

## **ACC/AHA Guidelines for Cholesterol Management and Considerations for Newer and Emerging Therapies**

*Nathan D. Wong PhD, FACC, FAHA, FNLA*

*From the Heart Disease Prevention Program, Division of Cardiology, University of California, Irvine, CA, USA*

The American College of Cardiology/American Heart Association in 2013 issued revolutionary guidelines for blood cholesterol management, accompanied by guidelines on cardiovascular risk assessment, lifestyle management, and obesity management. The use of an atherosclerotic cardiovascular disease (ASCVD) risk calculator was the foundation of the risk assessment guideline and the lifestyle management guideline focused on recommending an evidence-based dietary pattern and regular physical activity. The blood cholesterol management guideline identified four groups of patients shown to benefit from moderate or high intensity statin therapy and removed the use of specific low density lipoprotein (LDL)-cholesterol goals due to lack of evidence for specific targets. Rigorous evidence from randomized clinical trials formed the rationale for moderate and high intensity statin therapy. Updated guidance has since provided recommendations for newer non-statin therapies, including cholesterol absorption inhibitors and proprotein convertase subtilisin kexin type 9 (PCSK9) monoclonal antibody (mAb) therapy when additional LDL-C lowering is needed beyond that provided by maximum tolerated statin therapy. Novel RNA interference therapy for PCSK9 synthesis is also currently in development. The recent development and application of PCSK9 mAb therapies have resulted in remarkable reductions in LDL-C beyond statin therapy that are well-tolerated and with promising outcome data demonstrating ASCVD event reductions beyond statin therapy.

**Key words:** Cholesterol, statins, risk assessment, prevention, cardiovascular disease.