LipoPortfolio

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Comprehensive, Innovative Panels to **Help Identify Cardiometabolic Risk**

LabCorp

Cardiovascular disease and diabetes

Two of the leading chronic diseases in the US and drivers of morbidity, mortality and rising health care costs.[1,2]

Guidelines suggest evaluating and controlling cardiometabolic risk,[3] a condition in which the risk of developing atherosclerotic cardiovascular disease (ASCVD) and type 2 diabetes mellitus (T2D) is significantly enhanced by the presence of insulin resistance and atherogenic dyslipidemia.[4]

Lipid panels and glycemia assays, such as HbA1c and glucose, have traditionally been used to assess a patient's risk of developing ASCVD and T2D. These assays continue to be the foundation of risk assessment and primary prevention guidelines[3] but in some cases they may not reflect the full risk status of a patient. Additional information, such as the presence of insulin resistance, systemic inflammation, and lipoprotein particle levels and size can provide a more detailed—and in some cases, a more accurate—depiction of a patient's cardiometabolic risk.[5-13]

The inclusion of measurements of apolipoprotein B (ApoB), GlycA (systemic inflammation), and Diabetes Risk Index (insulin resistance and metabolic dysregulation), along with standard lipid testing, can provide actionable clinical data and a more in-depth risk assessment for individualized treatment, as well as prevention and intervention strategies.

ApoB

What is it:

Low-density lipoprotein (LDL) particles are a leading cause of ASCVD.[14] Apolipoprotein B (ApoB) is the primary protein component of LDL and triglyceride-rich lipoprotein (TRL) particles.[15]

How will this information enable physicians to help their patients?

The cholesterol content of these atherogenic lipoproteins can vary widely among patients, but each contains one ApoB protein. Measured ApoB thus provides an accurate assessment of atherogenic particle number and its associated ASCVD risk, whereas LDL cholesterol (LDL-C) does not.[15]

Although LDL-C, non-HDL-C, and ApoB are highly correlated, "discordance analyses" have demonstrated that ASCVD risk tracks with ApoB, not the cholesterol measures, when levels differ.[15]

GlycA

What is it:

GlycA is a composite biomarker that integrates the protein levels and glycosylation states of several of the most abundant acute phase proteins in serum.[16] Data suggest that GlycA has clinical utility similar to high sensitivity C-reactive protein (hsCRP), but has the advantage of having much lower intra-individual day-to-day variability.[16]

How will this information enable physicians to help their patients?

GlycA, used as an alternative to or in conjunction with hsCRP, may aid in the identification and stratification of individuals at risk for future ASCVD events. It may also aid as an independent prognostic marker for recurrent cardiovascular events in patients with stable coronary disease or acute coronary syndrome.

Diabetes Risk Index (DRI)

What is it:

LabCorp developed the Diabetes Risk Index (DRI) to help clinicians distinguish, among patients with similar glucose levels, those that have a greater versus lesser likelihood of developing T2D. Since >80 million U.S. adults qualify by glycemic criteria as "prediabetic", a need has been recognized for a more refined and cost-effective approach to diabetes prevention that directs treatment to the subset of patients at highest risk.[17] Waiting until the onset of prediabetes before initiating preventive measures may also be suboptimal, since many individuals with normal glucose levels progress to T2D in a relatively short time period.[18]

The DRI score (values 1-100) is derived from the patient's measured Lipoprotein Insulin Resistance Index (LP-IR)[19] and selected branched-chain amino acid (BCAA) levels. Both LP-IR and BCAA levels are independently associated with insulin resistance and both have been shown in multiple prospective clinical studies to predict the development of T2D independent of the level of glycemia.[8-13]

How will this information enable physicians to help their patients?

The LP-IR score, the main determinant of DRI, has been shown to be modifiable by drug and lifestyle interventions that produce weight loss and increase insulin sensitivity.[20-22] Reductions of DRI and LP-IR are thus clinically achievable and likely to reflect a corresponding reduction of the risk of developing diabetes.

LabCorp developed the Diabetes Risk Index (DRI) to assist clinicians with identifying patients who could be at risk of developing T2D.

Through its efficient, proprietary Vantera® testing platform, LabCorp offers comprehensive, innovative panels to help identify cardiometabolic risk—at cost-effective pricing.

Test Name	Number
Lipid Panel with GlycA (Inflammation)	**123510**
Lipid Panel with Diabetes Risk Index (DRI)	**123525**
Lipid Panel with Apolipoprotein B (ApoB)	**123544**
Lipid Panel with GlycA (inflammation) and Diabetes Risk Index (DRI)	**123559**
Lipid Panel with Apolipoprotein B (ApoB), GlycA (Inflammation), Diabetes Risk Index (DRI)	**123567**

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