

# **Peripheral corneal cross-linking (P-CXL) for ultrathin corneas with severe keratoconus: a new technique**

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Corneal cross-linking (CXL) is aimed at halting the progression of keratoconus and is widely considered to be the golden standard in its treatment. It is usually contraindicated, however, in patients with corneal thickness of less than 400  $\mu\text{m}$ , leaving the ophthalmic surgeon no option, but to perform transepithelial CXL (epi-on), usually regarded as less effective. We report a novel approach for ultrathin corneas with severe keratoconus - peripheral corneal cross-linking (P-CXL), in which corneal epithelium is still removed but the apex of the cornea is left untouched. Hypo-osmolar riboflavin solution is used as well. P-CXL was performed on a remarkably developed stage IV keratoconus with the thinnest pachymetry of 215  $\mu\text{m}$ , Kmax of 88.1 D and astigmatism of 11.2 D. Four months after P-CXL, the thinnest pachymetry increased by 42  $\mu\text{m}$ , Kmax decreased by 1.4 D, and astigmatism also decreased by 3.2 D.