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Poster Abstracts
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Real-world evaluation of a new extended depth of focus (EDOF) hydrogel lens - toric and non-toric

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Purpose: The purpose of this study was to evaluate the performance of a new EDOF contact lens made with a modern hydrogel, in subjects with and without astigmatism, who already wore multifocal contact lenses, center-near and center-distance designs, made of silicone hydrogel.
Method: Longitudinal, prospective, open label on eye study. 20 contact lens presbyopes currently using multifocal toric and non-toric lenses made of Comfilcon A material, were voluntarily enrolled. Subjects wore a pair of lenses of a new EDOF lens in a modern hydrogel, Filcon 2 (30) [59%].
Eye-checks were done on insertion, after 10 days and 1 month of wear. Assessment included photopic logMAR high contrast visual acuity (HCVA). Subjective assessment included visual satisfaction at distance, intermediate and near, dysphotopsias (ghosting at distance and near and halos), comfort and lens handling, all in a 0 excellent to 5 very poor scale.
Results were analysed with Statgraphics Centurion 18 with Analysis of Variance, General Linear Model (GLM). The significance level was set at 0.05.
Results: Results at 1-month were HCVA distance 0.00±0.01 logMAR, near 0.08±0.03 logMAR, visual satisfaction at distance 1.00±0.00, intermediate 1.10±0.31 and near 1.65±0.49, ghosting 1.00±0.00, comfort 0.05±0.22 and lens handling 0.03±0.16. In all cases, statistically significant differences were found ($p<0.05$). No participants reported halos.
Preferences over previous lenses did not change between 10 days and 1 month. 80% preferred EDOF to previous lenses due to vision and comfort.

Conclusions: The EDOF lens made from bio-inspired hydrogel (Ori:gen Technology) achieved good results for HCVA, visual satisfaction, dysphotopsias and comfort, both for toric and non-toric lenses, being highly preferred over previously used lenses and therefore representing a viable alternative for presbyopes.

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