## 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:

- 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.
- 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





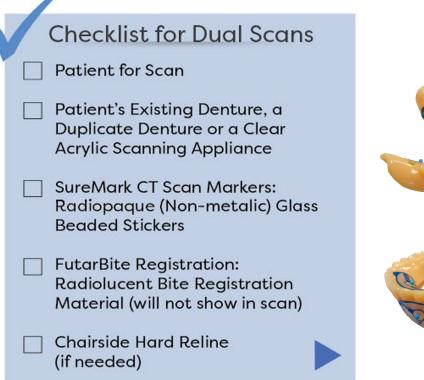








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## Taking the Dual Scan:

- 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.

