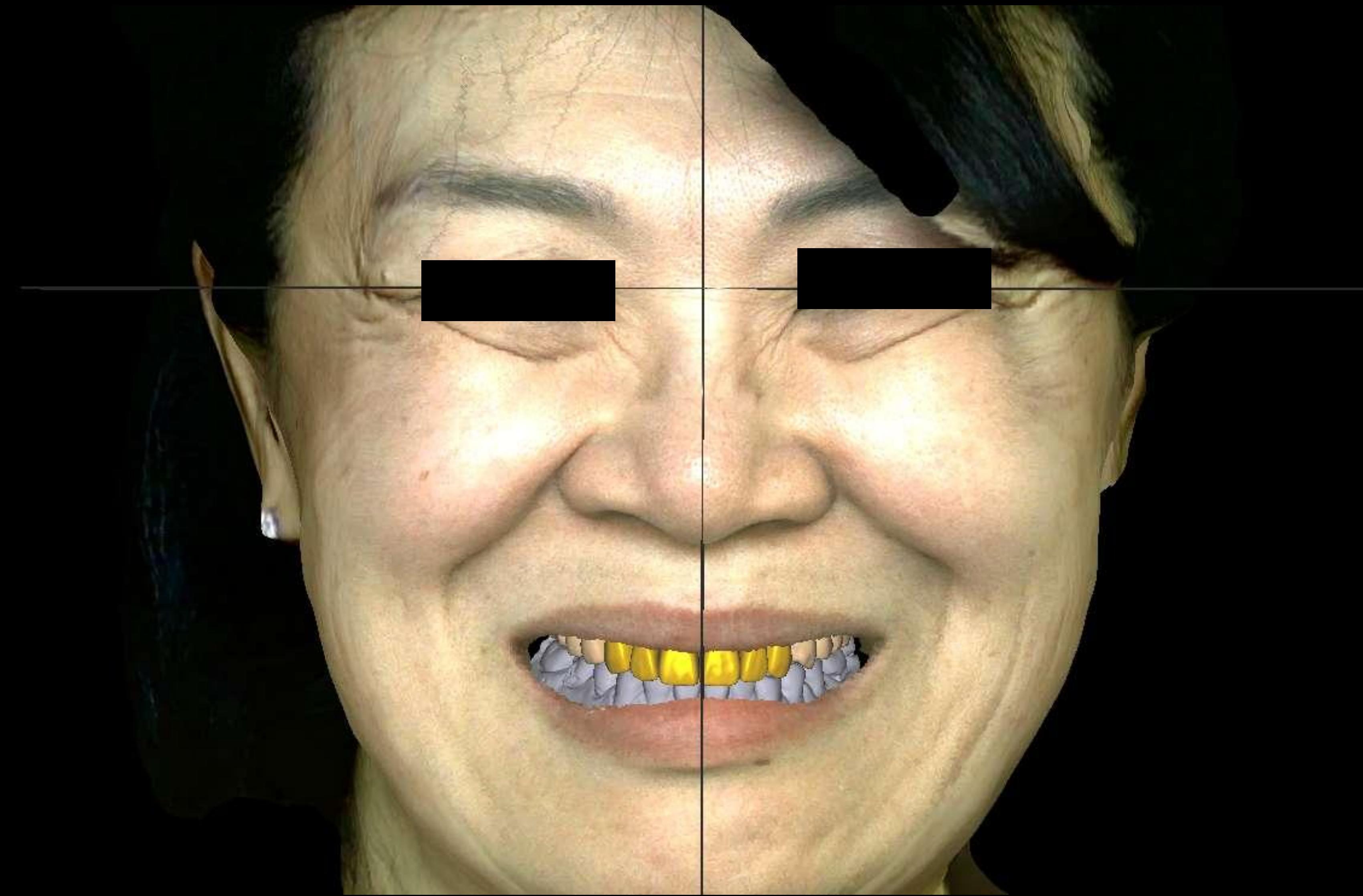
Provisional restoration (2024-09-10)

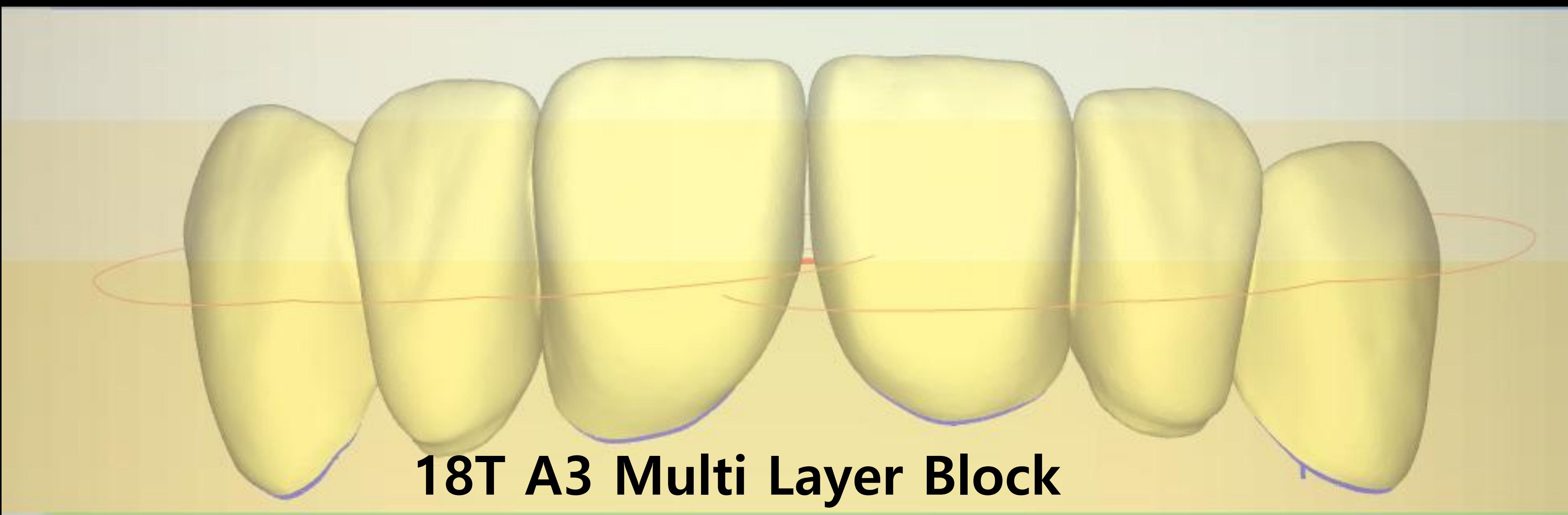


Healing : 4 months (2024-12-13)



Face driven





# Natural tooth Case



Shade Taking : A3

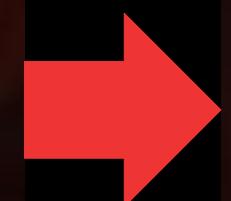


# Natural tooth Case





CT centered



# Virtual Set up

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# Virtual Set up

---



Pre Op

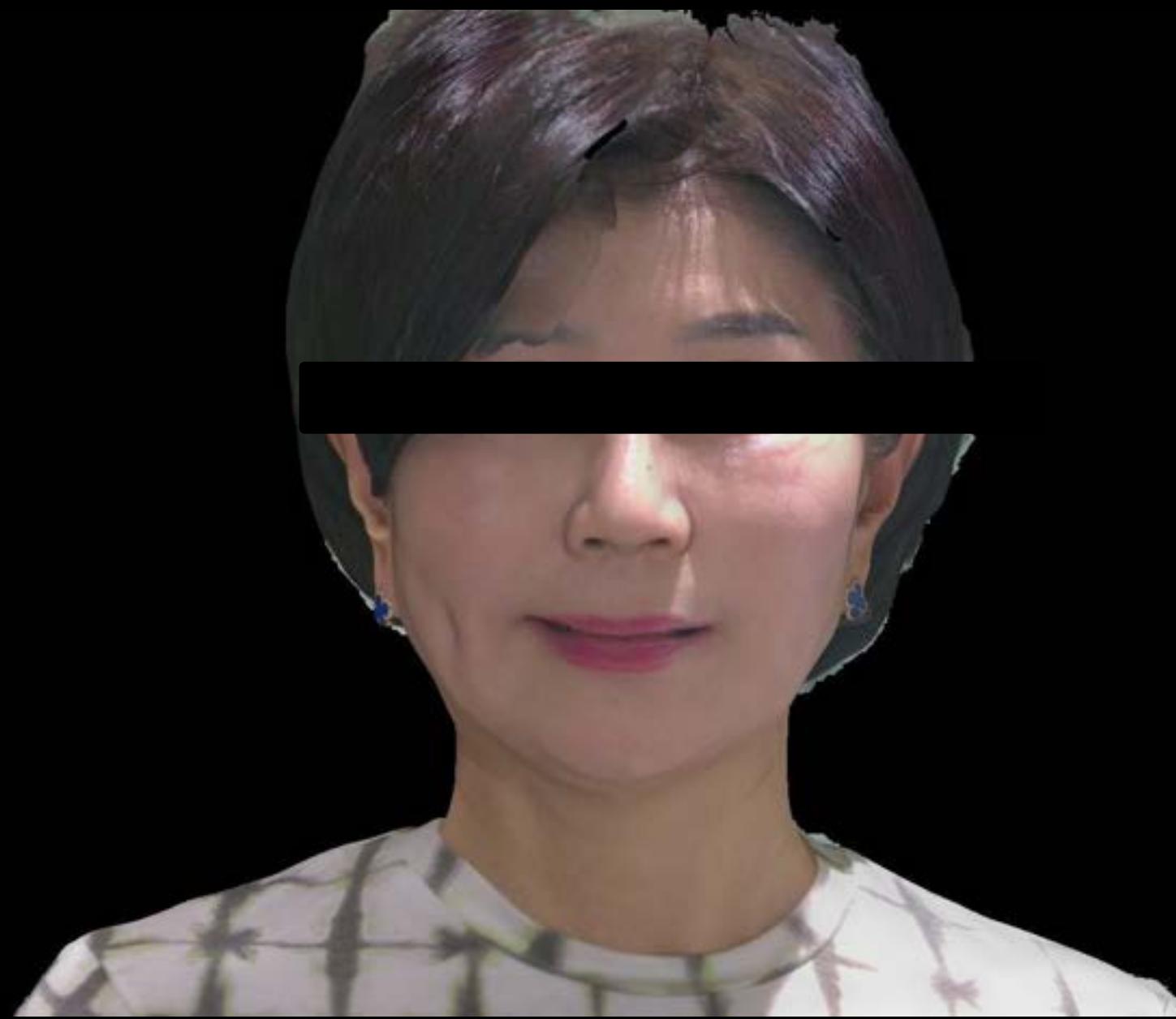


VD 3~4mm Up

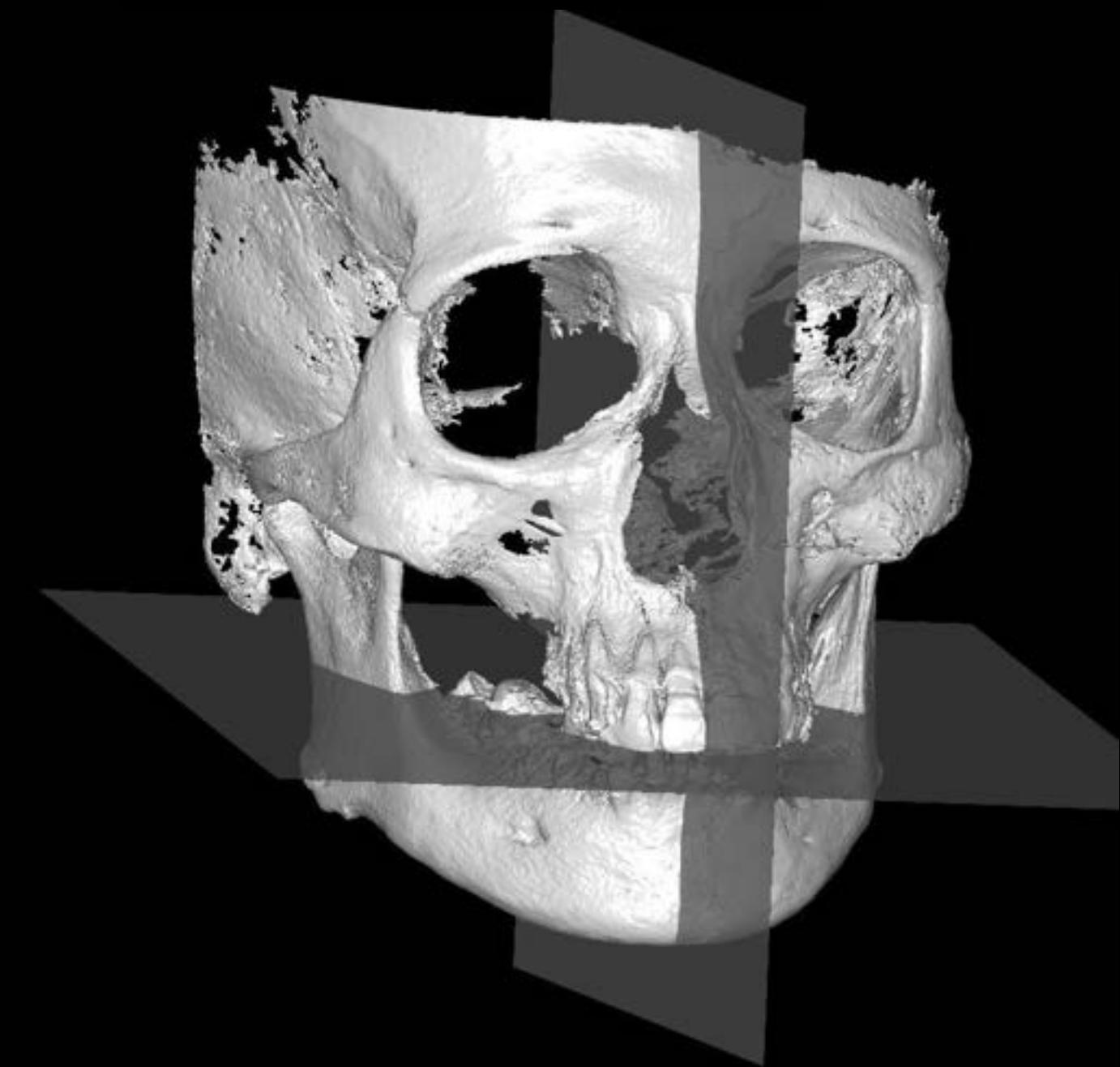


# Virtual Set up

---



**Shining 3D Face Scanner  
Meti Smile**



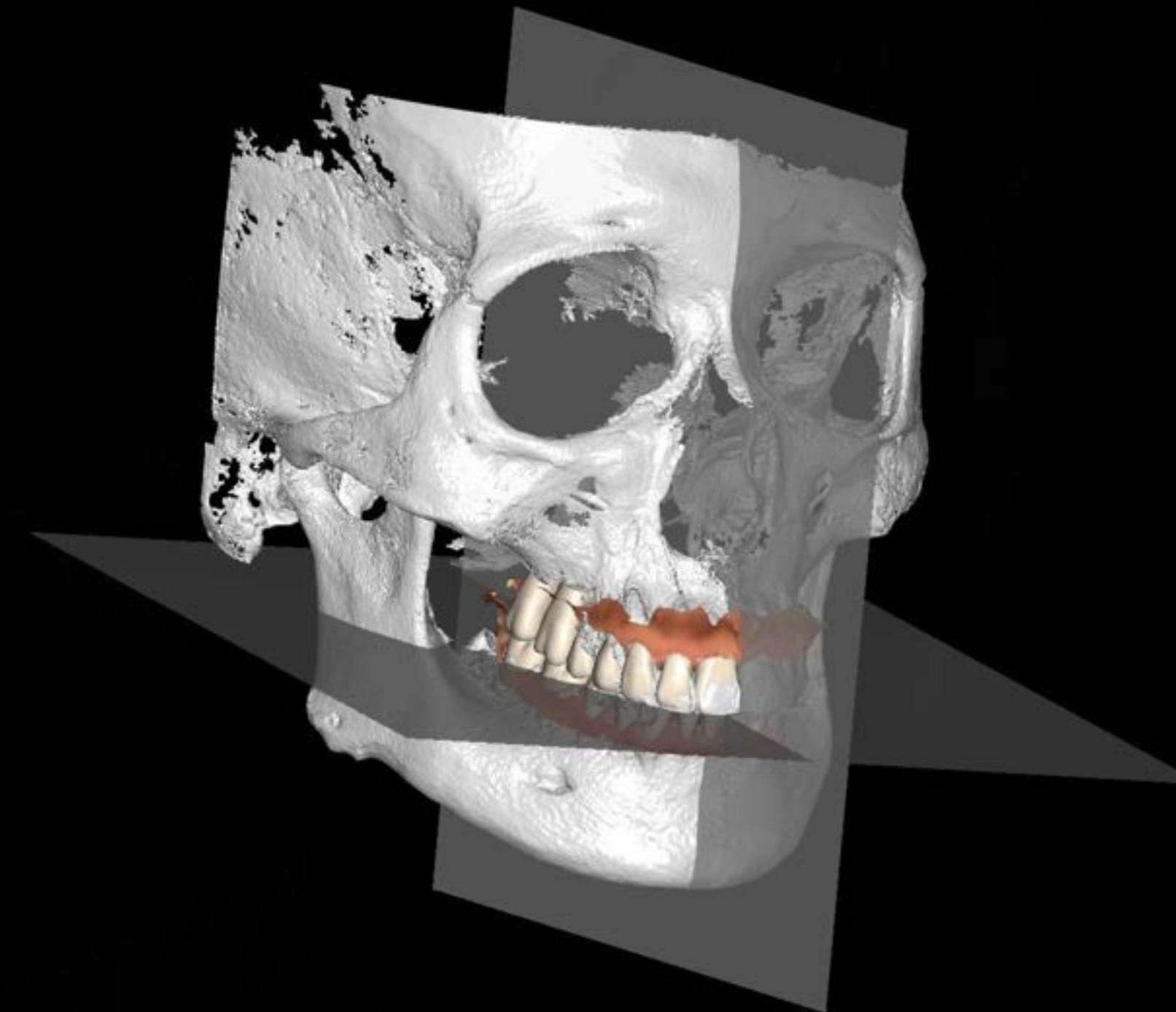
**CT data(AI Occlusal Plane)**



**Shining 3D Aoral Scan Elite**

# Virtual Set up

---



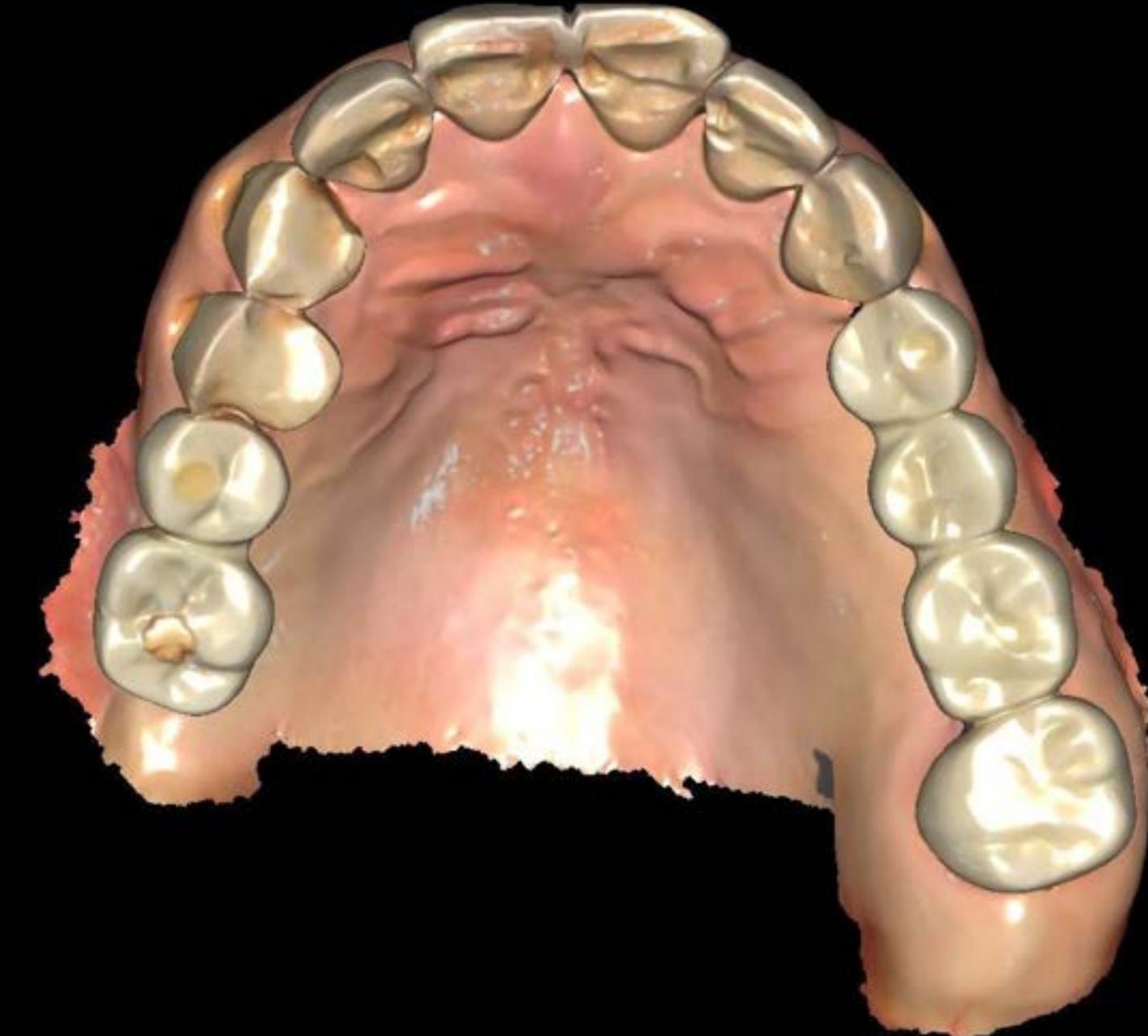
By using CT and face scan data for treatment planning,  
patient satisfaction and cooperation during consultation are enhanced.

# Provisional restoration



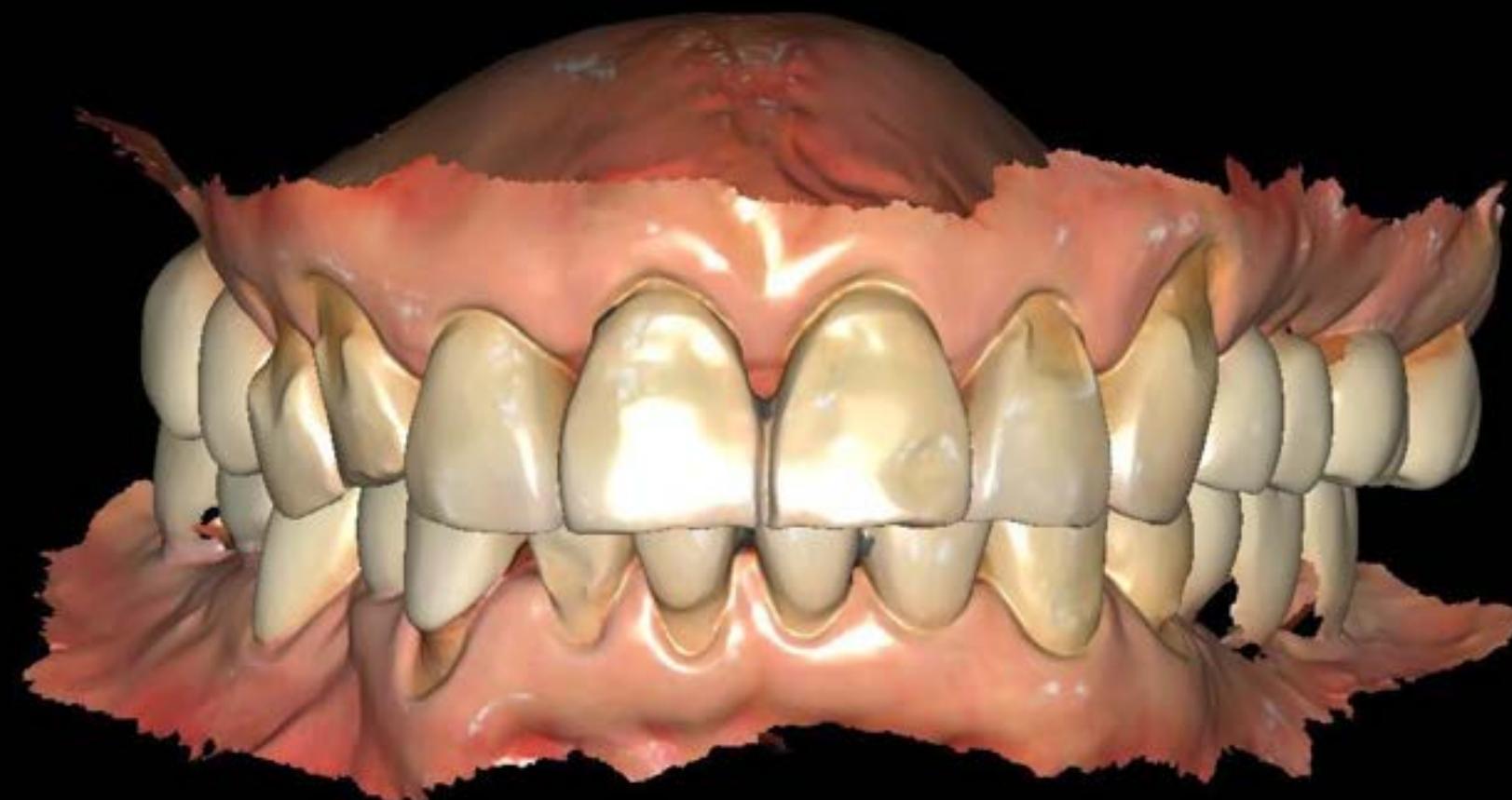
Posterior Ext & I.s

# Provisional restoration

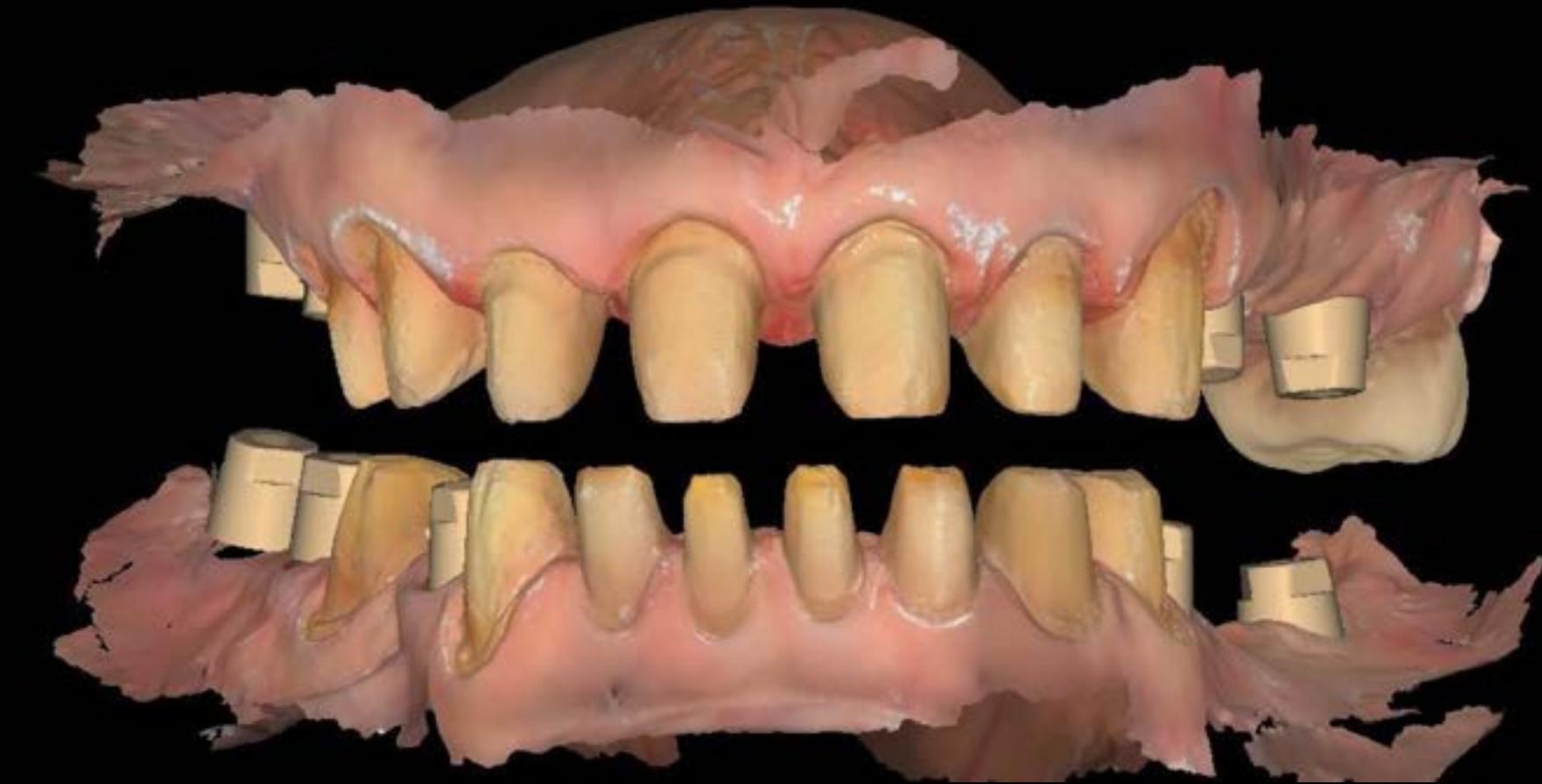


Implant provisional restoration 1<sup>st</sup>

# Provisional restoration



Implant cr provisional crown 1<sup>st</sup>



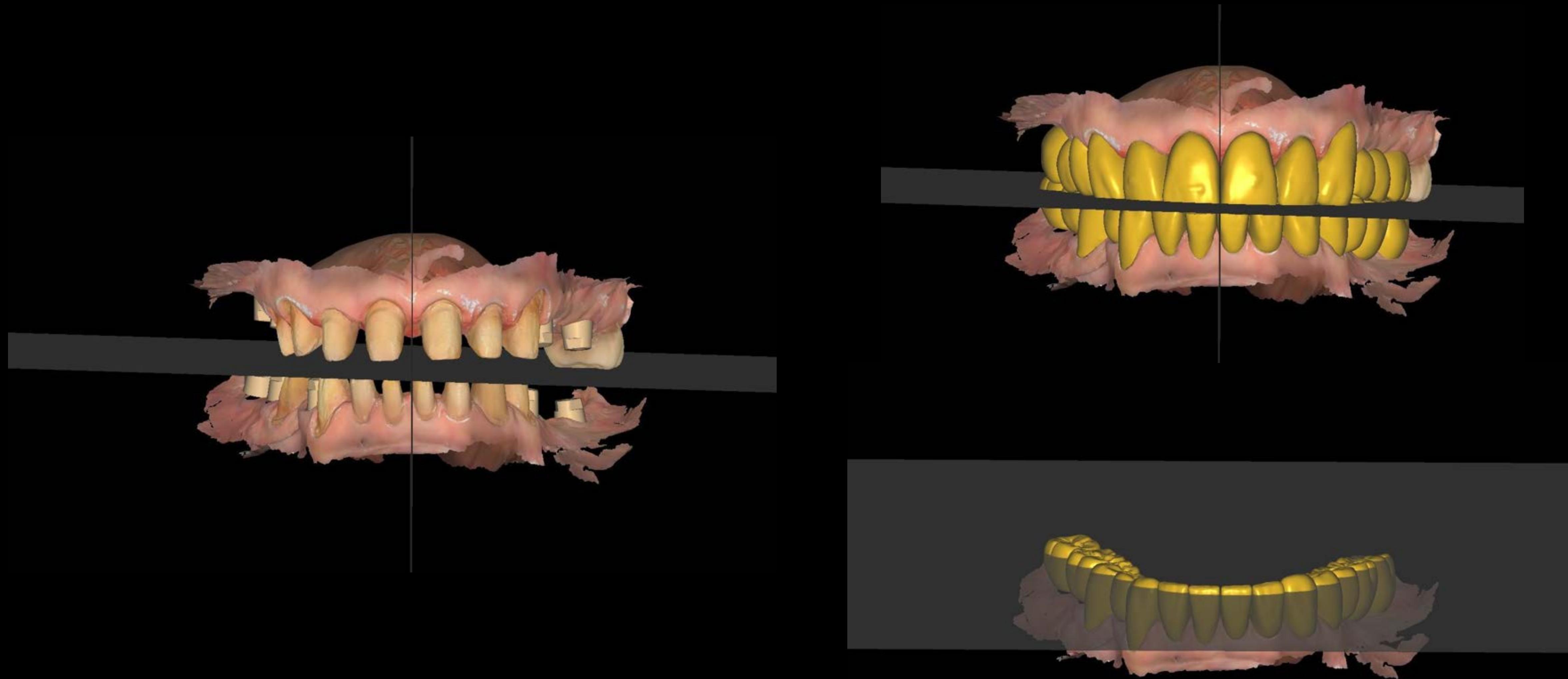
( Vd 3mm up )

Full mouth provisional crown 2<sup>nd</sup>



Putty index  
CT Check Bite

# Cad Design



Cad design using CT data (AI Occlusal Plane)

# Provisional restoration

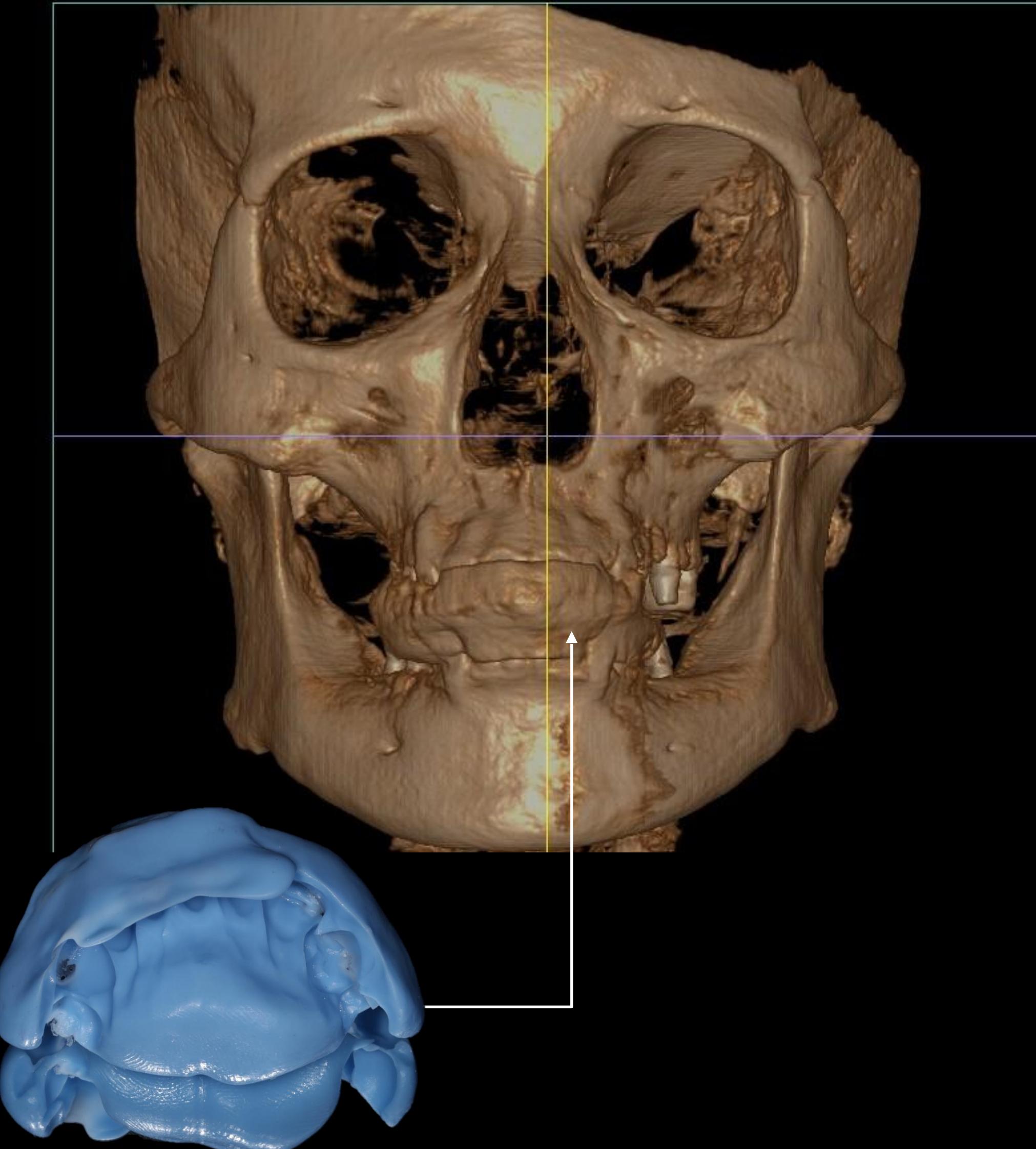


Full mouth provisional crown 2<sup>nd</sup>

# CT Check Bite

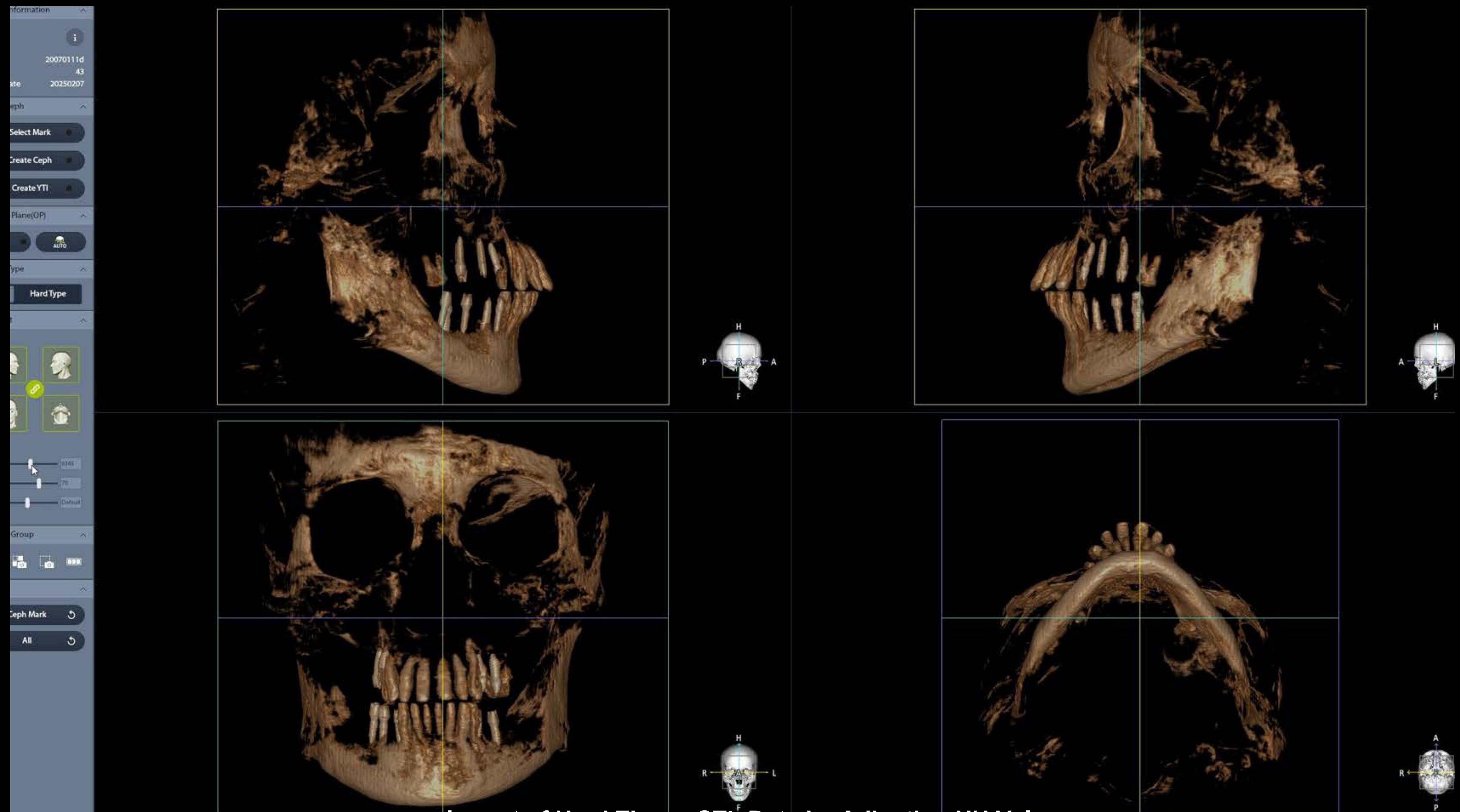


Using a putty index to fix the temporary crown occlusion  
after the patient adapts to the new VD,  
CT imaging is used to transfer the occlusion for the final prosthesis

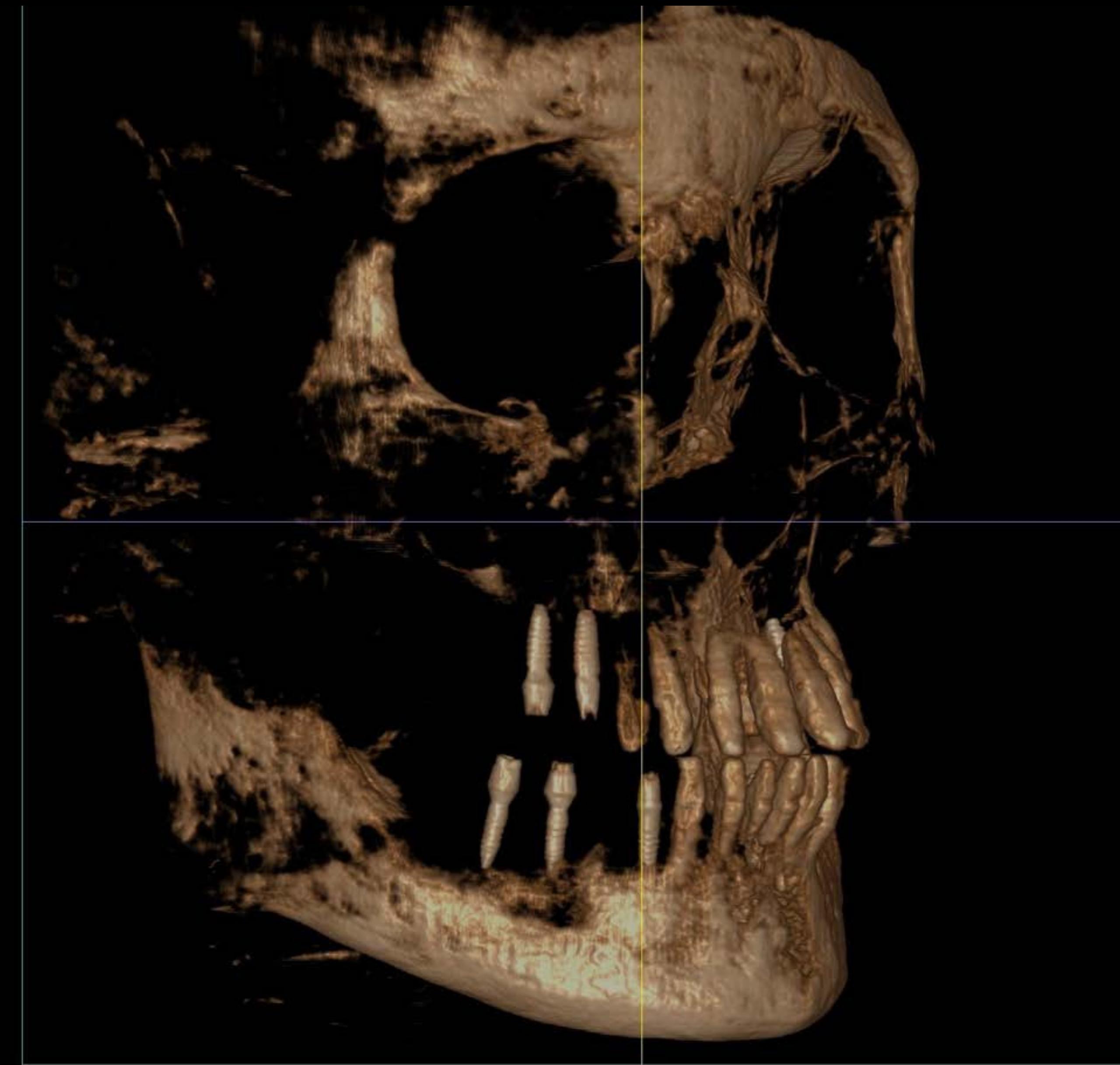


Putty Index

# CT Check Bite



# CT Check Bite



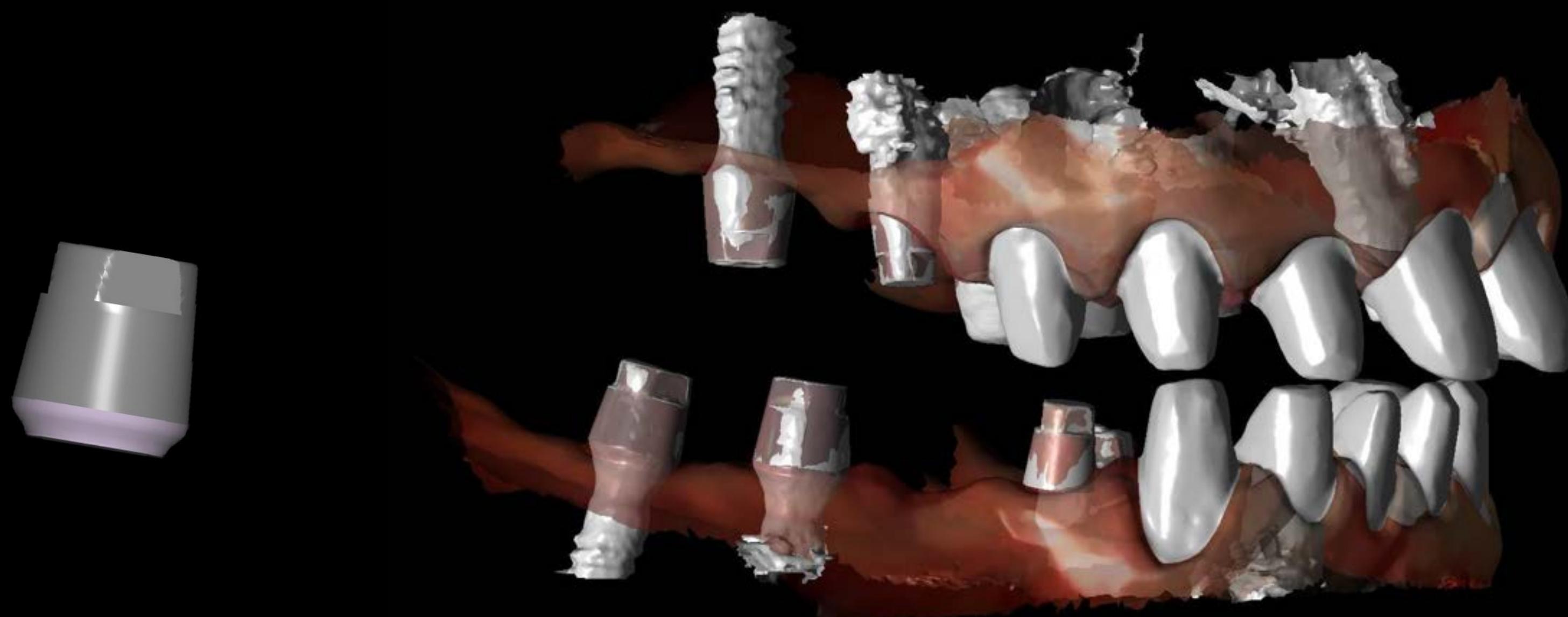
Import of Hard Tissue STL Data by Adjusting HU Values

# CT Check Bite



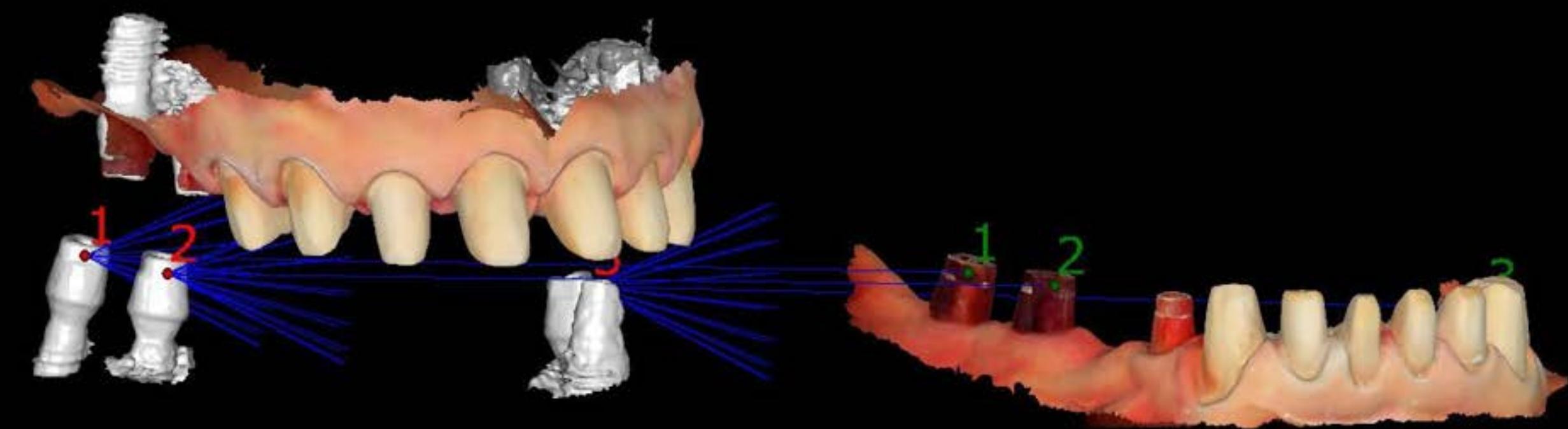
CT Data STL of Temporary Crown Occlusion Using Putty Index

# CT Check Bite



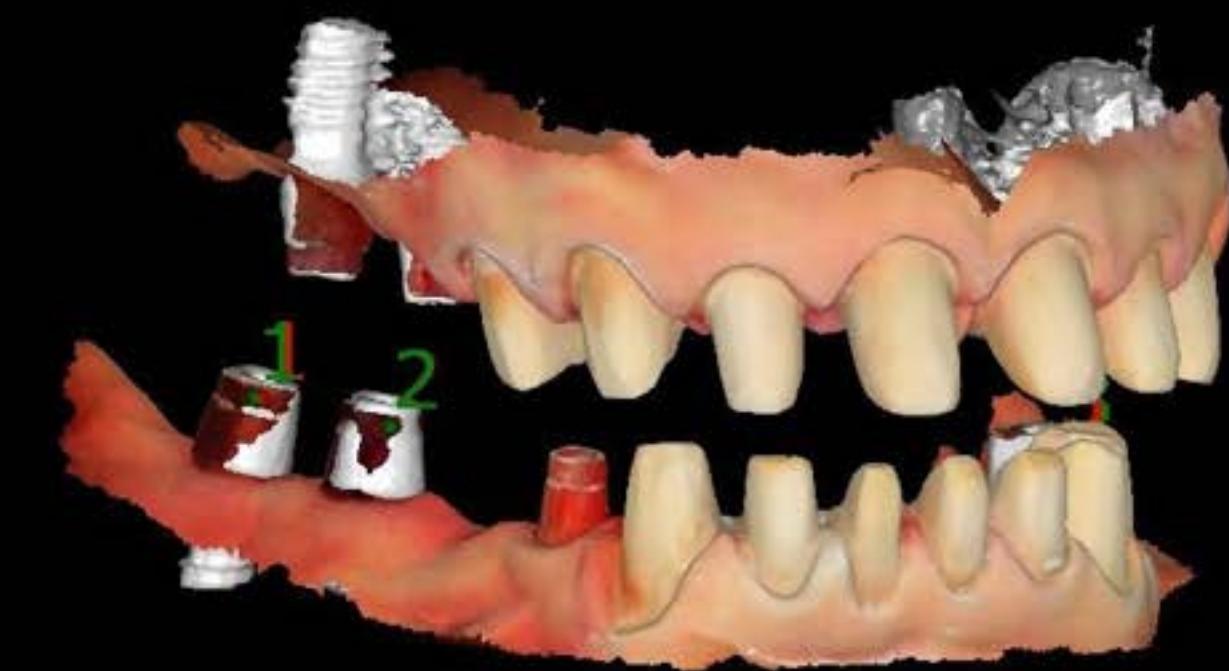
CT Data STL of Temporary Crown Occlusion Using Putty Index

# CT Check Bite



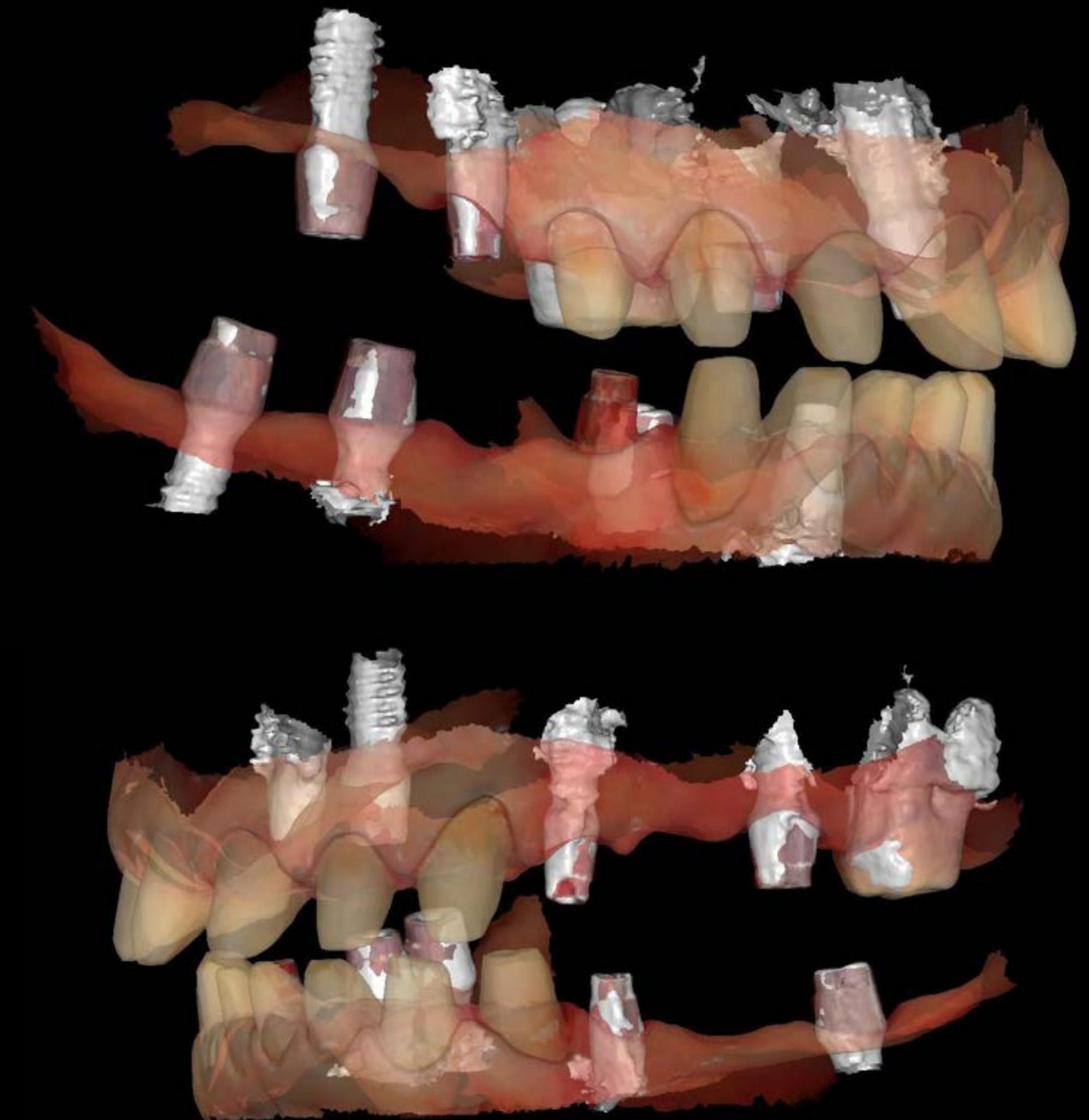
Digital Mounting Using CT Data

# CT Check Bite



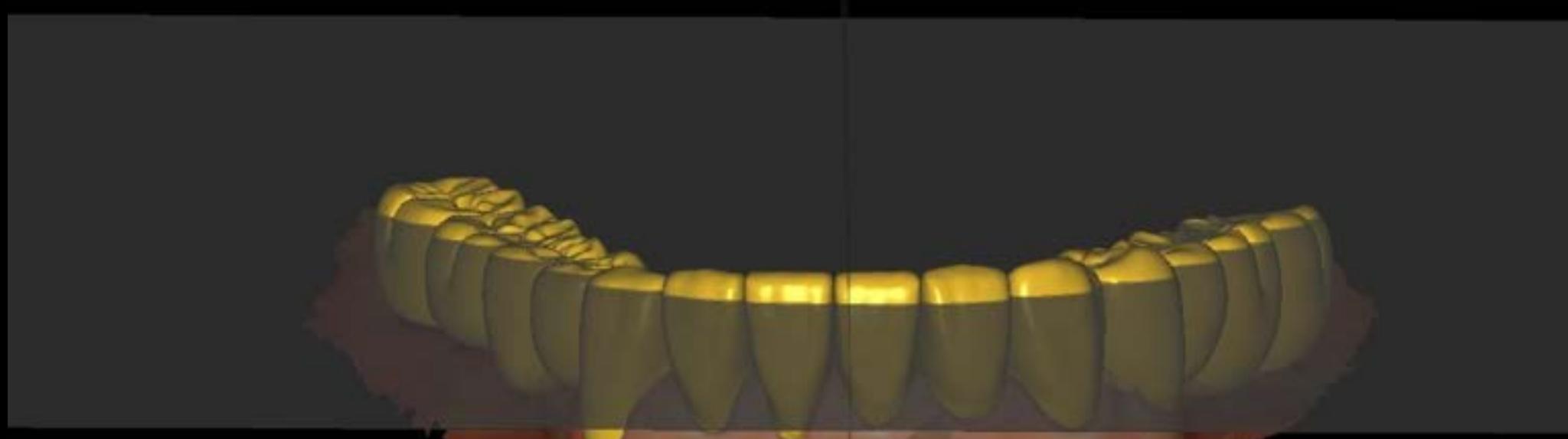
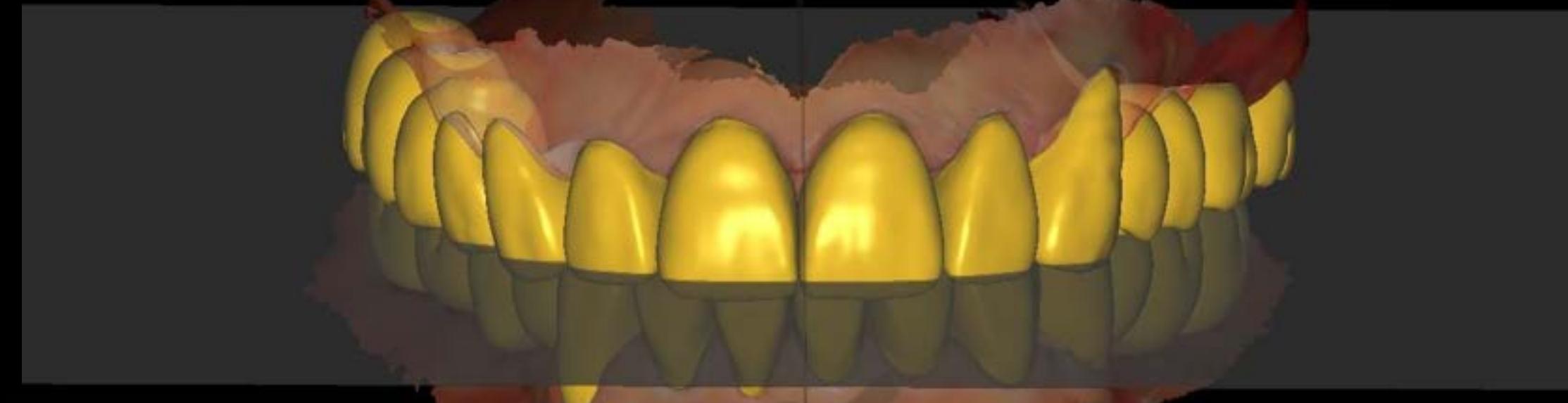
Digital Mounting Using CT Data

# CT Check Bite

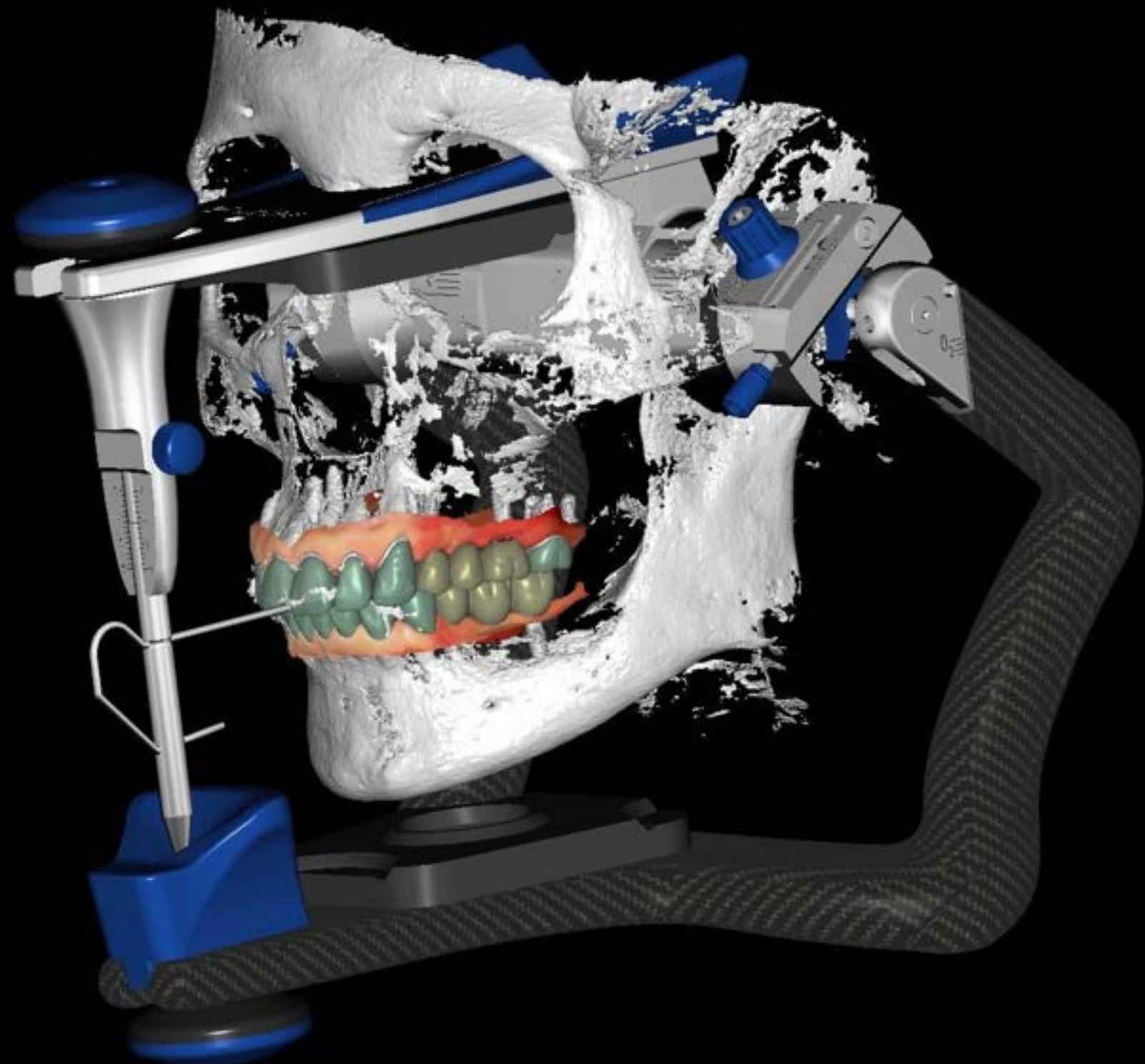


Digital Mounting Using CT Data

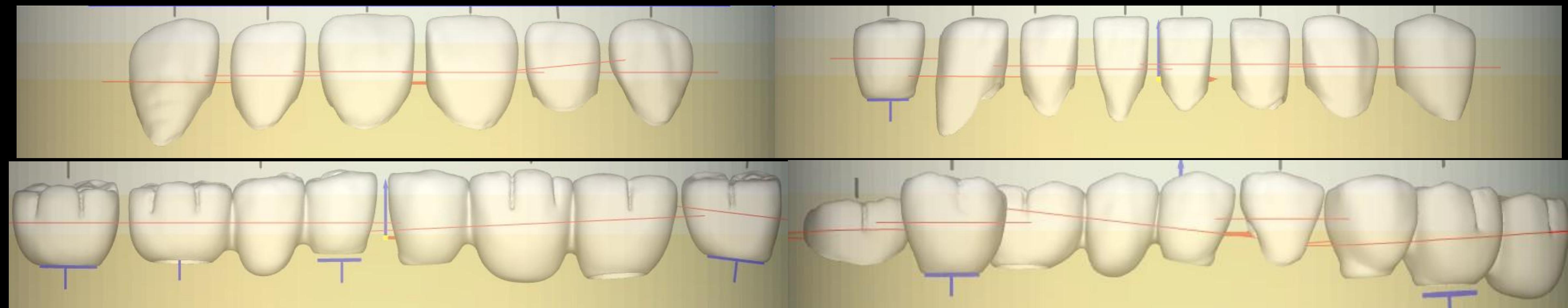
# Cad Design



# Virtual Articulator



# Hyper Dent



3-Layer block A1

# bright 3-Layer

---

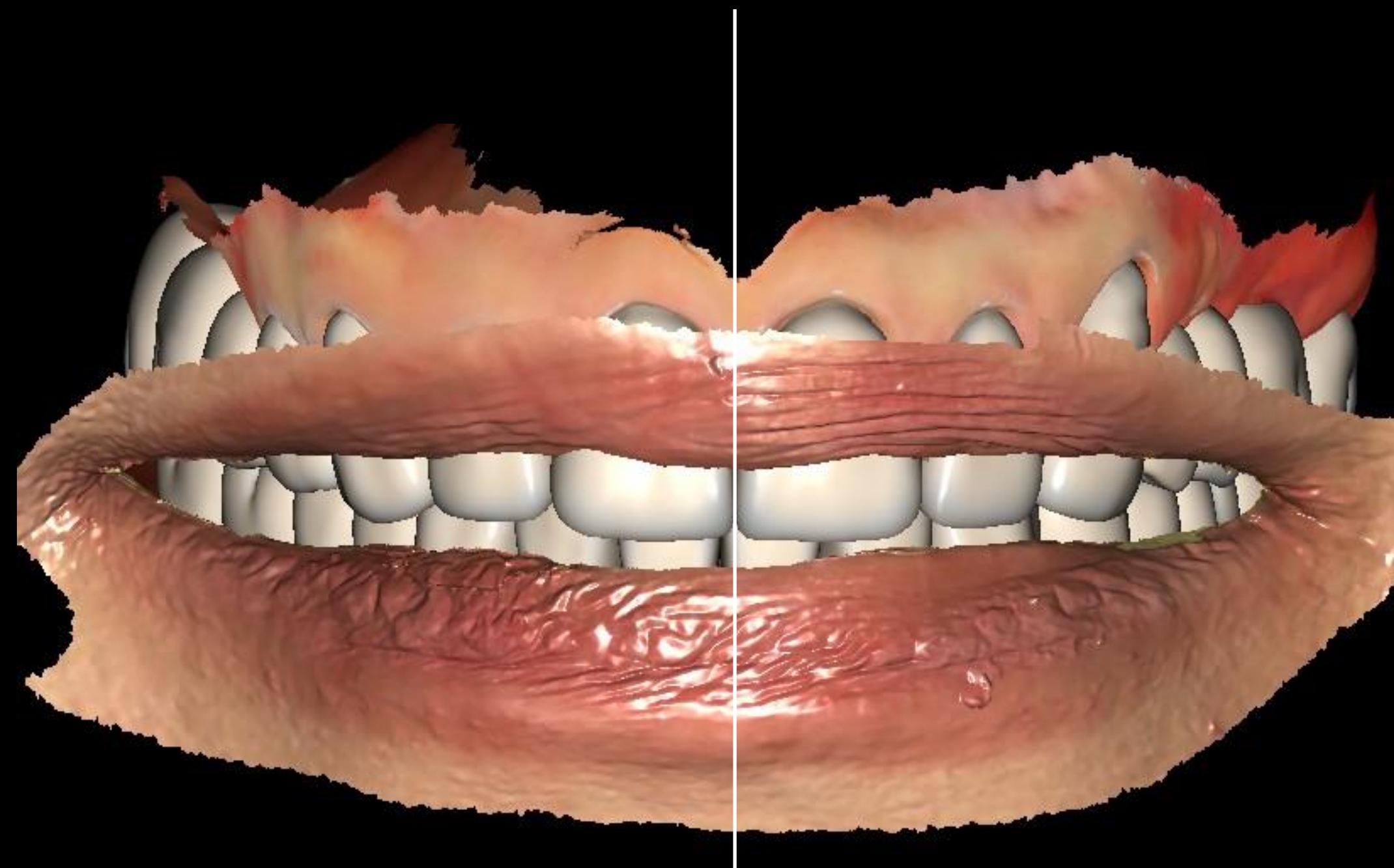


# Final Prosthesis



**Model-less , Stock Abutment, 3 layer Block, CT data(AI Occlusal Plane)**

# Final Prosthesis



**Model-less , Stock Abutment, 3 layer Block, CT data(AI Occlusal Plane)**



Pre Op



Full mouth provisional crown 2<sup>nd</sup>

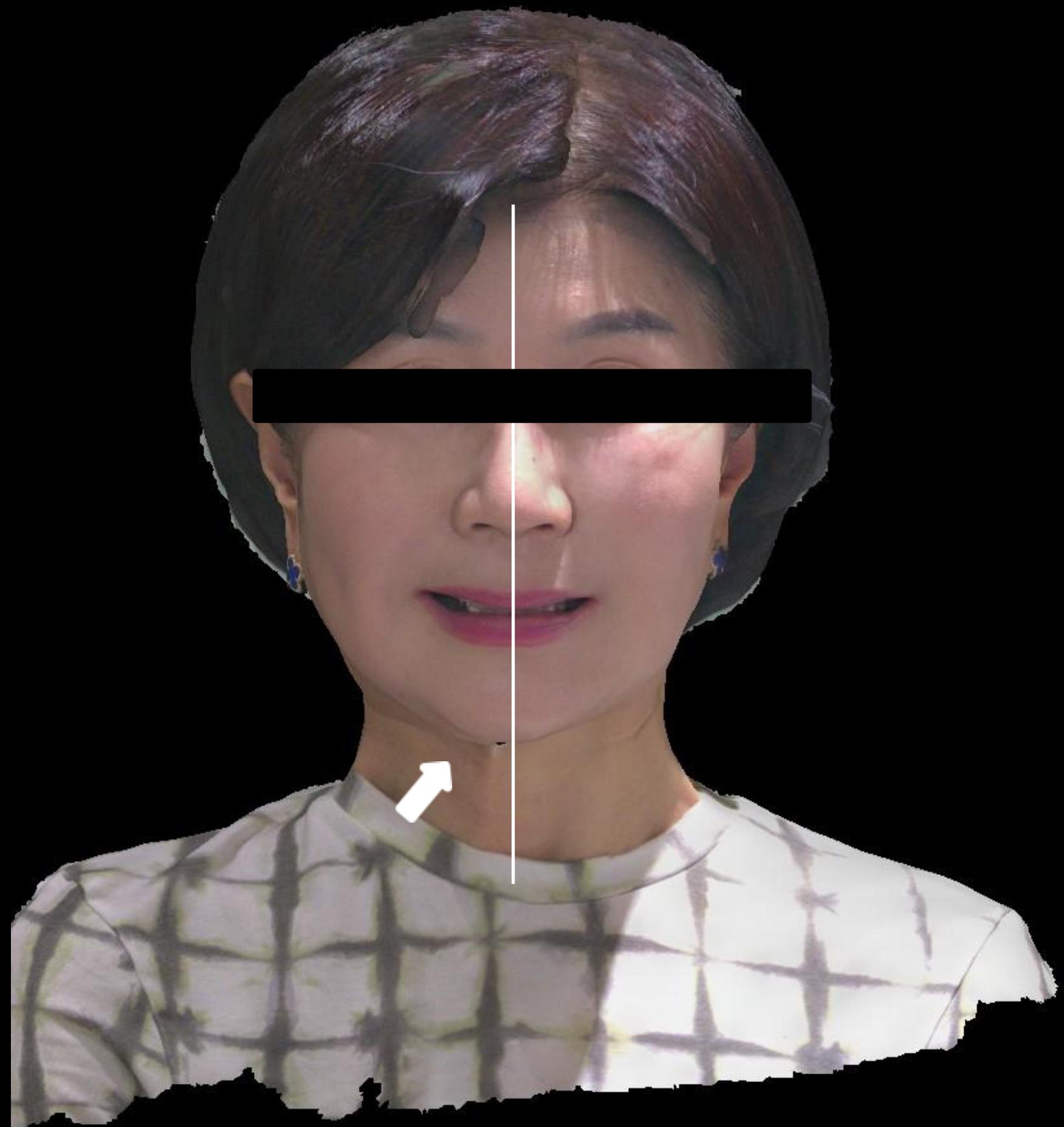


Implant cr provisional crown 1<sup>st</sup>

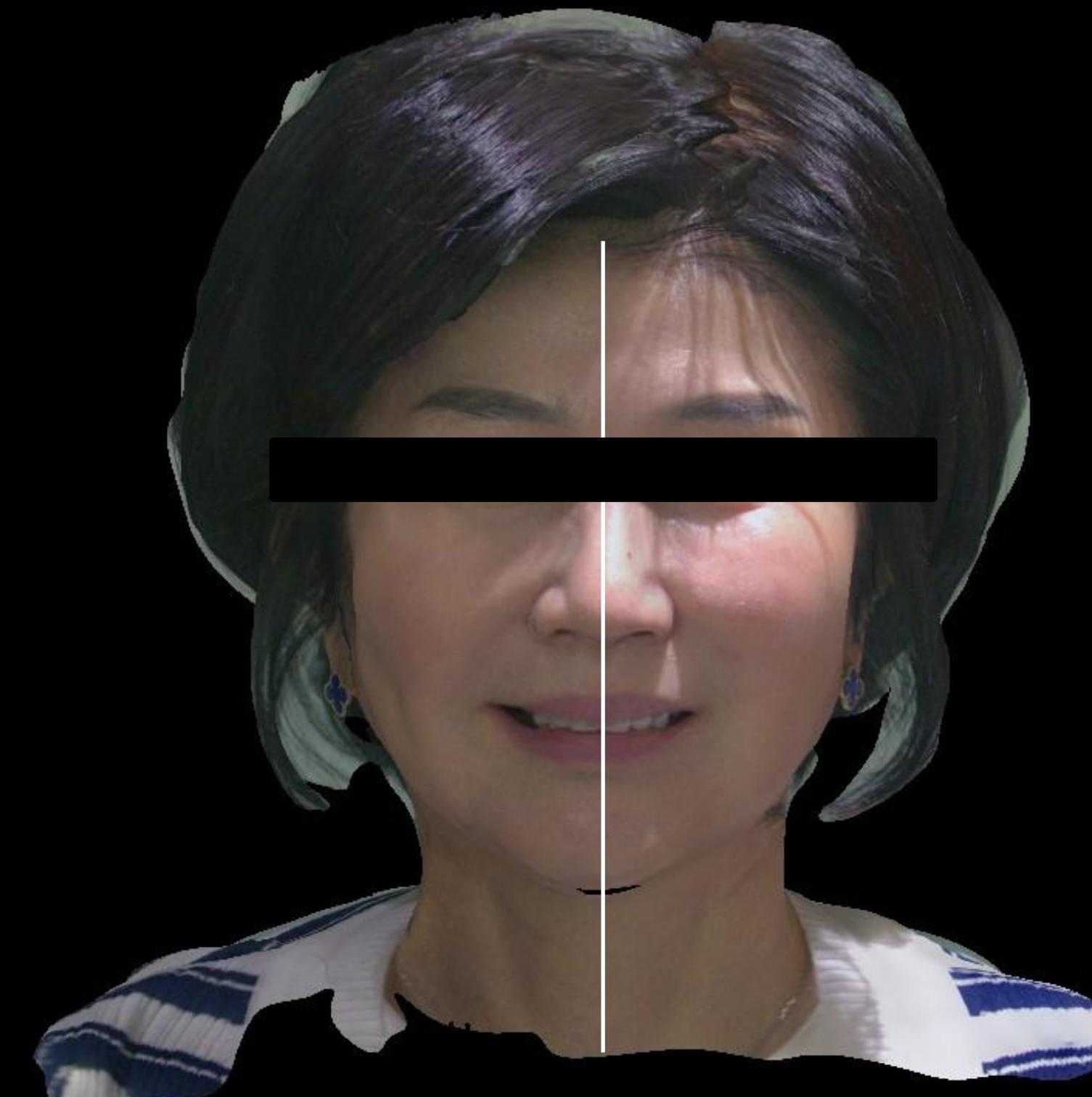


Full mouth Final Prosthesis

Model-less , Stock Abutment, 3 layer Block, CT data(AI Occlusal Plane)



**Consulting Face Scan data**



**Final Face Scan data**

# Contents

Introduction

Tooth oriented

Facial driven

CT centered

**BTS** - bite impressions and scanning with model scanner

**BOS** - bite impressions and scanning with IOS

**IOS** - intra oral scanning

BTS BOS IOS

IOS - Natural teeth and simple case

Communication and consultation

Continuous upgrade and investment

BTS and BOS - implant and extensive case

Accurate and no investment

# Simple Digital Impression

## 1 B.T.S (Bite Tray Impression Scan)



## 2 IOS (Intra Oral Scan)

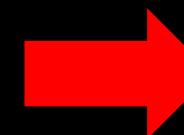


# BTS

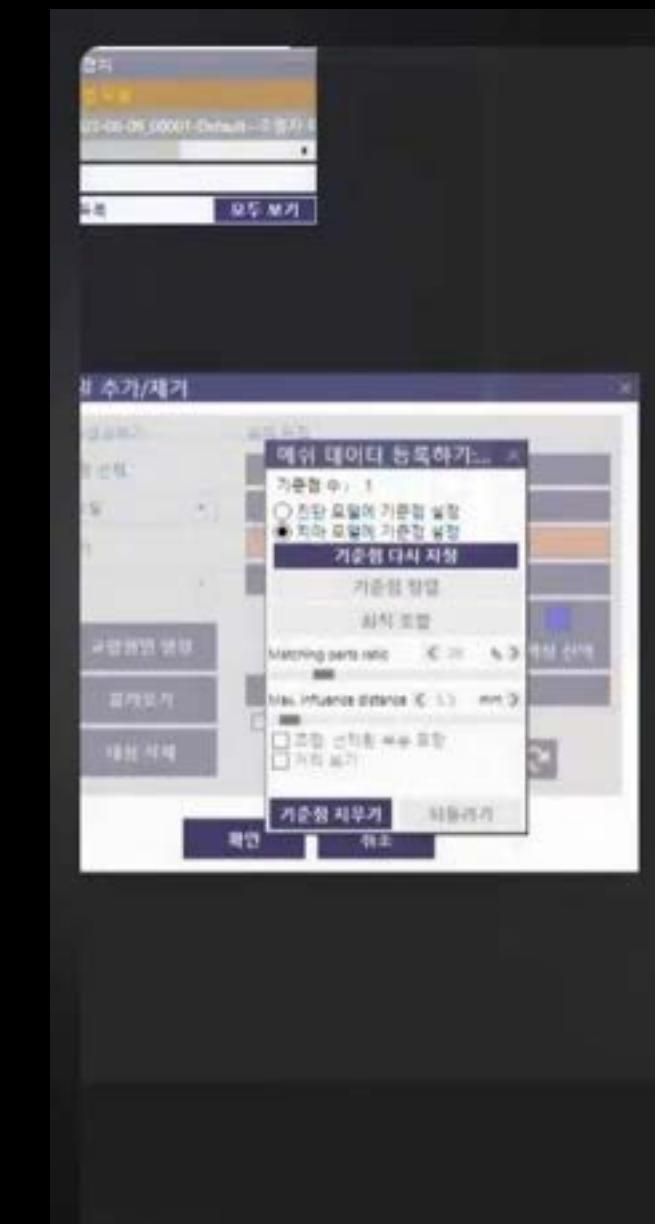
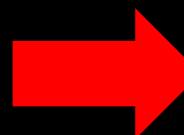
## Bite Tray Impression Scanning



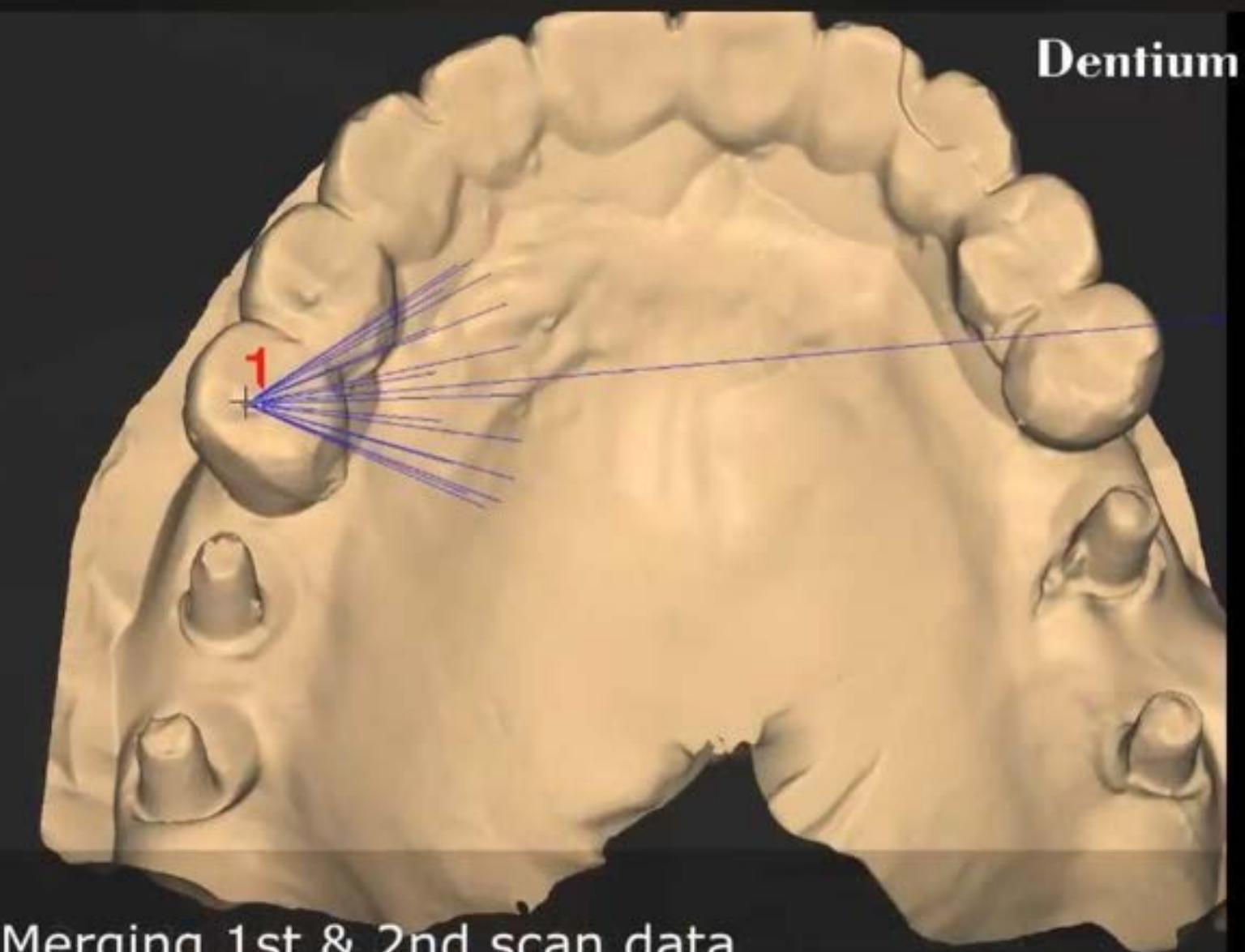
Impression  
Rubber Trimming



IMP SCAN



Merging 1st & 2nd scan data



# Dentium Dental Clinic **BTS** Process

## 1. Bite Tray Selection & Simulation



Full - Arch



Anterior - Exd



Anterior



Posterior - Metal



Posterior - Original

# Dentium Dental Clinic BTS Process

1. Bite Tray Selection & Simulation
2. Light body & Putty IMP



Nature Tooth & AB level IMP  
**Light Body + Putty**



Fixture level ( IMP Coping)  
**Medium Body + Putty**

# Dentium Dental Clinic **BTS** Process

1. Bite Tray Selection & Simulation
2. Light body & Putty IMP
3. Buccal & Lingual Molding

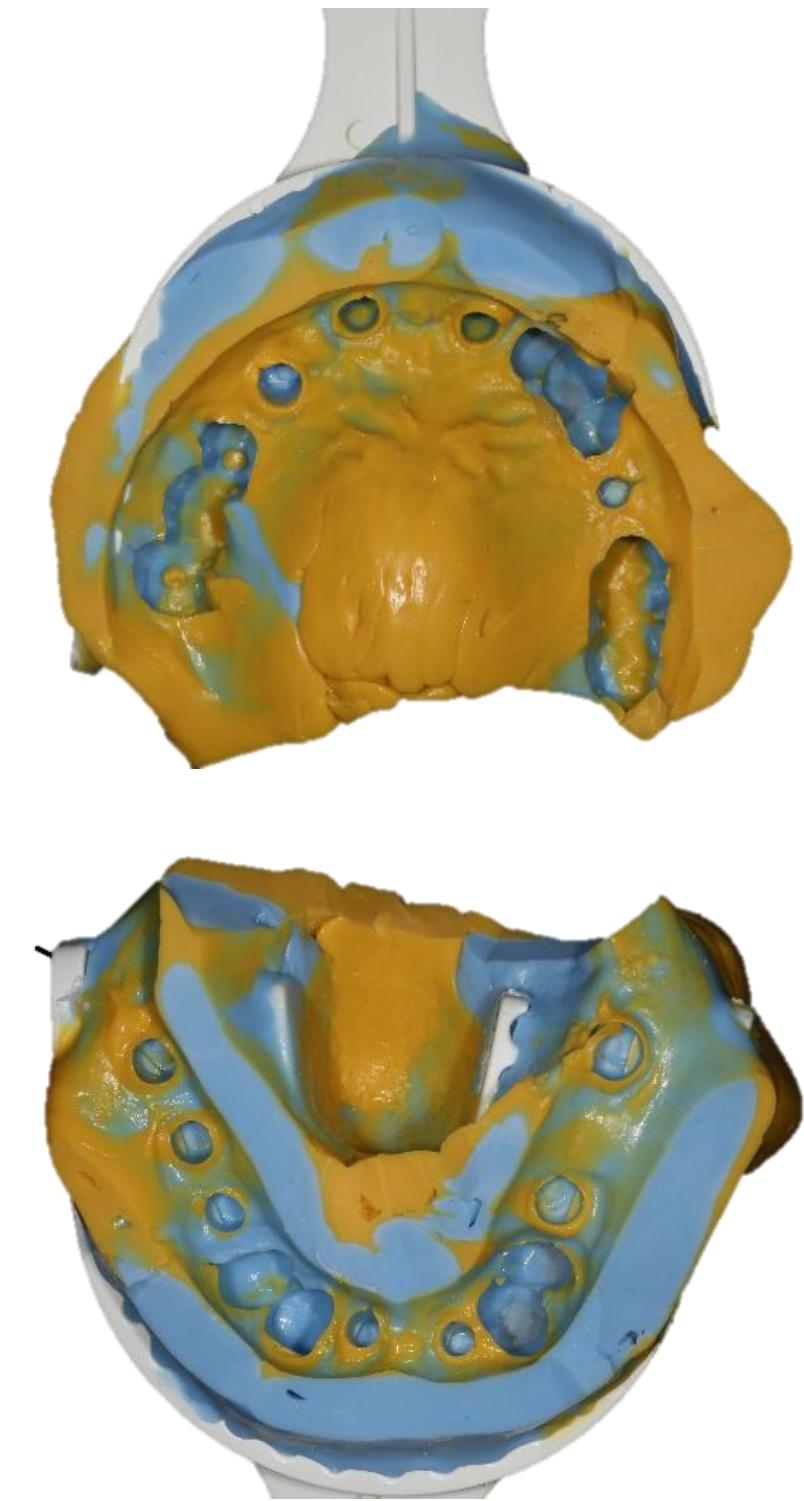


# Dentium Dental Clinic **BTS** Process

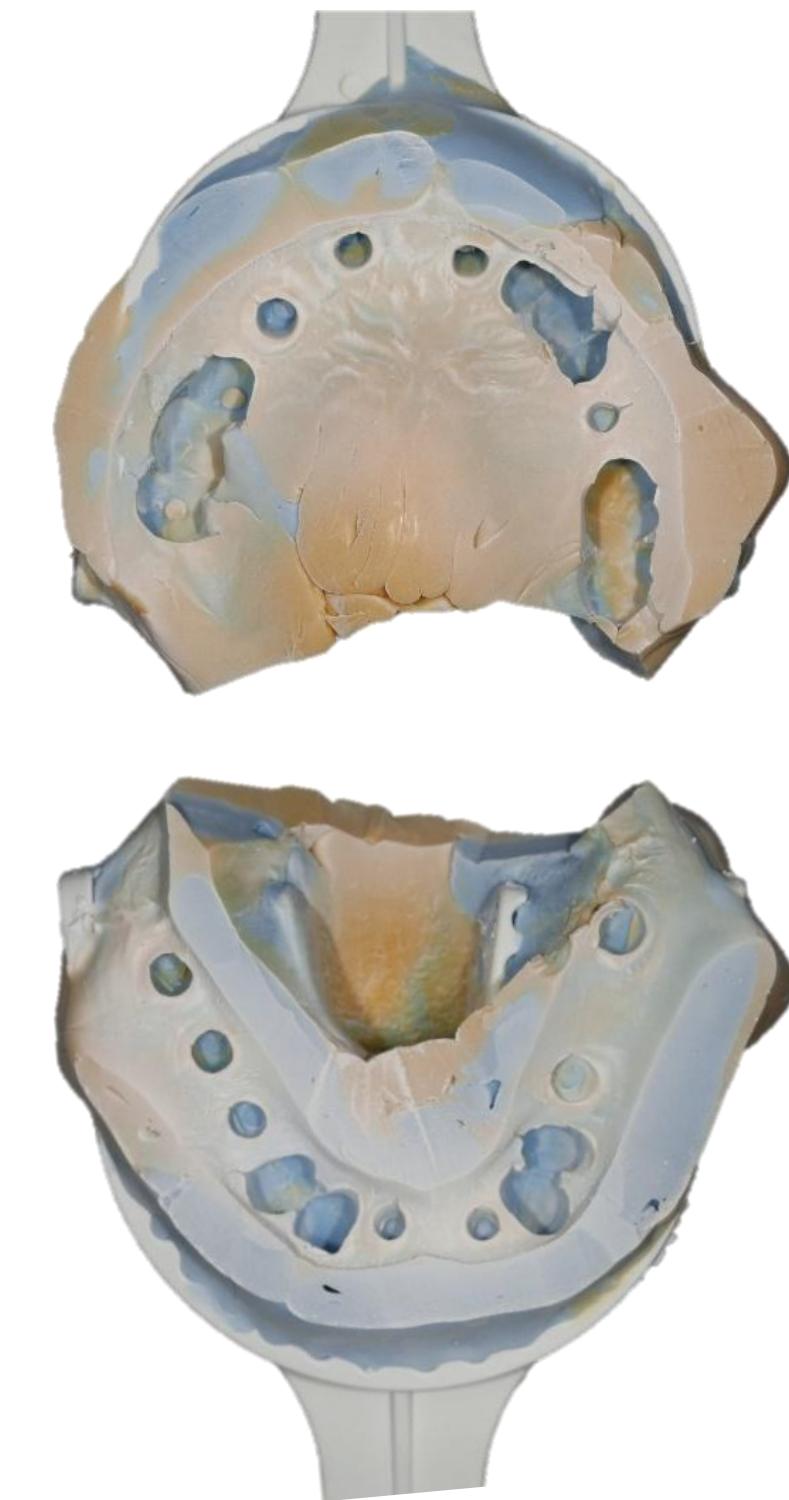
1. Bite Tray Selection & Simulation
2. Light body & Putty IMP
3. Buccal & Lingual Molding
4. Mandibular Fixation



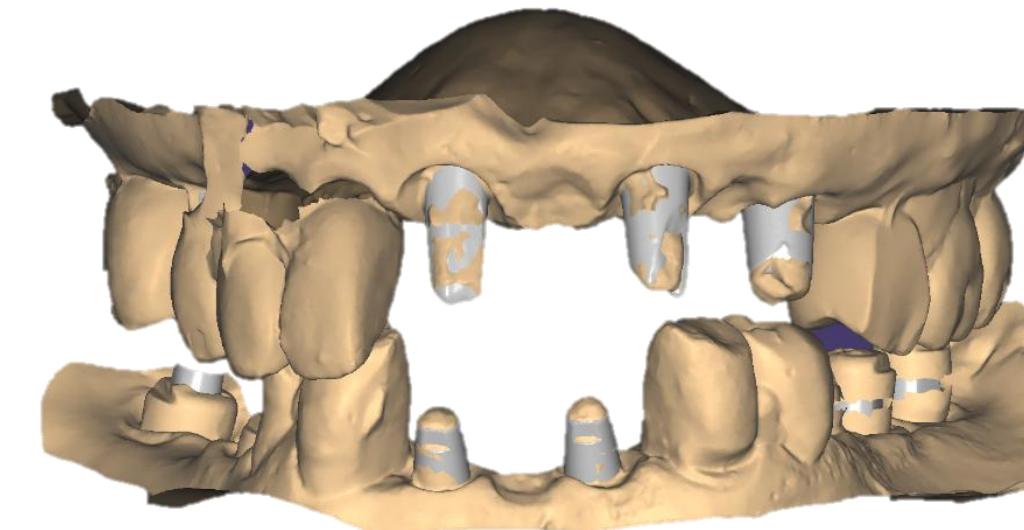
# B.T.S (Bite Tray Impression Scan)



Take an impression  
using putty and light body



Spray



Scan the model with a model scanner



**B** ite

**T** ray impression

**S** canning

**\*\* 90p B.T.S VOD**

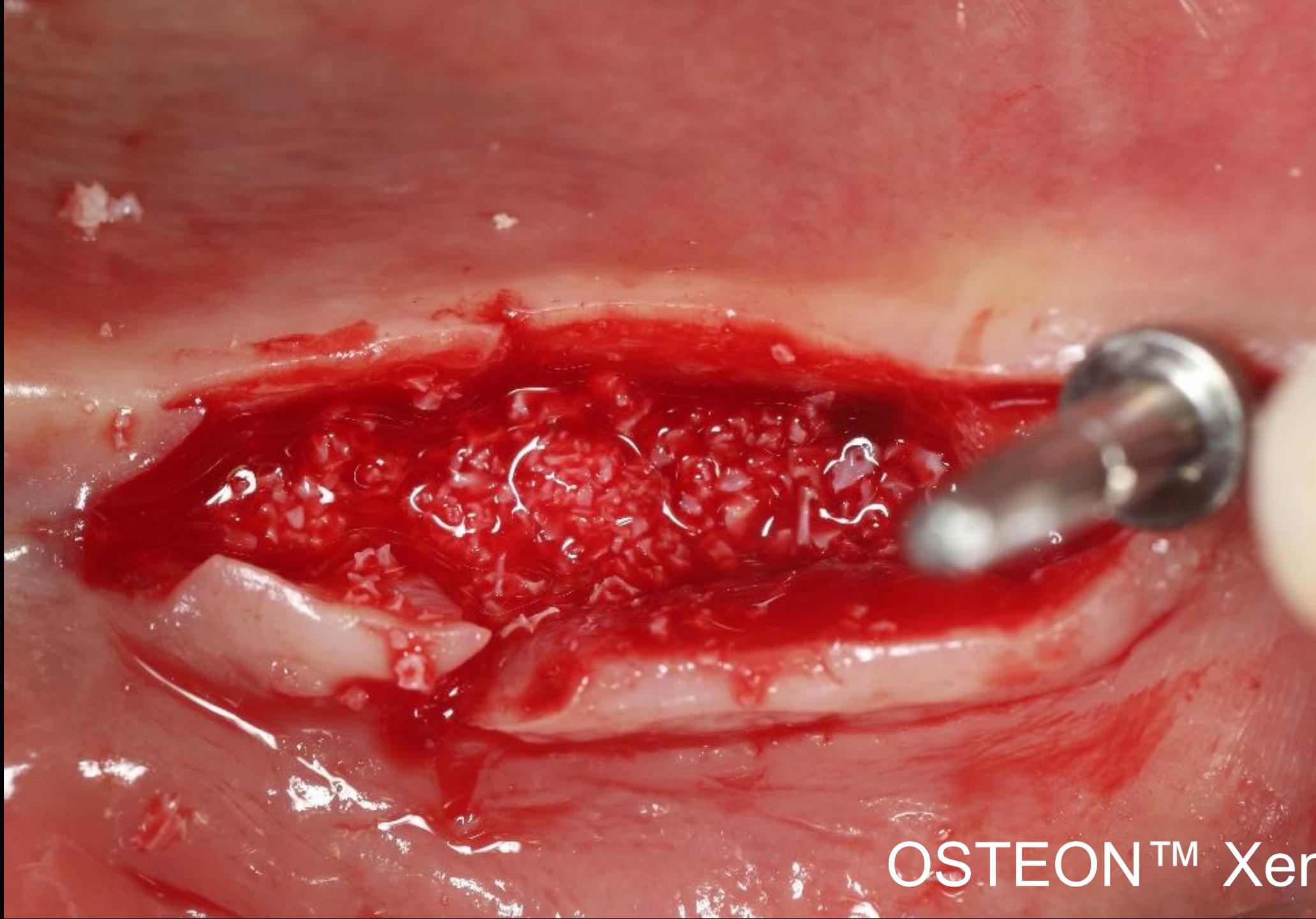
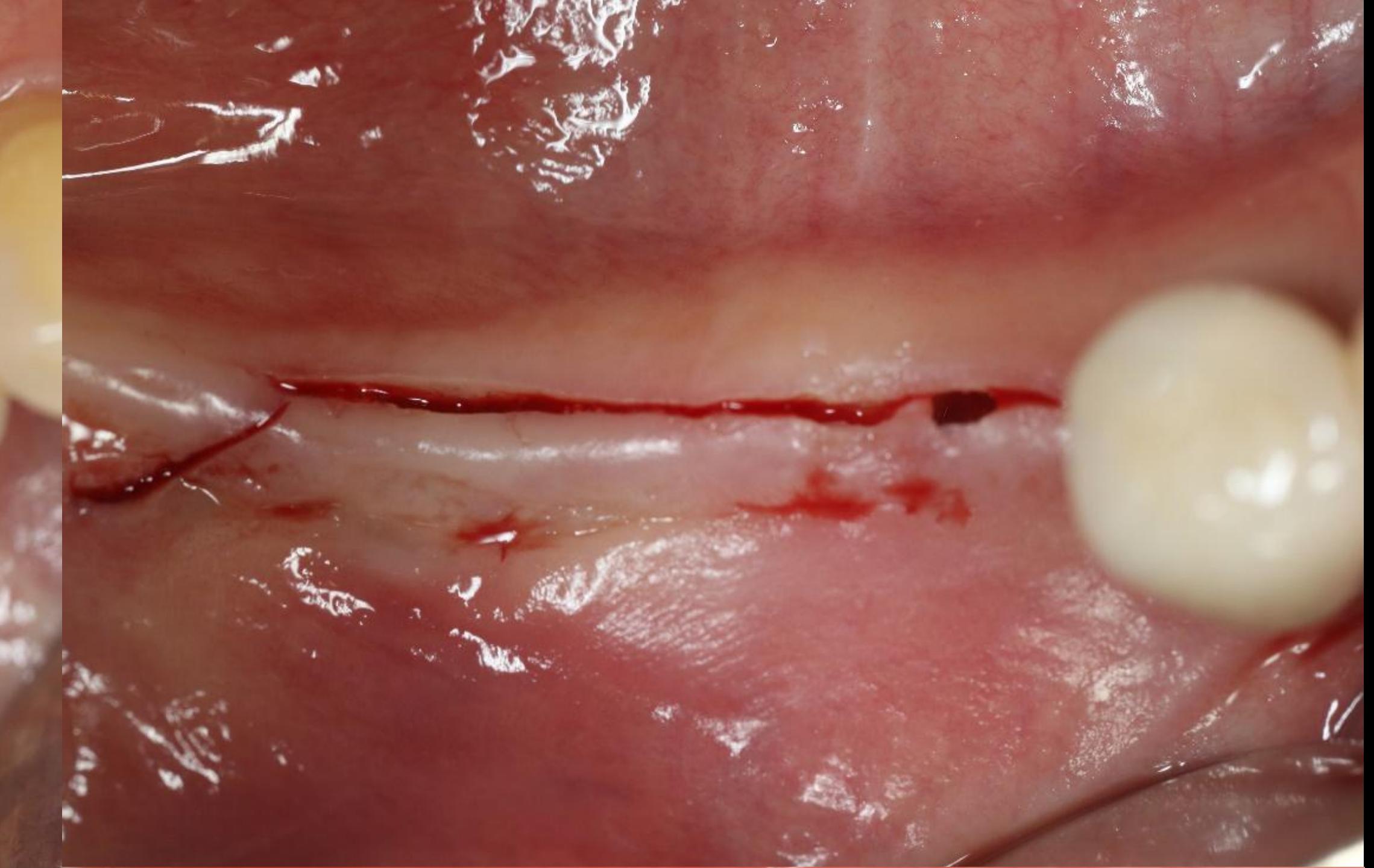
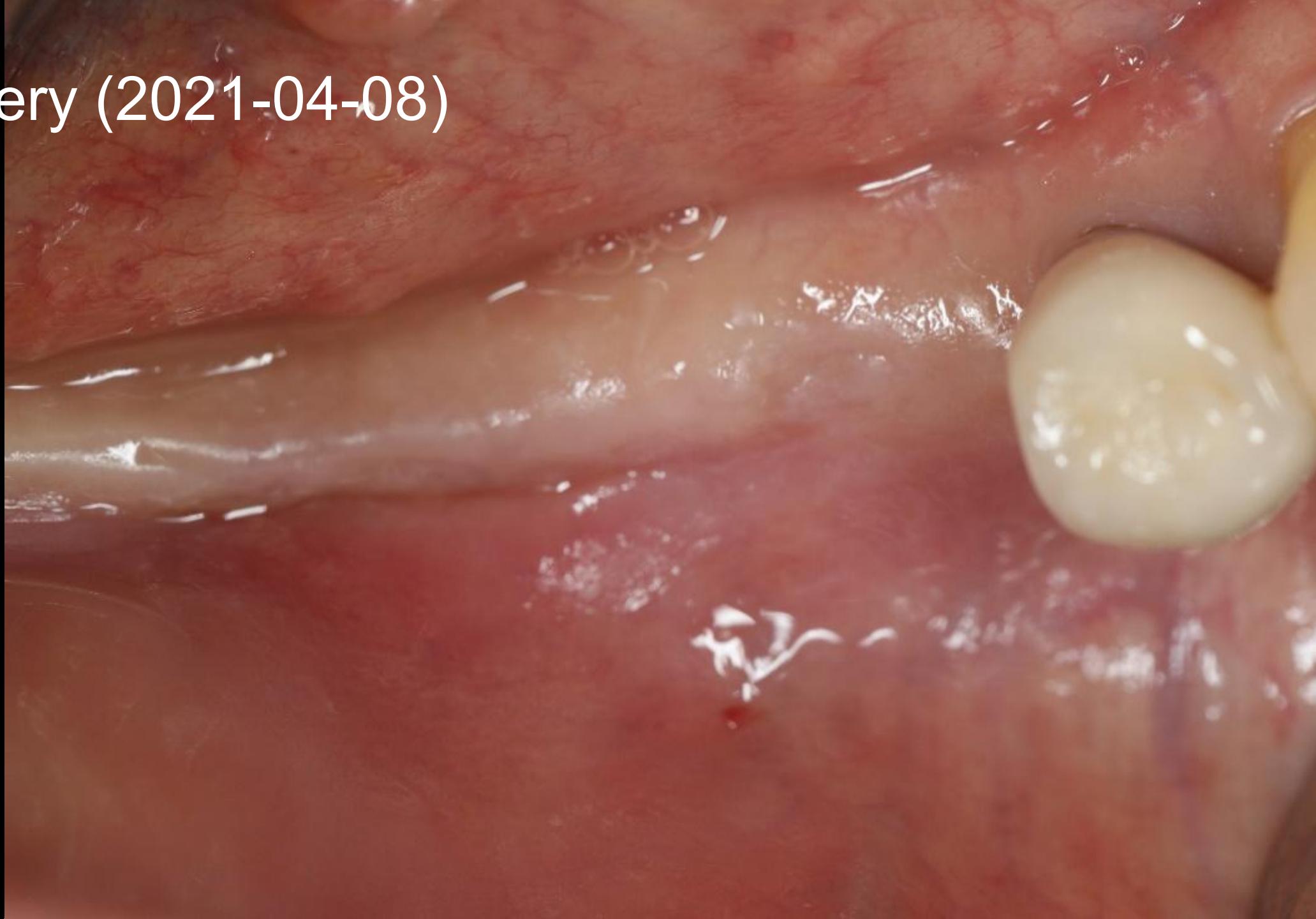
Pre-op (2021-04-08)



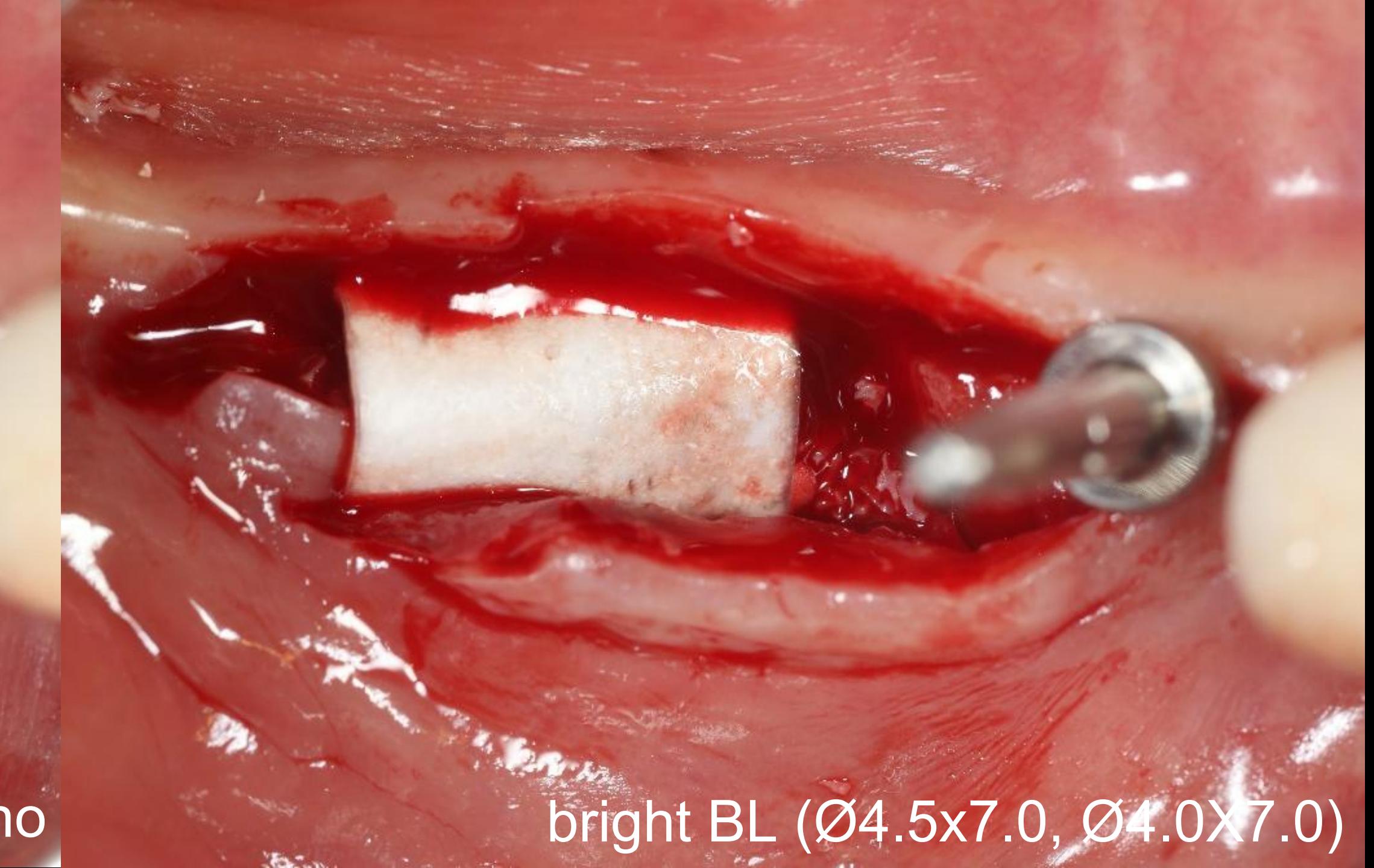
Final prosthesis (2022-05-11)



Surgery (2021-04-08)

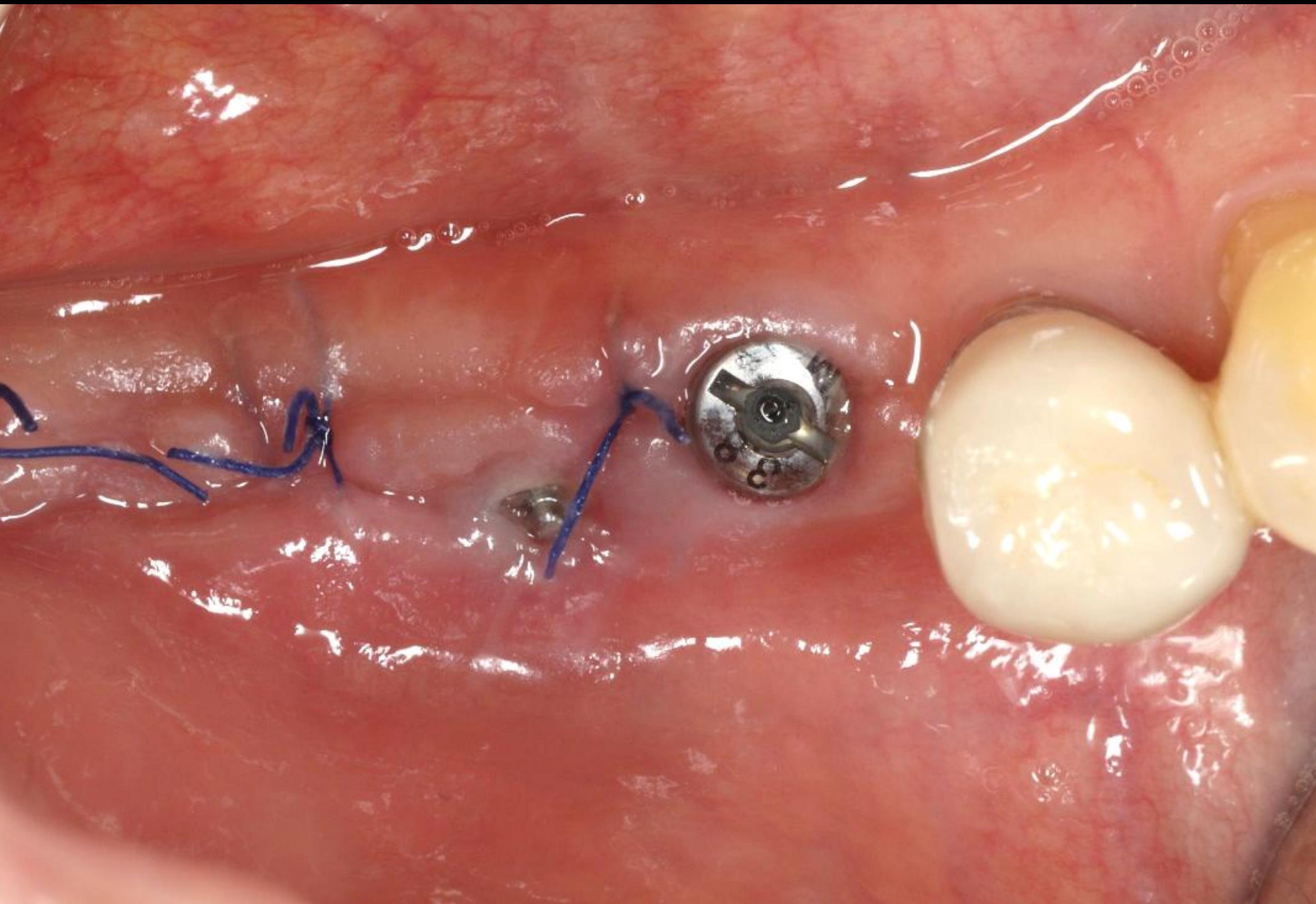


OSTEON™ Xeno

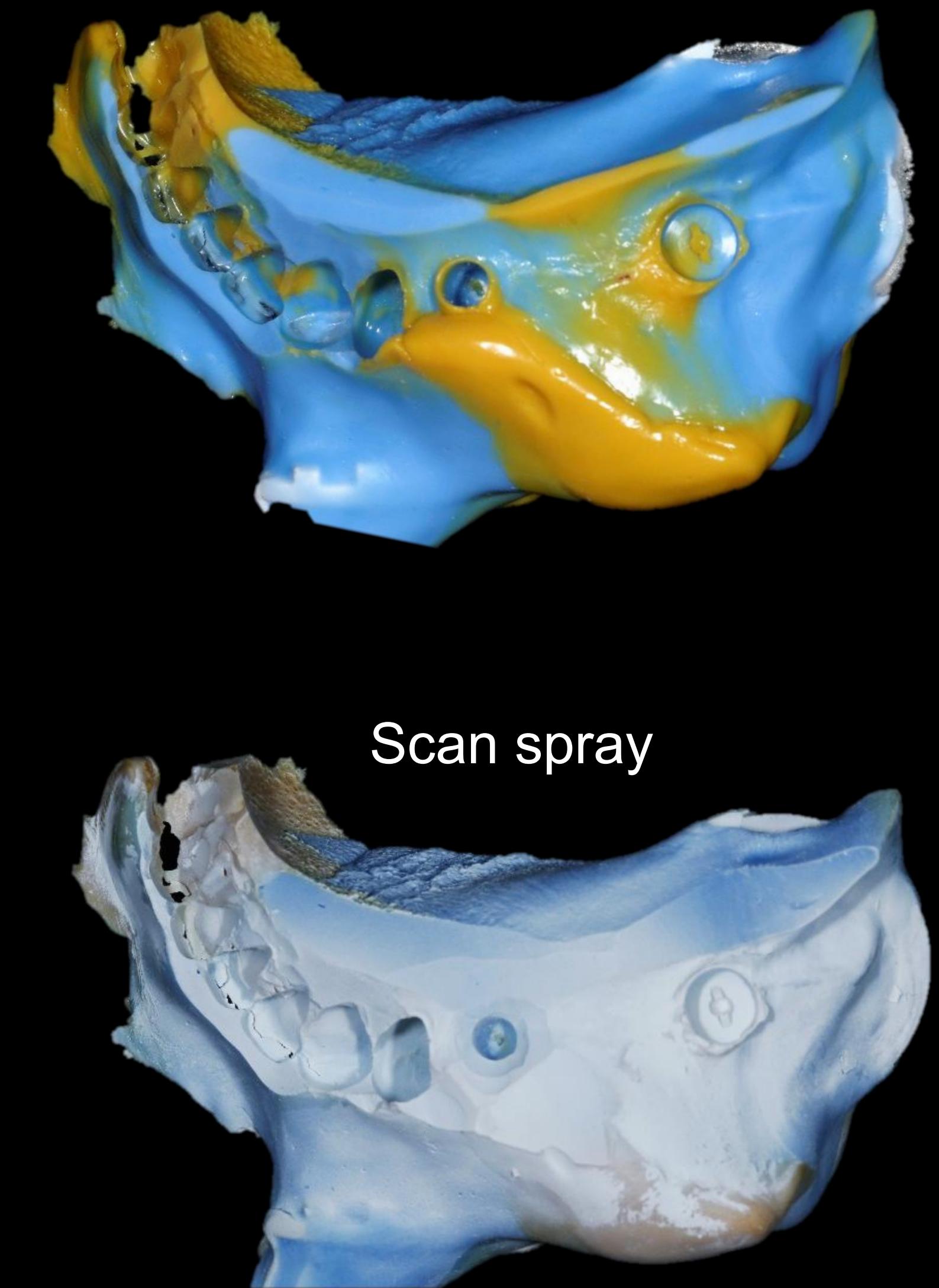
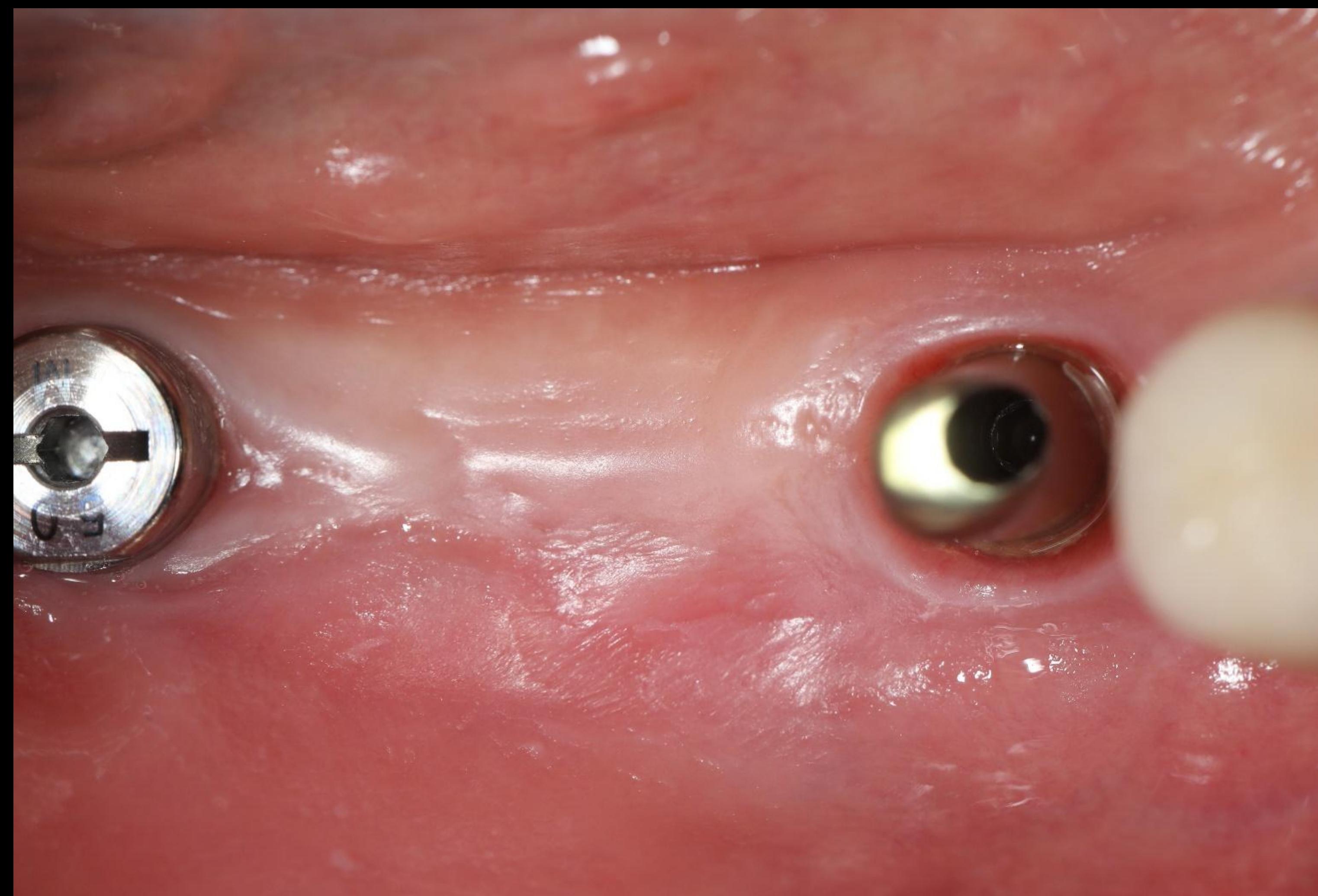


bright BL ( $\varnothing 4.5 \times 7.0$ ,  $\varnothing 4.0 \times 7.0$ )

Healing : 2 weeks (2021-04-22)

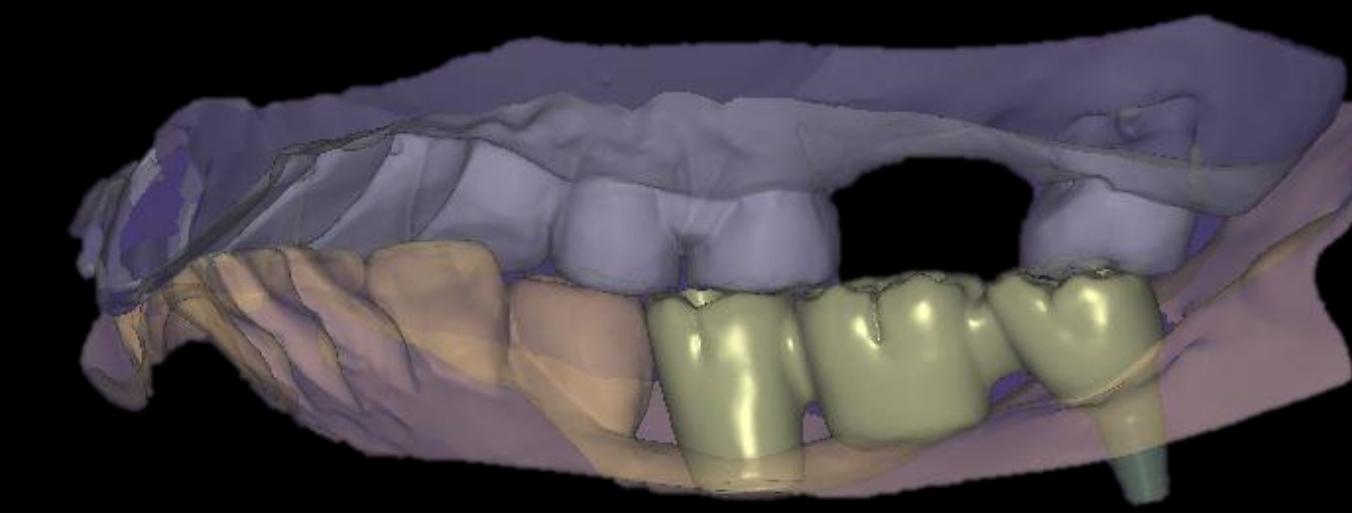
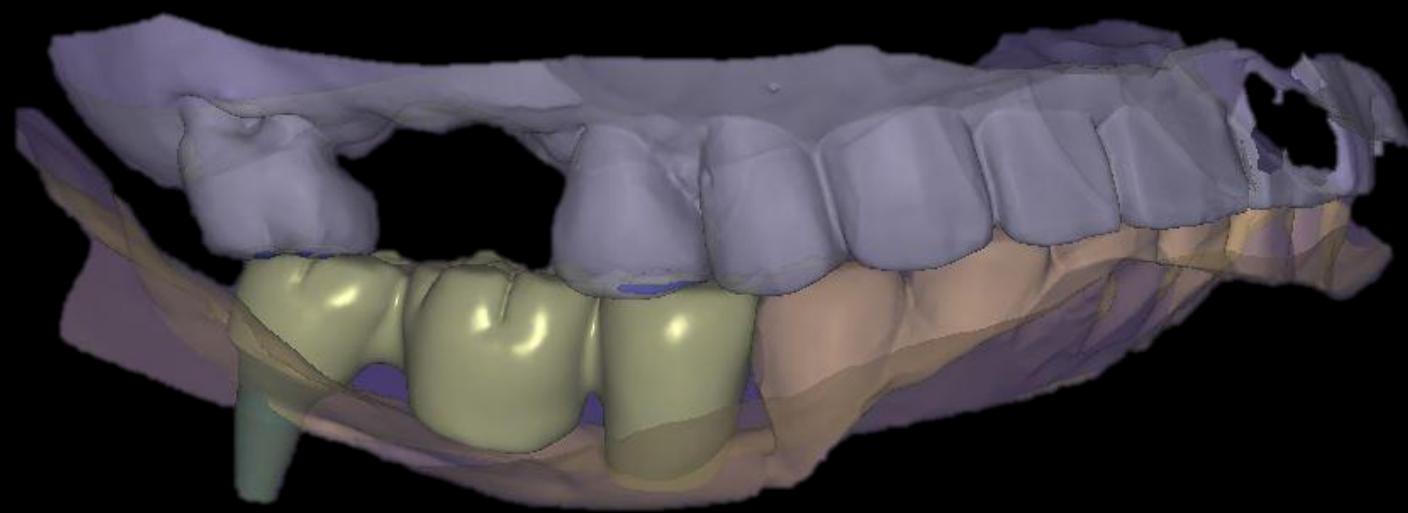
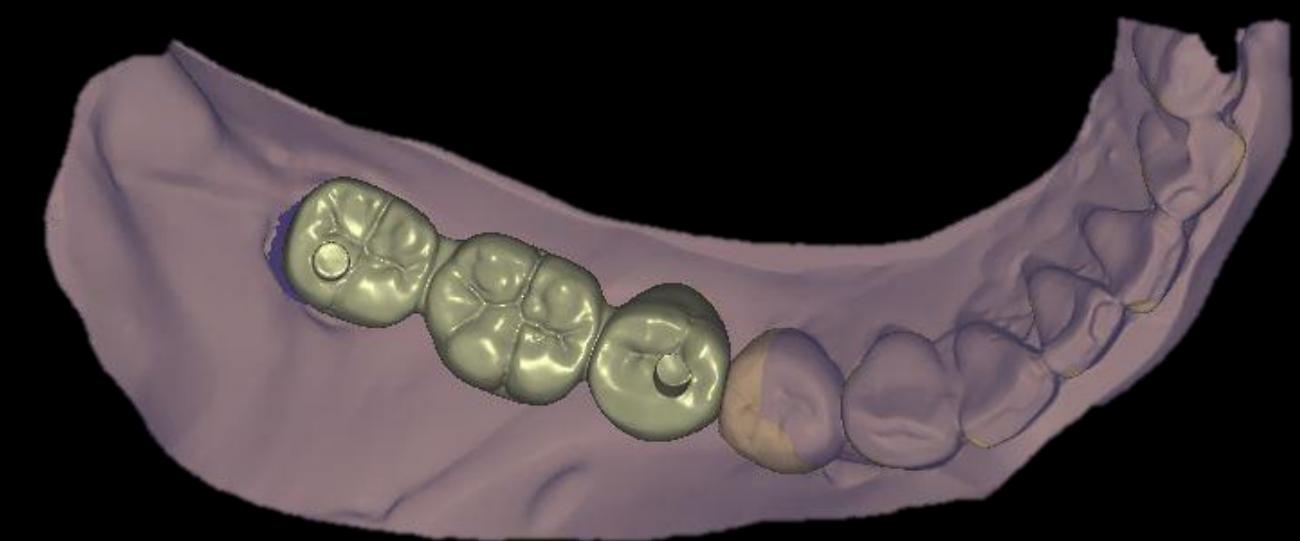
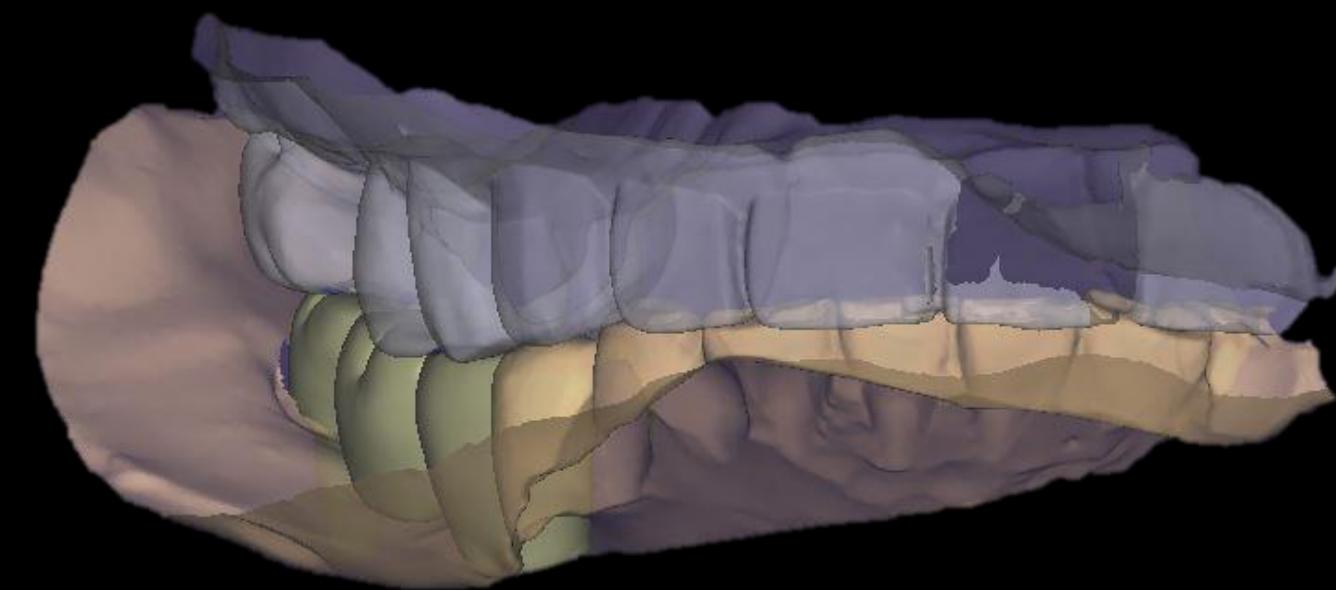


Impression trimming & Scan



Scan spray

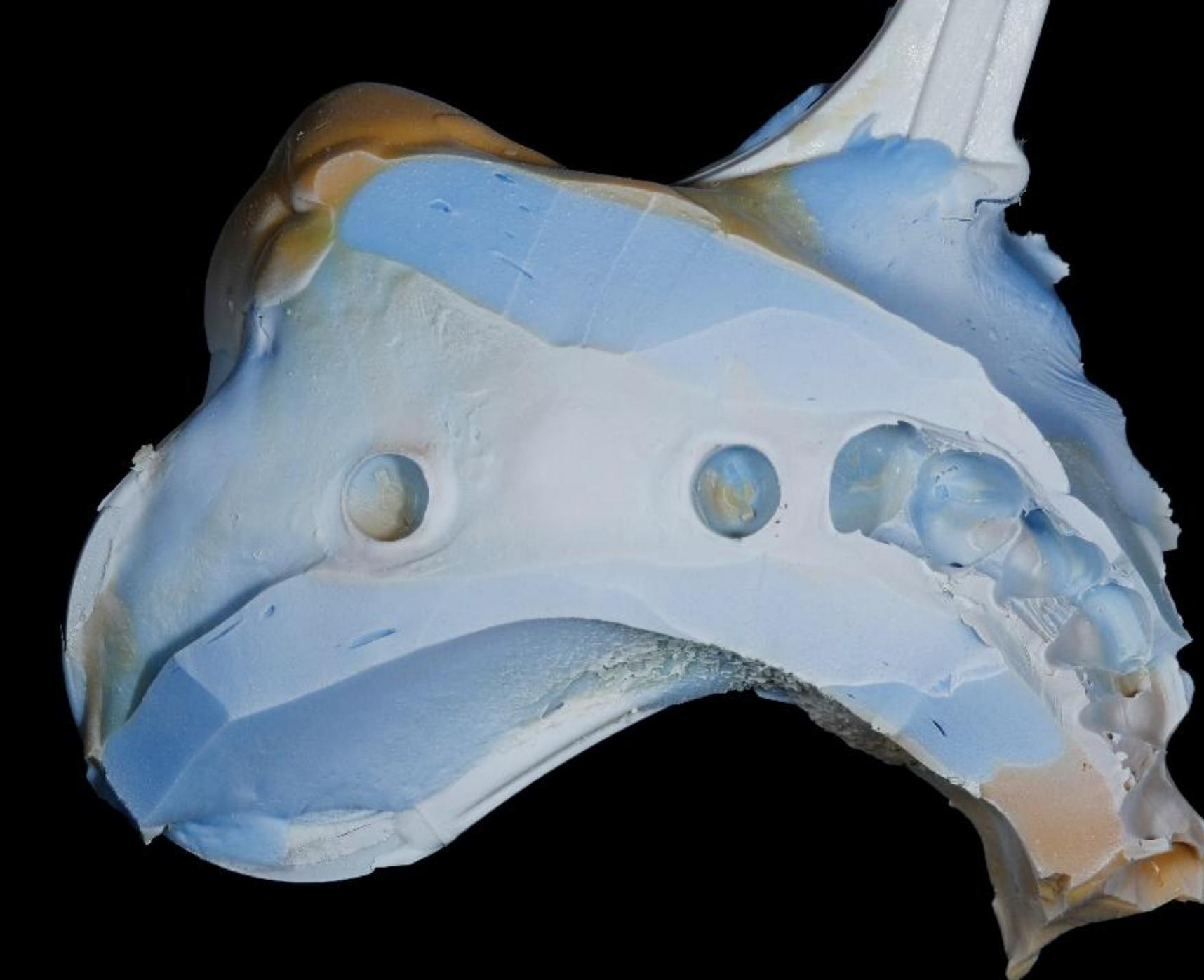
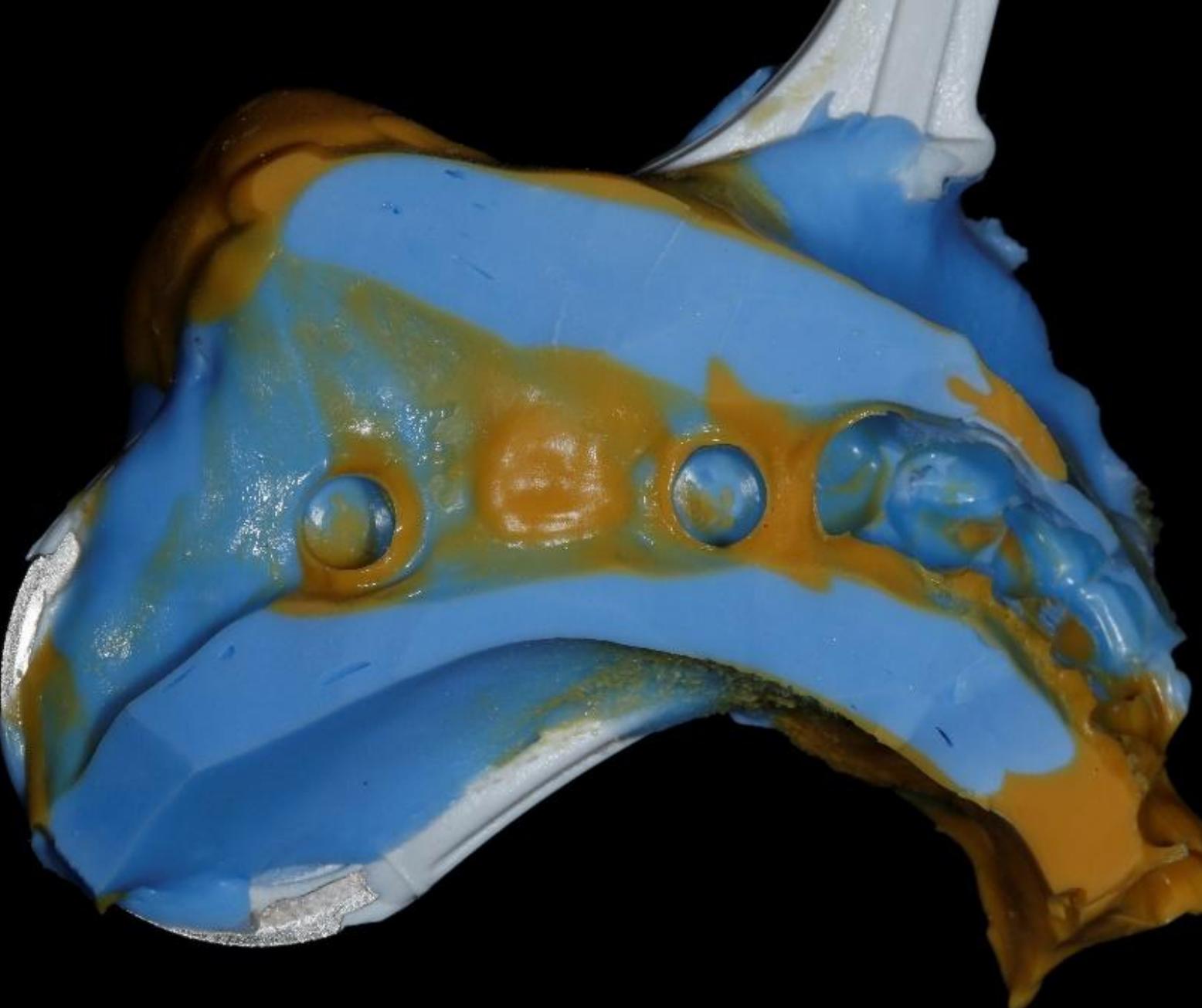
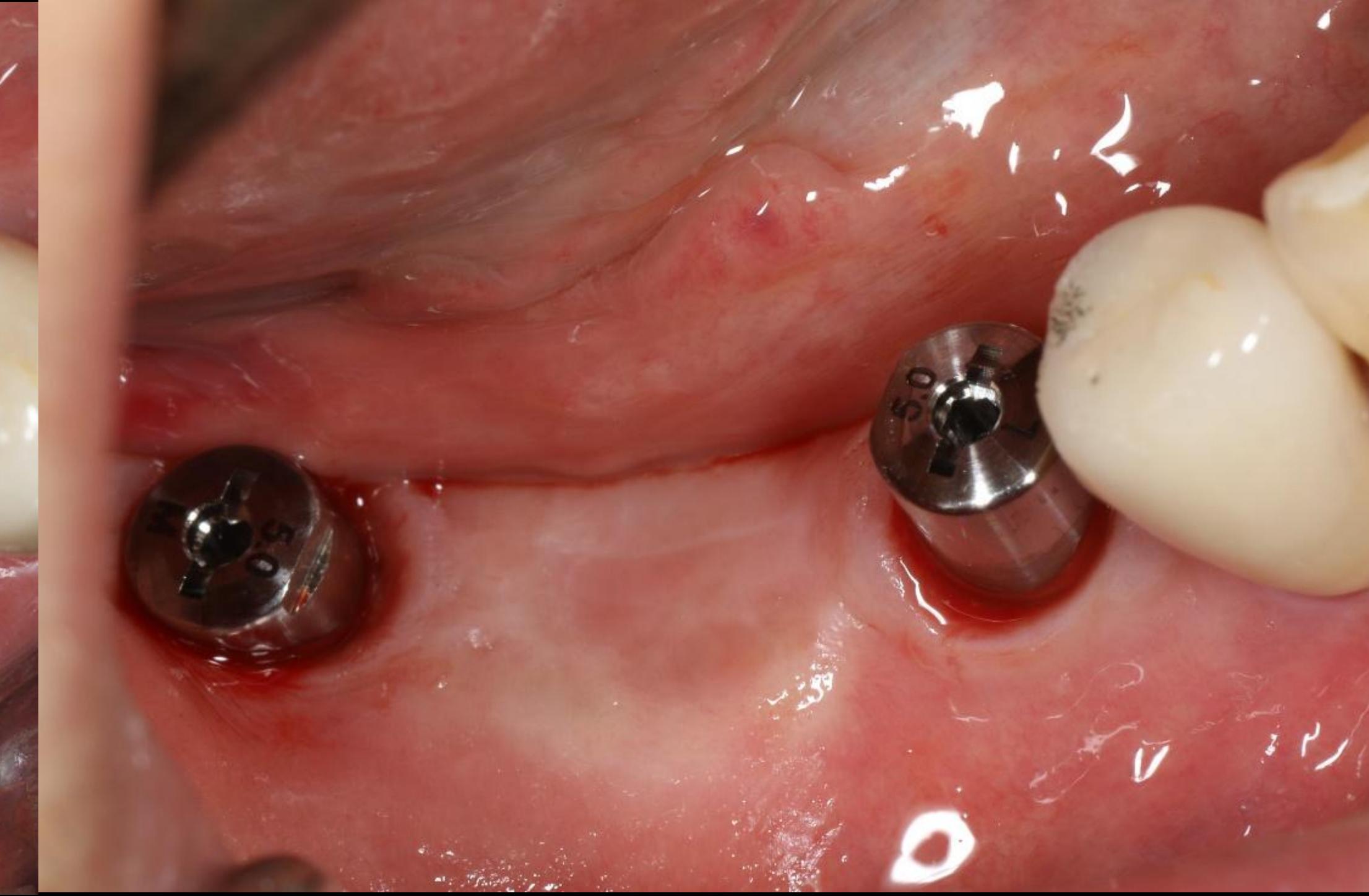
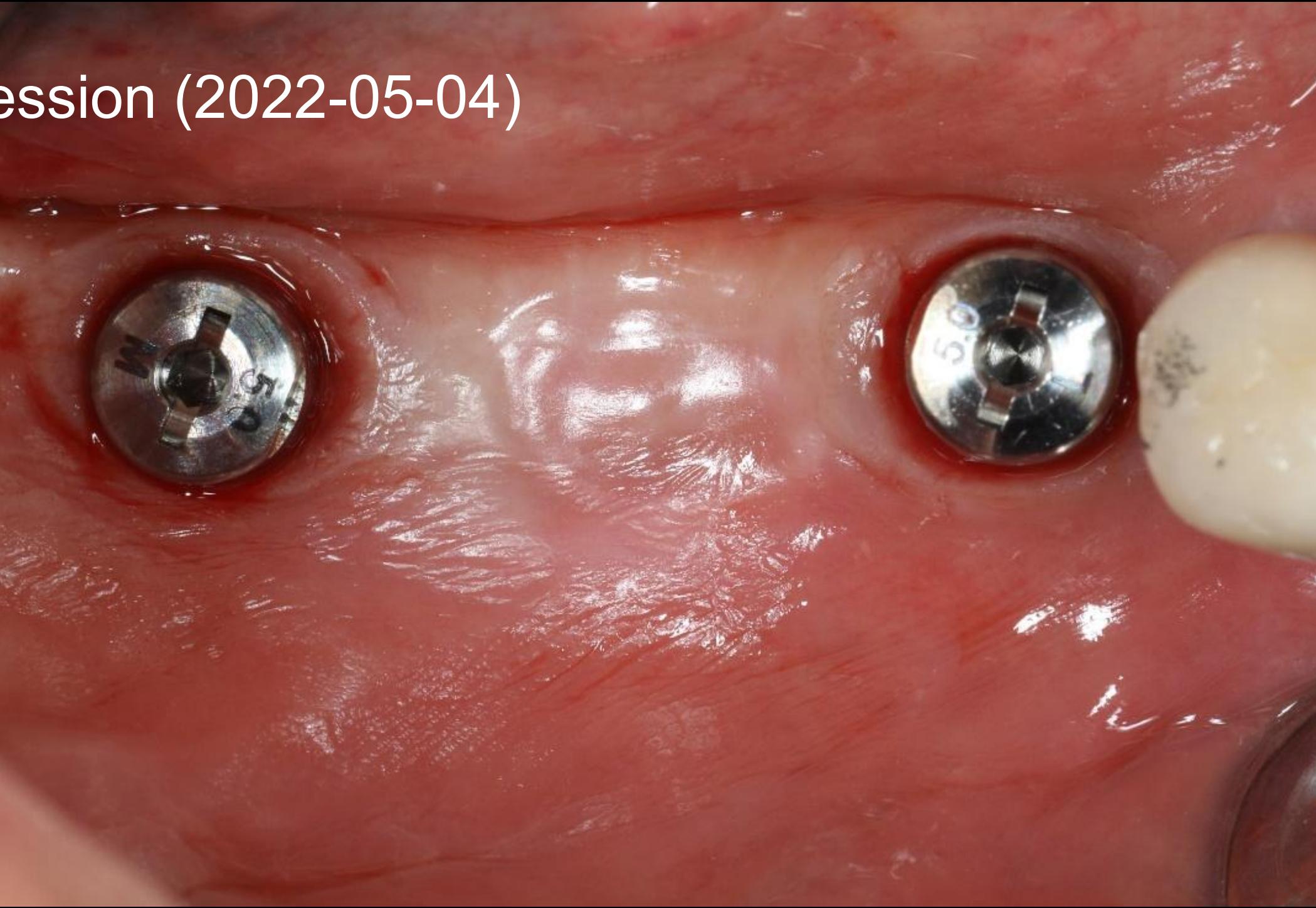
# CAD Design (Temporary)



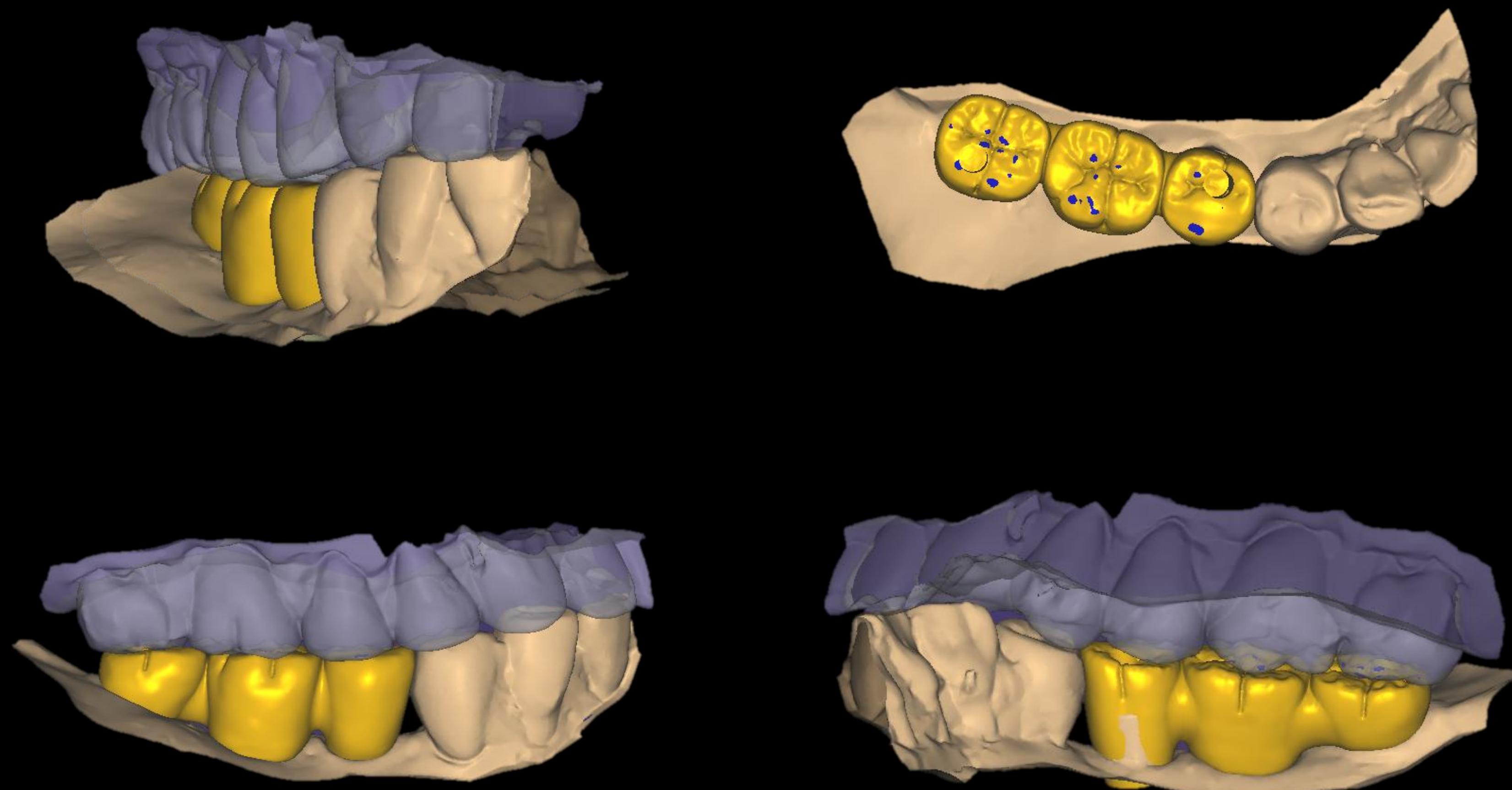
Provisional restoration (2021-08-18)



Impression (2022-05-04)



# CAD Design (Final)



# Milling / Coloring / Sintering / Glazing



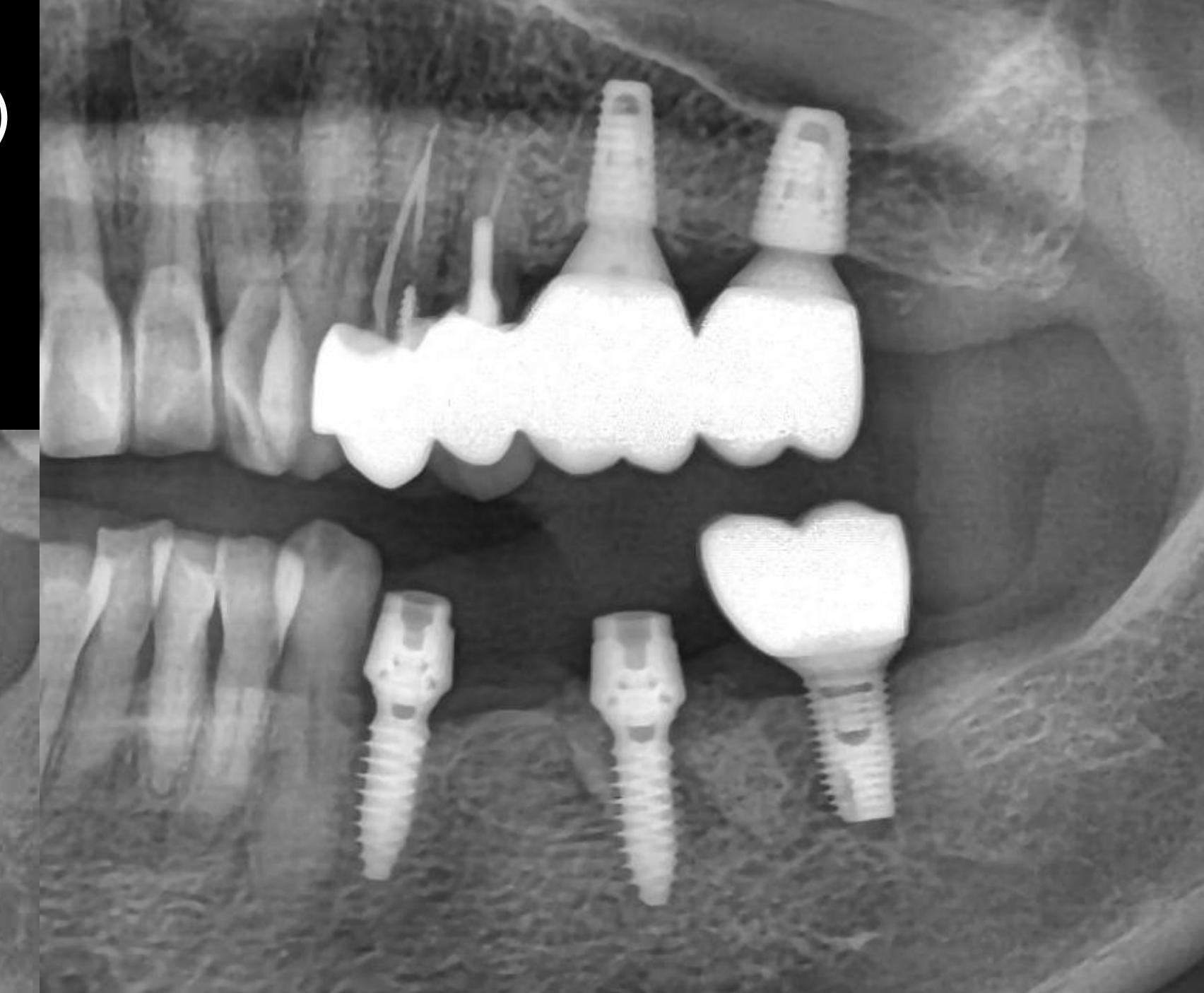
Final prosthesis (2022-05-19)



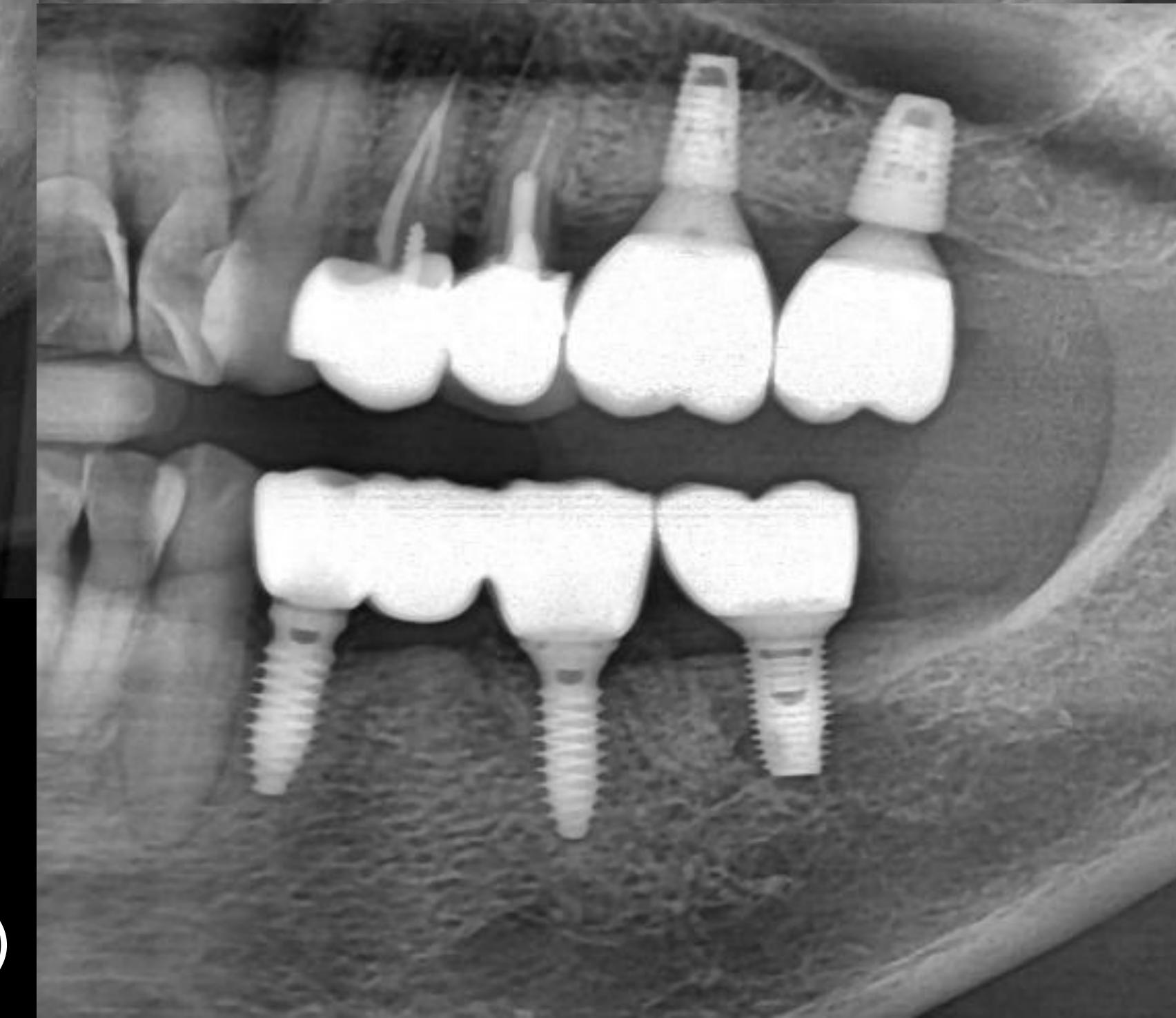
Pre-op (2023-03-08)



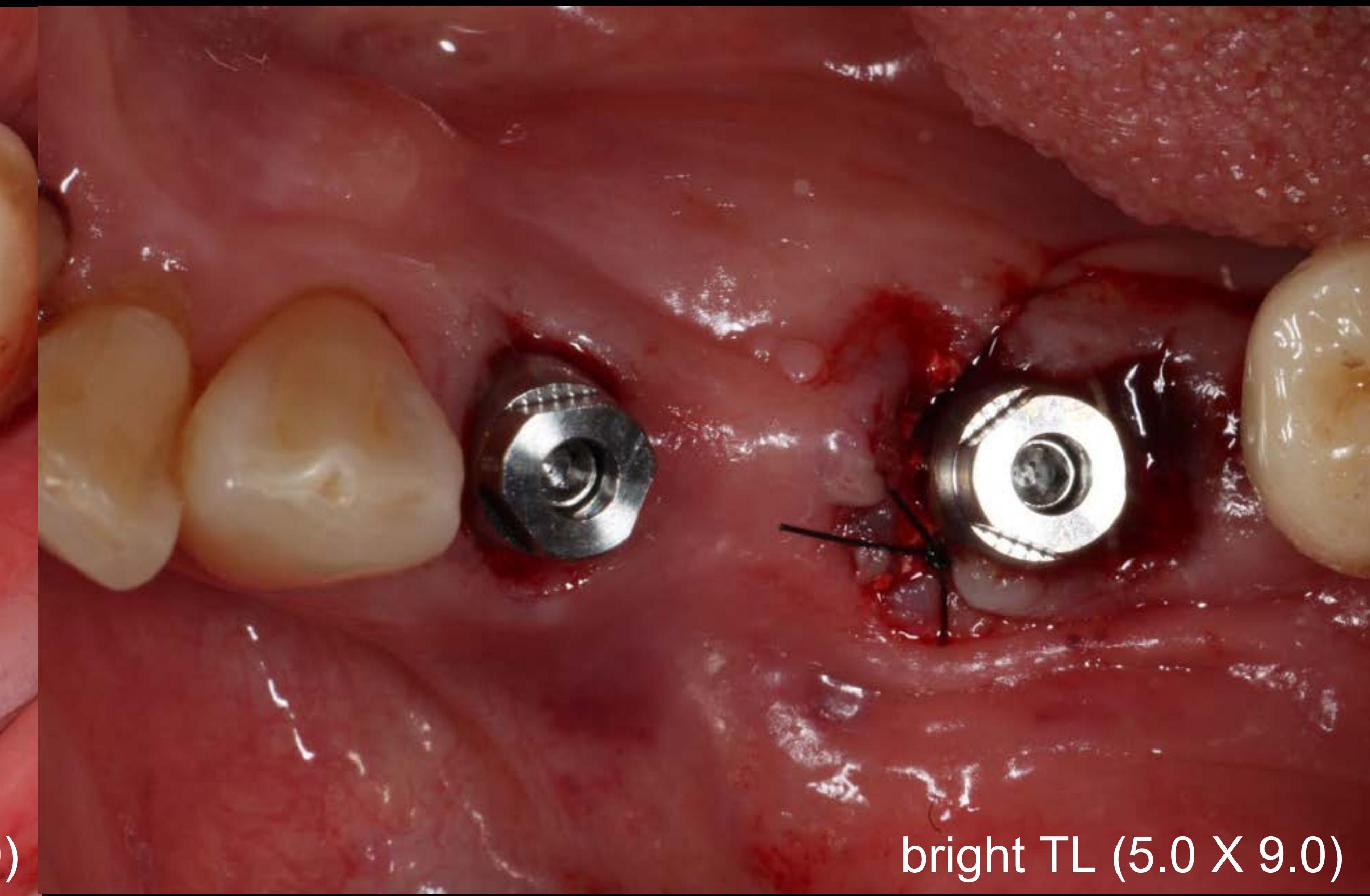
Post-op (2023-03-08)



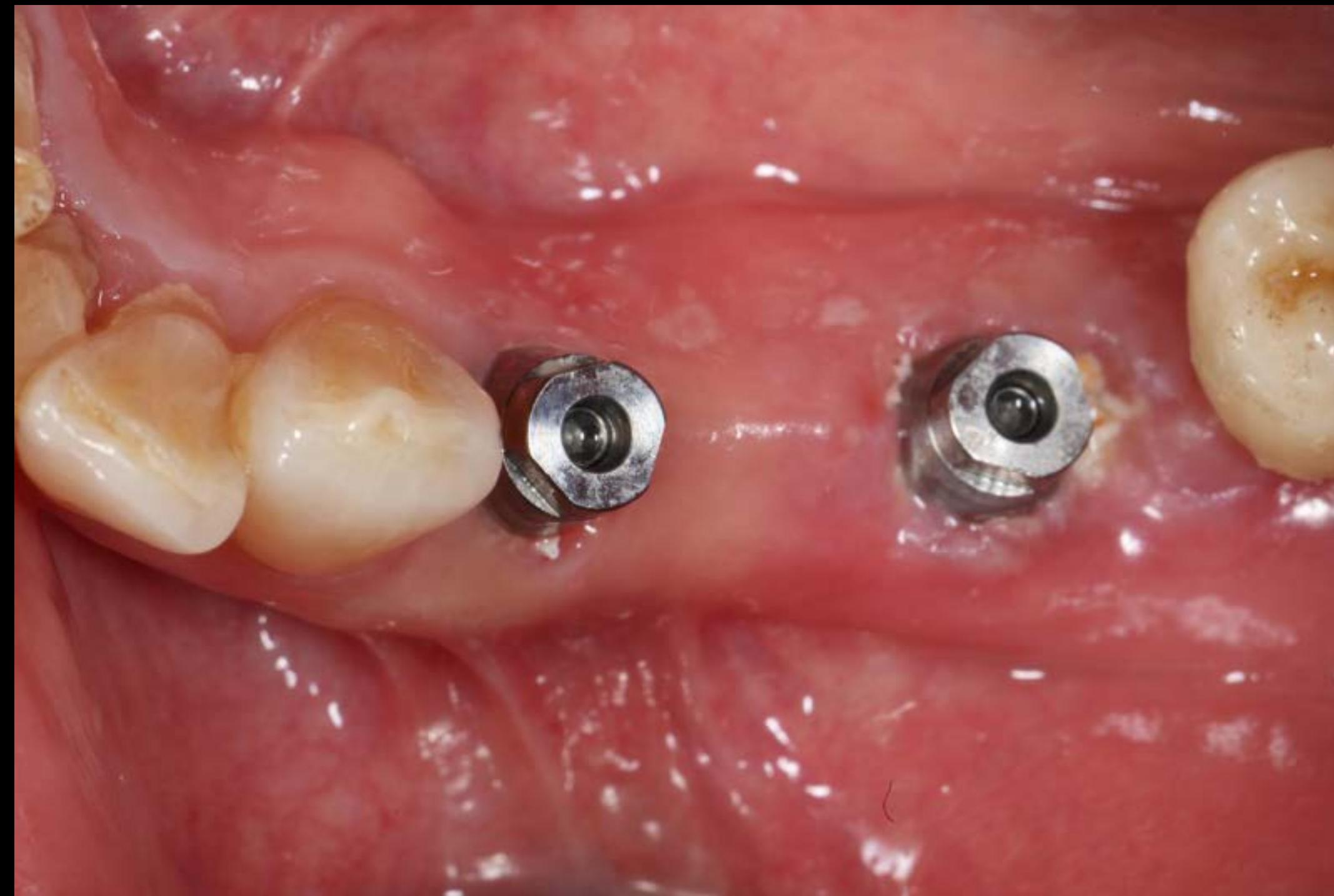
Final prosthesis (2023-06-29)



# Surgery (2023-03-08)



Healing : 2 weeks (2023-03-20)



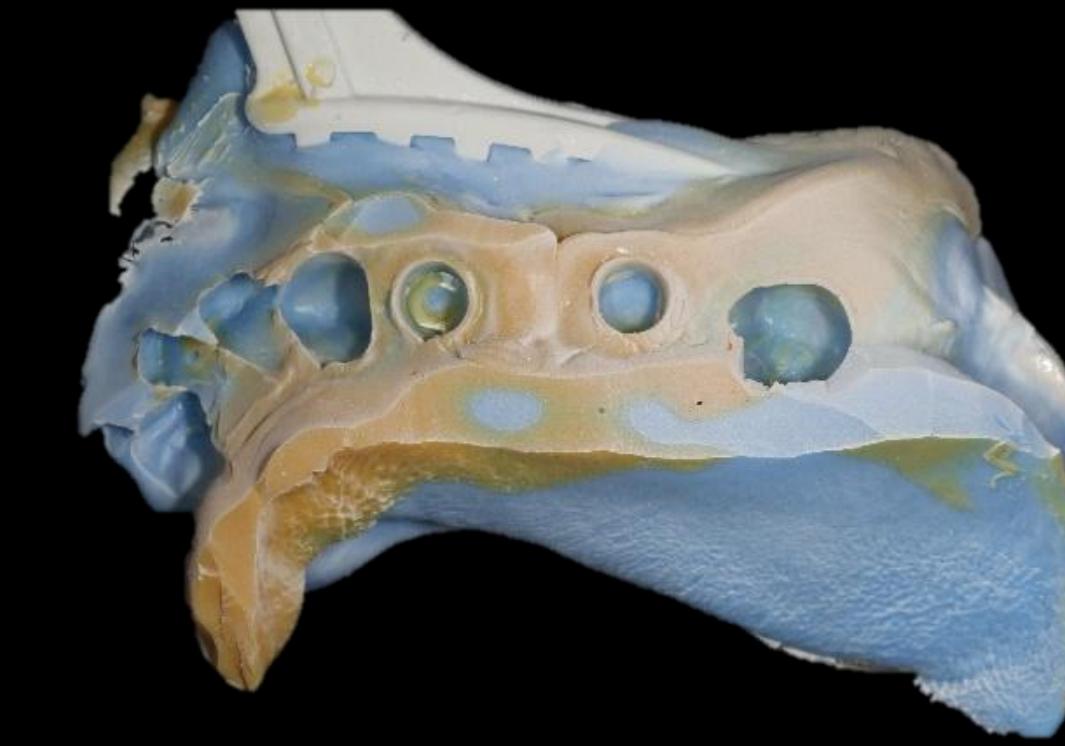
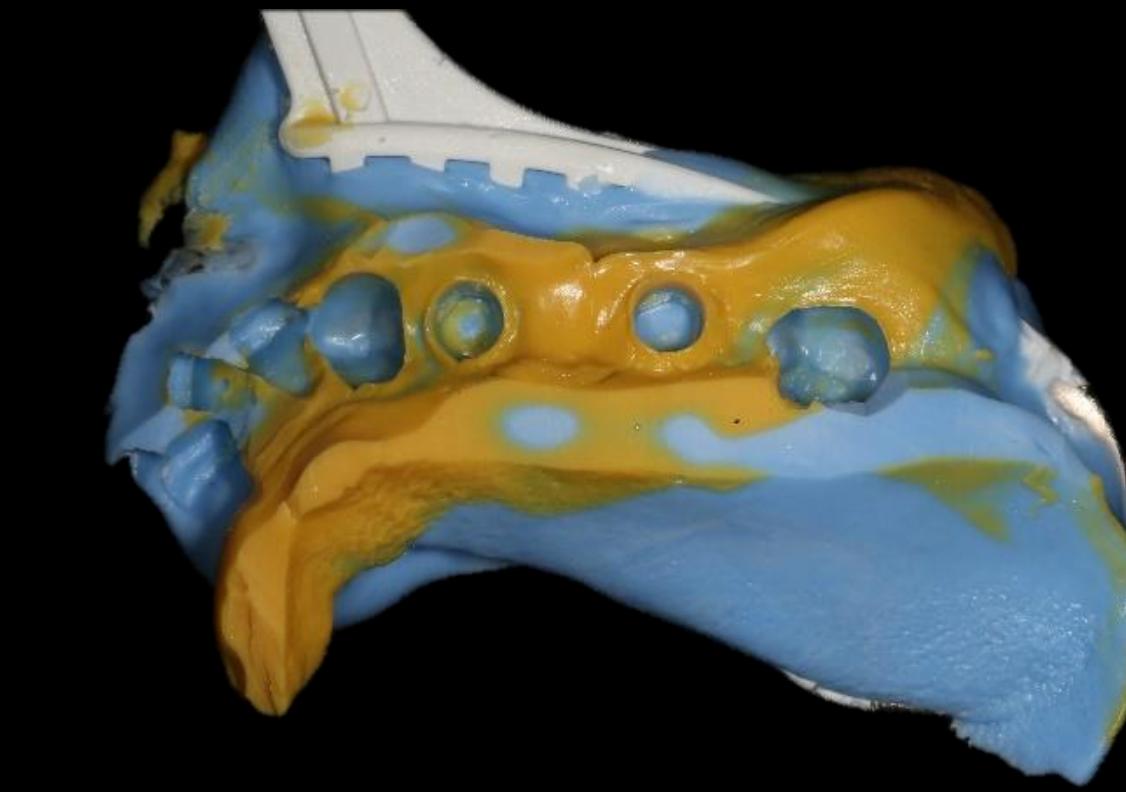
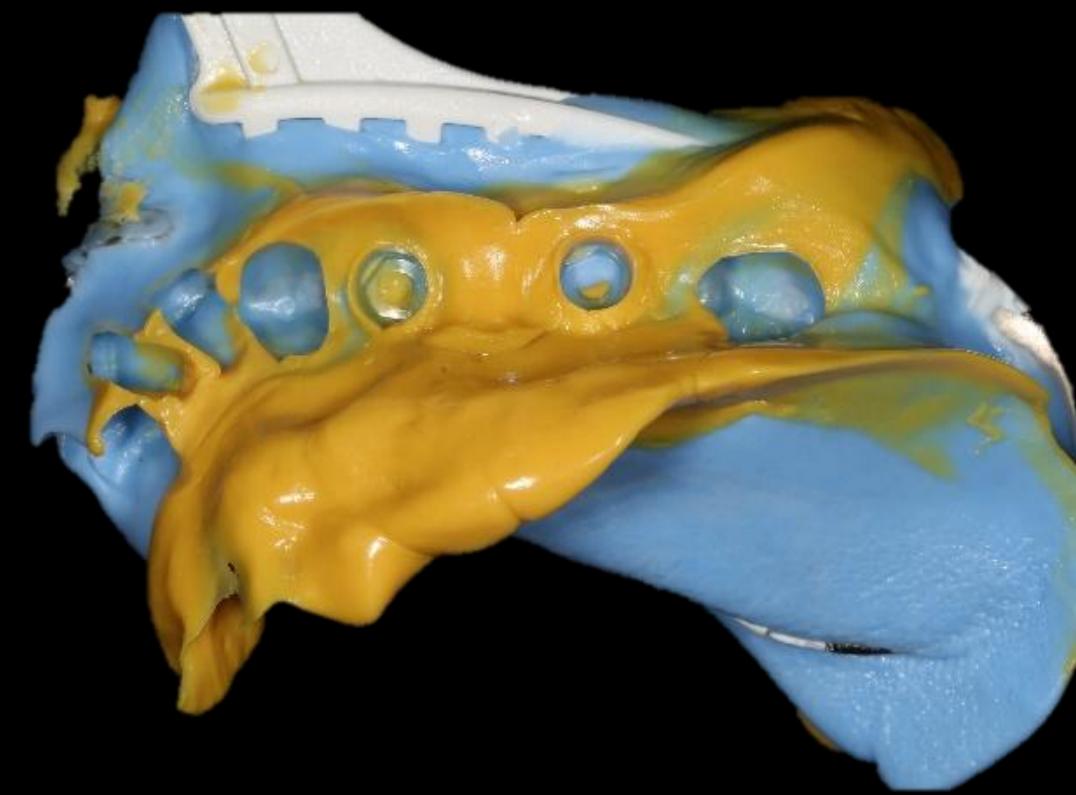
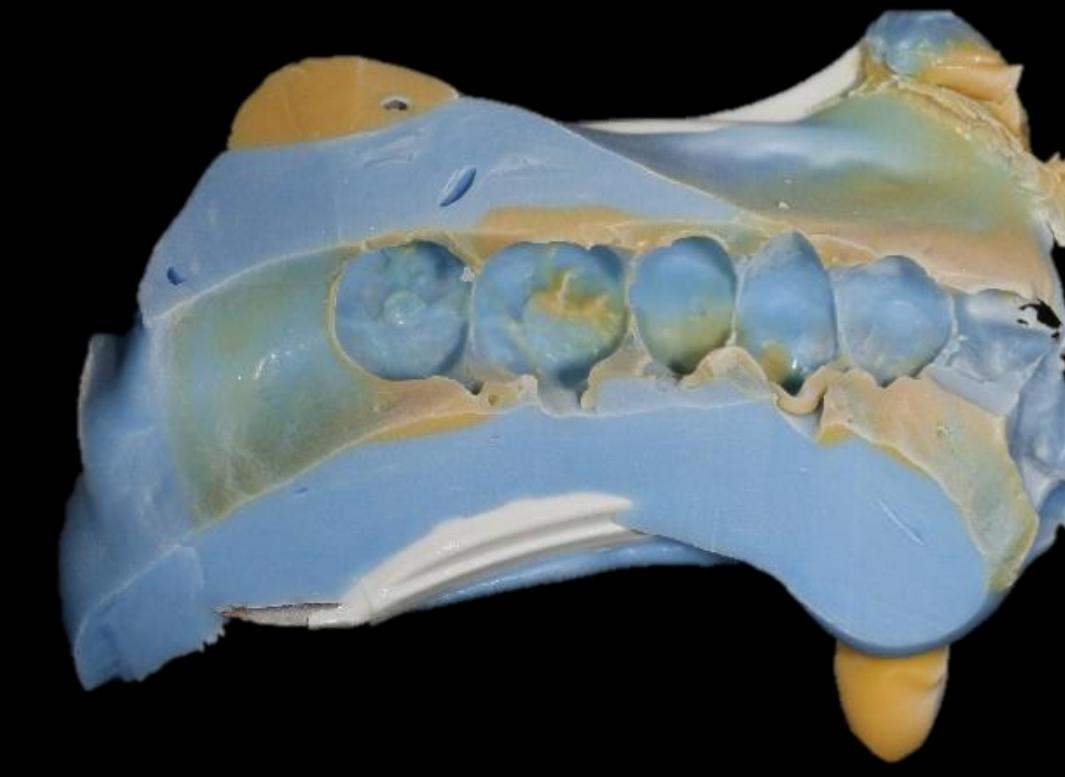
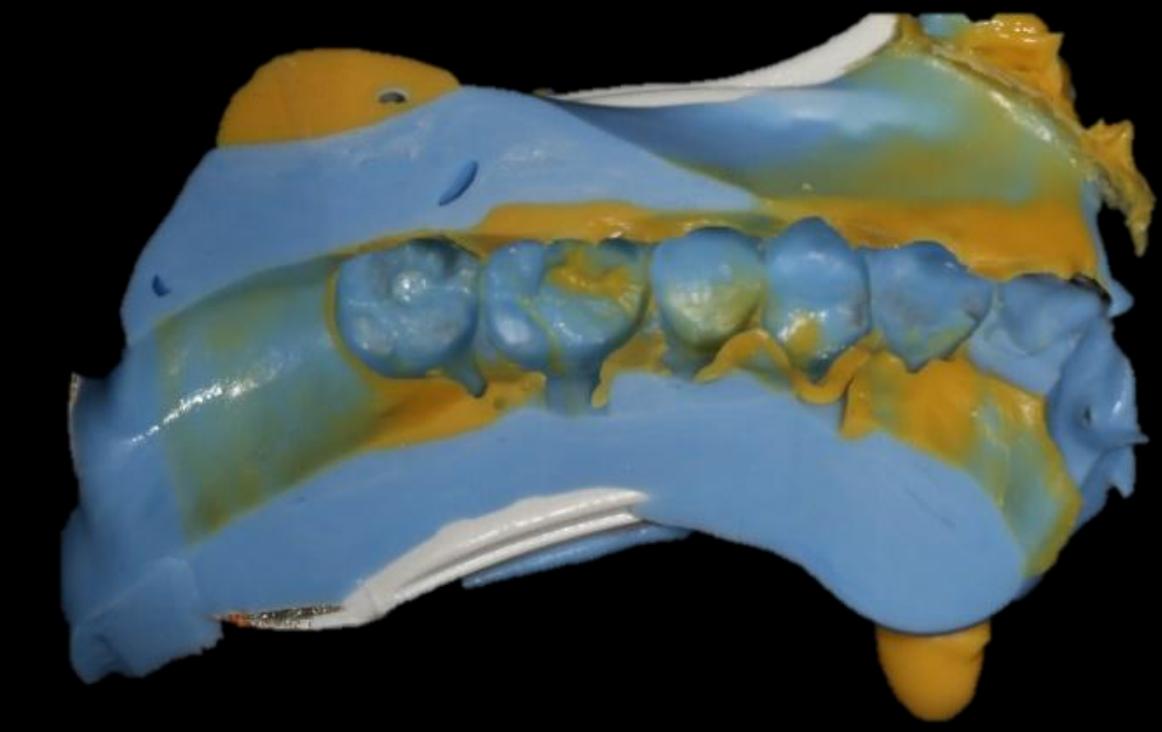
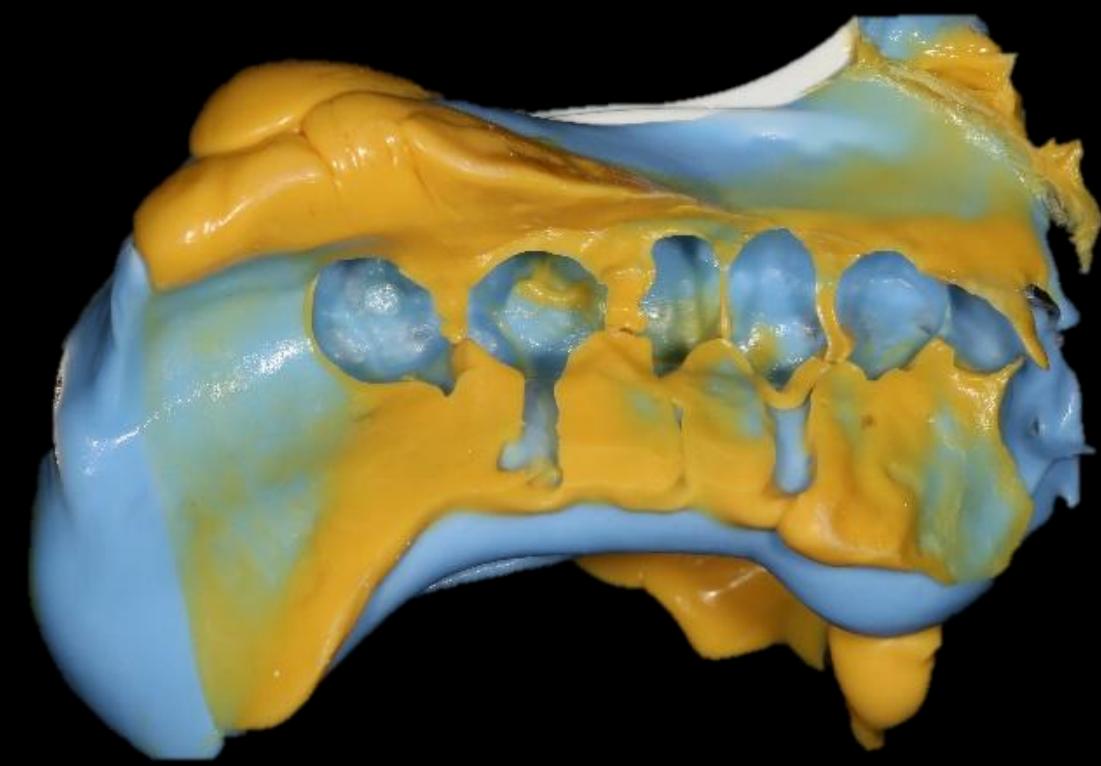
Provisional restoration (2023-06-07)



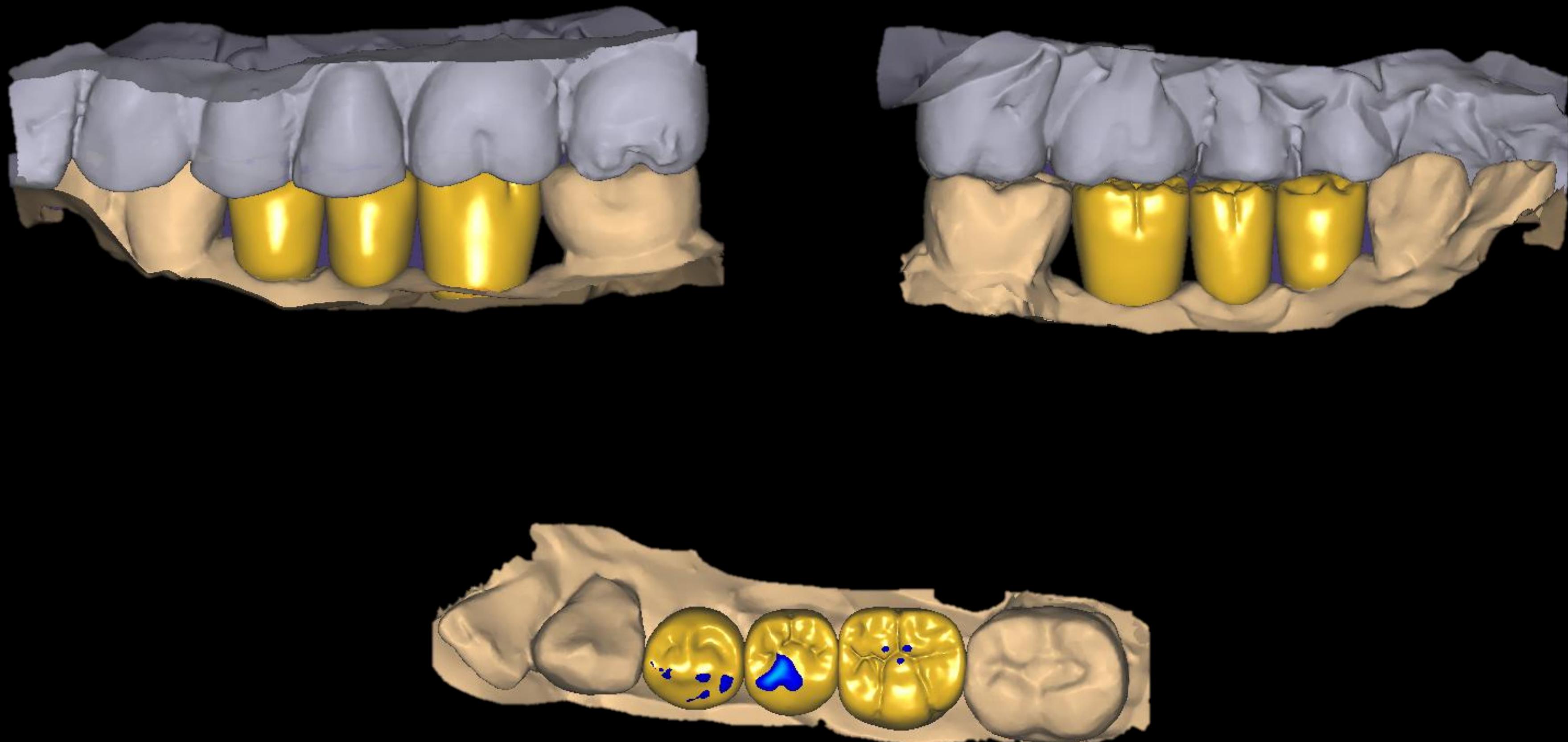
Final Impression (2023-06-07)



Impression / Trimming / Scan spray



CAD (Final prosthesis)



# Milling / Coloring / Sintering / Glazing



Final prosthesis(2023-06-29)



## IOS

Good for straight line in molar, even in bridge 4 to 5 crown

Shining 3d IOS is good in free end case and precise occlusion

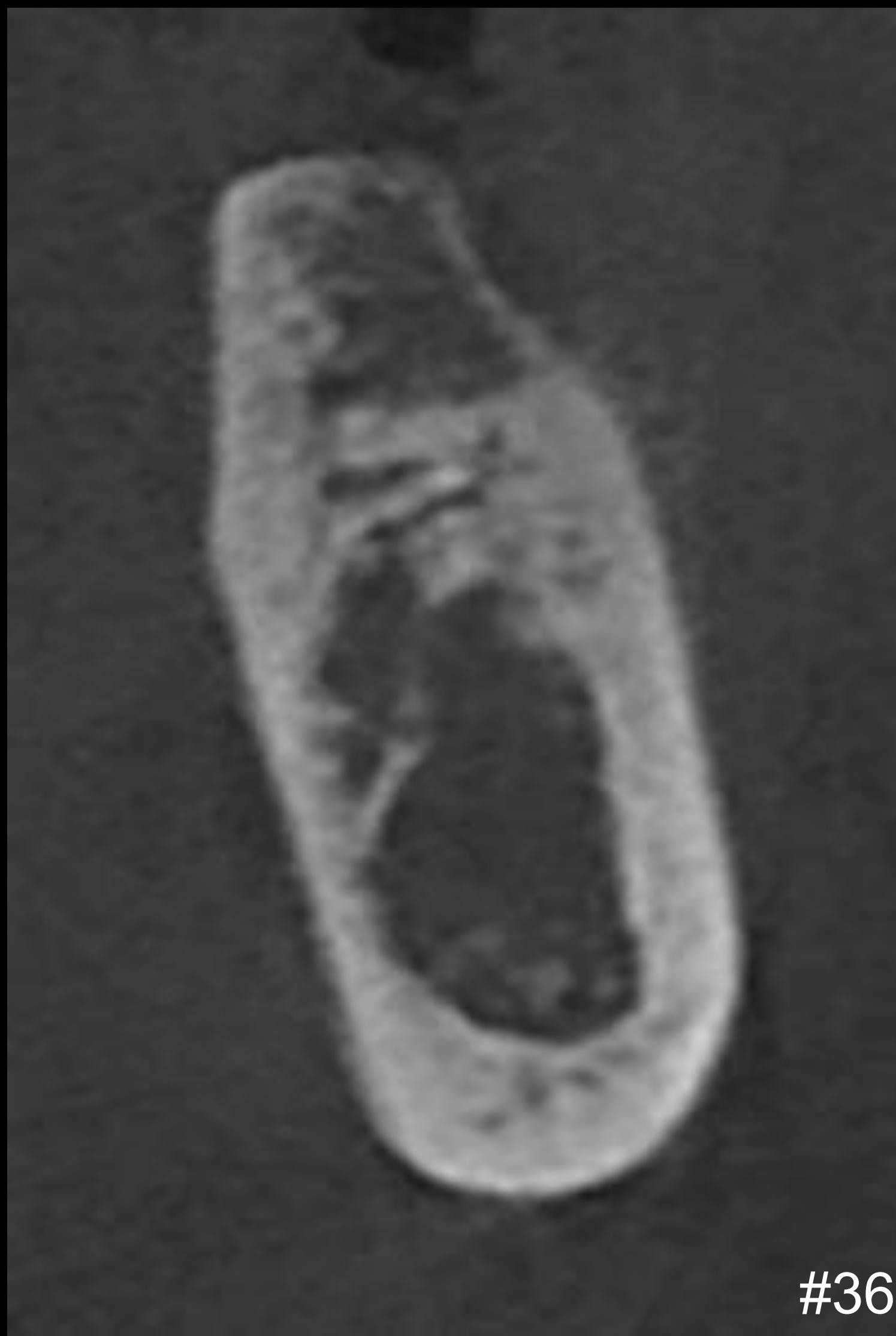
Oral exam (2024-08-27)



Final prosthesis (2025-01-22)



Pre-op CT (2025-01-07)



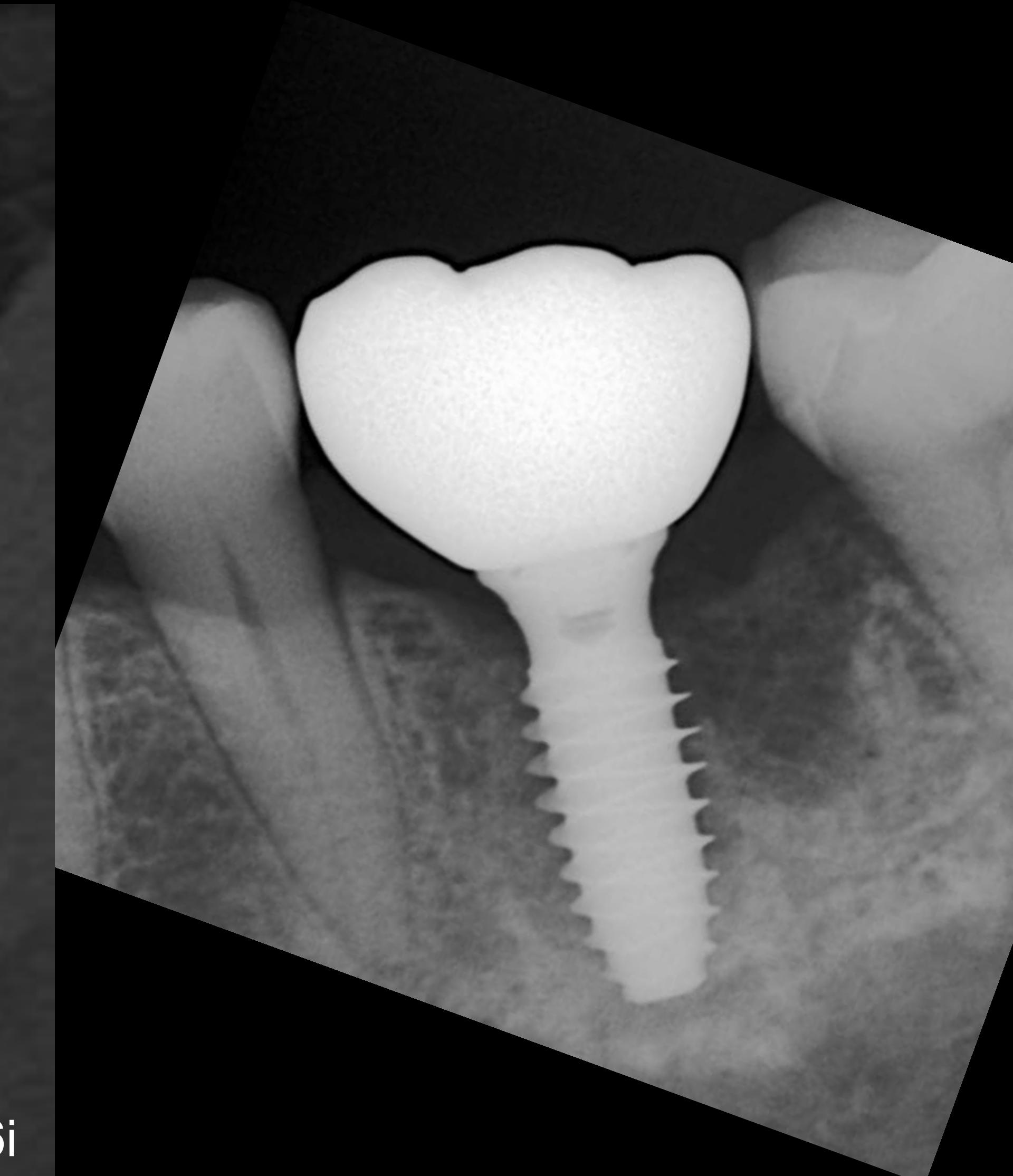
#36

Post-op CT (2025-01-07)

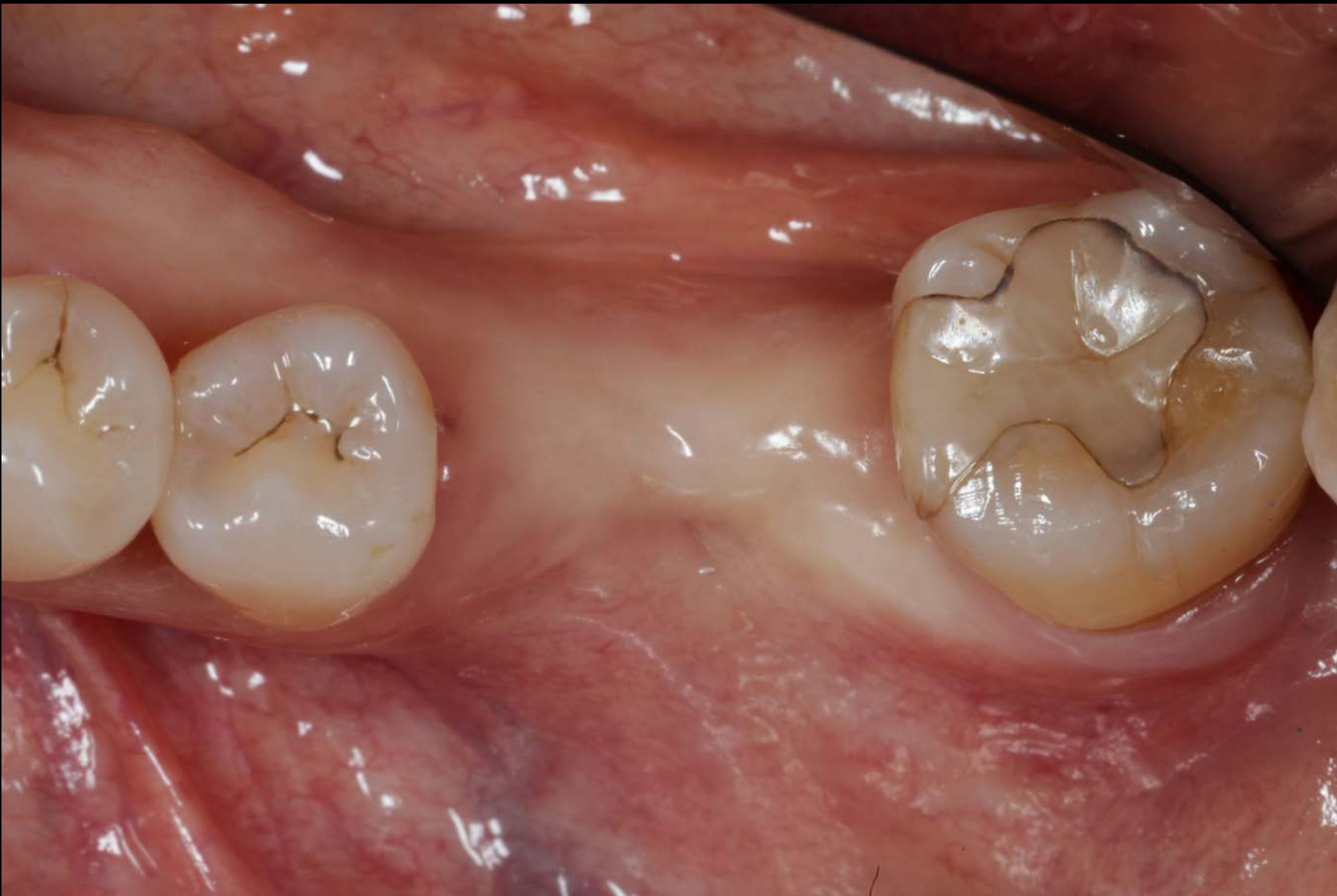


36i

Follow up : 1 month (2025-02-15)



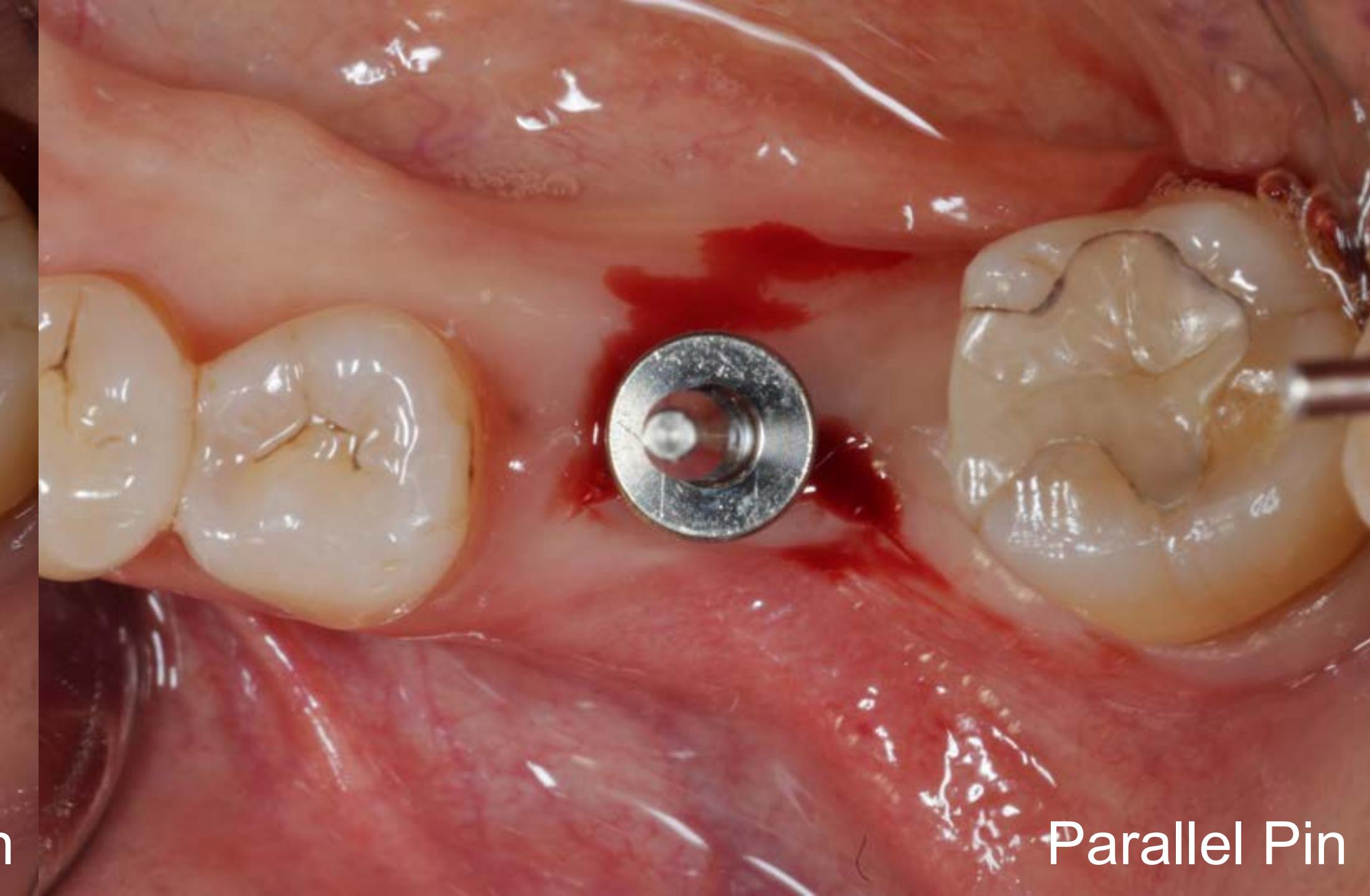
Pre-op (2025-01-07)



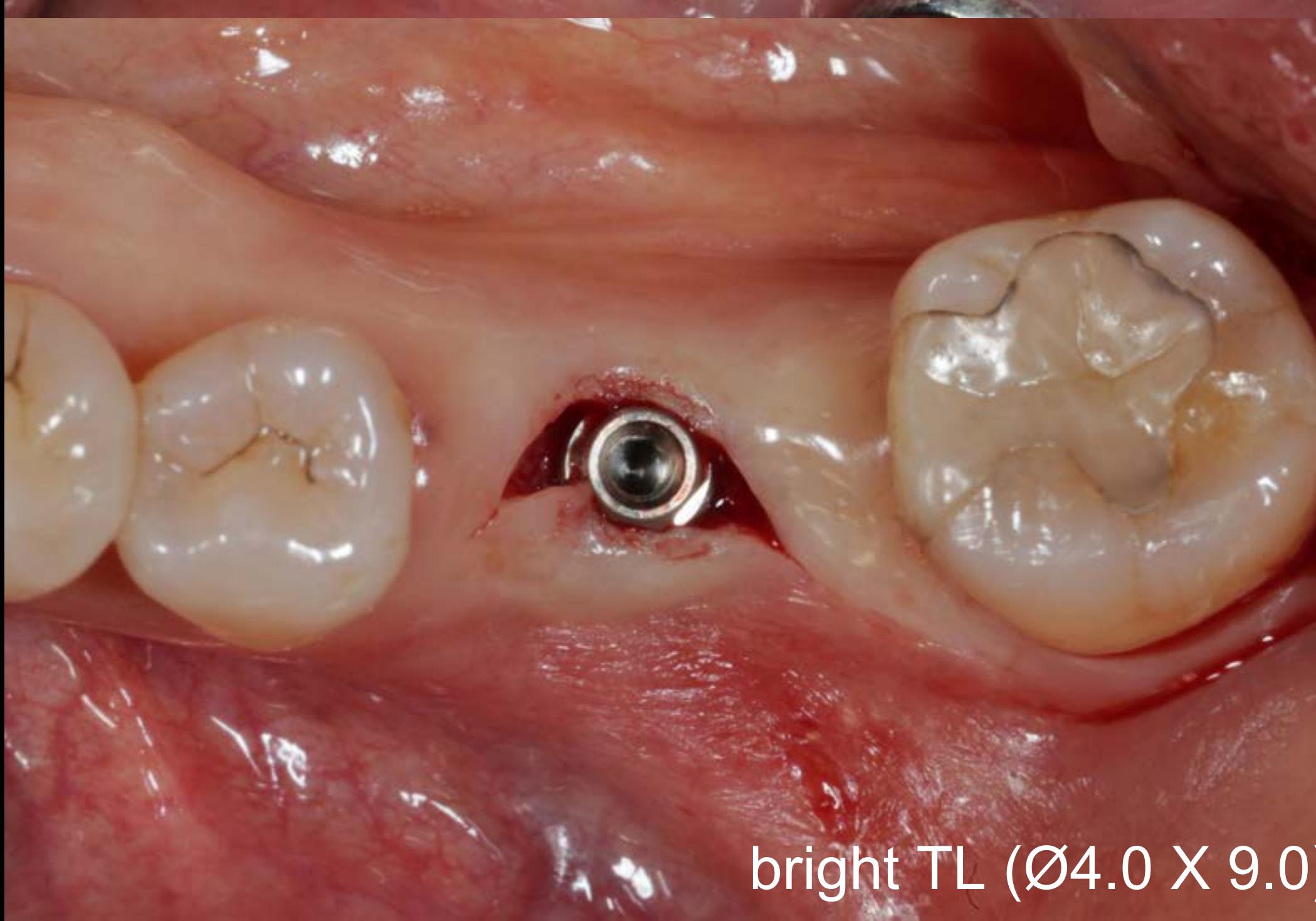
Surgery (2025-01-07)



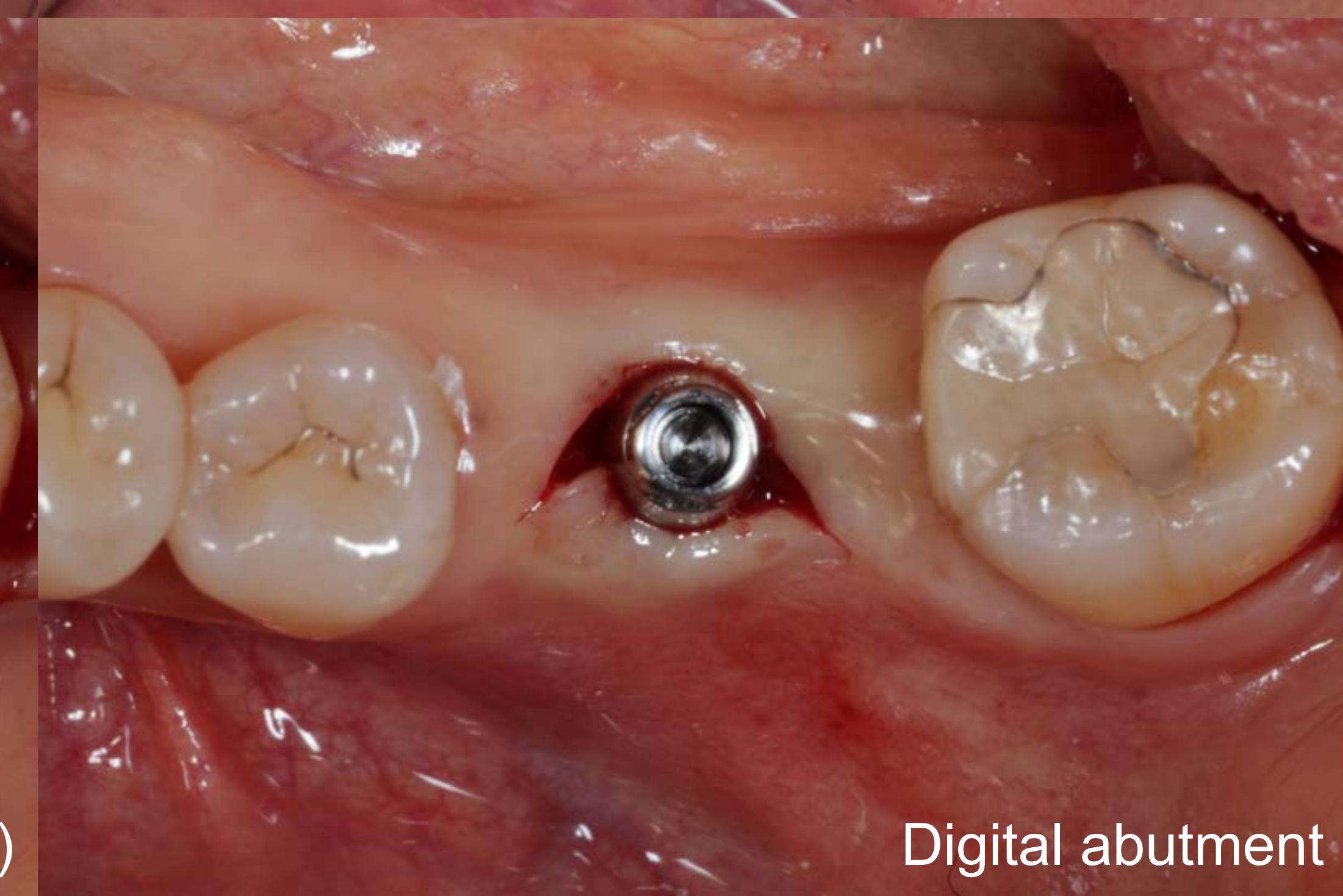
Semilunar Incision



Parallel Pin



bright TL ( $\varnothing 4.0 \times 9.0$ )

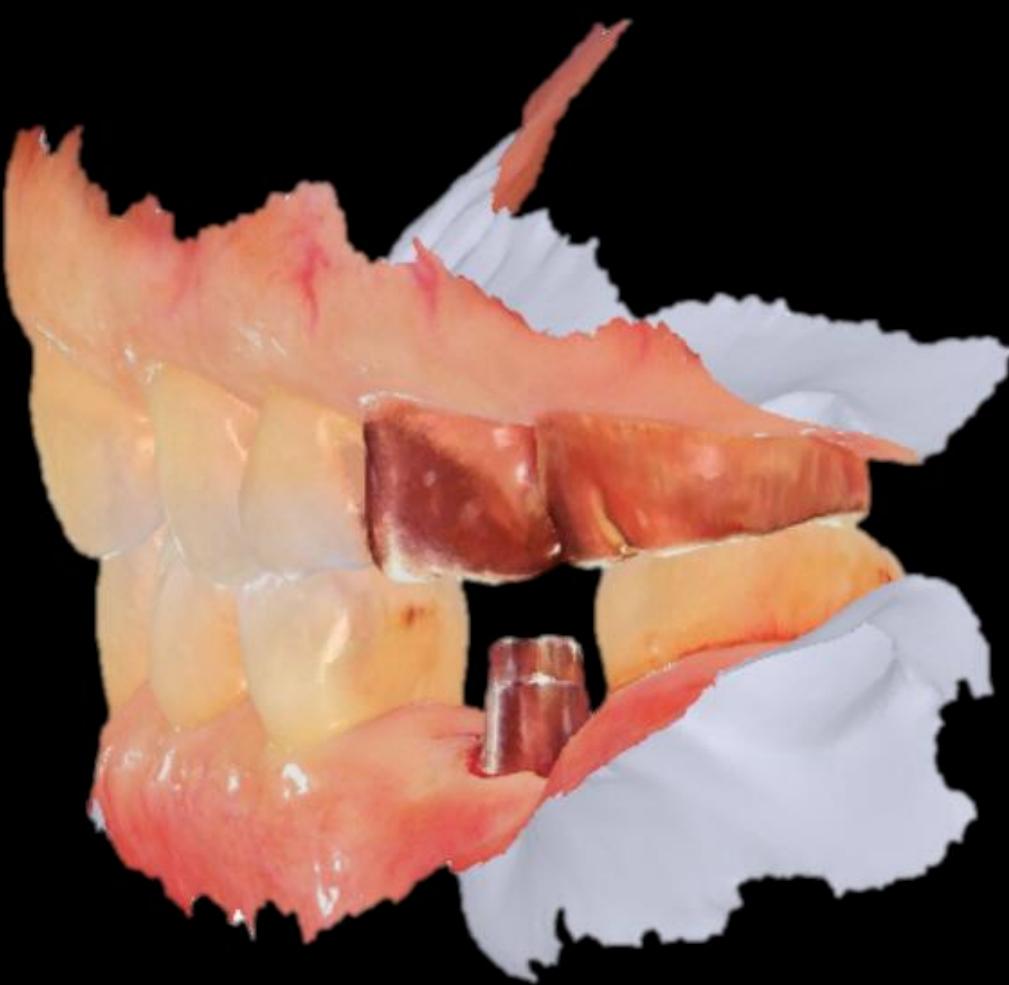


Digital abutment

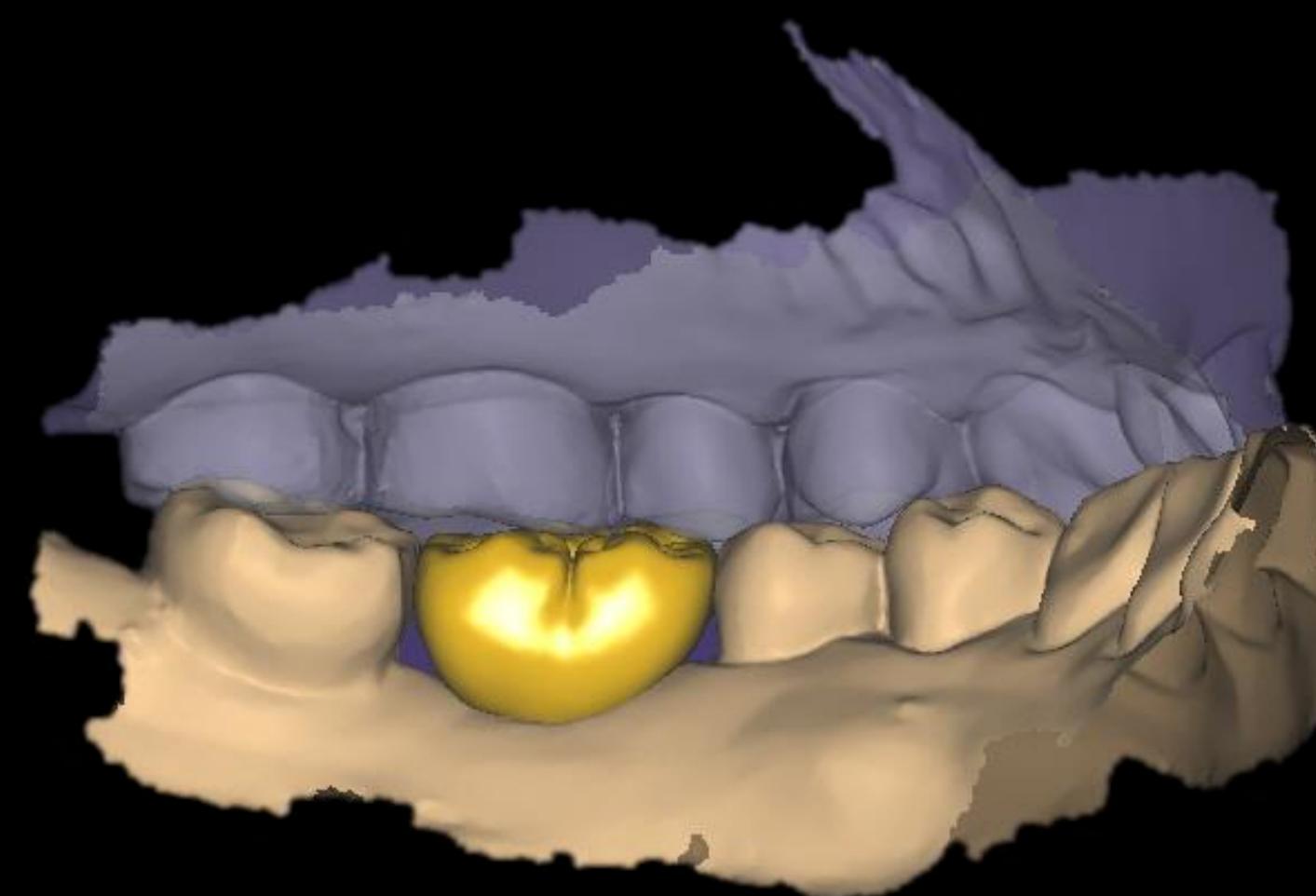
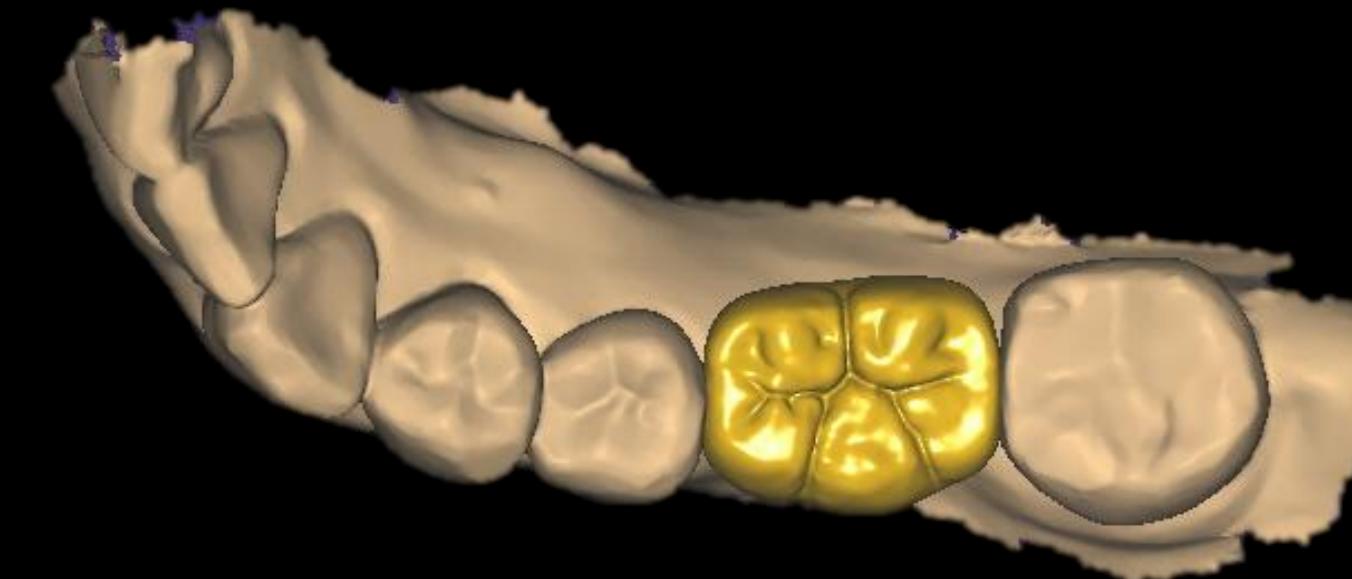
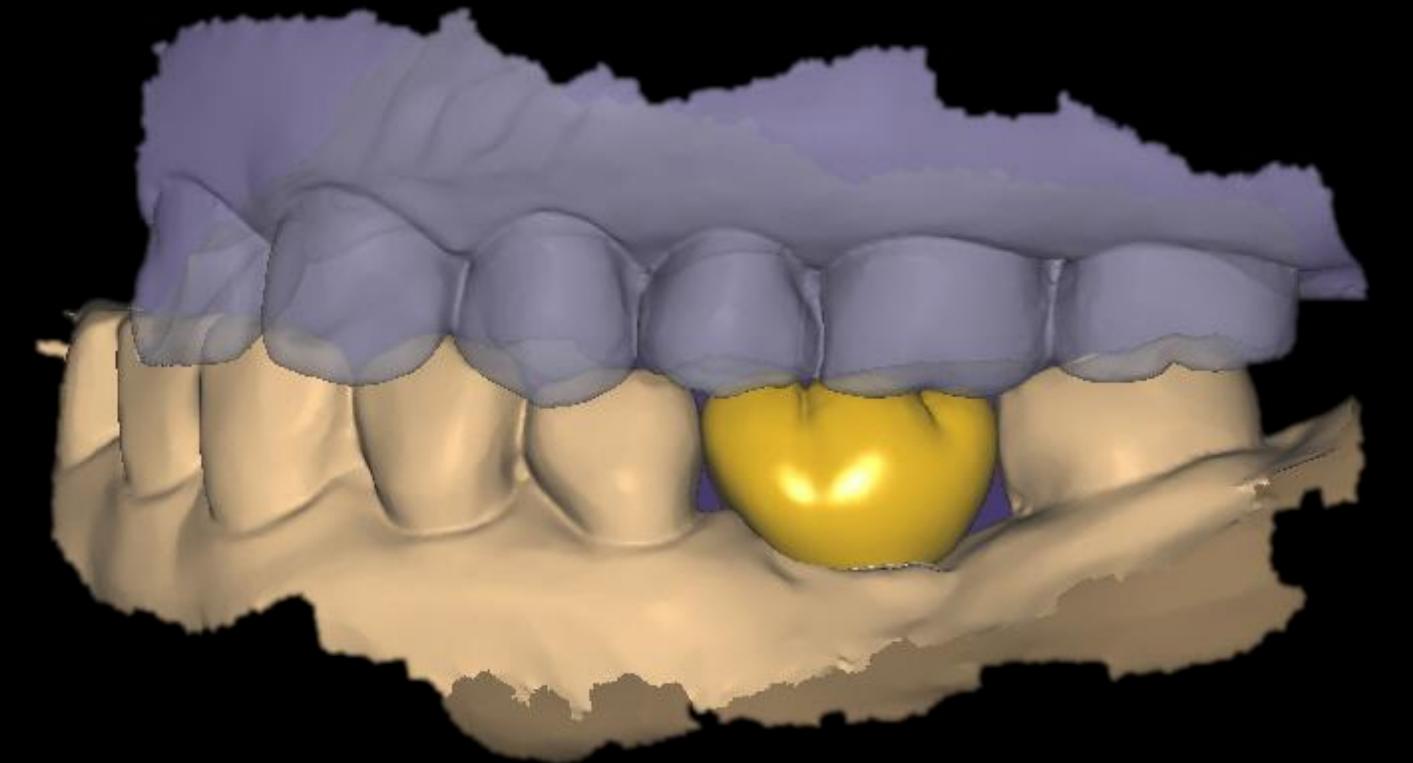
Shade taking



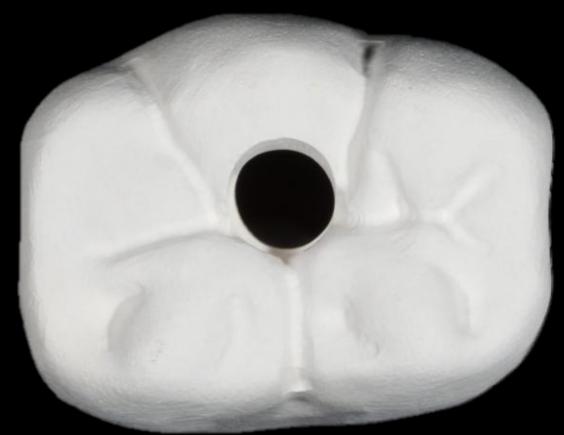
# Intra Oral Scan



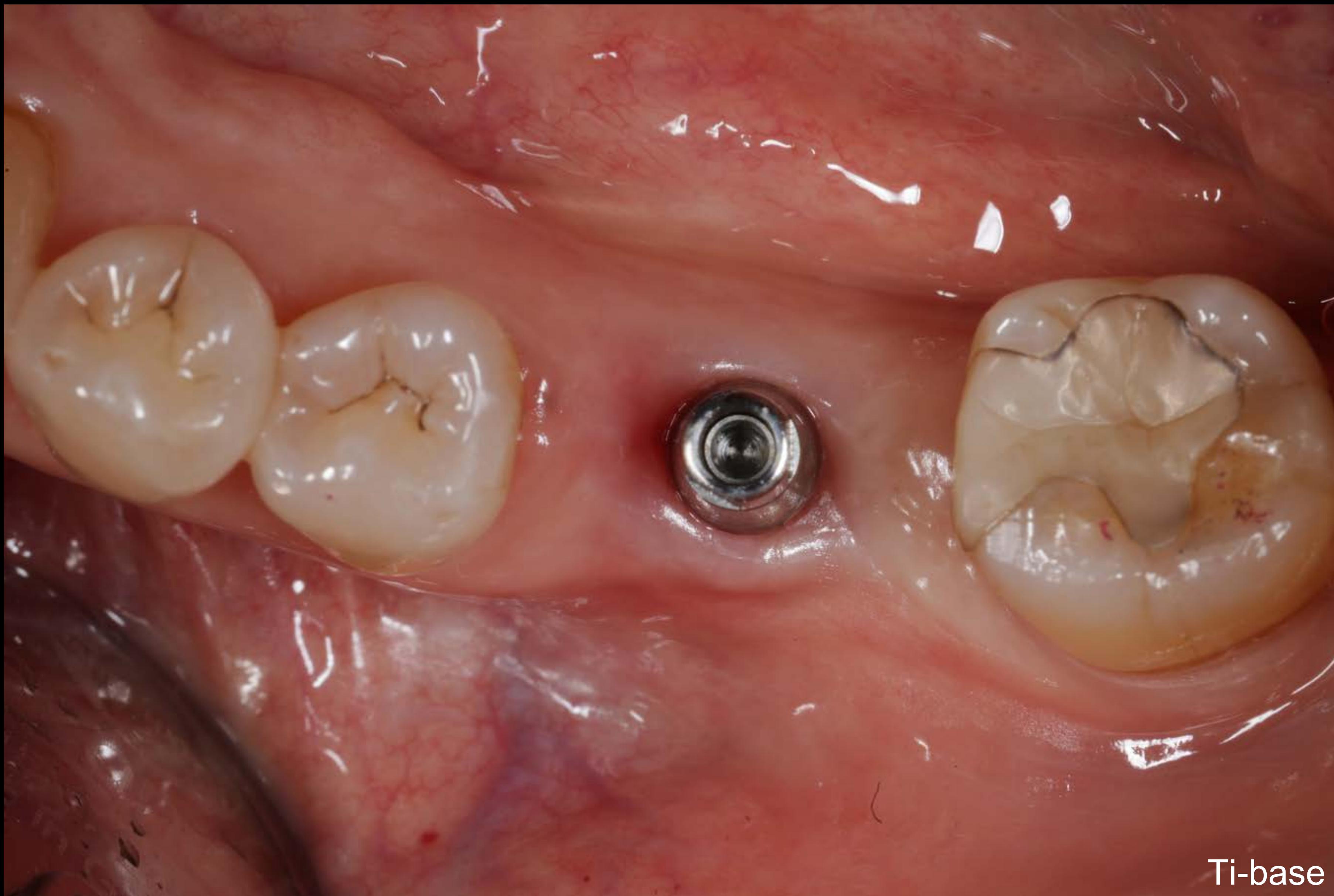
CAD (Final prosthesis)



# Milling / Sintering / Glazing



Healing : 2 weeks (2025-01-22)



Ti-base

Final prosthesis (2025-01-22)



Why negative to IOS?

Trios - 3shape. Medit

Prime scanner

Shining 3D - Aoral, Elite

High cost

Inaccuracy - curved poetics, free end

## Application of IOS

Natural teeth

Single or bridge in a straight line

Maximum 3 to 4 teeth

## Limitation of IOS

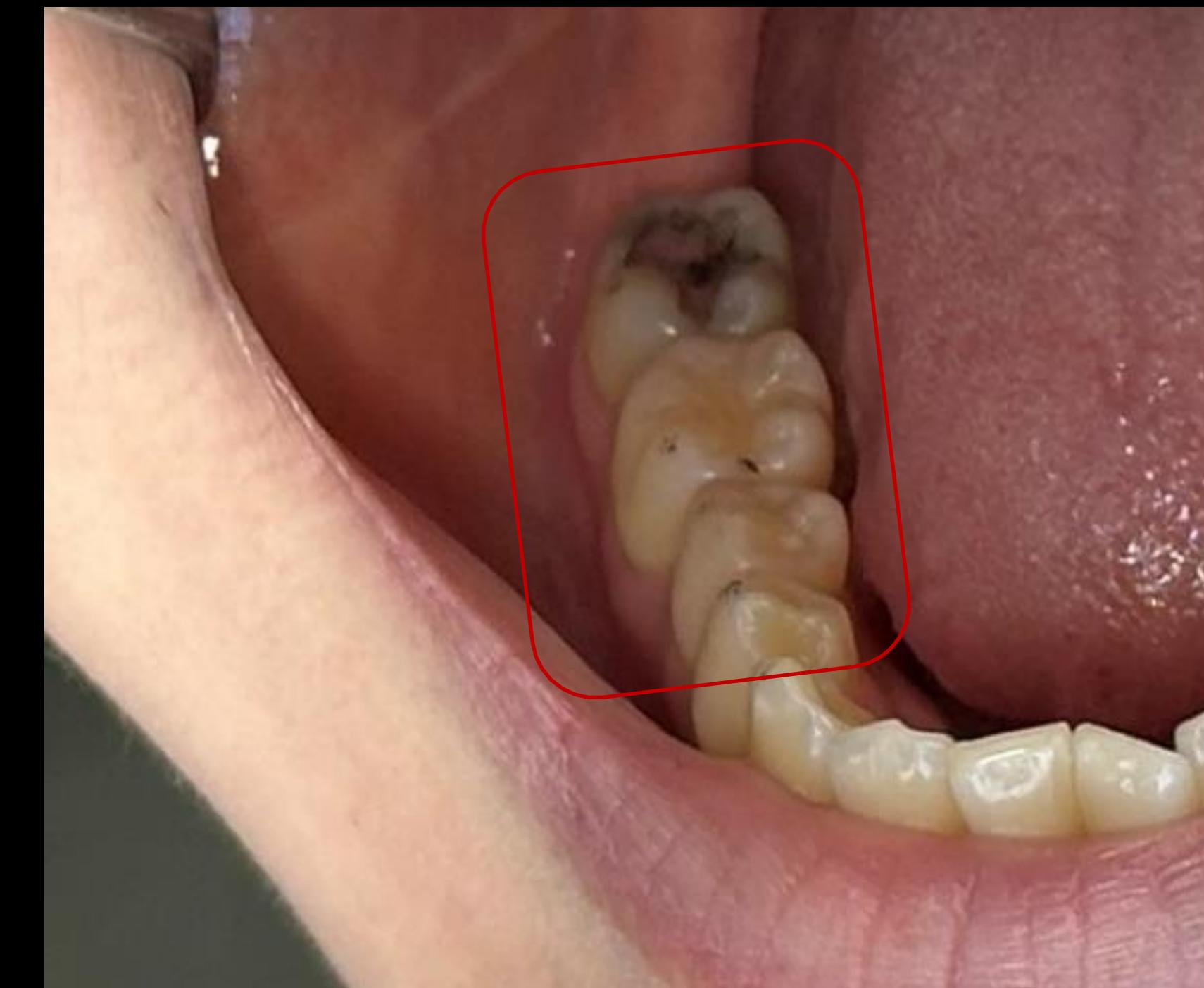
Some errors in free end case

Curved arch with poetics

# Dentium Dental Clinic IOS Process

IOS workflow (w. Shining 3D Aoralscan)

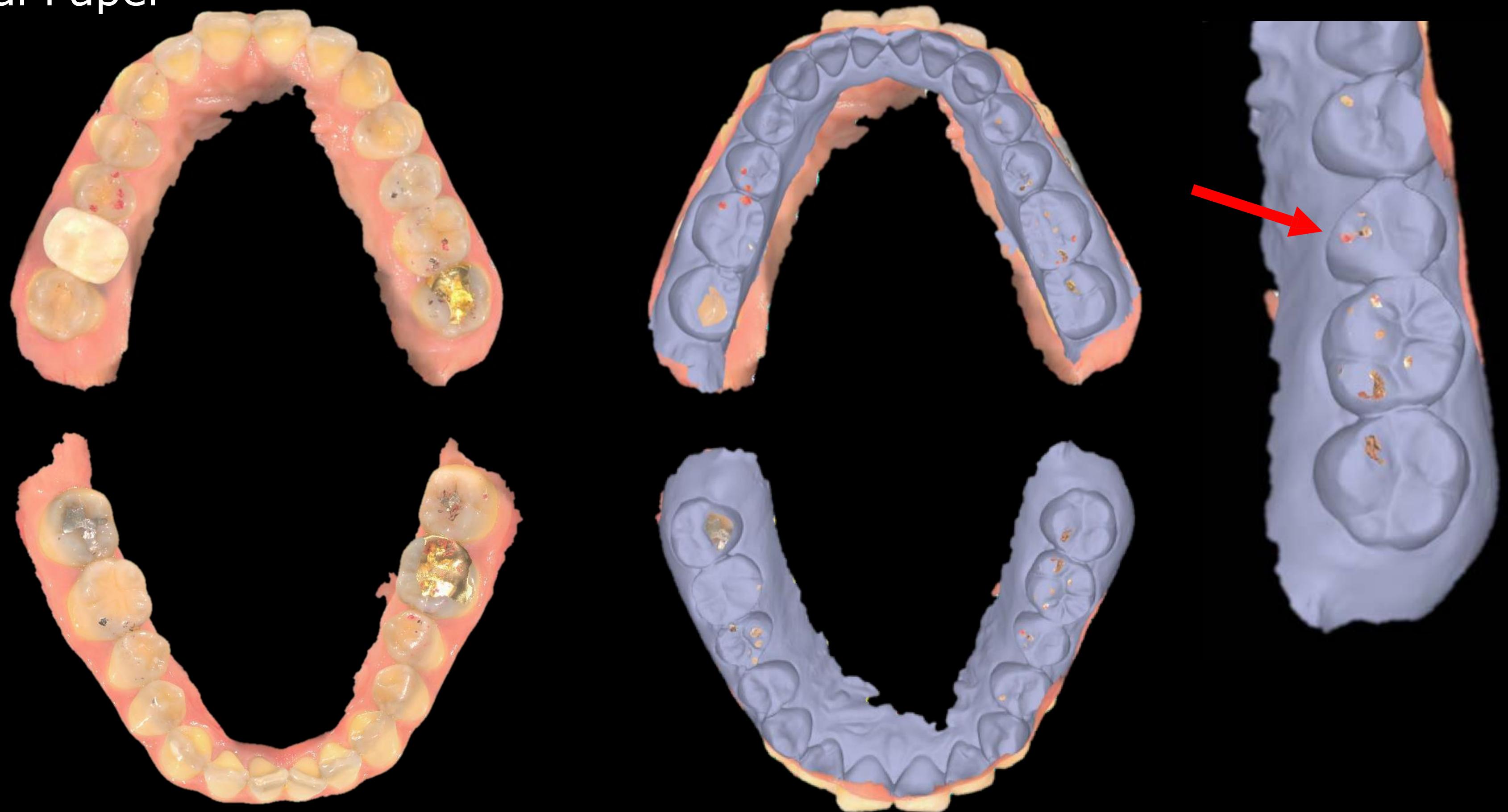
## 1. **Bite Marking** Using Occlusal Paper



# Dentium Dental Clinic IOS Process

## IOS workflow (w. Shining 3D Aoralscan)

1. Bite Marking Using Occlusal Paper
2. Upper SCAN
3. Lower SCAN
4. Bite SCAN



Shining 3D Elite - photogrammetry

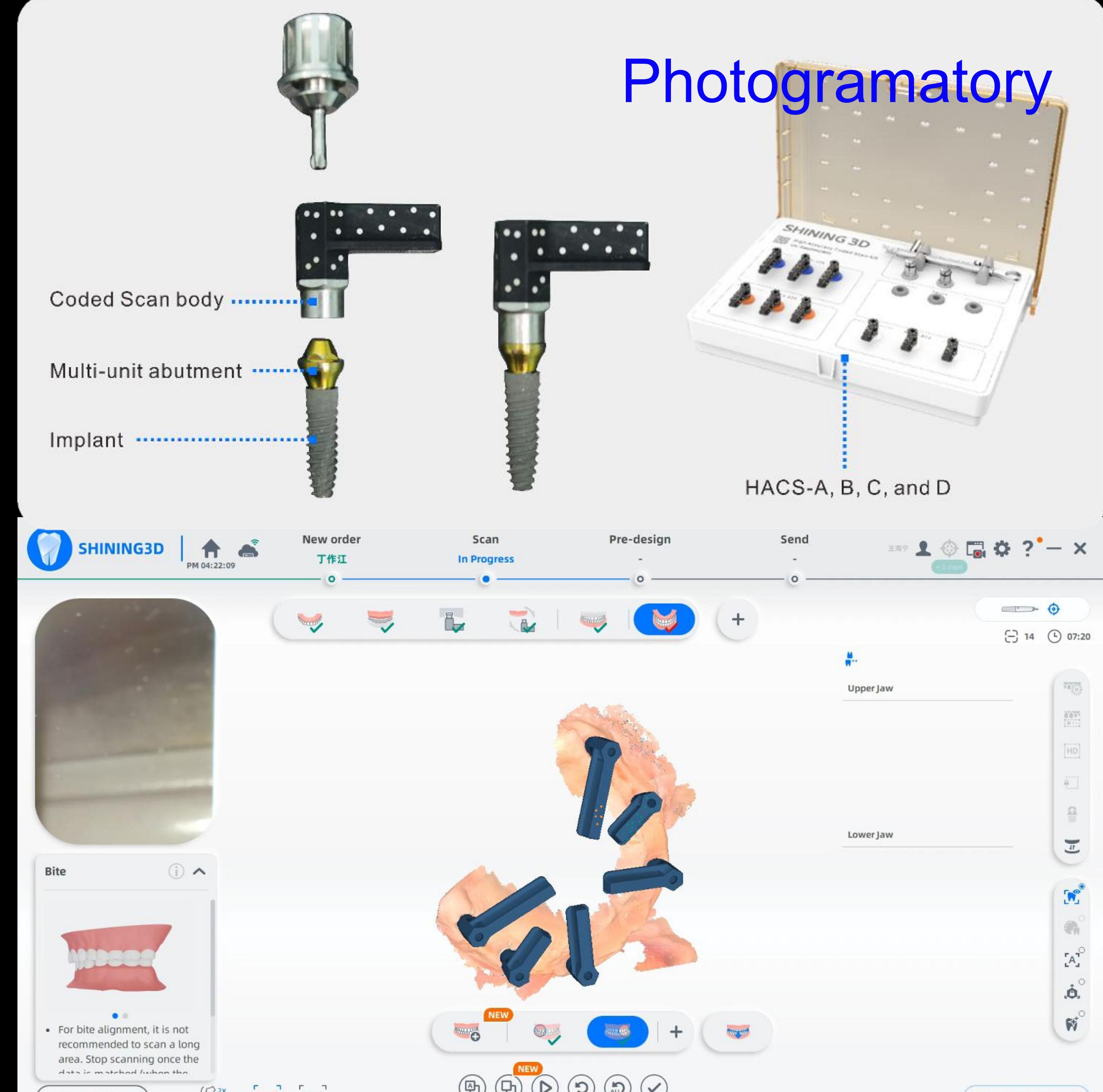
Shining 3D Aoral

Prime scanner from Sirona

Trioss from 3shape

Media

# Photogramatory



## BTS & BOS & IOS Data Compare

In a straight area - no difference in precision

But in occlusion, partial scan is better than full arch scan



**BTS**



**BOS**



**IOS  
(Partial)**

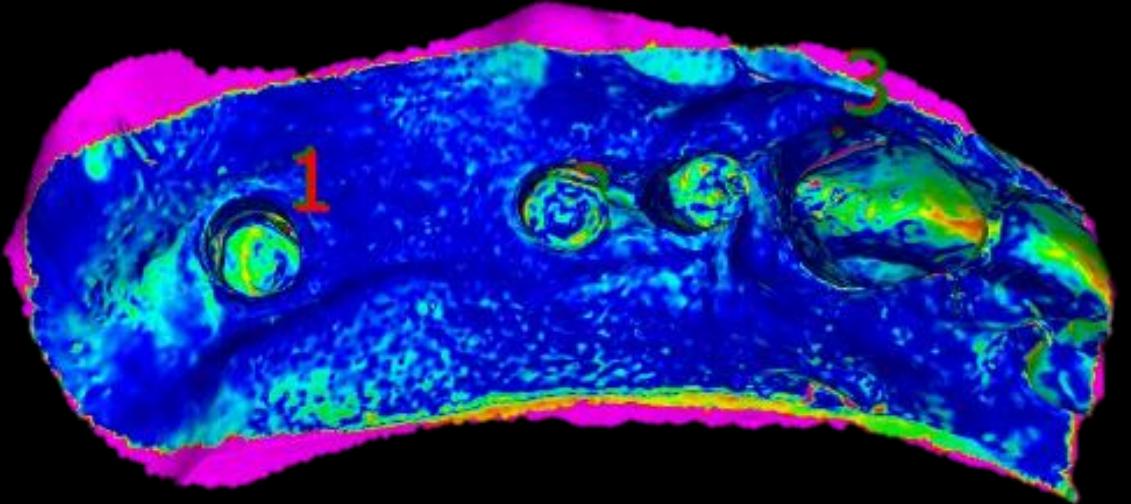
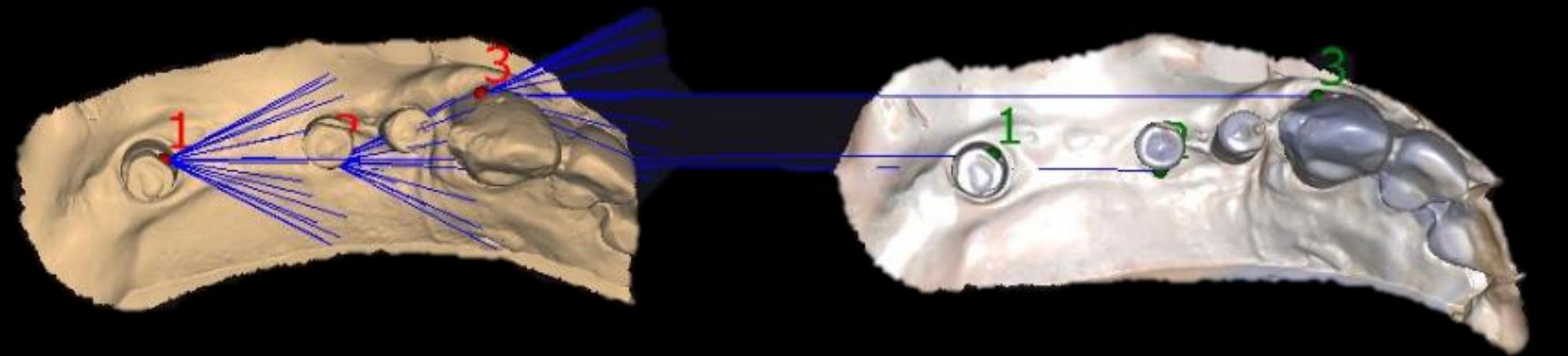


**IOS  
(Full Arch)**

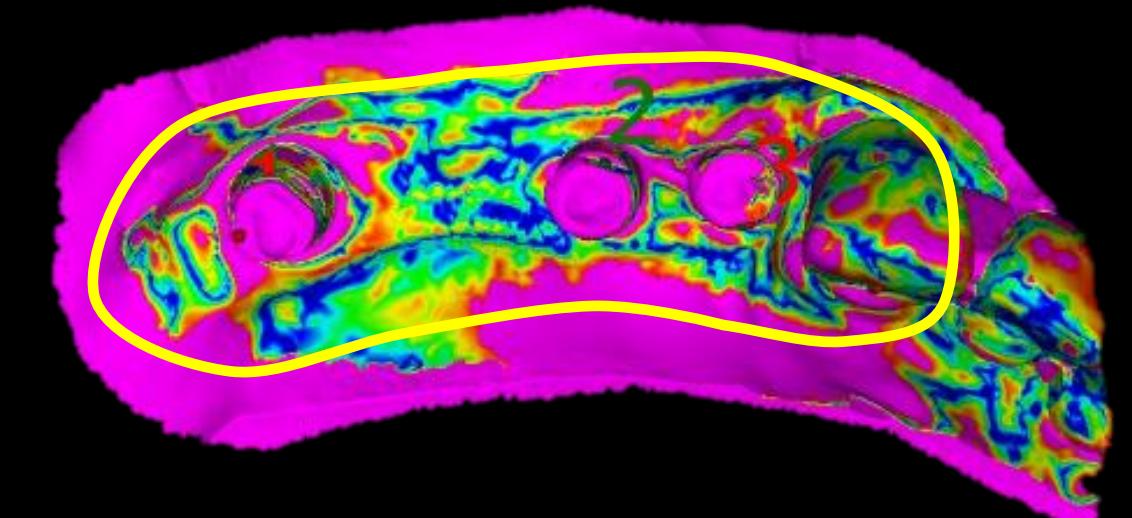
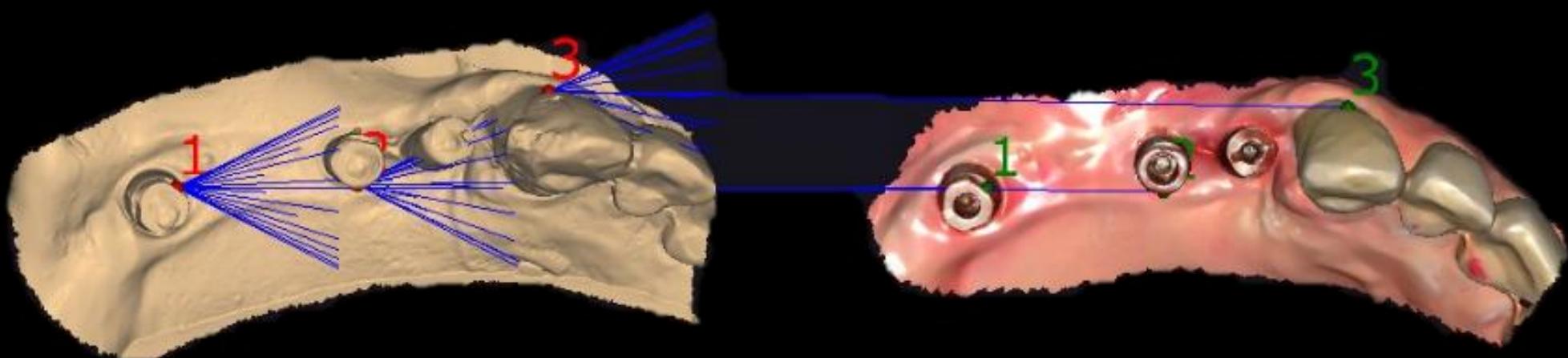
# BTS & BOS & IOS Data stitching

\* Stitching Performed Based on BTS

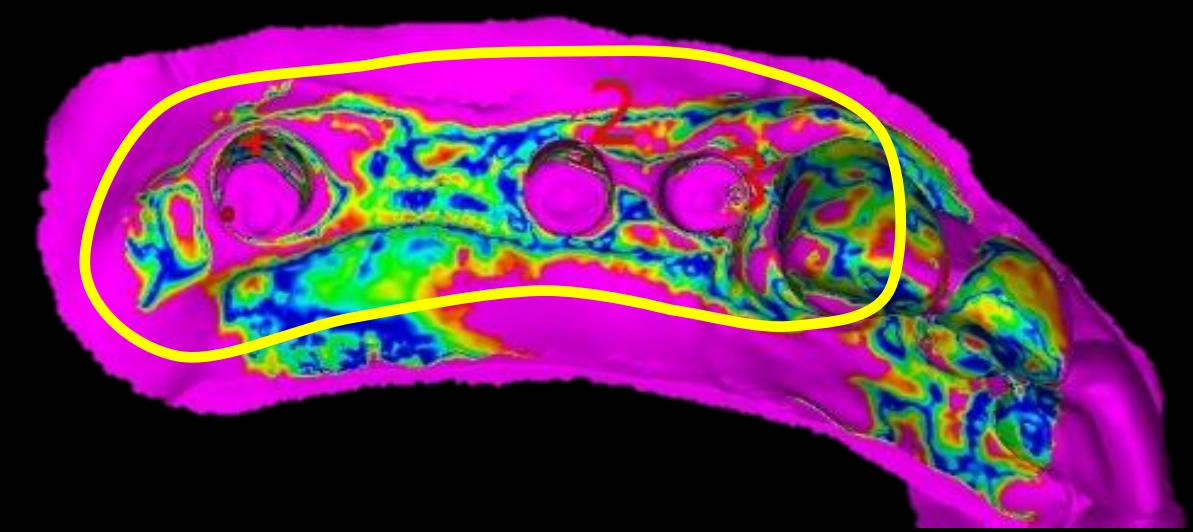
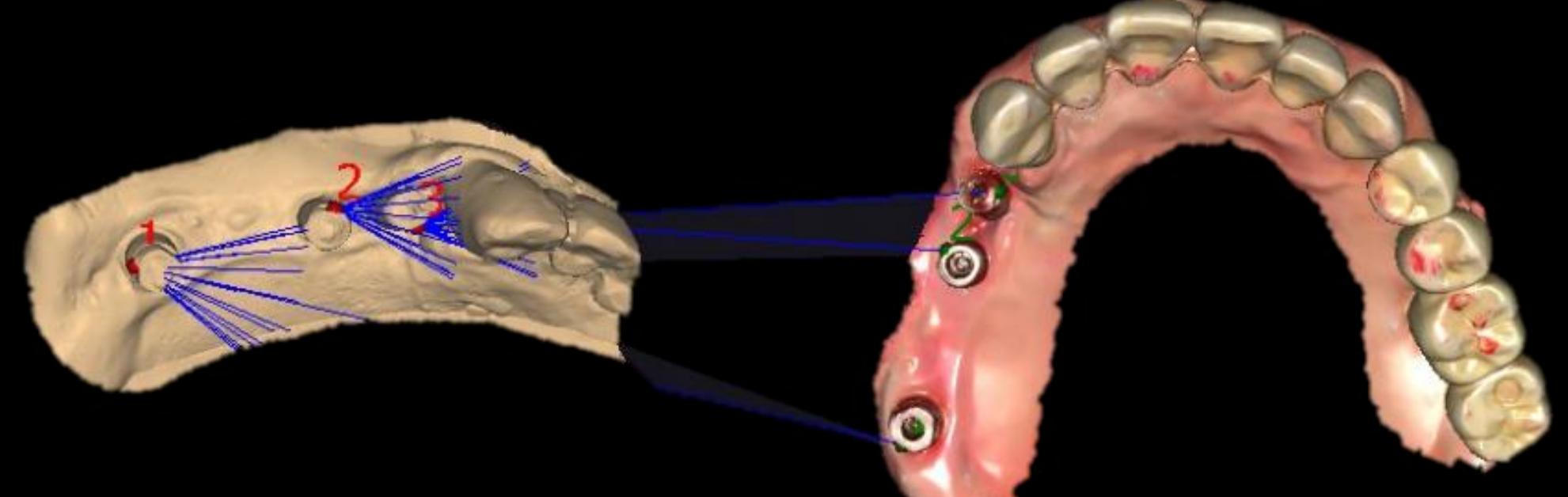
**BTS x BOS**



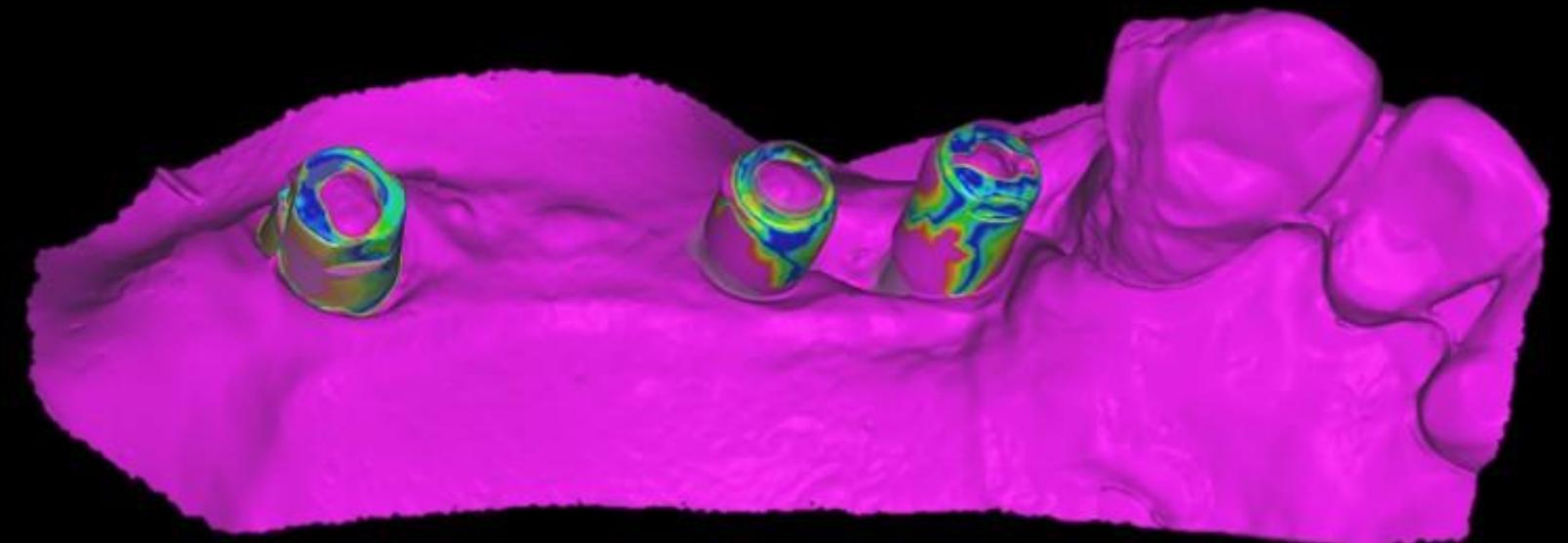
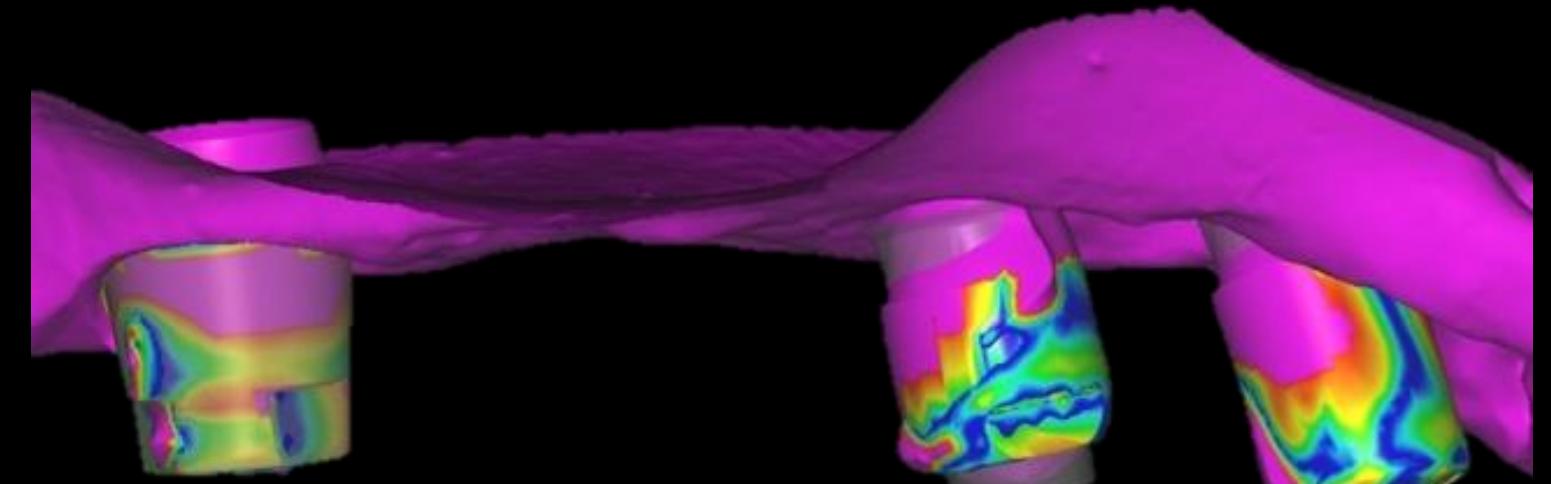
**BTS x IOS**  
(Partial)



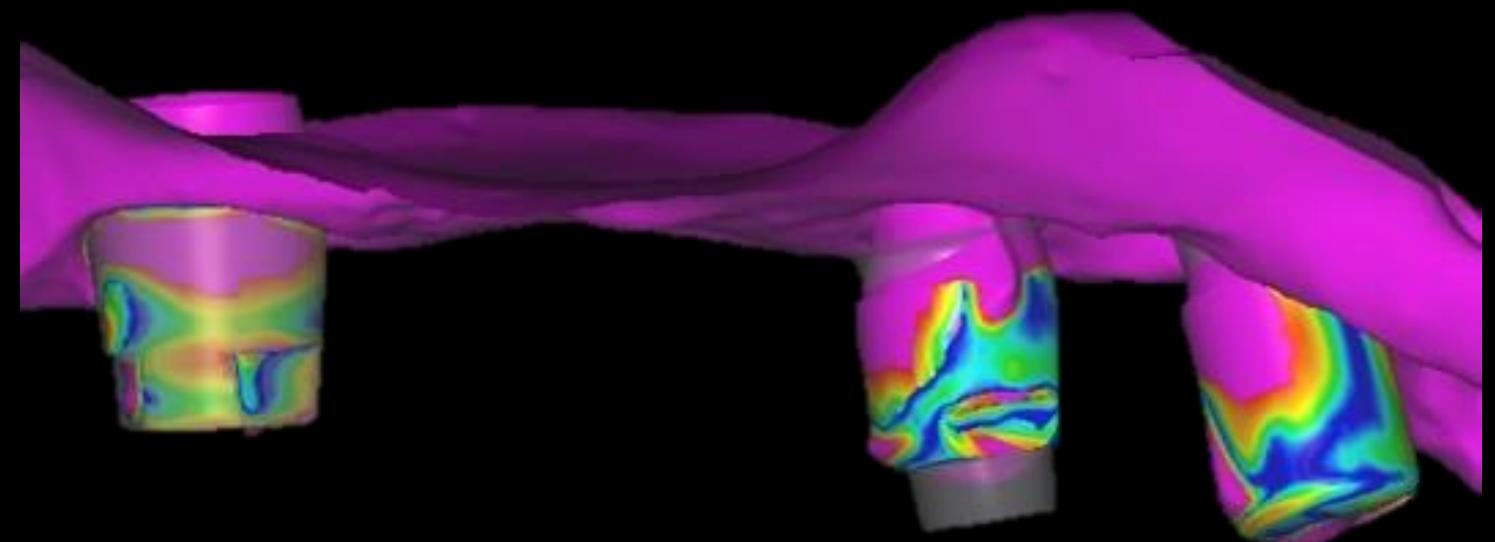
**BTS x IOS**  
(Full Arch)



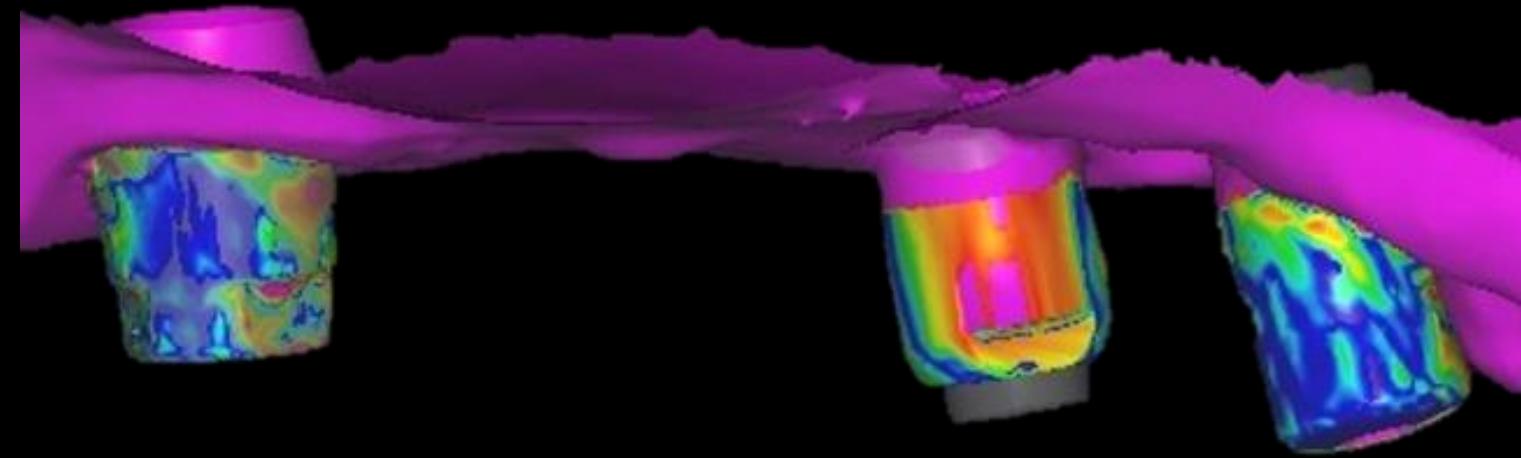
# BTS & BOS & IOS Library stitching



BTS

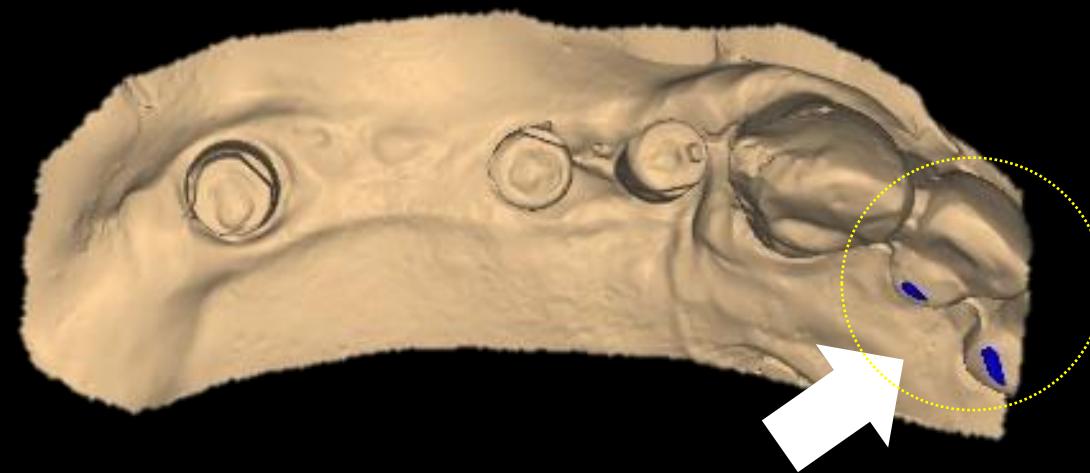


BOS

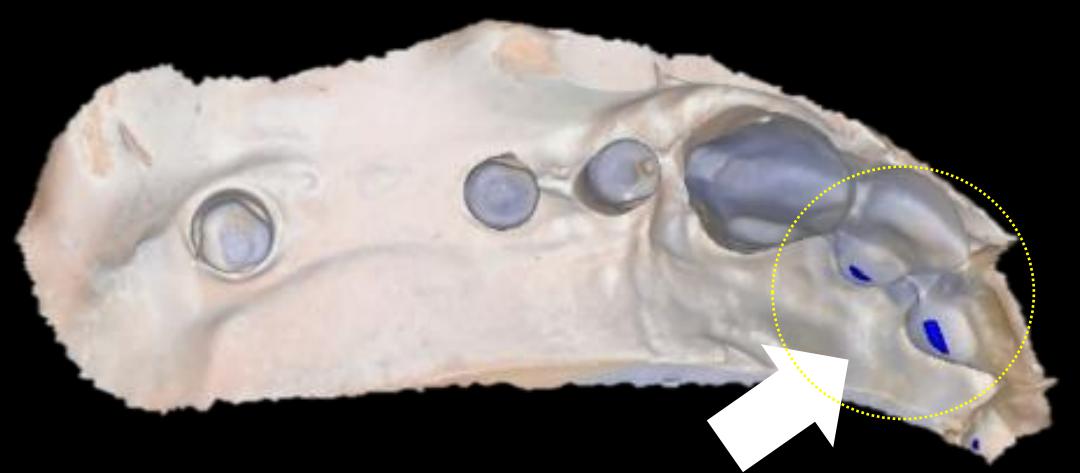


IOS  
(Partial)

# BTS & BOS & IOS Bite Compare



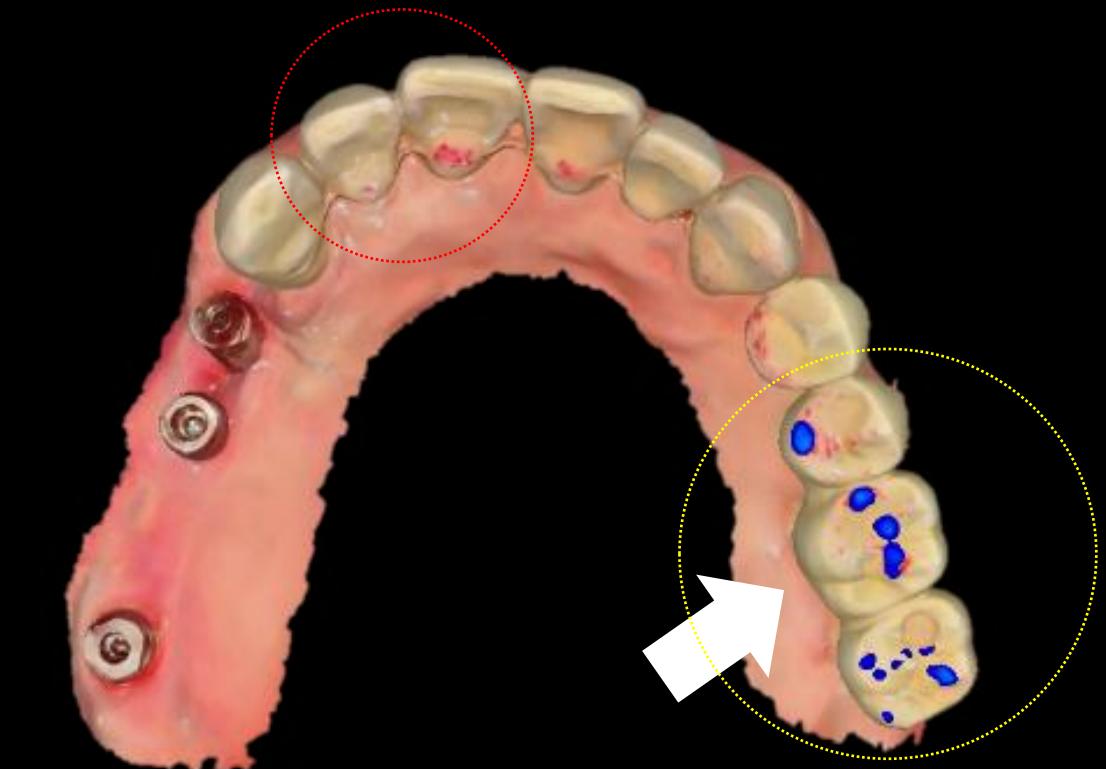
BTS



BOS

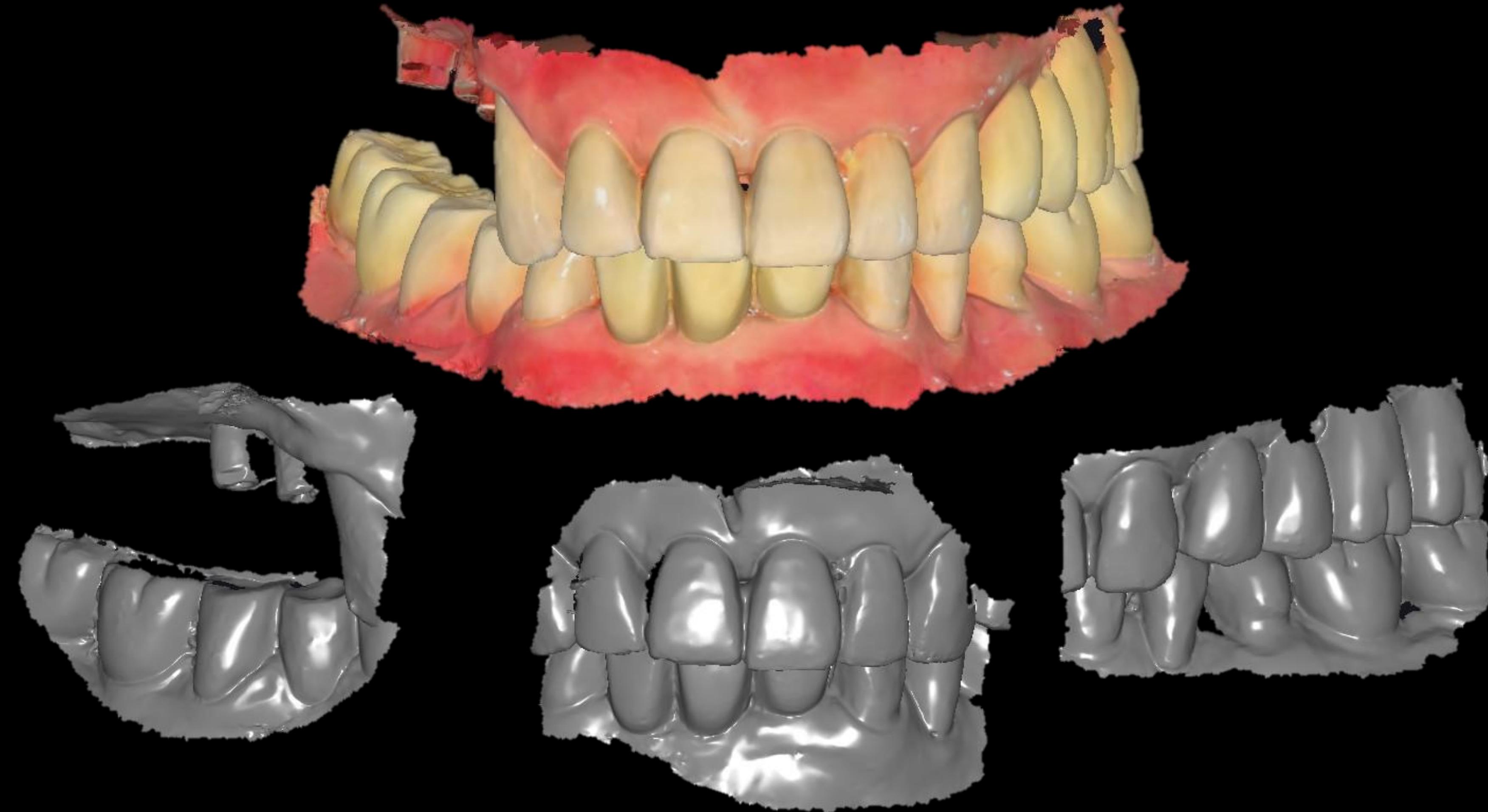


IOS  
(Partial)



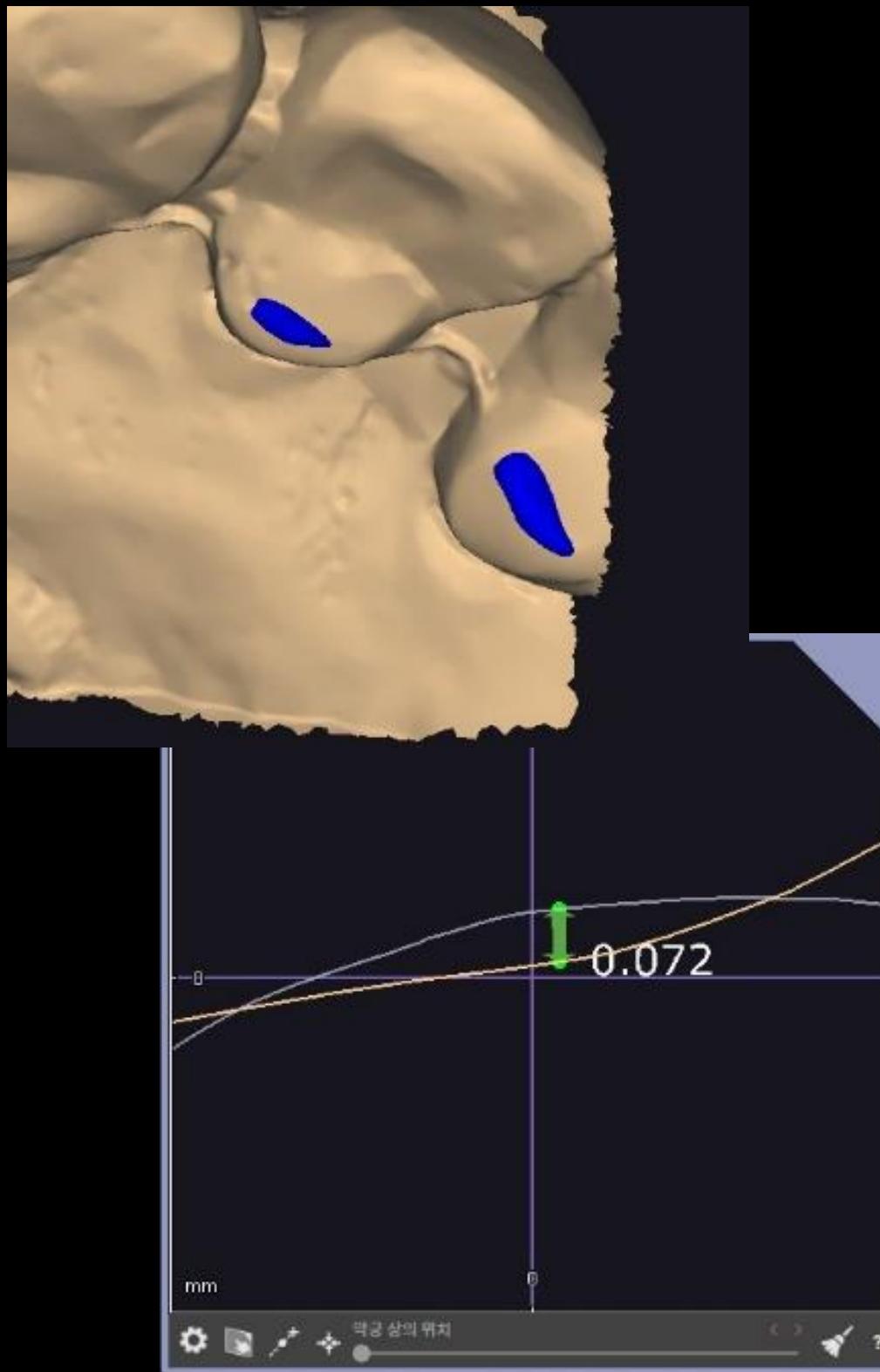
IOS  
(Full Arch)

# BTS & BOS & IOS Bite Compare

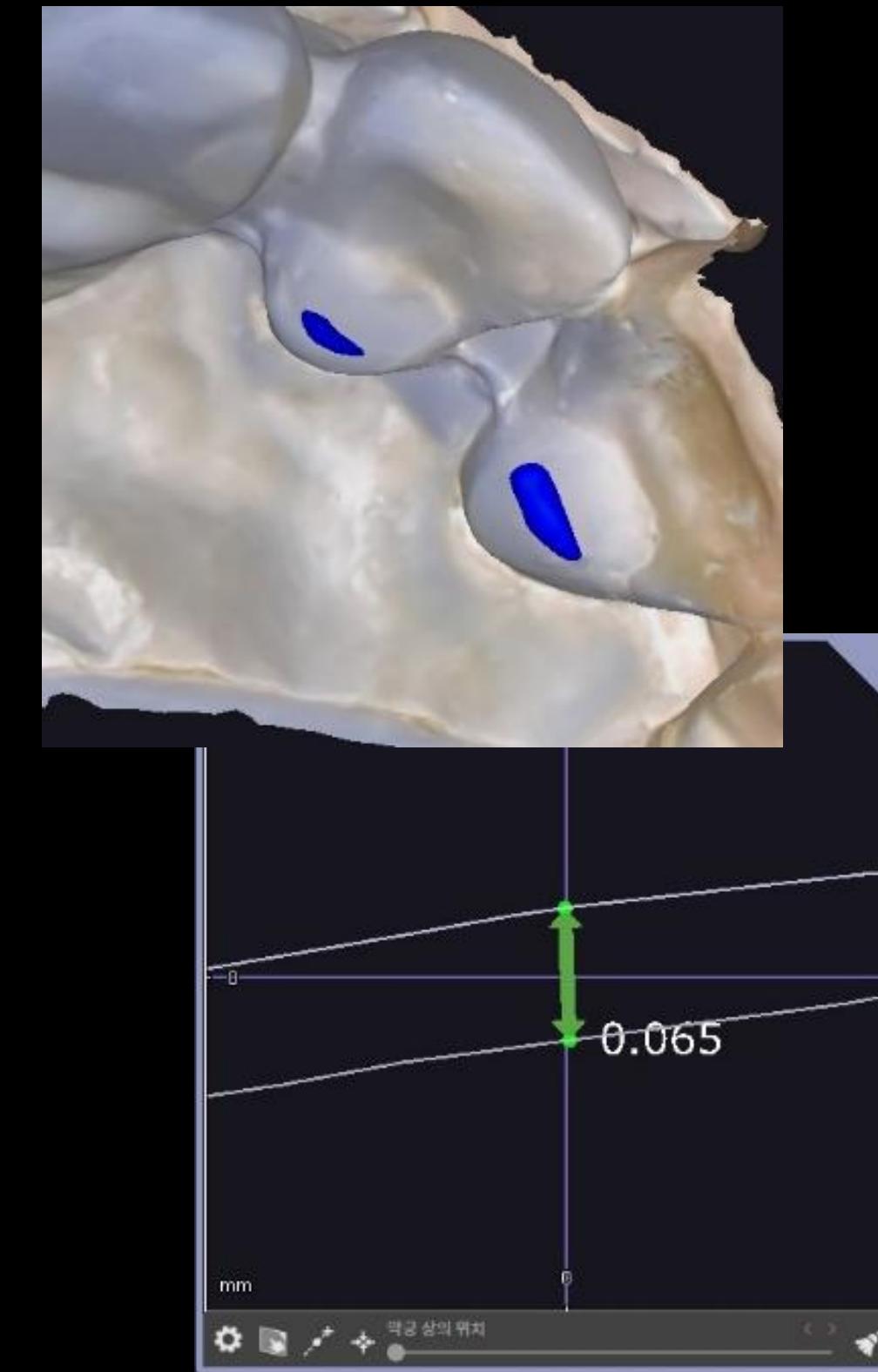


In a full arch scan, during stitching of each occlusion part, very little deviation

# BTS & BOS & IOS Bite Compare

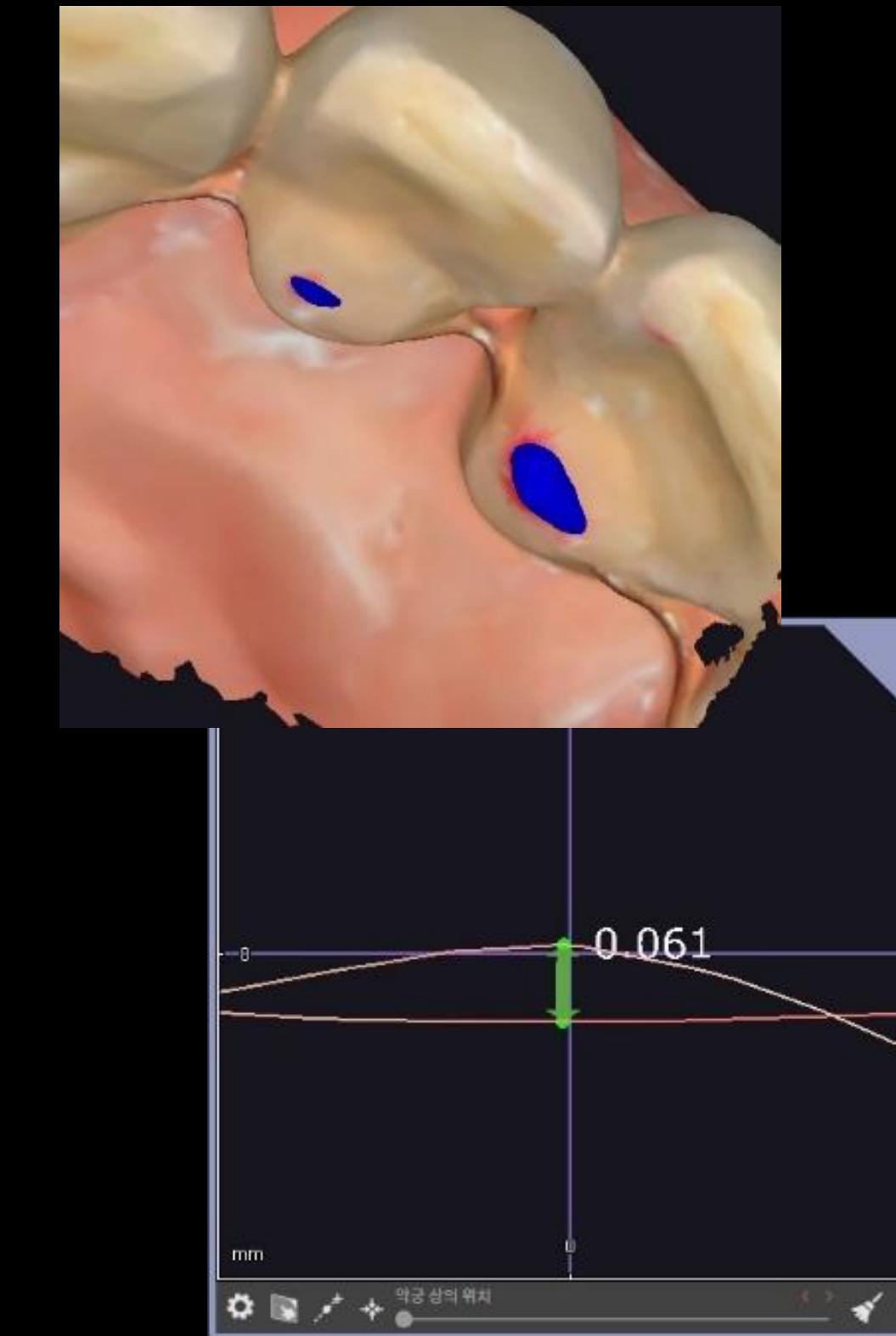


**BTS**

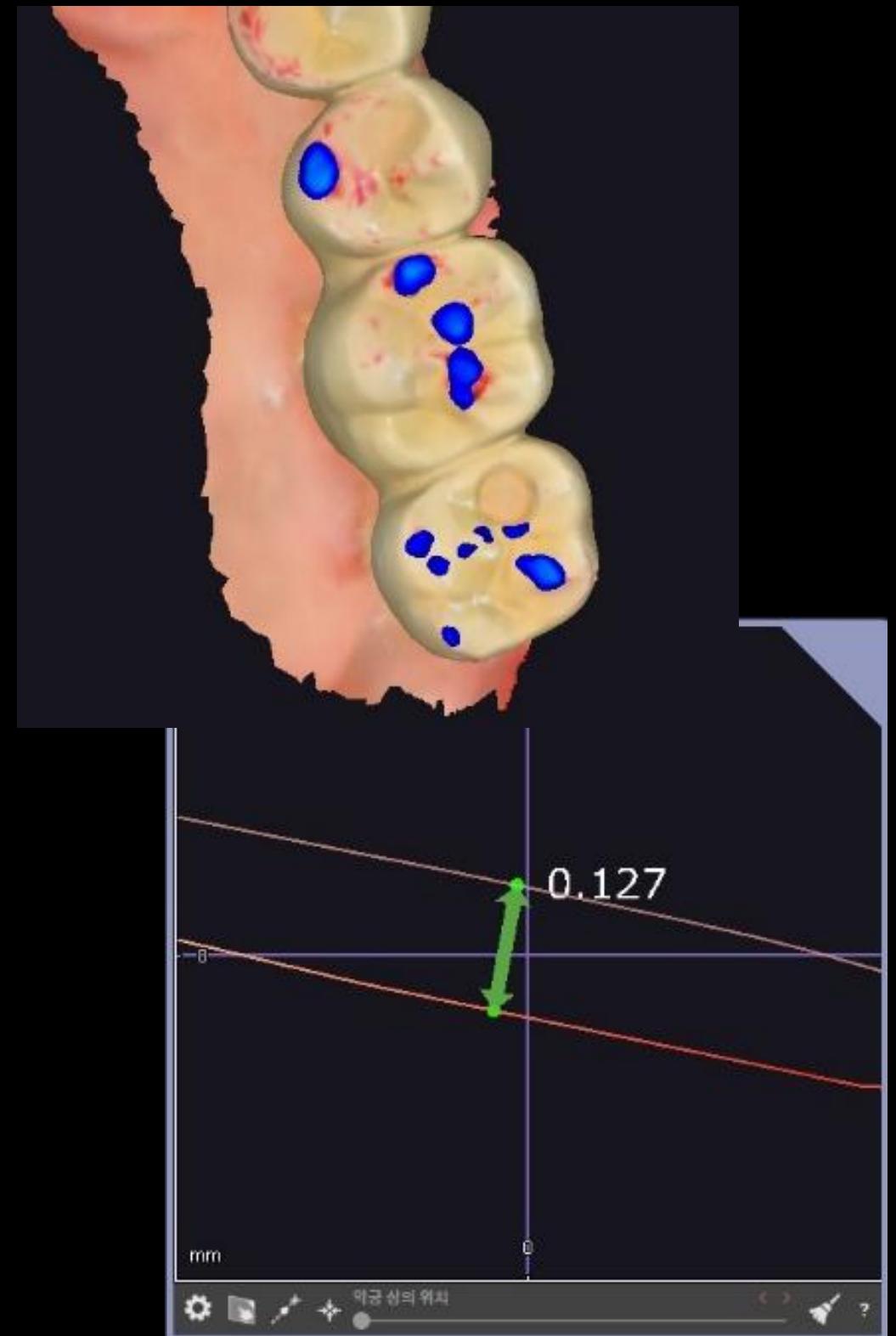


**BOS**

Bite value approximately 0.06–0.07 mm  
Positions and values are similar



**IOS  
(Partial)**



**IOS  
(Full Arch)**

Bite value approximately 0.12 mm  
Differences in Position and Values  
Compared to Partial Impression

# BTS & BOS & IOS Bite Compare



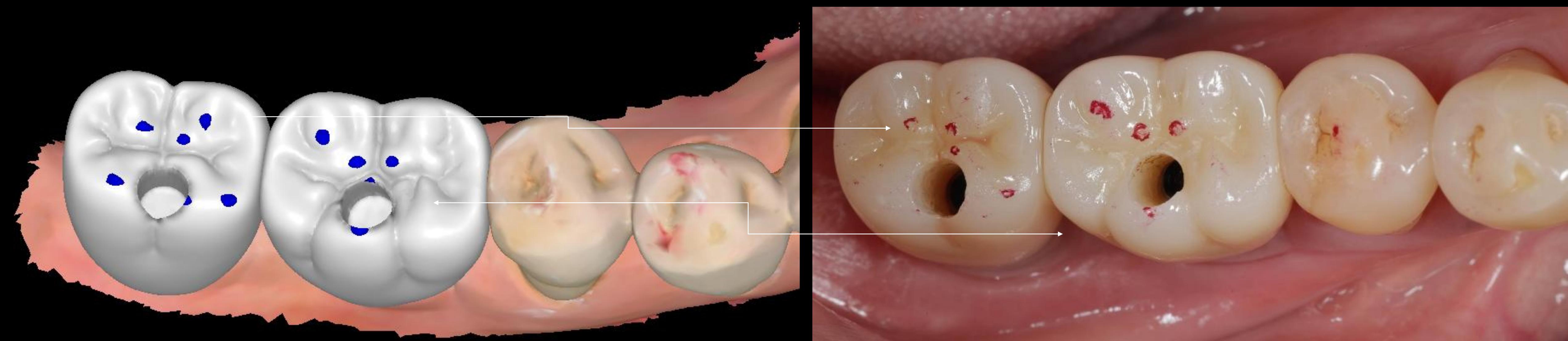
\* Production Plan: Fabrication to Proceed Using the **IOS** (Partial) Showing the Most Stable **Bite** and **Library** Alignment \*

# Final Prosthesis



Shining 3d Aoral Elite scan data use to model-less

# Final Prosthesis



Shining 3d Aoral Elite scan data use to model-less



Oral exam (2024-07-31)



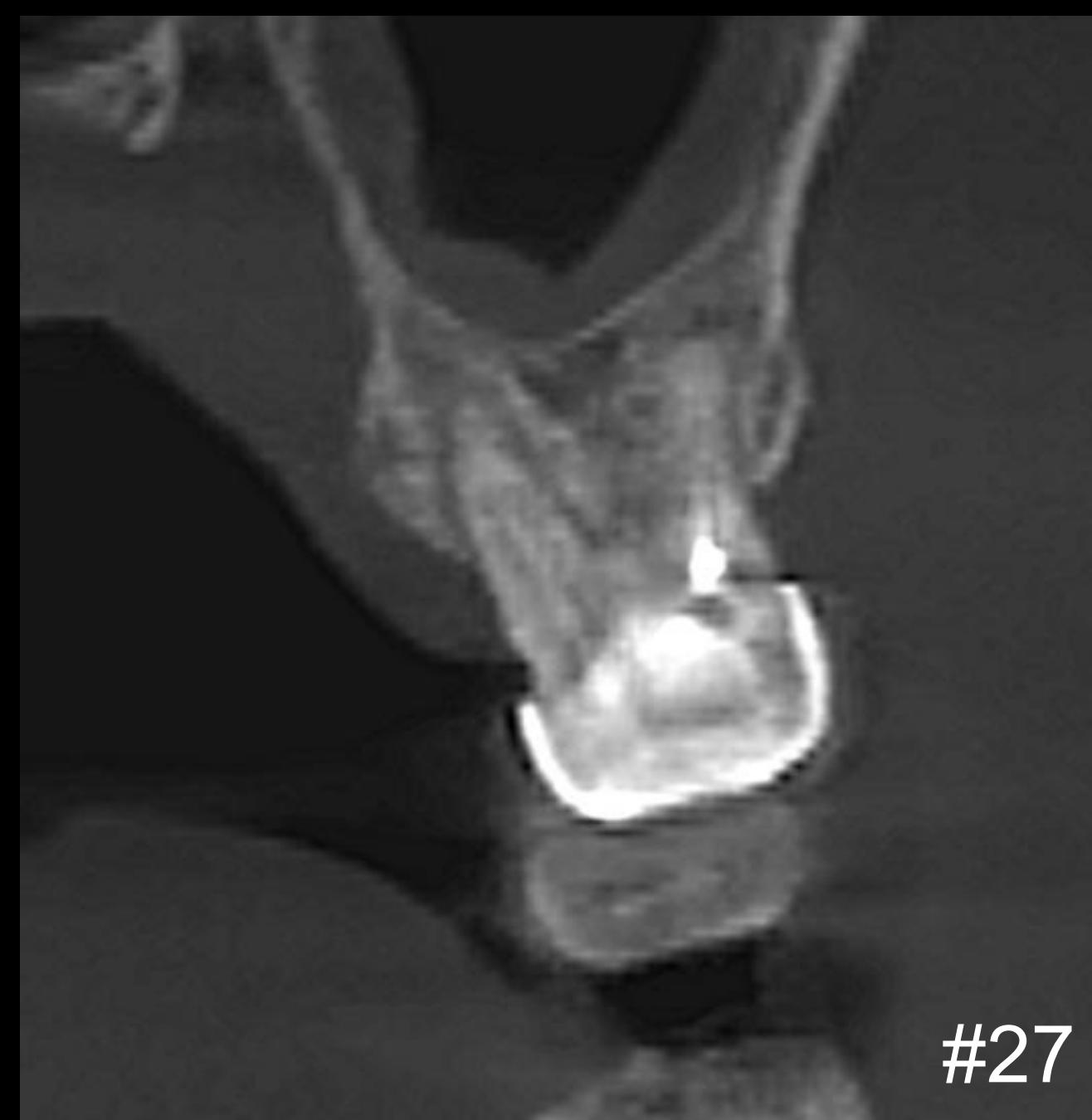
Post-op (2024-10-08)



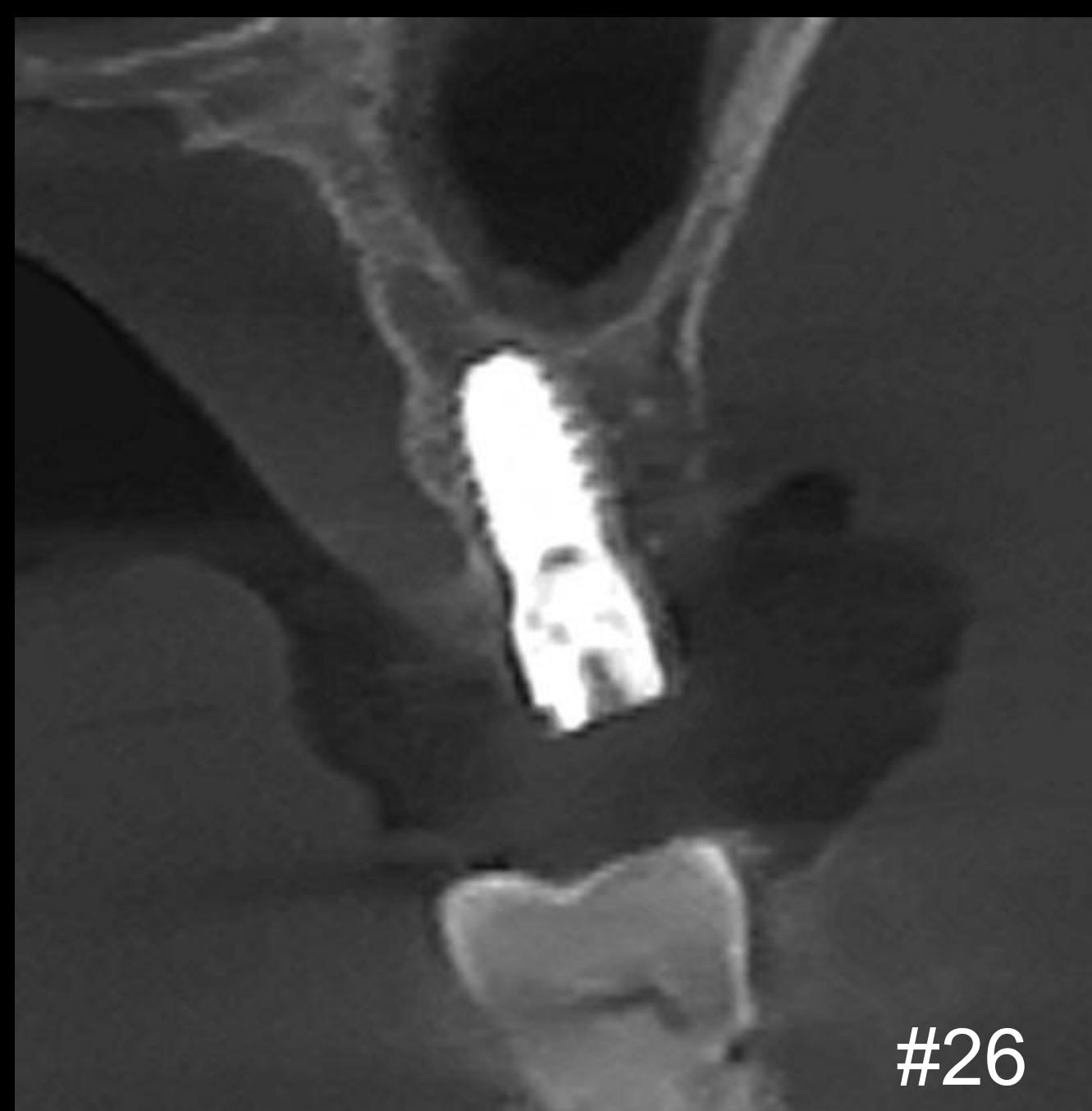
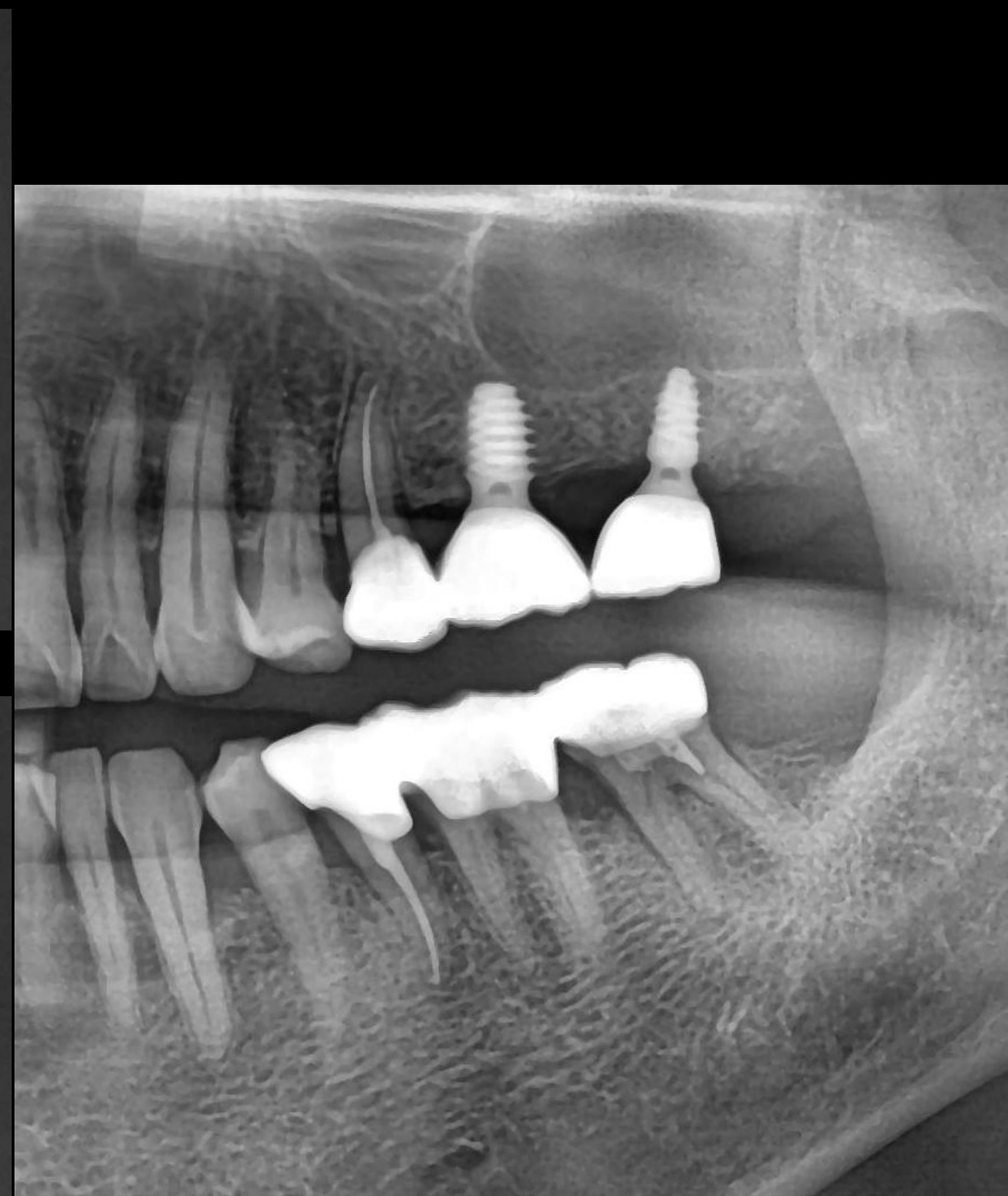
Pre-op CT (2024-07-17)



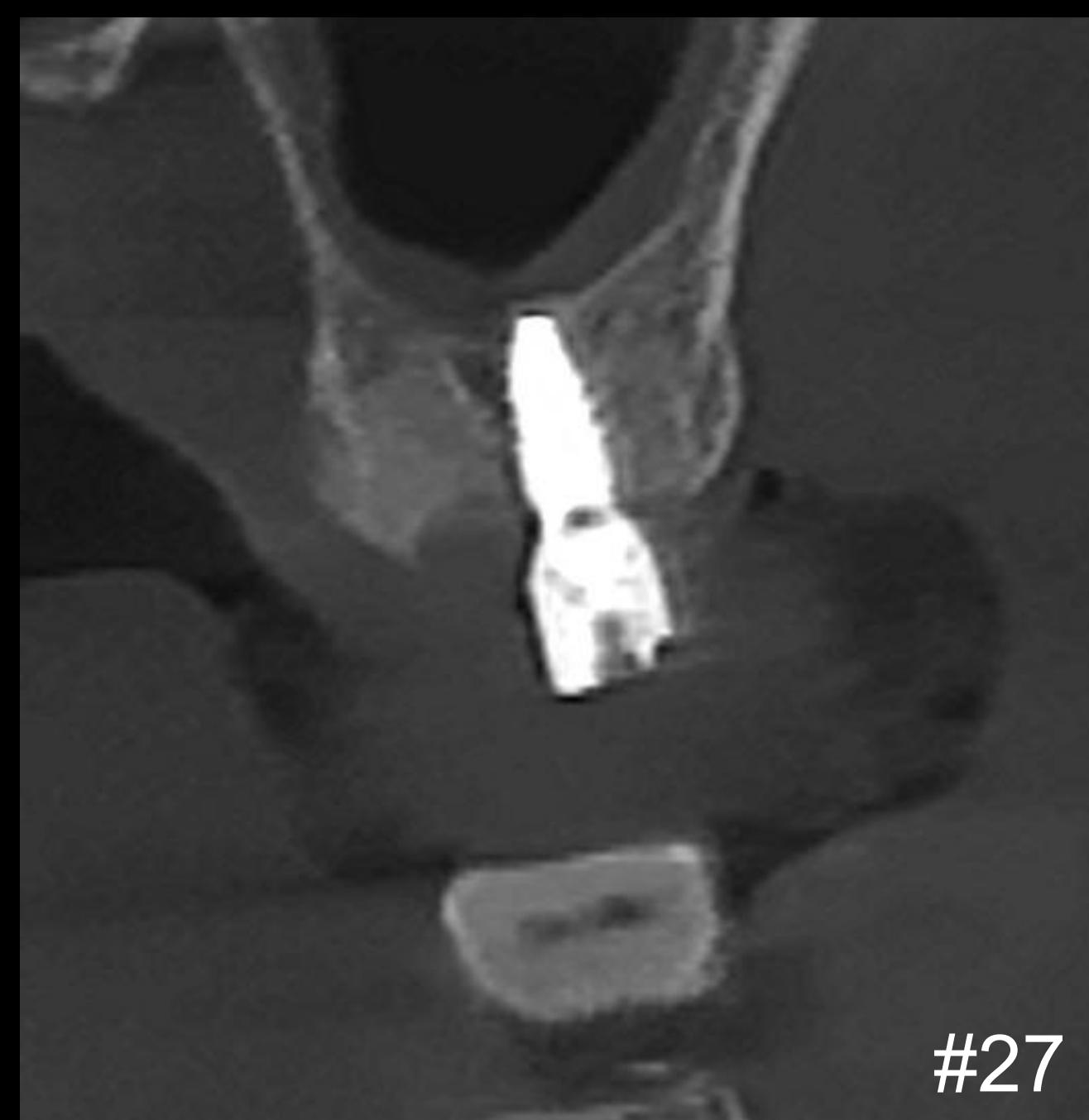
#26



#27

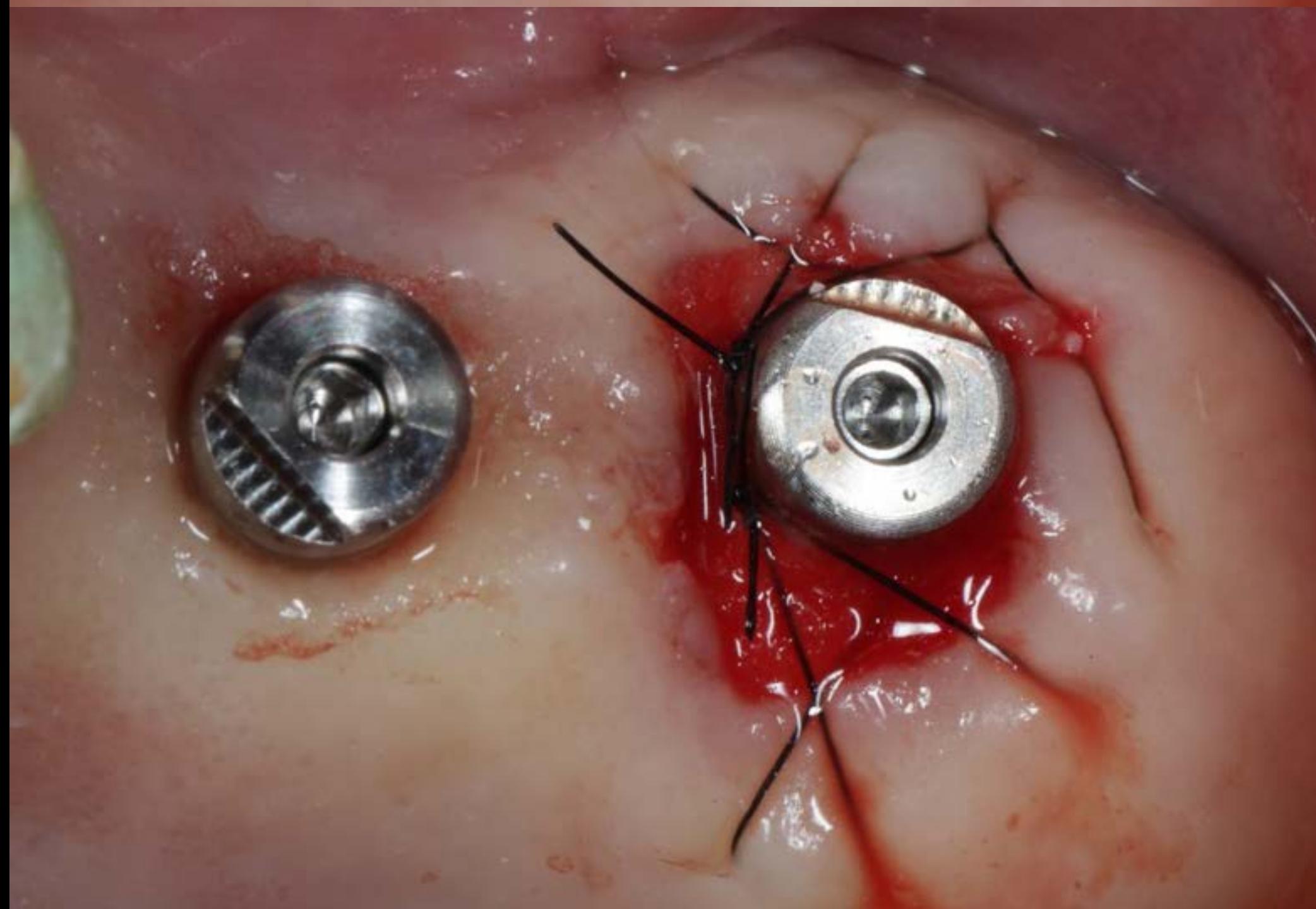
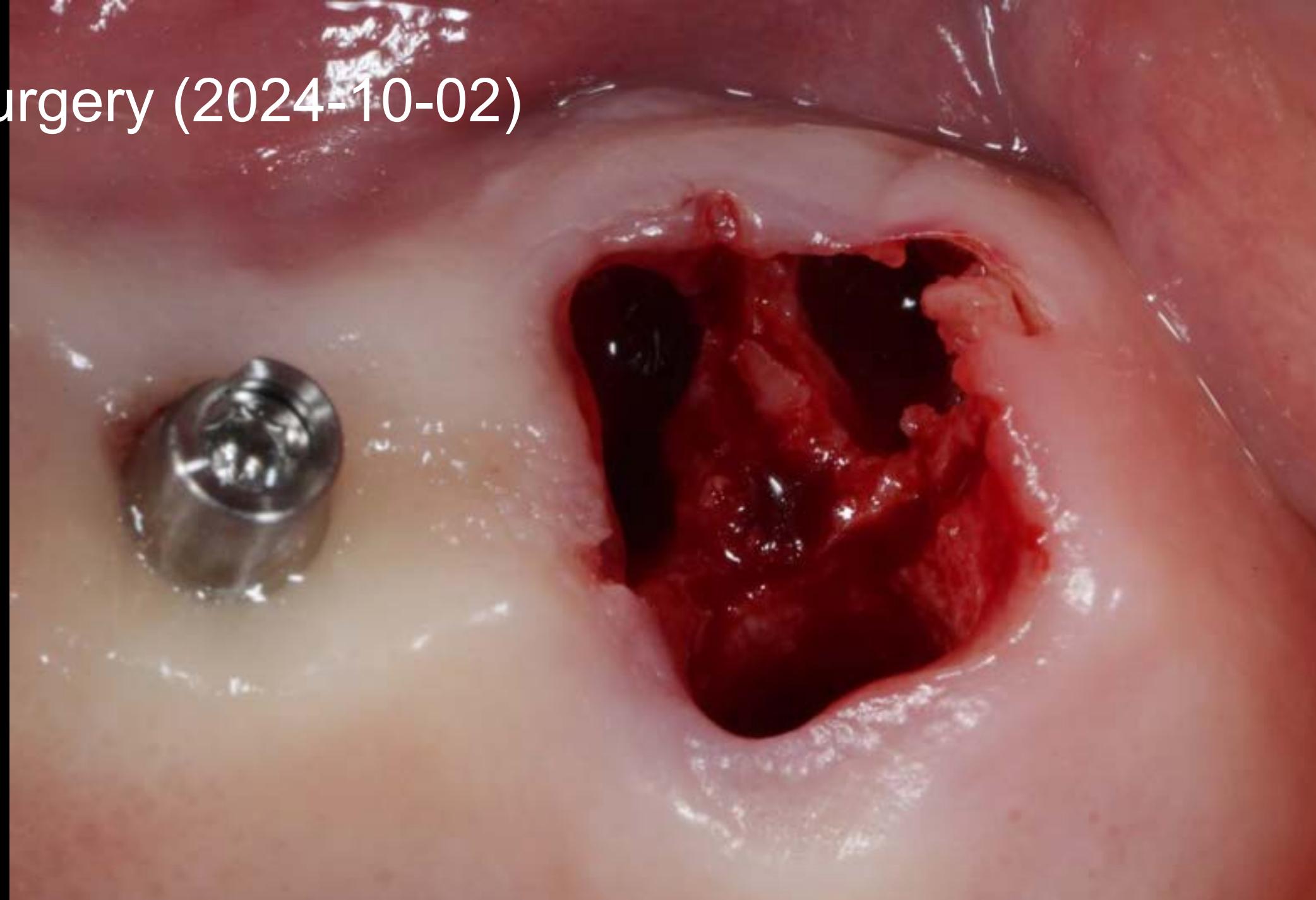


#26



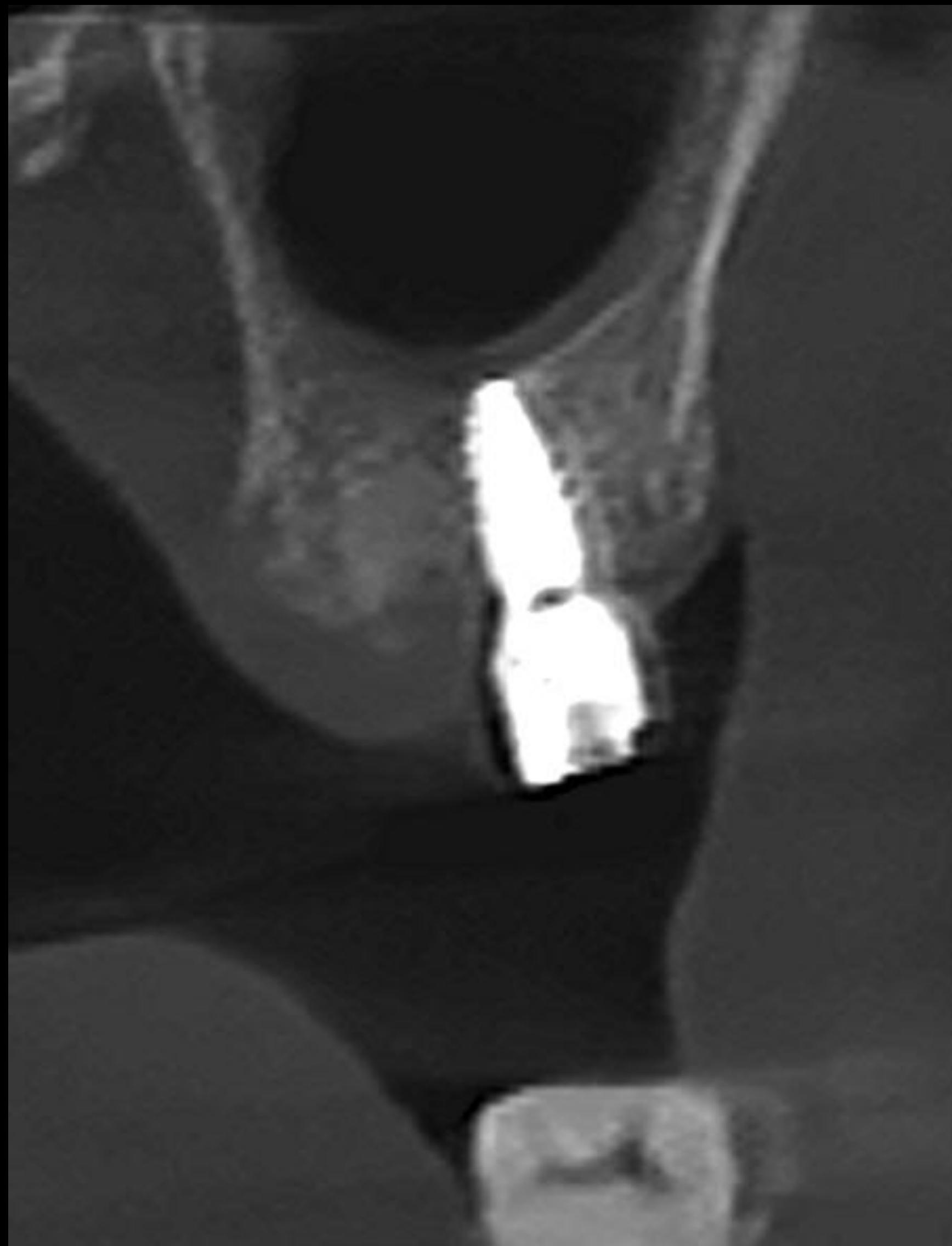
#27

Surgery (2024-10-02)

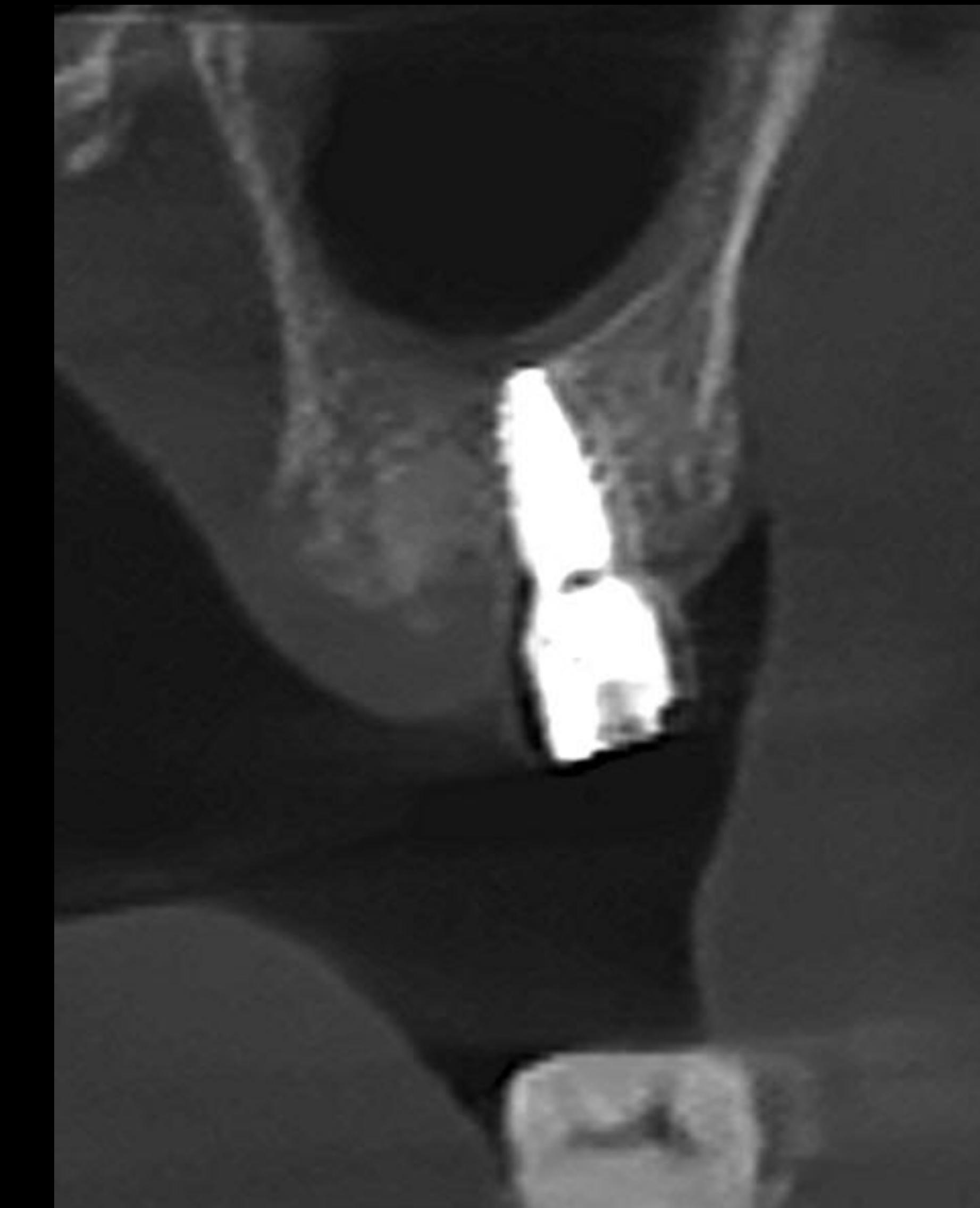


Healing : 1 month (2024-10-30)

Follow up CT : 4 weeks (2024-10-30)



#26



#27

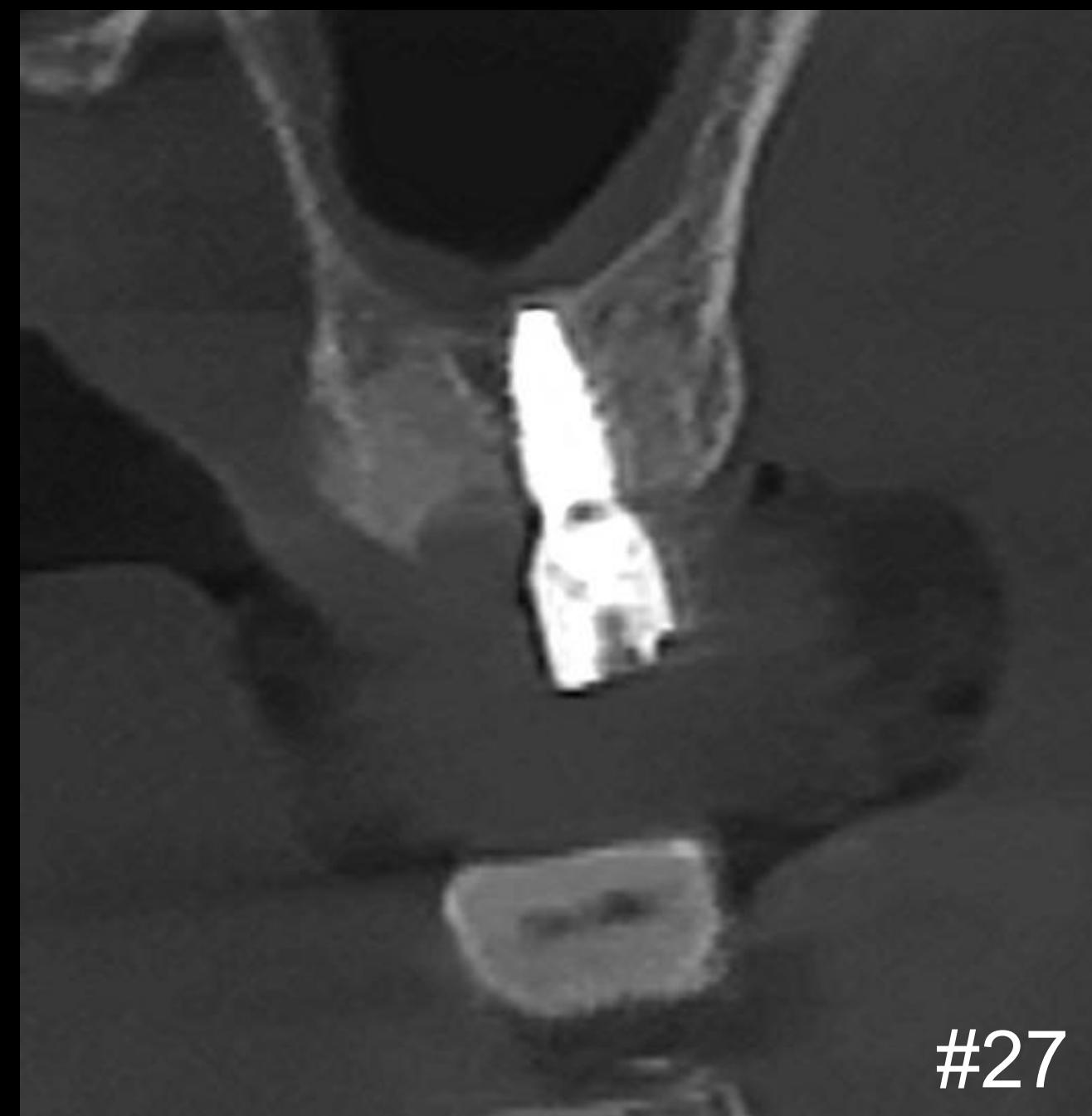
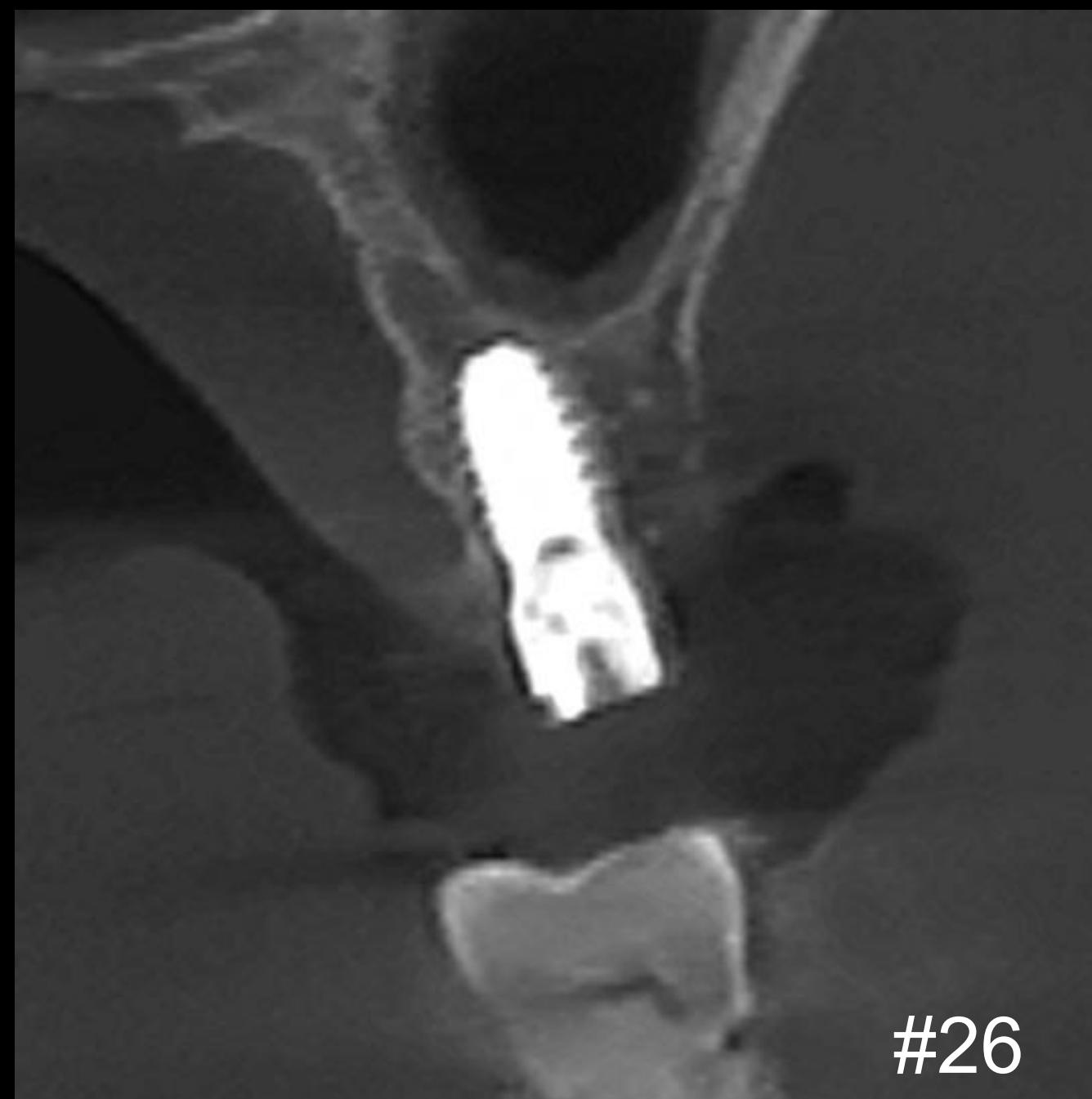
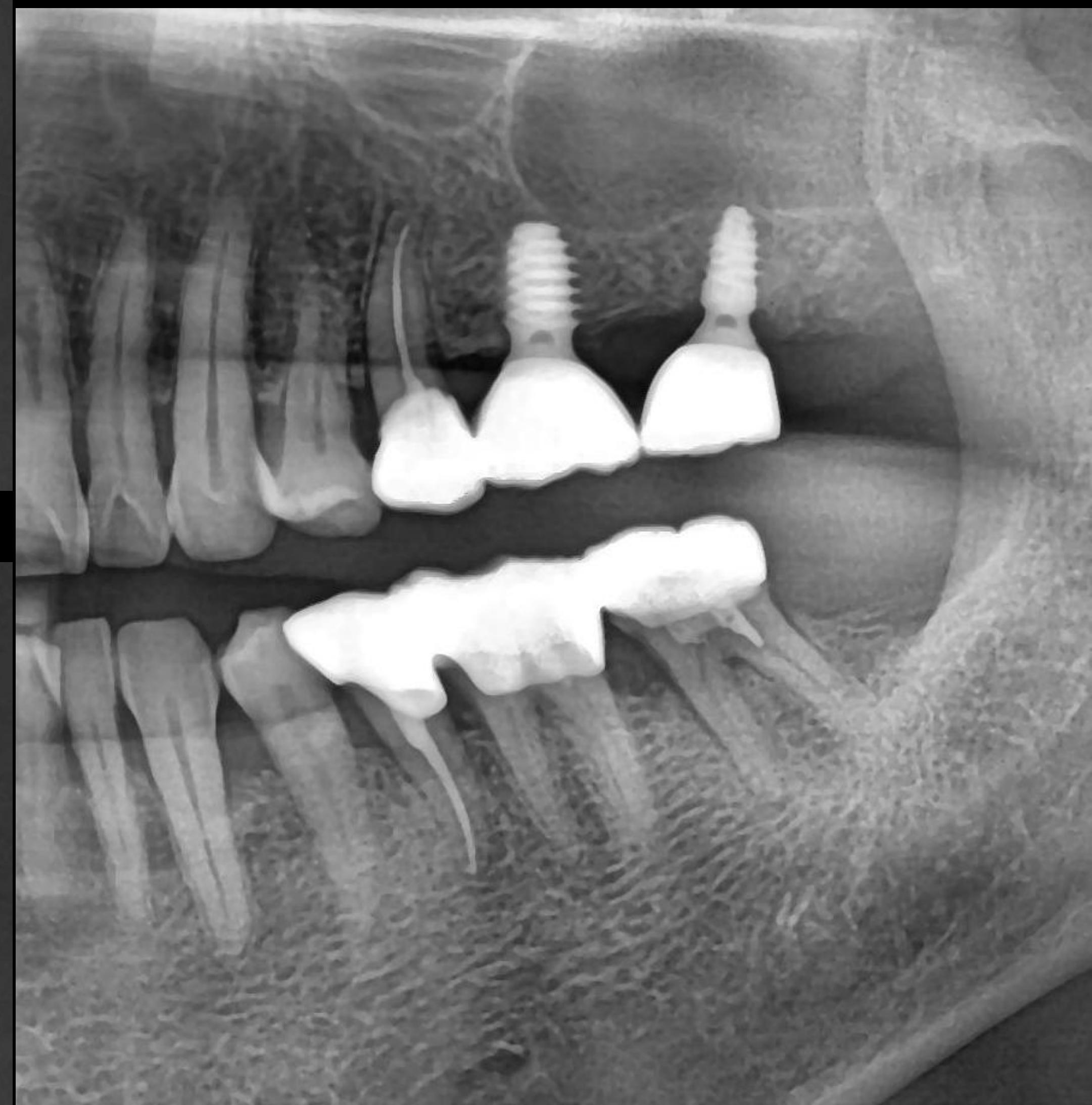
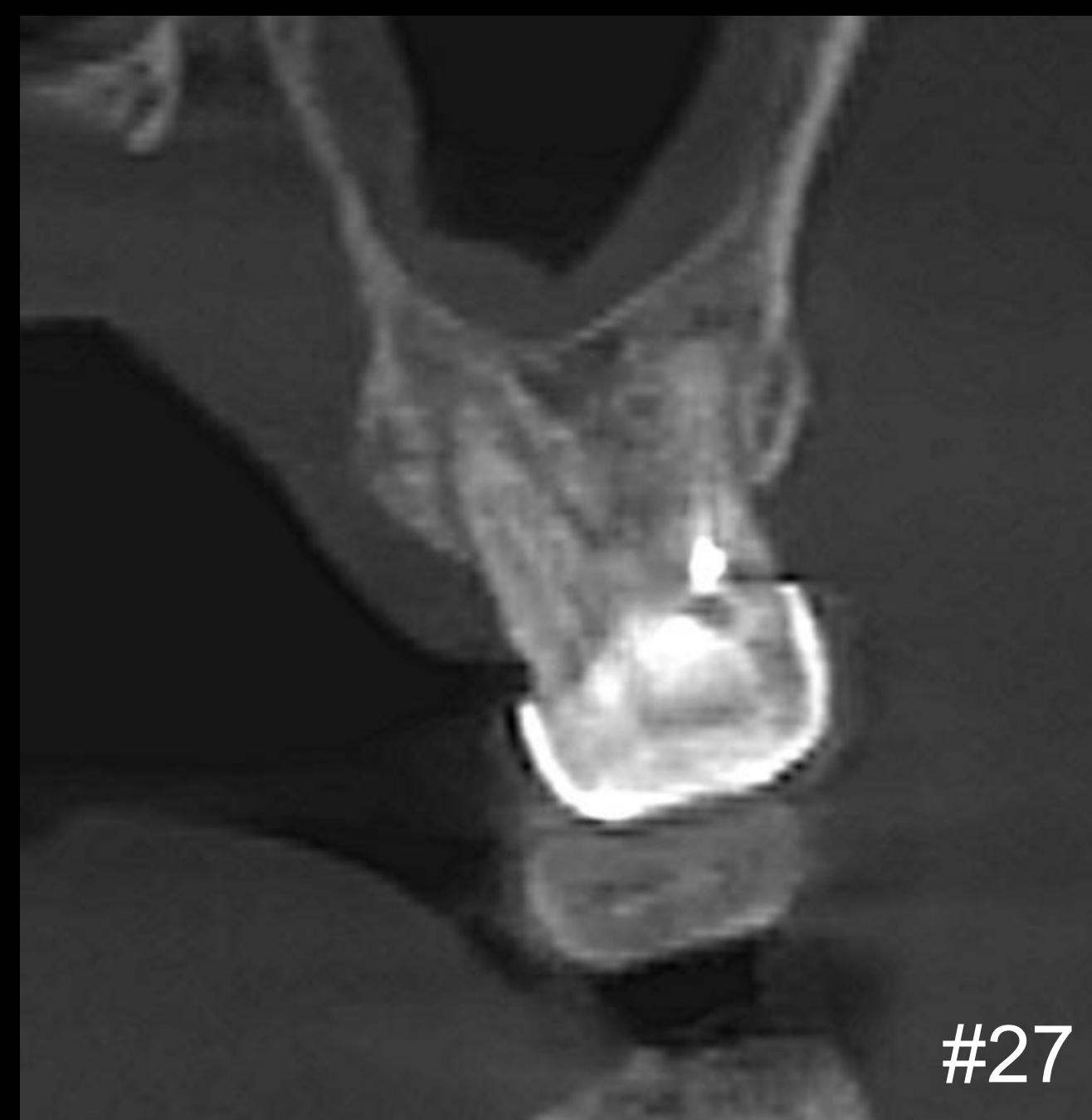
Oral exam (2024-07-31)



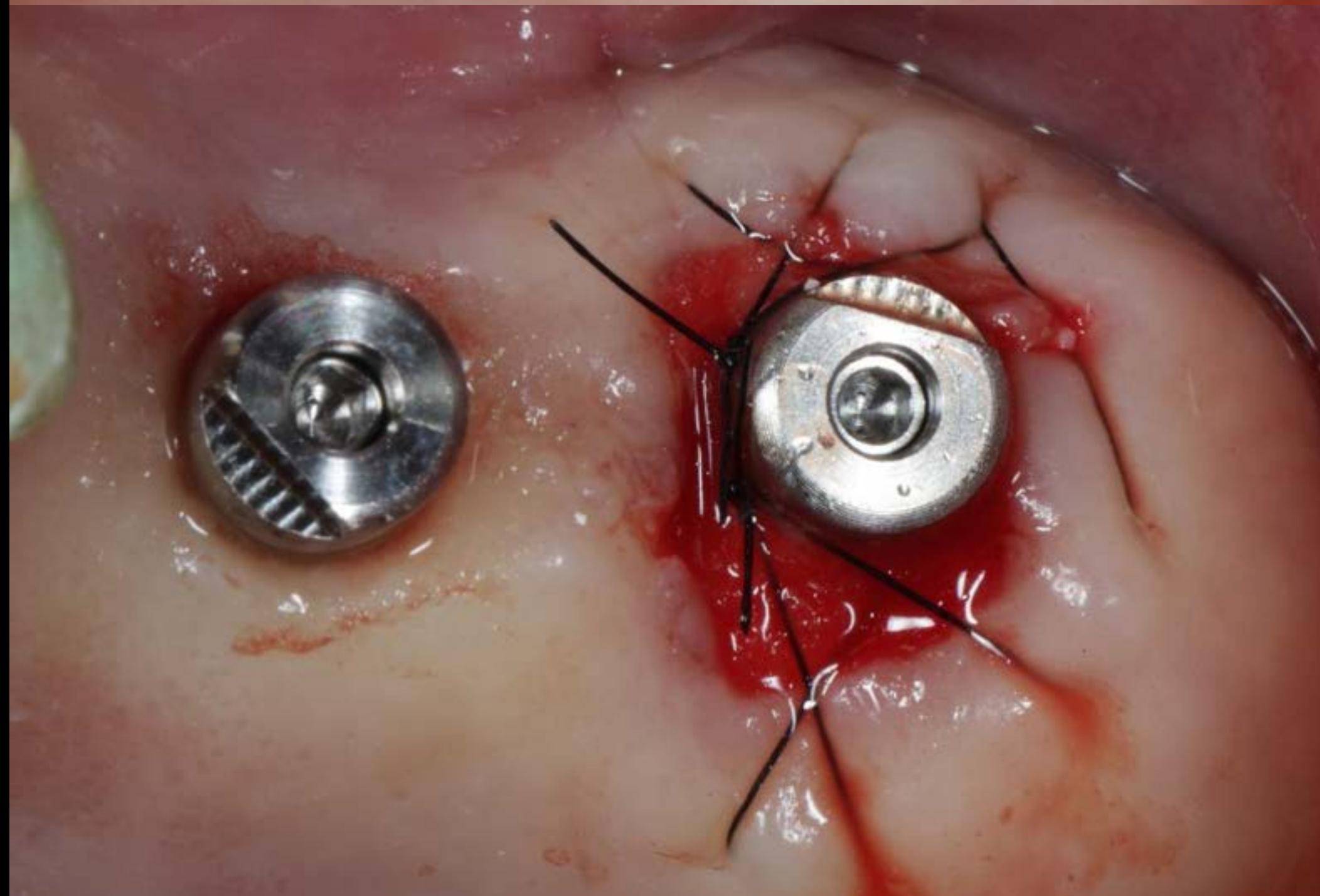
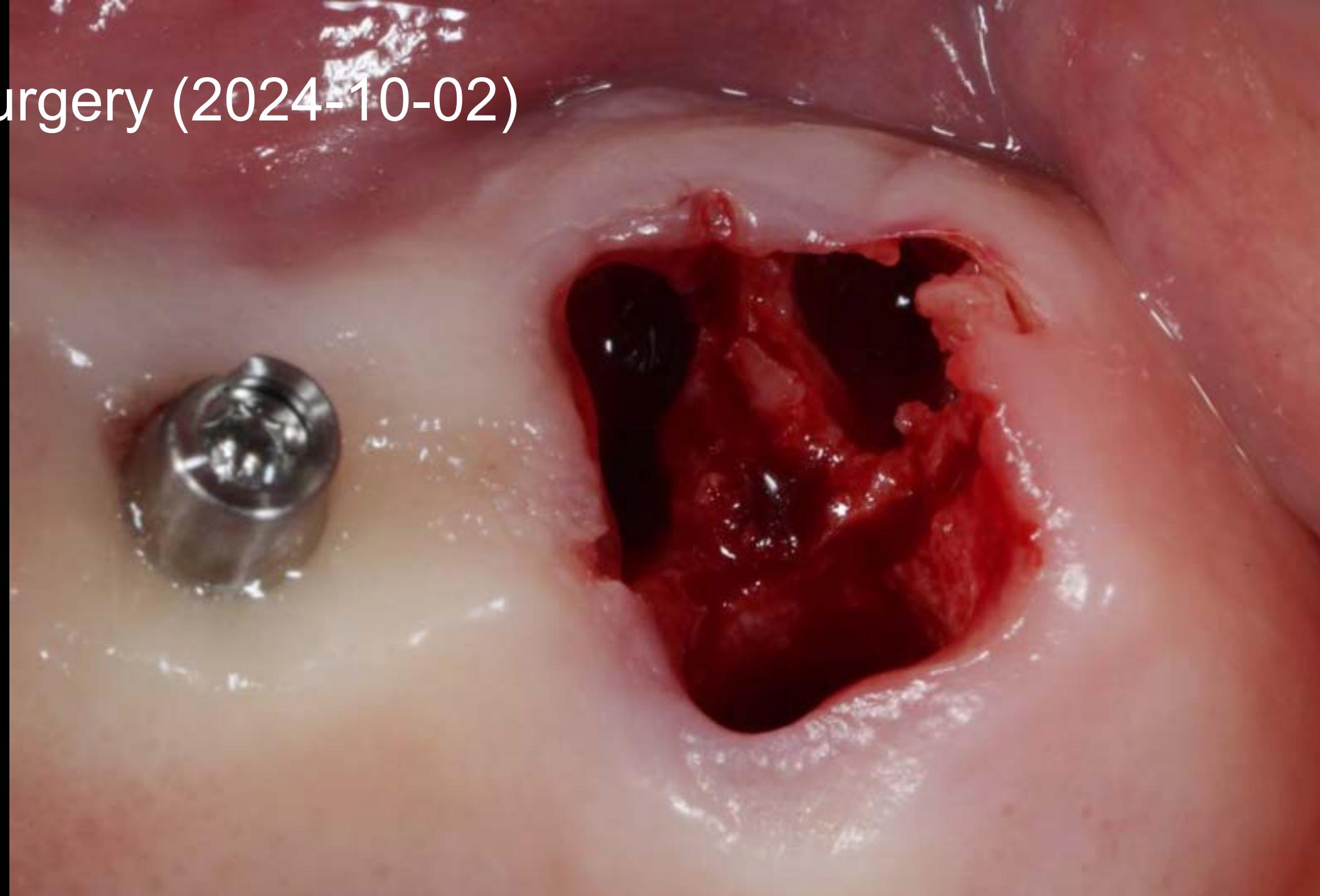
Post-op (2024-10-08)



Pre-op CT (2024-07-17)

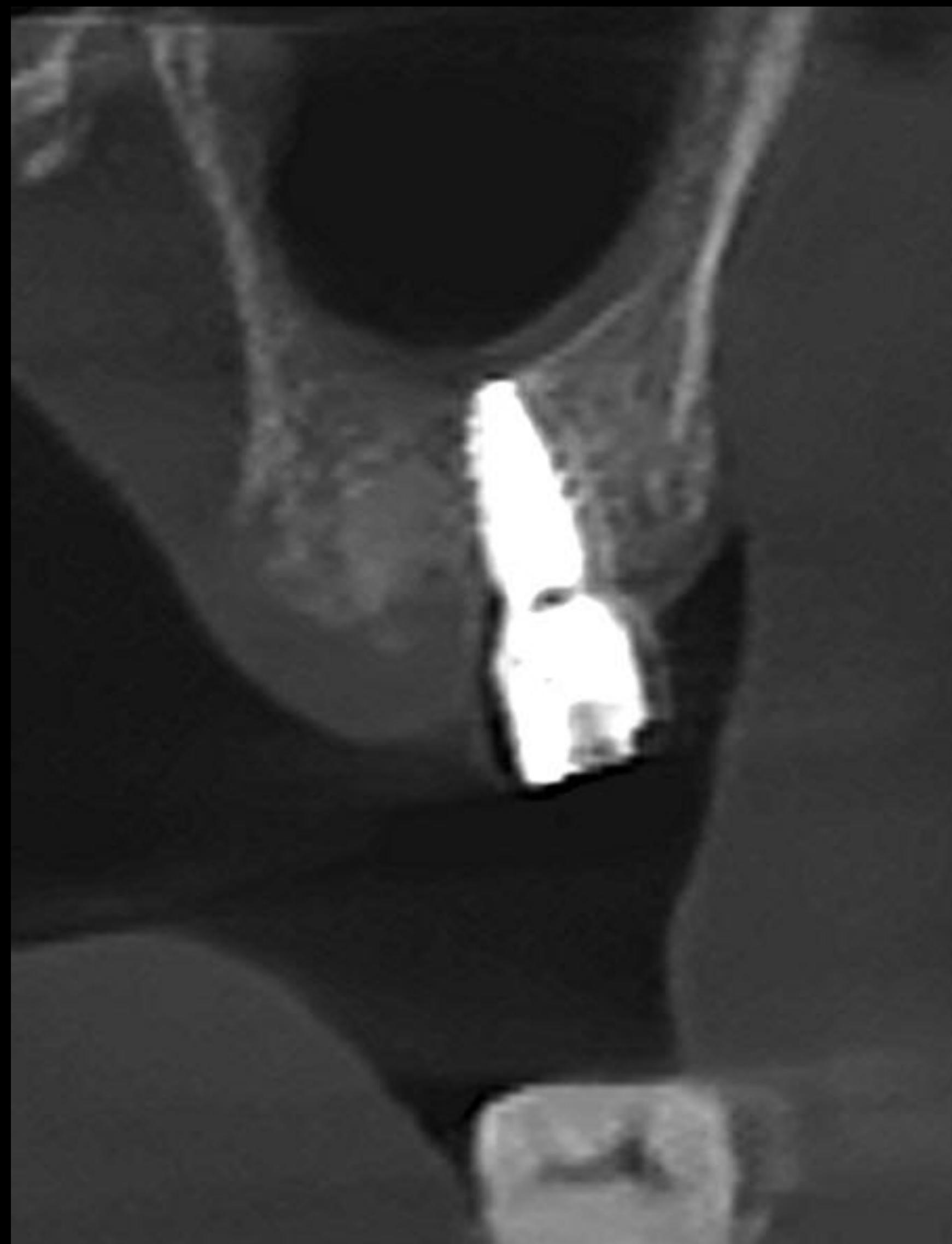


Surgery (2024-10-02)



Healing : 1 month (2024-10-30)

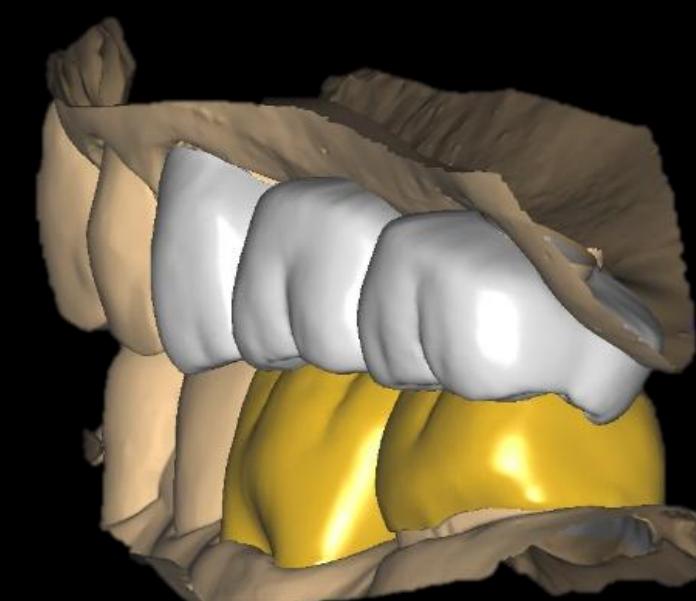
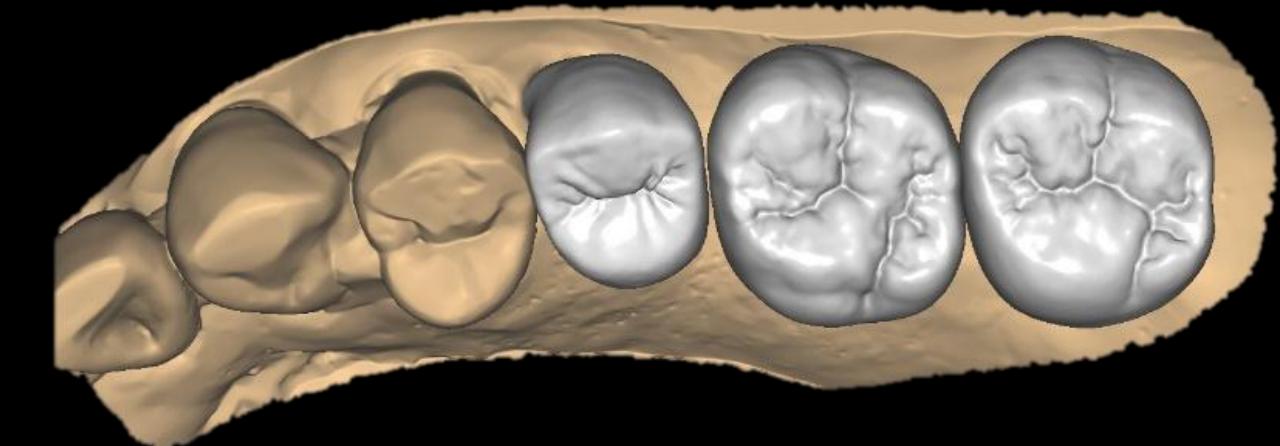
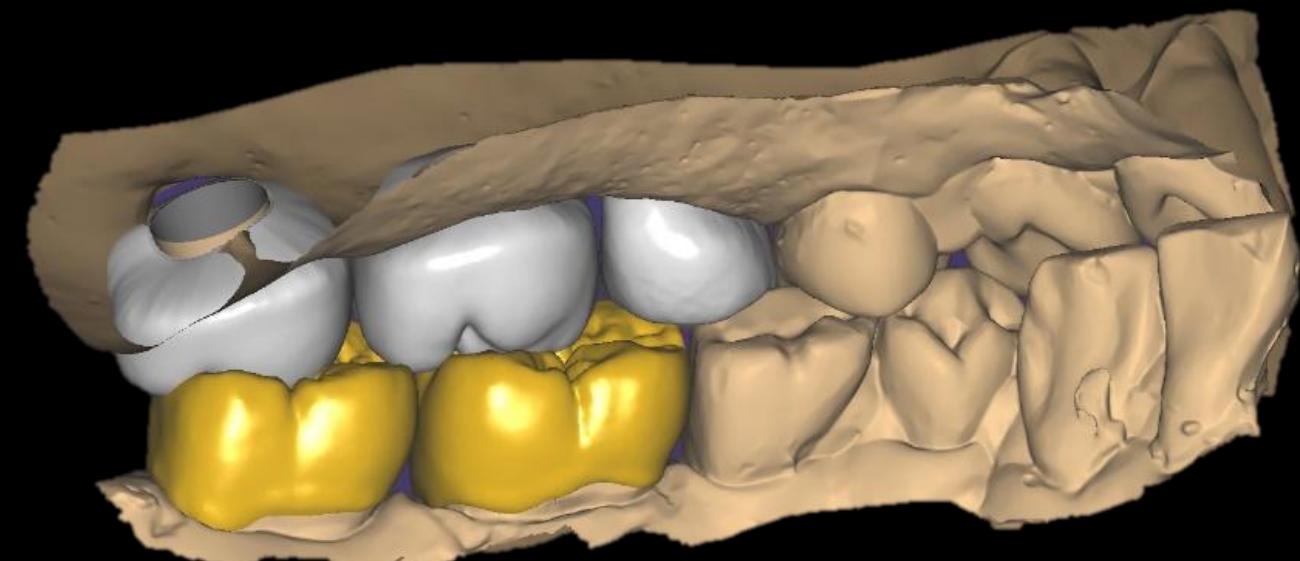
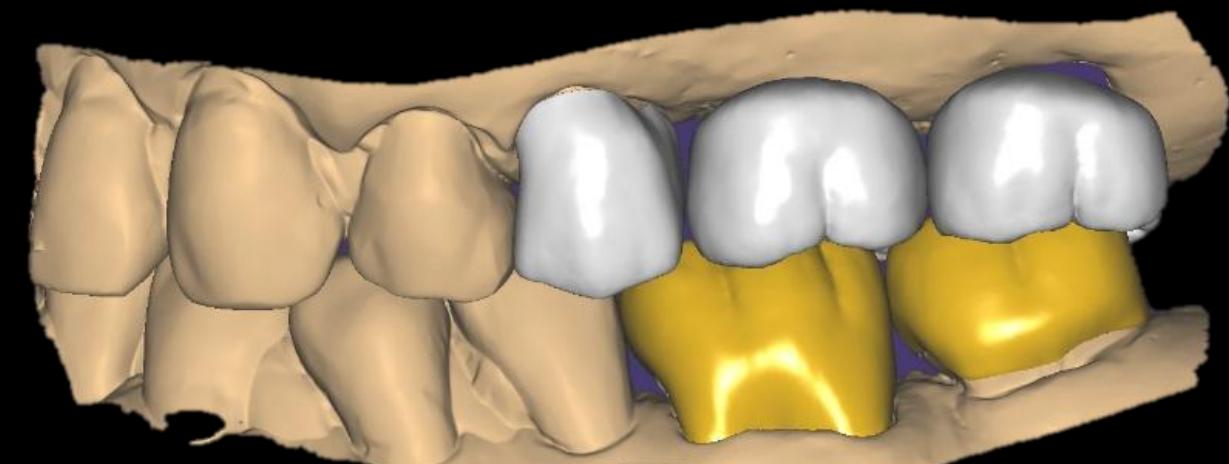
Follow up CT : 4 weeks (2024-10-30)

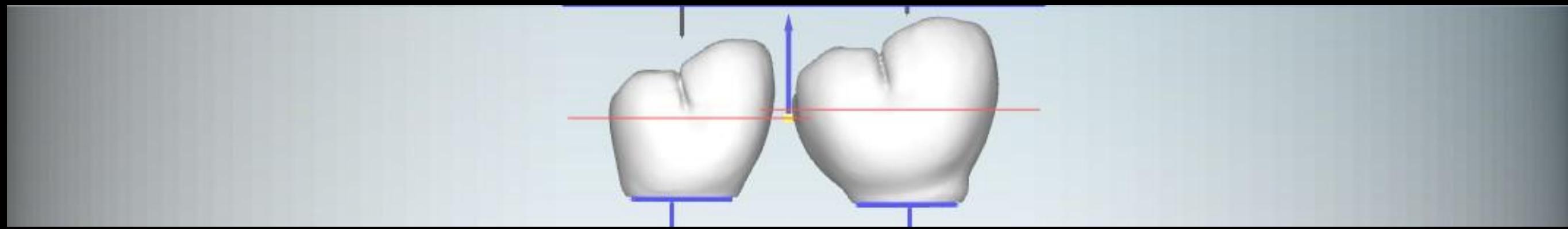


#26



#27





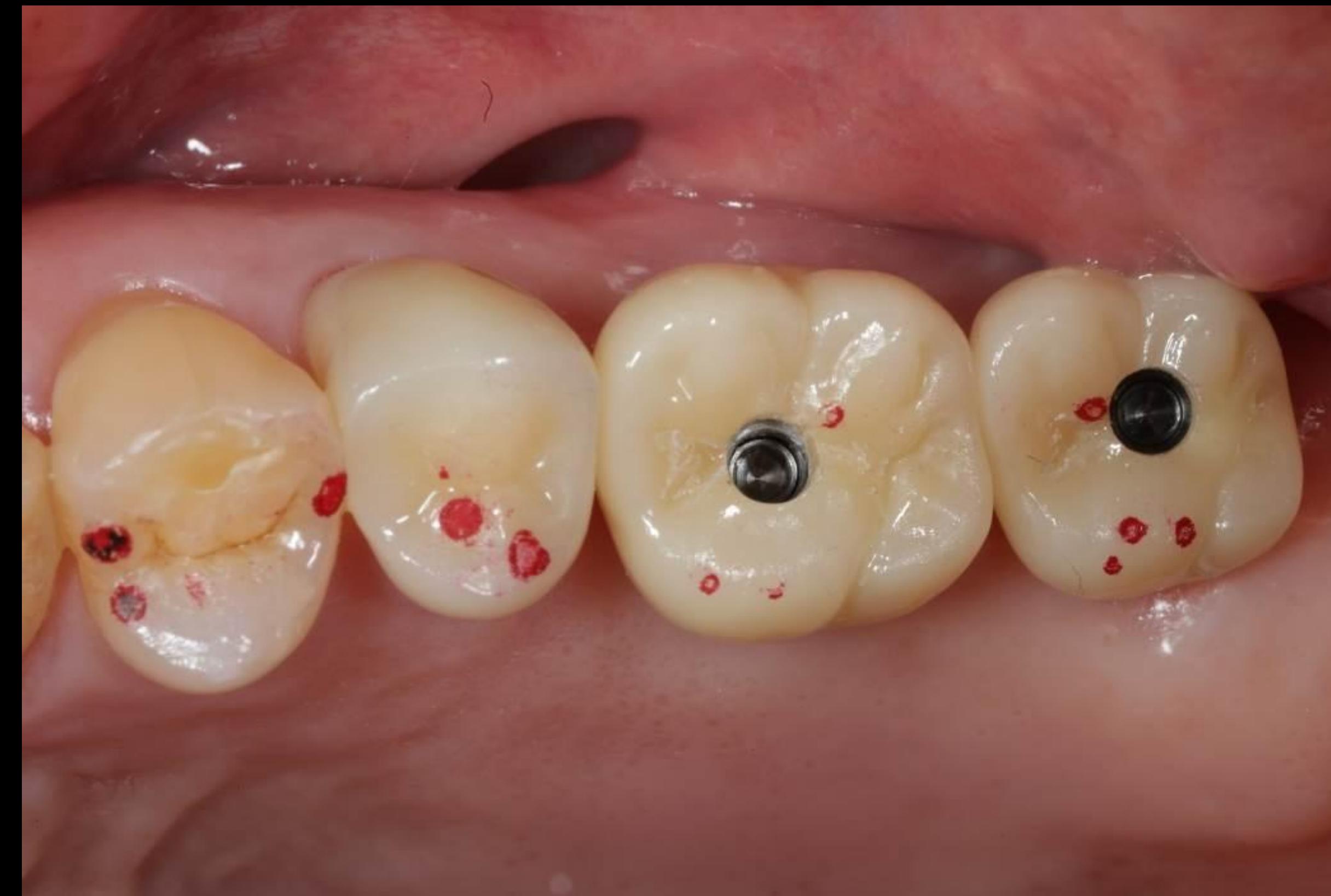
**bright Mono Block A3**



# Final Prosthesis



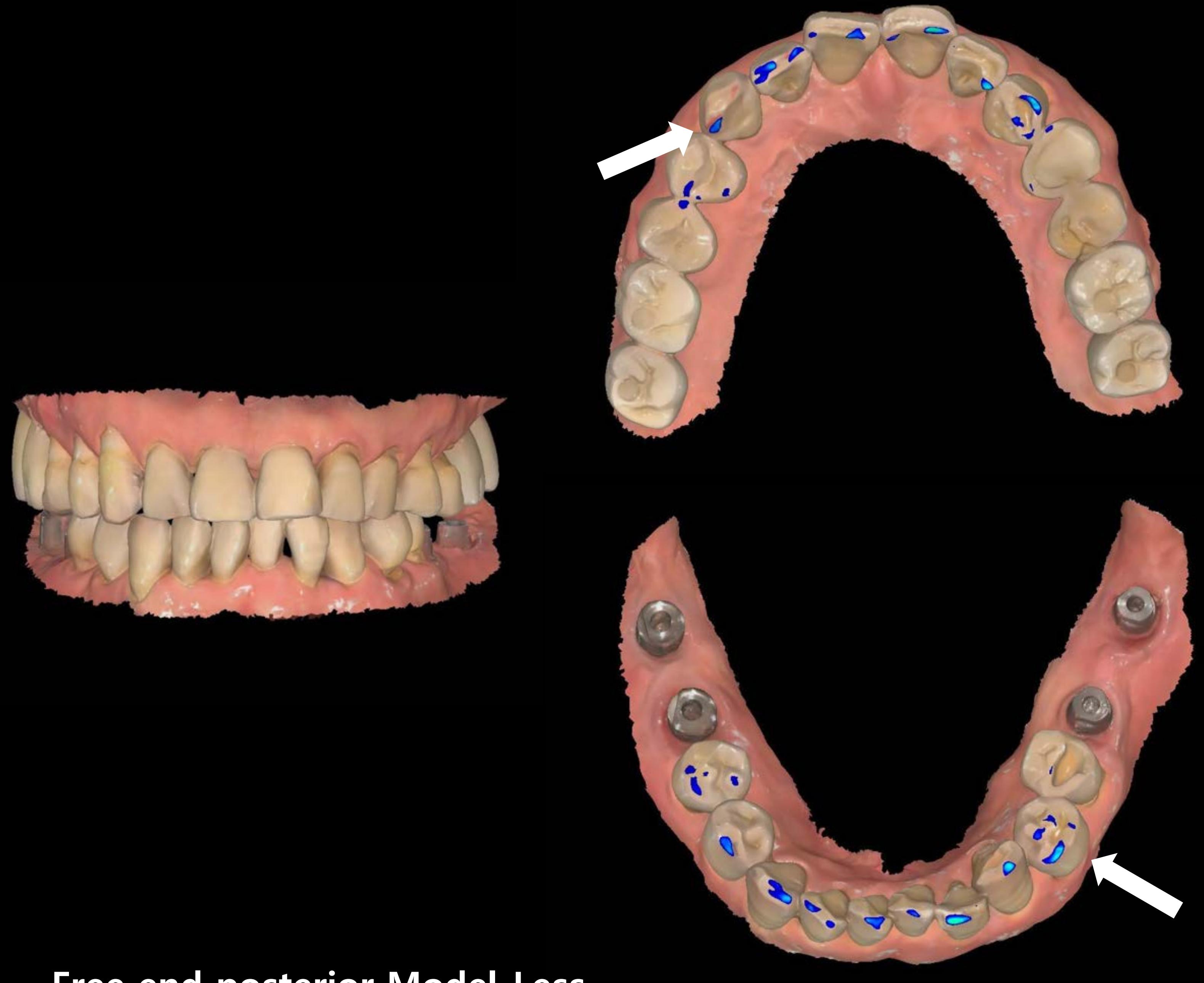
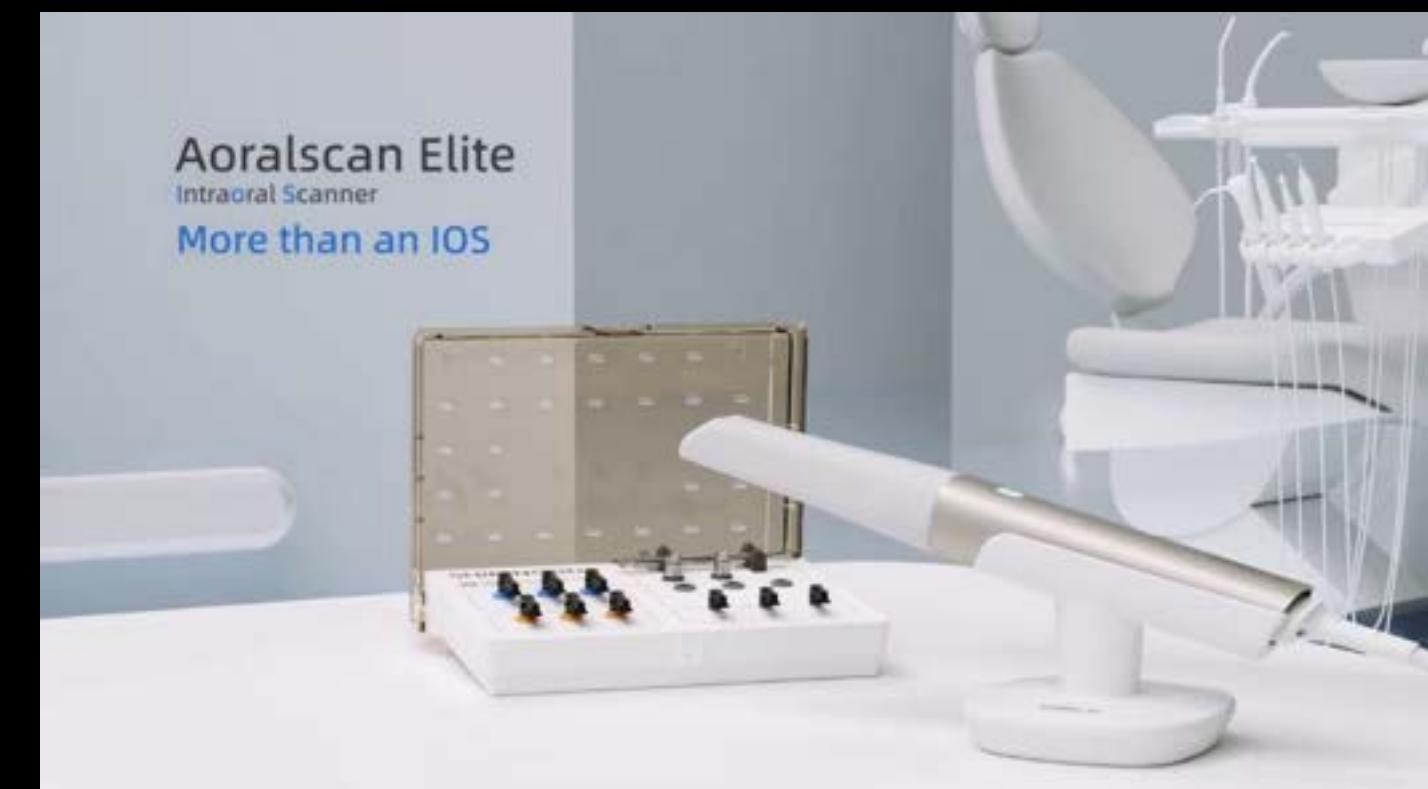
# Final Prosthesis



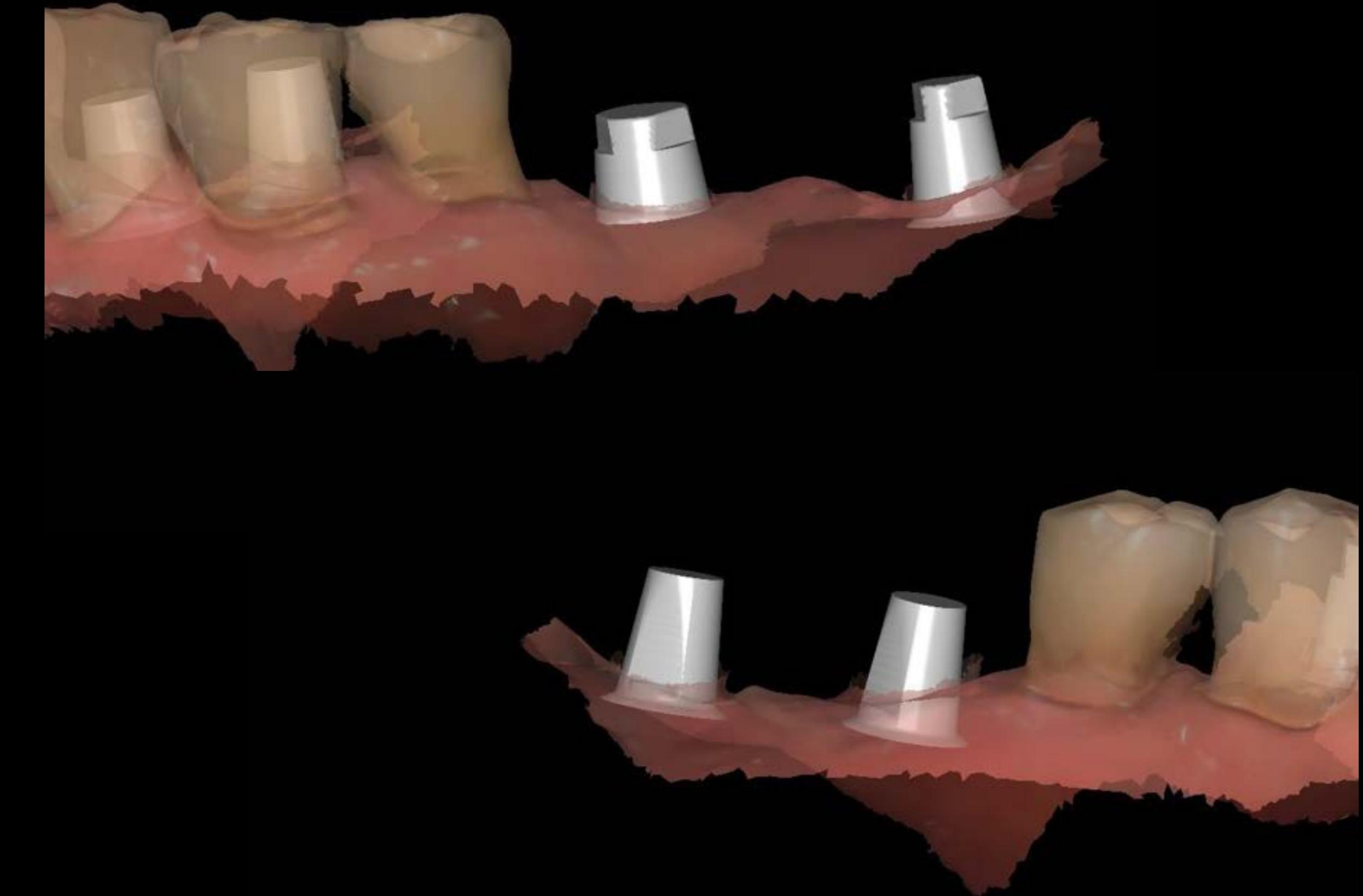
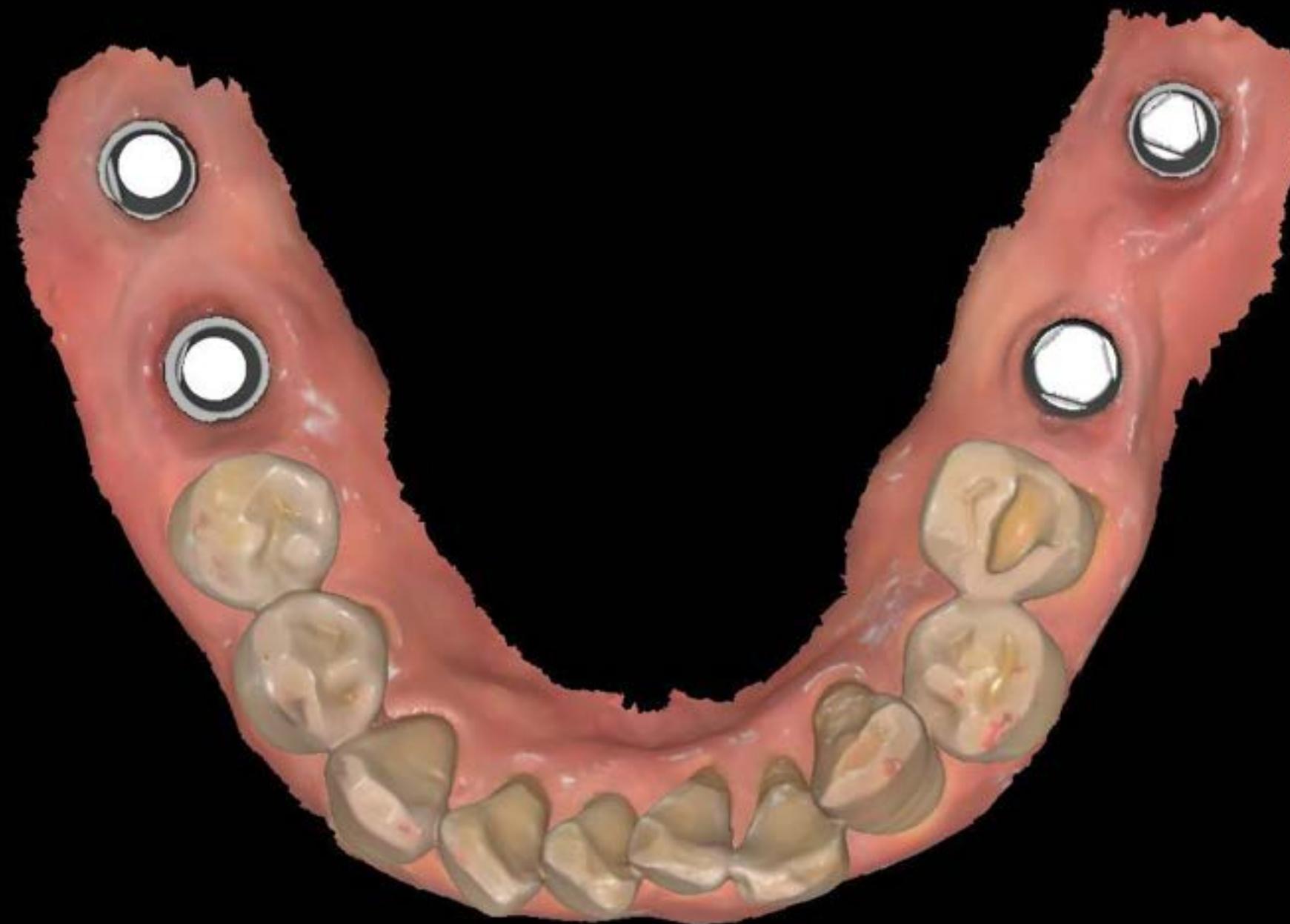
- # 47i 46i , 36i 37i
- bright Tissue Level
- bright Bone Level
- Dentium SuperLine
- bright 3layer Block
- Model-less (Shining 3D AoralScan Elite Scanner)



# Intra Oral Scan

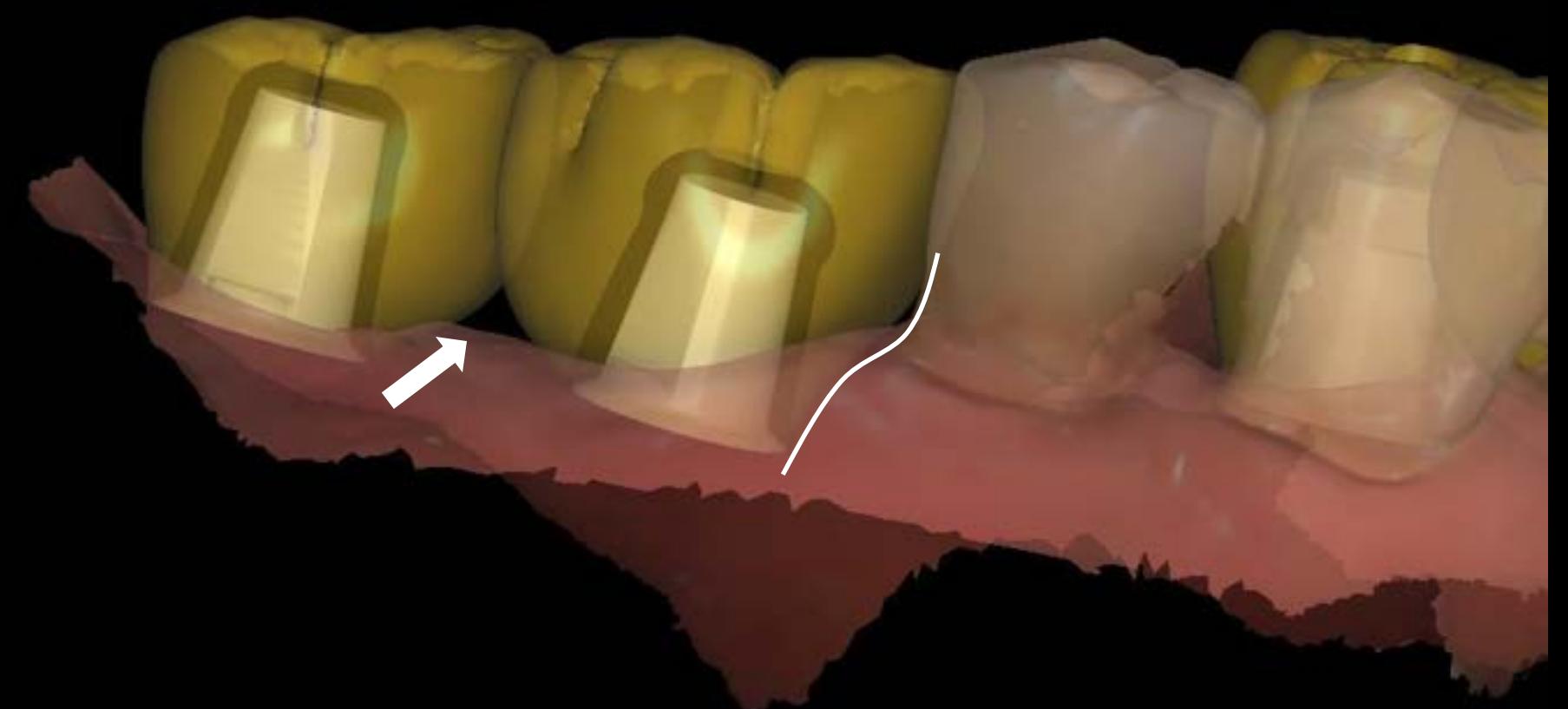
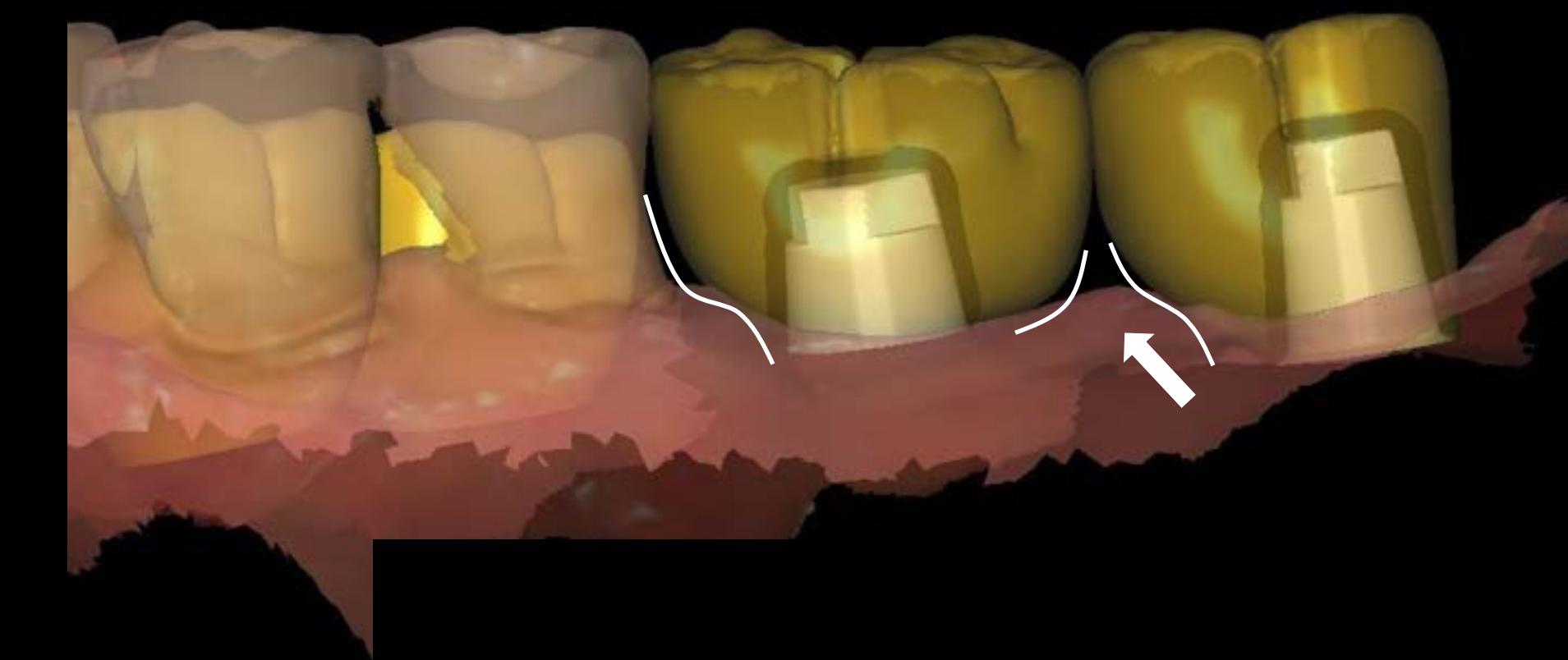
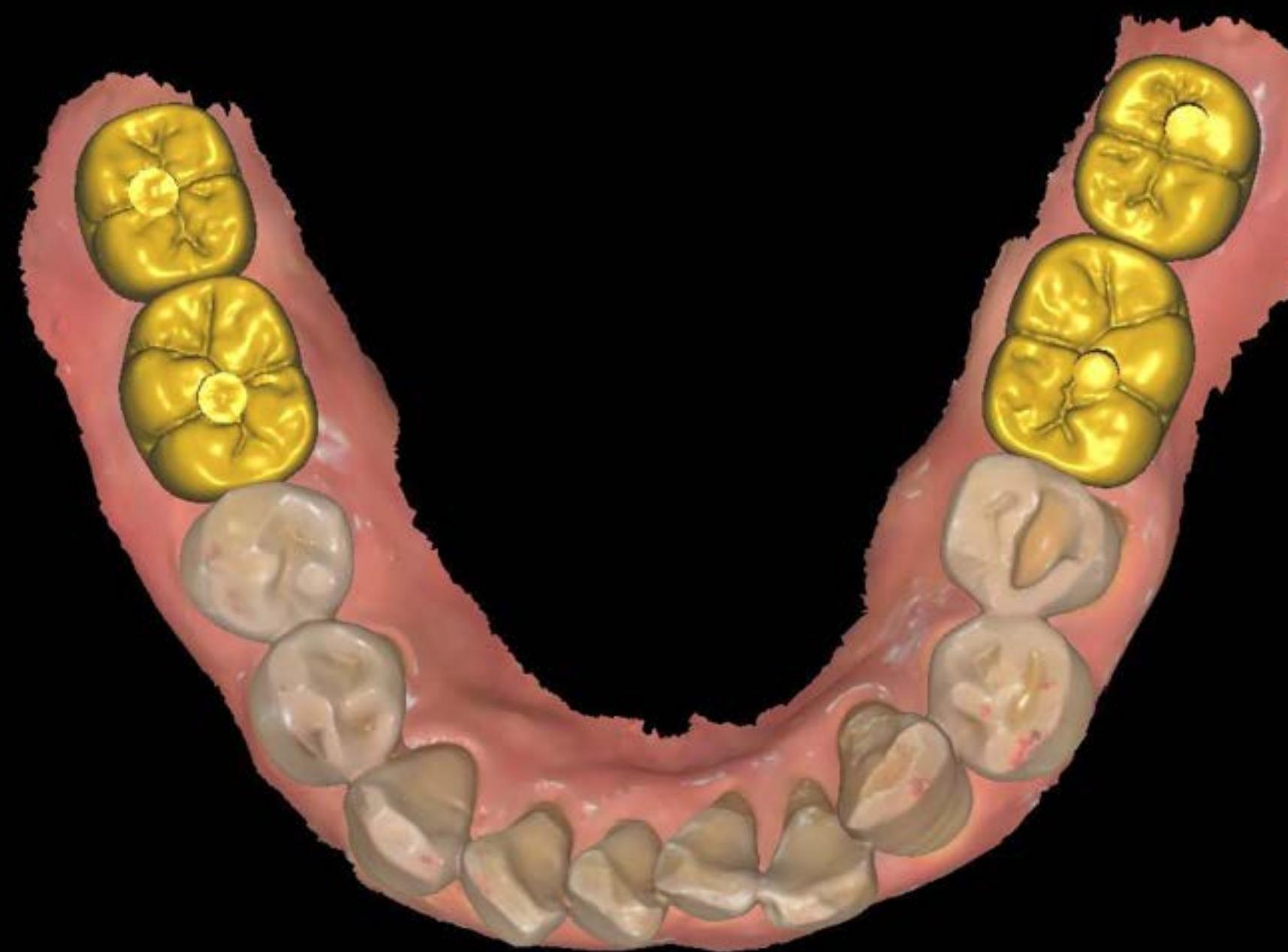


# Abutment Select



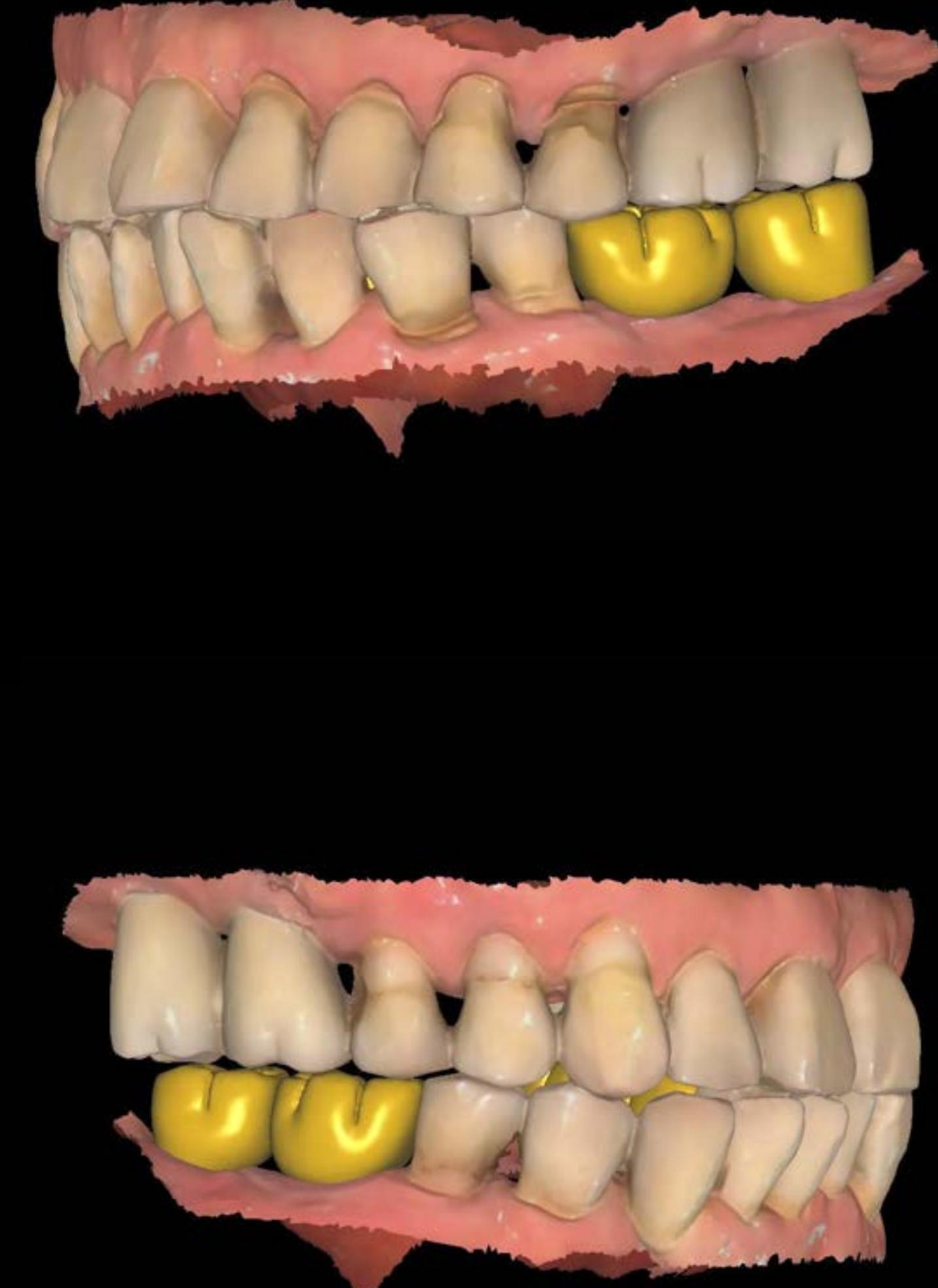
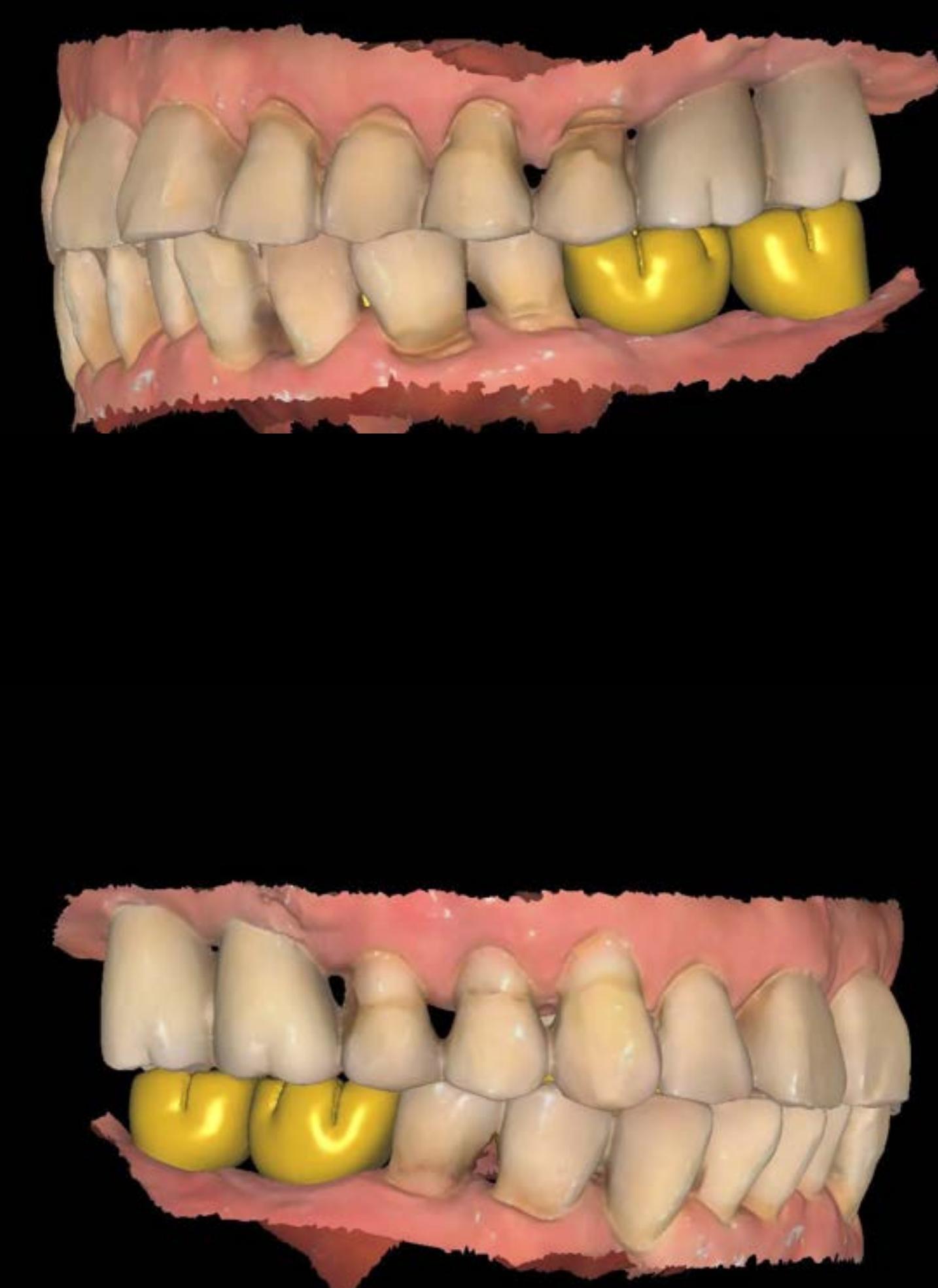
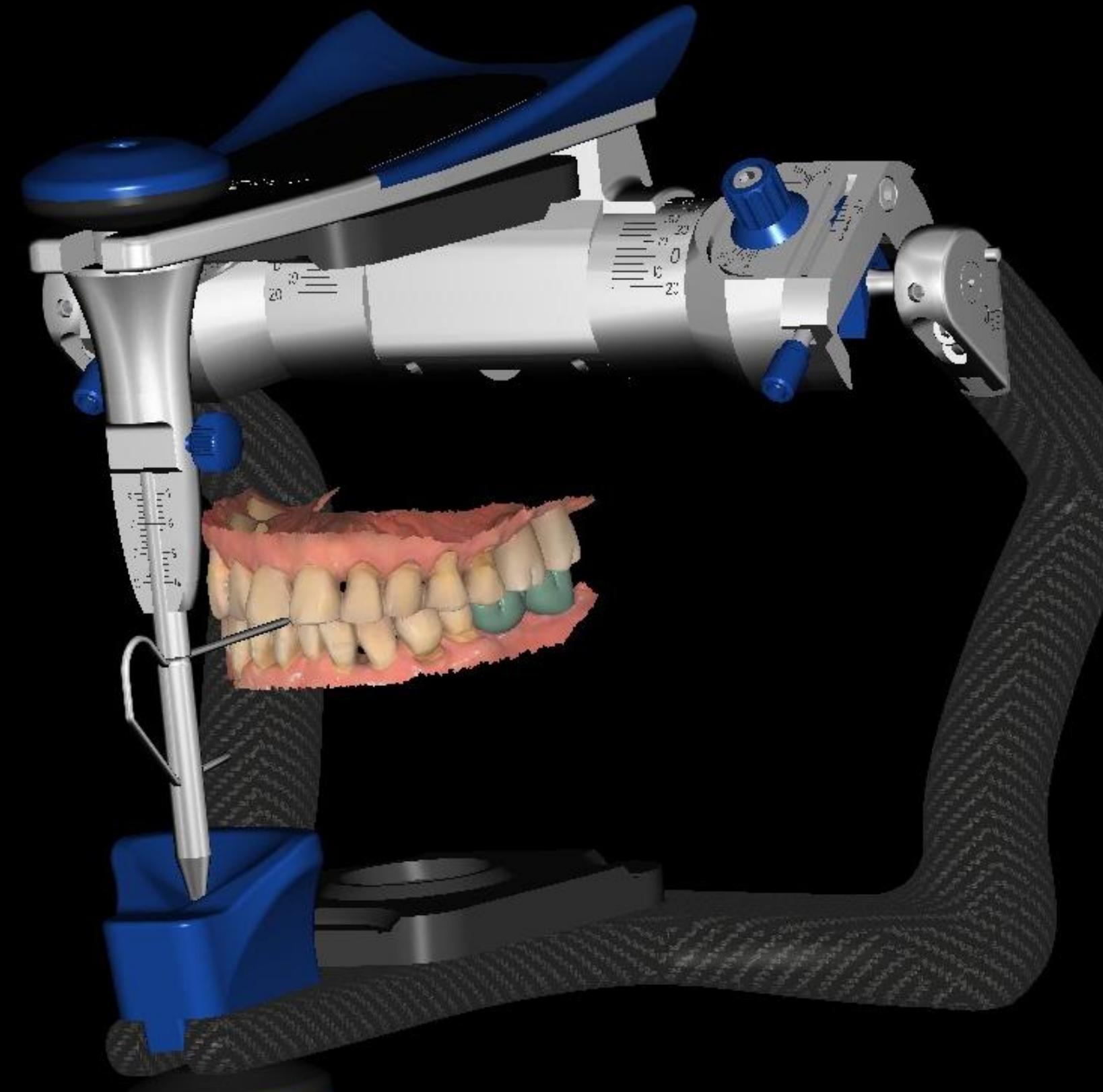
**bright TL & BL Digital Abutment & Ti-base Abutment  
Super Line Dual Abutment**

# Cad Design

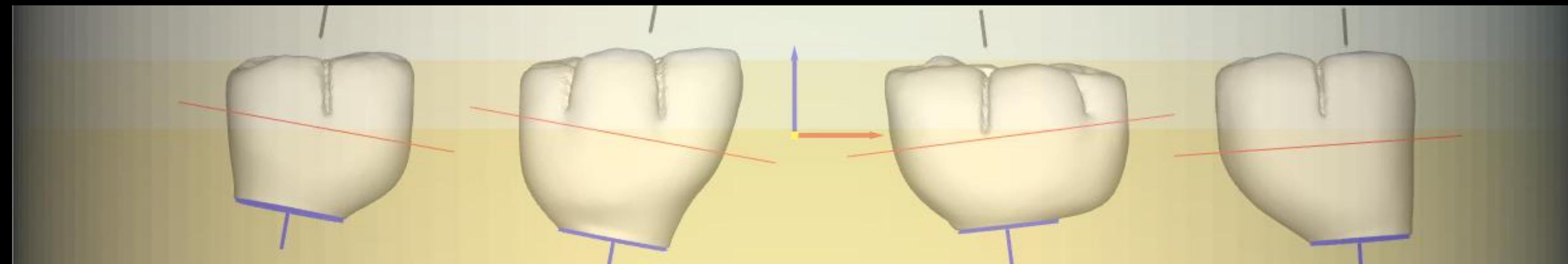


All Hexa Stock Abutment Single Cr & Designed to facilitate interproximal Self cleansing

# Virtual Articulator

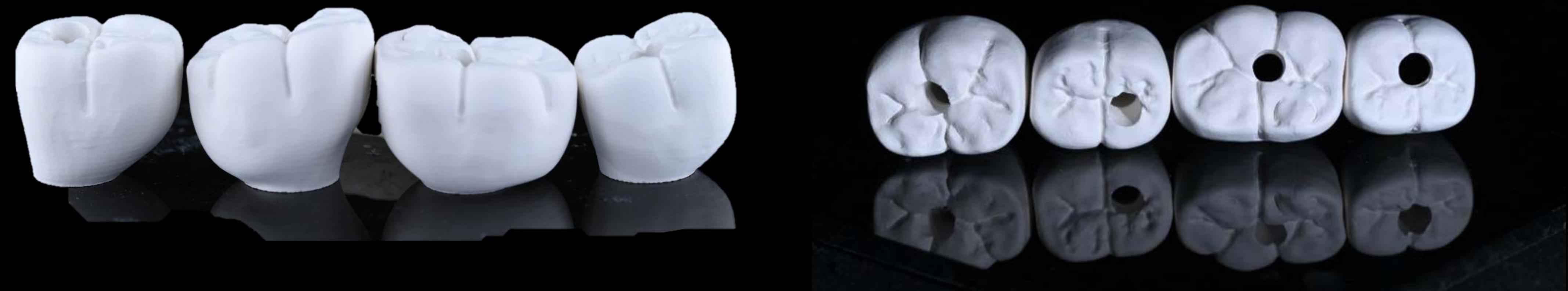


# Hyper Dent



bright 3-Layer

# bright 3-Layer



bright 3-Layer  
No coloring & Stain

# bright 3-Layer

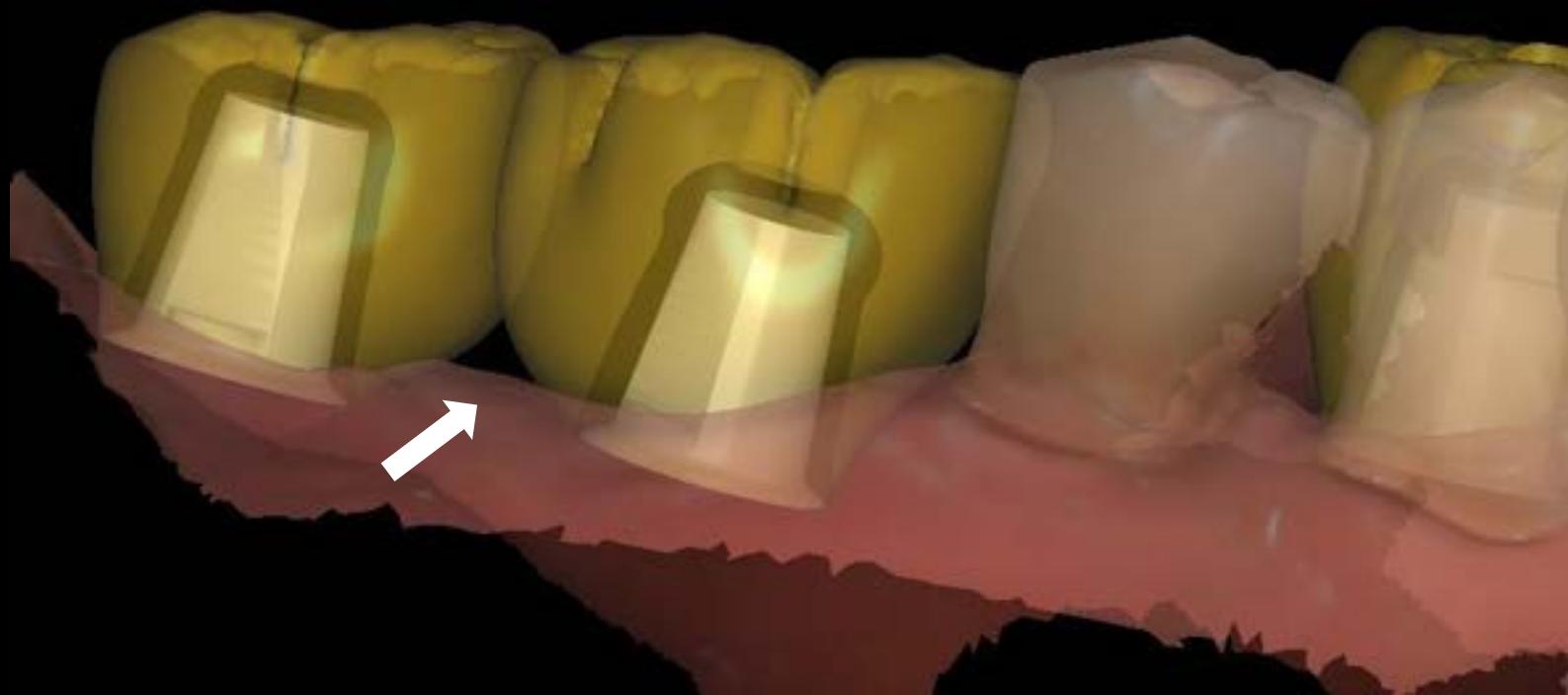


bright 3-Layer  
No coloring & Stain

# Final Prosthesis

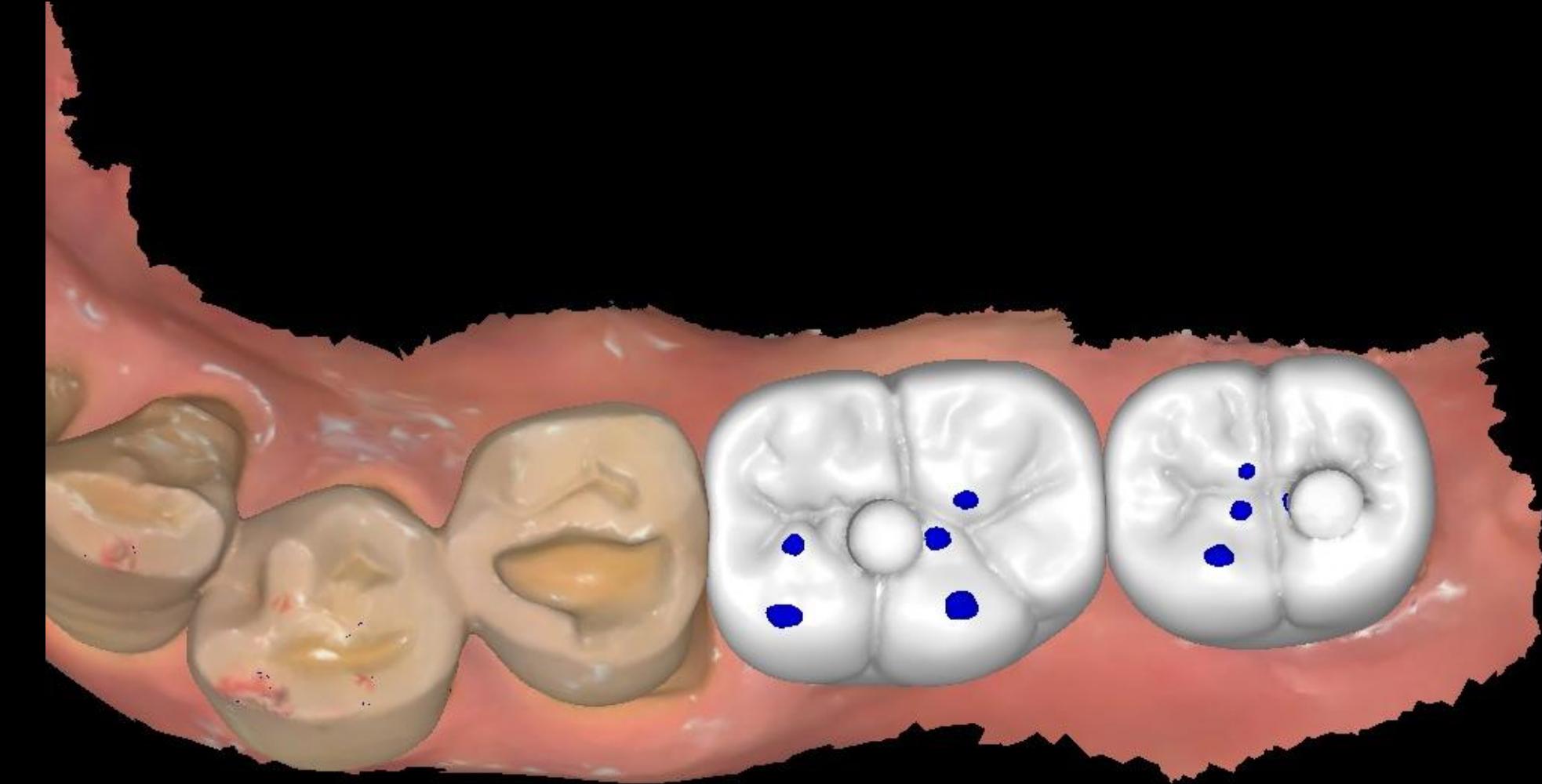
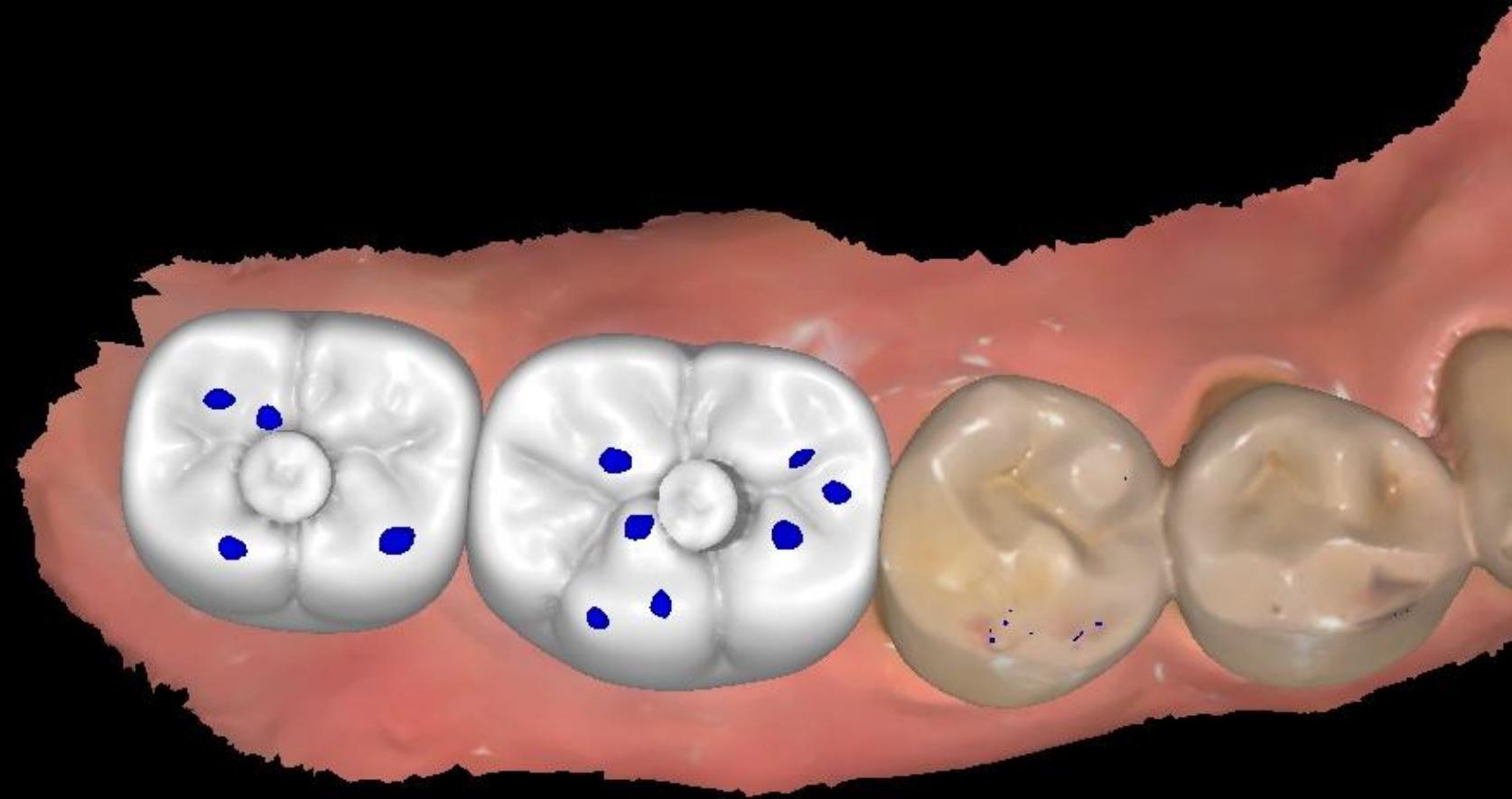


# Final Prosthesis



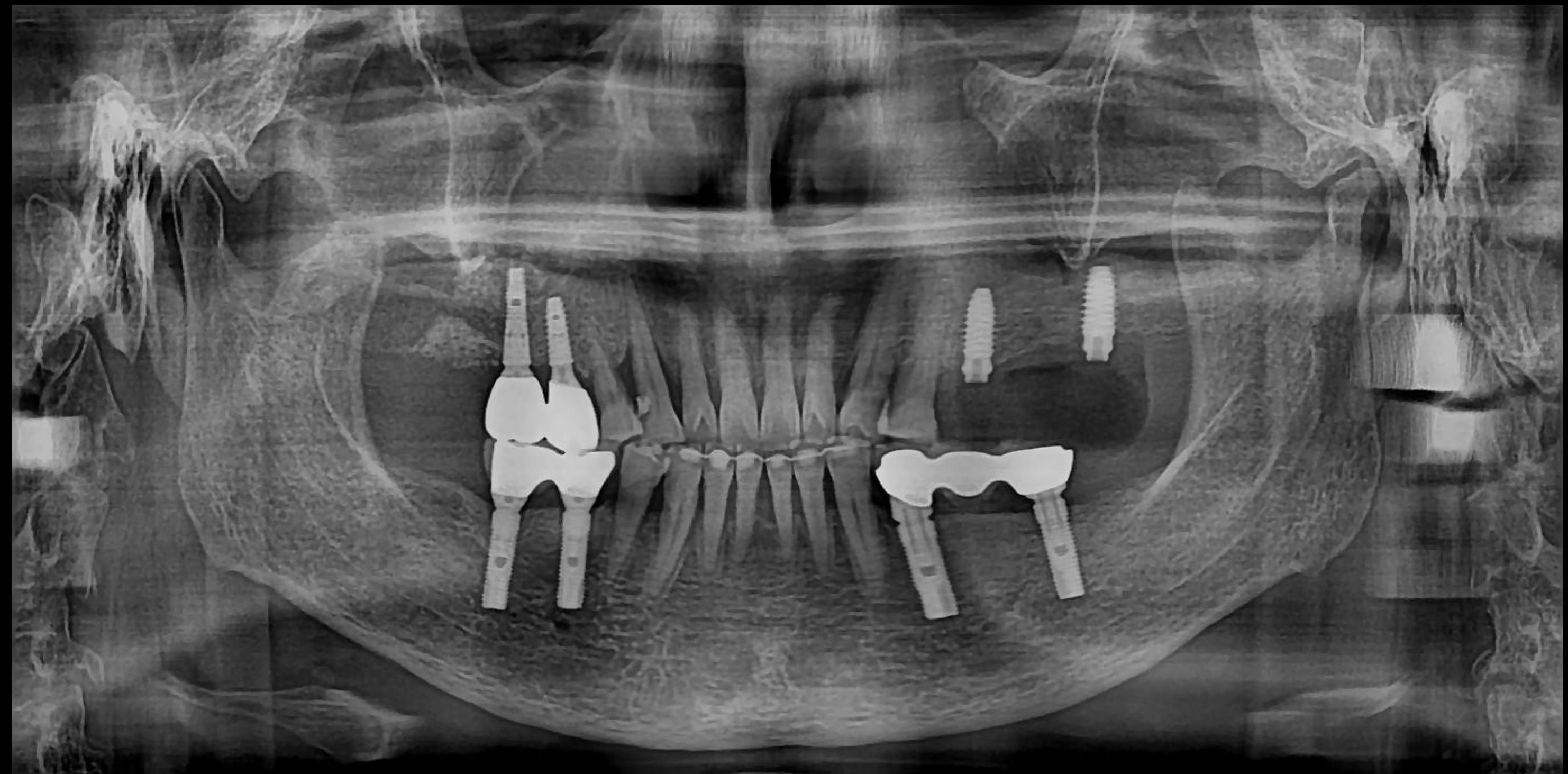
Designed to facilitate interproximal Self cleansing

# Final Prosthesis

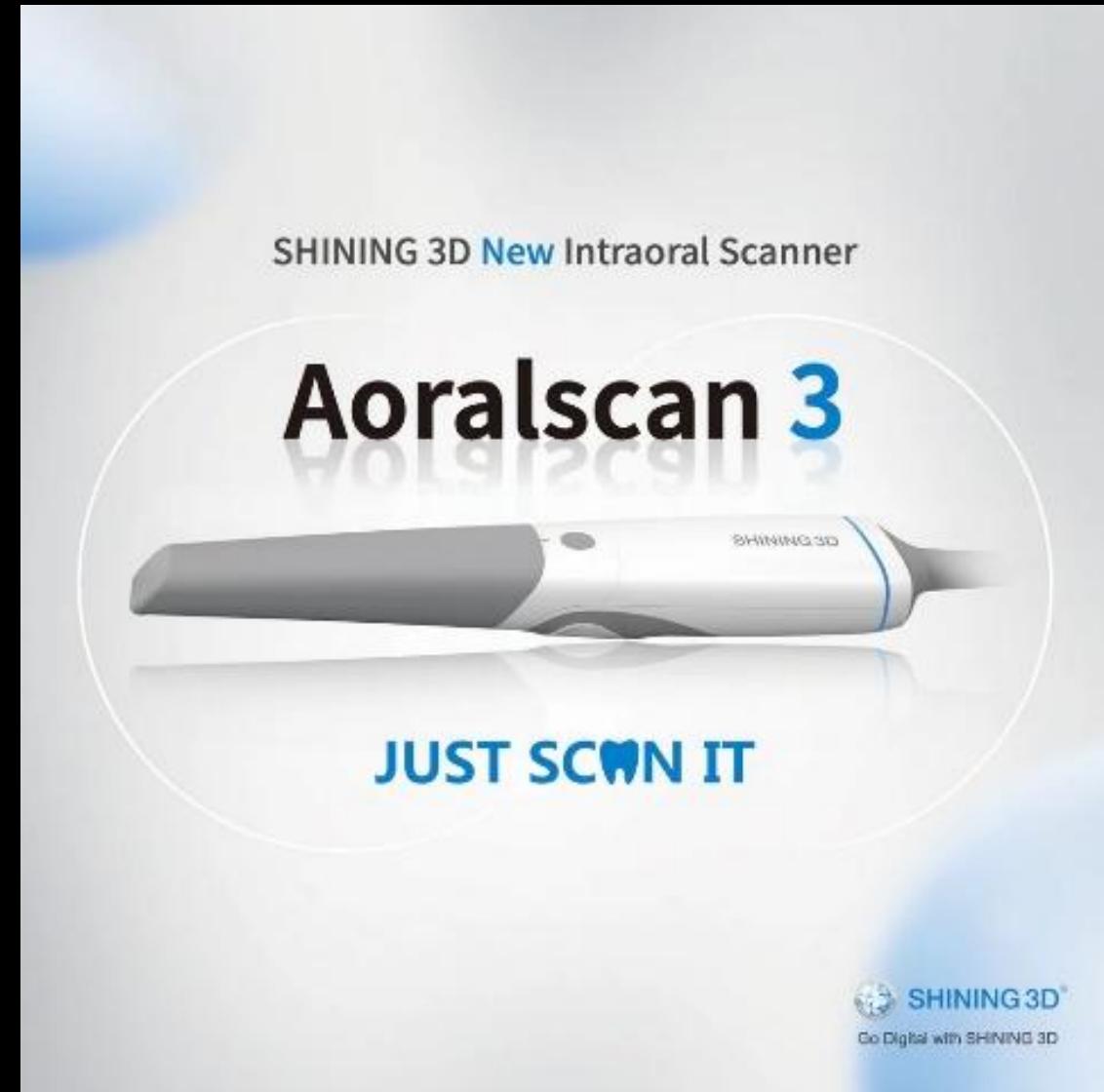


Shining 3D AoralScan Elite / Free end Posterior case

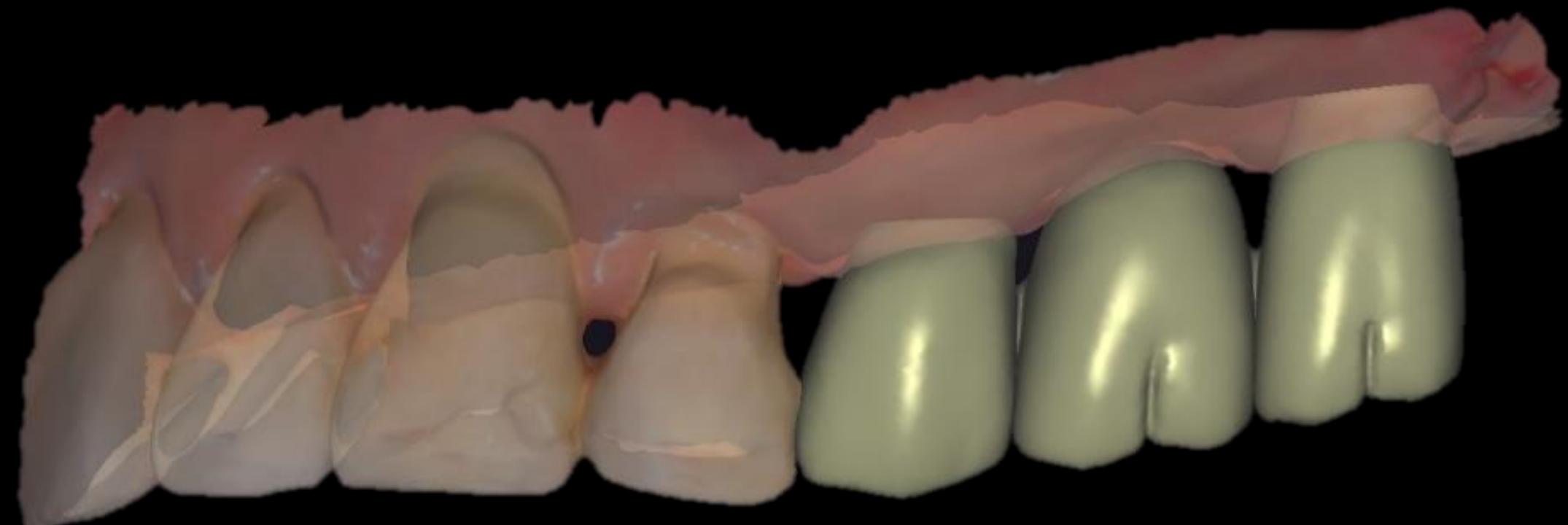
- # 25i x 27i
- bright Tissue Level
- Shade A3.5
- 3 Layer Block



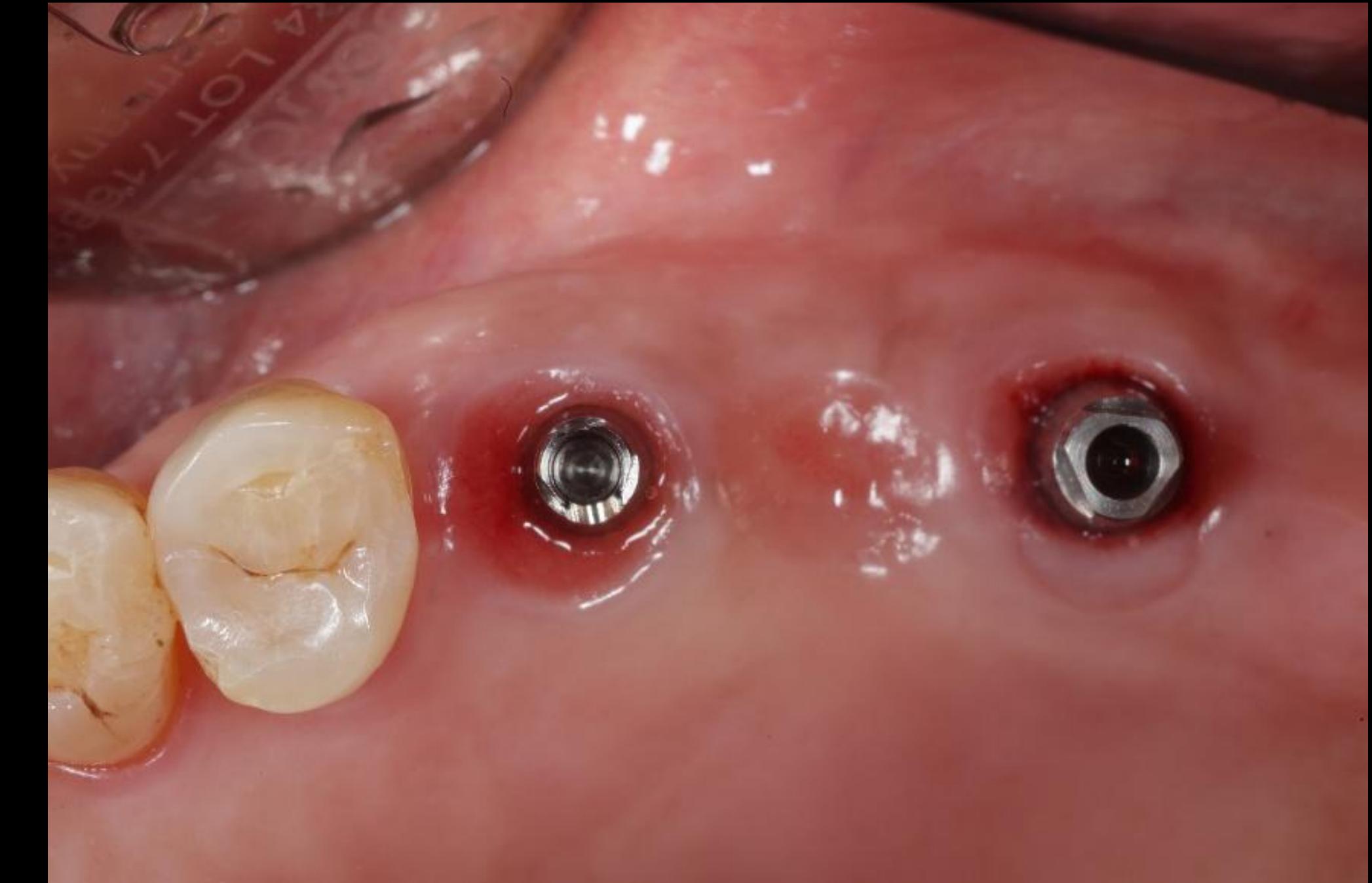
# Working Model



# Cad Design

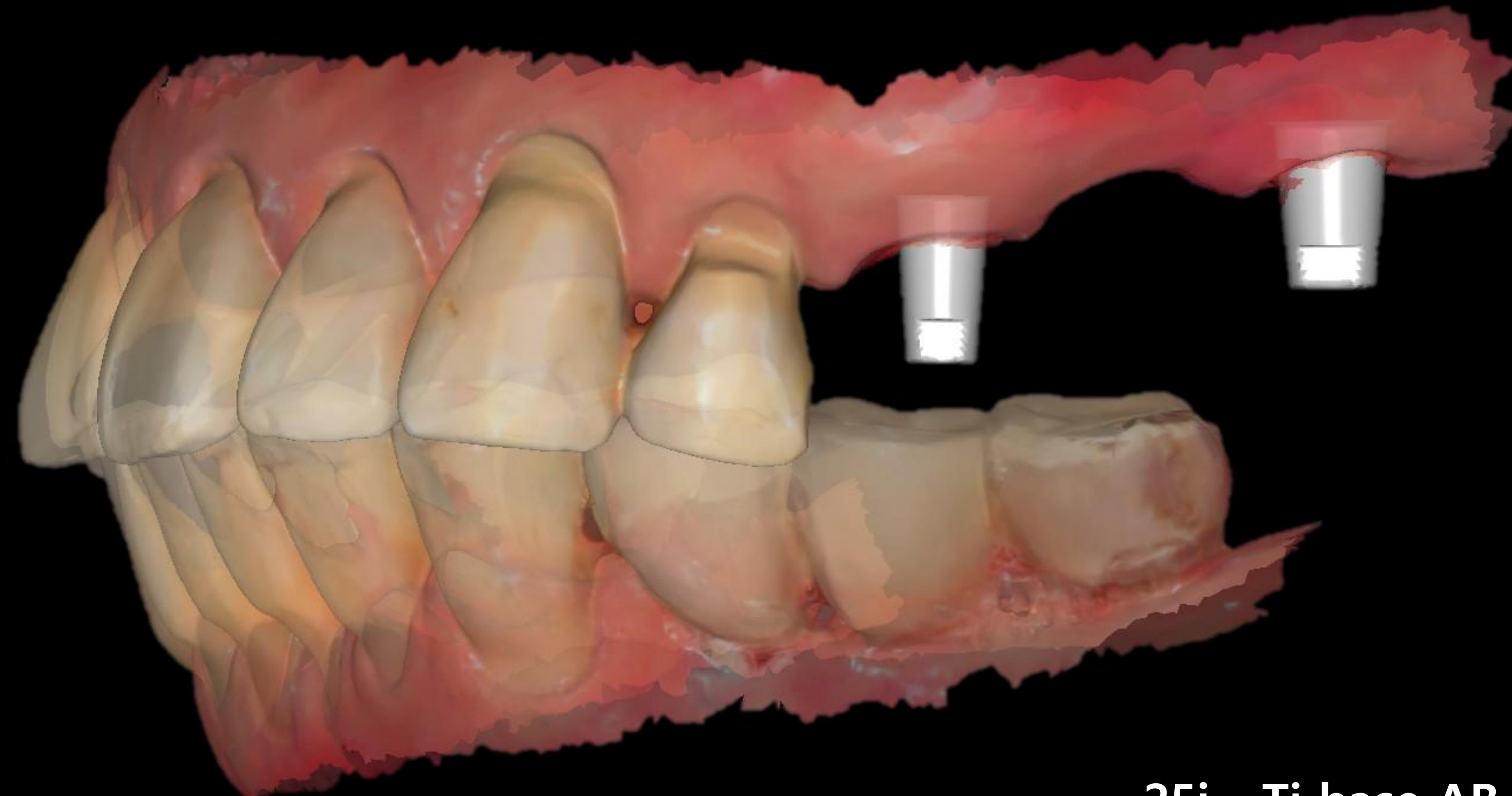


Temporary Crown design  
(2025.04)



Tissue & Pontic base molding

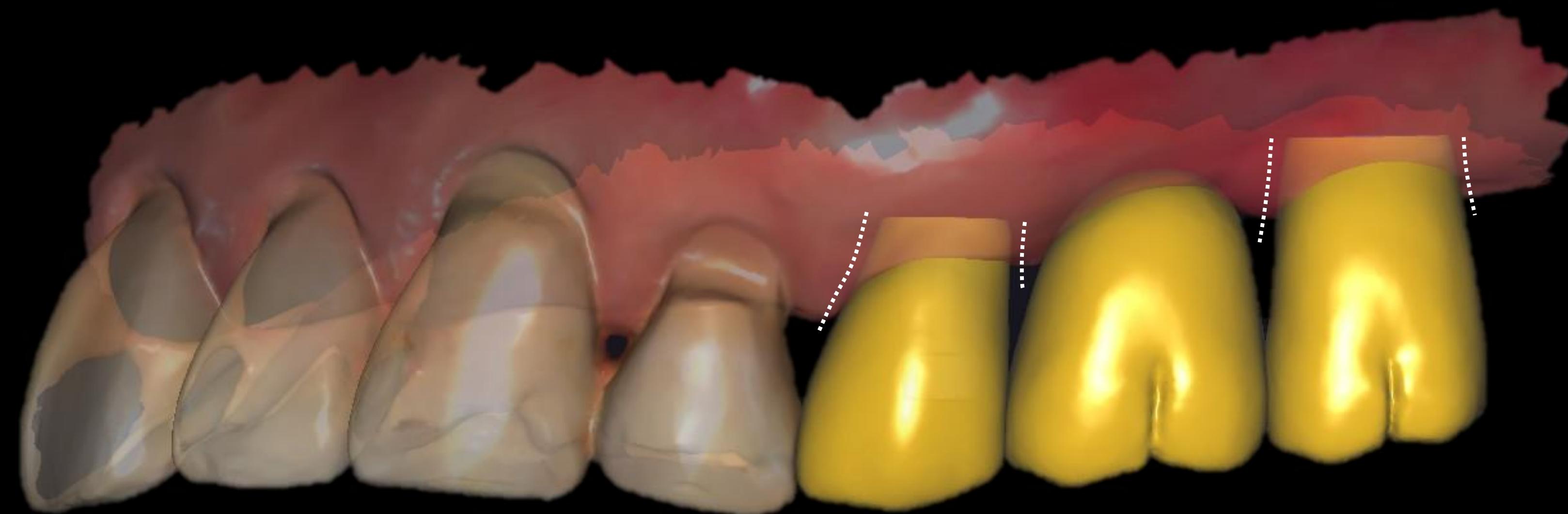
# Cad Design



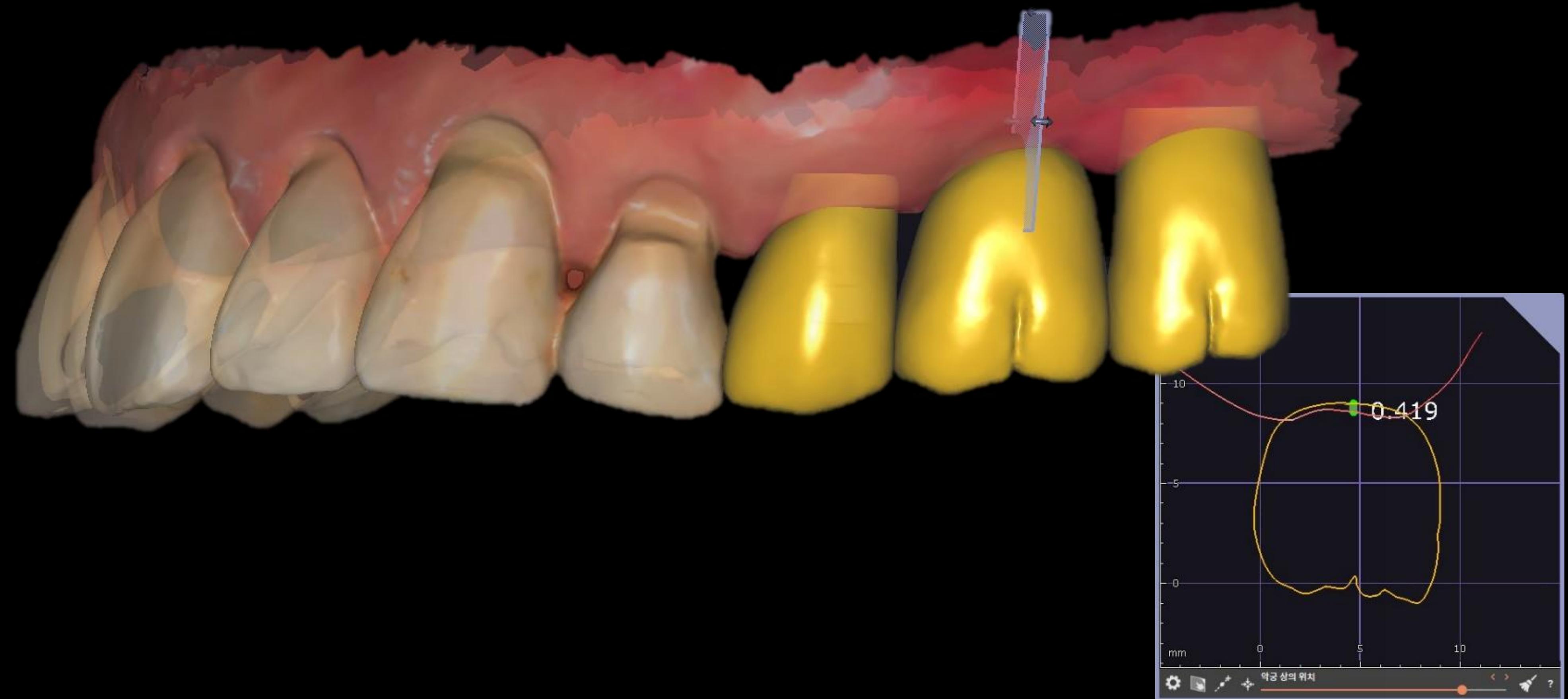
**25i - Ti base AB Ø3.8 GH1.0**

**27i - Ti base AB Ø5.0 GH2.0**

# Cad Design

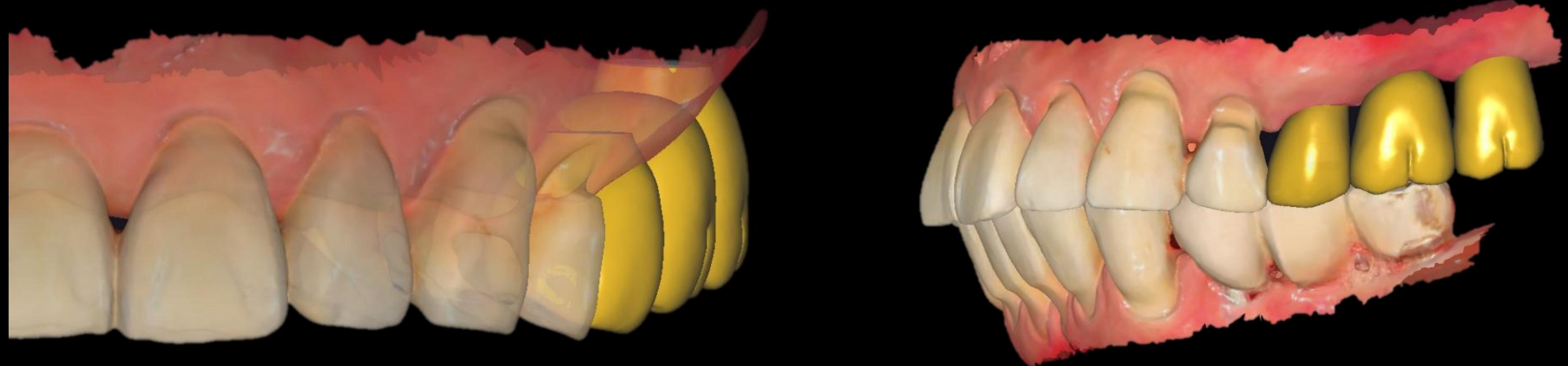


# Cad Design

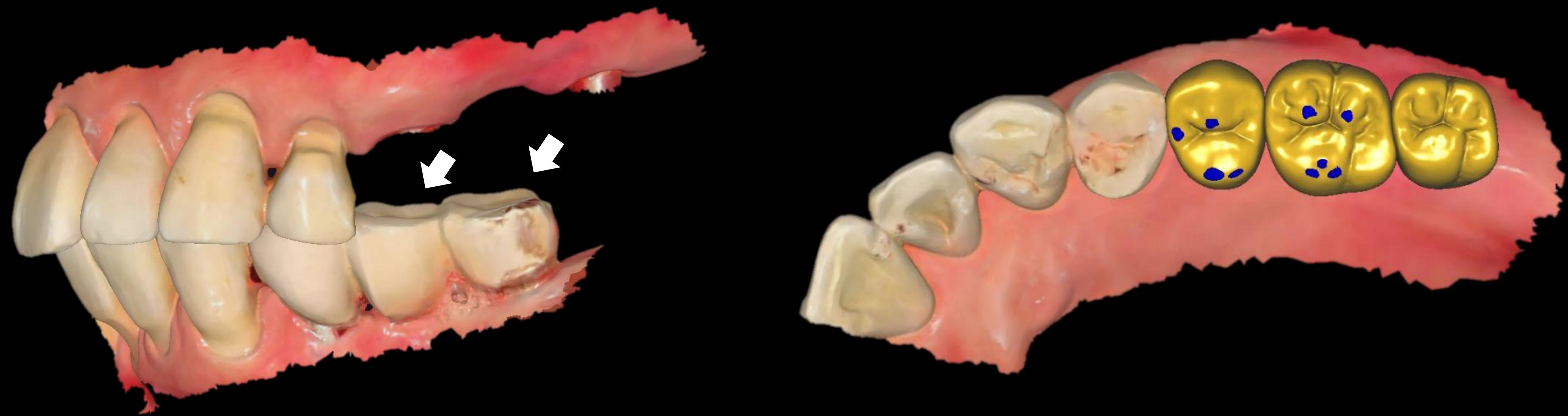


Ovate Pontic – Upperjaw 0.4mm

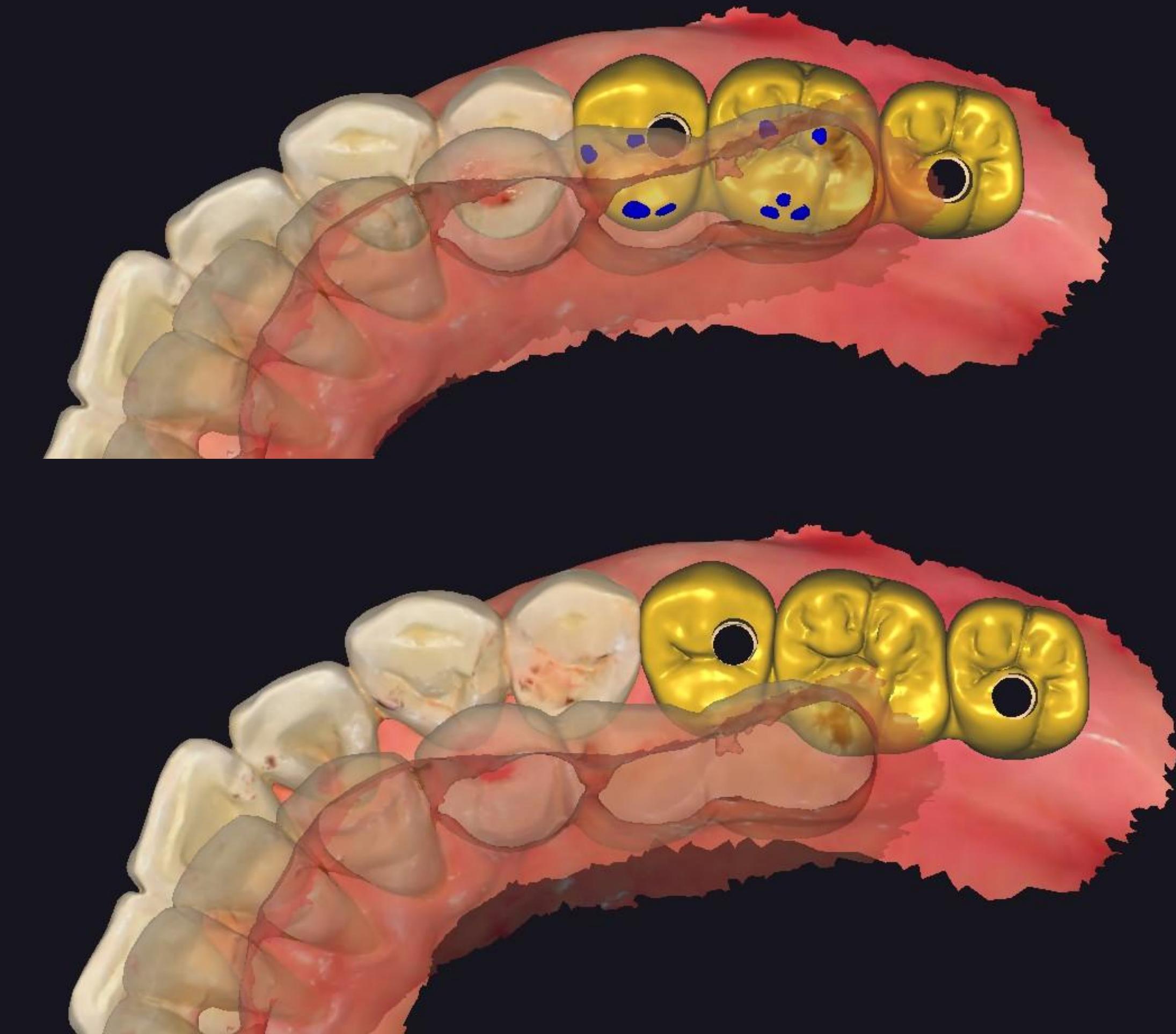
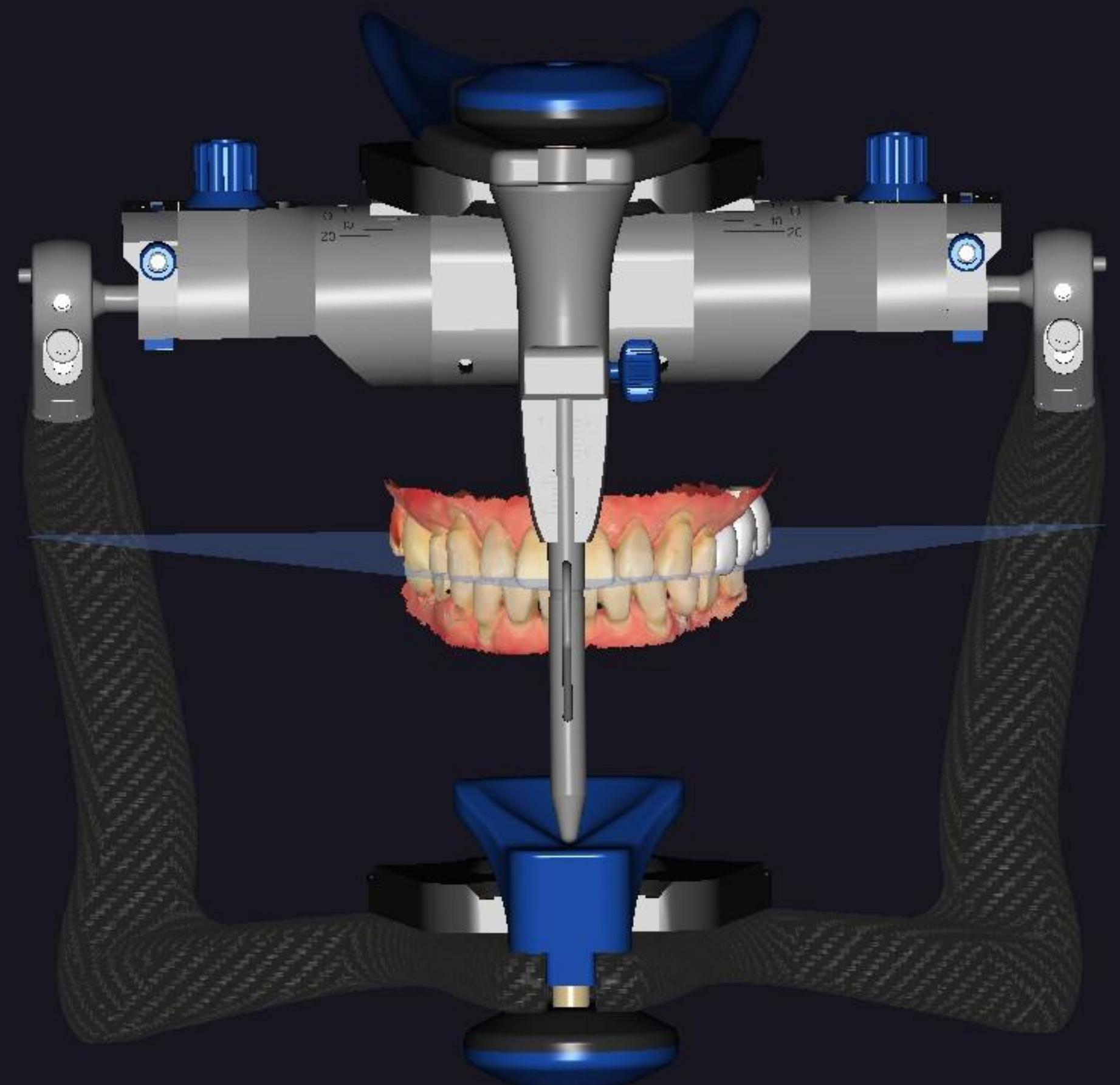
# Cad Design



# Cad Design



# Cad Design

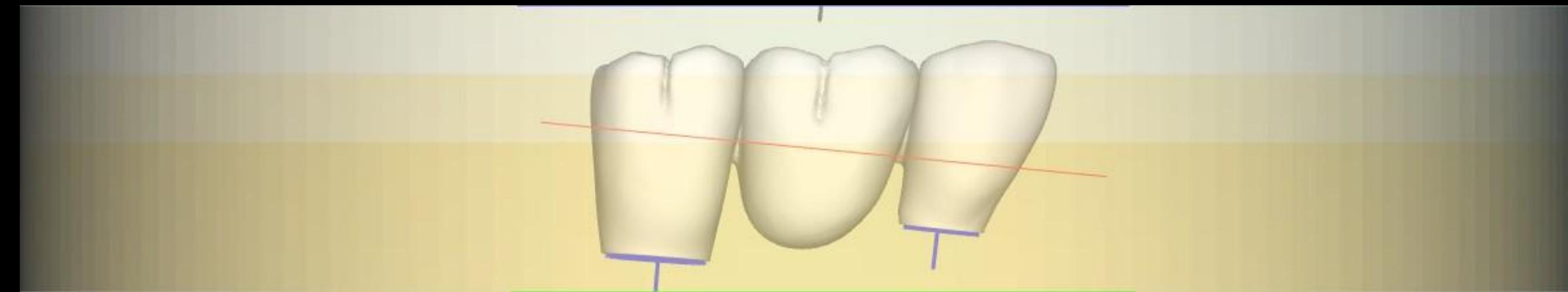


Virtual articulator

# Shade Taking



Hyper Dent



3 Layer Block A3.5 18T



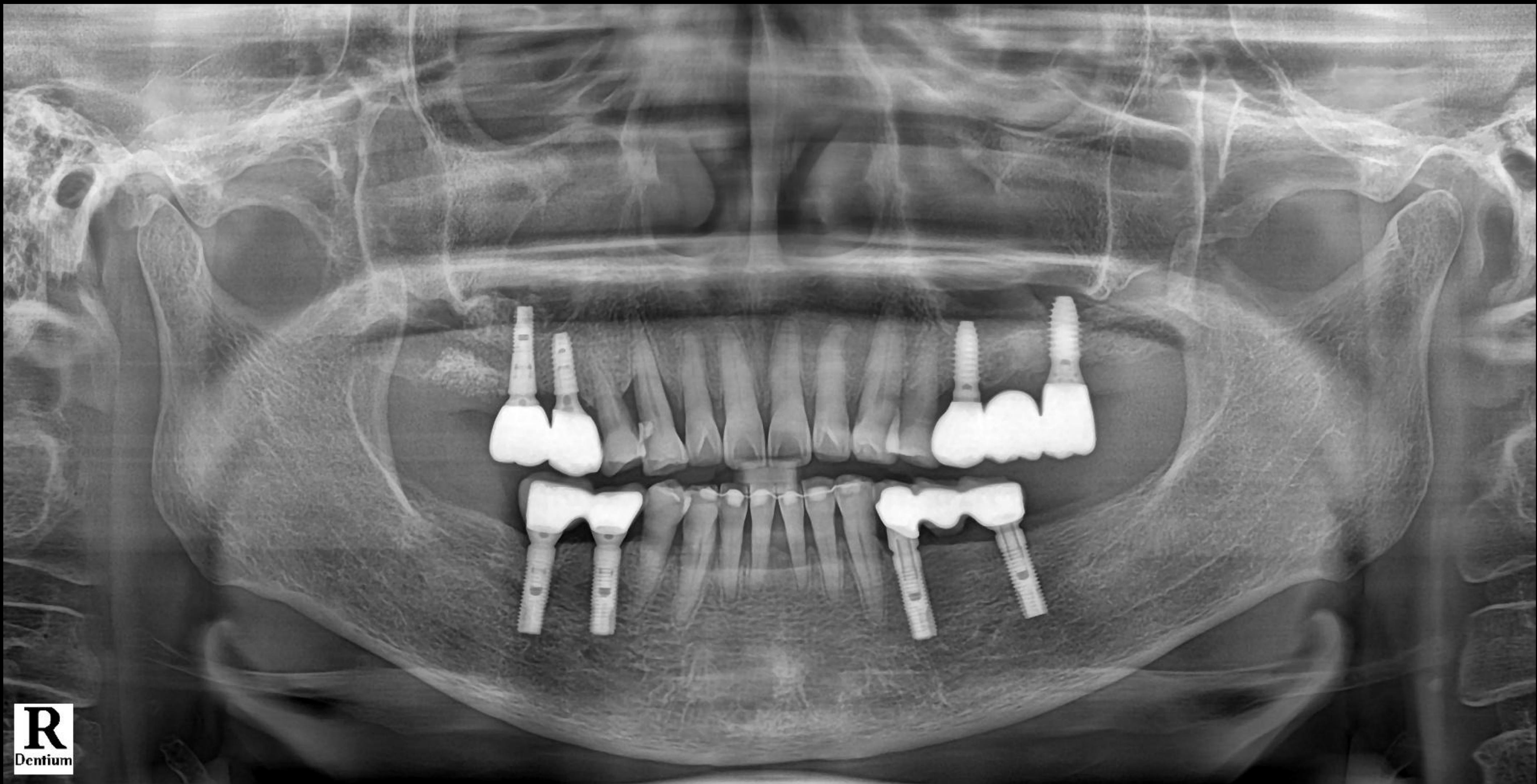
Inner - White Opaque

Glazing

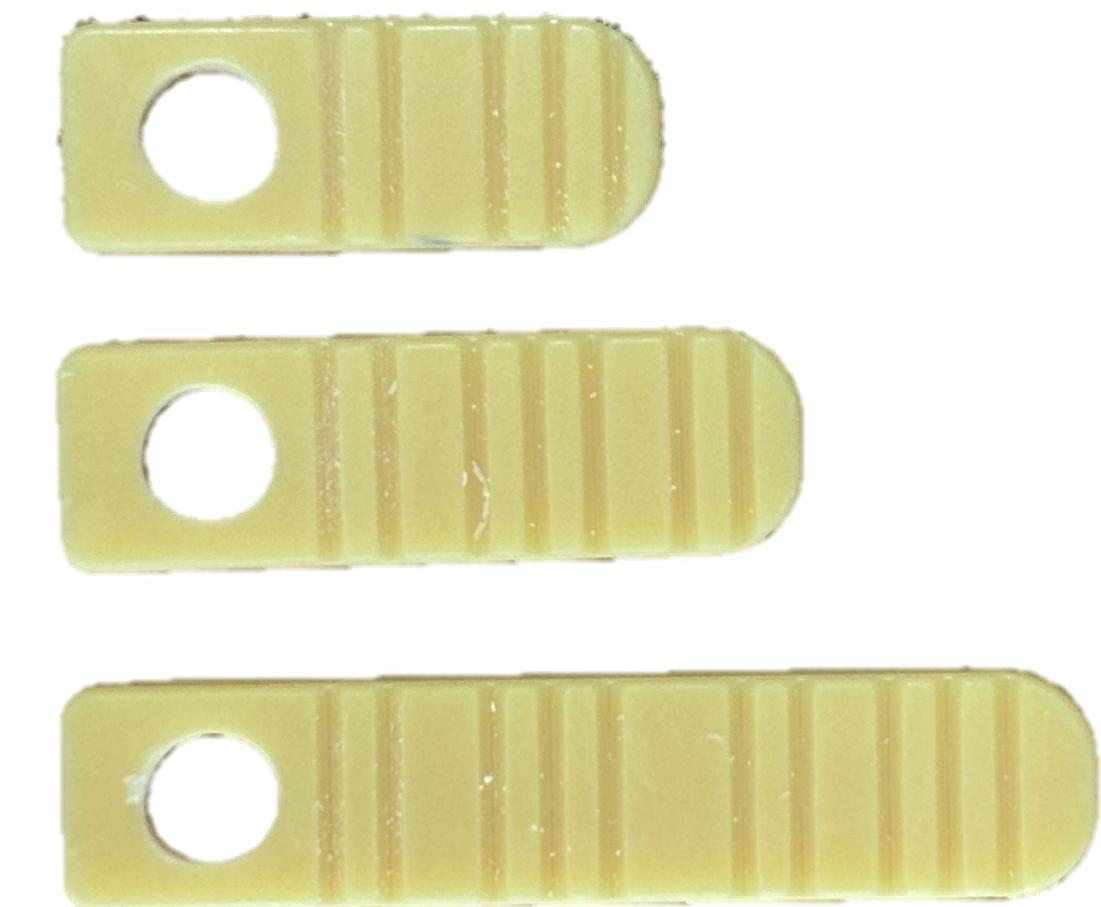
# Final Prosthesis

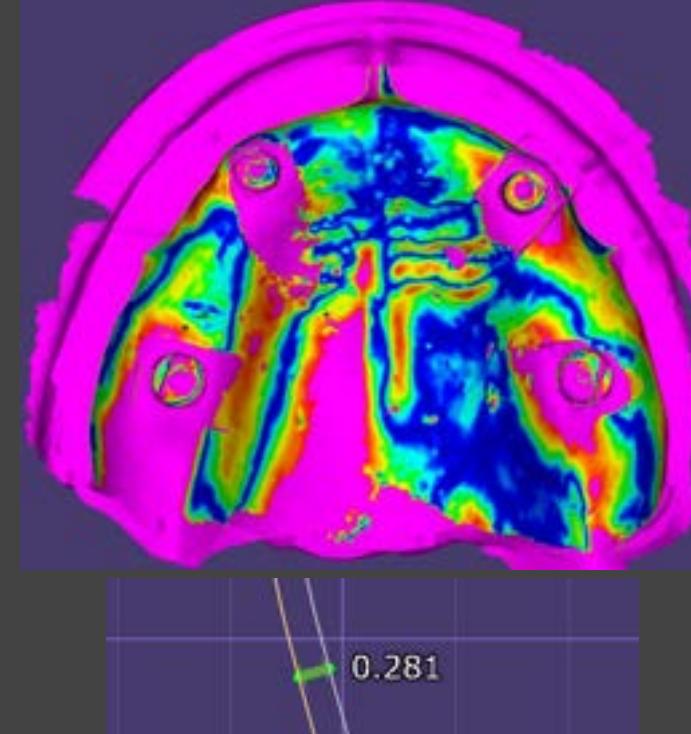
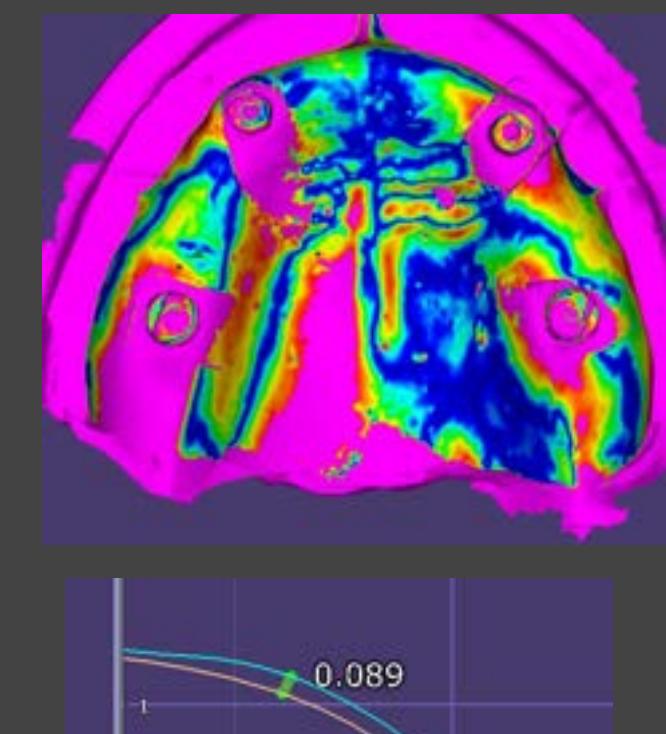
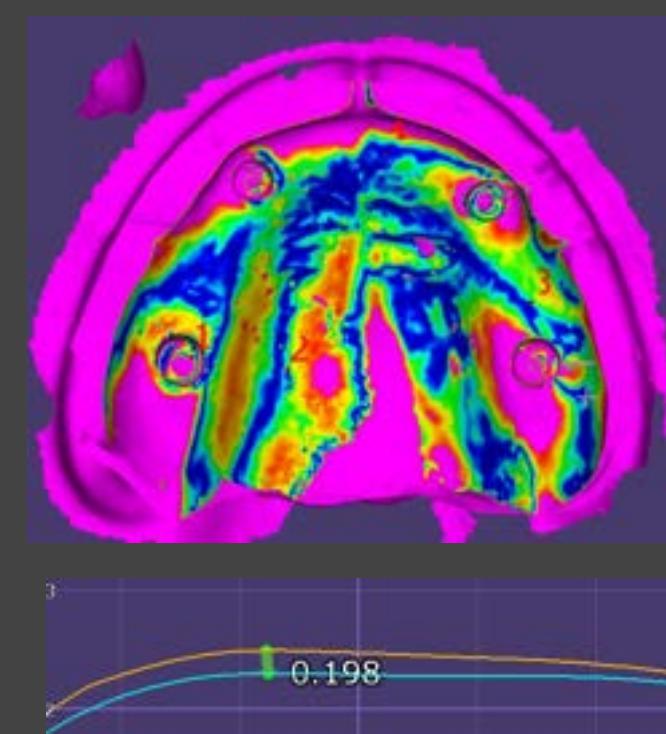
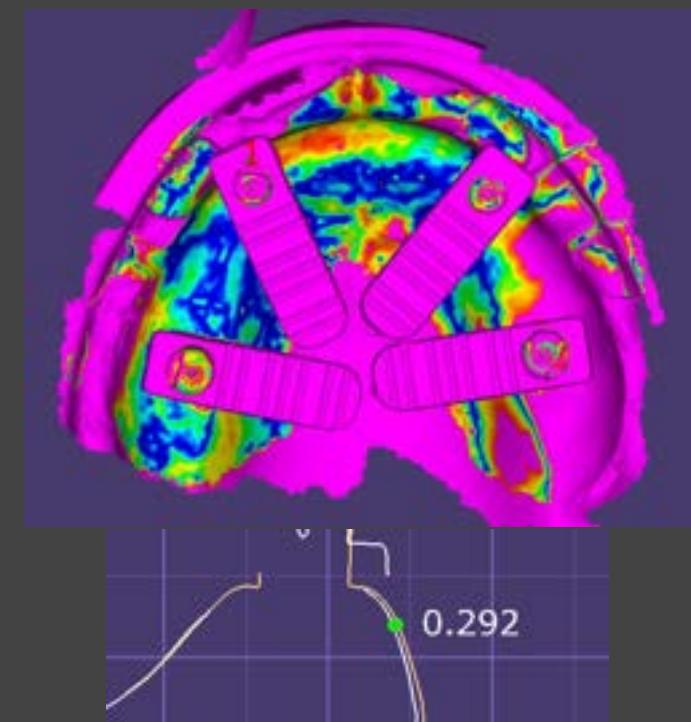
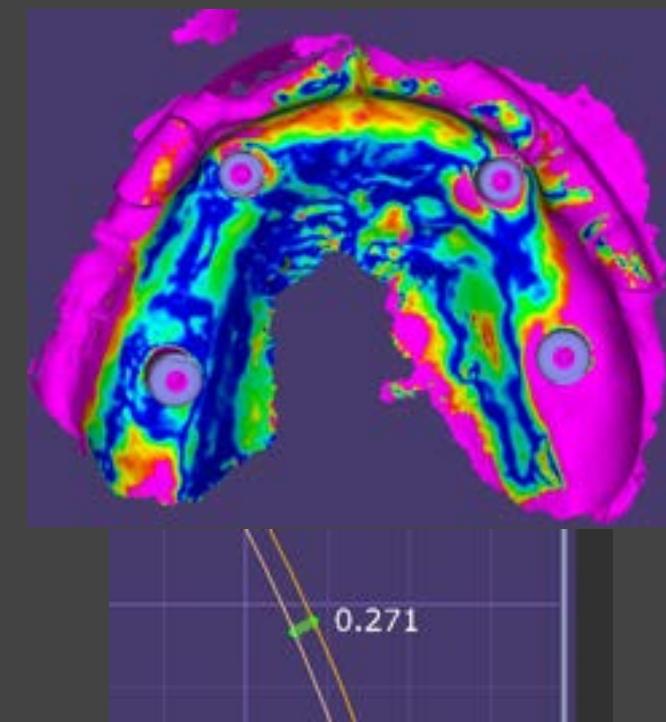
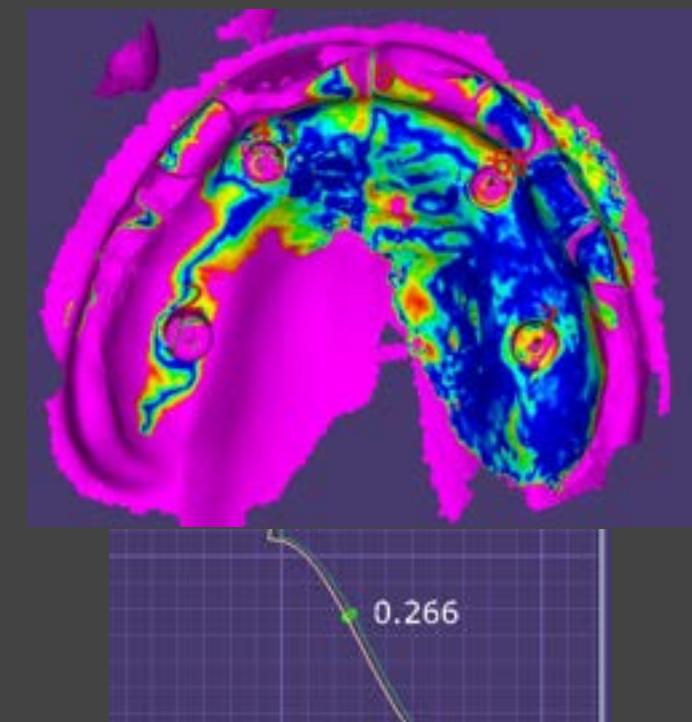
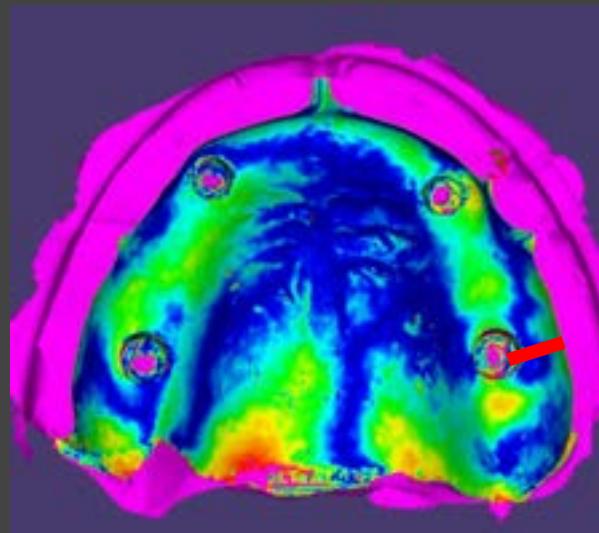
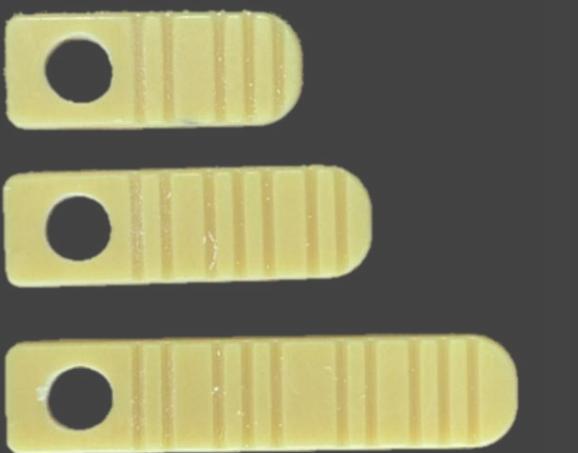
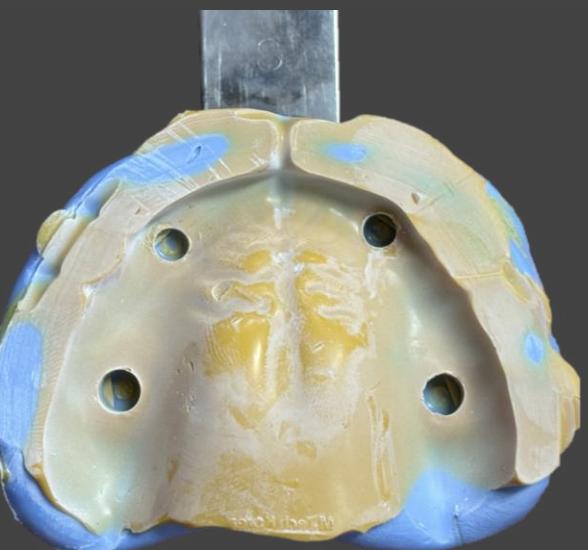
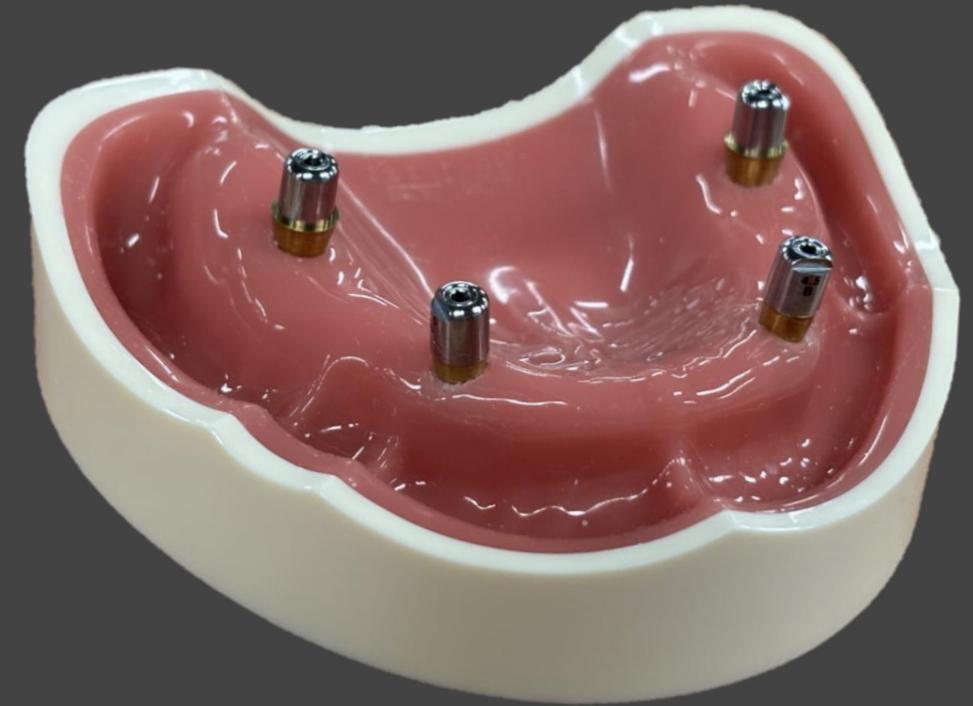


# Final Prosthesis



## Evaluation of scan jig for IOS of edentulism





BTS = BOS

Photogrammatory jig and simple jig are similar and fit well

Without Jig is less hittable

# Contents

Introduction

Tooth oriented

Facial driven

CT centered

Facial scanner

Facial photo

CT soft tissue profile

# Virtual Set up



# Virtual Set up



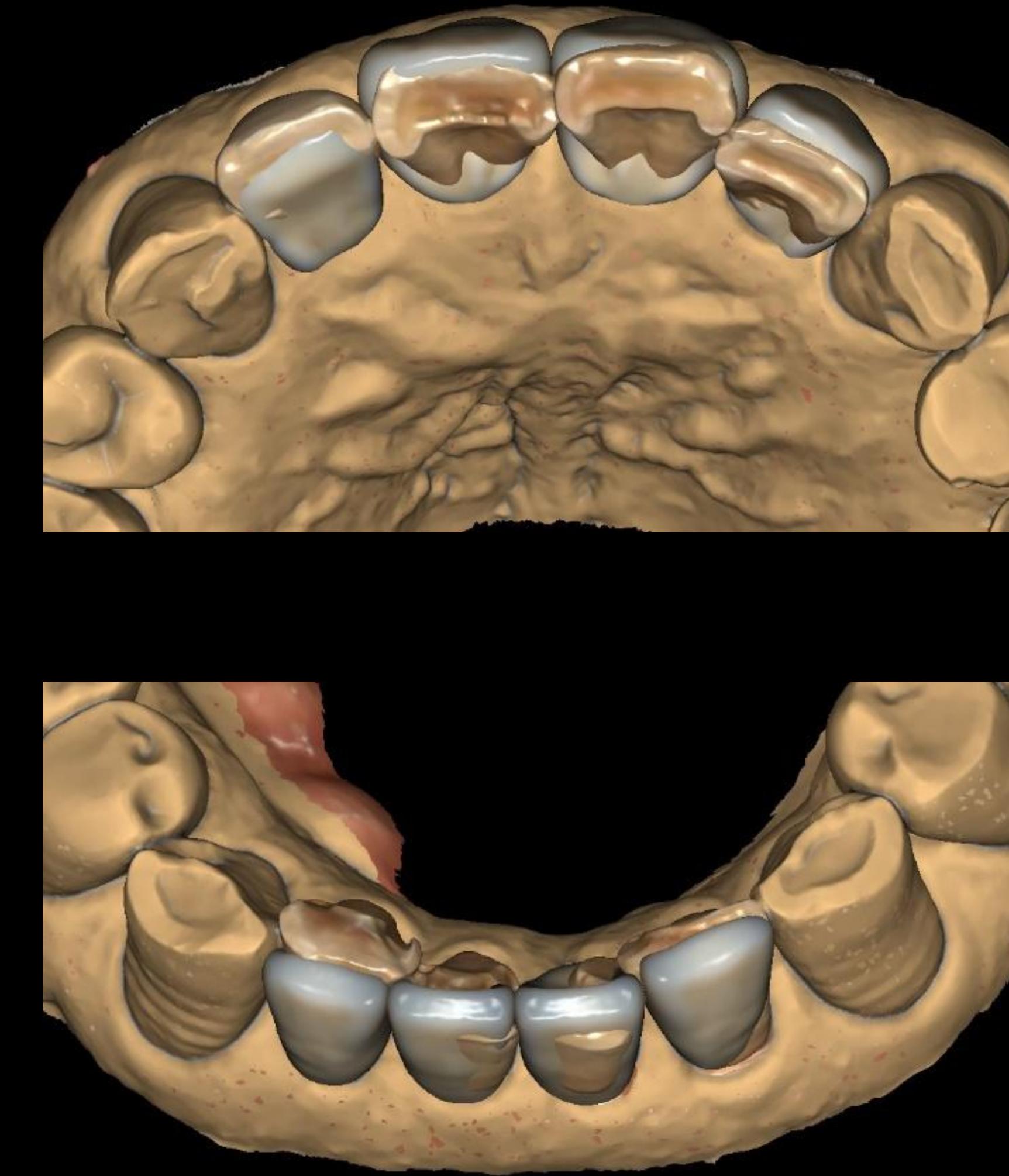
VD 2mm ↑



# PT dental consulting



Face Scan data + virtual set up



Pre op data + virtual set up

# Provisional restoration



Pre op

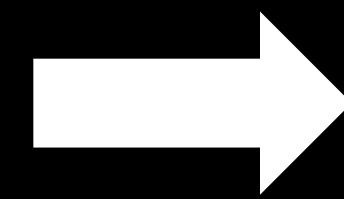


Provisional restoration

# Working model



Face scan data



CT Data AI Occlusal Plane & Soft, Hard Tissue

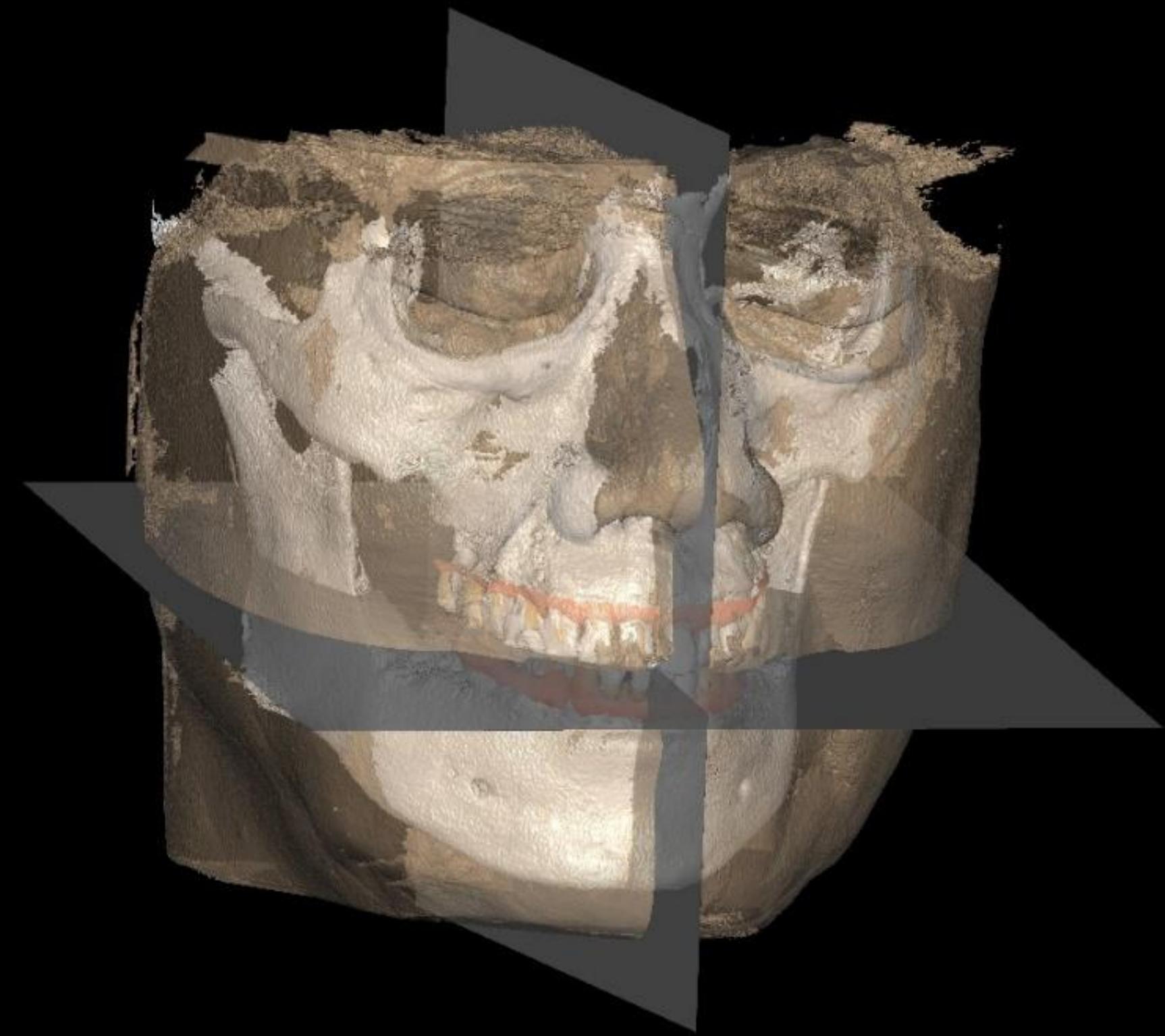


Shining 3d aoral3 wireless

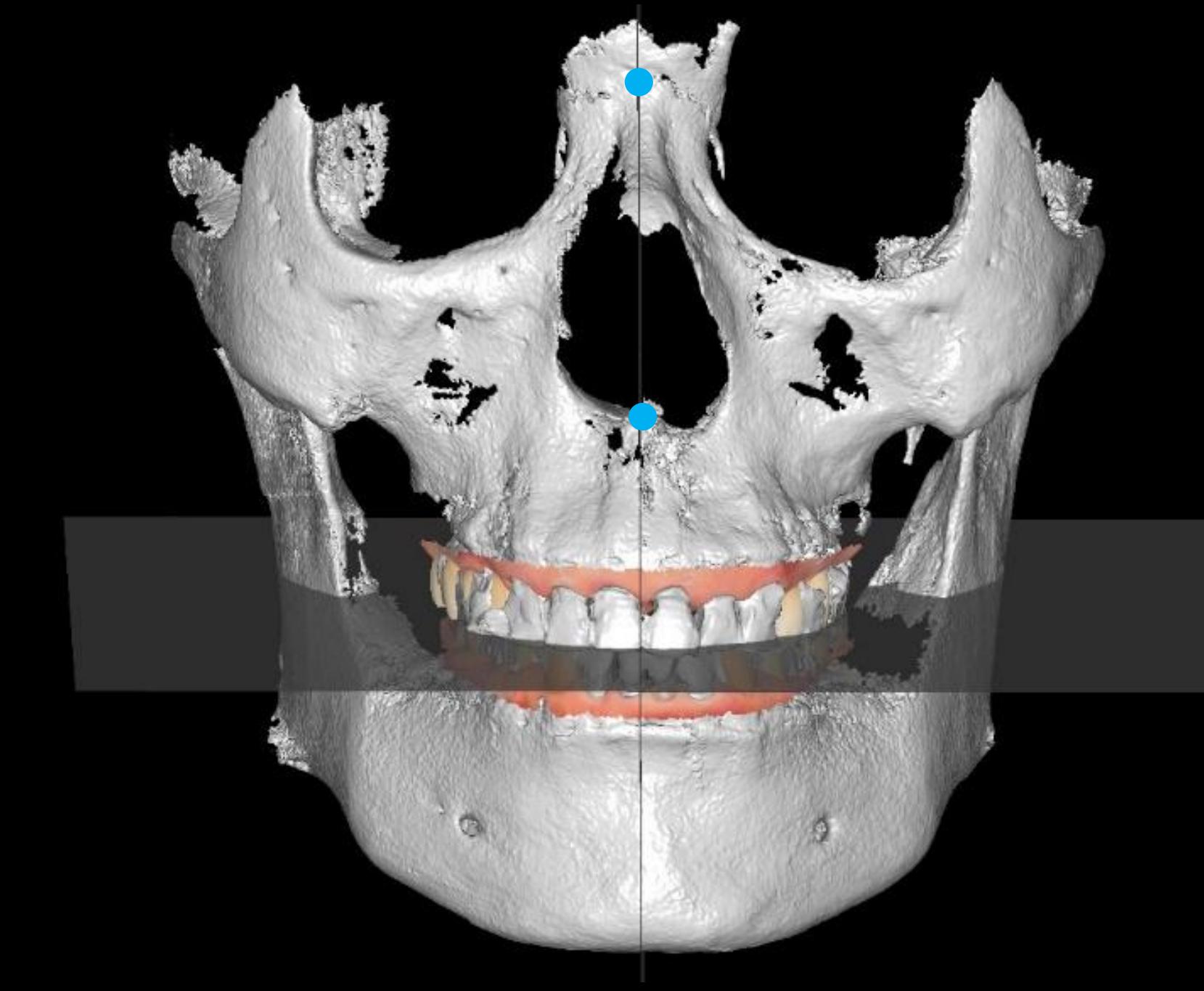


Shining 3d Elite Scanner

# CT data Stitching

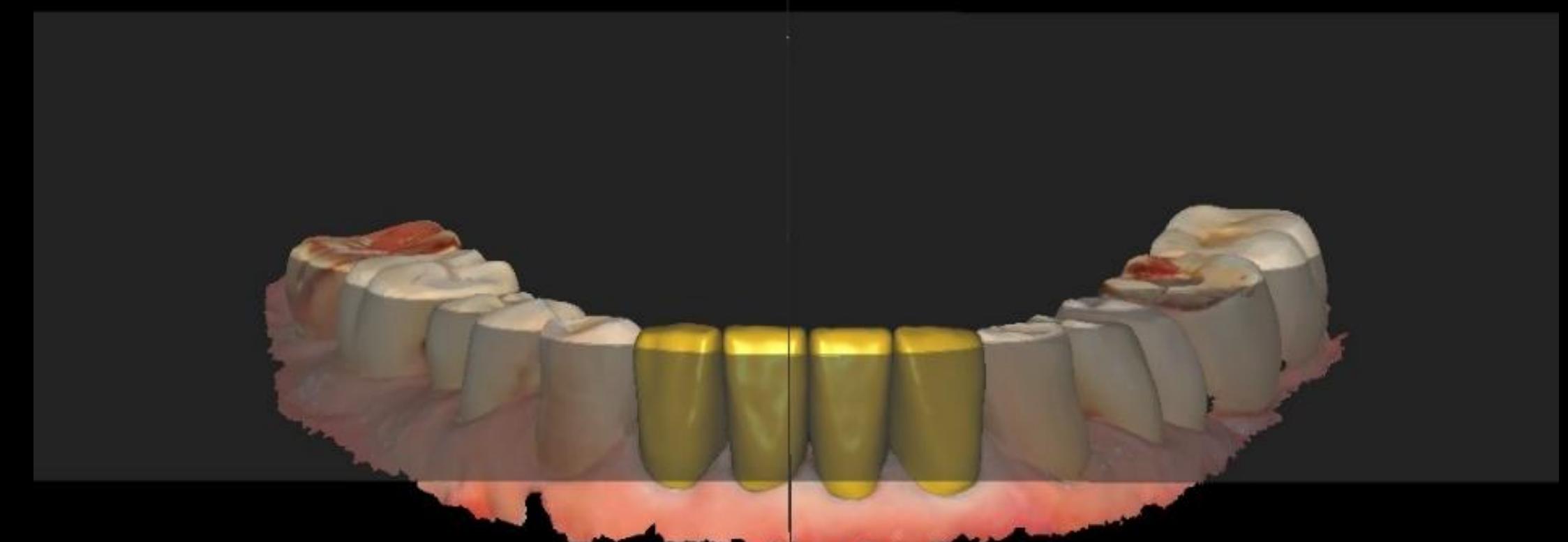
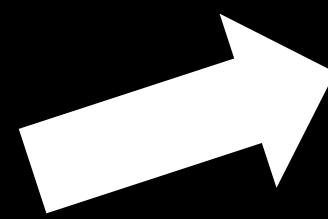


CT data + los data Stitching

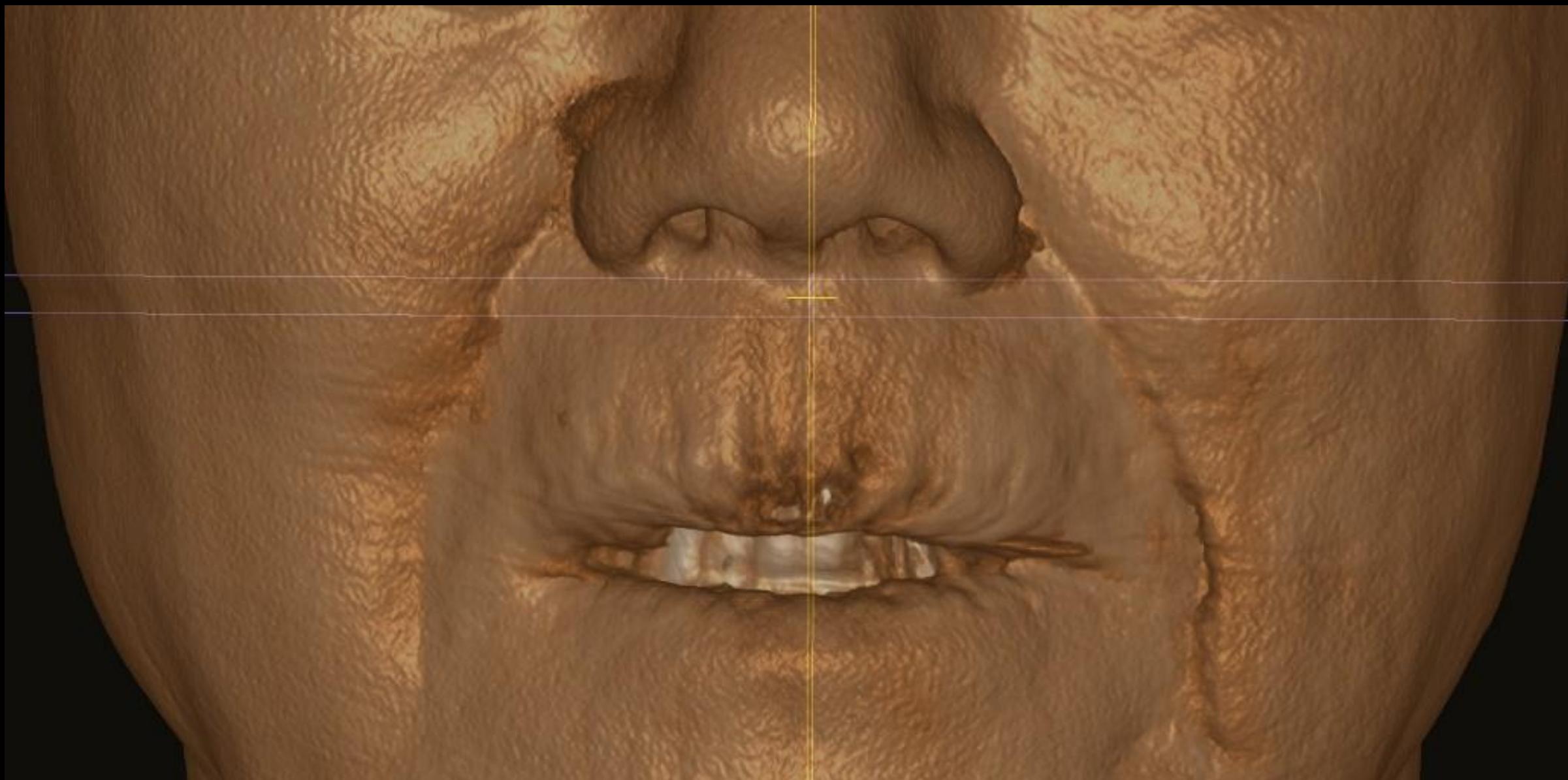


Rasion – Ans to Pns Midline

# AI Occlusal Plane



# Cad Design



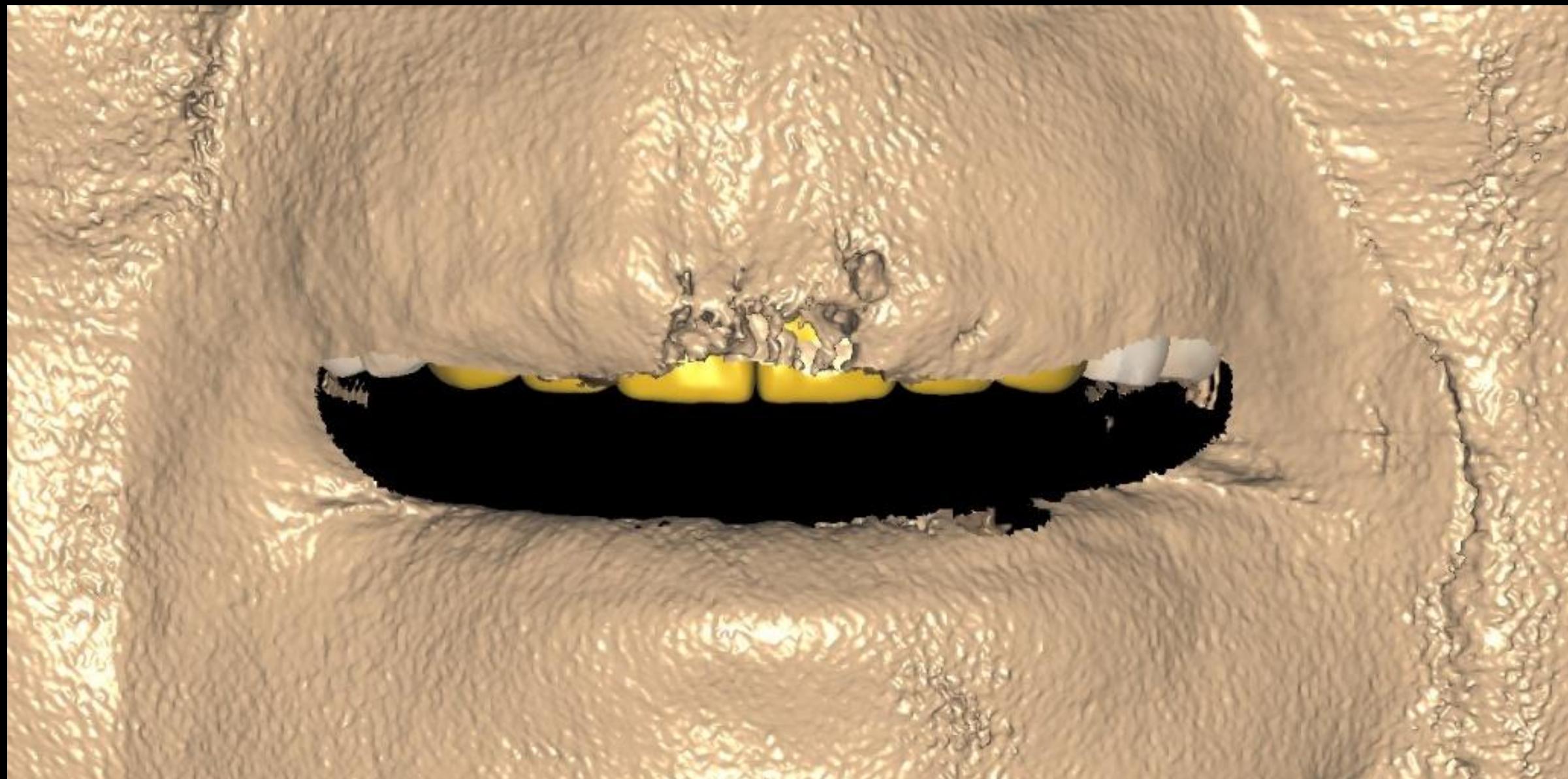
CT data Soft Tissue

# Cad Design



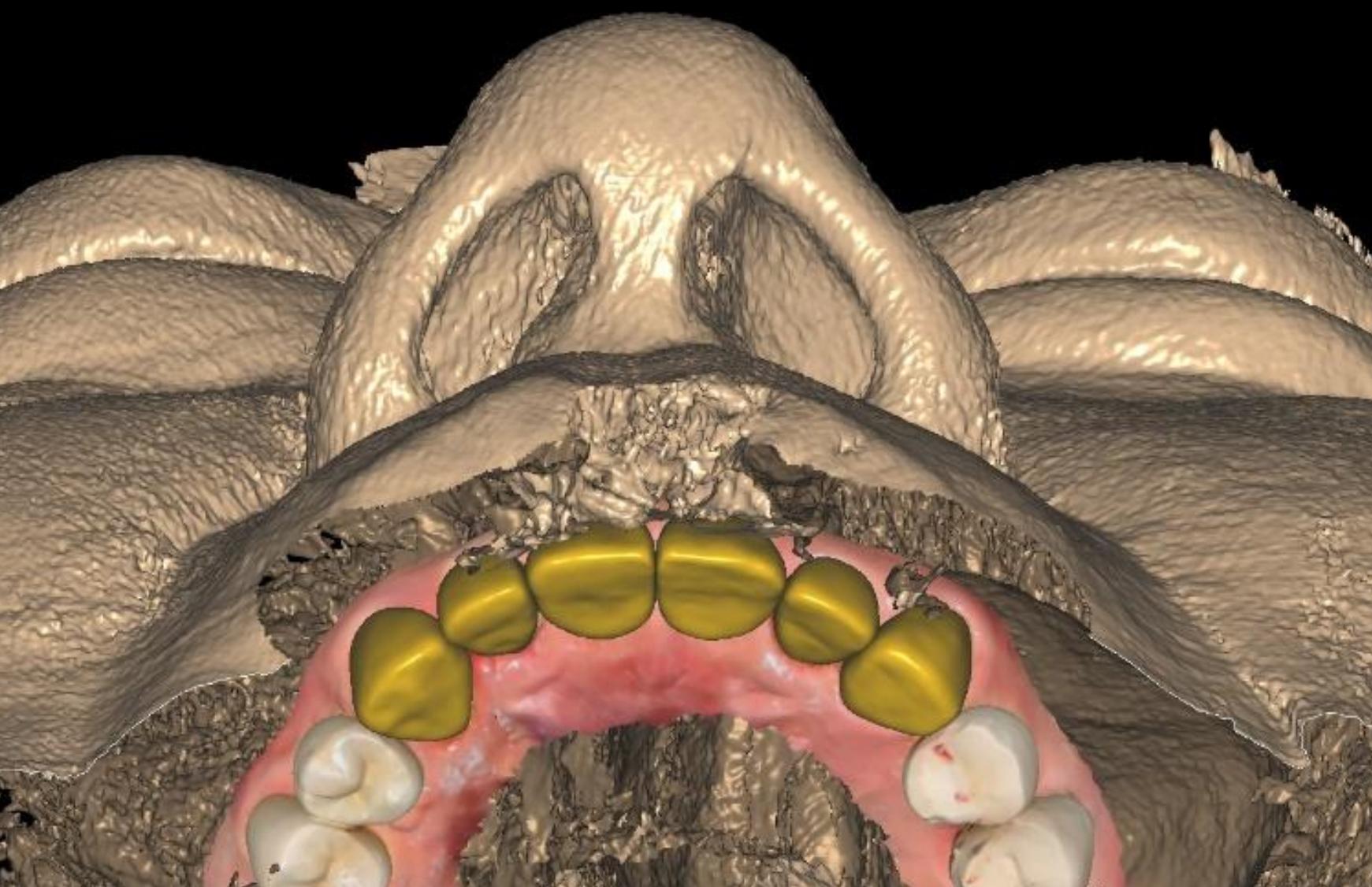
CT data Soft Tissue

# Cad Design



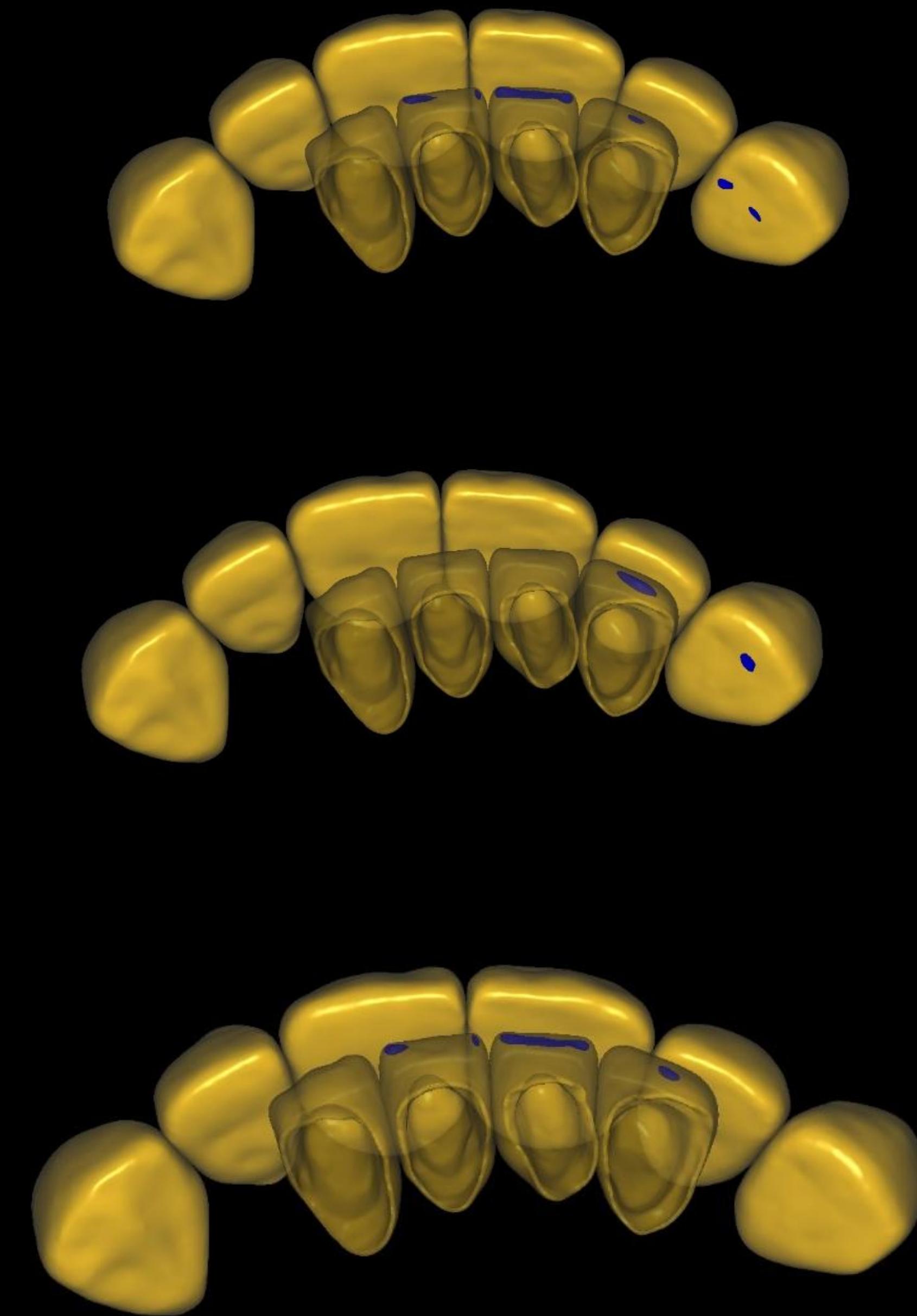
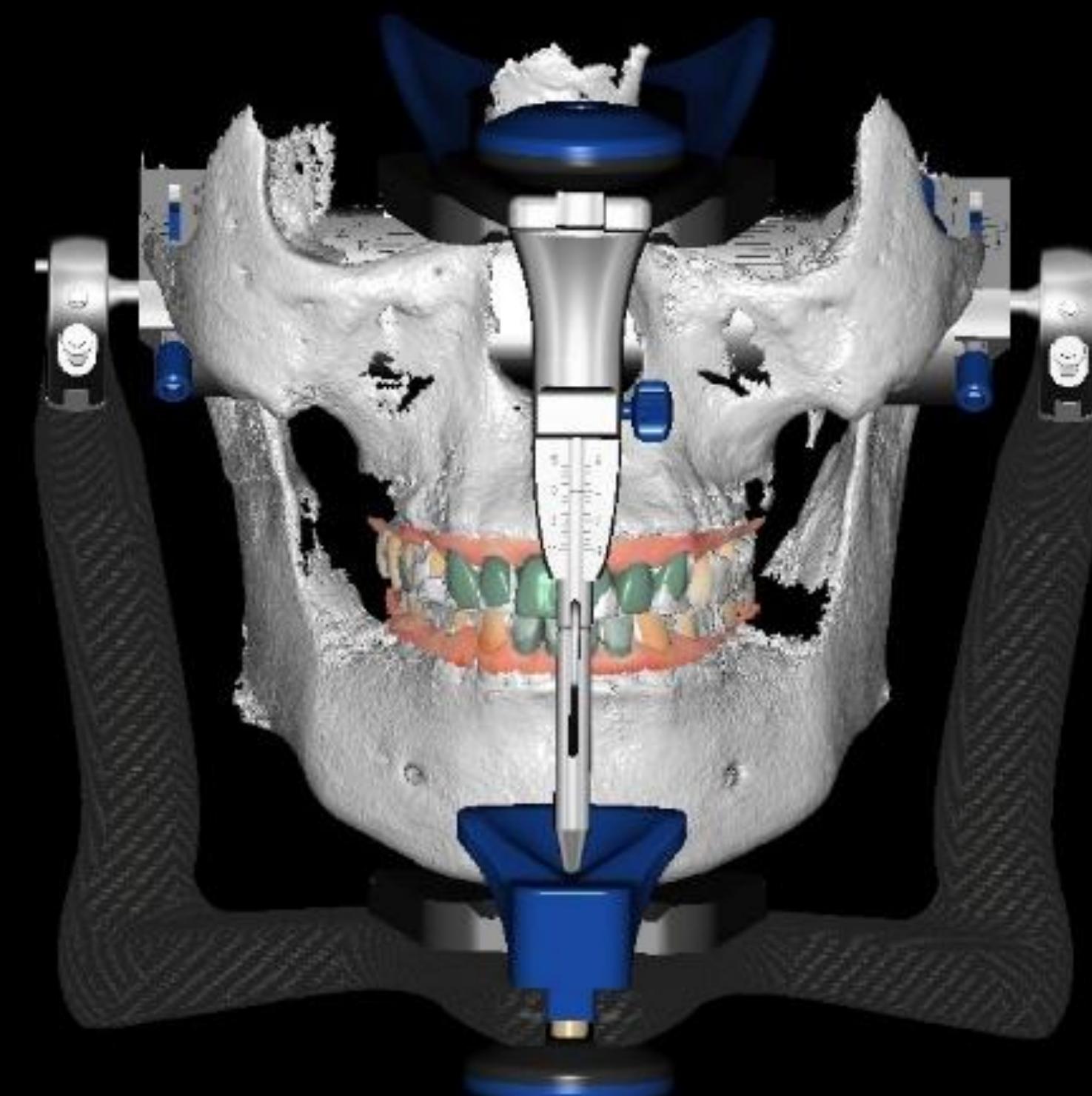
CT data Soft Tissue

# Cad Design



CT data Soft Tissue

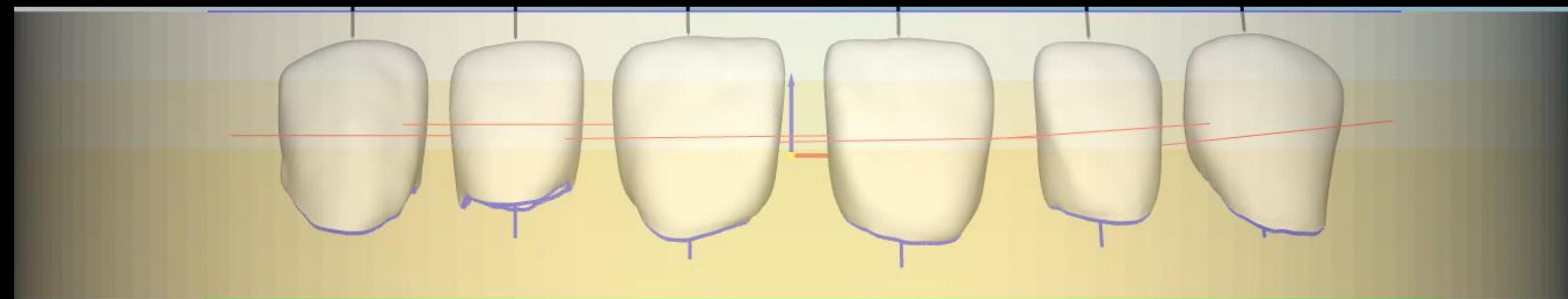
# Virtual Ariticulator



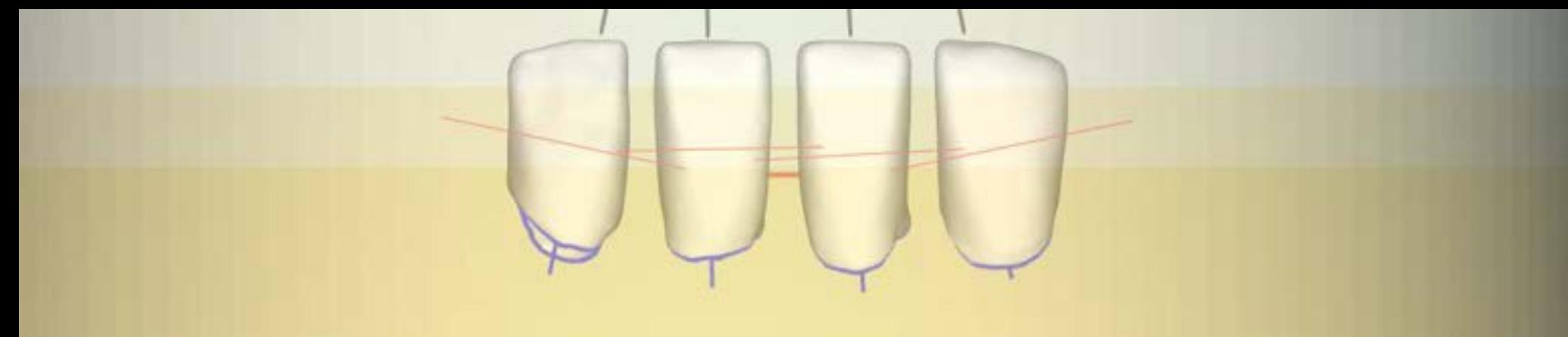
# Shade Taking



# Hyper Dent



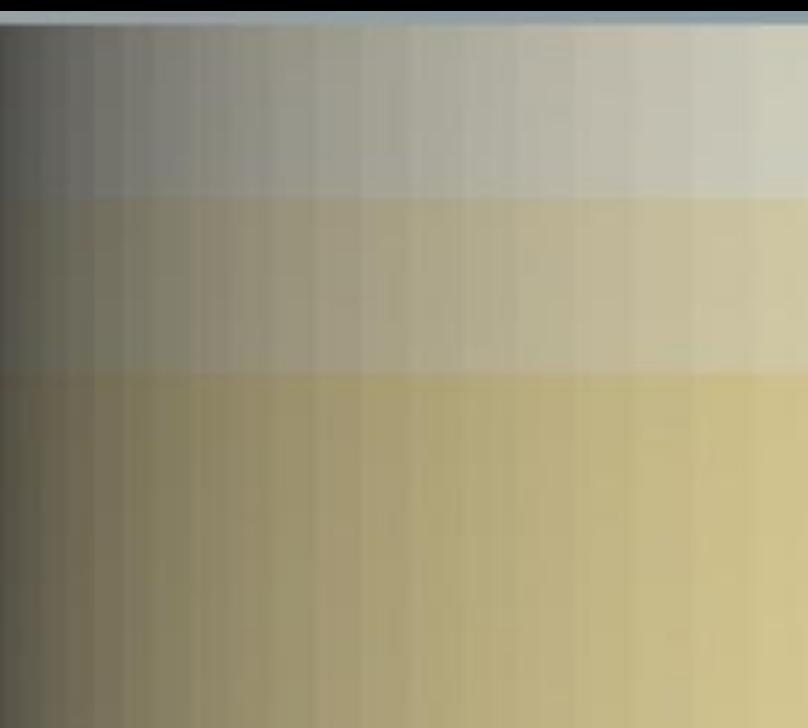
3layer A3 blcok



3layer A3.5 blcok



Maxillary A3 Block with  
Body Layer Color Adjustment



# Milling



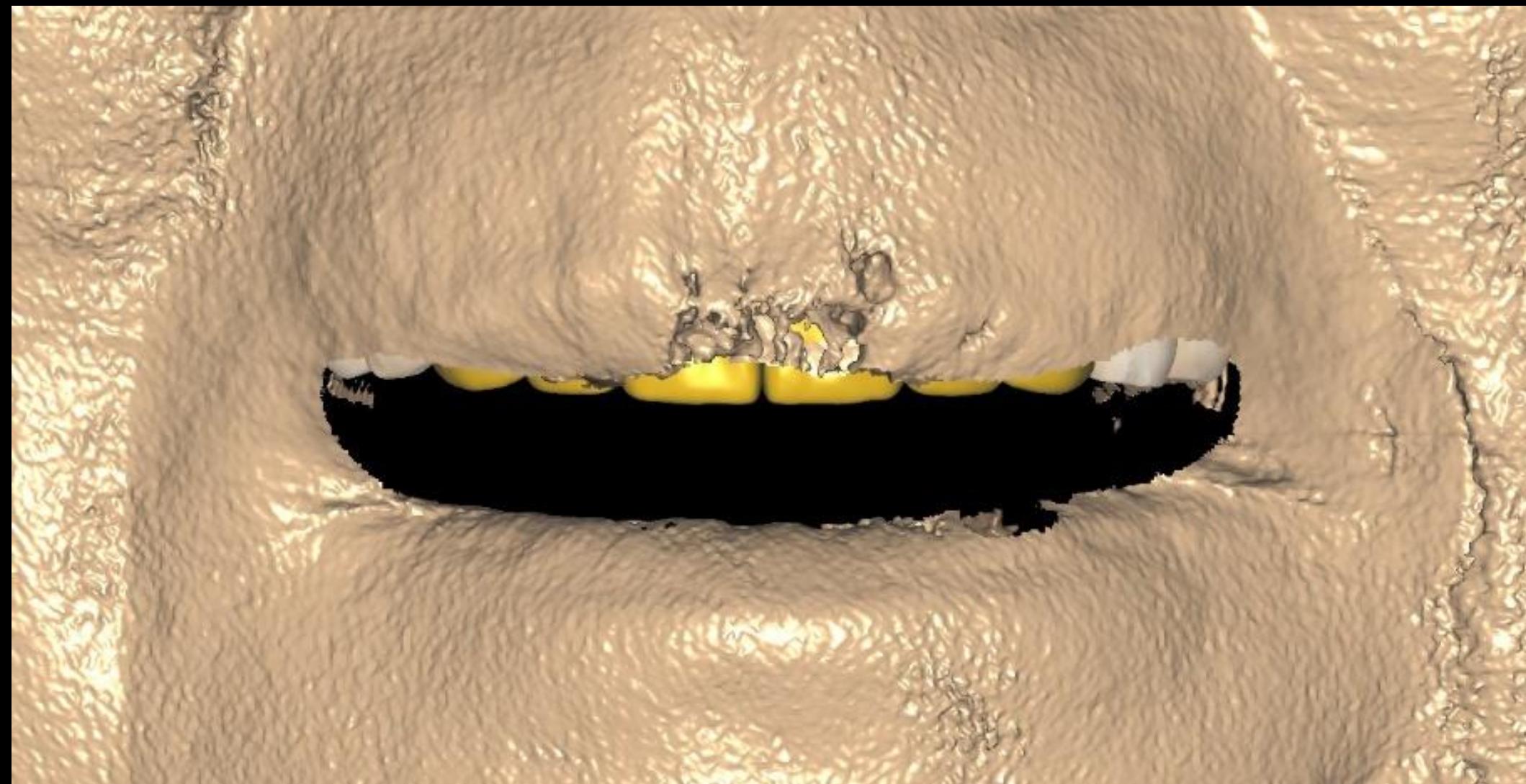
# Glazing



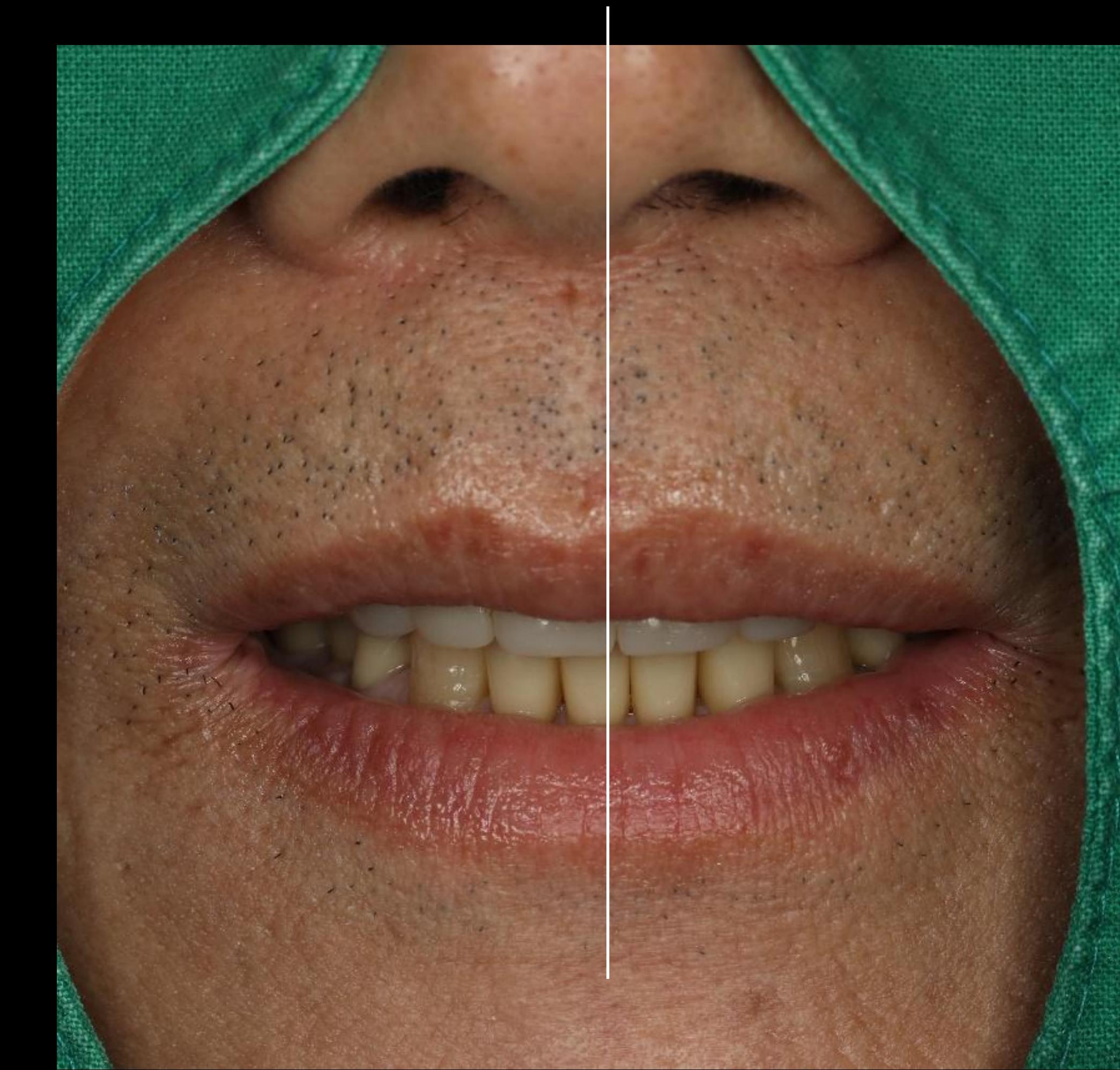
# Final Prosthesis



# Final Prosthesis



CT data Soft Tissue



**\*\* Utilization of CT Data Instead of Face Scanner  
for Anterior Maxillary and Mandibular Aesthetic Restorations**

**\*\* Improvement of Natural Tooth Scan Data from Shining 3D Elite Scanner  
and Application in Curved Section Cases with Abutments**

# Final Prosthesis



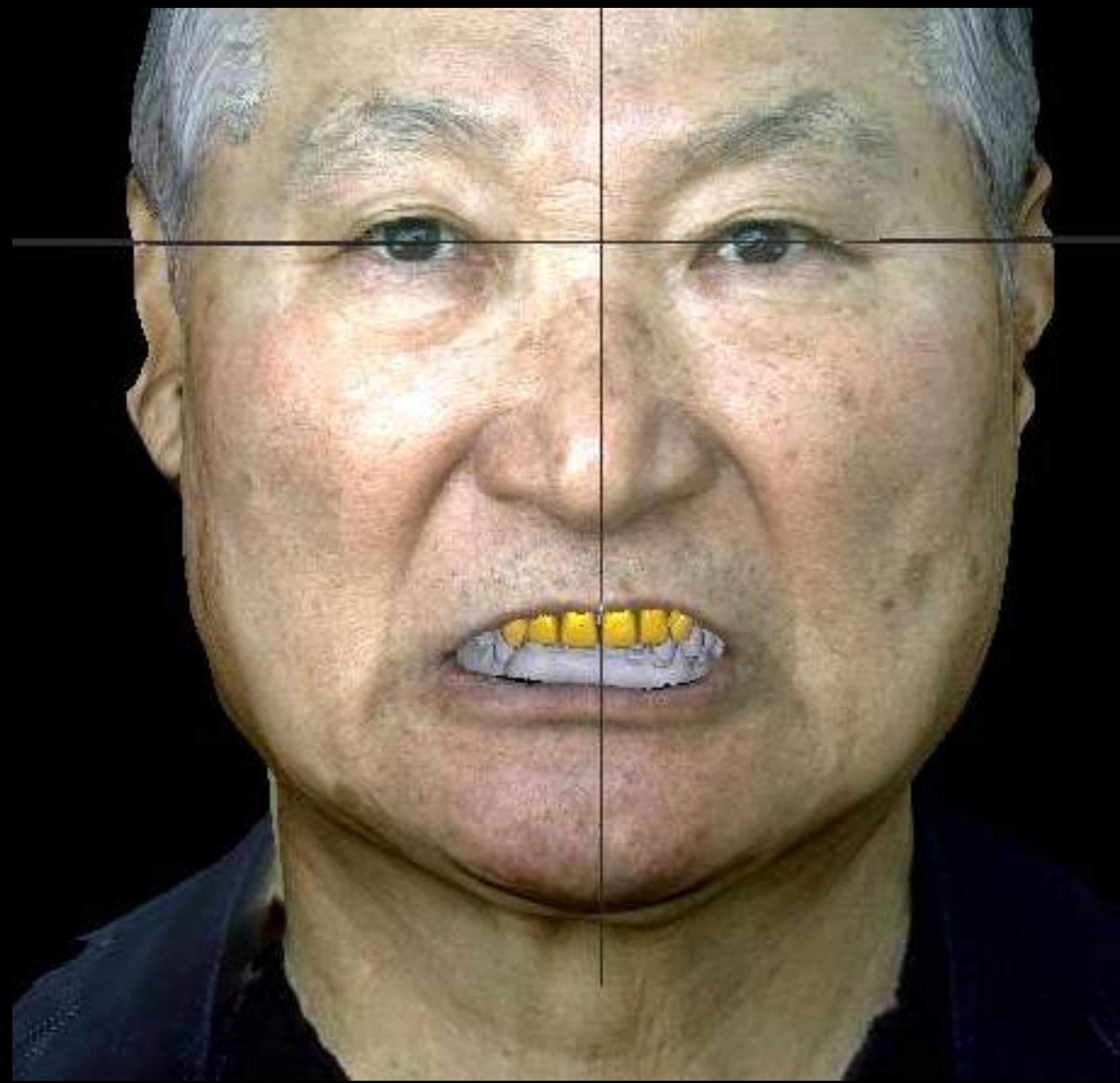
Pre op



Provisional crown



Final prosthesis



# Evaluation of Facial Scanning Technology in Dentistry



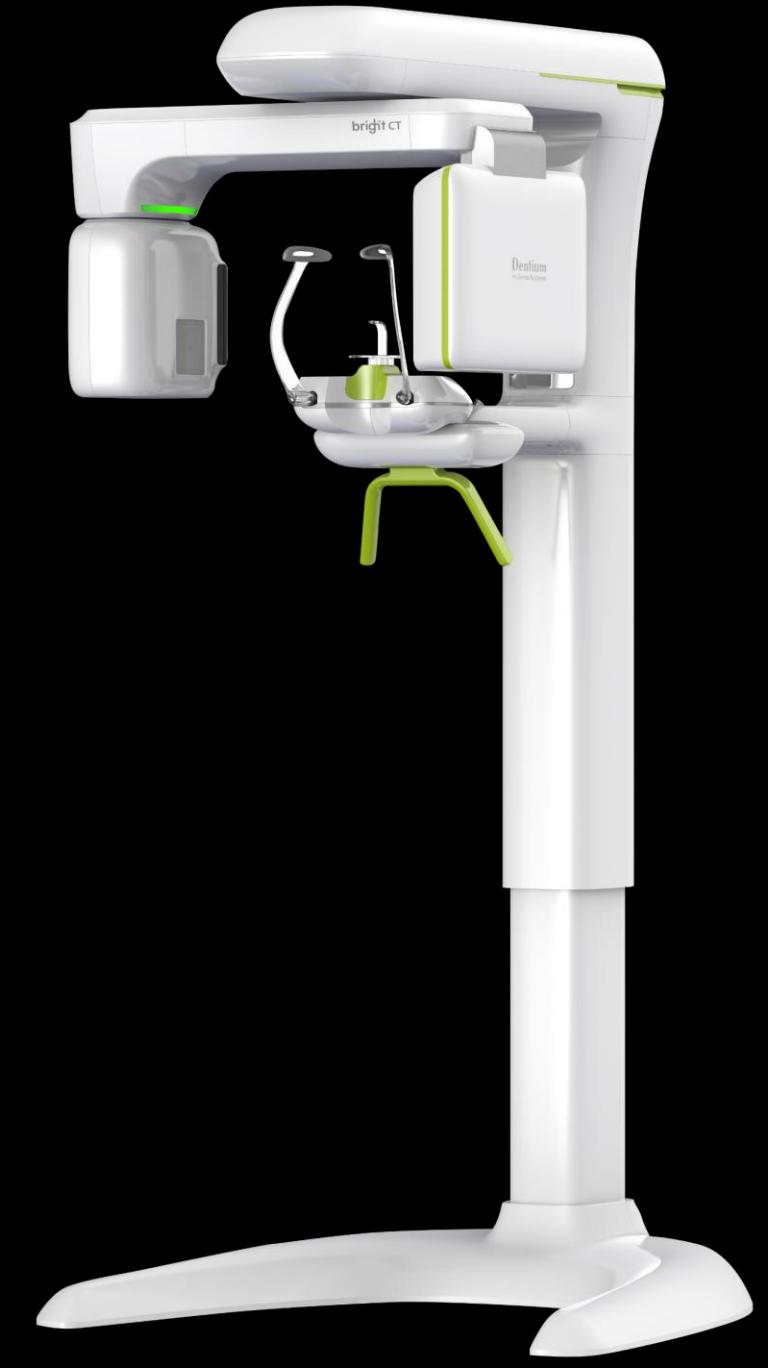
Digital Camera



RayFace



Shining 3D Meti-Smile



bright CT

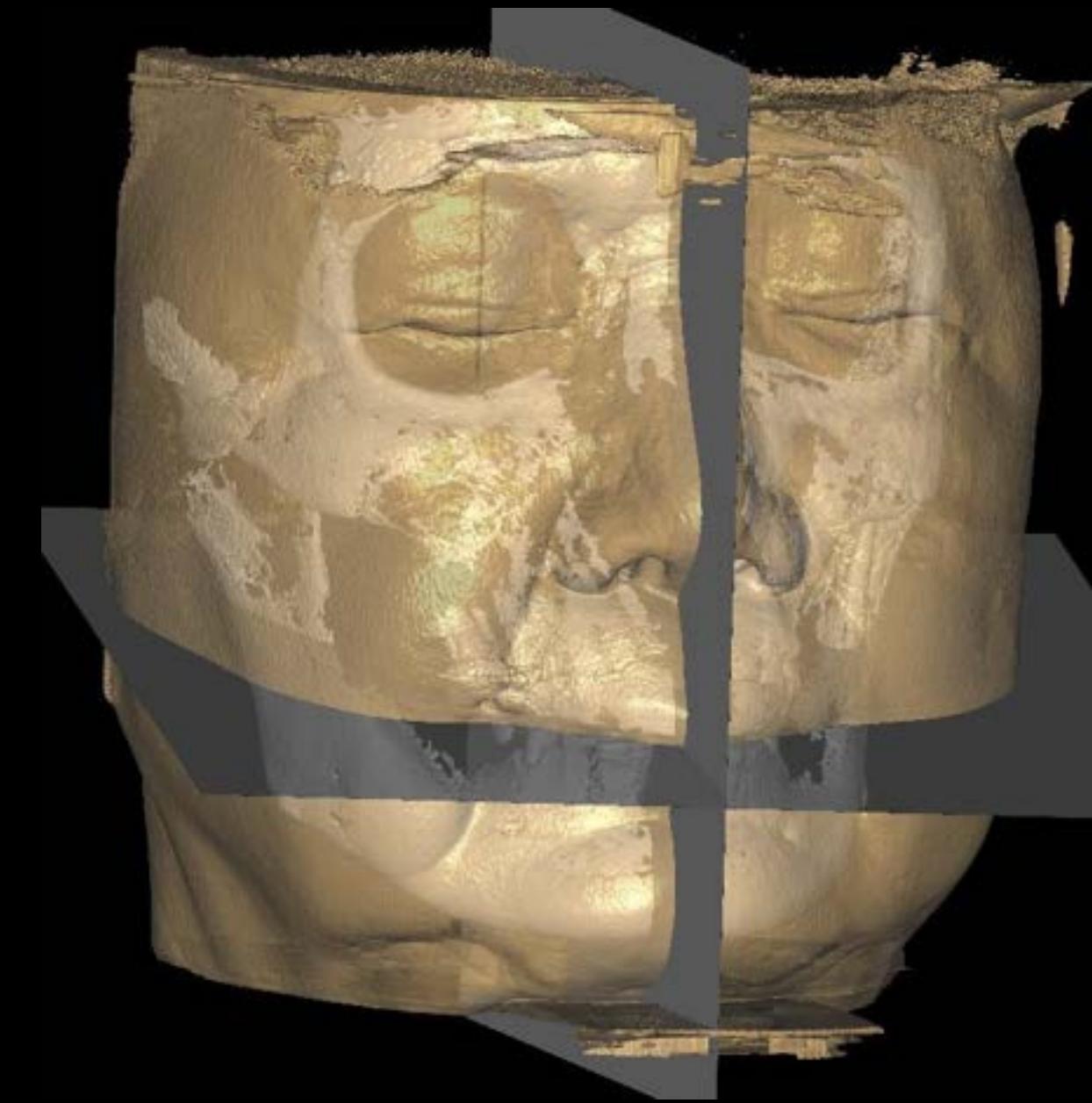


Cellular Phone



Mobile application

# diagnosis & Virtual set up Data for Consulting



# Face Scanner comparative & evaluation

Products	Revopoint POP3	CREALITY CR-Scan Ferret SE	Shining3D Metismile
Product image			
Location of HQ	Shenzhen, China (2023Y 6M release)	Shenzhen, China (2025Y 3M release)	Beijing, China (2023Y 3M release)
Single capture range	125 x 225mm	560 x 820 mm	210 x 270 mm
Resolution	Accuracy: 0.1 mm	Accuracy: 0.1 mm	Accuracy: 0.05 mm
Working range	150 - 400 mm	150 ~ 700 mm	500 mm
Size	153 x 45 x 29 mm	120 x 30 x 26 mm	215 x 50 x 75 mm
Weight	190 g	105 g	800 g
Price	\$ 659 (914,692₩)	\$ 349 (484,412₩)	\$ 4,999 (6,938,612₩)

# Face Scanner comparative & evaluation

**Revopoint**  
**POP3**



**CREALITY**  
**CR-Scan Ferret SE**

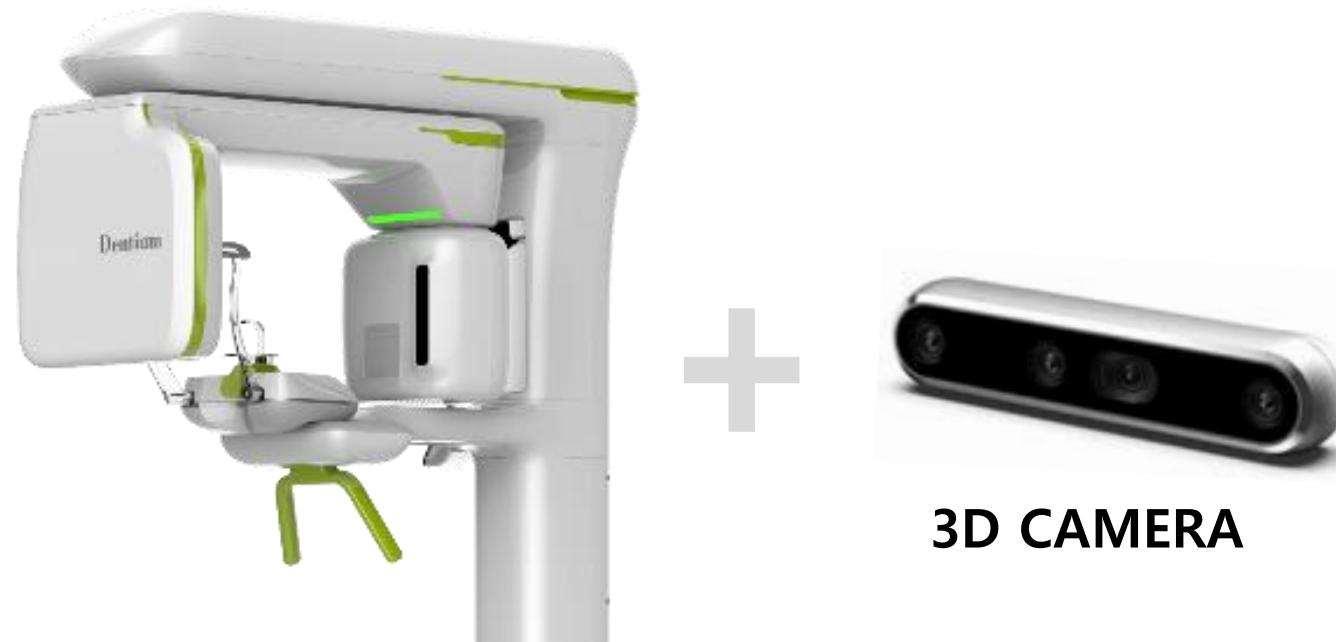


**Shining3D**  
**Metismile**



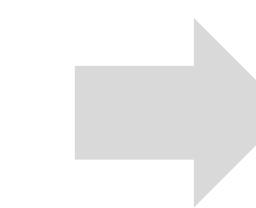
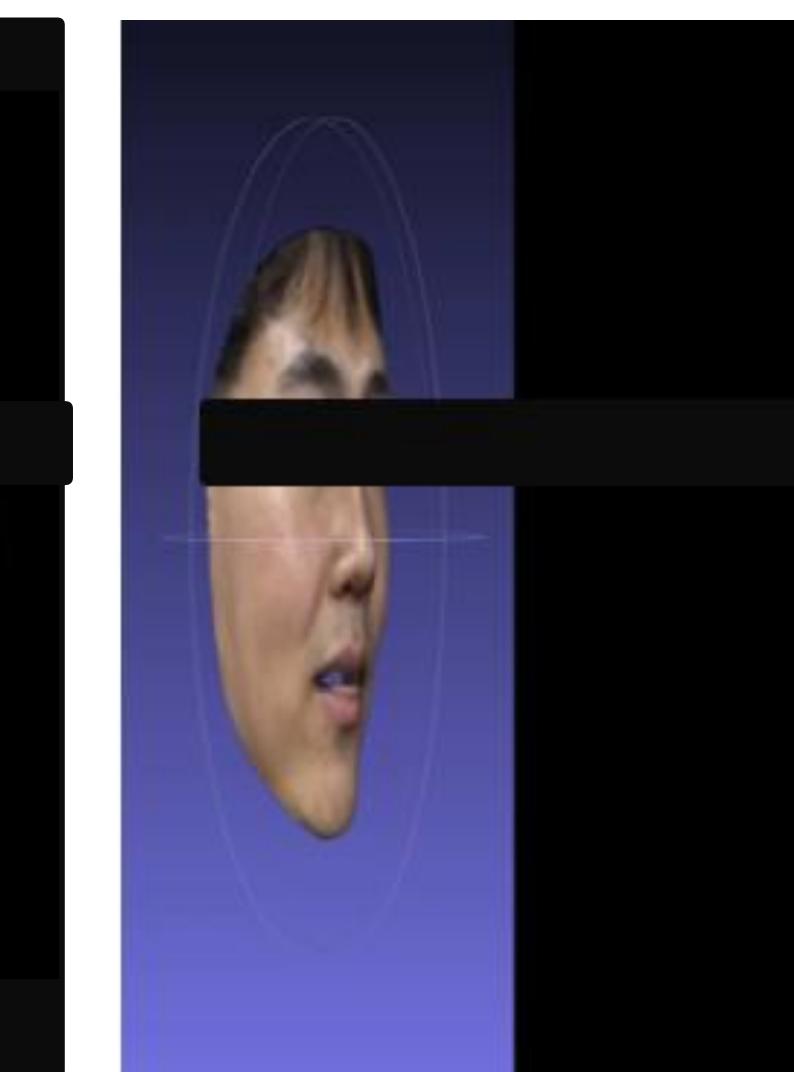
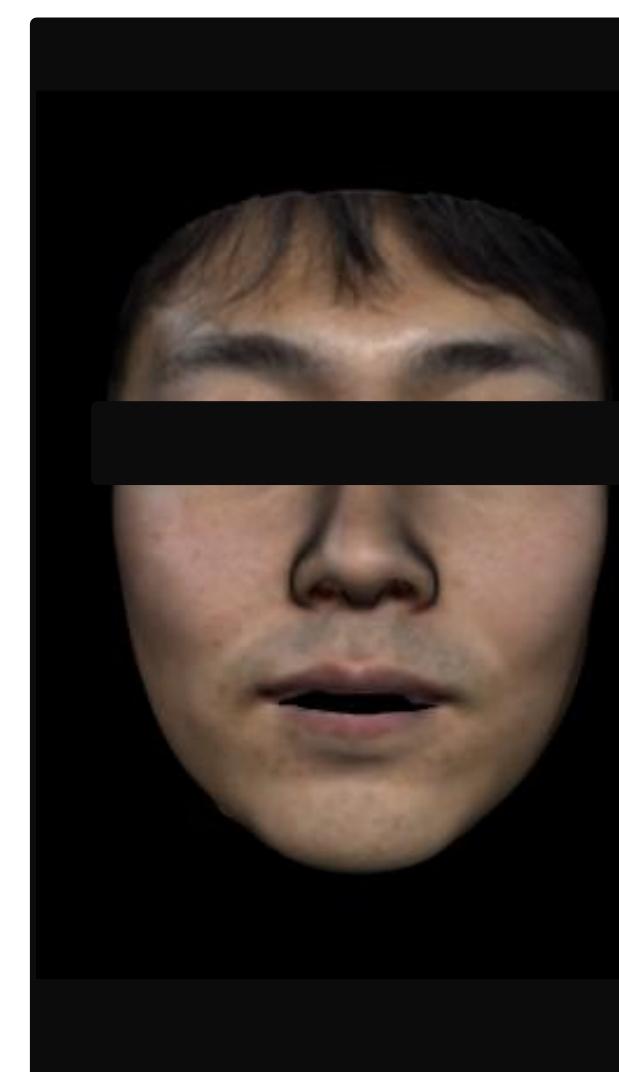
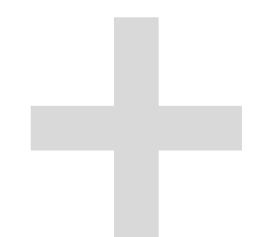
# Plan to Integrate Facial Scan Function into bright CT

Dentium



3D CAMERA

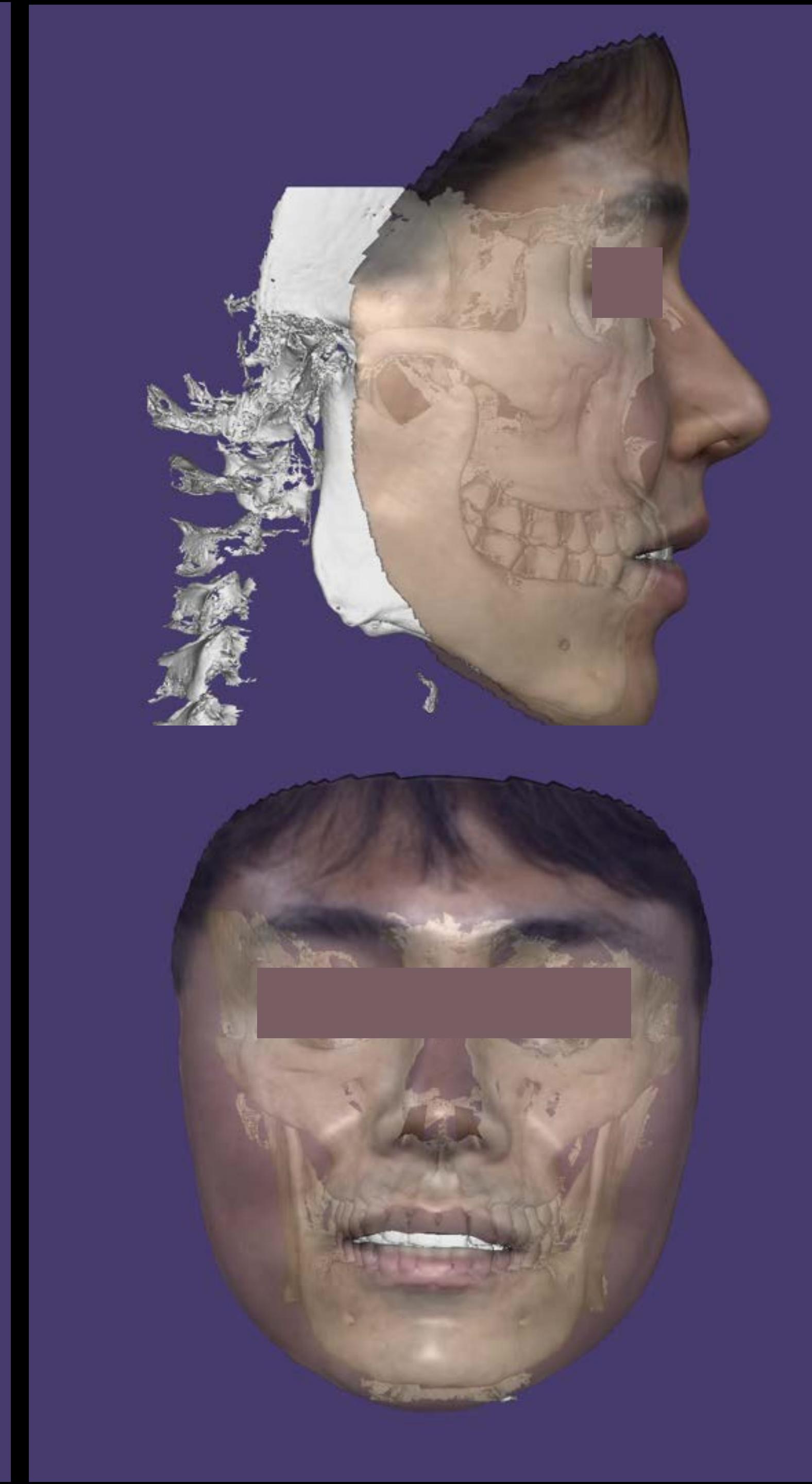
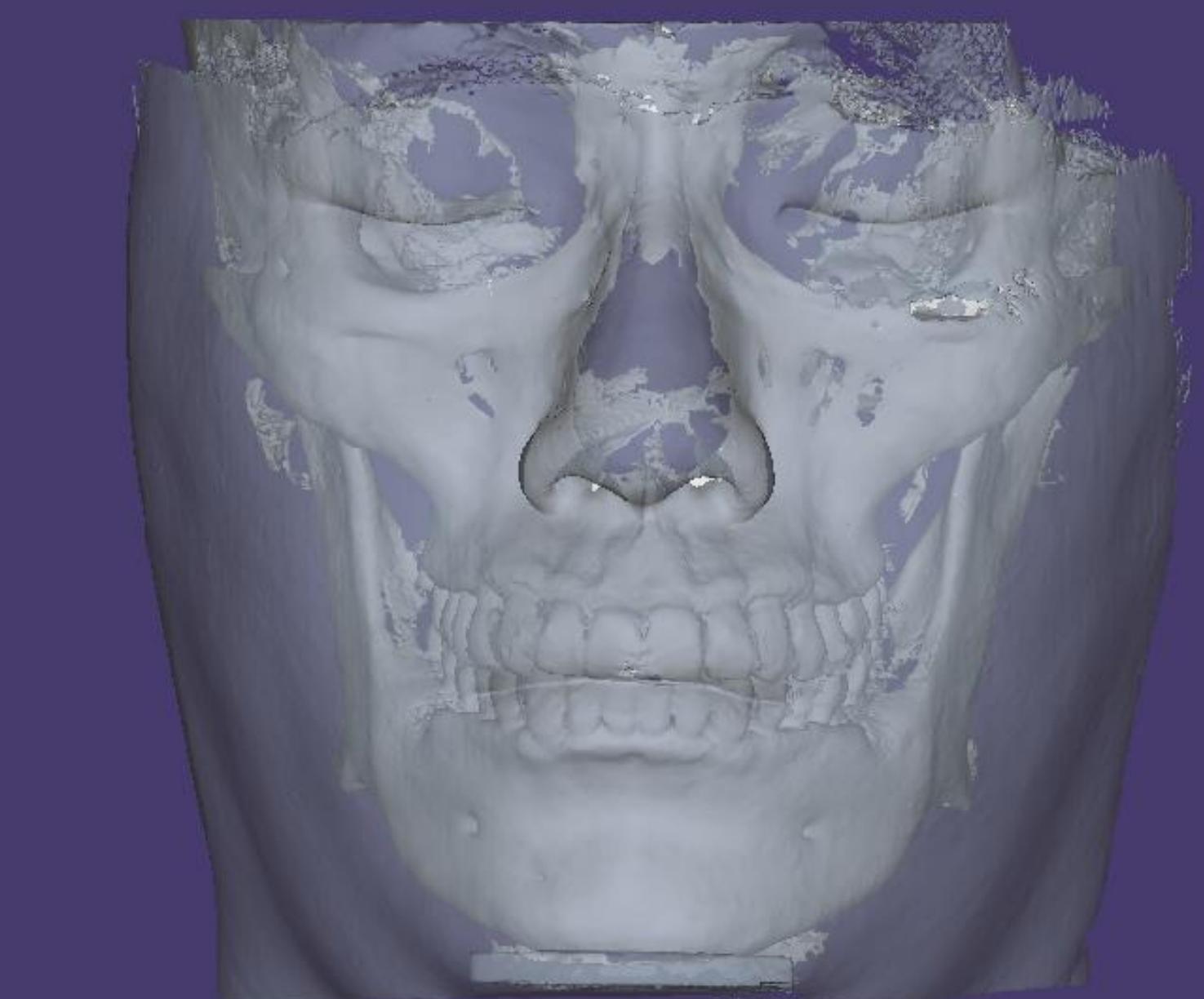
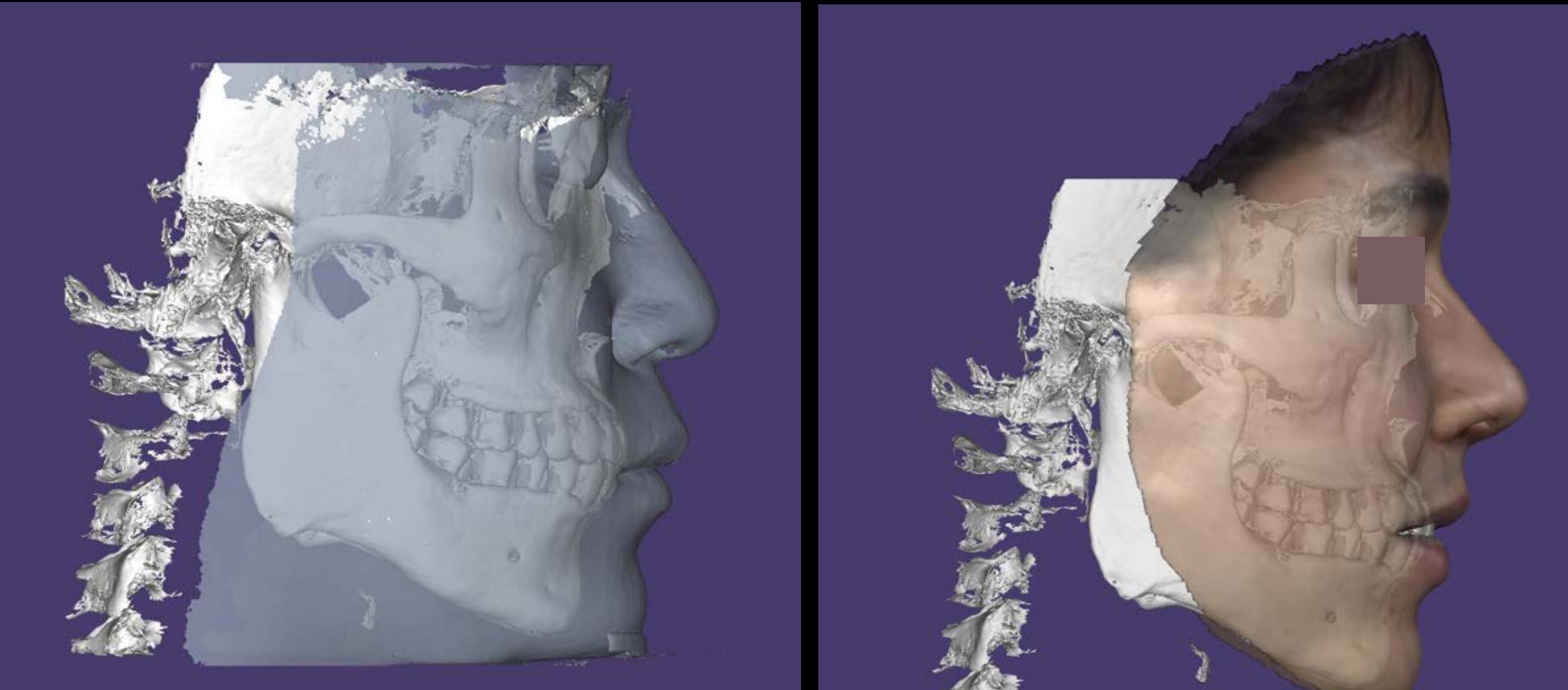
bright CT 4T (with Facial Scan)



Large FOV CT Image  
(20cm x 20cm)

3D Facial Scan

CT + Facial Scan stitching



# Virtual Face Reconstruction

Digital Minimalism is precise, exactly, Minimal investment



Facial photo can be merged with CBCT and IOS

That are now under development

Dentium

# Contents

Introduction

Tooth oriented

Facial driven

CT centered

Oral exam (2023-04-12)



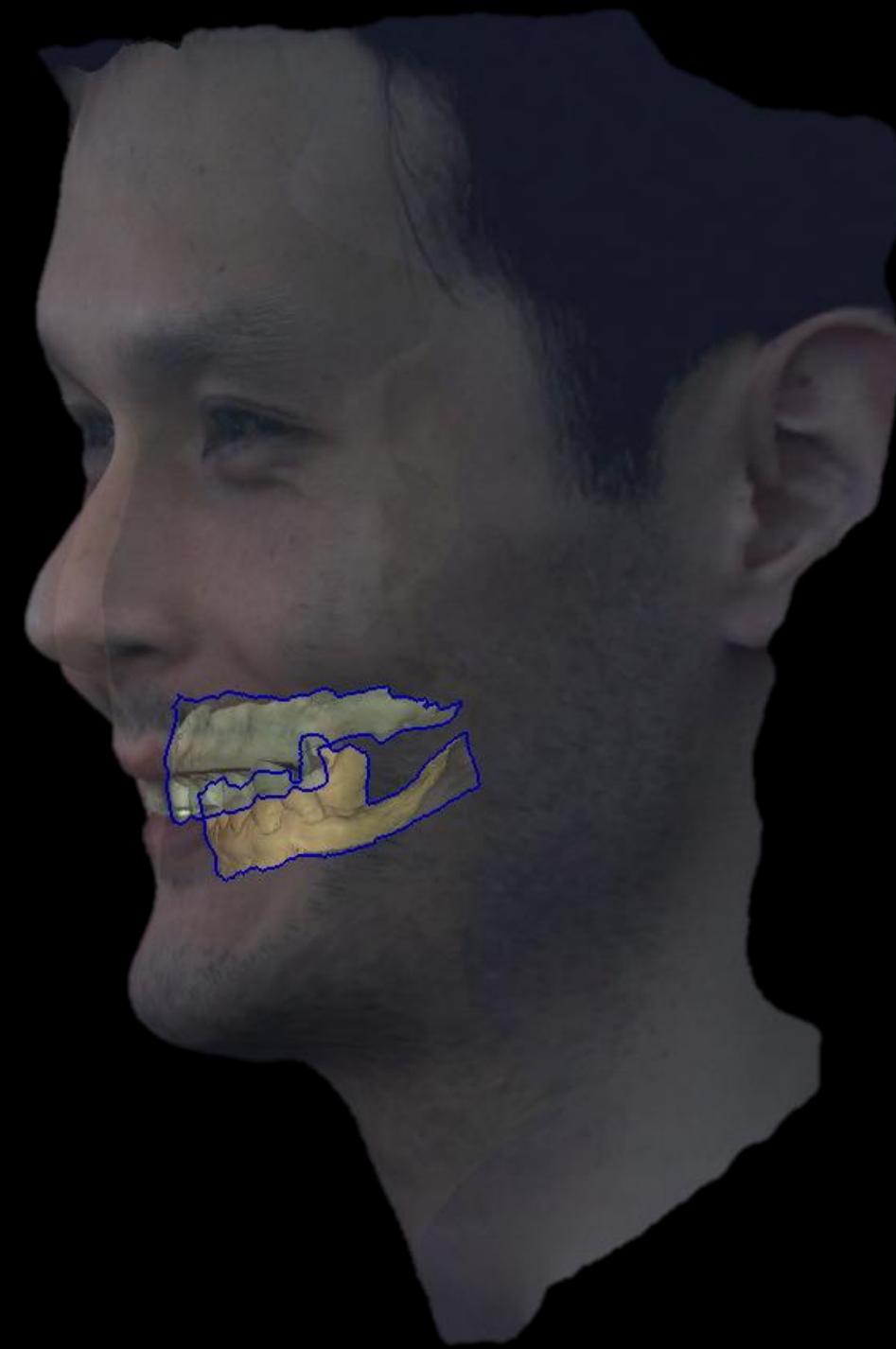
Follow up : 11 months (2024-10-30)



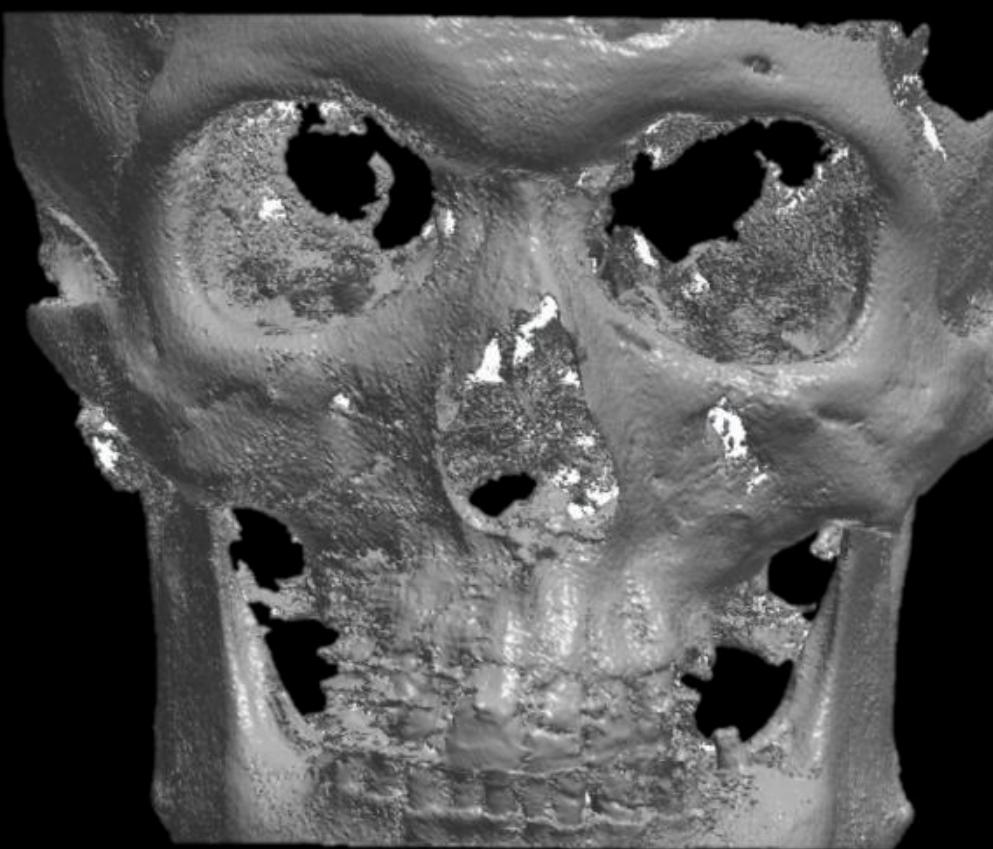
# Scan data & Facial scan data stitching



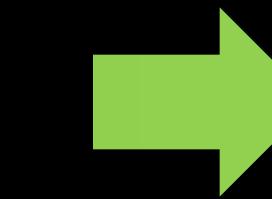
# CT data stitching



&



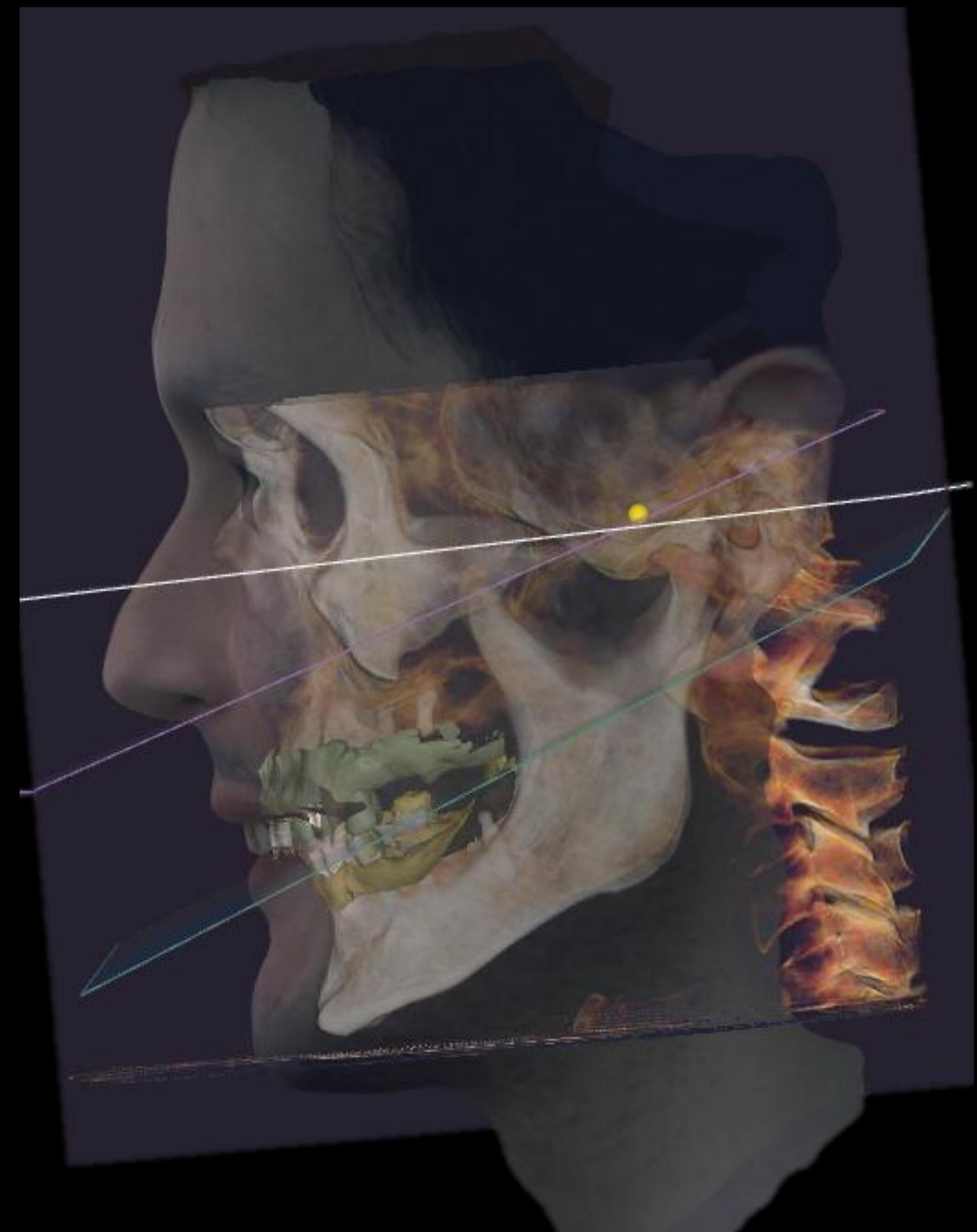
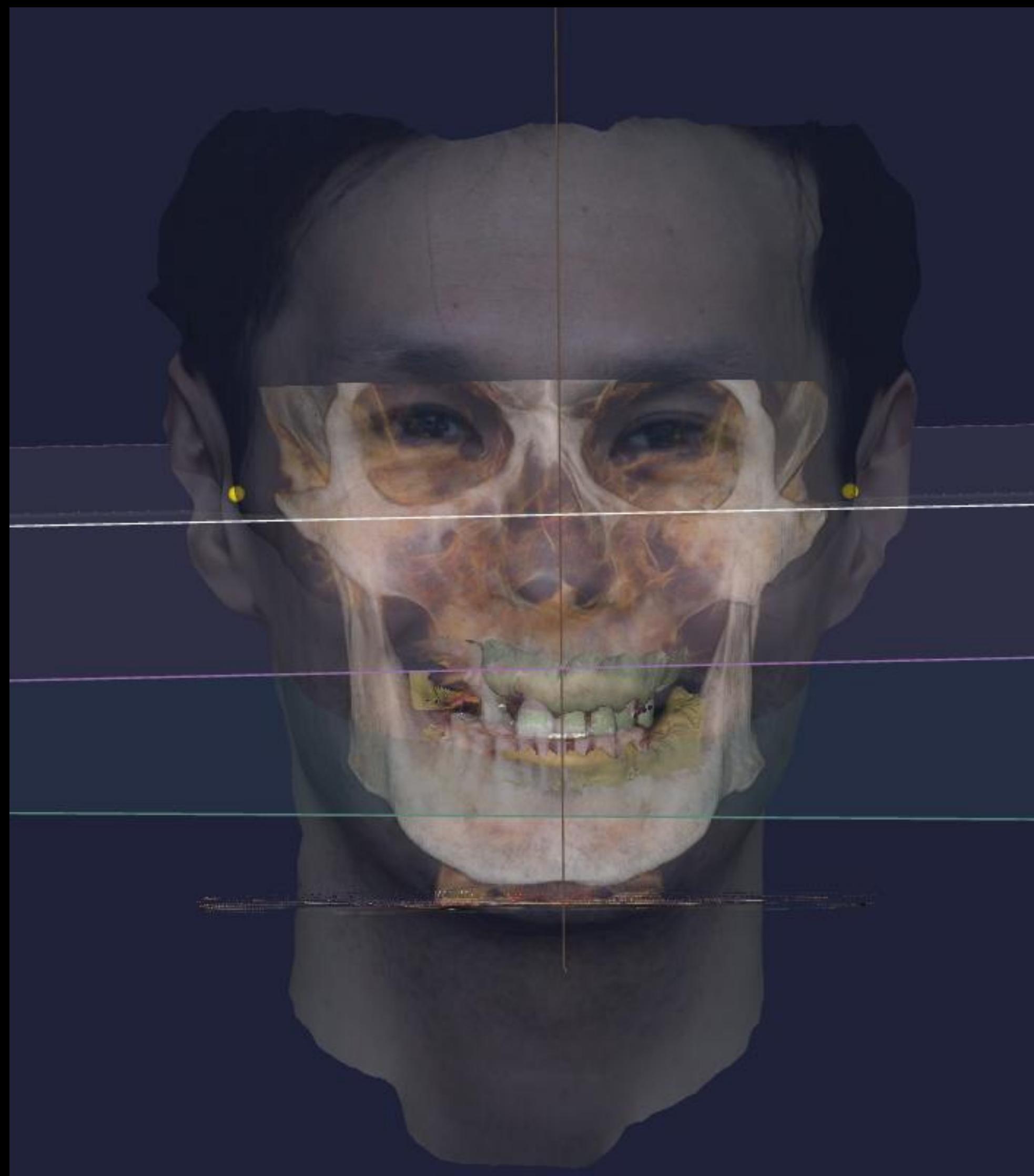
CT STL



Facial Scan + IOS + CT STL

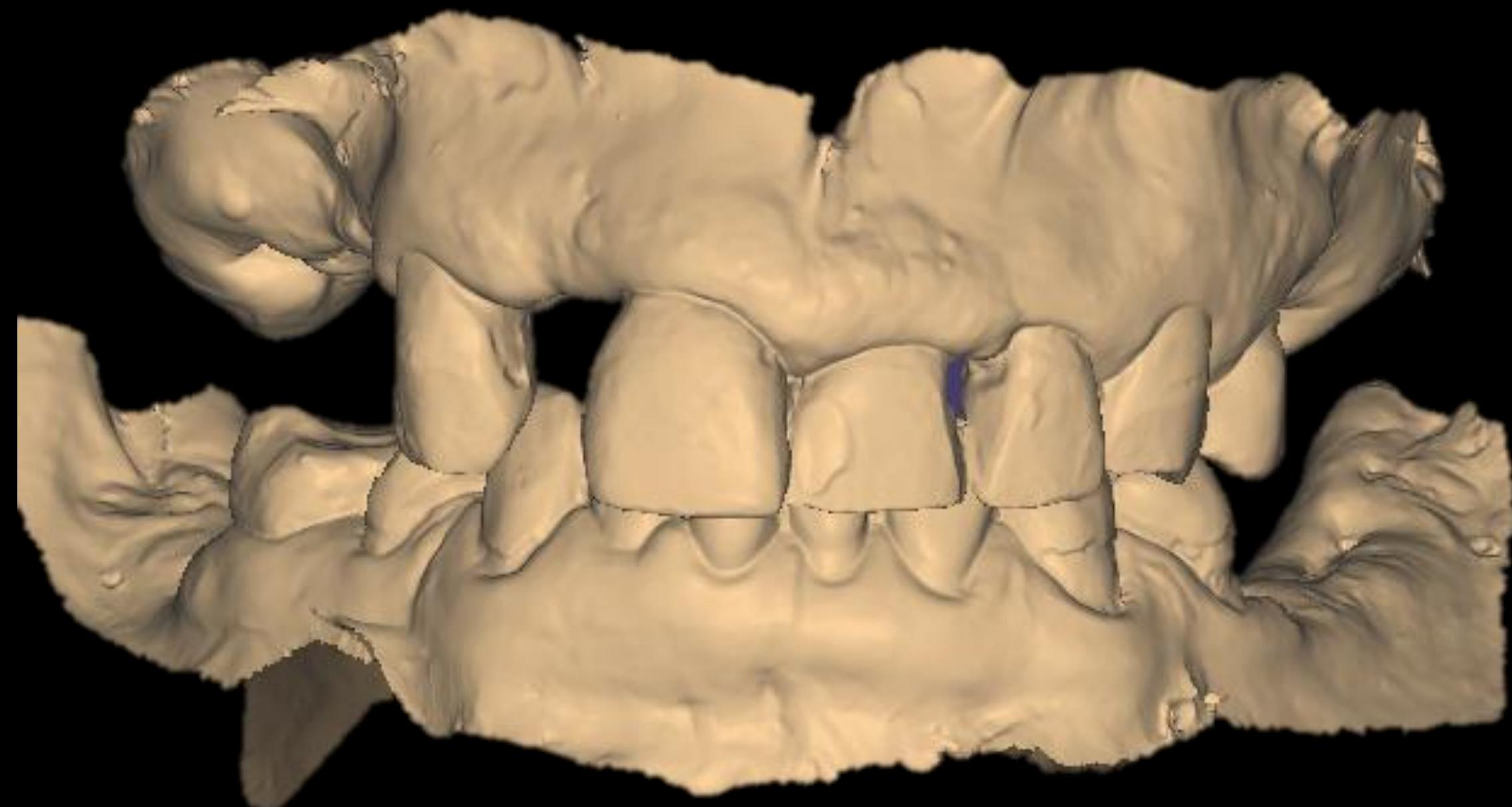


# Scan data & Facial scan data stitching data



Facial Scan + Plane + IOS + CT

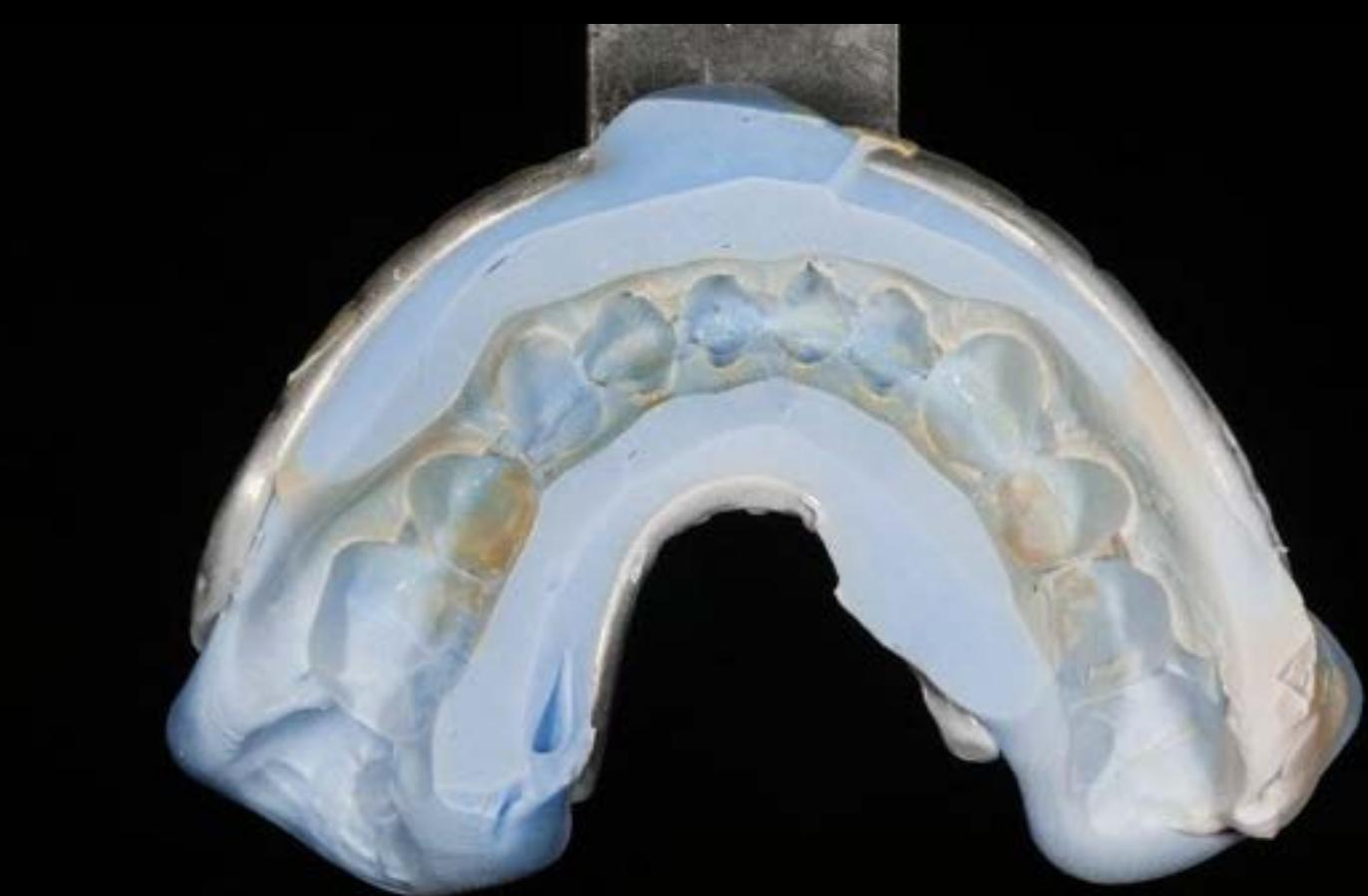
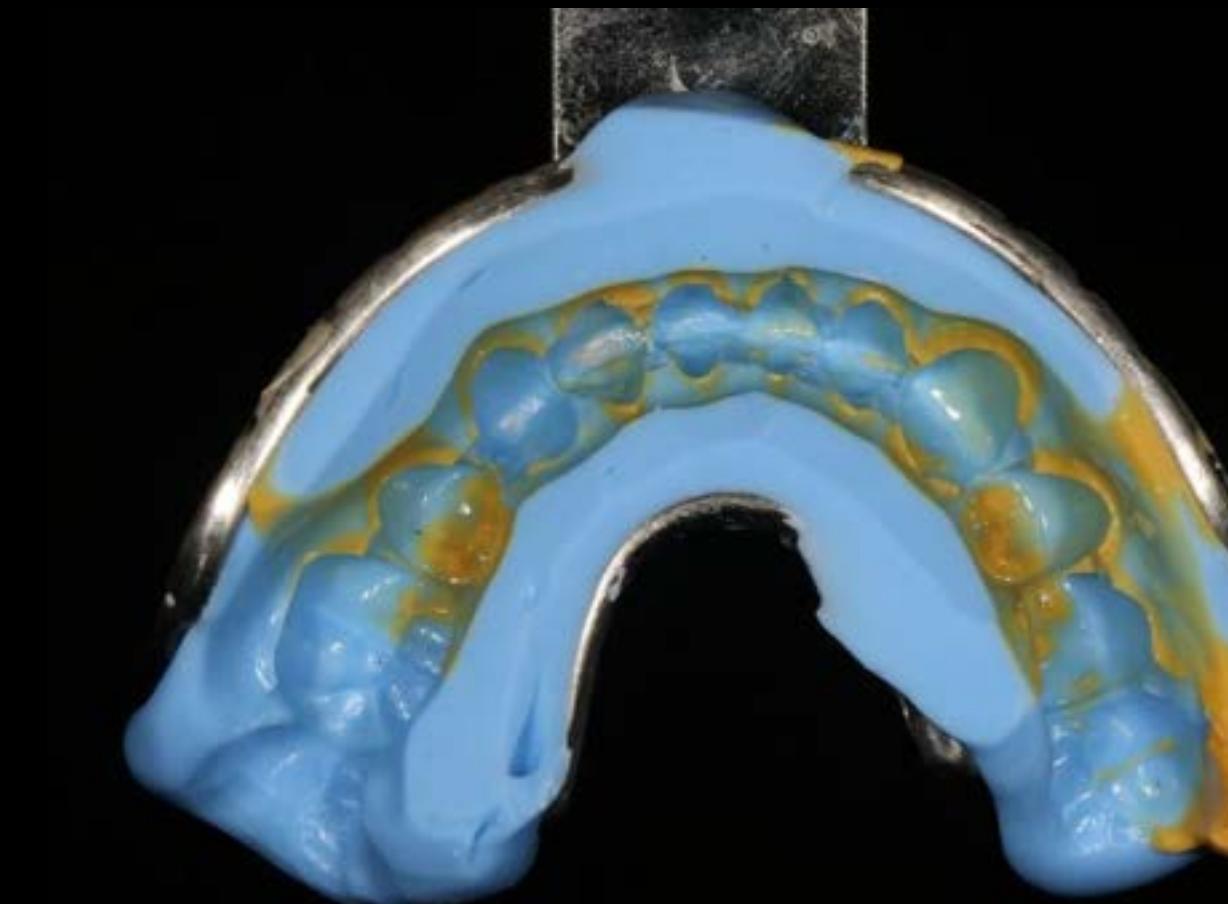
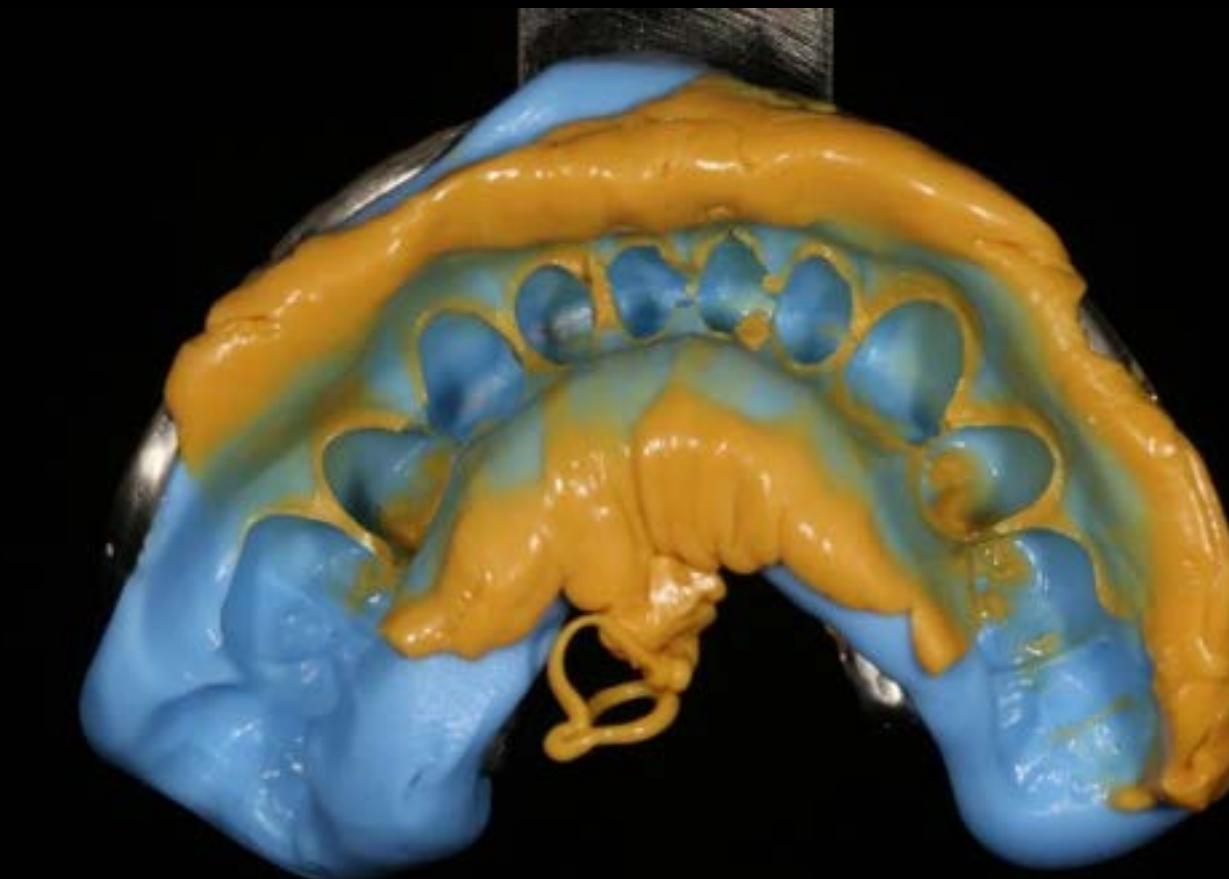
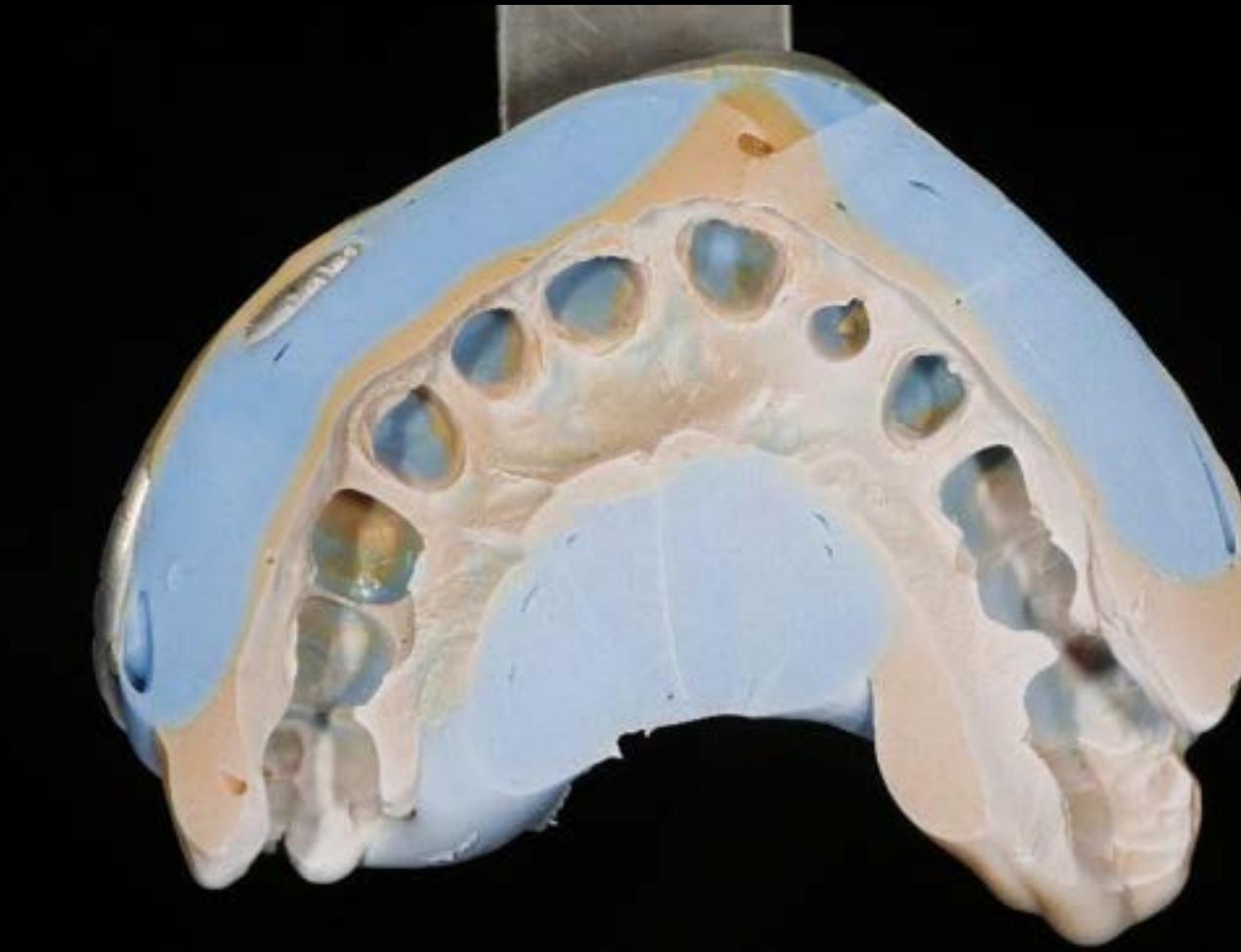
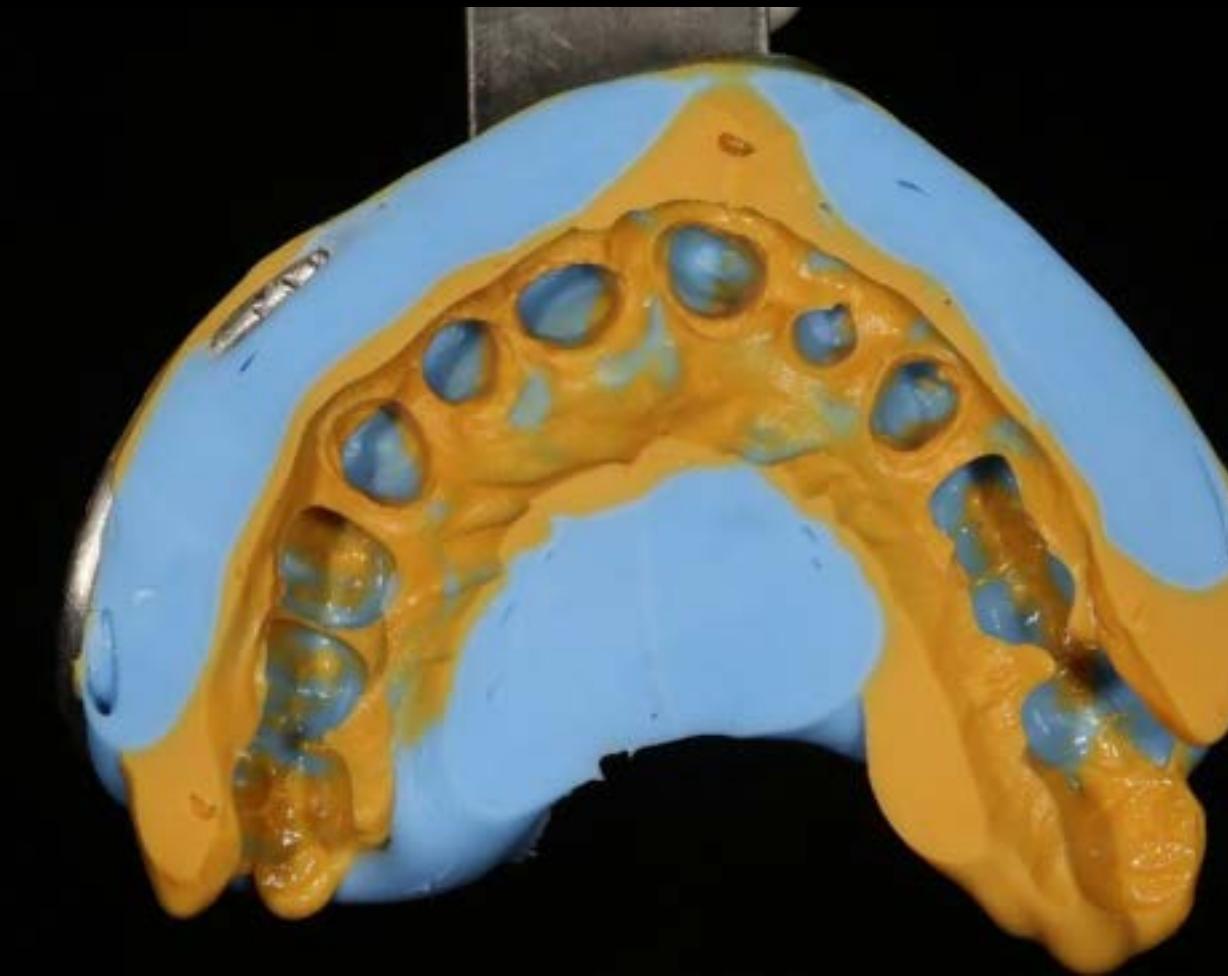
Intra-oral scan



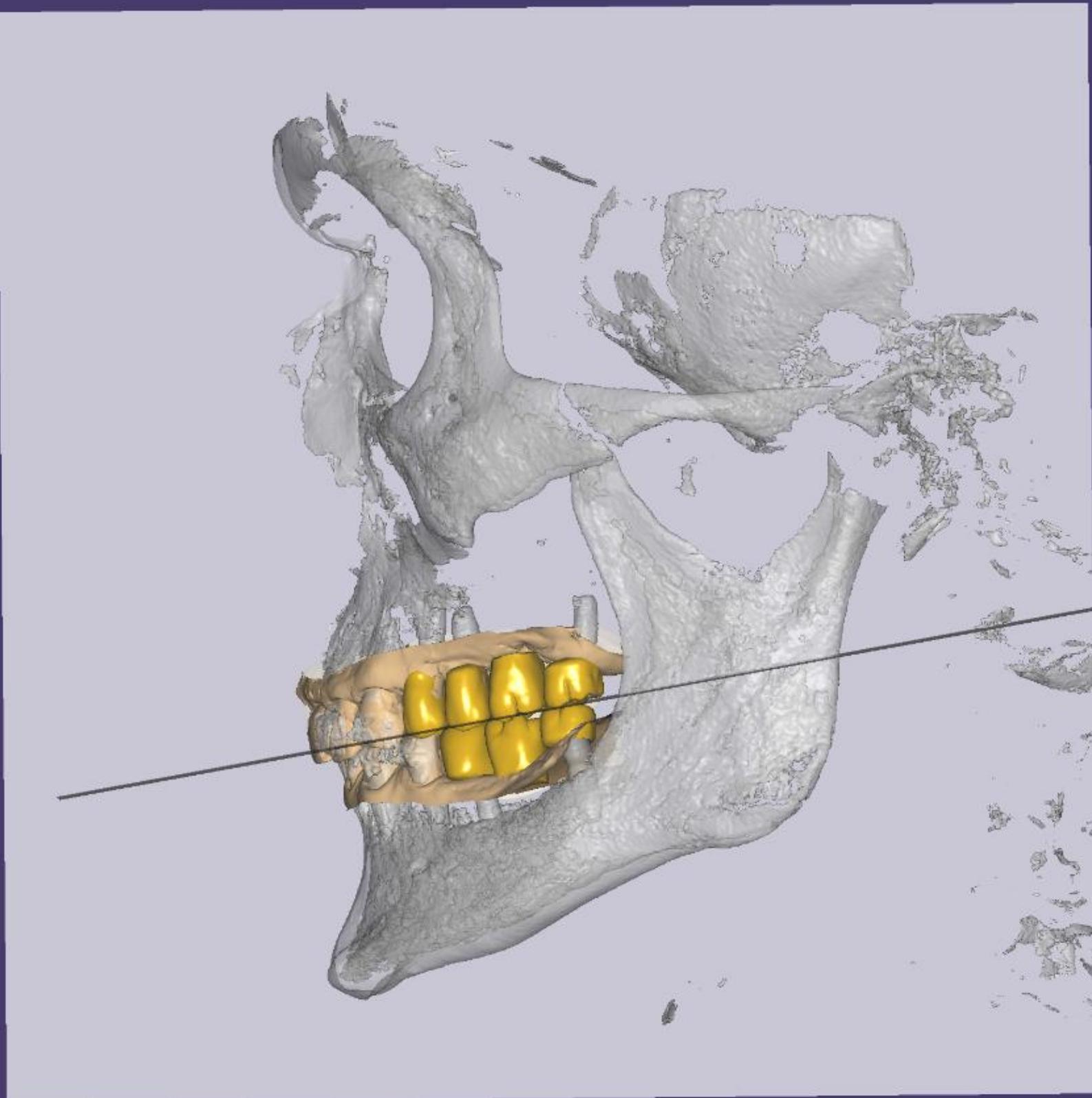
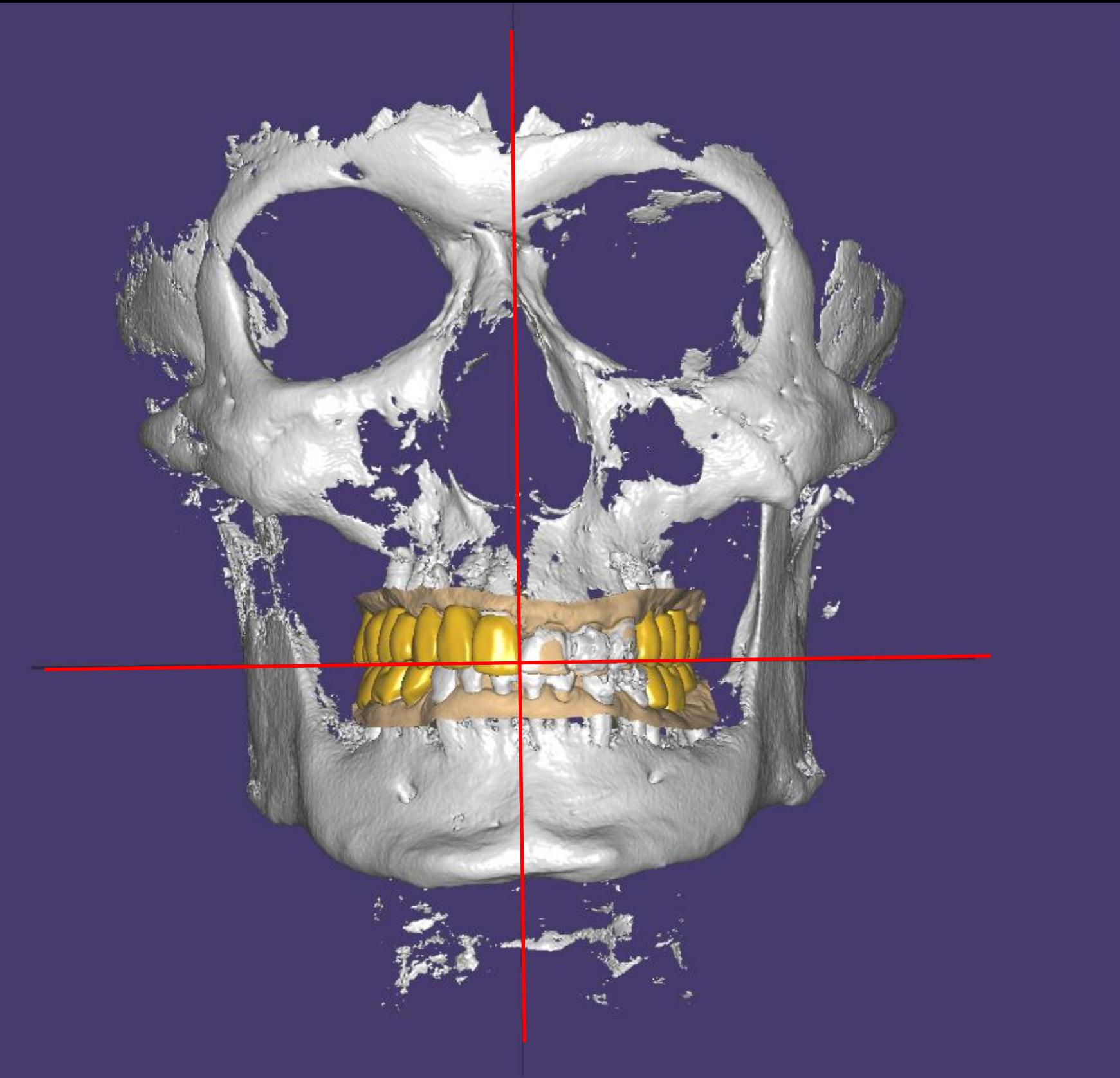
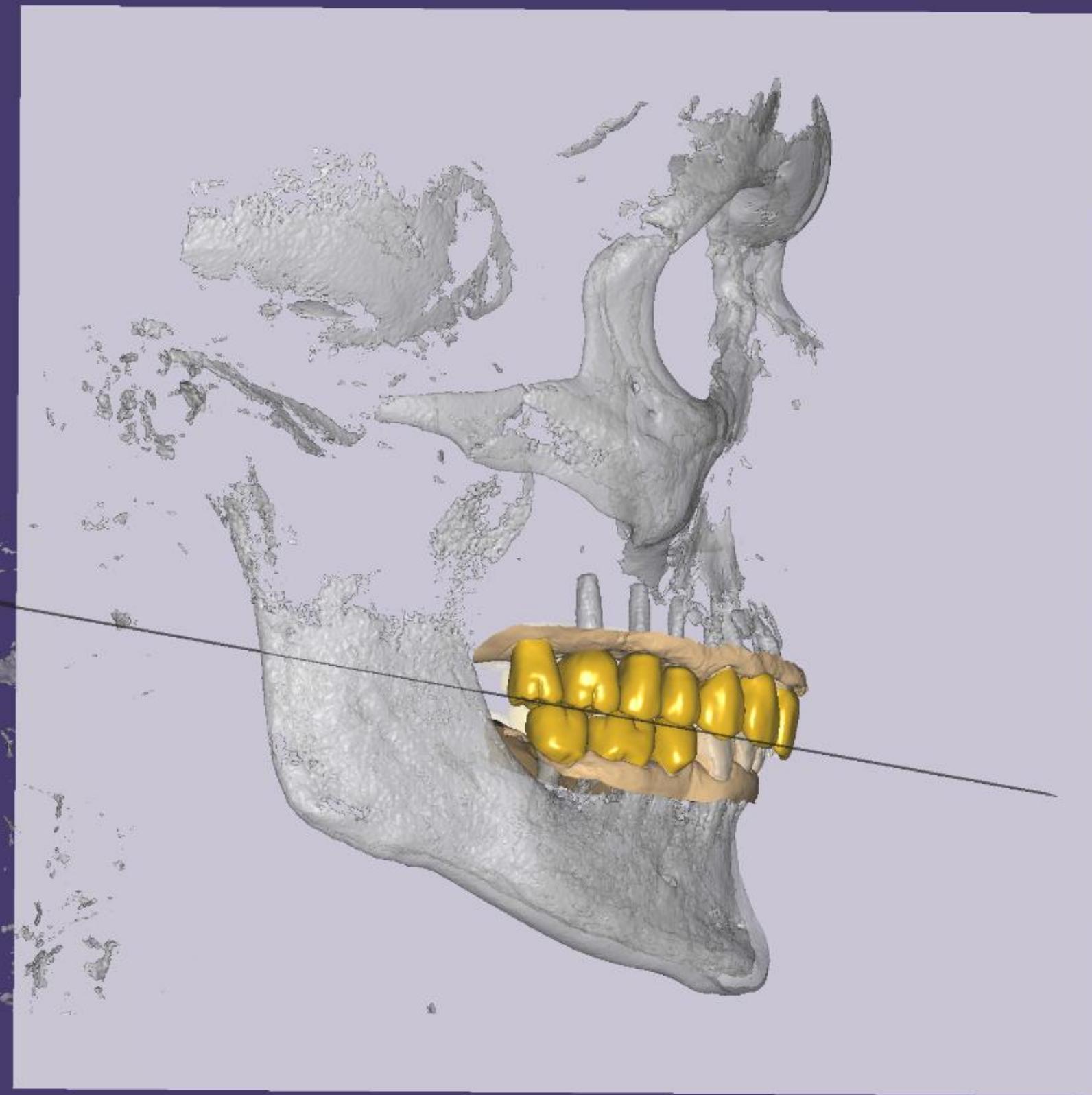
Virtual set up



Impression / Trimming / Scan spray



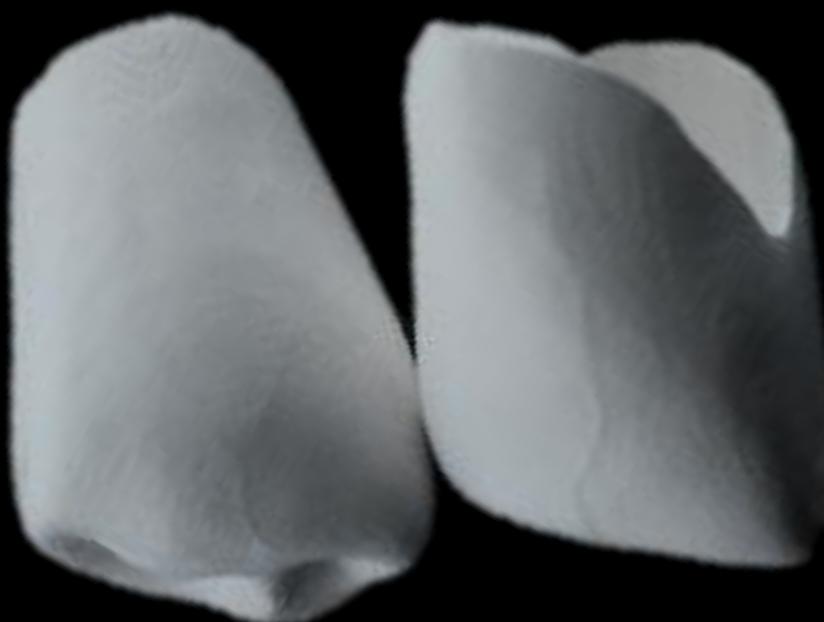
CAD (Final prosthesis)



## Milling / Sintering / Glazing



## Milling / Sintering / Glazing



#11,21,23 Final prosthesis (2024-11-06)



Follow up : 11 months (2024-10-30)



CT

From diagnosis to treatment

Sticking with facial scanning and IOS

Accuracy of CT check bite

CT - AI occlusal plane and midline

# Facial scanner vs CT data application



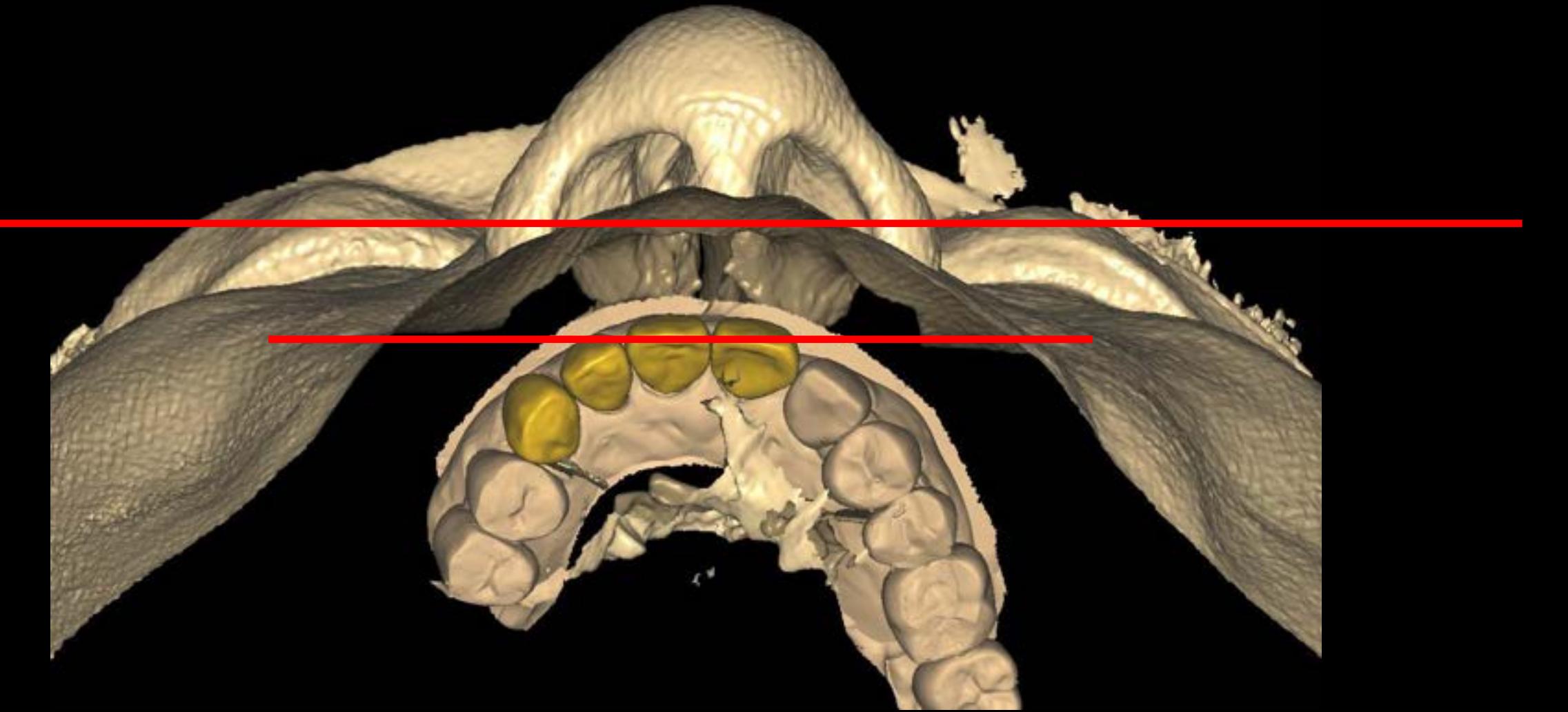
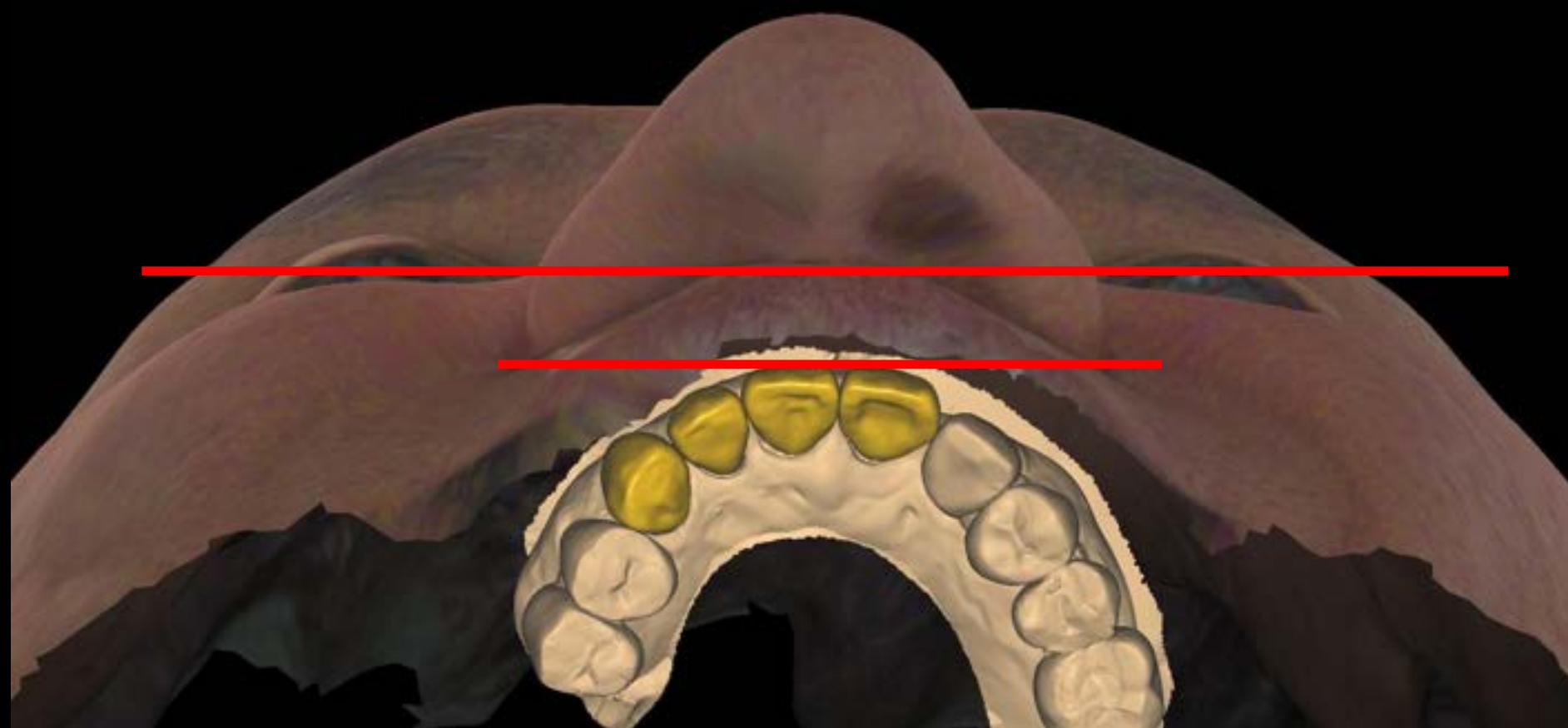
**Facial scanner**

Good for pts consulting



**CT STL**

more precise for lab



# bright CT

The **NEXT** in CBCT for Digital Tx

CT

From diagnosis to treatment

Sticking with facial scanning and IOS

CT check bite

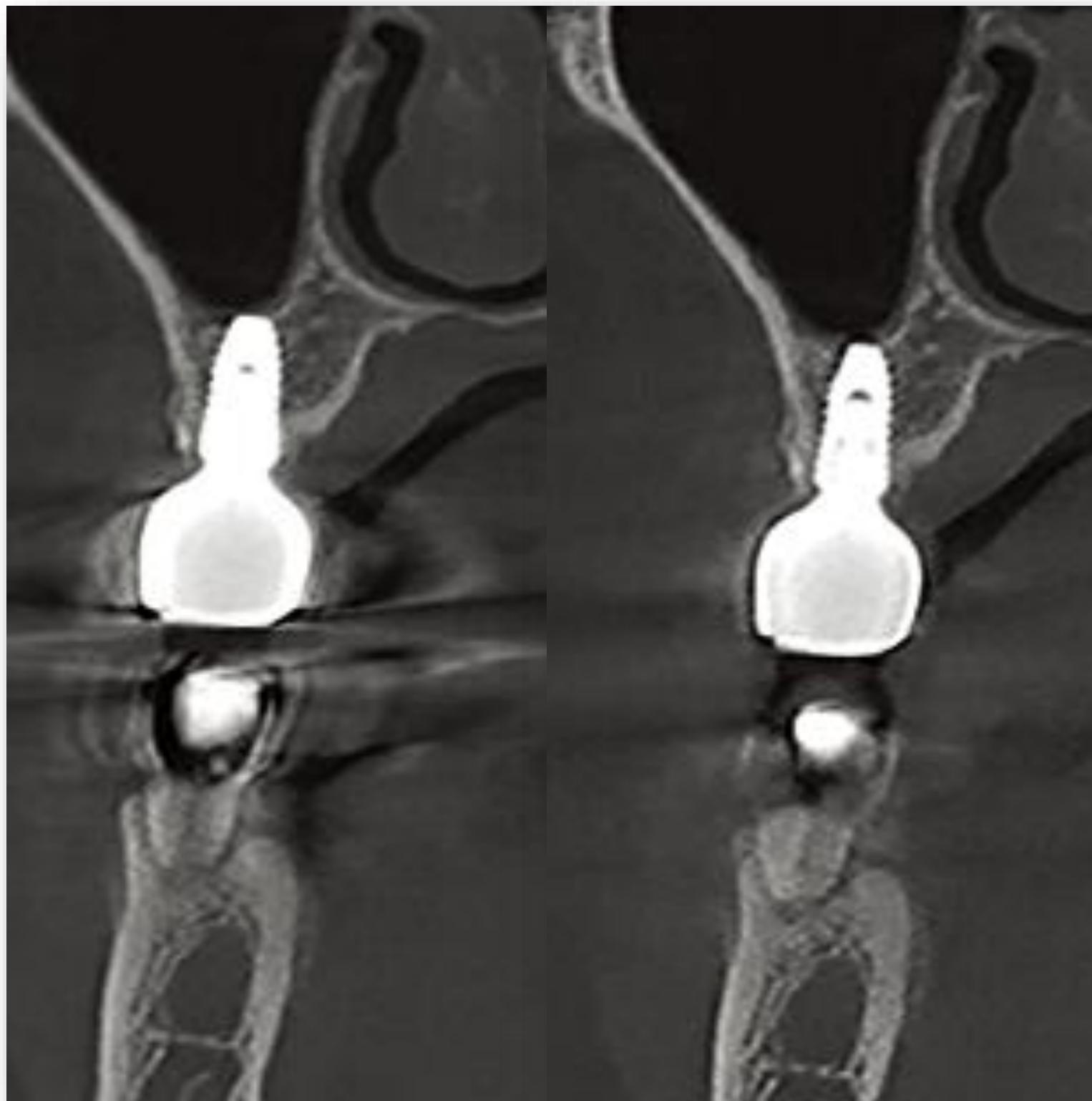
CT - AI occlusal plane and midline



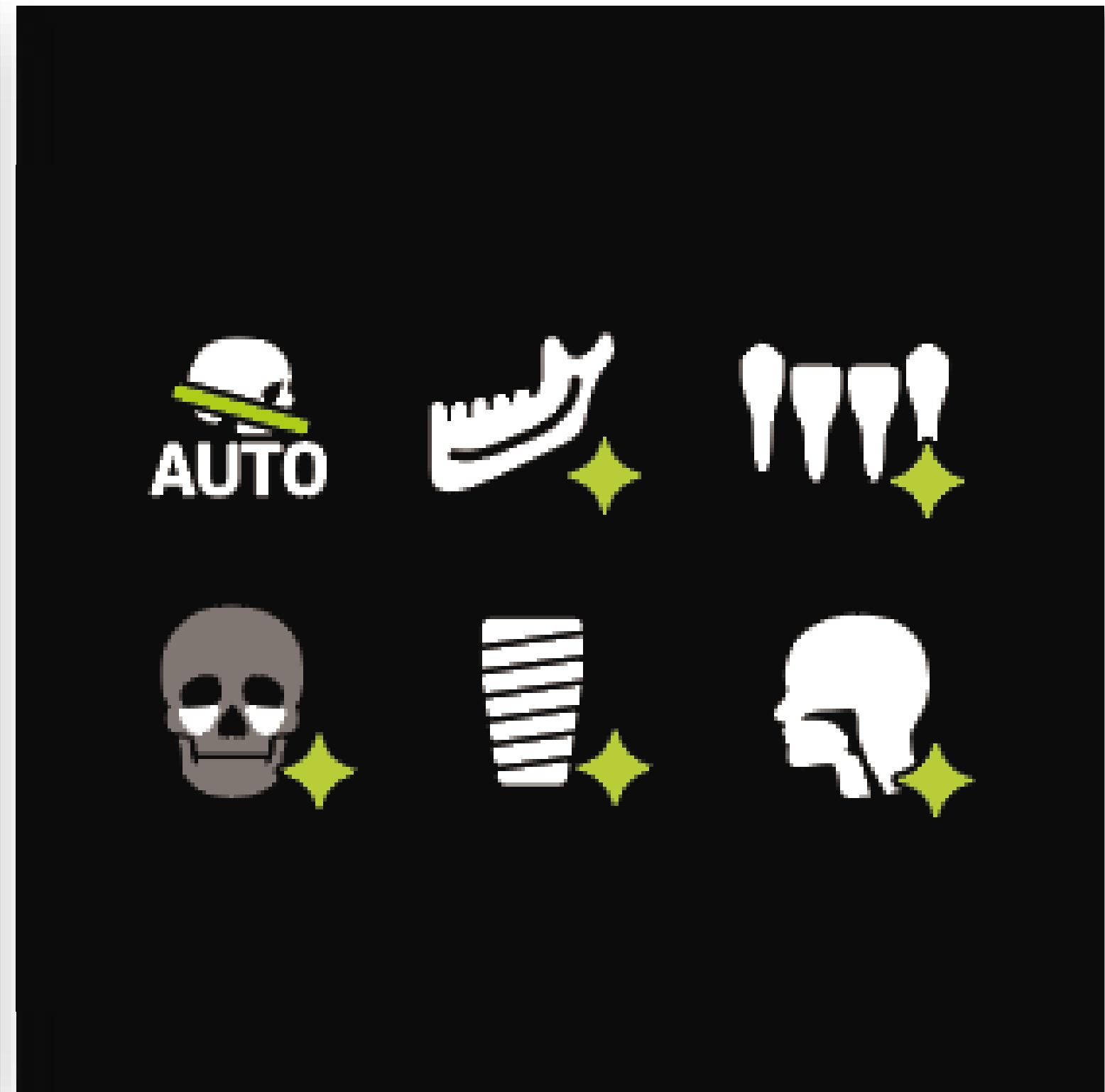
# What Makes bright CT Different?

**-79%**  
**LOWER  
RADIATION  
EXPOSURE**

Less Dose



More Clarity

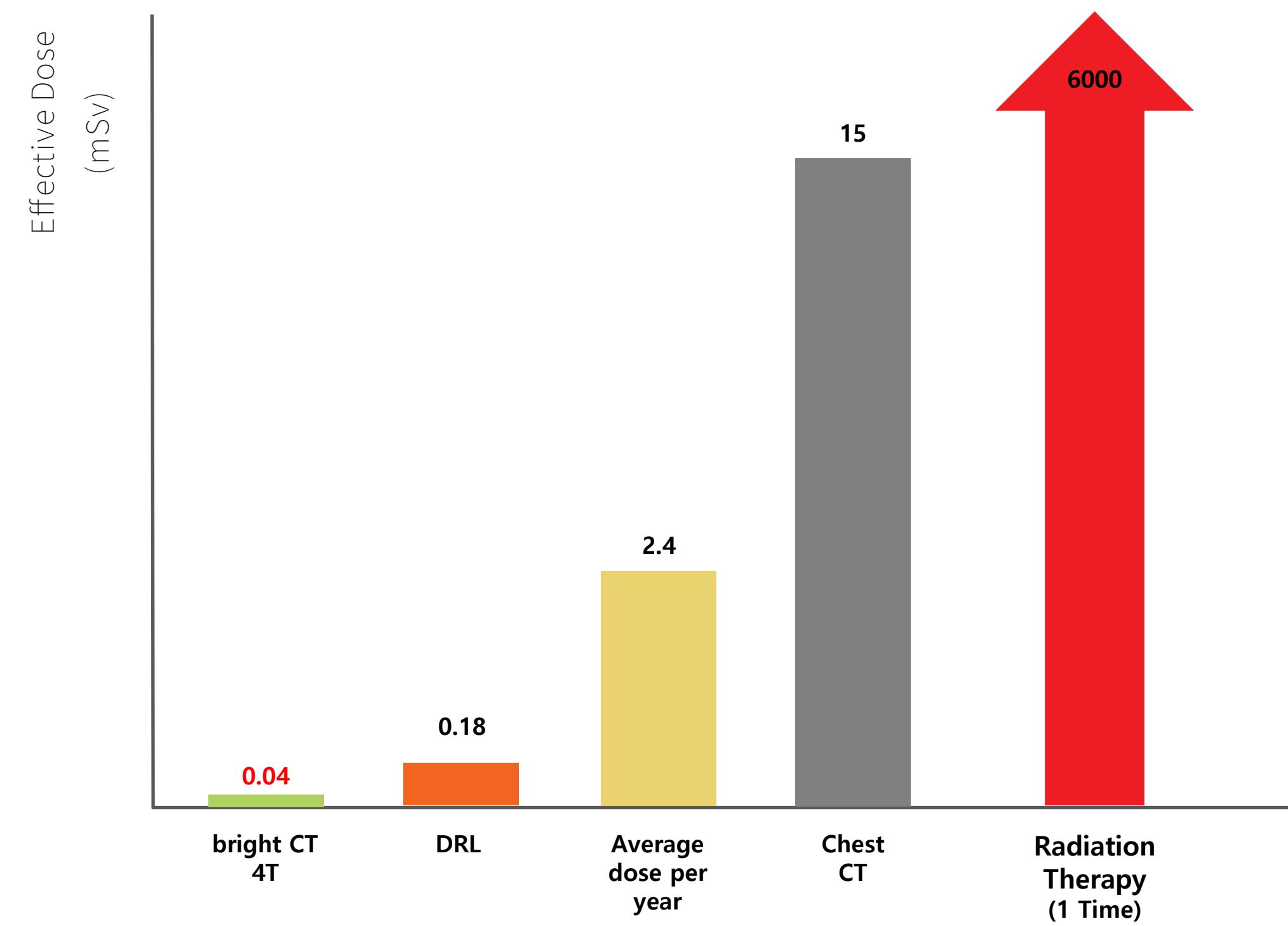
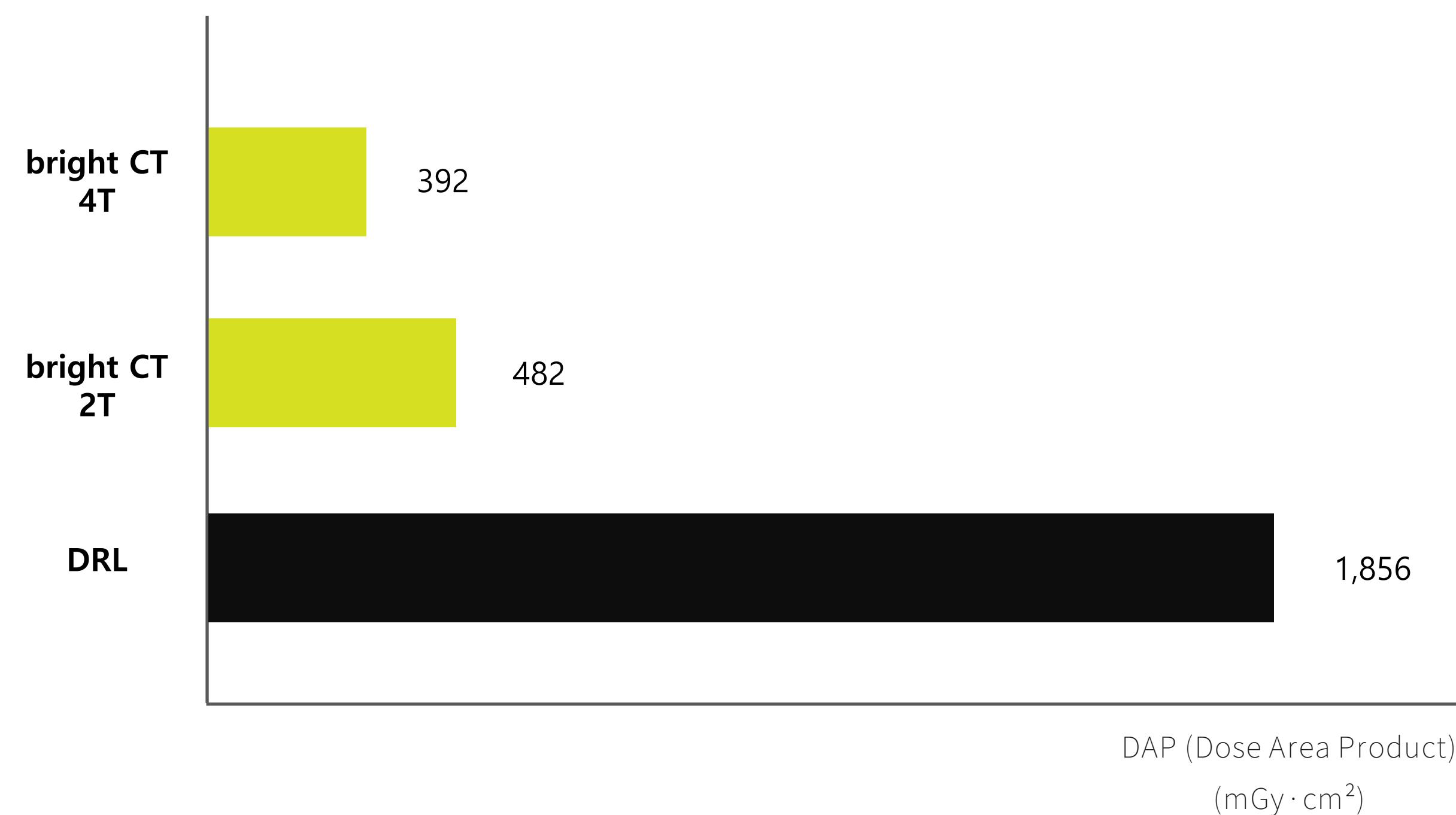


AI Simplicity

# Clinical Value

## Low Dose & Fast Scan

bright CT reduces radiation exposure by approximately 79% compared to Korea's Diagnostic Reference Level (DRL, 2024). Designed with patient safety as the top priority, this mode enables confident imaging even for children, elderly patients, and other sensitive groups.



# Clinical Value

## Low Dose & Fast Scan

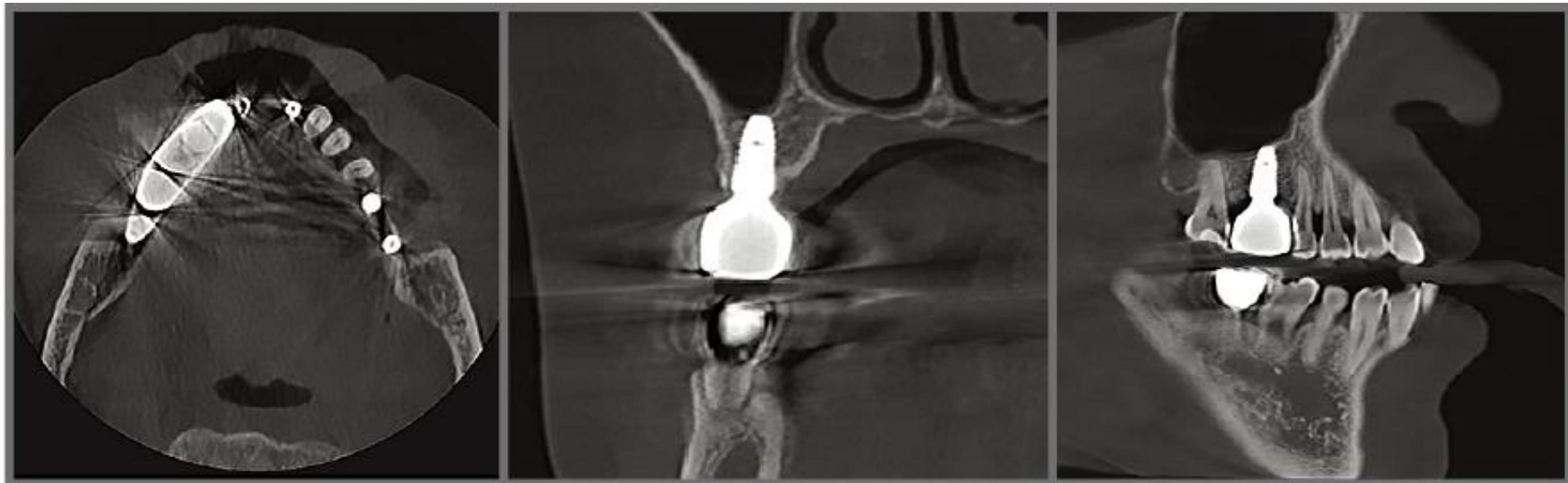
bright CT completes cephalometric scans in just 3.5 seconds and CT scans in about 15 seconds, reducing patient discomfort and minimizing motion artifacts. The shorter scan time ensures clearer images, increases patient satisfaction, and provides clinicians with greater diagnostic confidence.

	4T	4TC
Pano		11.8
CT	Low Dose / Normal / High Resolution 10 / 15 / 25	
Scan Time (sec)		3.5
Ceph		
Impression		24.5

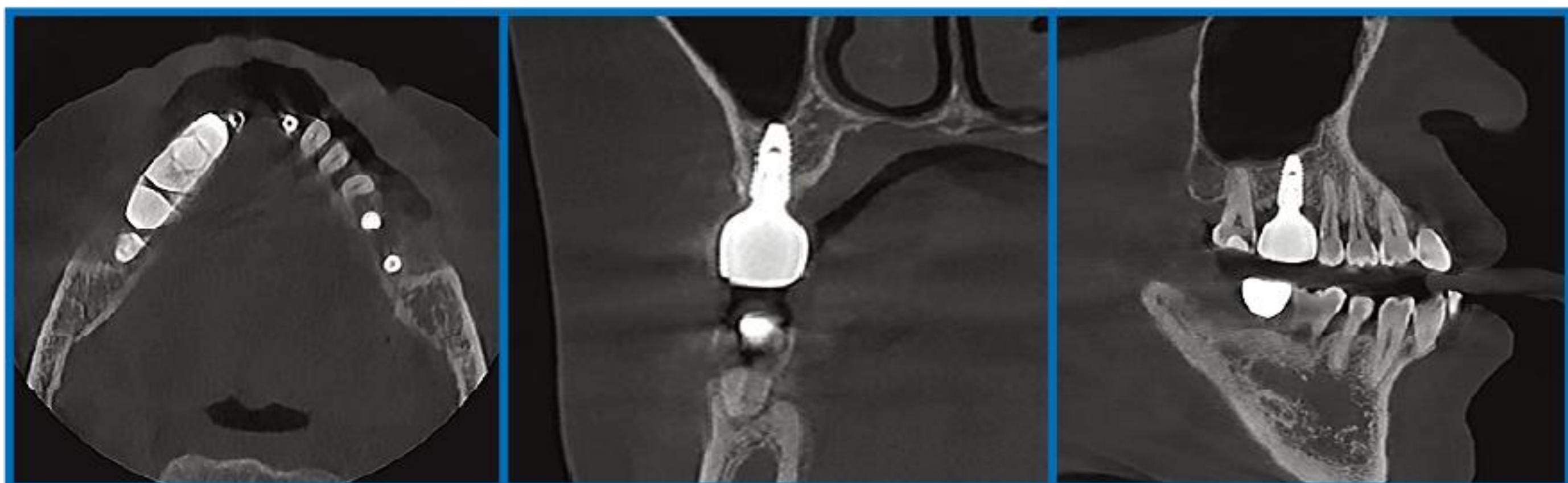
# Clinical Value

## NEXT Generation MAR(Metal Artifact Reduction)

The upgraded MAR technology automatically reduces the streak artifacts caused by metal objects and improves the quality of images for precise diagnosis.



MAR OFF



MAR ON

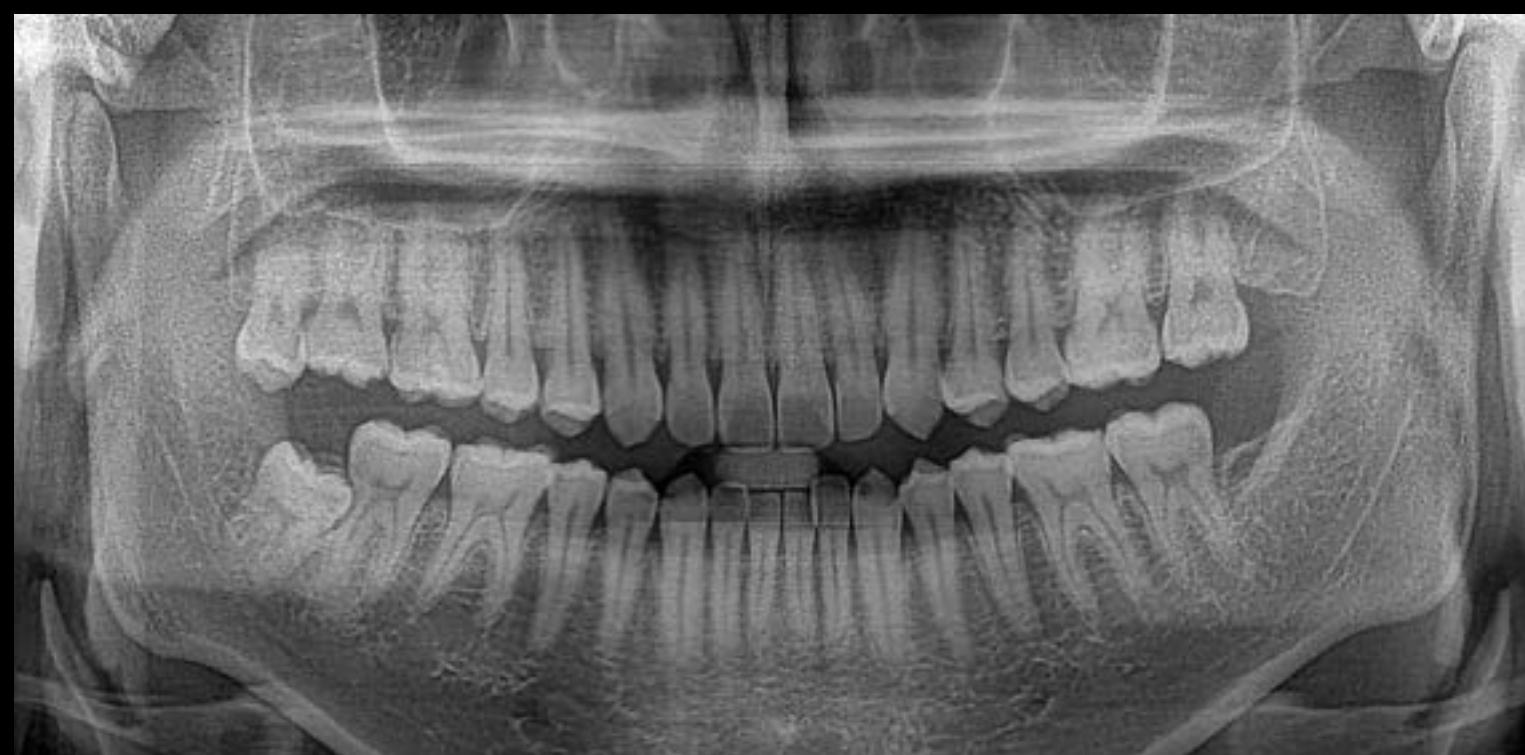
NEW

# Clinical Value

One Scan. All You Need

Capture high quality CBCT, panoramic, and cephalometric images in a single scan.

No retakes. No extra radiation. Improved patient experience without compromising quality.



Virtual Panoramic Image



Virtual Cephalogram

NEW

# Clinical Value

## Orthodontic AI Tracing

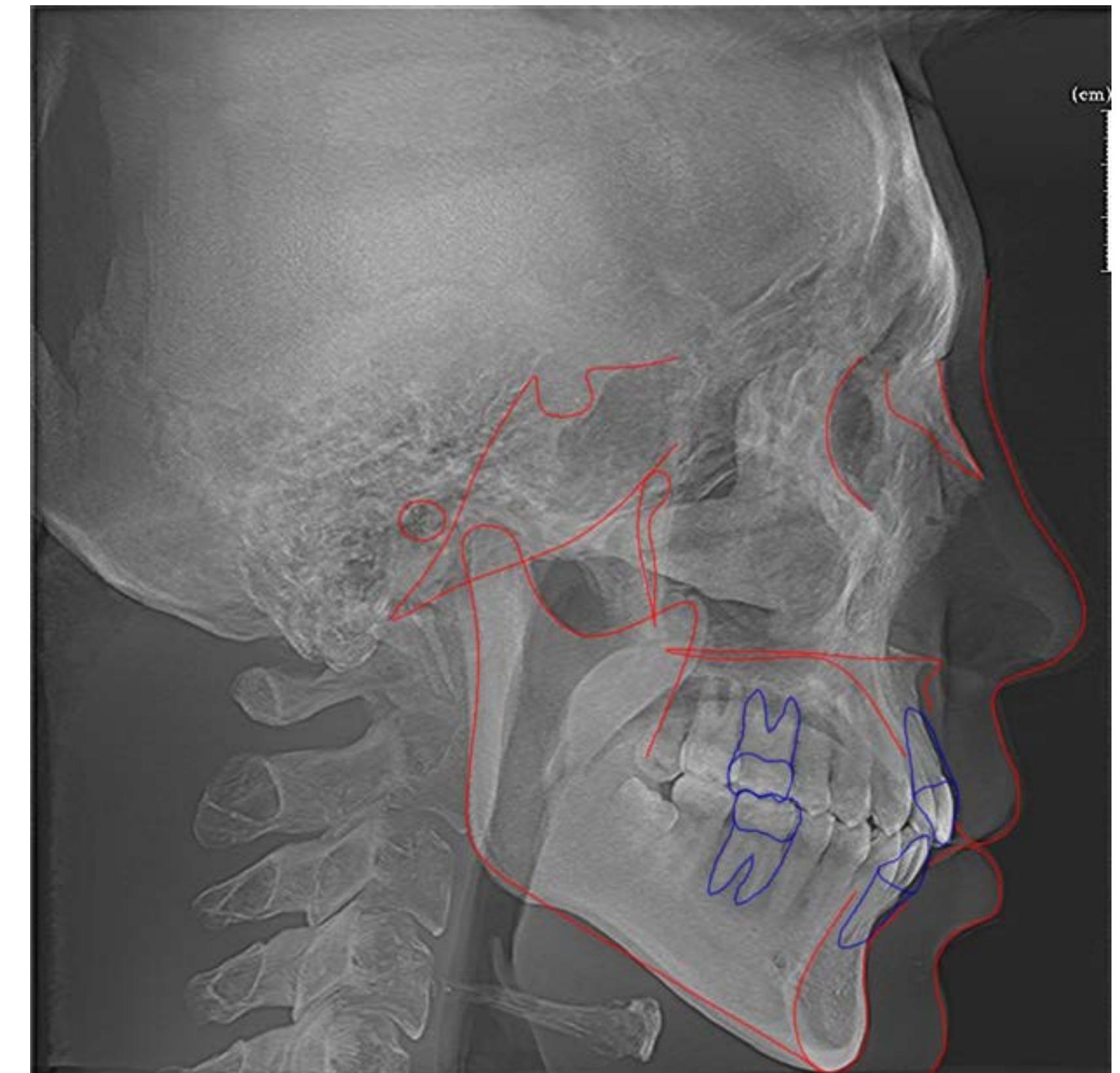
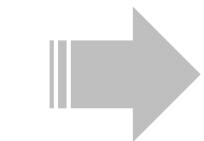
Automatic orthodontic landmark recognition. Save time and boost accuracy with your orthodontic treatments.



Lateral

PA

SMV

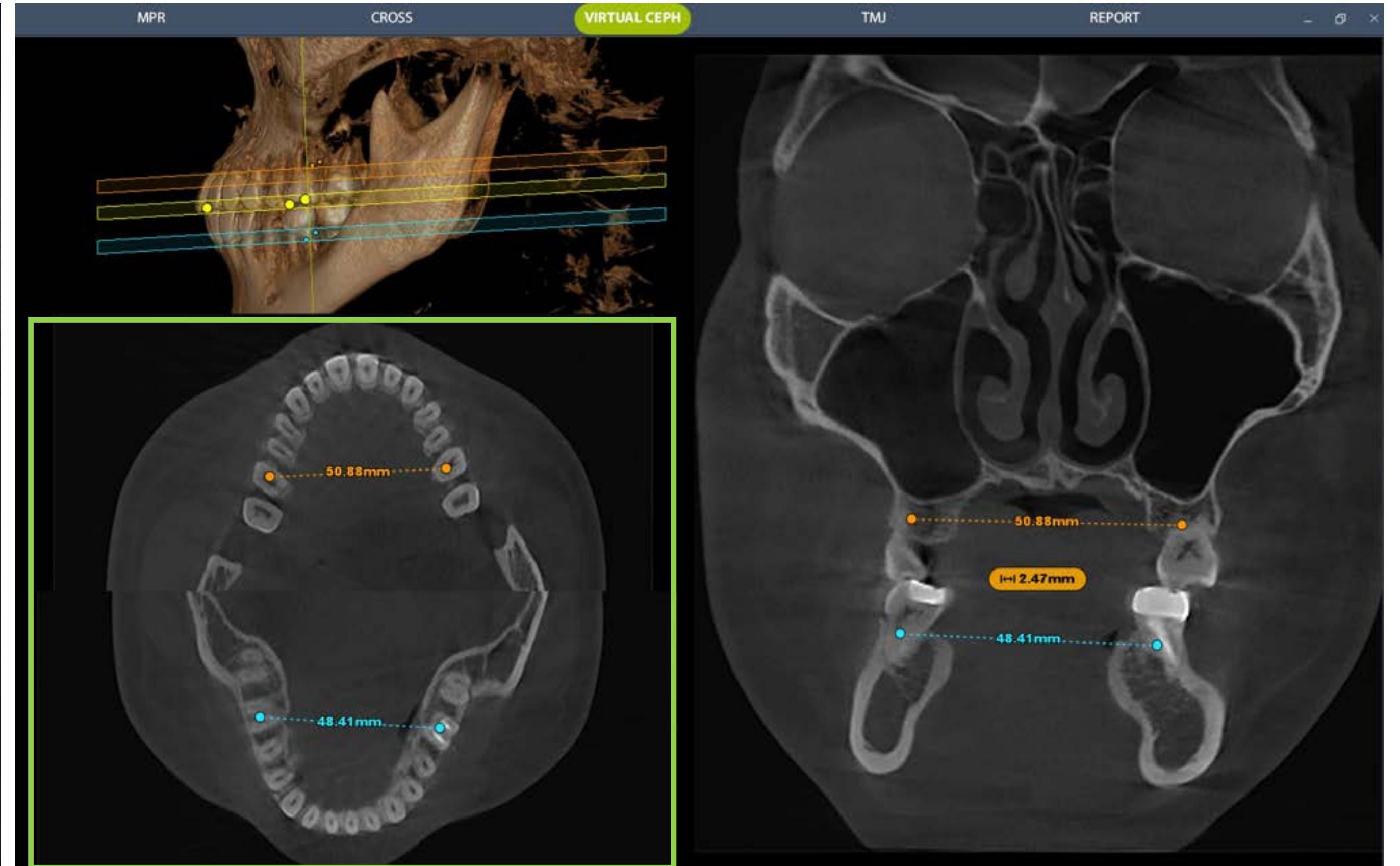
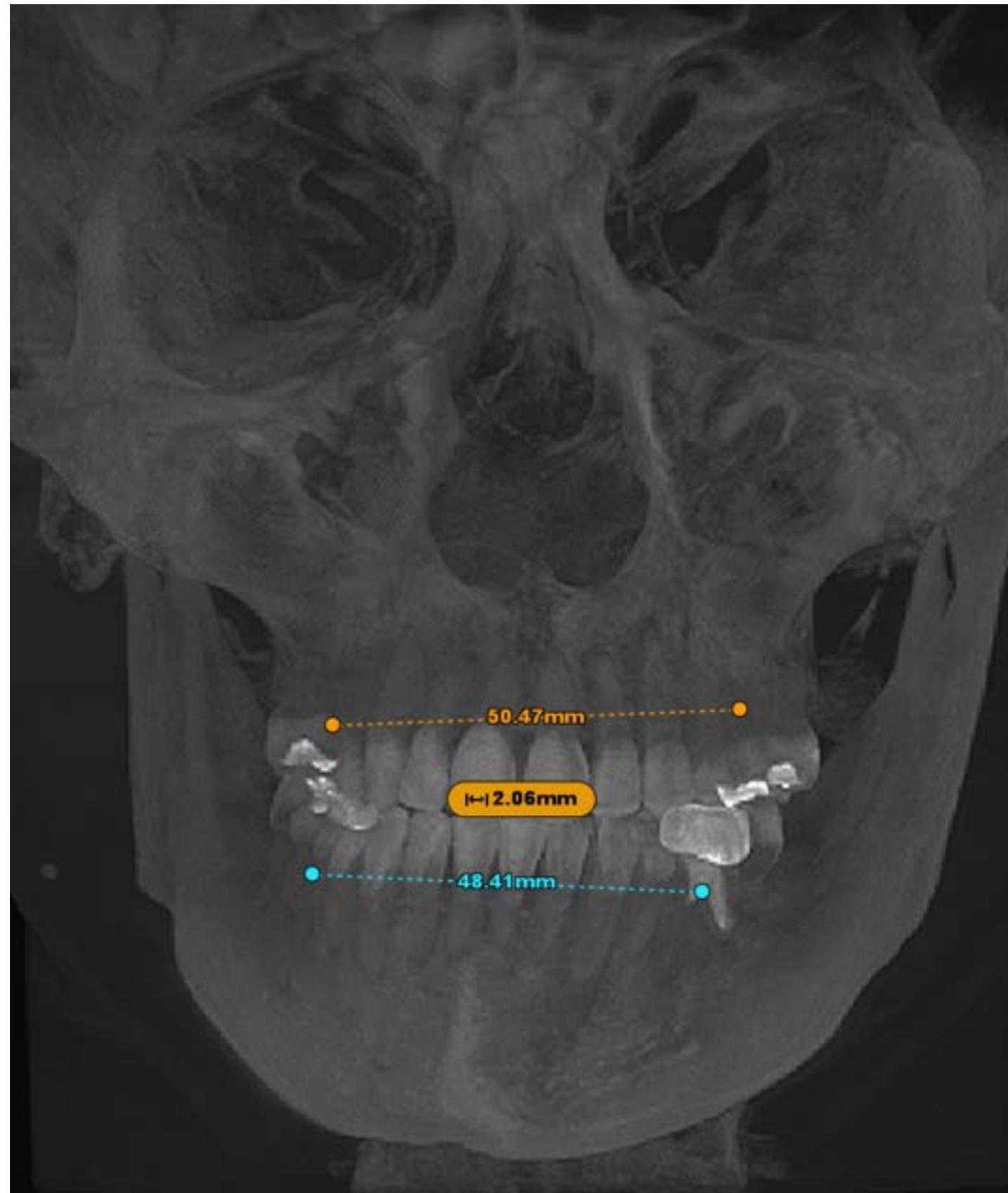


# Clinical Value

## Create IMW(Inter Molar Width)

Real time data in a single click.

Check the maxillary and mandibular basal widths and their differences based from the first molar's center of resistance (Cres)

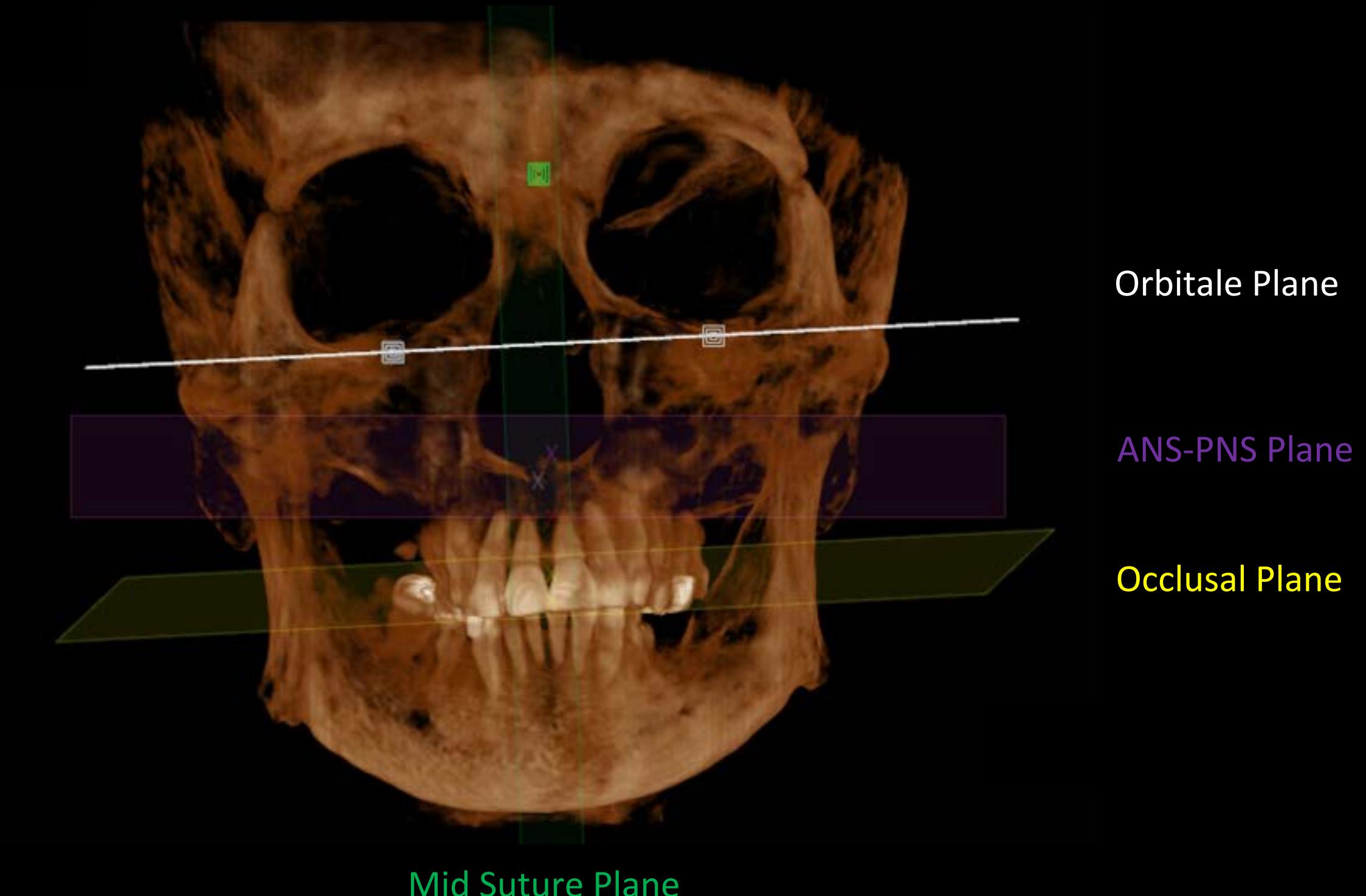


# Clinical Case Applications

## Implant Cases

### 2. Advanced Case : AI Occlusal Plane

Defines ideal occlusal and midline planes using ANS-PNS, Orbitale, and Mid-suture line, helping clinicians establish precise prosthetic and orthodontic references.



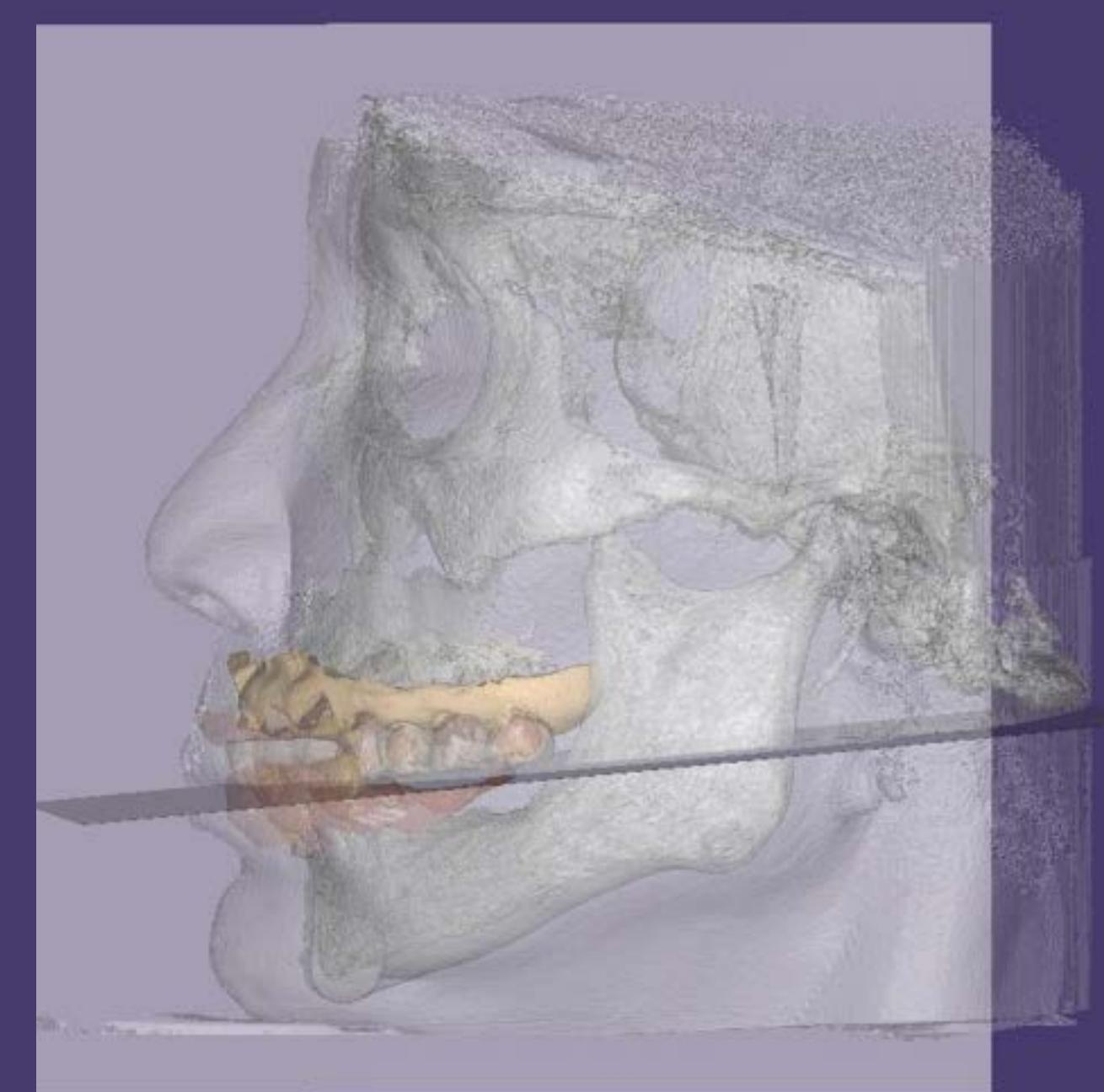
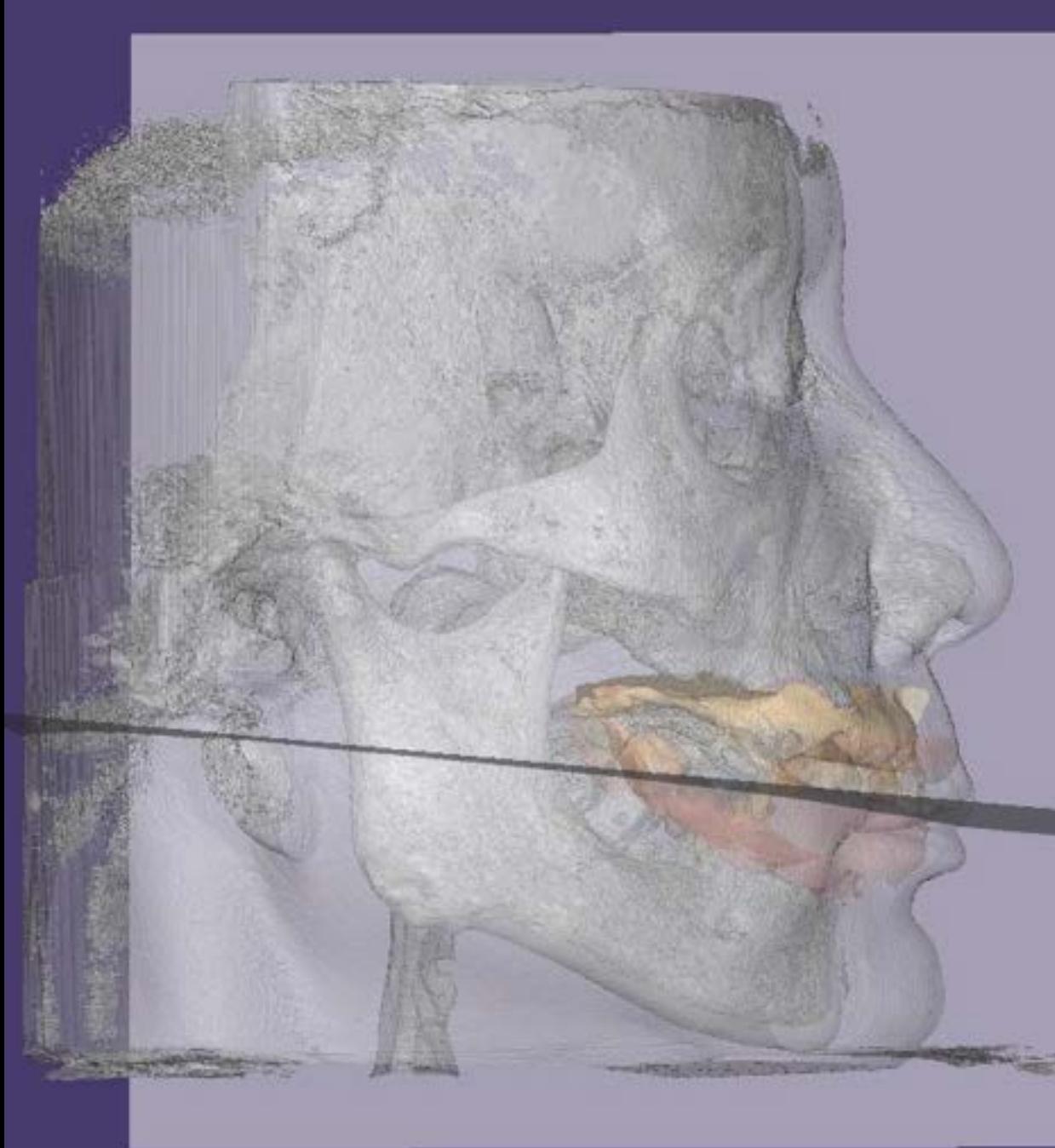
# Clinical Case Applications

## Implant Cases

### 2. Advanced Case : AI Occlusal Plane

2

Export occlusal plane, midline, and tissue data from the viewer as STL files to CAD for alignment with working models.



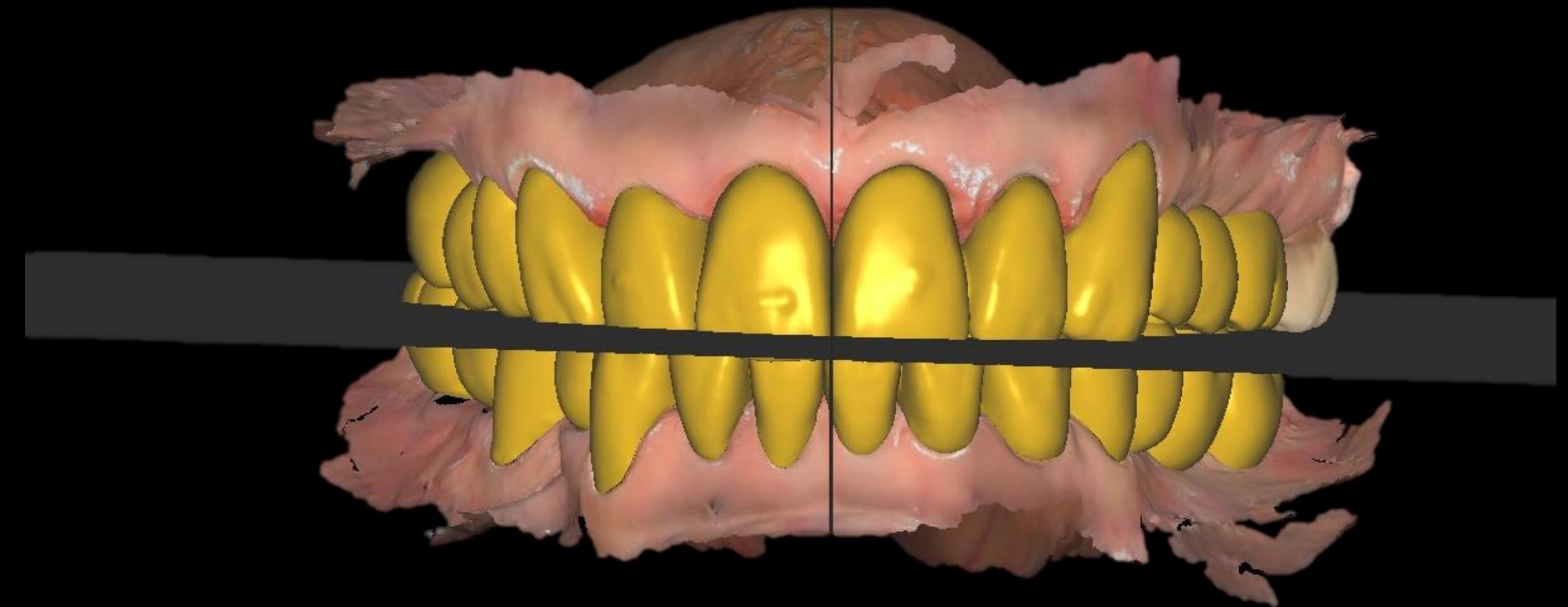
# Clinical Case Applications

## Implant Cases

### 2. Advanced Case : AI Occlusal Plane

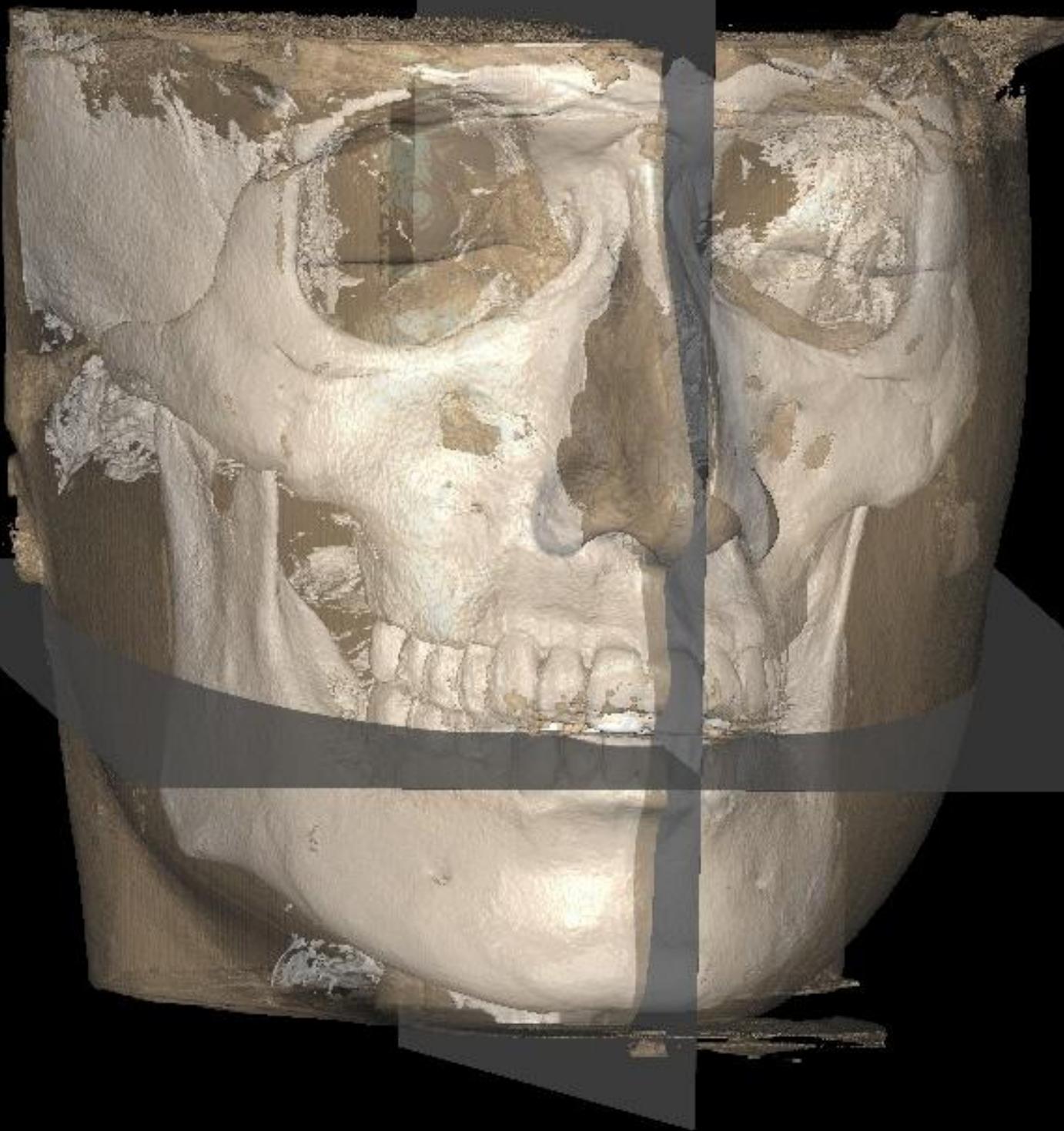
4

AI-generated midline and occlusal plane provide exact guidelines for tooth alignment in edentulous cases, especially in upper anterior esthetics.



CAD

# CT data with Orthodontics diagnose



CT data

(AI occlusal plane, Hard & Soft Tissue data)

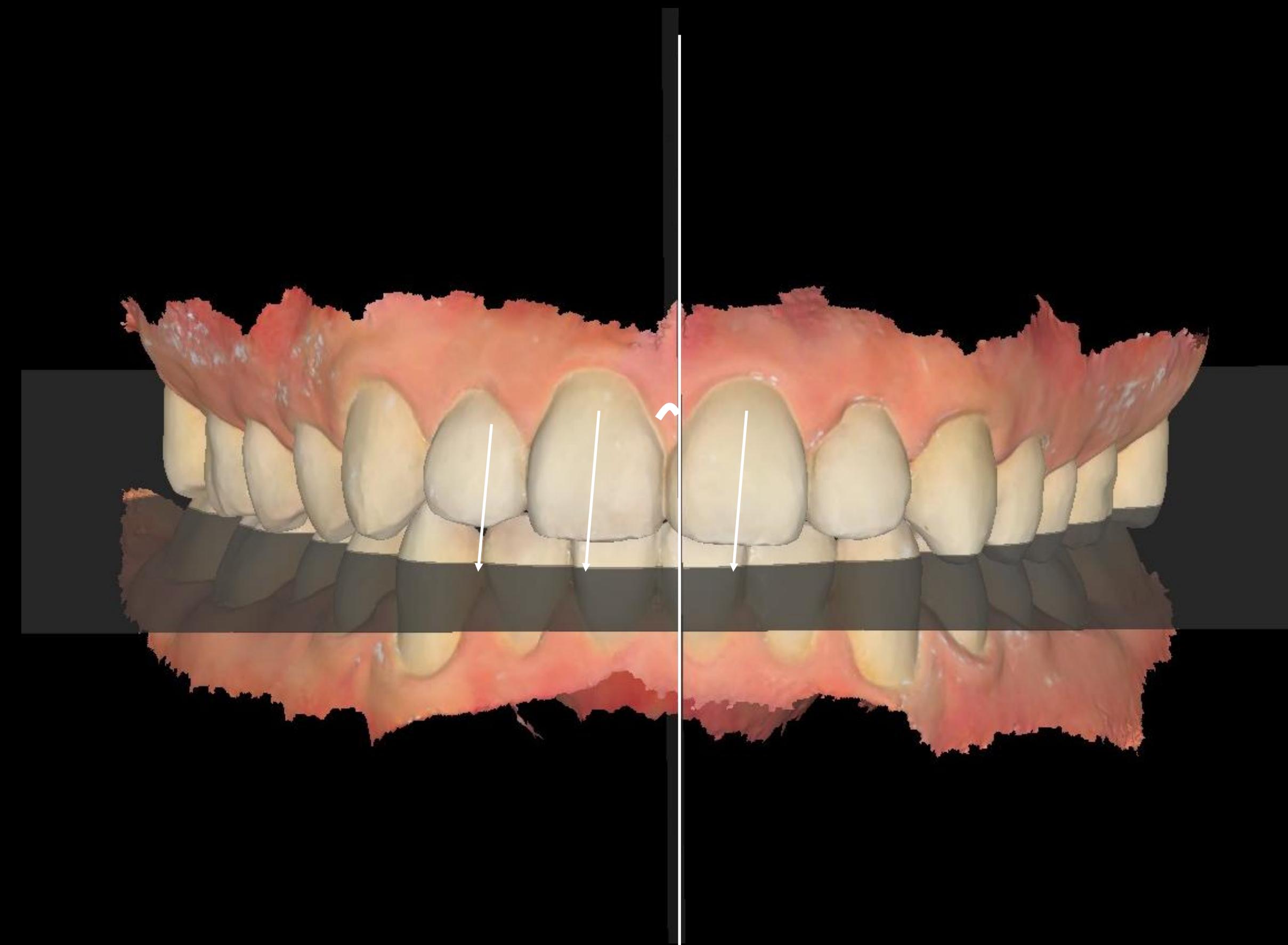


Shining 3d Elite los scan data



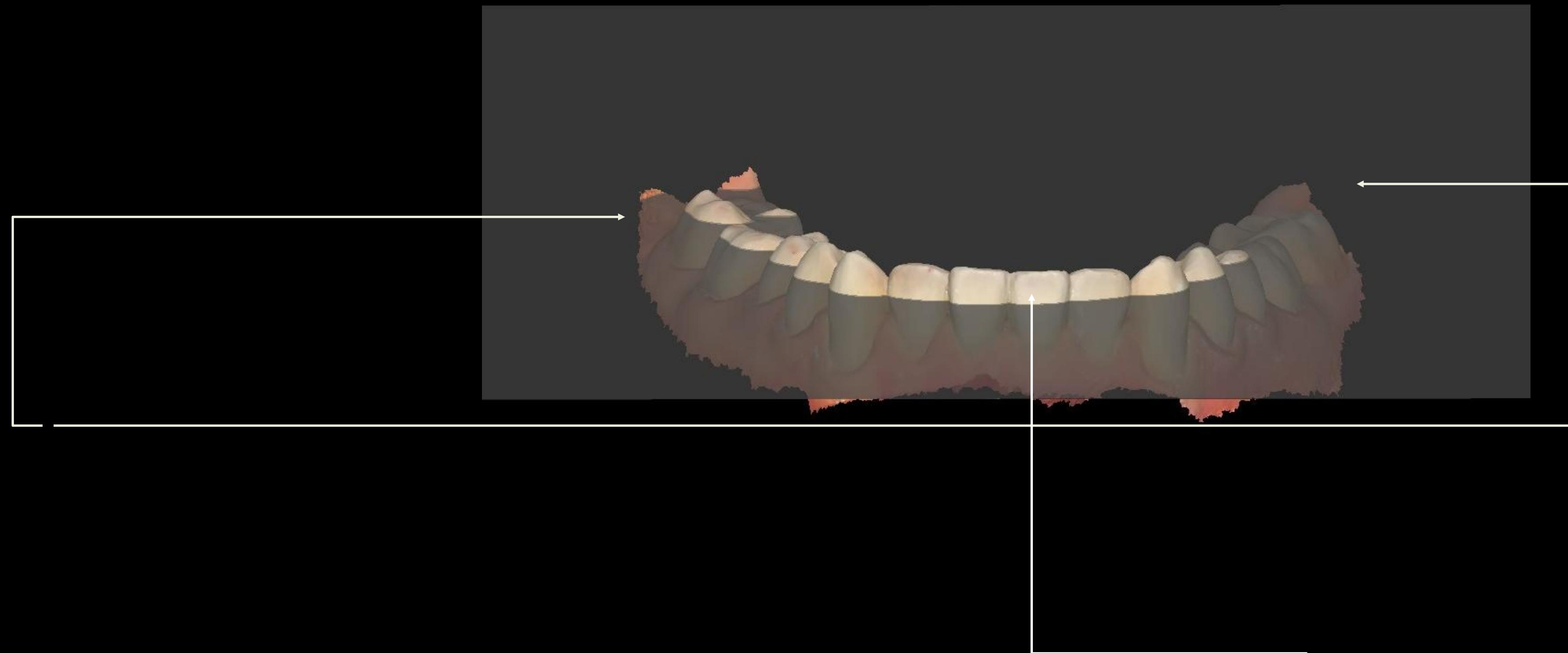
Shining 3d MetiSmile

# CT data with Orthodontics diagnose



**\*\*Assessment of Deviated Anterior Maxillary Tooth Axis & Midline\*\***

# CT data with Orthodontics diagnose

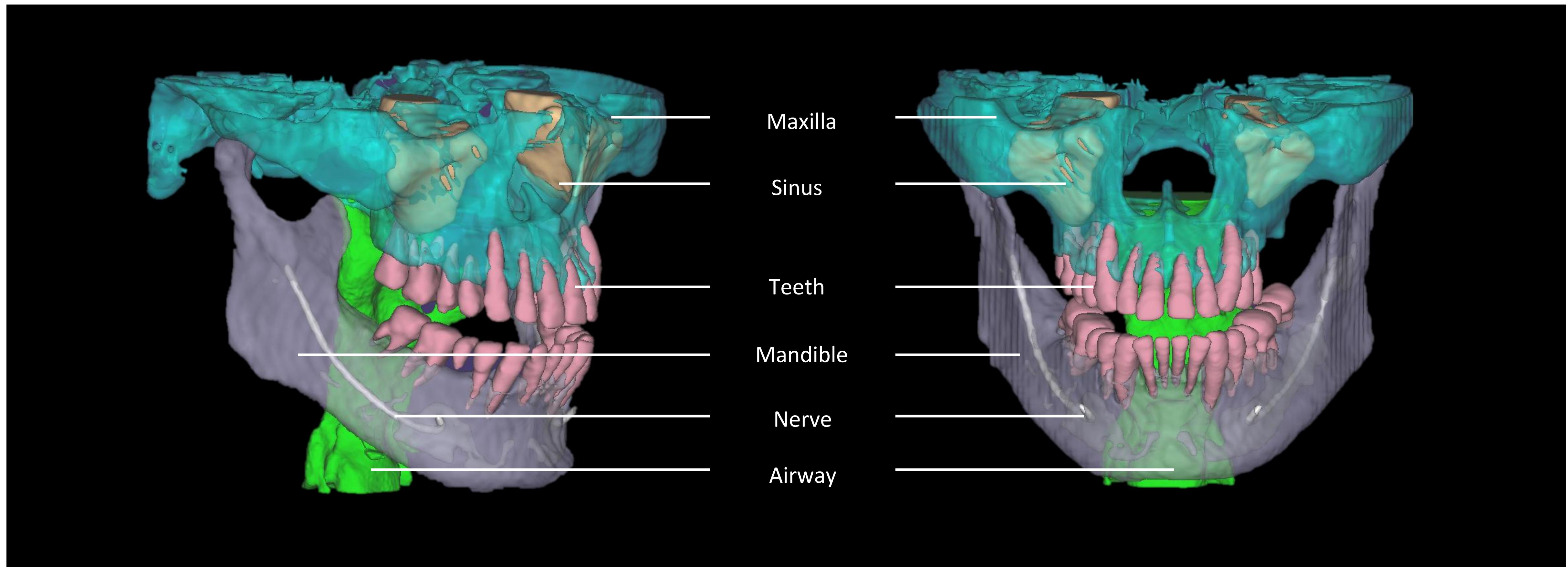


**\*\* Diagnosis of Occlusal Plane in Left and Right Posterior Teeth and Mandibular Anterior Teeth \*\***

# Clinical Value

## AI Segmentation

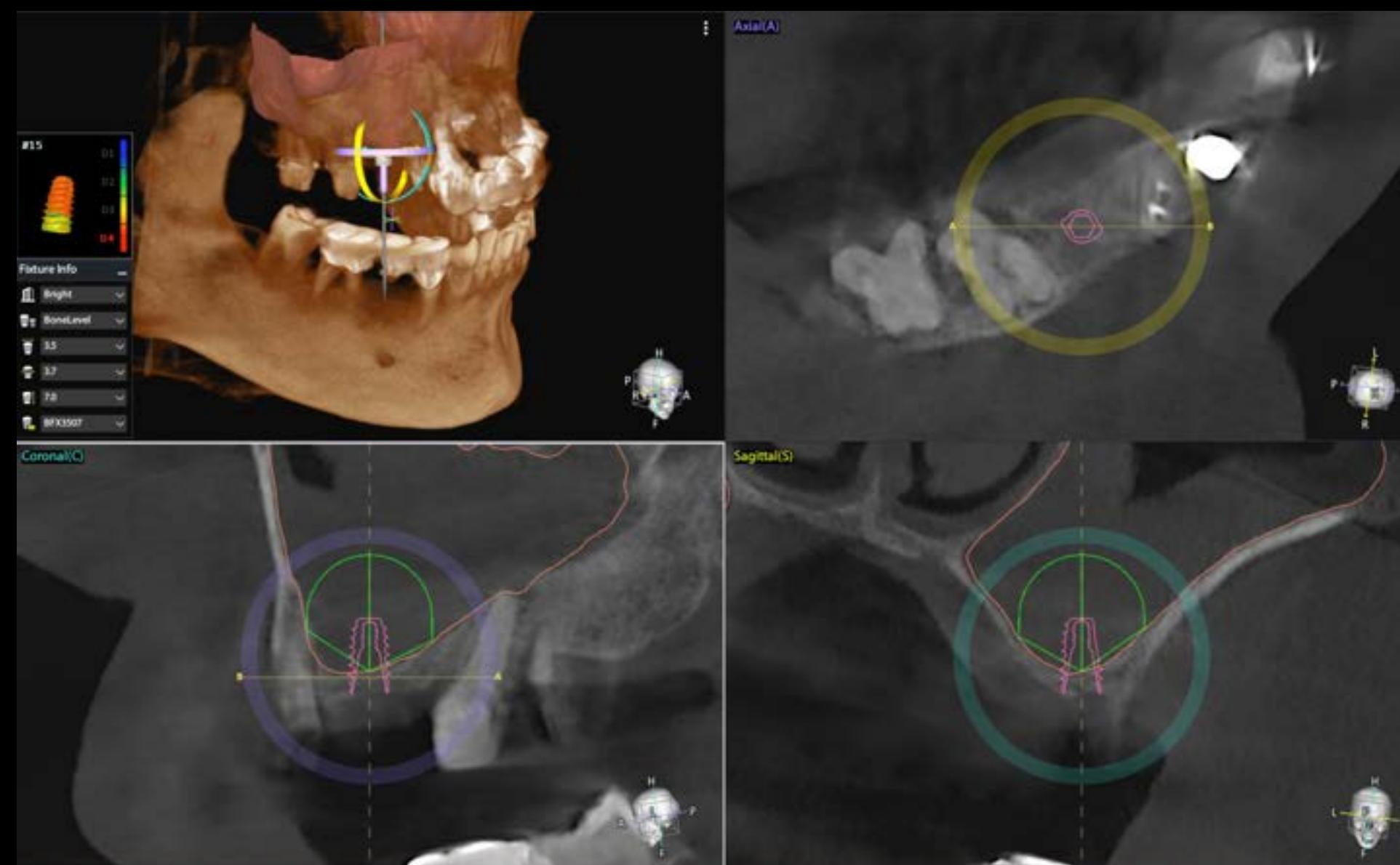
Automatically segments teeth, nerves, bones, sinus and airway clearly — very helpful for intuitive diagnosis and patient consultation.



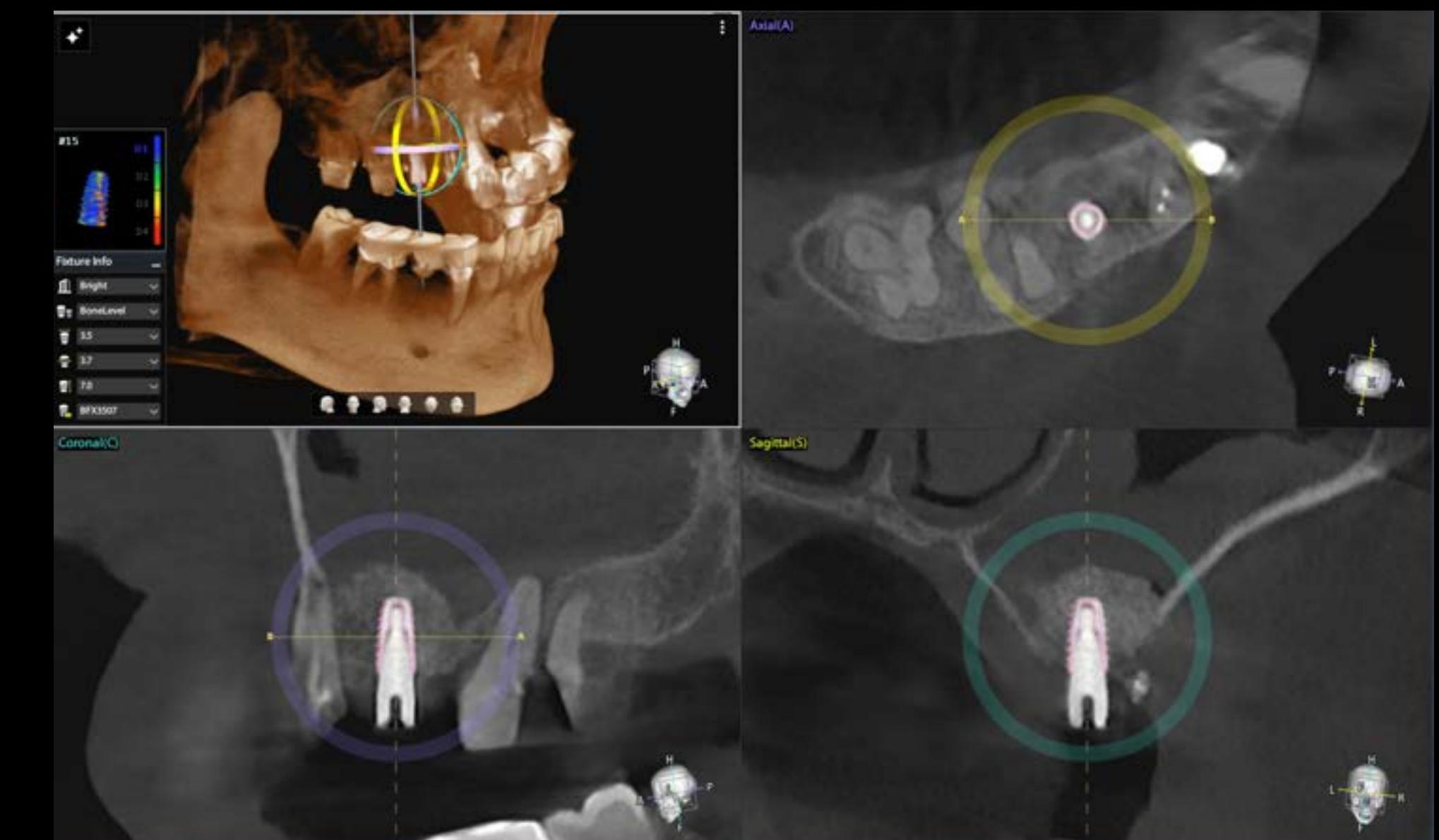
# Clinical Value

## AI Sinus Bone Graft

Based on segmented maxillary sinus data, the AI feature provides a visualization of the expected augmented volume in areas requiring sinus grafting.



Bone Graft Simulation

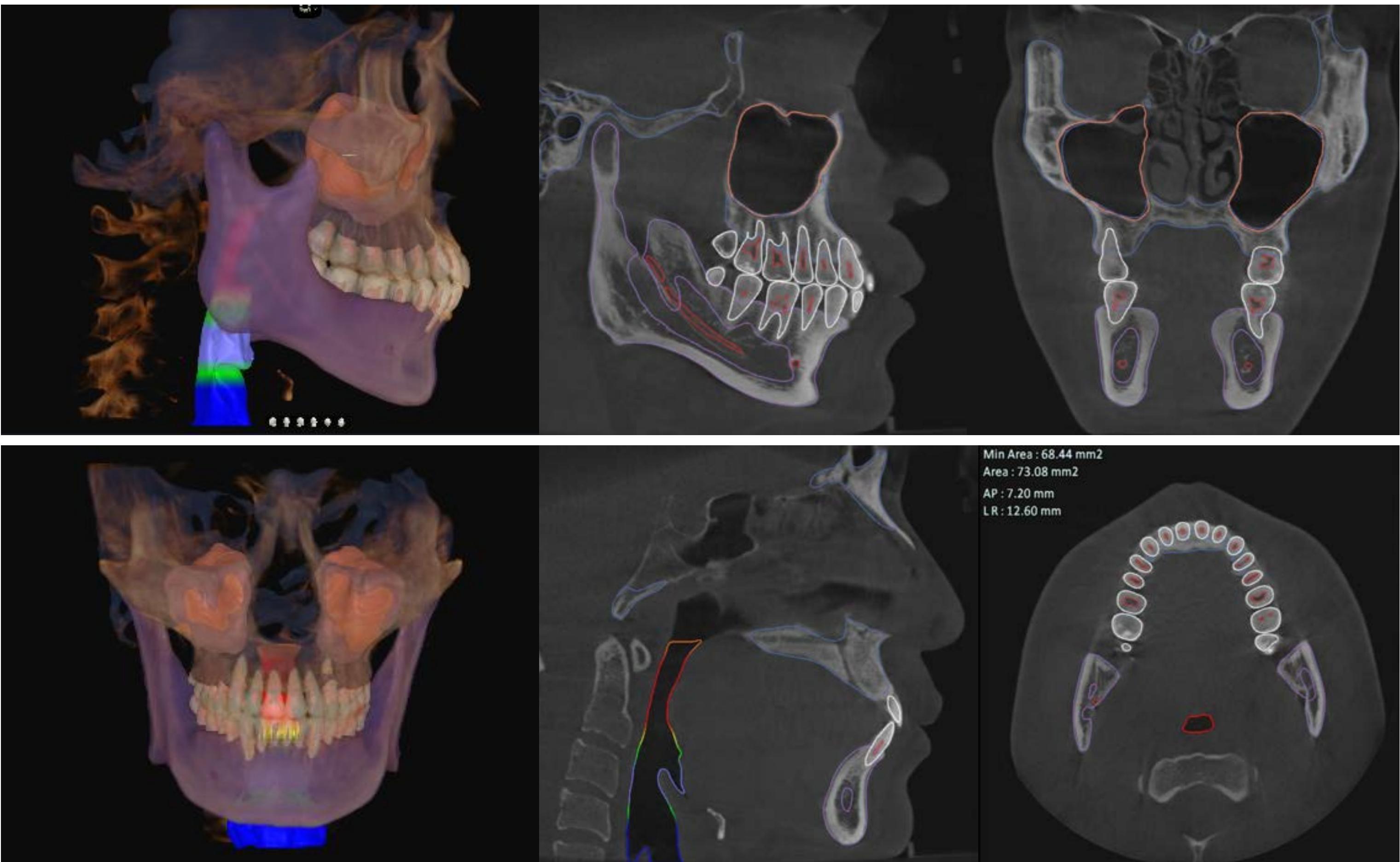


After Sinus Bone Graft

# Clinical Value

## AI Segmentation

Automatically segments teeth, nerves, bones, sinus and airway clearly — very helpful for intuitive diagnosis and patient consultation.



## CT viewer

Before for Diagnosis, but now for treatment

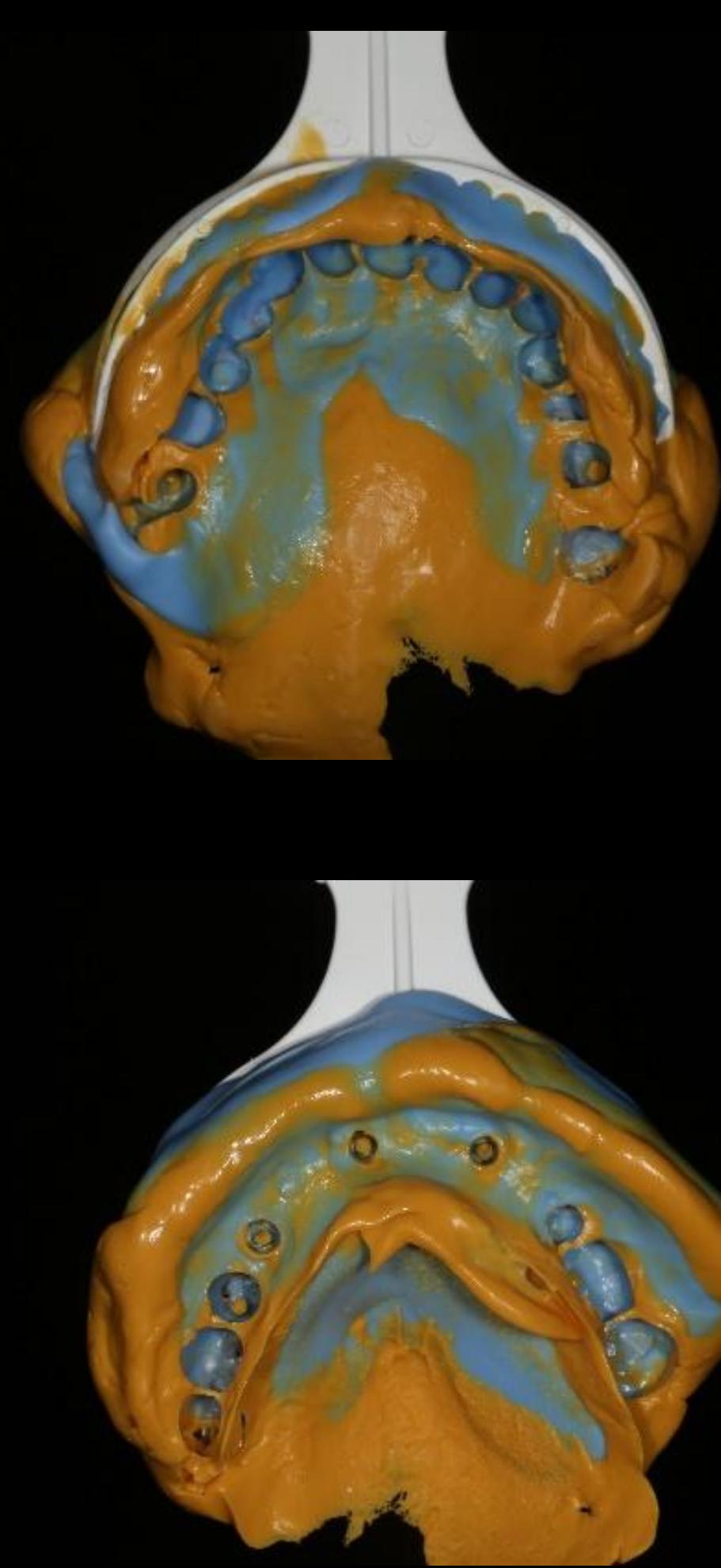
Check bite - metal artifacts reduction algorithms

AI occlusal plane - midline and occlusal plane

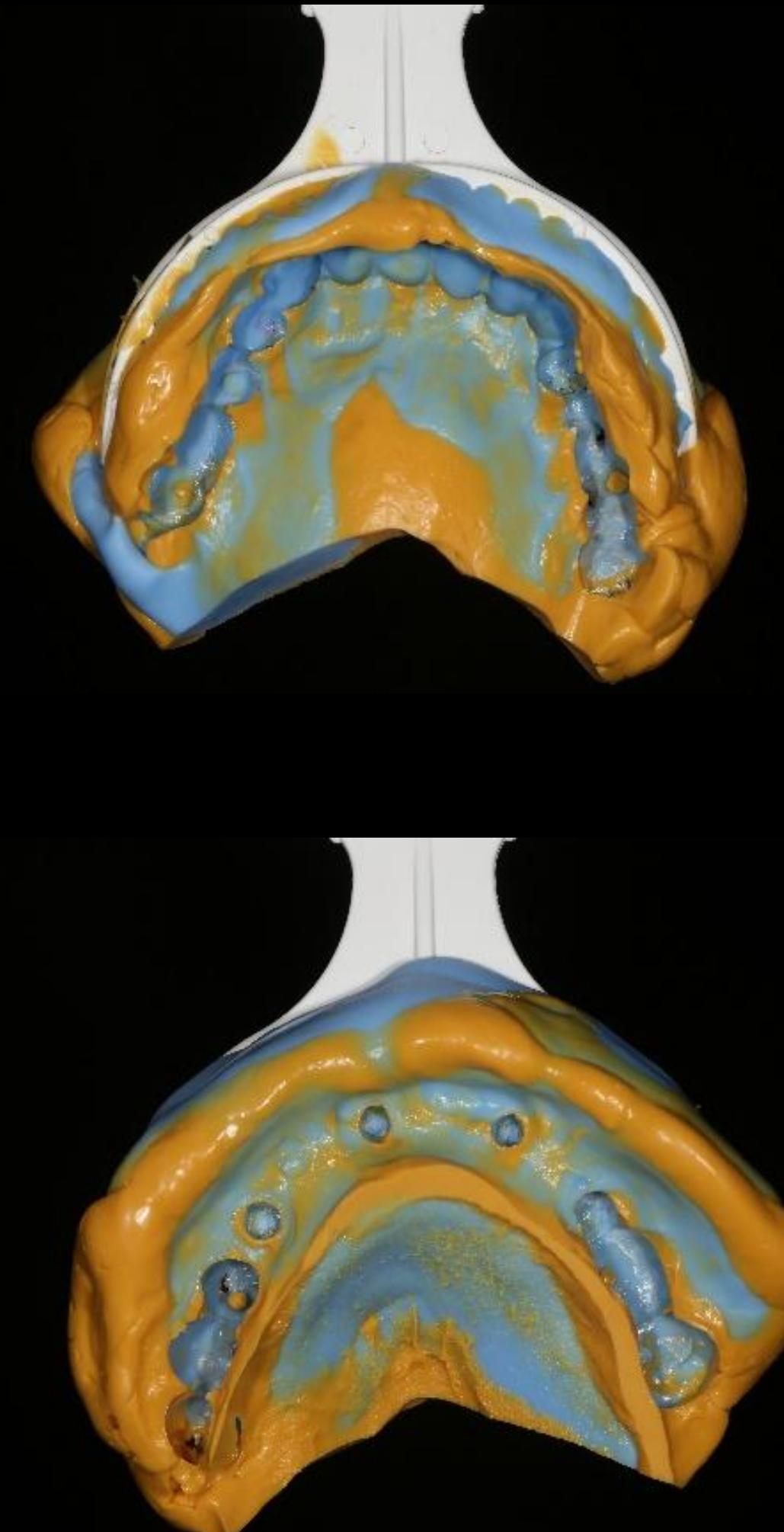
- # 44i, 41i, 33i
- bright Tissue Level
- Shade A3
- Shine T block



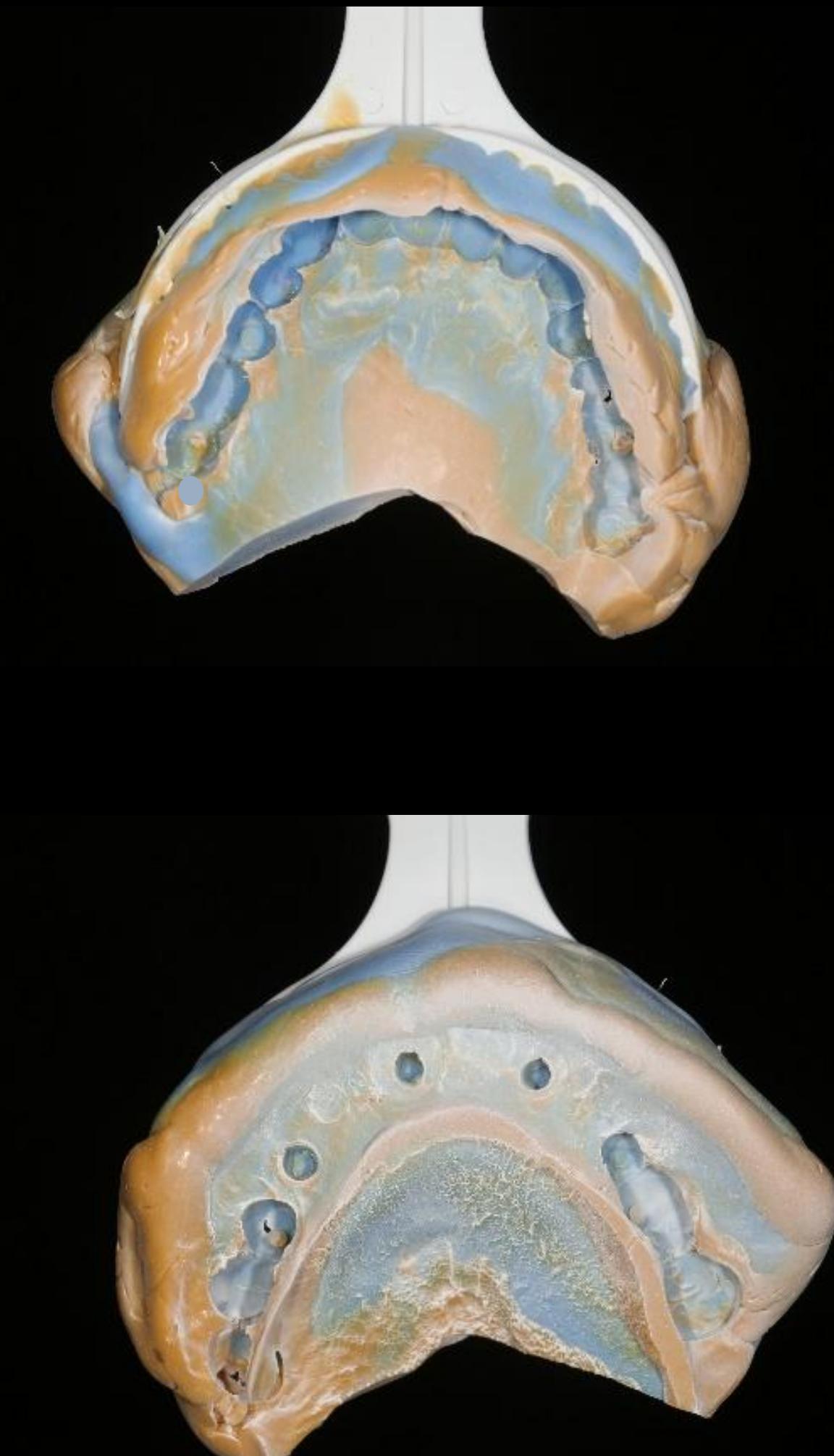
# Bite Tray Impression Scan



Border Trimming



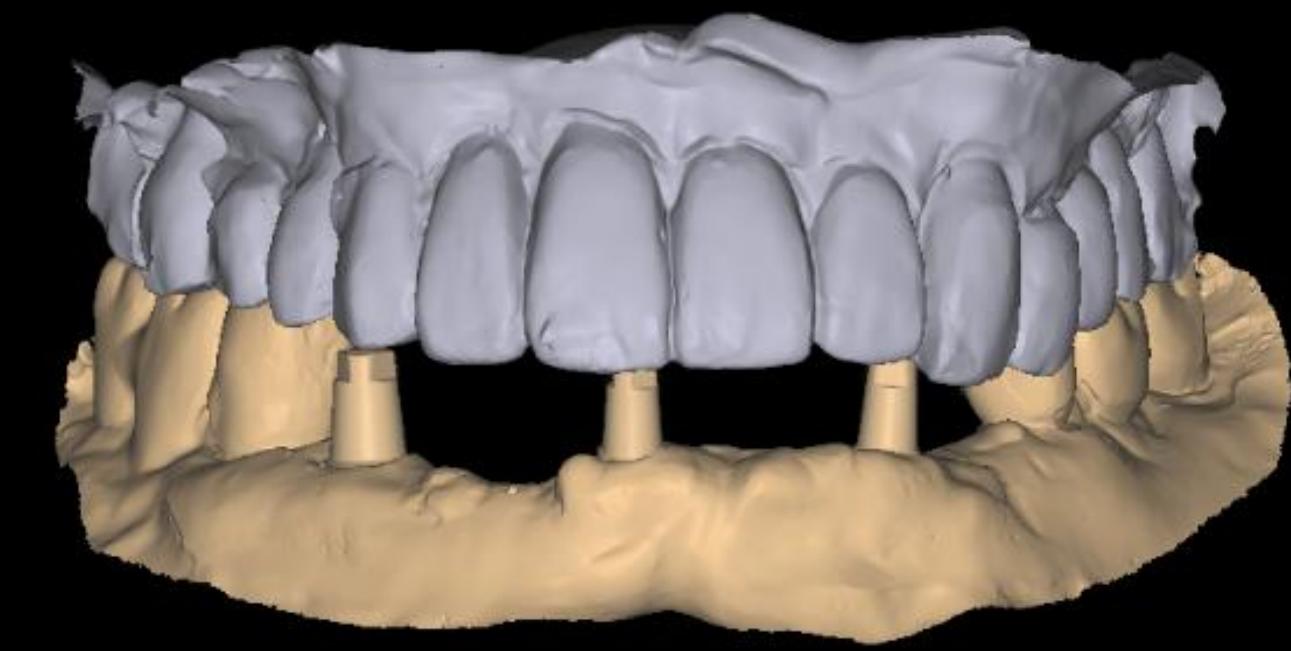
Scan spray



# Working model

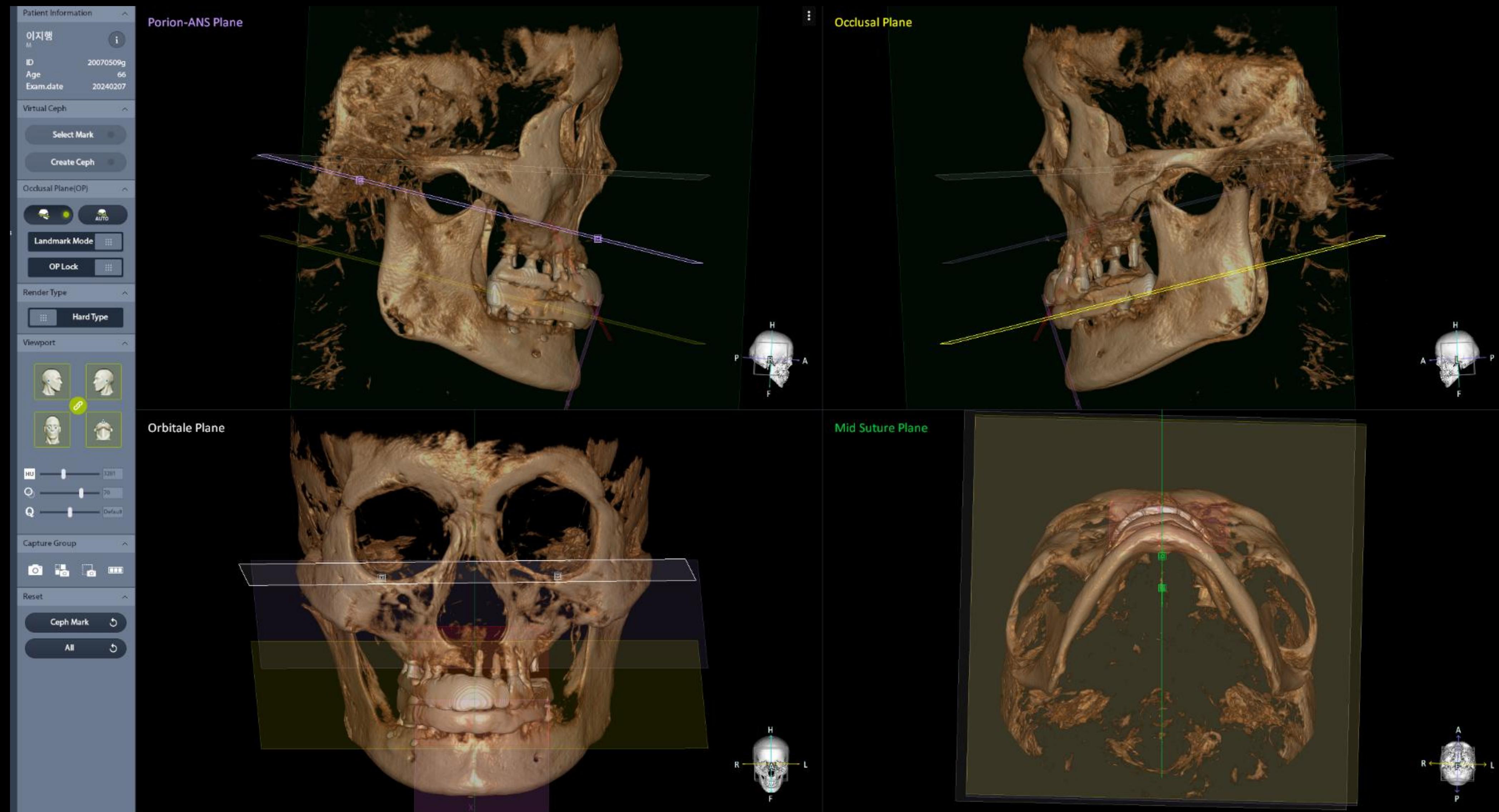


Shining 3D  
AutoScan-DS-EX Pro (H)



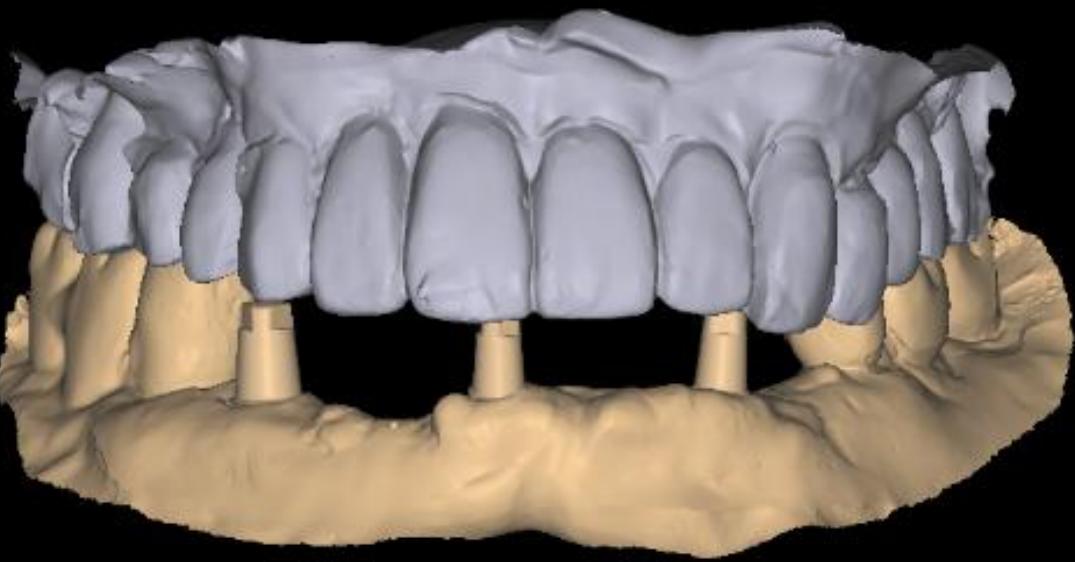
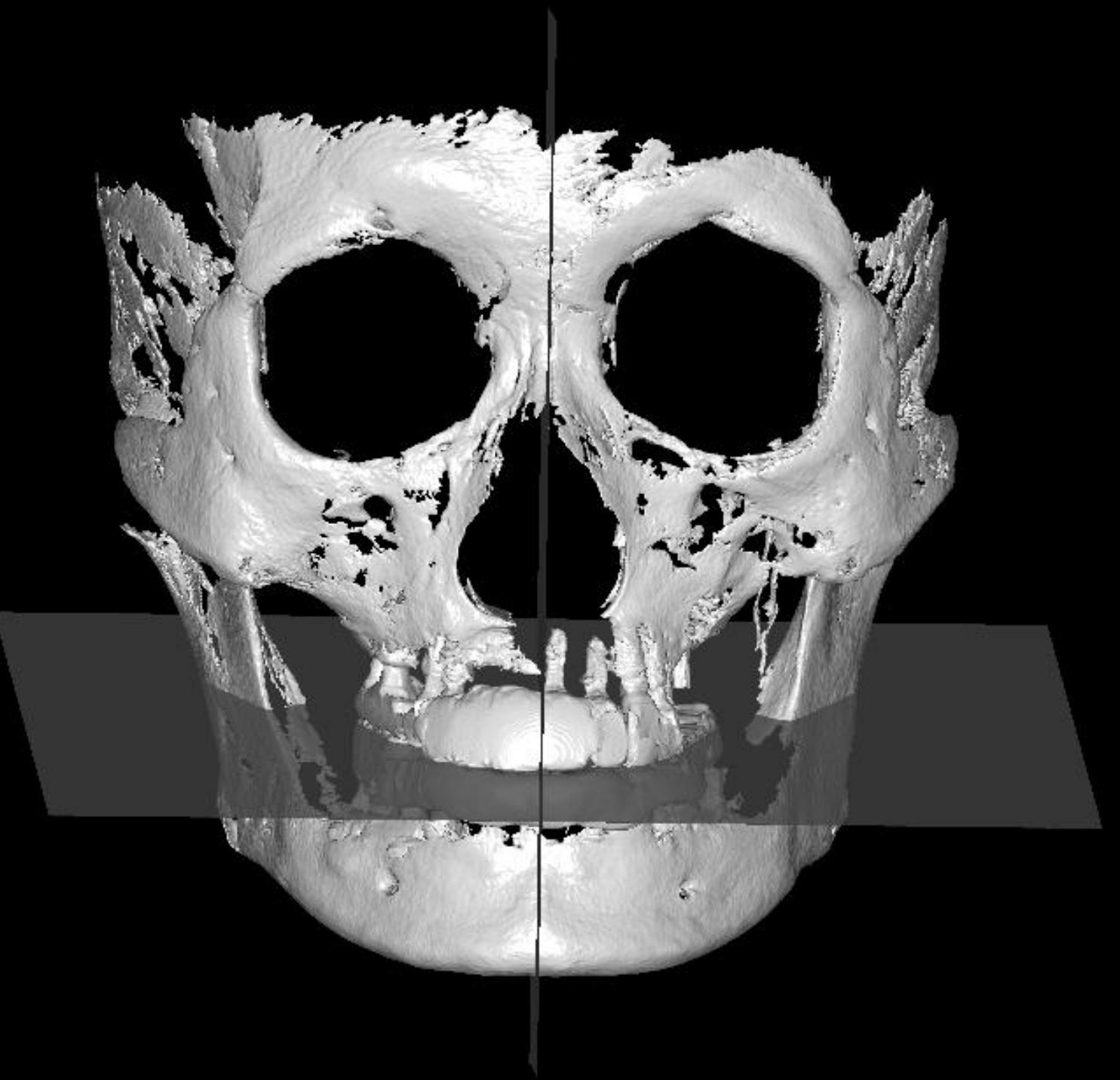
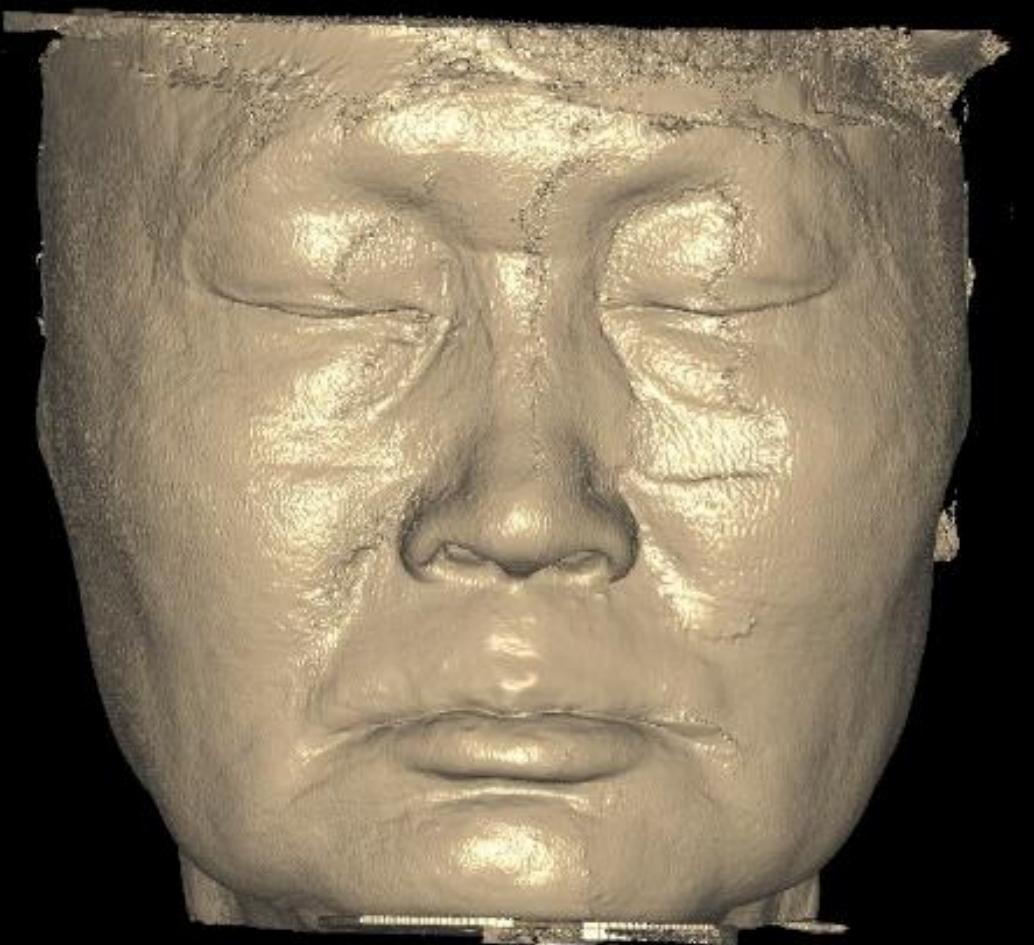
Bite Tray Impression Scan

# Dentium Viewer



AI Occlusal Plane

# Cad Design



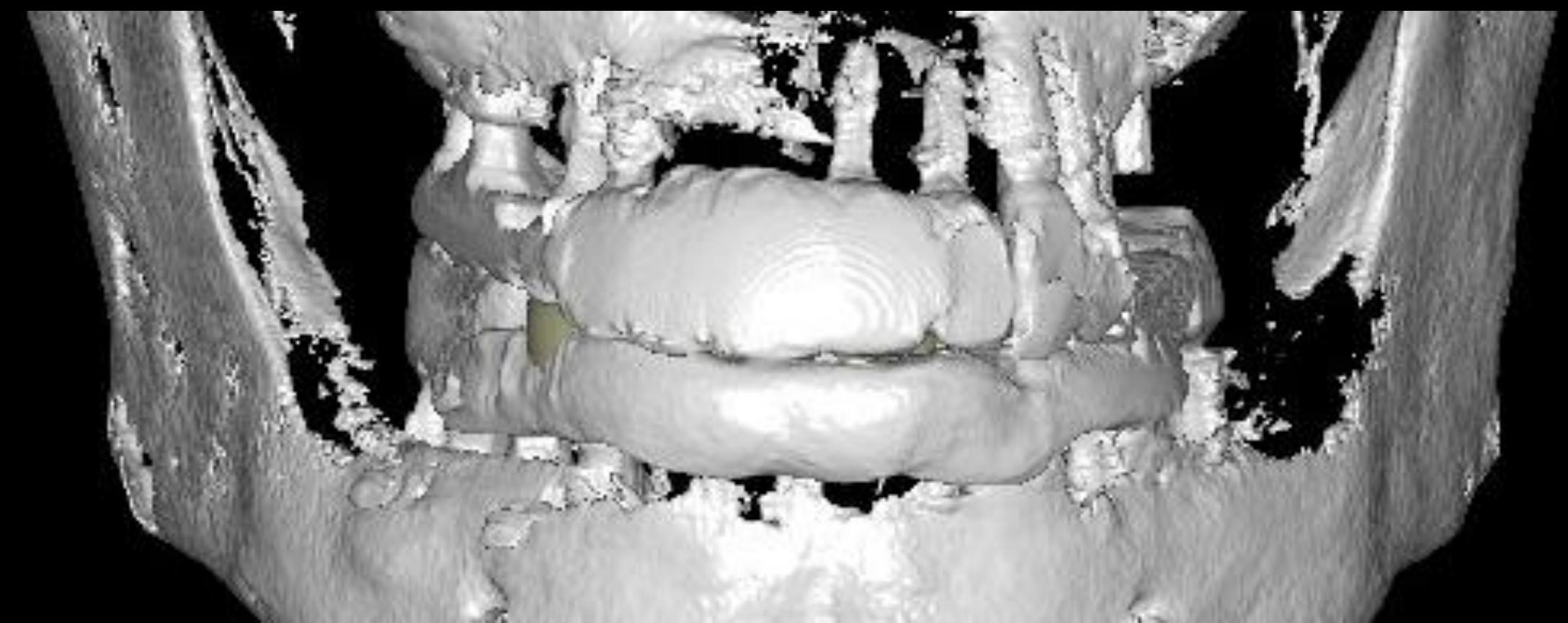
CT Dicom Stl

Cad Design



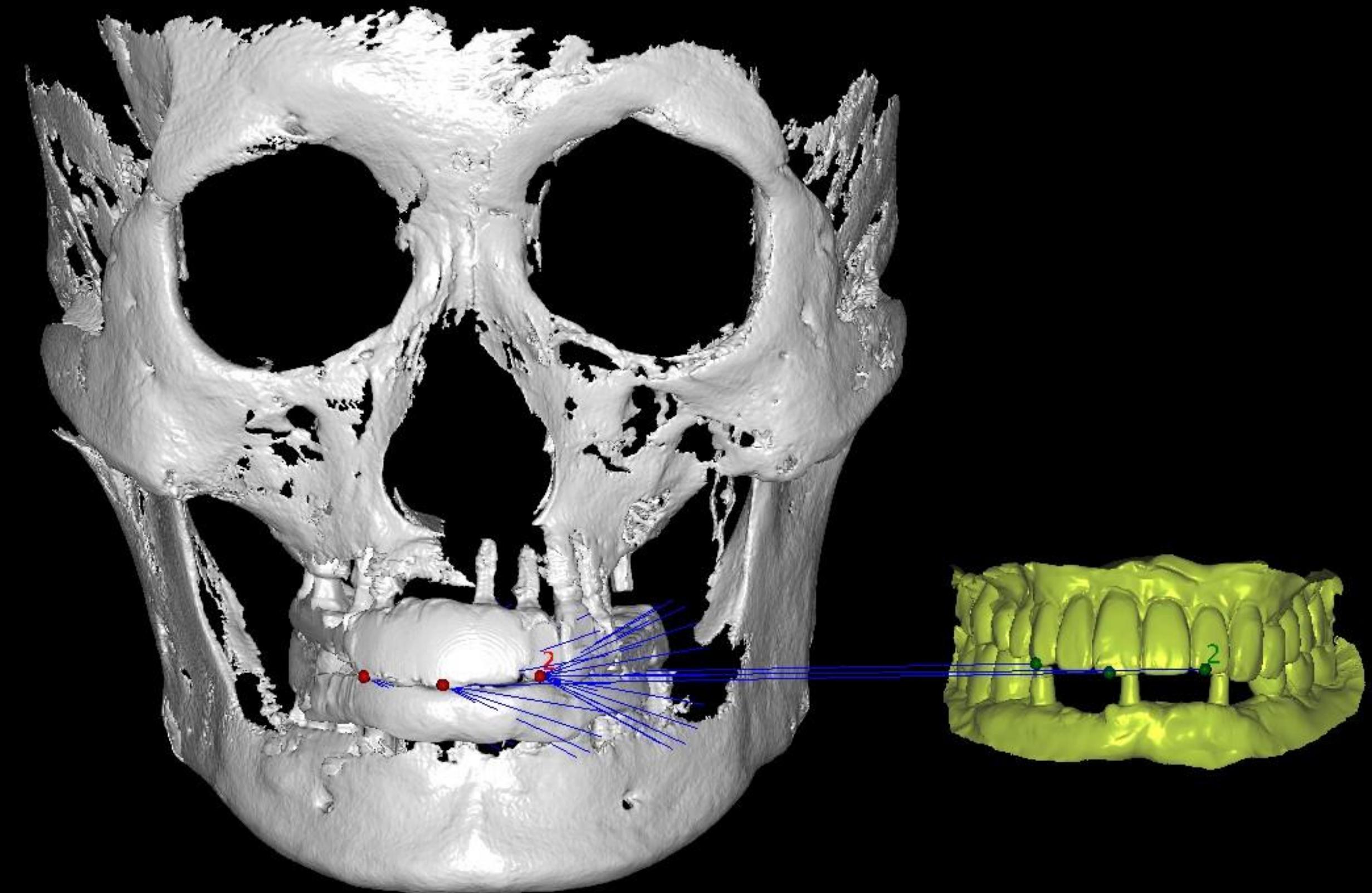
CT Dicom Stl

# Cad Design



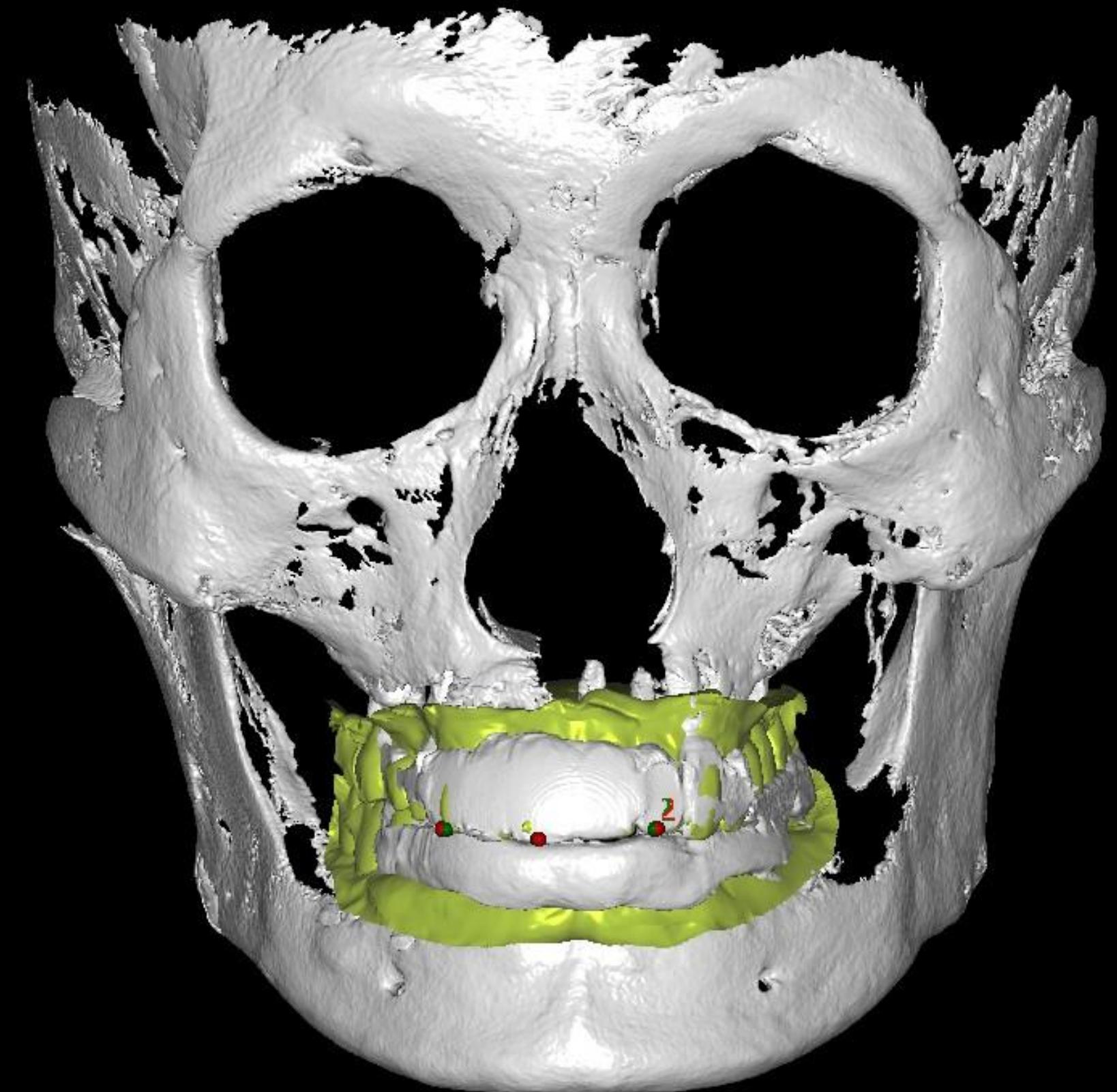
CT Dicom Stl

# Cad Design



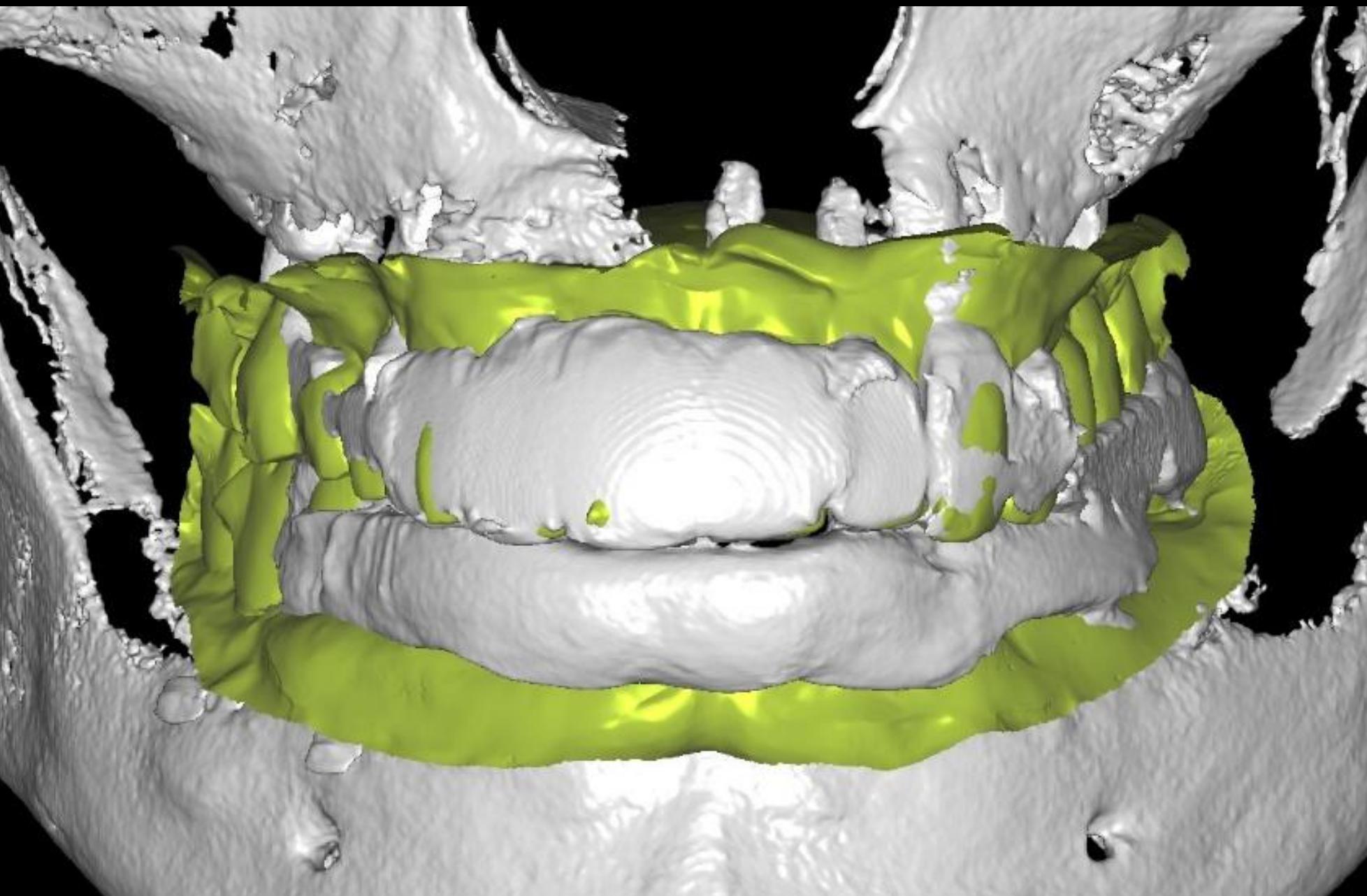
CT Dicom Stl

# Cad Design



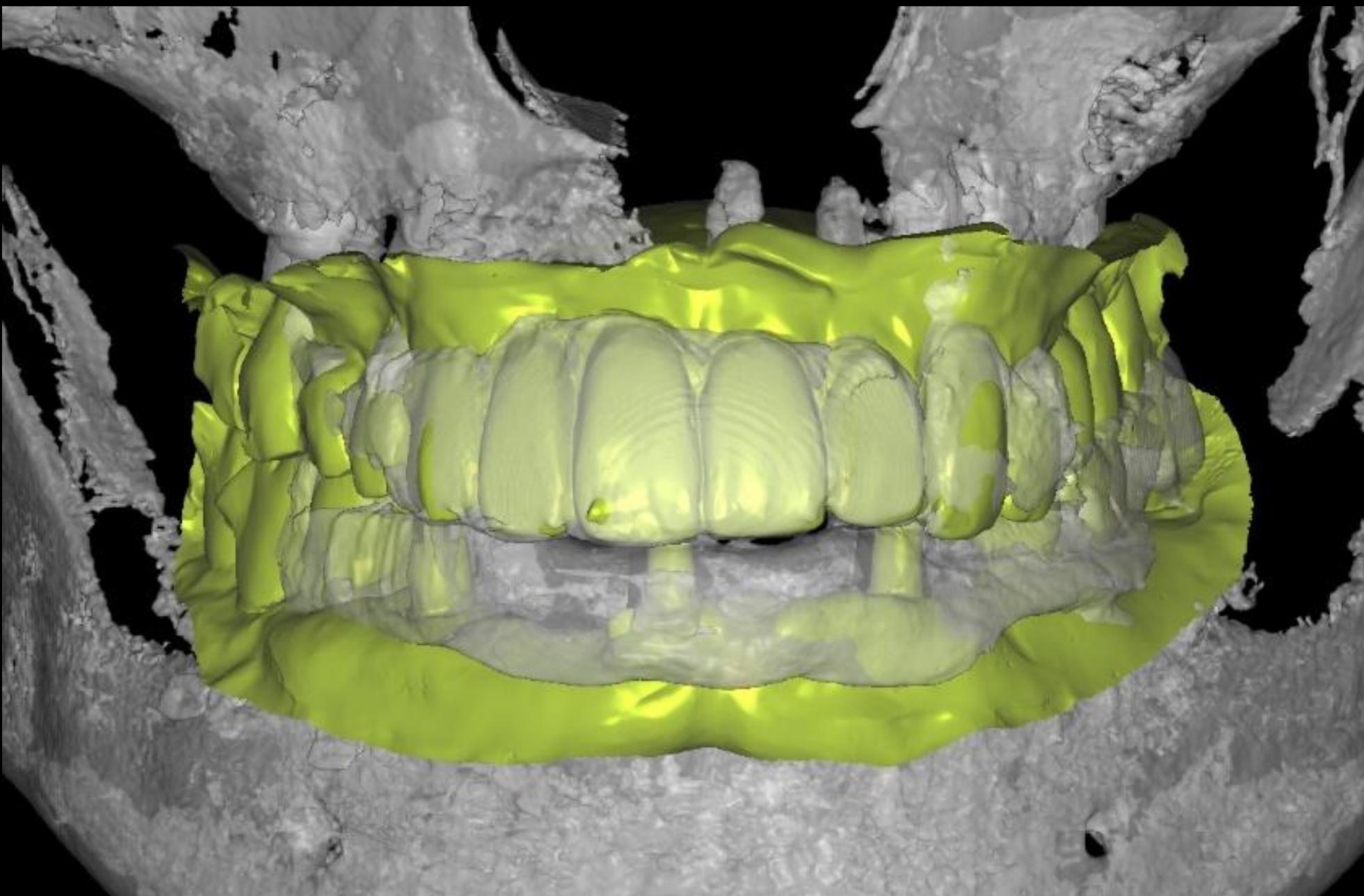
CT Dicom Stl

# Cad Design



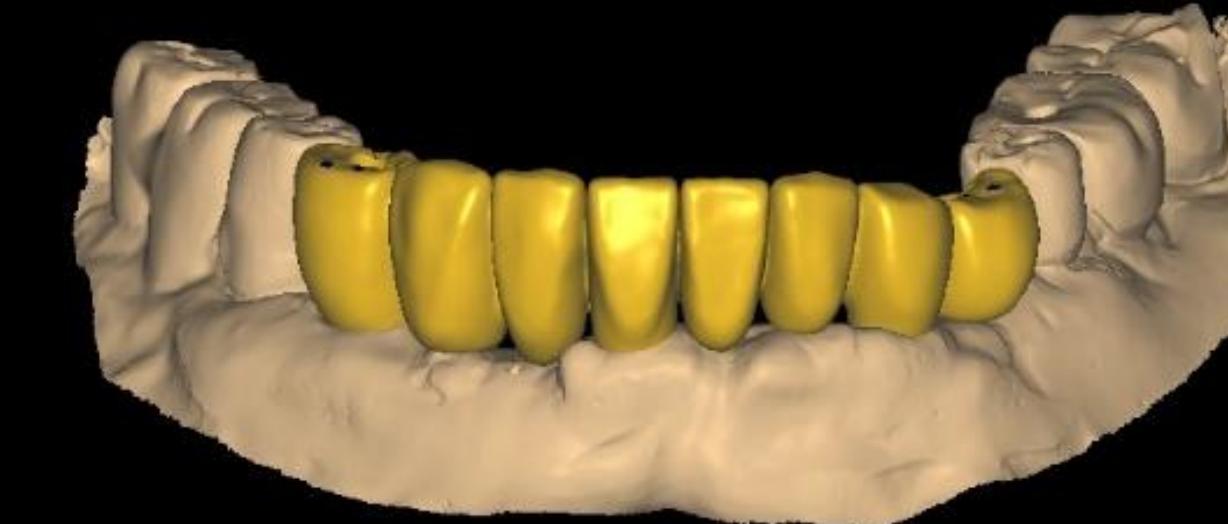
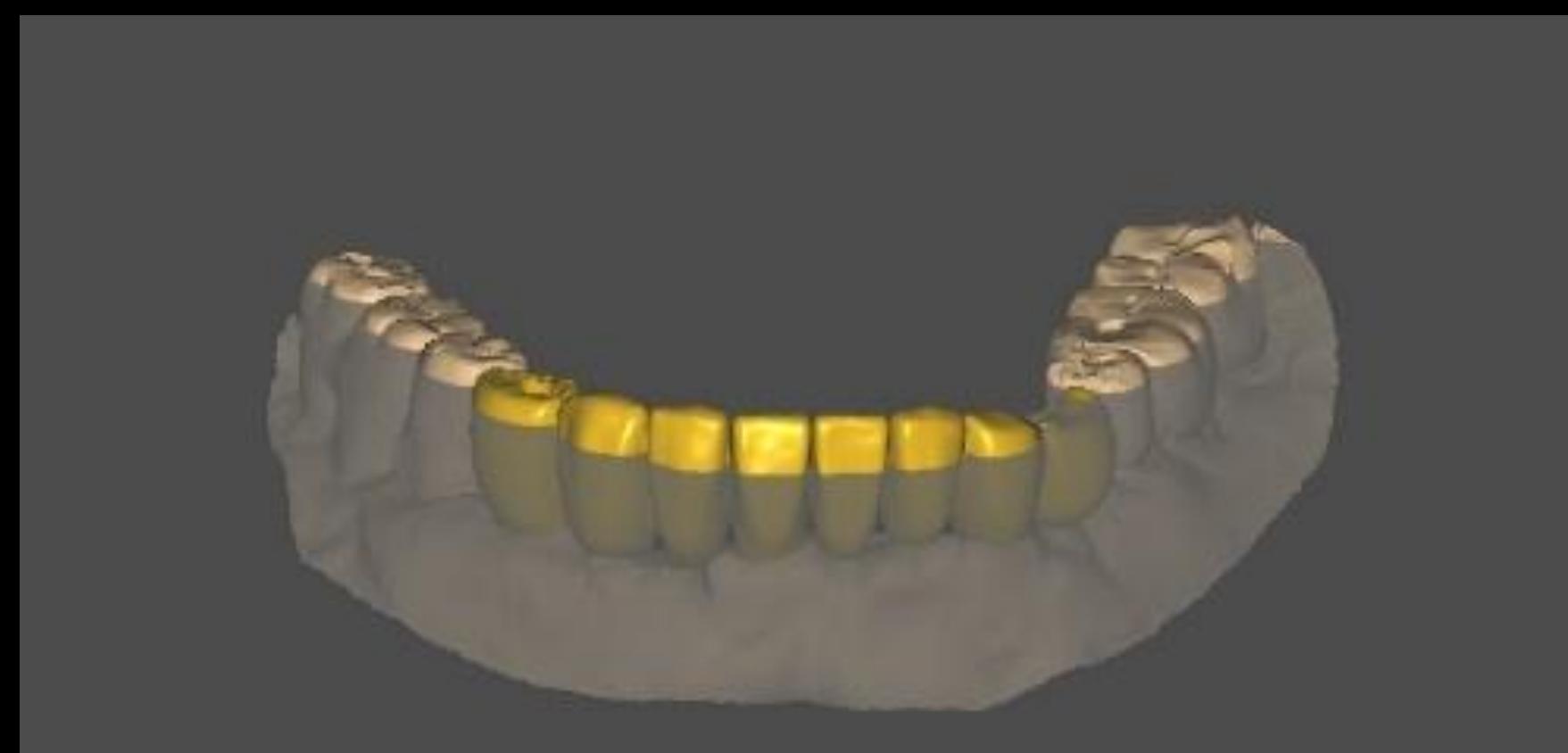
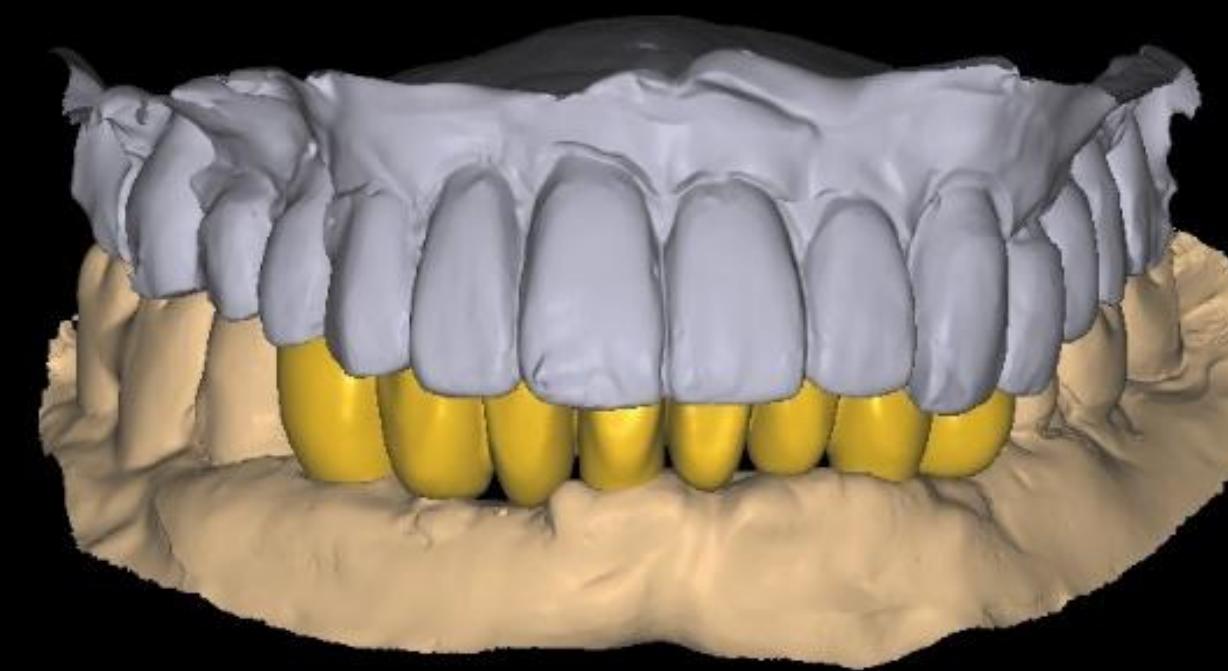
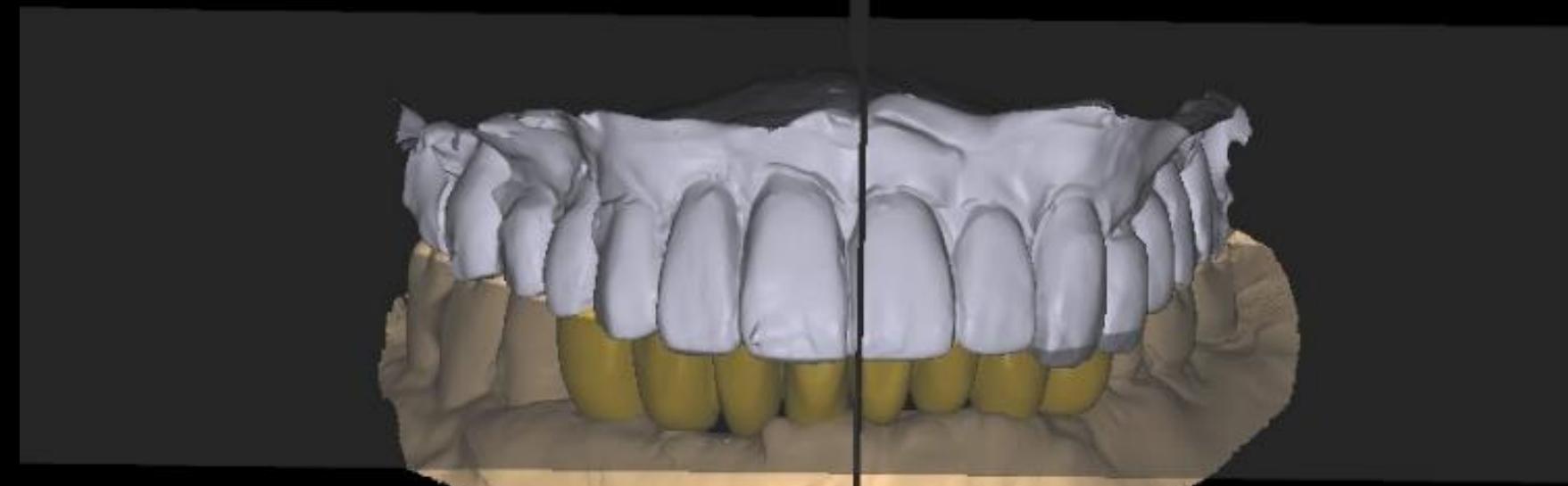
CT Dicom Stl

# Cad Design

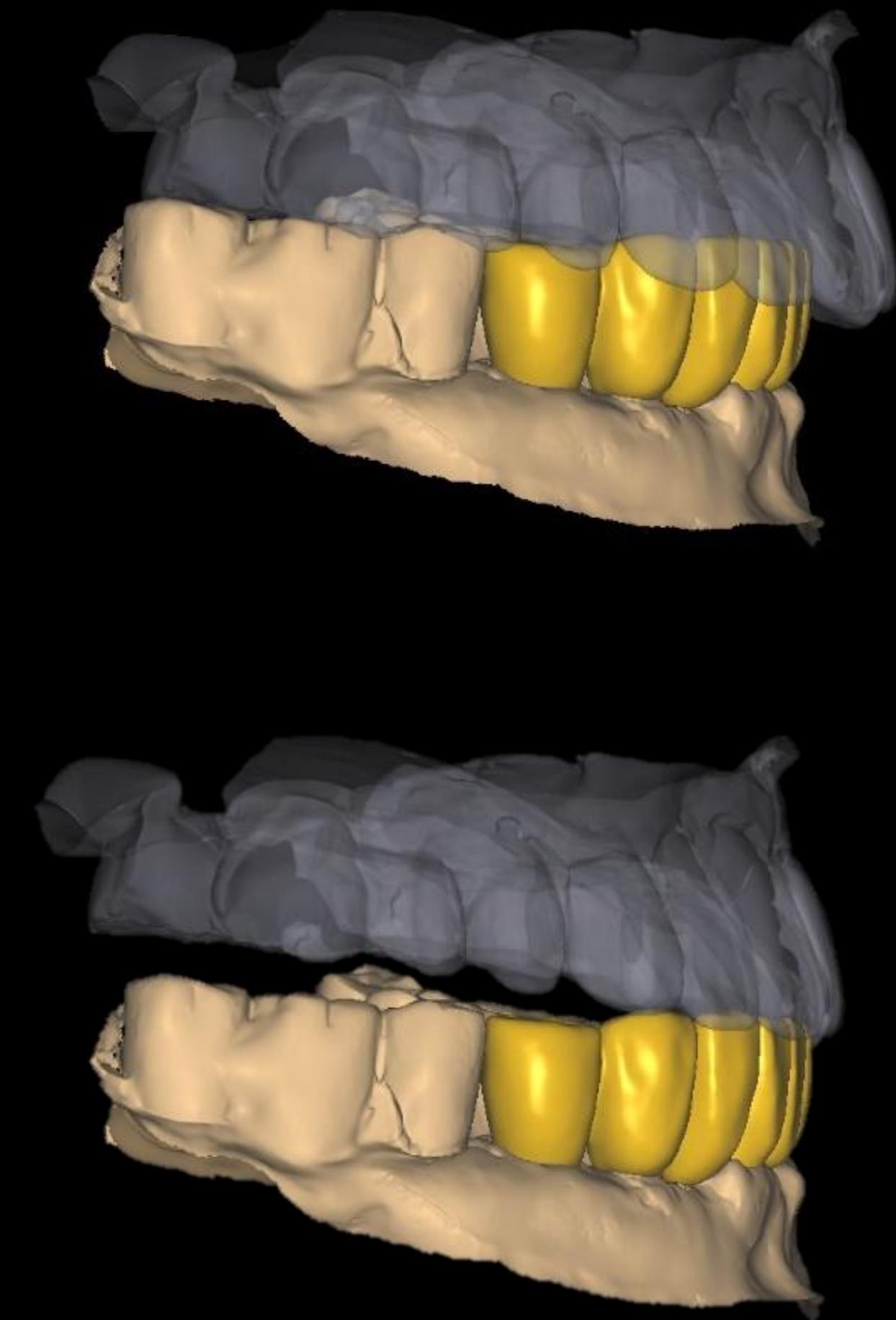
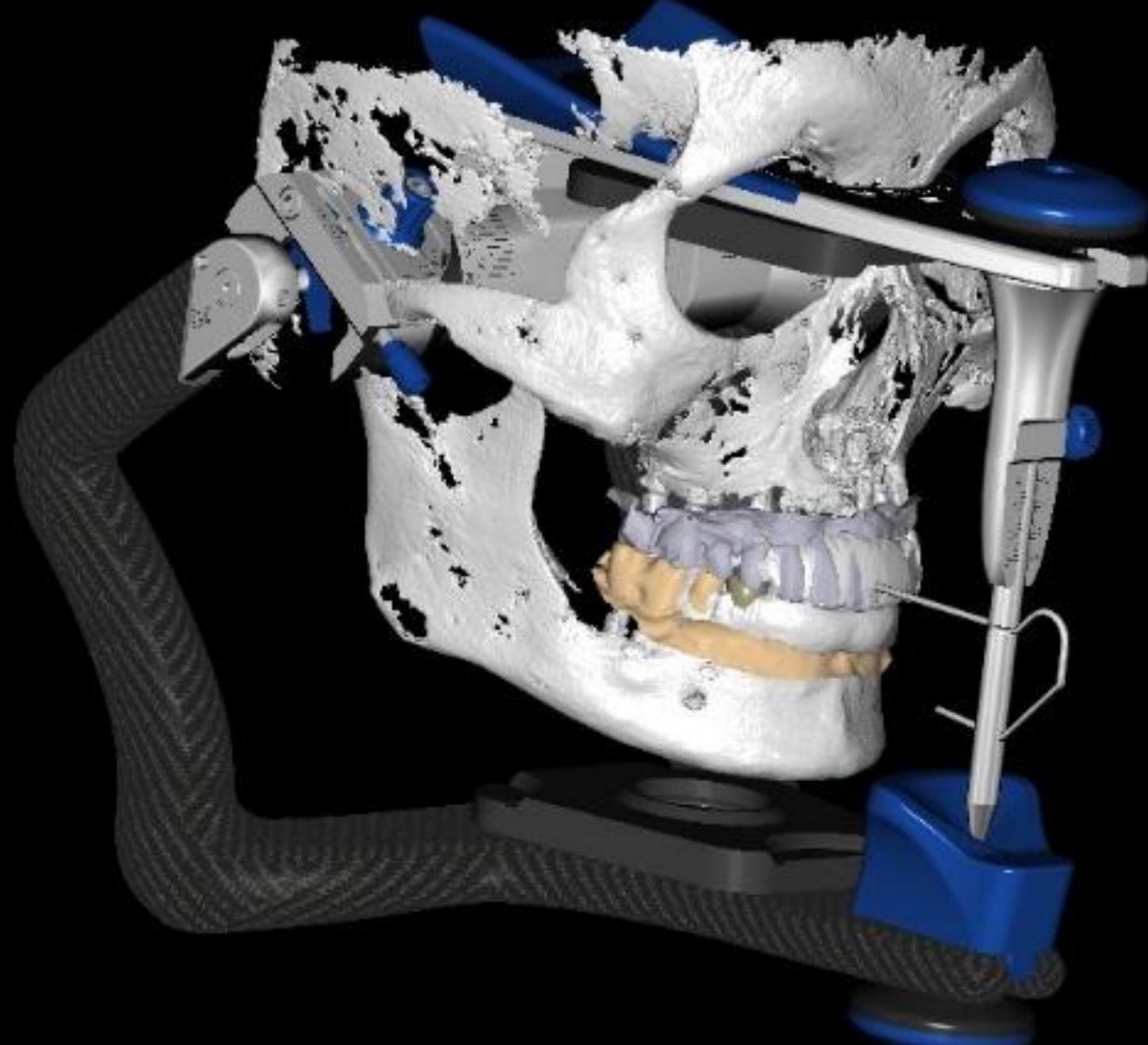


CT Dicom Stl

# Cad Design

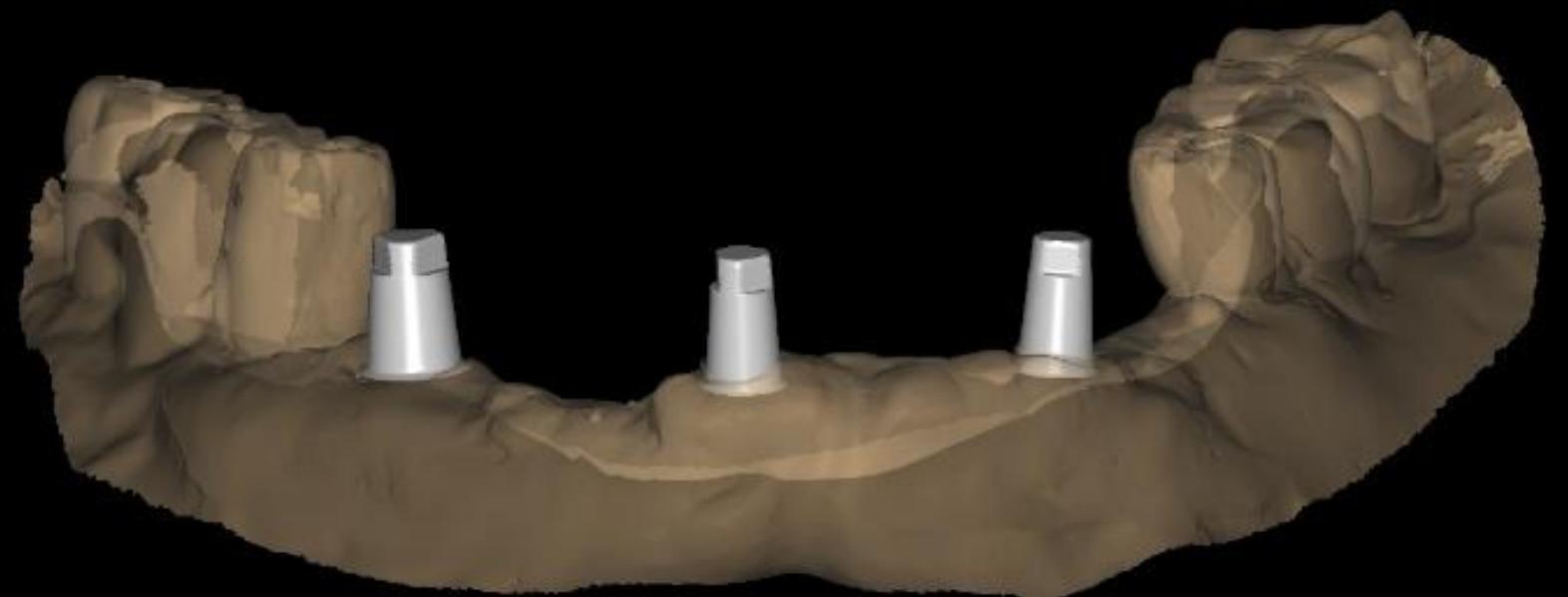


# Cad Design

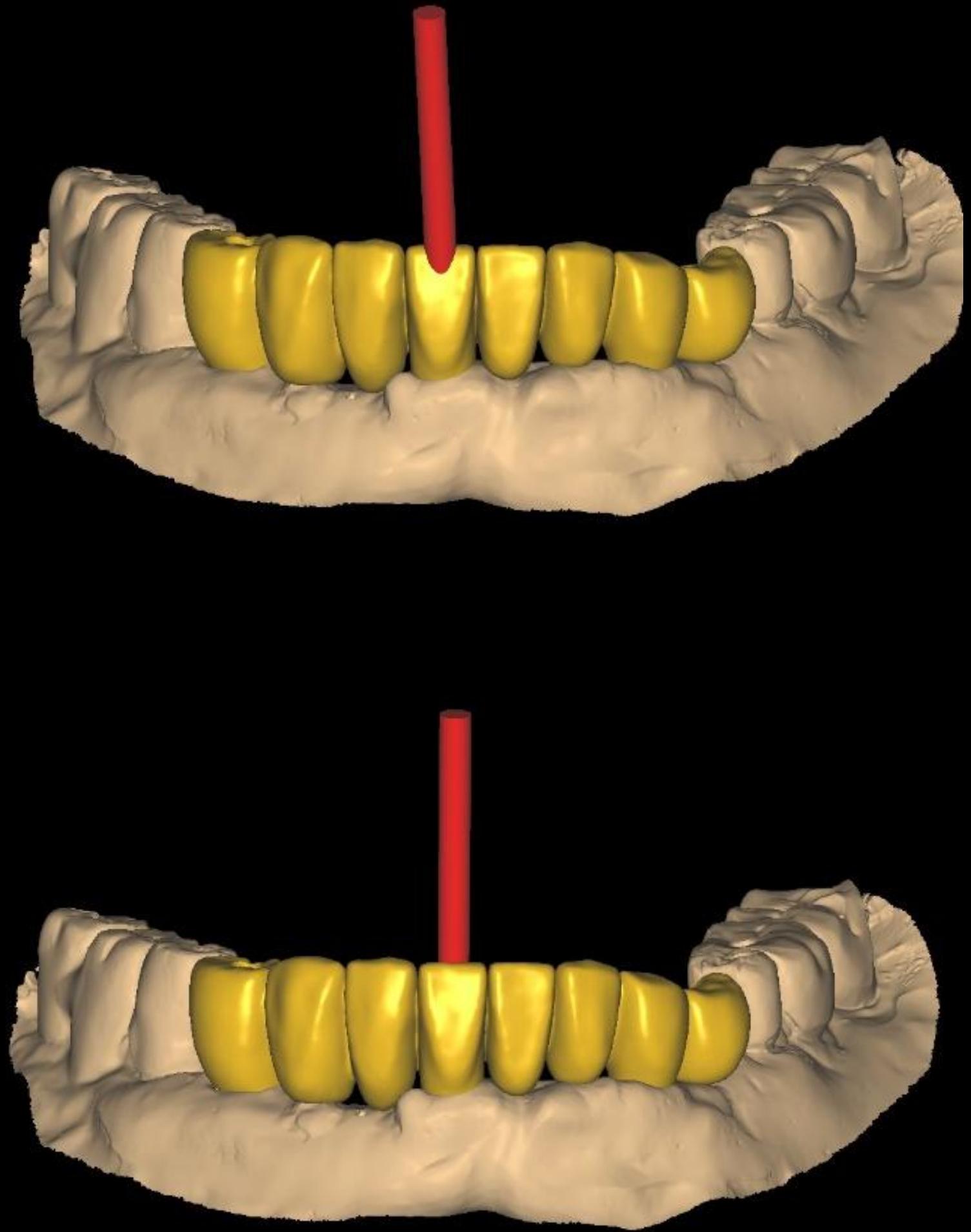
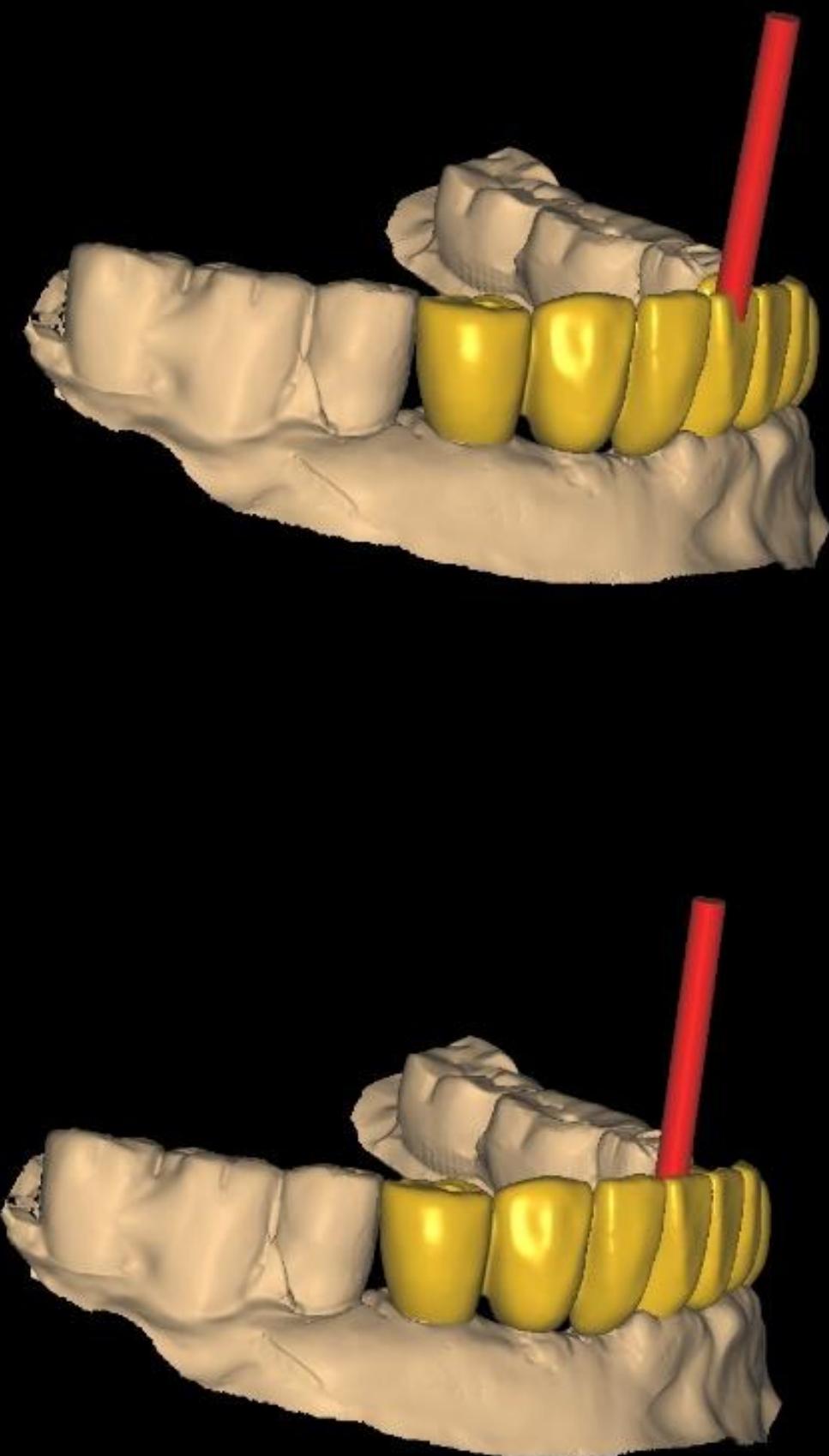


Virtual articulator

# Cad Design



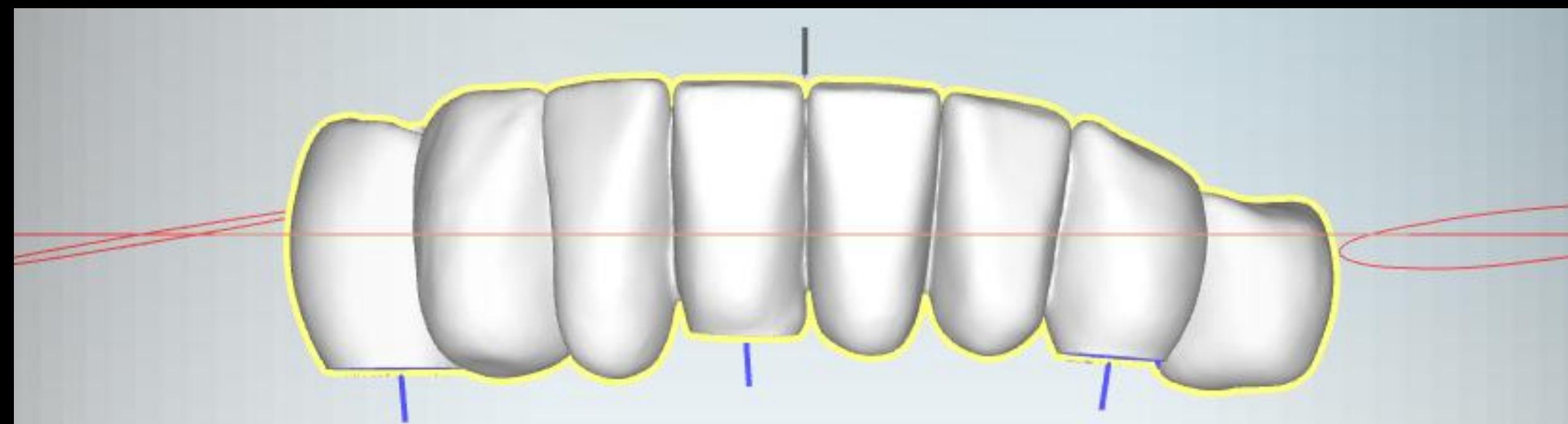
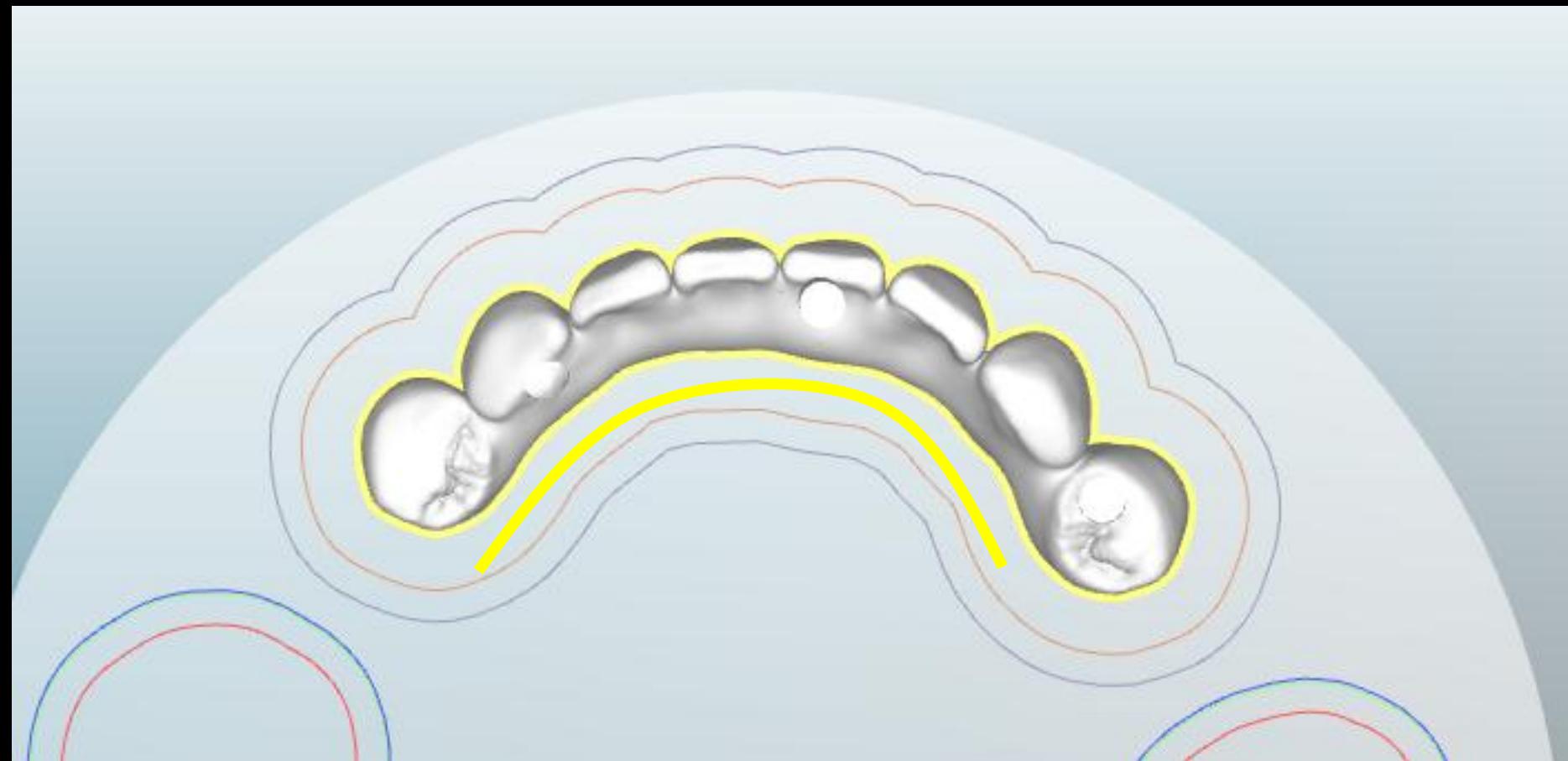
**Tissue level  
Ti base angled abutment**



# Shade Taking



# Hyper Dent



**Shine T block A2 22T**

# Coloring



Inner - White Opaque  
Body- Shine A3  
Occlusal - Trans violet

# Glazing



# Final Prosthesis



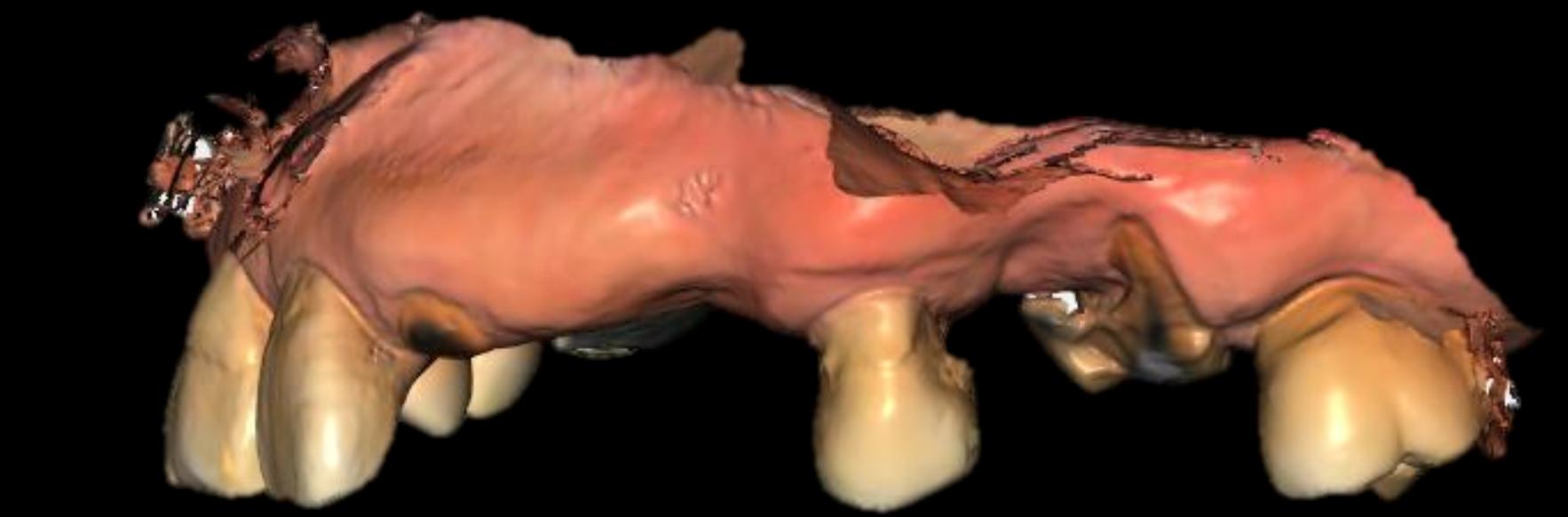
Oral exam (2024-02-21)



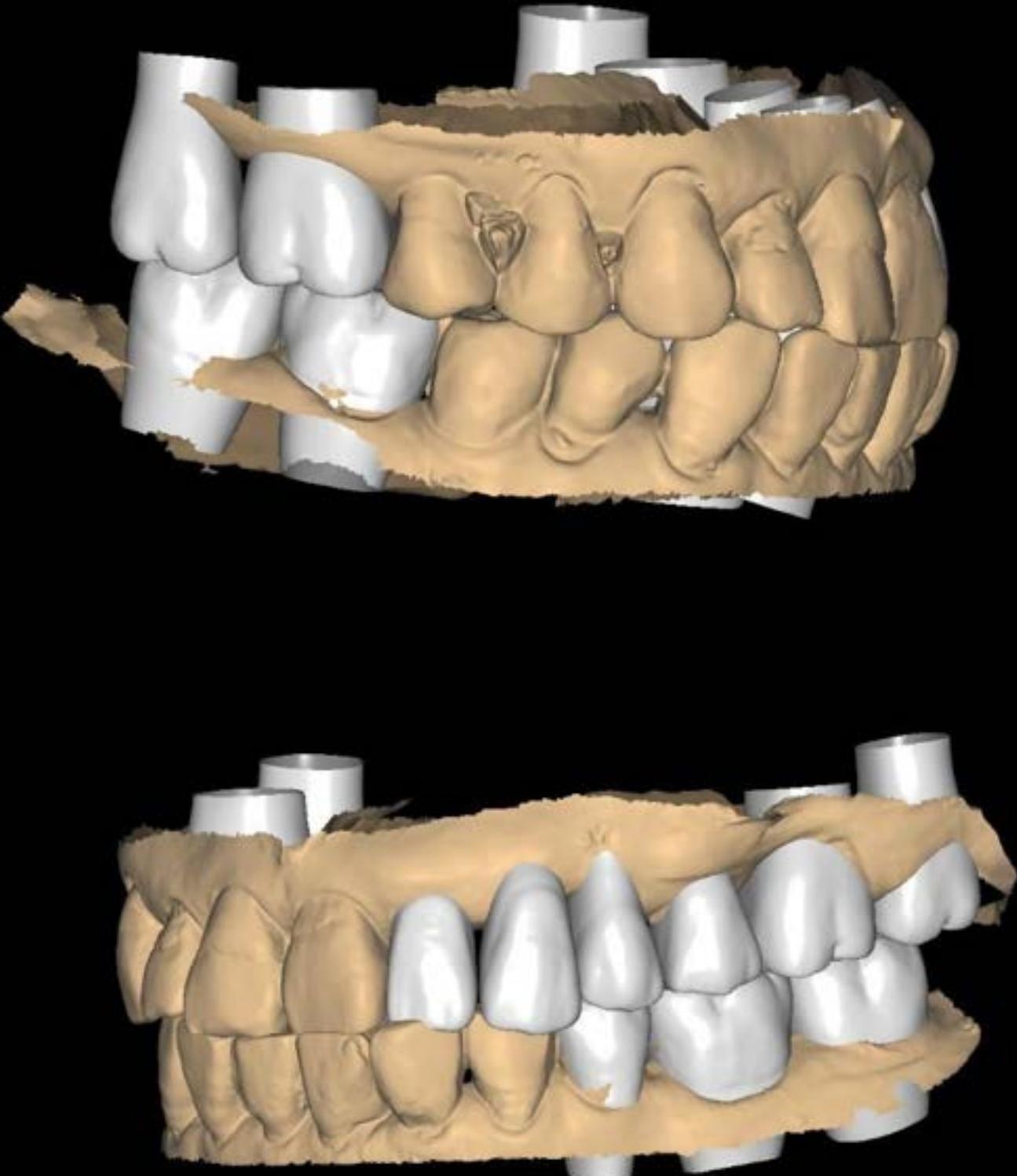
Pre-op (2024-03-06)



Intra Oral Scan (2024-02-21)

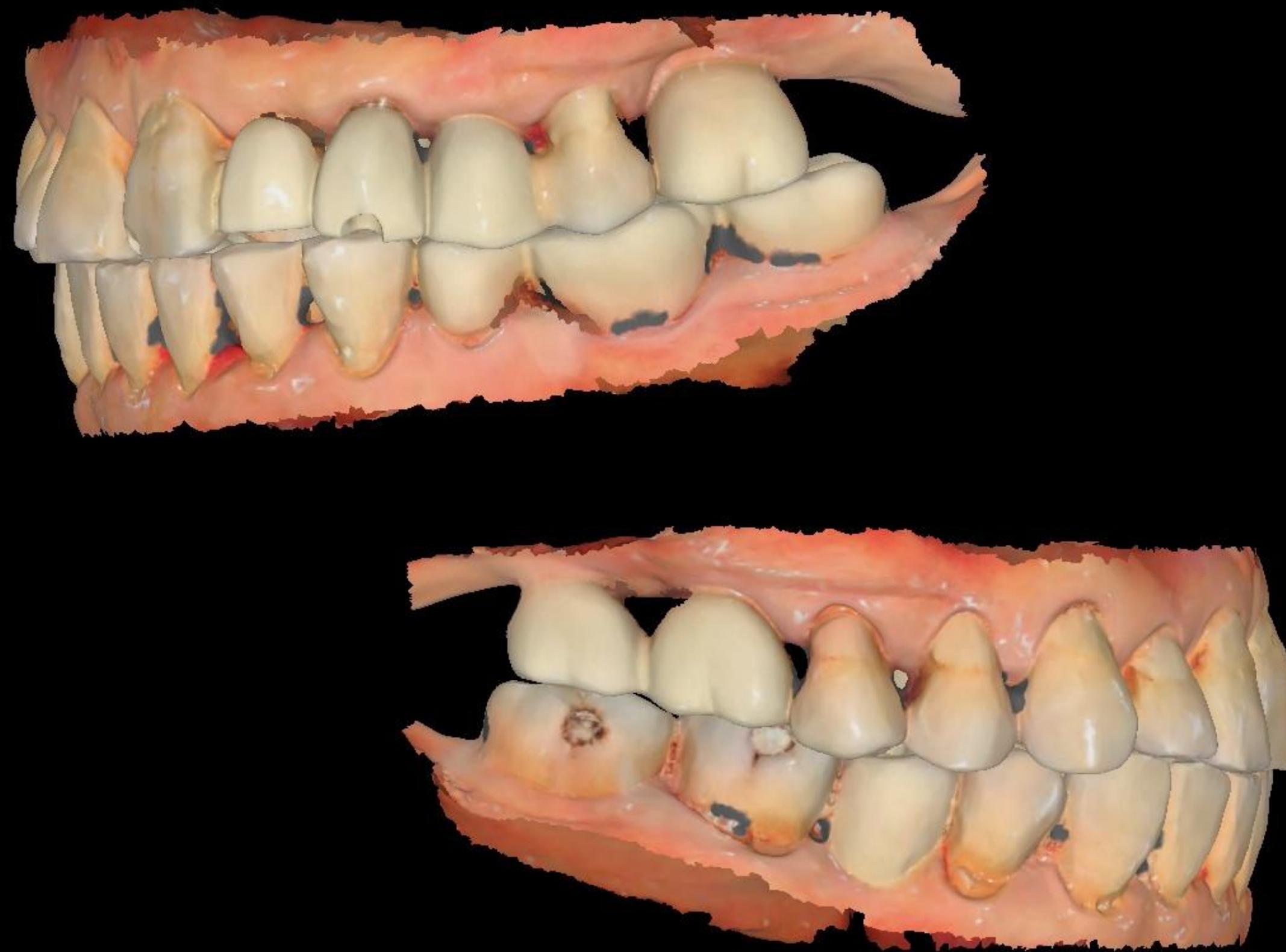


Pre Op

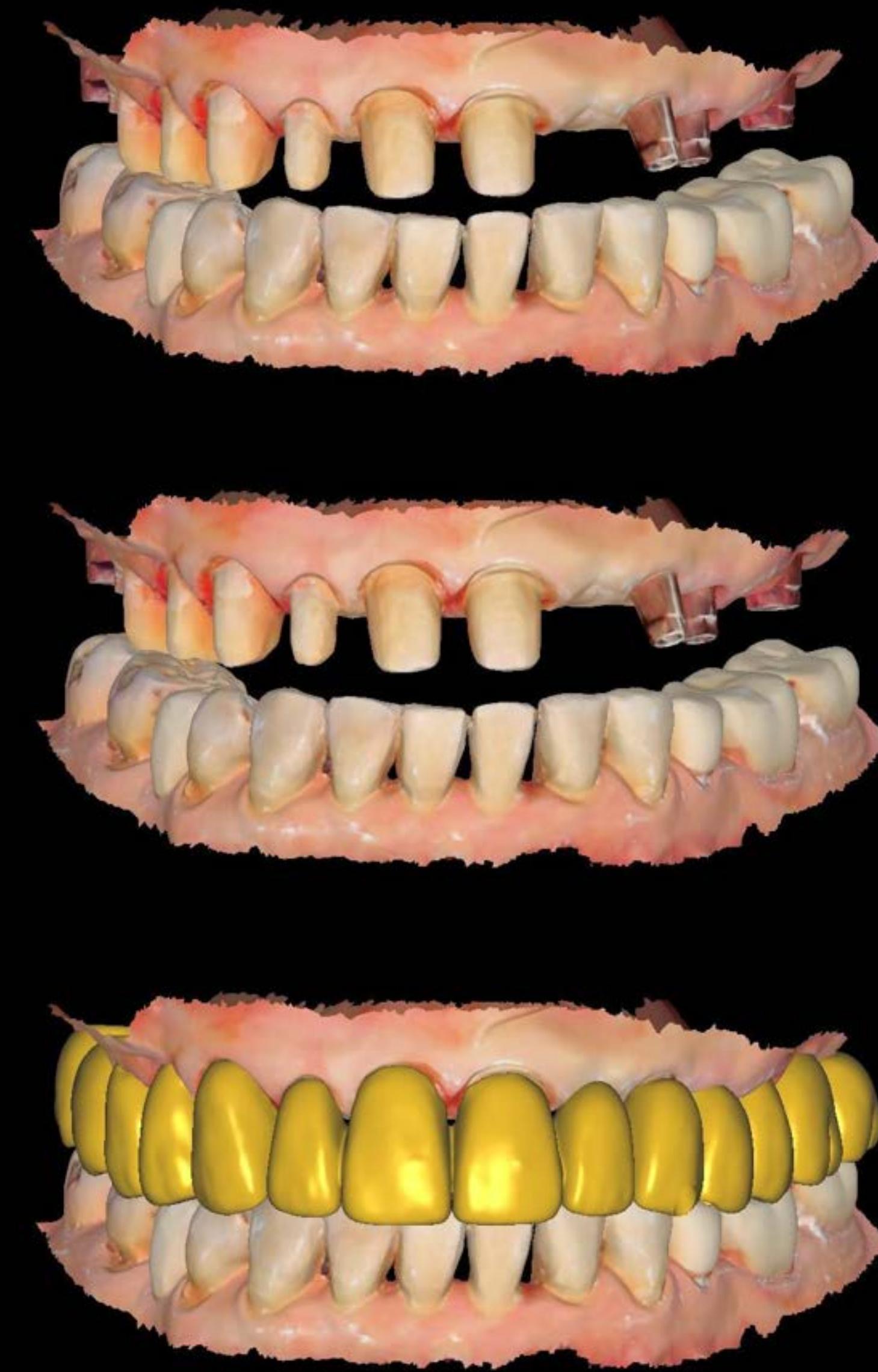


Conducted patient consulting using virtual set-up

Pre Op



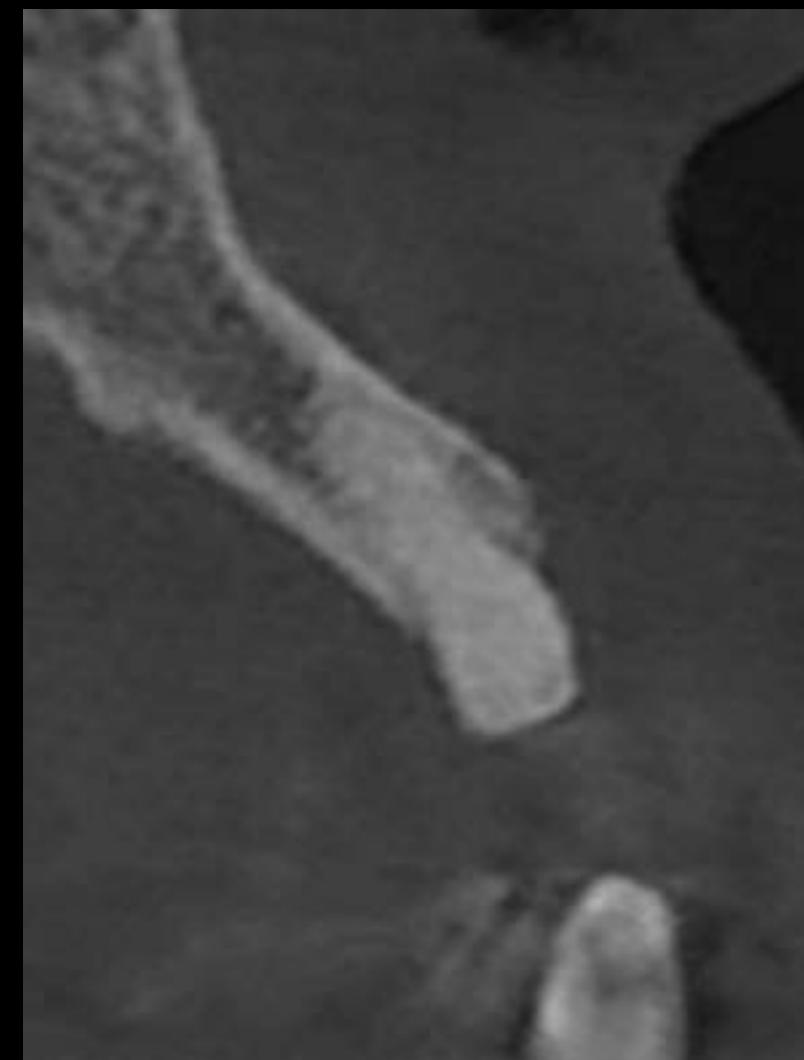
Posterior I.s & 1<sup>st</sup> provisional Crown



Upperjaw Full 2<sup>nd</sup> provisional crown (VD 2mm up)

Pre-op CT (2024-02-21)

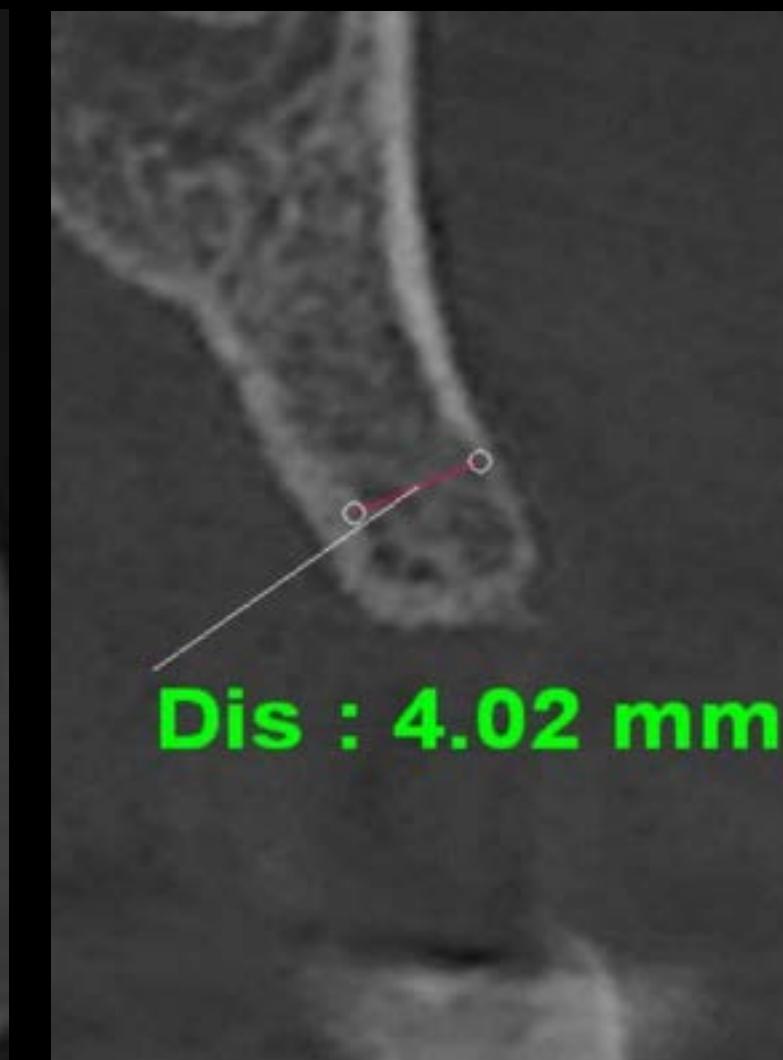
Post-op CT (2024-03-06)



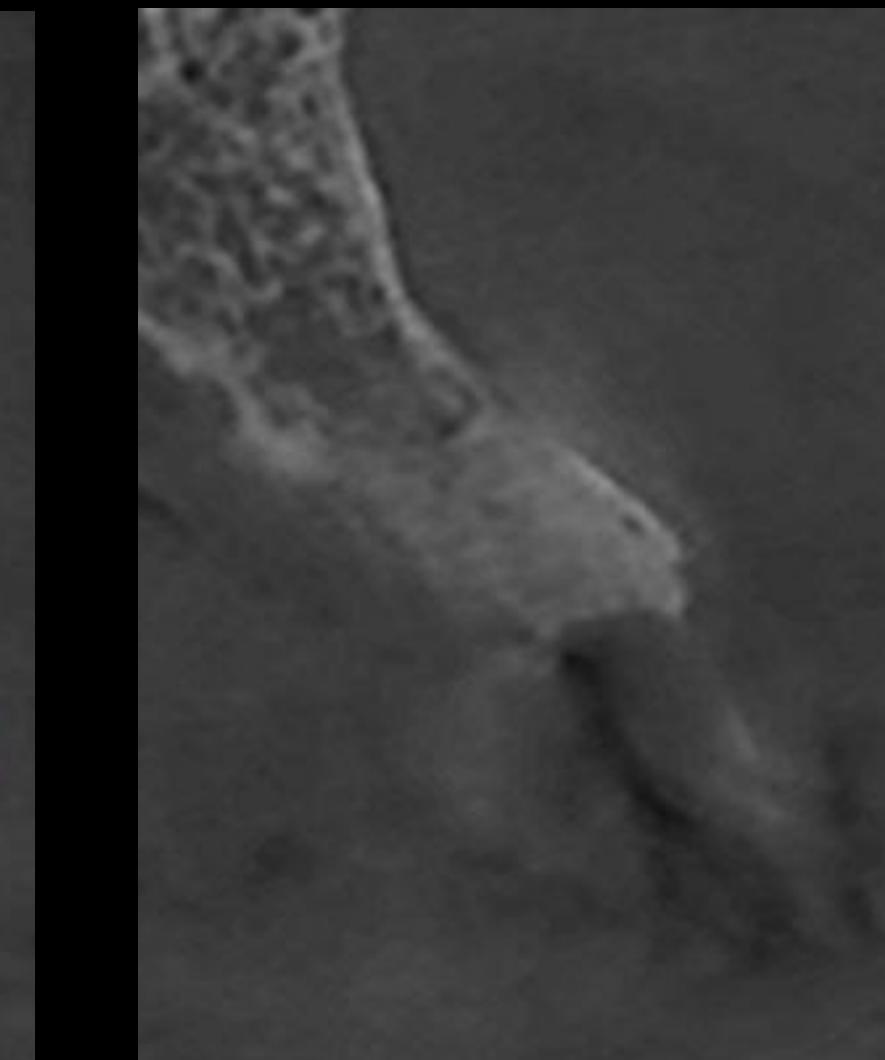
#22



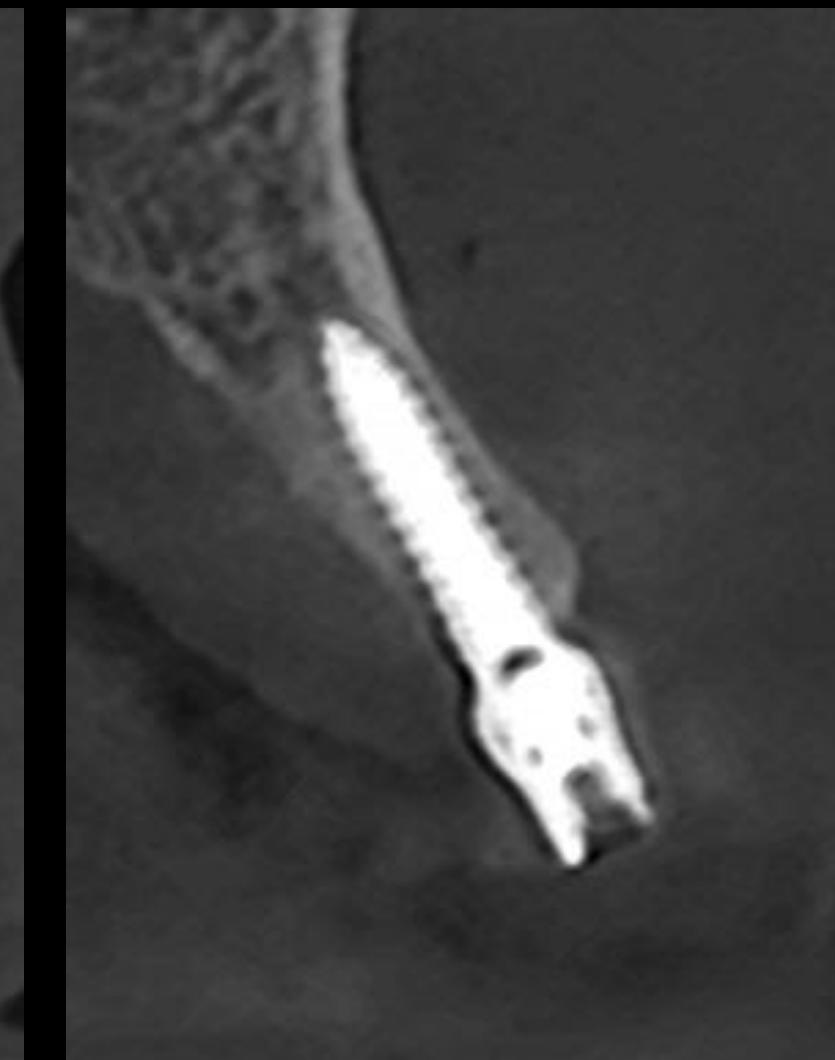
#23



#24



#22



#23



#24

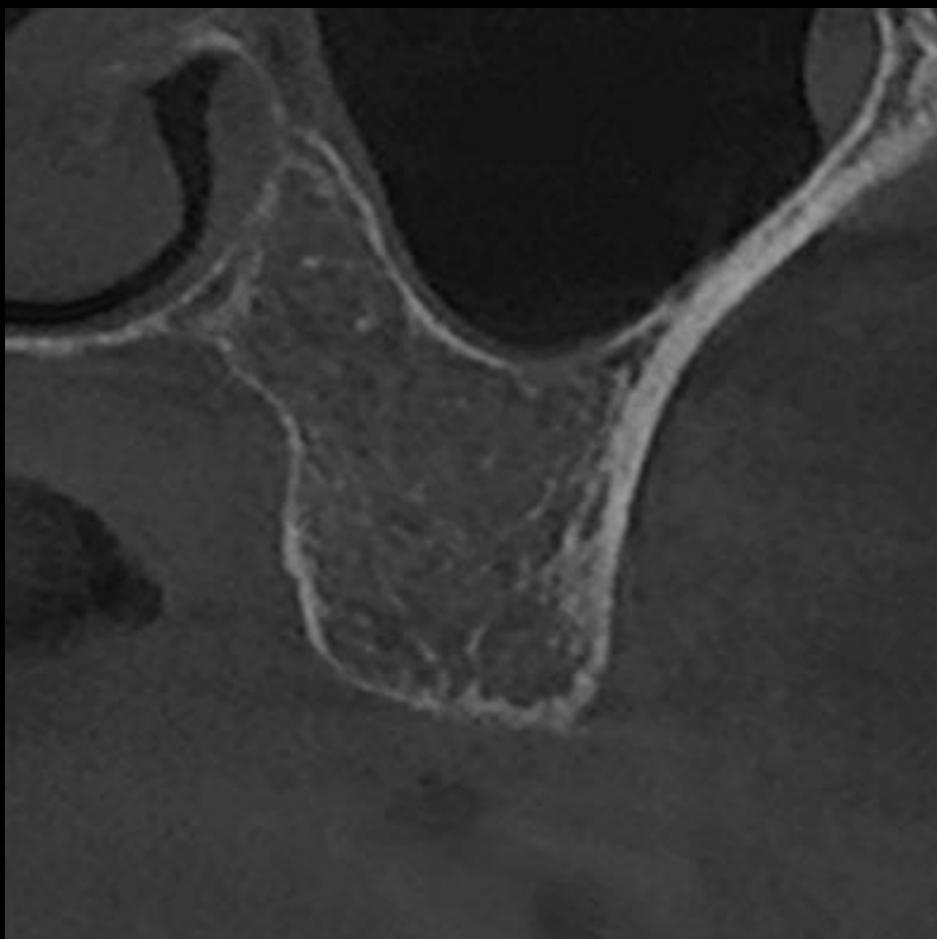
#22,23,24 Post op (2024-03-08)



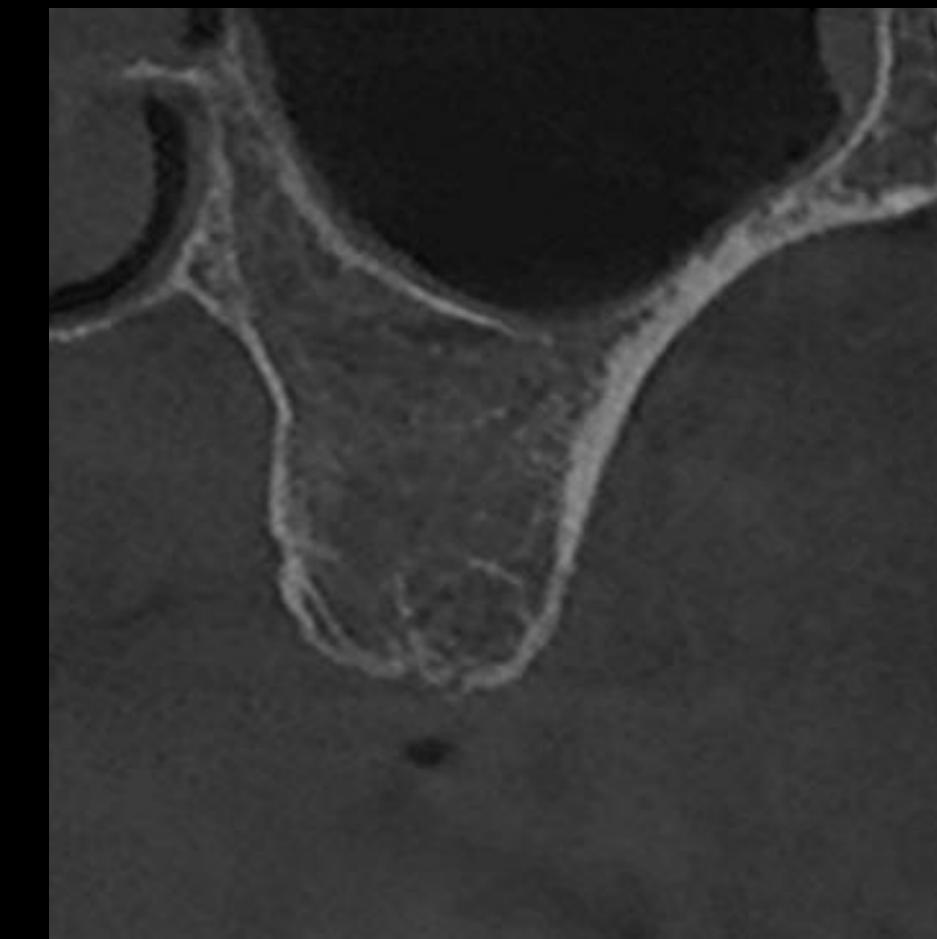
#16,17,26 Post-op (2024-05-23)



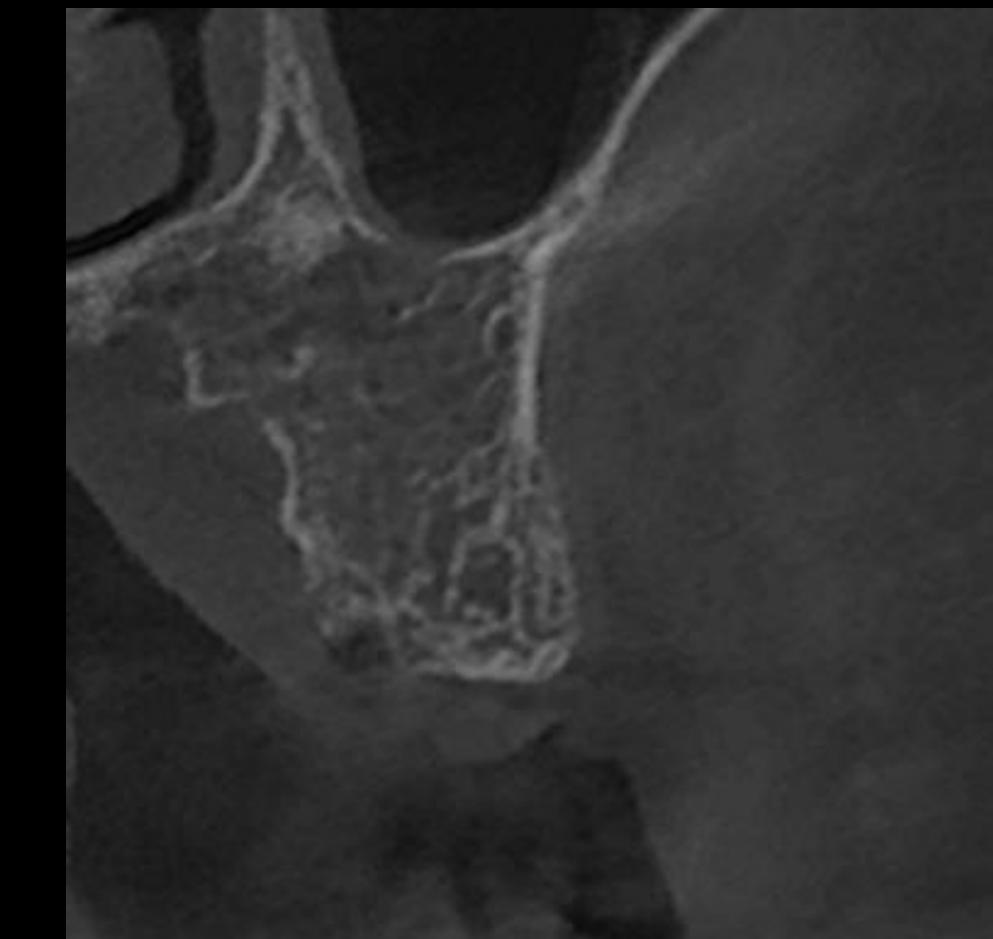
Pre-op CT (2024-03-06)



#16

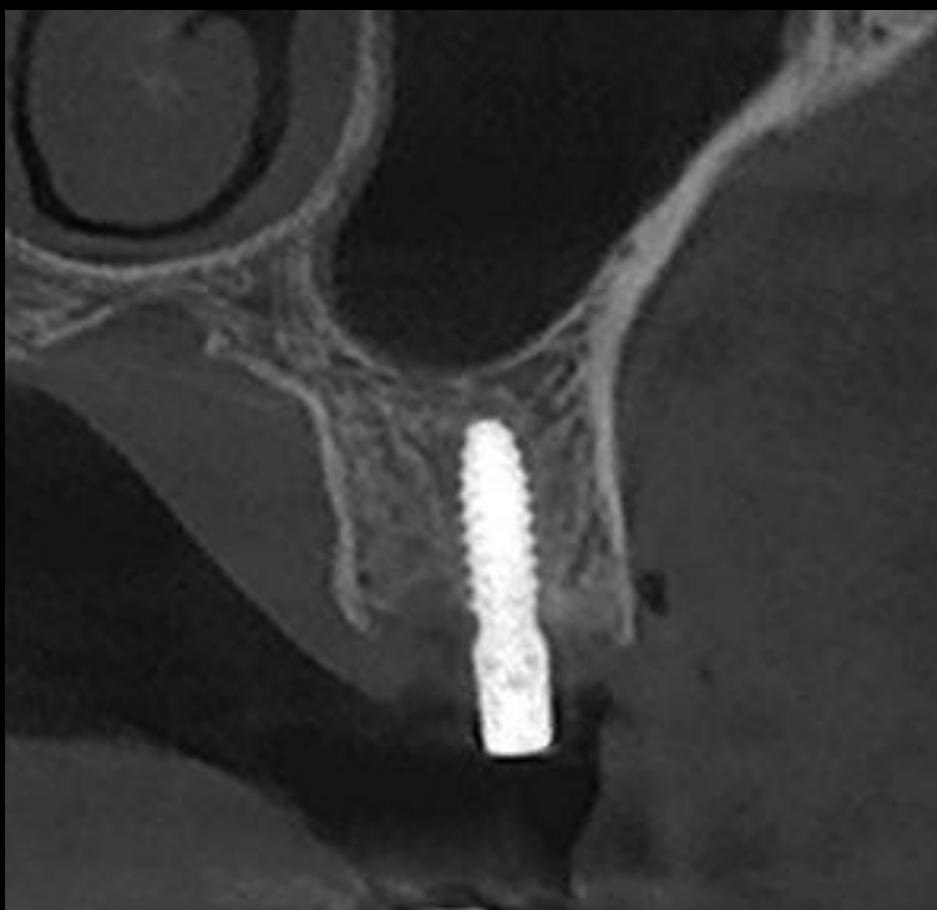


#17

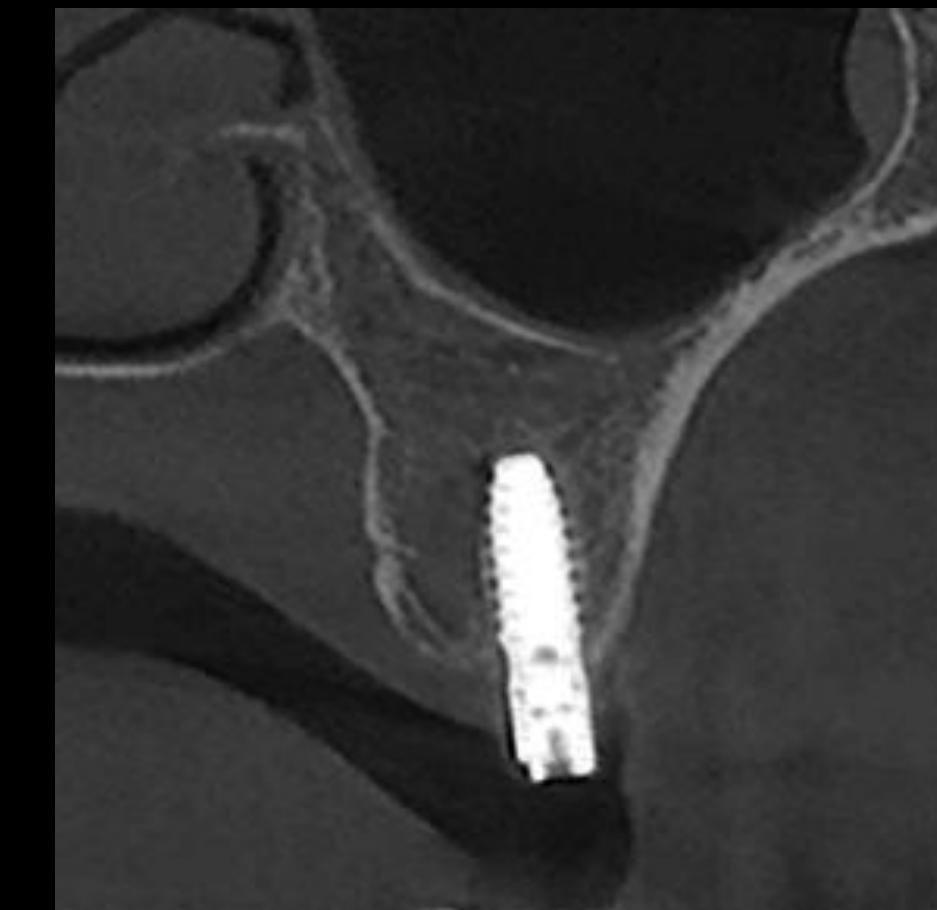


#26

Post-op CT (2024-05-23)



#16



#17



#26

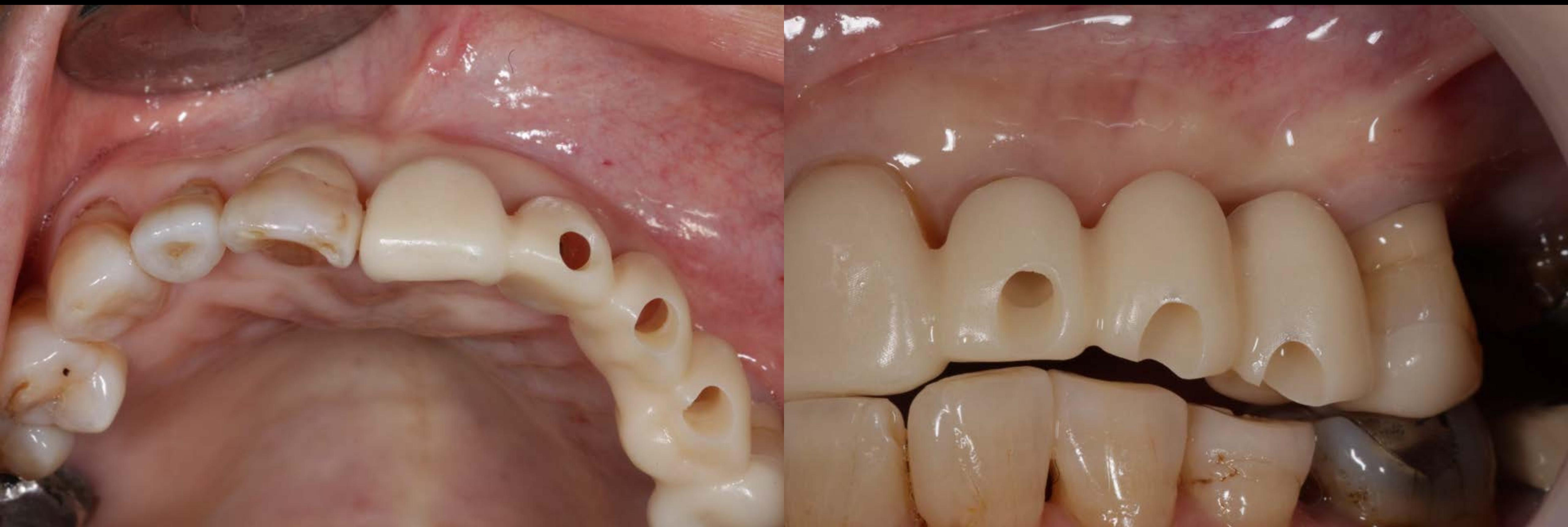
Final prosthesis (2025-06-16)



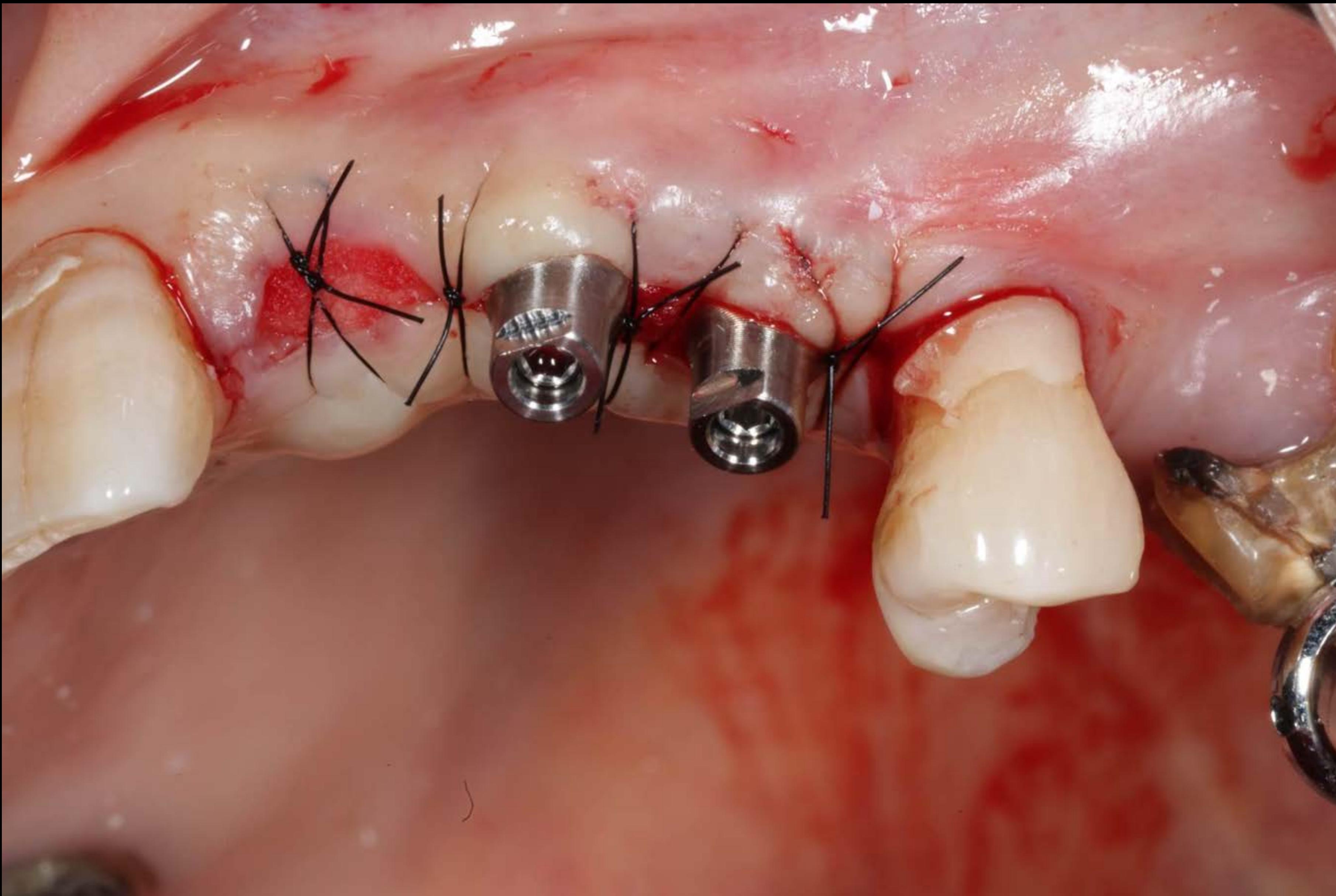
Pre-op (2024-03-06)



Crown guide adaptation (2024-03-06)



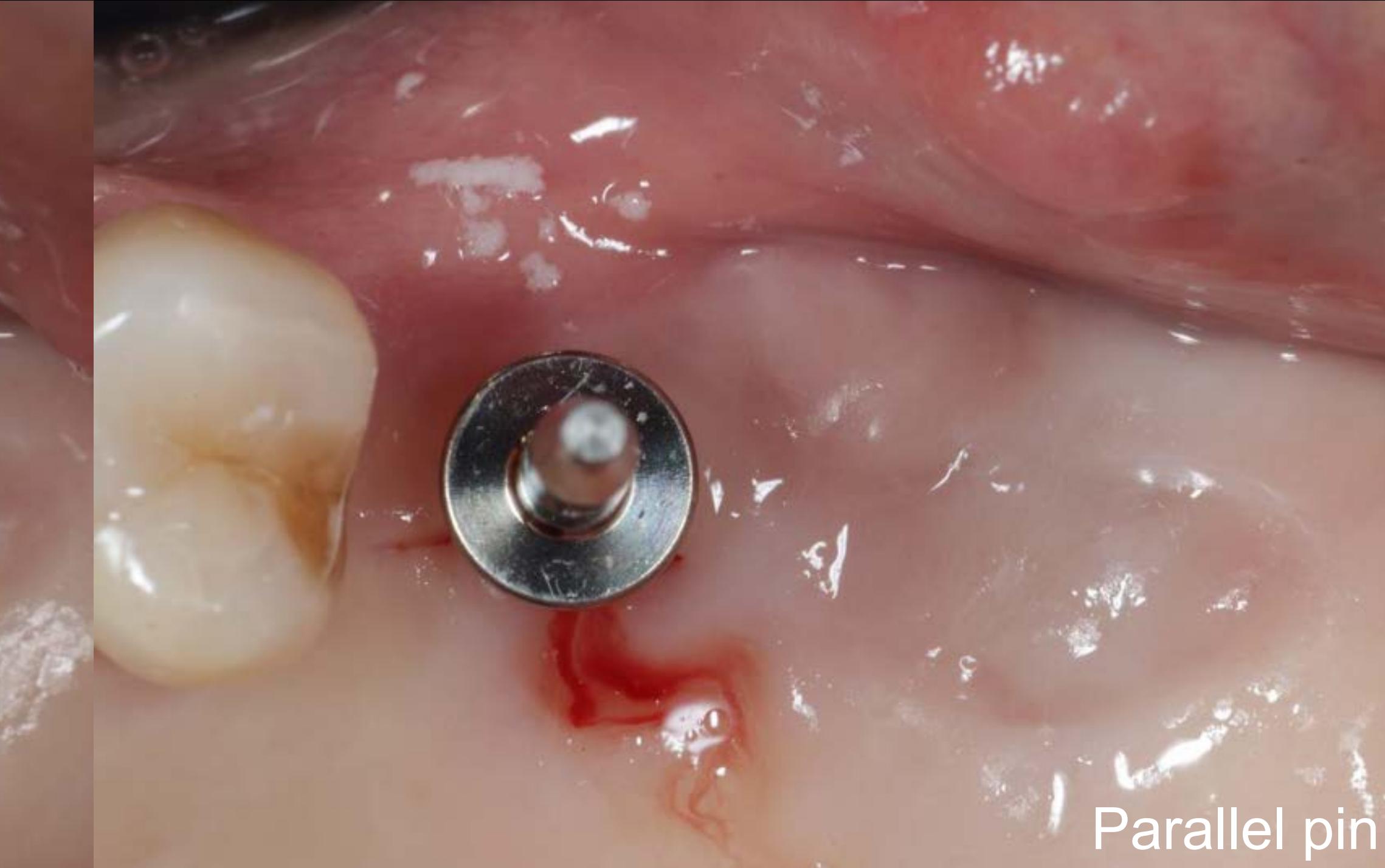
#22,23,24 Post-op (2024-03-06)



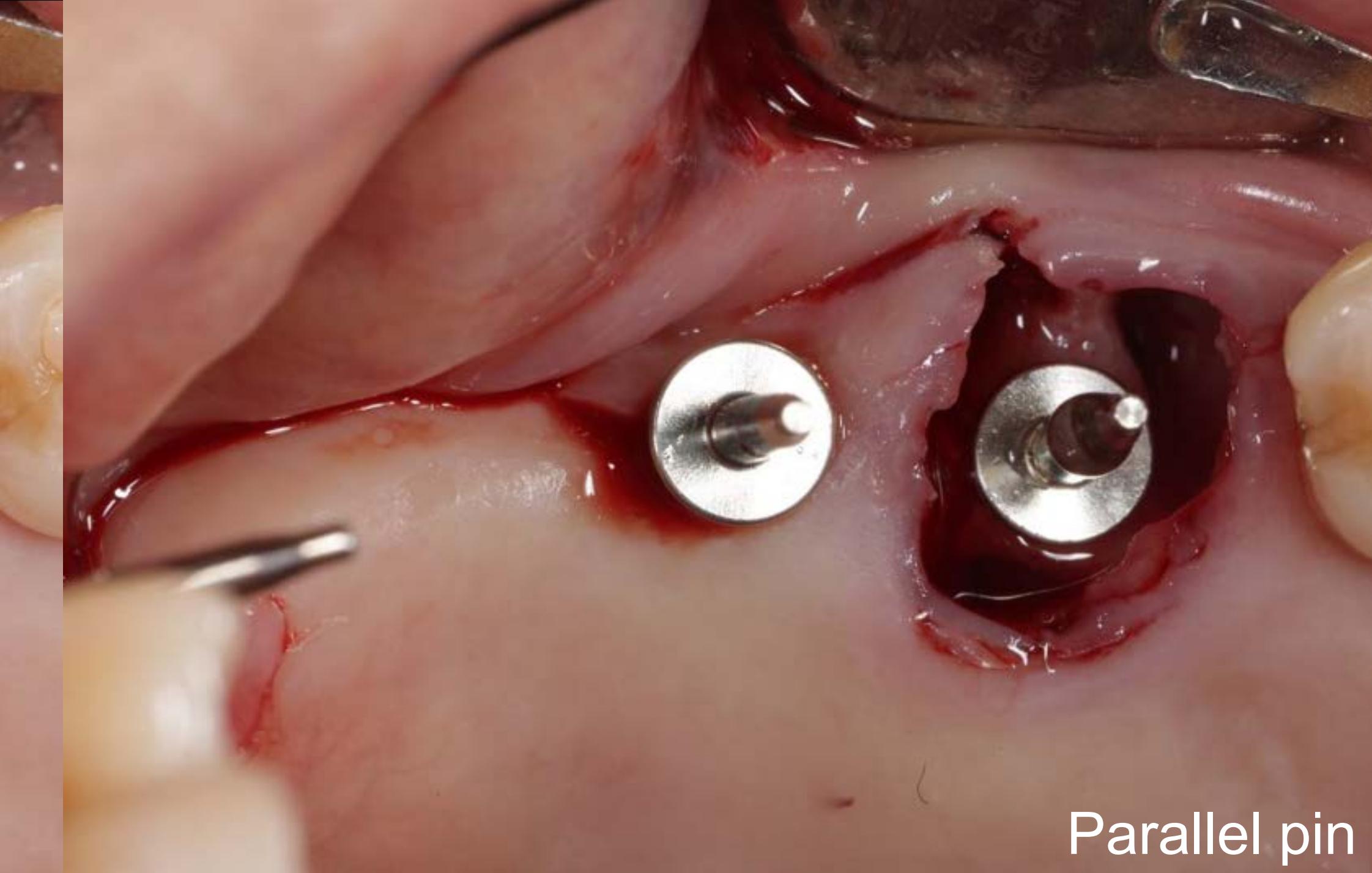
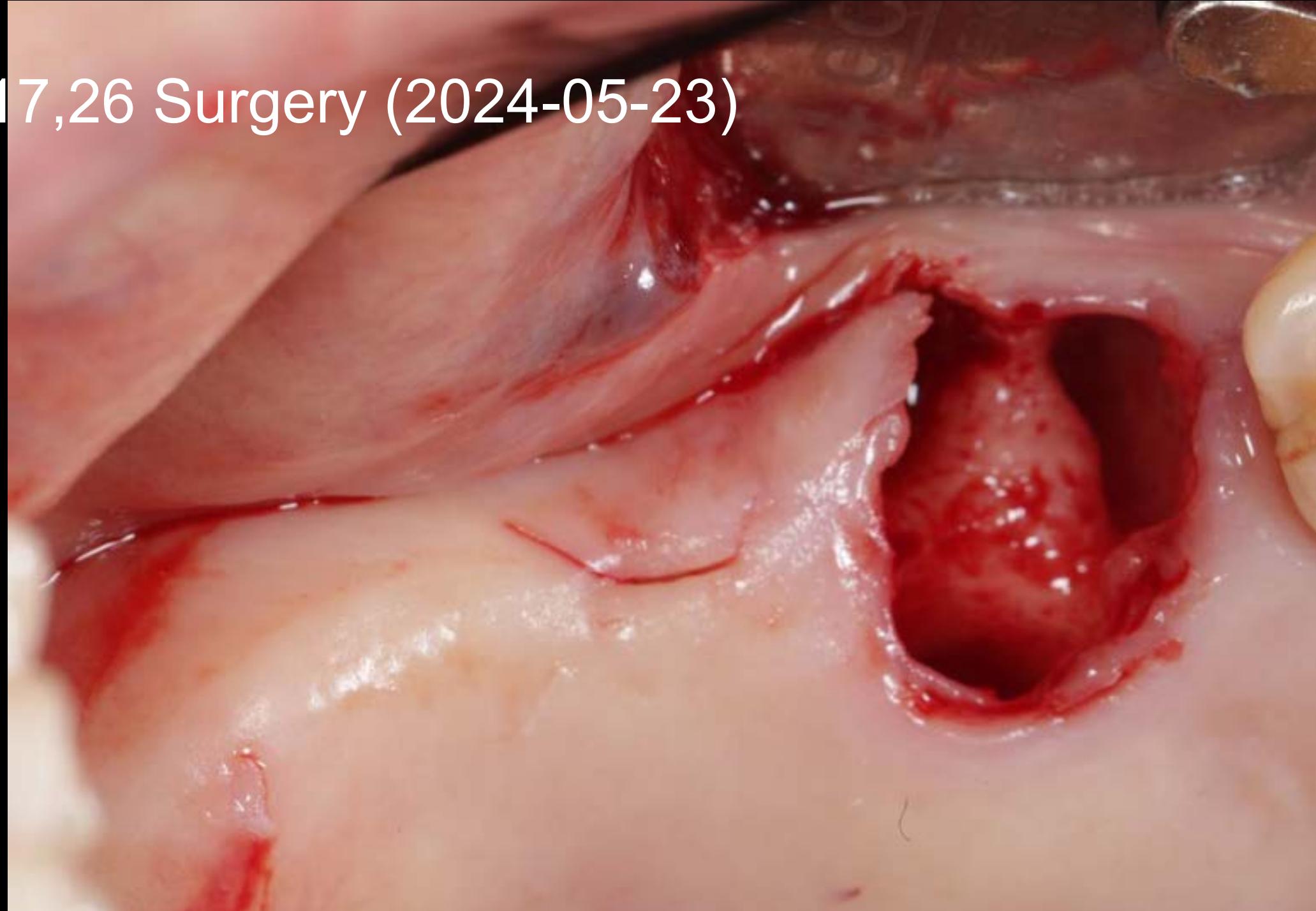
#22,23,24 Healing : 2 months (2024-09-06)



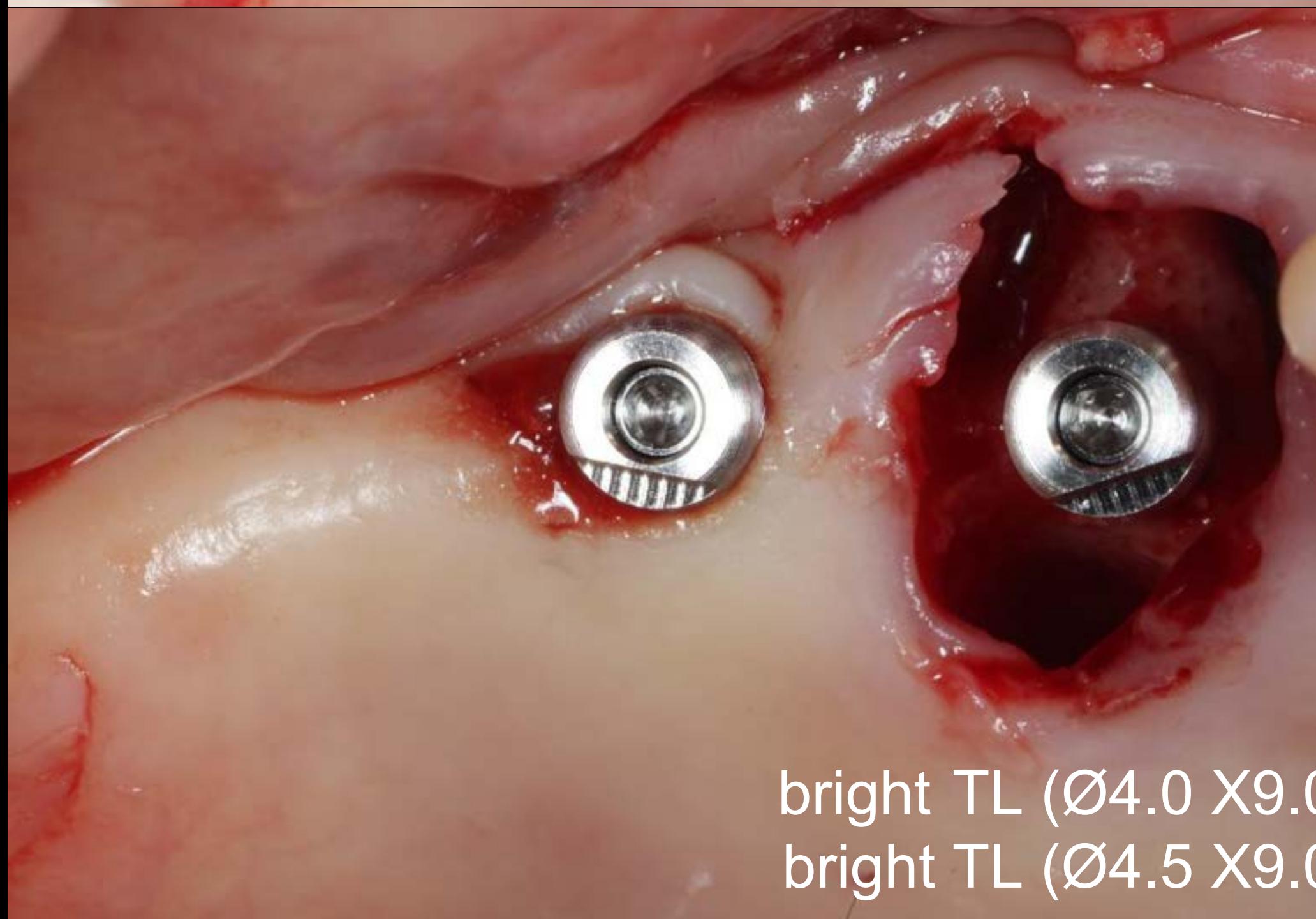
#16,17,26 Surgery (2024-05-23)



#16,17,26 Surgery (2024-05-23)



Parallel pin



bright TL (Ø4.0 X9.0)  
bright TL (Ø4.5 X9.0)



OSTEON™ Xeno Collagen  
Collagen Graft 2  
Suture

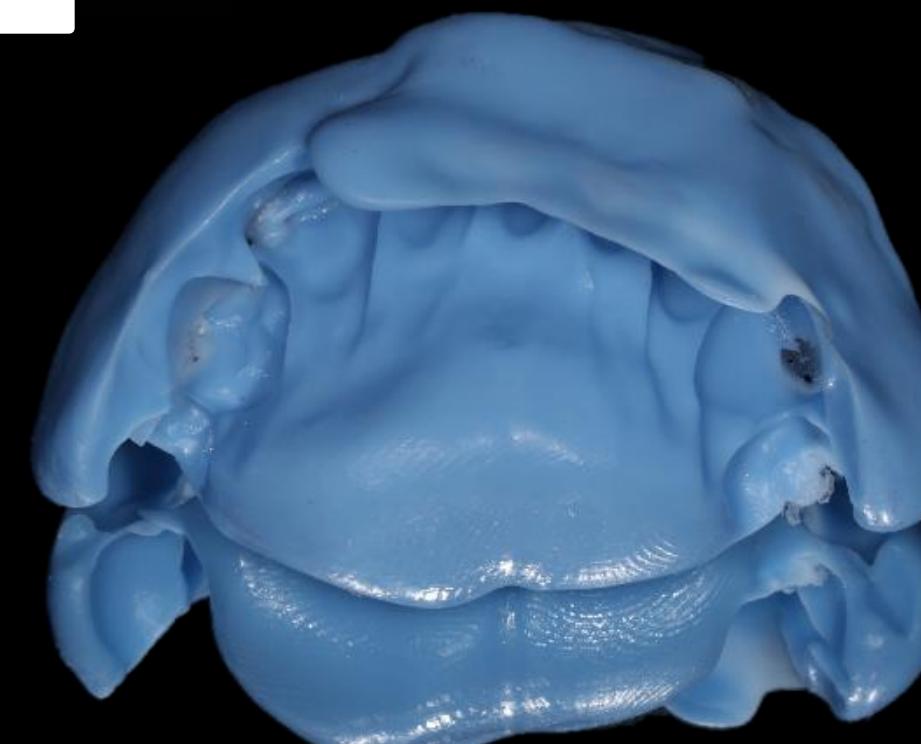
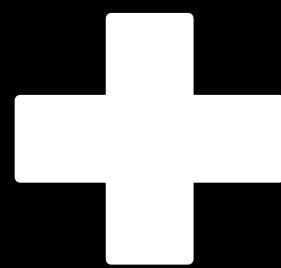
#16,17,26 Healing : 2 weeks (2024-06-05)



#26 Follow up : 6 months (2025-01-17)

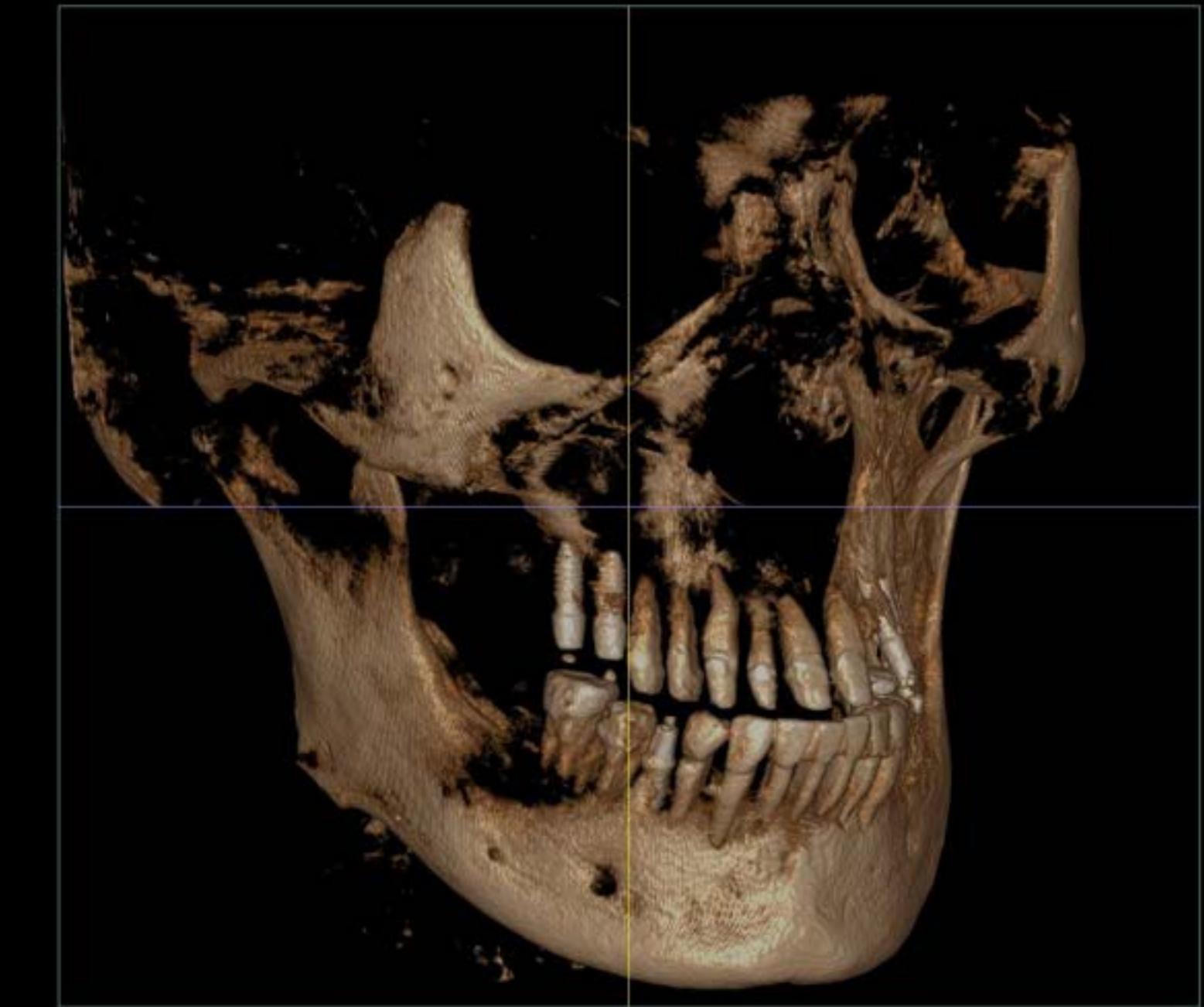
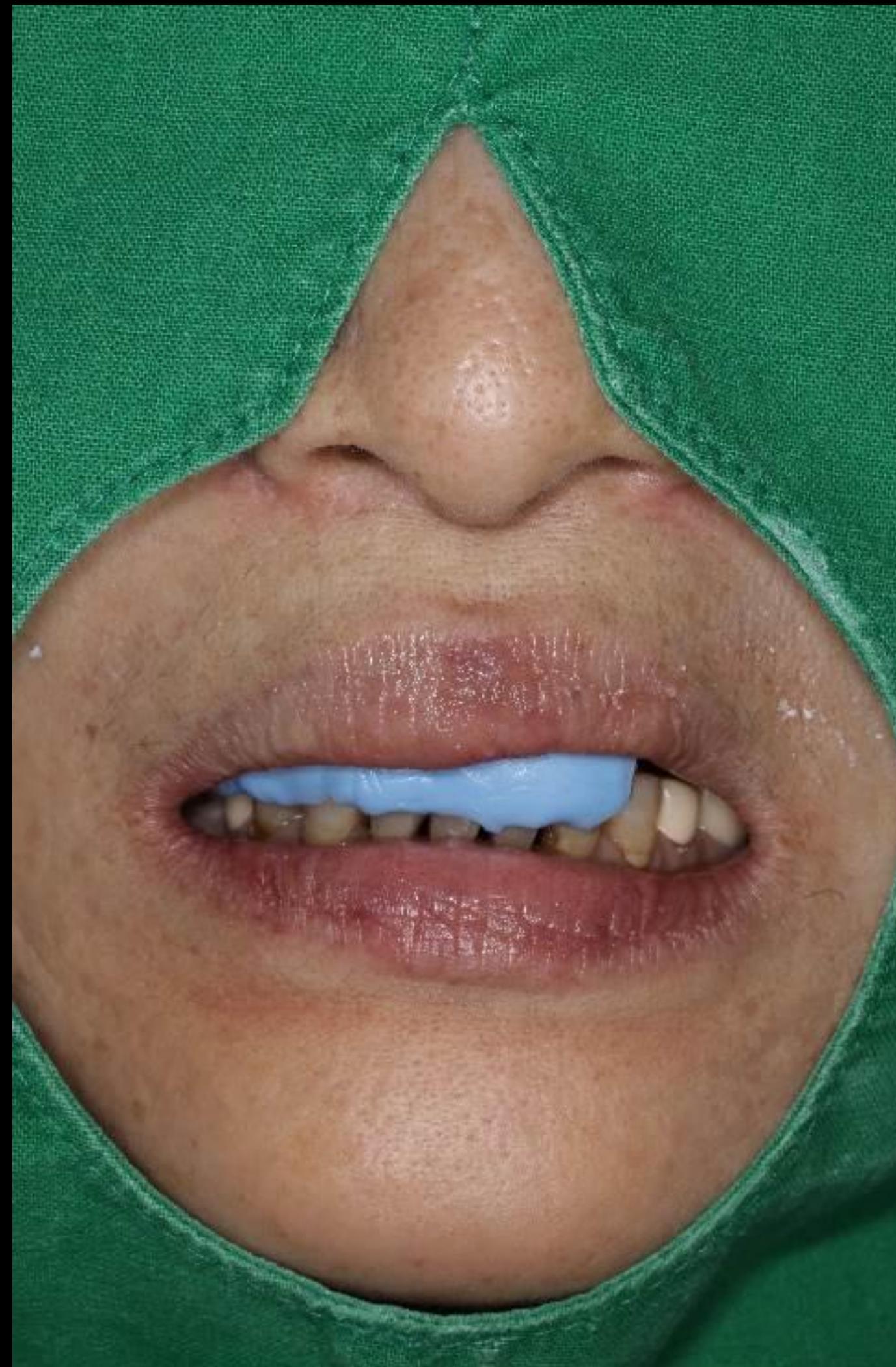


# CT Check Bite



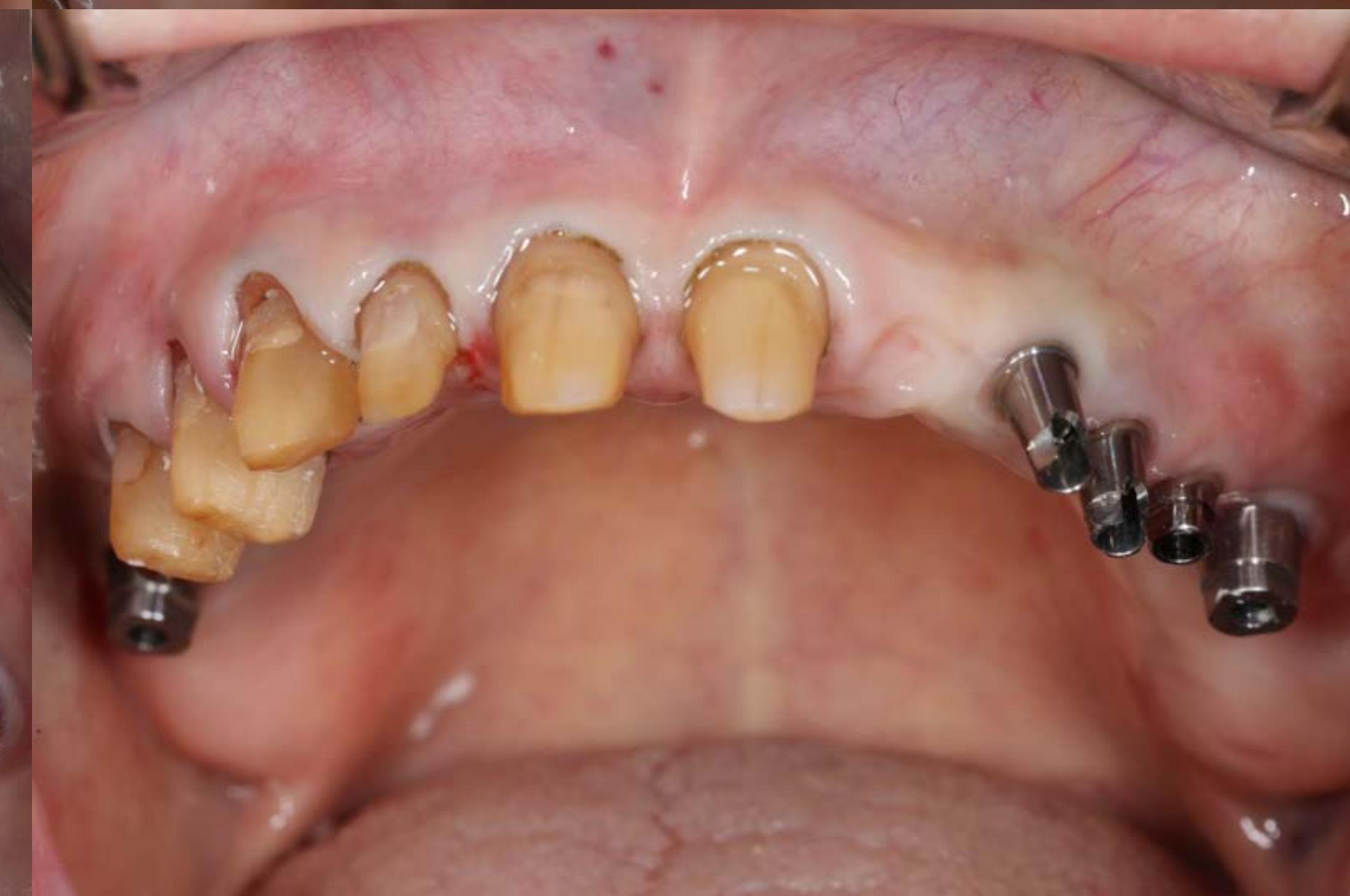
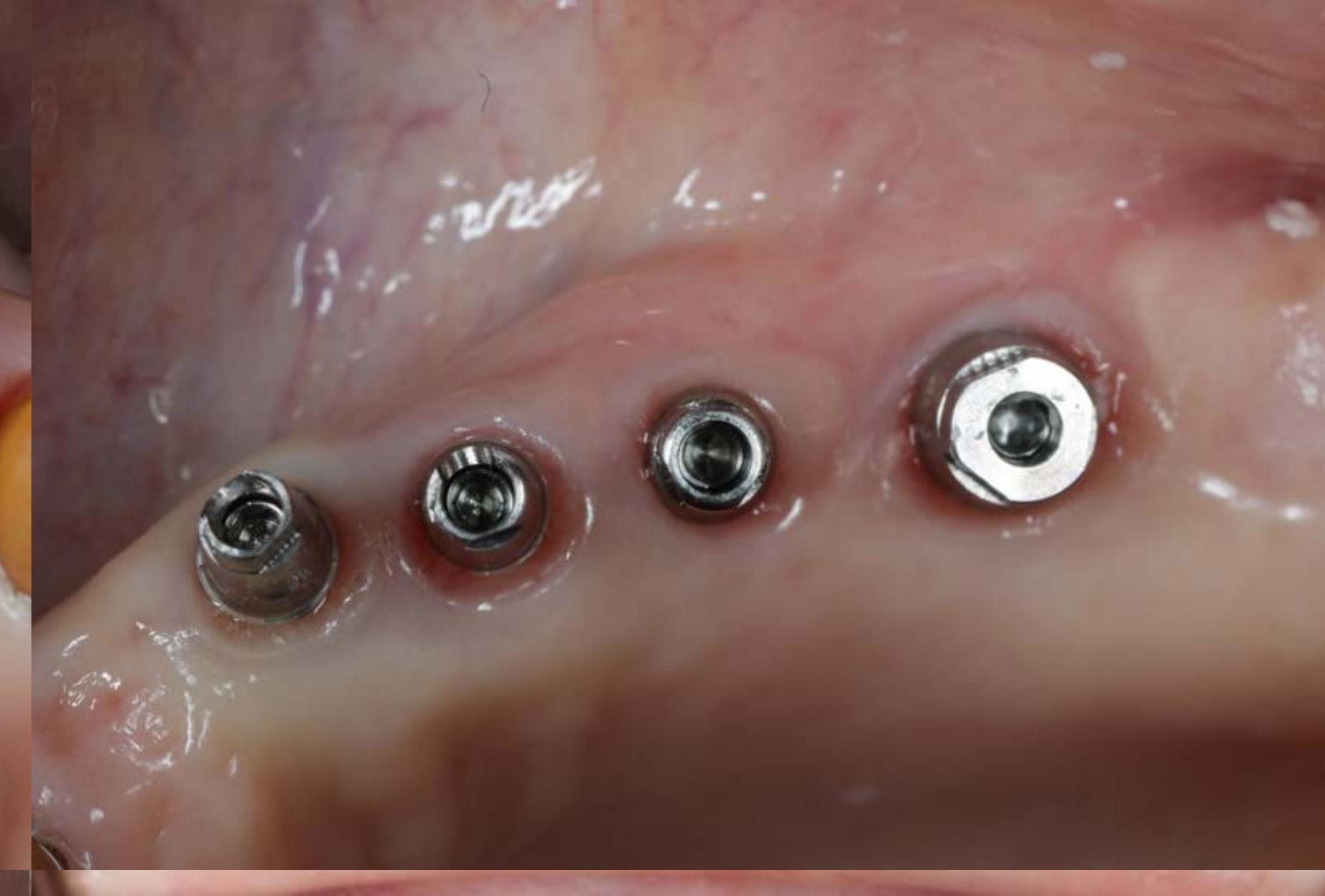
Verified stable occlusion of 2nd provisional crown using  
putty index during CT scan and check bite  
Utilized for fabrication of final prosthesis

# CT Check Bite



Verified stable occlusion of 2nd provisional crown using  
putty index during CT scan and check bite  
Utilized for fabrication of final prosthesis

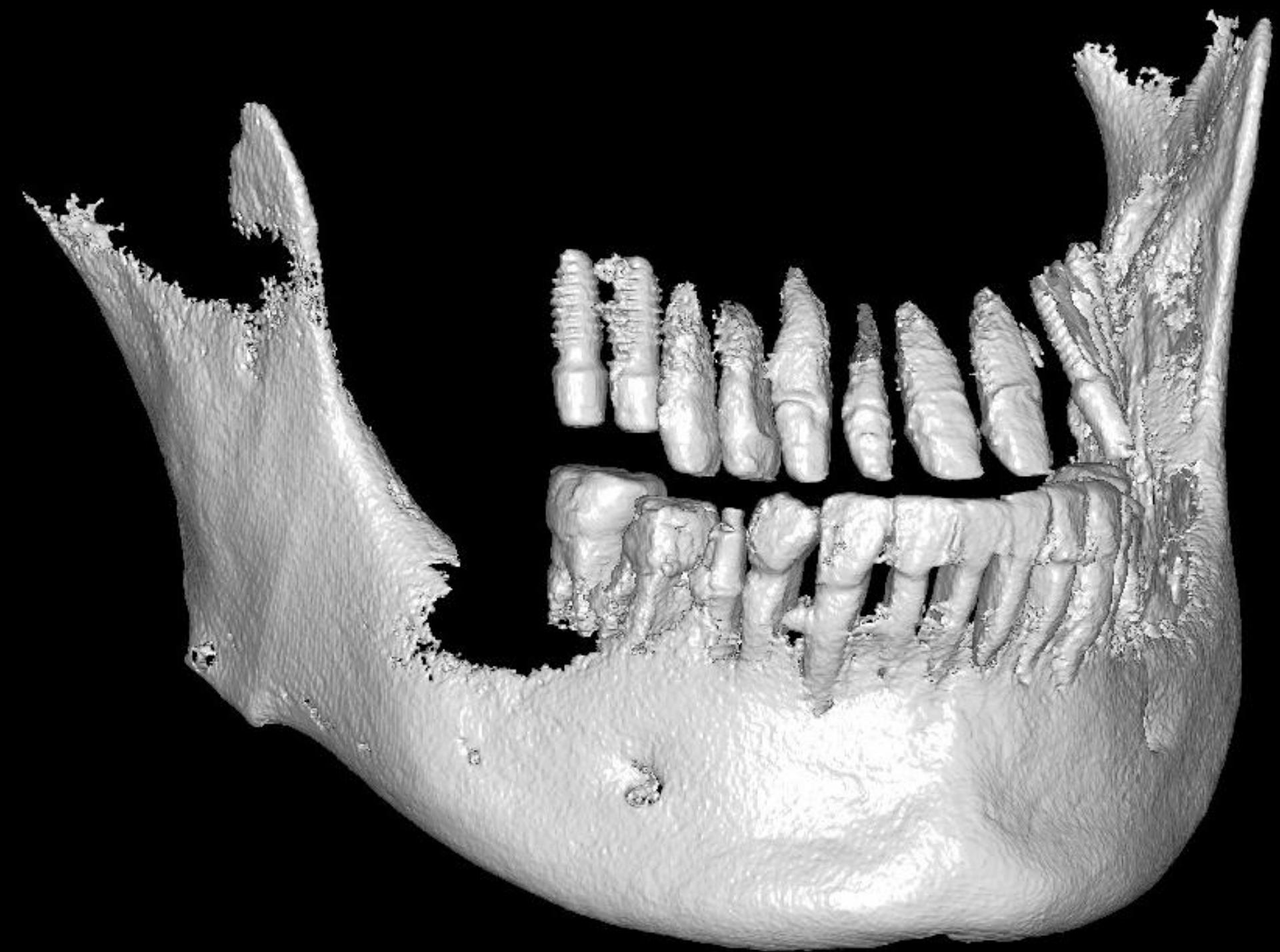
Final Impression (2025-05-19)



Intra Oral Scan (2025-05-22)



# CT Viewer



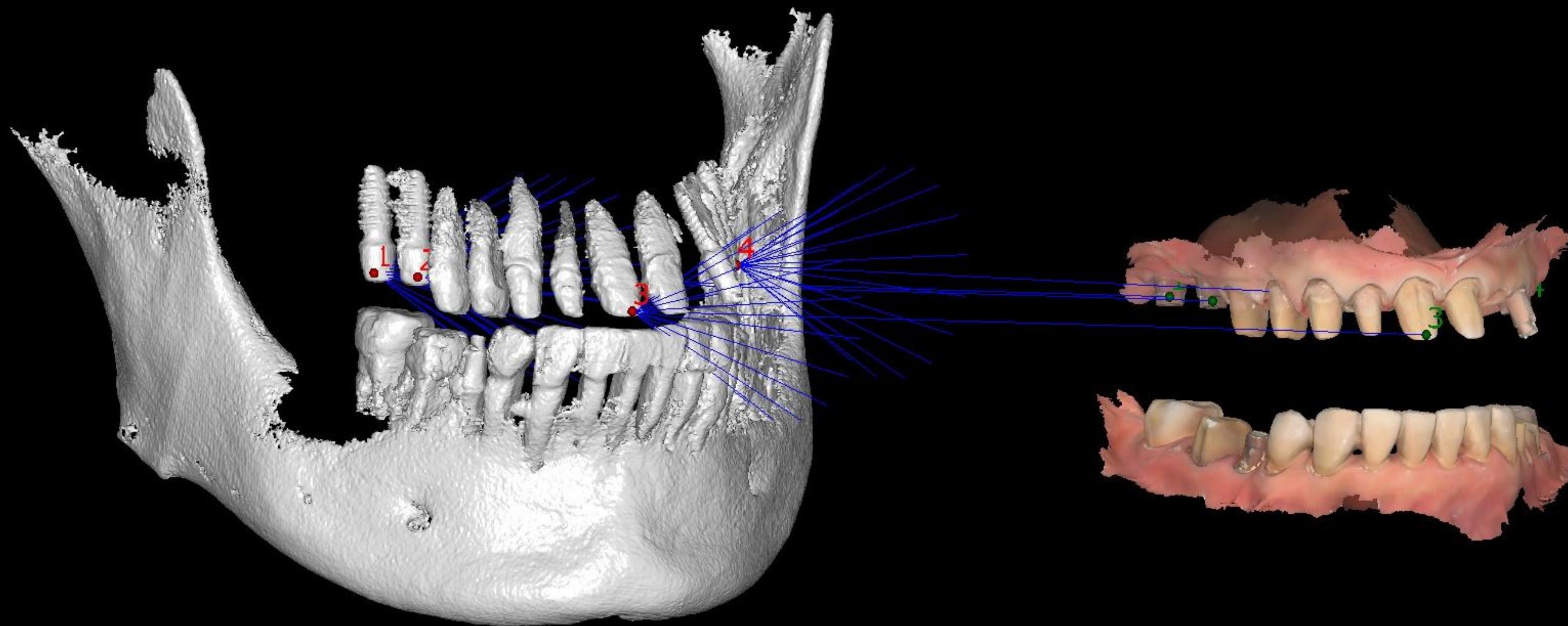
CT check Bite



los scan Data

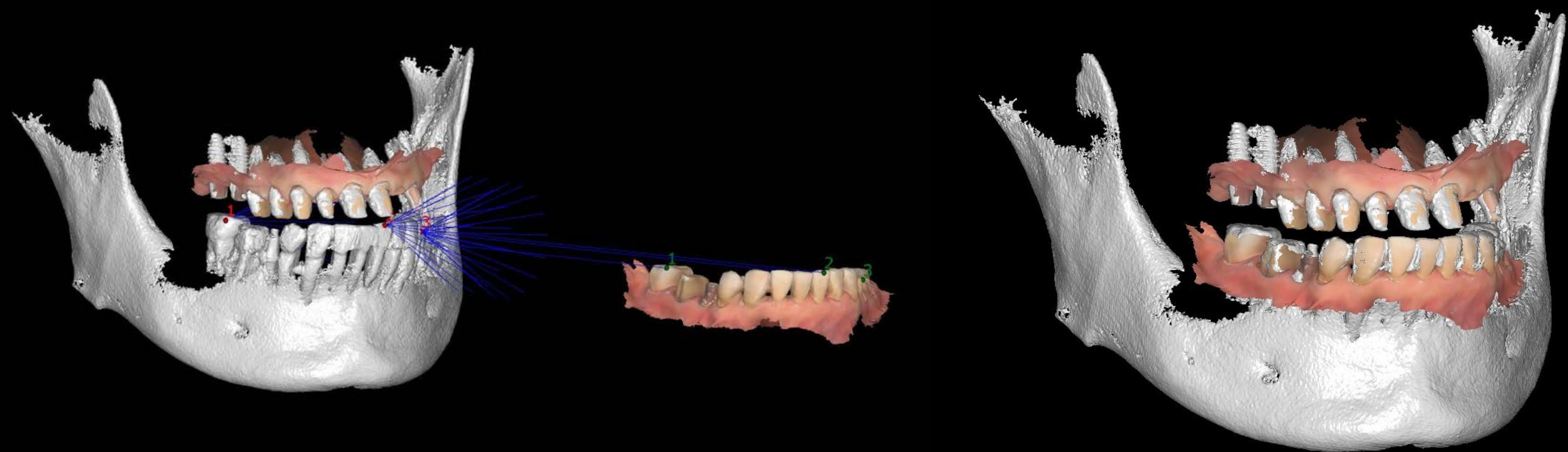
AI Occlusal Plane

# CT Viewer

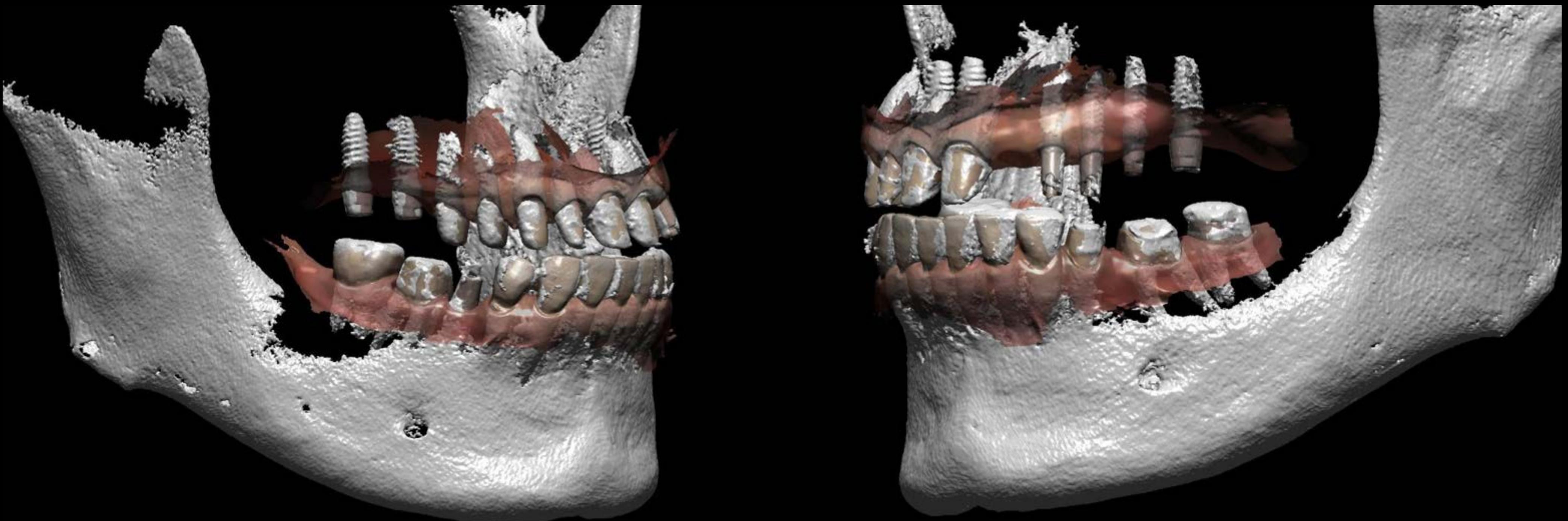


AI Occlusal Plane

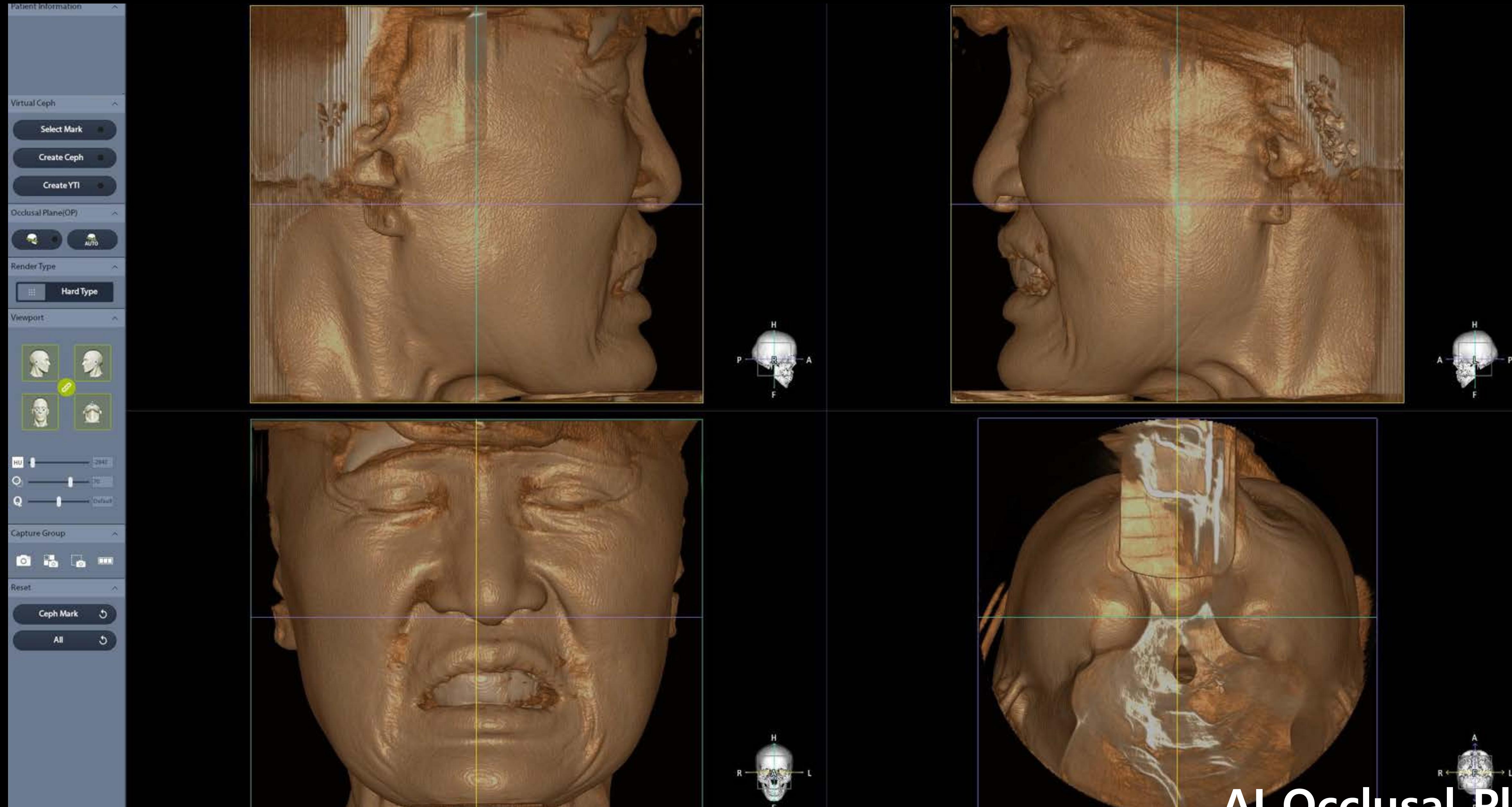
# CT Viewer



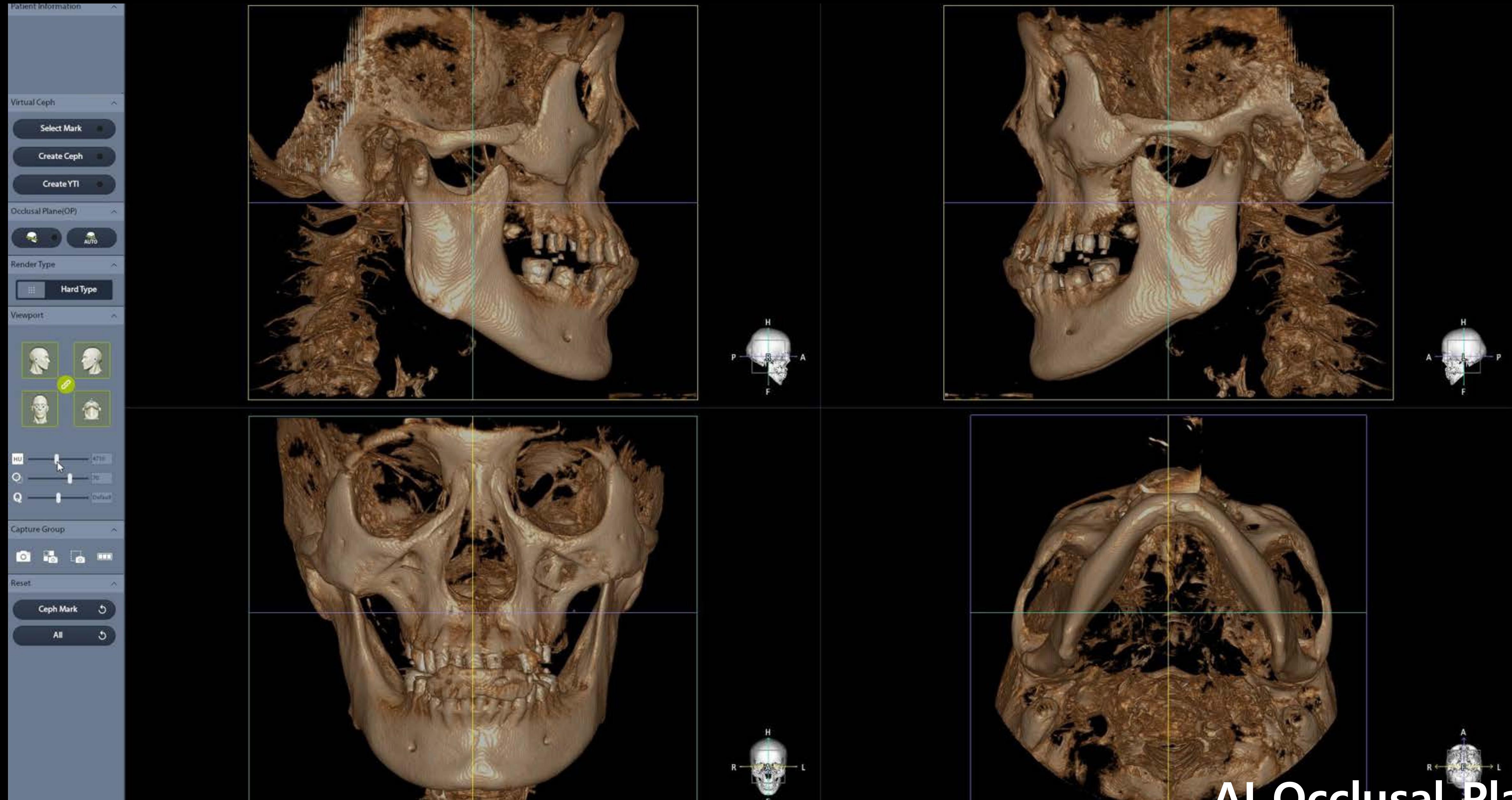
# Cad design



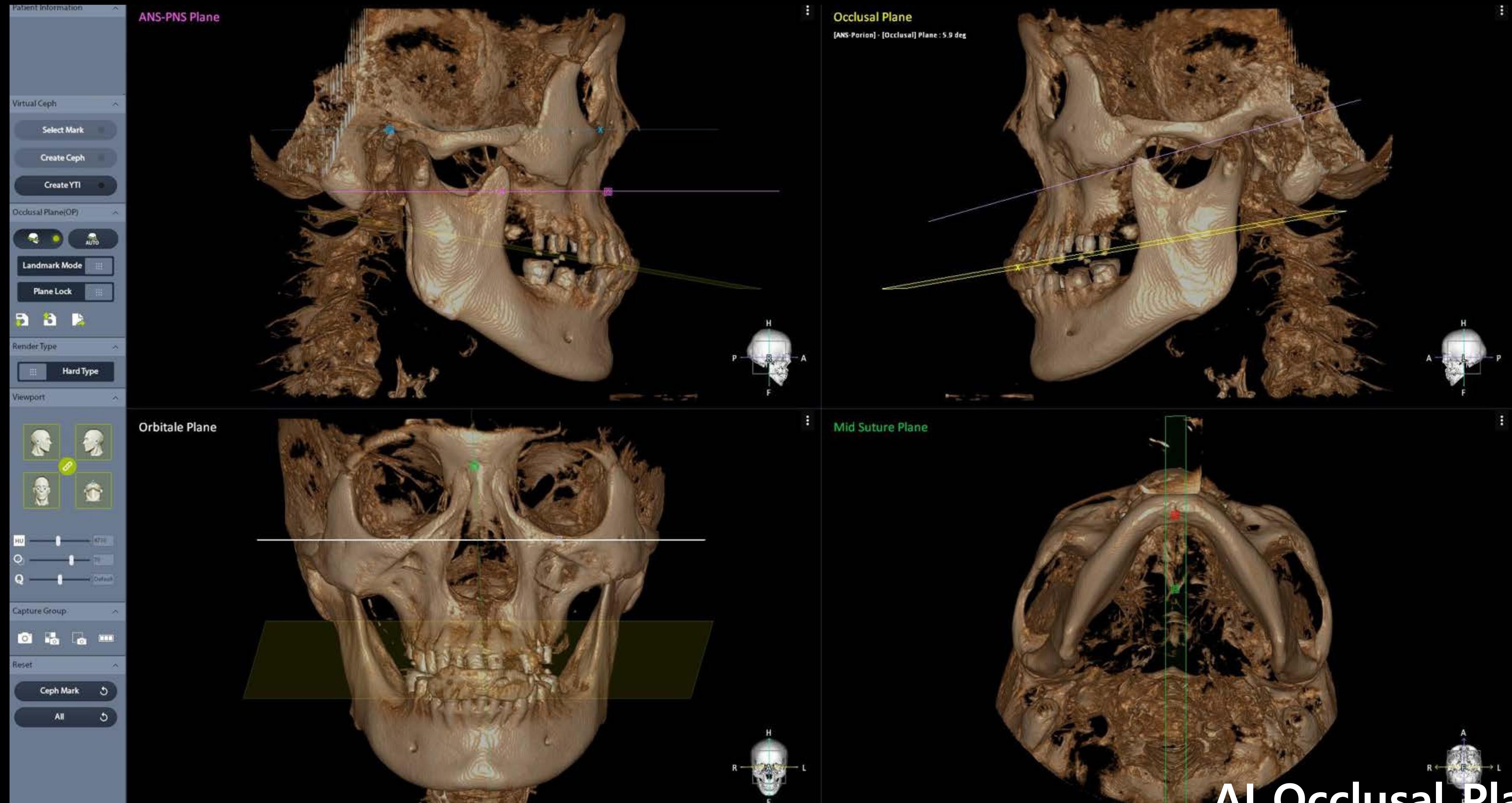
# CT Viewer



# CT Viewer

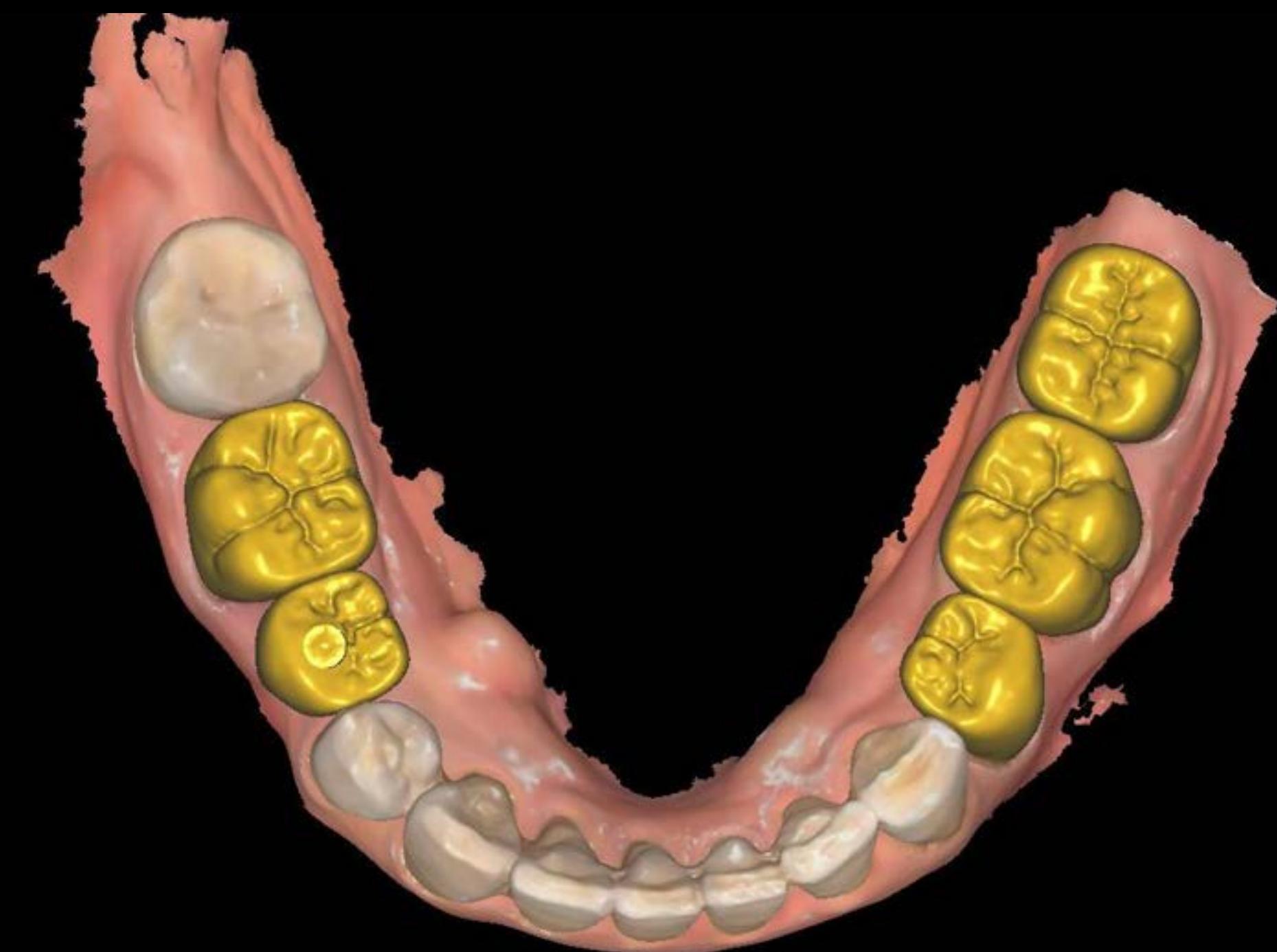
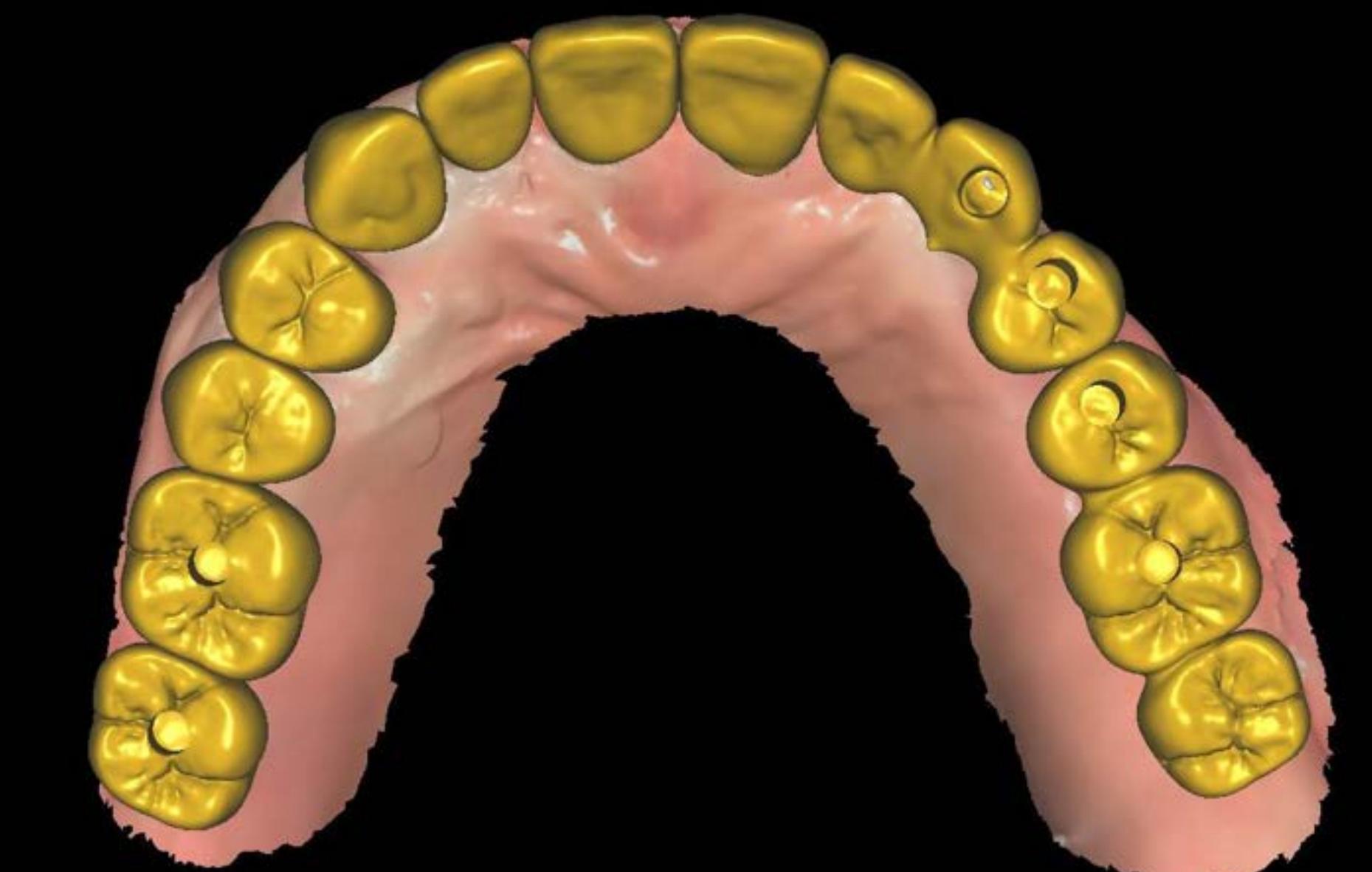


# CT Viewer

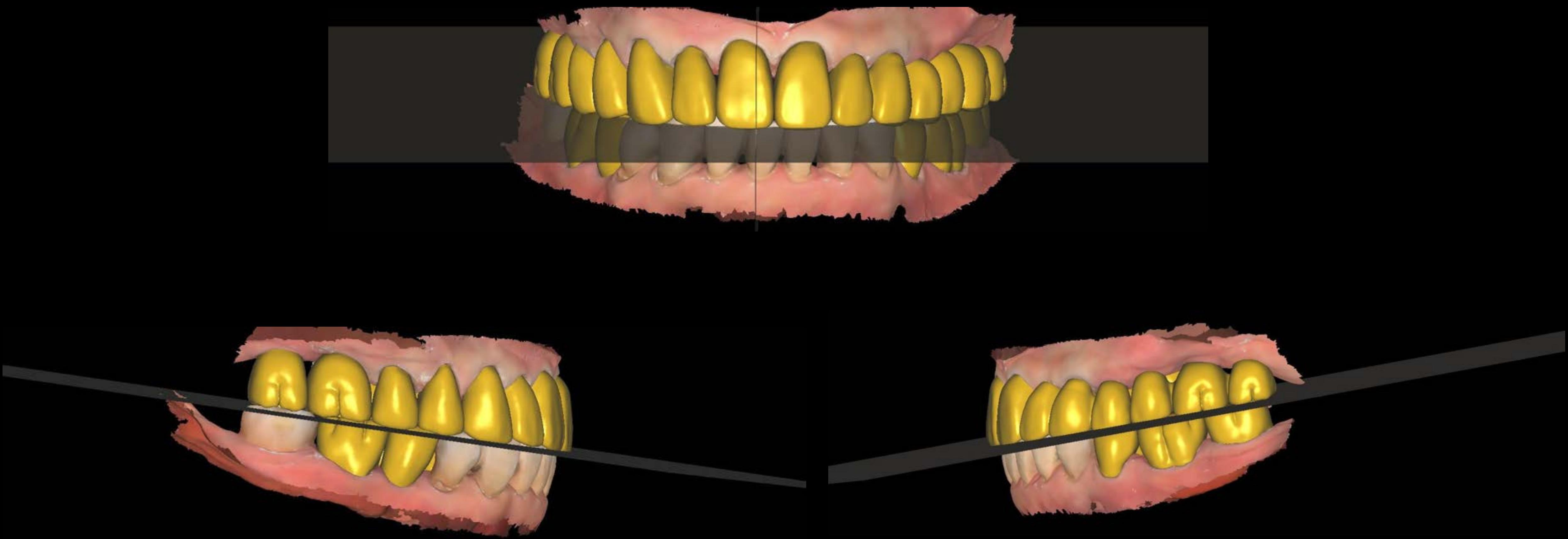


AI Occlusal Plane

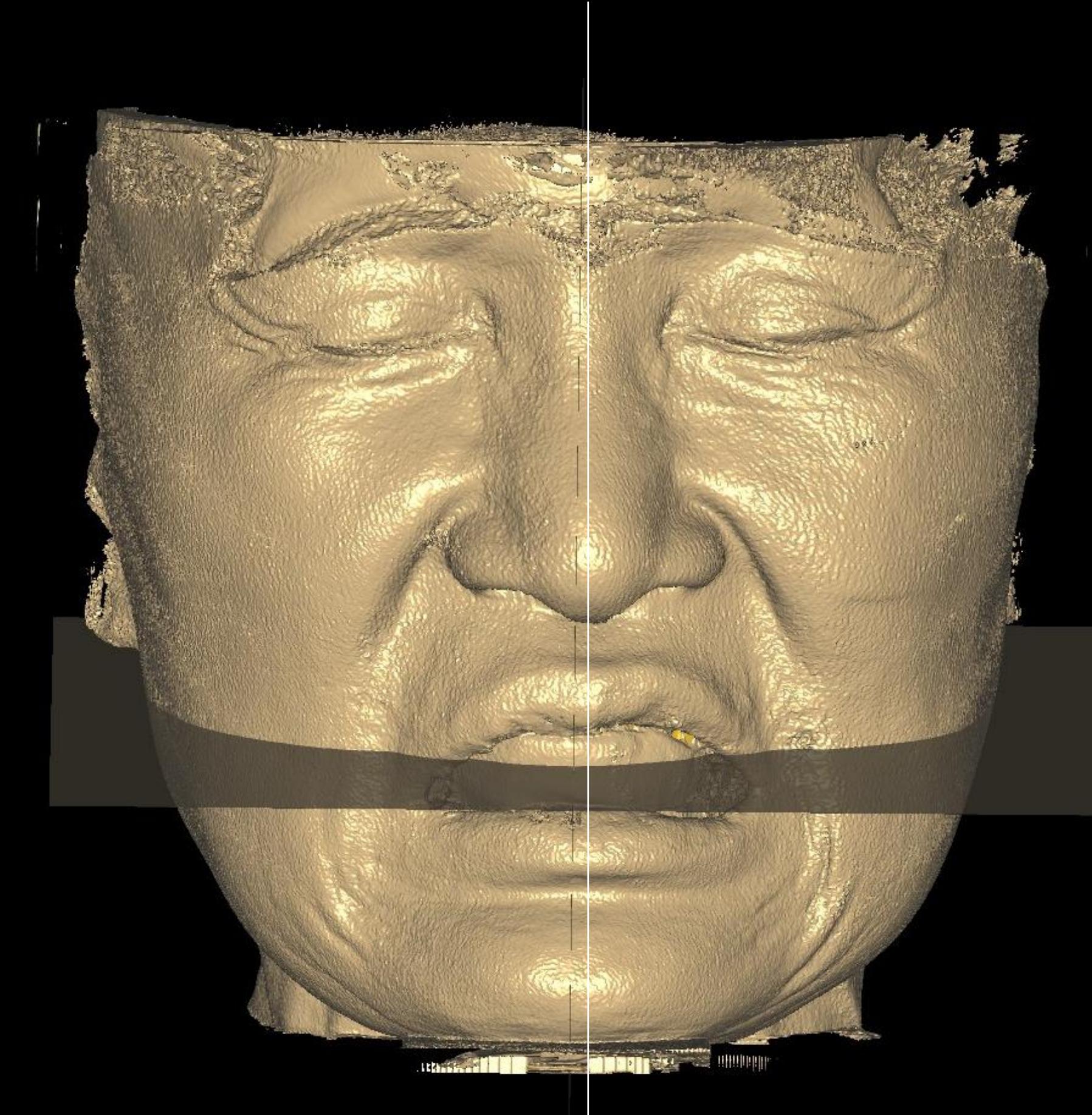
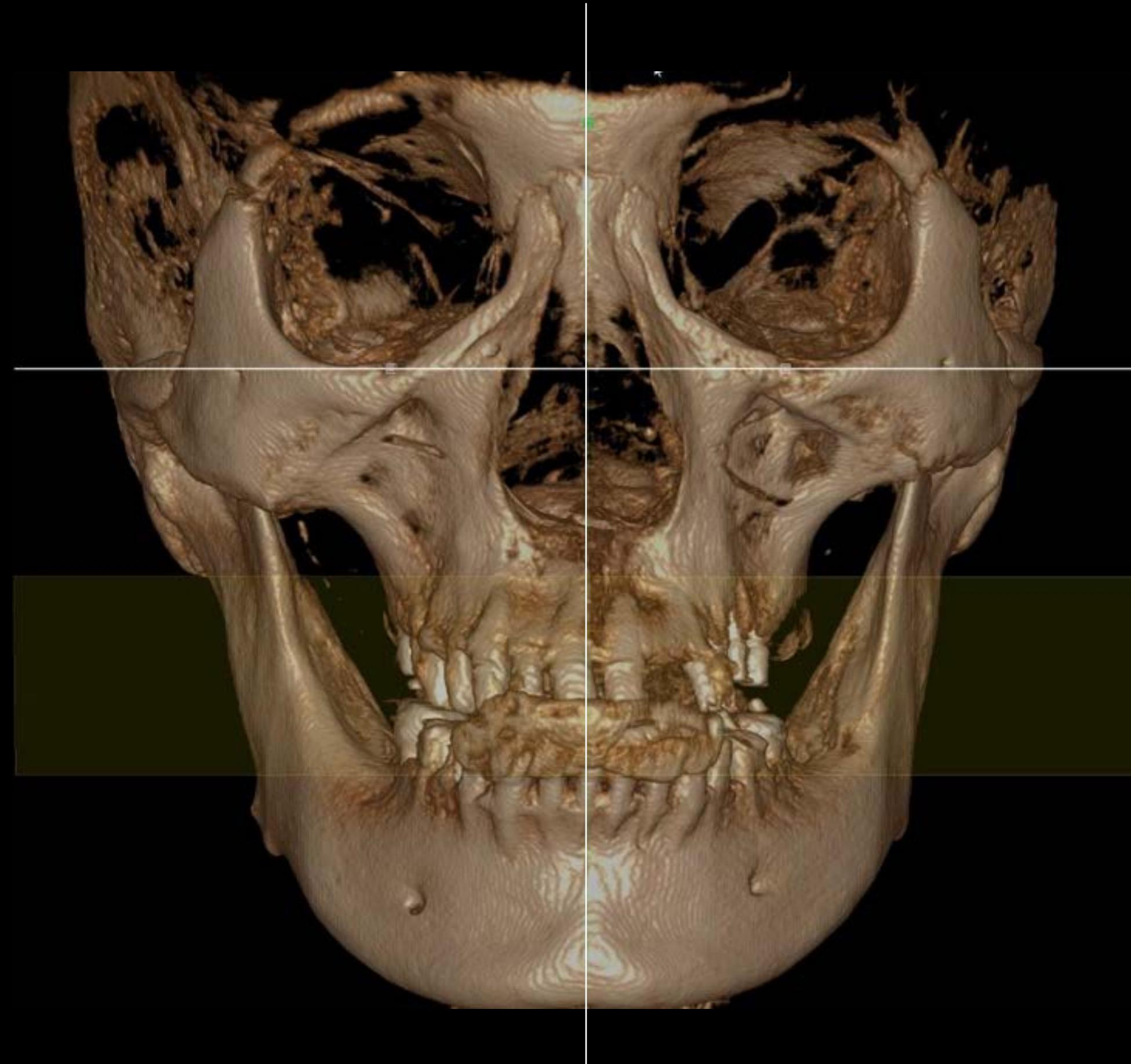
# Cad Design



# Cad Design



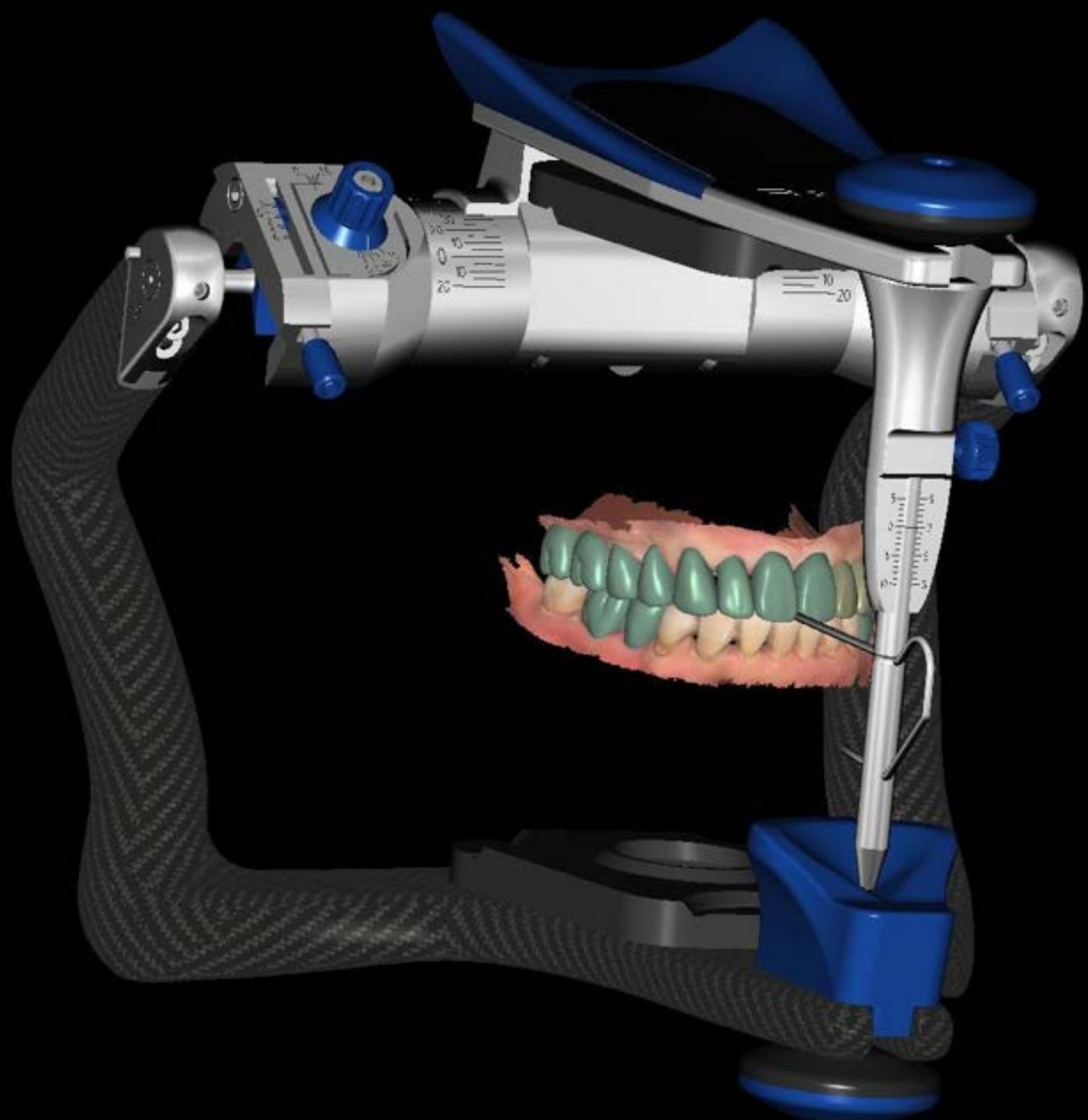
# Cad Design



There is a slight difference between the midlines of hard and soft tissues, so both datasets were used together

AI Occlusal Plane

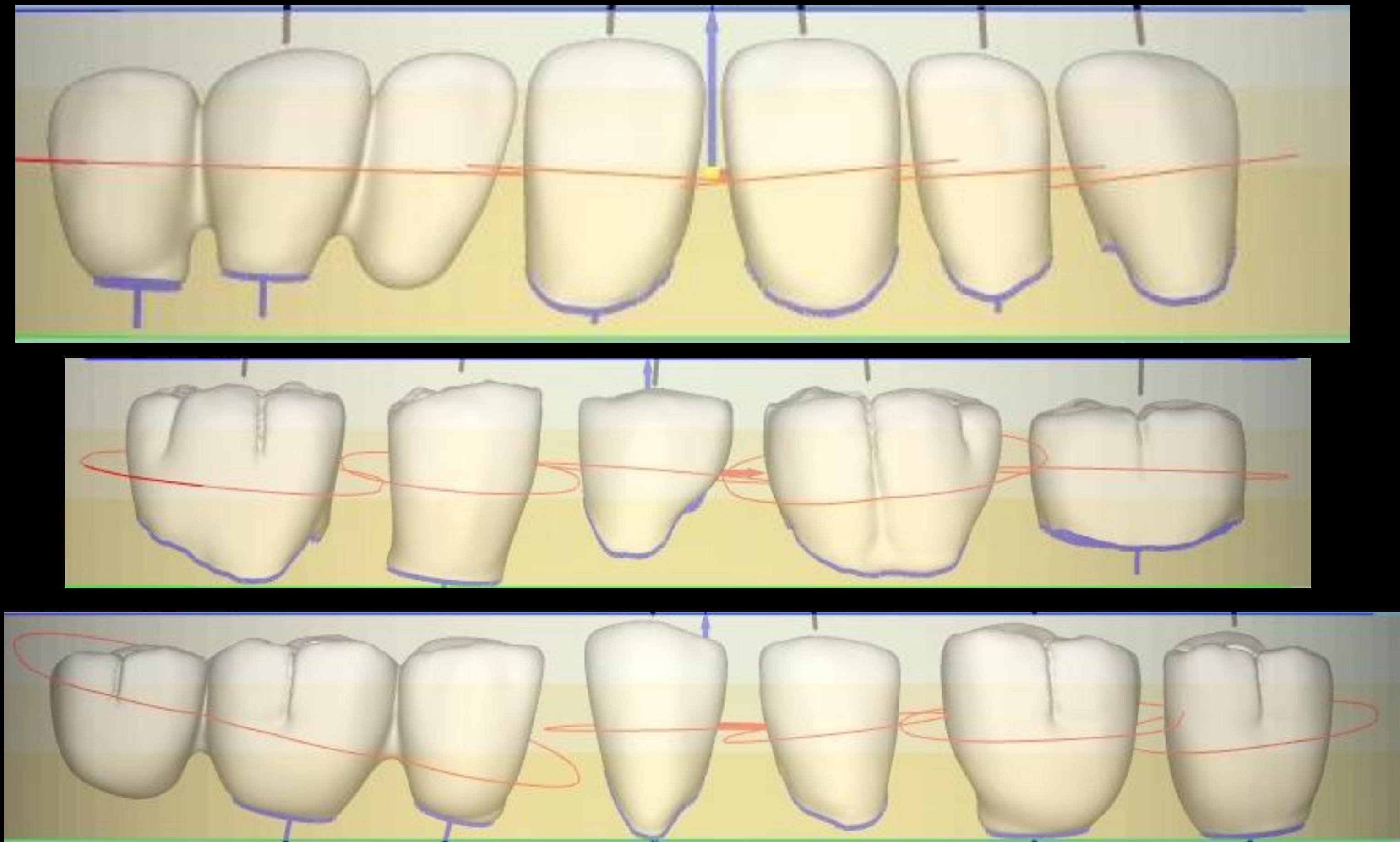
# Virtual Articulator



# Shade Taking

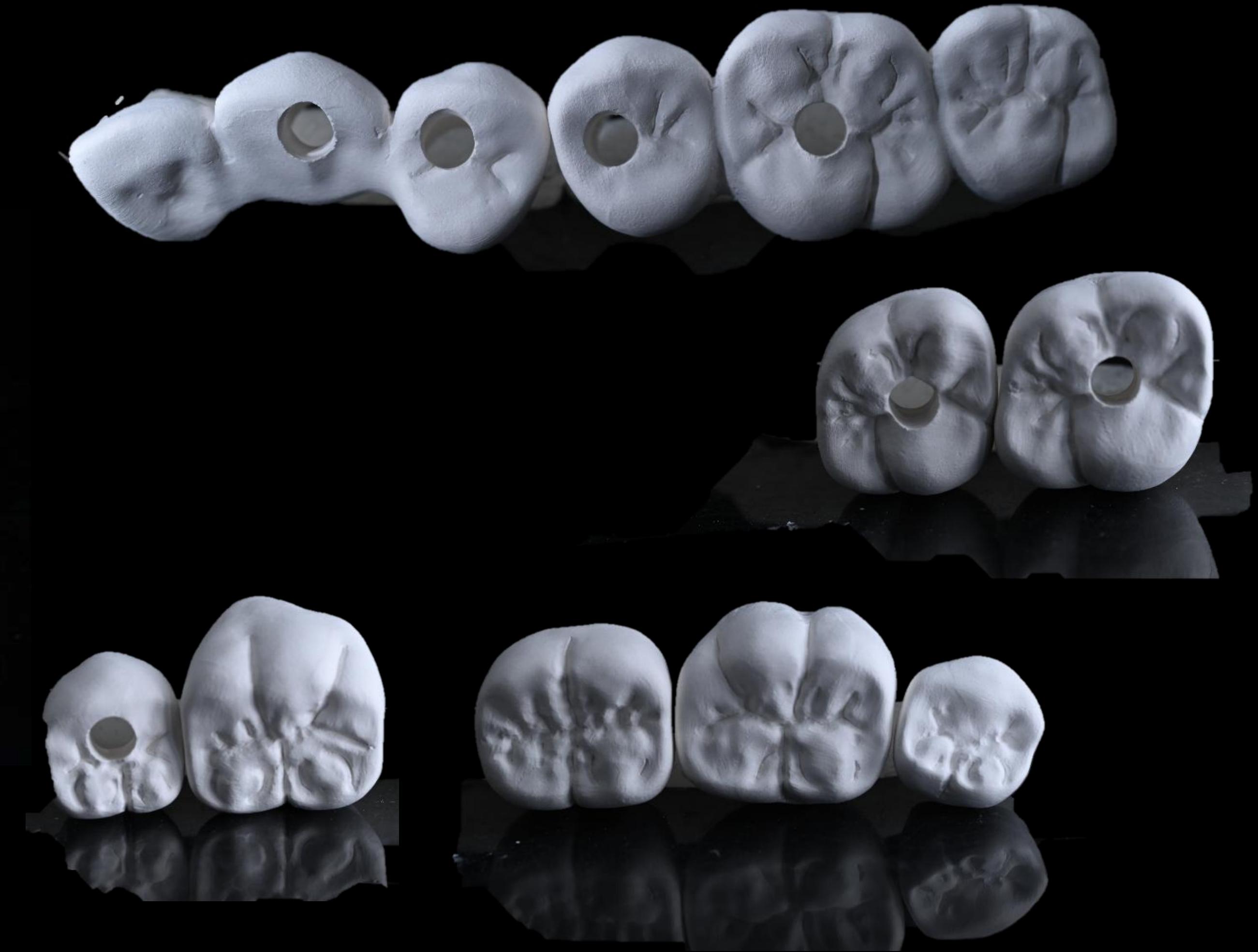


# Hyper Dent



bright 3-Layer

# bright 3-Layer



bright 3-Layer  
No coloring & Stain

# Glazing



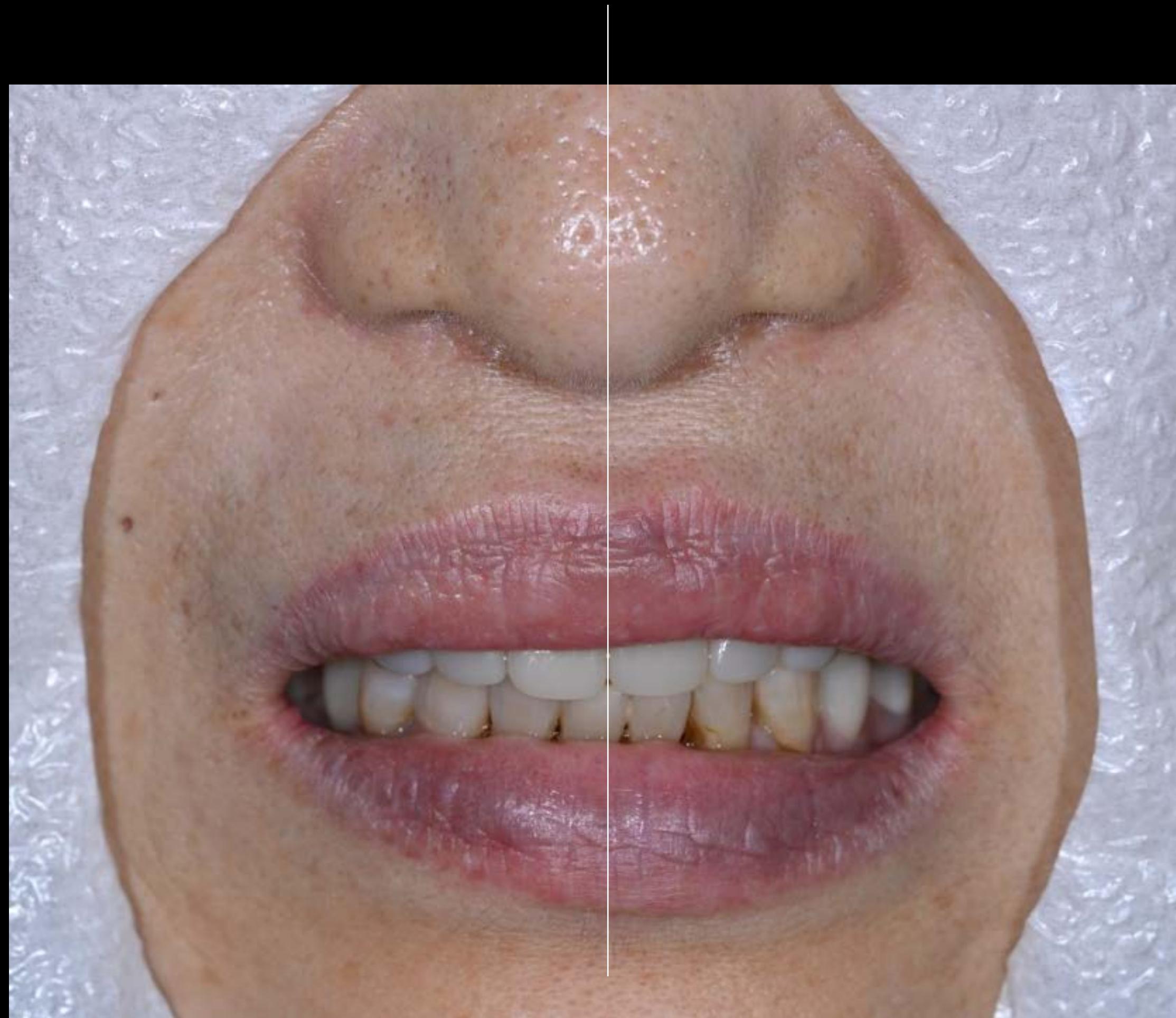
bright 3-Layer  
No coloring & Stain



# Final Prosthesis



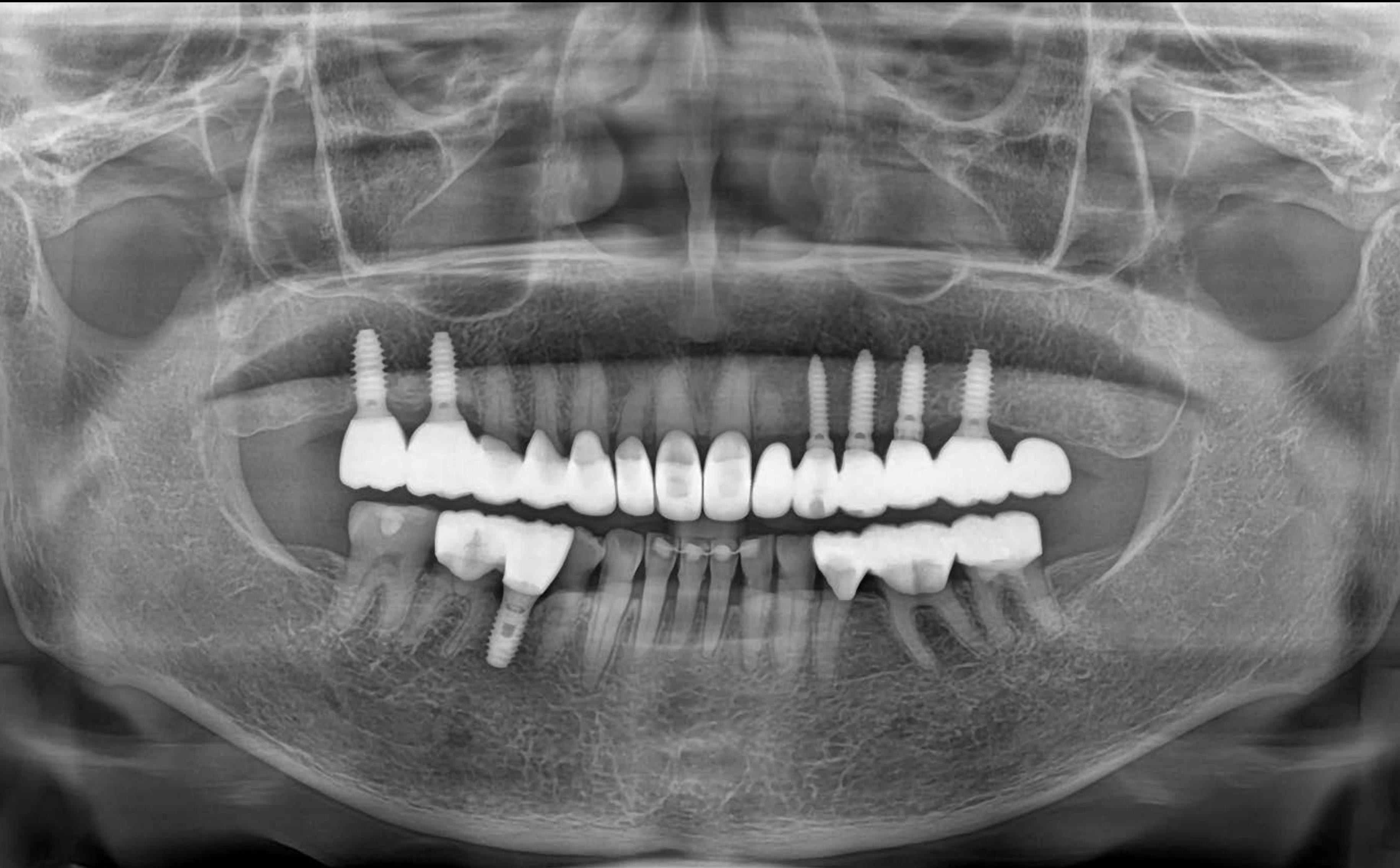
# Final Prosthesis



# Final Prosthesis



# Final Prosthesis



Dentium

# 3D Viewer AI Diagnosis

**\*\* Dentium AI Solutions VOD**