

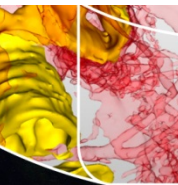
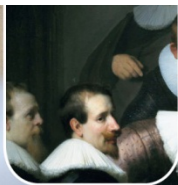
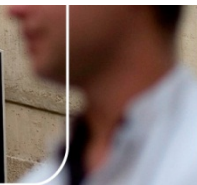
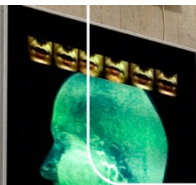
Clinical experience with the Hanita SeeLens MF IOL



Retina
Total Eye Care®

Ruth Lapid-Gortzak MD PhD
Retina Total Eye Care, Driebergen

Dept. of Ophthalmology, Academic Medical
Center, University of Amsterdam, the
Netherlands

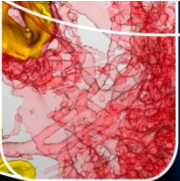
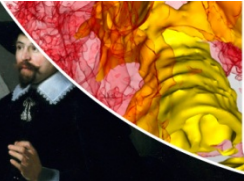
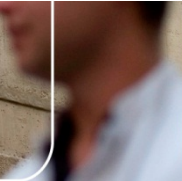
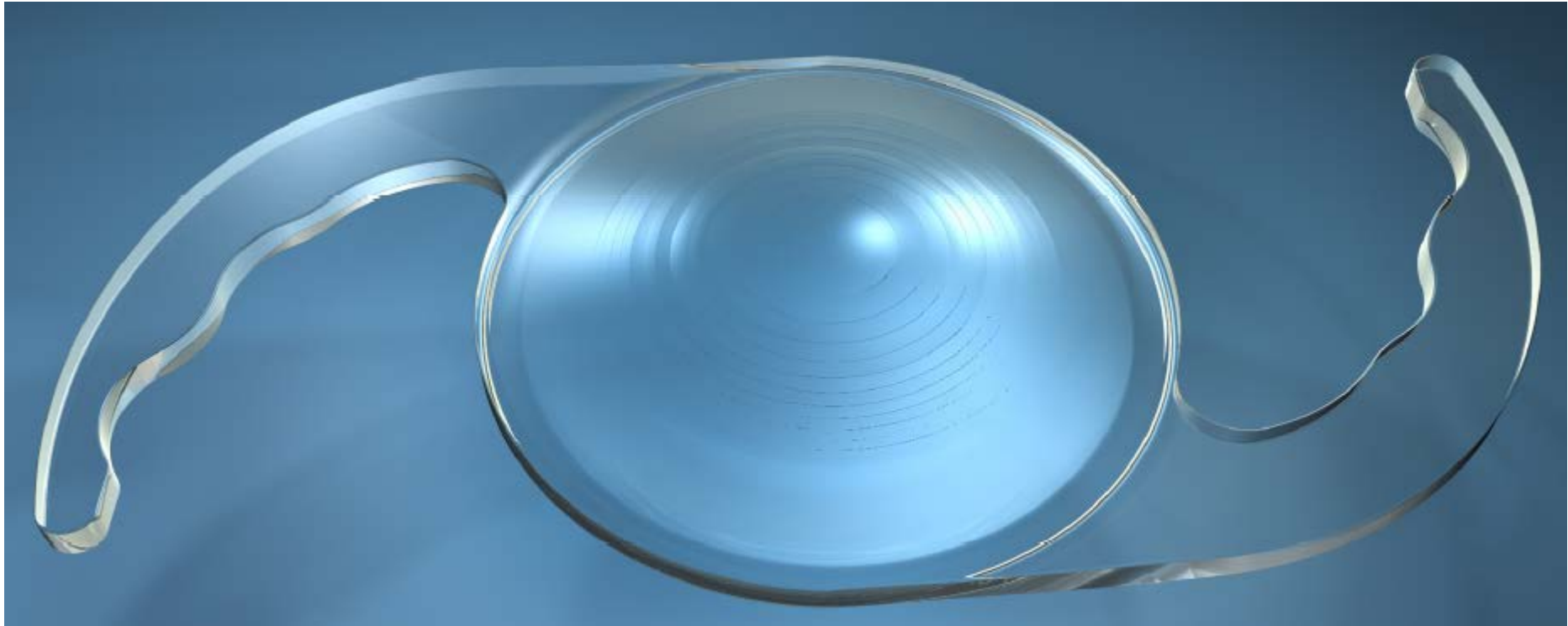


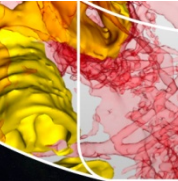
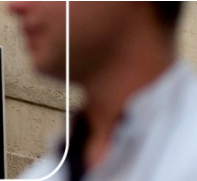
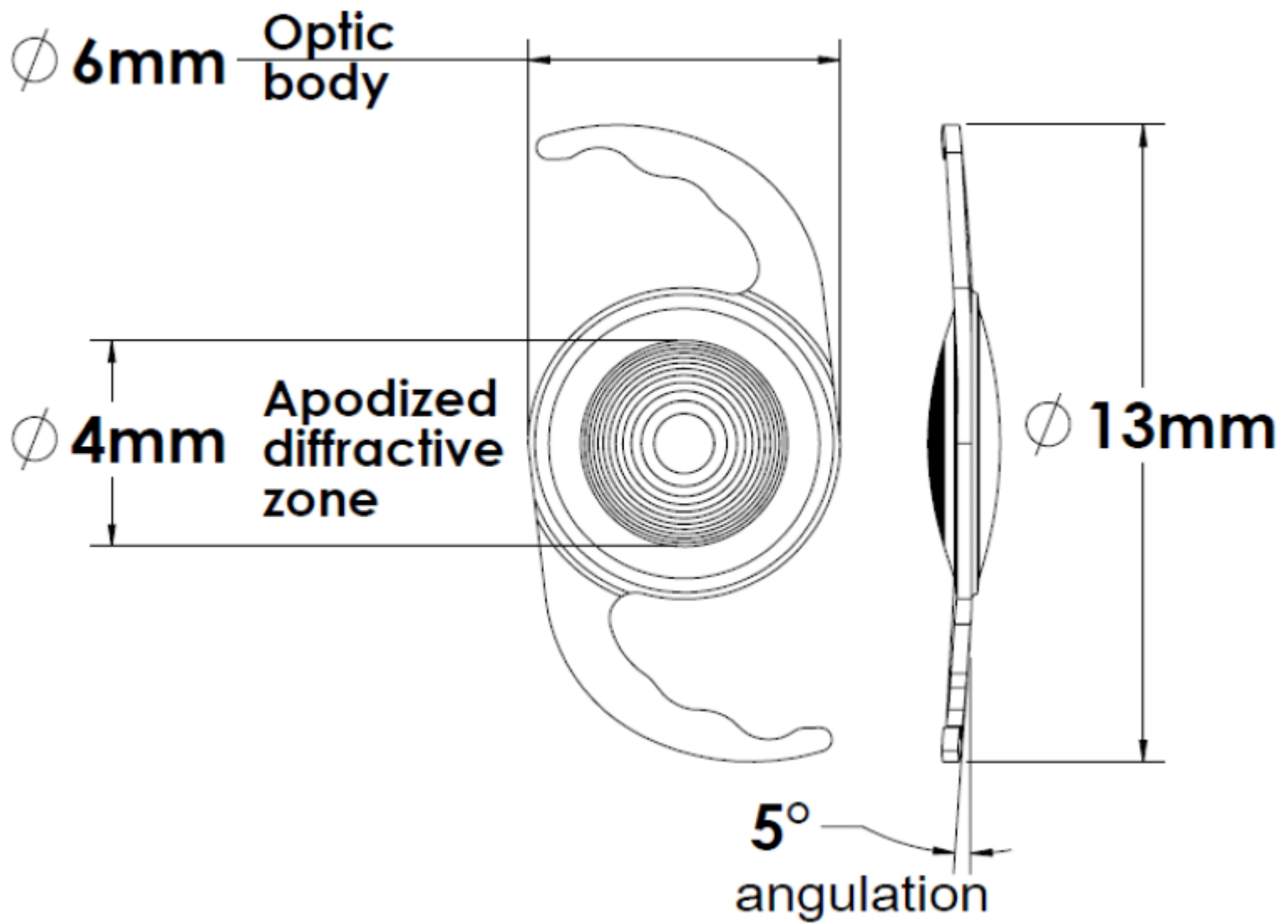
Financial Disclosure

- Alcon
- Simovision
- Oculentis
- Medtechnika
- Hanita Lenses

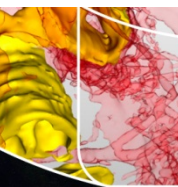
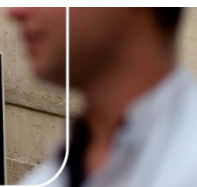


Hanita Seelens MF

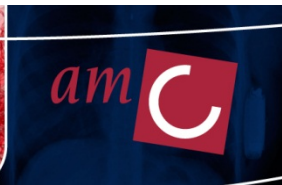
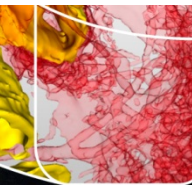
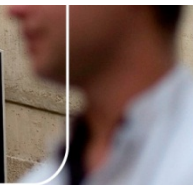
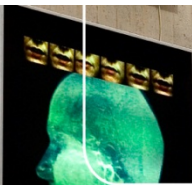
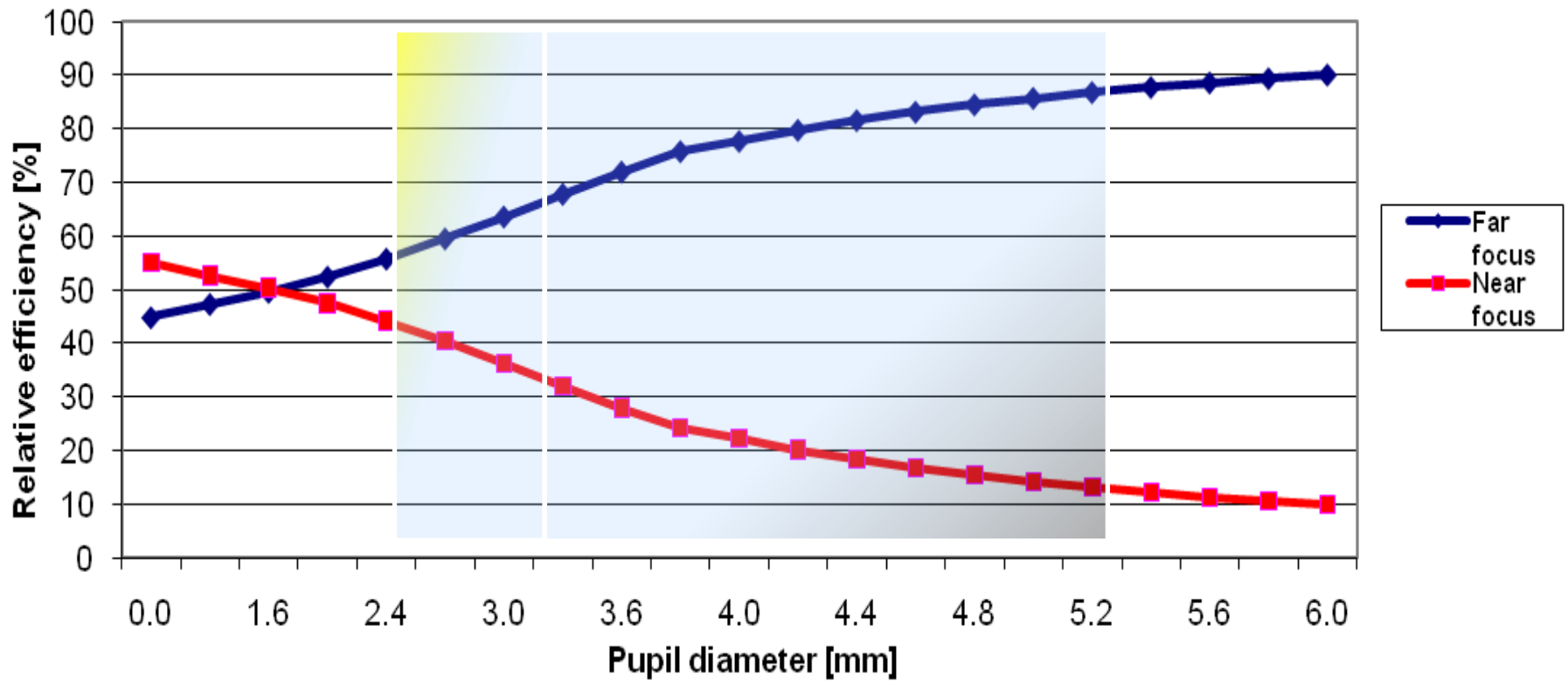




Parameter	Specification
Optic Diameter	6.0 mm
Power Range	+10 to +35 (10-30D in 0.5D increments, 30-35D in 1D increments)
Addition	+3.0 D IOL plane
Optic Design	Apodized diffractive aspheric Multifocal IOL
Lens design	360° Double square edge
Haptic angulation	5°
Material	Hydrophilic Acrylic 25% water content, with UV blocker and Natural Yellow violet light filter
Refractive index	1.462 (35°C)
Estimated A constant	118.6 (IOLMaster SRK/T)
Nd-YAG laser	Compatible
Placement	Capsular bag



Energy distribution between far (blue) and near (red) vision



Purpose:

To report the SeeLens MF outcomes in terms of:

- Refraction
- Visual acuity for D, I, and N
- Dysphotopsias: Halos, Glare.
- Patient satisfaction VQF-14



Methods:

- Prospective study
- N= 53 eyes
- Unrestricted research grant of Hanita
- Inclusion: cataract or refractive lens exchange, AL 21-26 mm, ACD > 2.5 mm
- Exclusion criteria: dry eye disease, corneal disease, glaucoma, diabetes, macular disease, AL <21, or >26 mm, ACD<2.5 mm
- Informed Consent following guidelines of Dutch Society for Refractive Surgery

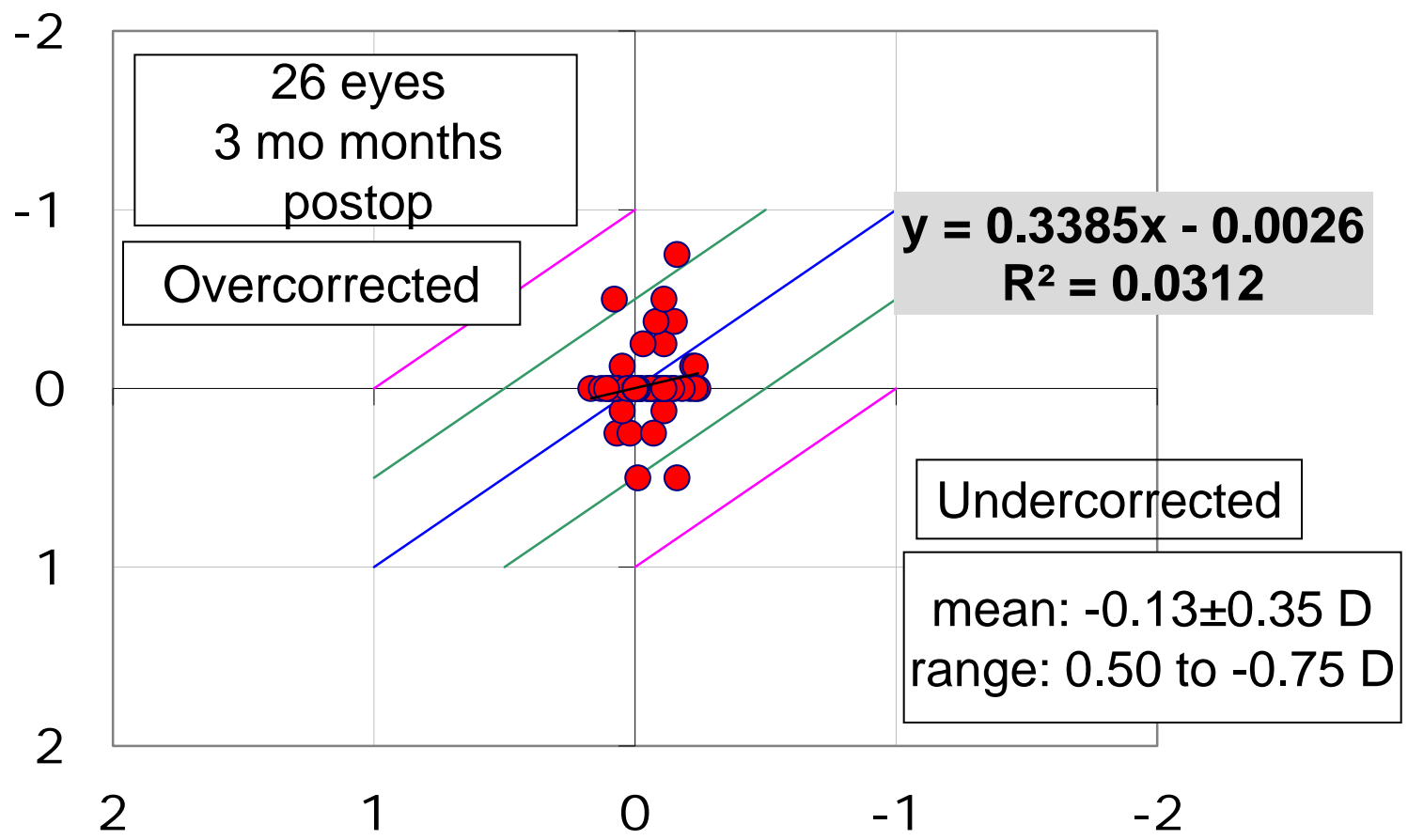


Demographic data

- M=15/F=13; 53 eyes up to now included
- Mean age 56.4 years (45-84)
- Cataract in 30 eyes.
- Refractive Lens Exchange in 23 eyes
- 2 eyes with mild amblyopia



Achieved Spherical Equivalent Refraction (D)

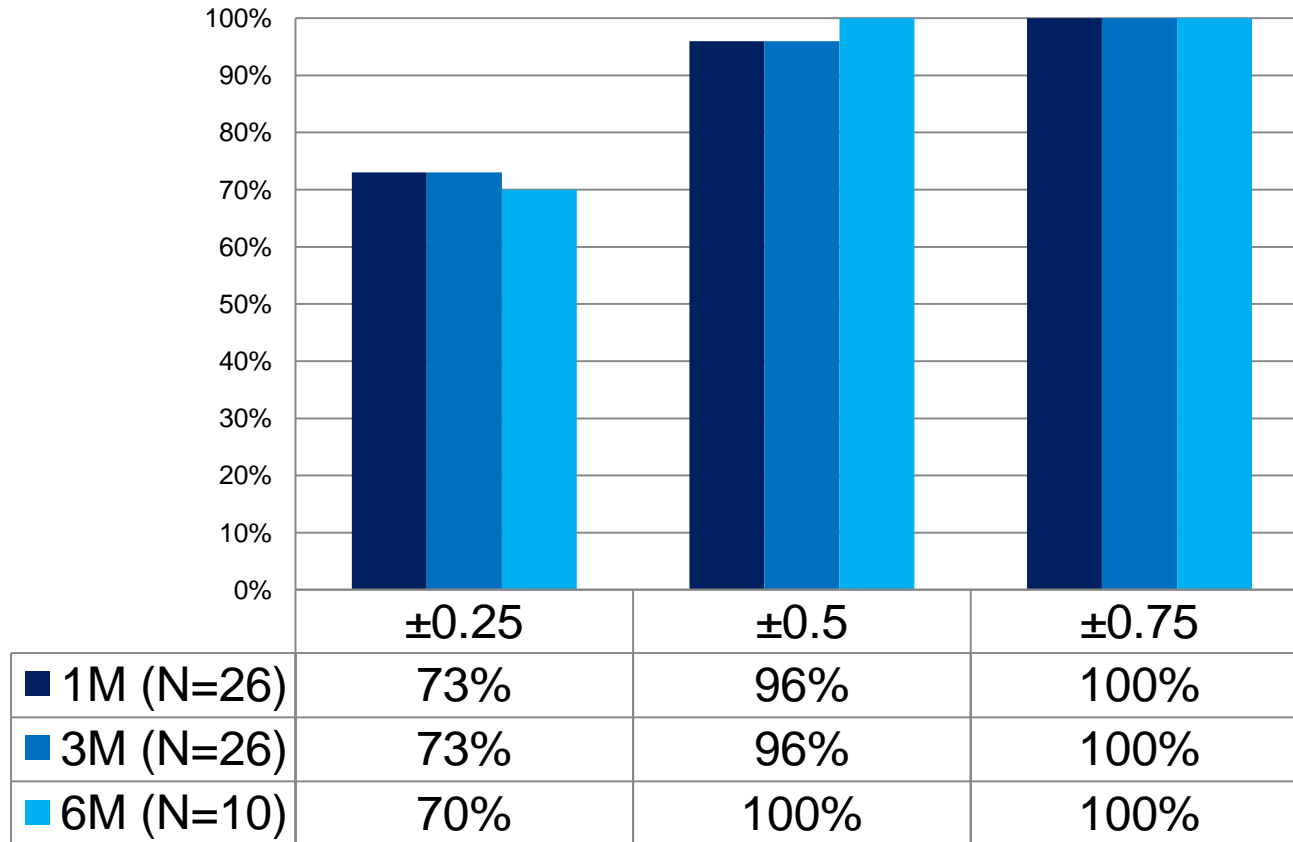


Attempted Spherical Equivalent Refraction (D)

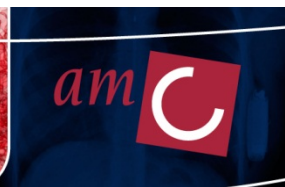
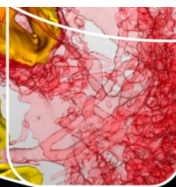


Spherical Equivalent Refractive Accuracy

Absolute deviation from target refraction

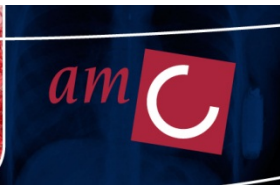
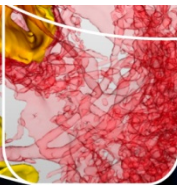
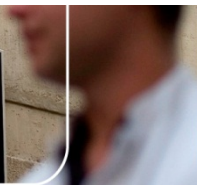
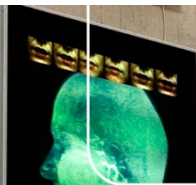


Mean 3M refraction: $-0.13D \pm 0.35$ (-0.75 to $+0.5$)

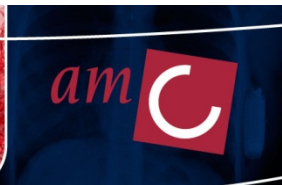
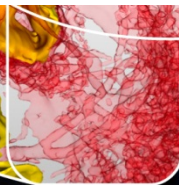
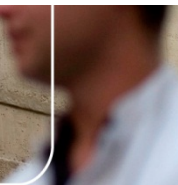
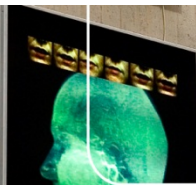
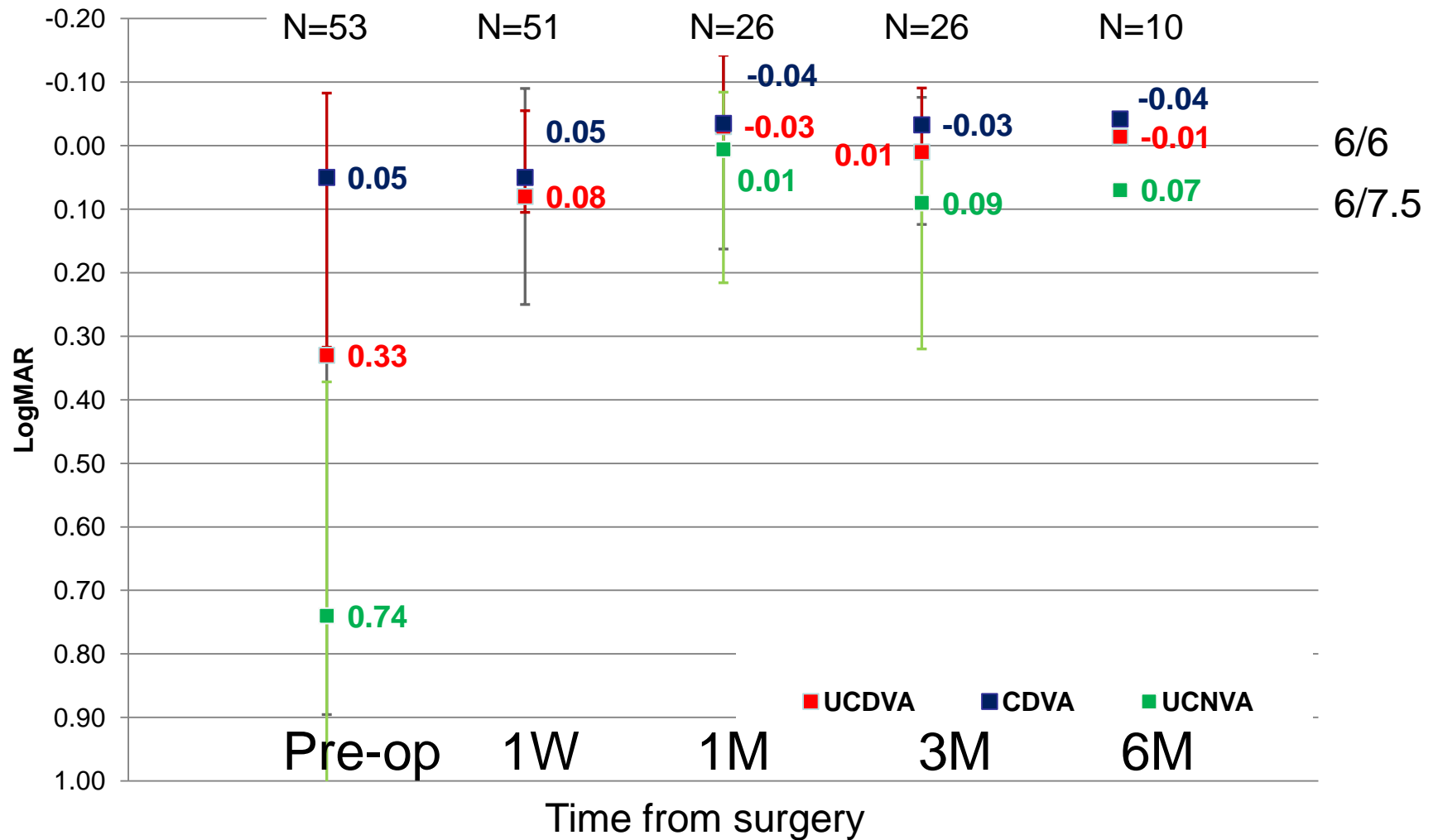


Results: Pre to Post op @ 3 m

	Pre-op	Post-op	P value
UCDVA	LogMAR 0.23 \pm 0.25 (0.8 to -0.04)	LogMAR 0.01 \pm 0.07 (0.2 to -0.14) (Snellen 6/6-)	<0.001
CDVA	LogMAR 0.03 \pm 0.09 (0.3 to -0.1)	LogMAR -0.03 \pm 0.05 (0 to -0.14) (Snellen 6/6+)	<0.005
UNVA	LogMAR 0.67 \pm 0.23 (1 to 0.3)	LogMAR 0.09 \pm 0.10 (0 to 0.3) (Snellen 6/7.5+)	<0.0001



Results up to 6 months



Uncorrected Visual Acuity Distance, intermediate & near @ 3 months

Lighthouse Near Visual Acuity Test (SECOND EDITION)
MODIFIED ETDRS WITH SLOAN LETTERS
For Testing at 40 cm (16 inches)

Chart 1

Letter Size (metric)	Letters	Snellen Distance Equivalent Diopters of Add For 1 M	
		at 40 cm	at 20 cm
8.0 M	N C K Z O	20/400	20/800
6.3 M	R H S D K	20/320	20/630
5.0 M	D O V H R	20/250	20/500
4.0 M	C Z R H S	20/200	20/400
3.2 M	O N H R C	20/160	20/320
2.5 M	D K S N V	20/125	20/250
2.0 M	Z S O K N	20/100	20/200
1.6 M	C K D N R	20/80	20/160
1.25 M	S R Z K D	20/63	20/125
1.0 M	H Z O V C	20/50	20/100
.8 M	H Z O V C	20/40	20/80
.6 M	H Z O V C	20/32	20/63
.5 M	H Z O V C	20/25	20/50
.4 M	H Z O V C	20/20	20/40
.3 M	H Z O V C	20/16	20/32

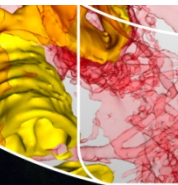
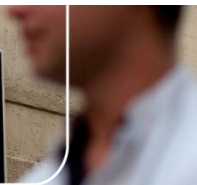
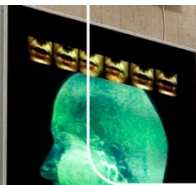
Instructions: The 40cm test distance requires a maximum add of +2.5D. If the patient cannot see the top line, move test distance to 20cm with a maximum add of +5.0D. Similarly if a 10cm test distance is required, the maximum add is +10.0D.
Record test distance and letter size from the left column. Examples: 40/80A, 20/60B.
The columns on the right provide reference to Snellen distance equivalent for two test distances; diopters of add for 1M print size for two test distances.

THIS COMPLIMENTARY DISPOSABLE CHART IS AVAILABLE IN 2MM THICK, WASHABLE
PLASTIC WITH A 40-CM NON-STRETCH CORD. ORDER CAT. NO. C170
1-800-829-0500



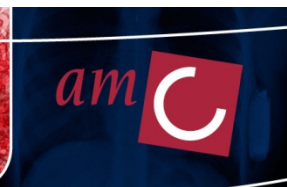
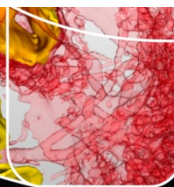
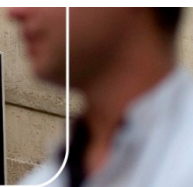
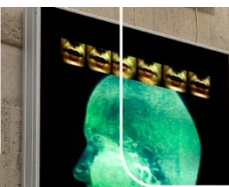
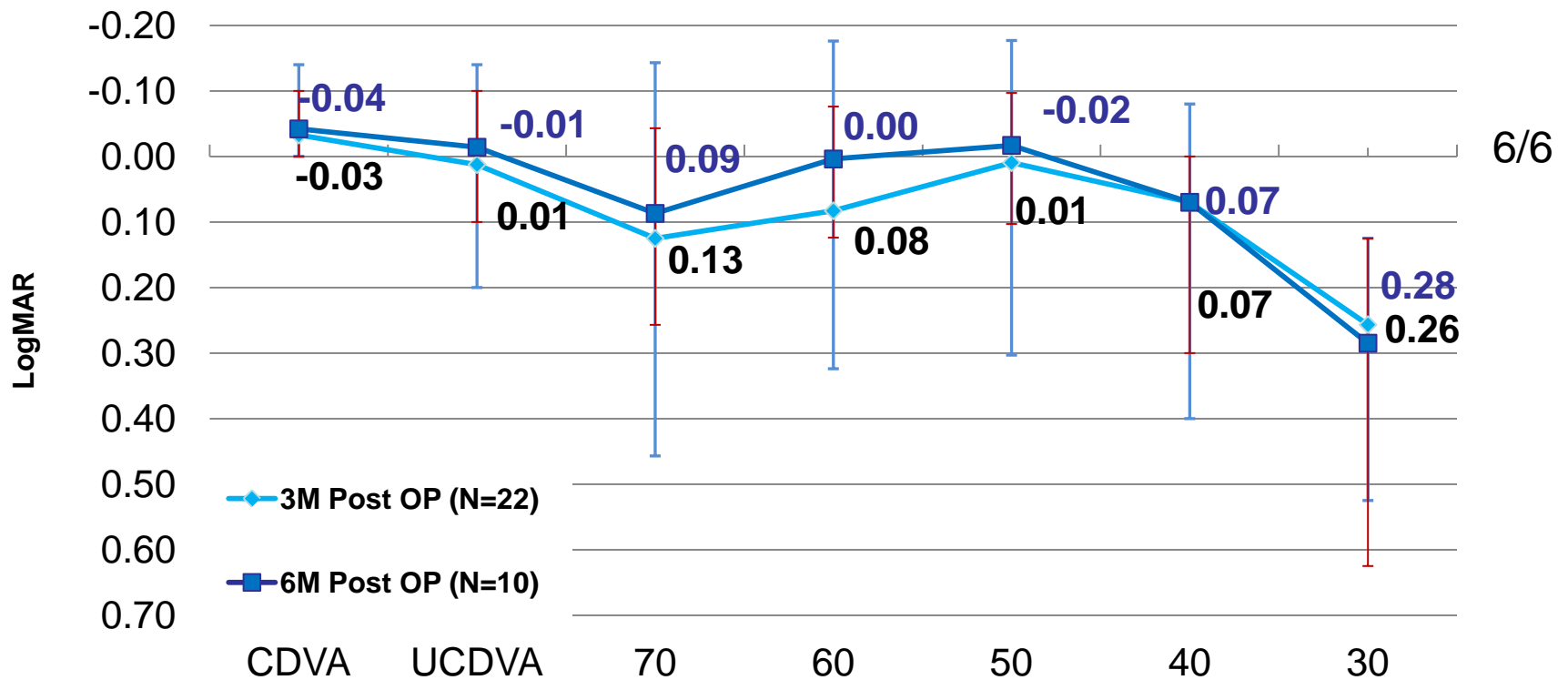
LIGHTHOUSE INTERNATIONAL
LIGHTHOUSE ENTERPRISES
PROFESSIONAL PRODUCTS DIVISION
111 EAST 94TH STREET
NEW YORK, NY 10022

Cat. No. C170



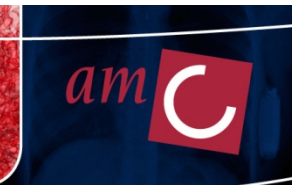
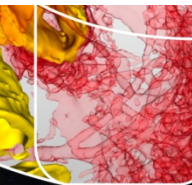
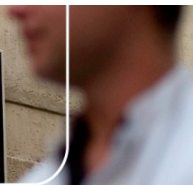
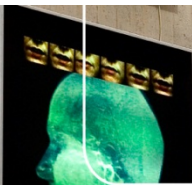
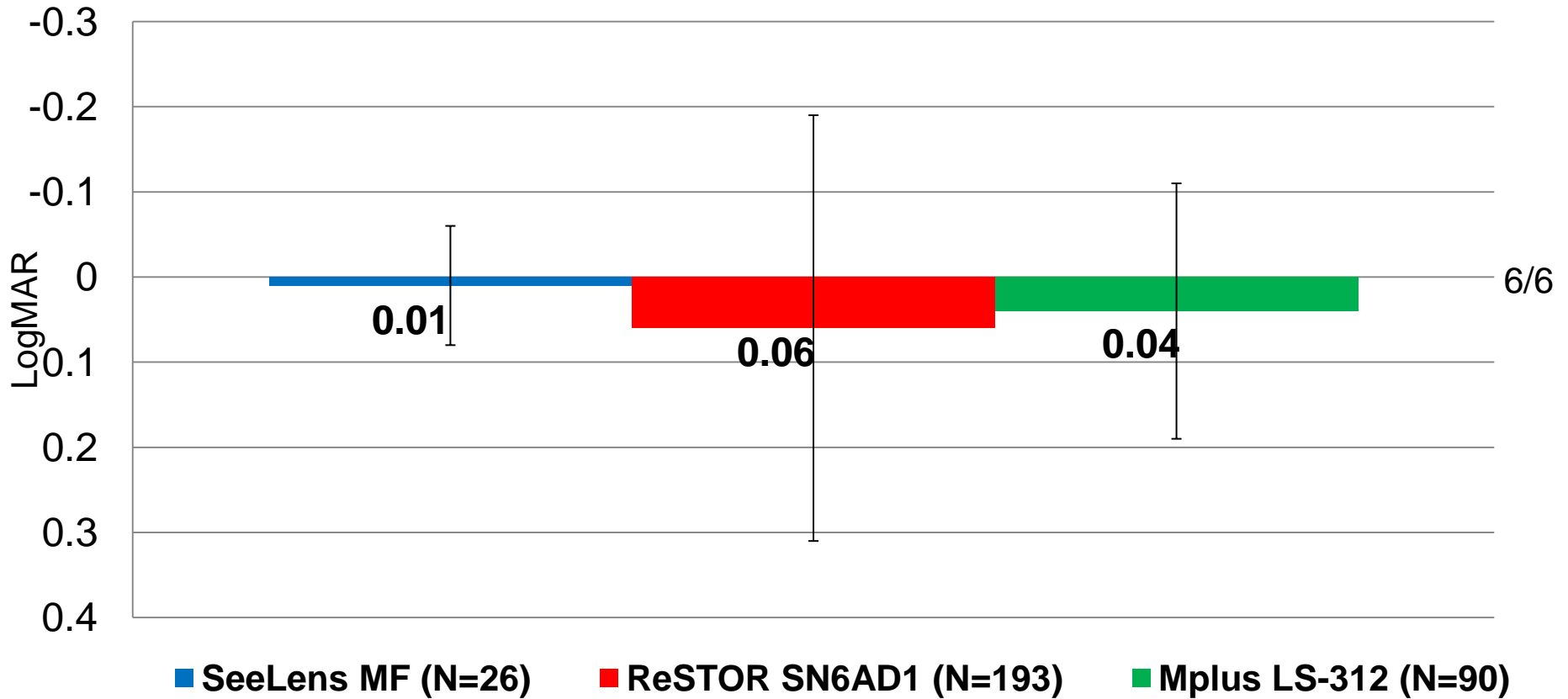
Uncorrected Visual Acuity

Distance, intermediate & near @ 3 months



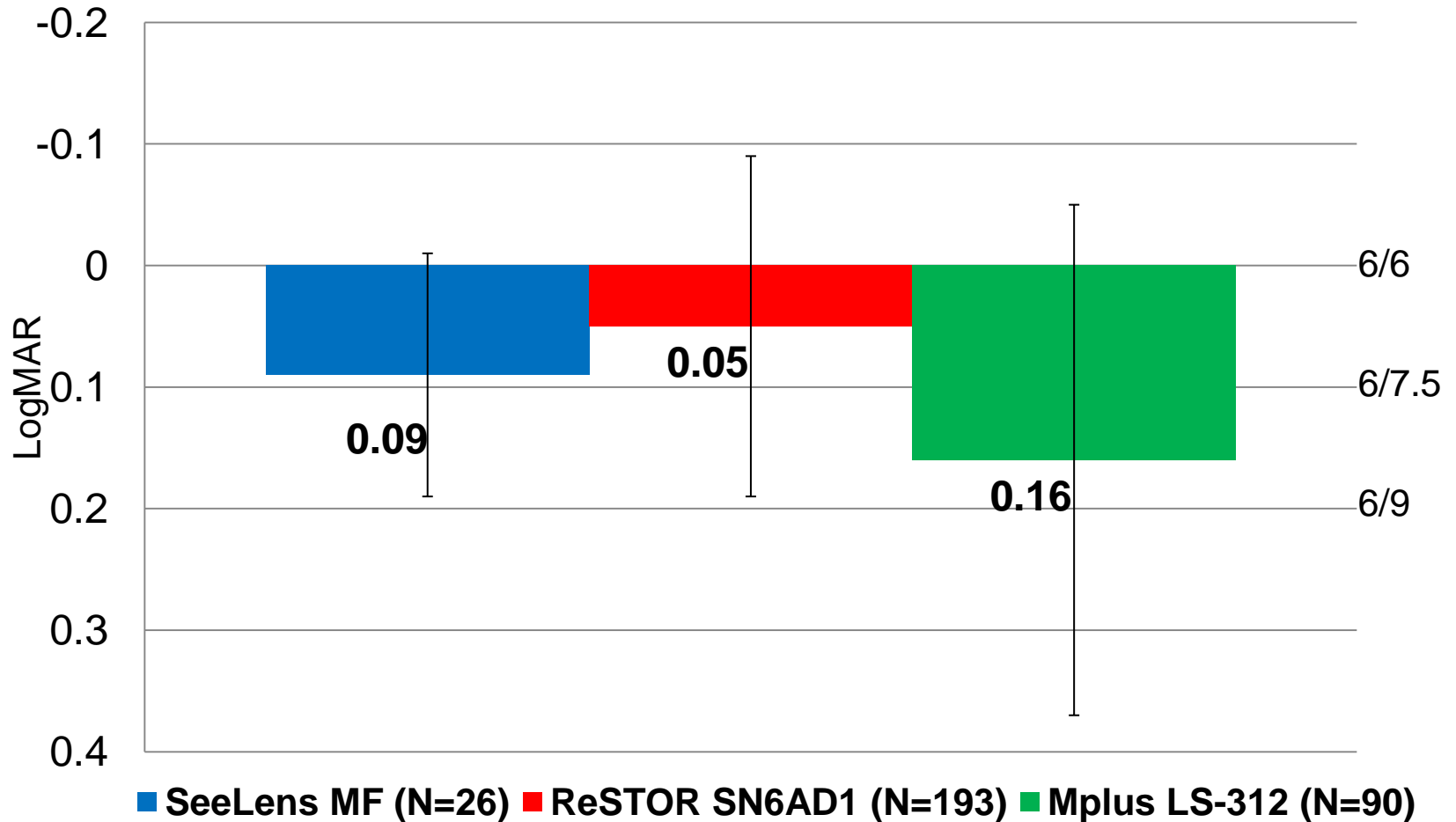
Comparison to other MF IOLs

UCDA - 3 Months Post OP



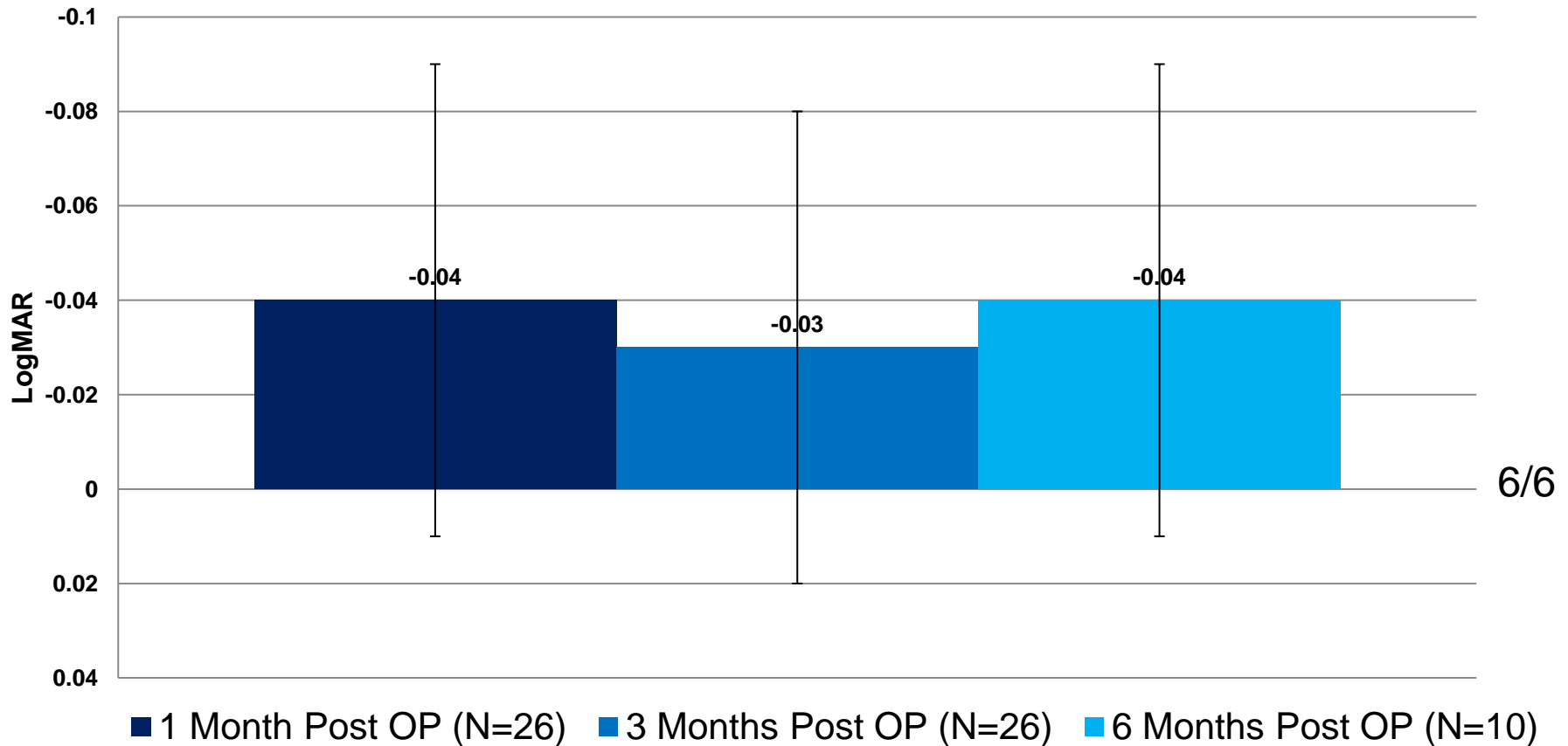
Comparison to other MF IOLs

UNVA - 3 Months Post OP



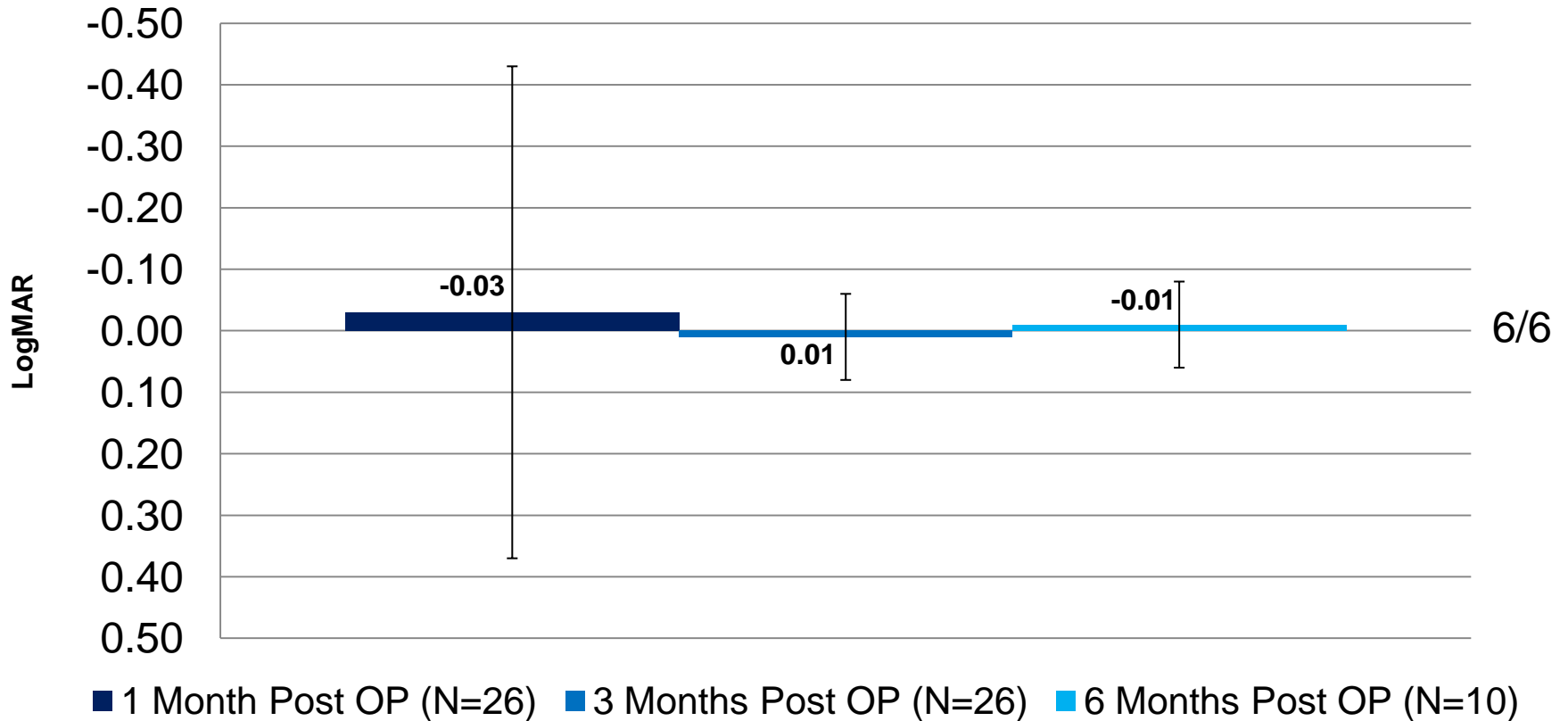
SeeLens MF - stability over 6M

CDVA



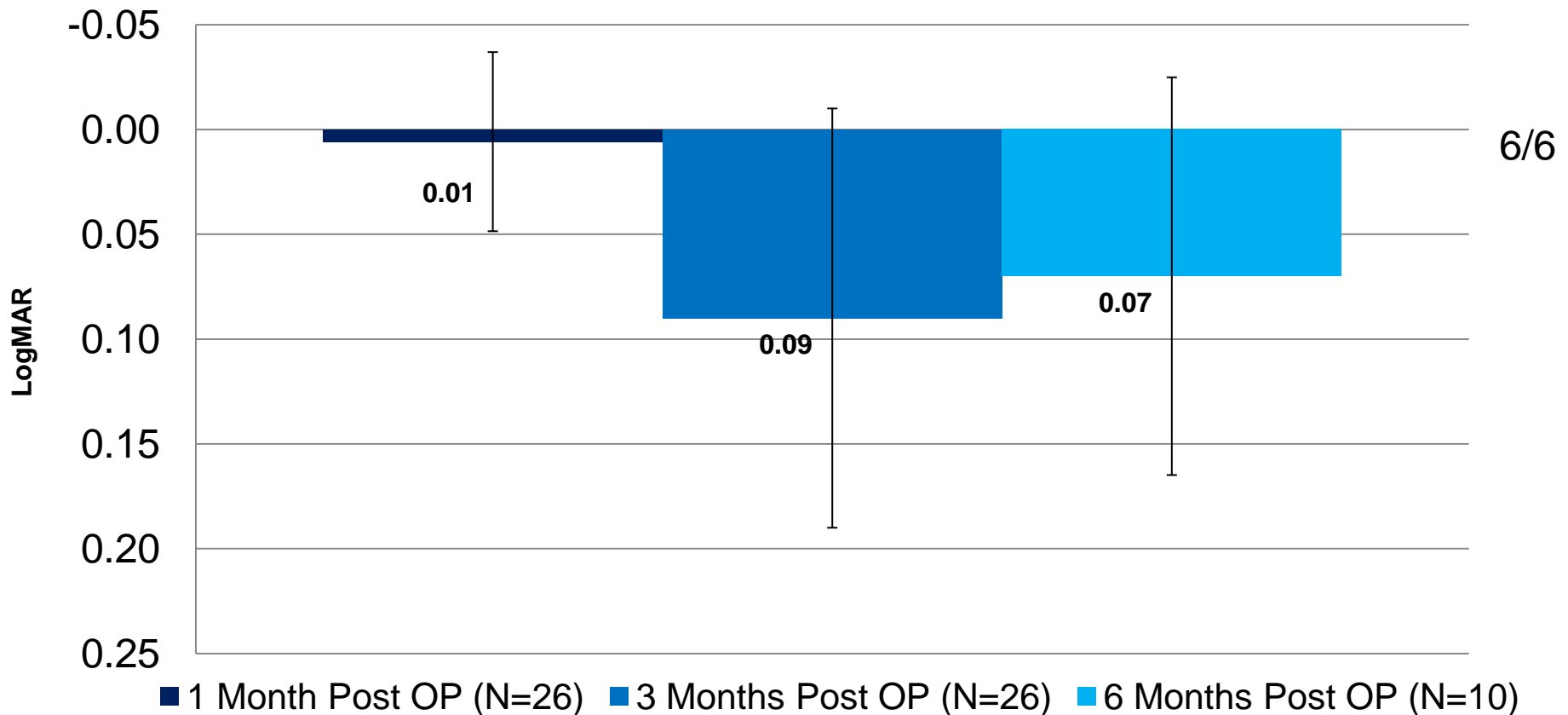
SeeLens MF - stability over 6M

UCDA



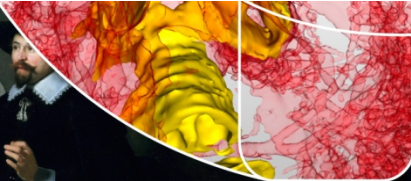
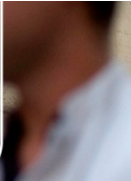
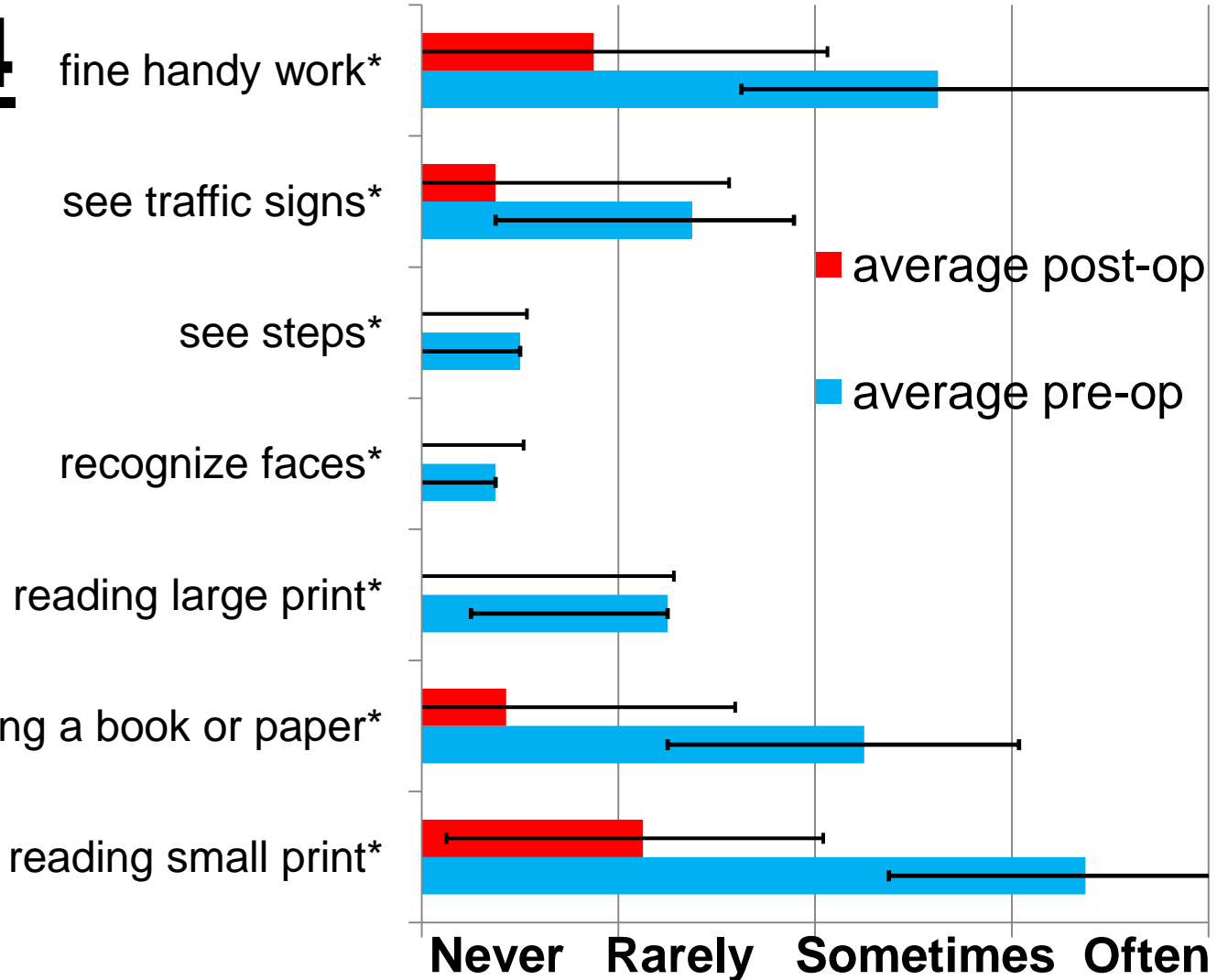
SeeLens MF - stability over 6M

UNVA



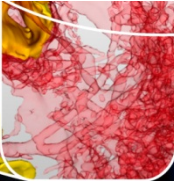
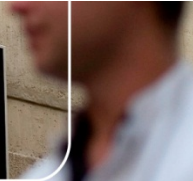
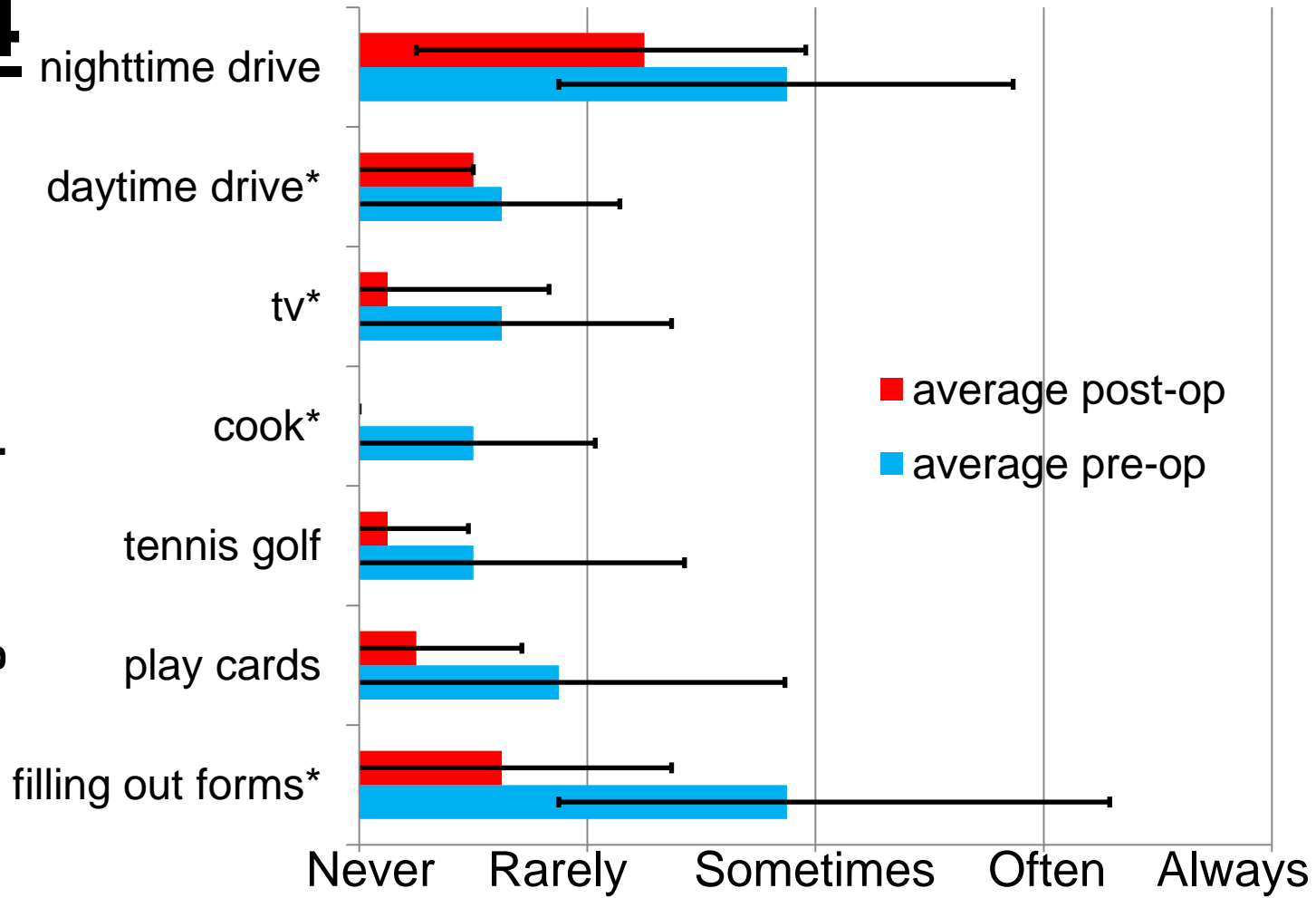
VQF 14

Parameter * = statistically significant $p < 0.033$ to 0.003



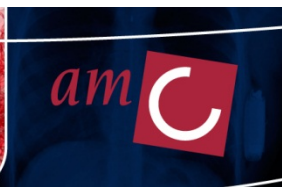
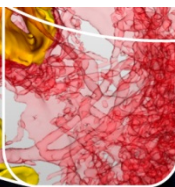
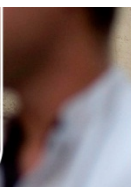
VQF 14

Parameter * = statistically significant $p < 0.03$ to 0.05



Comparison to other MF IOLs

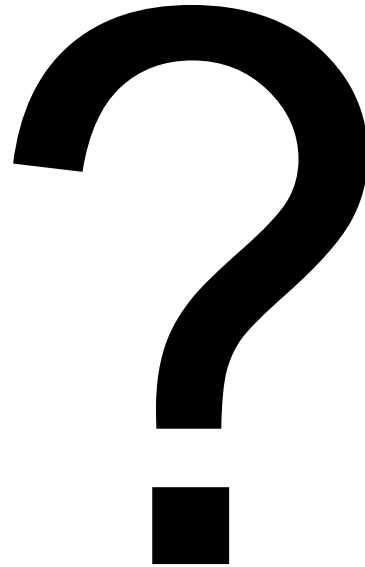
@ 3 Months	Hanita Seelens MF	Alcon ReSTOR SN6AD1	Oculentis Mplus LS-312
Spherical Equivalent refraction	-0.13 ± 0.35	0.12 ± 0.37	0.08 ± 0.31
Halos	20.8%	18.18%	18.89%
Satisfaction	95.8%	98.6%	83.33%
N= lenses	26	143	90



Conclusion

- New generation apodized diffractive multifocal IOL
- Predictable outcomes
- Good Distance, Intermediate and Near Uncorrected visual acuity
- Compares favorably to the ReSTOR and the MPlus





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