



Lasik Surprise

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Editorial

Lasik surprise occurs when good vision such as 20/20 coexists unexpectedly with night-time distressing symptoms of one or more of glare, ghosting, starbursts, haloes or decreased contrast sensitivity commonly termed "GASH" as an acronym. These adverse symptoms often result in "20/20 unhappy" patients whose symptoms may not resolve with time and adaptation.

The principal cause is where corneal topographic and refractive cylinder measurements do not match well, so when their difference is greater than 1.0 dioptre quantified by ORA (Ocular Residual Astigmatism) [1] and the Lasik treatment is guided wholly by the refraction (spectacle or wavefront), then an excess amount (>1.00 D) of astigmatism is left on the cornea. Depending on which study, 34% [1] to 46% [2] of eyes undergoing Lasik have >1.00 D ORA making this condition of GASH prevalent but under-recognized.

The problem is entirely predictable about which eyes are at risk and avoidable by using "safe" mode or "low astigmatism" mode provided by Vector Planning™ [3], hence the term "PALS" (Predictable Avoidable Lasik Surprise) Syndrome. This facility is not available on any refractive laser device, but calculations are provided free of charge to surgeons at <http://www.assort.com>. Vector Planning™ reduces the amount of astigmatism destined to the cornea by 40% or more, but the refractive cylinder outcome is the same as demonstrated in a study by Dr. Arbelaez published in the JCRS in December 2017 [4].

Applying the method of Vector Planning™ for any eye results in less overall astigmatism compared to treatments using refractive parameters alone. With less astigmatism postoperatively the likelihood of developing GASH symptoms from PALS syndrome is very low.

Financial Disclosures

Noel Alpins reports a financial interest in ASSORT Surgical Management Systems which holds trademarks in Vector Planning™.

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