A comparison of the efficacy of brolucizumab and aflibercept in eyes with early persistent retinal fluid: 96-week results from the HAWK and HARRIER studies

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Purpose:
To compare the outcomes of brolucizumab 6 mg and aflibercept 2 mg treatment on best-corrected visual acuity (BCVA) and central subfield thickness (CST) in neovascular age-related macular degeneration (nAMD) patients with early persistent retinal fluid.

Methods:
Patients were randomized 1:1:1 [HAWK] to brolucizumab 3 mg (n=358), brolucizumab 6 mg (n=360) or aflibercept 2 mg (n=360), and 1:1 [HARRIER] to brolucizumab 6 mg (n=370) or aflibercept 2 mg (n=369). After three loading doses, brolucizumab patients received 12-weekly dosing with an option to adjust to 8-weekly (q8w) if disease activity (identified by masked investigator) was present; aflibercept was dosed q8w. Early persistent retinal fluid was defined as presence of intraretinal fluid and/or sub retinal fluid (IRF/SRF) at baseline, Week 4, Week 8 and Week 12. Differences in BCVA and CST outcomes between brolucizumab and aflibercept patients from the pooled HAWK and HARRIER data were analyzed using ANOVA model with baseline BCVA/CST and age categories as covariates.

Results:
The proportion of patients with early persistent fluid were 12.5 % for brolucizumab and 20.4 % for aflibercept. Amongst these patients, at Week 16, BCVA change from baseline was comparable for brolucizumab and aflibercept [4.7 versus 4.8 ETDRS letters, respectively]. At Week 48 and 96, however, greater BCVA gains were observed with brolucizumab [6.8/6.4 letters] compared to aflibercept [5.5/3.7 letters]. Brolucizumab achieved greater CST reductions from baseline versus aflibercept, with a least square mean difference (± standard error) between the two treatment groups (brolucizumab – aflibercept) of 44.4 (±19.6), 58.7 (±21.5) and 54.8 (±23.0) µm at Weeks 16, 48 and 96, respectively.

Conclusions:
The current analysis of nAMD patients with early persistent retinal fluid found that patients treated with brolucizumab had better BCVA outcomes and greater CST reductions through 96 weeks than aflibercept. These findings suggest that brolucizumab may achieve greater disease control in nAMD patients with early persistent retinal fluid than aflibercept.