

# Visual quality after aspheric diffractive multifocal intraocular lens implantation in eyes with high myopia

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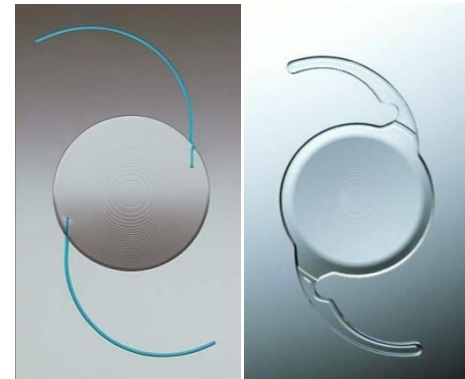


**Authors have no financial interest**

# Purpose

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- To evaluate differences in refractive and visual results in eyes with axial length after aspheric diffractive multifocal intraocular lens (IOL) implantation



# Subject

- Multifocal IOL implantation : 81 eyes
  - 2.4-mm corneal or scleral corneal incision
  - Implant ZMA00 (AMO) or ZMB00 (AMO)
  - No complications

# Subjects

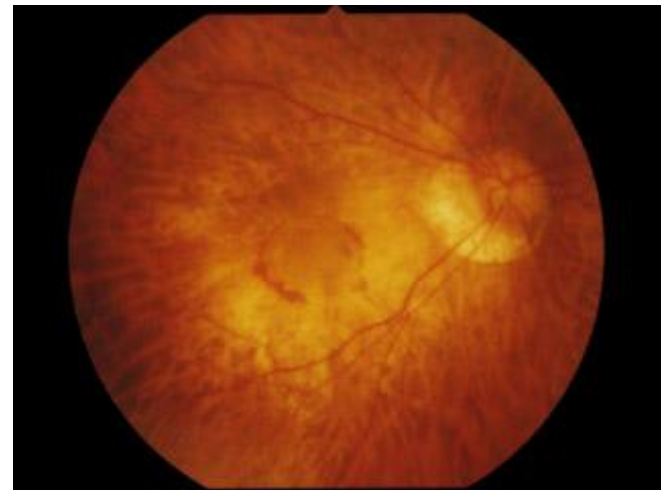
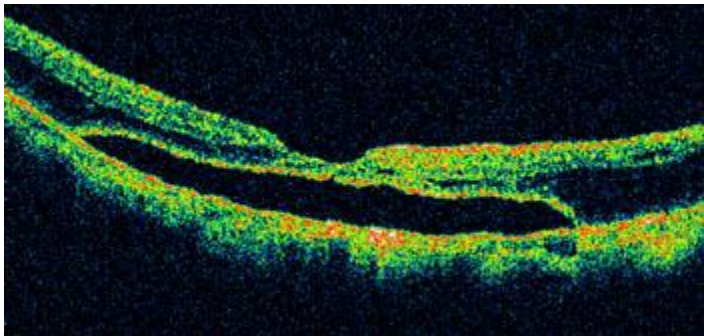
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- Axial length : > 26 mm
  - 26 eyes
  - Mean age, 61 years (range, 39-78 years)
- Axial length : < 26 mm
  - 55 eyes
  - Mean age, 63 years (range, 31-78 years)
- No significant difference  
( $p=0.440$ , Mann-Whitney U test)

# Selection criteria

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- No macula degeneration
  - Optical coherence tomography (OCT)
  - Funduscopy
- No glaucoma
- Axial length measured with IOL-Master (Zeiss)
- SRK-T



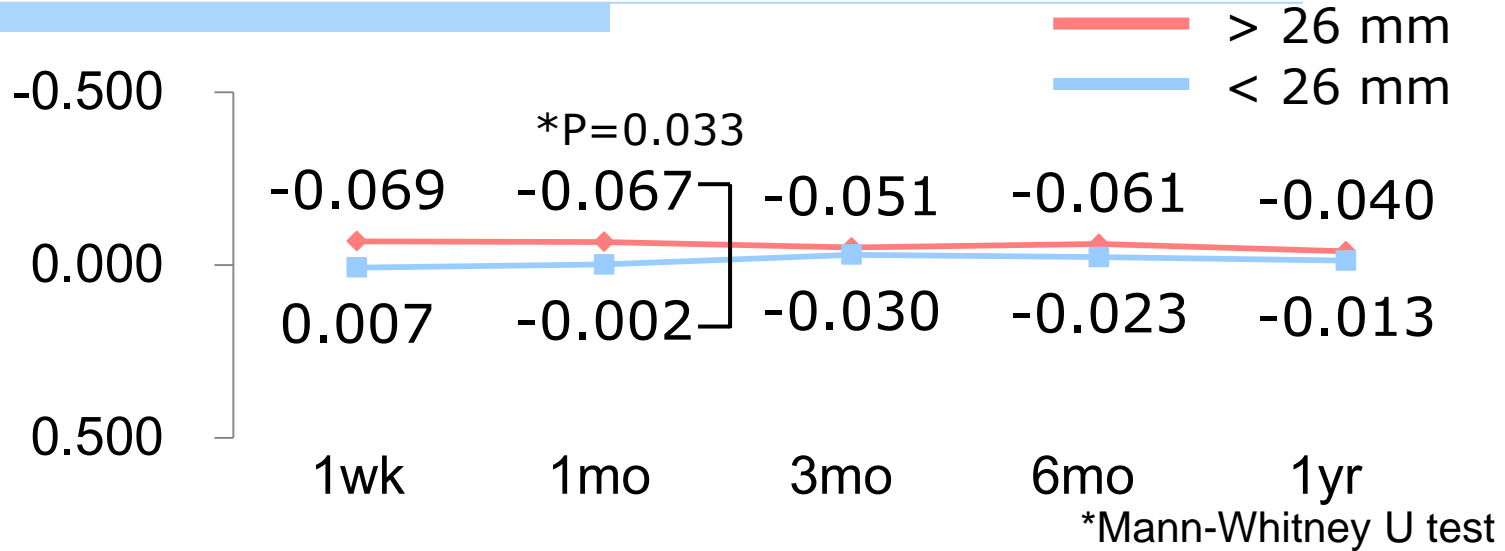
# Methods

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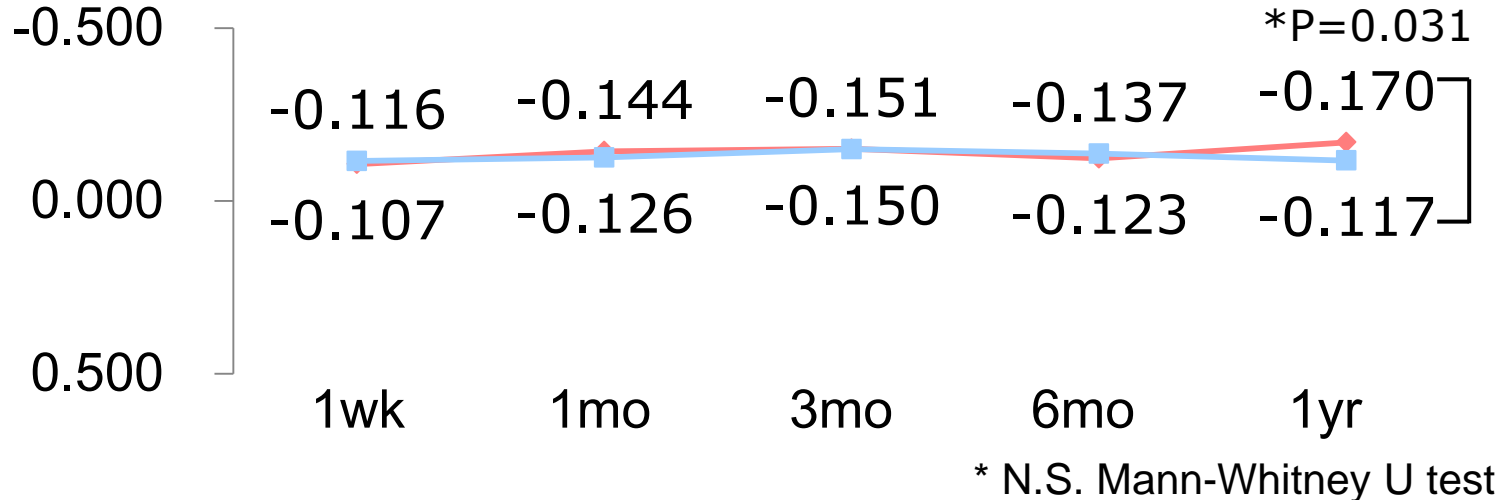
- Visual acuity ( logMAR )
  - UDVA, BCDVA
  - UNVA, BCNVA, BDCNVA
  - Postoperative: 1 wk, 1 mo, 3 mo, 6 mo, 1 yr
- Postoperative refractive error (absolute): 3 mo
- Contrast sensitivity: 1 mo
- Defocus curve: 3 mo

# Results: Visual acuity

**UDVA**

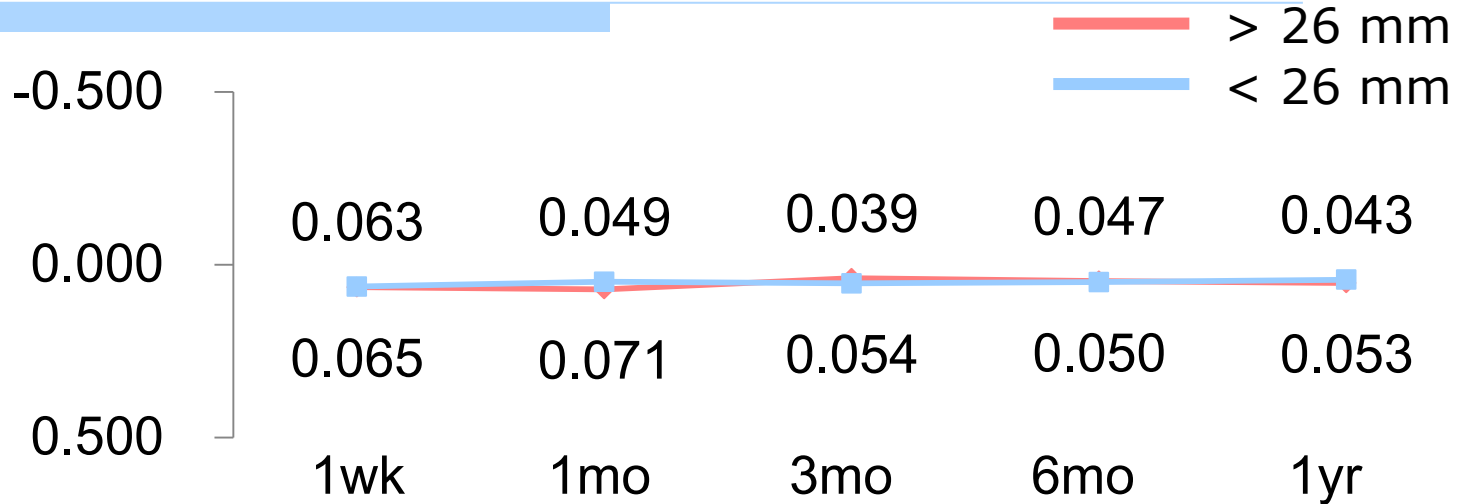


**BCDVA**



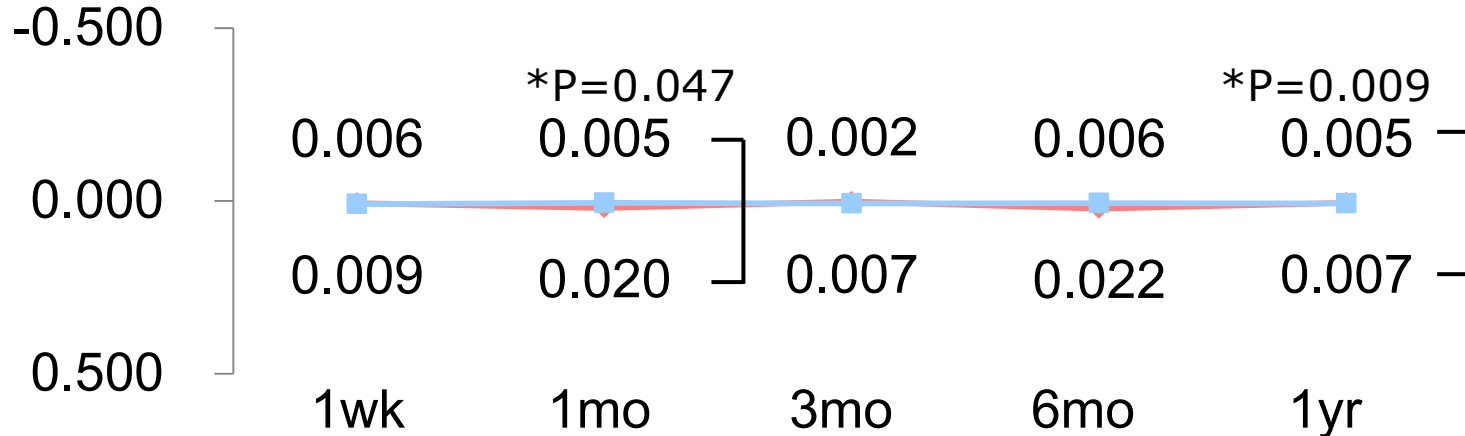
# Results: Visual acuity

UNVA



\*N.S. Mann-Whitney U test

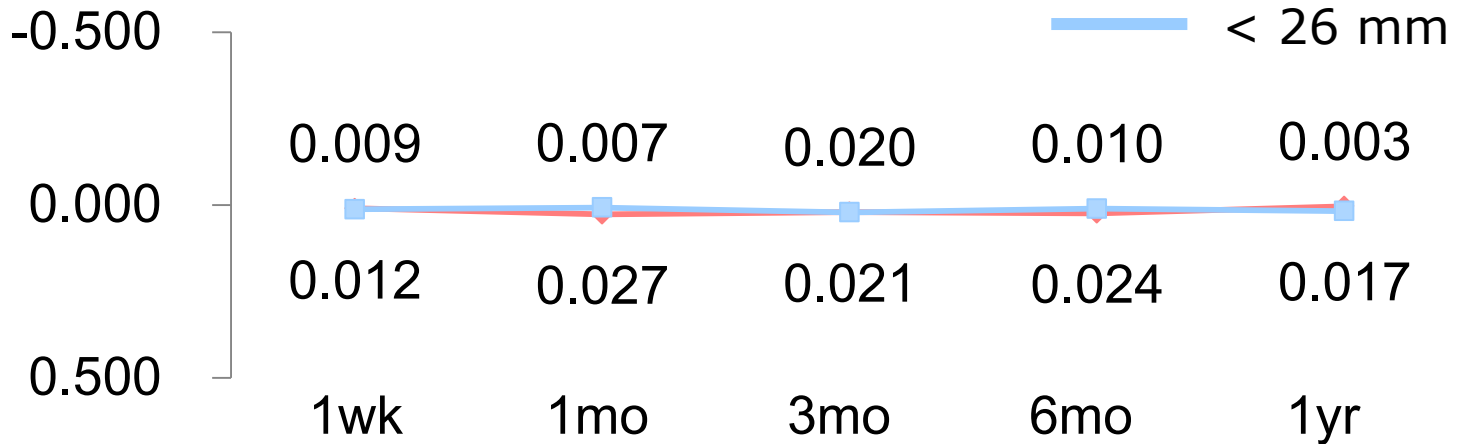
BCNVA



\*Mann-Whitney U test

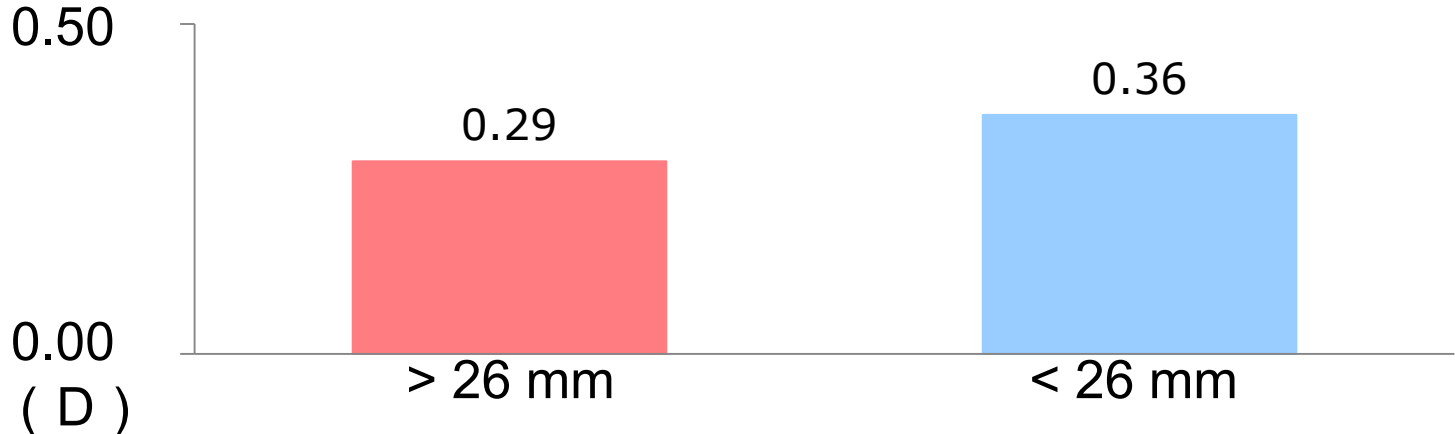
# Results: Visual acuity

**BDCNVA**



\*N.S. Mann-Whitney U test

**Refractive error (absolute)**



\*N.S. Mann-Whitney U test

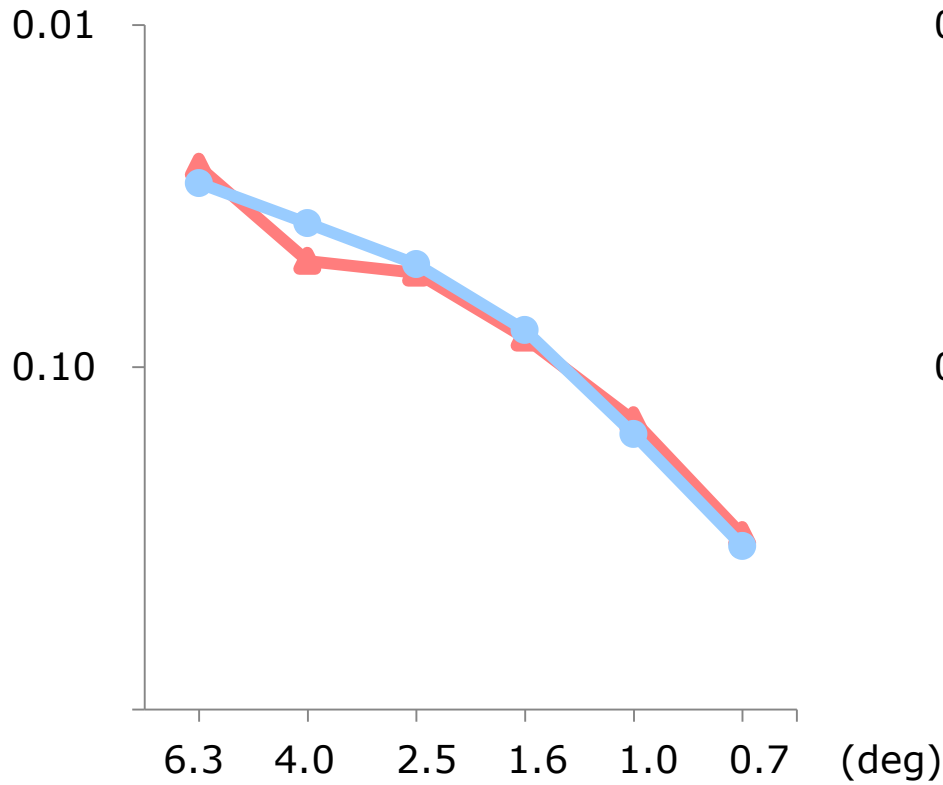


# Results: Contrast sensitivity

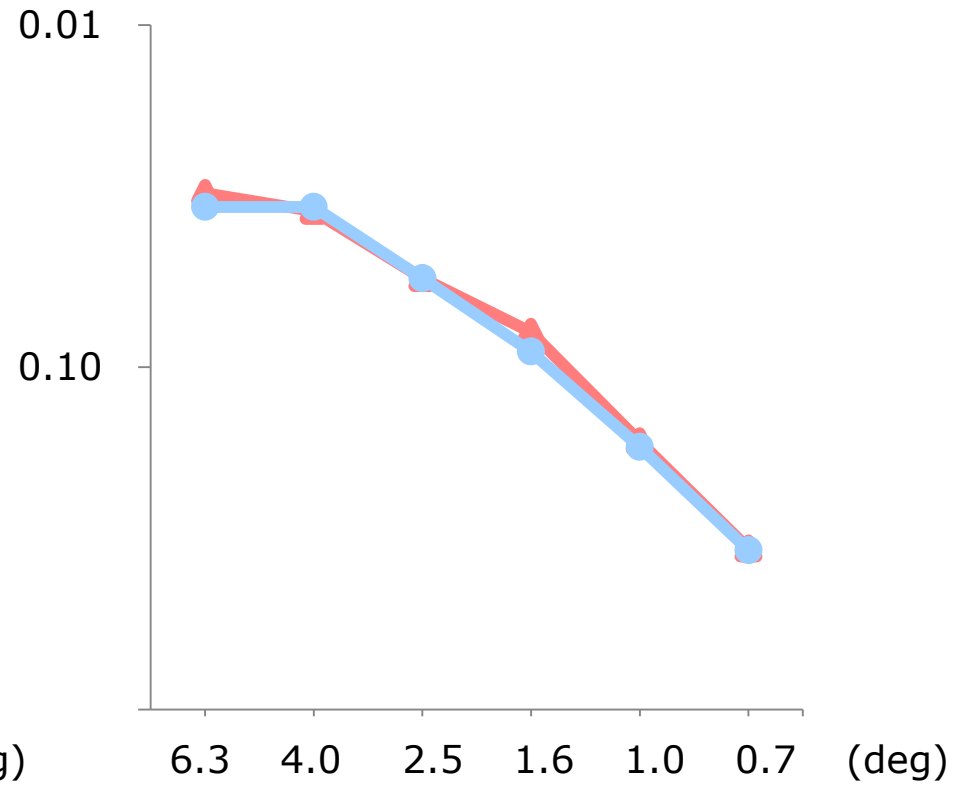


- > 26 mm
- < 26 mm

## Glare (+)



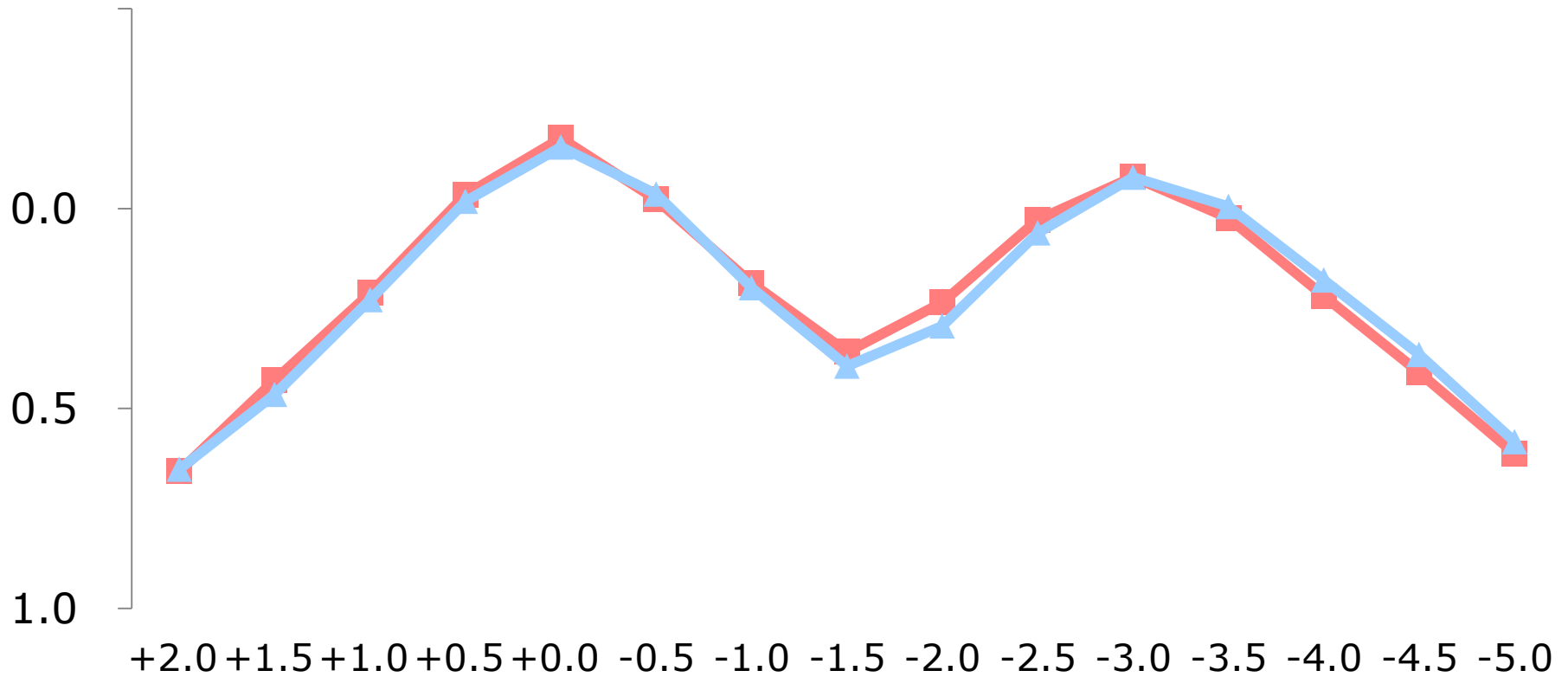
## Glare (-)



\*N.S. Mann-Whitney U test

# Results: Defocus curve

— > 26 mm  
— < 26 mm



\*N.S. Mann-Whitney U test

# Discussions

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- Good postoperative results in both groups
  - Refractive error less despite hypermyopia
    - Axial length accurately measured with optical method
    - IOL calculate with Haigis or SRK-T formula
  - High myopic maculopathy excluded

# Conclusions

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- Multifocal IOL implantation for high myopia provides good visual function by evaluating retinal function preoperatively