

# Refractive surgery for high myopia

**AT ISSUE** posed the following questions to a panel of experts:

**For patients with myopia greater than 7 D who desire refractive surgery, what treatment do you prefer, and why?**

**NOEL A. ALPINS, MD:**

## Several options

The mode of correction for a myopic refractive error between 7 D and 12 D principally depends on corneal regularity, thickness and best corrected visual acuity. Beyond this level of myopic error, lenticular surgery is preferable; the type depends on surgeon preference.

LASIK is possible up to 12 D, but safety issues are a primary consideration to avoid inducing corneal ectasia. These include at least 250  $\mu\text{m}$  of corneal tissue remaining at the thinnest corneal point. Other considerations are that this thinnest point and the posterior corneal float should be reasonably centered and the latter not to exceed 40  $\mu\text{m}$ . Topographical asymmetry should be relatively minor, and mid-peripheral corneal thickness should be consistent at any optical zone.

Any shortcoming in one or more of these criteria would render LASIK inadvisable, and the preferred treatment mode would be PRK with the adjunctive treatment of mitomycin-C applied for 30 seconds to avoid the development of haze. Surface ablation may also be inadvisable if one or more of the above criteria fall further outside safe guidelines.



Noel A. Alpins

For myopic patients over 12 D and those below 12 D who are not suitable for LASIK or PRK, refractive lens exchange would be the recommended choice if the patient is over 45 years of age. For those younger than this, if loss of accommodation is not an issue, refractive lens exchange can be considered. Multifocal implants can be offered if patients with lower refractive errors are within the range of implant availability. Intracameral lenses are also an option if astigmatism is minimal, but these have not been approved for general use in all countries and perhaps at this late stage are unlikely to gain general acceptance even if this does become the case. Other considerations are long-term sizing issues and the potential for the development of cataracts.

## For more information:

Noel A. Alpins, MD, can be reached at 7 Cherterville Road, Cheltenham, Victoria 3192 Australia; +61-3-9584-6122; fax: +61-3-9585-0995; e-mail: [alpins@newvisionclinics.com.au](mailto:alpins@newvisionclinics.com.au).