



13rd A.I.O.T. National Congress

Digital i/d Bonding
In Orthodontics

June 3rd – June 4th 2016

Digital i/d Bonding

Rolf Kühnert, Chemnitz, Germany

Introduction

Overview OnyxCeph^{3™}

Workflow

- Preparation

FA_Bonding

Wire_Bonding

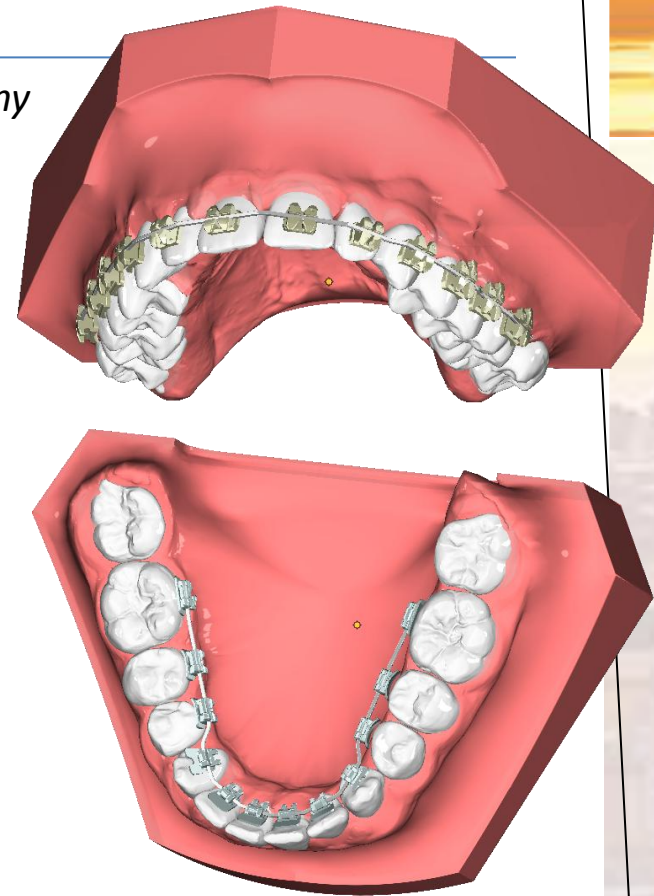
- Virtual Setup
- Bracket-/Wire-Placement

Bracket Position Transfer

- Indirect Methods
- Direct/Mixed Methods

Other Planning Options (Examples)

Summary



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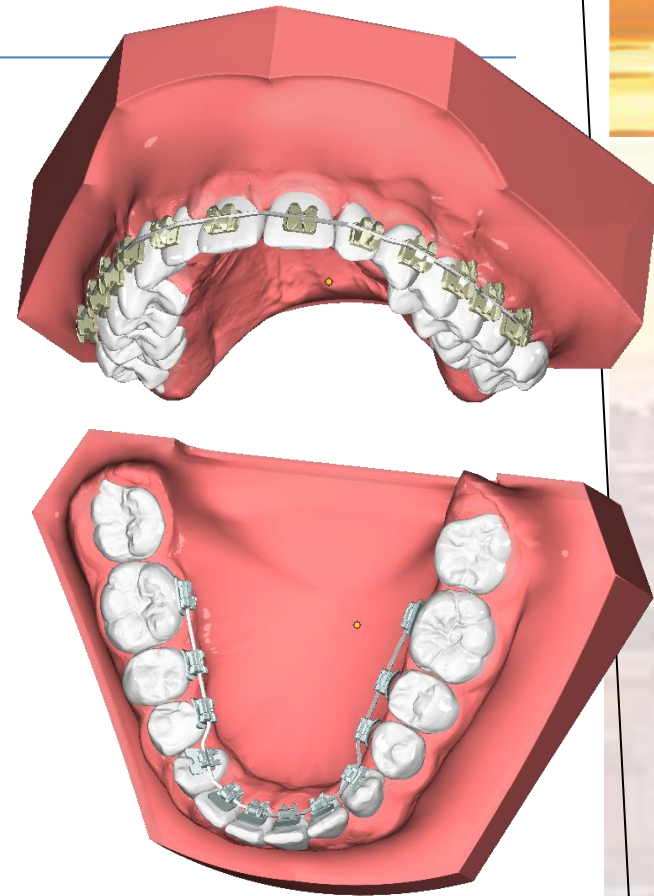
- Virtual Setup
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Bracket Position Transfer

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Other Planning Options (Examples)

Summary



Introduction



Rolf Kühnert *1956

1977–1982 Study of Physics Technical University Chemnitz, Germany

1982–1990 Academy of Sciences, Institute of Mechanics, Electron Microscopy Dptmt.

1986 DSc degree (Physics)

1990–1996 Coordinator Research Project German Research Foundation & EU-CRAFT Project

since 1995 Managing Director Image Instruments GmbH

Introduction



image instruments

GmbH

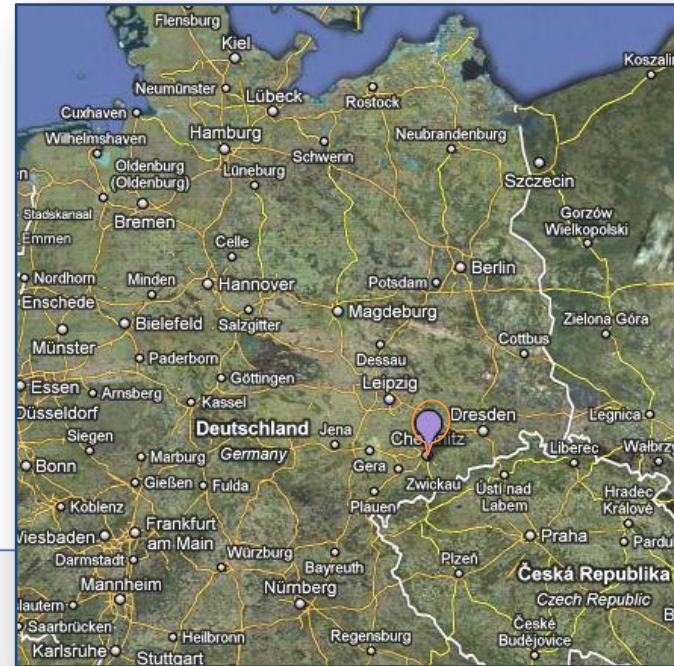
Olbernhauer Str. 5

D 09125 Chemnitz

Germany

+49 371 9093140

info@image-instruments.de



* 1995

[90 m*y]



2015

Digital i/d Bonding

Introduction

► Overview OnyxCeph^{3™}

Workflow

- Preparation

FA_Bonding

Wire_Bonding

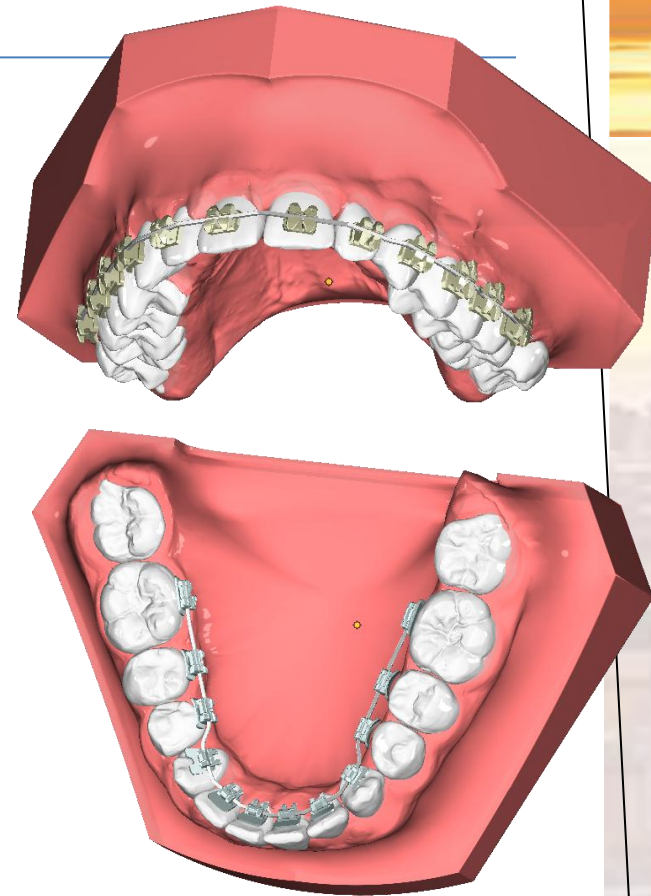
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Other Planning Options (Overview)

Summary



Overview OnyxCeph³™

- ✓ **MDD Medical Product**
- ✓ 2.400+ Registered Users
- ✓ 50+ Countries
- ✓ 8 Languages
- ✓ 5+ Program Versions
- ✓ 2 License Types

Intended Purpose

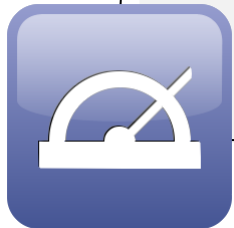
Software OnyxCeph™ is intended for the purpose of managing and diagnostically evaluate two-dimensional and three-dimensional image data by qualified personnel in the framework of dental medicine applications.

Diagnostic and therapeutic evidence based hereon may not primarily or exclusively be derived from measurement results provided by the software.

The intended medical purpose presupposes the regular registration and activation of the software by the user.

Non-registered trial versions of the software are only intended to become familiar with the application but not to be used according to above mentioned medical purpose.

EN 62304



OnyxCeph³™

Overview OnyxCeph³™

Open Subscription License OSL



Purchase License RL+

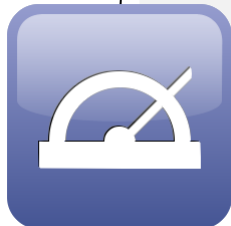


	Deutsch - German
	English
	Русский - Russian
	Español - Spanish
	Italiano - Italian
	Français - French
	Čech - Czech
	Magyar - Hungarian
	한국 - Korean
	Slovenčina - Slovak

PRICES

Program Version	OSL	RL+	Support
2D Basic	100 p.a.	900	99 p.a.
3D Basic	200 p.a.	1.800	99 p.a.
2D Pro	300 p.a.	2.700	99 p.a.
3D Pro	400 p.a.	3.600	99 p.a.
3D Lab	n/a	4.800	99 p.a.

Prices in EUR plus VAT, if applicable



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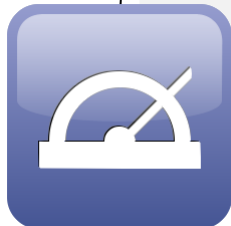
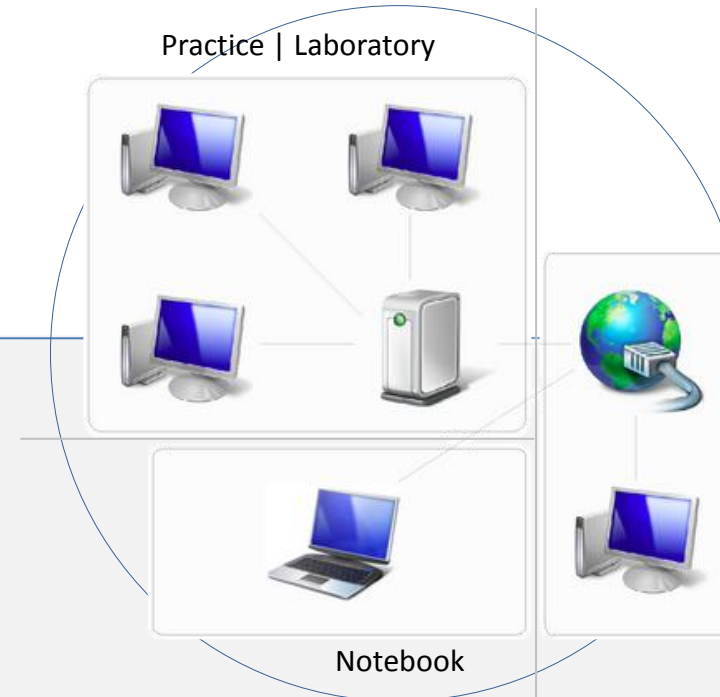
Client-/Server **Windows™ Application**
incl. **NexusDB-SQL Data Base** for

- Image Archiving
- Image Diagnostics
- Image-Based Treatment Planning
- Patient Education

for 2D|3D Image Data in

- Orthodontics
- General Dentistry
- OMS

► *All-In-One Ortho Imaging Software* ◀



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Overview OnyxCeph³™

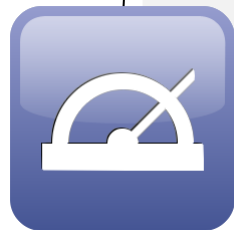
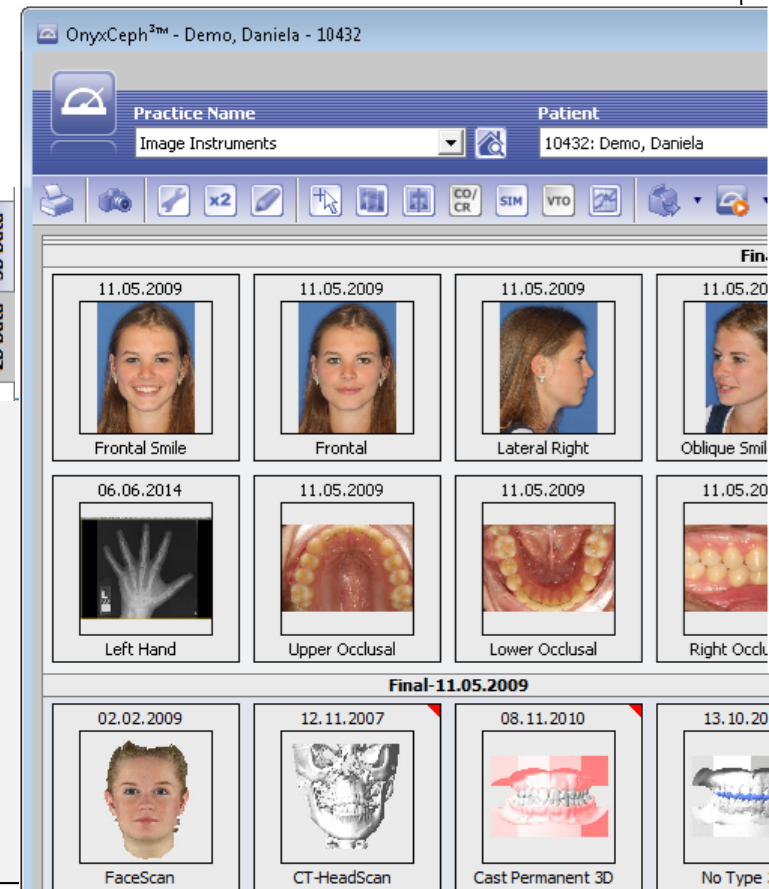
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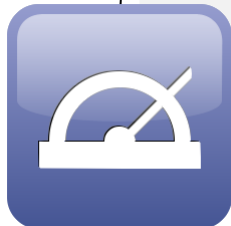
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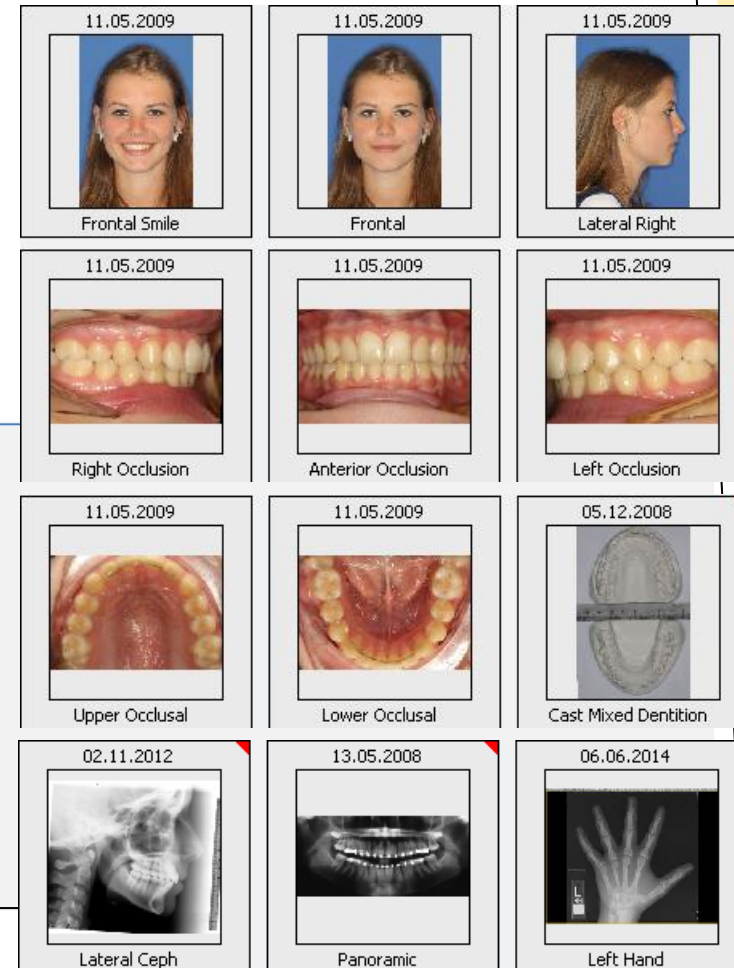
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[67 pre-defined 2D Image Types]



Overview OnyxCeph³™

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Client-/Server Windows™ Application
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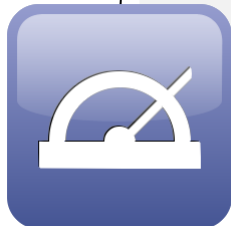
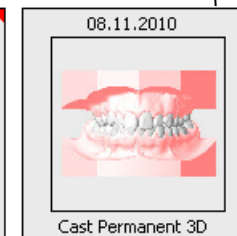
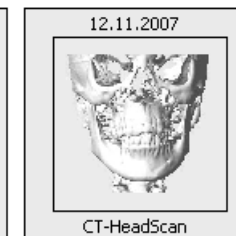
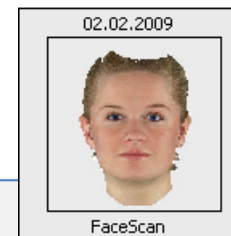
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[8 pre-defined 3D Image Types]



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Overview OnyxCeph³™

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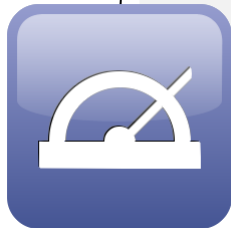
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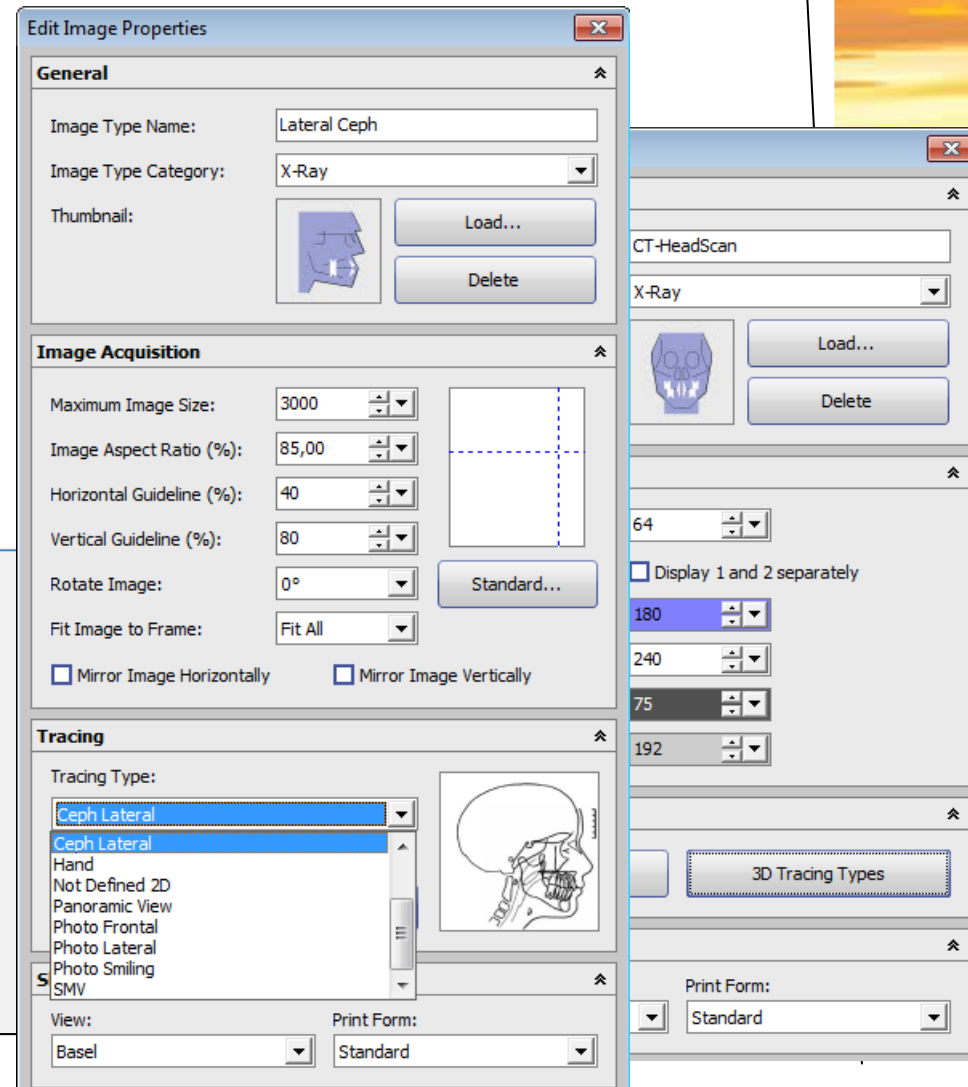
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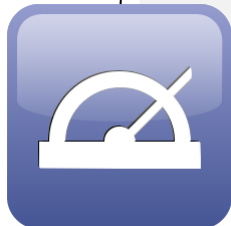
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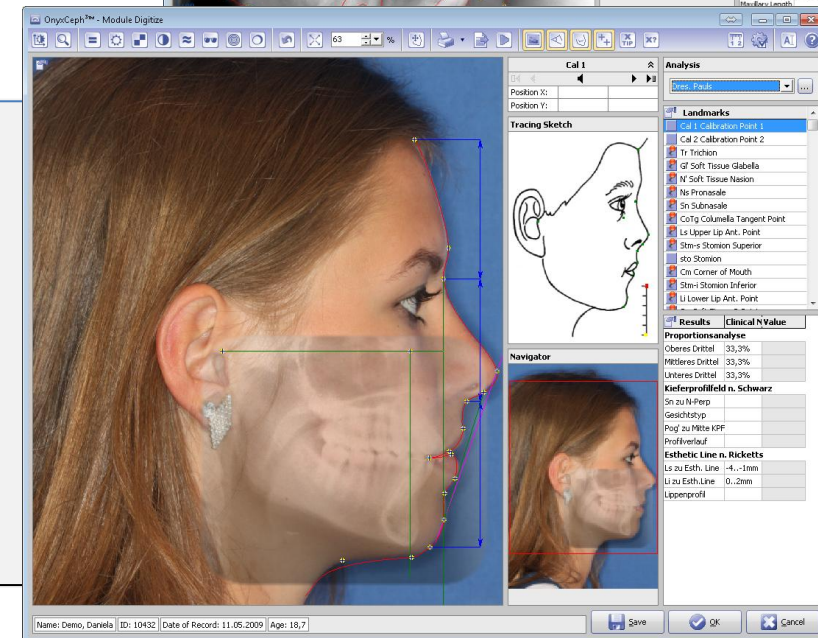
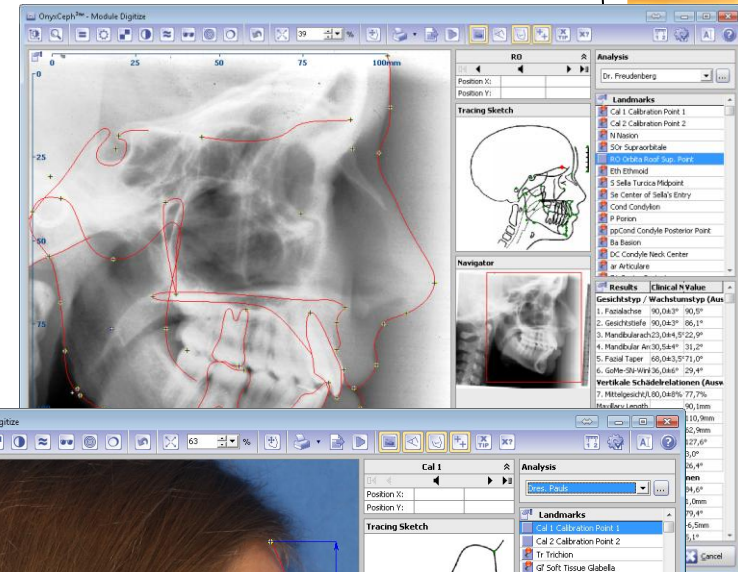
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[12 Tracing Types 2D]



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Overview OnyxCeph^{3™}

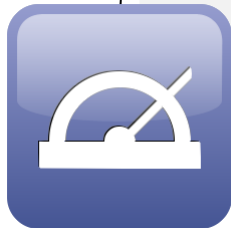
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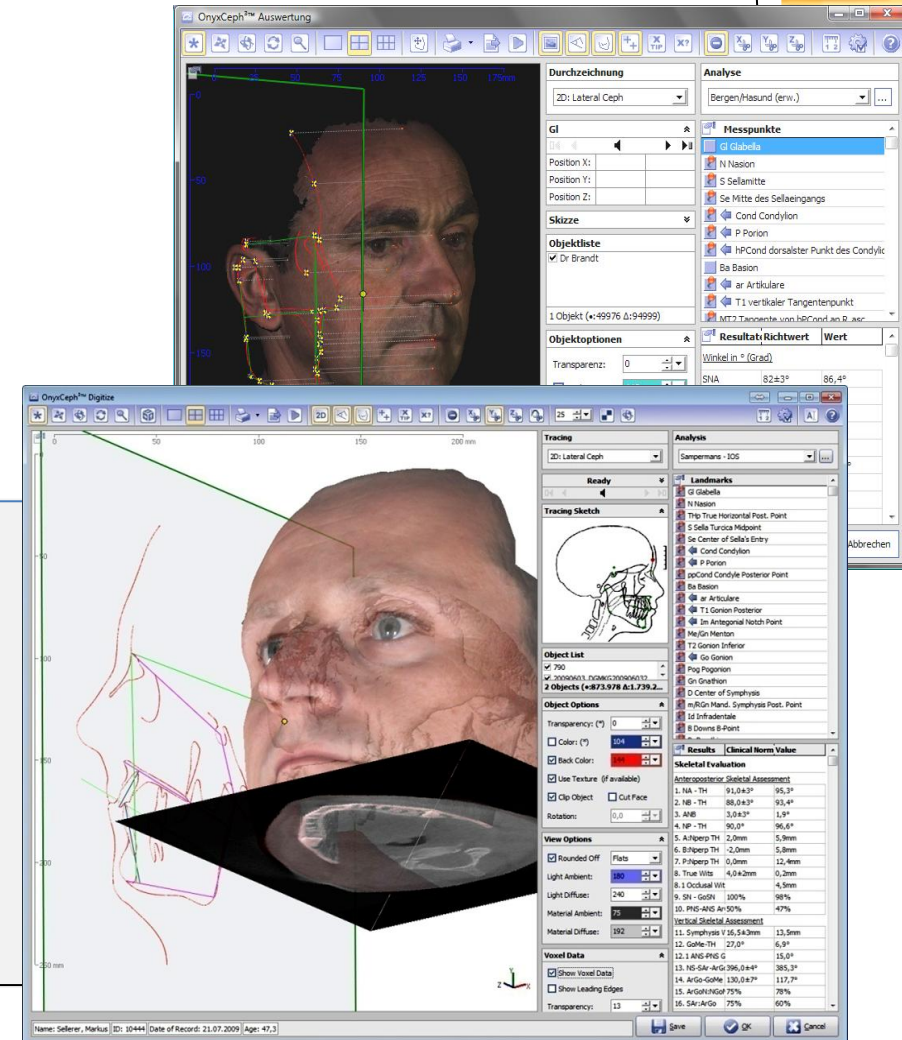
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[5 Tracing Types 3D]



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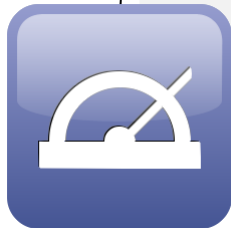
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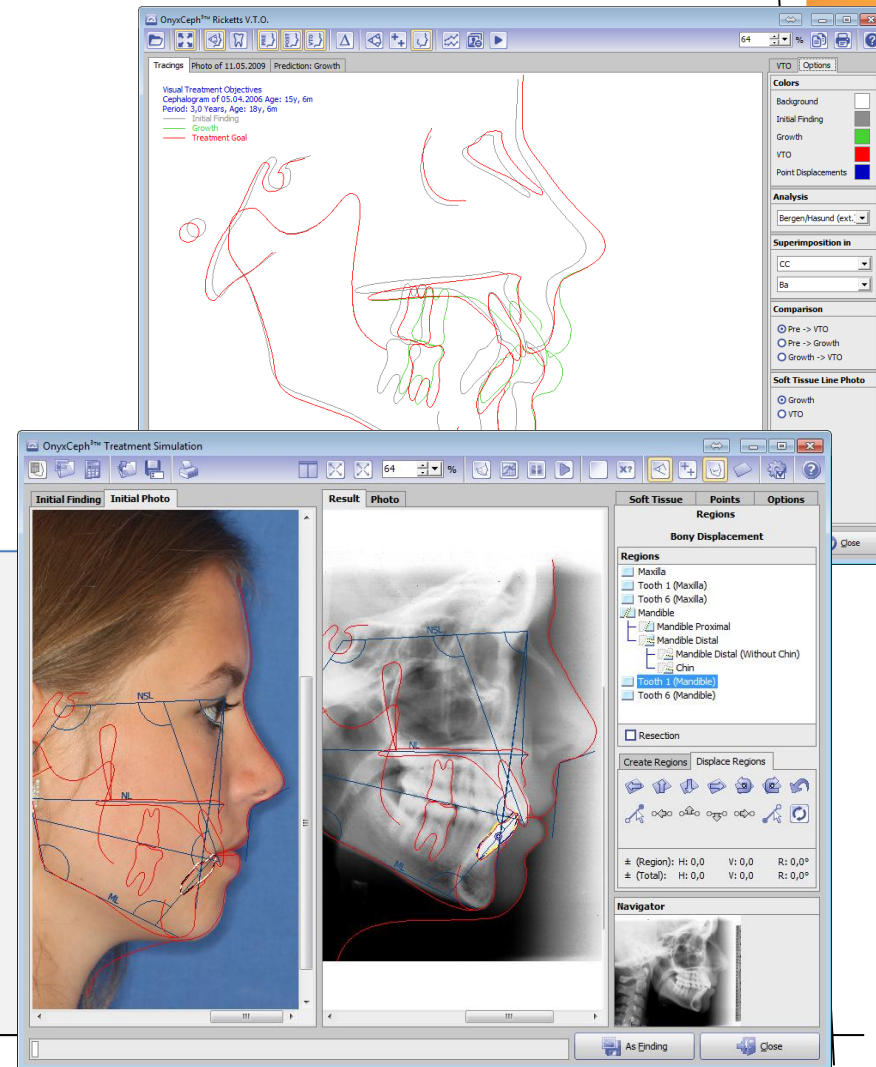
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Overview OnyxCeph³™

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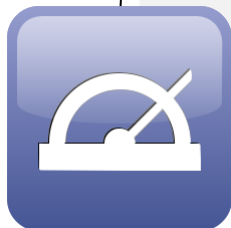
Client-/Server Windows™ Application
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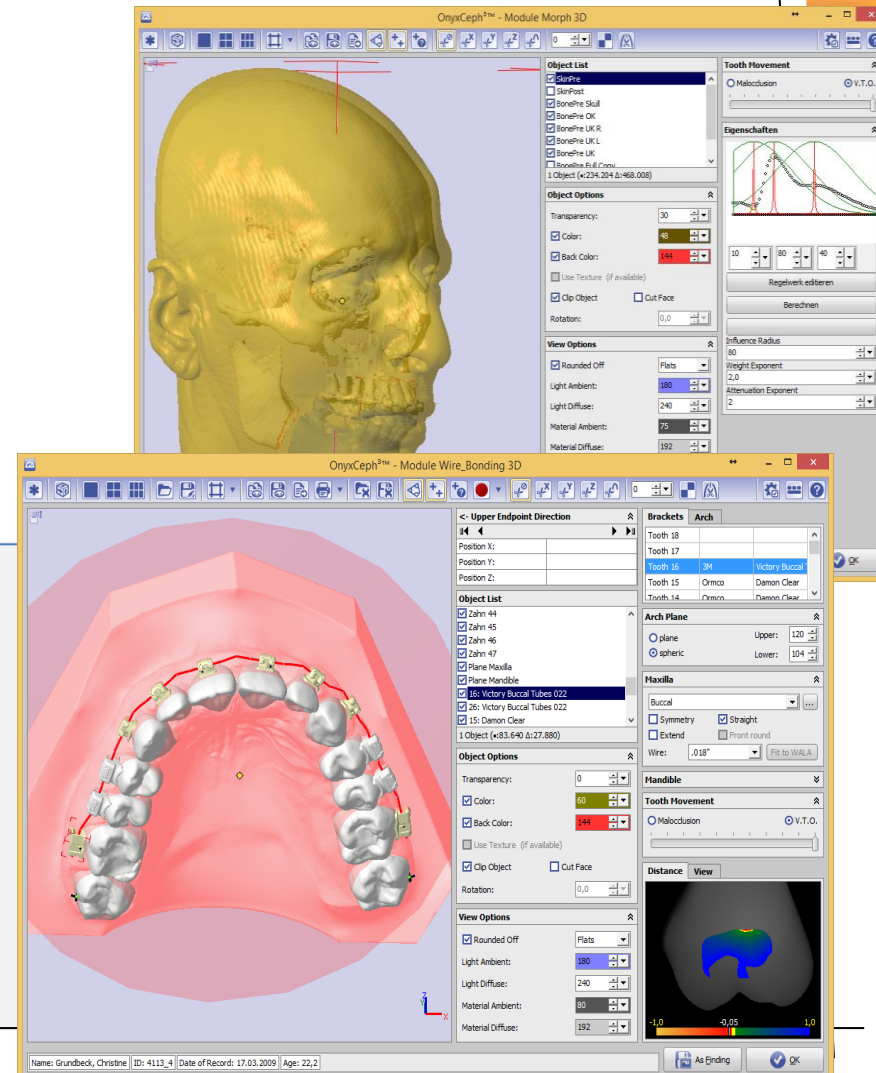
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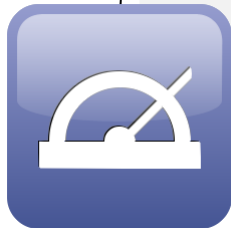
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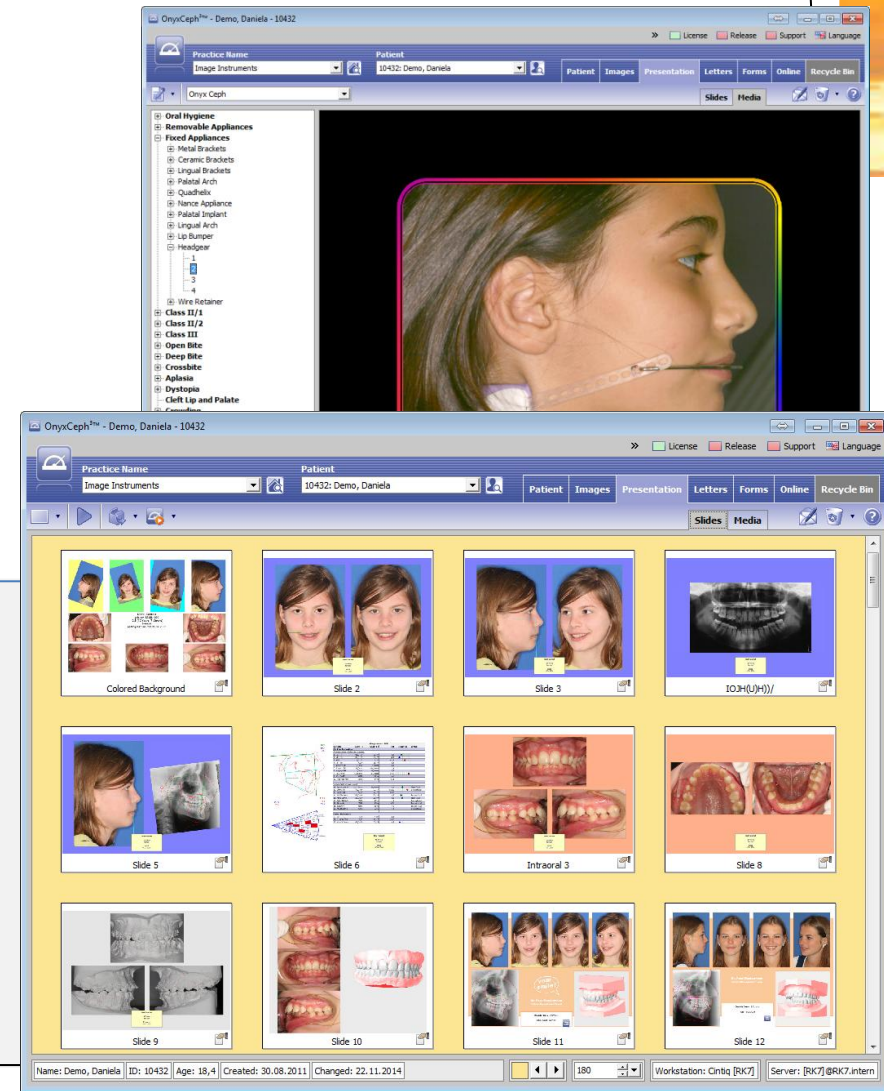
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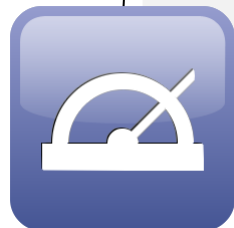
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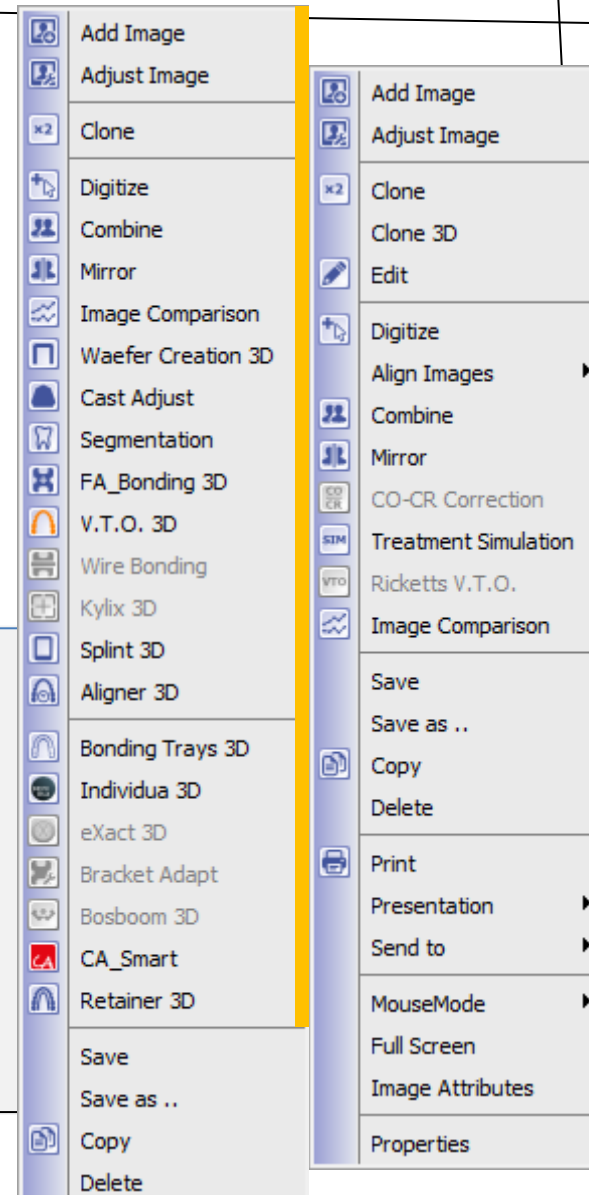
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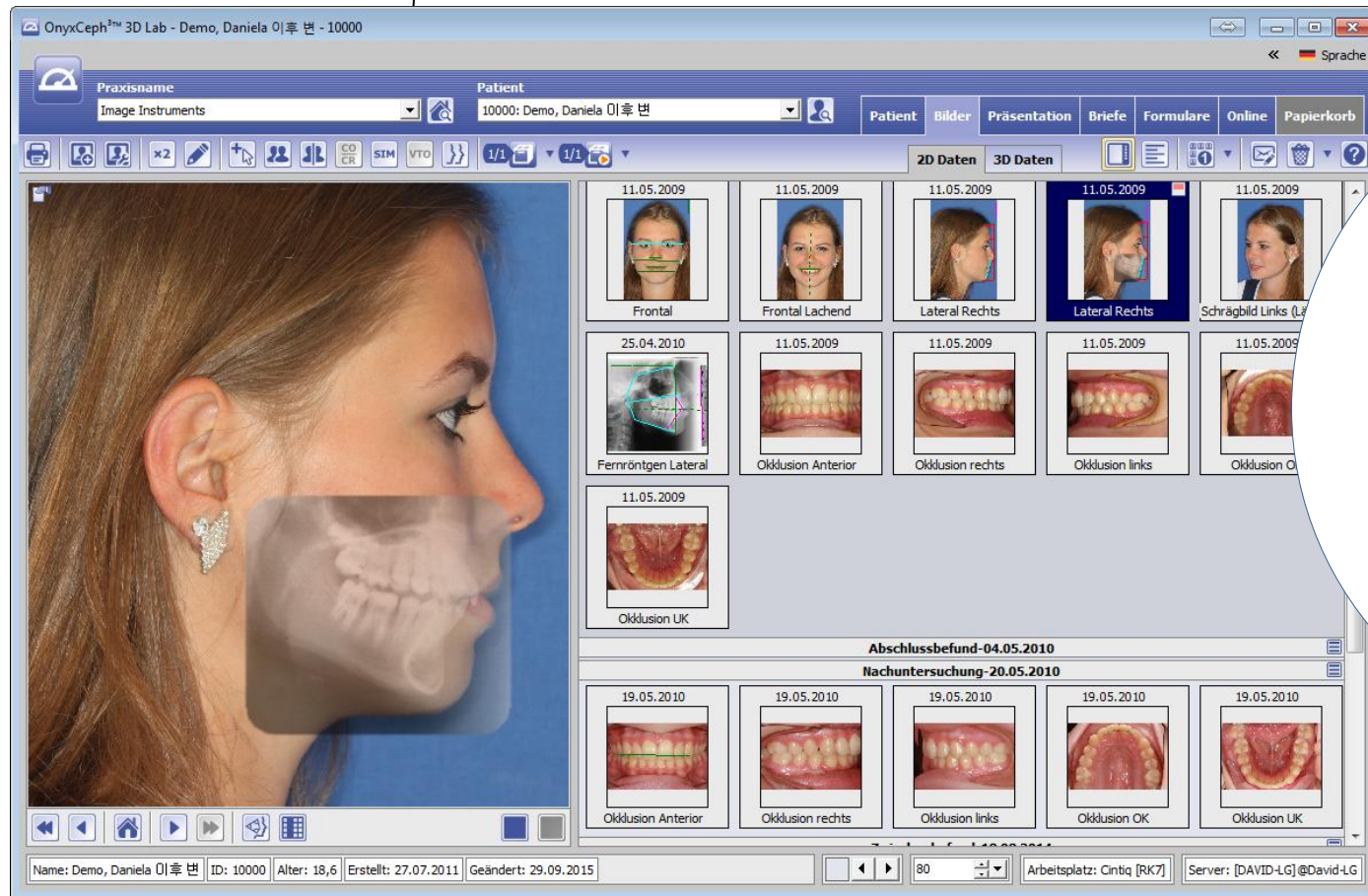
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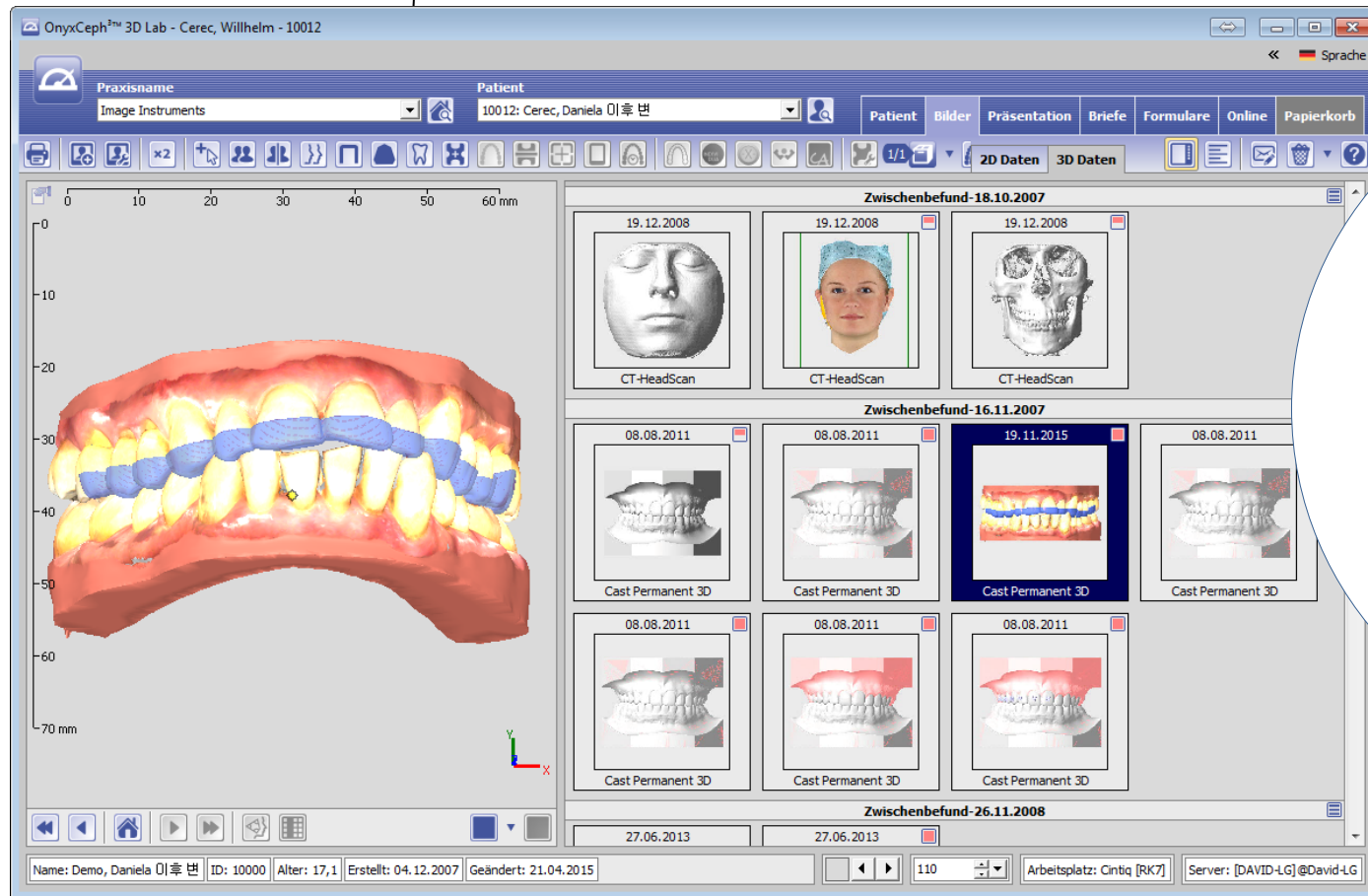
Overview OnyxCeph³™



2D Imaging

3D Imaging

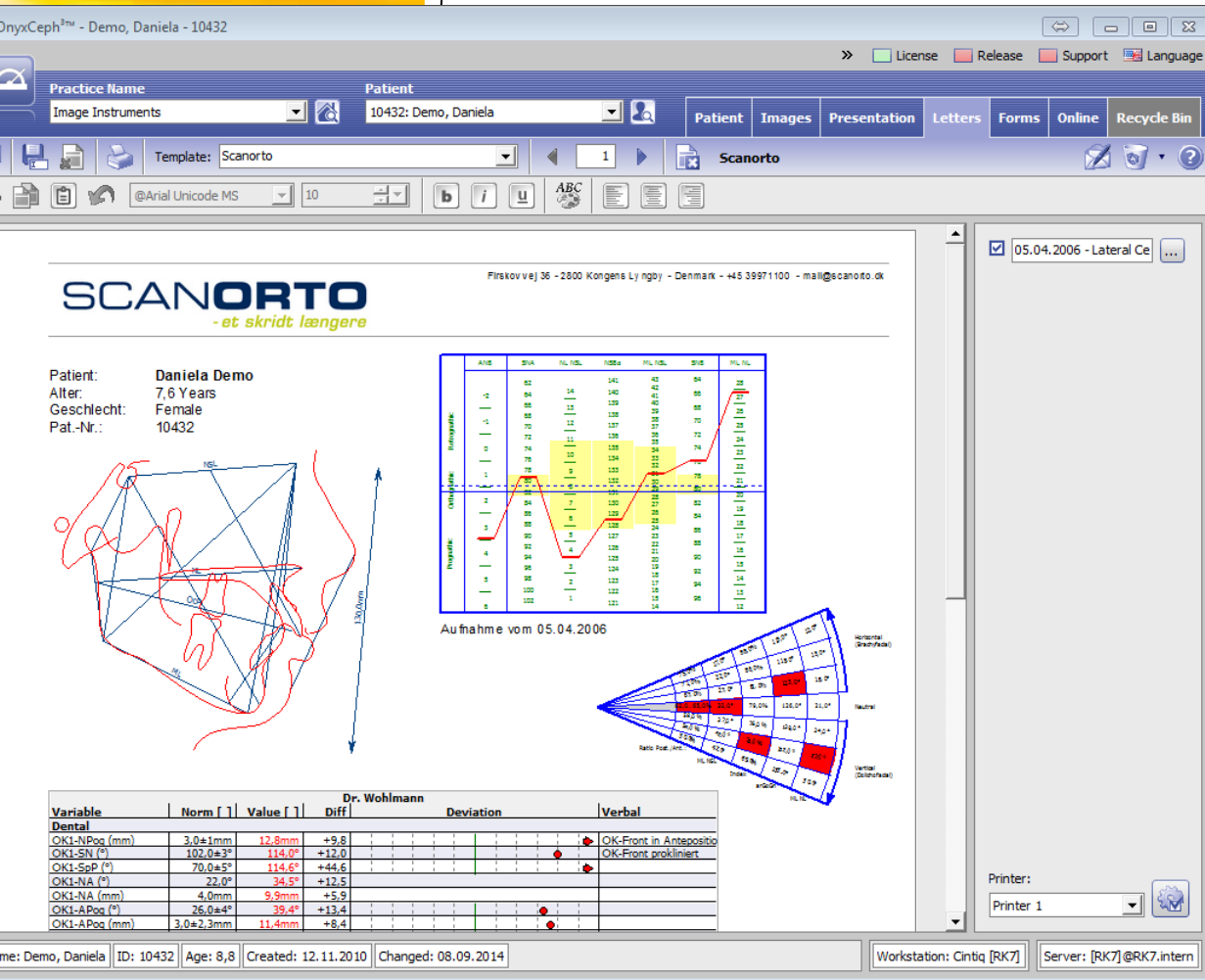
Overview OnyxCeph³™



2D Imaging

3D Imaging

Overview OnyxCeph³™



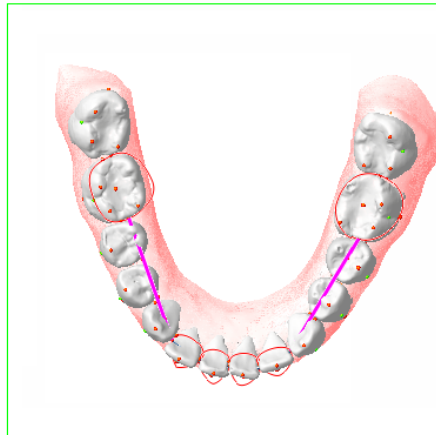
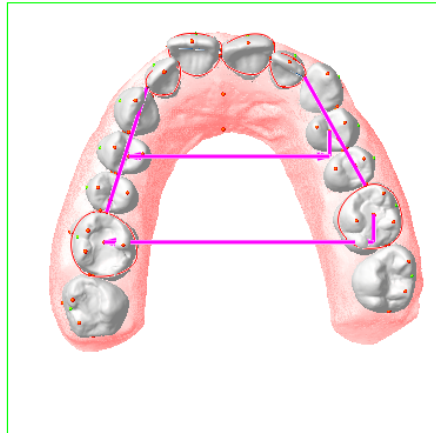
Documentation



2D Imaging

3D Imaging

Dr. med. dent. Peter Blattner

Gertenbachstr. 30 - 42899 Remscheid
Tel: 02191-50649 - Email: praxis@dr-blattner.deSCANORTO
-et skridt længerePatient: Oberlech, Inga - 19.09.1996 - Female
Pat-ID: 10005Age: 17,5 Years
Initial: 23.03.2014
Analysis: Weise

Weise			
Variable	Norm []	Value []	Diff
SI _{max}		30,3mm	
Lup	17,8mm		
Llo	15,8mm		
aw _{max}	37,2mm	32,7mm	-4,5
aw _{mand}	37,2mm		
pw _{max}	49,7mm	43,9mm	-5,8
pw _{mand}	49,7mm		
SZ _{rmax}	21,8mm	21,4mm	-0,4
D SZ _{rmax}		-0,4mm	
SZ _{lmax}	21,8mm	20,3mm	-1,5
D SZ _{lmax}		-1,5mm	
AS _{max}	30,3mm		
D AS _{max}			
D _{max}			
SZ _{rmand}	21,1mm	21,1mm	0,0
D SZ _{rmand}		0,0mm	
SZ _{lmand}	21,1mm	21,2mm	+0,1
D SZ _{lmand}		+0,1mm	
AS _{mand}	21,5mm		
D AS _{mand}			
D _{mand}			

Pont Index			
Variable	Norm []	Value []	Diff
SI _{max}		30mm	
aw _{max}	38mm	33mm	-5
aw _{mand}	38mm		
pw _{max}	47mm	44mm	-3
pw _{mand}	47mm		

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Documentation



2D Imaging

3D Imaging

Letter Writing

Overview OnyxCeph³™

Overview OnyxCeph³™

Daniela Demo
13.08.1998

SCANORTO
- et skridt længere



Before

After

Documentation

Presentation

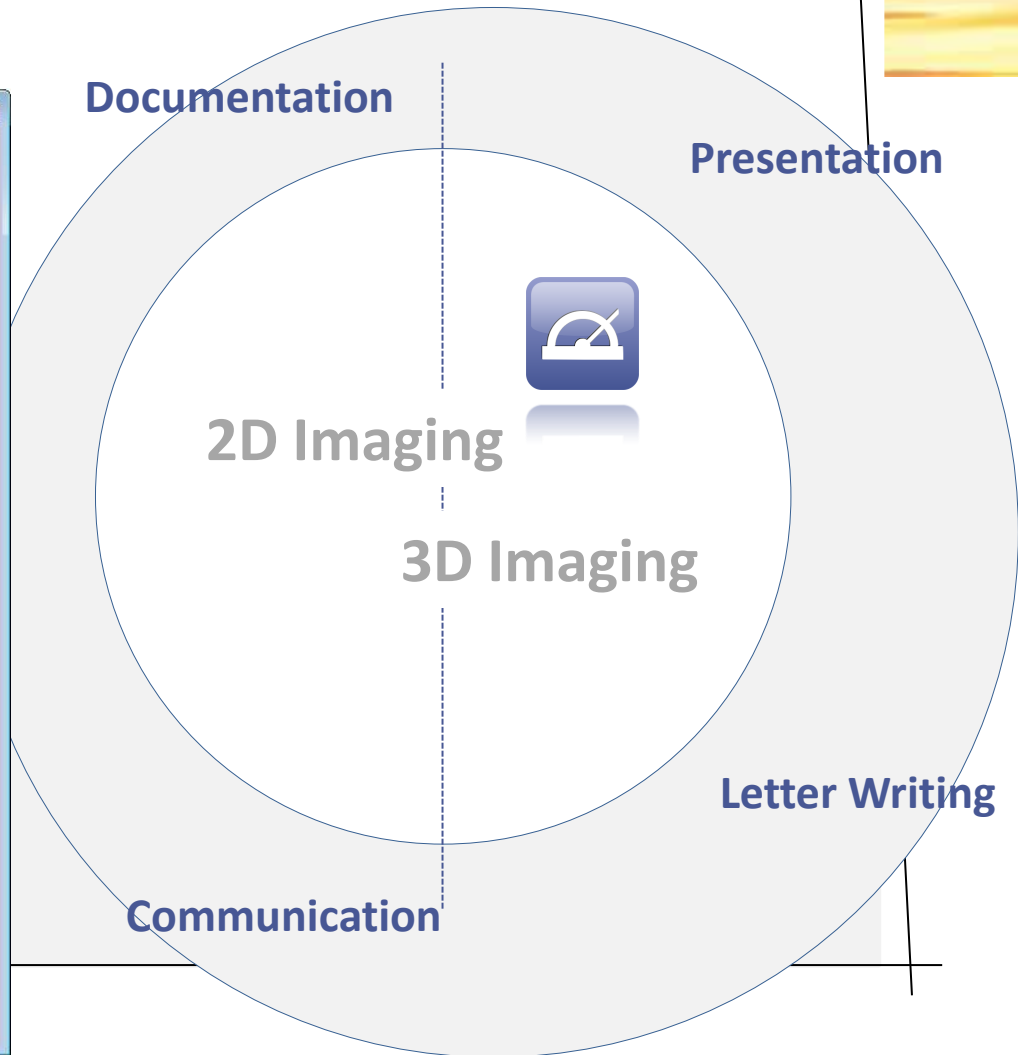
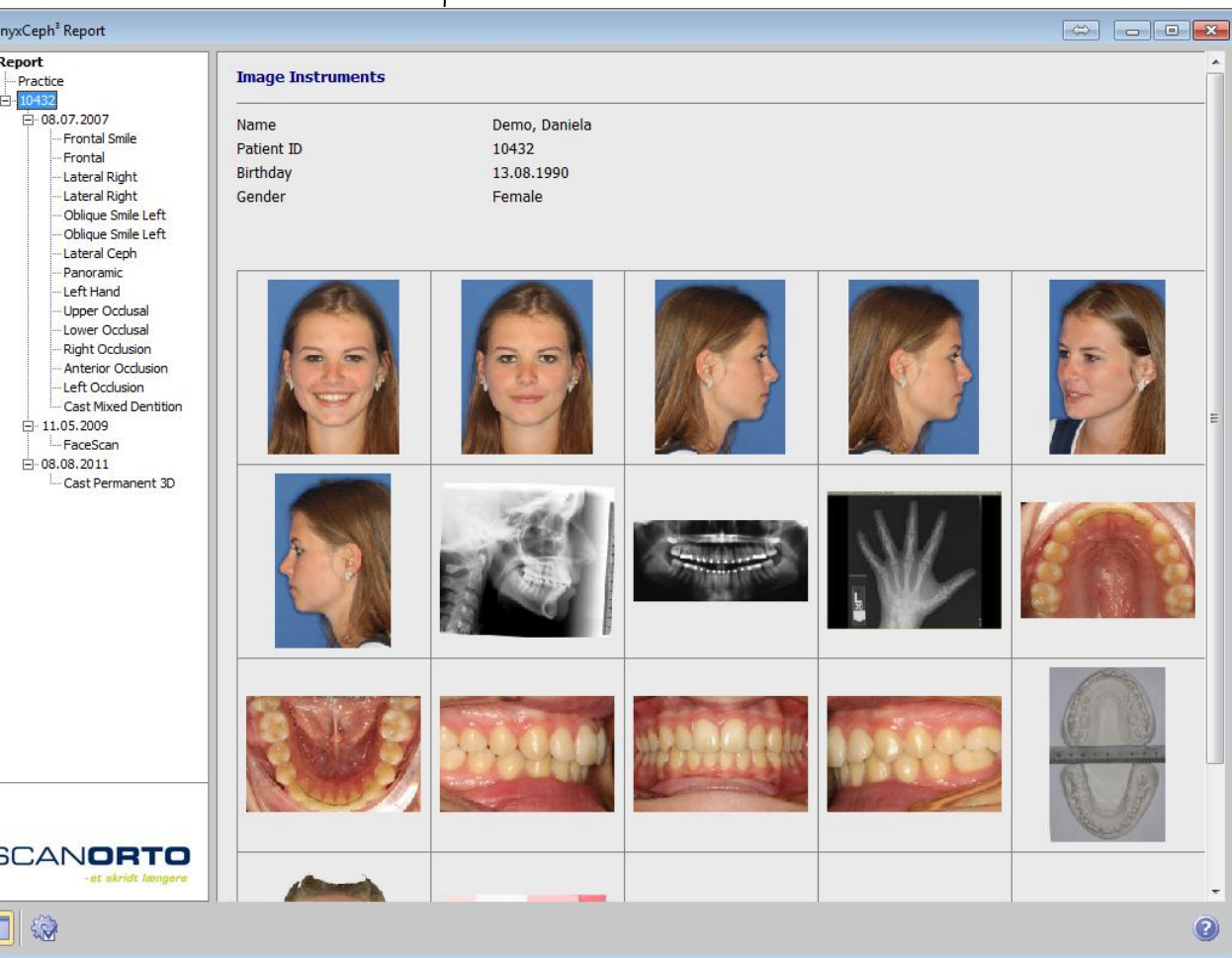


2D Imaging

3D Imaging

Letter Writing

Overview OnyxCeph³™



Overview OnyxCeph³™

Window Options Help

Patient Name	Patient First Name	Patient Gender	Patient Birthday	Patient Attributes	Patient Photo
1	Patient(en)in...	Male	20.03.2003		;Dr. I
1Äöüöö	Patient(en)in...	Male	20.03.2003		
2	DemoX-ray	Male	19.03.2003		;Dr. I
2	DemoX-raytest	Male	19.03.2003		
3d	Tom	Male	09.12.2005		
3shape	VDDS	Male	25.04.2006		
ABELS	GÜNTHER	Male	30.06.1937		
ARAT	T	Male	13.09.1985		
Anonymous ...	P	Male	05.08.1948		
Anonymous ...	XX	Male	05.08.1948		
Anonymous ...	FT	Male	05.06.1987		
Anonymous ...	xxxx	Male	08.03.1976		
Antje	Walsleben	Male	01.01.1972		
Beam	Jim	Male	12.12.1989		
Becker	Kathrin	Female	01.01.1990		
Bedford	Cindy	Female	12.12.1989		
Bending	Test	Male	20.01.2006		
Berutsen	Anne	Female	01.12.2005		
Brackets	Ormco	Male	12.12.1987		
Bredebusch	Tony	Male	10.10.2000		
Brekne	Kristiane	Female	25.11.2005		
Breukmann	Für Tom	Male	09.12.2005		
Bringsmark	Halvard	Male	01.12.2005		
CADstar	Scanner	Male	17.12.2005		
Ca	Smart	Male	12.12.1999		
Cad	Star	Male	18.11.2005		

Query 1

Color

Categories as Text

Sort By

Patient Filter
No Filter Defined

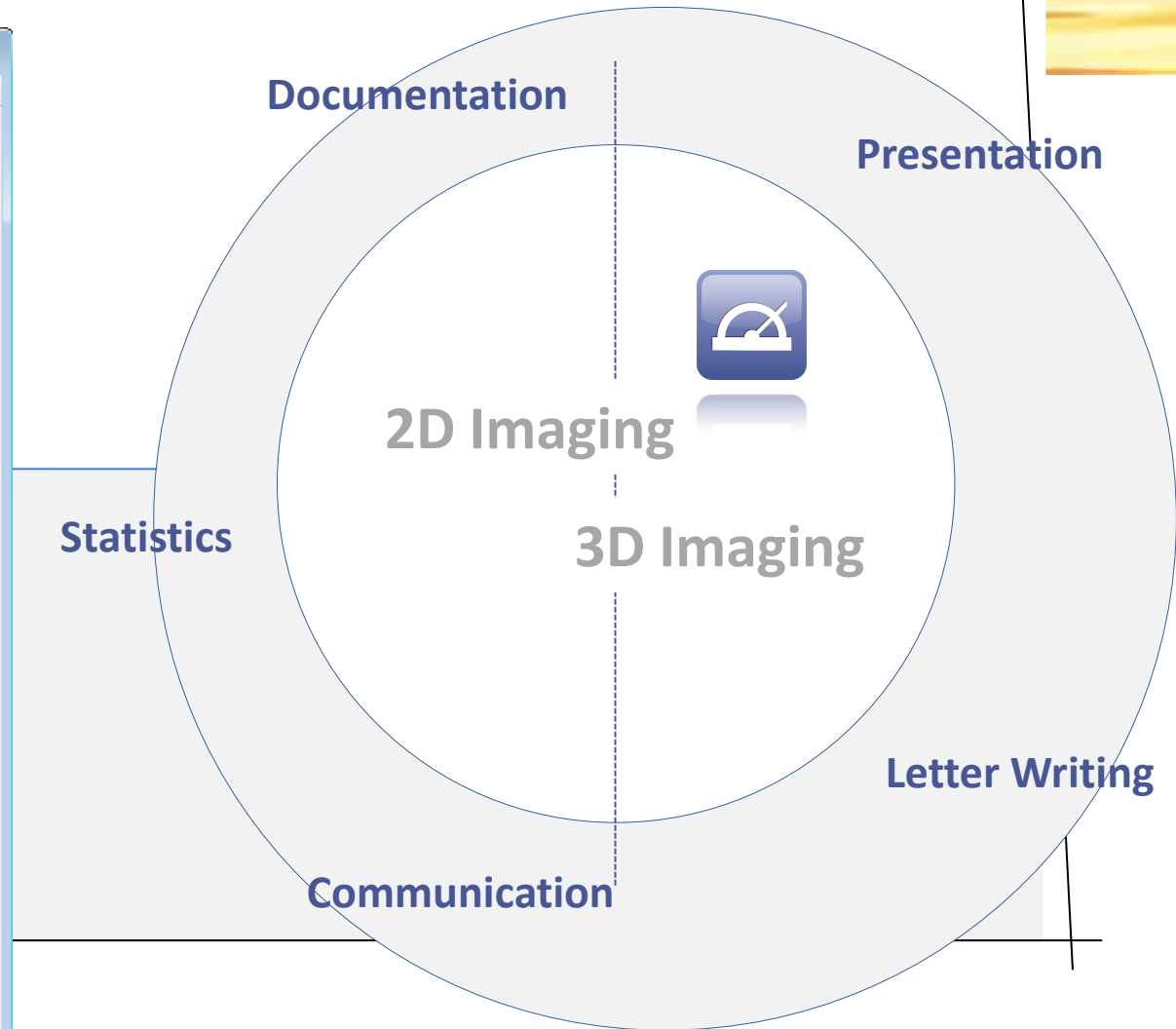
Data Filter
No Filter Defined

Column

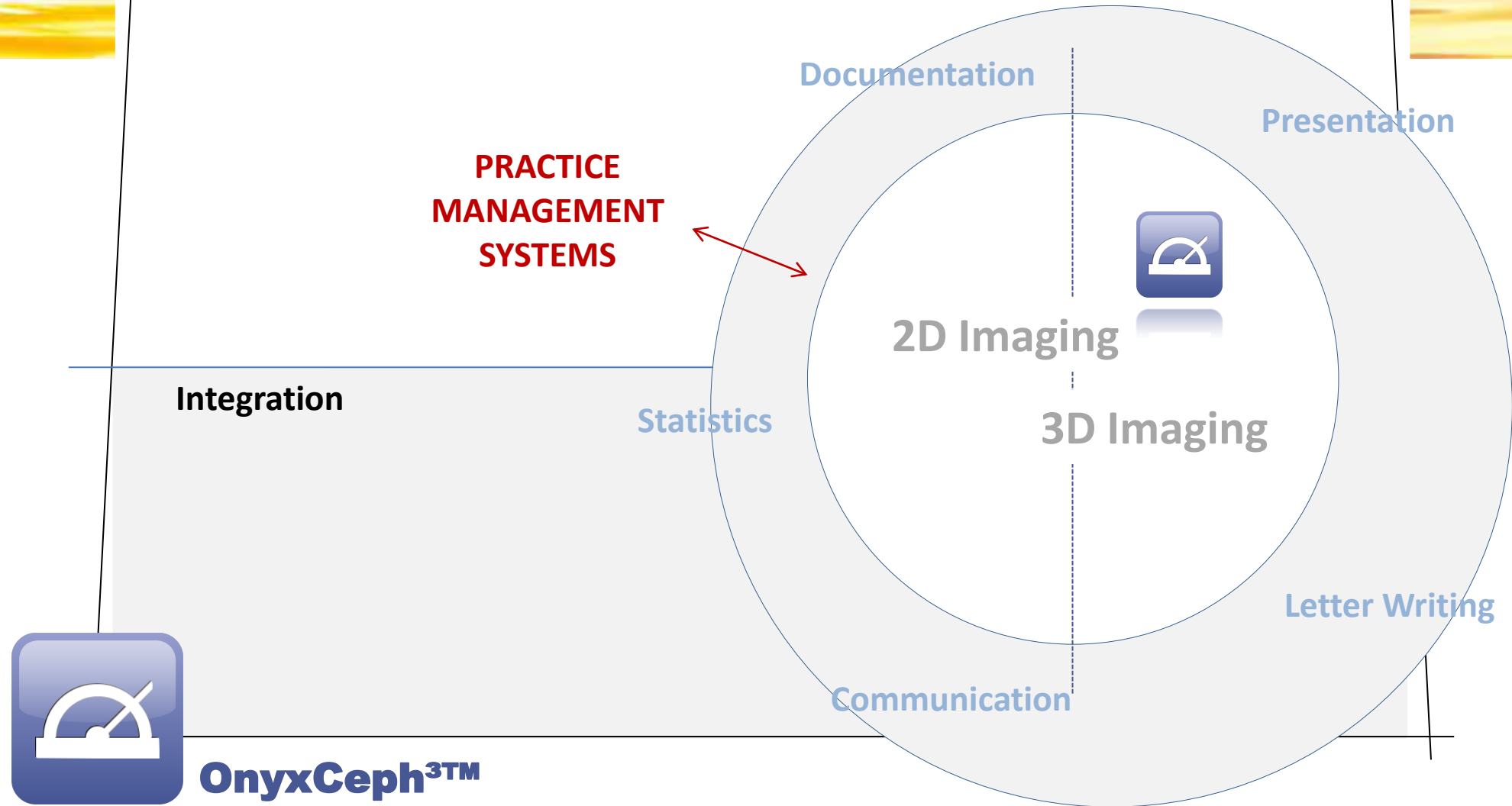
Go to

OnyxCeph³™

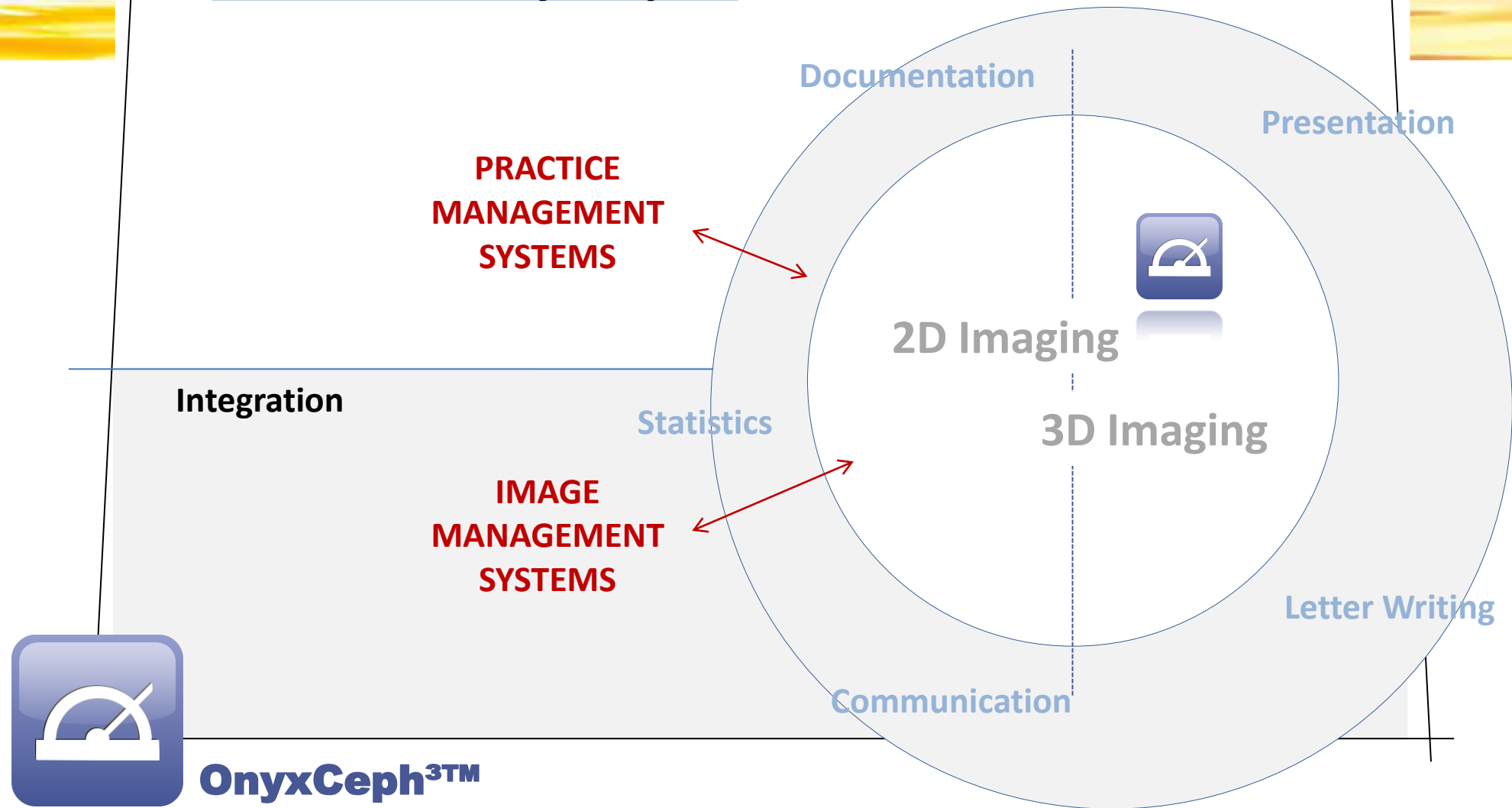
Image

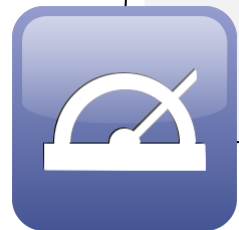
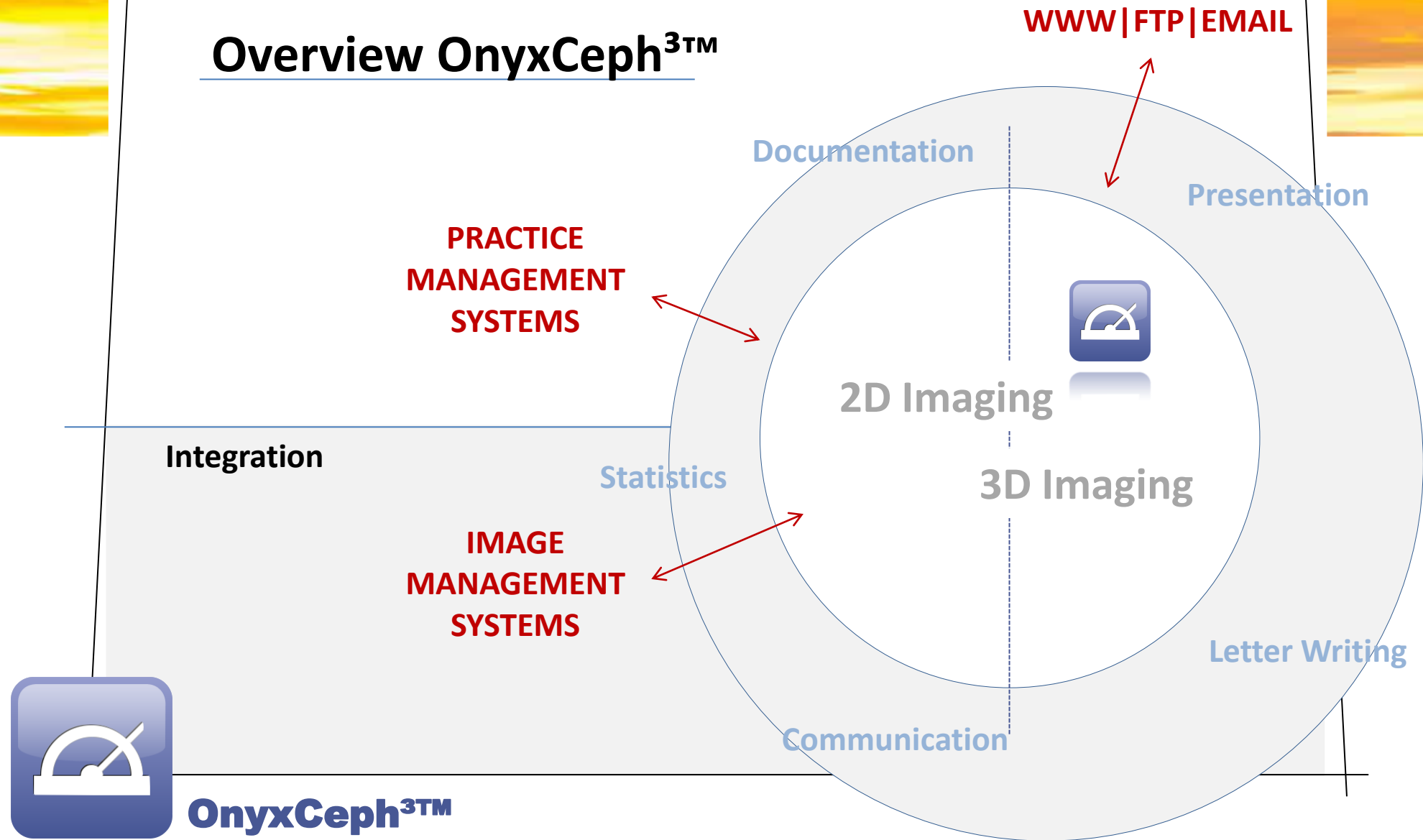
Overview OnyxCeph^{3TM}



Overview OnyxCeph³™

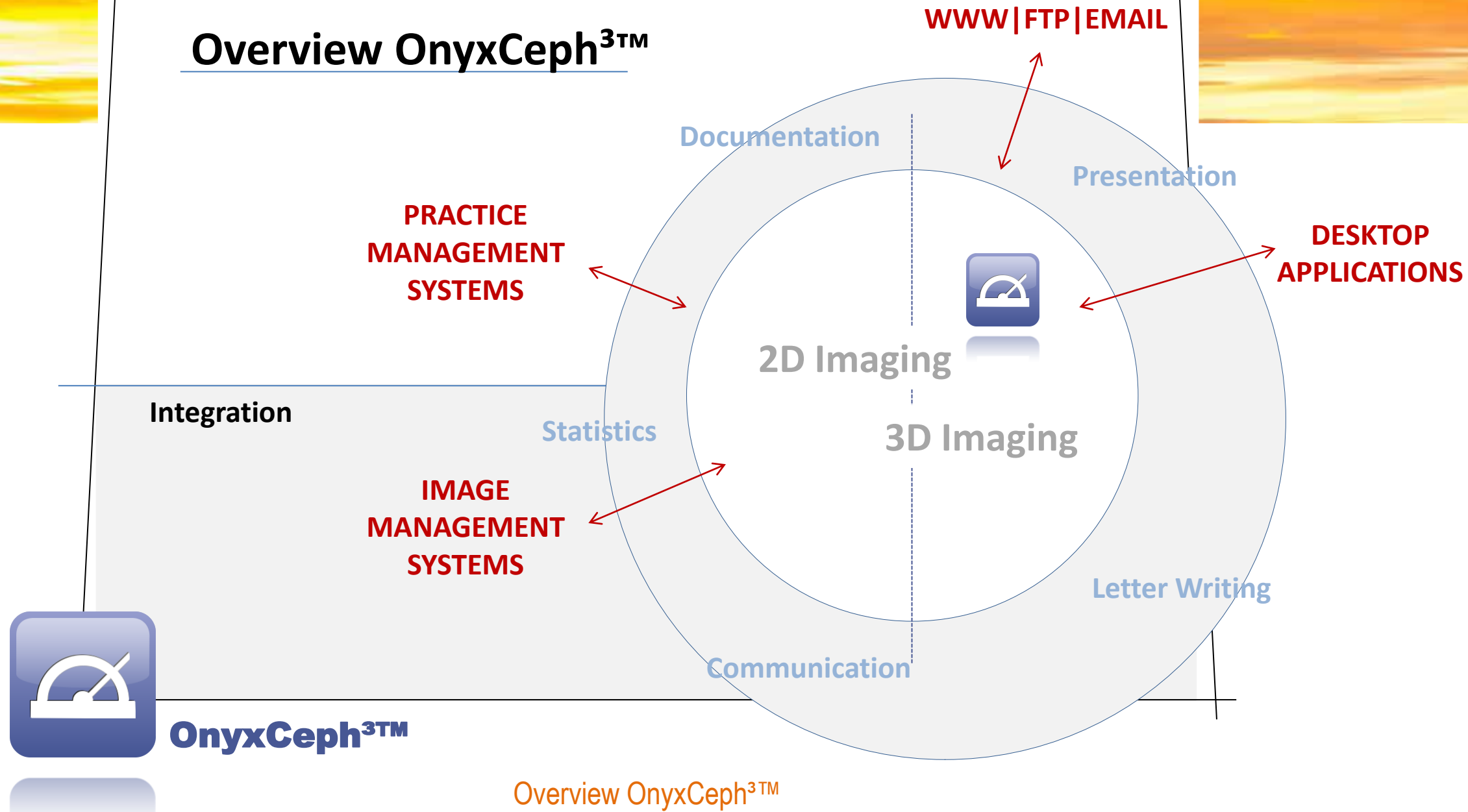


Overview OnyxCeph³™

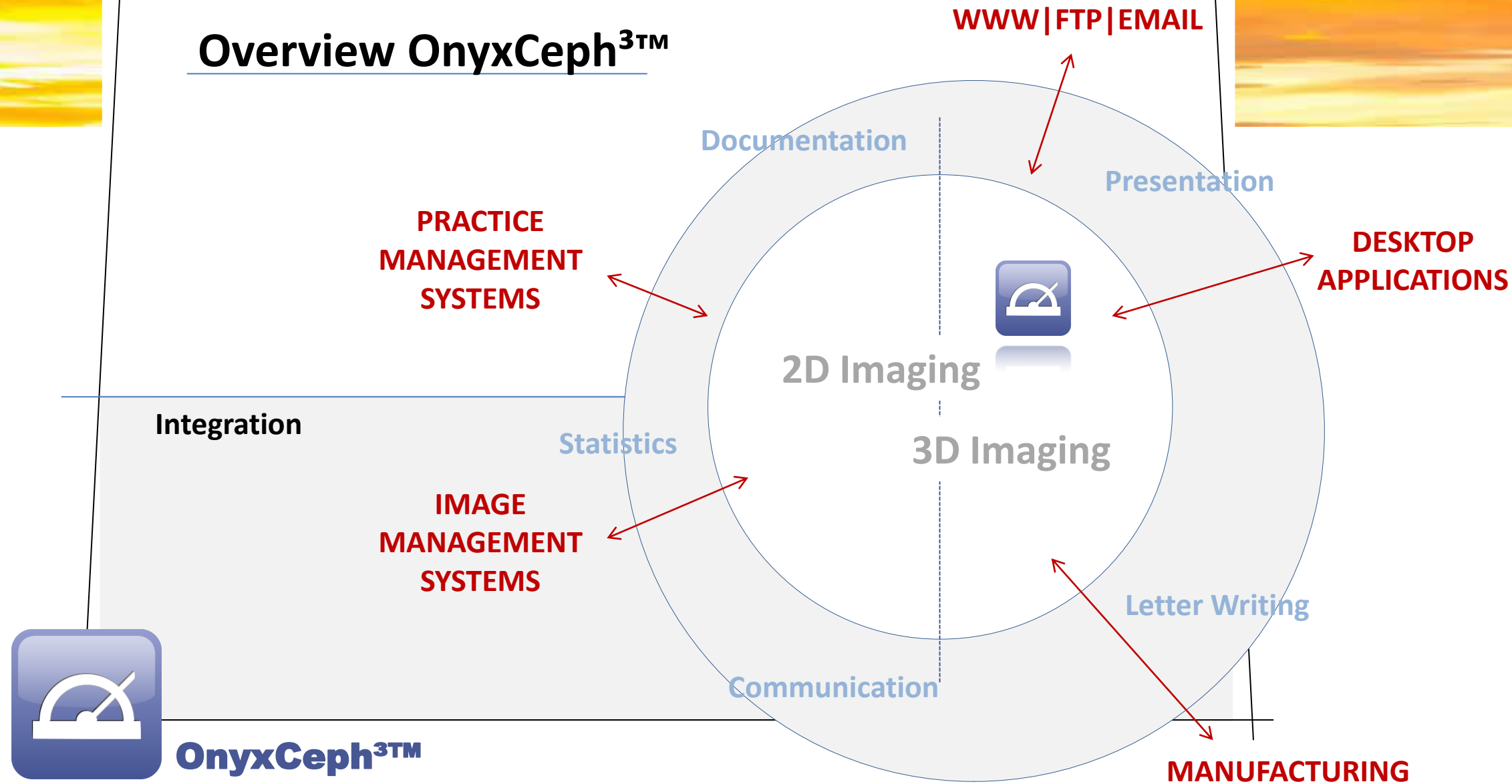


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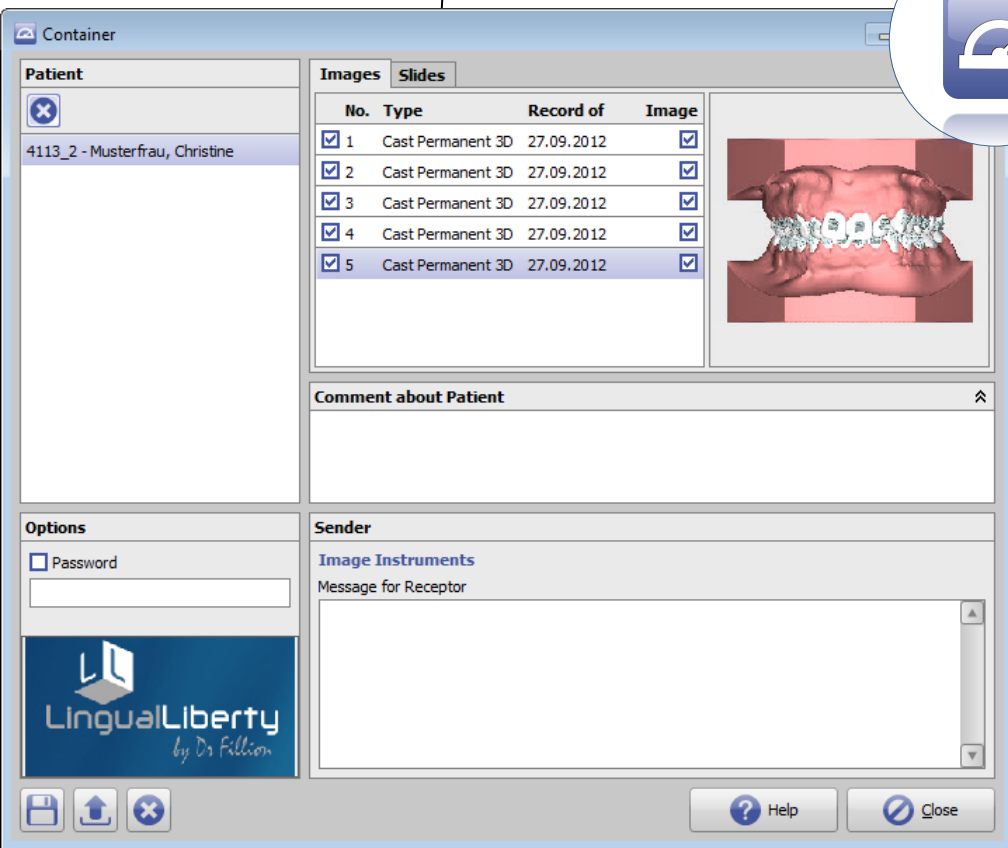
Overview OnyxCeph³™



Overview OnyxCeph³™



Overview OnyxCeph³™



Statistics

Documentation

Presentation

2D Imaging

3D Imaging

Letter Writing

Communication



Overview OnyxCeph³™

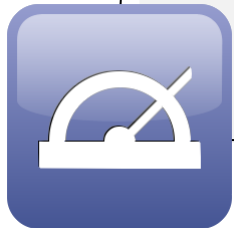
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Imaging Modules

2D Imaging

3D Imaging



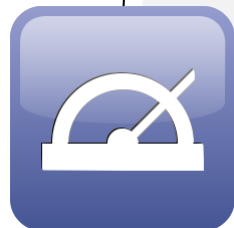
OnyxCeph³™

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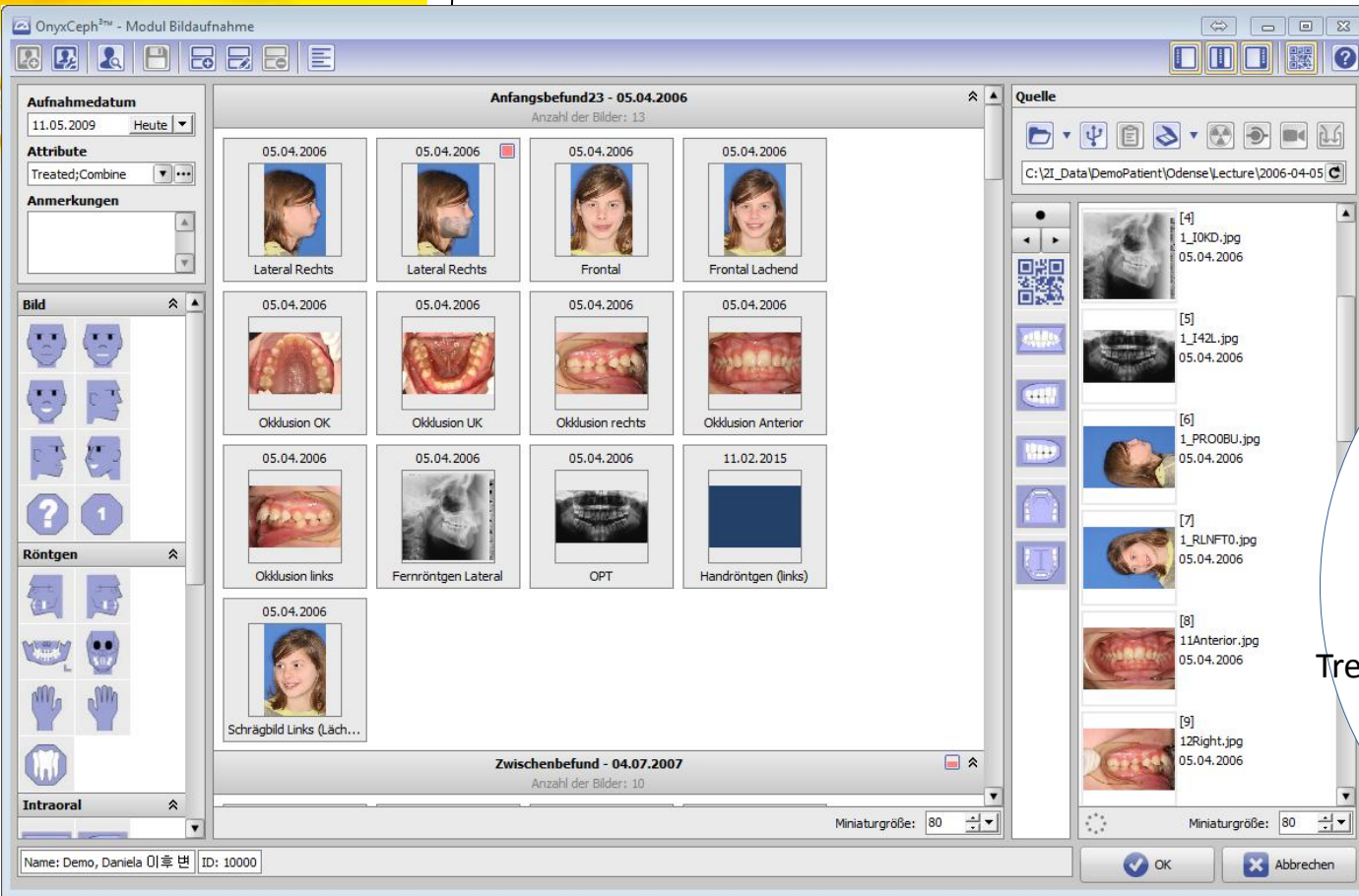
Imaging Modules

- Add Image
- Adjust Image
- Edit
- Digitize
- Combine
- Mirror
- CO|CR Correction
- Treatment Simulation
- Ricketts V.T.O.
- Image Comparison
- Add Image
- Adjust Image
- Digitize
- Combine
- Mirror
- Treatment Simulation 3D
- Image Comparison
- Cast Adjust
- Segmentation
- FA_Bonding
- V.T.O.3D
- Wire Bonding
- Kylix 3D
- Bonding Trays 3D
- Splint 3D
- Bracket Adapt
- Aligner 3D
- Retainer 3D
- Waefer Creation 3D



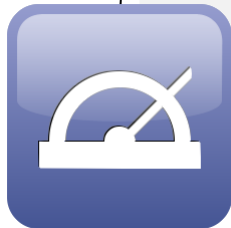
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2D Imaging



Add Image
Adjust Image
Edit
Digitize
Combine
Mirror
CO|CR Correction
Treatment Simulation
Ricketts V.T.O.
Image Comparison

MODULES



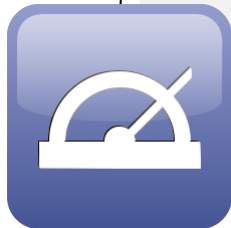
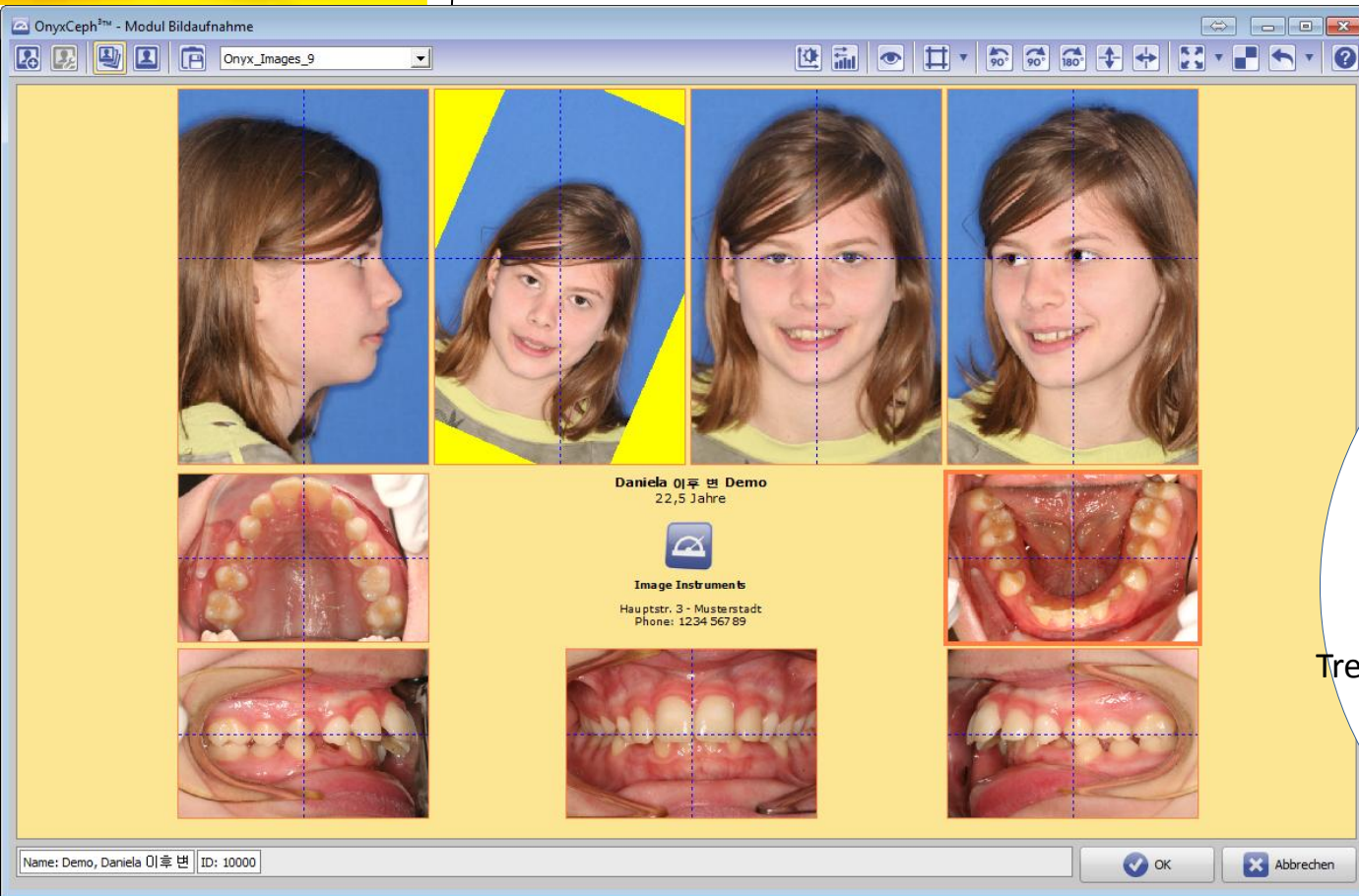
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2D Imaging

MODULES

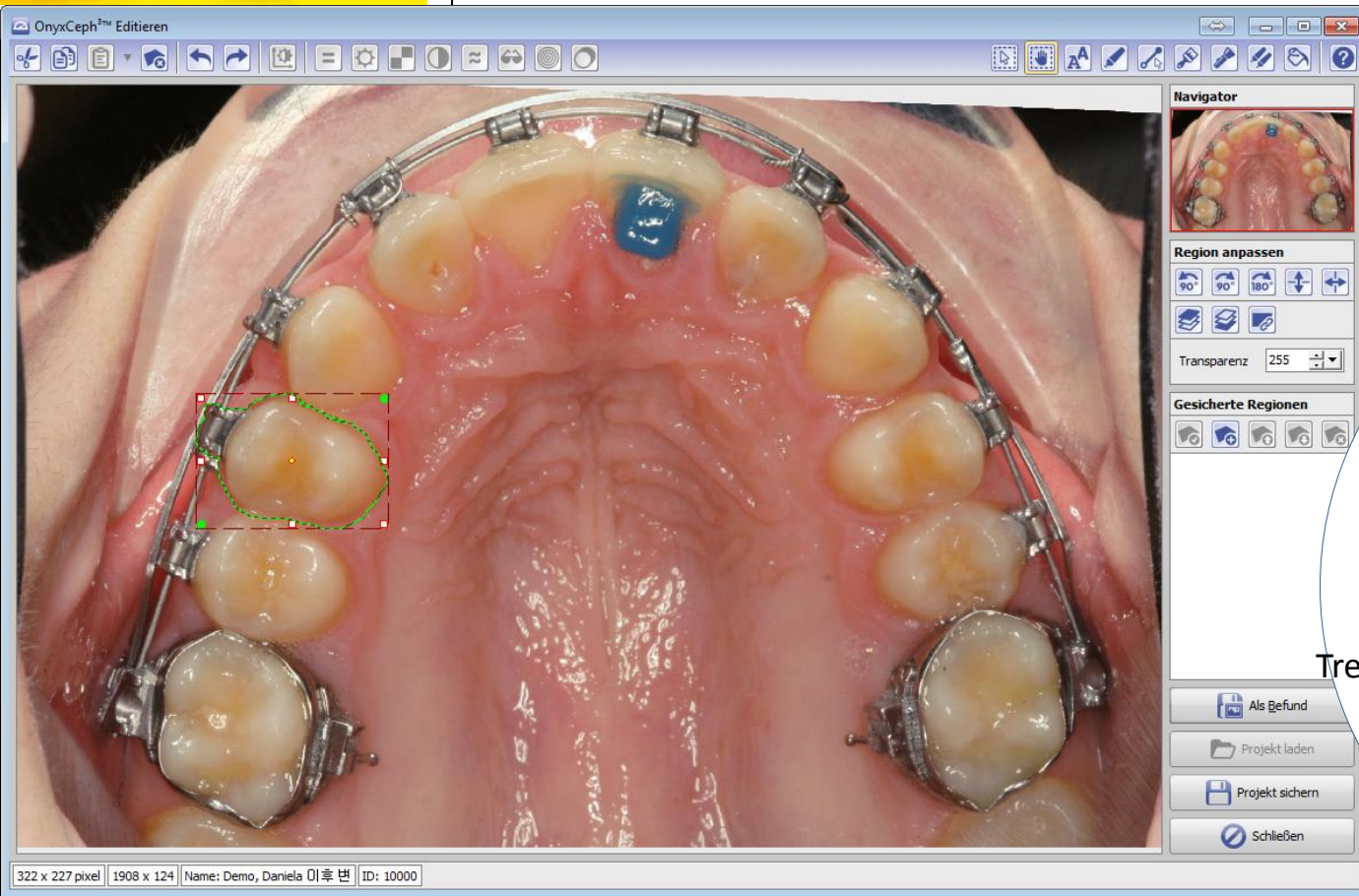
Add Image
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Treatment Simulation
Ricketts V.T.O.
Image Comparison



OnyxCeph^{3TM}

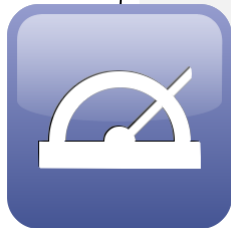
Overview OnyxCeph^{3TM}

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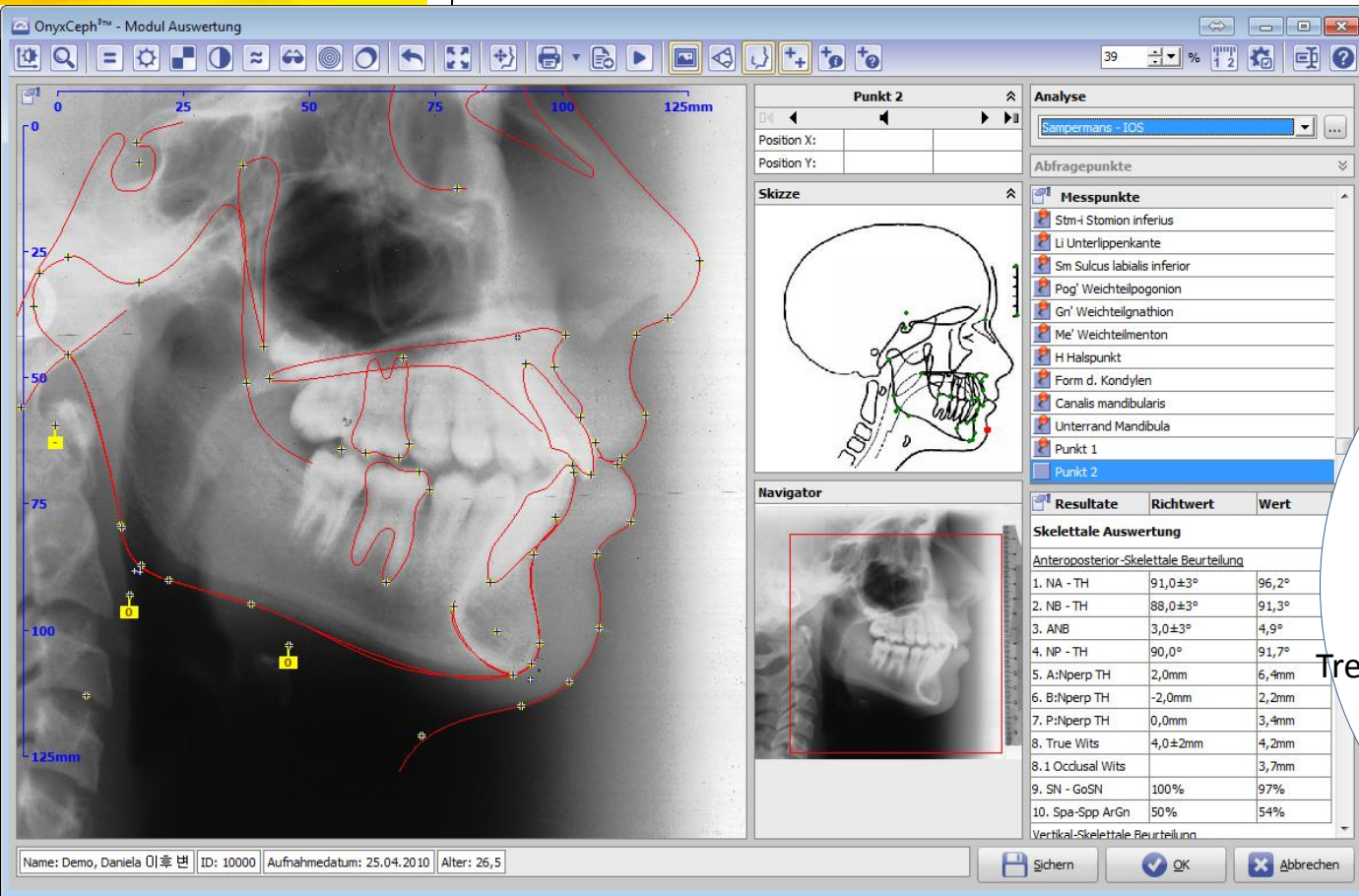
MODULES



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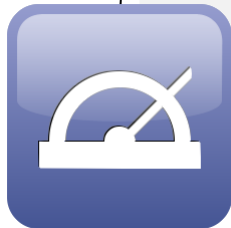
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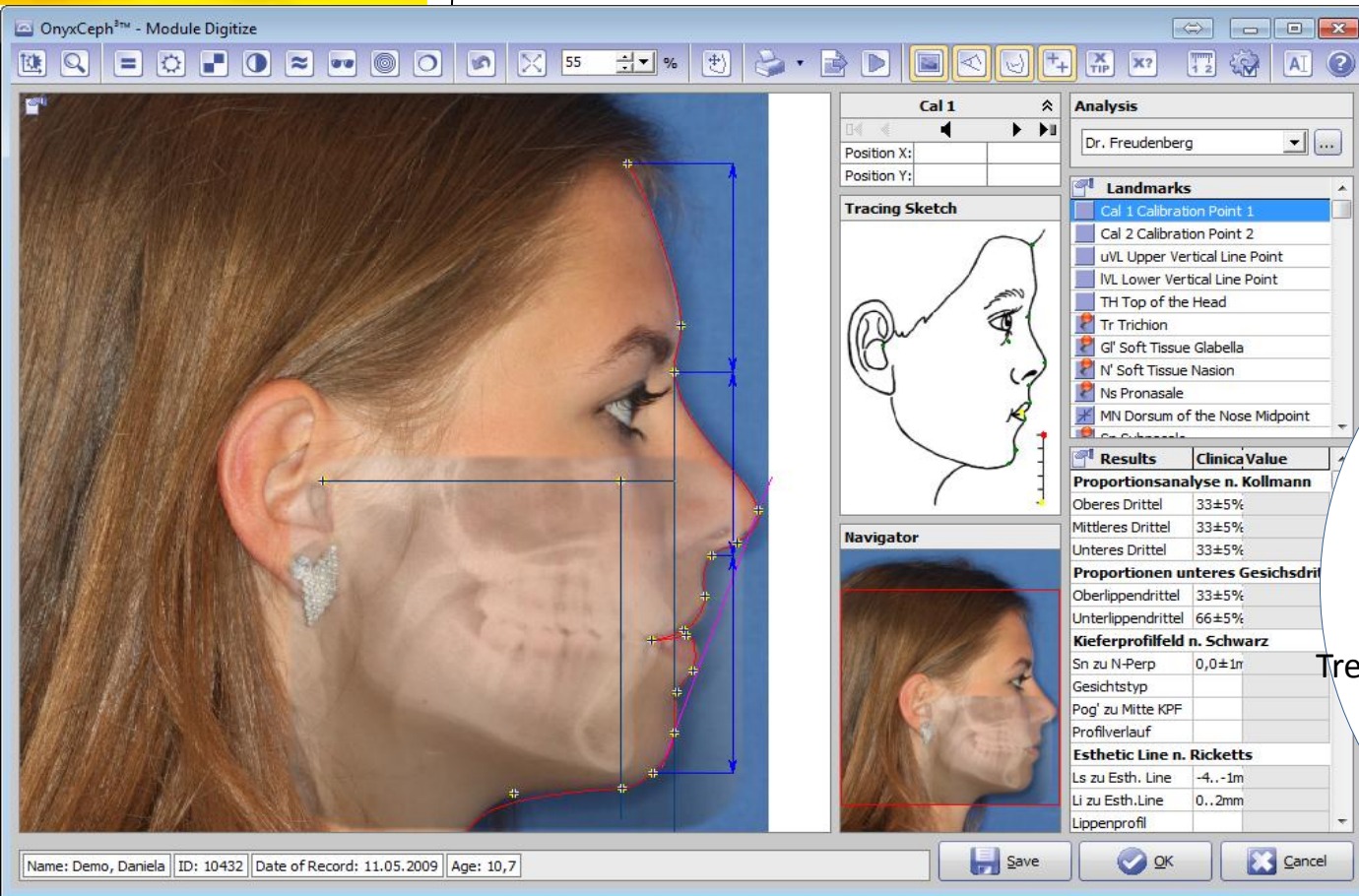
MODULES



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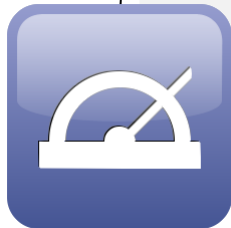
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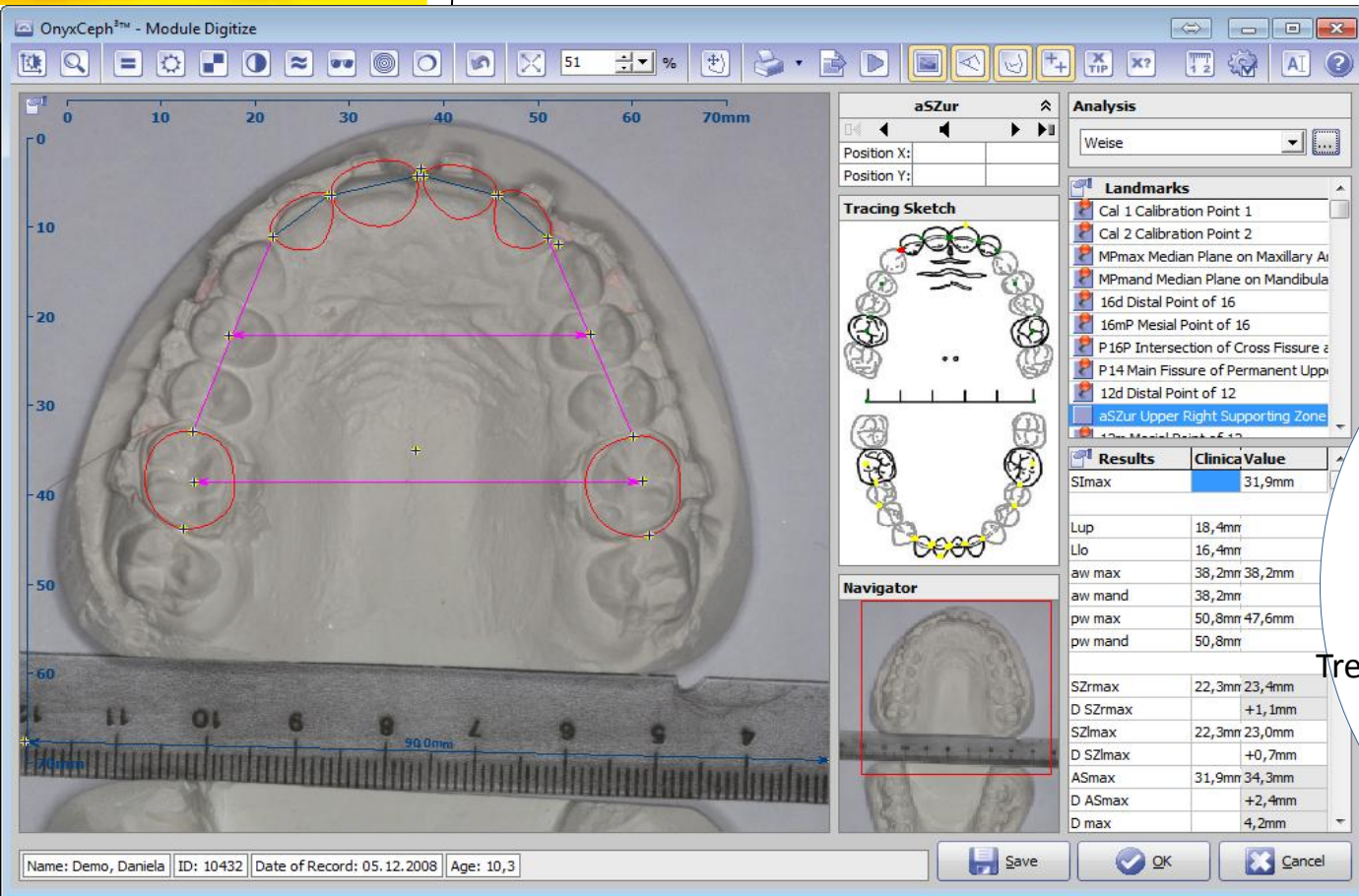
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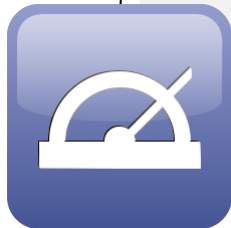
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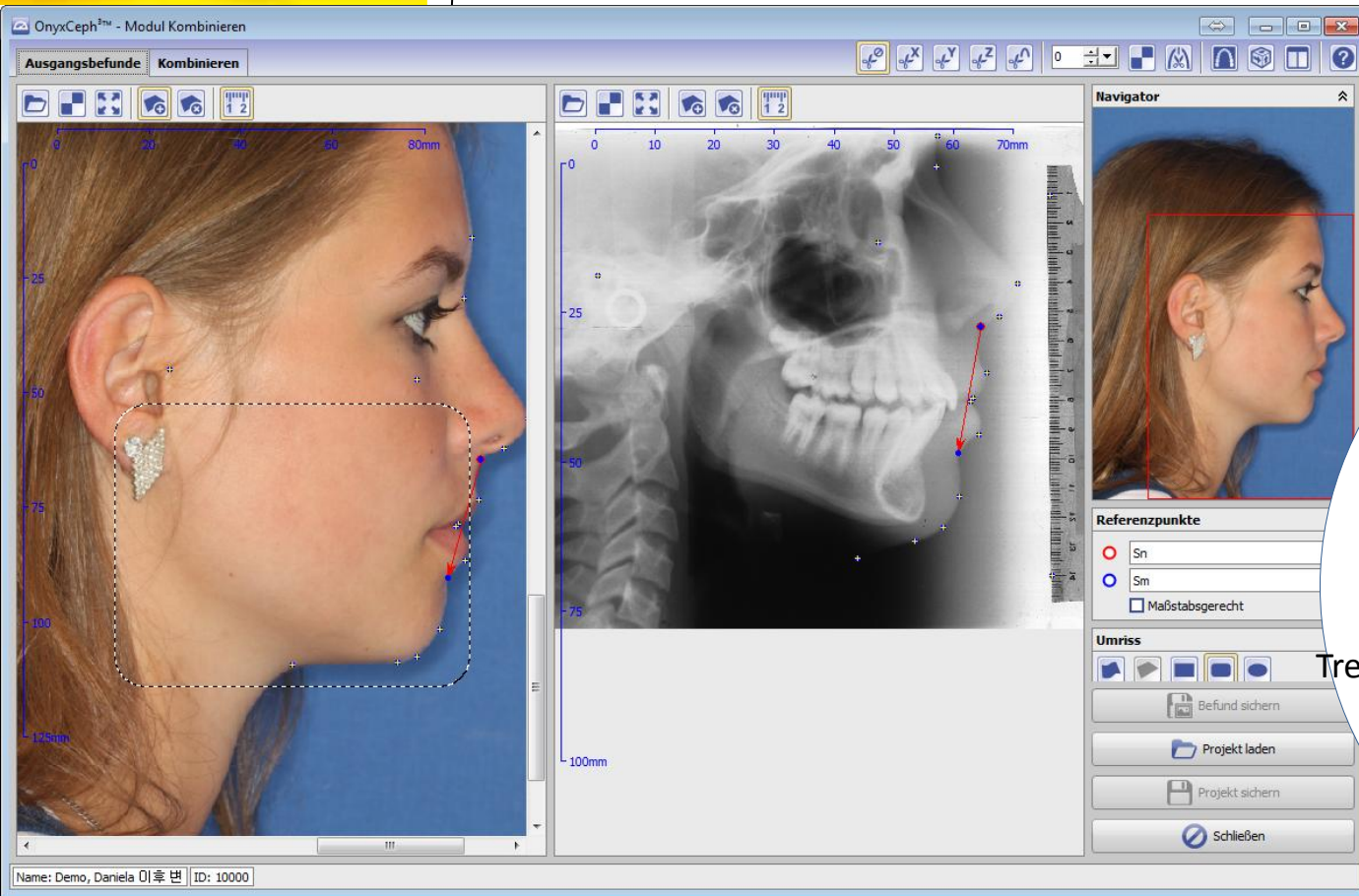
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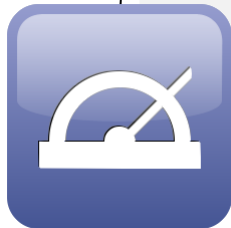
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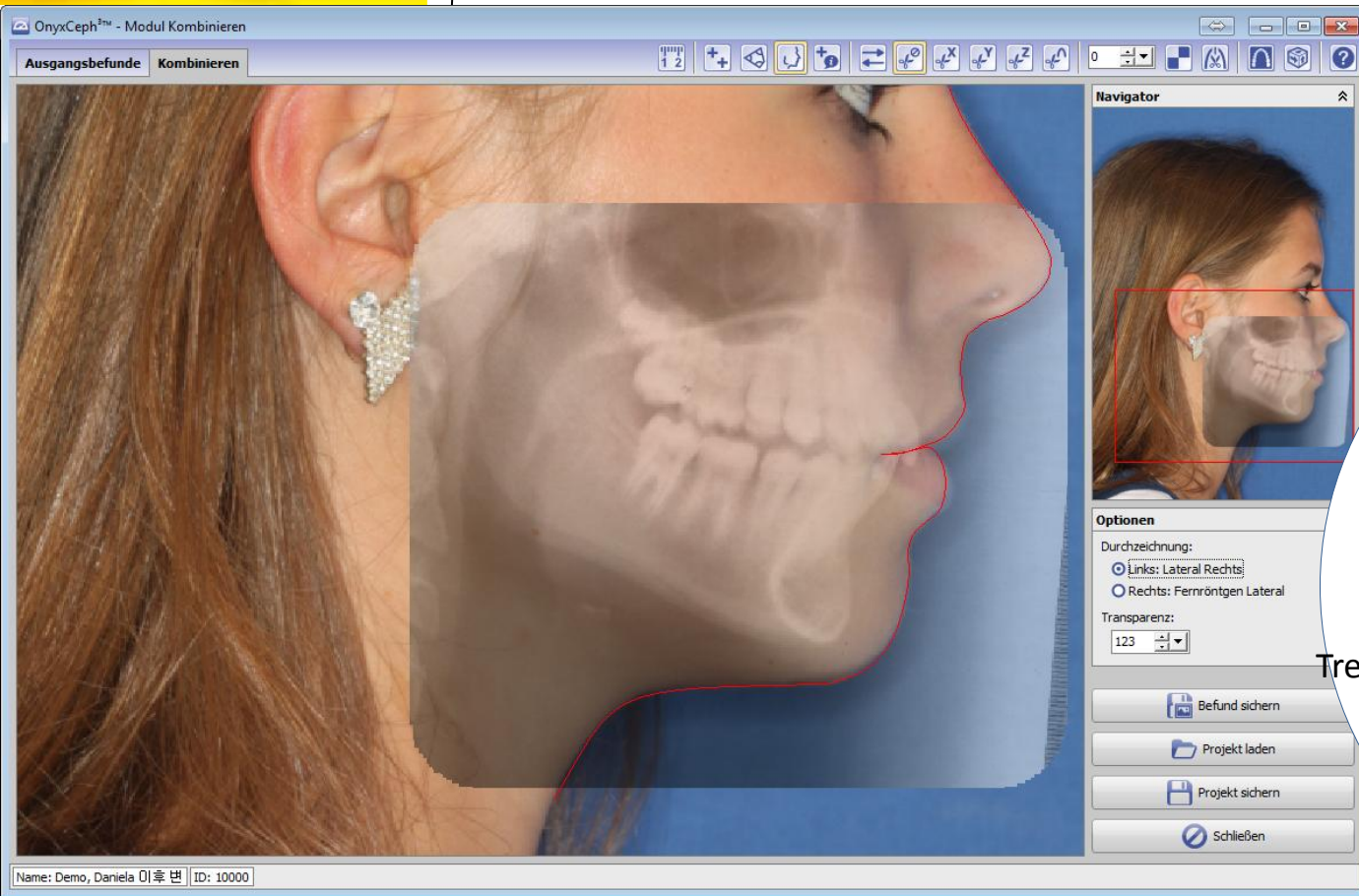
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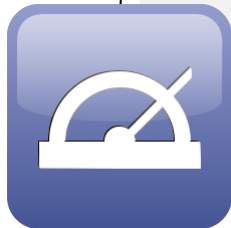
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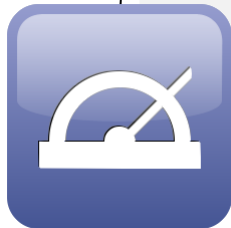
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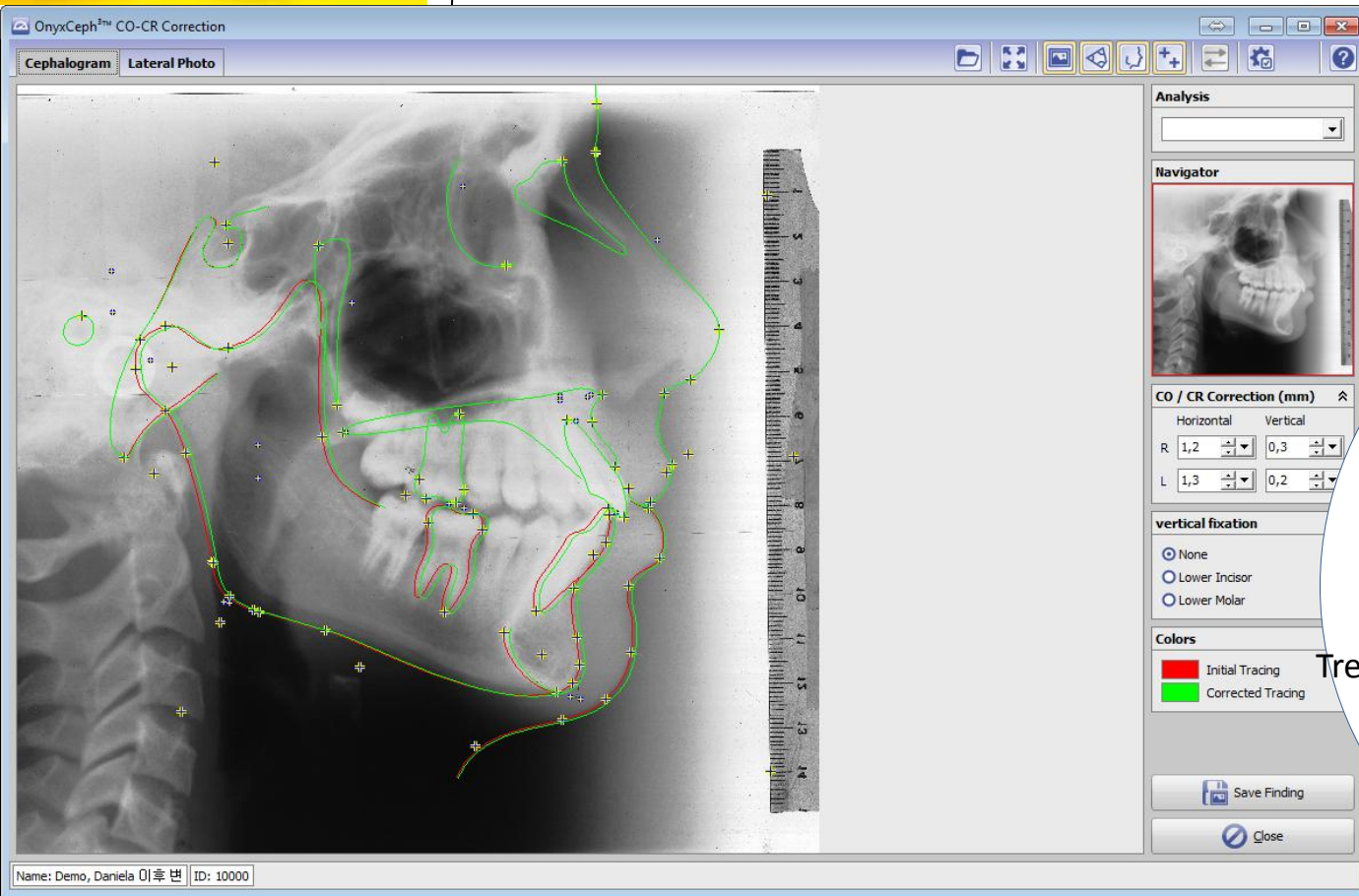
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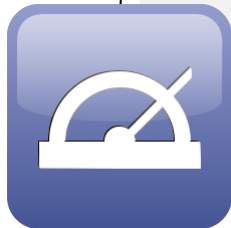
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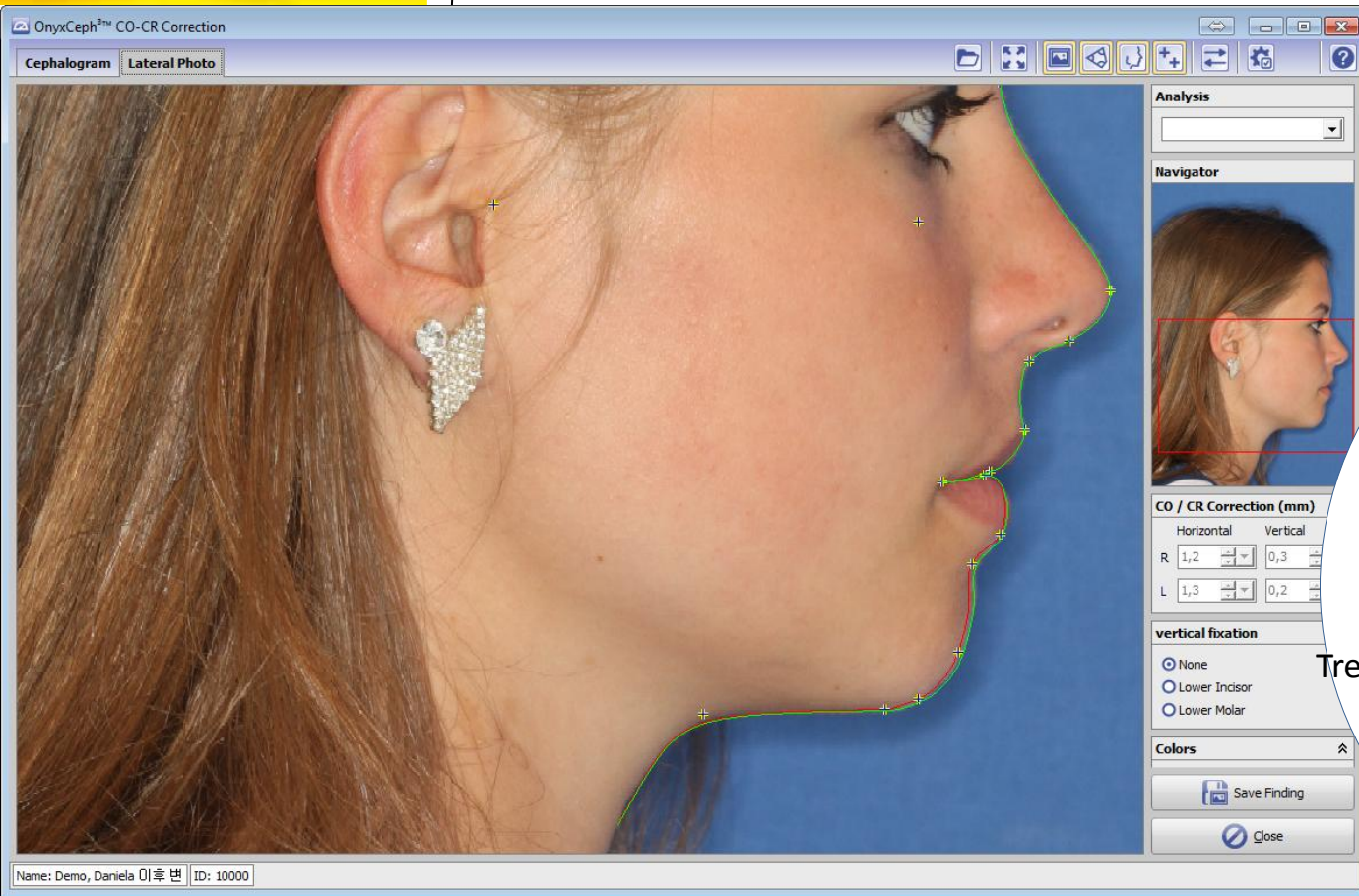
MODULES



OnyxCeph³™

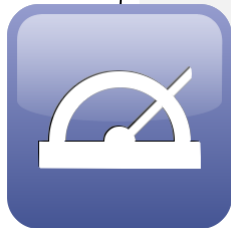
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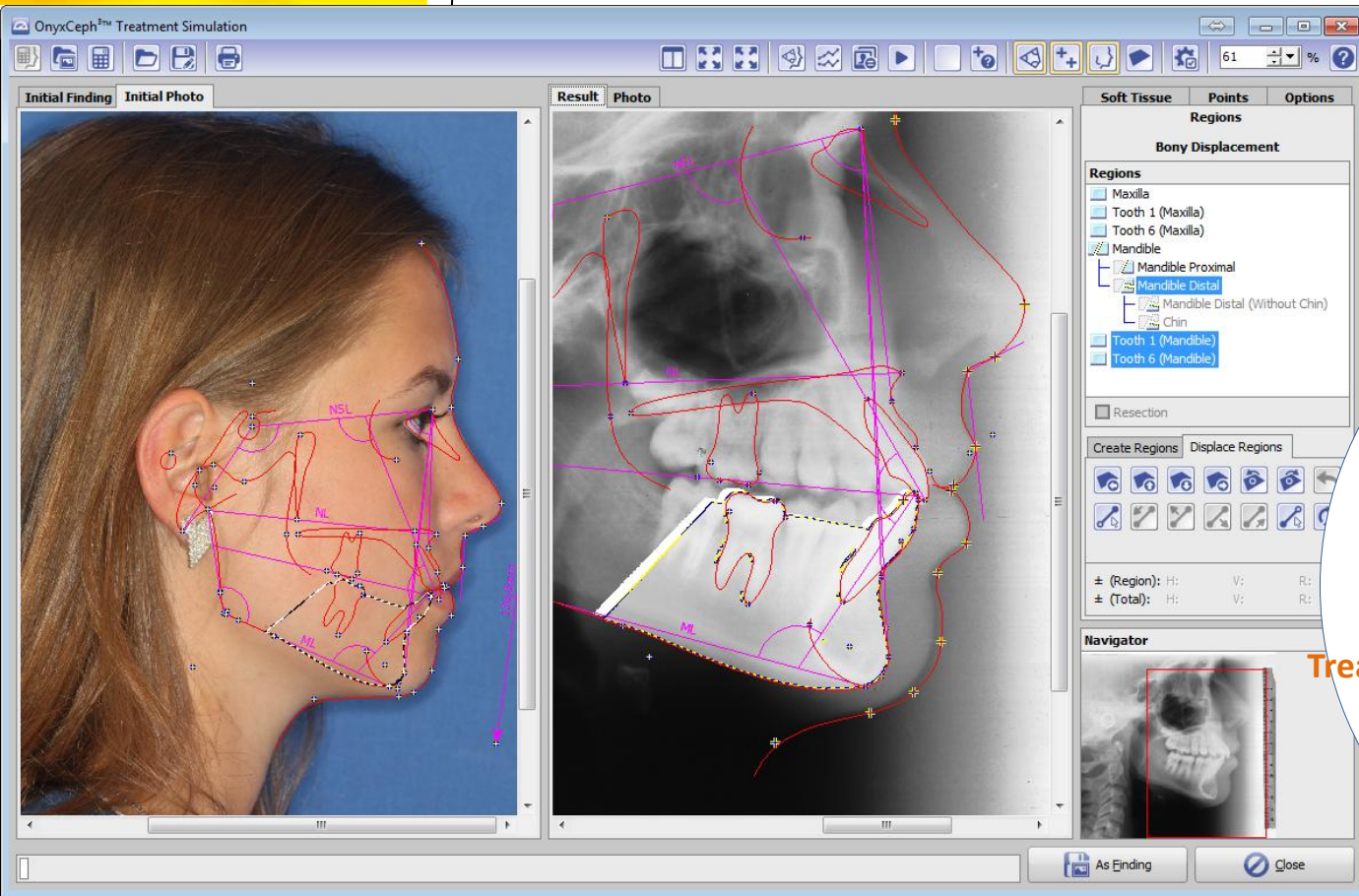
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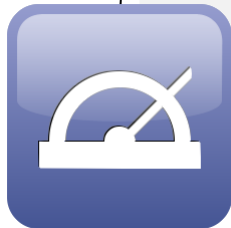
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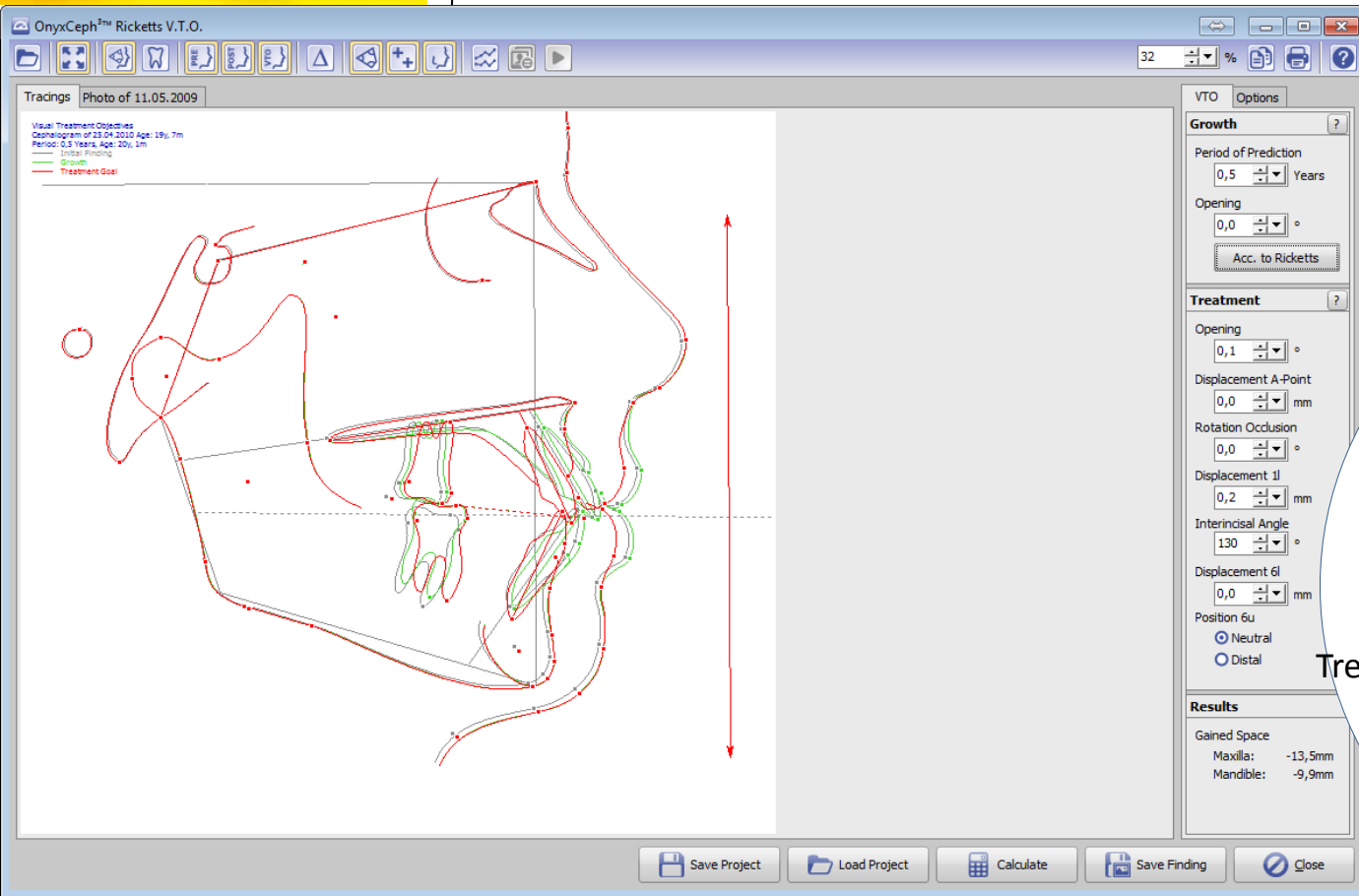
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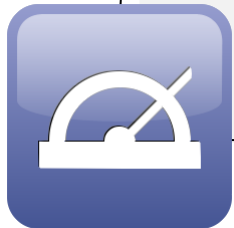
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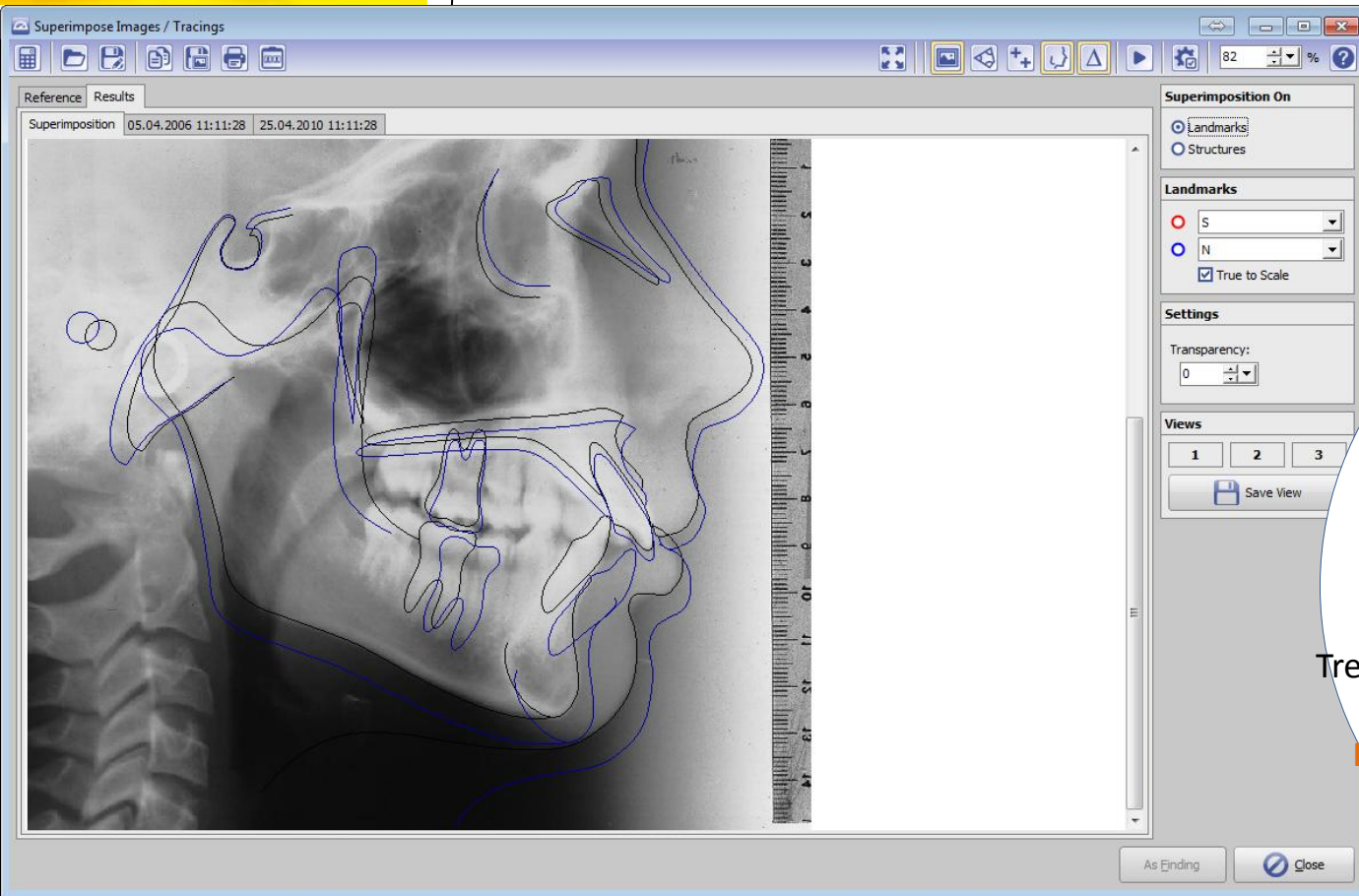
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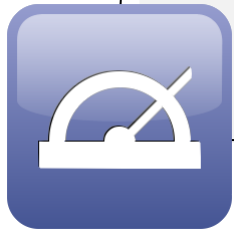
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Kylix 3D

Bonding Trays 3D

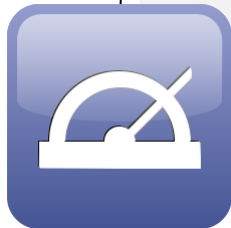
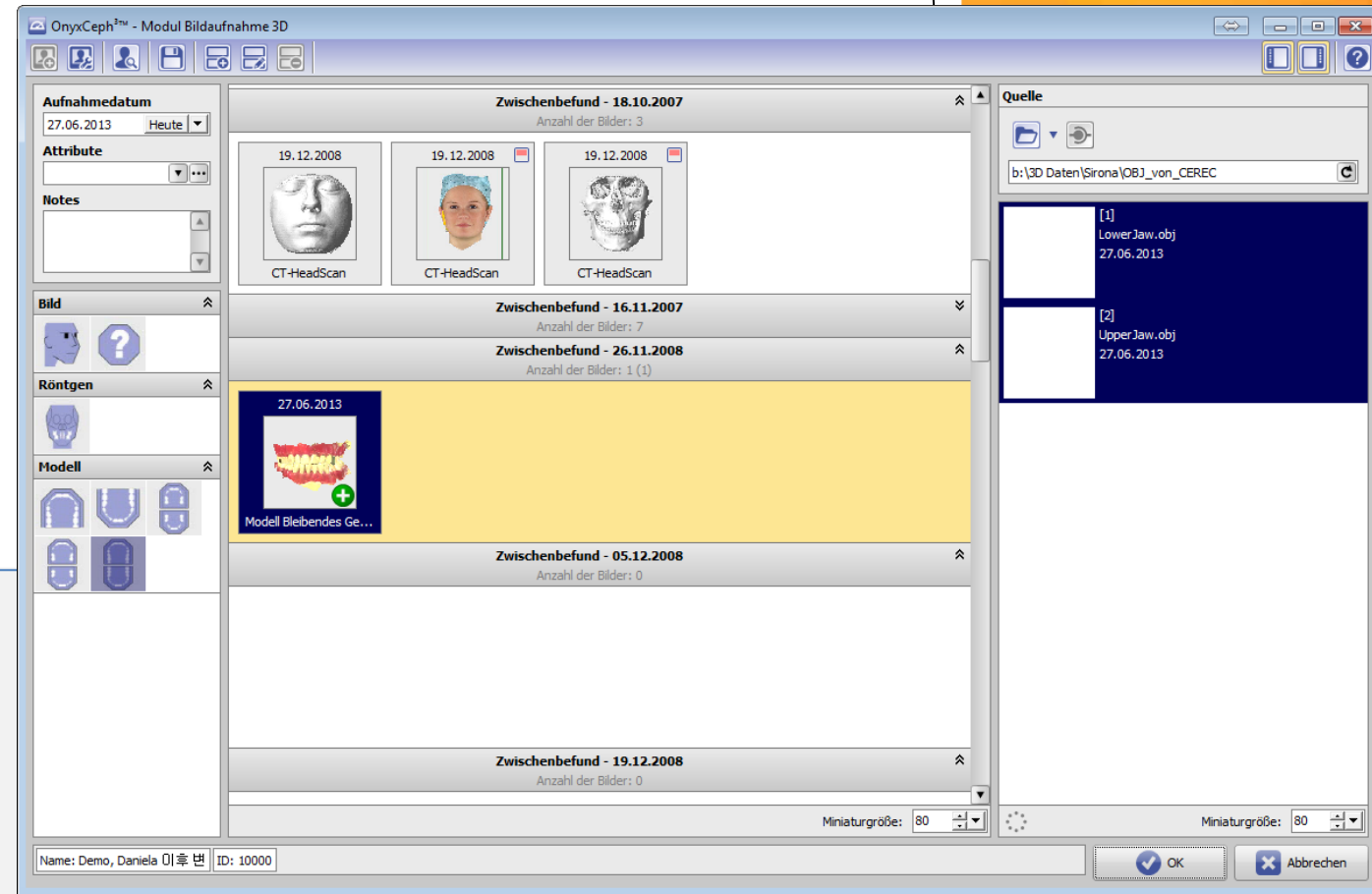
Splint 3D

Bracket Adapt

Aligner 3D

Retainer 3D

Waefer Creation 3D



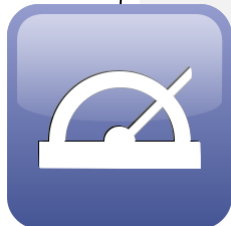
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Overview OnyxCeph³™

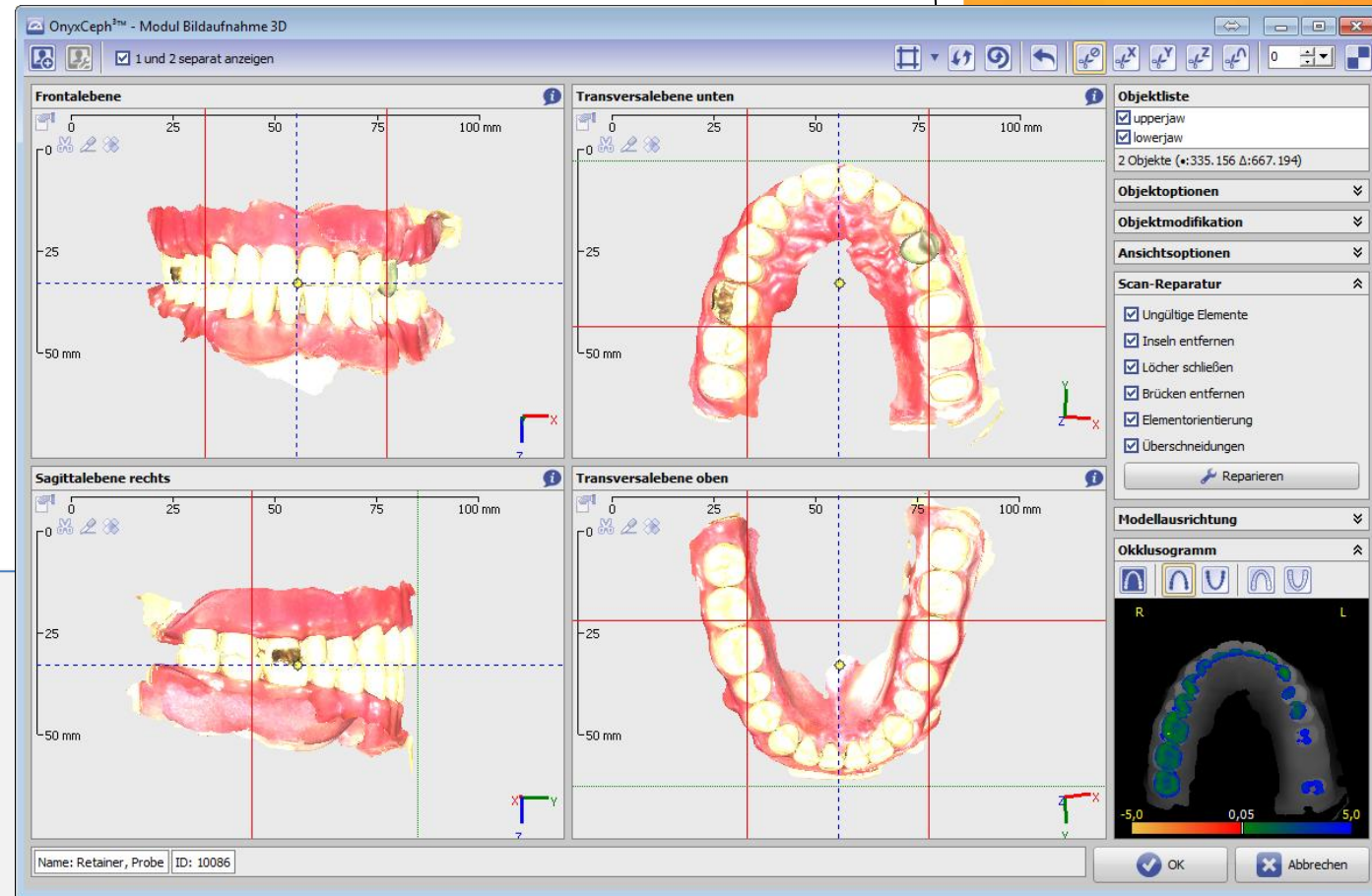
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OnyxCeph³™

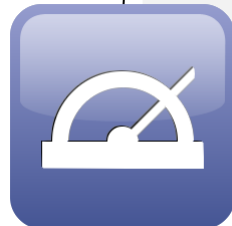


Overview OnyxCeph³™

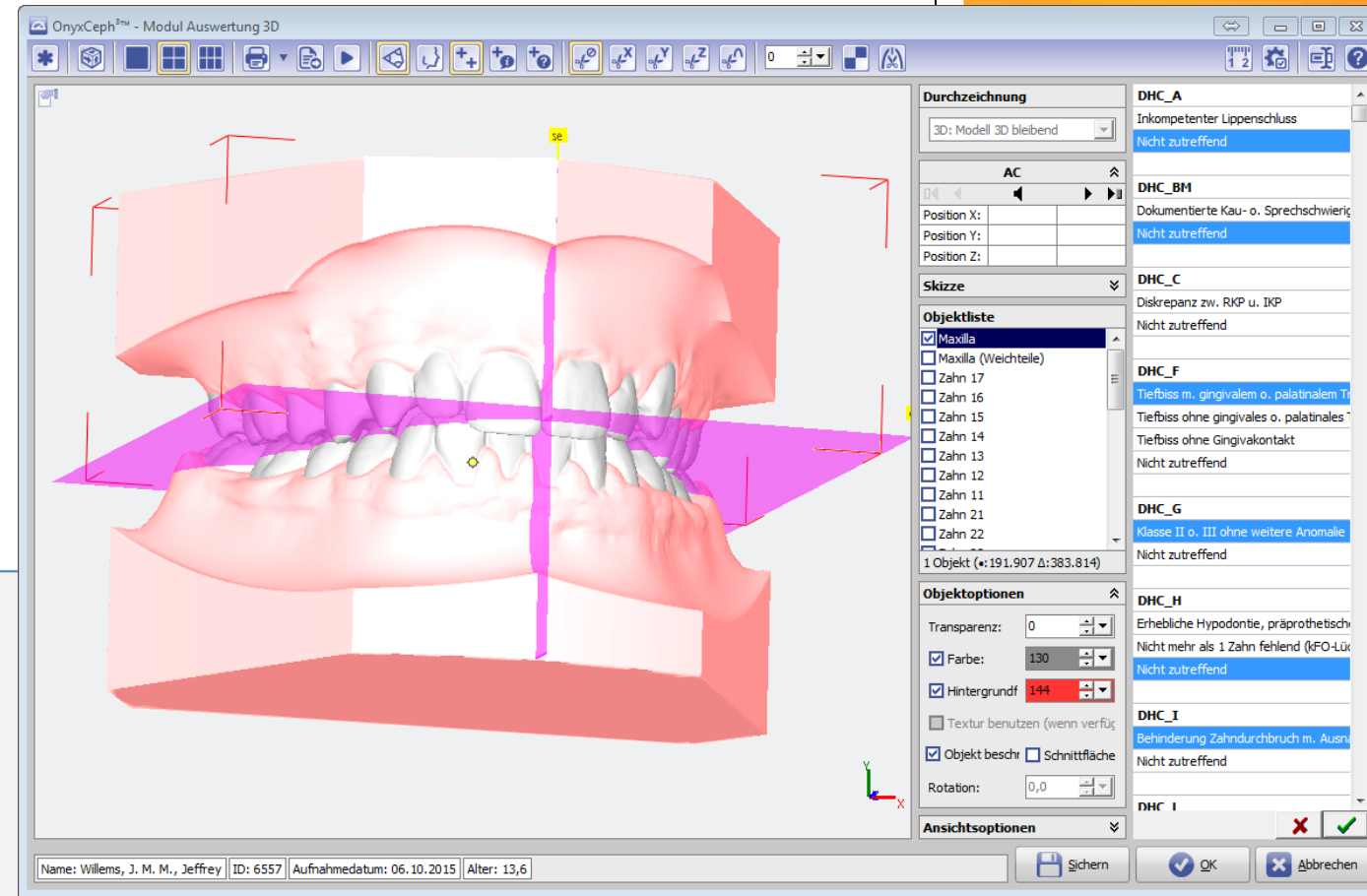
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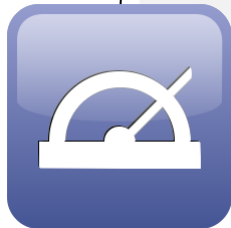
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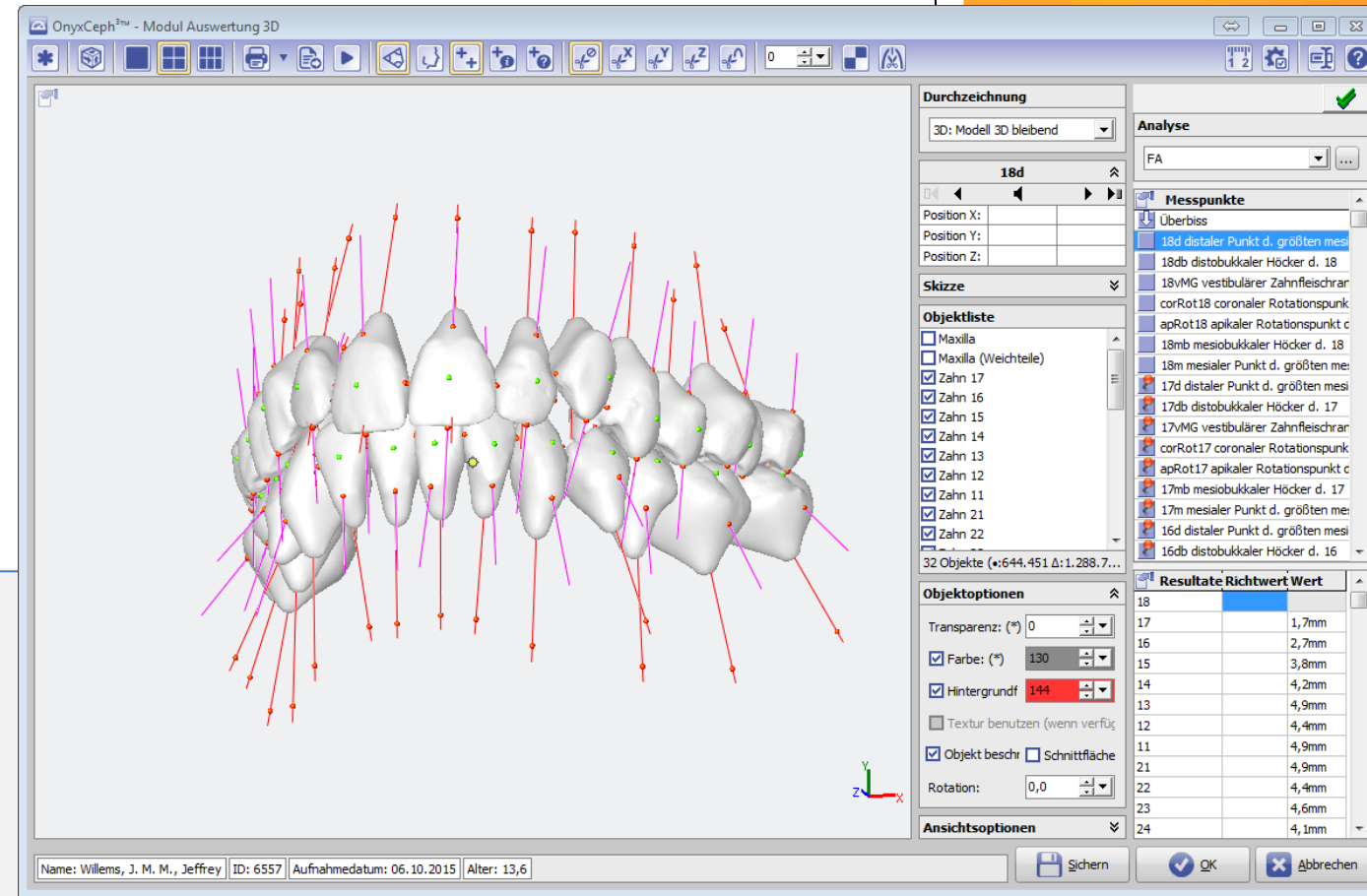
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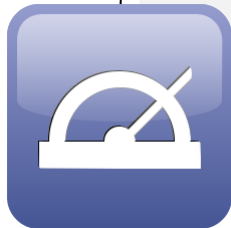
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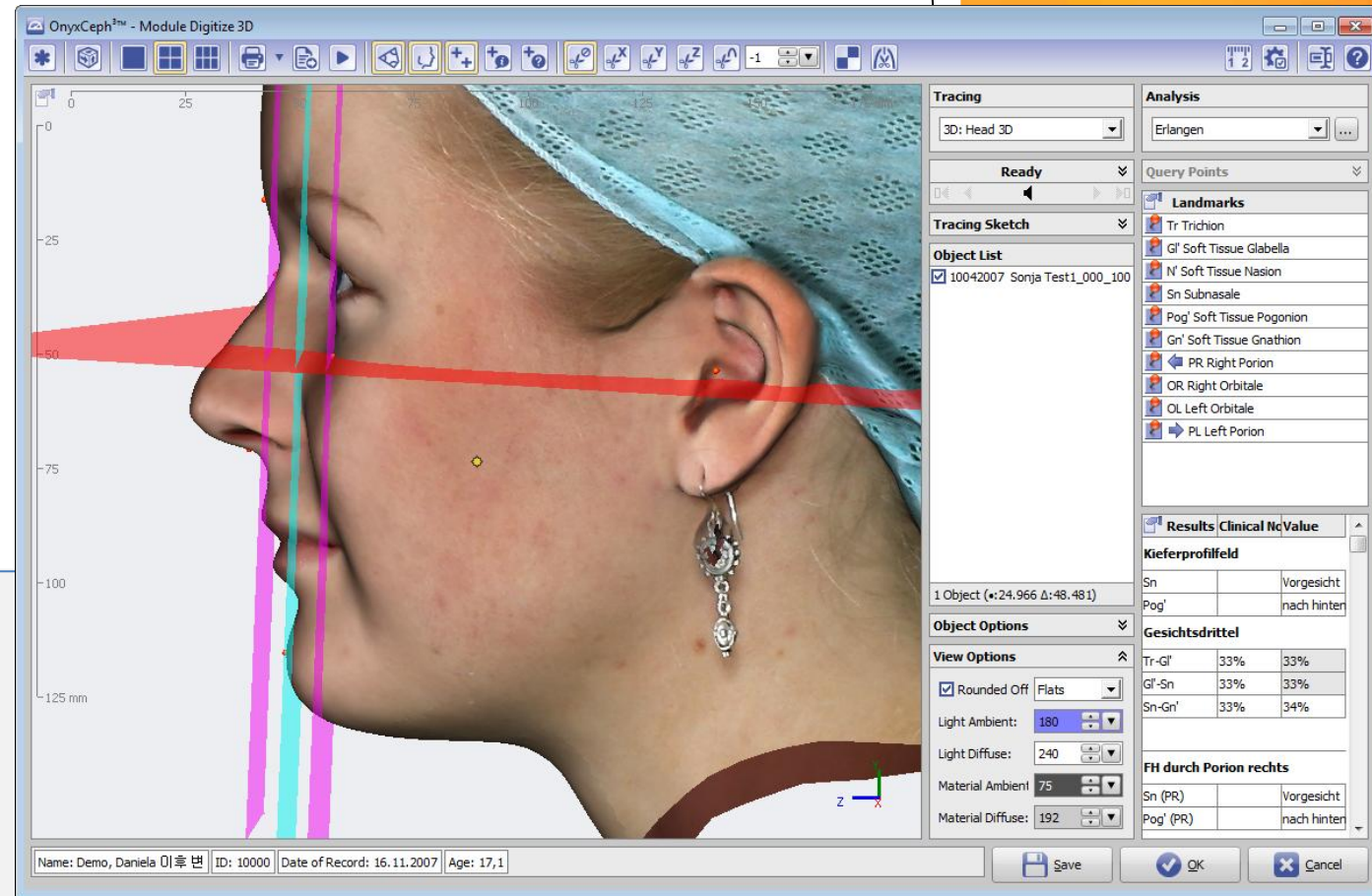
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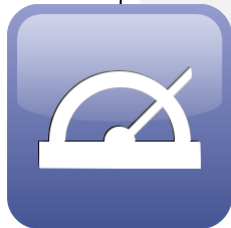
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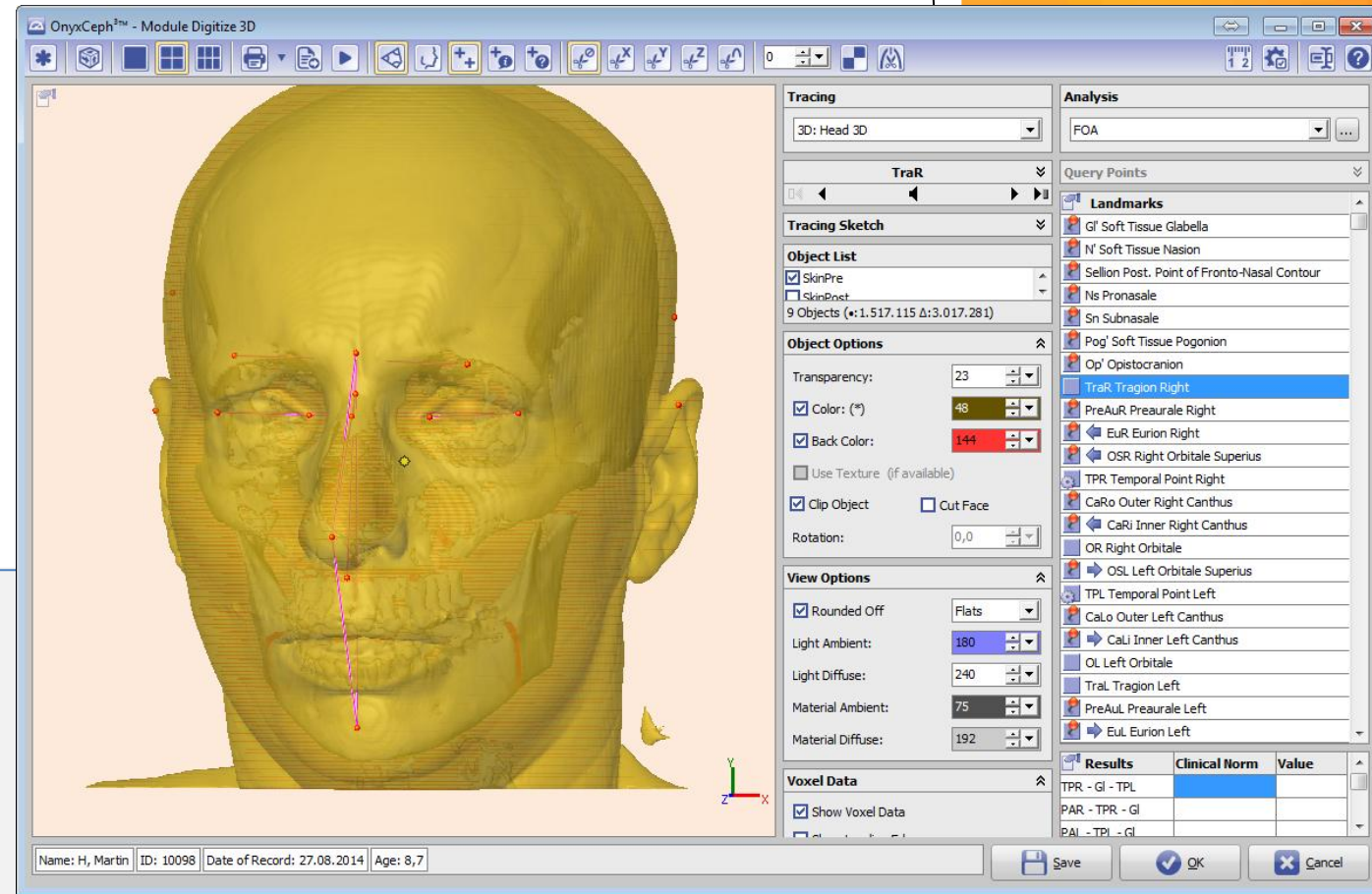
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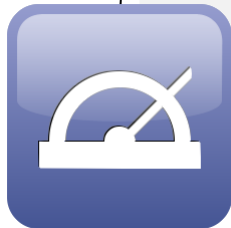
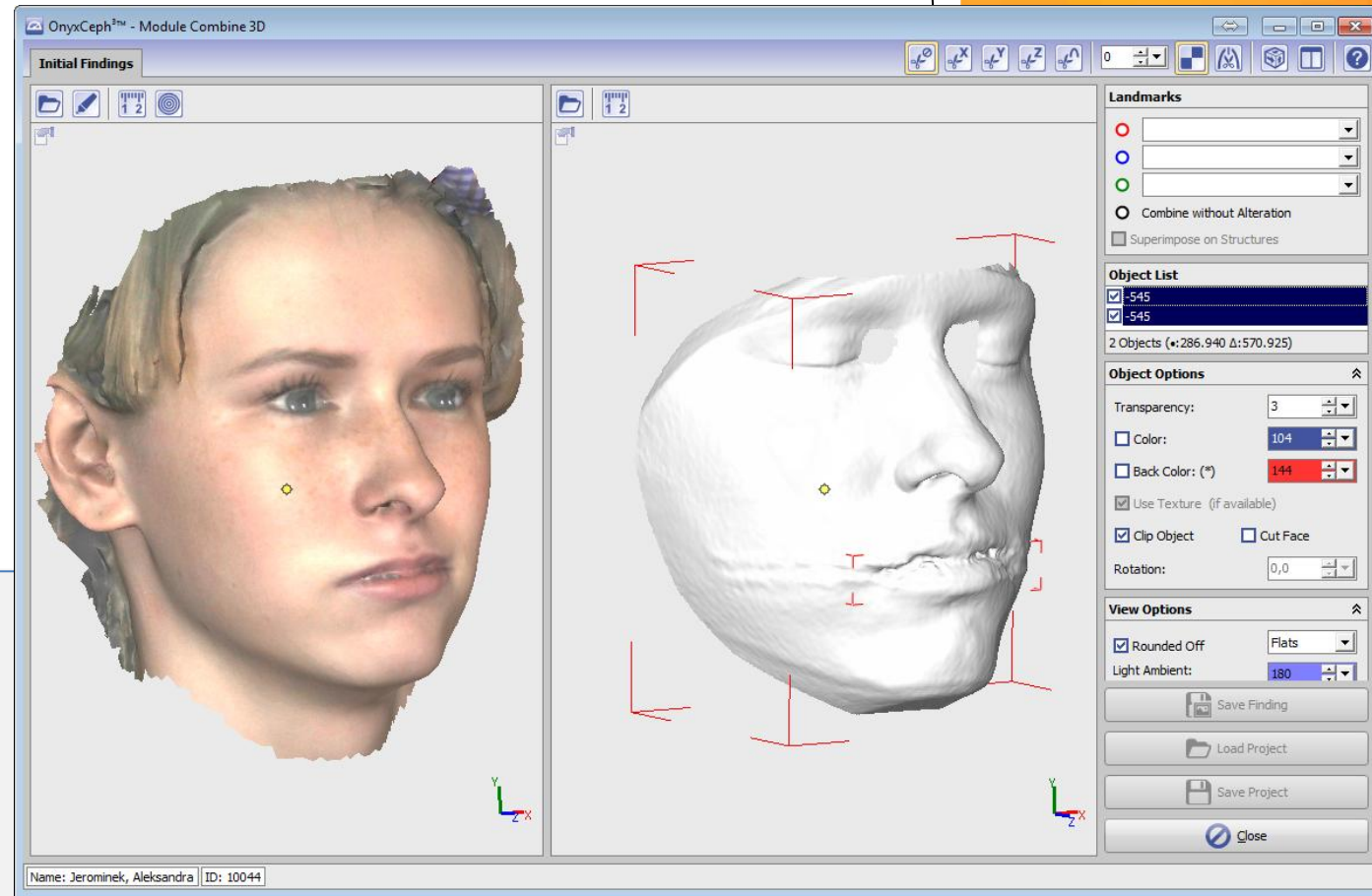
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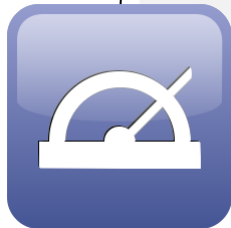
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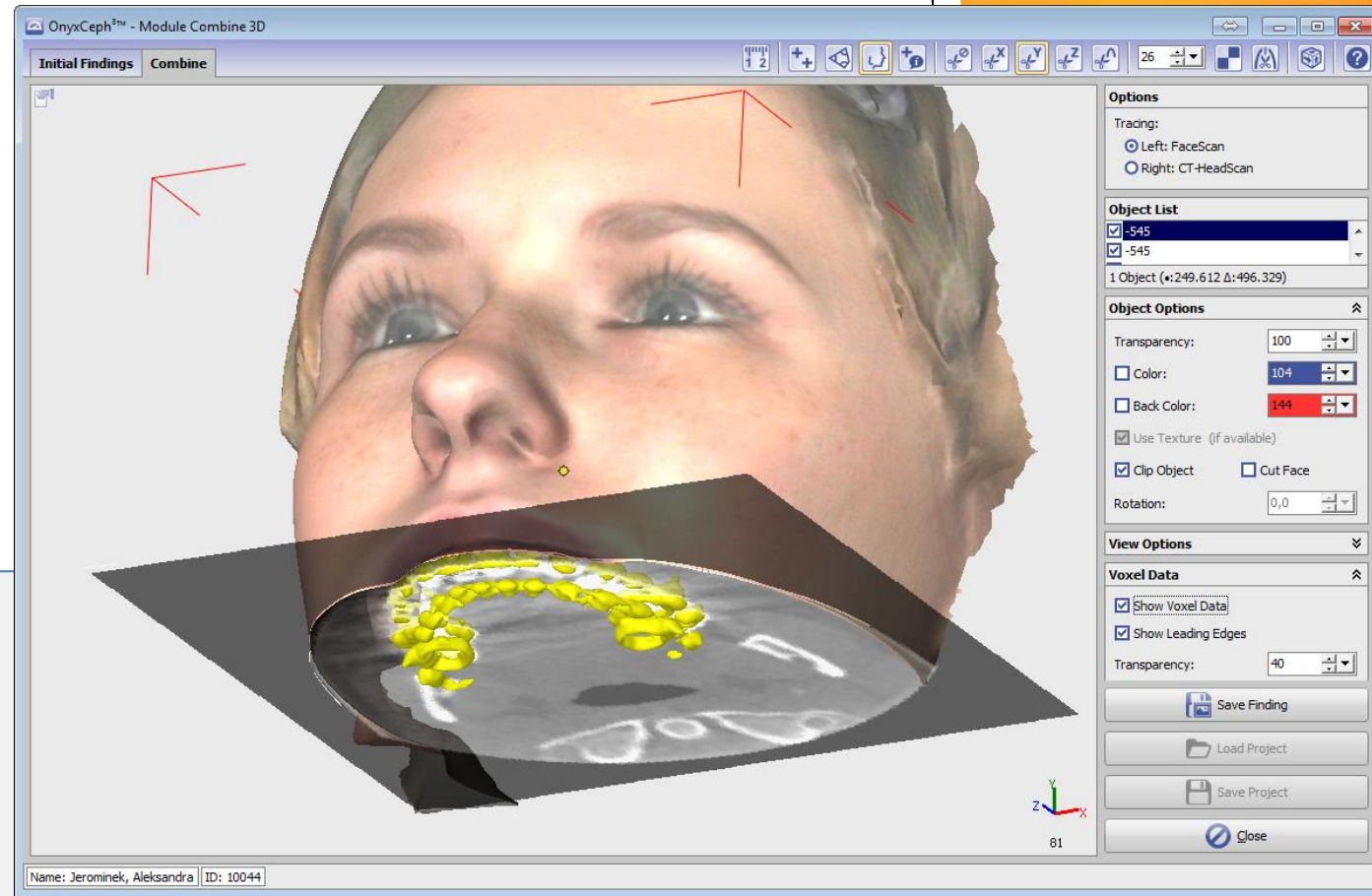
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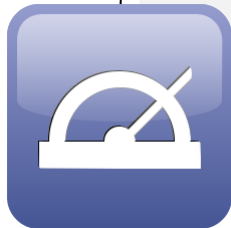
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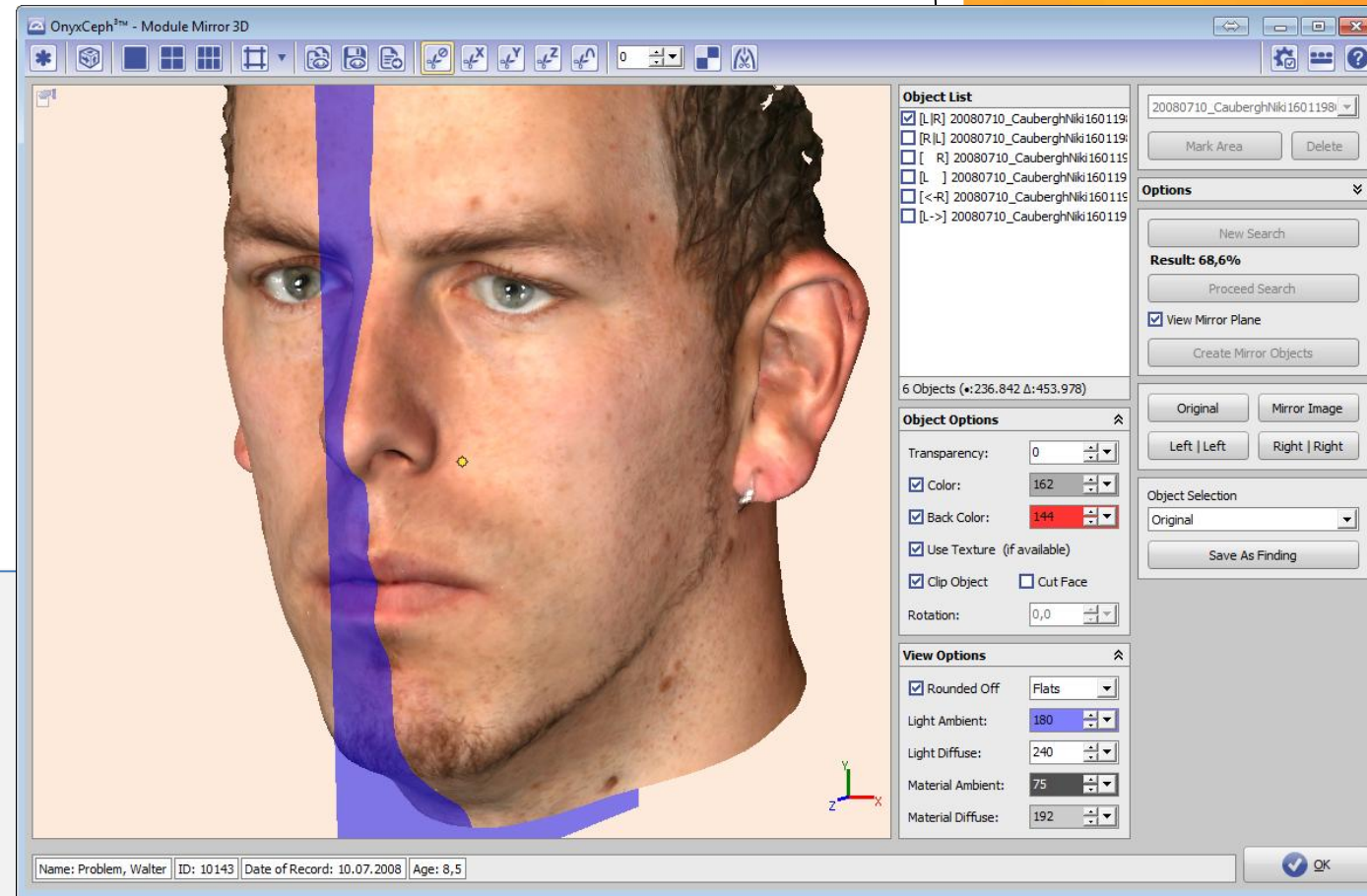
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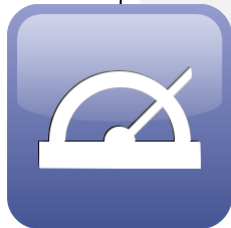
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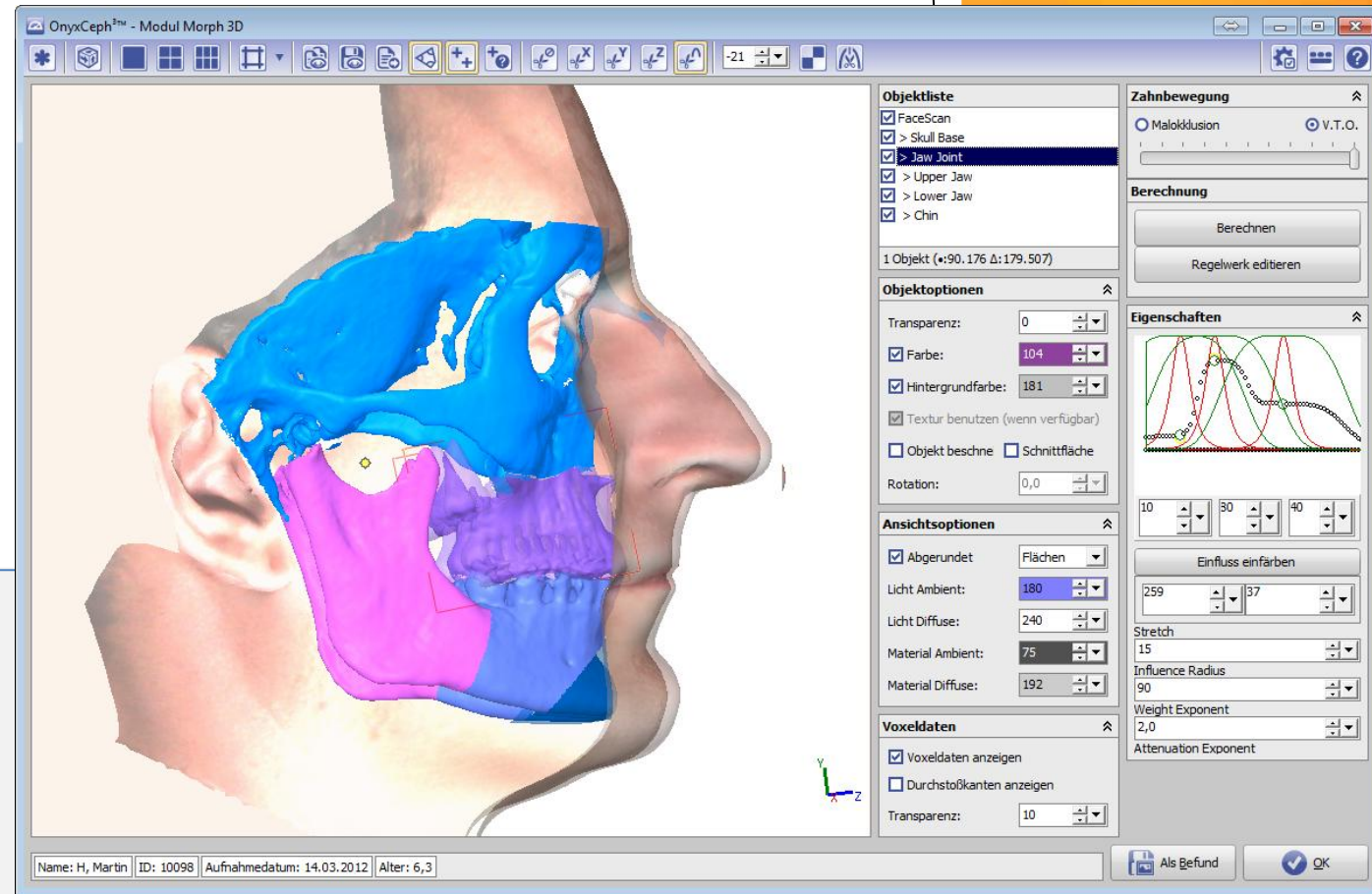
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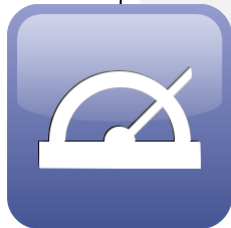
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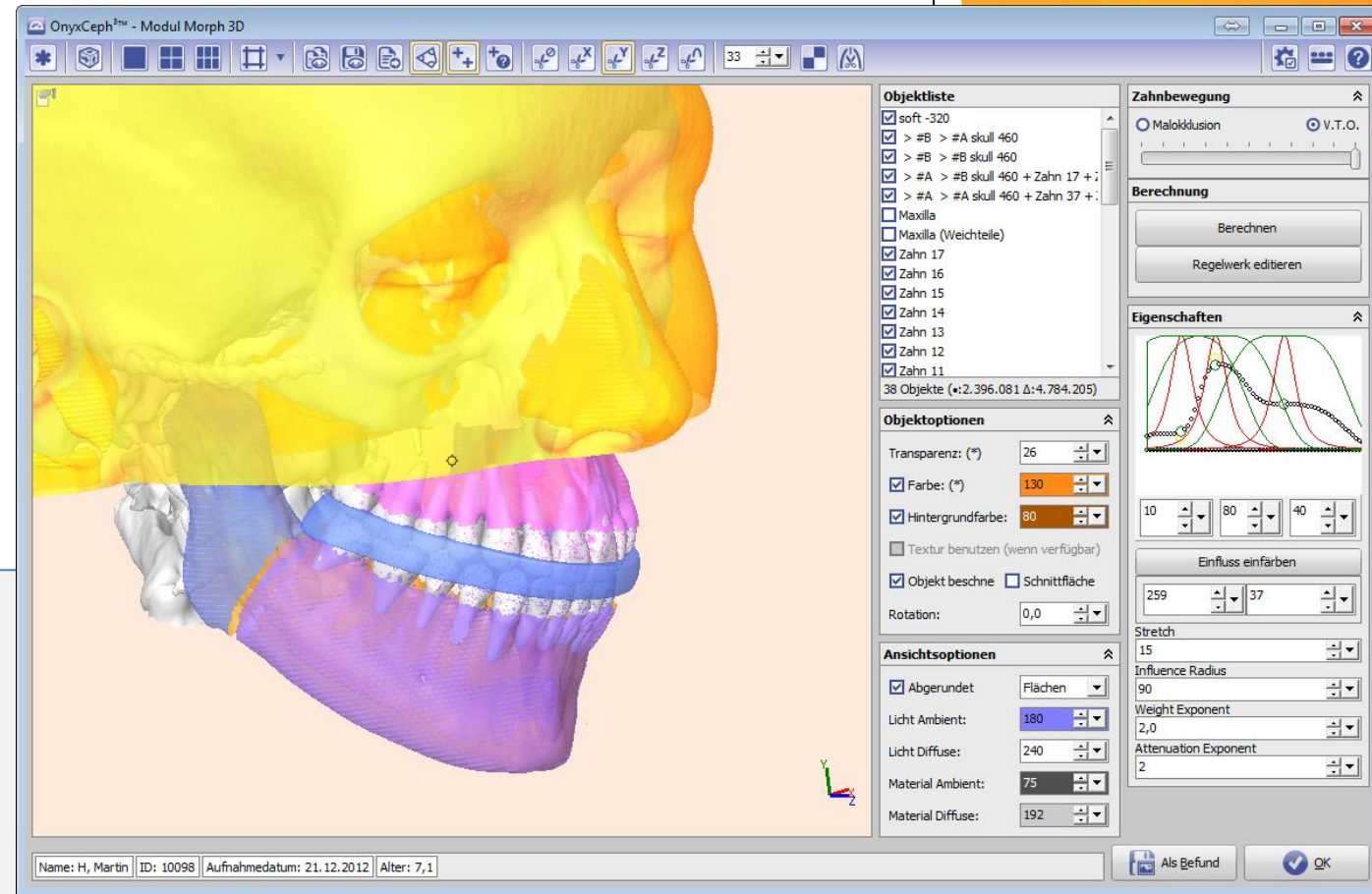
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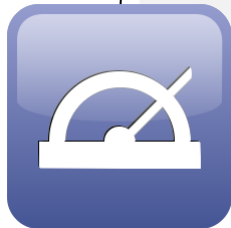
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OnyxCeph™ - Module Image Comparison

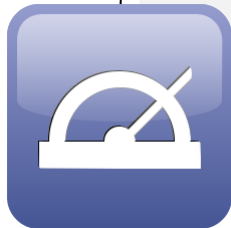
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UK Seite Tanaka/M??ler (B)	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm	20,1mm
UK Front (B)	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm	21,4mm
UK Platzbedarf tats??chl.	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm	62,8mm
UK Platzbedarf Faustregel	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm	65,4mm
UK Platzbedarf Intervall	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm	63,6mm
UK Platzbedarf Tanaka/M??ler	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm	61,6mm
Platzdiscrepanz															
OK Seite links tats??chl. (D)	-0,7mm	+0,4mm	+0,4mm	+0,4mm	+0,4mm	+0,6mm	+0,4mm	+0,6mm	+0,4mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	-0,7mm	-0,7mm
OK Seite links Faustregel (D)	-2,9mm	-1,7mm	-1,7mm	-1,7mm	-1,7mm	-1,5mm	-1,7mm	-1,6mm	-1,7mm	-1,5mm	-1,5mm	-1,5mm	-1,5mm	-2,9mm	-2,9mm
OK Seite links Intervall (D)	-1,3mm	-0,1mm	-0,1mm	-0,1mm	-0,1mm	+0,1mm	-0,1mm	+0,0mm	-0,1mm	+0,1mm	+0,1mm	+0,1mm	+0,1mm	-1,3mm	-1,3mm
OK Seite links Tanaka/M?? (D)	-0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,8mm	+0,6mm	+0,7mm	+0,6mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	-0,6mm	-0,6mm
OK Seite rechts tats??chl. (D)	+0,9mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,8mm	+0,9mm	+0,9mm
OK Seite rechts Faustregel (D)	-1,5mm	-1,6mm	-1,6mm	-1,6mm	-1,6mm	-1,7mm	-1,6mm	-1,6mm	-1,6mm	-1,6mm	-1,7mm	-1,7mm	-1,7mm	-1,5mm	-1,5mm
OK Seite rechts Intervall (D)	+0,1mm	0,0mm	0,0mm	0,0mm	0,0mm	-0,1mm	0,0mm	0,0mm	0,0mm	0,0mm	-0,1mm	-0,1mm	-0,1mm	+0,1mm	+0,1mm
OK Seite rechts Tanaka/M?? (D)	+0,8mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,7mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,8mm	+0,8mm
OK Front (D)	-2,2mm	+0,5mm	+0,5mm	+0,5mm	+0,5mm	+0,5mm	+0,4mm	+0,4mm	+0,5mm	+0,5mm	+0,5mm	+0,5mm	+0,5mm	-2,2mm	-2,2mm
OK Diskrepanz tats??chl.	-1,9mm	1,8mm	1,8mm	1,8mm	1,8mm	1,9mm	1,6mm	1,8mm	1,8mm	1,9mm	1,9mm	1,9mm	1,9mm	-1,9mm	-1,9mm
OK Diskrepanz Faustregel	-6,5mm	-2,9mm	-2,9mm	-2,9mm	-2,9mm	-2,7mm	-3,0mm	-2,8mm	-2,9mm	-2,7mm	-2,7mm	-2,7mm	-2,7mm	-6,5mm	-6,5mm
OK Diskrepanz Intervall	-3,3mm	0,4mm	0,4mm	0,4mm	0,4mm	0,5mm	0,3mm	0,4mm	0,4mm	0,5mm	0,5mm	0,5mm	0,5mm	-3,3mm	-3,3mm
OK Diskrepanz Tanaka/M??ler	-1,9mm	1,7mm	1,7mm	1,7mm	1,7mm	1,9mm	1,6mm	1,8mm	1,7mm	1,9mm	1,9mm	1,9mm	1,9mm	-1,9mm	-1,9mm
Platzdiscrepanz															
UK Seite links tats??chl. (D)	+0,9mm	+0,6mm	+0,6mm	+0,6mm	+0,6mm	+0,5mm	+0,5mm	+0,5mm	+0,6mm	+0,5mm	+0,5mm	+0,5mm	+0,5mm	+0,9mm	+0,9mm
UK Seite links Faustregel (D)	-0,2mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,6mm	-0,2mm	-0,2mm
UK Seite links Intervall (D)	+0,7mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,3mm	+0,7mm	+0,7mm
UK Seite links Tanaka/M?? (D)	+1,7mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,3mm	+1,7mm	+1,7mm
UK Seite rechts tats??chl. (D)	+0,5mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,3mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,5mm	+0,5mm
UK Seite rechts Faustregel (D)	-0,5mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,7mm	-0,5mm	-0,5mm
UK Seite rechts Intervall (D)	+0,5mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,3mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,2mm	+0,5mm	+0,5mm
UK Seite rechts Tanaka/M?? (D)	+1,4mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,2mm	+1,4mm	+1,4mm
UK Front (D)	-0,2mm	+0,4mm	+0,4mm	+0,4mm	+0,4mm	+0,4mm	+0,5mm	+0,4mm	+0,4mm	+0,4mm	+0,4mm	+0,4mm	+0,4mm	-0,2mm	-0,2mm
UK Diskrepanz tats??chl.	1,2mm	1,1mm	1,1mm	1,1mm	1,1mm	1,2mm	1,2mm	1,1mm	1,2mm	1,2mm	1,2mm	1,2mm	1,2mm	1,2mm	1,2mm
UK Diskrepanz Faustregel	-0,8mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,9mm	-0,8mm	-0,8mm
UK Diskrepanz Intervall	1,0mm	0,9mm	0,9mm	0,9mm	0,9mm	1,0mm	1,0mm	0,9mm	0,9mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm

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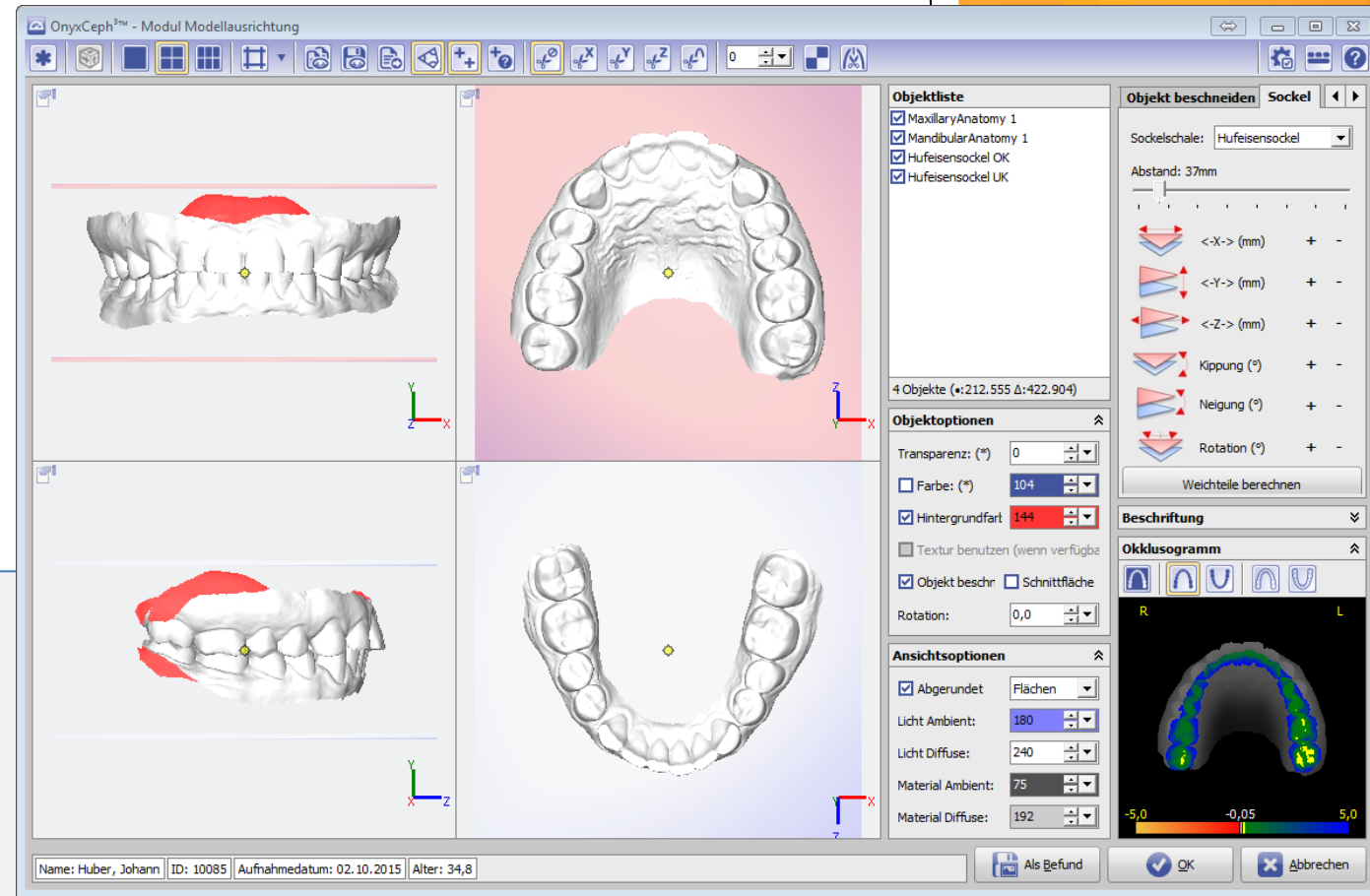
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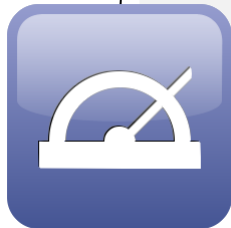
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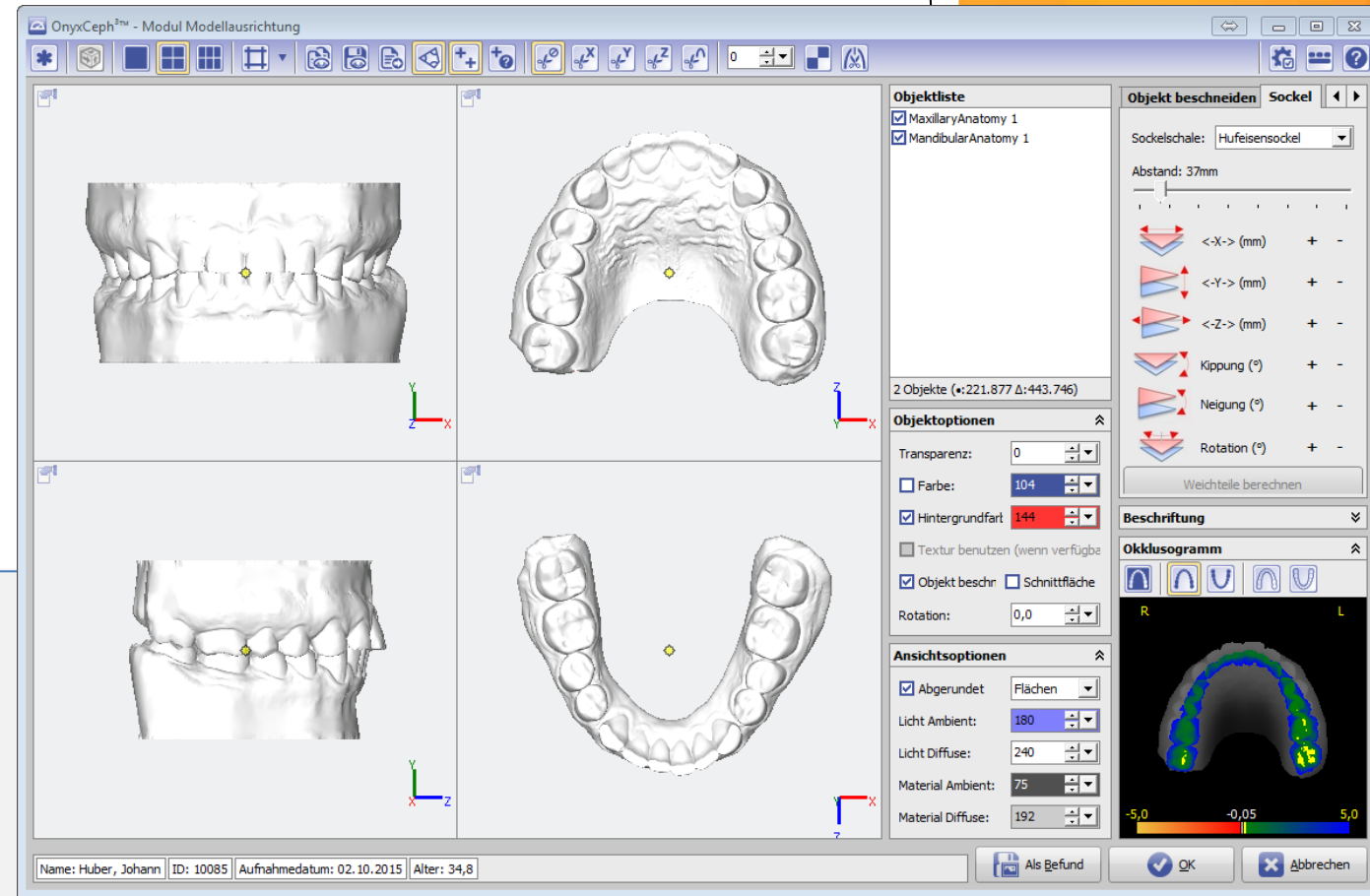
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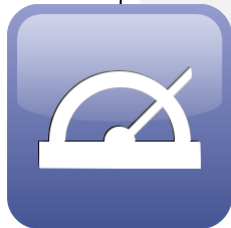
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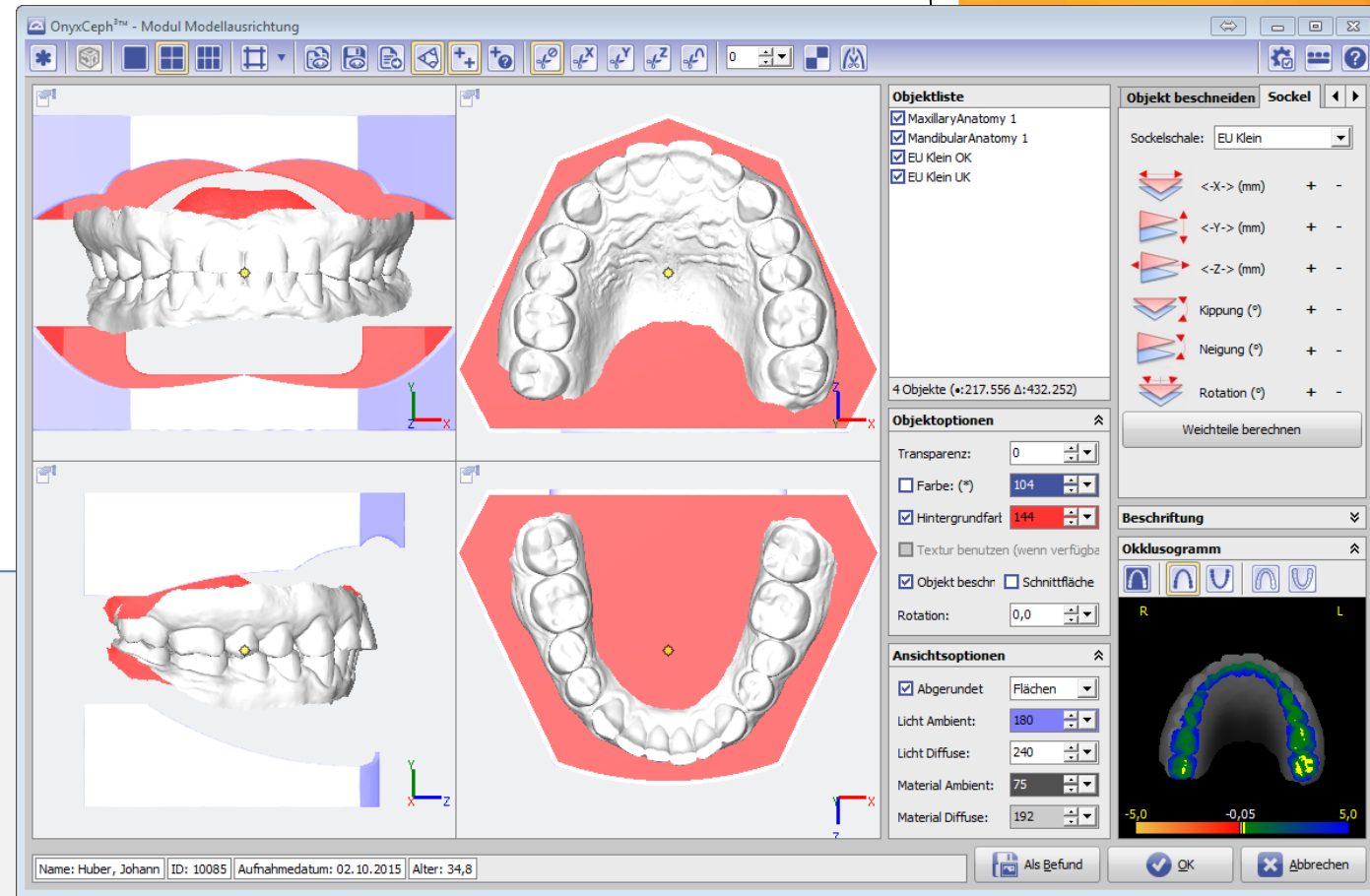
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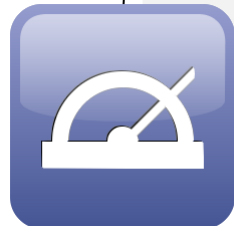
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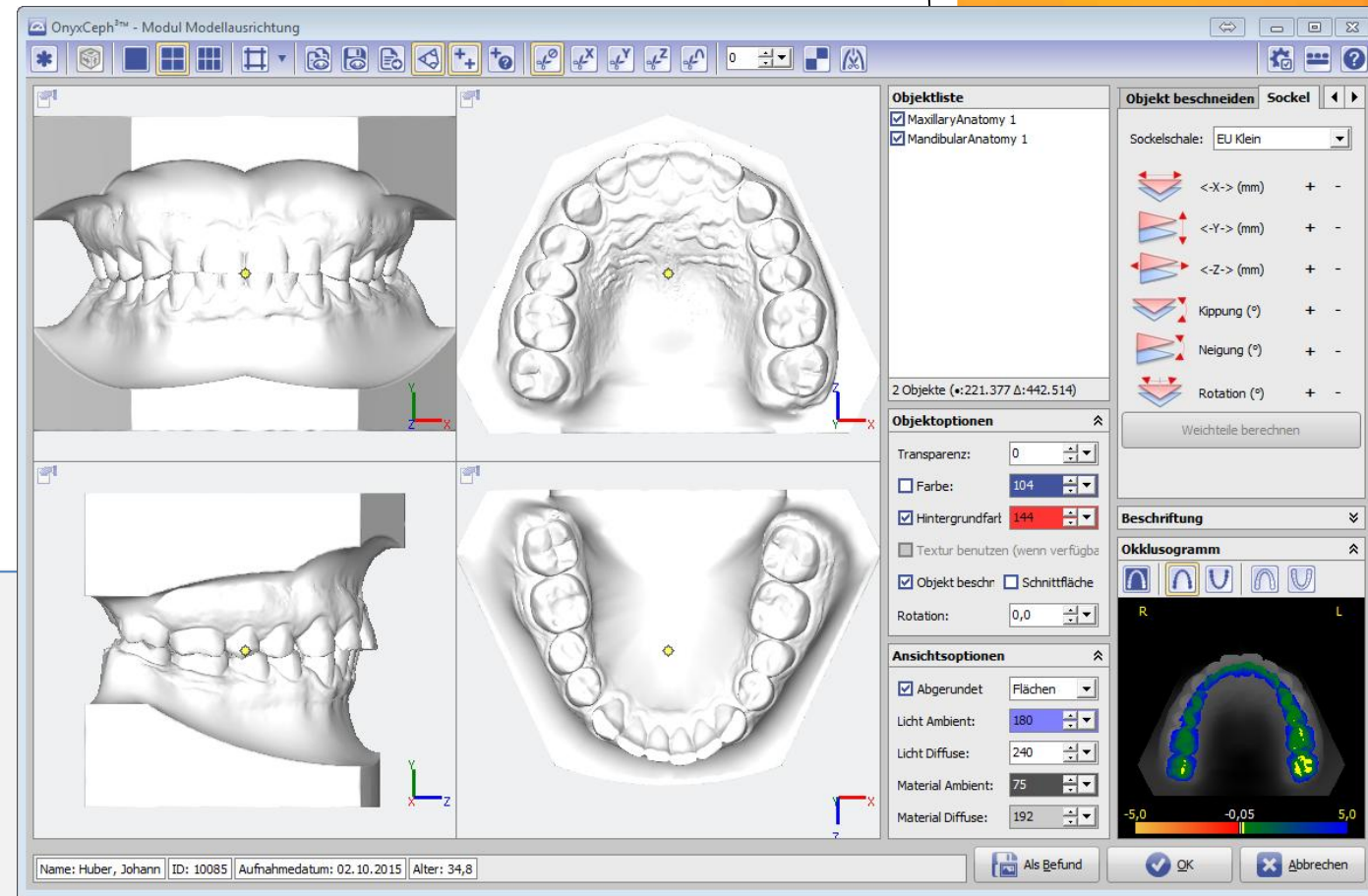
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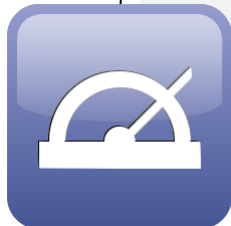
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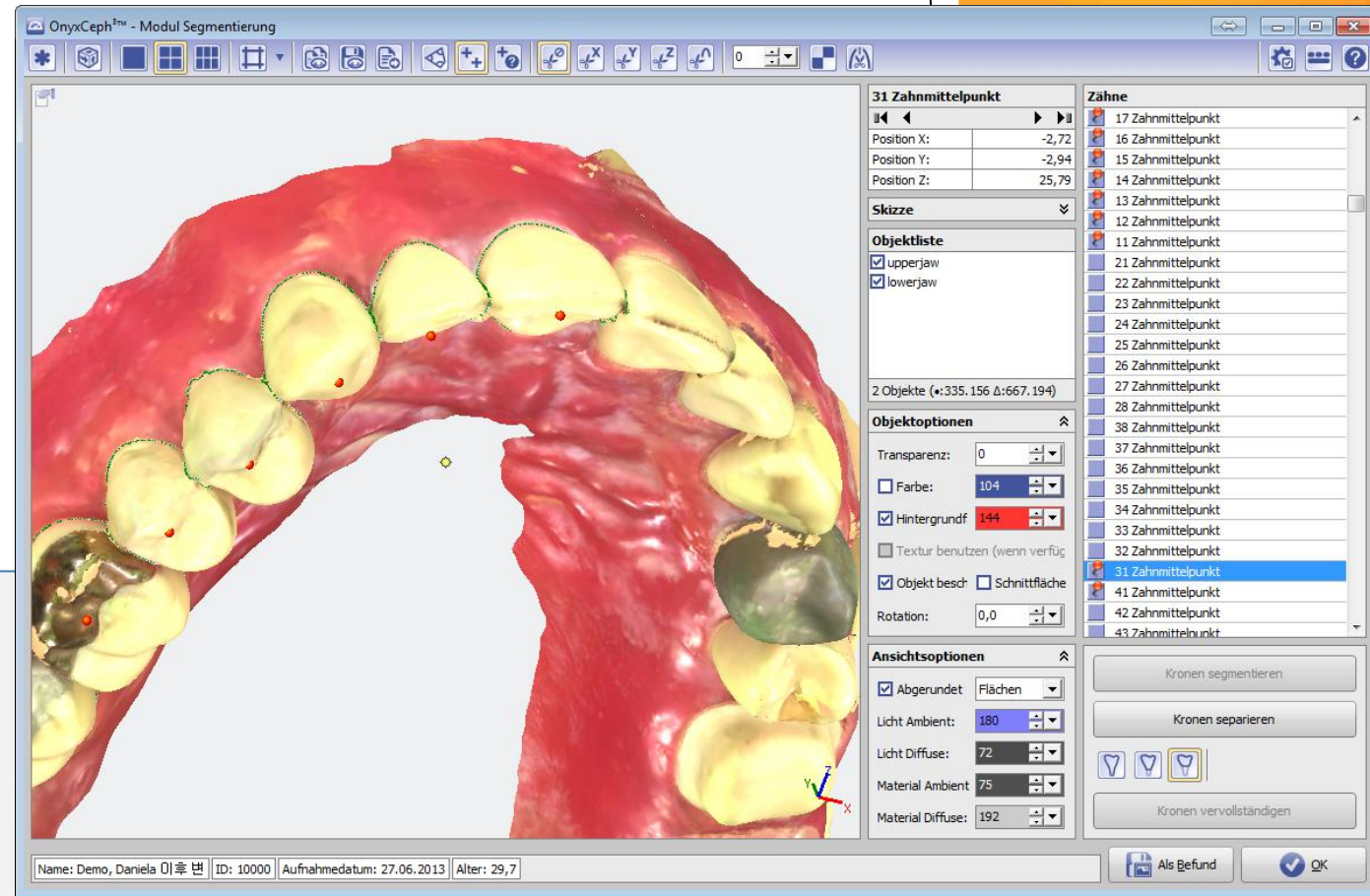
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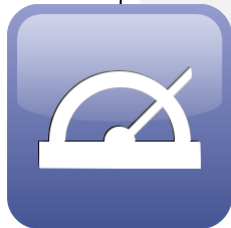
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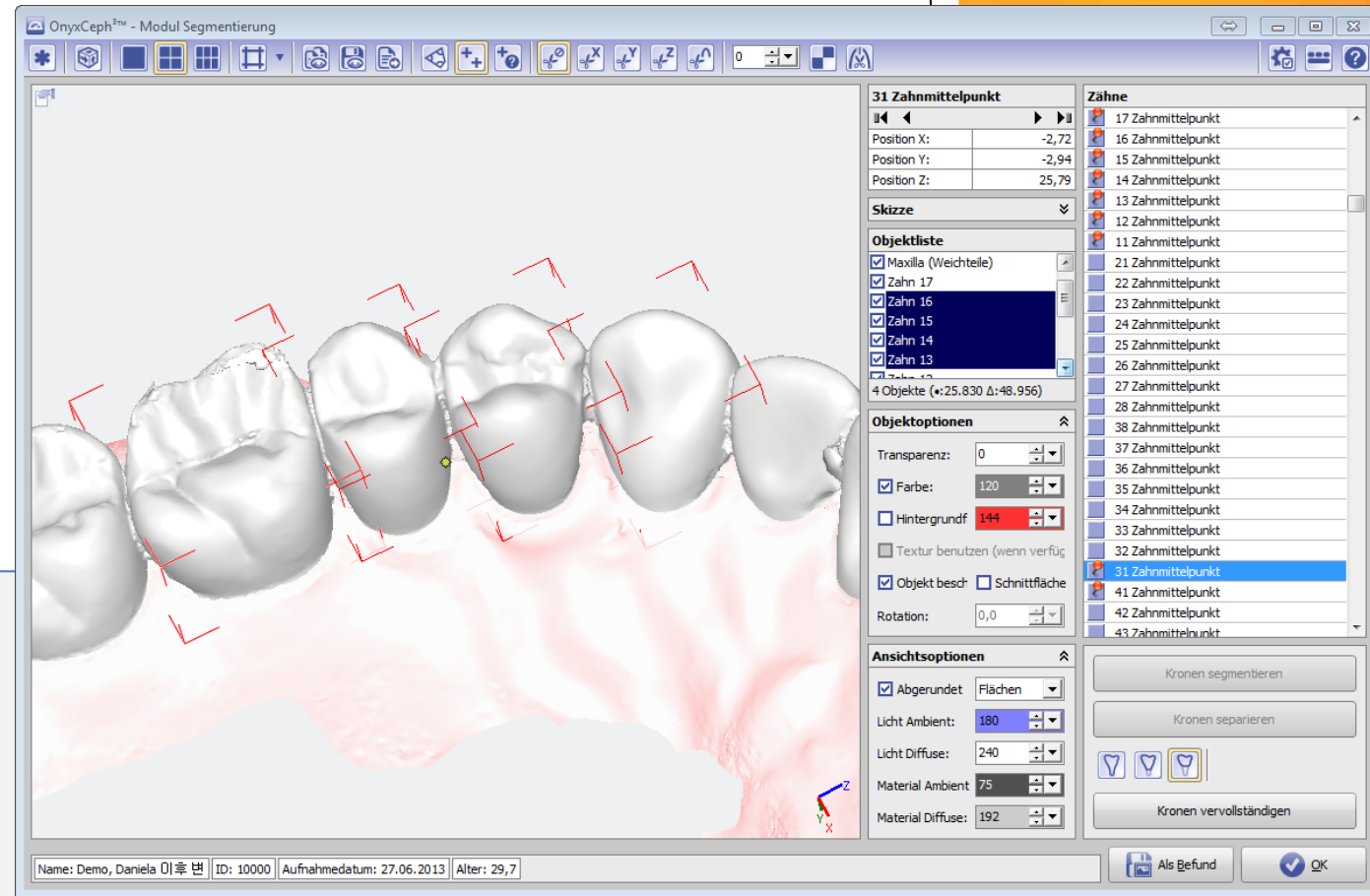
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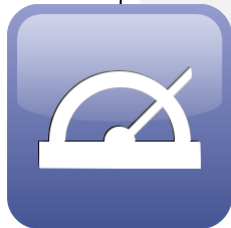
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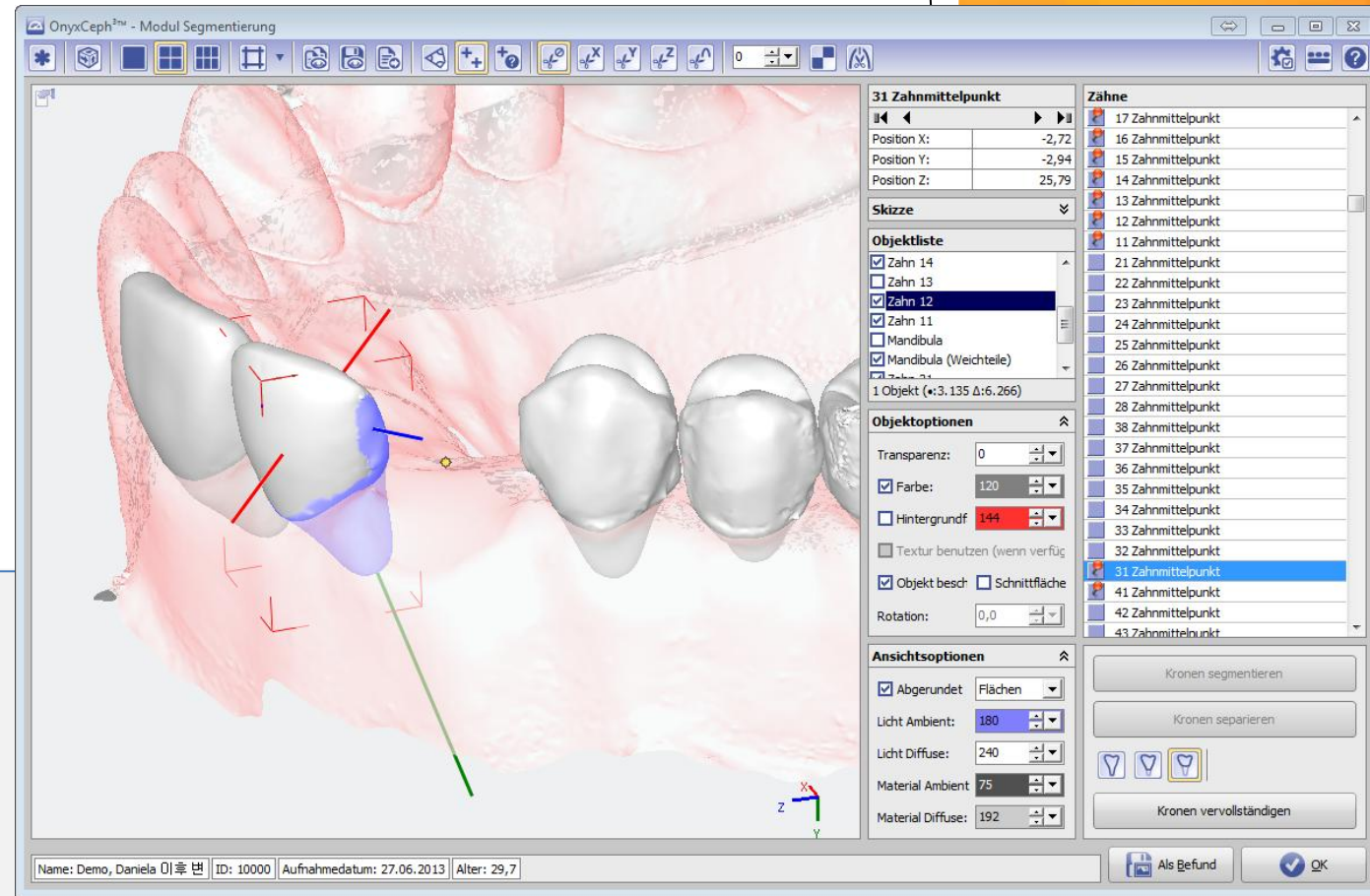
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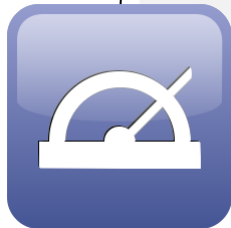
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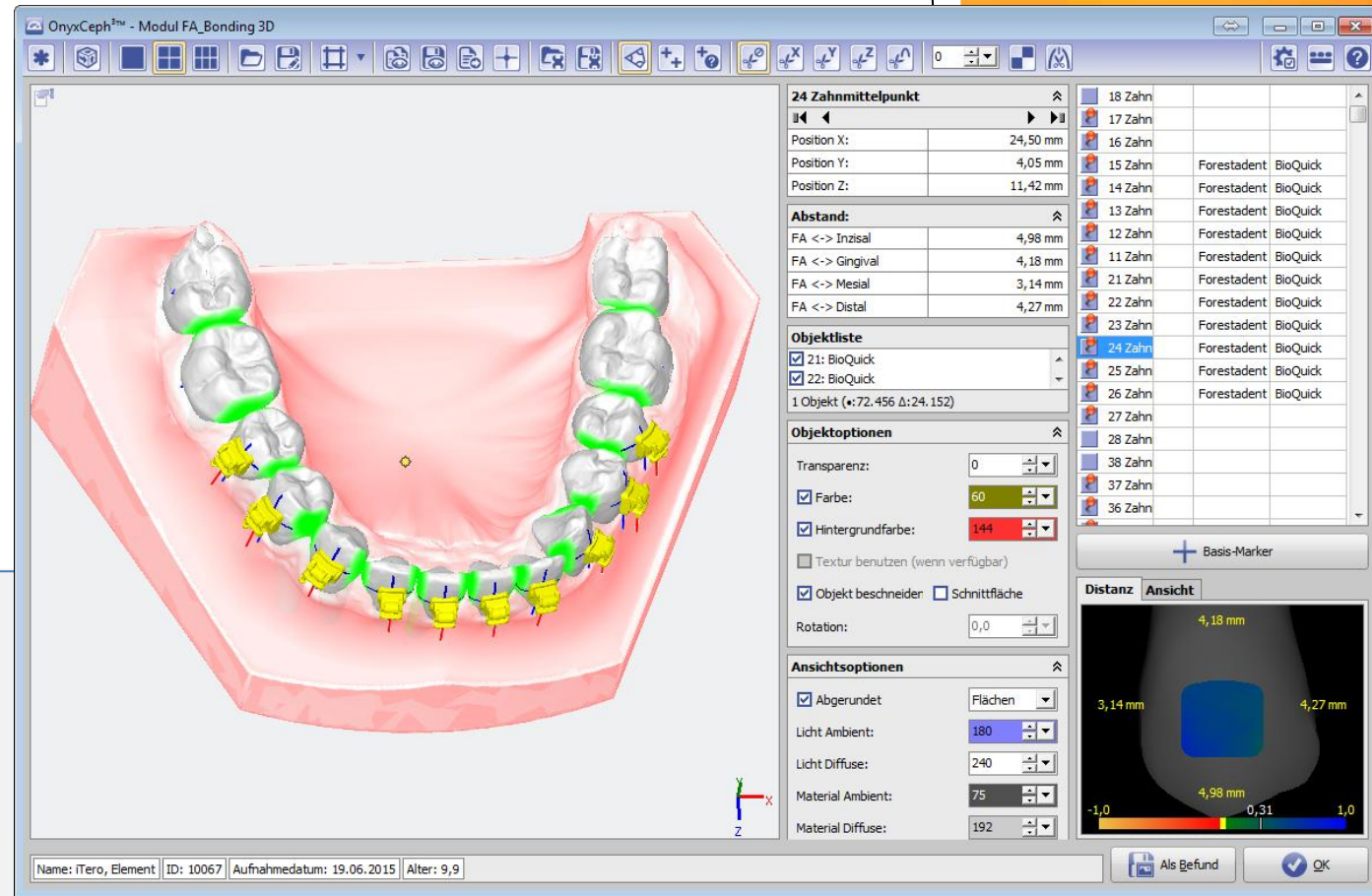
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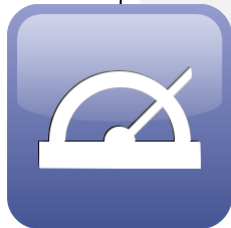
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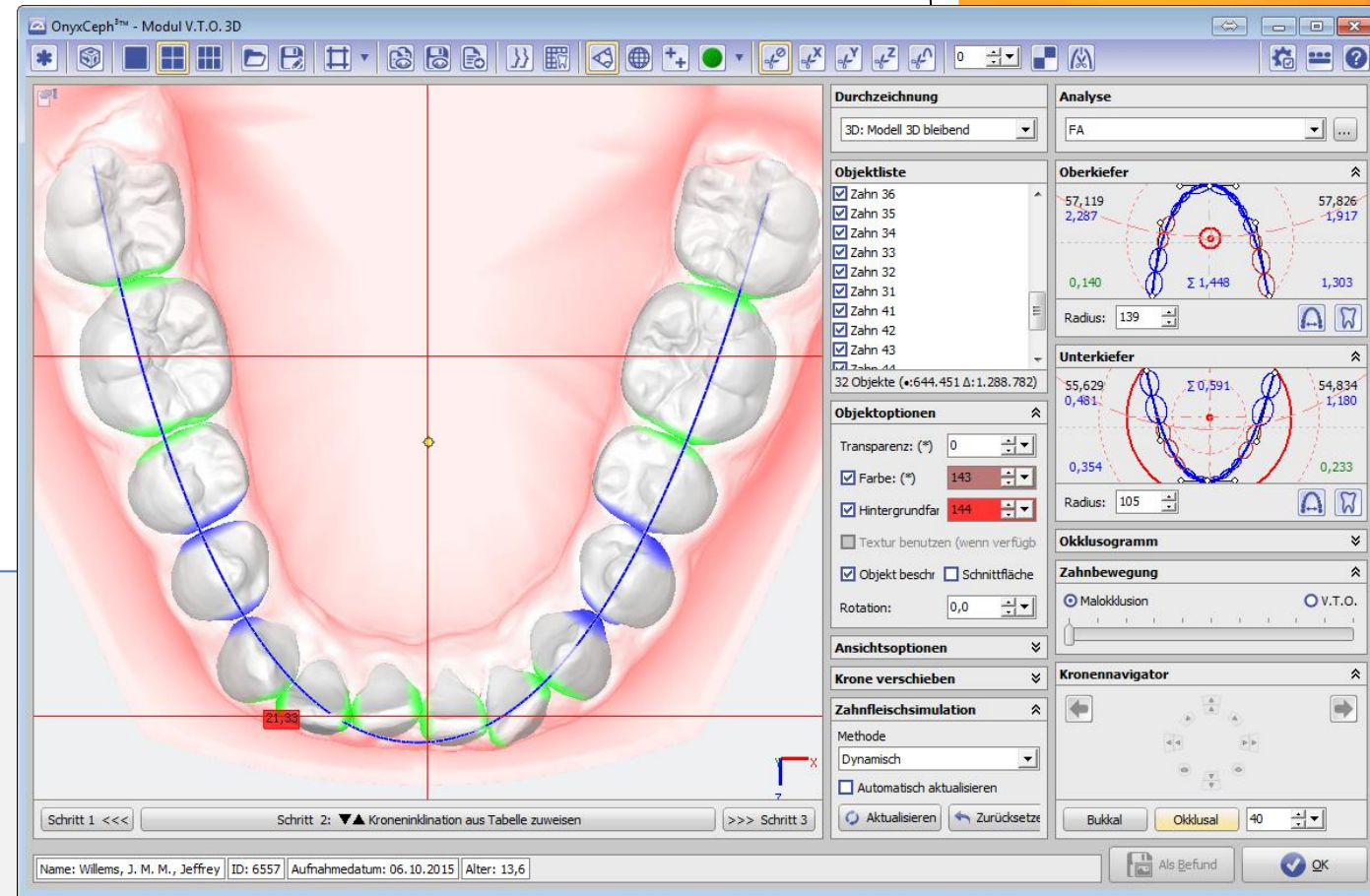
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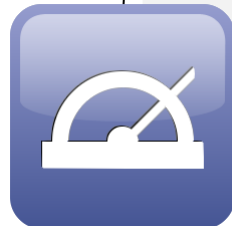
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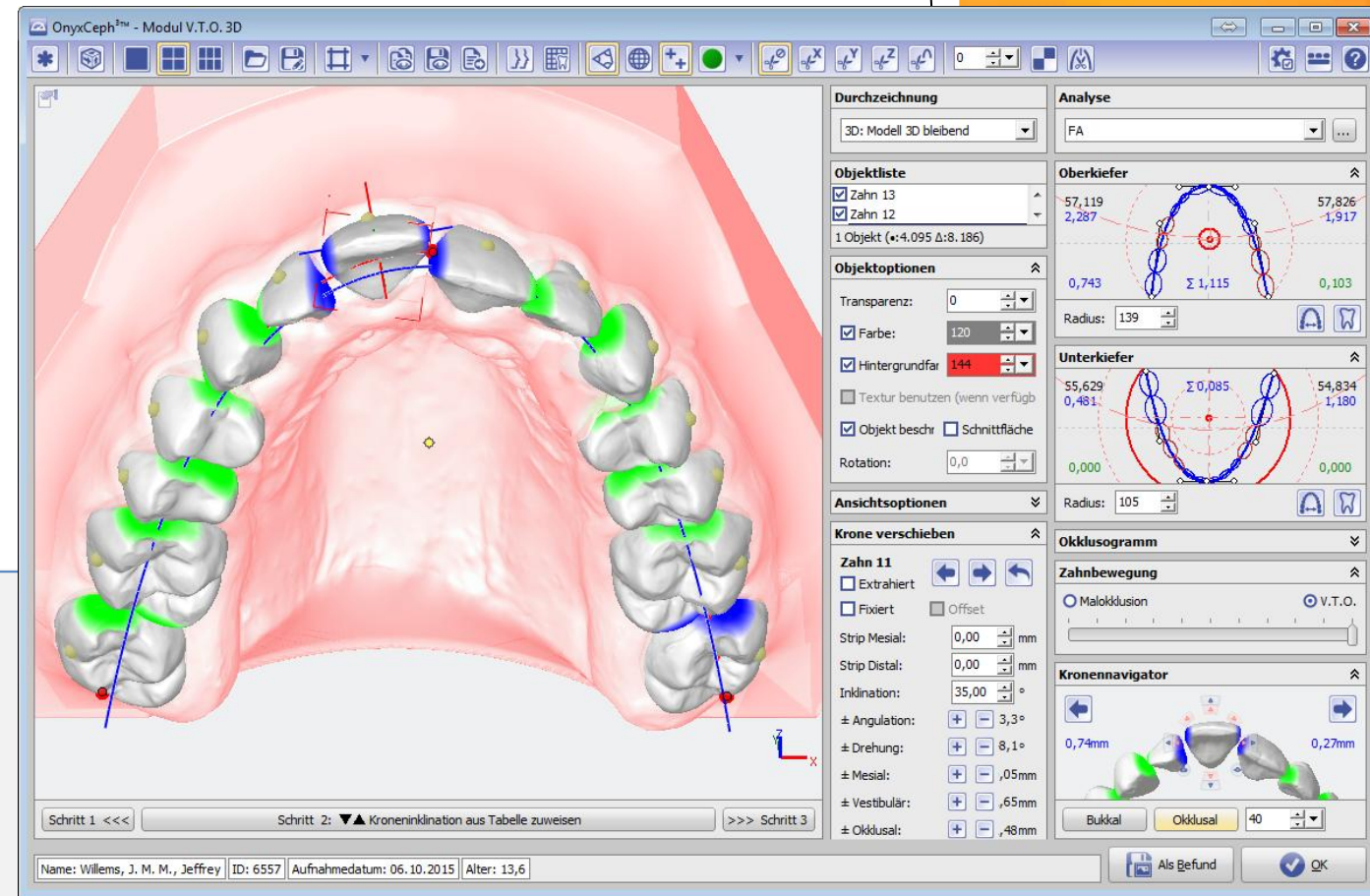
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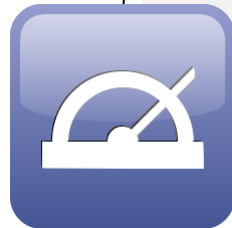
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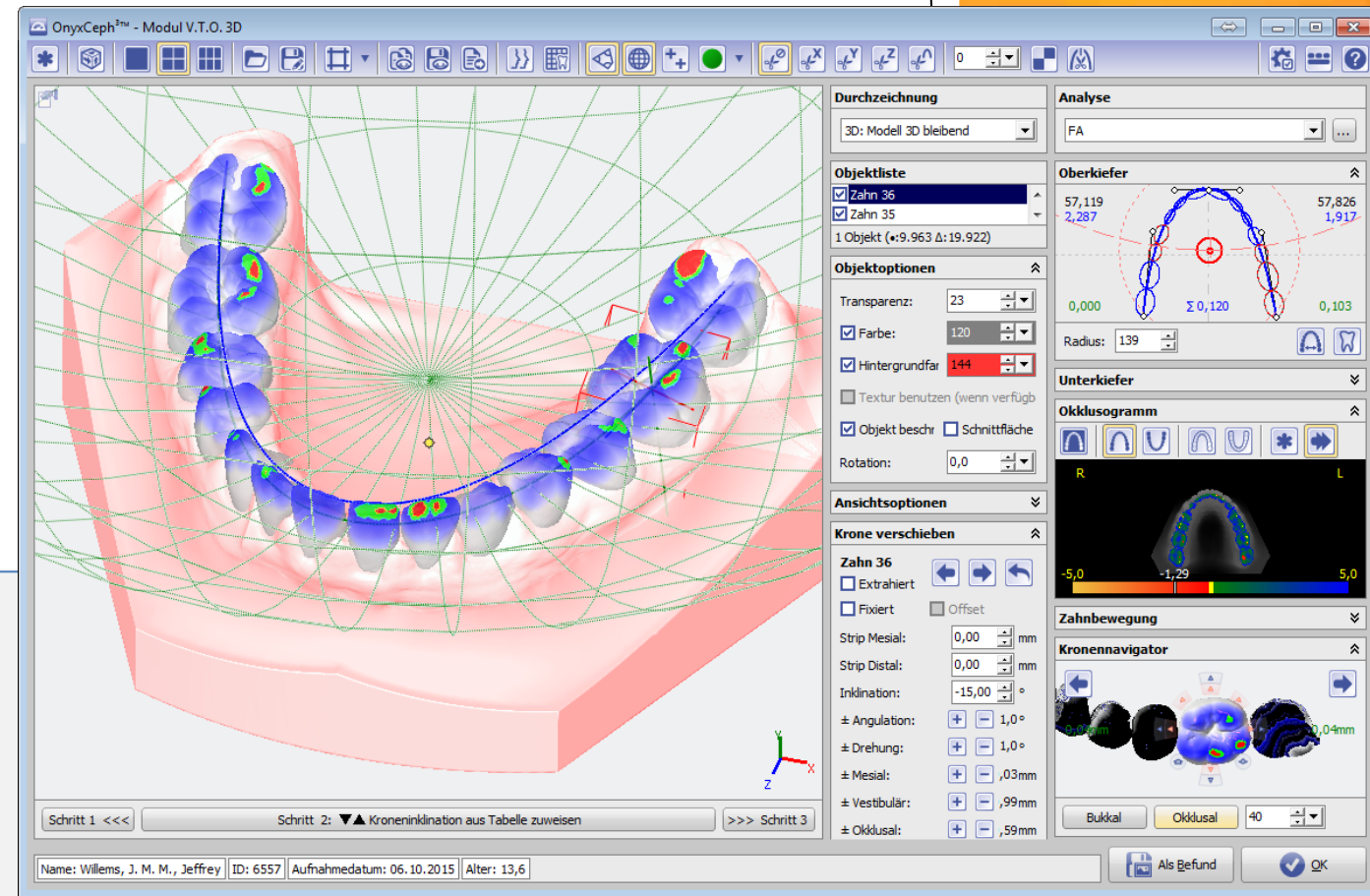
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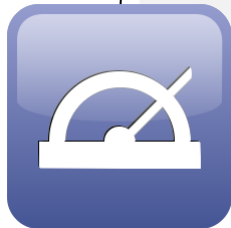
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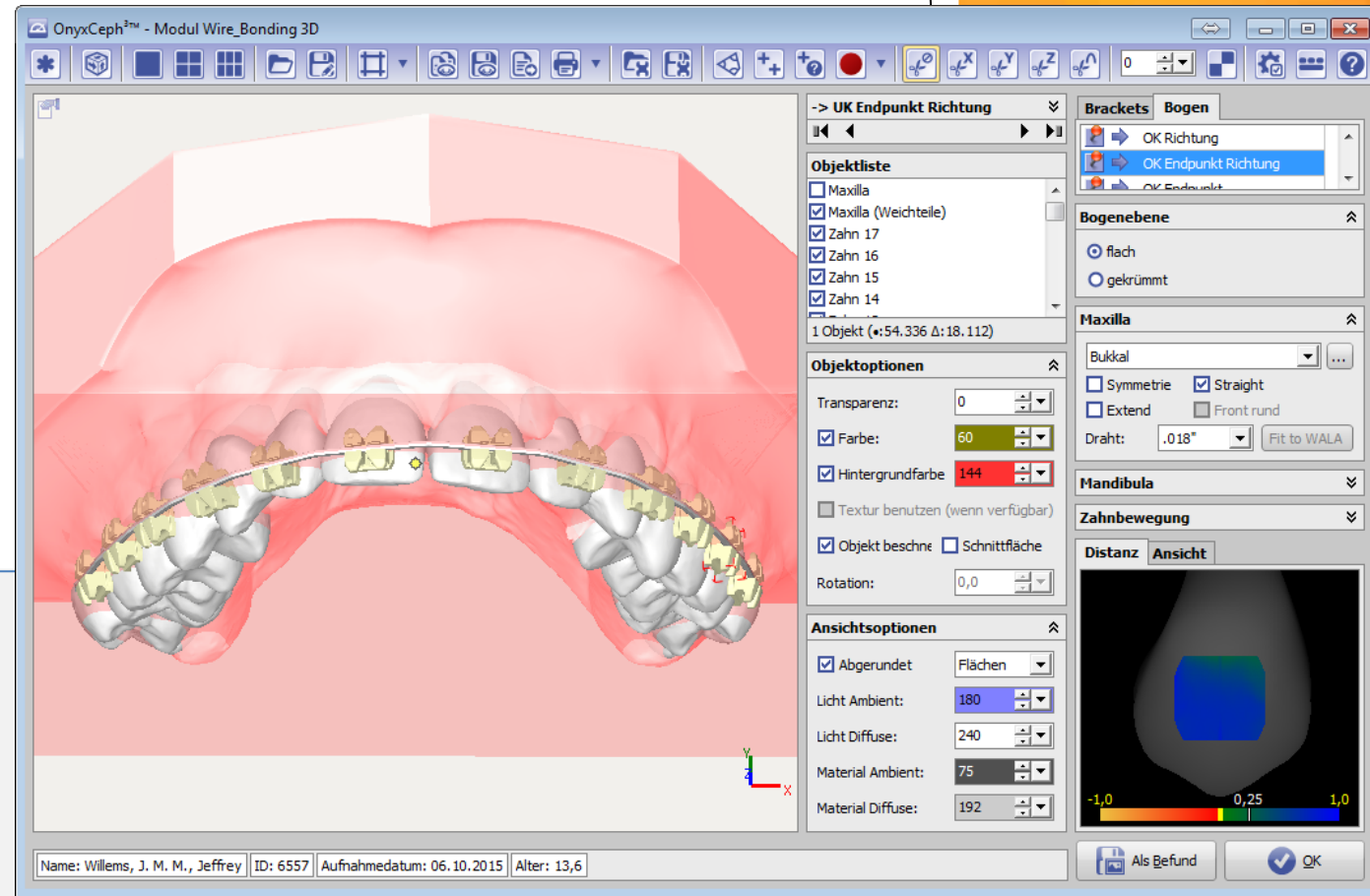
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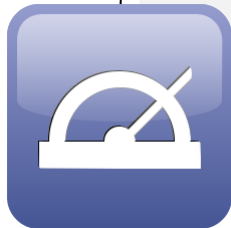
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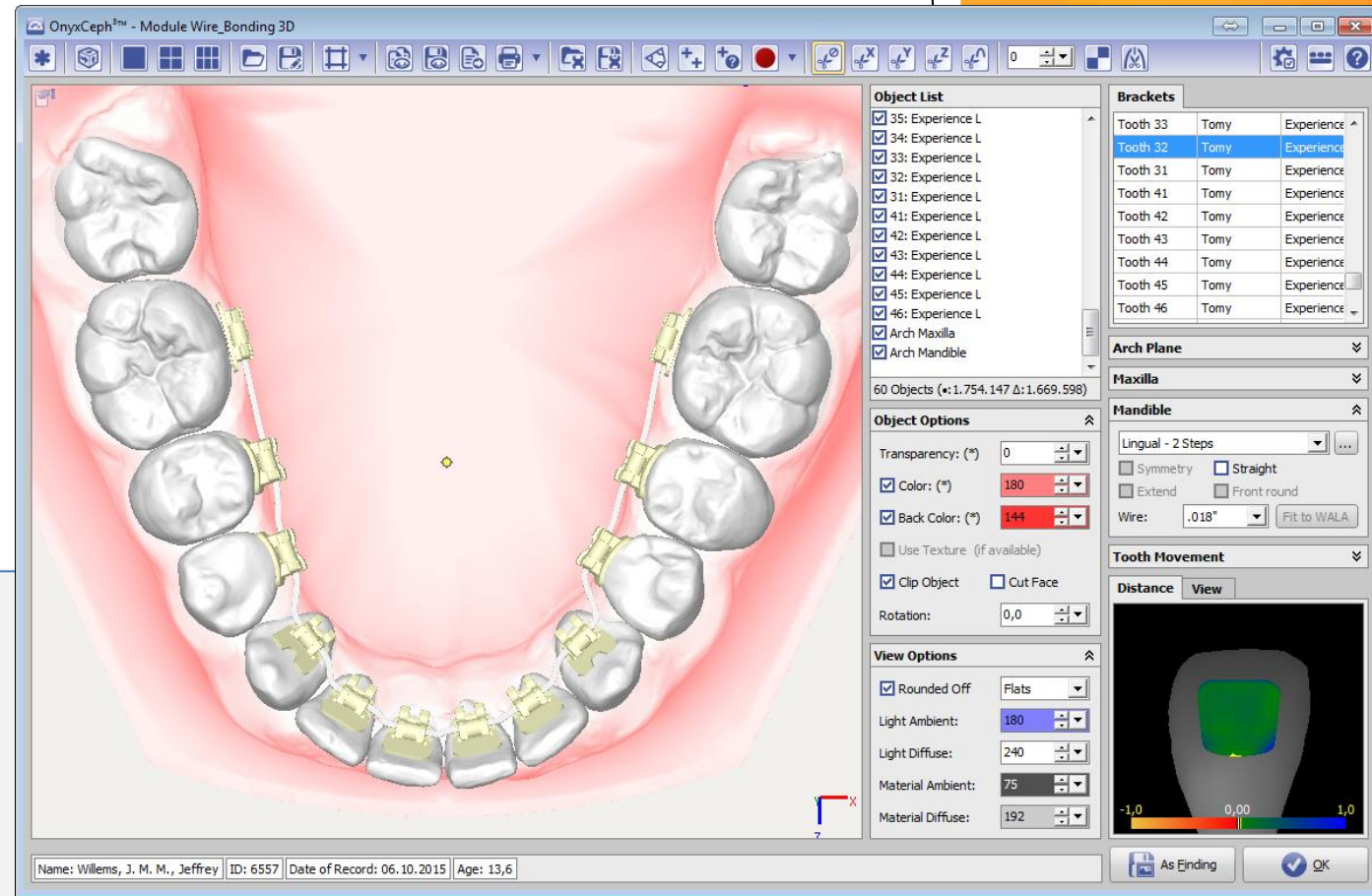
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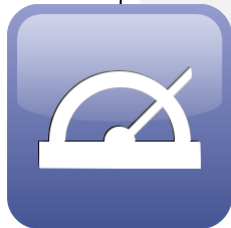
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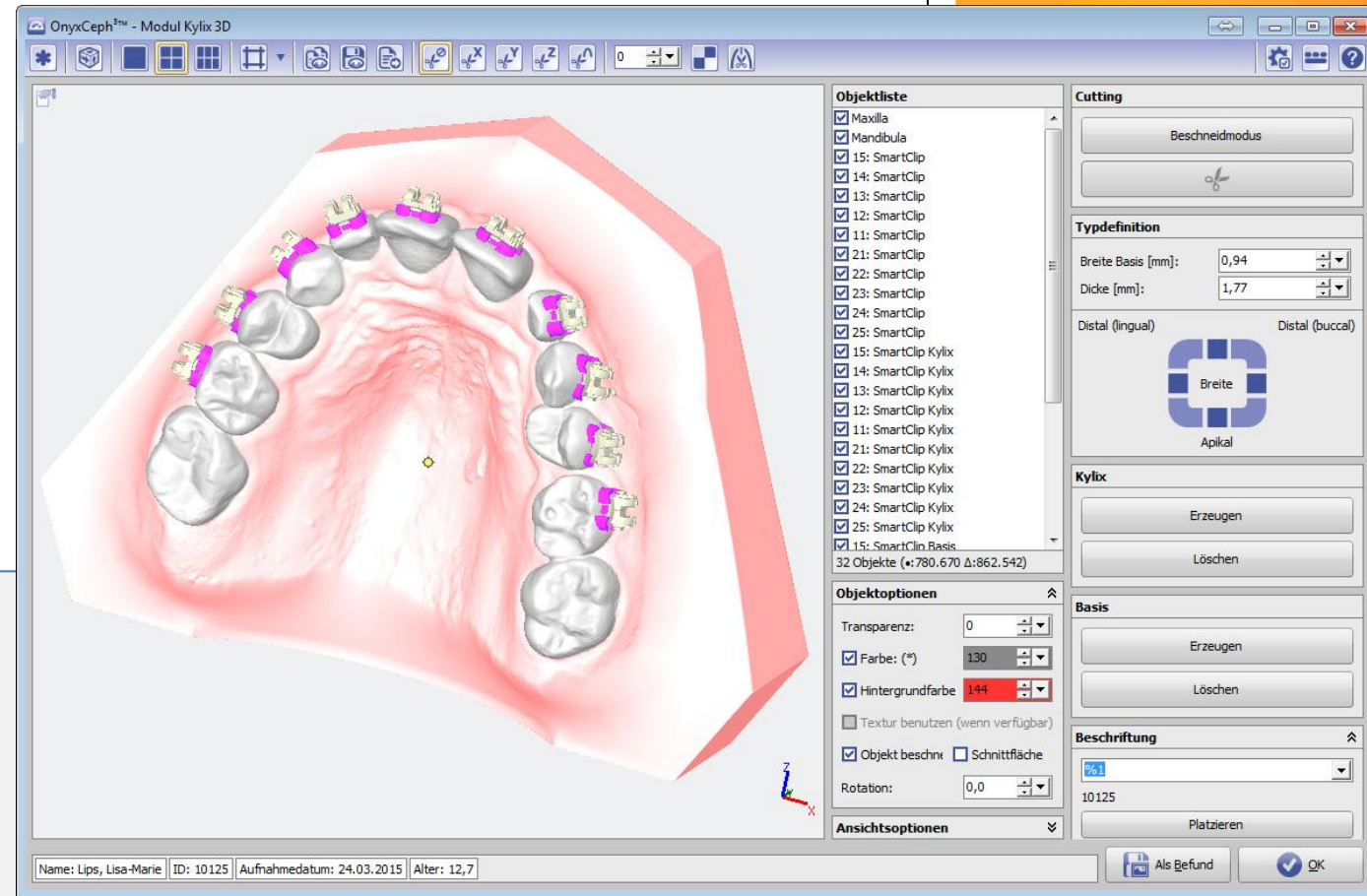
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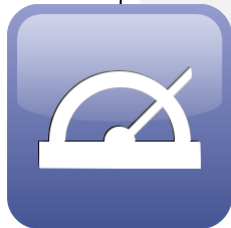
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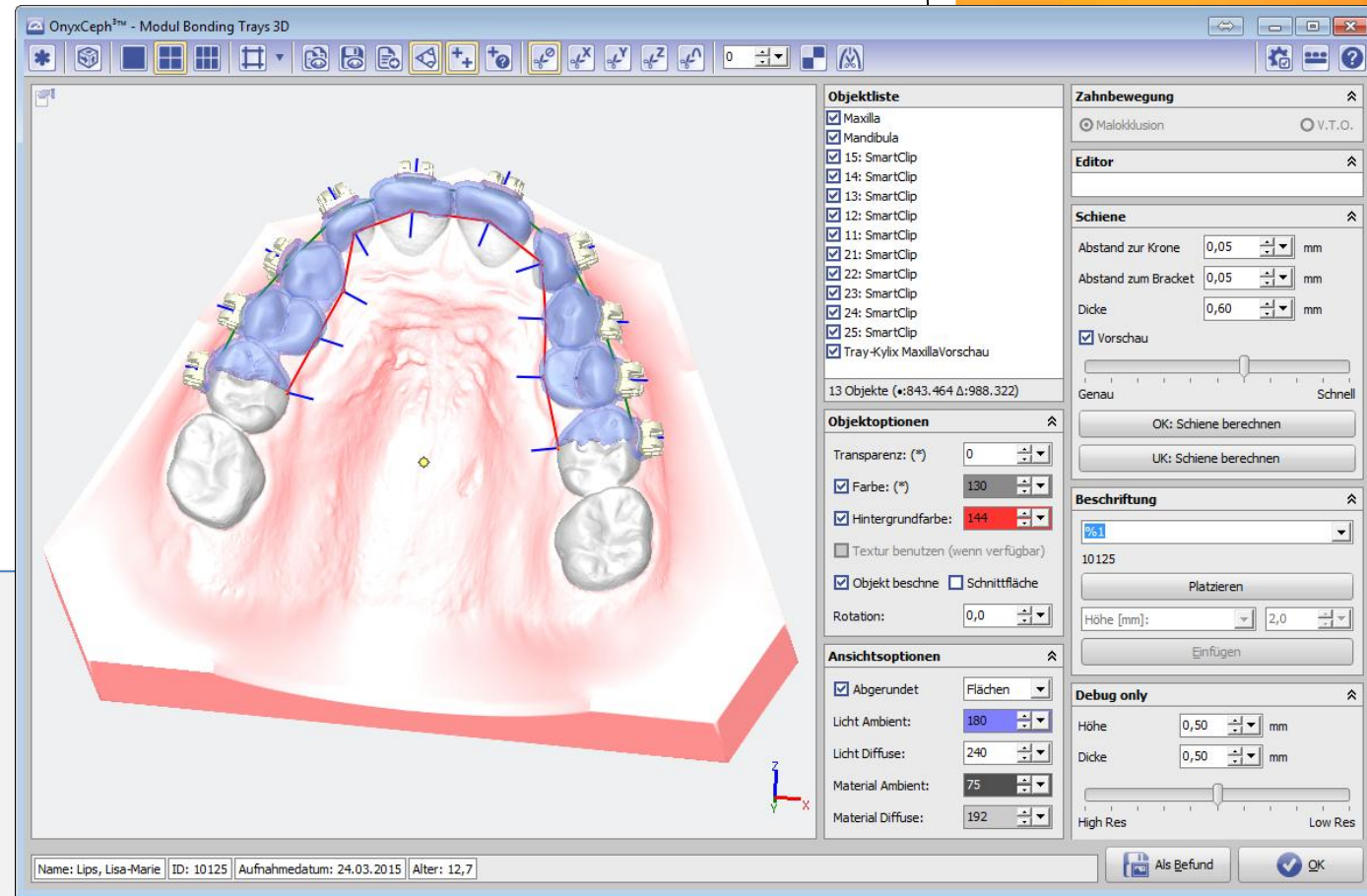
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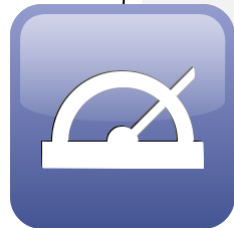
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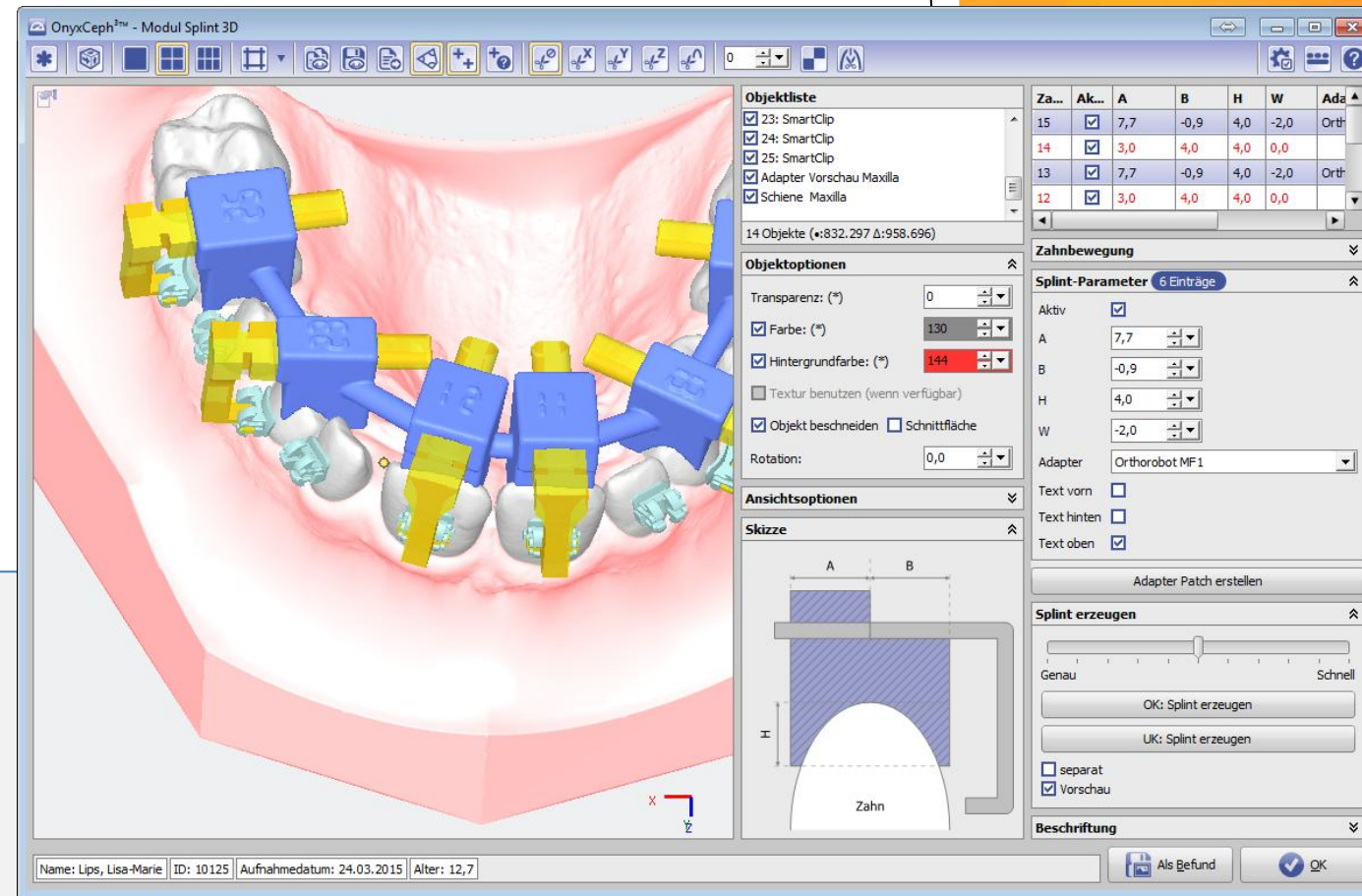
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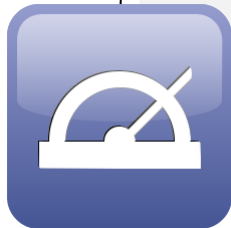
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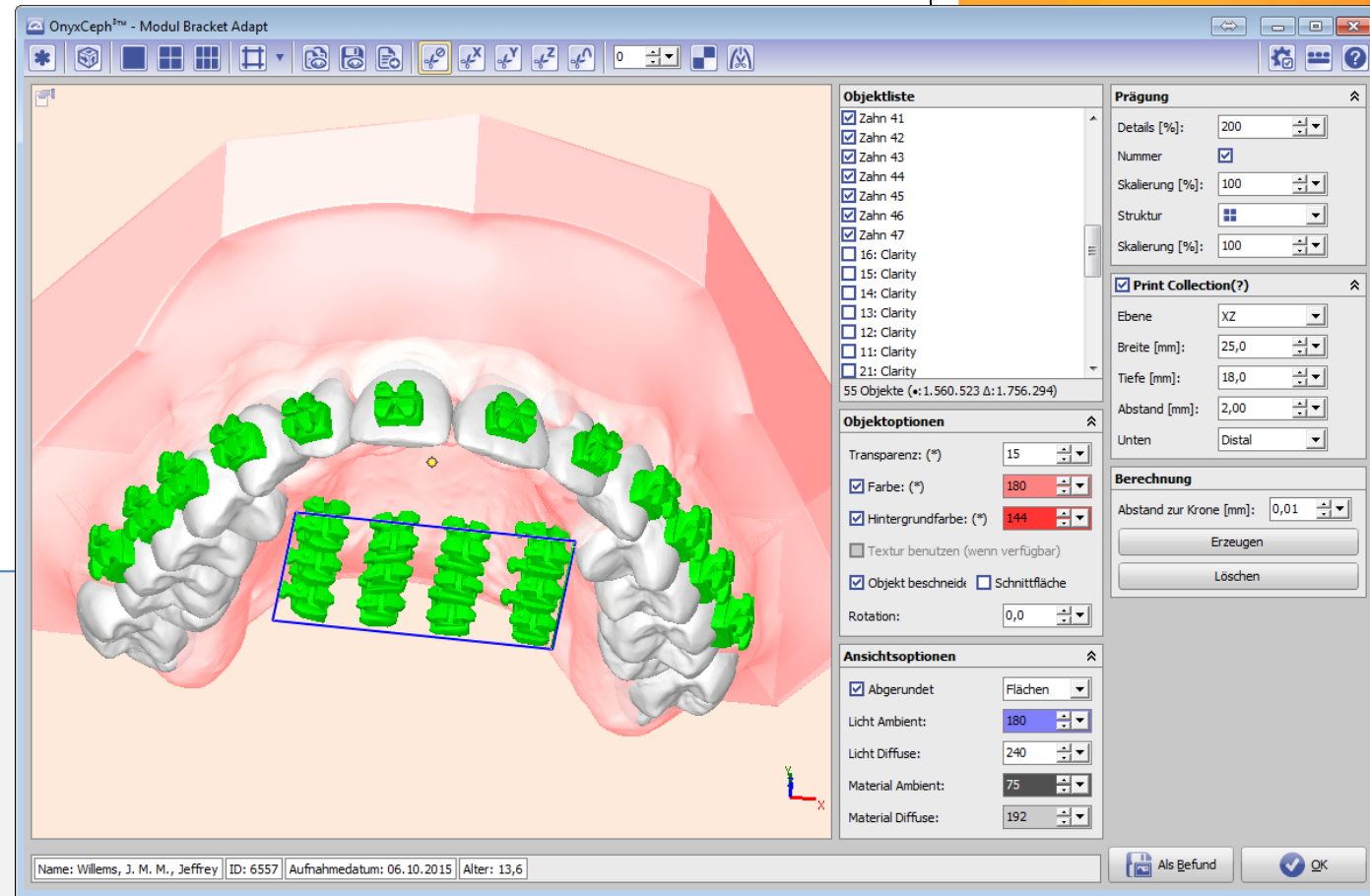
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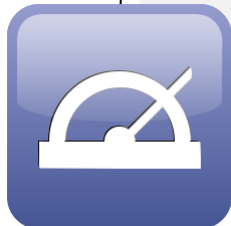
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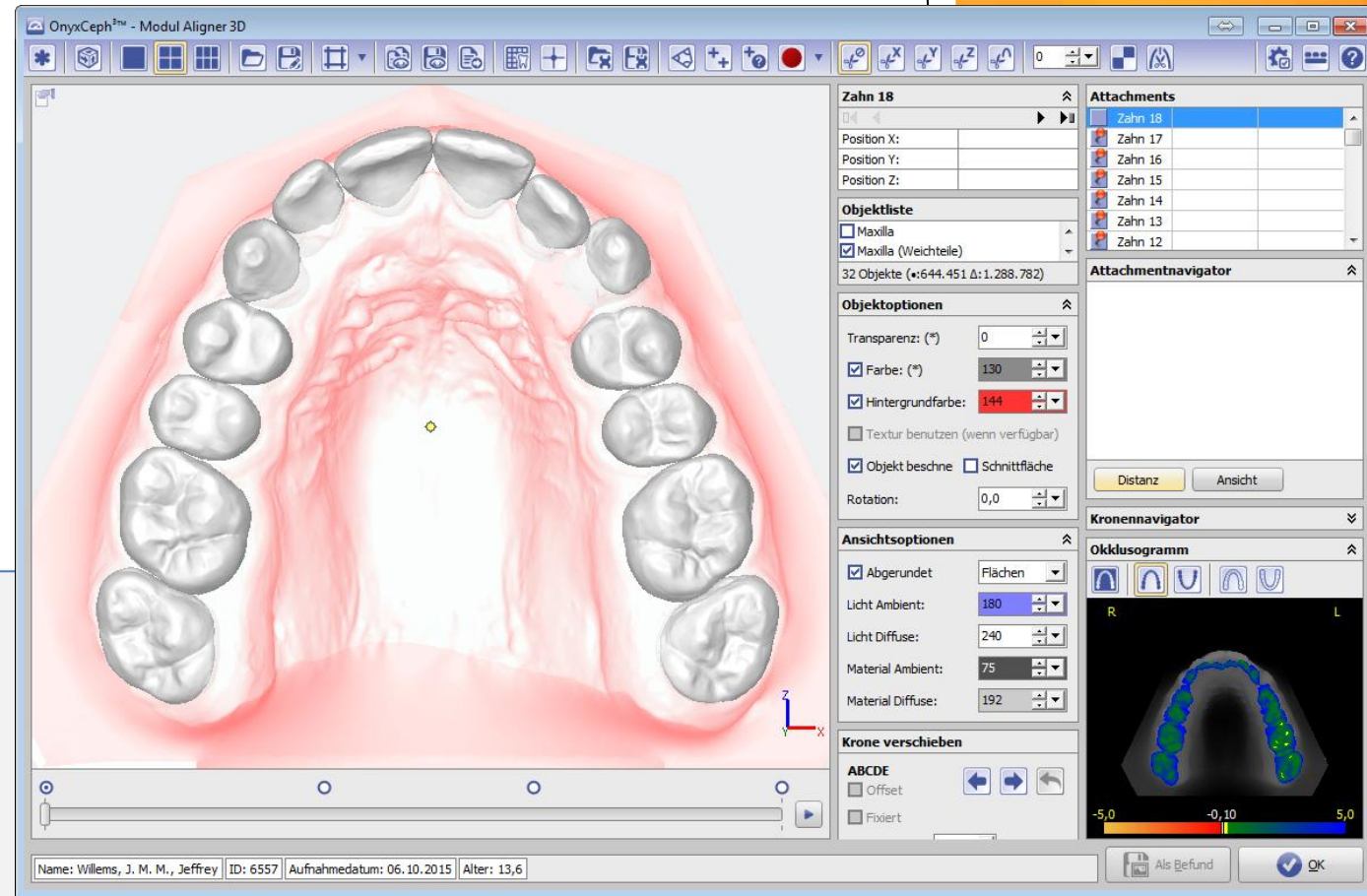
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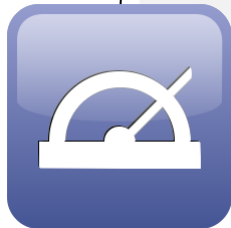
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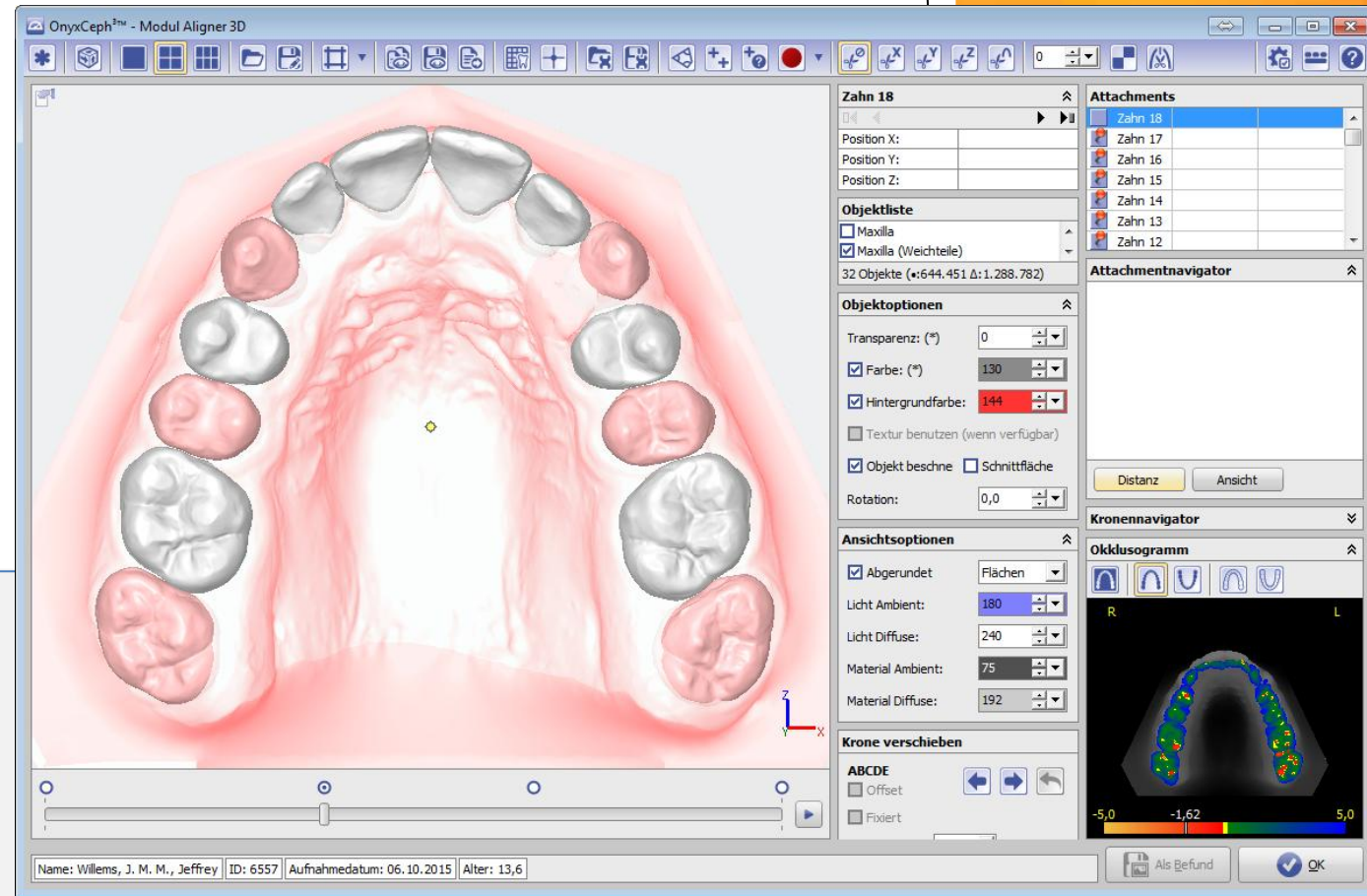
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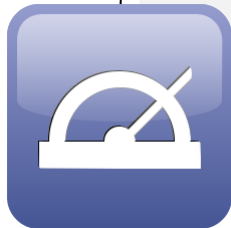
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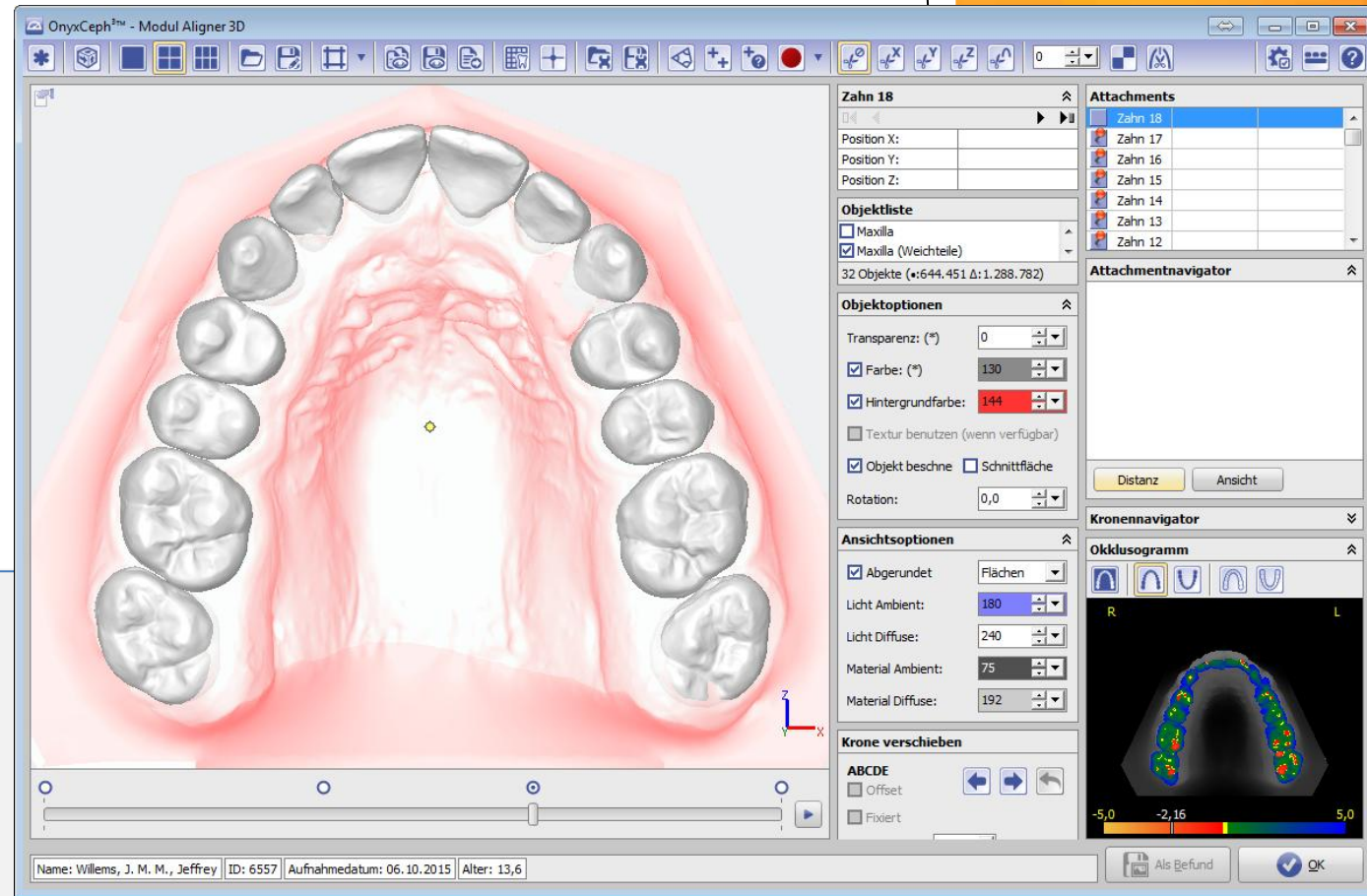
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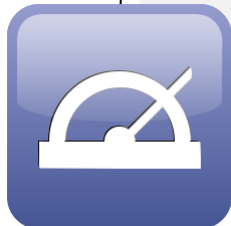
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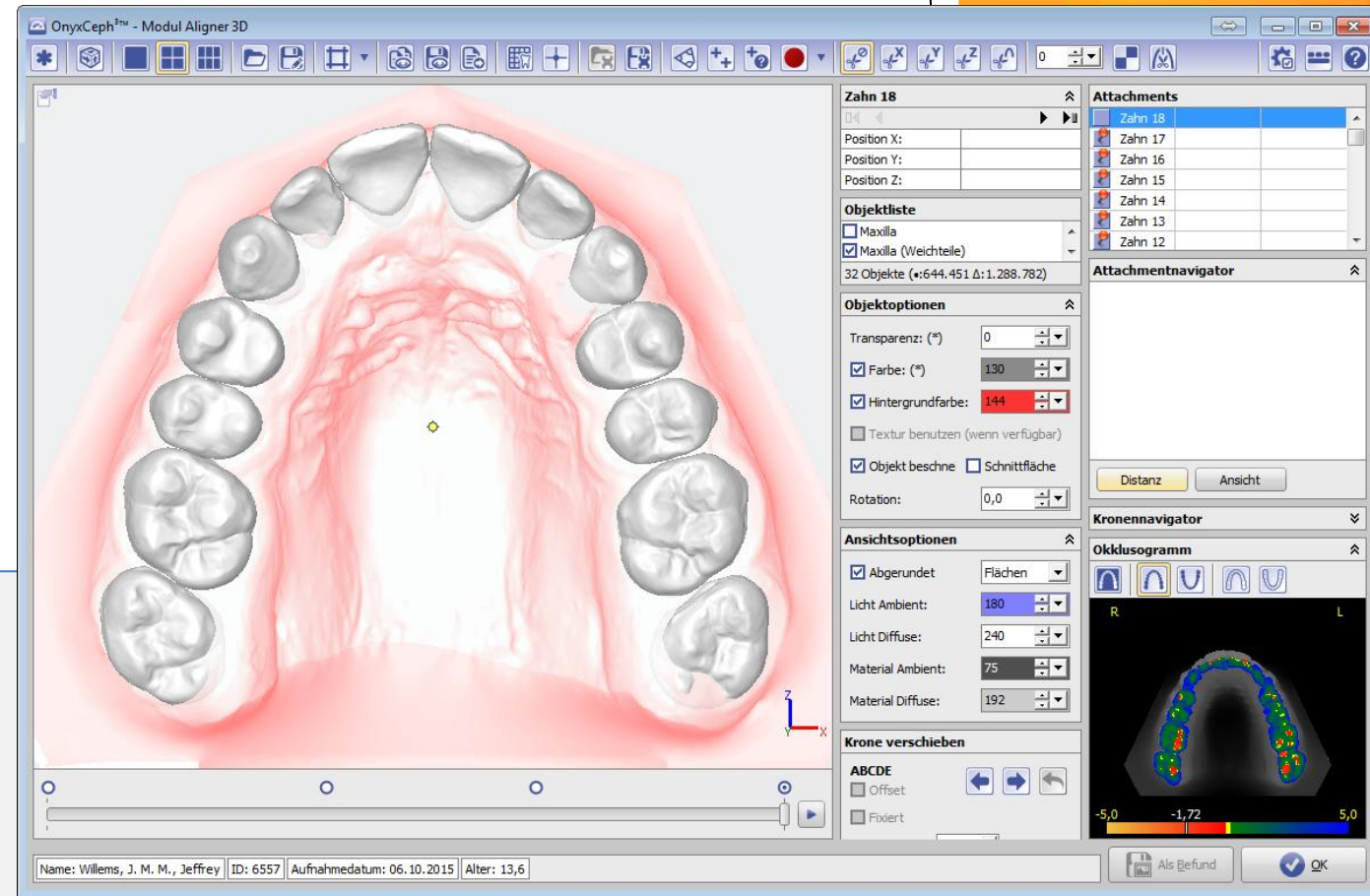
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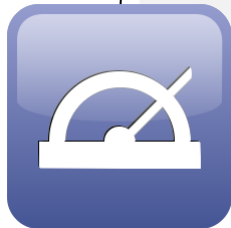
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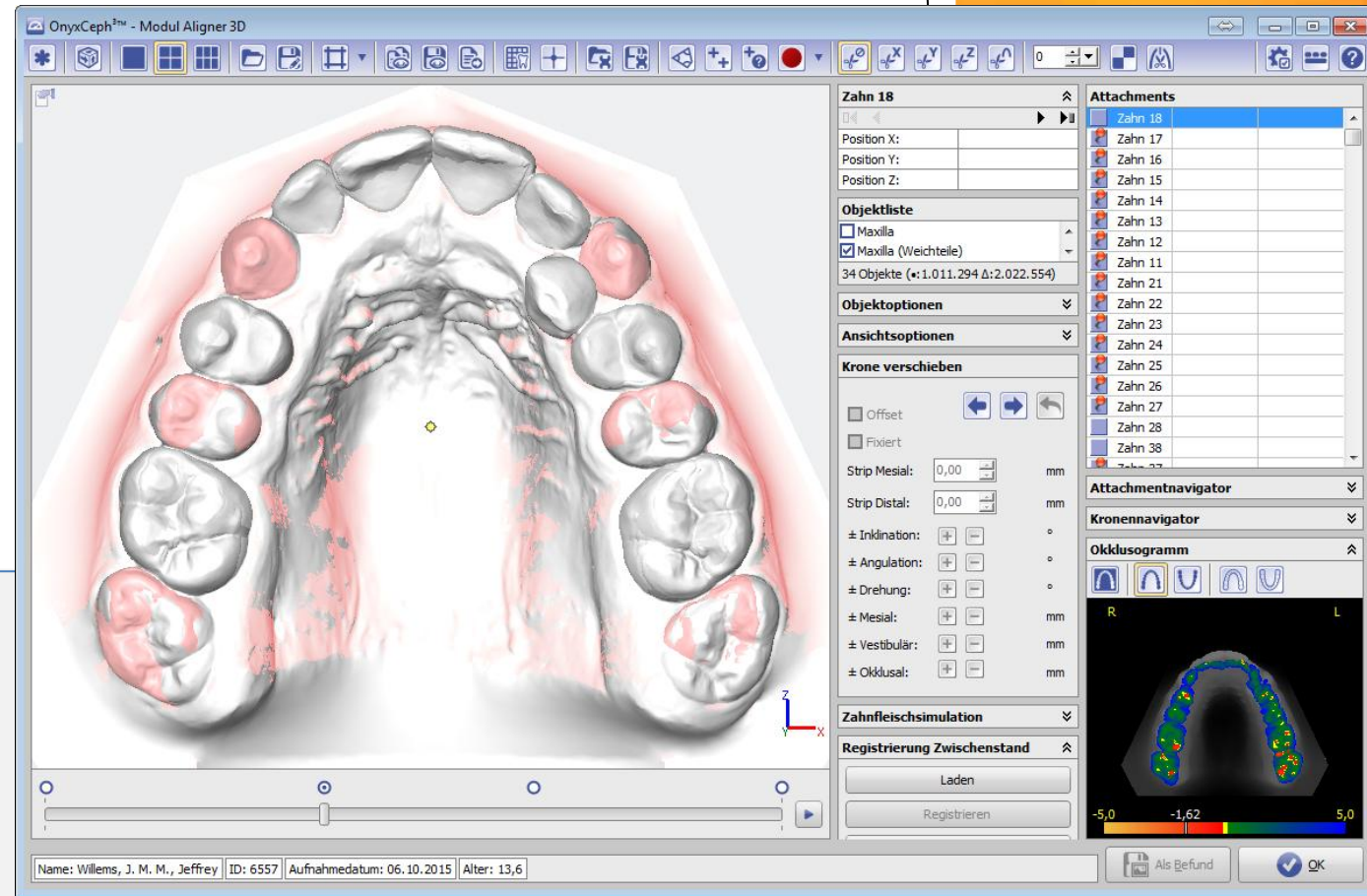
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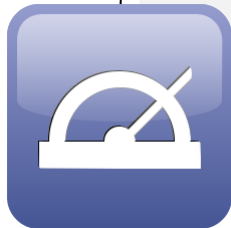
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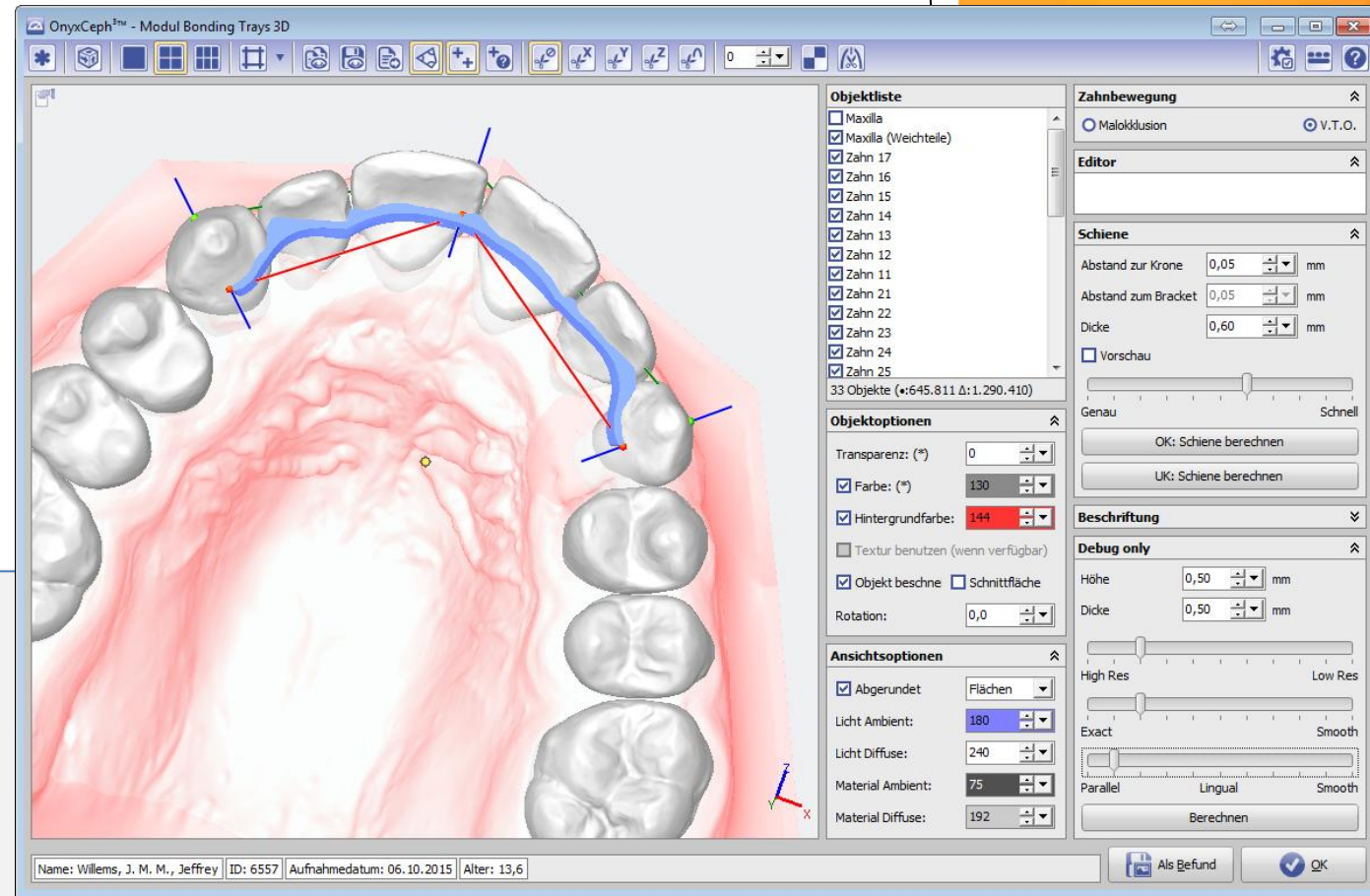
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Aligner 3D
Retainer 3D
Waefer Creation 3D



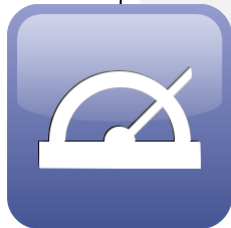
OnyxCeph³™



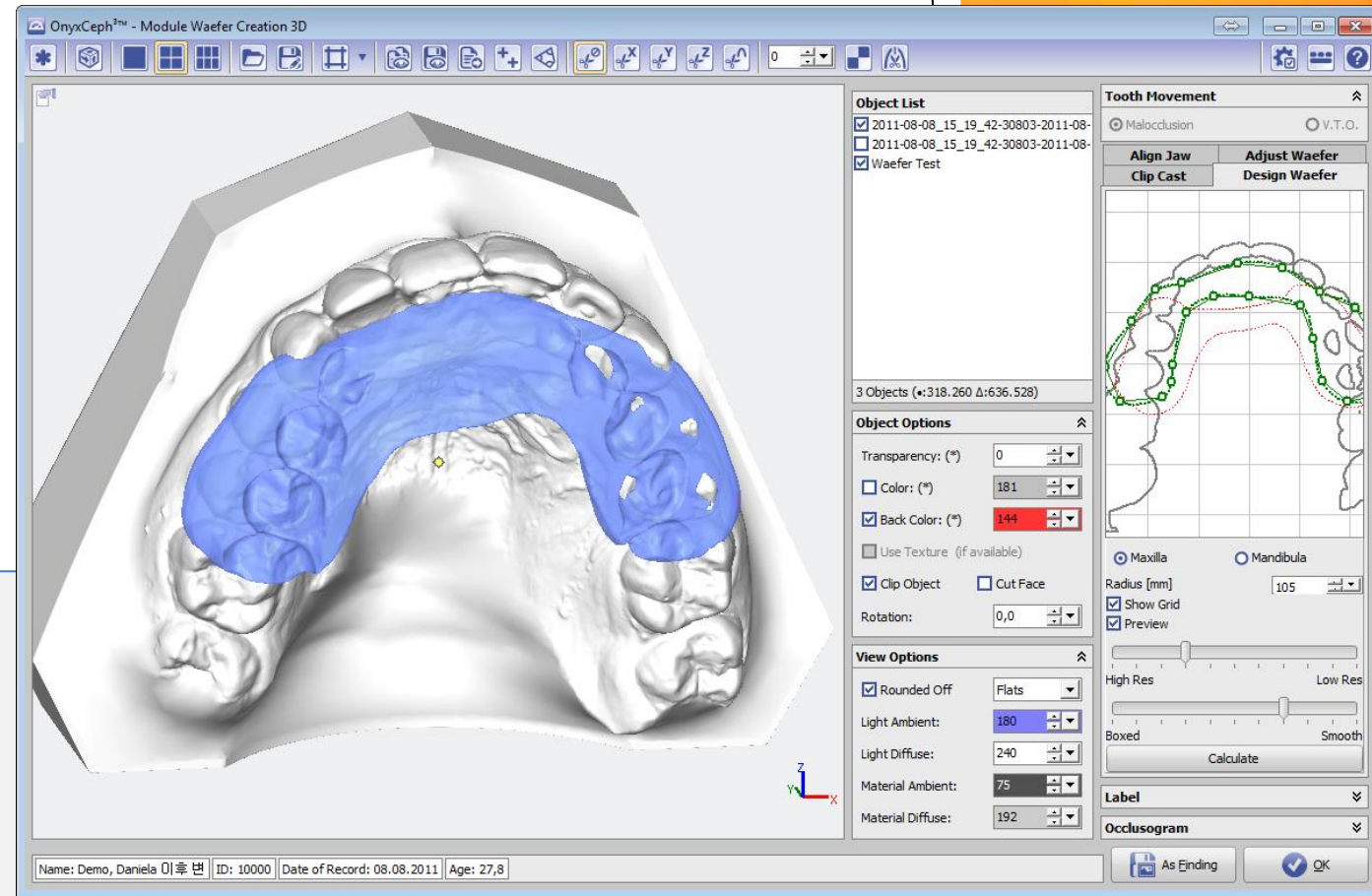
3D Imaging

MODULES

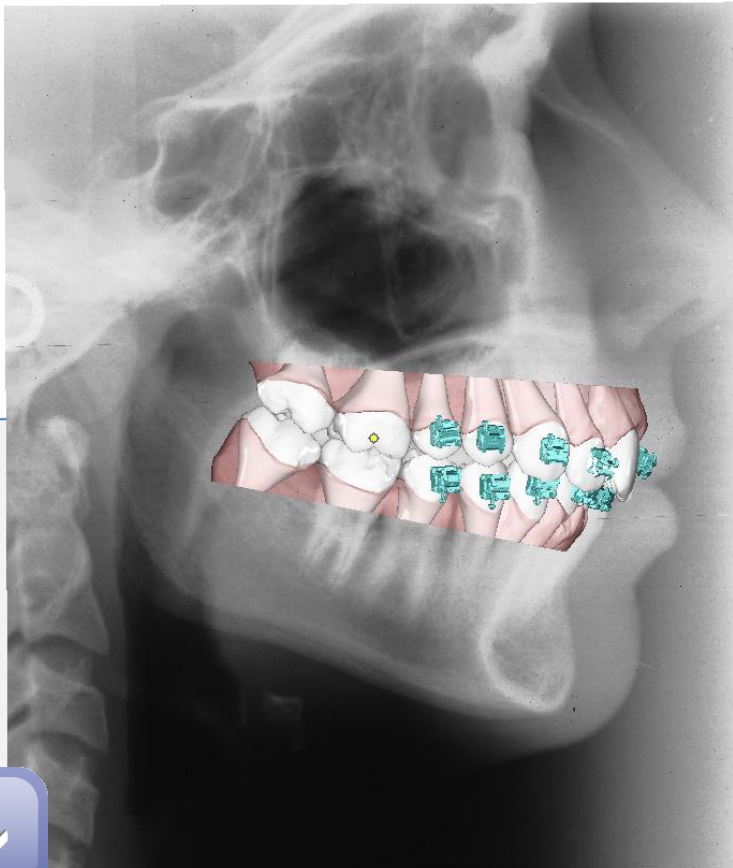
Add Image
Adjust Image
Digitize
Combine
Mirror
Treatment Simulation 3D
Image Comparison
Cast Adjust
Segmentation
FA_Bonding
V.T.O.3D
Wire Bonding
Kylix 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D



OnyxCeph³™



Overview OnyxCeph³™



- Add Image
- Adjust Image
- Edit
- Digitize
- Combine
- Mirror
- CO|CR Correction
- Treatment Simulation
- Ricketts V.T.O.
- Image Comparison
- Add Image
- Adjust Image
- Digitize
- Combine
- Mirror
- Treatment Simulation 3D
- Image Comparison
- Cast Adjust
- Segmentation
- FA_Bonding
- V.T.O.3D
- Wire Bonding
- Kylix 3D
- Bonding Trays 3D
- Splint 3D
- Bracket Adapt
- Aligner 3D
- Retainer 3D
- Waefer Creation 3D



OnyxCeph³™

Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

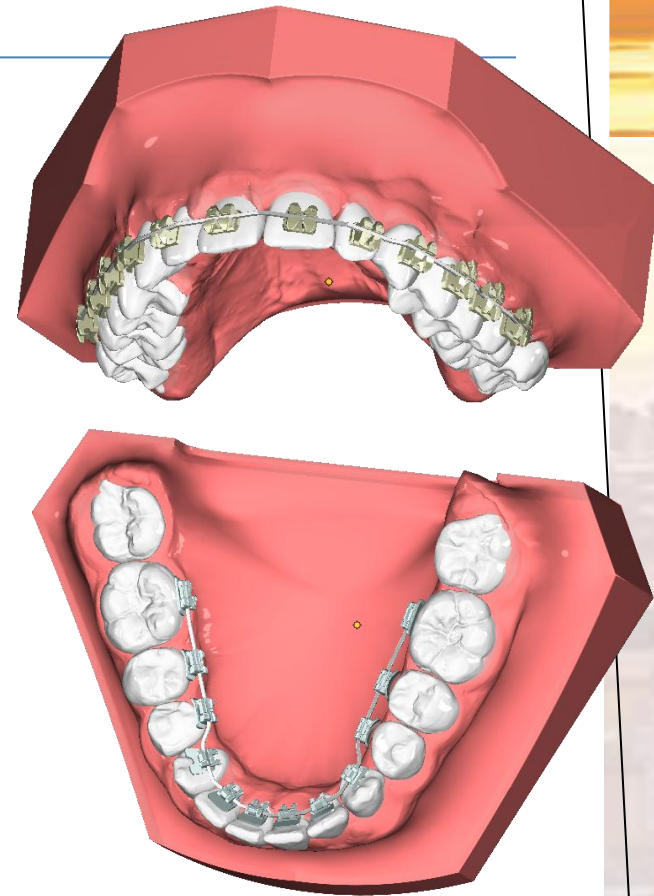


Workflow

- Preparation
- FA_Bonding
- Wire_Bonding
- Virtual Setup
- Bracket-/Wire-Placement
- Bracket Position Transfer
- Indirect Methods
- Direct/Mixed Methods

Other Planning Options (Examples)

Summary



Digital i/d Bonding

Introduction

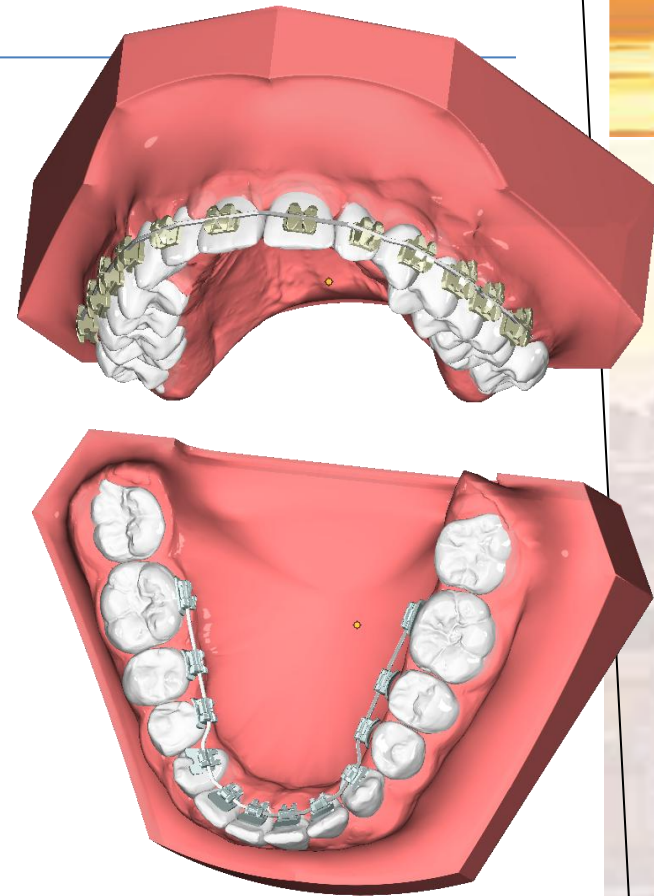
Overview OnyxCeph^{3™}

► Workflow

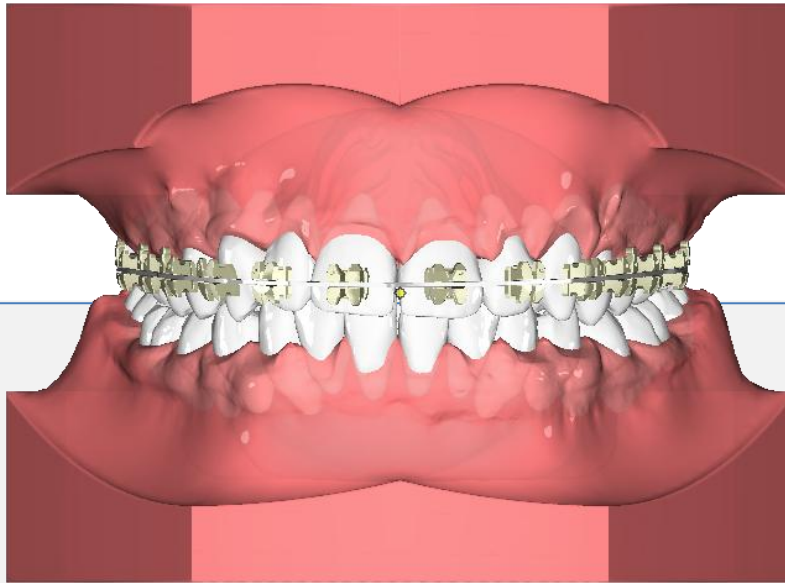
- Preparation
 - ▷ FA_Bonding
 - ▷ Wire_Bonding
 - Virtual Setup
 - Bracket-/Wire-Placement
- Bracket Position Transfer
- Indirect Methods
 - Direct/Mixed Methods

Other Planning Options (Examples)

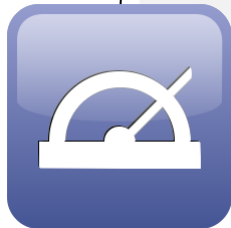
Summary



Workflow

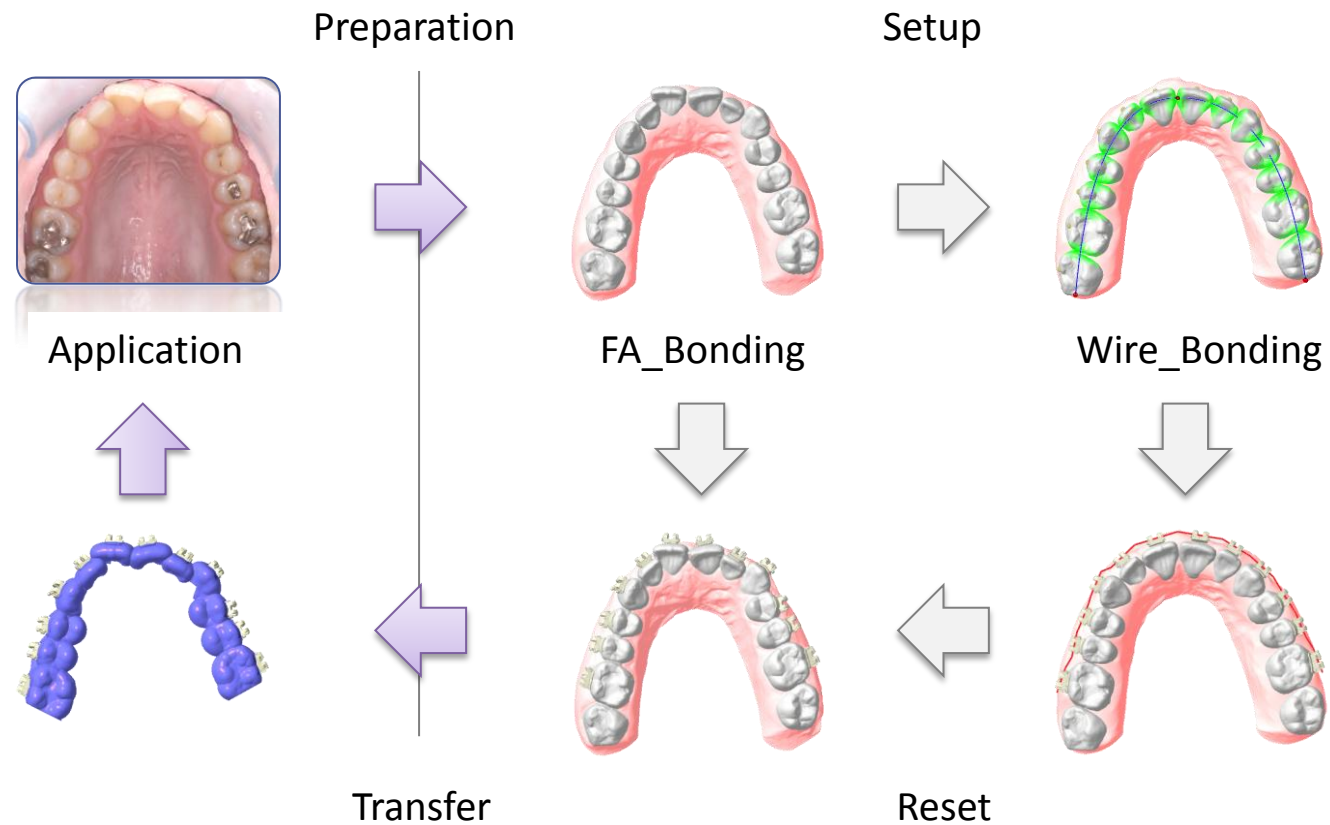


- Add Image
 - Adjust Image
 - Digitize
 - Combine
 - Mirror
 - Treatment Simulation 3D
 - Image Comparison
 - Cast Adjust
 - Segmentation
 - FA_Bonding**
 - V.T.O.3D
 - Wire Bonding**
 - Kylix 3D
 - Bonding Trays 3D
 - Splint 3D
 - Bracket Adapt
 - Aligner 3D
 - Retainer 3D
 - Waefer Creation 3D
- Add Image
 - Adjust Image
 - Edit
 - Digitize
 - Combine
 - Mirror
 - CO|CR Correction
 - Treatment Simulation
 - Ricketts V.T.O.
 - Image Comparison

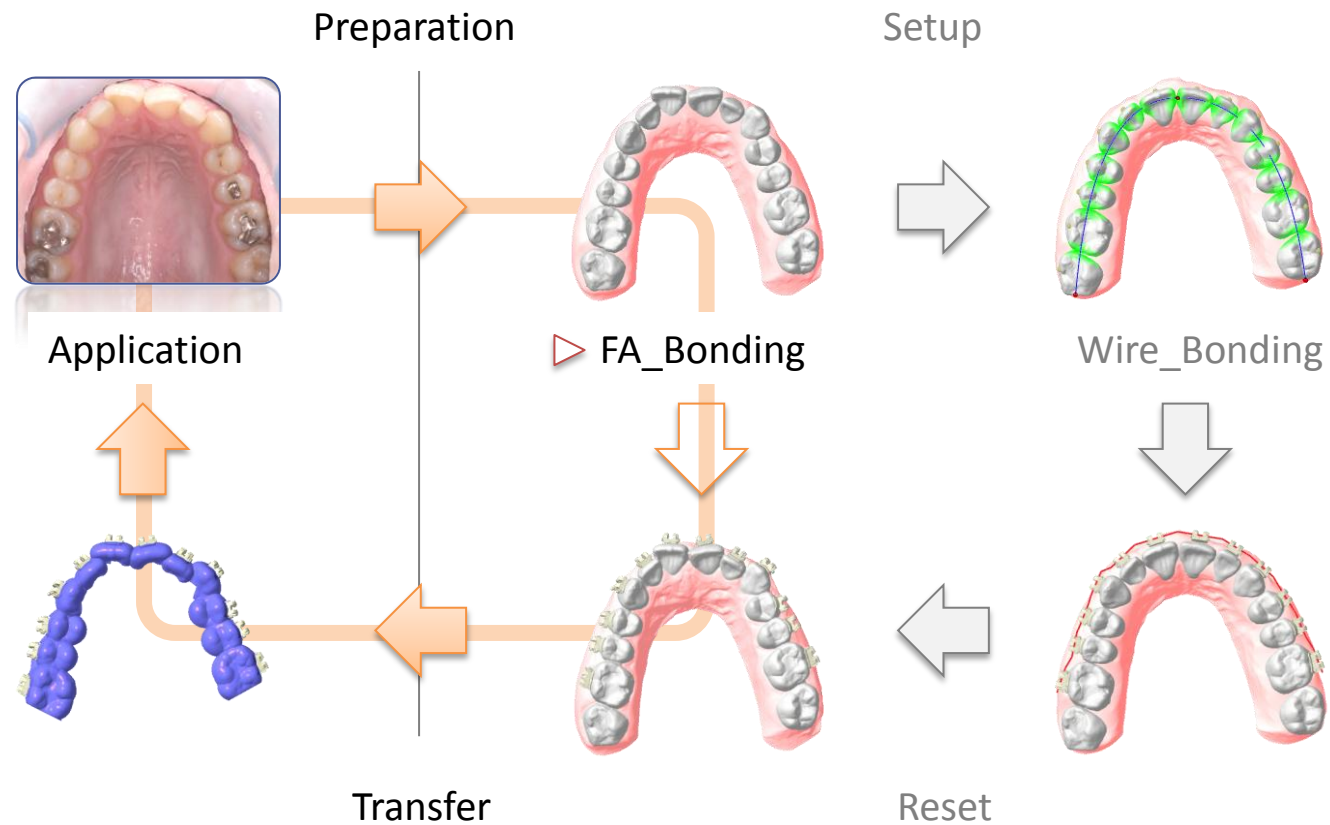


OnyxCeph^{3TM}

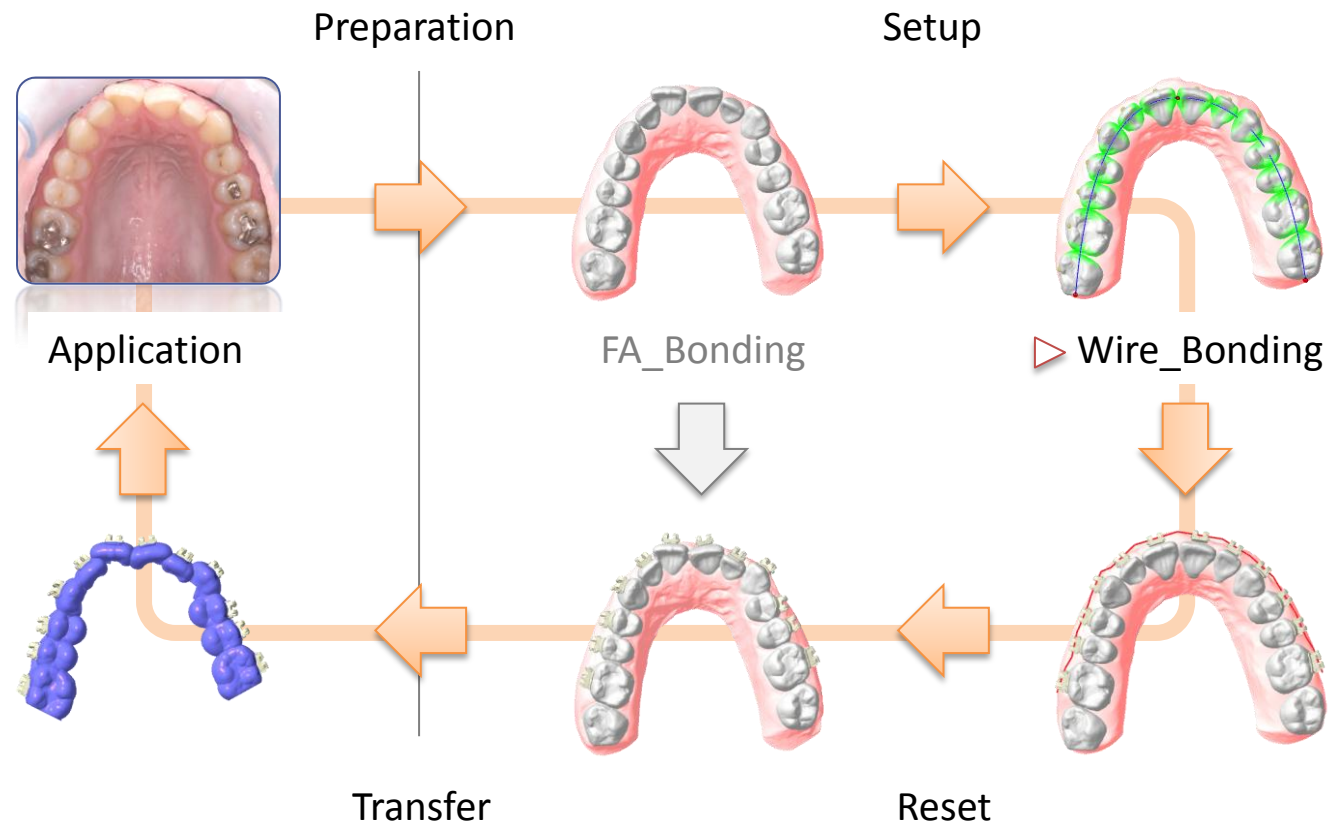
Workflow



Workflow

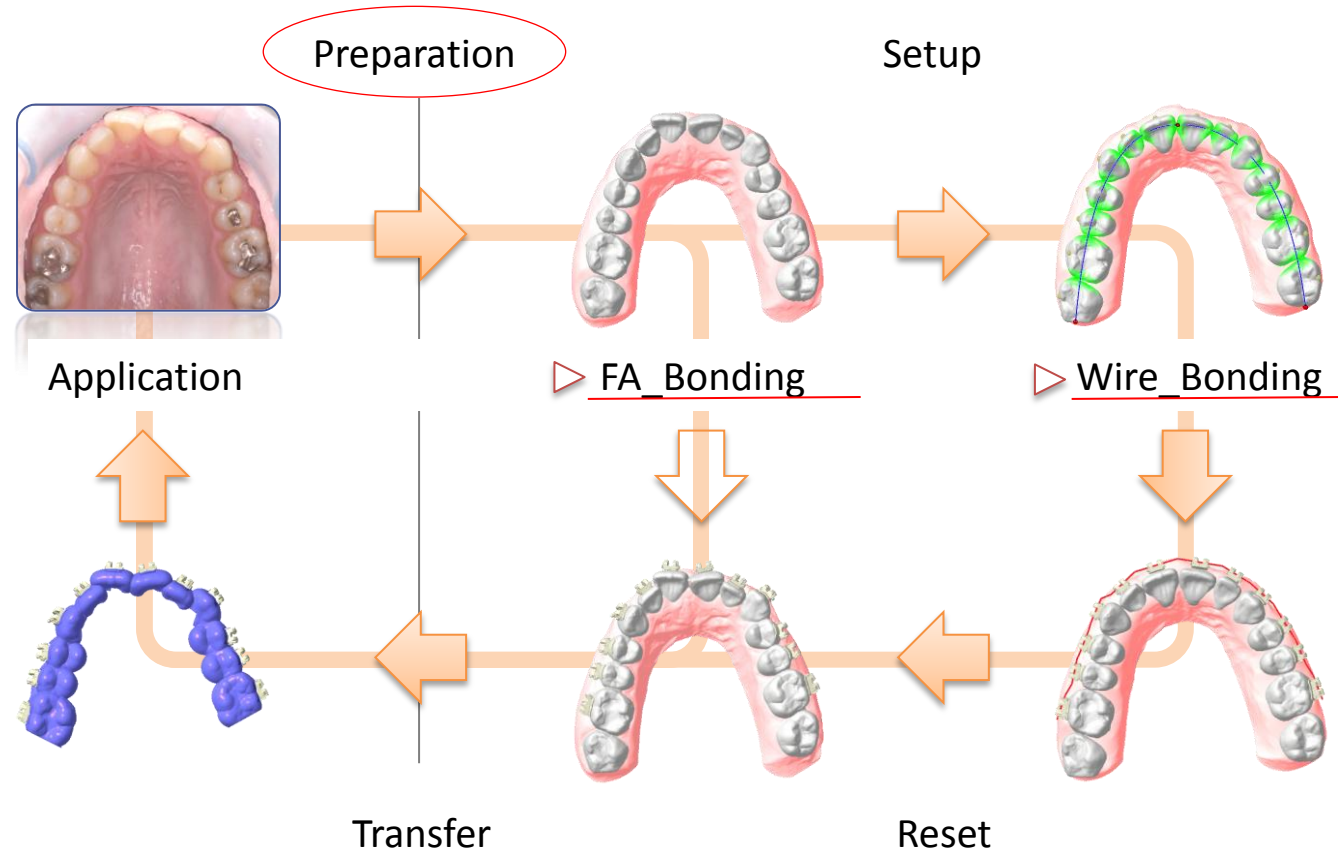


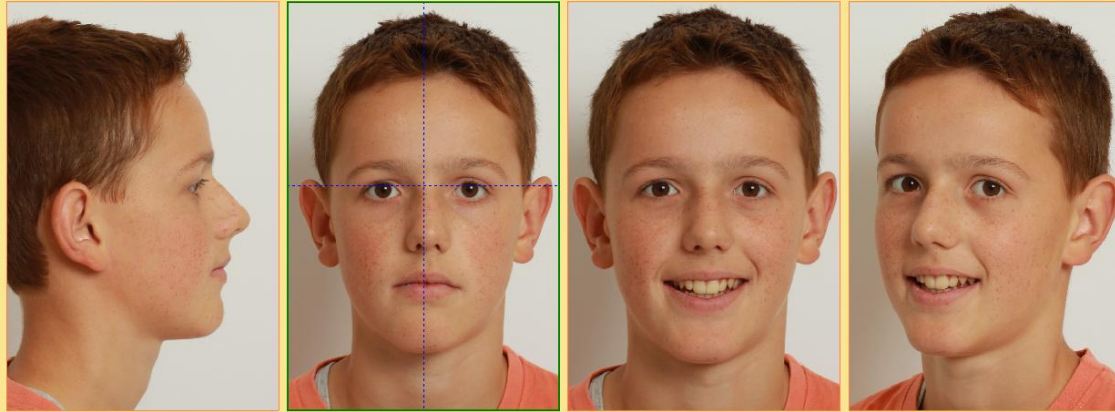
Workflow



Workflow : FA_Bonding vs. Wire_Bonding

Workflow

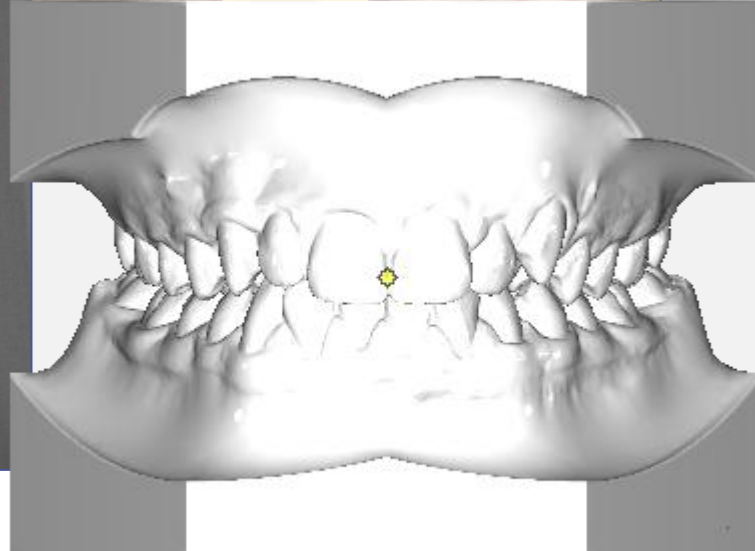




Jeffrey Willems, J. M. M.
13,5 Years



Image Instruments
Musterstr. 3 - Musterstadt



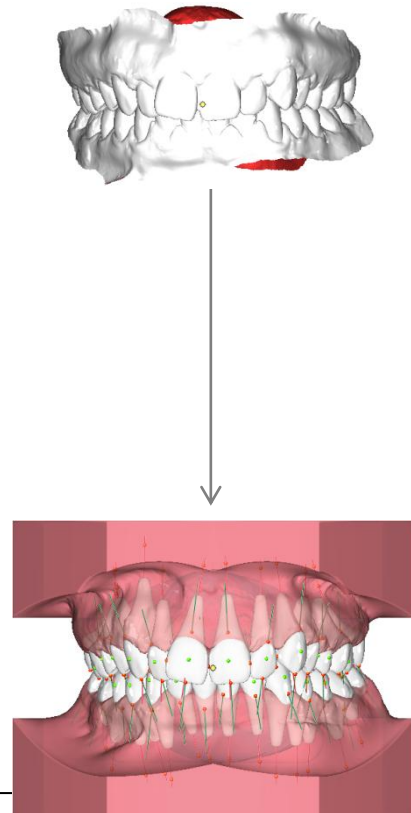
- | | |
|-------------------------|-------------------------|
| Add Image | Add Image |
| Adjust Image | Adjust Image |
| Digitize | Digitize |
| Combine | Combine |
| Mirror | Mirror |
| Treatment Simulation 3D | Treatment Simulation 3D |
| Image Comparison | Image Comparison |
| Cast Adjust | Cast Adjust |
| Segmentation | Segmentation |
| FA_Bonding | FA_Bonding |
| V.T.O.3D | V.T.O.3D |
| Wire Bonding | Wire Bonding |
| Kylix 3D | Kylix 3D |
| Bonding Trays 3D | Bonding Trays 3D |
| Splint 3D | Splint 3D |
| Bracket Adapt | Bracket Adapt |
| Aligner 3D | Aligner 3D |
| Retainer 3D | Retainer 3D |
| Waefer Creation 3D | Waefer Creation 3D |

Preparation

Planning

Transfer

Preparation



Add Image
Adjust Image
Digitize

Combine
Mirror
Treatment Simulation 3D
Image Comparison

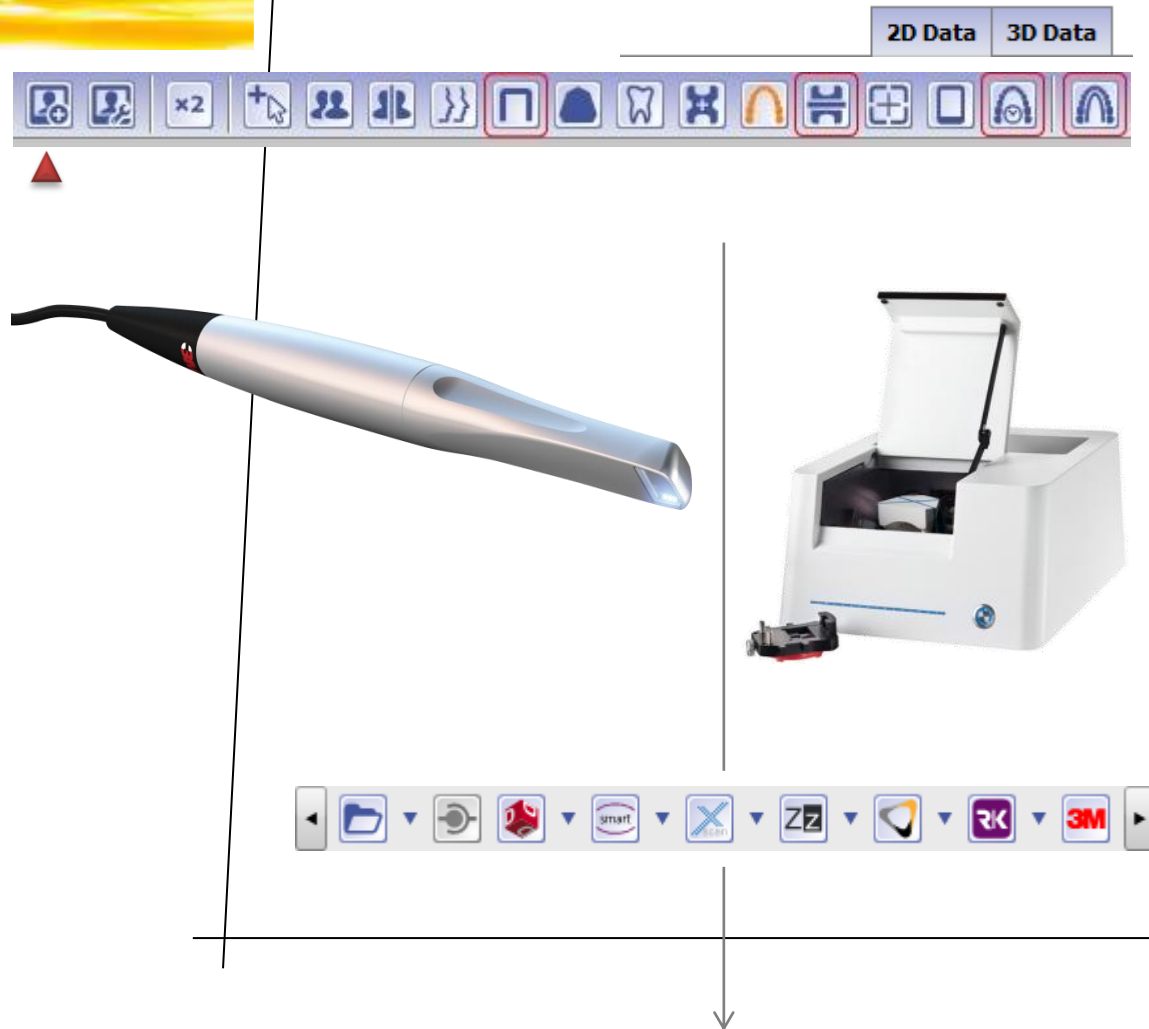
Cast Adjust
Segmentation

FA_Bonding
V.T.O.3D
Wire Bonding
Kylix 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D

Preparation

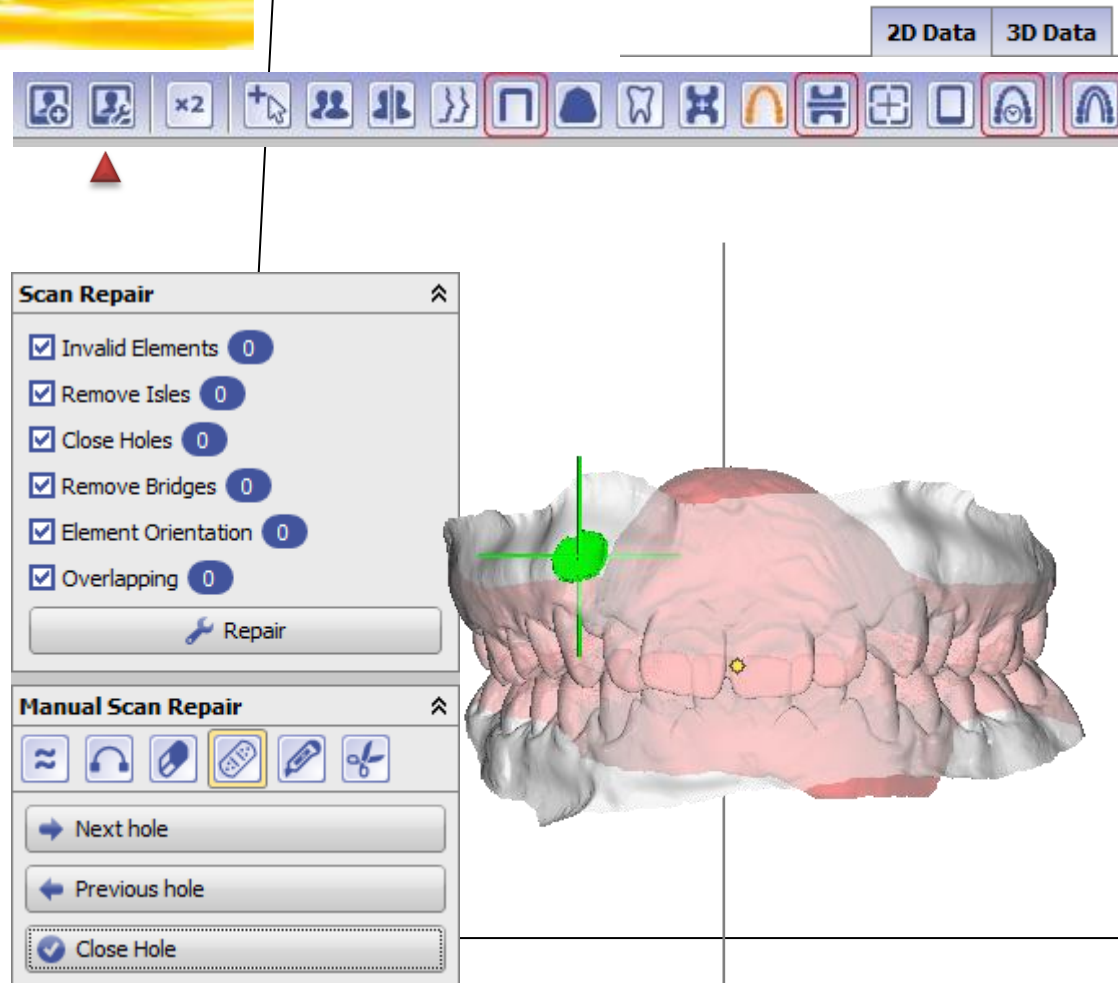
Preparation: Add/Adjust Image

Preparation



Preparation: Add/Adjust Image

Preparation

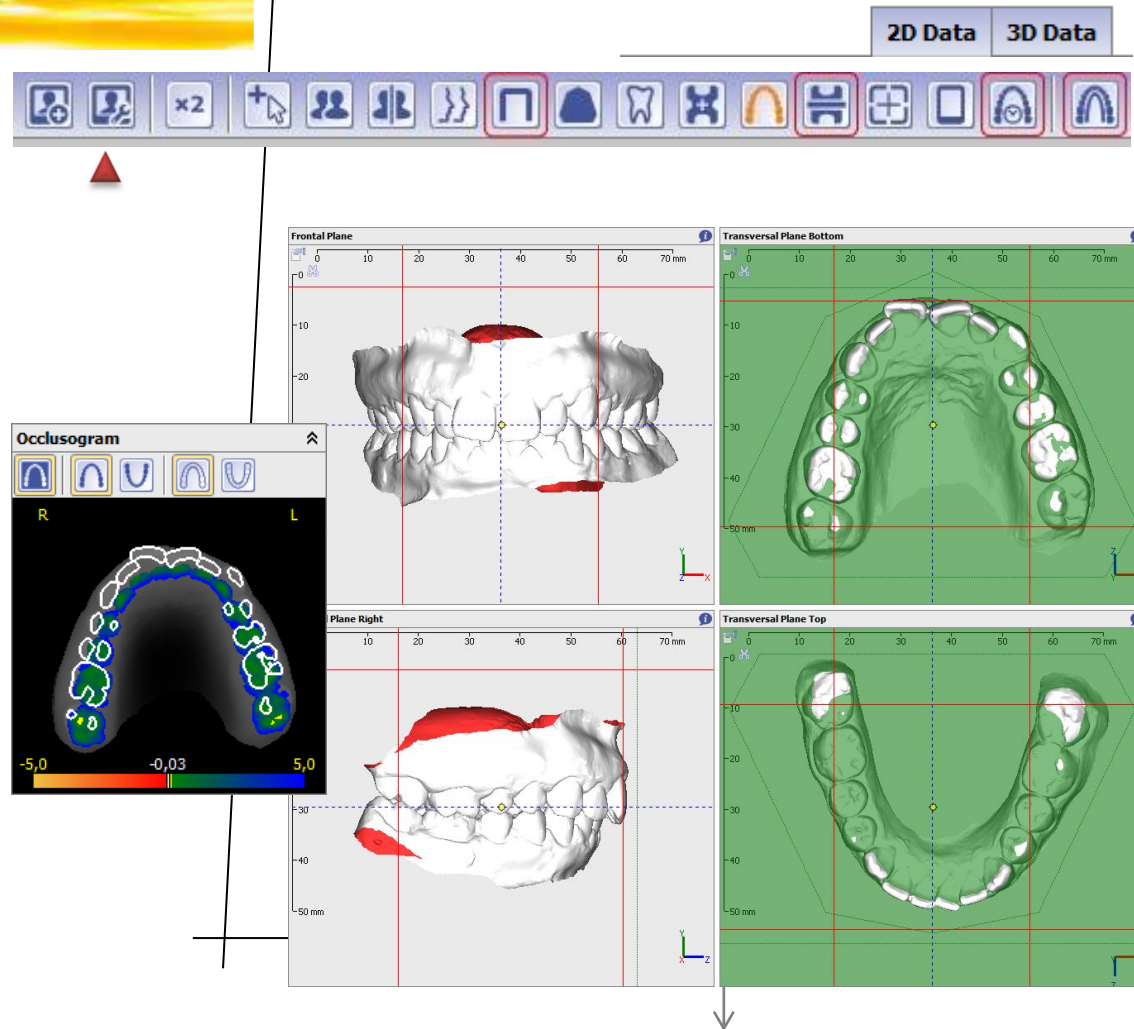


Add Image
Adjust Image
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Treatment Simulation 3D
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FA_Bonding
V.T.O.3D
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Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D

Preparation

Preparation: Modules Add/Adjust Image – Inspection

Preparation



Add Image

Adjust Image

Digitize

Combine

Mirror

Treatment Simulation 3D

Image Comparison

Cast Adjust

Segmentation

FA_Bonding

V.T.O.3D

Wire Bonding

Kylix 3D

Bonding Trays 3D

Splint 3D

Bracket Adapt

Aligner 3D

Retainer 3D

Waefer Creation 3D

Preparation

Preparation: Modules Add/Adjust Image – Alignment

Preparation



- Add Image
- Adjust Image
- Digitize
- Combine
- Mirror
- Treatment Simulation 3D
- Image Comparison
- Cast Adjust**
- Segmentation
- FA_Bonding
- V.T.O.3D
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- Splint 3D
- Bracket Adapt
- Aligner 3D
- Retainer 3D
- Waefer Creation 3D

Preparation

Preparation: Module Cast Adjust - Base Tray

Preparation

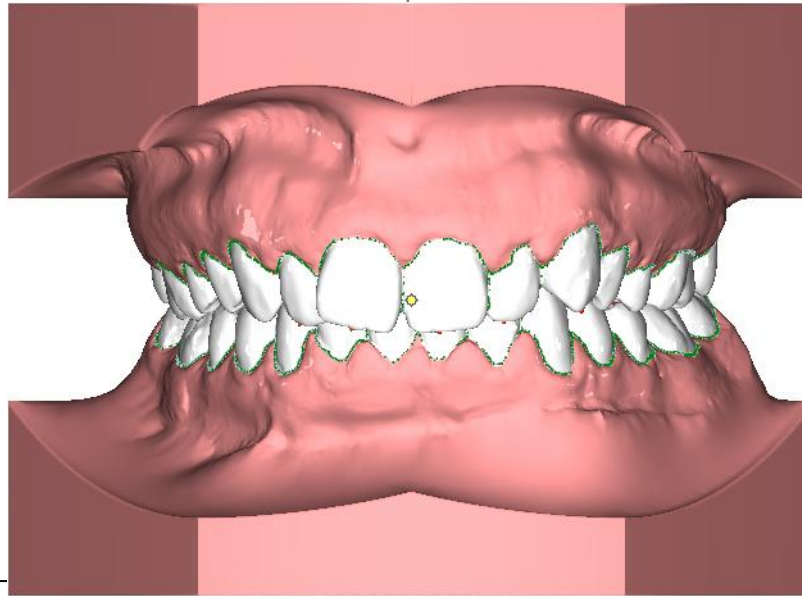


- Add Image
- Adjust Image
- Digitize
- Combine
- Mirror
- Treatment Simulation 3D
- Image Comparison
- Cast Adjust**
- Segmentation
- FA_Bonding
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- Splint 3D
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- Aligner 3D
- Retainer 3D
- Waefer Creation 3D

Preparation

Preparation: Module Cast Adjust - Base Tray

Preparation

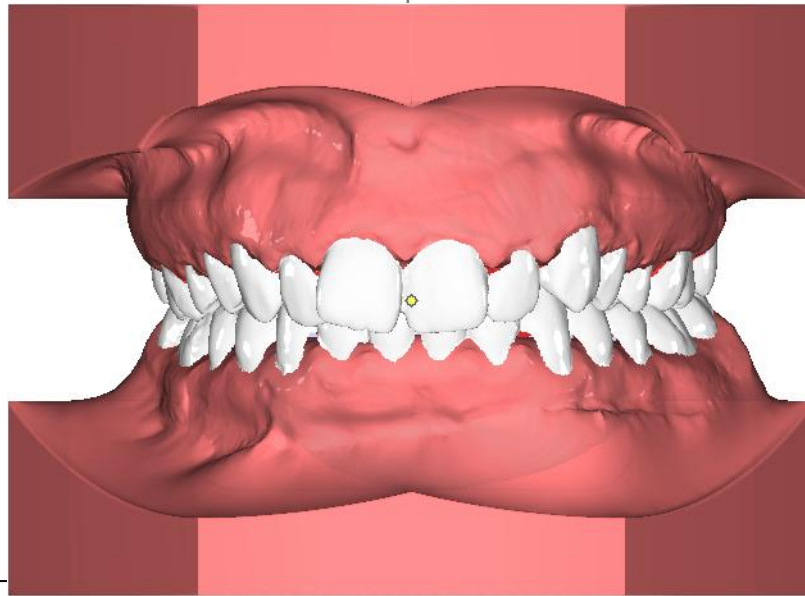


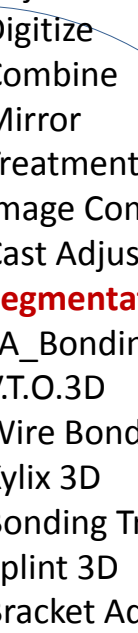
- Add Image
- Adjust Image
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- Splint 3D
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- Retainer 3D
- Waefer Creation 3D

Preparation

Preparation: Module Segmentation – Crown Segmentation

Preparation

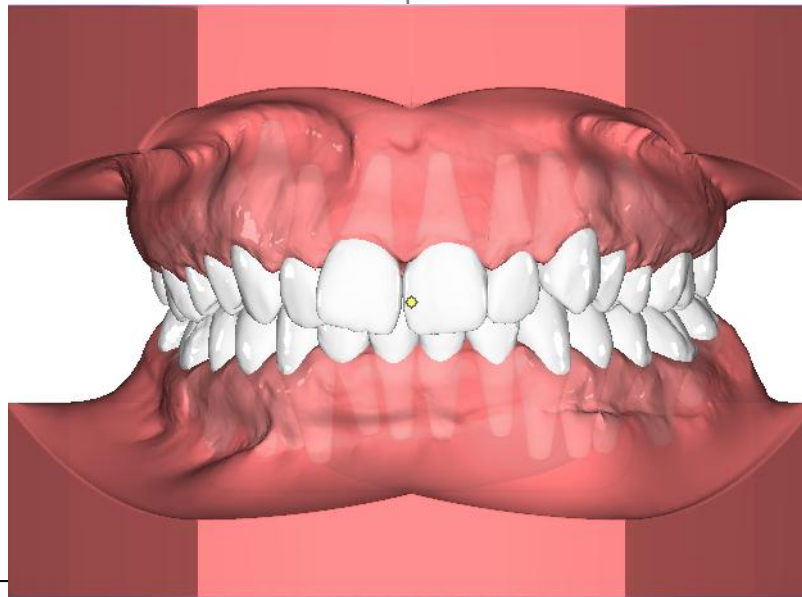


- 
- Add Image
 - Adjust Image
 - Digitize
 - Combine
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 - Treatment Simulation 3D
 - Image Comparison
 - Cast Adjust
 - Segmentation**
 - FA_Bonding
 - V.T.O.3D
 - Wire Bonding
 - Kylux 3D
 - Bonding Trays 3D
 - Splint 3D
 - Bracket Adapt
 - Aligner 3D
 - Retainer 3D
 - Waefer Creation 3D

Preparation

Preparation: Module Segmentation - Separation

Preparation



- Add Image
- Adjust Image
- Digitize
- Combine
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- Treatment Simulation 3D
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- Segmentation**
- FA_Bonding
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- Bonding Trays 3D
- Splint 3D
- Bracket Adapt
- Aligner 3D
- Retainer 3D
- Waefer Creation 3D

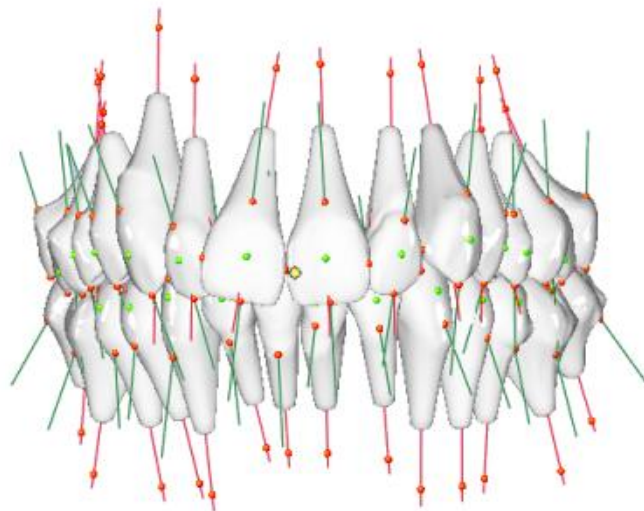
Preparation

Preparation: Module Segmentation - Completion

Preparation



FA



- Add Image
- Adjust Image
- Digitize**
- Combine
- Mirror
- Treatment Simulation 3D
- Image Comparison
- Cast Adjust
- Segmentation
- FA_Bonding
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- Wire Bonding
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- Waefer Creation 3D

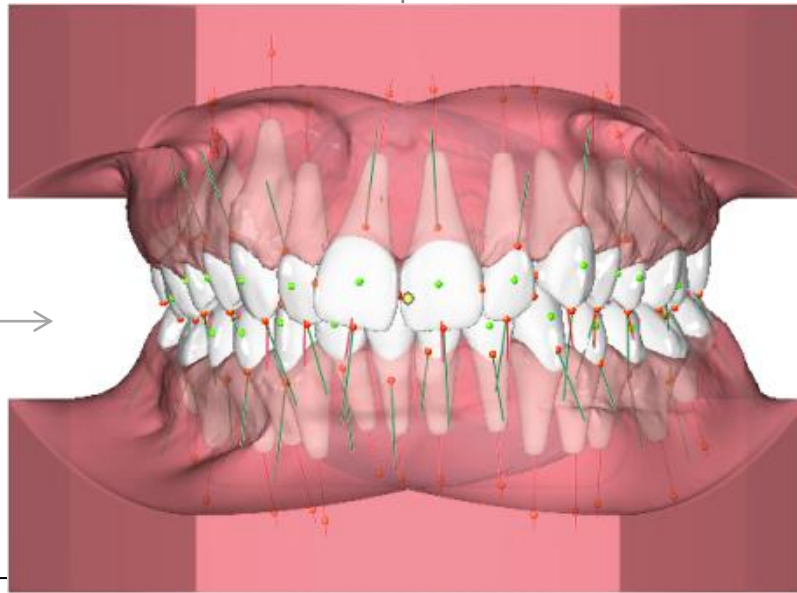
Preparation

Preparation: Module Digitize - Check/Correct Landmarks

Preparation



WALA



- Add Image
- Adjust Image
- Digitize**
- Combine
- Mirror
- Treatment Simulation 3D
- Image Comparison
- Cast Adjust
- Segmentation
- FA_Bonding
- V.T.O.3D
- Wire Bonding
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- Bonding Trays 3D
- Splint 3D
- Bracket Adapt
- Aligner 3D
- Retainer 3D
- Waefer Creation 3D

Preparation

Preparation: Module Digitize - Complete Landmarks

Preparation



Add Image
Adjust Image
Digitize

Combine
Mirror
Treatment Simulation 3D
Image Comparison

Cast Adjust Segmentation

FA_Bonding
V.T.O.3D

Wire Bonding

Kylix 3D

Bonding Trays 3D

Splint 3D

Bracket Adapt

Aligner 3D

Retainer 3D

Waefer Creation 3D

Preparation

Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

Workflow

- Preparation

► FA_Bonding

Wire_Bonding

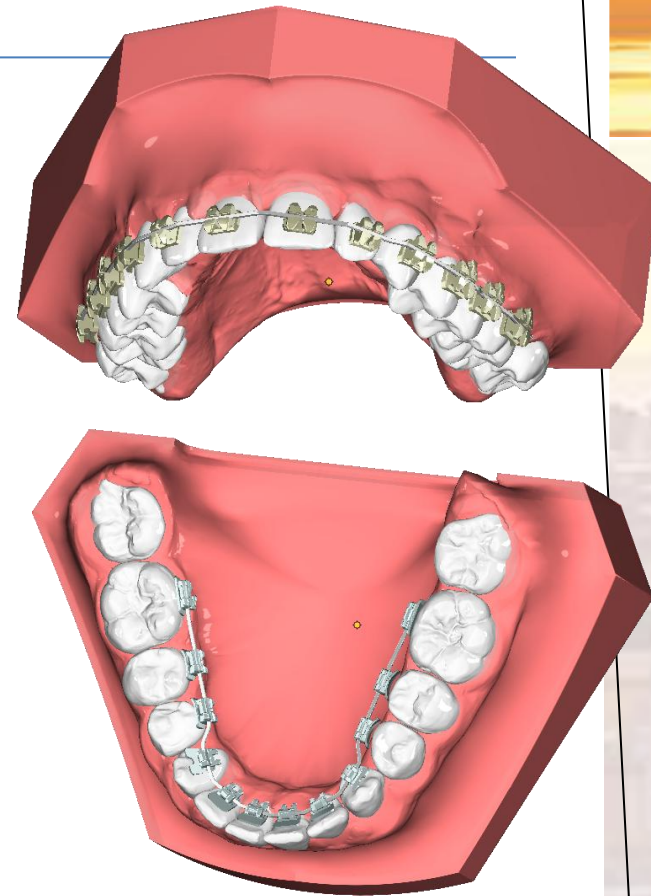
- Virtual Setup
- Bracket-/Wire-Placement

Bracket Position Transfer

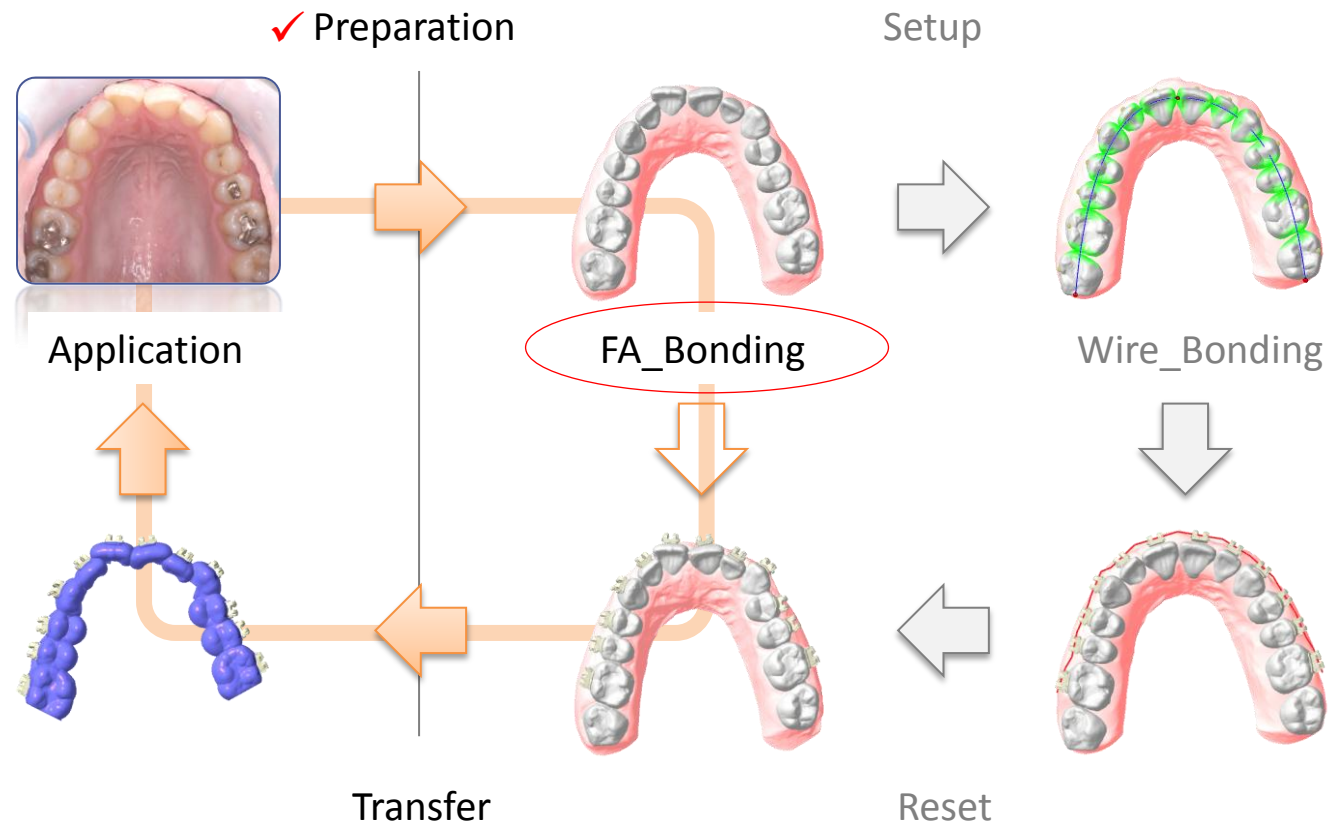
- Indirect Methods
- Direct/Mixed Methods

Other Planning Options (Overview)

Summary

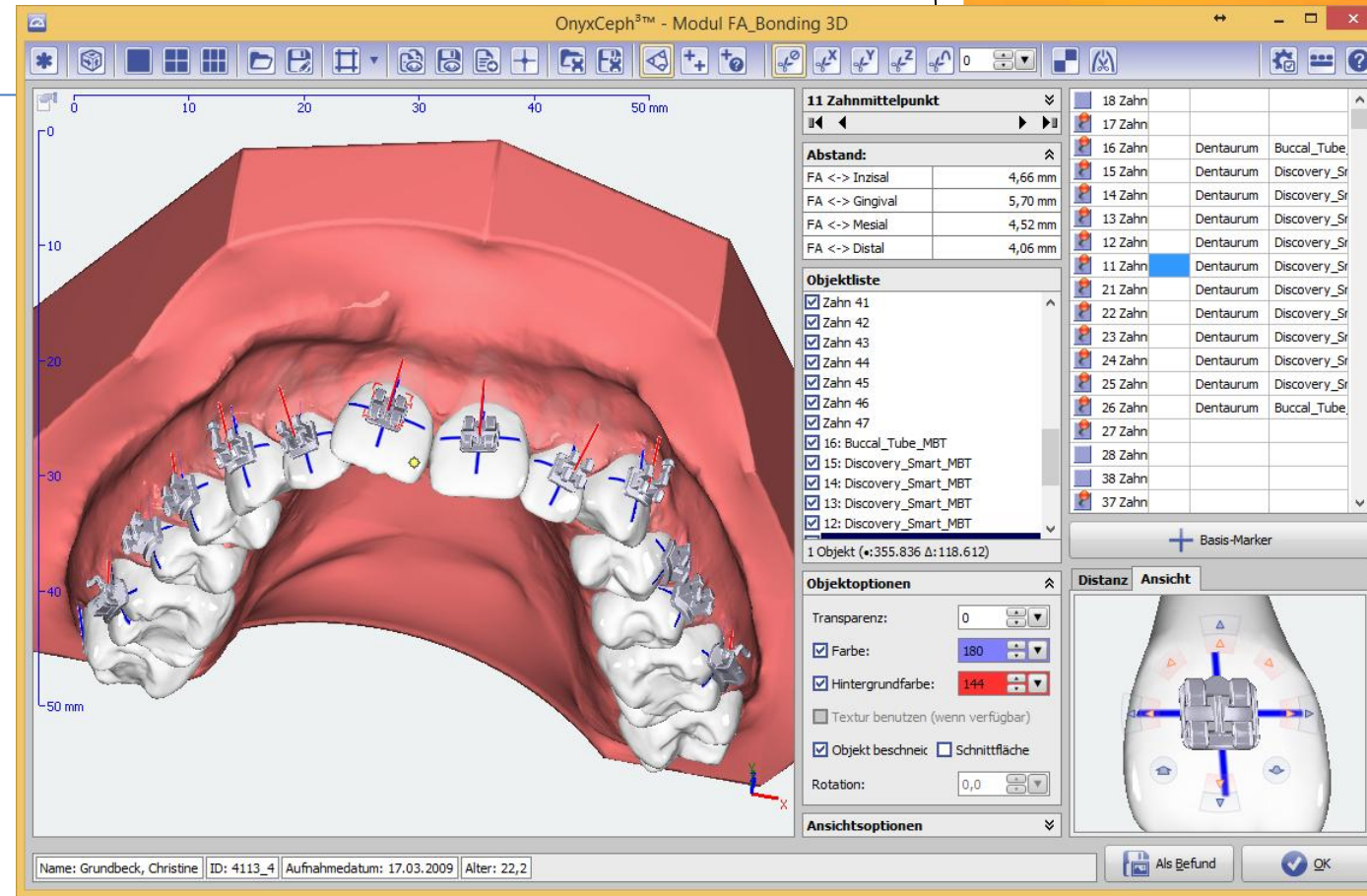


FA_Bonding

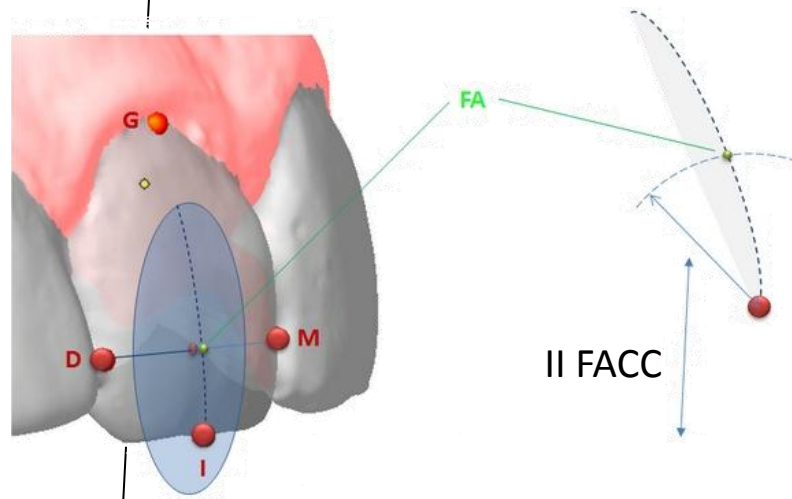


FA_Bonding

Add Image
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FA_Bonding
V.T.O.3D
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Splint 3D
Bracket Adapt
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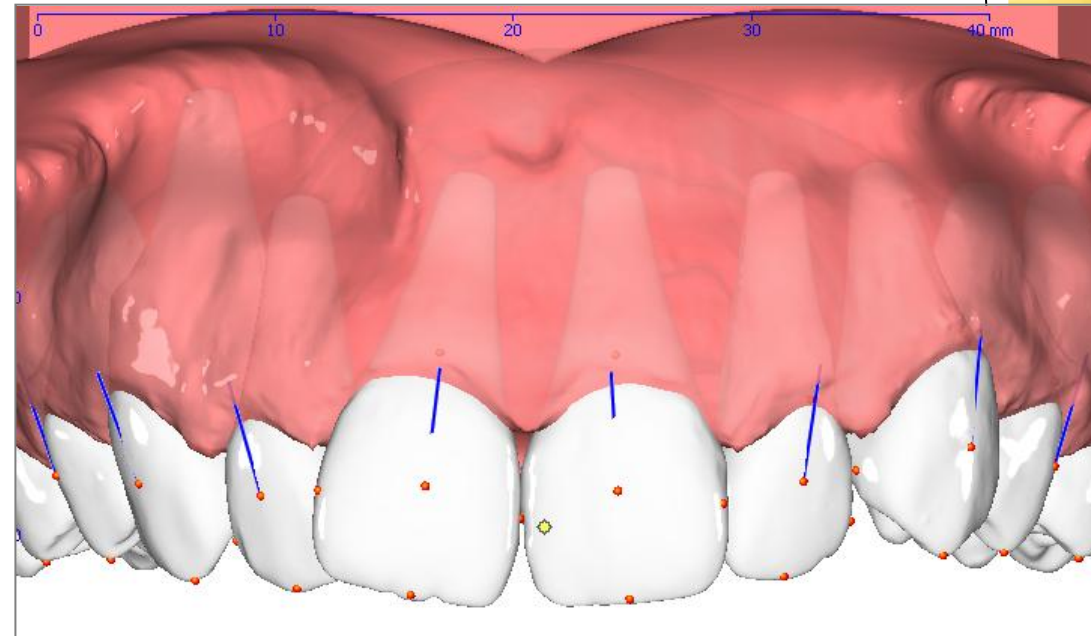


FA_Bonding



MBT/Andrews

+ Correction ~ Crown Height
+ Correction ~ Overbite Type



U7	U6	U5	U4	U3	U2	U1
2,0	3,0	4,0	4,5	5,0	4,5	5,0
L7	L6	L5	L4	L3	L2	L1
2,5	2,5	3,5	4,0	4,5	4,0	4,0

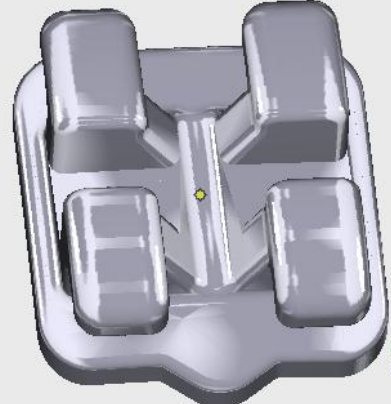
FA_Bonding: FA Calculation

FA_Bonding

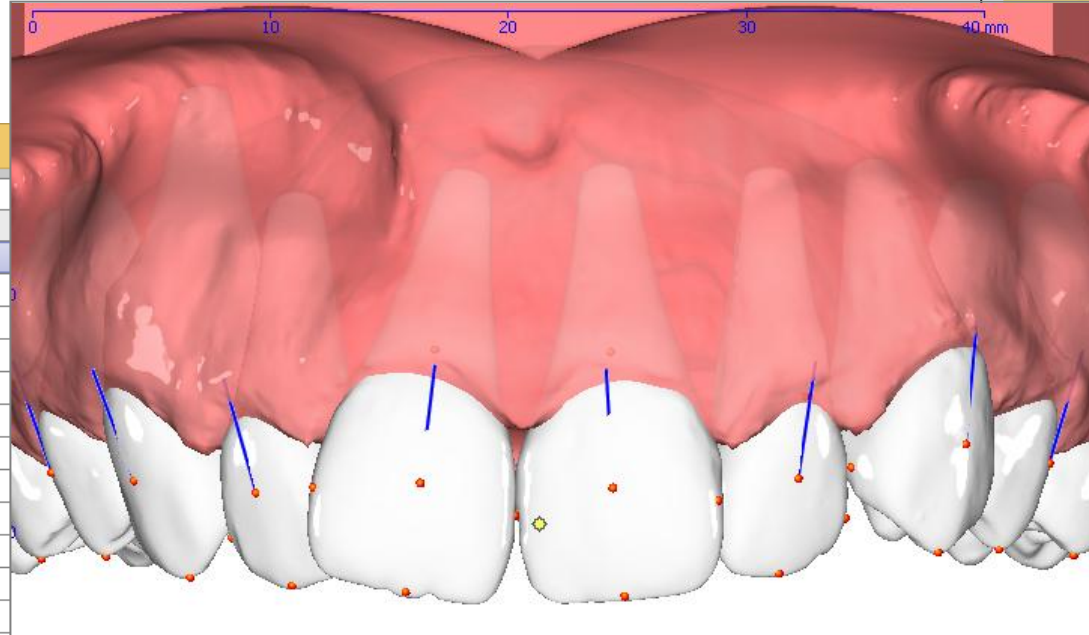
Select Bracket

Search...	Search...	Search...	11	Search...	Search...
Name	Manufacturer	System	Tooth	Slot	Torque
Discovery_Smar	Dentaurum		11	0.022"	17.00
Discovery_Smar	Dentaurum		11	0.022"	17.00
Discovery_Smar	Dentaurum	Roth 18	11	0.018"	12.00
Discovery_Smar	Dentaurum	Roth 22	11	0.022"	12.00
Empower SL	AO	MBT	11	0.022"	17.00
Equilibrium_Mini	Dentaurum		11	0.022"	0.00
IN-OV C ROTH	GAC		11	0.018"	12.00
IN-OV C ROTH	GAC		11	0.022"	12.00
IN-OV C ROTH	GAC		11	0.022"	12.00
INOV R RNC 01	GAC				18.00
INOV R RNC 02	GAC				18.00
IN-OVTN R 018	GAC				12.00
mb_100-111-00	GAC				
mb181_101.stl	HT				
SmartClip	3M				
SmartClip	3M				
SmartClip	3M				
SmartClip	3M				
SmartClip	3M				
SmartClip	3M				
SmartClip	3M				

Vorschau



3D Model of Teeth with Brackets

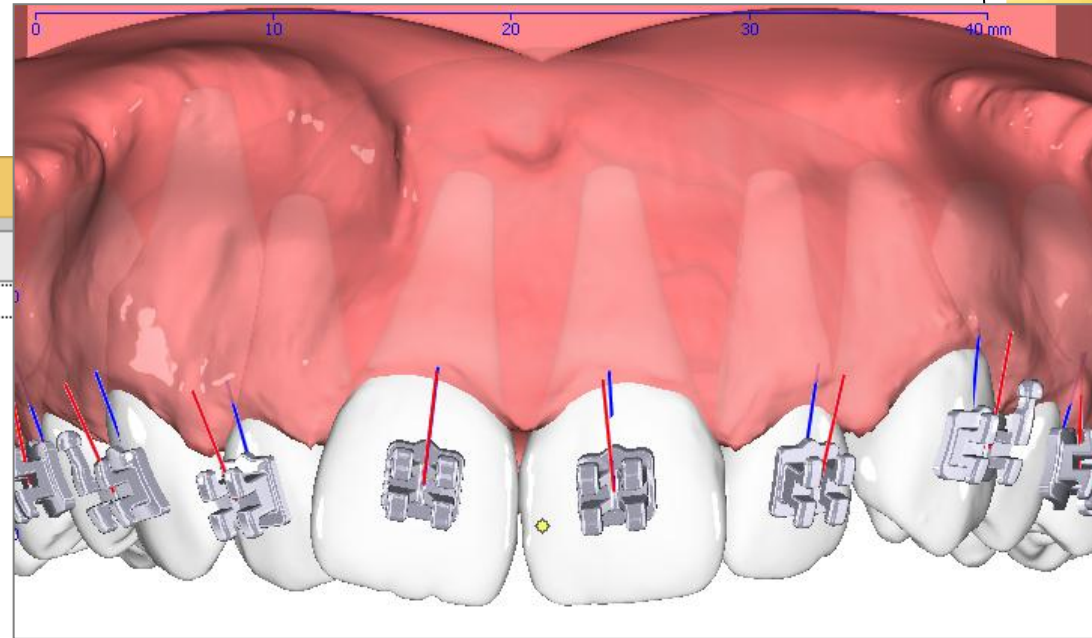
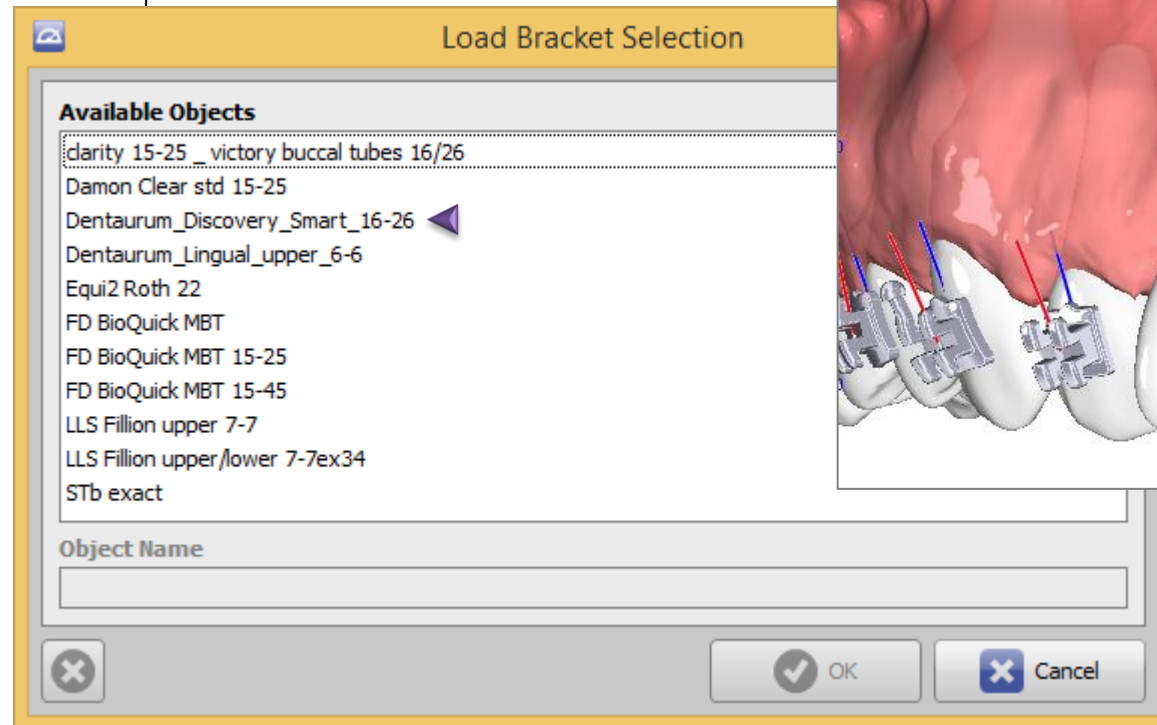


0.00	0.00	True	False
0.00	0.00	True	False
17.00	4.00	True	False
22.00	4.00	True	False
12.00	3.00	True	False
12.00	3.00	True	False
22.00	4.00	True	False
17.00	4.00	True	False

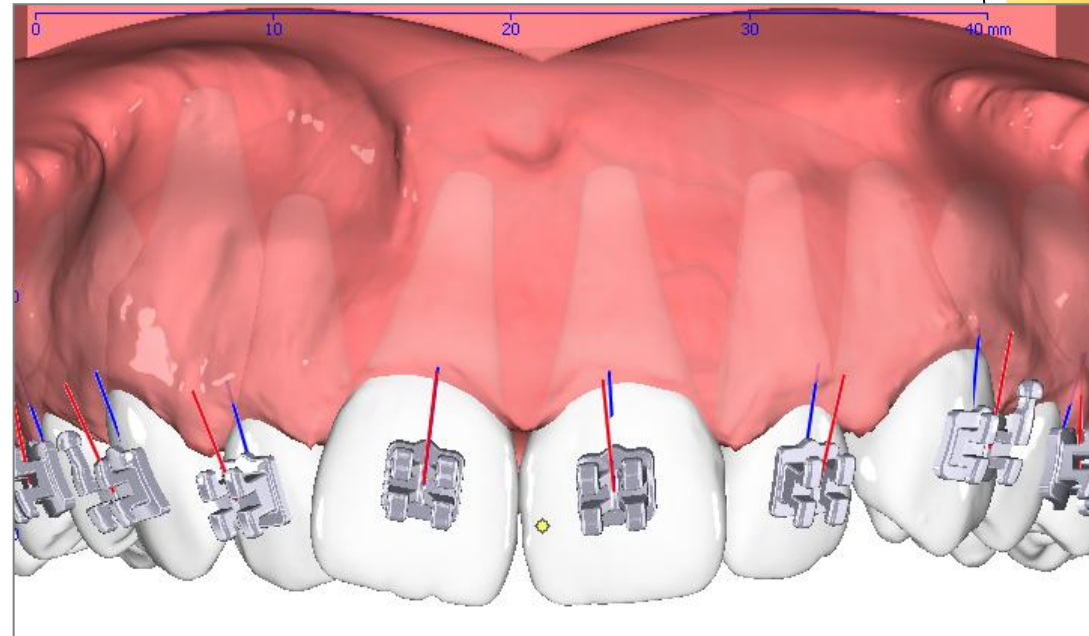
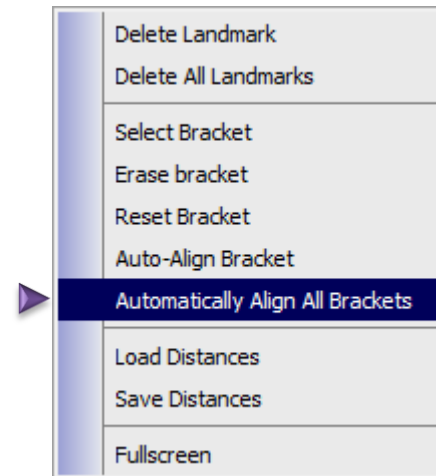
OK Cancel

FA_Bonding: Bracket Library

FA_Bonding

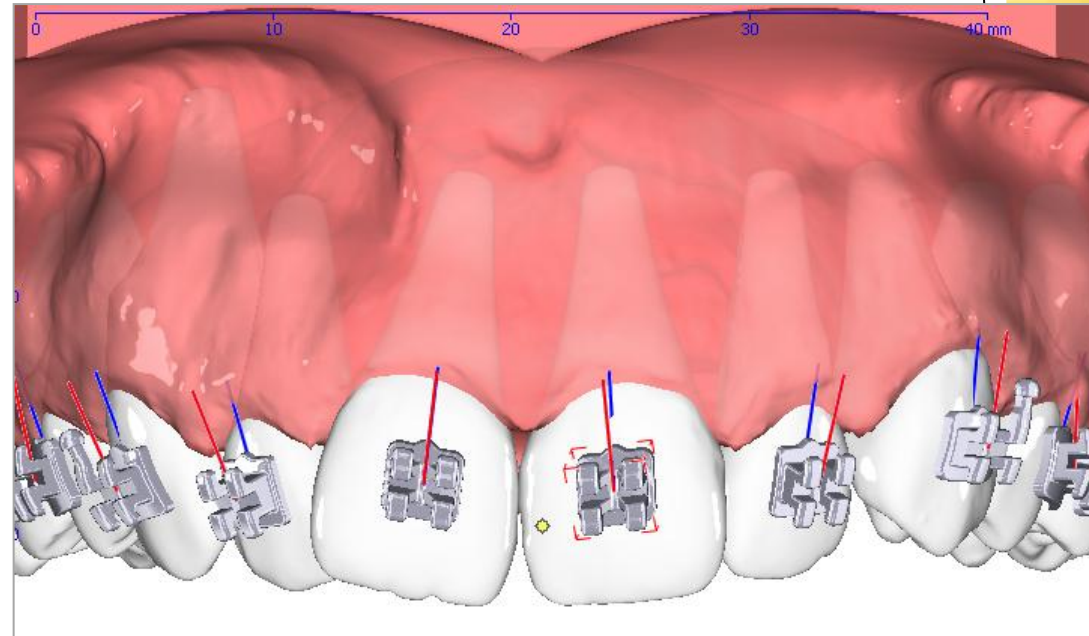
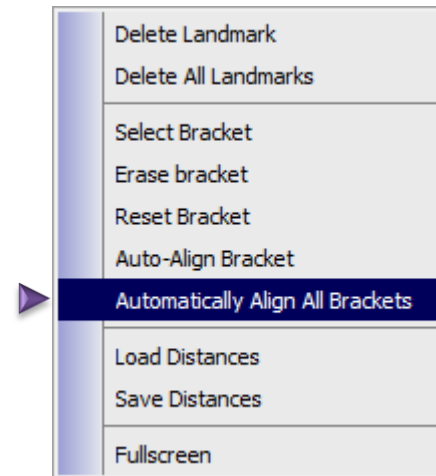


FA_Bonding



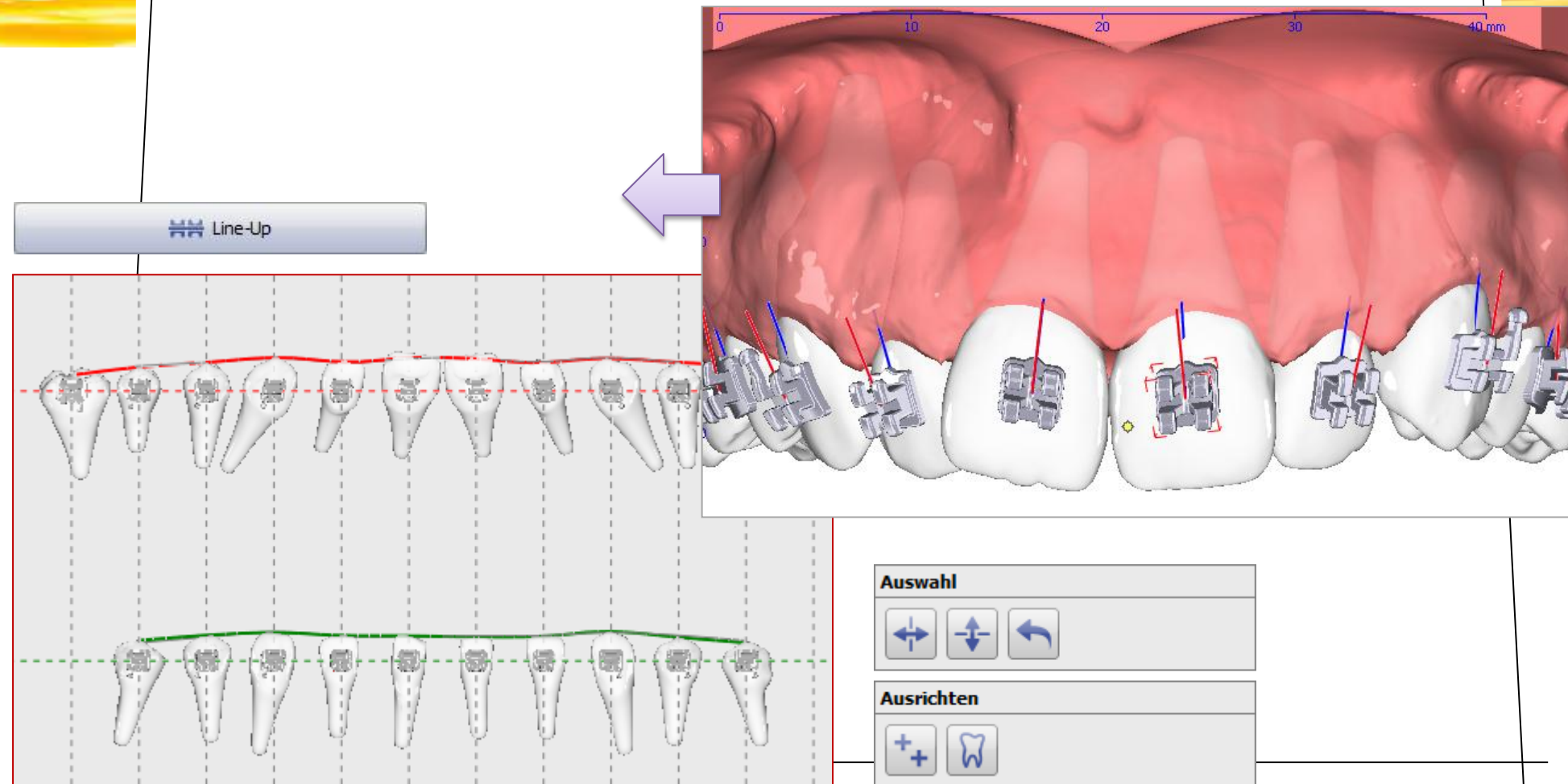
FA_Bonding: Auto Distance

FA_Bonding



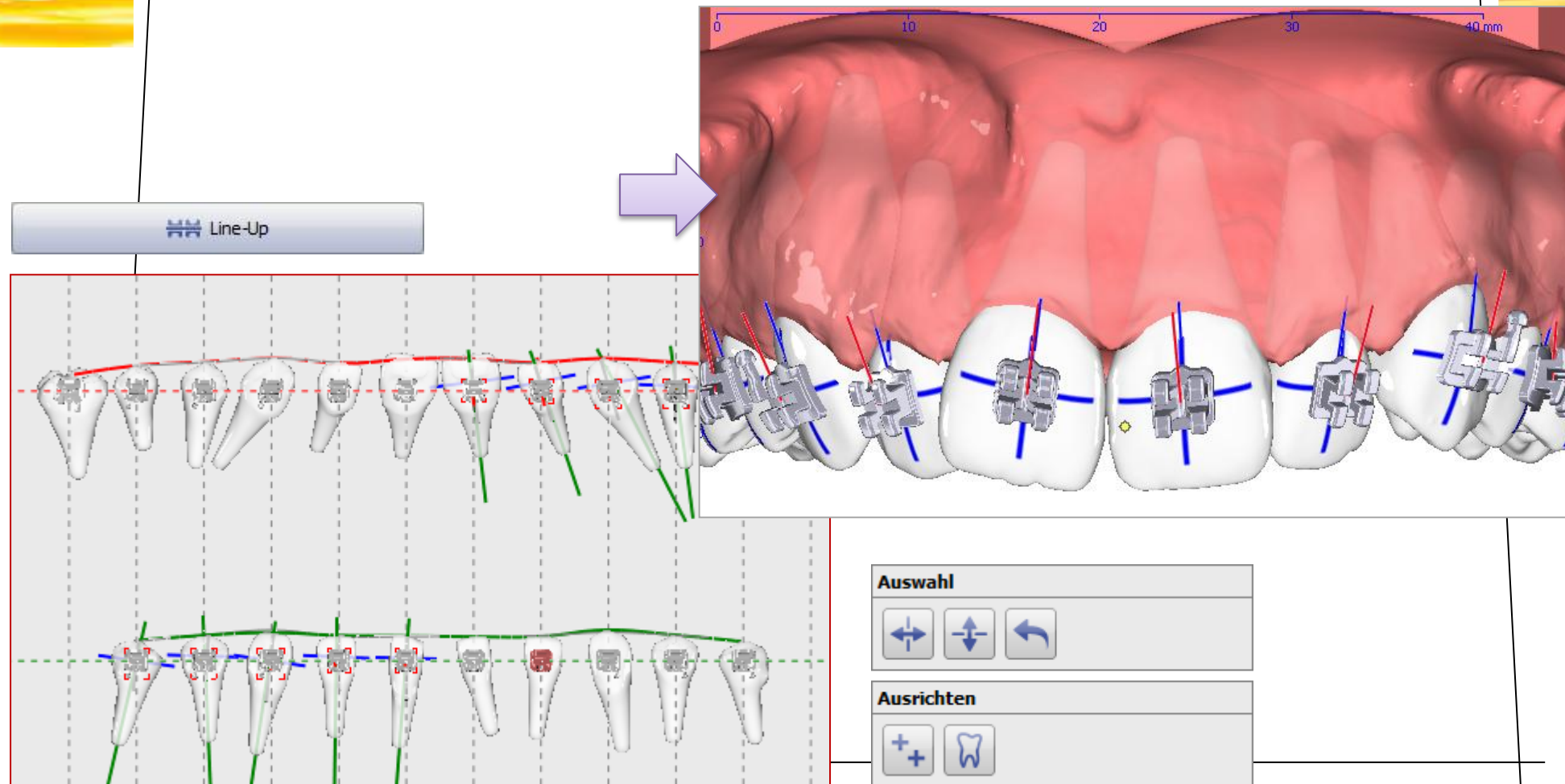
FA_Bonding: Auto Distance

FA_Bonding



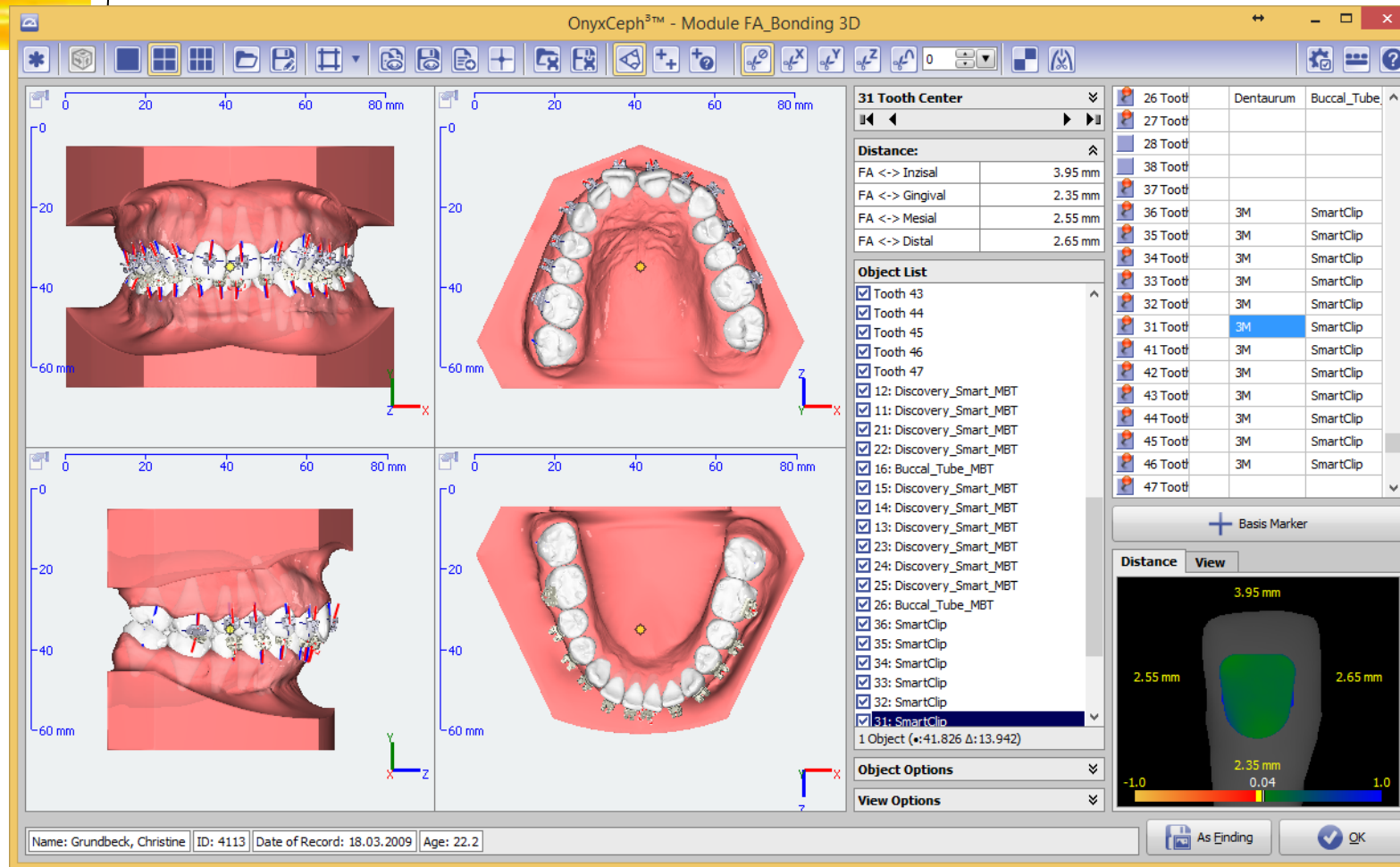
FA_Bonding: Tooth/Arch/Crest Symmetry

FA_Bonding



FA_Bonding: Tooth/Arch/Crest Symmetry

FA_Bonding



FA_Bonding



Add Image
Adjust Image
Digitize
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Image Comparison
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V.T.O.3D
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Kylix 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D

Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

Workflow

- Preparation

FA_Bonding

► **Wire_Bonding**

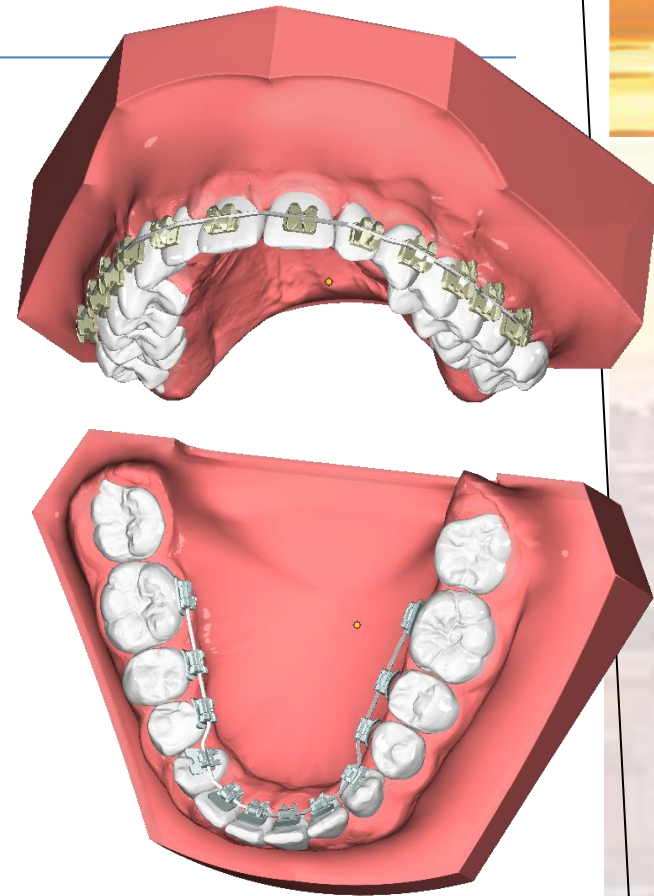
- Virtual Setup
- Bracket-/Wire-Placement

Bracket Position Transfer

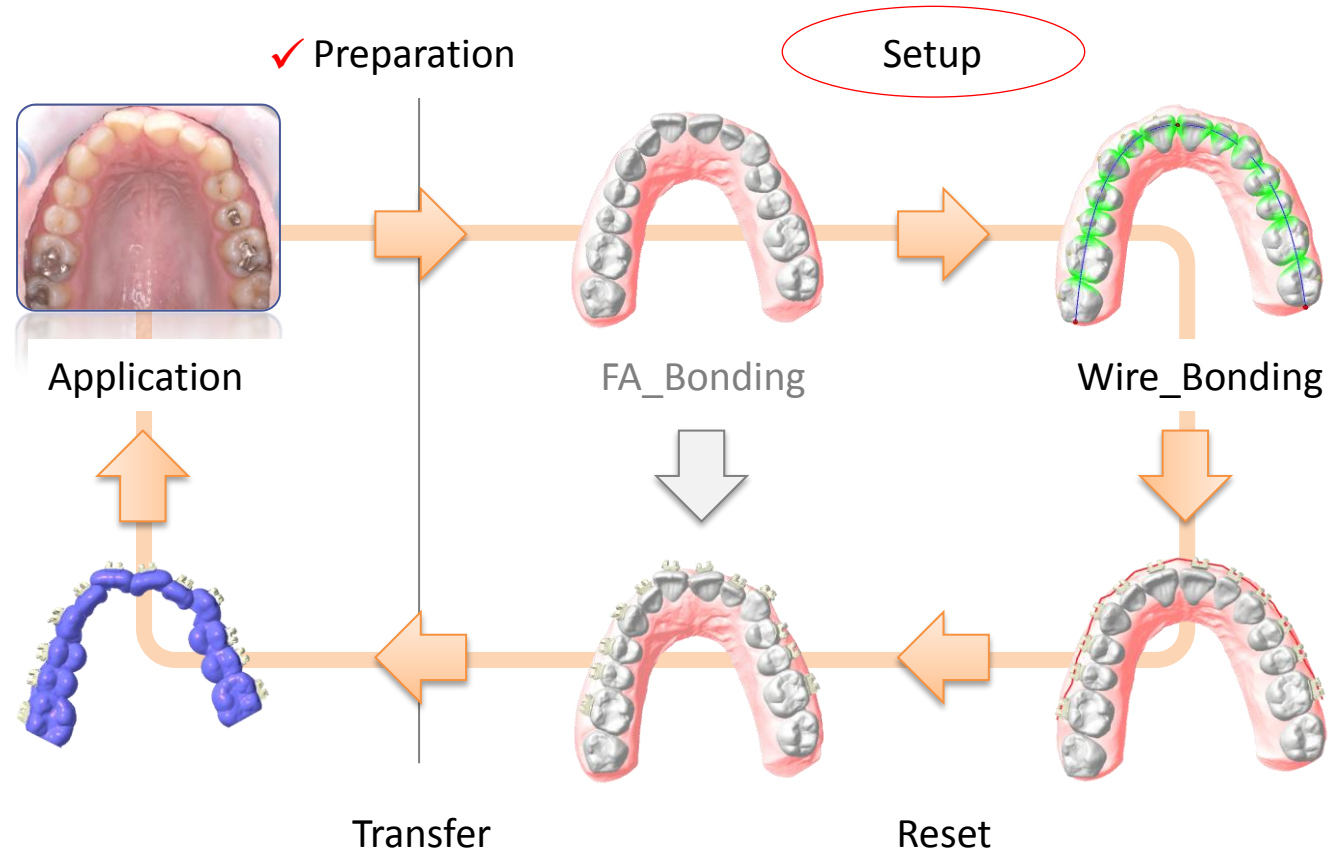
- Indirect Methods
- Direct/Mixed Methods

Other Planning Options (Overview)

Summary



Wire_Bonding



Wire_Bonding

Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

Workflow

FA_Bonding

Wire_Bonding

► **Virtual Setup**

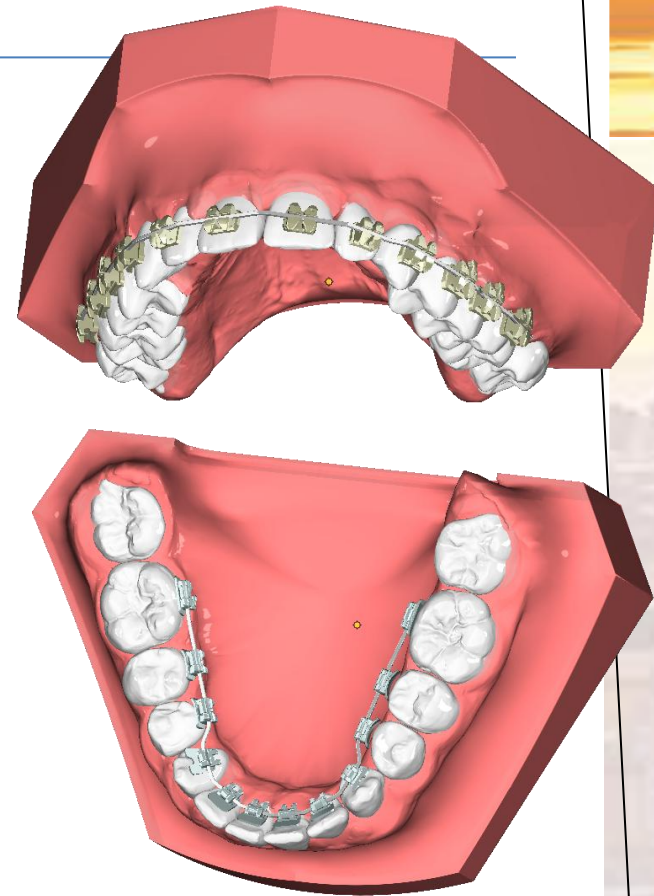
- Bracket-/Wire-Placement

Bracket Position Transfer

- Indirect Methods
- Direct/Mixed Methods

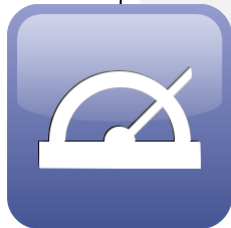
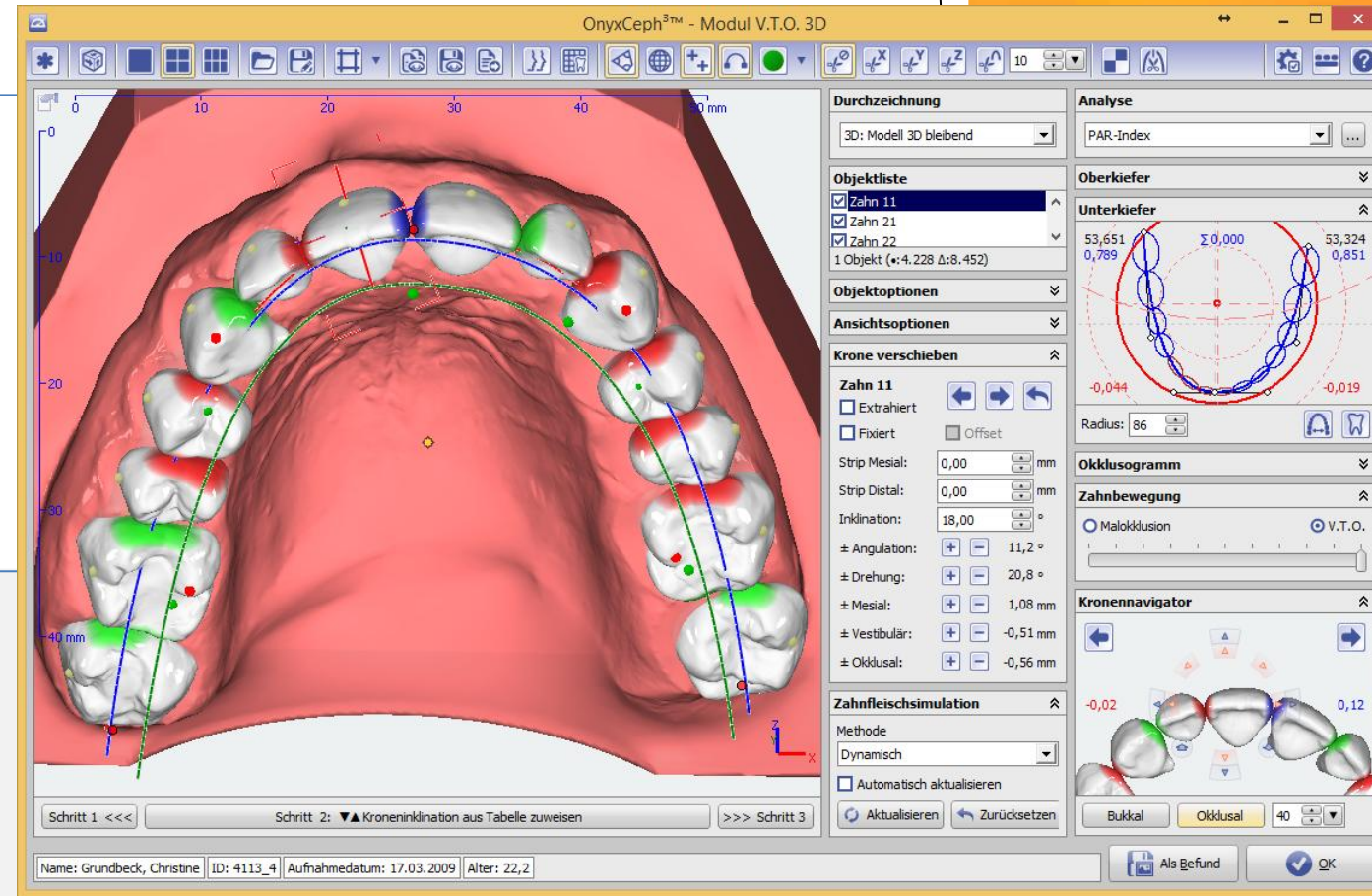
Other Planning Options (Examples)

Summary



Virtual Setup

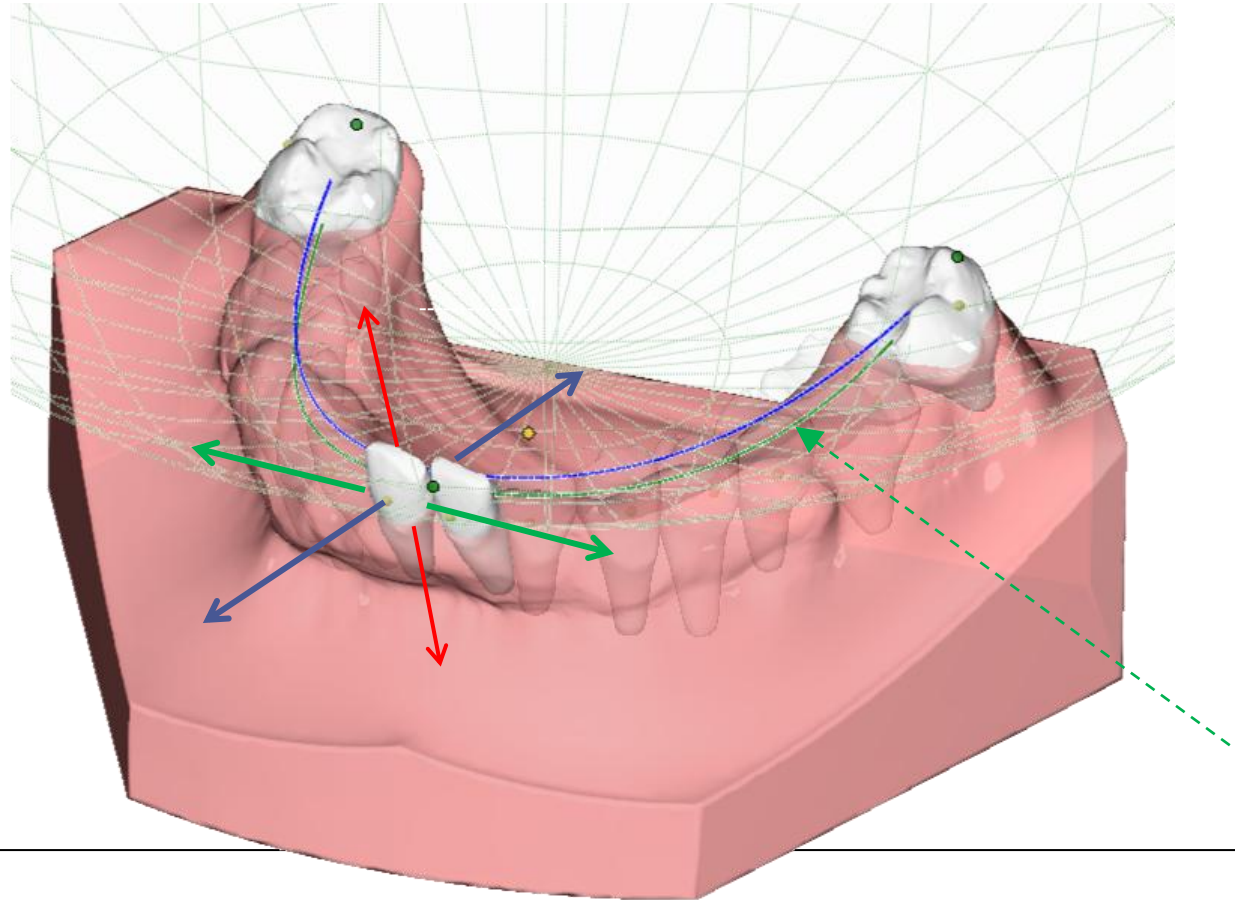
Add Image
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V.T.O.3D
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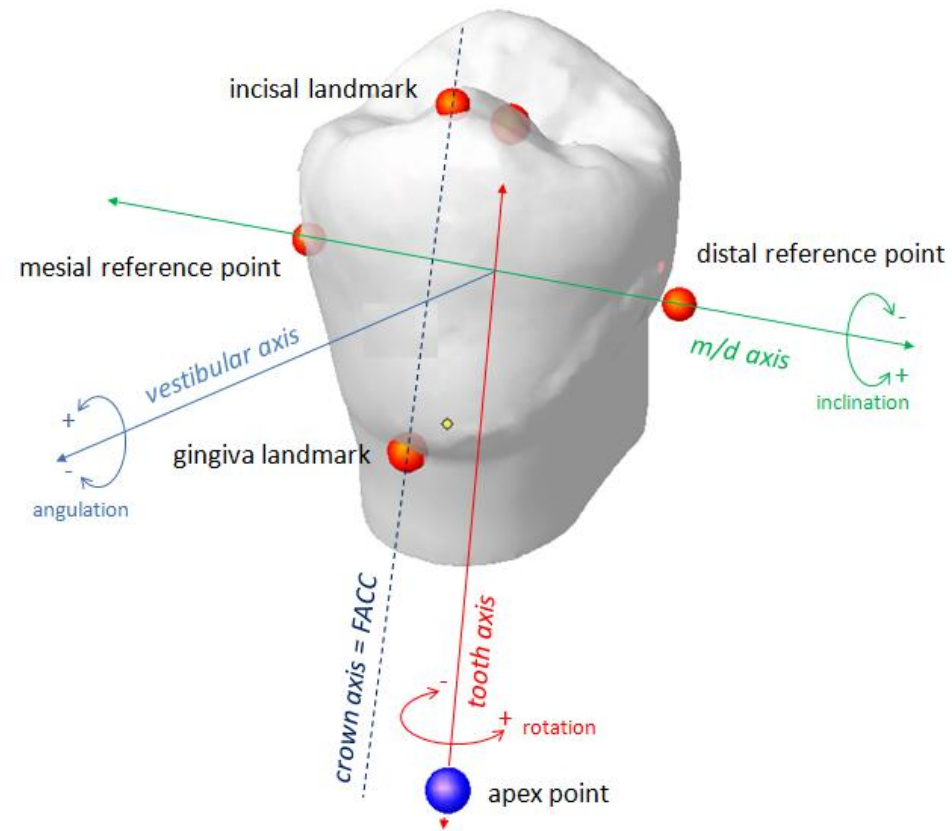
OnyxCeph^{3D}

Module V.T.O.3D

Virtual Setup



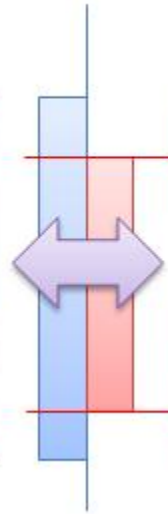
Virtual Setup



Virtual Setup



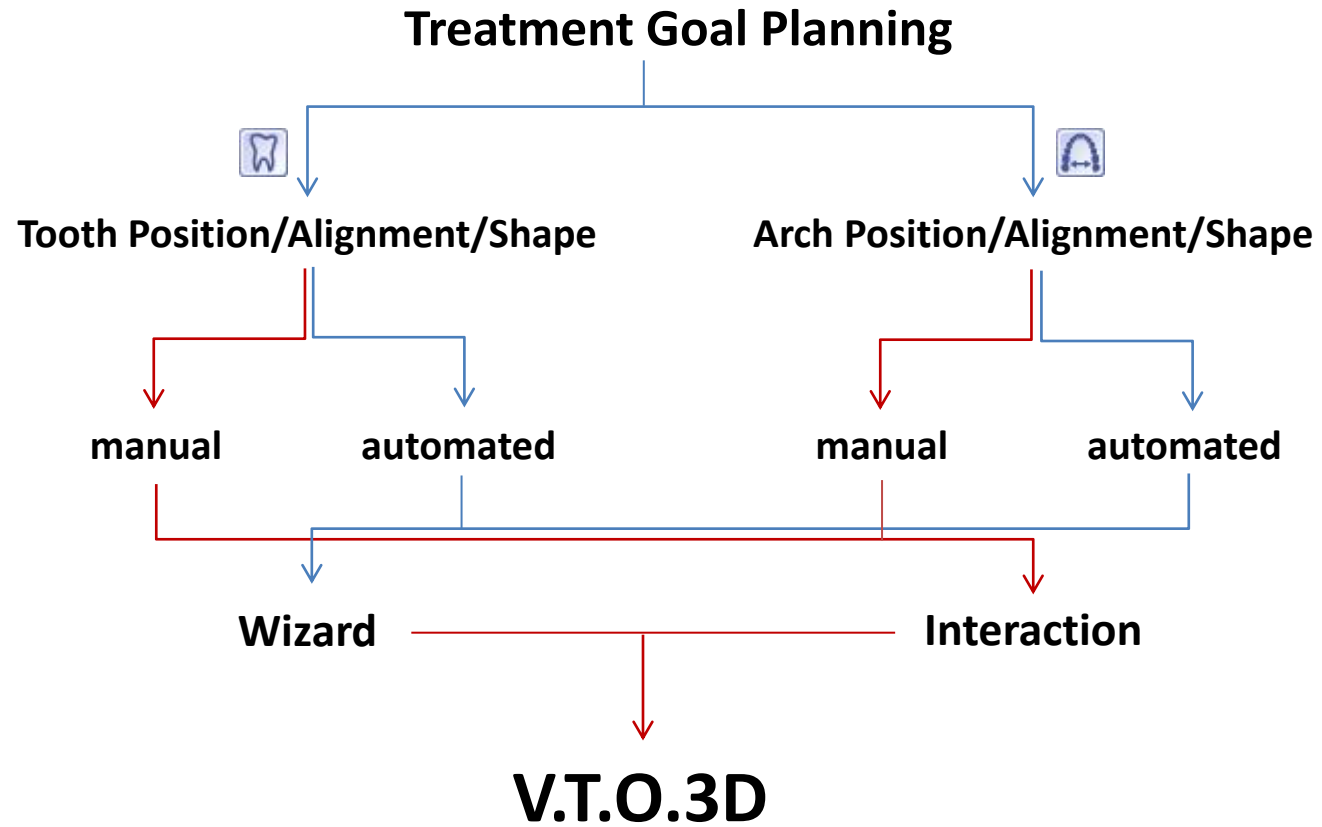
Real Tooth Movement



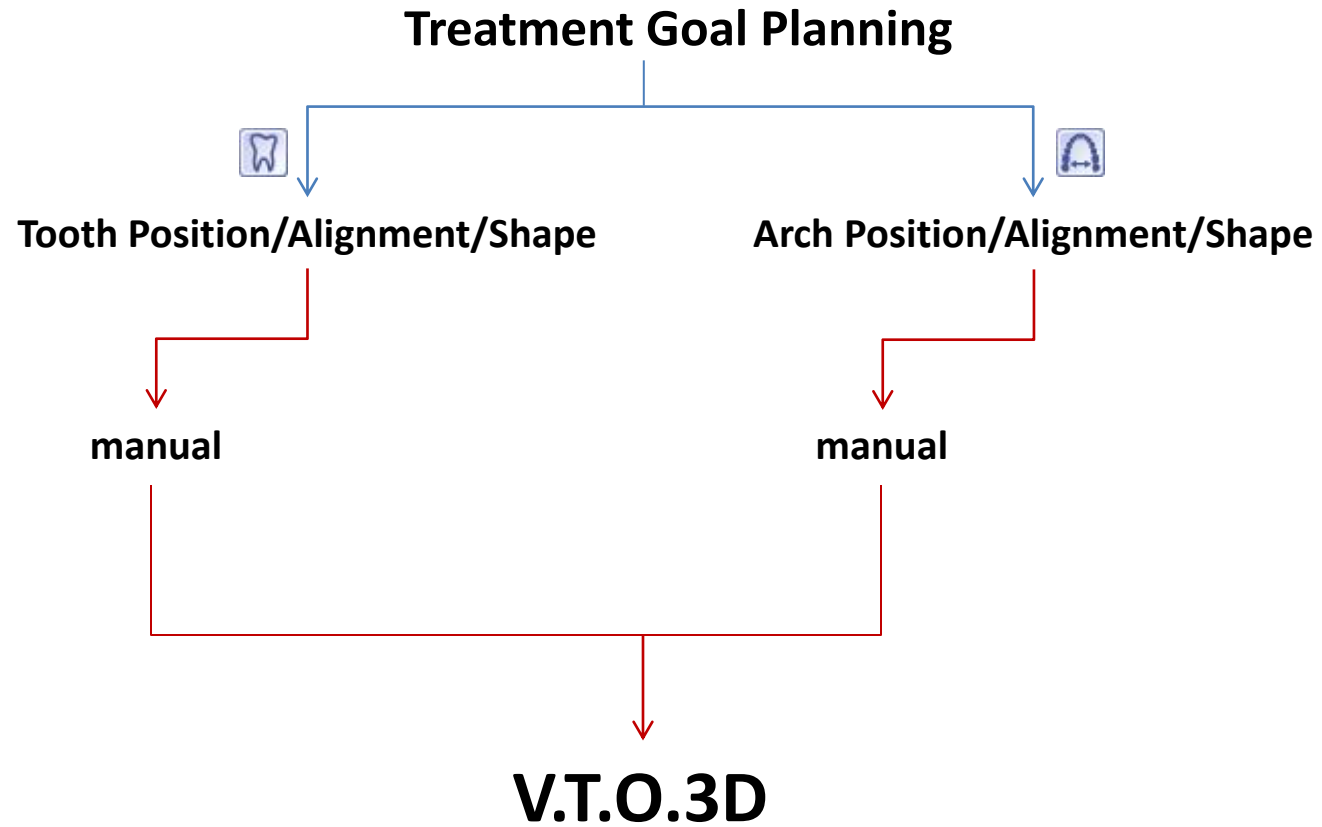
Computer Simulation



Virtual Setup



Virtual Setup



Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

Move Crown

Tooth 11

☒ Extracted

☒ Fixed

☐ Offset

Strip Mesial: 0,00 mm

Strip Distal: 0,00 mm

Inclination: 10,65 °

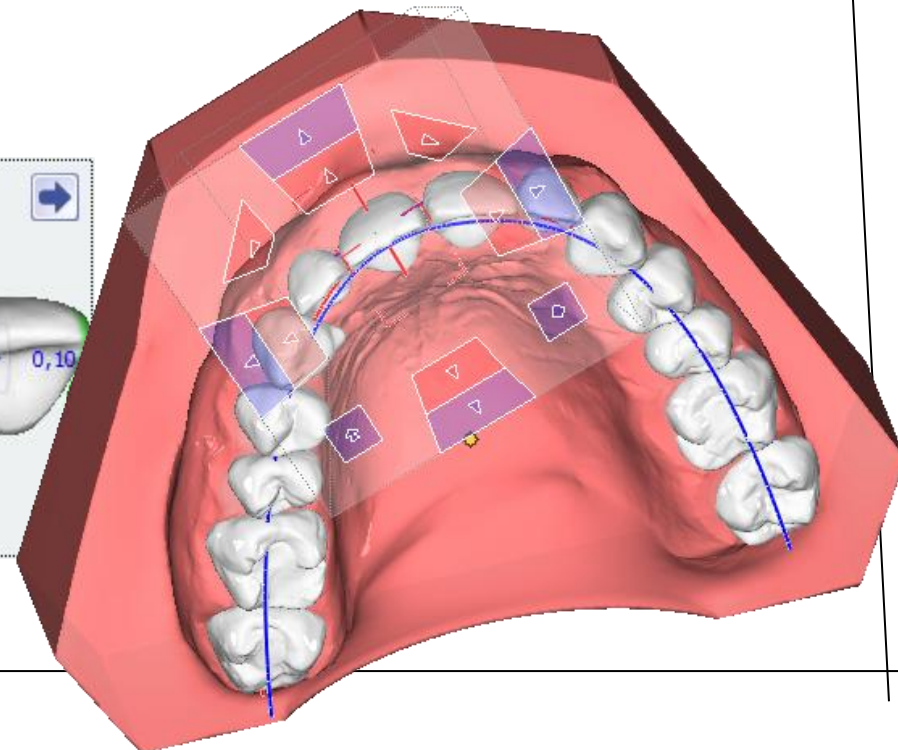
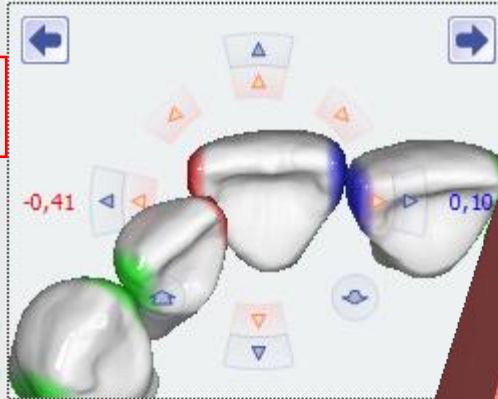
± Angulation: + -

± Rotation: + -

± Mesial: + - mm

± Vestibular: + - mm

± Occlusal: + - mm

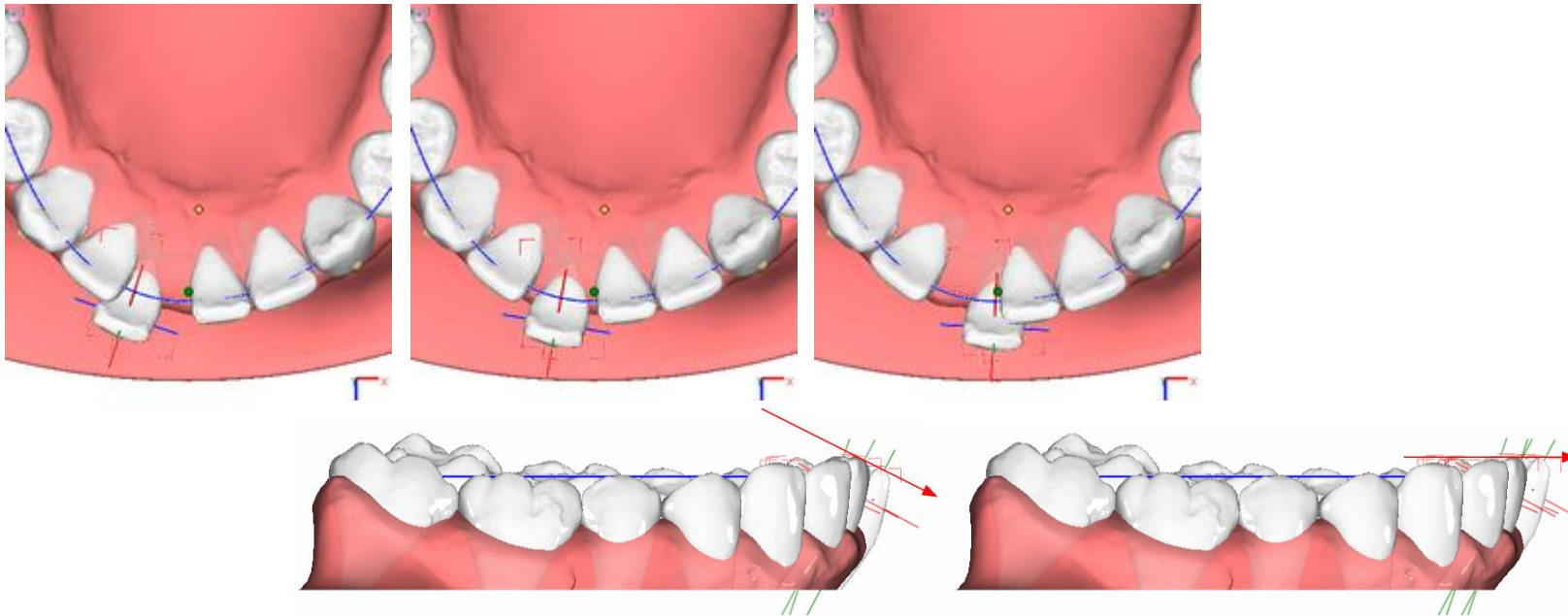


Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

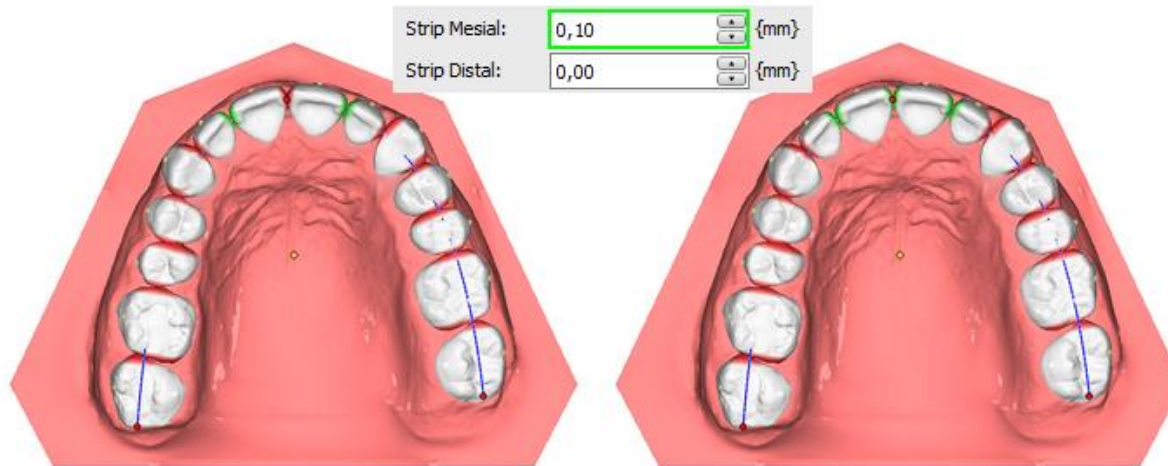


Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

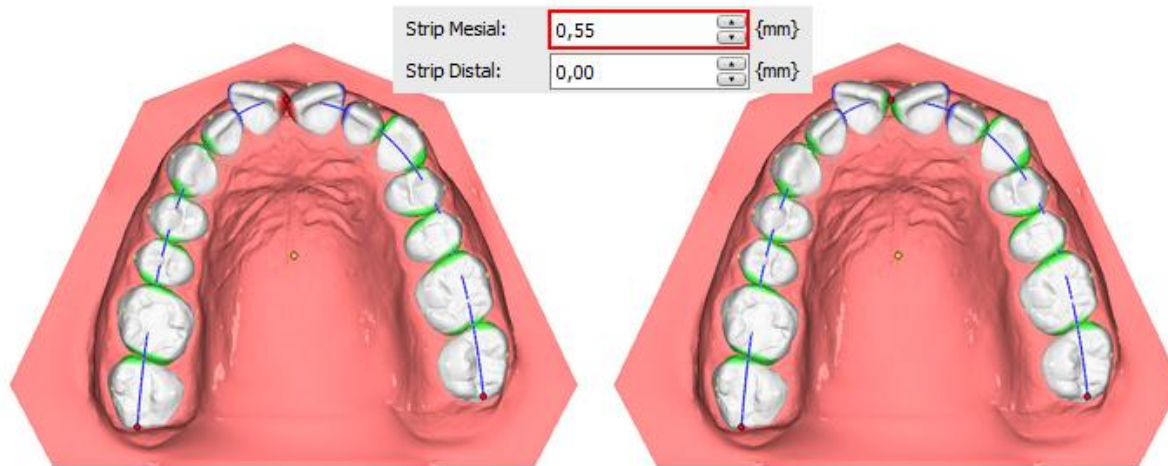


Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

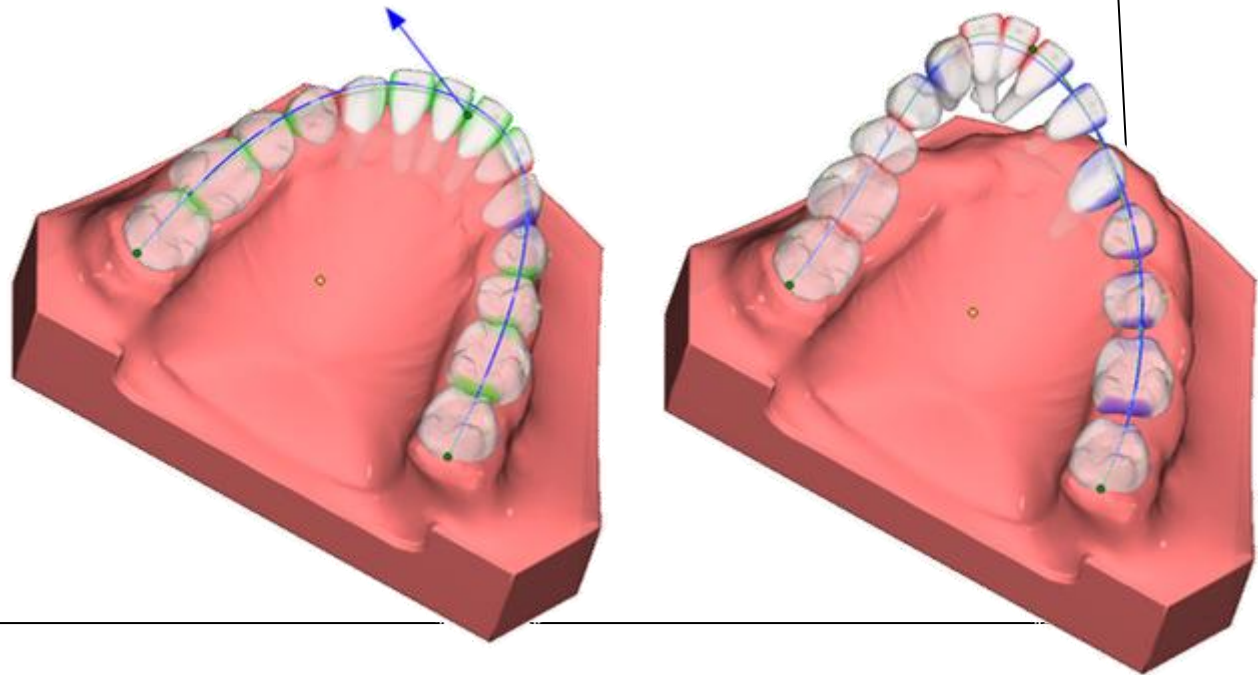


Virtual Setup

Treatment Goal Planning



Arch Position/Alignment/Shape

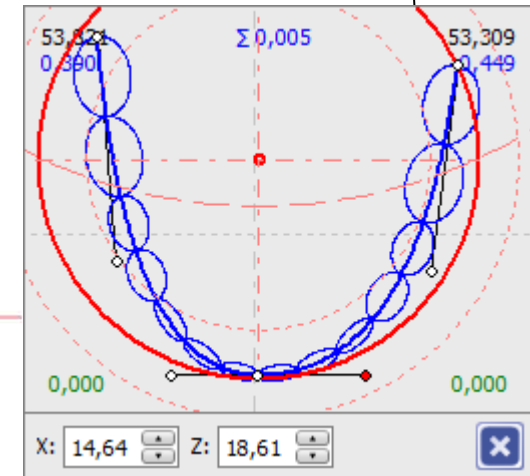
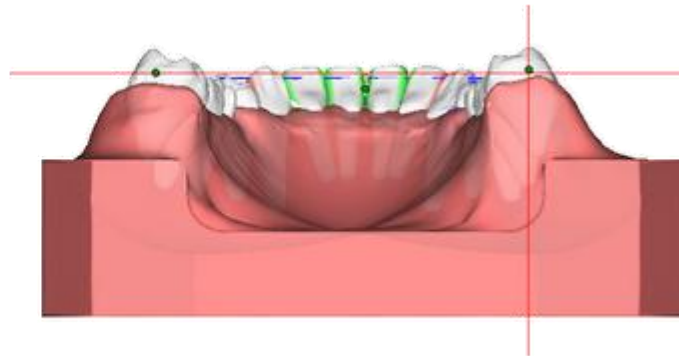
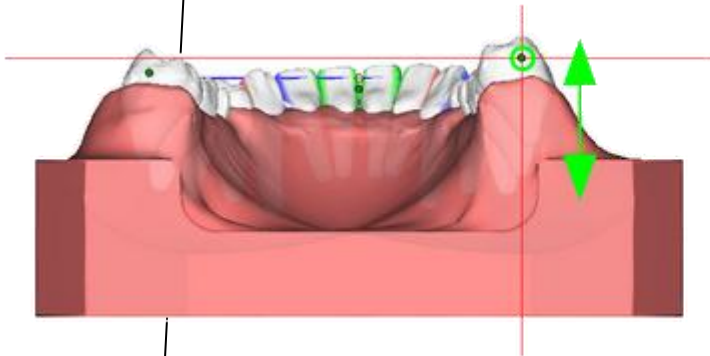


Virtual Setup

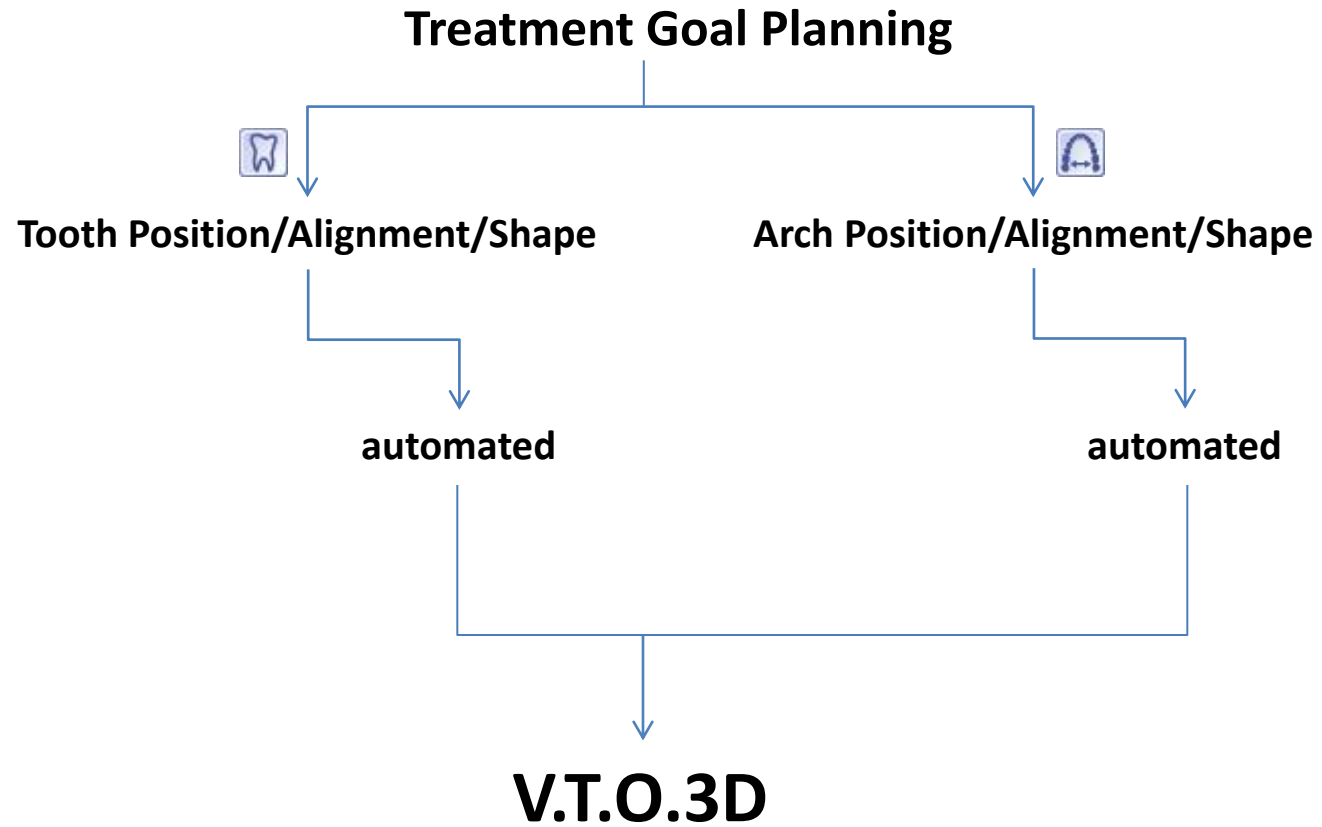
Treatment Goal Planning



Arch Position/Alignment/Shape



Virtual Setup



Virtual Setup

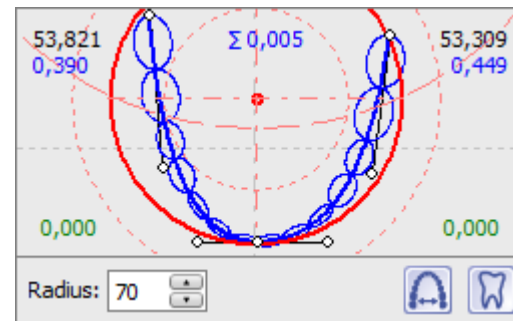
Treatment Goal Planning



Tooth Position/Alignment/Shape



Arch Position/Alignment/Shape



Fit to Max. Arch
Load inclination
Harmonize Angulation
Harmonize FA
Set FA on Arch-Plane
Compensate space discrepancy
Compensate Collisions
Settling

Fit to Malocclusion
Fit to Mandible
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint

Fit to Malocclusion
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint
Fit to WALA

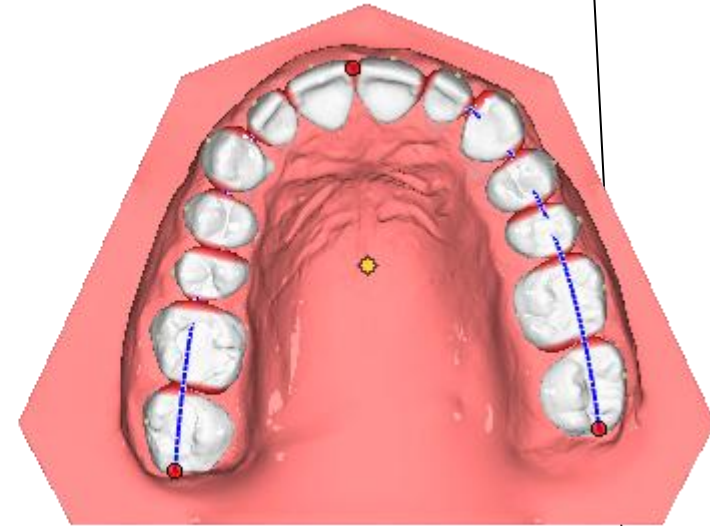
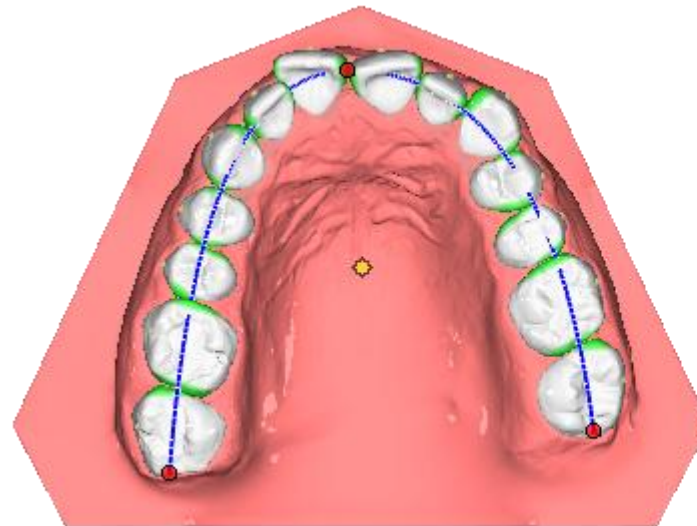
Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

- Fit to Max. Arch
- Load inclination
- Harmonize Angulation
- Harmonize FA
- Set FA on Arch-Plane
- Compensate space discrepancy
- Compensate Collisions
- Settling



Automated Controls Tooth Position/Alignment

Virtual Setup

Treatr

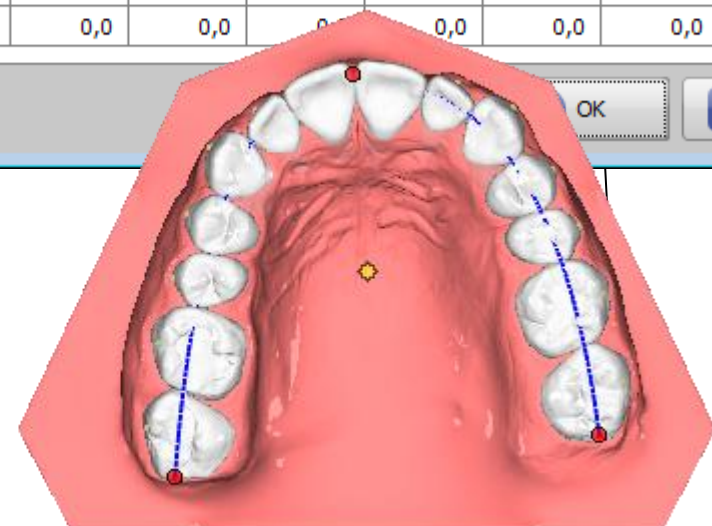
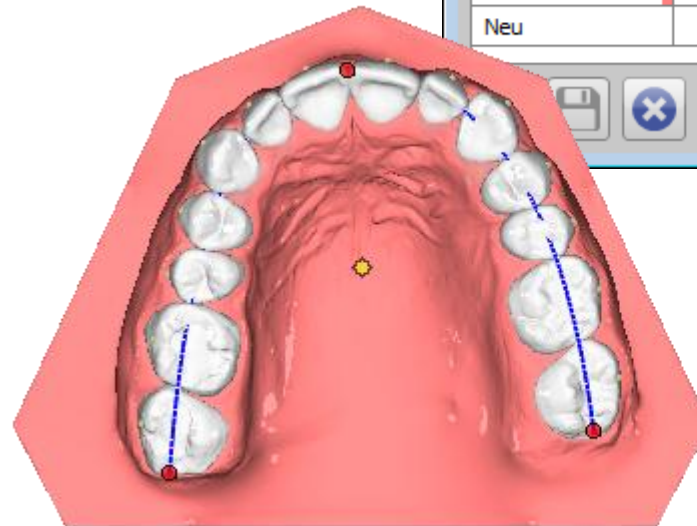
Tooth Position/Alignment/Sh

Inklination (Maxilla)

# Zahn	1	2	3	4	5	6	7	8
Keine Änderung								
Sampermans	16,0	9,0	0,0	-8,0	-8,0	-17,0	-17,0	
Gianelli	12,0	8,0	0,0	0,0	0,0	0,0	0,0	
Cetlin	24,0	16,0	0,0	-7,0	-7,0	-14,0	-14,0	
Roncone	18,0	10,0	0,0	-10,0	-10,0	-20,0	-20,0	
MBT	17,0	10,0	-7,0	-7,0	-7,0	-14,0	-14,0	
Roth	12,0	8,0	-2,0	-7,0	-7,0	-14,0	-14,0	
Andrews SWA	7,0	3,0	-7,0	-7,0	-7,0	-9,0	-9,0	
Neu	0,0	0,0	0,0	0,0	0,0	0,0	0,0	

OK Abbrechen

- Fit to Max. Arch
- Load inclination**
- Harmonize Angulation
- Harmonize FA
- Set FA on Arch-Plane
- Compensate space discrepancy
- Compensate Collisions
- Settling



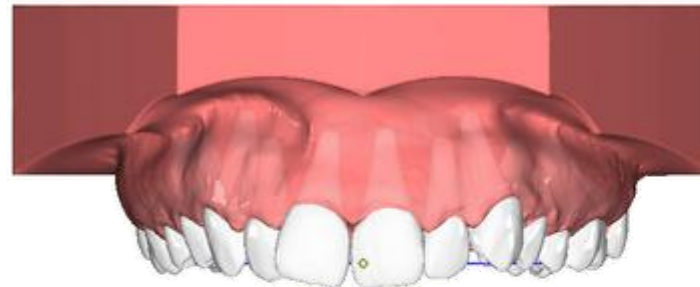
Automated Controls Tooth Position/Alignment

Virtual Setup

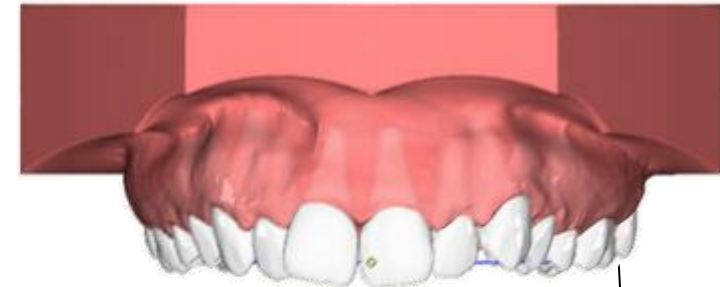
Treatment Goal Planning



Tooth Position/Alignment/Shape



Zahn 11		Zahn 21	
Breite:	8,57mm	Breite:	8,64mm
Strip Mesial:	0,00mm	Strip Mesial:	0,00mm
Strip Distal:	0,00mm	Strip Distal:	0,00mm
Inklination:	11° (±0°)	Inklination:	7° (±0°)
Angulation:	-11° (±0°)	Angulation:	-4° (±0°)
Drehung	-1° (±0°)	Drehung	-11° (±0°)



Zahn 11		Zahn 21	
Breite:	8,57mm	Breite:	8,64mm
Strip Mesial:	0,00mm	Strip Mesial:	0,00mm
Strip Distal:	0,00mm	Strip Distal:	0,00mm
Inklination:	11° (±0°)	Inklination:	7° (±0°)
Angulation:	-7° (+3°)	Angulation:	-7° (-3°)
Drehung	-2° (-1°)	Drehung	-10° (+1°)

- Fit to Max. Arch
- Load inclination
- Harmonize Angulation
- Harmonize FA
- Set FA on Arch-Plane
- Compensate space discrepancy
- Compensate Collisions
- Settling

Automated Controls Tooth Position/Alignment

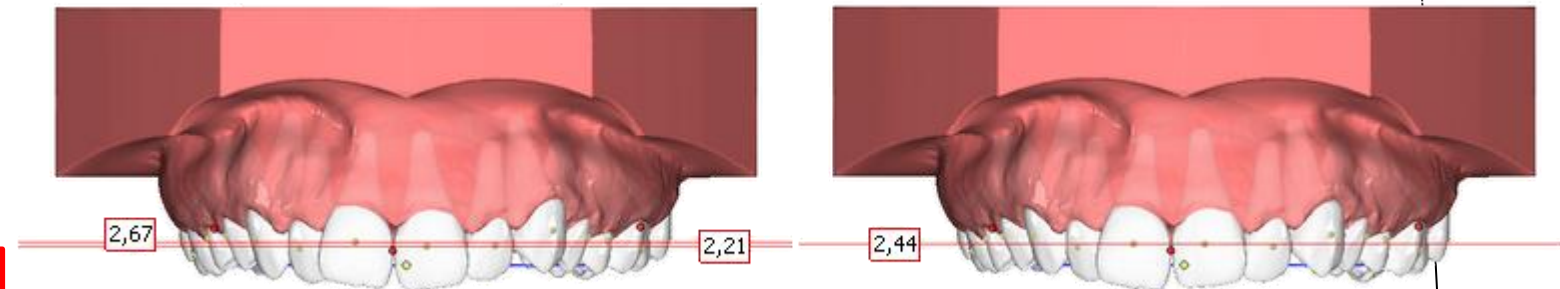
Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

- Fit to Max. Arch
- Load inclination
- Harmonize Angulation
- Harmonize FA**
- Set FA on Arch-Plane
- Compensate space discrepancy
- Compensate Collisions
- Settling



Automated Controls Tooth Position/Alignment

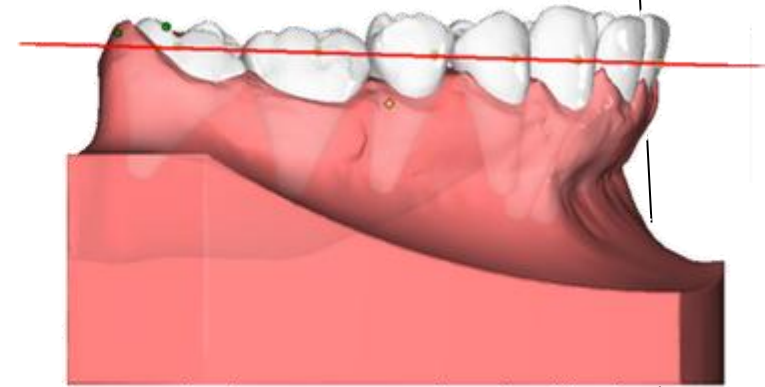
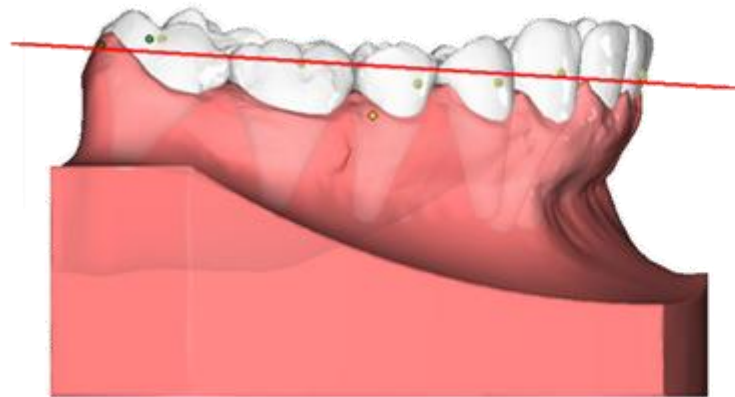
Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

Fit to Max. Arch
Load inclination
Harmonize Angulation
Harmonize FA
Set FA on Arch-Plane
Compensate space discrepancy
Compensate Collisions
Settling



Automated Controls Tooth Position/Alignment

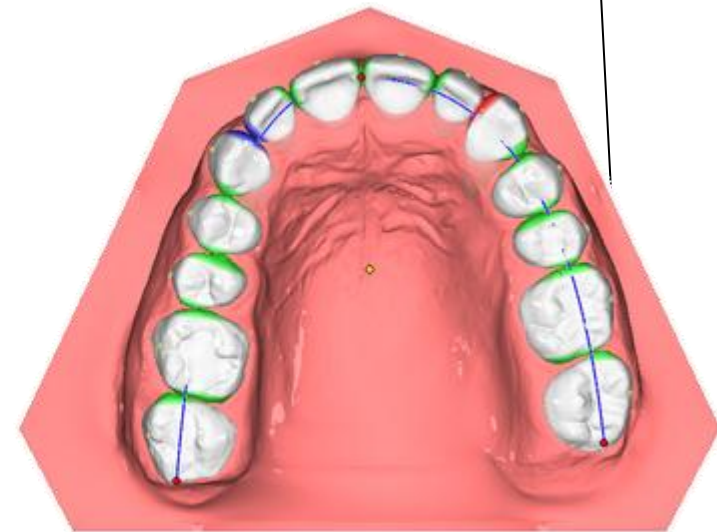
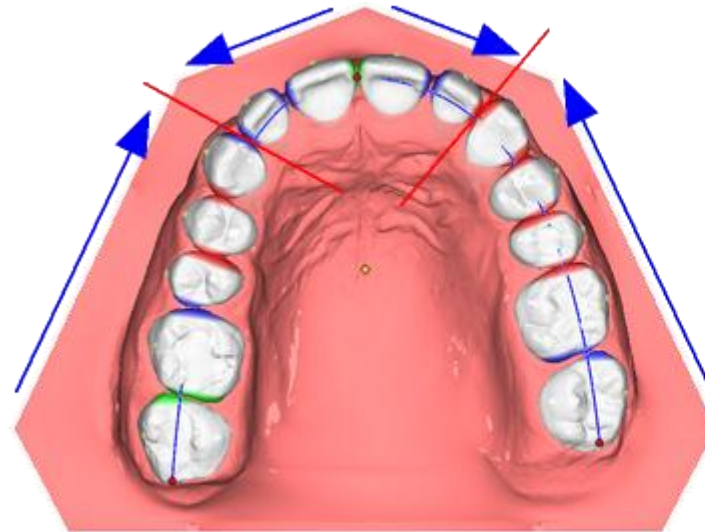
Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

Fit to Max. Arch
Load inclination
Harmonize Angulation
Harmonize FA
Set FA on Arch-Plane
Compensate space discrepancy
Compensate Collisions
Settling



Automated Controls Tooth Position/Alignment

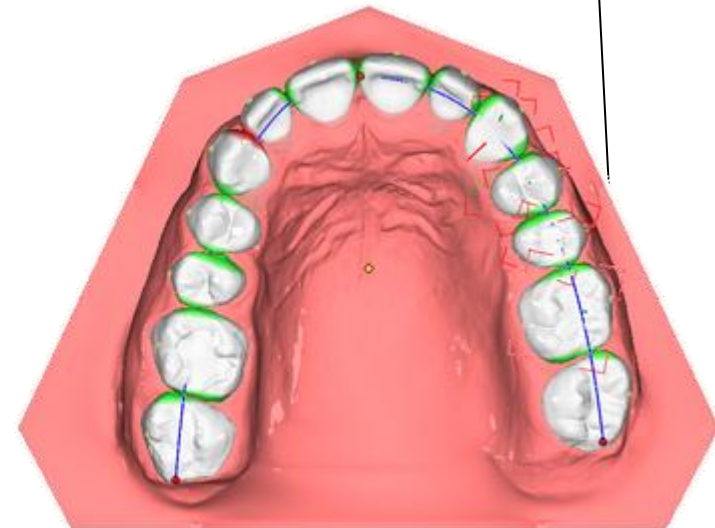
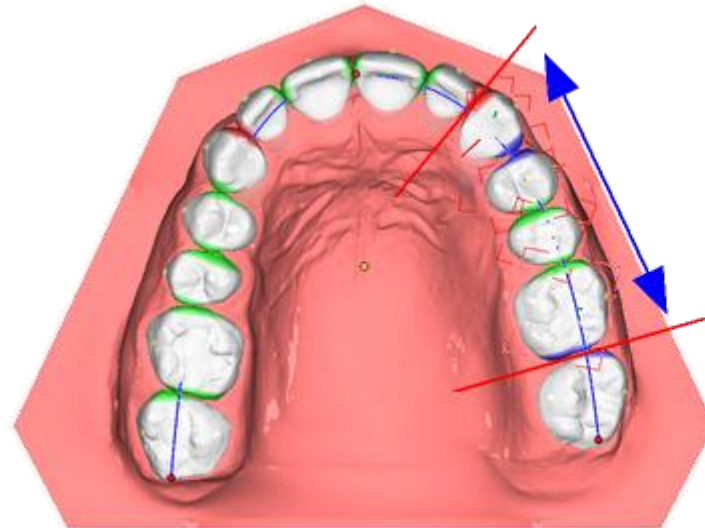
Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

Fit to Max. Arch
Load inclination
Harmonize Angulation
Harmonize FA
Set FA on Arch-Plane
Compensate space discrepancy
Compensate Collisions
Settling



Automated Controls Tooth Position/Alignment

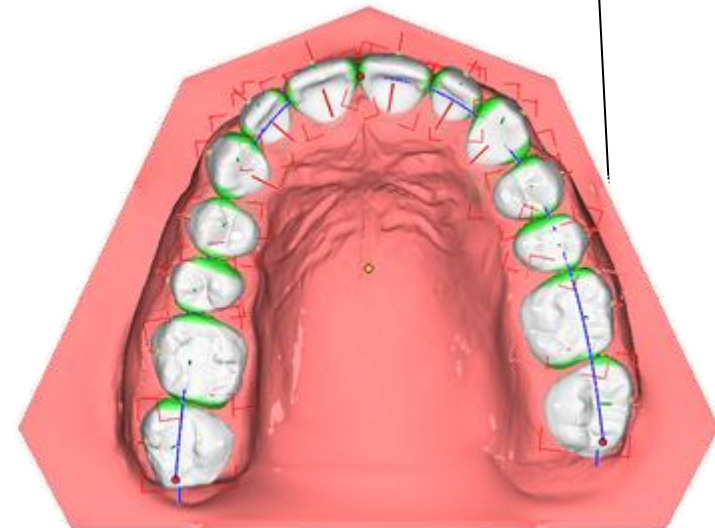
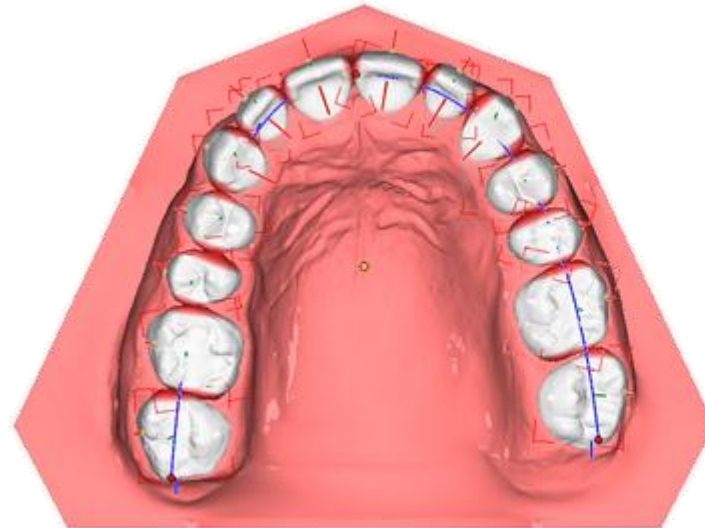
Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

- | |
|------------------------------|
| Fit to Max. Arch |
| Load inclination |
| Harmonize Angulation |
| Harmonize FA |
| Set FA on Arch-Plane |
| Compensate space discrepancy |
| Compensate Collisions |
| Settling |



Automated Controls Tooth Position/Alignment

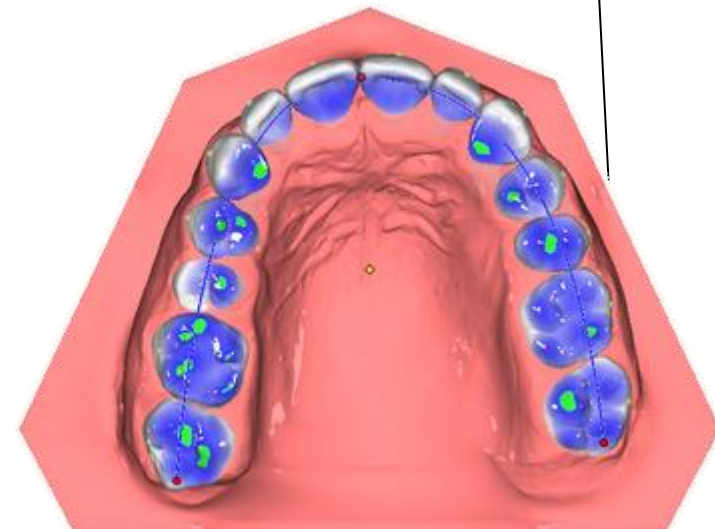
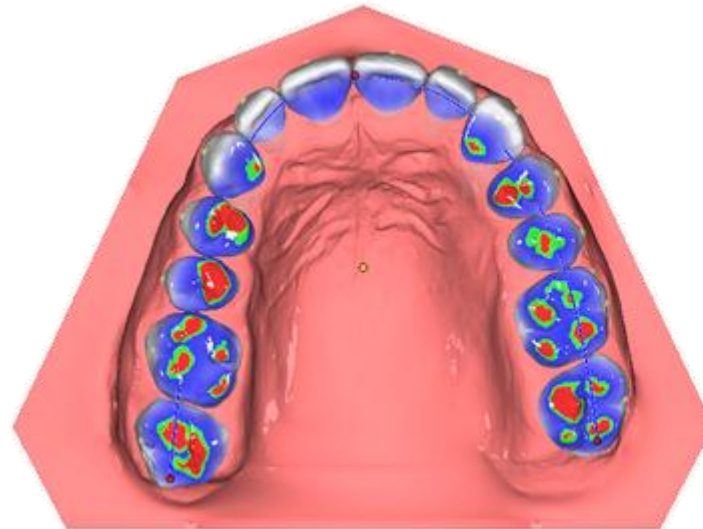
Virtual Setup

Treatment Goal Planning



Tooth Position/Alignment/Shape

- | |
|------------------------------|
| Fit to Max. Arch |
| Load inclination |
| Harmonize Angulation |
| Harmonize FA |
| Set FA on Arch-Plane |
| Compensate space discrepancy |
| Compensate Collisions |
| Settling |



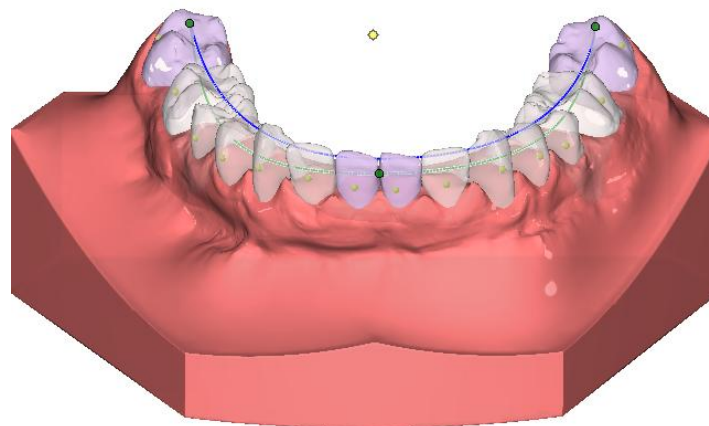
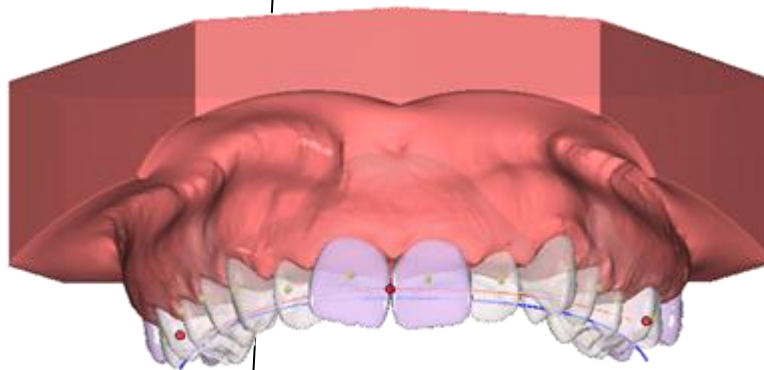
Automated Controls Tooth Position/Alignment

Virtual Setup

Treatment Goal Planning



Arch Position/Alignment/Shape



Fit to Malocclusion
Fit to Mandible
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint

Fit to Malocclusion
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint
Fit to WALA

Automated Controls Arch Position/Alignment/Shape

Virtual Setup

Treatment Goal Planning

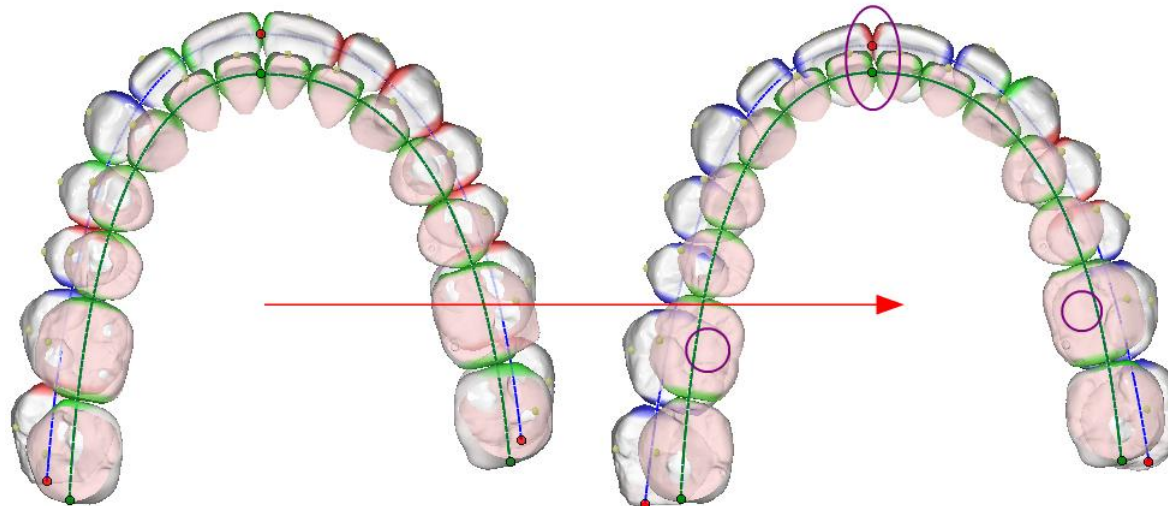
Arch Position/Alignment/Shape

Einstellungen

Overjet (mm): 2,50

Overbite (mm): 2,50

OK Abbrechen



Fit to Malocclusion
Fit to Mandible
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint

Fit to Malocclusion
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint
Fit to WALA

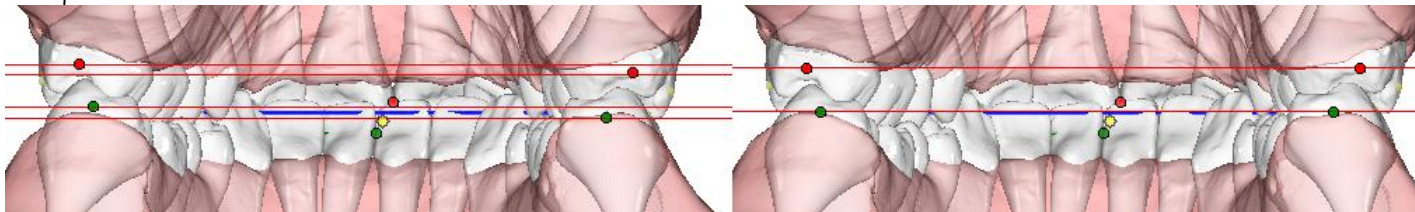
Automated Controls Arch Position/Alignment/Shape

Virtual Setup

Treatment Goal Planning



Arch Position/Alignment/Shape



Fit to Malocclusion
Fit to Mandible
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint

Fit to Malocclusion
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint
Fit to WALA

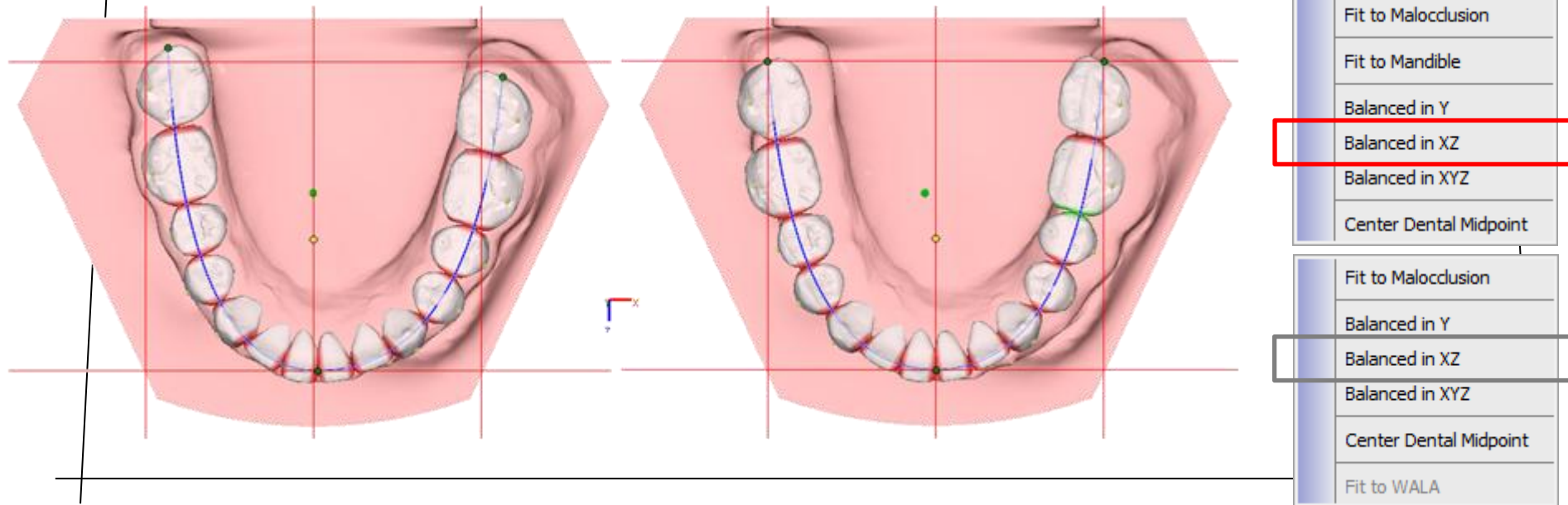
Automated Controls Arch Position/Alignment/Shape

Virtual Setup

Treatment Goal Planning



Arch Position/Alignment/Shape



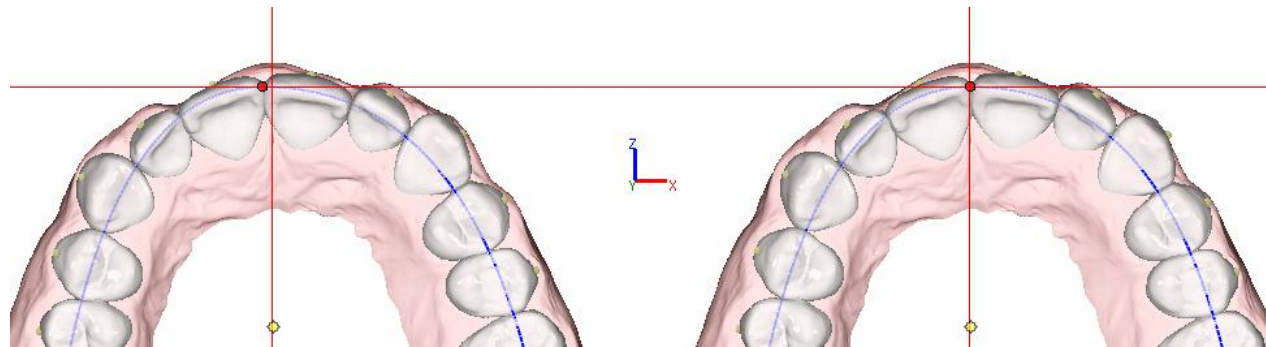
Automated Controls Arch Position/Alignment/Shape

Virtual Setup

Treatment Goal Planning



Arch Position/Alignment/Shape



Fit to Malocclusion
Fit to Mandible
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint
Fit to Malocclusion
Balanced in Y
Balanced in XZ
Balanced in XYZ
Center Dental Midpoint
Fit to WALA

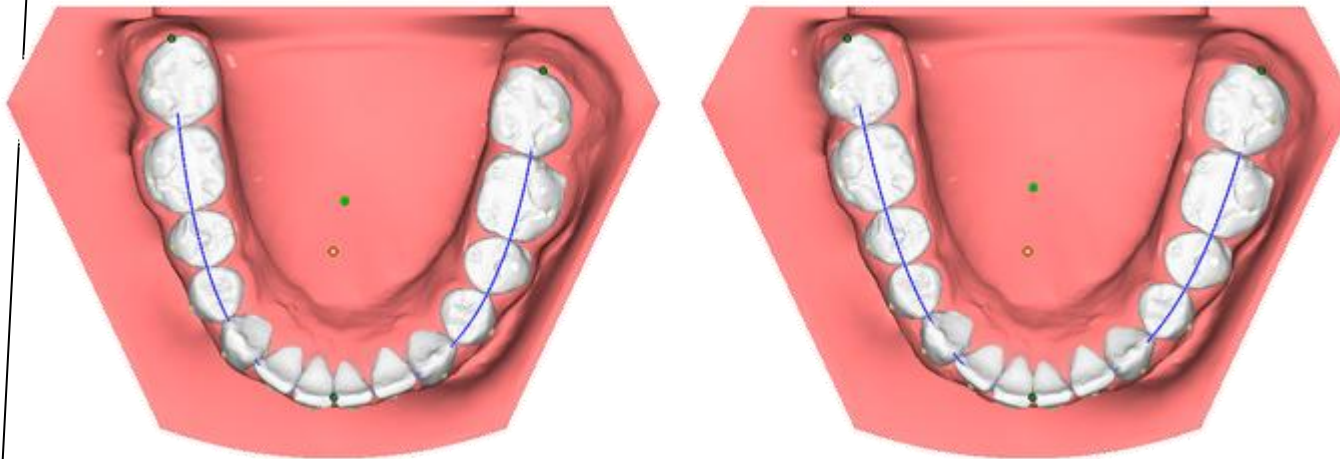
Automated Controls Arch Position/Alignment/Shape

Virtual Setup

Treatment Goal Planning



Arch Position/Alignment/Shape



Fit to Malocclusion

Fit to Mandible

Balanced in Y

Balanced in XZ

Balanced in XYZ

Center Dental Midpoint

Fit to Malocclusion

Balanced in Y

Balanced in XZ

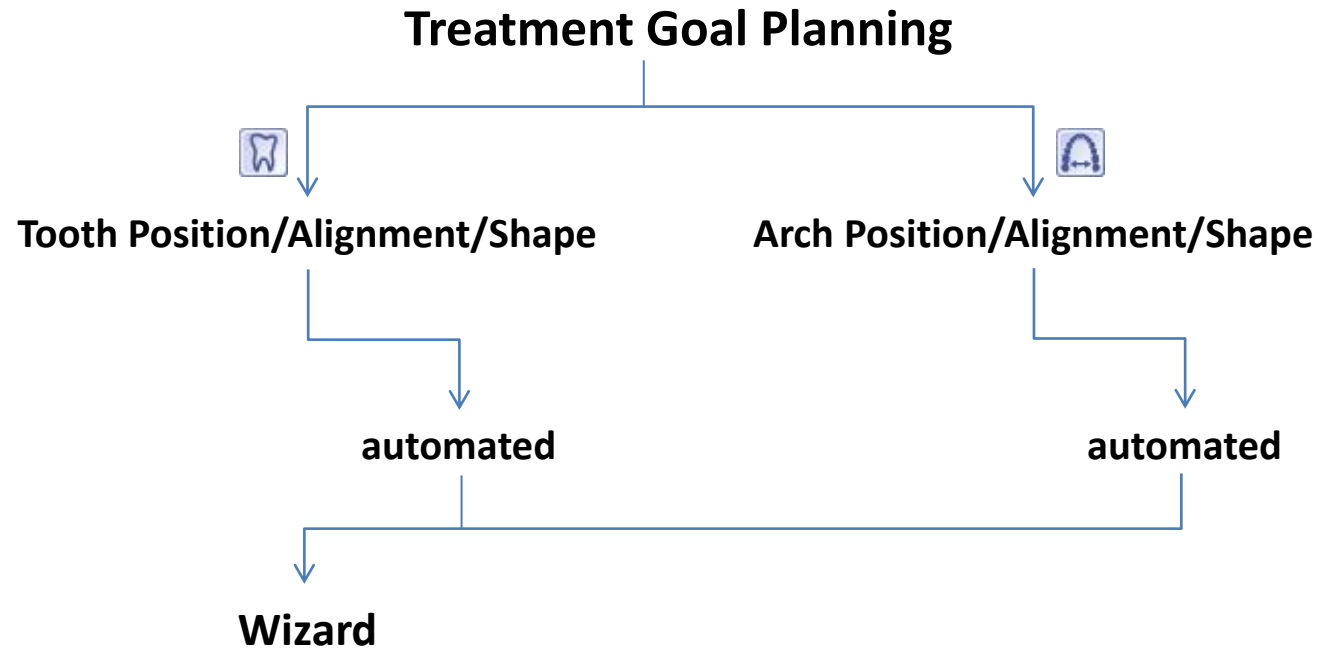
Balanced in XYZ

Center Dental Midpoint

Fit to WALA

Automated Controls Arch Position/Alignment/Shape

Virtual Setup



Start <<<

Step 1: ▼▲ Align Crowns with Arch

>>> Step 2

Virtual Setup

Step 0: Start

Step 1: ▼▲ Align Crowns with Arch

Step 2: ▼▲ Assign Crown Inclination from Table

Step 3: ▼▲ Arch: Set up Vertical Symmetry

Step 4: ▼▲ Arch: Center Dental Midpoint

Step 5: ▼▲ Harmonize Crown Angulation

Step 6: ▼▲ Harmonize Vertical Crown Position by FA

Step 7: ▼▲ Adjust Vertical Crown Position by FA

Step 8: ▼ Arch: Align with WALA

Step 9: ▼ Compensate space discrepancy

Step 10: ▲ Adjust Arch to Mandible Overjet/Overbit | Crown Contacts

Step 11: ▲ Compensate space discrepancy

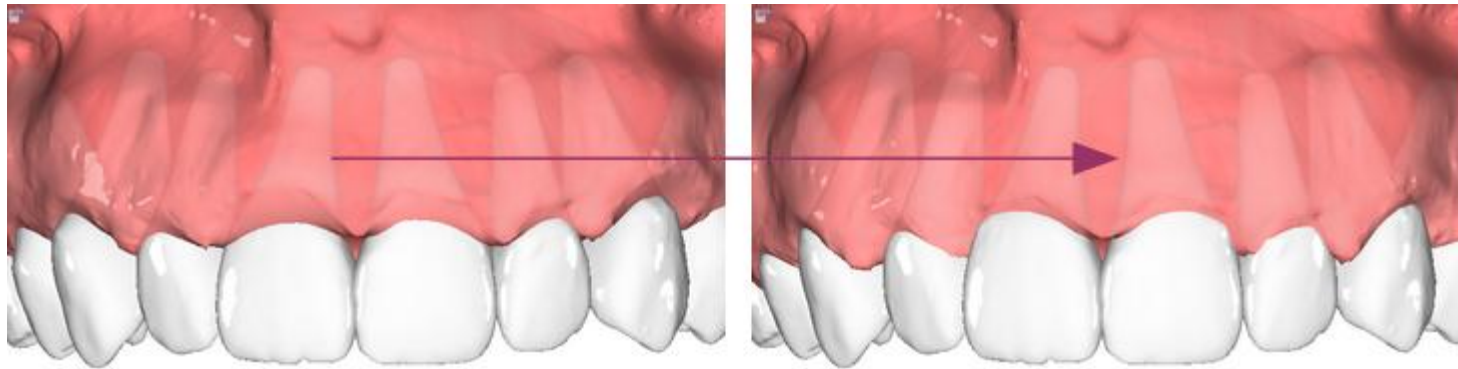
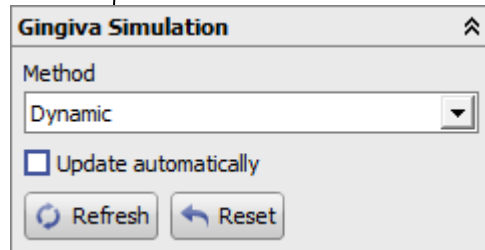
Step 12: ▲ Settling

Step 13: ▼▲ Reconstruct gums

▼▲ Lower / Upper

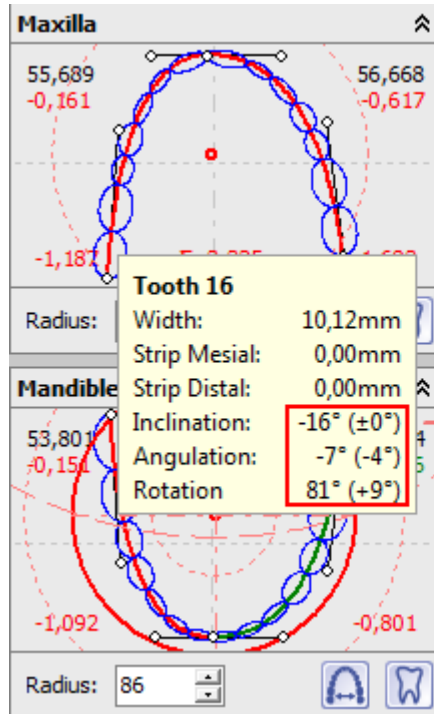
Start <<< Step 1: ▼▲ Align Crowns with Arch >>> Step 2

Virtual Setup



Controls: Gingiva Simulation

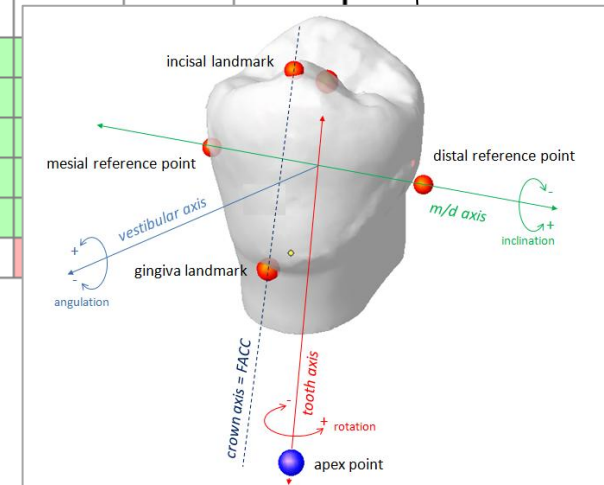
Virtual Setup



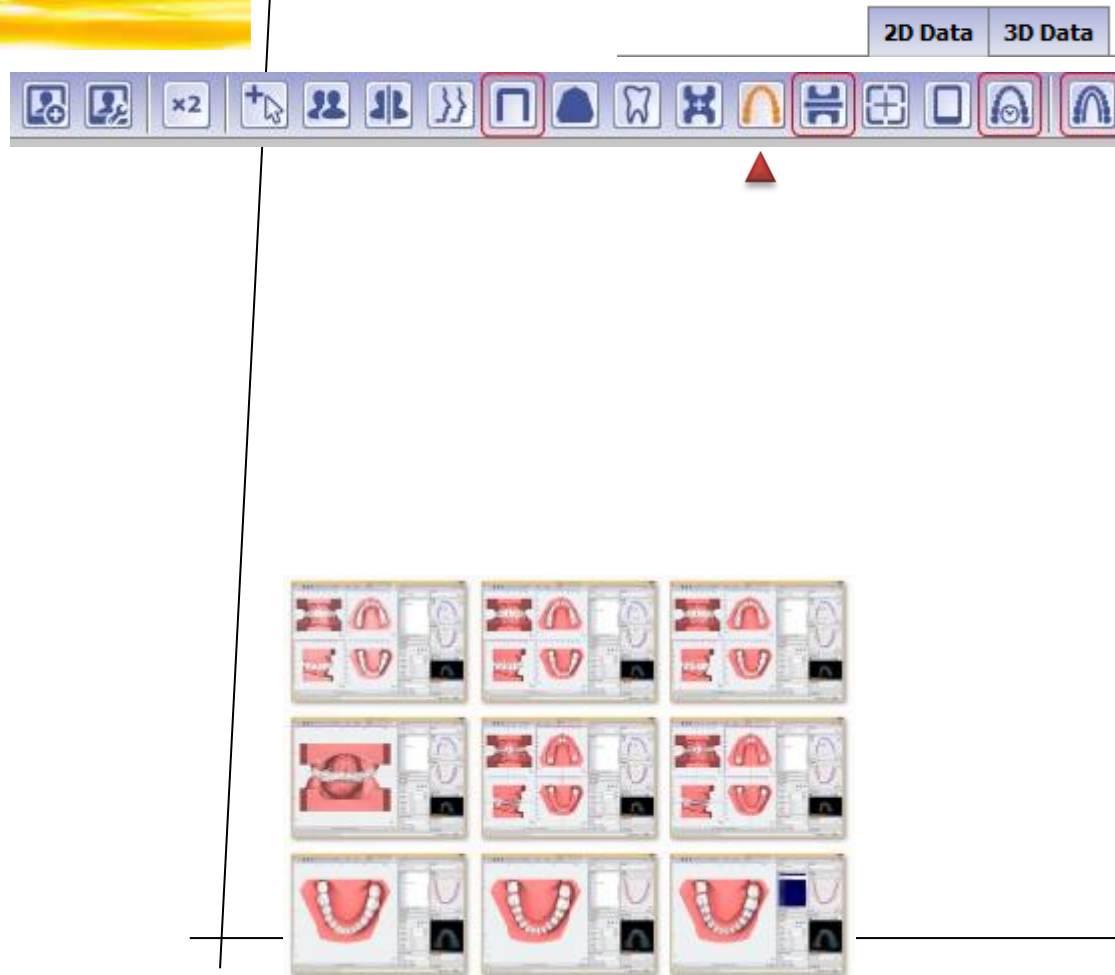
Current Tooth Movement

Maxilla								
Tooth	18	17	16	15	14	13	12	11
ASR mesial [mm]		0,00	0,00	0,00	0,00	0,00	0,00	0,00
ASR distal [mm]		0,00	0,00	0,00	0,00			
Inklination +/- [°]		0,3	0,2	0,0	0,1			
Angulation +/- [°]		-2,2	-3,9	-16,7	-5,1			
Rotation +/- [°]		-7,8	8,9	15,3	-5,0			
Mesial +/- [mm]		-0,02	-0,21	-0,37	-0,67			
Vestibulär +/- [mm]		-0,44	-0,50	-0,81	0,20			
Okklusal +/- [mm]		0,10	0,17	1,27	1,72			

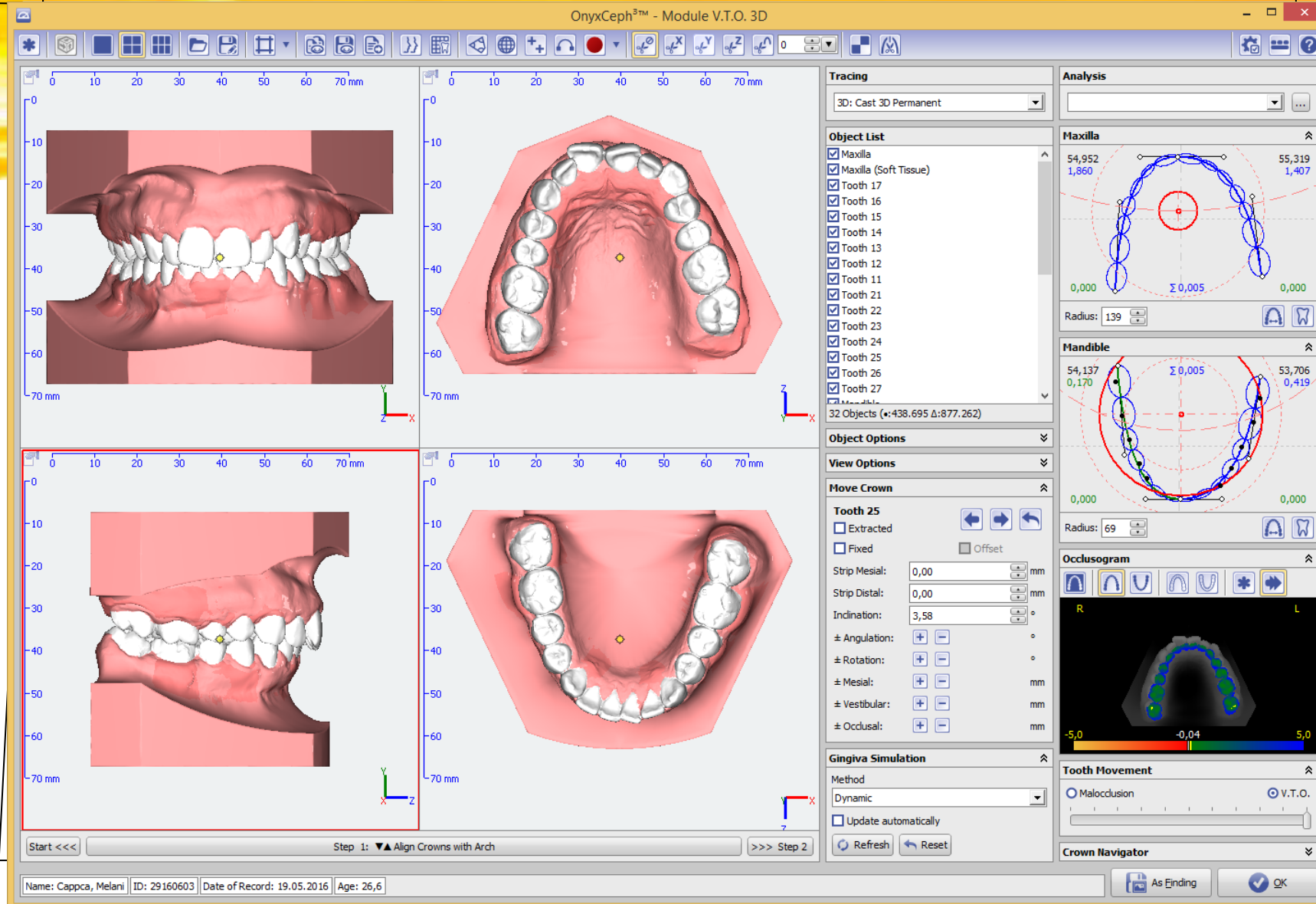
Limitation

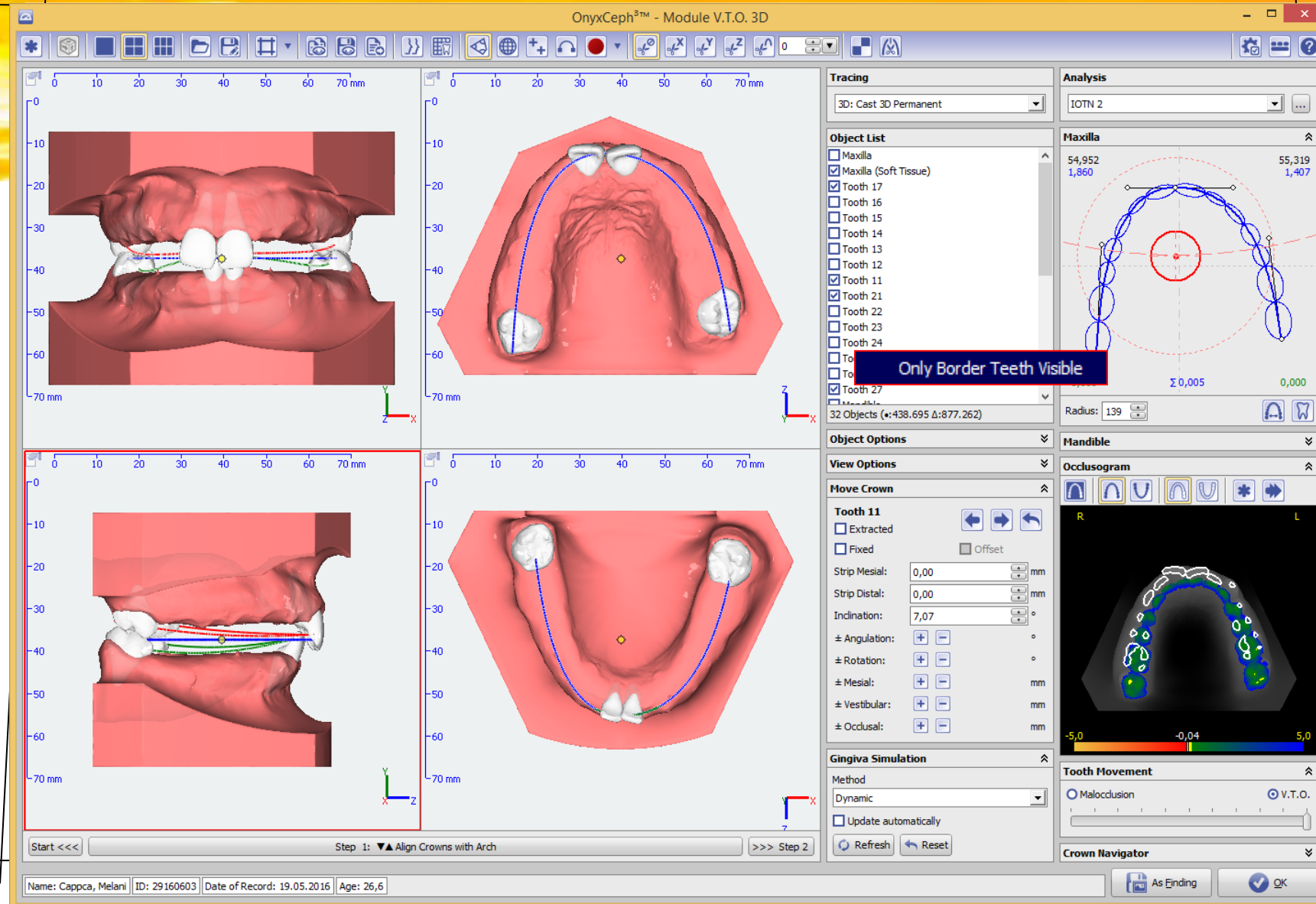


Virtual Setup

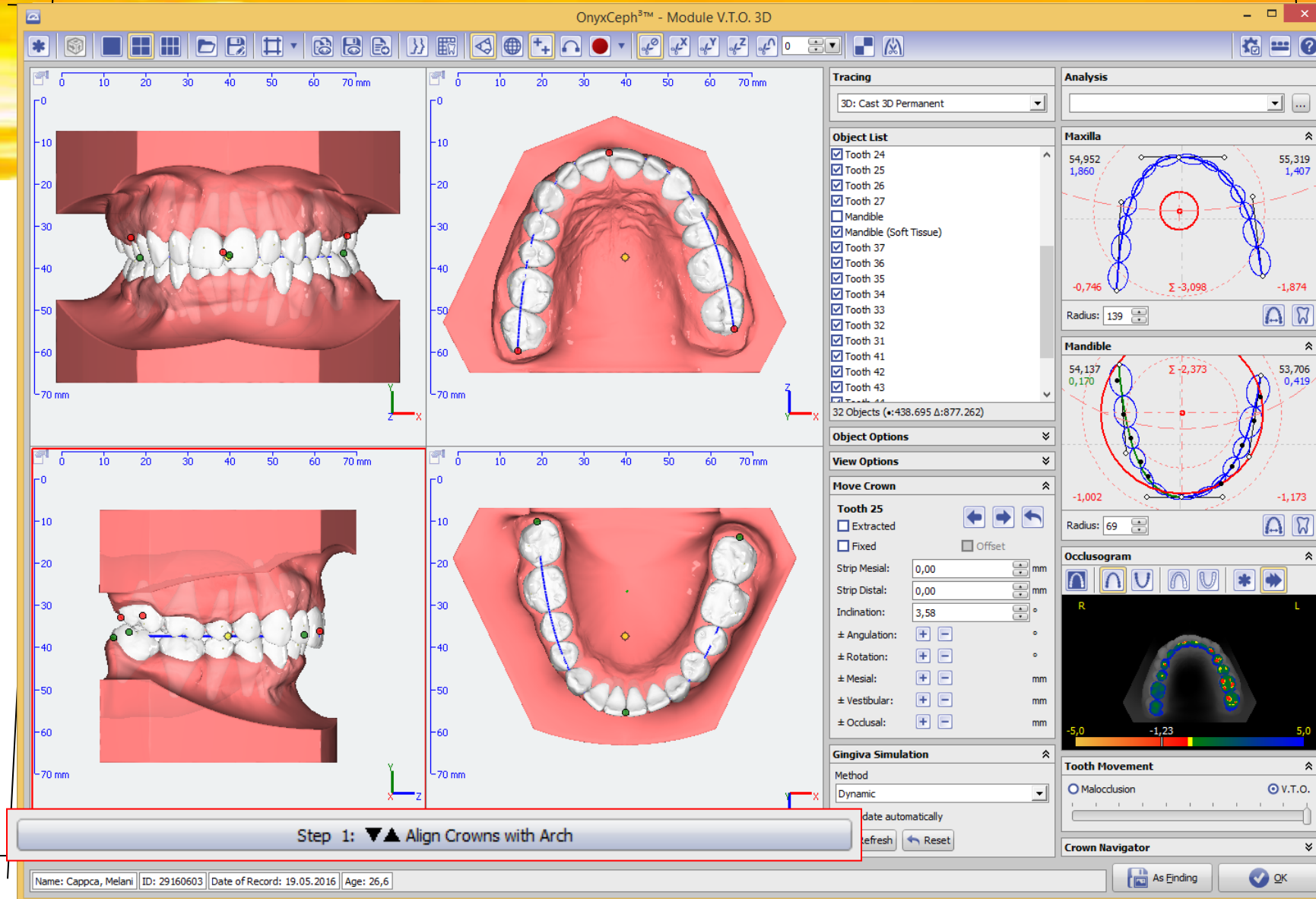


Add Image
Adjust Image
Digitize
Combine
Mirror
Image Comparison
Treatment Simulation 3D
Waefer Creation 3D
Cast Adjust
Segmentation
FA_Bonding
V.T.O.3D
Wire Bonding
Kylix 3D
Splint 3D
Aligner 3D
Bonding Trays 3D
Bracket Adapt
Retainer 3D





V.T.O.3D – Wizard: Start Situation – Only Border Teeth Visible



V.T.O.3D – Wizard: Step 1: ▼▲ Align Crown with Arch

OnyxCeph³™ - Module V.T.O. 3D

Tracing: 3D: Cast 3D Permanent

Analysis: Maxilla

Object List

Inclination (Mandible)

# Tooth	1	2	3	4	5	6	7	8
No Change								
Sampermans	0,0	0,0	-4,0	-10,0	-10,0	-15,0	-10,0	
Gianelli	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Cetlin	-6,0	-6,0	-7,0	-11,0	-15,0	-25,0	-25,0	
Roncone	1,0	1,0	-3,0	-7,0	-7,0	-10,0	-10,0	
MBT	-6,0	-6,0	-6,0	-12,0	-12,0	-20,0	-10,0	
Roth	-1,0	-1,0	-11,0	-17,0	-22,0	-25,0	-30,0	
Andrews SWA	-1,0	-1,0	-11,0	-17,0	-22,0	-25,0	-30,0	

Step 2: ▼▲ Assign Crown Inclination from Table

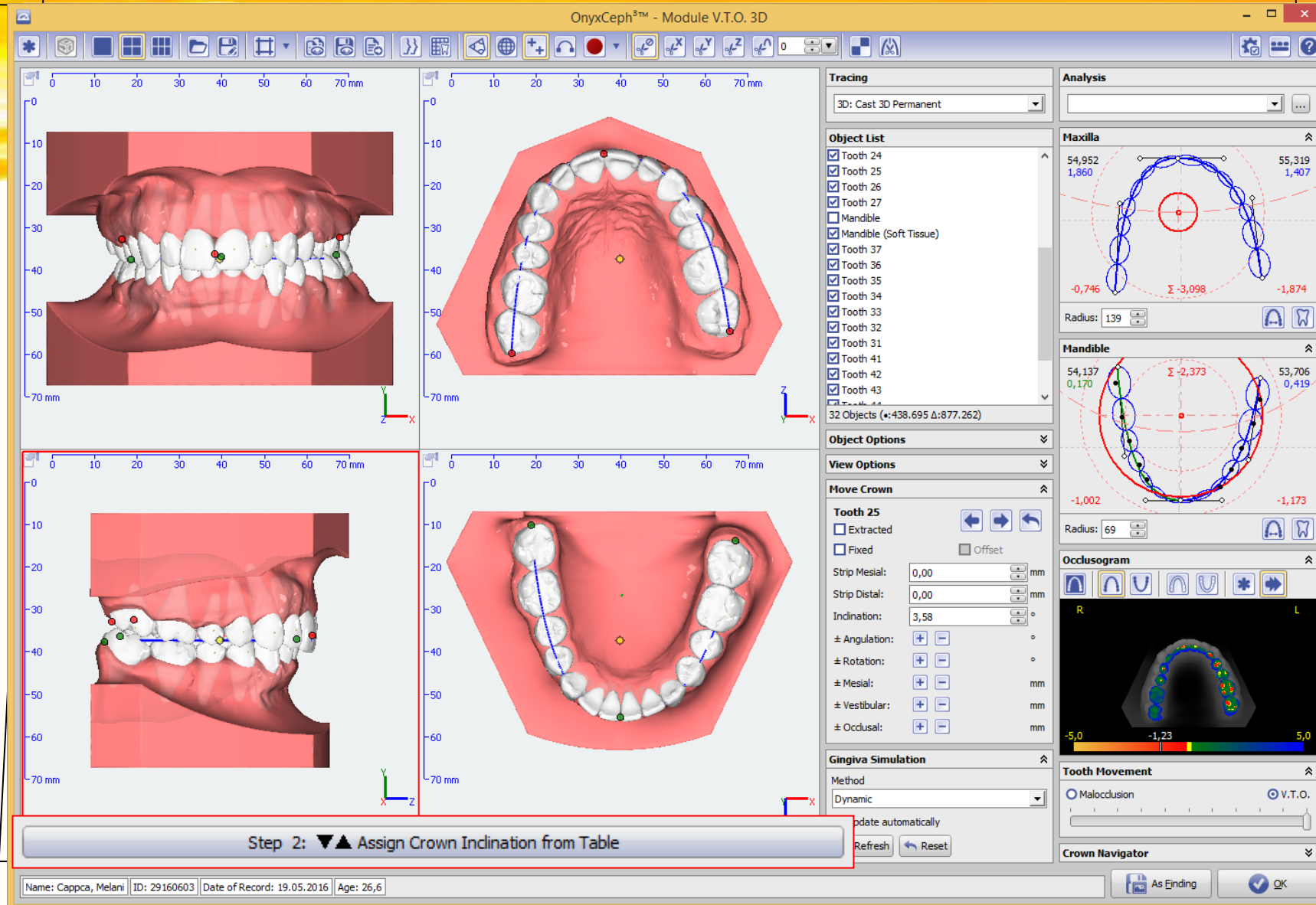
Name: Cappca, Melani ID: 29160603 Date of Record: 19.05.2016 Age: 26,6

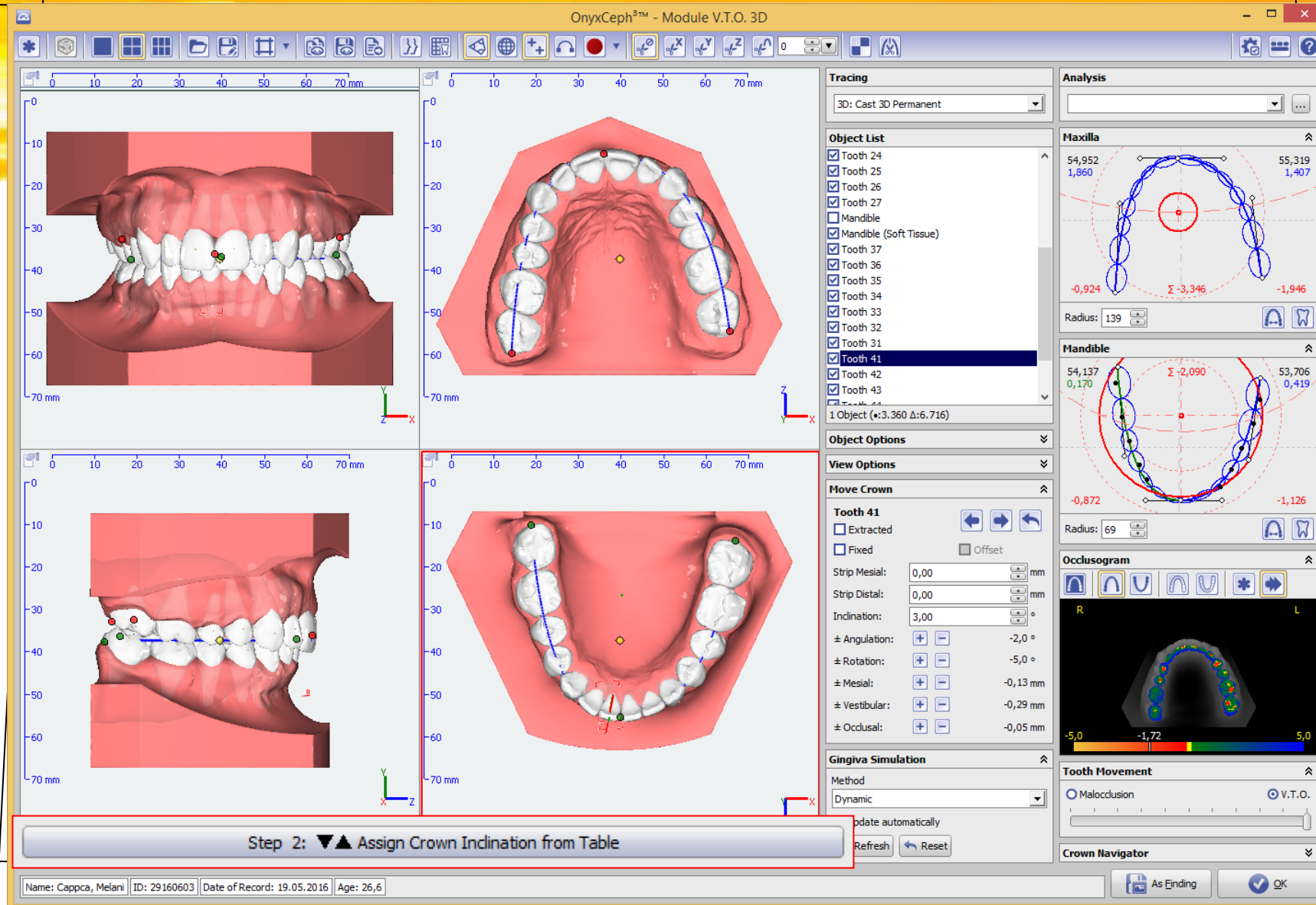
± Mesial: + - mm
± Vestibular: + - mm
± Occlusal: + - mm

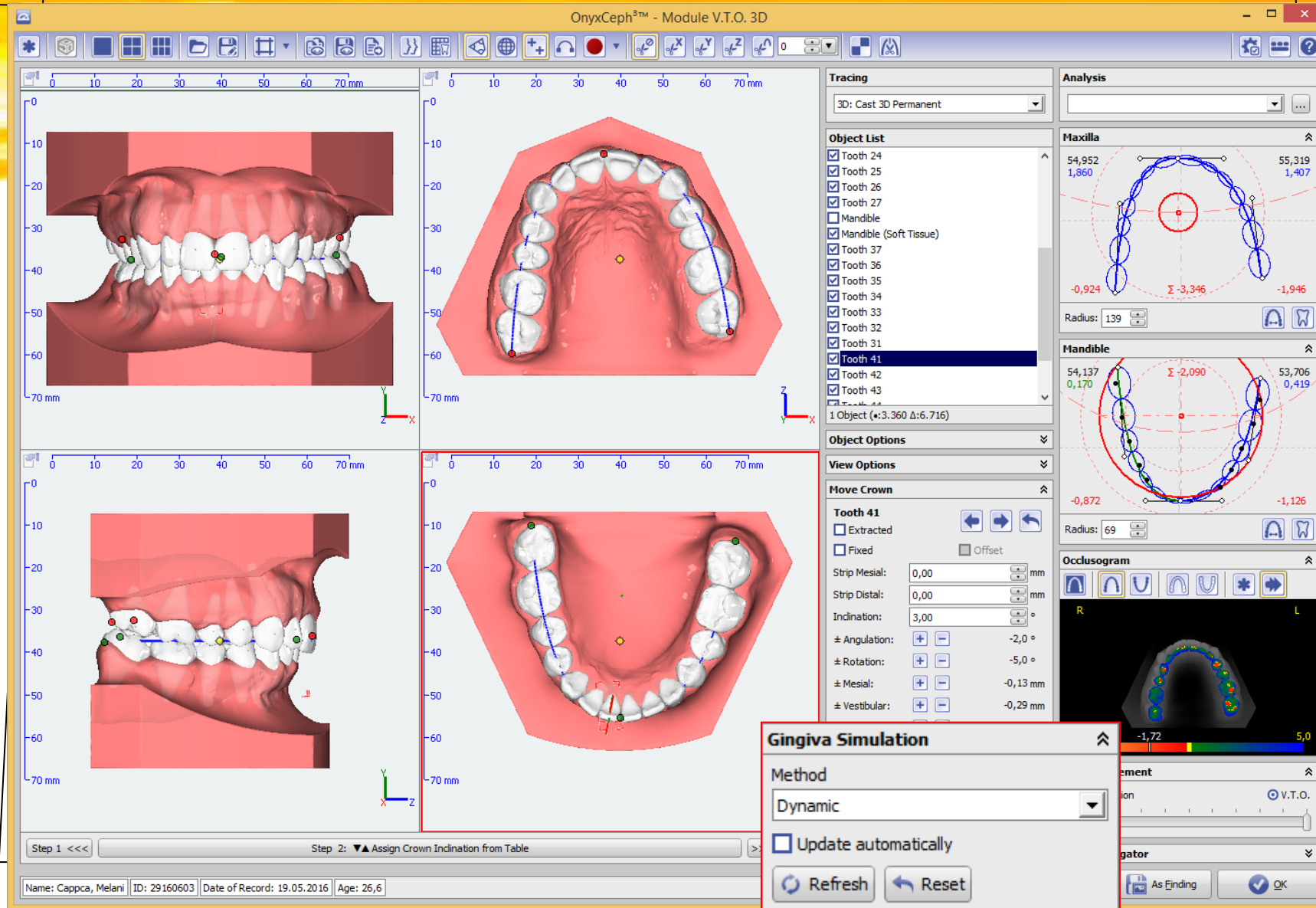
Gingiva Simulation
Method: Dynamic
Update automatically
Refresh Reset

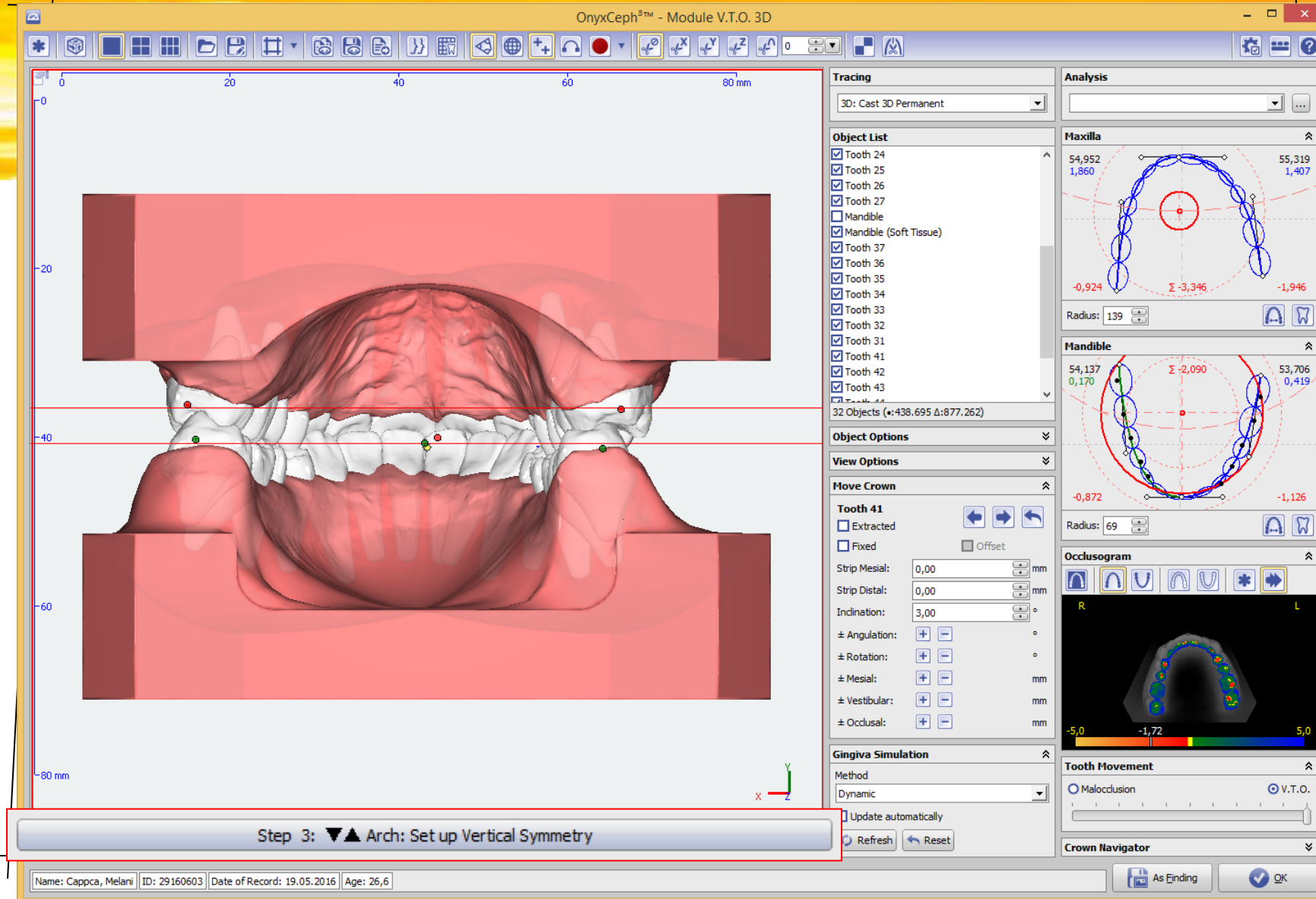
Tooth Movement
☐ Malocclusion ☒ V.T.O.
Crown Navigator
As Finding OK

V.T.O.3D – Wizard: Step 2 : ▼▲ Assign Crown Inclination from Table

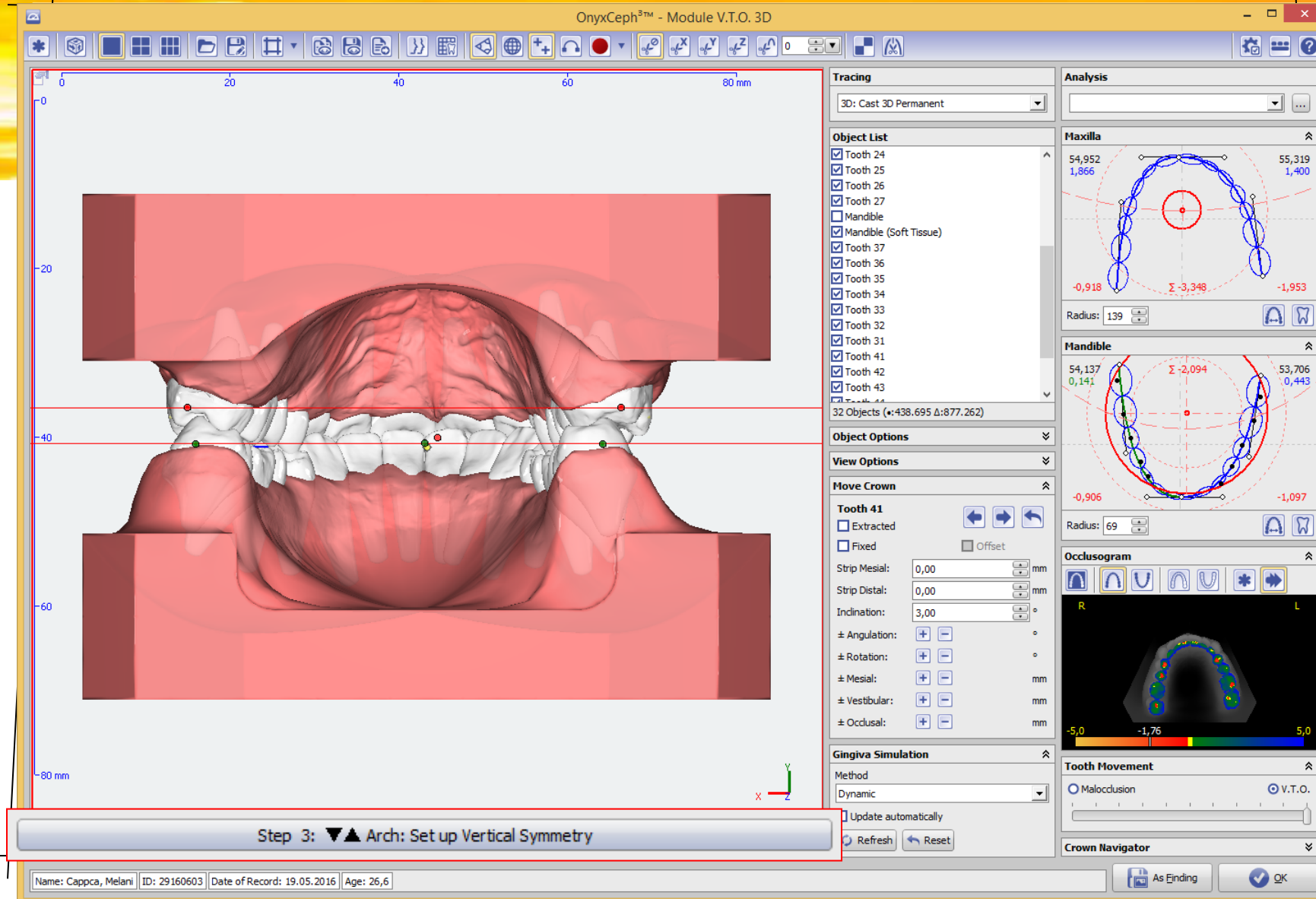




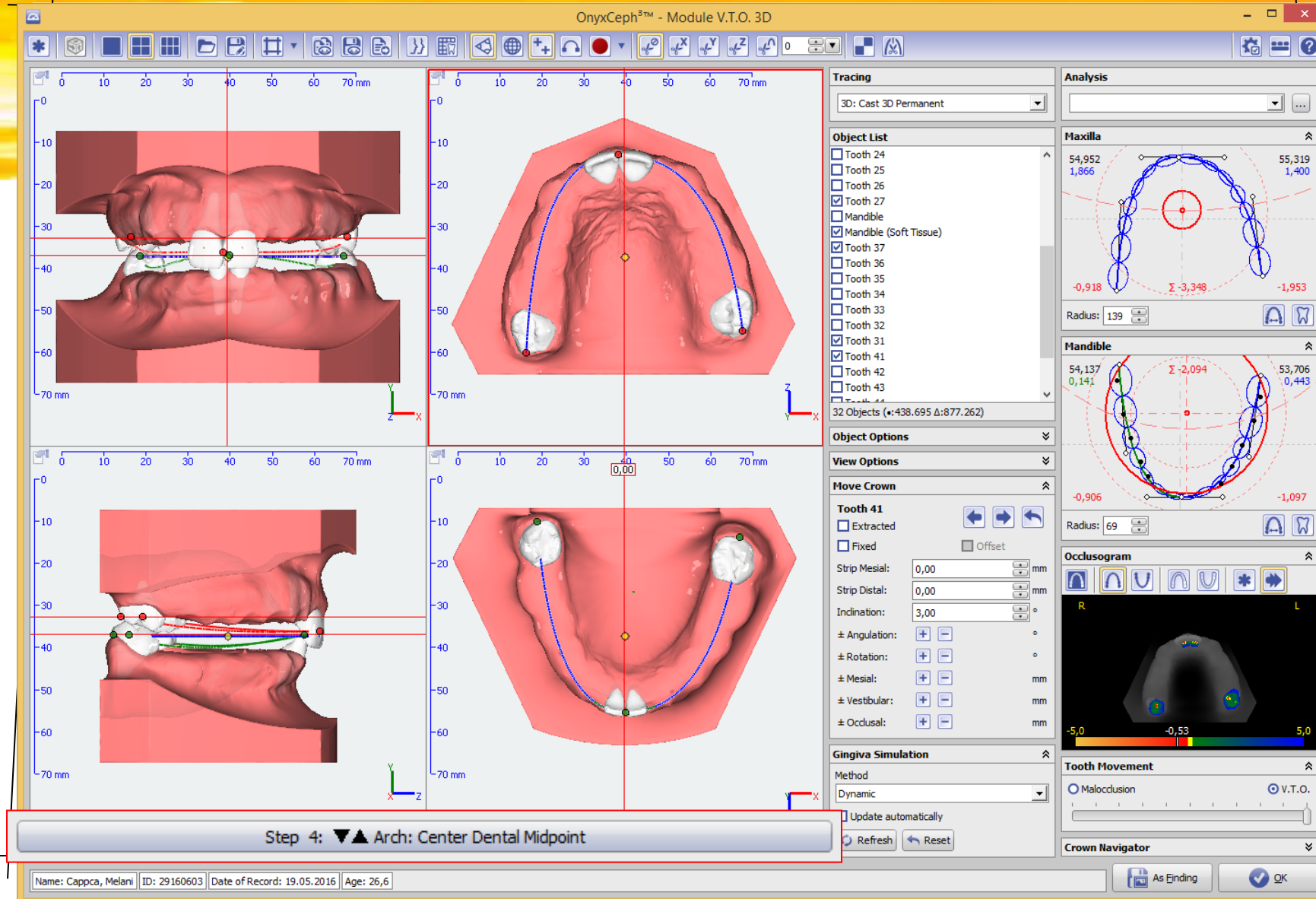




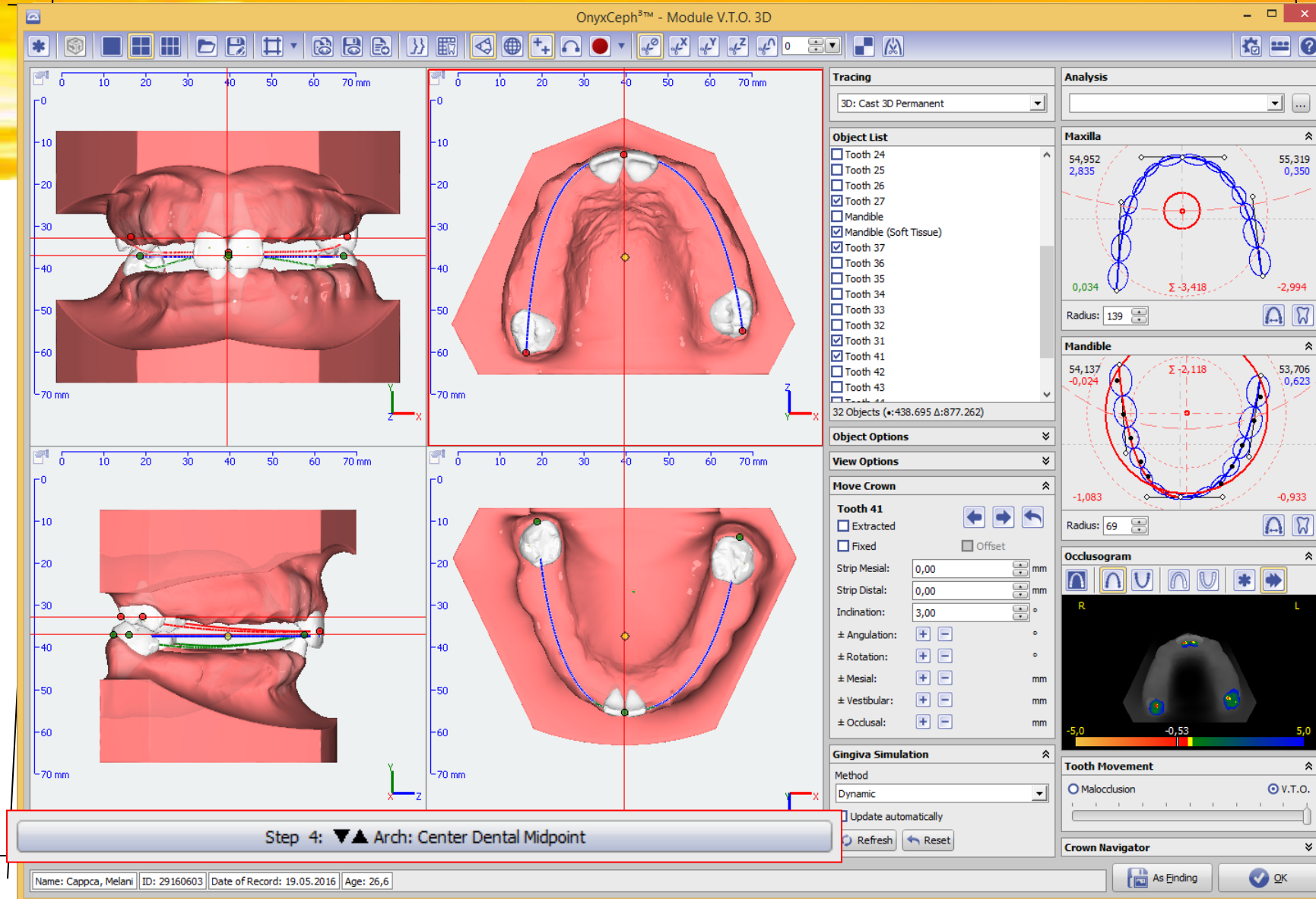
V.T.O.3D – Wizard: Step 3 : ▼▲ Arch: Set up Vertical Symmetry



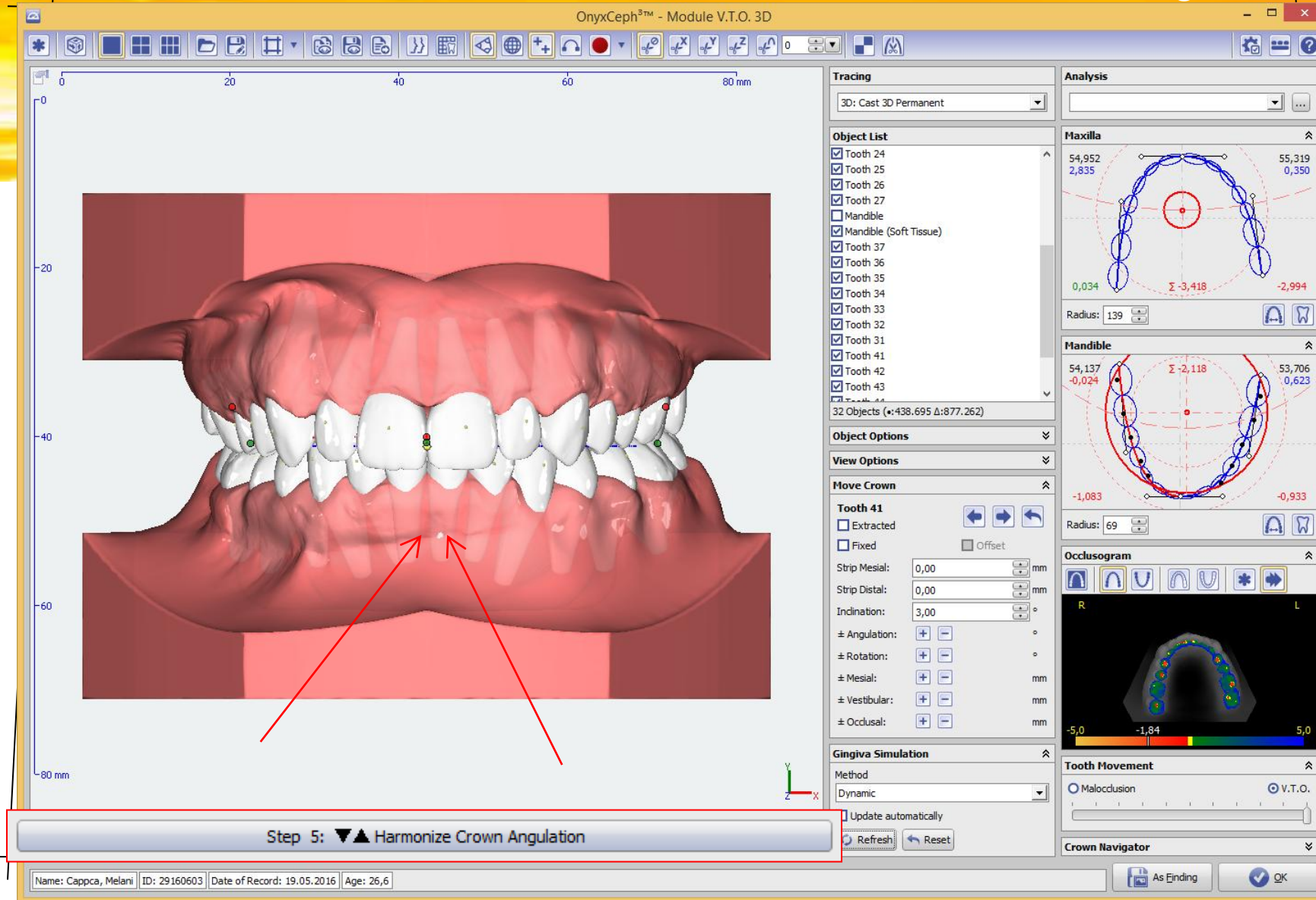
V.T.O.3D – Wizard: Step 3 : ▼▲ Arch: Set up Vertical Symmetry



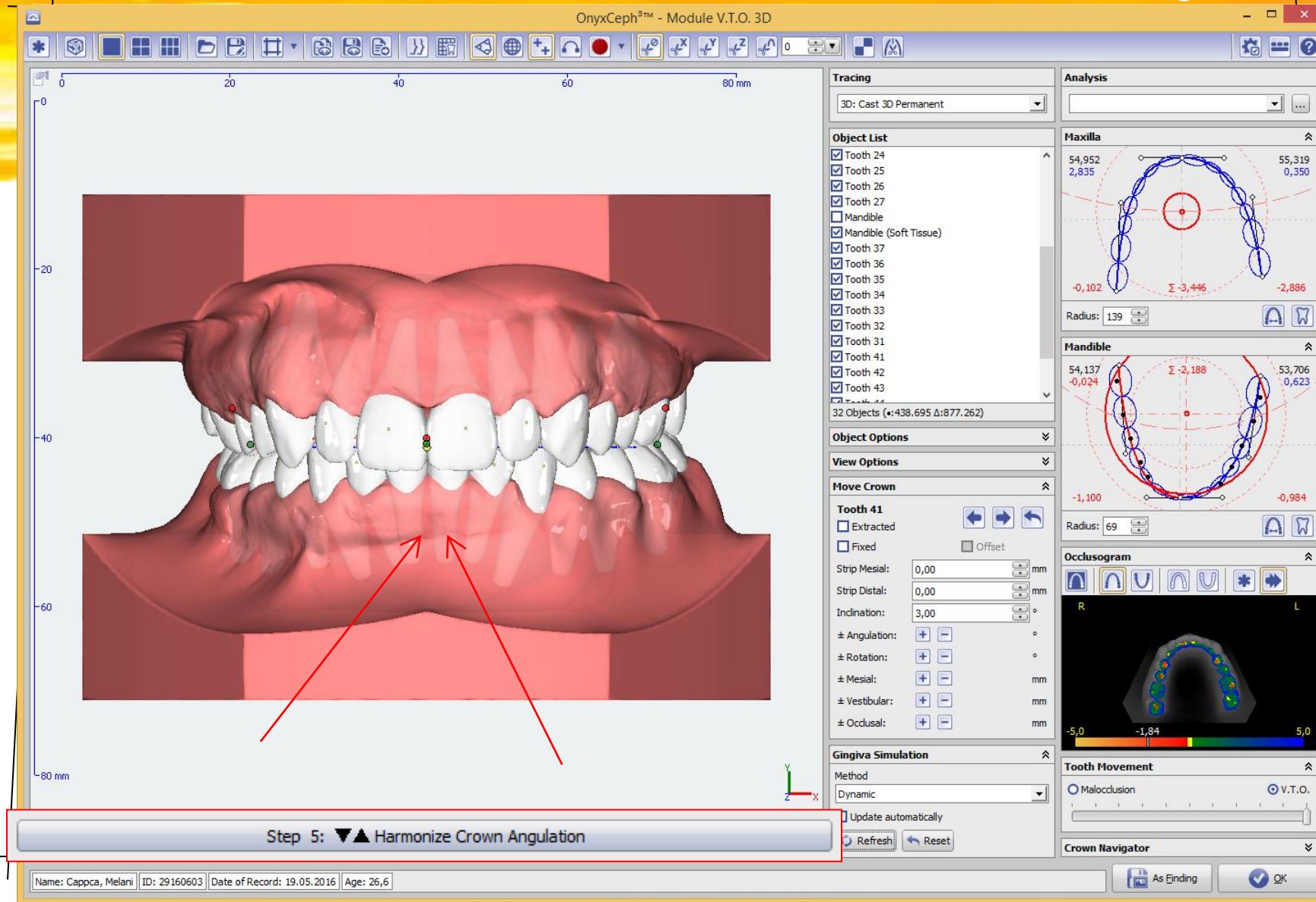
V.T.O.3D – Wizard: Step 4 : ▼▲ Arch: Center Dental Midpoint



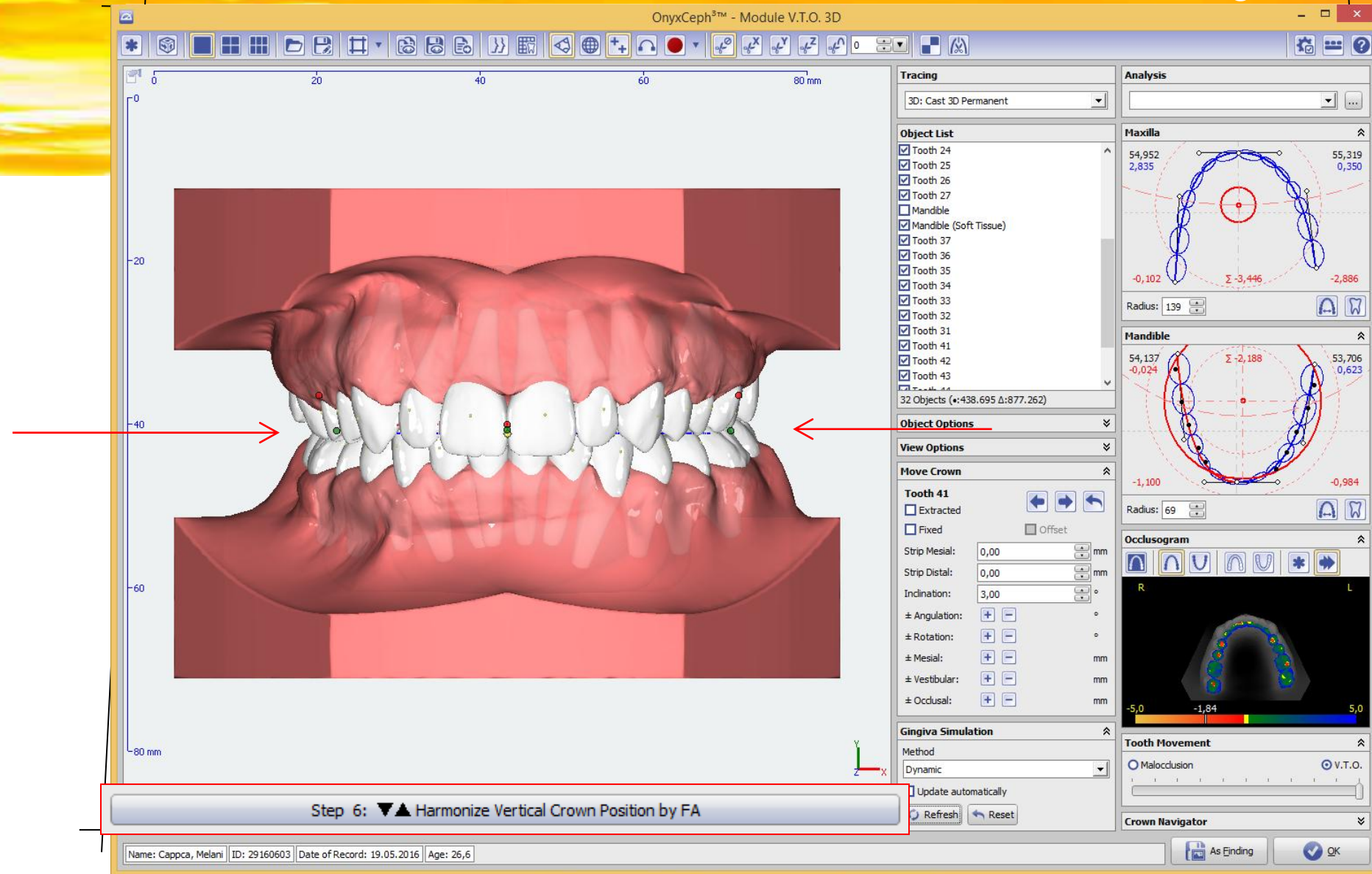
V.T.O.3D – Wizard: Step 4 : ▼▲ Arch: Center Dental Midpoint



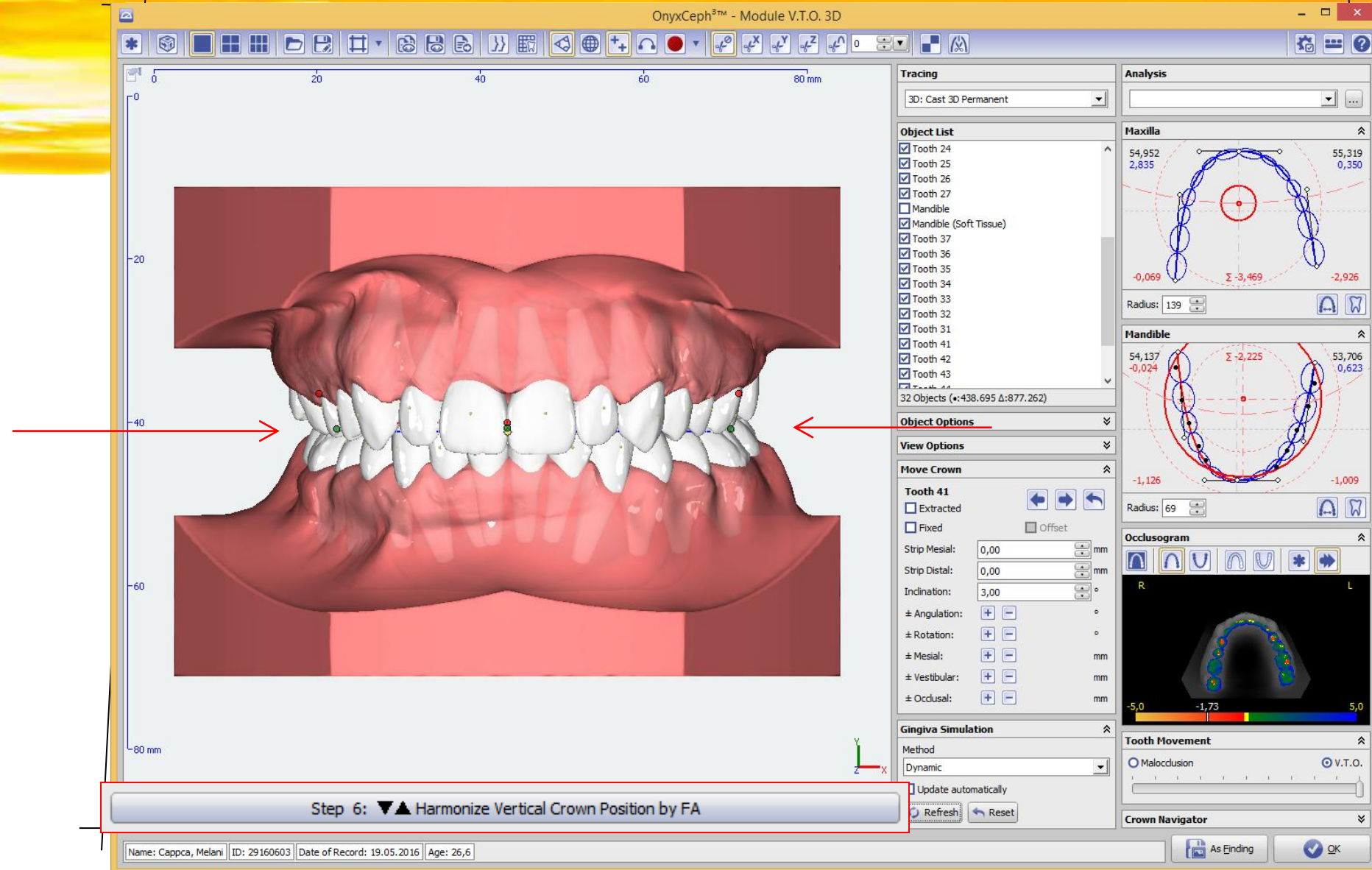
V.T.O.3D – Wizard: Step 5 : ▼▲ Harmonize Crown Angulation



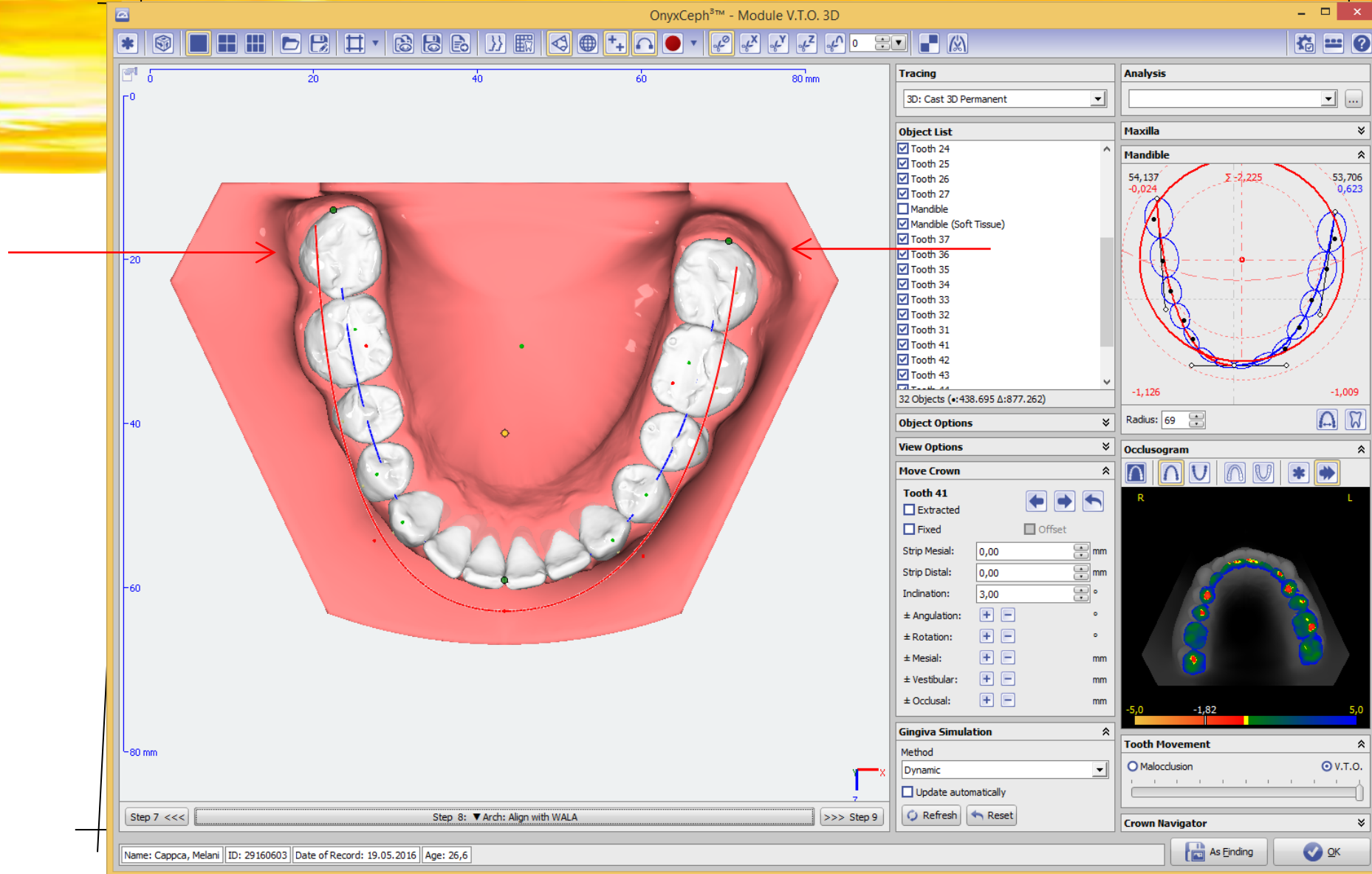
V.T.O.3D – Wizard: Step 5 : ▼▲ Harmonize Crown Angulation



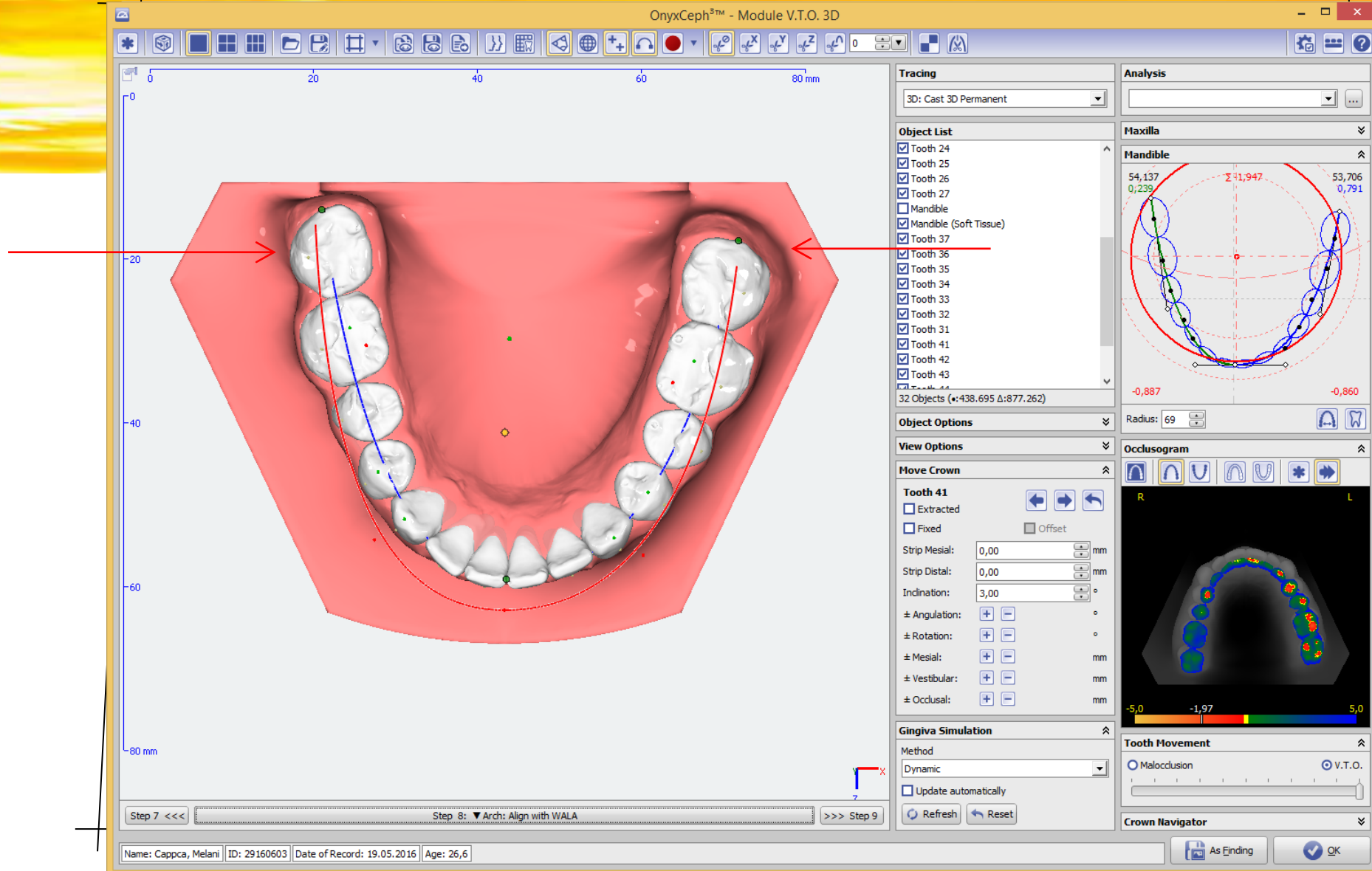
V.T.O.3D – Wizard: Step 6 : ▼▲ Harmonize Vertical Crown Position by FA



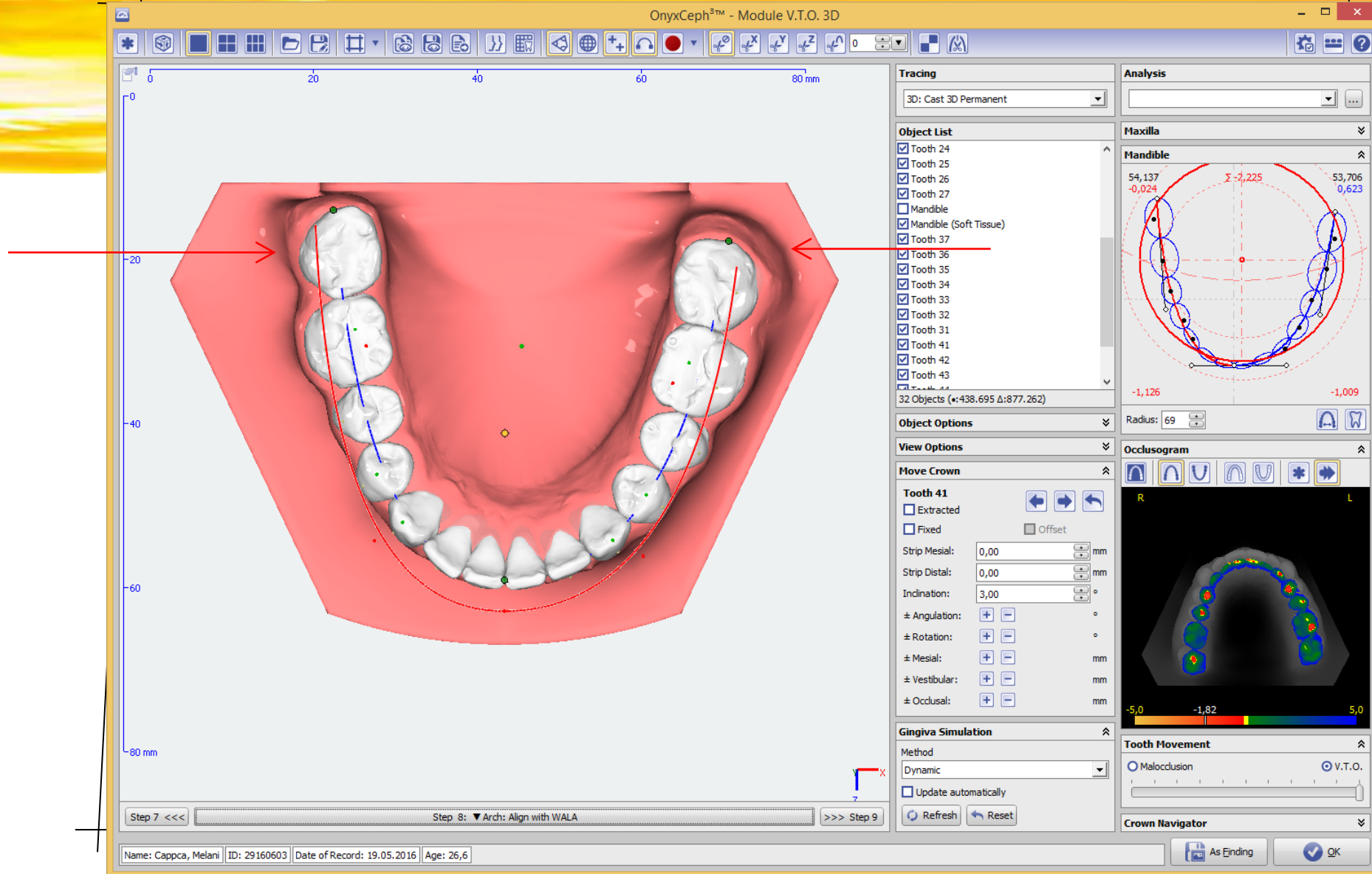
V.T.O.3D – Wizard: Step 6 : ▼▲ Harmonize Vertical Crown Position by FA



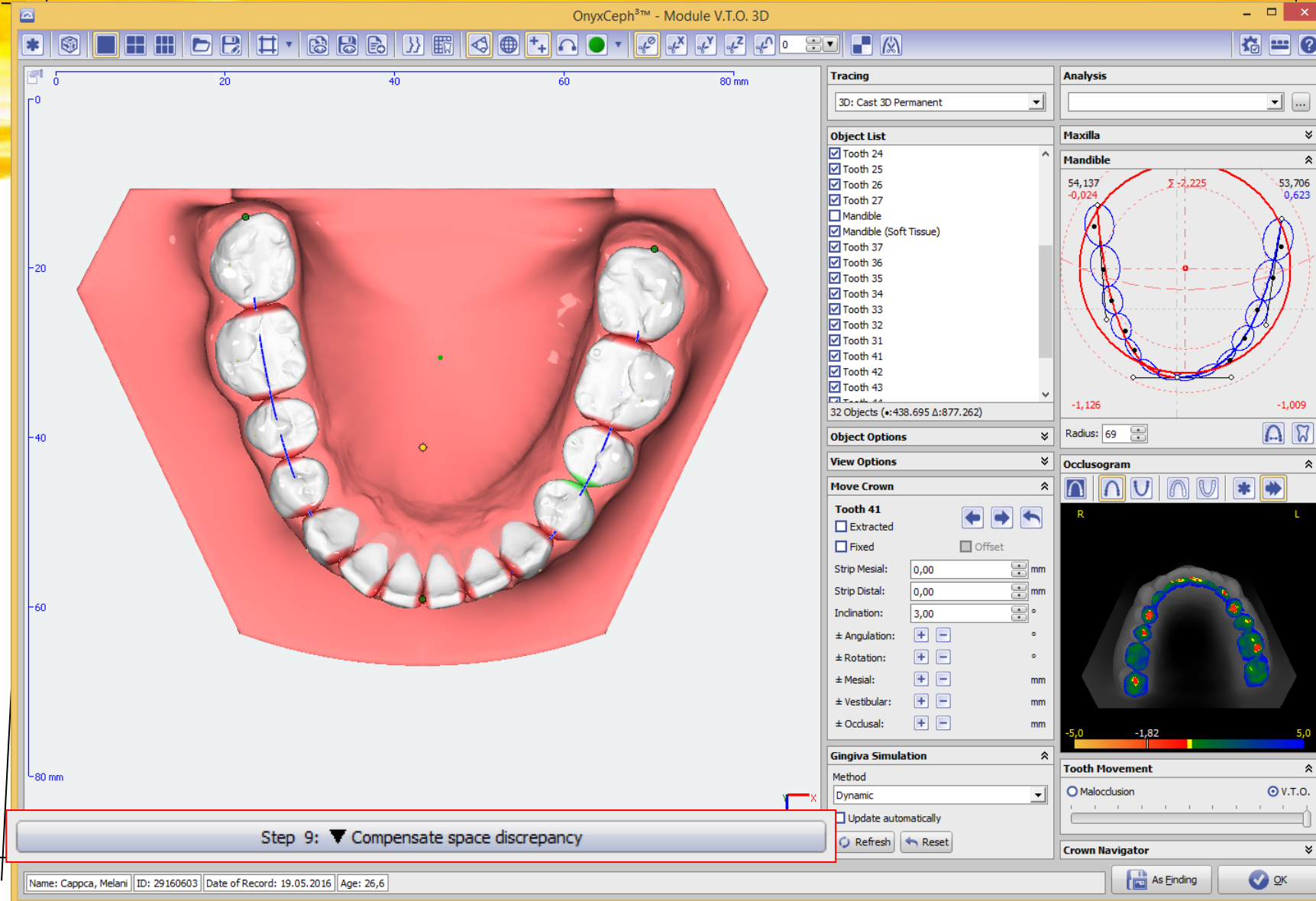
V.T.O.3D – Wizard: Step 8 : ▼ Arch: Align with WALA



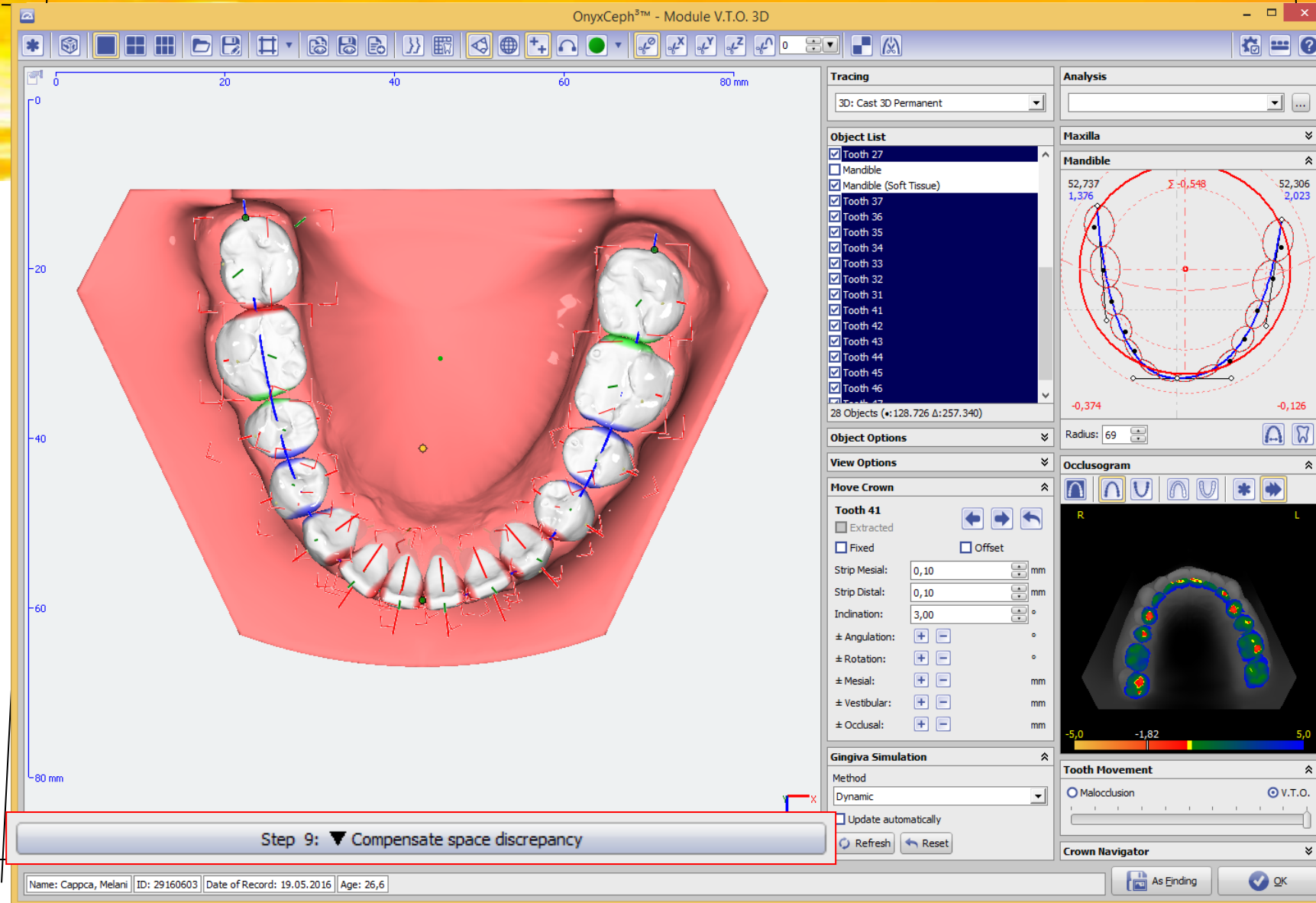
V.T.O.3D – Wizard: Step 8 : ▼ Arch: Align with WALA



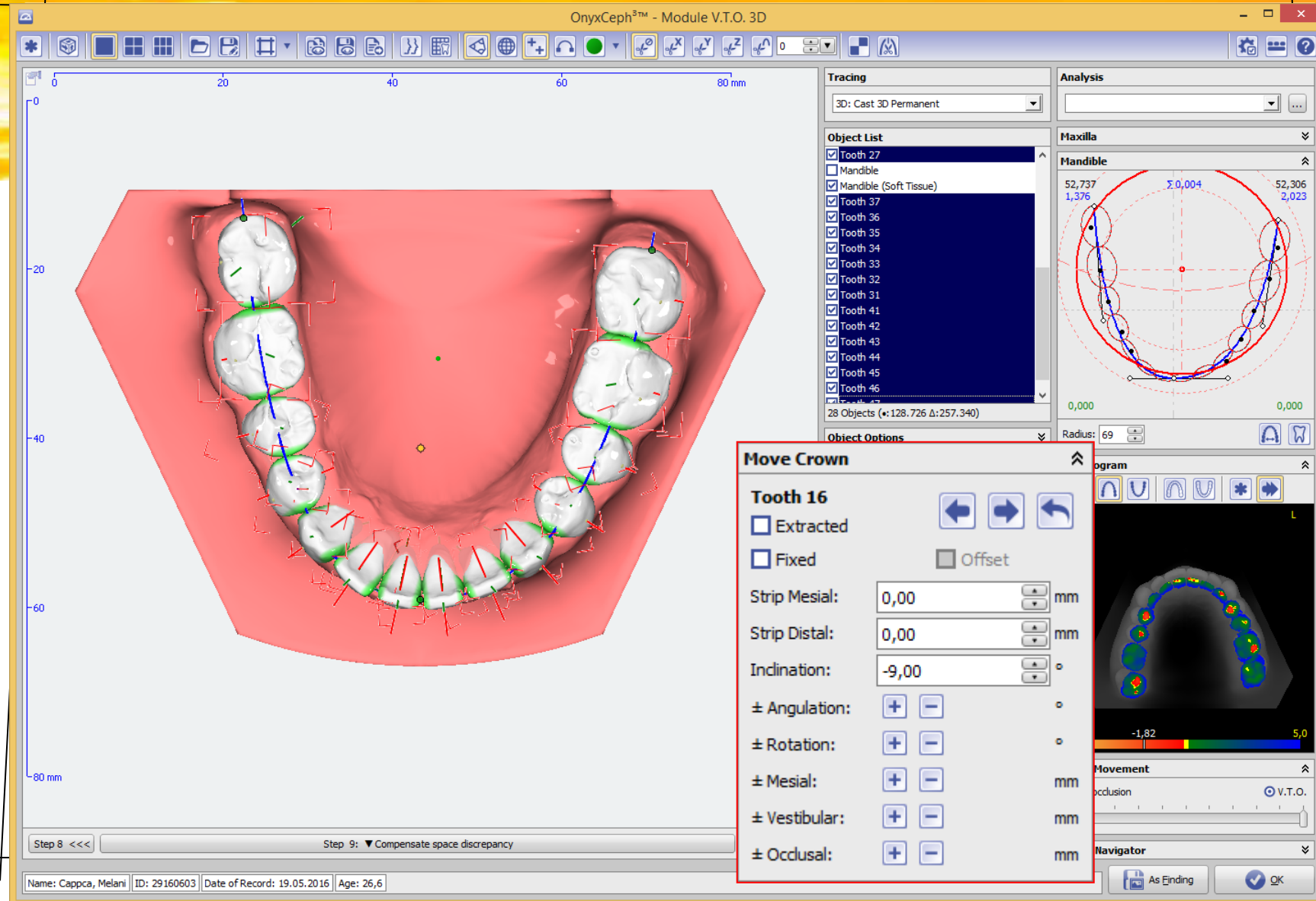
V.T.O.3D – Wizard: Step 8 : ▼ Arch: Align with WALA



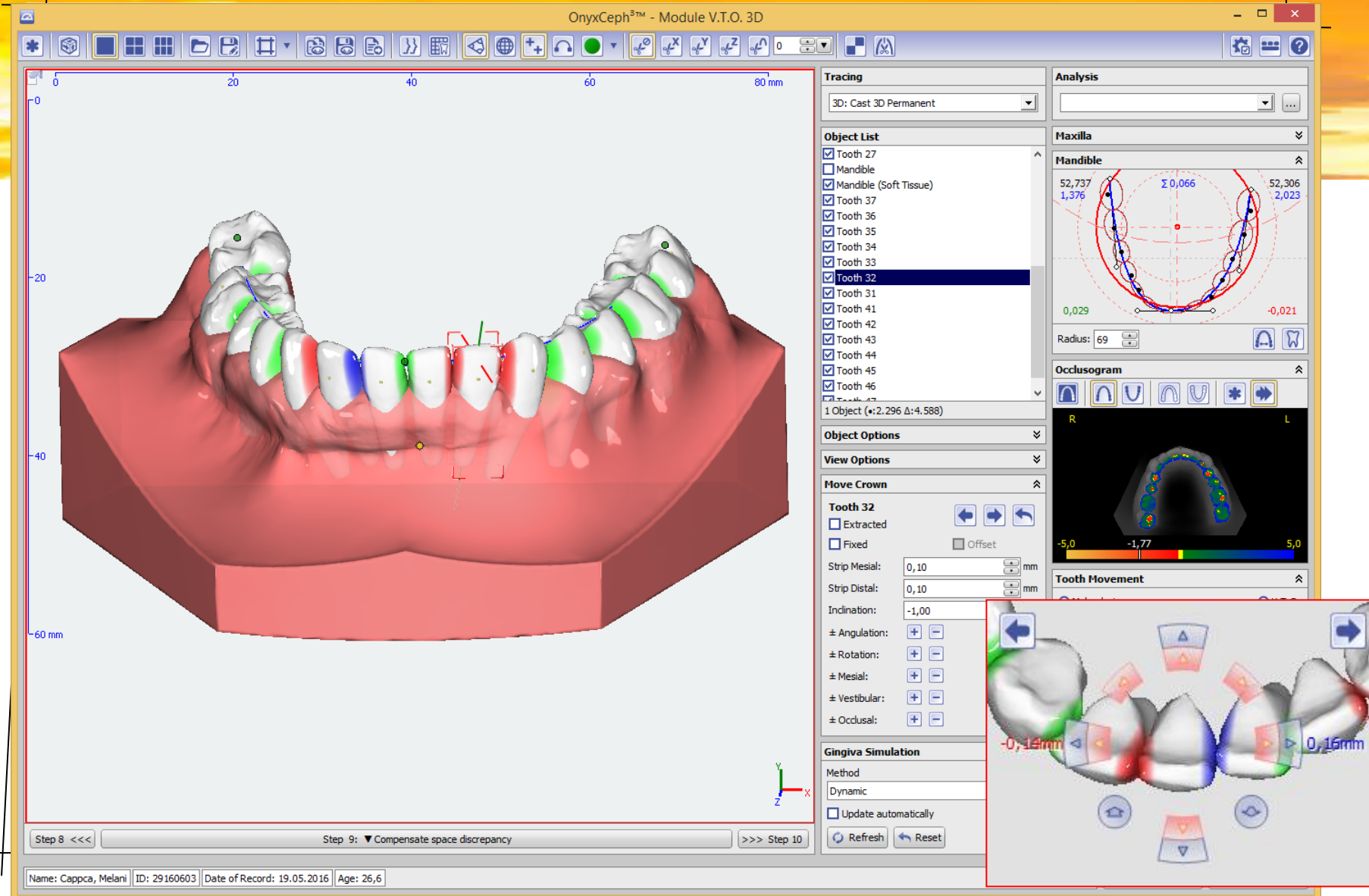
V.T.O.3D – Wizard: Step 9 : ▼ Compensate Space Discrepancy + Manual Control



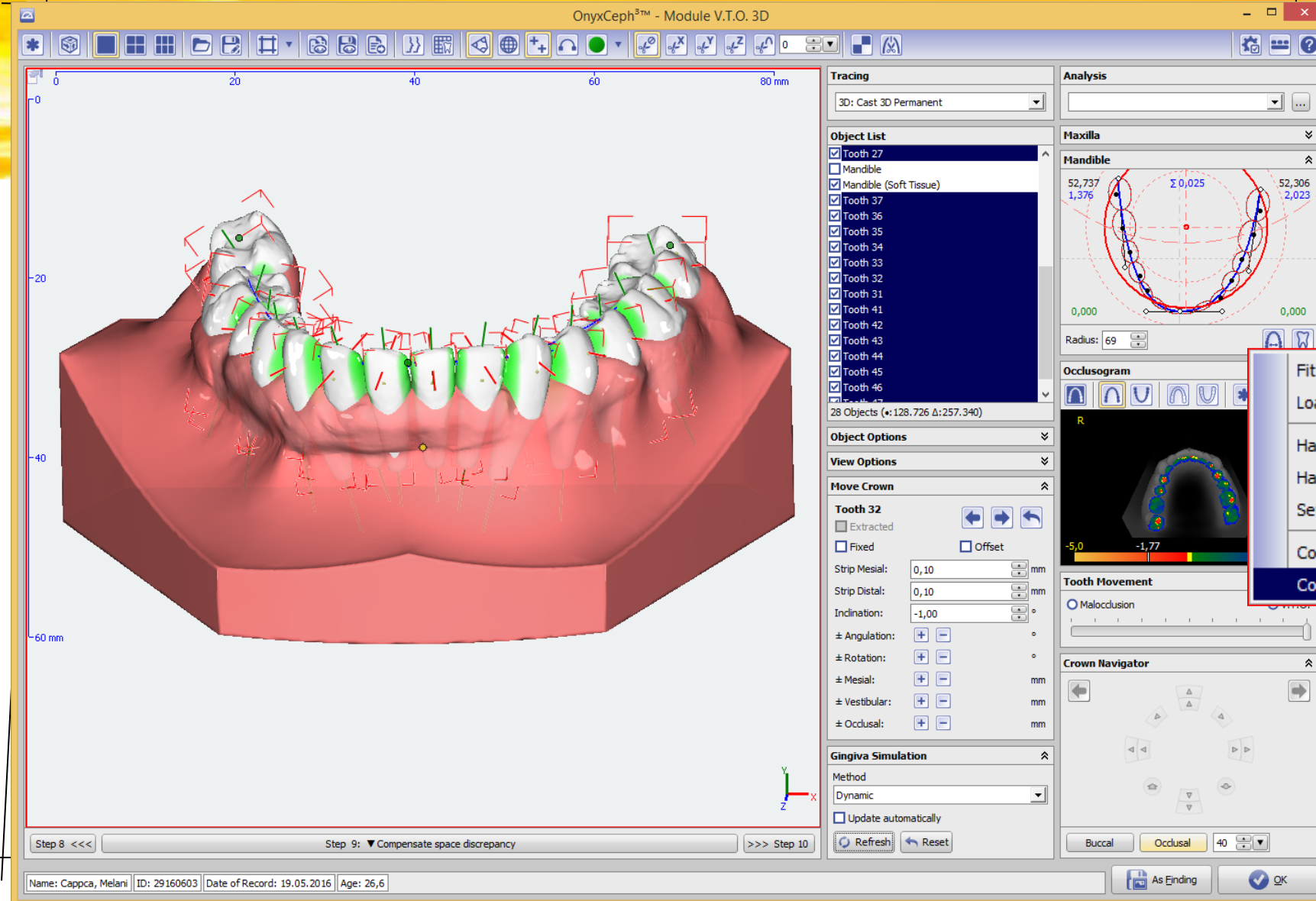
V.T.O.3D – Wizard: Step 9 : ▼ Compensate Space Discrepancy + Manual Control



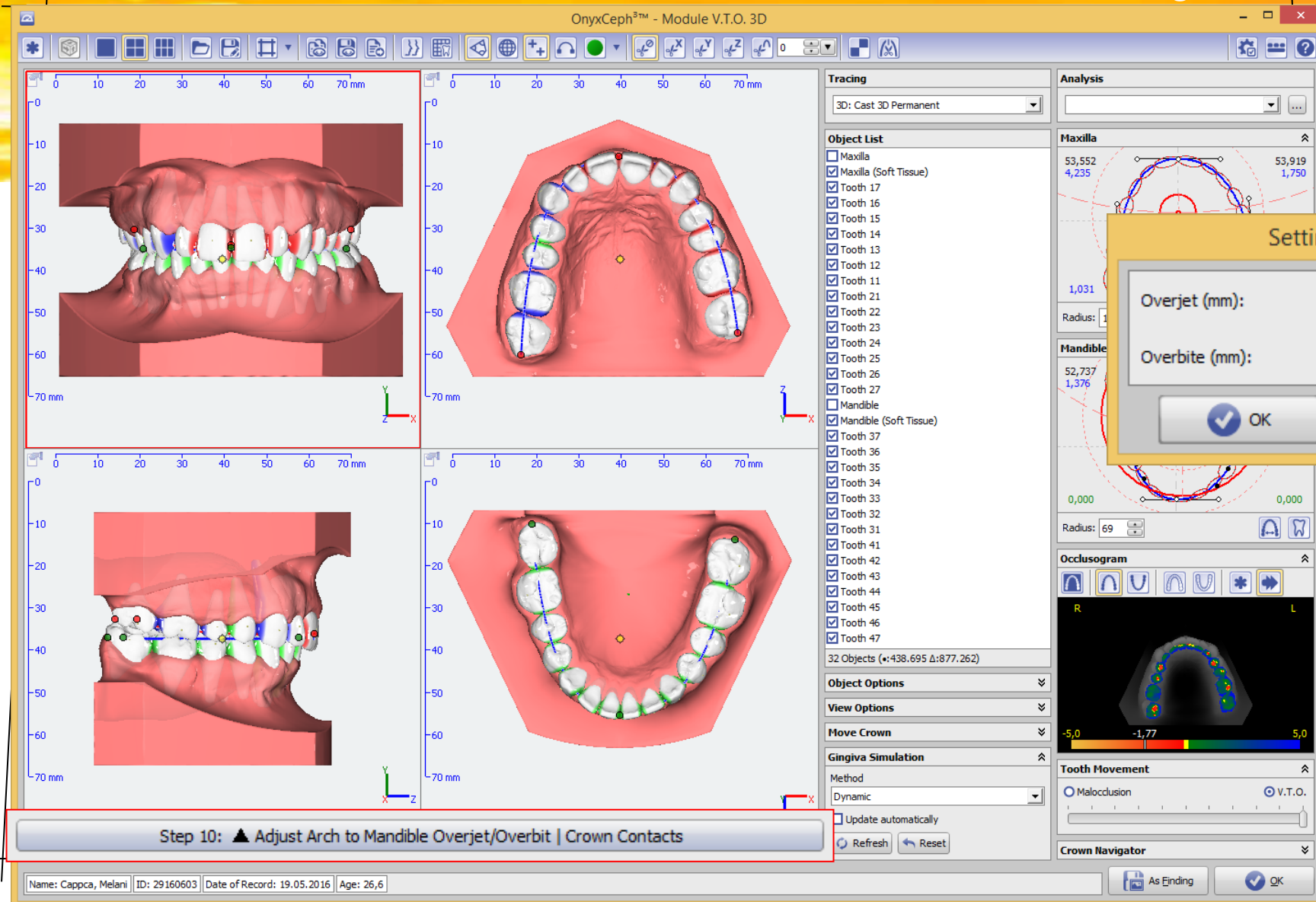
V.T.O.3D – Wizard: Step 9 : ▼ Compensate Space Discrepancy + Manual Control



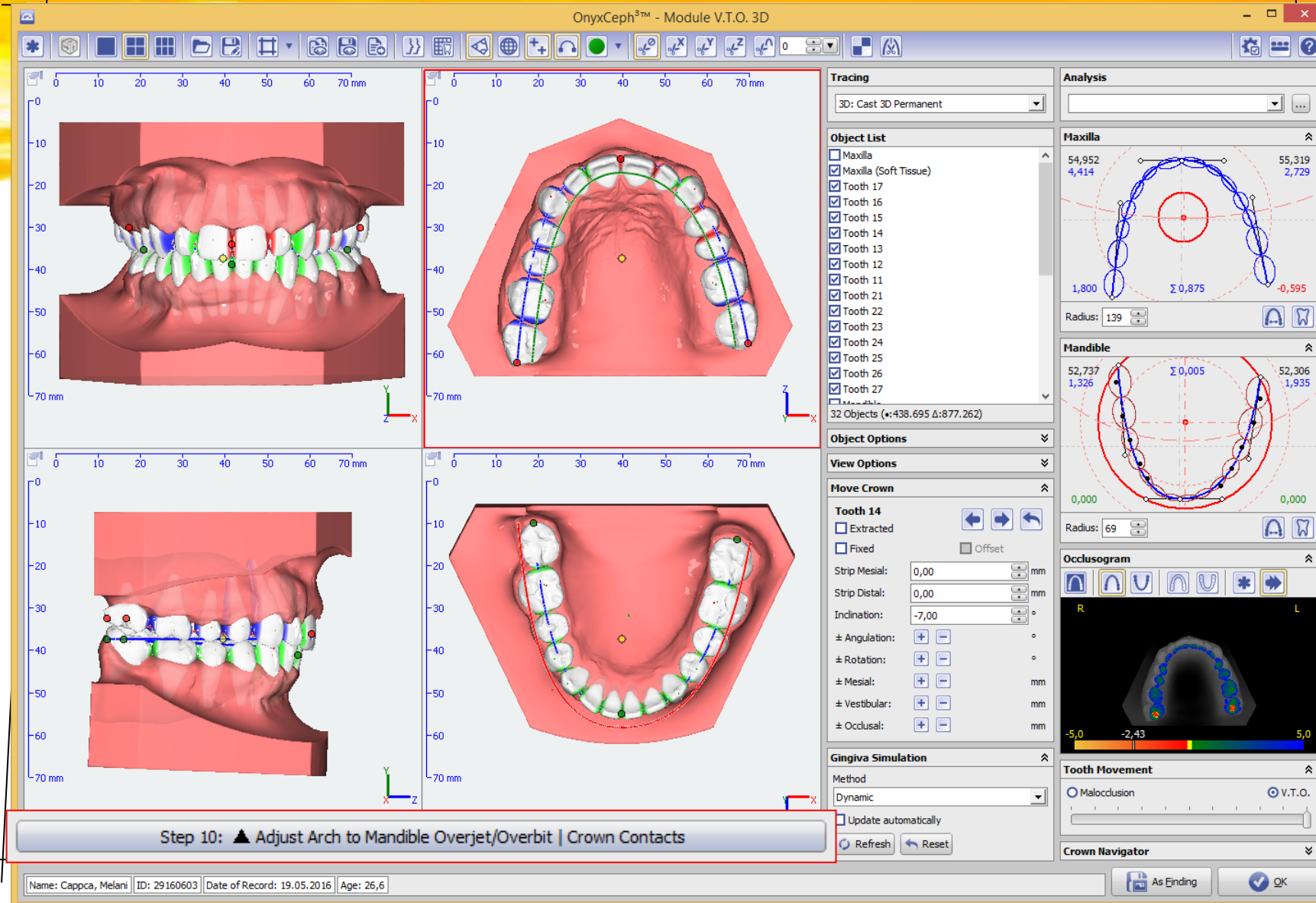
V.T.O.3D – Wizard: Step 9 : ▼ Compensate Space Discrepancy + Manual Control



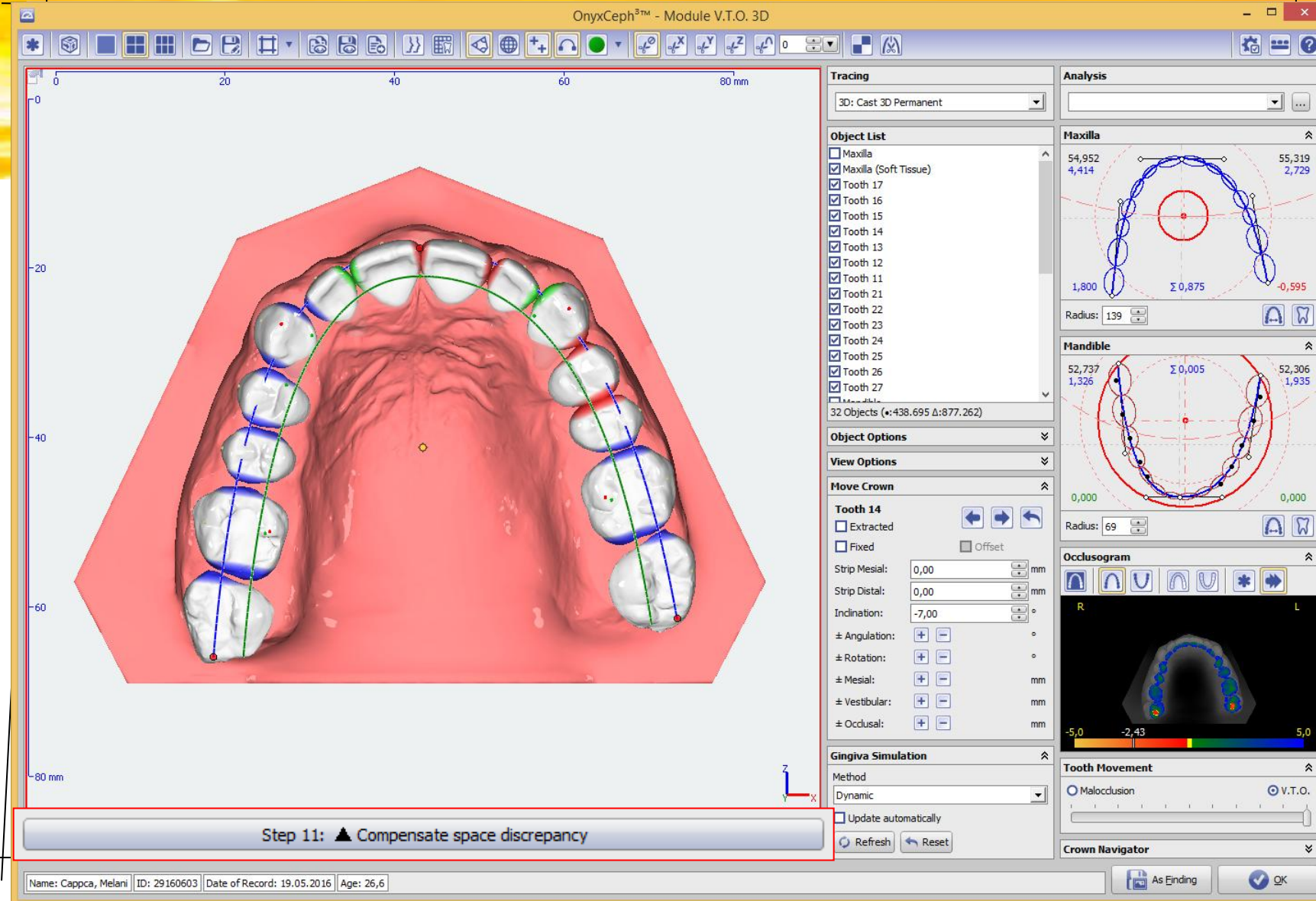
V.T.O.3D – Wizard: Step 9 : ▼ Compensate Space Discrepancy + Manual Control



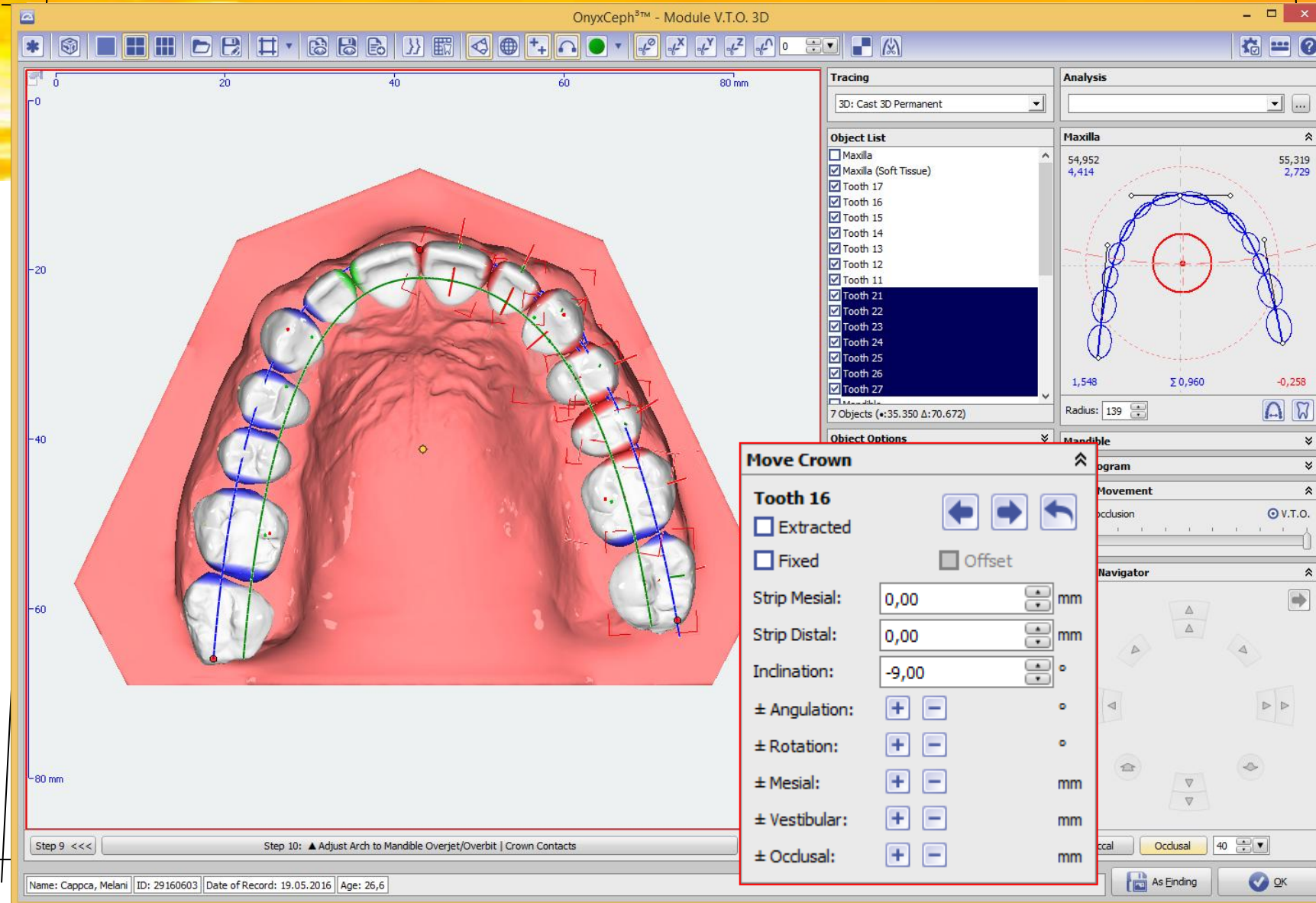
V.T.O.3D – Wizard: Step 10 : ▲ Adjust Arch to Mandible Overjet/Overbite | Crown Contacts



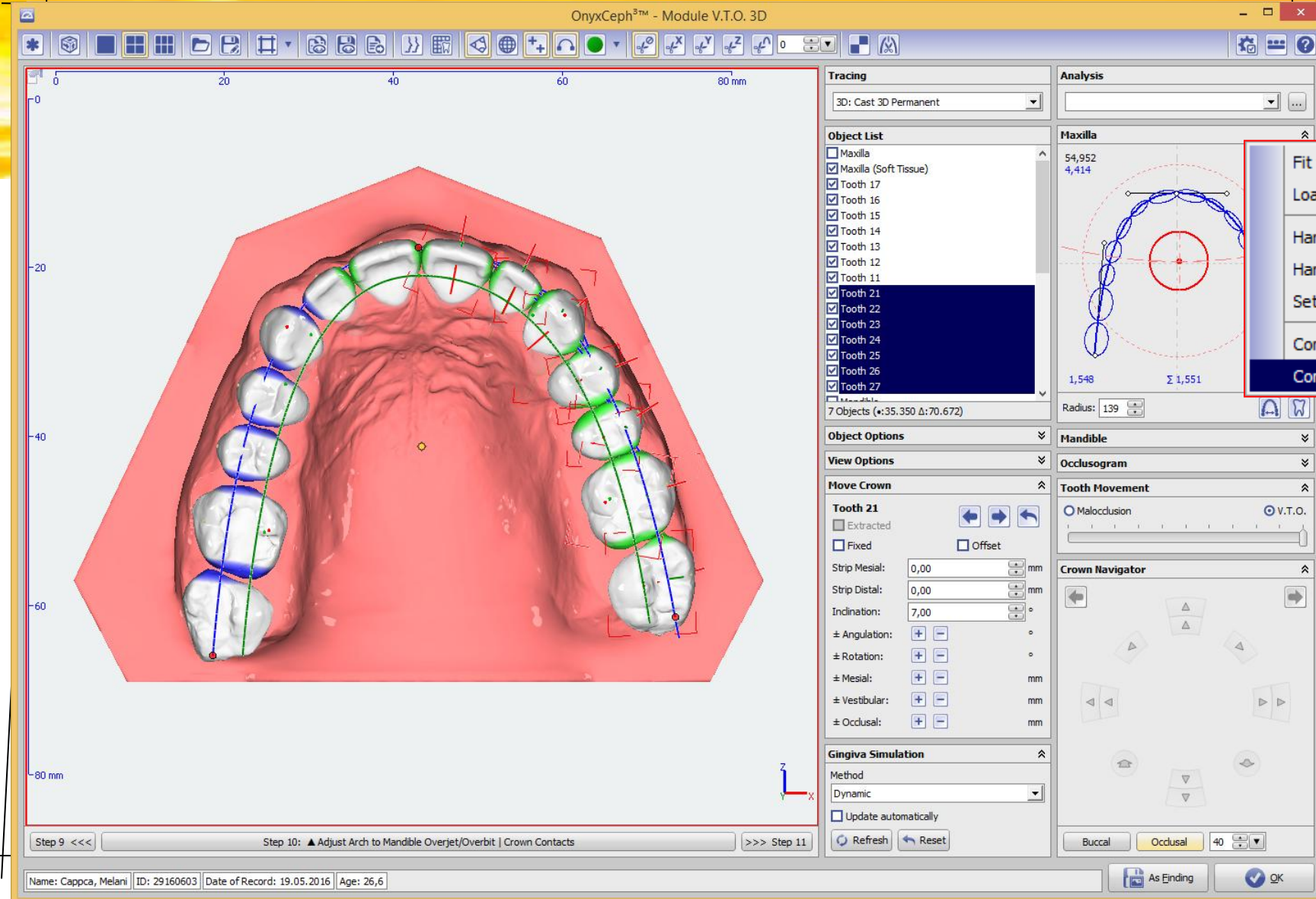
V.T.O.3D – Wizard: Step 10 : ▲ Adjust Arch to Mandible Overjet/Overbite | Crown Contacts



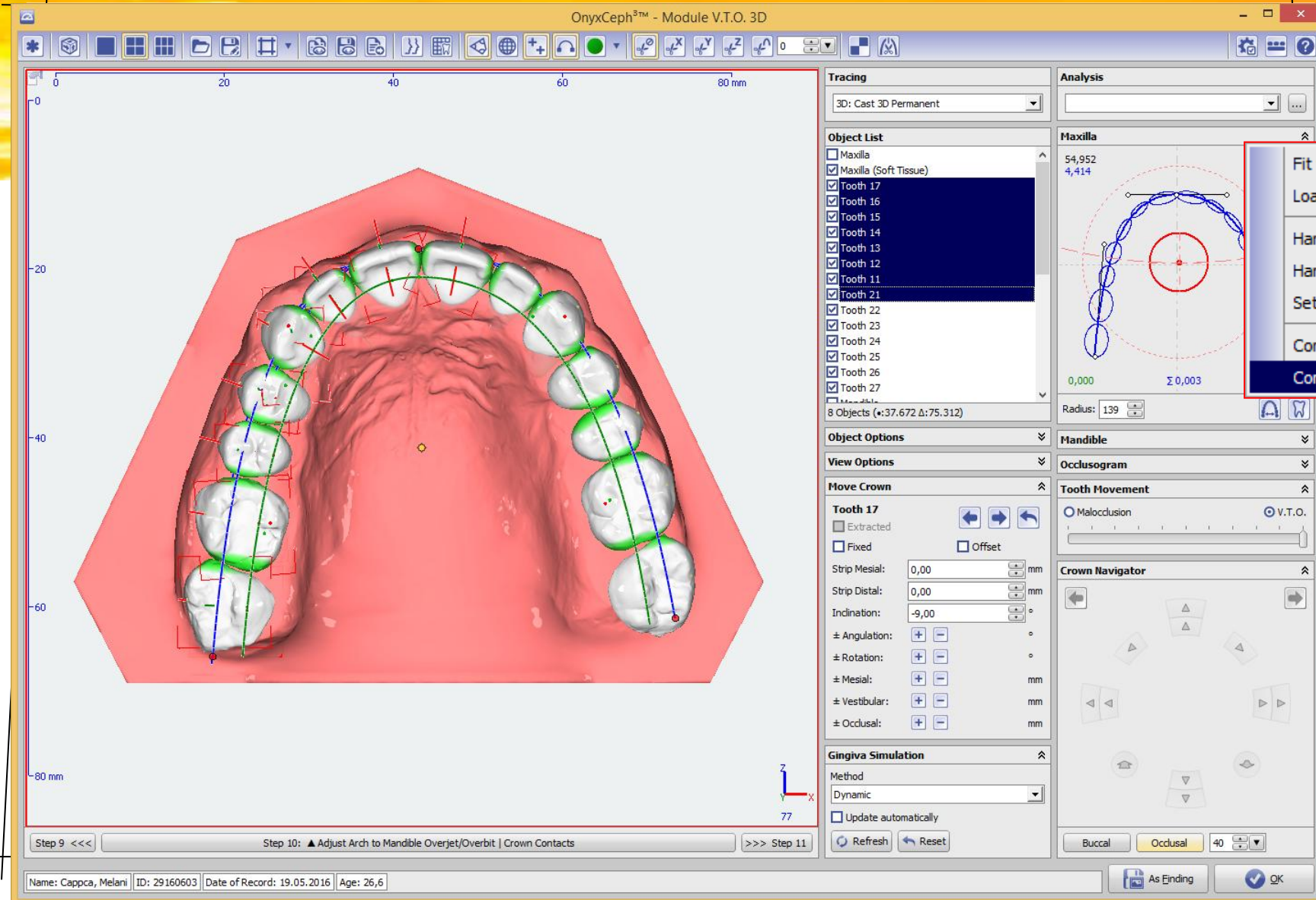
V.T.O.3D – Wizard: Step 11 : ▲ Compensate Space Discrepancy + Manual Control



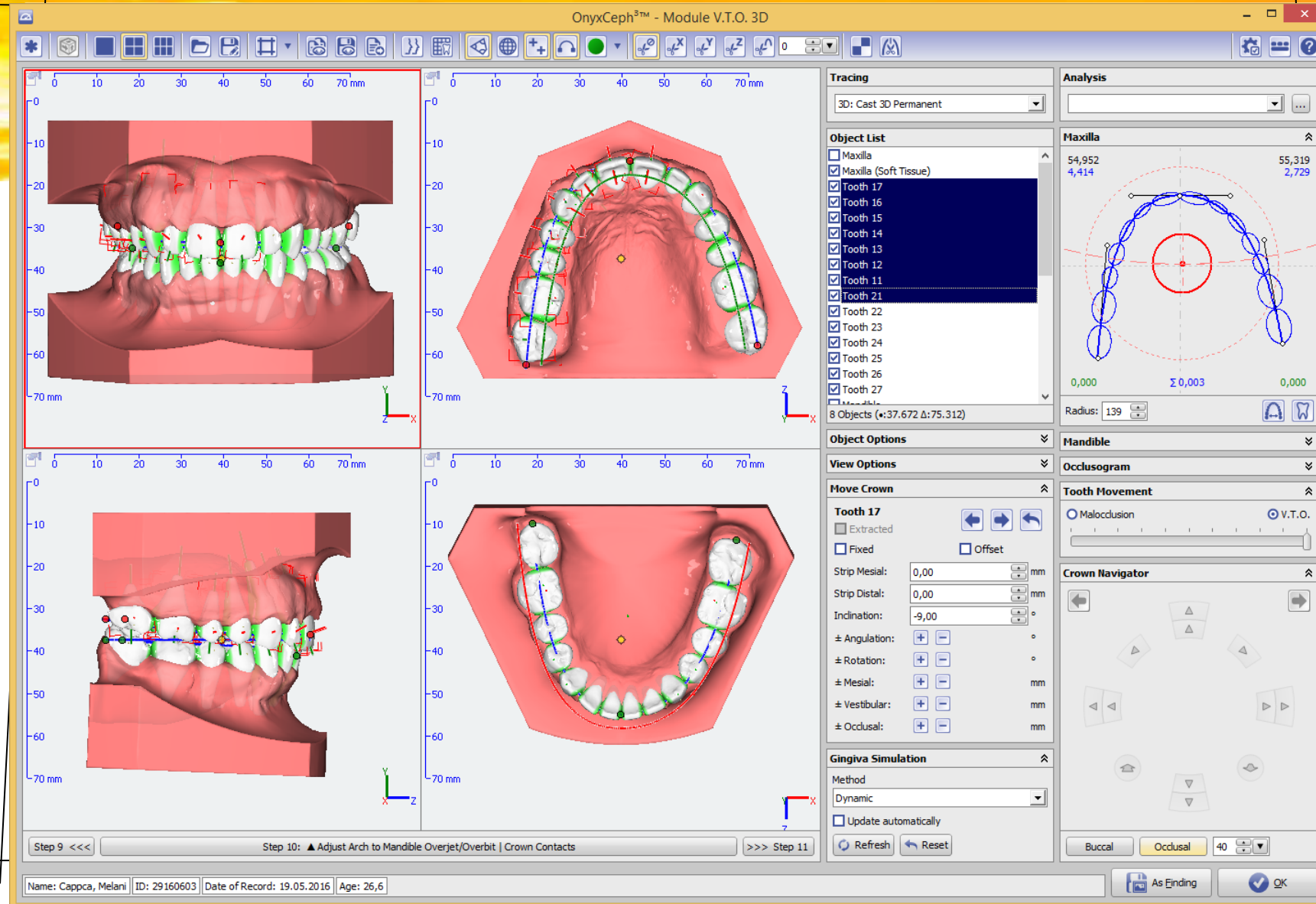
V.T.O.3D – Wizard: Step 11 : ▲ Compensate Space Discrepancy + Manual Control



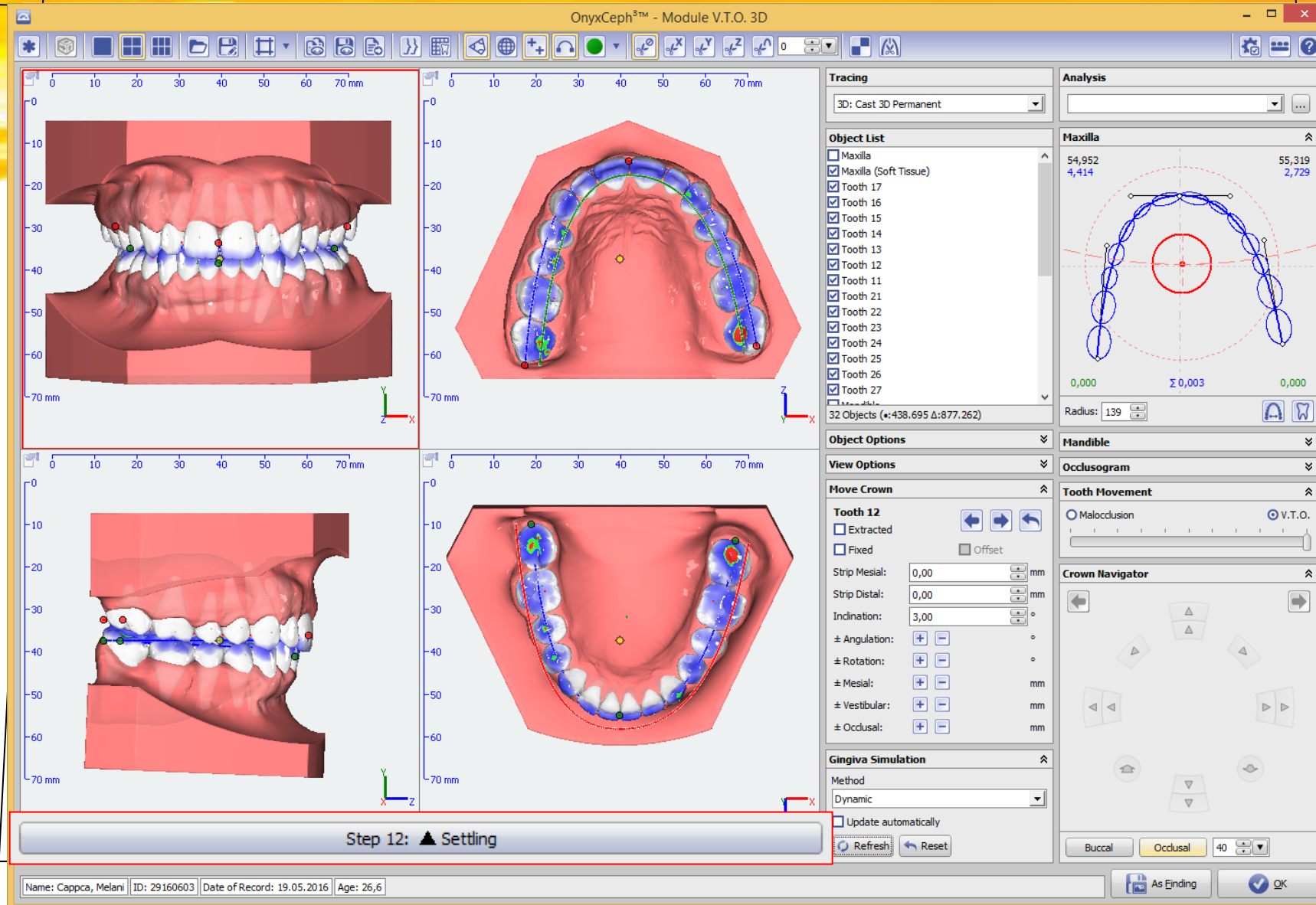
V.T.O.3D – Wizard: Step 11 : ▲ Compensate Space Discrepancy + Manual Control



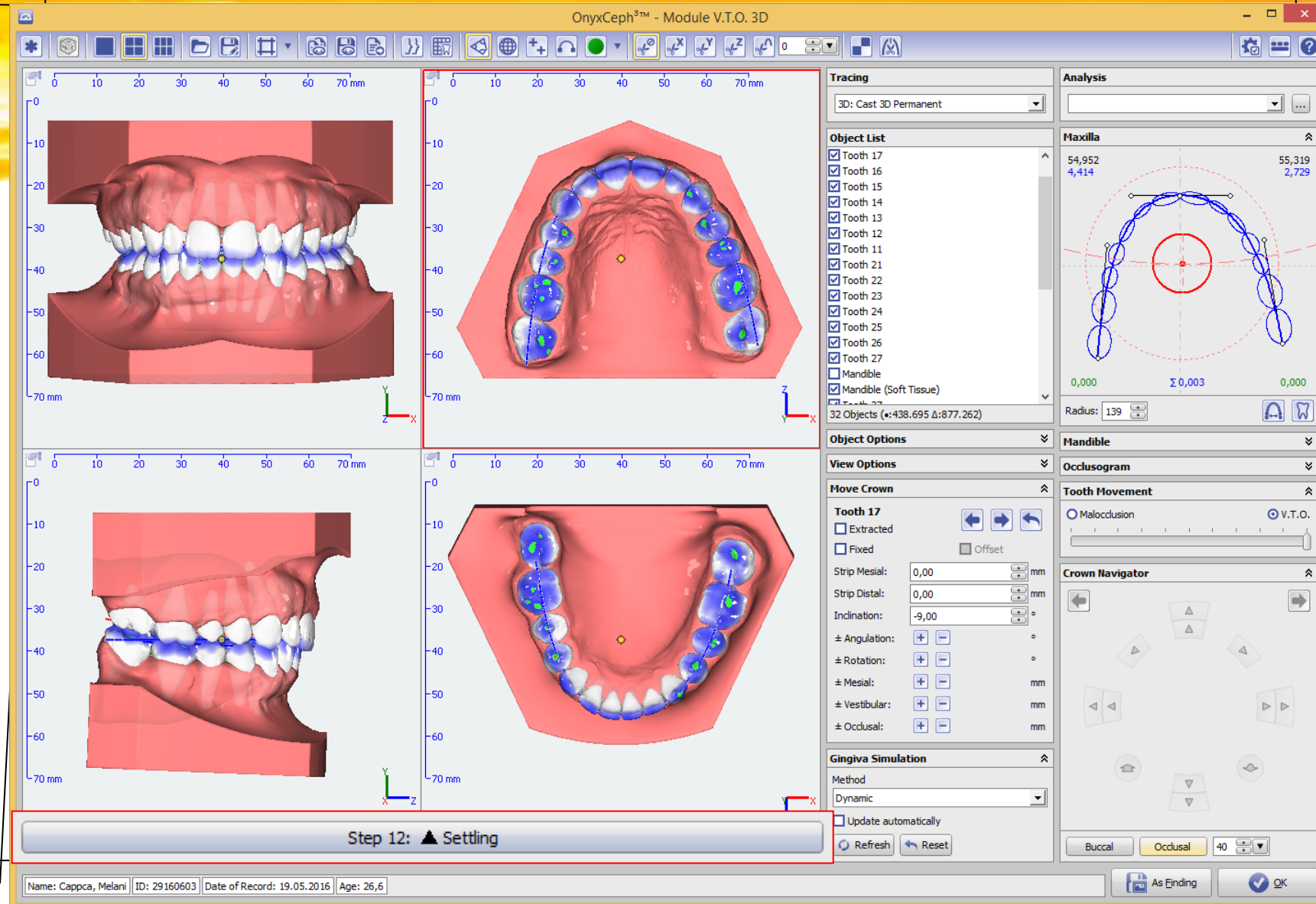
V.T.O.3D – Wizard: Step 11 : ▲ Compensate Space Discrepancy + Manual Control



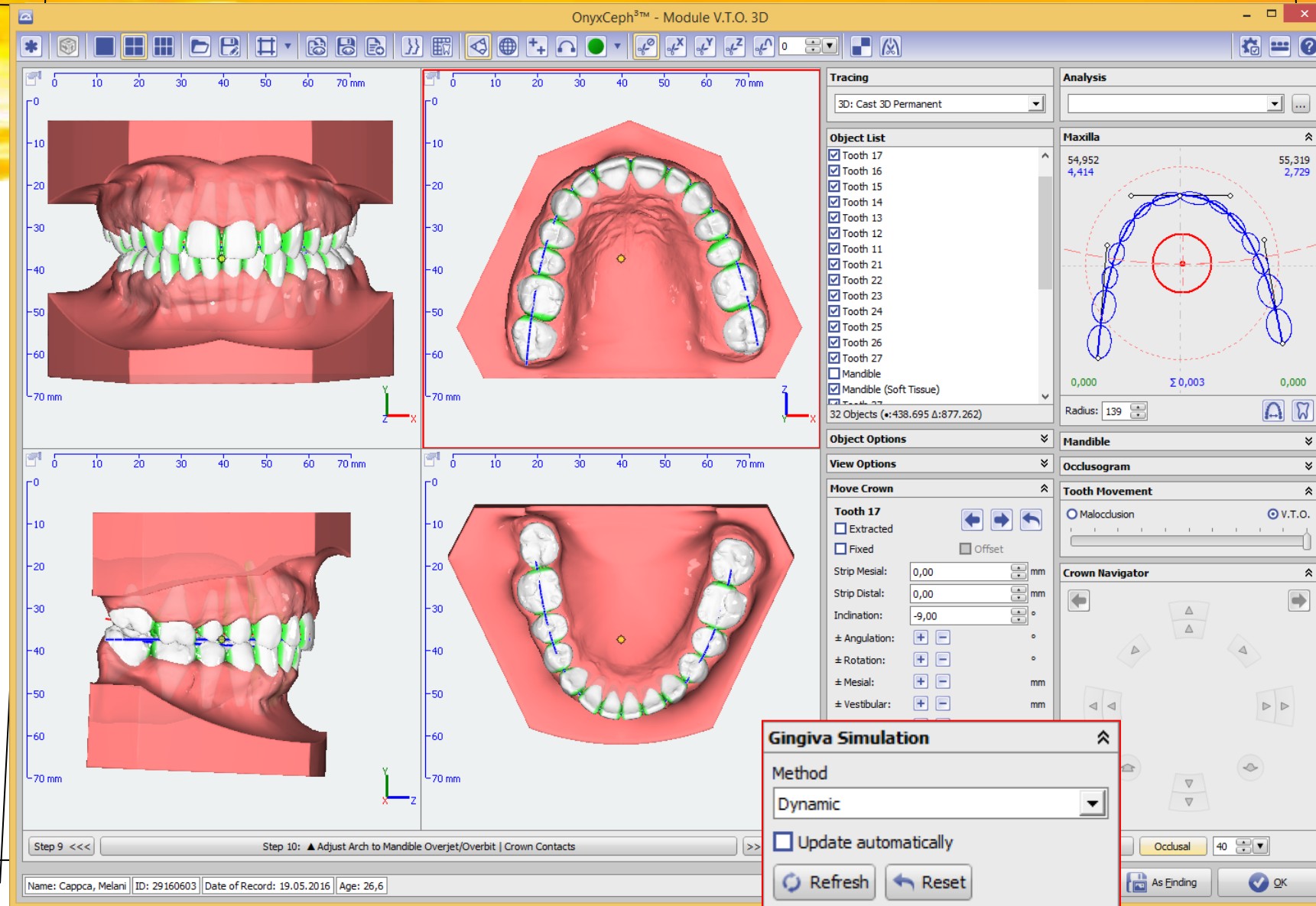
V.T.O.3D – Wizard: Step 11 : ▲ Compensate Space Discrepancy + Manual Control

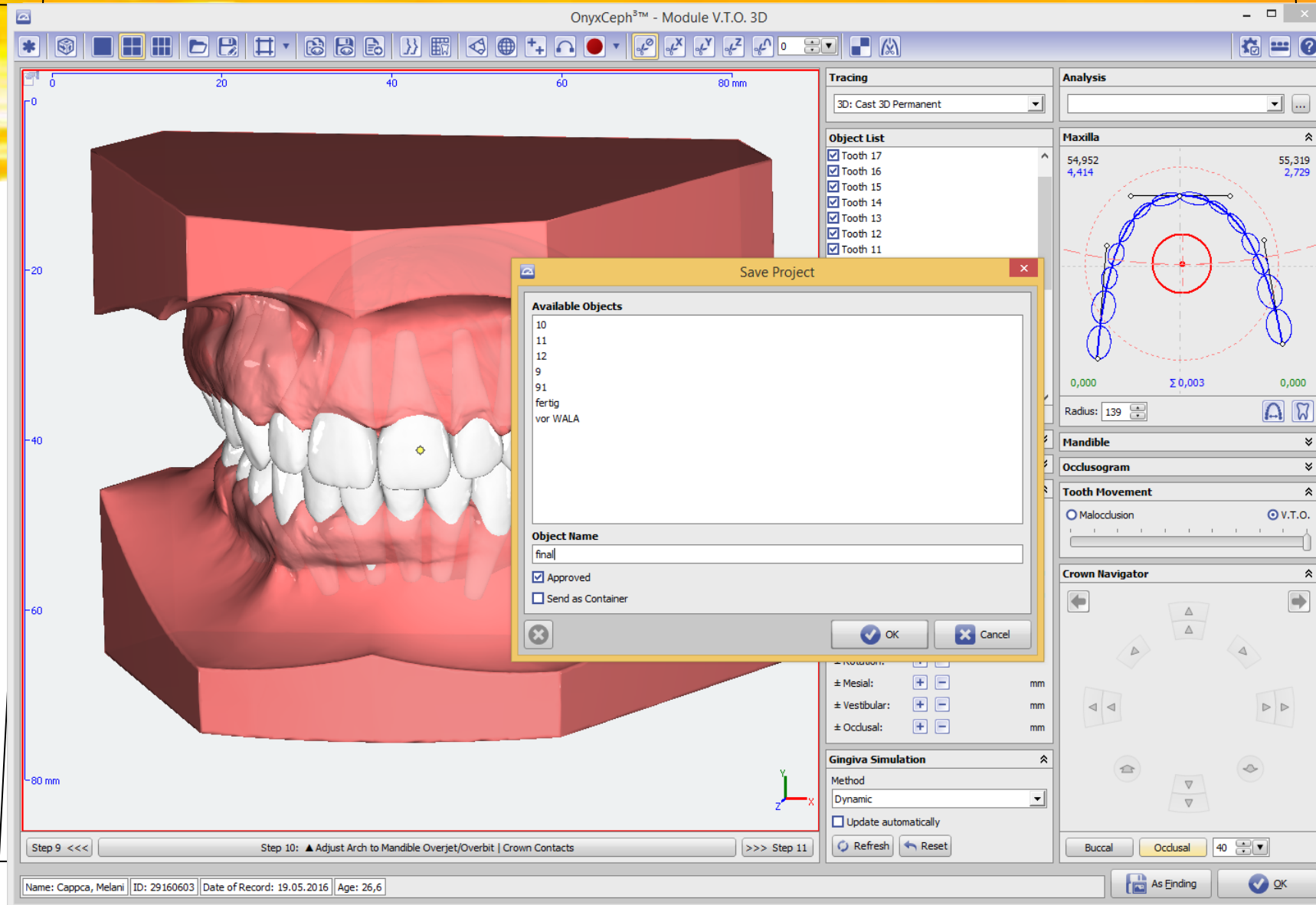


V.T.O.3D – Wizard: Step 12 : ▲ Compensate Space Discrepancy + Manual Control

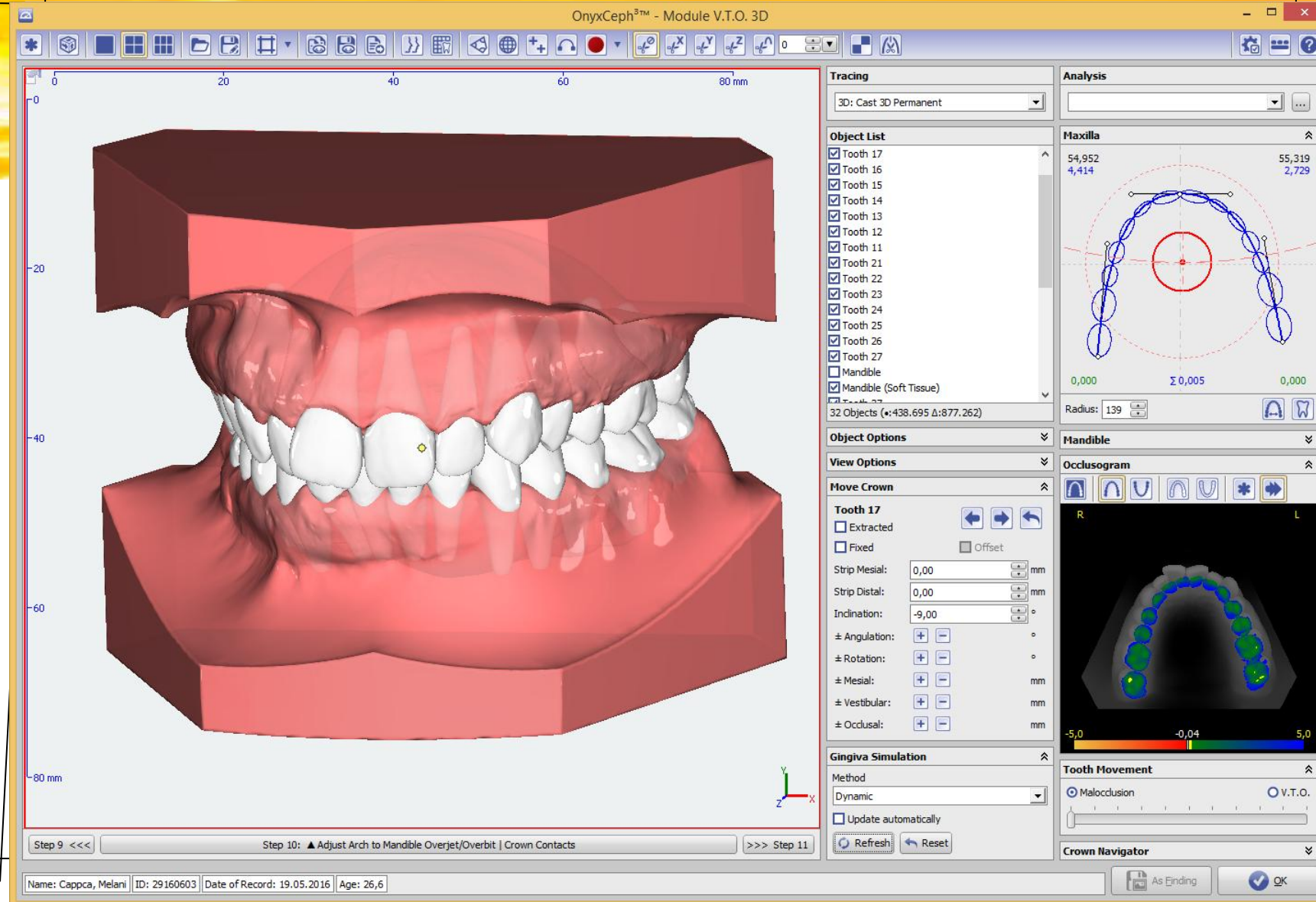


V.T.O.3D – Wizard: Step 12 : ▲ Compensate Space Discrepancy + Manual Control

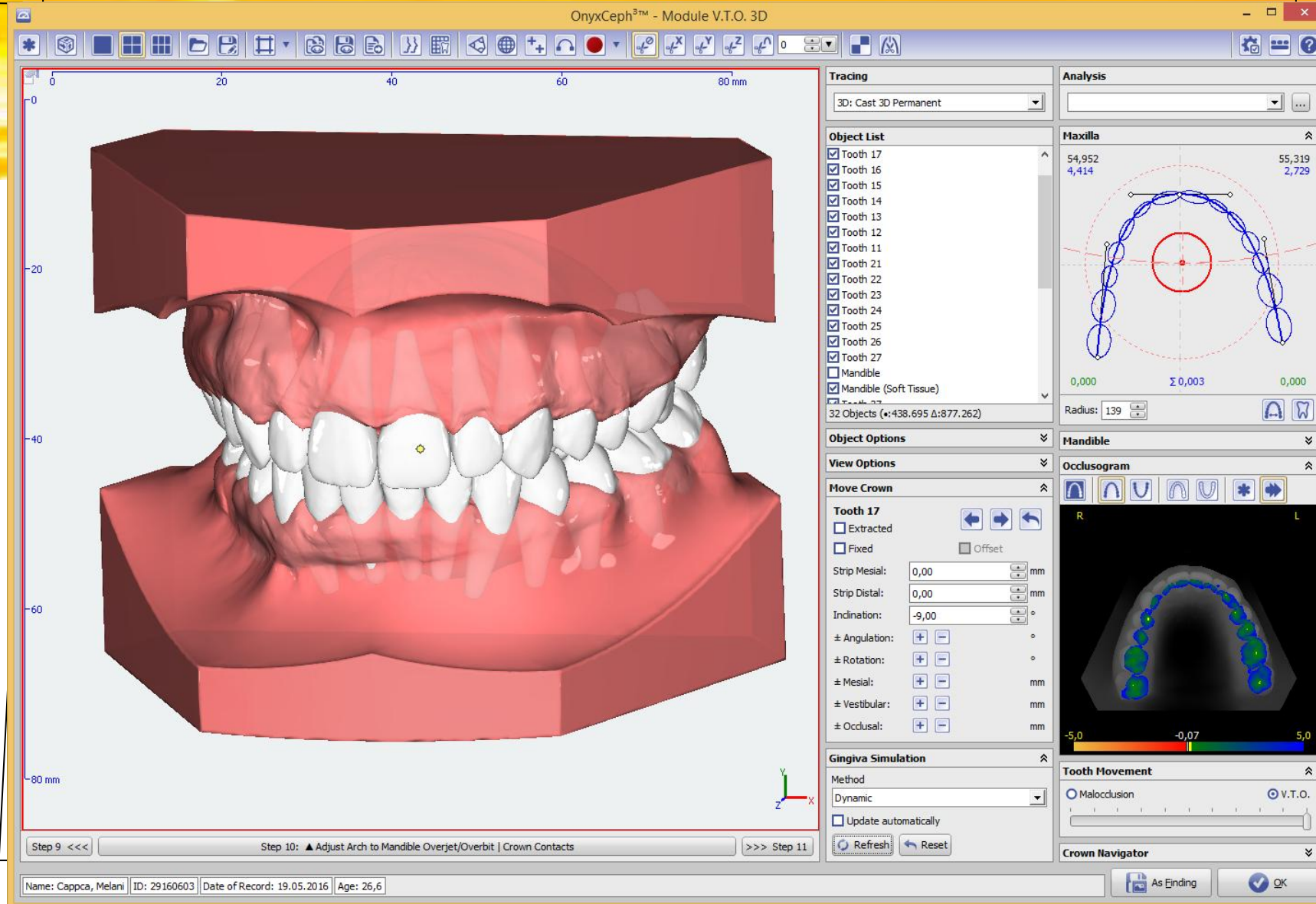




Saving V.T.O.3D – Save Project



V.T.O.3D – Start Situation



Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

Workflow

FA_Bonding

Wire_Bonding

- Virtual Setup

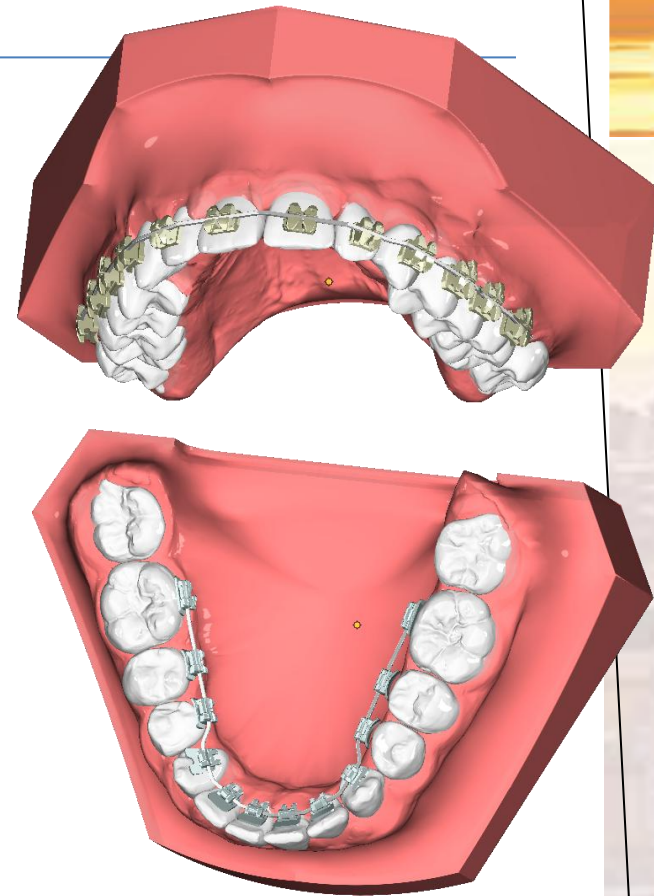
► Bracket-/Wire-Placement

Bracket Position Transfer

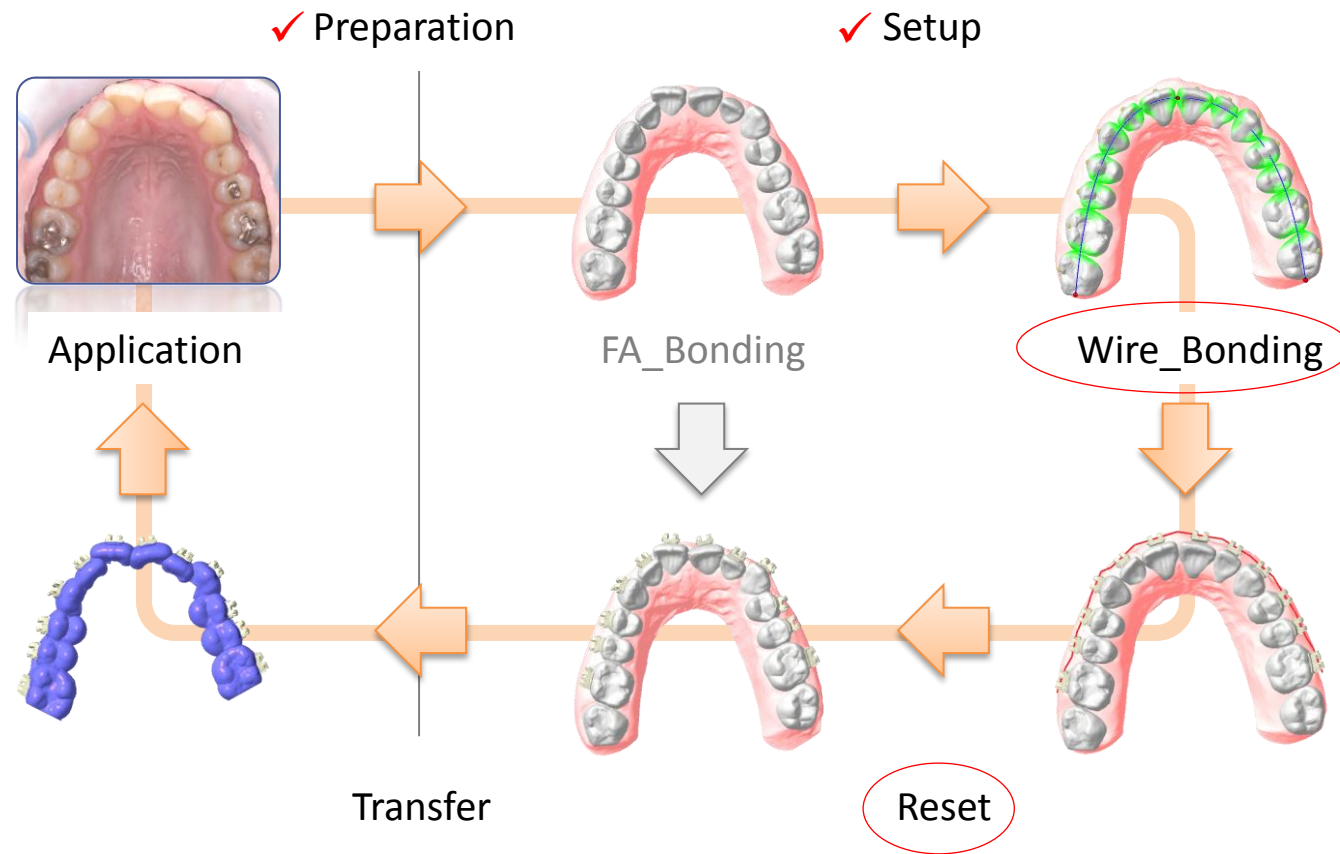
- Indirect Methods
- Direct/Mixed Methods

Other Planning Options (Examples)

Summary



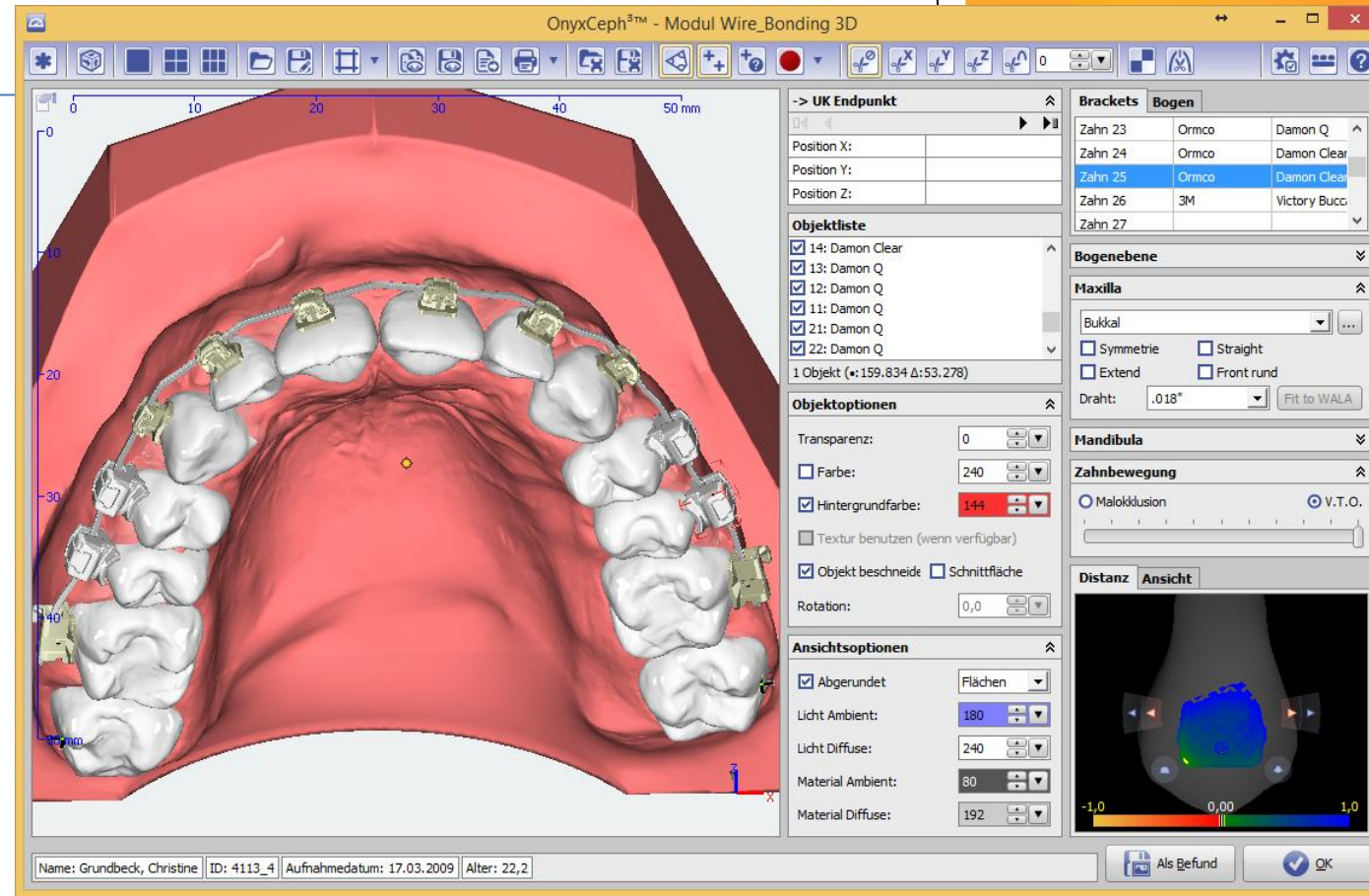
Wire_Bonding



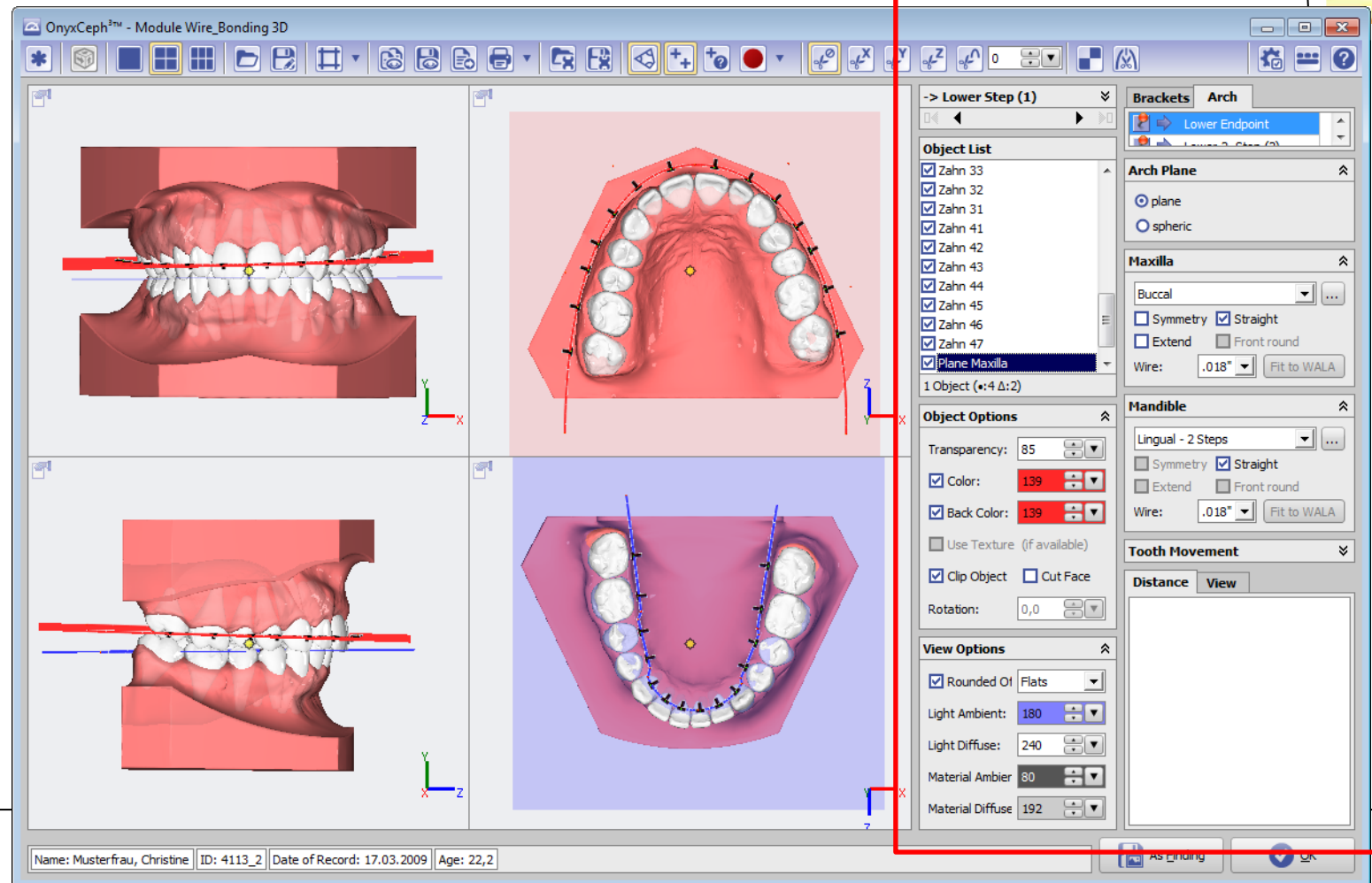
Wire_Bonding

Wire_Bonding

Add Image
Adjust Image
Digitize
Combine
Mirror
Treatment Simulation 3D
Image Comparison
Cast Adjust
Segmentation
FA_Bonding
V.T.O.3D
Wire Bonding
Kylux 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D



Wire_Bonding



Wire_Bonding

Wire_Bonding

Select Arch

Europa II

Europa I Upper

Europa II Upper

Europa II 92%

Europa II 84%

Trueform I Upper

Trueform II Upper

Standard Form Upper

Bioform I

Bioform II

Bioform III Upper

Bioform IV

Select Arch

Size 1 (Small) 32mm

Universal Lingual Archform

Size 1 (Small) 27mm Lower

Size 2 (Medium) 33.5mm

Size 2 (Medium) 30mm Lower

Size 3 (Large) 36mm

Size 3 (Large) 31mm Lower

Forestadent Shape 2

Forestadent Shape 3

- Buccal
- Buccal (Round Wire)
- Lingual
- Lingual (Round Wire)
- Lingual - 1 Step
- Lingual - 1 Step (Round Wire)
- Lingual - 2 Steps
- Lingual - 2 Steps (Round Wire)
- Lingual - Flex
- Lingual - Flex (Round Wire)

Arch Plane

☒ plane
 ☐ spheric

Maxilla

Buccal

☐ Symmetry
 ☐ Straight

☐ Extend
 ☐ Front round

Wire: .018" Fit to WALA

Mandible

Lingual - 2 Steps

☐ Symmetry
 ☐ Straight

☐ Extend
 ☐ Front round

Wire: .018" Fit to WALA

Tooth Move

☒ Malocclus
 ☐ V.T.O.

.017"

.018"

.019"

.020"

.022"

.024"

.025"

.026"

.028"

.030"

.032"

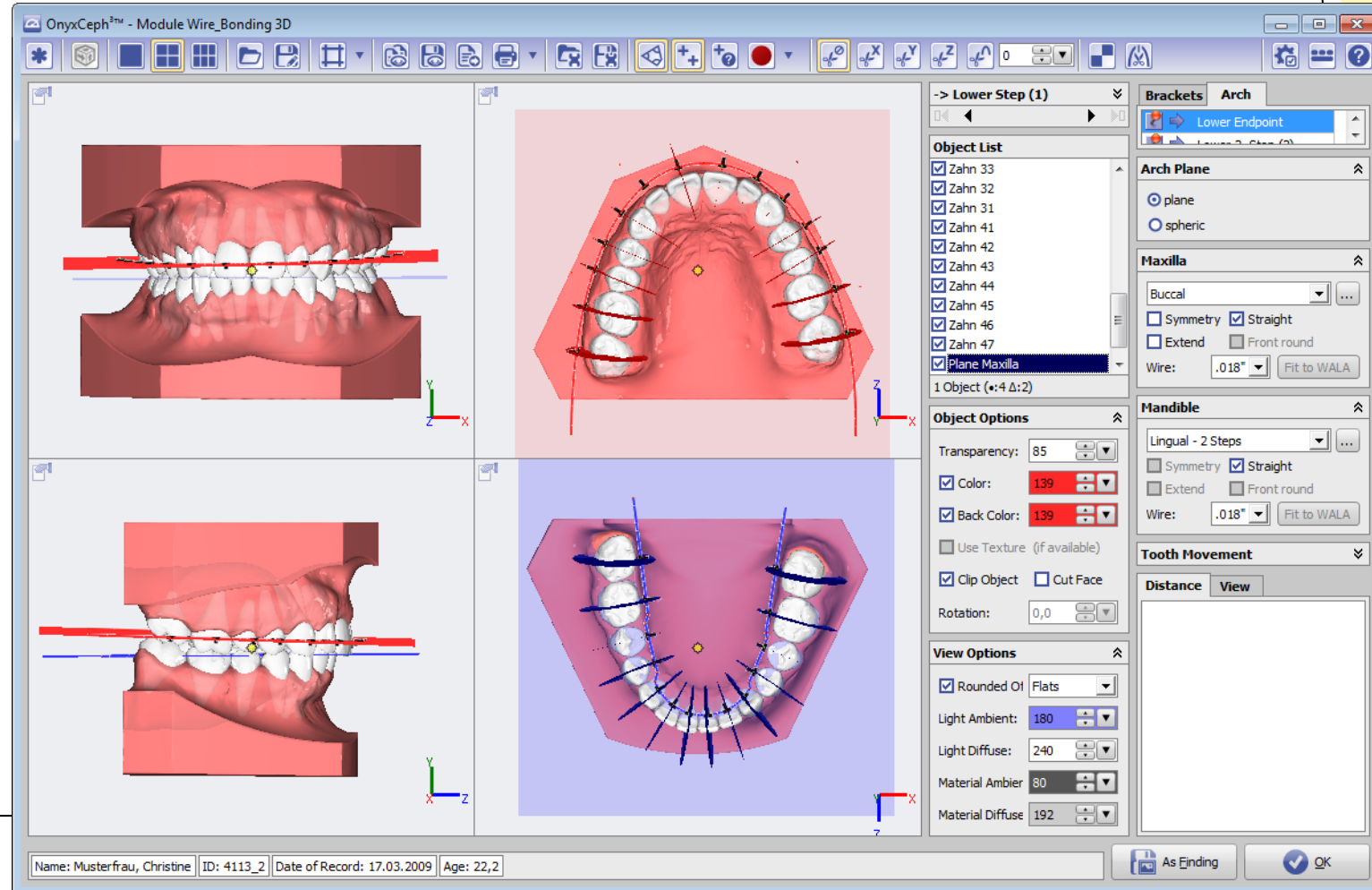
.036"

.040"

.045"

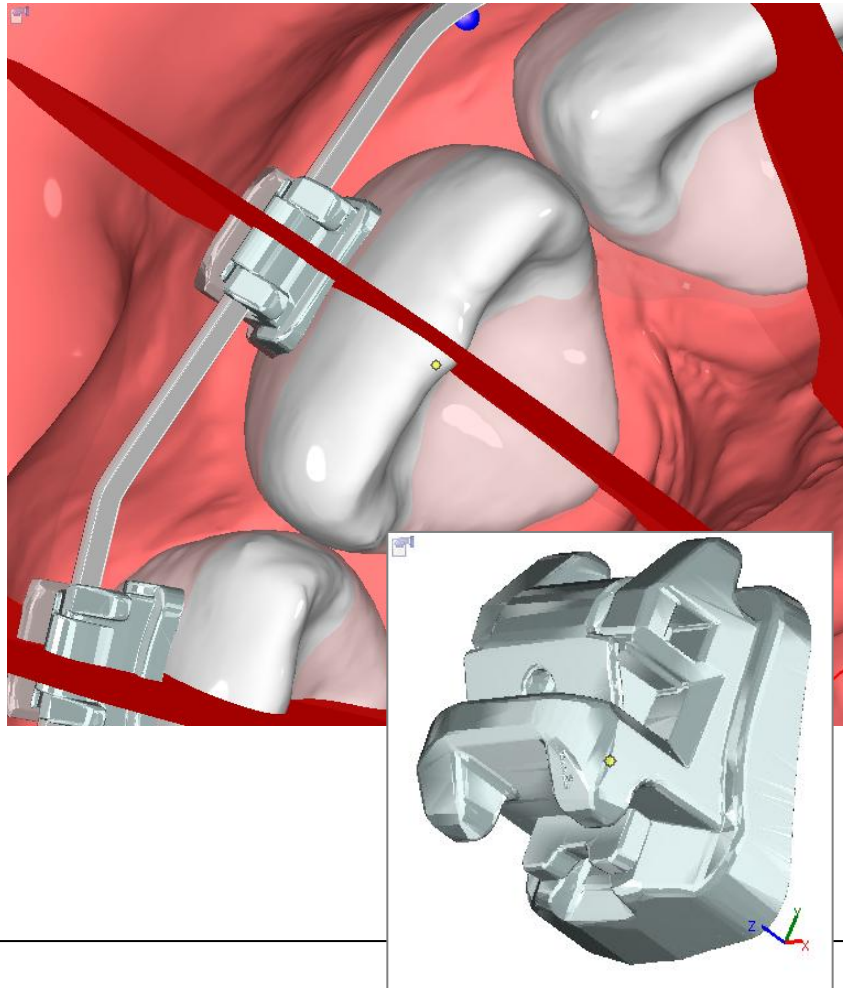
.051"

Wire_Bonding



Wire_Bonding

Wire_Bonding

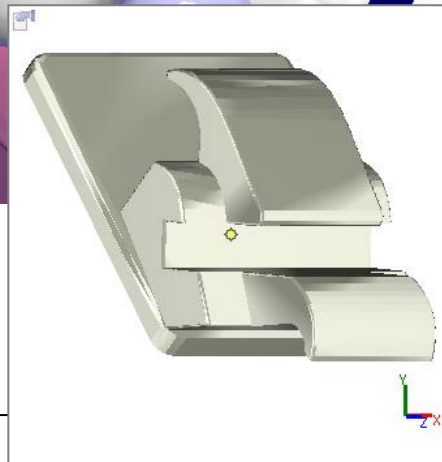
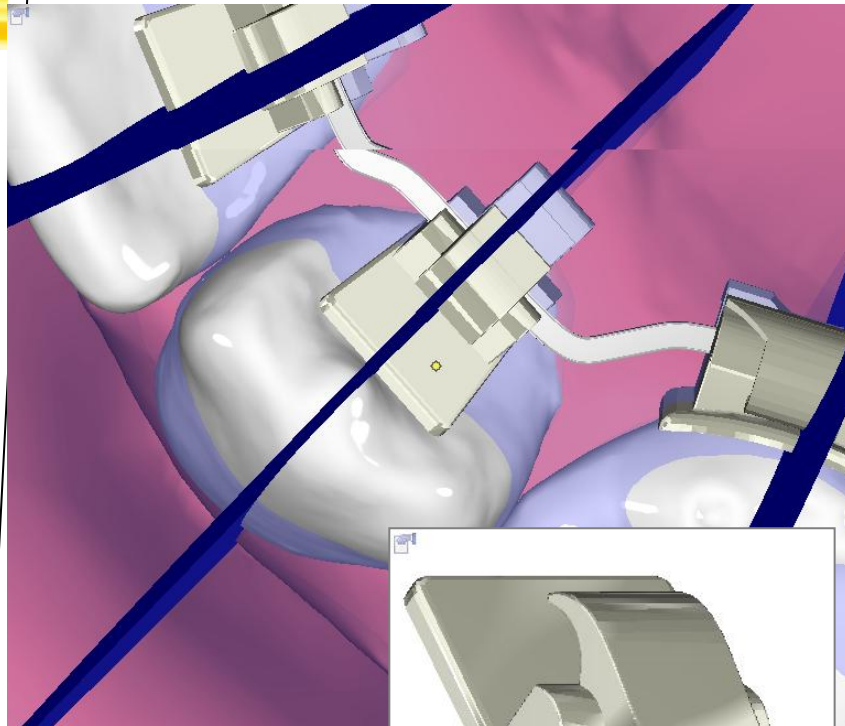


Select Bracket

Search...	Search...	Search...	Search...	11
Order No.	Name	Manufacturer	Type	Tooth
007-402	☒ Clarity SL Bkt MBT 022	3M	eXact	11
5007-444	☐ Clarity SL	3M	APC Plus Clarity SL	11
5007-418	☐ Clarity SL	3M	APC PLUS Clarity SL	11
5007-402	☐ Clarity SL	3M	APC PLUS Clarity SL	11
007-402	☒ Clarity SL	3M	R	11
006-302	☐ Clarity Advanced MBT	3M	Exact	11
6400-902	☒ Clarity	3M	MBT	11
6400-802	☒ Clarity	3M	MBT	11
722-702-11	☒ CIM_MBT	Dentaurum		11
733-0101	☒ BioQuick	Forestadent	MBT	11
	☒ asm_ur_cent_22t_4a_lp_018.stl	3M	UPR_018_line_ext	11
	☒ asm_ur_cent_22t_4a_lp.stl	3M	UPR_022_line_ext	11
024-776	☒ asm_ur_cent_17t_4a_lp_018	3M	UPR_018	11
	☒ asm_ur_cent_17t_4a_lp.stl	3M	UPR_022	11
	☒ asm_ur_cent_12t_5a_lp_018.stl	3M	UPR_018_line_ext	11
	☒ asm_ur_cent_12t_5a_lp.stl	3M	UPR_022_line_ext	11

Wire_Bonding: Buccal Brackets

Wire_Bonding

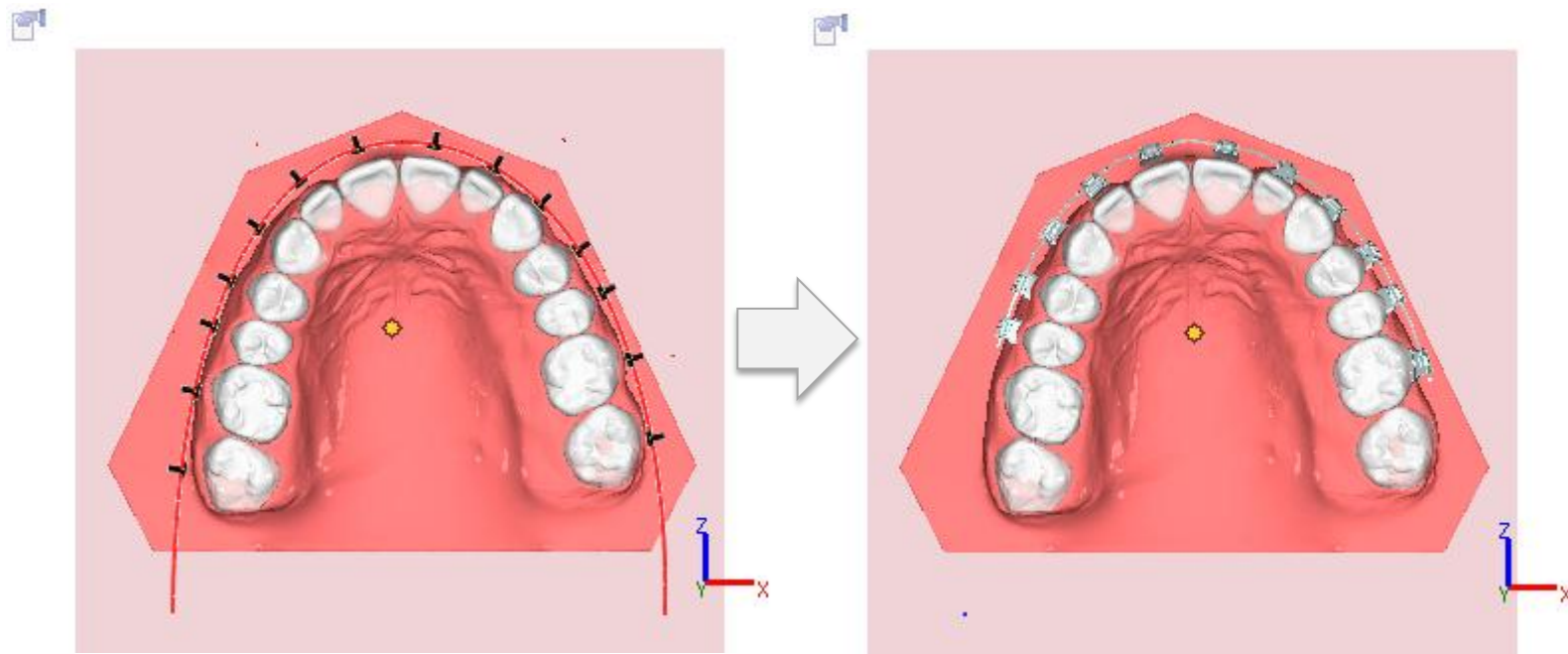


Select Bracket

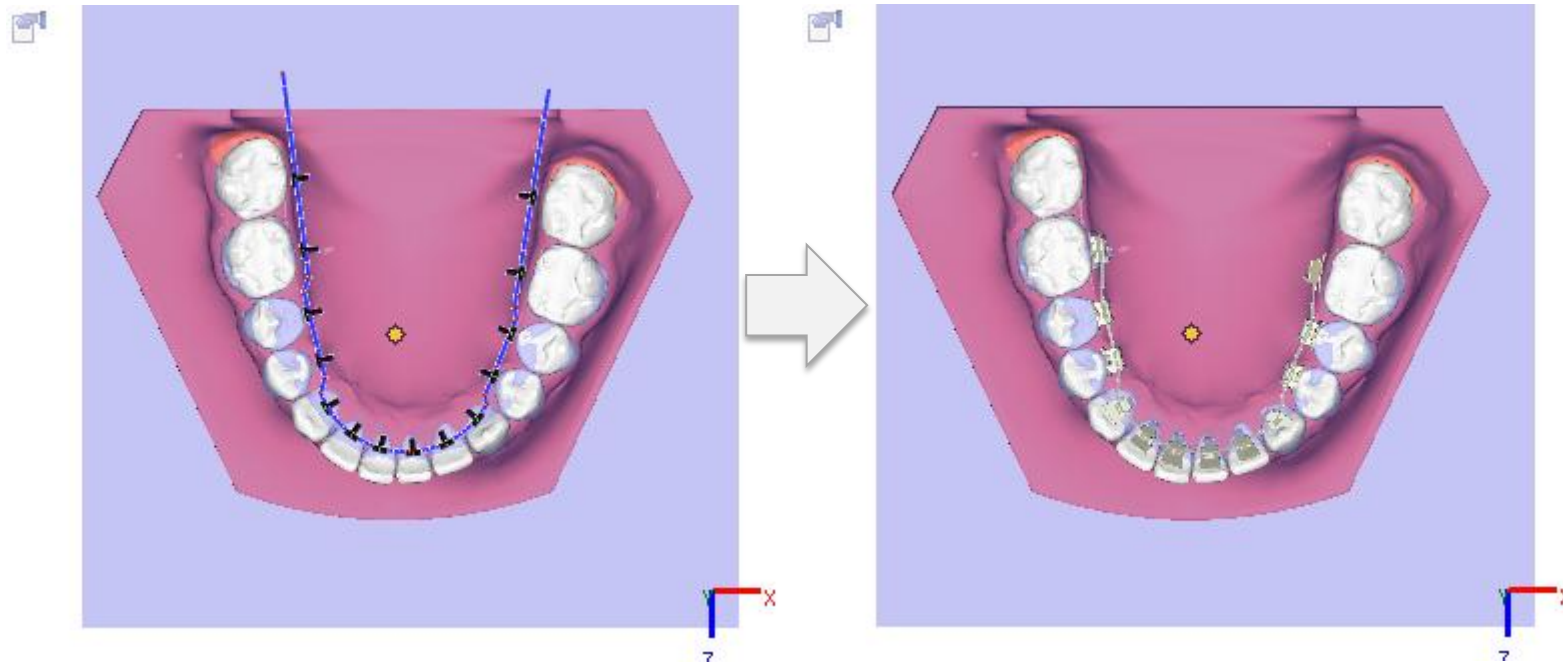
Search...	Search...	Search...	Search...	33
Order No.	Name	Manufacturer	Type	Tooth
017-681	☒ Victory Twin	3M		33
	☒ STB Lower Front	LLS Fillion		31;32;33
369-2110	☐ STb	Ormco	eXact	31;32;33
369-3110	☐ STb	Ormco	eXact	31;32;33
PH-10-46	☐ Phantom 2.0	Gestenco		11;12;13
	☒ Onyx System Lingual	Orthorobot	Dummy	33;43
none	☒ LLS front lower	LLS Fillion		31;32;33
	☒ Lingual_Front	Dentaurum		11;12;13
90-611-90	☒ In-Ovation L mtm	DENTSPLY GAC		31;32;33
17-163U-0010	☒ Experience LSB C	Tomy	SLB	33;43
17-1610-0010	☒ Experience LSB C	Tomy	SLB	31;32;33
17-1610-0050	☒ Experience LSB C	Tomy	SLB Narrow Base	31;32;33
17-1610-0050	☒ Experience LSB	Tomy	SLB Narrow Base	31;32;33
17-163U-0010	☒ Experience LSB	Tomy	SLB	33;43
17-1610-0010	☒ Experience LSB	Tomy	SLB	31;32;33
16-1630-0010	☒ Experience L C	Tomy	SLB	33;43

Wire_Bonding: Lingual Brackets

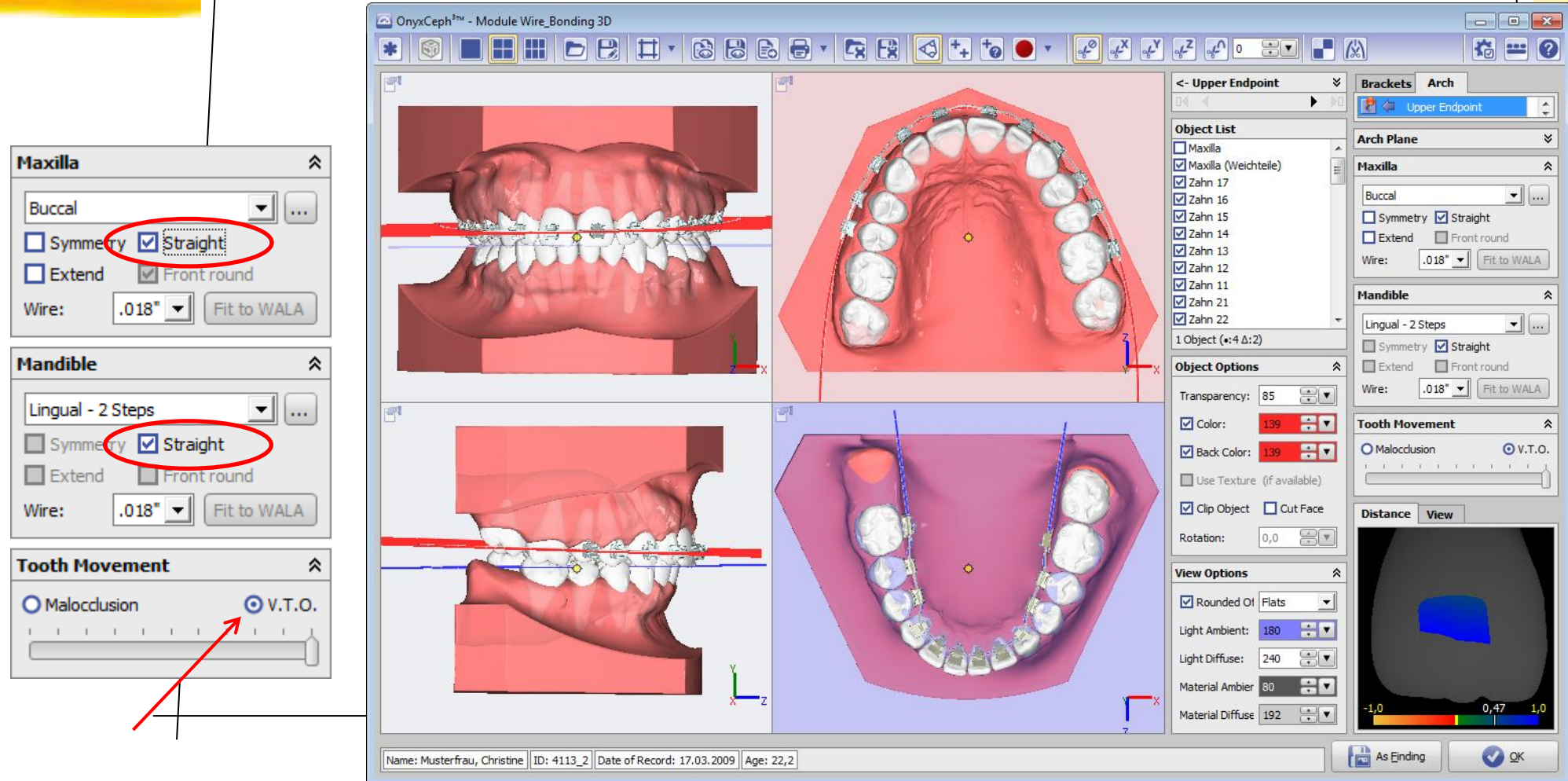
Wire_Bonding



Wire_Bonding

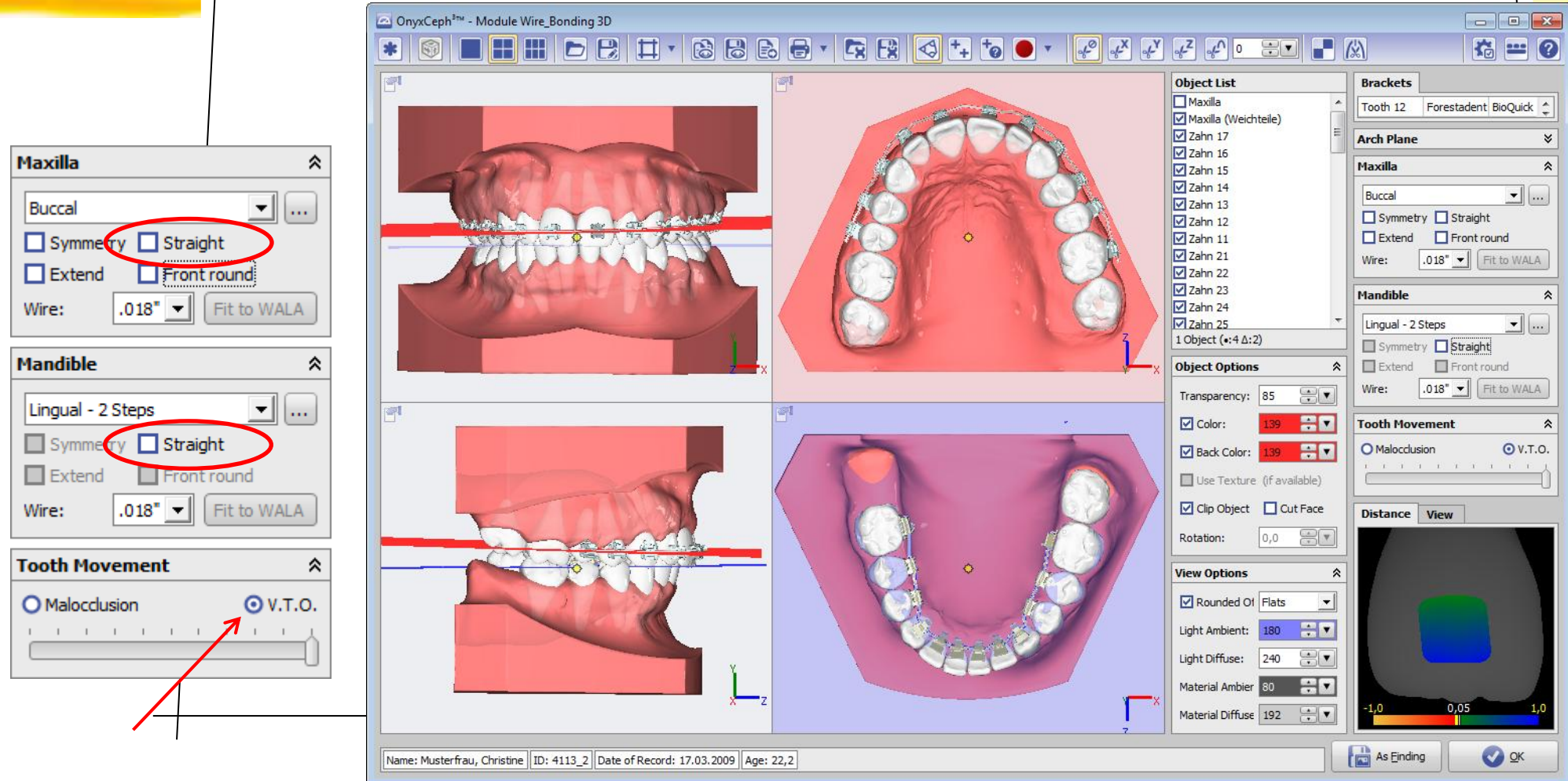


Wire_Bonding



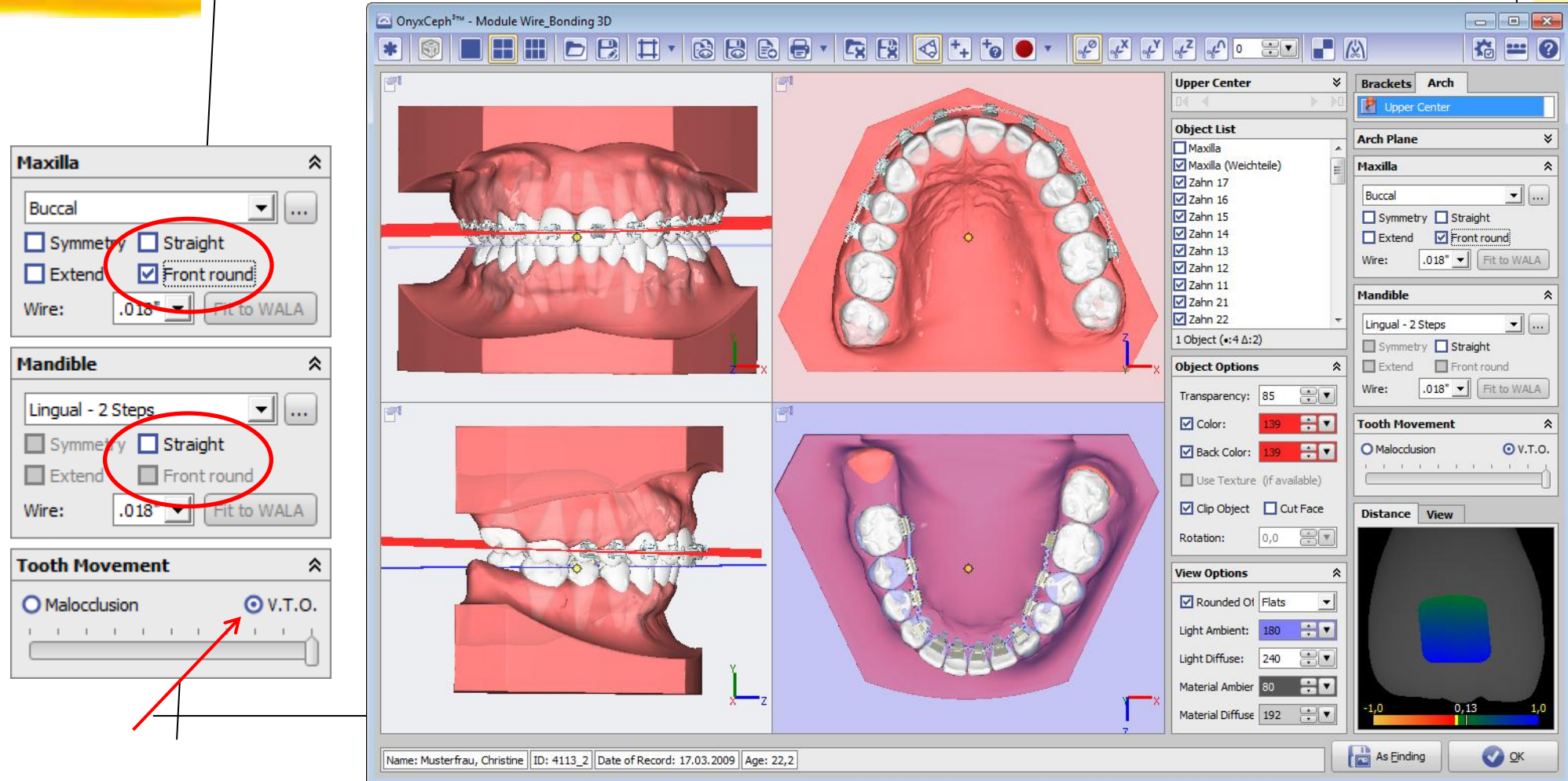
Wire_Bonding: Plain Straight Wire

Wire_Bonding



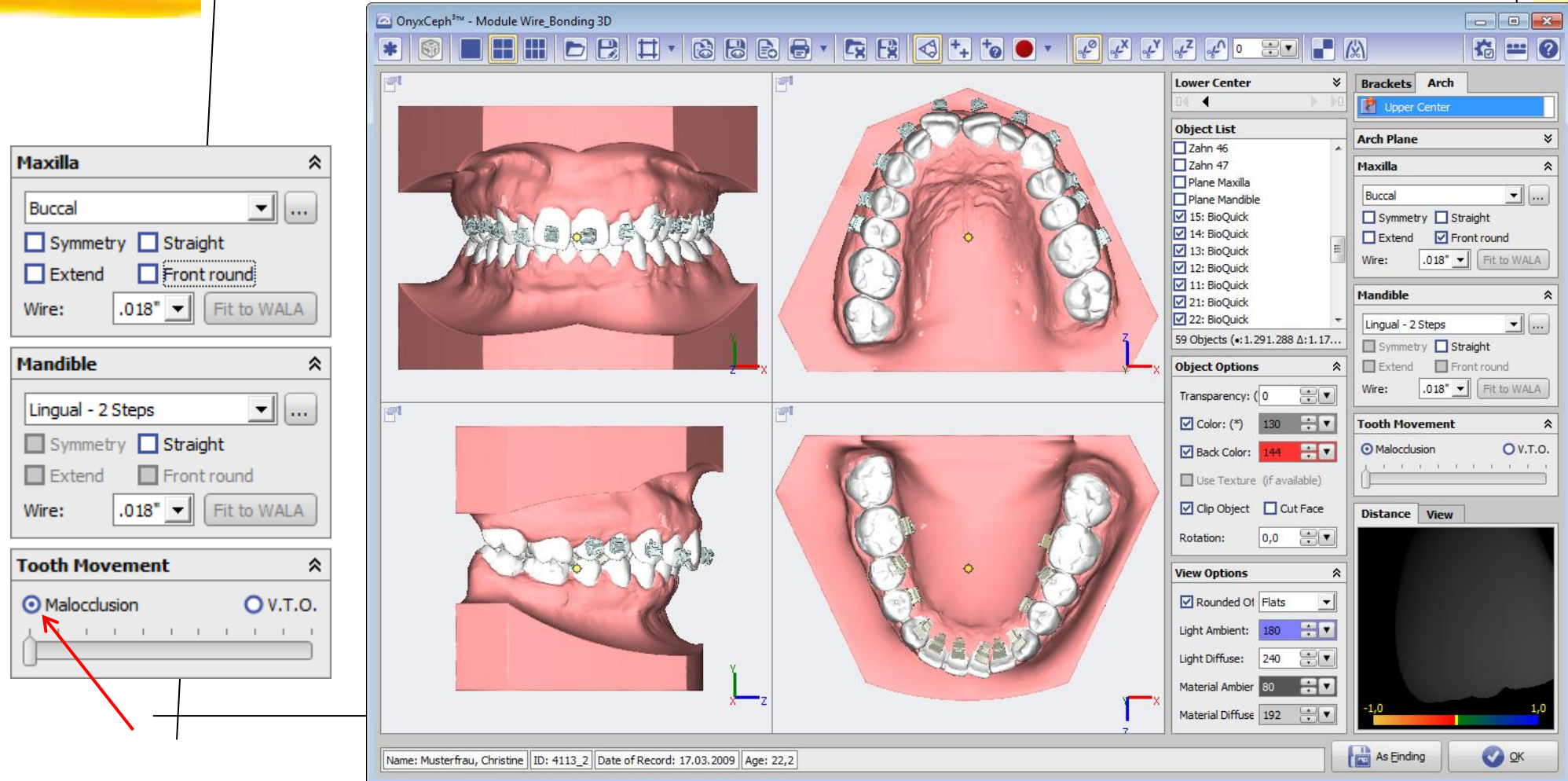
Wire_Bonding: Plain Non-Straight Wire

Wire_Bonding



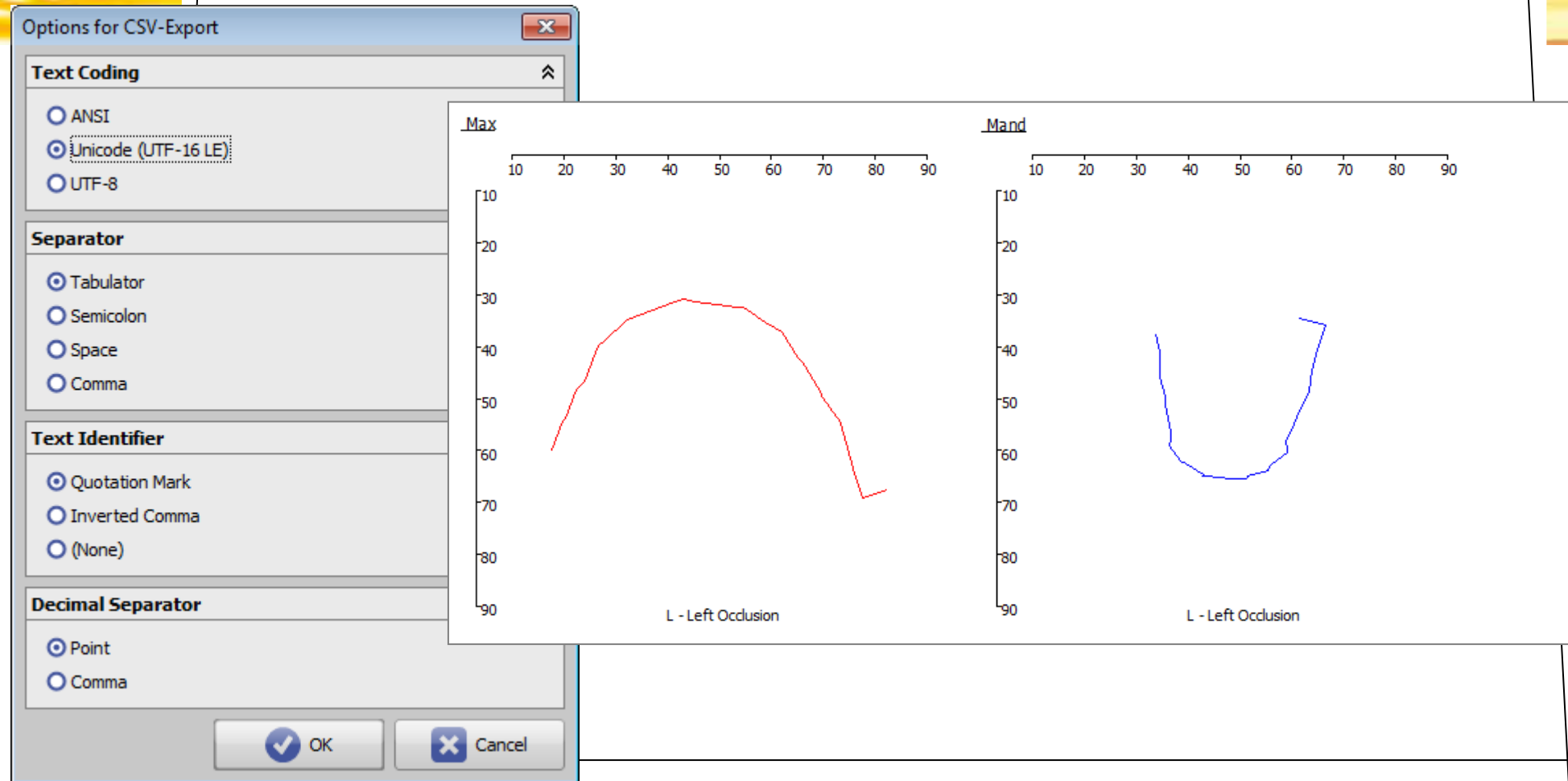
Wire_Bonding: Plain Non-Straight Wire With Straight Front 3-3

Wire_Bonding

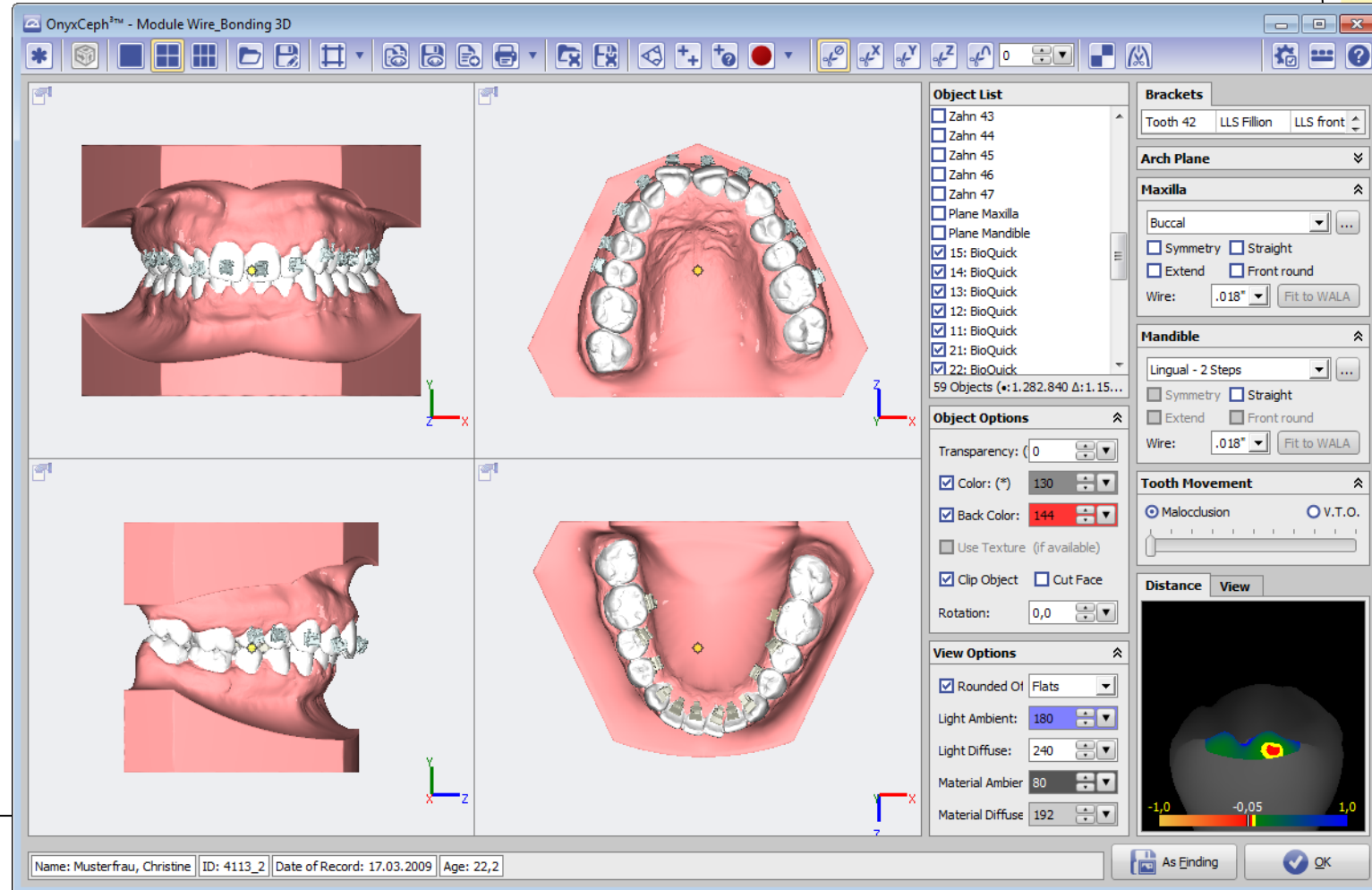


Wire_Bonding: Reset To Malocclusion

Wire_Bonding

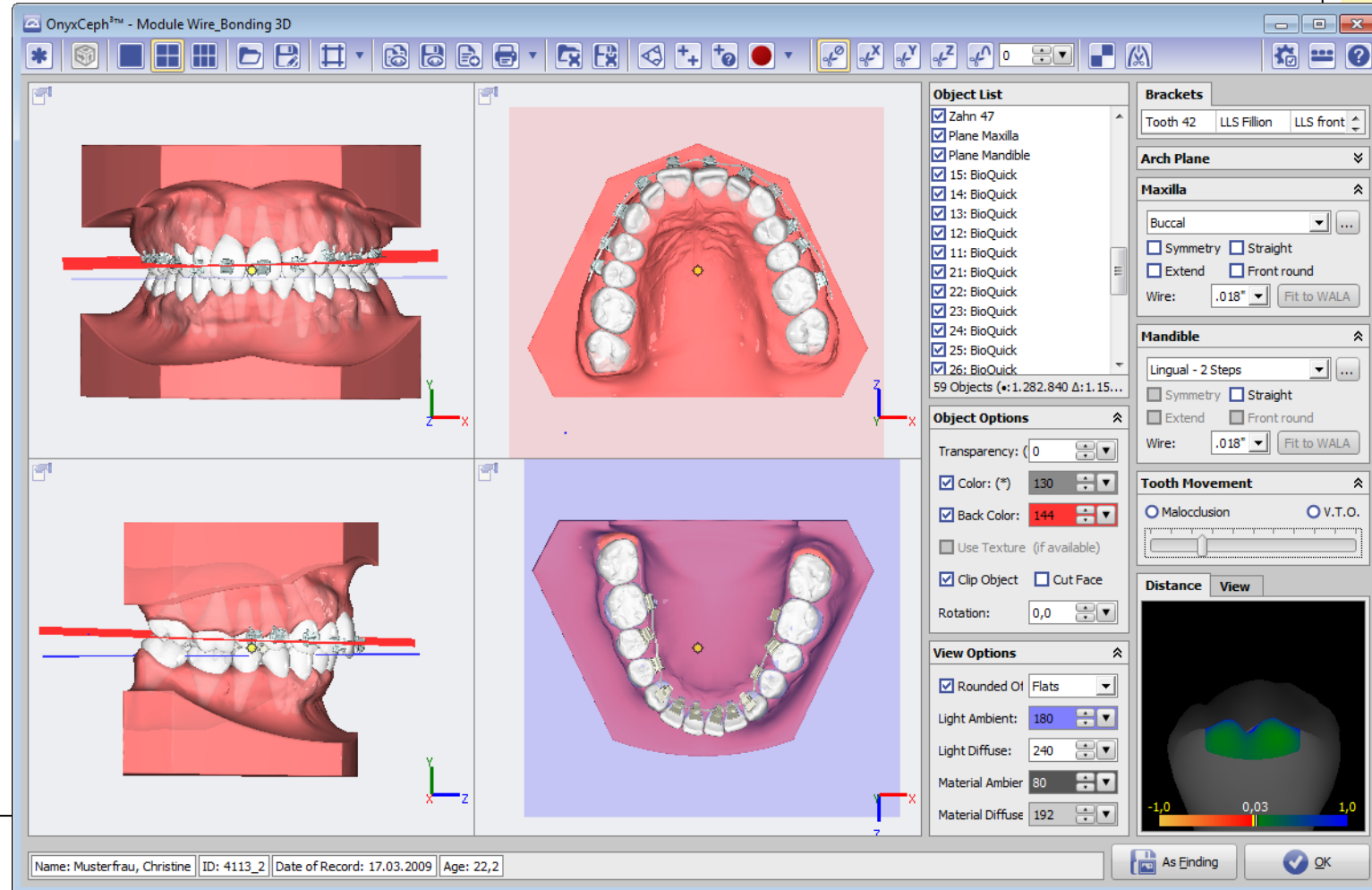
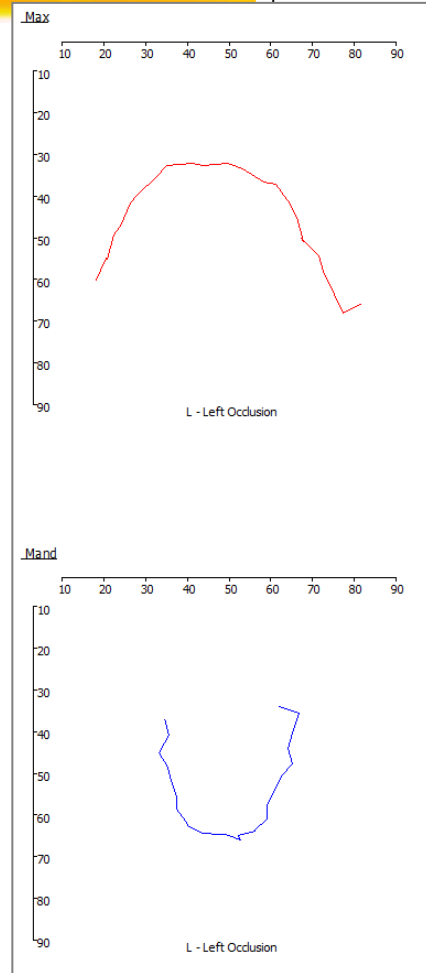


Wire_Bonding



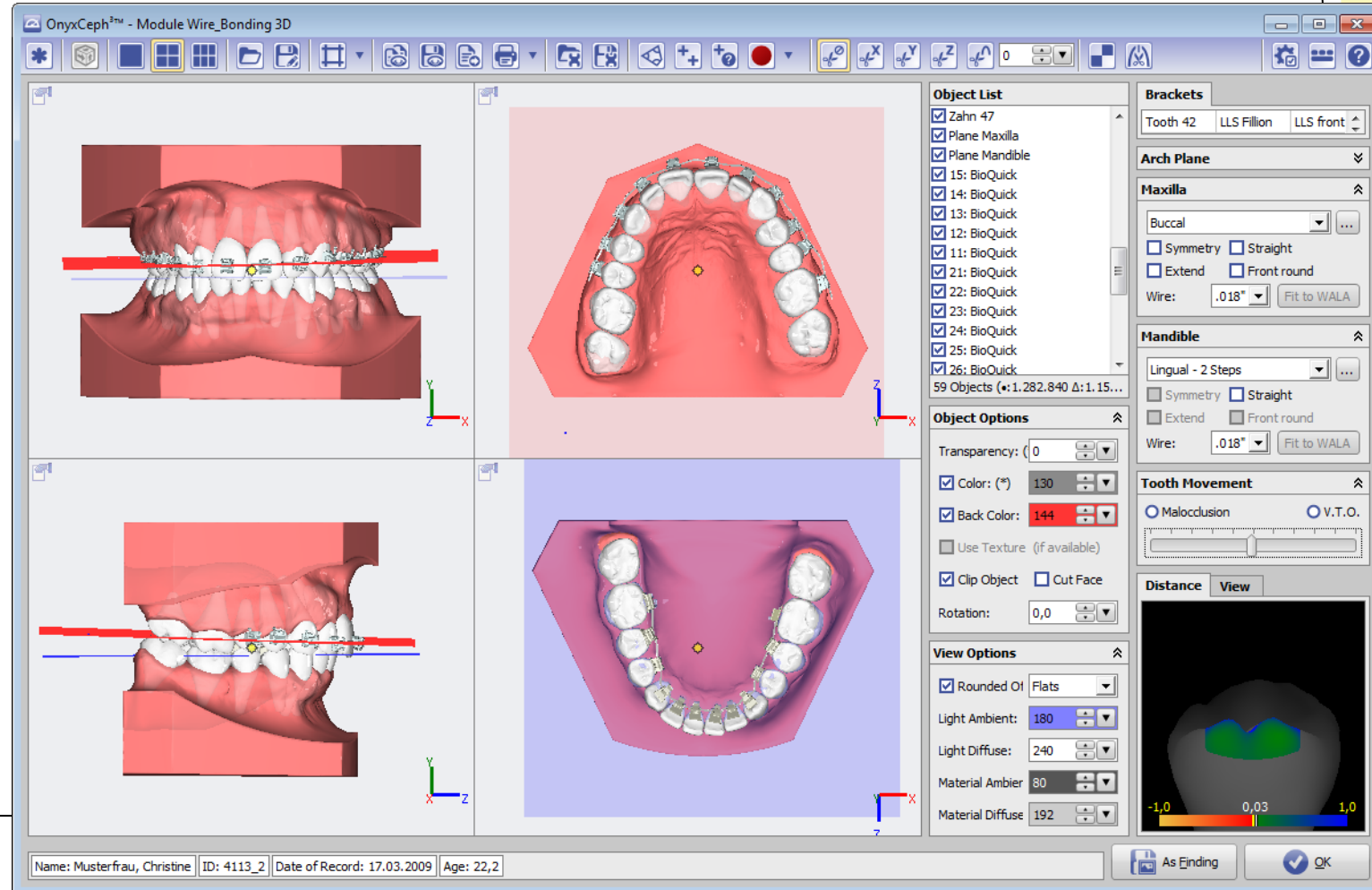
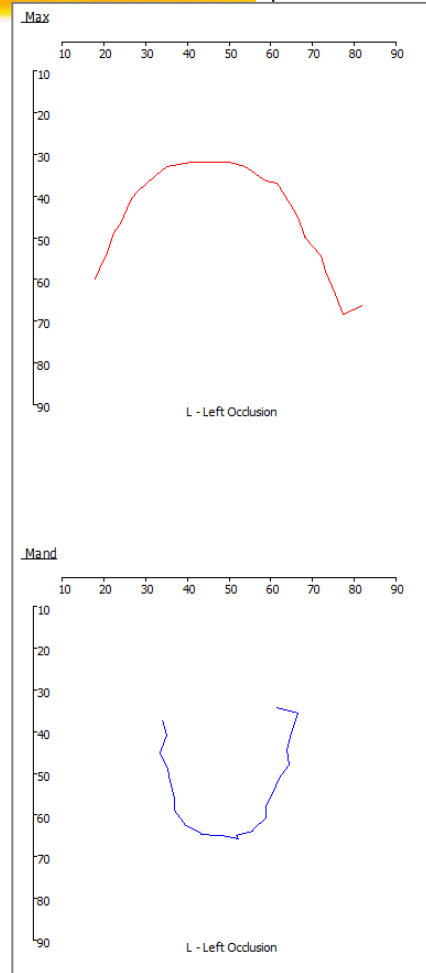
Wire_Bonding: Wire Steps - Malocclusion

Wire_Bonding



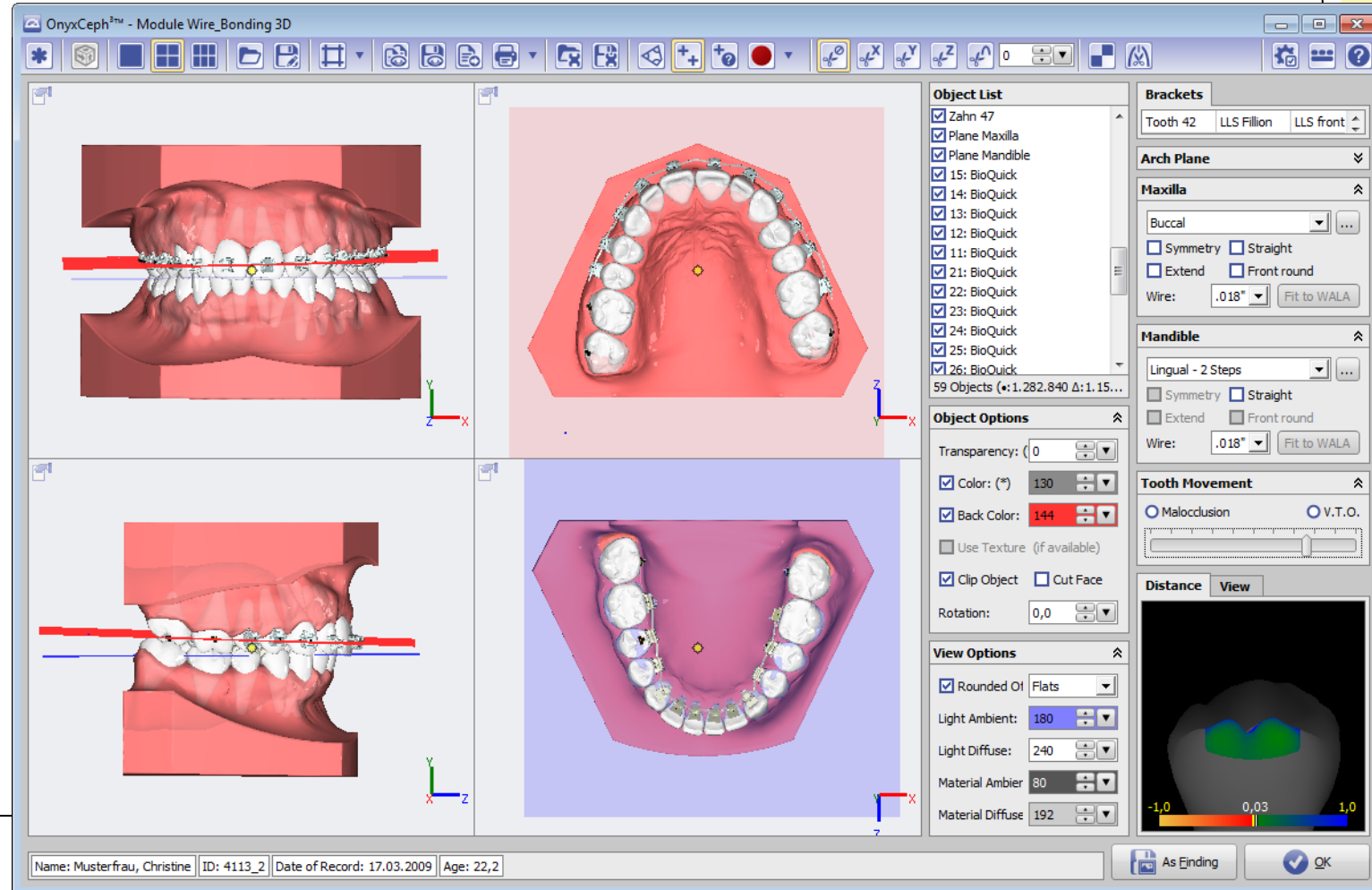
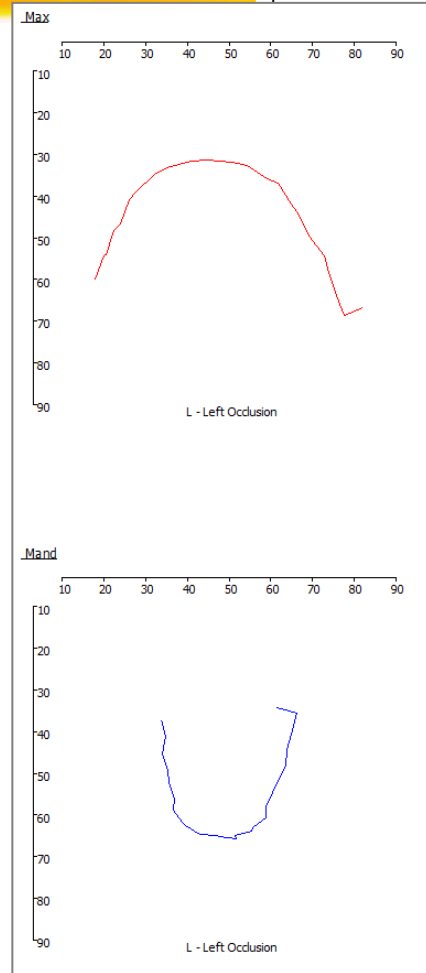
Wire_Bonding: Wire Steps – Step 1

Wire_Bonding



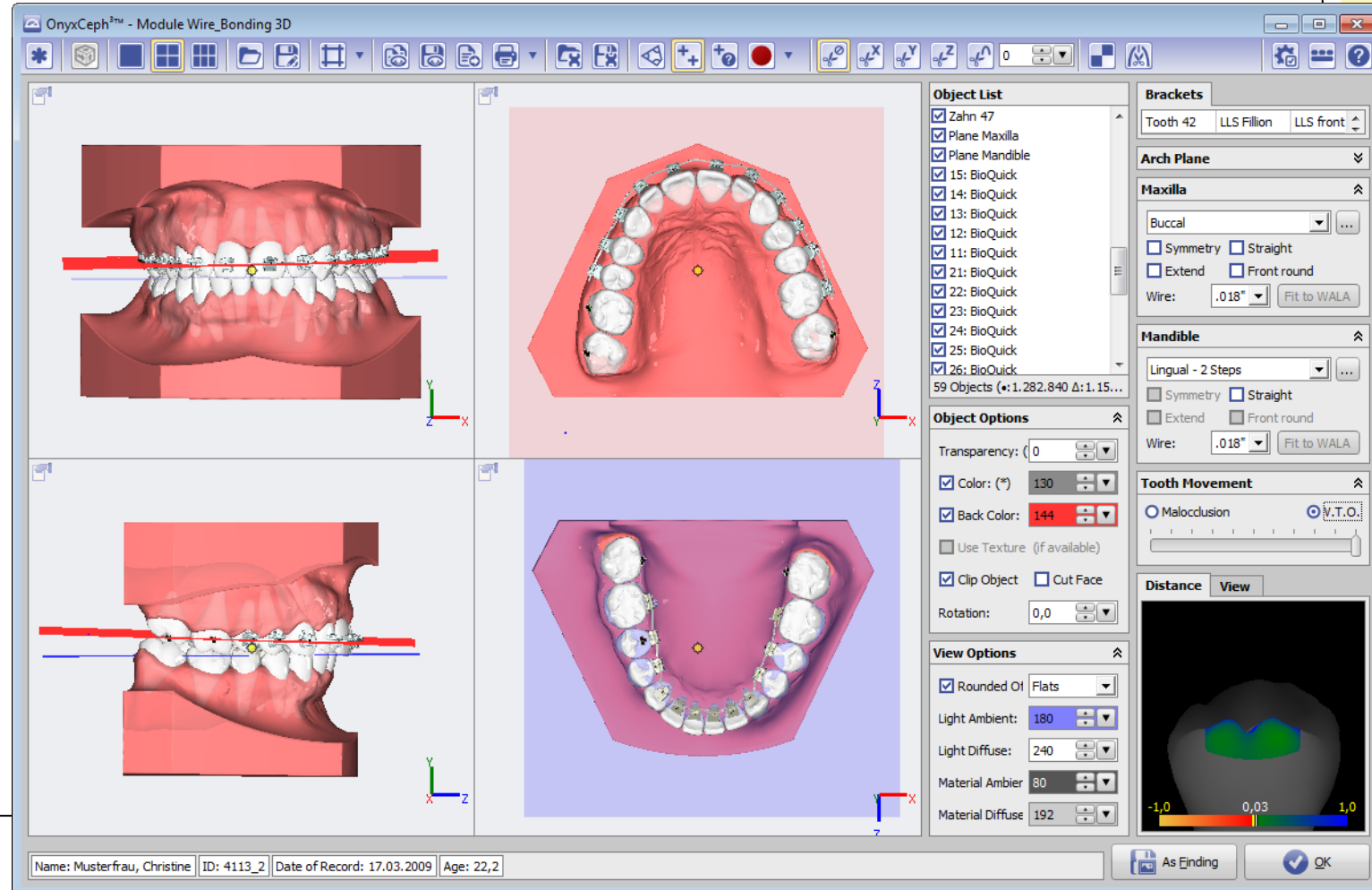
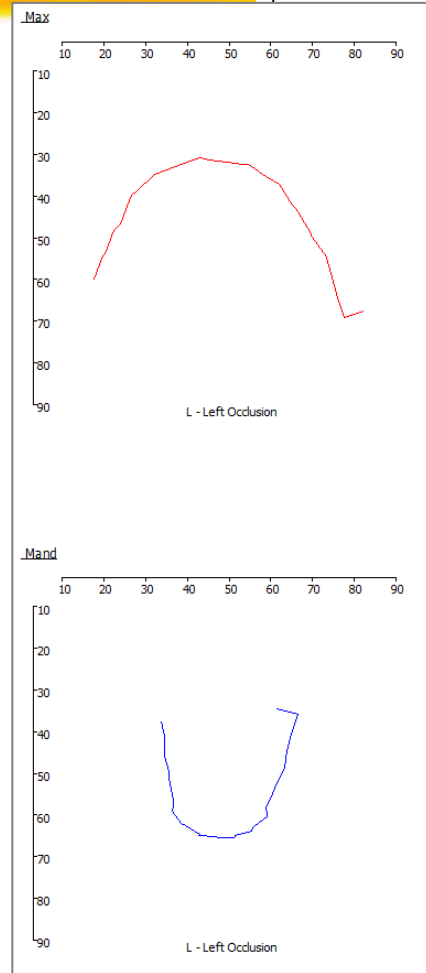
Wire_Bonding: Wire Steps – Step 2

Wire_Bonding



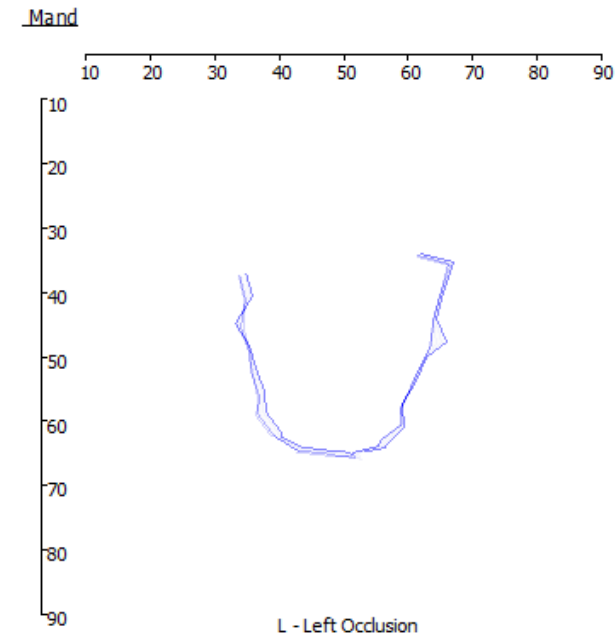
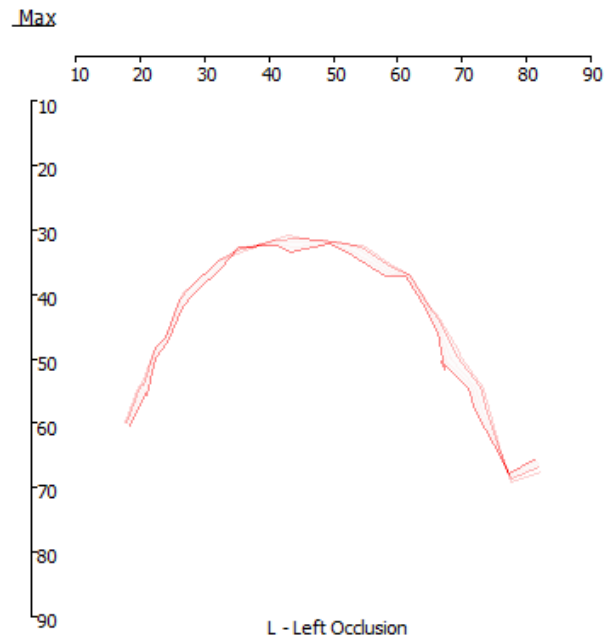
Wire_Bonding: Wire Steps – Step 3

Wire_Bonding



Wire_Bonding: Wire Steps – Final

Wire_Bonding



Wire_Bonding: Wire Steps (2D View)

Wire_Bonding



Add Image
Adjust Image
Digitize
Combine
Mirror
Treatment Simulation 3D
Image Comparison
Cast Adjust
Segmentation
FA_Bonding
V.T.O.3D
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Kylix 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D

Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

Workflow

FA_Bonding

Wire_Bonding

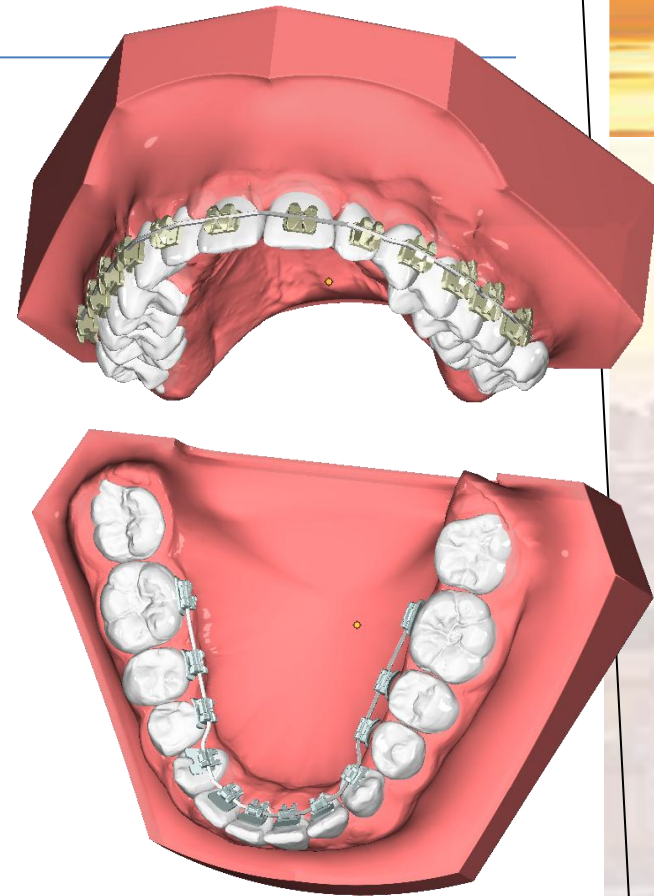
- Virtual Setup
- Bracket-/Wire-Placement

► Bracket Position Transfer

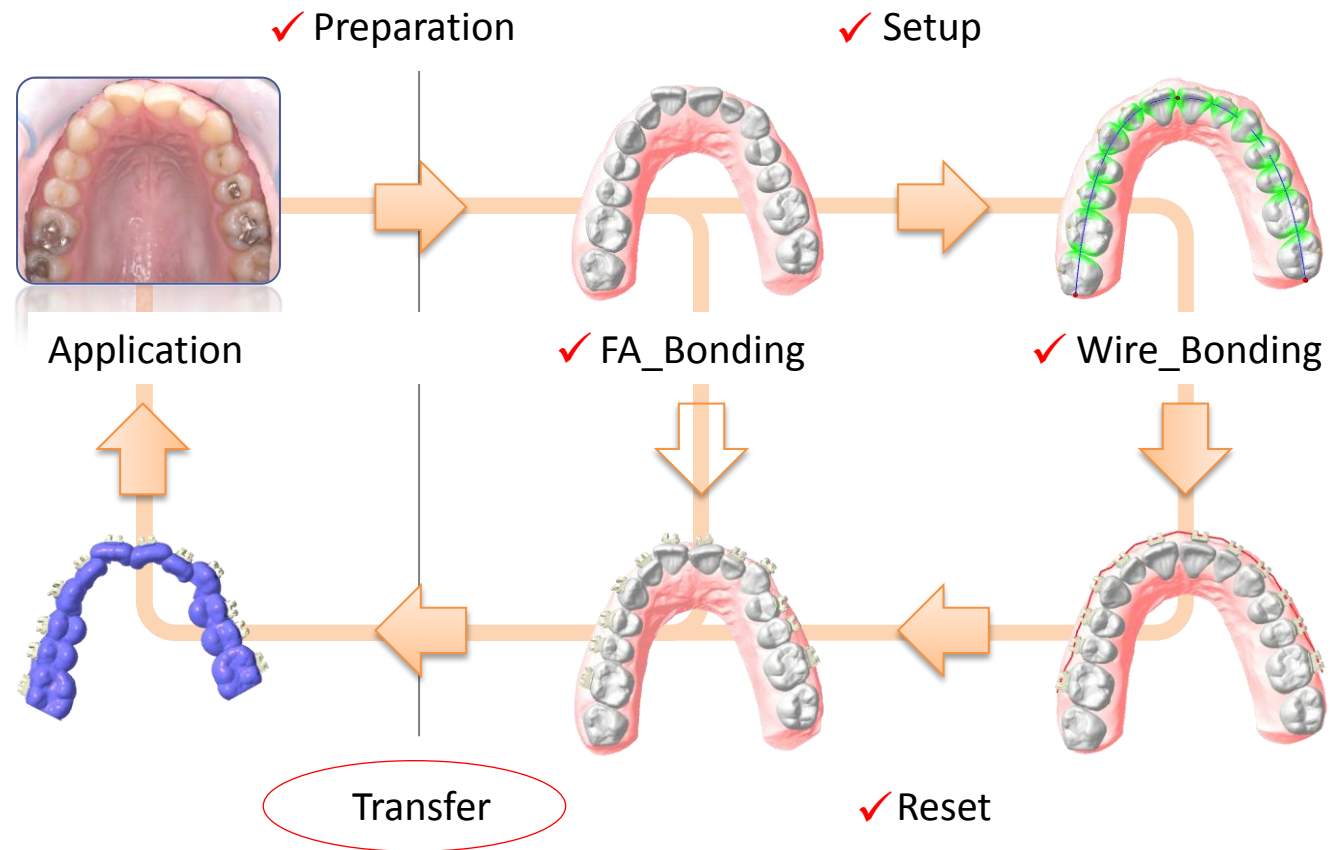
- ▷ Indirect Methods
- ▷ Direct/Mixed Methods

Other Planning Options (Examples)

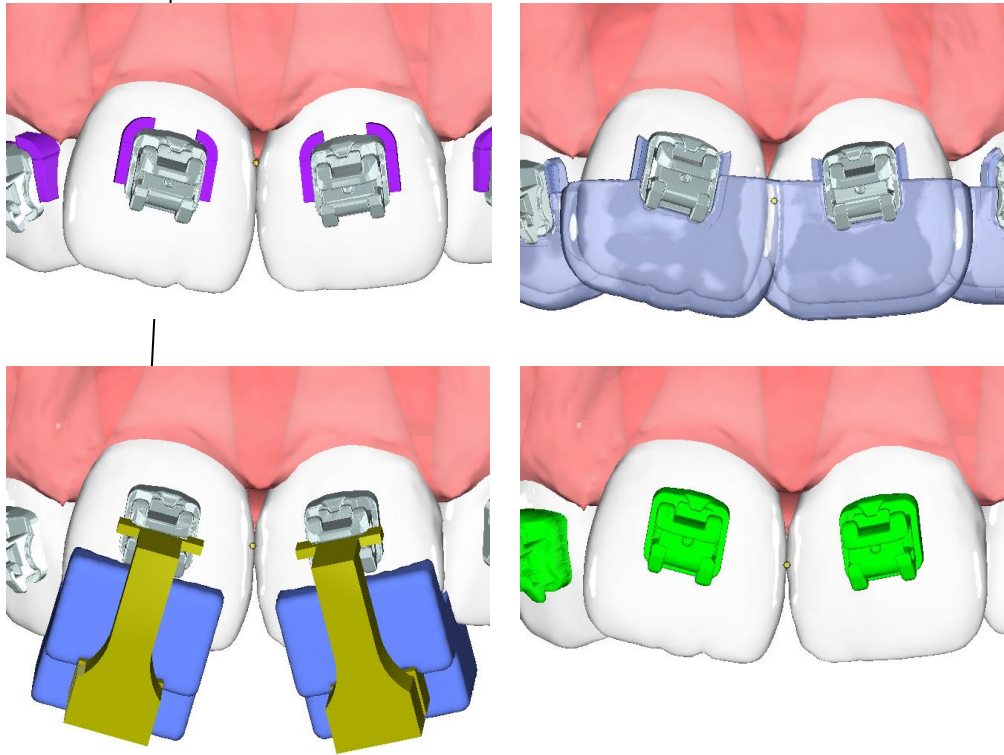
Summary



Transfer



Transfer



Add Image
Adjust Image
Digitize
Combine
Mirror
Treatment Simulation 3D
Image Comparison
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FA_Bonding
V.T.O.3D
Wire Bonding
Kylix 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D

Transfer

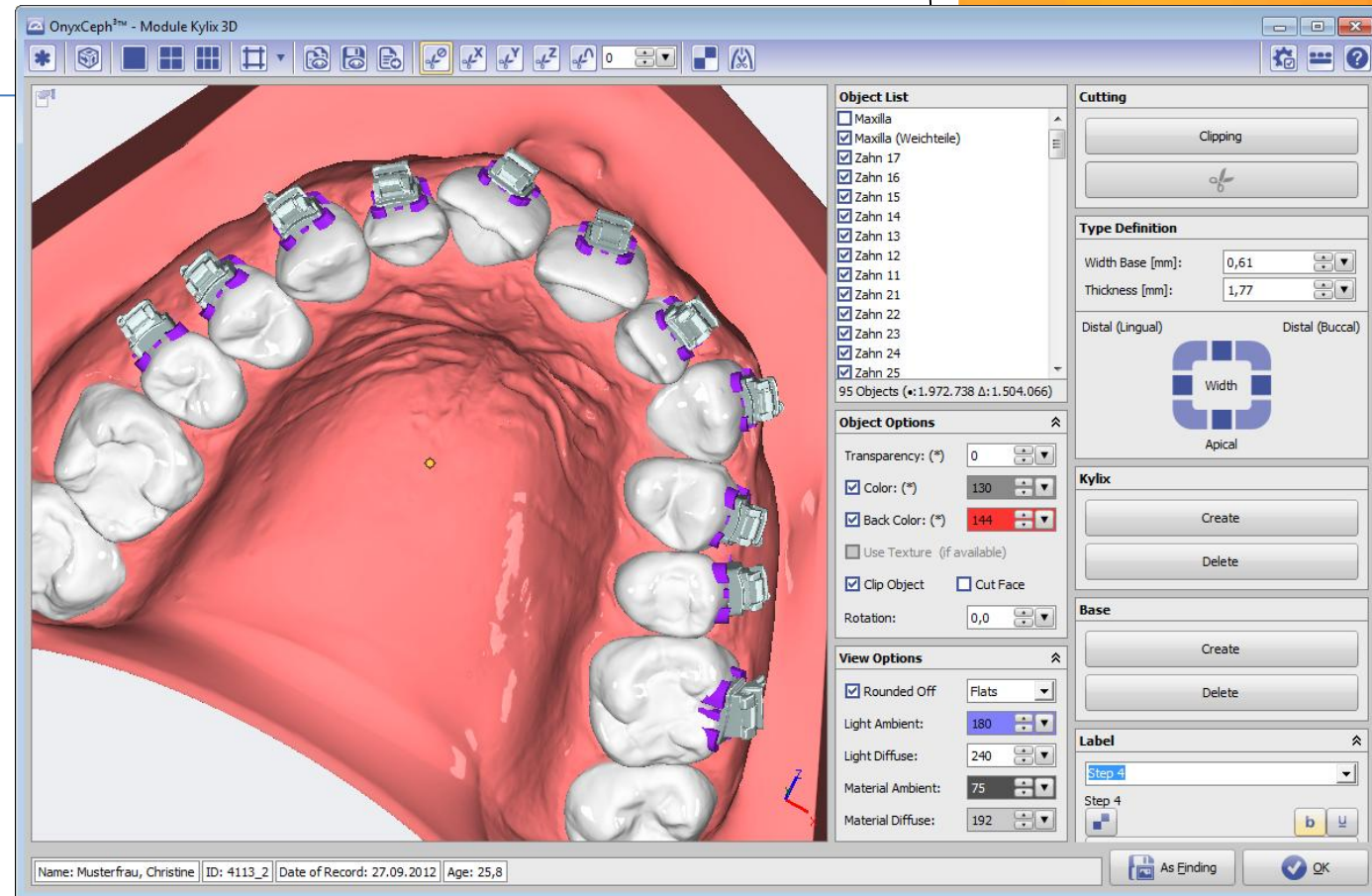
Transfer

Method	Indirect Methods (Model)						Direct Methods (Patient)					
	<u>Position</u>			<u>Alignment</u>			<u>Position</u>			<u>Alignment</u>		
	<u>x</u>	<u>y</u>	<u>z</u>	<i>a</i>	<i>i</i>	<i>r</i>	<u>x</u>	<u>y</u>	<u>z</u>	<i>a</i>	<i>i</i>	<i>r</i>
Kylix_3D												
<i>Individua</i>												
<i>Bosboom</i>												
<i>Orthorobot</i>												
Bonding_Trays_3D												
Splint_3D												
Bracket_Adapt_3D												

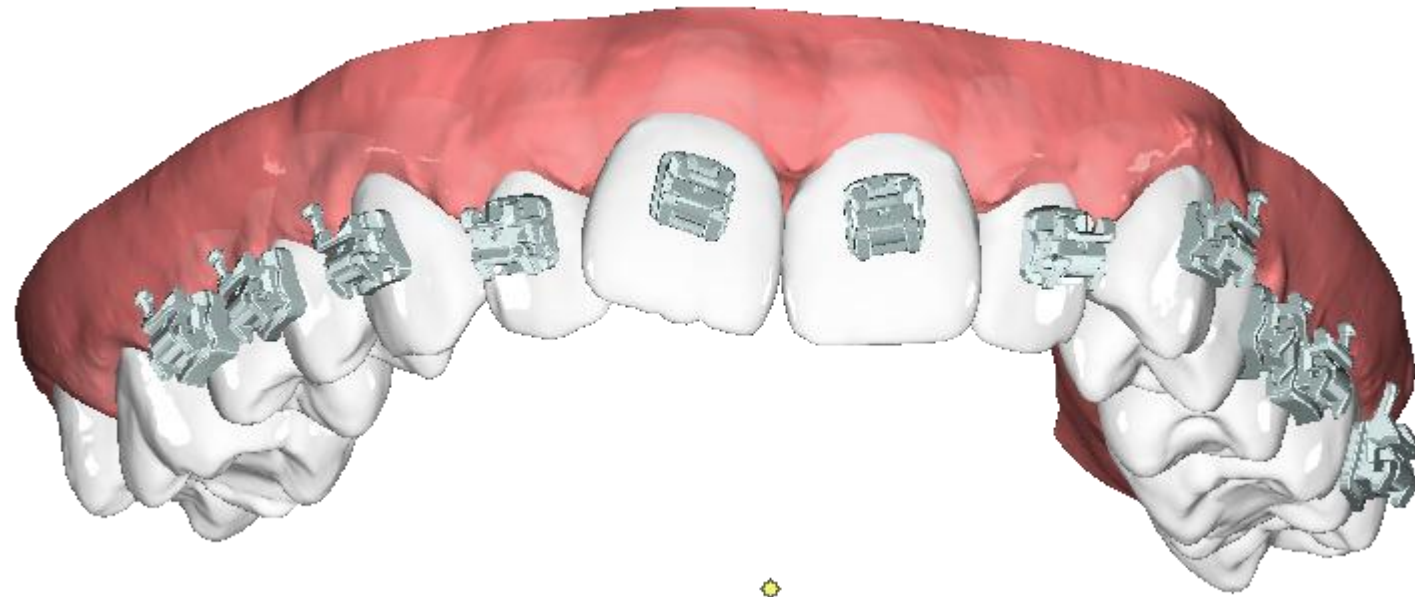
(x, y, z) – Position; (*a*, *i*, *r*) – Alignment

Transfer

Add Image
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Combine
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Treatment Simulation 3D
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Cast Adjust
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V.T.O.3D
Wire Bonding
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Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D

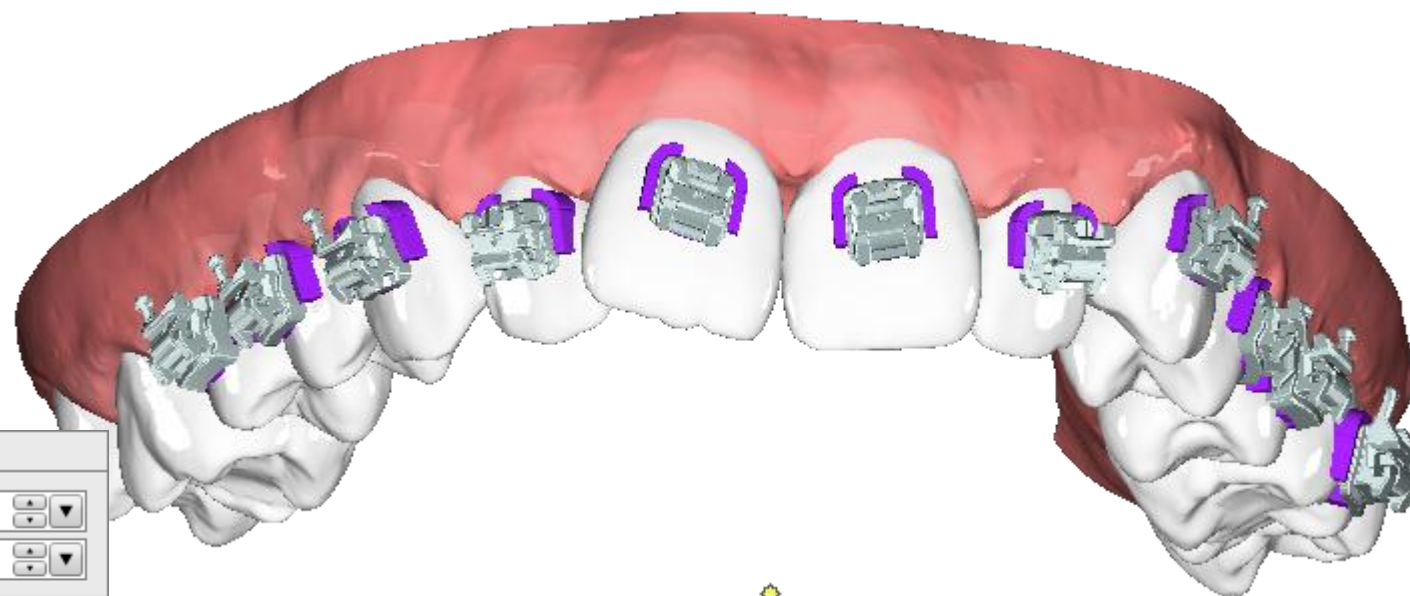


Transfer



Module Kylix

Transfer



Type Definition

Width Base [mm]:

Thickness [mm]:

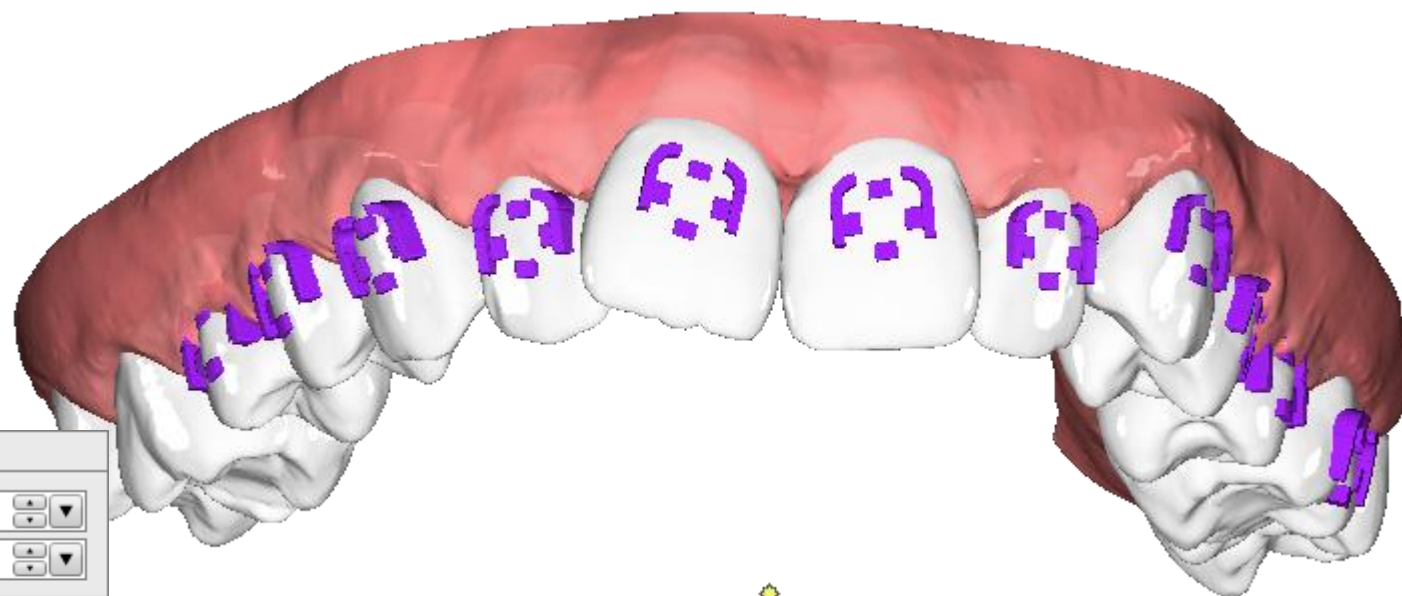
Distal (Lingual) Distal (Buccal)



Width

Apical

Transfer



Type Definition

Width Base [mm]:

Thickness [mm]:

Distal (Lingual) Distal (Buccal)



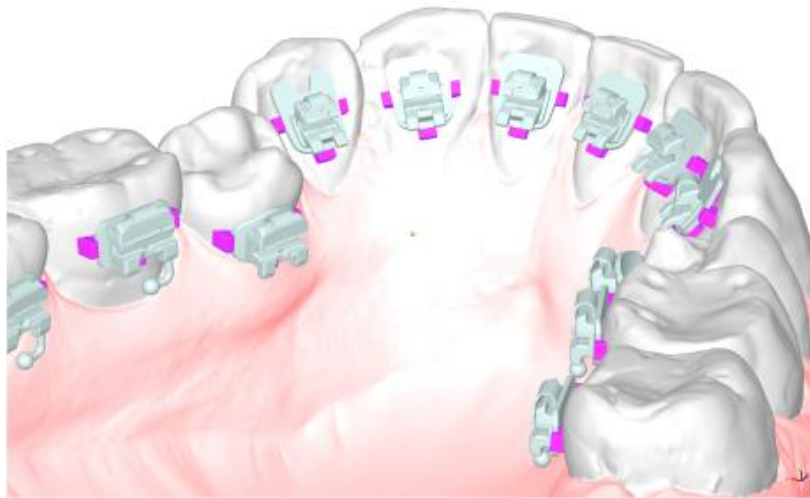
Width

Apical

Transfer



Transfer



Transfer



- Add Image
- Adjust Image
- Digitize
- Combine
- Mirror
- Treatment Simulation 3D
- Image Comparison
- Cast Adjust
- Segmentation
- FA_Bonding
- V.T.O.3D
- Wire Bonding
- Kylix 3D**
- Bonding Trays 3D
- Splint 3D
- Bracket Adapt
- Aligner 3D
- Retainer 3D
- Waefer Creation 3D

Transfer

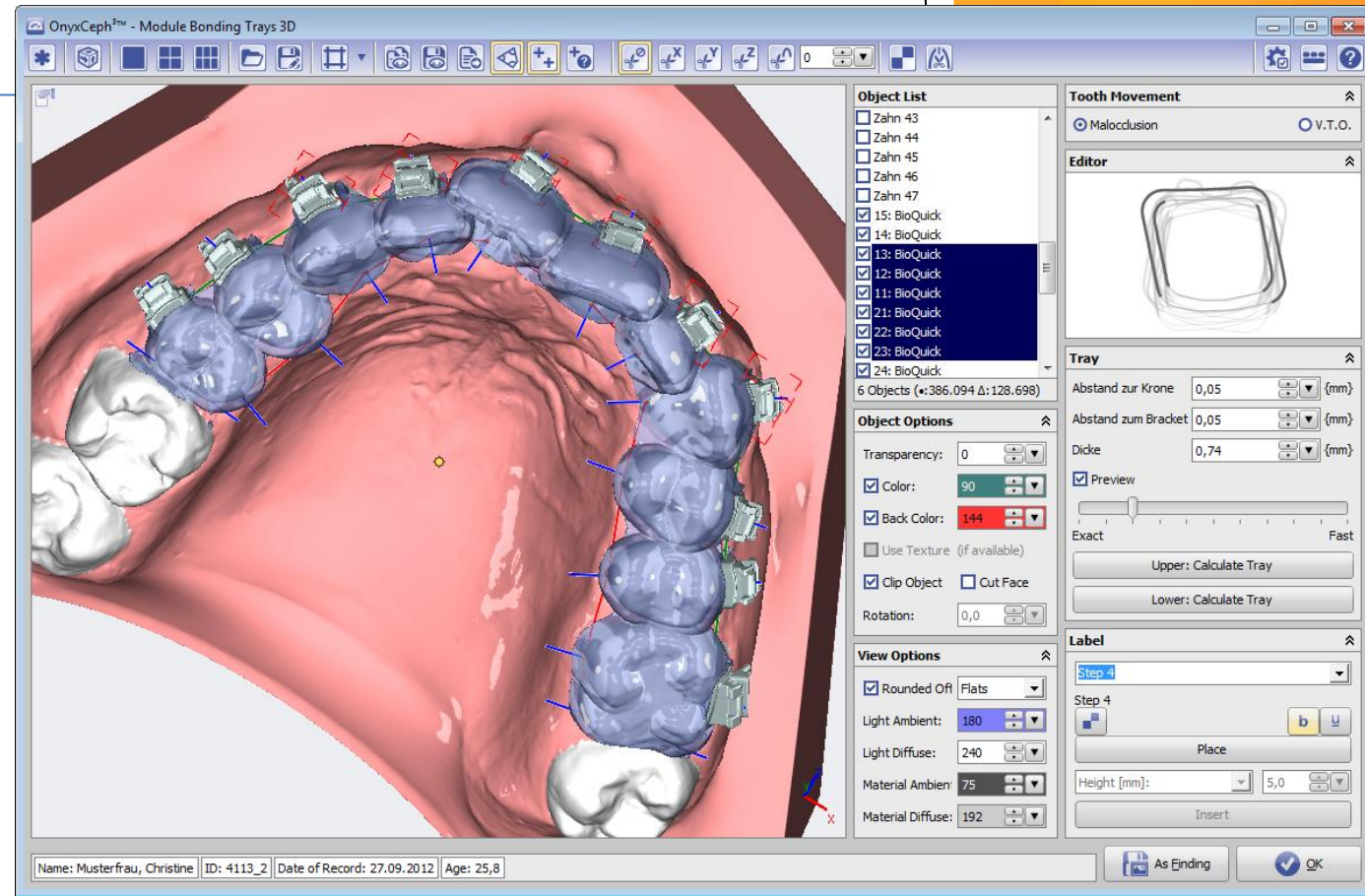
Transfer

Method	Indirect Methods (Model)						Direct Methods (Patient)					
	<u>Position</u>			<u>Alignment</u>			<u>Position</u>			<u>Alignment</u>		
	<u>x</u>	<u>y</u>	<u>z</u>	<i>a</i>	<i>i</i>	<i>r</i>	<u>x</u>	<u>y</u>	<u>z</u>	<i>a</i>	<i>i</i>	<i>r</i>
Kylix_3D												
<i>Individua</i>												
<i>Excent</i>												
<i>Orthorobot</i>												
Bonding_Trays_3D												
Splint_3D												
Bracket_Adapt_3D												

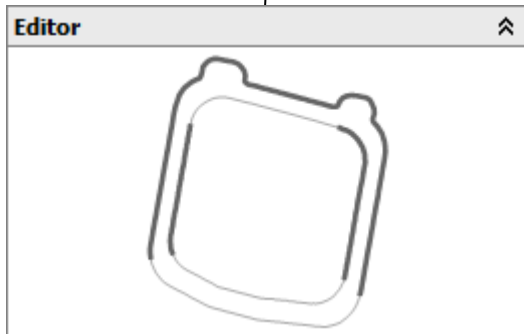
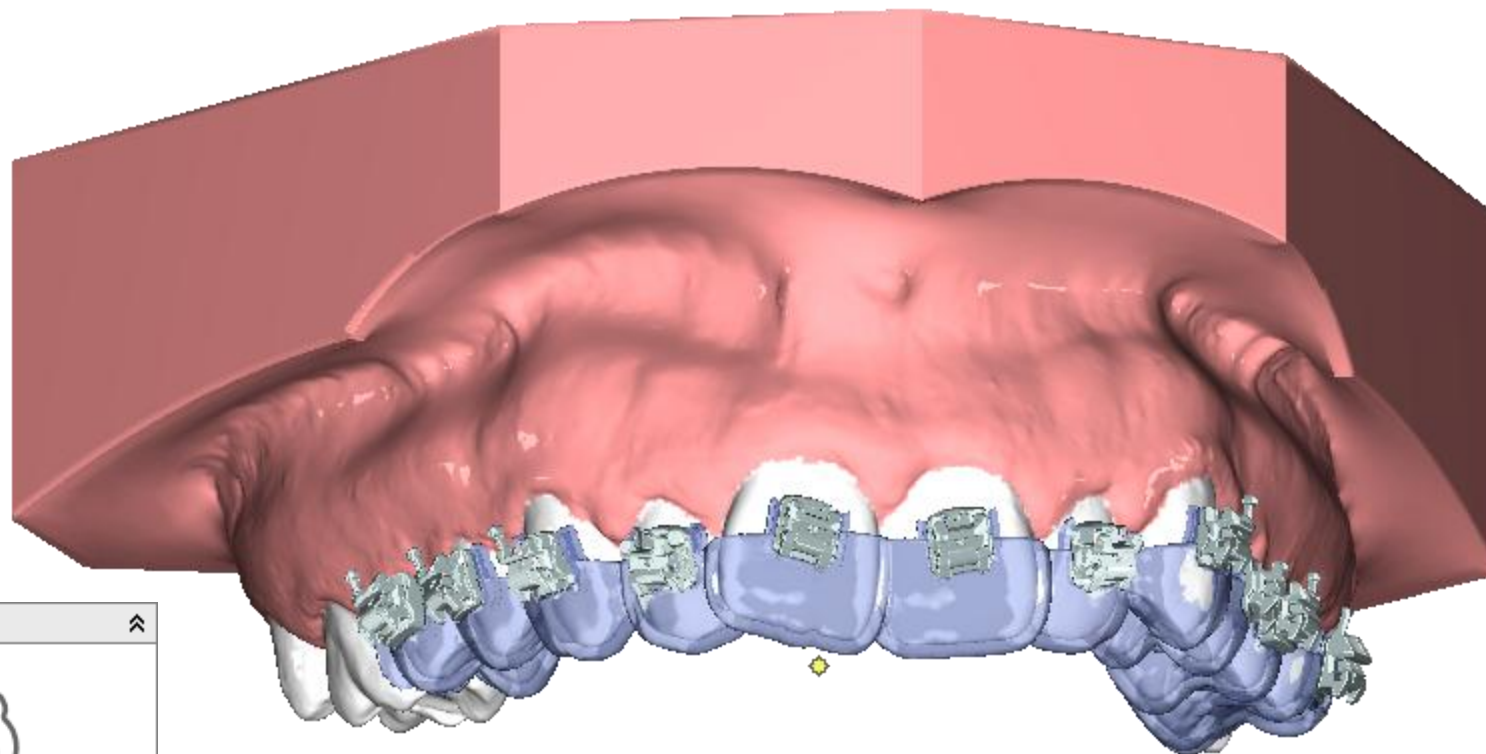
(x, y, z) – Position; (*a*, *i*, *r*) – Alignment

Transfer

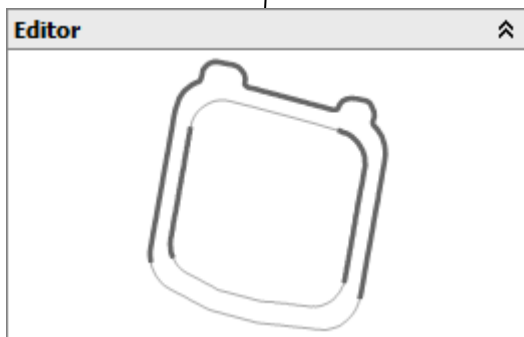
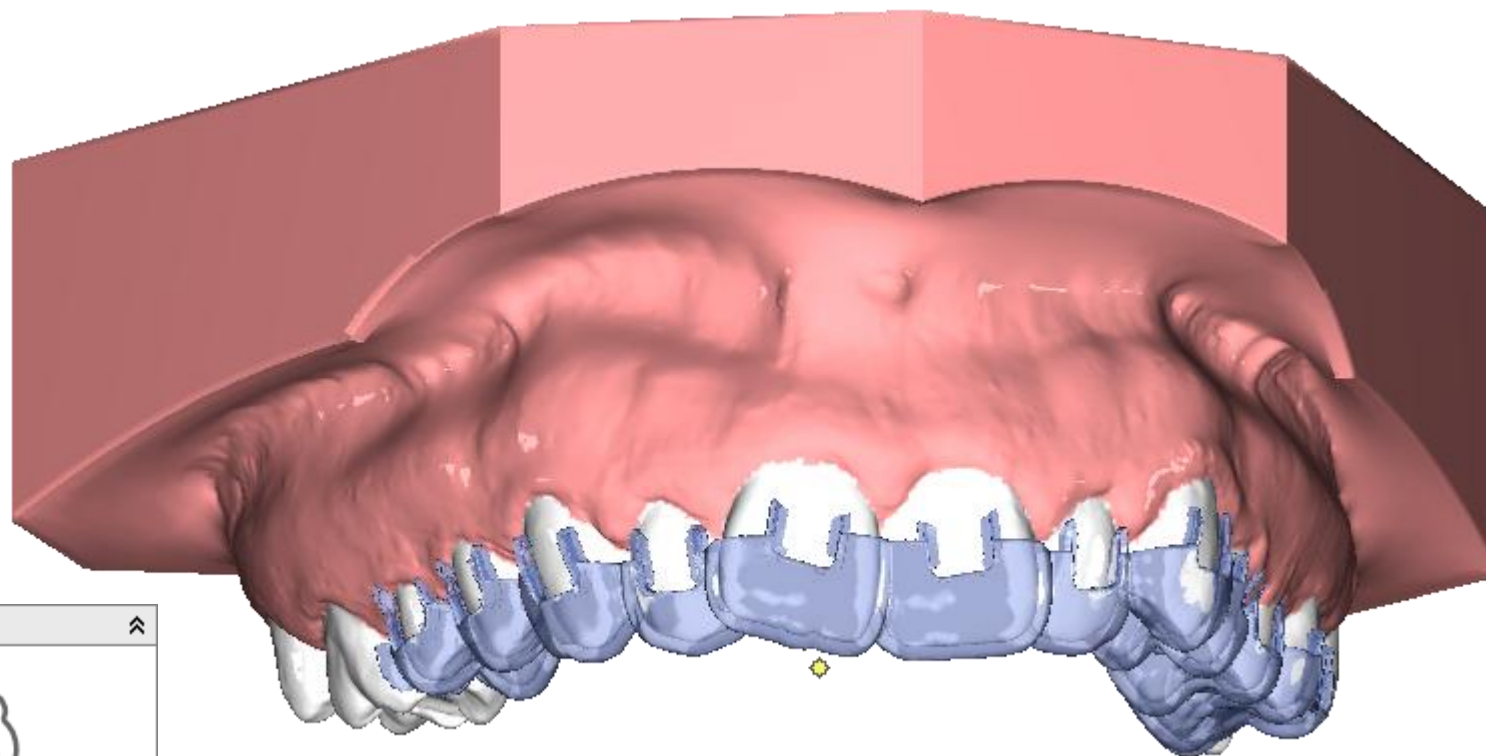
Add Image
Adjust Image
Digitize
Combine
Mirror
Treatment Simulation 3D
Image Comparison
Cast Adjust
Segmentation
FA_Bonding
V.T.O.3D
Wire Bonding
Kylux 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Wafer Creation 3D



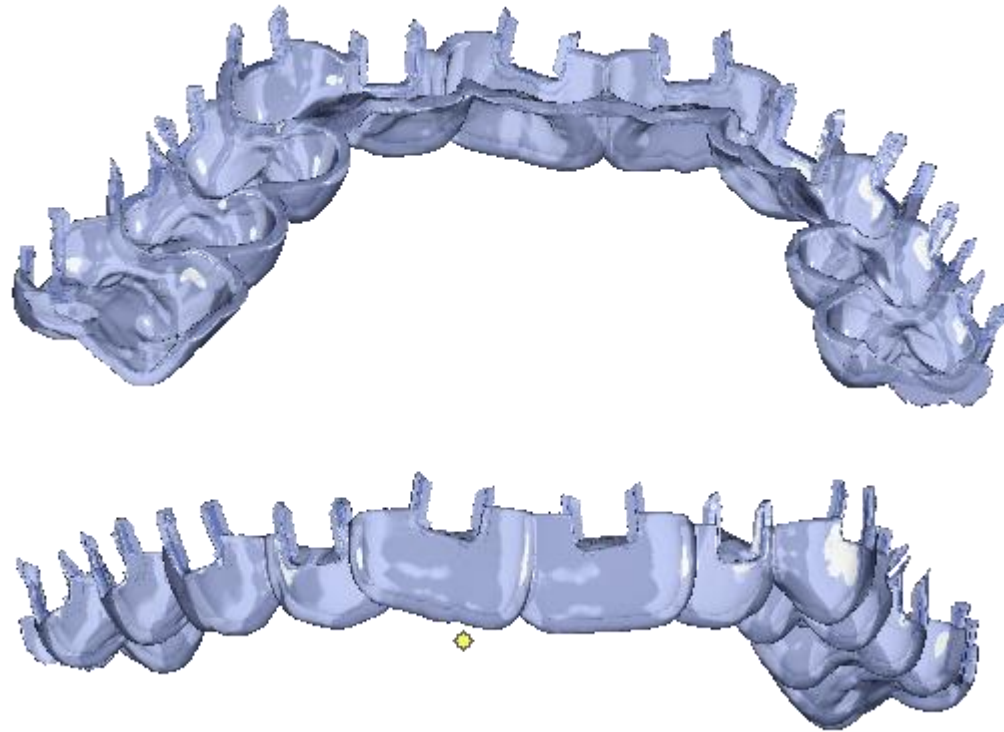
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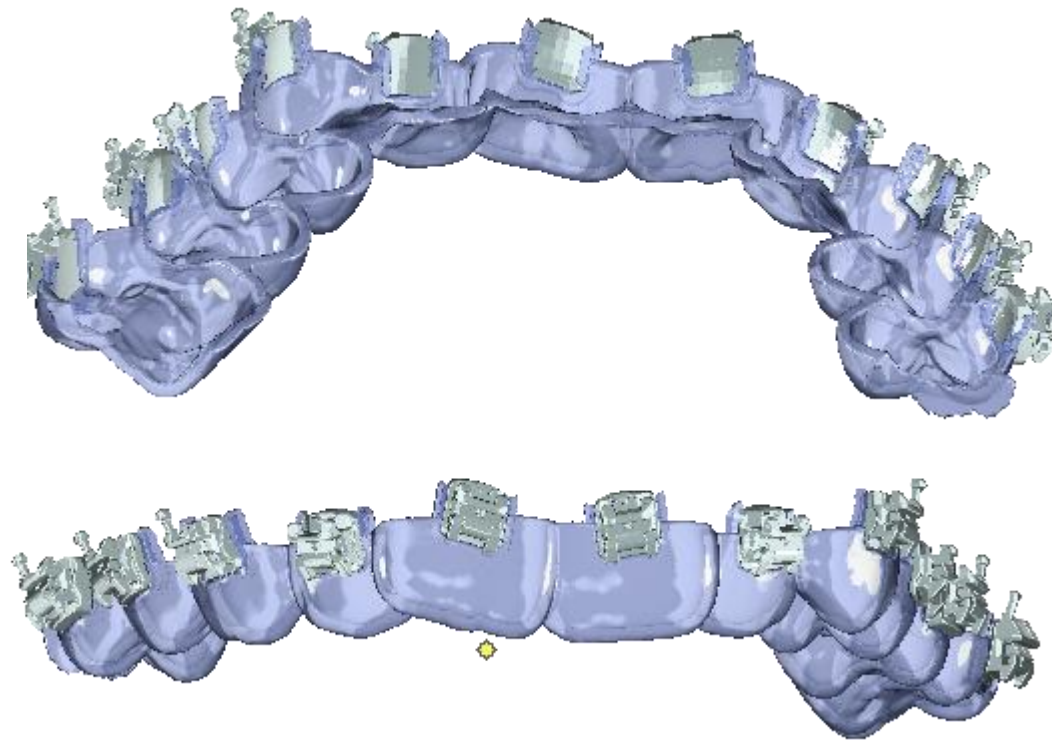
Transfer



Transfer

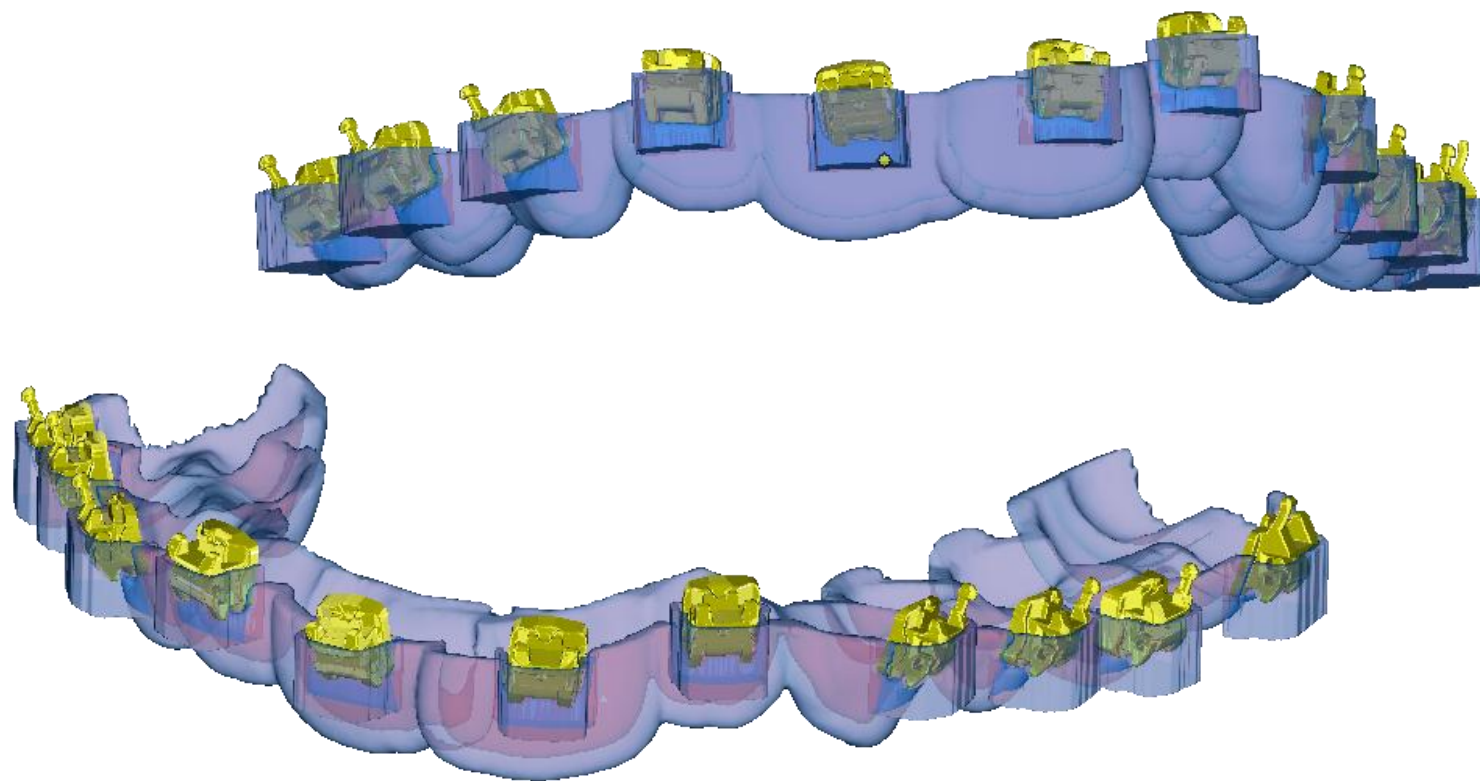


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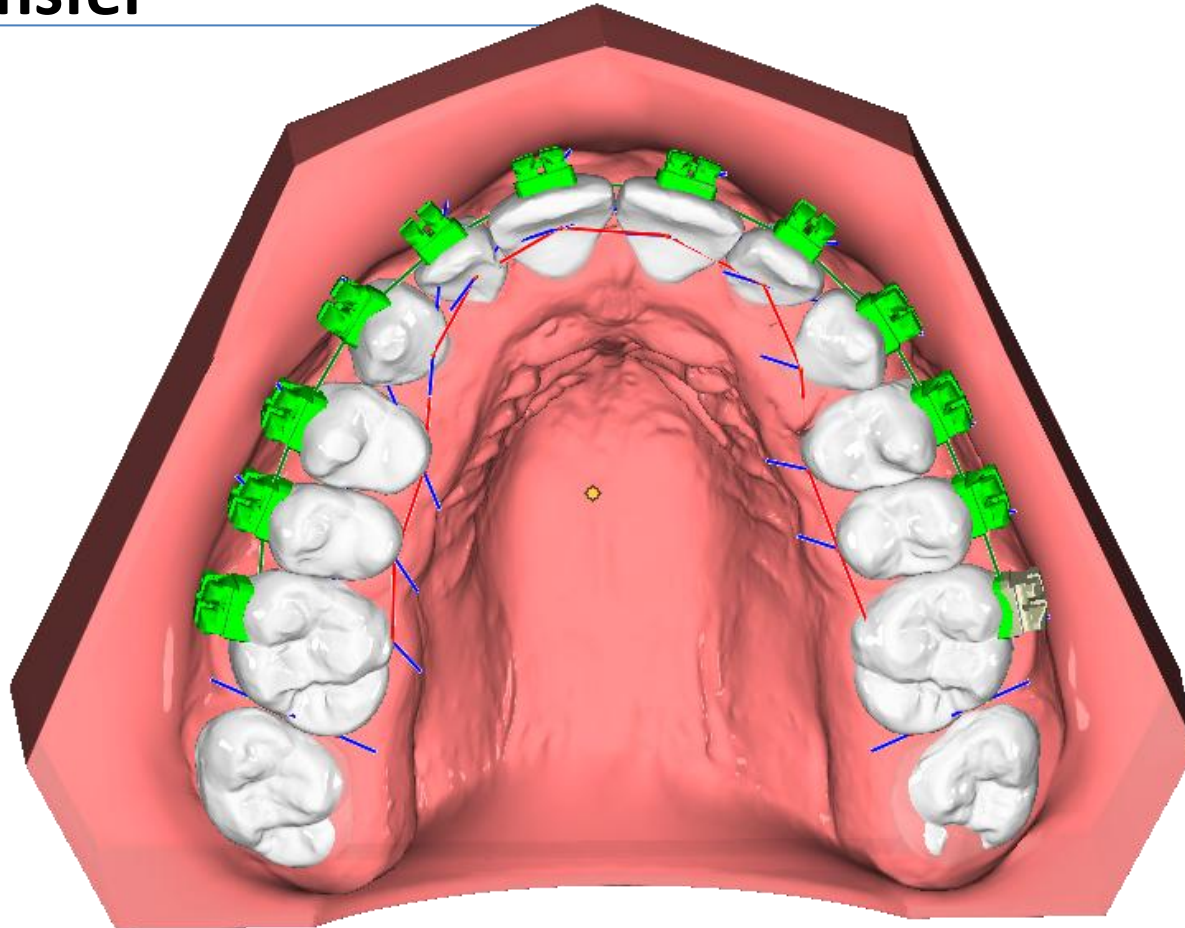
Module Bonding Trays 3D

Transfer

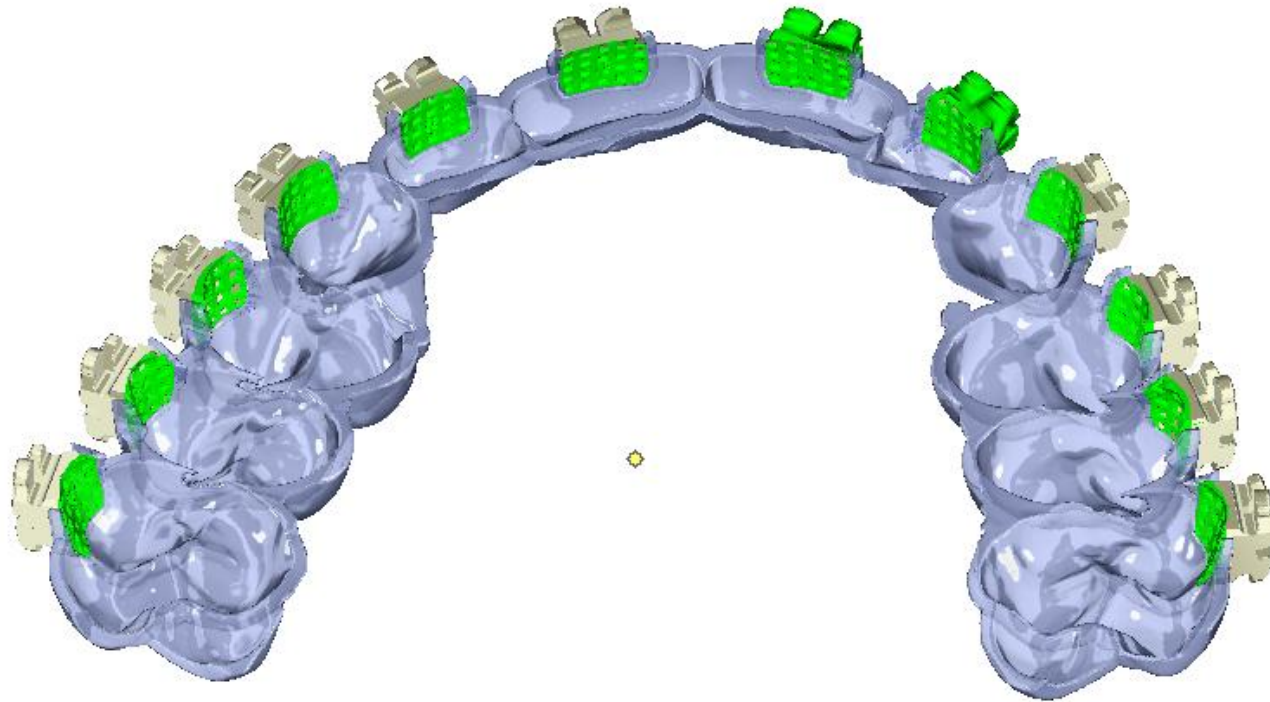


Module Bonding Trays 3D: Individualized Brackets

Transfer



Transfer



Module Bonding Trays 3D: Individualized Brackets

Transfer



Module Bonding Trays 3D: Printing - Milling

Transfer



Add Image
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Aligner 3D
Retainer 3D
Waefer Creation 3D

Transfer

Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

Workflow

FA_Bonding

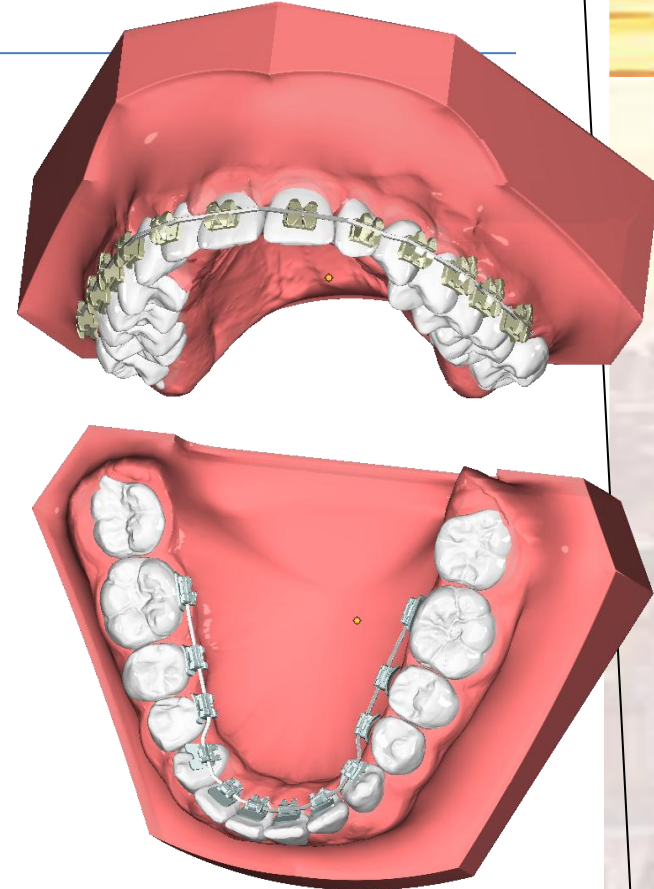
Wire_Bonding

- Virtual Setup
- Bracket-/Wire-Placement

Bracket Position Transfer

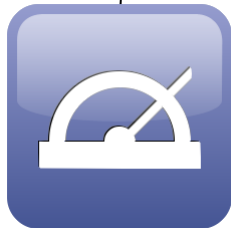
- Indirect Methods
- Direct/Mixed Methods

► **Other Planning Options (Overview)**
Summary

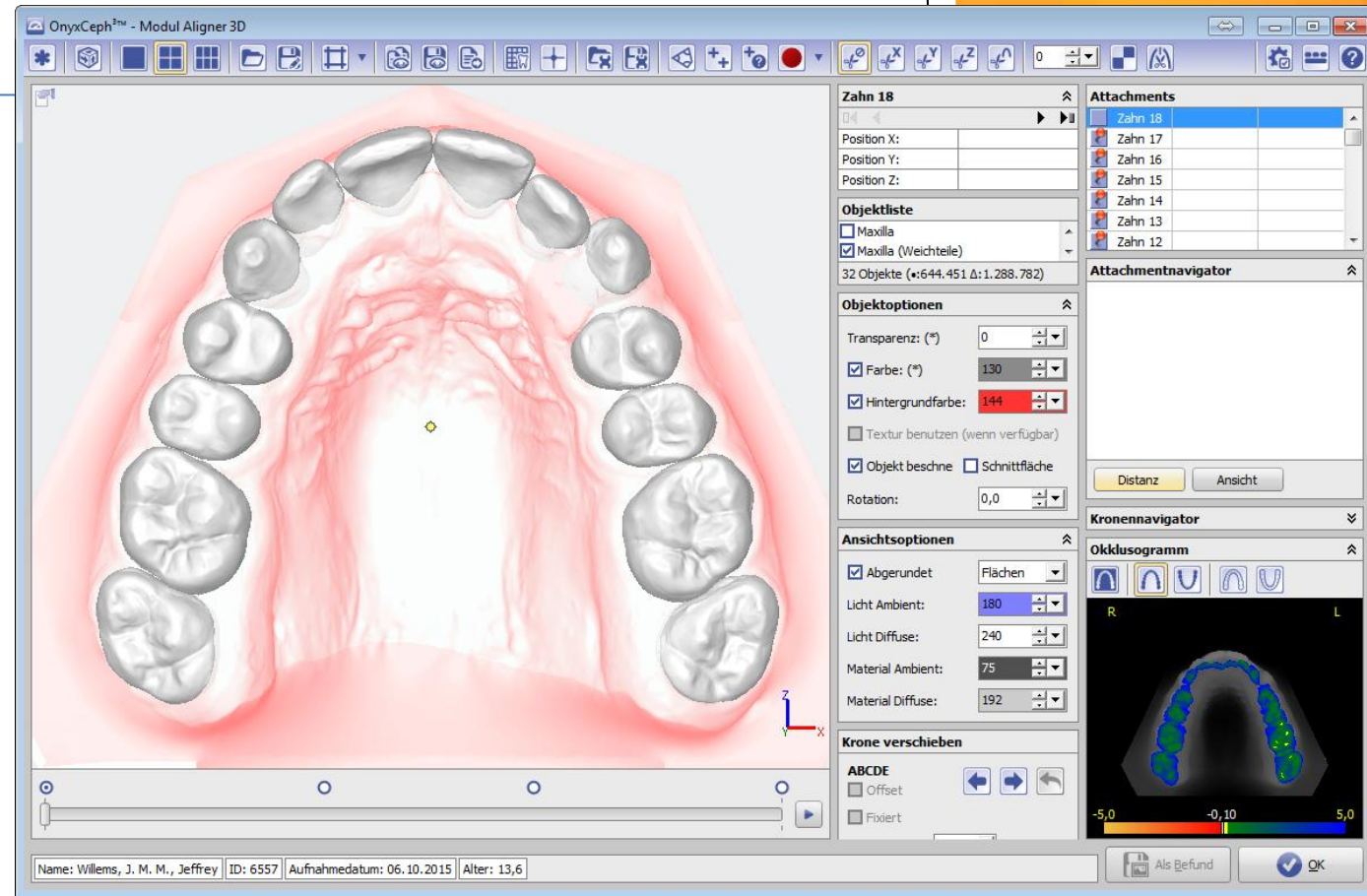


Other Options

Add Image
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Treatment Simulation 3D
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FA_Bonding
V.T.O.3D
Wire Bonding
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Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D



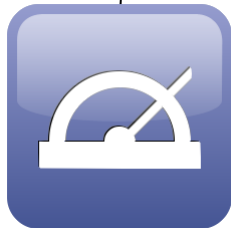
OnyxCeph^{3D}



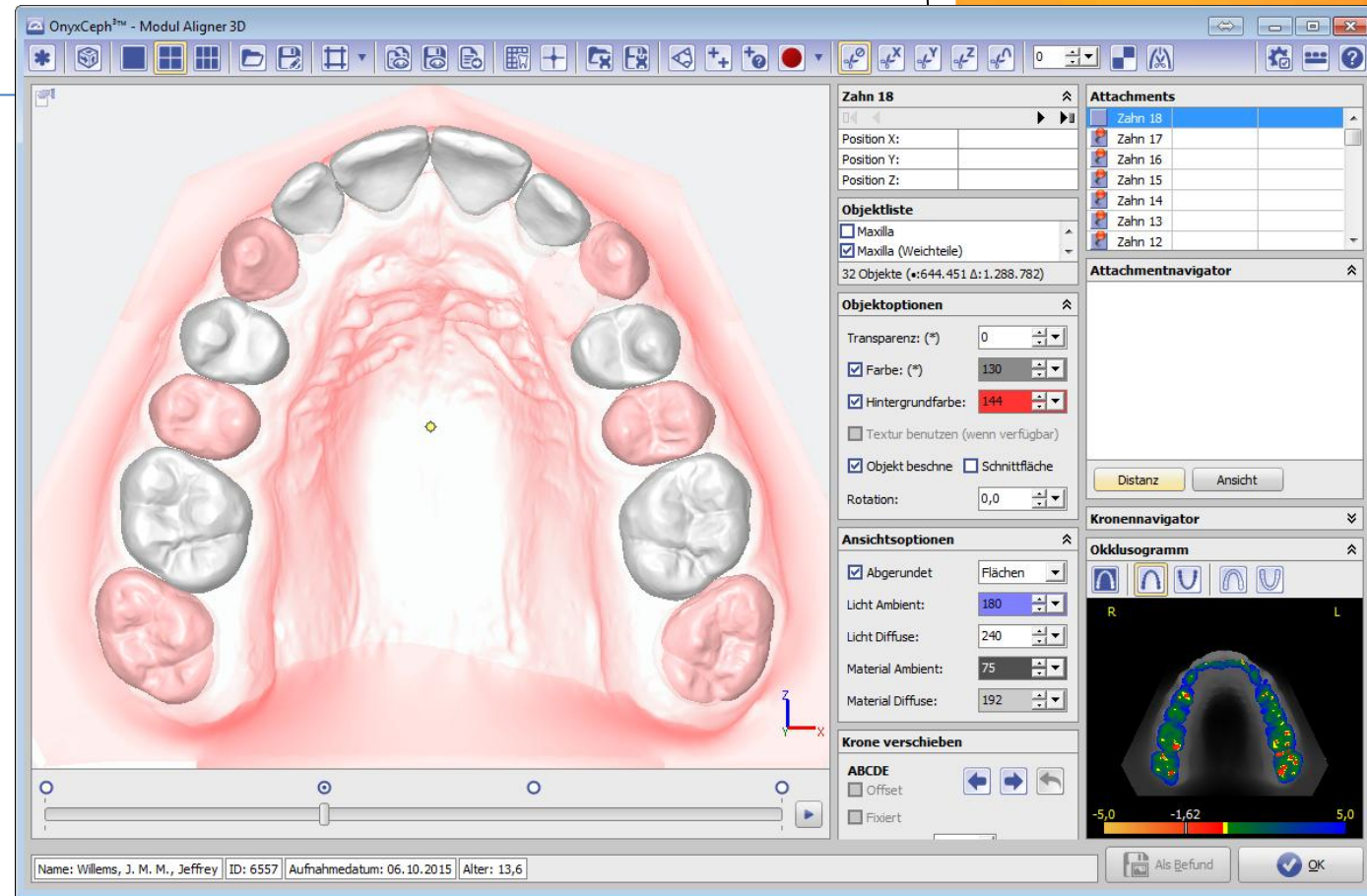
Aligner 3D

Other Options

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FA_Bonding
V.T.O.3D
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Kylix 3D
Bonding Trays 3D
Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D



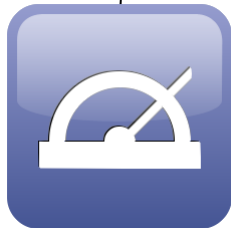
OnyxCeph^{3TM}



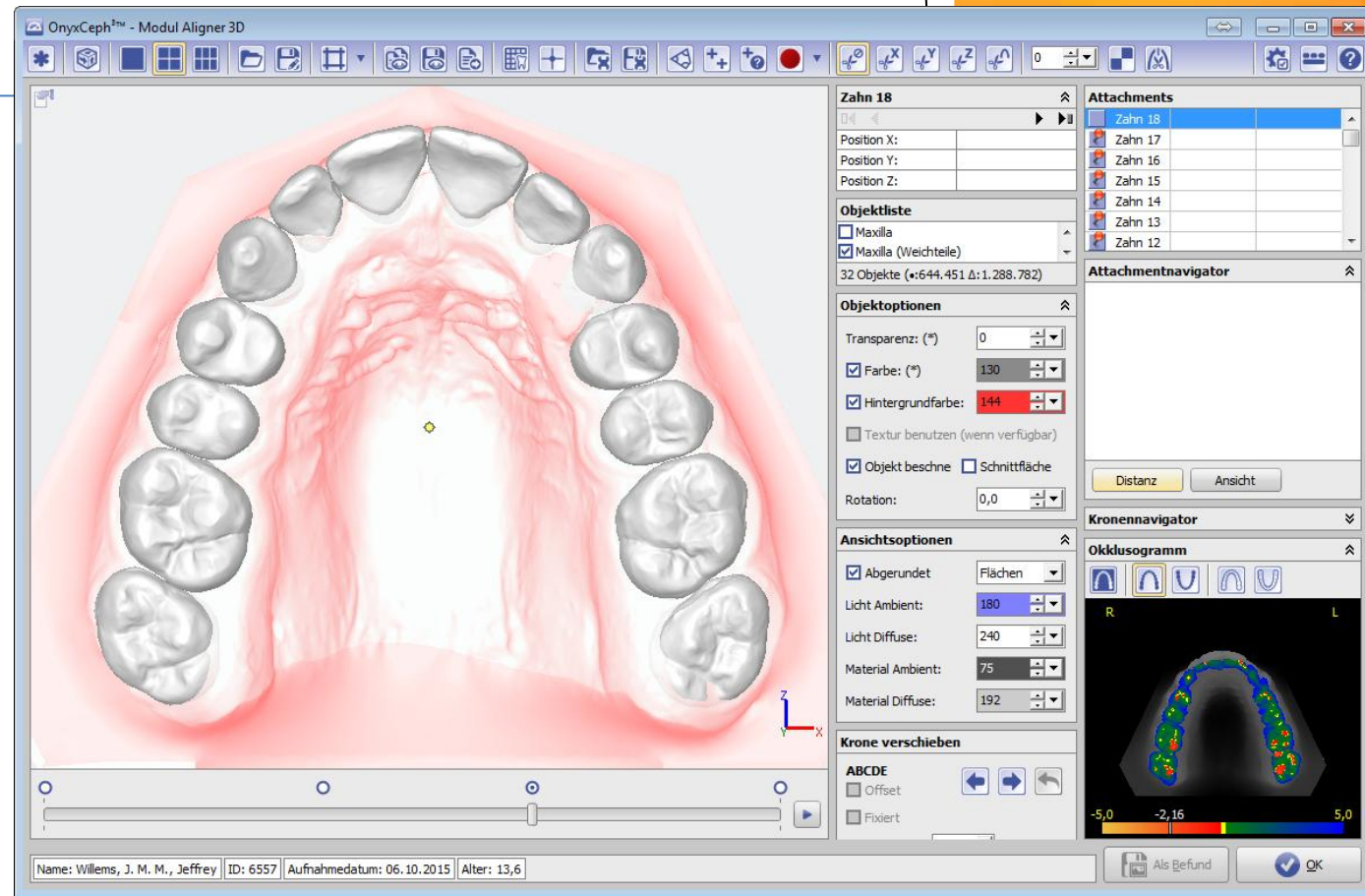
Aligner 3D

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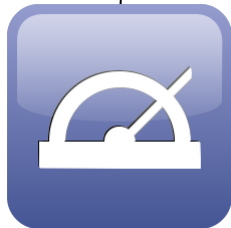
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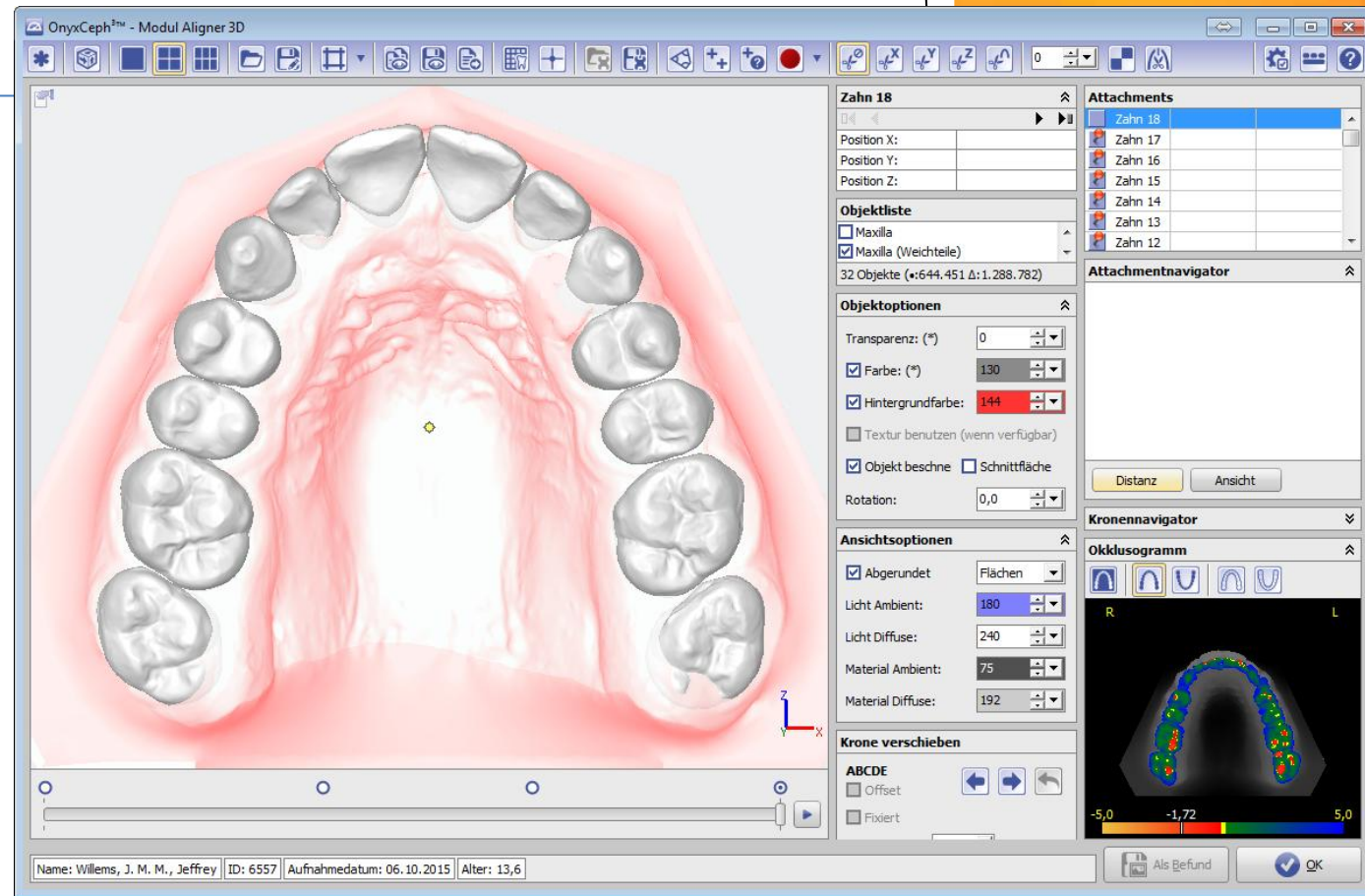
Aligner 3D

Other Options

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Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
Waefer Creation 3D



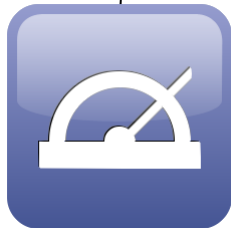
OnyxCeph^{3TM}



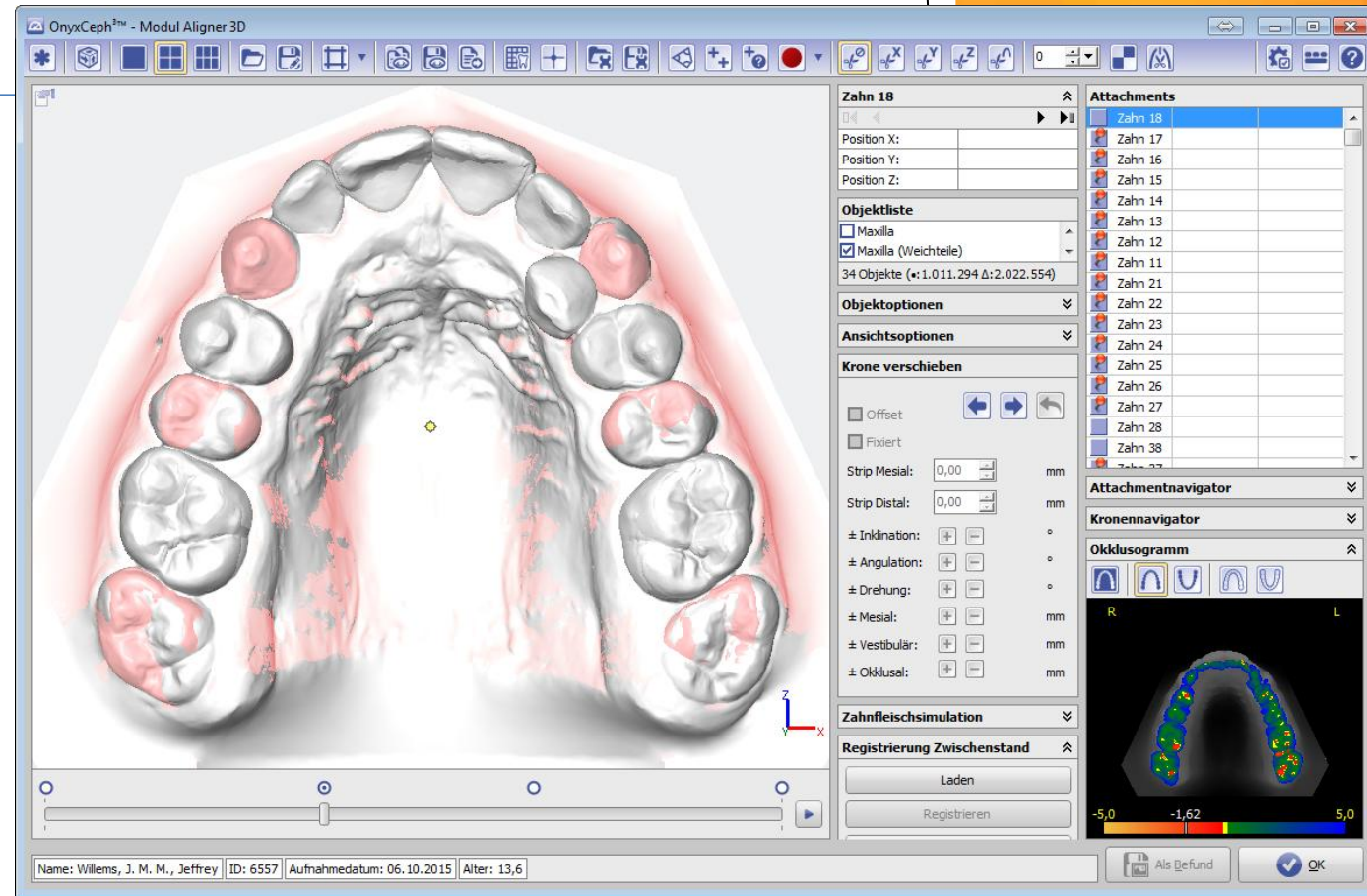
Aligner 3D

Other Options

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Splint 3D
Bracket Adapt
Aligner 3D
Retainer 3D
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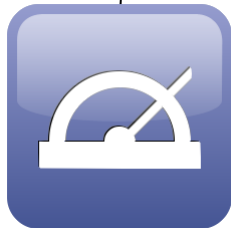
OnyxCeph^{3TM}



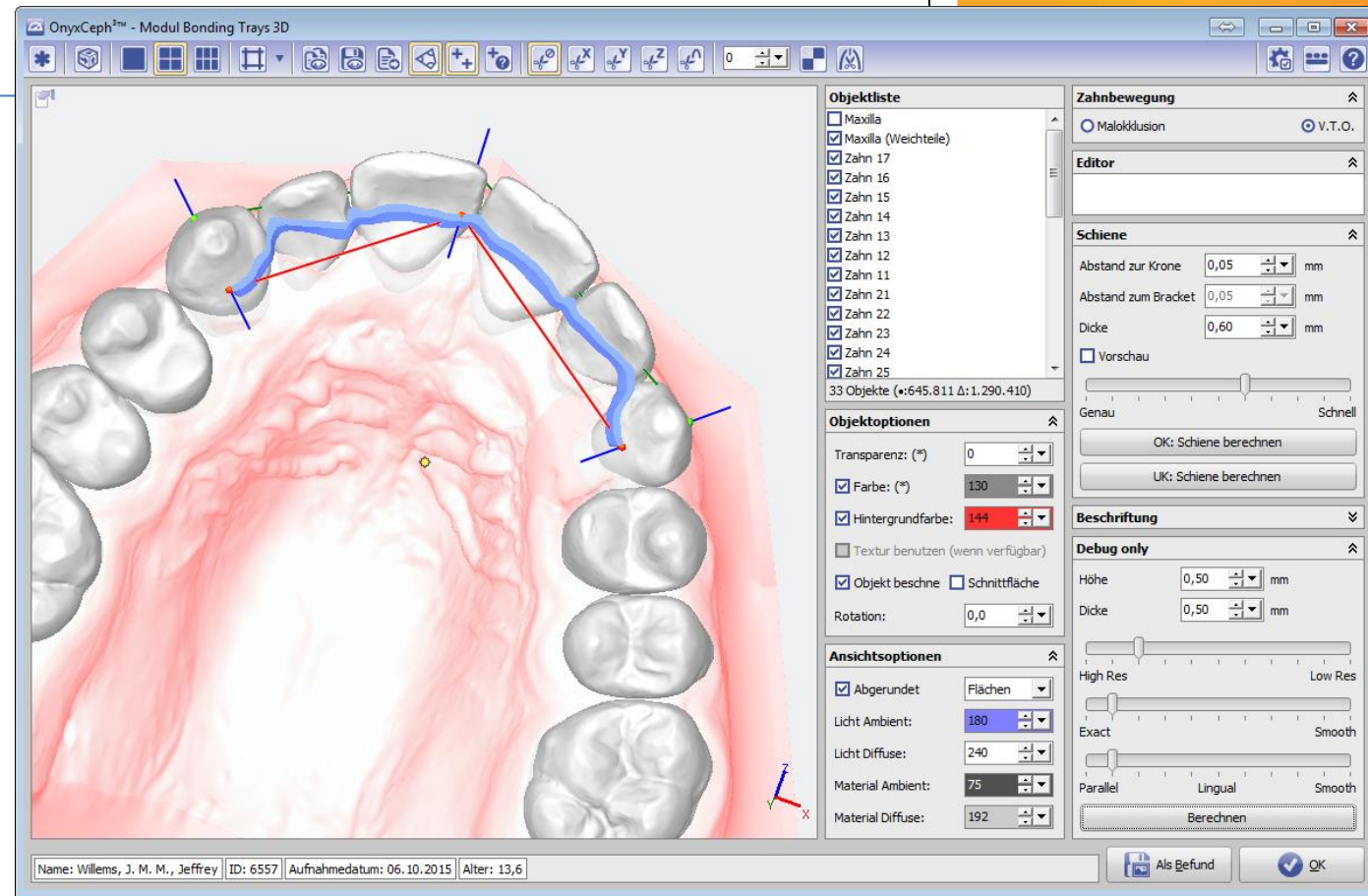
Aligner 3D

Other Options

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Retainer 3D
Waefer Creation 3D



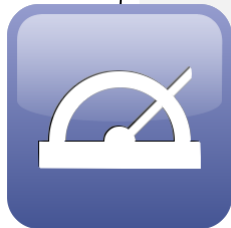
OnyxCeph^{3TM}



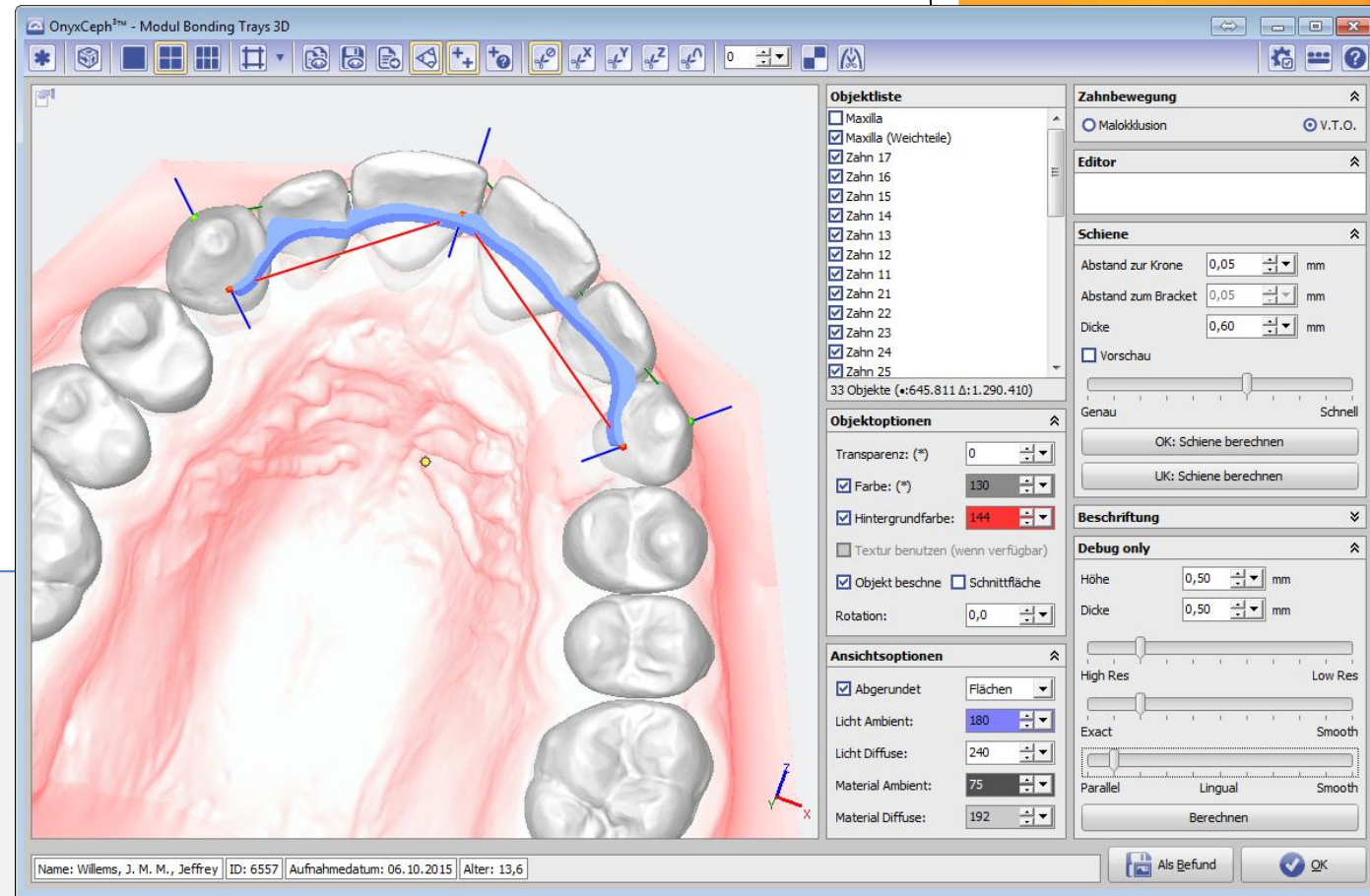
Retainer 3D

3D Imaging

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Bracket Adapt
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Retainer 3D
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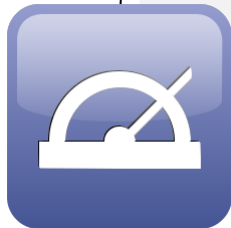


OnyxCeph³™

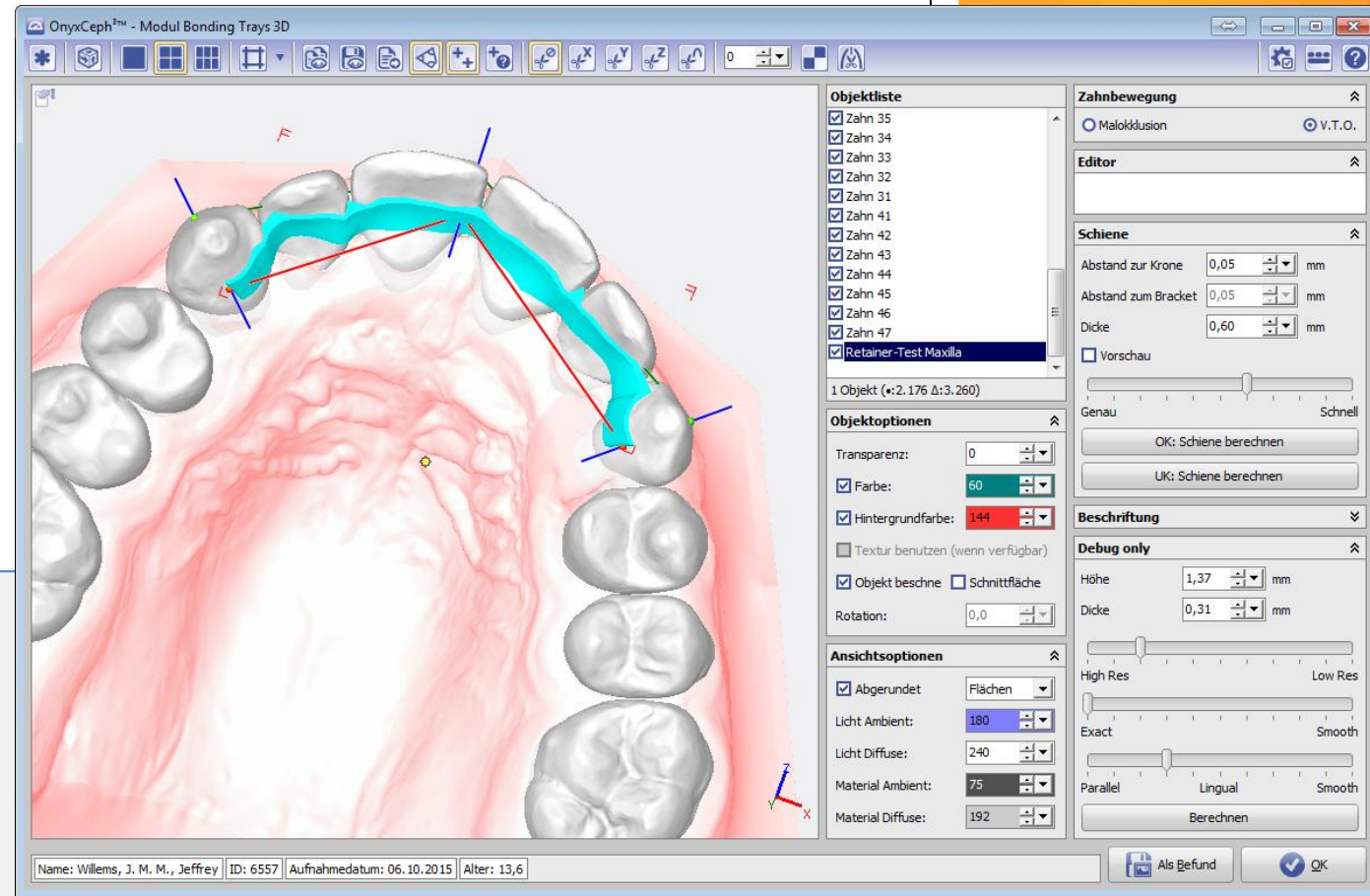


3D Imaging

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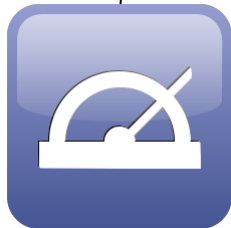
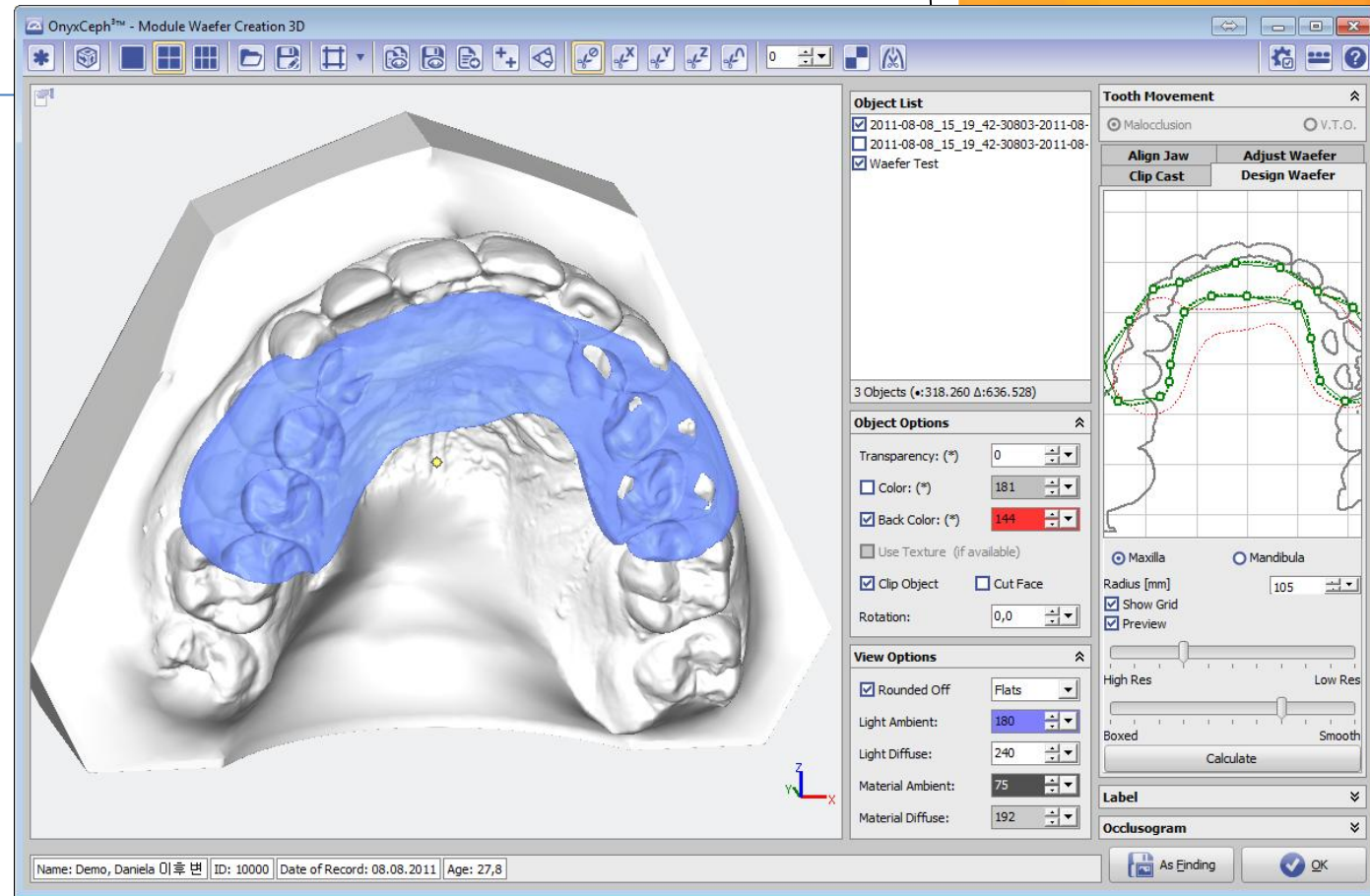
OnyxCeph³™



Other Options

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Retainer 3D

Waefer Creation 3D



OnyxCeph^{3M}

Waefer Creation 3D

Digital i/d Bonding

Introduction

Overview OnyxCeph^{3™}

Workflow

FA_Bonding

Wire_Bonding

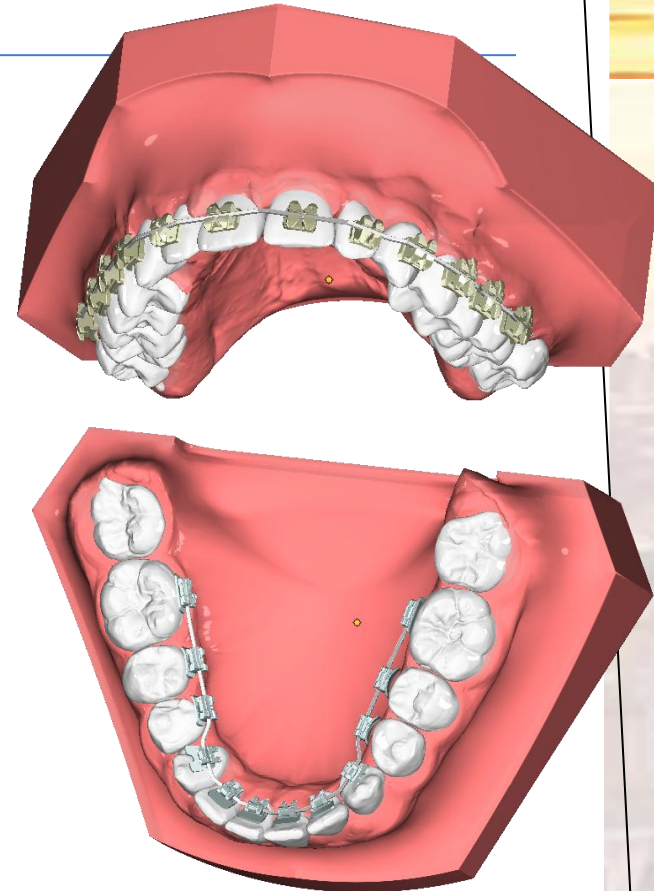
- Virtual Setup
- Bracket-/Wire-Placement

Bracket Position Transfer

- Indirect Methods
- Direct/Mixed Methods

Other Planning Options (Overview)

► **Summary**



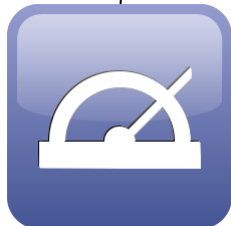
Summary

Areas of Application:

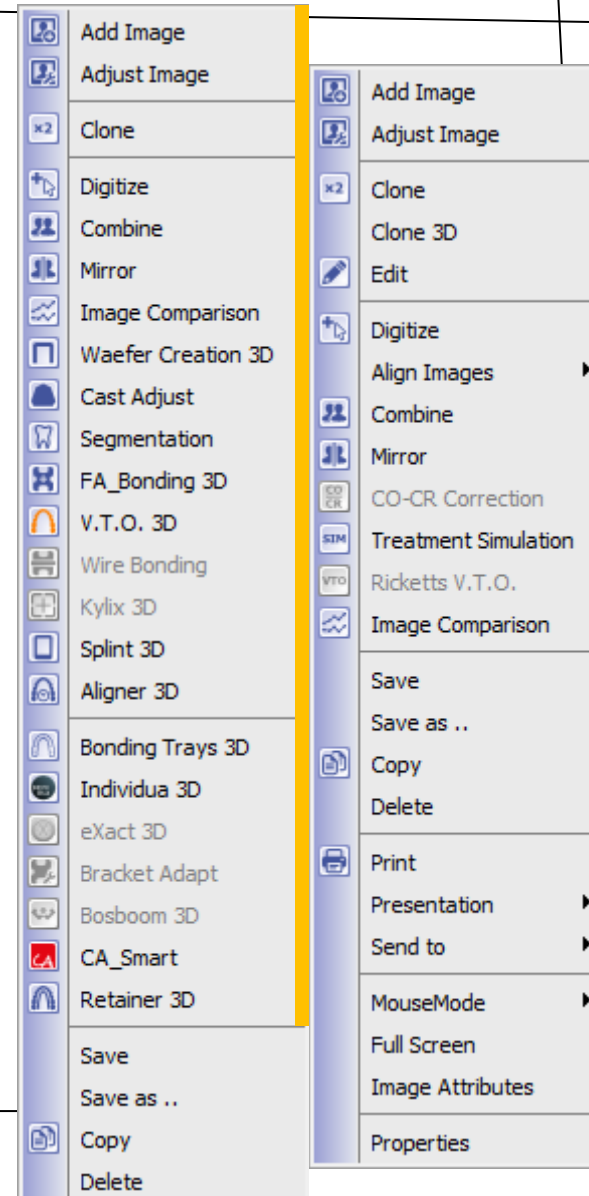
- Archiving
- Diagnostics
- Treatment Planning
- Patient Education
- Communication

Expectations:

- Savings
- Facilities
- Improvements



OnyxCeph^{3TM}



13rd A.I.O.T. National Congress

Thank You !

June 3rd – June 4th 2016