

CARDIOVASCULAR RISK MARKERS

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12/13, 11/14, 2/15, 2/16, 2/17, 2/18, 2/19

Date Of Origin: December 10, 2008

Status: Current

I. POLICY/CRITERIA

A. In addition to traditional risk assessment, the following cardiovascular disease (CVD) risk markers are a covered benefit:

1. Lipoprotein-associated phospholipase A2 (Lp-PLA2) (PLAC), limited to one test per year.
2. High-sensitivity C-reactive protein (hs-CRP) if both of the following:
 - a. Using the 10-year risk assessment tool recommended by the NCEP, the patient is at intermediate risk of developing CHD (i.e. 10-year risk of 10–20%).
 - b. The patient is metabolically stable without obvious inflammatory or infectious conditions.

B. The medical literature does not support the utility of the following tests for screening, diagnosis, or management of CVD and they are **not** a covered benefit:

1. Apolipoprotein A-I (apo AI)
2. Apolipoprotein B (apo B)
3. Apolipoprotein E (apo E)
4. Homocysteine testing
5. LDL gradient gel electrophoresis
6. Lipoprotein(a) enzyme immunoassay
7. Angiotensin gene (CardiaRisk™ AGT)
8. Measurement of long chain omega-3 fatty acids
9. Interleukin 6 -174 g/c promoter polymorphism
10. Carotid intimal-media thickness
11. LipiScan IVUS Coronary Imaging System (fat composition of plaque)
12. Prothrombotic factors (e.g., plasminogen activator inhibitor [PAI-1], activated factor VII, tissue plasminogen activator [tPA], von Willebrand factor, factor V Leiden, protein C, antithrombin III, fibrinogen)
13. Skin cholesterol test (PREVU Point of Care (POC) Skin Sterol Test, PreMD Inc.)
14. Lipoprotein particle size and concentration/density measurement (e.g., NMR LipoProfile® test)

15. Natriuretic peptides
16. Peripheral arterial tonometry, endothelial function test (e.g. EndoPAT™)
17. Gene expression analysis (e.g. Corus® CAD)
18. Secretory type II phospholipase A2 (sPLA2-IIA)
19. Singulex SMC™ testing for risk of cardiac dysfunction and vascular inflammation (e.g. SMC Endothelin, SMC IL-6, SMC IL 17A, SMC c TnI and SMC TNF-α)

II. MEDICAL NECESSITY REVIEW

- Required Not Required* Not Applicable
- * Selected tests require prior authorization administered through eviCore.

III. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO:** *This policy applies to insured HMO/EPO plans.*
- ❖ **POS:** *This policy applies to insured POS plans.*
- ❖ **PPO:** *This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.*
- ❖ **ASO:** *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*
- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*
- ❖ **MEDICARE:** *Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, this policy applies.*
- ❖ **MEDICAID/HEALTHY MICHIGAN PLAN:** *For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.*

IV. DESCRIPTION

Determination of cardiovascular disease (CVD) risk is based on standard, accepted risk-stratification approaches. These approaches are based on global assessment and traditional risk factor assessment including cholesterol/low density lipoprotein levels (LDL), diet, smoking, diabetes and family and personal

medical history. The National Cholesterol Education Program (NCEP) utilizes the Framingham risk scoring calculation, endorsed by the National Heart Lung and Blood Institute (NHLBI) and the AHA for determining 10-year coronary heart disease (CHD) risk.

Newer generation cardiovascular risk markers are developed and proposed to enhance the prediction of cardiovascular disease. Evaluation of the potential clinical utility of these emerging tests includes the following:

- Does the test better identify those at higher risk than the current risk scores (Framingham risk score)?
- Does treatment differ for those at highest risk?
- Does treatment improve clinical outcomes?

V. CODING INFORMATION

ICD-10 Codes that may support medical necessity:

E71.30	Disorder of fatty-acid metabolism, unspecified
E75.21	Fabry (-Anderson) disease
E75.22	Gaucher disease
E75.240	Niemann-Pick disease type A
E75.241	Niemann-Pick disease type B
E75.242	Niemann-Pick disease type C
E75.243	Niemann-Pick disease type D
E75.248	Other Niemann-Pick disease
E75.249	Niemann-Pick disease, unspecified
E75.3	Sphingolipidosis, unspecified
E75.5	Other lipid storage disorders
E75.6	Lipid storage disorder, unspecified
E77.0–E77.9	Disorders of glycoprotein metabolism
E78.00–E78.9	Disorders of lipoprotein metabolism and other lipidemias
E88.1	Lipodystrophy, not elsewhere classified
E88.2	Lipomatosis, not elsewhere classified
E88.89	Other specified metabolic disorders
F17.200–F17.299	Nicotine dependence
I10	Essential (primary) hypertension
I11.0–I11.9	Hypertensive heart disease
I12.0–I12.9	Hypertensive chronic kidney disease
I16.0 – I16.9	Hypertensive crisis
Z82.49	Family history of ischemic heart disease and other diseases of the circulatory system

May be preventive:

Z00.00-Z00.01	Encounter for general adult medical examination
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Z00.121-Z00.129 Encounter for routine child health examination
 Z13.220 Encounter for screening for lipoid disorders
 Z01.411-Z01.419 Encounter for gynecological examination
 Z13.6 Encounter for screening for cardiovascular disorders

CPT/HCPCS Codes:

See criteria above for coverage information.

83698 Lipoprotein-associated phospholipase A2 (Lp-PLA2)
 83719 Lipoprotein, direct measurement; VLDL cholesterol
 83722 Lipoprotein, direct measurement; small dense LDL cholesterol

86141 C-reactive protein; high sensitivity (hsCRP)

84999 Unlisted chemistry procedure
(Explanatory notes must accompany claims billed with unlisted codes.)

May be preventive

80061 Lipid panel
 82465 Cholesterol, serum or whole blood, total
 83718 Lipoprotein, direct measurement; high density cholesterol (HDL cholesterol)
 83721 Lipoprotein, direct measurement; LDL cholesterol
 84478 Triglycerides

Not covered for screening

See also Policy# 91540 Genetics: Counseling, Testing and Screening

81240 F2 (prothrombin, coagulation factor II) (e.g., hereditary hypercoagulability) gene analysis, 20210G>A variant
 81241 F5 (coagulation Factor V) (e.g., hereditary hypercoagulability) gene analysis, Leiden variant

 82615 Cystine and homocystine, urine, qualitative
 83090 Homocysteine
 85300 Clotting inhibitors or anticoagulants; antithrombin III, activity
 85303 Clotting inhibitors or anticoagulants; protein C, activity
 85384 Fibrinogen; activity
 85385 Fibrinogen; antigen
 85415 Fibrinolytic factors and inhibitors; plasminogen activator
 85420 Fibrinolytic factors and inhibitors; plasminogen, except antigenic assay
 85421 Fibrinolytic factors and inhibitors; plasminogen, antigenic assay
 83700 Lipoprotein, blood; electrophoretic separation and quantitation
 83701 Lipoprotein, blood; high resolution fractionation and quantitation of lipoproteins including lipoprotein subclasses when performed (e.g., electrophoresis, ultracentrifugation)
 83704 Lipoprotein, blood; quantitation of lipoprotein particle number(s) (e.g., by nuclear magnetic resonance spectroscopy), includes lipoprotein particle subclass (es), when performed
 83695 Lipoprotein (a)

83880 Natriuretic peptide

Not covered for any dx

- 0111T Long-chain (C20-22) omega-3 fatty acids in red blood cell (RBC) membranes
- 0126T Common carotid intima-media thickness (IMT) study for evaluation of atherosclerotic burden or coronary heart disease risk factor assessment
- 0205T Intravascular catheter-based coronary vessel or graft spectroscopy (e.g., infrared) during diagnostic evaluation and/or therapeutic intervention including imaging supervision, interpretation, and report, each vessel (List separately in addition to code for primary procedure)
- ~~0337T Endothelial function assessment, using peripheral vascular response to reactive hyperemia, non-invasive (e.g., brachial artery ultrasound, peripheral artery tonometry), unilateral or bilateral~~
- 0423T Secretory type II phospholipase A2 (sPLA2-IIA)
- 0052U Lipoprotein, blood, high resolution fractionation and quantitation of lipoproteins, including all five major lipoprotein classes and subclasses of HDL, LDL, and VLDL by vertical auto profile ultracentrifugation
- 81400* Molecular pathology procedure level 1(*when billed for evaluation of angiotensin gene*)
- 81479* Unlisted molecular pathology procedure – *when billed for any test not described as covered. (Explanatory notes must accompany claim)*
- 81493 Coronary artery disease, mRNA, gene expression profiling by real-time RT-PCR of 23 genes, utilizing whole peripheral blood, algorithm reported as a risk score Corus® CAD (*Covered for PH Medicare only*)
- 82172 Apolipoprotein, each
- 82777 Galectin-3
- 83006 Growth stimulation expressed gene 2 (ST2, Interleukin 1 receptor like-1)

VI. REFERENCES

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