



**AUGENÄRZTE**  
GERL, KRETZ & KOLLEGEN

## Individualized Patient Care

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# Financial Disclosure

Acufocus<sup>1</sup>

Alimera<sup>2,3,4</sup>

AMO<sup>1,2,3</sup>

AVS<sup>1</sup>

Carl Zeiss Meditec<sup>1,2,3,4</sup>

Glaukos<sup>1,2,3,4</sup>

Hoya<sup>1</sup>

LensAR<sup>1</sup>

Mediphacos<sup>1</sup>

MST<sup>4</sup>

Oculentis<sup>1,2,3,4</sup>

ODC<sup>4</sup>

PhysIOL<sup>1</sup>

Polytech<sup>1,2,3,4</sup>

Santen<sup>1</sup>

Teleon<sup>1,2,3</sup>

Vision Ophthalmology

Group<sup>2,3,4</sup>

*1 = Research; 2 = Travel Expenses  
3 = Honorary; 4 = Consulting*

## Cooperations



Univ.- Augenklinik  
Universität Heidelberg



**Provisus**  
Research Institute



# Agenda



- 1. Patient Categories**
- 2. Trifocality Outcomes**
- 3. Enhancing intermediate Vision**
- 4. The Right Match**
- 5. Conclusion**



# Patient Categories:

Patient focused

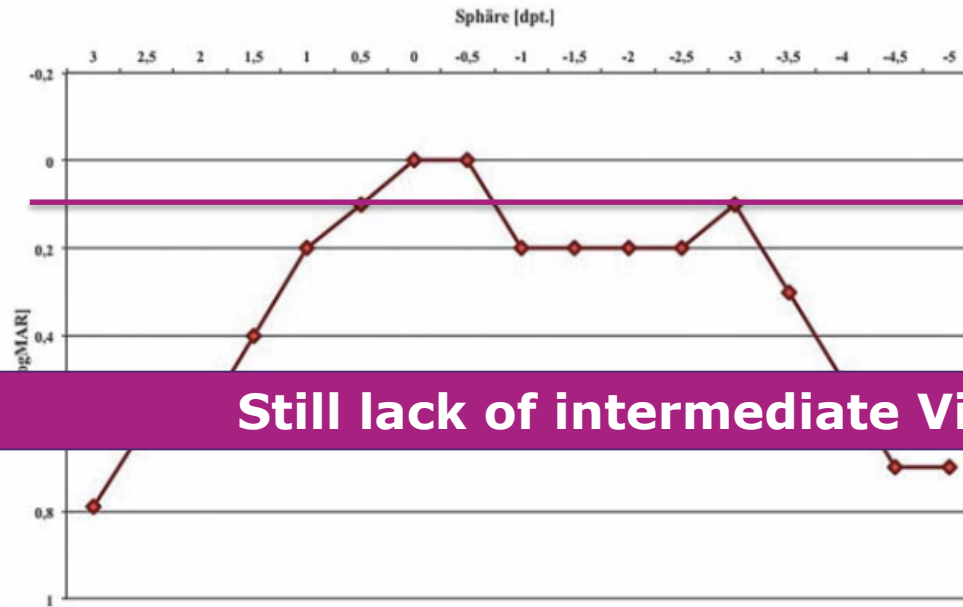


# Trifocal IOLs

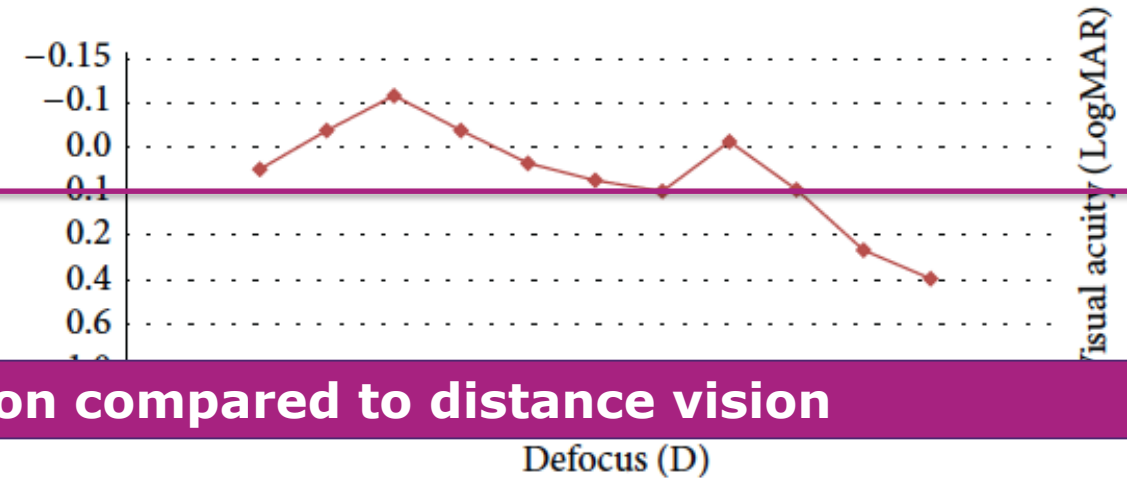
## Defocus Curve



**Micro F (PhysIOL)**



**AT LISA tri (ZEISS)**



**Still lack of intermediate Vision compared to distance vision**

Kretz FT et al., [Level of Binocular Pseudoaccommodation in Patients implanted with an Apodised, Diffractive and Trifocal Multifocal Intraocular Lens]. Klin Monbl Augenheilkd. 2015 Aug;232(8):947-52.

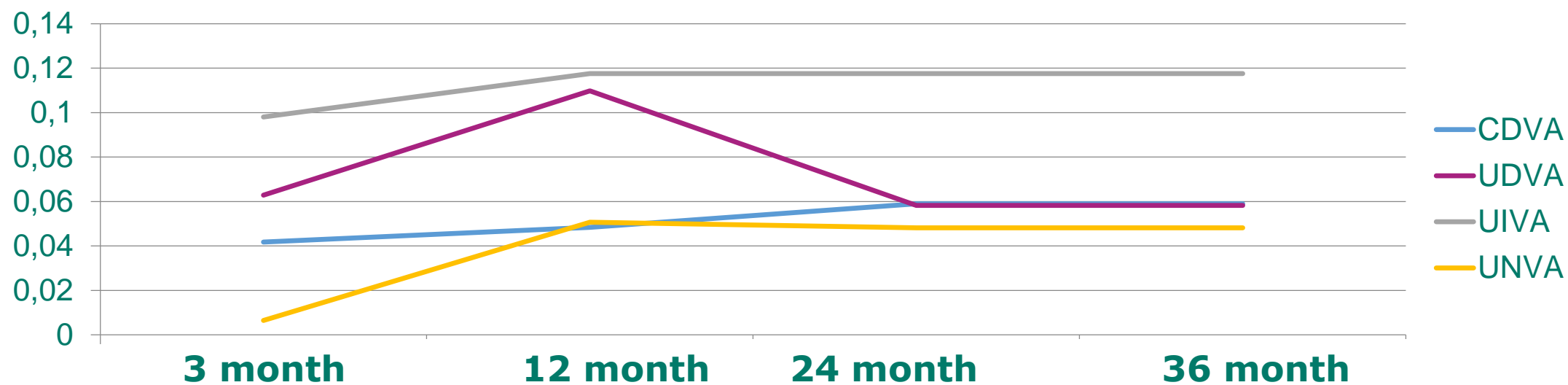
Kretz FT et al., Clinical Outcomes after Binocular Implantation of a New Trifocal Diffractive Intraocular Lens. J Ophthalmology. 2015;2015:962891.



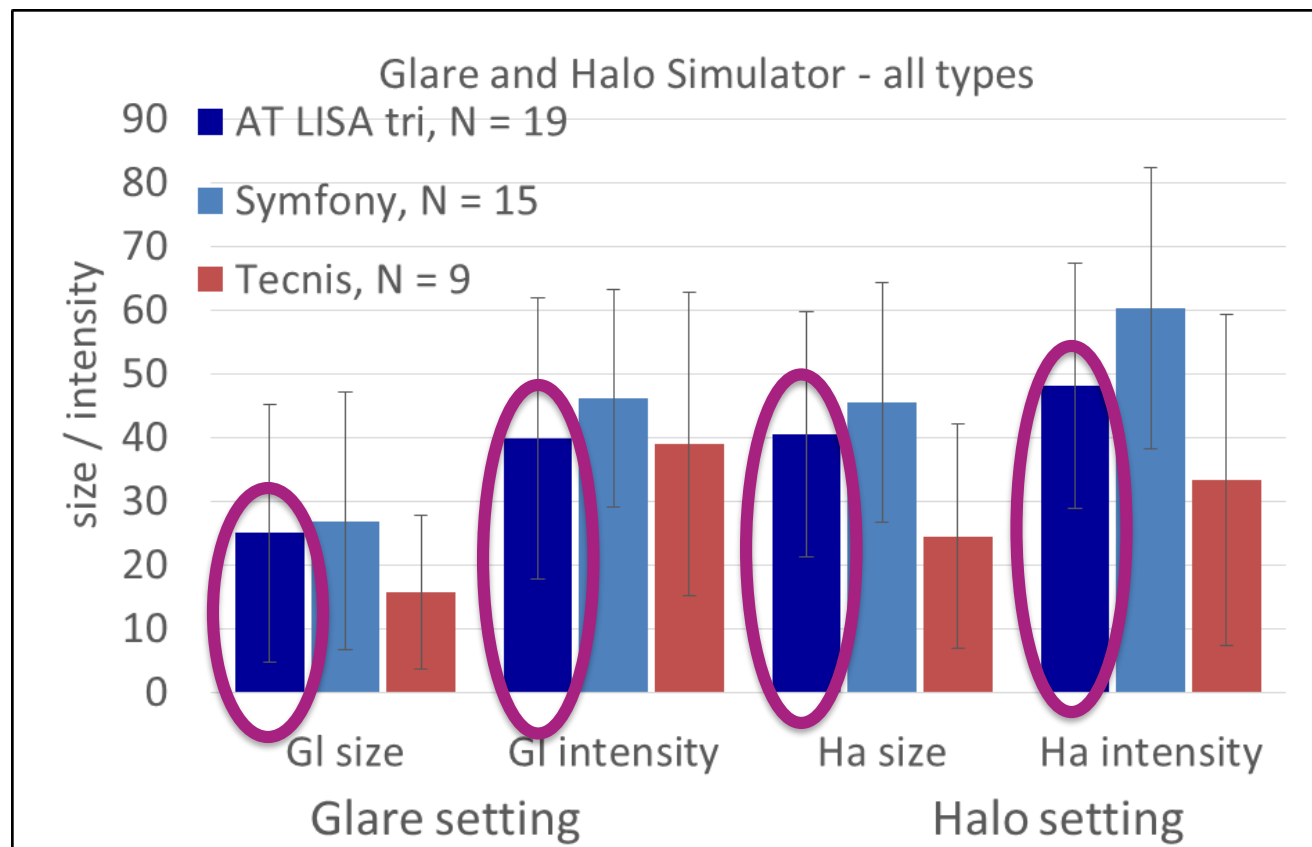
# Functional Results 839MP



		3 month		12 month		24 month		36 month	
		Mean	STD	Mean	STD	Mean	STD	Mean	STD
839 MP	CDVA	0.04	0.09	0.05	0.12	0.06	0.09	0.06	0.09
	UDVA	0.06	0.12	0.11	0.18	0.06	0.10	0.06	0.12
	UIVA	0.10	0.08	0.12	0.10	0.12	0.10	0.12	0.10
	UNVA	0.01	0.10	0.05	0.14	0.05	0.14	0.05	0.14



# Glare and Halo Simulator



**Less Glare and Hale perception than with Symphony IOL**





# Enhancing intermediate Vision

## ZEISS AT LARA 829



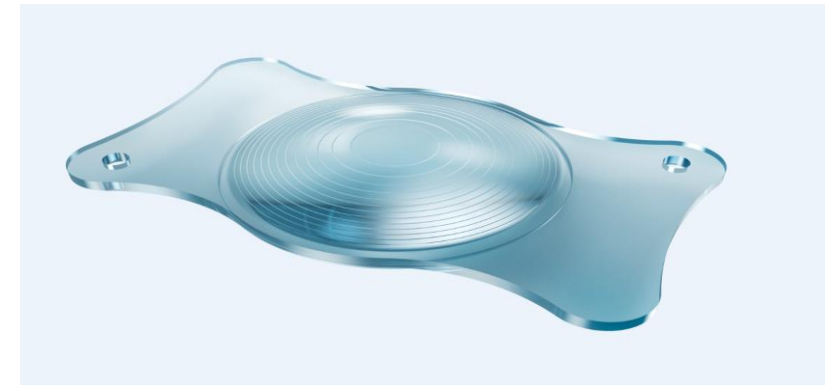
### NEXT GENERATION

Extended Depth of Focus (EDoF) IOL

- **Wider range of focus**
- **Less visual side effects** than multifocal IOLs

More selection offers better individual patient care:

- **AT LARA** offers a **perfect balance** for patients seeking spectacle independence for an active lifestyle with less side effects

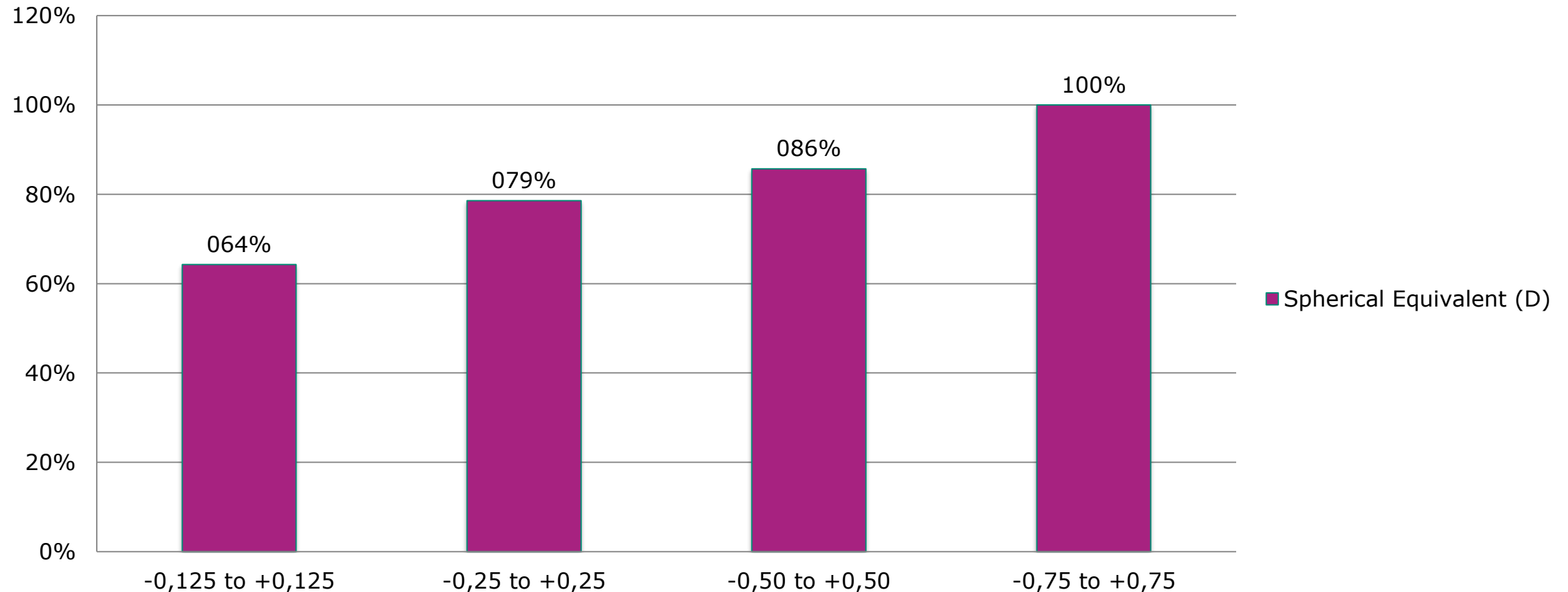




# AT LARA Emmetropia group post-Op cumulative Spherical Equivalent



## Cumulative Spherical Equivalent [D]

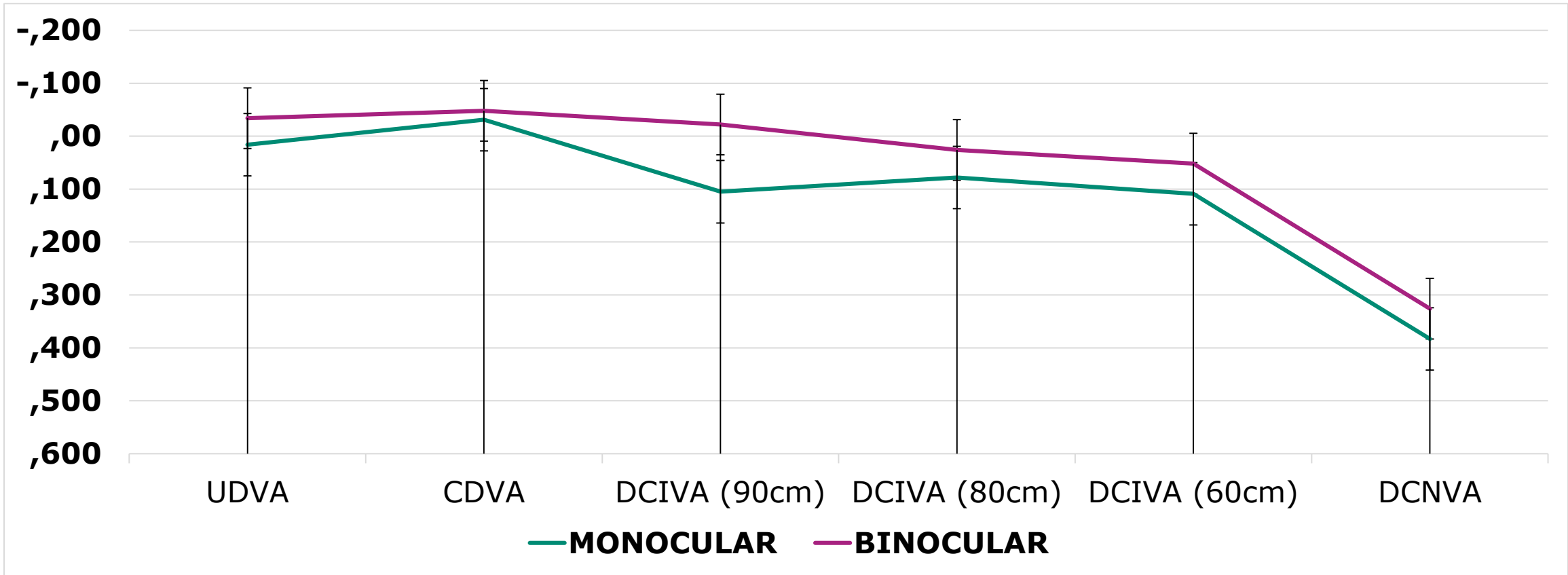


**Mean postoperative SE:  $-0.06 \pm 0.31$**



# AT LARA Emmetropia group

## Visual Acuity Results [logMAR]



	UDVA	CDVA	DCIVA (90cm)	DCIVA (80cm)	DCIVA (60cm)	DCNVA
Mono	0,016	-0,031	0,105	0,078	0,109	0,383
Bino	-0,034	-0,048	-0,022	0,026	0,052	0,326

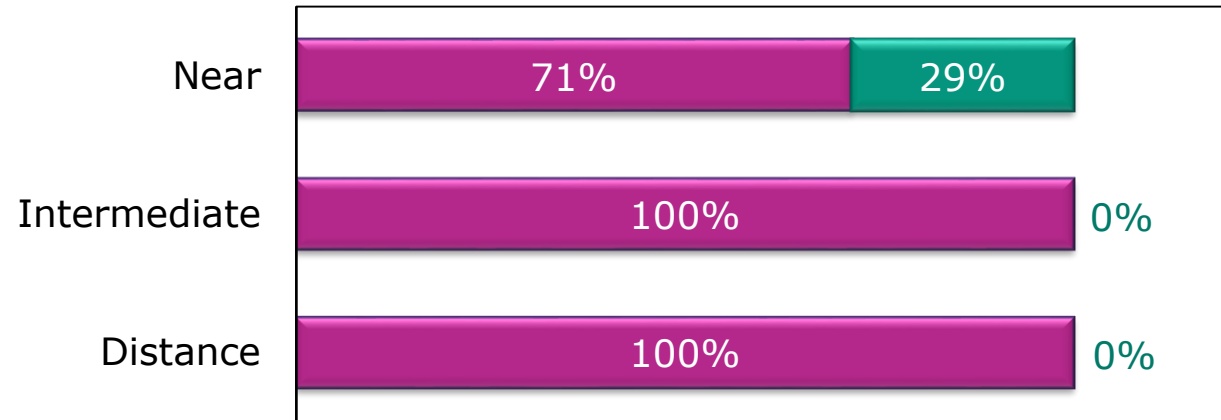
# AT LARA Emmetropia group

## Spectacle independency (McAlinden)



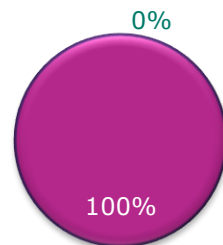
**Did the Surgery offer you spectacle independency?**

■ Yes ■ No



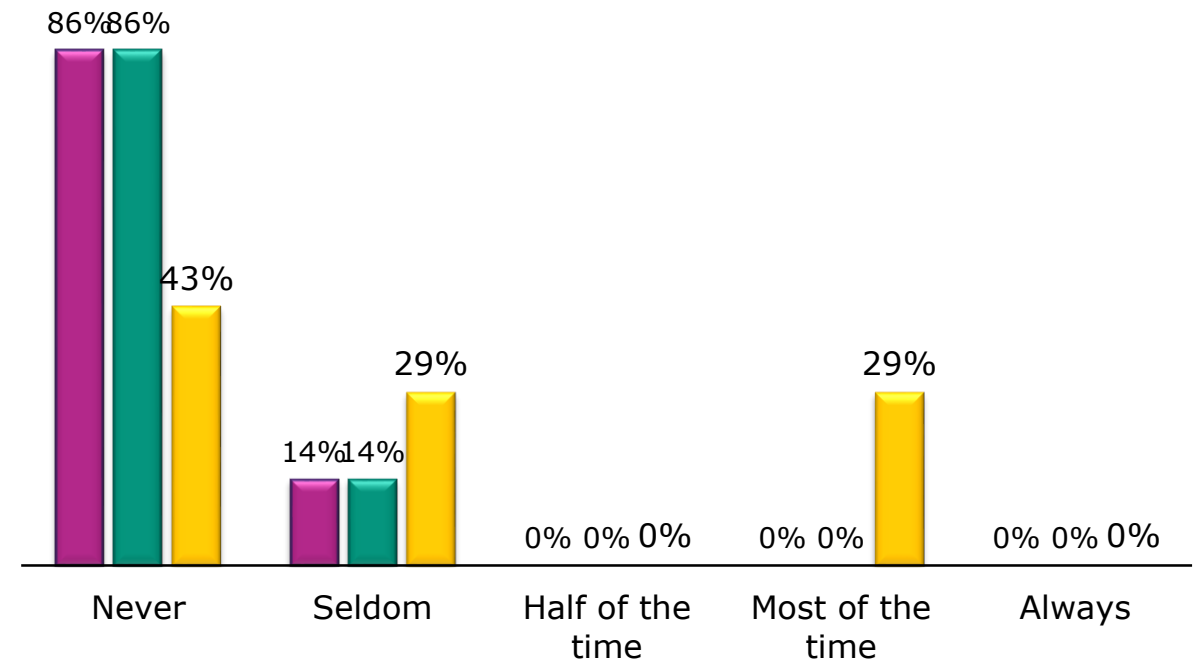
**If you had to choose again, would you pick a multifocal intraocular lens again?**

■ Yes ■ No



**How often do you wear glasses?**

■ Distance ■ Intermediate ■ Near



# Halo & Glare Assessment – AT LARA Results



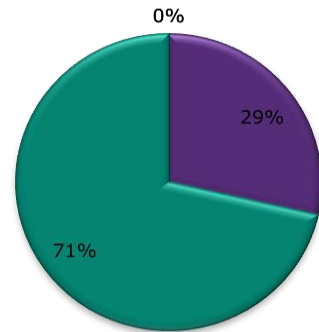
# AT LARA Emmetropia group

## Glare, Halo and Starburst (McAlinden)

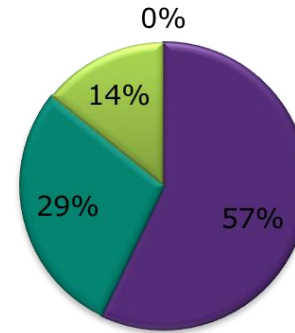


How often do you experience ...?

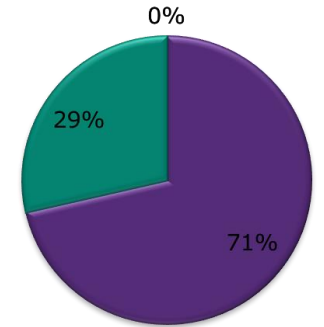
### Glare



### Halo

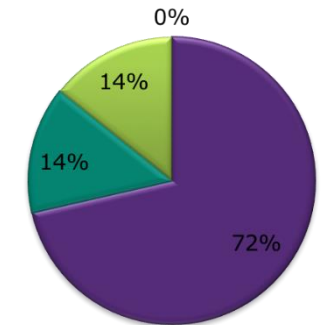
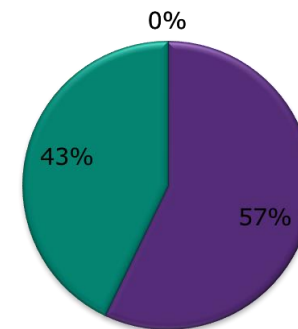
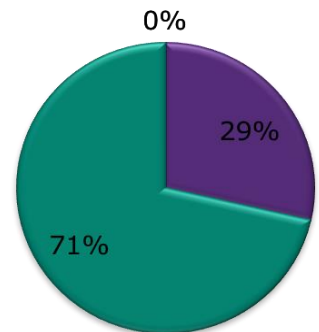


### Starburst



■ Never
 ■ Occasionally
 ■ Quite Often
 ■ Very Often

How severe is the ...?



■ Not at all
 ■ Mild
 ■ Moderate
 ■ Severe



# The Right Match

Combining both worlds



**TRIFOCAL AT LISA**

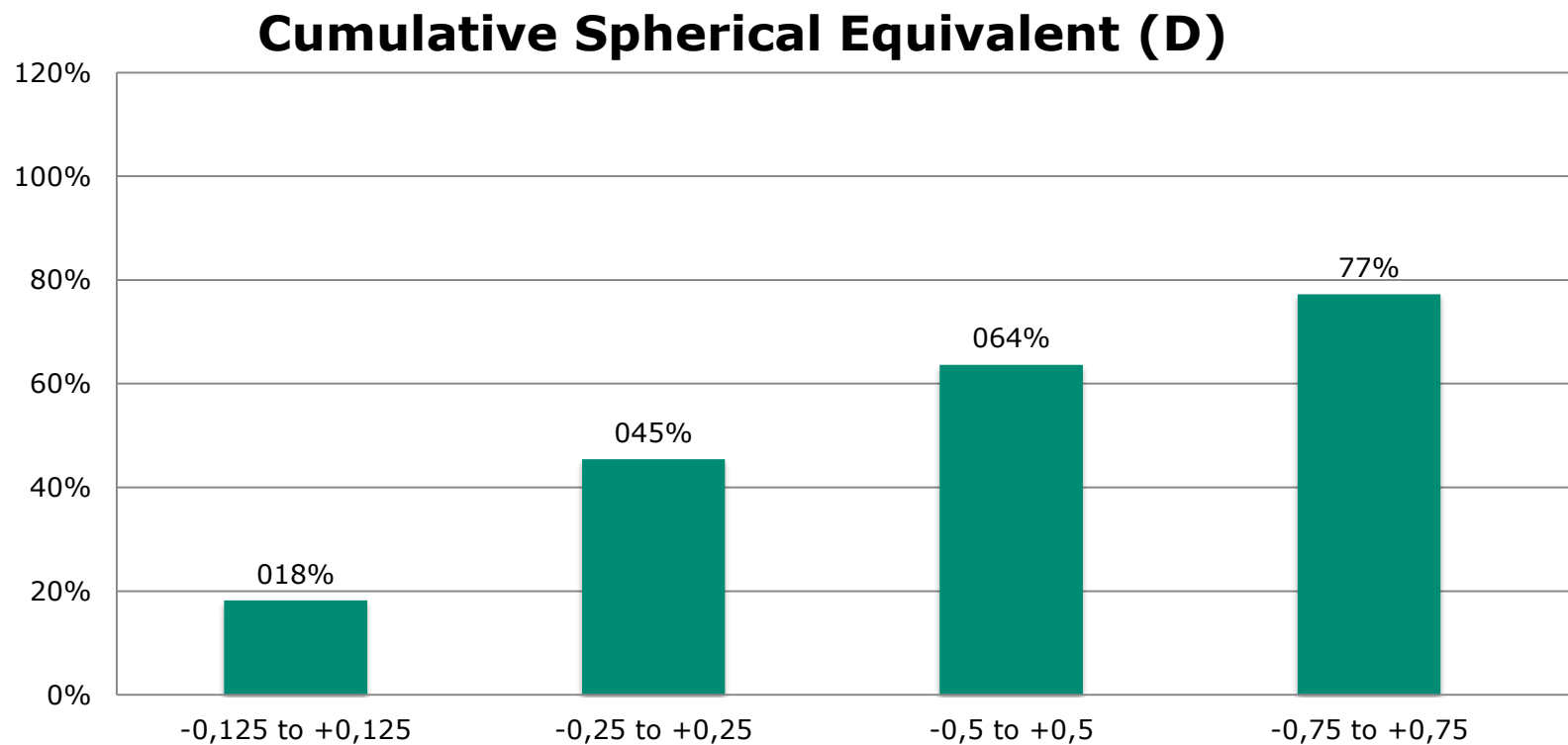


**EDOF AT LARA**



# First Results 3 month post-Op

## Cumulative SE

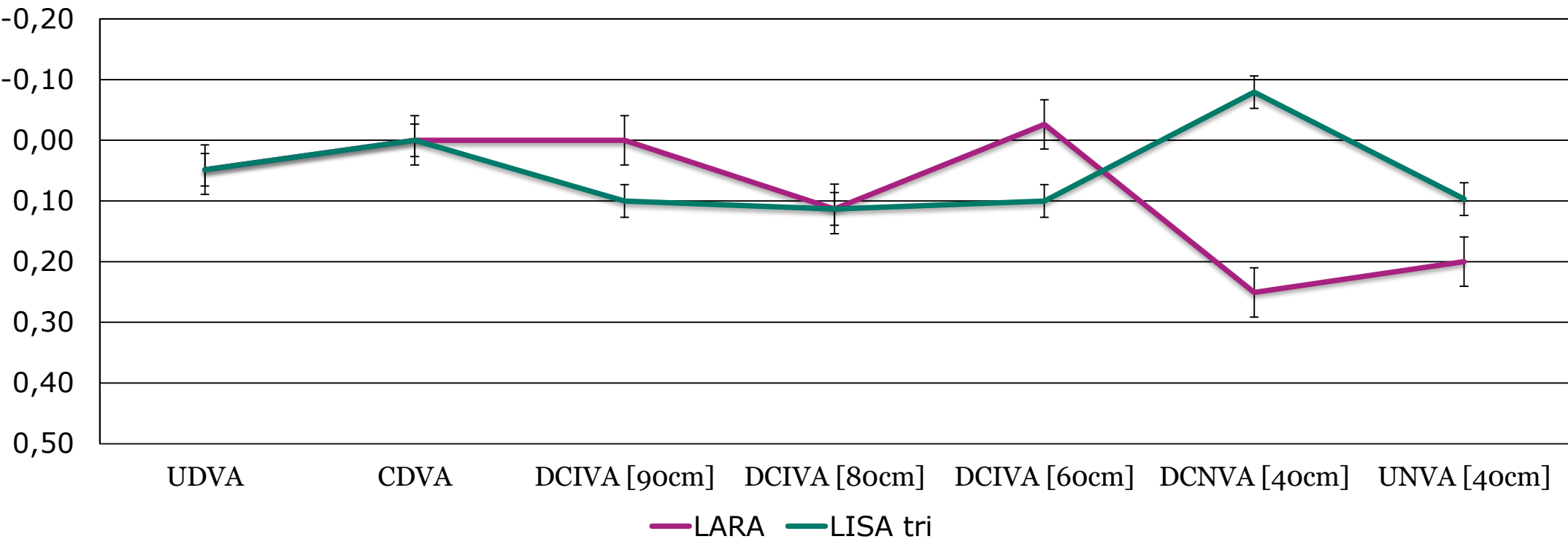




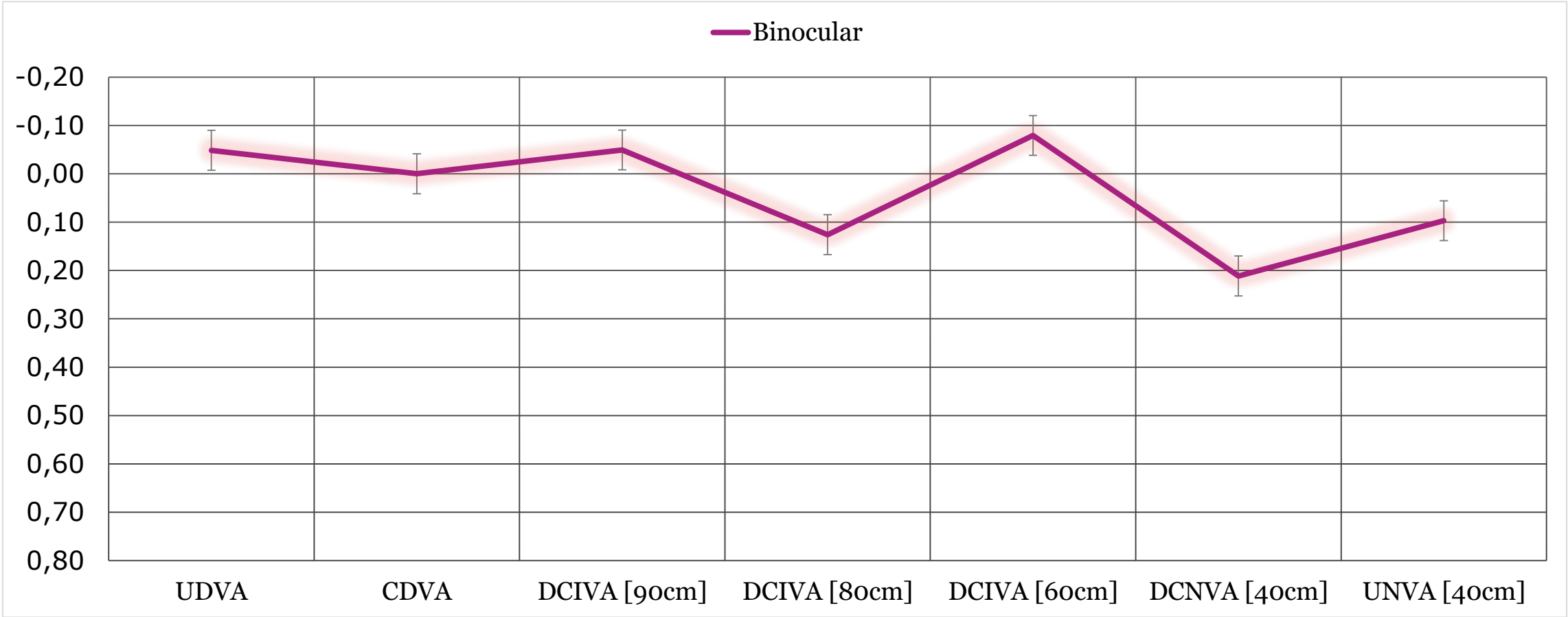
# First Results 3 month post-Op – LARA/LISA Mix & Match (VA logMAR)



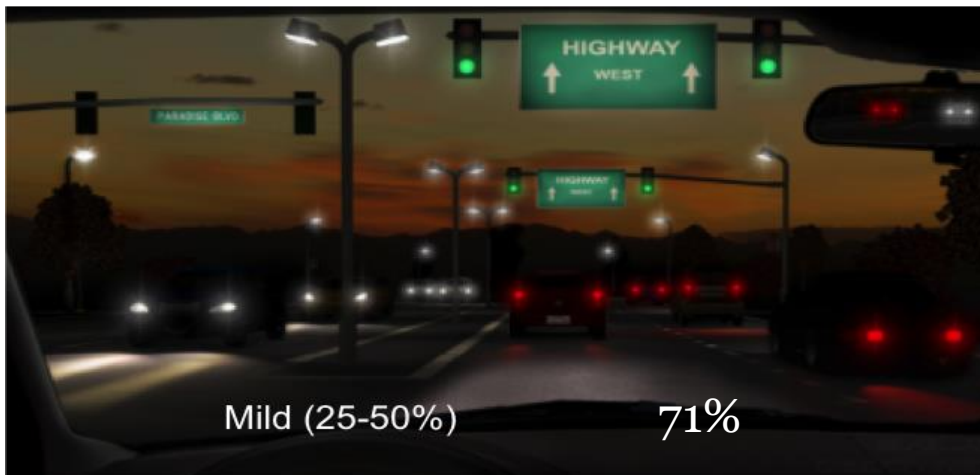
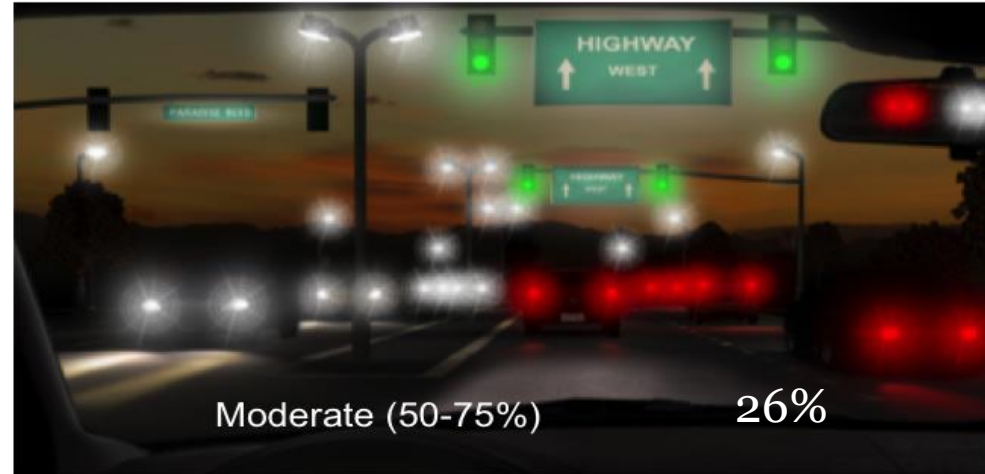
Monocular Visual Acuity



# First Results 3 month post-Op – LARA/LISA Mix & Match (VA logMAR)



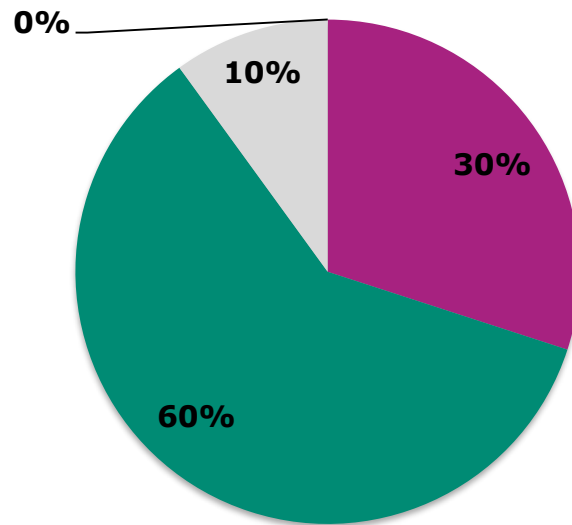
# First Results 3 month post-Op – (Halo & Glare Strength Simulation)



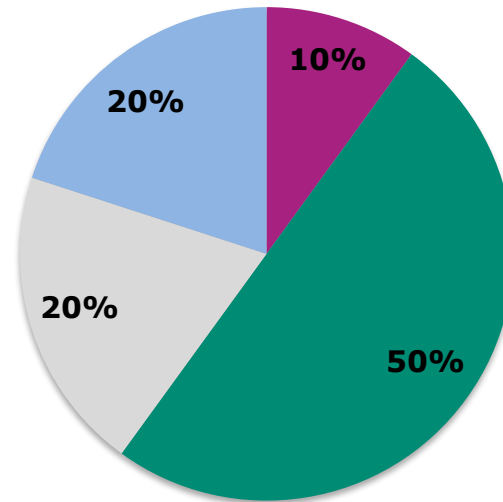
# First Results 3 month post-Op – (How often do you experience.....)



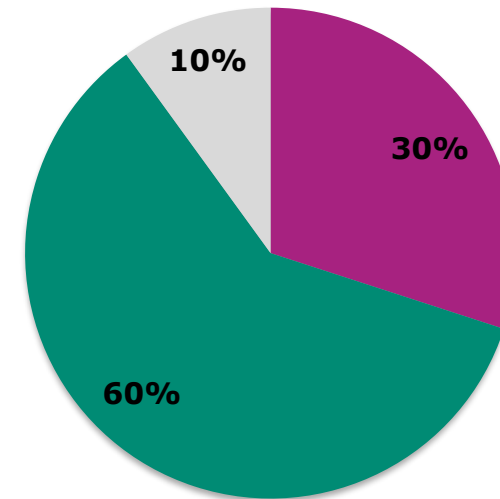
## Glare



## Halos



## Starburst

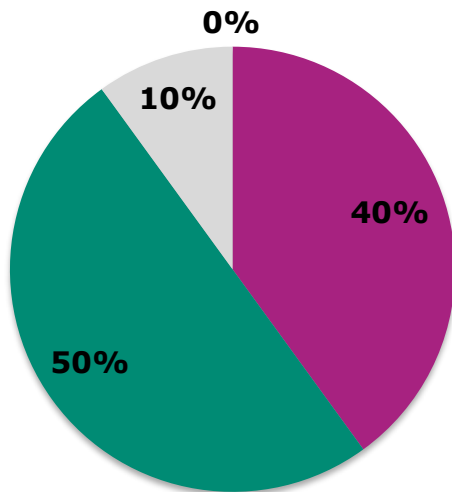


- Never
- Occasionally
- Quite Often
- Very Often

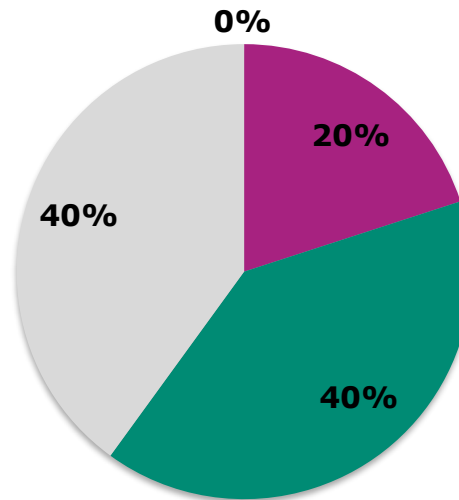
# First Results 3 month post-Op – (How bothersome is the.....)



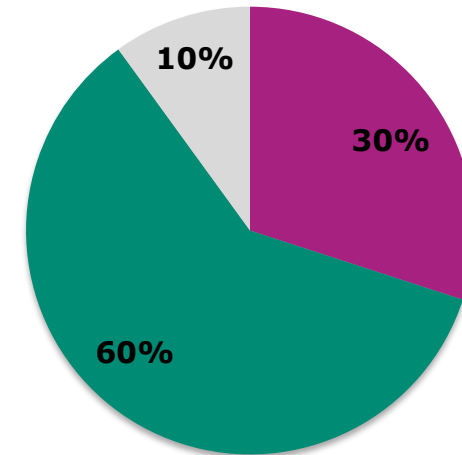
## Glare



## Halos



## Starburst

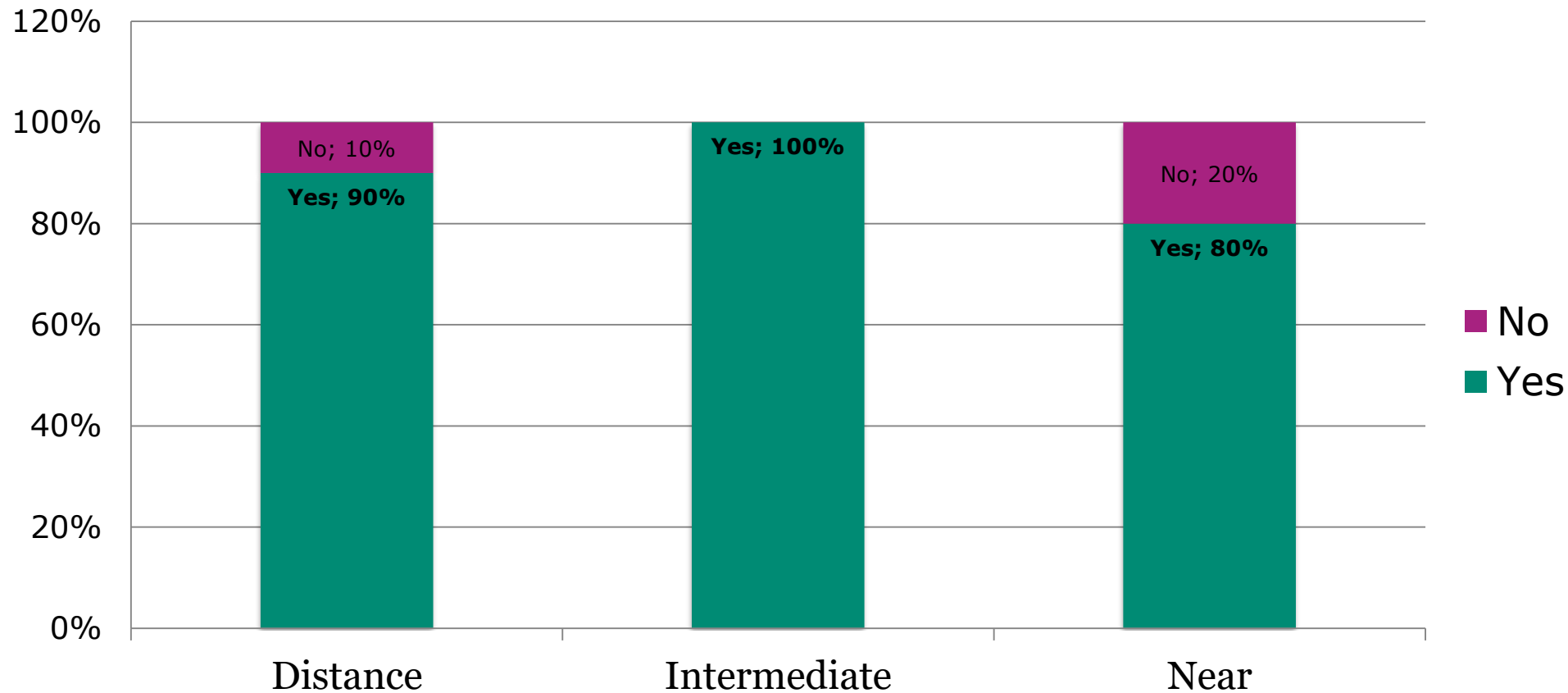


- Not at all
- A little
- Quite
- Very

# First Results 3 month post-Op – (Spectacle independancy)



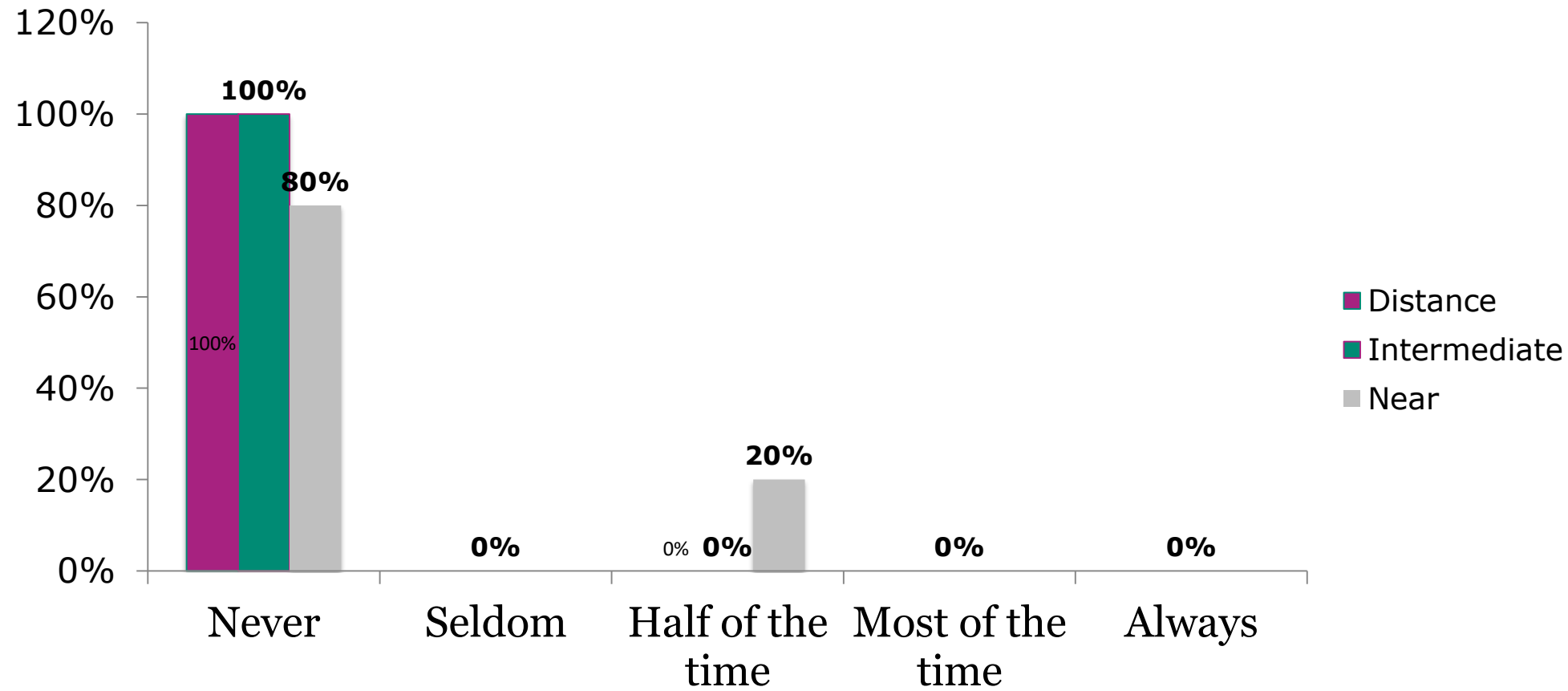
## Spectacle independancy in different distances



# First Results 3 month post-Op – (Spectacle independancy)



How often do you wear glasses?





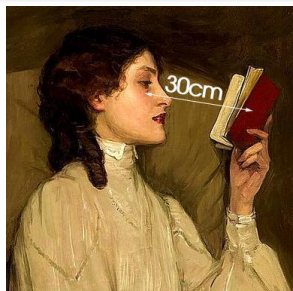
# Conclusion



- **Various Options** for individualized patient care available
- **Trifocal IOLs** offer a wide range of vision from distance to near
- **Novel EDOF IOL** offers excellent intermediate results
- **Mix & Match** Approach to enlarge range of vision from distance to near while offering several intermediate foci



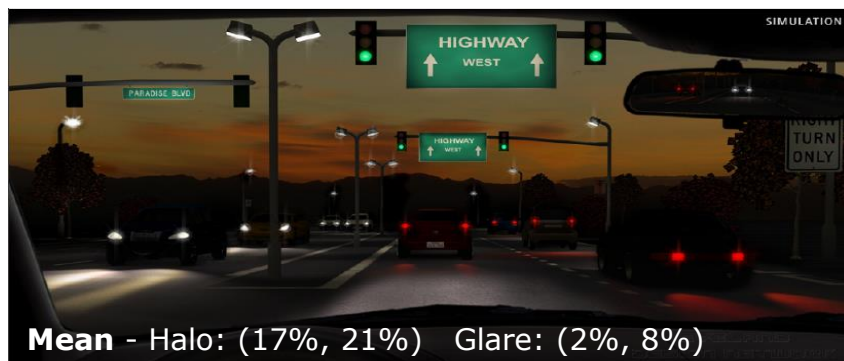
# Take Home Message



- First choice for true binocular near vision and good overall vision → **AT LISA tri**



- Wide range of focus from distance to near with focus on intermediate tasks → **LARA – LISA Mix & Match**



- Low rate of photopic phenomena with stable visual acuity from distance to 60 cm → **binocular AT LARA**



*Thank you very much for  
Your Attention!*



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