Early Insights From Real-World Use of Aflibercept 8 mg Among Eyes With Neovascular Age-Related Macular Degeneration (nAMD) Switching From Other Anti-VEGF Agents

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BACKGROUND & PURPOSE

- In the PULSAR trial, aflibercept 8 mg with extended dosing achieved non-inferior visual acuity (VA) outcomes with fewer injections compared to aflibercept 2 mg in patients with neovascular age-related macular degeneration (nAMD) through 96 weeks[1,2]
- Real-world evidence for use of aflibercept 8 mg in previously treated patients with nAMD could be informative for clinical practice
- This analysis aimed to describe real-world treatment patterns in patients with nAMD who were previously treated with other anti-vascular endothelial growth factor (VEGF) agents before switching to aflibercept 8 mg

METHODS

- Two cohorts of eyes with nAMD that were previously treated with anti-VEGF agent(s) and had initiated aflibercept 8 mg were identified from electronic health records in the Intelligent Research in Sight (IRIS®) Registry and Vestrum Health Retina database, respectively (**Figure 1**)
  - Eyes initiating aflibercept 8 mg between August 18, 2023, to June 30, 2024, for the IRIS cohort or August 18, 2023, to July 31, 2024, for the Vestrum cohort (indexing period), were followed from initiation (index date) until last visit or censoring event (treatment switch or missing information on treatment laterality), whichever occurred first
  - Data were available through December 31, 2024, for the IRIS cohort, and January 31, 2025, for the Vestrum cohort
- Injection intervals were evaluated for eyes that were consistently treated with anti-VEGF (defined as ≥6 months of treatment with an average injection interval of ≤8 weeks for the most recent anti-VEGF agent) and ≥1 post-initial dosing phase injection
- The last observed injection interval in the pre-switch phase (6-12 months prior to the index date) and after the initial dosing phase (defined as the first 3 injections or 90 days, whichever occurred first) were assessed, stratified by mean injection interval before switching (4-<6 or ≥6-8 weeks)

Figure 1. Inclusion Criteria and Attrition

Inclusion criteria	IRIS	Vestrum
Eyes with ≥1 diagnosis of nAMD on the index date receiving aflibercept 8 mg and no other anti-VEGF agent or other treatments[a]	n=63,719	n=16,499
Adult patients (aged ≥50 years) with no diagnosis of DR, DME, or RVO during the 12 months prior to/on the index date	n=60,475	n=15,537
Eyes treated with anti-VEGF therapy or other treatments[a] during the 12 months prior to the index date	n=54,035	n=14,942
≥1 visit ≥6 months prior to the index date	n=52,096	n=13,158
For patients with both eyes eligible for inclusion, 1 eye was randomly selected per patient	n=44,624	n=9968
Eyes that were switched from an anti-VEGF agent to aflibercept 8 mg during the indexing period	n=29,553	n=9451
Eyes that were consistently treated pre-switch[b]	n=15,283	n=6192
Eyes with an average injection interval of 4-8 weeks before switching and ≥1 post-initial dosing phase injection of aflibercept 8 mg	n=9693	n=2400

Where n is the number of eyes. Criteria in the lower green box apply to the injection interval analyses. [a]Other treatments included intravitreal steroids and/or laser therapy. [b]Treated with an anti-VEGF agent for ≥6 months and an average injection interval of ≤8 weeks for the most recent anti-VEGF agent. DME, diabetic macular edema; DR, diabetic retinopathy; RVO, retinal vein occlusion.

RESULTS

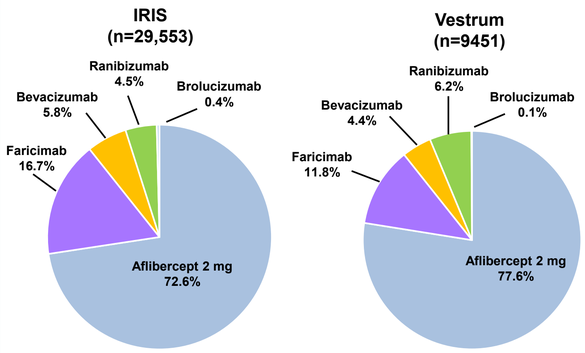
Table 1. Patient Characteristics at Index Date

	IRIS (n=29,533)	Vestrum (n=9451)
Mean age (SD), years	80.9 (7.4)	81.3 (7.6)
Male, n (%)	11,807 (40)	3549 (38)
Race/ethnicity, n (%)		
Hispanic or Latino	554 (2)	NA
White	22,555 (85)	NA
Black or African American	279 (1)	NA
Asian or Pacific Islander	500 (2)	NA
Other	2689 (10)	NA
Bilateral disease, n (%)	14,173 (48)	4625 (49)
Fellow eye treated with aflibercept 8 mg on the index date, n (%)	6044 (20)	1639 (17)
Mean VA (SD), ETDRS letters	60.5 (22.1)	67.6 (11.5)

ETDRS, Early Treatment of Diabetic Retinopathy Study; NA, not available (due to limitation of the Vestrum database); SD, standard deviation.

- Most eyes initiating aflibercept 8 mg were switched from aflibercept 2 mg (**Figure 2**)

Figure 2. Anti-VEGF Agent Used Before Switching to Aflibercept 8 mg



Data represent the proportion of eyes receiving each anti-VEGF agent. Values may not add up to 100% due to rounding. Ranibizumab comprised ranibizumab-eqrn (2.5%), ranibizumab (1.6%), and ranibizumab-nuna (0.4%) in the IRIS cohort; and ranibizumab-eqrn (4.7%), ranibizumab (1.4%), and ranibizumab-nuna (0.1%) in the Vestrum cohort.

Dosing Patterns

- Mean (SD) post-switch follow-up was 186 (113) and 240 (119) days in the IRIS and Vestrum cohorts, respectively (median [quartile {Q}1, Q3]: 183 [92, 269] and 238 [153, 336] days, respectively)
- Mean (SD) number of injections of aflibercept 8 mg administered during follow-up (including index date) was 4 (2) and 4 (1) in the IRIS and Vestrum cohorts, respectively (median [Q1, Q3]: 3 [2, 5] and 3 [2, 4], respectively)

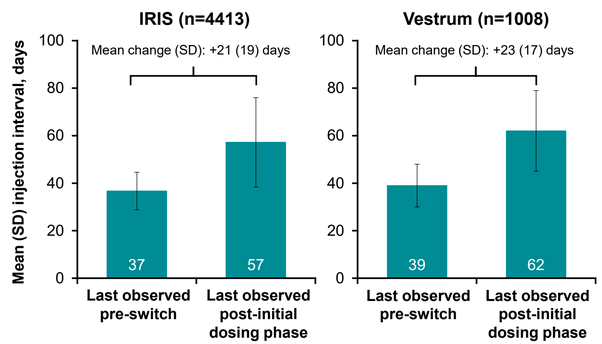
Table 2. Injection Interval Pre- and Post-Switch to Aflibercept 8 mg[a]

	Eyes with pre-switch injection interval 4-<6 weeks		Eyes with pre-switch injection interval ≥6-8 weeks	
	IRIS (n=4413)	Vestrum (n=1008)	IRIS (n=5280)	Vestrum (n=1392)
Last observed pre-switch injection interval, days				
Mean (SD)	37 (8)	39 (9)	51 (11)	52 (12)
Median (Q1, Q3)	35 (29, 42)	37 (34, 42)	49 (42, 56)	49 (42, 56)
Last observed post-initial dosing phase injection interval, days				
Mean (SD)	57 (19)	62 (17)	67 (20)	71 (20)
Median (Q1, Q3)	56 (49, 63)	56 (52, 70)	63 (56, 74)	65 (56, 78)
Change in last pre-switch to last post-initial dosing phase injection interval				
Mean change (SD)	21 (19)	23 (17)	16 (21)	19 (20)
Median (Q1, Q3)	20 (10, 28)	21 (14, 28)	14 (3, 26)	14 (7, 28)

[a]Included eyes that were consistently treated: ≥6 months of treatment prior to switch with an average pre-switch injection interval of 4-8 weeks and ≥1 post-initial dosing phase aflibercept 8-mg injection.

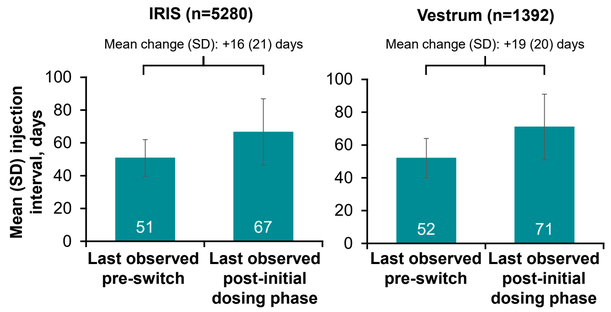
- Mean changes (SD) from last pre-switch to last post-initial dosing phase injection intervals are shown for eyes with a pre-switch injection interval of 4-<6 weeks (**Figure 3**) or a pre-switch injection interval of ≥6-8 weeks (**Figure 4**)

Figure 3. Injection Interval Extension of ~3 Weeks After Switching to Aflibercept 8 mg in Eyes With Pre-Switch Anti-VEGF Injection Interval 4-<6 Weeks[a]



[a]Included eyes that were consistently treated: ≥6 months of treatment prior to switch with an average pre-switch injection interval of 4-<6 weeks and ≥1 post-initial dosing phase aflibercept 8-mg injection.

Figure 4. Injection Interval Extension of ~2-3 Weeks After Switching to Aflibercept 8 mg in Eyes With Pre-Switch Anti-VEGF Injection Interval ≥6-8 Weeks[a]



[a]Included eyes that were consistently treated: ≥6 months of treatment prior to switch with an average pre-switch injection interval of ≥6-8 weeks and ≥1 post-initial dosing phase aflibercept 8-mg injection.

Limitations

- This study was based on data from electronic medical records, which may not reflect patients' full medical history, including prior treatment history
- This study included a subset of patients who switched to aflibercept 8 mg from other anti-VEGF therapies and may not represent the wider population
- This study represents early real-world experience with aflibercept 8 mg and had a limited follow-up period

CONCLUSIONS

- Most eyes were consistently treated with aflibercept 2 mg prior to initiating aflibercept 8-mg treatment
- Eyes switching to aflibercept 8 mg after consistent treatment with a previous anti-VEGF agent had an average injection interval extension of:
  - Approximately 3 weeks for eyes with an average pre-switch injection interval of 4-<6 weeks
  - Approximately 2-3 weeks for eyes with an average pre-switch injection interval of ≥6-8 weeks
- Additional analyses with longer-term follow-up are ongoing to assess real-world durability and outcomes of aflibercept 8 mg in previously treated patients with nAMD

REFERENCES

1. Lanzetta P et al. *Lancet.* 2024;403:1141–1152.
2. Korobelnik J. Presented at the American Academy of Ophthalmology Meeting; November 3-6, 2023; San Francisco, CA.

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