Lipoprotein(a) Lowering by Alirocumab Contributes to Event Reduction Independent of Low-Density Lipoprotein Cholesterol in the ODYSSEY OUTCOMES Trial


On behalf of the ODYSSEY OUTCOMES Investigators and Committees

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*Equal contributions
ClinicalTrials.gov: NCT01663402
Baseline Lp(a) Predicts MACE Risk in the Placebo Group

- **Quartile 1**: (<6.7 mg/dL)
- **Quartile 2**: (6.7 to <21.2 mg/dL)
- **Quartile 3**: (21.2 to <59.6 mg/dL)
- **Quartile 4**: (≥ 59.6 mg/dL)
Baseline Lp(a) Predicts Absolute Change in Lp(a), but not LDL-C

Alirocumab group
## Change in Lp(a) Predicts MACE, Independent of LDL-C$_{corr}$

<table>
<thead>
<tr>
<th>Model</th>
<th>Model Adjustments</th>
<th>Change Parameter</th>
<th>HR (95% CI) per 1 mg/dl decrease</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Baseline Lp(a)</td>
<td>Lp(a)</td>
<td>0.993 (0.989, 0.998)</td>
<td>0.0027</td>
</tr>
<tr>
<td>2</td>
<td>Baseline Lp(a), Baseline LDL-C$<em>{corr}$, Change from Baseline to Month 4 in LDL-C$</em>{corr}$</td>
<td>Lp(a) LDL-C$_{corr}$</td>
<td>0.994 (0.990, 0.999) 0.996 (0.994, 0.998)</td>
<td>0.0081 0.0002</td>
</tr>
</tbody>
</table>

Changes in lipoproteins measured between baseline and Month 4
Proportion of MACE Reduction Attributable to Changes in Lp(a) and Corrected LDL-C

From model with baseline and change in Lp(a), baseline and change in LDL-C_{corr} (Model 2)