

# Ophthalmic Artery Angioplasty Improves Visual Acuity in Patients With Geographic Atrophy

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## PURPOSE

Geographic atrophy (GA) is the most advanced and disabling form of dry age-related macular degeneration (AMD). With or without currently available treatments, the patients lose 5 letters of vision per year on average. While age and genetic variants are strongly associated with the pathogenesis of AMD, environmental factors play a crucial role. One environmental factor is localized macular ischemia, and this may be exacerbated by stenotic lesions in the ophthalmic artery (OA). An ongoing open-label safety and feasibility study (NCT05091476) is testing the use of OA angioplasty to treat GA.

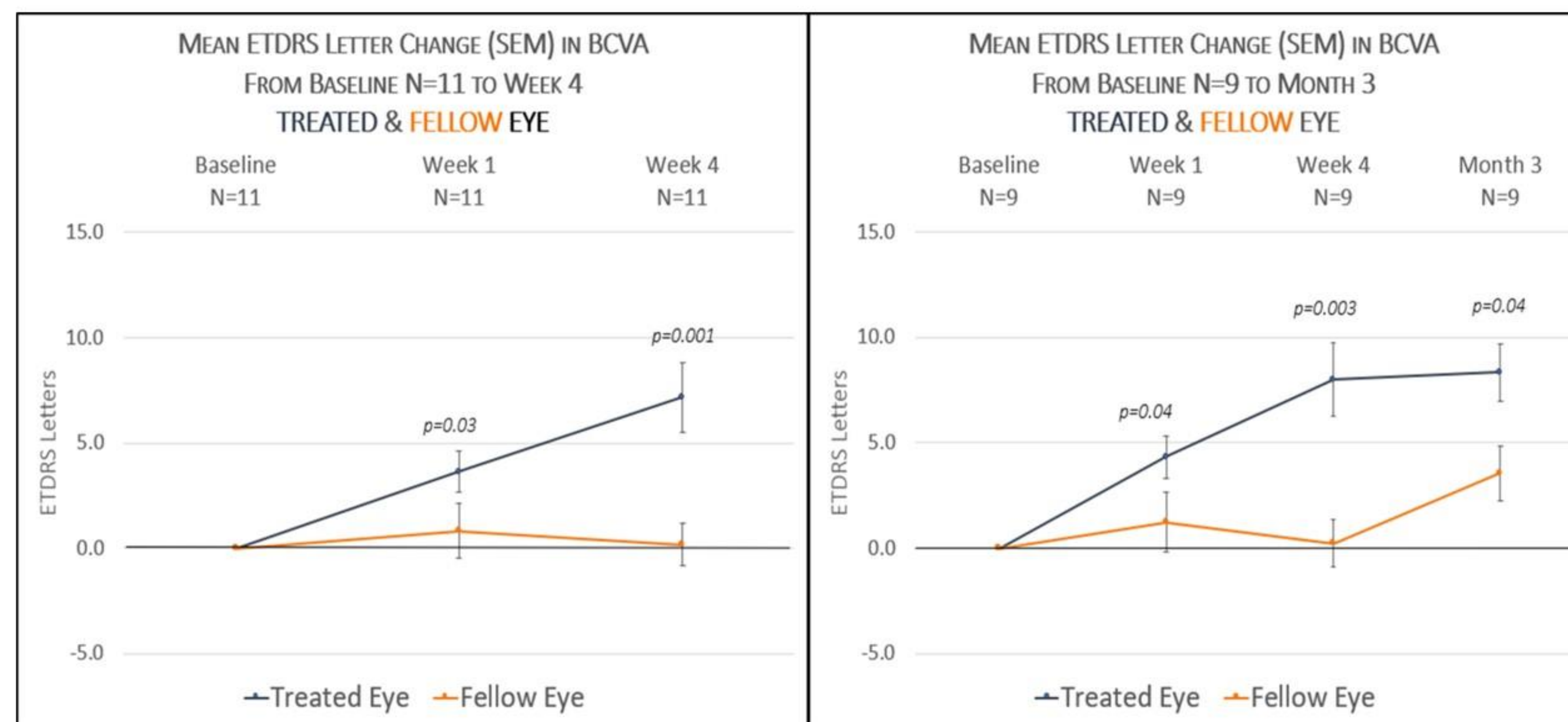
## METHODS

This study enrolled patients  $\geq 60$  years old with Early Treatment Diabetic Retinopathy Study (ETDRS) best-corrected visual acuity (BCVA) of  $< 56$  letters (20/80 or worse) due to GA. These patients were confirmed to have OA stenosis and treated with balloon angioplasty. BCVA was obtained at baseline and at postoperative weeks 1 and 4, and months 3 and 6. Data are reported as mean ETDRS letters read and total letter gain or loss by subject and visit.

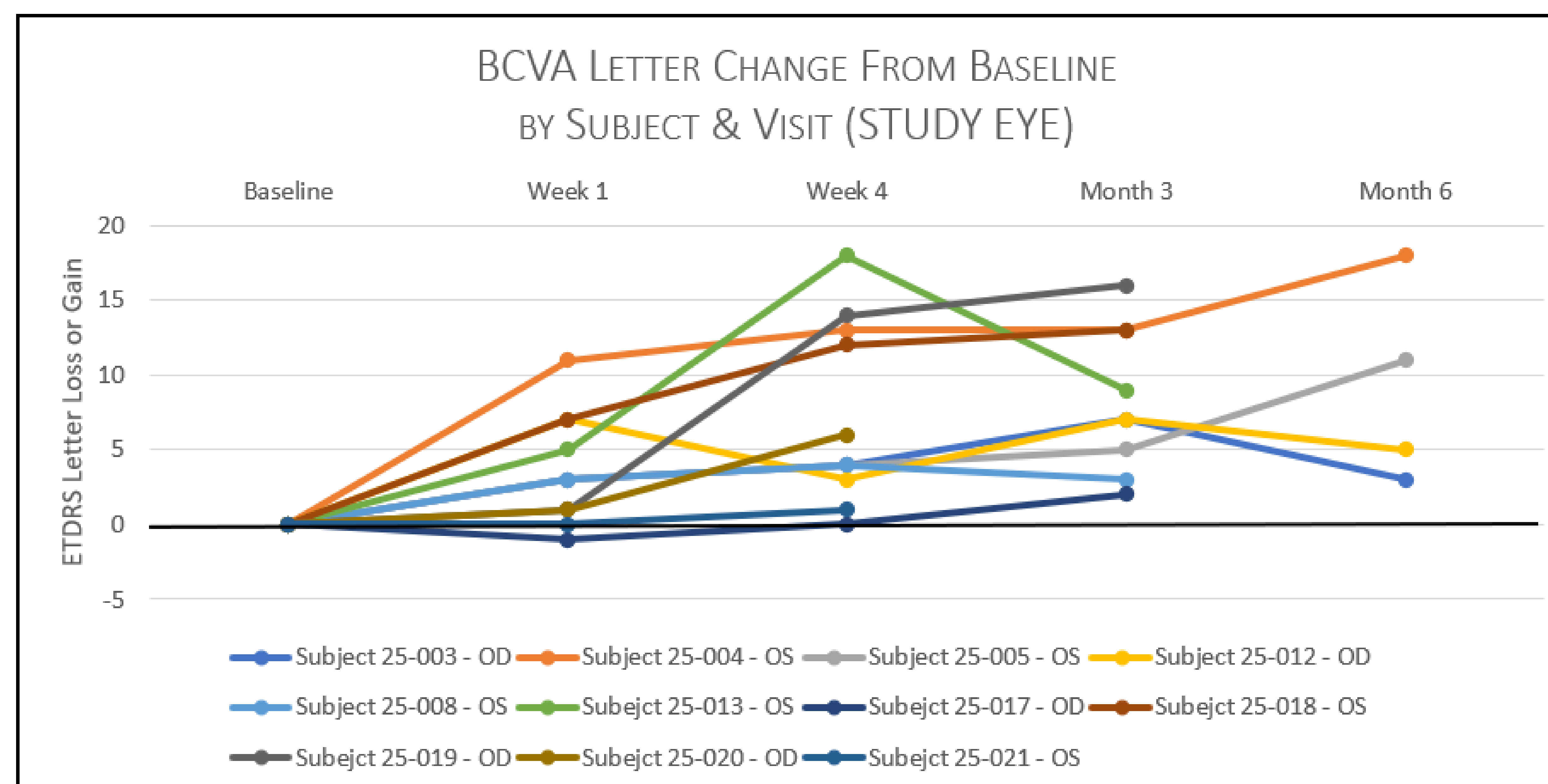
## RESULTS

These results include 11 consecutively treated subjects that include 6 (54.5%) that are male, mean age (SD) of 76.2 (8.36), and baseline mean (SD) ETDRS BCVA of 28.1 (17.28) letters (range, 1 – 55). Mean 20/276; range, 20/957 – 20/80.

## Statistically significant change in mean BCVA demonstrated by Week 1 Study Eye vs. Fellow Eye



## All patients demonstrated improved BCVA over baseline at last available visit



## RESULTS (cont.)

All subjects are Caucasian, 7 (63.6%) report a familial history of AMD, 8 (72.7%) report a history of smoking with a mean (SD) of 34.3 (32.16) smoking years. By week 1, mean Study Eye ETDRS BCVA improvement was statistically significant over the Fellow Eye Cohort and continued to improve (top). At last available visit, all subjects demonstrated BCVA improved over baseline (bottom). There were 7 (63.6%) that improved 1 or more lines, 4 (36.4%) that improved 2 or more lines, and 2 (18.2%) that improved 3 or more lines at last available visit. Additional subjective improvement in visual quality as reported immediately after the procedure were expressed as changes in scotoma, metamorphopsia, color vision, contrast, and visual field.

## CONCLUSIONS

In this case series, balloon angioplasty of stenoses in the OA of subjects with GA secondary to AMD resulted in improved BCVA. These preliminary data support further investigation of balloon angioplasty for OA stenoses in this population.

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**Disclosures:** P Bazterrechea, (N); I Lylyk, (N); N Monteros, (N); PN Lylyk, (N); J Rojas, (N); C Bleise, (N); F Forgues, (N); JM Cortalezzi, (N); I Zeolite, (N); J Franco, OcuDyne (I,O,P); MW Calhoun, OcuDyne (C,O,P), L Wilbur, OcuDyne (C), STAAR Surgical (C); P.J. Rosenfeld, Alexion (R), Annexon (C), Apellis (C,F), Bayer (C), Boehringer-Ingelheim (C), Carl Zeiss Meditec (C,R), Chengdu Kanghong Biotech (C), Gyroscope Therapeutics (R), InflammX Therapeutics (C), OcuDyne (C,I), Regeneron (C), Stealth Bio Therapeutics (R), Unity Biotechnology (C), Valitor (F), Verana Health (F); P Lylyk, OcuDyne (F); MJ Saravia, Apellis (C,F), OcuDyne (F).