Artemis epithelial thickness mapping helps to detect keratoconus

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EPIT H ELIAL thickness mapping may enable LASIK to be performed in eyes that get excluded due to topographically suspect keratoconus. A majority of suspect keratoconic eyes by topography in a recent study were confirmed to be non-keratoconic by epithelial thickness mapping, and demonstrated equal stability and refractive outcomes as control eyes, at six to 12 months.

"Forme fruste keratoconus is defined as cases which show demonstrable topographic abnormalities consistent with keratoconus in the absence of other clinical evidence of keratoconus. In 2005, an AAO /ISRS Ectasia Committee suggested that patients with abnormal, but stable, topography could be offered PRK with special informed consent provisions. However, there are a number of reported cases of ectasia after PRK, so I feel that an abnormal topography should still be regarded as a contraindication even for surface ablation."

The ideal solution would be to possess a diagnostic technique that tells us if keratoconus is present, in which case we would not perform corneal surgery, or tells us if keratoconus is completely absent, in which case not only PRK, but LASIK can be done. Artemis very high-frequency digital ultrasound technology appears to allow us to distinguish actually the fact. Nonetheless, looking at epithelial thickness profiles appears to allow us to distinguish early stages of keratoconus, the epithelium is able to compensate for stromal surface irregularity produced by a bulging cone.


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Refraction

Laser

Refractive Laser