Evaluation of Intravitreal Aflibercept for the Treatment of Severe Nonproliferative Diabetic Retinopathy: Results From the PANORAMA Randomized Clinical Trial

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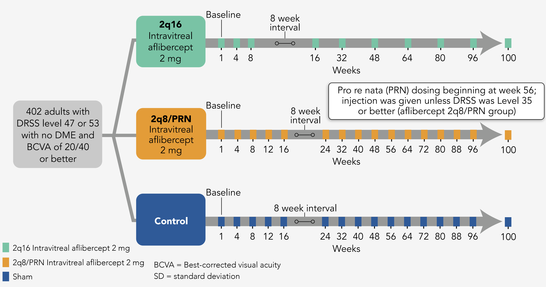
This study evaluated vascular endothelial growth factor (VEGF) blockade therapy with intravitreal aflibercept injections in eyes with severe nonproliferative diabetic retinopathy (NPDR) without diabetic macular edema (DME). Primary outcome measures assessed the proportion of eyes with a 2-step or greater improvement in Diabetic Retinopathy Severity Scale (DRSS) level, vision-threatening complications (VTC), and center-involved DME (CI-DME) from baseline at weeks 24, 52, and 100.

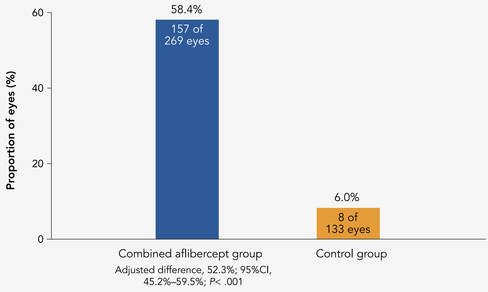
PANORAMA was a double-masked 100-week randomized clinical trial conducted in multiple centers worldwide.



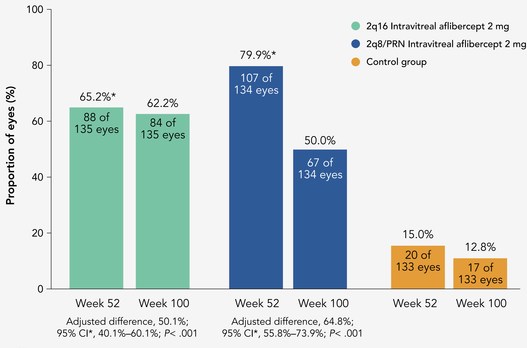
- Among 402 participants (1 eye per participant), the mean (SD) age was 55.7 (10.5) years; 225 (56.0%) were male, and 310 (77.1%) were White.
- A total of 135 were randomized to the aflibercept 2q16 group, 134 to the aflibercept 2q8/PRN group, and 133 to the control group.

Treatment with aflibercept resulted in a 2-step or greater improvement in DRSS.

2-Step or greater improvement in DRSS level - 24 weeks



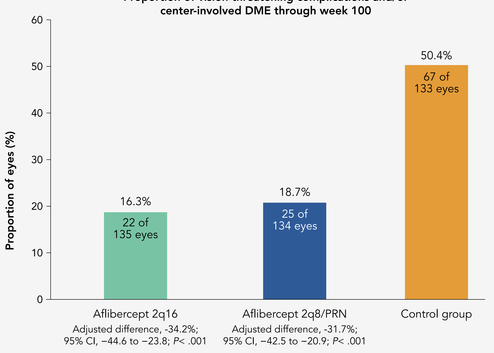
2-Step or greater improvement in DRSS level - 52 and 100 weeks



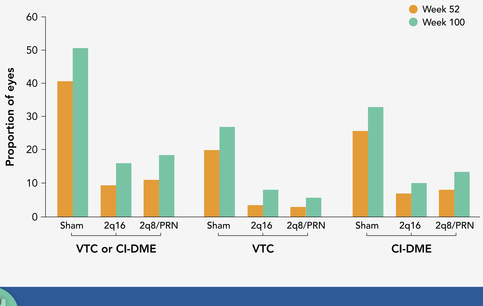
*Week 52 only

Fewer eyes treated with aflibercept vs sham injections developed VTCs and/or CI-DME through week 100.

Proportion of vision-threatening complications and/or center-involved DME through week 100



Proportion of eyes that developed VTCs or CI-DME



Conclusions

Significantly more eyes with moderately severe to severe NPDR that were treated with aflibercept showed a ≥2-step improvement in DRSS level at 24, 52, and 100 weeks, with significantly fewer eyes treated with aflibercept developing VTCs and CI-DME over sham.

In a post-hoc analysis of participants who had VTCs and/or CI-DME, more participants in the control group experienced a ≥5 letter loss over the course of the clinical trial, although differences across groups were not seen for ≥10 or ≥15 letters lost over the course of the study. These outcomes on the DRSS between year 1 and 2 emphasize the need for ongoing VEGF suppression and adherence.