

# Anti-VEGF Treatment Patterns and Long-Term Outcomes in Patients with nAMD in the Academy IRIS<sup>®</sup> Registry

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Poster #0381

## Purpose

To evaluate the real-world evolution of anti-VEGF treatment persistence and injection frequency for nAMD patients

## Conclusions

- Early, continuous anti-VEGF therapy is associated with early visual outcome gains and slower decline in vision, while non-persistent patients see fewer benefits and greater vision loss overall
- Declining injection frequency over time directly reduced the long-term durability of early vision gains
- High levels of treatment discontinuation and treatment gaps demonstrates that interruptions in therapy are the norm rather than the exception
- Median treatment gap duration at ~1-year highlights gaps are prolonged interruptions in care

**Sustained anti-VEGF treatment is critical for long-term outcomes and real-world attrition, with gaps highlighting the need for more durable, low-burden nAMD therapies.**

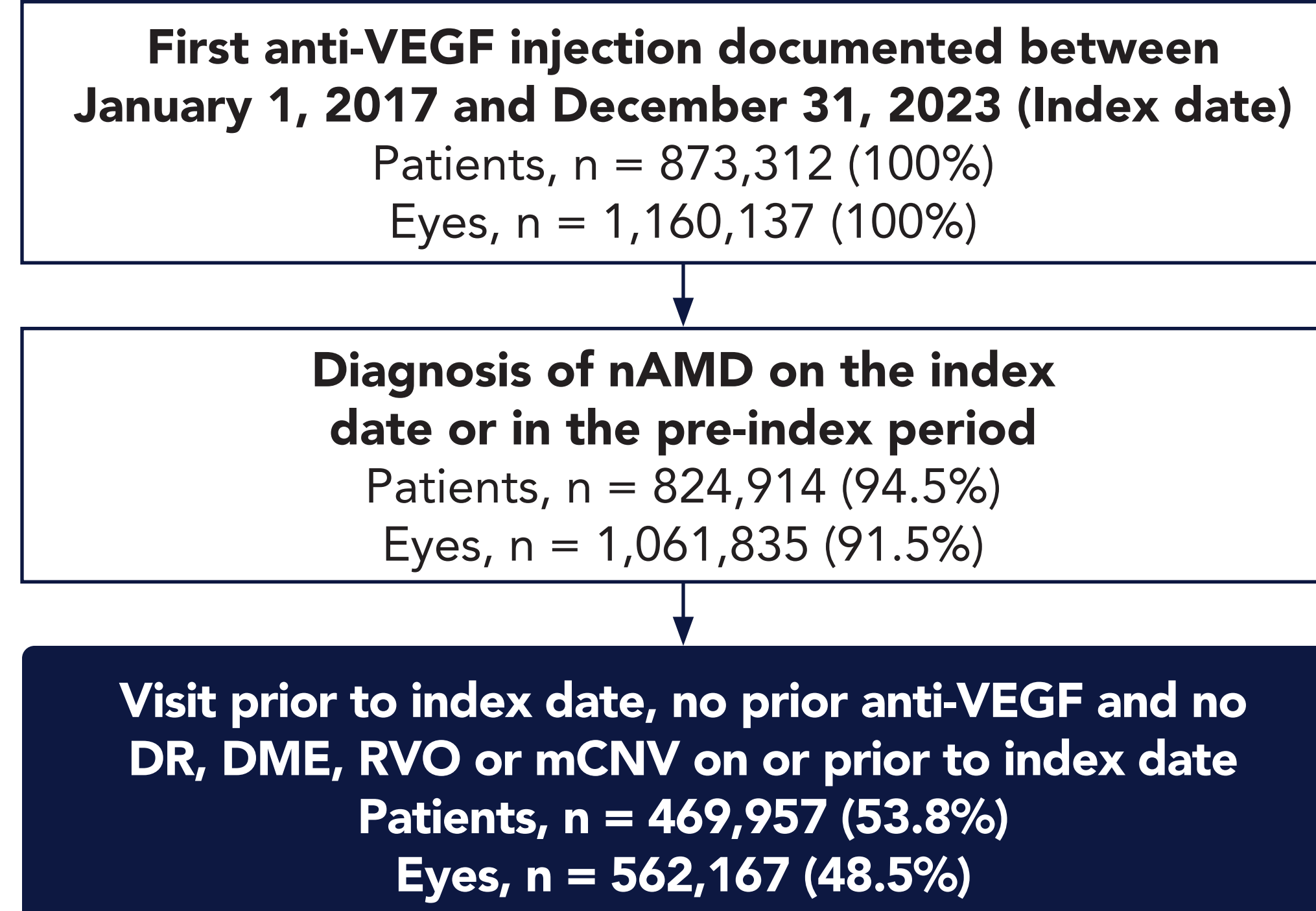
## Background

- nAMD is a leading cause of blindness in the United States, but the high burden of frequent injections often leads to real-world undertreatment and attrition<sup>1,2</sup>
- Because real-world adherence is poorly understood and often diverges from clinical trials, evaluating these patterns is critical to uncovering the true extent of long-term disease control in United States nAMD patients

## Methods

- Retrospective analysis using the American Academy of Ophthalmology IRIS<sup>®</sup> Registry (Intelligent Research in Sight)
- Patients aged ≥50 years with treatment-naïve nAMD initiating intravitreal anti-VEGF were included, with ≥1 prior visit and ≥12 months potential follow-up

## Cohort Attrition



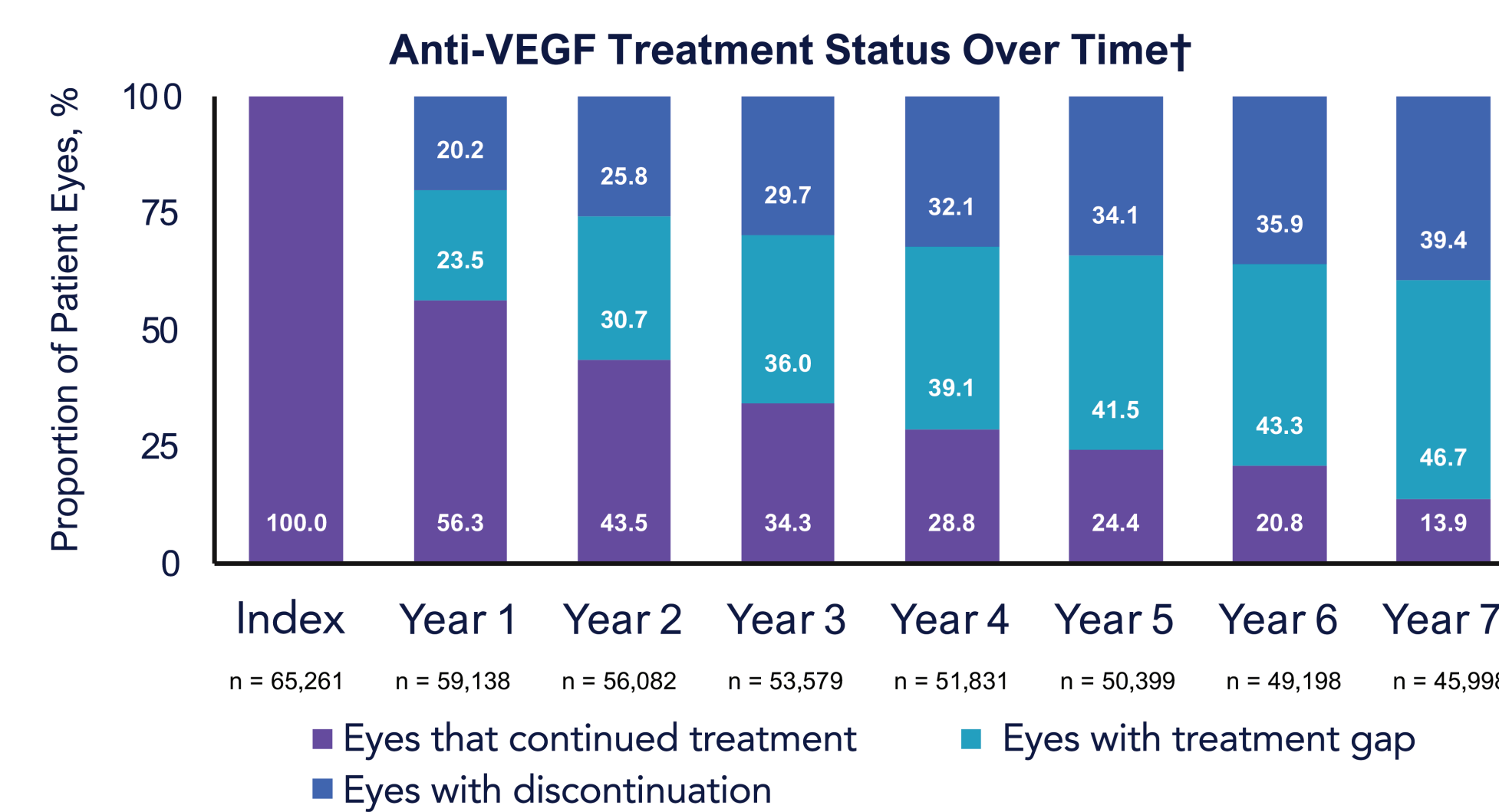
Sample size defined as number of eyes.

- **Subcohort Analysis:** A subcohort of the primary cohort was defined, including eyes initiating anti-VEGF in 2017–2019 with ≥5 years follow-up, baseline VA (within –30 days) and ≥1 follow-up VA, and classified by Year 1 treatment behavior as
  - continuous (no ≥180 days gap/discontinuation/censoring)
  - treatment gap (≥180 days gap with restart of treatment)
  - discontinuation (≥180 days without injections, not lost to follow-up)

## Results

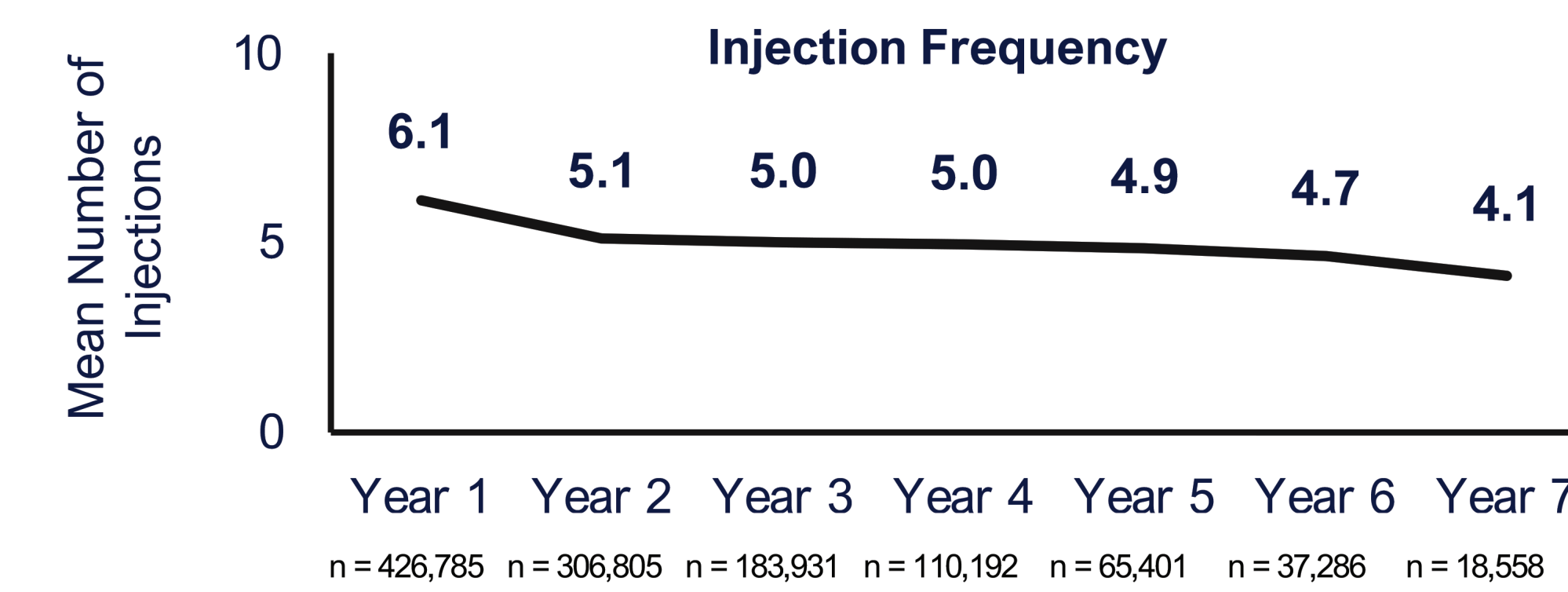
### 1. a) Real-World Attrition Remains High Despite Available Anti-VEGF Therapies\*

- Steepest drop-off in the first two years, which continued to decline through Years 3-7

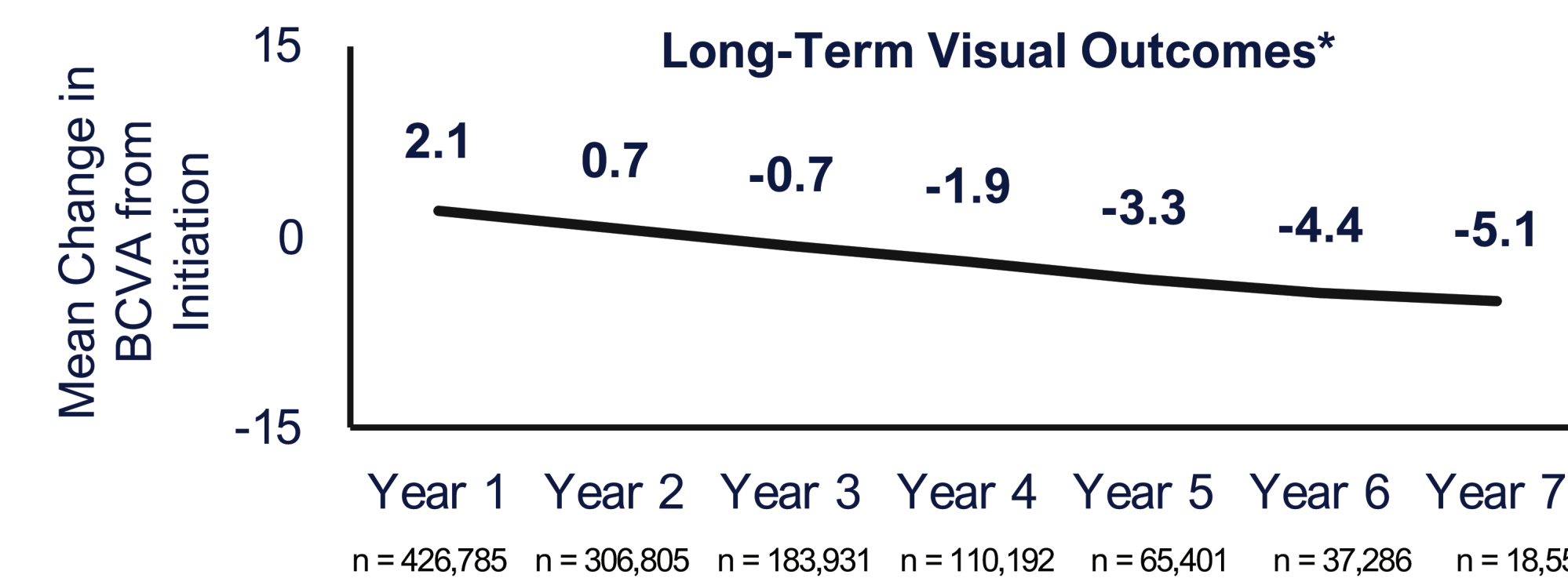


\*2017 cohort had the longest observation period for IRIS<sup>®</sup> Registry with 67,156 eyes. †Eyes lost-to-follow-up and insufficient follow-up not represented in the data. Index defined as date of first anti-VEGF injection.

### b) Real-World Anti-VEGF Use Shows Fewer Injections Over Time, Driving Initial Vision Gain Followed by Gradual Decline for Entire Cohort



**Injection Frequency Declines Over Time**  
Drops from 6.1 at Year 1 to 4.1 by Year 7



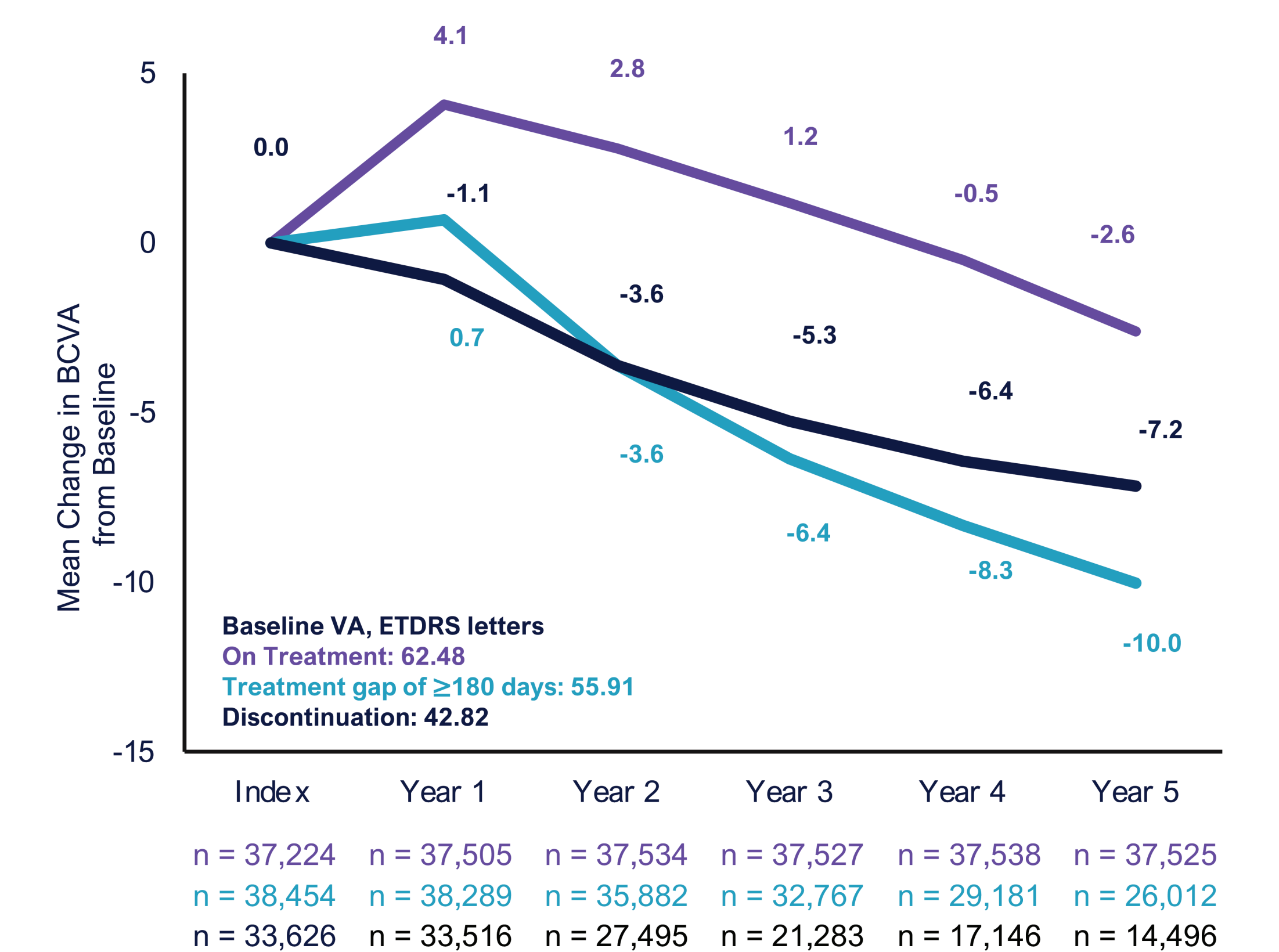
**Early Gains Followed by Long-Term Decline**  
+2.1 letters Year 1 to -5.1 letters by Year 7

\*Visual outcomes defined as mean from baseline BCVA, measured in ETDRS letters.

### 2. Subcohort Analysis: Visual Acuity Outcomes Over 5 Years based on Treatment Events in Year 1

- Continuous treatment showed early VA gains and slower decline, whereas early treatment gaps in Year 1 (despite retreatment) or treatment discontinuation in Year 1 was associated with progressively greater long-term VA loss, approaching ~2 ETDRS lines over 5 years
- Among patients with a treatment gap, median gap duration was ~1 year (374 days)

### Change in Visual Outcomes Based on Treatment Adherence\*



\*Change in VA was defined as the difference between baseline VA and the measurement closest to the end of each follow-up year. Discontinued eyes: VA assessed throughout follow-up, including after discontinuation; Treatment gap eyes: VA assessed across full follow-up, including after treatment restart

## Limitations

- An observational analysis that relies on ICD and CPT billing codes which may introduce misclassification bias or coding inaccuracies

**Study Disclosure**  
Funding was provided by Ocular Therapeutix for the study

**References**  
1. Almony A, et al. *J Manag Care Spec Pharm.* 2021;27(9):1260-1272.  
2. Wykoff CC, et al. *Ophthalmol Sci.* 2023;4(2):100421.

**Abbreviations**  
VEGF, vascular endothelial growth factor; nAMD, neovascular age-related macular degeneration; IRIS, Intelligent Research in Sight; DR, diabetic retinopathy; DME, diabetic macular edema; RVO, retinal vein occlusion; mCNV, myopic choroidal neovascularization; VA, visual acuity; ETDRS, early treatment diabetic retinopathy study BCVA, best-corrected visual acuity

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