iTero Element Intraoral Scanner Orthodontic Training Guidebook

with Invisalign Treatment

May 2018

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Hardware

iTero Element 1

Optional counter stand may be purchased separately

- High definition multi-touch 19 inch display
- Works with all clinical glove types
- Refer to Operation Manual for cleaning and disinfection instructions

The on / off power button is located at the bottom right-hand corner of the system under the power indicator light.

The iTero element 1 is the first generation iTero element. It is a small modular unit on a wheeled base for ease of movement between operatories.

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Wheel Base

Power Cord

Wheel Locks

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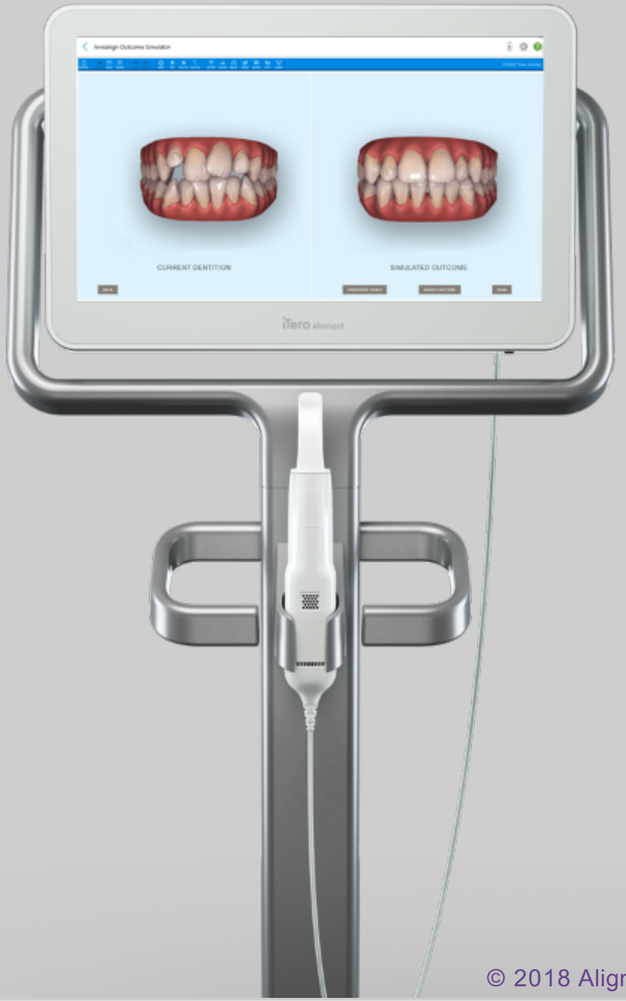
iTero element 2



Next-generation computing

21.5" touch widescreen delivers better visualization with enhanced color

Ergonomic, centered cradle provides easy wand access

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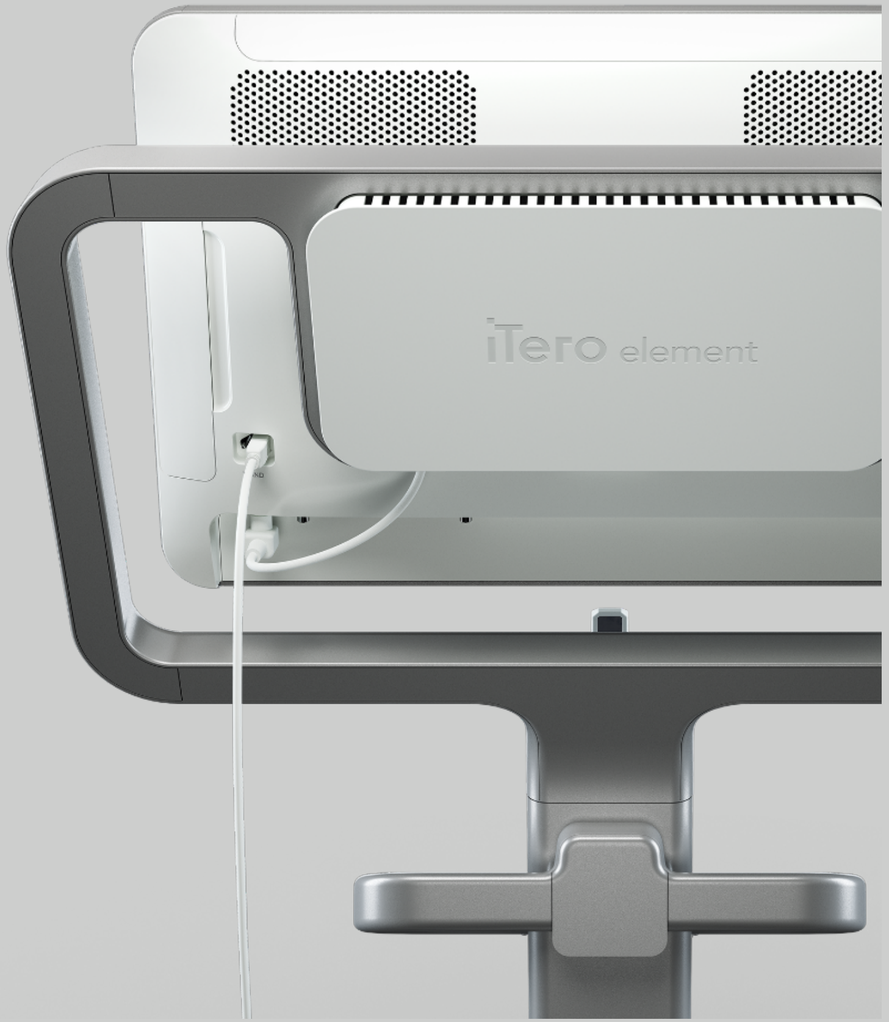
iTero element 2

Long-lasting, rechargeable battery for easy mobility without plugging in or rebooting



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iTero element flex

Compatible laptop
(purchase separately)

Wand & Hub only system

“Simulated clinical environment. “Laptop and all its accessories shall be located at least 1.5 m away from the patient. Do not scan a patient and touch the laptop or any of its accessories at the same time

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iTero element flex

Portable, ideal for multiple office practices

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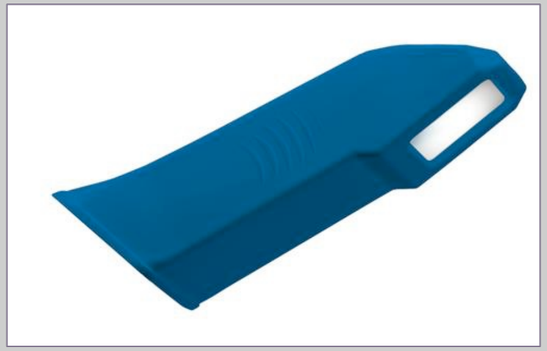
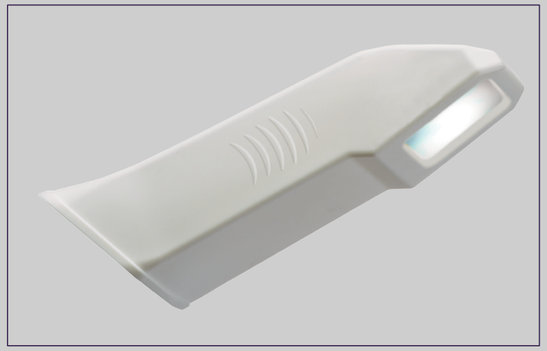
Scanner Sleeves



Blue protective sleeve protects the lens when the wand is not in use.



Disposable sleeve is made for single use on patient scanning. Discard sleeve after every patient.

Note: Please do not touch the wand lens.

Confirm sleeve is completely seated prior to scanning.

To remove and place sleeve use the side grips.

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Wand Controls

To activate the wand touchpad, press and release both side buttons simultaneously.

To start and stop scanning, press and release either of the side buttons.

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Holding the Wand

For proper ergonomics and to avoid fatigue, make sure the elbows are close to the body, holding the wand in the thin area behind the wand sleeve.

Do not cover the air vents.

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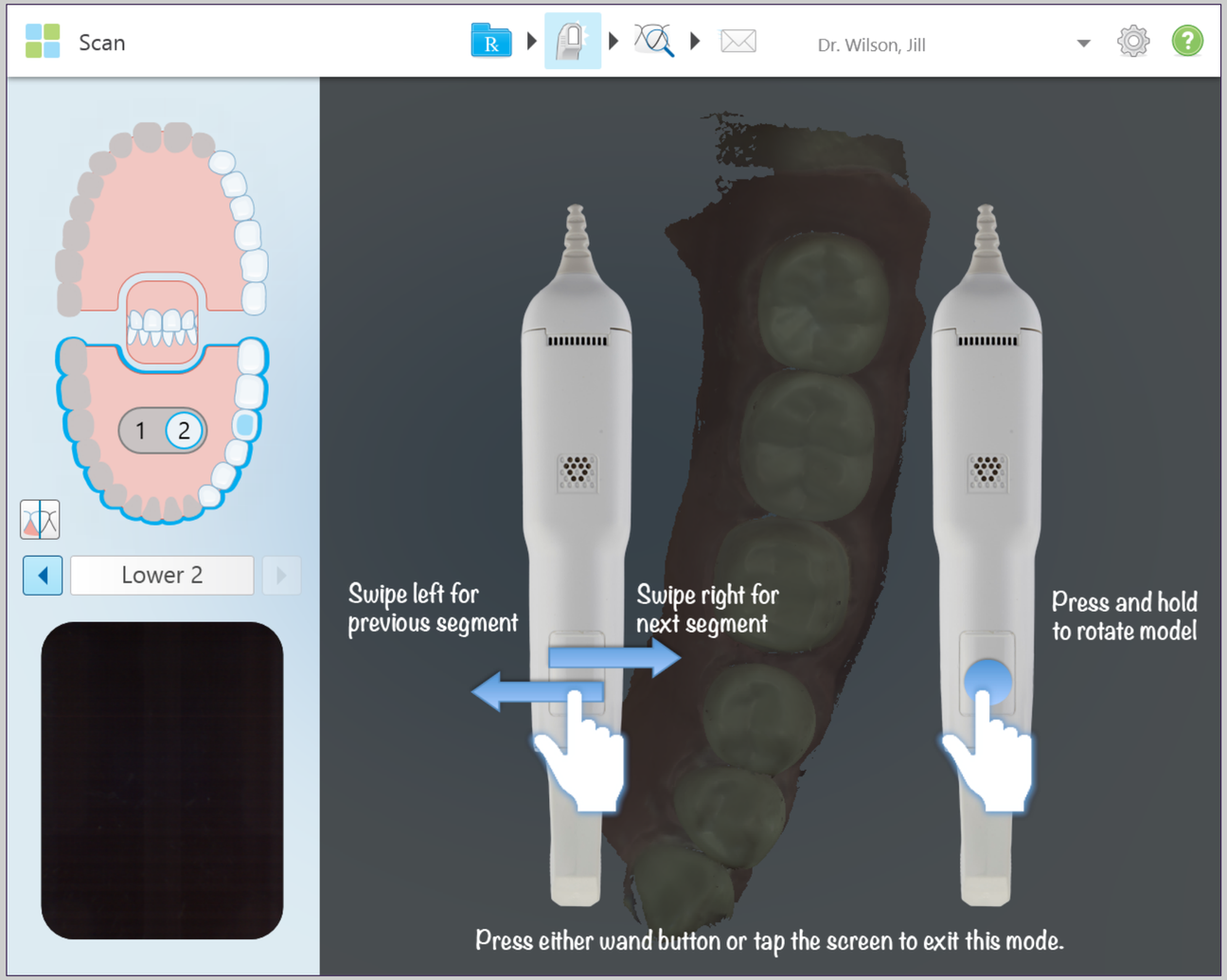
Wand Controls



Pressing and releasing both the buttons simultaneously will activate the touchpad. Once activated swiping the touchpad on the wand will allow movements between scan segments.

The current scanning segment is displayed in the indicator box between the arrows.

To rotate the model on the screen press and hold the wand touchpad.

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Care and Maintenance

Recommended best practices for cleaning and disinfecting the Scanning Unit, Base Unit, Wheel Stand, and / or Counter Stand in between each patient use.

- Do not spray disinfectant directly on scanner system surfaces
- Spray the disinfectant on a towel, or use disinfectant wipes for the Scanning Unit and Base Unit
- Follow the disinfectant manufacturers' instructions for appropriate contact time
- Remove residual liquid disinfectant with a lint-free, clean cloth

Description	pH	Manufacturer
Birex Quat Wipes	7.6	Biotrol Intl.
CaviCide AF	12.7	Metrex
CaviCide CaviWipe	12.5	Metrex
CaviCide 1 CaviWipe 1	12.5	Metrex
Clorox Healthcare Hydrogen Peroxide Cleaner Disinfecting Liquid	2-3	Clorox Healthcare
Clorox Healthcare Hydrogen Peroxide Cleaner Disinfectant Wipes	2-3	Clorox Healthcare
Opti-Cide 3 Liquid	7.6	Biotrol Intl.
Opti Cide 3 Wipes	7.6	Biotrol Intl.
OPTIM 33TB Liquid	2.5-3.5	SciCan Inc.
OPTIM 33TB Wipes	2.5-3.5	SciCan Inc.
ProSpray	10	Certol
ProSpray wipes		
Webcol Alcohol Prep Pads	7	Medtronic

*Please refer to Operations Manual for further instructions.

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Logging In

Make It Mine / Registering the System

To register the iTero Element system, have the following information available*

- User Name
- User Password
- Company ID

To retrieve User Name, User Password, and Company ID, please contact **iTero Customer Advocacy at 1 800 577 8767**.

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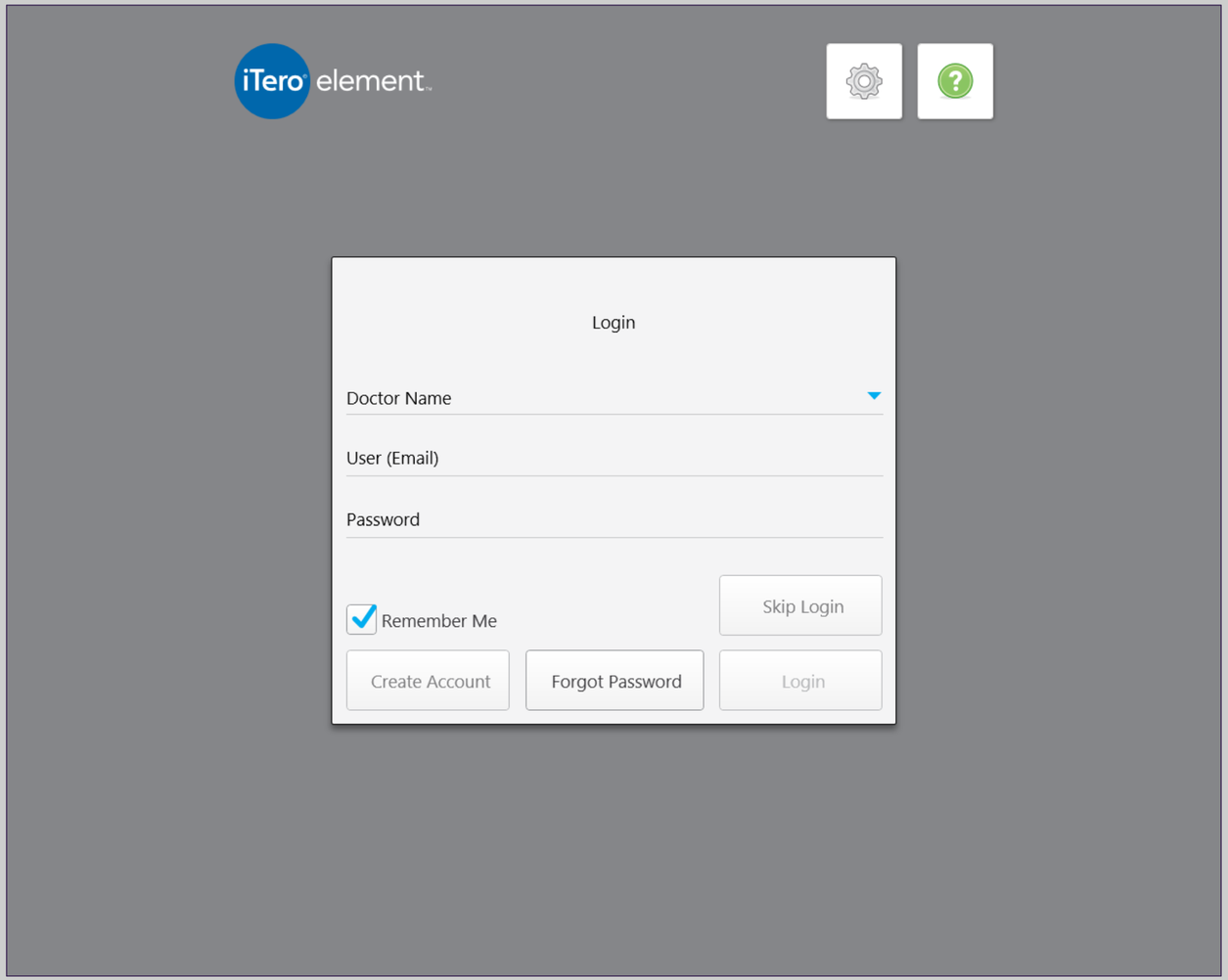
Logging In



- To log-in to the scanner,
- Choose the doctor name
- Enter user name and password*
- Check the ‘Remember Me' box to remain logged on to the scanner for 9 hours

To retrieve User Name, User Password, and Company ID, please contact iTero Customer Advocacy at 1 800 577 8767.

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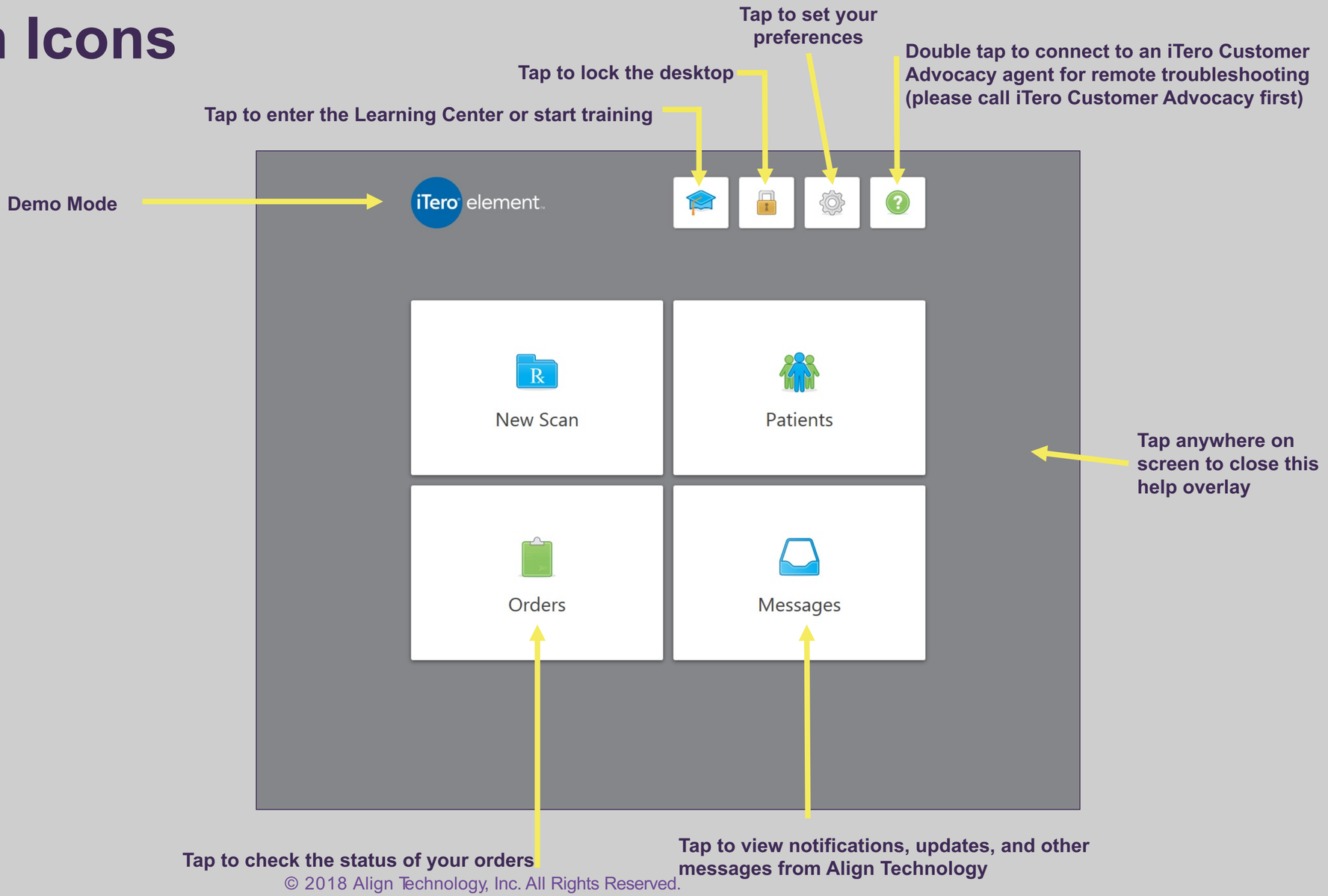
Home Page

Home Screen Icons



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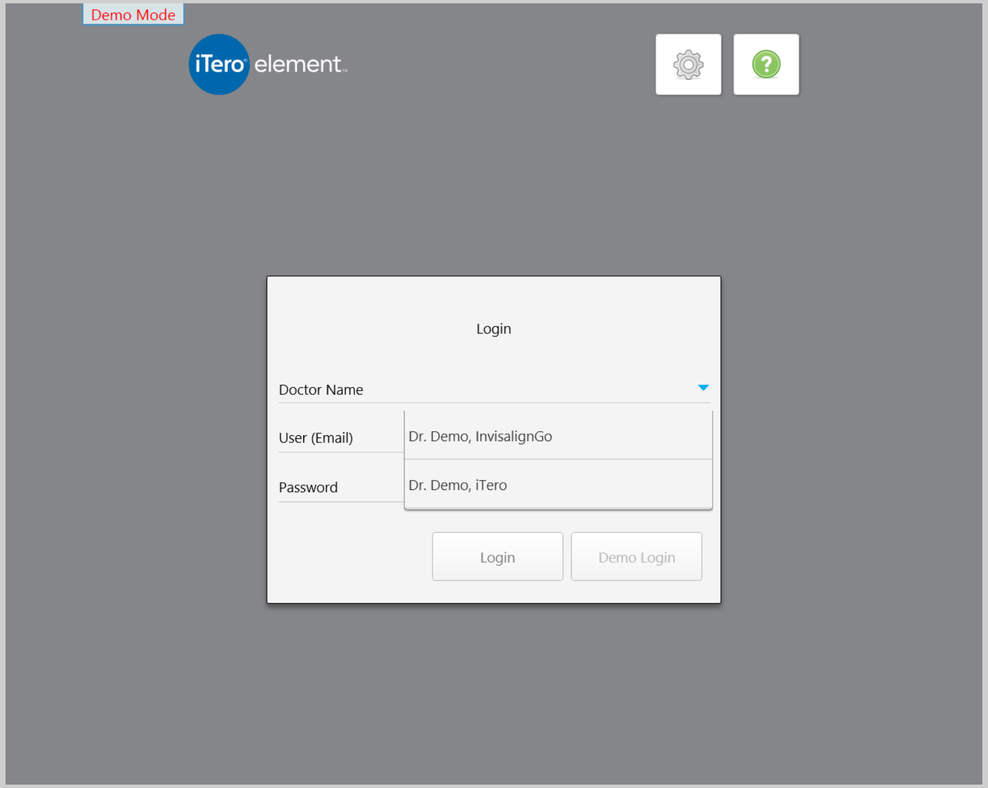
Home Page

Demo Mode

Tap on the iTero Element logo then select the demo mode button



Select a user and log in

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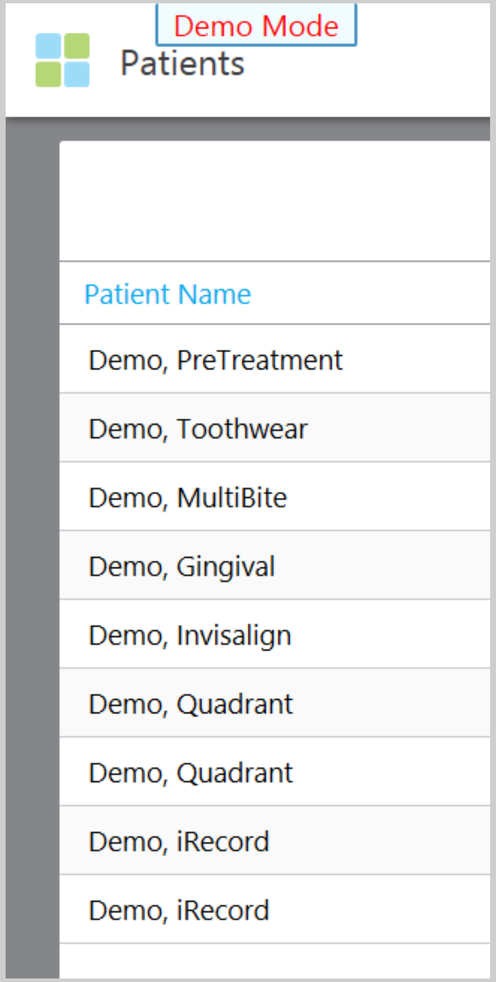
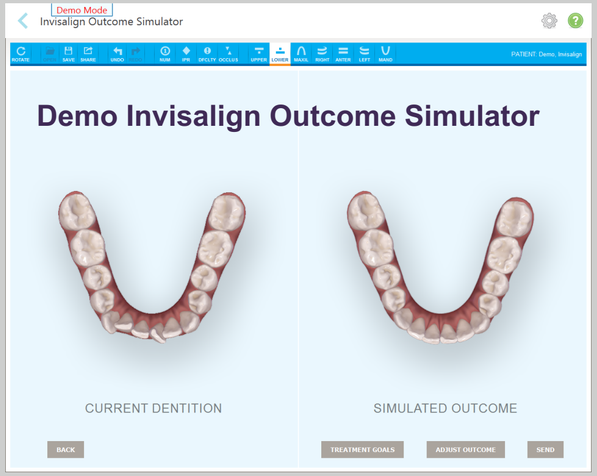
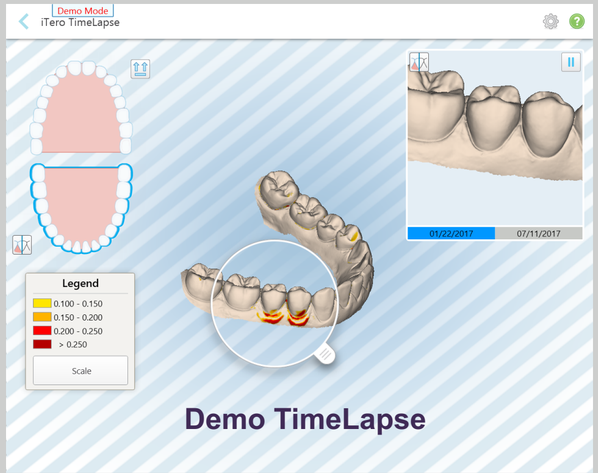
Home Page

Demo Mode





Explore Demo cases in Patients Tab



The background wallpaper is stripped alerting you to demo mode status

Practice scanning by selecting the new scan icon, completing the Rx and scanning according to the protocol for the selected case type. Note: Cases scanned in demo mode cannot be submitted for production.

Demo mode is effective for allowing team members new to scanning practice and review cases prior to completing a clinical case.

To exit demo mode tap on the iTero Element logo and choose exit demo mode.

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Small Icons – Learning Center

The graduation cap is the link to the Learning Center.

Select this icon to access all training support materials

- Online training videos
- Training and reference documents
- Register and view webinars

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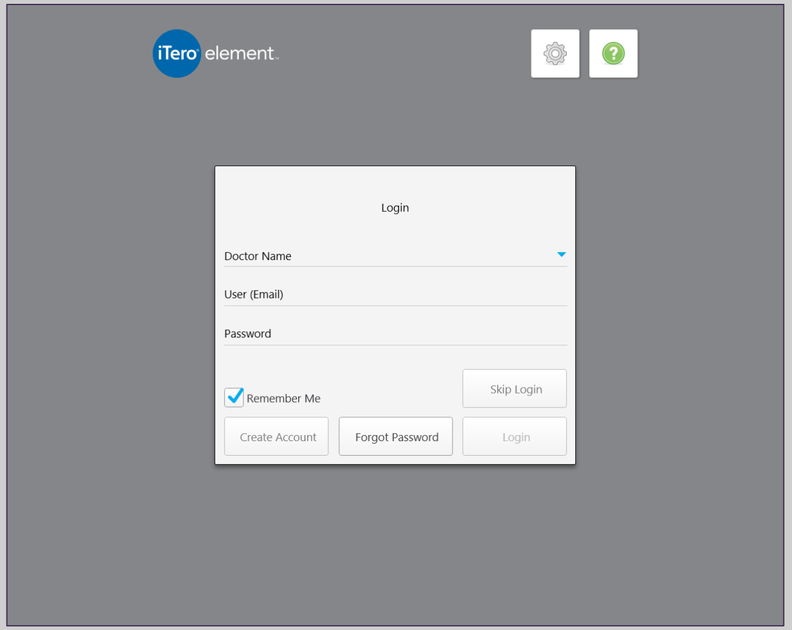
Small Icons – Lock



To further support patient privacy regulations compliance, the Lock option secures the desktop and returns screen to the login page.

Locking the system for cleaning is helpful to avoid unintended entries.

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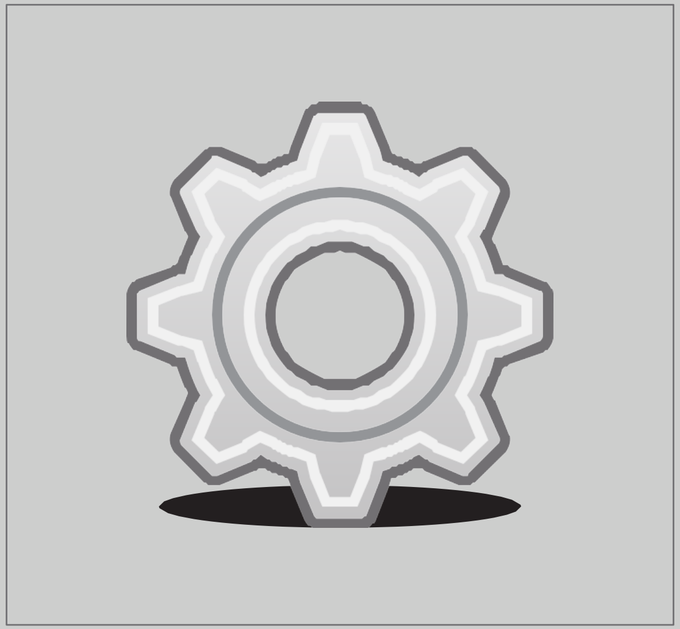
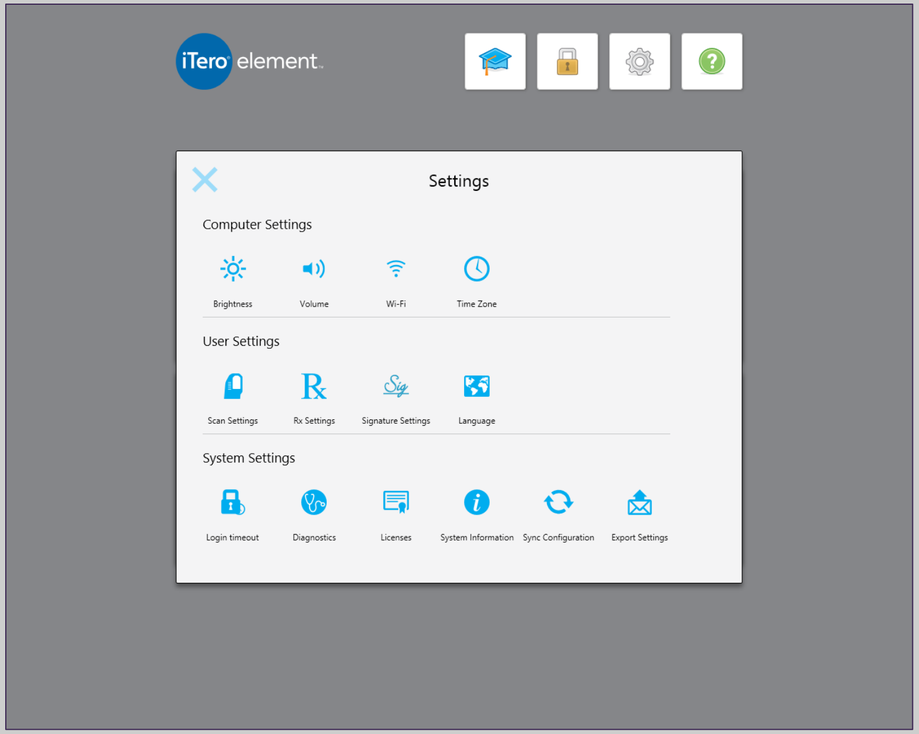
Small Icons – Settings





Tapping on the Settings icon brings the screen which allows the change of computer settings, scanner settings, time zone, language, add the Doctor's signature, license number, and sync the system for any new updates.

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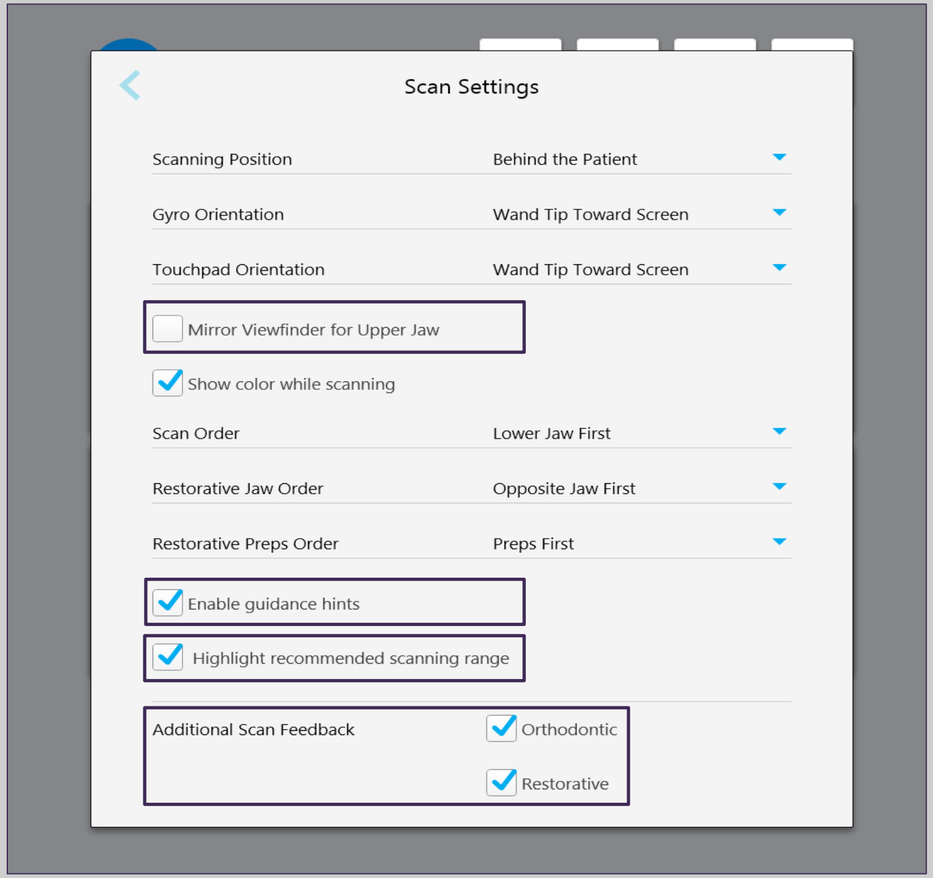
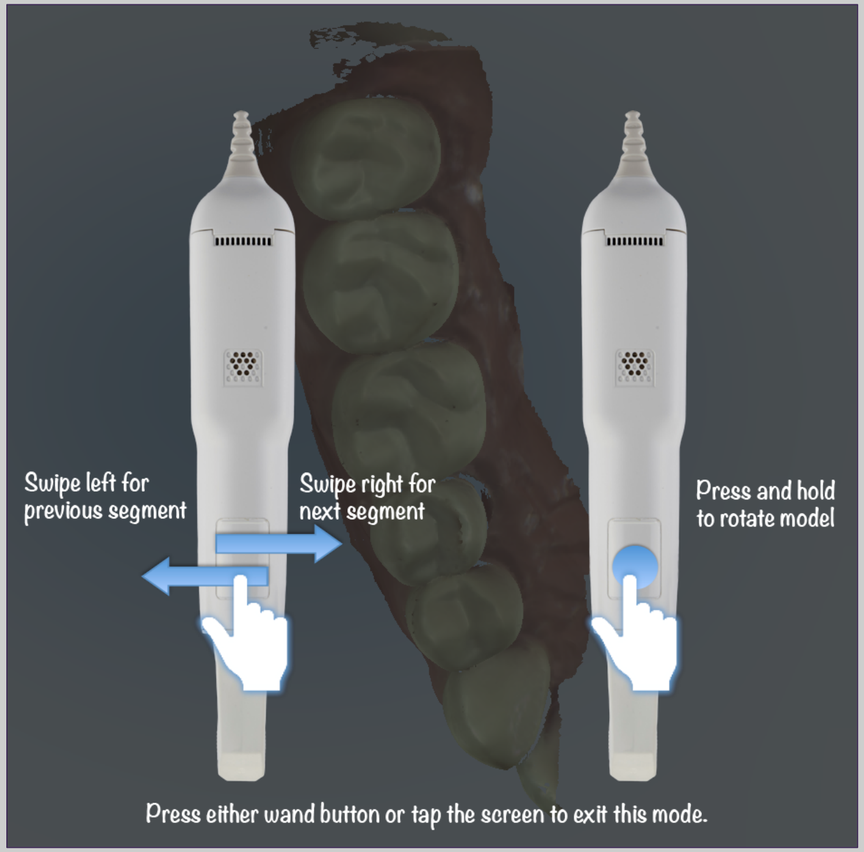
Home Page

Settings – Scanner Settings



Enabling the color while scanning, recommended scan range, guidance hints and additional scan feedback will provide the most supportive scanning experience



Within the Scanner Settings, select the preference for the Gyro and Touchpad orientation.

For example, in the above picture, the selections are for the wand tip toward the screen for the gyro and the base toward the screen for the touchpad.

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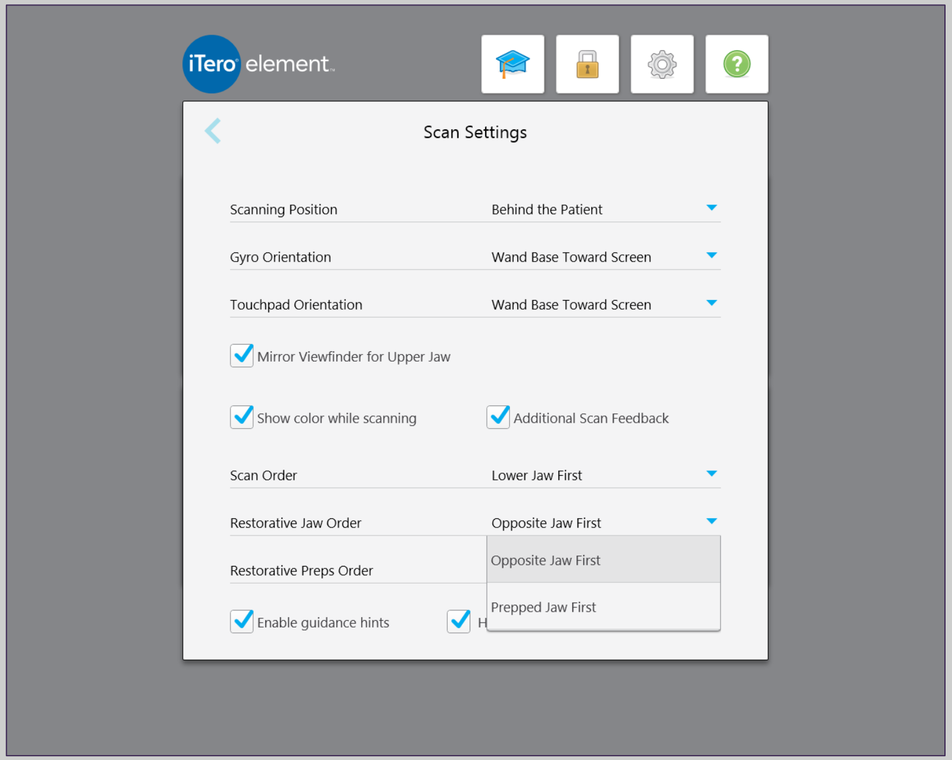
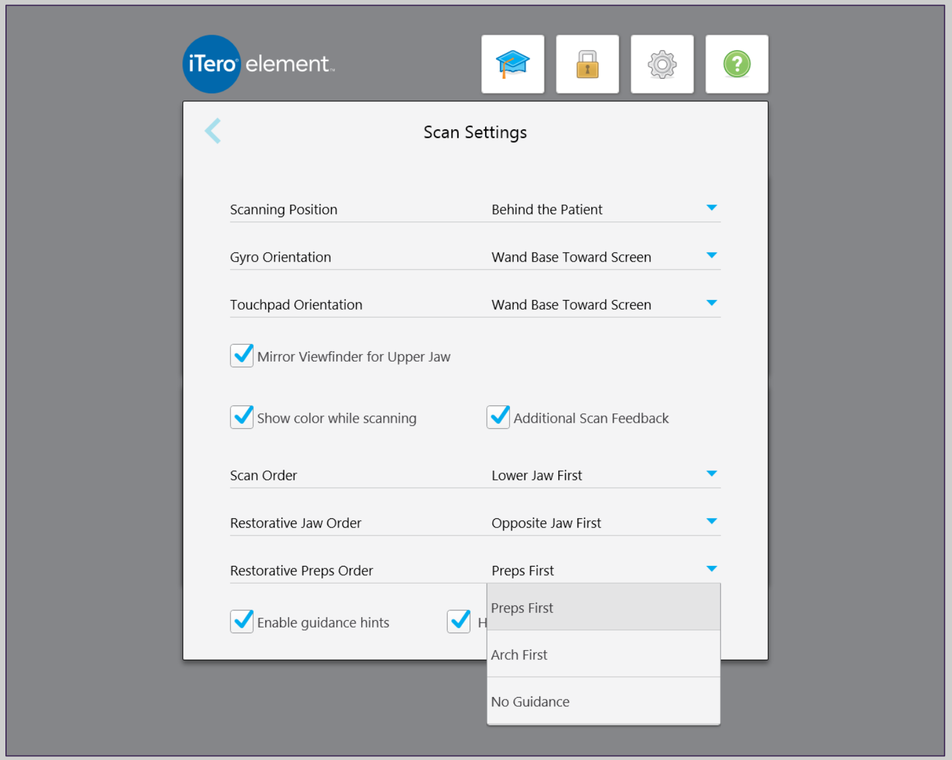
Settings – Scanner Settings

Change the Scan Order.



Jaw Order



Preparation Order

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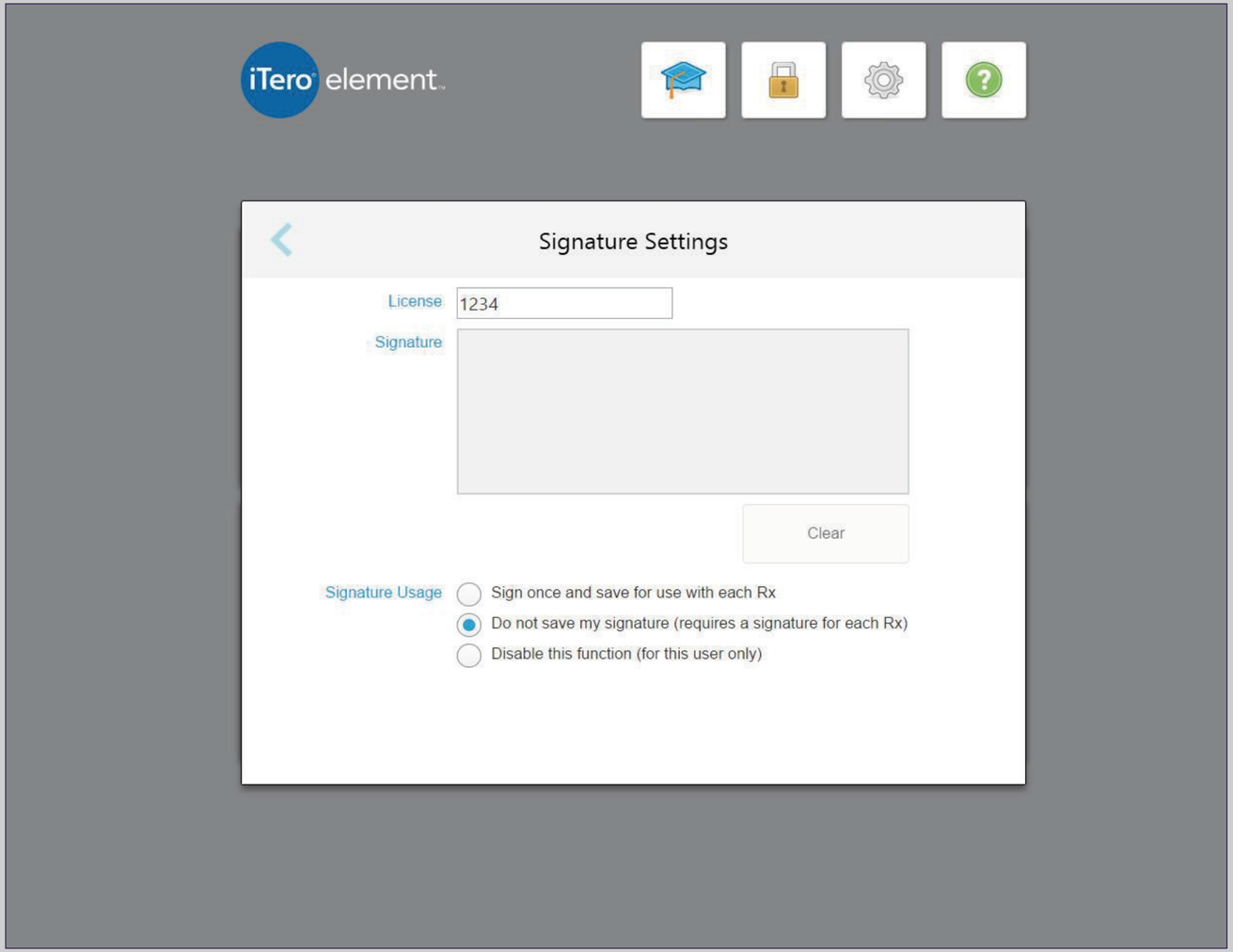
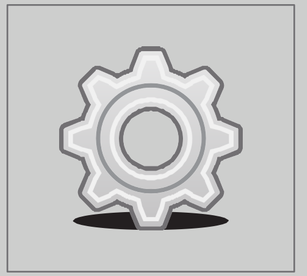
Settings – Scanner Settings





- Enter doctor license number in the box provided
- Sign in the signature box
- Select preferred option

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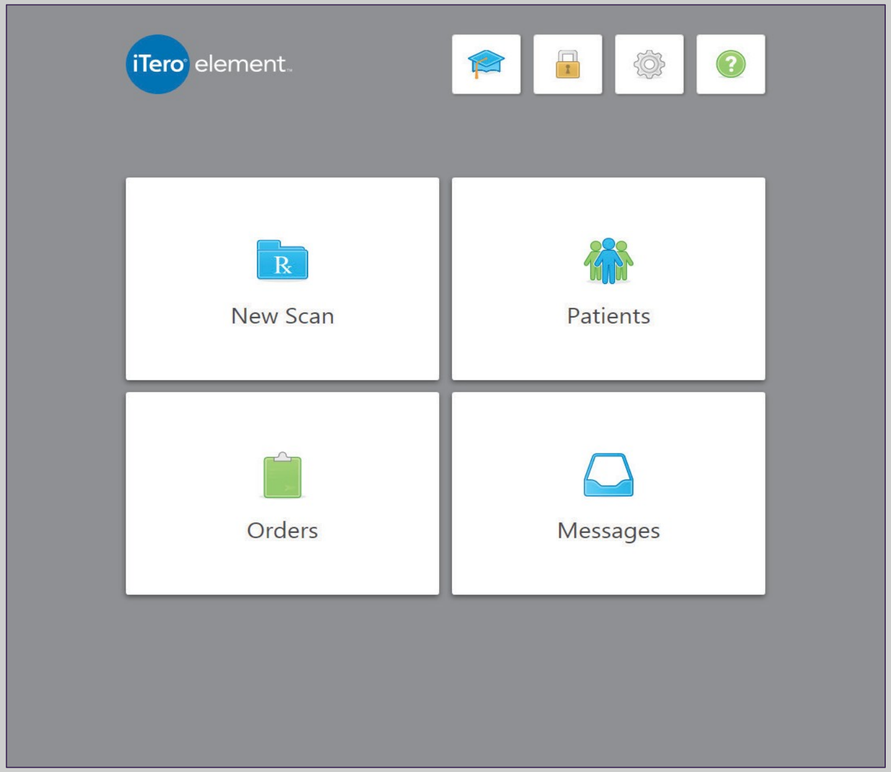
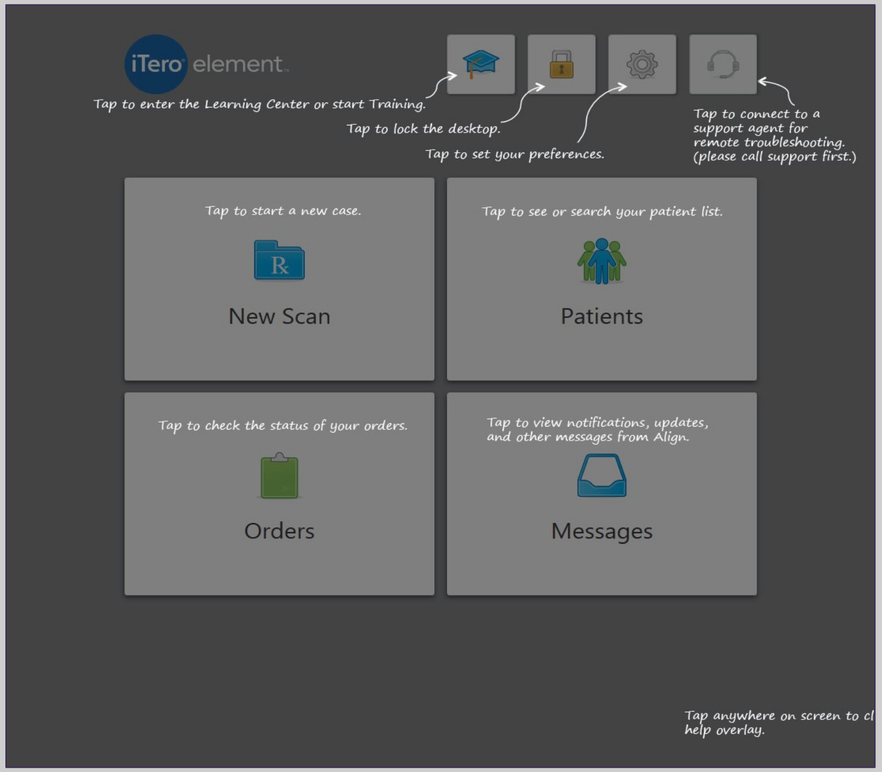
Home Page

Help Overlay





One tap on the question mark will enable a transparent overlay that will provide a brief overview. Tap anywhere to close the Help screen and return to the relevant screen.

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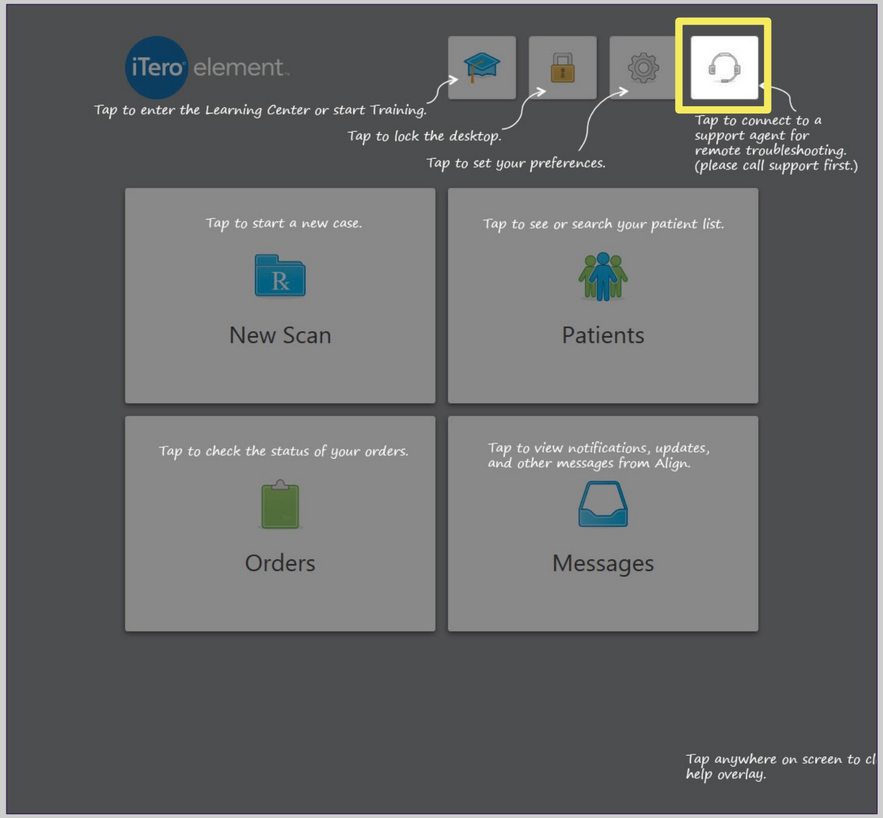
iTero Customer Advocacy



Tapping on the headset will allow for remote assess for troubleshooting. Contact iTero Customer Advocacy first at 1 800 577 8767.

After contacting iTero Customer Advocacy, an agent will review the specific steps in order to connect remotely.

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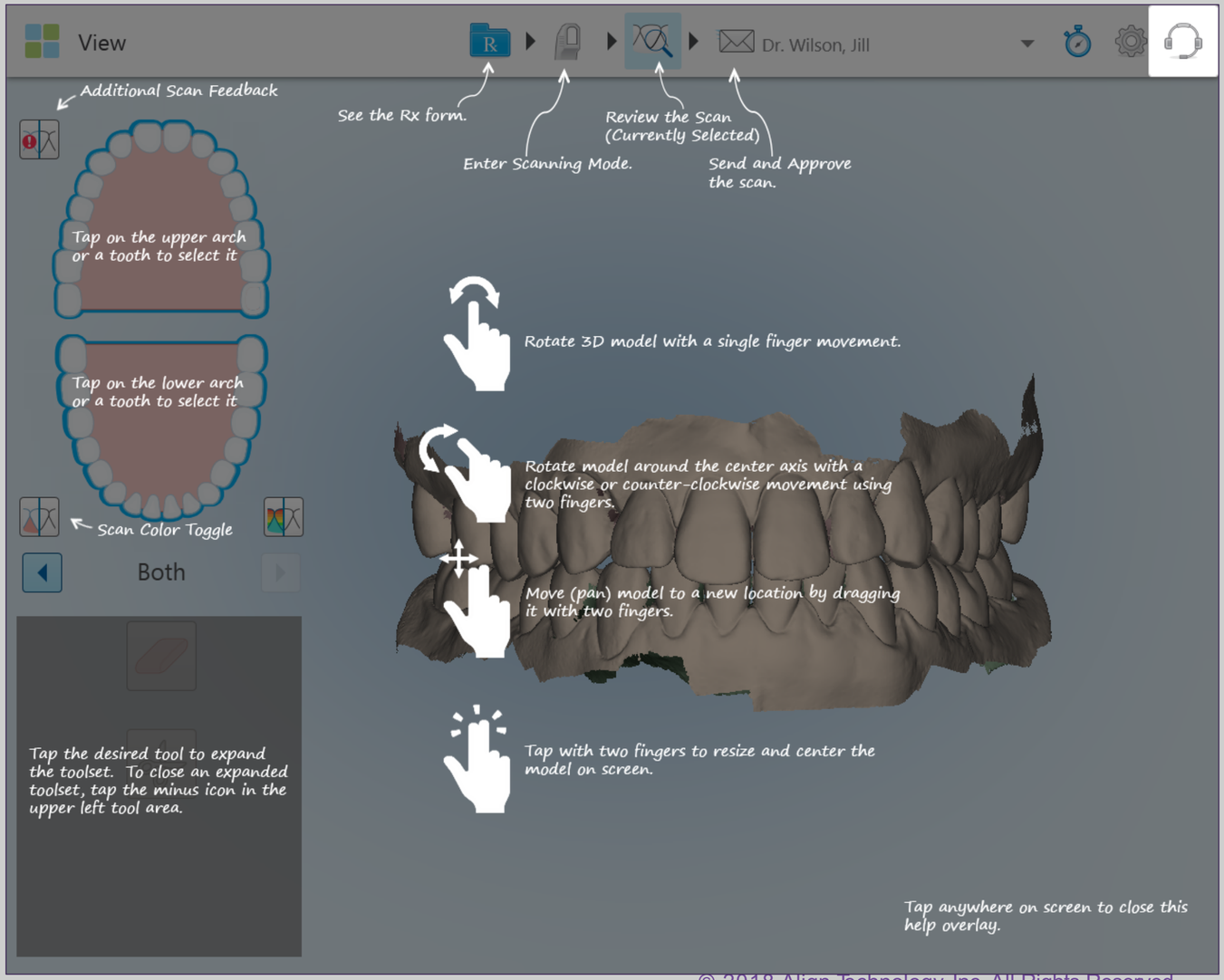
Help / Display Screen Gestures



- Tap on the help icon for context sensitive overlays with instructions and tool descriptions
- Use fingers to rotate, move, or zoom in on the scanned model for analyzing

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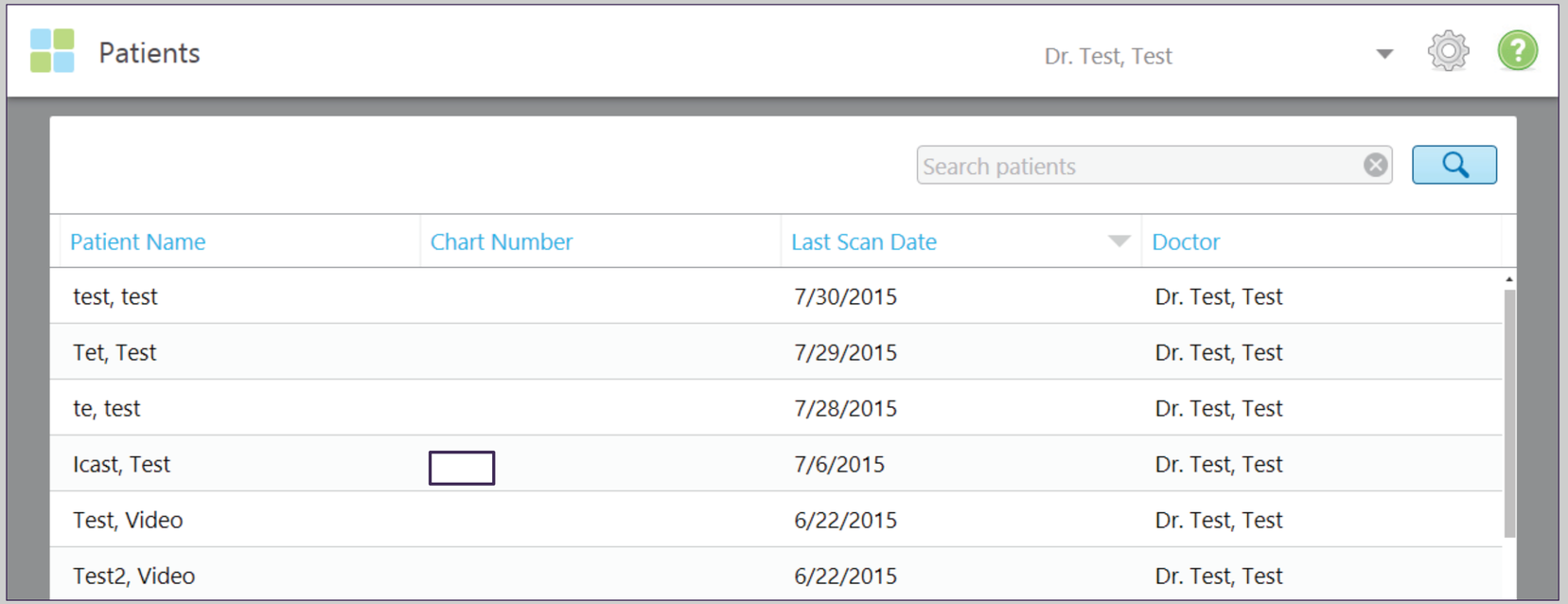
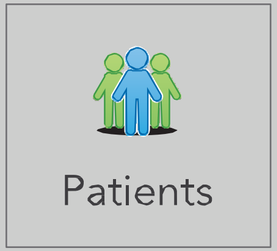
Home Page

Patients





To search for a patient from the iTero database, select the Patients icon on the home page.

The Patients order list will open.

Search by patient name or chart number to find the patient.

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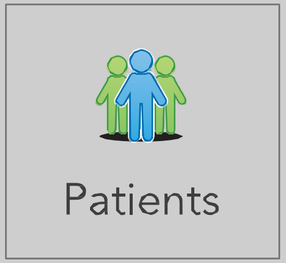
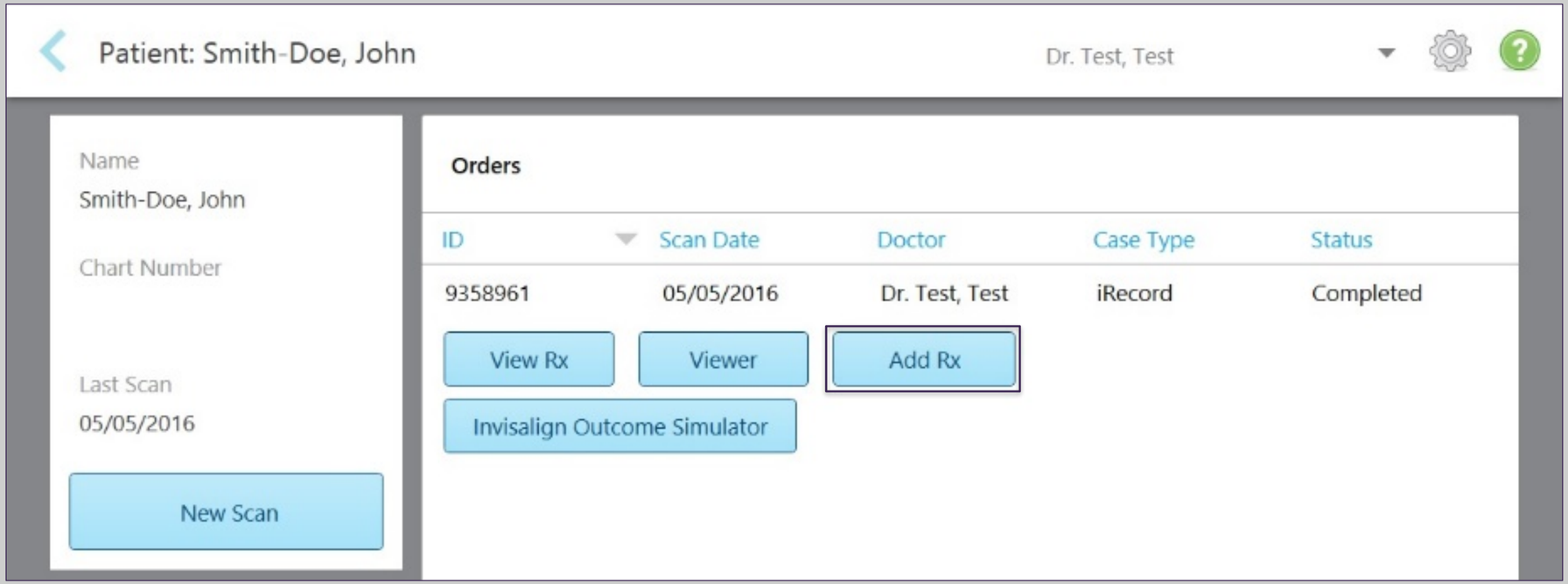
Home Page

Patients





The Patients icon can be used to start a new scan, open previous scans with Viewer and / or Invisalign Outcome Simulator.

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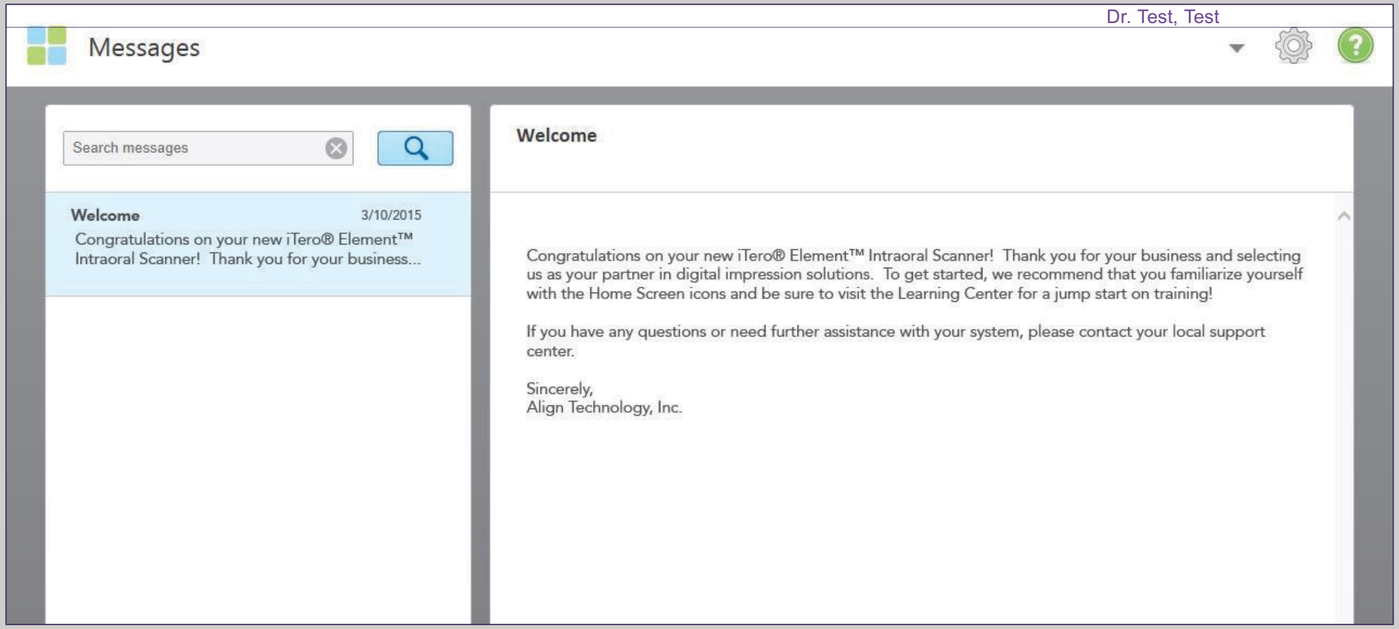
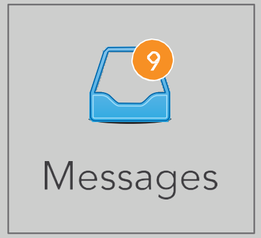
Home Page

Large Icons / Messages





The Messages icon is a badged icon that notifies the user of important messages from Align Technology such as product updates, upcoming educational sessions, or internet connectivity issues.

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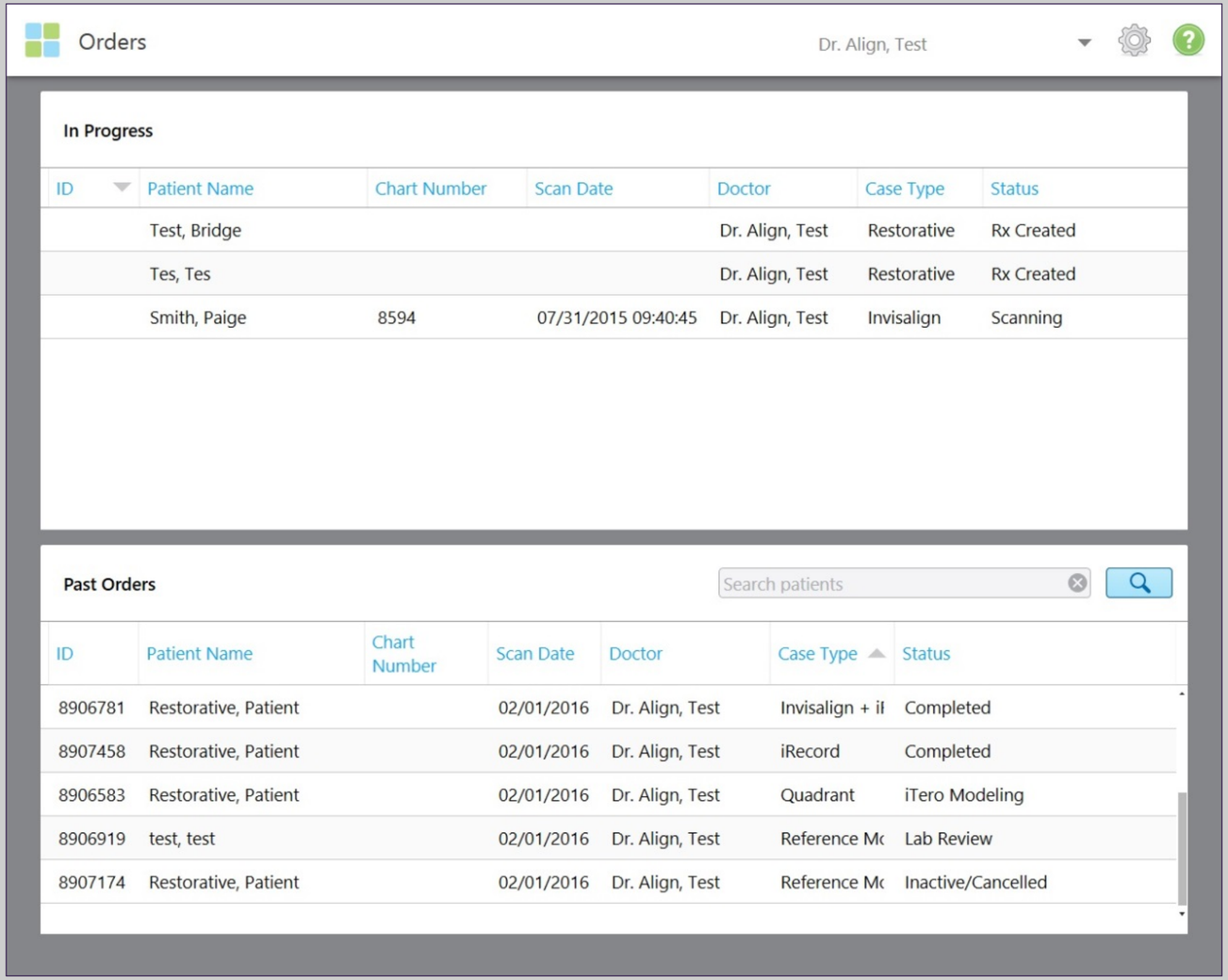
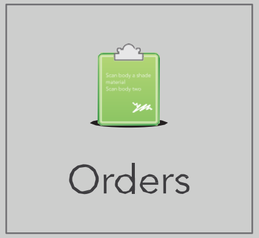
Large Icons / Orders





Within the Orders icon is the list of orders that are either In Process or Past Orders.

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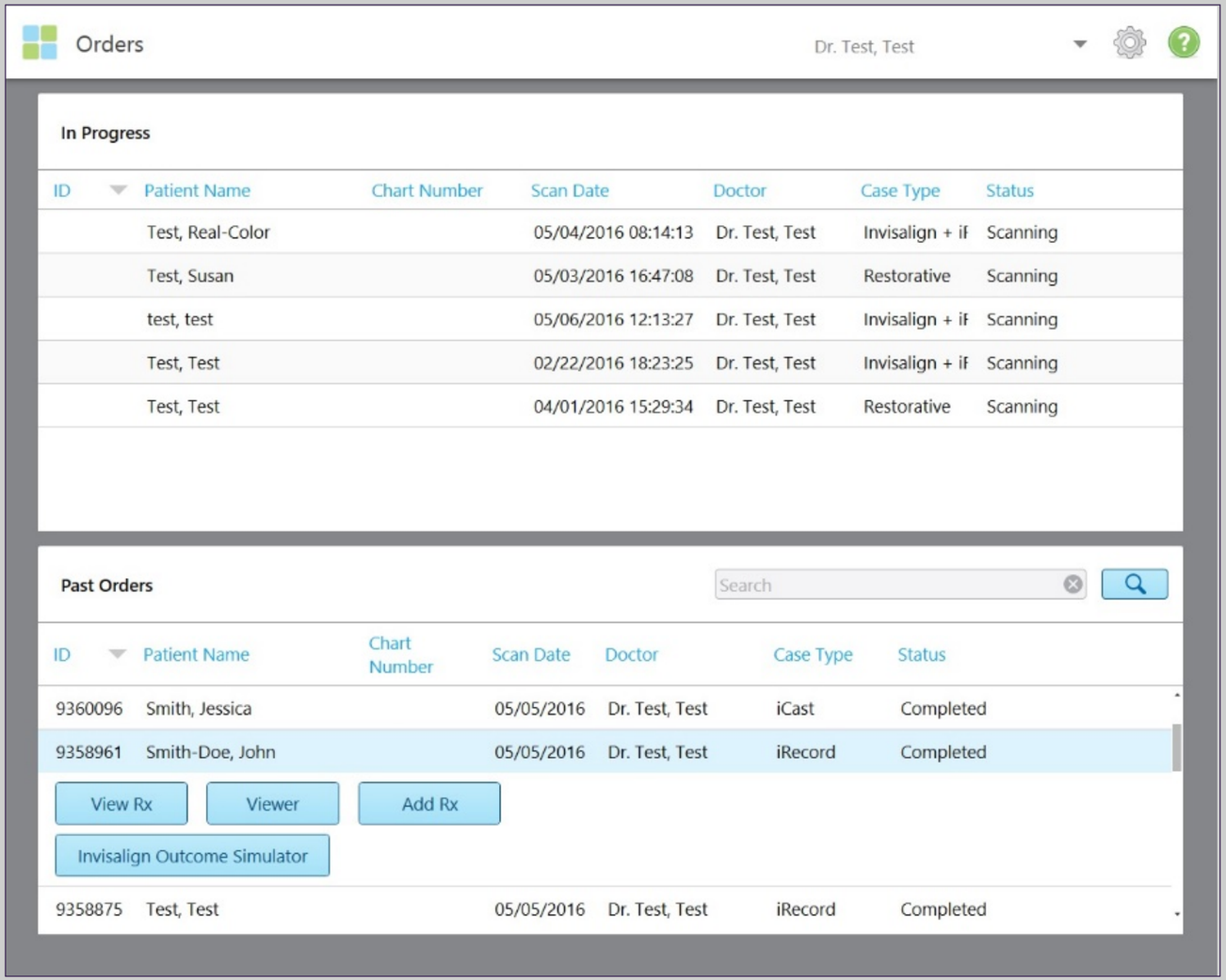
Large Icons / Orders in Progress and Past Orders



Within the In Progress section, view an Rx, continue, view, or delete a scan.

Within the Past Orders section, view an Rx, open the order using the Viewer, or open an Invisalign scan using the viewer or the Invisalign Outcome Simulator.

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Ergonomics

Ergonomics play a key role to comfort while scanning. It’s recommended to place the patient in the supine position.

Lower the patient's head and sit comfortably with elbows on the side. Place the display on dominant side to see the screen without turning or stretching.

The wand should fit comfortably in the palm of the hand with a light grip. There is no need to grip the wand tightly.

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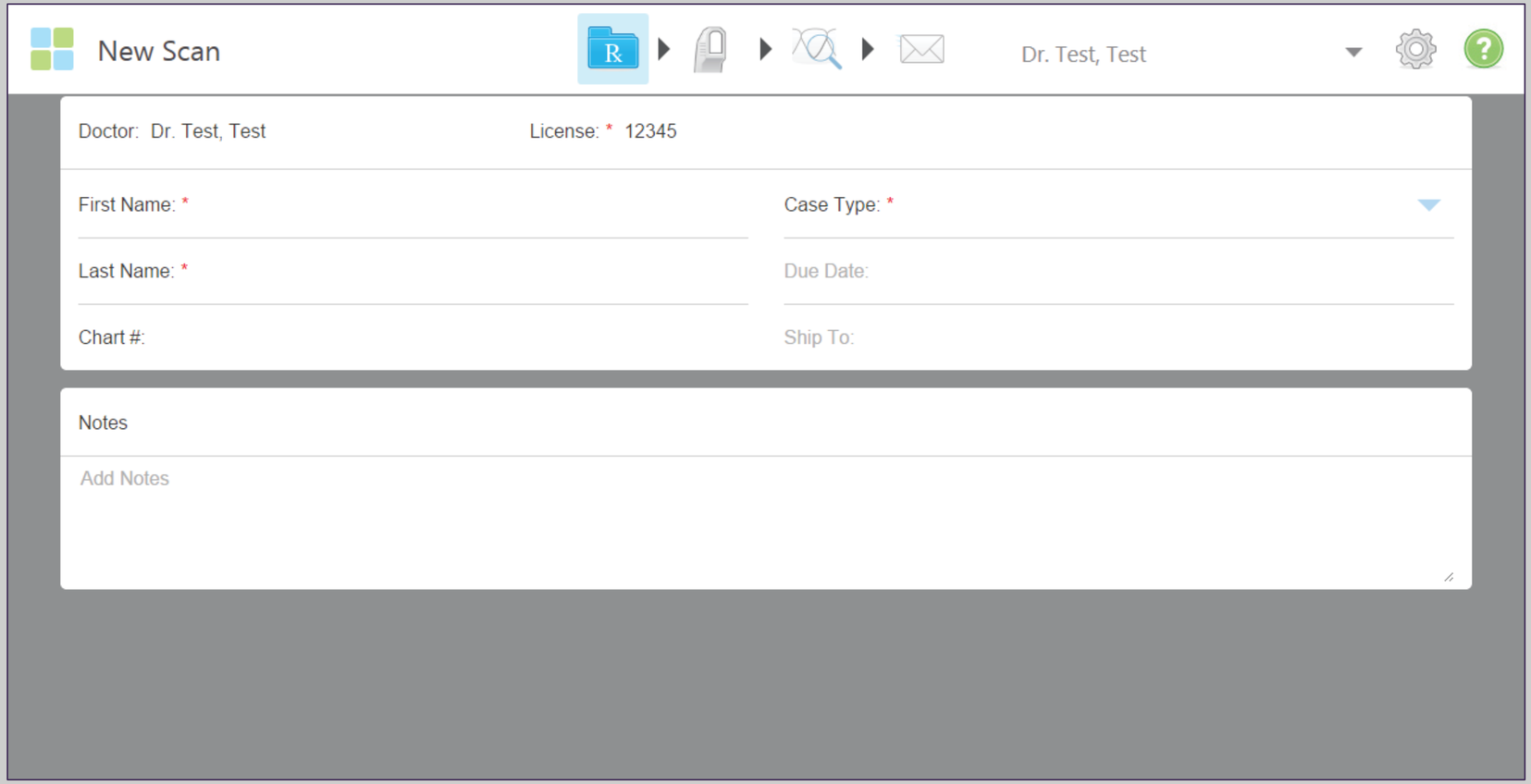
Home Page

Large Icons / New Scan



Opening the new scan icon will jump to the Rx page. The Rx is the section to enter all the necessary patient information. The sections marked with a red asterisk (*) are required information.

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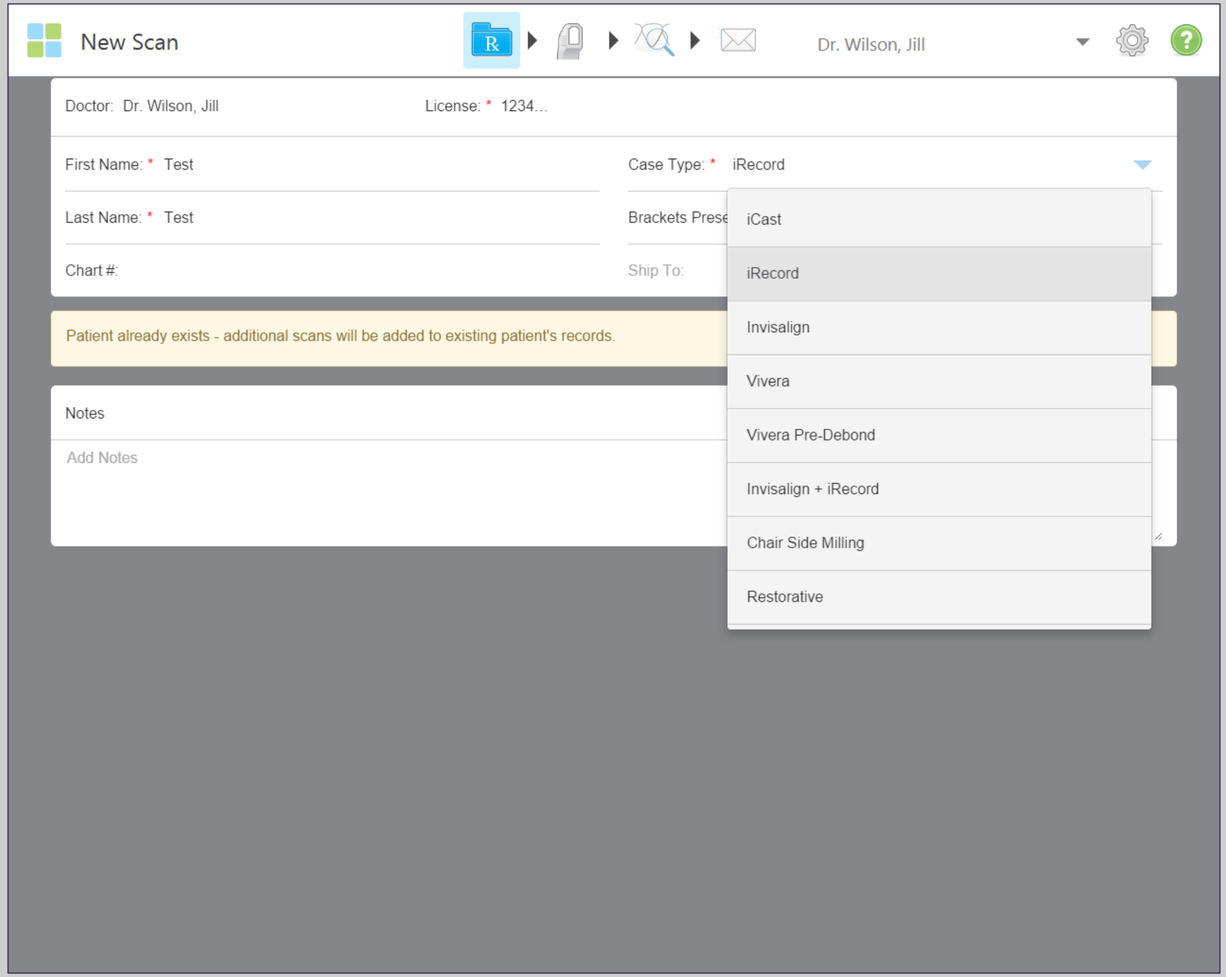
Full Mouth Scanning Protocol – Start New Prescription



There are several Case Types to choose from.

Any special instructions for Invisalign treatment must be noted in the Invisalign Doctor Site.

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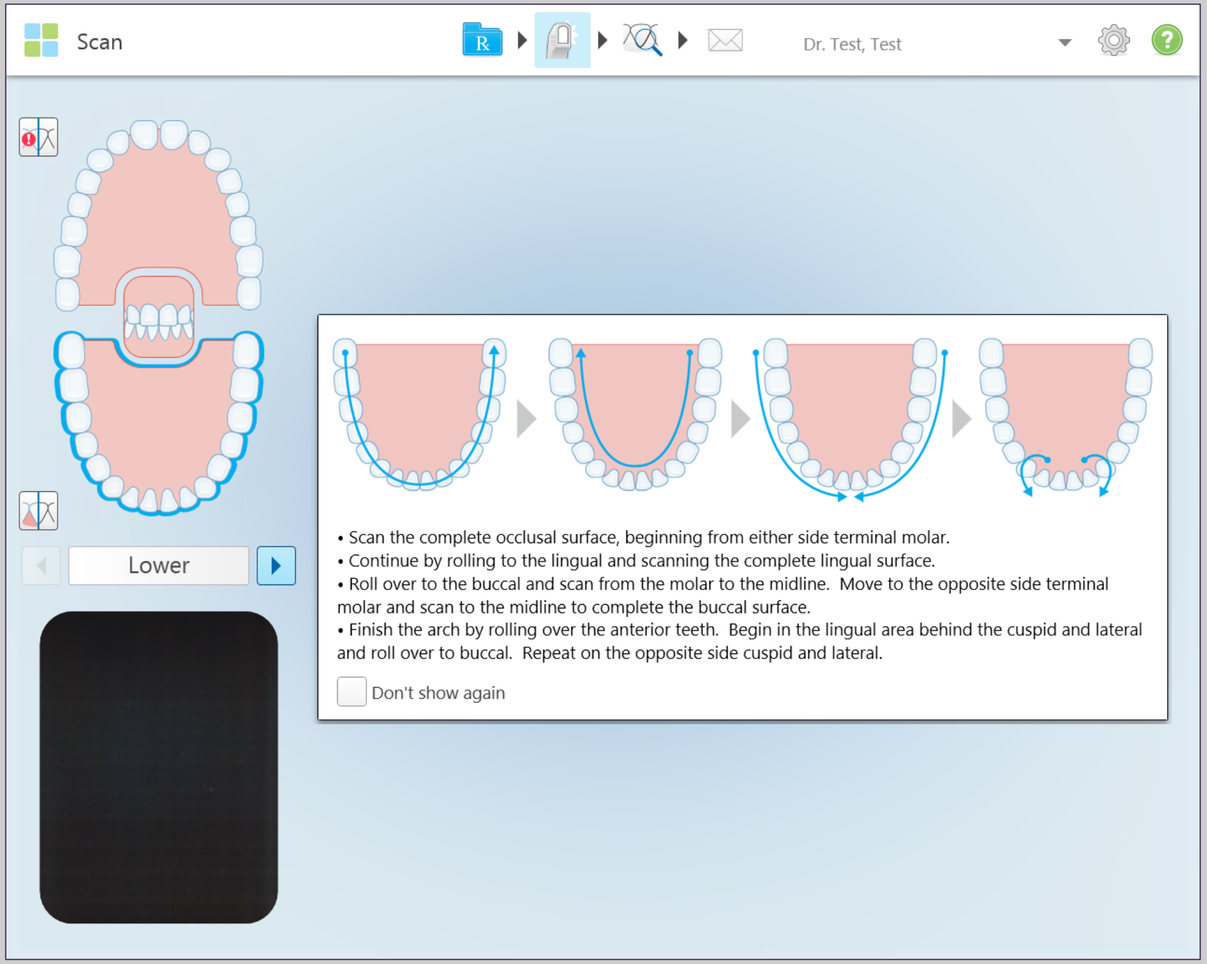
Invisalign Scanning Protocol - Guidance Hints



The iTero Element scanner offers Guidance Hints that helps recall the scanning sequence.

Deactivate the Guidance Keys by checking the box, ‘Don’t show again’.

Reactivate the Guidance Keys in the Settings gear icon.

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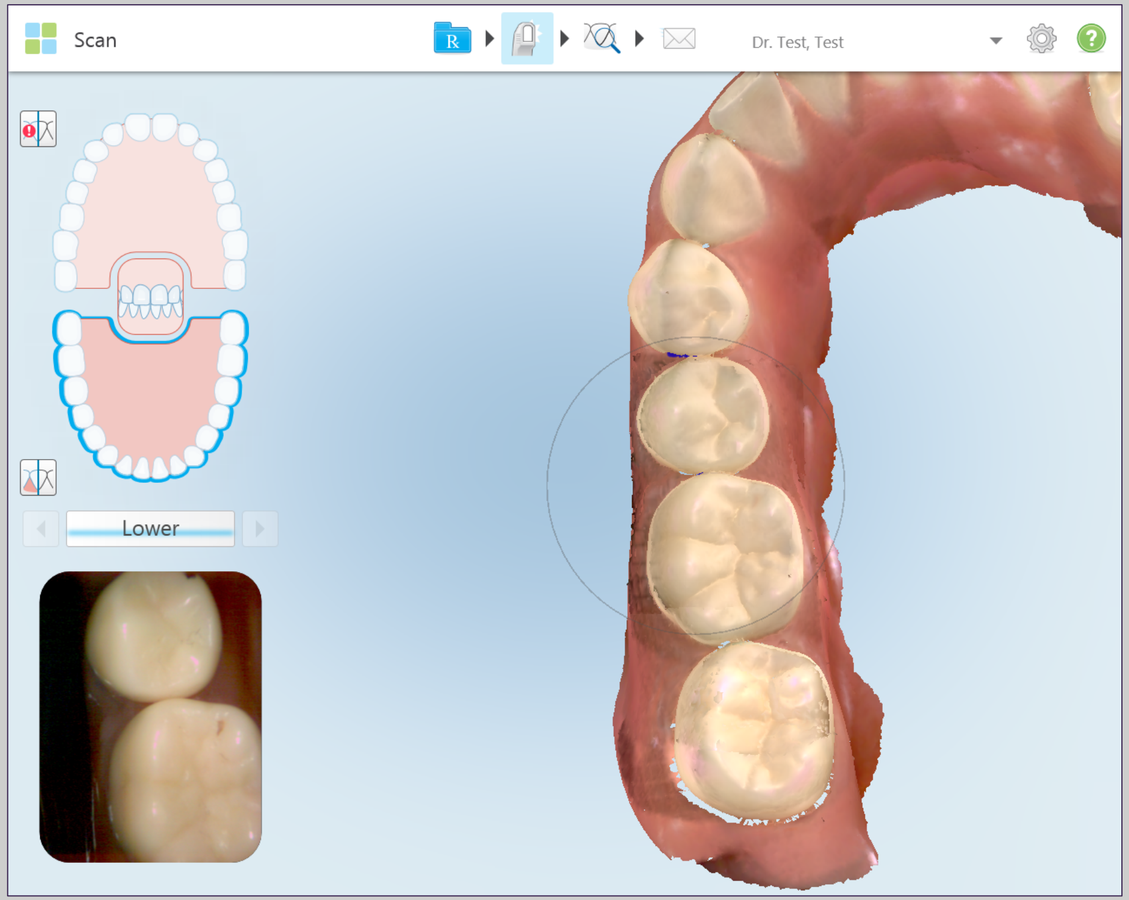
Full Mouth Scanning Basics

Occlusal
(Upper or Lower Arch First is Optional)



Scan the occlusal surface in a single continuous motion.

When the wand reaches the cuspid, continue by swiping across the anterior, tilting slightly to the lingual until the wand touches the contralateral cuspid.

Proceed by moving the tip straight back to the terminal molar.

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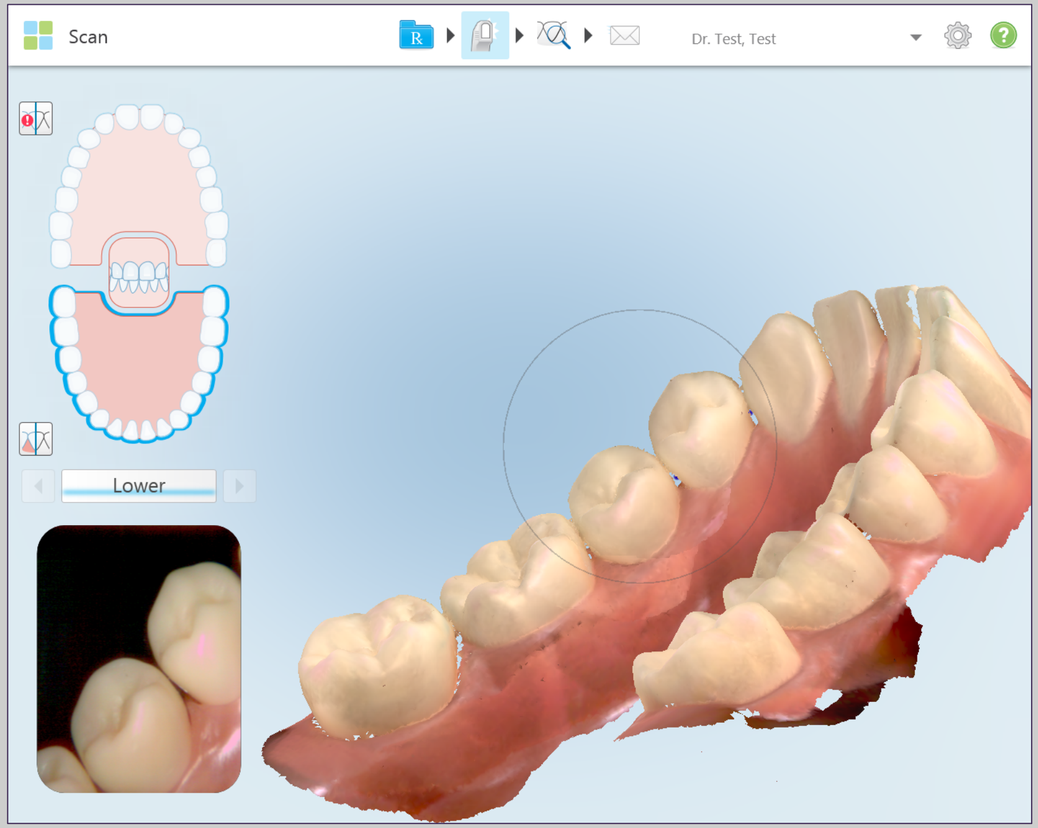
Full Mouth Scanning Basics

Lingual



Scan the lingual by rolling from the occlusal. Bring the cable end of the wand out to the side and maintain a vertical 45 degree angle of the wand tip to the lingual surface.

To capture the mesial and distal interproximal anatomy, twist the wand tip right and left as the wand moves around the arch. Holding the wand tip against the tooth will help to retract the tongue.

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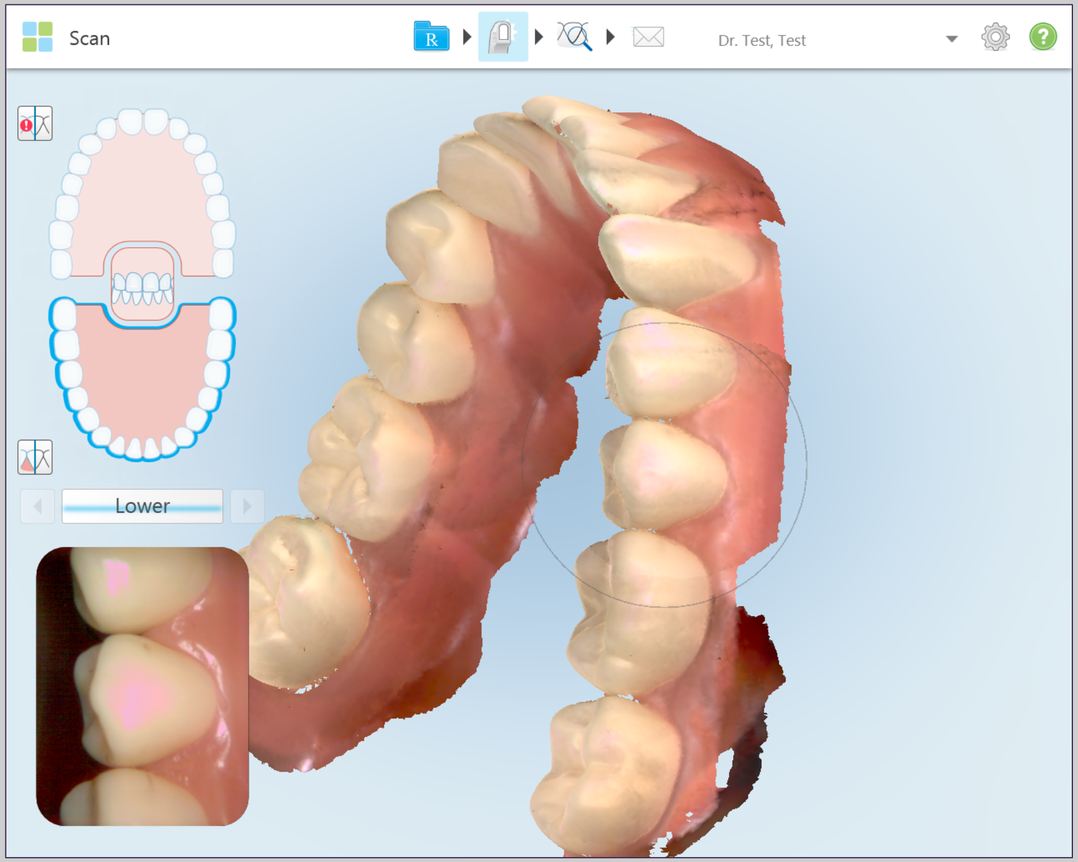
Full Mouth Scanning Basics

Buccal



Bring the cable end of the wand towards the arch to capture the mesial interproximal anatomy and taking the cable end away from the arch will capture the distal interproximal anatomy.

From the lingual, roll to the buccal at a 45 degree horizontal angle and use a rocking motion as the wand moves towards the midline to capture the interproximal anatomy.

After crossing the midline, begin on the contralateral terminal tooth and continue with the same rocking motion to capture the buccal surface from the posterior to the anterior.

Moving from posterior to anterior on the buccal reduces the interference from the cheek and provides a smoother scanning experience.

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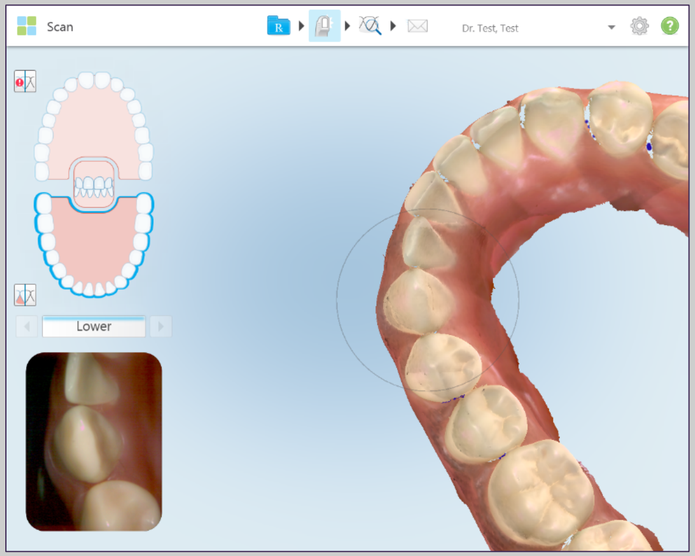
Anterior / Incisal

Place the wand with the cuspid and lateral centered in the view finder and roll from the lingual surface over the incisal edge to the facial.

Repeat this step on the contralateral side.



These scans help to ensure the lingual segments and buccal segments are joined with accurate incisal surfaces.

This step is critical for properly fitting Invisalign clear aligners.

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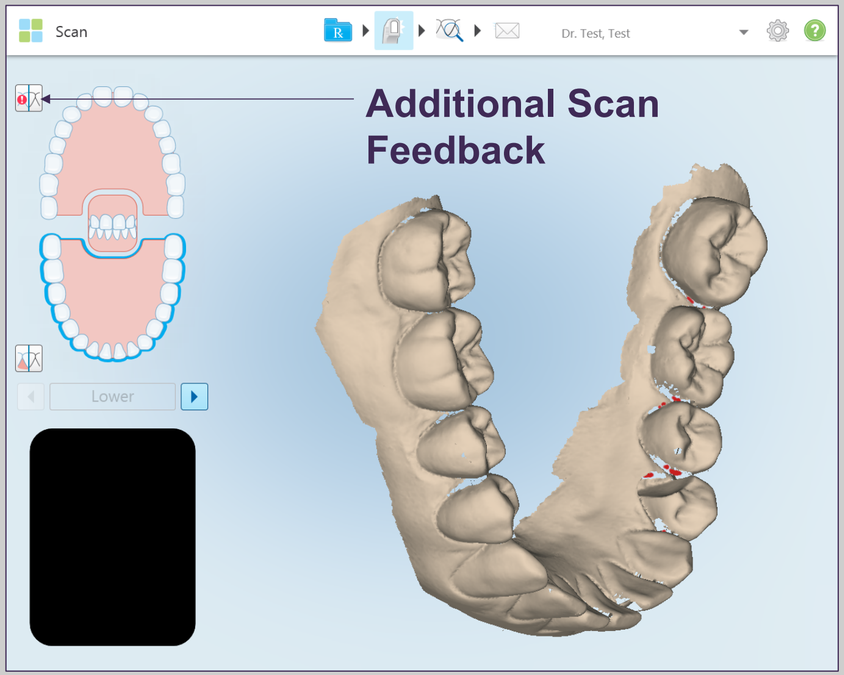
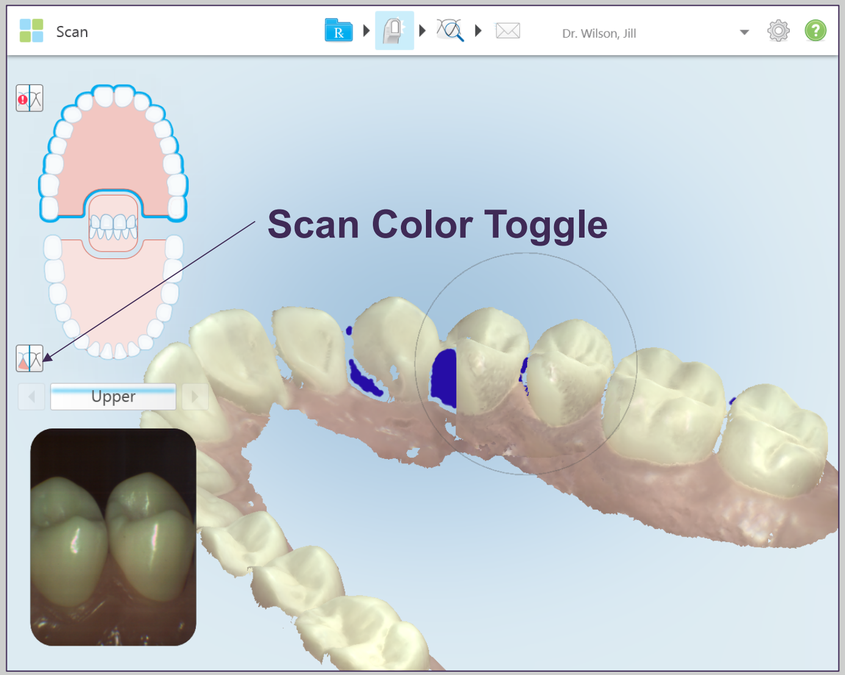
Full Mouth Scanning Basics

Optimized Scanning





When the Optimized Scanning Feature icon is activated, areas of missing anatomy will be highlighted in red when scanning in monochromatic mode and purple when scanning in color mode. This feature will alert you to areas that need additional scans. The color icon allows you to toggle between color or monochromatic modes. This applies to both scanning and viewing all case types.

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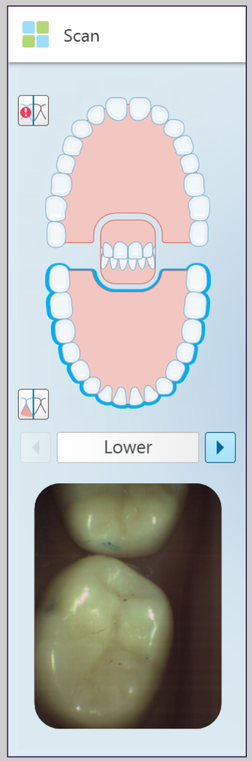
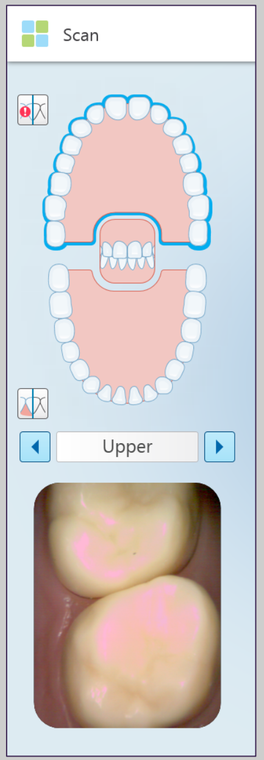
Switching to Opposing Arch





Switch to the opposing arch by pressing on the arch on the touchscreen or use the touchpad on the wand.

Follow the same protocol for the upper as with the lower: Occlusal, lingual / palatal, buccal, and incisal edge.

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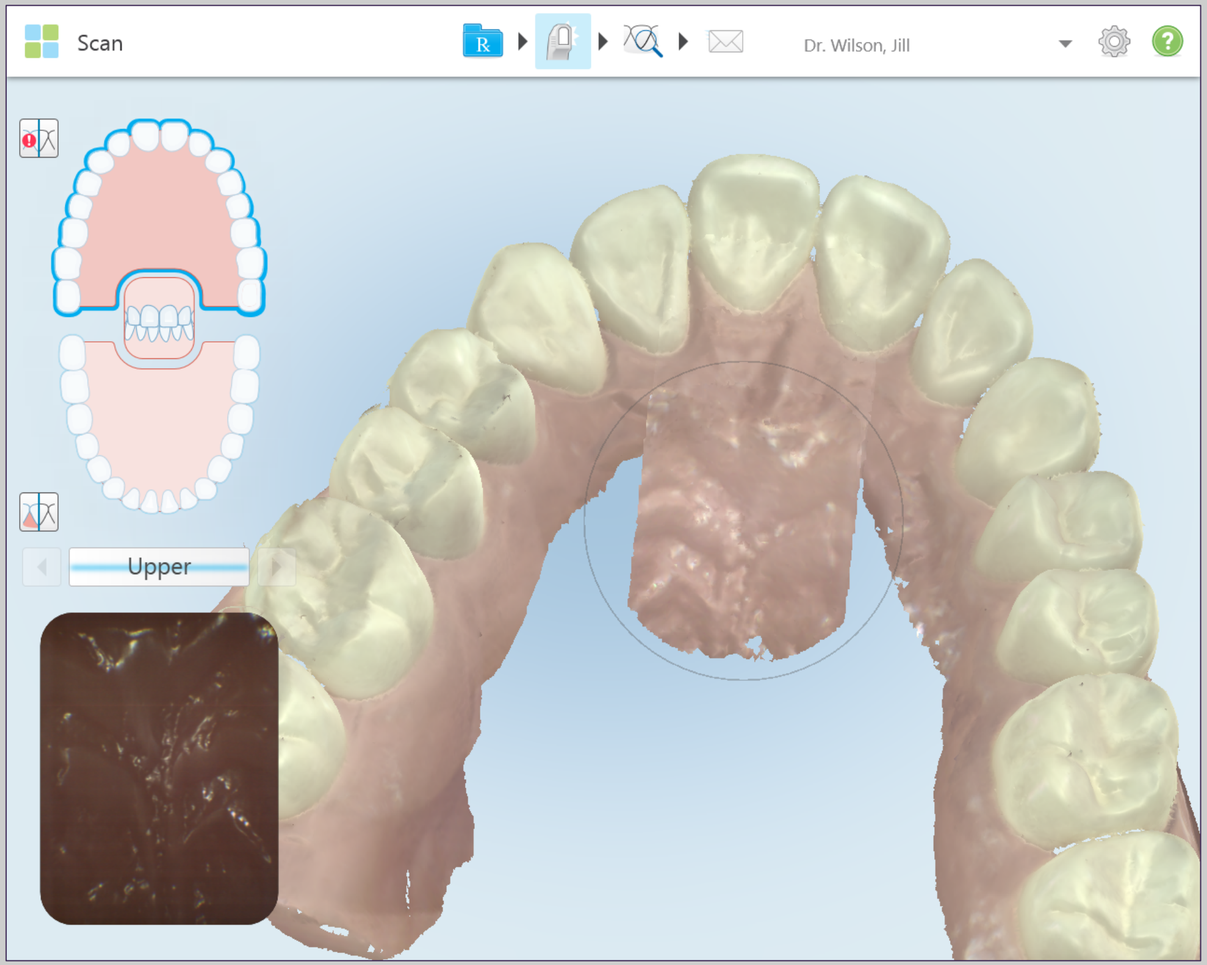
Scanning the Palate



- For Invisalign + iRecord or iRecord scans
- Once completed the lingual tooth anatomy
- Begin at the midline directly behind the central incisors
- Scan in a straight line to the soft palate
- Fill in the palate from the midline to the teeth on each side

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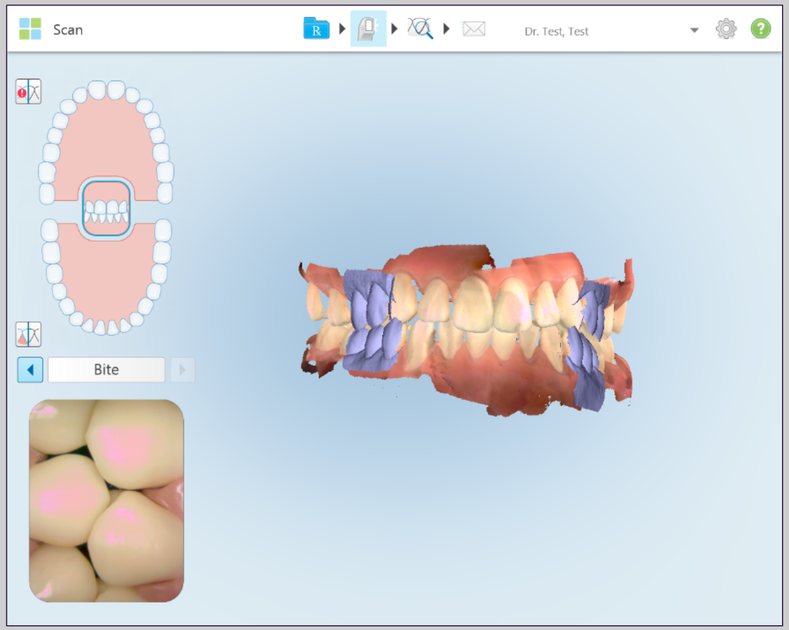
Full Mouth Scanning Basics

Bite

The final segment is the bite. Prior to scanning, confirm the patients bite. Have the patient open, use the wand to retract the cheek, and have patient close in centric occlusion. Bring the wand tip gently against the tooth anatomy.



Moving forward in a small wave like motion capture 3 – 4 teeth and then move to the contralateral side using the same technique.

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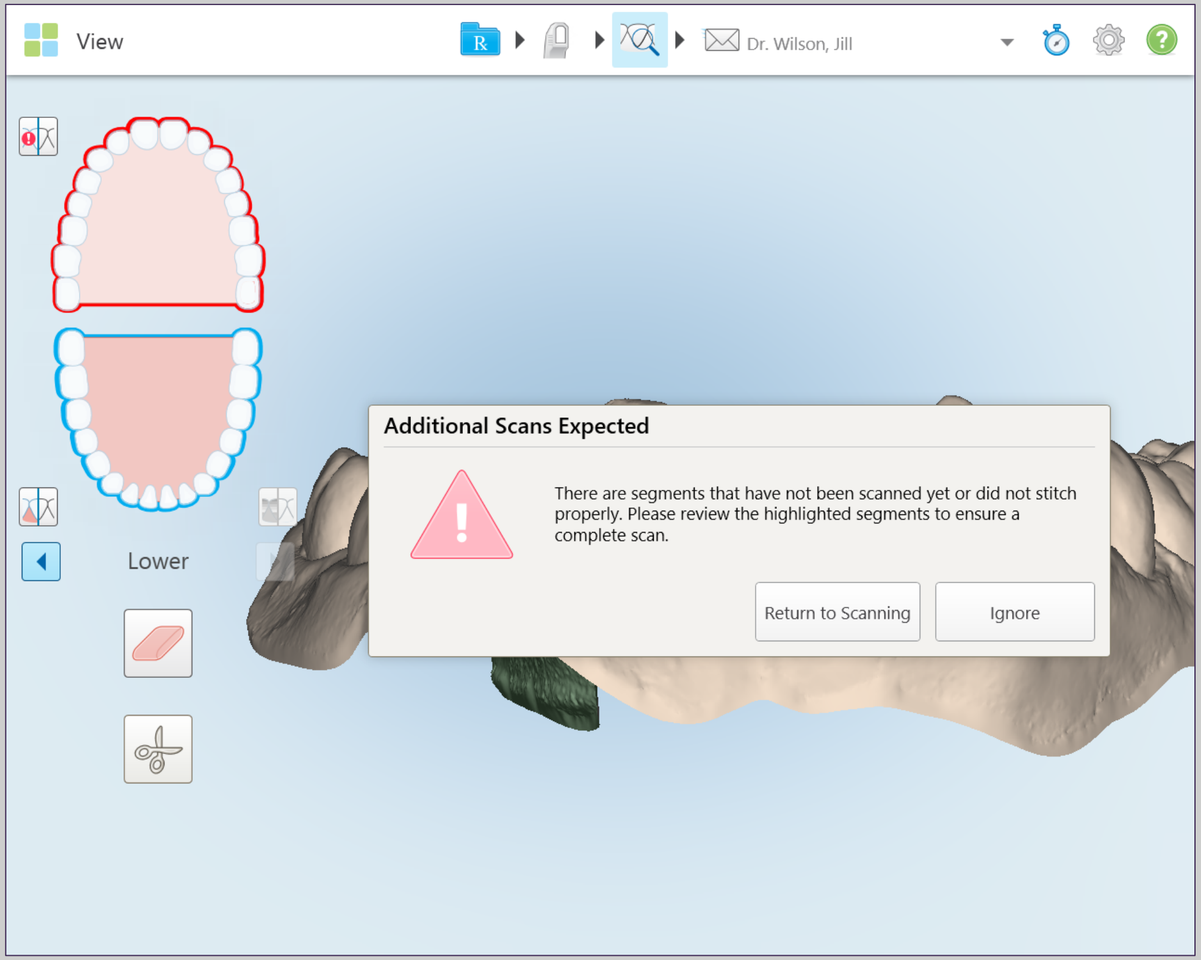
Missing Scan Segments



Complete the following steps if there are segments missing in your scan:

- **Go back to scan mode**
- **Complete the missing segments that are highlighted in red**
- **Repeat above steps if necessary**

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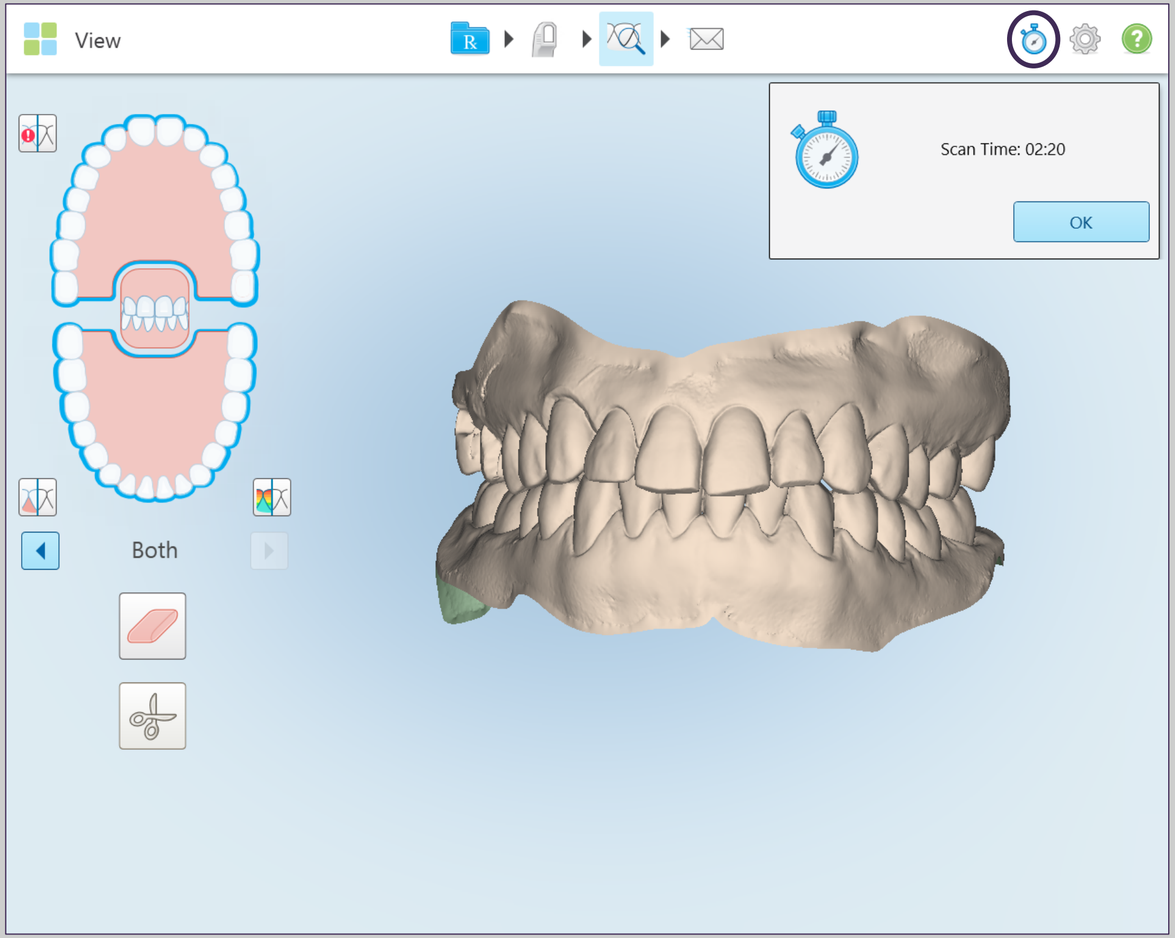
Full Mouth Scanning Basics

Scan Timer



After you are done scanning, you can use the Scan Timer icon to view your scanning time.

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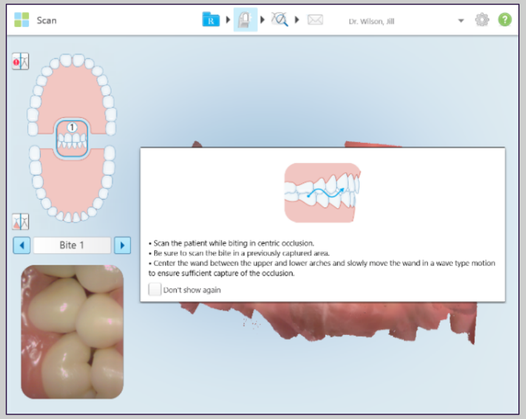
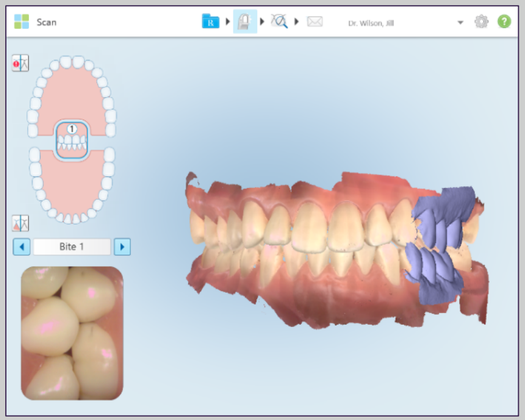
Full Mouth Scanning Basics

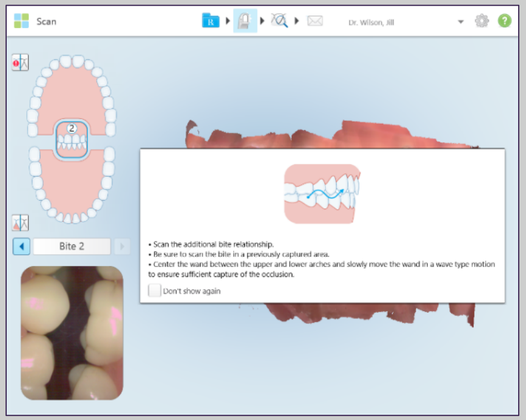
Multi-Bite

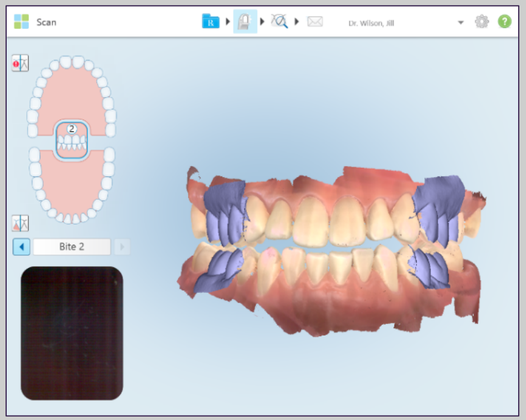
First Bite relationship





Additional Bite relationship





Multi-Bite scan feature makes it quicker, easier and more precise to capture and deliver bite information to the lab for appliance fabrication.

Some examples are:

- **Functional appliances**
- **Sleep apnea appliances – protrusion of the mandible to open the airway**

The segments will be registered as always as purple scans at the bicuspid and molar area.

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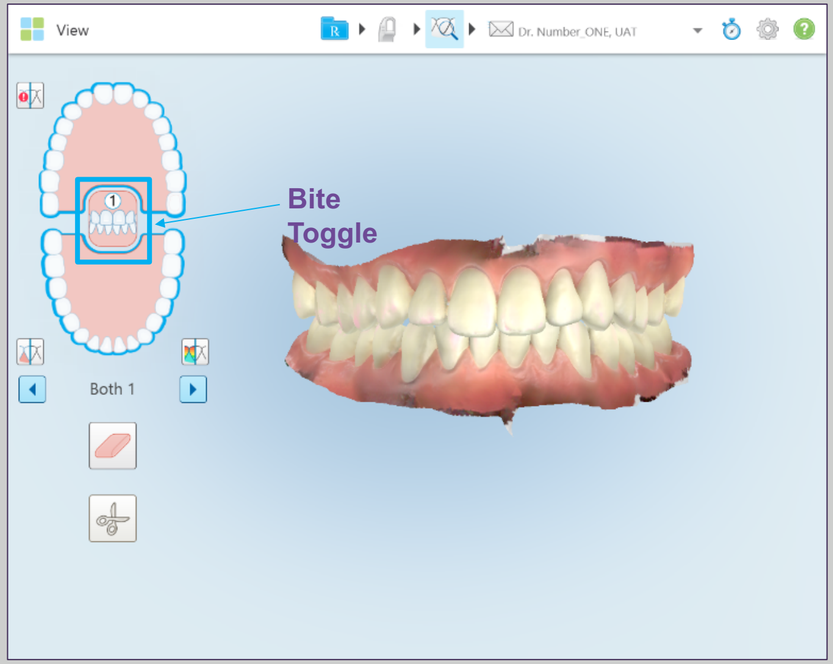
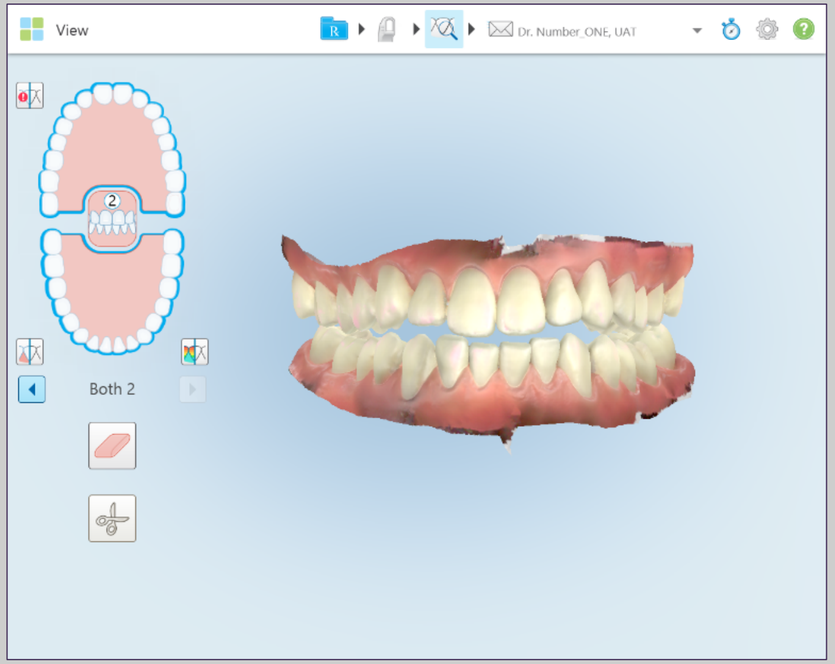
Full Mouth Scanning Basics

Multi-Bite

Bite 1



Bite 2



Select the arch to be displayed.

There are two layouts on the Viewer.

The icons on the left of the screen displays the multi-bite.

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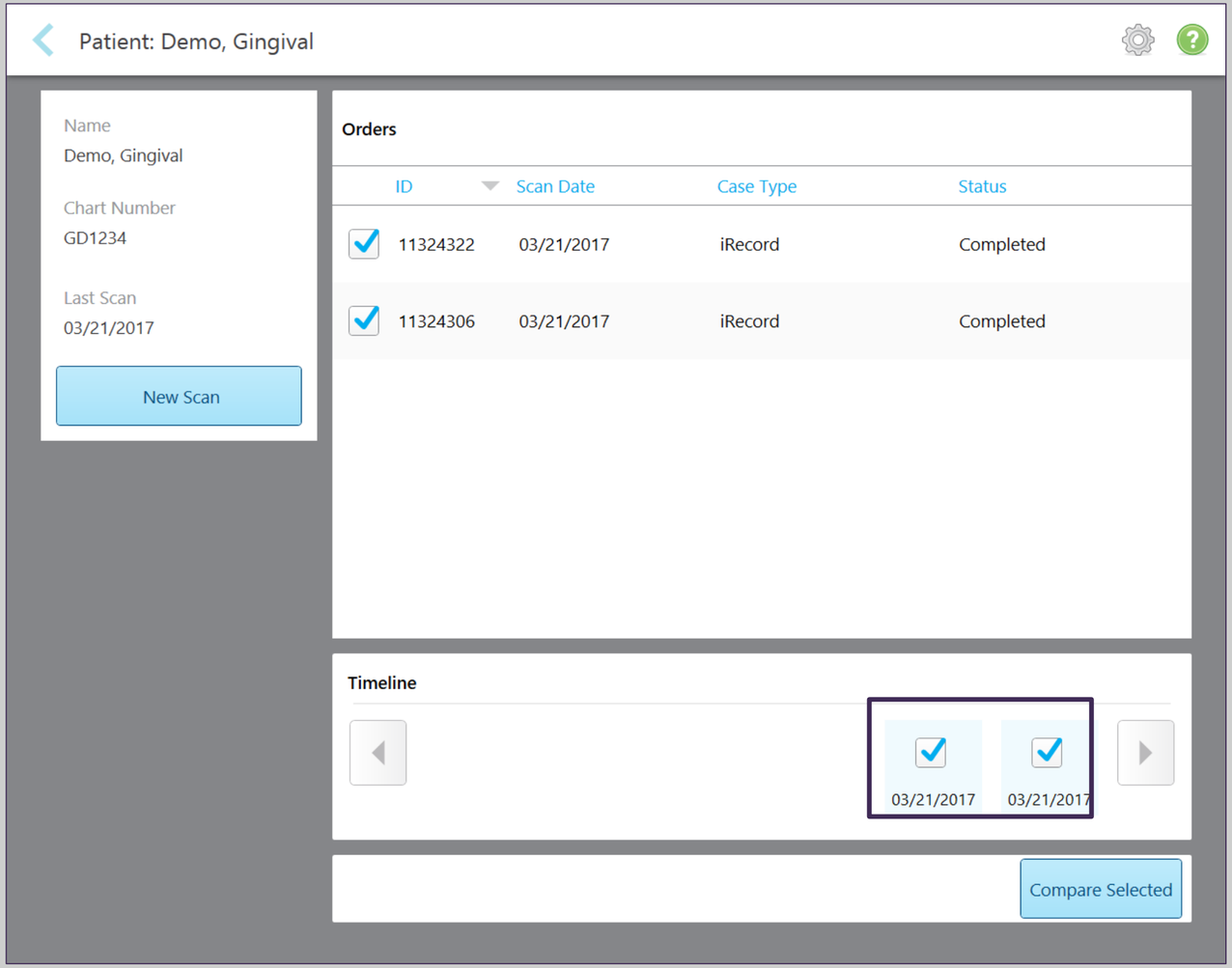
iTero TimeLapse



Patients scanned in a regular basis can be analyzed utilizing this tool.

In the Patient's profile, select two scans from the timeline at the bottom of the screen, Once two scans are selected, the option to "Compare Selected" will become enabled and pressing it will launch the Comparison Tool.

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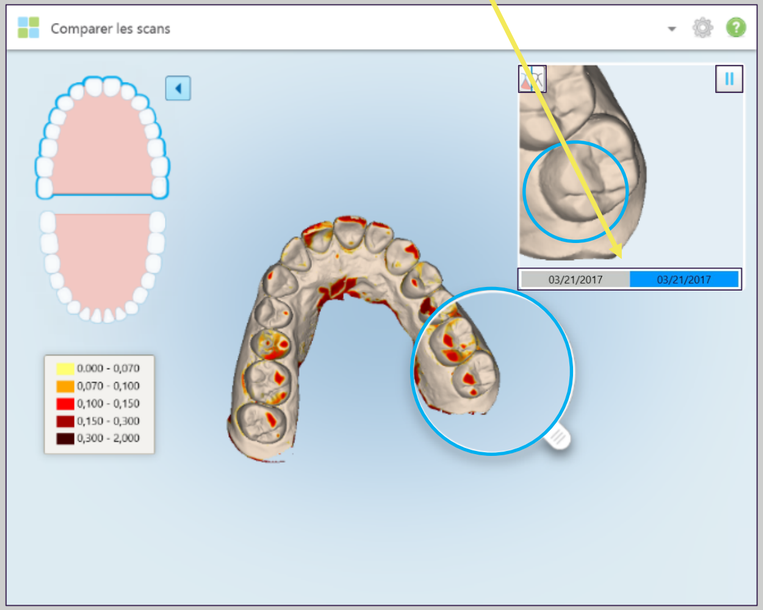
Full Mouth Scanning Basics

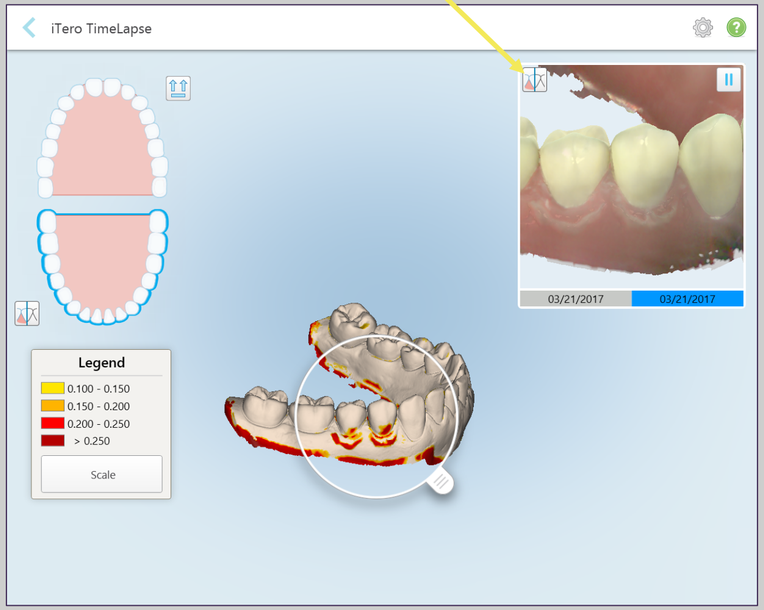
iTero TimeLapse

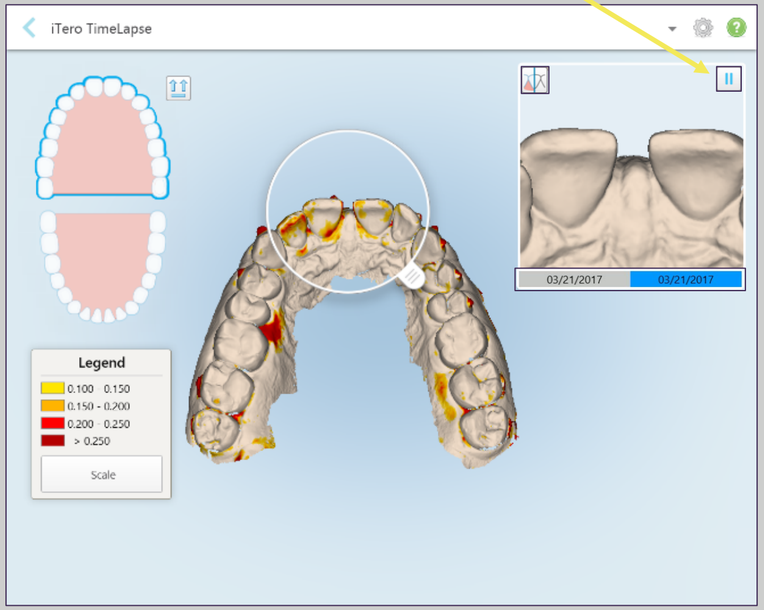
Animated Timeline

Color Toggle

Play/Pause animation







Tooth Wear

Gingival Recession

Tooth Movement

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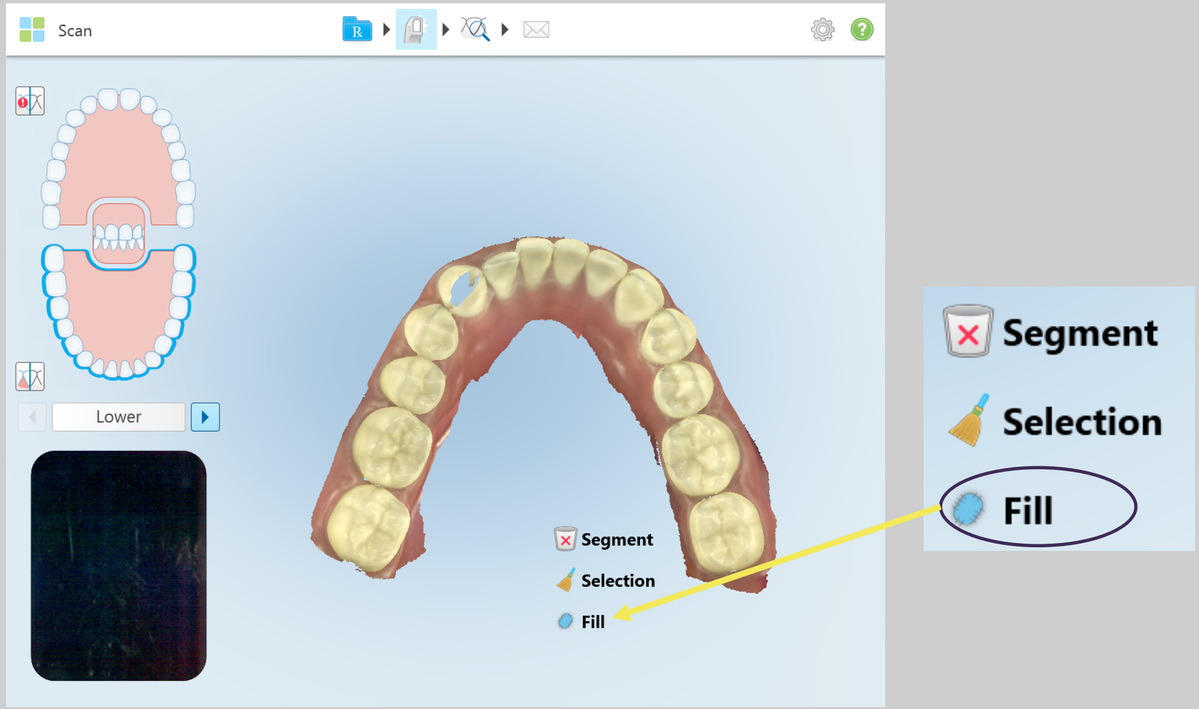
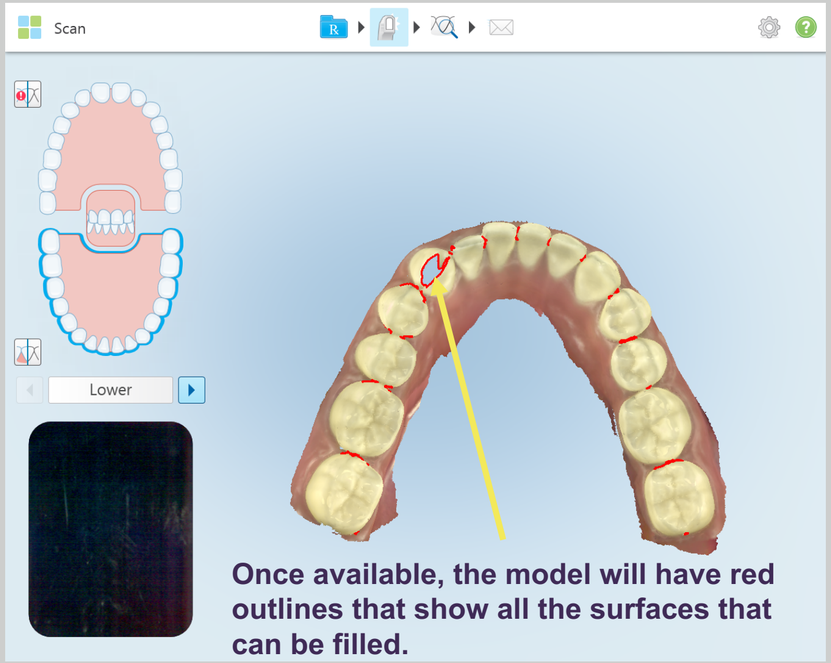
Fill Mode

There may be times when persistent areas of missing anatomy exist regardless of how many times you try to capture them in scan mode. These areas may be caused by the interference of anatomy (lips, cheeks and tongue) or moisture in the scanning segment. The fill tool has been added to the iTero Element software to enable you to more easily capture these areas.

1. To use the fill tool while in scan mode, long press on the screen to enter the scan option menu.



2. Select the "Fill" option. Depending on the number of scans taken, it may take a few moments to prepare the scan for the Fill mode to appear.



Once available, the model will have red outlines that show all the surfaces that can be filled.

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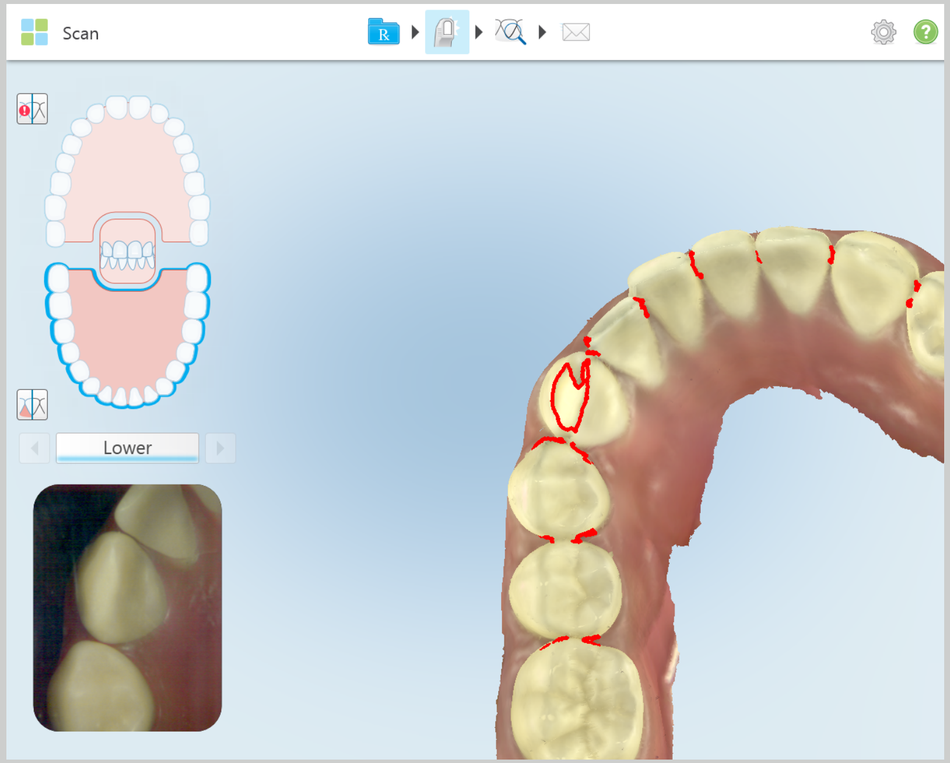
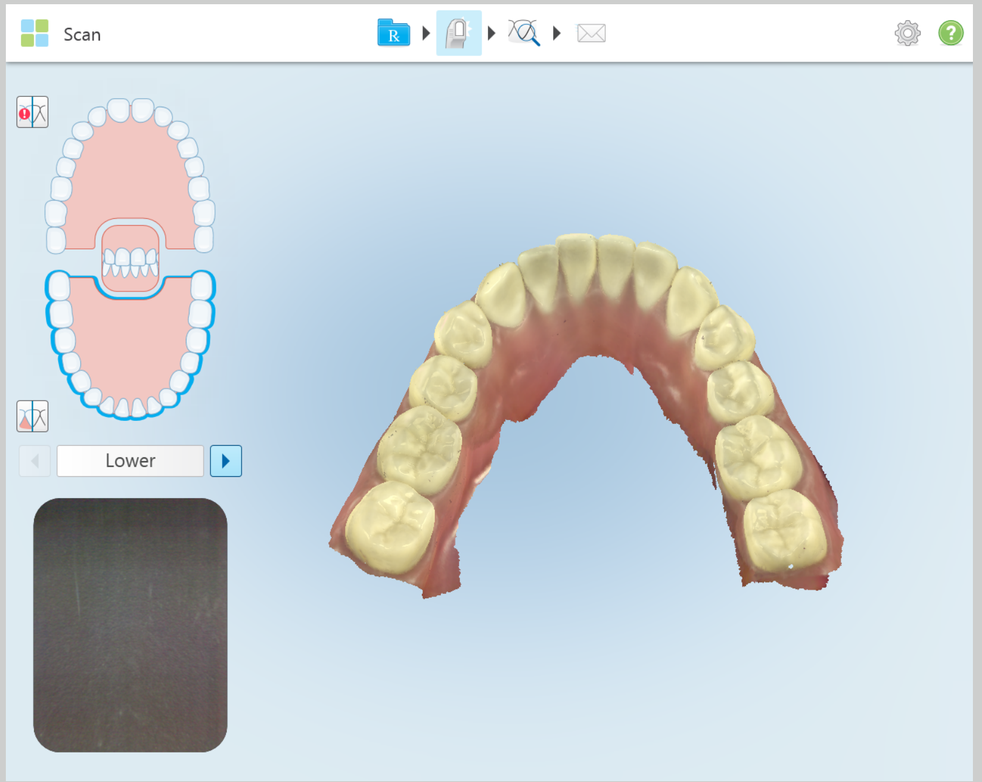
Fill Mode

3. Rescan the area of persistent missing anatomy. Note: there is no need to fill every area marked in red. It is recommended to only fill the area not being captured.



4. Press either wand button to end the Fill Mode feature. This will return to the regular scanning mode and the previous voids should now be eliminated.



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Invisalign Powered by iTero

In this section we will cover:
Model evaluation for Invisalign cases
Invisalign Outcome Simulator
Progress Assessment tools.

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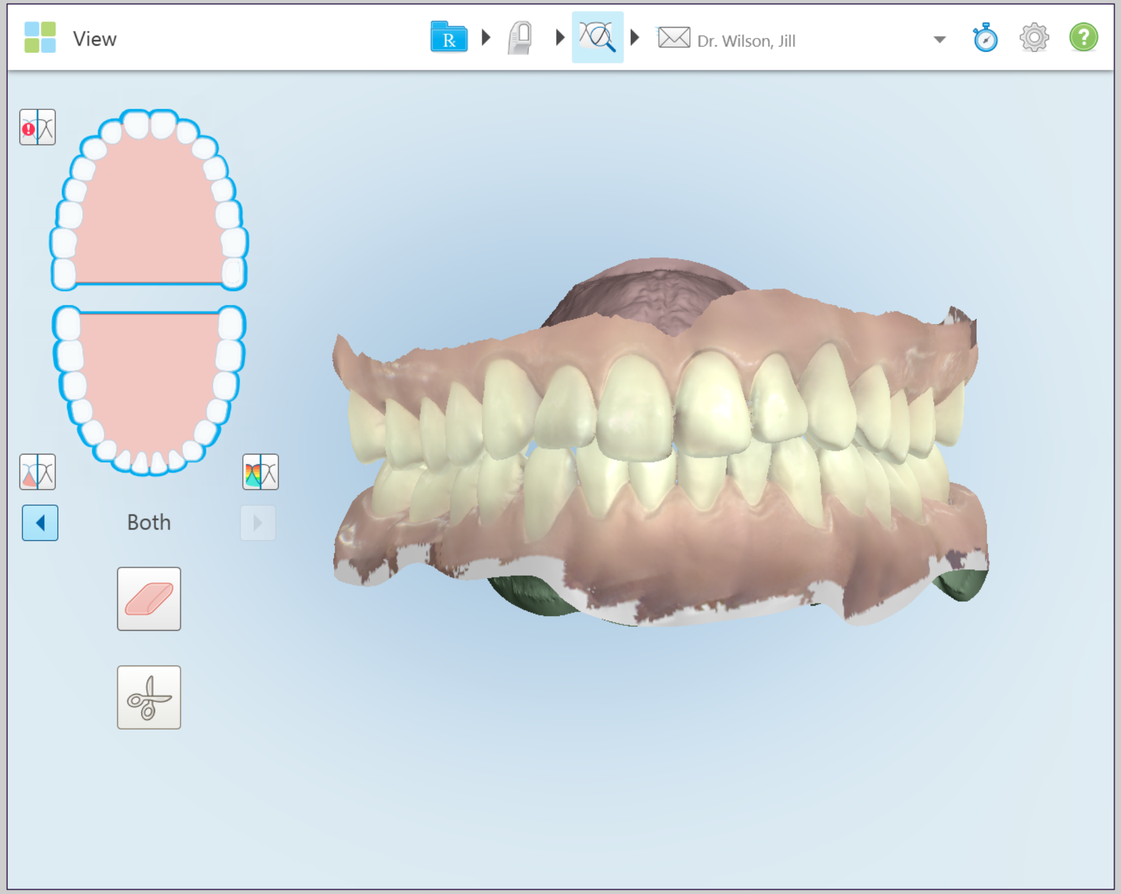
Evaluate Digital Models



For production of properly fitting aligners, evaluate the digital model for the following before submitting

- **Capture 2 mm of gingival tissue**
- **Distal wall of the terminal teeth**
- **Mesial and distal interproximal anatomy**
- **The complete incisal / occlusal surfaces of both mandible and maxilla**
- **Accurate bite with the patient in centric occlusion**

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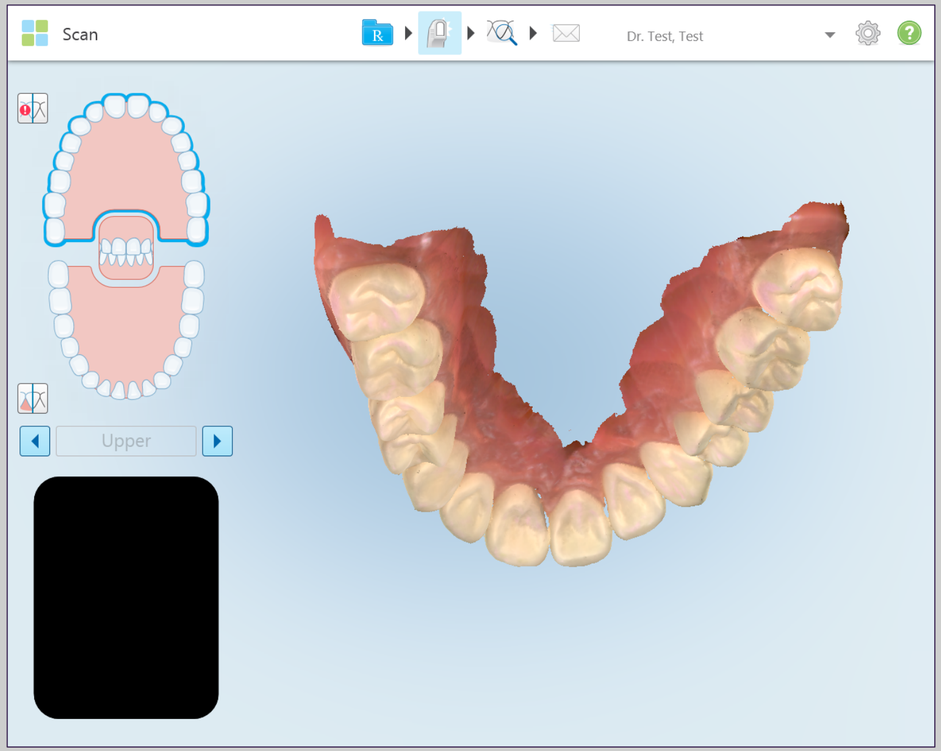
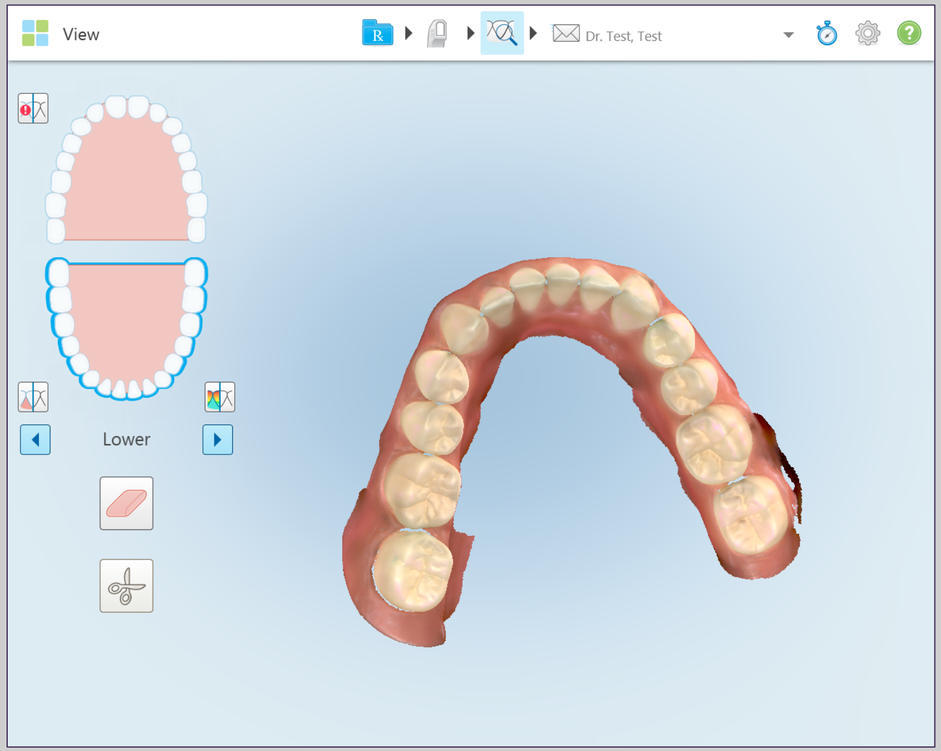
Evaluate Digital Models

Distal wall of upper terminal teeth.



Distal wall of lower terminal teeth.



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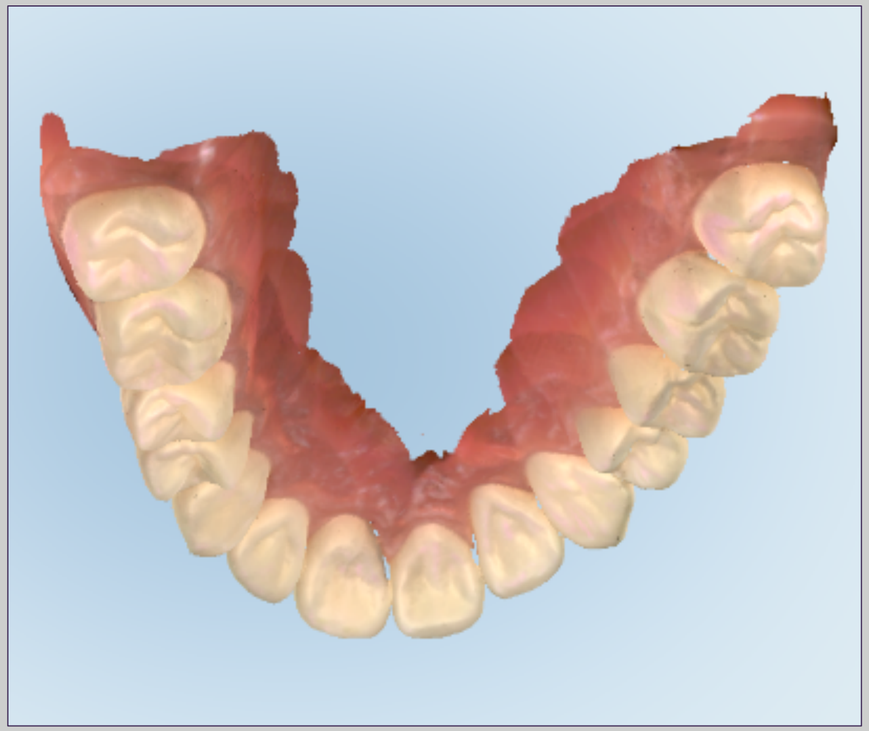
Evaluate Digital Models



The complete incisal / occlusal surfaces of both mandible and maxilla

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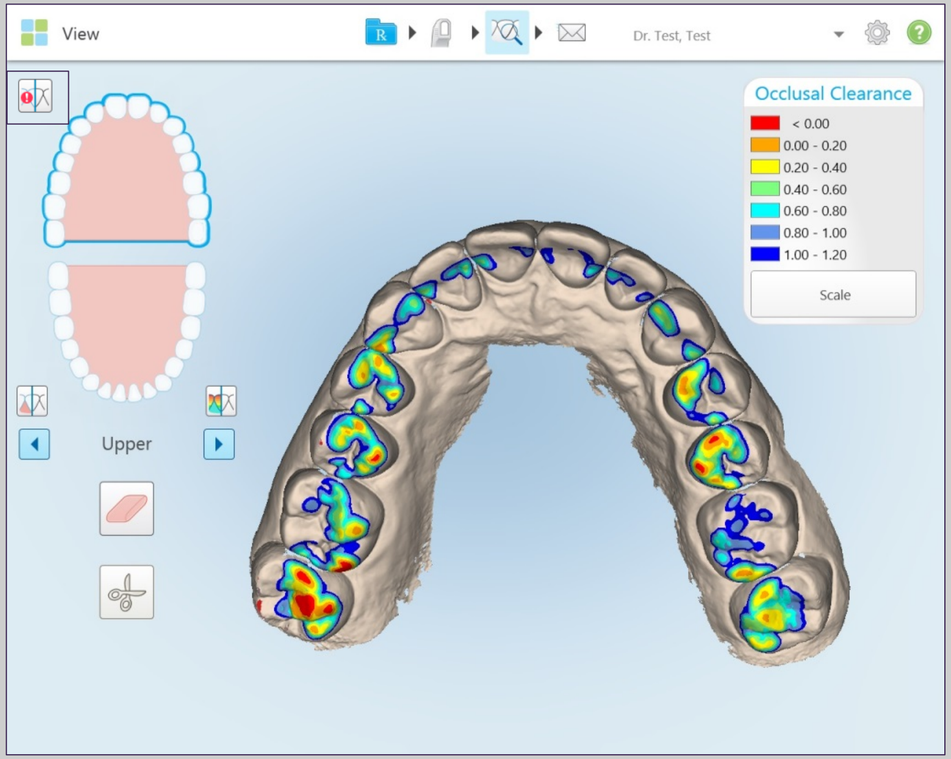
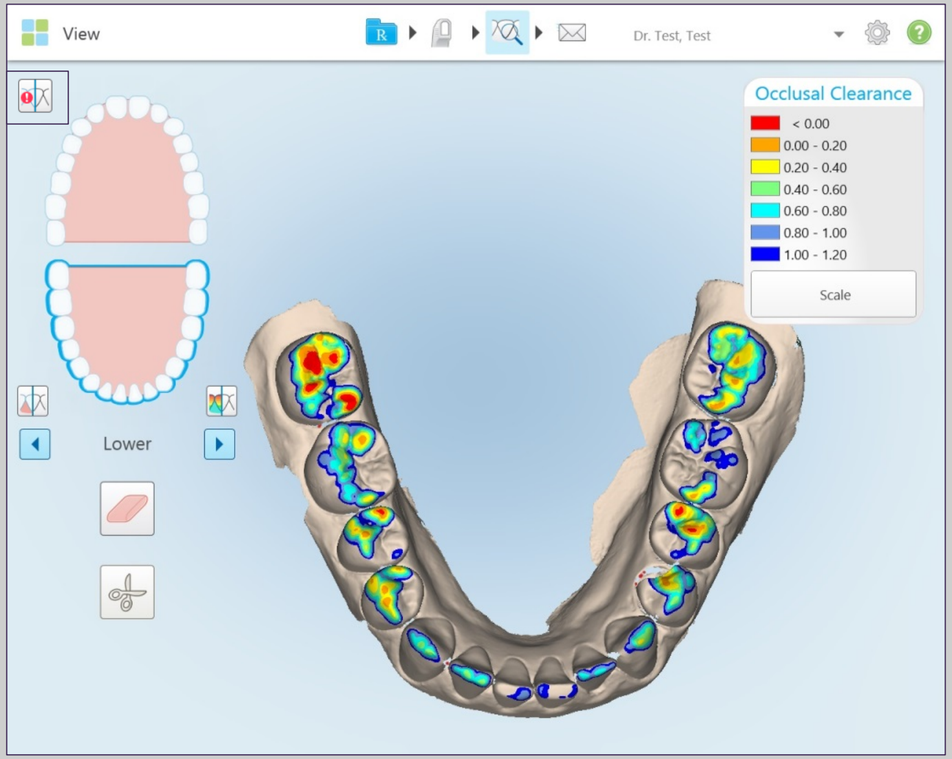
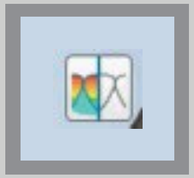
Evaluating Digital Model / Occlusal Analysis







Utilize the Occlusal Clearance legend to determine the distance between opposing teeth.

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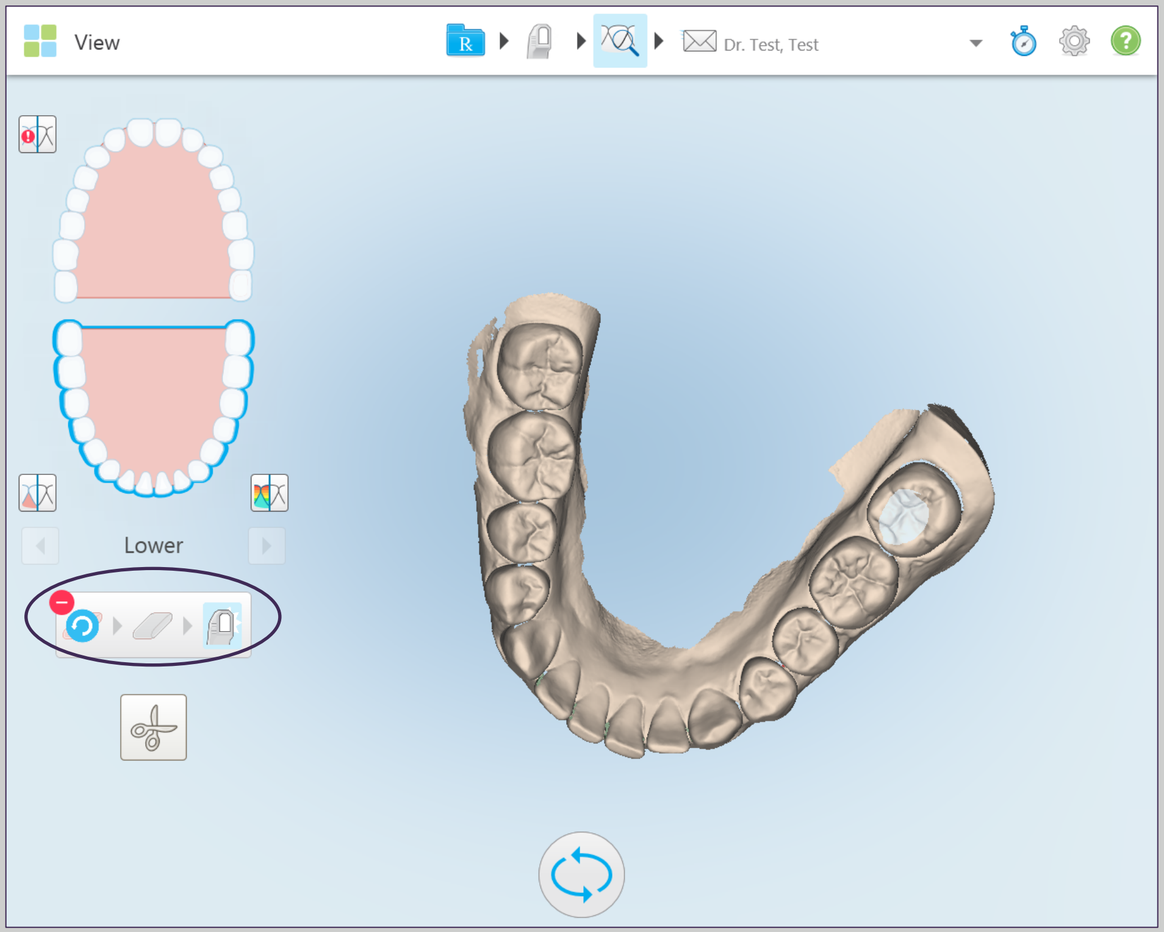
Using Eraser Tool



1. Tap on the eraser icon
2. Select the area to erase on the screen
3. Tap on the scanner sleeve icon
4. Scan to fill area erased
5. Tap on the view icon
6. Confirm correction

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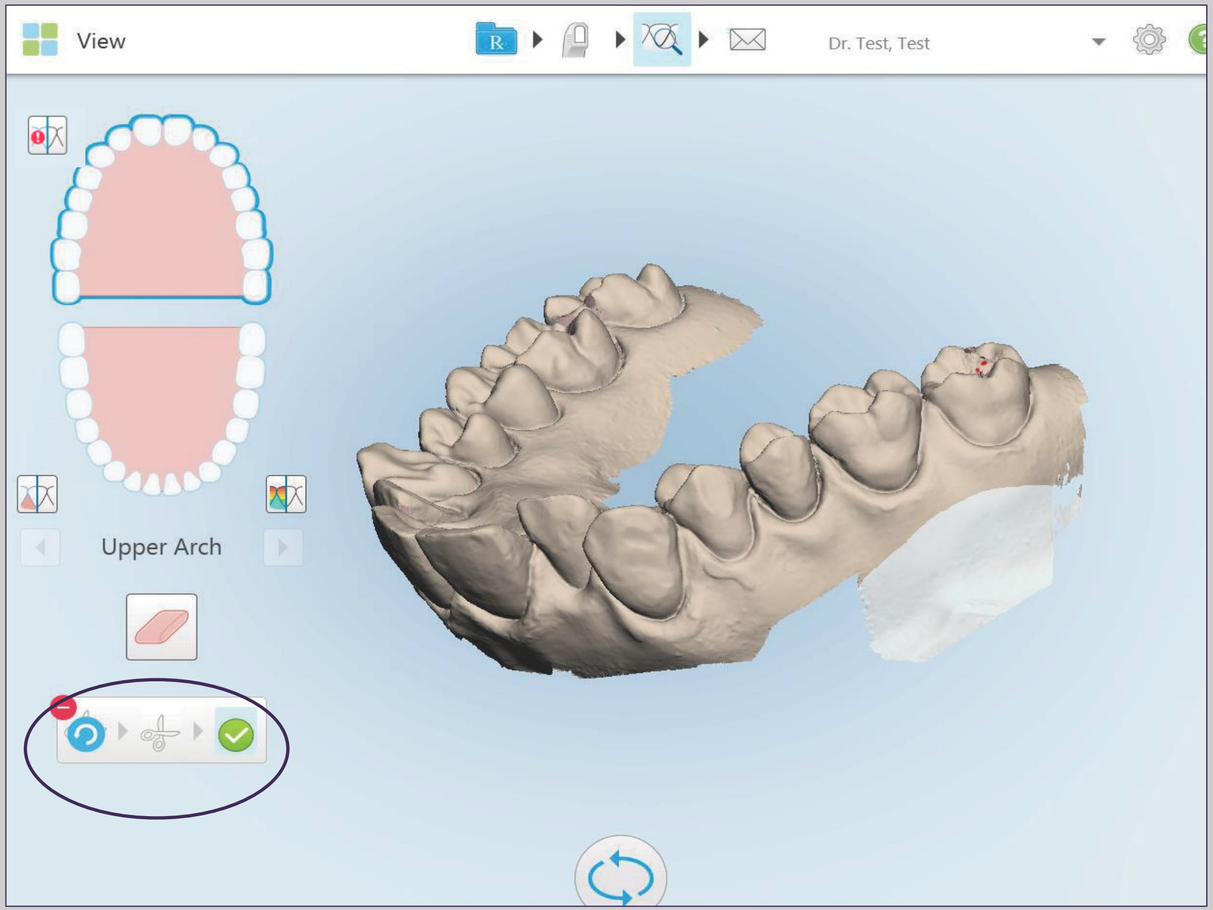
Using Trim Tool



Use the Edge Trim tool if there is excessive cheek or lip artifacts that should be removed from the scan

1. **Tap on the scissors icon**
2. **Circle the area to remove**
3. **Verify the selected area**
4. **Tap on the green check mark**
5. **Tap on the view button to confirm area has been trimmed as chosen**

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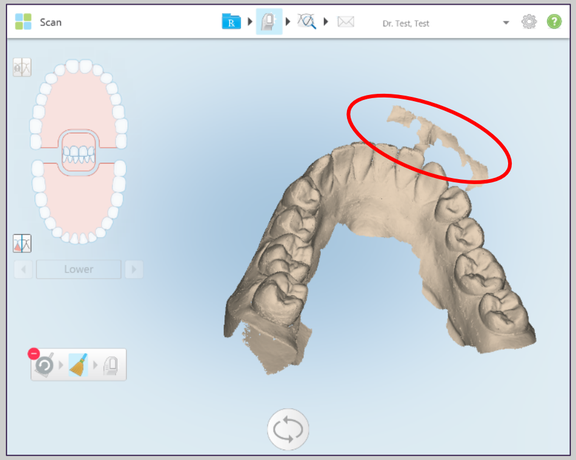
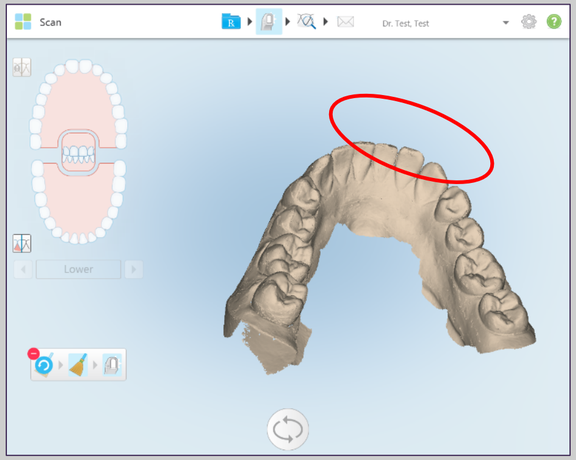
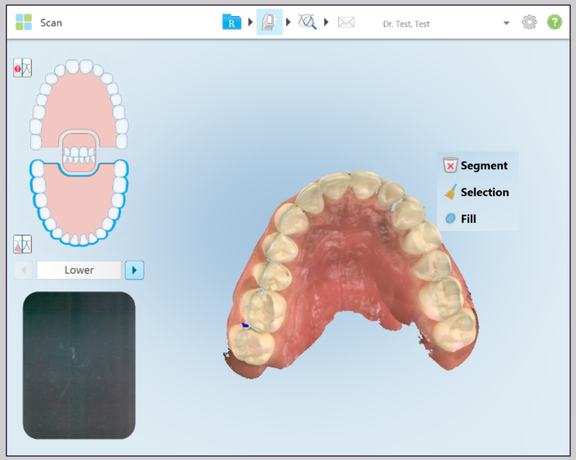
Tools – Deleting a Scan

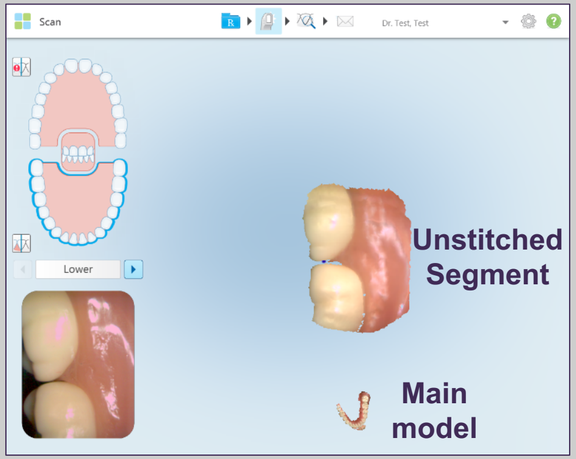




Remove an artifact (soft tissue)



Wrong jaw scanned



Tooth anatomy not stitching

Available in scan mode

1. Tap on the arch to be deleted
2. Press and hold on the model
3. Tap on the waste pail segment or broom icon
4. Confirm deletion
5. Rescan area

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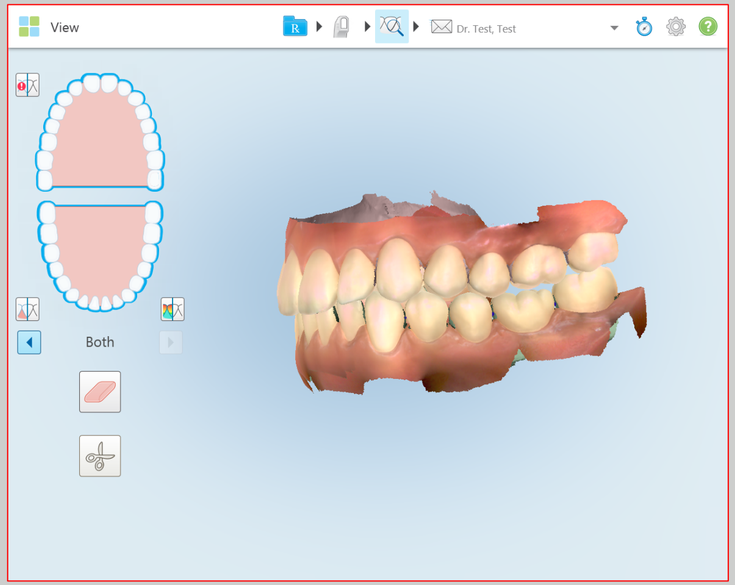
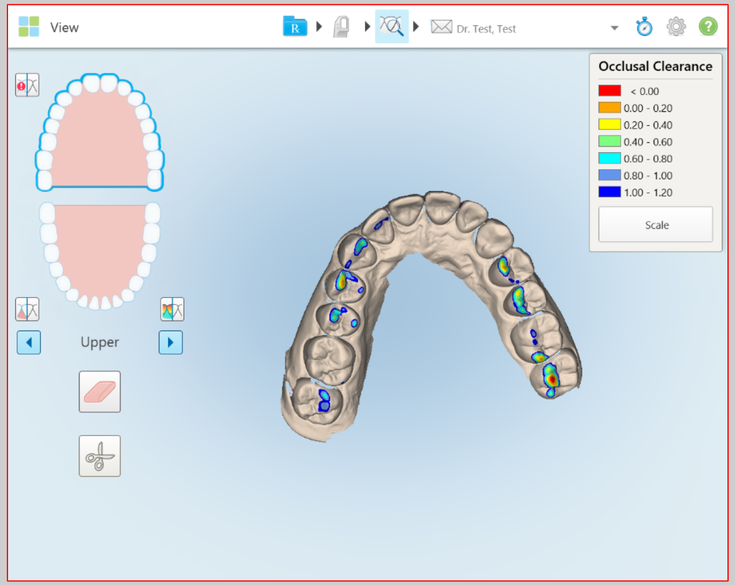
Tools – Deleting a Scan and Correcting the Bite

Clinical Scenario

The patient is able to close on maximum intercuspation and produce solid contacts on articulating paper. During scanning, the patient was not able to bite properly.



Incorrect bite registration



Occlusogram display
Poor contacts

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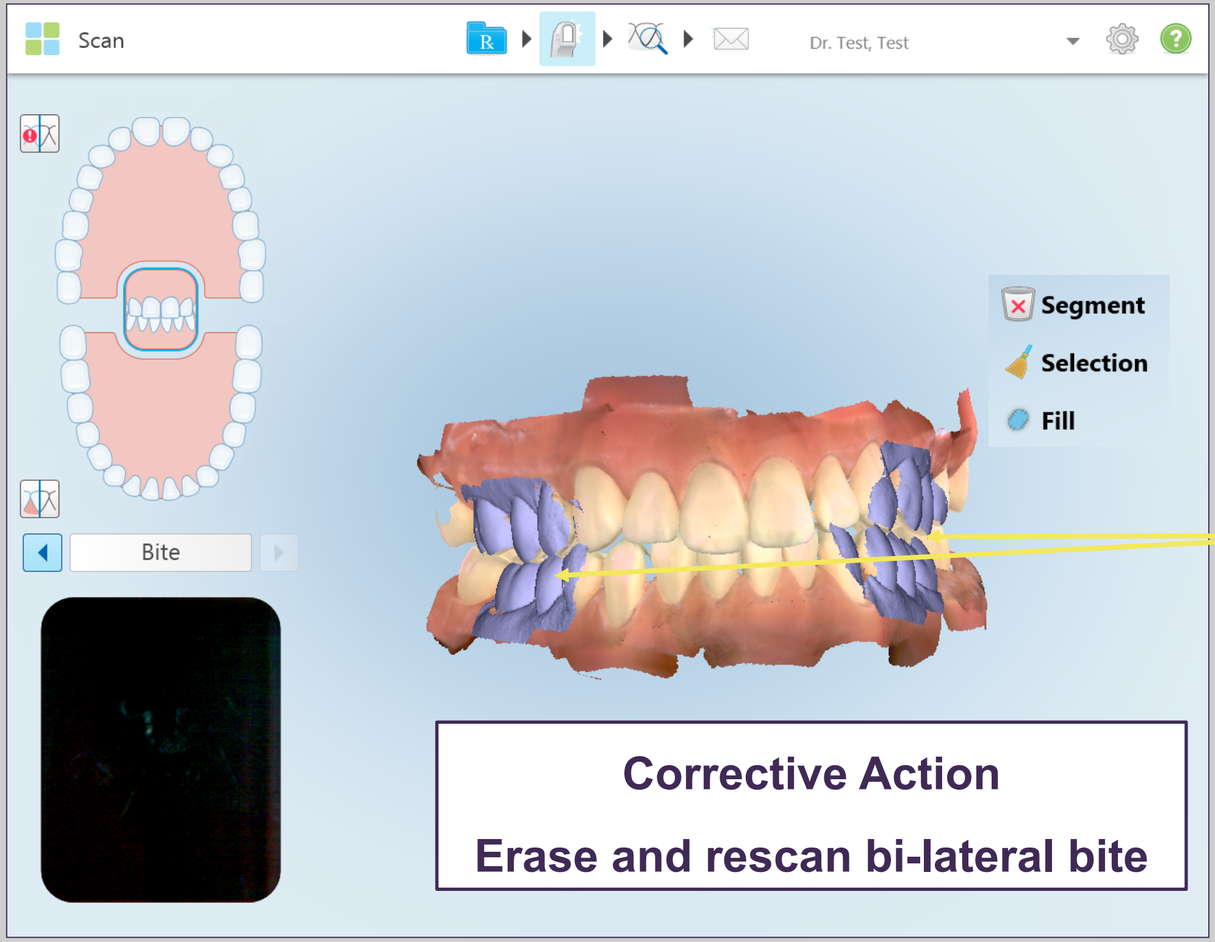
Tools – Deleting a Scan and Correcting the Bite



Tap on both bite segments to delete

Rescan

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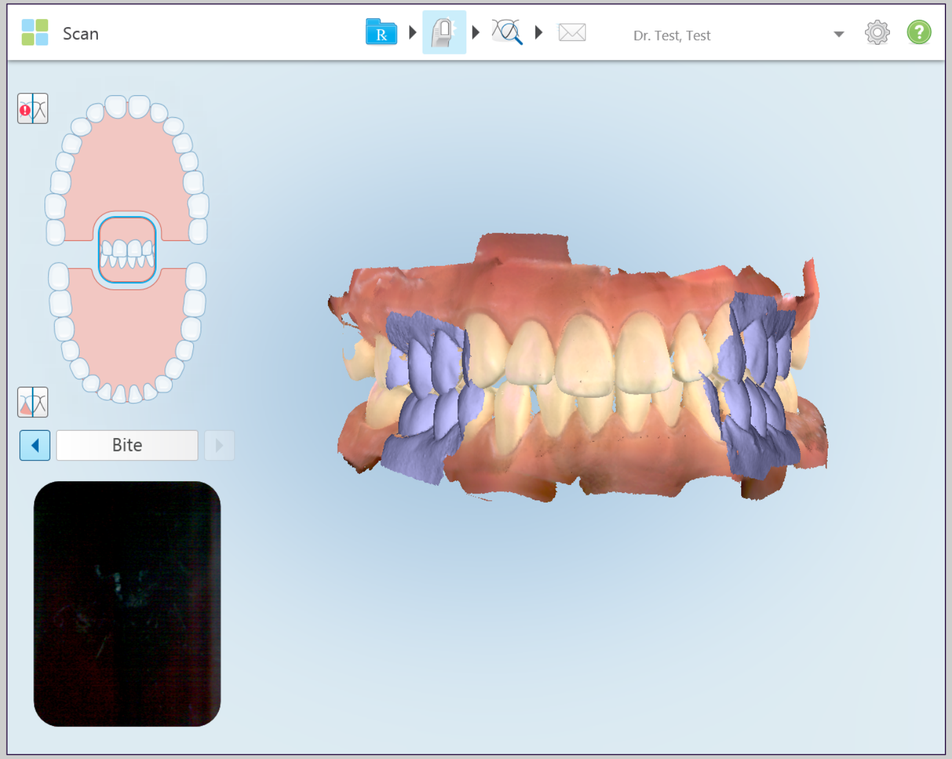
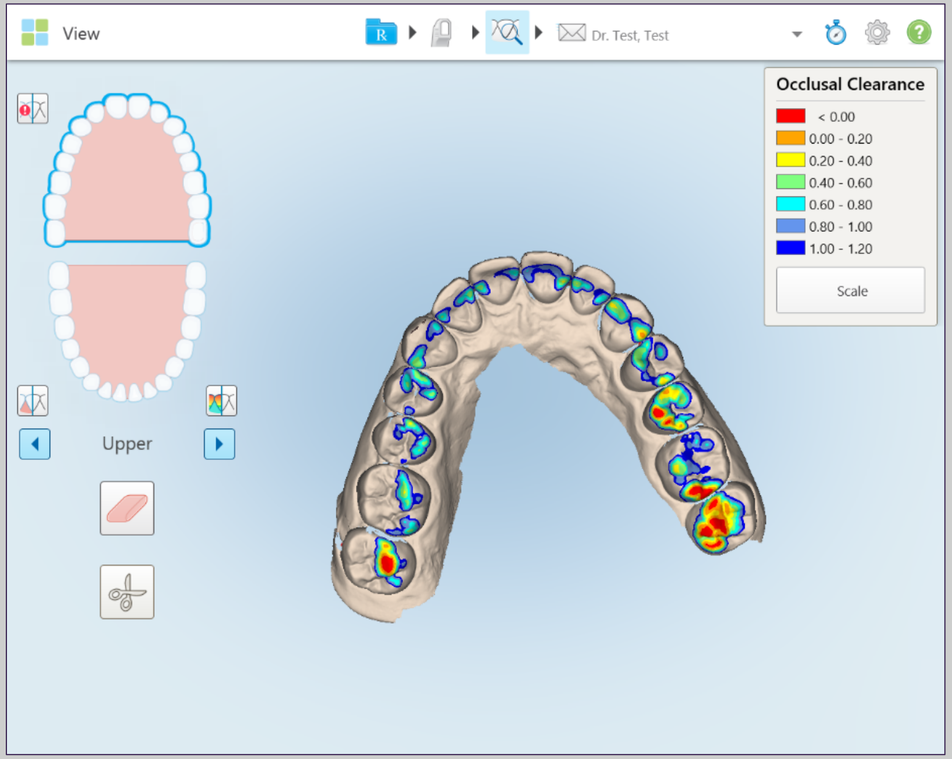
Tools – Deleting a Scan and Correcting the Bite



Verify new bite registration



Occlusogram display
Adequate contacts

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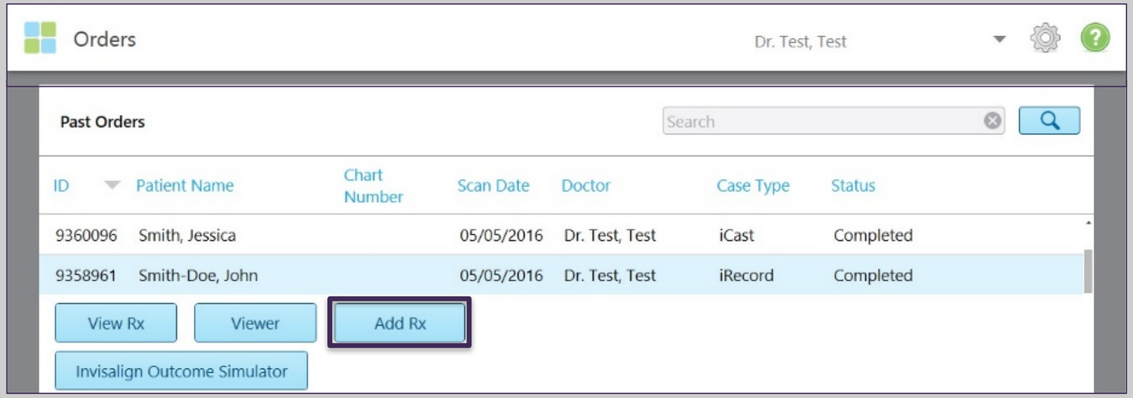
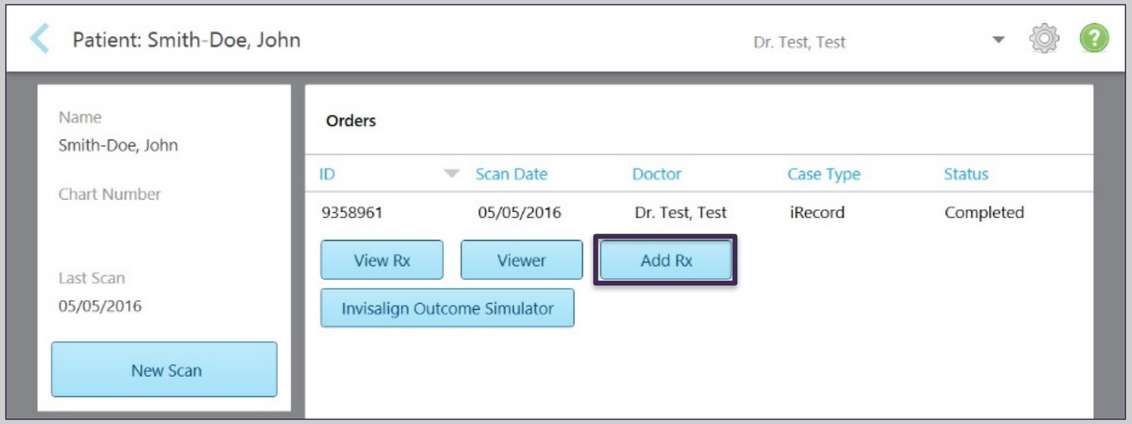
Add Rx To An Existing Sent Scan – Allow Additional Workflows





Conditions for the Add Rx to be enabled:

- Accessible from Orders and Patient's icons
- For cases except restorative and chair side milling
- Enabled up to 21 days from the case's scanning date
- The model has to be located on the scanner's base unit

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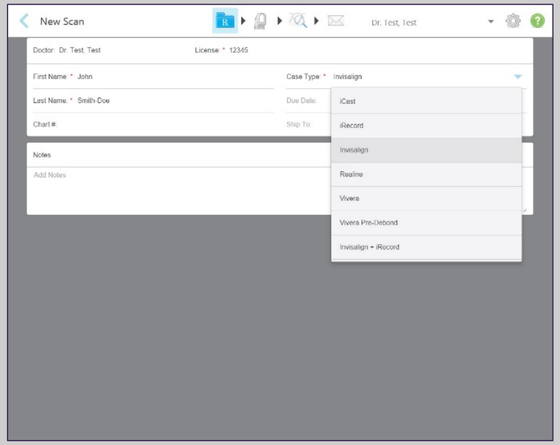
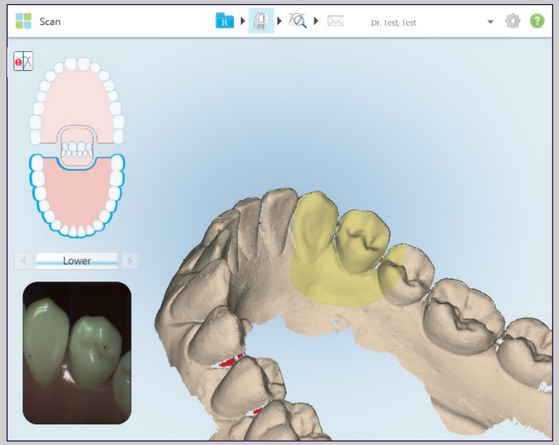
Add Rx To An Existing Sent Scan – Workflow

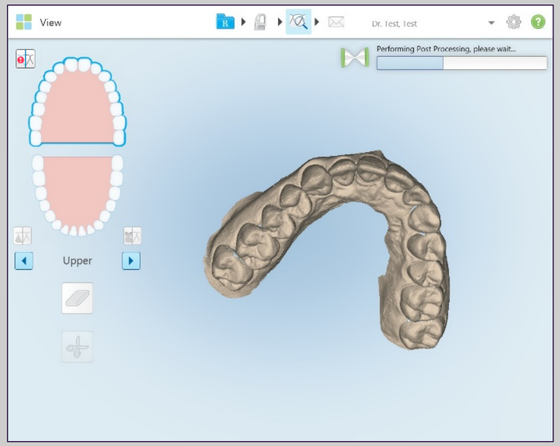
1. Select case type



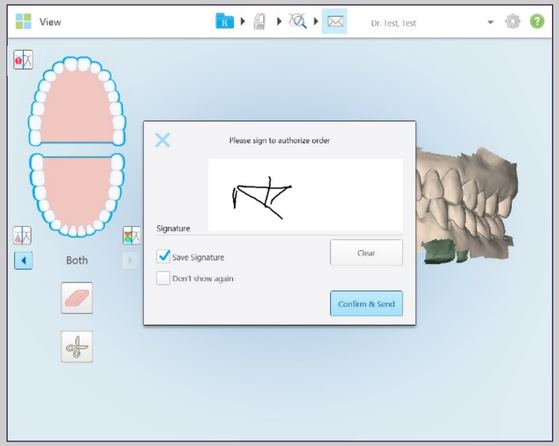
2. Add scans as needed



3. Tap on view tool



4. Send the case



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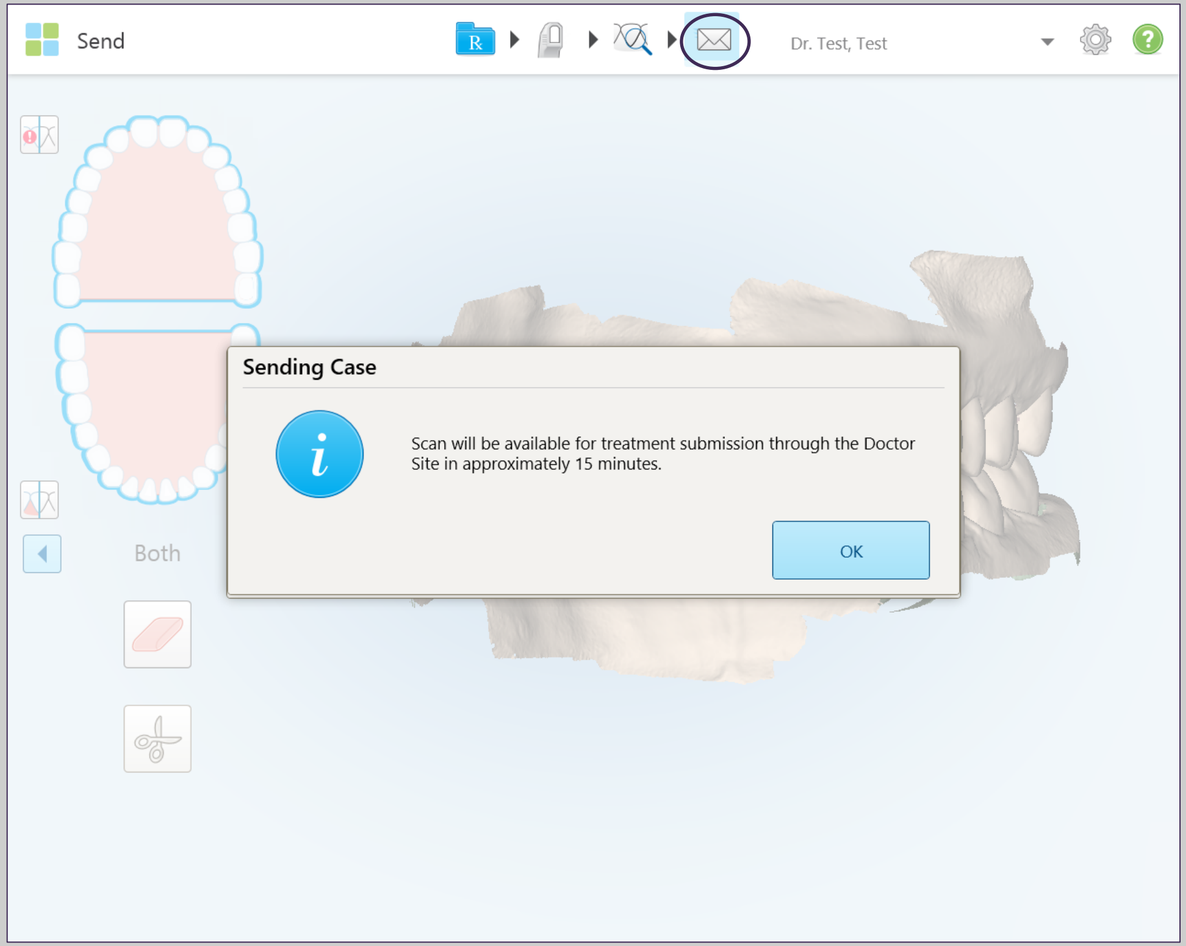
Submitting Case



To submit the case, simply tap on the envelope.

A prompt will appear stating that the scan will be available for treatment submission through the Invisalign Doctor Site in approximately 15 minutes. Select OK.

Next, click yes to launch the Invisalign Outcome Simulator.

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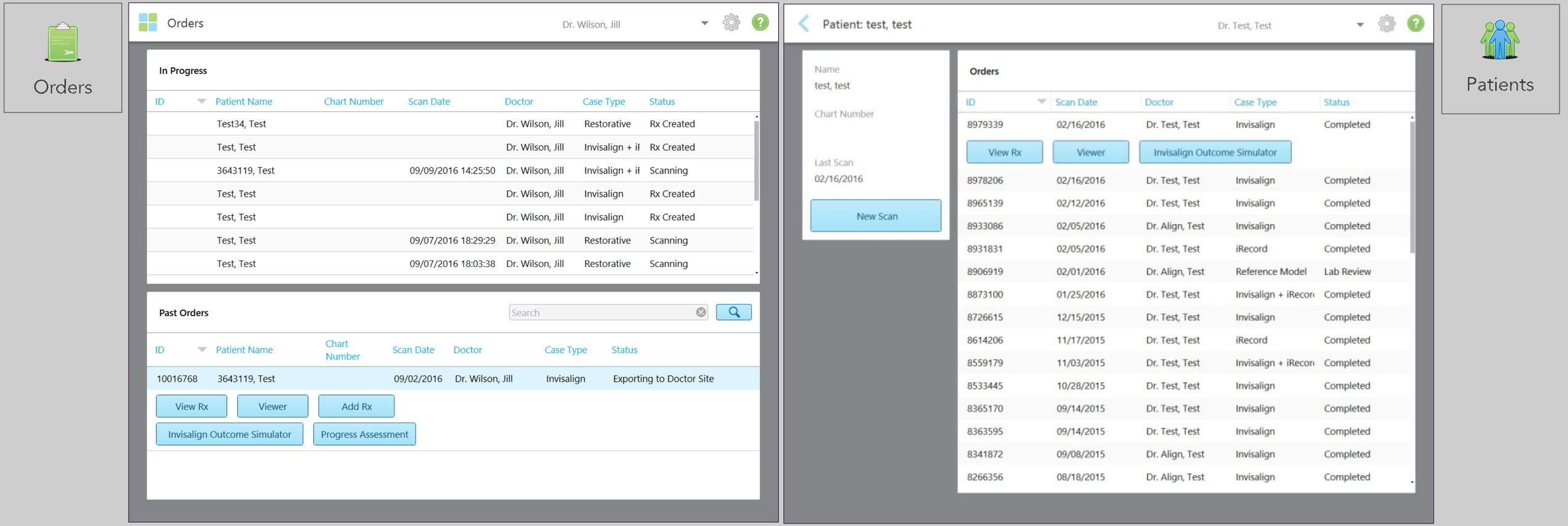
Viewer



Viewer is a tool that allows the scanner to manipulate and display the digital model for case presentations.

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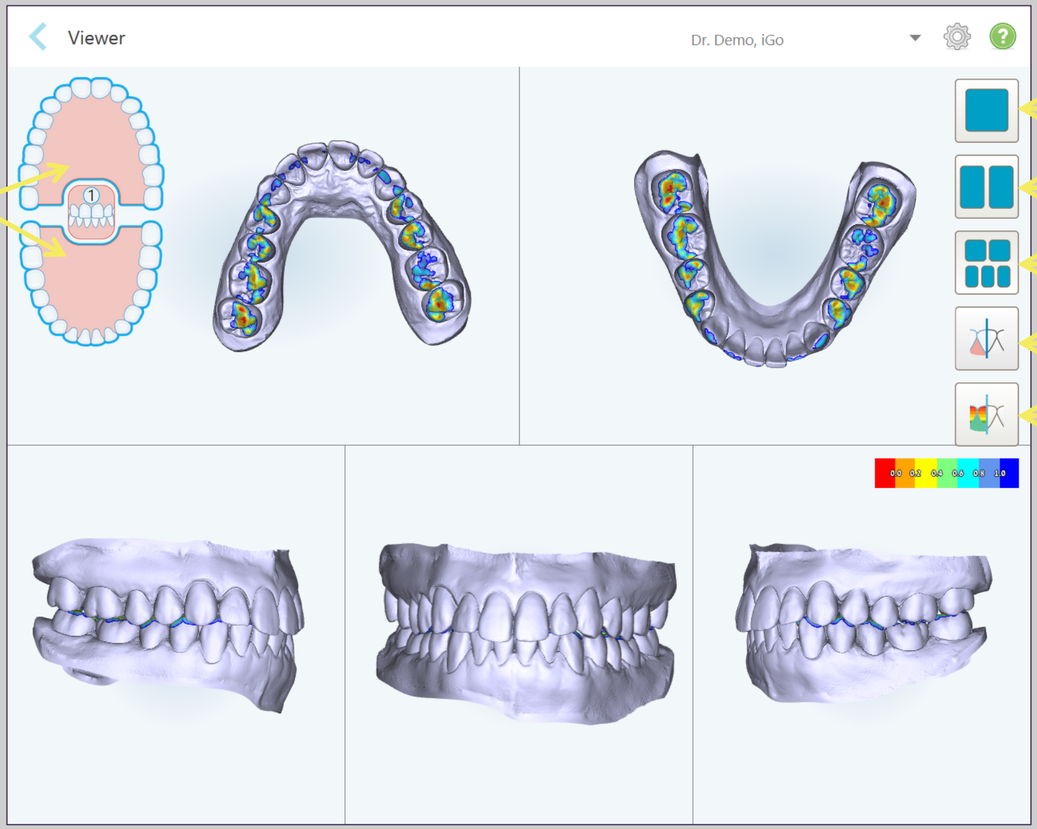
Viewer

Preset views of the model.

Hide / Display Maxilla or Mandible



Frontal View

Occlusal View

Gallery View

Color/monochrome

Occlusogram

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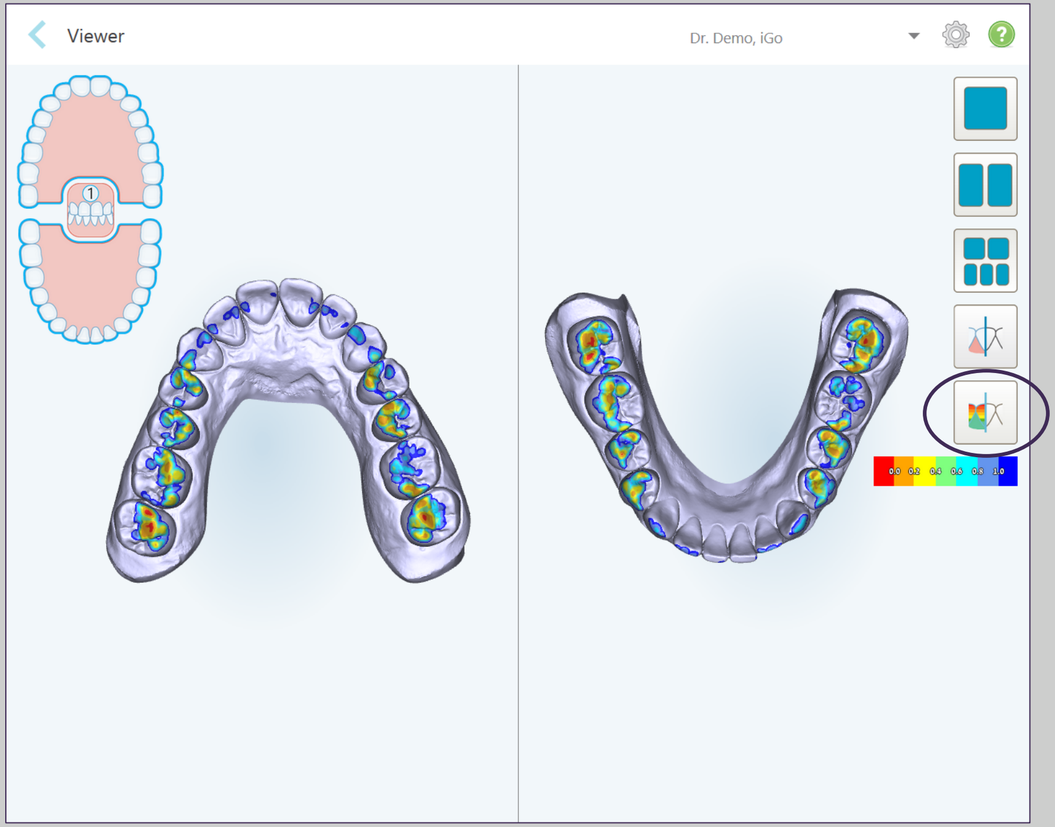
Viewer / Occlusogram



The Occlusogram tool can be shown in any view by tapping the Occlusogram icon.

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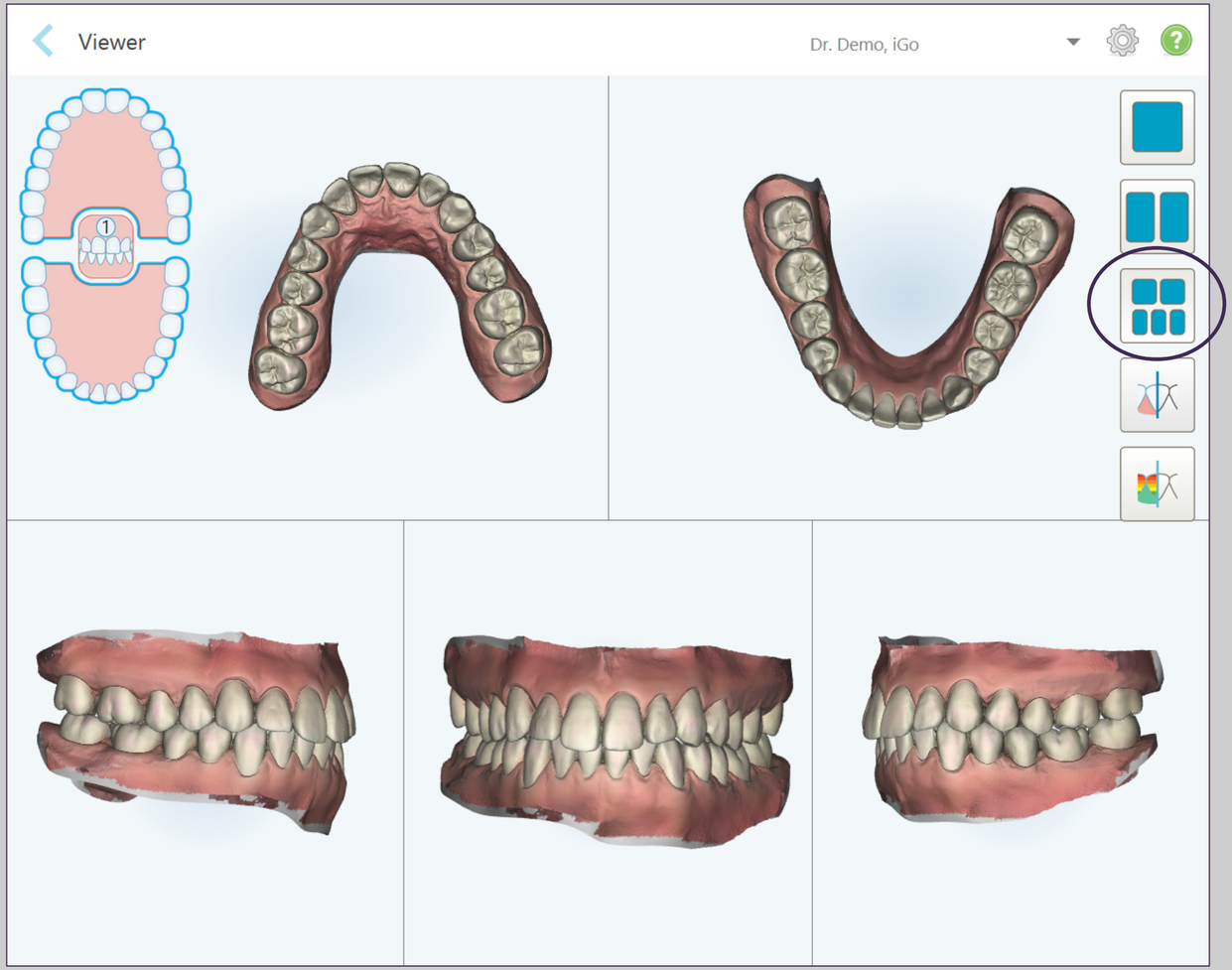
Viewer



In the Gallery View, the models in each window can be controlled separately for better evaluation.

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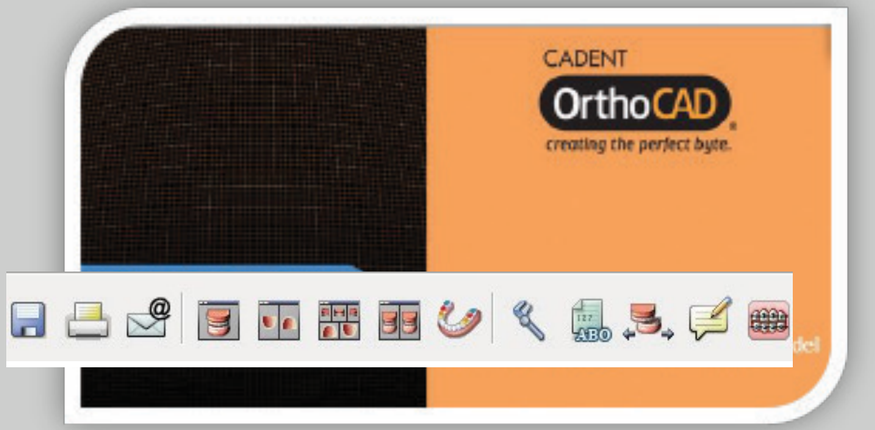
OrthoCAD



To export STL or view model, Install OrthoCAD on a workstation. Call iTero Customer Advocacy at 1 800 577 8767 for instructions.

The OrthoCAD software is the digital model viewer for all your orthodontic cases.

After you send the cases on your iTero Element scanner, it can be viewed, managed and analyzed with this powerful tool from any office computer or workstation

Some clinical applications for this software are:

a) **Communicate between dental offices - printing or emailing the 3D models**
b) **Perform diagnostic analysis of the 3D orthodontic models**
c) **Presenting cases to patients for discussion of the treatment plan**

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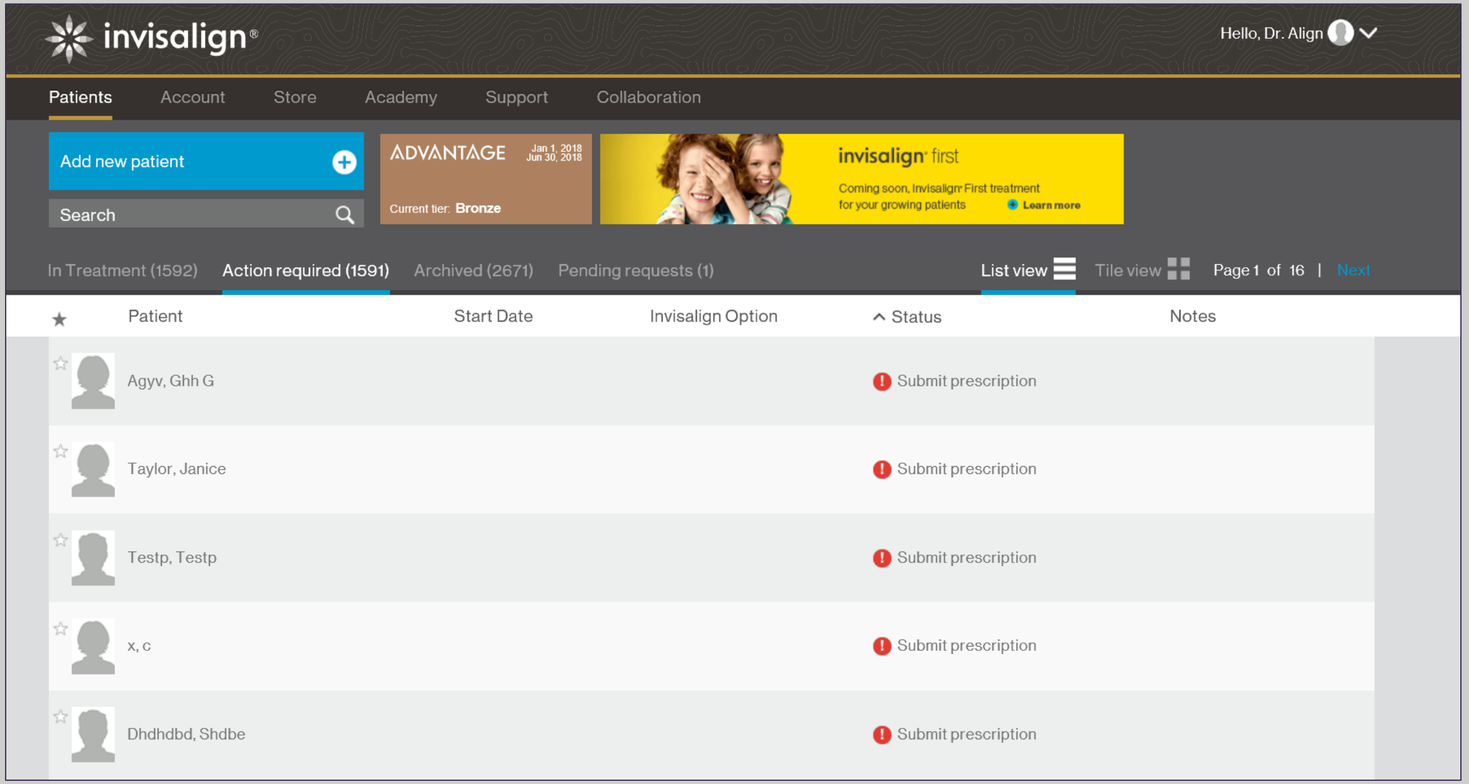
Invisalign Doctor Site

Log into the Invisalign Doctor Site (IDS) through the link on the MyAligntech website to access patient case files.

After sending a digital impression from the scanner, it may take up to 15 minutes for it to be available on the IDS site for submission.

The digital scan may be associated with a prescription in IDS prior to submitting the Invisalign order.



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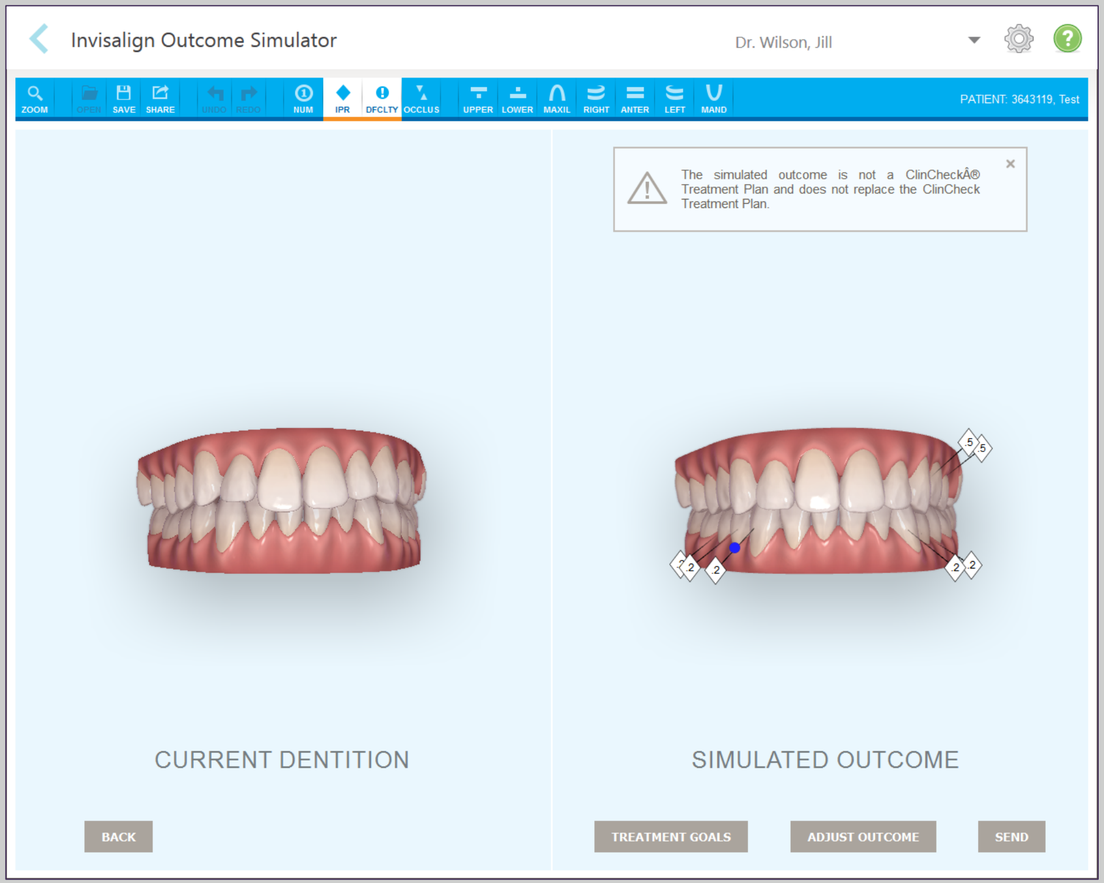
Invisalign Outcome Simulator



The Invisalign Outcome Simulator is a software tool that shows patients the simulated outcome of their Invisalign treatment.

To use the Invisalign Outcome Simulator,

- **Scan any Orthodontic case type**
- **Send the case**
- **Go to the Orders or Patients page to open the case with Invisalign Outcome Simulator**

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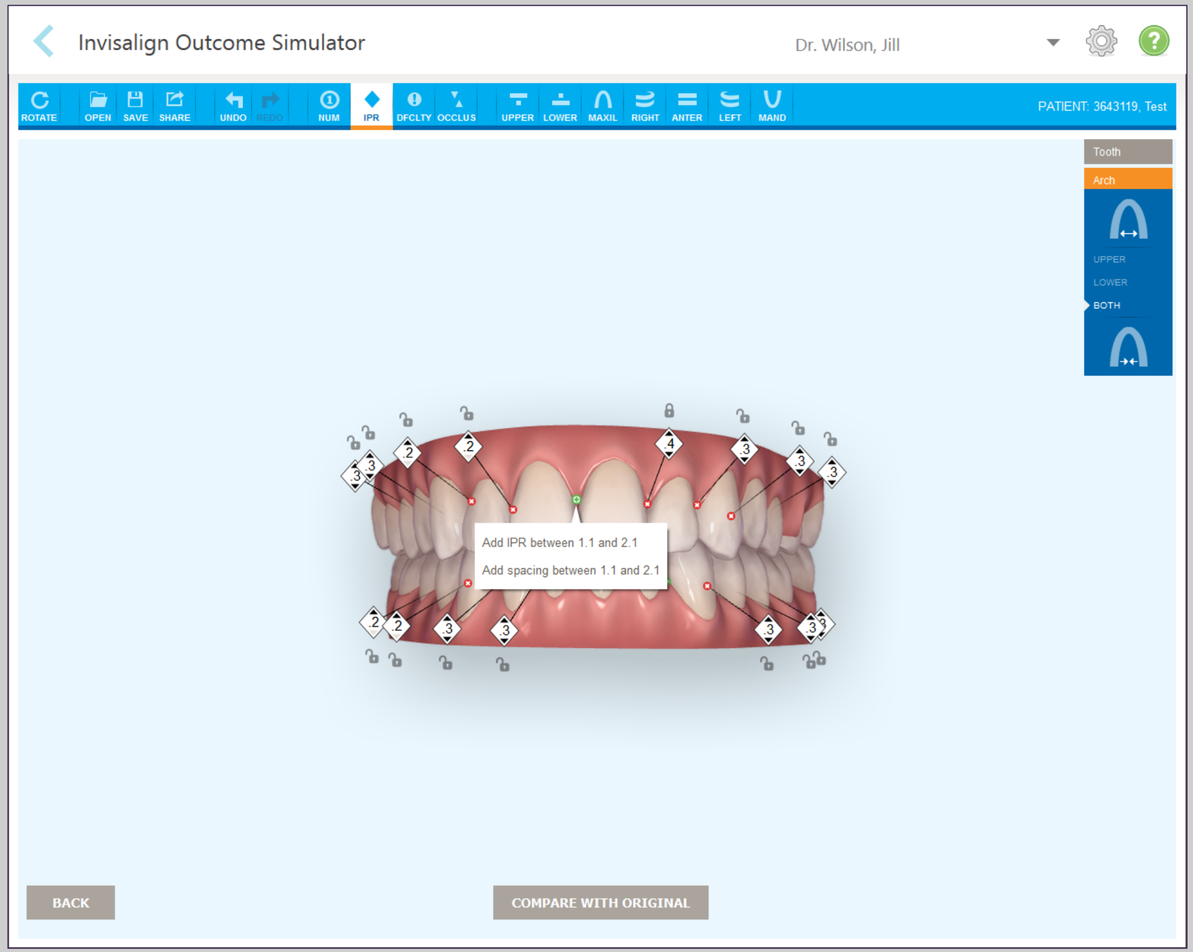
Invisalign Outcome Simulator



- The clinician can make real time adjustments to the simulated outcome as the clinician is showing the patient.
- This tool will provide additional information for the patient in their decision to accept treatment.
- The clinician will still be creating a ClinCheck treatment plan in the Invisalign Doctor Site and submitting the case for production.

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Invisalign Outcome Simulator - Simulate Outcome Workflow

Add / Delete / Correct Axis Lines

Treatment Goals:

- Extracted or unmovable teeth
- Allow IPR

Adjust Outcome

- Teeth
- Arches
- Inter-arch Collision Tool

Share with Patient

Send to Treat

Saving Simulation

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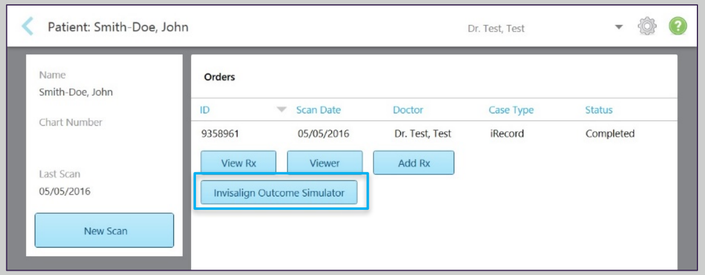
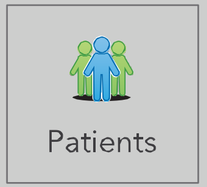
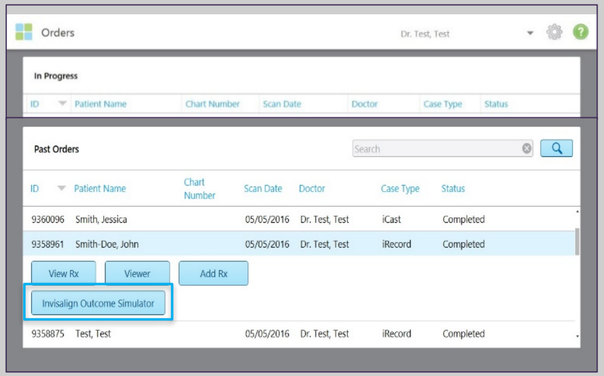
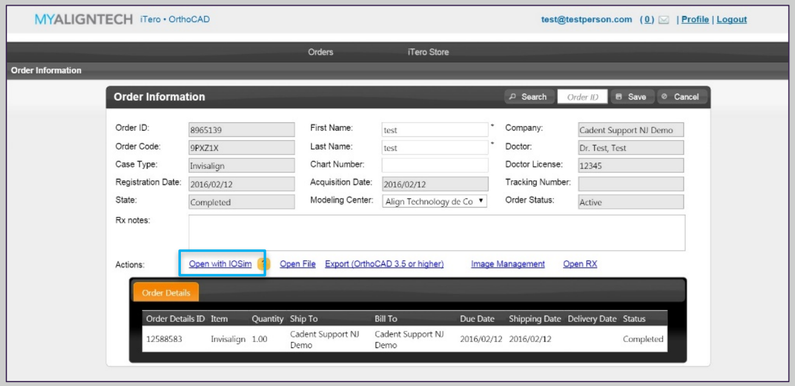
Invisalign Outcome Simulator





Access the Invisalign Outcome Simulator through these sites:





MYALIGNTECH

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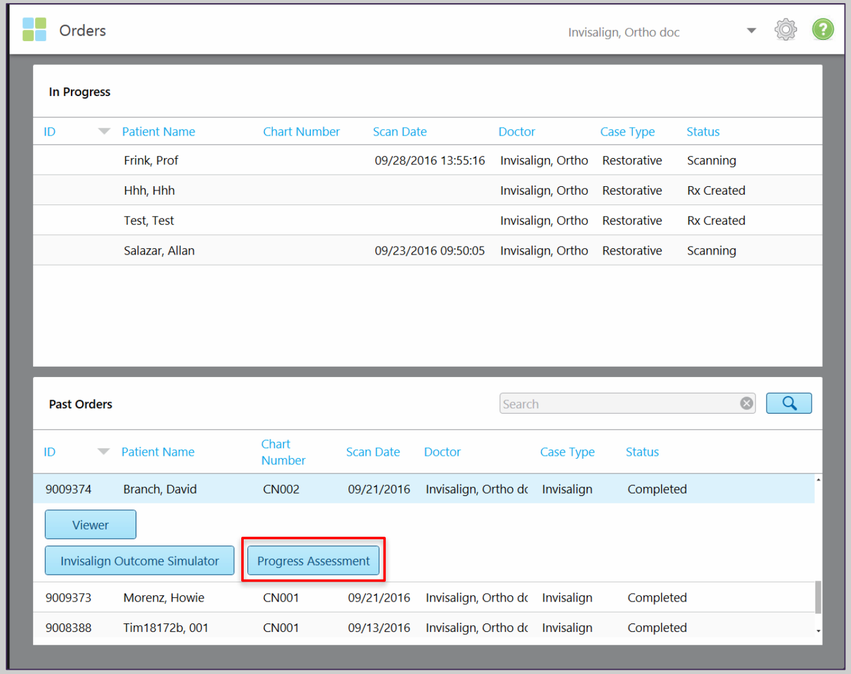
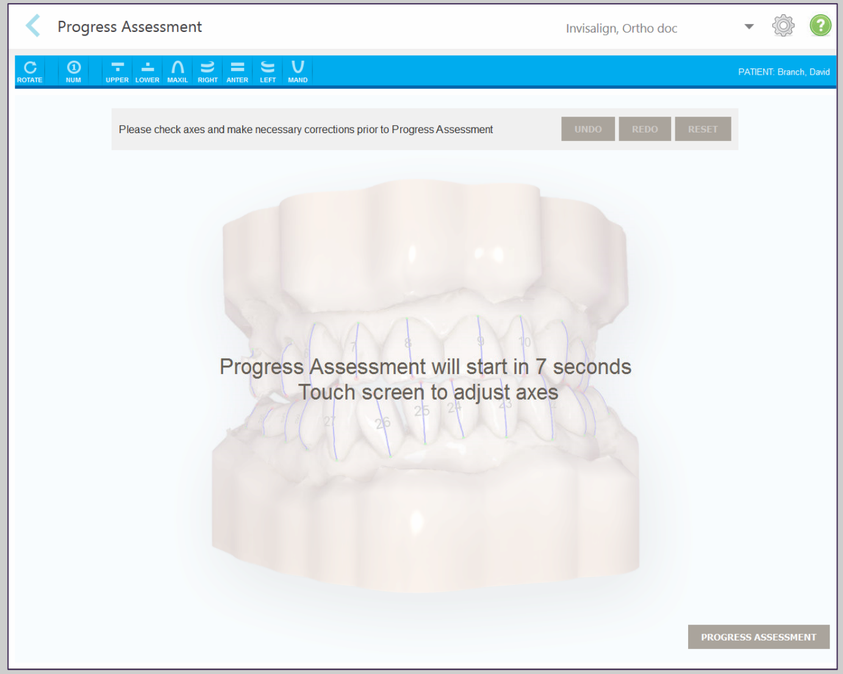
Progress Assessment

Open case from Orders or Patients



Correct Axis Lines (optional)



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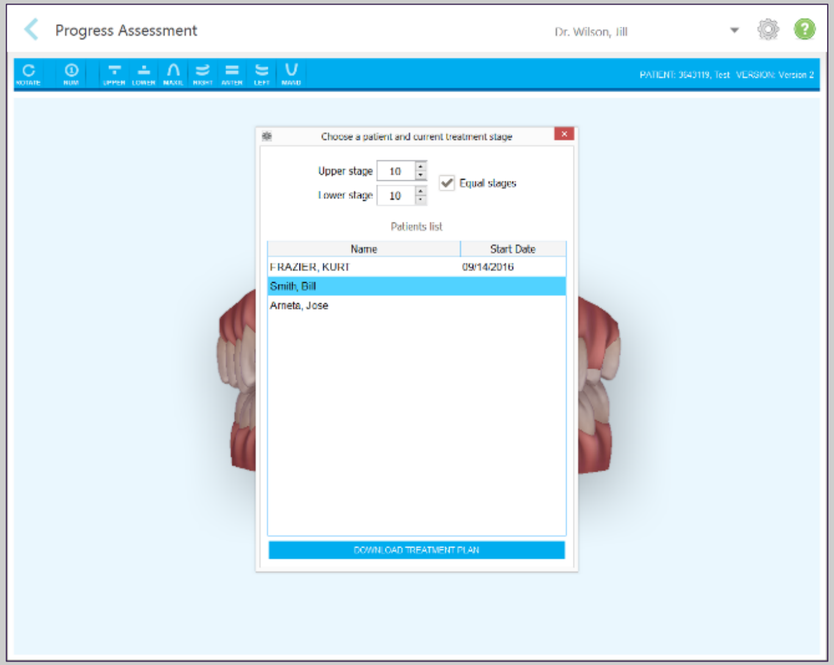
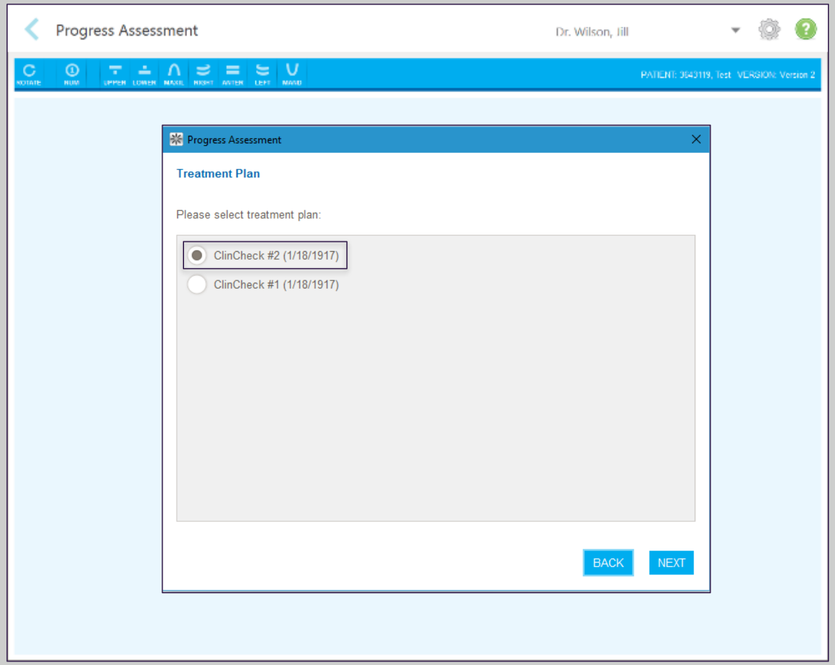
Progress Assessment

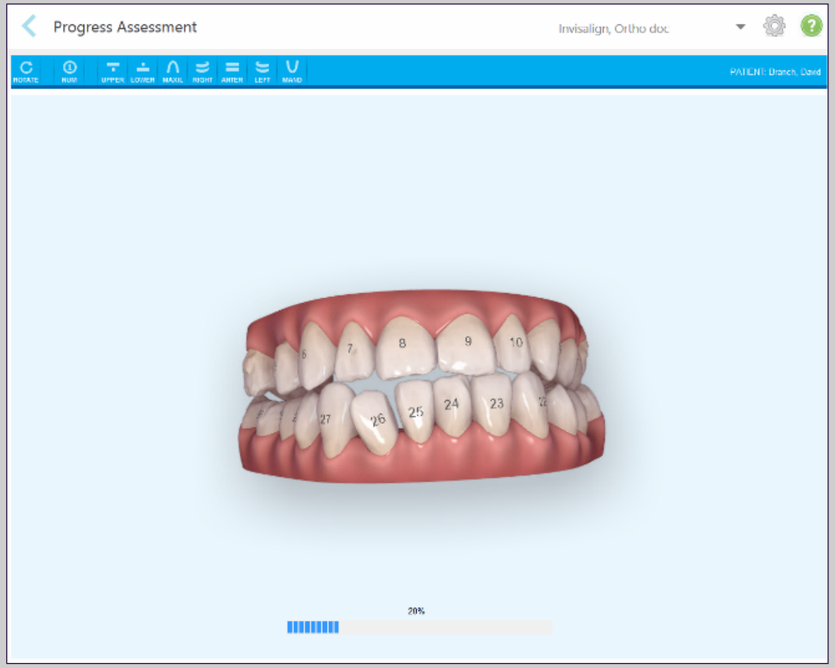
Access IDS Database



Select the ClinCheck



Analyzing progress assessment



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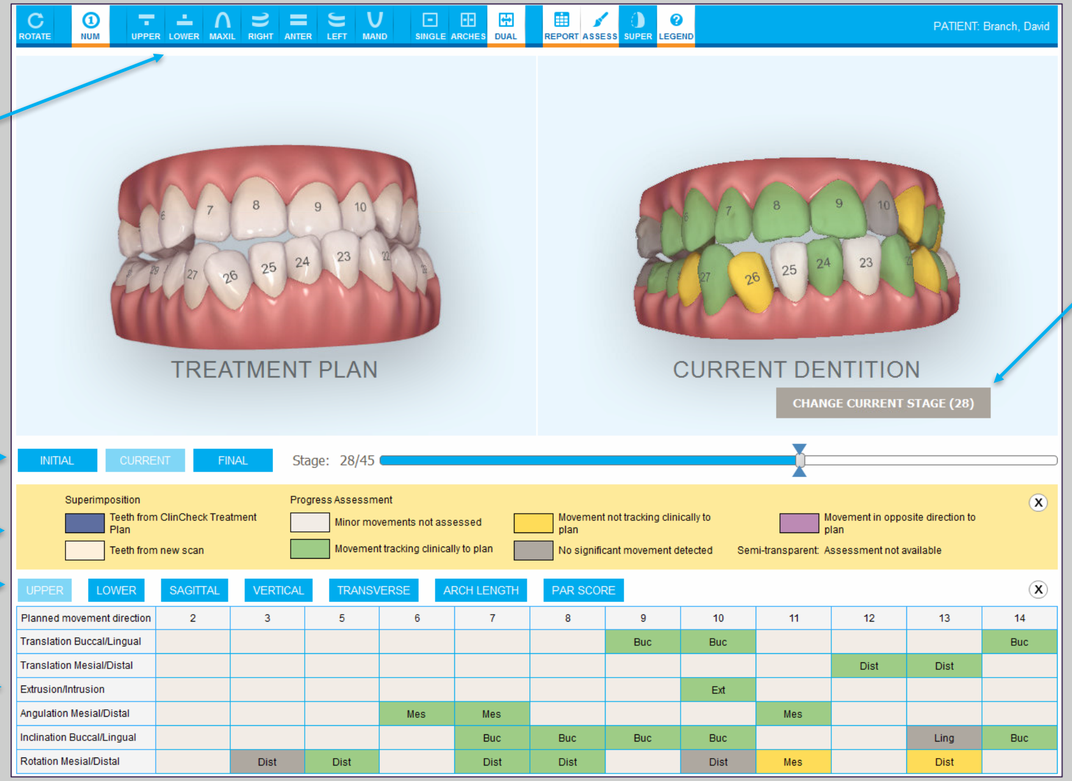
Progress Assessment



Assessment Tools

Stage Button

Stage Controls

Stage Slider

Legend

Page Buttons

Report Panel

The Progress Assessment tool includes a report that is a color-coded tooth movement table to assist the doctor in making treatment decisions to track the patient's progress to their ClinCheck treatment plan.

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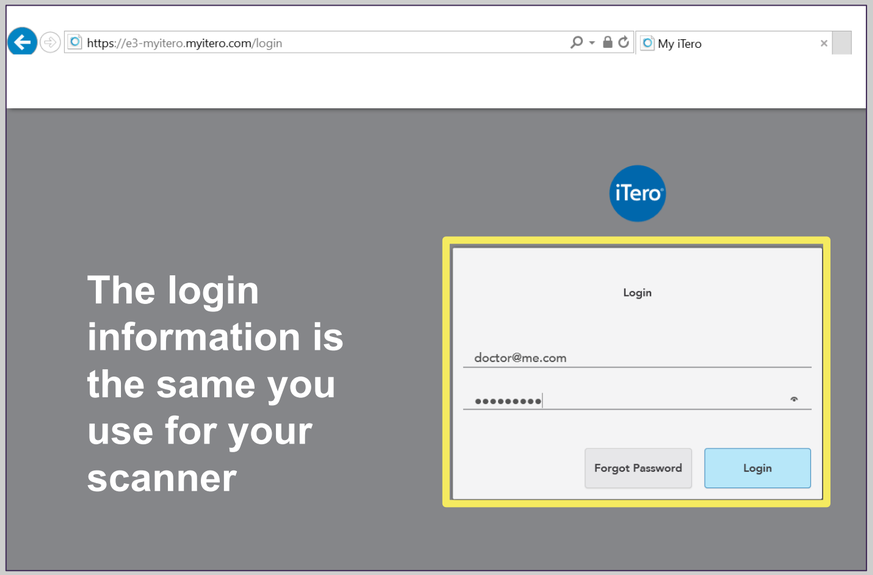
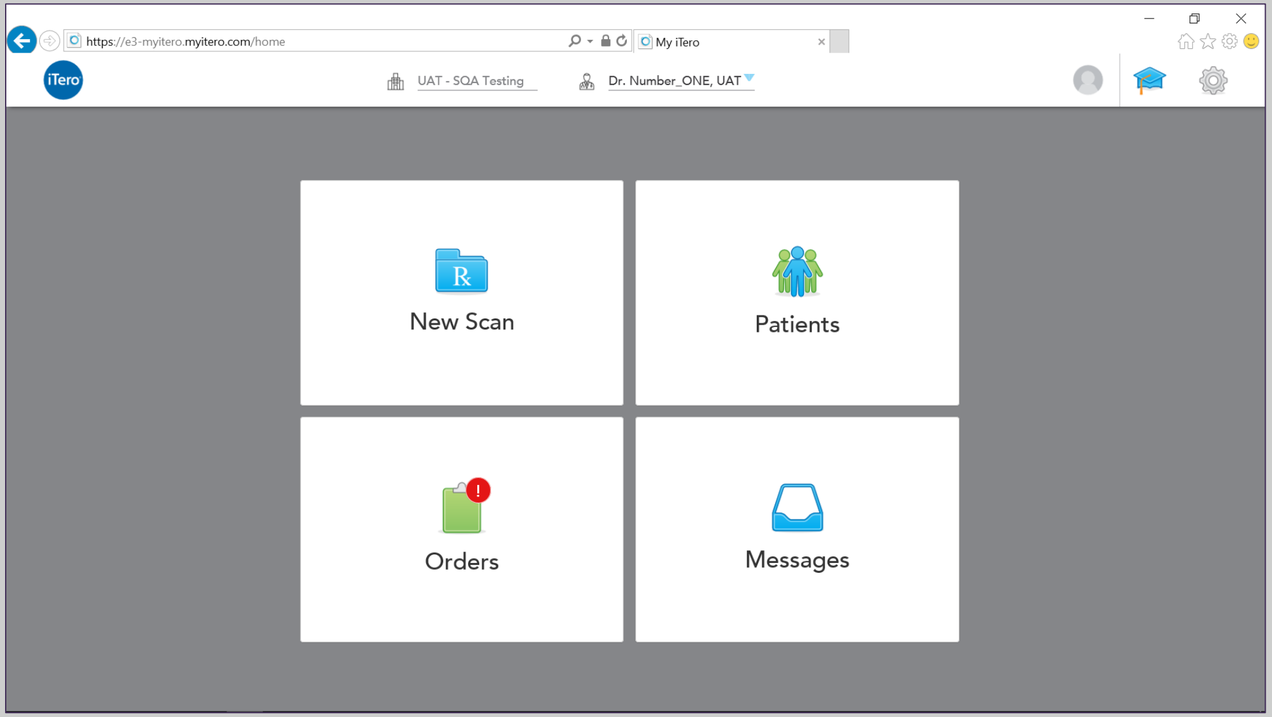
MyiTero.com

In your web browser, go to www.myitero.com





MyiTero.com brings the intuitive experience of the iTero® Element scanner online.
Note the home screen icons are the same as the scanner

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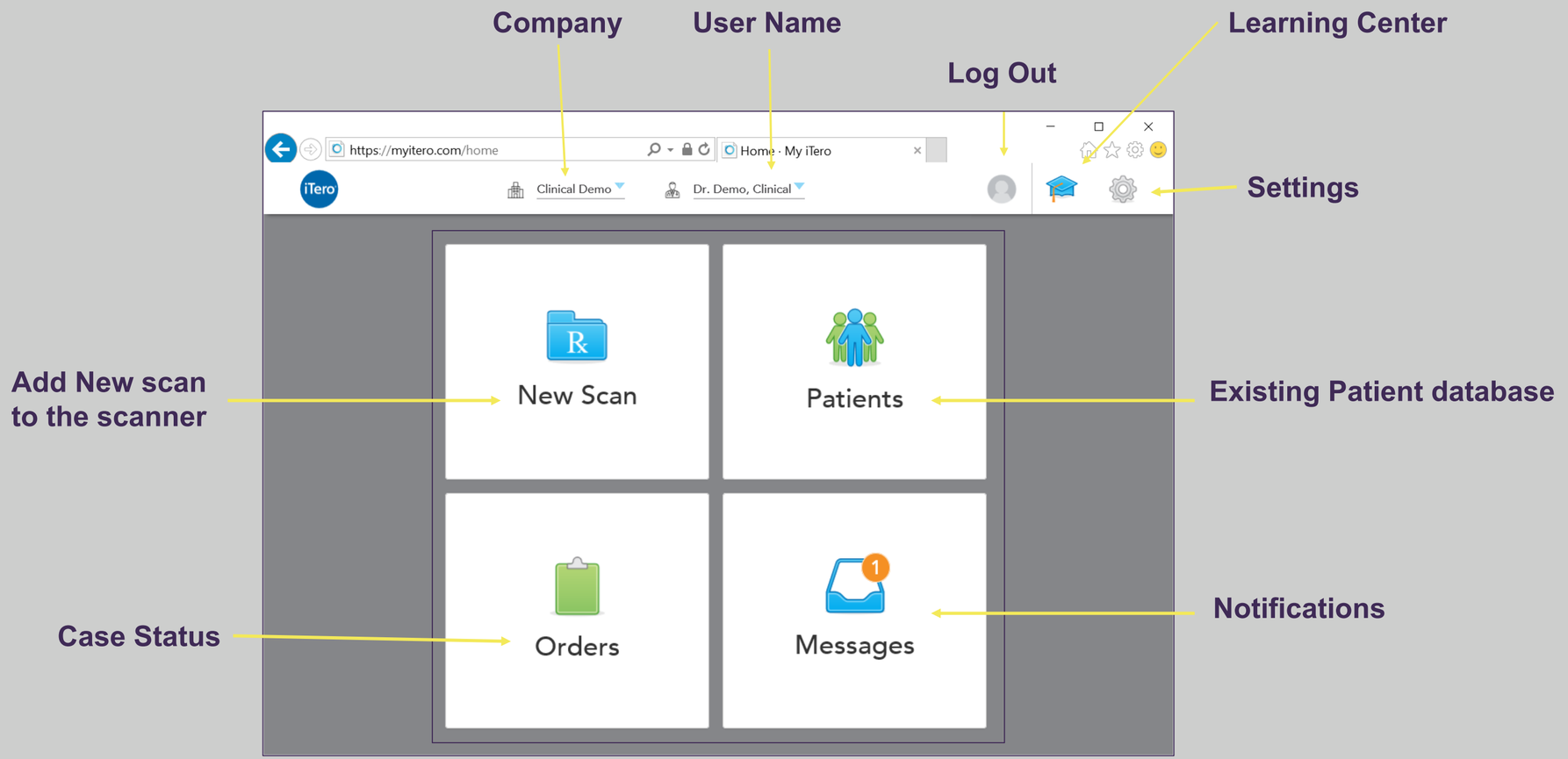
MyiTero.com



Extend the experience of visualizing the virtual models for patient education, treatment planning, administrative tasks and STL export you can view iTero Element scans both from the scanner and from any computer or tablet, through myitero.com.

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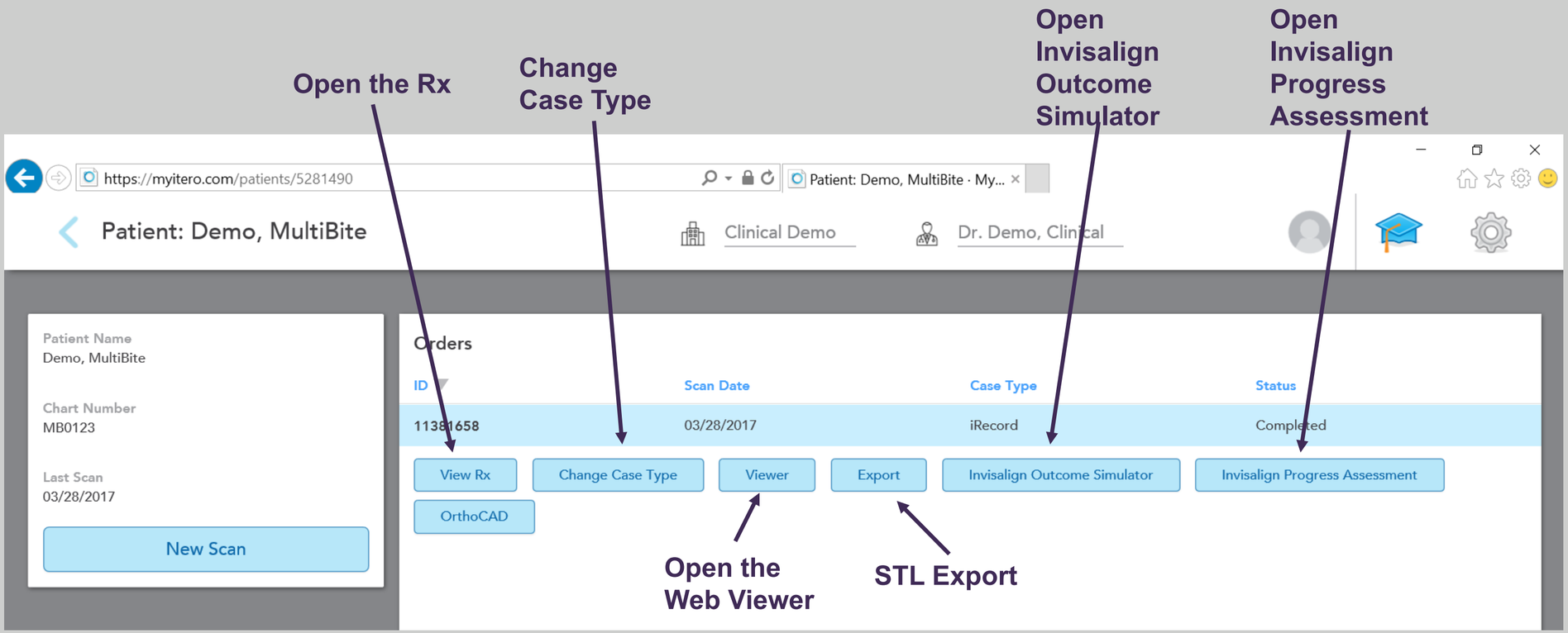
MyiTero.com – Available Workflows



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iTero Customer Advocacy

Contact iTero Customer Advocacy at 1 800 577 8767.

Order disposable scanner sleeves, articulators, and patient brochures online at the iTero Store (www.store.itero.com) or click on the iTero Store tab in MyAligntech.

Check MyAligntech and Messages for upgrade notifications and information on the monthly iTero Advanced Training Webinars.

Align Technology, Inc.
2560 Orchard Parkway
San Jose, CA 95131

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Resources

PDF Files

iTero Element Operation Manual

Invisalign Outcome Simulator Quick Reference Guide

STL Export Instructions

iTero Element Video

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iTero®