17 TH INTERNATIONAL CONFERENCE OF THE RESEARCH INSTITUTE OF OPHTHALMOLOGY

RIO 2025

Anterior Segment Eye Diseases
Current Status & Future Directions

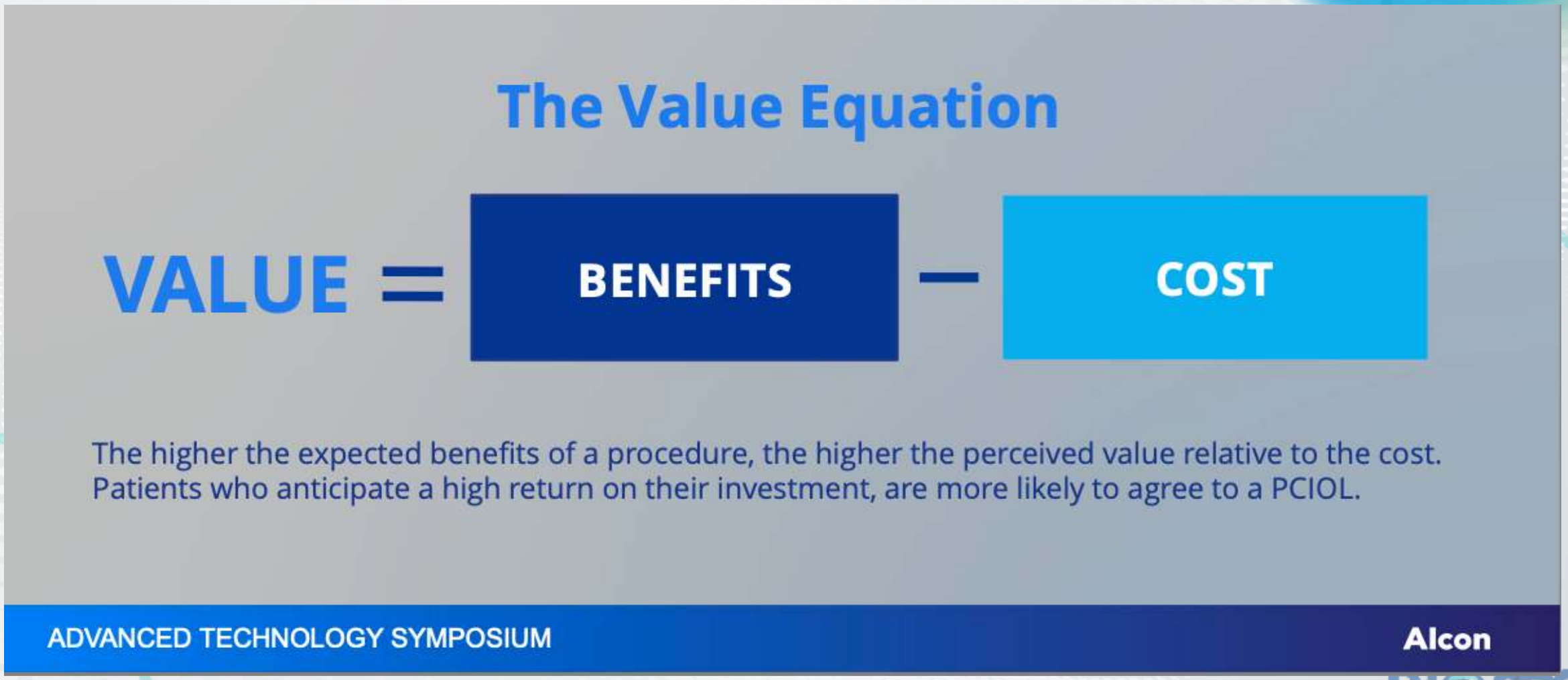
Managing Presbyopia with EDoF lenses?

Sarah Maling

What are the main challenges on premium lens utilisation for you?

- Lack of time to educate the patient and involve them in the decision?
- Not meeting patient expectations?
- Challenges getting desired refractive outcome?
- Confusion about which IOP platform is best?
- Some of all of the above?

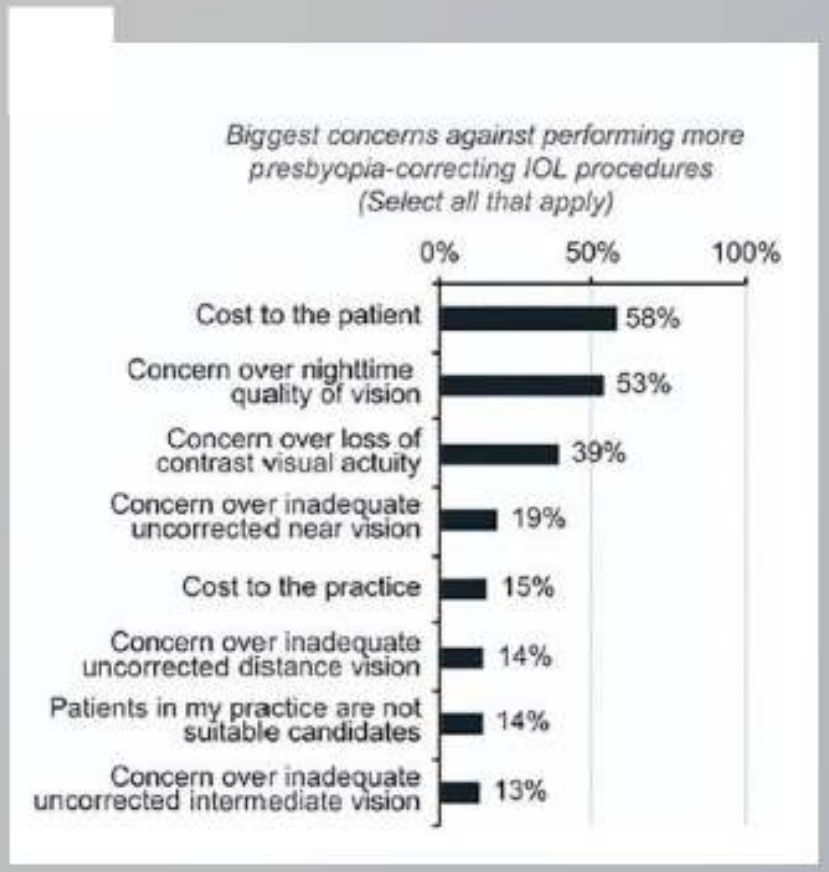
How do patients make decisions?



What do patients say? (as per a lens company)

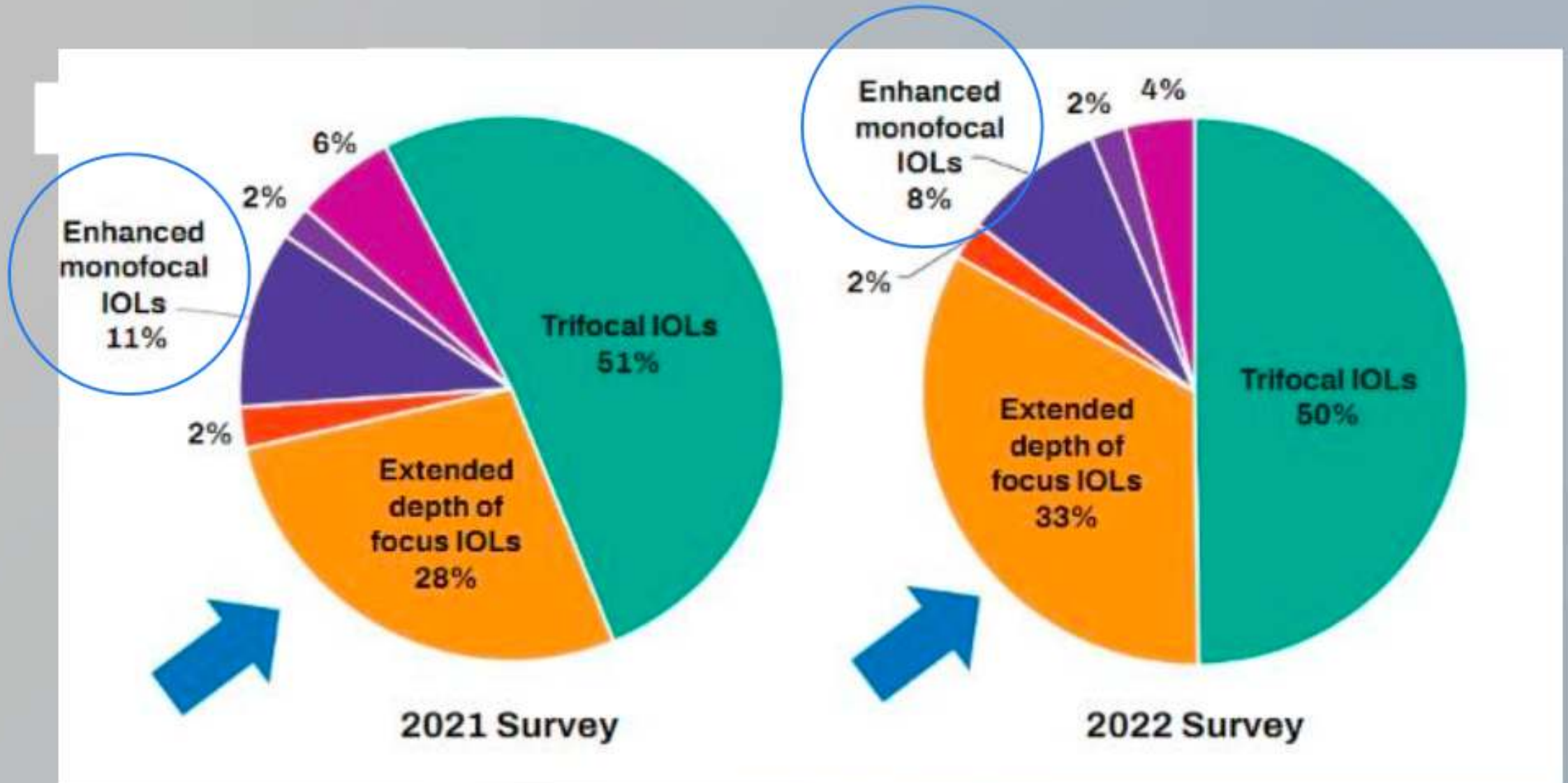
- Up to 40% of post op cataract patients have not considered various lens options pre op (1)
- Up to 75% of patients may be willing to pay for a lens that is likely to eliminate the need for glasses (2)
- 85% prefer to talk to eye care professionals for information about cataract surgery pre operatively patients aged 50 + (3)

What do clinicians say the barriers are?



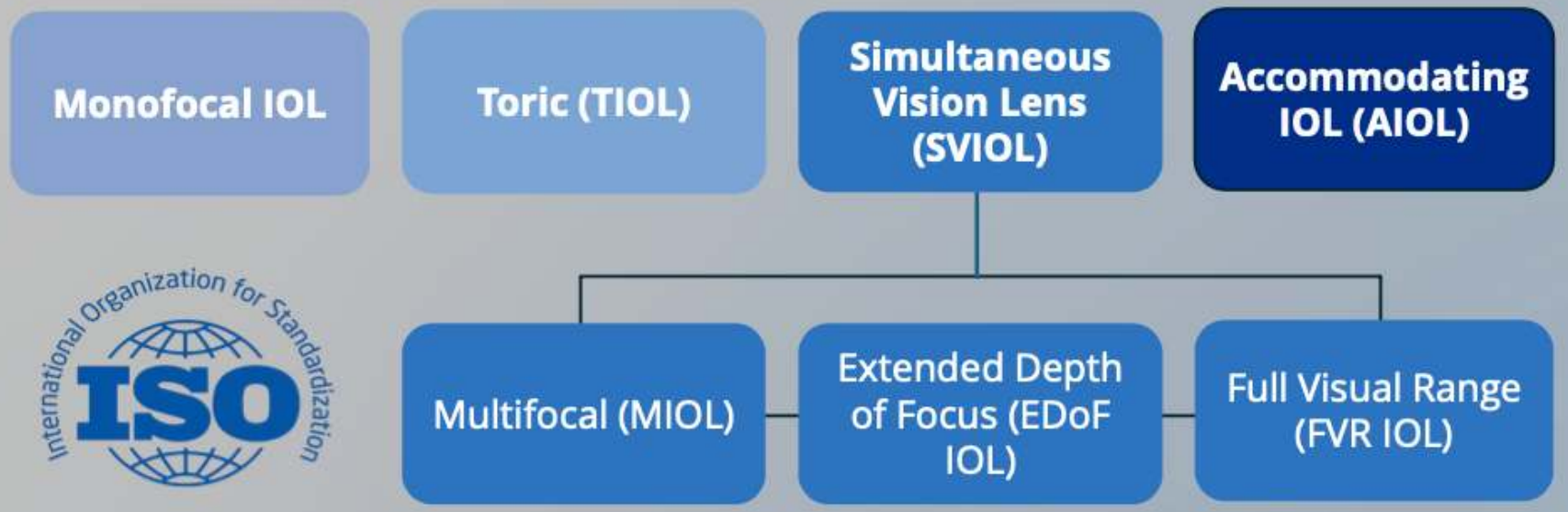
- **Cost to patient/to the practice**
- **Quality of night vision**
- **Loss of contrast visual acuity**
- **Concern over inadequate uncorrected near, distance and intermediate vision**
- **Patient suitable to undergo PC-IOL surgery**

Evolving presbyopia correcting IOL lenses



ISO standards

The updated ISO standards 11979-7:2024 provide definitions for all 4 categories of IOLs for the correction of aphakia[1]



ISO: International Organization for Standardization.
1.International Organization for Standardization (ISO). Ophthalmic implants – intraocular lenses. ISO 11979-7:2024.

EDoF ISO standard

+ ISO **ISO Standards**

FAR*	INTERMEDIATE (66 cm)*	NEAR (40 cm)*
CDVA non-inferior to control 0.10 logMAR level	DCIVA ≤0.20 logMAR (20/32)	
	DCIVA superior to control	
Negative defocus range at the 0.20 logMAR threshold is ≥0.50 D greater than control		
DCVA at 1.0 m ≤0.20 logMAR		

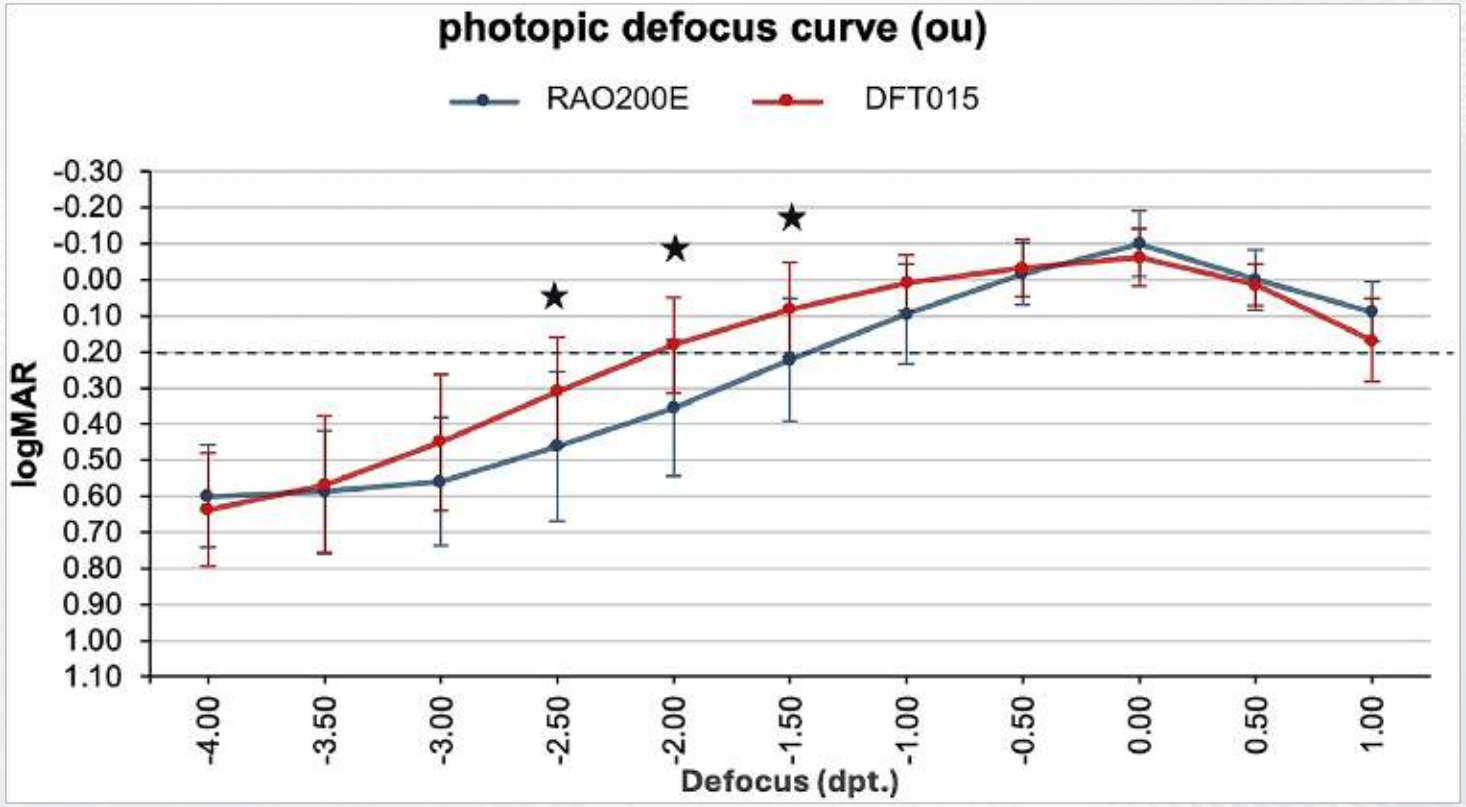
To meet ISO standards for an EDoF requires comparison with a monofocal IOL in a randomised controlled trial

Dysphotopsias not assessed in this classification

*LogMAR measures under photopic conditions.
ANSI: American National Standards Institute; CDVA: corrected distance visual acuity; DCIVA: distance corrected intermediate visual acuity; ISO: International Organization for Standardization.

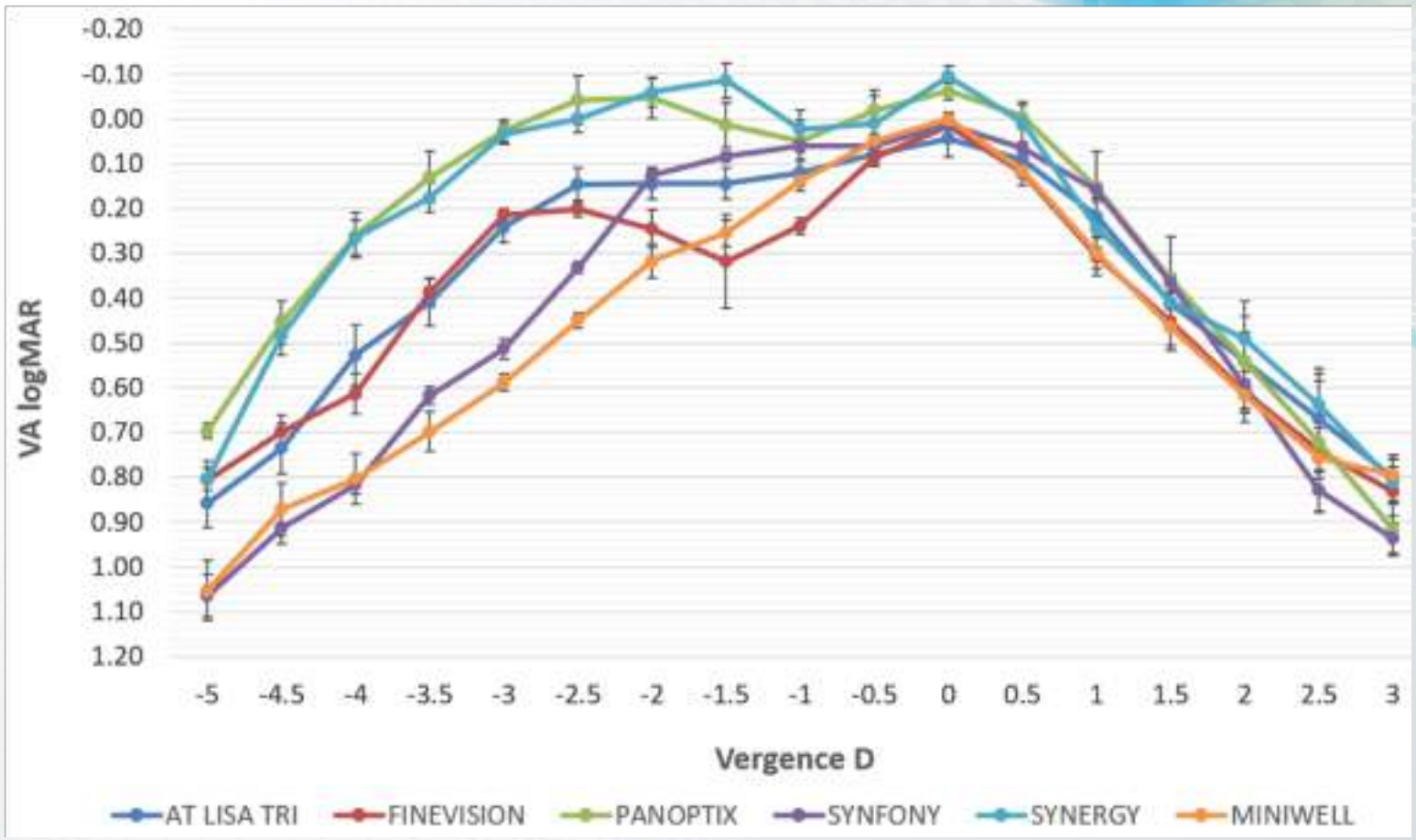
Comparison at the 66cm point

EMV Rayner **Alcon Vivity**

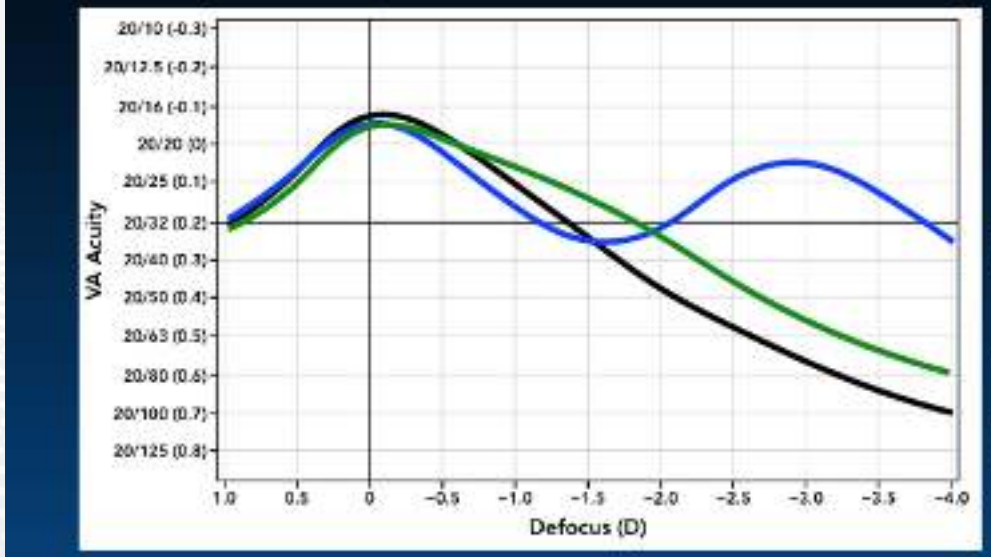


Trifocal Comparisons

- Zeiss AT LISA Tri
- FineVision Trifocal
- Alcon PanOptix
- J& J Tecnis Synfont



In broad terms why the halos



Multifocal (Bifocal)

"EDOF"

Monofocal

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What would you do?

What would you do?

Male

76 year old

Presents with reduced vision
VA (best corrected – 0.3 right (PH 0.12) 0.52 left (PH 0.4)
OCT
Normal anterior segment anatomy – with mild left posterior pole changes
Wore GPCL age 18-65 – now variofocals
Drives and will not tolerate halos or glare. Very active.
Wants spectacle independence for intermediate and distance
Will wear reading glasses
Type A personality

Prescription details from current sight test: 7 August 2023

	Vision	Sph	Cyl	Axis	Prism H	Prism V	VA	Add	Near VA	Previous VA 27 July 2022
RE		-2.50	-1.25	165			6/6	+2.50	N5	6/12
LE		-2.75	-1.00	10			6/12 -2	+2.50	N5	6/12

RE Intra-Ocular Pressure

21.3 mmHg

LE Intra-Ocular Pressure

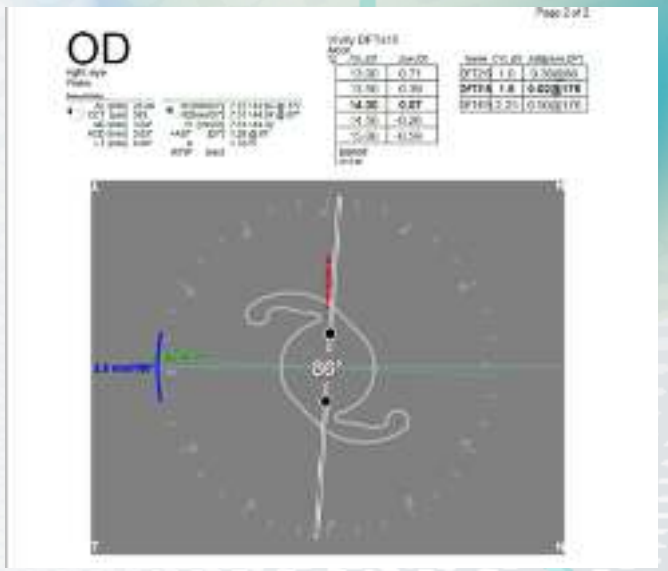
23.3 mmHg

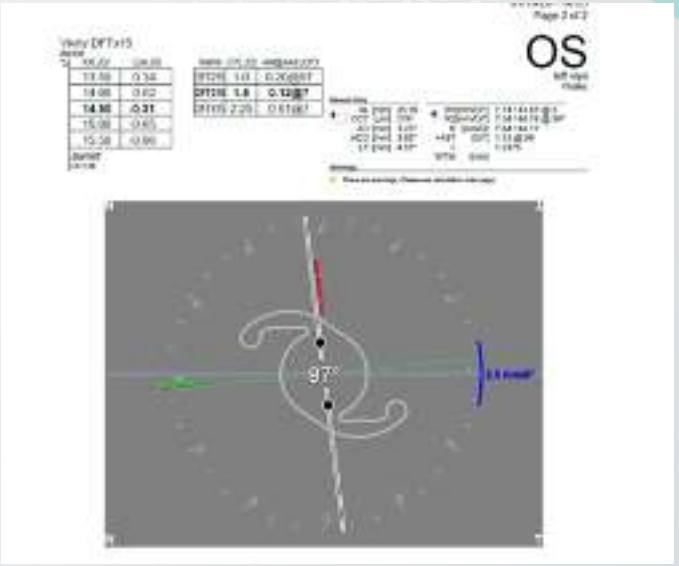
Choices

- Monofocal IOL
- Monovision
- Multifocal IOL
- Extended Depth of Focus
- Full Visual Range
- Accommodating

Together decided on EDOF

- Vivity used
- Routine ISBSC
- RE Vivity DFT315 14.0 = 0.07 @86 leaving 0.02 @176
- LE Vivity DFT315 14.5 = 0.31@96 leaving 0.12 @7





- Correct the astigmatism
- Stretch the mini-mono with an EDOF

Results

- VA U/A
- distance 0.0 Re and LE binocularly -0.14
- Near N6 easily but N5 with good light (+1.50 N5 easily)

- Refraction
- RE 0.0/-0.50 x 20
- LE -0.25DS
- NB - Type A personality and a myope pre op

Learning points to enhance patient satisfaction

- Robust preoperative planning and expectations (MYOPES)
- Robust expectations of excellent intermediate and distance vision (know your patients % daily focal lengths)
- Near vision is good but not aiming for spectacle independence (usually better than I counsel - under promise/ over deliver)
- Know what the focal length need of your patient is.

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Thank you

References

- 1 2023 Alcon Eye On Cataract Survey. Q.8A/Q.8B: To which extent do you agree or disagree with the following statement about the planning of cataract(s) surgery? 7-point scale; Top 3 box, Agreement. Total Post-surgery Patients (n=939),US (n=288), Brazil (n=74), Spain (n=45*), Italy (n=92), Germany (n=137), India (n=30*), China (n=64), South Korea (n=31*), Japan (n=141), Australia (n=37*)
- 2 2023 Alcon Eye On Cataract Survey. Q.8A/Q.8B: To which extent do you agree or disagree with the following statement about the planning of cataract(s) surgery? 7-point scale; Top 3 box, Agreement. Cataracts patients 50+ (n=1826), Pre-surgery patients (n=887), Post-surgery patients (n=939), Monofocal (unweighted - n=534), PC-IOL (unweighted - n=274)
- 3 2023 Alcon Eye On Cataract Survey. Q.9A Which five of the following options [did you / would you be most likely to] consult for more information on cataract(s) surgery? Total Pre-surgery Patients (n=887
- 4 Reference: 2022 ESCRS Clinical Trends Survey. Eurotimes Sept 2023 Kohnen T, Findl O, Nuijts R, Ribeiro F, Cochener-Lamard B. ESCRS Clinical Trends Survey 2016-2021: 6-year assessment of practice patterns among society delegates. J Cataract Refract Surg. 2023 Feb 1;49(2)

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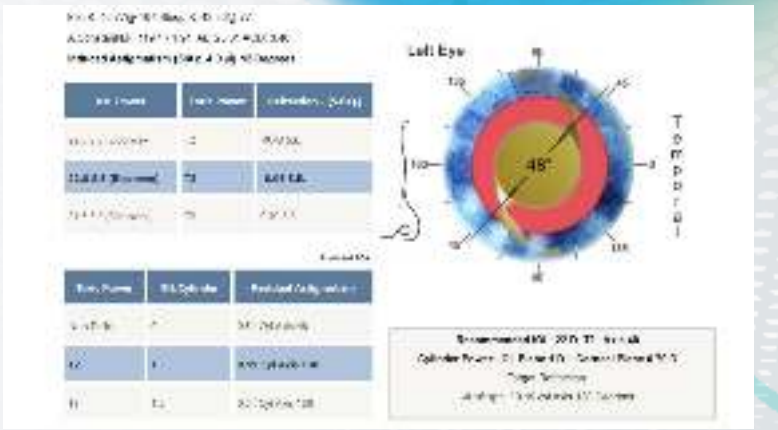
What would you do?

EDoF for unilateral young patients

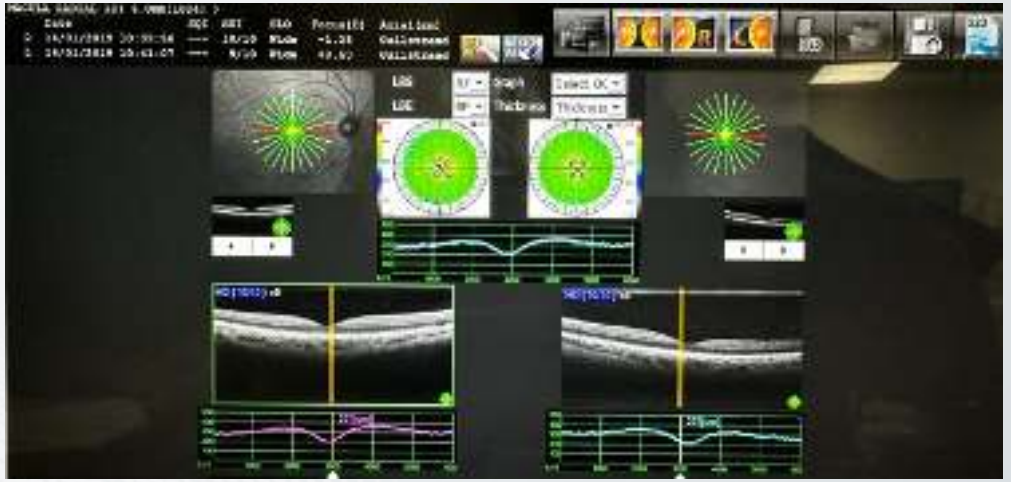
- Vivity toric DFT215 22D @48



- Post op distance UA
- RE -0.12 **LE -0.16**
- **N^ unilaterally LE for newer but N5 binocularly and spectacle independent with no adverse symptoms.**

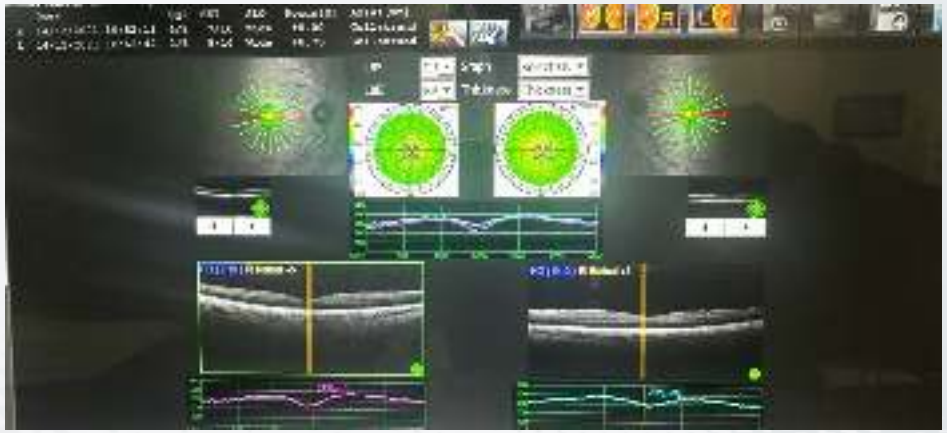
Contrast Sensitivity

- No patient reported problems
- CS score post op RE 2.0 LE 2.0



Case 2
Male 28 years

- Left cataract
- Long history of oral and topical steroids (severe atopy and asthma)
- Vision dropped from 0.12 LE to 0.68
- Vision RE 0.0
- Refraction : RE -0.25/-0.50 x 90 LE +0.75/-0.50 x 5



A revolution in lens design

RayOne Galaxy boasts a revolutionary spiral optic, a technological marvel designed to progressively elongate focus and deliver a full range of vision with an exceptionally smooth transition from distance to near.[1]

Enhanced Monofocal | **RayOne Galaxy** | Trifocal