



Cardiovascular

Comprehensive profiles for reducing risk.

- Evaluation of up to 17 primary and secondary risk factors
- Focused biomarkers including oxidized LDL
- Supports early detection and targeted treatment



SCIENCE + INSIGHT

Comprehensive Cardiovascular Risk Profile

Cardiovascular disease (CVD) is associated with more deaths than all cancers—and more deaths in women than breast cancer. The Comprehensive Cardiovascular Risk Profile from Doctor's Data reviews a thorough battery of biomarkers to aid in early detection and reduction of risk factors before the disease progresses.

Risk Factors and Analysis

Lipoprotein-Related Biomarkers

Total and LDL cholesterol, total triglycerides and HDL cholesterol have traditionally been measured to gauge CVD risk. However, recent research indicates that more focused biomarkers can provide even greater insight.

For example, oxidized LDL is plaque-specific and directly involved in accelerated atherogenesis and late-stage atherosclerotic plaque instability and rupture. Small dense LDL exhibits greater penetration into the arterial wall and has a longer half-life as well as lower resistance to oxidation compared to that of large buoyant LDL. Circulating levels of these two markers are:

1. Strong independent CVD risk factors
2. Higher in CVD patients
3. Correlated with the severity of CVD
4. Not correlated with LDL cholesterol levels

In addition, levels of apolipoproteins A-1 and B, specific protein constituents of HDL and LDL, are also strong indicators of risk.

Doctor's Data profiles evaluate each of these biomarkers as well as ratios of atherogenic to anti-atherogenic lipids, lipoproteins and apolipoproteins for further insight.

Inflammation

Arterial damage is associated with the infiltration of white cells into vessel walls and inflammation, which increases blood levels of two acute phase proteins, C-reactive protein and ferritin. For example, patients with moderately elevated CRP are more likely to develop stroke, myocardial infarction and severe peripheral arterial disease. Although not specific to CVD, analysis of high sensitivity to these two proteins is valuable in a comprehensive assessment of CVD risk.

Doctor's Data measures oxidized LDL cholesterol—found to be higher in CVD patients and correlated with the severity of CVD—as well as 16 other primary and secondary risk factors. This adds up to an unparalleled breadth of actionable information at a tremendous value.

Oxidative Stress, Glomerular Filtration and Blood Glucose

Because oxidative stress is a component of CVD, the Comprehensive Cardiovascular Risk Profile measures plasma levels of three primary antioxidants—coenzyme Q10 and α - and γ - tocopherol. The test also looks for elevated serum homocysteine, which has long been established as a risk factor.

Finally, because diabetes and chronic renal disease are also associated with markedly increased risk of CVD, long-term blood glucose homeostasis and glomerular filtration assessments round out the battery of risk factors analyzed.

Available CV Profiles and Test Components

	Comprehensive Cardiovascular Risk Profile	Cardiovascular Risk Profile
Lipid Panel: Total Cholesterol, HDL and Triglycerides (serum)	✓	✓
LDL (serum)	✓	✓
Oxidized LDL (serum)	✓	✓
Small Dense LDL (serum)	✓	✓
Lp(a) (serum)	✓	✓
Homocysteine (serum)	✓	✓
CRPhs (serum)	✓	✓
Apolipoprotein A1 (serum)	✓	✓
Apolipoprotein B (serum)	✓	✓
HbA1C (whole blood)	✓	
Cystatin C (serum)	✓	
Ferritin (serum)	✓	
Iron (serum)	✓	
Fibrinogen (plasma)	✓	
CoQ10 (plasma)	✓	
Vitamin E: Alpha and Gamma Tocopherol (plasma)	✓	
Magnesium (red blood cells)	✓	
Total Cholesterol/HDL-C Ratio	✓	✓
LDL-C/HDL-C Ratio	✓	✓
Oxidized LDL/HDL-C Ratio	✓	✓
Small Dense LDL-C/LDL-C Ratio	✓	✓
Apo B/Apo A-1 Ratio	✓	✓

Single-analyte tests are also available. Call Doctor's Data for assistance in selecting the tests that will maximize value for your patients.

For more information about all available tests, clinical information and sample reports, visit doctorsdata.com.



LAB #: B000000-0000-0
 PATIENT: Sample Patient
 ID: PATIENT-S-00002
 SEX: Female
 DOB: 1/11/1941

CLIENT #: 12345
 DOCTOR:
 Doctor's Data, Inc.
 3755 Illinois Ave.
 St. Charles, IL 60174

Comprehensive Cardiovascular Risk Profile

LIPIDS	RESULT / UNIT	REFERENCE INTERVAL	CARDIOVASCULAR RISK				
			LOW RISK	MODERATE RISK	HIGH RISK		
Total Cholesterol; serum	244 mg/dL	< 200					
HDL Cholesterol; serum	35 mg/dL	> 60					
LDL Cholesterol; serum	154 mg/dL	< 100					
Oxidized LDL; serum	67 U/L	< 45					
Small dense LDL Cholesterol*; serum	47 mg/dL	< 35					
Lp(a); serum	110 mg/dL	< 30					
Triglycerides; serum	220 mg/dL	< 150					
RATIOS							
Total Cholesterol : HDL-C	6.9	< 4.0					
LDL-C : HDL-C	4.4	< 2.0					
Oxidized LDL : HDL-C	1.9	< 0.8					
Small dense LDL-C : LDL-C	0.30	< 0.34					
Apo B : Apo A-1	1.0	< 0.8					
RISK FACTORS/INFLAMMATORY MARKERS							
Homocysteine; serum	25.3 μmol/L	< 11.0					
CRP (Hs); serum	4.5 mg/L	< 1.0					
HbA1c; whole blood	8.0 %	< 5.8					
PERCENTILE							
			2.5 th	16 th	50 th	94 th	97.5 th
Cystatin C; serum	2.9 mg/L	0.5- 1.5					
Ferritin; serum	79 ng/mL	10- 150					
Iron; serum	62.0 μg/dL	50- 170					
Fibrinogen; plasma	608 mg/dL	260- 590					
CARDIOPROTECTIVE NUTRIENTS							
CoQ10; plasma	1.8 mg/L	0.5- 2.0					
Vitamin E (α-Tocopherol); plasma	19 mg/L	6.5- 27					
Vitamin E (γ-Tocopherol); plasma	1.6 mg/L	0.06- 3.8					
Magnesium; red blood cells	52 μg/gr	39- 59					
LIPOPROTEINS							
Apolipoprotein A-1; serum	133 mg/dL	115- 220					
Apolipoprotein B; serum	138 mg/dL	50- 130					
SPECIMEN DATA							
Comments:							
Date Collected: 4/8/2012							
Date Received: 4/9/2012							
Date Completed: 4/19/2012							
Methodology: Chemistry Analyzer, Oxidized LDL by EIA, CoQ10 and Vitamin E by HPLC, RBC Mg by ICP-MS							

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The test requires only an overnight fasting blood draw. Results are presented in a clear, easy-to-understand report which details target ranges and graphically illustrates areas of elevated risk. Result-specific commentary is also provided.