

Perspective

For experienced surgeons, dynamic surgical navigation offers improved outcomes and other benefits

Beyond Static Guidance

Taking the leap and investing in dynamic surgical navigation can bring a lot of opportunities to the dental practice, and it can also dramatically increase clinicians' efficiency, predictability, and confidence during implant surgery. Clinically, drilling through a static guide has the potential to be problematic regarding irrigation and the risk of overheating and damaging the osteotomy site, which obviously leads to poor outcomes. But with navigated surgery, surgeons can rely on the dependability of well-irrigated, visualized surgical sites and tactile feedback, especially in tricky immediate implant cases.

Both of us have been performing guided implant surgery using static guides for about a decade, and we both introduced dynamic surgical navigation into our practices about 2 years ago. Static surgical guides have been evolving since their inception, and this technology is an extension of that evolution. One of the primary benefits of utilizing dynamic surgical navigation is the freedom that it imparts to surgeons. It allows them to pivot very easily in real time. Surgeons rarely have to make large surgical flaps in order to achieve access for these types of surgeries; however, dynamic guided surgery has really helped us to be even less invasive with minimal to no flap reflection. We really have become more flapless in our cases. It's wonderful to have the ability to deliver a guided surgical result without having to drill through a static guide and deal with the additional vertical clearance, but the big advantage of using dynamic surgical guidance that makes immediate implants and flapless surgery more predictable is the ability to see the 3D position of the entire drill and implant in real time. With dynamic surgery, surgeons do not need to reflect a large flap just to see the position of the implant because the implant shoulder can be seen on the computer screen. This can lead to better soft-tissue management and preservation of gingival esthetics.

This technology is both empowering and fun to work with; however, the learning curve should be noted. Experienced surgeons and vendors have suggested that it takes approximately 10 cases for new users to get comfortable with the technology. We agree that completing 10 cases will certainly provide for a better comfort level but maintain that

something really clicks with the overall workflow after about 20 to 25 cases. A higher degree of interest in the technology can certainly help with the learning curve, but practice is definitely needed. Learning to use dynamic surgical navigation is like learning a sport, language, or anything else that's new—it takes some perseverance. And similar to any other procedure performed by surgeons, it's important to begin by practicing on models. Then, when it's time to introduce a live patient, always try to start with a simple case, such as one in which there are no adjacent teeth and there is adequate surrounding alveolar bone.

Being less invasive and having more freedom to make adjustments in real time during implant placement are excellent benefits; however, implementing dynamic surgical navigation can help your practice beyond improving clinical outcomes. Using these types of systems can also improve both collaborative efforts and communication between referring clinicians. In addition, when patients see high-end technology in the office, they are put at ease and feel assured that their caregivers are using the most modern methods to provide them with the best possible outcomes.

It is important to view dynamic surgical navigation as a tool that can make good surgeons even better. If you are beginning your journey into placing implants, learn how to perform the surgery freehand well before attempting to implement guided surgical protocols—dynamic or static. Developing a good surgical technique is still the main pillar of successful implant surgery, and relying on the technology without first mastering the underlying clinical skills will lead to an inability to navigate (no pun intended) any problems when things do not go as planned. Once you've acquired the necessary skills, dynamic guided surgery will help you to safely and routinely get the best results. For any clinicians who are considering implementing dynamic surgical navigation technology into their implant protocols, the best advice that we can offer is to make the switch to dynamic guided surgery sooner than later.



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