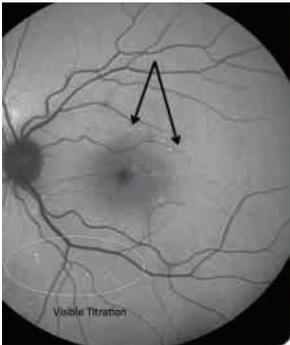


What are the main differences between Micropulse and Endpoint Management?

First, Micropulse does not have a clear titration protocol for producing predictable and reproducible outcomes.

Second, the long duration of the micropulse treatment envelope (200-300 ms) makes the treatment session too long for practical application of a pattern laser delivery. This is up to 30 times slower than Endpoint Management treatment (10-15 ms).

Third, micropulse lacks any visible reference, so it is easy to lose track of the treatment locations. With PASCAL and Endpoint Management software, physicians can rapidly treat large areas sub-visibly while leaving visible markers, known as Landmark Patterns, for reference and documentation of treatment region.



Arrows represent Landmark reference points. Circled lesions shows visible titration.

Who is currently using Endpoint Management and what kind of results are they seeing?

Physicians worldwide are successfully using Endpoint Management with PASCAL lasers in their practice. To review cases and learn more visit tmsinc.com/endpoint-management

What experts are saying:

"I have seen very nice long-term results..."

D. Lavinsky, MD

"...treat more precisely with minimal photodestruction"

P. Dugel, MD

"Unlike micropulse, we have a way to predict what laser settings are required for a desired clinical outcome with EpM."

D. Palanker, PhD

"Everyone is trying to figure out how to maximize the benefits of the laser, but minimize the collateral damage. EpM with Landmark technology is really a very elegant way of doing it."

R. Khurana, MD

If you would like more information on Endpoint Management and PASCAL lasers, please visit www.tmsinc.com



TOPCON MEDICAL LASER SYSTEMS, INC.

3130 Coronado Drive
Santa Clara, CA 95054 USA

Phone: +1 408.235.8200
Toll Free (USA only): 1.888.760.8657
Fax: +1 408.235.8259
Website: www.tmsinc.com

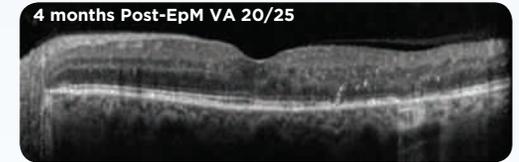
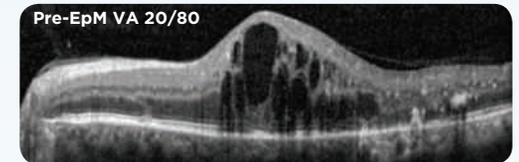
© TOPCON MEDICAL LASER SYSTEMS, INC. • PASCAL and PASCAL Streamline are registered trademarks of TOPCON MEDICAL LASER SYSTEMS, INC.

MK-00217

Endpoint Management™ with Landmark™ Patterns - Your Questions Answered.



Photo-thermal Stimulating Laser Treatments

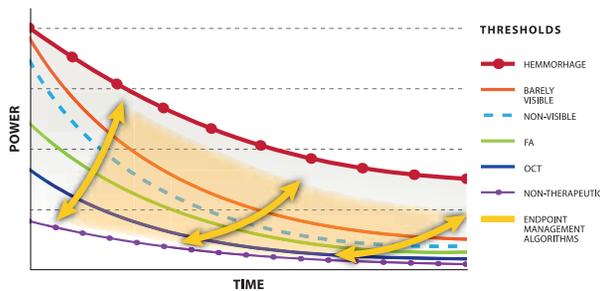


Courtesy of Daniel Lavinsky, MD



What is Endpoint Management (EpM)?

Endpoint Management™ is a laser treatment that uses a mathematical model of retinal hyperthermia, based on an Arrhenius Rate equation, to precisely control power and duration while optimizing the therapeutic effect of the laser at less-damaging levels. Endpoint management provides freedom to treat closer to the fovea without fear of causing retinal damage or vision loss. It allows for greater physician flexibility and control in providing therapeutically effective, vision-sparing treatment of retinal diseases.



Endpoint Management algorithms adjust power and duration simultaneously, maximizing the ability to safely and accurately control the desired endpoints.

What is the Arrhenius Rate equation?

EpM approach to laser therapy allows the physician to consistently operate in the realm of therapeutic relevance for sub-visible treatments. When no burns are visible, the biggest risk becomes lack of therapeutic effect. The Arrhenius Rate equation quantifies the changes in tissue induced by laser heating. Arrhenius integral-based algorithms in Endpoint Management adjusts power and duration to provide the best “path” between endpoints, moving smoothly from the ophthalmoscopically-visible titration point to angiographically only, OCT-only, and sub-visible therapeutic regimes. The EpM algorithm adjusts power and duration concurrently to provide a linear control over an inherently nonlinear process of photocoagulation.

Why use photo-thermal stimulation settings for the treatment of retinal disorders?

Small lesions of selective coagulation of photoreceptors heal over time without scarring. RPE damage is also restored over time. Such minimally-traumatic treatments spare vision by avoiding formation of scotomata and allow for retreatments. Even completely non-damaging levels that can be considered thermal stimulation have been shown to be clinically effective in DME and CSR patients, as long as the laser settings are properly calibrated with EpM.

What can I treat when using Endpoint Management?

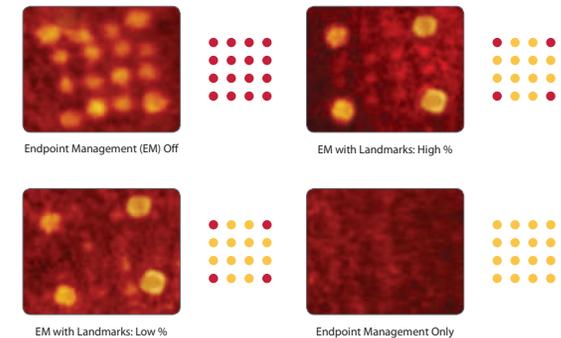
Physicians using Endpoint Management often treat retinal disorders such as DME, CSR and BRVO.

Is there any treatment flexibility when treating with EpM?

Using Endpoint Management with PASCAL® lasers, physicians can precisely adjust the treatment from the titrated visible lesion level down to various degrees of less-damaging settings. Physicians can treat at levels visible only with OCT or FA down to completely non-visible effects. It allows for ultimate user flexibility in a range of endpoints from 95% of the titrated lesion, down to a photo-thermal stimulating treatment level of 10%. This control capability allows precise selection of the desired treatment outcome resulting in minimum collateral damage while maintaining clinical efficacy.

How do I know the area I have treated at sub-visible settings?

Endpoint Management software provides a feature called “Landmarks”, which are visible reference lesions at the titrated level, placed on the outer edges of the selected pattern. The Landmarks bracket the treated area and thus help identify the regions treated. With Landmark patterns turned on, the outer corners of a pattern can be selected to remain visible and provide reference points, while the remainder of the pattern can be sub-visible, which offers a great advantage over other sub-visible technologies such as micropulse.



What products are capable of performing Endpoint Management.

Endpoint Management software is an optional upgrade to all PASCAL Streamline™ and Synthesis™ lasers.

