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

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Disclosures

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DME

- **MM**: Consultant fee from Allergan, Abbvie, Apellis, Bayer, Novartis, Gensight, Lumithera, Zeiss, Roche, RetinAI, Dandelion, Kubota, Eyepoint, Iveric Bio, Ocuterra
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PHOTON: Multi-center, Randomized, Double-masked Study[1]

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DME

Patients with DME[a,b]: Randomized 1 (2q8) : 2 (8q12) : 1 (8q16)

2q8
Aflibercept 2q8
after 5 initial monthly injections
n=167

8q12
Aflibercept 8q12
after 3 initial monthly injections
n=328

8q16
Aflibercept 8q16
after 3 initial monthly injections
n=163

	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

Primary endpoint at W48: Mean change in BCVA (non-inferiority)
Key secondary endpoint at W48: Proportion of patients with ≥2-step improvement in DRSS

DRM Criteria for Shortening Dosing Interval[c]

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

AND

- >50-micron increase in CRT

DRM in Year 1

- Intervals can only be **shortened**
- **Multiple opportunities** to shorten interval
- Minimum interval for all patients was **Q8**

Week 16 and 20: Patients on 8q12 and 8q16 meeting DRM criteria shortened to Q8

Week 24: Patients on 8q16 meeting DRM criteria shortened to Q12

Week 32 and 44 for 8q12 and Week 40 for 8q16: Treatment interval shortened by 4 weeks for patients meeting DRM criteria

Note: Figure does not reflect all dosing options once a patient's dosing interval is shortened. Stippled boxes = initial treatment phase; X = active injection; o = sham injections.
[a]Treatment naïve and previously treated. [b]End of study time point for PHOTON is Week 96, with optional 1-year extension period. [c]All assessments compared to Week 12.
BCVA, best-corrected visual acuity; **CRT**, central subfield retinal thickness; **DME**, diabetic macular edema; **DRM**, dose regimen modification; **DRSS**, Diabetic Retinopathy Severity Scale; **Q8**, every 8 weeks; **Q12**, every 12 weeks. 1. Brown DM. *Lancet*. 2024:S0140–6736(23)02577–1. Online ahead of print.

Baseline Demographics and Ocular Characteristics

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DME

- Approximately 44% of patients in PHOTON received prior treatment for DME[a]
- This subgroup analysis evaluated visual and anatomic outcomes in patients by prior DME treatment status

	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)
Age, years	64.4 (8.9)	62.8 (11.0)	63.0 (8.4)	62.0 (10.4)	61.6 (11.3)	60.9 (10.3)
Female, %	45.9	39.2	40.8	44.1	33.5	38.0
Duration of diabetes, years	16.7 (10.6)	16.0 (9.4)	16.6 (9.7)	15.3 (9.6)	14.5 (10.3)	15.0 (11.4)
BCVA, ETDRS letters	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, %						
20/32 (>73 to 78 letters)	14.9	16.8	5.6	9.7	18.4	20.7
20/40 or worse (≤73 letters)	85.1	83.2	94.4	90.3	81.1	79.3
CRT, µm	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 categories, %						
DRSS 43 or better	70.3	66.4	67.6	57.0	55.1	64.1
DRSS 47 or worse	25.7	28.0	23.9	36.6	39.5	31.5
Missing/ungradable	4.1	5.6	8.5	6.5	5.4	4.3

Data are mean (SD) unless otherwise indicated.

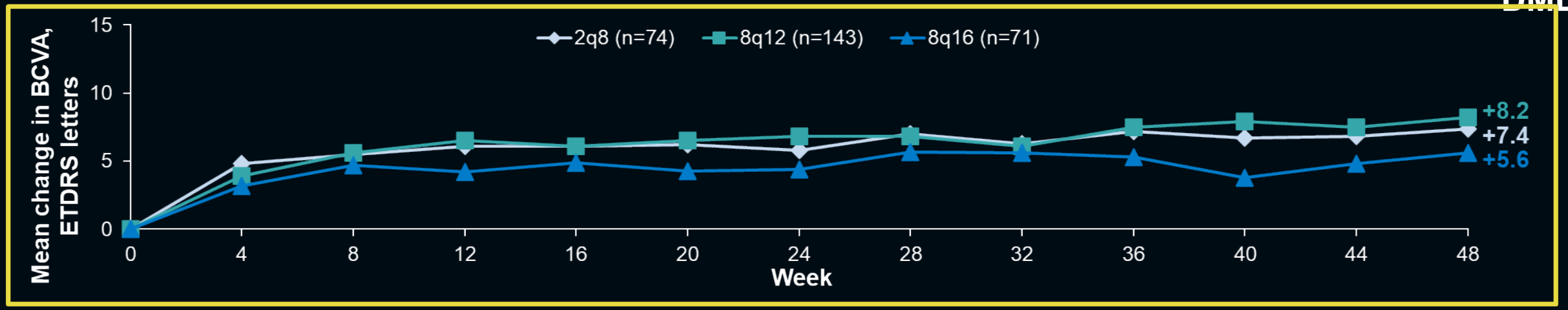
[a]Prior DME treatment status was categorized as yes/no in the electronic data capture record. Previous treatments for DME were laser, intravitreal anti-VEGF therapy, and corticosteroids.

ETDRS, Early Treatment Diabetic Retinopathy Study; **VEGF**, vascular endothelial growth factor.

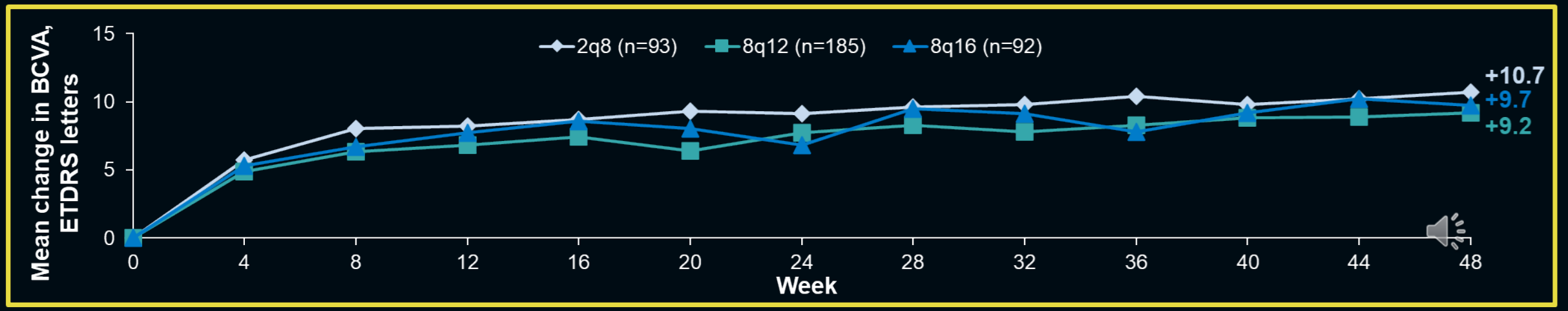
Mean Change in BCVA Through Week 48

DME

With Prior DME Treatment



Without Prior DME Treatment



FAS, observed cases. N values represent the number of patients at baseline.
FAS, full analysis set.

Proportion of Patients With ≥2-step DRSS Improvement From Baseline at Week 48

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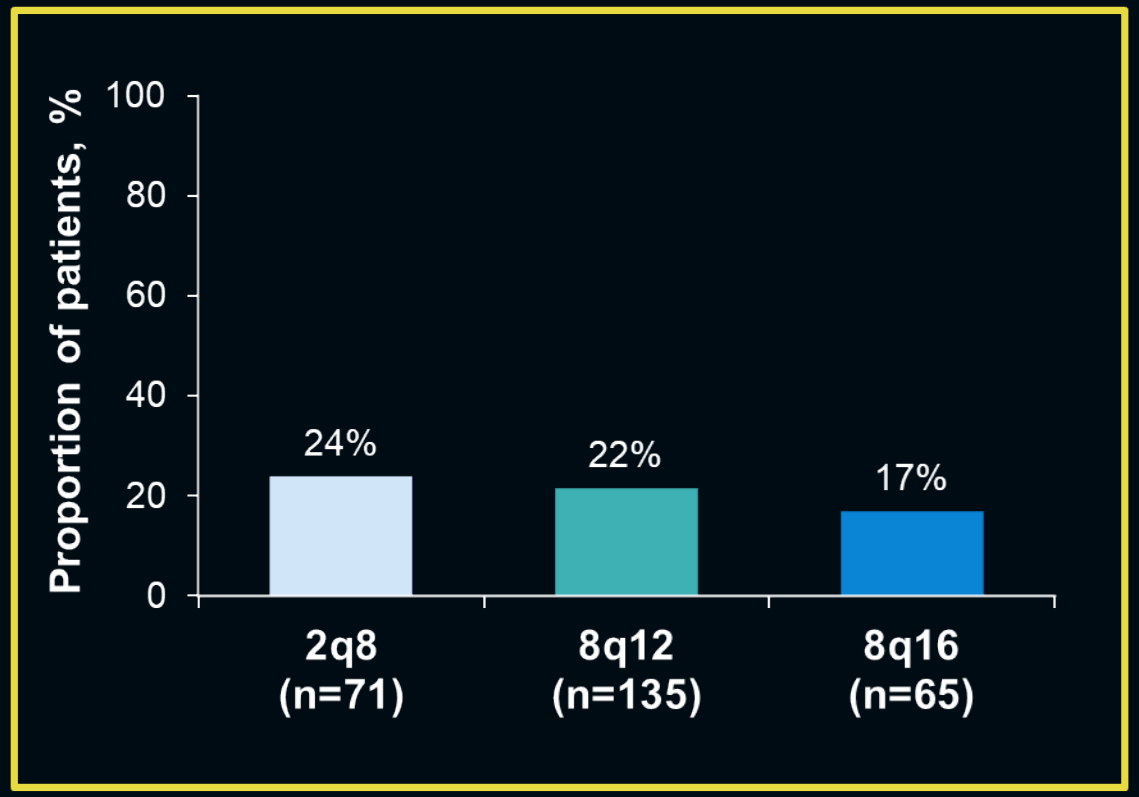
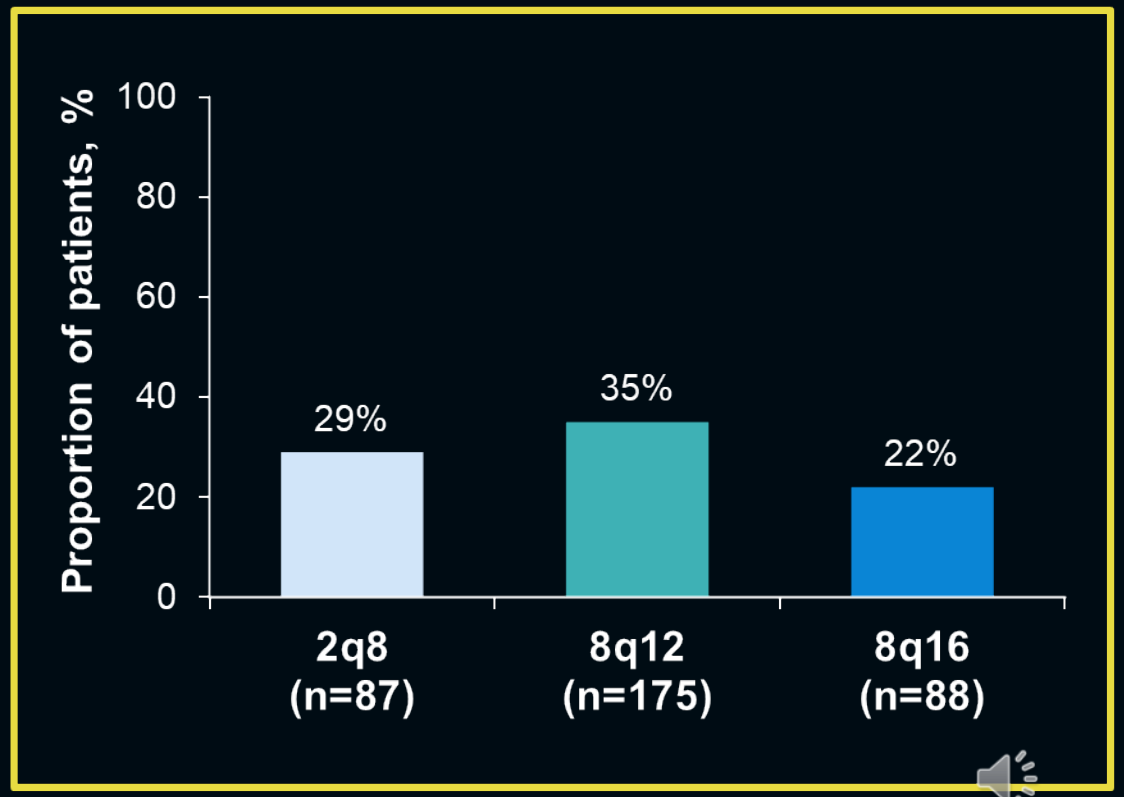
DME

With Prior DME Treatment



Without Prior DME Treatment



FAS, LOCF. Data are for patients with an assessment at Week 48.
LOCF, last observation carried forward.

Proportion of Patients With Baseline DRSS 47 or Worse and ≥2-step DRSS Improvement From Baseline at Week 48

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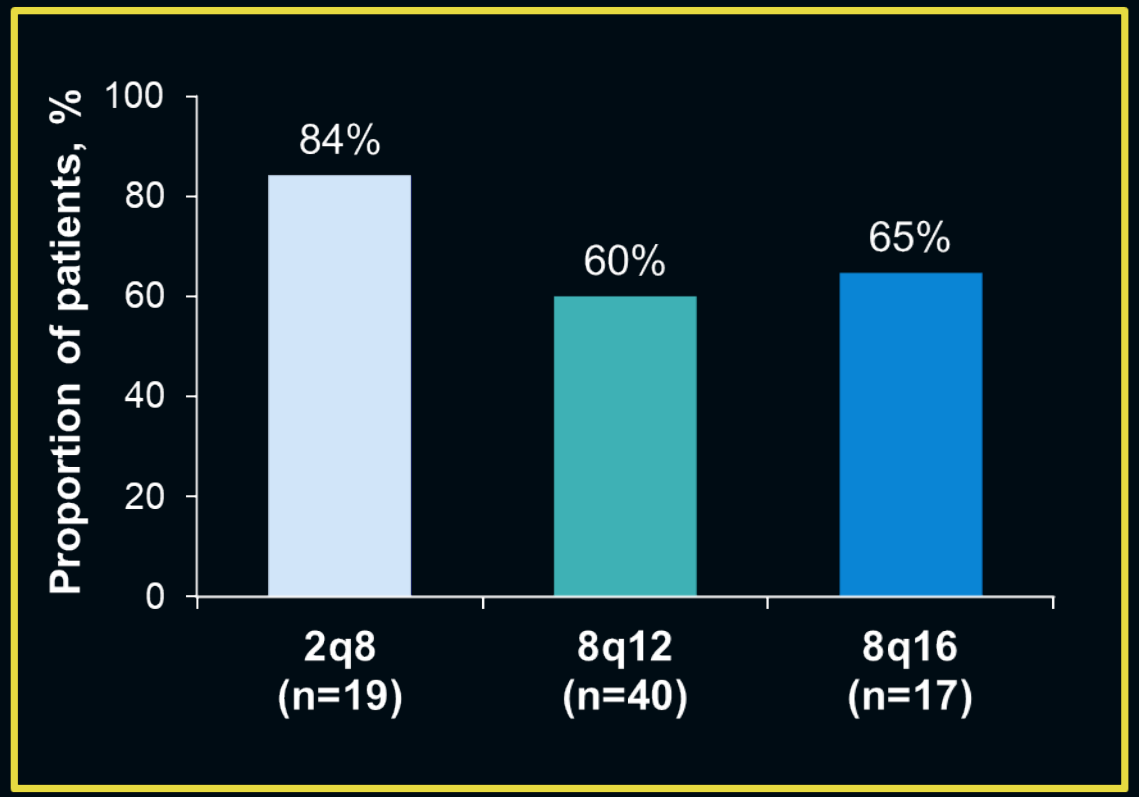
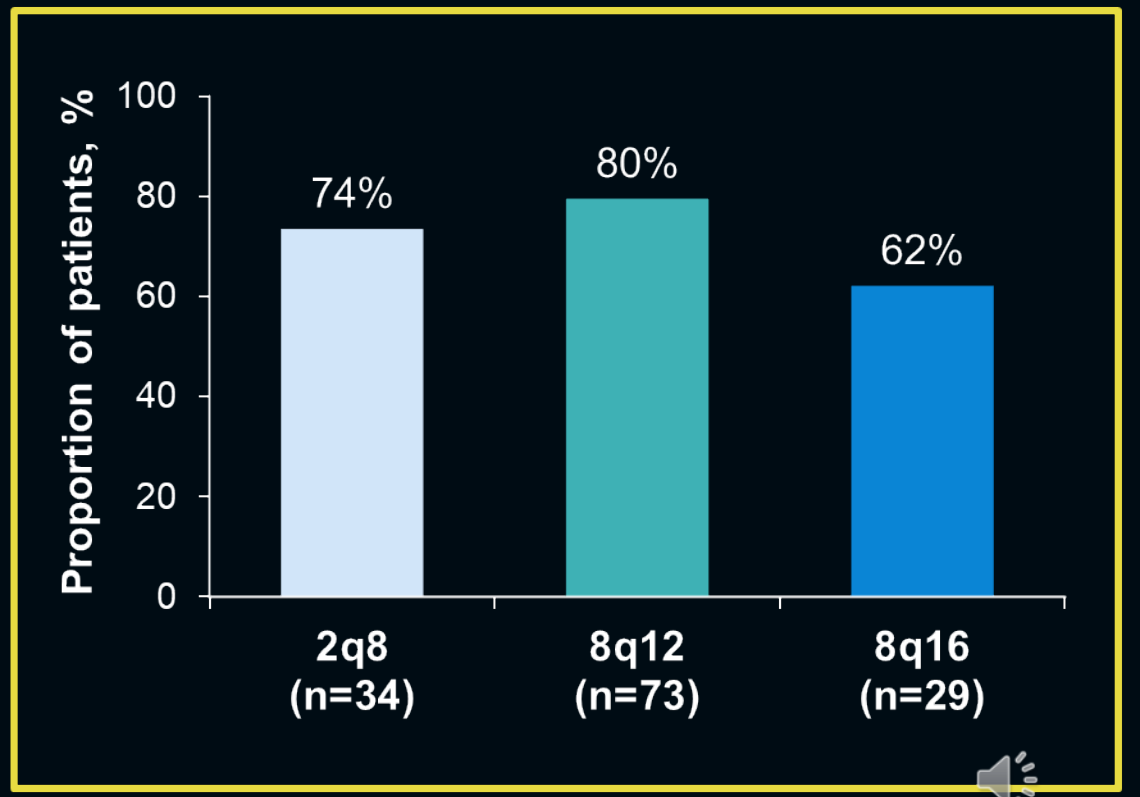
DME

With Prior DME Treatment



Without Prior DME Treatment

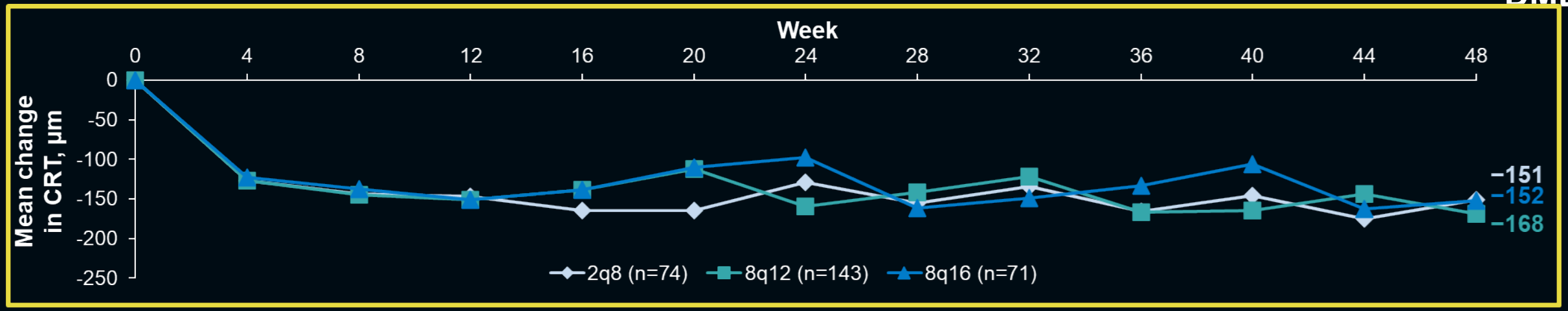


FAS, LOCF. Data are for patients with an assessment at Week 48.

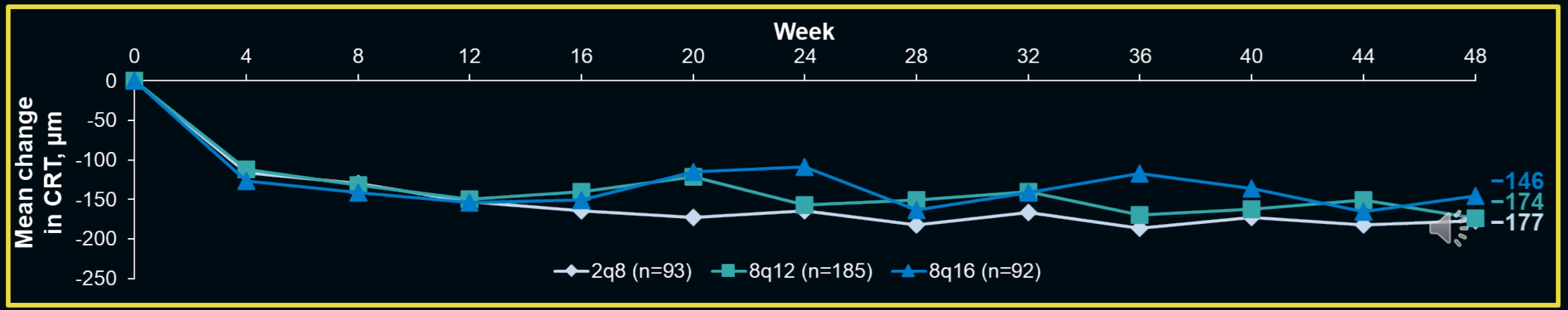
Mean Change in CRT Through Week 48

DME

With Prior DME Treatment



Without Prior DME Treatment



FAS, observed cases. N values represent number of patients at baseline.

Proportion of Patients Who Maintained Their Randomized Intervals Through Week 48

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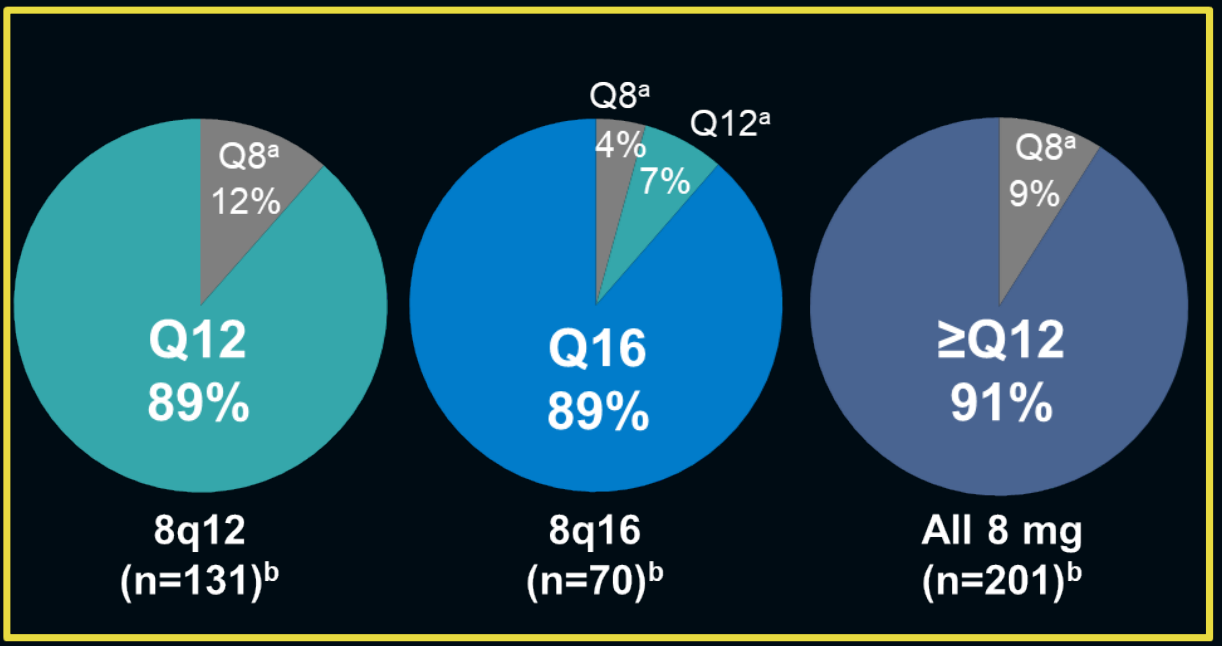
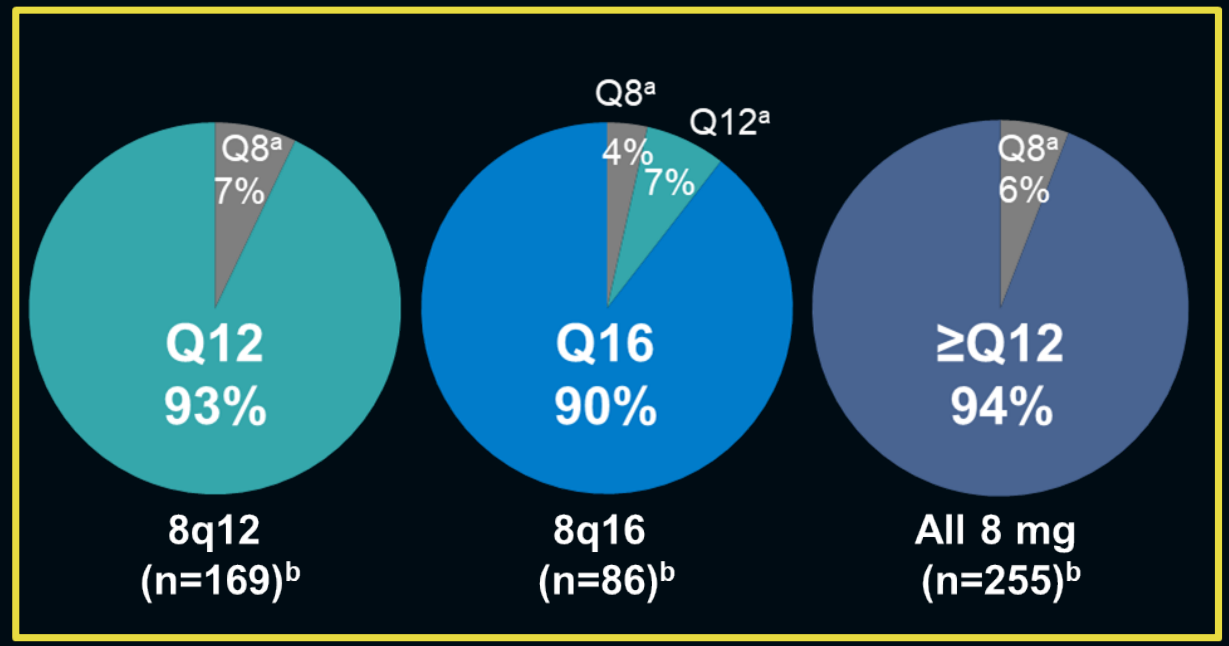
DME

With Prior DME Treatment



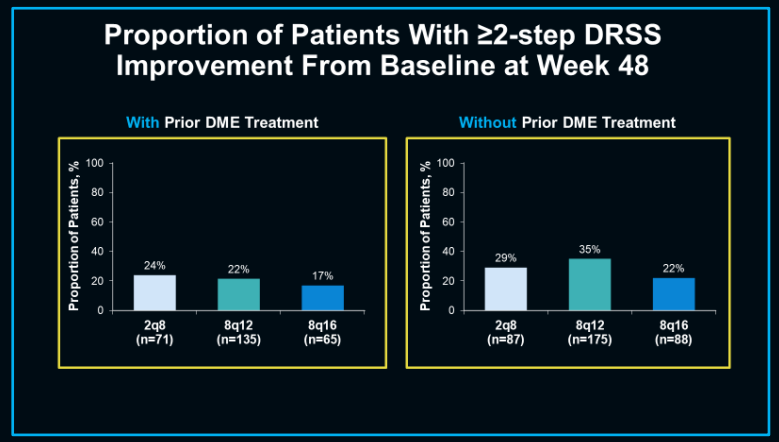
Without Prior DME Treatment

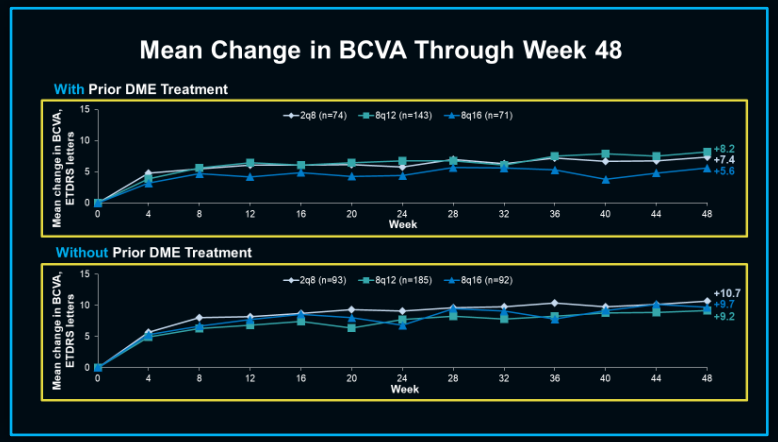


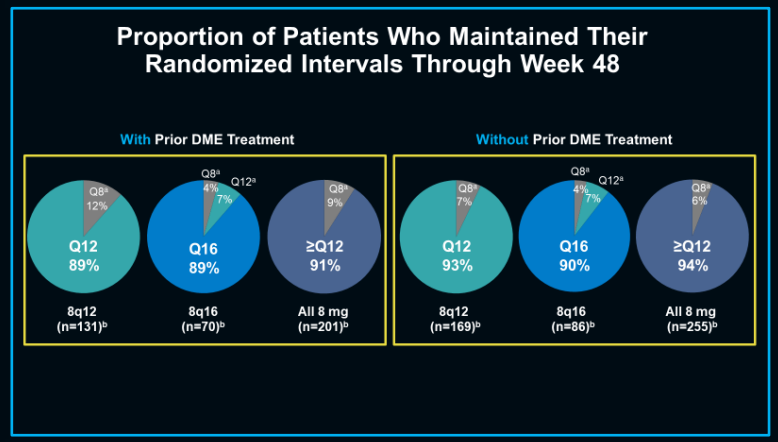
Values may not add up to 100% due to rounding. Data are for patients with an assessment at Week 48.
[a]Patients whose dosing intervals were shortened based on DRM assessments at some point through Week 48.
[b]Patients completing Week 48.

Conclusions

DME







- 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 lower across all treatment groups in patients with versus without prior DME treatment
- Similar proportions of 8q12 and 8q16 patients maintained ≥12-week dosing through Week 48 irrespective of prior DME treatment status