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Premium vision series

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What surgeons and patients gain from a combined premium cataract suite

by Jeffrey Whitman, MD

High quality cataract surgery outcomes flow from a cascading series of decisions. You want the very best equipment because you want the least inflammation. The VICTUS® femtosecond laser (Bausch + Lomb, Bridgewater, N.J.) gives me consistent capsulotomies, which leads to a better lens position when I am putting in my Crystalens® AO (Bausch + Lomb), and that leads to better results. Since using the VICTUS® laser, I have achieved more J1 and J2 results with excellent distance vision than I ever saw with my manual procedures. The overall effect leaves me more likely to meet or exceed the expectations that we set for the patient.

The difference for me starts with the advanced swept source OCT (optical coherence tomography) imaging system and updated software for the VICTUS® femtosecond laser. The VICTUS® is the only femtosecond laser offering real-time advanced swept source OCT. I've achieved more than 99% free-floating capsulotomies, which is pretty unheard of with most available technology; it also allows very fine focused OCT of the locations where I'm going to place both my arcuate incisions and entry incisions. It allows me to drop and draw. I can look at the depth to which my limbal relaxing incision is going, and if I want it a little longer I just point to it with the cursor and pull it down a little farther. For me, the technology has simplified the procedure on one hand but also increased the accuracy.

Other innovations include the availability of multiple patterns for lens fragmentation. This lets us break up soft cataracts, medium cataracts, and hard cataracts more efficiently, which provides greater utility.

But how do these various Bausch + Lomb technologies come together to complement each other? One example is the ability to create any type of opening for cataract surgery to fit your equipment, which in my case is the MICS handpiece for the Stellaris® system (Bausch + Lomb). The perfect fit for my phaco handpiece is a 1.8 mm incision, minimizing wound leak, which is a big advantage. Those two dovetail nicely and each step builds on the other. If I can get a beautiful, clean removal of both the cataract and the cortex and have Storz® instruments (Bausch + Lomb) like the capsule guard and the Whitman Toric Marker to help me clean the capsule or give a mid-peripheral toric mark, it is easier to line up any type of toric lens implant. It's pretty amazing how these tools seamlessly work together.

VICTUS® femtosecond laser

Another way the equipment works together is in helping me to meet patient expectations. Patient expectations are frequently high when it comes to premium lenses. You want the very best equipment because you want the least inflammation and the most precise results. Those benefits to cataract surgery start with the VICTUS® system. In my experience with the femtosecond laser, I can breathe a sigh of relief because I know it is going to be an easier case, with faster cataract removal, less inflammation, and that most patients are going to see better, compared to a manual approach.

We talk about optimizing outcomes for premium lens patients. I truly believe my best outcomes are from using the VICTUS® laser to produce those results, and that is why I suggest it for every one of my patients.

Another advantage from using the combination of Bausch + Lomb products is the efficiency gains they can provide. The higher percentage of times that we hit our goals for premium lens patients provides several advantages: less inflammation, quicker healing, and achievement of best vision quicker than I experience in my non-femto cases. These results stem directly from the combination of the Orbscan® IIz analyzer (Bausch + Lomb) topography for aiding in lens calculations, VICTUS®, Stellaris® system, and high technology lens implants, like the Trulign® Toric and enVista® IOLs (Bausch + Lomb). It's the complete portfolio and not just the premium lenses that gives us better offerings for our patients and increases our chances for 20/happy patients. New technology should not mean giving up on efficiency in the OR. Using the VICTUS® femtosecond laser, I can

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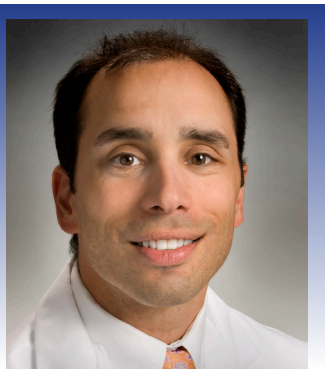

Versatility across multiple applications

by Michael Endl, MD

I received the first U.S. VICTUS® femtosecond laser (Bausch + Lomb, Bridgewater, N.J.) around Labor Day 2012, and it was wonderful. But like any computer-driven system, there was room for improvement.

There were certain steps—like the little rest it would take between the lens fragmentation to the corneal surface portion—that I wished could speed up a bit, for instance.

The latest upgrade has not only sped up those steps, which can contribute to improved patient comfort, it has also added swept source OCT, which is a live streaming imaging technology with much higher definition and allows the surgeon to see where the eye is at all times.

All of the other technologies are taking snap shots that may be repeated but are always a few moments behind. In the meantime, the patient's eye could have turned a little, unbeknownst to the surgeon. With live streaming we see exactly what that eye is doing and in higher definition than any ultrasound we have ever had before. The difference allows you to know that you are cutting where you think you are cutting and to do so a little more precisely.

In the past, if the patient moved it wasn't necessarily dangerous but you weren't getting the depth of a cut you wanted, which led to the need for more of the traditional work on the back end of the procedure.

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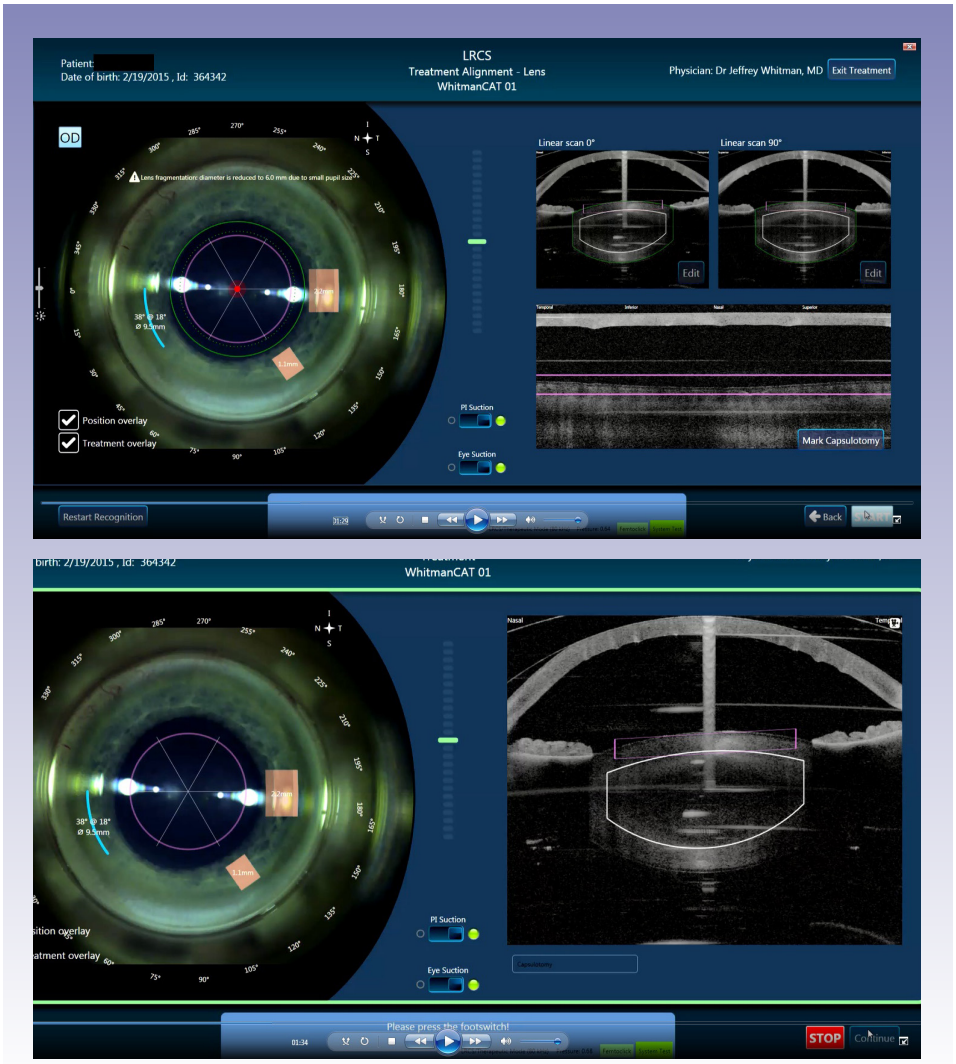

VICTUS® femtosecond laser user interface

Source: Michael Endl, MD

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perform the capsulotomy, lens fragmentation, arcuate incisions, and entry incisions very quickly, and this leads to less time spent inside the eye once the intraocular part of the procedure begins. This speed is brought about by efficiency and leads to less complications in my hands. Speed means little if I need to see the patient for twice as many office visits to address a problem.

My advice for surgeons who have not used the VICTUS® laser would be to remember that not all femtosecond lasers are created equal. While the basic elements of femtosecond lasers are the same, key differences include their energy, spot size, and densities. That is likely one reason that across the United States we get such a high free-floating capsulotomy rate with the VICTUS® laser. The differences of this system are why its users do not face the same frustrations with opening corneal incisions that users of some other femtosecond systems have complained about. Instead, my corneal incisions open 99% of the time, and my arcuate incisions do not require titration. I can use the same nomogram that I used with a blade. So there are critical differences between femtosecond lasers.

I urge prospective femtosecond owners to visit a physician using a VICTUS® system through the Bausch + Lomb site visit program and learn the benefits of the new software that recently came out. Observe it working because its performance and the swept source OCT will blow you away.

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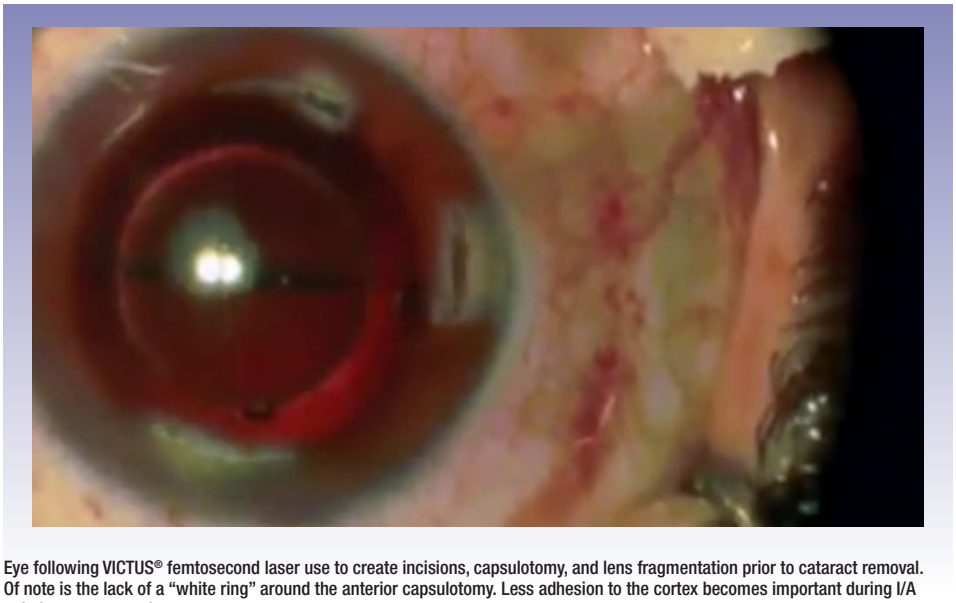
Offering patients the best possible outcomes

by Inder Paul Singh, MD



Eye following VICTUS® femtosecond laser use to create incisions, capsulotomy, and lens fragmentation prior to cataract removal. Of note is the lack of a "white ring" around the anterior capsulotomy. Less adhesion to the cortex becomes important during I/A to help ease removal.

Source: Inder Paul Singh, MD

My equipment selection for cataract surgery begins with asking what I need to maximize my patients' potential for good visual acuity, overall outcomes, and—most importantly—quality of vision.

When I look at lens options, for instance, like multifocals, standard monofocals, accommodating lenses, or torics, my focus is on which will give me the best chance of achieving that 20/happy patient. That's the bottom line.

Monofocal lenses are always my first choice, especially as a glaucoma specialist who has a lot of glaucoma patients. The first thing you lose in glaucoma is contrast sensitivity so I avoid IOLs that could worsen that loss. We also know that monofocals will not exacerbate dry eye, ocular surface disease, or macular issues that the patient could develop in the future. That is why, among premium lenses, I prefer the Crystalens® AO and Trulign® Toric IOLs (Bausch + Lomb, Bridgewater, N.J.).

But why offer premium lens technology in the first place? My approach is to offer every patient the technology with the potential

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The VICTUS® femtosecond laser continues to provide the multiple roles we have come to expect, which includes both LASIK flaps for the younger patients and cataract incisions and cataract lens fragmentations for older patients.

In the case of LASIK, the system replaces mechanical incisions, during which the surgeon loses visualization for 30 seconds. When you take the microkeratome off you hope the cut was made, but you don't see the cut as it is being made because the equipment covers up each other.

With other femtosecond lasers you can watch the image on the screen, but you are always a couple of seconds behind what is happening. Now, for the first time, the LASIK surgeon making the flap has both the live screenshot and a real-time live OCT. This view and the cross section allows you to detect whether any bubbles are going into the anterior chamber, as well as whether the cut is occurring too deeply or in a different position than you wanted.

The system allows us to compensate for individual patient challenges in new ways. If I see a patient who is moving and endangering the alignment I had at the beginning, I will stop and reposition the patient. In the past and with other femtosecond systems I might not have known that was occurring until part of the cut was made.

These latest advantages are important because when my patients are paying out-of-pocket costs on top of their insurance they expect perfection, and we want to have the best chance of delivering it.

The most common source of our patients is word of mouth from friends. People now come in and because of the Internet and word of mouth say "Here is how I want this, I expect to see as well as my friend and I expect it now." It is a little more demanding crowd and a much more knowledgeable crowd.

These patients are asking about options for distance vision and up close, and some are looking for complete spectacle freedom. If I can have something that's going to be that much more accurate, I am going to be more likely to meet my patients' expectations.

On the LASIK side, we used to have a lot of prospective patients who, due to the thinness of their corneas, were unable to qualify for LASIK. However, the margin of error for mechanical flaps was up to 40–50 microns. The standard deviation on this laser that I have studied is less than 6 microns, which gives me a lot more confidence to offer a procedure that is comfortable and that has faster healing.

The use of the VICTUS® laser for both flaps and cataracts is beneficial for my practice to be a one-stop shop for my patients. I used to have to buy two pieces of equipment, and this piece of equipment can do it more accurately out of one box. That's going to be more practical for the surgeon and a little more cost efficient for the practice.

Another key difference is that we're now able to accurately and predictably treat people with such big prescriptions that they are handicapped if they lose their glasses. The fun difference for me is I am going from patients saying "That wasn't that bad" to now getting hugs. It's life changing.

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to give him or her the best quality of vision and most lifestyle enhancement. My job is never to tell patients how much to pay or what it is worth for them.

Some physicians have raised concerns with appearing to promote a premium lens or premium technology in general or fear sounding like they are selling something. No one wants to come across as a salesman. But I look at my role as a physician as an educator, who aims to give my patients enough understanding of the technology to determine for themselves what its value is.

For Crystalens®, the education entails understanding what the technology provides, the range of vision it offers, and that it may decrease the need for glasses for computer work. Patients may need glasses for certain situations, but it offers a greater range of vision than standard lenses can offer.[1] This way, whatever they achieve, they are happy.

Patient expectations are also an important part of using the VICTUS® femtosecond laser (Bausch + Lomb). Some surgeons have raised doubts about whether femtosecond laser systems in general are worth the extra cost or are just fancy capsulotomy machines. I tell my patients that femtosecond technology gives me the best chance of getting the best outcome, but that does not mean they will always have better outcomes than manual surgery.

Do I believe the VICTUS® laser standardizes certain steps and does those more precisely than I can? Absolutely. Does it always translate to better outcomes? No.

Patient education must help them understand that better outcomes are not always based on any one step of the femtosecond laser. In certain situations, having a more precise arcuate incision may be a better option than manual surgery and give me a better chance of achieving the spherical outcome that I want. In other cases, it may be the perfect capsulotomy in terms of size and centration or enhance the position of the implant—and for the Crystalens® AO and Trulign® Toric IOLs that's important.

Not every patient will derive the same benefits. Another patient could benefit from the decreased need for phaco energy.[2] This system's decreased energy can translate into significantly reduced postop corneal edema and improved visual acuities.[3] I find there are certain situations where the cataract is denser, and it might help by decreasing the phaco energy and decrease the need for postop drops, which together can improve patient satisfaction.

Femtosecond technology is not just one step of the procedure that allows for better outcomes,[3] but its benefits vary by patient and could come in any one of multiple steps. Why not standardize the procedure and do what we can to get the best outcomes? I believe this technology gives the best chance of getting better outcomes.

It is important to educate patients preop on what these technologies do for them so they understand the value. Patient education includes discussing arcuate incisions and the fact that the VICTUS® is more precise than I am in performing those.

Another part of the patient education comes in the postop period. If they had a great outcome, I think it is important to educate patients postop on what the femtosecond laser did for them. That way, when they tell their friends and family about the procedure, they will include the laser's role in it.

Many times when you offer patients premium technology, they say "If I'm going to do a premium lens then why not do the entire procedure with the most precision possible?" I don't sell the laser, but I do tell them that for me, getting a perfect capsulotomy is the best way to get the best outcome. Other times patients ask me what I would do for my mother. That answer is easy because I put the Crystalens® in my mother's eyes.

In general, I tell my patients that if cost was not an issue, I wouldn't give them the option to have the procedure without VICTUS® and Crystalens®/Trulign®. The advantage of these technologies is that they are not limiting patients' vision in any way in terms of potential vision quality issues because the lens and the laser give me the best chance of achieving the best results.

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VICTUS® Femtosecond Laser

Caution: United States Federal Law restricts this device to sale and use by or on the order of a licensed physician.
Indications: The VICTUS platform is indicated for use in the creation of a corneal flap in patients undergoing LASIK surgery or other treatment requiring initial lamellar resection of the cornea, for anterior capsulotomy during cataract surgery, the creation of cuts/incisions in the cornea in patients undergoing cataract surgery or other ophthalmic treatment requiring cuts/incisions in the cornea, and for laser-assisted lens fragmentation during cataract surgery for nuclear cataracts, not for fragmentation of posterior subcapsular (PSC) and cortical cataracts.
Attention: Please refer to the Directions for Use for complete use instructions and safety information.

Summary of contraindications: Corneal disease or pathology that precludes transmission of laser wavelength or distortion of laser light. Patients who do not give informed consent, who are pregnant or nursing, have existing corneal implants, who have had any previous cornea surgery or pediatric patients. Conditions that interfere with intent to treat such as glaucoma, retinal disorders, rheumatic diseases, epilepsy, herpes zoster or herpes simplex keratitis, and heavy vascularization of ocular tissues. Conditions that interfere with proper docking such as chemosis, nystagmus, significant loss of stability of the conjunctiva, keratoconus, and corneal diseases requiring treatment. Conditions that may interfere with capsulotomy such as poorly dilating pupils, and anterior chamber depths (ACD) <1.5 mm or ACD >4.8 mm. Conditions that may interfere with creation of flap such as dry eye diseases, cataract, diabetes mellitus, severe acne rosacea, severe wound healing disorders, and immune deficiency diseases. Contraindicated for laser-assisted lens fragmentation of posterior subcapsular (PSC) and cortical cataracts.

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