

# IRIDEX MicroPulse® Laser Therapy: An Essential Asset for a Comprehensive Practice

*This article summarizes the whys, hows, and benefits of incorporating MicroPulse into a comprehensive practice as shared during an educational webinar on IRIDEX MicroPulse laser therapy. To view the webinar, visit [www.iredex.com/webinars](http://www.iredex.com/webinars).*

## Why and how did you incorporate MicroPulse laser therapy into your comprehensive practice?

**Dr. Mahootchi:** I was looking for a new laser that would allow me to do more than what was possible with an SLT laser or my conventional argon, so I purchased an IQ 577™. I use it as a continuous-wave (CW) laser for prophylactic treatment of tears, cut traps, sutures, and so on. Its MicroPulse mode allows me to treat transfoveally, so it can treat conditions that other lasers can't, such as central serous retinopathy (CSR), wet AMD, or pseudophakic CME. I routinely use MicroPulse for DME and glaucoma as well.

**Dr. Phillips:** In a word, versatility. I started using the IQ 577 system for MicroPulse Laser Trabeculoplasty (MLT). Out of almost 800 cases, I've had just two cases of mild iritis, no pressure spikes, and essentially no other complications. I achieved such good results with MLT that I decided to try MicroPulse for treating retinal diseases. I now use it daily to treat many retinal disorders, and MicroPulse allows me to treat patients who I could not have otherwise. For instance, a patient presented with a second episode of CSR. His first episode was in 2012. It lasted >6 months, and he lost two



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lines of vision. Given his history, and that his CSR recurred about 3 weeks prior to seeing me, I decided to treat rather than observe. One month later, his vision improved to base-line (Figure 1).

**Dr. Friedrichs:** I was looking for a versatile laser that could treat a multitude of diseases. I use the IQ 577 laser and its scanning laser delivery system in CW mode to treat proliferative diabetic retinopathy, and in MicroPulse mode for vein occlusions, CSR, and CME — whether it's from macular degeneration (Figure 2) or diabetic macular edema. I also use it to perform MLT in my office.

**“I use the IQ 577 laser and its scanning laser delivery system in CW mode to treat proliferative diabetic retinopathy, and in MicroPulse mode to treat vein occlusions, CSR, and CME ...”**

— Jason Friedrichs, MD, MS

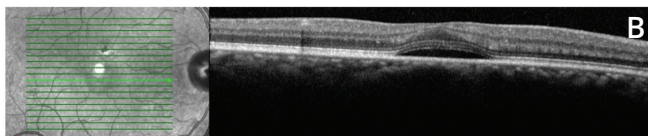
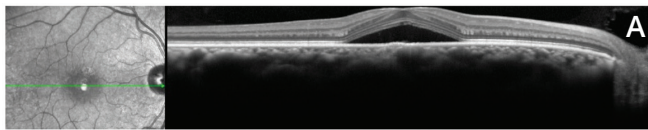
## What are the benefits of MicroPulse for your patients and your practice?

**Dr. Phillips:** My patients are very compliant after receiving MicroPulse and happier because of fewer office visits and injections, and lower copays.

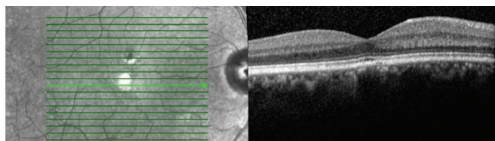
**Dr. Mahootchi:** MicroPulse reduces the injection treatment

**Figure 1: 577 nm MicroPulse for Quick CSR Recovery**

IMAGES COURTESY OF BRANDON PHILLIPS, MD



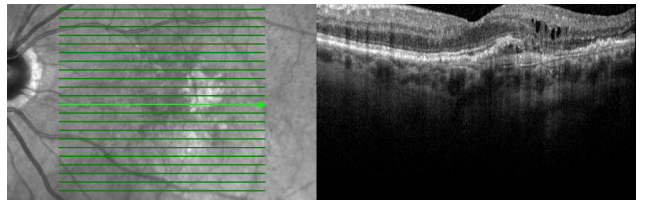
A. First episode: Feb 21, 2012. Lasted 6 months | BCVA 20/20 to 20/50; eventually 20/30.  
B. Second episode: Jan 4, 2017 | BCVA 20/50 | 577 nm TxCell-Guided MicroPulse performed.



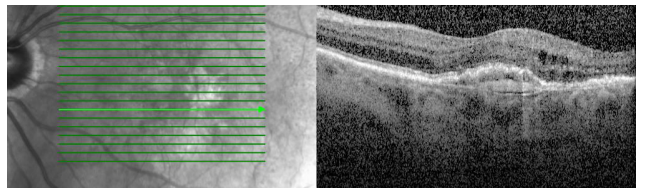
One month post MicroPulse | BCVA 20/30.

**Figure 2: MicroPulse Reduces Injection Burden in Wet AMD**

IMAGES COURTESY OF JASON FRIEDRICHS, MD, MS



Patient received injections every other month for 5 years. OS prior to Aug 15, 2015 | VA 20/40 | CMT 289  $\mu$ m



Aug 18, 2016. Post three 577-nm MicroPulse treatments (Sept 22, 2015; Feb 1, 2016, May 2, 2016) | VA 20/25; CMT 278  $\mu$ m.  
**Four Avastin injections over 1.7 years (from Aug. 1, 2015 to Mar. 6, 2017).**

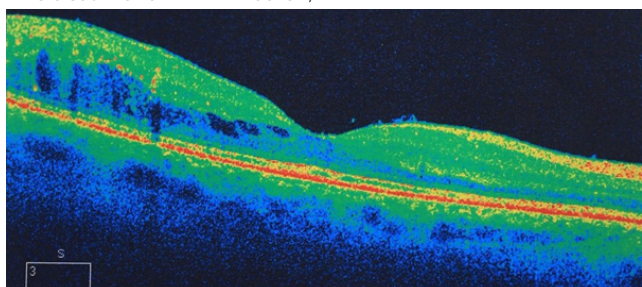
**“Originally, I was spending about \$42,000 monthly on injections. After incorporating MicroPulse, that number dropped to \$14,000.”**

— Ahad Mahootchi, MD

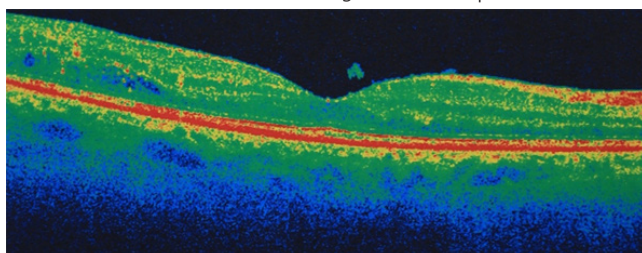
burden for macular edema and other disorders, so it frees up my time — as well as my patients’ — to do other things. In my practice, MicroPulse seems to double the injection interval in about one-third of patients. In another third, MicroPulse eliminates injections for a year or two (Figure 3). Originally, I was spending about \$42,000 monthly on injections. After incorporating MicroPulse, that number dropped to \$14,000.

**Figure 3: Long-Term Efficacy for DME**

IMAGES COURTESY OF AHAD MAHOOTCHI, MD



70-year-old Caucasian female with NIDDM with Hx of previous focal for CSME. Control worse with Hbg A1c of 8 to 9 | VA 20/25.



43 months post one 577-nm MicroPulse treatment | VA 20/20.

**Dr. Friedrichs:** As a physician running my own practice, I’m very financially conscious, and feel a big responsibility to my community. MicroPulse allows me to provide my patients a treatment that’s cost effective, clinically effective, and time effective. They appreciate fewer injections, and are therefore less anxious.

We also win as physicians: fewer injections open up more time slots for new patients, laser treatment is more profitable than injections, and fewer injections may reduce the risk of infection in our patients.

As physicians, part of our job is to take less money out of the societal bucket. We know the cost of FDA-approved injections is \$1,800. If we continue to reduce the treatment burden of anti-VEGF by incorporating the use of MicroPulse, the cost savings to everyone involved — patients, physicians, private insurance, and Medicare — is great. ■

## Getting Started with MicroPulse: Candidates, Expectations, and Treatment Guidelines

MicroPulse will change the way you practice. Here’s a quick primer on patient selection, what to expect, and treatment guidelines.

### Patient Selection

BY BRANDON PHILLIPS, MD

Patients with very mild edema, poor compliance, low pain tolerance, or who would like to avoid an injection are ideal candidates.

### Physician Expectations

BY BRANDON PHILLIPS, MD

Knowing what to expect from therapy will help both physicians and patients set realistic expectations and help guide treatment plans.

- Patience. MicroPulse takes time to work. Allow about 3 months post-treatment to observe the full effect.
- Be wary of undertreating when you begin to use the laser. It’s important to deliver high-density applications.
- Patients should have no discomfort, and their vision should return to baseline before they’ve even left your office.
- Patients may report subjective improvement in vision, even in the absence of significant improvement of central retinal thickness.

### Treatment Guidelines

BY AHAD MAHOOTCHI, MD

- Treat with different spot pattern than traditional laser
- Treat confluent
- Treat a big area (larger than edematous area)
- Treatment may take up to 3-4 months to take full effect
- IQ 577™ Laser / IQ 532™ Laser
- SLA Spot Size: 200 μm
- Contact Lens: ~1x
- Duration: 200 ms
- Duty cycle: 5%
- Power: Typically between 300 mW to 400 mW based on CW test spot
- Technique: Deliver high-density applications over edematous areas