

A Conversation with Dr. Paulus, MD, FACS, on Endpoint Management™ During COVID

We sat down with Dr. Yannis Paulus (University of Michigan Ann Arbor, MI) to learn about his recent study¹ on PASCAL® Endpoint Management™ for the treatment of DME and how it reduces the burden of anti-VEGF injections.

Q: Can you give us a brief overview of your recent study?

A: My team, led by Dr. Asad Durrani, conducted a study to assess the effects of tissue-sparing laser treatment in patients with DME and its impact on the number of intravitreal injections needed. We know that frequent injections are a huge burden on patients particularly given the COVID-19 pandemic, so we wanted to know if there was a better way to preserve vision and lessen this burden.

For our initial study, we conducted a retrospective analysis of nine eyes of seven patients with DME treated with Topcon's PASCAL 532 nm Synthesis™ Laser, using Endpoint Management (EpM) software. Five patients had proliferative diabetic retinopathy, one had severe non-proliferative diabetic retinopathy (NPDR), and one with mild NPDR. We evaluated anti-VEGF injection burden before and after treatment and performed t-tests to analyze the effect of EpM on VA and the number of injections required before and after treatment. Mean age was 66.71± 20.18 years. We have now expanded our study and included more than 30 patients.

Endpoint Management Treatment Parameters²:

- 30% of threshold laser with landmarks off
- Laser spot size of 200 micrometers
- Pulse duration of 15 milliseconds
- Spacing of 0.25 Φ apart.
- Mean number of spots was 671.33±135.45

PASCAL® Synthesis™: The Multi-Specialty Workhorse

With exclusive Endpoint Management™, the PASCAL Synthesis allows you to treat patients at subthreshold levels, delivering clinically therapeutic results with accuracy and speed. Experience true power and precision with PASCAL.

TOPCON Healthcare

SEEING EYE HEALTH DIFFERENTLY

1. Durrani AF, Paulus YM. Nondamaging focal retinal laser therapy for the treatment of diabetic macular edema reduces anti-vascular endothelial growth factor injection burden [ARVO Abstract] Invest Ophthalmol Vis Sci. 2020; 61(7). Abstract nr 4882.
2. Patient cases, parameters and techniques provided by the physician/author.

Q: What were the results of the study?

A: The mean number of intravitreal injections in the six month period prior to laser treatment was 4.55 ± 2.19 injections. In the six months following laser treatment, patients required 2.33 ± 1.58 injections (p=0.01). Mean VA before treatment was 0.48±0.30 and after treatment was 0.54±0.27, which was not statistically significant (p=0.12).

Q: What does this mean for patients?

A: EpM treatment led to a significant decrease in the number of intravitreal injections required in the six month period immediately following treatment without compromising vision since there was no significant change in VA. EpM offers great benefits to patients by reducing the number of anti-VEGF injections and office visits, which minimizes the burden on patients and families, especially now, as patients with diabetes are at considerably higher-risk of complications from COVID-19 if they were to become infected.

Q: Is this your approach for treating patients with DME?

A: Absolutely. I'm a proponent of combination therapy and believe that treating patients with tissue-sparing laser therapy in conjunction with anti-VEGF affords them the best of both treatment worlds—we can help preserve vision and stretch the time between visits and treatments, which helps minimize potential exposure to COVID-19.



Yannis Paulus, MD, FACS
• Assistant Professor, Ophthalmology and Visual Sciences, Assistant Professor, Biomedical Engineering
• University of Michigan Ann Arbor, MI
• ypaulus@med.umich.edu
• Financial Disclosure: None



Asad Durrani, MD
• Resident, University of Michigan Ann Arbor, MI
• adurrani@med.umich.edu
• Financial Disclosure: None



Visit www.pascalvision.com to learn more about PASCAL® technology.