# **ALL ON X APPOINTMENT PROTOCOL**

### Stage O - Pre Op Records

#### 1. Photo Protocol

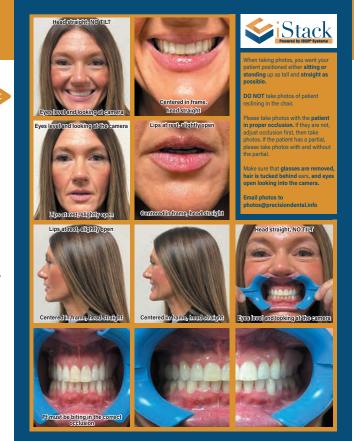
2. Intraoral Scans (IOS)

#### **Upper and Lower Jaw Scans:**

• Capture patient's existing dentition, entire palate, tuberosities, retromolar pads, and as much buccal/lingual tissue as possible.

#### **Bite Scans:**

- Scan with patient sitting up
  - \* Verify the occlusion scan matches your patient photos and patient's correct bite.
- If a patient has **occlusion on posteriors** take one bite scan on each side.
- If a patient has **no posterior occlusion** but has a good anterior occlusion - take one bite scan premolar to premolar.
- If a patient has a **collapsed dentition** Open the patient into the desired VDO. Scan and take photos in the new VDO in addition to their original bite.
  - \* If you are not comfortable properly opening the VDO, send pre op scans as is and have the lab verify they can open the VDO digitally.
- If the patient wears a *partial*: Take records with and without partial seated and bite scans with and without partial.
- If the patient is **edentulous**:
  - Take a light body wash impression of the tissue using their denture.
  - Do a 360 degree scan of denture outside the mouth (occlusal and intaglio).
  - Put the denture back in the mouth with the light body wash in place and scan the bite. Photos and bite are always done **AFTER** the wash impression has been taken.
- If a patient does not have existing dentures that occlude Take a full coverage denture impression and send to the lab for bite rims to be made prior to the procedure to be able to establish the patient in a proper VDO.
  - Light body wash impression using bite rim.
  - 360 degree scan of bite rims outside the mouth (occlusal and intaglio).
  - Scan the bite and take the photos **AFTER** the wash impression has been taken.
- 3. Export Scans: (see attached instructions) Submit to Precision Dental Arts portal, Stage O link.

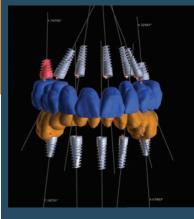






## **Stage 1 - Surgery**

- 1. If pre op photos and IOS were not taken prior to surgery day, then those will need to be taken **PRIOR** to sedation and surgery.
- 2. Anesthetize the patient and place the fiduciary markers (reference markers) on the palate and/or lower posterior ridges.
- 3. Take another IOS with fiduciary markers in place capturing the same information plus the fiduciary markers as was captured in the records scan.
- 4. Send scans to our Design Team to verify the IOS line up correctly with the records scan. Once the Design Team approves scans, then the doctor can proceed with surgery.
- 5. Extractions, implants and multi unit abutments (MUA) need to be placed and torqued.
- 6. Place photogrammetry markers/scanbodies with an open flap. **Verify** they are fully seated. Take a scan with the photgrammetry unit. Remove scanbodies and place tissue reference markers/healing caps. Verify they are fully seated.
- 7. Sutures can now be placed around the tissue reference markers/healing caps.
- 8. Take another full coverage IOS of tissue with fiduciary markers and healing caps in place. If you cannot capture this with the IOS, go ahead and take an impression with alginate and scan the impression with the IOS or desktop scanner.
- 9. Send ALL images/scans to *Precision's Digital Design Team*.
- 10. The Fiduciary Markers are removed **AFTER** Precision verifies that scans align correctly.
- \*IF THERE ISN'T PRIMARY STABILITY/UNABLE TO LOAD: The lab will make immediate digital denture from post-surgery tissue scan. Take a full coverage impression of the working arch, capturing as much tissue and anatomy as a denture impression and scan the impression to send to the Precision Design Team.









### Stage 1 - Surgery

### PMMA/Temp Delivery

- 1. Healing caps are removed (these are kept, cleaned, and sterilized) for future use.
- 2. Vortex 1.4 screws (what we design our cases with) are torqued with T5 driver to 15 NCM.



Note: If you are using a different screw system for your office be sure to research that system's specific recommendations for torque values.

- Close access holes with soft reline (gingi-mask) or light body.
- **4.** Make bite adjustments if needed.
- **Photos**



### **Troubleshooting**

- Bite is off
  - Take new full face photos with the temps in
  - Take a new IOS with the temps in upper, lower and bite scan.
- Doesn't Seat
  - Check torque on MUA
  - Check angulation of MUA, are they too divergent?
  - If anything changes take a new photogrammetry/Optisplint scan and a new tissue scan.

#### \*\*For local offices

• PMMA temps will be delivered to office same day (by 4:00/4:30 PM if files are sent to lab by noon and the case is pre-scheduled) or next day (schedule with the lab) \*We recommend purchasing a Sprint Ray 55S printer for in-house printing for quicker delivery.





## Stage 2

- 1. Discuss with patient changes they and the doctor would like to make. Place these notes in the comment sections
  - Shade
  - Size, Shape, Position of teeth
  - Bite/VDO
- Photo Protocol
- Take IOS of the temporary(ies)
  - Scan the temps in the mouth acquiring as much tissue as possible (palate, tuberosity, retromolar pad, buccal/ lingual tissue, ect.)
  - If the temporary is a denture: take a wash impression and 360 scan the denture including the wash impression
    - \*Take photos and bite scan with the wash impressed denture still seated.
  - Take a bite scan (with the patient sitting up) right and left.
    - \*Verify that your bite scan matches the patient's mouth and the photos.
- 4. Export files and name "(pt name) temp" (See exporting help attached).
- 5. Remove temp/s.
- 6. Torque all MUA's according to manufacturer's recommendation.
  - Sound Check: If the sound is hollow, not sharp, or if the patient feels any sensations, stop and take a radiograph for doctor evaluation.
- 7. Prepare Photogrammetry unit and place scanbodies on the MUA's. Verify they are fully seated. Once the scan is captured and saved with the correct healing cap geomentry, remove scanbodies and place healing caps to a finger tight torque. **Verify** they are fully seated.
- 8. Take an IOS with the healing caps, capturing as much tissue as possible.
  - \*Be sure that the healing caps match the geometry in the photogrammetry scan
- 9. Remove healing caps and seat temporary, torque prosthetic screws to 15 NCM and close access holes with soft reline (Gingi-mask) or light body.
- 10. Export all files and submit them to the Precision Dental Arts portal, "Upload Files."







### Scans should go as follows when there are challenges:

#### Stage 2 adjustment:

- only bite was off New photos, upper, lower and bite scan.
- didn't seat/not passive Recheck torque and check if MUAs are too divergent? Take a new white cap and new photogrammetry/Optisplint scan.
- gap in soft tissue but bite is good and seats passive New white cap IOS
- only esthetic changes, bite, intaglio are good and seats passive Photos and detailed instructions.

If any changes need to be made, new photos and IOS need to be taken and submitted to the lab for Stage 2 adjustments. For each new adjustment, please submit with a new Stage 2 under the same patient name, not the previous Stage 2.

#### \*\*\*If multiple bite adjustments have been needed and still having issues

- 1. Adjust bite to centric relation
- 2. Take physical bite registration
- 3. Send adjusted PMMA(s) and opposing impression (if only one arch PMMA) with bite registration to the lab.

## **Stage Final**

#### When patient and doctor are ready to proceed to final prosthesis:

- If no bite adjustments were made on the current PMMA and no other changes need to be made:
  - Final shade match
  - Submit final request (Stage Final) on the Precision portal in the "Notes Selection"
- If any minor changes (bite, esthetics) needed on current PMMA or for tissue color match:
  - Take new photos and IOS and submit through the Stage 2 in the Precision Portal.

\*Give directions to go to final and detailed instructions about bite adjustment in the comment section

\*Final prosthesis will be delivered to your office in 2-3 weeks.







### **Zurick - Monolithic**

FP1, FP2 & FP3 designs available

Whether designed as a crown and bridge FP1 or a FP3 with simulated pink gingival this true 100% monolithic zirconia, this design not only provides amazing strength and toughness, the aethetics will leave your patients thrilled by their new Smile.

Or try our Zurick Bridge with Titanium Bar design:





### Zurick Bridge - Layered

FP1, FP2 & FP3 designs available

This gorgeous fixed prothetic ensures that all functional areas are 100% solid zirconia and ensures avoidance of chipping and fractures. With the facial aspects of the anterior teeth layered by our AACD accredited ceramist we combine the ultimate in aesthetics and strength.

**Discover the Difference** 





# **Zurick Bridge**

Constructed from 100% solid zirconia, our Zurick Bridge Implant Prosthesis provides the same superior stability and function as the screw-retained hybrid denture, but with our monolithic construction that avaoids the chips, stains and fractures that can compromise acrylic appliances. With superior fracture toughness and an average flexural strength of 1200 MPa, our Zurick Bridge with lvoclar's Prime Zirconia is the ideal material for withstanding the functional stresses that full-arch restorations must endure. This material is also gentle to opposing dentition and hypoallergenic.

The Zurick Bridge Implant Prosthesis includes a new and improved step-by-step protocol that streamlines the restorative process. Our five-appointment protocol, supported by instructional guides and ensures a predictable outcome. A provisional PMMA try-in implant prosthesis is included to ensure that the patient and doctor are satisfied with the prosthetic design before the final restoration is milled from monolithic zirconia. The result is a highly accurate, exceptionally strong, lifelike restoration.

# Learn more about our different Zirick Bridge Designs.



834 Falls Ave. Ste 2100 Twin Falls. ID 83301



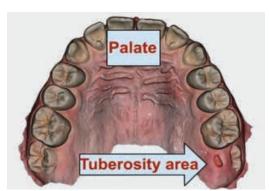


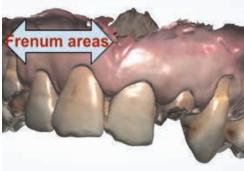


# **Important Anatomy to Capture on IOS:**

IOS: Common abbreviation for Intraoral Scan. Trios (3Shape), Medit, Itero, Primescan, Shining, etc.)

.stl, .ply, .sbj Files: Represent the surface geometry of a 3D object. These digital files are what the designers use in their CAD/CAM software to inspect and align intraoral scans.













## **Common Digital Workflow Terminology**

Fiduciary Markers: Reference marker that does not move throughout the entire surgical procedure; This scan allows the design team to align intraoral scans from before and after surgery. These markers can be bone screws with Nobel white caps, stable molars, root tips or mini implants.





Photogrammetry: (Digital Verification Jig).

The use of photography in surveying and mapping to measure distances between objects. The most common cameras are the ICAM, PiC, and Micron Mapper.







Scan Bodies, Scan Markers, Dominos, Flags: Gives coordinates to the camera to verify the orientation and position measurements of the implants.



**Optisplint:** Alternative to photogrammetry, this is a scannable verification jig to determine implant positions.





MUA: Multi-Unit Abutments - These connect the prosthesis to the implant and are available in straights, 17, and 30 degrees and in select systems have up to a 45, 60 and 72 degrees. These can be oriented in different directions and are used to correct the path of insertion for convergent and divergent implant.



Healing Caps: Used to cover the multi unit abutment to prevent tissue from growing over area. Each implant system makes their own. We utilize the iCam "Refs" most commonly.



**Driver:** Tool used to place and remove screws, scan bodies, cover caps, etc. that have a specific head size that fits implant parts (i.e. 1.2, 1.25, Nobel Unigrip, Neodent Unigrip, Straumann Torx).



Torque Wrench: Tool used to precisely apply specific Newton-centimeter torque to MUA and screws that tighten to manufacturer's recommendation. Under torquing can lead to screw loosening and over torquing can lead to stripped or broken screw head.



PMMA: Temporary hybrid prosthesis, commonly printed 3D printed in photopolymer resin but can also be milled in Polymethyl methacrylate (PMMA)







### QUICK GUIDE FOR ALL ON X APPOINTMENTS

	Stage O - Pre-op Records
	Photos following photo protocol
	Intraoral scans (upper, lower, bite)
	Schedule surgery appointment on Precision Dental Arts Portal
	Stage 1 - Surgery
	Photos/IOS taken if not done prior to surgery appointment
	Doctor places breadcrumb reference markers
	Take full IOS (upper, lower, bite include the breadcrumbs) and send to lab
	Surgical design team verifies alignment- DO NOT PROCEED UNTIL VERIFIED
	Proceed with surgery and place MUAs and torque
	Place photogrammetry scanbodies with an open flap and take photogrammetry scan
	Remove scanbodies and place white caps/healing caps
	Suture
Ш	Take an IOS of sutured tissue and healing caps and send to lab
	Precisions Digital Design Team verifies alignment- DO NOT PROCEED UNTIL VERIFIED
	Remove breadcrumbs after the lab has verified the alignment
Ш	STL file will be sent in the portal for printing
	Stage 2 - Post Op Records
	Discuss with the patient about changes, if any
П	Photos following photo protocol
	Intraoral scans of temporary prosthesis in the mouth
П	Remove temporary prosthesis
	Torque MUAs to recommended ncm and sound check
$\bar{\sqcap}$	Photogrammetry scan
	Take IOS intraorally
	White caps placed over MUA's and intraoral scan
	Temporary prosthesis re-seated and tightened to 15 ncm
	Photos and scans submitted through Precision Dental Arts Portal
	New prototype file delivered in 3 working days
	Final December
	Photos or IOS if needed
	Final shade match Photos and scans (if needed) submitted through Precision Dental Arts portal
	Final Records Photos or IOS if needed



