Outcomes of Neovascular Age-related Macular Degeneration from the VIEW Studies by Choroidal Neovascularization Features at Baseline

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On behalf of the VIEW 1 and VIEW 2 study investigators
Disclosures

Research funding:
- Genentech
- Regeneron

Consultant:
- Genentech
- Regeneron
- Clearside
Background

Multi-center, active controlled, double masked trial
VIEW 1 N=1217; VIEW 2 N=1240

2457 Patients randomized 1:1:1:1

Intravitreal Aflibercept

2 mg q4 wks

0.5 mg q4 wks

2 mg q8 wks*

Ranibizumab

0.5 mg q4 wks

Primary endpoint:
Maintenance of Vision

Dosing through Week 52

Modified quarterly dosing through Week 96

Secondary endpoint:
Mean Change in BCVA

- In the integrated VIEW 1 and VIEW 2 studies at week 52, all IAI groups demonstrated similar improvements in all visual acuity endpoints compared to Rq4
- Incidences of Antiplatelet Trialists’ Collaboration defined arterial thromboembolic events were similar across treatment groups (2.4% to 3.8%) from baseline to week 96
- Cataract was the most common serious ocular adverse event over 96 weeks (0.8%, 0.7%, 0.5%, and 1.1% with Rq4, 2q4, 0.5q4, and 2q8, respectively)

*After 3 initial monthly doses
BCVA, best-corrected visual acuity; IAI, intravitreal aflibercept injection; R, Ranibizumab
Objectives

- To assess visual and anatomic outcomes of treatment with 2 mg IAI or 0.5 mg ranibizumab (combined) by baseline CNV
  - Area (quartiles)
  - Type (occult, minimally classic, predominantly classic)

- Evaluate the time to first cumulative incidence of **sustained** events including:
  - Vision gain of ≥ 15 ETDRS letters
  - Vision loss of > 5 ETDRS letters
  - Absence of retinal fluid (intraretinal or subretinal fluid)
  - Absence of intraretinal fluid

**Sustained events = events occurring on 2 or more consecutive visits**
Effect on Visual Outcomes
Time to First Sustained* Gain of ≥ 15 ETDRS Letters from Baseline

By Baseline CNV Area

<table>
<thead>
<tr>
<th>Baseline CNV Area</th>
<th>N</th>
<th># of Events</th>
<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3.12 mm²</td>
<td>446</td>
<td>208</td>
<td>75.81</td>
<td>1.00</td>
<td>.</td>
</tr>
<tr>
<td>≥ 3.12 to &lt; 5.96 mm²</td>
<td>453</td>
<td>177</td>
<td>57.07</td>
<td>0.75 (0.62, 0.92)</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>≥ 5.96 to &lt; 10.265 mm²</td>
<td>454</td>
<td>142</td>
<td>42.60</td>
<td>0.56 (0.45, 0.70)</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>≥ 10.265 mm²</td>
<td>451</td>
<td>137</td>
<td>41.93</td>
<td>0.55 (0.44, 0.69)</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

* Sustained = 2 or more consecutive visits
FAS, Observed; Treatment groups combined
CNV, choroidal neovascularization; ETDRS, Early Treatment Diabetic Retinopathy Study
Time to First *Sustained* Loss of > 5 ETDRS Letters from Baseline

**By Baseline CNV Area**

<table>
<thead>
<tr>
<th>CNV Area</th>
<th>N</th>
<th># of Events</th>
<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3.12 mm²</td>
<td>446</td>
<td>42</td>
<td>11.71</td>
<td>1.00</td>
<td>.</td>
</tr>
<tr>
<td>≥ 3.12 to &lt; 5.96 mm²</td>
<td>453</td>
<td>52</td>
<td>14.57</td>
<td>1.24 (0.83, 1.88)</td>
<td>0.29</td>
</tr>
<tr>
<td>≥ 5.96 to &lt; 10.265 mm²</td>
<td>454</td>
<td>89</td>
<td>25.76</td>
<td>2.20 (1.53, 3.21)</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>≥ 10.265 mm²</td>
<td>451</td>
<td>100</td>
<td>30.44</td>
<td>2.60 (1.82, 3.77)</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

*Sustained = 2 or more consecutive visits
FAS, Observed; Treatment groups combined
CNV, choroidal neovascularization; ETDRS, Early Treatment Diabetic Retinopathy Study

* Cumulative incidence
* Weeks

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Time to First Sustained* Gain of $\geq 15$ ETDRS Letters from Baseline

By Baseline CNV Area

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th># of events</th>
<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occult</td>
<td>693</td>
<td>212</td>
<td>40.82</td>
<td>1.00</td>
<td>.</td>
</tr>
<tr>
<td>Minimally Classic</td>
<td>638</td>
<td>232</td>
<td>51.20</td>
<td>1.25 (1.04, 1.51)</td>
<td>0.02</td>
</tr>
<tr>
<td>Predominantly Classic</td>
<td>470</td>
<td>220</td>
<td>72.68</td>
<td>1.78 (1.47, 2.15)</td>
<td>$&lt;.01$</td>
</tr>
</tbody>
</table>

*Sustained = 2 or more consecutive visits
FAS, Observed; Treatment groups combined
CNV, choroidal neovascularization; ETDRS, Early Treatment Diabetic Retinopathy Study
Time to First Sustained* Loss of > 5 ETDRS Letters from Baseline

By Baseline CNV Area

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<thead>
<tr>
<th></th>
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<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occult</td>
<td>693</td>
<td>100</td>
<td>19.31</td>
<td>1.00</td>
<td>.</td>
</tr>
<tr>
<td>Minimally Classic</td>
<td>638</td>
<td>107</td>
<td>23.08</td>
<td>1.19 (0.91, 1.57)</td>
<td>0.20</td>
</tr>
<tr>
<td>Predominantly Classic</td>
<td>470</td>
<td>75</td>
<td>21.39</td>
<td>1.11 (0.82, 1.49)</td>
<td>0.50</td>
</tr>
</tbody>
</table>

*Sustained = 2 or more consecutive visits
FAS, Observed
CNV, choroidal neovascularization; ETDRS, Early Treatment Diabetic Retinopathy Study
Effect on Anatomic Outcomes
### Time to First *Sustained* Absence of Retinal Fluid

*Sustained* = Retinal fluid (intraretinal or subretinal fluid) absent on 2 or more consecutive visits

FAS, Observed

**CNV, choroidal neovascularization**

<table>
<thead>
<tr>
<th>N</th>
<th># of events</th>
<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3.12 mm²</td>
<td>440</td>
<td>331</td>
<td>271.3</td>
<td>1.00</td>
</tr>
<tr>
<td>≥ 3.12 to &lt; 5.96 mm²</td>
<td>448</td>
<td>351</td>
<td>289.0</td>
<td>1.07 (0.92,1.24)</td>
</tr>
<tr>
<td>≥ 5.96 to &lt; 10.265 mm²</td>
<td>446</td>
<td>348</td>
<td>294.7</td>
<td>1.09 (0.93,1.26)</td>
</tr>
<tr>
<td>≥ 10.265 mm²</td>
<td>448</td>
<td>341</td>
<td>270.1</td>
<td>1.00 (0.85,1.16)</td>
</tr>
</tbody>
</table>

**By Baseline CNV Area**

- **< 3.12 mm²**
- **≥ 3.12 to < 5.96 mm²**
- **≥ 5.96 to < 10.265 mm²**
- **≥ 10.265 mm²**

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*Please note: The table and graph data are placeholders and should be replaced with actual research findings.*
Time to First *Sustained* Absence of Intraretinal Fluid

By Baseline CNV Area

<table>
<thead>
<tr>
<th>Quartile</th>
<th>N</th>
<th># of events</th>
<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3.12 mm²</td>
<td>262</td>
<td>225</td>
<td>498.1</td>
<td>1.00</td>
<td>.</td>
</tr>
<tr>
<td>≥ 3.12 to &lt; 5.96 mm²</td>
<td>271</td>
<td>229</td>
<td>473.1</td>
<td>0.95 (0.79,1.14)</td>
<td>0.58</td>
</tr>
<tr>
<td>≥ 5.96 to &lt; 10.265 mm²</td>
<td>289</td>
<td>238</td>
<td>432.3</td>
<td>0.87 (0.72,1.04)</td>
<td>0.13</td>
</tr>
<tr>
<td>≥ 10.265 mm²</td>
<td>253</td>
<td>217</td>
<td>467.3</td>
<td>0.94 (0.78,1.13)</td>
<td>0.51</td>
</tr>
</tbody>
</table>

*Sustained* = Intraretinal fluid (cystic fluid only) absent on 2 or more consecutive visits
FAS, Observed
CNV, choroidal neovascularization
Time to First *Sustained* Absence of Retinal Fluid

By Baseline CNV Area

<table>
<thead>
<tr>
<th>Baseline CNV Area</th>
<th>N</th>
<th># of events</th>
<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occult</td>
<td>682</td>
<td>532</td>
<td>294.3</td>
<td>1.00</td>
<td>.</td>
</tr>
<tr>
<td>Minimally Classic</td>
<td>633</td>
<td>507</td>
<td>325.0</td>
<td>1.10 (0.98,1.25)</td>
<td>0.11</td>
</tr>
<tr>
<td>Predominantly Classic</td>
<td>464</td>
<td>329</td>
<td>218.9</td>
<td>0.74 (0.65,0.85)</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

*Sustained* = Retinal fluid (intraretinal or subretinal fluid) absent on 2 or more consecutive visits

FAS, Observed

CNV, choroidal neovascularization
Time to First *Sustained* Absence of Intraretinal Fluid

**By Baseline CNV Area**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
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<th>Event Rate (Per 100-Patient-Year)</th>
<th>Relative Risk 95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occult</td>
<td>343</td>
<td>298</td>
<td>529.1</td>
<td>1.00</td>
<td>.</td>
</tr>
<tr>
<td>Minimally Classic</td>
<td>419</td>
<td>352</td>
<td>477.3</td>
<td>0.90 (0.77, 1.05)</td>
<td>0.19</td>
</tr>
<tr>
<td>Predominantly Classic</td>
<td>311</td>
<td>257</td>
<td>390.7</td>
<td>0.74 (0.62, 0.87)</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

*Sustained* = No intraretinal fluid on 2 or more consecutive visits

FAS. Observed

CNV, choroidal neovascularization
Summary

Effect of Baseline Features of CNV On Outcomes at Week 52

Visual Acuity

- With increasing baseline CNV area, cumulative incidence of first sustained ≥15 letters gain decreased and first sustained >5 letters loss increased in a non-linear manner
- Lowest cumulative incidence of the first sustained ≥15 letters gain and >5 letters loss was seen in subgroup of occult lesions

Anatomic

- No indication of influence of CNV area on cumulative incidence of first sustained absence of retinal and intraretinal fluid
- Predominantly classic CNV showed a lower cumulative incidence of first sustained absence of retinal and intraretinal fluid

Baseline CNV area and type may influence some visual and anatomic outcomes