

iTero Lumina™ scanner - lab guide

iTero Lumina scanner is the next generation of digital scanning technology that pushes the boundaries of what intraoral scanners can do and sets a new standard for practice performance. The new proprietary iTero Multi-Direct Capture™ technology offers 3x larger field of view¹, high accuracy² and maximum capture distance of 25mm³ for a smooth scanning experience for users and patients.

This guide helps labs identify, understand, and address common scan-related scenarios. By following these recommendations, labs can achieve better margin detection, improve restoration fit, and help your doctors avoid typical challenges with scan workflows and tools.

This guide applies specifically to cases scanned with iTero Lumina scanner. With the new iTero Multi-Direct Capture technology, There are new guidelines and best practices that will help you achieve more precise, high-quality restorations.



1. Compared to the field of view of the iTero Element™ 5D imaging system, when the iTero Lumina™ intraoral scanner's scanning distance is 12 mm. 2. The iTero Lumina™ intraoral scanner has scientifically proven greater accuracy for your clinical orthodontic needs. 3. Data on file at Align Technology, as of November 15, 2023.

iTero Lumina™ scanner - lab guide

Scanner type and procedure type

Identifying the scanner type and procedure type used for each case is essential for providing accurate solutions, particularly when working with scans captured using the iTero Lumina scanner. While you may be familiar with best practices for iTero Element™ scanners, workflows and best practices differ when using iTero Lumina scanners.

Verify that the procedure type is accurate to the case. Each procedure is specifically designed to support a particular case and provide optimal software performance. Below is description of each procedural indication:

1. Study Model/iRecord procedure

Most commonly used for routine scanning and periodic documentation of dental clinical status. We do not suggest using iRecord for restorative cases.

2. Fixed Restorative procedure

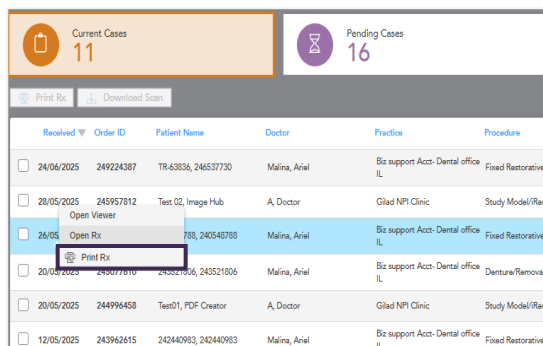
Covers a range of restorations, including crowns, bridges, veneers, inlays, onlays, and implant-based restorations.

3. Denture/Removable procedure

Used to design and fabricate removable prosthodontic appliances, including partial and full dentures.

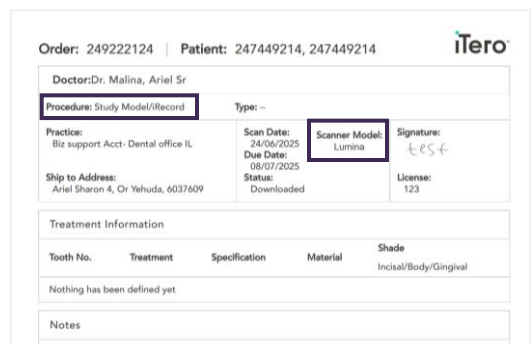
Scanning technique recommendations is based on the iTero Lumina scanner fixed restorative procedure type.

01 Open the MyiTero™ portal for labs and access the Rx file by selecting **Print Rx**.



Received	Order ID	Patient Name	Doctor	Practice	Procedure	
<input type="checkbox"/>	24/06/2025	249224387	TR-63836, 24653730	Malina, Ariel	Biz support Acct- Dental office IL	Fixed Restorative
<input type="checkbox"/>	28/05/2025	245957812	Test 02, Image Hub	A, Doctor	Glad NPI Clinic	Study Model/iRe
<input type="checkbox"/>	26/05	788, 240548788	Malina, Ariel	Biz support Acct- Dental office IL	Fixed Restorative	
<input type="checkbox"/>	20/06/2025	243077810	240021006, 243521006	Malina, Ariel	Biz support Acct- Dental office IL	Denture/Removal
<input type="checkbox"/>	20/05/2025	244996458	Test01, PDF Creator	A, Doctor	Glad NPI Clinic	Study Model/iRe
<input type="checkbox"/>	12/05/2025	243962615	242440983, 242440983	Malina, Ariel	Biz support Acct- Dental office IL	Fixed Restorative

02 Locate the scanner type and procedure type in the Rx.



Order: 249222124 | Patient: 247449214, 247449214

Doctor: Dr. Malina, Ariel Sr

Procedure: Study Model/iRecord | Type: --

Practice: Biz support Acct- Dental office IL | Scan Date: 24/06/2025 | Scanner Model: Lumina | Signature: [Signature]

Due Date: 08/07/2025 | Status: Downloaded | License: 123

Ship to Address: Ariel Sharon 4, Or Yehuda, 6037609

Treatment Information

Tooth No.	Treatment	Specification	Material	Shade
Nothing has been defined yet				

Notes

iTero Lumina™ scanner - lab guide

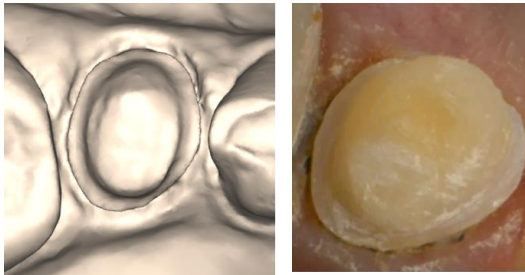
General guidelines

This section provides practical steps to help doctors capture high-quality scans with clear margins, and accurate surface data, ensuring better lab outcomes and optimal restoration fit.

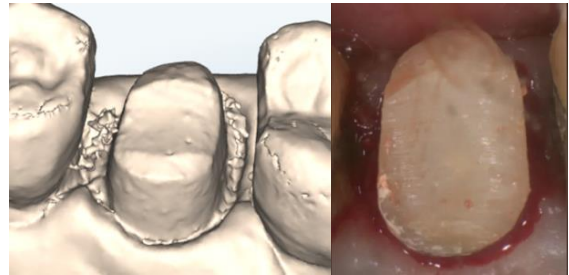
> Tissue and fluid management

Effective tissue and fluid management is essential for clear margins and accurate scans. If you notice moisture, blood, or poor retraction in the 2D images (available in iTero exocad Connector™) or color model, inform the doctor that improved gingival isolation is needed to enhance visibility and margin clarity.

Example of good fluid management



Example of poor fluid management



> Real-time scan assistance



- Instruct the doctor to utilize the real-time scan assistance, during scanning, to fill in any blue holes in critical areas—for example, on the margin and adjacent contacts.
- Inspect the scan for voids in critical areas: around the preparation, contact points, and adjacent gingiva.

iTero Lumina™ scanner - lab guide

General guidelines - cont.

> Scanning technique

- The iTero Lumina scanner provides a flexible scanning experience, allowing your doctors to hover over or touch the teeth when scanning, based on the patient's unique anatomy. For restorative workflows and capturing fine details such as margin lines, **we recommend touching the teeth to optimize surface quality capture and ensure a precise restoration fit.**
- After proper gingival isolation, scan the arch and preps in one single pass. Note: No individual prep segment scans needed.
- When **the doctor reaches the prep tooth, we recommend to touch the teeth with the wand tip**, to get as close to the prep as possible for optimal margin capture.
- Rock the wand buccally and lingually. Then move the wand in a circular motion for better capture in the proximal areas, and to fill any blue voids that may be present on the prep. This technique allows the various cameras the opportunity to capture all the surrounding areas and help fill voids.
[<to add learning center video link when ready>](#)
- Instruct the doctor to use the real-time scan assistance during scanning to fill any blue holes in critical areas, such as the margins and adjacent contacts while using the circular motion.

Note: The iTero Lumina scanner requires continuous wand movement across varying depths to capture data, unlike the iTero Element™, which collects more data while stationary.

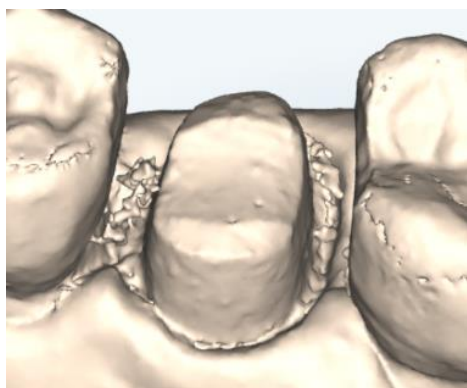
iTero Lumina™ scanner - lab guide

Scan optimization insights

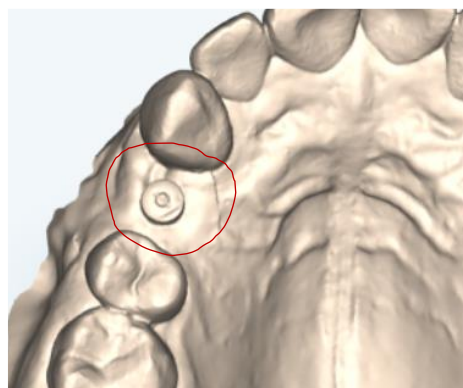
This section helps labs identify, understand, and address common scan-related scenarios.

Click each insight to learn more.

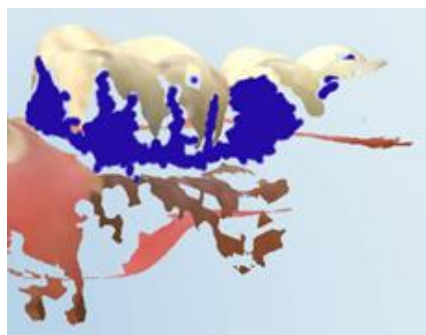
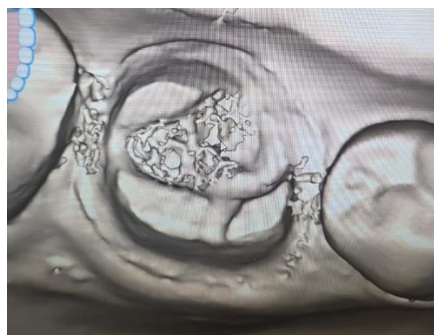
Margin line optimization



Prep editor tool



Restoration misfit



Have questions or need support?

Contact your regional iTero™ Customer Support.

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Scan optimization insights - cont.

Margin line optimization

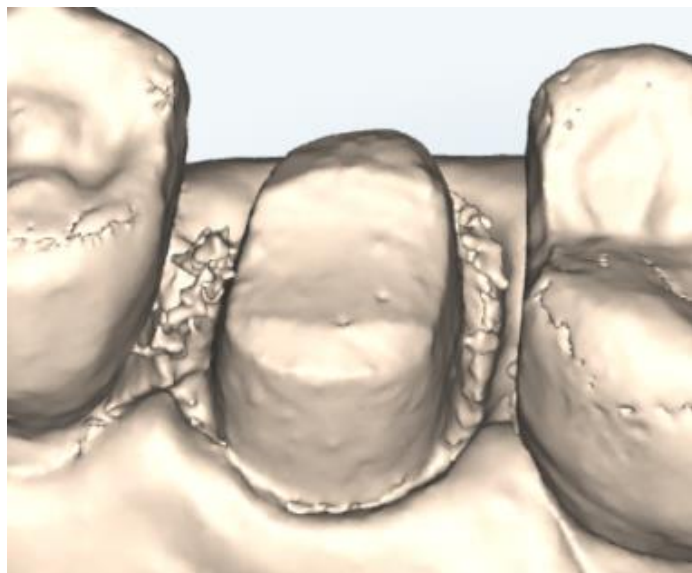
Unclear margins occur when the margin line is blurred or obscured by fluid, tissue or scanning errors. Remind doctors to review margins.

Evaluation tools

1. Use the color mode to assess the surface texture.
2. View the scan in monochrome mode to enhance edge visibility.
3. If using the iTero exocad Connector™, examine the 2D intraoral images and iTero™ NIRI technology (Near Infra-Red Imaging) images to trace unclear margins.

If the margin is still ambiguous, you can submit the case to the complimentary Modelling and Interpretation (M&I) service to request margin marking corrections.

Cases are typically returned within approximately six hours.



iTero Lumina™ scanner - lab guide

Scan optimization insights - cont.

Prep editor tool

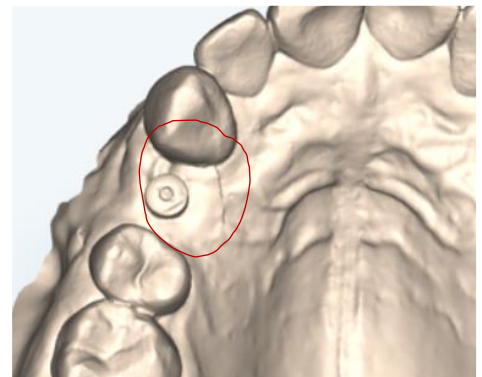
The iTero Lumina scanner enables doctors to scan everything in one continuous scan eliminating the need to scan individual prep segments.

To support this streamlined workflow, we've added the prep editor tool, which allows doctors to adjust preps and manage the clinical environment during scanning, if needed.

Situations where the prep editor tool was used unnecessarily:

Case example

In this case, the clinician initially scanned the full arch, then used the prep editor tool to remove the area containing the healing abutment and rescanned that section. This approach led to visible mismatched lines between the original scan and the rescanned area.



Other examples where the prep editor tool was used unnecessarily:

- Duplicating a tooth by scanning the full arch with the temporary in-place, removing the temporary and rescanning the preparation - rather than using the pre-treatment scan workflow.
- Duplicating a full-arch case and using the prep editor tool to erase and rescan a specific area, then resending the case, without realizing that too many changes occurred between the two scans.
- Managing the margin by marking and removing a very specific area and then rescanning an area that is not big enough.

iTero Lumina™ scanner - lab guide

Scan optimization insights - cont.

Prep editor tool - cont.

Possible causes

- Poor integration of the new/replaced section.
- Not scanning enough anatomy outside of the erased area.
- Gingiva and surrounding tissues often change due to anesthesia or bleeding, leading to mismatched scans.

Communication to the doctor

- If you detect inconsistencies in gingival appearance or surface transitions, suspect prep editor tool was used ineffectively. Refer to the prep editor tool video for guidance. [<to add learning center link>](#)
- Recommend that the clinic scan the prep area and surrounding tissues together, rather than relying solely on partial edits. They should ensure the scanned area is larger than the portion they edited.
- Suggest rescanning the full arch or quadrant after prep is completed to maintain uniformity. If the clinical environment has changed too much or hard to manage its best to rescan the entire arch or quadrant.
- Refer to additional training resources - for example, the prep editor tool video, which shows how to use the tool effectively.

iTero Lumina™ scanner - lab guide

Scan optimization insights - cont.

Restoration misfit

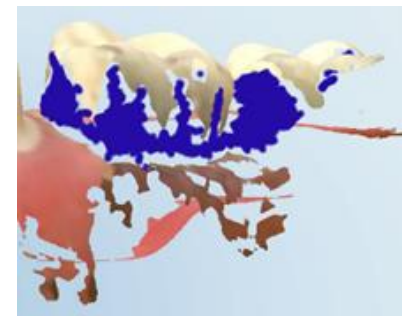
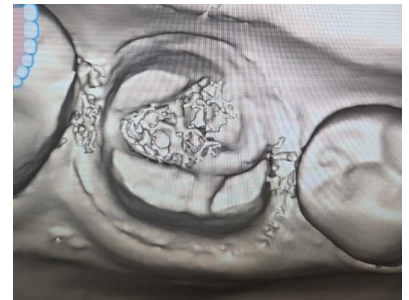
The fabricated restoration does not fit properly.

Examples include: Crown is too big or too high, the contact area is too tight, and the intaglio is too tight on the preparation

If there is a challenge with the restoration fit at the margin line, [refer to the margin line optimization section](#).

What are the possible causes of misfitting restoration?

- Inefficient scanning technique, such as repeatedly rescanning the same area multiple times during the scan.
- Rapidly changing clinical environment, such as uncontrolled fluid or tissue collapse.
- Missing data (blue holes present).



Communicate to the doctor

When scanning, aim for a continuous movement, at a convenient pace, while actively managing fluids and soft tissue, touching the teeth when scanning any preparations.