

# How can the iTrace help me with patients experiencing Dysfunctional Lens Syndrome?

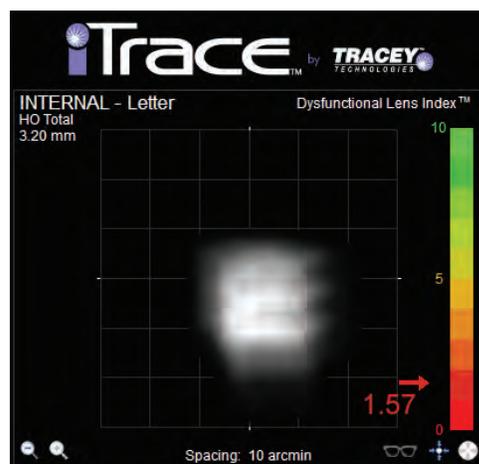
## The Diagnosis of Dysfunctional Lens Syndrome

Dysfunctional Lens Syndrome is characterized by difficulty seeing at distance due to congenital ametropia and at near due to aging and progressive presbyopia, as described by George O. Waring IV, M.D.<sup>1</sup> The clinical findings typically include:

- (1) lens opacities, whether they are cortical lens changes or nuclear lens changes or both;
- (2) the inability to accommodate due to presbyopia; and
- (3) an **aberration profile** that has changed.

## The iTrace Dysfunctional Lens Index™

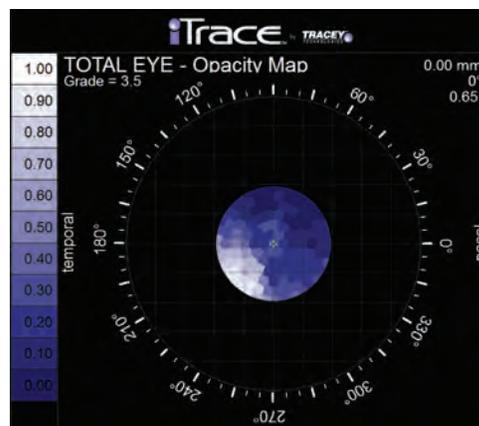
As a multi-functional device, iTrace has the unique ability to separate total eye aberrations between corneal and internal aberrations. Knowing the origin of the aberrations, the iTrace can help cataract surgeons know if significant internal aberrations are present, which can indicate the dysfunction of the lens. If aberrations are also present on the cornea, it can indicate that a patient's cornea should also be addressed to achieve success in a premium lens procedure.



Tracey Technologies is taking the measurement of internal aberrations a step further. The iTrace software provides the **Dysfunctional Lens Index (DLI™)**. The DLI is calculated based on a number of factors from the iTrace exam including the internal higher order aberrations, analysis of contrast sensitivity, and pupil size dynamics. The DLI is an objective measure of the earliest, most appropriate time to consider a refractive lens exchange for the aging, dysfunctional lens.

## The iTrace Opacity Grade

The iTrace also provides an **Opacity Grade**. This metric is an assessment of how much energy lands on the retina from 128 sequential and independent lasers sent into the eye. The iTrace reads the variance and intensity of the energy reaching the retina generating a map of the opacity or scatter graded from zero to five. This grading is a familiar grading scale, but not intended to match the LOCS grade. Most will



### Improve Outcomes

- Optimize patient-to-procedure matching to ensure a more successful premium practice.
- Utilize the Toric Planner to improve precision and enhancement success.

### Improve Efficiency

- 5-in-1 system: auto-refractor, ray tracing aberrometer, corneal topographer, auto-keratometer, and pupillometer.
- Streamlined pre-op assessments and less chair time with post-op complications.

### Differentiate the Practice

- With premium information, provide premium service with advanced diagnostics from the iTrace.
- Be one of the few practices in your market to offer patients the advanced diagnostics from the iTrace.



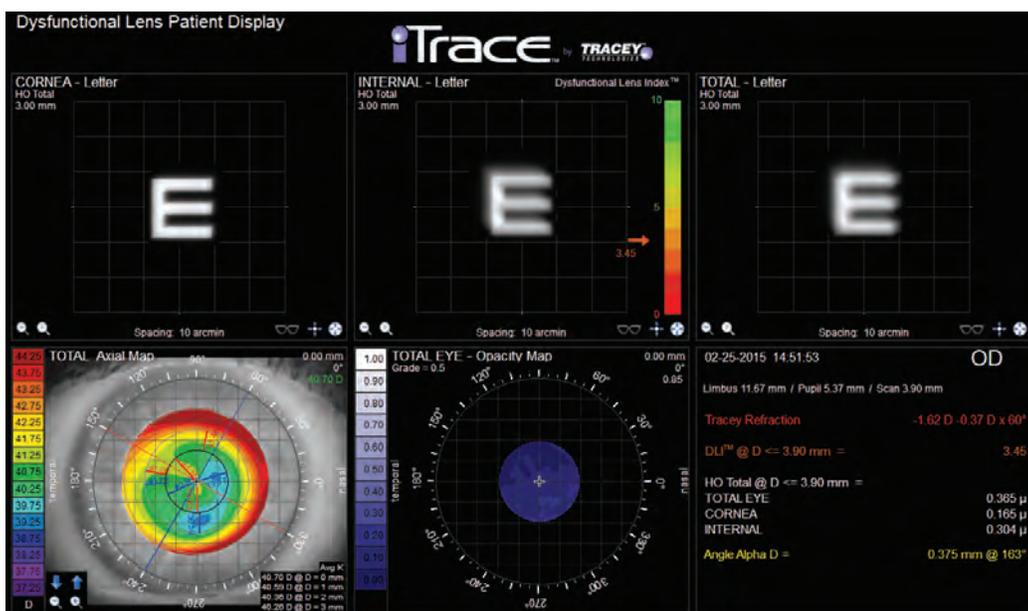
<sup>1</sup>"Diagnosis and Treatment of Dysfunctional Lens Syndrome." George O. Waring IV, MD, *Cataract & Refractive Surgery Today*, March 2013.

agree, the LOCS is very subjective and what is needed is a more objective measure of lens performance.

Combining the DLI and the Opacity Grade on the iTrace Dysfunctional Lens Display, the opacity measurement can tell us if the crystalline lens “looks” like a cataract and the DLI can tell us if it “acts” like a cataract. With these two indices, we have an objective analysis of the patient’s dysfunctional lens syndrome.

### Using the iTrace DLI to Discuss Treatment Options

This Dysfunctional Lens Display quickly and easily illustrates to the patient how each of the two main optical components to their vision work to focus their overall eyesight. Using familiar Snellen Es, the display shows the cornea’s contribution, the lens’ contribution and the total eye vision simulation. The display also includes the DLI number illustrated with a color bar. The display can be very effective to educate patients and help them understand that the previous corneal refractive procedure has not “worn off” but rather their dysfunctional lens syndrome is now causing the decreased quality of vision and a dysfunctional lens replacement could be a viable treatment option.



This case exemplifies a patient who has had LASIK and returns to the surgeon complaining that the LASIK “wore off”. The DLI Display can be used to explain to the patient that the previous surgery is still providing good vision, but the lens is now dysfunctional. An DLR procedure can then be discussed.

Every practice has patients whose post-op cataract response is “I wish I would have done this years ago!” Wouldn’t it be great to know who those patients are pre-operatively Then you can visually demonstrate that their lens no longer functions optimally and that they will benefit from an intraocular lens much earlier than when it “looks” like a cataract at the slit lamp.