

Full Mouth Fury:

Perfecting the Bite
Throughout a Full-Mouth
Reconstruction Case

An Cosmetic Case Summary Provided by
**Dr. Ben A. Sutter, DMD, FAGD,
FICCMO, LVIF**



BEFORE



AFTER

Table of Contents

- 3 Patient Overview, and Author Biography
- 4 “Eighteen to Twenty-Four Months in Braces Isn’t Going to Work”
- 5 “There was Quite a Noticeable Difference from Pre-Treatment to Post-Treatment, where Even his Gum Tissue Improved”
- 6 T-Scan Measurements Following Reconstruction
- 7 T-Scan Measurements from Follow-up Appointments
- 8 “Honestly, I Sleep at Night Because I Know I have Taken Care of My Patient’s Bites.”
- 9 Ready to Invest in a New Tool for Your Practice?

TEKSCAN DOES NOT PROVIDE NOR ENDORSE MEDICAL ADVICE OR RECOMMENDATIONS. You should not rely on any information on the website as a substitute for professional medical advice, diagnosis, or treatment. You should not assume that the information on this website concerning certain courses of diagnosis or treatment will apply or be successful. The contents of this website are for general informational purposes only. The medical information on our website is provided without any representations or warranties, express or implied. Without limiting the foregoing, we do not represent or warrant that such medical information will be constantly available or available at all or will be true, accurate, complete, current or non-misleading.

The contents of this case study may be of interest to medical professionals or other health care providers. Such persons should exercise their own judgment in determining whether a particular product, treatment, therapy option, procedure, program or service is appropriate or legal for their practice or their patients. Persons proposing to evaluate or use our products for a medical purpose must rely on their own medical judgment and legal advice as to the suitability of our products for such a purpose.

Please see our Terms of Use for other important information in this regard.



All content and images have been provided courtesy of the author.

Patient Overview

In this case, we'll follow a 61-year-old male patient who's an executive with a high stress job. He came into my office for a regular cleaning and my hygienist, who is very aware of occlusal disease, notes that his four front teeth were loose—they wiggle a lot. There's no sign of inflammation or decay, and while he does have a few fillings here and there, nothing stands out as an obvious tooth issue.

But as you can see in Figure 1:

- **There are abfractions on tooth #7, a bit on #8 and #6 has been repaired.**
- **There is also bone loss on #19, and additional abfractions on teeth #20, and #21.**
- **On #30, he has a huge abfraction that's been patched. The patch is still good, however, occlusal factors are clearly taking a toll. At least that's what the signs and symptoms tell me.**

In Figure 2, you can see the teeth opposing the loose front four have some pretty serious wear and tear. Tooth #8 is so thin here that you can actually see right through it.



Figure 1: Initial Examination: Abfractions & Bone Loss



Figure 2: Initial Examination: Wear & Tear



About the Author:

Dr. Ben A. Sutter, DMD,
FAGD, FICCMO, LVIF

Dr. Sutter graduated Rutgers School of Dental Medicine in 2005 and currently has a private practice in Eugene, OR. Since then, he has extensively studied occlusion by completing coursework at the prestigious Las Vegas Institute for Advanced Dental Studies, the Piper Education and Research Center and is a certified Perfect Bite Doctor. He has spent the last 15 years devoting himself to the treatment of occlusion and TMJ Dysfunction.

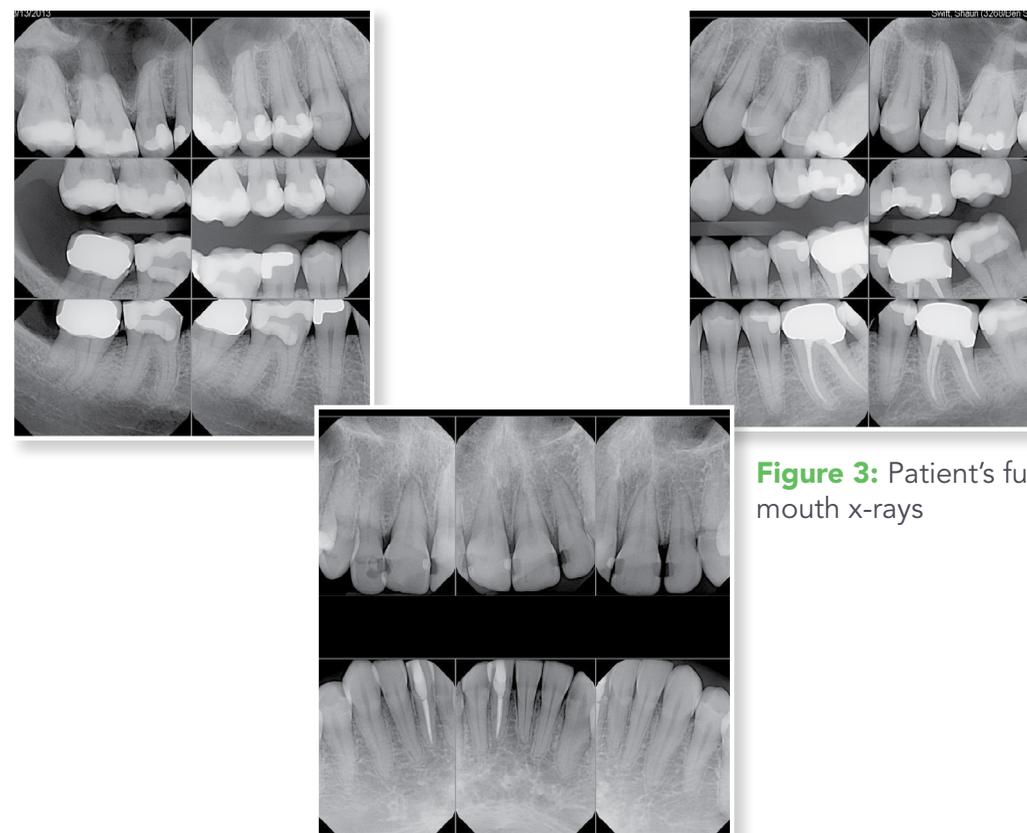


Figure 3: Patient's full mouth x-rays

“Eighteen to Twenty-Four Months in Braces Isn’t Going to Work.”

There’s a faint black line around the root of the tooth called the periodontal ligament—it holds the tooth into the bone. When you compare it to the bottom opposing teeth, there is no widening of the periodontal space. These teeth are not mobile; they’re solid as a rock. The spaces around the front four teeth are filled with elastic tissue, so these teeth do move. In fact, when the patient bites his teeth together, those upper teeth push outward. This indicates there is fremitus.

Teeth #7-10 demonstrated Class 3 mobility which means they’re depressible in the socket. **If you pushed his front teeth upwards, you could actually push them into his skull. That’s how mobile these four teeth are!** Obviously, there is a problem.

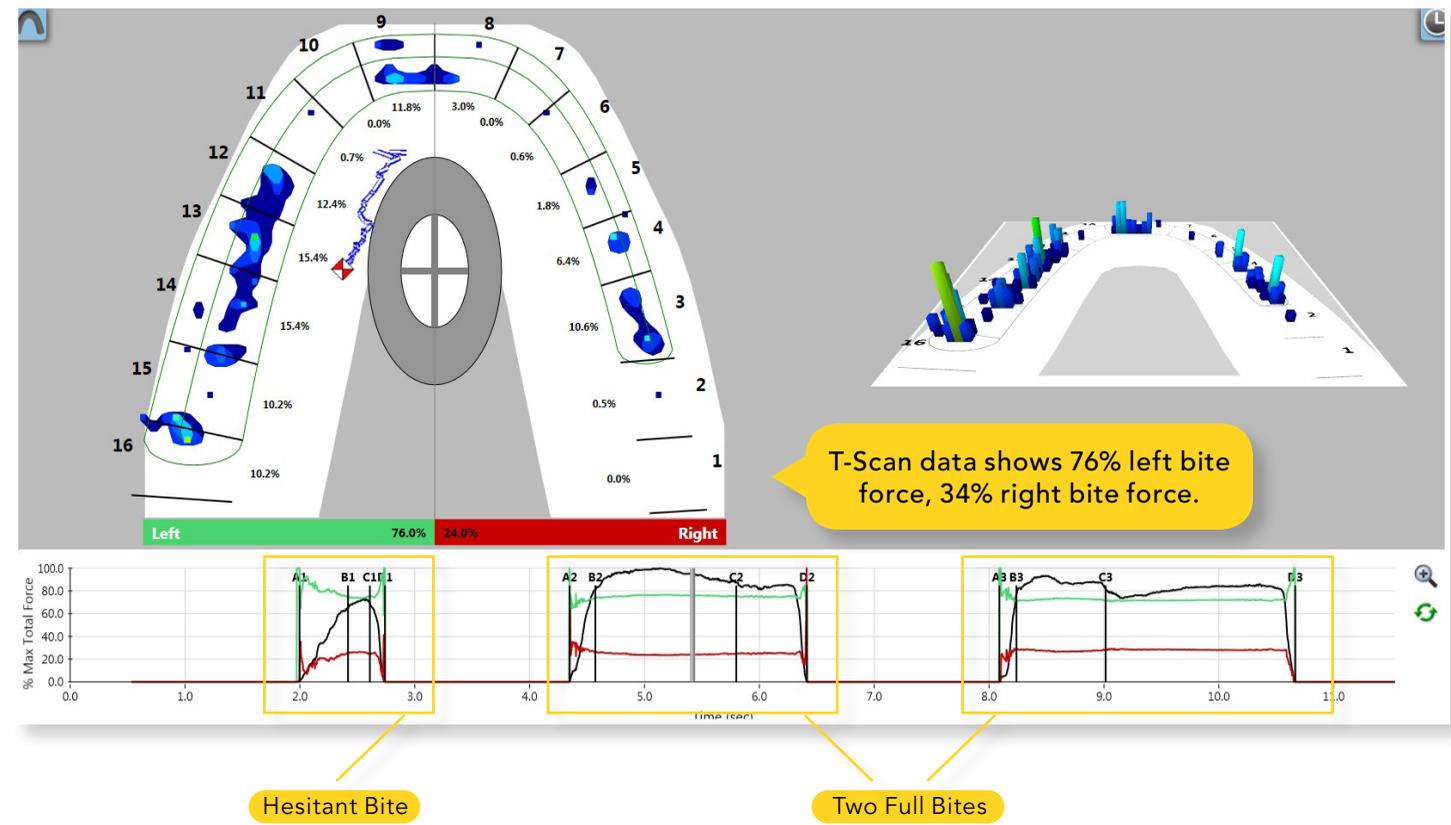
On his upper cast, there is definite ledging present on the lingual aspect of teeth #7-10. These teeth are weak. The patient must choose a treatment course: undergo either orthodontics to create an ideal occlusion, or a full mouth reconstruction. He could also live in an orthotic to take pressure off the four upper anterior teeth, or choose to do nothing, and risk eventually losing these teeth due to repetitive occlusal trauma.

Eighteen to twenty-four months in braces isn’t going to work; he’s a frequent traveler and involved in numerous public speaking events. **Ultimately, he decided on having a full mouth reconstruction, which would provide a lasting correction (because I have complete control over the whole occlusal design) and require less time than undergoing orthodontics.**

At the start of the reconstruction, I used T-Scan to obtain a Multi-bite scan of his habitual intercuspatation. He exhibited a left-sided bite force discrepancy that was consistent across all three intercuspatations. Typically, the first time a patient occludes onto a T-Scan sensor, the patient can be hesitant, as they feel they might break it, so they don’t bite down completely during the intercuspatation. However, the next two closures were definitely symmetrical, showing the same occlusal data.



Figure 4: Static bite test taken with T-Scan on the patient’s reconstruction start date.



Note the anterior portion of the T-Scan force data, where the patient is occluding directly on the lingual cervical ledges, which is why his front teeth are mobile. Also, note that the left side receives 76% of his overall bite force, which is definitely problematic.

“There was Quite a Noticeable Difference from Pre-treatment to Post-treatment, where Even his Gum Tissue Improved.”

First, I built him a removable appliance that kept his upper front teeth out of contact with the opposing teeth, so they could start to heal (Figure 5). We transferred his bite force to the posterior teeth, where it would be more evenly distributed from right to left. Over time, his teeth began to heal and tighten up. This improvement helped the patient to move ahead with definitive restorative treatment.

To start, we took impressions and a bite registration in order to thoroughly track his occlusion throughout the process. I replaced his top teeth with porcelain (Figure 6). I wasn't convinced he was completely healed yet, so we held off on his lower teeth.

We fixed a tooth shaped orthotic onto his lower teeth, which would not dislodge during chewing. This prosthesis allowed the whole system to heal. A fixed orthotic ensures the occlusion will align properly. A removable appliance is only therapeutic when a patient is wearing it—take it off and the patient would once again be occluding on his weakened front teeth.

After further healing, the lower arch was reconstructed and restored with porcelain. The patient stated this felt good. The mobility was gone, such that the anterior teeth firmed up because they were not taking the brunt of his occlusal force. There was quite a noticeable difference from pre-treatment to post-treatment, where even his gum tissue had improved (Figure 7). This is a really nice end result.



Figure 5: Patient fitted with removable appliance to avoid damaging tooth contact.

Figure 6: Top teeth replaced with porcelain; orthotic fixed into lower jaw.

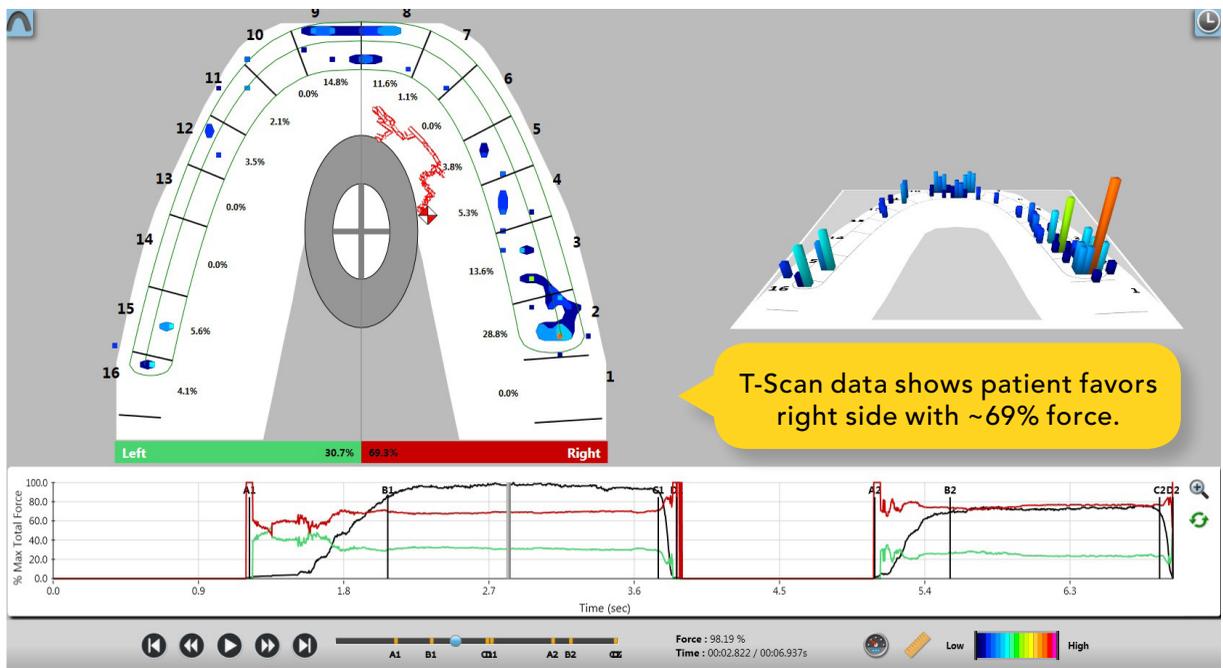


Figure 7: All 28 teeth replaced with porcelain; shows gum tissue improvement.

T-Scan Measurements Following Reconstruction

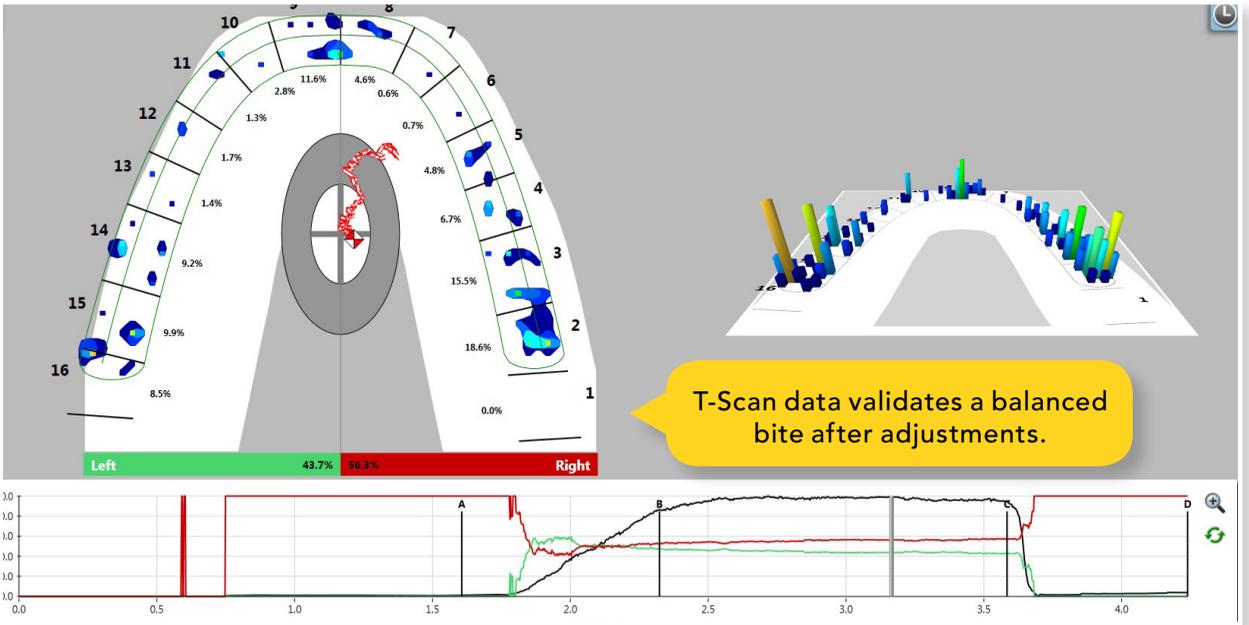
SCAN 1

This is the day of lower teeth porcelain replacement. At this point, the patient believed he was occluding more to the left (which is what you would expect). However, he was actually favoring the right side that concentrated 69% of his bite force.



SCAN 2

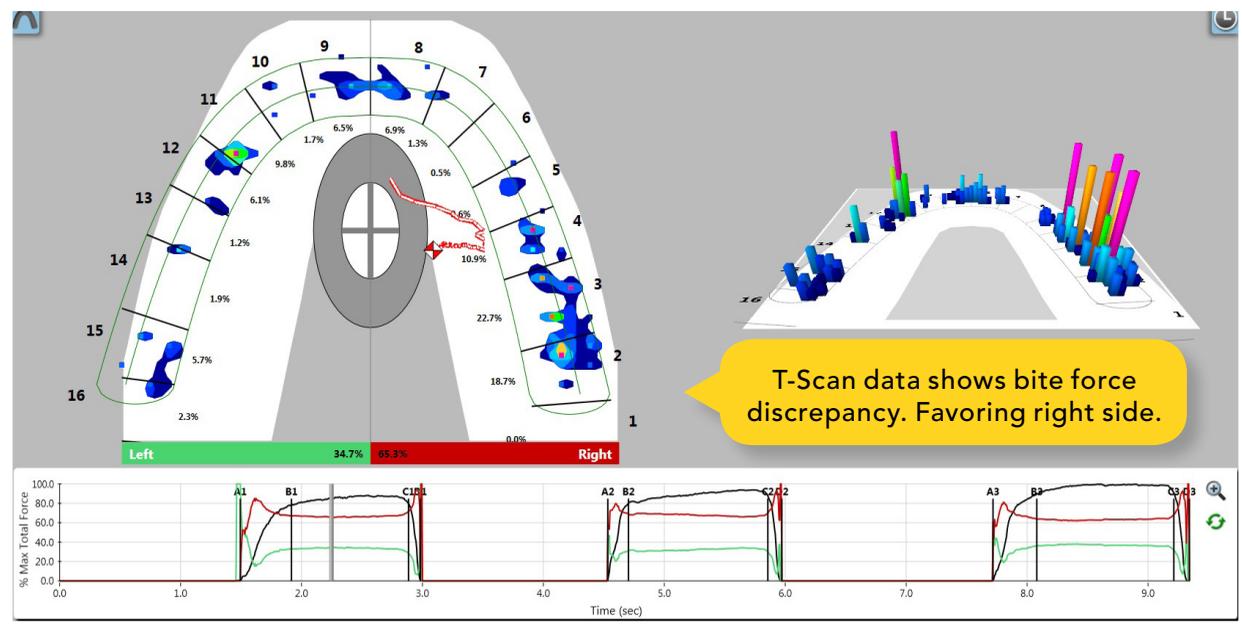
We took this scan 19 minutes after Scan 1, which showed that **the Center of Force was fairly even bilaterally**. I couldn't believe it. I actually called up my colleague, Dr. Robert Kerstein, and was elated to report that I had just inserted a whole lower arch and completed the occlusal case finishing in 19 minutes.



T-Scan Measurements from Follow-up Appointments

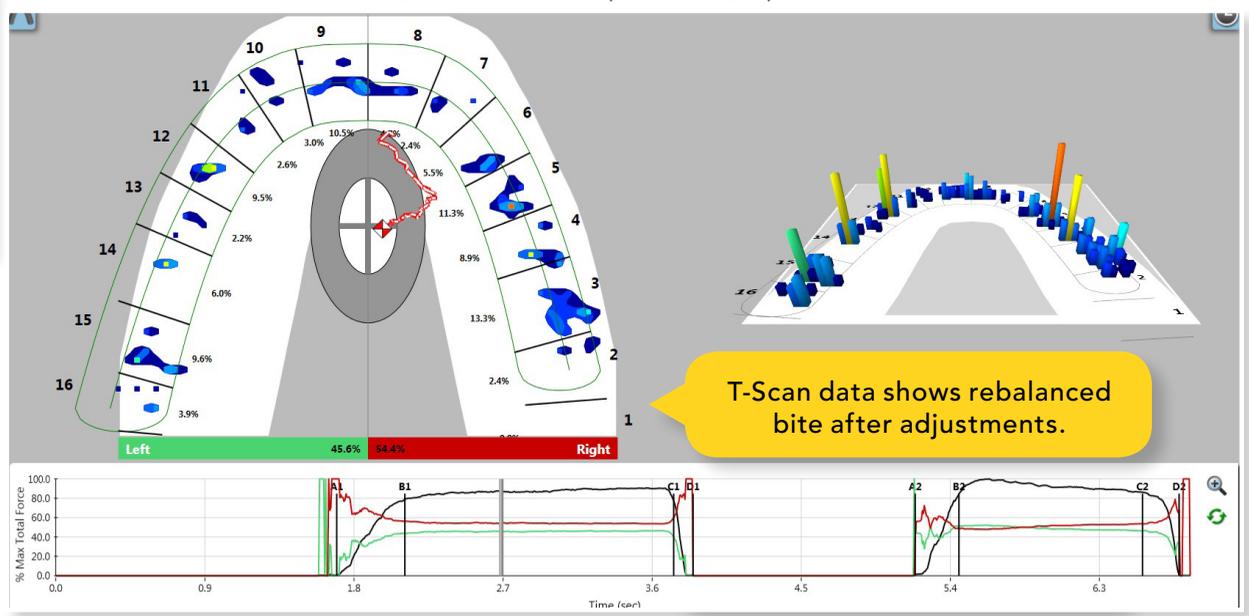
SCAN 3

This scan was taken during a follow-up appointment six months after our initial scans. While the patient reported his bite felt great, **we discovered he had reverted back to favoring his right side**. He reported he could feel the discrepancy, but that he hadn't broken anything, and had no noticeable symptoms.



SCAN 4

Once again, following further T-Scan refinements, within 20 minutes his occlusion was back to where it was after our initial treatment. In general, I prefer to keep the left-to-right arch half-force distribution within a range of about five percentage points.



“Honestly, I Sleep at Night Because I Know I have Taken Care of My Patient’s Bites.”

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 occlusal measurement technology. Occlusion gets sexy fast when Disclusion Time Reduction (DTR) rids patients of pain and provides immediate results.

Honestly, I sleep at night because I know I have taken care of my patients’ bites. In fact, most of my patients will never need to wear an orthotic again because they don’t clench and grind. The point is this: the bite is fixed.

Figure 8: Pre-treatment and Post-treatment photos.



A FOLLOW-UP Q&A WITH DR. BEN A. SUTTER

Did you use articulating paper in conjunction with T-Scan to measure the bite?

Of course I use paper marks as well. I have to know where on the tooth these points are touching and where exactly to adjust them in the mouth. I definitely use articulating paper, I just don’t rely on it solely.

Is there a specific brand of porcelain you’d recommend for tooth replacements?

It doesn’t really matter what you use. If the bite is right, you could essentially build this in empress (which is glass). I used Emax on my patients—these replacements are a more yellow/warm golden color at the gum line, and then as you move toward the incisal edge, it lightens up. Then when you get right at the edge it has a bit of translucency to it. These aren’t block-like monochromatic replacements. I personally like things to look more natural. For me, as a cosmetic dentist, that doesn’t look natural, and that’s not a true representation of what I try to build.

T-SCAN: DENTISTRY'S ONLY VALIDATED DIGITAL OCCLUSAL ANALYSIS TECHNOLOGY



T-Scan has over 180 articles and two research textbooks (encompassing five volumes) proving its effectiveness



T-Scan has a global network of KOLs that make the technology an important part of their practice



T-Scan is affiliated with several respected CE Partners serving the dental industry, including:



DIGITAL OCCLUSION SEMINARS
Patient Focused... Technology Driven Learning

Contact us today to discuss adding T-Scan to your practice!

www.tekscan.com/t-scan

+1.617.464.4820

