CS 3500

CS 3600

# SureSmile®

Carestream Dental Intraoral Scanners

THE DENTAL
SOLUTIONS
COMPANY™

Dentsply Sirona

SureSmile® has its headquarters in Richardson, Texas, with offices in Berlin, Germany and St. Leonards, Australia. For general information about SureSmile®, visit the SureSmile® website at www.SureSmile.com.

## Contact us for support

To contact us, please call one of the phone numbers listed below, or email us at customercare@SureSmile.com

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|---|---|
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| Australia | 1300 552 929 |
| Belgium | +32 3 232 81 50 |
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| Germany | +49 625 116 16 14 |
| Spain | +34 93 264 35 60 |
| Ireland | +44 (0)1932 838323 |
| Italy | 800310333 |
| Japan | +800 6655 1234 |
| Lichtenstein | +41 800 33 11 99 |
| Netherlands | +31 88 024 52 00 |
| New Zealand | 0800 336 877 |
| Nordic Countries | +4543713377 |
| Poland | +48 22 502 99 66 |
| Portugal | +34 93 264 35 60 |
| South Korea | +82 2008 7662 |
| Switzerland | +41 800 33 11 99 |
| United Kingdom | +44 (0)1932 838323 |
| Note: We are currently rolling out this number on a country-by-country basis. If not yet available in your country, you can still call us by using our All other countries toll number below. | |
| All other countries | +1 972 728 5902 |

# Table of Contents

About This Guide ..... 1
Getting Started ..... 2
    Upgrade Carestream Orthodontic/OMS Imaging ..... 2
What is SureSmile®? ..... 3
Workflow for Carestream Intraoral Scanner ..... 5
Taking Required 2D Records ..... 6
    Import Records on Time ..... 6
Standards for SureSmile Patients ..... 8
    Prepare the Patient ..... 8
Scan Procedure – CS 3500 ..... 9
    Scanning Bonded Patients ..... 9
Scan Procedure – CS 3600 ..... 11
    Scanning Bonded Patients ..... 11
Review Scan Quality ..... 16
Using the Carestream® Intraoral Scanner to Capture Data for SureSmile ..... 20
    Start the Patient's Carestream Record ..... 20
    Take the Scan/Send Order ..... 21
    Orthodontic Imaging Users: Export Scan Data ..... 22
    Dental Imaging Users: Export Scan Data ..... 22
Ordering a Therapeutic Model from STL/PLY Files for SureSmile Advanced ..... 23
    Create/Open a Patient Record ..... 23
    Select a Case Type ..... 23
    Start a Therapeutic Model Order ..... 23
    Upload 3D Scan Data Files ..... 24
    Submit the SureSmile Advanced Order for a Therapeutic Scan ..... 25
Ordering a Therapeutic Model from STL/PLY Files for SureSmile Ortho or SureSmile Aligner ..... 26
    Create/Open a Patient Record ..... 26
    Select a Package Type ..... 27
    Upload Surface Scan Data ..... 27
    Upload images ..... 28
    Dental Examination ..... 28
    Prescription ..... 29
    Payment and Order ..... 29
Ordering an Update Model ..... 30
    Capture Scan Pieces ..... 30
    Start an Update Scan ..... 31
    Upload 3D Scan Data Files ..... 31
Ordering a Therapeutic Model from a CBCT Scan and a Supplemental Scan ..... 33
    Capture Scan Pieces ..... 33
    Start a SureSmile Advanced Therapeutic Model Order (for CBCT Scans) ..... 34
    Submit the SureSmile Advanced Order for a CBCT Scan with a Supplemental Scan ..... 36
    Start a SureSmile Ortho or SureSmile Aligner Therapeutic Model Order (for CBCT Scans) ..... 38
Ordering Diagnostic or Final Models for SureSmile Advanced ..... 41

Start a Diagnostic/Final Scan ..... 41
Import STL Files for Diagnostic/Final Scans ..... 42
Submit the Order for a Diagnostic/Final Model ..... 42
Import STL Files for Diagnostic/Final Scans ..... 43
Submit the Order for a Diagnostic/Final Model ..... 43
Ordering Diagnostic Models for SureSmile Ortho or SureSmile Aligner ..... 44
Start a Diagnostic/Final Scan ..... 44
FAQs ..... 45
Carestream Scanning Job Aid for Bonded Patients ..... 49
SCAN CHECKLIST ..... 50
Learning Resources ..... 51

# About This Guide

This guide includes the protocol and procedures for using the Carestream Intraoral scanners, for SureSmile treatment. Although informative for the doctor, the primary audience is the clinical assistant who will be performing Carestream scans and entering SureSmile orders.

Any practice implementing an Carestream system with SureSmile can use this document as a reference, including:

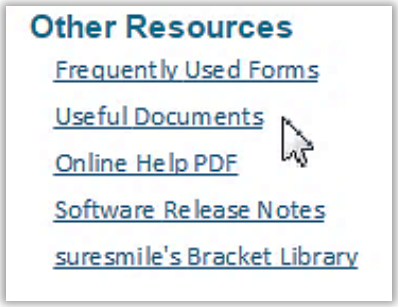
- New SureSmile practices planning to use the CS 3500 or CS 3600 scanner for all model types.
- Existing SureSmile practices using the orascanner who have decided to obtain a CS 3500 or CS 3600 scanner.

Any SureSmile practice planning to use the CS 3500 or CS 3600 scanner to capture Supplemental and Update Scans for their SureSmile-certified CBCT system.

Practices using CBCT must also refer to the applicable guide for the SureSmile protocol for CBCT scans. These documents are available in the SureSmile online help.

To access this area,

1. go to SureSmile via your web browser
2. click the **?** icon and select **Help Center**
3. Next, find the "**Other Resources**" section in the lower-right corner of the window and select "**Useful Documents.**"




When this page opens, find the appropriate CBCT guide under the heading, "**Scanning Protocols**."

## Prerequisite Training

Prior to conducting the SureSmile training and launch:

- The practice should be trained in the proper use of the CS3500 or CS 3600 scanner by a Carestream-certified clinical trainer.
- Scan technicians should have successfully performed at least 10 scans prior to scanning patients for SureSmile.
- If using CBCT, the practice should be trained in the safe and effective operation of CBCT equipment by a representative of the manufacturer.

The software for the CS 3500 or CS 3600 is available in a dental and an orthodontic version. Either version may be used to capture scans; however, please note that the steps differ for exporting STL data, which is the format required for SureSmile.

# Getting Started

## Upgrade Carestream Orthodontic/OMS Imaging

It is recommended that offices use either Carestream Orthodontic / OMS Imaging software version 11.6 or higher OR Carestream Dental Imaging Software version 6.14 or higher. If you are running an older version, contact Carestream Dental Support at 1.866.724.6317 or email Carestream Dental Support at CSDImagingSoftware@carestream.com

Install SureSmile® software and Carestream Orthodontic/OMS Imaging on the same computer

The export option is available in OrthoCAD® 5.1.1.113 or higher. If this version is not installed, click Support at the bottom of any MyAligntech.com page and choose OrthoCAD® installation instructions.

Prepare a computer to process orders for SureSmile patients. For your convenience, choose a computer with access to your Carestream Orthodontic/OMS Imaging so you can perform tasks with Carestream Orthodontic/OMS Imaging and SureSmile at the same computer using a patient data folder accessible to both programs.

If you use CBCT, you can also set up a folder for patient CBCT data accessible to this computer.

- Install a SureSmile-supported browser to submit model orders based on STL/PLY data
- Install “SureScan” software to submit model orders based on CBCT data (if applicable)

## Cybersecurity Guidelines

1. Keep your computer's operating system up to date with patches and fixes.
2. Install and maintain an anti-virus program.
3. Install and maintain a firewall between your LAN and the internet.
4. Avoid installing browser add-ins or plug-ins.
5. Avoid downloading or installing software from unknown sites
6. Create a hard to guess password by using at least 8 characters of mixed case letters, numbers, and symbols.
7. Avoid using common words or phrases.
8. Do not reuse the same password for any accounts.
9. Consider using a password program to manage passwords, such as KeePass or LastPass
10. Do not display your password where others can see it.
11. Change your password periodically, every 60 to 90 days.
12. Logout or lock your workstation when leaving your desk.
13. Avoid clicking on links in email. Instead, go directly to the site and login using your user-id and password.

Contacts for service or software issues:

For issues with SureSmile orders, software, or CBCT protocols for SureSmile, contact SureSmile Customer Care or refer to the SureSmile online help.

To access SureSmile online help, go to SureSmile via your web browser, click the icon and select “Help Center.”

For issues with the Carestream imaging systems or exporting your STL files, please contact Carestream customer support.

# What is SureSmile®?

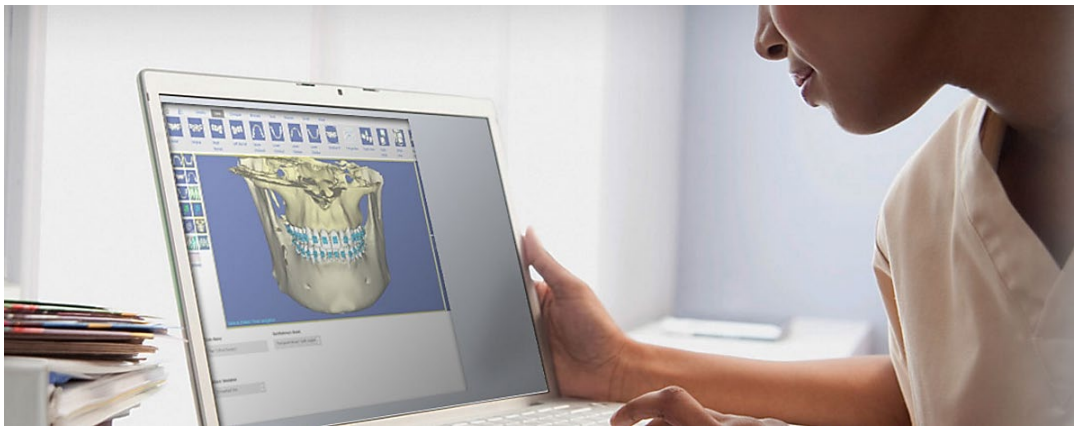
The SureSmile system is the first end-to-end solution that allows the orthodontist to apply 3D diagnostic imaging and computer-aided treatment planning to produce custom appliances. This results in greater control and efficiency for orthodontic care.

The SureSmile system is comprised of several technology components:

- Scanning technologies to produce a 3D model of the patient’s dentition that may be captured in an optical scan by our orascanner or a certified third-party scanner; scans may also be captured by a certified CBCT system.
- SureSmile 3D software, which provides powerful visualization tools for precision diagnosis, treatment simulation and customized appliance design. The doctor can review the digital setup with this software and use it to communicate with patients and with the SureSmile Digital Lab.
- SureScan software primarily used for scan acquisition with the orascanner or CBCT data submission

The SureSmile Digital Lab provides scan and setup processing to produce precise robotically bent custom archwires and aligners; or you may order aligners.

IMPORTANT: SureSmile does not determine patient care. SureSmile provides therapeutics as directed by the doctor. The best possible results from the SureSmile process depend on the application of the doctor’s diagnostic and clinical judgment.



## Treatment Models

The table below lists the 3D models produced from scans to support SureSmile treatment. An optical scan may be captured by scanning a patient in-vivo (intraorally) or by scanning a plaster model. However, an in-vivo scan is required for wire therapy and strongly recommended when capturing any model used for appliance design.

The Digital Lab also produces a setup, which is a model of the doctor's treatment plan based on the therapeutic model to fabricate custom appliances.

| Model | Purpose | Source Data |
|---|---|---|
| **Diagnostic Model** | Models the malocclusion, including individual teeth, to support: full dental examination using 3D diagnostic tools, a simulation of treatment options, and/or a model for appliance design. | • Optical scan In-vivo or plaster<br>• CBCT In-vivo or plaster |
| **Therapeutic Model** | This scan is captured intraorally (or by in-vivo CBCT).<br>For bonded patients, models the patient's current tooth anatomy and bracket positions. Captured any time after bonding in preparation for designing custom archwires or aligners<br>For unbonded patients, models the patient's current tooth anatomy to support: full dental examination using 3D diagnostic tools, a simulation of treatment options, and/or a model for appliance design.<br>CBCT users have an additional scan option that accompanies a therapeutic scan:<br>• Supplemental scan – an intraoral scan primarily used to capture areas with restorations that cannot be accurately modeled from a CBCT scan. The two scans of the patient are combined to produce a complete model. | • Optical scan In-vivo*<br>• CBCT In-vivo scan<br>• Optical scan In-vivo* |
| **Update Model** (for bonded patients only) | This scan is taken intraorally by an optical scanner to capture areas that have changed since the last model was produced. Schedule an update scan when you need to order archwires, but bracket positions have changed or new teeth have erupted.<br>Note: If new teeth are captured, you must order a new setup prescription before ordering wires. | • Optical scan In-vivo* |
| **Final Model** | Models the patient's final tooth positions with individual teeth to support a full Dental Examination using 3D diagnostic and quality grading tools, and/or a model for appliance design. | • Optical scan In-vivo or plaster<br>• CBCT In-vivo or plaster |

# Workflow for Carestream Intraoral Scanner

While you may use your Carestream scanner to scan either intraorally or scan a plaster model, the following scan types must be captured intraorally:

- Therapeutic scans – upper and lower arches (both arches are required even if the patient is receiving single arch treatment since both are needed to plan the occlusion)
- Update scans – arches or partial scans of arches to capture changes to tooth anatomy and/or brackets
- Supplemental scans – arches or partial scans of arches to capture supplemental data for CBCT scans

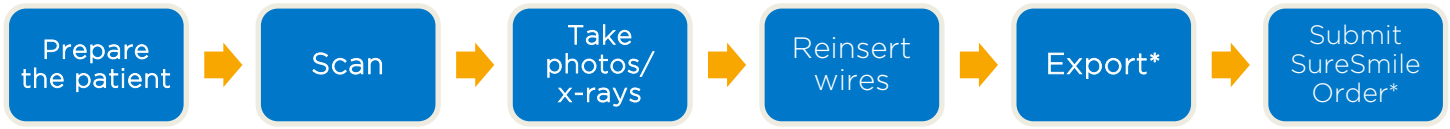
In addition, we strongly recommend capturing diagnostic and final scans intraorally when you plan to use them to design an appliance (aligners, for example).

After capturing the data, export .STL files and submit them to the SureSmile Digital Lab via an order.

The process for the therapeutic scan appointment, which contains the most steps since it must be captured intraorally and requires records, is depicted below.

## Overview of the Therapeutic Scan Appointment

### SureSmile **Advanced**




### SureSmile **Ortho** and SureSmile **Aligner**

*The steps to export the data from Carestream Orthodontic/OMS Imaging and attach it to a SureSmile order may be completed after the patient appointment. To avoid delays to treatment, make sure you submit orders by the end of the day.

# Taking Required 2D Records

The SureSmile system requires current photos and x-rays any time a scan is taken to optimize 3D modeling accuracy. Each photo is used for a specific purpose in Digital Lab modeling or setup processing. A standard photo set consists of:

- 3 extraoral photos: Extraoral photos indicate the natural jaw position and natural smile line. The Digital Lab uses this information when orienting the 3D model to the head position.
- 5 intraoral photos: The Digital Lab references intraoral photos to confirm tooth anatomy, check bite registration, and confirm bracket placement.

The following table illustrates the records required (or recommended) for each model type.

| | Required Photos | Required x-rays | Strongly Recommended |
|---|---|---|---|
| **Diagnostic Model** | - | - | Five standard intraoral + three facial + full mouth Panorex, ceph |
| **Therapeutic Model** | Five standard intraoral + three facial | Panorex + initial or current ceph* *(optional for SureSmile Ortho and SureSmile Aligner)* | Full Mouth + Overjet |
| **Final Model** | - | - | Five standard intraoral + three facial + full mouth Panorex, ceph |

For best results, photos should be taken the same day as the scan. To meet minimum modeling requirements, they must be taken within 4 weeks before or 2 weeks after the scan.

* For the most accurate orientation of the model to the head position, the Digital Lab recommends importing a ceph that includes the Frankfort Plane. If the patient's CBCT scan does not capture this anatomy, you can import the ceph from the initial records.

## Import Records on Time

Import required photos/x-rays into the patient's SureSmile record before the data is sent to SureSmile.

If the 3D data arrives at the Digital Lab without the required records, the order will be placed on "customer hold," and you will have to release the hold before work can begin in the Digital Lab.

## Create a new image set

Create the image set using an integrated imaging system to automatically create the patient record and upload the set, or create the set manually in SureSmile via the web:

1. On the patient overview, click **Image Sets** and then select **Add Image Set...**
2. Enter the name for the image set.
3. If you need to change the date, type the date or click the calendar icon and select the date that the records were taken.
4. Click **Save.**

## Upload multiple images

Next, upload photos and x-rays.

1. Click the **Upload Files** button for the image set.
2. Select multiple image files from the **Open dialog** and click **Open**.
3. Drag and drop images into their correct position in the montage.

# Standards for SureSmile Patients

NOTE: The following standards may not pertain to all SureSmile platforms. Brackets and wires will apply to SureSmile Advanced.

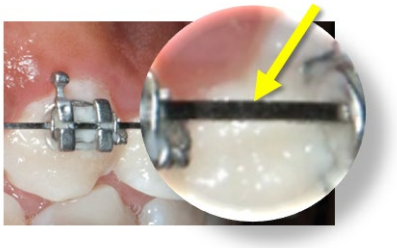
If the patient is not bonded, you will follow your usual scanning procedure for capturing a model of the patient's teeth. SureSmile requires 100% tooth coverage in scans with 2mm of gingiva.

With your Carestream scanner, you will need to understand how to capture data for SureSmile patients who are bonded. The requirements are:

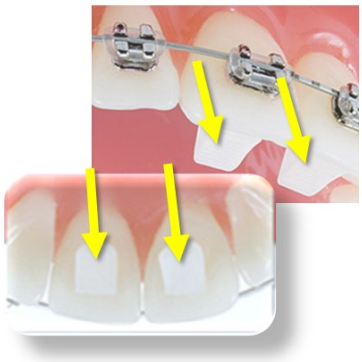
- 100% tooth coverage and interproximal areas
- 100% of bracket face/wings
- 70% of bracket mesial and distal profiles
- 2mm of gingiva

Because the SureSmile system will fill in holes with artificial data, these standards must be met to produce an accurate representation of the patient. See page 15 for coverage examples.

## Prepare the Patient



1. If the patient is bonded, remove the patient's wires in the arches to be scanned. If they are SureSmile archwires, keep track of their orientation to help you reinsert them correctly at the end of the appointment.



2. Remove calculus and any other material that will misrepresent the true shape of the teeth.

   *If the patient has turbos:*

   If the turbos are scheduled to be removed at this appointment, remove them before the scan. Otherwise, enter a note in the SureSmile order to describe the location of the turbos.

3. If you are using self-ligating brackets, close bracket doors.

   NOTE: The manufacturer recommends using retractors to avoid capturing excessive tissue in scans—especially for anterior teeth (see the Scanner User Guide).

# Scan Procedure – CS 3500

## Scanning Bonded Patients

When you receive your CS 3500 training, you will learn how to scan both arches and the bite. You will also learn how to use tools for erasing extra data that may have been captured (i.e., cheek, tongue). You must erase and rescan the area if anything is touching the teeth or bracket surfaces.

### In General

- Use compressed air and other methods to remove saliva from the patient's teeth and brackets. Repeat during the session when needed.
- Avoid capturing soft tissue (tongue, lips, cheeks) since soft tissue can move between pictures and confuse the system. This rule also applies to your fingers. If you accidentally capture any extraneous anatomy, use the trim function to remove this data.
- Switch the scanner head when moving from posterior (Pedo Tip) to anterior (Adult Tip) since the pedo tip is helpful in tight spaces while the adult tip captures larger areas.

### Opaque and Capture Brackets

- The CS 3500 is not designed to capture brackets. For all bracket types (including clear), you must apply an opaque solution to assist the scanner in capturing bracket geometry. Consider using retractors to keep the opaque solution from being wiped off of the brackets before they can be scanned.
- Attempt to include a view of the brackets as you make your occlusal pass.

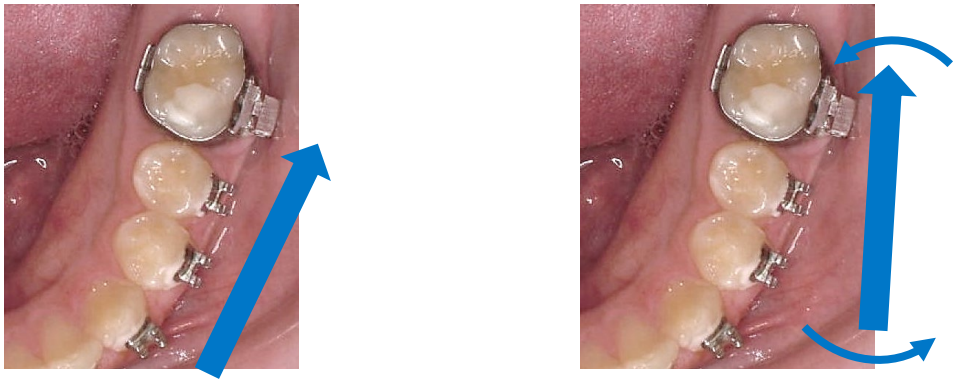
### Capture the Incisal Edges:

- While completing the case Rx, it is important to be aware of the recipient being scanned. Do the patient's teeth have brackets bonded or not? If so, it is critical that the Brackets Present field is checked. This will allow the scanner to include all attributes of the bracket in the processed scan.

### Capture the Interproximal Areas

- When capturing the lingual view, angle the scanner down over the lingual of the anteriors rather than turning parallel with the arch.
- In tight spaces, angle the scanner tip to take advantage of the reach of its corner.

- Angle the scanner tip to focus on the mesial cusp of the far tooth, and then change the angle to focus on the distal cusp of the near tooth (as pictured below).



Proceed to **Review Scan Quality** section

# Scan Procedure – CS 3600

## Scanning Bonded Patients

When you receive your CS 3600 training, you will learn how to scan both arches and the bite. You will also learn how to use tools for erasing extra data that may have been captured (i.e., cheek, tongue). You must erase and rescan the area if anything is touching the teeth or bracket surfaces.

### In General

- Use compressed air and other methods to remove saliva from the patient's teeth and brackets. Repeat during the session when needed.
- Avoid capturing soft tissue (tongue, lips, cheeks) since soft tissue can move between pictures and confuse the system. This rule also applies to your fingers. If you accidentally capture any extraneous anatomy, use the trim function to remove this data.
- The scanner has two tip options for scanning the intended areas. The side orientation tip has a lower profile. The normal tip has a narrower window with a higher profile. Switching the scanner tip to the slide orientation may help with scanning the posterior teeth.

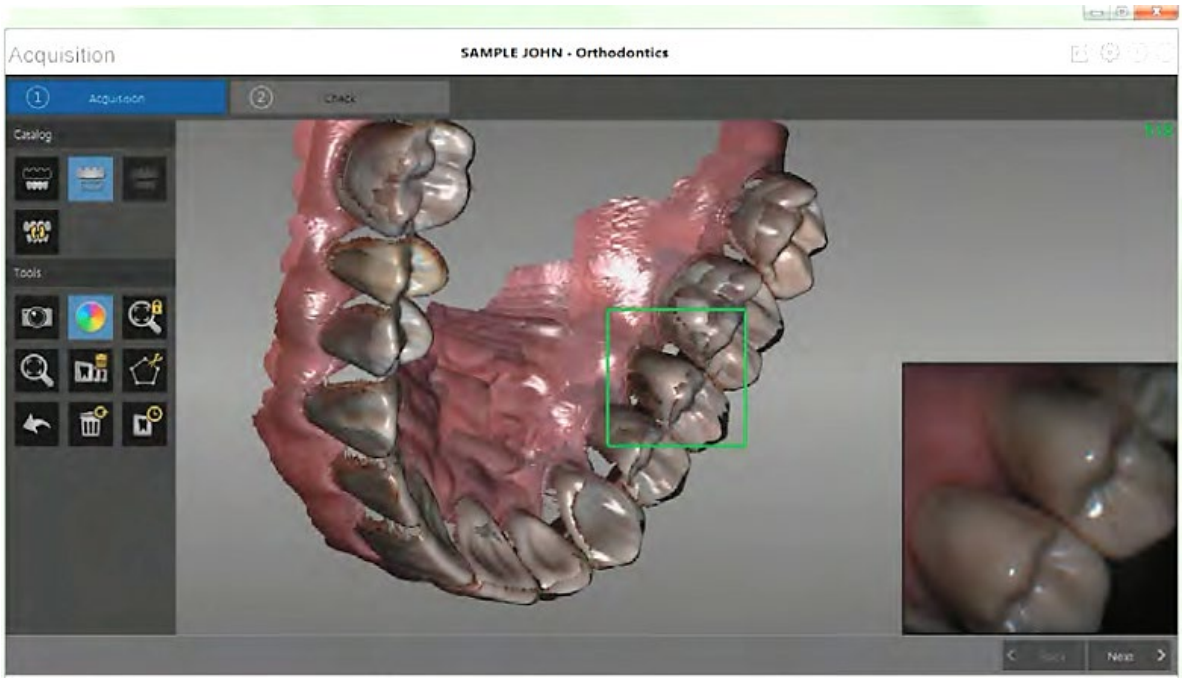
#### Opaque and Capture Brackets

- The CS 3600 is not designed to capture brackets. For all bracket types (including clear), you must apply an opaque solution to assist the scanner in capturing bracket geometry. Consider using retractors to keep the opaque solution from being wiped off of the brackets before they can be scanned.
- Attempt to include a view of the brackets as you make your occlusal pass.

**Important: Re-dry the teeth as appropriate throughout the acquisition process.**

### Capture the Occlusal Surface:

- Hold the CS 3600 at a 90-degree angle to the occlusal surface of the teeth. Rest the tip on the tooth surface to steady the CS 3600. Live video is displayed on the video preview screen, and the acquisition begins. Images are automatically acquired and transferred to the 3D model display screen.
- *The image below shows several acquisitions of the upper jaw.*



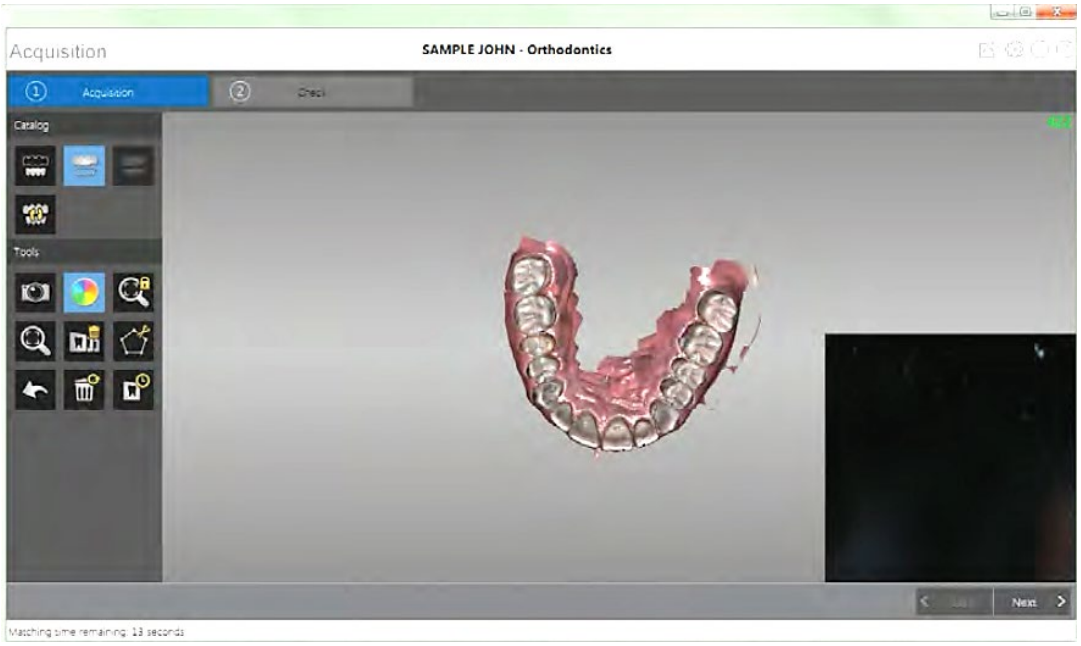

### Capture the Lingual Surface

- When the occlusal surface scan is complete, scan the lingual surface of the teeth. Hold the CS 3600 at a 45-degree angle to the lingual surface of the teeth. Be sure to include several millimeters of gingival tissue in the lingual scan.

### Capture the Buccal Surface

- When the lingual surface scan is complete, scan the buccal surface of the teeth. Hold the CS 3600 at a 45-degree angle to the buccal surface of the teeth. Be sure to include some of the occlusal surface and several millimeters of gingival tissue in the buccal scan.
- As needed, fill in buccal data to capture the area shadowed by the brackets shadowing (which will become holes in the data). See your iTero tutorials for a demonstration

  *The example below shows a 3D model of the upper jaw when the occlusal, lingual, and buccal surfaces have been completely scanned, as well as much of the palate.*



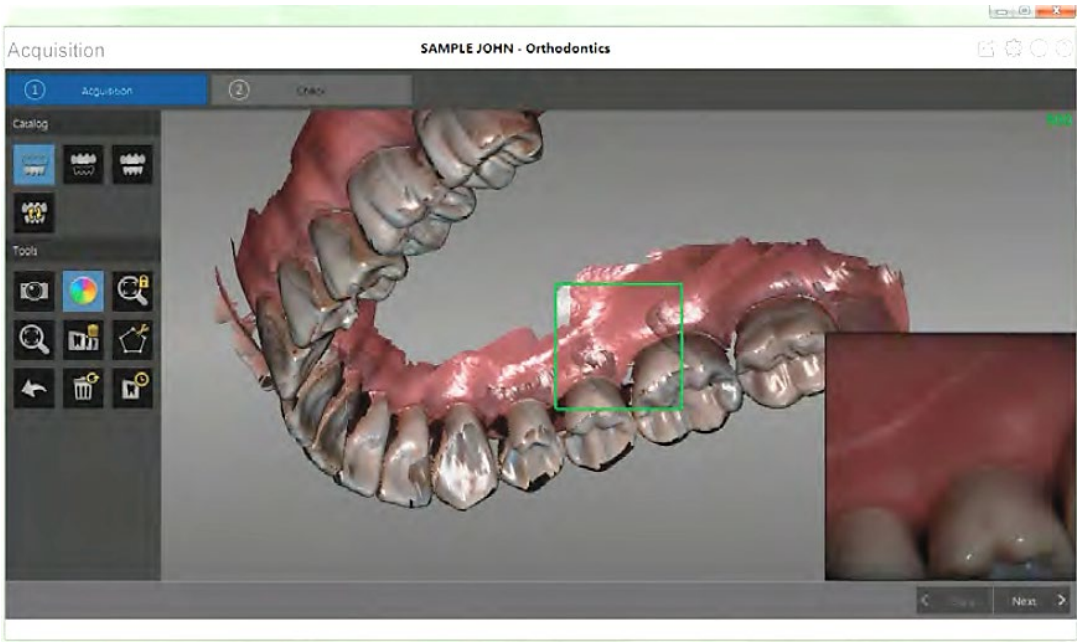

**Important: If holes are displayed in the scanned image, re-scan the area until the holes are filled. Use the mouse wheel to zoom in on the image for a closer look.**

## Scan Lower Jaw

- Once the upper jaw has been scanned, you can begin scanning the lower jaw.

  Click and repeat scanning of all surfaces as upper until the teeth on the lower jaw are scanned.

  *The example below shows a 3D model of the lower jaw when the occlusal, lingual, and buccal surfaces have been completely scanned, including soft tissue.*

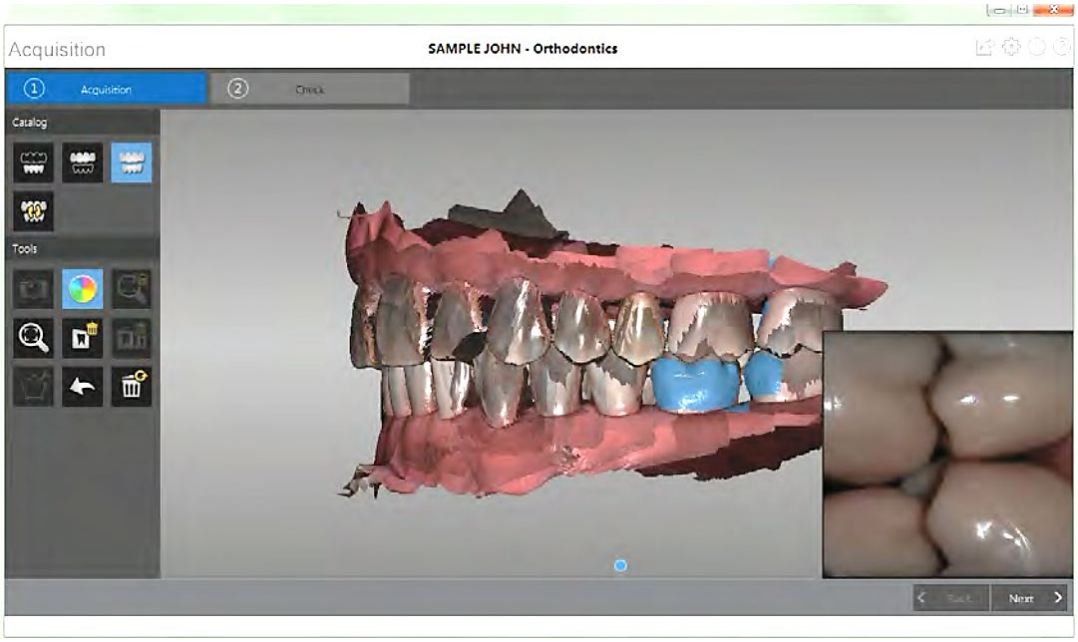


- Visually inspect the 3D model for any holes. If holes are present, re-scan the area until the holes are filled.
- When you are satisfied with the 3D model, continue with the buccal bite registration acquisition

## Scan Buccal Bite Registration

1. Click .
2. Have the patient bite down.
3. Position the CS 3600 at a 90-degree angle to the buccal surface of the teeth, and align the point where the upper and lower teeth meet in the middle of the video preview screen. Rest the tip on the tooth surface to help steady the CS 3600.
4. Move the CS 3600 slightly up and down to trigger the bite registration acquisition.

   *The example below shows a buccal bite registration.*




*A dot* *is displayed at the bottom of the window to indicate the capture was successful. A successful bite image includes both the upper and lower arch.*

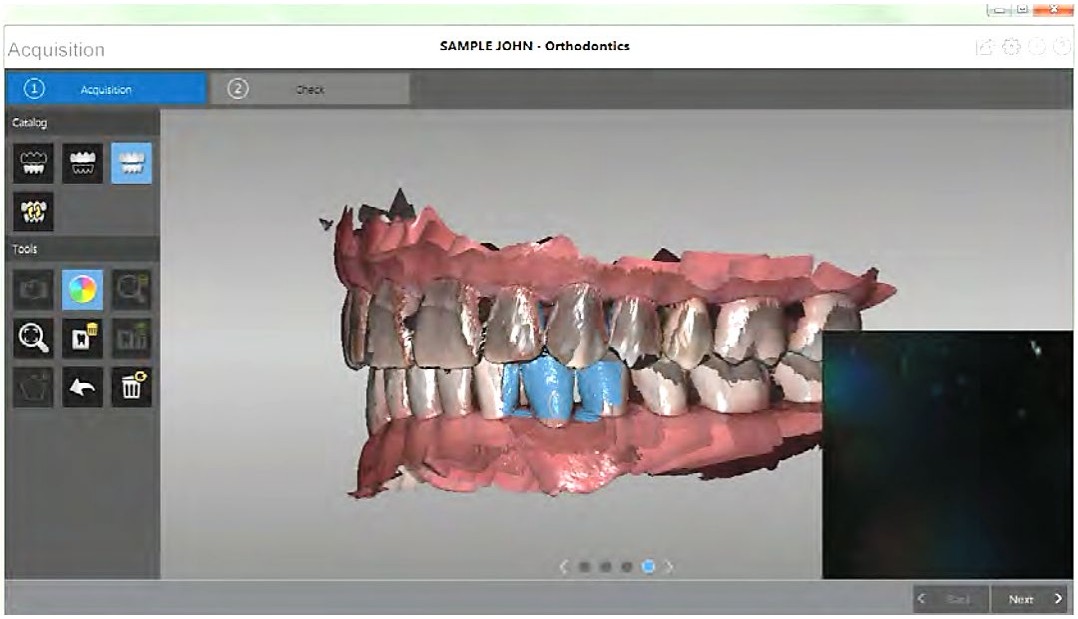
Once both arches are displayed in the Acquisition interface, the bite image is successful, and you can acquire additional bite images, which will increase the accuracy of the bite.

**Important: For a full arch, you should acquire at least four buccal bite images—one on each side of the mouth at the molars, and one on each side of the mouth at the canines.**

Acquire several additional buccal bite images. You can take up to six bite images for a full arch.

Once the bite has been registered, rotate the model and zoom the view to ensure that the bite is accurate and that there are no areas where the bite is mismatched. Click a dot to view the bite for that acquisition.

*The example below shows several buccal bite registrations.*



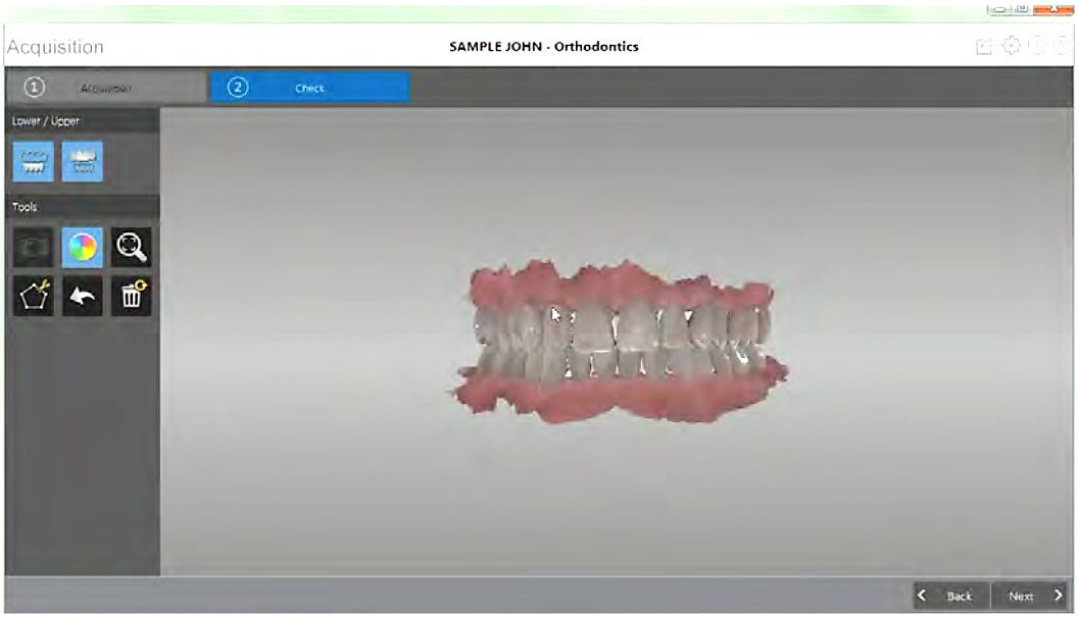

When you have finished acquiring the buccal bite registration, proceed to the check step.

# Review Scan Quality

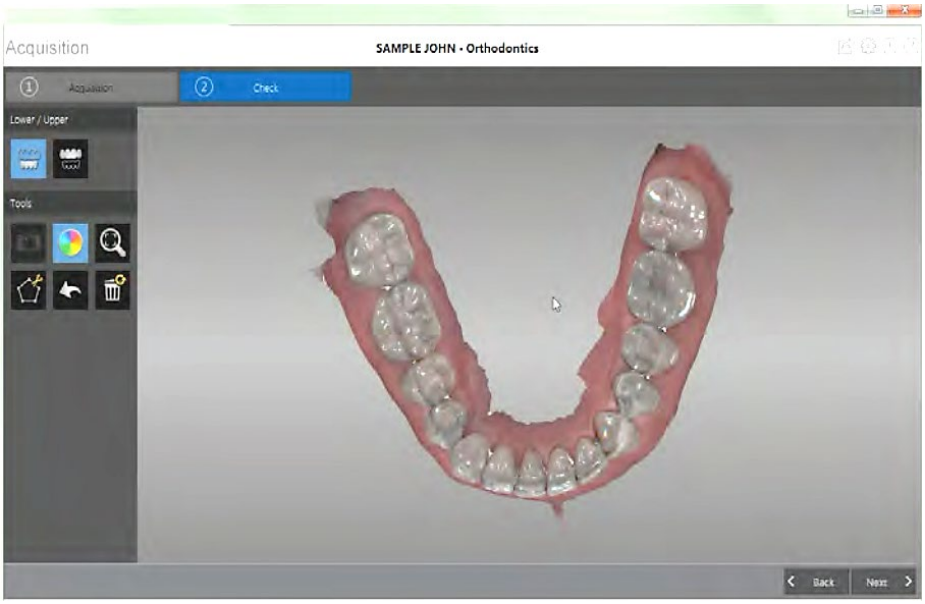
The check step enables you to further process the 3D image to obtain the highest accuracy.

To refine the 3D model and further examine it, follow these steps:

1. Click Next to refine the image.

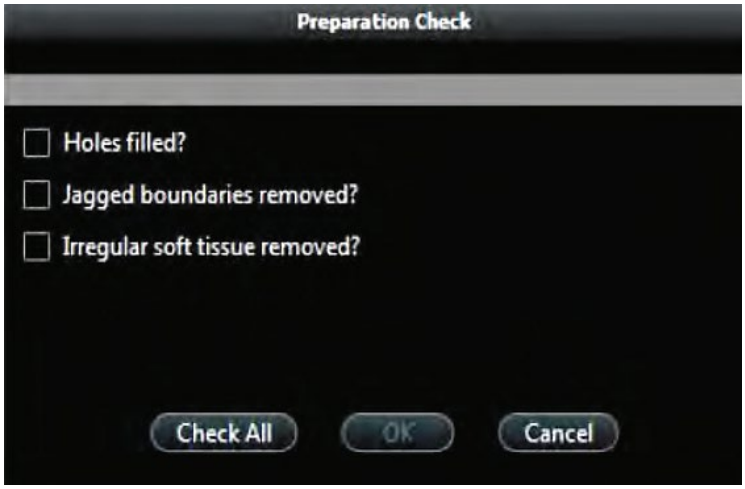



2. Manipulate the refined 3D model using the following methods:
   - Right-click and hold on the 3D model to move it in the window.
   - Left-click and hold on the 3D model to rotate it.
   - If your mouse has a scroll wheel, use the wheel to zoom in or zoom out on the 3D model.
   - Click to scale the model to its best view.
   - Click or to hide the upper or lower jaw. Click the button again to restore the view of the jaw.



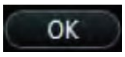

- Click to select and delete excess soft tissue in the image.

3. If you find holes in the image, click Back and re-scan the teeth that are missing data.
4. Repeat steps 1 through 3 until you are satisfied with the 3D model.
5. Click Next. The Preparation Check window is displayed.




6. Examine the 3D model for holes and do one of the following:
   - If there are no holes in the image, click the corresponding option in the Preparation Check window.
   - If there are holes that need to be filled, click Cancel. Click Back and re-scan the affected teeth.
7. Examine the 3D model for jagged boundaries and do one of the following:
   - If there are no jagged boundaries in the image, click the corresponding option in the Preparation Check window.

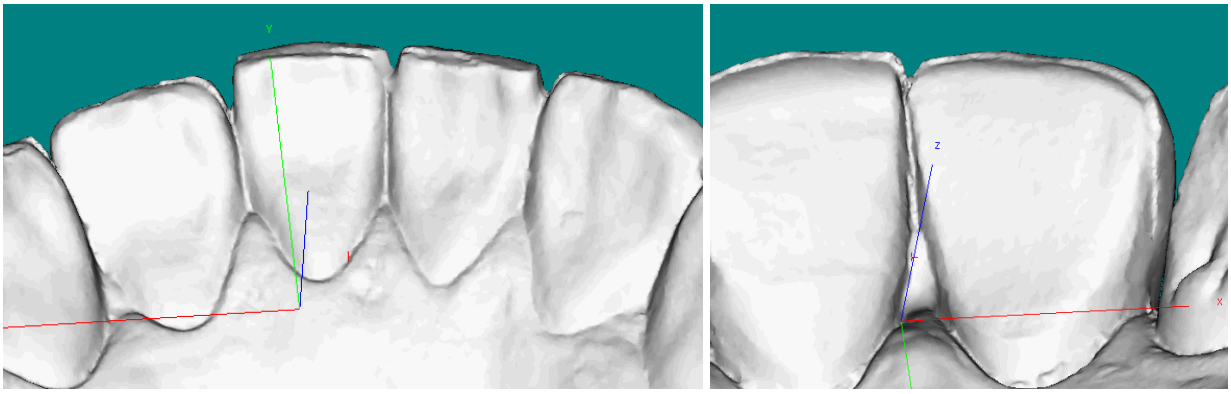
- If you find jagged boundaries in the image, remove the boundaries using the tool.

8. Examine the 3D model for irregular soft tissue and do one of the following:
   - If there is no irregular soft tissue in the image, click the corresponding option in the **Preparation Check** window.
   - If you find irregular soft tissue, remove the irregular soft tissue using the tool.
9. When satisfied with the 3D model, click  to send the 3D model to the imaging software.

## Examples of Insufficient Overlap in Anterior

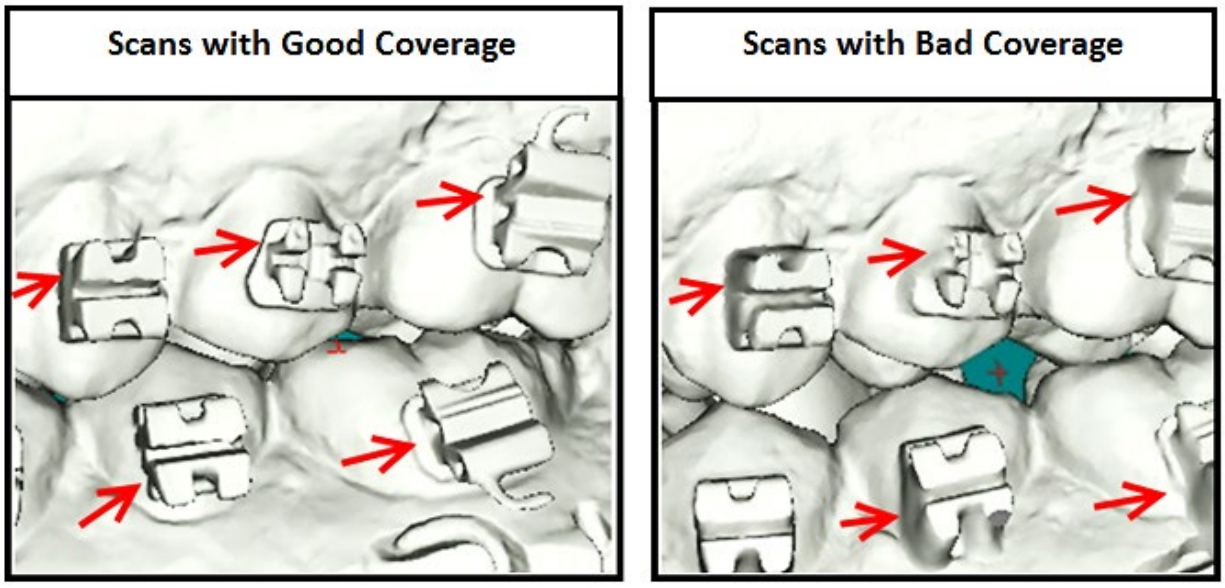
If you see ridges or grooves at the incisal edge that do not reflect actual tooth anatomy, the scan has not accurately registered; and it will ultimately be rejected by the SureSmile Digital Lab. Do not order this scan. Instead, delete the segment and re-scan to capture accurate data.

NOTE: Once the scan is sent to Carestream Orthodontic/OMS Imaging, it cannot be modified. If the scan is rejected by SureSmile, the patient must be recalled and the data re-captured.

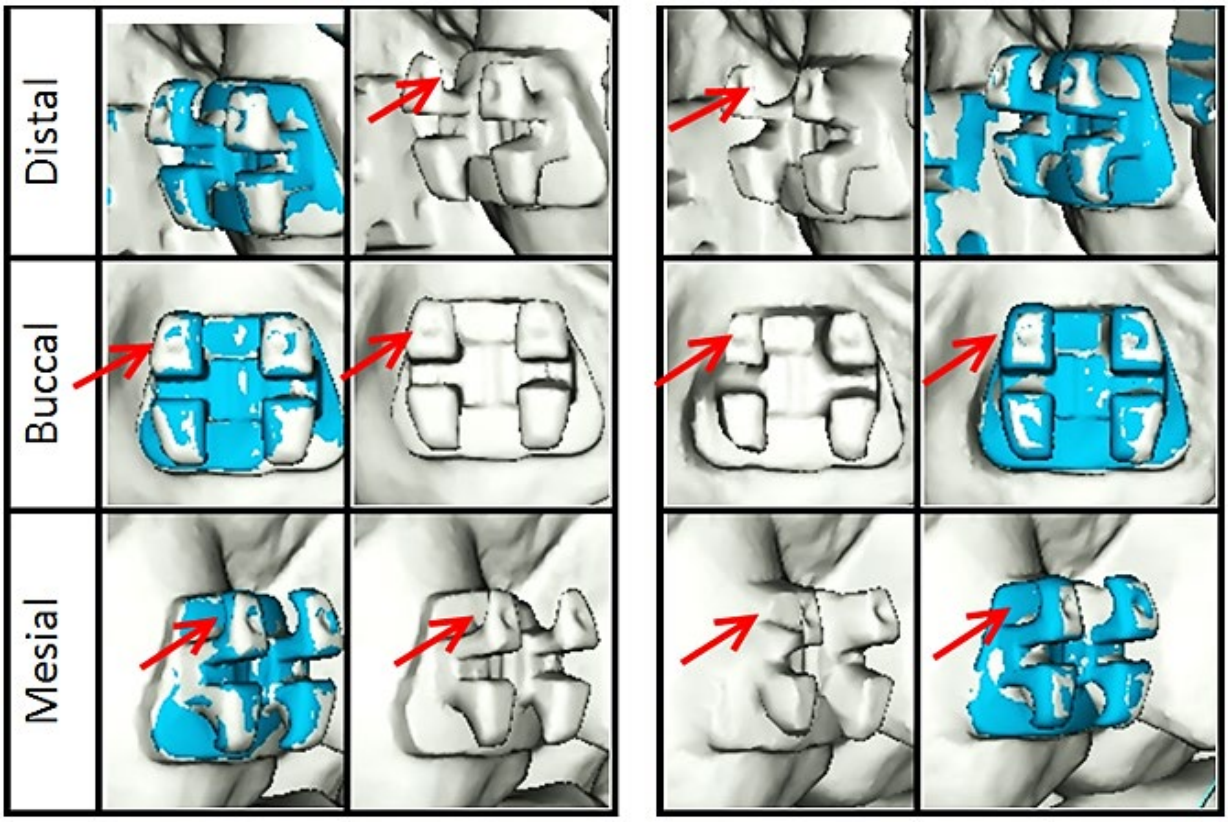


These images are from SureSmile after the data has been imported.

Looking at the left buccal view, you can see the missing coverage causes the brackets' shape to be distorted.  The distortion will cause bracket registration to be compromised.



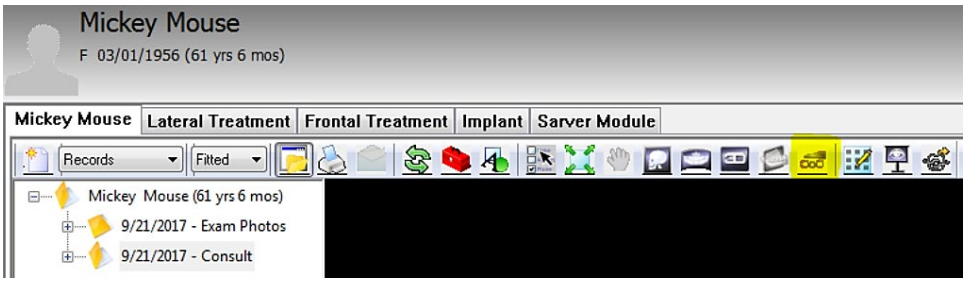

Magnification of the UL5 bracket shows the distortion of the upper mesial wing and pad.

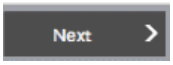


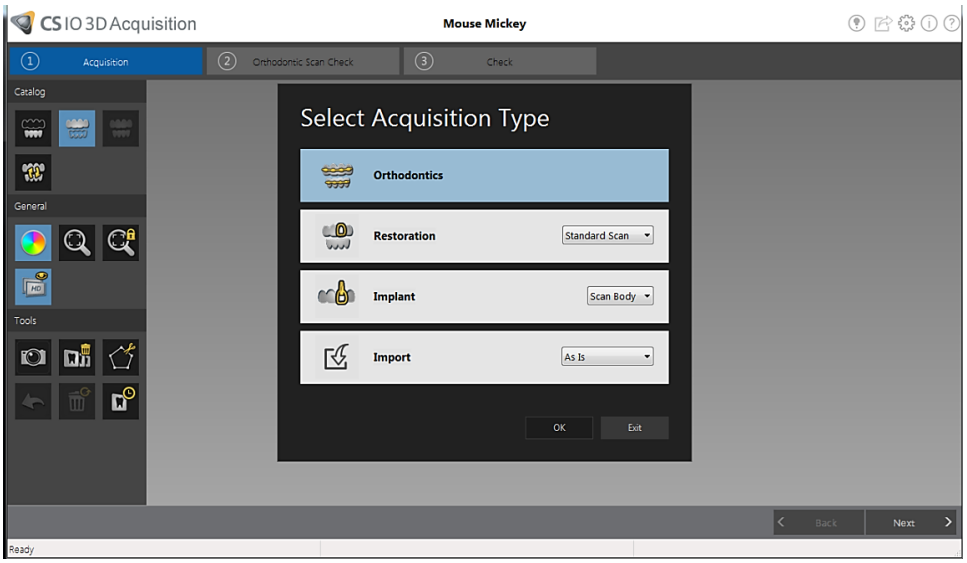
# Using the Carestream® Intraoral Scanner to Capture Data for SureSmile

## Start the Patient's Carestream Record

1. Create or open the patient's record in Carestream Orthodontic/OMS Imaging
2. Click the **Acquisition** button (highlighted in yellow below.




3. Select "**Orthodontics**" acquisition type and click on 


On the CS 3600, press the mode button for one second to select the acquisition mode. The mode indicator LED turns blue.

4. Proceed to the scanning windows and tools.

# Take the Scan/Send Order

1. If you are capturing data for a therapeutic model, capture the upper and lower

   OR

   If you are capturing data for an update scan or supplemental scan, capture only the arches or areas needed.

2. Fill in any voids to capture:

   - Therapeutic scan: 100% of tooth surfaces for all teeth in a therapeutic scan
   - Update scan: 100% of tooth surfaces for changed teeth plus adjacent teeth for a minimum of 3 teeth (to provide good coverage for integrating new data with the therapeutic model)
   - Supplemental scan: 100% of tooth surfaces for teeth that cannot be modeled from the CBCT scan plus adjacent teeth for a minimum of 3 teeth (to provide good coverage for integrating new data with the therapeutic model)
   - 100% of bracket face/wings
   - 70% of bracket mesial and distal profiles
   - Gingival margins

3. Complete the order to send the data to the CS computer

   You can take patient photos and x-rays at the time that works best for you during the appointment. Since the file transfer process may take several minutes, you may find this is a good time to take records.

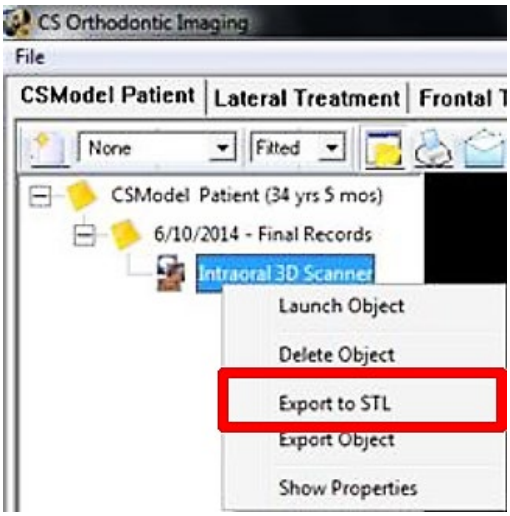
   NOTE: The SureSmile Digital Lab recommends marking the bite with articulating paper when preparing to take photos. Also, wires must be removed for SureSmile records.

4. For SureSmile Advanced, reinsert the archwires and complete the patient appointment.

## Orthodontic Imaging Users: Export Scan Data

If you are using the Orthodontic Imaging software, follow these steps to export files.

1. Select a patient and open **Carestream Orthodontic/OMS Imaging** software.
2. Right-click the 3D Model in the visit and select **Export to STL** to move the STL files to a designated location.
3. The **Save As** dialog box is displayed, enabling you to specify a destination and file name. The default location is the **Documents** library
4. Browse to a location and click **Save**. The **MeshConverter result** dialog box is displayed, confirming that the file was exported successfully.

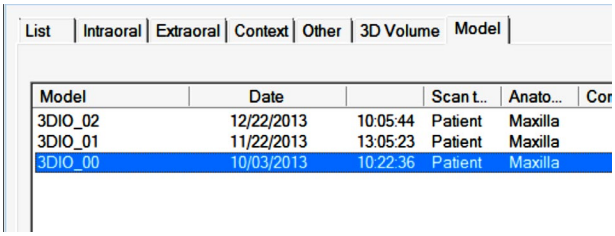



5. The STL Files are exported automatically to the chosen location.
6. The files can now be transmitted to a third party using your preferred method (web portal, flash drive, and so forth)

## Dental Imaging Users: Export Scan Data

If you are using the Dental Imaging software, follow these steps to export files.

1. Select a patient, and open **Dental Imaging Software**.
2. Open the patient history under the **Model** tab, and select the scan to be exported.



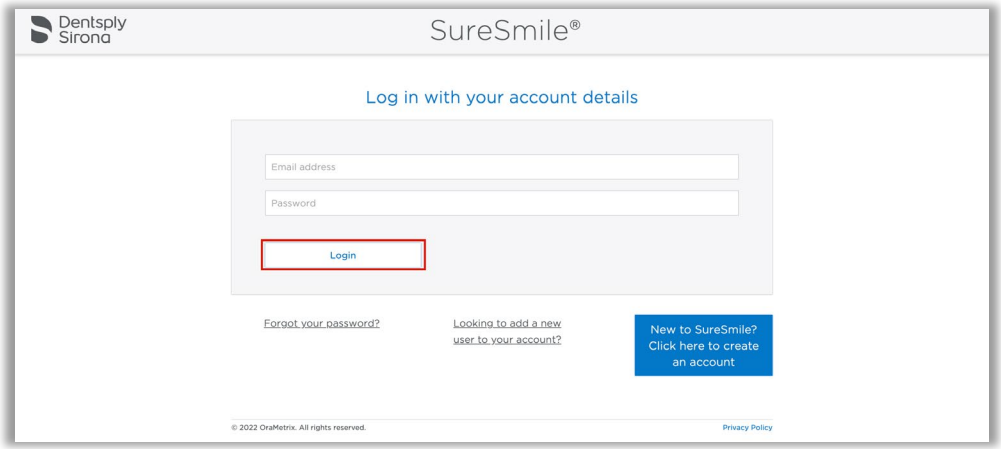

3. Click **Send To** to move the STL files to the desktop. The **MeshConverter result** dialog box is displayed, confirming that the file was exported successfully.
4. The STL Files are exported automatically to the desktop in a folder containing the patient's name.

TIP FOR ALL USERS: Keep your scans organized so you can easily find them for import into an order for a SureSmile model. The files are given default names. You can use Windows Explorer to rename them to the patient's name or ID. Or you can save them to a folder that identifies the patient.

# Ordering a Therapeutic Model from STL/PLY Files for SureSmile Advanced

## Create/Open a Patient Record

1. Login to SureSmile: https://login.SureSmile.com/
2. Add a new patient record or open a patient record.



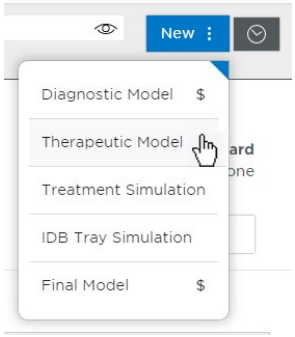

## Select a Case Type

1. On the Patient Overview, click the **New** button and look at the menu.
2. If the "Select Case Type" option is available, choose it from the menu to go to the Patient Profile page. (If it is not available, continue to the steps below "Start a Therapeutic Model Order.")
3. In the drop-down menu, select the appropriate case type and click **Save Changes**. The software returns to the Patient Overview.

   WARNING: If your patient will be treated with custom wires now or as a later therapy, do NOT select the Aligner case type.
4. Continue to the steps below "Start a Therapeutic Model Order."

## Start a Therapeutic Model Order

1. On the Patient Overview, click the **New** button and choose Therapeutic Model. A new model order opens.
2. Update the Dental Exam for the Teeth tab.
3. If the patient is bonded, select the Brackets tab and update the Dental Exam for the bracket assignments.

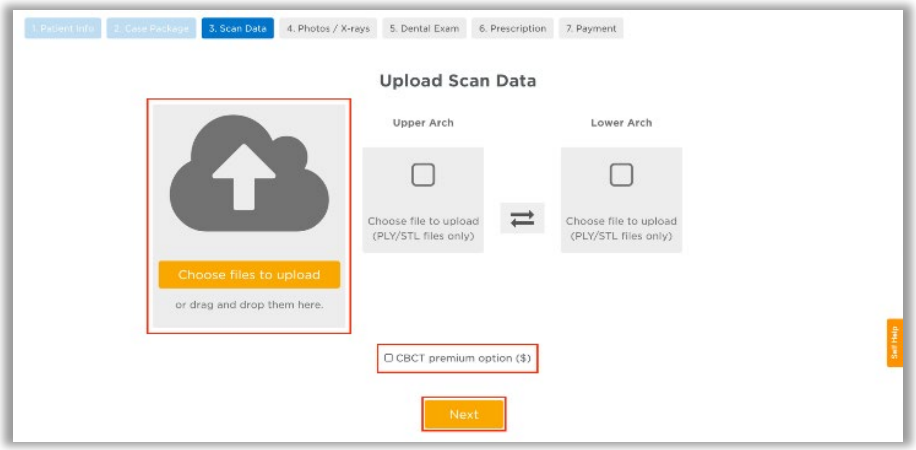


# Upload 3D Scan Data Files

1. For Upper Jaw, click the **Choose File** button, select the patient's upper scan file and click **Open**.
2. For the Lower Jaw, click the **Choose File** button, select the patient's lower scan file and click **Open**.

   At this point, the files are simply assigned but not yet uploaded. The "Submit Product" button will not become available until you upload files.

   NOTE: The bite data is not required since the upper/lower relationship was set at the time the data was captured.
3. Click **Upload Files** and wait a minute for the files to be copied to the cloud. A confirmation appears in the "Already uploaded" area.



# Submit the SureSmile Advanced Order for a Therapeutic Scan

The *Submit Product* button becomes available for a therapeutic model order when you have uploaded files for both the upper and lower arches.

TIP: If you see a red notice instead of the Submit button, you have skipped the steps to select a case type. Follow the link in the notice to make your choice.

1. Click in the Product Notes area and type any relevant notes regarding your order.
2. Click the "Deliver with Brackets" checkbox as needed:
   - In a therapeutic model order, the "Deliver with Brackets" checkbox is checked by default. If this is correct (the patient is bonded and will receive custom wires), continue to the next step.

   OR

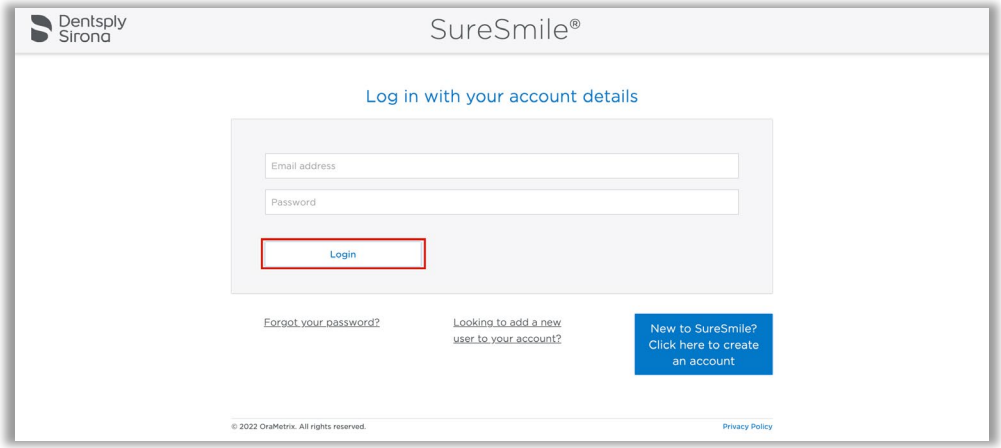
   - if you are scanning a patient that is NOT bonded (or will be debonded at the next appointment) to transition from braces to aligners, uncheck the "Deliver with Brackets" checkbox.
3. Click Submit Product.

   Once an order is submitted, the therapeutic model order status is updated to *Ordered*. The order is now restricted to "*Read Only*" in the practice. This means you can review it, but you cannot change it. If you have submitted an order that you would like to cancel or change, please contact SureSmile Customer Care.

# Ordering a Therapeutic Model from STL/PLY Files for SureSmile Ortho or SureSmile Aligner

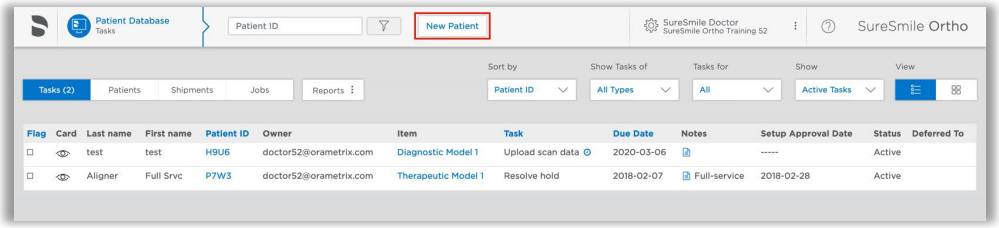
## Create/Open a Patient Record

1. Login to SureSmile: https://login.SureSmile.com/



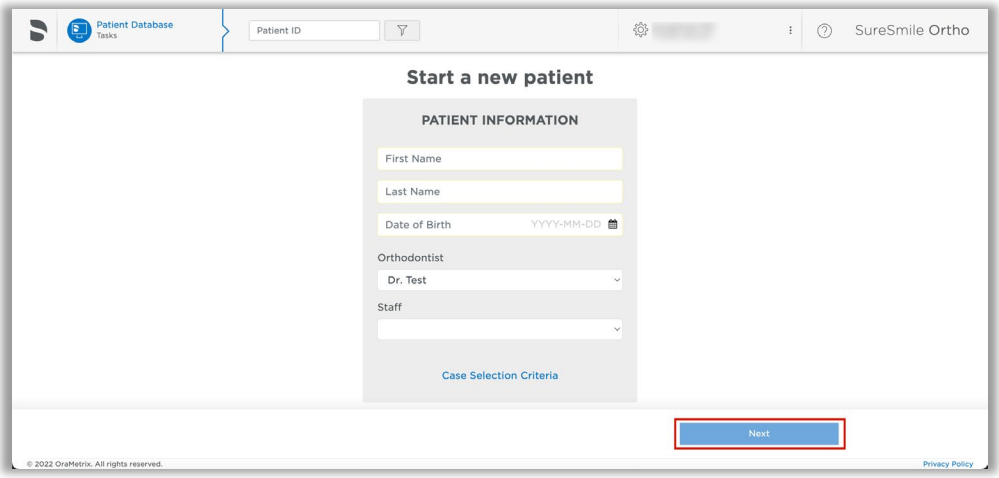

2. Add a new patient record or open a patient record.

   NOTE: You should use Google Chrome, Mozilla Firefox or Safari



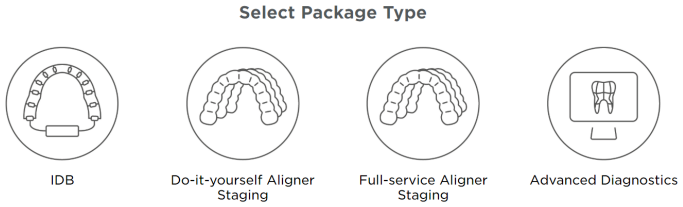

## Enter Patient Information

1. Enter the patient's first name, last name and DOB. The orthodontist will populate automatically but you have the option to choose a different doctor if needed. Staff is optional.



## Select a Package Type (This step does not pertain to SureSmile Aligner)

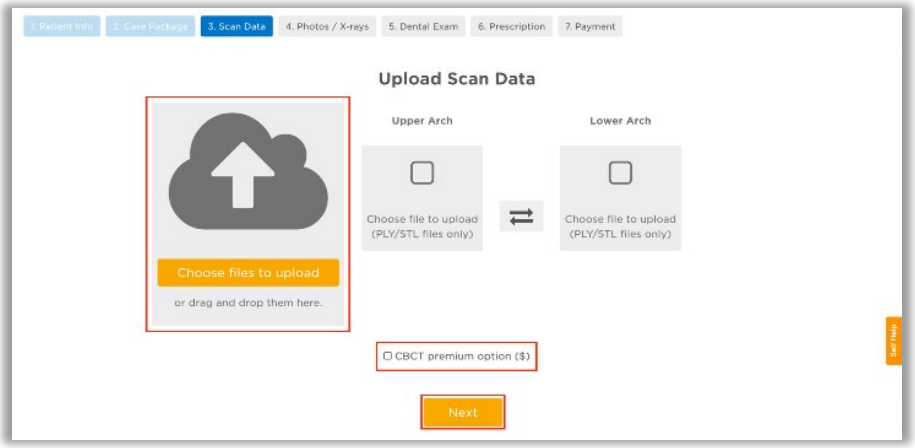
- Full-service Aligner Staging - Aligner Case (includes Therapeutic model + setup and staging)
    - Lab-created setup & staging
    - Evaluate and accept plan
    - Print or export 3D models
- Advanced Diagnostics - Therapeutic Model + Advanced Toolset
    - Simulate treatment options
    - Surgery, restorative & extractions
    - Optional: 3D models, IDB trays




## Upload Surface Scan Data

1. Select Choose files to upload or drag and drop scan data files on the icon.

   If you plan to include a CBCT scan to order a premium model, check the check box for CBCT premium option ($). If you select the check box, the system will prompt you to upload the CBCT scan files after the order has been placed.

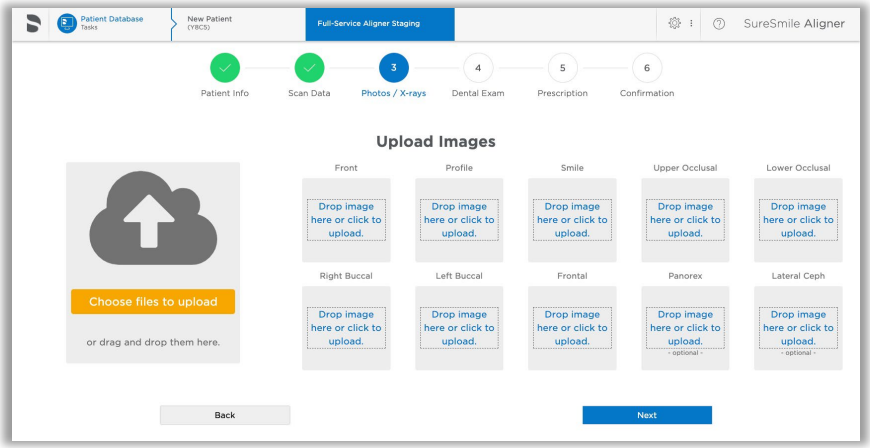



2. Click Next.

# Upload images

1. Select Choose files to upload or drag and drop image files on the icon.
2. Click Next.

   Note: X-rays are optional.for SureSmile Aligner

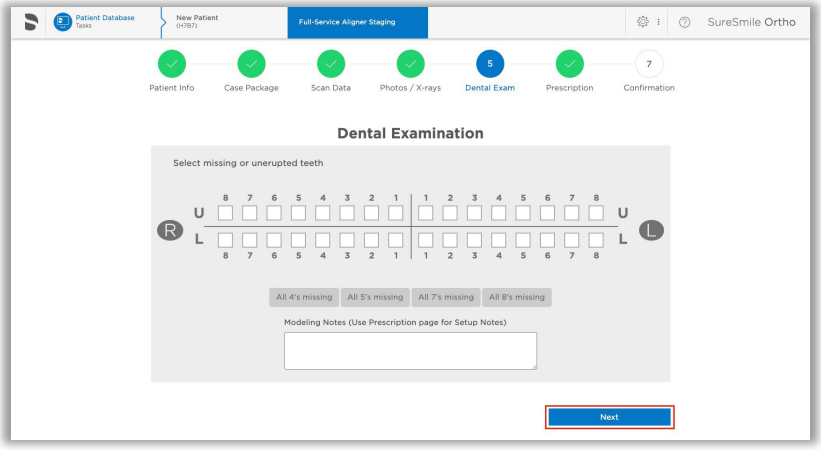



# Dental Examination

Mark any teeth that are not present in the scan as 'missing

1. If any teeth are missing from the scan they need to be marked as missing in the Dental Examination.

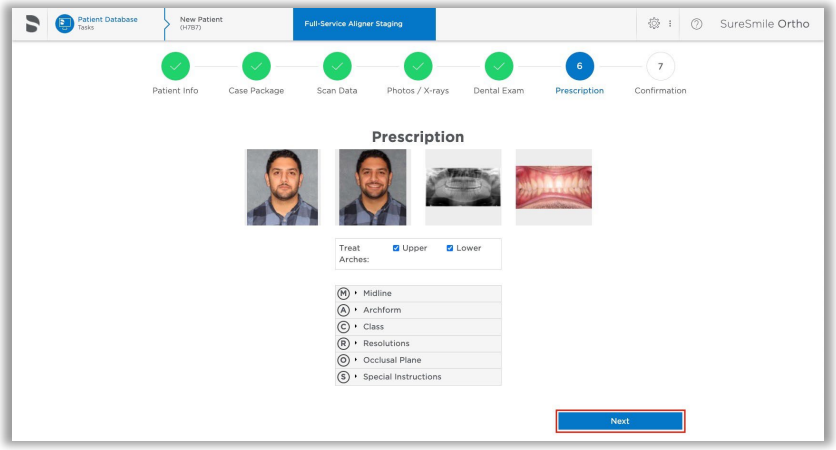
   Select individual tooth boxes to mark them as missing or use the shortcut buttons below the tooth chart to mark multiple teeth at once. You may also leave notes for the Digital Lab in the Modeling Notes box if needed.




2. Click Next.

## Prescription

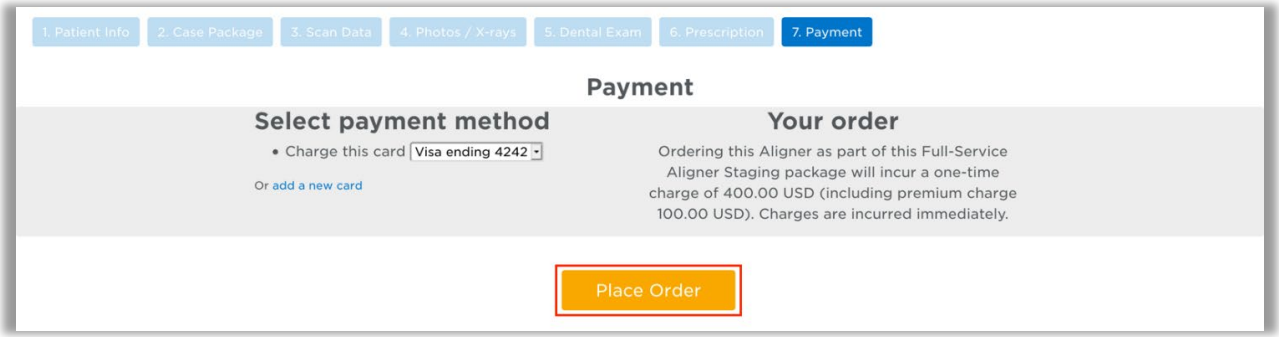
Complete each section of the prescription form (MACROS). Click each section to expand it.




## Payment and Order

Select your payment method then click Place Order. If you are submitting only STL files, you are finished with your order. The Digital Lab will process your order and return it for your review within 6-10 US business days.

If you are submitting a CBCT scan along with your STL files, you will be able to upload the CBCT scan after you click **Place Order.**please continue to step 11.




NOTE: SureScan can only be used on Windows; you cannot use SureScan on a Mac.

# Ordering an Update Model

**For SureSmile Advanced only.** This section is not applicable for SureSmile Ortho and SureSmile Aligner.

An update scan is used to update the therapeutic model of bonded patients in the event of:

1. A newly erupted tooth has been added to treatment.
2. One or more brackets were rebonded or repositioned.
3. The tooth anatomy has changed to the extent that the setup is affected.

NOTE: The update scan is applicable to bonded patients only, and is not available in an aligner case type

## Capture Scan Pieces

Although the iTero software is designed for full arch scanning, you can capture just a section for a SureSmile update scan. Here are some tips:

- You do not have to start at a terminal tooth. The scanner will allow you to start and end at any tooth. When you stop and view the scan, the software will simply close up the hole at either end.
- Use the iTero menus to choose “Next” or “Previous” to skip to the appropriate area and capture each piece.
- To capture multiple areas in one arch, we recommend performing a full arch scan. The sections to be modeled by the Digital Lab should be captured at the highest possible quality; however ancillary areas can be captured to lower standards.

To help the Digital Lab accurately merge and process the update scan data to update the therapeutic model, follow these requirements:

| Requirements | Example |
|---|---|
| Capture the affected teeth AND the adjacent teeth. | If you rebonded the LL4 and LL5, capture the LL3-LL6 |
| Capture a minimum of three teeth. | If you added the UL7 to treatment, capture the UL5-UL7 |
| For the required area, follow quality criteria described for Therapeutic Scans | If you changed the brackets on the molars, completely capture anatomy and brackets for the molars. The anterior may be captured at a lower quality as long as the arch is connected into one piece. |

WARNING: Although SureSmile can upload many segments, your iTero or OrthoCAD software may limit you to two segments per patient. Scan full arches as needed.

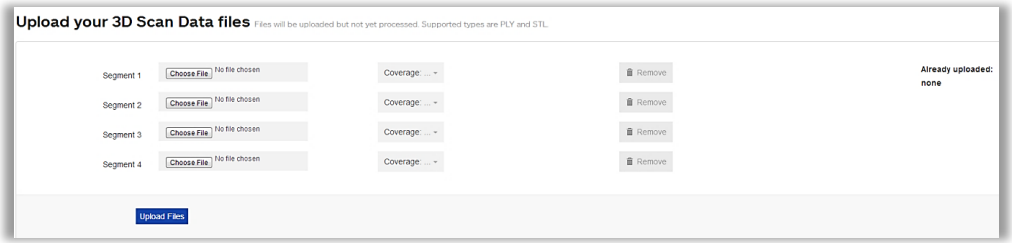
## Start an Update Scan

1. On the Patient Overview, click the **New** button and choose **Update Model**. A new model order opens.

   NOTE: If the update model option is not available:

   - If you selected the Standard or Extended case type, make sure that you have submitted a therapeutic model order.
   - If you selected the Aligner case type, you cannot use the update model feature. To capture changes to tooth anatomy for this case type, order another therapeutic model (additional fees may apply).

2. Update the dental exam and bracket assignments, if changed.



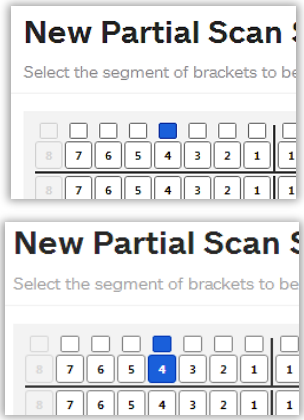

## Upload 3D Scan Data Files

1. For Segment 1, click the Choose File button, and browse to the patient folder you created for this purpose.
2. Select the STL file you saved for the patient's arch (or partial arch) and click **Open**.
3. Click the Coverage drop-down adjacent to Segment 1. A dialog appears with a tooth chart.
4. In the tooth chart, indicate your modeling request:

   If you are capturing a bracket rebond, click the corresponding tooth symbol ONCE. The bracket symbol is shaded in dark blue.

   OR

   If you are capturing a new tooth, click the corresponding tooth symbol TWICE. Both the tooth and bracket symbols are shaded in dark blue.




5. Click Close to close the tooth chart.
6. Repeat these steps for each segment you captured for this patient. You may attach up to four segments.

   OR

   To remove a data segment, click the Remove button adjacent to the segment information.

NOTE: There is room for four segments, which should be more than sufficient. If there are extensive changes to the patient's teeth and brackets, we recommend ordering a new therapeutic model (full scan of both arches).

7. Click Upload Files button and wait a minute for the files to be copied to the cloud. A confirmation appears in the "Already uploaded" area.

**Submit the SureSmile Order for an Update Model**

The *Submit Product* button becomes available for an update model order when you have attached data.

1. Click in the Product Notes and type any relevant notes regarding your order.
2. Click Submit Product.
3. Click OK to confirm you have updated bracket assignments, if changed.

Once an order is submitted, the update model order status is updated to *Ordered*. The order is now restricted to "Read Only" in the practice. This means you can review it, but you cannot change it. If you have submitted an order that you would like to cancel or change, please contact SureSmile Customer Care.

# Ordering a Therapeutic Model from a CBCT Scan and a Supplemental Scan

A supplemental scan is used to add data from an optical scan (iTero) to the data from a CBCT scan to form a complete representation of the patient.

This scan is required if the patient has a certain number of teeth with restorations that cannot be accurately modeled from a CBCT Scan. Optionally, it can be used to add a bite segment as well as order a premium modeling service where all or most crowns are modeled from the optical data (additional fee applies).

NOTE: SureSmile Ortho and SureSmile Aligner will need to capture full upper and full lower arches.

Refer to the appropriate CBCT protocol to determine if a supplemental scan (or premium) is needed.

## Capture Scan Pieces

Although the iTero software is designed for full arch scanning, you can capture just a section for patients with minimal restorations requiring a supplemental scan. Here are some tips:

- You do not have to start at a terminal tooth. The scanner will allow you to start and end at any tooth. When you stop and view the scan, the software will simply close up the hole at either end.
- Use the iTero menus to choose “Next” or “Previous” to skip to the appropriate area and capture each piece.

To capture multiple areas in one arch, we recommend performing a full arch scan. The sections to be modeled by the Digital Lab should be captured at the highest possible quality; however ancillary areas can be captured to lower standards.

To help the Digital Lab accurately merge and process the supplemental scan data into the therapeutic model, follow these requirements:

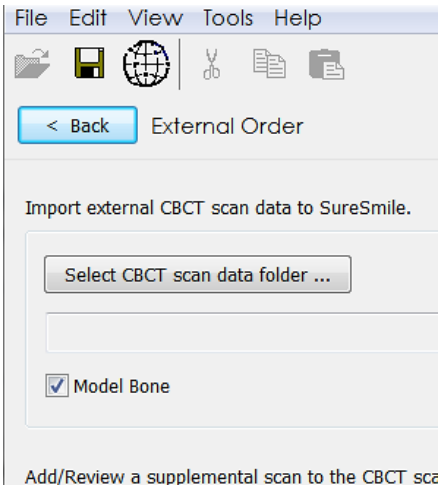
| Requirements | Example |
|---|---|
| Capture the affected teeth AND the adjacent teeth. | If the upper laterals have been built up, capture the UL3-UR3 |
| Capture a minimum of three teeth. | If the UL7 contains a large filling, capture the UL5-UL7 |
| For the required area, follow quality criteria described for Therapeutic Scans | If both sides of an arch have been restored in the posterior, completely capture anatomy and brackets for the restored teeth and adjacent teeth. The anterior may be captured at a lower quality as long as the arch is connected into one piece. |

WARNING: Although SureSmile can upload many segments, your iTero or OrthoCAD software may limit you to two segments per patient. Scan full arches as needed.

# Start a SureSmile Advanced Therapeutic Model Order (for CBCT Scans)

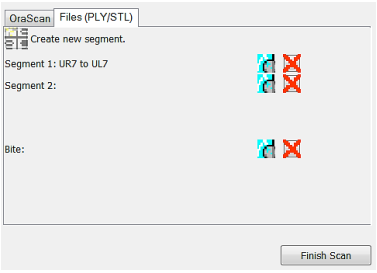
1. In the browser, create an order for a Therapeutic CBCT scan following the instructions in the SureSmile protocol for your CBCT Scanner.
2. Complete the dental exam.
3. Refer to SureScan to import the CBCT data.

NOTE: You must attach CBCT data using the "Select CBCT scan data folder" button before the Finish Scan button becomes available in SureScan and the Submit button available in SureSmile browser.



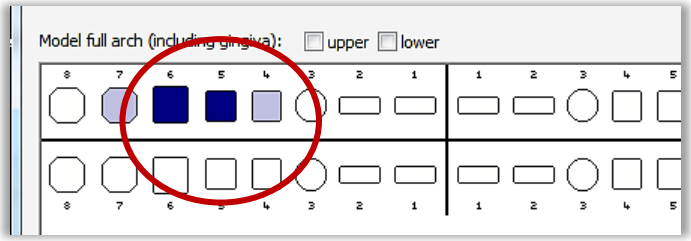

## Import STL Files for Supplemental Scans

1. Select the **Files (PLY/STL)** tab.
2. Under the tab, click the **Create/Preview/Edit** icon adjacent to the segment name (such as Segment 1).



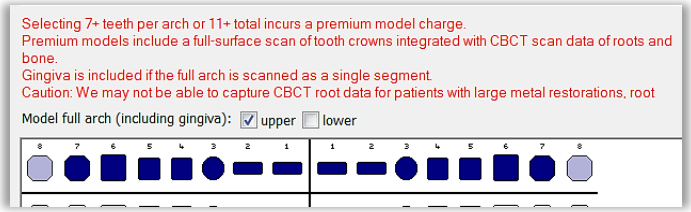

3. In the tooth chart, select each tooth in one arch to be modeled from the supplemental scan due to limitations of CBCT processing.

   *For example,* if the UR5 and UR6 both have metal fillings larger than 3 mm, select each tooth symbol.

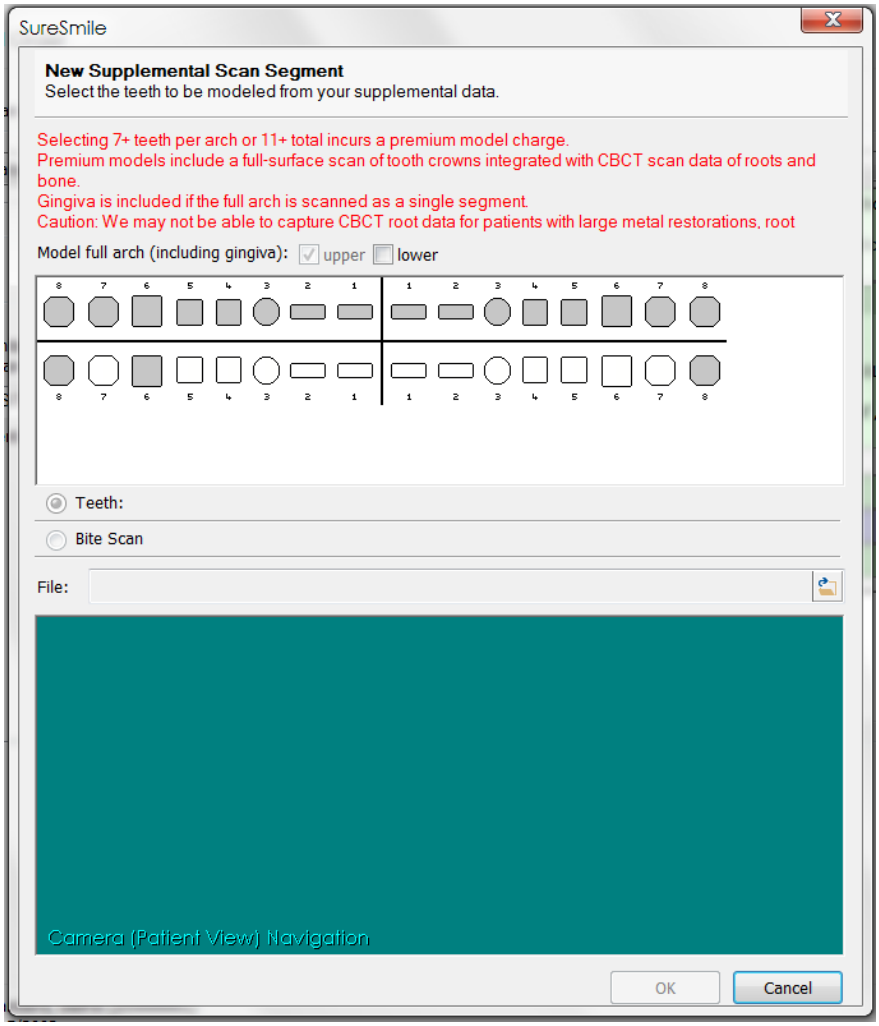



   OR

   Click the arch checkbox (upper or lower) to select all teeth and gingiva in the arch for premium modeling (additional fee applies).




WARNING: This option requires full arch data for the supplemental scan to be processed successfully by the Digital Lab. If you captured partial segments, do not use this feature!




4. Click the folder icon in the **New Supplemental Scan Segment** window, and browse to the patient folder you created for this purpose.
5. Select the STL file you saved for the patient's arch (or piece), and then click **Open.**

6. If needed, use the on-screen camera navigation controls to view the model. Click **OK** when you are finished to close the **New Supplemental Scan Segment** window.

   *Notice that the name of the segment is updated according to the teeth you selected.*

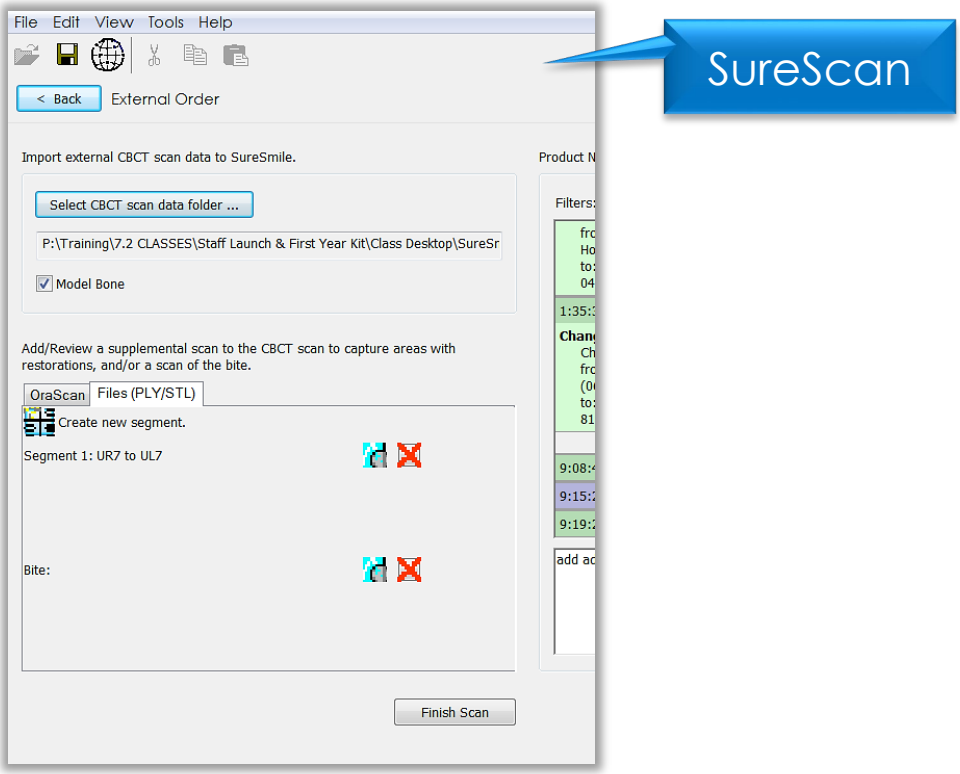
7. If you have another segment, click Create new segment. to add another row of segment icons and repeat steps 2-7 to add another data segment.

   OR

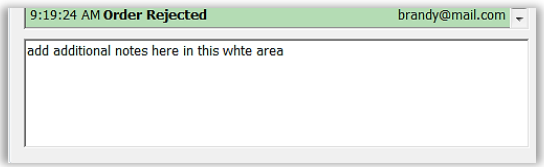
   To remove a data segment, click the button adjacent to the segment information or to view the segment.

NOTE: The bite option is not applicable with ITero scans since bite information is stored within the upper and lower arch files.

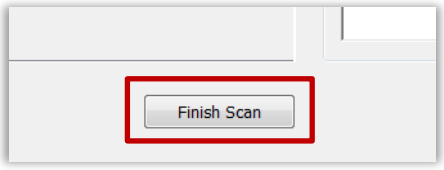
## Submit the SureSmile Advanced Order for a CBCT Scan with a Supplemental Scan




1. Once all necessary scan data have been uploaded for the CBCT scan with supplemental order, it is time to complete the task.
   Click in the white area, and type any additional notes regarding your order.



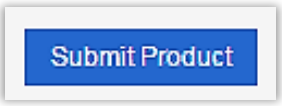

2. Click on **Finish Scan** to complete task for this patient and submit the scan.

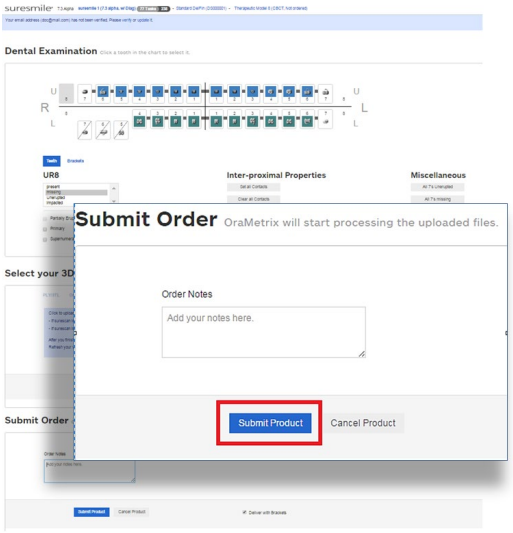



3. Click **OK** and **return to SureSmile** in the browser to submit the product.

## Return to SureSmile

1. After you've completed uploading the scan data for that patient in SureScan and have clicked **Finish Scan** to submit the scan data, return to SureSmile in the browser.
2. Open the order page for the patient and scroll down to **Submit Order** section. Enter any additional information about the order for the Digital Lab if needed (optional).



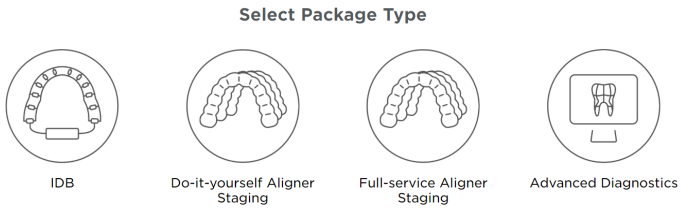




If you have not fulfilled all of the prerequisites

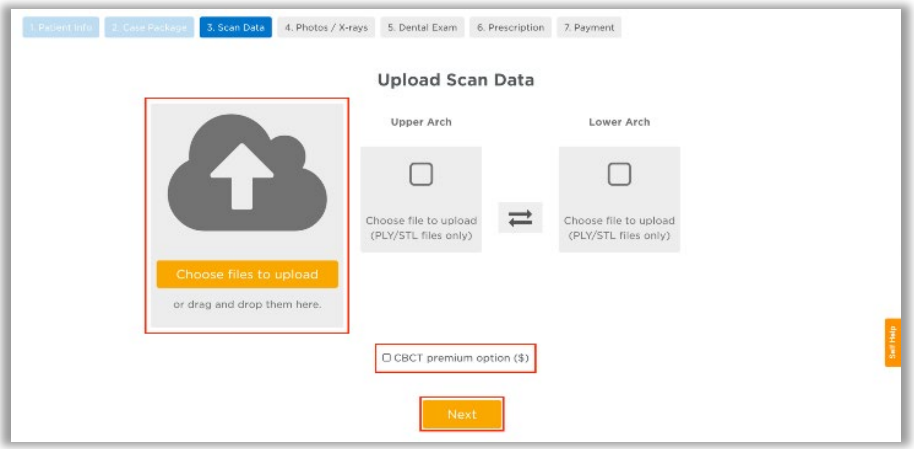
- when you return to the SureSmile browser, SureSmile opens to the Missing Prerequisites section of the Order page and shows which prerequisites are still missing.
- The system displays a reminder to refresh the screen. A message, Scan data missing, remains displayed until you manually refresh the web page. (Press the F5 key.)
- You must submit all missing prerequisites before you can submit the product order.
- Once you fulfill all missing prerequisites, click **Submit Product** to order the model.

# Start a SureSmile Ortho or SureSmile Aligner Therapeutic Model Order (for CBCT Scans)

1. In the browser, create an order for a Therapeutic CBCT scan following the instructions in the SureSmile protocol for your CBCT Scanner.
2. Select Package type. *(This step does not pertain to SureSmile Aligner)*
   - Full-service Aligner Staging - Aligner Case (includes Therapeutic model + setup and staging)
     - Lab-created setup & staging
     - Evaluate and accept plan
     - Print or export 3D models
   - Advanced Diagnostics - Therapeutic Model + Advanced Toolset
     - Simulate treatment options
     - Surgery, restorative & extractions
     - Optional: 3D models, IDB trays

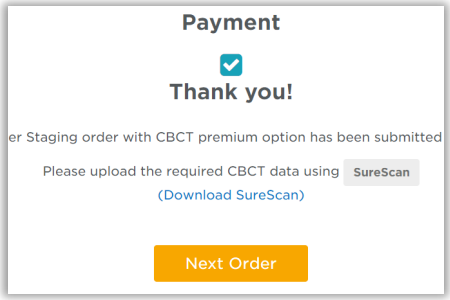



3. Upload Surface Scan Data
   a. Select Choose files to upload or drag and drop scan data files on the icon.
   b. Check the check box for CBCT premium option ($) to include a CBCT scan to order a premium model. The system will prompt you to upload the CBCT scan files after the order has been placed.
   c. Click Next.

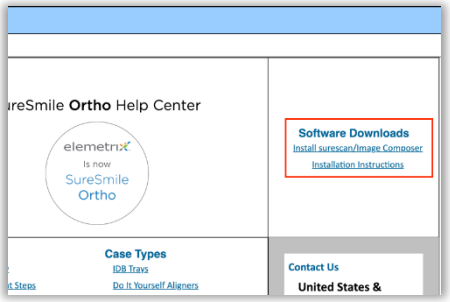


4. Upload images
   - Click 'Choose files to upload' to locate the photos & x-rays on your computer or drag them to this box.
   - Note: X-rays are optional.for SureSmile Aligner
5. Complete Dental Examination - Mark any teeth that are not present in the scan as 'missing
6. Complete Aligner Prescription
   - Choose which arch(es) to treat and decide if you want to treat to 'Ideal' or choose 'Custom' to give the Digital Lab specific instructions.
   - If you choose 'Custom' you will need to complete the aligner prescription we call MACROS. There is more information on MACROS in the next section.
7. Select payment method and place order

   You will then see a confirmation that your order was submitted for processing. The Digital Lab will process your case and return it for your review. Cases are typically returned within 6 business days but no longer than 10 business days.
8. If you selected the CBCT premium option ($) you will be prompted to upload your CBCT scan via SureScan. You will need to install SureScan on the computer where the CBCT scan files are located.
   - If you already have the SureScan software installed on the computer you are using, jump to step 10.
   - If you have SureScan installed on a different computer, jump to step 16. If you need to download SureScan to the computer you are working on, please continue to step 9.

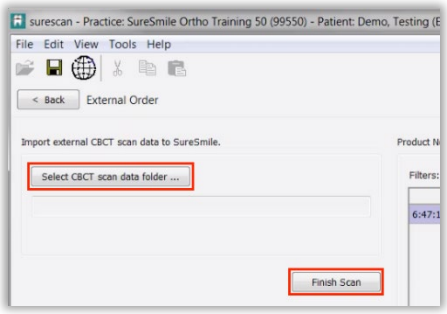



   Note: SureScan can only be used on Windows; you cannot use SureScan on a Mac.
9. A few options to download SureScan:
   - Click the (**Download SureScan**) link; the SureSmile Ortho/SureSmile Aligner Help Center will open.
   - Click **Install SureScan/Image Composer** under Software Downloads and follow the prompts.
   - You can also click Installation Instructions under the install link for instructions on how to download SureScan.



If you have SureScan on the computer, you are working on:

10. Click the SureScan button to open SureScan. If you get a pop-up asking if you want to open SureScan, click the affirmative option to open the program.
11. Login with your SureSmile credentials.
12. The patient should open. If the patient does not automatically open, find the patient in the task list and double click their name to open it.




13. Click the Select CBCT scan data folder … button and locate the CBCT scan files. Once the files have been uploaded, click Finish Scan.

OR

If you will be using SureScan on a different computer:

10. Open SureScan and login with your SureSmile credentials.
11. Find the patient in the task list and double click their name to open it.

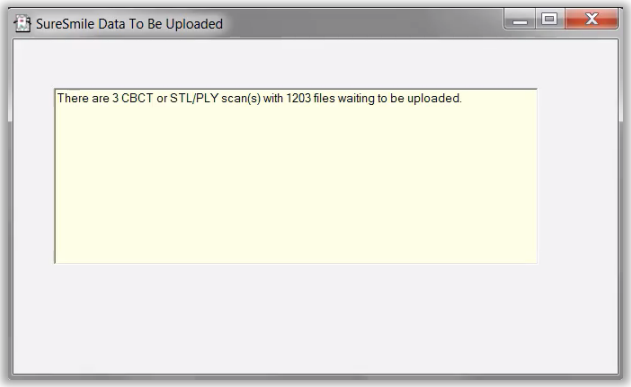
    Click the Select CBCT scan data folder … button and locate the CBCT scan files. Once the files have been uploaded, click Finish Scan.

Once the CBCT data has been submitted, SureSmile begins transferring the data over to the Digital Lab. Due to the large size of the files, this process may take a while depending on your bandwidth.

Please do not close your computer or allow it to go into "sleep" mode for at least 3 hours after submitting so that all of the data can come across. If this is done at the end of the day, you may want to leave your computer on overnight.

If you want to check the transfer status you can right-click the green SureScan icon in the taskbar at the bottom right corner of your screen and select Show.

A window will display where you will see the number of files waiting to be uploaded. When the window is empty, all of the CBCT data has been transferred and it is safe to turn off your computer.



# Ordering Diagnostic or Final Models for SureSmile Advanced

The SureSmile software supports the same STL/ PLY format option for importing data to build diagnostic and final models.

You can capture the patient's dentition using your ITero scanner or any other device that can export a PLY or STL file. For example, some offices use a tabletop scanner to capture plaster models for initial and final records.

The requirements for SureSmile scan quality are:

- 100% of every tooth surface
- 2 mm of gingiva
- No interproximal, gingival or lingual holes
- No missing cusp tips

Just like the therapeutic scan, a standard record set including photos and x-rays helps the Digital Lab with tooth modeling. For diagnostic and final models, these records are recommended rather than required.

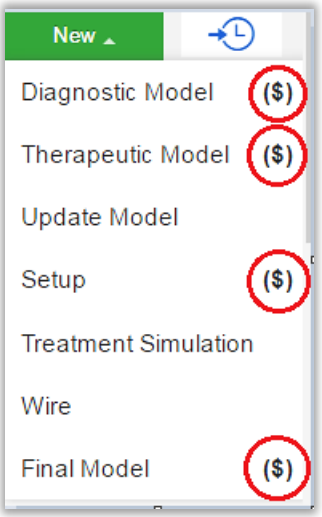
## Start a Diagnostic/Final Scan

1. Open SureSmile via your browser.

   On the Patient Overview, click the **New** button and choose **Diagnostic (or Final) Model**. A new model order opens.

   NOTE: If you see a $ sign in the menu option, a fee applies for this service.

2. Update the Dental Exam for the Teeth tab.

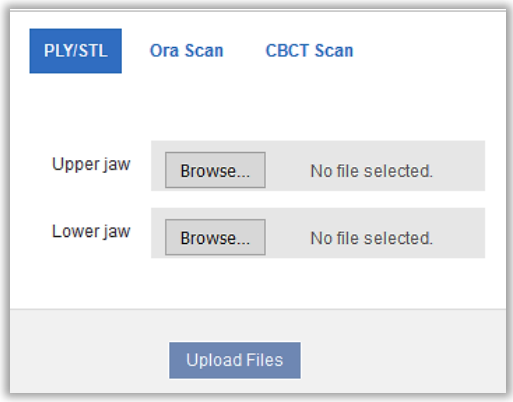



*$ indicates a fee will apply for that service*

## Import STL Files for Diagnostic/Final Scans

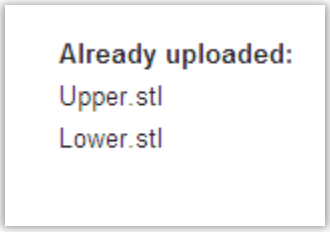
1. For Upper Jaw, click the **Choose File** button, select the patient's upper scan file and click **Open**.
2. For the Lower Jaw, click the **Choose File** button, select the patient's lower scan file and click **Open**

   At this point, the files are simply assigned but not yet uploaded. The "Submit" button will not become available until you upload files.




   NOTE: The bite data is not required since the upper/lower relationship was set at the time the data was captured.

3. Click **Upload Files** and wait a minute for the files to be copied to the cloud. A confirmation appears in the "Already uploaded" area.




## Submit the Order for a Diagnostic/Final Model

The ***Submit*** Product button becomes available when you have attached data.

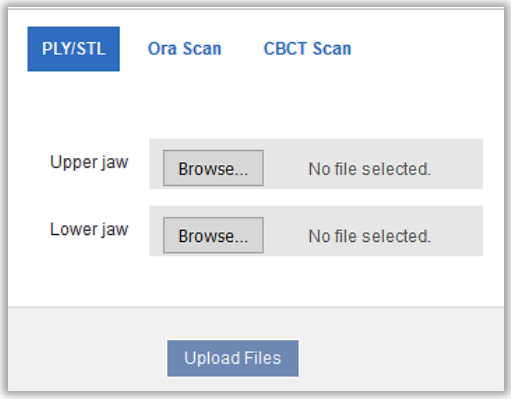
1. Click in the **Product Notes** area, and type any relevant notes regarding your order.
2. Click the "Deliver as Finished" checkbox as needed:
   - For diagnostic models, leave the box checked if you prefer the model to be delivered with a workflow task that includes options for starting an IDB tray or treatment simulation. Uncheck the box if you prefer the model to be delivered in a Review Order state.
   - For final models, leave the box checked if you prefer the model to be delivered without a task. Uncheck the box if you prefer the model to be delivered in a Review Order state.
3. Click **Submit Product.**

   Once an order is submitted, the order status is updated to ***Ordered***. The order is now restricted to "Read Only" in the practice. This means you can review it, but you cannot change it. If you have submitted an order that you would like to cancel or change, please contact SureSmile Customer Care.

## Import STL Files for Diagnostic/Final Scans

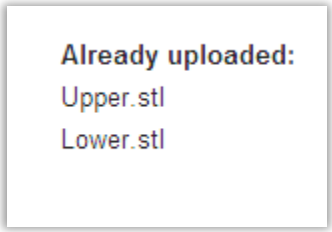
1. For Upper Jaw, click the **Choose File** button, select the patient's upper scan file and click **Open**.
2. For the Lower Jaw, click the **Choose File** button, select the patient's lower scan file and click **Open**.

   At this point, the files are simply assigned but not yet uploaded. The "Submit" button will not become available until you upload files.




   NOTE: The bite data is not required since the upper/lower relationship was set at the time the data was captured.

3. Click **Upload Files** and wait a minute for the files to be copied to the cloud. A confirmation appears in the "Already uploaded" area.

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2. Click the "Deliver as Finished" checkbox as needed:
   - For diagnostic models, leave the box checked if you prefer the model to be delivered with a workflow task that includes options for starting an IDB tray or treatment simulation. Uncheck the box if you prefer the model to be delivered in a Review Order state.
   - For final models, leave the box checked if you prefer the model to be delivered without a task. Uncheck the box if you prefer the model to be delivered in a Review Order state.
3. Click **Submit Product.**

   Once an order is submitted, the order status is updated to ***Ordered***. The order is now restricted to "Read Only" in the practice. This means you can review it, but you cannot change it. If you have submitted an order that you would like to cancel or change, please contact SureSmile Customer Care.

# Ordering Diagnostic Models for SureSmile Ortho or SureSmile Aligner

The SureSmile software supports the same STL/ PLY format option for importing data to build diagnostic and final models.

You can capture the patient's dentition using your ITero scanner or any other device that can export a PLY or STL file. For example, some offices use a tabletop scanner to capture plaster models for initial and final records.

The requirements for SureSmile scan quality are:

- 100% of every tooth surface
- 2 mm of gingiva
- No interproximal, gingival or lingual holes
- No missing cusp tips

Just like the therapeutic scan, a standard record set including photos and x-rays helps the Digital Lab with tooth modeling. For diagnostic and final models, these records are recommended rather than required.

## Start a Diagnostic/Final Scan

1. Log onto SureSmile on the web.
   - Open your web browser and type https://login.suresmile.com into the address bar.
   - Type your Email address and Password and click Login

   Note: You should use Google Chrome, Mozilla Firefox or Safari
2. Add a new patient or open the Patient Overview for an existing patient.
3. Enter patient information
   - Enter the patient's first name, last name and DOB. The orthodontist will populate automatically but you have the option to choose a different doctor if needed. Staff is optional.
4. Select Package type *(This step only pertains to SureSmile Ortho.)*
5. Upload surface scan data. Check the check box for CBCT premium option ($). If you select the check box, the system will prompt you to upload the CBCT scan files after the order has been placed.
6. Upload images
   - Click 'Choose files to upload' to locate the photos & x-rays on your computer or drag them to this box.

   Note: X-rays are optional for SureSmile Aligner
7. Complete Dental Examination

8. Select payment method and place order.
9. If you chose to use CBCT data in Step 5, will you now refer to SureScan to upload the CBCT scan.

# FAQs

IMPORTANT: Please be aware that some of these questions may only pertain to SureSmile Advanced especially if it mentions brackets or wires.

### How will I learn to integrate the Carestream scanner with SureSmile treatment?

If you are new to SureSmile, your Account Manager (AM) will visit your office to support you as you launch SureSmile treatment. During this visit, the AM will educate selected staff on all of the functionality for completing and managing SureSmile orders.

### Which brackets can we use with patients scanned using the Carestream scanner?

All brackets in the SureSmile bracket library are available for use with the Carestream scanner.

### Can I use an opaque solution on the teeth or brackets to help with Carestream scanning?

If you are having difficulty capturing clear brackets, such as 3M Unitek Clarity™, you can apply a thin coating of an opaque solution on these brackets prior to scanning.

In addition to helping you capture clear brackets, using an opaque solution can also help you scan restorations such as veneers that inhibit data capture.

### What if I am interrupted while working on completing the order in SureSmile and cannot finish importing required records until later?

Do not click Submit. When you are ready to complete the order, select the Tasks tab and filter for Submit Order to easily find your incomplete patient records.

### Why would I submit an update model order?

An update scan is used to update the therapeutic model in the event of:

- A newly erupted tooth has been added to treatment.
- One or more brackets were rebonded or repositioned.
- The tooth anatomy has changed to the extent that the Setup is affected.

## When is a supplemental scan required?

There are three situations when a supplemental scan is required:

1. During the initial examination, you determine that the patient has restorations* that do not meet our requirements for CBCT-only scans. (Remember to set time in your appointment schedule for a CBCT scan AND an intraoral scan.)
2. Your CBCT scan was rejected due to distortion (usually from metal fillings). In this case, recall the patient within two weeks of the date of the CBCT scan. At the appointment, reopen the SureSmile order and add a supplemental scan* according to DL instructions.
3. For SureSmile Ortho and SureSmile Aligner, full upper and lower supplemental scans are required for cases being submitted with CBCT data.

If the patient has 7 teeth per arch (or 11 total) with problematic restorations, the CBCT scan will most likely be distorted. To compensate for this issue, you may scan full arches in the supplemental scan area to request our premium service (available for an additional fee). Or, to avoid the fee, do not submit a CBCT scan. Instead, submit a full intraoral scan of the patient using your Carestream.

## Do we need to take the CBCT scan and the supplemental scan the same day?

Yes. When you examine the patient at the beginning of treatment, you will see which teeth cannot be captured in a CBCT scan and will require a supplemental scan. At that time, schedule the patient for the CBCT scan AND for chair time with the Carestream scanner during the same appointment. Since the data will be combined in the SureSmile Digital Lab, the scans should be taken the same day.

## What if my scan is rejected because a supplemental scan is needed or has a problem?

Recall the patient to capture the area that was missed or is a problem. This appointment must be scheduled within 2 weeks of the CBCT scan or the new scan may not register with the CBCT scan since the teeth are moving. Refer to the SureSmile Digital Lab product notes for instructions.

When you open the patient record, double-click the name of the rejected product (shaded in red under the Items heading). You will need to click Yes to restart work on the scan. Next, attach the new data and submit the order.

## Users of the orascanner can take a bite scan to supplement a CBCT scan. Can we do this with the Carestream scanner?

No. The Carestream scanner does not store a bite scan as a file that can be downloaded for import into SureSmile.

### What if I don't have a supplemental scan to upload when I'm importing my CBCT scan?

If supplemental cannot be provided at the same time as importing of CBCT Data, **do not Finish Scan.**

Click **Save**

Click **Back**. This will create a task for this patient and return you back to the Tasks page in SureScan.

### Do I need to capture a full arch on the Carestream to submit update or supplemental scans?

Yes, for SureSmile Ortho or SureSmile Aligner.

No, for SureSmile Advanced. You may capture an area of an arch following these requirements:

- In addition to capturing the teeth to be remodeled, capture the adjacent teeth which serve as "anchor teeth" to help the Digital Lab merge this data with the therapeutic model.
- A minimum of three teeth must be included in the scan to accurately merge the data.
- Follow quality and coverage requirements to accurately represent the patient.

### Since the Carestream is designed for full arch scans, how do I capture areas of an arch for an update scan or supplemental scan?

Use the Carestream menus to choose "Next" or "Previous" to skip to the appropriate area and capture each piece. Remember to capture adjacent teeth with a minimum of three teeth per piece.

If you need to capture multiple areas in one arch, we recommend performing a full arch scan.

## We scanned a patient before the brackets were available in the library. Now that they have been added, how do we update the patient's therapeutic model?

This situation is more common for new practices that are in the process of getting brackets added to the SureSmile Bracket Library. If none of the patient's brackets are available in the library, the order will be placed on "Hold." In this state, the brackets can be easily identified once they are available by following the steps to release a hold.

Alternatively, if the case was processed into a finished therapeutic model because some brackets were available and registered, you will order an update model.

1. Open the patient record and start an order for an update model.
2. Select the Brackets tab and make the new bracket assignments.
3. Upload the patient's therapeutic data. (This is the same data you previously uploaded for the therapeutic model order.)

   NOTE: The Digital Lab recommends keeping the patient's data until the model is finished; or, you can export it again from OrthoCAD as needed.
4. Indicate in the coverage area which brackets you are updating.
5. Type notes explaining that these brackets have become available, and submit your order.

# Carestream Scanning Job Aid for Bonded Patients

For best results, submit complete scan orders that meet SureSmile's requirements for quality. Scans that must be captured intraorally are: therapeutic, supplemental segments and/or bite (CBCT users only), and update. To meet quality requirements, follow guidelines for scan criteria and scan pattern handling.

## Scan Criteria for Segments

Follow scan criteria to capture a complete representation of the patient's teeth anatomy and brackets

- 100% tooth coverage and interproximal areas
- 100% of bracket face/wings
- 70% of bracket mesial and distal profiles
- 2mm of gingiva

## Opaque and Capture Brackets

- These scanners are not designed to capture brackets. For all bracket types (including clear), you must apply an opaque solution to assist the scanner in capturing bracket geometry. Consider using retractors to keep the opaque solution from being wiped off of the brackets before they can be scanned.
- Attempt to include a view of the brackets as you make your occlusal pass.

## Scan Pattern

### Upper & Lower Arches

- Hold the scanner at a 90-degree angle to the occlusal surface of the teeth. Rest the tip on the tooth surface to steady the scanner. Live video is displayed on the video preview screen, and the acquisition begins. Images are automatically acquired and transferred to the 3D model display screen.
- When the occlusal surface scan is complete, scan the lingual surface of the teeth. Hold the scanner at a 45-degree angle to the lingual surface of the teeth. Be sure to include several millimeters of the occlusal surface and gingival tissue in the lingual scan.
- When the lingual surface scan is complete, scan the buccal surface of the teeth. Hold the CS 3600 at a 45-degree angle to the buccal surface of the teeth. Be sure to include several millimeters of the occlusal surface and gingival tissue in the buccal scan
- Visually inspect the 3D model for any holes. If holes are present, re-scan the area until the holes are filled.
- When you are satisfied with the 3D model, continue with the buccal bite registration acquisition.

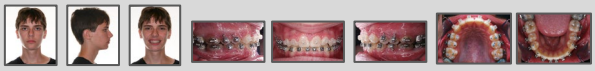
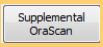
### Buccal Bite Registration

1. Have the patient bite down.
2. Position the scanner at a 90-degree angle to the buccal surface of the teeth, and align the point where the upper and lower teeth meet in the middle of the video preview screen. Rest the tip on the tooth surface to help steady the scanner.
3. Move the scanner slightly up and down to trigger the bite registration acquisition.

A dot is displayed at the bottom of the window to indicate the capture was successful. A successful bite image includes both the upper and lower arch.

**Important:** For a full arch, you should acquire at least four buccal bite images—one on each side of the mouth at the molars, and one on each side of the mouth at the canines.

# SCAN CHECKLIST

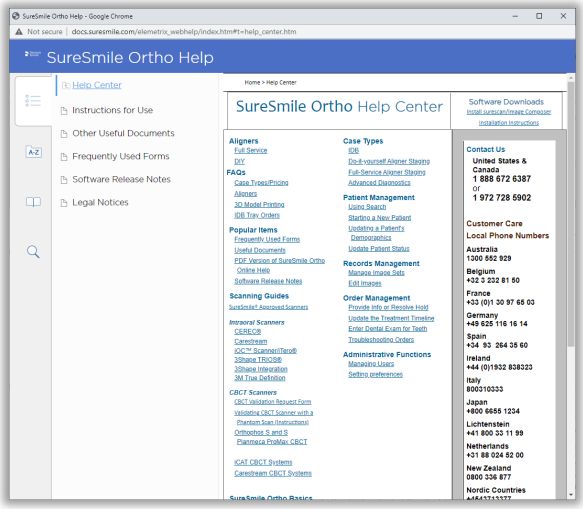
| | Therapeutic Scan | Supplemental Scan (CBCT Users only) | Update Scan |
|---|---|---|---|
| | A full intraoral scan used to model the patient's current tooth anatomy and bracket positions. | A partial intraoral scan to capture optional bite and/or:<br>• Teeth with restorations which were not captured adequately during a CBCT scan (6 or less teeth in an arch or 10 total)<br>• $ Premium service to model more/all teeth | A partial intraoral scan to capture changes after the therapeutic scan has been taken:<br>• Newly erupted tooth<br>• Rebond<br>• Change in anatomy that will affect setup |
| **1** Prepare patient | ❑ Remove wires<br>❑ Close bracket doors<br>❑ Remove turbos/equilibrate | ❑ Plan scan segments<br>❑ Remove wire(s) for segments<br>❑ Close bracket doors for segments<br>❑ Remove turbos/equilibrate | ❑ Plan scan segments<br>❑ Remove wire(s) for segments<br>❑ Close bracket doors for segments |
| **2** Take photos & x-rays | Photos and panorex must be taken within 4 weeks before or 2 weeks after the scan.<br>❑ Standard set required  <br>❑ Also recommended: <br>❑ Current panorex required: <br>❑ Ceph required (current preferred, but initial is acceptable): | | Recommended: Take current photos to capture the reason for the scan |
| **3** Take scan | ❑ Capture upper, lower, bite<br>❑ Use approved scanning technique (serpentine, and sweep-rock)<br>❑ For bite scan, use natural bite | ❑ Open existing order or start a new CBCT order<br>❑ Take scan intraorally  <br>❑ Capture teeth with restorations: crowns, bridges, PVC, PFM, metal fillings 3mm or larger)<br>❑ Capture incisal restorations<br>❑ Capture a minimum of 3 teeth<br>❑ Capture 2 or more anchor teeth per segment<br>❑ Touch to start next segment | ❑ Select ONCE for a bracket change <br>❑ Select AGAIN for tooth remodel/new <br>❑ Capture teeth with changes plus adjacent teeth<br>❑ Use approved scanning techniques (serpentine and sweep-rock)<br>❑ Touch to start next segment |
| **4** Replace wire/Instruct | ❑ Brush<br>❑ Replace wires<br>❑ Give instructions/wire appointment handout | | |
| **5** Upload photos & x-rays* | ❑ Upload photos and x-rays.<br><br>**The steps to submit the order and upload records may be completed later in the day as time allows* | | |
| **6** Submit order* | ❑ Update dental exam for missing teeth<br>❑ Update dental exam for brackets<br>❑ Submit order/set wire appointment date | | ❑ Update dental exam<br>❑ Submit order/set wire appointment date<br>❑ For bracket updates, order new wire(s) and note the update scan<br>❑ For tooth updates, order new setup |

# Learning Resources

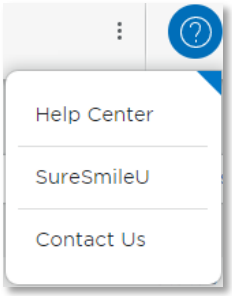
There is no requirement of specific training for the use of SureSmile Ortho Software 7.6, However, you can find additional information here:

Search the Help Center in SureSmile for:

- Online help topics with step-by-step instructions
- Downloads including forms and reference documents
- Video demonstrations of software features



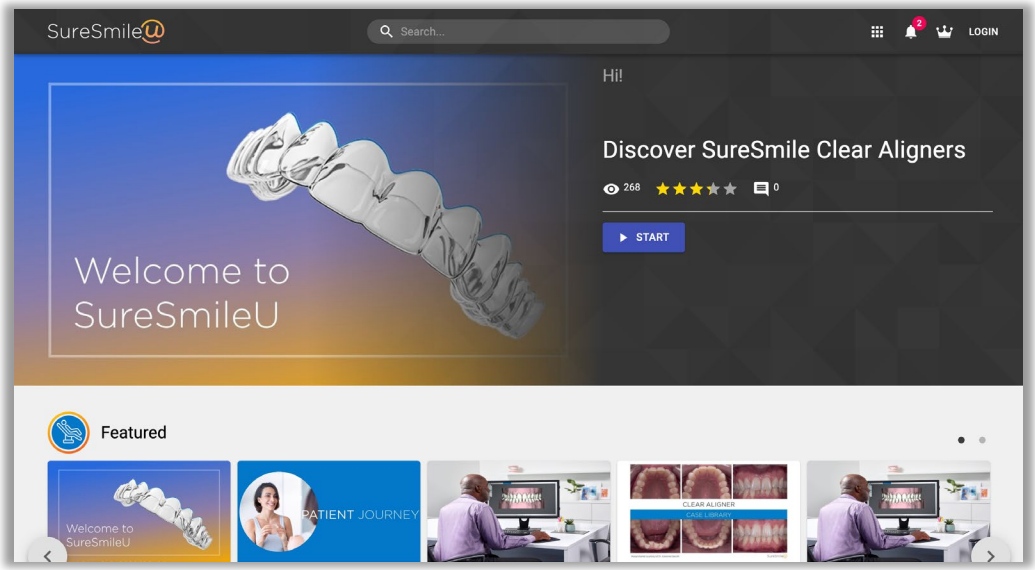

To open the Help Center, click the question mark button and select **Help Center**.




Visit www.suresmileu.com for online learning resources including:

- Archived SureSmile webinars
- Recordings of presentations from events
- Class materials

To open SureSmileU from the SureSmile software, click the question mark button and select SureSmileU.



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