

## **Haag-Streit showcases comprehensive new optical biometer**

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Haag-Streit has taken the opportunity of the ESCRS meeting to unveil its innovative non-contact optical biometer, the LENSTAR LS900.

The LENSTAR measures all the parameters of a traditional optical biometer and more, measuring the axial dimension of the eye — from the cornea to the retina — in a single step. From this one measurement, axial chamber length, central corneal thickness, anterior chamber depth, lens thickness, anatomical anterior chamber depth and retinal thickness can all be assessed. In addition to this, on the anterior surface of the eye, the LENSTAR measures traditional metrics (k readings and white-white) but also performs pupillometry in ambient light conditions.

The single measurement of these nine metrics takes approximately 20 seconds; up to five measurements will be taken sequentially to enhance the accuracy of the final reading.

The LENSTAR assesses all the measurements along the visual axis, and not the optical axis as a traditional optical biometer does; this ensures that no realignment between measurements is required. This is a more suitable option for patients with, for example, severe myopia.

The LENSTAR utilizes Haag-Streit's OLCR (optical low coherence reflectometry) technology as opposed to traditional PCI (partial coherence interferometry) technology; this is an innovative laser interferometry method that utilizes different light pulses and calculates distances differently than the traditional method.

The LENSTAR also incorporates a graphical display, which, although immensely detailed, is also clear and simple; this was designed both for surgeon ease of use and for patient education purposes.

The computer employs a simple "traffic light" colour coding system to alert the user if the equipment is properly aligned to take accurate measurements. Users can also manually override the computer to take new measurements; for example, it is possible to enhance the contrast of the image taken to sharpen the view of the iris.

The measuring device and computer are separate, so it is easy and cheaper to upgrade the equipment when newer versions are available.

"The interest we've drawn has been huge, and the response has been really good," said Thomas Beutler, Haag-Streit product manager. "The LENSTAR's measurements can be used to provide an instant calculation of the optimal lens model. This new measurement instrument is clearly focused on the future."

Haag-Streit is currently conducting a multicentre study to assess the utility of the LENSTAR in penetrating dense cataracts. Initial theoretical results are expected by the end of October.

The LENSTAR has attained CE mark and will be available throughout Europe by late October. FDA approval has not yet been secured, but the US commercial launch is anticipated for Spring 2009.