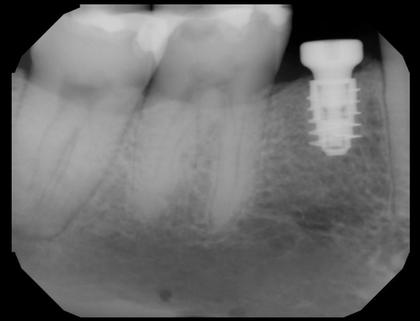
Digital Model Based Guided Surgery

Sharon # 29



1. Digital :
    1. Digital positioners 7 mm bar
    2. Digital positioner 10 mm bar

2. Analog :
    1. Positioner analog 0 degrees NP & RP
    2. Positioner analog 3 degrees NP & RP
    3. Positioner analog 7 degrees NP & RP
    4. Drill Sleeve straight NP & RP
    5. Drill Sleeve angled NP & RP

The Digital Model Based Guided Surgery System

1. Digital :
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    2. Digital positioner 10 mm bar

2. Analog :
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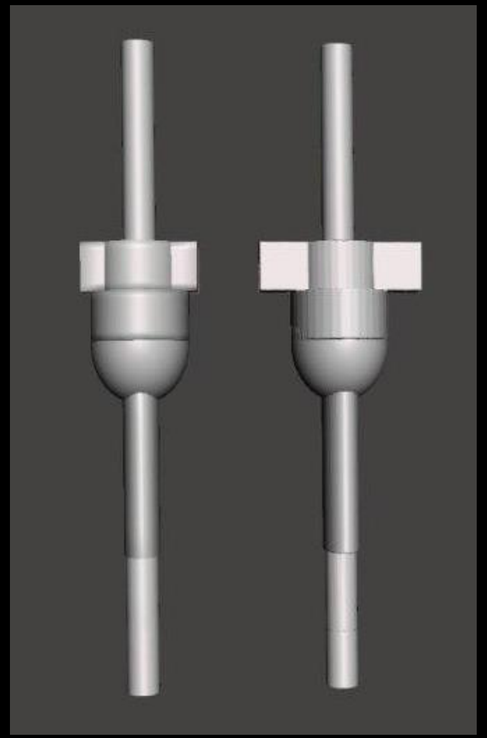
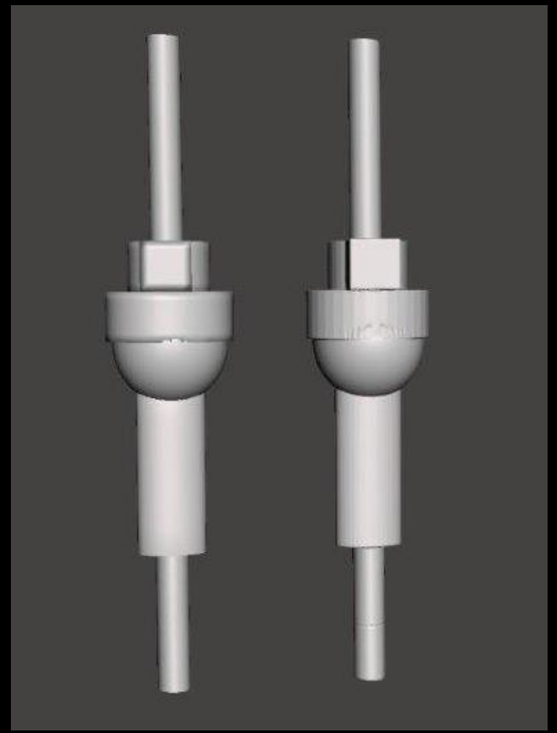
    2. Positioner analog 3 degrees NP & RP
    3. Positioner analog 7 degrees NP & RP
    4. Drill Sleeve straight NP & RP
    5. Drill Sleeve angled NP & RP





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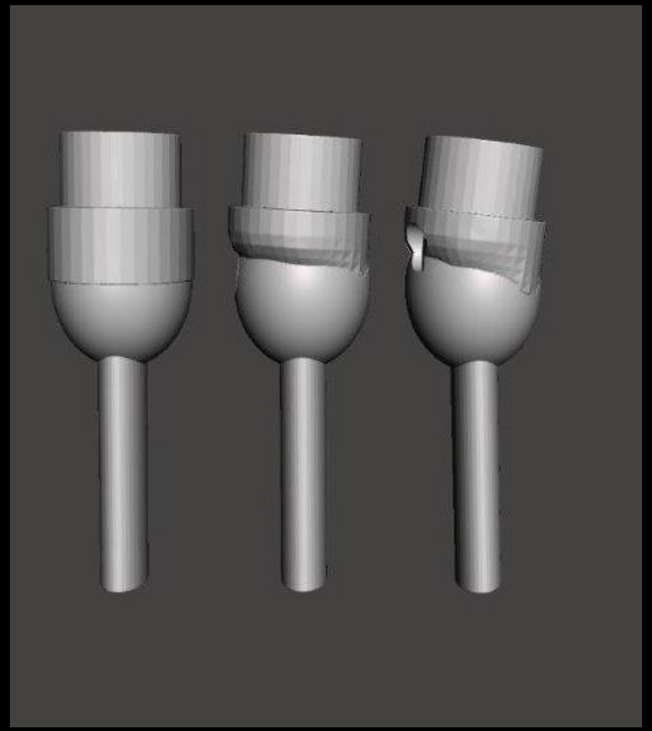

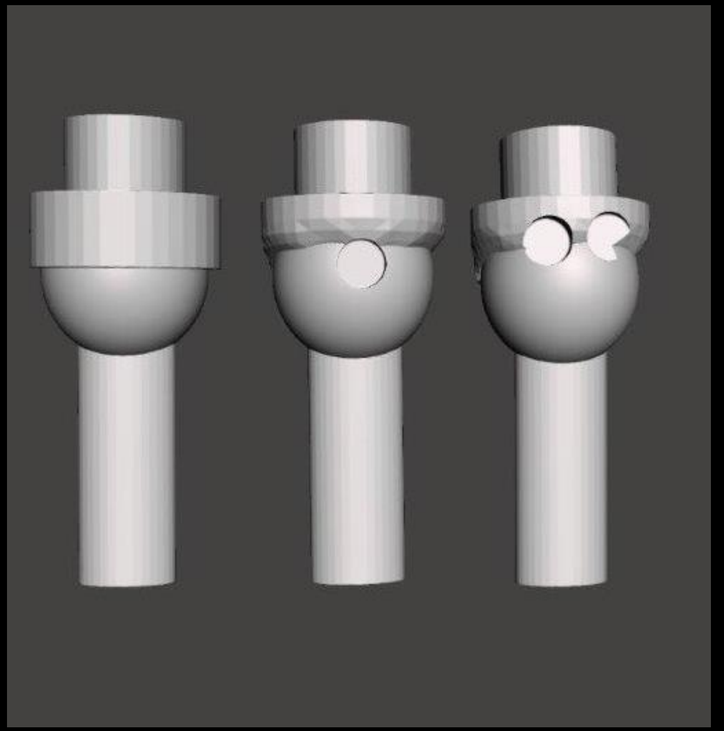

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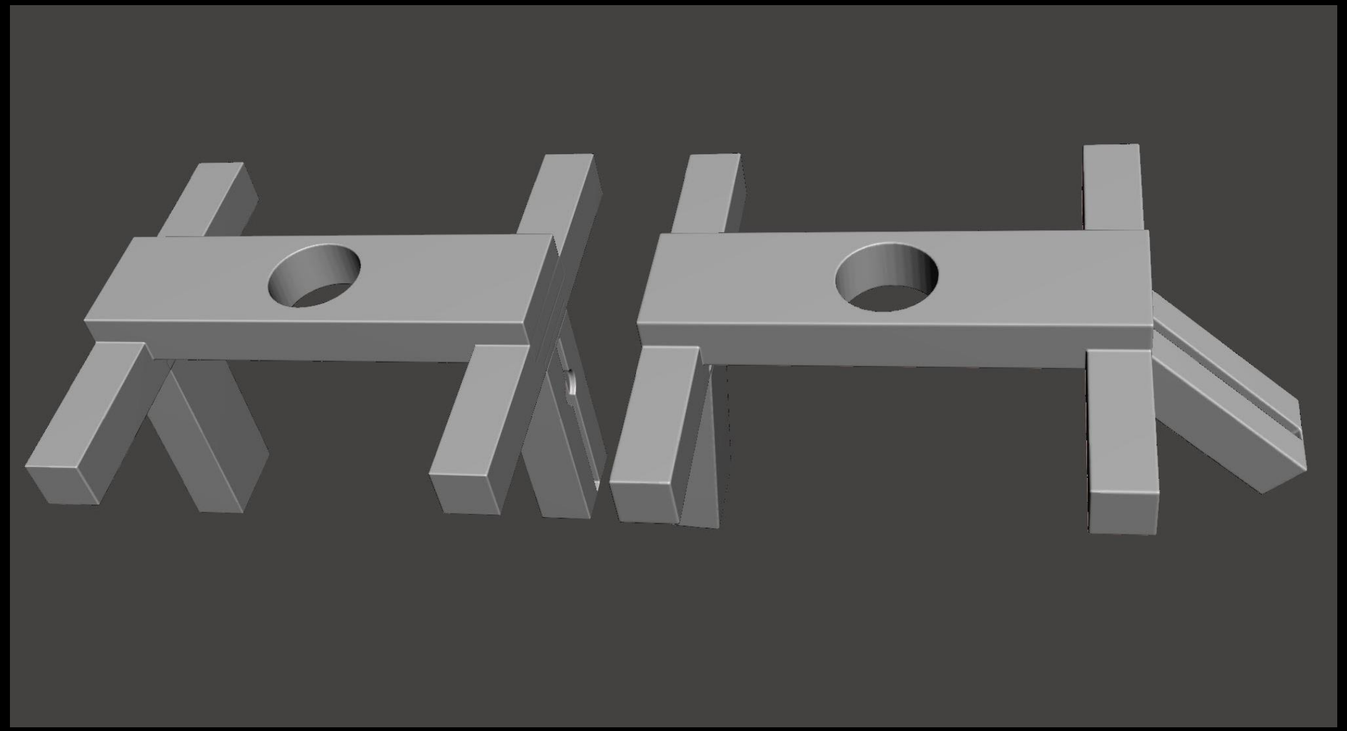
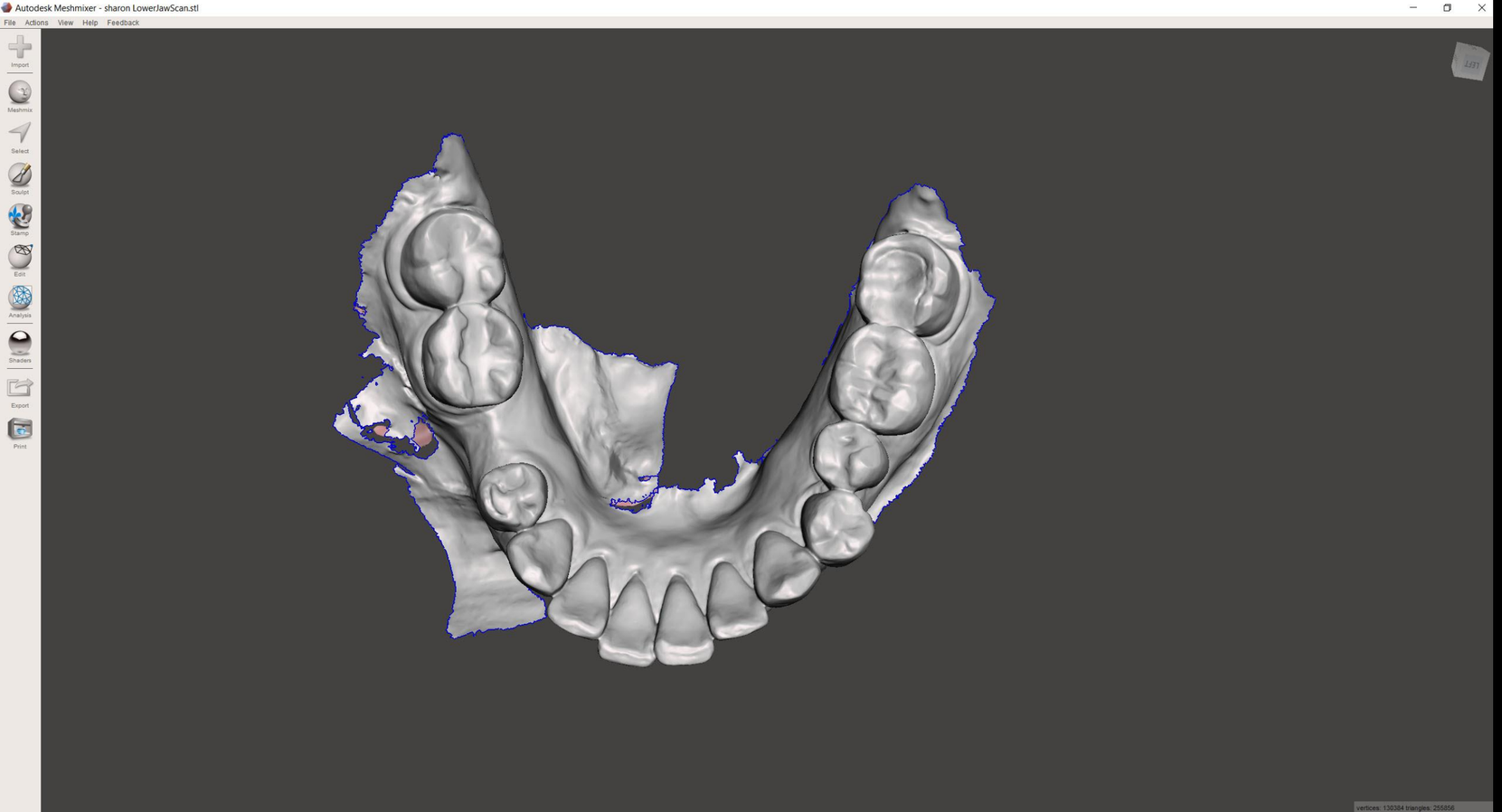
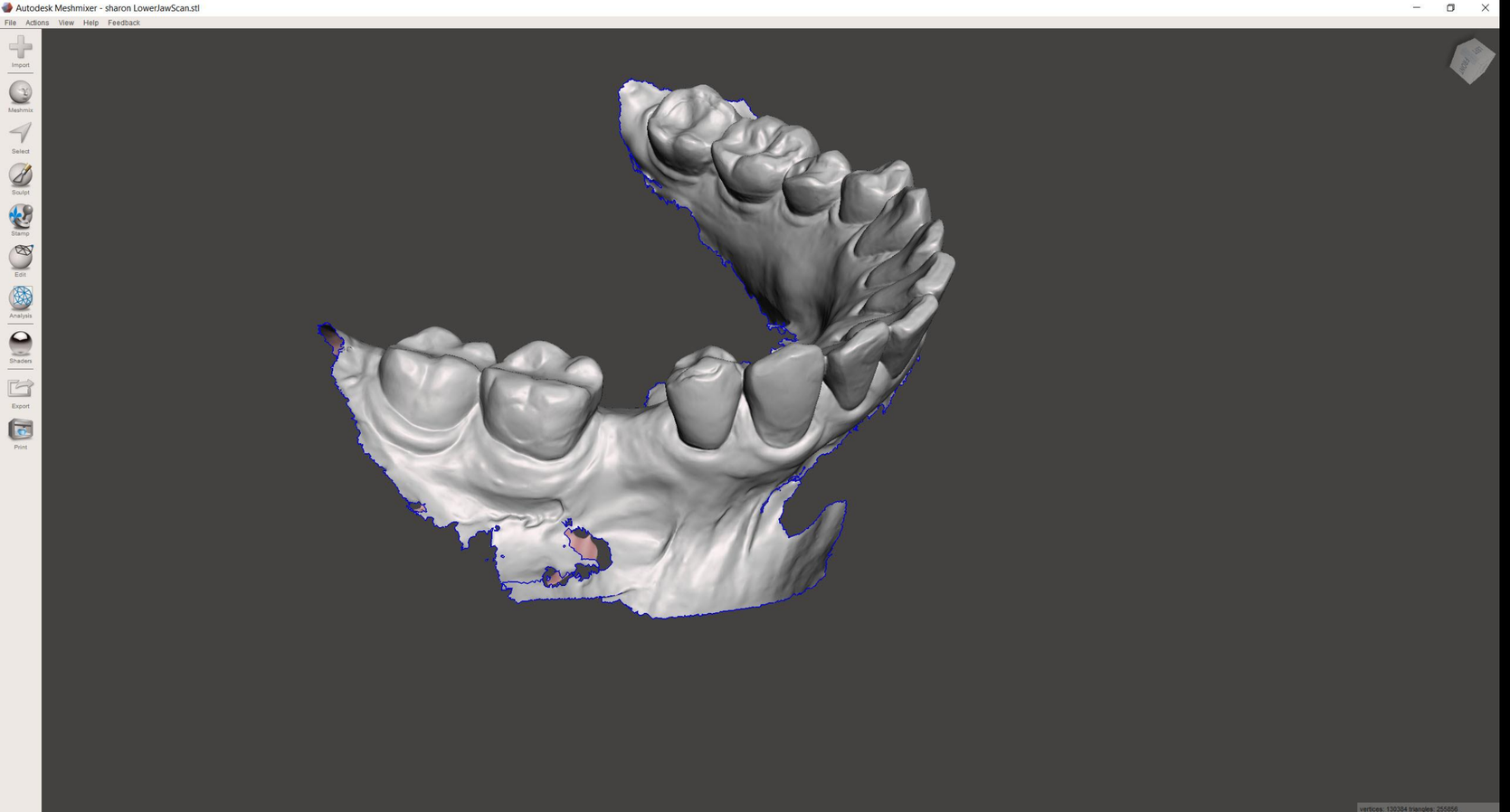



Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
LEFT
vertices: 130384 triangles: 255856


Autodesk Meshmixer - sharon LowerJawScan.stl
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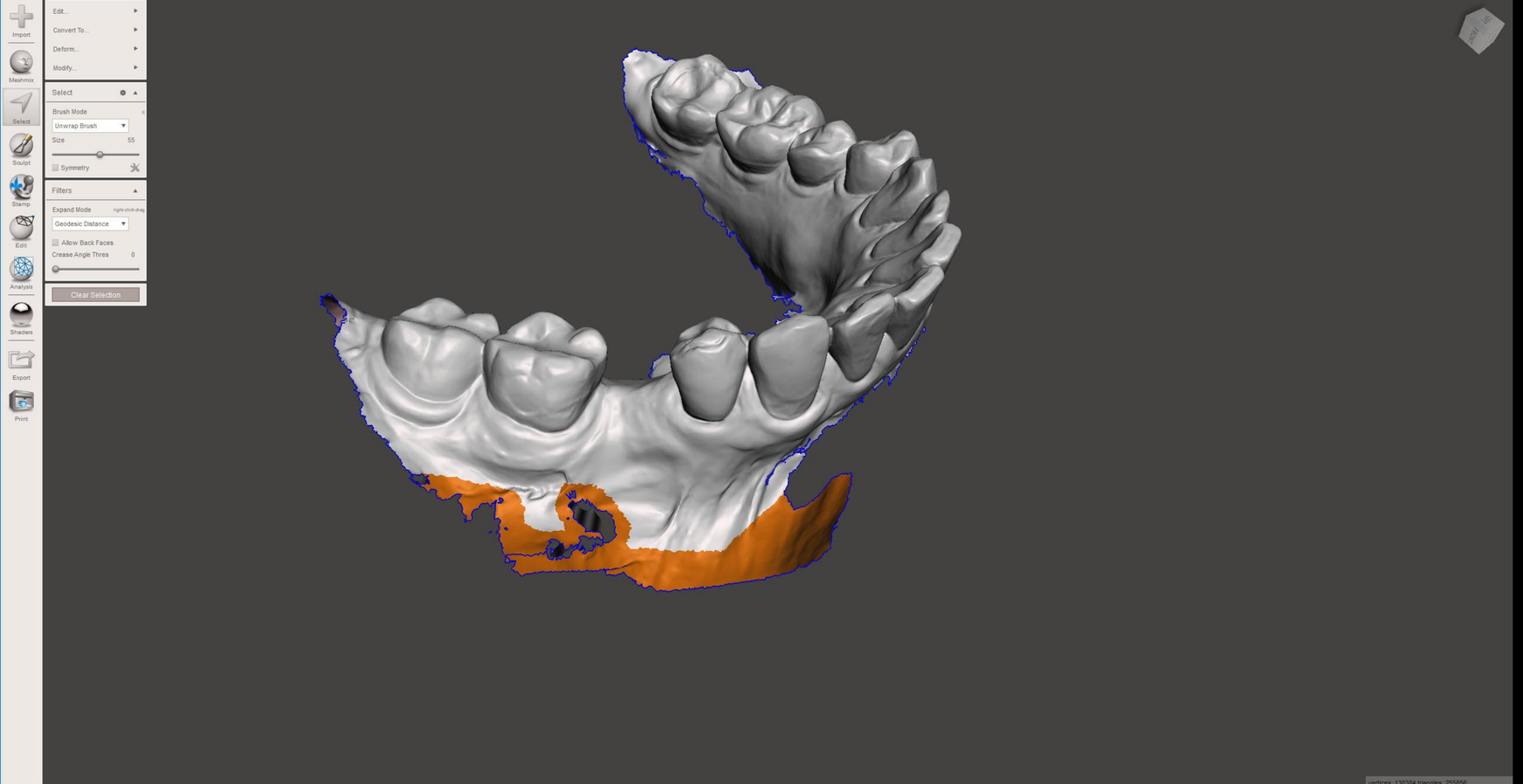
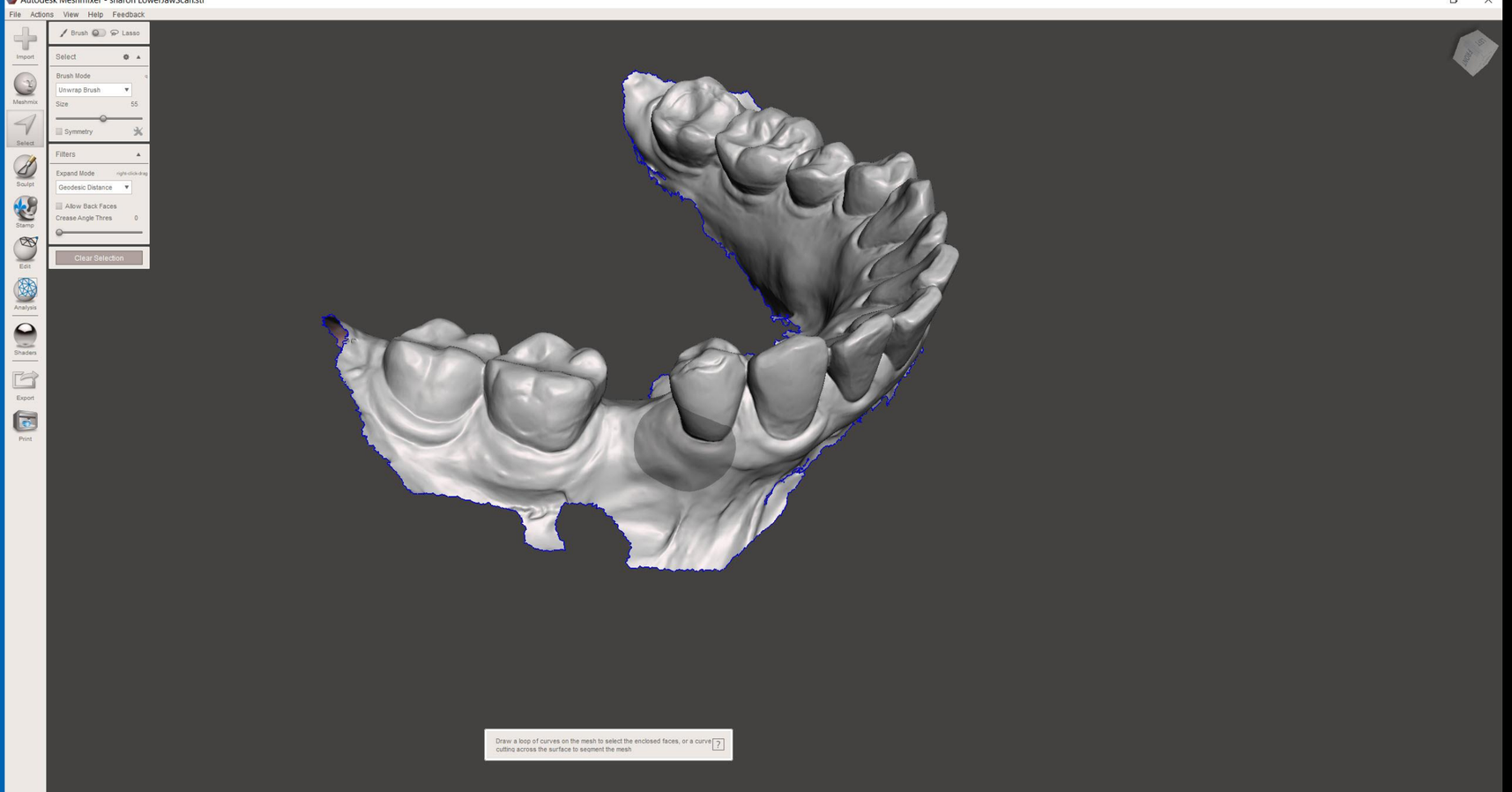


"S", then use cursor to make outline more even. Remove the jiggly stuff that Meshmixer doesn't like


Autodesk Meshmixer - sharon LowerJawScan.stl
File
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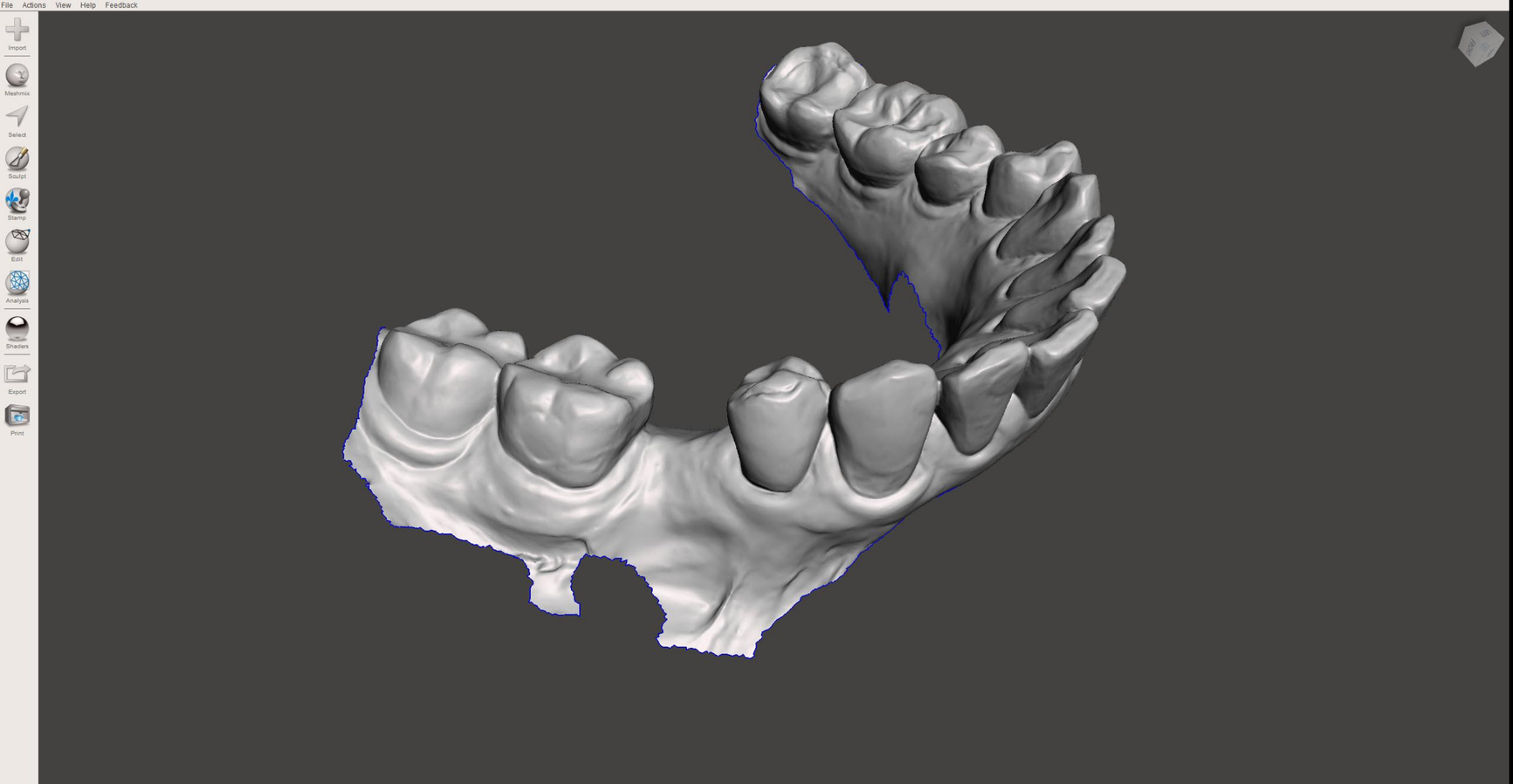
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Brush
Lasso
Select
Brush Mode
Unwrap Brush
Size
55
Symmetry
Filters
Expand Mode
Geodesic Distance
Allow Back Faces
Crease Angle Thres
0
Clear Selection
Draw a loop of curves on the mesh to select the enclosed faces, or a curve cutting across the surface to segment the mesh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Edit
Analysis
Shaders
Export
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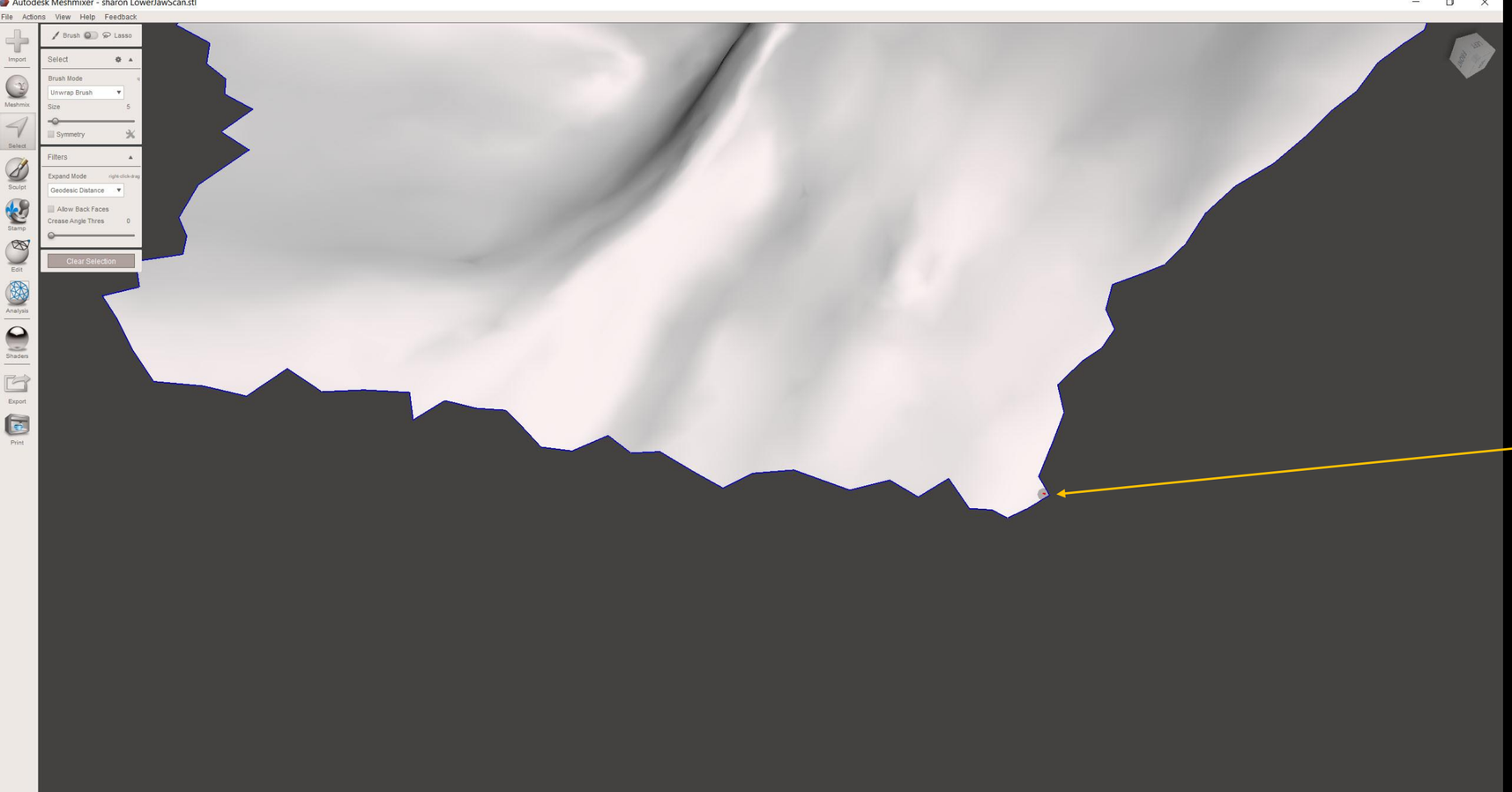
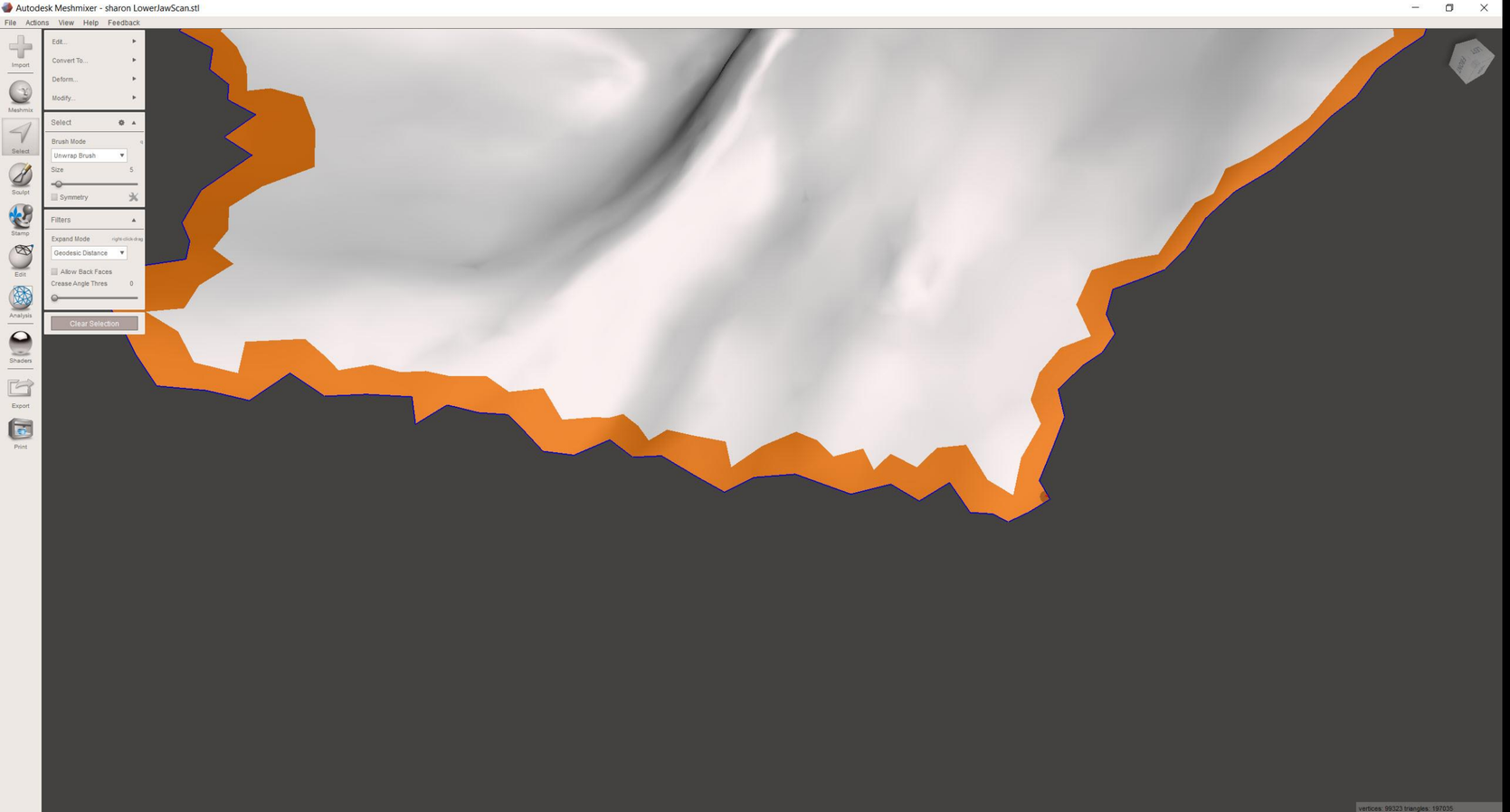
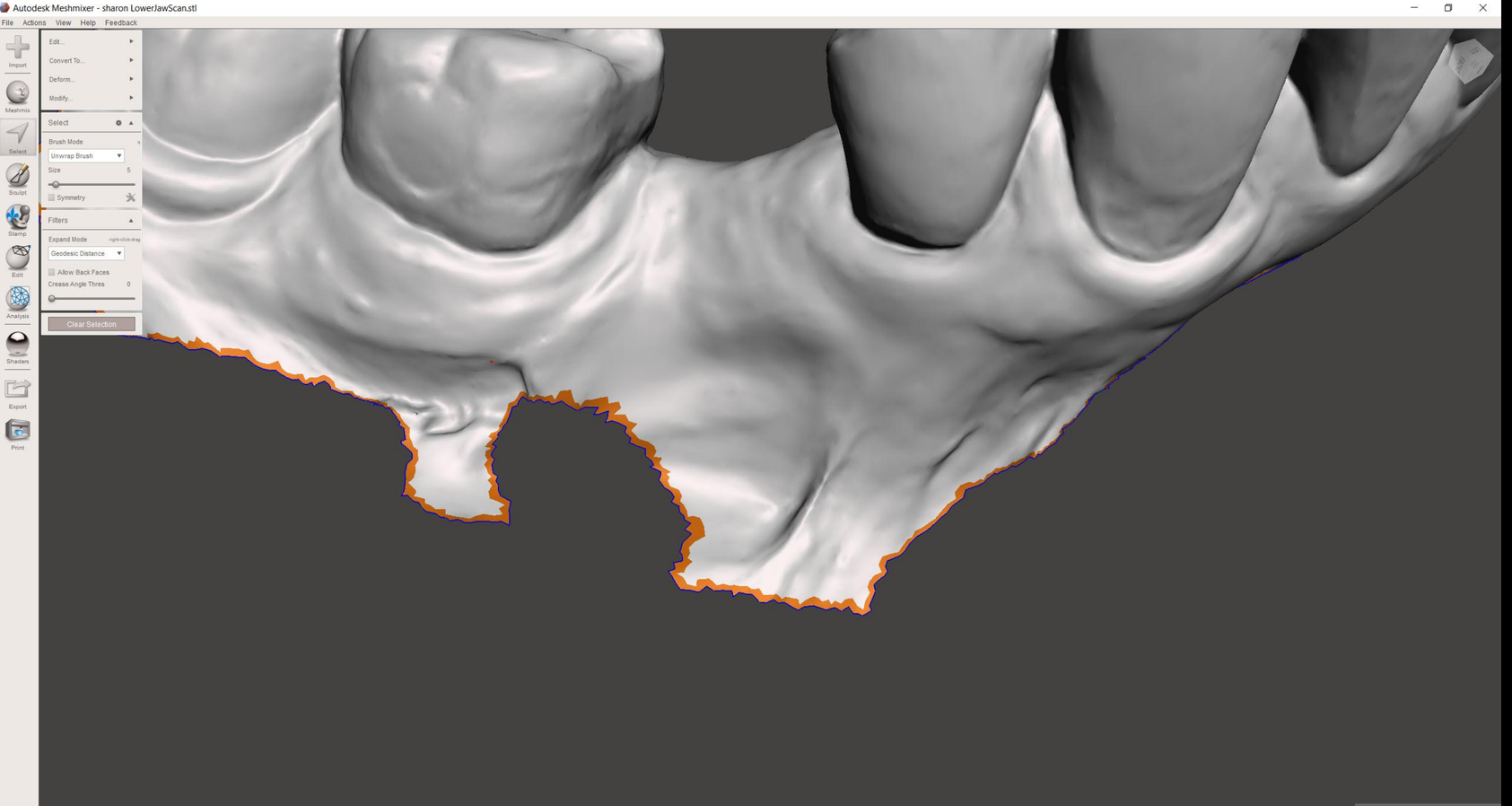


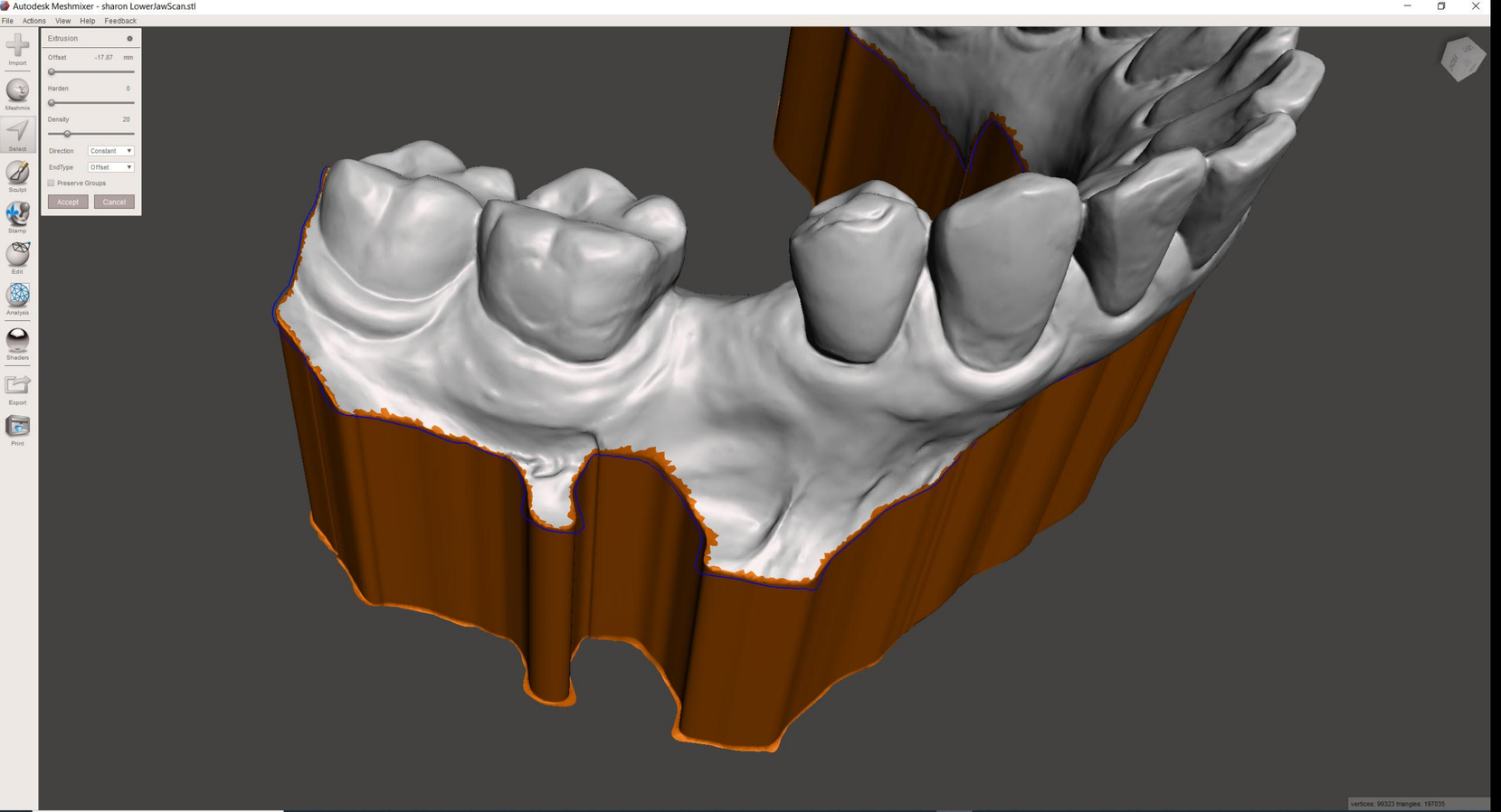
Zoom in to the outline, real big and “S” select , just on the blue line

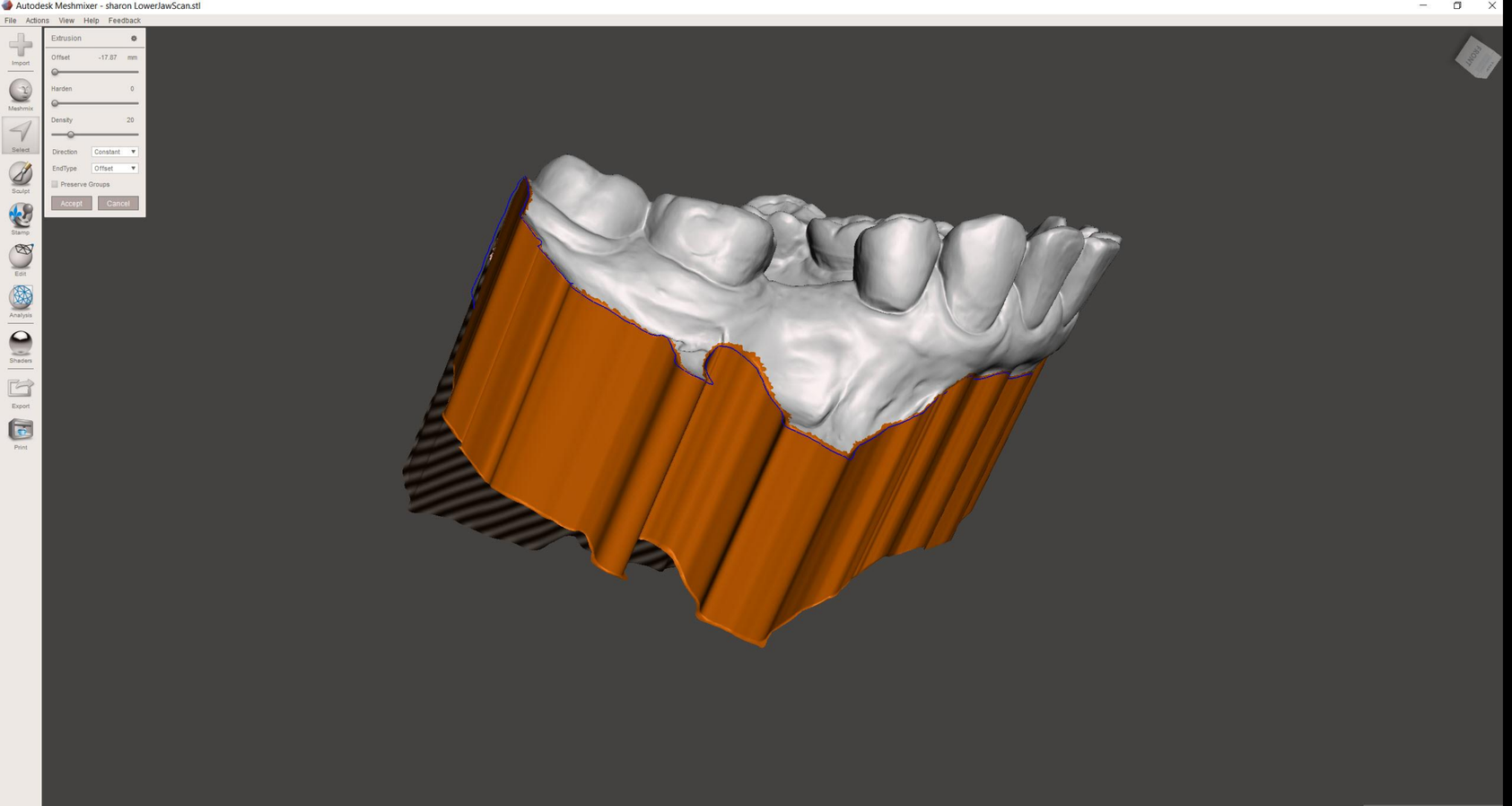


“O” for optimize. Then “B” for border, enter. This will make the border smoother.



“D” extrude , select negative the largest number 18. this will extrude the base


Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Extrusion
Offset -17.87 mm
Harden 0
Density 20
Direction Constant
EndType Offset
Preserve Groups
Accept
Cancel
vertices: 99323 triangles: 197035


Autodesk Meshmixer - sharon LowerJawScan.stl
File
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Feedback
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Meshmix
Select
Sculpt
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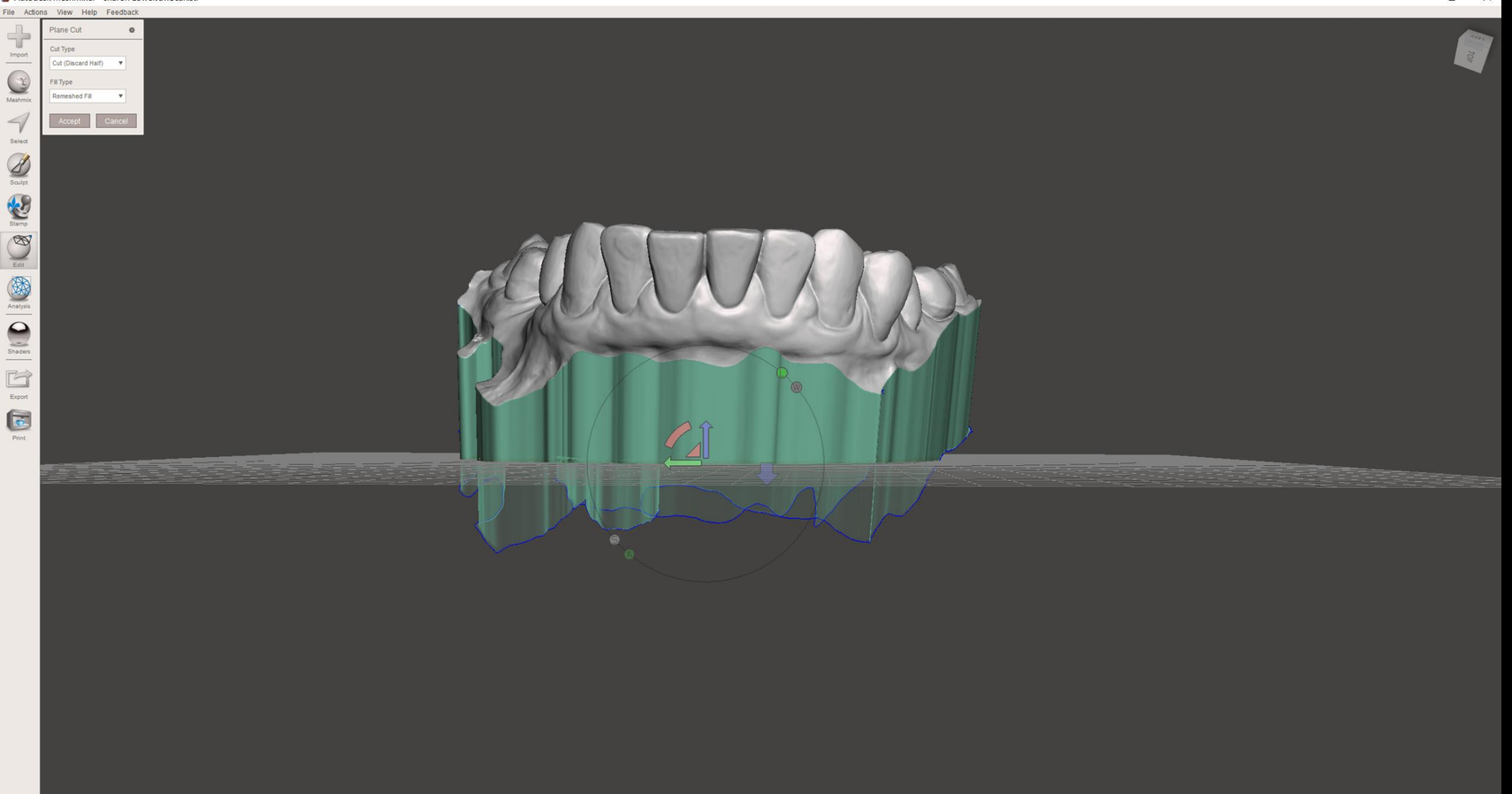
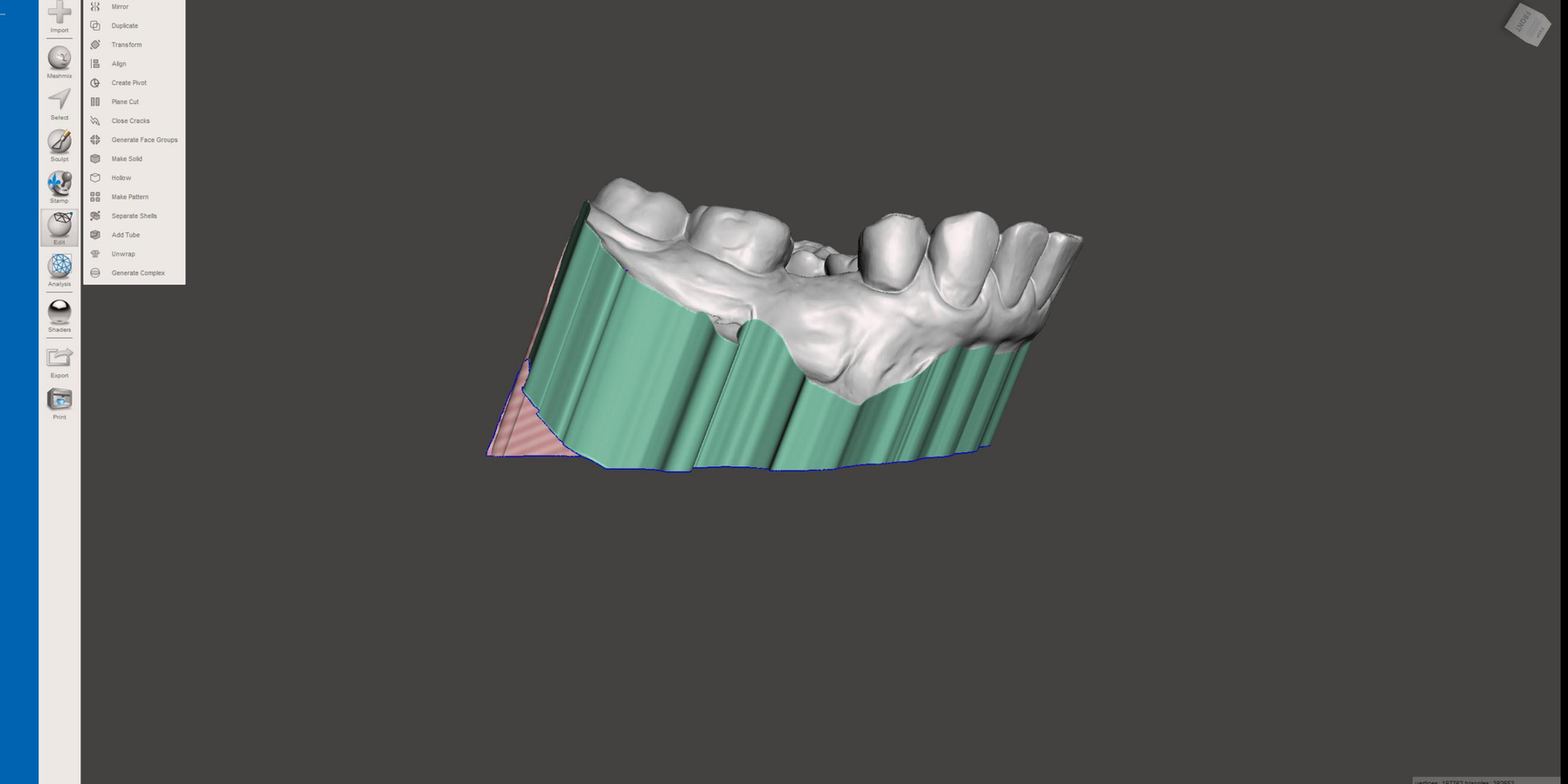
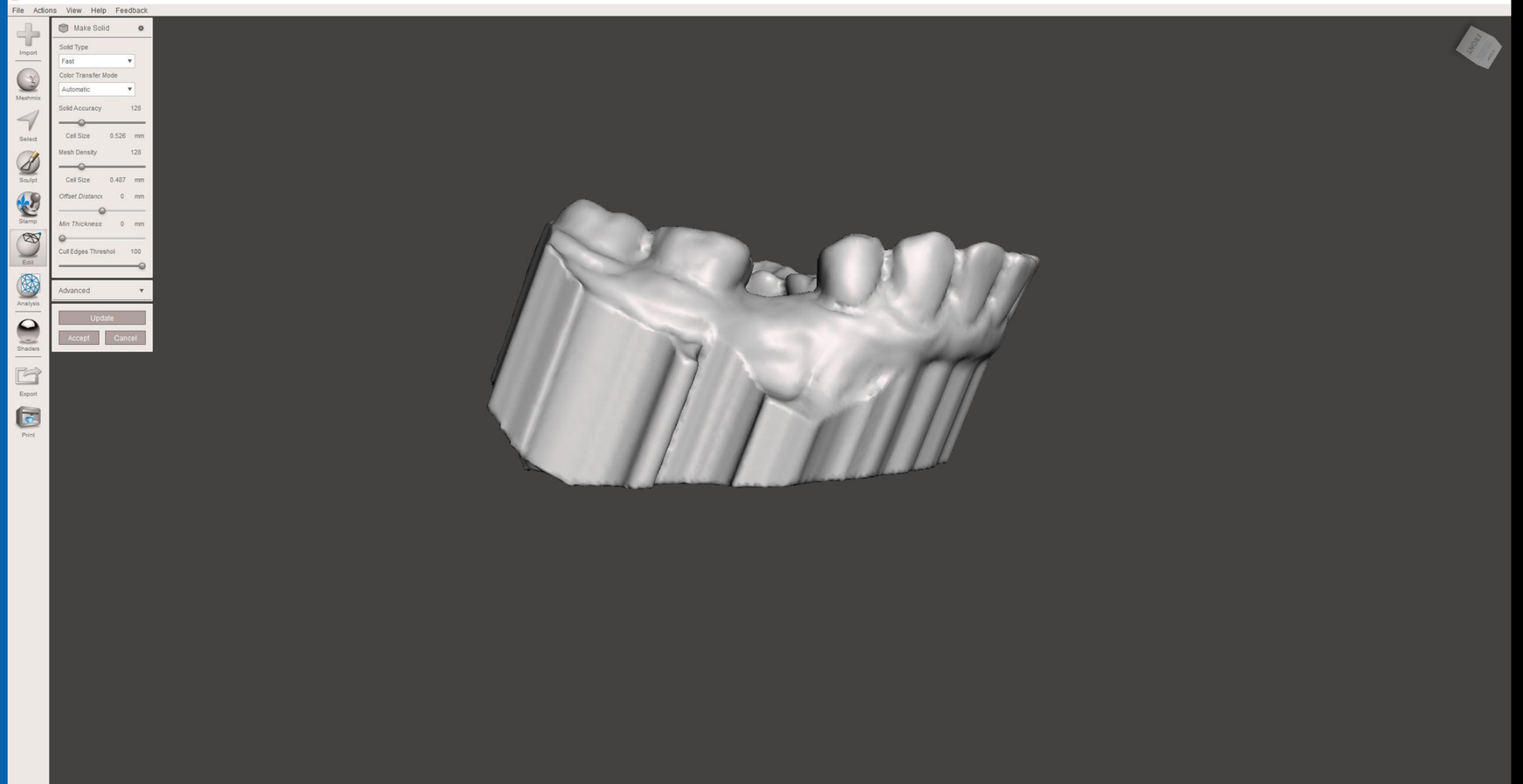
Analysis
Shaders
Export
Print
Extrusion
Offset -17.87 mm
Harden 0
Density 20
Direction Constant
EndType Offset
Preserve Groups
Accept
Cancel

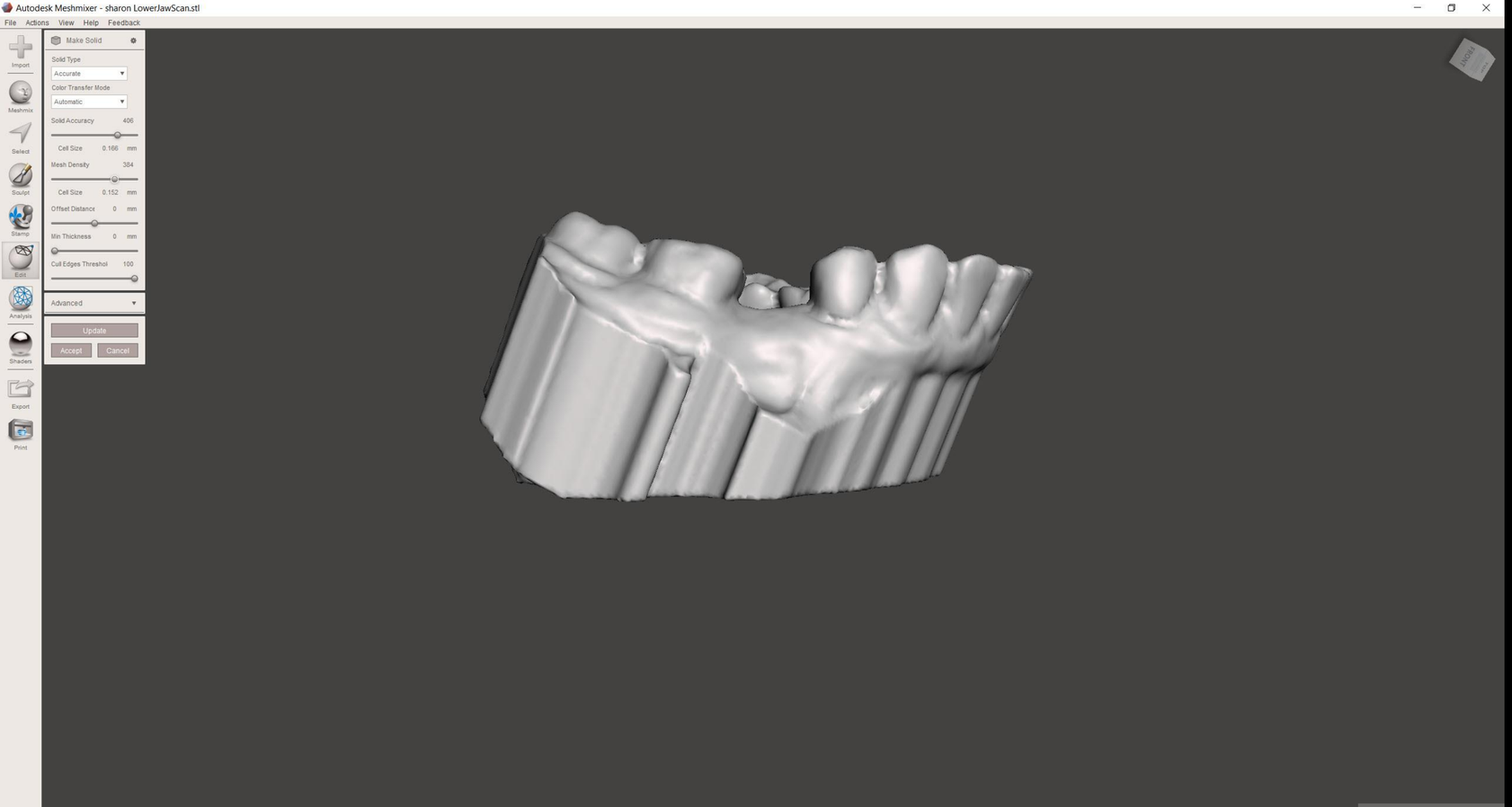


Edit, Plane cut . Even out the bottom of the base . If the wrong side is selected, push the fat purple arrow

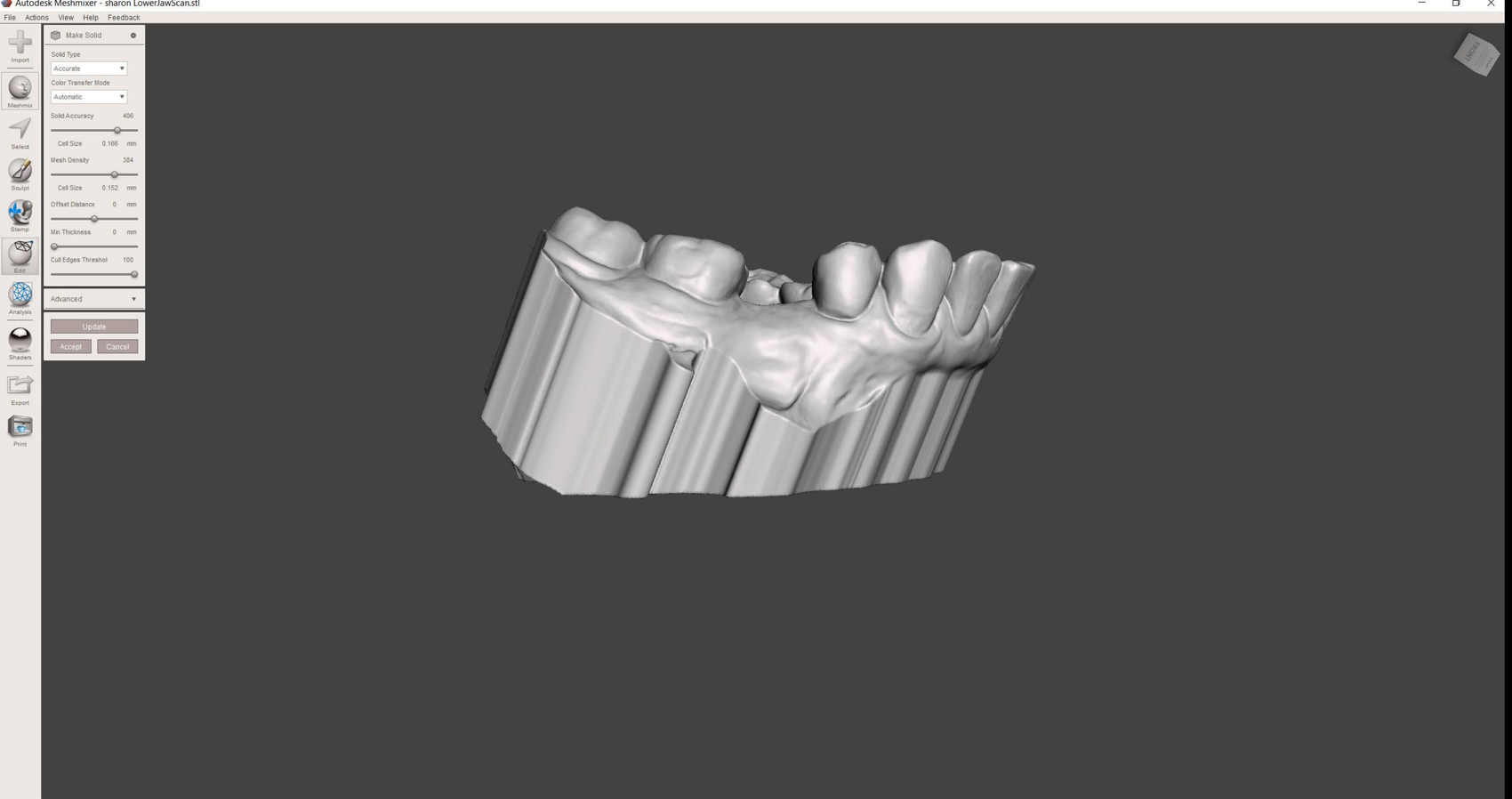

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Mirror
Duplicate
Transform
Align
Create Pivot
Plane Cut
Close Cracks
Generate Face Groups
Make Solid
Hollow
Make Pattern
Separate Shells
Add Tube
Unwrap
Generate Complex



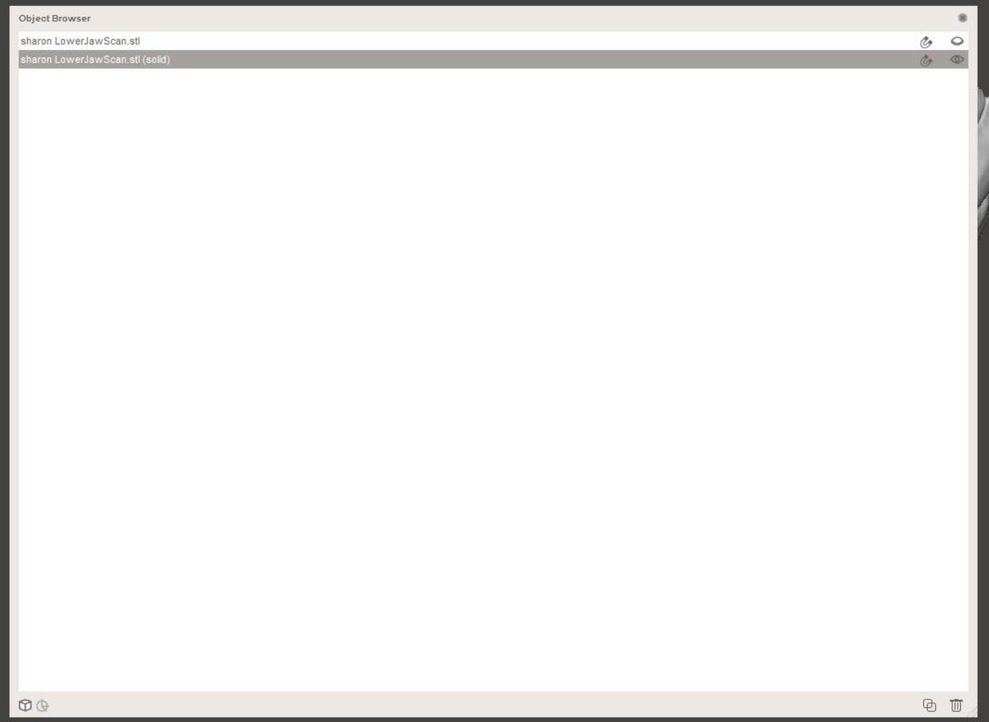
Edit, make solid. This will fill the model
This will take a bit of time. The standard selection is fast and will give a fussy model



Change fast to accurate and increase the accuracy to 400 and the mess density to 400


Autodesk Meshmixer - sharon LowerJawScan.stl
File Actions View Help Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Make Solid
Solid Type
Accurate
Color Transfer Mode
Automatic
Solid Accuracy 406
Cell Size 0.166 mm
Mesh Density 384
Cell Size 0.152 mm
Offset Distance 0 mm
Min Thickness 0 mm
Cull Edges Threshol 100
Advanced
Update
Accept
Cancel

Accept

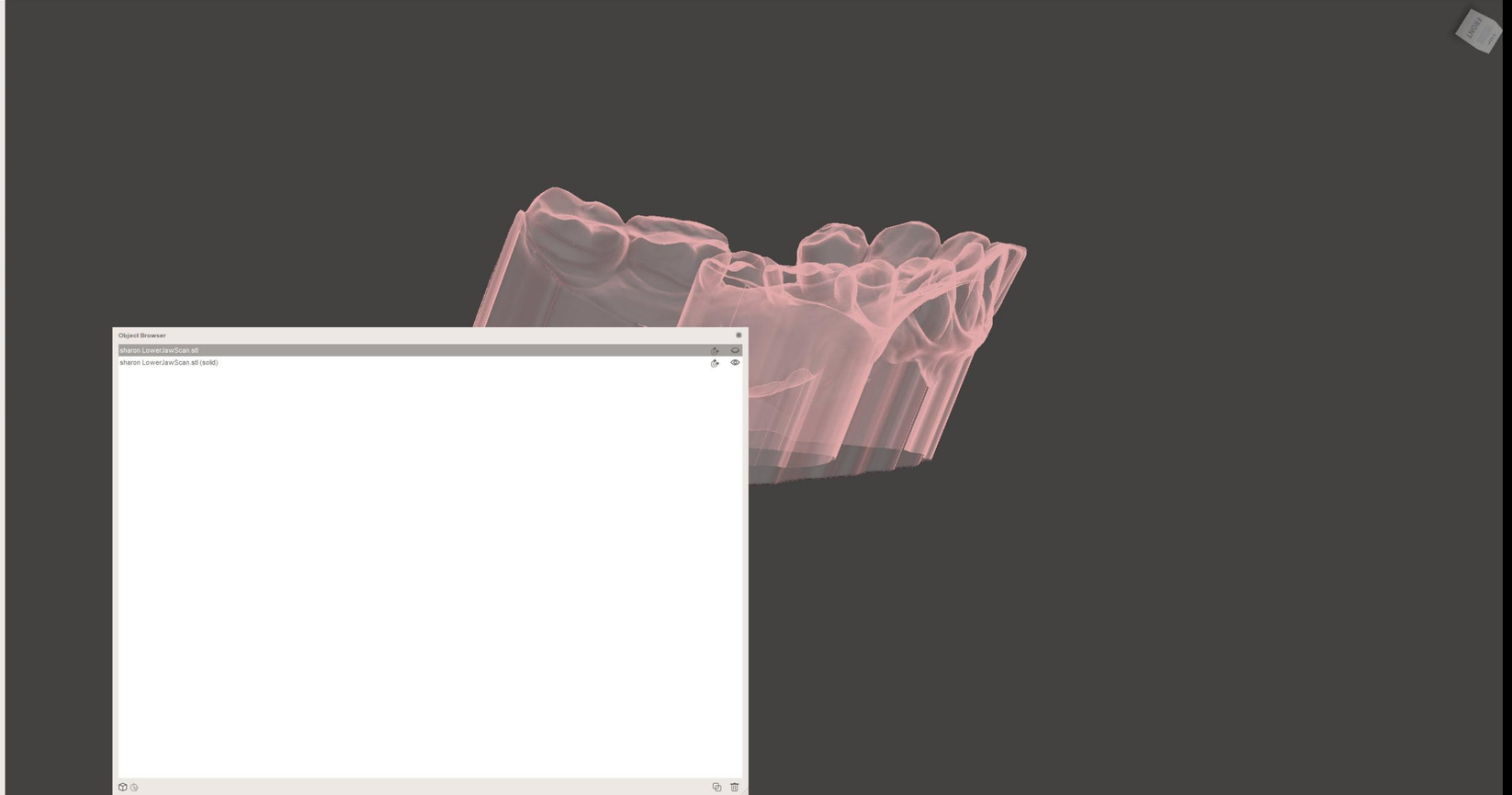


The object browser you now will have two files. The original one and the solid one. Delete the original one.

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print



Object Browser

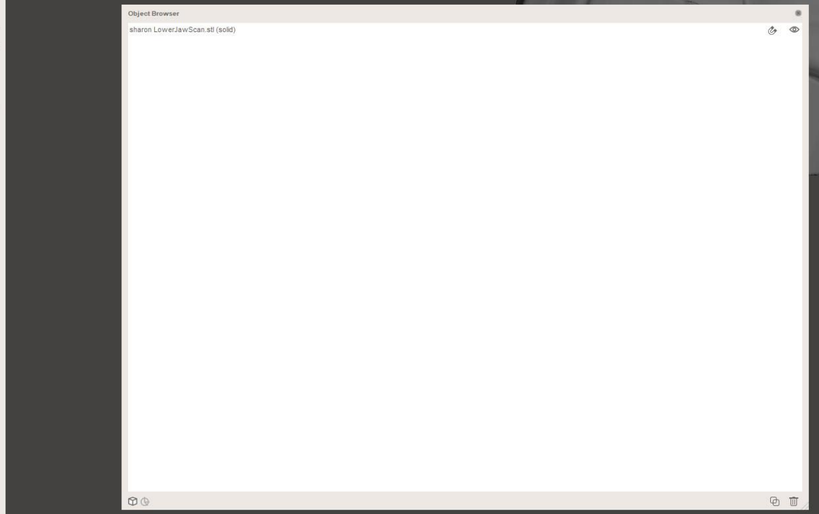
sharon LowerJawScan.stl

sharon LowerJawScan.stl (solid)

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print



Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

- Open Ctrl+O
- Save Ctrl+S
- Save As Ctrl+Shift+S
- Recent Files...

- Import
- Import Bunny
- Import Sphere
- Import Plane

- Import Parts Folder

- Import Reference

- Export Ctrl+E
- Export SVG

- Preferences Alt+T

- Start Screencast

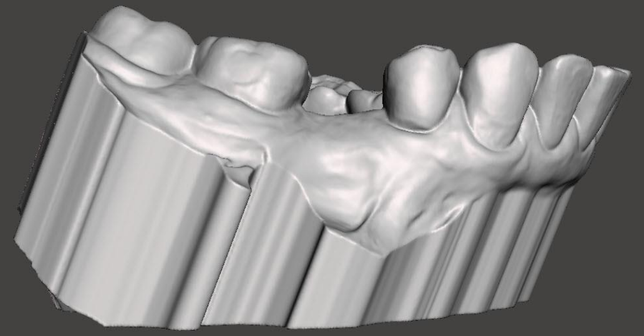
- Exit

Analysis

Shaders

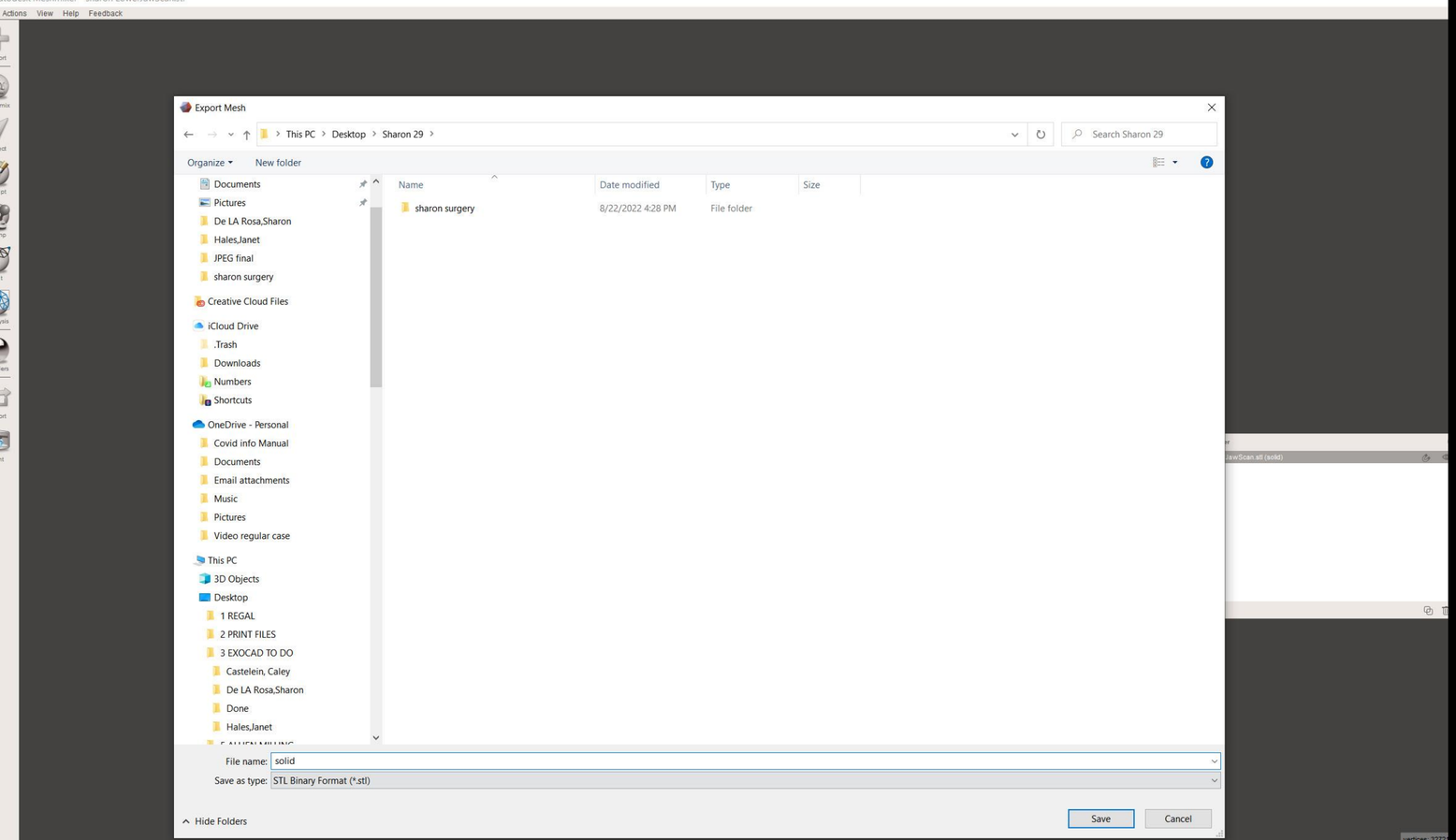
Export

Print

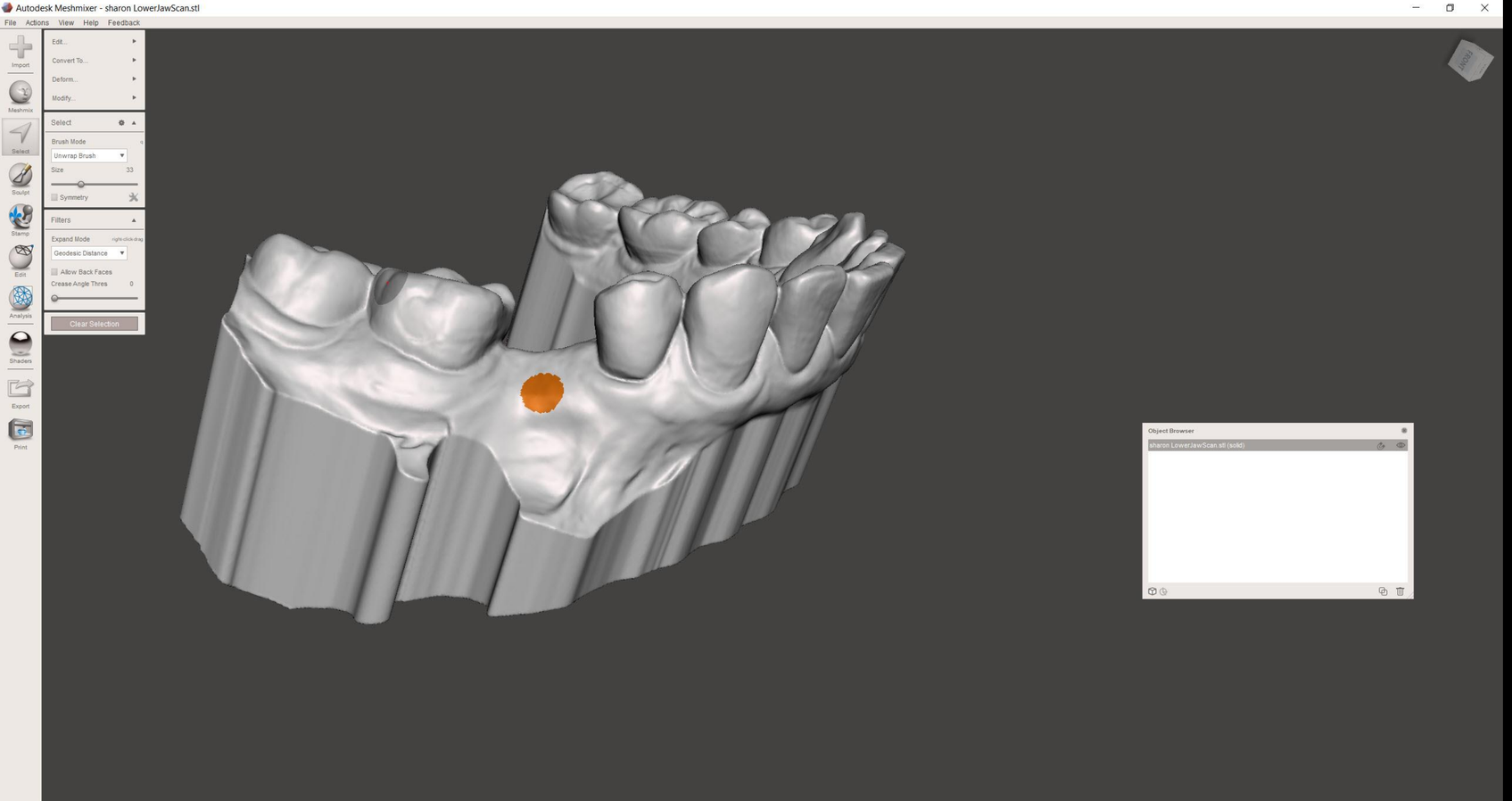


Object Browser

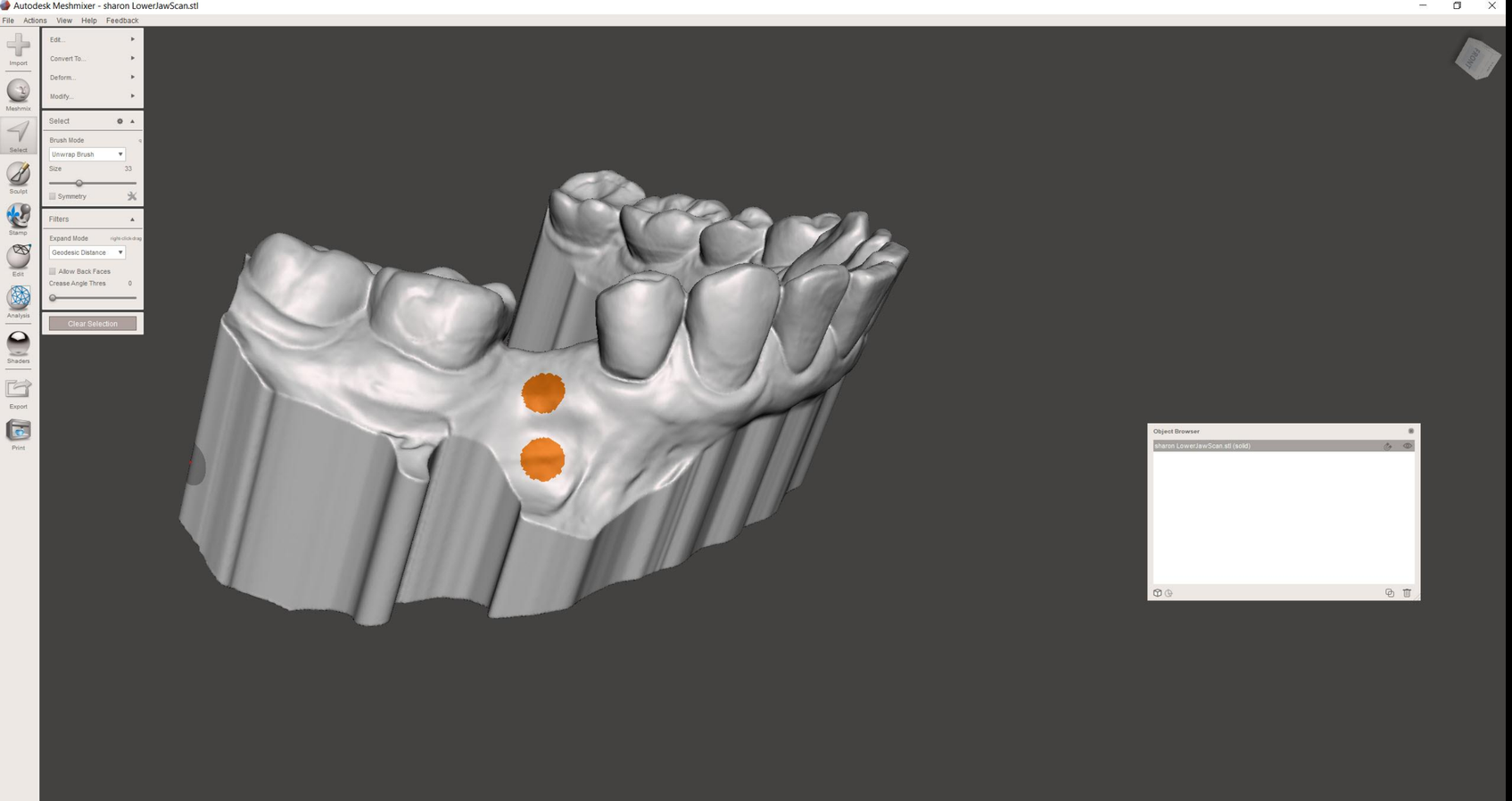
sharon LowerJawScan.stl (solid)



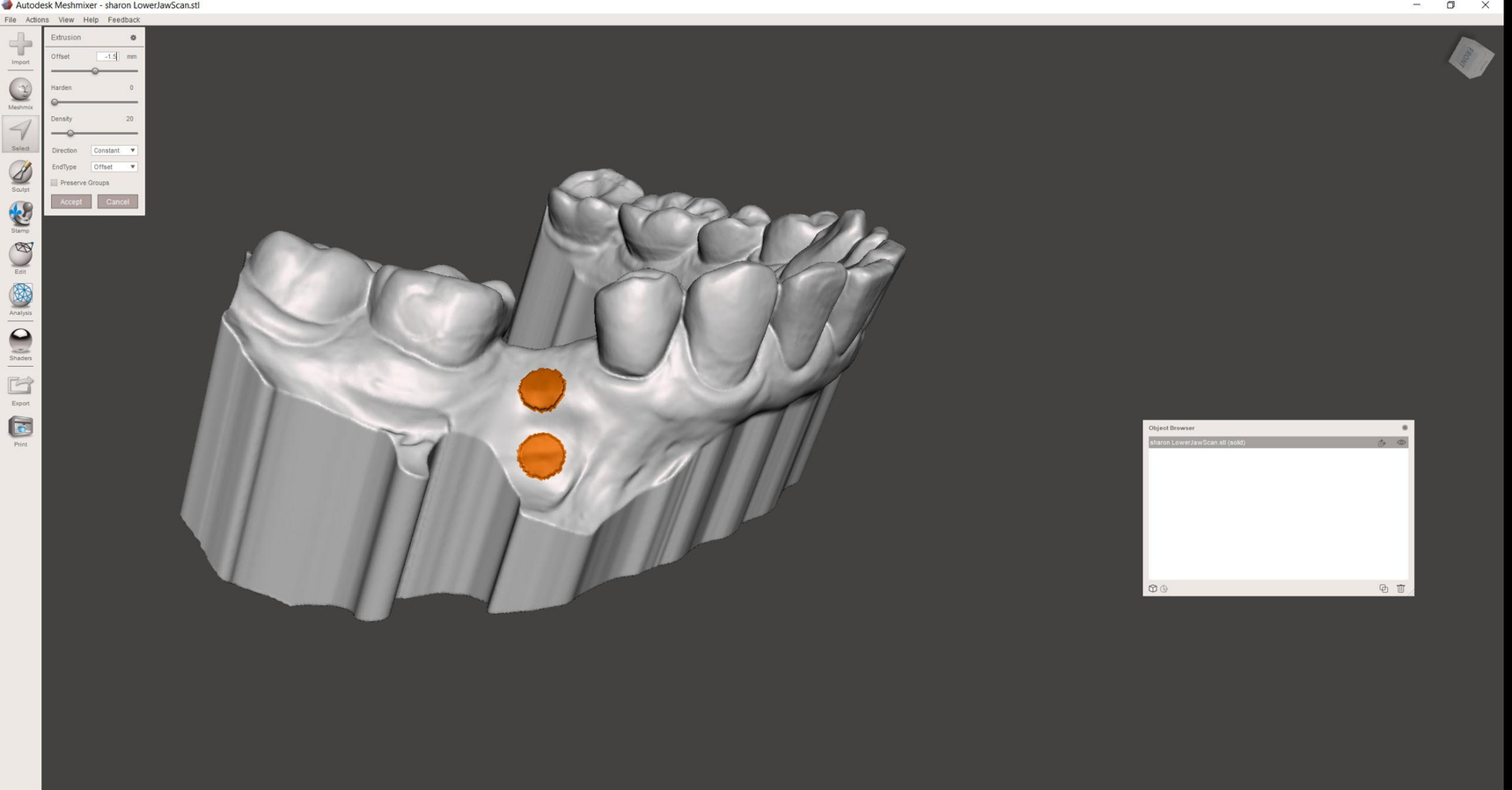
Export this file and safe as “ solid” in the patient's folder



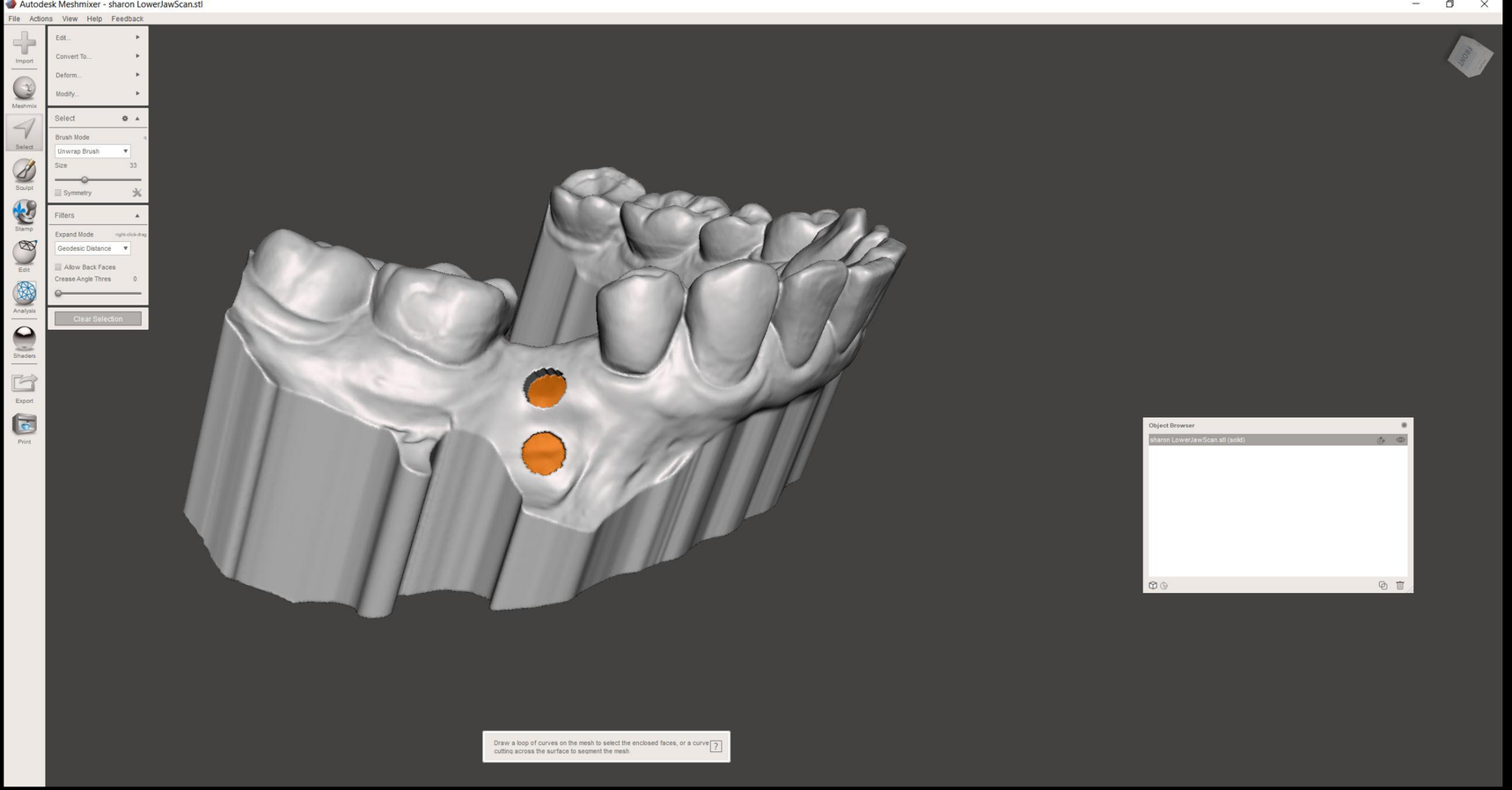
“S”, make cursor 4-5 mm in diameter and select first measurement spot



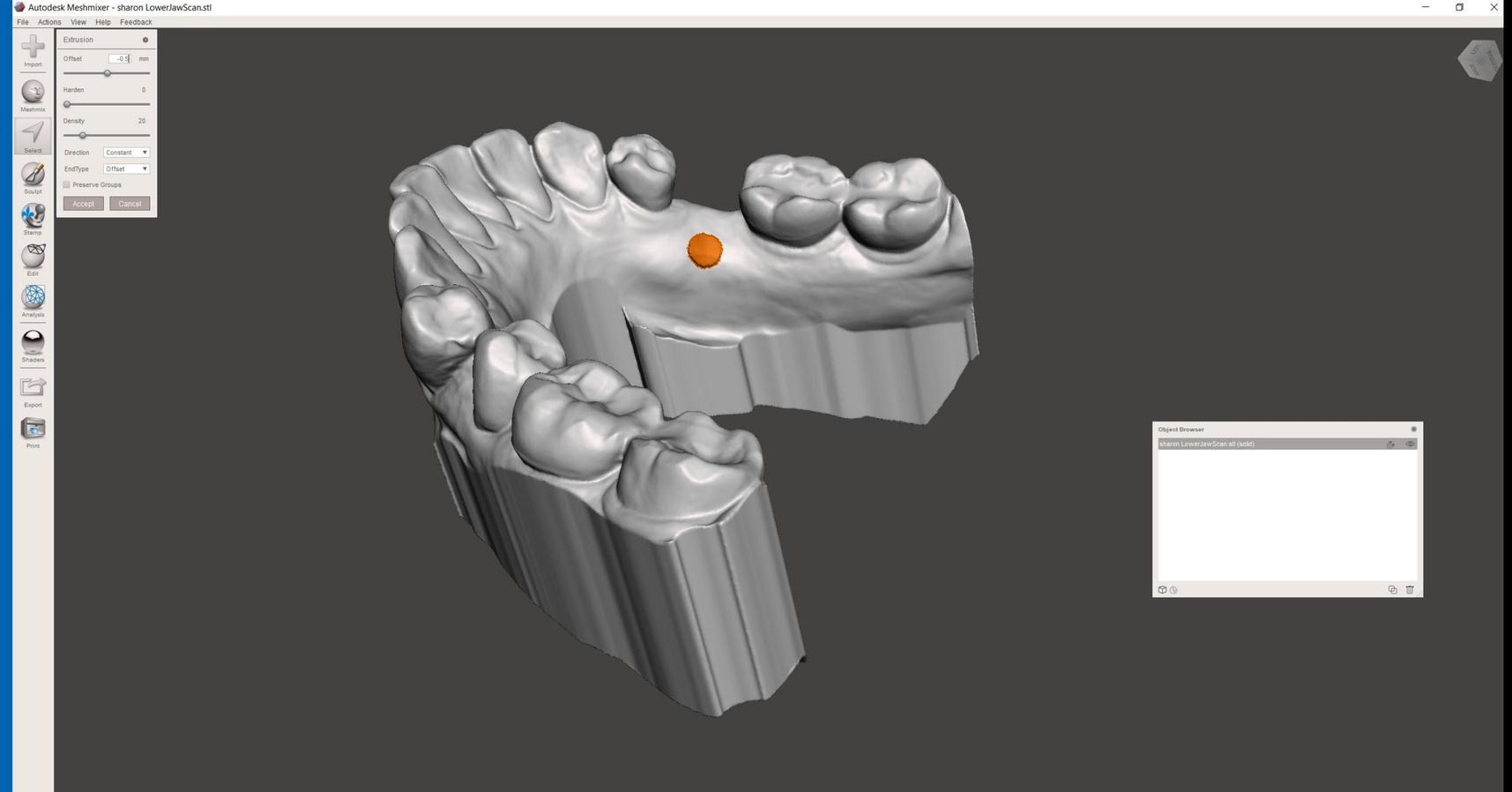
Since the depth was 1.5 on both spots the lower measurement spot was also selected



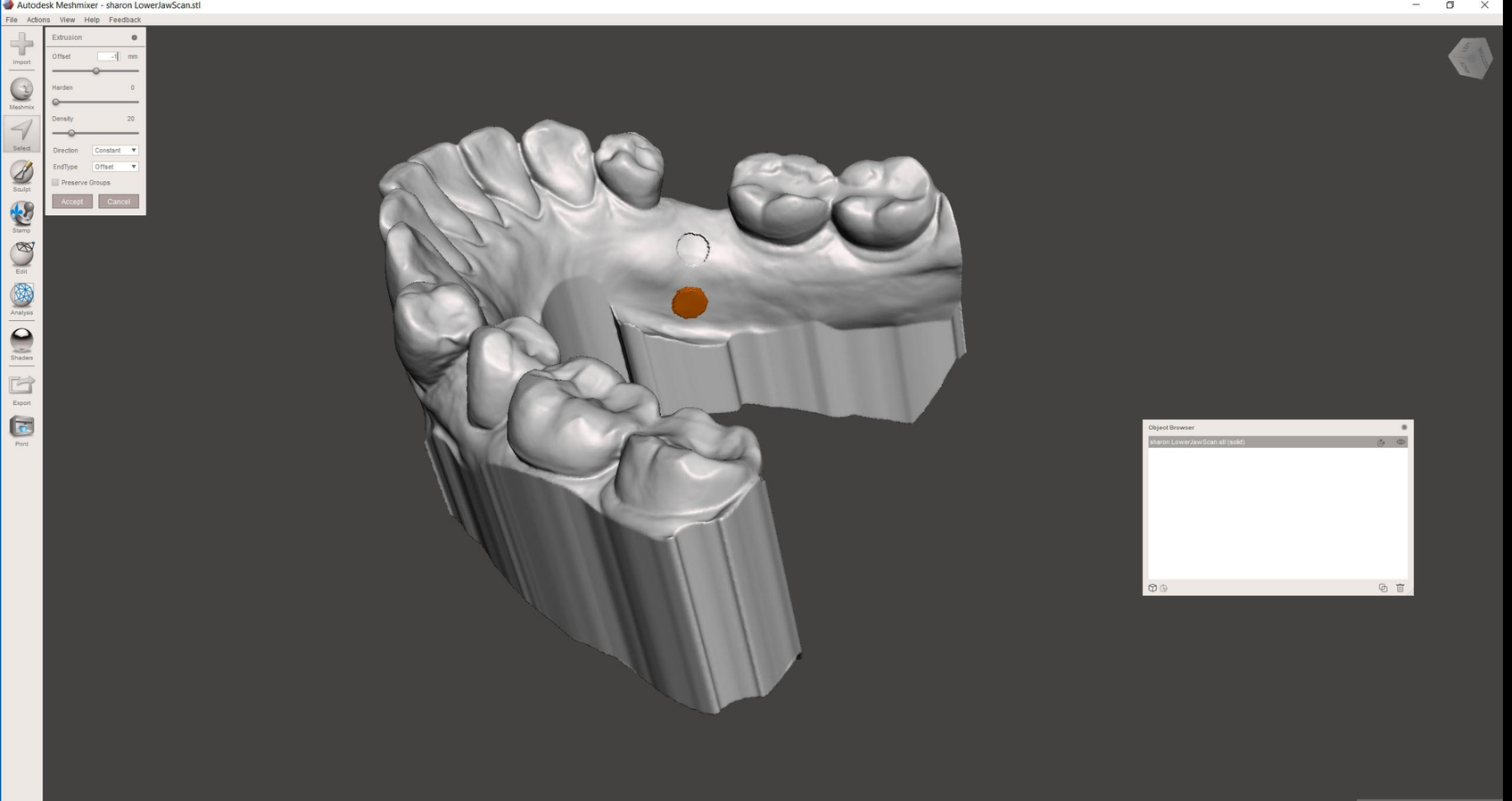
"D" for extrude, -1.5, which is the measurement you did intra orally with a small needle and rubber stop



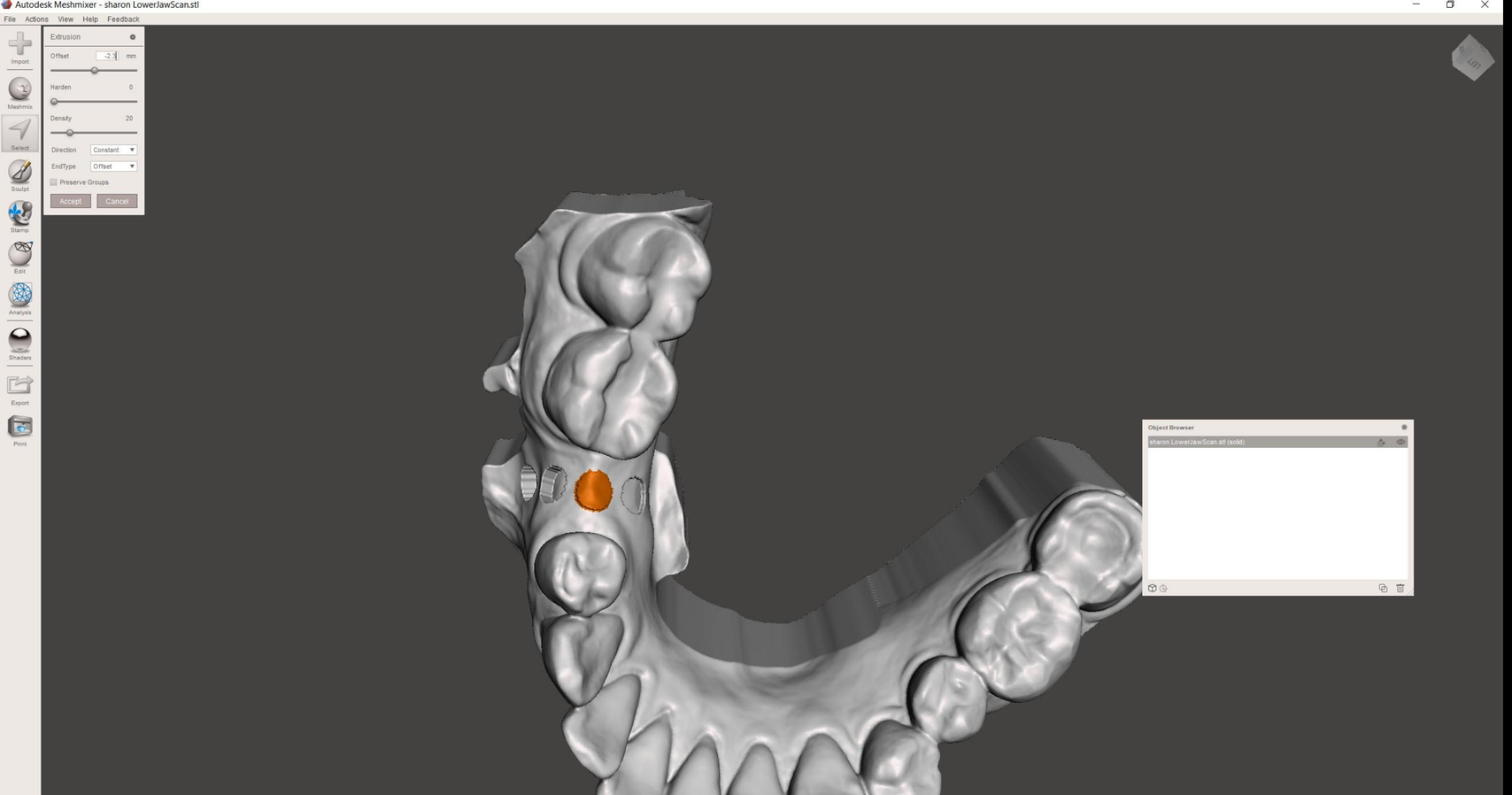
Clear selection



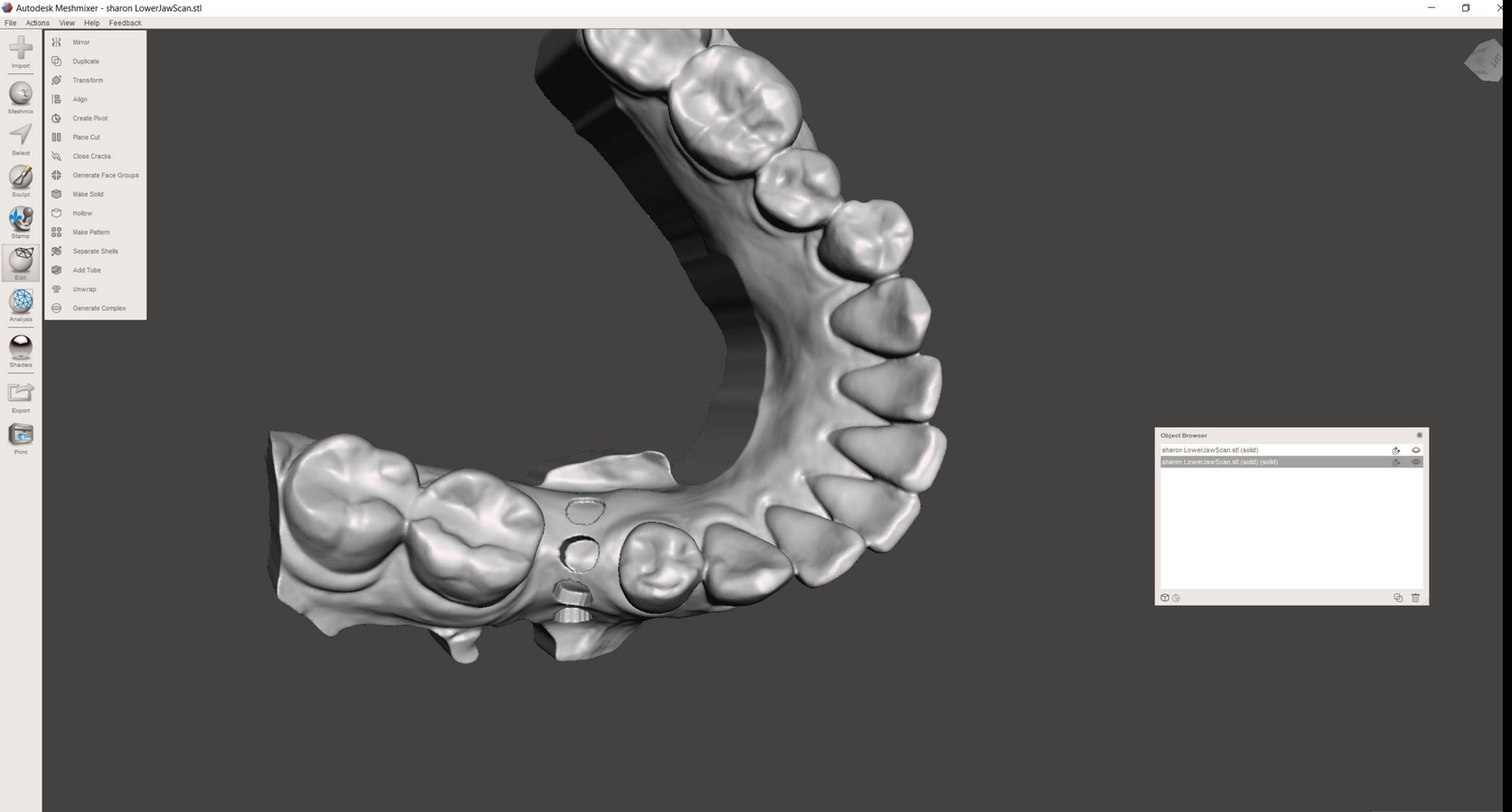
“S”, “D” – 0.5 mm, clear selection



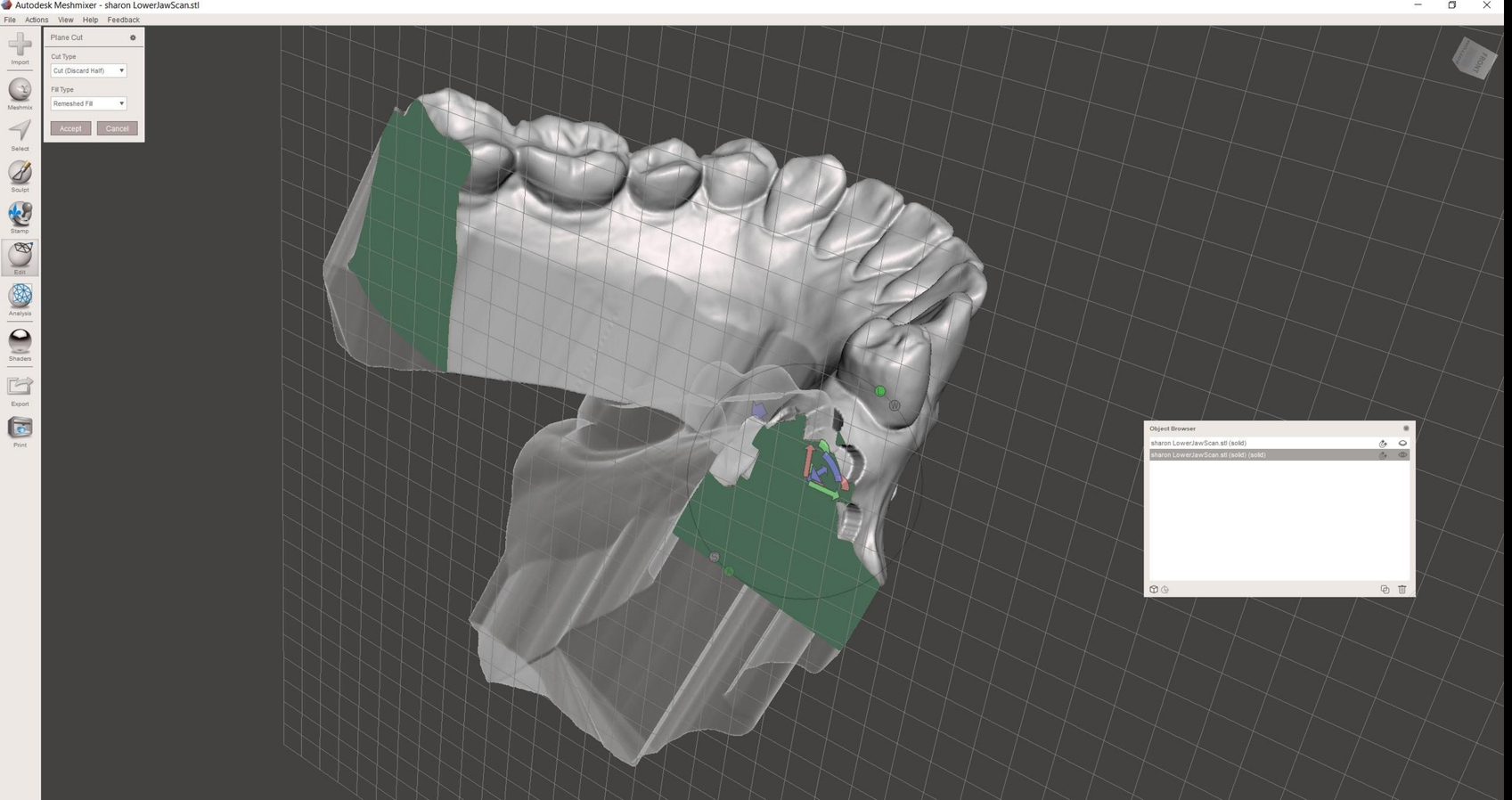
“S”, “D”, -1 mm, clear selction



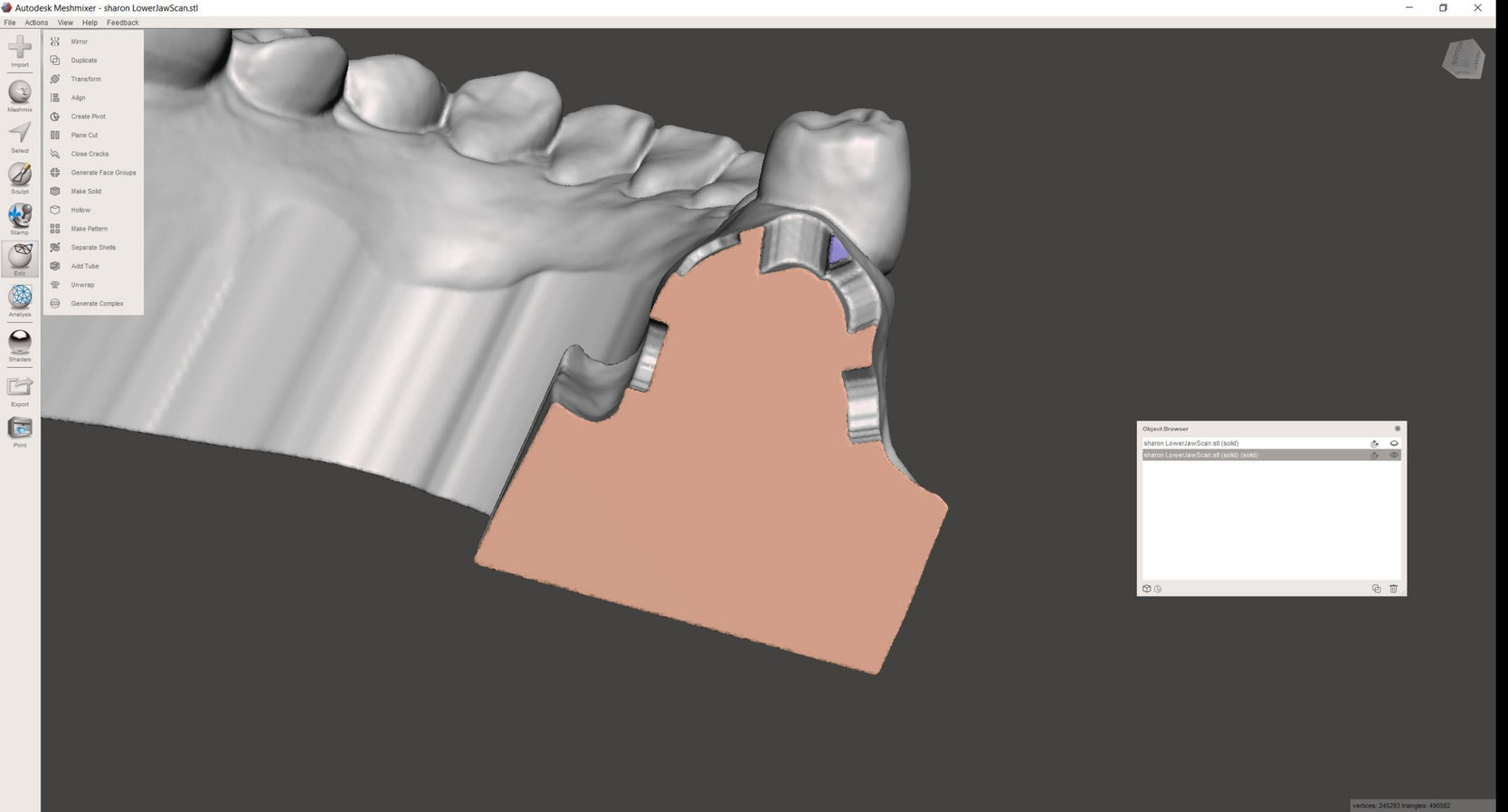
"S", "D", -2.3 mm (taken from X-ray measurement), clear selection



Now all 5 measurement have been transferred to the model



Edit, plane cut. Cut trough the middle of the ridge. If the model is not solid anymore. Make solid again.


Autodesk Meshmixer - sharon LowerJawScan.stl
File
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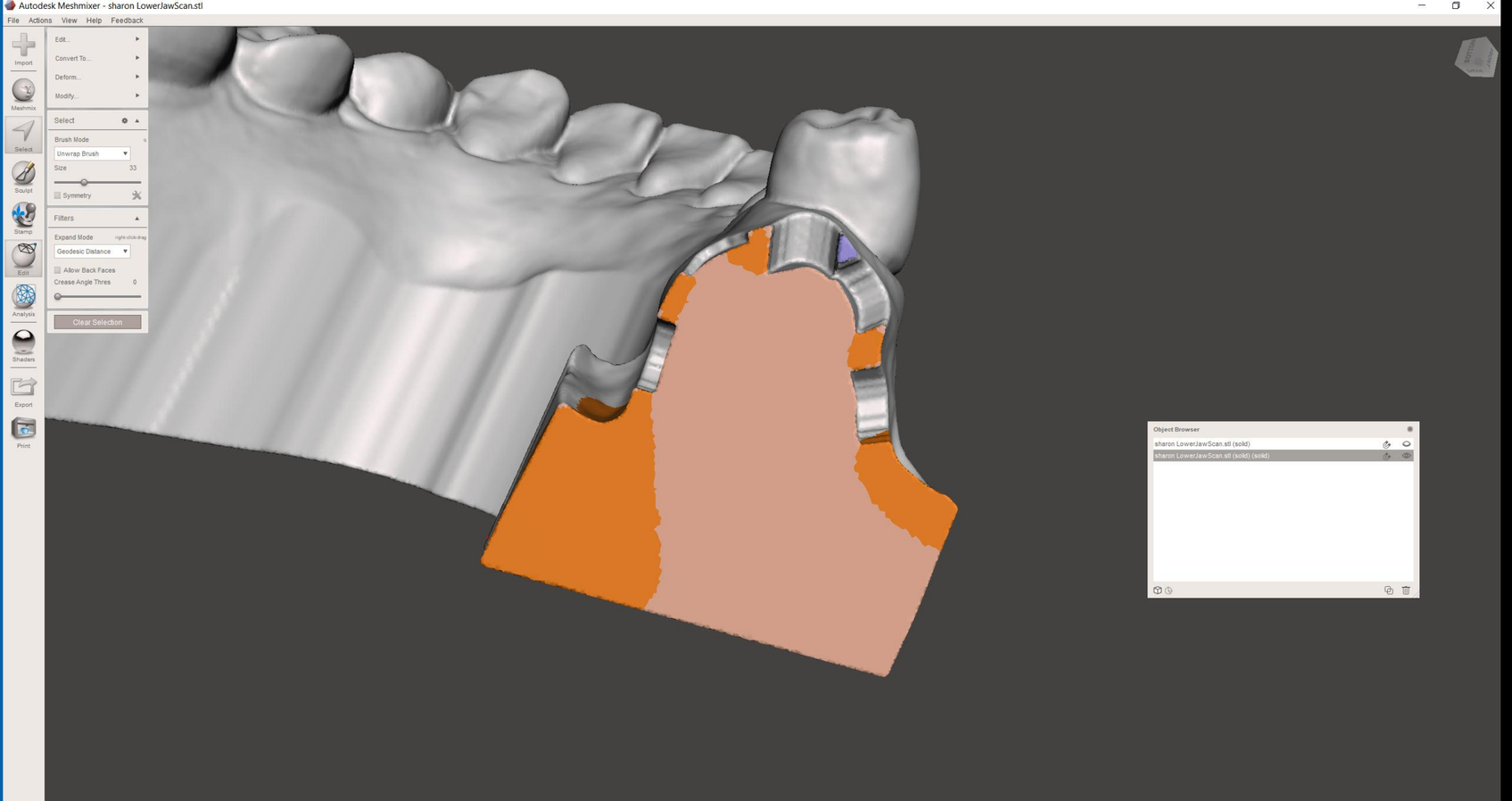
Create Pivot
Plane Cut
Close Cracks
Generate Face Groups
Make Solid
Hollow
Make Pattern
Separate Shells
Add Tube
Unwrap
Generate Complex
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
vertices: 245293 triangles: 490582


Autodesk Meshmixer - sharon LowerJawScan.stl
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Convert To...
Deform...
Modify...
Select
Brush Mode
Unwrap Brush
Size
33
Symmetry
Filters
Expand Mode
right-click-drag
Geodesic Distance
Allow Back Faces
Crease Angle Thres
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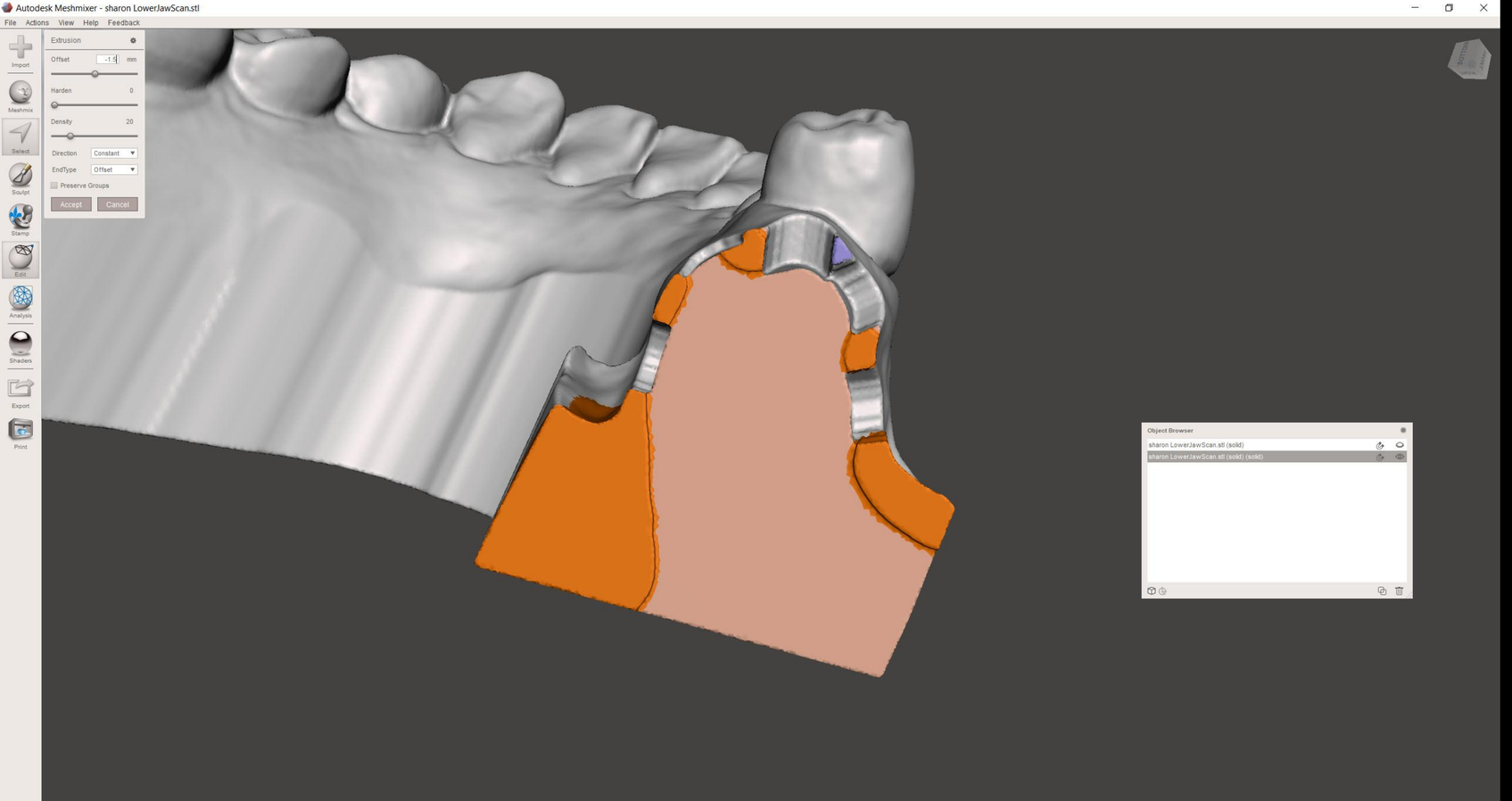
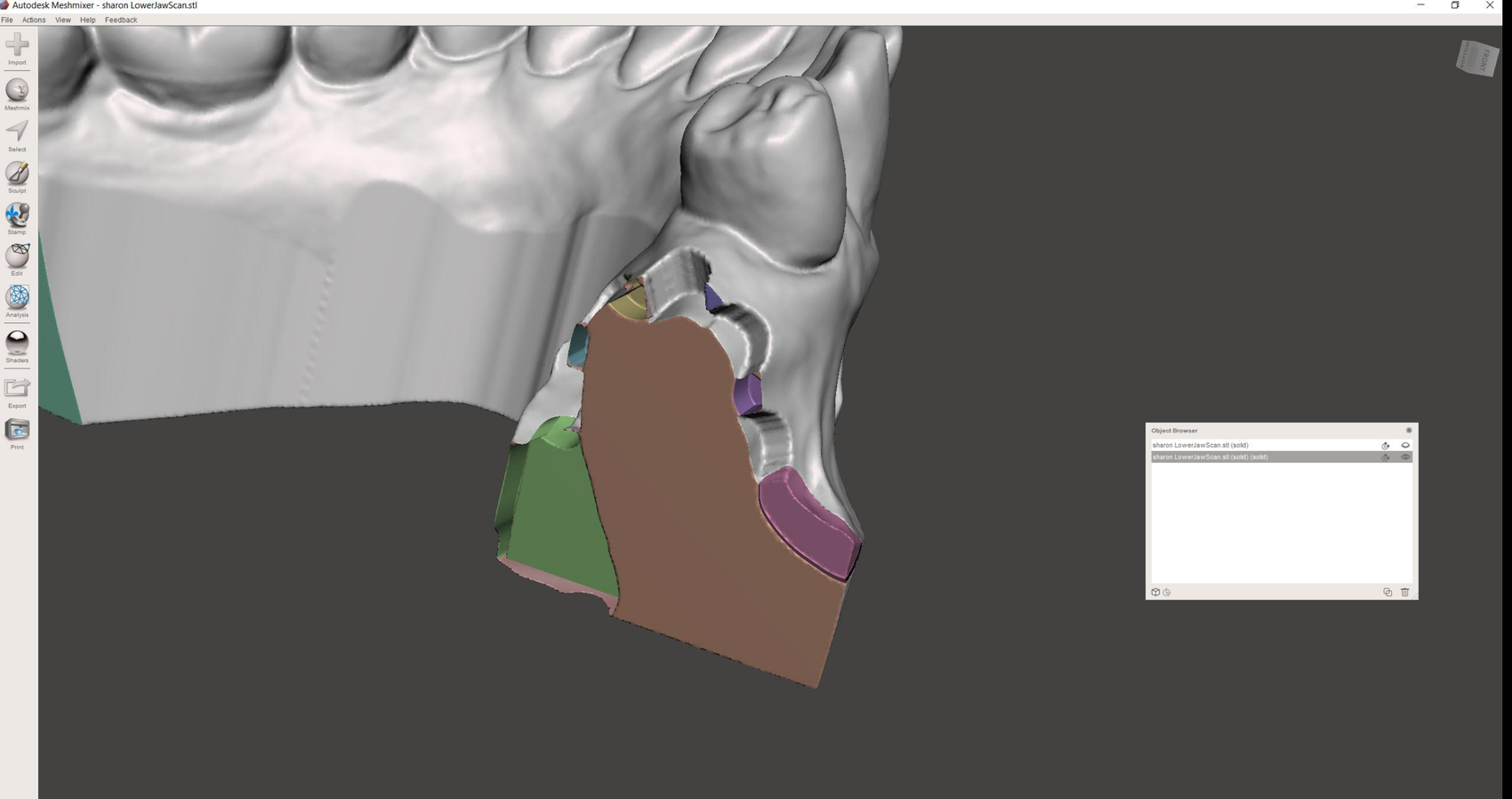
Clear Selection
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)



"S", then use cursor to make outline. You have used your finger to palpate Intra oral and draw contour accordingly.

"D" - 1.5 mm to accentuate bone volume.


Autodesk Meshmixer - sharon LowerJawScan.stl
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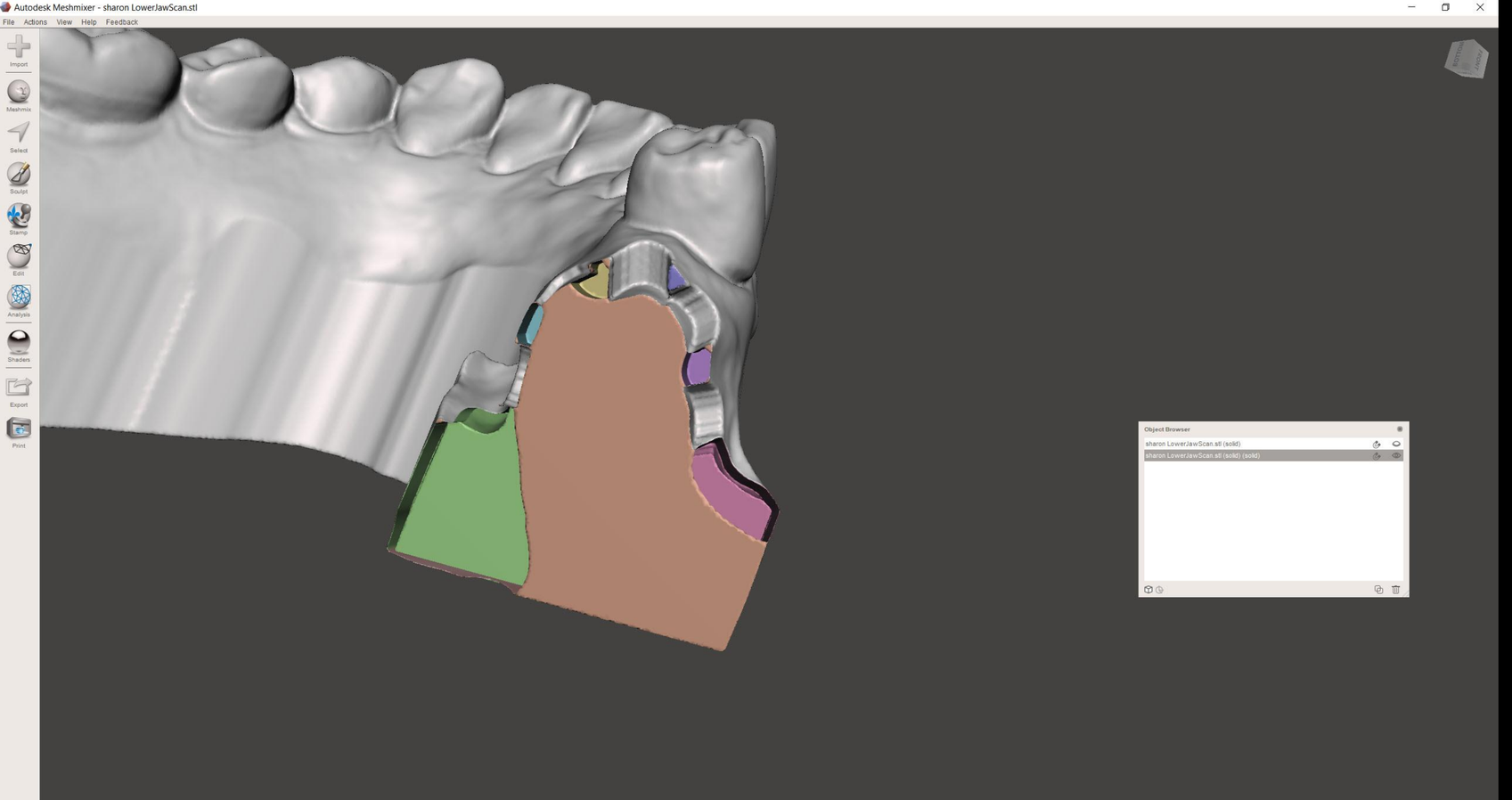
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)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sharon LowerJawScan.stl (solid)
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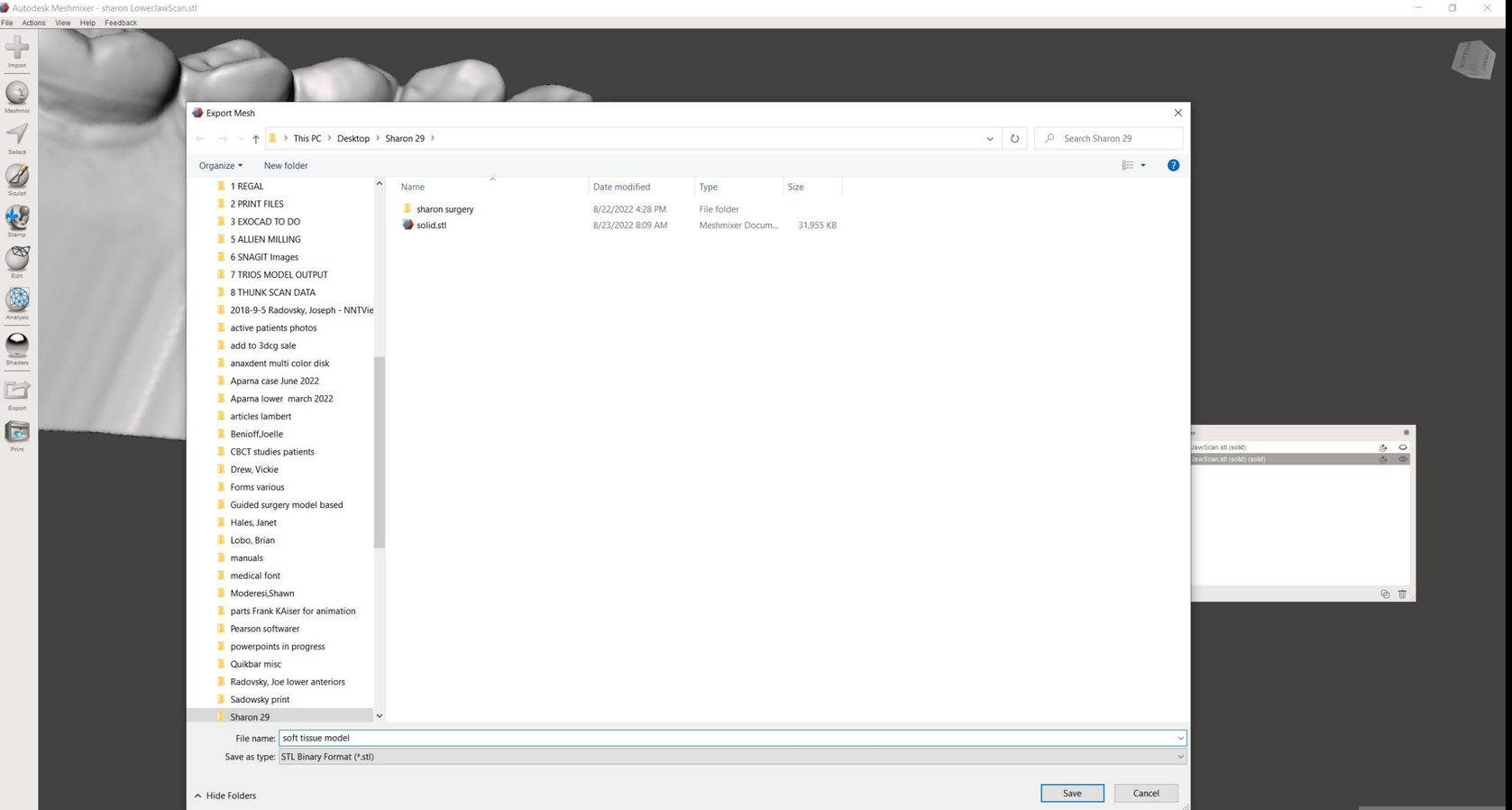
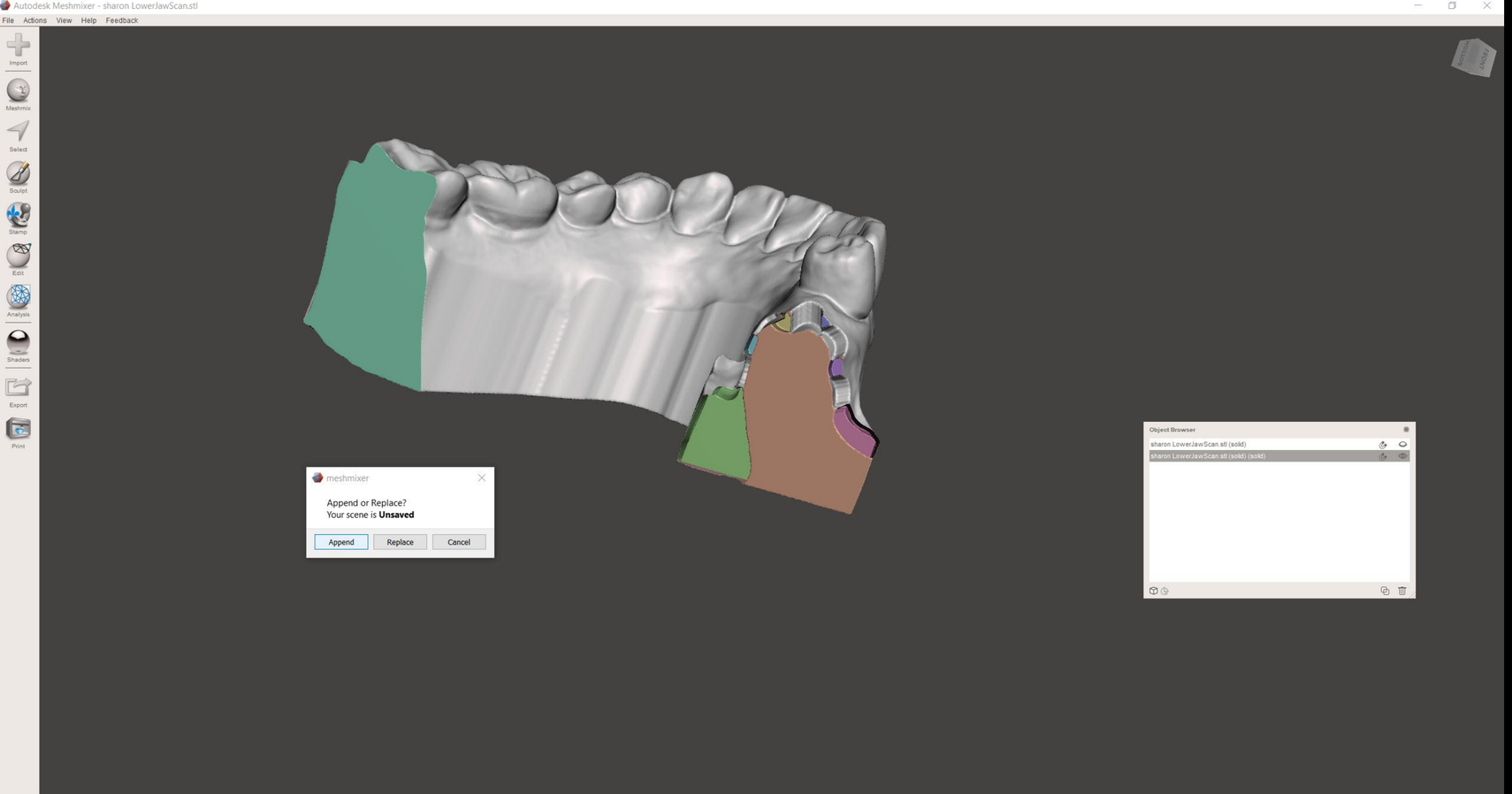
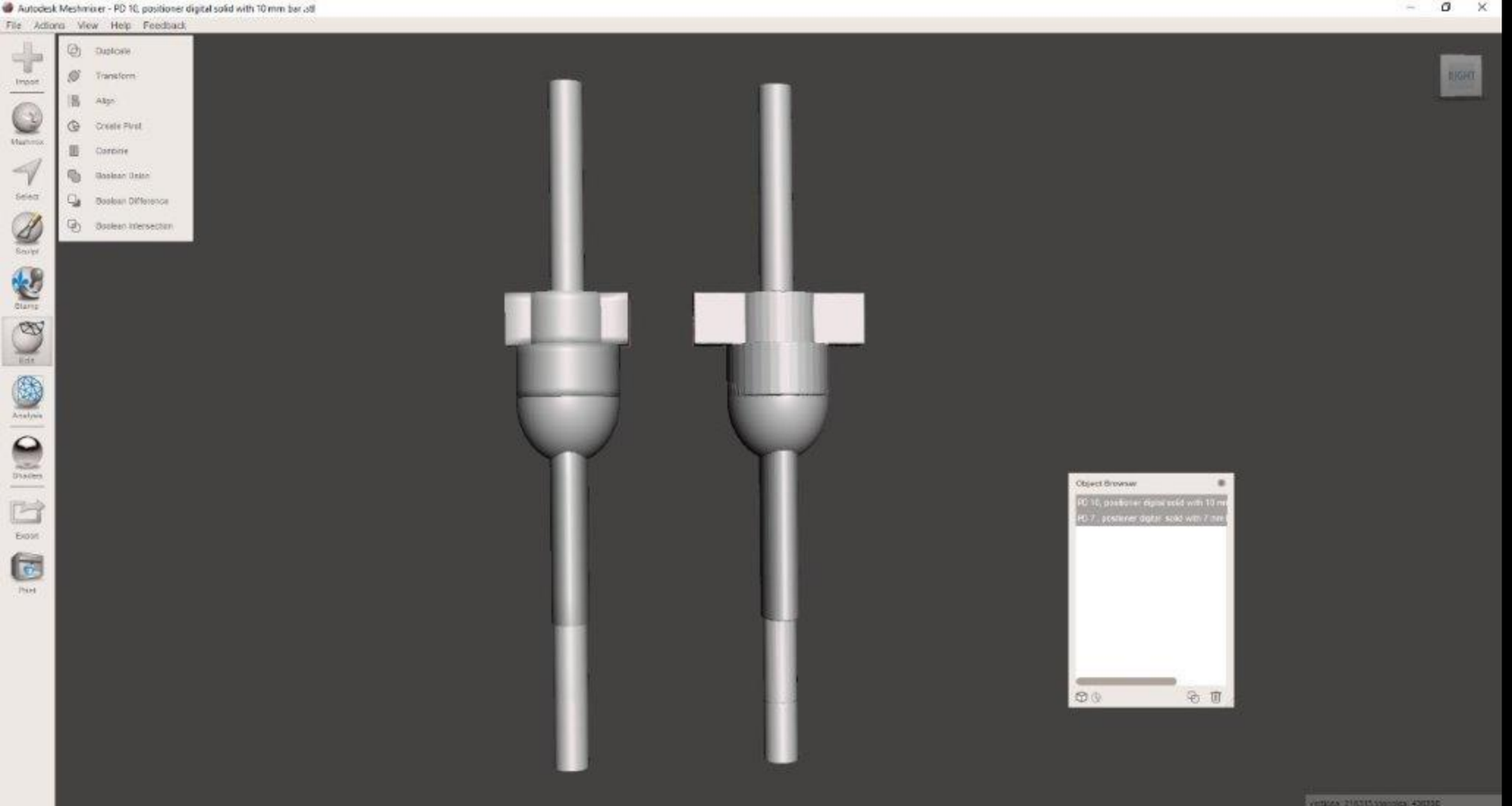
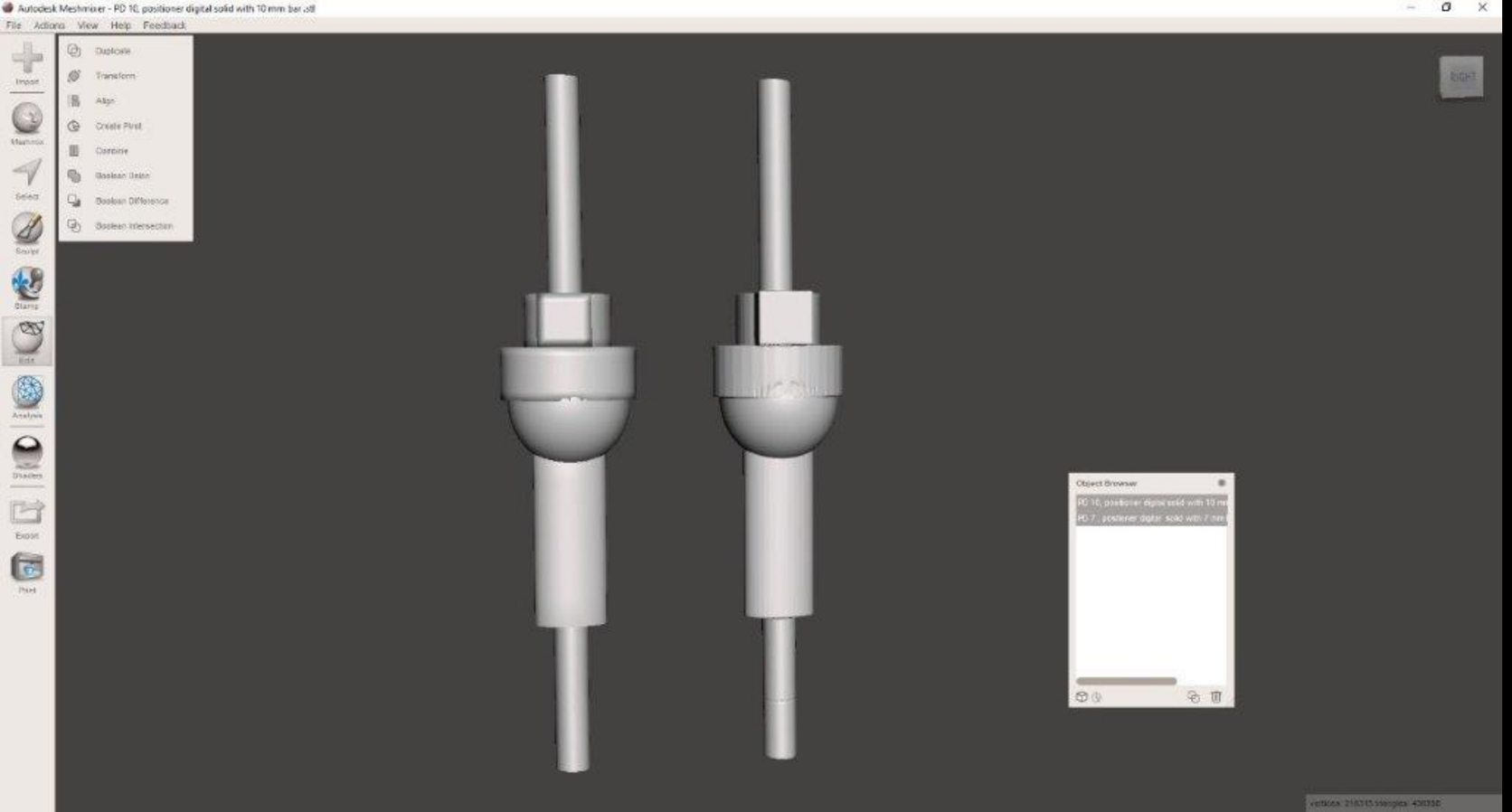


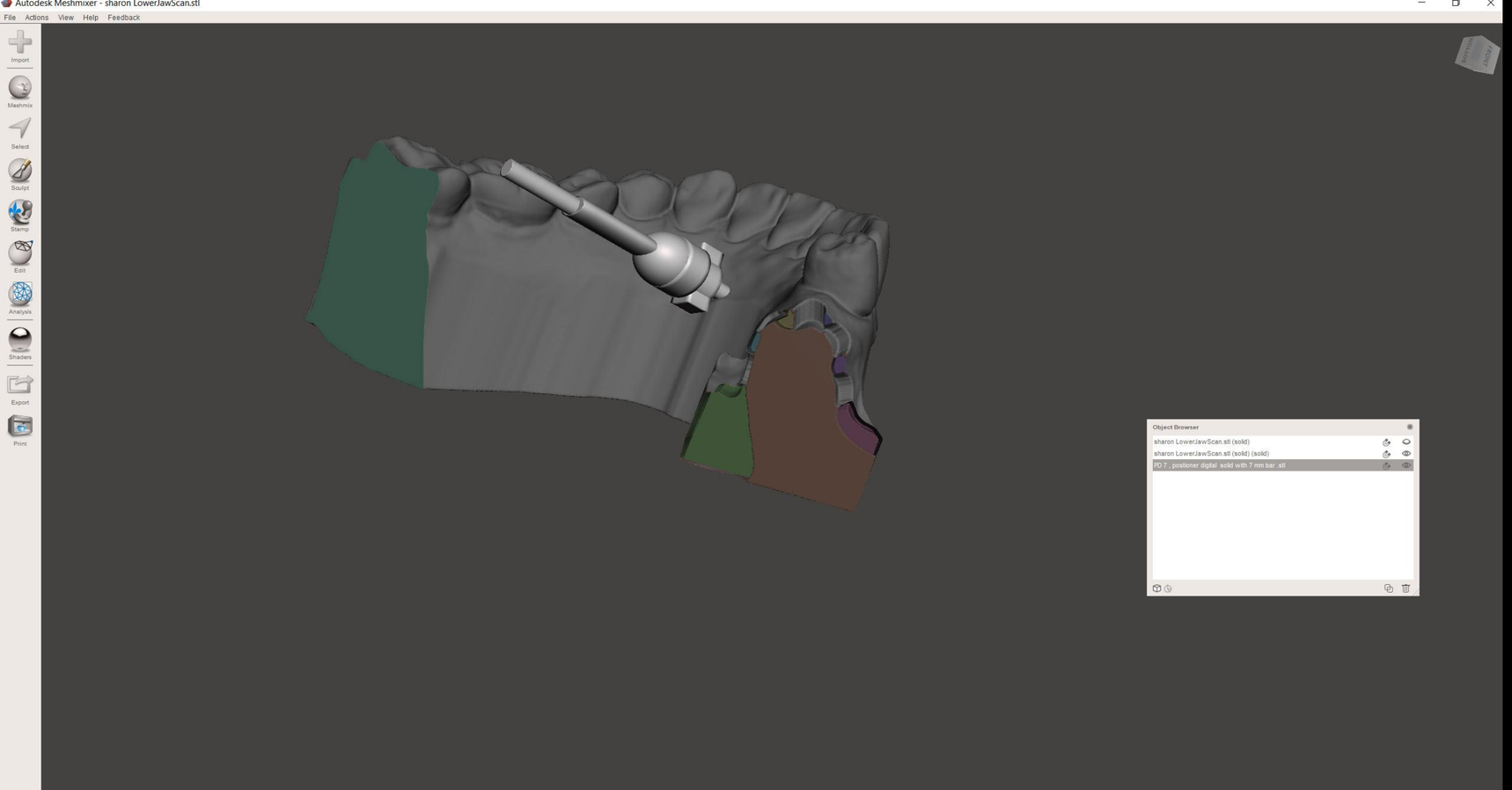
Export, safe as soft tissue model in patient file



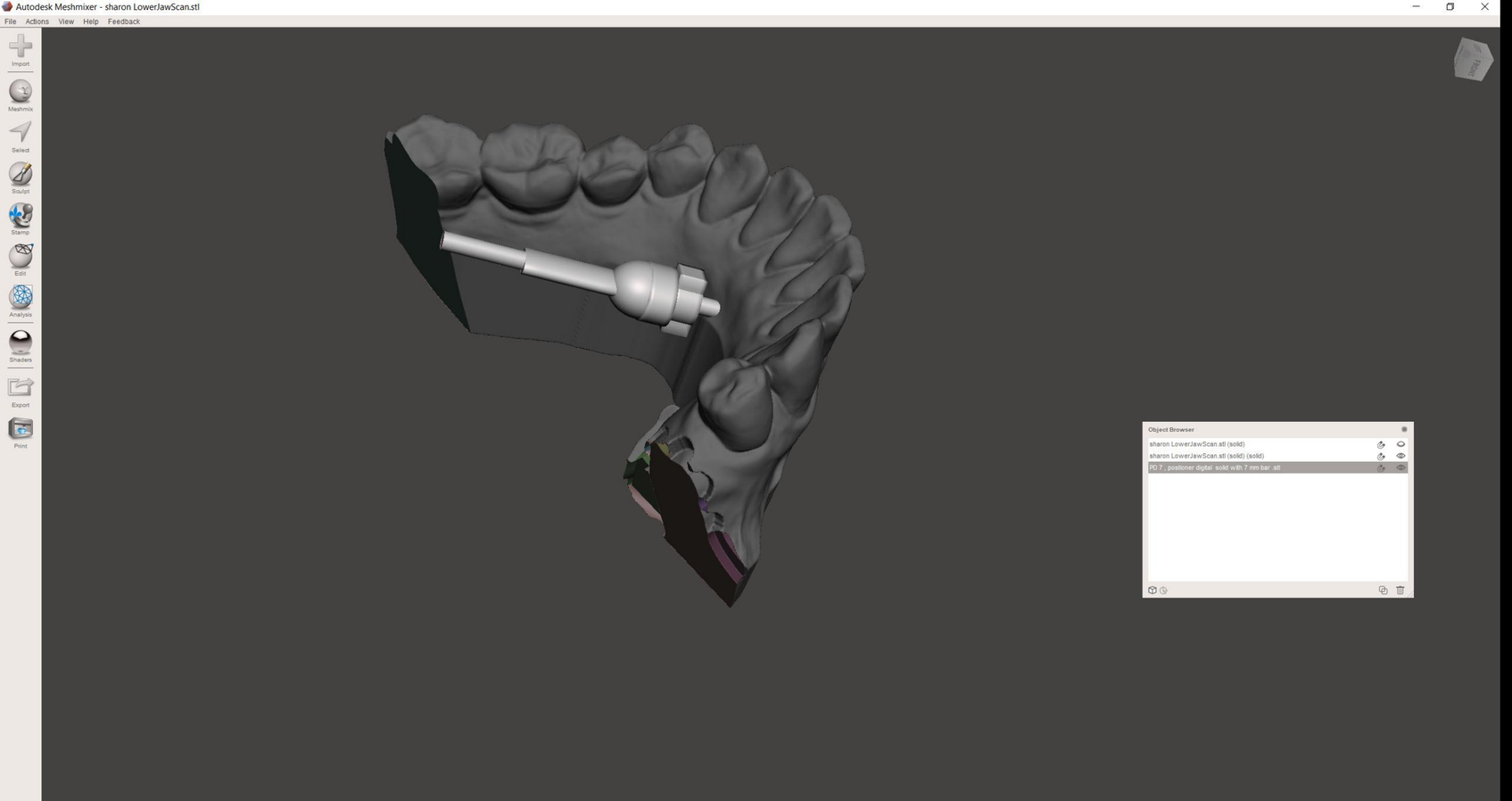
Select the full solid model from the patient file and drag it into the scene. Append.


Autodesk Meshmixer - PD 10, positioner digital solid with 10 mm bar.stl
File
Actions
View
Help
Feedback
Duplicate
Transform
Align
Create Pivot
Combine
Boolean Union
Boolean Difference
Boolean Intersection
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
RIGHT
Object Browser

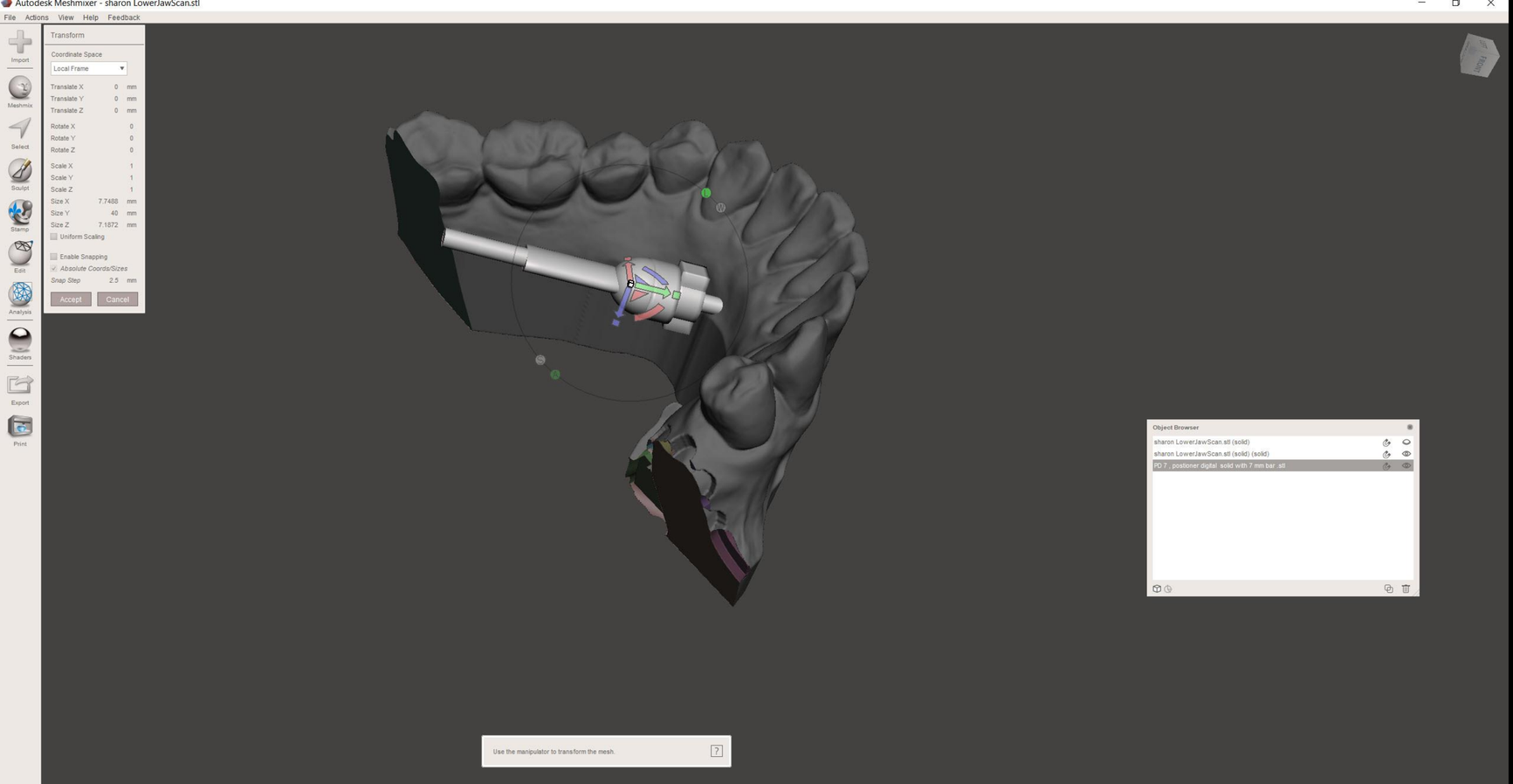

Autodesk Meshmixer - PD 10, positioner digital solid with 10 mm bar.stl
File
Actions
View
Help
Feedback
Duplicate
Transform
Align
Create Pivot
Combine
Boolean Union
Boolean Difference
Boolean Intersection
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
RIGHT
Object Browser
PD 10, positioner digital solid with 10 mm
PD 7, positioner digital solid with 7 mm



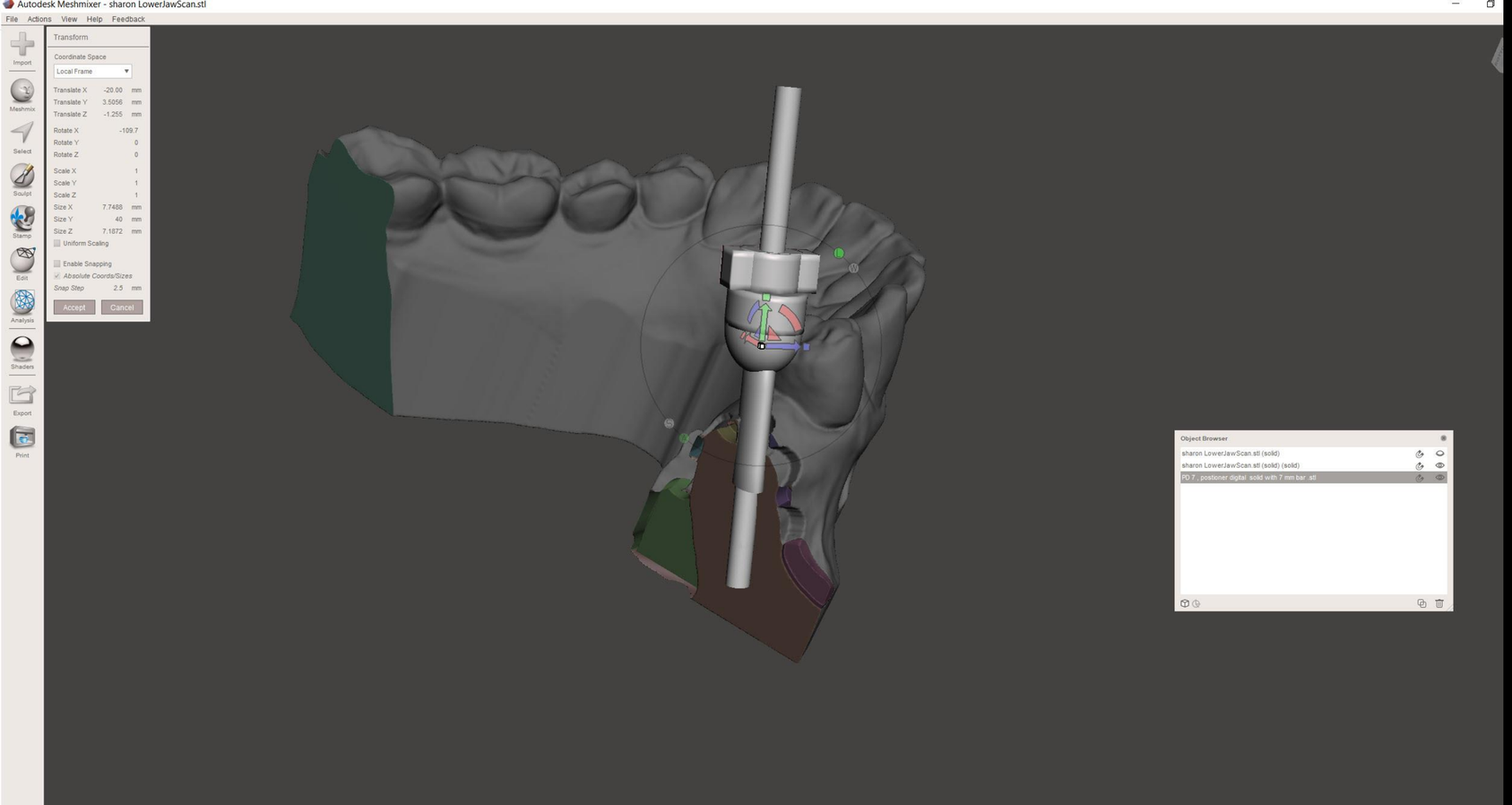
Select Positioner Digital with 7 MM bar. PD 7 mm and drag into scene. You will then select append.

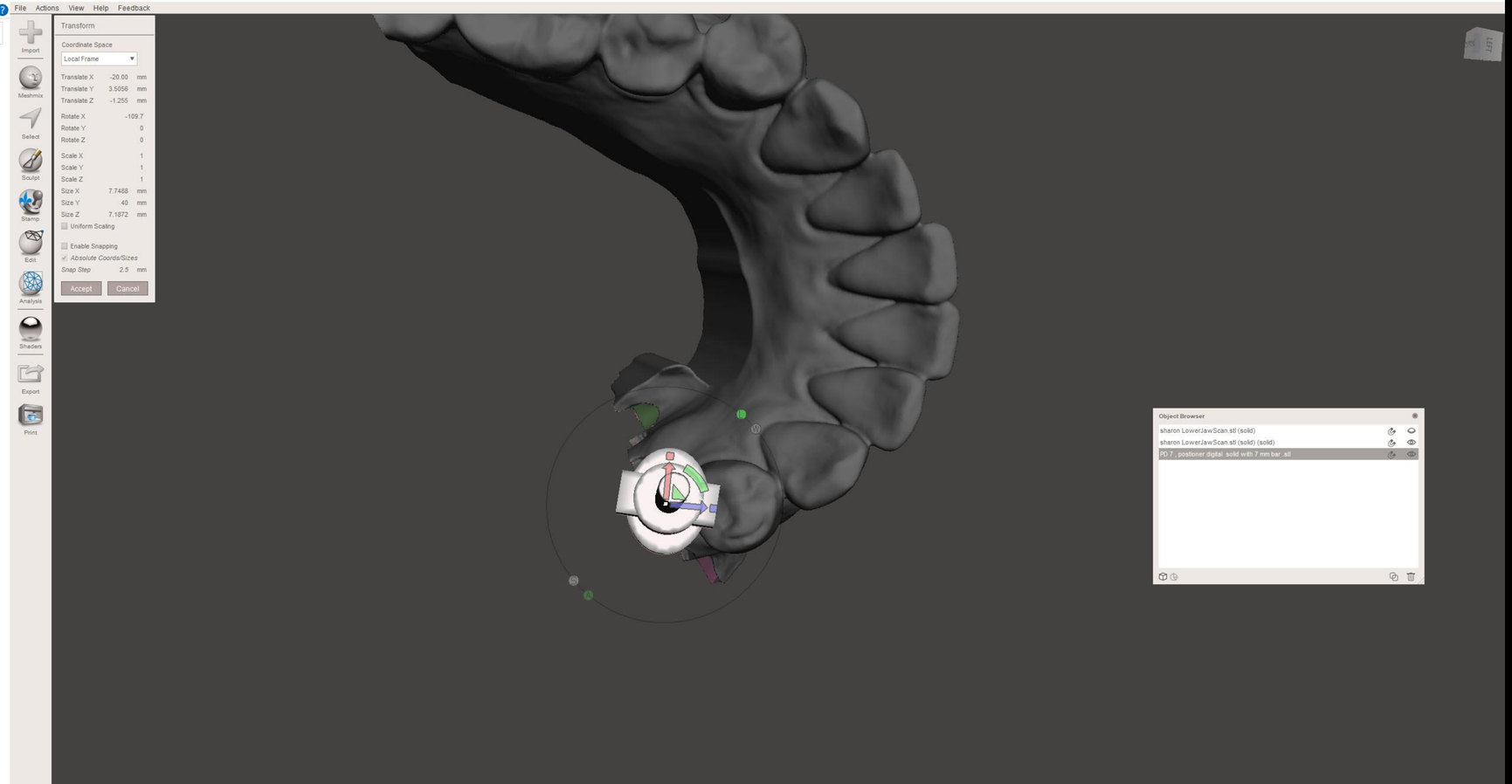


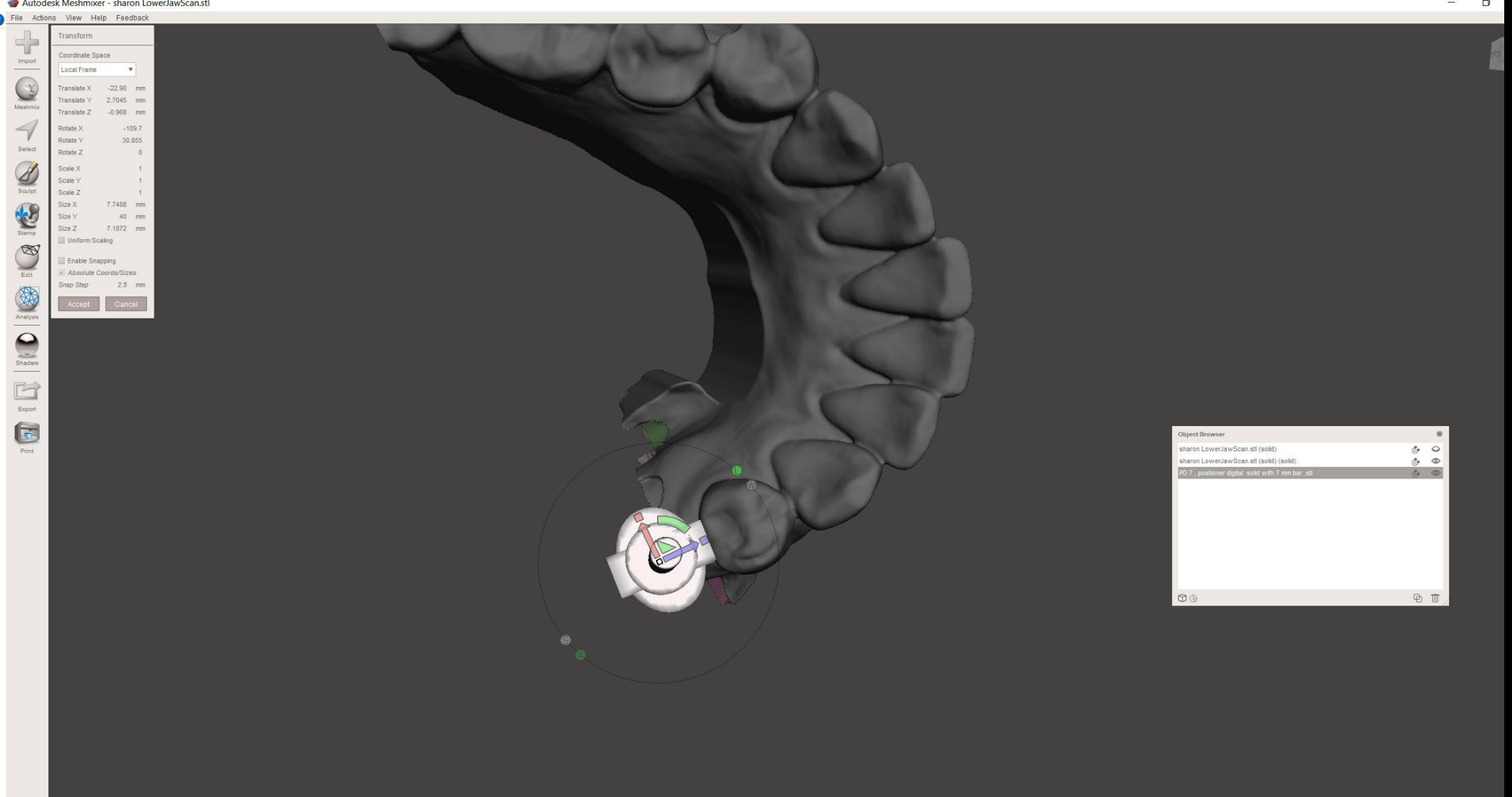
The PD will now float near the soft tissue model

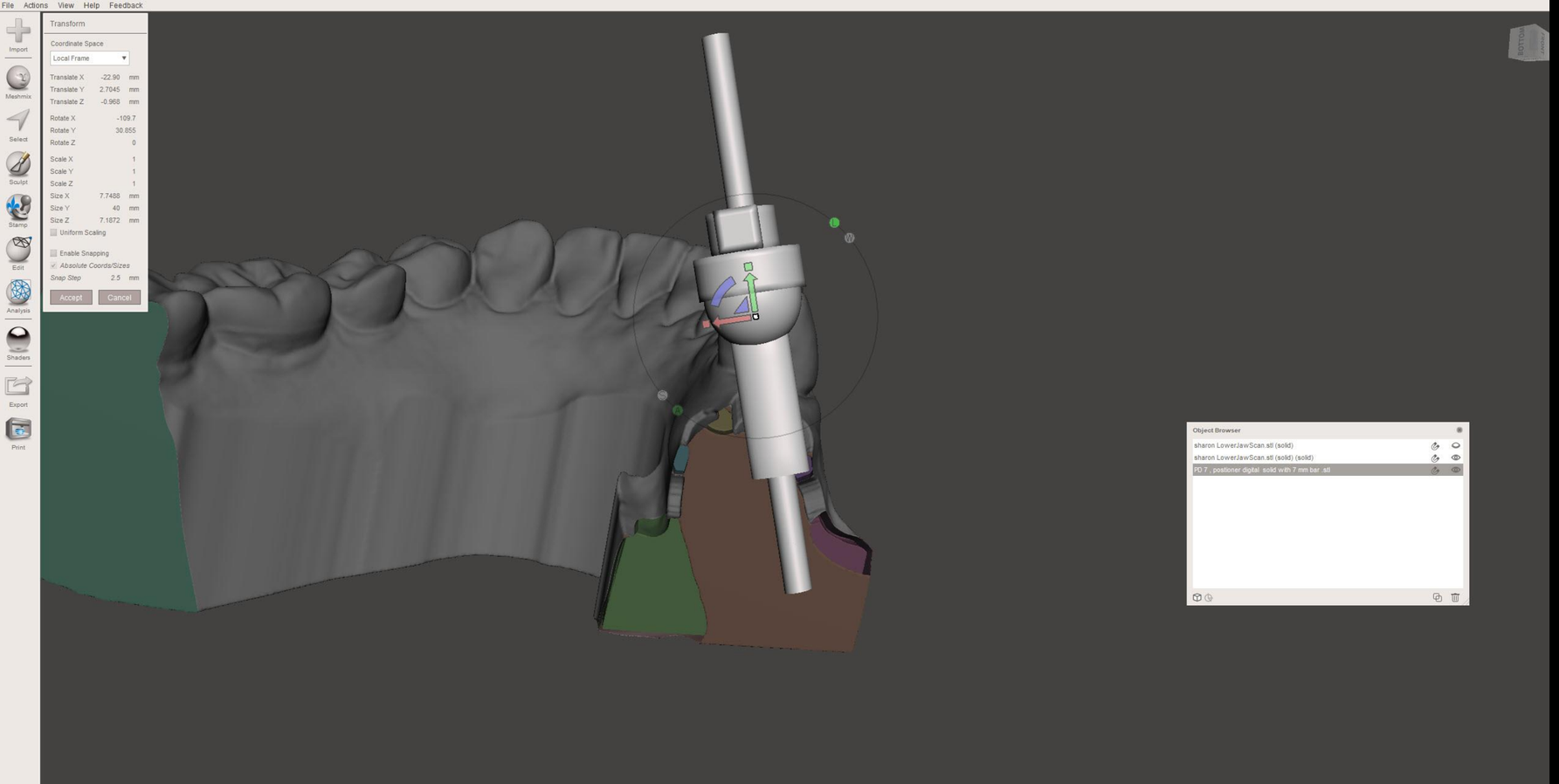


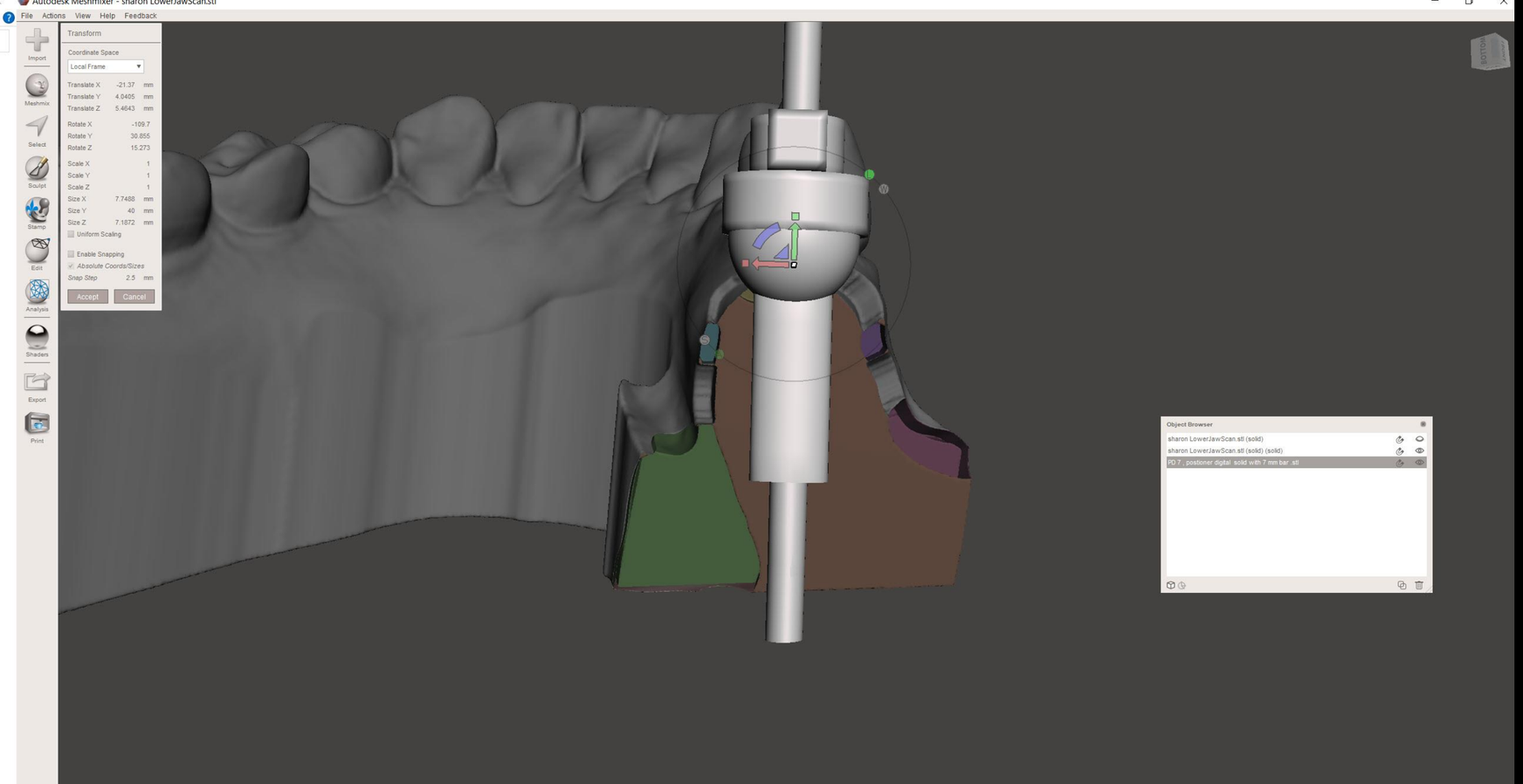
"T" for transform. Use the arrows and semi circles to move the Positioner. Do not use the squares as this will change the size.


Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Transform
Coordinate Space
Local Frame
Translate X -20.00 mm
Translate Y 3.5056 mm
Translate Z -1.255 mm
Rotate X -109.7
Rotate Y 0
Rotate Z 0
Scale X 1
Scale Y 1
Scale Z 1
Size X 7.7488 mm
Size Y 40 mm
Size Z 7.1872 mm
Uniform Scaling
Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm
Accept
Cancel
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 ; positioner digital solid with 7 mm bar .stl

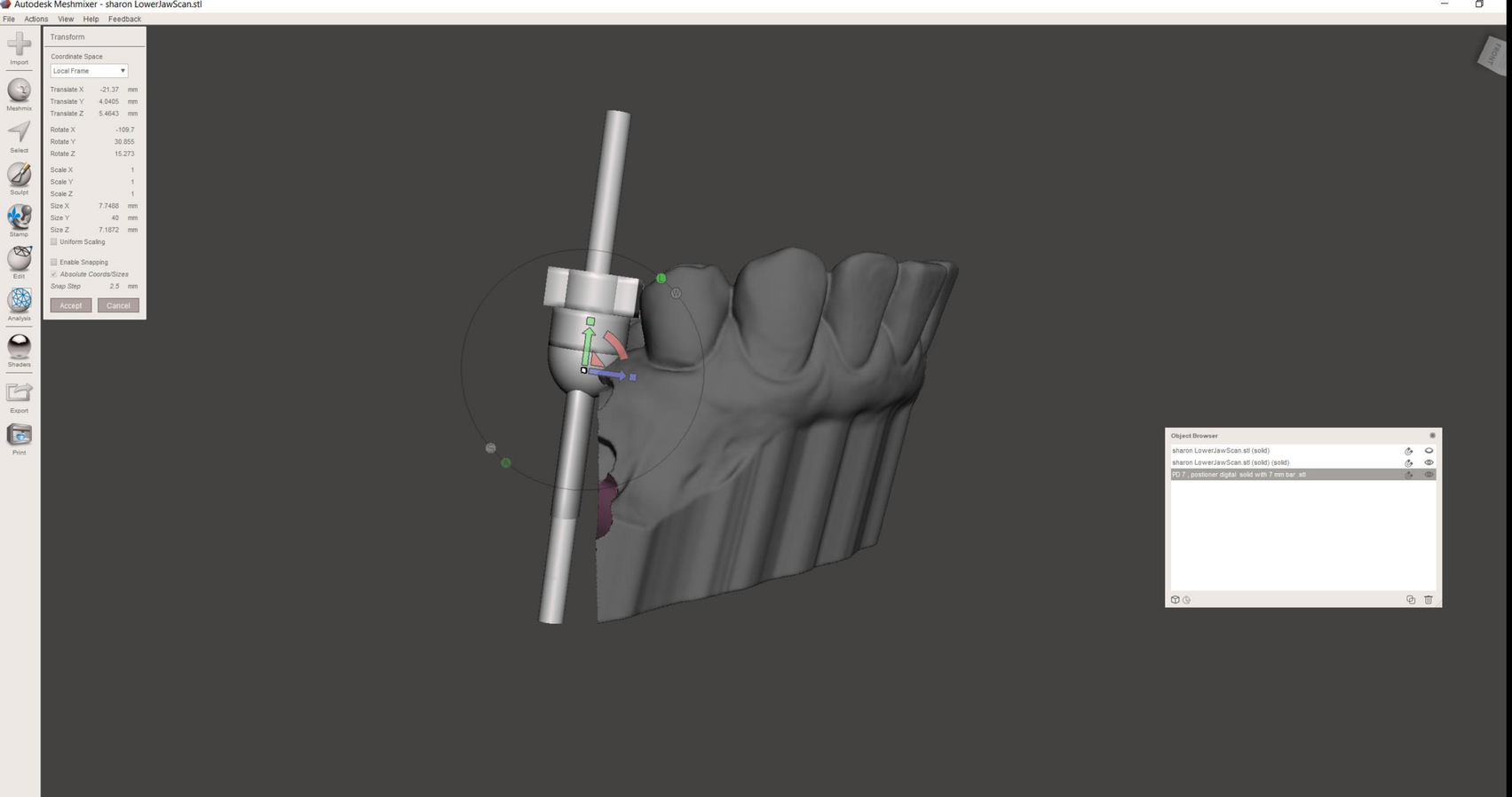

File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Transform
Coordinate Space
Local Frame
Translate X -20.00 mm
Translate Y 3.5056 mm
Translate Z -1.255 mm
Rotate X -109.7
Rotate Y 0
Rotate Z 0
Scale X 1
Scale Y 1
Scale Z 1
Size X 7.7488 mm
Size Y 40 mm
Size Z 7.1872 mm
Uniform Scaling
Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm
Accept
Cancel
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
20 7_ postioner digital solid with 7 mm bar .stl


Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Transform
Coordinate Space
Local Frame
Translate X -22.90 mm
Translate Y 2.7045 mm
Translate Z -0.968 mm
Rotate X -109.7
Rotate Y 30.855
Rotate Z 0
Scale X 1
Scale Y 1
Scale Z 1
Size X 7.7488 mm
Size Y 40 mm
Size Z 7.1872 mm
Uniform Scaling
Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm
Accept
Cancel
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 - positioner digital solid with 7 mm bar .stl


File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Transform
Coordinate Space
Local Frame
Translate X -22.90 mm
Translate Y 2.7045 mm
Translate Z -0.968 mm
Rotate X -109.7
Rotate Y 30.855
Rotate Z 0
Scale X 1
Scale Y 1
Scale Z 1
Size X 7.7488 mm
Size Y 40 mm
Size Z 7.1872 mm
Uniform Scaling
Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm
Accept
Cancel
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7_ positioner digital solid with 7 mm bar .stl



Bring the positioner in place depending on the bone volume etc. the width is 4 mm, length is 10 mm. the emergence profile is 3 mm.


Autodesk Meshmixer - sharon LowerJawScan.stl
File Actions View Help Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Transform
Coordinate Space
Local Frame
Translate X -21.37 mm
Translate Y 4.0405 mm
Translate Z 5.4643 mm
Rotate X -109.7
Rotate Y 30.855
Rotate Z 15.273
Scale X 1
Scale Y 1
Scale Z 1
Size X 7.7488 mm
Size Y 40 mm
Size Z 7.1872 mm
Uniform Scaling
Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm
Accept
Cancel
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 , postioner digital solid with 7 mm bar .stl

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print

Transform

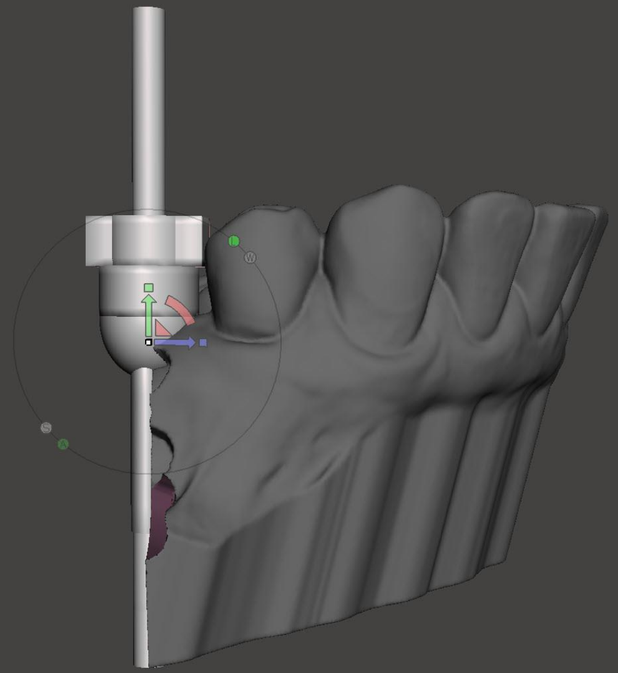
Coordinate Space
Local Frame

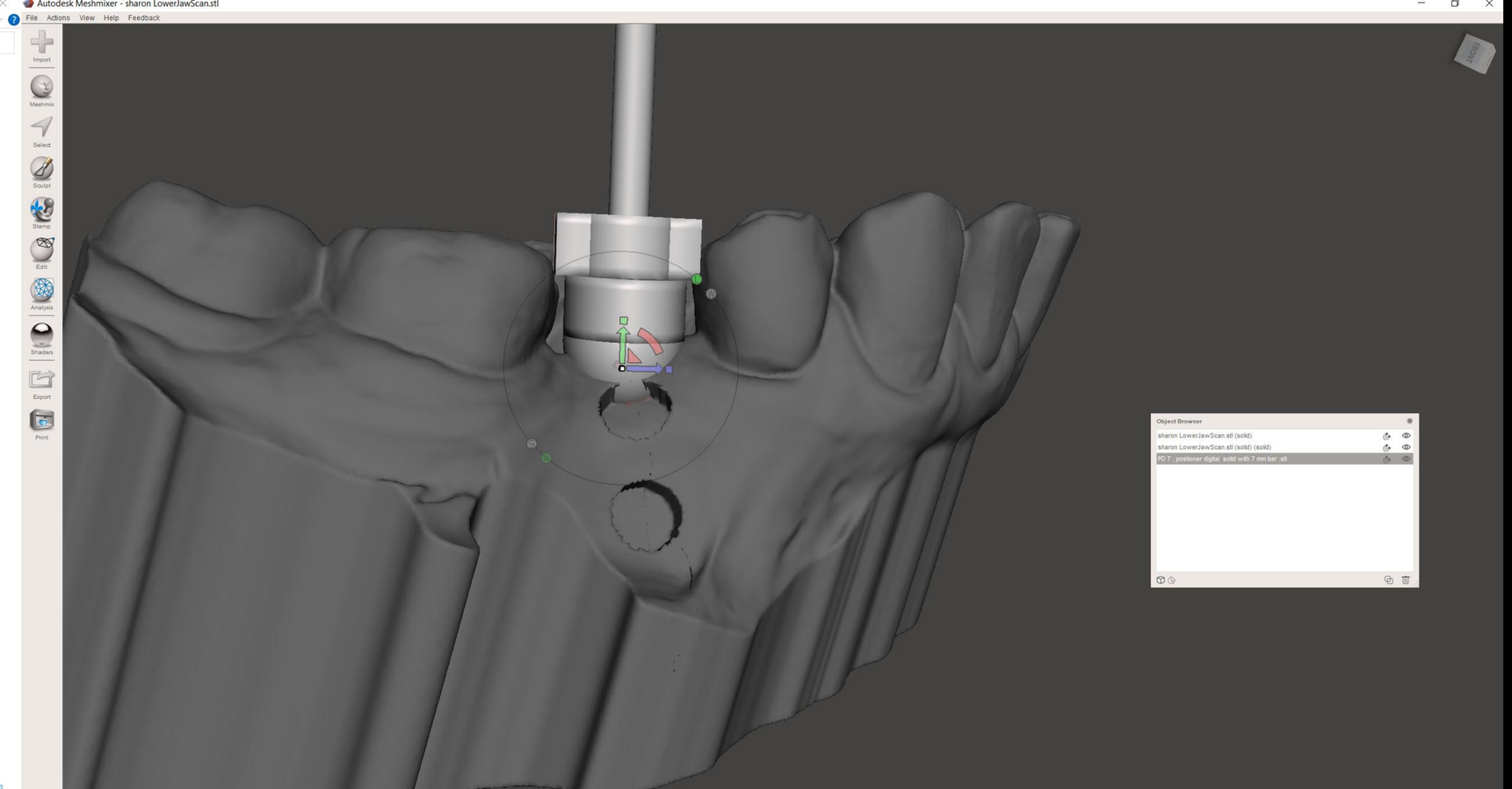
Translate X	-20.95	mm
Translate Y	4.7273	mm
Translate Z	5.0967	mm
Rotate X	-118.1	
Rotate Y	28.551	
Rotate Z	19.472	
Scale X	1	
Scale Y	1	
Scale Z	1	
Size X	7.7488	mm
Size Y	40	mm
Size Z	7.1872	mm

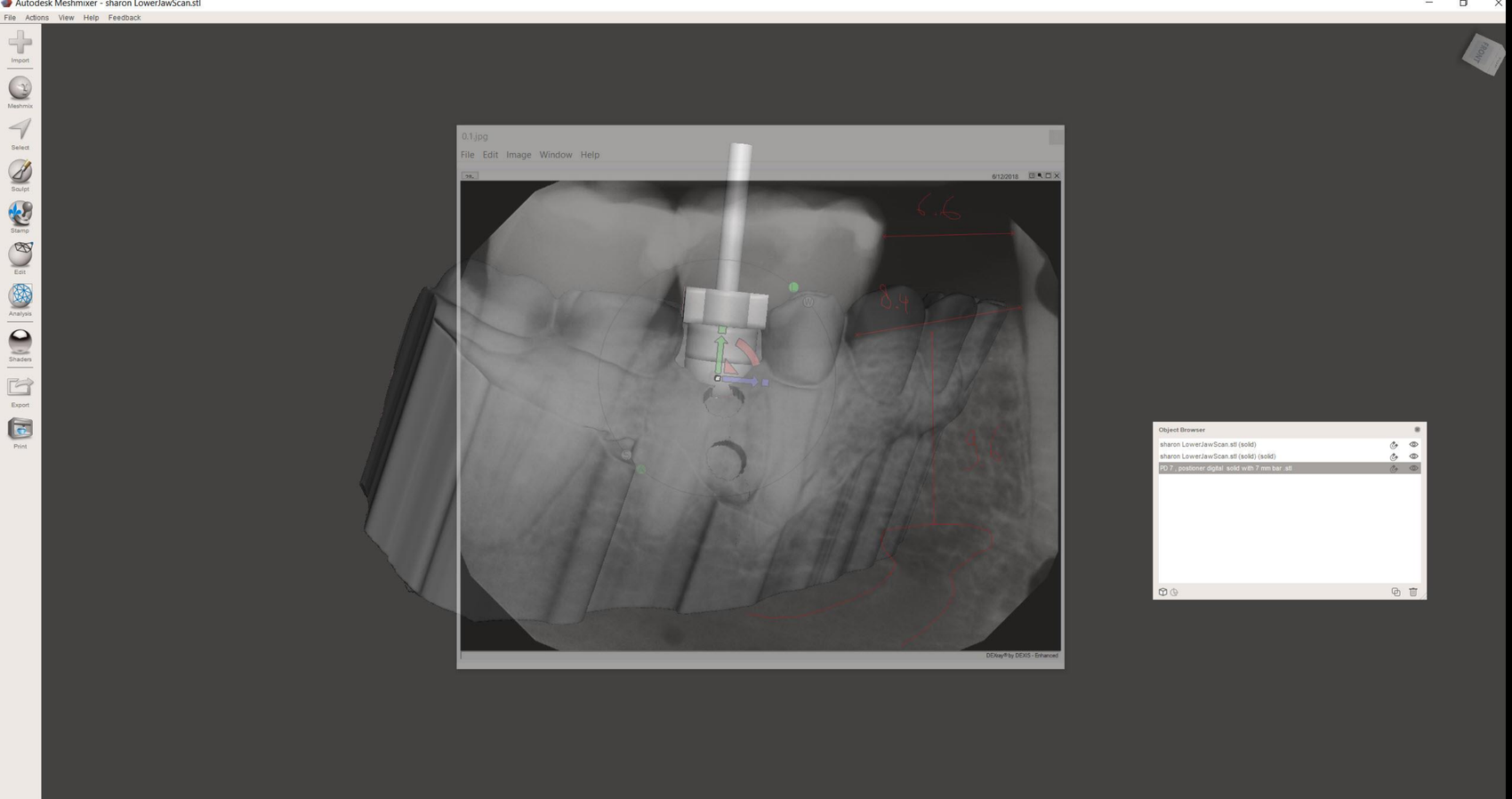
Uniform Scaling

Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm

Accept Cancel




Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 . positioner digital solid with 7 mm bar .stl

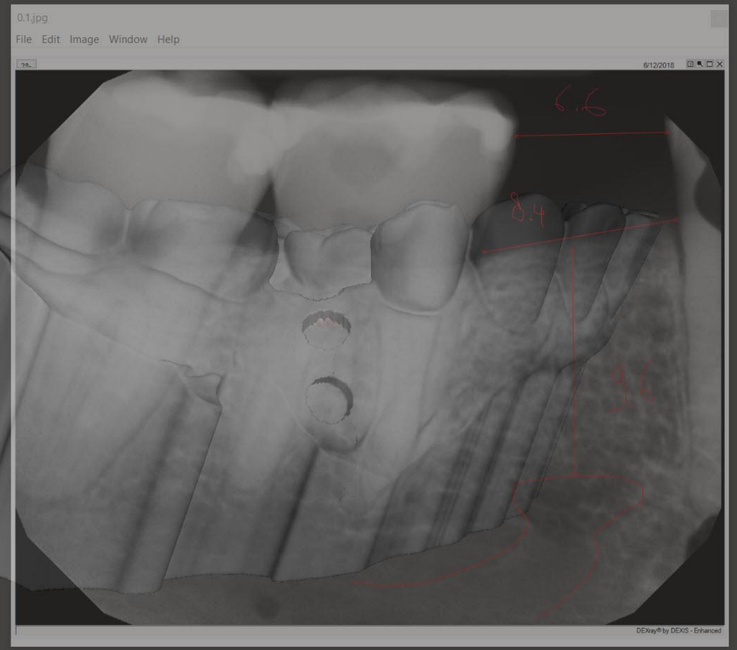


You can eyeball the root position or super impose the X-ray with a simple inexpensive program (Overlay 2.1)

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print



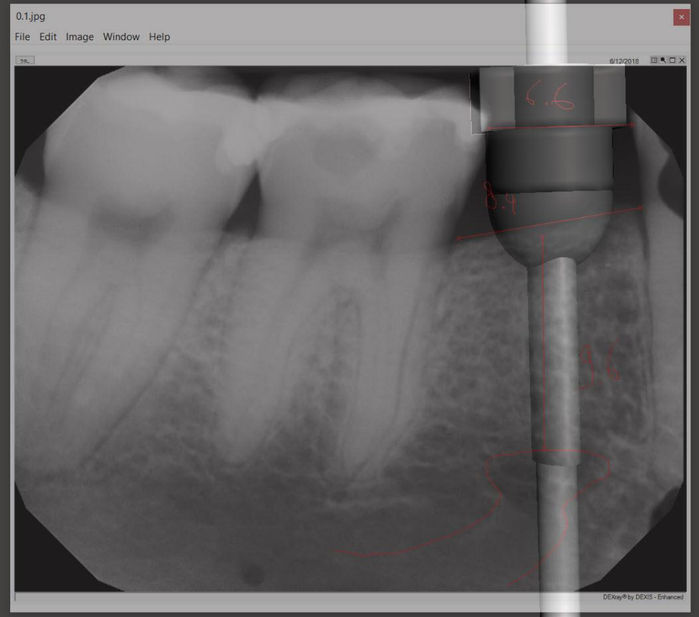
Object Browser

sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 , postioner digital solid with 7 mm bar .stl

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print



Object Browser

sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 ; positioner digital solid with 7 mm bar .stl

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print

Transform

Coordinate Space
Local Frame

Translate X	0	mm
Translate Y	0	mm
Translate Z	0	mm
Rotate X	5.0739	
Rotate Y	-3.421	
Rotate Z	-0.347	
Scale X	1	
Scale Y	1	
Scale Z	1	
Size X	7.7468	mm
Size Y	40	mm
Size Z	7.1872	mm

Uniform Scaling

Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm

Accept Cancel

0.1.jpg

File Edit Image Window Help

6/12/2018

DEXIS by DEXIS - Enhanced

Object Browser

sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 , postioner digital solid with 7 mm bar .stl

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print

Transform

Coordinate Space
Local Frame

Translate X	0	mm
Translate Y	0	mm
Translate Z	0	mm
Rotate X	10.090	
Rotate Y	-6.817	
Rotate Z	-0.391	
Scale X	1	
Scale Y	1	
Scale Z	1	
Size X	7.7488	mm
Size Y	40	mm
Size Z	7.1872	mm

Uniform Scaling

Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm

Accept Cancel

0.1.jpg

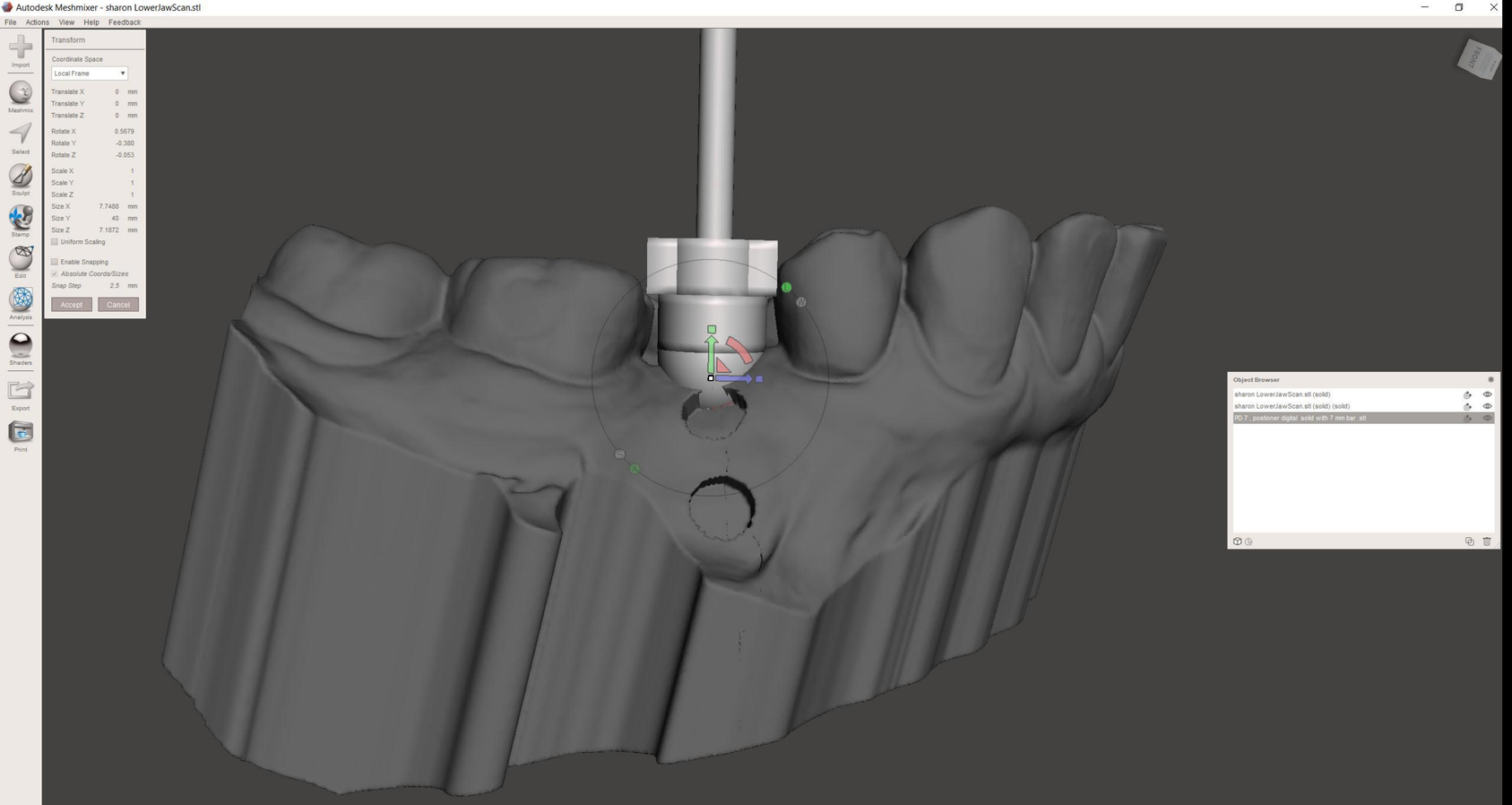
File Edit Image Window Help

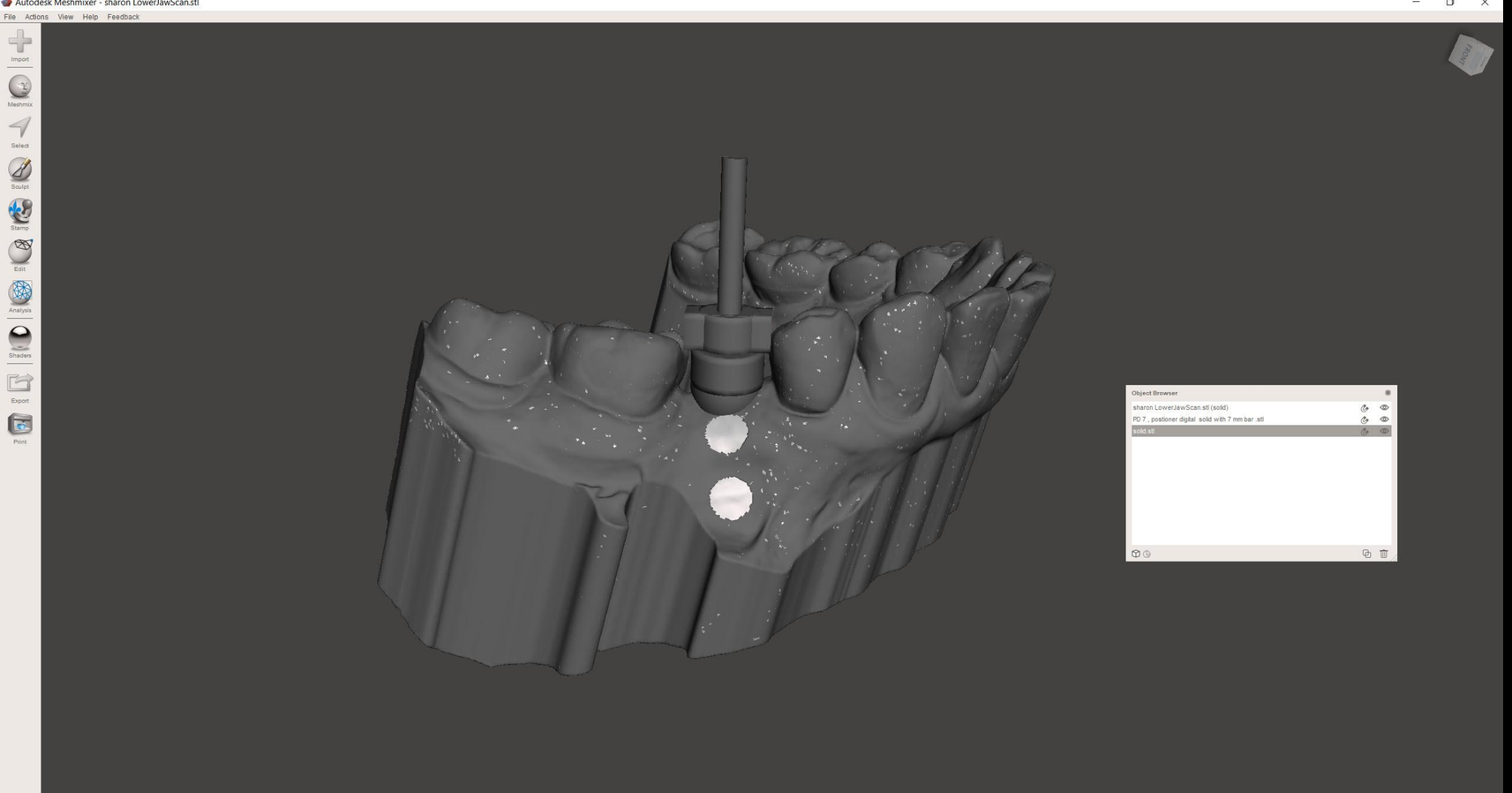
8/12/2018

DEXIS by DEXIS - Enhanced

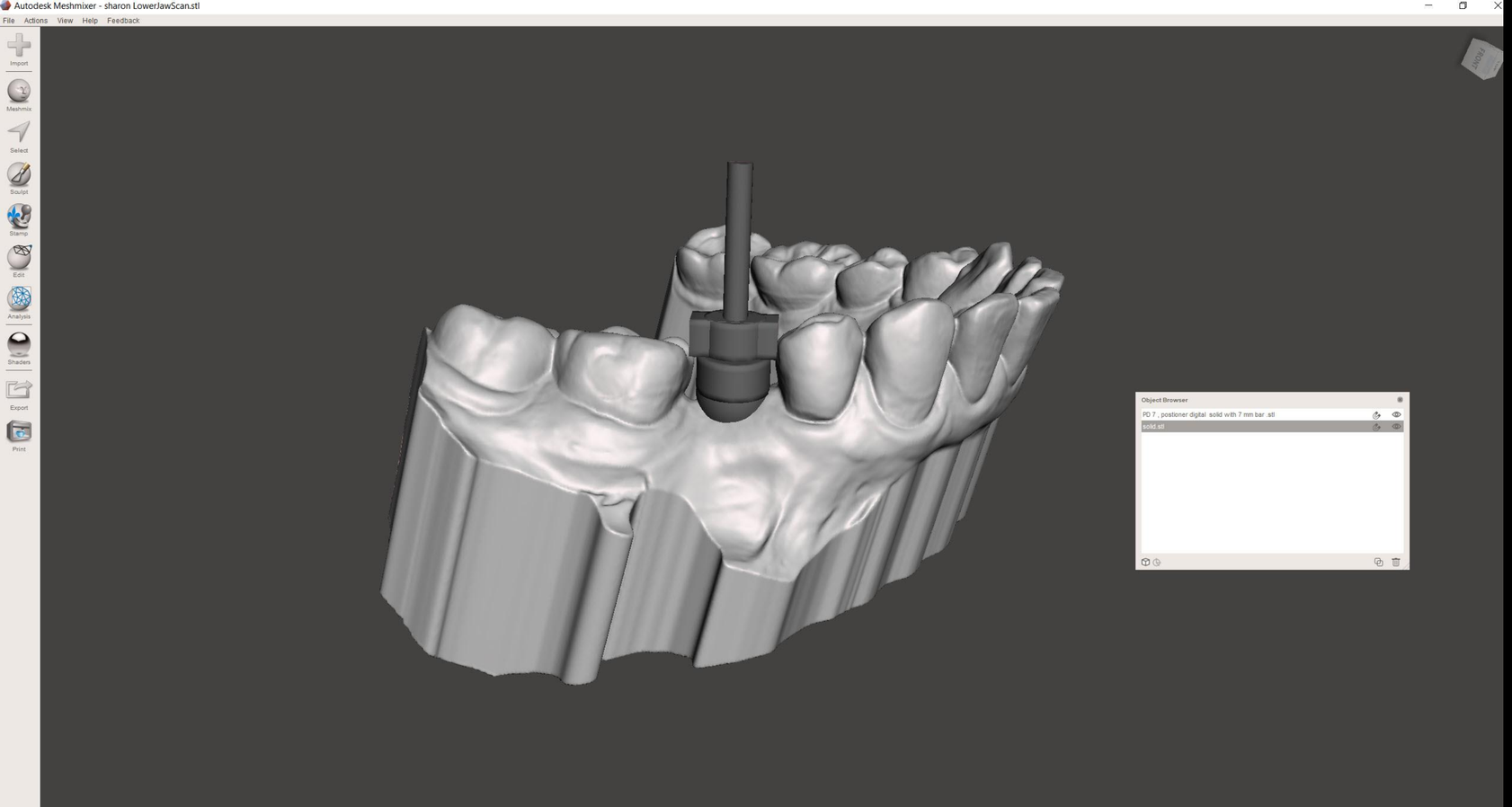
Object Browser

sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 _ positioner digital solid with 7 mm bar .stl

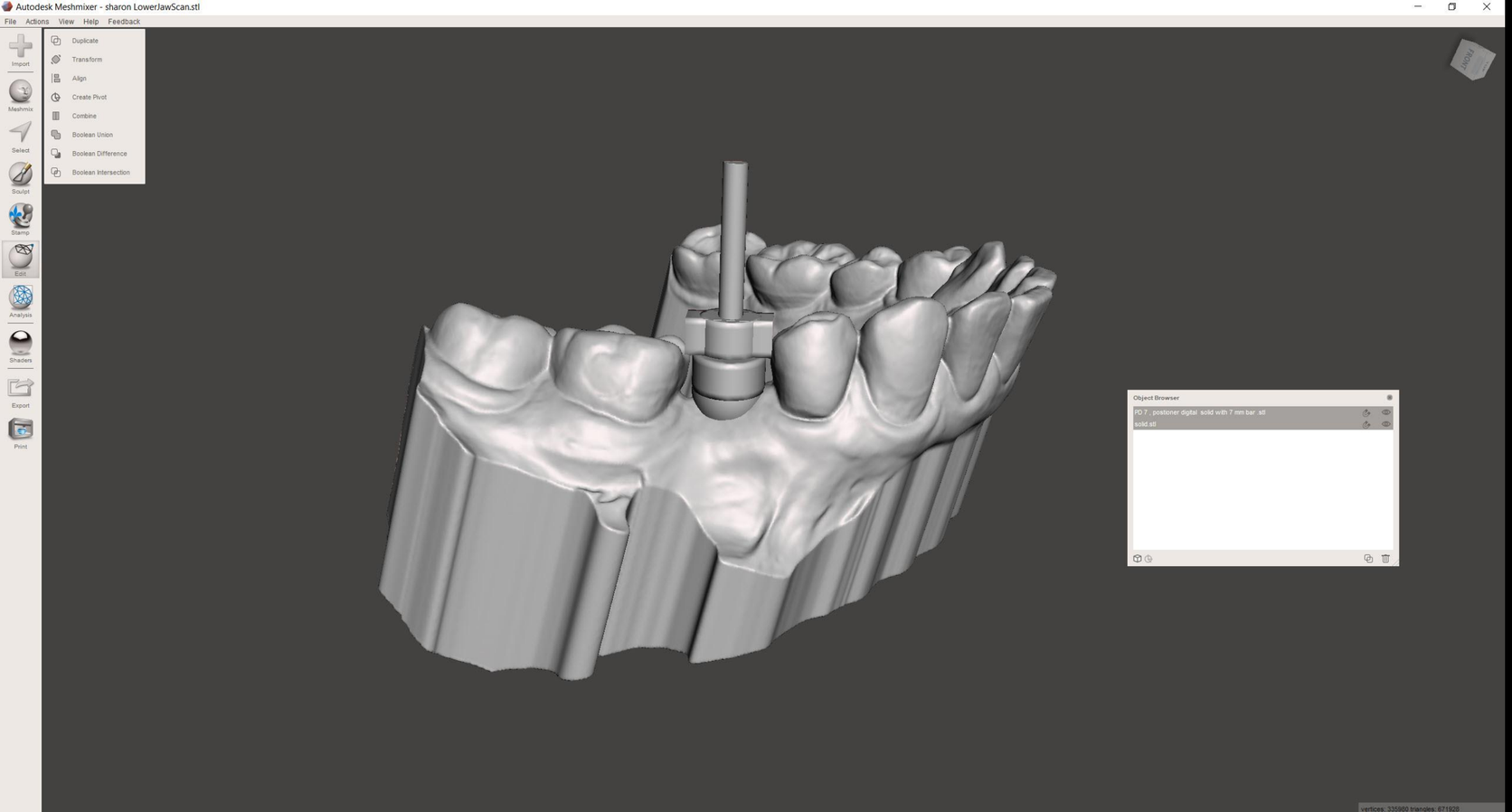

Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Transform
Coordinate Space
Local Frame
Translate X 0 mm
Translate Y 0 mm
Translate Z 0 mm
Rotate X 0.5679
Rotate Y -0.380
Rotate Z -0.053
Scale X 1
Scale Y 1
Scale Z 1
Size X 7.7488 mm
Size Y 40 mm
Size Z 7.1872 mm
Uniform Scaling
Enable Snapping
Absolute Coords/Sizes
Snap Step 2.5 mm
Accept
Cancel
Object Browser
sharon LowerJawScan.stl (solid)
sharon LowerJawScan.stl (solid) (solid)
PD 7 , positioner digital solid with 7 mm bar .stl



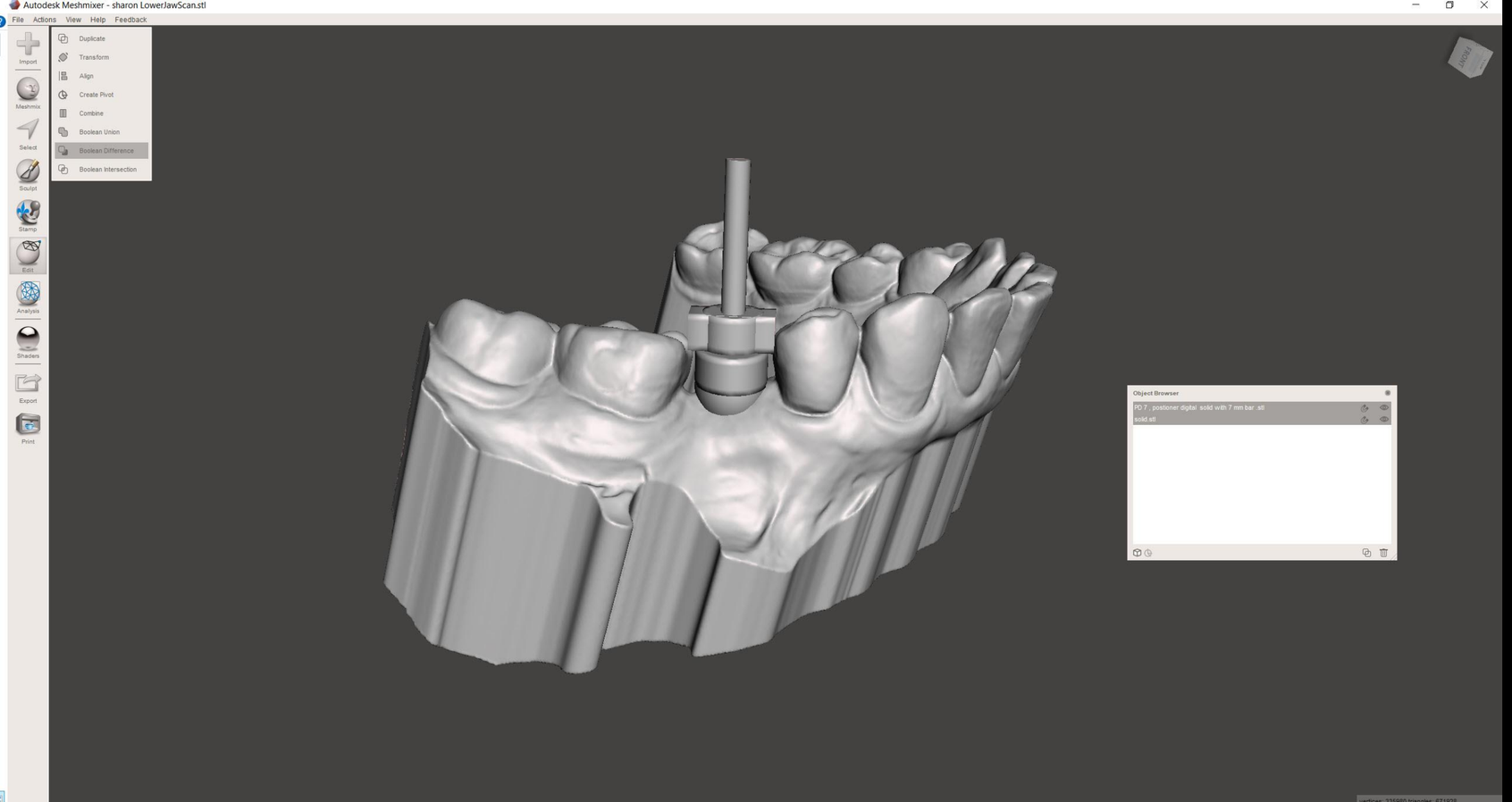
Select the full solid model from the patient file, append. Then delete the soft tissue model from the object browser



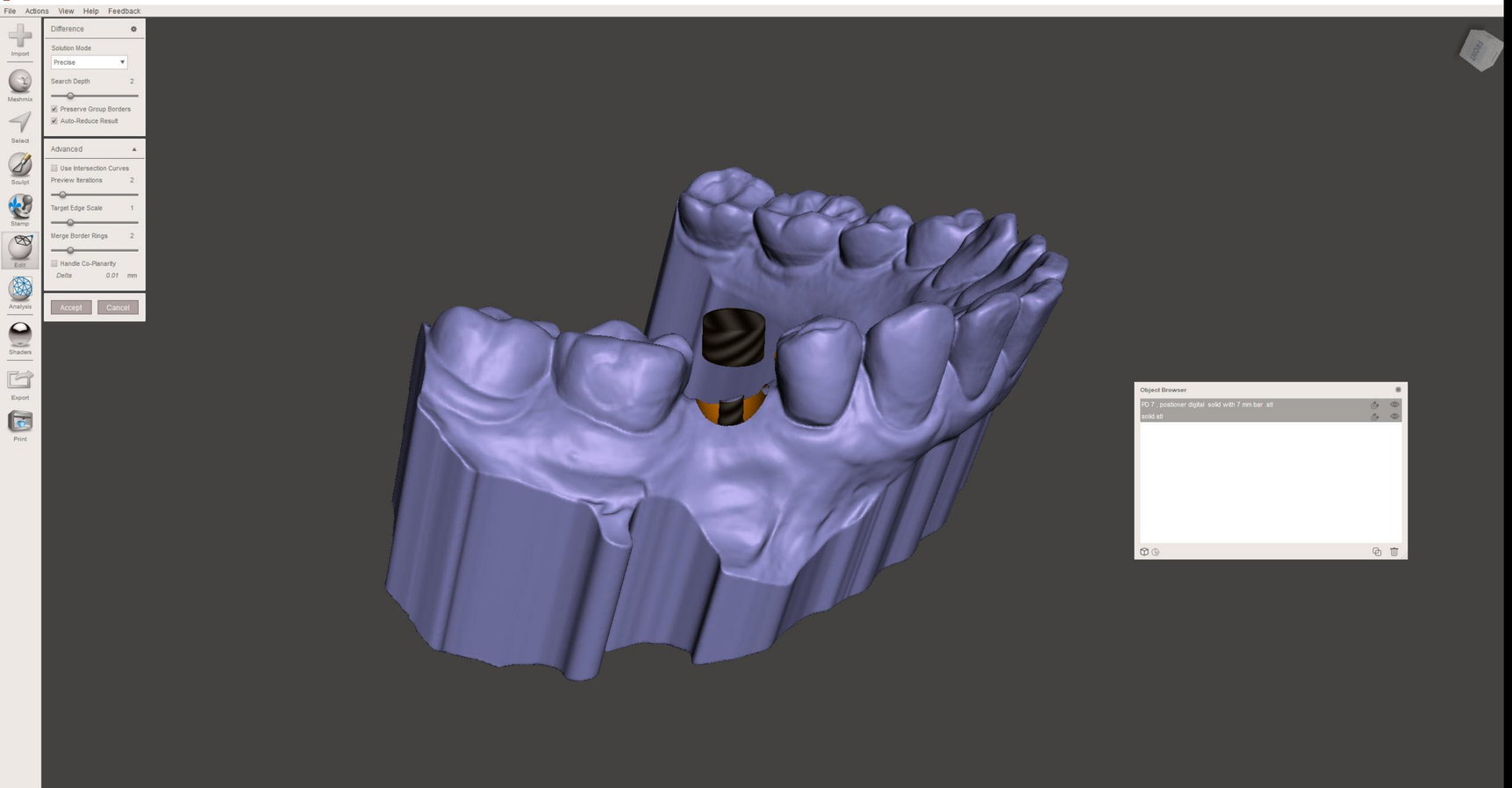
You now will have two files left. The full soft tissue model and the Digital Positioner. Select the solid model first



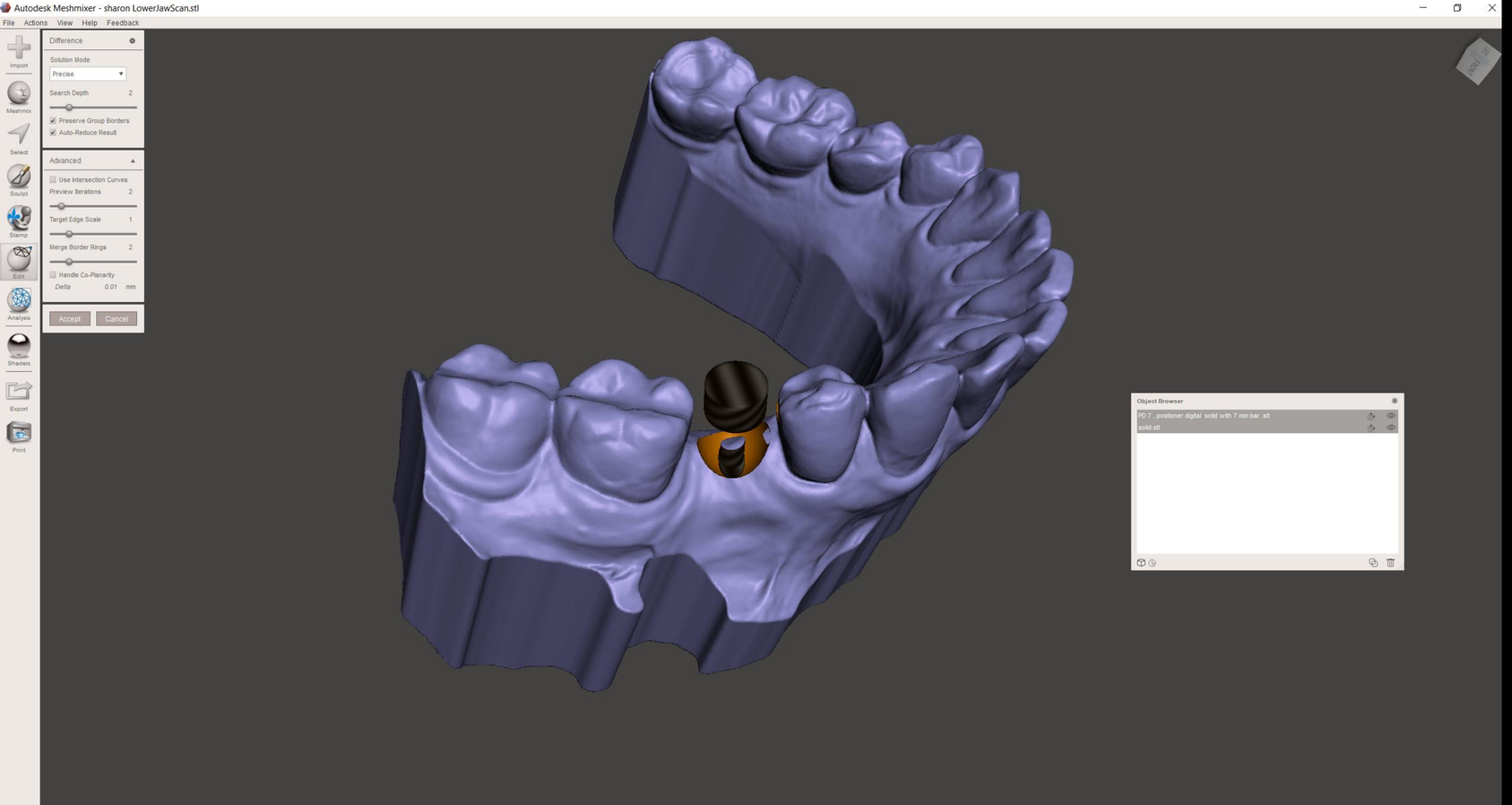
Edit, Boolean difference .
Hold control key and select the DP



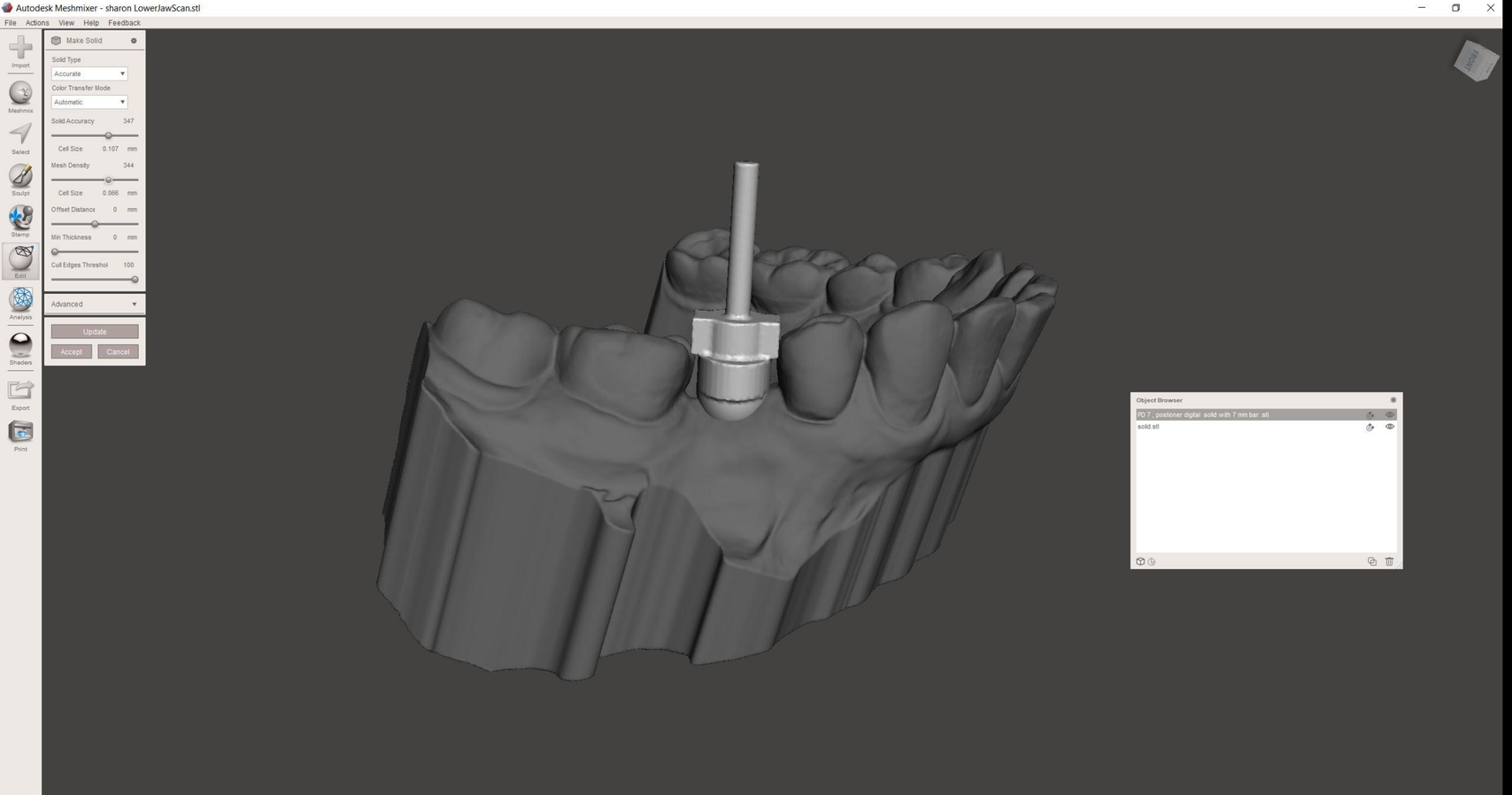
This will subtract the second selected file from the first selected file



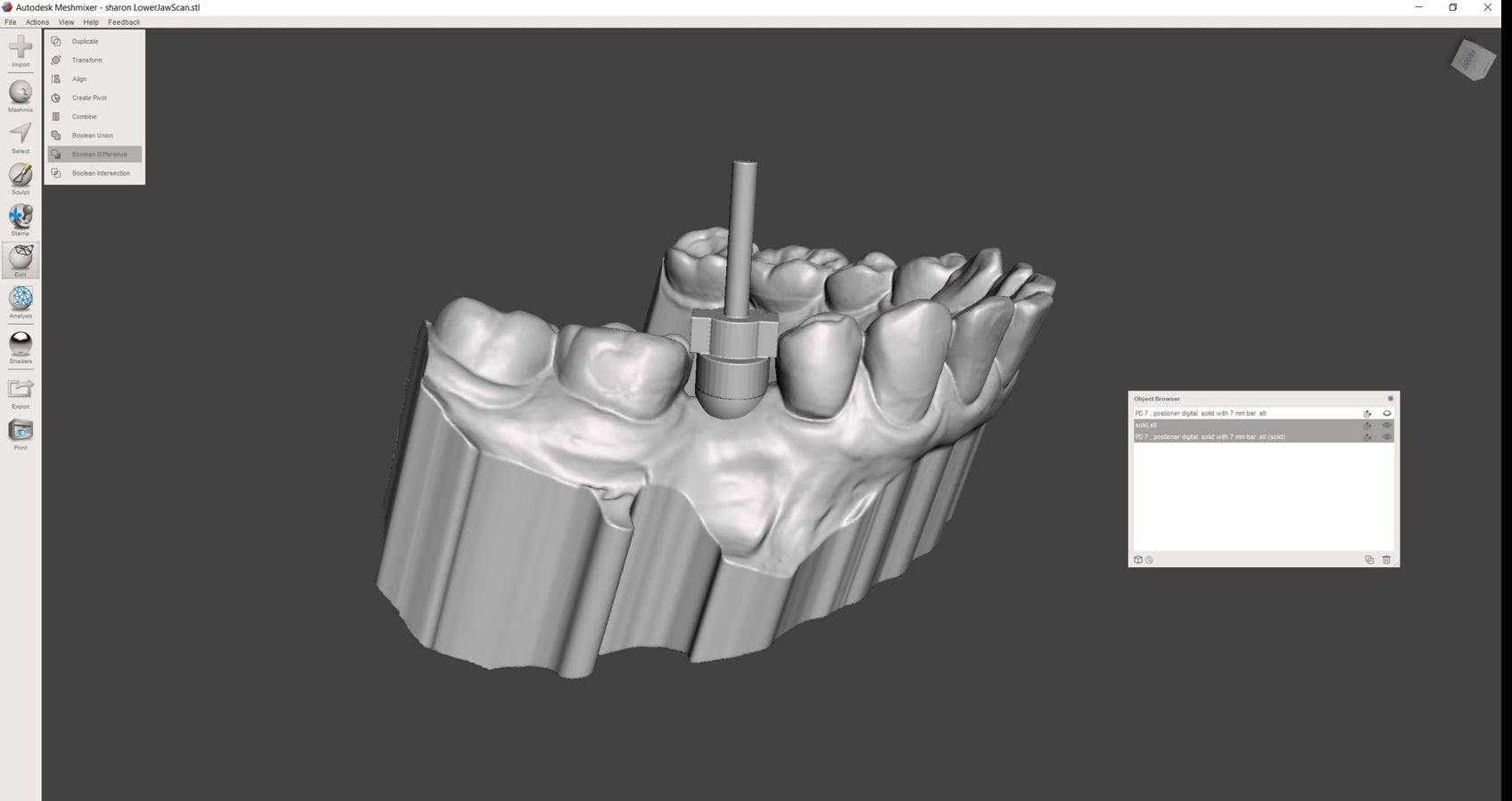
OOPS, this went wrong !!.



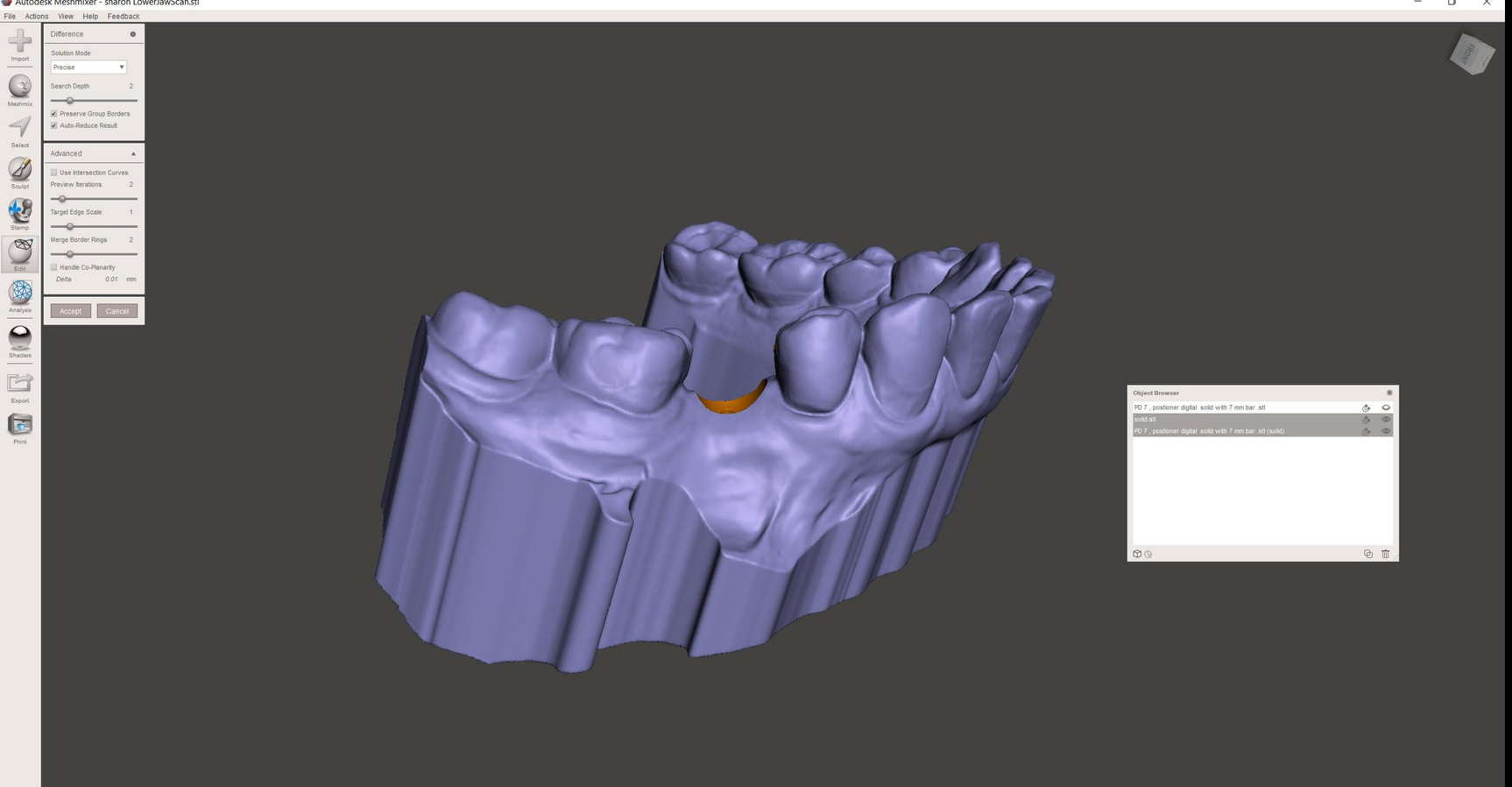
Go back and make the PD solid again. This will allow Meshmixer to properly deduct it



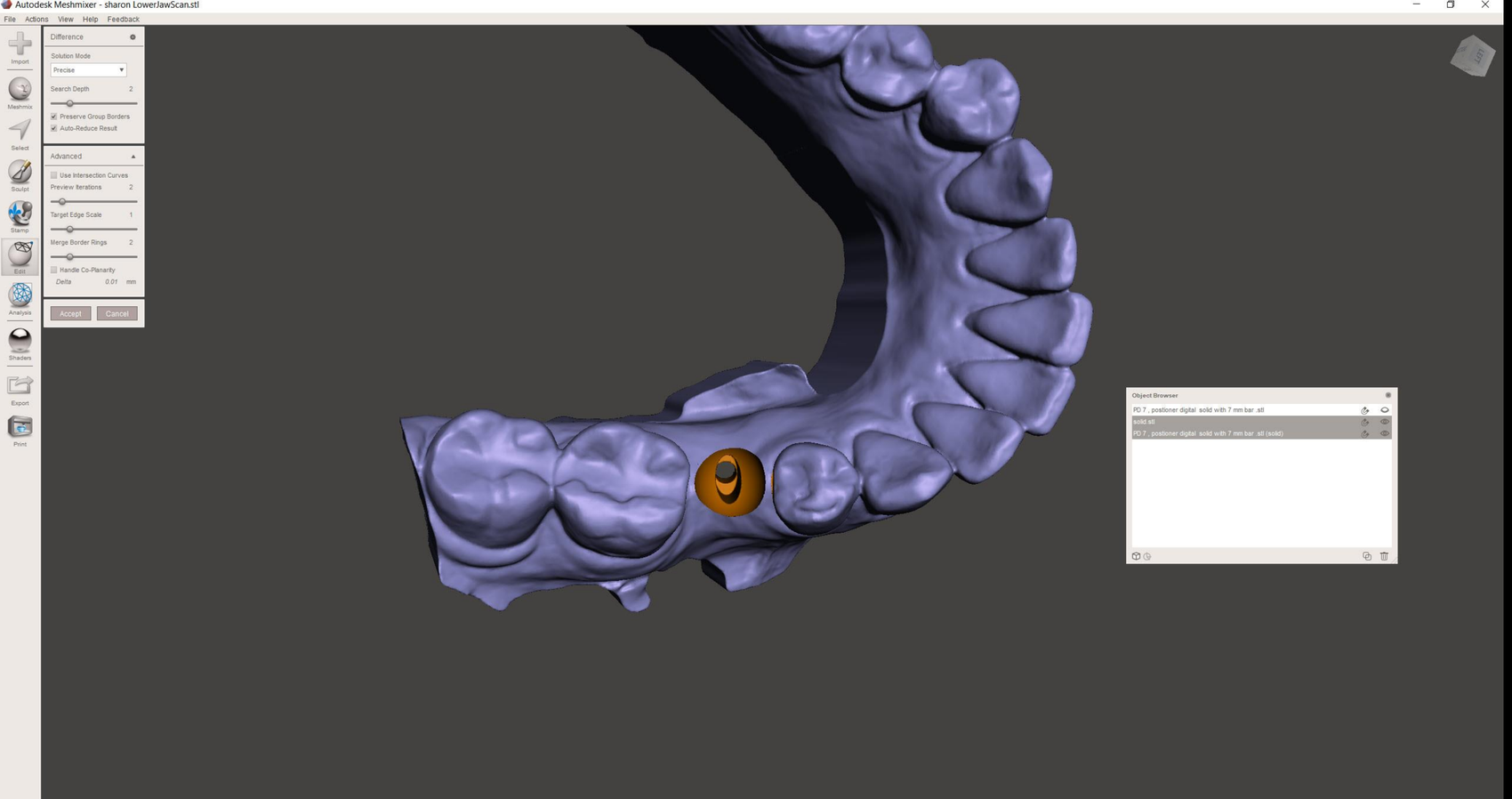
Solid fast first



Solid accurate



Boolean difference again. By Edit, select full solid model first, control select second model,


Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Difference
Solution Mode
Precise
Search Depth
2
Preserve Group Borders
Auto-Reduce Result
Advanced
Use Intersection Curves
Preview Iterations
2
Target Edge Scale
1
Merge Border Rings
2
Handle Co-Planarity
Delta
0.01
mm
Accept
Cancel
Object Browser
PD 7 , postioner digital solid with 7 mm bar .stl
solid.stl
PD 7 , postioner digital solid with 7 mm bar .stl (solid)

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print

Difference

Solution Mode
Precise

Search Depth 2

Preserve Group Borders
Auto-Reduce Result

Advanced

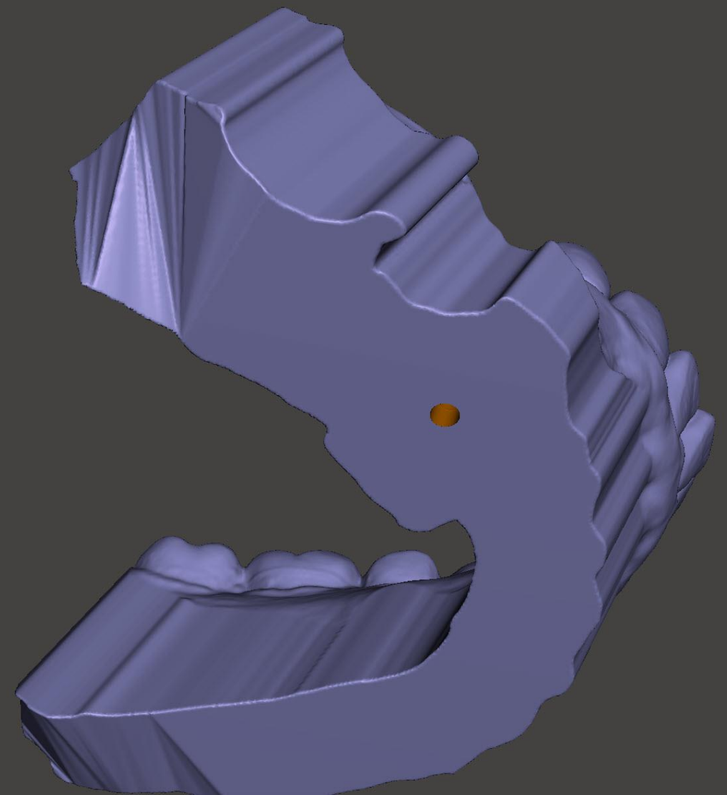
Use Intersection Curves
Preview Iterations 2

Target Edge Scale 1

Merge Border Rings 2

Handle Co-Planarity
Delta 0.01 mm

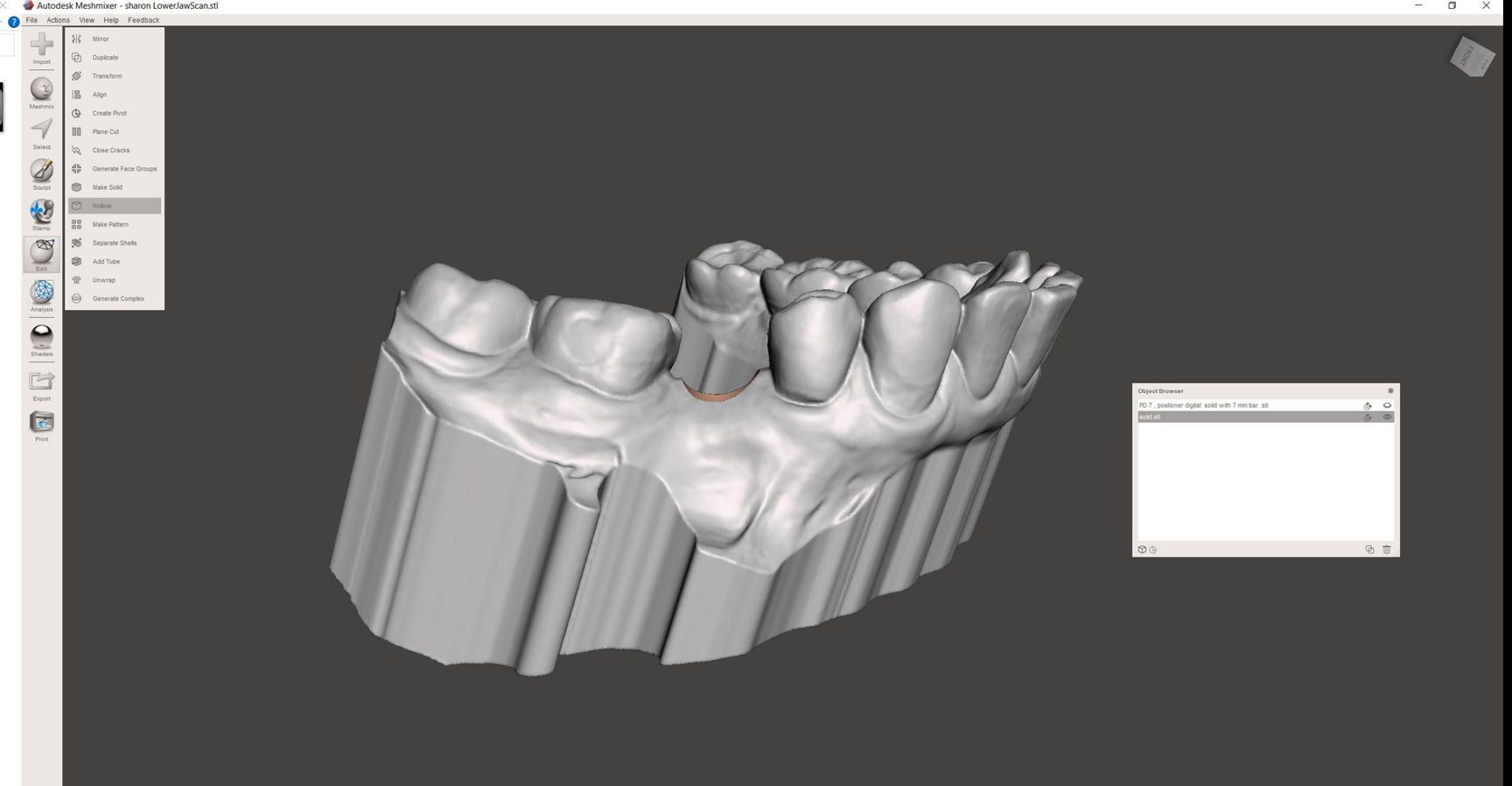
Accept Cancel

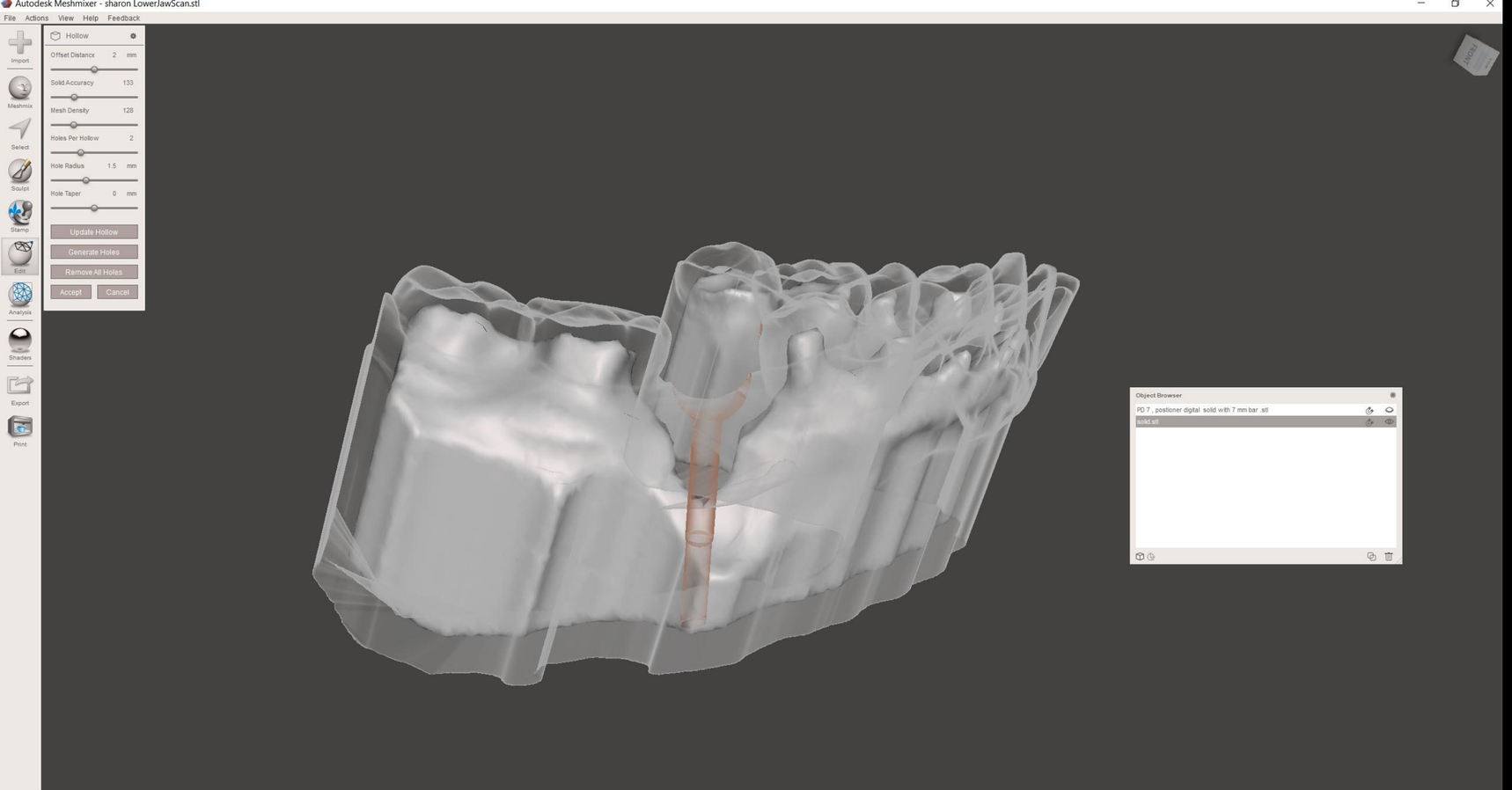


RIGHT

Object Browser

PD 7 _ postioner digital solid with 7 mm bar .stl
fold.stl
PD 7 _ postioner digital solid with 7 mm bar .stl (solid)


Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Mirror
Duplicate
Transform
Align
Create Pivot
Plane Cut
Close Cracks
Generate Face Groups
Make Solid
Hollow
Make Pattern
Separate Shells
Add Tube
Unwrap
Generate Complex
Object Browser
PD 7 , postioner digital solid with 7 mm bar .stl
solid.stl



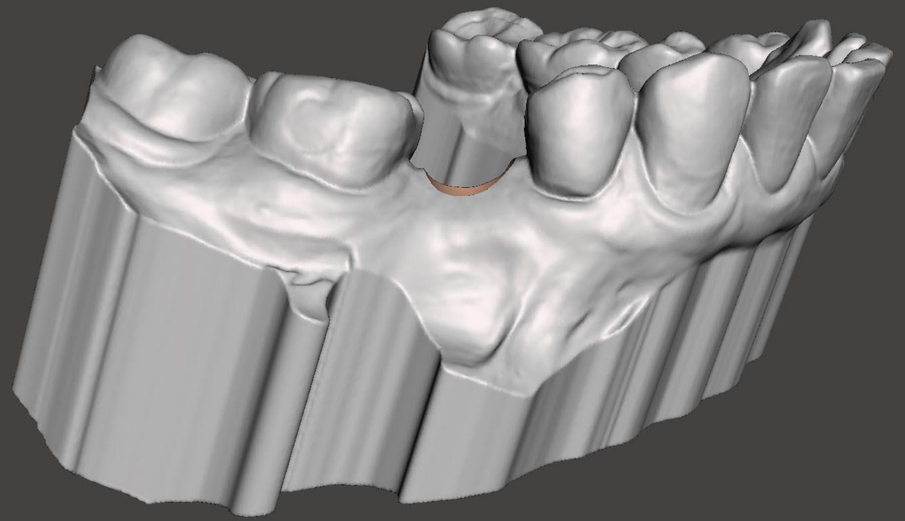
Edit, Hollow. Use default values

Autodesk Meshmixer - sharon LowerJawScan.stl

File Actions View Help Feedback

Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print

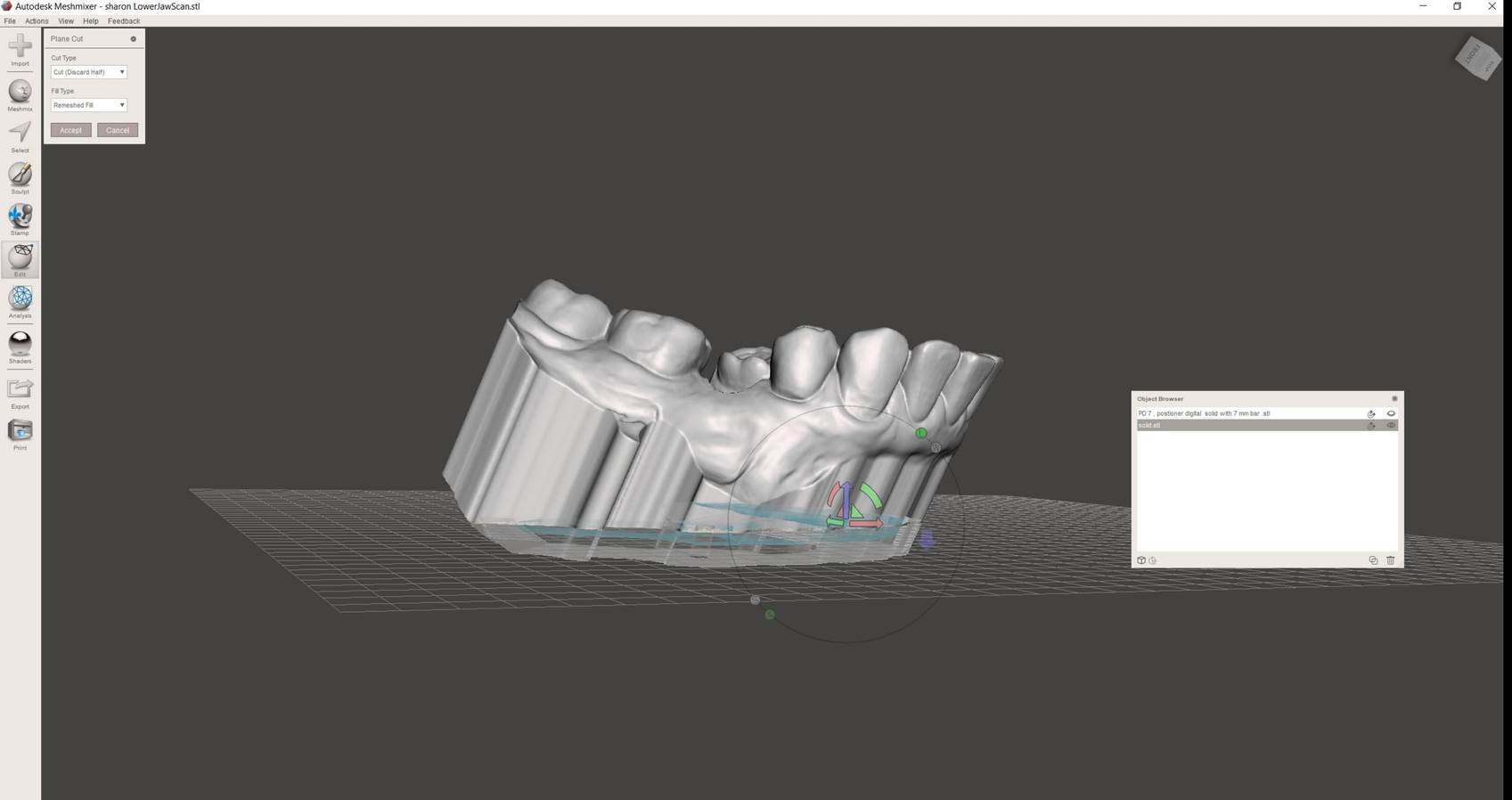
Mirror
Duplicate
Transform
Align
Create Pivot
Plane Cut
Close Cracks
Generate Face Groups
Make Solid
Hollow
Make Pattern
Separate Shells
Add Tube
Unwrap
Generate Complex



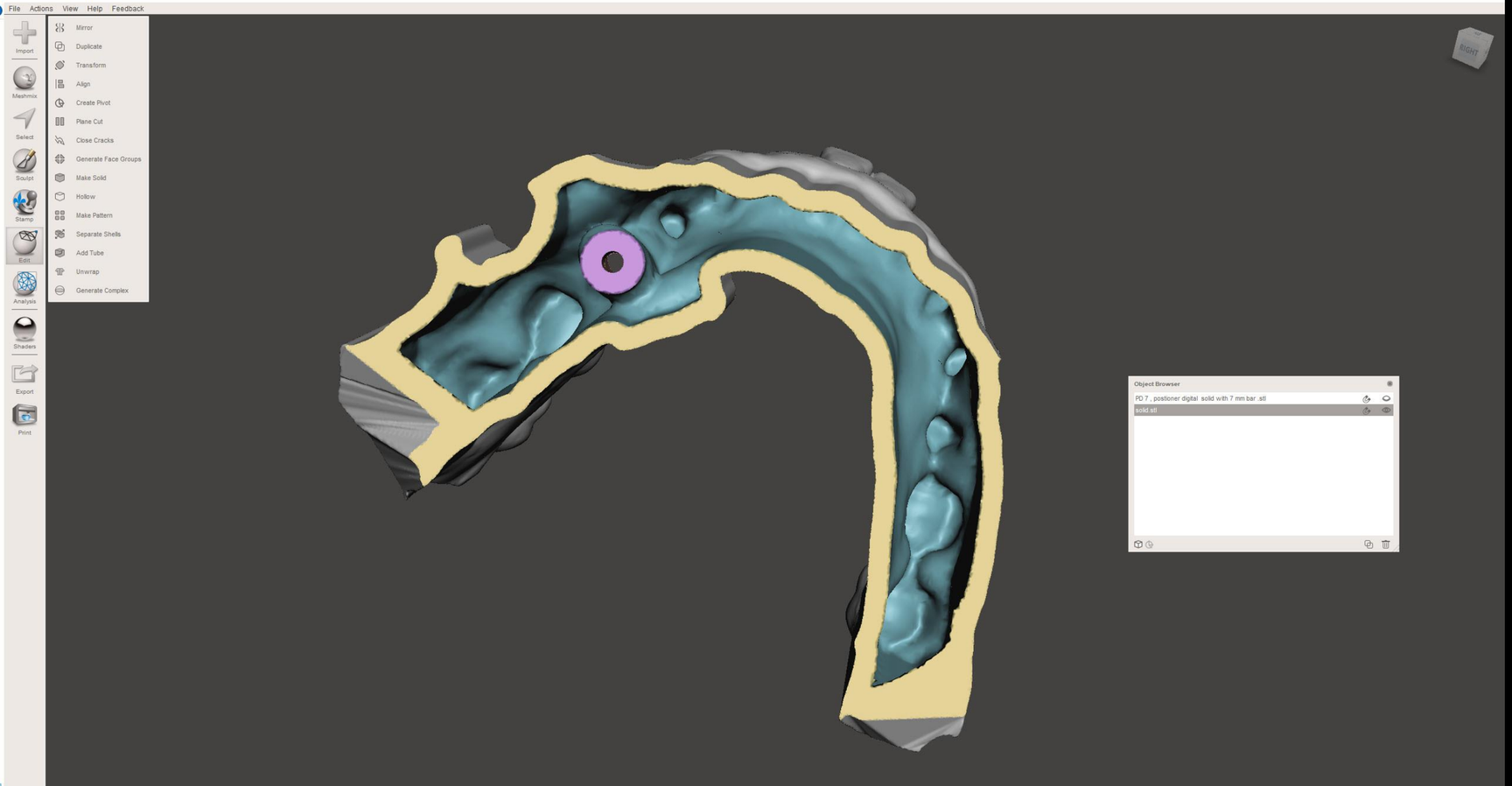
Object Browser

PD 7 , postioner digital solid with 7 mm bar .stl

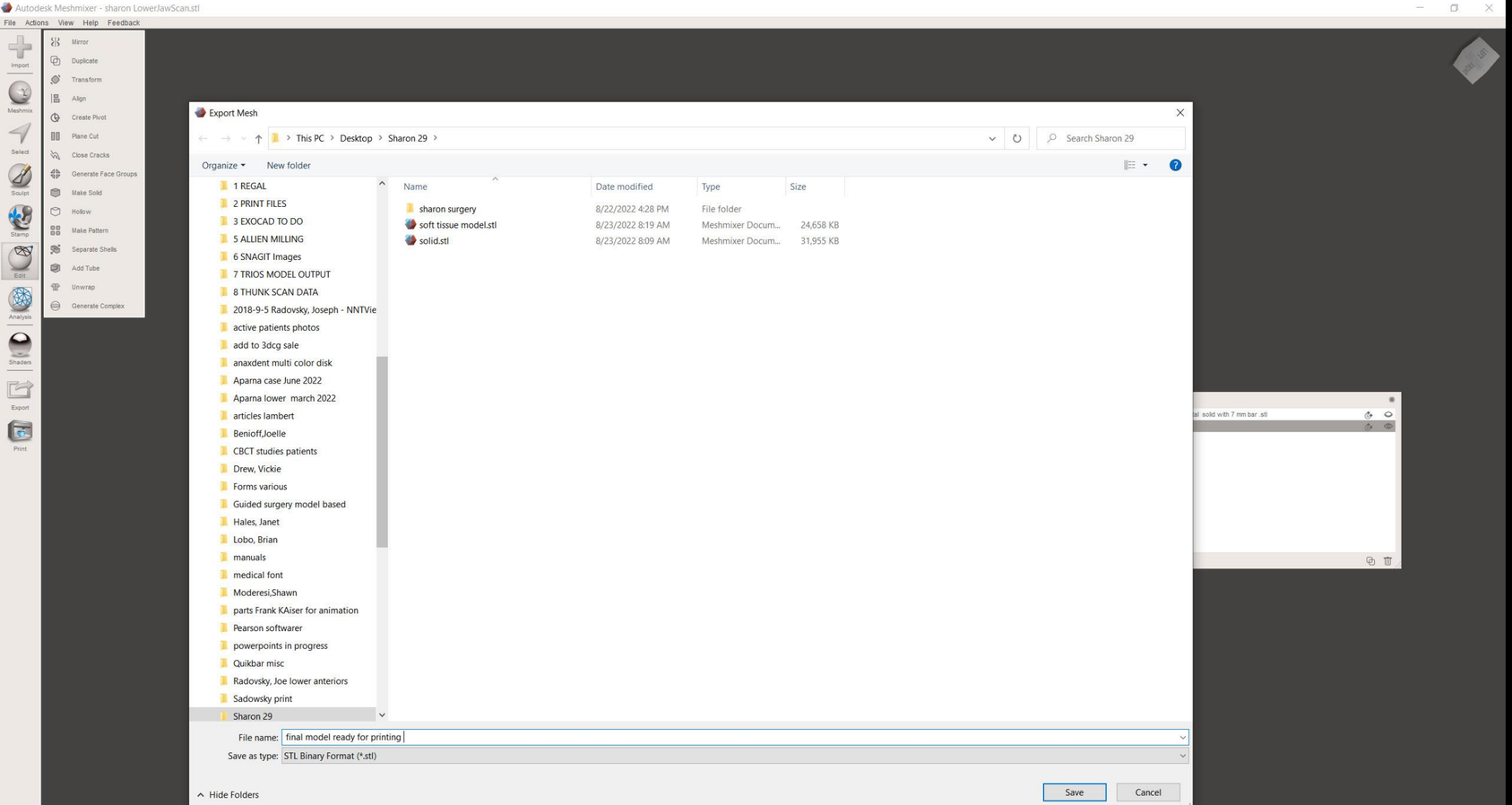
solid.stl



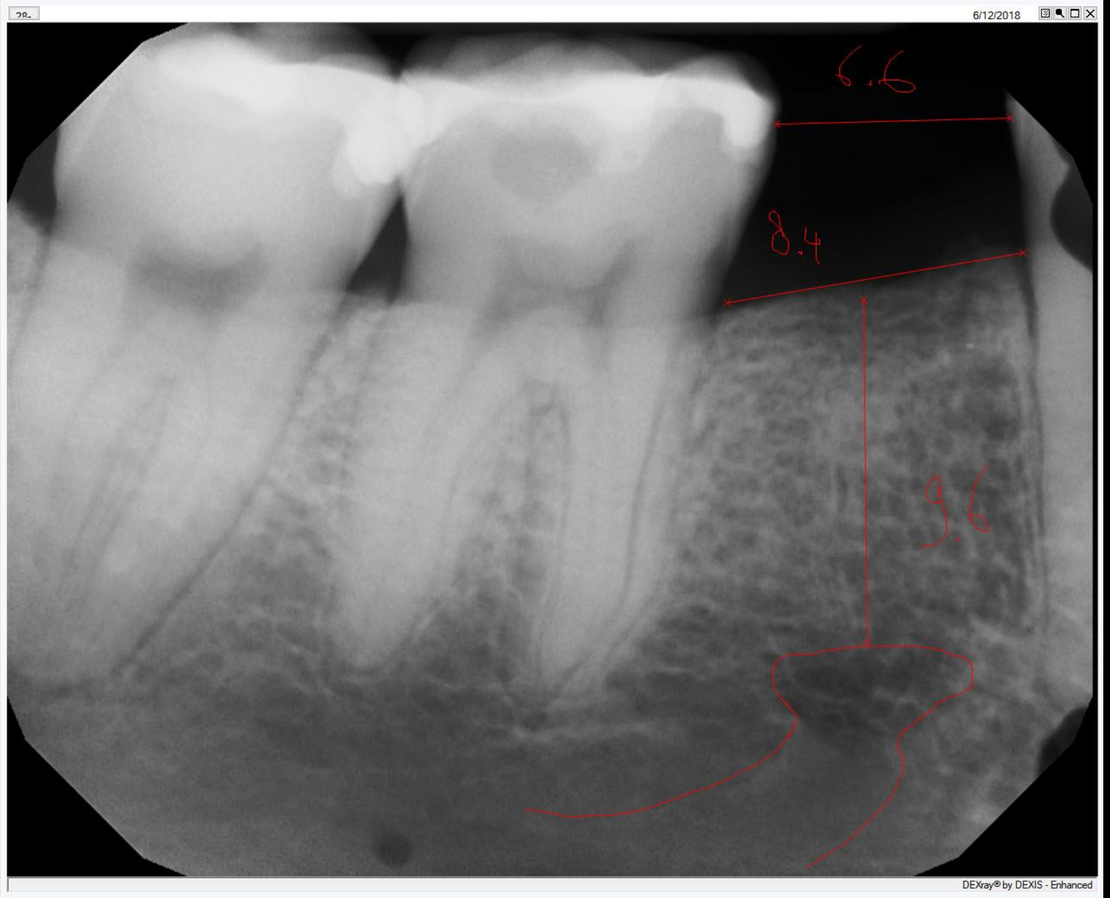
Edit, plane cut. Cut the bottom off


File
Actions
View
Help
Feedback
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
Mirror
Duplicate
Transform
Align
Create Pivot
Plane Cut
Close Cracks
Generate Face Groups
Make Solid
Hollow
Make Pattern
Separate Shells
Add Tube
Unwrap
Generate Complex
RIGHT
Object Browser
PD 7 , postioner digital solid with 7 mm bar .stl
solid.stl


Autodesk Meshmixer - sharon LowerJawScan.stl
File
Actions
View
Help
Feedback
Open Ctrl+O
Save Ctrl+S
Save As Ctrl+Shift+S
Recent Files...
Import
Import Bunny
Import Sphere
Import Plane
Import Parts Folder
Import Reference
Export Ctrl+E
Export SVG
Preferences Alt+T
Start Screencast
Exit
Unwrap
Generate Complex
Analysis
Shaders
Export
Print
Object Browser
PD 7 , postioner digital solid with 7 mm bar .stl
solid.stl

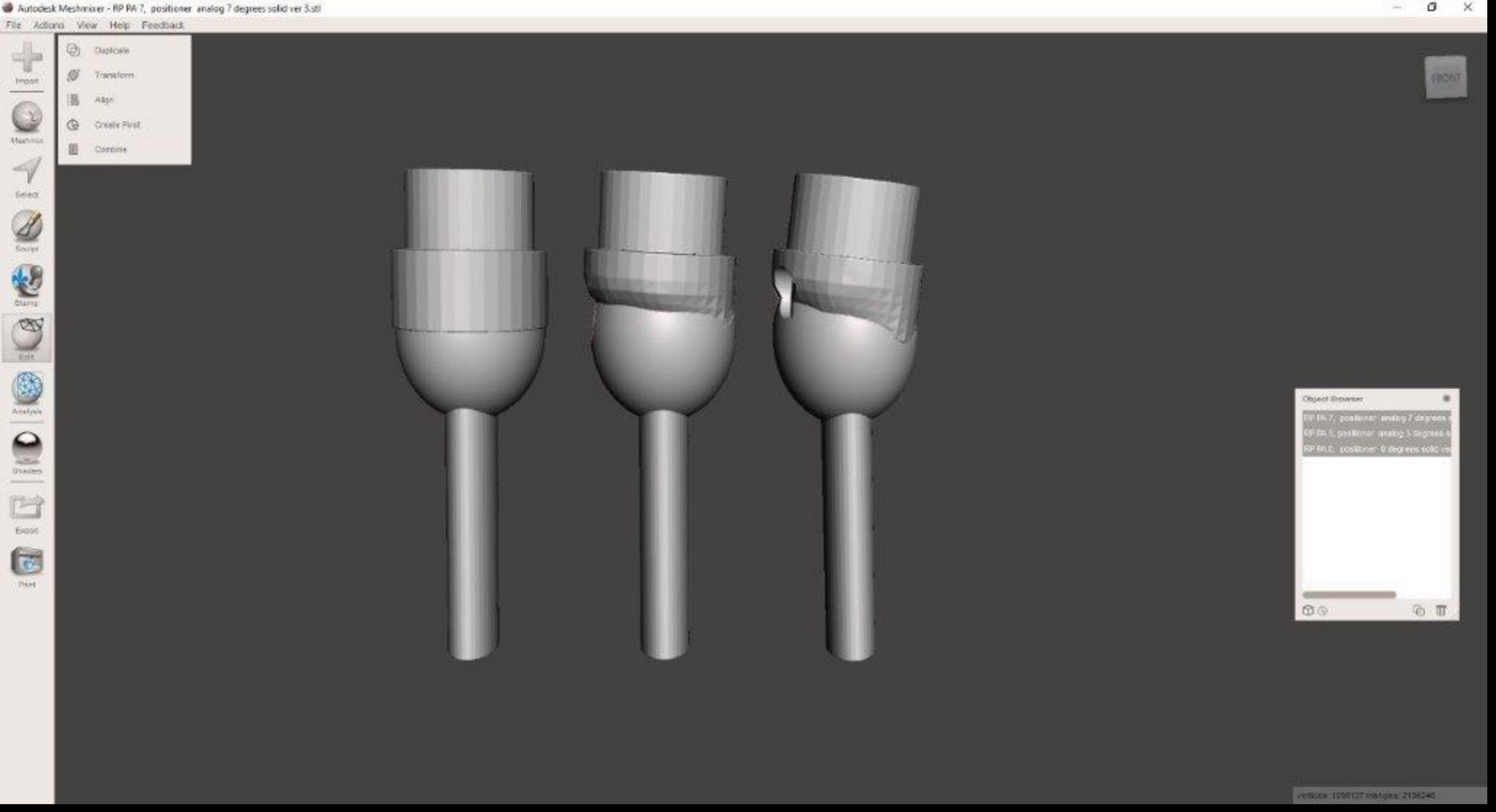


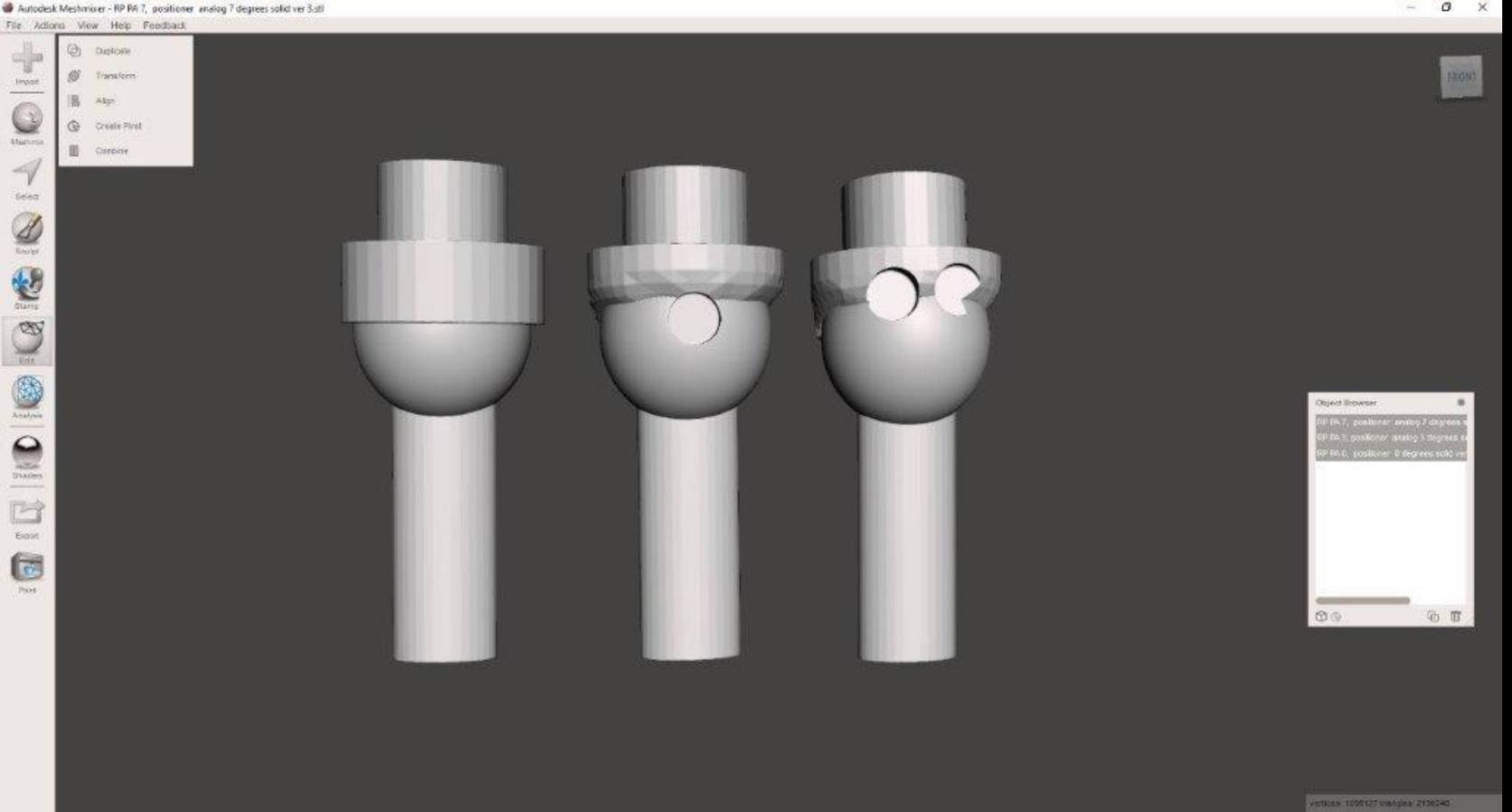
Export, safe file ready for printing in patient folder



Identify anatomy. In this case the mental foramen is the critical structure you want to stay away from.

0 – 3- 7 degrees


Autodesk Meshmixer - RP PA 7, positioner analog 7 degrees solid ver 3.stl
File Actions View Help Feedback
Duplicate
Transform
Align
Create Pivot
Combine
Import
Meshmix
Select
Sculpt
Stamp
Edit
Analysis
Shaders
Export
Print
FRONT
Object Browser
RP PA 7, positioner analog 7 degrees
RP PA 5, positioner analog 5 degrees
RP PA 0, positioner 0 degrees solid ve


Autodesk Meshmixer - RP PA 7, positioner analog 7 degrees solid ver 3.stl
File
Actions
View
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Duplicate
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Shaders
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Print
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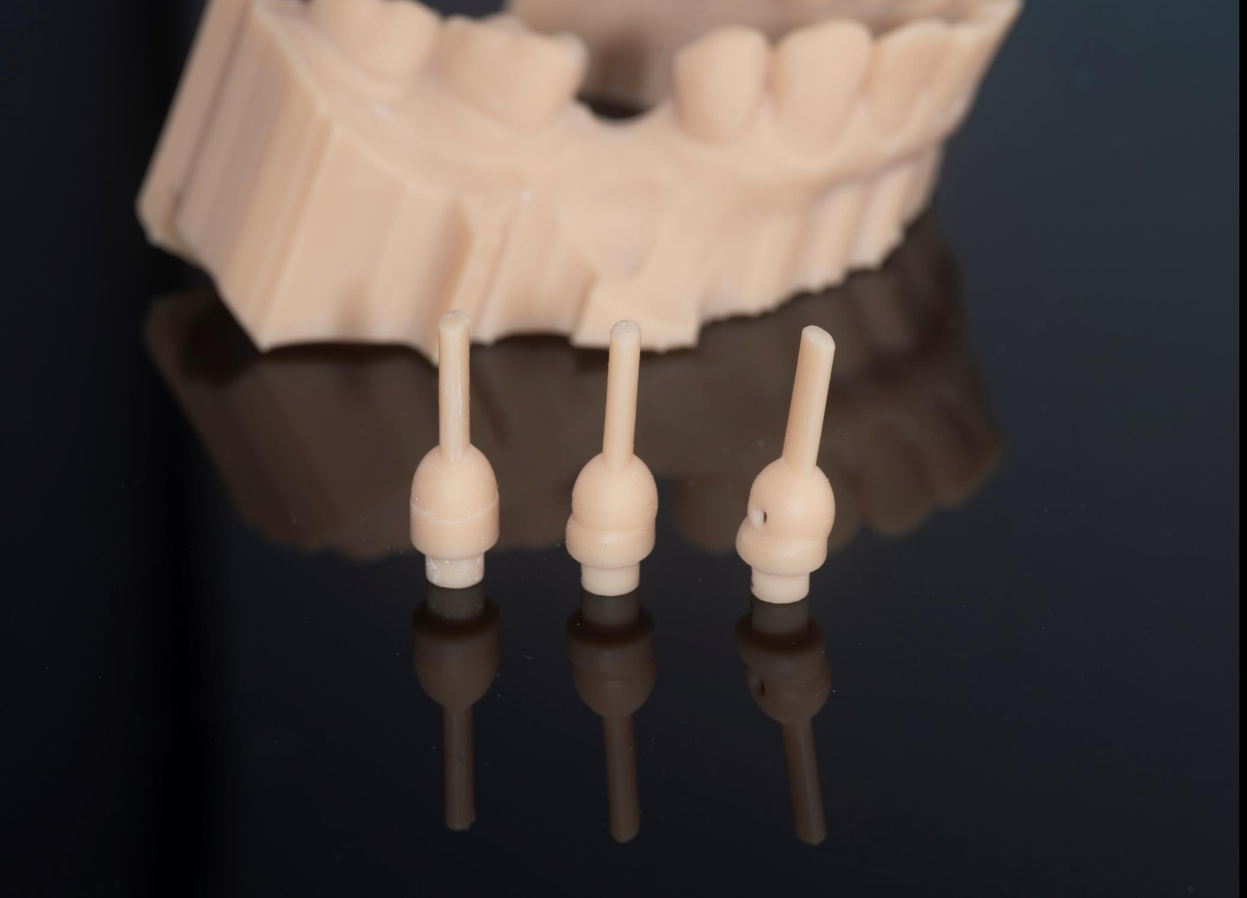
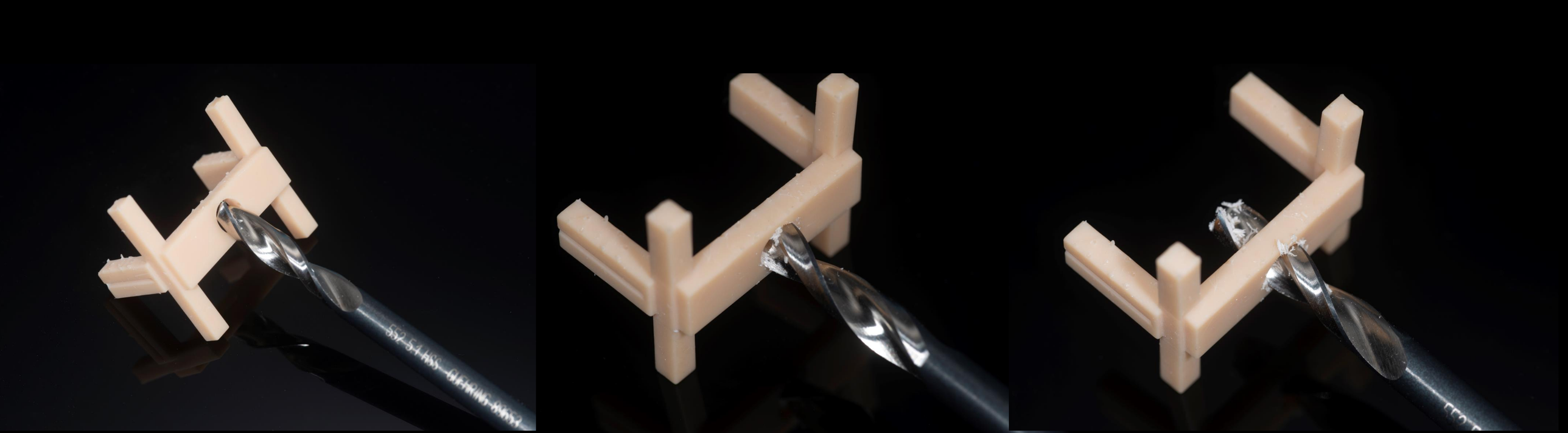
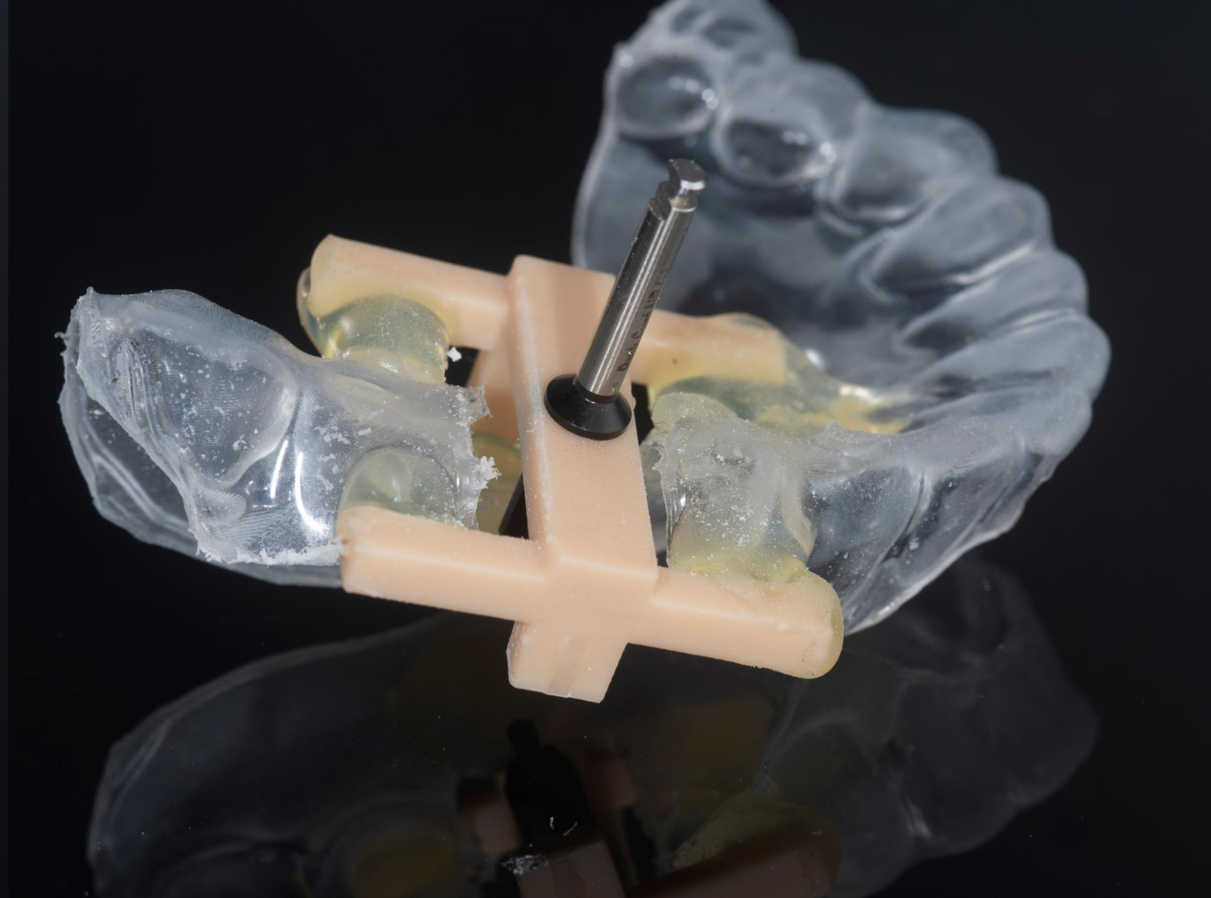
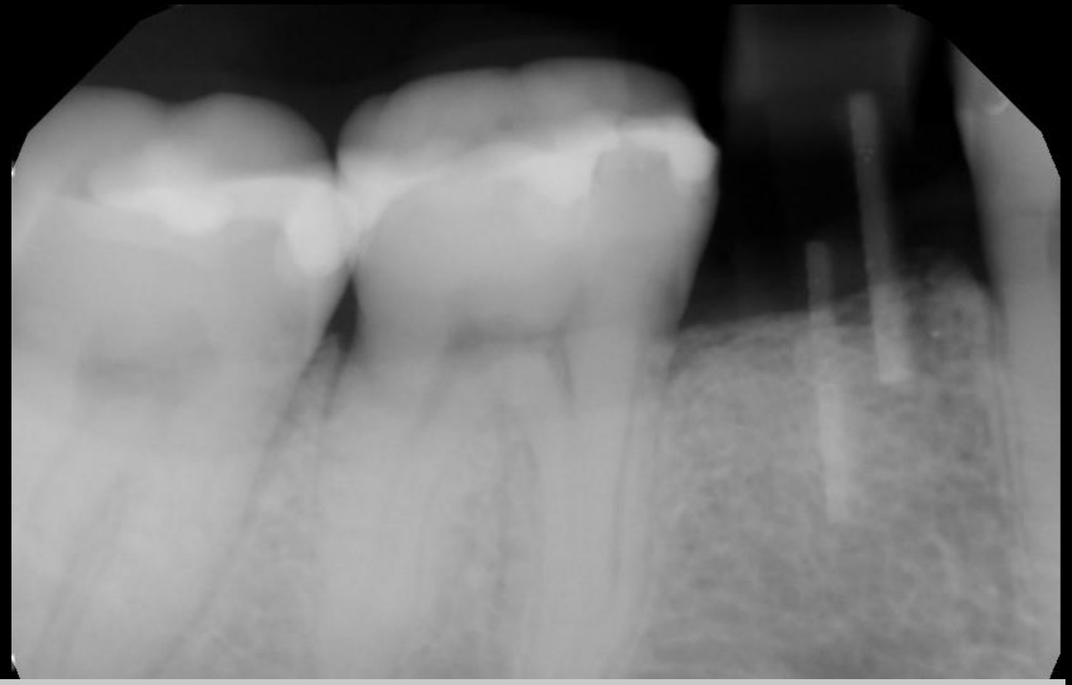
Object Browser









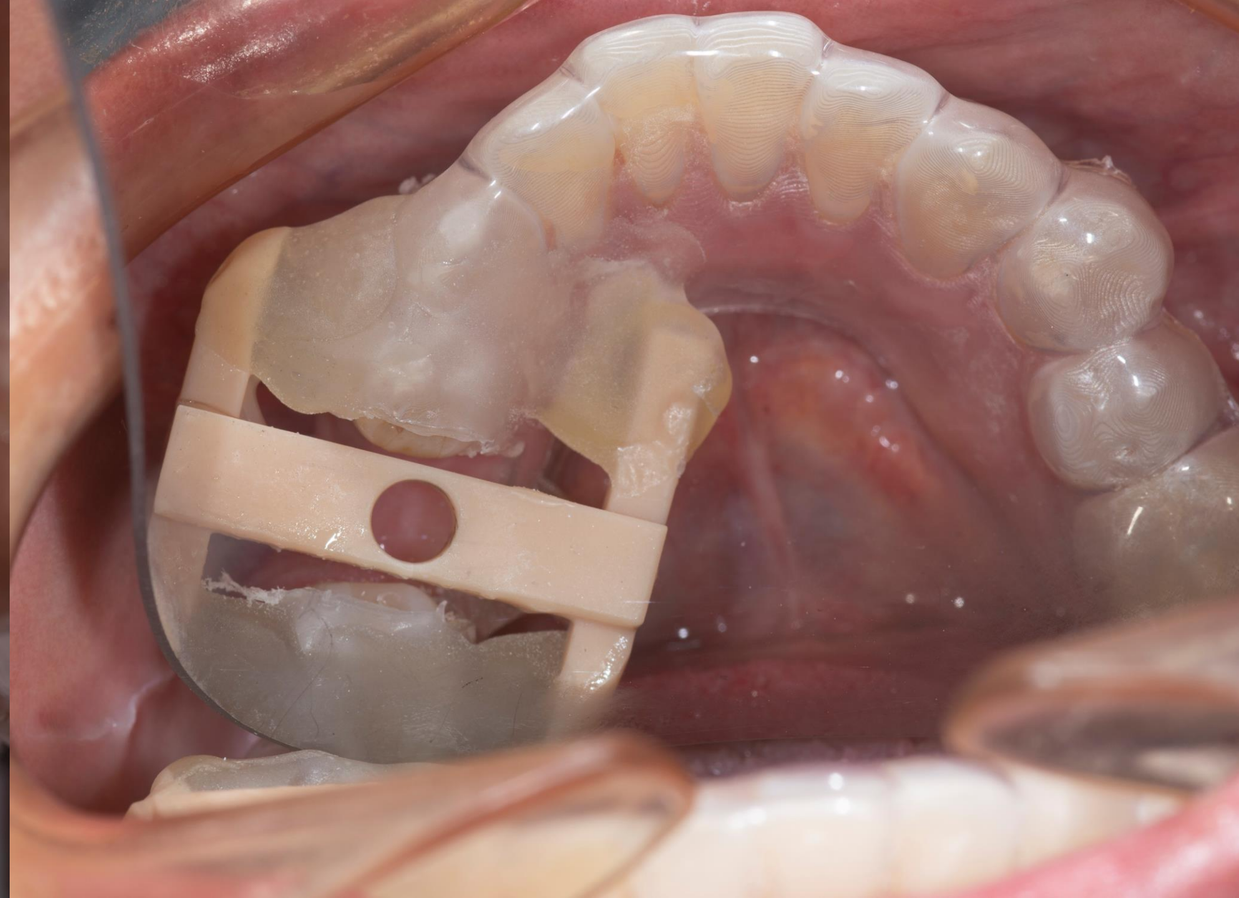


If radio opaque bars do not overlap, X-ray was not shot perpendicular


0 degrees

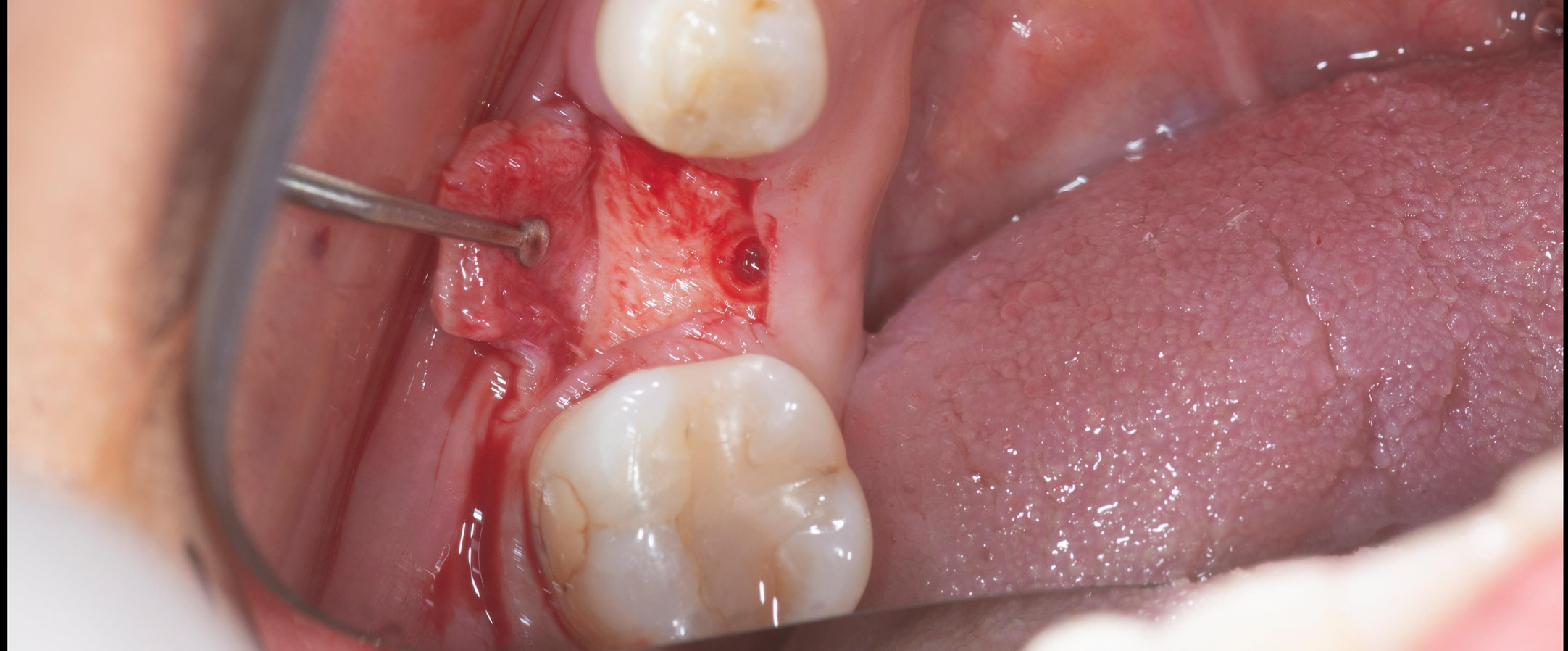

8/18/2022
7 degrees
DEXray® by DEXIS - Enhanced

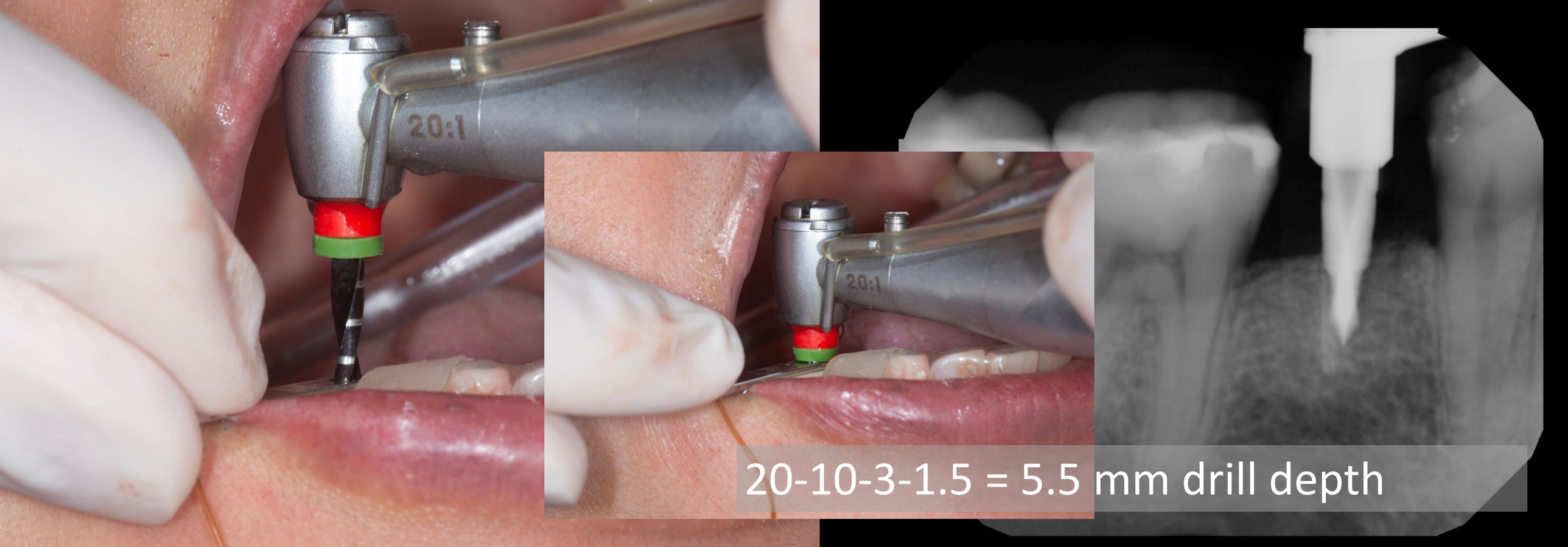


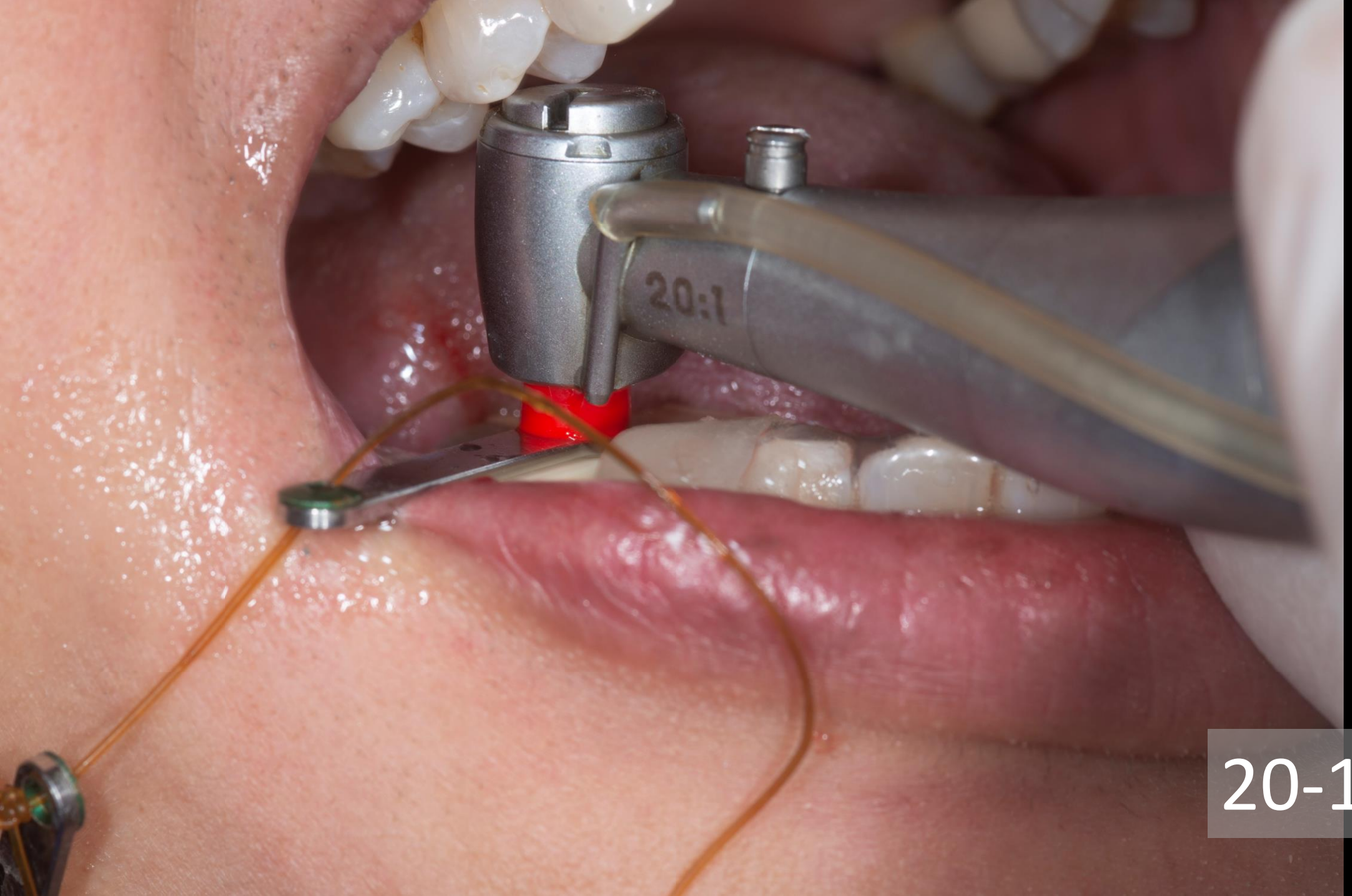


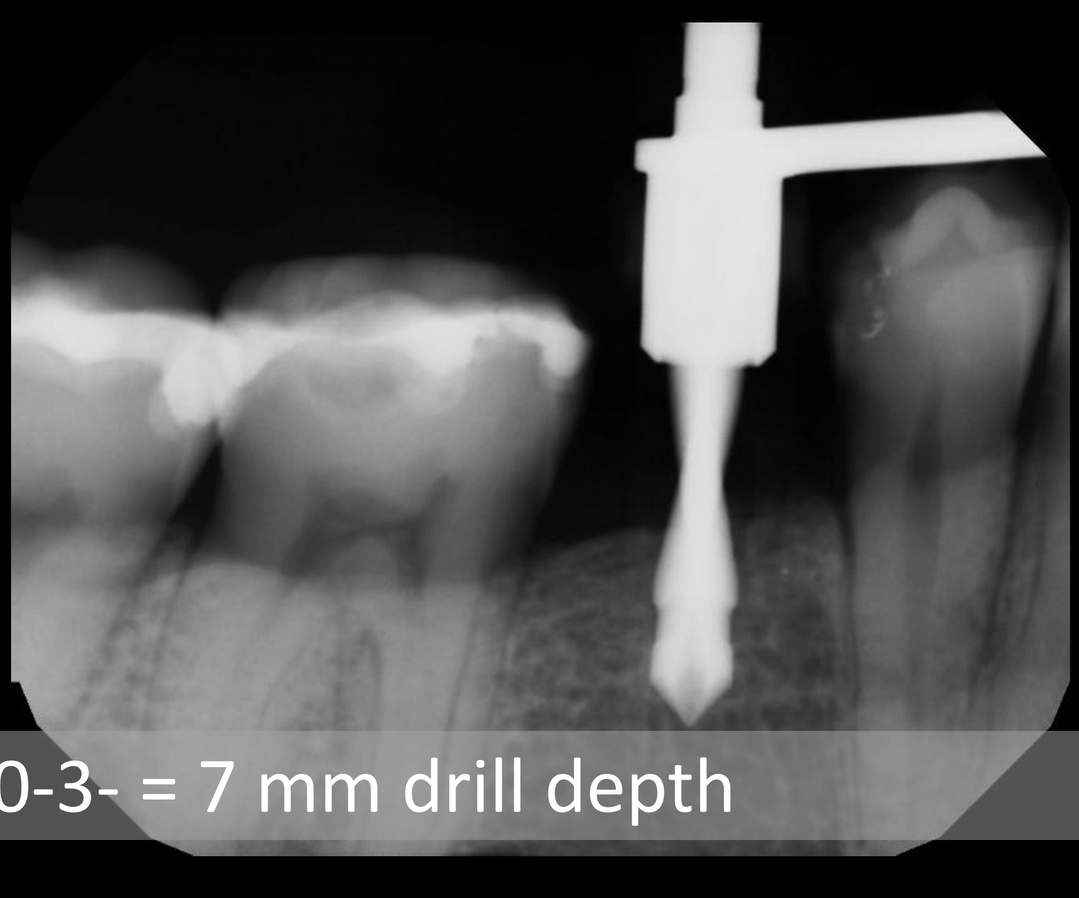
X-tip, intra osseo anesthesia

NP Starting drill will create 2 mm deep osteotomy 4 mm diameter




20:1
20:1
20-10-3-1.5 = 5.5 mm drill depth

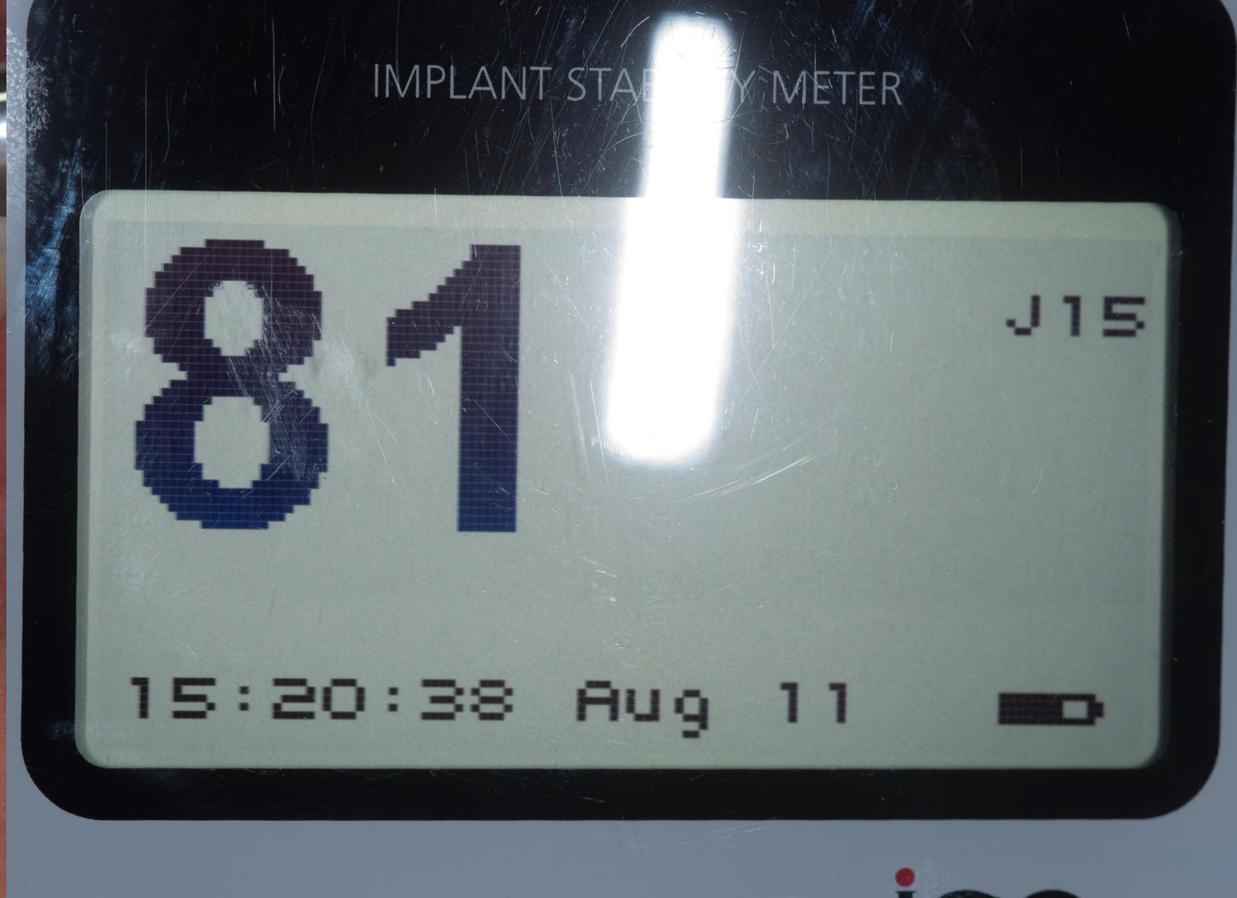


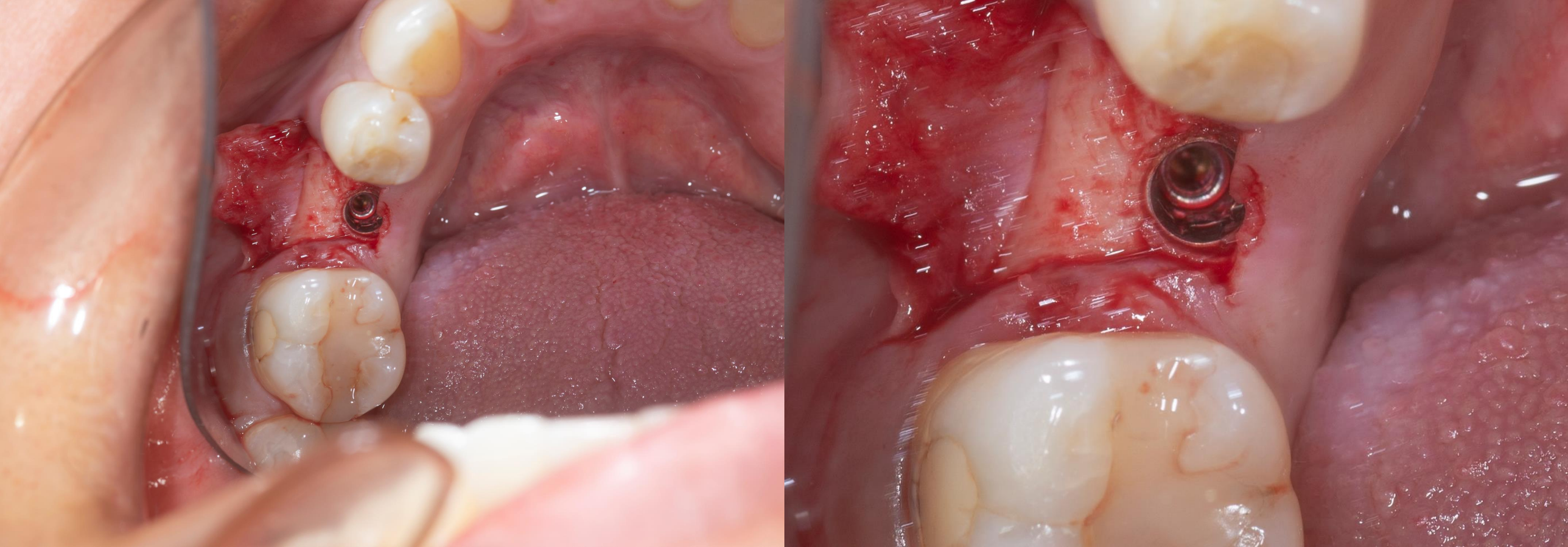


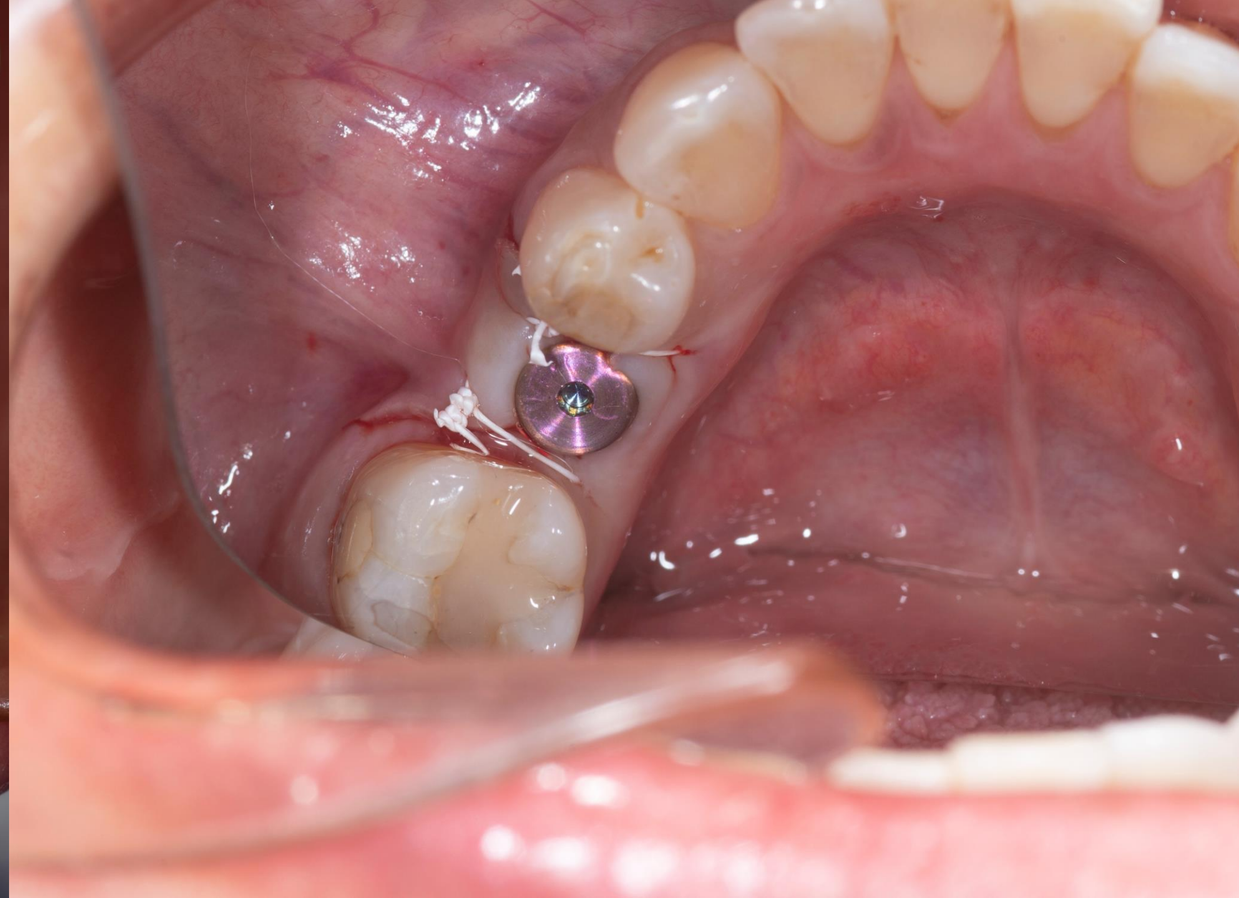
20-10-3- = 7 mm drill depth

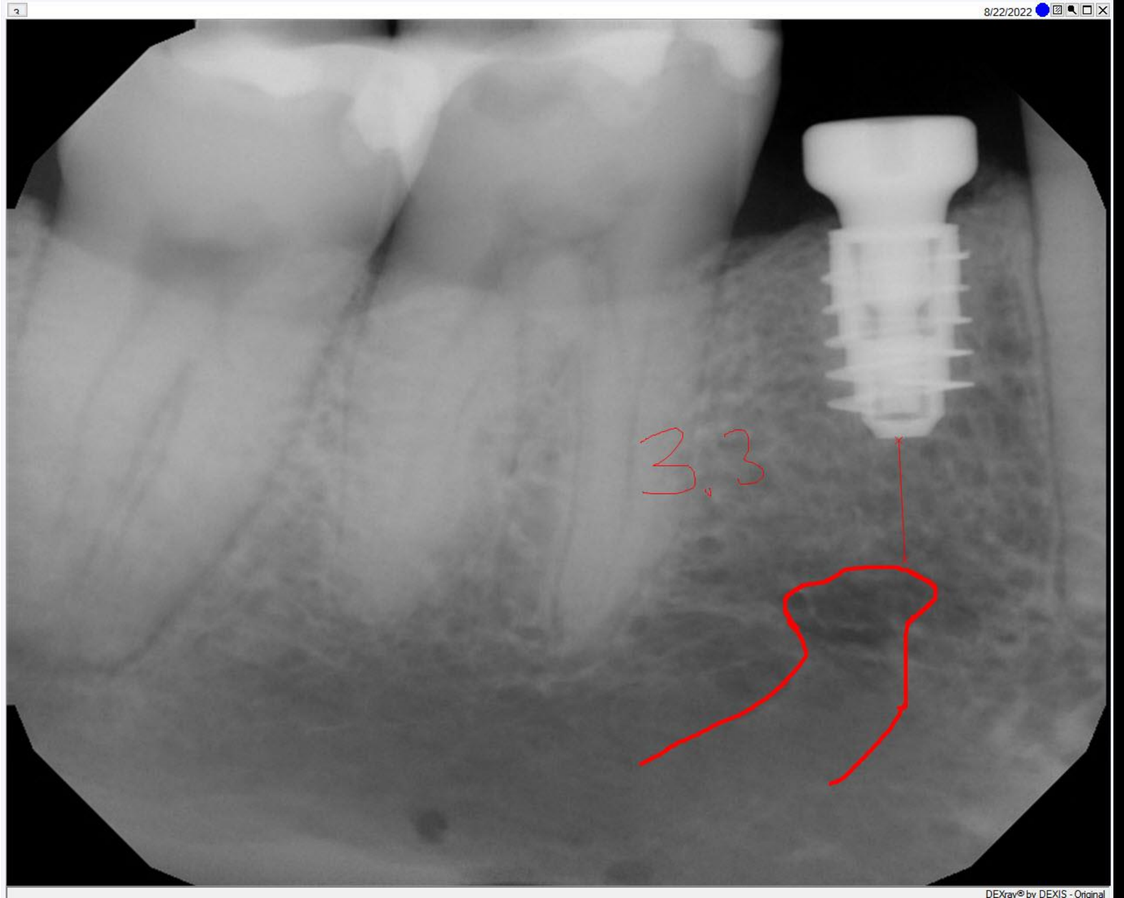

20:1
6 x 4.3 MM. Blue Sky Bio Max WT

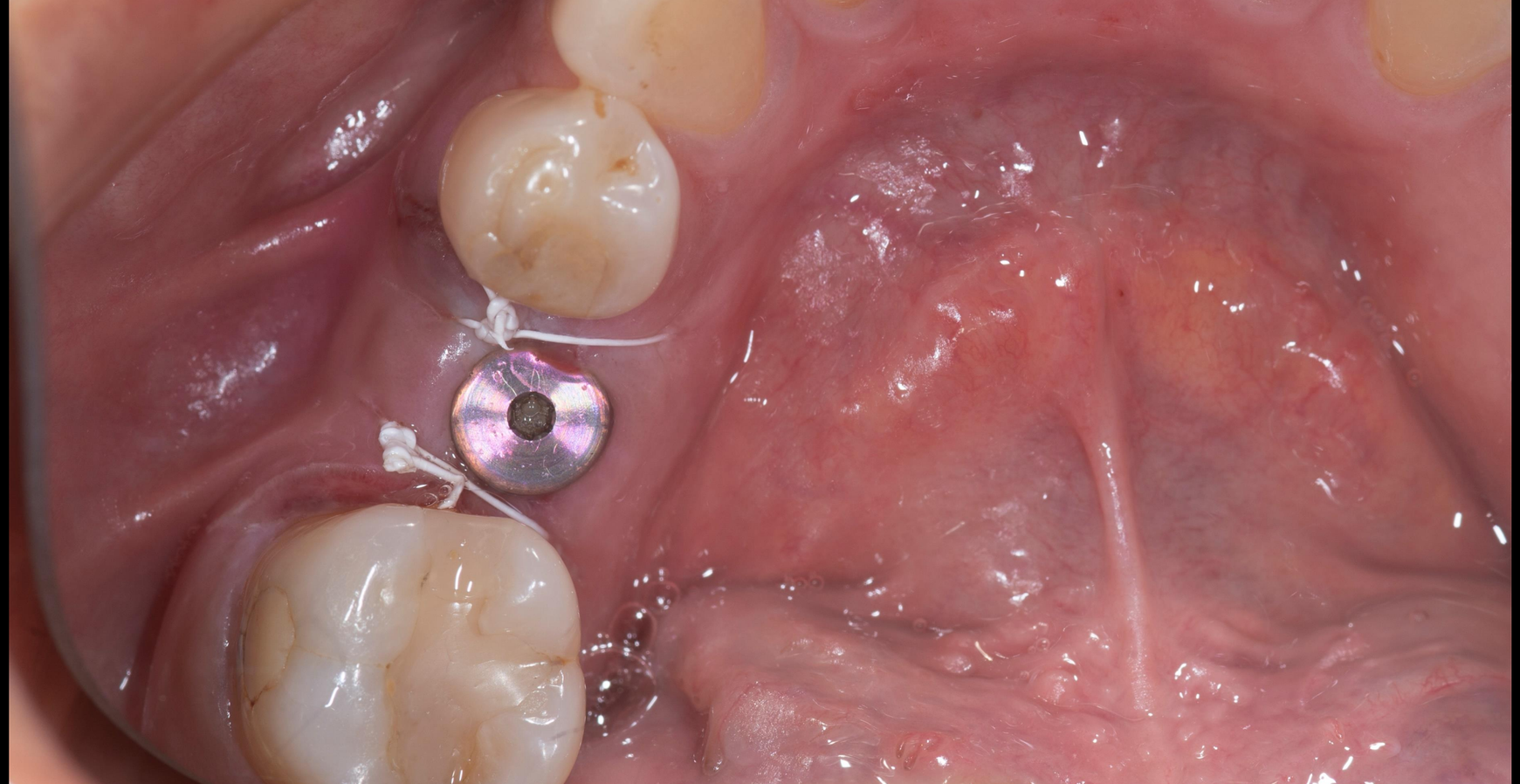

Guided bone mill


81
J15
15:20:38 Aug 11

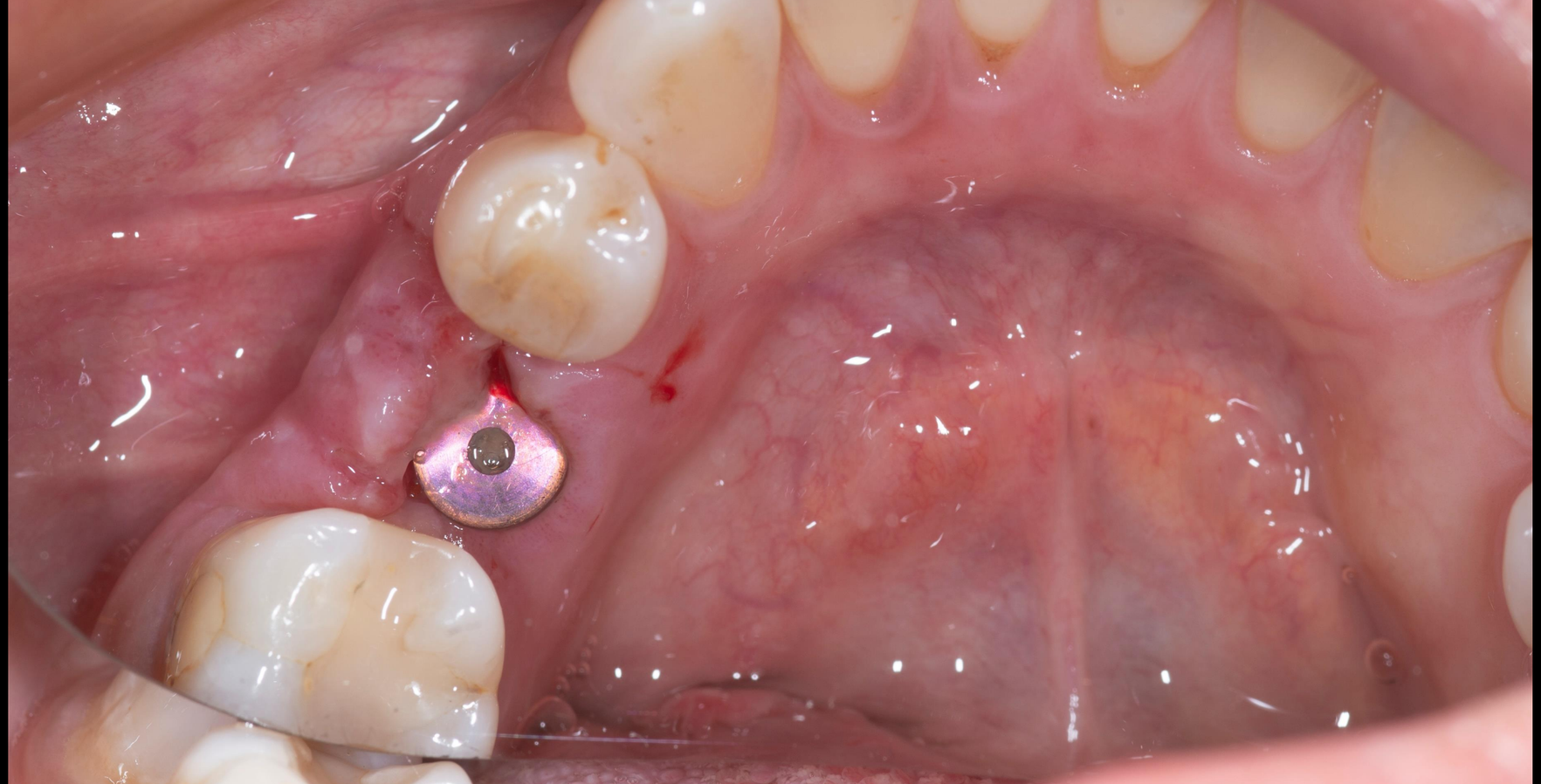





8/22/2022
3,3
DEXray® by DEXIS - Original



24 hours



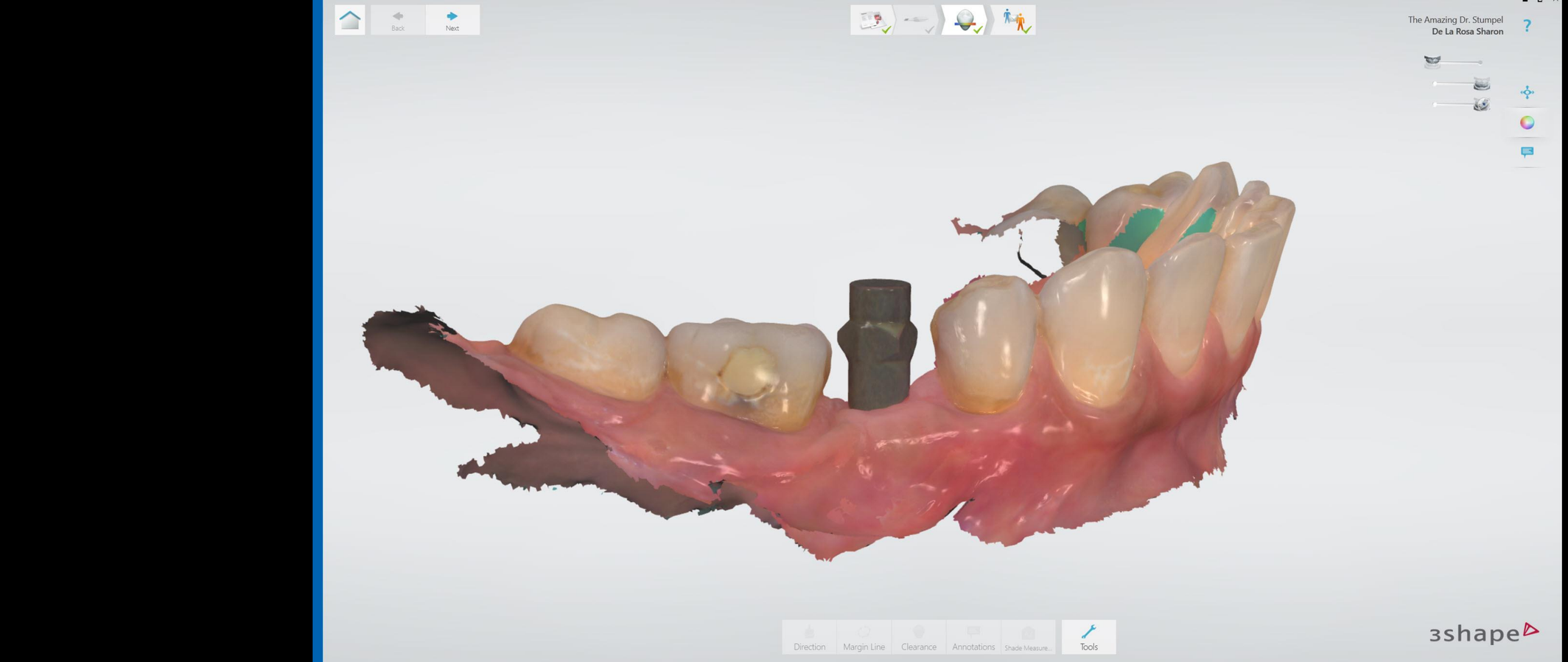
5 days

8 weeks

IMPLANT STABILITY METER
78
K18
10:09:24 Oct 09
ISQ


Back
Next
The Amazing Dr. Stumpel
De La Rosa Sharon
Direction
Margin Line
Clearance
Annotations
Shade Measure...
Tools
3shape


Back
Next
The Amazing Dr. Stumpel
De La Rosa Sharon
Direction
Margin Line
Clearance
Annotations
Shade Measure...
Tools
3shape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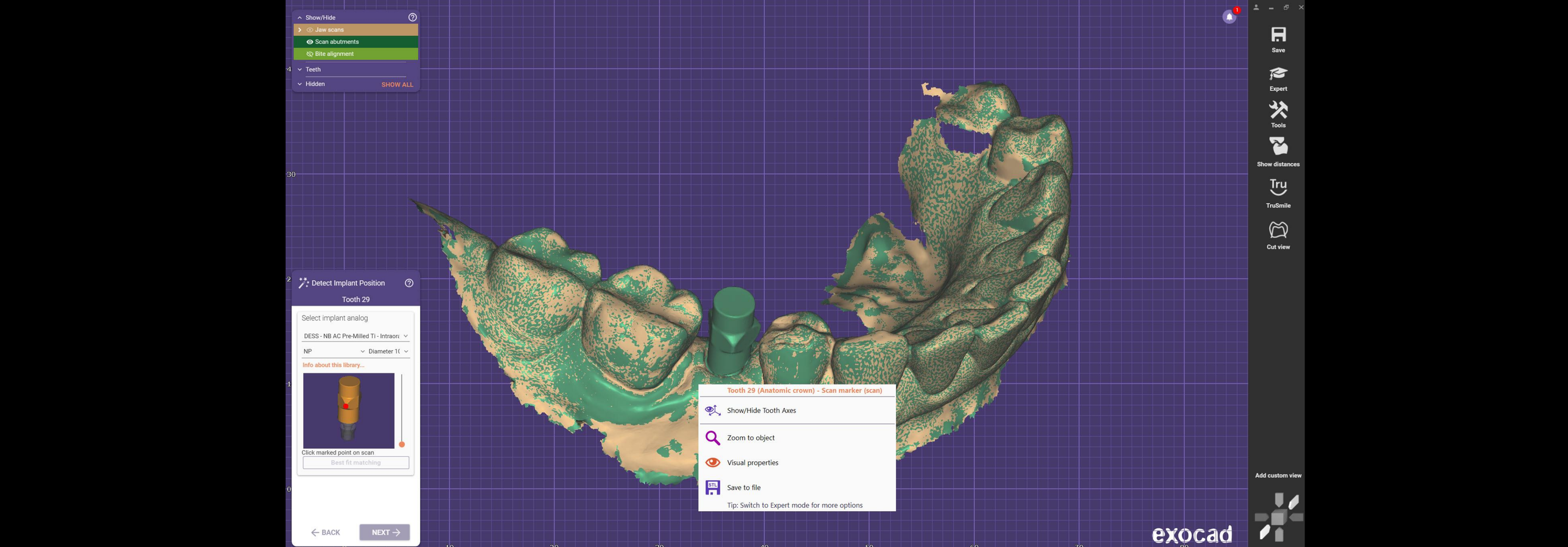
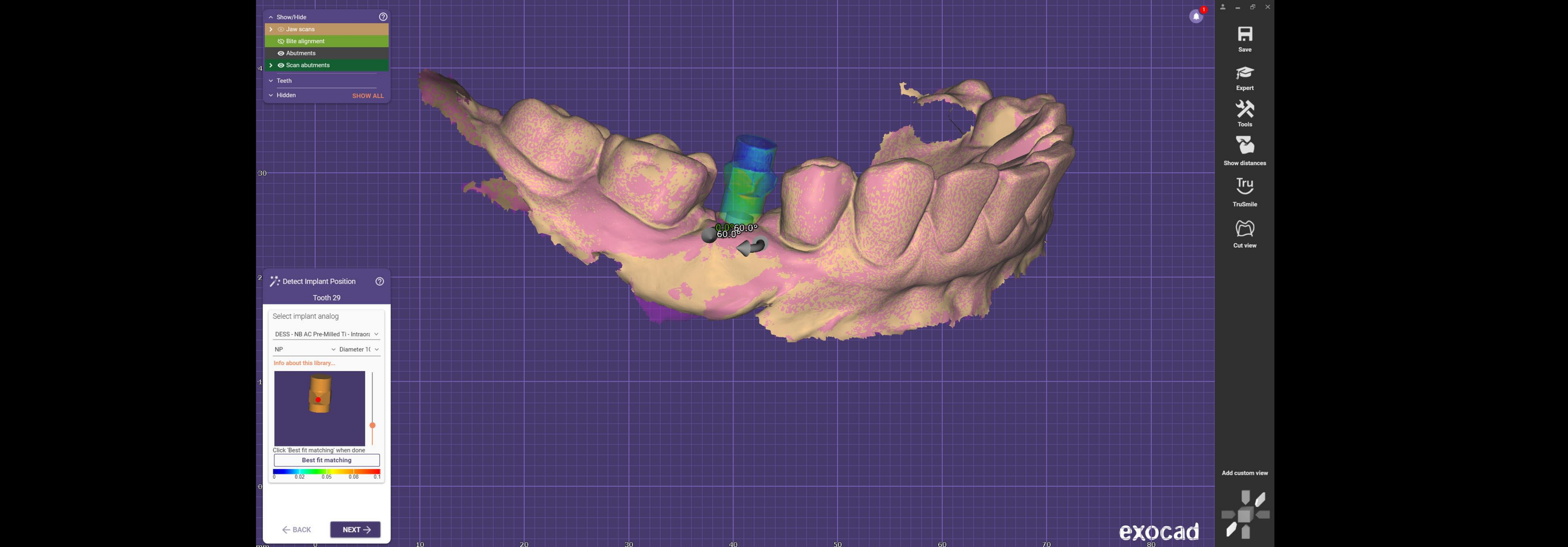
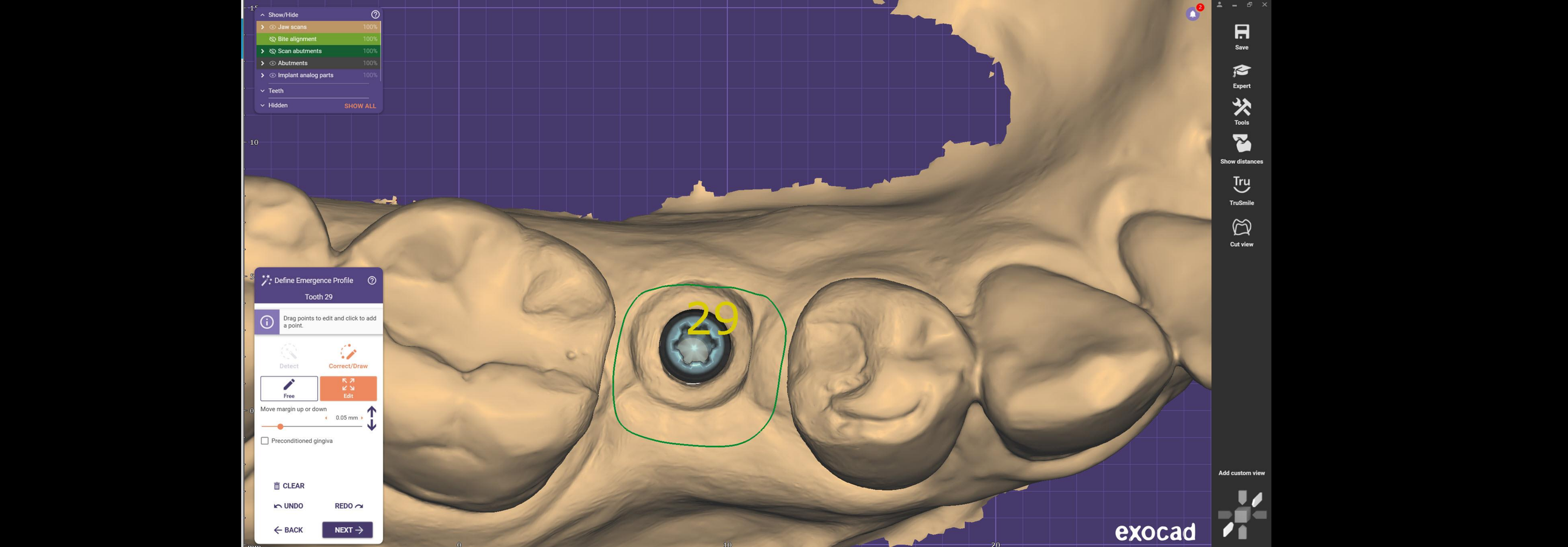
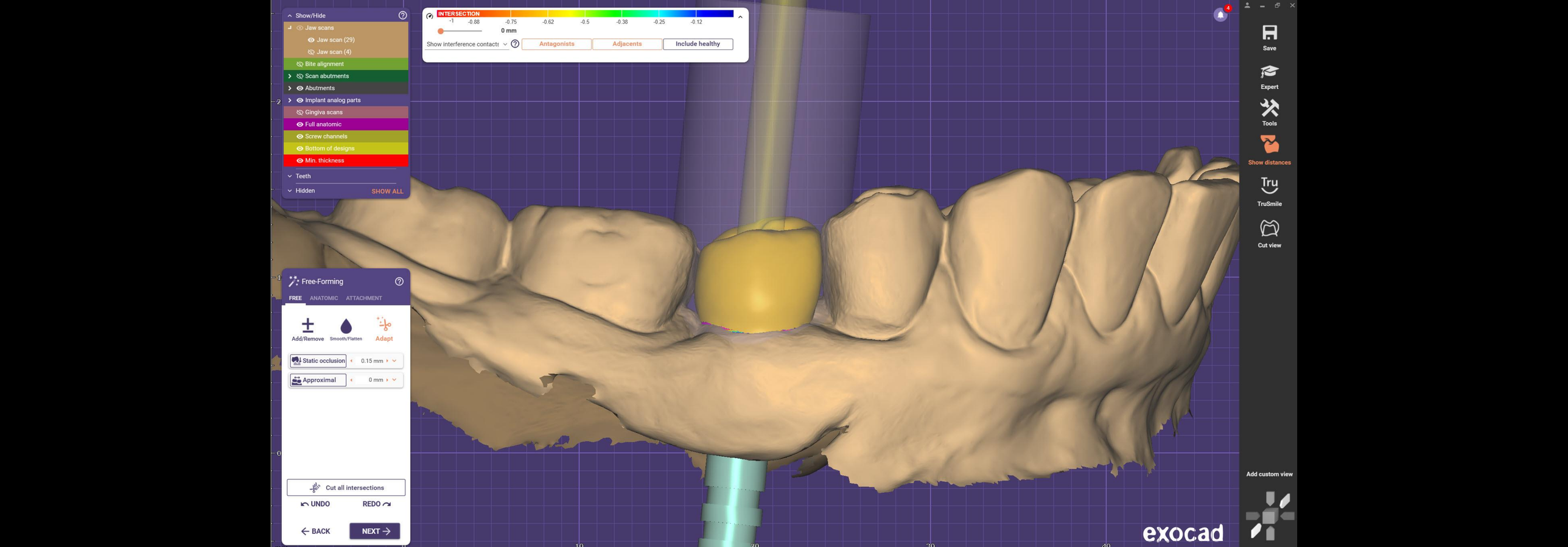
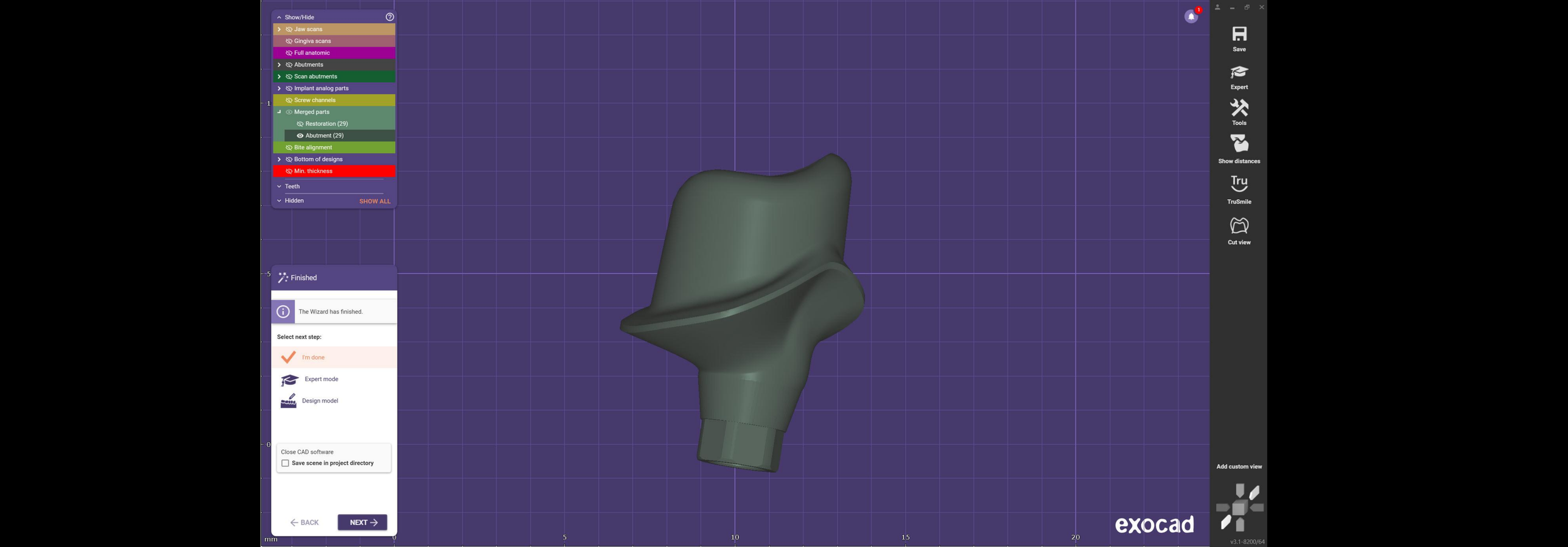
Next
The Amazing Dr. Stumpel
De La Rosa Sharon
Direction
Margin Line
Clearance
Annotations
Shade Measure...
Tools
3shape

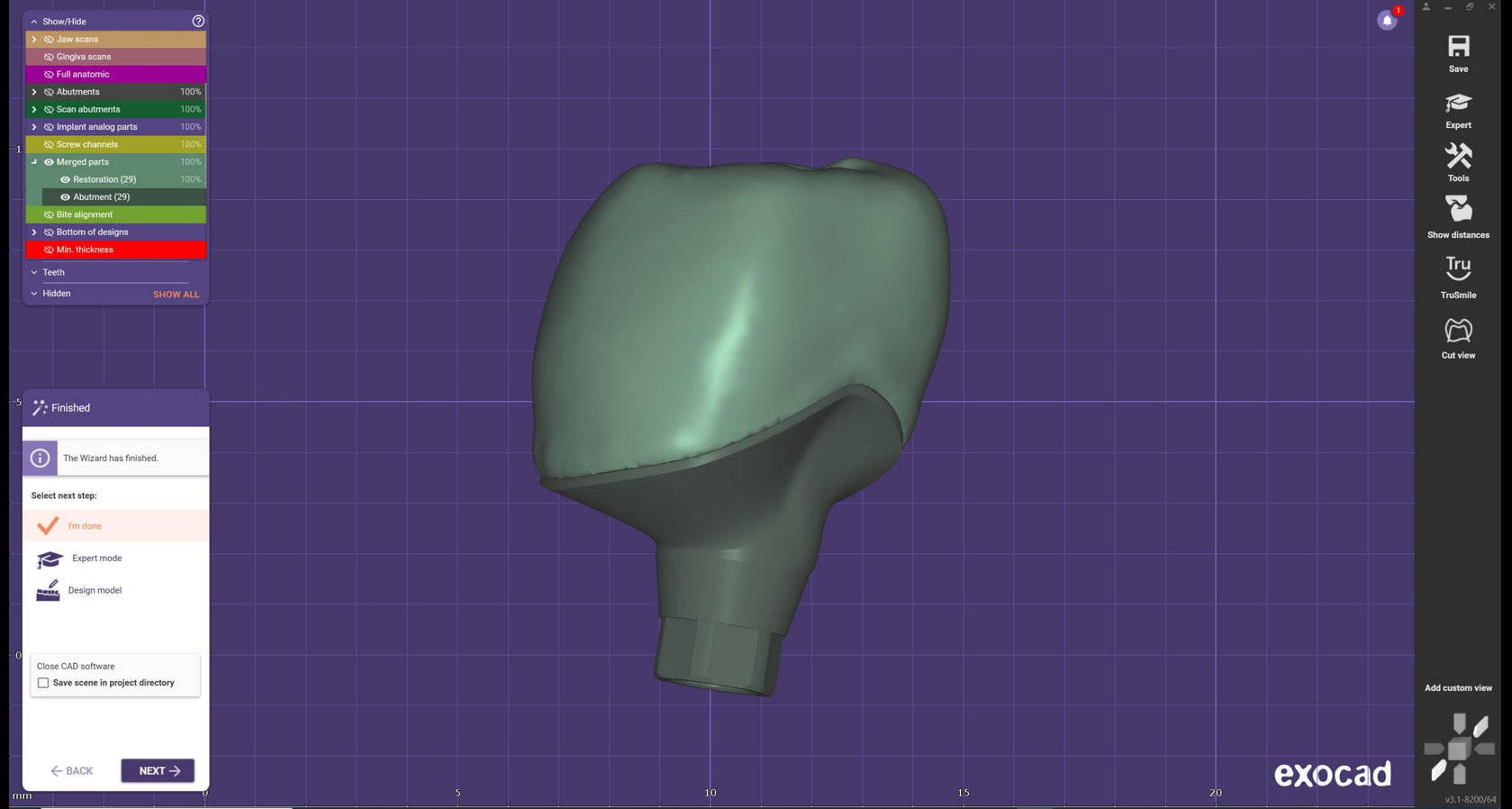

Show/Hide
Jaw scans
Scan abutments
Bite alignment
Teeth
Hidden
SHOW ALL
Detect Implant Position
Tooth 29
Select implant analog
DESS - NB AC Pre-Milled Ti - Intraor
NP
Diameter 1(
Info about this library...
Click marked point on scan
Best fit matching
BACK
NEXT
Tooth 29 (Anatomic crown) - Scan marker (scan)
Show/Hide Tooth Axes
Zoom to object
Visual properties
Save to file
Tip: Switch to Expert mode for more options
Save
Expert
Tools
Show distances
TruSmile
Cut view
Add custom view
exocad


Show/Hide
Jaw scans
Bite alignment
Abutments
Scan abutments
Teeth
Hidden
SHOW ALL
Detect Implant Position
Tooth 29
Select implant analog
DESS - NB AC Pre-Milled Ti - Intraora
NP
Diameter 1(
Info about this library...
Click 'Best fit matching' when done
Best fit matching
0
0.02
0.05
0.08
0.1
BACK
NEXT
0.0°
60.0°
60.0°
Save
Expert
Tools
Show distances
TruSmile
Cut view
Add custom view
exocad


Show/Hide
Jaw scans 100%
Bite alignment 100%
Scan abutments 100%
Abutments 100%
Implant analog parts 100%
Teeth
Hidden SHOW ALL
Define Emergence Profile
Tooth 29
Drag points to edit and click to add a point.
Detect
Correct/Draw
Free
Edit
Move margin up or down
0.05 mm
Preconditioned gingiva
CLEAR
UNDO
REDO
BACK
NEXT
29
Save
Expert
Tools
Show distances
TruSmile
Cut view
Add custom view
exocad


Show/Hide
Jaw scans
Jaw scan (29)
Jaw scan (4)
Bite alignment
Scan abutments
Abutments
Implant analog parts
Gingiva scans
Full anatomic
Screw channels
Bottom of designs
Min. thickness
Teeth
Hidden
SHOW ALL
INTERSECTION
-1 -0.88 -0.75 -0.62 -0.5 -0.38 -0.25 -0.12
0 mm
Show interference contacts
Antagonists
Adjacents
Include healthy
Free-Forming
FREE
ANATOMIC
ATTACHMENT
Add/Remove
Smooth/Flatten
Adapt
Static occlusion
0.15 mm
Approximal
0 mm
Cut all intersections
UNDO
REDO
BACK
NEXT
Save
Expert
Tools
Show distances
TruSmile
Cut view
Add custom view
exocad


Show/Hide
Jaw scans
Gingiva scans
Full anatomic
Abutments
Scan abutments
Implant analog parts
Screw channels
Merged parts
Restoration (29)
Abutment (29)
Bite alignment
Bottom of designs
Min. thickness
Teeth
Hidden
SHOW ALL
Finished
The Wizard has finished.
Select next step:
I'm done
Expert mode
Design model
Close CAD software
Save scene in project directory
BACK
NEXT
Save
Expert
Tools
Show distances
TruSmile
Cut view
Add custom view
exocad
v3.1-8200/64
mm
0
5
10
15
20


Show/Hide
Jaw scans
Gingiva scans
Full anatomic
Abutments 100%
Scan abutments 100%
Implant analog parts 100%
Screw channels 100%
Merged parts 100%
Restoration (29) 100%
Abutment (29)
Bite alignment
Bottom of designs
Min. thickness
Teeth
Hidden SHOW ALL
Finished
The Wizard has finished.
Select next step:
I'm done
Expert mode
Design model
Close CAD software
Save scene in project directory
BACK
NEXT
Save
Expert
Tools
Show distances
TruSmile
Cut view
Add custom view
exocad
v3.1-8200/64
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