



IMPLANT SOLUTIONS

GUIDED SURGERY PATIENT RECORDS

In keeping with Glidewell's restorative-driven approach to implant treatment, digital treatment planning cases are designed to support the optimal prosthetic outcome. Capturing accurate records at each stage in the surgical and restorative process is crucial to success.

PATIENT RECORDS NEEDED FOR GUIDED SURGERY

This step-by-step clinical guide applies to the full range of **Digital Treatment Planning (DTP)** services and surgical guides available through Glidewell. Use this guide as a checklist to secure the records and scans required to deliver an accurate, esthetic treatment plan and surgical guide.

STAGE 0 PRESURGICAL

Dentate Single Arch.....	4
Partially Edentulous Arch	5
Edentulous Arch	6

STAGE 1 DAY OF SURGERY

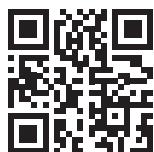
Record Checklist.....	7
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There are four key categories of records needed for digital treatment planning and guided surgery. For additional information, review the guides for each record before beginning.

Photographs/Facial Scans	8
Impressions	9
Bite Registration.....	10
CBCT Scans.....	11

ORDER DETAILS

Be sure to have this information — and the required records — available when you submit your case: patient name, age, implant site(s), implant system/type, guided kit, and any relevant notes.



To upload your scans and get your case started,
scan the QR code below or visit glidewell.com/start-DTP

SURGICAL GUIDE TYPES

TOOTH-SUPPORTED GUIDES



- CBCT Scans
- Intraoral Scans (STL)

TISSUE-SUPPORTED GUIDES



- Dual Scan (STL)
- Clinical Photos/ Facial Scans recommended

BONE-SUPPORTED GUIDES



- CBCT Scans
- Prosthetic Reference (optional, for better results)
- Clinical Photos/ Facial Scans recommended

GLIDEPRO™ STACKABLE GUIDE



- CBCT Scans
- Intraoral Scans (STL)
- Clinical Photos/ Facial Scans required
- Bite Registration

RECORD CHECKLIST: STAGE 0 PRESURGICAL DENTATE SINGLE ARCH

PHOTOGRAPHS/FACIAL SCANS

Capture photos with patient upright, keeping camera and retractors level.

NOTE: If an immediate-load provisional is desired, be sure to capture the tooth shade.

- Full Face & Profile
 - Full smile showing eyes and ears
 - Include left and right profile views
- Smile Photos
 - Smile at rest
 - Exaggerated smile
(to evaluate prosthetic clearance and transition line)
- Retracted Views
 - Full face with retractors
- Bite Confirmation
 - Left and right side photos in occlusion



FULL FACE



LEFT



RIGHT



SMILE AT REST



EXAGGERATED SMILE



RETRACTED BITE

IMPRESSIONS: DIGITAL OR ANALOG

- Maxillary Arch
- Mandibular Arch

NOTE: If opposing arch is edentulous, capture opposing denture.

BITE REGISTRATION: DIGITAL OR ANALOG

- Full-arch bite registration in centric occlusion or centric relation

CBCT SCANS

- Take the CBCT scan with the patient in an open position, use positioning aids if available. The field of view (FOV) should capture the entire maxilla and sinuses as well as the complete mandible. Confirm scan quality before dismissing the patient.

RECORD CHECKLIST: STAGE 0 PRESURGICAL PARTIALLY EDENTULOUS ARCH

PHOTOGRAPHS/FACIAL SCANS

Capture photos with patient upright, keeping camera and retractors level.

NOTE: If an immediate-load provisional is desired, be sure to capture the tooth shade.

- Full Face & Profile
 - Full smile showing eyes and ears
 - Include left and right profile views
- Smile Photos
 - Smile at rest
 - Exaggerated smile
(to evaluate prosthetic clearance and transition line)
- Retracted Views
 - Full face with retractors
- Bite Confirmation
 - Left and right side photos in occlusion



FULL FACE



LEFT



RIGHT



SMILE AT REST



EXAGGERATED SMILE



RETRACTED BITE

IMPRESSIONS: DIGITAL OR ANALOG

Provide two impressions, one with the partial denture and one without to allow for precise evaluation and planning. If the patient does not have an existing partial, ask Glidewell for a bite block.

- Maxillary Arch
- Mandibular Arch

NOTE: If opposing arch is edentulous, capture opposing denture.

BITE REGISTRATION: DIGITAL OR ANALOG

- Full-arch bite registration in centric occlusion or centric relation with partial in place

CBCT SCANS

- Take the CBCT scan with the patient in an open position wearing the partial or bite block, use positioning aids if available. The field of view (FOV) should capture the entire maxilla and sinuses as well as the complete mandible. Confirm scan quality before dismissing the patient.

RECORD CHECKLIST: STAGE 0 PRESURGICAL EDENTULOUS ARCH

PHOTOGRAPHS/FACIAL SCANS

Capture photos with patient upright, keeping camera and retractors level.

NOTE: If an immediate-load provisional is desired, be sure to capture the tooth shade.

- Full Face & Profile
 - Full smile showing eyes and ears
 - Include left and right profile views
- Smile Photos
 - Smile at rest
 - Exaggerated smile
(to evaluate prosthetic clearance and transition line)
- Retracted Views
 - Full face with retractors
- Bite Confirmation
 - Left and right side photos in occlusion



FULL FACE



LEFT



RIGHT



SMILE AT REST



EXAGGERATED SMILE



RETRACTED BITE

IMPRESSIONS: DIGITAL OR ANALOG

A series of impressions is needed for an edentulous arch. For optimal results, the patient must have a well-fitting denture. If not, it is recommended to reline the denture with a hard radiolucent material prior to scanning as this will be needed for CBCT scans.

- Capture 360° scan of well-fitting denture outside of the mouth, or a physical duplication of denture
- Capture teeth of opposing dentition
 - **NOTE:** If opposing arch is edentulous, capture opposing denture.

BITE REGISTRATION: DIGITAL OR ANALOG

- Full-arch bite registration in centric occlusion or centric relation with well-fitting denture in place

CBCT SCANS

- Adhere to the dual-scan protocol on page 11

RECORD CHECKLIST: STAGE 1 DAY OF SURGERY/SAME DAY PROVISIONAL DESIGN

The following records are needed to deliver a same-day printed provisional. Whether you prefer guided or freehand All-on-X surgery, Glidewell can support you with same-day design service enabling you to print a provisional prosthesis in your office. If preferred, Glidewell can print and overnight the provisional prosthesis.

PRIOR TO TEETH EXTRACTION

Scan Order	Photogrammetry	Intraoral (IO) Photogrammetry	OPTISPLINT®	Horizontal Scan Body
1	IO Scan: Working arch with fiducial marker			
2	IO Scan: Opposing	IO Scan: Opposing	IO Scan: Opposing	IO Scan: Opposing
3	IO Scan: Bite	IO Scan: Bite	IO Scan: Bite	IO Scan: Bite

AFTER IMPLANTS PLACED

NOTE: Fiducial marker should remain in place.

Scan Order	Photogrammetry	Intraoral (IO) Photogrammetry	OPTISPLINT	Horizontal Scan Body
1	Implant Scan: Scan with EPG scan bodies at MUA level	Implant Scan: Scan with IPG scan bodies at MUA level	Implant Scan: Extraoral scan of OPTISPLINT on scan plate	Implant Scan: IO scan with horizontal scan bodies in place at MUA level
2	Tissue Scan: MUA scan caps in place	Tissue Scan: IPG MUA scan caps in place	Tissue Scan: OPTISPLINT MUA scan caps in place	Tissue Scan: MUA scan caps in place

PHOTOGRAPHS/FACIAL SCANS

PHOTOGRAPHING TIPS:

- If the patient has an existing prosthesis, have them wear it in the photos
- Have the patient look directly at the camera
- Capture images prior to physical impressions (if applicable) to keep lips and teeth clean

FACIAL SCANNING TIPS:

- If the patient's teeth do not show when capturing the full face smile, put a retractor in place and capture a second full face scan
- Export accurate facial scan in all file formats (OBJ/PLY/JPEG)

4 CRITICAL PHOTOS/FACIAL SCANS FOR OPTIMAL RESULTS

- Full face & profile
- Smile at rest
- Duchenne smile (exaggerated smile)
- Retracted views (bite, anterior view)



FULL FACE



LEFT



RIGHT



SMILE AT REST



EXAGGERATED SMILE

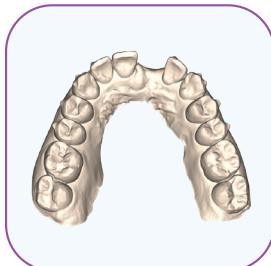


RETRACTED BITE

IMPRESSIONS: DIGITAL OR ANALOG

IMPRESSIONS

- Capture all surface areas of the arch requiring treatment, including the teeth and soft tissue
- Capture full-arch impressions, even if only a single surgical site, for optimal guide design
- Capture teeth of opposing dentition (non-surgical arch)



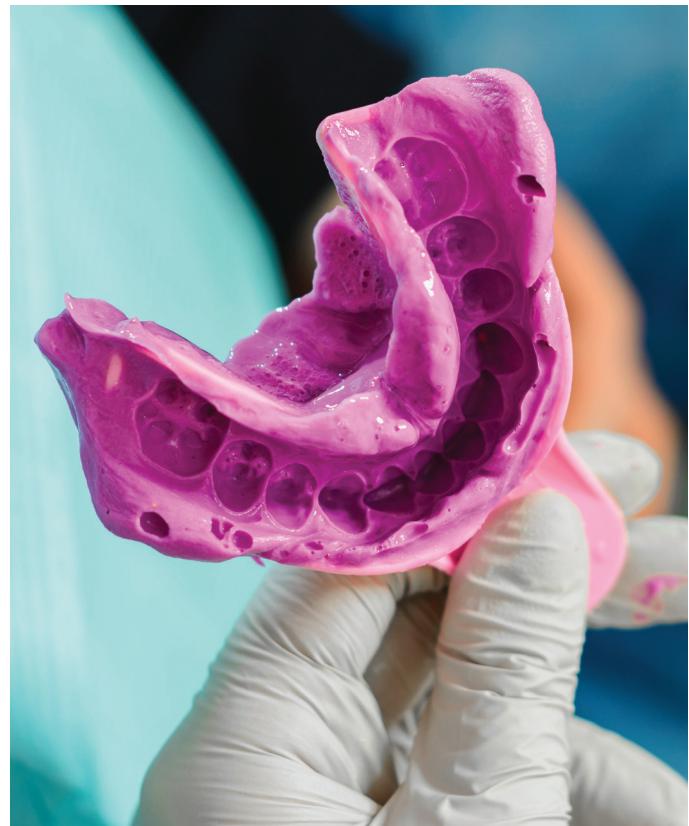
MAXILLARY SCAN

Be sure to capture all critical anatomical landmarks, including the frenum attachments, full palate, posterior palatal seal area, hamular notches, and both buccal and labial vestibules.



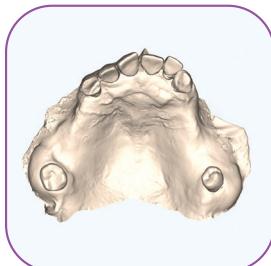
MANDIBULAR SCANS

Ensure the impression includes the external oblique ridges, retromolar pads, frenum attachments, sublingual region, distolinguinal borders, and all buccal and labial vestibular areas for accurate representation.



PARTIAL DENTURE PATIENTS

- If partial dentures are used to stabilize the bite, capture the impression and bite with the partial in place
- For fabrication of an immediate removable prosthesis, all critical landmarks must be captured in the impression



PARTIAL DENTURE CASES

Provide two impressions: one with the partial denture in place and another without it to allow for precise evaluation and planning.

FULLY EDENTULOUS PATIENTS

- Ensure existing prosthesis is **well-fitting**
- Reline denture if not well-fitting with a hard radiolucent material prior to capturing records. Adhere to the Dual Scan protocol on page 11



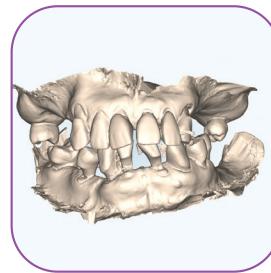
EDENTULOUS PATIENTS

Capture cameo and intaglio surface of existing prosthesis for arch being treated. Note: if denture is relined, capture 360° scan with reline in place.

BITE REGISTRATION

BITE REGISTRATION TIPS

- If partial dentures are utilized to stabilize bite, capture the impression and bite with the partial in place
- If vertical dimension must change due to missing posterior tooth support, it is recommended to either:
 - Capture the bite at the desired vertical dimension
 - Order a bite rim, adjust accordingly and capture the centric relation bite position using the wax rim
- Verify that the bite registration is correct before releasing the patient



ANALOG BITE REGISTRATION

- Instruct the patient to gently close into centric occlusion and maintain that position until the material sets completely
- Once set, carefully remove the bite registration and trim any excess material for a clean fit
- Analog registration should be evaluated for distortion and intraoral accuracy

DIGITAL BITE REGISTRATION

- Instruct the patient to gently close into centric occlusion and maintain that position until both the right and left registrations are captured
- Digital scan should be evaluated postprocessing and compared to the patient's clinical bite

TECHNIQUE TIP:

Having difficulty scanning hard to reach landmarks? Take an alginate impression, then scan the impression.

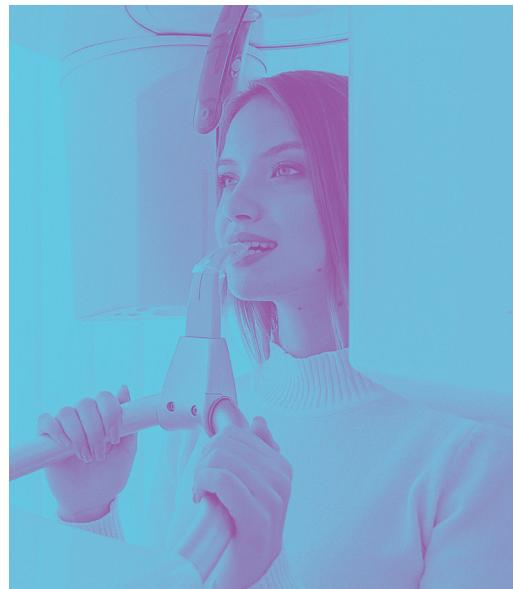
CBCT RECORDS

CBCT SCAN GUIDELINES

- Take the CBCT scan with the patient in an open position (use positioning aids if available)

CBCT ACQUISITION TIPS

- A voxel size of 150-250 μm is recommended
- The FOV should capture the entire maxilla working arch
 - If focusing on the maxillary arch, ensure the FOV includes the full maxilla and sinuses
 - If focusing on the mandibular arch, ensure the FOV includes the full mandible
- Confirm scan quality before dismissing the patient. Scans should be high resolution without stitching or movement errors



AFTER CBCT ACQUISITION

- Export DICOM files from the CBCT system and save it in the patients folder
 - Ensure CBCT is exported in correct orientation and coordinates (not flipped)
 - Ensure file is exported as multi-DICOM files
- Create a ZIP file of the patient folder and upload via the *My Account* digital treatment planning portal, or send on a flash drive with a printed Rx

DUAL-SCAN PROTOCOL

NOTE: Do not move, reposition or replace radiographic fiduciary markers in between the scans.

1. EXTRAORAL SCAN OF DENTURE

OPTION 1: Using CBCT

- Place the denture or scan appliance on a foam or Styrofoam block in the center of the FOV; denture should be well-fitting and include fiduciary markers

OPTION 2: Using Intraoral Scanner

- Use intraoral scanner to scan the intaglio surface (tissue side) and cameo surface (external side). Ensure full 360° to capture complete geometry.
- Verify scan quality before moving to scan 2

2. CT SCAN OF PATIENT

- Seat the denture or duplicate scan appliance with the same radiopaque fiduciary markers in the patient's mouth, using a bite registration as an index to ensure correct positioning
- Verify scan quality before dismissing patient

TECHNIQUE TIP: CBCT LIP LIFT

For an optimal CBCT scan, try this technique:

- Place three cotton rolls between the upper lip and the upper arch
- Place two cotton rolls between the canines and the premolars
- Place three cotton rolls between the lower lip and the lower arch

WANT MORE DETAILS ON THE DUAL-SCAN PROTOCOL?



DOWNLOAD THE FULL PROTOCOL



IMPLANT SOLUTIONS

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