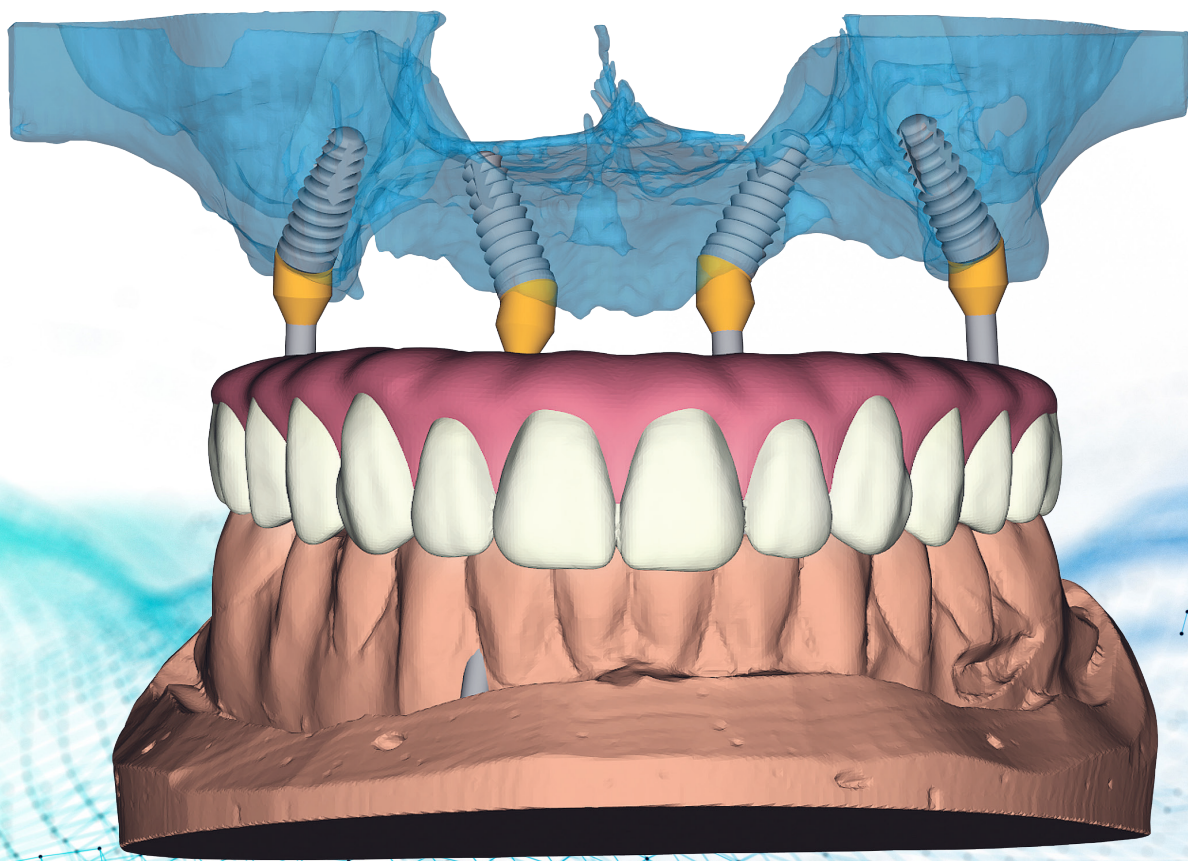


# NDX<sup>®</sup> nSequence

## nSequence<sup>®</sup> Quick Reference Procedure Guide



## Welcome to nSequence<sup>®</sup> Fully Guided Prosthetics<sup>®</sup>

This Quick Reference Procedure Guide is intended to provide clinicians with a visual step-by-step tutorial for the proper use of the nSequence Fully Guided Prosthetics System. The objective of this guide is to address the methodology for overcoming some of the more common challenges with this treatment modality, as it relates to nSequence Fully Guided Prosthetics.

**It is not intended as a tutorial for use of different implant manufacturers' guided surgical kits. Clinicians are encouraged to contact their implant manufacturer of choice for their protocols and instrumentation for guided implant procedures.**

**TO HELP ENSURE PROPER, PREDICTABLE AND SAFE PROCEDURES,** clinicians are encouraged to seek professional training in the area of fully guided, immediate full arch reconstruction. Guided surgery and/or guided prosthetic systems are not a replacement for clinical experience for this type of treatment modality.

### Common nSequence Terminology and References

**NSQ:** nSequence (Based upon how it is used in a sentence, this could either refer to the laboratory or to the protocol)

**NSQGP:** nSequence Guided Prosthetics (This refers to the actual nSequence kit, components/guides)

**Bone Reduction Model:** Represents the alveolar ridge (post-extraction) and bone height to reduce

**BFG:** Bone Foundation Guide

**Monostrut:** Attaches to the BFG with plastic pins and is used to help guide the BFG into proper position

**LTP:** Long Term Provisional prosthesis (two LTPs are provided)

**MUA:** Multi-unit Abutment (angled or straight)



# How the nSequence® Fully Guided Prosthetics® Kit Arrives



**A Start Bite**

**B Bone Foundation Guide (BFG) w/ Monostrut**

**C 3D Printed Working Model**

**D 3D Printed Opposing Model**

**E Surgical Guide**

**F Customized Prosthetic Components**

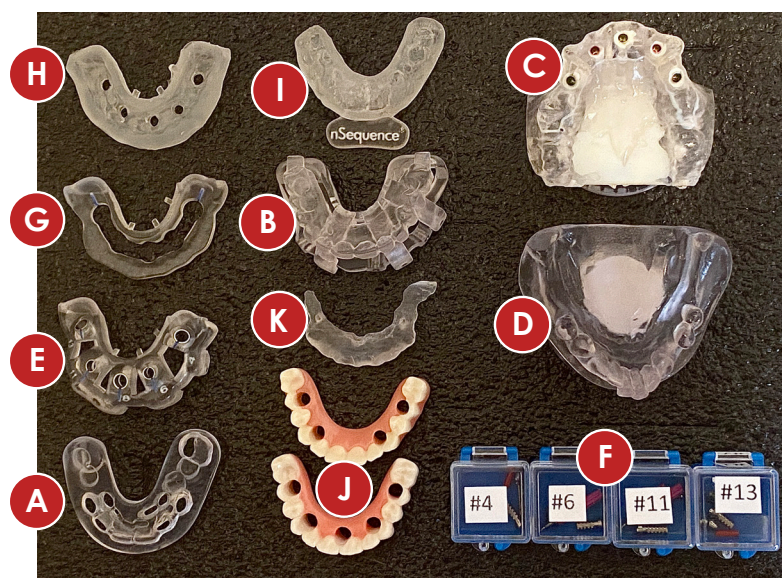
**G Angle Rotation Guide (MUA)**

**H Tissue Gasket**

**I Prosthetic Bite Guide**

**J Two Long Term Provisionals**

**K Bone Reduction Model**



## nSequence Surgical Packet contains:

- Copy of RealGUIDE report
- Surgical drilling sequence
- Photos of implant and abutment positions
- Proper positioning of the LTP
- List of needed components

Items will be referenced by their corresponding letter on the following pages.

# Explanation of nSequence® Fully Guided Prosthetics® Kit Components

## A Start Bite



The Start Bite is a replica of the bite registration received from the doctor. It is used prior to sedation/surgery to evaluate bite accuracy. If it is incorrect, additional occlusal adjustments to the LTP may be needed.

## B Bone Foundation Guide (BFG) and Monostrut



Complete and accurate seating of the BFG is mandatory for achieving optimal results and minimizing adjustments. Once the BFG is secured to the bone, it will function as a seating jig for all the other surgical and prosthetic guides. Removing the Monostrut from the BFG will give the clinician better visual and physical access for confirming flap reflection and fit. Always attach the Monostrut to the BFG with the plastic pins to help correctly position the BFG prior to drilling and fixating it to the bone with the anchor/fixation pins.

## C 3D Printed Working Model



The implant analogs are in the pre-planned position. The Bone Reduction Model and the replica of the existing dentition have posts that will guide the seating of these components onto the Working Model for evaluation.

## D 3D Printed Opposing Model



Both of the 3D printed models have a base with an integrated magnet that will allow for easy installation onto an articulator.

## E Surgical Guide



The Surgical Guide is secured in place onto the BFG with three plastic pins. Blue lines indicate implant timing/rotational position. The sleeves control the drill and implant depth.

Photos courtesy of **Dr. Robert Stanley**  
Cary, North Carolina



# Explanation of nSequence® Fully Guided Prosthetics® Kit Components

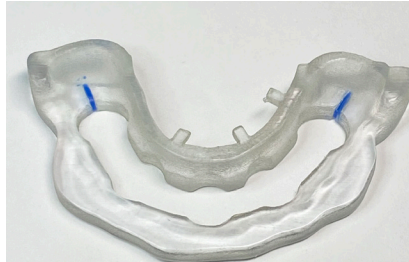
(continued)

## F Customized Prosthetic Components



These boxes contain the predetermined MUA Abutments, two customized Temporary Cylinders, two customized plastic occlusal plugs and two prosthetic screws for each implant site.

## G Angle Rotation Guide (MUA)



Blue lines provide visual indicators for correct positioning for angled MUA Abutments.

## H Tissue Gasket



The Tissue Gasket protects the surgical site and is designed for the LTP to fit accurately into the correct vertical and horizontal positions during the luting of the Temporary Cylinders.

## I Prosthetic Bite Guide



The Prosthetic Bite Guide correctly positions the two arches together for luting the Temporary Cylinders to the LTP.

## J Two Long Term Provisionals



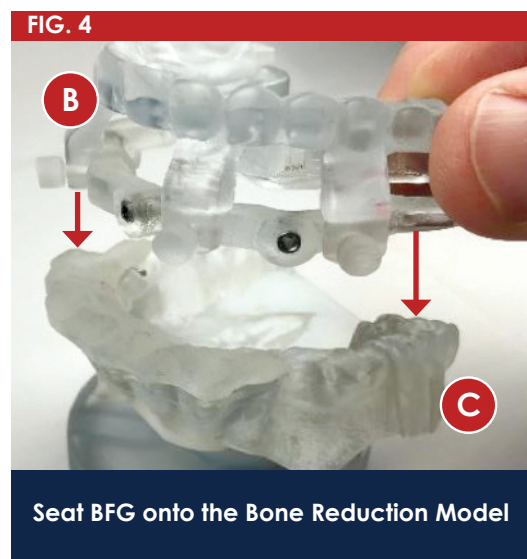
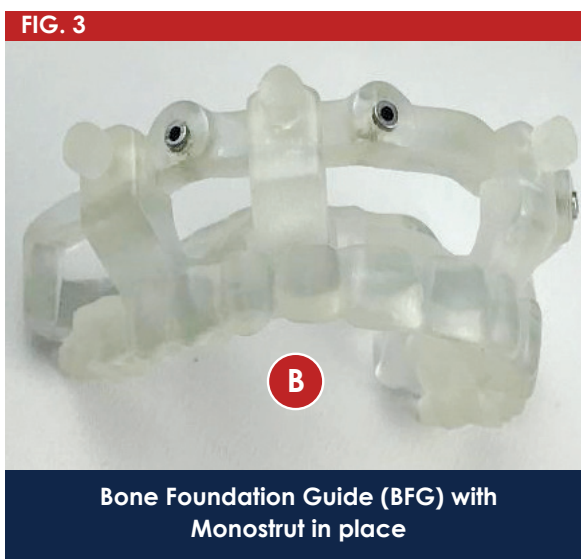
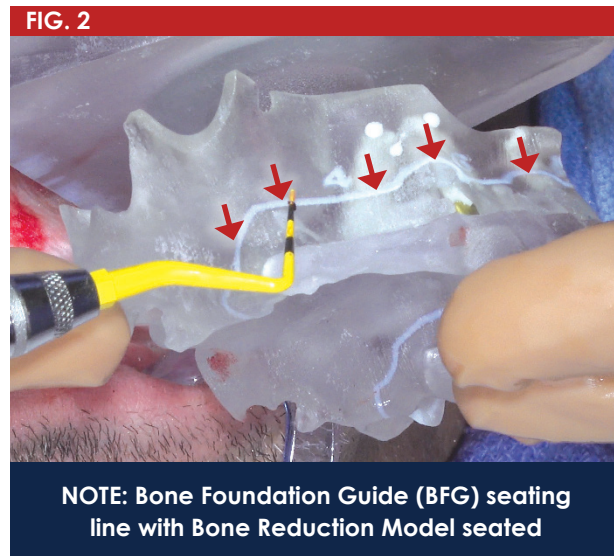
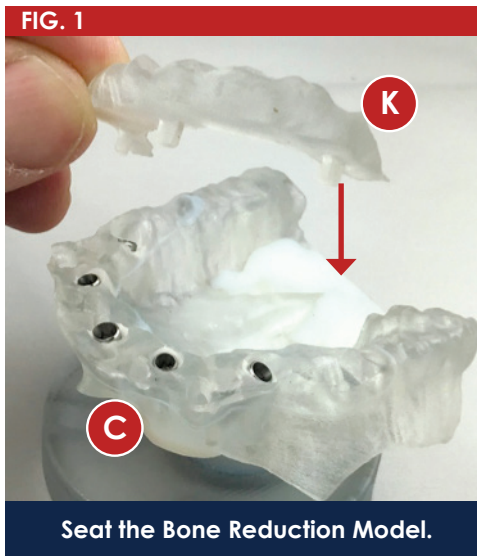
The Temporary Cylinders are luted to the LTP through the pre-drilled injection holes near the gingival of the teeth at each implant site. One of the Long Term Provisionals is delivered the day of surgery.

## PRIOR to the Day of Surgery

Review and become familiar with how the components fit/relate to one another. Pay close attention to how the Bone Foundation Guide (BFG) seats onto the 3D printed working model and note at **LEAST THREE POINTS** of contact with the BFG and the crest of the alveolar ridge of the Bone Reduction Model.

The BFG must have **TWO POSTERIOR** contact points (right side AND left side) and at least **ONE ANTERIOR** contact point of the BFG onto the bone. The goal is to have a **TRIPOD** of contact between the BFG and the alveolar ridge.

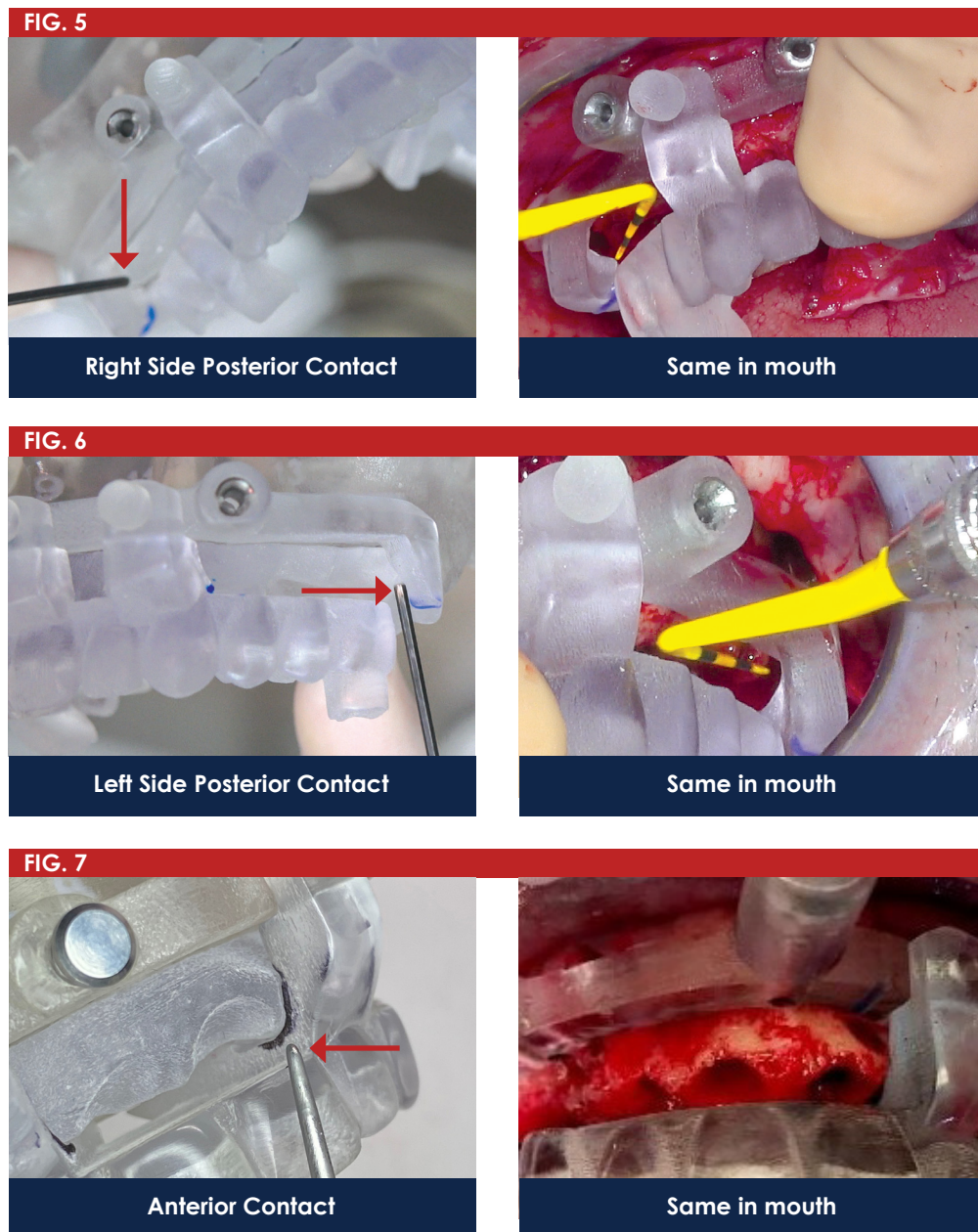
**To confirm 3-4 contact points of the BFG to the crest of the alveolar ridge:**





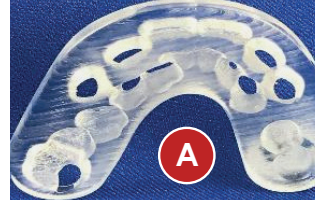
## Confirm three points of contact of the Bone Foundation Guide with the Monostrut to the crest of the alveolar ridge. (Two posterior and at least one anterior contact point)

Proper seating of the BFG with the Monostrut **B** is paramount for the accuracy of the remaining steps. The way the BFG with the Monostrut seat onto the model is how these should seat in the mouth. Failure to do so will result in additional adjustments to the Long Term Provisional and increased chairtime.



## 1. Try-In Start Bite **A**

All the components were based upon and developed from the Blu-Mousse® bite that was used during the CBCT scan. This Start Bite is a replica of the Blu-Mousse bite.



- a. Be aware that for patients with mobile teeth or with dentures (due to tissue movement), the Start Bite may not fit precisely. If at the time of the Start Bite verification/try-in, there seems to be a significant amount of discrepancy, the doctor should call the NDX nSequence Lab for guidance.
- b. Most often this only means that there may be more occlusal adjustments needed once the LTP has been delivered.

## 2. Extract Teeth and Reflect Tissue Beyond the BFG Seating Line

(Depicted on the working model **C**)

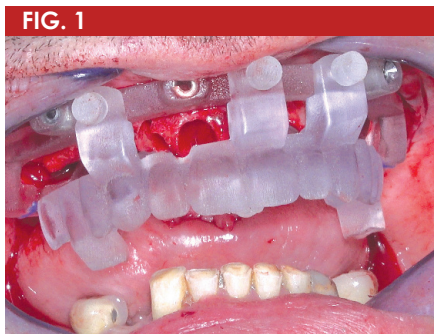
## 3. Seat the Bone Foundation Guide (BFG) **B**

The BFG should seat the same way in the mouth as it did on the 3D Printed Model.

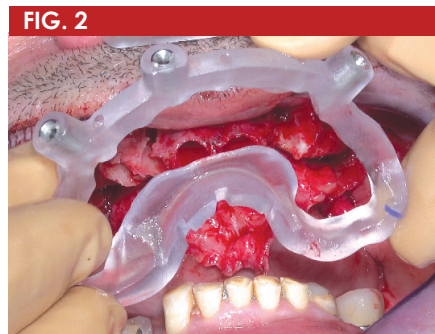
### **PLEASE NOTE:** Top three reasons the BFG doesn't seat completely

- 1. Tissue IS NOT reflected enough (refer to the working model **C**)
- 2. Tissue is trapped between the BFG and bone
- 3. Buccal or palatal/lingual bone was "expanded" during extractions

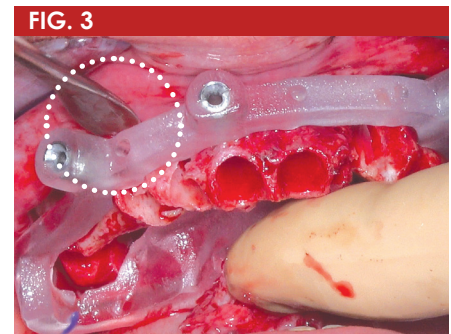
## Tips for Seating the Bone Foundation Guide **B**



If the BFG with Monostrut blocks view/access



Remove the Monostrut from the BFG by removing the plastic pins.

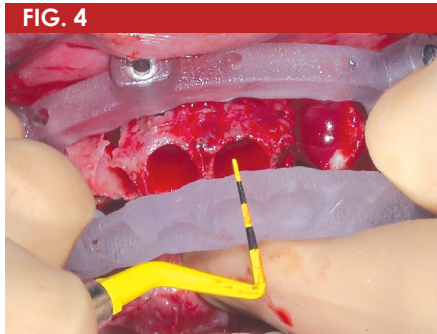


Use instrument to clear tissue from the BFG  
(Do not force it or apply too much pressure to the BFG.)



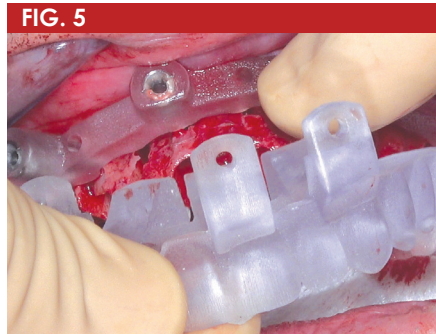
## Tips for Seating the Bone Foundation Guide B

(continued)



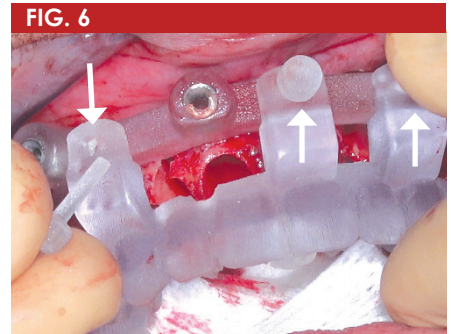
**FIG. 4**

Compare the Bone Reduction Model height to bone in the mouth (they should match.)



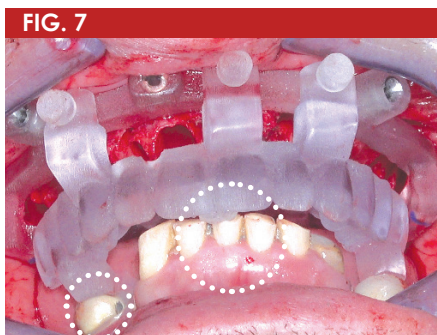
**FIG. 5**

Hold the BFG in place and replace the Monostrut.



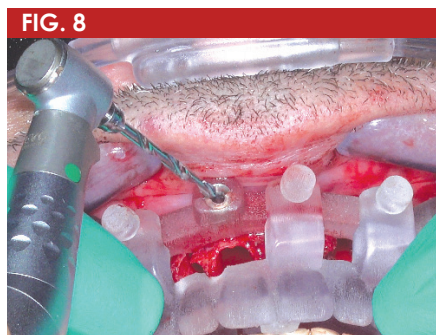
**FIG. 6**

Insert the plastic pins.



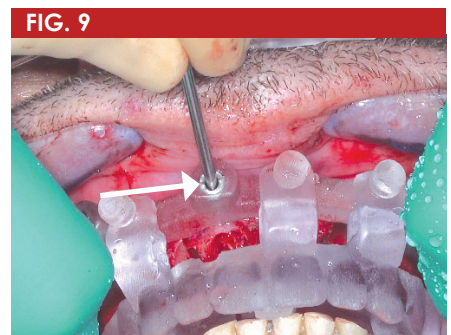
**FIG. 7**

Close the patient into occlusion with the BFG & Monostrut (Double arch cases as shown will have occlusal/centric stops for patient to close into.)



**FIG. 8**

Hold the patient firmly into centric, drill to depth and place the anchor/fixation pins



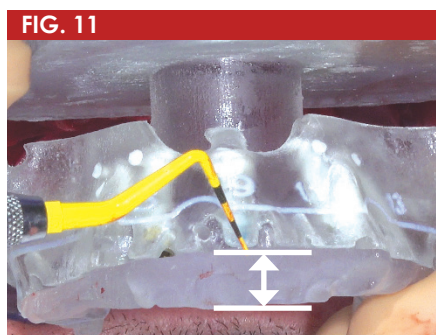
**FIG. 9**

Hold the patient firmly into centric, drill to depth and place the anchor/fixation pins



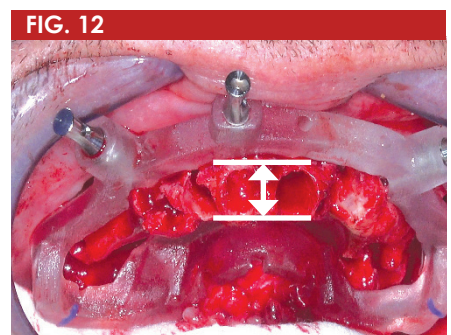
**FIG. 10**

Once ALL anchor/fixation pins are inserted, remove the plastic Monostrut pins and remove the Monostrut.



**FIG. 11**

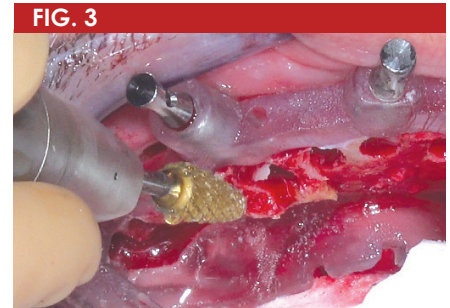
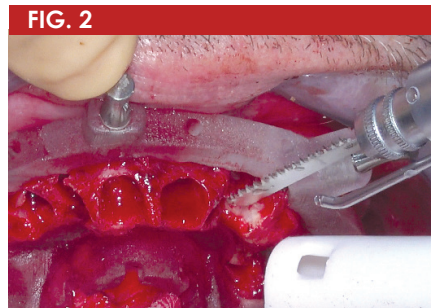
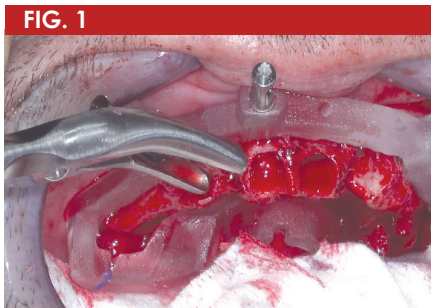
The height of the Bone Reduction Model (fig. 11) should be the same height as the bone protruding above the BFG (fig. 12).



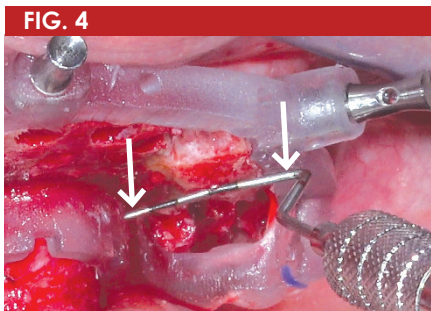
**FIG. 12**

Hold the patient firmly into centric, drill to depth and place the anchor/fixation pins

## 4. Reduce the Bone Flush to the BFG



Clinicians may choose to harvest bone with a Rongeur, surgical saw or piezo unit and finish the bone reduction with a surgical bur.

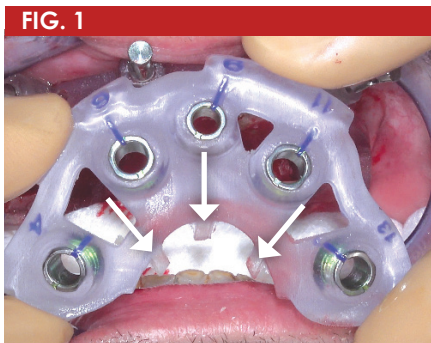


Slide a metal perio probe over the bone, touching BOTH the buccal and palatal/lingual flats of the BFG to identify high spots of bone.

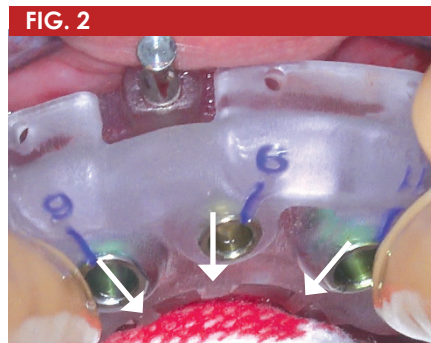
### TIP

If using a large round bur, be careful not to create a "trough" when reducing the bone.

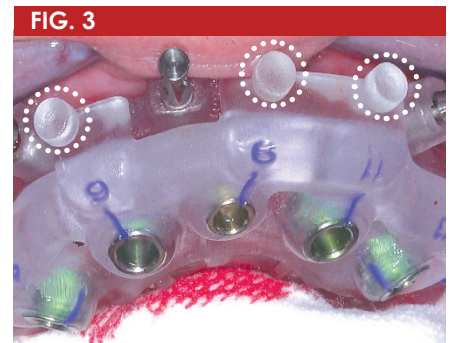
## 5. Seat the Surgical Guide E



Note the palatal/lingual keys protruding from the Surgical Guide



Keys need to seat flush into the BFG



Insert plastic pins to secure the Surgical Guide to the BFG.

## 6. Create Osteotomies

Follow the respective implant manufacturer's guidelines for drilling – especially for soft bone drilling protocols – to help ensure good initial stability for immediate loading of the LTP.



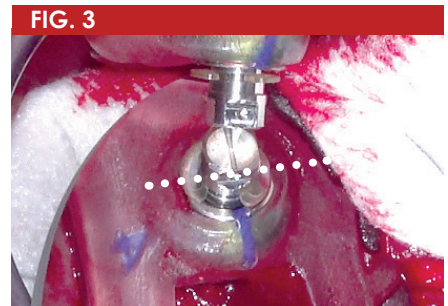
## 7. Deliver the Implants



Seat implants to proper depth and rotation (align "flat" or dots/lines) of the hex mount to the **BLUE LINE**



**INCORRECT ALIGNMENT!**  
The corner of the hex is aligned to the **BLUE LINE**.



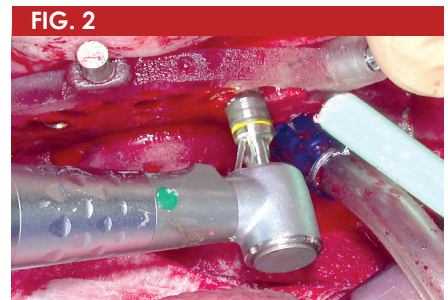
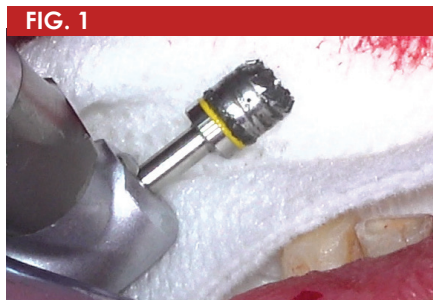
**CORRECT ALIGNMENT!**  
The flat of the hex is aligned to the **BLUE LINE**.

**NOTE:** Correct rotational position for angled implants is **CRITICAL!** A flat (or dot/groove) **must be perpendicular** with the **BLUE** line on the Surgical Guide.

## 8. Remove Implant Placement Mounts

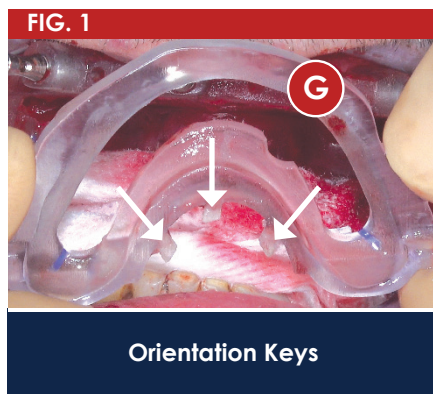
## 9. Remove the Surgical Guide, and Use A Bone Profiler Around the Implants

Usually required for angled implants and often required for straight implants to ensure Multi-unit Abutments seat completely.

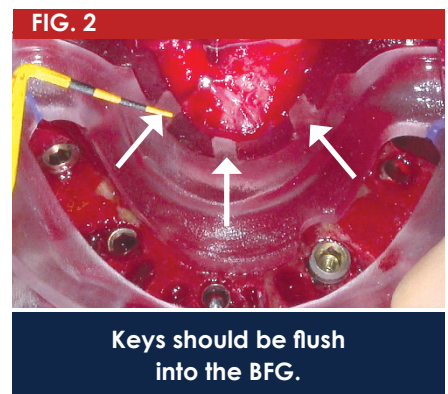


## 10. Seat Angle Rotation Guide **G**

Included only if the implants are placed at an angle and angle correcting Multi-unit Abutments are needed.

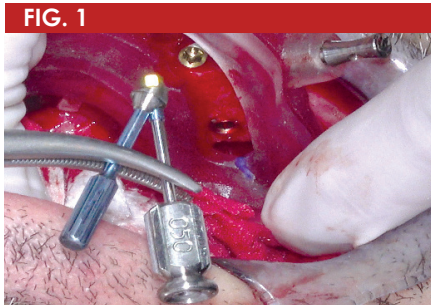


Orientation Keys

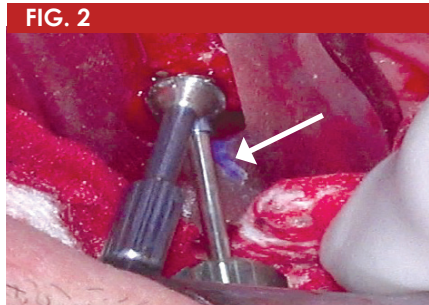


Keys should be flush into the BFG.

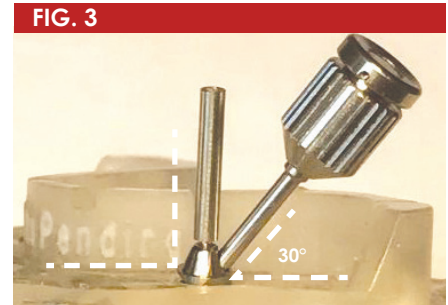
## 11. Seat Angled Multi-unit Abutments



**TIP:** If possible, clip a hemostat around the abutment carrier and driver and seat it into the implant.

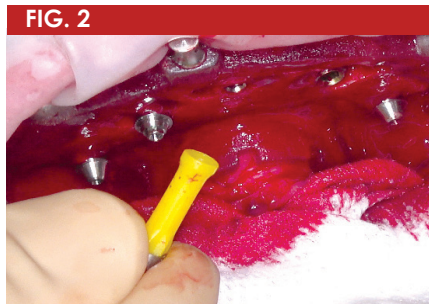
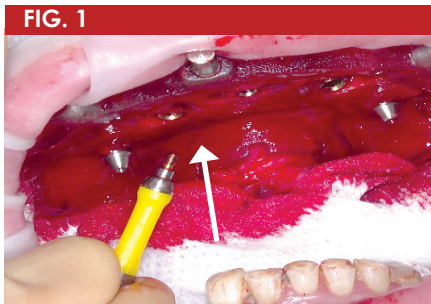


Note how the shaft of the hex driver (silver) lines up with the **BLUE LINE**



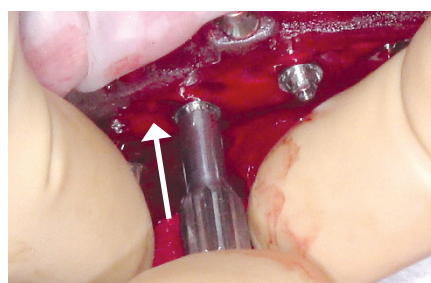
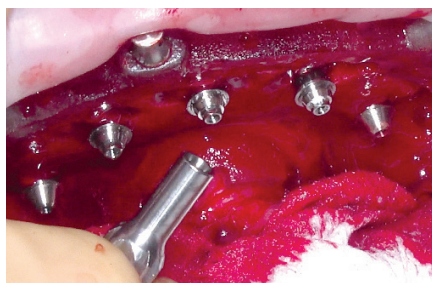
The relationship between the hex driver and carrier once correctly positioned/seated

## 12. Seat Straight Multi-unit Abutments



Remove Angle Rotation Guide and seat all the Straight Multi-unit Abutments  
(Not all Straight MUAs have plastic carriers.)

**IMPORTANT TO NOTE:** A Multi-unit Driver is required for tightening **STRAIGHT** Multi-unit Abutments and is usually NOT included in surgical kits and/or guided surgical kits. **These need to be purchased separately.**





## 13. Seat Temporary Cylinders

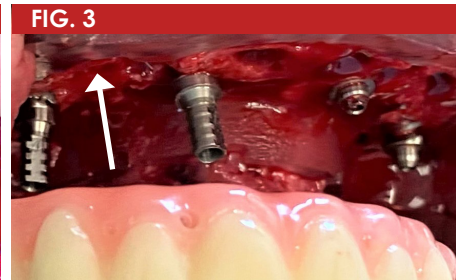
Seat two Temporary Cylinders onto the MUAs with finger pressure, and try in the LTP. If it binds, relieve the LTP (do the same relief on the duplicate LTP). Repeat this step after each Temporary Cylinder is seated.



**FIG. 1**  
Insert the Prosthetic Screw through the top of the Temporary Cylinder and tighten with light finger pressure.



**FIG. 2**  
Seat two Temporary Cylinders, then try in the LTP



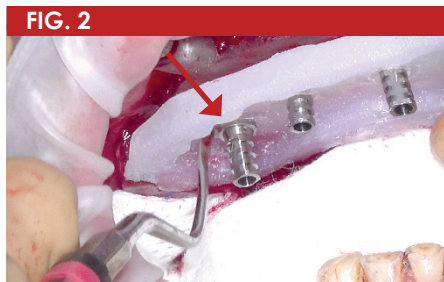
**FIG. 3**  
The LTP should seat loosely around the Temporary Cylinders (try in the LTP after each Temporary Cylinder) and relieve inside the LTP as needed.

## 14. Seat the Tissue Gasket H

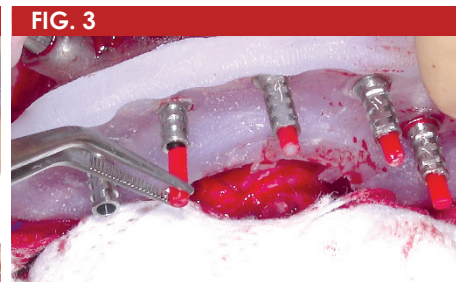
Be sure to seat it completely down and around each Temporary Cylinder and completely/flush into the BFG. Insert the plastic block-out plugs.



**FIG. 1**  
Tissue Gasket



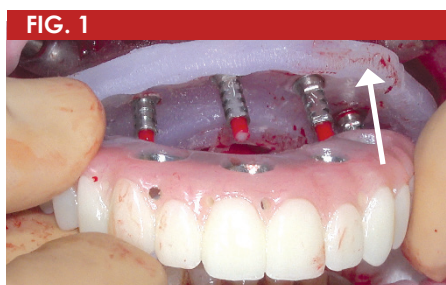
**FIG. 2**  
Use a blunt instrument to press the Tissue Gasket around the base of the Temporary Cylinders.



**FIG. 3**  
The plugs will be 1-2mm taller than the Temporary Cylinders.

## 15. Seat the Long Term Provisional (LTP) J and Prosthetic Bite Guide I

Place the LTP over the Temporary Cylinders, and ensure that it fits completely into the Tissue Gasket.



**FIG. 1**  
Apply a light coat of petroleum jelly over the LTP and seat (except for inside the Temporary Cylinder holes)



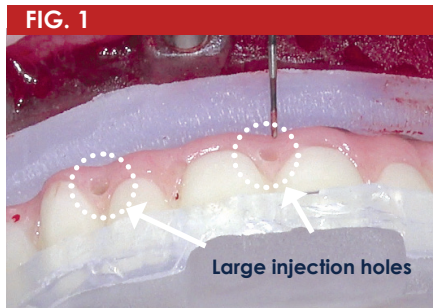
**FIG. 2**  
The Prosthetic Bite Guide seals off the occlusal surfaces and helps to hold the LTP into the proper position.



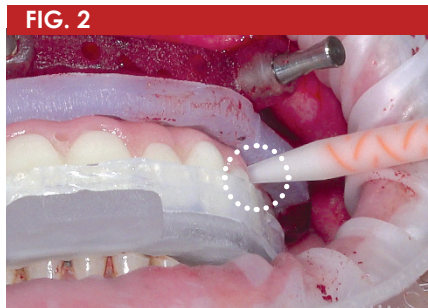
**FIG. 3**  
Hold the patient into a firm closed position into the Prosthetic Bite Guide.

## 16. Lute a Long Term Provisional to the Temporary Cylinders

The use of a dual cure (self-cure/light cure) material is recommended.



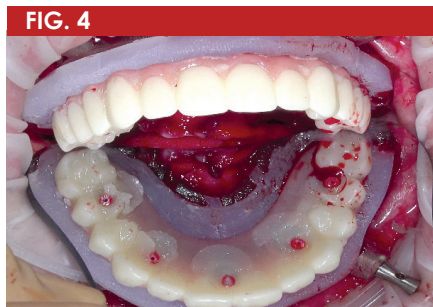
**NOTE:** Large injection holes are pre-drilled for each implant site (hold patient into a firm "bite position").



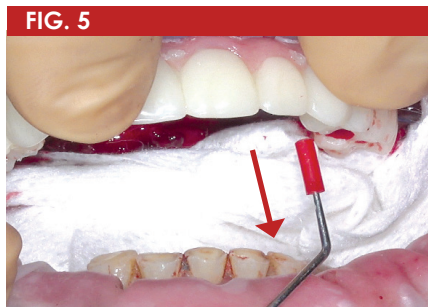
Inject the luting material into the large injection holes. After about 3-4 seconds of injecting, you should have enough material. Too much material may flow over the plugs.



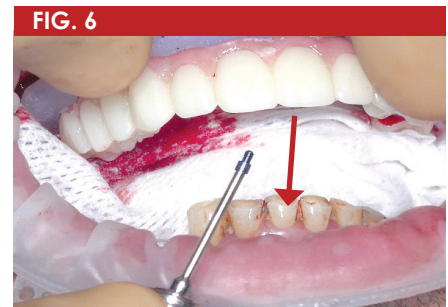
Wipe off excess material before it sets up.



If there is not enough material securing the Temporary Cylinder to the LTP, add more at this time.



Push a perio probe into the plugs to remove them (if the plug does not come out, check for occlusal flash and/or try a #50 endo file).



Remove each of the small Prosthetic Screws and remove the LTP.



Confirm Temporary Cylinders are secured into the LTP.



**NOTE:** Light flash is not uncommon and is easy to remove.



Remove the Tissue Gasket.

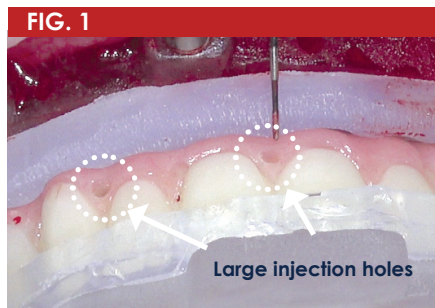
## 17. Seat the Second Set of Temporary Cylinders

REPEAT steps 13 and 14. Seat the second set of Temporary Cylinders, seat the Tissue Gasket and the second set of plastic plugs.

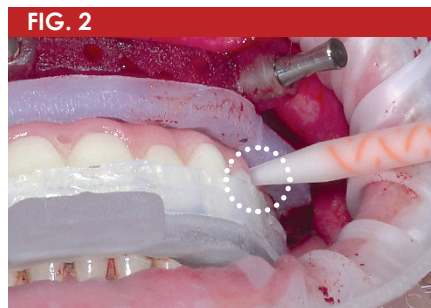


## 18. Lute the Duplicate Long Term Provisional to the second set of Temporary Cylinders (REPEAT Step 16)

This step eliminates at least 3-4 restorative appointments in order to complete the Definitive Prosthesis.



**NOTE:** Large injection holes are pre-drilled for each implant site (hold patient into a firm "bite position").



Inject the luting material into the large injection holes. After about 3-4 seconds of injecting, you should have enough material. Too much material may flow over the plugs.



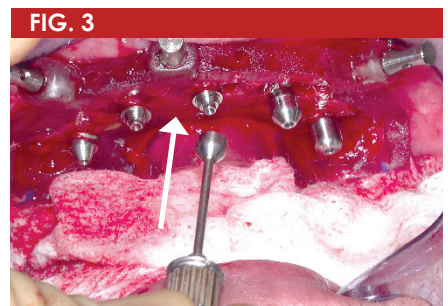
Wipe off excess material before it sets up.

## 19. Remove the Duplicate Long Term Provisional, and Seat the Healing Caps

Check to confirm all Temporary Cylinders are secured to the Long Term Provisional. Seat the Multi-unit Healing Caps prior to suturing.

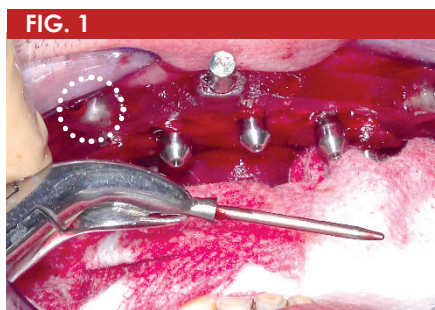


Fill in the voids and remove access

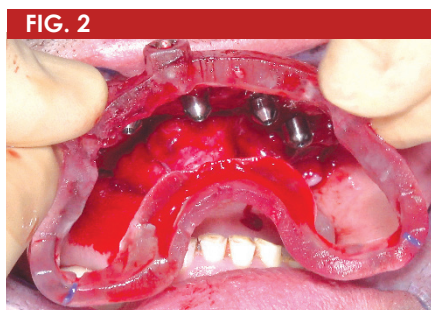


Seat Healing Caps over the MUAs with light finger pressure

## 20. Remove the Bone Foundation Guide and Suture (bone graft as needed)



Remove metal Anchor/ Fixation Pins



Remove the BFG, smooth sharp edges of the bone and graft as needed



Healing Caps help to prevent tissue from covering over the Multi-unit Abutments prior to seating the LTP.

## 21. Finalize both of the Long Term Provisionals (LTPs) J

The following steps will demonstrate how to finalize the LTPs. Complete one first for immediate delivery, then complete the duplicate LTP. The steps are exactly the same for both LTPs.

FIG. 1

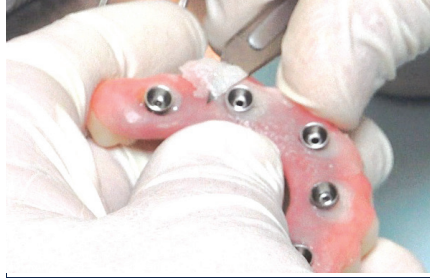


FIG. 2



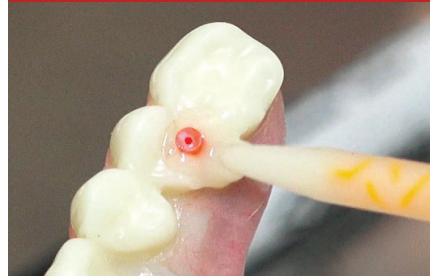
Remove any flash and fill in any voids

FIG. 3



For occlusal voids, place a plastic plug to prevent material from flowing into the cylinder.

FIG. 4



Inject material to follow the contour of the tooth without covering the plastic plug.

FIG. 5



Inject material to fill in the voids and to create a slightly convex contour that is hygienic.

FIG. 6



Use a carbide bur for bulk reduction of excess material.

FIG. 7



Use a fine coarse rubber point/wheel for smoothing.

FIG. 8



High shine the LTP.

FIG. 9



The LTP is ready to be seated.

FIG. 10



The duplicate LTP, along with the second set of small prosthetic screws and MUAs, should be sent to the restoring doctor for the first restorative appointment and the fabrication of the Definitive Prosthesis.

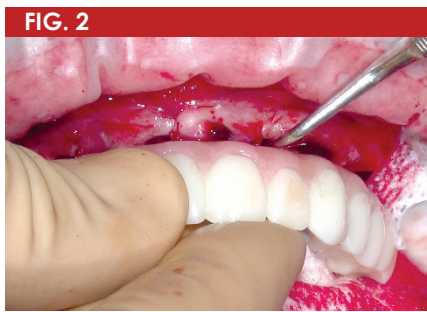


### 22. Deliver the Long Term Provisional **J**

Once grafting and suturing are completed, remove the Healing Caps and seat the LTP. Be careful to not trap tissue between the MUAs and the LTP. Secure the LTP with the small Prosthetic Screws.



Remove the Healing Caps.



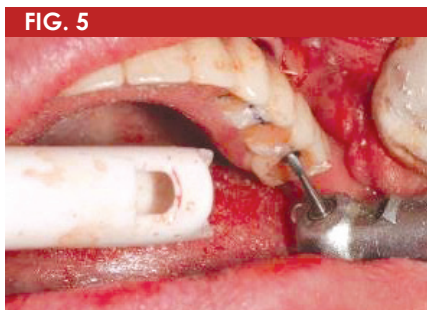
Seat the Long Term Provisional – being careful to not trap any tissue.



Insert the Prosthetic Screws initially with light finger pressure, then tighten to the manufacturer's recommendations.



Check occlusion to ensure there is no acrylic holding the bite open.



Adjust occlusion to achieve initial bilateral contacts.



Fill in the screw access holes with material of choice.

**PLEASE NOTE:** It is not uncommon for a patient to have a slightly opened bite directly after surgery. If needed, final occlusal adjustments should be performed after 24-36 hours. This will allow time for the patient to regain some proprioception and reduce any possible swelling in the joint area.

## Notes

[illegible]









NDX  nSequence

6980 Sierra Center Parkway, Suite 100  
Reno, NV 89511  
888.809.2777

[nSequence.com](https://nSequence.com)

NDX  NATIONAL  
DENTEX LABS

  
LOCAL

  
NATIONAL

  
AESTHETIC

  
TECHNOLOGY