A0286

Incidence of New Choroidal Neovascularization in Fellow Eyes of Patients Treated with Intravitreal Aflibercept Injection or Ranibizumab in the VIEW Studies

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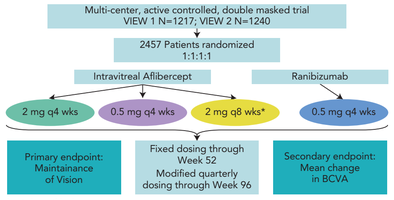
OBJECTIVES

- This post hoc analysis assessed:
  - Influence of drug and dosing regimen on the incidence of conversion to choroidal neovascularization (CNV) in the fellow eye of patients treated for CNV with intravitreal aflibercept injection (IAI) or ranibizumab in the VIEW 1 and 2 studies
  - Effect of baseline characteristics on incidence of conversion to CNV in the fellow eye

BACKGROUND

- The VIEW studies evaluated efficacy and safety of IAI compared with ranibizumab for treatment of neovascular age-related macular degeneration (AMD).



*After 3 initial monthly doses

- At week 52, all IAI groups demonstrated similar improvements in all visual acuity endpoints compared to Rq4
- Incidences of ocular adverse events were similar across all treatment groups; adverse events occurring in >10% of patients were conjunctival hemorrhage, eye pain, retinal hemorrhage, and reduced VA

METHODS

- Only fellow eyes lacking signs of neovascular AMD at baseline were included in this post hoc analysis
  - Absence of neovascular AMD was determined by investigator evaluation and by central reading center evaluation of fluorescein angiography
- Determination of conversion was based upon:
  - Adverse events
  - Concomitant medications
  - Fluorescein angiography
- Statistical Analysis
  - Time to CNV in the fellow eye was evaluated by Kaplan-Meier (product limit estimate) methodology.
  - The log-rank test was used to determine if the curves for IAI were different from ranibizumab.
  - The Cox's proportional hazard model was used to quantify the differences.
  - Simple univariate statistics were used to describe the histograms.

Table 1. Baseline CNV Status in Fellow Eye

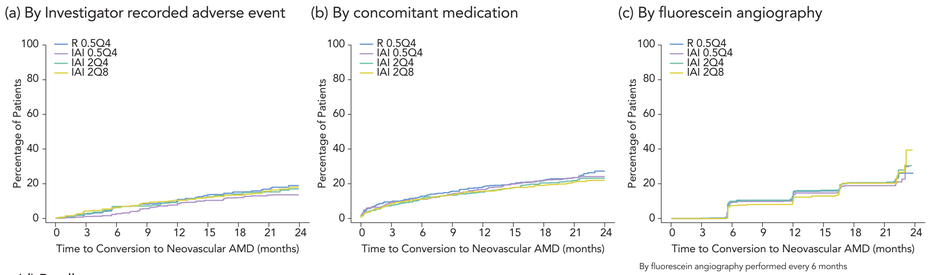
	R 0.5Q4	IAI 0.5Q4	IAI 2Q4	IAI 2Q8
Number Randomized and Treated in the Study, n	595	601	613	610
Number With CNV at Baseline, n (%)	196 (32.9)	213 (35.4)	226 (36.9)	221 (36.2)
Number With Missing CNV at Baseline, n (%)	0	1 (0.2)	0	1 (0.2)
Number Without CNV at Baseline, n (%)	399 (67.1)	387 (64.4)	387 (63.1)	388 (63.6)

FA/Investigator Recorded AE/ Recorded Concomitant Medication

RESULTS

INCIDENCE OF FELLOW EYE NEOVASCULARIZATION

Figure 1. Time to First Conversion to Neovascular AMD

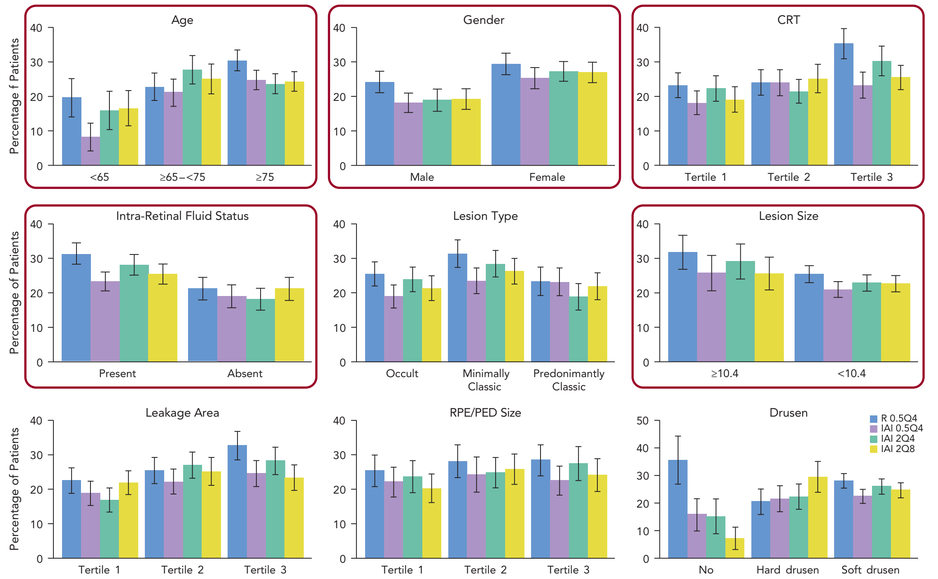


By fluorescein angiography performed every 6 months

Treatment Group	N	Number of events	Cumulative Incidence (%)[1]	Rates 100 PYR[2]	Hazard Ratio (IAI vs R 0.5Q4)[3]	95% CI of Hazard Ratio[3]	P-value[3]
R 0.5Q4	399	107	32.2	18.1	.		.
IAI 0.5Q4	387	84	26.2	14.7	0.808	0.607 to 1.075	0.1435
IAI 2Q4	387	93	28.2	16.2	0.891	0.675 to 1.176	0.4156
IAI 2Q8	388	91	29.0	16.0	0.877	0.663 to 1.160	0.3588
IAI pooled	1162	268	27.8	15.6	0.859	0.686 to 1.075	0.1831

[1]Estimated by Kaplan-Meier method
[2]Rates 100 PYR = 100*n/ Patient-years at risk
[3]Hazard ratio is estimated using Cox regression model with treatment as the only covariate

Figure 2. Effect of Baseline Characteristic on Conversion in Fellow Eyes at Month 24

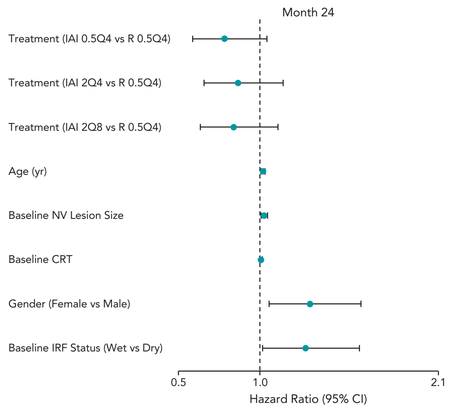


EFFECT OF BASELINE CHARACTERISTICS

Table 2. Baseline Demographics and Characteristics – Study Eye

	R 0.5Q4	IAI 0.5Q4	IAI 2Q4	IAI 2Q8
Age (years)				
n	399	387	387	388
Mean (SD)	75.2 (8.8)	75.4 (8.5)	75.2 (8.1)	75.0 (9.0)
Male, n (%)	191 (47.9)	193 (49.9)	148 (38.2)	172 (44.3)
CRT (um)				
n	398	384	385	386
Mean (SD)	292.7 (127.9)	303.6 (139.7)	297.5 (127.9)	317.2 (140.6)
Intra-Retinal Fluid Present, n (%)	234 (58.6)	234 (60.5)	232 (59.9)	229 (59.0)
Drusen Present				
No, n (%)	31 (7.8)	38 (9.8)	33 (8.5)	42 (10.8)
Hard drusen, n (%)	78 (19.5)	79 (20.4)	81 (20.9)	68 (17.5)
Soft drusen, n (%)	286 (71.7)	268 (69.3)	258 (66.7)	268 (69.1)
Leakage on FA (mm^2)				
n	395	386	385	387
Mean (SD)	7.9 (4.8)	7.8 (4.7)	8.0 (5.0)	7.7 (5.0)
Lesion Type				
Occult, n (%)	153 (38.3)	142 (36.7)	142 (36.7)	131 (33.8)
Minimally Classic, n (%)	134 (33.6)	132 (34.1)	137 (35.4)	141 (36.3)
Predominantly Classic, n (%)	107 (26.8)	112 (28.9)	106 (27.4)	114 (29.4)
NV Lesion Size ≥ 10.4, n (%)	88 (22.1)	70 (18.1)	79 (20.4)	82 (21.1)
RPE/PED Present, n (%)	297 (74.4)	270 (69.8)	293 (75.7)	292 (75.3)

Figure 3. Effect on Time to First Conversion to Neovascular AMD



FA/Investigator Recorded AE/ Recorded Concomitant Medication

STRENGTHS AND LIMITATIONS

- Strengths
  - Large sample size from controlled phase 3 studies
  - Multiple approaches to confirm conversion in fellow eyes
- Limitations
  - Post hoc analysis
  - Cannot adjust for all confounding factors
  - OCT in fellow eyes was not available

CONCLUSIONS

- Rate of conversion was similar amongst treatment groups
- Study eye baseline features associated with higher rates of fellow eye conversion were:
  - Gender (female)
  - Older age
  - Greater CNV lesion size in study eye
  - Higher CRT in study eye
  - Presence of intra-retinal fluid in study eye

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