

### **ASSORT: LASER CAPABILITIES EXPANDED FOR ASTIGMATISM TREATMENT**

The developer of a breakthrough approach to the treatment and analysis of regular astigmatism for performing refractive surgery now brings leading-edge advantages to the treatment of irregular astigmatism.

Ophthalmologist Noel Alpíns, of Melbourne, Australia, first described his vector analysis method for regular astigmatism in 1992. His most recent paper, "The treatment of irregular astigmatism," appeared in the May 1998 issue of the *Journal of Cataract and Refractive Surgery*.

Alpíns shows his method can be applied separately to the two halves of the cornea—the clear front of the eye—in patients with unequal or misaligned components of naturally occurring astigmatism. This advanced method generates laser settings for the two separate divisions of the cornea, which will be a critical task for the new scanning lasers capable of providing the treatment. The laser settings can be based on Alpíns' "optimal treatment" or determined independently by the individual surgeon to reshape the cornea to a better optical value.

More than half of all Americans are potential candidates for laser treatment of nearsightedness, farsightedness and astigmatism. The Alpíns approach applies not only to naturally occurring irregular astigmatism, but has potential in treating irregular astigmatism present after refractive surgery.

Alpíns' concept of "optimization," applied separately to the two halves of the irregular cornea, can achieve the maximum reduction of astigmatism measured both topographically and by refraction. Other unique treatments he describes: Making irregular astigmatism regular (more favorable) without changing overall refraction; and shifting one or both topographic semimeridians to more favorable locations with improvement in refractive correction.

The concept of "regularizing" irregular astigmatism without changing overall refraction means that people could receive treatment that would improve the quality of their vision without necessarily requiring a change in their glasses prescription. Alpíns foresees "See Better" clinics, where people who prefer to wear glasses or who do not wear spectacles at all, could become free of the vision-distorting effects of irregular astigmatism, gaining better overall eyesight.

In line with its leading-edge approach, Alpíns' paper also includes an important new concept called the Topographic Disparity (TD). The TD provides a concise, quantitative measure in diopters of irregular astigmatism, which gives surgeons a more precise way than any other available method to compare eyes and assess any irregularity in a cornea. The TD, Alpíns says, would be especially useful if supplied by corneal topography machines, which are devices that generate various measurement of the cornea, including image maps. Currently, there is no universally accepted measure of corneal irregularity.

The Alpíns method of astigmatism analysis is included in the Designer Cornea treatment module for corneal reshaping, marketed by ASSORT Pty. Ltd., a company Alpíns founded in 1991. ASSORT is currently negotiating with makers of refractive lasers and corneal topography machines to include the Alpíns method in the programming of their equipment. Contact: ASSORT, 7 Chesterville Rd., Cheltenham Victoria 3192, Australia. Tel: 61.3.9584.6966; Fax: 61.3.9585.0995.