Introduction
Some international guidelines specify lipid targets to guide management of LDL-C lowering and improve time-matched combination of combination therapy for risk-targeted patients in need of additional LDL-C lowering.

The ACC/AHA 2013 cholesterol guidelines do not specify lipid target values or recommend a particular combination of low- and high-intensity statin, or combination therapy with ezetimibe, for the prevention of atherosclerotic cardiovascular disease (ASCVD) or to achieve optimal LDL-C reductions of ≥50% and ≥30% in ≥75% of patients. In this context, the present report evaluates the variability of response to ezetimibe/statin combination therapy in statin-naive patients with high ASCVD risk.

The present evaluation offers insight into the variability of response to ezetimibe/statin combination therapy in patients with high ASCVD risk.

Methods
Data were gathered from 14 randomized controlled, double-blind clinical trial and post-marketing development programs in hypercholesterolemic patients (N=601).

Patients were categorized in per-risk groups specified in the ACC/AHA 2013 guidelines: 1. Clinical cardiovascular disease (CVD) – ACS or history of MI, stable or unstable angina, coronary or carotid artery stenosis, TIA, peripheral arterial disease (PAD). 2. Baseline LDL-C >160 mg/dL, >21 yrs. 3. Diabetes, LDL-C >100 mg/dL, >21 yrs without ASCVD. 4. Without ASCVD, LDL-C >190 mg/dL, >21 yrs.

For the risk categories, patients were stratified by baseline LDL-C, HDL-C, smoking, systolic blood pressure treated for hypertension, and presence of other traditional coronary risk factors (i.e., diabetes, age, 10-yr ASCVD risk ≥7.5%).

Efficacy of high- and moderate-intensity statin and ezetimibe therapy was compared to a placebo in placebo-controlled studies and to a control arm in comparative trials. All trials were randomized, double-blind, and placebo-controlled and included at least one primary endpoint (i.e., non-fatal MI, stroke, TIA, or peripheral arterial disease) presumed to be of atherosclerotic origin.

The percentage of patients achieving ≥50% reduction in LDL-C ranged from 62.2% to 70.2% for ezetimibe/statin combination therapy. The variability was determined by comparing the percentage of patients achieving ≥50% reduction in LDL-C with and without ezetimibe/statin combination therapy.

Table 1. Baseline characteristics of statin therapy group

Table 2. Baseline characteristics of ezetimibe/statin group

Table 3. Baseline characteristics of ezetimibe/statin group

Table 4. Association between covariates and % attainment of LDL-C reduction in multivariable analyses

Figure 1. % change from baseline in LDL-C and variability of LDL-C response with statins

Figure 2. % change from baseline in LDL-C and variability of LDL-C response with ezetimibe/statins

Figure 3. Relationships between covariates and % attainment of LDL-C reduction in multivariable analyses

Results

High-intensity statin therapy:
- Mean % change in LDL-C ranged from 43.5% to 74.4%
- % of patients achieving ≥50% reduction in LDL-C ranged from 72.6% to 87.9%

Moderate-intensity statin therapy:
- Mean % change in LDL-C ranged from 37.3% to 53.6%
- % of patients achieving ≥50% reduction in LDL-C ranged from 79.7% to 86.6%

Conclusion
Overall, ~1/3 of patients who received ezetimibe/statin therapy did not achieve ≥50% reduction in LDL-C, with ezetimibe/statin therapy remaining effective across high- and low-risk patient populations.

Disclosures
None.

References