SPECIAL GLIDEWELL.IO™ SUPPLEMENT

Implant, Restorative and Esthetic Dentistry

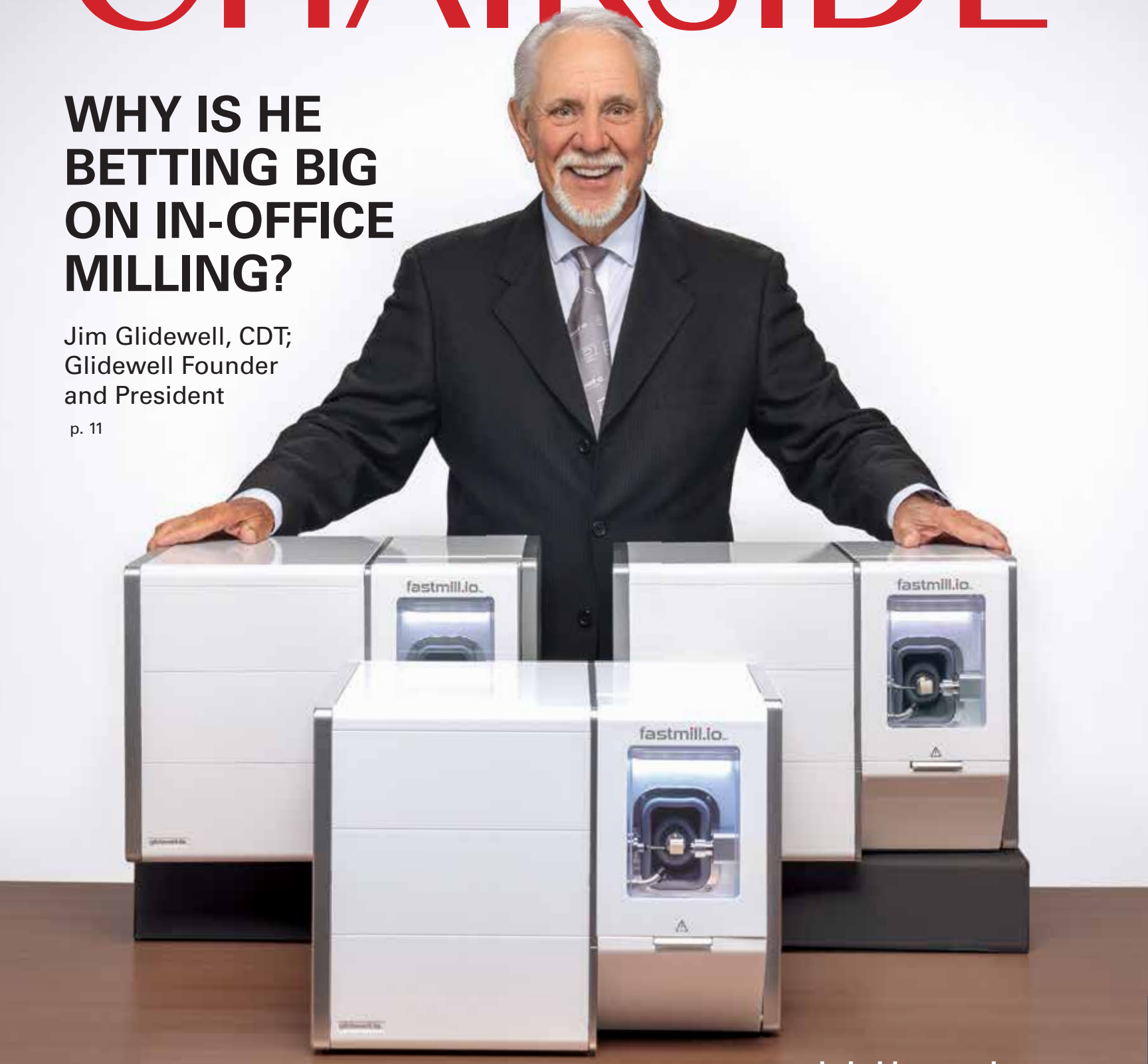
CHAIRSIDE®

vol. 19, iss. 2

WHY IS HE BETTING BIG ON IN-OFFICE MILLING?

Jim Glidewell, CDT; Glidewell Founder and President

p. 11



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Allow Glidewell's digital tools to reduce your everyday costs, and gain the freedom to treat every patient in need.

Opening Doors with Digital Technology

A great business should aim to make things better by improving the quality of life of its customers. What I'm most proud of in the dental industry is our shared principle of service to others — and I've worked ceaselessly to make sure that's been the true north star of my business for over 50 years. In practice, in our *Glidewell way*, that's meant relying on innovation to make treatment better, faster and ultimately more accessible.

Digital dentistry is the most disruptive field of innovation I've seen in my career. In less than a decade, over half of all dentists implemented digital scanners and virtually every lab installed CAD/CAM systems. Guesswork? Gone. Off days? Largely gone. We're left with programmatic precision and predictable outcomes on both sides of the dentist-lab equation. And because of this sea change, we have more ability than ever to extend the reach of our care — to help patients who previously had no access to treatment.

You might be objecting right about now: "Insurance reimbursements are down. Staff costs are up. My lease renewal is eye-watering. I need big-dollar cases for my practice to survive." By no means do I mean to downplay the financial realities of today's practitioner. But, I want to offer you an alternate pathway: Allow Glidewell's digital tools to reduce your everyday costs, and gain the freedom to treat every patient in need.

We've partnered with Medit to offer the fastscan.io™ Scanning Solution. If you scan and send a case to our lab, you'll save $20 per unit and $9 on shipping. After just 11 crowns, that's $319 in savings, which more than covers the monthly payment of your new scanner. Each crown afterward delivers pure savings: Your lab cost for the average restorative case is reduced by over 25%, and you have an opportunity to pass those savings on to patients whose finances get in the way of treatment acceptance. And that's accelerated even more if you adopt our glidewell.io™ In-Office Mill and create crowns in your practice.

Cost-savings are just one benefit offered by digital tools. While my passion lies in broadening the reach of dentistry, throughout this issue of *Chairside*® magazine you'll find articles that demonstrate the speed, control and simplicity of these technologies. We've dedicated this issue to all things digital, and I encourage you to consider if these innovations are right for your practice.

Sincerely,

Jim Glidewell, CDT
Founder and President, Glidewell

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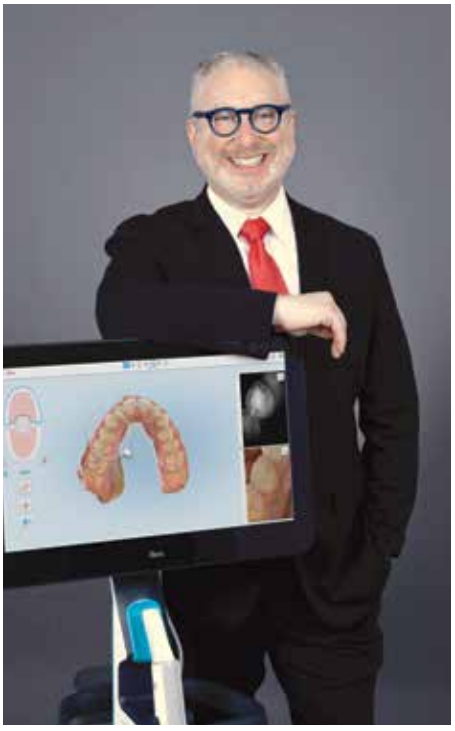

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This issue of *Chairside*® magazine includes one free continuing education unit (CEU). Follow the URL at the end of Dr. Bender's article on page 61 or visit **chairsidemagazine.com**.

chairsidemagazine.com

Chairside magazine is optimized for all popular desktop, tablet and smartphone platforms. Go online to view the latest digital edition from your computer or favorite mobile device.

FREE ONLINE CE:

- Dr. Jinny Bender outlines her protocol for cementing zirconia restorations — **glidewell.com/1902-ce1**

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If you are just starting your journey toward a digital workflow, I hope these stories provide valuable insights into what you can expect with the glidewell.io In-Office Solution.

Celebrate the Past, Embrace the Future

When we unveiled the glidewell.io™ In-Office Solution at our inaugural symposium in 2017, our goal was to provide clinicians with an affordable, user-friendly digital workflow for same-day results. The potential for better dentistry through technology was constrained by high costs, poor customer support and awkward workflows. We challenged ourselves to address these obstacles by designing and manufacturing a CAD/CAM system ourselves and setting a new industry standard for manufacturer-direct support without the middleman. Now, seven years later, I couldn't be happier with the results.

In this special edition of *Chairside*® magazine, we highlight the past, present, and future of glidewell.io through stories of users who are empowering their practices with a digital workflow, BruxZir® NOW crowns, and, best of all, with no oven needed. Hear from our founder and president, Jim Glidewell, about the principles that guided his decision to pursue chairside milling — a decision seemingly at odds with the goals of a traditional lab.

Dr. David Galler also shares his reasons for scanning every patient that comes to his practice. The biggest obstacle modern practices face is a lack of trust from patients, and an intraoral scanner is a great way to promote active participation in their exam. The ability to highlight areas of concern and use visual aids to show treatment options in real time goes a long way to fostering a trusting environment and boosting treatment acceptance.

Dr. Jonathan Vo also explains how he gained the confidence to take on a challenging anterior case thanks to the skills he learned in Dr. Justin Chi's course. The impressive two-year case involving aligner therapy, implants, and various digital solutions is a testament not only to Dr. Vo's clinical skills, but also to how well the digital workflow of glidewell.io can be tailored to a case's unique demands.

While we often mention a doctor's choice of materials in *Chairside* magazine case studies, we rarely compare them side by side. In this edition, we gathered five glidewell.io power users to share how they each use a particular milling material, and why those choices perfectly suit their clinical needs. These details will shed new light on the strengths and differences of a variety of chairside milling materials.

If you are just starting your journey toward a digital workflow, I hope these stories provide valuable insights into what you can expect with the glidewell.io In-Office Solution. If we are already part of your digital journey, I trust you will learn something new.

I look forward to your feedback.

Here's to the future of digital dentistry!

Robert Brenneise
Chief Growth Officer, Glidewell

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If you have questions, comments or suggestions, email us at chairside@glidewell.com. Your comments may be featured in an upcoming issue or on our website.

DAVID GALLER, DMD

Dr. David Galler graduated from the **University of Pennsylvania College of Dentistry**. He completed his general practice residency and cosmetic practice residency at the Brooklyn Veteran's Administration Hospital. He has been personally involved in the completion of more than two thousand Invisalign® cases. Dr. Galler also personally leads and instructs Reingage, a network of nearly one thousand dentists committed to his philosophy of bettering lives with Invisalign® and advanced alignment techniques.

JONATHAN VO, DMD

Dr. Jonathan Vo graduated from the **University of Pennsylvania** and completed a GPR at the VA Puget Sound in Seattle, Washington. He maintains two practices in Seattle, focusing on esthetics and full-mouth reconstructions utilizing the latest technologies in digital dentistry. Driven by a commitment to excellence and patient care, Dr. Vo is dedicated to transforming lives through personalized, high-quality dental solutions.

DAVID ZANT, DDS

Dr. David Zant works as the regional clinical director and PC Owner for Gentle Dental in Hawaii. After graduating summa cum laude with a degree in pre-professional biology, Dr. Zant chose to pursue dentistry because "it's like being a physician with a toolbelt." He was accepted into **Baylor College of Dentistry**, where he received his Doctor of Dental Surgery degree. Since completing his DDS, Dr. Zant continues to be an avid learner and spends much of his time in continuing education courses, keeping up with the most modern dental technology. Dr. Zant is proficient in digital dentistry, implant dentistry and cosmetics.

JINNY BENDER, DMD

Dr. Jinny Bender is a clinical dentist at Glidewell. After earning her Doctor of Dental Medicine degree from **Tufts University School of Dental Medicine**, she practiced general dentistry for 27 years before joining Glidewell in 2022. Dr. Bender is a member of the ADA, CDA and Orange County Dental Society.

JUSTIN CHI, DDS, CDT

Dr. Justin Chi is director of clinical technologies at Glidewell. He joined Glidewell as a clinical research associate in 2015 after graduating from the **Herman Ostrow School of Dentistry of USC**. Dr. Chi's previous education included receiving his Bachelor of Science degree in dental laboratory technology from the LSU School of Dentistry and earning his CDT in crown & bridge in 2007.

JIM GLIDEWELL, CDT

Jim Glidewell is the founder and president of Glidewell, the world's largest privately owned provider of restorative dental solutions. In 1970, Jim officially opened his lab to the public. Still driven by his mission to make restorative dentistry affordable to all, Jim employs a diverse team of over 5,000 employees. Joined in his pursuits are certified technicians, engineers, scientists, clinicians and support personnel, who all believe in his mission of advancing high-quality, cost-efficient materials. In addition to his work in driving change in dentistry, he also serves as an advocate for continued education.

NEIL I. PARK, DMD

Dr. Neil Park is vice president of clinical affairs for Glidewell. He received his DMD from **Temple University School of Dentistry** and practiced general dentistry in Florida before moving on to an accomplished career in the dental implant field, developing continuing education programs and implementing a predoctoral implant curriculum in universities throughout North America. In 2016, Dr. Park joined Glidewell, where he oversees clinical research as well as training and education programs for implant and restorative solutions.

ERIC RELYEA

Eric Relyea received his MBA from **Wharton School of the University of Pennsylvania**. With more than 30 years of experience, Eric has worked with leading dental companies in the management and development of clinical and laboratory solutions, including teeth whitening, minimally invasive veneers, endodontics, lasers, education, and practice marketing. He joined Glidewell in 2018 and serves as the company's vice president of marketing.

Chairside Milling Trends

The number of same-day restorations produced chairside has increased dramatically in recent years, thanks to an efficient combination of intraoral scanning, simplified design software and a growing selection of restorative materials. Let's look at these trends using industry reports and data from glidewell.io™ In-Office Solution analytics.

85%

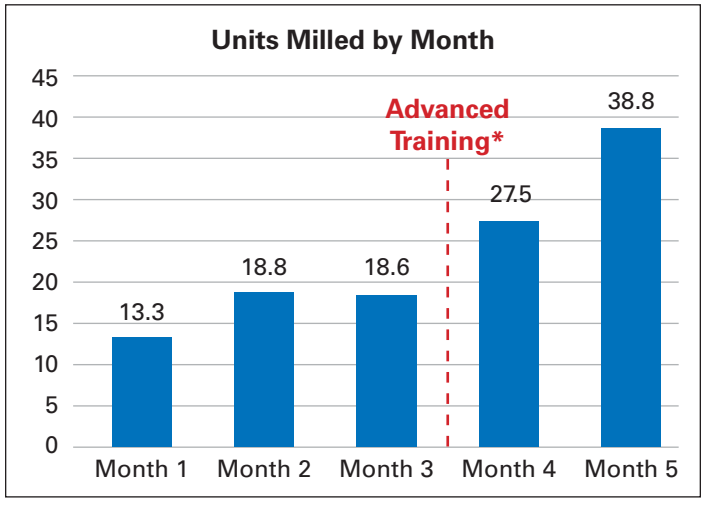
Of patients prefer same-day dentistry.[1]

50%

Of patients are willing to pay more for same-day dentistry.[1]

2 out of 3

patients would change dentists and travel farther for same-day dentistry.[1]



*Advanced training at the Glidewell Clinical Education Center is included with each glidewell.io mill purchase for 2 people, including airfare and hotel.

13.3

Average number of units milled in first month after in-office training by Glidewell.

27.5

Average number of units milled in fourth month after advanced training at Glidewell.*

	BruxZir® NOW	BruxZir Esthetic NOW	BioTemps® NOW	CAMouflage® NOW	Obsidian® Milling Blocks	BruxZir NOW Bridge	BioTemps NOW Bridge
% of glidewell.io dentists using material	99%	76%	69%	63%	39%	22%	21%
Avg. mill time (mins.)	33:33	39:18	10:12	9:34	19:38	2:05:16	28:43

145%

Increase in units milled when a second fastmill.io™ mill is added to the practice.

Most important reasons dentists acquire a second mill:

- Able to mill crowns for 2 patients at the same time
- Multiple units needed for same patient

1 out of 5

glidewell.io™ In-Office Solution systems in dental practices are the result of trade-ins from other milling systems.

Why Offering Same-Day Dentistry Matters[2]

1. Receive Payment Faster
2. Fewer Appointments
3. Less Time Making Temporaries
4. Higher Case Acceptance

1. Exevia GmbH – Dental patient survey, November 2015
2. https://www.jarvisanalytics.com/blog/how-to-improve-the-case-acceptance-rate-of-your-dental-group/

GET ONE-CLICK CROWN DESIGNS GENERATED FROM OUR DATABASE OF 20 MILLION SUCCESSFUL CASES

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PK-4693114-090124

Why Does Glidewell Dental Lab Promote Chairside Milling?

by Jim Glidewell, CDT

Founder and President, Glidewell

To many, chairside milling appears to be in direct odds with the traditional laboratory model. Who can argue? Every restoration milled in the clinic is one less restoration sent to the lab. And as dentists' adoption of in-office milling grows, it stands to reason that more lab technicians — perhaps entire labs — will find themselves out of a job.

So why has Glidewell, widely recognized as the largest dental lab in the world, done so much to promote chairside milling? Going so far as to develop and manufacture our own leading chairside unit, the fastmill.io™ In-Office Mill?

In simplest terms, it's because in-office milling provides advantages for patients. It's faster, more convenient, and reduces or eliminates the need for temporaries. Dentists who can offer single-visit services benefit from shorter overall chair time, higher case acceptance, and positive word of mouth — giving them a distinct competitive advantage.

A win for your patients is a win for your practice.

Same for the lab. I've long believed that, to be successful, you have to look past your own, short-term needs to focus on what's best for your customer. This often means embracing change. Two of my favorite business axioms are "grow or die" and "be in harmony with your environment." I've used these principles to guide nearly all my company's choices, and chairside milling is no exception.

GROW OR DIE

To thrive as a company, you simply cannot stop growing. The moment the company stops growing, it enters its own inevitable demise. Your brightest people recognize this and leave — because they know their own value — further accelerating the decline.

My duty as a business owner is to make sure that growth doesn't stop, for my customers' sake, my employees' sake and my family's sake. This is why I invest so heavily in research & development. We're constantly searching for new avenues of business related to our core competency, which is providing affordable, high-quality restorations — by any means.

Jim Glidewell with his son, William, who is an assembler in the glidewell.io mill department.

While growth undoubtedly has a financial aspect to it, focusing purely on finances is a recipe for disaster. More often than not, a finance-focused mindset leads to the pursuit of short-term, shortsighted ideas. My recipe for success centers on growing volume — on creating solutions that are so beneficial and accessible that dentists and patients can't imagine life without them.

Enter in-office milling. Even from the earliest days of the technology, companies have sold chairside mills as "putting the lab in your office." And at Glidewell, we know a lot about being a dental lab. Using our expertise to build chairside mills is a natural extension — and perhaps something that we're uniquely qualified to do. I'll revisit that thought shortly.

BE IN HARMONY WITH YOUR ENVIRONMENT

In business, harmony isn't a finite state — a place that you reach once and reside for good. Instead, harmony is an ever-moving target because the industry environment is always changing. Continually striving for harmony means adapting and evolving, discovering how to use your strengths to meet your customers' shifting needs.

Even though chairside milling has been around for decades, dentists and patients alike didn't gravitate toward it until recently — perhaps because the technology was formerly limited, expensive and difficult to use, or because it wasn't until recently that our culture's buying habits have prioritized speed and convenience above all else. What I do know with certainty is that there's a patient-driven demand for chairside milling. If we at Glidewell don't answer that demand, someone else will.

GLIDEWELL'S UNIQUE POSITION

No single laboratory has handled more cases than Glidewell. Since the mass implementation of CAD/CAM lab technologies in the early 2000s, we've delivered tens of millions of restorations to dentists across the United States, including 35 million units of BruxZir® Zirconia as of July 2024. We partner with thousands of dentists weekly from all types of practices

— solo, group and corporate — and from those relationships, we've gained incomparable insight into the needs of today's practitioner.

Much of this insight is captured in the form of digital data: design characteristics and milling strategies that promote restorative success. This data was the perfect bedrock on which to begin building our own in-office milling system. The result of that effort is the fastmill.io In-Office Mill, the only chairside unit capable of producing fully-sintered BruxZir crowns without the need for an oven.

Because my company is both a laboratory and now an in-office mill producer, we can advise dentists about the best way to pursue a case. We don't have the same biases as a company that's singularly focused on just being a lab or just being a mill manufacturer — whether your case benefits most from being made chairside or by the lab, we can assist you.

APPLYING OUR EXPERTISE

My organization has grown significantly over the years, in order to better serve an ever-increasing number of dentists. We've had to find and hire experts — or become our own — to maintain and advance our research, engineering, technology and manufacturing divisions. Today, I'm proud to employ several hundred individuals in these fields, including two dozen Ph.D.s, nearly 70 mechanical engineers, and nearly 140 software engineers. Their collective efforts make it possible for us to broaden our capabilities and evolve.

When we set out to create the fastmill.io In-Office Mill, we utilized our existing dental lab expertise. No other mill manufacturer has the legacy that Glidewell does when it comes to serving dentists' restorative needs. We know what it takes to design, mill and deliver excellent crowns & bridges — and we challenged ourselves to replicate the capabilities of our lab systems in a compact, user-friendly, reliable form factor. We challenged ourselves to make a mill that dentists would actually want to incorporate into their offices.

Today, we're confident that our fastmill.io in-office unit delivers lab-like capabilities. We assemble the hardware by hand in our Southern California facilities from over 300 unique components — roughly 775 pieces in all. It has about the same footprint as a microwave, and is powerful enough to mill a full-contour, fully-sintered zirconia crown in roughly 33 minutes.

Glidewell leaned on nearly five decades of dental lab expertise to design a mill that efficiently meets dentists' needs.

> Our main goal is empowering you to get an excellent crown design in as few clicks as possible — to ensure you're not asked to moonlight as a technician.

Likewise, the software is a modified version of what our technicians utilize in the lab, with usability as its defining characteristic. The chairside software is connected to our cloud database of millions of successful lab crown designs. So when it is time to create a crown in office, the software has an incredible resource to pull from. In fact, after confirming the preparation's margins on the screen, the software will instantly auto-generate a design specific to the patient. All you need to do is approve the design and then it can be milled. Should you want to customize the crown further, that's no problem either. But our main goal is empowering you to get an excellent crown design in as few clicks as possible — to ensure you're not asked to moonlight as a technician.

HOW DENTISTS BENEFIT FROM GLIDEWELL MILLS

In-office milling provides a level of convenience and control that the traditional laboratory can't compete with. The technology makes one-appointment crowns & bridges possible. What sets the fastmill.io In-Office Mill apart is that our system also provides connectivity — to the lab, to training experts and to the support team. When

you adopt our system, you can access us via text, chat, email or phone. The benefit is that we have decades of experience in handling similar cases in the lab, so we can solve any challenge you might have chairside and get you back to providing care quickly. You can rest easy knowing that we're going to be here to support you for years to come.

In the rare instance a problem arises with the mill that can't be immediately fixed, you can easily send your case data to the lab. No interruptions or cancelled appointments — your treatment keeps moving forward. You don't even have to wait for an emergency. Should there ever be a case that's getting too complicated or something you'd simply prefer not to handle chairside, you're just a click away from sending it to our experienced lab technicians.

DEEPENING THE CONNECTIONS BETWEEN DENTIST AND LAB

While it may appear to be the downfall of our traditional lab business, we recognize chairside milling to be essential to the future of dentistry. We therefore choose not only to accept it, but champion it. The mere act of selling a mill would hopefully demonstrate that we're not set in our ways, satisfied to be a dental lab in the traditional sense. But we've taken the idea much further, seeing it as an opportunity to vastly improve upon legacy technologies. In all that we do, we're dedicated to serving dentists and their evolving needs. That is how we demonstrate our value, today and tomorrow. If there is a way for us to meaningfully improve your experience of providing care, you can count on us to work toward making that a reality. And perhaps more importantly, you can rely on us to make it accessible, to help ensure your practice can serve every patient in need. **CM**

Each glidewell.io mill goes through a rigorous quality inspection process.

HOW CAN I FURTHER PROMOTE MY DIGITAL PRACTICE?

Dentists who offer Glidewell's chairside milling services rave about the technology, the lab support and the positive reviews received from their patients. Here are a few ideas for capitalizing on the convenience of single-visit dentistry:

- **Signage** – We all know you only get one chance to make a first impression. Is your signage of high quality? Is it inviting? Does it accurately reflect your brand? If offering single-visit digital services, let local residents know!
- **Reviews** – Happy patients will return, and often share the news with others. Help them by collecting testimonials — along with a formal release — to use this content in your advertising. Encourage them to post reviews online — ideally before they leave the office and forget.
- **Referrals** – Consider incentives for those who directly refer family and friends. These could come in the form of various gift cards, or discounted tickets to local festivals or theme parks. You could even hold periodic contests, with further recognition and rewards for the winners.
- **Literature** – To aid in the referral process, give patients marketing items to take home with them. Consider brochures highlighting the technology, or attractive swag items such as coffee mugs, drink sleeves, T-shirts and more.

With these and other tips, you can maximize positive word of mouth and turn patients into advocates in your local community.

P.S. Remember to treat your staff like family. Our glidewell.io™ chairside technology is intentionally easy to learn, but there are other aspects of each practice that are unique, making trained employees difficult (and expensive) to replace.

— Jim Glidewell, CDT

Digital Dentistry is About More than Broken Molars

"There's no growth without change," says Dr. Justin Chi, and when it comes to same-day dentistry, no one understands this better. As the director of clinical technologies at Glidewell, Dr. Chi has been shaping the landscape of digital dentistry from the technology's early days.

Dr. Chi studied dental laboratory technology at Louisiana State University Health Sciences Center School of Dentistry before joining E4D Technologies — an early digital dentistry startup — as a dental technician and clinical educator. From there, he attended the Herman Ostrow School of Dentistry of USC, receiving his DDS in 2015. Dr. Chi's background and years of training dentists in digital technology provided distinct advantages during dental school at USC. In fact, he occasionally found himself providing CAD/CAM training to faculty members.

Education remains a core part of Dr. Chi's work today at Glidewell. He teaches multiple courses, guiding dentists through the applications of digital and same-day dentistry. Dr. Chi has also been instrumental in plotting the course for glidewell.io™ technology development through his collaborations with the Glidewell engineering, software, and materials development departments. The growth and continued transformation of digital dentistry is a story told through Dr. Chi's own professional journey.

DR. CHI'S ROLE IN THE GROWTH OF GLIDEWELL.IO™ IN-OFFICE SOLUTIONS

Clinical cases play a fundamental role in the validation of the glidewell.io In-Office Solution's constant evolution. Dr. Chi collaborates with Glidewell researchers and scientists, providing the clinical perspective crucial to developing products that meet the needs of dentists and enhance the patient experience.

"Understanding the specific challenges dentists encounter is so important to our development team," Dr. Chi said. "Dental practices are growing and changing due to chairside digital technology, including intraoral scanning, artificial intelligence, chairside mills and 3D printing. We have a clinical facility on the Glidewell campus that is constantly testing new materials and processes, and being part of this process is very rewarding," said Dr. Chi. His background in dental technology and chairside dentistry made him the ideal candidate to bridge the technological and clinical sides of Glidewell, and the timing with Dr. Chi joining Glidewell upon graduating from dental school worked out perfectly.

Dr. Justin Chi's work at Glidewell includes training users in all phases of digital dentistry.

Having worked with CAD/CAM technology in the early 2000s, just as it was beginning to become more widely accessible, Dr. Chi knows the concerns dentists have about digital dentistry interrupting their workflow. "To get to this point, dentists have had to overcome challenges and adapt to new workflows," he said. "And I understand why there's resistance. Change is never easy. But change is an opportunity to greatly transform their capabilities and expand what they're able to offer their patients."

"The digital workflow has three key components: You've got the intraoral scanner, the design software and the mill. Those same three factors have been consistent for as long as I have been involved, but the way they're managed — starting with the simplification of scanning — is remarkably better," said Dr. Chi.

"The quality of data that we input into the CAD/CAM workflow is critical: Garbage in, garbage out. The accuracy and precision of scanning is much better today," he continued. "In the past, we had to spend considerable time with a multitude of single-capture images. Now, the scans appear so quickly they look like a high-definition video, which makes the scanning process faster and more detailed."

"Design software that works in conjunction with these more powerful scanners is vital," said Dr. Chi. "At Glidewell, we developed the fastdesign.io™ Software and Design Station, which takes the intraoral scan and proposes a design rendered via artificial intelligence. The vast AI machine-learning algorithm we use pulls from the library of more than 35 million restorations we have produced since 2009. We now have the computing power and materials to produce more than molars. The software easily extends the potential of

digital dentistry to be applied to more complex cases." Most dentists mill single-unit posterior restorations as their introduction to digital dentistry. However, continued advancements open the possibility of multi-unit restorations and more esthetic cases.

"The main goal in materials development is to maximize esthetics and strength while maintaining optimal function. In this regard, Glidewell has changed the game," said Dr. Chi. "Restorations fabricated from monolithic zirconia — a material that is strong enough for my most demanding cases — provide patients with peace of mind," Dr. Chi said. "Fully sintered BruxZir NOW® Milling Blocks fueled the evolution of glidewell.io milling capabilities."

BECOMING THE MENTOR OF CHAIRSIDE MILLING

With the role he plays in glidewell.io's development, combined with his technical and clinical expertise, Dr. Chi became a mentor for dentists adopting digital solutions.

Dr. Chi is an instructor for several glidewell.io courses covering all aspects of digital chairside dentistry, from introductory level to advanced design. He also teaches specialty courses on anterior crowns, partial coverage and bridges.

"Navigating the glidewell.io system is essential to maximizing its effectiveness," Dr. Chi said. "There is a learning curve with any new technology, and starting with the right foundation is critical. At Glidewell, we have trainers, continuing education, and a whole series of resources to help dentists with the transition," Dr. Chi said. "We start with an initial training in their practice, then dentists come to the Glidewell campus, where we share the full menu of offerings with the system."

WHAT'S NEXT FOR GLIDEWELL.IO IN-OFFICE SOLUTIONS

As quickly as the digital dentistry landscape changes, Dr. Chi recognizes the importance of sustained growth. "The future is for the dental office to be more self-sufficient," he said when laying out the next steps for glidewell.io. "Whether that means taking on more complex cases or having treatment done as quickly as possible, we will do everything we can do to make that a reality."

"There are still limitations for more complex cases, such as multiple-unit anterior restorations. When it comes to ensuring the precision of the shape, contours and shade, it can all be done, but it requires more time," Dr. Chi said. "We are working on reducing the time commitment needed."

Another example that Dr. Chi cites is incorporating images of the patient and their smile into the design software, and the software will digitally render the proposed smile on the patient's image. "We're integrating some of those workflows into the glidewell.io system," he said. "What's wonderful about the system is that it is connected directly to the Glidewell lab. Data improvements in the lab directly translate into software updates chairside."

The more feedback the lab receives through clinical cases, the more intuitive the software becomes. This is one crucial way in which the lab remains a vital part of digital dentistry even as the technology allows for dentists to take on more crown fabrication in-office. In the same vein, the lab will continue to be an essential resource as mill capabilities evolve. "The lab is always going to be important to provide critical support to the dentist," said Dr. Chi. "It will evolve into a different support structure that helps the dentist produce these high-quality treatments in-office."

Both the variety and quality of treatments that are possible with in-office dentistry will only continue to improve. Dr. Chi's experiences demonstrate how the technology has evolved, and his efforts with the glidewell.io team ensure that the evolution goes on. **CM**

Severely eroded and worn dentition was restored with the help of digital dentistry and BruxZir® restorations. The patient received BruxZir Esthetic NOW restorations for teeth #4–13 and BruxZir NOW restorations for #2, #3, #14 and #15. The patient also received BruxZir NOW screw-retained crowns for teeth #18, #19 and #30; a BruxZir NOW crown for #31; BruxZir Esthetic NOW overlays for #20, #21, #28 and #29; and BruxZir Esthetic veneers for #22–27.

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1. American Dental Association Health and Policy Institute. Dentists see increased prevalence of stress-related oral health conditions. March 2, 2021.
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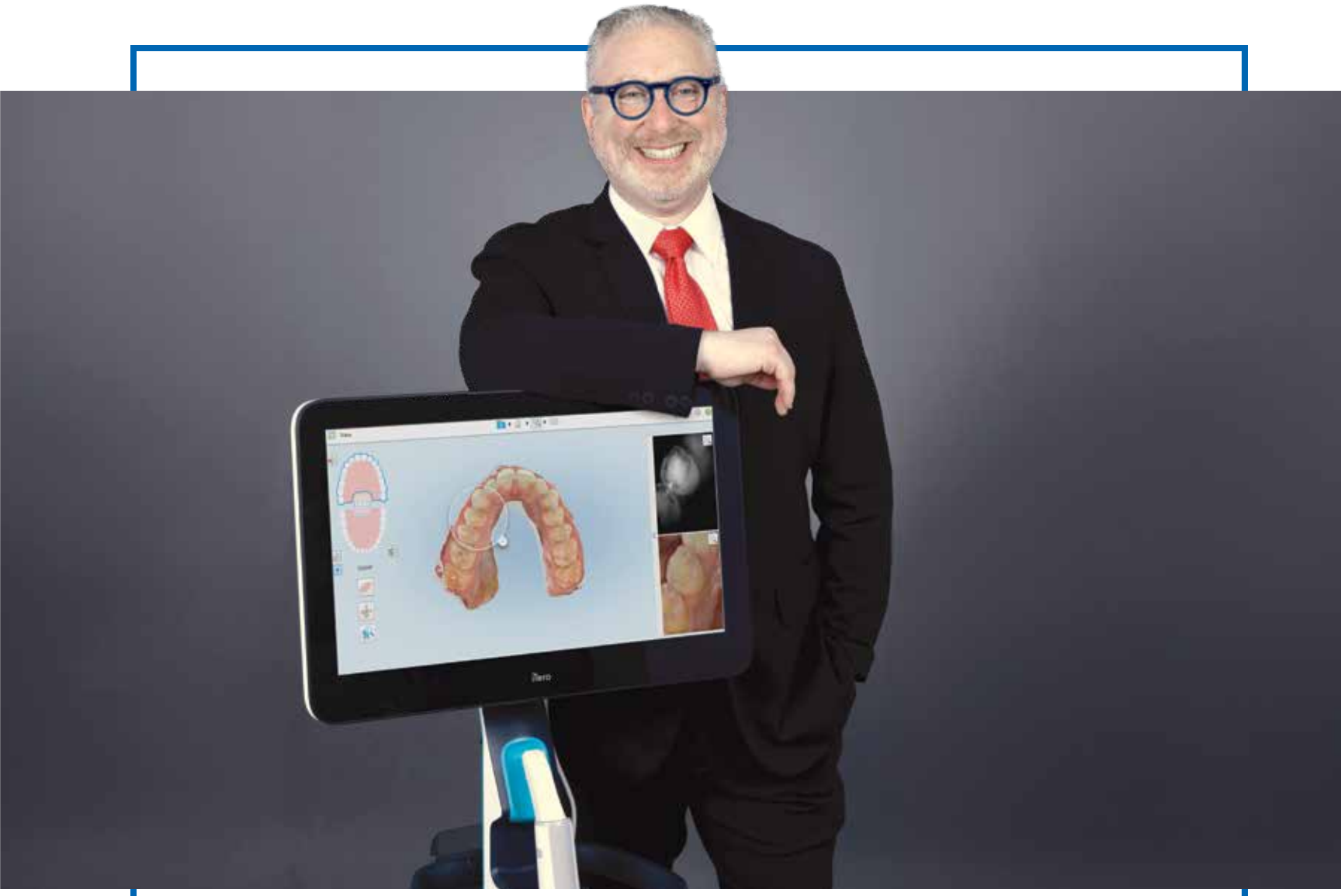

The Modern-Day Dental Exam: What is Broken and How to Fix It

by David Galler, DMD
New York, New York

I'm a general dentist. I worked for 20 years in downtown Manhattan and built a large Invisalign® practice. I'm currently the president of the American Academy of Clear Aligners, which is responsible for over 100,000 Invisalign cases per year. I speak to about 4,000 offices on a monthly basis and listen to what doctors are talking about. I want to bring to light a major problem I see with dentistry that we've had for 100 years and — even better — recommend a solution. Let's start with five facts.

1: ONLY 35% OF PATIENTS ACCEPT YOUR TREATMENT PLAN

If you're doing really well, you might expect that your patients are accepting a significant percentage of your treatment plans. What do you think that percentage would be? 50%? 75%? The truth is, according to just about every consultant in dentistry, if you're getting 35%, you're doing great. You're killing it. You're a good dentist. You're spending your time wisely, you're learning, you're buying technology, using the best stuff out there. You're a master of your craft. Yet 65% of our patients do not follow our treatment recommendations.

2: PATIENTS DON'T TRUST THE DENTIST

As much as it pains me to say, patients do not trust us. It's a little weird, right? I'm a dentist. I went to an Ivy League school. I'm not bragging, I'm just saying it. I slip it into the conversation a little bit. And yet, I have patients who doubt me in everything. I lived in New York, had a ton of friends. I lived in Chicago, had a ton of friends. I lived in Vancouver, had a ton of friends. Everybody who meets me says, "David's a good guy. David's an honest guy." Everyone says, "David? You can trust him." There's only one group of people who thinks everything out of my mouth is a lie, or a trick, or a game. You know who that group of people is? My patients. How many of you reading this have ever said something to a patient and the patient has doubted you? You've experienced this. I tell a patient, "You have a cavity." My patients say, "What? I have a cavity? Is it possible?" I reply, "Yeah, totally possible." They say, "Are you sure?" I say, "Yeah, I went to school for a really long time."

On a regular day, I say to a patient, "Sir, you need two crowns and a filling." My patient looks me in the face and says, "And you need a Tesla." How did this happen? Our patients doubt us. They doubt us more than any other health care provider. When I go to my ophthalmologist or my primary care doctor, I don't doubt anything they say, but everybody doubts the dentist.

How did dentistry become the profession that you doubt? A recent study showed that 62% of patients have delayed, refused treatment, sought second opinions, or switched dentists because they didn't trust the diagnosis.[1] How is this possible?

3: THE REASON PATIENTS DON'T TRUST US IS THE DENTAL EXAM

Why do they not trust us? I believe it's all about the dental exam. I think the way that we do the dental exam is broken. It's been the same for 100 years, and I think it creates all the problems that we see. If I came to your office, here's what it would look like: patient comes in, boom, you lean them back, grab a mirror and an explorer, boom, boom, you're looking all around, call out a bunch of numbers to your staff. When a person is flat, it's the most prone position they can be in. It's scary to be totally flat. Then somebody's all over you looking into your mouth and you're thinking, "Did I brush last night? Do I have something in there?" Then they call out all these things you don't understand.

The way we do the dental exam is broken. It's thorough, but it's broken. It's not the correct way to do the exam when we have modern technology. If you do the exam that way, you're setting yourself on a collision course with the patient. I was resistant to change, but I changed. And my case acceptance shot through the roof. The solution, the one that I've been employing and a lot of my followers have been employing for years, is using a scan.

I own five iTero scanners. Since 2018, I've been taking scans on every single patient. Then I use the scan as my exam. I don't follow the rote review system anymore. I pull up the iTero viewer and look at the teeth the same time as the patient. When I see it, they see it, too. I can see everything in the mouth clearer and better than before. "If you have a black line in your tooth, you have a cavity. If you have a hole, you have a big cavity. If you're missing a wall, you need a crown. If you're missing a tooth, you need an implant." Patients now look at me and say, "Do you have time to do it today?" It's a whole different game. Now, I do all of my exams with the scanner. I don't look

Intraoral scanners aid in illustrating treatment plans chairside.

in the mouth until the last minute. The moment you convert to intraoral scanning, the treatment acceptance in your office will skyrocket.

When a patient visualizes their teeth on a computer screen in front of their face, the entire game changes. When you change the way you do the exams, all the mistrust goes away. That 35% acceptance number can easily jump to 45% acceptance, which can translate to hundreds of thousands of dollars a year, maybe millions in some practices.

The iTero Element™ 5D utilizes near infrared technology for caries detection.

4: SCANNING AND USING DIGITAL TECHNOLOGY IS THE SOLUTION

Then there is software. For example, Overjet (Overjet Inc.; Claymont, Del.), which uses artificial intelligence to analyze X-rays and identify areas of concern. Simply put, it looks at your bite wings and tells you what's there. Invisalign Outcome Simulator Pro analyzes the patient and determines if the teeth can be straightened. I use these software features during the exam. I often show the results to the patient and say, "I want you to know, you're an orthodontic candidate. You don't have to live with these crowded teeth." The software is truly effective. And you show the patient what their smile could look like chairside, without picking up a handpiece or without putting wax on anything. You don't have to spend money on digital smile design software.

The moment you convert to intraoral scanning, the treatment acceptance in your office will skyrocket.

Then there is Time-Lapse. What do you do if your patient of 5–10 years comes into the office — they're male, 50 years old — and asks, "Is my grinding getting worse?" I would look at his chart, but in reality, I have no idea. With iTero, you can use the Time-Lapse software. Every time the patient comes in, you scan them and the software overlays the scans and shows changes over time. "Red: lots of change. Yellow: a little bit of change. Plus, you cracked that tooth." You don't need to open your chart and read the last five years of notes. Use technology. I can now tell my patient, "Your teeth are shifting." And when they say, "Oh, and you need a Tesla," I say "No, your teeth are really shifting. On this screen, look at how #8 and #9 are moving apart from each other. This is happening. This is when it happened. You need aligners now." This is technology having the conversation for us. This is the future, and it is going to solve the problem of people not trusting us.

Intraoral scanners aid in illustrating treatment plans chairside.

The iTero Element™ 5D incorporates near infrared (NIRI), which allows you to analyze an intraoral scan using infrared wavelengths that are not visible to the naked eye. This aids in the detection and monitoring of interproximal caries above the gingiva. NIRI can save you time and money in terms of taking fewer X-rays and helps limit patient exposure to radiation.

I foresee a world where you're going to come in to a patient and your scanner will be sitting there. You'll push a button and a screen will pop up and provide a synopsis of what's happening. "You

have a crack on #3. It wasn't there last time. You have recession on #24. It's a millimeter worse than it was last year. You have a cavity detected by NIRI on #30 MO." It'll be consistent. That is a big problem; we're not consistent in our diagnosis. This technology, this modern way to do exams, is consistent.

5: YOU HAVE TO SCAN EVERYBODY

You have to set it up. Scanning is like bite wings for us. I will not walk into an operatory unless there's a scan there. No exceptions. I don't begin by looking in the mouth. I look at the scan. If there's no scan, it's a waste of time for me. If the patient says, "I don't want orthodontics," they're still getting a scan. "I don't want to pay for it." It's free. "I don't want any radiation." It's a camera. You get the idea.

CONCLUSION

Your office should be the office that scans everybody. It is so impressive to patients. You will see your treatment acceptance jump. I started scanning because I really wanted to get more Invisalign acceptance. I wanted patients to see their malocclusion. I wanted patients to see their abfractions. I wanted them to see their crowding. You know what wound up happening? Scaling and root planning went up. Crowns went up. Everything we did went up because the treatment acceptance went up.

In 2012, I bought my first iTero scanner because Invisalign said, "Instead of taking PVS impressions, you can send in a scan." In 2015, I started scanning crowns. In 2016, I started scanning implants. That was a no-brainer. In 2017, Invisalign launched the Outcome Simulator Pro and I told patients, "If you're interested in Invisalign, I'll show you what things could look like with a scan." In 2018, we started scanning everybody. It's not just about selling Invisalign. It's how I visualize the mouth. Now, I'm using all of the tools the machine gives me. You walk in and know everything about every tooth: every abfraction, every wear facet, every crack, every NIRI image. And it's not because I'm leaning over and looking and calculating and calling out the right numbers and my assistant is writing everything down. That's old school. Be a modern dentist every day.

Change the way you practice dentistry. Slightly more than 50% of dentists are using intraoral scanners.[2] But how many are scanning every patient? How many are increasing their treatment plan acceptance rates by 5%, 10% or even 15%? If you change the way you do dental exams, you will have an amazing practice. **CM**

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Why I Prefer the glidewell.io™ In-Office Solution over Other Milling Systems

CARY LACOUTURE, DDS

Burning Tree Family Dentistry
Franktown, Colorado

The initial and continuous support he receives using the glidewell.io™ In-Office Solution is a plus for Dr. Cary LaCouture.

In March 2018 after having some experience with a CEREC® milling unit, I had my first fastmill.io™ In-Office Mill installed. As part of the installation process, a team of experts from Glidewell in Orange County, California, came to my one-stoplight town of Franktown, Colorado, to ensure everything went smoothly. In fact, they stayed for several days, testing connections, training staff and providing technical support as we produced our first crowns.

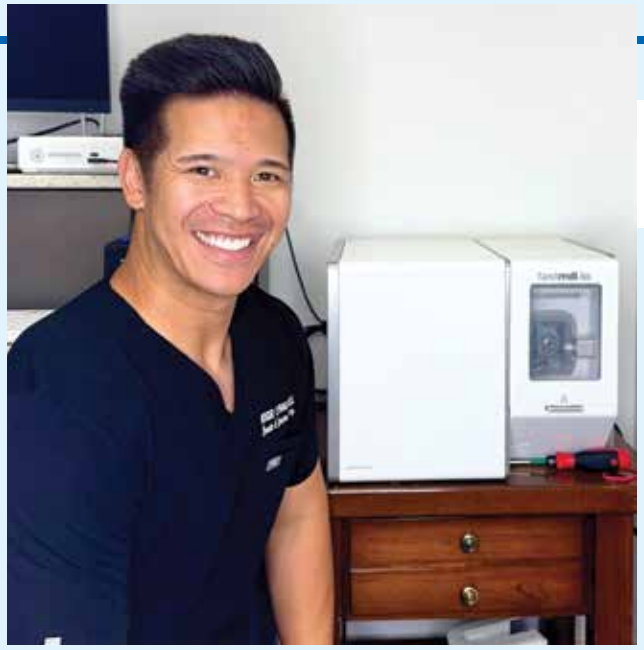
This was far better than the support I received with my previous mill, which I purchased from one of the major dental distributors. In fact, with my previous mill, even knowing whom to contact for support was a challenge.

Everyone in my office was trained at the same time. We began milling on the second day of training and have not stopped in the six years since.

The glidewell.io team may have left Franktown after our introductory session, but the quality of support and training we continue to receive remains as thorough today as it was on Day 1. Glidewell continuously ensures we are properly trained on any software or hardware updates.

Dentists want a digital CAD/CAM system that grows with them. The glidewell.io™ system does exactly that for my practice. We have taken advantage of product updates and the many webinars Glidewell offers so we can stay as knowledgeable and as current with our mill as possible.

The benefits to patients have become so clear that I now get referrals specifically asking for in-office restorations. Whether your practice is in a bustling metropolis or a town with a single traffic light, Glidewell's training and continued support made adding a mill an easy and rewarding decision.



Dr. Roger Pham passes the time savings he sees from using the fastmill.io™ In-Office Milling Solution along to his patients.

Auburn Dental Center
Bakersfield, California

Every minute I save thanks to the fastmill.io™ In-Office Mill's intuitive software enables me to spend more productive time with my patients. And the minutes add up. I have found it easy to come up with design proposals that require little-to-no adjustment. With CEREC, I would be fussing with the design for 5-to-10 minutes. With glidewell.io software, the anatomy is on-point and I sometimes touch up the contacts a bit. From there, I go straight to milling.

The fastdesign.io™ Software and Design Station uses CrownAI™ and MarginAI™ technology to generate ready-to-use designs. Glidewell's digital restoration database, which utilizes data from millions of crowns designed at Glidewell, provides the data for the artificial intelligence. The process takes just seconds and, in my experience, comes up with better proposals than other design software.

The reliability I have seen from the fastdesign.io software provides me with the confidence to focus on other responsibilities. Usually, I have my assistant start the design process and call me when they have the margins marked. If the margins are good, I will let them take over while I do something else, like a hygiene check. Because they've attended the Glidewell training, they know how to design. I'll make a final check, then they are ready to send to the mill.

The software's not complex, but it is still new to me. If I can't figure something out, I can call Glidewell and get support quickly. Then, we're up and milling in no time. The mill is as user-friendly as the software and contributes to the time savings. In particular, the chairside workflow for producing restorations from fully sintered zirconia blocks has fewer steps than milling with pre-sintered zirconia. I save five minutes on design, then I save more time not having to sinter the crown. With CEREC, I would tell patients we'll be done in about an hour-and-15 minutes. But when using the fastmill, I'm confident when I tell patients the process will take 45 minutes.

A half-hour is a considerable time savings, especially adding up that saved time over multiple cases. That is what dentists want: to be efficient with our time. And no patient wants to be in the chair any longer than necessary. **CM**

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[1]Kerr M, Allen B, Park N. Clinical and radiographic evaluation of tapered implants with an aggressive reverse buttress thread and crestal microthreads: a retrospective study. For the full report, visit glidewell.com/ht-2-year. Glidewell HT is a trademark of Prismatik Dentalcraft, Inc. NobelActive is a registered trademark of Nobel Biocare. Straumann is a registered trademark of Straumann Holding AG.

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Renewing a Smile with the glidewell.io™ In-Office Solution

by Jonathan Vo, DMD

Private Practitioner
Seattle, Washington

The introduction of in-office milling was a rewarding experience for my practice. I began with posterior cases and enjoyed the ability to offer same-day crowns while controlling the quality of the restoration.

After about a year, I was ready to take the next step and begin milling anterior cases. To this end, I took Dr. Justin Chi's hands-on advanced anterior course at Glidewell. The course covered the finer points of crown design and characterization, which served me well when this patient sought a remake of his smile.

Figures 1a–1c: *The patient came to my practice to address the shade and alignment of his teeth.*

Figures 2a–2c: *Because the patient had crowding that needed to be addressed before restorative treatment, we initiated aligner therapy, which lasted for two years.*


3a


3b


3c


3d

Figures 3a–3d: *Aligner therapy alleviated the crowding and improved the tooth positioning for the planned veneers and crowns. During aligner therapy I extracted teeth #12 and #15 due to endododontic infections. I placed two implants that integrated during the orthodontic treatment.*


4a


4b


4c

Figures 4a–4c: *A pre-op scan is shown in Figure 4a. Figure 4b shows a screenshot of a digital wax-up for #7–10, and Figure 4c depicts an overlay of the digital wax-up. This digital wax-up was completely additive, allowing me to be conservative with the preparations. Using a 3D-printed model of the digital wax-up, I made a PVS matrix for #6–11 provisionals. Using Luxatemp® Ultra temporary crown and bridge material (DMG America; Ridgefield Park, NJ) in the PVS matrix, I fabricated the provisionals intraorally.*

Figures 5a–5c: *The patient is shown in provisionals a week after placement. I give patients several days to live in their provisionals so they can decide if they approve the design. At follow-up appointments, I solicited the patient's feedback on the provisionals. We then selected the final shades and made any requested changes.*

Figures 6a, 6b: *I reviewed shading with the patient before choosing an A2 shade.*

7a

7b

7c

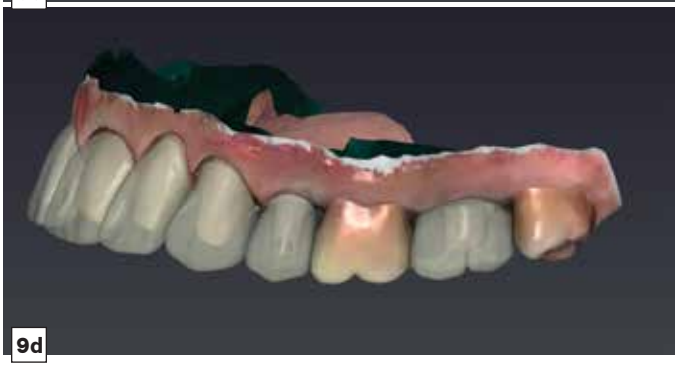
Figures 7a–7c: *Following tooth preparation, I scanned with an iTero Element™ 5D imaging system and imported directly to the Glidewell fastdesign.io™ Software and Design Station. Teeth #6, #8 and #11 are crowns, while #7, #9 and #10 are veneer preps. Note that #12 and #15 have custom implant abutments already seated.*

8a

8b

8c

Figures 8a–8c: *Here is the model view from the same scans shown in Figures 7a–7c.*



Figures 9a–9d: *The preparations are shown beneath the designed crowns and veneers. I used the fastdesign.io software's* design as a service *function to get assistance with the design process from the glidewell.io support team. This was very helpful, as I was able to use the scans of the provisionals as a guide for the final crown design.*

Figures 10a, 10b: *The support team at Glidewell provided the final design of the restorations, as shown here. I was pleased that it closely mirrored the provisionals. The new restorative design arrived overnight, ready for me to mill in my office.*

11a

11b

11c

Figures 11a–11c: *I used Obsidian® Milling Blocks, which I like for the natural esthetics. Obsidian restorations bond well to the teeth and are easily monitored with radiographs. I 3D-printed the final scan of the preparations. A solid model worked well for adjusting contacts as needed.*

Figure 12: *I milled crowns #12 and #15, with plans for screw-retained final restorations. I drilled holes on the occlusals of the implant crowns and cemented them extraorally, allowing me to thoroughly polish and contour the margins.*

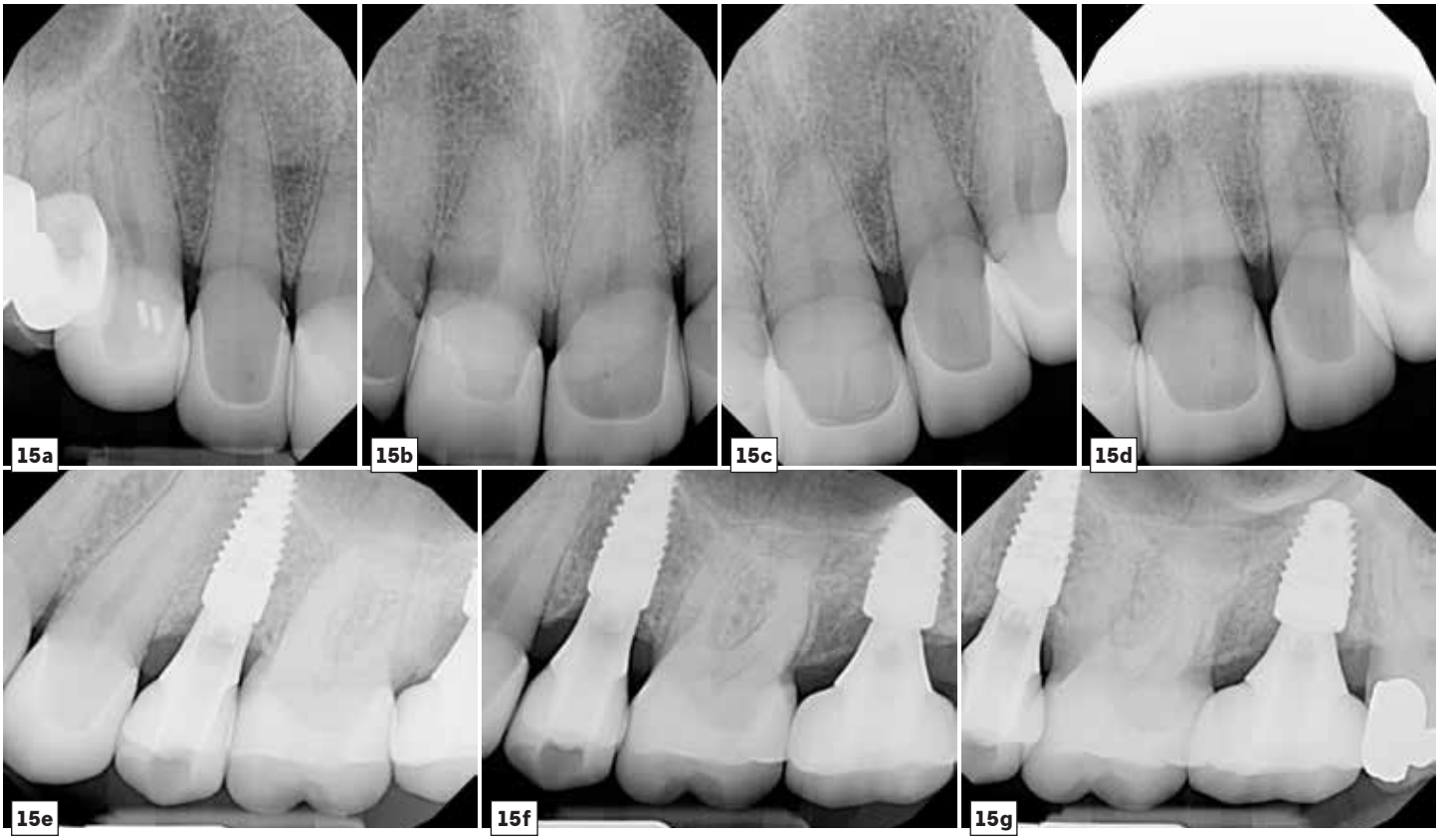
13a

13b

13c

Figures 13a–13c: *The patient was happy with the results. At two days post-cementation, the gingiva was healing nicely. Our next phase of treatment will be the mandibular arch.*

Figures 14a, 14b: *I was pleased with how the surface anatomy and texture of the restorations provided a natural look.*



Figures 15a–15g: *Here are the post-op X-rays. I am pleased with the accuracy and marginal adaptation coming out of the fastmill.io™ In-Office Mill.*

CONCLUSION

The glidewell.io system helped me turn around a case efficiently and to a standard that satisfied me and the patient. The design process and milling were completed in a day, even with a full clinical schedule. I was able to stain and glaze the crowns between patients while my assistants helped with milling. I was especially pleased with the surface anatomy and texture, which gave the restorations a natural look.

Adding the skills necessary to provide anterior restorations with my mill made a rewarding experience even more gratifying, as I could provide the patient with a high-quality result in a timely manner. Whether you want to start doing anterior cases or stay with the more straightforward posteriors, I recommend glidewell.io In-Office Solution milling to any dentist looking to add another dimension to their practice. **CM**

Obsidian® NOW
Milling Blocks

Obsidian® NOW Milling Blocks, the newest addition to the line of restorative materials for the glidewell.io™ In-Office Solution, allow dentists to provide their patients with esthetic lithium disilicate anterior crowns straight from the fastmill.io™ In-Office Mill.

Manufactured on the Glidewell campus, Obsidian NOW Milling Blocks undergo pre-crystallization and final crystallization stages during the production process, eliminating the need for post-mill crystallization in the dental office that is common with other glass ceramic materials.

With a flexural strength of 476 MPa, Obsidian NOW blocks provide the esthetic benefits of a glass ceramic material while maintaining excellent strength. The monolithic composition is resistant to fracture or chipping.

No additional staining and glazing necessary means reduced chairtime and an efficient chairside workflow calling for five steps: Scanning, designing, milling with the fastmill.io In-Office Mill, then etching. Removing the post-mill crystallization process saves about 45 minutes. After milling, the restoration is ready for final finish and polishing. After etching, Obsidian NOW can be luted using conventional cements, adhesive resin, or self-adhesive resin cements. Adhesive cement is preferred for inlays, onlays and partial crowns.

Patients will appreciate the convenience of same-day dentistry and the esthetic characteristics of Obsidian; dentists will benefit from the efficient production process.

Obsidian NOW is initially available in VITA® classical shades A1, A2, A3 and B1, and priced at $130 for a three-pack of blocks, which includes five single-use burs. **CM**

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glidewell.io Users Share Their Favorite Restorative Materials

In addition to being the developer and manufacturer of the fastmill.io™ In-Office Mill, Glidewell has developed optimized biomaterials specific to the system. Clinicians from across the nation spoke with *Chairside*® to discuss the materials that have become their go-to options. Here are some of their stories.

Viviana Waich, DDS

Sonrisas Dental Miami
North Miami Beach, Florida

Dr. Viviana Waich sees numerous advantages to offering BioTemps® NOW milled provisionals in her practice: fast milling times, durability and pleasing esthetics. "The only disadvantage," Dr. Waich said with a laugh, "Is that I have had a few patients who are so happy with their smile that they don't come back for their final restorations. Even though we explained the process, they think BioTemps NOW provisionals are their final crowns."

Of course, crowns milled using BioTemps NOW Milling Blocks are not intended for permanent placement. They are, however, designed for up to six months of use. Dr. Waich treats a large number of cases requiring provisionals, and her patients all agree that BioTemps NOW provisionals provide a better all-around experience.

"They love the crowns. The first thing they say is, 'Wow, these are so much more comfortable than other provisionals I have had,'" she said. Dr. Waich described patients complaining of other provisional crowns feeling rough and not looking esthetic — issues they don't experience with BioTemps NOW.

In addition to durability and comfort, BioTemps NOW crowns provide patients the opportunity to preview their permanent restorations. The provisional restorations mirror the esthetic qualities of the final product, giving Dr. Waich's patients the chance to "test drive" and offer their input when designing their permanent restorations.

She said many of her patients work full-time, and thus she recognizes the importance of limiting appointment times. "They have jobs to return to and they can't cut into their workday. They need something more convenient," she explained. With BioTemps NOW, Dr. Waich can mill full-coverage provisional crowns, inlays and onlays in 10 minutes or less.

The quick turnaround time also benefits Dr. Waich. "My chairtime is valuable. With BioTemps NOW, I know the crown won't come loose easily or be damaged, greatly reducing the chance that I have to see them again before their final seating. I know that the occlusion is perfect, and I am meeting the patients' needs by providing them with a good-looking provisional crown they can trust. BioTemps NOW sets us up to deliver a great final result and does so without using too much chair time."

Dr. Vivian Waich says the fast turnaround time to produce provisionals gets positive feedback from patients.

Dr. Waich provided a patient requiring multiple restorations with BioTemps® NOW crowns that were both comfortable and esthetically pleasing, and mirrored the look and feel of the permanent restorations.

Rebekah Browder, DDS

Westport Family Dental
Westport, Connecticut

Offering her patients the lifelike translucency provided by Obsidian® milling blocks same day was the motivating factor for Dr. Browder adding the fastmill.io™ to her practice. "It's a differentiator between us and other dentists in the area," she said. "It's important to be able to offer things other dentists can't."

With Obsidian milling blocks and the fastmill.io, Dr. Browder offers patients highly esthetic restorations chairside. "The esthetics I want to provide usually take 5–7 days in a dental lab. But now, I can complete the entire process and deliver the final restoration in as little as an hour with no need to temporize. Patients appreciate not having to schedule a second appointment."

The convenience of receiving a same-visit restoration coupled with the esthetic qualities Obsidian milling blocks provide drives demand, Dr. Browder explained. "Obsidian's esthetic qualities mimic natural teeth very closely," she said. "I educate my patients on the natural appearance of the material, and now my patients specifically request restorations milled from Obsidian."

Dr. Browder also chooses Obsidian blocks as her go-to for some cases requiring multiple restorations. "Say I'm doing two molars that are side-by-side, I'll use Obsidian on the first tooth because of its esthetics. Then on the second molar, I'll use CAMouflage® NOW," she said. "When we have those second molars, or anybody with finicky occlusion, I have found that CAMouflage is easy to contour and adapt to the patient's occlusion. It's a powerful combination of the two materials."

"For me, the next step is mastery of esthetics. It's been great so far to figure out the foundation and the clinical basics you need to have amazing bond structure and maintain the tooth structure," she said. "I'm so glad to have a material that not only provides excellent function, but also knocks the esthetics out of the park." Dr. Browder also expressed her eager anticipation for adding the new Obsidian NOW Milling Blocks into her practice. The new material offers the high-quality esthetics of Obsidian glass ceramic without requiring an oven for additional crystallization after milling. Dr. Browder anticipates being able to provide esthetic restorations to more patients as a result.

Offering restorations fabricated from Obsidian® milling blocks helps Dr. Rebekah Browder's practice stand out among other dental offices in her area.

Dr. Browder chose Obsidian because of the combination of strength and lifelike translucency for a restoration that will stand the test of time and look beautiful.


David Zant, DDS
DR. ZANT
DOCUMENTS
FOR YOUR
REVIEW

David Zant, DDS

Gentle Dental
Mililani, Hawaii

"It's nice to be able to offer something that looks good, is strong and most importantly that I can make in about 40 minutes. It's hard to beat," Dr. David Zant said. "It's this combination of form and function that makes BruxZir® Esthetic my go-to material."

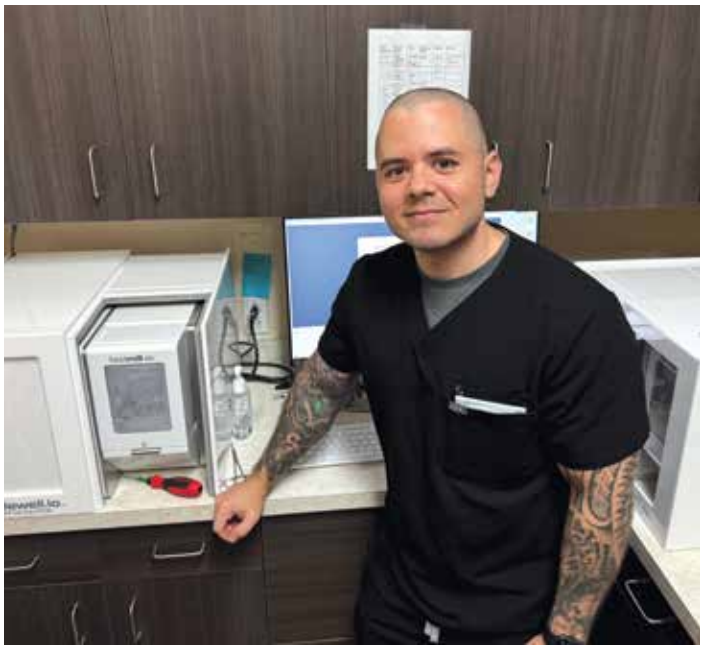
With a flexural strength of 870 MPa, BruxZir Esthetic NOW Milling Blocks are designed for durability. The monolithic zirconia material emulates the vitality of natural teeth and is indicated for anterior crowns. As for the material's look, Dr. David Zant said, "BruxZir Esthetic blends exceptionally well with natural dentition."

BruxZir Esthetic NOW Milling Blocks combines the superior durability of the original BruxZir NOW Milling Blocks with enhanced translucency for excellent esthetics in the anterior.

"For anterior cases where I need more strength and life-like esthetics, I can't imagine choosing any other material," Dr. Zant said. "The ease of delivery and simple cementation protocol make BruxZir Esthetic NOW critical for my busy practice."

The fully sintered zirconia milling block can be delivered directly from the mill with no oven time or post-processing required. The efficiency is a significant plus for any practice emphasizing in-office solutions.

"95% of my cases are done same day, and I think that will just continue to grow," said Dr. Zant. "Advancements in both technology like artificial intelligence for crown design and the quality of materials available for milling has been a game-changer for my practice."



Most of the case work performed at Dr. David Zant's office is handled same day, thanks to several in-office mills and capable, well-trained staff like Ryan (pictured here).

After years of disliking the appearance of her teeth, this patient asked Dr. Zant to restore her smile to its former glory. He achieved her goal by restoring it with BruxZir® Esthetic NOW crowns.


Dr. M.E. Kord

Maryam Ekhtiar Kord, DDS

Kord Dentistry
Mission Viejo, California

CAMouflage® NOW Milling Blocks are Dr. Maryam Ekhtiar Kord's go-to material for milling inlays and onlays. This nanohybrid ceramic-polymer material provides her patients with more predictable results than a direct restoration and offers financial benefits for her practice while performing minimally invasive treatment.

"You have more control over the restoration's outcome with CAMouflage, unlike a direct Class II composite." she said. "With CAMouflage, you walk away from the patient feeling that you have predictable contacts and margins. With direct composites, there is more room for error, including saliva contamination and hence, bond failure. Other potential issues with direct composites include loose or poorly fitted matrix bands, which increase the risk of food impaction and recurrent caries." Dr. Ekhtiar Kord said she has never encountered these problems when using CAMouflage NOW Milling Blocks.

The predictability is one of the main positives Dr. Ekhtiar Kord sees from using CAMouflage NOW Milling Blocks. Another is the material's composition. Dr. Ekhtiar Kord pointed to CAMouflage NOW Milling Blocks' ceramic-reinforced resin for providing patients with a better overall quality restoration that lasts longer than direct composites. The material is designed for easy, durable cementation with a survival rate of 98% after one year per Gordon J. Christensen Clinicians Report®.[1]

Meanwhile, some insurance plans offer substantial reimbursement for CAMouflage NOW restorations, which translates to higher profits. With positives both for her patients and her practice, Dr. Ekhtiar Kord said using CAMouflage NOW Milling Blocks is an easy decision that has fostered a "win-win situation" for her patients and her practice.

REFERENCE

1. Christensen G. Zirconia: most durable tooth-colored crown material in practice-based clinical study. Clinicians Report. 2018 Nov;11(11):1-3.

For Dr. Maryam Ekhtiar Kord, CAMouflage® NOW Milling Blocks provide patients with convenient restorations that ensure successful outcomes.

A 16-year-old patient entered the office after breaking tooth #8 during sports practice. Dr. Ekhtiar Kord chose to restore her front tooth with CAMouflage NOW due to the biomimetic nature of the material, its minimally invasive approach, and the speed with which she can provide a final restoration.


fastmill.io

Lan Chi Le, DDS

ZYGO Dental Group

Dallas, Texas

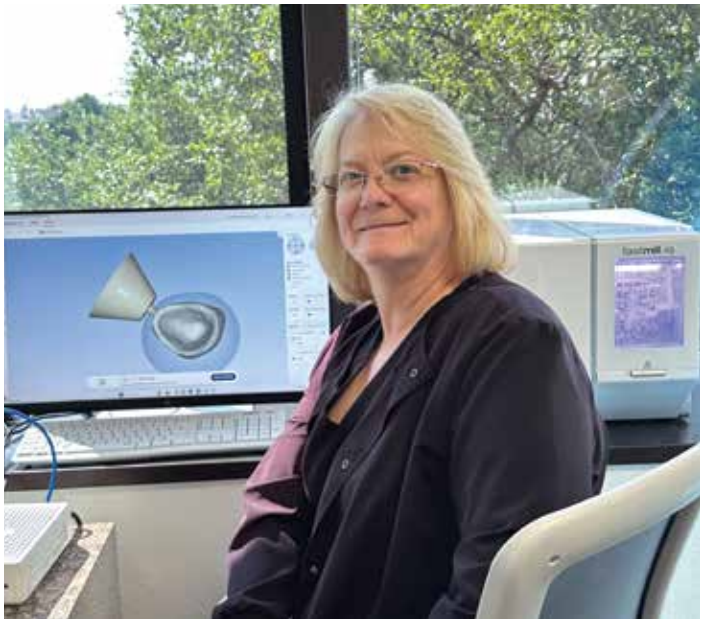
Provisional bridges milled from BioTemps® NOW bridge blocks fulfill a variety of needs for Dr. Lan Chi Le, making the material an invaluable part of her practice's offerings. Dr. Le said BioTemps NOW bridges "enhance both the final outcome for final restorations and the overall patient experience."

"There are three common case types that call for BioTemps NOW provisionals," Dr. Le said. "The first is for complex restorations that will be fabricated by the lab. Second, BioTemps NOW blocks are beneficial for cases that need time to heal, such as implants, extractions, gingival recontouring or grafting. Lastly, for cases with occlusal issues where the final restorations will be a significant change, BioTemps NOW milling blocks give them an opportunity to grow accustomed to their new occlusion."

Dr. Le finds that provisional bridges fabricated from BioTemps NOW milling blocks instill confidence in her patients to proceed with their final restoration. "BioTemps give patients a sense of ownership in their permanent restorations," she said. "They get feedback while having the provisional restorations in their day-to-day lives, then relay that to us. They feel like they have more of a choice in the final look of the permanent restoration."

Dr. Le describes the process of designing, milling and delivering same-day restorations as unlocking the comprehensive potential of her practice. Even in a case in which the permanent restoration must be fabricated by a lab, provisional restorations with BioTemps NOW milling blocks allow Dr. Le to utilize the glidewell.io™ In-Office Solution for same-day results. The time saved delivering provisional bridges in less than 28 minutes allows her to provide more treatment.

"It elevates the patients' experiences when we use digital tools and are able to see the overall outcome together. It's convenient for the patient, and it allows us to have the best plan in place for them," Dr. Le said. "And because we have support from the glidewell.io™ team, we can do more complicated cases. Instead of one or two crowns on the anterior region, it can be multiple units." **CM**



Dr. Lan Chi Le emphasizes comprehensive patient care at her practice — an approach made possible by providing high-quality restorations, utilizing the glidewell.io™ In-Office Solution, and with the assistance of office staff like Kelly (pictured).

Cases involving the esthetic zone are particularly challenging. Dr. Le opted for a provisional restoration milled from BioTemps® NOW for both a fast process and great esthetics. Furthermore, the functionality of the provisional restoration helps preserve the patient's soft tissue in position while awaiting the final restoration.

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– Diana Batoon, DMD
Private Practitioner in Scottsdale, Arizona
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I Wish They All Could be California Mills

A highlight of any Glidewell Symposium is a tour of our campus. And as attendees are sure to notice while walking through our 800,000-square-foot campus, we do a lot of manufacturing on site — a reflection of our core tenet of vertical integration. A testament to the success of this principle is the production of the fastmill.io™ In-Office Mill. Here, we explore the story behind the mill, and the team that makes it possible.

WHY MANUFACTURE IN CALIFORNIA?

It's no secret that many companies in the dental industry outsource their manufacturing to other companies, or to overseas facilities. Whether that decision stems from the benefit of reduced material and labor costs found overseas, or to avoid the complex logistics of in-house manufacturing, the fact remains that outsourcing is typically cheaper. While walking through the aisles of our bustling production facility, many tour guests have asked us: Why manufacture on some of the most expensive real estate in the country?

"Our decision to manufacture in-house boils down to quality control and communication," said Jishan Mansuri, mechanical assembly supervisor at Glidewell, who oversees the manufacturing of the mill. "We designed and engineered the fastmill.io ourselves. To produce a chairside mill that continuously performs at the caliber our doctors expect, we also had to manufacture it ourselves."

The mill is not just the sum of its material parts. With sophisticated software and continuous optimization testing, it is a perpetual work in progress, with its success depending on the efforts of many departments, not just engineering. One recent example of this collaboration is in the successful reduction of production time by 25%. "If we outsourced, we would lose the streamlined communication between our departments," Jishan added. "Our machine shop, customer technical support team, R&D department, engineers, and software developers are all here at the Glidewell campus. If there's ever a problem in our workflow, the departments can come in and keep the process flowing."

MAKING THE MILL

At the fastmill.io assembly facility, Jishan leads a team of 20 mechanical assemblers who meticulously hand-assemble each component of the mill. "The craftsmanship of the mill is incredibly unique," he noted. "There are some mechanical tools involved, but everything is hand touched and hand assembled. That's the level of detail that this piece of equipment demands."

The process begins in the machine shop, where the legs, plates, and baseplate are fabricated in-house from high-grade aluminum billet. This frame is then used to house 14 separate assemblies, which together constitute a completed mill. These subassemblies are made at a designated station on the production floor, and a technician is tasked with completing the build of that subassembly.

Once these steps are completed, the fastmill.io mill is hand assembled. Jishan explained that "We believe in traceability. If there's ever an issue, we want to identify precisely how to correct it — and we have systems in place to be able to do that. That's how we're able to have such strict quality control."

Once the mill is assembled, it undergoes rigorous testing through five dedicated stations and a 348-point inspection process, which includes software and material testing. "If we detect any point of failure, we can trace it to the source to find out exactly what part needs to be replaced. Then, we start the testing process all over again. That type of detail can only be assured by doing it ourselves," Jishan added, underscoring their commitment to quality and precision.

Ongoing collaboration between the engineering department and assembly team plays a vital role in the build quality of the fastmill.io.

> "Our decision to manufacture in-house boils down to quality control and communication."

Every step of the assembly process is meticulously logged for traceability.

MASTERING THE ASSEMBLY PROCESS

The training process to become a mill assembler varies, but typically takes several months. As Jishan explained, "There isn't a defined timeline for training. The answer is however long it takes for the individual to master the process." New hires start at one of the simpler assembly stations and gradually progress to more complex assemblies as they develop proficiency. This method ensures that everyone becomes fluent in all steps of the assembly process, understanding exactly what parts go where and how the entire mill fits together.

Jishan emphasizes the rigor of their process, stating, "Overseas production would mean relying on employees in a different country. This is how we ensure we can meet demand without delay."

The fastmill.io story is about unwavering commitment to quality, precision and communication. That's why Glidewell invites event guests on a tour, so they can see in person how Jishan and his team are fulfilling the promise of empowering doctors and their everyday restorative routines. "One of my favorite parts of this job is when doctors stop by and meet the people who make the mill," he admitted. "It adds a personal touch to what we do, and inspires us to never stop improving." **CM**

The fastmill.io story is about unwavering commitment to quality, precision and communication.

Every mechanical assembler has a thorough understanding of how their task fits into the final build of the mill.

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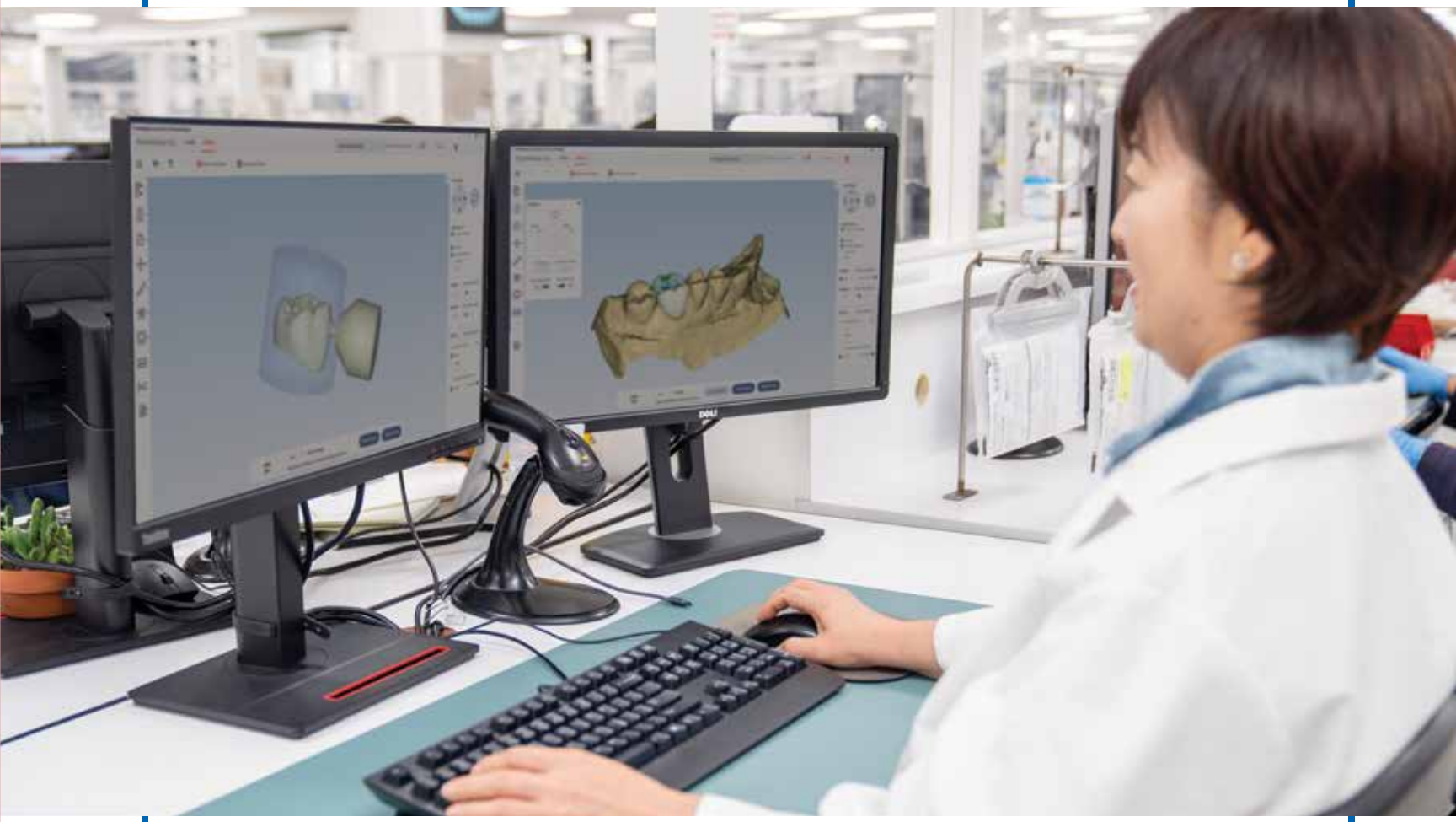


Design as a Service: Creativity on Demand

by Eric Relyea

Vice President of Marketing, Glidewell
Irvine, California

Vertical integration at Glidewell doesn't just benefit the development and manufacturing of products at the lab. It also benefits the digital workflow in your practice. The glidewell.io™ In-Office Solution — including the scanner, design software, mill, 3D printer and customer support — promotes a seamless digital experience for you, your team and your patients. Because these services are streamlined with direct support from the lab should you need it, you have the power to decide exactly how much or how little the lab is involved in your day-to-day operations.

SIMPLIFYING DIGITAL DENTISTRY TO MEET YOUR NEEDS

For clinicians taking advantage of the fastdesign.io™ Software and Design Station and the fastmill.io™ In-Office Mill, Glidewell has simplified that decision to three easy selections:

- *Send to Mill* — For straightforward crown & bridge cases, you can immediately send your designs to your in-office mill.
- *Send to Lab* — For cases that are more complex, you can send your designs to Glidewell for the lab to mill.
- *Send to Design Service* — For just $10 per unit, you can send your intraoral scans to Glidewell for design of the restoration. Glidewell will then send this design proposal back the same day for you to mill in office.

HOW DOES *DESIGN AS A SERVICE* WORK?

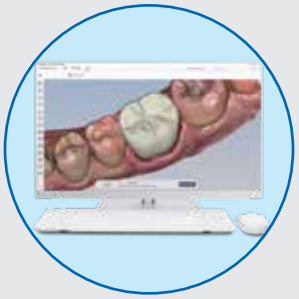
Many clinicians are unaware that Glidewell offers the *Design as a Service* option for milling. This unique offering can be handy for extremely busy days or more complex cases.

The process is simple. For example, if you want to do a same-day crown for a patient who just fractured tooth #8, a busy schedule might make it impractical for you to spend time designing the crown yourself. Simply scan the patient with your intraoral scanner, ensure the scan looks good in the fastdesign.io software, and select *Send to Design Service*. The scan then gets reviewed by the Glidewell Customer Technical Support (CTS) team. After about 15 minutes, CTS uploads the crown design to your fastdesign.io system. All you have to do after that is accept the design and select *Send to Mill*. While you do have the ability to tweak the design if needed, it is a rare occurrence. Most clinicians accept the design and mill the restoration immediately.

On the order form page, simply click the button on the top right that reads, Send to Design Service. *Doctors can submit their scans for design on other fastdesign.io pages as well, including the case list on the main page.*

THE GLIDEWELL.IO™ IN-OFFICE SOLUTION

The fastscan.io™ Scanning Solution



The fastdesign.io™ Software and Design Station

The fastmill.io™ In-Office Mill

The fastprint.io™ 3D Printing Solution

TOP THREE REASONS TO USE *DESIGN AS A SERVICE*

This service offers three important benefits that can help clinicians who might be facing an interruption in their daily milling schedule or who may just want to forgo the design process.

1. *You're Too Busy*

There may be some days in your practice when you don't have a few extra minutes to spare to design a restoration yourself. In those cases, having a lab tech complete the design can reduce stress and help keep you on track with your schedule.

2. *Your Team is Too Busy*

Similarly, your team may not have the time to design a restoration. With a team member out sick or on vacation, utilizing a Glidewell lab tech can ensure you don't fall behind.

3. *The Case is Too Complex*

Some complex cases may benefit from a lab tech's expertise. These lab techs can also help newer doctors or team members who may initially want some guidance while using the system. There's no shame in getting things right the first time.

CONCLUSION

No matter the reason for sending a scan to the lab for design before milling in-office, Glidewell is here to support you and help make every case successful. *Design as a Service* is all about convenience for you, your team and your patients. **CM**

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89% Eliminate up to 89% of office visits with ProMonitoiring[2]

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1. Based on all patients initiating treatment between Oct 1 and Oct 31, 2021, (n=43).
2. Compared to conventional orthodontic treatment

Optimizing the Cementation of Zirconia Restorations

by Jinny Bender, DMD
Staff Dentist, Glidewell
Newport Beach, California

Over the past 30 years, I've seen incredible advancements in dental restorations and the adhesives used to cement them. The cementation techniques and protocols for these advancements, however, have remained complex.

When I began working and teaching courses at Glidewell in 2022, I realized the importance of providing clinicians with straightforward direction for the cementation of monolithic zirconia restorations. Cementing crowns, bridges, and veneers doesn't have to be complex — and the Research & Development department at Glidewell has made the protocol easier for clinicians to carry out, whether they are prescribing a zirconia restoration from the lab or from a chairside mill.

CEMENT SELECTION

With so many categories and brands of cement on the market, it can be challenging to know which one to choose. Streamlining the decision-making process by separating them into three categories has helped me identify which types to use: conventional resin modified glass-ionomer (RMGI), adhesive resin and self-adhesive resin.

With lots of products and brands to choose from in these three categories of cement types, it can be a challenge to know which one to use.

Conventional RMGI Cement: Relies on mechanical retention and requires fewer chairside steps.

Adhesive Resin Cement: Provides the strongest retention but is also technique-sensitive because it requires a separate coupling agent for chemical bonding.

Self-Adhesive Resin Cement: Strikes a balance between the RMGI and adhesive cements because it offers extra strength without the additional steps of etching, priming and bonding.

Having a universal, easy-to-use cement for a wide range of restorative needs can greatly simplify delivery. I often had several types of cement in my operatory. After teaching courses on cementation and bonding protocols here at Glidewell, I noticed that other clinicians were also looking for a single cement they could use on a more consistent basis.

The Glidewell R&D team addressed that clinical need, releasing the BruxZir™ Dual Cure Resin Cement (available at Glidewell Direct). It is a self-adhesive resin cement that can bond to the tooth and restoration without requiring acid-etching or additional primers — all while achieving a high-strength bond. I personally have seen great success with it and use it at every opportunity, including my in-office cases with BruxZir® NOW, BruxZir Esthetic NOW and CAMouflage® NOW crowns & bridges. It's not just for zirconia restorations. In some cases, I've even used this cement for single-unit lithium disilicate restorations. Despite this being a dual cure cement, Glidewell recommends light-curing for 20 seconds on each surface. Without light, it sets within 90 seconds.

AIR-ABRASION

To optimize the bond, all zirconia restorations must be air-abraded before placement. This enhances the micromechanical properties of the intaglio surfaces, increasing the surface area for cement and improving the quality of the bond. While all BruxZir Zirconia restorations from Glidewell are air-abraded at the lab, not all labs complete this step for you. Similarly, if you're using an in-office mill, these restorations should be air-abraded. BruxZir Full-Strength is roughened by blasting with 50 micron aluminum oxide for 15 seconds. For BruxZir Esthetic, use 30 micron 3M™ CoJet™ at 2bar/30 psi for 15 seconds.

SIMPLIFIED ZIRCONIA CEMENTATION TECHNIQUE

I prefer to use the BruxZir Dual Cure Resin Cement because it is versatile, color stable and efficient — all aspects I look for when simplifying my day-to-day operatory appointments. It also eliminates several steps in the bonding protocol, which saves money, chair time and needless frustration. Now, cementing zirconia takes only four steps.

Cementing Zirconia with BruxZir Dual Cure Resin Cement

1. Air-abrade (check lab)
2. Try-in
3. Clean restoration
4. Cement

Cementing zirconia can now be accomplished in just four easy steps.

When utilizing Glidewell as your lab of choice for zirconia restorations, you can skip step one, as all BruxZir Zirconia restorations are air-abraded for you at the lab. As with any restoration, proper cleaning after try-in is still required to fully decontaminate the restoration and remove salivary phosphates. Glidewell recommends the following cleaning procedure for zirconia restorations: Apply a universal cleaning paste such as Ivoclean® (Ivoclar Vivadent; Amherst, N.Y.) or 5%

SCAN ME

READY TO START CEMENTING?

Learn more about the BruxZir Dual Cure Resin Cement at **glidewelldirect.com/collections/cement**

Sodium Hypochlorite (NaClO) to the internal surface for 20 seconds. Do not clean with phosphoric acid.

After cleaning, apply the BruxZir Dual Cure Resin Cement directly to the internal surface of the restoration. I tack cure for one to two seconds on the buccal and lingual surfaces to achieve a gel-like state for easy removal. Once the gross cement and fine cement are removed, a final 20 seconds of light curing is recommended. Self-curing is also acceptable, and the initial setting takes approximately 90 seconds. Ensure all excess cement is removed.

SCAN ME

LEARN MORE BY TAKING THE ONLINE, HANDS-ON COURSE

The Perfect Crown: Finishing, Polishing and Cementing Monolithic Zirconia Crowns

CASE EXAMPLE

Cementing crowns in the anterior can be intimidating no matter what restorative material or cement you're using. When a patient came to me requesting two new crowns on teeth #8 and #9, I knew I had to utilize a reliable cementation protocol to get it right on the first try.

The patient had open margins with a chip on tooth #9 and wanted better-fitting crowns.

I used the glidewell.io™ In-Office Solution to scan, design and mill BioTemps® Provisionals for the patient while Glidewell fabricated BruxZir Esthetic crowns at the lab.

Utilizing the fastscan.io™ Scanning Solution, fastdesign.io™ Software and Design Station (top), and fastmill.io™ In-Office Mill enabled me to quickly assess the case and provide the patient with temporaries (bottom).

Preparations for zirconia cases with an axial height greater than 3 mm with minimal taper are considered retentive, which allows for reliable cementation. When the BruxZir Esthetic crowns arrived, I followed the zirconia cementation protocol outlined in this article: check that the lab air-abraded the restoration, try in the crowns, clean them, and cement them. I light cured each side of the restorations for 20 seconds. Before the cementation process was complete, the excess cement was in a rubbery state and was easy to remove in one piece. It is important to remove the cement at this stage before it hardens.

The BruxZir Dual Cure Resin Cement was efficient and provided a reliable bond between the tooth preparations and the crowns.

The patient was thrilled with the final result and felt more confident about his smile.

The simplified cementation protocol saved me time and money.

SCAN ME

CEMENTATION PROCESS

Watch this video of Dr. Jinny Bender completing the cementation process as outlined in the article.

CONCLUSION

With a simplified protocol and a more universal cement, like the BruxZir Dual Cure Resin Cement, zirconia cementation has never been easier. At the end of the day, it's not only about making it easier on ourselves. It's about making it easier on our patients and giving them a beautiful zirconia restoration that makes them smile with confidence. **CM**

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QUESTIONS ON NEXT PAGE

Optimizing the Cementation of Zirconia Restorations

by Jinny Bender, DMD

1. Preparations for zirconia cases with an axial height less than 3 mm or an excessive taper are considered retentive.
   a. True
   b. False
2. Retentive preparations can be more easily _____.
   a. Cemented
   b. Tapered
   c. Primed
   d. Light-cured
3. Why do zirconia restorations need to be air-abraded before try-in?
   a. Air-abrasion reduces post-op sensitivity
   b. Air-abrasion improves the quality of the connection by enhancing the micromechanical properties of the intaglio surface of the restoration
   c. Air-abrasion allows the prep shade to show through the restoration
   d. Zirconia restorations should not be air-abraded before try-in
4. Zirconia restorations milled from an in-office milling unit are pre-air-abraded.
   a. True
   b. False
5. What are the three categories of cement discussed in this article?
   a. Conventional RMGI, adhesive resin and self-adhesive resin
   b. Zinc, zinc phosphate and zinc polycarboxylate
   c. Primer, bond and adhesive
   d. Self-etching, provisional and light-cure
6. Proper cleaning of a zirconia restoration after try-in is required to _____.
   a. Decontaminate the restoration
   b. Remove salivary phosphates
   c. Increase the adhesive bond
   d. All of the above
7. When cleaning a zirconia restoration after try-in, you should avoid using which cleaning agent?
   a. Sodium Hypochlorite (NaClO)
   b. A universal cleaning paste
   c. Phosphoric acid
   d. Zirconia restorations should not be cleaned after try-in
8. Dual cure resin cement can only be used for zirconia restorations.
   a. True
   b. False
9. What aspects should you look for when choosing a type of cement to use regularly in your practice?
   a. Versatility
   b. Color stability
   c. Efficiency
   d. All of the above
10. An in-office mill can be used to fabricate temporaries while the lab mills the final restorations.
    a. True
    b. False

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Glidewell Implant Solutions

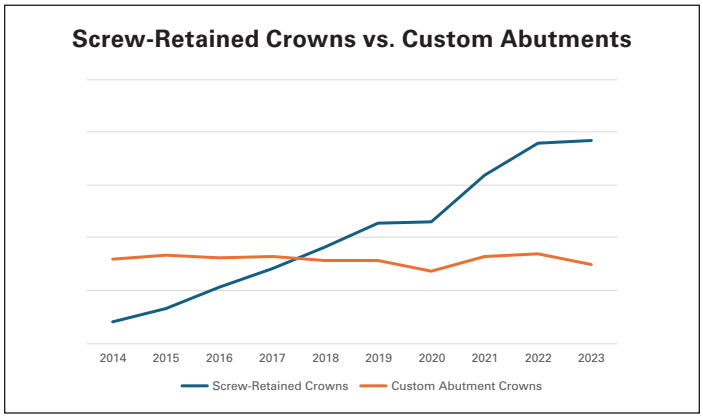
GL-5197641-090124

BruxZir® NOW SRC

Same-Visit Screw-Retained Crowns Coming to the fastmill.io™ In-Office Mill

For many years, the glidewell.io™ In-Office Solution has been greatly simplifying same-visit restorations. And with the increase of implant dentistry in the general practice, the opportunity to provide expanded functionality with in-office mills has grown.

Over the last decade, there has been an 846% increase in the number of screw-retained crowns being fabricated annually by Glidewell. In response to the increasing popularity of screw-retained single-unit restorations in general practices, Glidewell is introducing BruxZir® NOW SRC Milling Blocks to the glidewell.io portfolio of in-office solutions to offer more options for fast, high-quality restorations that can be provided to mill users.



Since July 2017, dentists have prescribed more screw-retained crowns from Glidewell than custom abutments — and that divide continues to grow.

When milled from a block of BruxZir NOW Zirconia, the fastmill.io reduces turnaround time by turning seven days in-lab for screw-retained crowns to 40 minutes in-office. This does not come at the expense of restoration quality. Restorations fabricated from in-office milling blocks have the same toughness and precision fit of zirconia restorations made in the lab, making this the ideal solution for screw-retained restorations in the posterior.

The opportunity to provide expanded functionality with in-office mills has grown.

PRODUCT FEATURES

✓ **Fully Sintered BruxZir NOW Zirconia**	No oven needed, and comes from the mill pre-polished
✓ **Pre-drilled Screw Access Hole**	No post-processing required after milling is completed
✓ **Pre-attached Titanium Abutment**	Eliminates the need for cementation after milling
✓ **Includes Abutment Screw and Single-use Bur**	No separate purchases required with BruxZir NOW SRC block
✓ **Available in a Variety of VITA® Shades**	A1, A2, A3, A3.5, B1, C2, D2

COMPATIBILITY WITH THE GLIDEWELL HT™ IMPLANT SYSTEM

Glidewell has engineered BruxZir NOW SRC blocks to be compatible with the Glidewell HT™ Implant System, formerly the Hahn™ Tapered Implant System. Glidewell HT Implants help doctors succeed in implant dentistry with a simplified surgical procedure, expert lab support and significant cost savings.

Priced at just $99, Glidewell HT Implants save practices money compared to other implant systems — while delivering premium results. BruxZir NOW SRC blocks are also compatible with NobelActive® implants from Nobel Biocare.

To learn more about BruxZir NOW SRC Milling Blocks and the capabilities of the fastmill.io In-Office Mill, visit **glidewell.io/fastmillio-in-office-mill** or call **888-683-2063**. For more information on Glidewell HT Implants — as well as an introductory offer for first-time Glidewell HT users — visit **glidewell.com/ht-intro** or call the Glidewell Direct team at **888-944-7874**. **CM**

The Glidewell HT Implant System is manufactured by Prismatik Dentalcraft, Inc., a wholly owned subsidiary of Glidewell Laboratories. NobelActive is a registered trademark of Nobel Biocare Services AG. Glidewell HT and Hahn are trademarks of Prismatik Dentalcraft, Inc. VITA is a registered trademark of VITA Zahnfabrik.

Doubling Down: The Impact of Adding a Second Mill

Interview with Paul Raines, DDS

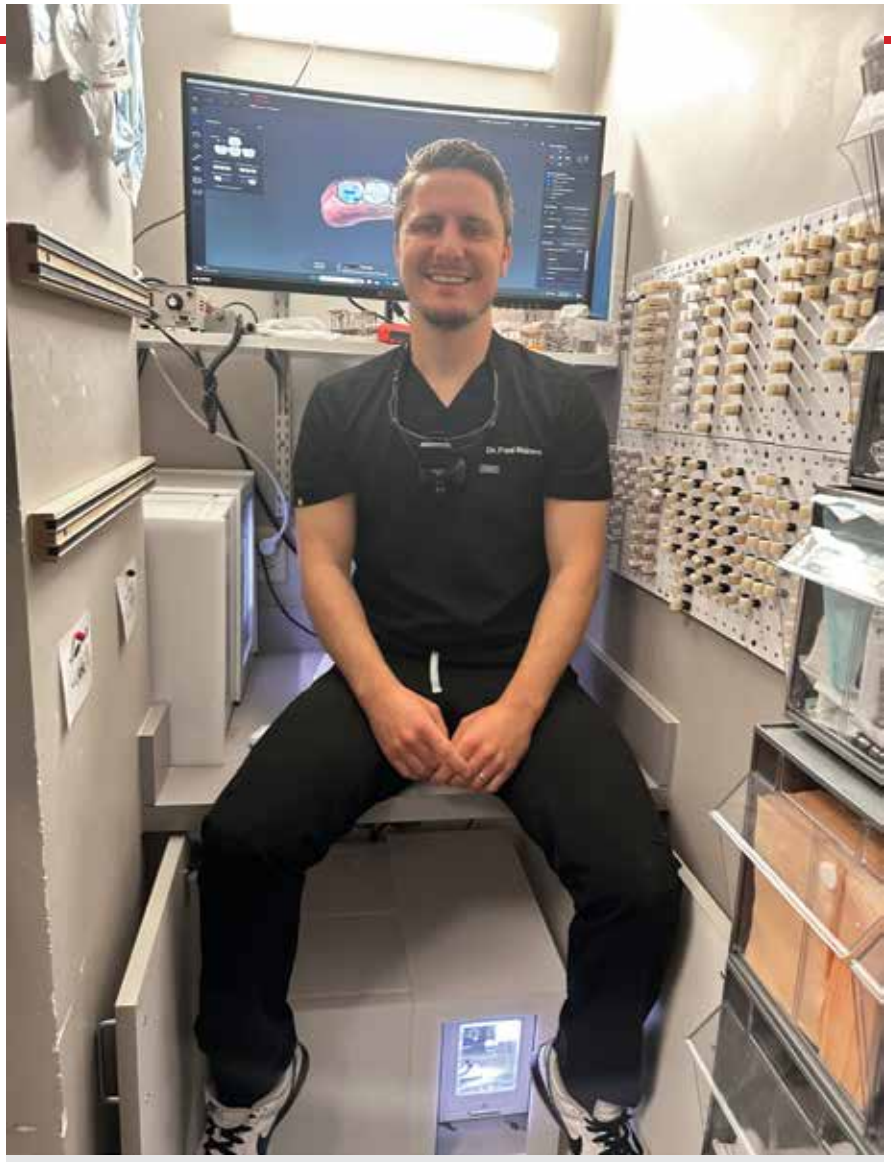
Shortly after opening his Lakewood, Colorado, practice in 2021, Dr. Paul Raines invested in the glidewell.io™ In-Office Solution. Dr. Raines was so pleased with the results, he added a second mill just a few months later. Dr. Raines discussed the benefits he has seen in his practice since introducing two mills, sharing his experiences with *Chairside*® magazine.

CHAIRSIDE MAGAZINE: What sparked your interest in digital dentistry?

DR. PAUL RAINES: Before using glidewell.io, I had some digital dentistry experience with an iTero Element® scanner (Align Technology, Inc.; San Jose, Calif.). This gave me a glimpse into the possibilities of what CAD/CAM technology can do. It was Dr. David Galler, the president of the American Academy of Clear Aligners, who introduced me to the glidewell.io system. I purchased my first mill in October 2022.

Like many doctors, I sent most cases to a local lab before I added the mill. Over time, I became less and less satisfied with their work. They didn't have good customer support, and we spent a lot of time on remakes and provisionals. Rather than use another lab, I opted for glidewell.io because having control over the design to mark my own margins and control over the esthetics was attractive. I also felt I could have some fun with it.

CM: What prompted you to get a second mill?



Dr. Paul Raines added a second mill and has been able to expand his case load as a result.

PR: I have had patients tell me if they couldn't get same-day treatment, they would rather wait to reschedule their appointment. I couldn't believe it. With everything else people have going on in their lives nowadays, scheduling multiple appointments can seem daunting, so the demand for same-day treatment is especially high. That's when I realized how integral this technology is to my practice and patients. The demand led me to add a second mill, which allowed us to take on more cases. I went from milling about 40 crowns per month to as many as 70 because we can have multiple restorations going simultaneously.

CM: What impact has glidewell.io had on your patients?

PR: Having this system is a great way for patients to distinguish our services from that of other practices. It really makes us stand out. By adding the glidewell.io system and delivering same-day restorations, we can offer patients treatment other dentists in the area cannot. Every appointment feels like a bespoke, white-glove service. The technology actively involves patients in their treatment plans, helping them feel like participants rather than just recipients of services.

I love how I can use visual tools to identify issues, propose solutions, and see outcomes together in real time. Even though patients may not grasp the technical details behind the scenes, they clearly understand and appreciate the results. This has led not only to a higher patient count, but higher treatment acceptance as well. Patients love that we're a tech-forward practice.

CM: What cases do you typically handle with this technology?

PR: There are so many material options and possibilities with this system that you can learn to tackle a wide range of clinical situations. I do a lot of anterior and full-mouth cases. Patients who

The support provided to users of the glidewell.io In-Office Solution benefits Dr. Paul Raines and his entire team.

have had crowns done elsewhere tell me that their experience receiving same-day restorations with us is much quicker and easier than their prior experience. Being able to turn around their cases so effectively, and doing so using Glidewell's high-quality materials, has been a significant practice-builder.

CM: How has the digital workflow of glidewell.io changed the work environment for your team?

PR: It's been fantastic. Some of my team members were skeptical about same-day dentistry at first, but they quickly came around. Having the ability to be more involved, to work on crown designs, to add an artistic touch — it goes a long way in improving the quality of their output and increasing job satisfaction. Having this technology makes everyone's job more fulfilling.

CM: How was the training on glidewell.io?

PR: Glidewell has provided exceptional support, going as far as flying my team out to California for a training course. That's very important. Staff turnover is a big concern in this industry, and training someone takes a lot of time and effort. What's great about glidewell.io is that there are ample training opportunities, and the system is easy to learn. From online courses to in-person sessions, there's always a way to ensure that a new team member can be trained quickly and efficiently. Within a week I can have a team member fully ready to use this digital workflow if necessary.

CM: What return on investment have you seen from the glidewell.io system?

PR: The numbers speak for themselves. Even with three iTero® scanners, two fastmill.io units and all the milling blocks, my monthly payments are less than what my lab bill would be without these tools. But the biggest factor is time. With reduced chair time, we're able to see more patients. This efficiency — completing crowns in one visit — has cut our operational costs by about 50% per case. **CM**

Chris Petrush
2h ·

Today's delivery, upper and lower 8, done in bruxzir esthetic shade B1. Having the second mill was a total game changer!

5 9 comments

Like Comment Send

Scott Barton
January 31, 2023 ·

Promised at iox I would post more…
Did 8&9 in Obsidian A2, regular glaze.
If you're not doing anteriors don't be intimidated. Although I do prescans, I generally find the A.I. better with less design tweaks. I actually did these myself but have spent plenty of time when needed with the great Glidewell support team. Also added a BruxZir on #3 on this patinet. In and out in under 3 hours. Everyone happy😎

Harold Mendelson
January 5 ·

I am in practice with my son. We had the IO system for at least six years. He wanted it and I said that i would be a big waste of money and effort. I was wrong…it has been an incredibly wonderful addition to our office. The Tech support has been the best of anything we have ever bought. They are pleasant and have never failed to be helpful. I really do not think we could do without our IO system. I no longer see patients for procedures. I check hygiene and I make the crowns. Thank you Glidewell.

~ Joel Baez

Great practice with friendly and competent people! I got a crown today, and it was a much better experience than my previous dentist. The practice created the crown in the office rather than send it out to a lab, so I didn't need a temporary tooth and I didn't need to come back in 2 weeks for another appointment. It was all done in one shot. So convenient and pain-free! Highly recommend this practice! 5:29 PM

❤️

~ Joel Baez

Glidwell support is A ++ 5:30 PM

❤️

Here's what doctors are saying about their experiences with glidewell.io™.

Dr. Ben Friberg

I added a second mill after two weeks of owning one. The ability to do 30 and 31 on the same patient same day is huge. I also like it for 2 patients staggered 30 minutes with each haveing one unit.

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- LIGHTWEIGHT OPTICS

fastscan.io™ Scanning Solution Featuring The Medit® i900®

The fastscan.io™ Scanning Solution combines Medit® i900® technology with fastscan.io software to deliver a complete, stress-free and affordable introduction to digital dentistry. The Medit i900 provides upgraded imaging technology for faster scanning and improved accuracy in a light, versatile design.

COMFORT MEETS VERSATILITY

At only a third the weight of its predecessor, the Medit i900 is light and easy to handle with its slimmer, more compact body.

The 360° touch band allows for scanning at any angle, resulting in a more comfortable and more manageable process. The seamless unibody design provides superior balance and eliminates the need for the reversible tip that was part of its predecessor's designs. Users can now hold the wand upside-down while moving from one scan to the next.

The Medit i900's smaller, lighter electrical cable is reinforced for improved durability.

The Medit i900 provides upgraded imaging technology for faster scanning and improved accuracy in a light, versatile design.

CUSTOMIZABLE FEATURES AND TOUCH-ACTIVATED TECHNOLOGY

Using touch activation, fastscan.io featuring the Medit i900 simplifies the scanning process. The Medit i900 replaces the traditional button-control layout of past scanners with touch activation. Users start and end scans with a double tap, then can swipe to view different scanning stages. The interactive touch pad also offers customizable command actions, making it the most intuitive scanner available today.

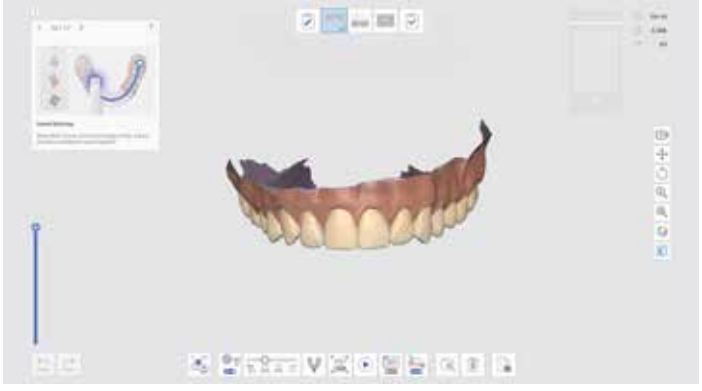
Navigation is now in one convenient device and is comparable to using a smartphone, which cuts down on the need for frequent disinfecting associated with going back and forth between devices. Doctors can access their scans quickly and easily through the touch pad without having to move to the computer mouse.

FASTER SCANS WITH ENHANCED VISUAL OUTPUT

The Medit i900 introduces an all-new, third-generation optical engine. Capture high-detail scans from broad spectrum to low-noise imaging thanks to the Medit i900's expanded field of view, which ranges from 18 x 15 mm when using the large tip; 14 x 11.5 mm using the medium; and 10 x 8 mm for the all-new small tip, available separately.

Along with the highest-detail imagery available, the Medit i900 is the fastest scanner to date. There is no required warm-up, an especially useful feature for those with a high-volume practice. Paired with Glidewell software and support, the Medit i900 can help further improve turnaround times.

The Medit i900 scans a variety of reflective surfaces effectively and is perfectly suited to edentulous scanning.



A COMPLETE SCANNING SOLUTION

Packaged with a preconfigured and optimized laptop, monitor and cart, the Medit i900 arrives ready for quick, seamless installation and Glidewell provides comprehensive training and support. Submit cases to the lab of your choice, or directly to Glidewell for a three-day turnaround and savings of $20 or more per unit on model-free cases. Help patients better visualize treatment plans and increase case acceptance using popular Medit applications, offered with no monthly fees.

The fastscan.io featuring Medit i900 sells for $24,500 MSRP and is backed with a three-year warranty. To learn more, including the potential savings when you invest in the fastscan.io Scanning Solution featuring Medit i900, visit **glidewell.io/fastscan-io-scanning-solution**. **CM**

Along with the highest-detail imagery available, the Medit i900 is the fastest scanner to date.

3D Printing in the Dental Practice

by David Zant, DDS

Private Practitioner
Mililani, Hawaii

3D printing is the next step for practices that embrace same-day in-office solutions. In my practice, we print orthodontic retainers, models and occlusal appliances. I especially love printing occlusal guards because the process is simple and it enables us to offer our patients a unique service that will continue to grow.

3D PRINTING STARTS WITH SOFTWARE

3D printing starts with the design software, which should be intuitive and easy to use. I find that the fastdesign.io™ software works well with my fastprint.io 3D printer to streamline the process. For example, when printing an occlusal guard, the steps are surprisingly uncomplicated.

Once I have imported the intraoral scan into fastdesign.io software, I simply select the *Design Occlusal Appliance* tab. Next, I select the arch — upper, lower or both — the desired fit and thickness, and press *Design*. In fact, there is no additional design work required to print an occlusal guard; just follow the steps.

Figure 1: *Using the fastdesign.io™ Software and Design Station to print occlusal guards is an intuitive process that requires only a few steps, starting with selecting* design occlusal appliance *in the interface.*

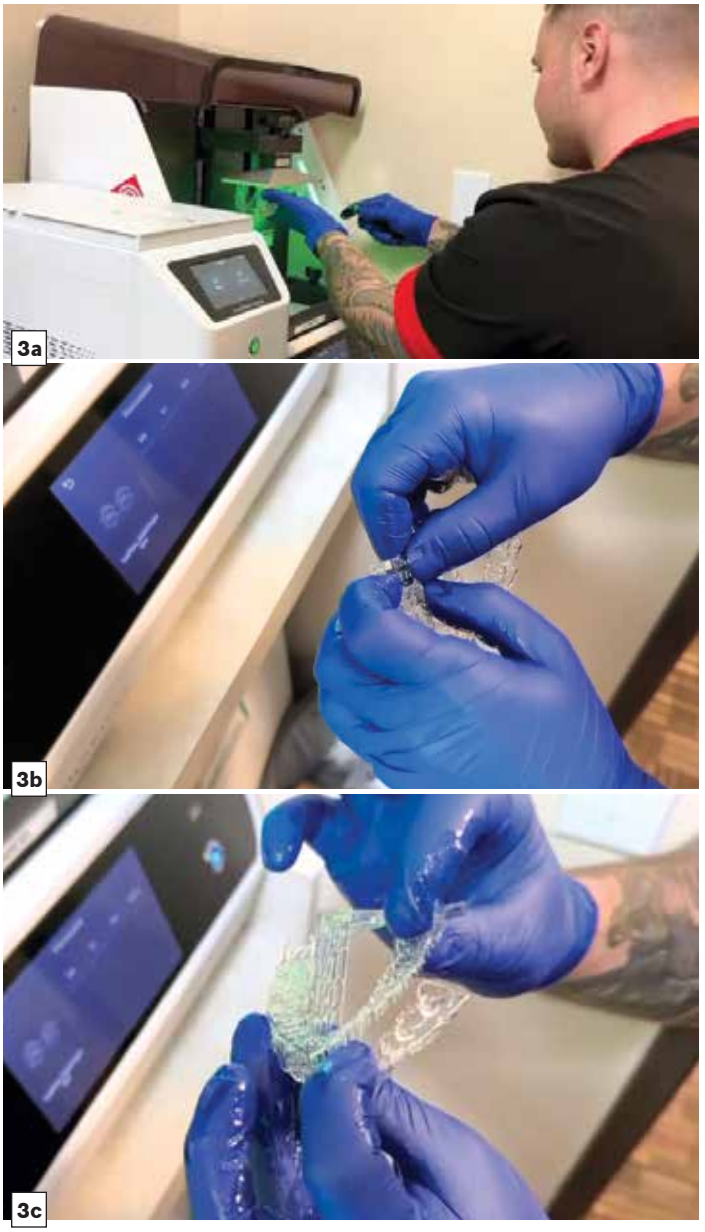
Once the occlusal guard is printed, there is no need for trimming or polishing. It comes from the printer exactly as designed in the fastdesign.io software. Just remove it from the print plate and supports, rinse and cure it, and the guard is ready to go.

THE PROCESS

Seeing the printing process is like watching a scene from a science-fiction movie. You are witnessing a tangible, three-dimensional object being crafted out of resin using only computer data and lights. It seems like magic.

Once the object is crafted from the resin, post-processing requires popping the occlusal guard off the print plate and "unzipping" it from the support. The printed product goes into the wash unit for a rinse with isopropyl alcohol, which removes any uncured resin.

Figure 2: *3D-printed occlusal guards on the print plate, held in place by supports.*



Figures 3a–3c: *3D-printed retainers are removed from the print plate, then separated from the supports.*

BENEFITS OF 3D PRINTING

A primary benefit for patients is convenience. If a patient is coming in for a hygiene appointment, for example, you can take a scan, send it to the fastdesign.io software, press *print* and have an occlusal guard ready during the same visit. A 3D-printed occlusal guard is also inexpensive to print. I estimate that it costs me $3–5 each for the consumable materials. I offer patients a free replacement if their occlusal guard is ever lost or damaged. As a benefit to the practice, 3D printing is another means of maximizing my glidewell.io™ system and promoting in-office dentistry.

Figure 4: *My patients love their 3D-printed occlusal guards for protection and comfort.*

THE FUTURE

My experience printing retainers and occlusal guards chairside has been so positive that I cannot help but envision eventually printing provisional and permanent crowns as 3D processes and materials progress.

However, the strength and esthetics of milling materials are unmatched by those of resins currently available for 3D printing. For example, provisionals milled with BioTemps® NOW are precise and durable, while resins used for 3D printing do not compare favorably. Milled restorations are so superior that – for now – I choose to mill rather than print my restorations. I plan to continue to evaluate new resins as they are introduced and add additional 3D-printed options as they become available. **CM**

For information on the fastprint.io™ 3D Printing Solution, please visit **www.fastprint.io**.

As a benefit to the practice, 3D printing is another means of maximizing my glidewell.io™ system and promoting in-office dentistry.

SINGLE-VISIT CLEAR APPLIANCES?
YES, YOU CAN!

The ease of use, rapidly improving AI software, and small footprint of the fastprint.io 3D Printing Solution have all made it an asset to my practice.

Eric Schoening, DDS | Chicago, IL
fastprint.io user since 2023

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Offer cannot be applied to previous purchases or combined with any other offers.

A Journey Through the **Customer Experience**

Glidewell offers many opportunities for hands-on training in digital smile design.

Purchasing new technology is often a sterile and faceless experience. Here's a common scenario: A product is shipped to you, maybe with a manual. Even if you are excited about the capabilities of the product, you may dread the trial-and-error of setup and early usage.

With the glidewell.io™ In-Office suite, Glidewell has shifted the norm, introducing a people-first approach to our solutions. When you purchase a mill, scanner or other chairside materials, you automatically gain access to a dedicated support team.

While the protocols may differ slightly depending on the product — e.g., a mill versus an intraoral scanner — the white glove service, attention to detail and commitment to education remains the same throughout the glidewell.io ecosystem.

BEFORE YOU BEGIN

Likely, your first point of contact will be a glidewell.io salesperson. They will ensure you are on the right track and choose the glidewell.io products that are most beneficial to your practice.

INITIAL COMMUNICATIONS

First, you will receive an email or phone call welcoming you to the glidewell.io family. The communications will include:

- A link to a product resource page with detailed instructions on signing up for an account and training
- Contact information in case further assistance is needed

Myth: Only tech-savvy dentists can use the glidewell.io system.

Reality: Due to unmatched customer support and in-depth training, any dentist can be successful with glidewell.io systems.

DELIVERY COORDINATION

Depending on the requirements of the product, a coordinator will call your office to schedule an installation and training appointment. For products like an intraoral scanner or 3D printer, virtual consultations are both sufficient and convenient. For in-office mills, Glidewell provides in-person training.

Digital Adoption Manager Yves Cuaton assists a new glidewell.io user with a virtual demonstration of a fastscan.io™ intraoral scanner.

Specialty Delivery Service

Because we understand how busy dentists are, we use a concierge delivery service to ensure the product arrives exactly when the dentist is ready for it.

For example, if a practitioner in Boston orders a mill, it will be shipped to a warehouse in Boston and delivered to their office one week before installation day, when a Glidewell representative will be on site.

Concierge delivery means that dentists are not wasting precious time trying to set up and figure out a new product. Glidewell is there to make the process as seamless and pain-free as possible, so clinicians can get up to speed and back to their practices.

CLIENT SUCCESS MANAGEMENT

The client success team fosters the relationship between Glidewell and the glidewell.io customer. They help dentists discover their goals and customize individual plans.

For example, some dentists might have the goal of creating as many same-day crowns as possible while others might want to focus on 3D printing. Other dentists might want to start with an intraoral scanner and integrate .io products as they gain confidence.

The client success team pinpoints what is important to the customer and builds a plan based on those goals. Once the plan is fleshed out, the team will set up a call schedule to put the plan into action:

- **Weekly check-ins:** The first check-in happens after installation and training to evaluate the setup and address any questions or concerns that arise. Then, customer success will follow up once a week during the first month of use.

- **Bi-weekly check-ins:** Anticipating that the customer needs a little less at this point, the calls are reduced to twice a month for the second month. The customer success team also tracks engagement metrics to identify trends, opportunities for improvement and potential issues before they escalate.

- **Monthly check-ins:** By the third month, the customer success team checks in just once a month. This ensures Glidewell maintains a strong relationship with the customer as they navigate their new equipment.

Client Success Manager Annie Lee creates custom plans for glidewell.io users and makes sure that every customer is set up for success.

The client success team is additionally responsible for managing the initial supply needs of the customers, such as ordering milling blocks or coolant.

OVERVIEW OF IN-PERSON TRAINING

For the fastmill.io, the Logistics and Implementation team has found that a two-day, onsite process is ideal for milling technology adoption. When the dentist is prepared to receive their mill, an implementation specialist arrives at their office to facilitate the process.

Day One: Installation day. Although practitioners are always excited to receive their "new toy," the mill installation can be quite noisy, so Glidewell makes sure the dentists and their staff are aware and make the proper arrangements.

Day Two: All-day fastmill.io training for dentists and their team members — worth six CEUs.

Logistics and Implementation Manager Samantha Montenegro explains key features of the fastmill.io to a dentist and his team on day two of the onsite implementation process.

After the implementation process, the dentist is invited to the Glidewell campus to attend the Level One Advanced Course for glidewell.io users. Airfare and two seats to the course are included with the system purchase, but dentists are welcome to purchase more seats for additional team members.

OVERVIEW OF REMOTE TRAININGS

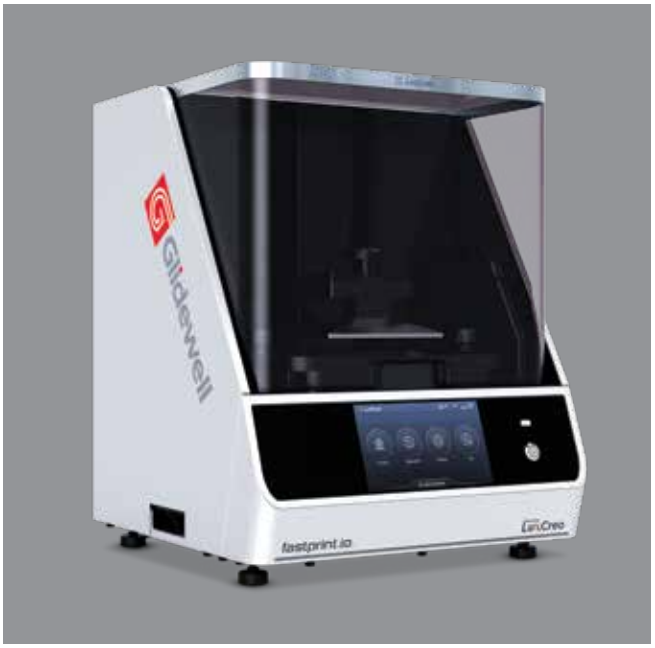
For fastscan.io and fastprint.io users, remote training is utilized for the setup/installation process, through FaceTime, Google Meet, Microsoft Teams or Zoom. Once the dentist signs their office up for training, a trainer is automatically assigned. These trainers are available from 5 a.m.–5 p.m. (Pacific) to accommodate sessions coast-to-coast. On average, a consultation will be scheduled within 3–5 days of sign-up.

fastscan.io Training

Session One: Covers the basics of scanning with the fastscan.io. This includes familiarization of the Meditlink and fastscan.io software, basic scanner controls and scan strategies. The goal for the first session is for office staff to be able to scan a basic crown & bridge or nightguard case.

Session Two: Covers more advanced tools and techniques. This session touches on more challenging workflows such as scanning for implant cases as well as partial and full dentures.

fastprint.io Training



During the first session of fastprint.io training, the trainer ensures the following:

- All materials and equipment have been received, unpacked and properly positioned on countertops
- All cables/connections are installed and functioning
- All equipment has been appropriately calibrated
- Software is installed and all licenses have been verified and activated

The second session deals with the specifics of 3D printing:

- Learning how to use 3D printing software including fastdesign.io, LuxDentHost, LuxFlow, and LuxDesign
- Hands-on 3D printing instruction on dental models, nightguards and retainers/aligners
- Post-processing protocols — washing, dehydrating and curing
- Basic care and maintenance

TECHNICAL SUPPORT

While the trainings cover everything needed to be successful, there is also a U.S.-based customer support team standing by should clinicians ever have any questions. As dentists begin regular use of their products, they may need clarification or troubleshooting help. That is where the Customer Technical Support (CTS) team comes in.

Here is how they address a request:

1. Customer calls with a question or problem
2. CTS collects their contact information and notes the request in detail
3. Often, CTS will remote into the customer's computer to get a better look at the situation
4. After the issue is identified, the support representative personally guides the customer through the solution, educating them in the process
5. Once the request is complete, a ticket is created to document the correspondence and save the information to help future customers

Customer Technical Support Supervisor Kevin Argueta resolves questions and empowers Glidewell customers through personalized education.

The CTS team oversees every product under the glidewell.io umbrella as well as *My Account* and the Glidewell Direct website. The most common calls are regarding design assistance, but the team uses their deep knowledge of the glidewell.io ecosystem to address every request as it arises.

With purchase of a glidewell.io product, dentists receive unlimited ongoing training. This includes:

- Training for new team members brought on due to turnover
- Refresher training for current team members
- On-demand live support, often utilized for complex scans

ONGOING EDUCATION

One hallmark of the Glidewell philosophy is an emphasis on continuing education. It is no different with glidewell.io. With so many features and methods, the possibilities are truly endless. Every few months Glidewell staff dentists break ground with techniques and strategies, as they test the boundaries of glidewell.io capabilities. Educational events are a chance to disseminate new innovations in digital dentistry.

Additionally, you can attend a live course on a specific digital dentistry topic, browse our comprehensive library of videos or attend an in-person event like the IOX Symposium, which sells out in advance every year.

NEXT GLIDEWELL.IO LIVE COURSE

▸ December 6, 2024

Introduction to CAD/CAM Dentistry

Jinny Bender, DMD

Location: Irvine, CA

Available CEUs: 4 units

Dr. Jinny Bender lectures practitioners on CAD/CAM techniques and digital design workflows for same-day dentistry. In-person courses at the Glidewell Clinical Education Center engage glidewell.io users to get the most out of their products in a dynamic learning environment.

Learning Objectives:

- Apply techniques for digitizing the clinical workflow
- Digitally design a functional and esthetic restoration
- Make material choices based on their indications
- Produce quality restorations in a single visit

SCAN ME

REGISTER NOW
glidewell.io/register

IOX SYMPOSIUM

Ever since Glidewell started offering IOX, it has consistently been our fastest selling event — and with good reason. At this symposium, clinicians can practice the latest digital workflows and expand their skill sets to maximize the value of their glidewell.io systems. Along with earning 12 CEUs, dentists will have the opportunity to network with likeminded peers and experience the forefront of dental technology.

Dr. David Zant guides an IOX attendee through a hands-on exercise covering 3D printing.

Highlights:

- A tour of the world's largest and most innovative lab
- New, never-before-seen glidewell.io information
- A hosted cocktail party and exclusive IOX giveaways

SECURE YOUR SPOT FOR IOX IN 2025

SCAN ME

REGISTER NOW
glidewell.io/promotions/iox

CONCLUSION

With the glidewell.io suite of solutions, the Glidewell team has ushered in a new era of humanized customer experience. When you purchase a glidewell.io product, you can expect to be on a first-name basis with several dedicated team members. These team members each have an organized role in making your entire glidewell.io experience smooth, simplified and productive. Though there are other digital dentistry products on the market, customers have reached out to Glidewell, saying our support and education is unmatched. From beginning to end, the customer is always top of mind and our highest priority.

SCAN ME

LEARN MORE

Ready to explore the world of same-day dentistry? Check out our website:
www.glidewell.io

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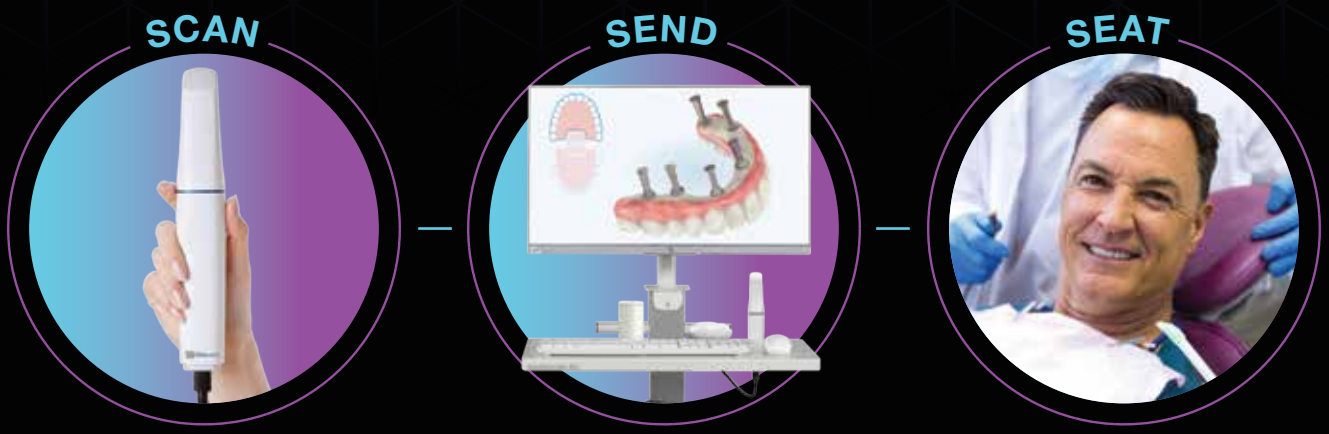

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2025

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