

# Ocular Response Analyzer® G3 and Corneal Hysteresis

The Ocular Response Analyzer® (ORA) is the only device cleared by the FDA that can measure a biomechanical tissue property known as “Corneal Hysteresis.” Corneal Hysteresis (CH) is an assessment of the cornea’s ability to absorb and dissipate energy. This is very different from thickness or topography, which are geometrical attributes of the cornea. Corneal Hysteresis is more predictive of visual field progression in glaucoma.

In addition, Corneal Hysteresis enables Ocular Response Analyzer G3 to provide Corneal Compensated IOP (IOPcc): a better indication of the true pressure.

- “CH measurements were significantly associated with risk of glaucoma progression. Eyes with lower CH had faster rates of visual field loss than those with higher CH.”<sup>1</sup>
- “The effect of IOP on rates of (glaucoma) progression depended on the level of CH.”<sup>1</sup>
- “...A comparison between the effects of CH and CCT revealed that although CH explained 17.4% of the variation in the rates of progression, CCT explained only 5.2%.”<sup>1</sup>
- CH is reimbursable under CPT code 92145, published January 2015
- “IOPcc may represent a better tool for the evaluation and management of POAG due to its more consistent association with the disease across a wide range of IOPs.”<sup>2</sup>
- Ocular Response Analyzer G3 is fast and easy-to-use
- Ocular Response Analyzer G3 measurements are non-contact, saving time and costly drops and sterilization procedures



“Corneal Hysteresis (CH) was the corneal parameter most strongly associated with VF progression.”<sup>3</sup>

“...Evidence that an IOP assessment that compensates for corneal biomechanical properties may have better accuracy for the detection of POAG than GAT.”<sup>2</sup>



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<sup>1</sup> Medeiros FA, Meira-Freitas D, Lisboa R, Kuang TM, Zangwill LM, Weinreb RN. Corneal hysteresis as a risk factor for glaucoma progression: a prospective longitudinal study. *Ophthalmology*. 2013 Aug;120(8):1533-40

<sup>2</sup> Ehrlich JR, Radcliffe NM, Shimmyo M. Goldmann applanation tonometry compared with corneal-compensated intraocular pressure in the evaluation of primary open-angle Glaucoma. *BMC Ophthalmol*. 2012 Sep 25;12:52

<sup>3</sup> De Moraes CV, Hill V, Tello C, Liebmann JM, Ritch R. Lower corneal hysteresis is associated with more rapid glaucomatous visual field progression. *J Glaucoma*. 2012 Apr-May;21(4):209-13

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