Pigment Epithelial Detachment Outcomes With Aflibercept 8 mg Versus Aflibercept 2 mg in the PULSAR Trial: A 96-Week Post Hoc Analysis

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BACKGROUND

- In the phase 3 PULSAR trial (NCT04423718), aflibercept 8 mg achieved similar visual and anatomic improvements compared to aflibercept 2 mg with fewer injections through Week 96 in patients with neovascular age-related macular degeneration (nAMD)[1,2]

OBJECTIVE

- To evaluate the impact of aflibercept 8 mg and 2 mg on pigment epithelial detachment (PED) outcomes in the PULSAR trial

METHODS

- In PULSAR, treatment-naive patients with nAMD were randomized to either aflibercept 8 mg every 12 (8q12) or 16 weeks (8q16) or aflibercept 2 mg every 8 weeks (2q8), each after 3 monthly injections. Dosing intervals for patients in the aflibercept 8q12 and 8q16 groups could be shortened from Week 16 and extended from Week 52 per dose regimen modification (DRM) criteria (**Figure 1**)

Figure 1. PULSAR Study Design

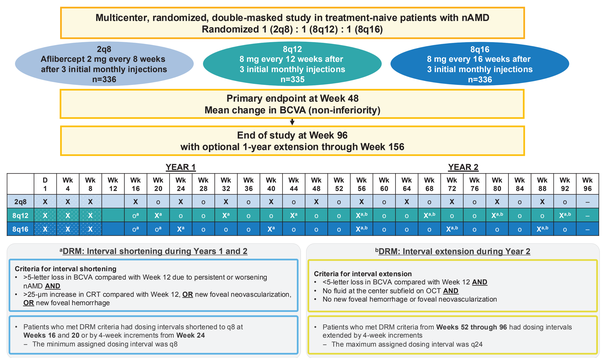
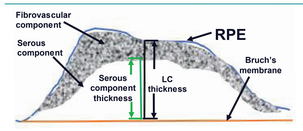


Figure does not reflect all dosing options once a patient's dosing interval is shortened or extended. Stippled boxes = initial treatment phase; X = active injection; o = sham injections.
BCVA, best-corrected visual acuity; CRT, central retinal thickness; D, day; OCT, optical coherence tomography; Wk, week.

Post Hoc Analysis

- PED outcomes following treatment with aflibercept 8 mg or 2 mg were evaluated through Week 96 of PULSAR (**Figure 2**)
  - Presence and location of serous component of PED and neovascular lesion complex (LC) through Week 96
  - Thickness of serous component of PED and neovascular LC involving the foveal center
- Analysis-specific definitions are described in **Figure 2**

Figure 2. PED Definitions



RPE, retinal pigment epithelium.

- PED was characterized by the separation of the RPE from the Bruch's membrane
- Neovascular LC comprised of the serous (sub-RPE fluid) and fibrovascular component of the PED

RESULTS

- Approximately 50% of patients had a PED with a serous component and the majority of patients (90%) had a neovascular LC involving the foveal center at baseline (**Table 1**)

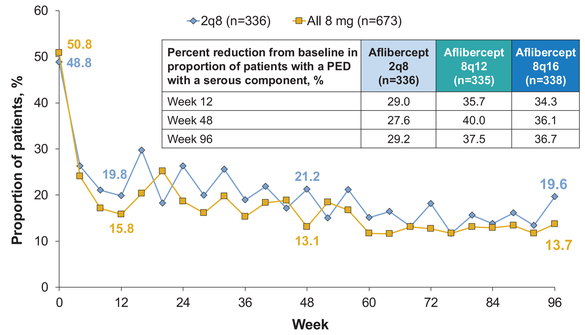
Table 1. Presence and Location of PED at Baseline[a]

	Aflibercept 2q8 (n=336)	Aflibercept 8q12 (n=335)	Aflibercept 8q16 (n=338)	All 8 mg (n=673)
Presence of a PED with a serous component, n (%)	164 (48.8)	171 (51.0)	171 (50.6)	342 (50.8)
Serous component of PED involving the foveal center, n (%)	29 (8.6)	42 (12.5)	36 (10.7)	78 (11.6)
Neovascular LC involving the foveal center, n (%)	299 (89.8)	299 (90.1)	296 (88.6)	595 (89.3)

[a]Assessed using spectral-domain-OCT at Wisconsin Reading Center.

- Fewer patients treated with aflibercept 8 mg versus 2 mg had PED with a serous component through Week 96 (**Figure 3**)

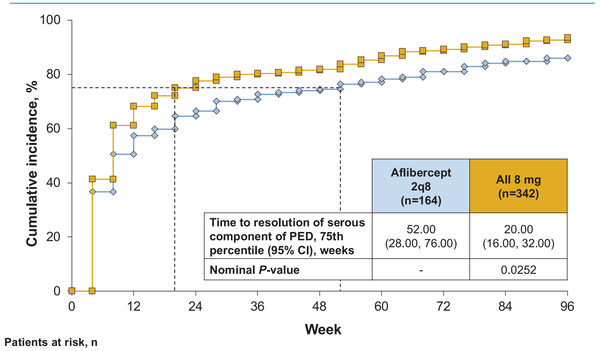
Figure 3. Proportion of Patients With a Serous Component of PED Through Week 96



Percent reduction from baseline in proportion of patients with a PED with a serous component, %	Aflibercept 2q8 (n=336)	Aflibercept 8q12 (n=335)	Aflibercept 8q16 (n=338)
Week 12	29.0	35.7	34.3
Week 48	27.6	40.0	36.1
Week 96	29.2	37.5	36.7

- Time to resolution of PED with a serous component was shorter in patients treated with aflibercept 8 mg versus 2 mg (**Figure 4**)

Figure 4. Time to Resolution of Serous Component of PED Through Week 96



	Aflibercept 2q8 (n=164)	All 8 mg (n=342)
Time to resolution of serous component of PED, 75th percentile (95% CI), weeks	52.00 (28.00, 76.00)	20.00 (16.00, 32.00)
Nominal *P*-value	-	0.0252

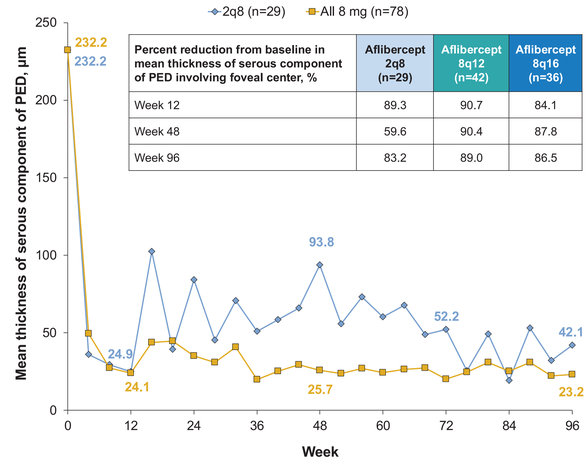
Patients at risk, n

2q8	164	81	58	47	41	36	30	25	22
All 8 mg	342	132	81	65	60	48	37	30	24

Patients with a serous component of PED at baseline.

- Marked reductions in mean thickness of the serous component of PED involving the foveal center were achieved with aflibercept 8 mg and 2 mg at Week 12 and sustained through Week 96 (**Figure 5**)

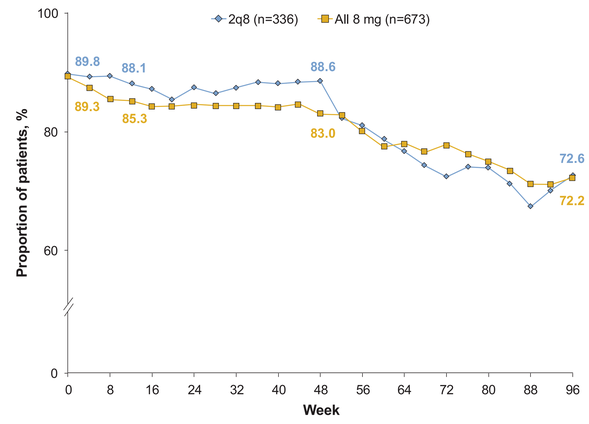
Figure 5. Mean Thickness of Serous Component of PED Involving the Foveal Center Through Week 96



Percent reduction from baseline in mean thickness of serous component of PED involving foveal center, %	Aflibercept 2q8 (n=29)	Aflibercept 8q12 (n=42)	Aflibercept 8q16 (n=36)
Week 12	89.3	90.7	84.1
Week 48	59.6	90.4	87.8
Week 96	83.2	89.0	86.5

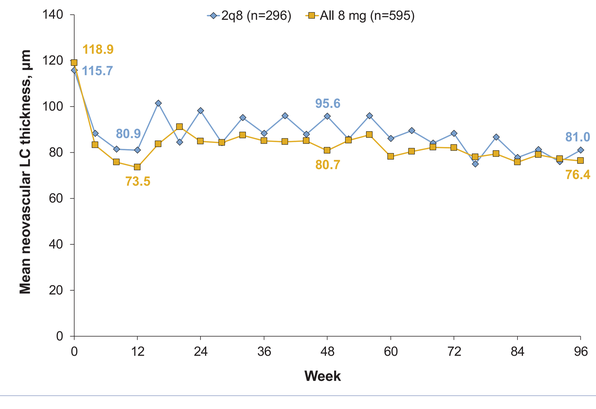
- The proportion of patients with neovascular LC involving the foveal center decreased with aflibercept 8 mg versus 2 mg through Week 96 (**Figure 6**)

Figure 6. Proportion of Patients With Neovascular LC Involving the Foveal Center Through Week 96



- Reductions in mean thickness of neovascular LC involving the foveal center achieved with aflibercept 8 mg and 2 mg at Week 12 were sustained through Week 48 and Week 96 (**Figure 7**)

Figure 7. Mean Thickness of Neovascular LC Involving the Foveal Center Through Week 96



CONCLUSIONS

- Fewer patients treated with aflibercept 8 mg versus 2 mg had a serous component of PED through Week 96
  - Marked reductions in thickness of serous component of PED involving the foveal center were achieved with aflibercept 8 mg and 2 mg
- A comparable decrease in proportion of patients with neovascular LC involving the foveal center and moderate reductions in thickness were observed from baseline to Week 96 with aflibercept 8 mg and 2 mg
- Overall, improvements in PED outcomes occurred early at Week 12 and were sustained through Week 96 with extended dosing intervals with aflibercept 8 mg

REFERENCES

1. Lanzetta P et al. *Lancet*. 2024;403:1141-1152.
2. Korobelnik J-F et al. *Ophthalmology*. 2026;133:39-50.

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