ADVISORY STATEMENT:
Regarding Light Therapy (Photobiomodulation) for Macular Degeneration

This is an advisory statement regarding light therapy for macular degeneration. EPSOM does not currently endorse this treatment.

Definitions:

Light therapy, also known as Photobiomodulation (PBM) involves the use of visible to near-infrared (NIR) light (500–1000 nm) produced by a laser or non-coherent light sources such as light emitting diodes (LEDs) applied to the body to produce beneficial cellular effects. Light in this range penetrates tissue depending on the wavelength and stimulates cellular function *via* activation of photoreceptors.[1]

Age-related macular degeneration (ARMD) is serious and potentially sight threatening. There are dry (non-exudative) and wet (exudative) forms of the disease. There are also different levels of severity.

Discussion:

Patients with early dry macular degeneration often have relatively normal vision. As the disease progresses to advanced stages, patients can have both a gradual and/or sudden loss of central vision. There are no proven pharmacologic treatments for dry ARMD, however age-related eye disease study (AREDS) vitamin supplementation has been shown in large, randomized trials to decrease the risk of progressing to advanced macular degeneration[2]. Canadian patients have coverage and access to effective, large randomized clinical trial-proven pharmacologic treatments for wet macular degeneration[3,4].

While light therapy for dry macular degeneration has shown limited promise in small trial settings[5-7], it is not yet supported by enough strong evidence to recommend it as an effective and safe treatment intervention for patients. Furthermore, without a large trial using a specific standardized protocol we cannot be confident that light therapy is effective or safe, nor do we know what adverse events to expect. We are especially concerned about patients choosing light therapy and foregoing proven treatments for macular degeneration.

Patients with ARMD, those who are concerned about ARMD, or anyone with changes in their vision should see an ophthalmologist or optometrist without delay as timely evidenced-based treatment is more likely to be successful.

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3. CATT Research Group, D.F. Martin, M.G. Maguire, G.S. Ying, et al.**Ranibizumab and bevacizumab for neovascular age-related macular degeneration** N Engl J Med. 2011;364: 897-1908
4. Heier JS, Brown DM, Chong V, et al. **Intravitreal Aflibercept (VEGF Trap-Eye) in Wet Age-related Macular Degeneration**. Ophthalmology. 2012 Dec; 119(12):2537-2548.
5. Geneva II. **Photobiomodulation for the treatment of retinal diseases: a review**. Int J Ophthalmol. 2016 Jan 18;9(1):145-52.
6. Ivandic BT & Ivandic T. **Low-level laser therapy improves vision in patients with age-related macular degeneration**. Photomed Laser Surg. 2008; 26: 241–245.
7. Merry GF, Munk MR, Dotson RS et al. **Photobiomodulation reduces drusen volume and improves visual acuity and contrast sensitivity in dry age-related macular degeneration.** Acta Ophthalmol. 2017 Jun;95(4):270-277.