suresmile protocol

3Shape TRIOS®

ORAMETRIX®

OraMetrix has its headquarters in Richardson, Texas, with offices in Berlin, Germany and Chatswood, Australia. For general information about OraMetrix, call +1.972.728.5500, or visit the OraMetrix website at www.orametrix.com. To learn more about suresmile, go to www.suresmile.com.

For suresmile customer support, supplies, or other questions, e-mail customer support at customercare@suresmile.com or use the following table to call suresmile customer care:

Location	Phone Number	Hours
Australia	**1800 976 453**	**Monday – Friday:** **9am - 6pm** (UTC +10, Australian Eastern Standard Time)
Austria	**+43-720115530**	**Monday – Friday:** **9:00 – 17:00** (UTC +1, Central European Time)
Belgium, Denmark, France, Germany, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom	**+800-0012-5555**	**Monday – Friday:** **9:00 – 17:00** (UTC +1, Central European Time)
Japan	**+1.972.728.5903**	**Monday - Friday:** **9am - 6pm** **1 hour earlier during the Summer*** (UTC +9, Japan Standard Time)
New Zealand	**0800 460 043**	**Monday – Friday:** **9am - 6pm** (UTC +12, New Zealand Standard Time)
Romania	**0-800-895-945**	**Monday – Friday:** **9:00 – 17:00** (UTC +1, Central European Time)
Switzerland	**0800-561-214**	**Monday – Friday:** **9:00 – 17:00** (UTC +1, Central European Time)
United Arab Emirates	**+1.972.728.5904**	**Monday - Friday:** **4am – 1pm** **5pm - midnight** **1 hour earlier during the Summer*** (UTC +4, Gulf Standard Time)
United States & Canada	**1.888.672.6387**	**Monday – Friday:** **7am - 7pm** (UTC -6, U.S. Central Time)
All other countries	**+1.972.728.5900**	**Monday - Friday:** **7am - 7pm** (UTC -6, U.S. Central Time)

* Due to daylight savings time in the U.S., phone support will be available 1 hour earlier from the second Sunday in March to the first Sunday in November.

Table of Contents

Contacts for service or software issues:

For issues with suresmile orders, software, or TRIOS scanning with brackets for suresmile, contact suresmile Customer Care per the listing in the suresmile online help. To access this area, go to suresmile via your web browser, click the ? icon and select "Help Center."

For all other issues with the TRIOS or exporting your STL files, please contact 3Shape customer support.

About this Guide

This guide includes the protocol and procedures for using the 3shape TRIOS® for suresmile treatment. Although informative for the doctor, the primary audience is the clinical assistant who will be performing TRIOS scans and entering suresmile orders.

Any practice implementing the TRIOS system with suresmile can use this document as a reference, including:

- New suresmile practices planning to use the TRIOS scanner for all model types.
- Existing suresmile practices using the OraScanner who have decided to obtain a TRIOS scanner.
- Any suresmile practice planning to use the TRIOS 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, go to suresmile via your web browser, click the ? icon and select Help Center. 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."

Other Resources
Frequently Used Forms
Useful Documents
Online Help PDF
Software Release Notes
suresmile's Bracket Library

Prerequisite Training/Steps

Prior to conducting the suresmile training and launch:

- The practice should be trained in the proper use of the TRIOS scanner by a 3shape-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. To begin the process of validating your system for use with suresmile, visit [sure u](). You will find instructions here:

  www.suresmileu.com > Resources > Overview > Find resource by topic > Integrated Systems > Becoming a suresmile CBCT user

---

suresmile supports the following systems:

- **TRIOS® Color**
- **TRIOS® standard**
- **TRIOS® 3**

When purchasing the system, order the Ortho option to obtain the correct software. As a quick check to see if you have the right software, look at the tooth chart, the Ortho software uses the label "Normal" instead of "Restorations."

Getting Started

Install Appropriate Software on the TRIOS Computer

Install software on the computer supplied with your TRIOS system so you can place orders with suresmile using a patient data folder accessible to both programs. Install the appropriate suresmile component for your configuration:

- If you are placing therapeutic model orders based primarily on CBCT data using the TRIOS for supplemental scans, install surescan software.
- If you are placing therapeutic model orders based on intraoral data captured with your TRIOS, install a browser for suresmile web-based software.

For more information on installing suresmile software, refer to the *Technical Requirements Guide*.

Enable STL/PLY files for Therapeutic Scans in suresmile

The suresmile system should have Therapeutic PLY/STL import enabled for Therapeutic Scans. If you do not see an option in the suresmile software on the web for creating a new therapeutic model, contact Customer Care.

Set Hole Color

The TRIOS software allows you to choose the color-coding for holes in your scan data. Since suresmile requires 100% tooth coverage, it is helpful to choose a bright color (such as red) to catch your attention. This setting is available in the options for Configure > Settings > Scan.

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; or you may send the models to your lab to fabricate other appliances such as aligners.

IMPORTANT: OraMetrix does not determine patient care. OraMetrix 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 • CBCT In-vivo or plaster
Therapeutic Model	This scan is captured intraorally (or by in-vivo CBCT). For bonded patients, models the patient's current tooth anatomy and bracket positions. Captured any time after bonding in preparation for designing custom archwires. 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. CBCT users have an additional scan option that accompanies a therapeutic scan: • **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* • CBCT In-vivo scan • 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. 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 • CBCT In-vivo or plaster

* Visit www.suresmileu.com under "integrated systems" for a list of optical scanners that are certified to capture data for therapeutic models.

Office Workflow with the TRIOS Scanner

While you may use your TRIOS scanner to scan either intraorally or scan a plaster model, the following scan types must be captured intraorally:
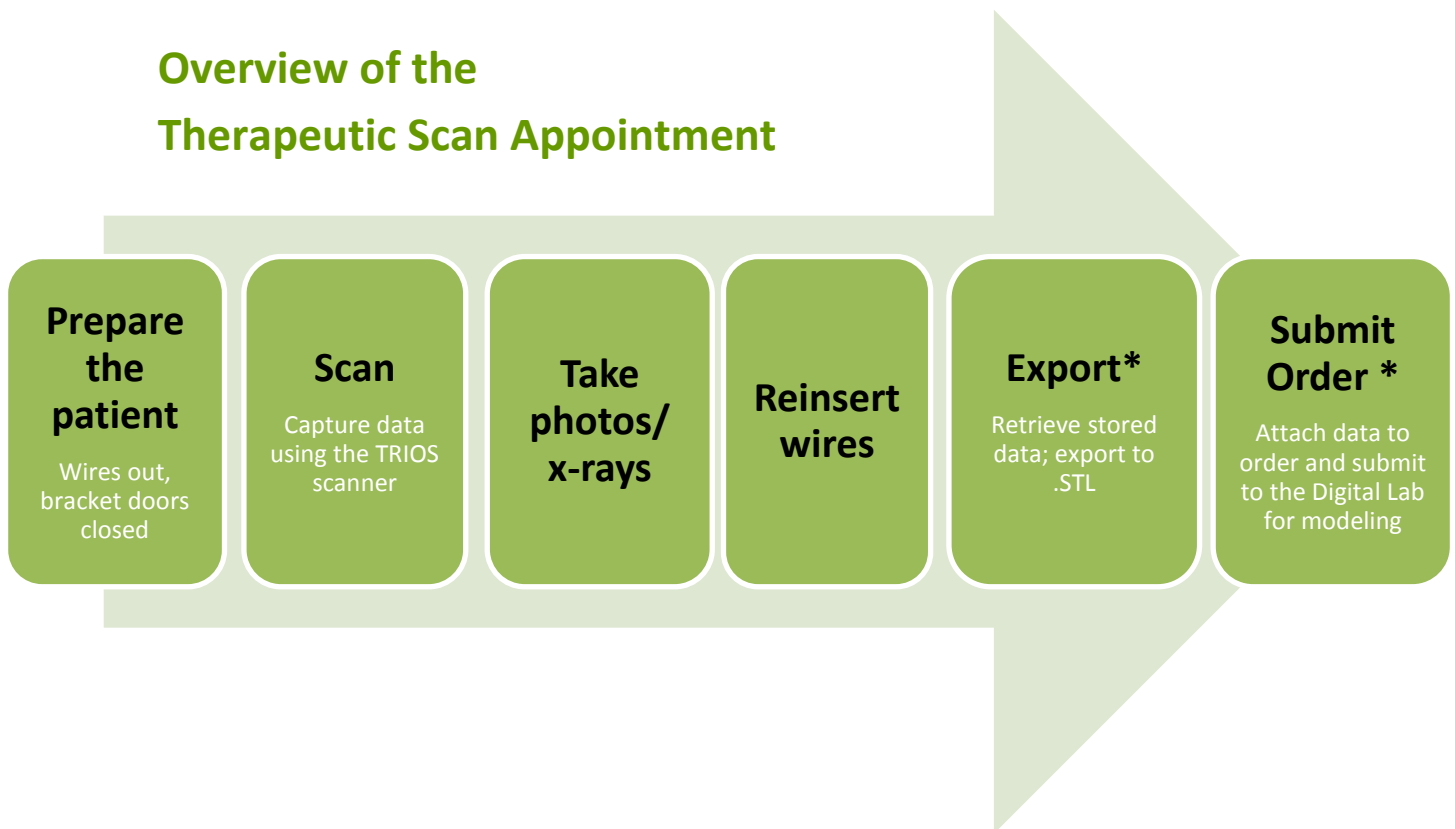
- **Therapeutic Scans** – upper and lower arches (both arches are required even if the patient is receiving single arch treatment since both are needed to plan the occlusion)
- **Update Scans** – arches or partial scans of arches to capture changes to tooth anatomy and/or brackets
- **Supplemental Scans** – 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

Prepare the patient	Scan	Take photos/ x-rays	Reinsert wires	Export*	Submit Order *
Wires out, bracket doors closed	Capture data using the TRIOS scanner			Retrieve stored data; export to .STL	Attach data to order and submit to the Digital Lab for modeling

*The steps to attach the data to an 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 3-D 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*	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 OraMetrix. 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.
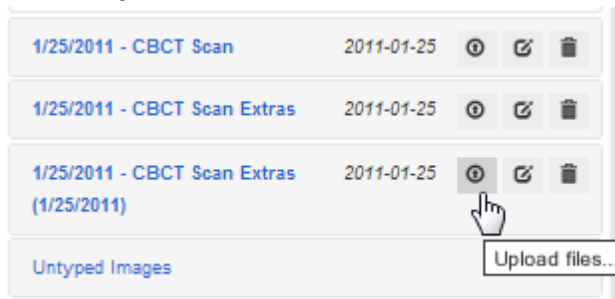
2. Select multiple image files from the Open dialog, and click **Open**.

3. Drag and drop images into their correct position in the montage.

Standards for suresmile Patients

Because the suresmile system will fill in holes with artificial data, complete coverage is required for an accurate representation of the patient. Capture to these standards:

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

Tips for Scanning Bonded Patients

When you receive your TRIOS 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:

- Keep the scanner in motion. You will need more pictures to capture bonded patients so do not hover over an area or you may exceed recommended image counts.
- Try standing to capture difficult angles, such as when you are scanning the bite.
- 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.
- It is critical to follow the TRIOS scan strategy—especially the wiggling across the incisors as part of the first pass where you capture the occlusal surface. This view provides global accuracy to avoid warping of the 3D model.

To capture brackets:

- The TRIOS is not designed to capture brackets. For all bracket types (including clear), apply an opaque solution such as SureWhite 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.
- Keep some distance between the scanner tip and the brackets while you are moving. The tip is open and could potentially hang on a bracket or even pull it off.

To capture incisal edges:

- When capturing the buccal view, switch to a 45 degree angle as you approach the anterior teeth to capture some of the occlusal view as well. As needed, fill in buccal data to capture the area shadowed by the brackets.

To capture 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).
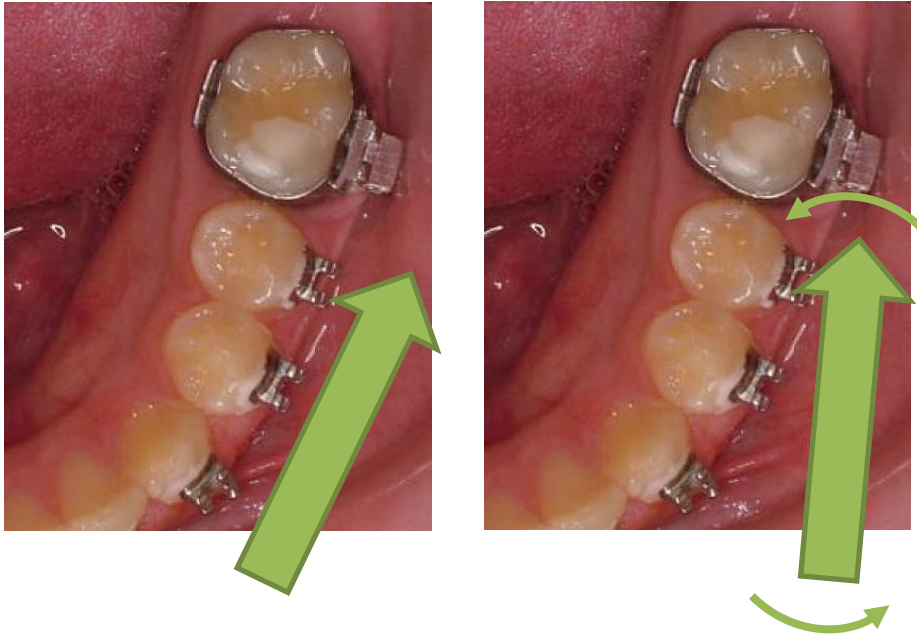
Examples of Insufficient Overlap in Anteriors

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.
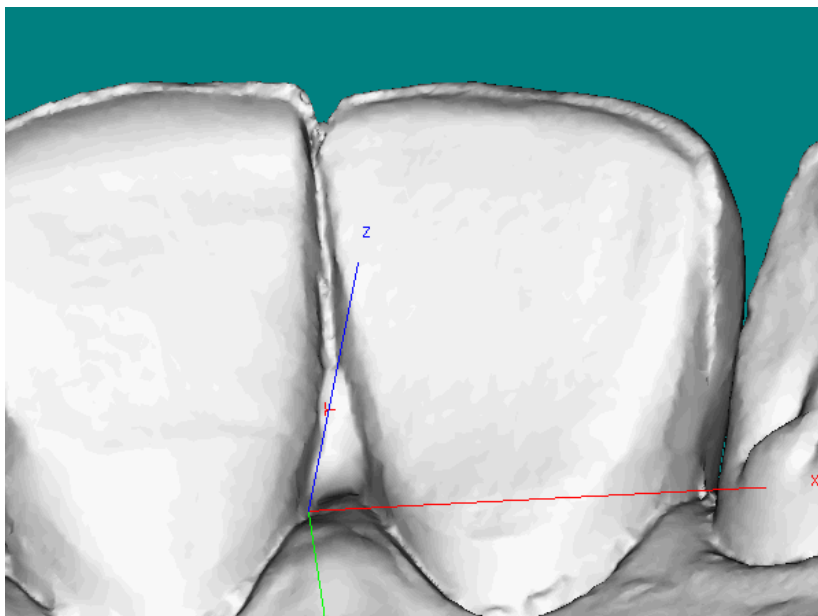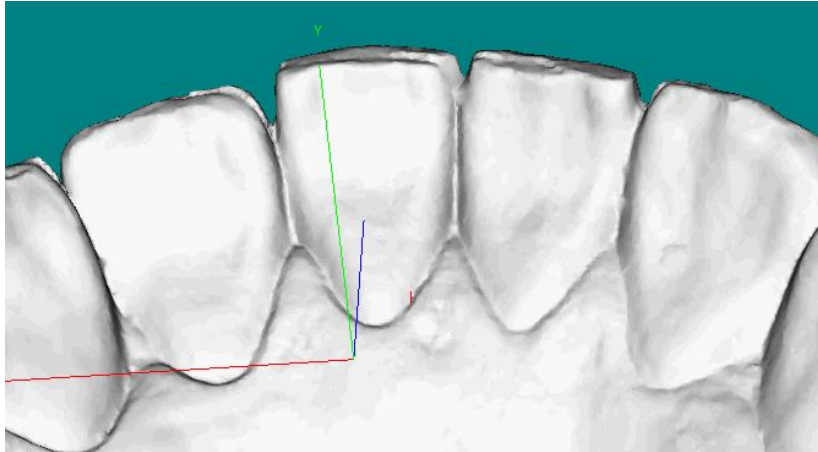
Using the TRIOS to Capture Data for suresmile

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, the guideline is the same whether they are located on the lingual or occlusal surface, and whether they consist of metal or composite material:

   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.

Opaque Brackets for Scanning

Before you begin scanning, apply an opaque material to each bracket (whether it is ceramic or metal). Use a material such as SureWhite (available from the suresmile Marketplace) that can provide a thin coating for the bracket without obscuring its detail. It is not necessary to coat the teeth.

The TRIOS training will not instruct you to use retractors; however, you may find retractors helpful when scanning bonded patients since the brackets must be coated with an opaque material.

Take the Scan/Send Order

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

   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 edges of base

   - Gingival margins

3. Complete the order to send the data to your TRIOS 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. Reinsert the archwires and complete the patient appointment.

Export Scan Data from the TRIOS computer

1. Go to the computer with a wireless connection to your TRIOS.

2. Open the Ortho Analyzer software.

3. In the Open Patient dialog, select the **TRIOS** tab.

4. Find your patient record and click the checkmark ✓ to accept it.

5. Go back to the **Patients** tab and find the scan under the patient name.

6. Right-click the data and choose **Open Model Set….** A window opens to show the models.

7. Click the Export icon in the upper-right corner. The Save As dialog opens.

8. For each arch, change the Save As type to .STL and browse to a location.

9. In the Save As dialog, click the **Save** button.

   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 such as "mandibular" and "maxillary." 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.

Continue to Specific Scan Steps

If you are using an integrated imaging system such as Dolphin, you can push your new record set to initiate a suresmile patient record. If not, you will need to start a new record and then a new image set.

After the patient record is created in suresmile, continue to the section for the scan type you are ordering:

– Ordering a Therapeutic Model from STL/PLY Files (page 20)

– Ordering an Update Model (page 23)

– Ordering a Therapeutic Model from a CBCT Scan and a Supplemental Scan (page 27)

– Ordering Diagnostic or Final Models (page 33)

Ordering a Therapeutic Model from STL/PLY Files

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.

Start a Therapeutic Model Order

1. On the Patient Overview, click the **New** button and choose **Therapeutic Model**. A new scan 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.
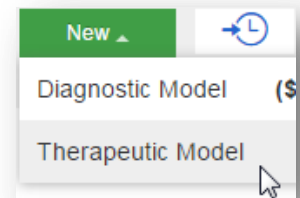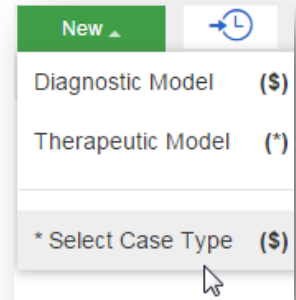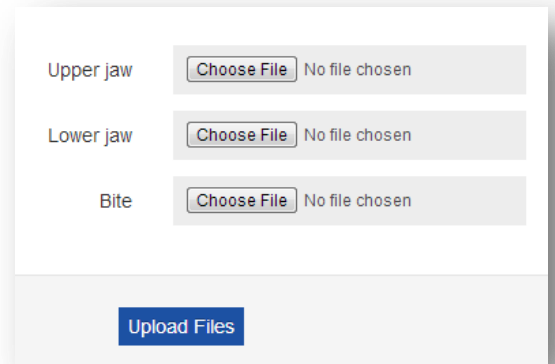
Upload 3D Scan Data Files

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 Order" 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 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.

Notice! 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 an Update Model

An update scan is used to update the therapeutic model of bonded patients 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.

  NOTE: The update scan is applicable to bonded patients only, and is not available in an Aligner case bundle.

Capture Scan Pieces

Although the TRIOS 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.
- 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 anteriors may be captured at a lower quality as long as the arch is connected into one piece.

Start an Update Scan

1. On the Patient Overview, click the **New** button and choose **Update Model**. A new scan 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
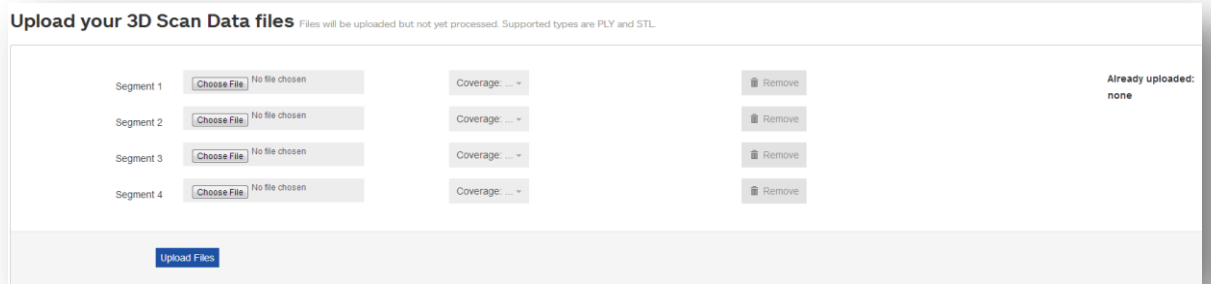
1. For Segment 1, click the **Choose File** button, and browse to the patient folder you created for this purpose.

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 and bite).

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.
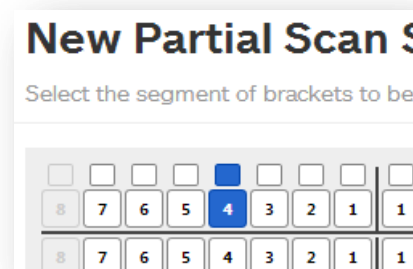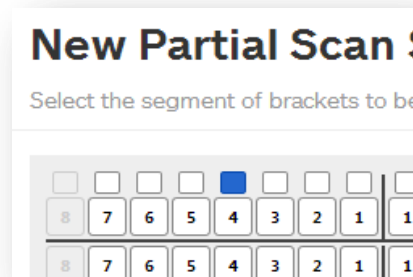
Submit the suresmile Order for an Update Model

The *Submit Order* 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 Order**.

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 (TRIOS) 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. It can also be used to order a premium modeling service where all or most crowns are modeled from the optical data (additional fee applies).

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

Capture Scan Pieces

Although the TRIOS 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.
- 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.

See the appropriate CBCT protocol to determine when a patient is eligible for a CBCT scan; and, if the patient requires a supplemental scan or a premium supplemental.

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 anteriors may be captured at a lower quality as long as the arch is connected into one piece.

Launch surescan

You must use the surescan software to enter model orders based on CBCT data. The browser software can only submit orders based on STL/PLY data (it does not even contain the CBCT order type).

1. On your desktop, double-click the **surescan 7.2** icon to start the software.

2. Login with your username and password. (This is the same username/password that you use to login to the web version of suresmile.)

3. Click **Next,** select a database, and then click **Next** or **Finish**. A patient listing appears.

4. Find and open a patient record.

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

1. Create an order for a Therapeutic CBCT scan following the instructions in the suresmile protocol for your CBCT Scanner.

2. Enter the dental exam.

3. Import the CBCT data.

   NOTE: You must attach CBCT data using the "Import CBCT Data" button before the Submit button will become available.

## Import STL Files for Supplemental Scans

NOTE: See your CBCT protocol for more information on when a supplemental scan is required.

1. Select the **Files (PLY/STL)** tab.

2. Under the tab, click the ![icon] Create/Preview/Edit icon adjacent to the segment name (such as Segment 1).

3. Click **Yes** to confirm.

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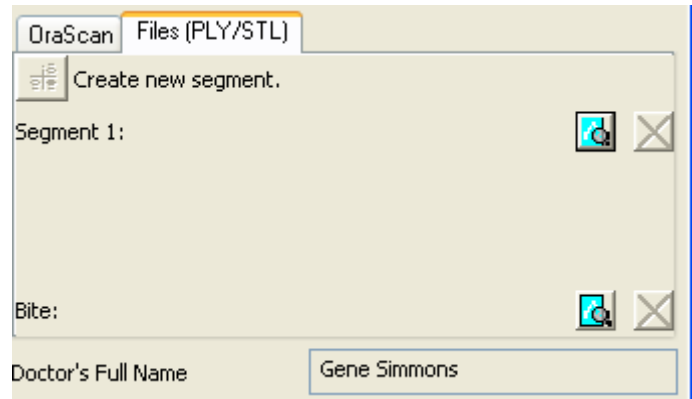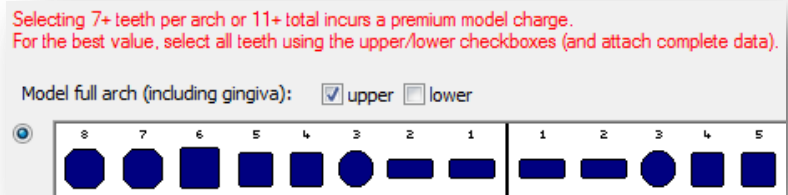
   scan due to limitations of CBCT processing.

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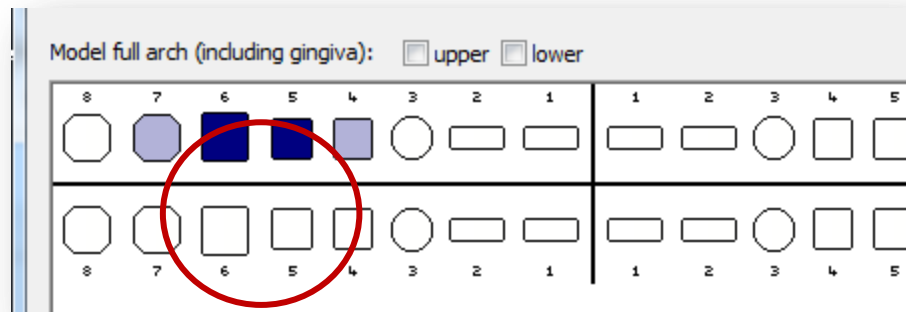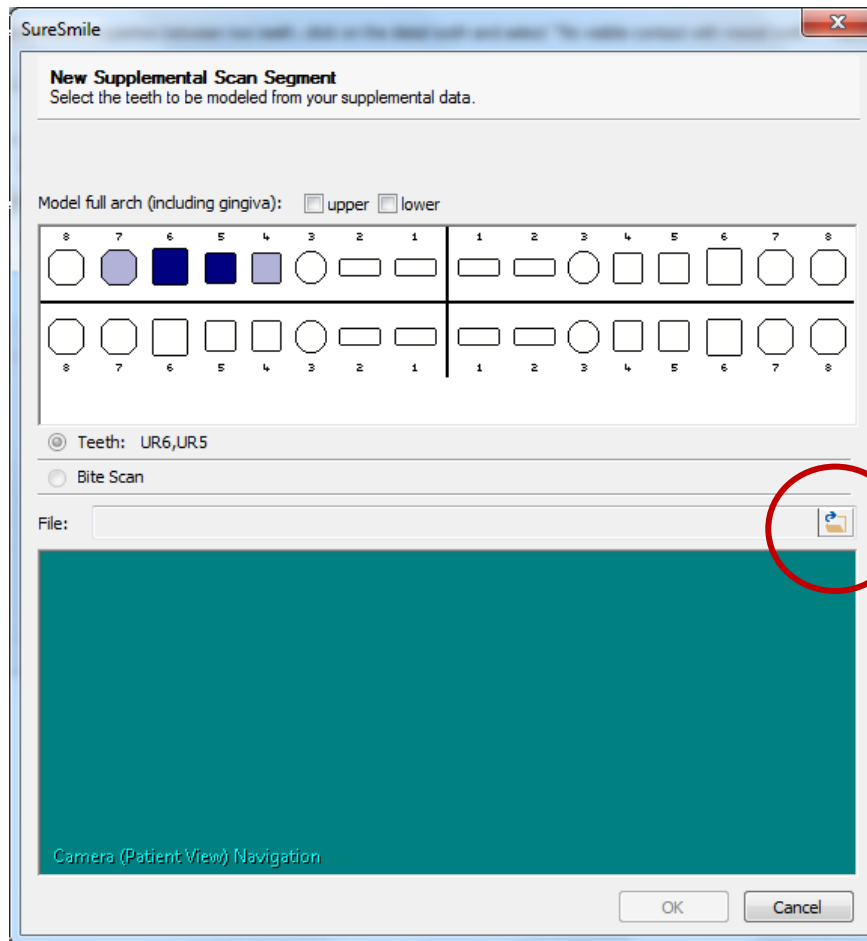

   OR

   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!

5. Click the ![folder icon] folder icon in the *New Supplemental Scan Segment* window, and browse to the patient folder you created for this purpose.

6. Select the .STL file you saved for the patient's arch (or piece), and then click **Open**.

7. 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.

8. If you have another segment, click 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 TRIOS scans since bite information is stored within the upper and lower arch files.

Submit the suresmile Order for a CBCT Scan with a Supplemental Scan

1. Click in the white area, and type any notes regarding your order.

2. If possible, confirm Setup Approval and Wire Insertion dates.

3. 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.
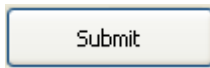
4. Click ⬚Submit⬚ .

   Once an order is submitted, the therapeutic model order status is updated from *Not Yet Submitted* to *Submitted by Doctor.* The order is now restricted to "Read Only" in the practice. This means you can review it at any time, but you cannot change it. If you have submitted an order you would like to cancel or change, please contact suresmile Customer Care.

5. When you have completed and submitted the order, click ⬚ in the main toolbar to close this patient record.

Product Notes
Display notes related to this product You can write your order notes here.

Filters: Standard Notes

Import external scan data to SureSmile.
☑ Model Bone

Import CBCT Data

OraScan | Files (PLY/STL)

⬚ Create new segment.

Segment 1: UR6,UR5

Bite:

Bond Date:	Scheduled ▾	7/10/2015 ▾
Setup Approval Date:		3/20/2016 ▾
Wire Insertion Date:	Estimated ▾	4/10/2016 ▾
Estimated treatment time	15	Months

☑ Deliver with Brackets

suresmile URL: https://login.suresmile.com/

Ordering Diagnostic or Final Models

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 TRIOS 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.

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

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

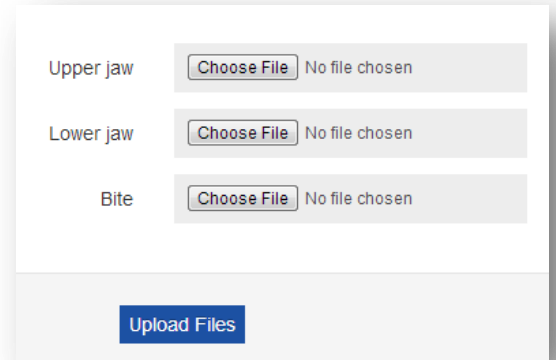3. Update the Dental Exam for the Teeth tab.

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.

FAQs

How will I learn to integrate the TRIOS 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.

As an additional reference, visit sure u: www.suresmileu.com > Resources > find resources by topic > integrated systems > TRIOS Integration with suresmile

How much gingiva do I need to capture in a scan?

Please capture a minimum of 2 mm on all views of every tooth.

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

All brackets in the suresmile bracket library are available for use with the TRIOS scanner. However, if you are using CBCT for therapeutic scans with the TRIOS scanner capturing any needed supplemental scans, you are limited to brackets labeled "CBCT-Approved."

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 two situations when a supplemental scan is required:

- During the initial examination, you determine that the patient has restorations that do not meet our requirements for CBCT-only scans.
- Your CBCT scan was rejected due to excessive noise (usually from metal fillings), and the Digital Lab requested a supplemental scan.

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 TRIOS.

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 TRIOS 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 TRIOS scanner?

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

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

No, 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.

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.

   Warning: Do not re-apply brackets to teeth that were already correctly assigned with bracket part numbers.

3. Upload the patient's therapeutic data. (This is the same data you previously uploaded for the therapeutic model order.)

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.

Glossary

Aligner bundle: a preselected set of products recommended for patients who will receive aligners based on suresmile models, but will not be bonded nor receive wires: 1 unbonded therapeutic model from optical scan only; 1 setup with Digital Lab assistance.

archwire prescription: Archwire design instructions based on a setup or a treatment simulation. Used to order custom archwires.

bracket set: Collection of predefined bracket choices used to quickly assign a bracket prescription to a suresmile patient record.

case items: Case items consist of suresmile products and simulations.

CBCT scan: A scan taken with a suresmile-certified Cone Beam CT scanner (in the practice or at an imaging center) of a patient to capture their individual tooth anatomy, roots and bracket positions to produce a patient model.

custom archwires: Archwires custom-bent for a patient using suresmile.

Customer Care: Customer service department of OraMetrix providing technical and software support for suresmile.

diagnostic model: A digital model of the malocclusion comprised of individual tooth models created from an in-vivo scan or a scan of a plaster model. A 3D model created from a plaster model or from an impression can be used for analysis. A 3D model created from an in-vivo scan can be used for analysis, labial or lingual bracket placement simulations, bracket placement simulation for IDB tray design, and aligner or wire therapy treatment simulations.

digital lab: Located at OraMetrix's headquarters in Richardson, Texas (a suburb of Dallas), the suresmile Digital Lab includes all of the departments that process scans, develop 3D models, and fills orders for archwires, staged models and IDB trays.

final model: A digital model of the final tooth positions after debonding. It can be created from an in-vivo scan or a scan of a plaster model.

in vivo: In suresmile, means that the procedure is performed on a patient rather than on a model; e.g., an in-vivo scan means a scan performed on a patient.

optical scanner: A handheld intraoral camera used to capture 3D images of a patient's dentition, such as the orascanner or iTero®.

patient ID: Number automatically assigned to each patient by the suresmile software. Contains the first initials from the patient's last name and first name followed by a six-digit number; for example, patient ID for John Doe: DJ123456.

plan: Used in suresmile to refer to the setup model or setup prescription.

robot: The mechanical device that heats and bends each wire to the specifications in the archwire prescription.

scan: 3D digital image of the patient's dentition. Scans are taken with a suresmile orascanner, a suresmile-approved intraoral scanner or a suresmile-approved CBCT scanner. suresmile scans are associated

with the following suresmile products: diagnostic model, therapeutic model, update scan and final model.

supplemental scan: A partial intraoral scan to capture areas with restorations which were not captured adequately during a CBCT scan. The suresmile Digital Lab merges the partial intraoral scan with the CBCT scan to produce a complete model. If the restored teeth number 6 or less per arch (or 10 total), there is no additional fee for a supplemental scan. If more teeth are involved, you may capture full arches to request our premium model service (available for an additional fee) or submit a full intraoral scan in lieu of a CBCT with supplemental.

therapeutic model: A model of the patient's individual tooth anatomy and bracket positions. It is created from an intraoral scan or an in-vivo CBCT scan. It is taken when the patient is ready for custom archwires. Use for analysis and treatment simulations.

update scan: Intraoral scan used to capture changes to brackets or newly erupted teeth after the therapeutic scan has been taken. (Only relevant to wire therapy.)