

Where T-Scan™ Fits Into Your Everyday Dentistry

Digital Occlusal Analysis Can
Improve Your Case Acceptance
and Treatment Outcomes



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INTRODUCTION

Occlusion Affects Everyone

Adjustments. Equilibration. Chronoplasty. Regardless of the term or method you currently use to determine when an occlusal adjustment is needed, T-Scan will enhance your existing evaluations by providing more accurate occlusal data for more precise diagnoses and adjustments.

Dentists are using T-Scan at every stage of the treatment plan, from initial consultation to the case finishing, and recare—regardless of treatment philosophy. It is the only tool that provides detailed information about the bite. By providing data related to occlusal force, location, and timing, T-Scan helps dentists identify occlusal interferences that could be potentially destructive to their dentistry.



"The accuracy of the contact force and timing data collected with T-Scan assures patients that the clinician is performing the correct procedure. It gives them peace of mind. It's one of the best occlusion software concepts in the world."

Dr. Ash Parmar

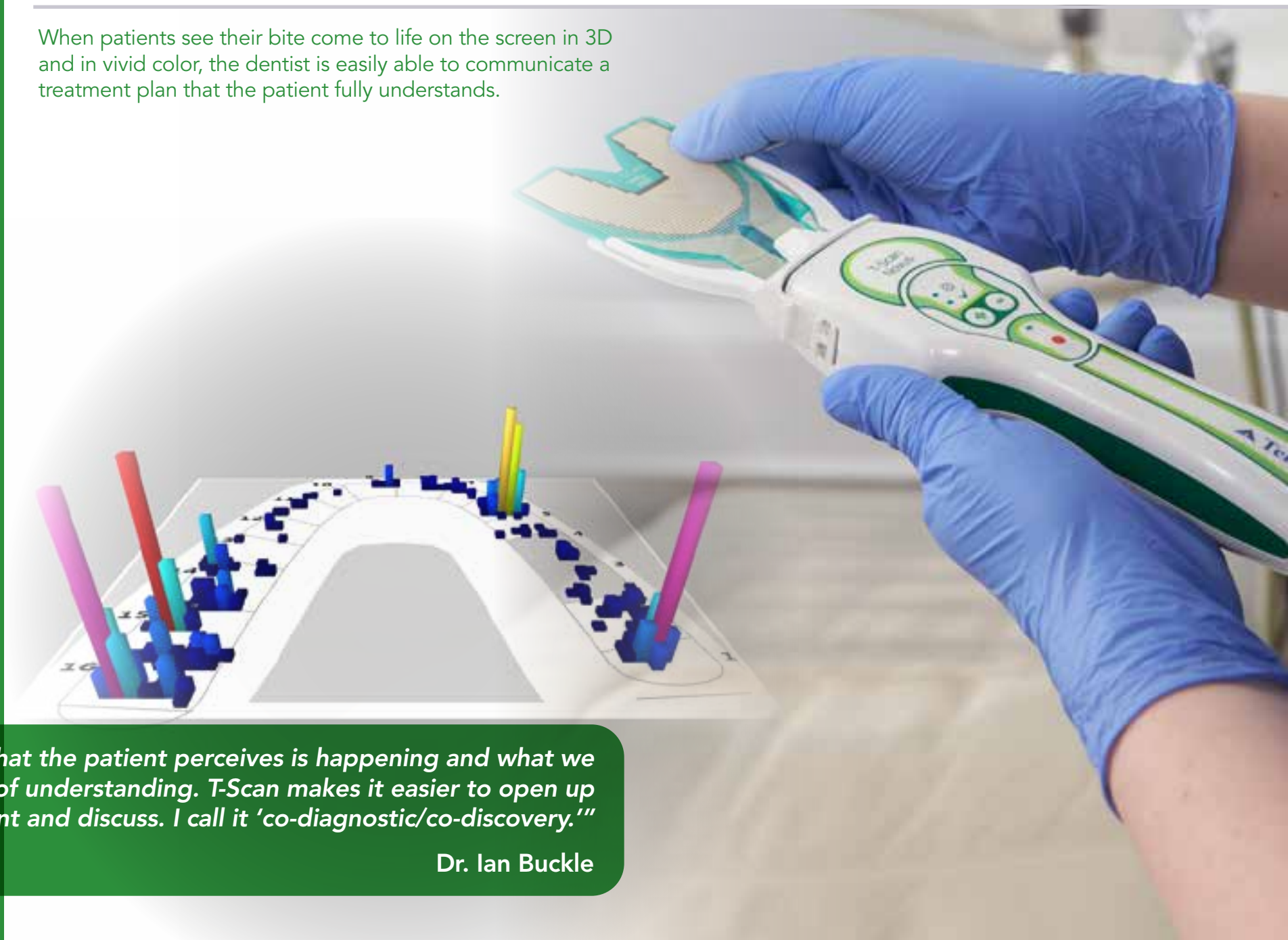
Where Does Digital Occlusal Analysis Fit In?

T-Scan puts paper marks into context by providing real-time dynamic occlusal data related to the patient's bite, enhancing your ability to make occlusal adjustments with precision and confidence.

For occlusal analysis, the current standards of care (articulating paper, shimstock foils, waxes, and bite registration materials) only provide a glance into occlusion and still require your subjective "best guess" interpretation. T-Scan provides more accurate data about the occlusion than observation can ever provide.

T-SCAN: THE CLEAR COMMUNICATION TOOL YOUR PATIENTS TRUST

When patients see their bite come to life on the screen in 3D and in vivid color, the dentist is easily able to communicate a treatment plan that the patient fully understands.



"T-Scan builds a bridge between what the patient perceives is happening and what we find. It takes the patient along a path of understanding. T-Scan makes it easier to open up problems with the patient and discuss. I call it 'co-diagnostic/co-discovery.'"

Dr. Ian Buckle

Cosmetic Dentistry

T-Scan digital occlusal analysis provides data that ensures your dental artistry is flawless and functional.



COSMETICS

Form & Function

You artistically choose the design, quality, and selection of materials in your cosmetic cases. With T-Scan, you can choose how it performs and functions. By providing detailed timing and force distribution data across the dentition, T-Scan gives the clinician the data needed to harmonize the occlusion scheme and resolve extreme force exposure to preserve the longevity of crowns, veneers, and restorations.

T-Scan is used during multiple parts of the patient experience. By showing patients their bite problems on-screen, you gain a commitment to treatment. You can then use T-Scan throughout the treatment procedure to ensure a balanced occlusion from start to finish.

T-Scan has been reported to show a significant reduction in complications simply due to more effective adjustments made to occlusal overloading. This directly results in:



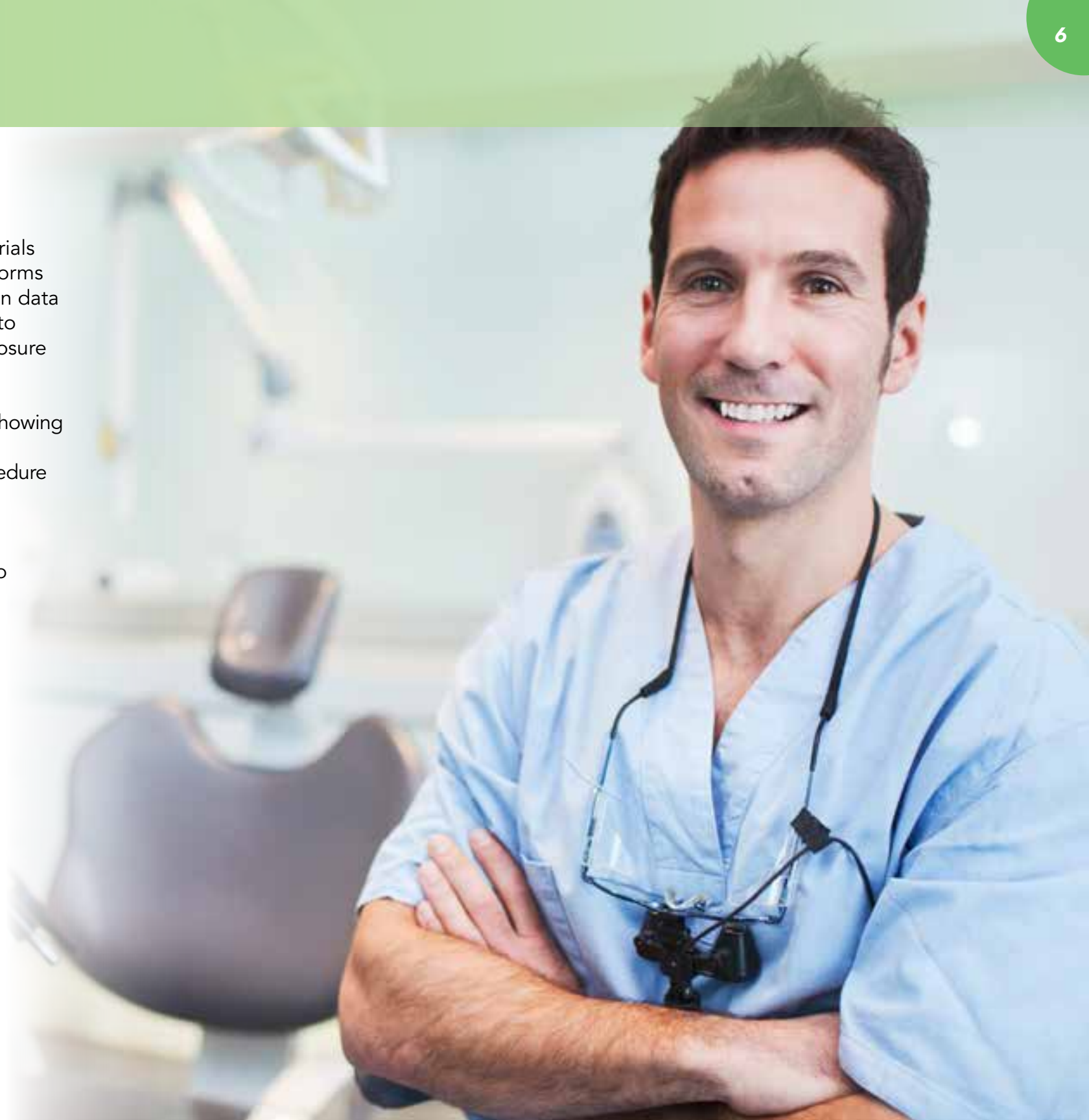
**Increased Case
Acceptance &
Revenue**



**Less Chair Time
Per Patient in
Repeat Visits**



**More Quality
Referrals From
Satisfied Patients**

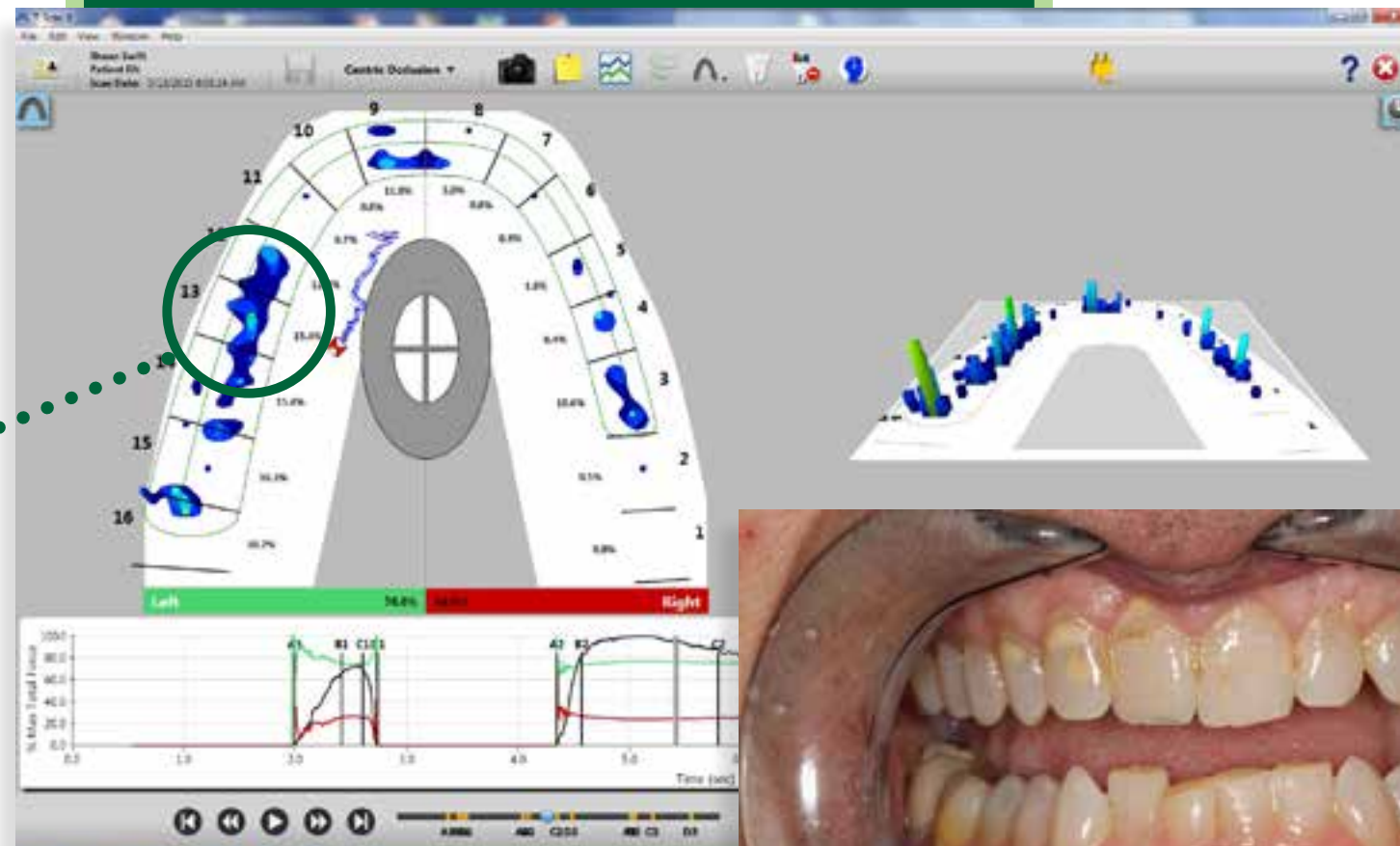


FORM & FUNCTION: A CASE EXAMPLE

The difference that T-Scan provides is “quantifiable force” that allows clinicians to see when each tooth comes into contact to identify prematurities or occlusal abnormalities.

In this case example, Ben Sutter, DMD delivered a functionally beautiful smile to his patient. As shown in the image on the right, the hygienist identified occlusal disease with several abfractions and bone loss.

BEFORE...

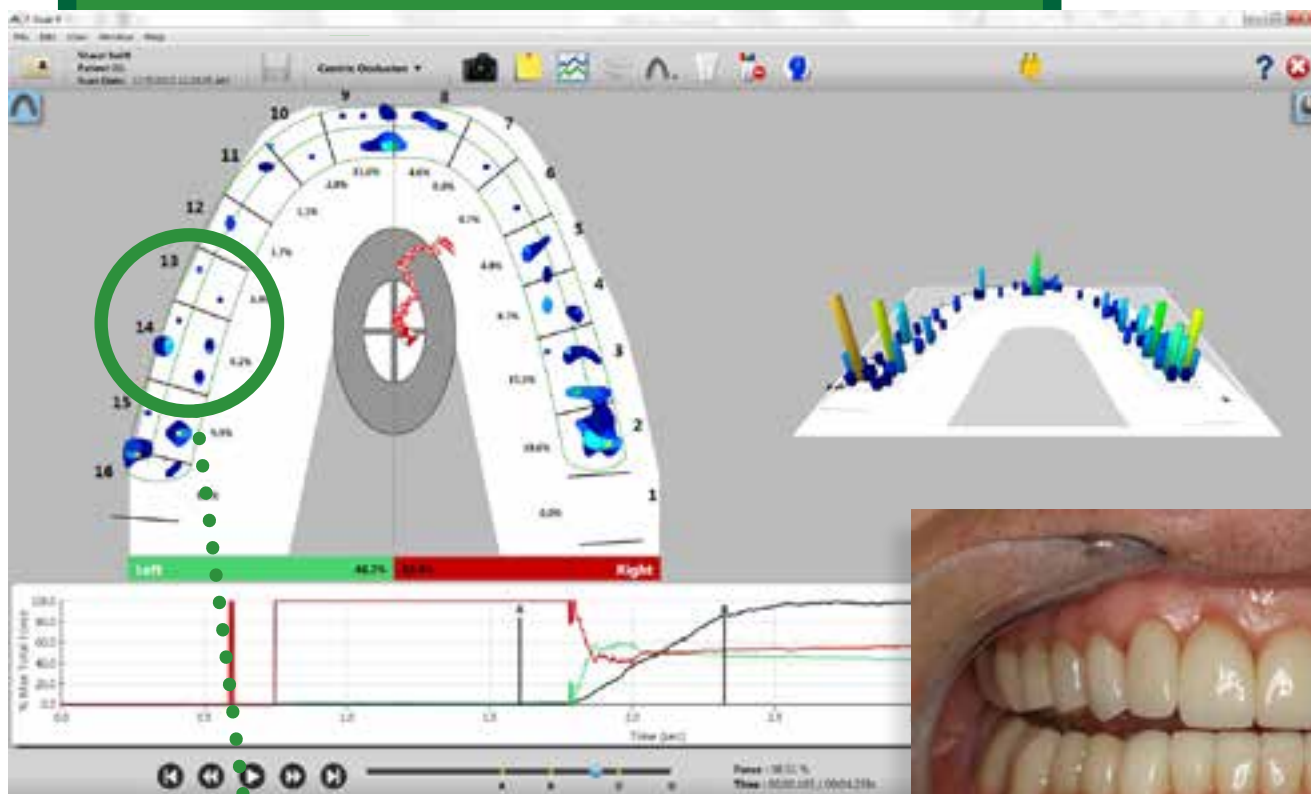


Wide area of occlusal forces favoring the left side. Very little contact with the anterior.



FORM & FUNCTION: A CASE EXAMPLE (CONTINUED)

...AFTER



Contacts come together with an even distribution and no concerning forces or interferences.



T-Scan revealed a sizeable left-to-right side force imbalance of 74% left, 26% right. After a complete exam and discussion, the patient agreed to undergo a full reconstruction.

"Not only is this an aesthetic improvement, but it's also a functional improvement. It is often stated that form follows function, and that is true. Function takes priority. Teeth can look beautiful, but if they don't work properly, all of the replacements will likely pop off.

Occlusion isn't sexy. Cosmetic dentistry is, however, because you can blatantly see the results. Occlusion can't really be seen with one's eyes, but it can be visualized with the aid of T-Scan occlusal measurement technology. Honestly, I sleep at night because I know I have taken care of my patients' bites."

Dr. Ben Sutter

To read the full case study and other cases on veneers and orthodontics, check out our eBook: **"Beautify and Balance Bites with T-Scan"** www.tekscan.com/dental



BUILDING T-SCAN INTO YOUR COSMETIC DENTISTRY WORKFLOW

Digital Smile Design (DSD) uses T-Scan in their smile design workflow.

Christian Coachman, founder of DSD, believes T-Scan enhances the treatment procedures and final result delivered by his DSD dentists.

"T-Scan is a perfect fit to the DSD storyline in all aspects. We love function and digital, so nothing better to combine both worlds than T-Scan. Besides that, it also improves one of the key factors of the DSD Concept, patient education and motivation. T-Scan as a great visual tool to increase the understanding and awareness of occlusal issues."



BEAUTIFY AND BALANCE BITES

Achieving a balanced occlusal scheme during orthodontic and restorative cases is critical to maintaining a beautiful smile (both esthetically and functionally). With T-Scan's digital bite force data, you can identify early and high forces that pose a threat to the longevity of ceramics and natural teeth.

Gain commitment to treatment by showing patients a visual representation of their occlusion and explaining how you will manage destructive forces throughout their case to avoid fractures and breakages.



"I use T-Scan on implant or full mouth reconstruction patients who experience post-treatment issues. The real value of T-Scan is that it allows me to detect occlusal interferences I couldn't see before when I was just using articulating paper. This is so important because if patients invest in their treatment, they expect successful, long-lasting results. Without the T-Scan, a dentist may not know why patients are having issues with implants or other restorations. I can solve these problems, and that's the biggest reward."

Dr. Jose Suarez Feito

Prosthetic Dentistry

Art meets science when it comes to improving a patient's oral health, function, and appearance with T-Scan.



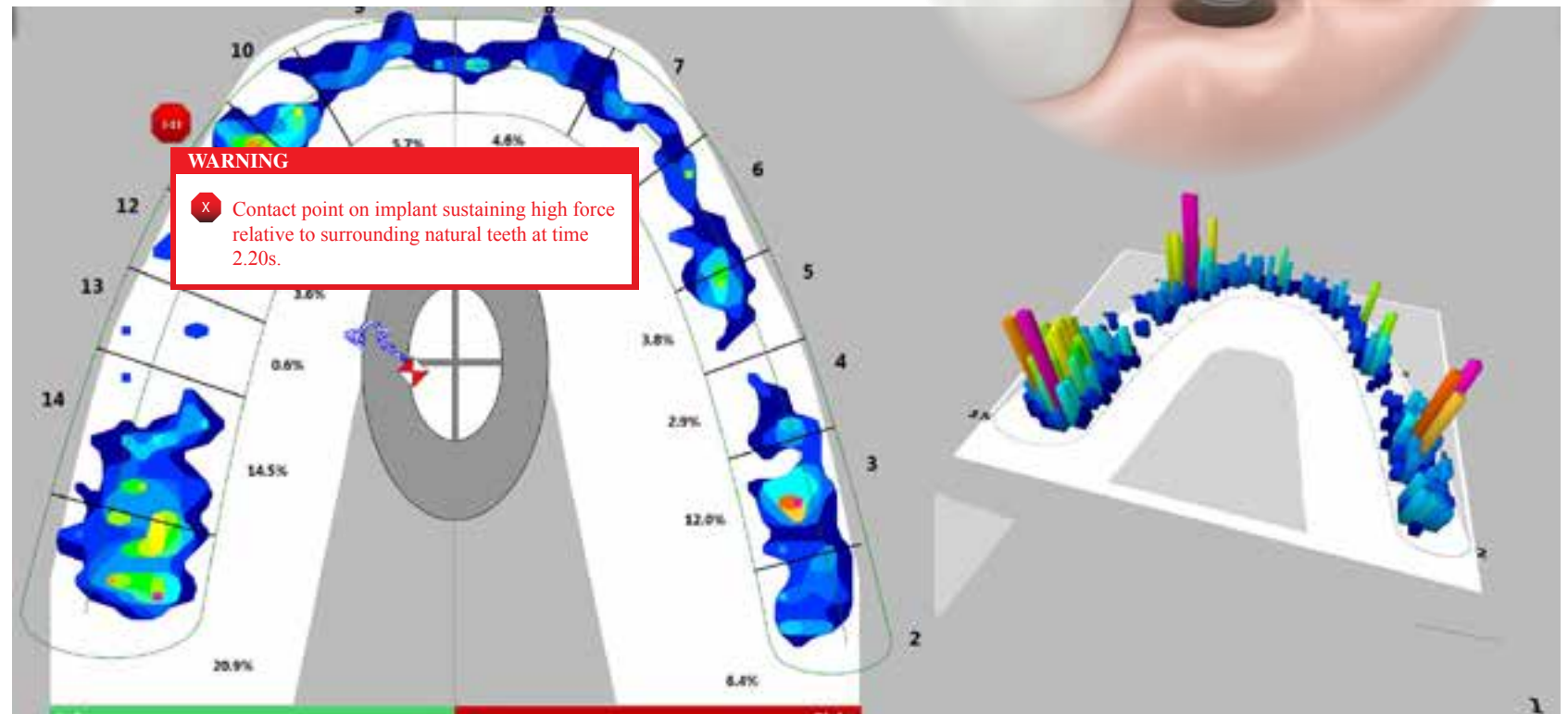
PROSTHETIC

Insights to Balance & Function

Create a harmonized occlusal scheme using T-Scan to protect and preserve carefully designed and installed dental prosthesis and implants. As both artists and scientists, dentists use T-Scan's objective data to ensure that dental work is durable and long-lasting. Whether working with implants, dentures, or crowns and bridges, T-Scan provides timing and force data about the bite that helps:

- Ensure bilateral balance
- Confirm comfort and function (that doesn't rely on "patient feel")
- Check group function
- Reduce early interferences
- Prevent bone loss

T-Scan has also been found to be a very effective educational tool, allowing patients to understand how necessary the treatment plan is, and see the results post-treatment. Even skeptical patients have an easy time understanding treatment recommendations after seeing objective data that is displayed in a visual format.



PROSTHETIC / TEETH WITH A JOB TO DO: A CASE EXAMPLE

Patients are often very interested in seeing their bite force data on the screen. It is comforting to see a diagnosis that is backed by an objective viewpoint, and it validates the discomfort patients may have been feeling for some time.

Scott Keith, DDS was visited by a patient that was previously treated with a bridge, splint therapy, and multiple implants, but complained of a “crooked feeling” and constant headaches. The patient spent years trying to identify the cause of her discomfort and desperately pursued a beautiful smile. When Dr. Keith examined her occlusal force and timing, he was surprised to see a point of contact that was hitting harder than the rest. He made the occlusal adjustments, and the patient reported a more “straight-feeling” smile and freedom from headaches.

“As the treating clinician, it would be unwise to say based on subjective information, ‘In my opinion, here’s what’s going on and let me grind on your teeth until it starts to feel better to you.’ We simply bring out the T-Scan and show the patient the source of her occlusal discrepancy.

We can then educate the patient along the lines, “It’s not my opinion. It’s the computer sensor’s objective data that shows us where you’re hitting harder and where your bite might be coming together before the other teeth touch!”

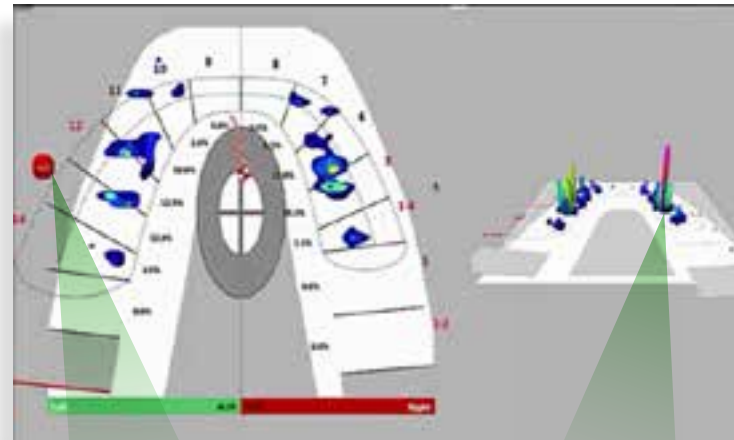
Dr. Scott Keith



PROSTHETIC / TEETH WITH A JOB TO DO: A CASE EXAMPLE



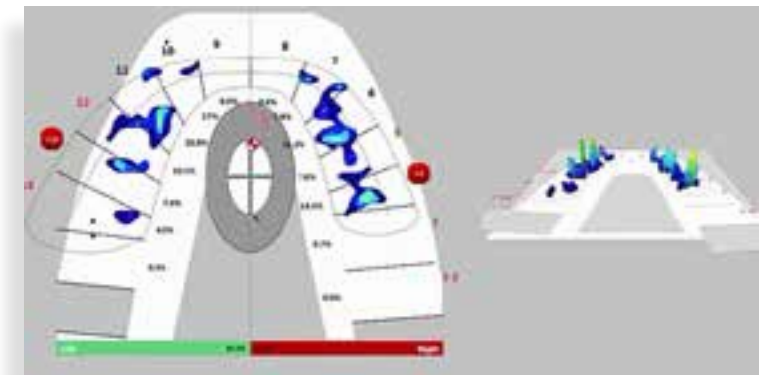
Intraoral view and panoramic radiograph



Implant warning and premature contact



T-Scan-guided adjustment procedure



Post adjustment with bilateral equality

To read the full case study and other cases on implants, check out our eBook: **"Implant Occlusion in the Digital Age of Dentistry"** www.tekscan.com/dental



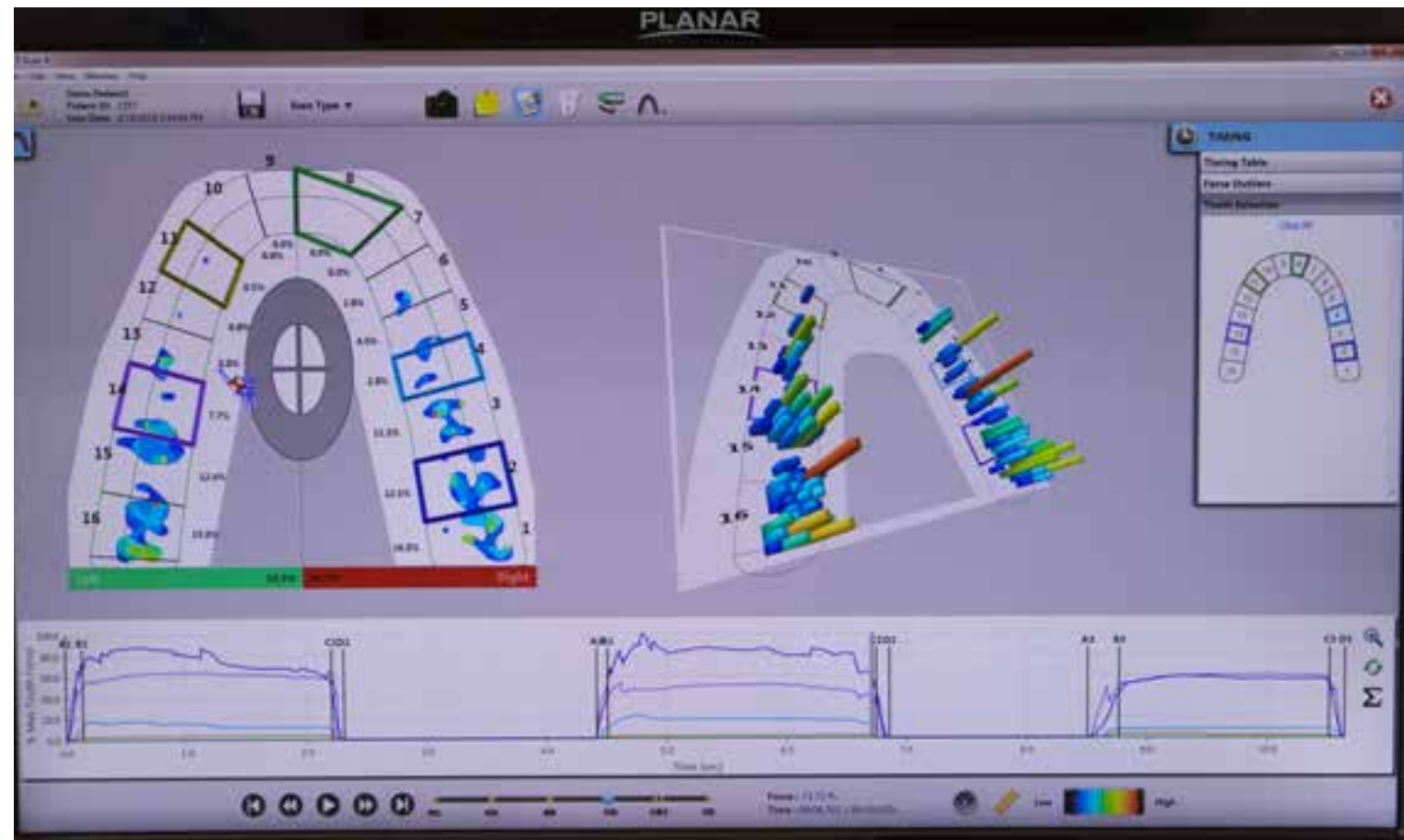
PROSTHETIC / T-SCAN: SEEING IS BELIEVING

Help patients understand the treatment you are proposing. Articulating paper doesn't allow you to visually communicate what is going with the patient's bite. If a patient does not perceive a problem, they will find it hard to believe they need any additional treatment. If they have a problem, you can validate it by reviewing the scan on-screen.

For increased case acceptance and patient commitment, educate your patients by showing them what the naked eye can't see.

"I had a new patient come in thinking his teeth are perfect, no problems. We took Panoramic X-rays and #14 and #15 of his upper left two back molars looked to be abscessed. I used T-Scan and it showed he had a 40% of occlusal force on one tooth. He was very sad that his teeth weren't perfect, but he was looking at the data so he wasn't upset at me. The furthest back crown, the one that was getting the most pressure, had actually broken after he had a root canal done. I designed a different crown that was better, and when he came back for a cleaning and follow-up he told me his teeth had never felt so balanced."

Dr. Lincoln Parker



Splint Therapy and TMD

T-Scan reveals
occlusal instabilities
in patients
undergoing splint
therapy and TMD
treatment.



SPLINT THERAPY & TMD / COMPUTER-GUIDED CARE

No two splint cases are alike. Splint therapy treatment can differ depending on the dentist's preferred treatment modality. Additionally, patients who suffer from TMD and the debilitating side effects are some of the most complex cases in dentistry. With T-Scan's digital bite force data, you will be more prepared to provide your patients with clinical information that will impact their care. T-Scan is a tool that helps you:

- Establish a baseline and continuously monitor occlusion over time
- Reduce tooth mobility to relieve muscle stress
- Fit orthotic appliances properly during the first appointment
- Link occlusion data with EMG systems for further analysis

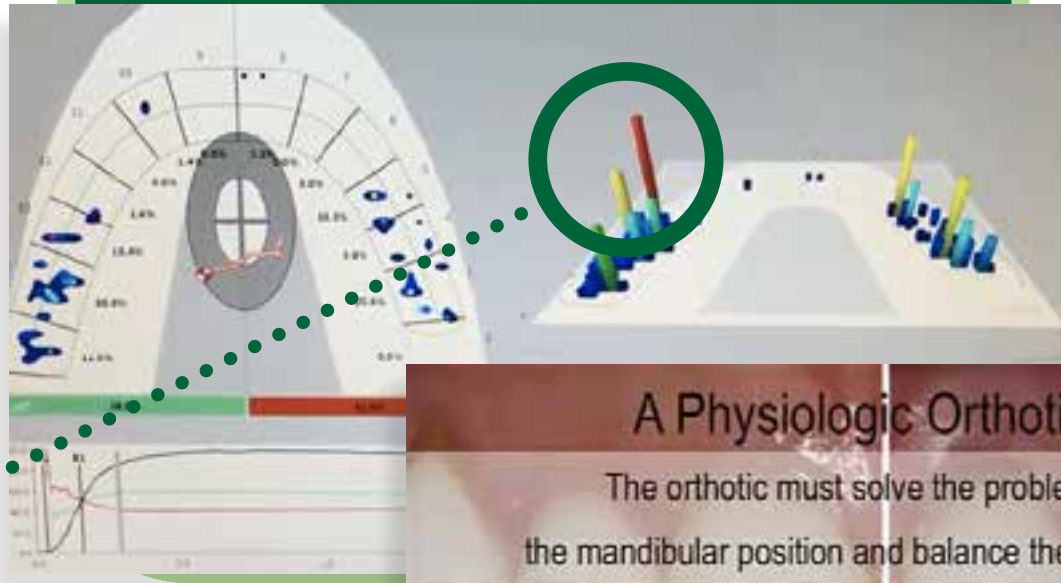
No matter the dental philosophy, T-Scan helps you determine if occlusal issues are behind your patients' TMD issues. Digital occlusal analysis provides confirmation that orthotics/splints are properly constructed and identifies areas where orthotic/splint design could be adjusted.



SPLINT THERAPY & TMD / BALANCING AN ORTHOTIC: A CASE EXAMPLE

Curtis Westersund was fitting a patient (a clencher) for an anatomical orthotic. He developed a protocol using T-Scan in order to achieve the ideal occlusion when the orthotic is inserted. Using T-Scan and articulating paper, he identified noxious contacts in a good, sealed clench and adjusted the orthotic based on what the data told him.

BEFORE

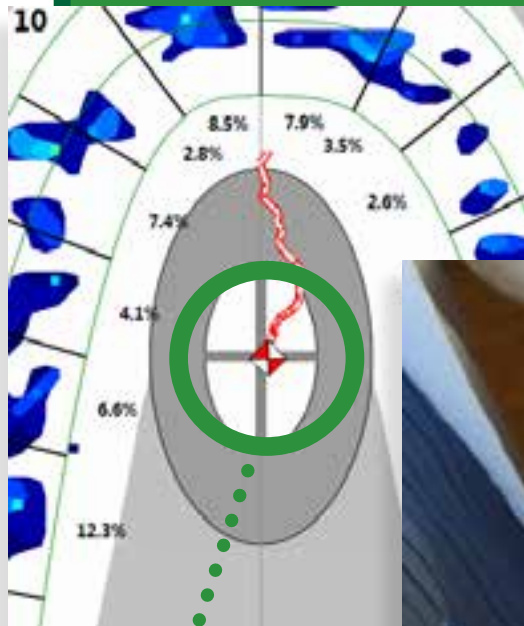


Note the high contact in a sealed clench, indicating a need to adjust the orthotic.



SPLINT THERAPY & TMD / BALANCING AN ORTHOTIC: A CASE EXAMPLE (CONTINUED)

...AFTER



The distribution of forces is more equal across the dentition after adjustments are made.



"New technologies allow us to better understand human physiology and how it is interweaved with bruxism, clenching, and occlusion. I have lots of high tech instruments I use every day: a Cone Beam Cat Scan; two different types of kinesiographs; Ultra Low Frequency TENS for physiotherapy of muscles; a Cold Laser for acute pain. The T-Scan can show us the forces on teeth as they function, and with this information we can clearly see why some teeth are losing bone and gingiva while others are not. Further, we can see why we have clenching and bruxism in the first place, as the occlusal force patterns are clearly displayed on the computer screen before you.

I use the T-Scan everyday in my office: in patient diagnosis, in treatment planning, in functional rebalance of the occlusion, and in the rebalance of my dental orthotics used in TMD therapy. It is so easy to pull out and use that it makes me wonder how I ever worked without one. It's not only another tool in my toolbox; it makes the existing tools better and more effective."

Dr. Curtis Westersund

For the full case, watch the webinar on-demand!: **"T-Scan and TENS: How to Balance an Anatomical Orthotic"** www.tekscan.com/dental



SPLINT THERAPY & TMD: GET IT RIGHT THE FIRST TIME

Strive to make the most of your time by doing things right the first time. The best approach to splint therapy includes using T-Scan to see that splints and orthotics are balanced and comfortable.

"One of the big time savers that we've seen with T-Scan is in splint adjustments. Sometimes you can spend a lot of time adjusting splints, whereas with the T-Scan it's really helped us hone in on where to adjust; doing it quicker, and more precisely, which again has enhanced or sped up the time that we spend in the splint phase so that we can move on with other treatments."

Dr. Ian Buckle

MORE TO OCCLUSION THAN TEETH

Chronic issues can be caused by occlusal interferences—negatively impacting jaw joints and muscle function. T-Scan is the only dental tool that gives you the ability to more precisely diagnose and treat patients with TMD by identifying problems with the occlusion. Dentists have found T-Scan data helpful in treating (and even curing) some of these issues:

- Condyle displacement
- Bruxism
- Clicking
- Popping
- Headaches
- Neck/jaw pain

"Neuro-muscular issues, which can cause headaches and fatigue, are associated with poor bite timing and direction on the posterior. With T-Scan, we can measure this and that's why it's so important to my practice. This piece of technology is the cheapest thing I have ever purchased in dentistry and the return is nearly instant - within a month it virtually paid for itself."

Dr. J. Terry Alford



A Non-Appliance Approach to Treating TMD

A new treatment therapy for treating TMD symptoms has emerged in the past several years. Dentists are now performing computer-aided adjustments instead of using splints. Disclusion Time Reduction (DTR) therapy is a specialized dental treatment procedure that requires the use of T-Scan in tandem with an EMG link, to evaluate occlusal forces in relation to muscle activity.



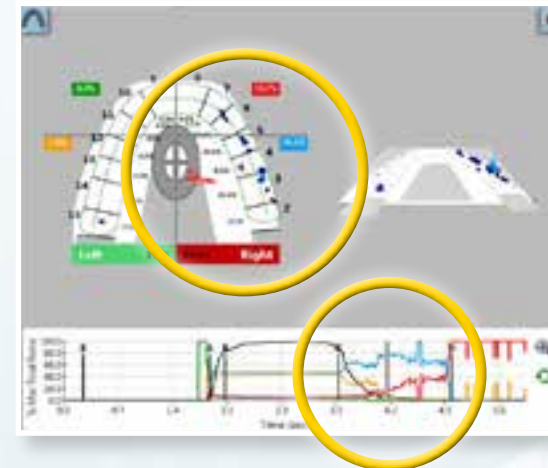
DTR Therapy uses T-Scan digital occlusal analysis data to measure the impact of excursive movements on levels of masticatory muscle activity. The goal is to identify contacts that may be overly engaging during excursive movements, a problem that can lead to hyperactive muscles, breakage, and TMD symptoms. The clinician evaluates the time it takes for posterior teeth to disengage during excursive movements, and correlates the occlusal data to muscle activity in real time.

Using T-Scan to perform DTR Therapy allows the clinician to:

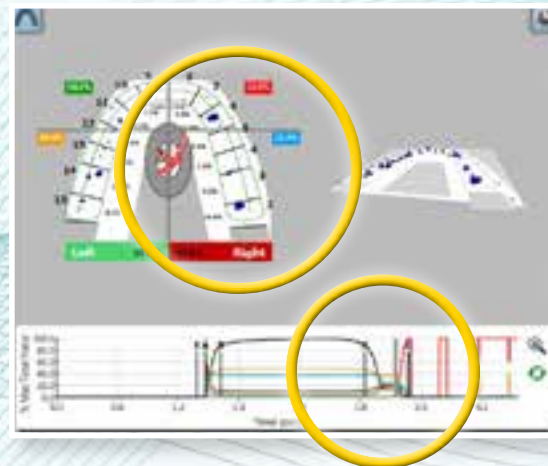
- Identify overly engaged contacts during excursive movements
- Evaluate how muscles are firing during bite cycles
- Verify occlusal contacts that could be contributing to TMD symptoms
- Use data to guide adjustment procedures
- Objectively analyze the timing of disclusion

No matter the dental philosophy, T-Scan helps you determine if occlusal issues are behind your patients' TMD issues. Digital occlusal analysis provides confirmation that prolonged Disclusion Time exists in the TMD patient's occlusion, and identifies areas where the excursive friction could be adjusted.

BEFORE



AFTER



"Now with our latest foray into the DTR and T-Scan, I am seeing some of the mistakes I have made in the past, some of the assumptions that were wrong. With this technology, we are helping people that we haven't been able to help before."

Dr. Rick Coker, DDS, FACE

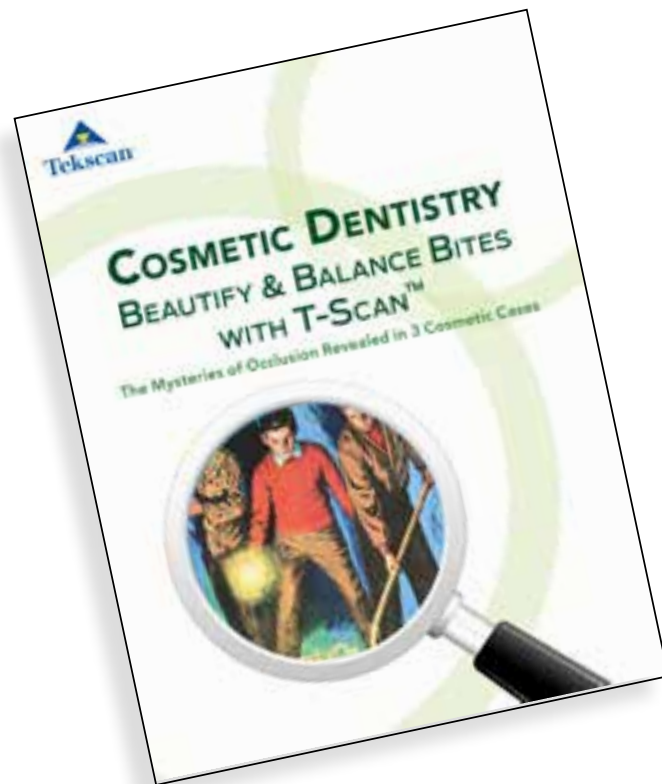
ADDITIONAL RESOURCES



Visit **www.Tekscan.com/Dental** to Download these Free Resources



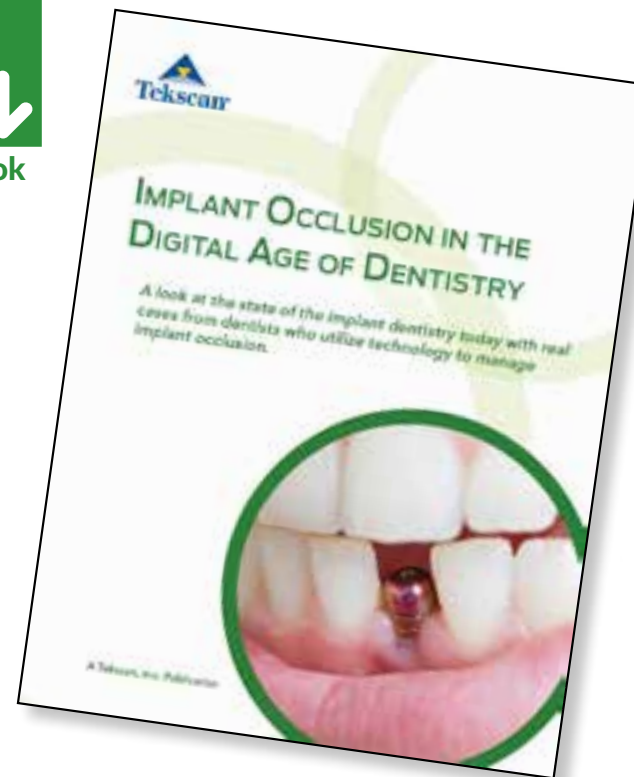
eBook



- Learn different problems that occur in cosmetic treatment, and how T-Scan is used to establish ideal occlusion case studies.



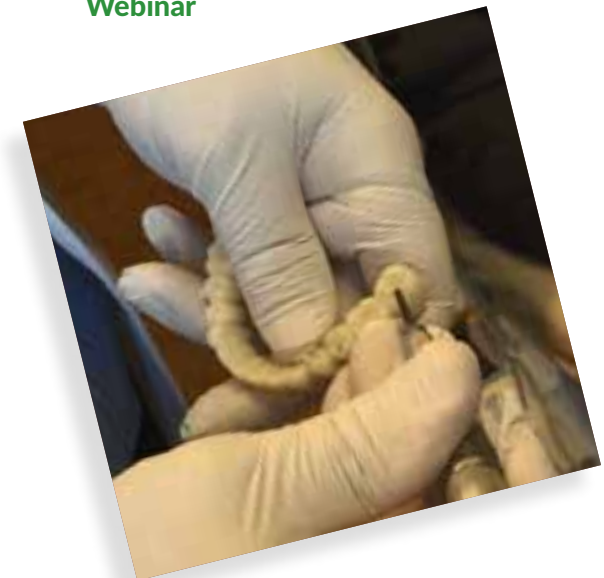
eBook



- Commentary on the state of implant dentistry today, methods of analyzing occlusion, and how T-Scan is impacting implant placement and restoration.



Webinar



- Dr. Curtis Westersund discusses how to use T-Scan in conjunction with TENS (Transcutaneous electrical nerve stimulation) to balance an anatomical orthotic in this informative webinar.

CONCLUSION

How Do You Measure Success?

Occlusion affects everyone. There are so many clinical applications of T-Scan—it transcends philosophies and treatment modalities providing benefits for your patients, treatments, and ultimately, your practice.

T-Scan is the tool you need any time you want to measure a patients' occlusion or make changes to their bite.

Realizing the value of digital occlusion is not the same for every dentist. With T-Scan, you can conquer your occlusal challenges, save time, save money, and communicate treatment paths to your patients that you can't do with traditional methods.

If you're looking for a power tool for your practice, you'll be amazed at the benefits T-Scan can provide.

**Visit www.tekscan.com/dental or call
1.800.248.3669 / +1.617.464.4280
for more information.**