align education

How to get more from your iTero™ scanner investment and uncover hidden practice growth.

Dr. Iwasiuk has been practicing orthodontics for over 20 years and continues to push the limits of what can be accomplished with Invisalign ® clear aligners and iTero™ scanners. He received his DDS from the University of Toronto and his orthodontic certificate from the University of Rochester. For over a decade, he is an International Keynote Speaker, Research Consultant, a Key Opinion Leaders for Align Technology and a Global Faculty member. He is an Invisalign Diamond Provider practicing in the Greater Toronto area.

Ms. Debbie Khedoo began her career as a Level II Certified Dental Assistant, where she worked for a large orthodontic practice in Mississauga, Ontario. Over the years, she has acquired extensive experience in different aspects of the field, such as purchasing and marketing, before joining Dr. Bart Iwasiuk at Discover Orthodontics, as his Treatment Coordinator. Ms. Khedoo is an enthusiastic and passionate treatment coordinator who strives to create a welcoming environment for each patient.

1. Executive summary

Integrating the iTero Lumina™ scanner and Align™ Digital Platform into our practice operations has significantly transformed our approach, driving clinical excellence, patient satisfaction, and operational efficiency[1]. By using digital models to support diagnosis and treatment planning, we achieve precise and comprehensive visualizations of each patient's initial condition. Patients benefit from this clarity, gaining a deeper understanding of their oral health conditions and the long-term benefits orthodontic treatment offers beyond aesthetics. This enhanced understanding has directly increased patient acceptance rates, a critical metric for us in today's competitive market. Additionally, the effortless and intuitive scanning experience provided by the iTero Lumina™ scanner has elevated staff confidence[2], allowing them to engage more effectively with patients during consultations.

1. Background

Dr. Iwasiuk

I have been in private practice since 2002 and have incorporated intraoral scanning early in my career. Initially, my main objective was simply to reduce the discomfort and inconvenience associated with conventional PVS impressions. Using most of the previous scanners released by Align Technology, Inc. I have seen how digital scanning has evolved, becoming a standard of care in modern orthodontic practice rather than a novelty employed by enthusiasts. All the scanners we used, from the iTero Element™ to the iTero Element™ 5D Plus to the iTero Lumina™, have built upon the hardware and software foundations of their predecessors. The newest model brings enhanced capabilities for efficient scanning, diagnostic support, and patient engagement[3].

Today, replacing impressions is just a small fraction, about 10%, of what scanning technology offers. The real value, the remaining 90%, lies in how well scanners help us engage patients.

This is due to the fact that roughly 65% of all individuals are visual learners[4], who comprehend information more effectively when it is presented visually. In our consultation process, digital scans function as visual aids, enabling patients to clearly understand their oral health condition and treatment needs. This leads to more informed treatment decisions and increased treatment acceptance.

Using the original Invisalign® Outcome Simulator in our consultations has taught us how to demonstrate the benefits of orthodontic care by showing the before-and-after visuals and customizing simulations to create a one-of-a-kind solution based on the individual patient's needs. The Invisalign® Outcome Simulator Pro with in-face visualization capabilities further empowers us to help patients visualize their potential treatment outcomes. As patients see their simulated treatment outcomes not only for their teeth, but also for their faces, they experience an emotional, visceral response. These personalized visualizations elevate patient presentations and provide an emotional "highlight" at the completion of our proposed treatment plan. This personal connection has made it easier

for patient treatment plan acceptance[5].

Scanning technology also contributes to increased practice efficiency. With the current economic landscape and increasing competitive pressure, we look to optimize clinical processes while improving patient experience. With the new scanner we can scan twice as fast compared to previous iTero™ intraoral scanners[6], thanks to the new iTero Multi-Direct Capture™ technology. We were also able to replace conventional intraoral photography with digital scanning thanks to the high-quality lifelike 3D models produced by the iTero Lumina scanner[7], helping us save time in each appointment.

Reflecting on the evolution of our practice and the ways we have integrated scanning into our workflows, it seems inconceivable to operate without the enhanced capabilities of the iTero Lumina™ scanner. Effectively communicating with today's patients requires advanced visualization tools, while practice efficiency and staff experience are equally as important. As an orthodontist and practice owner, I see how incorporating the iTero Lumina™ scanner has helped us excel in all three of these areas.
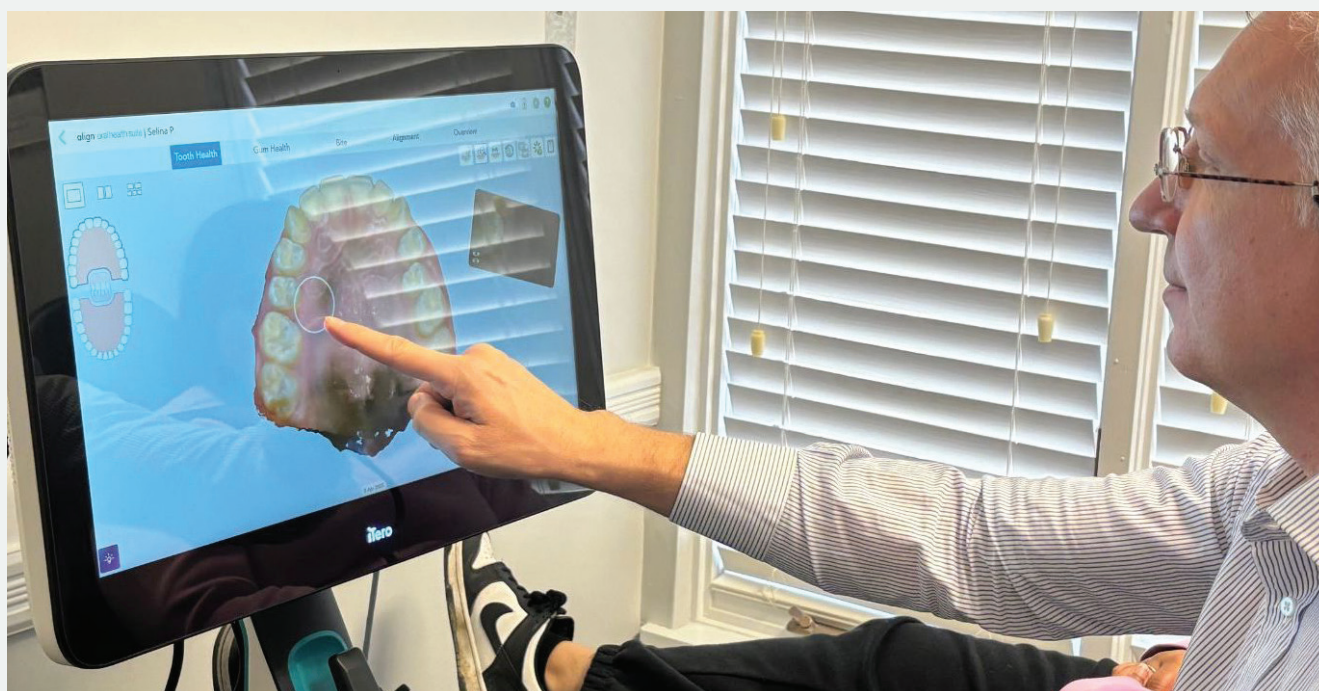

Figure 1: Dr. Iwasiuk reviews the patient's digital scan in real time during the consultation.
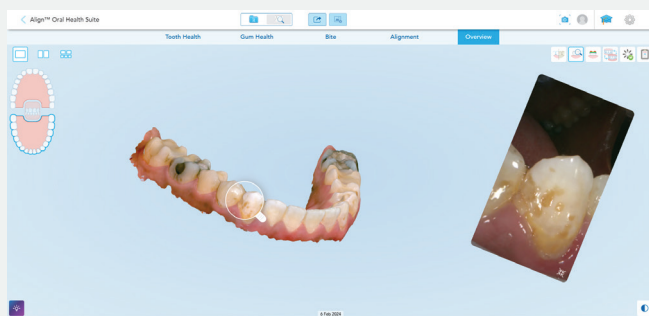
Figure 2a: Photorealistic 3D model and intraoral photos from the iTero Lumina™ showing fluorosis of the lower right canine.

Figure 2b: Intraoral photo captured with a DSLR camera.

2. The digital patient as a baseline for the modern orthodontist

Dr. Iwasiuk

In our practice, digital scanning is now typically the first step of every consultation. Creating these *"digital patients"* as we call them, improves not only efficiency, it's also a major upgrade in how patients feel during their first visit. Having a digital record of patient's dentition enables our team to manage multiple tasks simultaneously. One team member works with the digital patient and focuses on data management, diagnostic measurements, and creating an outcome simulation, while another engages the actual patient. This parallel approach creates a smoother, quicker, and more informative consultation experience for our patients.

A key benefit of routine scanning is the time saved by eliminating traditional intraoral photography. The high-quality lifelike 3D models from iTero Lumina™ scanners are comparable to DSLR images[7], enabling us to replace traditional intraoral photography with digital scanning. In addition to shorter procedure time, we no longer need cheek retractors, mirrors, or bulky photography equipment. At our practice, we've found that digital scanning reduces processing time, the materials used, and the staff required to
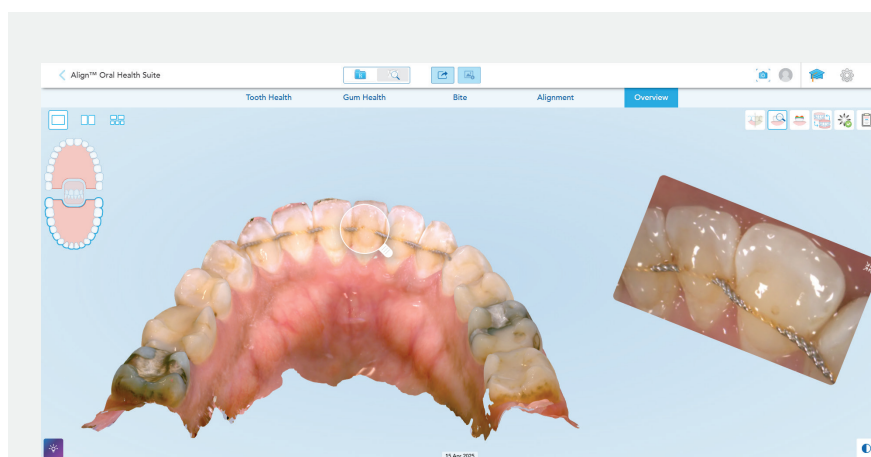

Figure 2c: Lingual view of the dentition that is not normally captured with conventional photography.

sterilize extra instruments and maintain sensitive photography equipment. In the end, scanning helps us reduce appointment time by ten minutes compared to using DSLR camera for intraoral photography.

Additionally, digital scans provide comprehensive records by capturing views of all tooth surfaces, including lingual areas that are rarely documented with standard photos. A 3D scan contains more information to support diagnostic evaluation compared to a 2D photo, making additional photography unnecessary. Having digital patient records stored securely in the MyiTero™ portal allows me to access all the records remotely. My main motivation is to have a diagnosis and treatment plan completed before I ever meet the "physical" patient. And this is why, I never walk into a consultation without knowing exactly what I will be

discussing with my new patient.

When lecturing, I often meet colleagues who wait until after a patient accepts treatment to scan them to fabricate orthodontic appliances. In my view, this approach misses the opportunity to truly impress patients with our technology. My advice is always: just start scanning everyone. Once patients experience the process, you'll see that it leads to smoother, more engaging conversations that can be tailored on the spot to meet their specific needs and desires. This strategy creates a clearer vision of the benefits of orthodontic care, regardless of the final treatment modality. Ultimately, the scanner is a tool for patient engagement and presentation; using it solely to produce orthodontic appliances is secondary in modern digital workflow.

Ms. Khedoo

When we were using iTero Element™ scanners, our scanning process was fast – or so we thought. Upgrading to the iTero Element™ 5D Plus imaging system boosted our scanning speed, and the iTero Lumina™ scanner has made us even faster. If we compare our team's efficiency in scanning to what it was back in 2021, we now save almost four minutes per scan. With our average of 118 scans per month this adds up to 7.7 hours saved per month or 92 hours yearly.

Additionally, the combination of iTero Lumina™ scanner's wide field of view and increased scan depth makes capturing even narrow and deep palates effortless, almost as an added benefit of a regular scan[8]. With our previous iTero™ scanners, capturing a palate could easily add an extra minute. While this might seem small, the cumulative time savings throughout a busy day can significantly impact on our overall practice efficiency.

The time saved is repurposed so more patients can be scheduled without adding additional days to the schedule, and we build better relationships with patients by focusing on conversations and engagement rather than on capturing records. As most patients today are busy and hesitant to spend extra time in consultation, we reduced our consultation time from one hour to 40 minutes — all while capturing more complete records and enhancing the flow of our patient presentations.

Additionally, scanning enhances the overall patient experience. Since scanning is still a procedure for the patient, our goal is to make it as fast and comfortable as possible. The sooner we complete the scan and involve the patient in discussing their dental needs, the more they focus on the positive treatment outcomes rather than on the procedure itself. New patients consistently express their appreciation for quick scans, and even our current patients regularly mention their preference for the comfort and speed of the newest scanner.

Scan duration per scanner model

iTero Element™ scanner
6.5 minutes

iTero Element™ 5D Plus imaging system
3.2 minutes

iTero Lumina™ scanner
2.6 minutes

Time saved aggregated
By using iTero Lumina™ scanner instead of the original iTero Element™ scanner

7.7 hours saved monthly
92 hours saved yearly

Figure 3: The scan durations and time-saving figures cited are based solely on proprietary data collected by Discover Orthodontics.
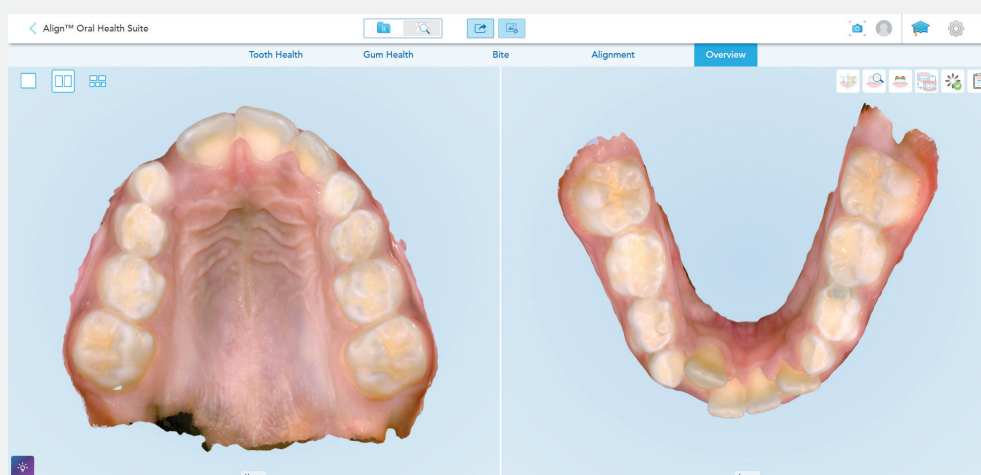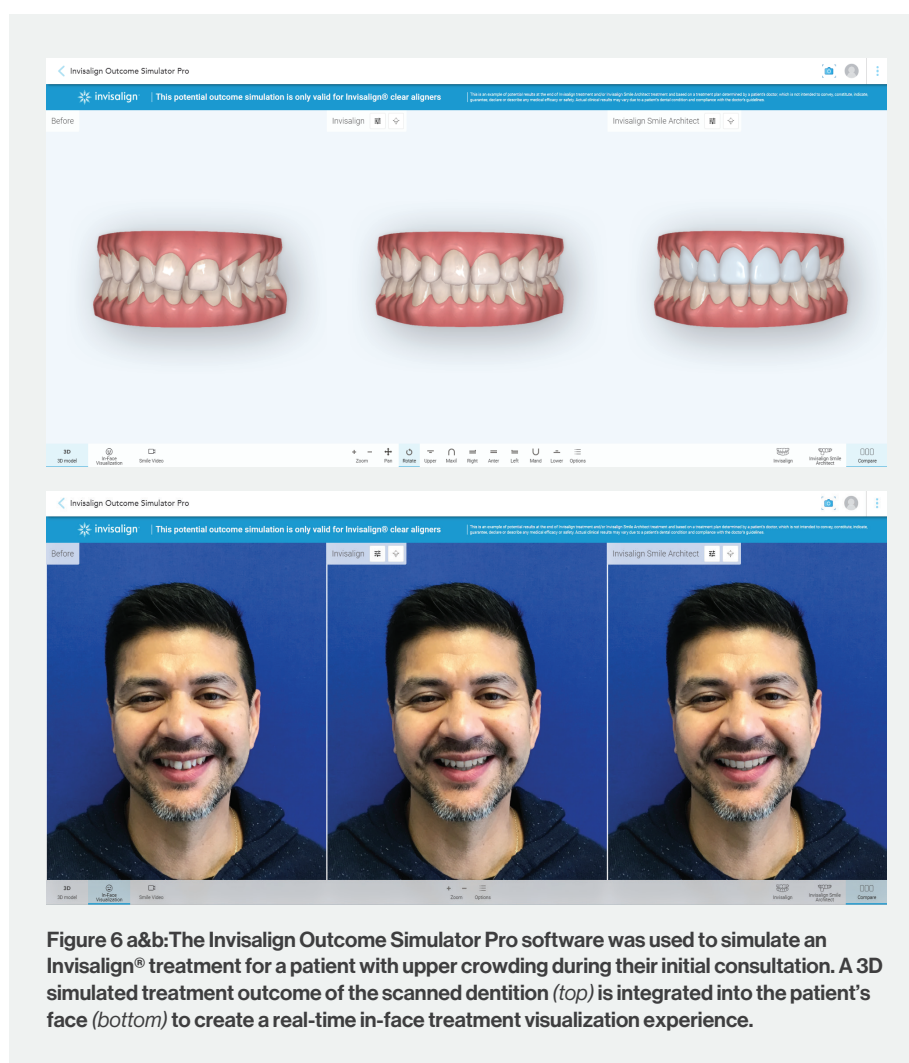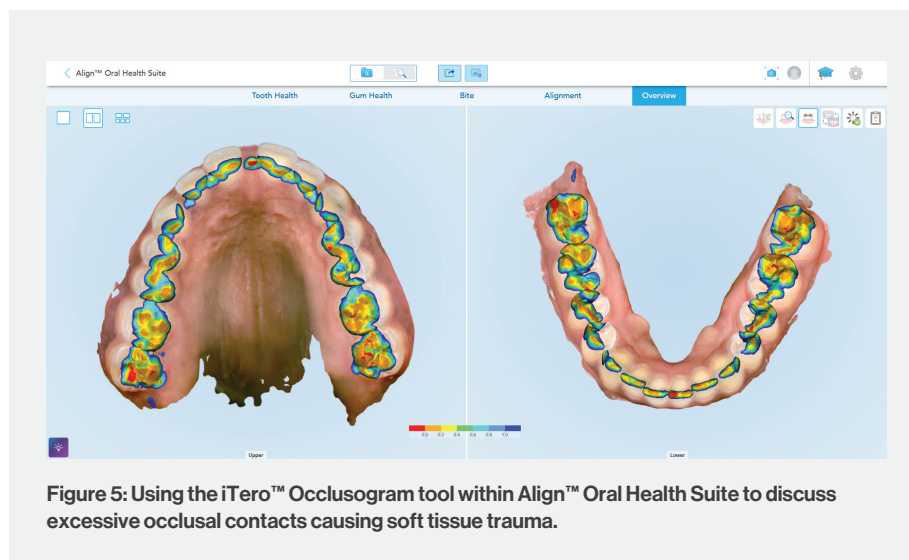

Figure 4: The photorealistic 3D model from the iTero Lumina™ scanner. The effortless scanning and the increased field of capture allow operators to easily capture palates.

3. Digital consultation experience

Dr. Iwasiuk

Orthodontic consultations are carefully designed interactions, refined through thousands of repetitions. Our practice is no exception; we've developed our consultations into visually compelling and emotionally engaging experiences. Integrating the iTero Lumina™ scanner into our very first interaction with each patient has become a foundation of our engagement strategy. By utilizing tools such as the Align™ Oral Health Suite, we visually supplement conversations with patients, helping patients understand their oral health condition and treatment needs. With the high-definition intraoral images of iTero Lumina™ scanner, patients can see what we see. More importantly, patients can be educated on the benefits of orthodontic treatments that go beyond aesthetic considerations, highlighting the long-term value they offer for overall oral and dental health.

A principal component of our consultation is the Invisalign® Outcome Simulator Pro, providing patients with real-time visualizations of potential treatment outcomes directly in the context of their own smile. These dynamic simulations captivate patients, visually depicting the positive transformations achievable through orthodontic and restorative treatments. Simulated outcomes are created automatically and can be adjusted using simulation preferences and 3D control instruments. This high level of personalization increases engagement and motivates patients to proceed with treatment[9]. Patients often pull out their phones and take photos of the simulation to share their excitement with friends and family. This immediate emotional connection often results in a confident "yes" to treatment, even among those initially seeking alternative opinions.

Figure 5: Using the iTero™ Occlusogram tool within Align™ Oral Health Suite to discuss excessive occlusal contacts causing soft tissue trauma.

Figure 6 a&b: The Invisalign Outcome Simulator Pro software was used to simulate an Invisalign® treatment for a patient with upper crowding during their initial consultation. A 3D simulated treatment outcome of the scanned dentition *(top)* **is integrated into the patient's face** *(bottom)* **to create a real-time in-face treatment visualization experience.**

Optimizing treatment acceptance is a key metric for us, and our current workflow has demonstrated superior results. In today's competitive market, where exam volumes may be declining, securing patient acceptance is vital for the sustainability and growth of our practice.

Ms. Khedoo

Throughout patient consultations, we actively record notes and screenshots, incorporating them into a personalized iTero™ scan report. This report plays a key role in supporting patient engagement after they leave our office to consider their treatment options. It enables patients to communicate their oral health and treatment needs with spouses and family members, reinforcing their treatment decisions. From our perspective, these reports enhance follow-up communication, transitioning interactions from impersonal "cold calls" to personalized, meaningful connections. By referencing specific details from their consultation, we create stronger patient relationships and encourage continued engagement throughout their treatment journey.

Additionally, whenever we have concerns about particular issues, we share the scan reports with referring general dentists. This practice is far more informative and efficient than traditional written notes, strengthening our relationships with referral networks and ensuring we consistently deliver the highest standard of care to our patients.
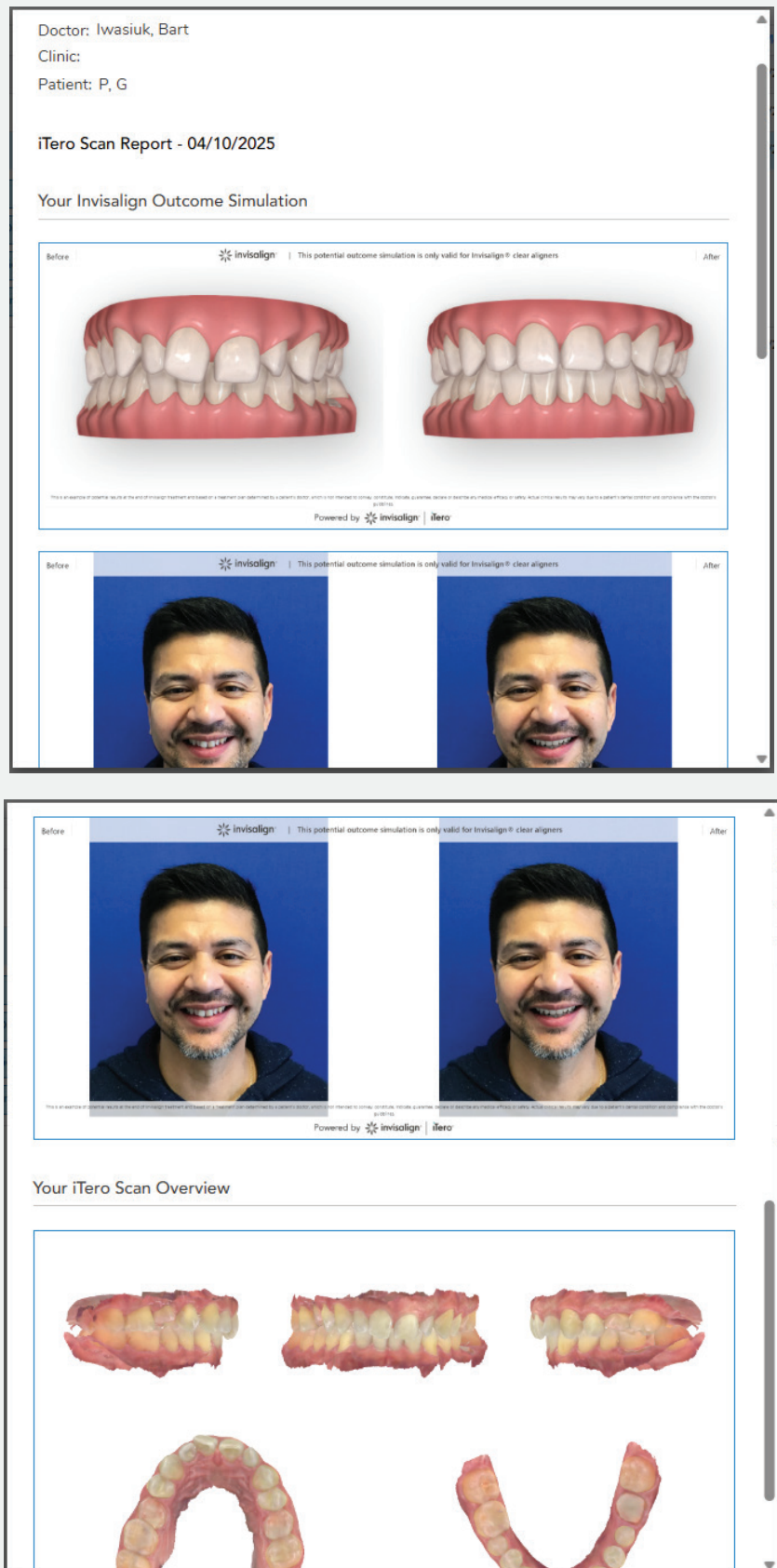
Figure 7 a&b: Preview of the iTero™ scan report. Information shared in the report includes scan overview, annotated screenshots, and Invisalign ® Outcome Simulator Pro treatment simulations.

4. Practice staff experience

Ms. Khedoo

One of my key responsibilities at the practice is training both existing and new staff members. I also provide consulting services to orthodontic practices across North America, assisting teams in integrating digital technologies into their practice workflows.

I've observed that experienced staff members accustomed to previous iTero™ models often encounter a slight learning curve when first adopting the iTero Lumina™ scanner. This is because the scanning approach with iTero Lumina™ is different; it requires focusing on the screen rather than a viewfinder and avoiding direct physical contact with patients' teeth. However, in my experience, after just a few sessions with the iTero Lumina™, team members get used to the new technique and then start to find older scanners cumbersome and slower by comparison, strongly preferring the newer model.

In my experience, new staff members who haven't used older scanning methods, learning the iTero Lumina™ scanner technique is much easier compared to previous generations. Without any previous experience or habits to unlearn, their adaptation process is smooth, fast, and free from resistance. I see a general decrease in the need for extensive training in scanning techniques with the iTero Lumina™ scanners.
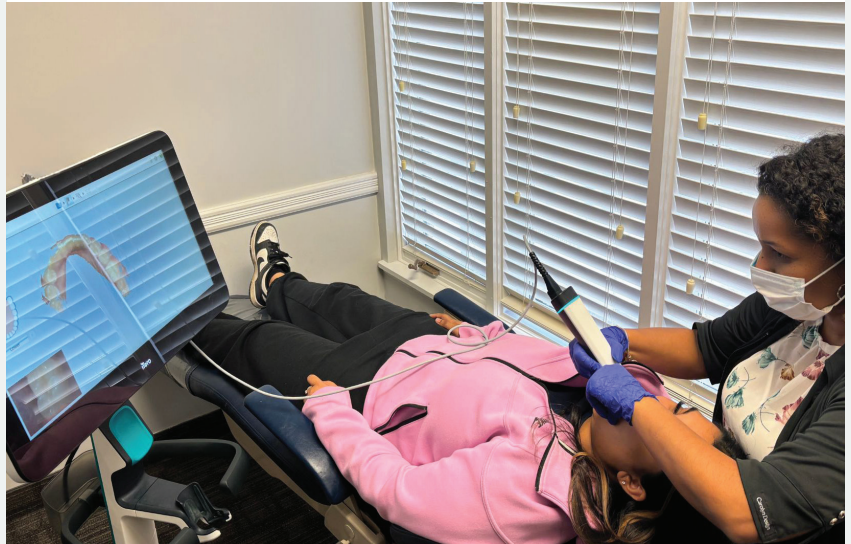
Figure 8: Ms. Khedoo scanning a practice employee so they can experience intraoral scanning first-hand.

Dr. Iwasiuk

When considering new equipment investments, orthodontists need to carefully balance their clinical responsibilities with the strategic needs of their business. The daily interactions between practice staff and technology significantly affect our productivity, efficiency, and patient experience. Hence, staff experience should always be a critical consideration when evaluating hardware upgrades.

My consistent recommendation to other orthodontists is to invest in the latest and most advanced scanner technology available, placing it strategically in the consultation room. If budget constraints allow for only one piece of equipment, make it the iTero Lumina™ scanner and position it where the first patient interactions happen. The iTero Lumina™ scanner, placed strategically in the consultation room, provides the greatest benefits by delivering comfortable, engaging, and impactful patient experience while enhancing practice team efficiency.

5. Bonus section – Smile Video within Invisalign Outcome Simulator Pro

I was one of the first orthodontists to take part in the limited market release of the new Smile Video feature within the Invisalign® Outcome Simulator Pro. Previously, we were only able to show smile simulations using still images, but now we have dynamic video simulations.

While a picture is worth a thousand words, imagine the impact of a video in capturing your patients' imaginations. We are closer than ever to letting patients see exactly what we envision—and to fully grasp the wide-ranging benefits of orthodontic care. Once they understand the true potential of their smile, it's no longer a question of "Do I want this?" but rather, "How do I make this happen?"

Although the decision to begin treatment may not be made on the day of the consultation, we routinely hear from patients weeks, months, or even years later. They consistently tell us that the engaging presentation during their consultation—highlighting the complete capabilities of our iTero™ technology—ultimately convinced them to start treatment with us.

Even in a highly competitive market, this unique patient experience sets a practice apart. For us, there's no going back; if anything, we continue to innovate and use these tools in ever more creative and compelling ways. That's the power of iTero™ scanners.

References

1. Majority of surveyed Invisalign® trained doctors and their staff agree that the iTero Lumina™ intraoral scanner increases clinic productivity and efficiency.
   a. Based on a survey in September 2023 of n=22 users who participated in a global limited market release, working with iTero Lumina™ intraoral scanner for an average period of 6 months, representing both Invisalign® trained general practitioners and orthodontists, and their staff in NA, EMEA and APAC, who were presented with a 4 point level of agreement scale from strongly agree to strongly disagree with the following statement: "The iTero Lumina™ intraoral scanner increases the efficiency and productivity in my clinic."

2. 90% of surveyed doctors and their staff agree that they feel confident when scanning with the iTero Lumina™ intraoral scanner due to its reliable and effortless scanning experience.
   a. Based on a survey in September 2023 of n=22 users who participated in a global limited market release, working with iTero Lumina™ intraoral scanner for an average period of 6 months, representing both Invisalign® trained general practitioners and orthodontists, and their staff in NA, EMEA and APAC, who were presented with a 4 point level of agreement scale from strongly agree to strongly disagree with the following statement: "I feel confident when scanning with the iTero Lumina™ intraoral scanner due to its reliable and effortless scanning experience."

3. Majority of surveyed users agree that the iTero Lumina™ intraoral scanner's superior 3D model boosts patient engagement.
   a. Based on a survey in September 2023 of n=22 users who participated in a global limited market release, working with iTero Lumina™ intraoral scanner for an average period of 6 months, representing both Invisalign® trained general practitioners and orthodontists, and their staff in NA, EMEA and APAC, who were presented with a 4 point level of agreement scale from strongly agree to strongly disagree with the following statement: "The iTero Lumina™ intraoral scanner's superior 3D model boosts patient engagement."

4. Zopf, R., Giabbiconi, C. M., Gruber, T., & Müller, M. M. (2004). Attentional modulation of the human somatosensory evoked potential in a trial-by-trial spatial cueing and sustained spatial attention task measured with high density 128 channels EEG. Cognitive Brain Research, 20(3), 491–509. https://doi.org/10.1016/j.cogbrainres.2004.02.014

5. Surveyed doctors who agreed that Invisalign® Outcome Simulator Pro improved their Invisalign® case starts estimated a 50% increase in case starts. *
   a. *Based on a survey in September 2022 of n = 32 doctor respondents who answered, "Strongly agree" or "Agree" to the following statement: "My practice experienced an increase in Invisalign case starts with usage of Invisalign Outcome Simulator Pro (vs previous workflow & tools)." Those doctors were then asked to estimate the % increase in Invisalign case starts. 50% was the median of all responses. Respondents represent both GPs (n=16) and Orthos (n=16) in NA, EU, and APAC who had utilized Invisalign Outcome Simulator Pro in their workflows ten times or more with their iTero Element™ Plus Series for an average period of 4 months

6. The iTero Lumina™ intraoral scanner is designed to enable 2x faster* scanning compared with previous iTero™ intraoral scanners.
   a. *Compared to the iTero Element™ 5D imaging system with tolerance AVE=±0.1 operating at a working distance from 0-20 mm.

7. Majority of surveyed users agree that the iTero Lumina™ intraoral scanner's photorealistic scans enable orthodontic clinical assessments the same way intraoral photos do.
   a. For Invisalign® record-taking cases only. Based on a survey in September 2023 of n=22 users who participated in a global limited market release, working with iTero Lumina™ intraoral scanner for an average period of 6 months, representing both Invisalign® trained general practitioners and orthodontists, and their staff in NA, EMEA and APAC, who were presented with a 4 point level of agreement scale from strongly agree to strongly disagree with the following statement: "The iTero Lumina™ intraoral scanner 3D model is comparable to that of an intraoral photo."

8. The iTero Lumina™ intraoral scanner's Multi-Direct Capture™ technology, with its wider field of view1, large capture distance2 and multi-angle capture3, is designed to simplify capture of challenging areas like the palate, edentulous spaces, partially erupted teeth and crowded teeth.
   a. The iTero Lumina™ intraoral scanner offers 3x larger field of view designed for more surface area capture enabling faster scanning. *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.
   b. The iTero Lumina™ intraoral scanner boasts a 25 mm capture distance.
   c. The iTero Lumina™ intraoral scanner offers simultaneous multi-angle capture designed for less maneuvering.

9. Surveyed doctors reported an average of 62% of patients that were shown an Invisalign Outcome Simulation with the iTero Scanner accepted Invisalign treatment.
   a. *Based on a survey of GPs (n=110) and orthodontists (n=106) from the USA, Canada, and UK in August 2021 who used the Invisalign Outcome Simulator in the past year and were asked, "For the patients that you have used the Invisalign Outcome Simulator on in the past 12 months, what percentage (%) of these patients accepted Invisalign treatment?"

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