

SCANNING FOR **GUIDED SURGERY**

CHEAT SHEET

General CBCT Guidelines

- Full arch bone and teeth anatomy **must be** recorded.

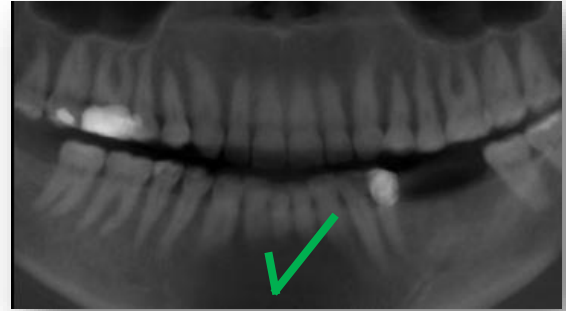
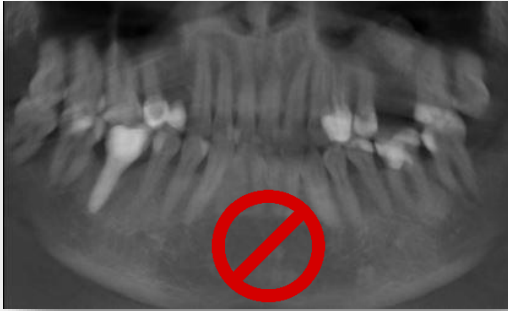
In cases of possible zygomatic implants, please extend the field of view to show the zygomatic area and inferior orbital rim.

In maxillary cases with possible lateral sinus lifting procedure, please make sure to include the anatomy of maxillary sinus, nasal cavity, lower 1/3 of the orbit to check the sinus drainage.

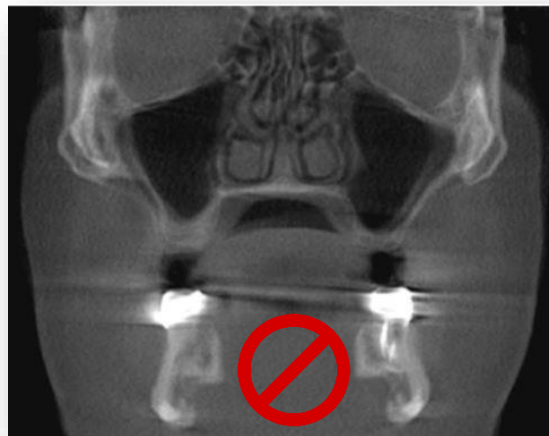


- Slight teeth separation of both arches using cotton rolls, gauze &/or plastic bite block **is required** to avoid teeth scattering over each other.



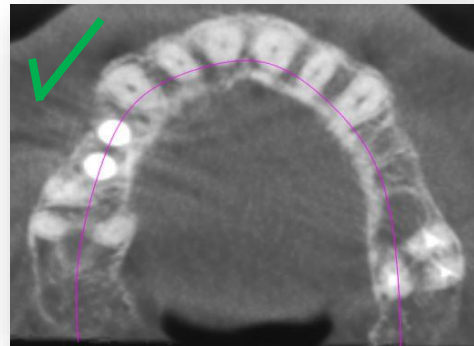


- Accepted slice thickness ranges from 0.1 to 1 mm. It is **recommended** to be within the range of (0.3–0.6 mm).
- Make sure that the CBCT scan acquisition date is recent. Scans **up to 6 months** old are accepted **only** when there is no history of extractions, grafting, crown and bridge work since the scan date.
- Before dismissing the patient, kindly review the CBCT scan quality to exclude any motion artifact or indistinct cortical outlines.



- In patients with multiple crown and bridge work, it is recommended to **restrict the field of view to the arch of interest**, increase the slice thickness to be within the range of **0.4 to 0.8**, kVp at 70 and tube current at 2 mA to decrease scatter (always refer to the scanner manufacturer's instructions).

- Quadrant scans are **not recommended** and are accepted only in single implant cases where there is a minimum of **6 ideally recorded teeth** other than the edentulous sites.



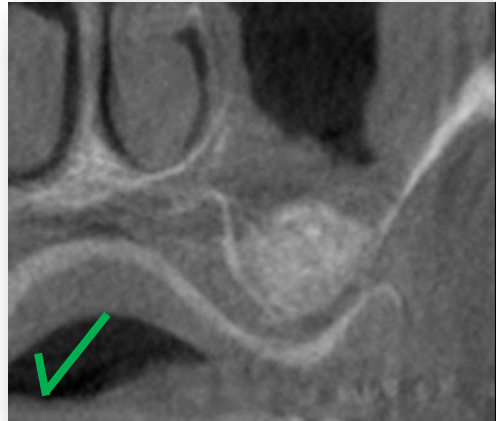
- Fully edentulous patients will **require** a dual scan. (See below)

Dual Scanning Protocol

- Patients are scanned while wearing a denture with radiopaque markers in occlusion (radiopaque bite registration material is **recommended**, cotton rolls are accepted), then the denture is scanned alone while being seated on a foam block to avoid being at direct contact with the CBCT platform and maintain the integrity of the intaglio surface.



- In cases of opposing missing posterior/anterior teeth, pivot points may be created. So, always **double check** that the denture is in full contact with the soft tissue.



- Markers should be distributed both on the buccal and lingual sides of the denture (5 to 6 markers per side recommended).



- The denture should be made of **pure acrylic**. In cases of dentures with any metallic parts, duplicating a pure acrylic one is **required**.



- Always **check for the denture fit** before the dual scanning process. In cases of ill-fitting denture, **relining is required** using a hard reline material. Any other materials are not accepted. If the denture is well-fitting, soft relining material is accepted.



- For denture CBCT scanning parameters, always check the CBCT manufacturer's instructions.

Models/Impressions/IOS

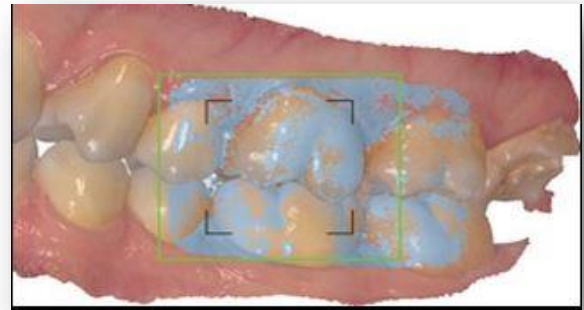
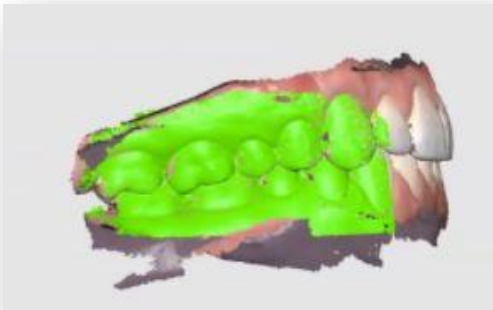
- Full arch maxillary &/or mandibular anatomy with the soft tissue at the area of interest must be accurately recorded.
Kindly make sure to capture the buccal/labial vestibule, full palate for maxillary arch, retromolar pads for mandibular arches as well the sub-lingual space.
- Always check the IOS to exclude incomplete scanning and double registration especially in the anterior area.



- In case of sending impressions, PVS impression material is **recommended**. Alginate impressions are **not recommended** and are accepted only at ideal quality.
- If the patient has a partial denture with ideal bite and esthetics, please send **one with partial and one without**.

Physical Byte/Byte Scan

- Bite registration is accepted either physical or bite scan.
- In cases of patients with missing posterior stops, fabricating occlusal rims is **recommended**.
- In cases where the patient's bite needs to be raised significantly, we **recommend** a try-in for the new bite over a short time to apply any changes if needed.



Records needed for full-arch AnatomX cases

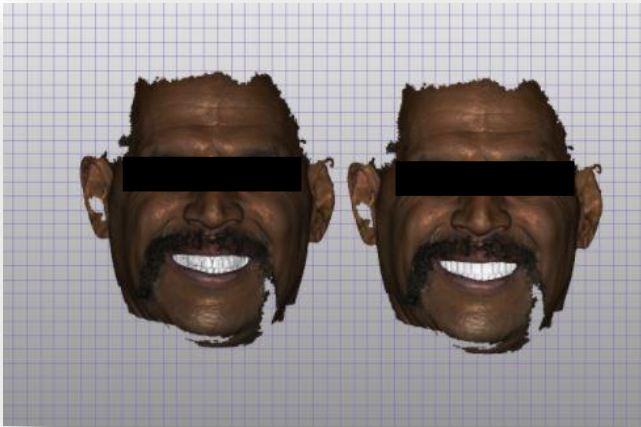
- Patient clinical pictures are required (resting, smiling, maximum smile, retracted lips, profile, & profile smiling).

It is recommended to include a profile smiling picture while being in occlusion to confirm the bite.

Please make sure that the camera is at the level of the patient's face and the patient is at 12 o'clock position.



- Multiple DICOM files of the patient CBCT scan **are required**. Dual scan protocol is **required** in case of fully edentulous patients.
- Dual arch model/impression/IOS with full vestibule and/or palatal definition.
- Physical Bite registration/bite scan.
- Diagnostic guidelines (shade, tooth shape, midline, incisal edge position).
- Referral form.
- Face scan (**Optional**).



Records needed for tooth-supported guides

- Multiple DICOM files of the patient CBCT scan.
- Model/impression/IOS of the arch of interest.

Optional

- Patient clinical pictures in cases of missing anterior/esthetic zone teeth.
- Wax up.
- Opposing model/impression/IOS.
- Bite scan.

Records needed for mucosa-supported guides

- Dual-scan protocol

Optional

- Model/impression/ IOS of edentulous arch of interest.
- Model/impression/ IOS of opposing dentition/denture.
- Scanning the denture with markers outside the patient's mouth can be done with an intraoral scanner and exported as STL file for matching.

Records needed for bone-supported guides

- Multiple DICOM files of the patient CBCT scan is the **minimum requirement**. However, dual scanning protocol is **highly recommended** for prosthetic-driven planning.