CASE PRESENTATION

Find What You Can't See and Restore with Simplicity

Using the latest in caries detection technology and restorative materials to produce an esthetic restoration with ease

When I bring new technology into my practice, my regular patients are never surprised. They expect it because they know that I’ve built my practice around technology that improves patient care and increases efficiency. New patients, however, are blown away by all the technology. And that’s a good thing, because I know that when they go home they’ll tell their family and friends.

Early Detection

CariVu, the caries detection device from DEXIS, is one of those products—my regular patients expect to see this technology and the images it produces, and my new patients are blown away by it. And I’m a little blown away by it myself. One of the biggest issues we face in dentistry is that we often can’t see what we need to see. If we can’t see decay, we do our patients a disservice. With CariVu, I’m able to detect decay early, explain it to the patient, and provide minimally invasive treatment that preserves tooth structure and saves chair time.

Case Study

The patient, a healthy woman in her early 40s, presented to the practice for a regular exam. Her radiographs showed no signs of decay on teeth Nos. 4, 12, 13, or 30. I use CariVu on most patients because I never know what I’ll find—or what I would have missed if I didn’t use it. So, that’s what I did in this case. Now I could clearly see a black diffuse spot. I showed the CariVu images to the patient and explained that what we were looking at was caries that should be treated as soon as possible. I also explained that because we were able to detect the decay earlier than we would have if we relied only on a radiograph, our restorative technique would be minimally invasive. The patient agreed to return in a few weeks for treatment.

On the day of the restorative procedure, after administering local anesthesia (Carbocaine, Septodont USA), I placed a Triodont V3 Ring and WedgeGuard (Ultradent). I then prepared the tooth with a small diamond bur (Microcopy). Using the CariVu image as a guide, I was able to go right to the spot of decay, rather than easing into it millimeter by millimeter, thus reducing the amount of natural tooth I removed. I then used a caries indicator to make sure no decay was left behind.

Next, I used my typical bonding technique and cured the bonding agent. I had two composite options for this case: flowable or universal nanohybrid. The best choice for this case, in my opinion, was a universal nanohybrid (Harmonize, Kerr Restoratives). It handles nicely, polishes well, and blends in with the surrounding tooth structure. Following the manufacturer’s instructions, I placed the composite and then cured and polished the restoration. Because I was able to remove so little tooth structure, no bite adjustment was needed.

The patient was pleased with the outcome and the procedure itself. She liked that because we found the caries early, little prep was needed and the procedure was quick and easy. She also was pleased with the restoration itself because it blended in with her other teeth.
Patient Pleasing

Using the right technology and the latest generation of restorative materials can make a huge difference in how you practice. In the case of CariVu, I easily jump the first big hurdle, which is finding what I might normally have missed. After that, the rest of the hurdles are a piece of cake—showing and explaining what I’ve found to the patient so that he or she accepts treatment, and then performing a minimally invasive procedure that saves both tooth structure and time. In the end, I’m pleased and—most importantly—so is the patient.

Figure 1—A woman in her early 40s presents to the practice for a regular exam. There is no evident decay upon visual examination.

Figure 2—No decay is visible on the radiograph.

Figure 3—CariVu image shows a cavity.

Figure 4—Tooth is ready for preparation with a small diamond bur (Microcopy).

Figure 5—Triodont WedgeGuard (Ultradent) is placed to protect adjacent teeth and preparation begins.
Using the CariVu image as a guide, we were able to easily find the exact location of the decay, minimizing the amount of tooth structure removed.

The preparation is complete and the Triodont WedgeGuard is removed. The adjacent tooth is untouched.

Final preparation is ready for restoration.

The Triodont V3 Ring is in position before beginning the final steps of the restorative procedure.

Final Harmonize composite restoration placed. It blends in with the surrounding tooth structure.
MINIMIZE IT!

Minimally invasive dentistry begins with prevention. Educating patients so they can perform good home hygiene, ensuring they come in for regular exams, and implementing preventive treatment can stop caries before they start. However, dental professionals can’t always prevent all decay, so the next step is tissue preservation. And that requires technology and techniques that allow the early detection of decay and then treatment by removing as little natural tooth structure as possible.

Tools like caries detection devices go beyond traditional radiographs, using the latest technologies to detect early-stage caries that are often missed by x-rays and to produce images that educate patients so they understand their condition and the need for treatment.

With the right technology and restorative materials, dentists can preserve more natural teeth. Take the time to learn about the products that can help you protect your patients from needlessly invasive treatment.

GO-TO PRODUCTS USED IN THIS CASE

CARIVU

With dental x-rays, what you see is not always an accurate snapshot of what is there. Instead of watching a suspicious area that appears on a radiograph, such as hard-to-detect interproximal decay, it’s possible to get a more in-depth view using Carivu—a compact, portable caries detection device that uses transillumination technology to identify carious lesions and cracks.

Carivu images read similar to the familiar x-ray image. The tooth is bathed in safe, near-infrared light to make enamel appear transparent. Porous lesions, even those in the beginning stages, trap and absorb the light to appear as dark areas on the image. This minimizes the learning curve, as there’s no color coding or numeric indicators to memorize. Carivu can be used during routine prophylaxis treatment to help hygienists identify questionable areas and decide on a course of preventative care.

HARMONIZE

Treatment of carious lesions and cracks should be as simple as the diagnosis. At the core of Harmonize nanohybrid universal composite is Adaptive Response Technology (ART)—a nanoparticle filler network that helps clinicians achieve lifelike restorations with ease and simplicity. The ART of Harmonize offers better blending capabilities and enhanced structural integrity to ensure restorations are both strong and esthetic.

The unique filler particles refract and diffuse light in a way that closely resembles enamel, providing a chameleon effect on the tooth for enhanced esthetics. Harmonize is more reactive with resin for better polymerization, leading to increased strength and durability. Its adaptive viscosity allows for easier sculpting and holding power to reduce the time needed for trimming and finishing.

Disclaimer: The opinions expressed and procedures described are those of Dr. Snyder. DEXIS is a medical device manufacturer and does not dispense medical advice. Clinicians should use their own judgment in treating their patients.