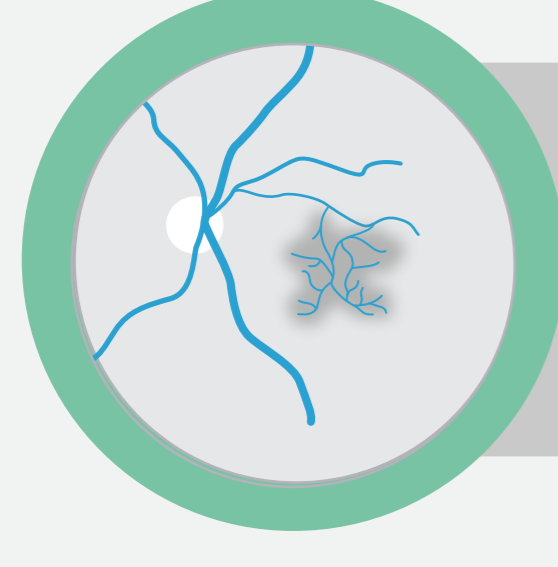
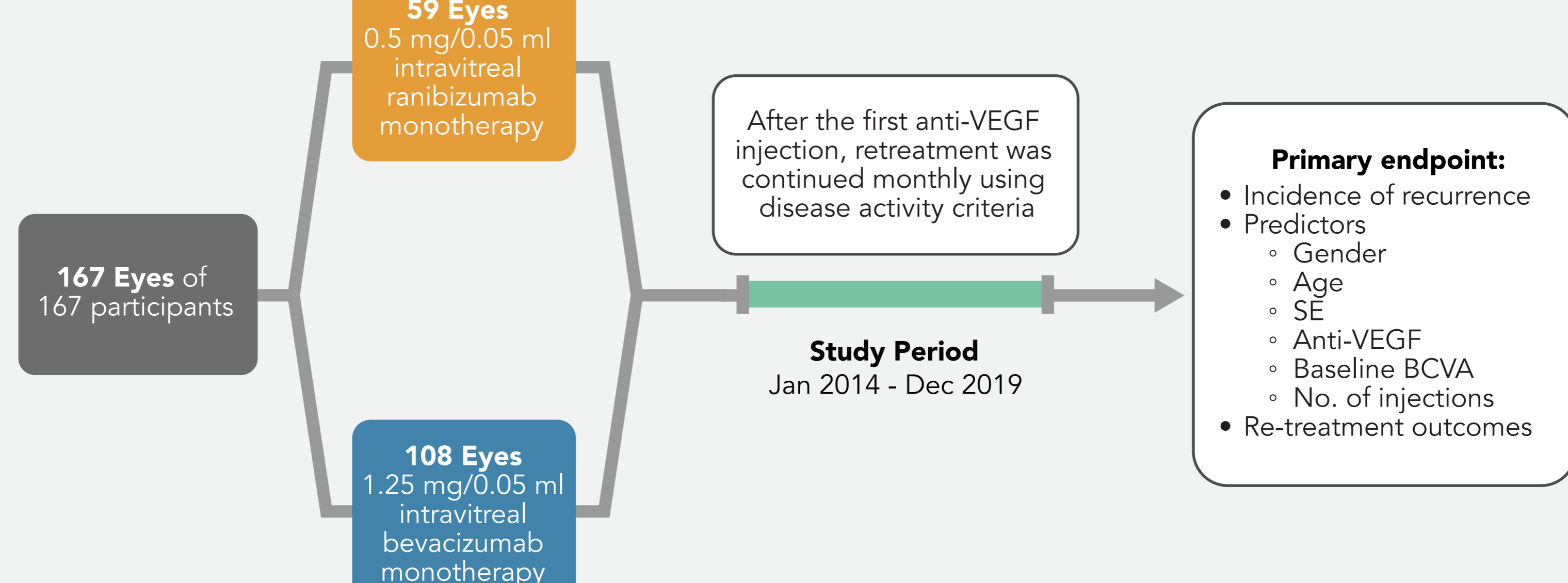


# Incidence, predictors and re-treatment outcomes of recurrent myopic choroidal neo-vascularization

Jain M, Narayanan R, Jana P, et al. *PLoS One*. 2022;17(7):e0271342.  
doi:10.1371/journal.pone.0271342

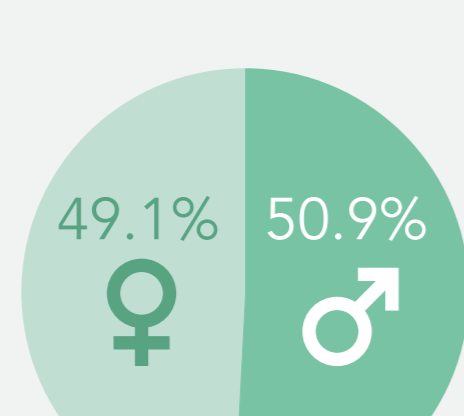
Myopic choroidal neovascularization (mCNV) is a common vision threatening complication in high myopic eyes. If left untreated, mCNV can cause rapid vision loss. Literature on incidence, possible predictors and re-treatment outcomes in recurrent mCNV is sparse, yet this data is crucial in optimizing follow-up regimens to detect early re-activation as well as counseling about re-treatment outcomes. This study was designed to evaluate incidence, predictors, and re-treatment outcome of recurrent mCNV, as well as compare the efficacy and safety of anti-vascular endothelial growth factor (anti-VEGF) treatment with either ranibizumab or bevacizumab.

From year 2014 to 2019, 167 eyes of 167 patients of treatment naïve mCNV were enrolled in this retrospective consecutive observational series.



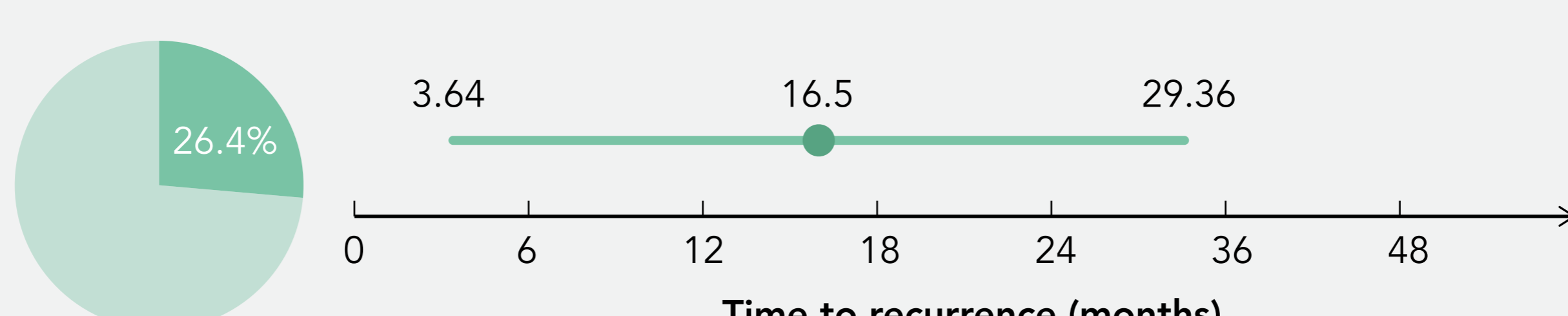
Recurrence was defined as re-appearance of CNV activity, confirmed on optical coherence tomography (OCT) after at least 3 months of cessation of anti-VEGF therapy.

Kaplan-Meier survival analysis showed the risk of recurrence\* was 8%, 26% and 34% at 6, 12 and 18 months, respectively.

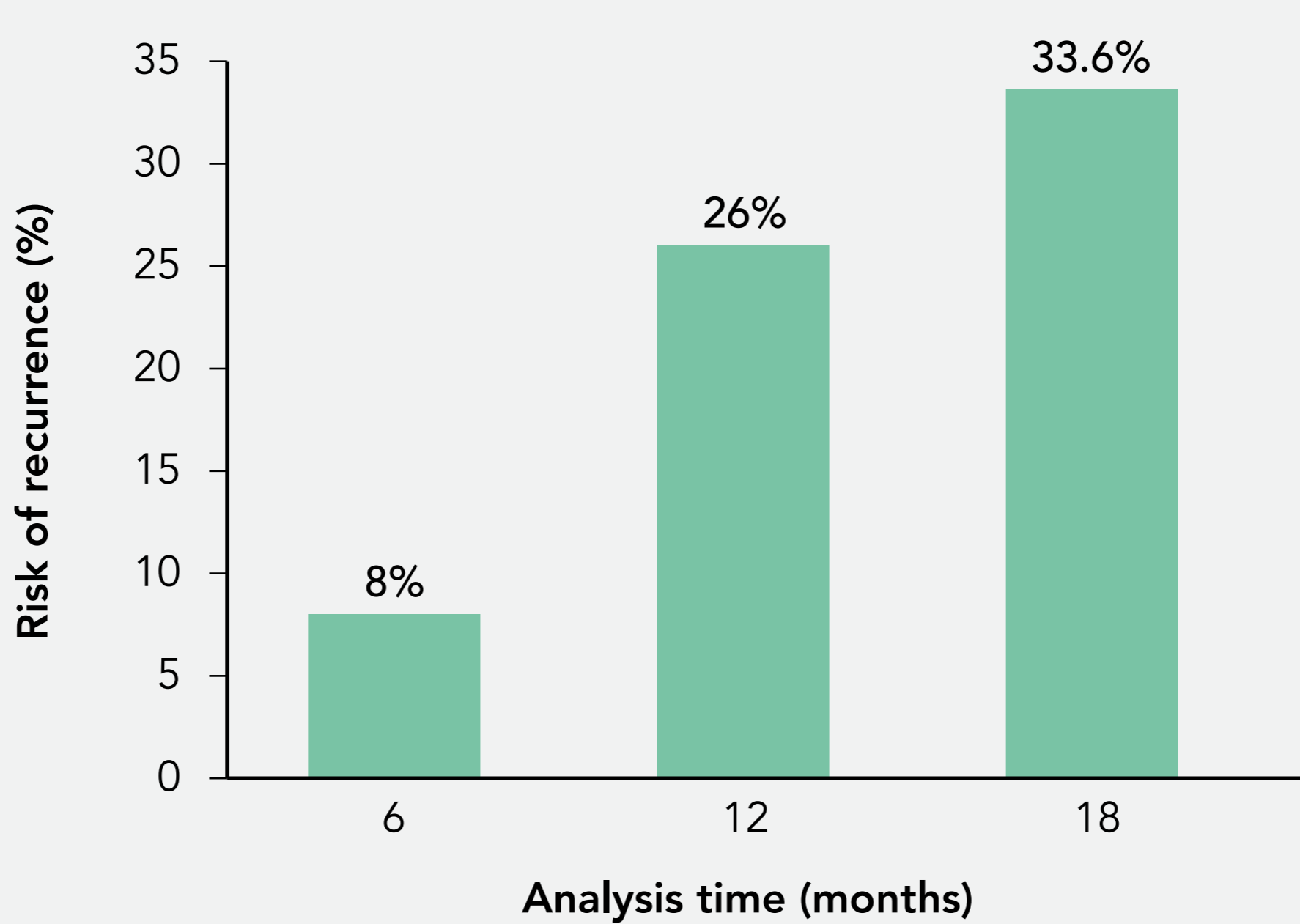


Males constituted 50.9%.  
Mean age was 47.95 ± 14.72 years.  
Spherical equivalence (SE) was -12.19 ± 4.93 D.

44 eyes (26.4%) had a recurrence during a mean follow up of 16.5 ± 12.86 months.



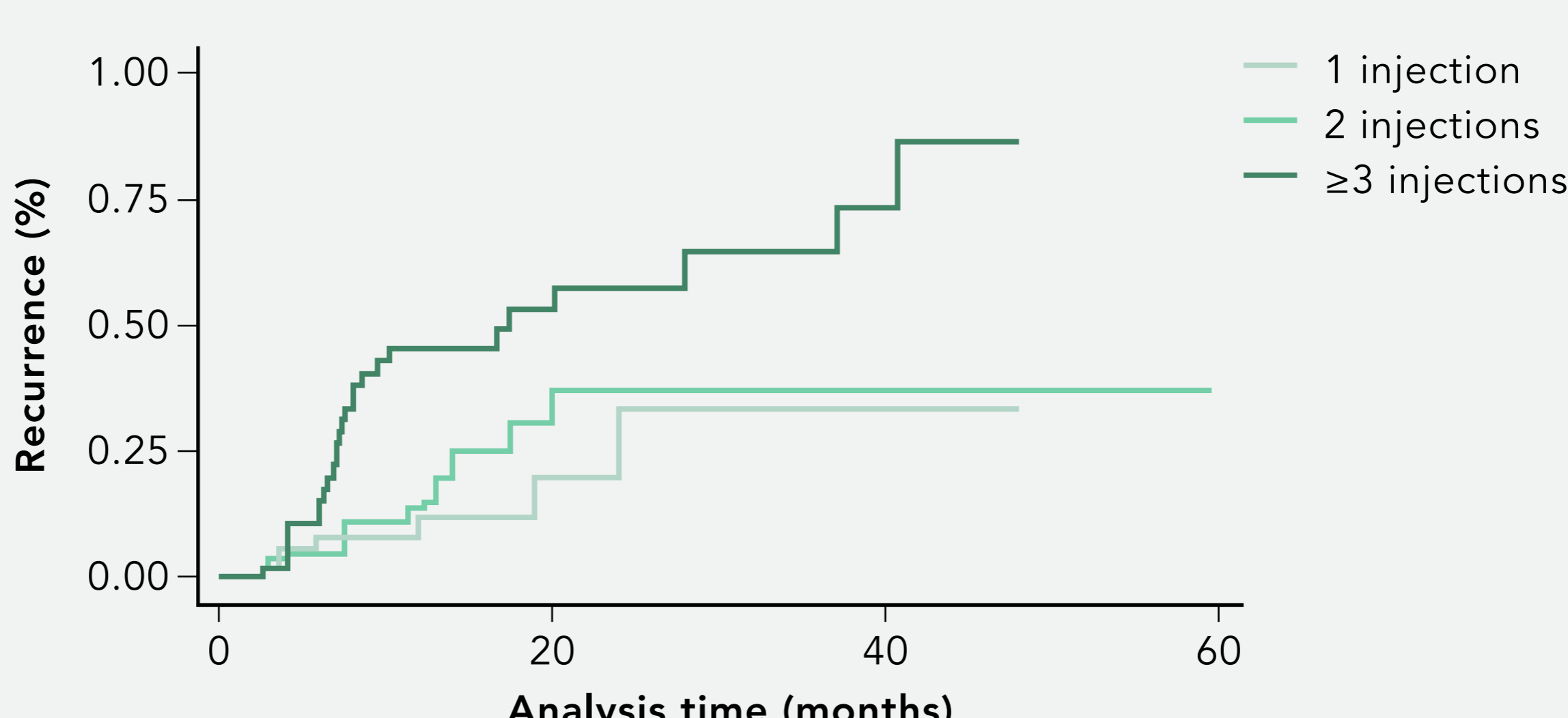
Risk of recurrence over 18 months



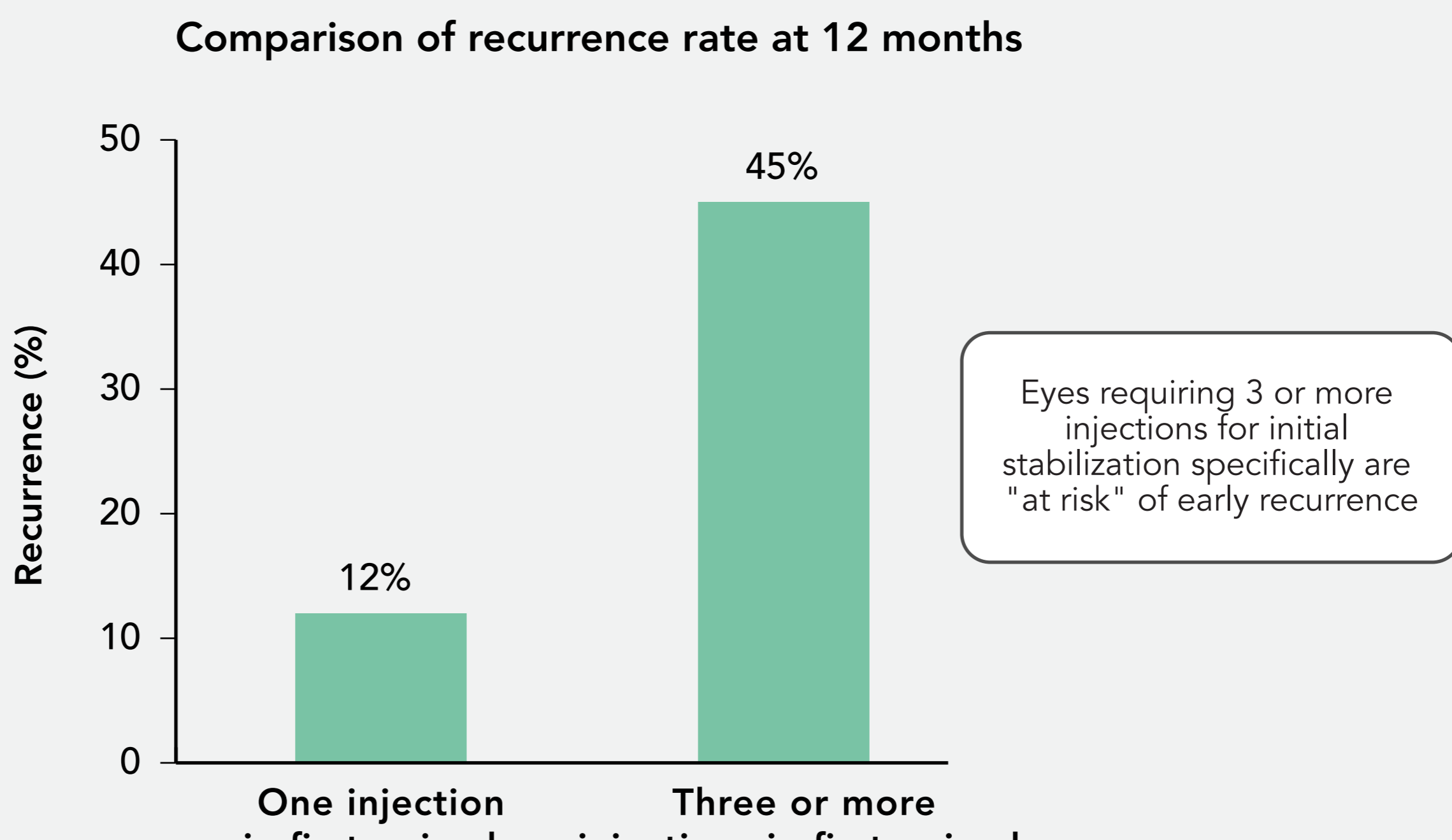
\*Recurrence was defined as reappearance of mCNV activity after cessation of anti-VEGF therapy for at least 3 months. D = diopter.

Number of injections administered to control the disease in the first episode was the only significant predictor of recurrence (Cox Proportional Hazard Ratio 2.89-3.07, 95% CI: 1.28-7.45; P= .005).

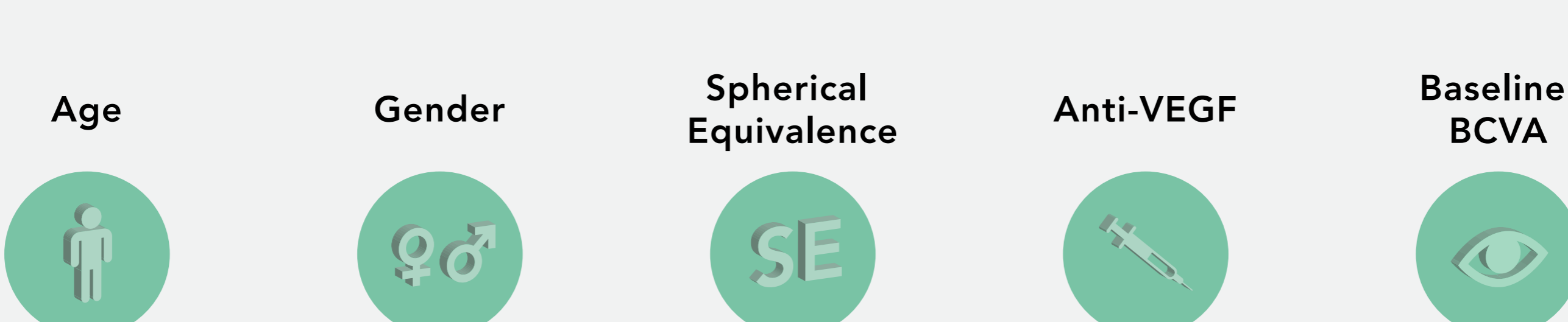
Kaplan-Meier estimates



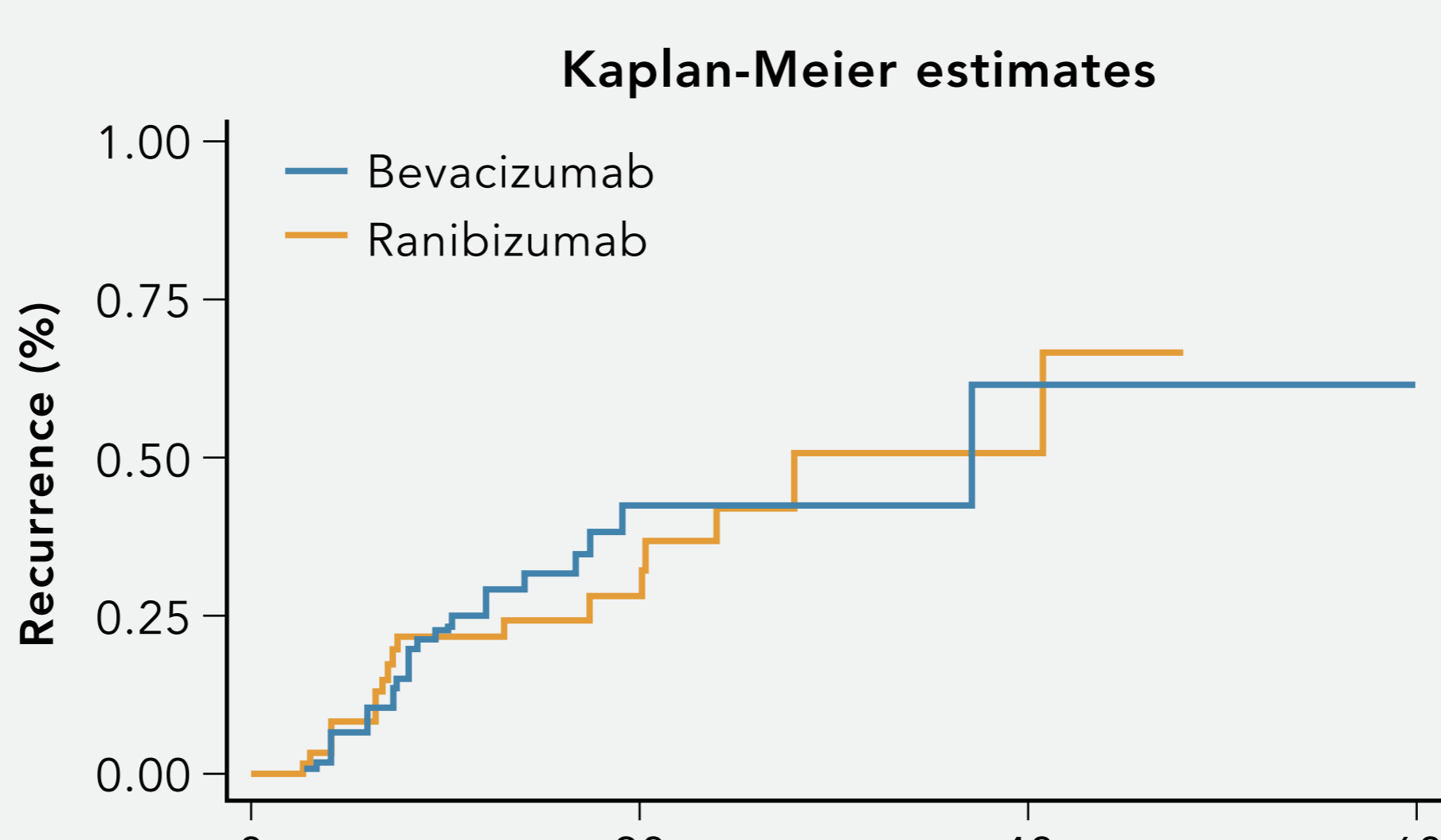
Comparison of recurrence rate at 12 months



Age, gender, SE, anti-VEGF and baseline BCVA did not influence recurrence. Recurrence rates were similar between the bevacizumab and ranibizumab treatment groups.



Kaplan-Meier estimates



SE = spherical equivalence; BCVA = best-corrected visual acuity.

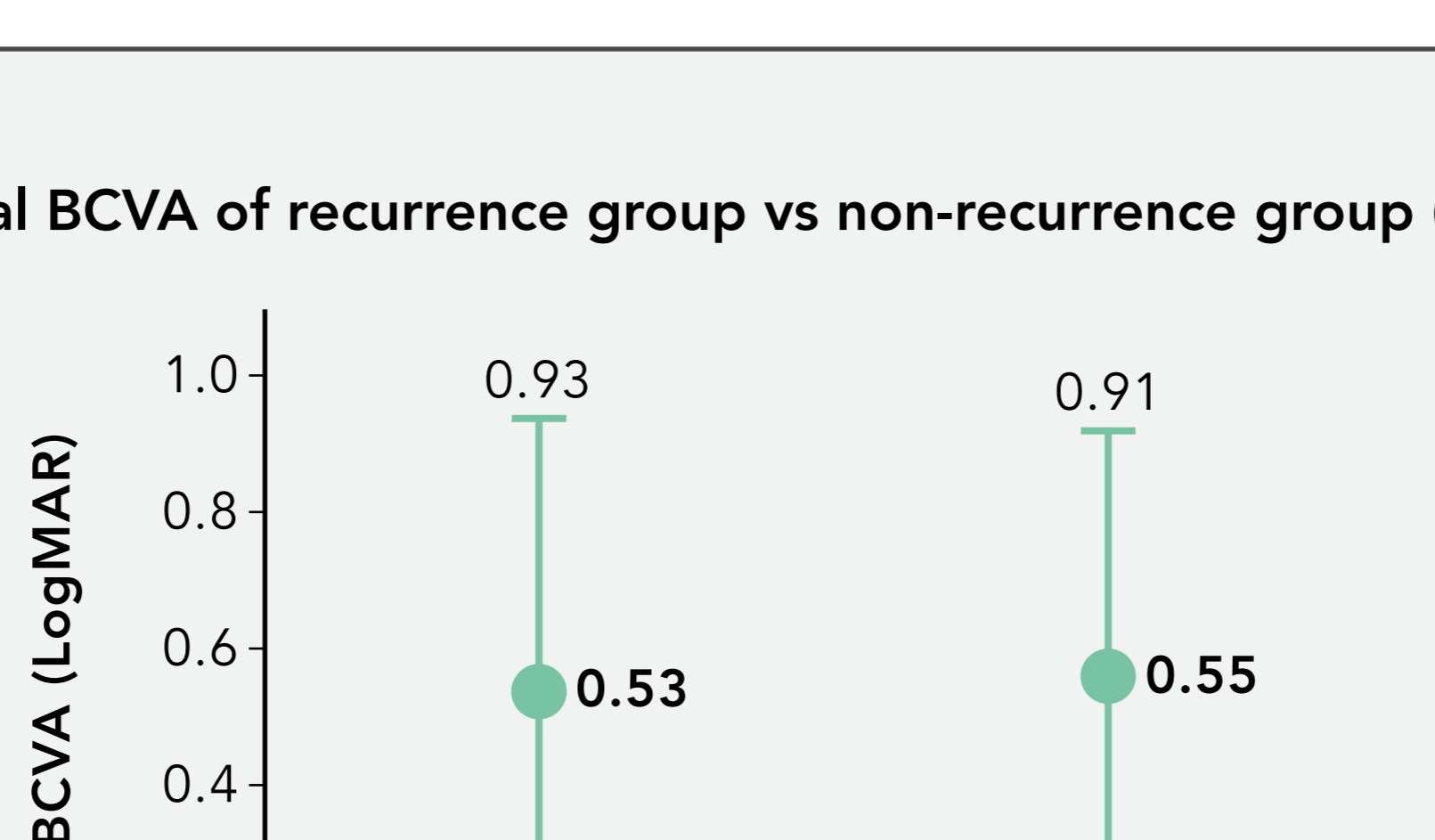
Final BCVA in the recurrence group was not statistically different to the non-recurrence group. Baseline BCVA (P= .0001) was the only predictor of final visual outcome irrespective of anti-VEGF drug (P= .38).

Spearman correlation analysis showed age, baseline BCVA, type of anti-VEGF, and number of injections to be significantly associated with post-injection BCVA.

Variable	Bivariate Spearman correlation coefficient	P value	Multiple regression P-value
Age	0.17	.03	.09
SE	-0.07	.49	.78
Baseline BCVA	0.76	<.0001	<.0001
Gender	-0.06	.44	.83
Anti-VEGF	-0.24	.002	.38
No. of Injections	-0.15	.049	.09

Visual acuity was the only predictor that correlated with post-injection BCVA irrespective of the anti-VEGF drug and the number of injections administered.

Final BCVA of recurrence group vs non-recurrence group (P= .755)



## Conclusions

Eyes requiring greater number of injections for disease control in first episode are "at risk" of early mCNV recurrence. However, recurrence does not adversely affect visual outcome, if treated adequately.