FITTING GUIDE: ComfortPerm

Lens Design

ComfortPerm is the original ultra limbal design. This large diameter design incorporates a proprietary posterior aspheric base curve that aligns uniformly from the central cornea to the periphery. ComfortPerm performs very well most irregular corneas including, corneal trauma, pellucid marginal degeneration, post penetrating keratoplasty and post LASIK and RK patients. ComfortPerm should not be used on bulging or nipple grafts. This design works very well on sunken and tilted graphs.

Pre-Fitting Examination

Assuming there are no contraindications, begin by taking the Keratometer readings. Determine the flatter K reading ("Flat K") and amount of corneal astigmatism. If corneal topography is done take note to the steepest area on the map. In addition you want to observe the limbal size of the cornea.

Selecting Lens Size

The first parameter you should select is lens size. Since most patient's corneas are 11.5mm in diameter an 11.0 mm lens will be selected. The overall diameter should be .5 mm smaller that the limbal area of the eye.

PROBABLE LENS DIAMETER

Flat K	Diameter
41.0 and flatter	11.5 mm
41.1 - 45.50	11.0 mm
45.75 and steeper	10.5 mm

Choosing Base Curve

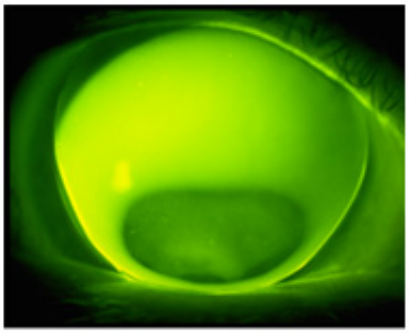
The most difficult parameter to determine on a distorted corneal is the base curve. An accurate "K" reading is many times difficult to obtain. Your goal is to determine the flat "K" and how steep the cornea is in its steepest area. Using a topographer or peripheral "K's" will allow you to obtain the steepest area of the cornea. Take the steepest area and subtract it from your flat "K" to determine the total corneal cylinder. A good start point for your initial trial lens will be a base curve that is steeper than the flat "K" by adding 1/3 of the corneal cylinder to that flat "K". Lens power is best determined by over-refraction with a trial lens in place. The spherical value of the over-refraction is simply added to the trial lens power to determine the power prescribed.

Center Thickness

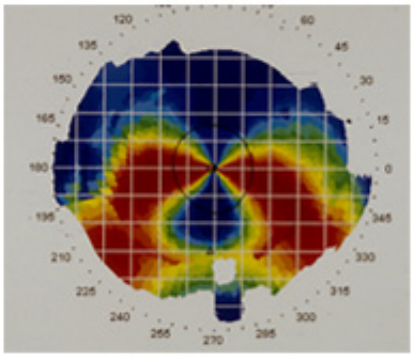
Center thickness is a function of lens design and should be calculated by the laboratory.

Fluorescein Pattern

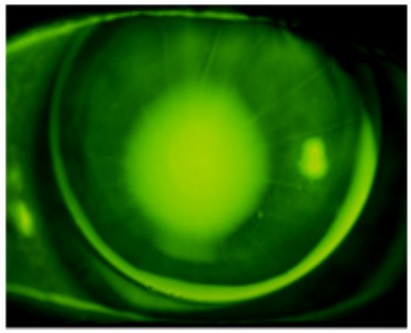
Lens selection may be aided by an examination of the fluorescein pattern. There is no ideal pattern when dealing with a distorted cornea. There will be areas of pooling and bearing. However, the peripheral curve area should show a definite green band. **Caution**: A lens that seals off and does not move will be apt to cause a physiological problem. Make sure the lens fluorescein pattern does not seal off at the intermediate or peripheral areas.



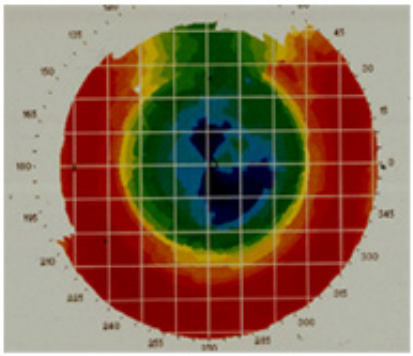
Pellucid Fluorescein



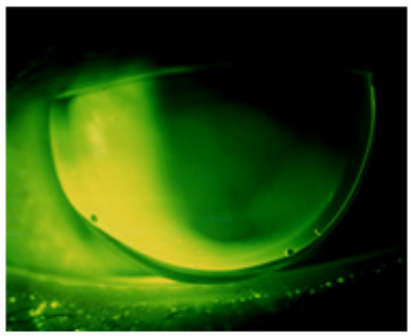
Pellucid Topography



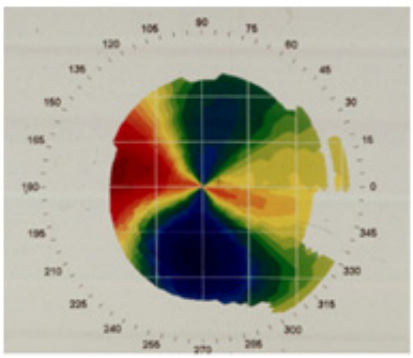
ComfortPerm on Post "RK"



Plateau Topography



Tilted Graph



Loosest in Steppest area

Ideal Fit

The lens should ideally move freely with the blink. However, there will be less movement with a *ComfortPerm* lens than a conventional lens design. A minimum of 1 mm of movement is required for good tear exchange. Depending on the severity of the distortion the fluorescein pattern may be irregular and lens position may de-center.