Role of ApoB in Clinical Management of Cardiovascular Risk in Adults

AN EXPERT CLINICAL CONSENSUS FROM THE NATIONAL LIPID ASSOCIATION

Overview: This Expert Clinical Consensus is meant to clarify the role of apolipoprotein B (apoB) testing for clinicians, patients, health systems, payers, and medical associations. Whether as an alternative or complementary metric to low-density lipoprotein cholesterol (LDL-C), the NLA strongly supports a role for apoB for regular and specialty clinical use.

Evidence

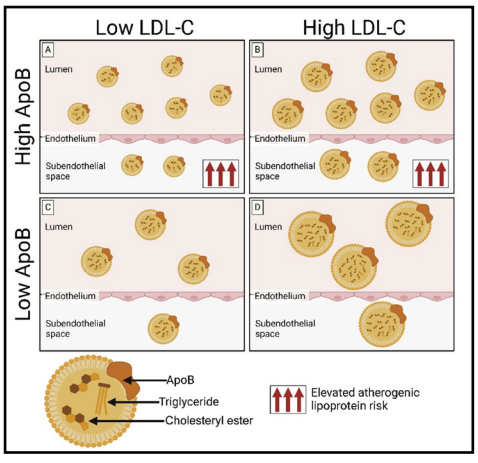
- » ApoB is precise, accurate, and validated
- » ApoB stratifies risk more accurately than LDL-C, before and during treatment with lipid-lowering therapy
- » ApoB/LDL-C discordance is common and, when discordance is present, apoB corresponds more closely with atherosclerotic cardiovascular disease (ASCVD) risk and should be the therapeutic target
- » Lowering apoB can be managed with dietary and other lifestyle interventions and with pharmacotherapy
- » Thresholds for apoB to initiate pharmacotherapy are not as well-established as LDL-C, and therapeutic objectives are not clearly defined; however, it is reasonable to extrapolate treatment thresholds for apoB using population levels of untreated and treated patients for comparison
- » The table below is a simplified summary of ASCVD risk categories and treatment thresholds for LDL-C and non-high-density lipoprotein cholesterol (non-HDL-C) from U.S. guidelines, and recommended treatment thresholds for apoB to consider intensification of lipid-lowering therapy based on the average of the predicted apoB concentrations for the corresponding LDL-C threshold in treated and untreated patients

ASCVD risk profile	LDL-C	Non-HDL-C	ApoB
	Treatment Threshold, mg/dL		
Very high Very high risk includes a history of multiple major ASCVD events or 1 major ASCVD event and multiple high-risk conditions.	55	85	60
High High risk refers to the presence of clinical ASCVD with or without severe hypercholesterolemia (LDL-C ≥190 mg/dL), diabetes mellitus, or an estimated 10-year risk for ASCVD of ≥20%.	70	100	70
Borderline to intermediate risk Borderline risk refers to an estimated 10-year risk for ASCVD of 5% to <7.5%. Intermediate risk refers to the presence of severe primary hypercholesterolemia (LDL-C ≥190mg/dL) or an estimated 10-year risk for ASCVD of 7.5% to <20%.	100	130	90

Conclusion

The use of apoB greatly facilitates the accurate diagnosis of various lipoprotein lipid disorders, allows a better understanding of the physiologic and metabolic changes in lipoprotein number and composition for a given patient, and facilitates more appropriate management of patients and their families.

Read the National Lipid Association's Expert Clinical Consensus in the ***Journal of Clinical Lipidology*** (doi: 10.1016/j.jacl.2024.08.013).



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