



## ***CAD 3D Printed Implant Surgical Guide*** **Scan to Guide Protocol**

### **Tooth Supported Surgical Guide:**

#### **Required:**

- Good CBCT scan of the patient in DICOM format (not compressed).
- Intraoral Scan of a model or impression in STL format or a Model / PVS Impression.  
\*\*\* Note: If this is a restoratively sensitive case, please also send a wax-up.

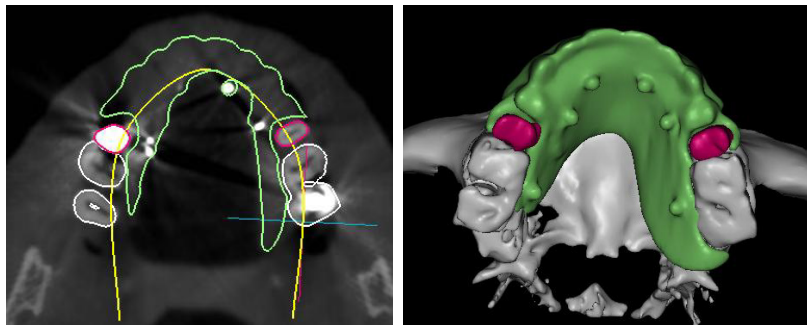
#### **Recommended:**

- Dual Scan of patient's non metallic flipper with markers properly placed.
- Additional impression with patient's appliance in place (not in the scan).

#### **Prepare Patient**

1. All detachable metal dentures and jewelry from the neck up must be removed from the patient prior to scan.

A non metallic denture should be used or If a scan appliance was provided it should be marked with scan markers, scanned first (dual scan) then worn during the patient scan.



Place the patient in the CT scanner be sure to separate the occlusion at least 3mm with cotton rolls or a bite stick to minimize spray artifacts from opposing dentition. Separation of the upper and lower arch is necessary to clearly visualize incisal/ cusp tips for accurate matching of model scan to patient scan.

2. Export the images of the scan in Dicom file format
3. Mail in recent stone model or PVS impression of the arch to Reliable Arts



## Scan to Guide Protocol

### Mucosa Supported Surgical Guide:

#### Required:

- Dual Scan with well fitting denture; markers placed properly.
- Good scan of patient with denture in place Seated properly; markers visible.

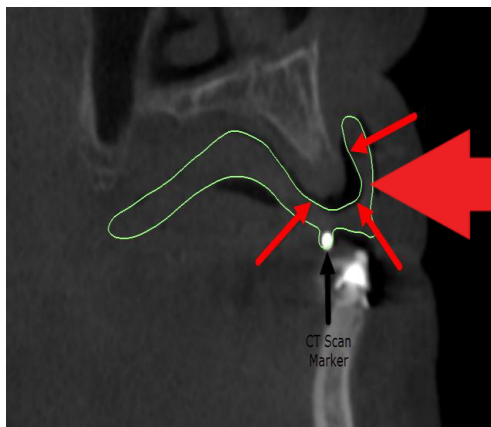
#### Recommended:

- Hard relin using a reline material that is not radiopaque.
- Bite registration to help make sure denture is seated properly; otherwise no separation unless the patient has natural teeth.

### Prepare Patient

1. The patient's current denture may be used as a scan appliance if no metal is present.
  - a. It must be a well seated denture

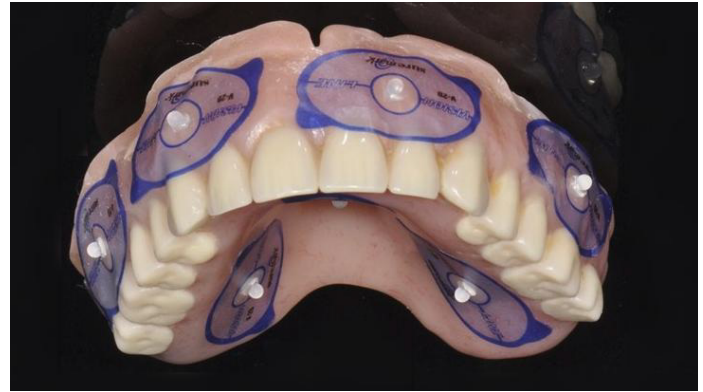
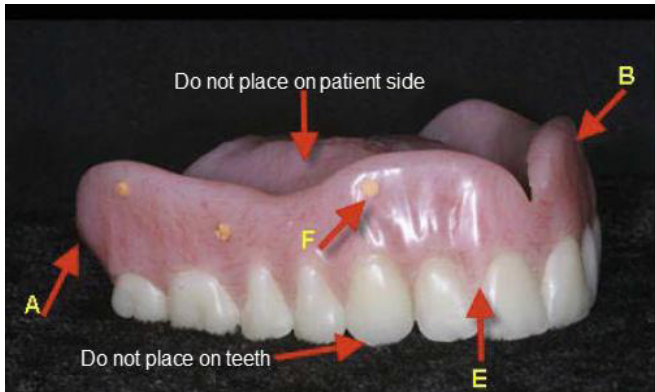
**THIS IS AN EXAMPLE OF AN APPLIANCE THAT IS NOT SEATED PROPERLY**



AIRSPACE BETWEEN THE  
PATIENT'S SOFT TISSUE AND THE  
APPLIANCE

- b. If not well seated do a hard reline, we recommend using a reline material that is not radiopaque.
- c. Adhere 6-8 scanning markers, such as radiopaque scan markers, to the flanges of the denture.

Place markers randomly on the appliance



\*\*\* Be sure NOT to place markers on the intaglio (soft tissue) surface or on teeth. \*\*\*

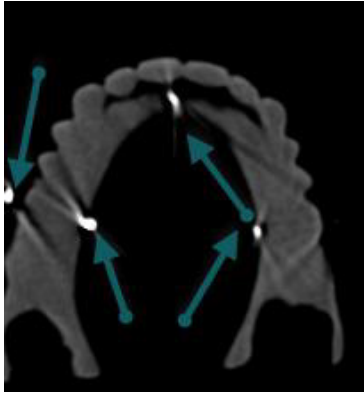
2. If there is metal in the patient's existing denture:
  - a. Duplicate the denture using clear acrylic.



3. Scan denture/scan appliance first resting on a scanning platform or Styrofoam block the same orientation as it will be in the patient's mouth. Scanning the appliance first will allow the markers to stick properly to a drier surface.

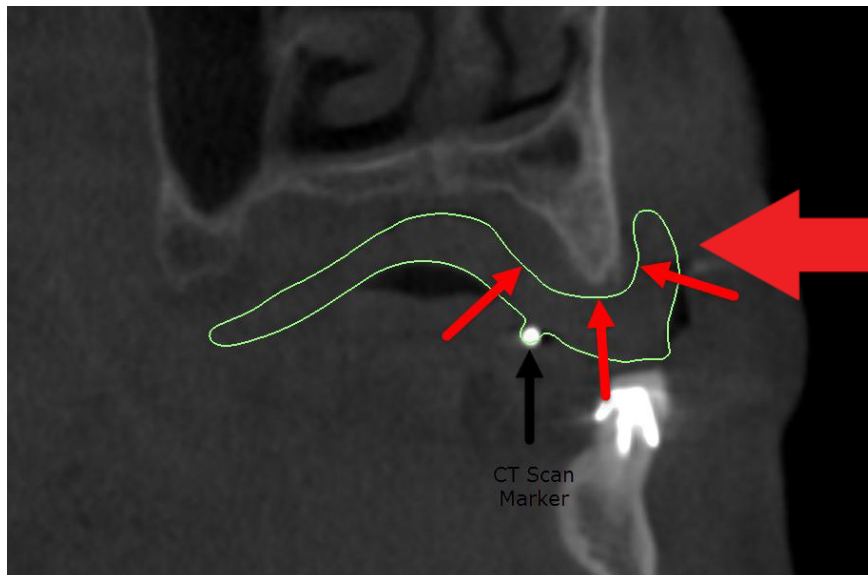


4. After scanning denture/scan appliance, check that all the markers are visible in the scan.



5. Prepare a bite registration if the patient is wearing a full arch appliance to ensure that it is fully seated against soft tissue. If you do not have a bite registration, do not use gauze or any separation technique.

**THIS IS AN EXAMPLE OF AN APPLIANCE THAT IS SEATED PROPERLY**



NO AIRSPACE BETWEEN  
THE PATIENT'S SOFT  
TISSUE AND  
THE APPLIANCE

6. Scan the patient wearing the denture/scan appliance with the fiducial markers.

