Early Insights From Real-World Use of Aflibercept 8 mg Among Eyes With Diabetic Macular Edema Switching From Other Anti-VEGF Agents

Michael Javaheri, MD,[1] Steven Sherman, MPH,[2] Keran Moll, PhD,[2] Dana Murdock, PhD,[2] Nick Boucher, BS,[3] Rishi P. Singh, MD,[4] Ferhina S. Ali, MD, MPH,[5] Durga Borkar, MD,[6] Theodore Leng, MD,[7] Nitish Mehta, MD[8]

[1]Retina Specialists of Beverly Hills, Beverly Hills, California; [2]Regeneron Pharmaceuticals, Inc., Tarrytown, New York; [3]Vestrum Health, Naperville, Illinois; [4]Cleveland Clinic Martin Hospitals, Cleveland Clinic Florida, Stuart, Florida; [5]New York Medical College, Valhalla, New York; [6]Duke University Eye Center, Durham, North Carolina; [7]Byers Eye Institute, Stanford University School of Medicine, Palo Alto, California; [8]Department of Ophthalmology, NYU Langone Health, New York, New York

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Disclosures

- Michael Javaheri has acted as a speaker and consultant, and partaken in advisory boards, for Genentech and Regeneron Pharmaceuticals, Inc. Steven Sherman, Keran Moll, and Dana Murdock are employees and stockholders of Regeneron Pharmaceuticals, Inc. Nick Boucher is an employee of Vestrum Health. Rishi P Singh has received personal fees from Apellis, Iveric Bio, EyePoint, REGENXBIO, Genentech, Bausch + Lomb, Zeiss, Alcon, and Regeneron Pharmaceuticals, Inc., and has received research grants from Janssen. 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. 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 acted as a consultant for Astellas, Boehringer Ingelheim, Regeneron Pharmaceuticals, Inc., Roche/Genentech, Topcon, and Virtual Field. Nitish Mehta has no disclosures to report.

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Background and Objectives

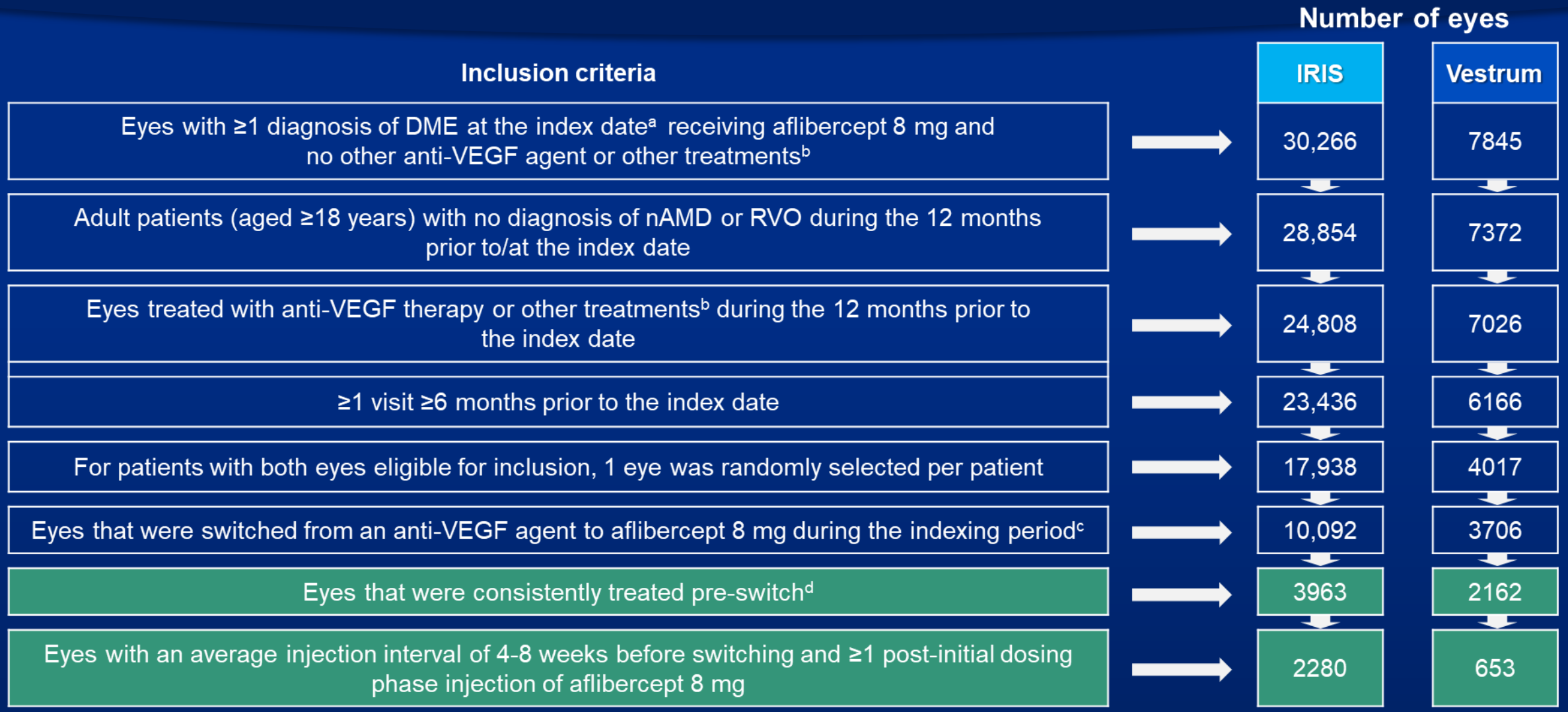
- In the PHOTON trial, aflibercept 8 mg with extended dosing achieved similar VA outcomes with fewer injections compared to aflibercept 2 mg through 96 weeks in patients with DME[1,2]
- Real-world evidence for use of aflibercept 8 mg in previously treated patients with DME could be informative for clinical practice

This analysis aimed to describe real-world treatment patterns in patients with DME who were previously treated with other anti-VEGF agents before switching to aflibercept 8 mg

DME, diabetic macular edema; VA, visual acuity; VEGF, vascular endothelial growth factor.

1. Brown DM et al. *Lancet*. 2024;403:1153–1163. 2. Do D. Presented at the American Academy of Ophthalmology Meeting; November 3-6, 2023; San Francisco, CA.

Inclusion Criteria and Attrition



Criteria in green boxes apply to injection interval analyses. [a]Index date was date of first aflibercept 8-mg injection. [b]Other treatments included intravitreal steroids and laser therapy. [c]Indexing period was between August 18, 2023, and June 30, 2024, for the IRIS cohort, or between August 18, 2023, and July 31, 2024, for the Vestrum cohort. [d]Treated with an anti-VEGF agent for ≥6 months and an average injection interval of ≤8 weeks for the most recent anti-VEGF agent. IRIS, Intelligent Research in Sight; nAMD, neovascular age-related macular degeneration; RVO, retinal vein occlusion.

Outcomes

- 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 (during 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)

Patient Characteristics at the Index Date

	IRIS (n=10,092)	Vestrum (n=3706)
Age, mean (SD), years	66.5 (10.5)	66.3 (10.9)
Males, n (%)	5576 (55)	2033 (55)
Race/ethnicity, n (%)		
Hispanic or Latino	866 (10)	NA
White	5548 (62)	NA
Black or African American	1025 (12)	NA
Asian or Pacific Islander	276 (3)	NA
Other	1174 (13)	NA
Bilateral disease, n (%)	9264 (92)	3210 (87)
Fellow eye treated with aflibercept 8 mg at the index date, n (%)	3671 (36)	1064 (29)
VA, mean (SD), ETDRS letters	65.5 (18.2)	70 (10.7)

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

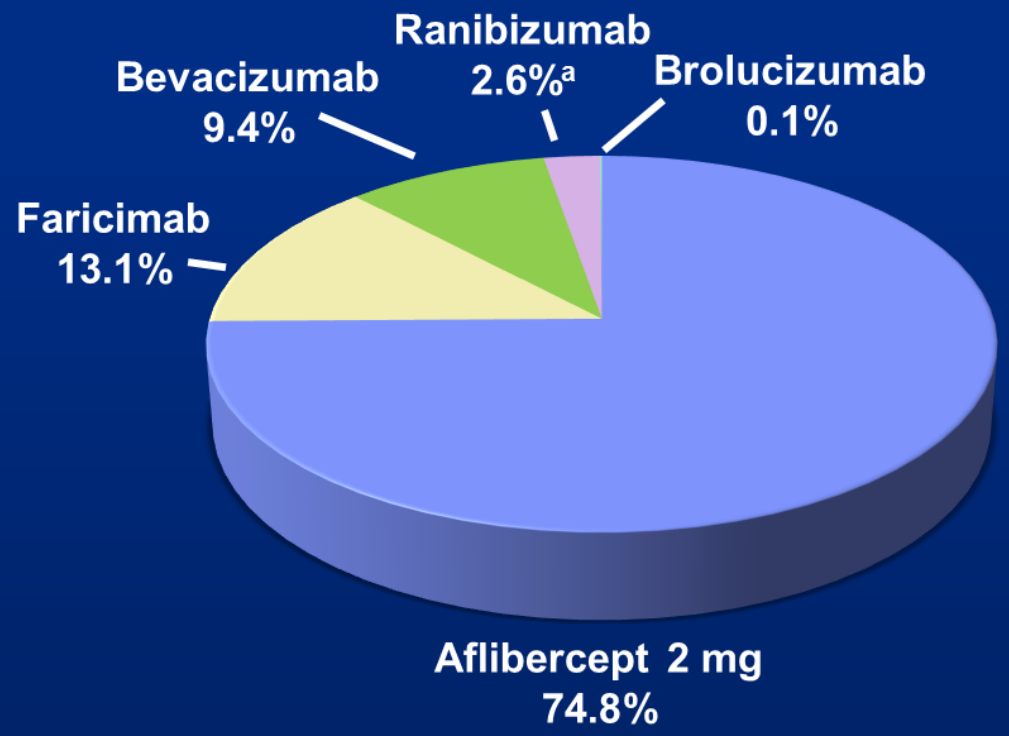
Treatment Patterns During Follow-Up

	IRIS (n=10,092)	Vestrum (n=3706)
Duration of post-switch follow-up, days		
Mean (SD)	167 (109)	246 (110)
Median (Q1, Q3)	162 (71, 245)	252 (175, 329)
Number of aflibercept 8-mg injections during follow-up[a]		
Mean (SD)	3 (2)	3 (1)
Median (Q1, Q3)	3 (1, 4)	3 (2, 4)

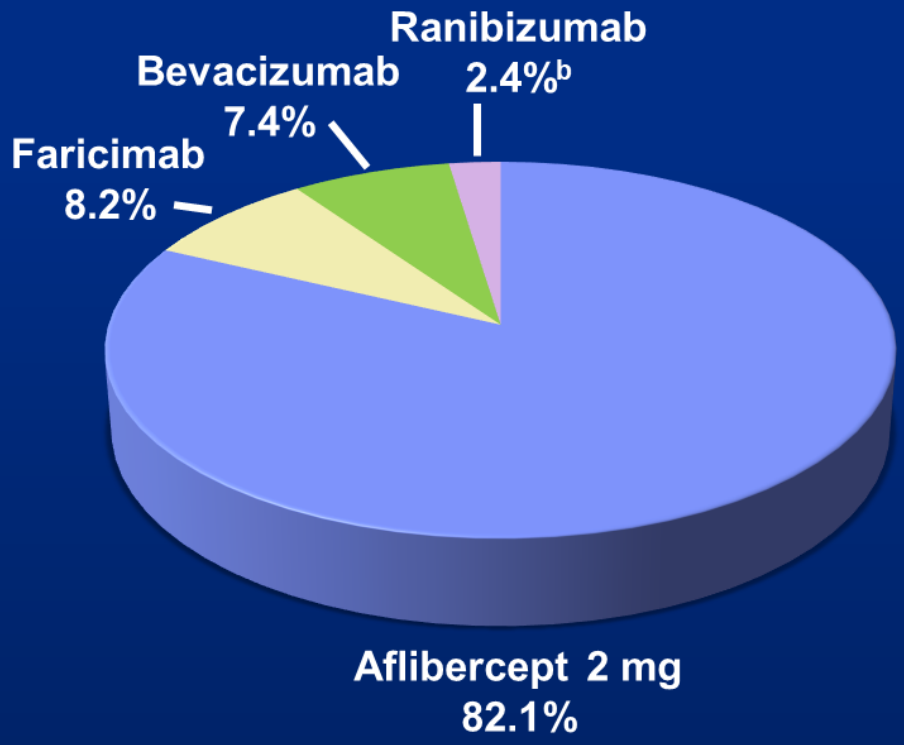
[a]Including the index date (date of the first aflibercept 8-mg injection).
Q, quartile.

Anti-VEGF Agent Used Before Switching to Aflibercept 8 mg

IRIS (n=10,092)



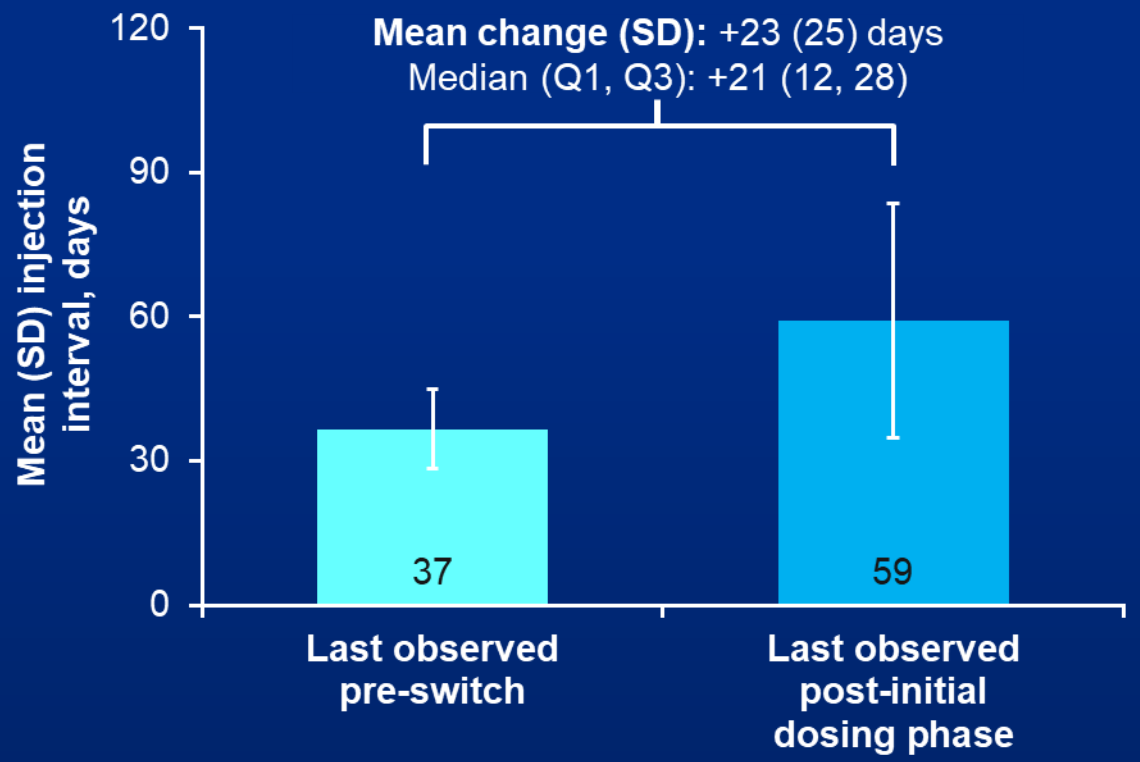
Vestrum (n=3706)



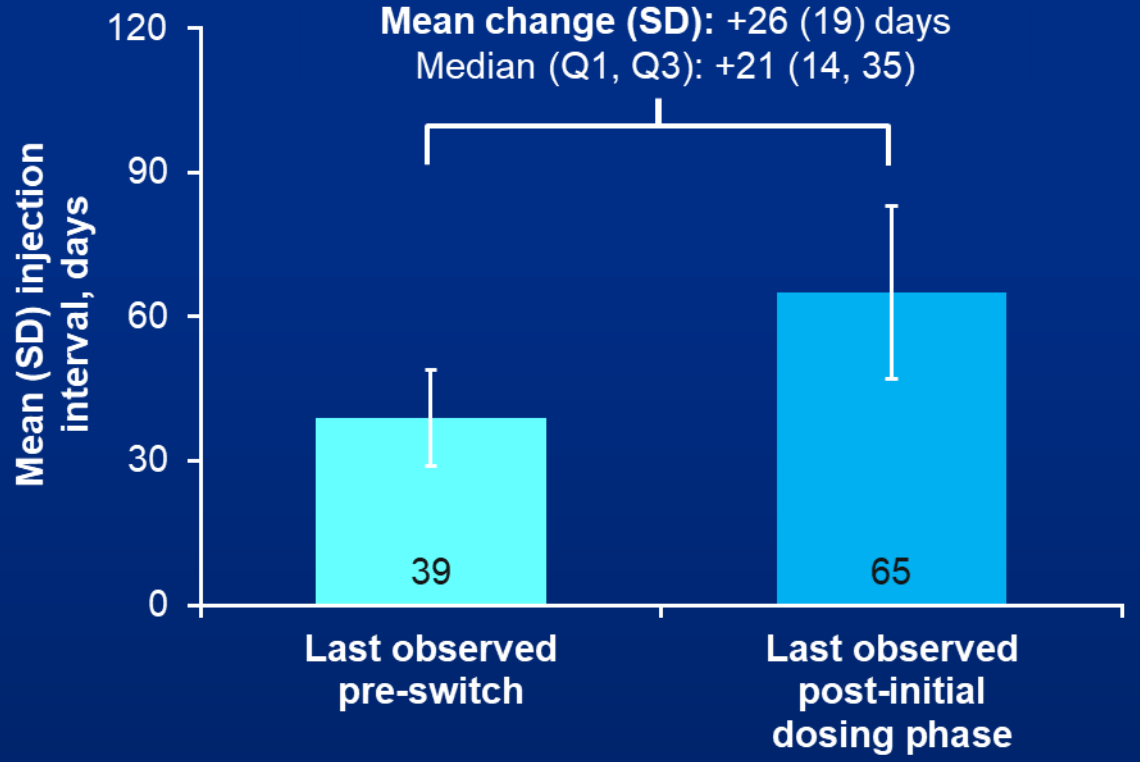
Data represent the proportion of eyes receiving each anti-VEGF agent. Values may not add up to 100% due to rounding.
[a]Ranibizumab comprised ranibizumab-eqrn (1.4%), ranibizumab (1.1%), and ranibizumab-nuna (0.1%) in the IRIS cohort.
[b]Ranibizumab comprised ranibizumab-eqrn (1.8%), ranibizumab (0.5%), and ranibizumab-nuna (0.1%) in the Vestrum cohort.

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

IRIS (n=959)



Vestrum (n=224)



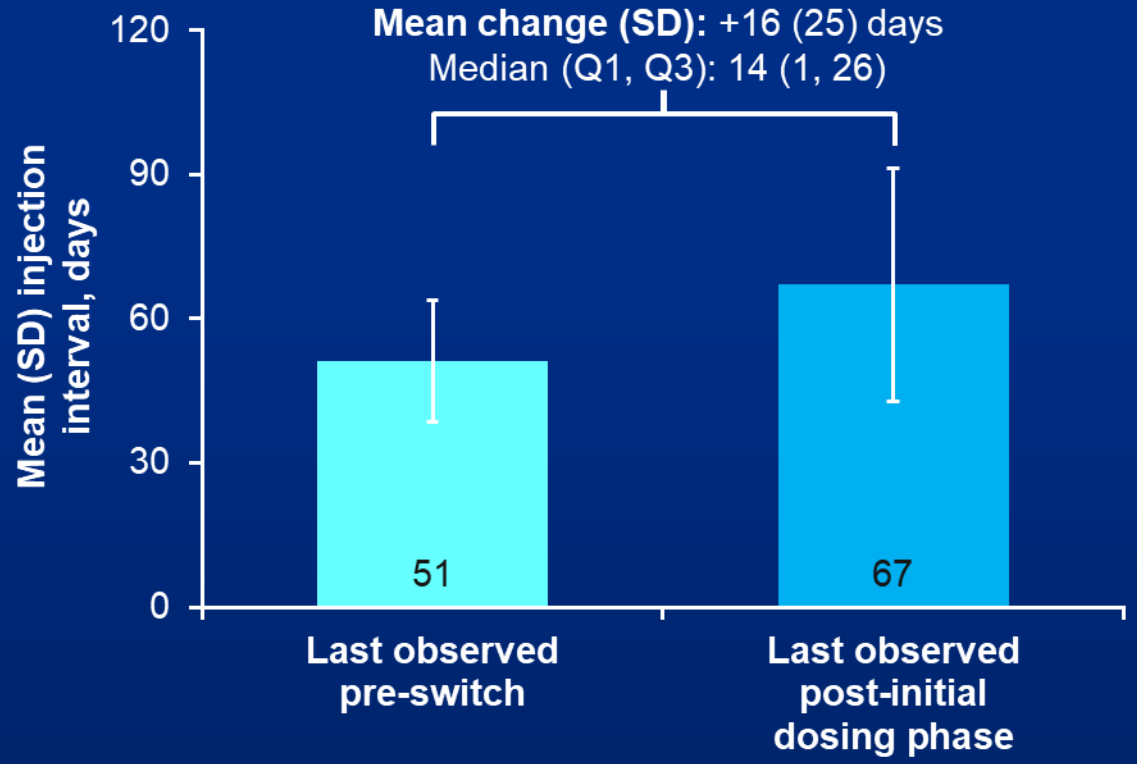
Median (Q1, Q3) injection interval, days:	Last observed pre-switch	Last observed post-initial dosing phase
IRIS (n=959)	35 (29, 42)	56 (49, 63)
Vestrum (n=224)	35 (31, 42)	62 (56, 70)

Values on the bars indicate the mean injection interval in days.

[a]Among 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.

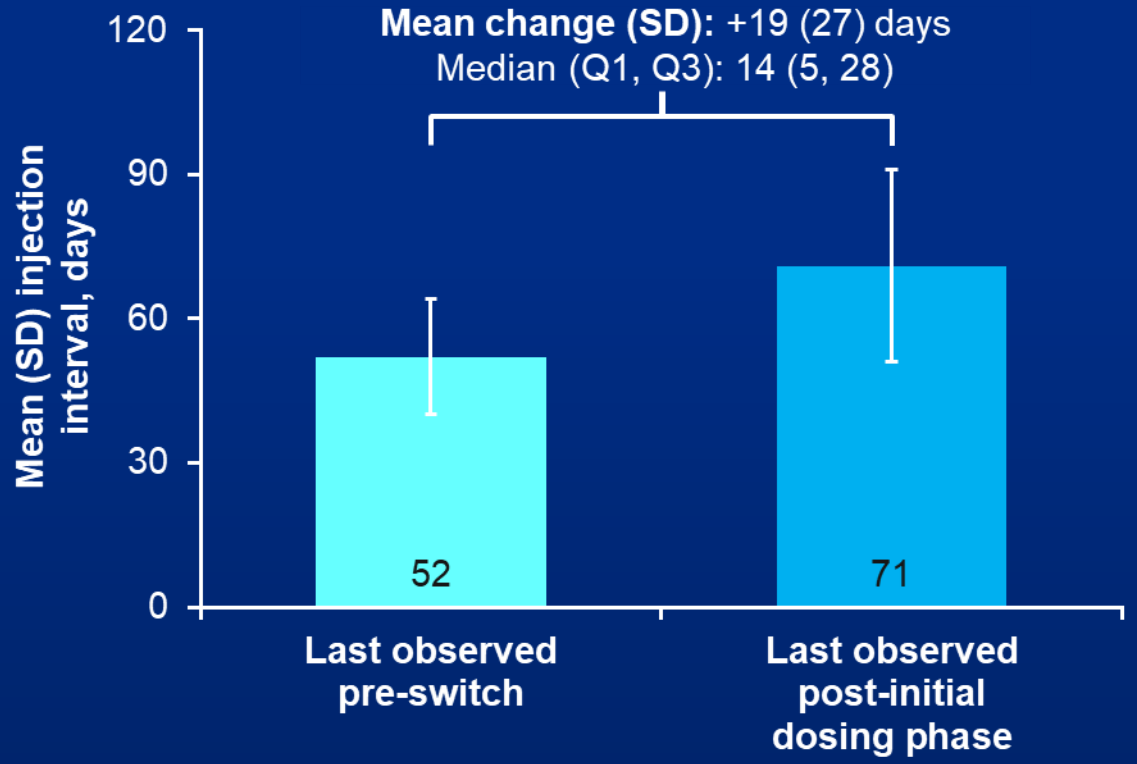
Injection Interval Extension of ~2-3 Weeks After Switching to Aflibercept 8 mg in Eyes With an Average Pre-Switch Injection Interval of ≥6 to 8 Weeks[a]

IRIS (n=1321)



Median (Q1, Q3) injection interval, days:	Last observed pre-switch	Last observed post-initial dosing phase
	49 (42, 56)	63 (56, 77)

Vestrum (n=429)



Last observed pre-switch	Last observed post-initial dosing phase
49 (42, 56)	63 (56, 84)

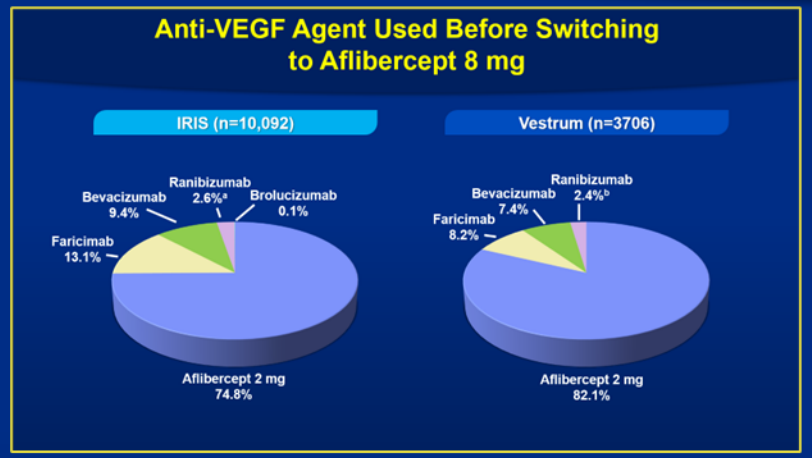
Values on the bars indicate the mean injection interval in days.

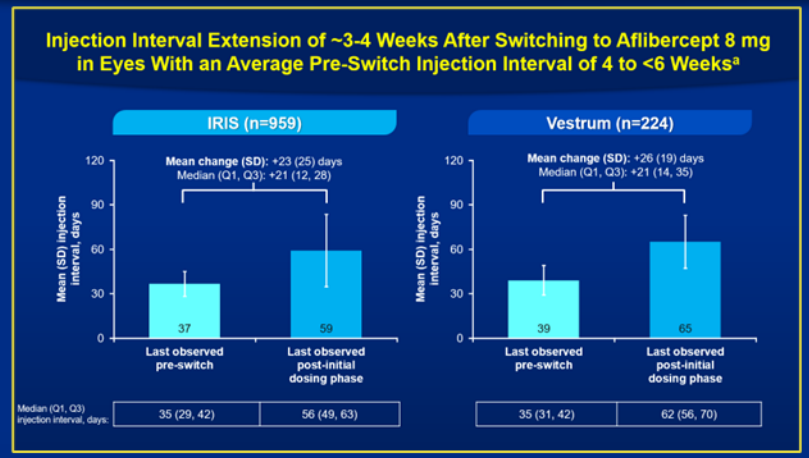
[a]Among eyes that were consistently treated: ≥6 months of treatment prior to switch with an average pre-switch injection interval of ≥6-8 weeks and ≥1 post-initial dosing phase aflibercept 8-mg injection.

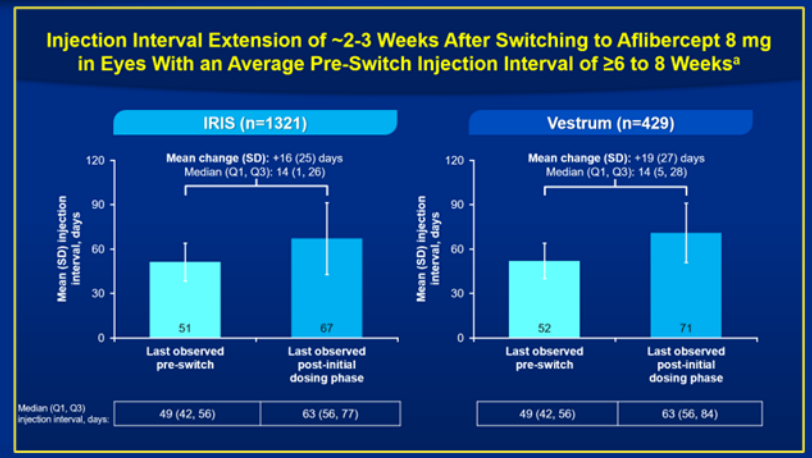
Limitations

- This study was based on data from electronic medical records, which may not reflect patients' full medical history, including treatment history
- A subset of patients among those who switched to aflibercept 8 mg from other anti-VEGF therapies were included in this analysis, which may not represent the wider population
- This analysis 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 3-4 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 DME