DIAGNOSTIC LABORATORY SERVICES,INC.

Technical Memorandum

LDL Cholesterol Equation Update

To: Medical Staff and Clients

From: Wesley Kim, MD
DLS Medical Director

Date: August 10, 2026

Subject: LDL Cholesterol Equation Update from Friedwald to Martin/Hopkins

Beginning September 8, 2026, DLS will be changing the formula for calculating LDL (LDL-C) from the current Friedwald Equation to the Martin/Hopkins Equation.

This change is based on the recommendation by the American College of Cardiology and the American Heart Association as stated in the 2026 Guidelines on the Management of Dyslipidemia (https://www.ahajournals.org/doi/10.1161/CIR.0000000000001423).

Although LDL-C levels have historically been estimated using the Friedwald equation, the Martin/Hopkins equation is now preferred because of its greater accuracy across a wider range of LDL-C and Triglyceride levels. This improved accuracy is related to an adjustable factor in the equation that changes based on a patient's Triglyceride and non-HDL value, which allows for more personalization of the LDL-C instead of the one size fit-all factor the Friedwald equation traditionally employed.

For patients whose Triglyceride is > 400 mg/dl, it is still recommended to order direct LDL measurement (LDL-D) for assessment of risk in these patients.

In addition, the 2026 Guidelines put forth by the ACC and AHA, have updated their recommendations for lipoprotein goals for the treatment and management of patients, based on PREVENT- ASCVD risk assessment and other risk factors as seen on the attached table.

As the formula for determining LDL-C will change, your patient's previous LDL-C values may or may not exactly match the new LDL-C values going forward. Along with the new updated lipoprotein goals for ASCVD risk reduction, clients may want to re-establish their patient's LDL-C value and refer to the guidelines before making any adjustments to patient management.

Test Code	Description
1891 OLD	LDL – Cholesterol Friedwald Equation
1895 NEW	LDL – Cholesterol Martin-Hopkins Equation

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Lipoprotein Goals for ASCVD Risk Reduction

Patient population	LDL-C <100 mg/dL (2.6 mmol/L) Non–HDL-C <130 mg/dL (3.4 mmol/L)	LDL-C <70 mg/dL (1.8 mmol/L) Non–HDL-C <100 mg/dL (2.6 mmol/L)	LDL-C <55 mg/dL (1.4 mmol/L) Non–HDL-C <85 mg/dL (2.2 mmol/L)
Primary prevention	PREVENT-ASCVD <10% • If TG ≥150 mg/dL to 499 mg/dL, apoB goal: <90 mg/dL	PREVENT-ASCVD ≥10% • If TG ≥150 mg/dL to 499 mg/dL, apoB goal: <70 mg/dL	N/A
Severe hypercholesterolemia	**Without** FH, ASCVD risk factors, and subclinical atherosclerosis	**With** FH, ASCVD risk factors, or subclinical atherosclerosis	Severe hypercholesterolemia or HeFH with clinical ASCVD
Diabetes	**Without** ASCVD risk factors or diabetes-specific risk modifiers • apoB goal: <90 mg/dL	**With** ASCVD risk factors or diabetes-specific risk factors • apoB goal: <70 mg/dL	N/A
Subclinical atherosclerosis	CAC = 1–99 AU and <75th percentile for age, sex, and race	• CAC ≥100 to 299 AU or ≥75th percentile for age, sex, race • CAC ≥300 to 999 AU ◦ Optional goal: LDL-C <55 mg/dL, non–HDL-C <85 mg/dL and consider apoB goal <55 mg/dL	CAC ≥1000 AU
Hypertriglyceridemia	<50 y old with no additional risk enhancers	• With clinical ASCVD not at very high risk ◦ apoB goal: <70 mg/dL • Age 40–75 y with ≥1 ASCVD risk factor ◦ apoB goal: <70 mg/dL	With clinical ASCVD at very high risk • apoB goal: <55 mg/dL
Clinical ASCVD	N/A	Not at very high risk • Optional goal: LDL-C <55 mg/dL, non–HDL-C <85 mg/dL and consider apoB goal <55 mg/dL	• At very high risk ◦ apoB goal: <55 mg/dL • With CKD

2026 Dyslipidemia

If you have any questions, please contact either DLS Client Services at (808) 589 – 5101 or Dr. Wesley Kim at (808) 589 – 5131.