

Zurick Bridge Protocol

by Precision Dental Arts





Diagnostics

- IOS Scans or Impressions- Upper and Lower and a Bite
- CBCT- Raw Dicom Files - Zipped
- Diagnostic Photos: Photo Series
- Diagnostic Video: Video of the patient speaking about their expectations and desires
- Patients expectations and desires
- Detailed Rx with Implants Type and Sizes

Communication

- Dentist to Laboratory
 - Rx- Detailed Rx
 - Shade photos
 - Material Selection
 - Implant Type and Size
 - Clinical Photos

Fill out your digital Rx, upload your Digital scans, Dicoms and Anything else Digitally at:

www.3dprecisiondigital.com

The screenshot shows the 3DP Digital Precision website interface. At the top left is the logo for 3DP Digital Precision. To the right of the logo is a search bar with the text "Enter keyword(s)" and a "Search" button. Below the search bar are navigation links: WELCOME, ABOUT, SUBMIT A CASE, SERVICES, CONTACT, MY ACCOUNT, and LOG OUT. A phone number "800.574.0721" is also visible. The main content area is titled "SUBMIT CASE" and contains a section "Select a workflow to start:" with ten options, each represented by a small image and a text label: Crown and Bridge, Implantology, Surgical Guides, Removable, Design Services, Digital Smile Designs & Diagnostics, Provisionalization, Splints, Additional Services, and Upload Additional Files.

You can print off the completed rx and send it with any models, impressions, bites or information you need to send to the lab.

types of digital dentistry I use everyday...

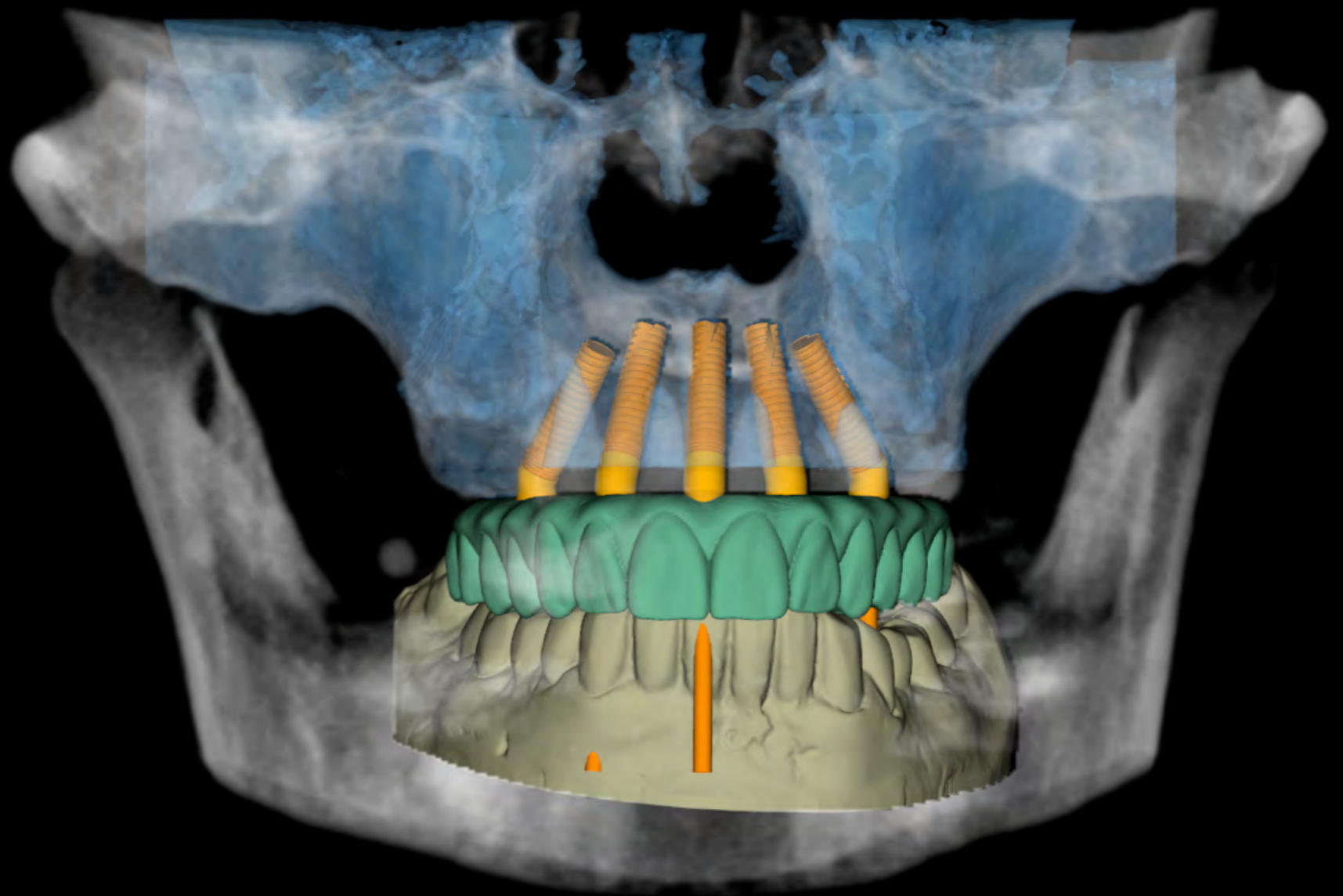
Radiographs

Photography

Impressions

Smile Design

Implant Planning



Go To Meeting





**PRECISION GUIDED
SURGERY & PROSTHETICS**





Maxilla Stackable Parts

Case#: **6244VPSG**

Customer:

Precision

Ph:

208.733.0383

Mandible doc attached? **Yes**

Surgery:

Patient: **Phillips**

Agent:

LOTT

Guide Type: **Stackable-Dent.Extraction**

For Constructor



Positioning Attachment



Fixation Site Drill Guide

Model for Fixation Site Drill Guide



Bone Mdl

Bone Piece

Sent / Diag. STL Received

Sent / Denture Received



Base Frame/Bone Reduction Jig



Bone Reduction Verification Jig



Surgical Guide
Markers on the Guide

Sent / Waxup Received

Base Frame
Base Frame Sent / Received



Timing Jig

Works as Bone Reduction Veri. Jig also



Transfer Jig



Provisional Shade:

Gum Shade:

Design Only (STL File)

() IBUR Diag. Finished



Backup Denture

Drill Guide Sleeves:

(1) 4.1

(2)

(3)

Size & #s

5

Sleeves in the Pan

()

()

()

Fixation Tube -----

(If needed tube dia: 2.0 mm)

Rubber Gaskets

Polymer Sleeve -----

Screw Hole Plugs -----

Drill Report

Guideline

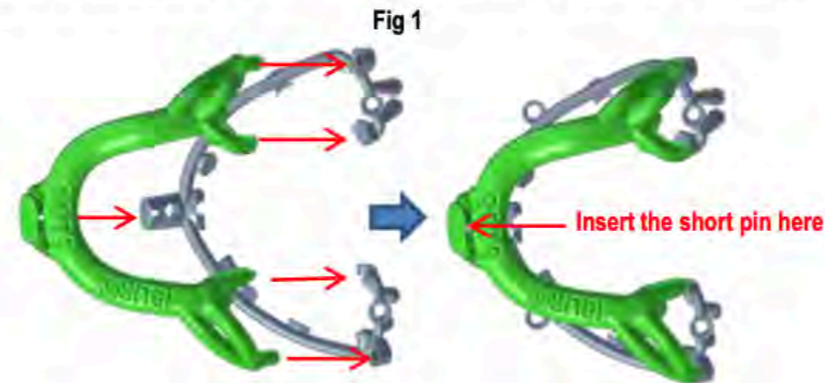
Parts List

Invoice

How to Use the 3DP Stackable Surgical Drill Guide Set (Horseshoe Type Guide w/ Saddle Type Base)

* Patented by Precision/3DP

1. **Sterilization:** Sterilize the surgical guide parts using a low temperature method such as γ -irradiation or EtO (conform EN552 and EN556 respectively). Separate attached pieces before sterilization.
2. **Assemble the Bone Reduction Jig and Positioning Attachment.**
 - a) Attach the Positioning Attachment (**marked #1**) to the Base Frame / Bone Reduction Jig by sliding the attachment horizontally into the Base Frame's connectors.
 - b) Insert the short pin in to the front hole to secure the connection of the appliances.



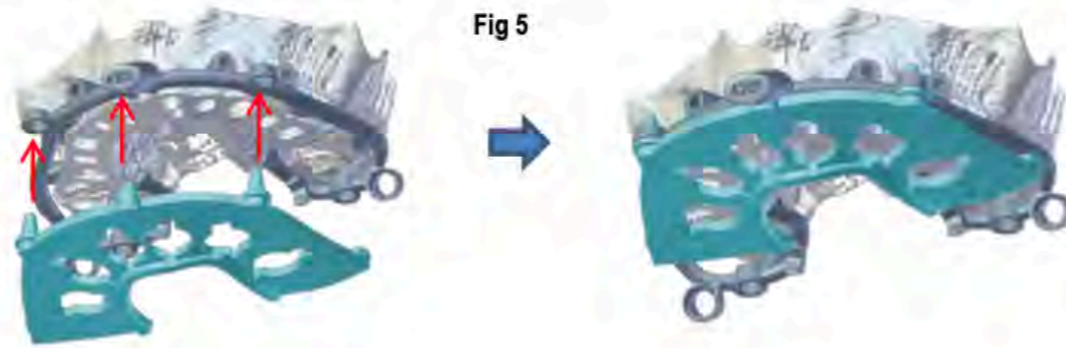
3. **Drill Fixation sites:**
 - a) Lay a flap. **Do not extract any teeth at this point.** Place the combined Base Frame and Positioning Attachment on the remaining teeth. Please make sure the appliance is properly positioned by checking the windows – Fig 2).
 - b) Drill through the fixation site drill guide holes to create fixation sites (15mm to depth for all the fixation sites) and fixation screws to fixate the Bone Reduction Jig to the bone.
 - c) Remove the Positioning Attachment from the Base Frame.



3. **Reduce the bone with the Bone Reduction Jig / Base Frame:**
 - a) Extract all the remaining teeth.
 - b) Reduce the bone using the Base Frame as a Bone Reduction Jig (Fig 3). Please refer to the Bone Piece Model (Fig 4) and black line on the bone model regarding the amount of the bone to be reduced.

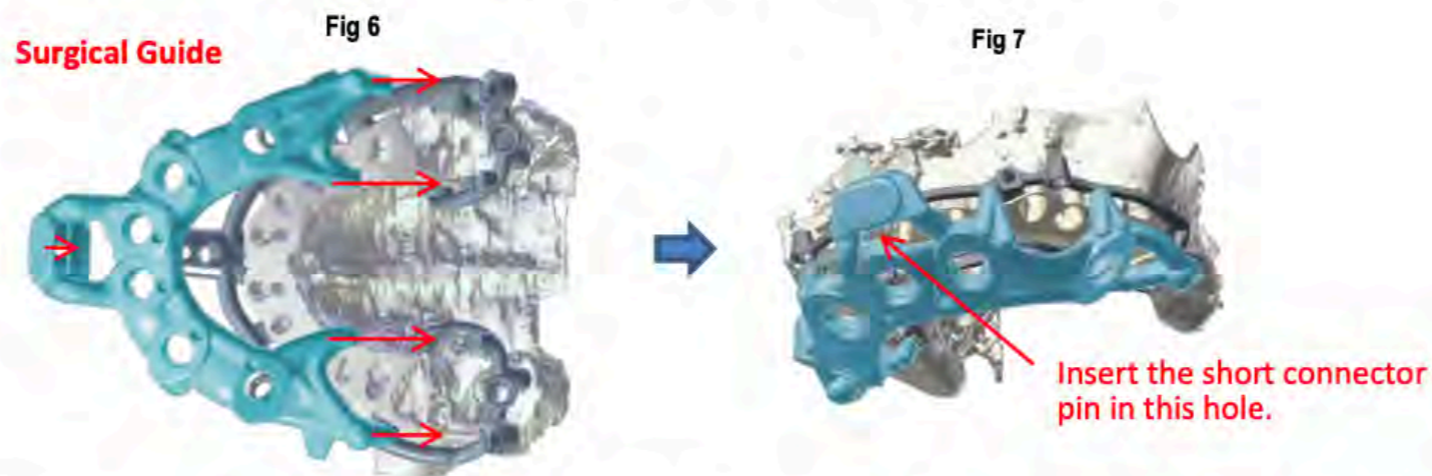


- c) Attach the Bone Reduction Verification / Timing Jig (marked #2 & 4) to the Base Frame (Fig 5) in order to see if the bone was reduced sufficiently.



4. Drill Osteotomies for Implants:

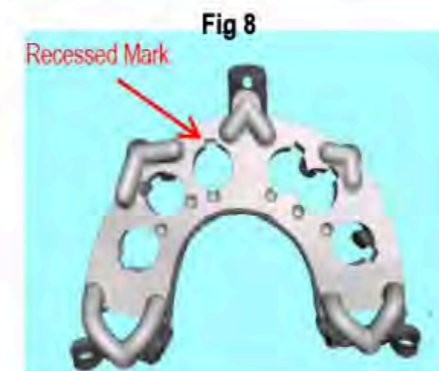
- a) Remove the Bone Reduction Verification / Timing Jig from the base frame and then attach the Surgical Guide (marked #3) to the Base Frame by sliding the Surgical Guide portion horizontally into the Base Frame's connectors (Fig 6). Insert the short connector pin in the front hole (Fig. 7).



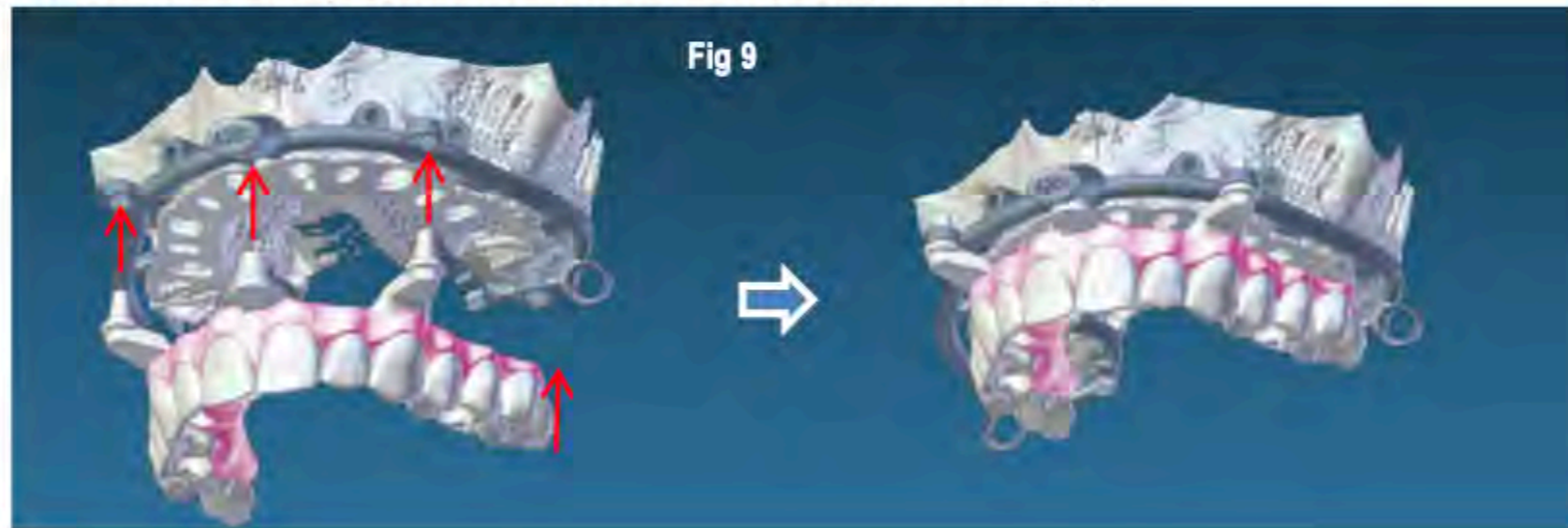
- b) Drill osteotomies, following the guideline and install implants (Refer to the timing markers on the surgical guide for the angled abutment directions). Remove the Surgical Guide portion from the Base Frame and finish drilling.

5. Prepare the Provisional:

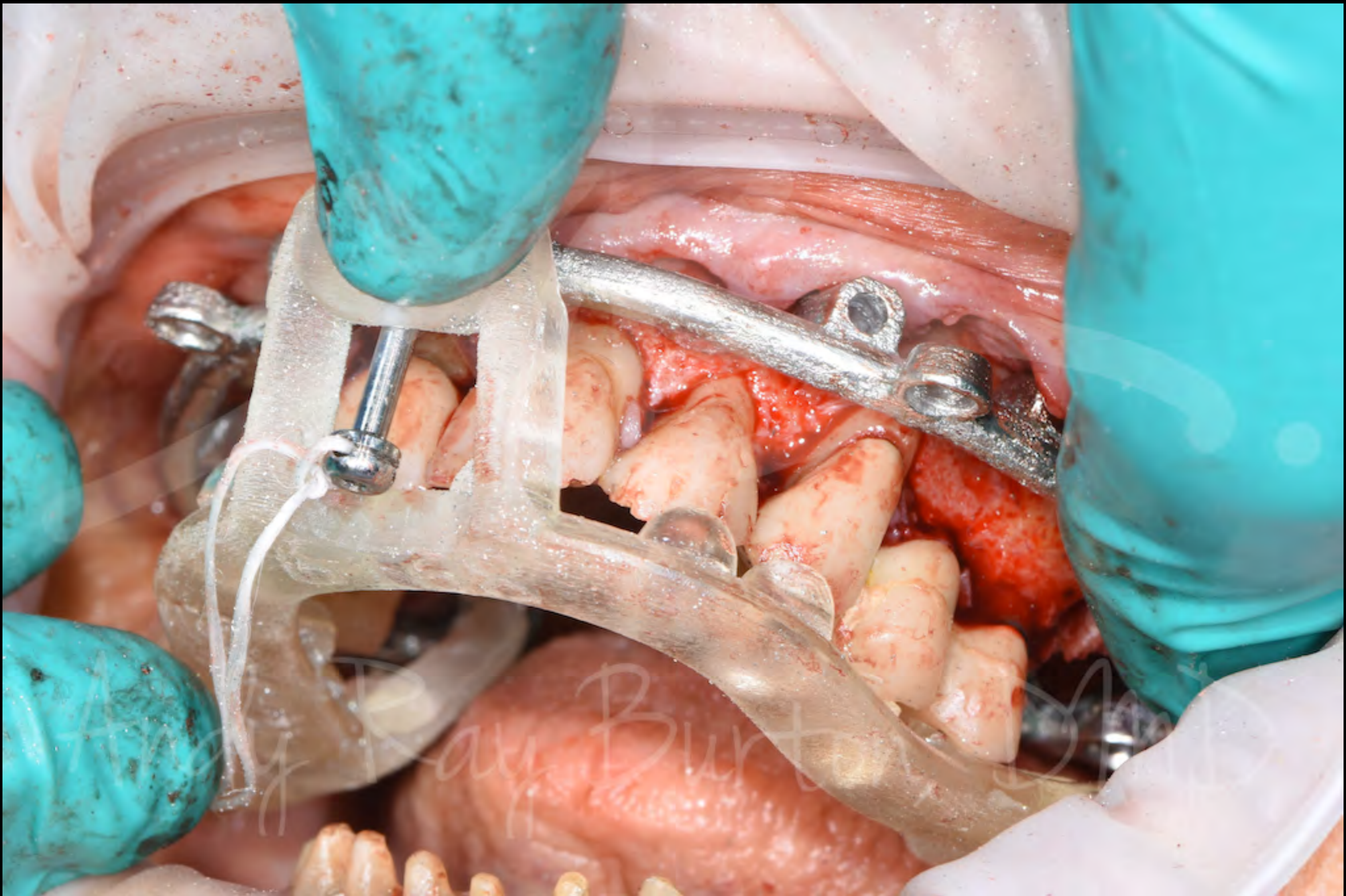
- a) Attach the Bone Reduction Verification/ Timing Jig Tray (marked #2 & 4) to the Base Frame again and attach multi-unit abutment and cylinders to the installed implants, referring to the dot markers and recessed markers on the Timing Jig Tray for the implant angles (Fig. 8).
- b) Put the polymer sleeves that were direct shipped to your office on the implants.



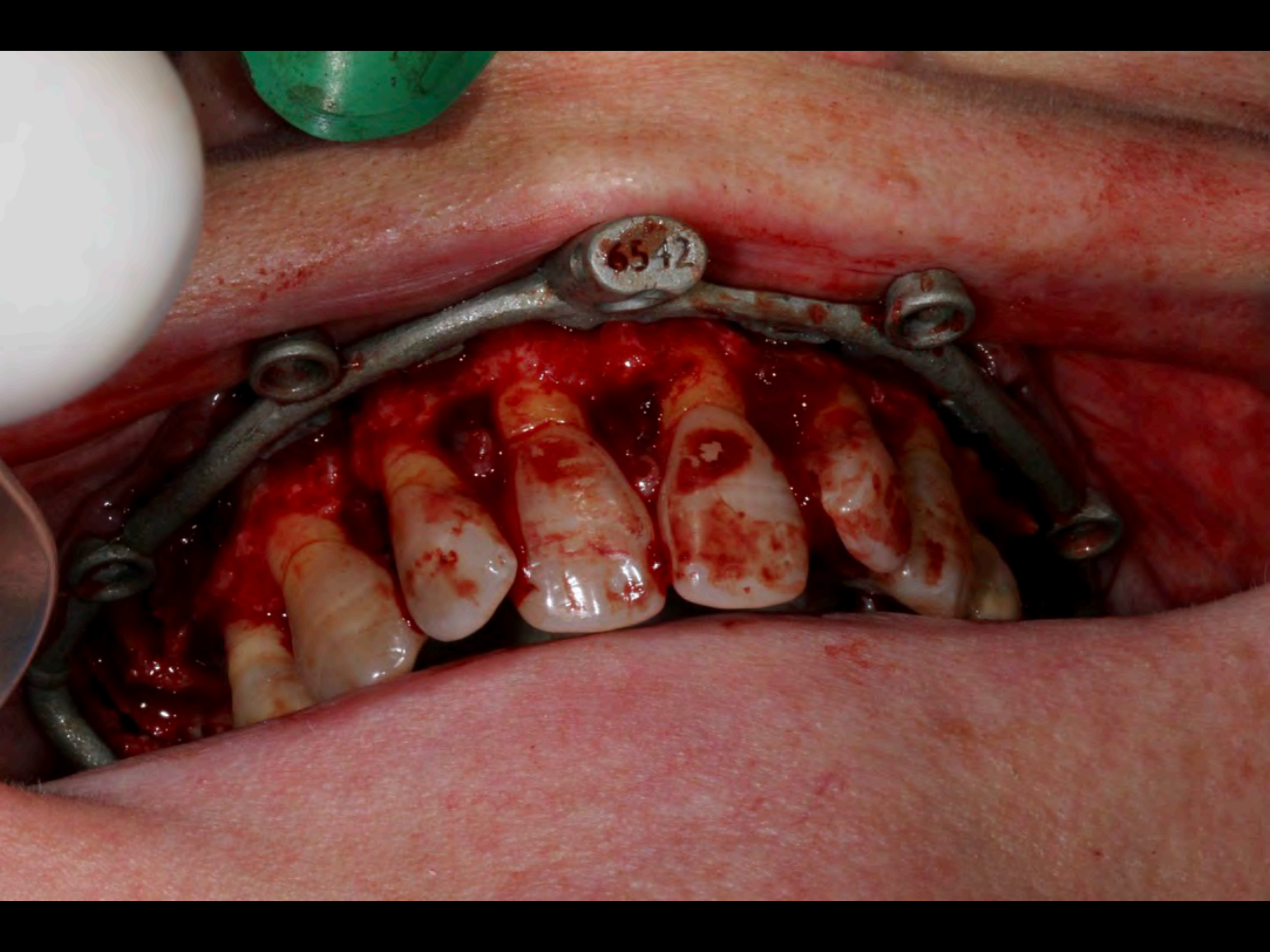
- c) Attach the Provisional on the Base Frame (Fig 9) and connect the cylinders to the provisional with the cement. Remove the provisional and cut off the connector legs. |

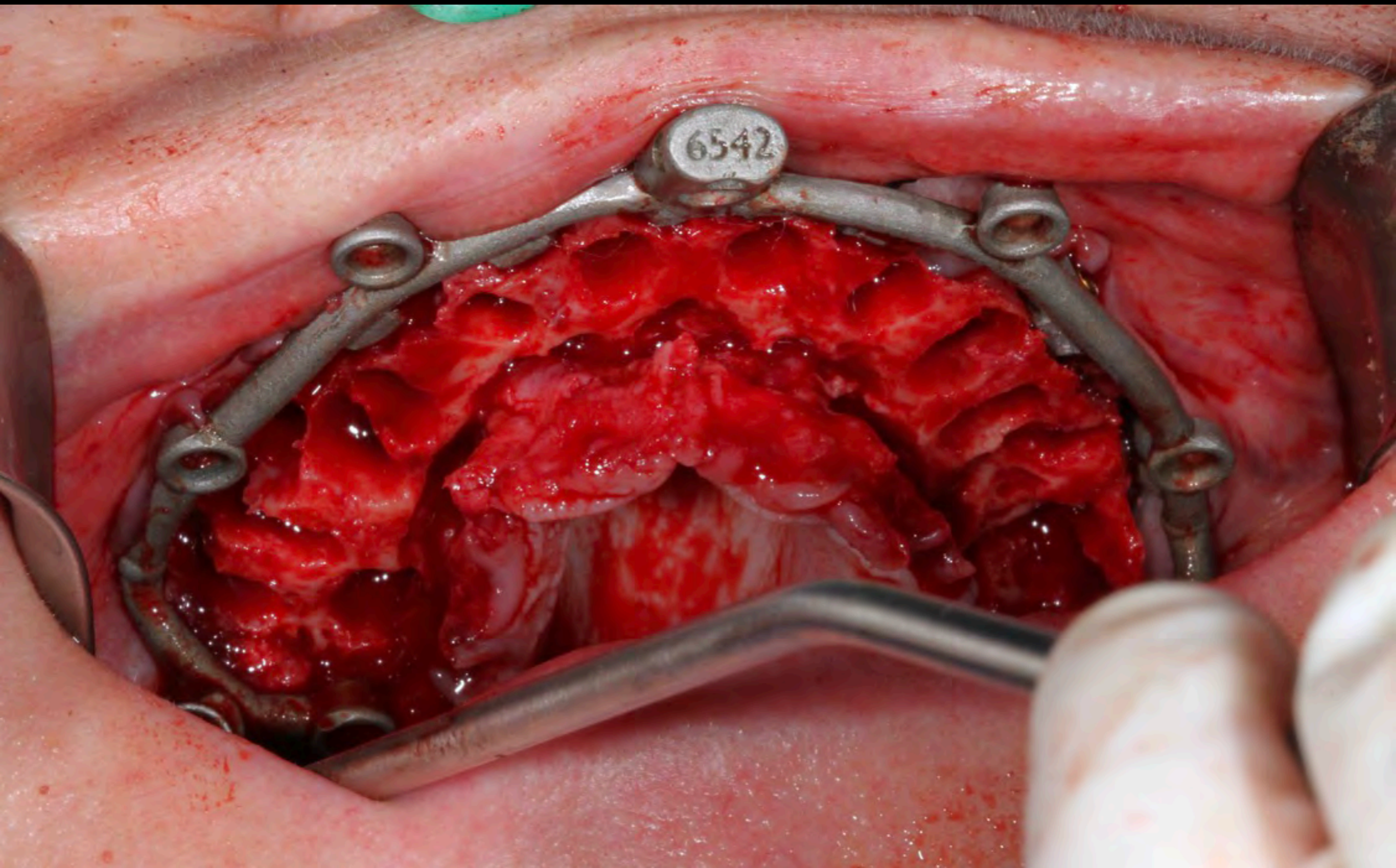


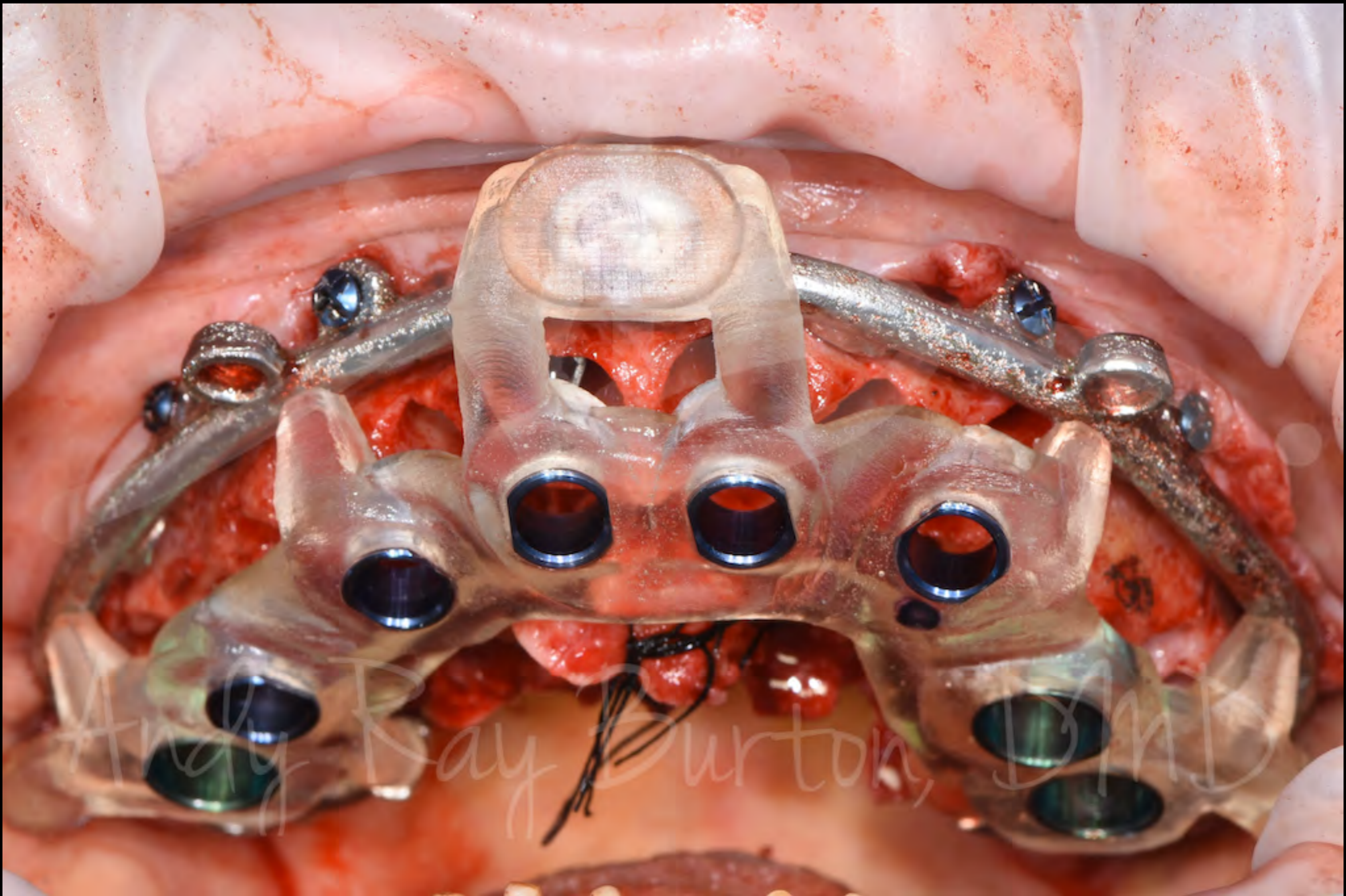
Call us at 208-733-0383 for any questions.



Dr. Jay Burt







BEFORE

Years of tooth grinding and failing dental work left the remaining teeth in very poor condition. Patient did not want a denture, so we planned for an implant-supported restoration.



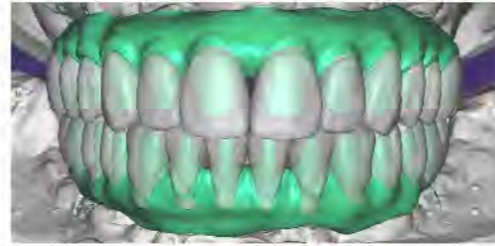
AFTER

Six implants in the upper arch allow us to completely restore the patient's smile. Sometimes people refer to this treatment as "teeth-in-a-day" as the appliance is inserted the same day the teeth are extracted



Printed Prototype Procedure PPP

Zurick Bridge Zirconia Full-Arch Implant Prosthesis Protocol A – Includes PMMA Setup



THE ZURICK Bridge Full-Arch Implant Prosthesis offers a fixed, all-zirconia implant solution for edentulous patients desiring a stable and esthetic replacement for removable prostheses. Constructed from multi layered Zirconia, this fully edentulous restoration offers exceptional resistance to chips, fractures and stains while improving chewing and speech function. A provisional CAD/CAM implant prosthesis is included, which functions as a temporary appliance and allows for patient evaluation of the definitive prosthesis.

■ FIRST Appointment

Preliminary Impression

Before moving forward with the Zurick Full-Arch Implant Prosthesis option, consider anterior-posterior spread and keep in mind that 12 mm or more of vertical clearance is required. Although a closed-tray impression technique is described here, open-tray impressions are acceptable and preferred.

Take an implant-level impression, including the vestibules
Ensure the palate is included for maxillary impressions.

- a. Remove the healing abutments or appliance from the implants. If the patient has multi-unit abutments in place, take an abutment-level impression.
- b.** Seat the impression copings and tighten the screws (**Fig. 1**). Take a periapical radiograph to verify complete seating. Check the impression tray for proper fit.
- c.** Take a VPS impression of the edentulous arch (**Fig. 2**). Allow the material to completely set, carefully remove the impression tray, loosen the screws and remove the impression copings.
- d.** Replace the healing abutments or appliance.
- e.** Carefully place the impression copings back into the impression (**Fig. 3**).
- f.** Fill out lab Rx including implant system and diameter of implants. If a bite splint is desired (additional fee), check the appropriate box on the Rx. Send the lab Rx in with the case. For Digital Impressions please upload all your information, scans and digital rx at:
www.3dprecisiondigital.com



Figure 1: Seat the impression copings



Figure 2: Take preliminary VPS impression.



Figure 3: Carefully reinsert impression copings into impression.

■ SECOND Appointment

Jaw Relation Records, Verification-Jig and Shade

You will receive from Precision Dental Arts, a bite block with screw-retained temporary cylinders (**Fig. 4**)

- Remove the healing abutments or appliance from the implants.
- Seat the bite block and gently tighten the screws by hand (**Fig. 5**).
- With the patient sitting up, use conventional denture technique to achieve accurate jaw relation records (**Fig. 6**).
- Unscrew the cylinder screws and remove the bite block.
- Replace the healing abutments or appliance.
- Take an impression of the opposing dentition and an impression of current denture for study model. The study model of the patient's existing denture can be used as a reference regarding the size and shape of the new teeth.
- Select the shade and communicate the preferred shape of the teeth; select the gingival shade.
- Return the entire case to Precision, including the working model, bite block, bite registration, opposing impression and shade selection.

Note: The final restorative option is determined following the Second Appointment, after your bite block has been received. At this point, Precision Dental Arts may determine that multi-unit abutments are required to correct implant angulation, accommodate screw access holes that are too far to the facial, or connect the prosthesis to implants that are more than 2 mm subgingival. In these cases, the lab will contact the doctor to provide information concerning treatment options and pricing.

Ensure that you take photographs with the patient wearing the occlusal rim. This will greatly improve the success of the next appointment as the PMMA Prototype Try-In. **See Figure 7**



Figure 4: Bite block with temporary cylinders.



Figure 5: Seat the bite block.



Figure 6: Record the jaw relationship.

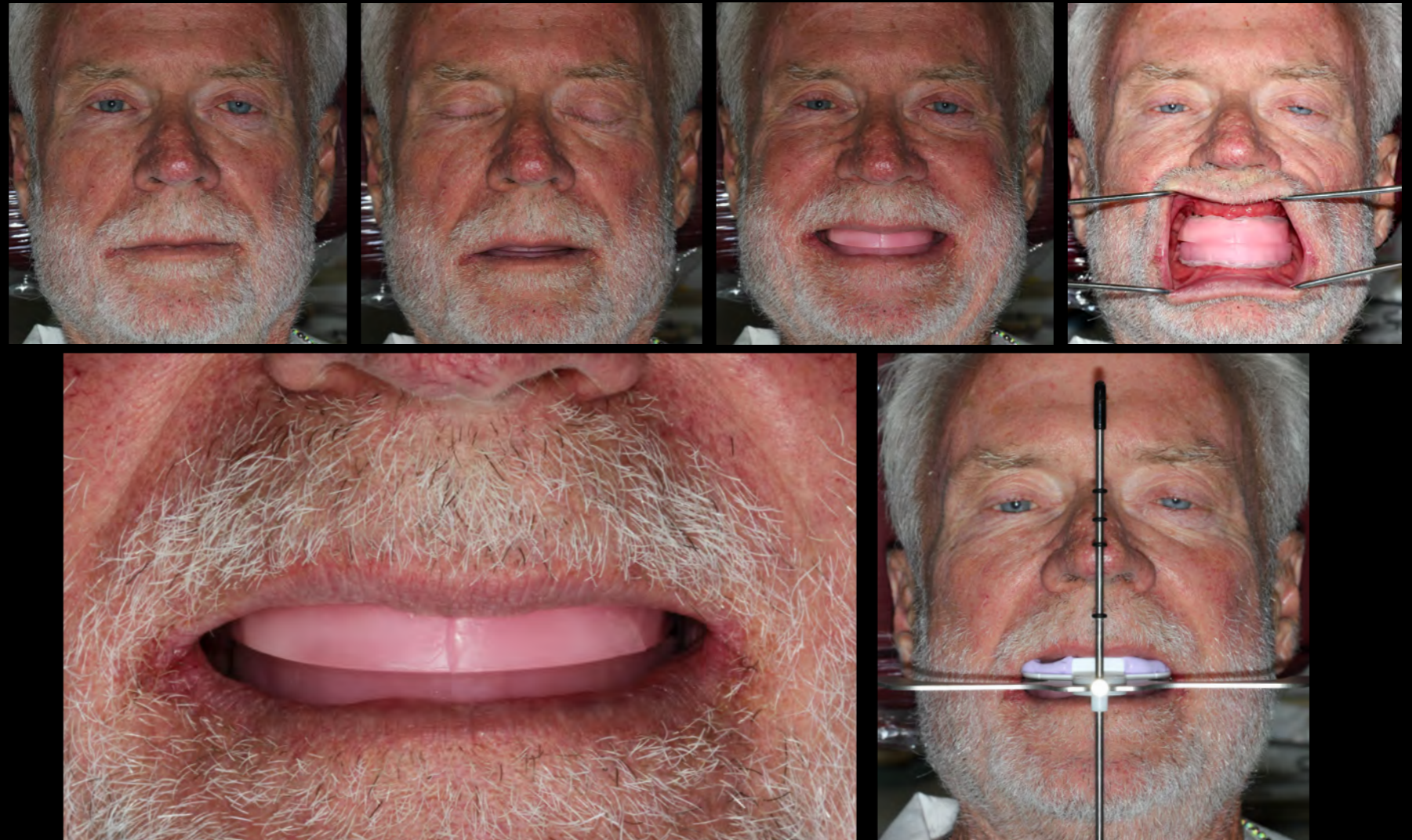


Figure 7: Occlusal Rim Photo Series

types of digital dentistry I use everyday...

Radiographs

Photography





Verification Jig

To ensure a passive fit of your restoration, it is vital to obtain an accurate final impression. A custom tray is provided along with an implant verification jig that has been sectioned and numbered on a working model. Each acrylic section contains a titanium cylinder. This procedure should be followed to ensure an accurate final impression.

Seat each section of the jig onto the appropriate implant or multi-unit abutment and tighten the guide pin (**Fig. 10**).

- a.** The sections should not be in contact. If necessary, remove one section, minimally trim it with a disc, and reseal it. Each section should have a gap about the thickness of a credit card. Visually verify gaps before luting.

Lute the sections together with a suitable material (e.g. , Triad® DualLine® – DENTSPLY; Pattern Resin™ – GC America Zapit® – Dental Ventures of America or ADDS-IT Diversified Dental Systems) (**Fig. 11**).

- a.** Allow the material to flow through and completely around the gaps (**Fig. 12**).
- b.** Ensure the material is completely cured.

Optional – If desired, the clinician can test the passivity of the jig with a one-screw test. Tighten a single guide pin into one of the distal cylinders. No lifting of the jig should occur. Check for a passive fit by visibly inspecting completely around each cylinder for complete seating. This process can be repeated for each implant.

- a.** If any section has a cylinder -implant interface that is subgingival, a periapical radiograph should be taken to verify complete seating.
- b.** If any cylinder is not completely seated, the jig must be sectioned in that area, reluted and rechecked until a passive fit is obtained.

Final Impression

Check the custom impression tray for proper fit, ensuring no contact with the jig or cylinders (**Fig. 13**).

Using a medium body VPS material, take the final impression with an open-tray technique.



Figure 10: Implant verification jig seated.



Figure 11: Luting sections of the implant verification jig



Figure 12: Implant verification jig luted together

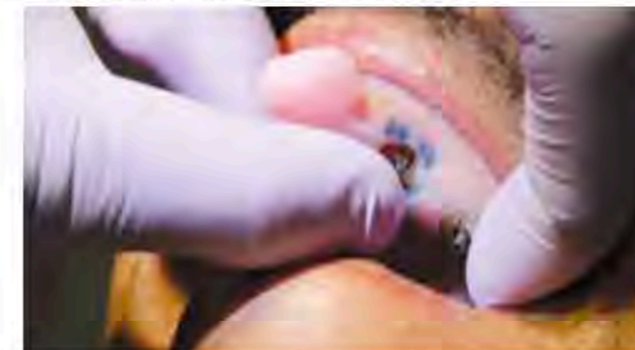


Figure 13: Check fit of the custom tray over the Verification Jig

- a. Inject VPS impression material under and around the jig to capture the ridge and all anatomical landmarks as for a full denture including full vestibular extensions (**Fig. 14**). Capture the complete palate for maxillary cases.
- b. Completely fill the impression tray. Seat the filled impression tray, ensuring the heads of the guide pins are exposed through the tray (**Fig. 15**).
- c. Once the material has set, remove guide pins and then remove the impression.

Note: the verification jig is picked up in the impression. Inspect the impression for the required detail.

Replace the healing abutments or appliance. If multi-unit abutments were supplied by Precision, leave them in place if possible.

Send in entire case, including the occlusal rim, the working cast and opposing model, the final impression containing the implant verification jig and guide pins, and lab Rx with instructions.

■ Third Appointment

Delivery of Provisional PMMA Implant Prosthesis

You will receive from Precision the provisional PMMA implant prosthesis. The provisional prosthesis serves as a temporary appliance and allows the patient a trial period to evaluate the prosthesis definitive prior to final fabrication. A trial period of one to four weeks is recommended.

Remove the healing abutments or appliance.

Seat the provisional prosthesis on the implants or multi-unit abutments.

Hand tighten the prosthetic screws, alternating from one side to the other.

Tighten the screws to the appropriate torque per manufacturer instructions (**Fig. 16**). Wait approximately 5 minutes and retorque the screws.

Confirm the occlusion. Make adjustments as necessary.



Figure 14: Inject impression material under the implant verification jig

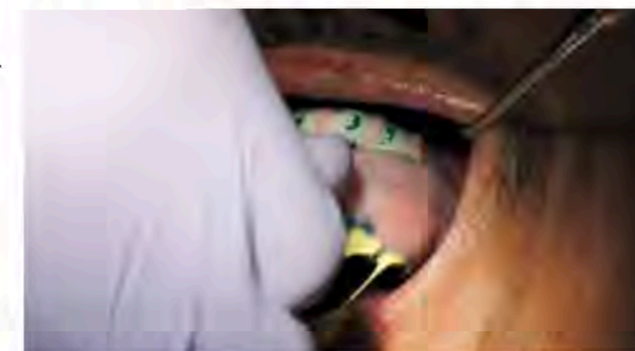


Figure 15: Seat the filled impression tray



Figure 16: Occlusal view of provisional prosthesis in place and tightening the prosthetic screws to the appropriate torque.



**Take Photos of the
PMMA in the Mouth**

Please Send The Following With Your Cosmetic & Restorative Cases:

Digital and Conventional Techniques for (4 or more units)

- 1) Very Detailed lab slip.
- 2) Master impression (scan or traditional), maxillary, and mandible.
- 3) Detailed impression (scan or traditional) or model of the provisional restorations.
- 4) Pre-operative impressions or models for all patients proceeding with comprehensive treatment.
- 5) Bite registrations for master impressions and provisional impressions: indicate if the bite is taken at MIP, CO or CR. Condylar settings are acceptable as well.
- 6) Bite registrations to cross mount provisional restorations to the prepared tooth models. This is a critical step and needs to be correct. We check the position of the final restorations relative to the position of the provisional restorations; if this isn't accurate, then the mounting of the provisional model is compromised.
- 7) Face-bow transfer for larger cases.
- 8) Stick bite for all multiunit anterior cases.
- 9) You may also include a PDF or Powerpoint presentation detailing the goals of the case. Videos of the patient are also very helpful.
- 10) Photos for communication: Please see Photo Views below:



***Any additional information you deem important information to share with us would be much appreciated.

types of digital dentistry I use everyday...

Radiographs

Photography



Printed Prototype

- Place a small amount of cotton in the screw access holes and fill with light cure composite or acrylic to prevent bacteria build-up (**Fig. 17**). You may also use PVS to fill access holes.
- When the patient is ready for the final prosthesis, return the master cast and opposing model. If any adjustments were made to the provisional CAD/CAM implant prosthesis, return the provisional appliance and list the adjustments on the prescription. Check the appropriate box on the Rx if a bite splint is desired but has not yet been prescribed.

Please note that you may request our **Dual Prototype Technique**. With this technique Precision will provide a PMMA Prototype along with a Printed Prototype. You will need execute any occlusal adjustments and any other modifications to both Prototypes, however, you may return the Printed Prototype and Keep the patient in the milled PMMA while the final Prosthesis is being fabricated.

An Additional cost of \$109 will be added to your case for this technique.

Notes: (1) If adjustments are required, the final restoration cannot be fabricated until the provisional has been returned. (2) Due to the potential of a bite discrepancy caused by occlusal wear, provisionals worn by the patient longer than four weeks must be returned and may incur a redesign fee.

*****Please photograph the patient wearing the adjusted PMMA. Use our recommended Photo Views as a guide. See image as a guide.**

FOURTH Appointment

Delivery of Final Prosthesis

You will receive from Precision Dental Arts the final prosthesis. If prescribed, you will also receive a bite splint.

Remove the healing abutments or appliance.

Seat the final prosthesis on the implants or multi-unit abutments.

Hand tighten the prosthetic screws, alternating from one side to the other.

Tighten the screws to the appropriate torque per manufacturer instructions. Wait approximately 5 minutes and retorqued the screws (**Fig. 18**).

Confirm the occlusion (**Fig. 19**). Make adjustments as necessary.

Place a small amount of cotton in the screw access holes and fill with light cure composite or acrylic to prevent bacteria build-up (**Fig. 20**).

Note: Tooth-colored composite or acrylic should be used for access holes in the teeth, while pink composite or acrylic should be used for access holes in the prosthesis base.

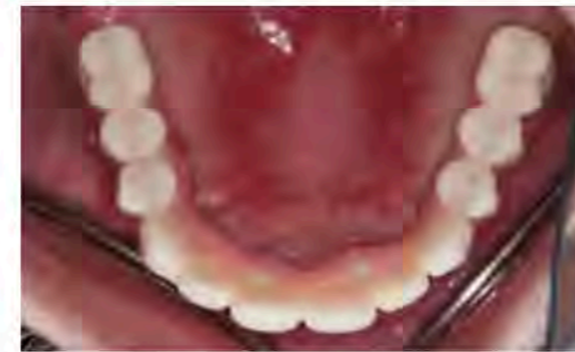


Figure 17: Occlusal view of provisional prosthesis in place



Printed Prototype for Dual Prototype Technique



***Any additional information you deem important information to share with us would be much appreciated.

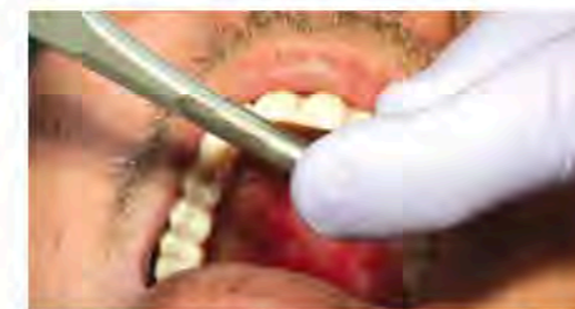


Figure 18: Deliver final prosthesis

Visit us at www.precision-dental-arts.com
or contact us at 800-574-0721

■ ONE Week

Follow-Up Check

- Check occlusion.
- Review oral hygiene instructions.
- Set recall schedule.

■ MAINTENANCE Appointments

How to Maintain Final Prosthesis

- Six-month hygiene appointment
 - a.** Perform prophylaxis under the prosthesis.
- Twelve-month (annual) hygiene appointment
 - a.** Remove prosthesis for thorough cleaning.
 - b.** If prosthesis screws are damaged or show signs of stripping, screws should be replaced.



Figure 19: Confirm occlusion.



Figure 20: Occlusal view of the final prosthesis in place following sealing of the screw access holes.



Predictable implant lab fees and no hidden costs- See Precision Pricing

Price (per arch) includes: provisional prosthesis; final prosthesis; all labor, model and die work; analogs, set-ups, bite blocks, try-ins and verification jigs. Temp Cylinders and Titanium bases are not included in final price.

Zurick Bridge Zirconia Full-Arch Implant Prosthesis

**Price does not include multi-unit abutments and may vary when original equipment manufacturer (OEM) components are requested or required for the chosen implant system. Bite splint is available for an additional fee and requires an additional three days for fabrication.*

Quick Reference

	Doctor	Precision
FIRST Appointment	Preliminary impression	Pour model, fabricate bite block, Custom Tray and Verification Jig (6 days)
SECOND Appointment	Jaw relation records, select tooth shade/mold, impressions of opposing dentition and current study casts. Try in V-Jig	Articulate casts, digitally design and fabricate PMMA (8 days)
THIRD Appointment	PMMA try-in, photos, occlusion, esthetics. Photograph of patient wearing PMMA. See Photo Series above	Fabricate 2nd PMMA provisional or go to Final implant prosthesis.
RESET Appointment <i>(if necessary)</i>	Try -in and approve reset PMMA setup, photos	
	Delivery of 2nd provisional PMMA implant prosthesis if necessary	Fabricate final Zurick Bridge Zirconia Full-Arch Implant Prosthesis (10 days)
FOURTH Appointment	Final prosthetic delivery	
ONE WEEK Post-Delivery Check	Check occlusion, review oral hygiene instructions, set recall schedule	



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