Study Spotlight: Comparative stability of ZEISS CT LUCIA 621PY

Seeing beyond

ZEISS CT LUCIA 621PY has the largest optic-haptic junction (OHJ) and angle of contact (AoC) compared to other hydrophobic acrylic monofocal IOLs

Source

Title
Geometry of Acrylic, Hydrophobic IOLs and Changes in Haptic-Capsular Bag Relationship According to Compression and Different Well Diameters: A Bench Study Using Computed Tomography

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Methodology

- ZEISS CT LUCIA 621PY compared to 4 hydrophobic acrylic 1-piece IOLs: AcrySof SN60WF, enVista MX60, TECNIS ZCB00 and Vivinex XY1
- Analyses of the haptics and OHJ and changes in haptic-capsular bag contact
- IOLs were scanned with computed tomography after placement into a series of compressed wells (11.5, 11.0, 10.0 and 9.0 mm) for analyzing the haptic AoC and capsular bag contact (CBC)
- All measurements were performed in laboratory dry conditions

Results

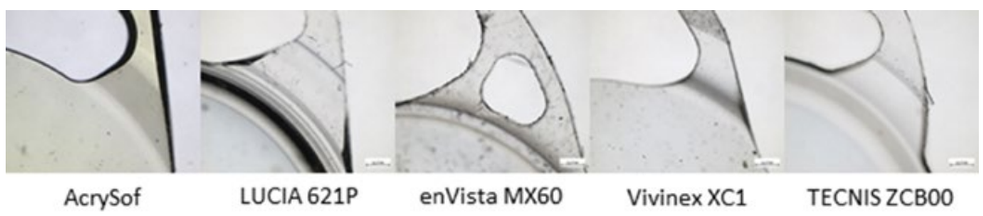

Figure 1: OHJ geometry comparison

- All tests are based on bench evaluations ▶ no conclusion can be drawn regarding clinical relevance
- OHJ geometry: width is **broadest for ZEISS CT LUCIA 621PY** and MX60 (Figure 1)
- OHJ surface area & volume are **largest for ZEISS CT LUCIA 621PY** (Figures 2 & 3, indicated by an arrow)
- ZEISS CT LUCIA 621PY has the **smallest change in AoC** for different well sizes and **the largest AoC for all well sizes**

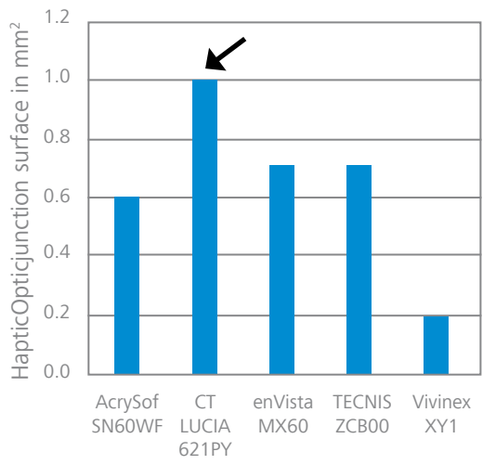

Figure 2: OHJ surface area (mm²)

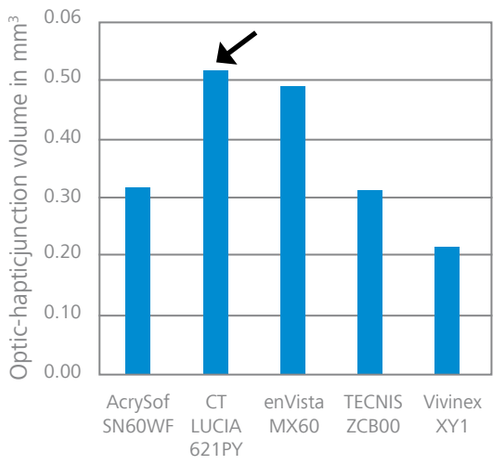

Figure 3: OHJ volume (mm³)

- Haptic surface area of ZEISS CT LUCIA 621PY is 18.82 mm² – **27-63 % greater** than the other IOLs
- Haptic surface volume of ZEISS CT LUCIA 621PY is 2.22 mm³ – **33-91 % larger** than the other IOLs

