

## Software that Removes the Laser Guesswork

*Surgeons no longer have to photocoagulate “in the dark.”*

BY RENÉ LUTHE, SENIOR ASSOCIATE EDITOR

**T**opcon’s Endpoint Management software with Landmark Patterns eliminates the retinal surgeon’s photocoagulation conundrum of either being able to see the treatment by creating a burn that causes collateral damage to the surrounding tissues, or decreasing the laser power to avoid collateral damage — but not being sure if the treatment level had been achieved because the burns could not be seen.

Designed for use with its Pascal Streamline & Synthesis laser systems, (Topcon Medical Laser Systems, Santa Clara, CA) “What Endpoint does is automatically modulate the laser power and/or duration to stay within the therapeutic window,” explains Rahul Khurana, MD, of Northern California Retina Vitreous Associates Medical Group, San Mateo.

### **MORE PRECISION, LESS DAMAGE**

The company says Endpoint Management uses proprietary algorithms to achieve this. “Using initial settings determined during titration, the system guides laser output to deliver a controlled, repeatable dose within treatment boundaries selected by the surgeon,” according to Topcon. The Landmark Patterns feature offers further treatment options by creating visible reference points, “landmarking” the periphery of the applied laser pattern. When the surgeon sets the laser to a sub-visible level, the feature provides feedback and mapping on the treatment dose and location.

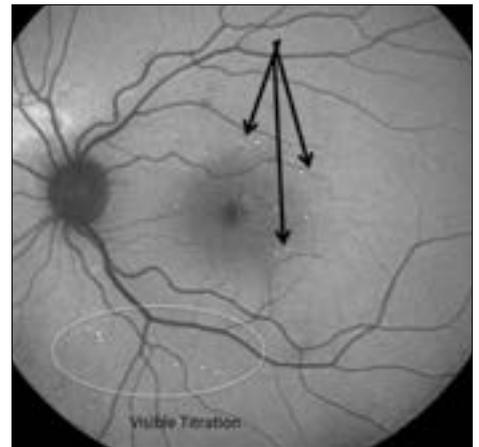
A problem with using very low power settings, Dr. Khurana explains, is that the surgeon doesn’t know for sure if it has worked until a couple of months later. If the patient comes in then and there’s no therapeutic effect, the surgeon doesn’t know if that is because he did not deliver sufficient power to achieve a result, or if the disease is simply too severe.

“The Landmark feature is really nice because it allows you to feel more confident that what you’re doing will work,” he explains. And if the treatment is not successful, at least the surgeon knows that it’s not because he didn’t use enough laser power. “You can treat with very low levels to minimize damage,” Dr. Khurana says.

### **PATIENT ADVANTAGES**

Dr. Khurana believes Endpoint will remove a major problem of anti-VEGF by reducing the treatment burden of monthly injections. By combining anti-VEGF with laser, he says, patients will need fewer injections. More than patient convenience and compliance are at stake given that the CAT T study has offered some indication that frequent anti-VEGF injections may be associated with an increased likelihood of geographic atrophy.

And because Endpoint Management means the surgeon will use less laser energy, the patient will suffer less col-



**The Landmark feature (arrows) provide physicians with reference markers (set by visible titration—spots in the periphery) on the outer edges of the patterns used for treatment. With Endpoint management, laser energy is delivered at a reduced percentage of the set Landmark power.**

COURTESY DANIEL LAVINSKY, MD

lateral damage to the surrounding structures, and less photoreceptor injury. The laser photocoagulation scar — a scar that can enlarge over time — that would develop in response to that collateral damage could affect vision.

“Everyone is trying to figure out how to maximize the benefits of the laser, but minimize the collateral damage,” Dr. Khurana says. “Endpoint Management with Landmark technology is really a very elegant way of doing it.” **RP**