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Study Spotlight: Stability of CT LUCIA 611PY

Demonstration of LEC¹ inhibition and positional stability in a capsular bag model

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Title Assessment of intraocular lens/capsular bag biomechanical interactions following cataract surgery in a human in vitro graded culture capsular bag model

Methodology

CT LUCIA 611PY

- CT LUCIA[®] 611PY was implanted in human cultured capsular bags and assessed for up to 84 days
- Amongst other things, a fusion footprint associated with the connection between the anterior and posterior capsules was measured
- Cell coverage was quantified at end-point

Sample Size



5 mm capsulorhexison four eyes and4.5 mm capsulorhexison six eyes

Results



Progression of the fusion footprint

Fusion footprint over an 84-day period. The footprint leads to a sealing between the front and back side of the capsule. Once sealed, this then limits PCO proliferation.

- The step-vaulted haptic design of CT LUCIA 611PY IOL interacted with the posterior capsule and formed a 360° effective barrier
- The restriction in cell movement resulting from the strong interactions of the CT LUCIA 611PY optic edge and the capsule is likely to limit lens epithelial cell populations and, therefore, PCO progression within the visual axis
- Mean light scatter score was 0.042 ± 0.014
- The angle of contact increased within a week by
 ≥ 100% and continued to increase over time, as is typical for postoperative capsular bag contraction
- This suggest a stable IOL position over time

¹ LEC lens epithelial cells * Indicates a significant difference from day 0





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