

# Study Spotlight: ZEISS CT LUCIA 621P in comparison to TECNIS Eyhance ICB00



Seeing beyond

Both IOLs show comparable uncorrected visual outcomes for far, intermediate and near distances while CT LUCIA® 621P exhibits superior contrast sensitivity at higher spatial frequencies and lower internal spherical aberrations assumingly due to its proprietary ZO aspheric optic design.

## Source



### Title

Comparison of Short-Term Clinical Outcomes After Implantation of Two Monofocal, Aspheric Intraocular Lenses



### Authors

Jeewon Han, Yea Eun Lee, Nahyun Park, Chung Min Lee, Yoo Young Jeon, Hayoung Lee, Kyu Sang Eah, Yeji Yoon, Ho Seok Chung, Jae Yong Kim, Jiwon Jeong, Hun Lee



### Publication

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## Methodology

### CT LUCIA 621P compared to TECNIS Eyhance ICB00

- Retrospective, comparative clinical study, all surgeries performed at a single center
- Postoperative uncorrected visual acuity outcomes at 1 month for far, intermediate (80 and 60cm) and near distances (40cm)
- Unilateral and bilateral defocus curves at 1 month postoperatively under photopic and mesopic light conditions
- Unilateral and bilateral contrast sensitivity
- Internal higher-order aberrations (HOA), including coma, spherical and total aberrations

### Sample size



CT LUCIA 621P	Eyhance ICB00
60 eyes/36 patients (24 bilateral, 12 unilateral)	60 eyes/36 patients (24 bilateral, 12 unilateral)
Mean age: 68.4 yrs	Mean age: 69.3 yrs.

## Results

### Visual Acuity Outcomes

Both IOLs provided excellent UDVA and CDVA. **The CT LUCIA 621P group demonstrated comparable uncorrected visual acuity at 80, 60 and 40cm to the Eyhance cohort (Figure 1).**

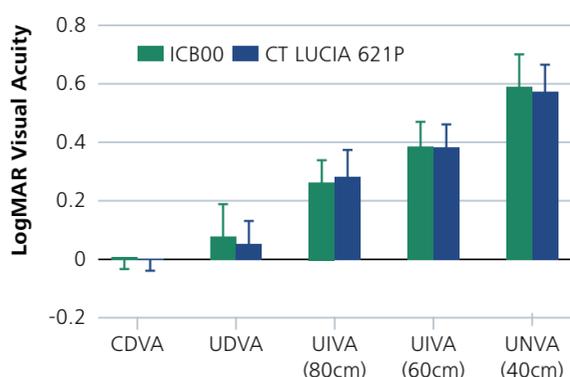


Figure 1: Comparison of visual acuity between the two groups at different distances.

### Defocus curves

**Comparable binocular defocus curve performance** across a broad range of tested values **for both photopic and mesopic conditions** (Figure 2).

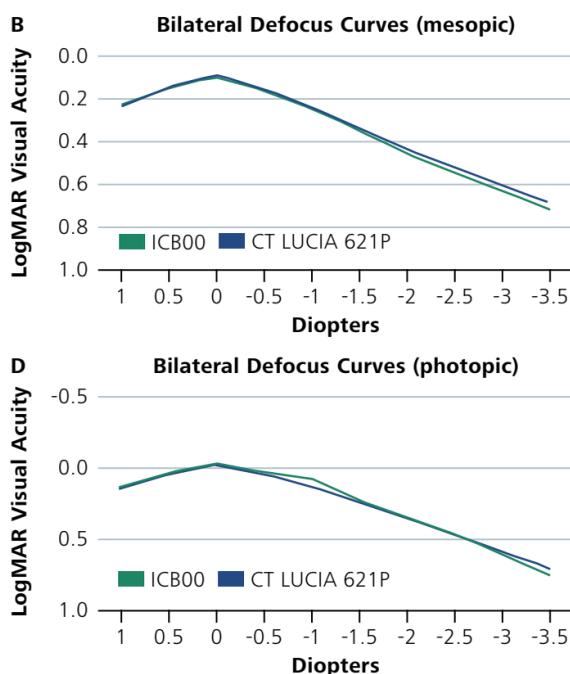


Figure 2: Binocular defocus performance at photopic and mesopic conditions.

### Contrast sensitivity

The **CT LUCIA 621P group had superior contrast sensitivity** compared to Eyhance ICB00 at higher spatial frequencies in binocular testing (18 cpd) (Figure 3).

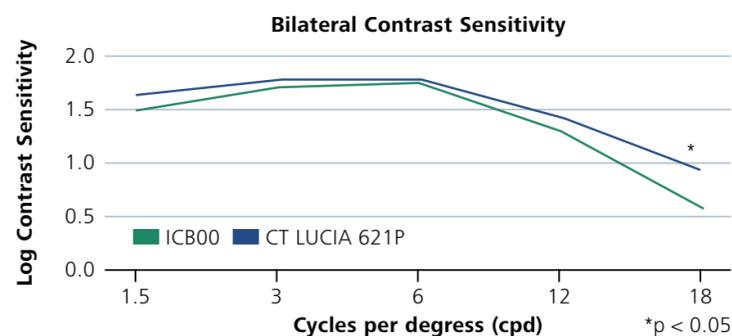


Figure 3: Binocular mean contrast sensitivity values under photopic condition. \*p < 0.05

### Postoperative aberrometry measurements

The **CT LUCIA 621P cohort with significantly lower levels of internal spherical aberration** at  $-0.003 \mu\text{m}$  compared to the Eyhance group at  $-0.04 \mu\text{m}$  while no significant differences were observed for the other internal HOA.