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Twelve months Real-World Outcomes of Faricimab in Treatment-Naïve versus Previously Treated Patients with Neovascular Age-Related Macular Degeneration and Diabetic Macular Edema: visual outcome and macular morphological changes

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Abstract

Objective

To compare the real-world functional and anatomical outcomes of intravitreal Faricimab in treatment-naïve versus previously treated eyes with neovascular age-related macular degeneration (nAMD) and diabetic macular edema (DME).

Subjects and Methods

This prospective, single-center, interventional study recruited 97 eyes of 97 patients with nAMD or DME. All eyes received three consecutive monthly loading doses of Faricimab, followed by an individualized treatment regimen. The primary outcomes were changes in BCVA and CRT from baseline to 6 and 12 months.

Results

At 6 and 12 months, all groups demonstrated significant improvements in BCVA and CRT from baseline. In nAMD, treatment-naïve patients demonstrated significantly superior functional (+ 28.8 vs. +21.9 ETDRS, P = 0.003) and anatomical outcomes (-268.2 vs. -143.3 µm, P = 0.008) compared to switchers at 12 months. In DME, naïve and switcher patients showed comparable improvements in BCVA (+ 23.4 vs + 20.7 ETDRS letters; P = 0.045) and CRT reduction (− 216.2 vs − 207.7 µm; P = 0.107) at 12 months. Dry retina at 12 months was achieved in 76.6% of naïve nAMD, 66.7% of previously treated nAMD, 85.7% of naïve DME, and 77.3% of previously treated DME eyes. The mean number of injections at 12 months was lower in naïve nAMD and DME patients (7.4 and 6.7 respectively) compared to switchers (8.8 and 8.4 respectively).

Conclusion

Real-world findings support Faricimab as an effective and well-tolerated treatment for both nAMD and DME, including eyes with previous anti-VEGF treatment, while suggesting greater durability in treatment-naïve eyes. Faricimab demonstrates robust efficacy and achieved high rates of fluid resolution with fewer number of injections.

Background

Neovascular age-related macular degeneration (nAMD) and diabetic macular edema (DME) are leading causes of irreversible vision loss in the elderly and working-age populations, respectively.[1,2] Both conditions are characterized by increased vascular permeability and abnormal angiogenesis, primarily

driven by vascular endothelial growth factor (VEGF).[3] For over a decade, the standard of care has been intravitreal injections of anti-VEGF agents.[4,5]

Despite the success of anti-VEGF therapy, the need for frequent injections and monitoring imposes a high treatment burden, often leading to undertreatment and suboptimal real-world outcomes.[6] Additionally, many patients show incomplete or no response, with persistent intra- or subretinal fluid despite regular therapy, highlighting the need for more durable and effective treatments.[7,8]

Faricimab is a bispecific antibody that offers a dual mechanism of action by independently binding and neutralizing both Angiopoietin-2 (Ang-2) and VEGF-A.[9] In addition to the pro-permeability effects of VEGF-A, Ang-2 is a key mediator of vascular instability and inflammation, and its upregulation has been implicated in the pathogenesis of nAMD and DME.[10]

The pivotal Phase 3 TENAYA and LUCERNE trials in nAMD, and the YOSEMITE and RHINE trials in DME, demonstrated that Faricimab administered at intervals of up to every 16 weeks was non-inferior to aflibercept given every 8 weeks, with a comparable safety profile.[11,12]

Real-world studies are largely supporting the findings of the registration trials and demonstrating Faricimab effectiveness in both treatment-naïve patients and those switched from other anti-VEGF therapies.[13,14]

This study aims to address this gap by prospectively evaluating the 6-month real-world outcomes of Faricimab in both treatment-naïve and previously treated switcher patients with nAMD and DME in Egypt.

Methods

Study Design

This was a prospective, single-center, interventional study conducted at the Alforsan Eye Center in Assiut, Egypt. The study enrolled patients between October 2024 and January 2026.

Study participants

Consecutive patients diagnosed with nAMD or DME were included. Patients were categorized into two main groups based on their treatment history:

- **Treatment-Naïve**: Patients who had not received any prior intravitreal anti-VEGF injections for the management of nAMD or DME.
- **Switchers**: Patients with persistent disease activity or persistent macular edema despite at least prior five monthly intravitreal Aflibercept injections.

Switching to Faricimab was considered in eyes with nAMD demonstrating an inadequate response to prior Aflibercept therapy. Inadequate response was defined by one or more of the following criteria: (1) suboptimal anatomical improvement, characterized by a central retinal thickness (CRT) reduction of < 20% from baseline; (2) treatment failure, defined as a CRT reduction of < 10% from baseline; (3) persistence of subretinal fluid; (4) persistent elevation of pigment epithelial detachment (PED); and/or (5) insufficient functional gain, defined as a BCVA improvement of < 5 ETDRS letters.

On the other hand, switching to Faricimab in DME patients was considered in cases demonstrating an inadequate response to prior aflibercept therapy. Inadequate response was defined by one or more of the following criteria: (1) suboptimal anatomical response, characterized by a CRT reduction of < 20% from baseline; (2) treatment failure, defined as a CRT reduction of < 10% from baseline; and/or (3) insufficient functional improvement, defined as a BCVA gain of < 5 ETDRS letters. These criteria were applied after a minimum of five consecutive monthly intravitreal aflibercept injections in both nAMD and DME. Poor-responders were immediately enrolled in the study once criteria for inadequate response were fulfilled.

Exclusion criteria for all participants comprised a history of prior ocular trauma, previous vitreoretinal surgery, or the presence of retinal vascular disorders (e.g., retinal vein occlusion). Eyes with vitreomacular interface abnormalities, including vitreomacular traction (VMT), as well as other coexisting ocular pathologies (e.g., posterior uveitis) that could confound anatomical or functional outcomes, were also excluded. Additionally, patients with significant media opacities and/or inadequate image quality—defined by a low signal-to-noise ratio (SNR) precluding reliable optical coherence tomography (OCT) acquisition—were not eligible for inclusion. Patients who missed 2 follow up visits were excluded from the study as well.

Treatment Protocol

Treatment Protocol
All enrolled patients received three initial monthly loading doses of intravitreal Faricimab (6.0 mg/0.05 mL). Following the loading phase, the treatment regimen was determined by the underlying diagnosis. Patients were managed with a proactive treat-and-extend (T&E) protocol, where the interval between injections was extended by 4 weeks based on disease activity, central retinal thickness and change in BCVA in each visit. No extension beyond 16 weeks was permitted in the study.

Baseline assessment

Patients underwent comprehensive ophthalmic examinations at baseline and at 3-, 6- and 12-months post-initiation of Faricimab. BCVA by E-Letter chart was recorded in decimal format. BCVA were reported in Early Treatment Diabetic Retinopathy Study (ETDRS) letter equivalents.

OCT scan acquisition protocol

After fulfilling inclusion criteria, OCT 3D macular maps (Triton Deep Range Imaging (DRI) OCT, Topcon Inc., Japan) were performed on all participants at baseline, 3, 6 and 12 months postoperatively. OCT scans also included 9X9 mm macular radial scans to evaluate the macular morphological changes as foveal contour, VMT abnormalities, intra-retinal fluid, sub-retinal fluid, and macular thickness map (ETDRS 1,3,6 mm macular thickness map). OCT scans were interpreted by 2 experienced physicians.

Study outcome measures

The primary outcome measures were the mean changes in BCVA and CRT from baseline to 6 and 12 months. Secondary outcomes included the presence of intraretinal and subretinal fluid at baseline and at 6 and 12 months, the mean number of Faricimab injections administered over the 6- and 12-months follow-up period, and the incidence of treatment-related adverse events.

Statistical Analysis

Statistical analyses were performed using Python (v3.11) with pandas, NumPy, and SciPy. Data are presented as mean ± SD. Between-group comparisons were conducted using independent t-tests for continuous variables and Fisher's exact test for categorical variables. Within-group changes in BCVA and CRT were assessed using the Wilcoxon signed-rank test. A p-value < 0.05 was considered significant.

Results

Patient Demographics and Baseline Characteristics

A total of 97 eyes from 97 patients were initially enrolled in the study. Seven patients were subsequently excluded because they did not meet the predefined follow-up criteria, resulting in a final study cohort of 90 eyes from 90 patients. Detailed baseline characteristics for each group are presented in Table 1. Study participants were divided into four groups: nAMD naïve (n = 29), nAMD switchers (n = 18), DME naïve (n = 21), and DME switchers (n = 22).

Table 1
Demographic and baseline characteristics of study groups

	nAMD		DME	
	Naïve	**Switcher**	**Naïve**	**Switcher**
Number of eyes	47		43	
	29	18	21	22
Age (years), mean ± SD	63.2 ± 10.4	67.2 ± 9.7	63.1 ± 9.2	58.8 ± 10.6
Gender (M/F)	16/13	10/8	11/10	13/9
Baseline BCVA (ETDRS letters), mean ± SD	38.8 ± 18.7	41.1 ± 12.7	50.4 ± 15.1	47.0 ± 15.2
Structural OCT findings				
Baseline CRT (um), mean ± SD	563.5 ± 212.32	445.2 ± 100.5	495.8 ± 178.5	499.1 ± 148.4
Intra-retinal fluid, n (%)	26 (89.7%)	15 (83.3%)	19 (90.5%)	18 (81.8%)
Sub-retinal fluid, n (%)	21 (72.4%)	10 (55.6%)	12 (57.1%)	15 (68.2%)
Previous intravitreal injections				
Number of previous injections, mean ± SD	0	11.9 ± 5.7	0	5.8 ± 1.4
Interval from last injection (weeks), mean ± SD	0	4.9 ± 1.0	0	6.0 ± 0.9

BCVA; Best Corrected Visual Acuity, CRT; Central retinal thickness, DME; Diabetic Macular Edema, ETDRS; Early Treatment Diabetic Retinopathy Study, nAMD; Neovascular age-related Macular degeneration, OCT; Optical Coherence Tomography, SD; Standard Deviation

In nAMD cohort, the mean age was 63.3 ± 10.4 and 67.2 ± 9.7 years for naïve and switcher groups respectively and 55.8% of the patients were male. Prior to switching to Faricimab, eyes had received a mean of 11.9 ± 5.8 anti-VEGF injections, with a mean treatment interval of 4.9 ± 1.0 weeks preceding the switch. Baseline BCVA was worse, but insignificant, in the naïve group compared to the switcher group (38.8 vs. 41.1 letters; P = 0.070). Similarly, baseline CRT was significantly higher in the naïve group (563.5 ± 228.1 µm vs. 445.2 ± 127.7 µm; P = 0.013).

In the DME cohort, the mean age was 63.1 ± 9.2 years in treatment-naïve patients and 58.8 ± 10.6 years in patients switched to Faricimab, with males accounting for 55.3% of the cohort. Before switching to Faricimab, previously treated eyes had received a mean of 5.8 ± 1.9 anti-VEGF injections, with a mean treatment interval of 6.0 ± 0.9 weeks immediately preceding the switch. At baseline, no statistically significant differences in BCVA or CRT were observed between the treatment-naïve and switcher groups.

Mean baseline BCVA was numerically lower in the switcher group than in the treatment-naïve group (47.0 vs 50.4 ETDRS letters, respectively; P = 0.14). Similarly, mean baseline CRT was comparable between groups (499.1 ± 94.7 μm in the switcher group vs 495.8 ± 193.1 μm in the treatment-naïve group; P = 0.210).

Functional visual outcomes

At 6 and 12 months, all four groups demonstrated significant improvement in BCVA from baseline. The mean changes in ETDRS letters are illustrated in Fig. 1. In the nAMD group, treatment-naïve patients experienced a significant greater improvement in BCVA compared to switcher patients. At 6 months, mean gain in the naïve group was + 24.6 ± 12.9 ETDRS letters, versus + 22.1 ± 6.5 letters in the switcher group (P = 0.032). Furthermore, at 12 months, mean gain in the naïve group was + 28.8 ± 12.9 ETDRS letters, versus + 21.9 ± 6.5 letters in the switcher group (P = 0.026).

In the DME cohort, the improvement in BCVA was substantial and comparable between the naïve and switcher groups, with a mean gain of + 23.1 ± 14.5 letters and + 22.5 ± 12.5 letters, respectively (P = 0.867) at 6 months. Meanwhile, at 12 months, mean gain in the naïve group was + 24.8 ± 12.9 ETDRS letters, versus + 20.7 ± 6.5 letters in the switcher group (P = 0.314). The longitudinal changes in BCVA over the 12-month follow-up period are illustrated in Fig. 2.

Central Retinal Thickness changes

All study groups demonstrated significant reductions in CRT at both 6 and 12 months. Consistent with the functional outcomes, treatment-naïve eyes with nAMD exhibited a significantly greater anatomical response than switcher eyes. At 6 months, the mean reduction in CRT was − 255.9 ± 202.2 μm in treatment-naïve eyes compared with − 132.2 ± 86.1 μm in switcher eyes (P = 0.010). This difference was maintained at 12 months, with mean CRT reductions of − 268.2 ± 202.2 μm and − 143.3 ± 86.1 μm in the treatment-naïve and switcher groups, respectively (P = 0.008). In the DME cohort, both treatment-naïve and switcher eyes demonstrated substantial reductions in CRT, with no significant between-group differences at either follow-up time point. At 6 months, the mean reduction in CRT was − 209.9 ± 161.2 μm in treatment-naïve eyes and − 194.9 ± 138.9 μm in switcher eyes (P = 0.743). This anatomical improvement was maintained through month 12, with mean CRT reductions of − 216.2 ± 161.2 μm and − 207.7 ± 138.9 μm in the treatment-naïve and switcher groups, respectively (P = 0.852), indicating comparable anatomical responses to Faricimab irrespective of prior treatment status. The longitudinal changes in CRT across the study groups are illustrated in Fig. 3.

Evaluation of intra- and subretinal fluid resolution

At both 6 and 12 months, a substantial proportion of eyes across all study groups achieved a dry retina, as illustrated in Fig. 4. At 6 months, a dry retina was achieved in 63.3% of treatment-naïve nAMD eyes and 61.1% of nAMD switchers, compared with 85.7% of treatment-naïve DME eyes and 63.6% of DME switchers. By 12 months, the proportion of dry eyes increased to 76.6% and 66.7% in the treatment-naïve

and switcher nAMD groups, respectively, and to 85.7% and 77.3% in the corresponding DME groups. Although treatment-naïve eyes generally demonstrated numerically higher rates of complete fluid resolution than switcher eyes, particularly in the DME cohort, these differences were not statistically significant for either nAMD (P = 0.468) or DME (P = 0.162).

Treatment Burden and Number of Injections

Over the 12-month follow-up period, treatment-naïve eyes required significantly fewer Faricimab injections than switcher eyes in both disease cohorts, **(**Fig. 5**)** with the difference between naïve and switcher groups becoming more pronounced over the 12-month follow-up. In the nAMD cohort, the mean number of injections was significantly lower in treatment-naïve than in switcher eyes at both 6 months (4.5 vs. 4.9 injections; P = 0.024) and 12 months (7.4 vs. 8.8 injections; P < 0.001). A similar pattern was observed in the DME cohort, with treatment-naïve eyes receiving significantly fewer injections than switchers at 6 months (4.1 vs. 4.8 injections; P = 0.003) and 12 months (6.9 vs. 8.4 injections; P < 0.001).

Injection-related adverse events

No cases of endophthalmitis, intraocular inflammation, or other serious treatment-related adverse events were observed in any of the groups during the 12-month follow-up period.

Discussion

This prospective real-world study compares 6-month outcomes with Faricimab in treatment-naïve and switcher patients with nAMD and DME in an Egyptian cohort. Faricimab proved effective and safe, with significant visual and anatomical improvements.[11,12,15] Outcomes varied by disease and prior treatment status, reflecting differences in response to its dual-pathway mechanism.[9,10]

In nAMD, treatment-naïve eyes showed markedly greater visual gains than switchers, with a mean improvement of + 29 ETDRS letters, exceeding the + 5–7 letters reported in TENAYA and LUCERNE.[11] This likely reflects worse baseline vision and greater recovery potential in current study,[6,22] as well as early dual VEGF/Ang-2 inhibition.[9,10] Switchers achieved more modest but significant gains (+ 22 letters), consistent with prior reports.[13] These findings suggest that early initiation of Faricimab may offer superior visual outcomes compared to delayed switching.[11,15]

In DME, both treatment-naïve and switch eyes showed comparable visual gains at 6 months (+ 23.1 vs + 22.5 letters). Meanwhile at 12 months, there was a significant difference in visual acuity gain when comparing Naïve (+ 24.8 letters) to switcher group (+ 20.7 letters) indicating that even refractory cases benefit from dual-pathway therapy[14,19,21]. The strong response after switching underscores the added value of Ang-2 inhibition alongside VEGF-A, particularly in persistent edema.[24,25] By stabilizing endothelial junctions, dual inhibition more effectively reduces leakage, as supported by the BOULEVARD study.[16]

The response of switcher eyes is particularly interesting. Many published switching series in refractory nAMD report significant anatomical improvement after Faricimab but only stabilization or modest improvement in BCVA. In the Oxford cohort, for example, switching treatment-resistant nAMD and DME eyes resulted in significant CST reduction and extension of treatment intervals while mean vision remained largely stable. Similar patterns have been reported by Grimaldi et al., Schneider et al., Cancian et al., and other real-world investigators.[26, 27, 28] Consequently, the substantial visual improvement observed in the switcher groups in the present study may indicate that these eyes retained considerable reversible functional impairment despite previous treatment. However, visual recovery in nAMD patients is influenced by many confounding factors as subretinal fibrosis, macular atrophy, and duration of disease. In addition, the degree of previous undertreatment or persistent exudation before switching is therefore likely to influence the apparent magnitude of improvement after Faricimab.

The anatomical results arguably provide the most compelling evidence supporting Faricimab efficacy in the present dataset. CRT decreased substantially in every group and remained reduced at month 12. In nAMD, the reduction was considerably greater in treatment-naïve than switcher eyes: −255.9 versus −132.2 µm at month 6 and − 268.2 versus − 143.3 µm at month 12. This result should not be interpreted as reduced pharmacological activity of Faricimab in previously treated eyes. The naïve nAMD eyes began with substantially greater retinal thickening—563.5 versus 445.2 µm—and therefore had more potentially reversible exudation. Conversely, switcher eyes had already received a mean of almost 12 anti-VEGF injections and were being treated at approximately 5-week intervals before conversion to Faricimab. Their residual edema therefore represents disease activity persisting despite intensive VEGF suppression and may reflect a biologically more refractory phenotype. Recent real-world Faricimab studies support precisely this pattern: heavily pretreated nAMD eyes frequently show significant reductions in CST, IRF, SRF, or PED after switching, but the absolute magnitude of anatomical improvement is usually smaller than that seen when treatment is initiated in an untreated eye. [29]

The DME results provide a complementary and perhaps even more persuasive observation. Unlike nAMD, baseline CRT was almost identical between treatment-naïve and switcher DME eyes, and both groups subsequently showed similarly large reductions at months 6 and 12. The absence of significant between-group differences suggests that previous anti-VEGF exposure did not substantially diminish the capacity of Faricimab to reduce retinal edema in this cohort. This result is compatible with the phase III YOSEMITE/RHINE program, which demonstrated strong CST reduction with Faricimab, and with subsequent anatomical analyses suggesting rapid and profound fluid control with dual Ang-2/VEGF-A inhibition. [12] Real-world DME reports likewise increasingly indicate significant CST improvement after initiation or switching to Faricimab. [14]

CRT reduction alone can be an imperfect surrogate for disease control because retinal thickness incorporates cystic fluid, tissue architecture, atrophy, and other structural components. By month 12, complete retinal dryness was documented in 76.6% of naïve and 66.7% of switcher nAMD eyes, and in 85.7% and 77.3% of corresponding DME eyes. Although the between-group differences did not reach statistical significance, the direction of effect consistently favored treatment-naïve eyes.

These observations are consistent with the anatomical profile of Faricimab reported in pivotal trials and more recent real-world studies. TENAYA/LUCERNE and YOSEMITE/RHINE demonstrated strong suppression of exudative activity, while switching studies have repeatedly documented reductions in IRF and SRF after conversion from aflibercept, ranibizumab, or other anti-VEGF agents. [11]

However, achieving a completely dry retina should not necessarily be considered an independent therapeutic objective in every nAMD eye. The FLUID randomized trial showed that a treat-and-extend strategy tolerating limited stable SRF could achieve noninferior visual outcomes while reducing treatment exposure. Furthermore, modern OCT analyses indicate that IRF and SRF do not carry equivalent prognostic significance; persistent IRF is generally more strongly associated with impaired visual function, whereas small amounts of stable SRF may sometimes be compatible with favorable vision. [30]

Accordingly, the high rate of complete fluid resolution in this study should be interpreted as evidence of strong exudative disease control, rather than proof that maximal dryness itself caused the visual gain. This distinction strengthens the discussion because it avoids equating anatomical perfection with functional success.

The number of injections add an important real-world impact in daily retina clinic. Treatment-naïve eyes received fewer injections than switcher eyes in both diseases, and this separation became more pronounced by month 12. In nAMD, mean cumulative injection numbers were 7.4 versus 8.8; in DME they were 6.9 versus 8.4. These findings suggest that eyes entering Faricimab therapy without a history of intensive anti-VEGF dependence were more readily maintained with longer effective intervals.

The greater treatment requirement in switchers is biologically plausible. The nAMD switchers had already demonstrated a need for treatment approximately every 5 weeks before Faricimab, while DME switchers had been treated approximately every 6 weeks. Their need for more Faricimab injections is therefore more likely to reflect intrinsically high disease-activity phenotype than reduced efficacy of Faricimab itself. Real-world studies have similarly shown that switching treatment-intensive nAMD eyes to Faricimab often improves anatomy while producing a more modest extension in dosing interval than is seen in treatment-naïve patients. Real-world data support extended intervals (12–16 weeks) without loss of efficacy,[19,20] improving adherence in chronic disease.[21,22,23]

This interpretation also aligns with the broader anti-VEGF literature. Treat-and-extend regimens with ranibizumab, bevacizumab, and aflibercept have shown that visual outcomes can be preserved while reducing visit or injection frequency relative to continuous monthly dosing, but treatment requirements vary markedly between individuals. Faricimab therefore represents an extension of the durability paradigm rather than a replacement for individualized retreatment. [31] Importantly, direct statements of superiority in injection burden over aflibercept 2 mg, aflibercept 8 mg, or other agents would require randomized or appropriately controlled comparative data. Compared with emerging options, high-dose aflibercept (8 mg) extends dosing intervals but targets VEGF alone.[18] In contrast, dual Ang-2/VEGF

inhibition shows greater anatomical improvement than monotherapy.[9,17] Faricimab combines both pathways, offering improved durability and fluid resolution.[32, 33, 34]

The safety profile of Faricimab in current study was excellent, with no ocular or systemic adverse events observed, consistent with phase III and large real-world datasets.[12,15,19] Importantly, no signal of increased vasculitis or occlusive events has been reported, alleviating early theoretical concerns about dual-pathway inhibition.

Several limitations are relevant when interpreting these findings. First, the sample sizes within individual strata are modest, reducing power for binary outcomes such as complete fluid resolution and increasing uncertainty around subgroup differences. The nonsignificant difference in dry-retina rates, for example, should not be interpreted as demonstrating equivalence between naïve and switcher eyes.

Second, this is not a randomized comparison of treatment-naïve and switcher patients. Prior treatment status inherently captures differences in disease duration, phenotype, treatment resistance, and retinal structural damage. The lower anatomical response and higher injection burden among nAMD switchers therefore cannot be attributed solely to prior exposure to anti-VEGF therapy.

Third, baseline imbalance is particularly important in the nAMD cohort. Treatment-naïve eyes began with substantially greater CRT, creating greater mathematical and biological potential for thickness reduction. Absolute CRT change should therefore be interpreted together with baseline and final CRT rather than independently.

Conclusion

Faricimab demonstrated sustained functional and anatomical effectiveness over 12 months in both treatment-naïve and previously treated eyes suffering from nAMD and DME. Significant improvements in BCVA and reductions in CRT were observed across all study groups, accompanied by high rates of retinal fluid resolution. Treatment-naïve nAMD eyes exhibited a more pronounced anatomical response than switcher eyes, whereas DME eyes showed substantial anatomical improvement irrespective of prior treatment status. Noteworthy, treatment-naïve eyes required significantly fewer injections than switcher eyes in both nAMD and DME, with the difference in treatment burden becoming more evident over time. No serious treatment-related ocular adverse events were observed during follow-up.

Declarations

Competing interest

No competing interest to disclose for all authors

Ethics approval and consent to participate

The research protocol adhered to the tenets of the Declaration of Helsinki, and approval was obtained from the Institutional Review Board (IRB) of Faculty of Medicine, Assiut University (IRB registration number 04-2026-300813). All participants provided written informed consent before enrollment.

Consent for publication

Not applicable

Competing interests

No competing interests to be declared by all authors

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Author Contribution

WS was responsible for writing the protocol and report, making research plan and reviewing literature, interpreting results. OA was responsible for writing the protocol and reviewing literature and updating reference lists. AE was responsible for writing the protocol and report, making research plan and reviewing literature, interpreting results. ZE was responsible for writing the manuscript, extracting, analyzing data, interpreting results and conducted the statistical analysis.

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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Figures

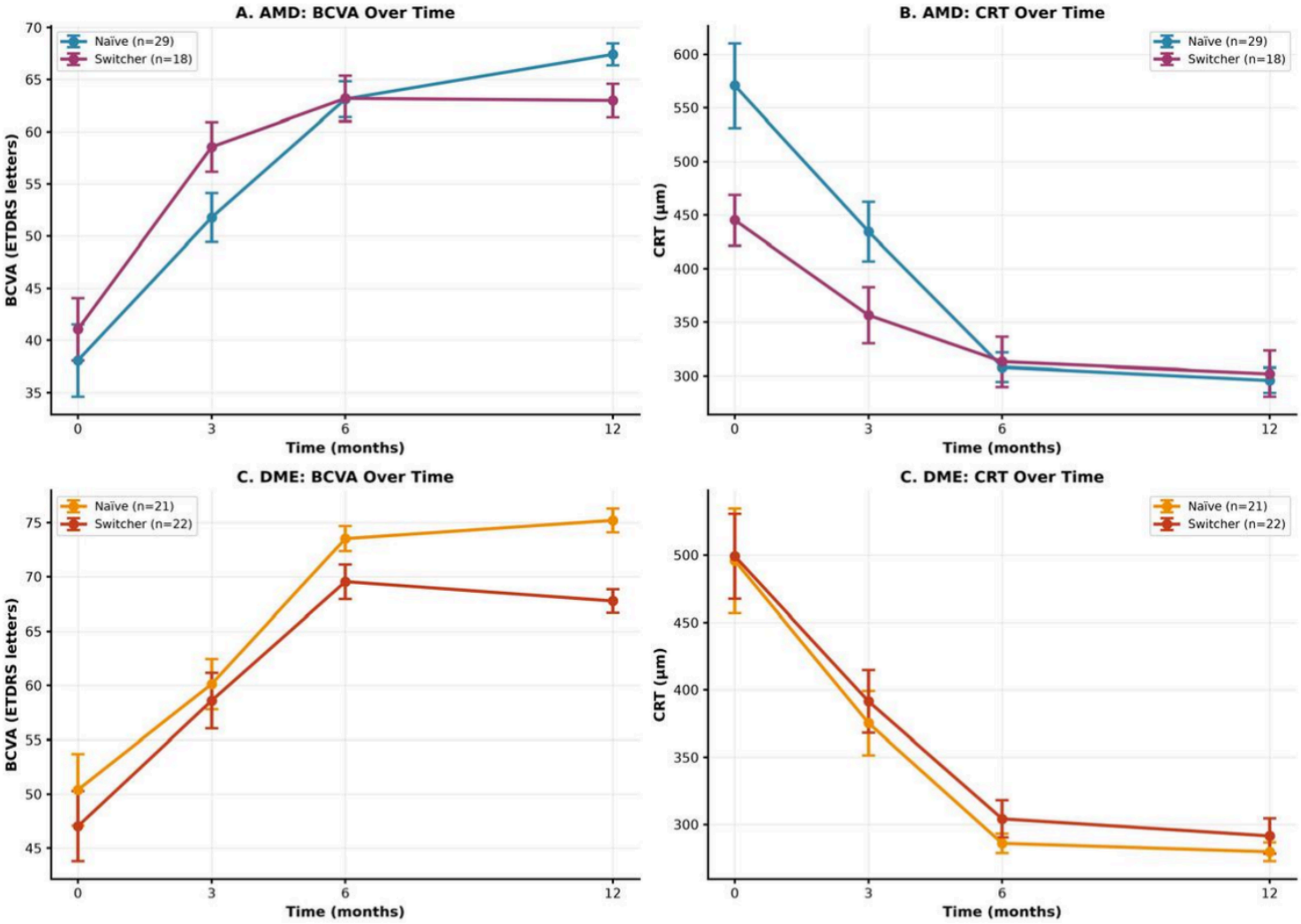

Figure 1

Changes in BCVA and CRT following Faricimab treatment. Changes in BCVA (ETDRS letters) and CRT (µm) from baseline to months 3, 6, and 12 are shown for treatment-naïve and switcher eyes with nAMD and DME. (A) BCVA and (B) CRT outcomes in the nAMD cohort; (C) BCVA and (D) CRT outcomes in the DME cohort.

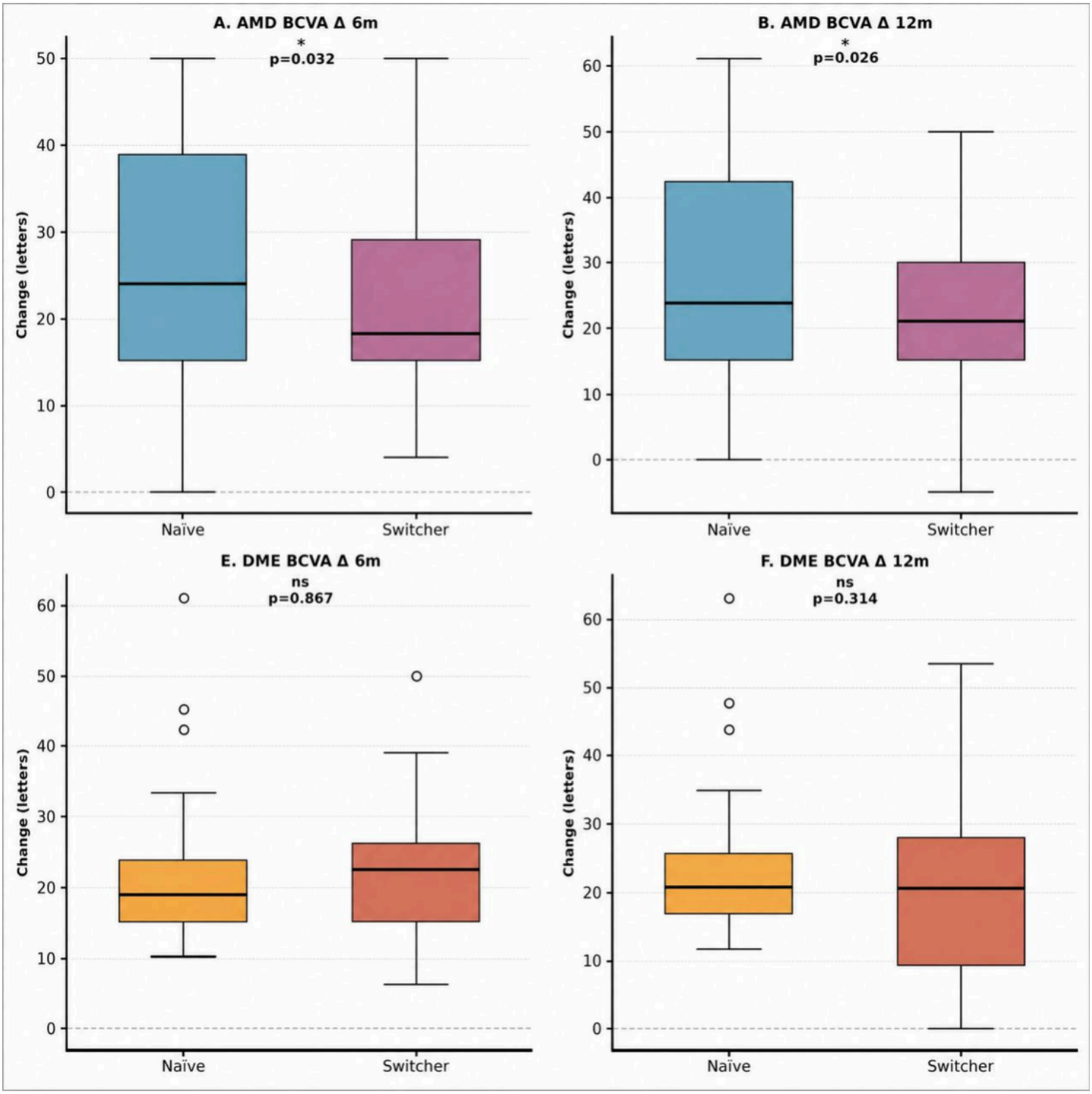

Figure 2

Changes in BCVA following Faricimab treatment in treatment-naïve and switcher groups. Plots illustrate the change in BCVA from baseline, at 6 and 12 months in eyes with nAMD and DME. (A, B) BCVA change in treatment-naïve versus switcher nAMD eyes at 6 and 12 months, respectively; (E, F) corresponding changes in DME eyes. Between-group differences were not statistically significant at either time point in the nAMD.

ns not significant, * P < 0.05, ** P < 0.01.

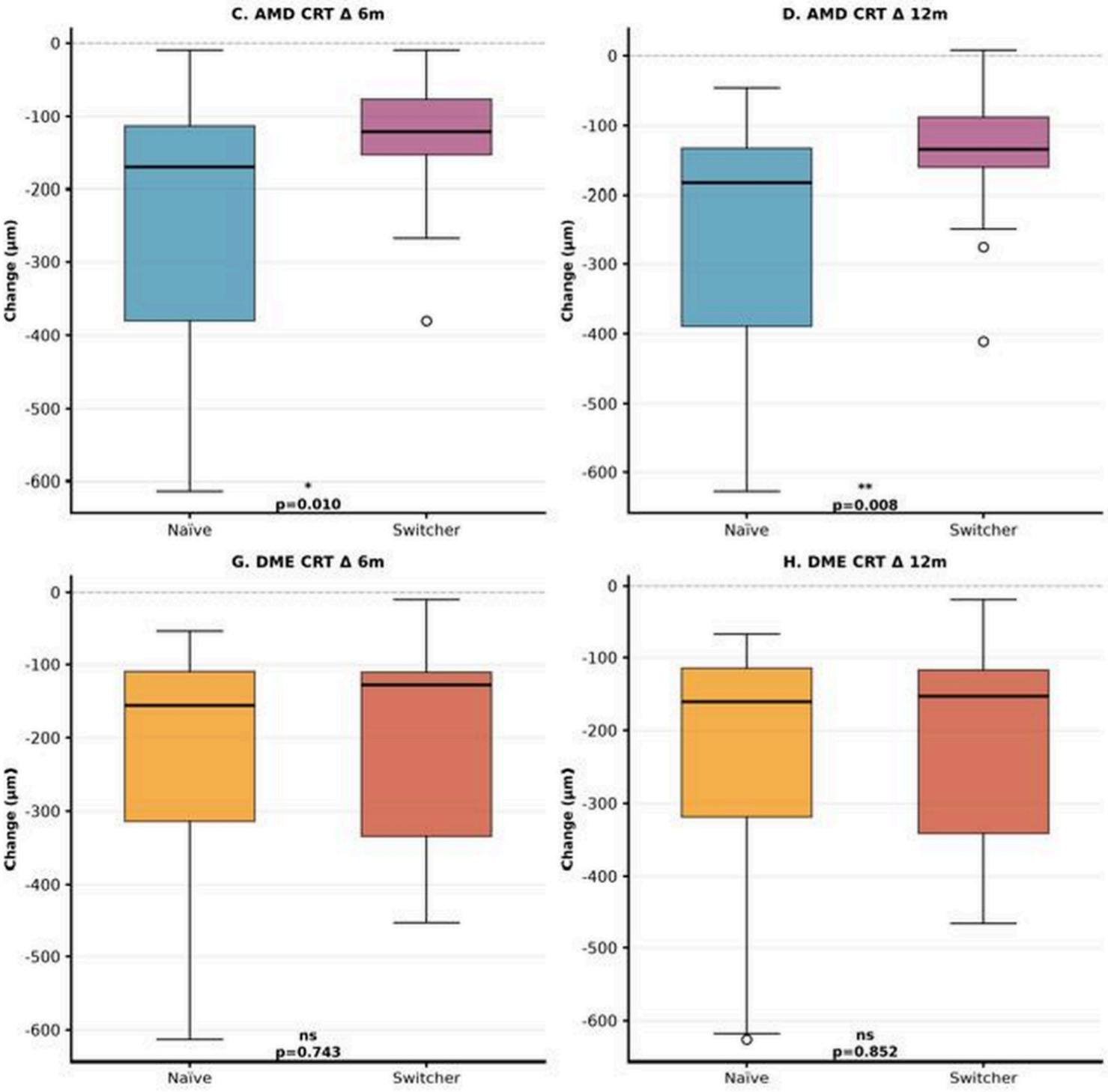

Figure 3

Changes in CRT following Faricimab treatment in treatment-naïve and switcher eyes. Plots illustrate changes in CRT from baseline, at 6 and 12 months in eyes with nAMD and DME. (C, D) CRT changes in treatment-naïve versus switcher nAMD eyes at 6 and 12 months, respectively; (G, H) corresponding changes in DME eyes. Treatment-naïve nAMD eyes demonstrated significantly greater CRT reductions than switcher eyes at both 6 months (*P*= 0.010) and 12 months (*P* = 0.008). In contrast, CRT reductions were comparable between treatment-naïve and switcher DME eyes at 6 months (*P*= 0.743) and 12 months (*P* = 0.852).

ns, not significant, * P < 0.05, ** P < 0.01.

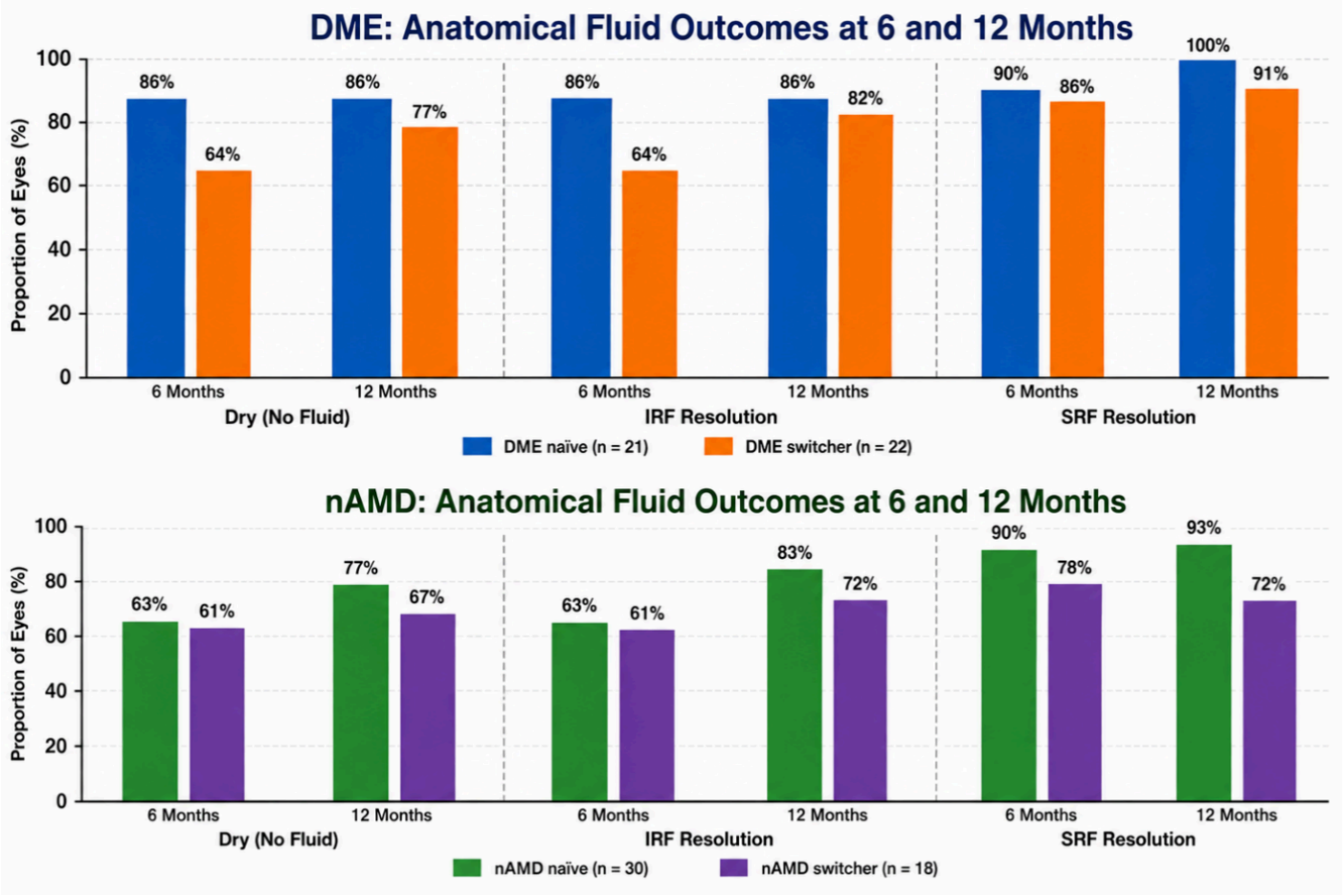

Figure 4

Anatomical fluid outcomes following Faricimab treatment in treatment-naïve and switcher eyes. Bar graphs illustrate the proportions of eyes achieving a dry retina, IRF resolution, and SRF resolution at 6 and 12 months in DME and nAMD cohorts. The proportion of eyes achieving complete fluid resolution generally increased or was maintained through 12 months, with particularly favorable anatomical outcomes in treatment-naïve eyes.

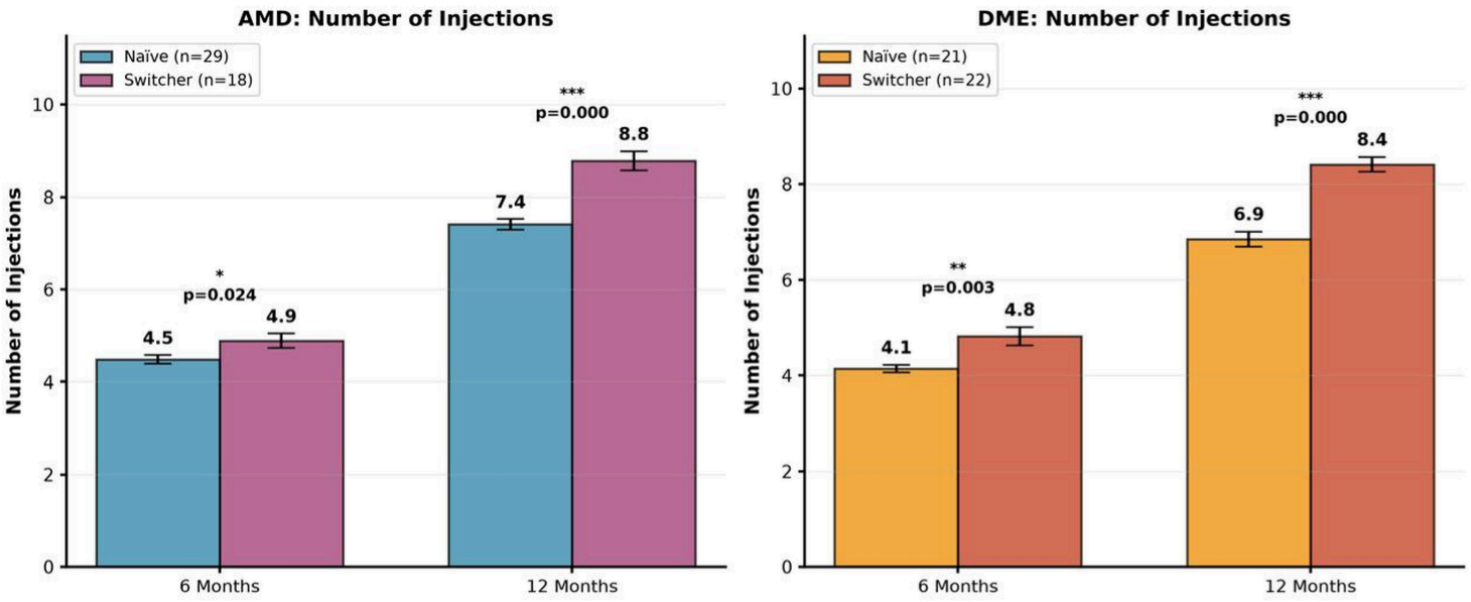

Figure 5

Faricimab treatment burden in treatment-naïve and switcher eyes with nAMD and DME. Bar graphs show the mean cumulative number of Faricimab injections at 6 and 12 months in treatment-naïve and switcher eyes nAMD and DME. Switcher eyes required significantly more injections than treatment-naïve eyes at both 6 and 12 months in the nAMD cohort.