DUAL SCAN PROTOCOL PROCESS

What is a Dual Scan and why is it used?

A dual scan is a process where a patient's existing denture, a duplicate denture or a clear acrylic scanning appliance is scanned in a CBCT unit with radiopaque markers and then the same marked denture is scanned in the patient's mouth. Thus, you have 2 scans, or a Dual (2) Scan Protocol. The Dual Scan Protocol is used for patient's that are fully edentulous and the desired surgical guide is mucosa / tissue supported. This process of scanning allows the doctor to see the patient's anatomy during planning, which would otherwise not be visible.

Setting up for the Dual Scan:

1. Start with a clear acrylic appliance (variation in composition can yield scatter in the image of the appliance; avoid this as much as possible). A well fitted denture with low radiopacity is acceptable as well.

2. Check the fit of the appliance.

3. Do a hard reline if necessary.

4. Dry the appliance prior to adhering markers. The markers should no move after application.

5. Mark the appliance with 6 markers for either a partial or full arch appliance.

6. Cut the markers if necessary so that they will fit on the appliance.

7. Place markers randomly on the appliance:
   a. Mesial / Distal
   b. Superior / Inferior
   c. Buccal / Lingual

8. Ensure there are NO markers on the intaglio (soft-tissue) surface

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Checklist for Dual Scans

☐ Patient for Scan

☐ Patient's Existing Denture, a Duplicate Denture or a Clear Acrylic Scanning Appliance

☐ SureMark CT Scan Markers: Radiopaque (Non-metalic) Glass Beaded Stickers

☐ FutarBite Registration: Radiolucent Bite Registration Material (will not show in scan)

☐ Chairside Hard Reline (if needed)

Taking the Dual Scan:

1. Scan the appliance first.
2. Position the appliance just as it sits in the patient's mouth on a foam or Styrofoam block.
3. Scan the appliance at 80KVP and 2ma if you are using a Carestream unit. On ICAT, Sirona, Vatech or any other unit, continue to use the same patient morphology.
4. Confirm that all markers are clearly visible in the scan of the appliance.
5. Prepare a bite registration if the patient is wearing a full arch appliance to ensure that the appliance is seated correctly.
6. Scan the patient.
   a. Use normal implant planning protocols and the largest field of view.
   b. Ask the patient to bite firm on the bite registration to blanch the gums.
7. Confirm that all the markers are visible in the patient scan and the appliance is seated properly.

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