Treatment Effect of Intravitreal Aflibercept Injection by Baseline Factors in Moderately Severe to Severe NPDR in PANORAMA

Nathan Steinle, MD, on behalf of the PANORAMA study investigators

California Retina Consultants, Santa Barbara, California, USA

Presented at the Retina Society 2020 Virtual Annual Meeting



- Dr. Steinle received research funding from and serves as a consultant and speaker for Regeneron Pharmaceuticals, Inc.
- Study disclosures: This study includes research conducted on human patients. Institutional Review Board approval was obtained prior to study initiation
- This study was funded by Regeneron Pharmaceuticals, Inc. (Tarrytown, New York). The sponsor participated in the design and conduct of the study, analysis of the data, and preparation of this presentation
- Medical writing support was provided by Prime, Knutsford, UK, according to Good Publication Practice guidelines, and was funded by Regeneron Pharmaceuticals, Inc.

PANORAMA Study Design



*Patients were stratified by baseline DRSS level; **After 3 initial monthly doses and 1 q8 interval; *After 5 initial monthly doses, flexible treatment schedule after week 52. 2q8, 2 mg every 8 weeks; 2q16, 2 mg every 16 weeks; AE, adverse event; ASNV, anterior segment neovascularization; CI-DME, center-involved diabetic macular edema; DME, diabetic macular edema; DRSS, Diabetic Retinopathy Severity Score; IAI, intravitreal aflibercept injection; NPDR, nonproliferative diabetic retinopathy; PDR, proliferative diabetic retinopathy; PRN, pro re nata.

Proportion of Patients with ≥2-step Improvement in DRSS from Baseline



Through week 52 in PANORAMA, ocular AEs occurring in >10% of eyes treated with sham, 2q16, and 2q8 were conjunctival hemorrhage (5.3%, 11.9%, and 17.2%, respectively) and DME (24.1%, 5.9%, and 9.0%, respectively)

Post Hoc Analysis

Objective

 To evaluate the difference in treatment effect between IAI and sham by baseline factors for the primary endpoint at weeks 52 and 100

Methods

- Difference in treatment effect across baseline factors was evaluated by Mantel-Haenszel weighting scheme adjusted by baseline DRSS stratification variable
- Between-treatment group comparisons were evaluated by 2-sided Cochran-Mantel-Haenszel test adjusted by baseline DRSS stratification variable
- Treatment-by-subgroup interactions were evaluated by logistic regression model using treatment, subgroup, treatment-by-subgroup interaction, and stratification variable as covariates
- Last observation carried forward method was used to impute missing or non-gradable post-baseline data
- For patients who received rescue treatment, data from the time rescue was given were censored

Proportion of Patients with ≥2-Step Improvement in DRSS From Baseline at Week 52



n = 133 for sham except for n = 132 in ethnicity, n = 135 for 2q16 except for n = 133 in HbA1c and n = 134 in ethnicity, n = 134 in 2q8 except n = 131 in the ethnicity analysis. BMI, body mass index; T, tertile; HbA1c, glycated hemoglobin.

Treatment Difference for Proportions with ≥2-Step DRSS Improvement at Week 52: <u>By Demographics</u>



CI, confidence interval.

Treatment Difference for Proportions with ≥2-Step DRSS Improvement at Week 52: <u>By Disease Characteristics</u>

	<u>Treatme</u> in	nt-by-subgroup teraction	2 q16	2 q8	<u>Nominal P vs</u> <u>sham</u>	
HbA1c (%)	≤7.6	<i>P</i> = 0.2482			0.0004 < 0.0001	(n = 47) (n = 50)
	>7.6 – ≤9.1		H		< 0.0001 < 0.0001	(n = 40) (n = 38)
	>9.1		H		< 0.0001 < 0.0001	(n = 46) (n = 46)
Duration of diabetes (years)	≥10.3	7.6 <i>P</i> = 0.2809	—		0.0003 < 0.0001	(n = 51) (n = 46)
	>10.3 – ≤17.6				< 0.0001 < 0.0001	(n = 38) (n = 48)
	>17.6		<u>بــــــــــــــــــــــــــــــــــــ</u>		< 0.0001 < 0.0001	(n = 46) (n = 40)
DRSS score	47	<i>P</i> = 0.2736	Ļ(< 0.0001 < 0.0001	(n = 102) (n = 101)
	53				< 0.0001 < 0.0001	(n = 33) (n = 33)
-100	-75 -50	-25 0	25	50 75	100	
Treatment difference at week 52 (%: 95% CI)						

Proportion of Patients with ≥2-Step Improvement in DRSS From Baseline at Week 100



Treatment Difference for Proportions with ≥2-Step DRSS Improvement at Week 100: <u>By Demographics</u>



Treatment Difference for Proportions with ≥2-Step DRSS Improvement at Week 100: <u>By Disease Characteristics</u>



Conclusions

- This post hoc analysis found no treatment-by-subgroup interactions across selected baseline factors in patients with moderately severe to severe NPDR at both weeks 52 and 100
- Greater proportions of eyes treated with IAI had a ≥2-step DRSS improvement from baseline compared with sham across all selected demographics and disease characteristics, in eyes with moderately severe to severe NPDR