Week 48 Outcomes in Aflibercept 8 mg- and 2 mg-Treated Patients by Prior DME Treatment Status: a Subgroup Analysis of the Phase 2/3 PHOTON Trial

Dennis Marcus MD,[1,2] on behalf of the PHOTON study investigators

[1]Southeast Retina Center, Augusta, Georgia;

[2]Eye Health America, Greenville, South Carolina

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METHODS

Objective: This subgroup analysis of the PHOTON trial evaluated visual and anatomic outcomes of intravitreal aflibercept 8 mg and 2 mg at Week 48 by prior DME treatment status[a]

Trial Design

Multi-center, randomized, double-masked study in patients with DME[b] randomized 1 (2q8) : 2 (8q12) : 1 (8q16)

2q8
Aflibercept 2 mg every 8 weeks after 5 initial monthly injections
n=167

8q12
Aflibercept 8 mg every 12 weeks after 3 initial monthly injections
n=328

8q16
Aflibercept 8 mg every 16 weeks after 3 initial monthly injections
n=163

Primary endpoint at Week 48
Mean change in BCVA (non-inferiority)
Key secondary endpoint
Proportion of patients with ≥2-step improvement in DRSS at Week 48

End of study at Week 96 with optional 1-year extension through Week 156

[b]Treatment naive and previously treated.

Dose Schedule

Primary Endpoint

	Day 1	Week 4	Week 8	Week 12	Week 16	Week 20	Week 24	Week 28	Week 32	Week 36	Week 40	Week 44	Week 48
2q8	X	X	X	X	X	o	X	o	X	o	X	o	X
8q12	X	X	X	o	o	X	o	o	X	o	o	X	o
8q16	X	X	X	o	o	o	X	o	o	o	X	o	o

DRM Criteria for Shortening Dosing Interval[c]

- **>10-letter loss in BCVA due to persistent or worsening DME**

AND

- **>50-micron increase in CRT**

- **Intervals were only shortened**
- **There were multiple opportunities to shorten**
- **Minimum interval for all patients was Q8**

Stippled boxes=initial treatment phase; X=active injection; o=sham injection. Note, the table does not reflect all dosing options once treatment intervals are shortened.
[c]All assessments compared to Week 12.

[a]Prior DME treatment status was categorized as yes/no in the EDC. Previous treatments for DME were laser, intravitreal anti-VEGF therapy, and corticosteroids.
2q8, 2 mg every 8 weeks; 8q12, 8 mg every 12 weeks; 8q16, 8 mg every 16 weeks; BCVA, best-corrected visual acuity; CRT, central retinal thickness; DME, diabetic macular edema; DRM, dose regimen modification; DRSS, Diabetic Retinopathy Severity Scale; EDC, electronic data capture record; Q8, every 8 weeks; VEGF, vascular endothelial growth factor.

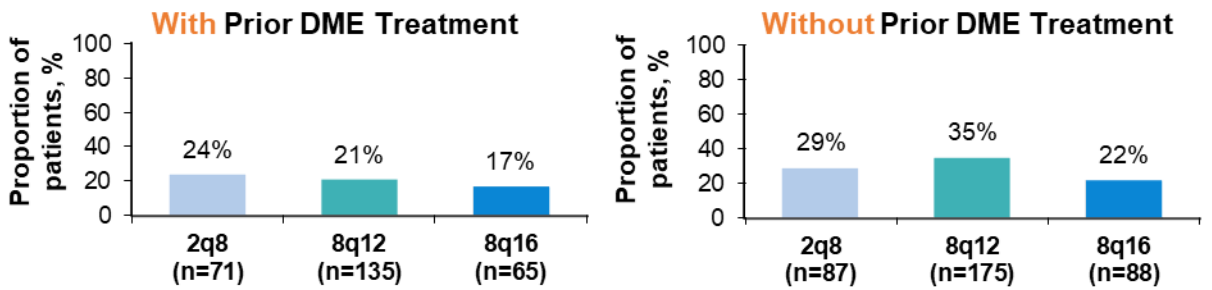
RESULTS

Baseline Ocular Characteristics

	With Prior DME Treatment			Without Prior DME Treatment		
	2q8 (n=74)	8q12 (n=143)	8q16 (n=71)	2q8 (n=93)	8q12 (n=185)	8q16 (n=92)
BCVA, ETDRS letters, mean (SD)	62.1 (10.9)	62.3 (10.5)	58.6 (11.9)	61.0 (11.5)	64.7 (9.7)	63.7 (11.2)
Snellen equivalent	20/63	20/63	20/63	20/63	20/50	20/50
CRT, µm, mean (SD)	472.7 (162.3)	455.7 (124.0)	460.6 (109.3)	444.9 (127.1)	444.1 (130.1)	460.1 (124.7)
DRSS better or equal to level 43, %	70.3	66.4	67.6	57.0	55.1	64.1

Baseline ocular characteristics were generally comparable except for baseline BCVA in 8q16 group

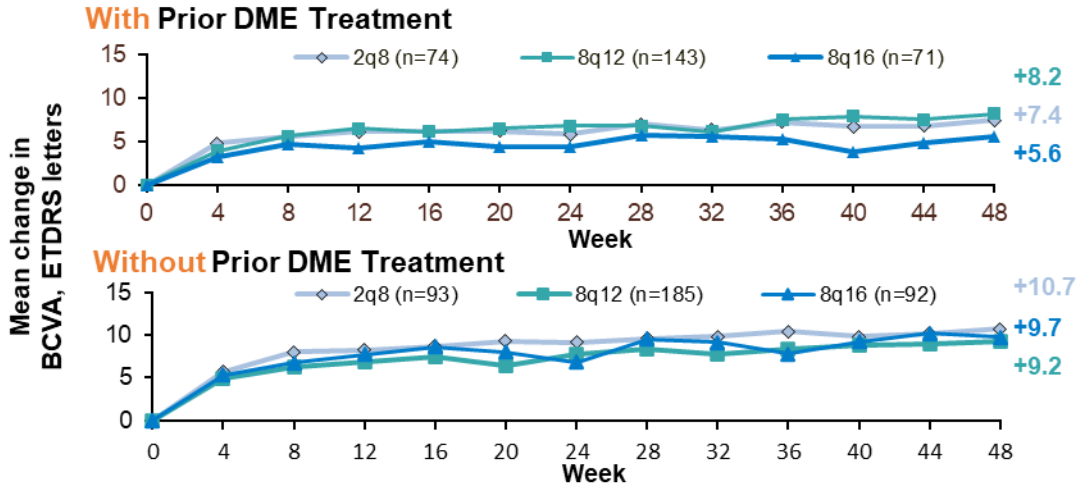
≥2-step DRSS Improvement From Baseline at Week 48



A higher proportion of patients without versus with prior DME treatment achieved ≥2-step DRSS improvement

Full analysis set, last observation carried forward.

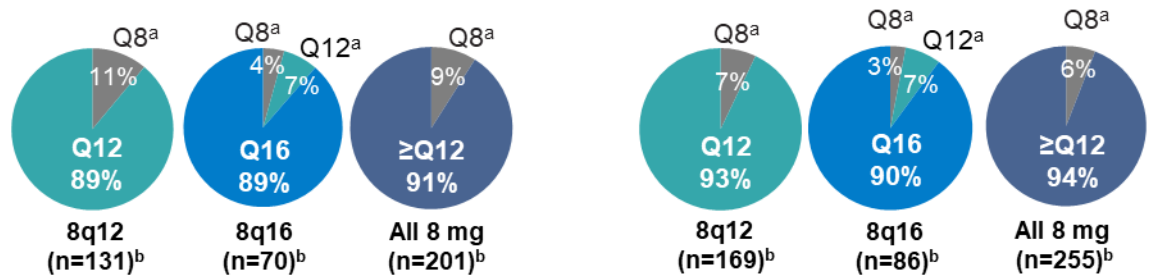
Mean Change in BCVA Through Week 48



BCVA gains at Week 48 were generally greater in patients without than with prior DME treatment

Full analysis set, observed cases.

Proportion of Patients Who Maintained Their Randomized Dosing Intervals Through Week 48



Comparable proportion of patients maintained their randomized dosing intervals

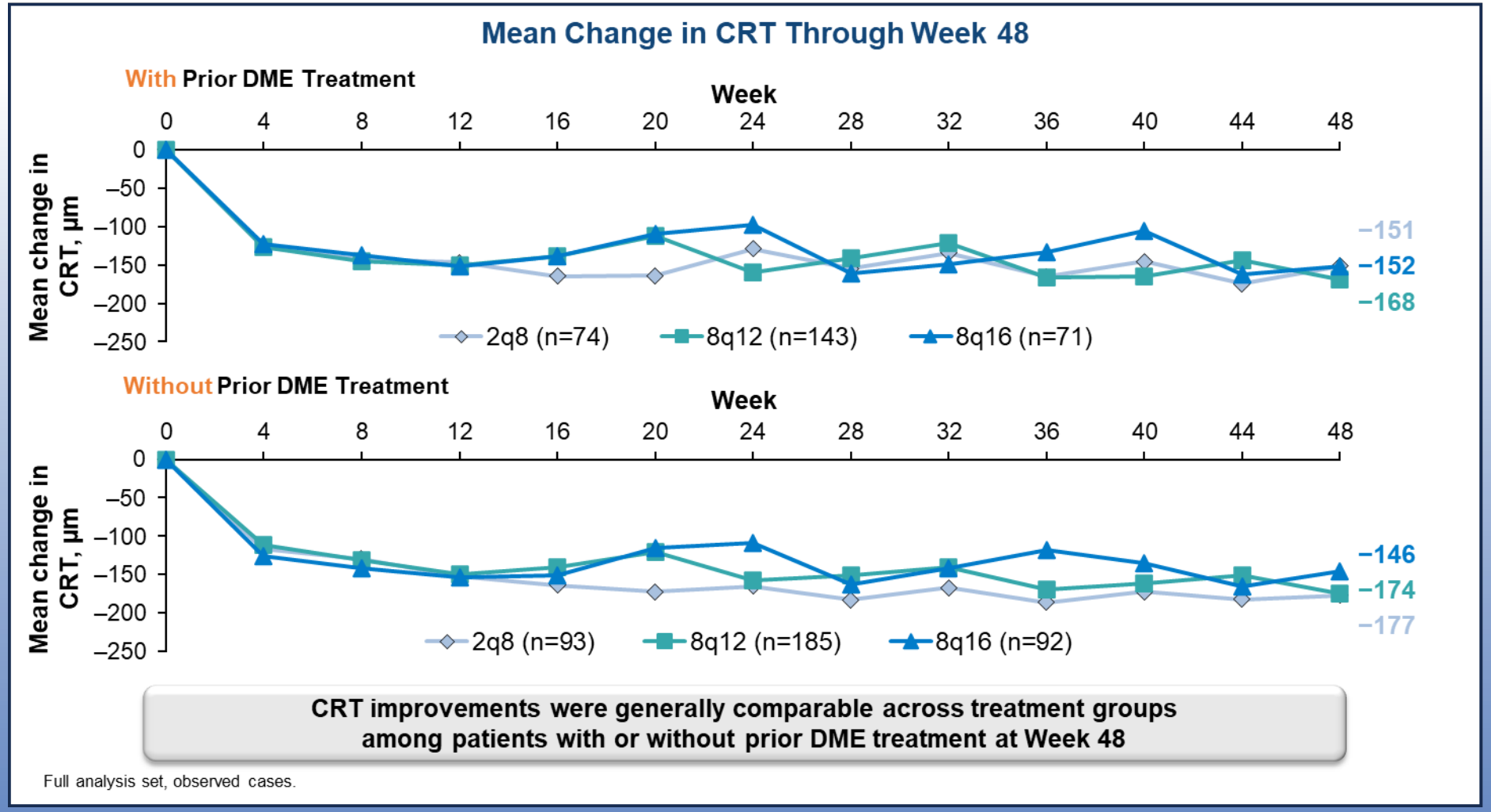
Values may not add up to 100% due to rounding. [a]Patients whose dosing intervals were shortened based on DRM assessments at some point through Week 48. [b]Patients completing Week 48.

ETDRS, Early Treatment Diabetic Retinopathy Study; Q12, every 12 weeks; Q16, every 16 weeks; SD, standard deviation

DISCUSSION

- Outcomes were generally comparable across treatment groups within subgroups of patients with or without prior DME treatment
- BCVA gains and proportions of patients with ≥2-step improvement in DRSS score at Week 48 trended numerically higher across all treatment groups in patients without versus with prior DME treatment
- Similar proportions of 8q12 and 8q16 patients maintained ≥12-week dosing through Week 48 irrespective of prior DME treatment status

ADDITIONAL BACK-UP DATA



Full analysis set, observed cases.