

Fast and Precise

Guided Surgery Unites Restorative Dentists and Surgeons

BY DANIEL VELINSKY, DMD

After working for 25 years as a general dentist, I wouldn't have said I was bored. Almost all of the cases I was doing were challenging and interesting. The town where I practice is a wealthy retirement community in Florida, not far from Palm Beach. It is home to a large senior community, with many patients who are in need of major reconstruction and dentures. While serving my patients, I gained in-depth experience in both dentures and implant reconstruction. Another thing that kept me from stagnating was my dedication to staying on the cutting edge of technology and knowledge. I attend more than 100 hours of continuing education every year.

Still, at age 55, I had been doing the same things for so long, I sometimes felt like I was on autopilot. Building my practice was no longer on my agenda. Instead, winding down and eventually retiring increasingly preoccupied my thoughts. But, two years ago, Nobel Biocare developed NobelGuide™ guided-surgery technology. This new technology renewed my interest in practicing.

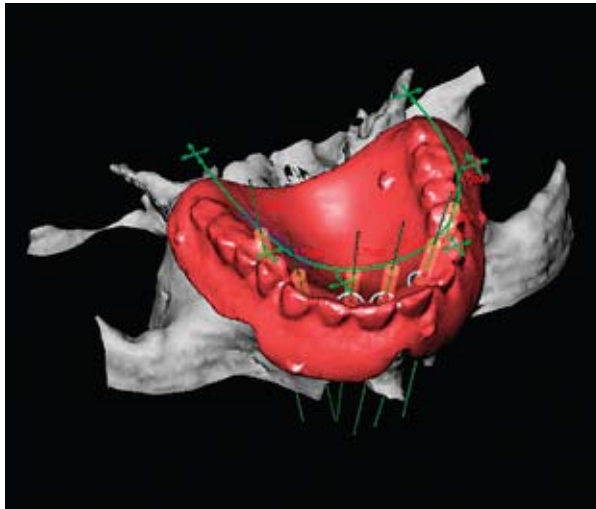
The NobelGuide technology uses information from CT scans to create sophisticated three-dimensional computer models of patients' alveolar bone, soft tissue, and other oral structures. Implants then can be placed virtually in the computer models, and the placement can be refined until the esthetics and function have been optimized. Once the placements have been planned virtually, a surgical guide can be fabricated to allow for the placement of actual implants. This guide controls the placement so precisely that the need for a surgical flap can be eliminated.

Although I was initially interested in the new technology, I've always been adamant in my

conviction that implants should be placed by surgeons and periodontists. While I'm perfectly capable of drilling a hole and placing an implant, I also am aware that medical and surgical problems can develop very rapidly and unexpectedly. A patient may suddenly stop breathing, a sinus may perforate, bleeding can become uncontrollable. My training for these situations is good, but I feel it is in the patient's best interest to be in the hands of a surgeon who deals with these

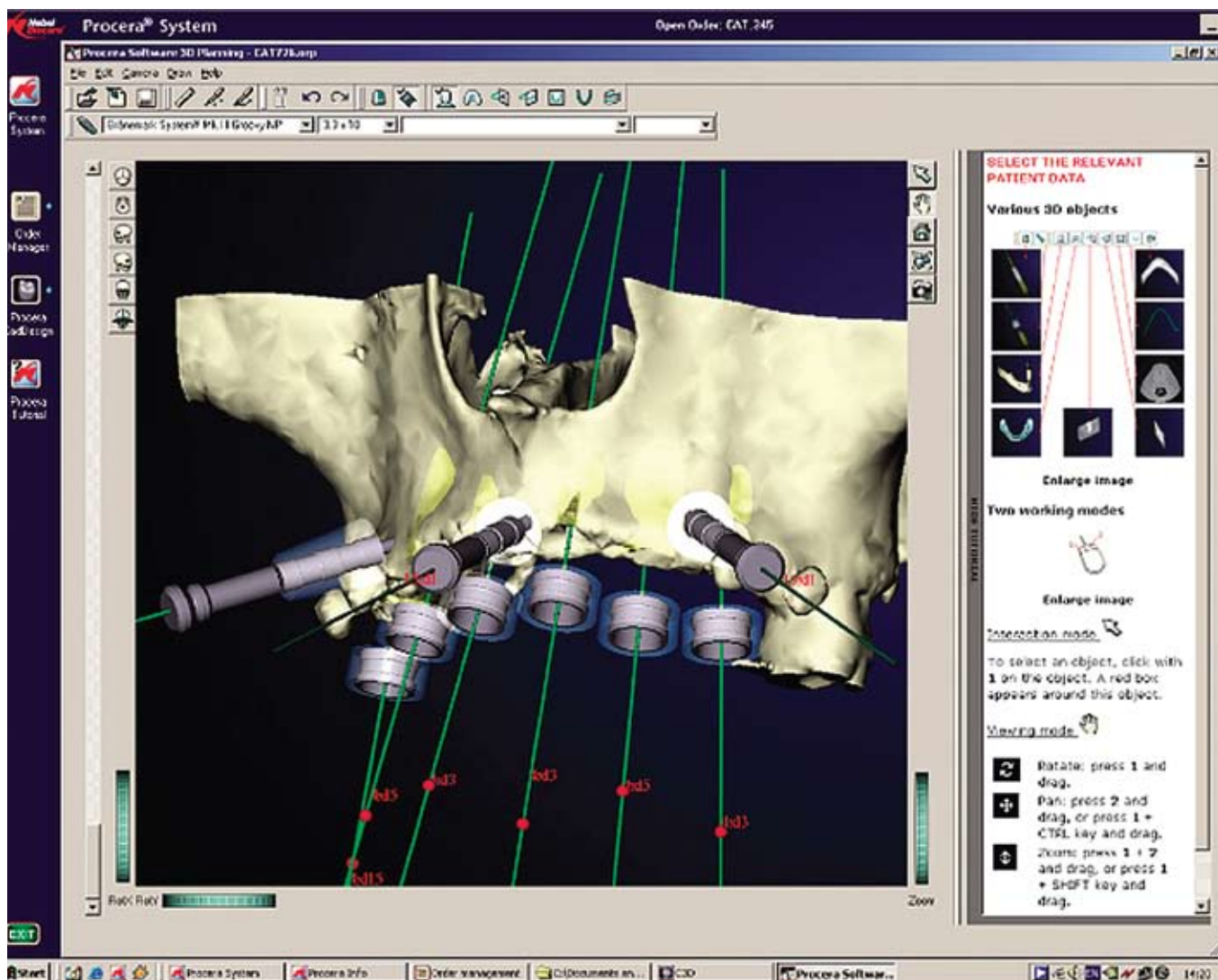
issues on a daily basis. I also believe that there may be legal implications if a problem occurs.

The oral surgeons with whom I work place implants under my direction. That wasn't always the case. In the early days of implant surgery, restorative dentists simply had to make do with the implant placements their



patients were given—often with unfortunate esthetic results. It took a while, but it was finally realized that you have to know where you are going or you'll never arrive. Although the surgeon still may be driving, the restorative dentist must be the navigator in implant surgery. Implant dentistry and guided surgery must be driven by the restorative goals to assure total success.

I believe the NobelGuide approach has the capacity to strengthen the symbiotic relationship between oral surgeons and restorative dentists. I work very closely with two surgical groups. When I talked to them about this new technology, one of the surgeons was immediately excited. He and I traveled to Pennsylvania to study with Tom Balshi, DDS, FACP, the developer of the Teeth In A Day® concept. After we returned and began using the guided surgery approach, it did not take long for the other surgeons to appreciate its potential. Additional trips



View of three-dimensional surgical plan showing guided sleeves and guided anchor pins.

to Pennsylvania followed.

Now I take a CT scan of virtually every implant patient with whom I work. The information from the CT scan, combined with the Procera® software, enables us to place and restore implants in areas that we would not have been able to access in the past because we wouldn't have known if the bone density was adequate or because we were concerned about hitting a nerve. Now we perform virtual surgery, make a surgical guide, and place the implant very close to the nerve structure—comfortable in the knowledge that the nerve will not be

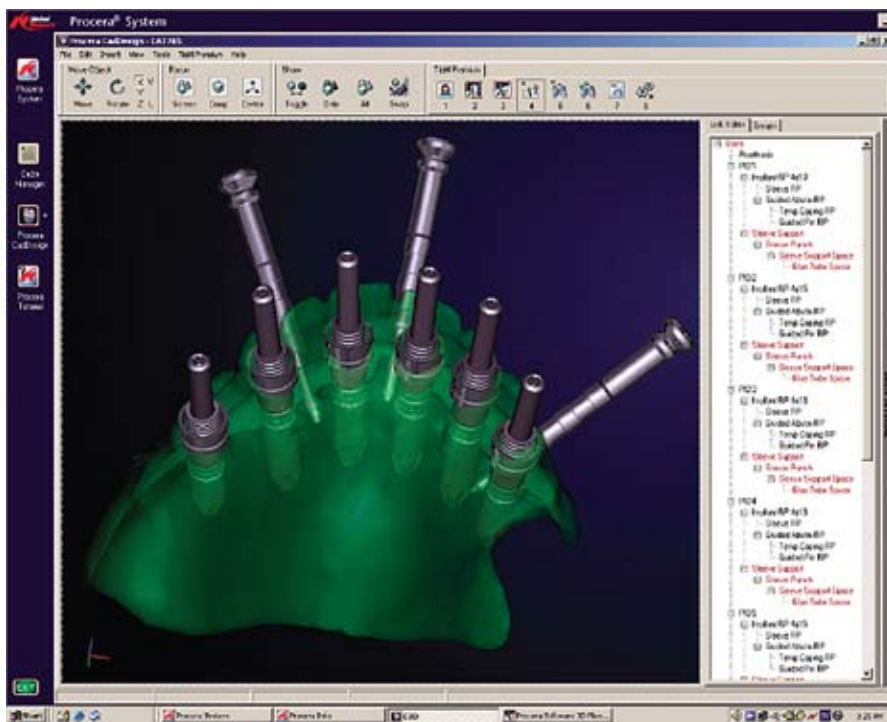
impinged upon. We recently completed a case for a patient who was scheduled for hip bone grafting of the upper jaw prior to implant placement. We saved the patient from having three surgeries and an extra year of treatment. The case was accomplished solely due to using the CT and virtual surgery (using Procera software) to find and use his present bone. We presently can do more cases with less morbidity.

My team actually performs two virtual surgeries on each patient. After a CT scan is obtained, we complete the virtual surgery independently. We then sit down, put the two computers

next to each other to compare and discuss what we've done, and determine a way to combine the best of both specialties.

Having the guide ensures that the surgeon will later be able to accomplish the precise placement we've agreed upon and allows me to construct the teeth ahead of time. Here's the key: When we use this approach, we only need to use the surgical guide stent to place a small hole in the gingival tissue and place the implant. As a result, there is less morbidity and

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Translucent view of the surgical template.

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healing time is reduced significantly compared to traditional open flap surgical placement.

On the day after surgery, I always videotape my patients' responses to a series of questions. I ask them if the surgery was what they expected, and they consistently say it was easier. I also ask patients to rate their pain experience on a scale of one to 10 for the previous night; the highest score I've ever received was a three. Finally, I ask about the pain they currently are experiencing, and the highest response I've ever received was a one. Some people have even given me negative numbers.

Over time, I've found that these taped interviews help to overcome the concerns of new patients regarding implant surgery. My entire staff also has learned to work as a team to educate prospective implant patients about their options. Everyone on the staff has observed at least one NobelGuide surgery. They all have been trained to answer any question a patient has, and we have developed an excellent informational package and a Web site,

which allows patients to read about implant surgery before they visit the office. During office visits, patients are presented with a series of short, easily understandable PowerPoint presentations, along with models and other supplementary videos. Later, they talk with a staff member who explains their financing options. We've found it valuable to use third-party vendors like CareCredit to help patients with expenses.

The financial impact of CT-planned, guided surgery has been dramatic. My gross earnings this year will be 33 percent more than last year. I work four days a week and feel that the more guided surgery I do, the more my work week will shrink. From a business perspective, guided surgery provides a higher dollar value per patient.

Yet, for me, it's not really about the money; I made a comfortable living two years ago. What most excites me about the guided surgery approach is what it lets me do for my patients. I want to provide

patients with the best outcomes available—and I hate failure. I'm willing to do whatever I can on the front end to prevent failures.

The bottom line is that we're placing implants with less morbidity for the patient, a higher success rate, and a shorter overall treatment time. Guided surgery has virtually guaranteed precision implant placement each and every time. That makes it easy for me to give the results I want to my patients—the highest levels of health with the lowest levels of discomfort. ♦

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