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http://dx.doi.org/10.1016/j.jacc.2016.10.074

Please note: The authors have reported that they have no relationships relevant to the contents of this paper to disclose. P.K. Shah, MD, served as Guest Editor-in-Chief for this paper. Paul Armstrong, MD, served as Guest Editor for this paper.

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What Is the Best Disease-Guided Approach to Statin?

Silverman et al. (1) report that in a meta-regression analysis, the use of statin and nonstatin therapies that act via upregulation of low-density lipoprotein (LDL) receptor expression to reduce LDL cholesterol (LDL-C) were associated with similar relative risks of major vascular events per change in LDL-C. Lower achieved LDL-C levels were associated with lower rates of major coronary events. In complying with this, Pender et al. (2) discussed new findings since 2013 and proposed strategies emanating from the current guidelines in lower-risk patients.

Nonetheless, this guideline has been criticized. The impact of the American College of Cardiology (ACC)/American Heart Association (AHA) strategy is huge because a very large number of subjects would be eligible for lifelong statin treatment from >40 years old. The potential side effects should be considered if such a large fraction of the population is put on statin treatment (3). Furthermore, the ACC/AHA guidelines have been overestimated in Asians. To overcome this paramount and important limitation, Mortensen et al. (4) reported that withholding statins in individuals without coronary artery calcium or carotid plaque could spare a significant proportion of elderly people from taking a pill that would benefit only a few. This individualized disease-guided approach is simple and easy to implement in routine clinical practice. This disease-guided approach looks pretty attractive in both Caucasians and Asians. However, it should be tested in Asians.

Also, it should be noted that a recent meta-analysis reported that exposure to LDL-C-lowering genetic variants in or near NPC1L1 and other genes was associated with a higher risk of type 2 diabetes despite a significant reduction in coronary artery disease risk. These data provide insights into potential adverse effects of LDL-C-lowering therapy (5).

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http://dx.doi.org/10.1016/j.jacc.2016.11.035

Please note: Dr. Koh has reported that he has no relationships relevant to the contents of this paper to disclose.

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