

Anti-VEGF Treatment Patterns and Long-Term Vision Outcomes in Patients with nAMD in the Academy IRIS® Registry

Priya S. Vakharia, MD¹

Christina Y. Weng, MD, MBA², Andrew A. Moshfeghi, MD, MBA³, Dilsher S. Dhoot, MD⁴, Matthew W. Cheung, PharmD⁵, Andrea Gibson, PhD⁵, Namrata Saroj, OD⁵

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¹Retina Vitreous Associates of Florida, Florida, FL; ²Ophthalmology, Baylor College of Medicine, Houston, TX; ³Ophthalmology, Keck Medicine of USC, Los Angeles, CA;

⁴California Retina Consultants, Santa Barbara, CA; ⁵Ocular Therapeutix, Bedford, MA

Disclaimer (Priya S. Vakharia, MD)

Investigator: 4DMT, Adverum/Eli Lilly, Alcon, Alexion, Allgenesis, Annexon, Astellas, Aviceda, Bayer, Boehringer Ingelheim, Eyebiotec Limited, EyePoint, Genentech/Roche, Glaukos, Ionis, Janssen, Kodiak, Kirwin, Kyoto, Kyowo Kirin, Notal Vision, Novartis, Ocular Therapeutix, Oculis, Ocuterra, Ollin Biosciences, Opthea, ONL Therapeutics, Pfizer, Priovant Therapeutics, Recens Medical, Regeneron, RegenxBio, Sanofi, Skyline Therapeutics, Stealth Biotherapeutics, Unity

Speaker: ANI Pharmaceuticals, Apellis, Astellas, Bausch and Lomb, Genentech/Roche, Regeneron

Consultant: Annexon, Abbvie, Aliph, ANI Pharmaceuticals, Apellis, Astellas, Bausch and Lomb, EyePoint, Genentech/Roche, Heidelberg, Novartis, Regeneron, Ocular Therapeutix, Adverum/Eli Lilly

Equity/Stakeholder: McKesson

Study Disclosures

- Funding was provided by Ocular Therapeutix for the study

Treatment Burden Remains a Significant Unmet Need in nAMD

INJECTION BURDEN

up to
12 anti-VEGF injections/yr for patients¹



90% of patients require
injection **every 1-3 months**²

up to
12 days off/yr for patients
and caregivers



Frequent injections and visits
disrupt patients' daily routines
and activities³

References: 1. MacCumber MW, et al. *Can J Ophthalmol*. 2023;58(3):252-261. 2. Ophthalmic Market Trends: Quarterly US Retina Edition: Q3-2024 Analysis of Historical Trends and Latest Developments. Market Scope; 2024. 3. Varano M, et al. *Clin Ophthalmol*. 2016;10:257-267.

Abbreviations: nAMD, neovascular age-related macular degeneration; VEGF, vascular endothelial growth factor

Existing Literature Underestimates True Treatment Attrition in nAMD

- nAMD is a leading cause of blindness in the United States, yet real-world anti-VEGF treatment adherence remains poorly understood^{1,2}
- Evaluating patterns of treatment discontinuation is critical to uncovering the long-term control of the disease, as **clinical trial data often diverges significantly from real-world outcomes**²⁻⁴

Current Themes in Attrition Literature^{2,5,6}

Varying Definitions of Discontinuation

Ranging from **6-12 Months**

Restrictive Inclusion Criteria

Prior registry analyses required 1.5 & 2 years of **follow-up**

Limited Longer-Term Follow-Up

Large studies **rarely follow patients** beyond first **2-3 years**

Attrition appeared to be a secondary focus

in large registry analyses with anti-VEGF treatment in nAMD

STUDY PURPOSE

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

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. 3. Monés J, et al. *Ophthalmologica*. 2020;243(1):1-8. 4. Ciulla TA, et al. *Ophthalmol Retina*. 2020;4(1):19-30. 5. MacCumber MW, et al. *Can J Ophthalmol*. 2023;58(3):252-261. 6. Khanani AM, et al. *Ophthalmol Retina*. 2020;4(2):122-133.

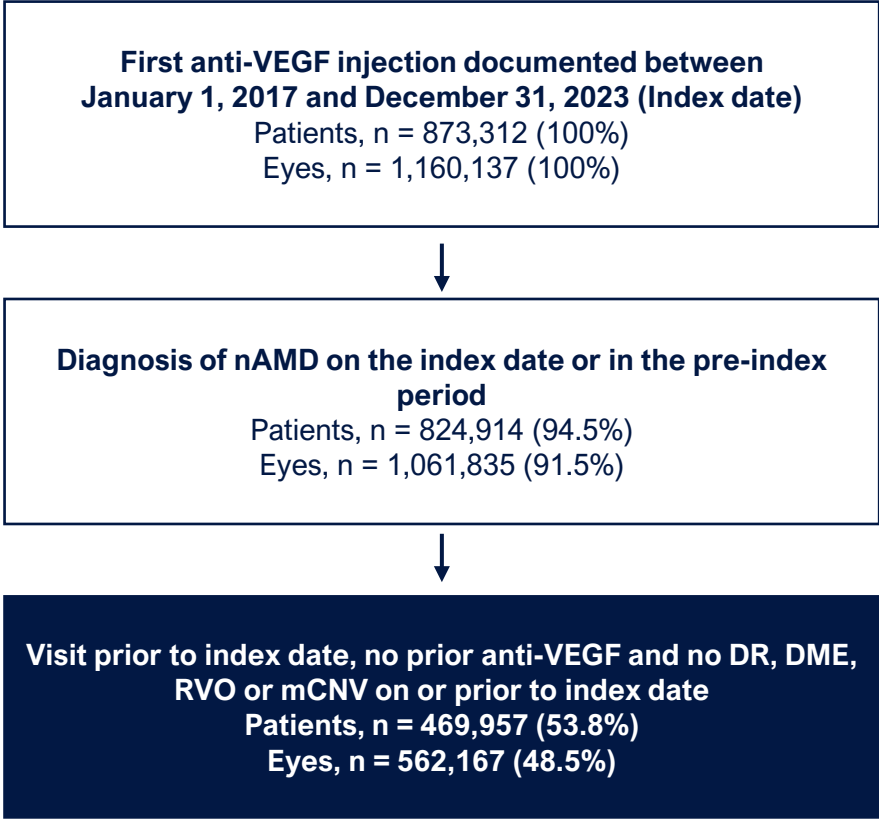
Abbreviations: nAMD, neovascular age-related macular degeneration; VEGF, vascular endothelial growth factor

Methods

- Retrospective analysis using the American Academy of Ophthalmology IRIS® 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
 - 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)

Limitations of this study include observational analysis, which relies on ICD and CPT billing codes that may introduce misclassification bias or coding inaccuracies.

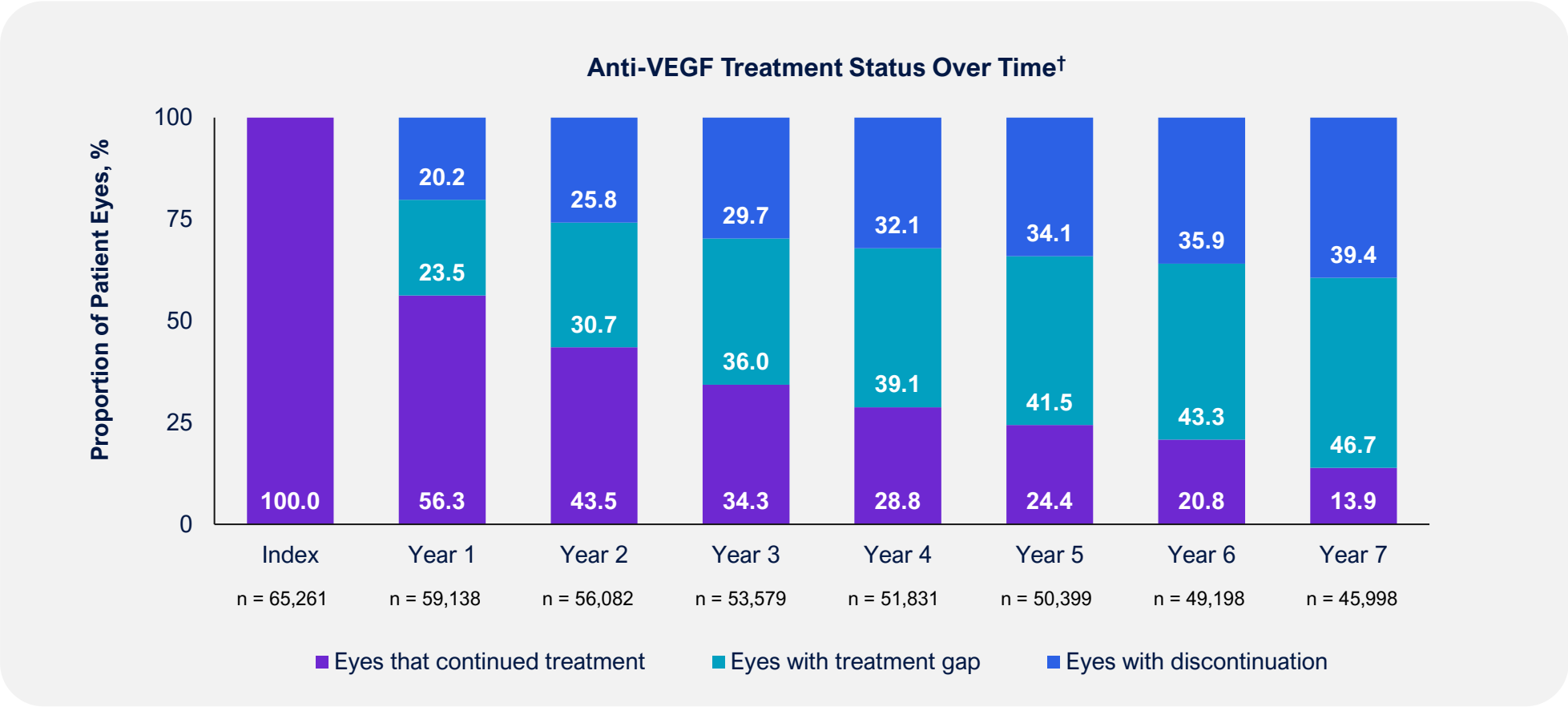
Cohort Attrition



Sample size defined as number of eyes.

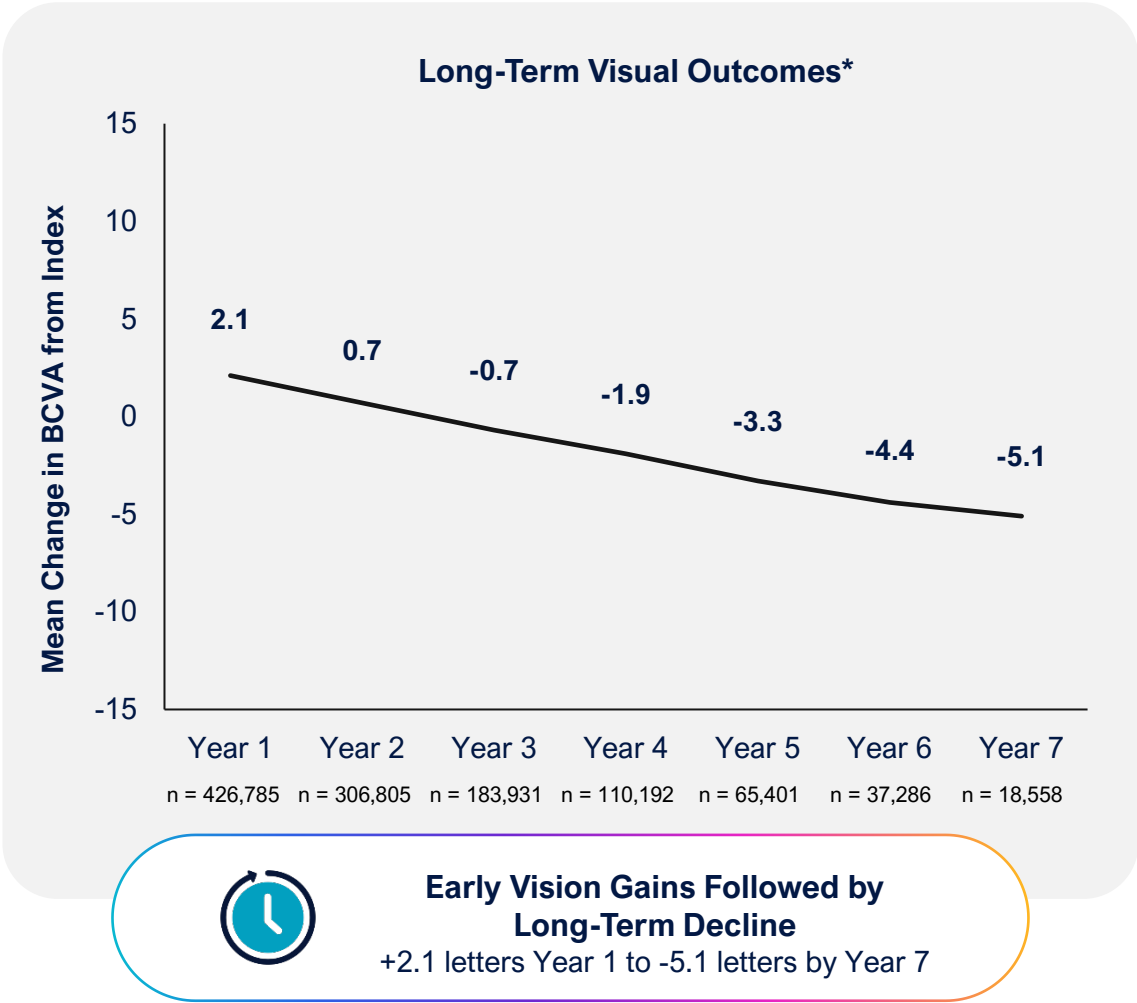
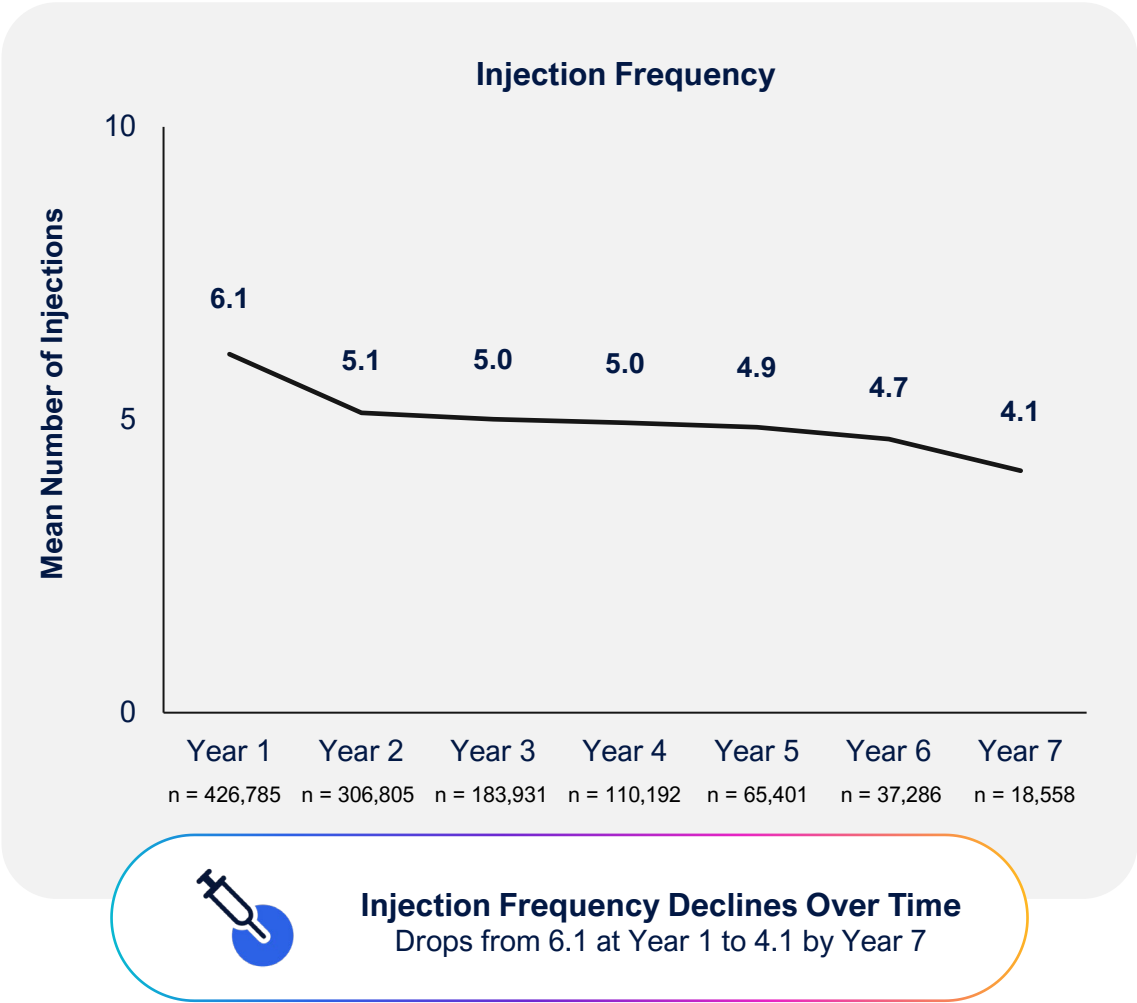
Real-World Attrition Remains High Despite Available Anti-VEGF Therapies*

Greater than 40% attrition by Year 1 that continues to steepen through Year 7



*2017 cohort had the longest observation period for IRIS® 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.
Sample size defined as number of eyes.
Reference: Weng CY, et al. Anti-VEGF Treatment Patterns and Long-Term Outcomes in Patients with nAMD in the Academy IRIS® Registry. Presented at the Association for Research in Vision and Ophthalmology. Denver, Colorado. May 7, 2026.
Abbreviations: VEGF, vascular endothelial growth factor

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



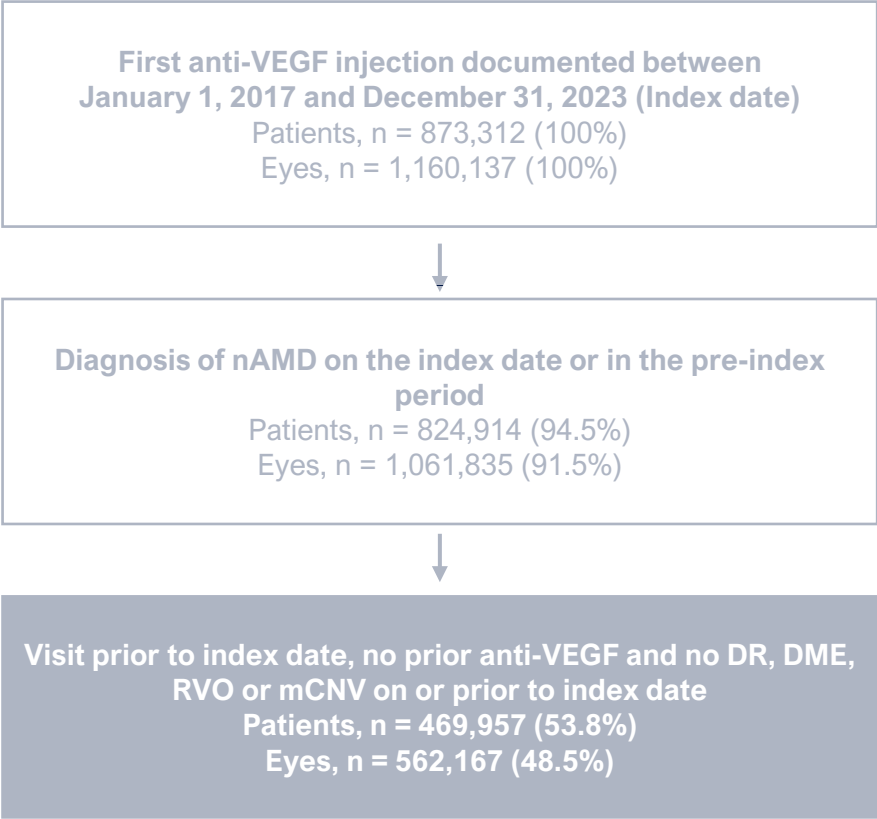
*Visual outcomes defined as mean change from baseline BCVA, measured in ETDRS letters.
Sample size defined as number of eyes.
Reference: Weng CY, et al. Anti-VEGF Treatment Patterns and Long-Term Outcomes in Patients with nAMD in the Academy IRIS® Registry. Presented at the Association for Research in Vision and Ophthalmology. Denver, Colorado. May 7, 2026.
Abbreviations: VEGF, vascular endothelial growth factor; BCVA, best-corrected visual acuity; ETDRS, early treatment diabetic retinopathy study

Methods

- Retrospective analysis using the American Academy of Ophthalmology IRIS® 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
- **Subcohort analysis:** A subcohort of the primary cohort was defined, including eyes initiating anti-VEGF in 2017-2019 with ≥ 5 years 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)

Limitations of this study include observational analysis, which relies on ICD and CPT billing codes that may introduce misclassification bias or coding inaccuracies.

Cohort Attrition

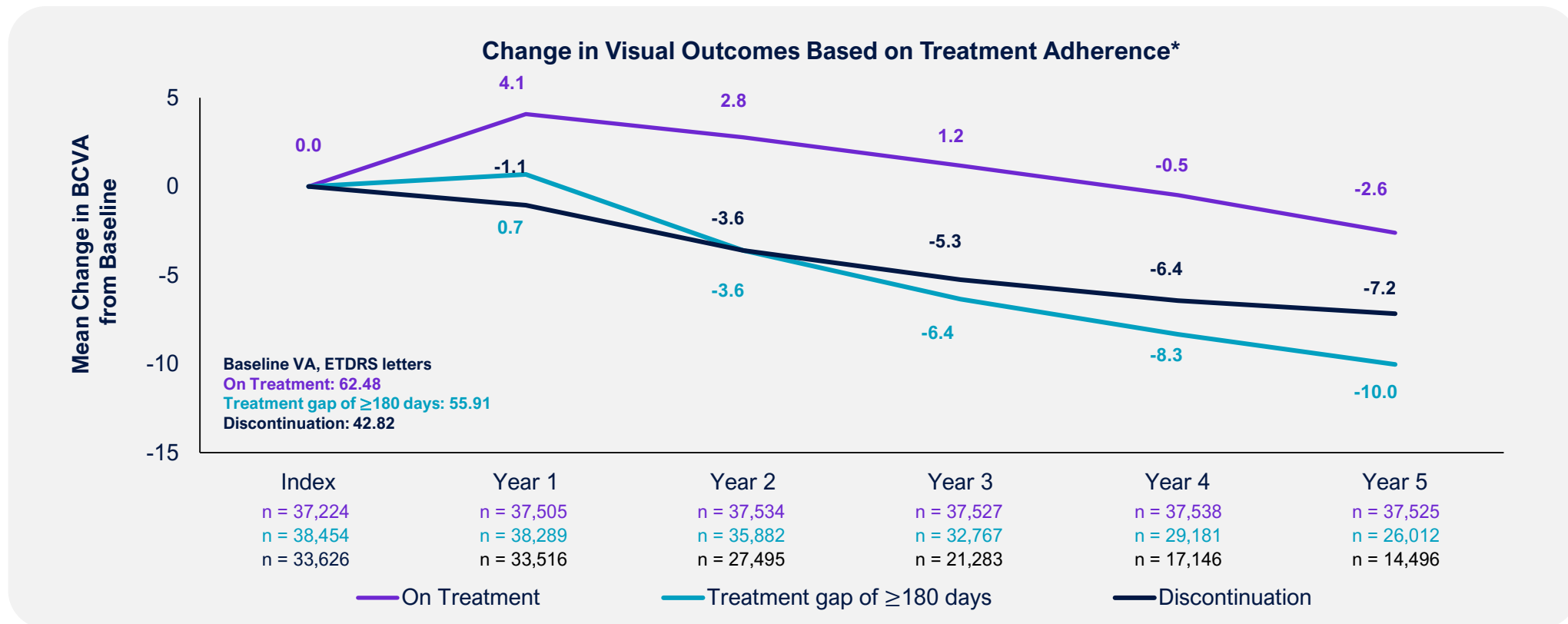


Sample size defined as number of eyes.

Early, Continuous Anti-VEGF Treatment Demonstrates Initial Gains and Slower Decline in VA Over 5 Years Compared to Treatment Gaps and Discontinuation

Subcohort Analysis

- Continuous treatment showed early, and greater, 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 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.

Sample size defined as number of eyes.

Reference: Weng CY, et al. Anti-VEGF Treatment Patterns and Long-Term Outcomes in Patients with nAMD in the Academy IRIS® Registry. Presented at the Association for Research in Vision and Ophthalmology. Denver, Colorado. May 7, 2026.

Abbreviations: VA, visual acuity; BCVA, best-corrected visual acuity; ETDRS, early treatment diabetic retinopathy study

Real-World Attrition and Treatment Gaps Drive Long-Term Vision Loss in nAMD



Early, continuous anti-VEGF therapy is associated with early vision gains and slower decline in vision, while patients who discontinue treatment see fewer benefits and greater vision loss overall



Declining injection frequency over time is associated with reduced long-term durability of early vision gains



High levels of treatment discontinuation and treatment gaps demonstrate 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.

Reference: Weng CY, et al. Anti-VEGF Treatment Patterns and Long-Term Outcomes in Patients with nAMD in the Academy IRIS® Registry. Presented at the Association for Research in Vision and Ophthalmology. Denver, Colorado. May 7, 2026.

Abbreviations: nAMD, neovascular age-related macular degeneration; VEGF, vascular endothelial growth factor