Efficacy and Safety of Intravitreal Aflibercept Using a Treat-And-Extend Regimen for Neovascular Age-Related Macular Degeneration

The ARIES Study: A Randomized Clinical Trial

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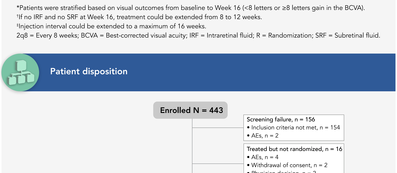
The aim of the ARIES study was to assess the efficacy and safety of 2 mg intravitreal aflibercept (IVT-AFL) in treatment-naive patients with neovascular age-related macular degeneration (nAMD) and determine whether intravitreal aflibercept early-start treat-and-extend (T&E) was noninferior to late-start T&E.

This was a 104 Week, randomized, open-label, Phase 3b/4 study.

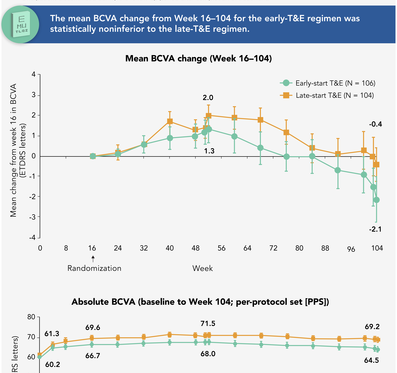
Study design



Primary endpoint: the best-corrected visual acuity change from randomization to Week 104.

*Patients were stratified based on visual outcomes from baseline to Week 16 (<8 letters or ≥8 letters gain in the BCVA).
†If no IRF and no SRF at Week 16, treatment could be extended from 8 to 12 weeks.
‡Injection interval could be extended to a maximum of 16 weeks.
2q8 = Every 8 weeks; BCVA = Best-corrected visual acuity; IRF = Intraretinal fluid; R = Randomization; SRF = Subretinal fluid.

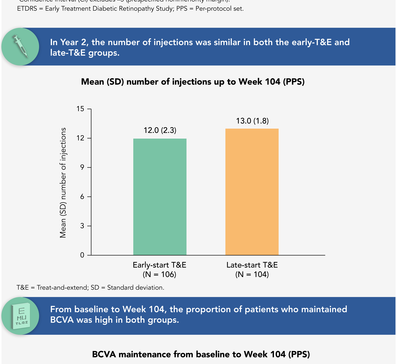
Patient disposition



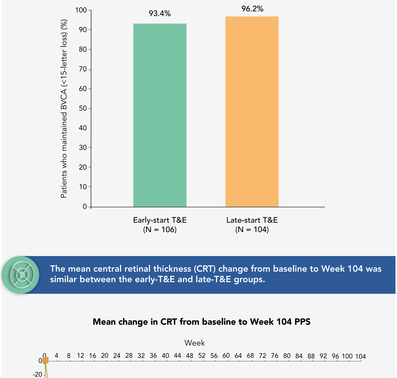
AE = Adverse event.
* One patient discontinued during the follow-up period after completion of treatment.

The mean BCVA change from Week 16–104 for the early-T&E regimen was statistically noninferior to the late-T&E regimen.

Mean BCVA change (Week 16–104)



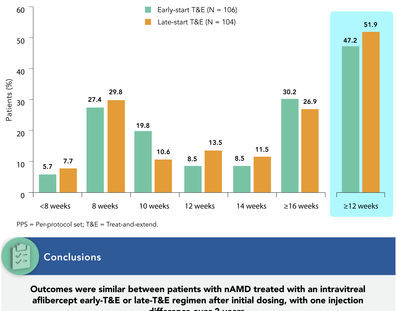
Absolute BCVA (baseline to Week 104; per-protocol set [PPS])



* Adjusted treatment difference (least squares means).
†Confidence interval (CI) excludes –5 (prespecified noninferiority margin).
ETDRS = Early Treatment Diabetic Retinopathy Study; PPS = Per-protocol set.

In Year 2, the number of injections was similar in both the early-T&E and late-T&E groups.

Mean (SD) number of injections up to Week 104 (PPS)



T&E = Treat-and-extend; SD = Standard deviation.

From baseline to Week 104, the proportion of patients who maintained BCVA was high in both groups.

BCVA maintenance from baseline to Week 104 (PPS)

The mean central retinal thickness (CRT) change from baseline to Week 104 was similar between the early-T&E and late-T&E groups.

Mean change in CRT from baseline to Week 104 PPS

Approximately half of patients in the early-T&E and late-T&E groups had a last injection interval ≥12 Weeks.

Duration of last treatment interval up to Week 104 PPS

PPS = Per-protocol set; T&E = Treat-and-extend.

Conclusions

Outcomes were similar between patients with nAMD treated with an intravitreal aflibercept early-T&E or late-T&E regimen after initial dosing, with one injection difference over 2 years.