

First market experiences’ analysis of a novel Extended Depth Of Focus Toric lens

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Introduction

Worldwide population is ageing, with a **prevalence** of 30% in America and **40%** in Europe¹. **Presbyopia** has a significant impact on an individual's quality of life and emotional state². We spend more than half of our life being presbyopes.

Also, the prevalence of patients with **astigmatism** of $\geq 0,75D$ in at least one eye is **47%**³.

It is therefore very likely *that* **2 out of every 4 people coming to our practice are **presbyope**, and **at least one** has a **significant** amount of **astigmatism**.**

Additionally, presbyope’s lifestyle is active, eating out and exercising regularly, being tech-savvy. Spectacle-wearing presbyopes **prefer contact lenses** as often as non-presbyopes⁴.

Purpose

To evaluate the objective and subjective **performance** of a novel Extended Depth of Focus (EDOF) toric contact lens, and to determine if fitting guidelines could be improved.

Methods

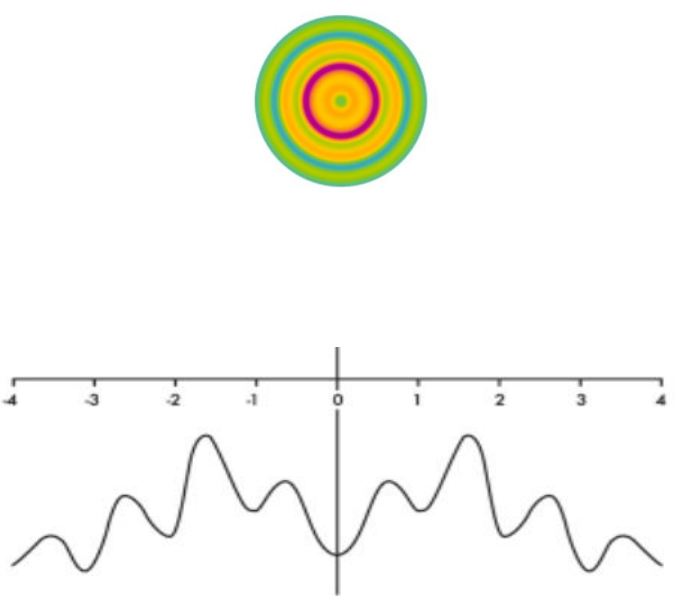
Before commercializing EDOF Toric contact lens, a multicenter prospective and lontigudinal trial across different countries was carried out

25 centers across 4 countries (Spain, Italy, Germany and Holland) were enrolled and **69 contact lens wearers** were recruited.

Lenses were calculated from biometric data following the recommended fitting guide. Exchanges were made where necessary to optimize fitting and vision.

After one month of wear photopic mono and binocular high contrast visual acuity were measured at distance and near and a subjective survey of preferences completed by the wearers, including a relative analogue scale (RAS).

Materials

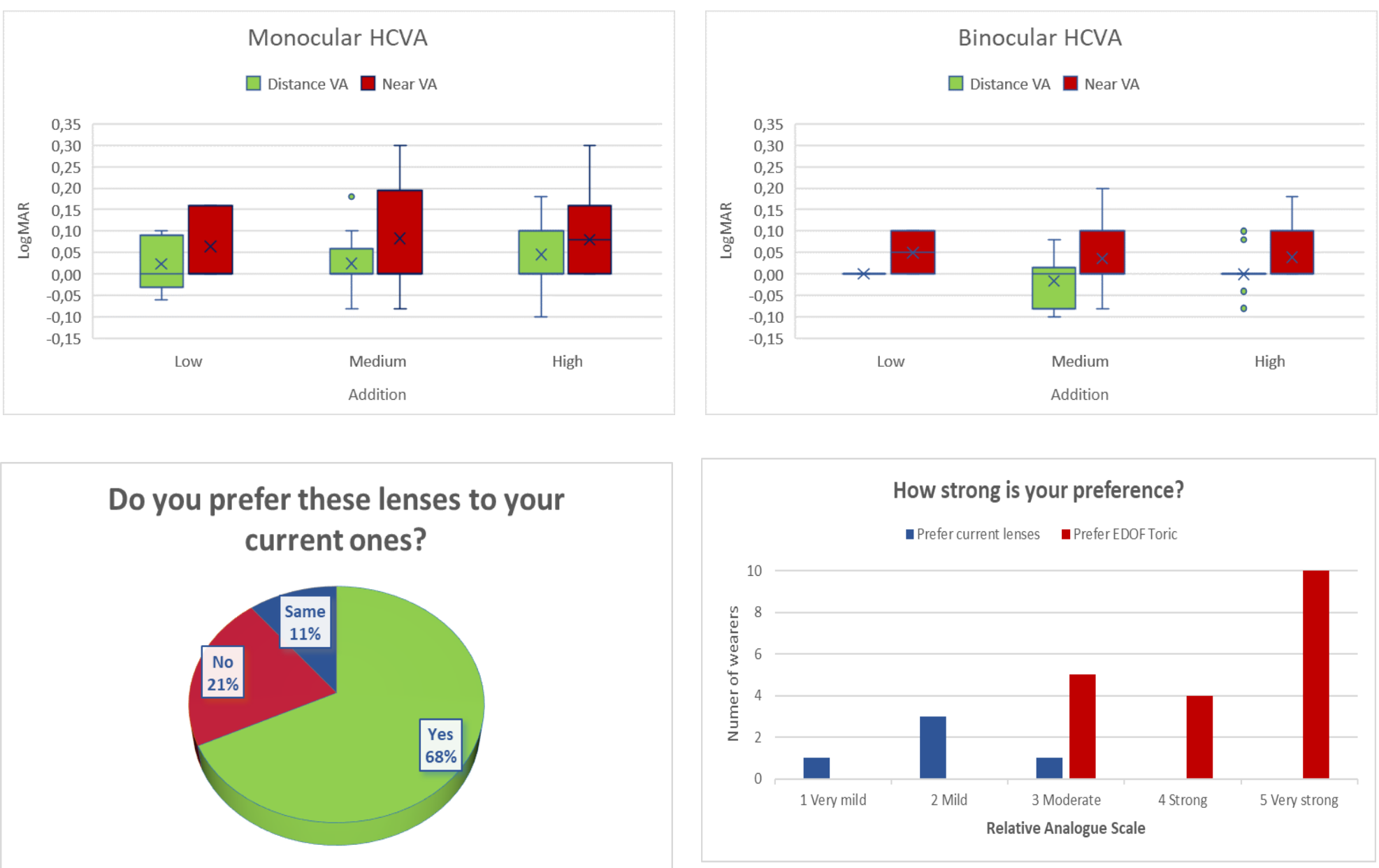


	Parameters (steps)
Diameter (mm)	13.50 a 15.50 (0.50)
Base Curve (mm)	7.10 a 9.80 (0.30)
Sphere (D)	± 18.00 (0.25)
Cylinder (D)	-0.75 to -8.00 (0.25)
Axes (°)	All (1)
Addition (D)	0.75; 1.50; 2.25

Material	SiHy
Classification	Filcon 5B (60) [75%]
Water Content	75%
Dk	60
Elasticity Modulus	0.33 Mpa
Cof	0.02
Replacement	Monthly
Handling tint	Blue
UV Filter	Class 1
Technology	EDOF
Central thickness	0.13 mm



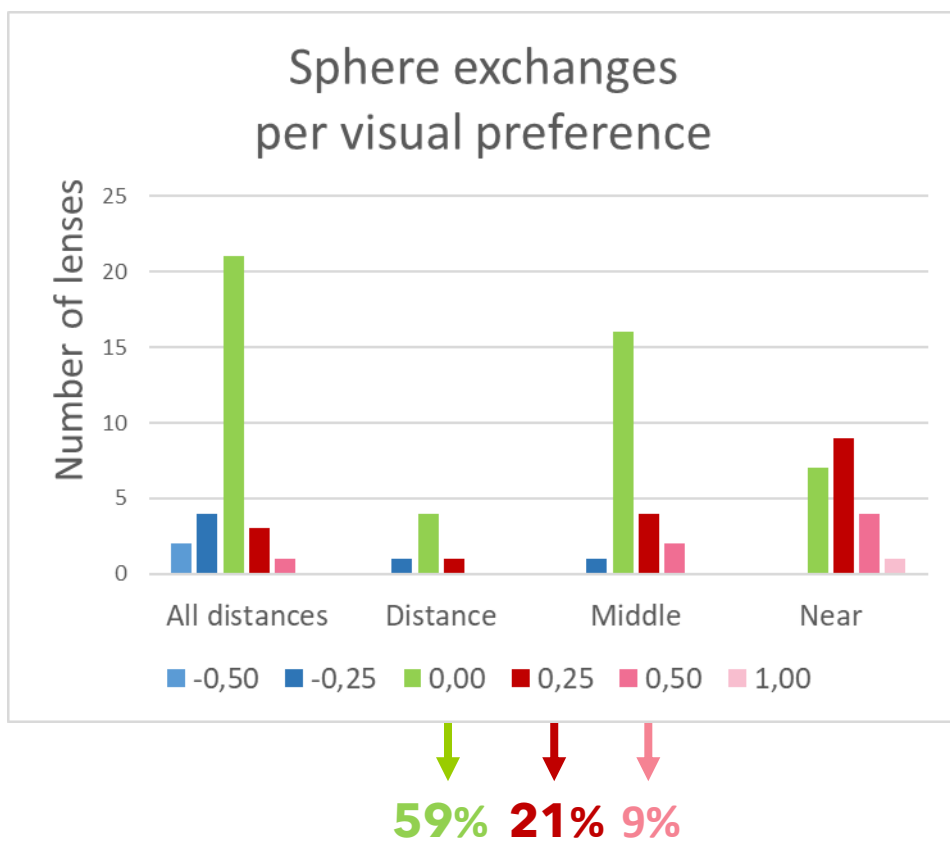
Results & Discussion



Participants			
Nº Exchanges	#	%	
0	28	53%	→ 1 out of 2 fitted with 1 st pair of lenses
1	21	40%	→ 93% finished within 2 visit
2	2	4%	
3	1	2%	→ Very few needed more than 1 exchange
4	1	2%	

19% changes due to axes (2/10)

# Modifications	Sph	Cyl	Axes	BC	Diam	Add
2,25	10	3	9	4	2	2
1,50	11	3	4	10	7	3
0,75	1	0	1	1	1	1



30% of the sphere exchanges were +0.25D & +0.50D when visual preference at near and middle distances was high, with little impact in distance vision.

Conclusions

Fitting guide was optimized by adding +0,25D in both eyes when patients’ visual demand at near and intermediate is high.

EDOF® Toric can be an appropriate solution for toric presbyopic patients.

References

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2. Wolffsohn JS, et al. New insights in presbyopia: impact of correction strategies. BMJ Open Ophthalmol. 2023 Jan;8(1):e001122.
3. Kathryn Richdale et al., BCLA CLEAR - Contact lens optics, Contact Lens and Anterior Eye, Volume 44, Issue 2, 2021, Pages 220-239, ISSN 1367-0484.
4. Rueff, E. M., & Bailey, M. D. (2017). Presbyopic and non-presbyopic contact lens opinions and vision correction preferences. Contact lens & anterior eye : the journal of the British Contact Lens Association, 40(5), 323–328.