Early Real-World Use of Aflibercept 8 mg in Treatment-Naive Patients With Neovascular Age-Related Macular Degeneration

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Disclosures

- Ferhina S Ali has received honoraria and served on speaker bureaus for 4DMT, Allergan, Apellis, EyePoint, Genentech, Iveric Bio, OcuTerra, Optomed, Ocuphire, Outlook Therapeutics, and Regeneron Pharmaceuticals, Inc. Steven Sherman, Dana Murdock, and Keran Moll are employees and stockholders of Regeneron Pharmaceuticals, Inc. Nick Boucher is an employee of Vestrum Health. Nitish Mehta has no disclosures to report. Michael Javaheri has acted as a speaker and consultant and partaken in advisory boards with Genentech and Regeneron Pharmaceuticals, Inc. Durga Borkar has acted as a consultant for 4DMT, Alimera Sciences, Astellas, Apellis, AbbVie/Allergan, EyePoint, Genentech, Glaukos, ONL Therapeutics, Regeneron Pharmaceuticals, Inc., and Verana Health, and as a speaker for Astellas and Genentech. Theodore Leng has received funding from Astellas and has acted as a consultant for Astellas, Boehringer Ingelheim, Regeneron Pharmaceuticals, Inc., Roche/Genentech, Topcon, and Virtual Field. Rishi P Singh reports personal fees from Apellis, Iveric Bio, EyePoint, REGENXBIO, Genentech, Bausch + Lomb, Zeiss, Alcon, and Regeneron Pharmaceuticals, Inc., and research grants from Janssen
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Background and Objectives

- In the PULSAR trial, aflibercept 8 mg achieved similar BCVA outcomes to aflibercept 2 mg with fewer injections in patients with nAMD through 96 weeks[1,2]
- Real-world evidence describing the use of aflibercept 8 mg in treatment-naive patients with nAMD could be informative for clinical practice

This cohort study aimed to describe real-world outcomes in treatment-naive patients with nAMD in the Academy IRIS® Registry and Vestrum Health Retina database who initiated aflibercept 8 mg treatment[a]

[a]Safety parameters were not accessed in this analysis.
BCVA, best-corrected visual acuity; IRIS, Intelligent Research in Sight; nAMD, neovascular age-related macular degeneration.
1. Lanzetta P et al. *Lancet*. 2024;403:1141–1152. 2. Korobelnik J. Presented at: American Academy of Ophthalmology; November 3-6, 2023; San Francisco, CA.

Study Design

Eyes with nAMD receiving aflibercept 8 mg on the index date[a]

IRIS Registry: n=58,638

Vestrum: n=23,338

Eligibility criteria

- Aged ≥50 years with a diagnosis of nAMD at the index date
- Initiated aflibercept 8 mg during the indexing period[b] and no other anti-VEGF agent or other treatments[c] on the index date
- No anti-VEGF therapy or other treatments[c] in the baseline period[d]
- No diagnosis of DR, DME or RVO during the baseline period/at the index date
- For patients with both eyes treated on the index date and eligible for inclusion, 1 eye was randomly selected per patient

Eligible eyes identified during the indexing period[b]

IRIS Registry: n=4417

Vestrum: n=2445

Outcomes

Injection intervals were assessed in eyes with ≥2 injections during the initial dosing phase,[e] and in eyes with ≥1 injection during the post-initial dosing phase

- **IRIS Registry:** Initial dosing phase: n=3096; Post-initial dosing phase: n=2517
- **Vestrum:** Initial dosing phase: n=1802; Post-initial dosing phase: n=1289

Change in BCVA from treatment initiation to 90 days[f] was assessed in eyes with BCVA available at the index date and 90±30 days post-index date, stratified by BCVA ≤20/50 or >20/50[g] at the index date

- **IRIS Registry:** BCVA ≤20/50: n=1842; BCVA >20/50: n=1178
- **Vestrum:** BCVA ≤20/50: n=1055; BCVA >20/50: n=738

[a]Index date was date of first aflibercept 8-mg injection. [b]For the IRIS Registry cohort, study period was between August 18, 2023, and March 31, 2025, with indexing period between August 18, 2023, and September 30, 2024. For the Vestrum cohort, study period was between August 18, 2023, and June 30, 2025, and indexing period was between August 18, 2023, and December 31, 2024. [c]Other treatments included intravitreal steroids and laser therapy. [d]Baseline period was 12 months prior to the index date. [e]First 3 injections or 90 days, whichever occurred first. [f]BCVA closest to 90 days within a ±30-day window. [g]≤65 or >65 ETDRS letters.

DME, diabetic macular edema; DR, diabetic retinopathy; ETDRS, Early Treatment Diabetic Retinopathy Study; RVO, retinal vein occlusion; VEGF, vascular endothelial growth factor.

Patient Demographics and Ocular Characteristics at the Index Date[a]

	IRIS Registry (n=4417)	Vestrum (n=2445)
Age, mean (SD), years	80.3 (7.6)	80.7 (7.7)
Male, n (%)	1659 (38)	900 (37)
Race/ethnicity, n (%)		
Hispanic or Latino	80 (2)	NA
White	3221 (86)	NA
Black or African American	35 (1)	NA
Asian or Pacific Islander	82 (2)	NA
Other	340 (9)	NA
BCVA, mean (SD), ETDRS letters	54.9 (24.5)	54.4 (24.4)
Bilateral nAMD, n (%)	1497 (34)	752 (31)
Fellow eye also treated with aflibercept 8 mg on the index date, n (%)	521 (12)	201 (8)

[a]Index date was data of first aflibercept 8-mg injection.
NA, race/ethnicity data not available in the Vestrum database.

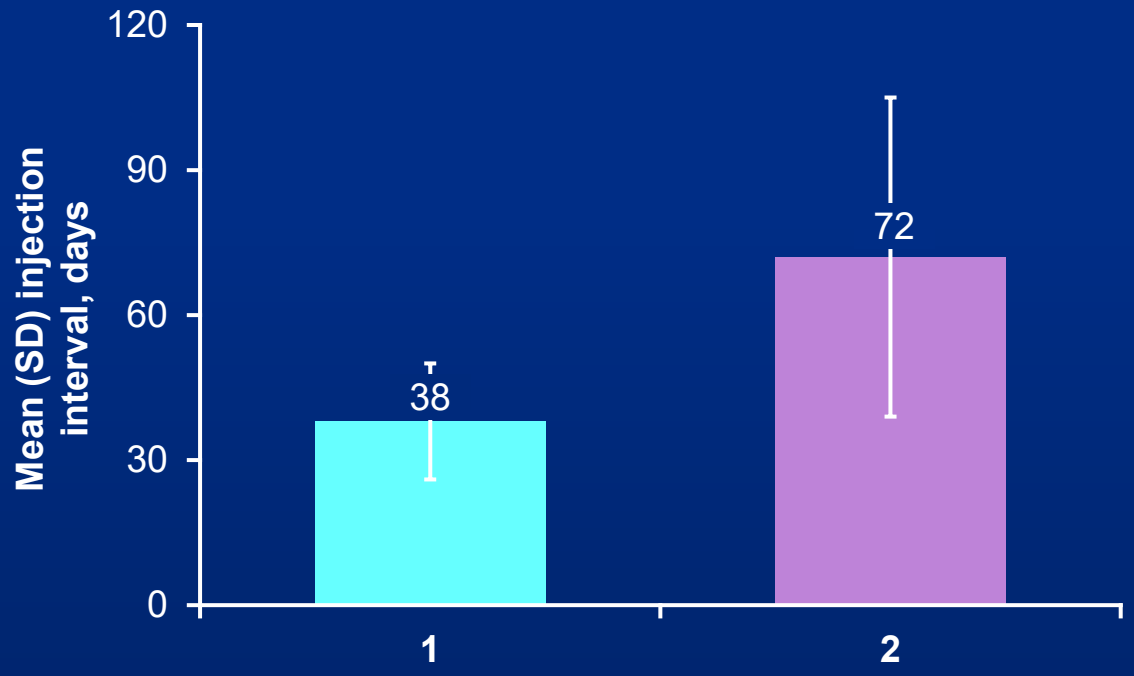
Treatment Exposure During Follow-Up

	IRIS Registry (n=4417)	Vestrum (n=2445)
Duration of follow-up, days		
Mean (SD)	189.3 (132.3)	223.8 (155.6)
Median (Q1, Q3)	183 (64, 288)	202 (90, 339)
Number of injections during follow-up[a]		
Mean (SD)	3.7 (2.3)	4.3 (2.7)
Median (Q1, Q3)	4 (1, 5)	4 (2, 6)

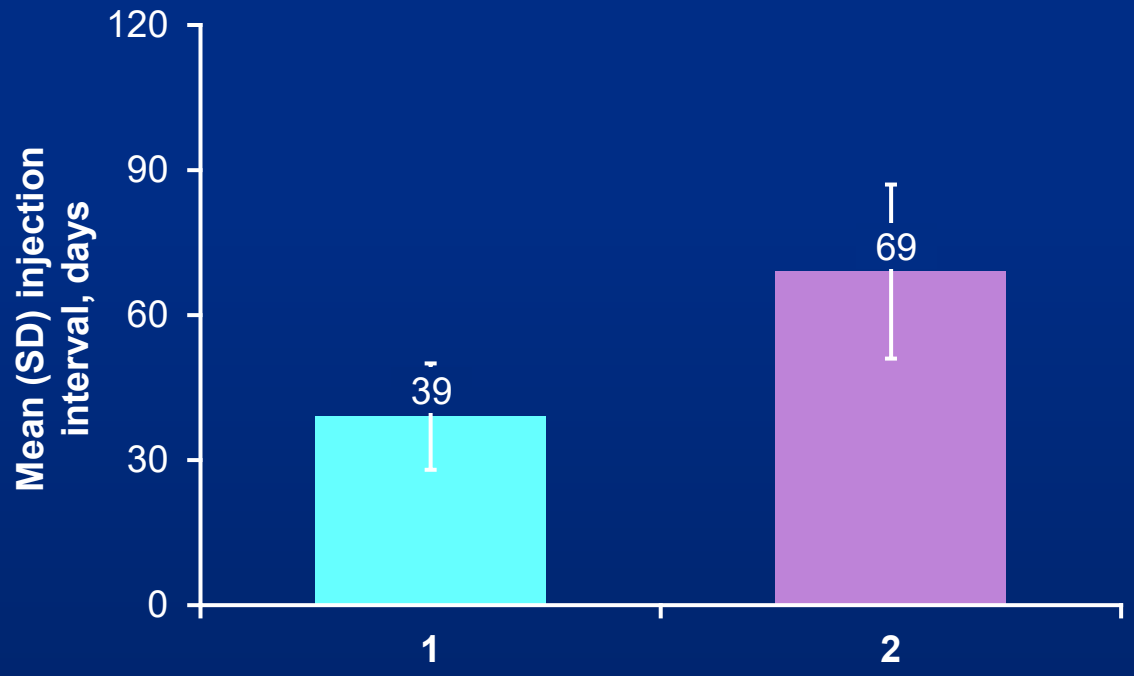
[a]Including the index date (date of the first aflibercept 8-mg injection).
Q, quartile.

Mean Injection Interval During Follow-Up

IRIS Registry



Vestrum

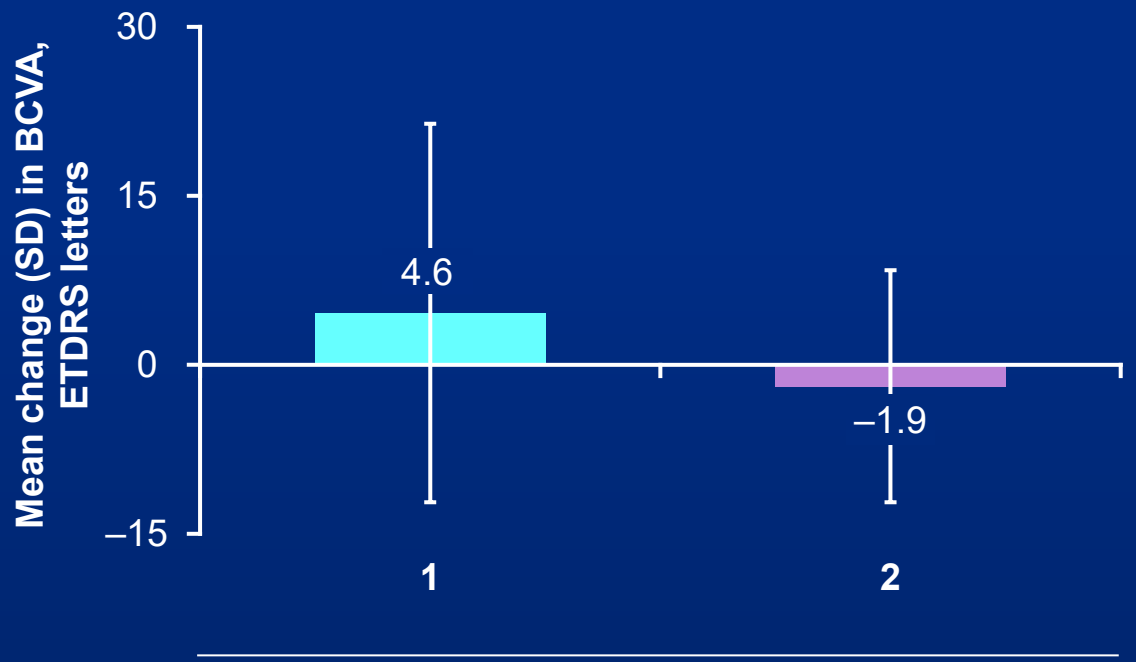


Median (Q1, Q3) injection interval, days:	IRIS Registry	Vestrum
1	35 (32, 42)	35 (32, 42)
2	63 (56, 77)	65 (58, 76)

Values above the bars indicate the mean injection interval in days.
Injection intervals were estimated during the initial dosing phase (i.e., first 3 injections or 90 days, whichever occurred first) and post-initial dosing phase. Injection intervals were assessed in eyes with ≥2 injections during the initial dosing phase, and in eyes with ≥1 injection during the post-initial dosing phase.

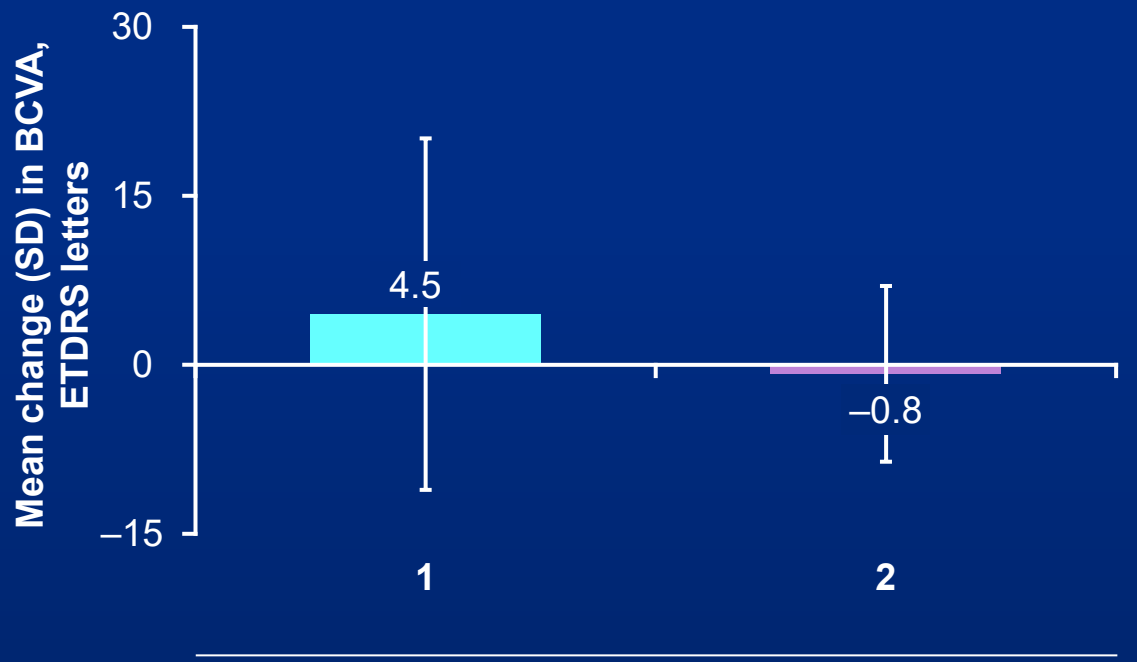
Mean Change in BCVA at 90 Days by BCVA at the Index Date

IRIS Registry



Mean (SD) BCVA at the index date, ETDRS letters:	42.5 (22.0)	76.3 (5.2)

Vestrum

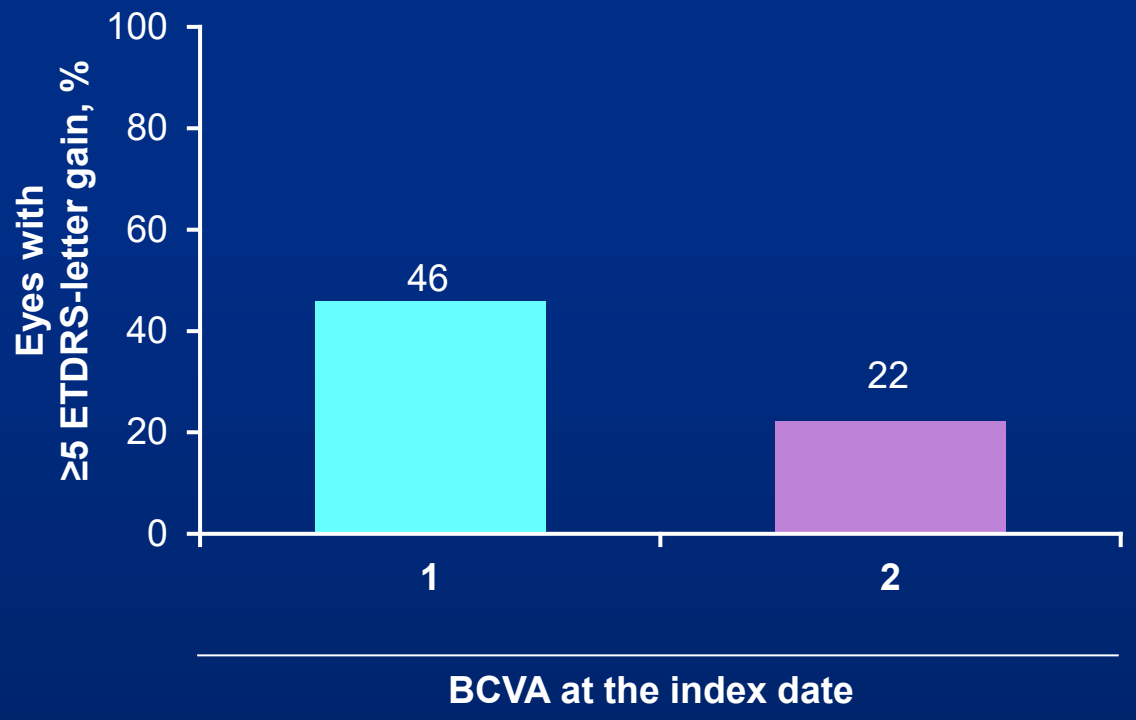


40.9 (21.7)	75.1 (5.3)

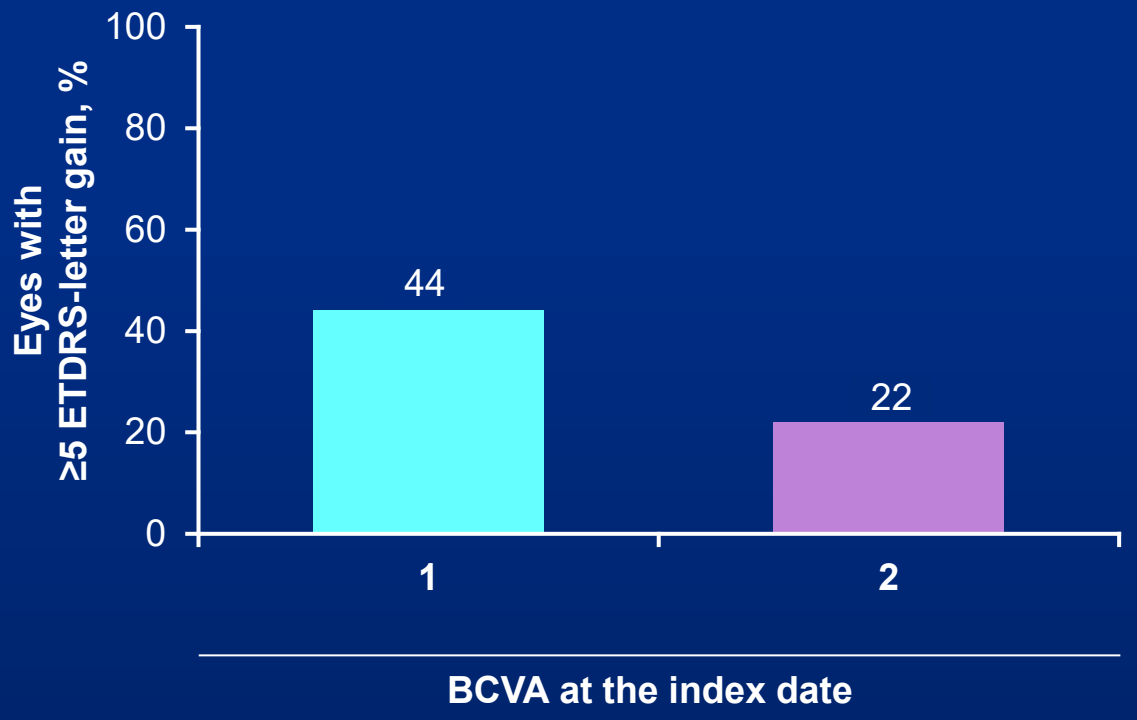
Values above the bars indicate the mean change in BCVA in ETDRS letters.
Includes a subset of eyes with BCVA available at the index date and at 90±30 days post-index date.

Proportion of Eyes With ≥5 ETDRS-Letter Gain at 90 Days by BCVA at the Index Date

IRIS Registry



Vestrum



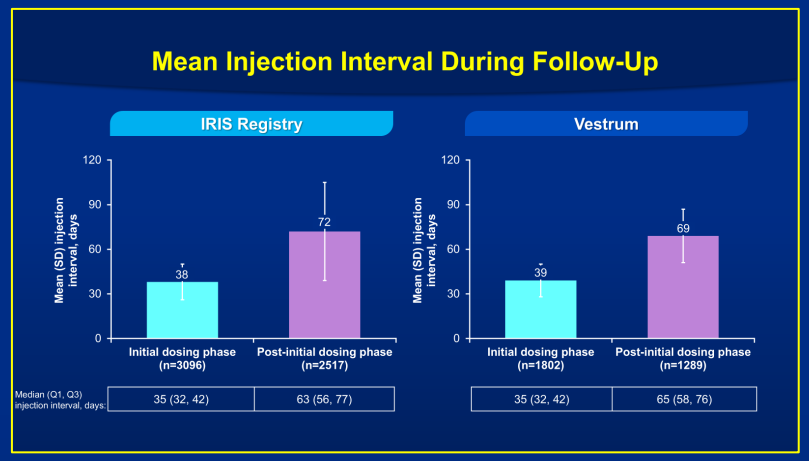
Mean (SD) BCVA at the index date, ETDRS letters:	1	2
IRIS Registry	42.5 (22.0)	76.3 (5.2)
Vestrum	40.9 (21.7)	75.1 (5.3)

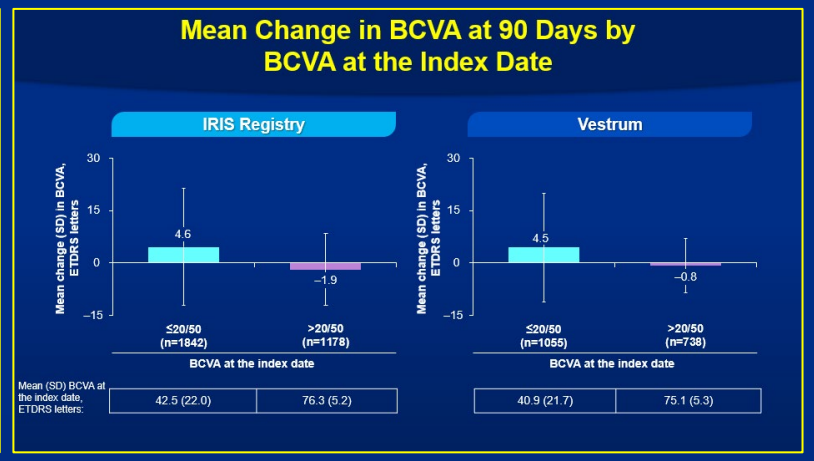
Values above the bars indicate the proportion of patients with ≥5 ETDRS-letter gain.
Includes a subset of eyes with BCVA available at the index date and at 90±30 days post-index date.

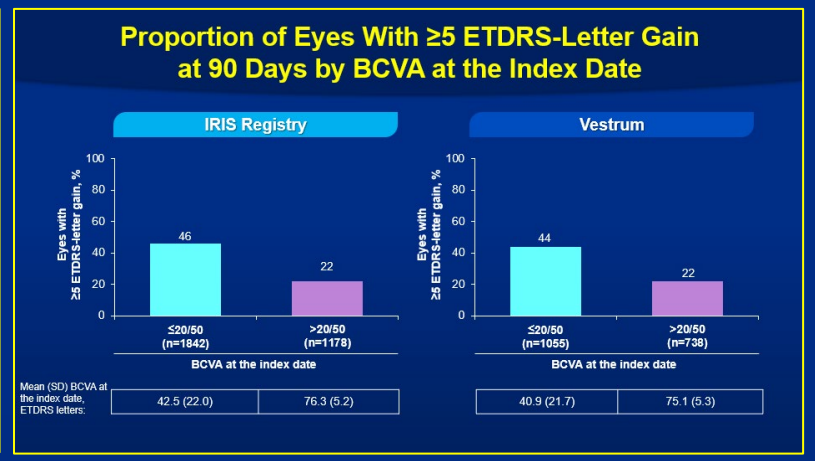
Limitations

- This study evaluated data available in electronic medical records, which may not reflect patients' full medical history, including treatment history
- This analysis represents early real-world experience with aflibercept 8 mg with a limited follow-up period
- As BCVA is assessed as part of routine clinical practice, there may be reduced accuracy and increased variability due to uncontrolled factors during the measurement process compared with the clinical trial setting
- Patients switching or discontinuing aflibercept 8 mg treatment prior to 90 days are not reflected in this analysis

Conclusions







- In this early real-world analysis of the IRIS Registry and Vestrum databases of treatment-naive patients with nAMD, eyes with BCVA ≤20/50 at the index date achieved clinically meaningful improvements in vision with aflibercept 8 mg at the end of the initial dosing phase
  - Mean BCVA remained relatively stable in eyes with good baseline vision (BCVA >20/50 [~75-76 ETDRS letters] at the index date), likely due to the ceiling effect minimizing potential improvement
- On average, patients with treatment-naive nAMD achieved injection intervals of ~70 days (~10 weeks) with aflibercept 8 mg, over a mean duration of ~27 weeks and ~32 weeks of follow up in the IRIS Registry and Vestrum cohorts, respectively
- Additional analyses with longer follow-up periods are ongoing to assess the long-term effectiveness and durability of aflibercept 8 mg in patients with treatment-naive nAMD in the real world