
Change to Calculated LDL Cholesterol Reporting

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Applicable to: OSUWMC, The James and East Hospitals Medical Staff, and University Reference Laboratory Clients

SUMMARY OF TEST CHANGE

Effective 10/13/2026, the equation used to calculate low-density lipoprotein cholesterol (LDL-c) will change from the Friedewald equation to the newer Modified Sampson-NIH equation.

The Modified Sampson-NIH equation¹ provides improved estimation of LDL-C, particularly in patients with low LDL-C concentrations and/or elevated triglycerides.

What providers should know

- LDL-C treatment goals and clinical decision thresholds are not changing. Only the method used to calculate LDL-C is changing.
- When comparing LDL-C results before and after the implementation date, clinicians should keep in mind that part of the difference may reflect the change in calculation method rather than a true change in the patient's lipid status.
- The new equation allows calculated LDL-C to be reported when triglycerides are 400–800 mg/dL. With the Friedewald equation, LDL-C was not calculated when triglycerides were >400 mg/dL.
- For lab order 'LABLIPDR', triglycerides >800 mg/dL will reflex to direct LDL-C measurement.
- Lipid panel test codes will remain unchanged. Below is a summary of the impacted tests and their changes.

Test Code	Test Name	Changes
LAB18	LIPID PANEL W CALCULATED LDL	• LDL-C calculated using Modified Sampson-NIH Equation
LABLIPDR	LIPID PANEL WITH REFLEX TO MEASURED LDL	• LDL-C calculated using Modified Sampson-NIH Equation • Reflex to direct LDL at triglycerides > 800 mg/dL
HDLTB	LIPIDS W/DIRECT MEASURE LDL	• No changes

1. Sampson M, et al. A Modified Sampson-NIH Equation with Improved Accuracy for Estimating Low Levels of Low-Density Lipoprotein-Cholesterol. Clin Chem. 2025 Nov 4;71(11):1125-1137. doi: 10.1093/clinchem/hvaf073.

See the online test catalog for more information - [The Ohio State Wexner Medical Center Labs Test Catalog](#)

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