Puzzle of PCO and capsulotomy rates
One of the main selling points for square-edged intraocular lenses is their potential to reduce posterior capsule opacification, and so reduce the demand for neodymium:YAG laser capsulotomy. A new study confirms that this does indeed appear to be the case, but that capsulotomy rates have not dropped as much as expected. Researchers evaluated Medicare claims data for cataract surgeries and laser capsulotomies performed between 1993 and 2003. They generated statistical predictions based on market share and available clinical data. The total number of Nd:YAG capsulotomies reimbursed by Medicare in 2003 exceeded the number of capsulotomies predicted by the model by at least 23.9 per cent. Moreover, the additional cost to the Medicare system was more than US $30m higher than the model predicted.

The researchers hypothesise that their model may have underestimated the use of square-edged IOls, or that higher rates of capsulotomy are being performed in clinical practice than the literature suggests are necessary. They note that it is probable that increasing patient expectation and demand for quality of vision after surgery could have lead to an increased demand for capsulotomy for otherwise minor PCO.


Epi-LASIK not recommended when Bowman’s is compromised
Epi-LASIK is one of several ablation procedures now being offered as an option to LASIK. Researchers conducted a histological analysis of free epithelial flaps that were intentionally created with an Epi-K epikeratome (Moria) during epi-LASIK in eyes with virgin corneas, and in eyes with previous corneal surgery or keratoconus. The prospective study of 18 patients showed that epi-LASIK effectively cleaved the epithelium from Bowman’s layer in healthy corneas. However, analysis of the epi-LASIK flaps in the patients with previously altered corneas showed varying levels of stroma in all cases. The researchers conclude that epi-LASIK should be avoided when the integrity of Bowman’s layer is compromised. PRK or LASEK would be considered safer options for retreatment in such cases.


Corneal topography stable during accommodation
Australian researchers conducted a study to determine whether significant change occurs in the topography of the anterior or posterior cornea or in corneal thickness with accommodation. They evaluated 12 young healthy emmetropic patients under two accommodation levels using a rotating Scheimpflug camera. They observed that small cyclo-torsional eye movements occurred with accommodation. However, when these eye movements were accounted for in data analysis, no consistent significant change in the topography of the cornea was found with accommodation across an 8.0 to 9.0mm corneal diameter.


Soft-shell for patients with Fuchs’ dystrophy
Cataract surgery in patients with Fuchs’ dystrophy is problematic because intraocular manoeuvres can result in endothelial cell damage. The soft-shell technique, which uses cohesive and dispersive ophthalmic viscosurgical devices to protect the corneal endothelium during phacoemulsification could help, a new study suggests. Polish researchers used this approach to cataract surgery in 61 eyes of 54 patients with Fuchs’ dystrophy. The soft-shell technique effectively protected the compromised endothelium in those patients, proving its advantages in eyes with moderately damaged endothelium, they note, adding that more research is required.


The full text of the articles is available online at www.ophsource.org.