



CLINICAL PAYMENT AND CODING POLICY

If a conflict arises between a Clinical Payment and Coding Policy (CPCP) and any plan document under which a member is entitled to Covered Services, the plan document will govern. If a conflict arises between a CPCP and any provider contract pursuant to which a provider participates in and/or provides Covered Services to eligible member(s) and/or plans, the provider contract will govern. "Plan documents" include, but are not limited to, Certificates of Health Care Benefits, benefit booklets, Summary Plan Descriptions, and other coverage documents. BCBSTX may use reasonable discretion interpreting and applying this policy to services being delivered in a particular case. BCBSTX has full and final discretionary authority for their interpretation and application to the extent provided under any applicable plan documents.

Providers are responsible for submission of accurate documentation of services performed. Providers are expected to submit claims for services rendered using valid code combinations from Health Insurance Portability and Accountability Act (HIPAA) approved code sets. Claims should be coded appropriately according to industry standard coding guidelines including, but not limited to: Uniform Billing (UB) Editor, American Medical Association (AMA), Current Procedural Terminology (CPT®), CPT® Assistant, Healthcare Common Procedure Coding System (HCPCS), ICD-10 CM and PCS, National Drug Codes (NDC), Diagnosis Related Group (DRG) guidelines, Centers for Medicare and Medicaid Services (CMS) National Correct Coding Initiative (NCCI) Policy Manual, CCI table edits and other CMS guidelines.

Claims are subject to the code edit protocols for services/procedures billed. Claim submissions are subject to claim review including but not limited to, any terms of benefit coverage, provider contract language, medical policies, clinical payment and coding policies as well as coding software logic. Upon request, the provider is urged to submit any additional documentation.

Cardiovascular Disease Risk Assessment

Policy Number: CPCPLAB020

Version 1.0

Enterprise Medical Policy Committee Approval Date: 1/25/2022

Plan Effective Date: May 1, 2022

Description

BCBSTX has implemented certain lab management reimbursement criteria. Not all requirements apply to each product. Providers are urged to review Plan documents for eligible coverage for services rendered.

Reimbursement Information:

1) Lipid Panel – for adult patients, 18 years or older only

- a) Measurement of total cholesterol, HDL-C, LDL-C and triglycerides as part of an assessment of cardiovascular risk factors **may be reimbursable**:
 - i) Every five years in patients ages 18 to 79 years.
 - ii) Annual screening for patients of all ages at increased risk for cardiovascular disease as defined by 2013 ACC/AHA Pooled Cohort Equations to calculate 10-year risk of CVD events (see Note 1).
- b) A lipid panel **may be reimbursable** when evaluating an individual diagnosed with diseases associated with dyslipidemia limited to the following conditions:
 - i) Nephrotic Syndrome
 - ii) Hypothyroidism
 - iii) Hyperthyroidism
 - iv) Pancreatitis
 - v) Diabetes
 - vi) Chronic Kidney Disease
 - vii) Cushing Syndrome
 - viii) Pregnancy
 - ix) Cholestatic Liver Disease
 - x) Lipid metabolism disorders, such as Gaucher disease in adults
- c) Before beginning statin therapy, a lipid panel **may be reimbursable** for establishing baseline levels for monitoring therapy.
- d) For individuals receiving statin therapy, lipid panel testing **may be reimbursable** up to every four to twelve weeks after initiation or change of therapy. Subsequently, annual lipid panel testing is considered medically necessary for individuals receiving statin therapy.
- e) Lipid panel testing **may be reimbursable** for individuals on a long-term drug therapy that requires lipid monitoring, including but not limited to, Accutane and anti-psychotics.
- f) A lipid panel **may be reimbursable** when evaluating and managing an individual diagnosed with HIV and receiving antiretroviral therapy (ART):
 - i) Prior to initiating ART (baseline)
 - ii) Within one to three months after starting or modifying ART every 6 to 12 months thereafter

2) Apolipoprotein B (Apo B)

Measurement of apolipoprotein B (apoB) **may be reimbursable** for individuals with one of the following:

- a) Hypertriglyceridemia
- b) Diabetes mellitus
- c) Obesity or metabolic syndrome
- d) Other dyslipidemias (such as very low LDL-C)

3) Lipoprotein (a)

Measurement of lipoprotein a (Lp(a)) **is not reimbursable** as an adjunct to low-density lipoproteins (LDL) cholesterol in the risk assessment and management of cardiovascular disease.

4) High-sensitivity C-Reactive Protein (hs-CRP)

- a) Testing for high-sensitivity C-reactive protein (hs-CRP) **may be reimbursable** if, after quantitative risk assessment using ACC/AHA Pooled Cohort Equations to calculate 10-year risk of CVD events (see Note 1), a risk-based treatment decision is uncertain.
- b) Testing for hs-CRP **is not reimbursable** for all other indications, including
 - i) Use as a screening test for the general population
 - ii) For monitoring response to therapy

5) High-sensitivity Cardiac Troponin

Measurement of High-sensitivity cardiac troponin T (hs-cTnT) **is not reimbursable** for cardiovascular risk assessment and stratification in the outpatient setting.

6) Homocysteine

Homocysteine testing for cardiovascular disease risk assessment screening, evaluation and management **is not reimbursable**. Homocysteine testing for other indications than CVD is addressed in CPCPLAB67 Testing of Homocysteine Metabolism-Related Conditions and CPCPLAB10 Vitamin B12 and Methylmalonic Acid Testing.

7) Novel Cardiovascular Biomarkers

Measurement of novel lipid and non-lipid biomarkers (e.g., apolipoprotein AI, apolipoprotein E, B-type natriuretic peptide, cystatin C, fibrinogen, leptin, LDL subclass, HDL subclass) **is not reimbursable** as an adjunct to LDL cholesterol in the risk assessment of cardiovascular disease.

8) Cardiovascular Risk Panels

Cardiovascular risk panels, consisting of multiple individual biomarkers intended to assess cardiac risk (other than simple lipid panels, see Policy Guidelines below), **are not reimbursable**.

9) Serum Intermediate Density Lipoprotein

Measurement of serum intermediate density lipoproteins **is not reimbursable** as an indicator of cardiovascular disease risk.

10) Lipoprotein-associated Phospholipase A2

Measurement of lipoprotein-associated phospholipase A2 (Lp-PLA2) **is not reimbursable** as an indicator of risk of cardiovascular disease.

11) Secretory type II Phospholipase A2 (sPLA2-IIA)

Measurement of secretory type II phospholipase A2 (SPLA2-IIA) **is not reimbursable** in the assessment of cardiovascular risk for all indications.

12) Long-chain Omega-3 Fatty Acid

Measurement of long-chain omega-3 fatty acids in red blood cell membranes, including but not limited to its use as a cardiac risk factor **is not reimbursable**.

13) All other tests for assessing CHD risk **are not reimbursable.**

Note 1:

2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk (Goff et al., 2014): Risk factors include gender, age, race, smoking, hypertension, diabetes, total cholesterol, high and low-density lipoprotein cholesterol, and calculators are available at: “A web-based application enabling estimation of 10-year and lifetime risk of ASCVD is available at <http://my.americanheart.org/cvriskcalculator> and <http://www.cardiosource.org/en/Science-And-Quality/Practice-Guidelines-and-Quality-Standards/2013-Prevention-Guideline-Tools.aspx>.”

Policy Guidelines:

A simple lipid panel is generally composed of the following lipid markers:

- Total cholesterol
- LDL cholesterol
- HDL cholesterol
- Triglycerides

Certain calculated ratios, such as the total/HDL cholesterol may also be reported as part of a simple lipid panel.

Other types of lipid testing, i.e., apolipoproteins, lipid particle number or particle size, lipoprotein (a), etc., are not considered to be components of a simple lipid profile.

Procedure Codes

Codes
80061, 81599, 82172, 82465, 82610, 83090, 83695, 83698, 83700, 83701, 83704, 83718, 83719, 83721, 83722, 83880, 84478, 84484, 84512, 84999, 85384, 85415, 86141, 0423T, 0052U

References:

360dx. (2019). Immunodiagnostics Firm Singulex Shuts Abruptly. Retrieved from https://www.360dx.com/immunoassays/immunodiagnostics-firm-singulex-shuts-abruptly#.X_M7DFxKiUk

AACE. (2021). Consensus Statement By The American Association Of Clinical Endocrinologists And American College Of Endocrinology On The Management Of Dyslipidemia And Prevention Of Cardiovascular Disease Algorithm – 2020 Executive Summary. Retrieved from <https://pro.aace.com/pdfs/lipids/CS-2020-0490.pdf>

Aberg, J. A., Gallant, J. E., Ghanem, K. G., Emmanuel, P., Zingman, B. S., & Horberg, M. A. (2014). Primary Care Guidelines for the Management of Persons Infected With HIV: 2013 Update by the HIV Medicine Association of the Infectious Diseases Society of America. *Clinical Infectious Diseases*, 58(1), e1-e34. doi:10.1093/cid/cit665

ACC. (2018). 2018 Guideline on the Management of Blood Cholesterol. Retrieved from <https://www.acc.org/~media/Non-Clinical/Files-PDFs-Excel-MS-Word-etc/Guidelines/2018/Guidelines-Made-Simple-Tool-2018-Cholesterol.pdf>



- ADA. (2020). Standards of Medical Care in diabetes—2020. Retrieved from https://care.diabetesjournals.org/content/diacare/suppl/2019/12/20/43.Supplement_1.DC1/DC_43_S1_2020.pdf
- ADA. (2021a). Standards of Medical Care in diabetes—2021, Chapter 10. Retrieved from https://care.diabetesjournals.org/content/44/Supplement_1/S125
- ADA. (2021b). Standards of Medical Care in diabetes—2021, Chapter 13. Retrieved from https://care.diabetesjournals.org/content/44/Supplement_1/S180
- Akcay, M., & Yuksel, S. (2019). Isotretinoin-associated possible Kounis syndrome: A case report and a review of other cardiovascular side effects reported in the literature. *Turk Kardiyol Dern Ars*, 47(4), 324-328. doi:10.5543/tkda.2018.67055
- Alan, S., Unal, B., & Yildirim, A. (2016). Premature ventricular contractions associated with isotretinoin use. *An Bras Dermatol*, 91(6), 820-821. doi:10.1590/abd1806-4841.20165138
- Arnett, D. K., Blumenthal, R. S., Albert, M. A., Buroker, A. B., Goldberger, Z. D., Hahn, E. J., ... Ziaeian, B. (2019). 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*, 140(11), e596-e646. doi:10.1161/cir.0000000000000678
- Arsenault, B. J., Boekholdt, S. M., Hovingh, G. K., Hyde, C. L., DeMicco, D. A., Chatterjee, A., ... Kastelein, J. J. (2012). The 719Arg variant of KIF6 and cardiovascular outcomes in statin-treated, stable coronary patients of the treating to new targets and incremental decrease in end points through aggressive lipid-lowering prospective studies. *Circ Cardiovasc Genet*, 5(1), 51-57. doi:10.1161/circgenetics.111.960252
- ASCP. (2016). American Society for Clinical Pathology. Retrieved from <http://www.choosingwisely.org/clinician-lists/american-society-clinical-pathology-expanded-lipid-panels-to-screen-for-cardiovascular-disease/>
- Ashley, E. A., Hershberger, R. E., Caleshu, C., Ellinor, P. T., Garcia, J. G., Herrington, D. M., ... Worrall, B. B. (2012). Genetics and cardiovascular disease: a policy statement from the American Heart Association. *Circulation*, 126(1), 142-157. doi:10.1161/CIR.0b013e31825b07f8
- Beauchemin, M., Geguchadze, R., Guntur, A. R., Nevola, K., Le, P. T., Barlow, D., ... Houseknecht, K. L. (2019). Exploring mechanisms of increased cardiovascular disease risk with antipsychotic medications: Risperidone alters the cardiac proteomic signature in mice. *Pharmacol Res*, 152, 104589. doi:10.1016/j.phrs.2019.104589
- Bibbins-Domingo, K., University of California, S. F., Grossman, D. C., Group Health Research Institute, S., Washington, Curry, S. J., University of Iowa, I. C., ... Austin, U. o. T. a. (2017). Statin Use for the Primary Prevention of Cardiovascular Disease in Adults: US Preventive Services Task Force Recommendation Statement. *Jama*, 316(19), 1997-2007. doi:10.1001/jama.2016.15450



Boekholdt, S. M., Hovingh, G. K., Mora, S., Arsenault, B. J., Amarenco, P., Pedersen, T. R., ... Kastelein, J. J. (2014). Very low levels of atherogenic lipoproteins and the risk for cardiovascular events: a meta-analysis of statin trials. *J Am Coll Cardiol*, 64(5), 485-494. doi:10.1016/j.jacc.2014.02.615

Bosch, J., Gerstein, H. C., Dagenais, G. R., Diaz, R., Dyal, L., Jung, H., . . . Yusuf, S. (2012). n-3 fatty acids and cardiovascular outcomes in patients with dysglycemia. *N Engl J Med*, 367(4), 309-318. doi:10.1056/NEJMoa1203859

Cao, J., Nomura, S. O., Steffen, B. T., Guan, W., Remaley, A. T., Karger, A. B., . . . Tsai, M. Y. (2019). Apolipoprotein B discordance with low-density lipoprotein cholesterol and non-high-density lipoprotein cholesterol in relation to coronary artery calcification in the Multi-Ethnic Study of Atherosclerosis (MESA). *J Clin Lipidol*. doi:10.1016/j.jacl.2019.11.005

CardioDX. (2019). Corus CAD Overview. Retrieved from <http://www.cardiodx.com/patient-resources/corus-cad-test/>

Catapano, A. L., Graham, I., De Backer, G., Wiklund, O., Chapman, M. J., Drexel, H., . . . Cooney, M. T. (2016). 2016 ESC/EAS Guidelines for the Management of Dyslipidaemias. *Eur Heart J*, 37(39), 2999-3058. doi:10.1093/eurheartj/ehw272

CCS. (2016). 2016 Canadian Cardiovascular Society Guidelines for the Management of Dyslipidemia for the Prevention of Cardiovascular Disease in the Adult. Retrieved from [https://www.onlinecjc.ca/article/S0828-282X\(16\)30732-2/pdf](https://www.onlinecjc.ca/article/S0828-282X(16)30732-2/pdf)

CDC. (2017a). Cardiovascular Disease Biomarker Standardization Programs. Retrieved from <https://www.cdc.gov/labstandards/cvd.html>

CDC. (2017b). LSP: Lipids Standardization Program. Retrieved from <https://www.cdc.gov/labstandards/lsp.html>

CDC. (2019). Know Your Risk for Heart Disease. Retrieved from https://www.cdc.gov/heartdisease/risk_factors.htm

Charland, S. L., Agatep, B. C., Herrera, V., Schrader, B., Frueh, F. W., Ryvkin, M., . . . Stanek, E. J. (2014). Providing patients with pharmacogenetic test results affects adherence to statin therapy: results of the Additional KIF6 Risk Offers Better Adherence to Statins (AKROBATS) trial. *Pharmacogenomics J*, 14(3), 272-280. doi:10.1038/tpj.2013.27

Chou, R., Dana, T., Blazina, I., Daeges, M., Bougatsos, C., & Jeanne, T. L. (2016). Screening for Dyslipidemia in Younger Adults: A Systematic Review for the U.S. Preventive Services Task Force. *Ann Intern Med*, 165(8), 560-564. doi:10.7326/m16-0946

Colucci, W. (2019). Natriuretic peptide measurement in heart failure. Retrieved from https://www.uptodate.com/contents/natriuretic-peptide-measurement-in-heart-failure?search=Brain%20natriuretic%20peptide&source=search_result&selectedTitle=1~150&useage_type=default&display_rank=1



Cosentino, F., Grant, P. J., Aboyans, V., Bailey, C. J., Ceriello, A., Delgado, V., . . . Group, E. S. C. S. D. (2020). 2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD: The Task Force for diabetes, pre-diabetes, and cardiovascular diseases of the European Society of Cardiology (ESC) and the European Association for the Study of Diabetes (EASD). *European Heart Journal*, 41(2), 255-323. doi:10.1093/eurheartj/ehz486

Crea, F., Morrow, David. (2018). C-reactive protein in cardiovascular disease. Retrieved from https://www.uptodate.com/contents/c-reactive-protein-in-cardiovascular-disease?search=screening-for-cardiovascular-risk-with-c-reactive-protein&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

Crea, F., Morrow, David. (2020). C-reactive protein in cardiovascular disease. Retrieved from https://www.uptodate.com/contents/c-reactive-protein-in-cardiovascular-disease?search=screening-for-cardiovascular-risk-with-c-reactive-protein&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

Curry, S. J., Krist, A. H., Owens, D. K., Barry, M. J., Caughey, A. B., Davidson, K. W., . . . Wong, J. B. (2018). Screening for Cardiovascular Disease Risk With Electrocardiography: US Preventive Services Task Force Recommendation Statement. *Jama*, 319(22), 2308-2314. doi:10.1001/jama.2018.6848

de Oliveira Otto, M. C., Wu, J. H., Baylin, A., Vaidya, D., Rich, S. S., Tsai, M. Y., . . . Mozaffarian, D. (2013). Circulating and dietary omega-3 and omega-6 polyunsaturated fatty acids and incidence of CVD in the Multi-Ethnic Study of Atherosclerosis. *J Am Heart Assoc*, 2(6), e000506. doi:10.1161/jaha.113.000506

De Stefano, A., Mannucci, L., Tamburi, F., Cardillo, C., Schinzari, F., Rovella, V., . . . Tesauro, M. (2019). Lp-PLA2, a new biomarker of vascular disorders in metabolic diseases. *Int J Immunopathol Pharmacol*, 33, 2058738419827154. doi:10.1177/2058738419827154

Dehghan, A., Bis, J. C., White, C. C., Smith, A. V., Morrison, A. C., Cupples, L. A., . . . O'Donnell, C. J. (2016). Genome-Wide Association Study for Incident Myocardial Infarction and Coronary Heart Disease in Prospective Cohort Studies: The CHARGE Consortium. *PLoS One*, 11(3), e0144997. doi:10.1371/journal.pone.0144997

Deloukas, P., Kanoni, S., Willenborg, C., Farrall, M., Assimes, T. L., Thompson, J. R., . . . Samani, N. J. (2013). Large-scale association analysis identifies new risk loci for coronary artery disease. *Nat Genet*, 45(1), 25-33. doi:10.1038/ng.2480

Di Angelantonio, E., Sarwar, N., Perry, P., Kaptoge, S., Ray, K. K., Thompson, A., . . . Danesh, J. (2009). Major lipids, apolipoproteins, and risk of vascular disease. *Jama*, 302(18), 1993-2000. doi:10.1001/jama.2009.1619

Dutta, A., Henley, W., Lang, I. A., Murray, A., Guralnik, J., Wallace, R. B., & Melzer, D. (2011). The coronary artery disease-associated 9p21 variant and later life 20-year survival to cohort extinction. *Circ Cardiovasc Genet*, 4(5), 542-548. doi:10.1161/circgenetics.111.960146



Elashoff, M. R., Wingrove, J. A., Beineke, P., Daniels, S. E., Tingley, W. G., Rosenberg, S.,...
Topol, E. J. (2011). Development of a blood-based gene expression algorithm for assessment of obstructive coronary artery disease in non-diabetic patients. *BMC Med Genomics*, 4, 26.
doi:10.1186/1755-8794-4-26

Ford, I., Shah, A. S., Zhang, R., McAllister, D. A., Strachan, F. E., Caslake, M.,... Mills, N. L.
(2016). High-Sensitivity Cardiac Troponin, Statin Therapy, and Risk of Coronary Heart Disease. *J Am Coll Cardiol*, 68(25), 2719-2728. doi:10.1016/j.jacc.2016.10.020

Ganesh, S. K., Arnett, D. K., Assimes, T. L., Basson, C. T., Chakravarti, A., Ellinor, P. T.,...
Waldman, S. A. (2013). Genetics and genomics for the prevention and treatment of cardiovascular disease: update: a scientific statement from the American Heart Association. *Circulation*, 128(25), 2813-2851. doi:10.1161/01.cir.0000437913.98912.1d

Garber, A. J., Handelsman, Y., Grunberger, G., Einhorn, D., Abrahamson, M. J., Barzilay, J. I.,... Umpierrez, G. E. (2020). Consensus Statement By The American Association Of Clinical Endocrinologists And American College Of Endocrinology On The Comprehensive Type 2 Diabetes Management Algorithm – 2020 Executive Summary. *Endocrine Practice*, 26(1), 107-139. doi:10.4158/CS-2019-0472

Garg, P. K., McClelland, R. L., Jenny, N. S., Criqui, M. H., Greenland, P., Rosenson, R. S.,... Cushman, M. (2015). Lipoprotein-associated phospholipase A2 and risk of incident cardiovascular disease in a multi-ethnic cohort: The multi ethnic study of atherosclerosis. *Atherosclerosis*, 241(1), 176-182. doi:10.1016/j.atherosclerosis.2015.05.006

Genova. (2021). CV Health Plus Genomics™. Retrieved from <https://www.gdx.net/product/cv-health-plus-genomics-cardiovascular-health-test>

Gibson, M., Morrow, D. (2020). Elevated cardiac troponin concentration in the absence of an acute coronary syndrome. Retrieved from https://www.uptodate.com/contents/elevated-cardiac-troponin-concentration-in-the-absence-of-an-acute-coronary-syndrome?search=troponin&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2

Goff, D. C., Jr., Lloyd-Jones, D. M., Bennett, G., Coady, S., D'Agostino, R. B., Sr., Gibbons, R.,... Wilson, P. W. (2014). 2013 ACC/AHA guideline on the assessment of cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*, 63(25 Pt B), 2935-2959. doi:10.1016/j.jacc.2013.11.005

Gransbo, K., Almgren, P., Sjogren, M., Smith, J. G., Engstrom, G., Hedblad, B., & Melander, O. (2013). Chromosome 9p21 genetic variation explains 13% of cardiovascular disease incidence but does not improve risk prediction. *J Intern Med*, 274(3), 233-240. doi:10.1111/joim.12063

Greenland, P., Alpert, J. S., Beller, G. A., Benjamin, E. J., Budoff, M. J., Fayad, Z. A.,... Yancy, C. W. (2010). 2010 ACCF/AHA guideline for assessment of cardiovascular risk in asymptomatic adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*, 56(25), e50-103.
doi:10.1016/j.jacc.2010.09.001



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of Texas

Grundy Scott, M., Stone Neil, J., Bailey Alison, L., Beam, C., Birtcher Kim, K., Blumenthal Roger, S., . . . Yeboah, J. (2019). 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ ASPC/ NLA/PCNA Guideline on the Management of Blood Cholesterol: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*, 139(25), e1082-e1143. doi:10.1161/CIR.0000000000000625

Grundy, S. M., Stone Neil, J., Bailey Alison, L., Beam, C., Birtcher Kim, K., Blumenthal Roger, S., . . . Yeboah, J. (2019). 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/ NLA/PCNA Guideline on the Management of Blood Cholesterol. *Circulation*, 0(0), CIR.0000000000000625. Retrieved from <https://doi.org/10.1161/CIR.0000000000000625>

Guler, E., Babur Guler, G., Yavuz, C., & Kizilirmak, F. (2015). An unknown side effect of isotretinoin: pericardial effusion with atrial tachycardia. *Anatol J Cardiol*, 15(2), 168-169. doi:10.5152/akd.2015.5790

HeartLab, C. (2020). Retrieved from <http://www.clevelandheartlab.com/providers/the-science/>

Hennekens C, Kaski J, et al. Secondary prevention of cardiovascular disease. In: UpToDate, 2015, UpToDate, Waltham, MA. Accessed November 2015

Holmes MV, Simon T, Exeter HJ, et al. Secretory phospholipase A(2)-IIA and cardiovascular disease: a mendelian randomization study. *J Am Coll Cardiol*. Nov 19 2013; 62(22):1966-1976. PMID 23916927

Hopewell, J. C., Parish, S., Clarke, R., Armitage, J., Bowman, L., Hager, J., . . . Collins, R. (2011). No impact of KIF6 genotype on vascular risk and statin response among 18,348 randomized patients in the heart protection study. *J Am Coll Cardiol*, 57(20), 2000-2007. doi:10.1016/j.jacc.2011.02.015

Howell, S., Yarovova, E., Khwanda, A., & Rosen, S. D. (2019). Cardiovascular effects of psychotic illnesses and antipsychotic therapy. *Heart*, 105(24), 1852-1859. doi:10.1136/heartjnl-2017-312107

Hwang, Y. C., Ahn, H. Y., Han, K. H., Park, S. W., & Park, C. Y. (2017). Prediction of future cardiovascular disease with an equation to estimate apolipoprotein B in patients with high cardiovascular risk: an analysis from the TNT and IDEAL study. *Lipids Health Dis*, 16(1), 158. doi:10.1186/s12944-017-0549-8

Iakoubova, O. A., Tong, C. H., Rowland, C. M., Kirchgessner, T. G., Young, B. A., Arellano, A. R., . . . Sacks, F. M. (2008). Association of the Trp719Arg polymorphism in kinesin-like protein 6 with myocardial infarction and coronary heart disease in 2 prospective trials: the CARE and WOSCOPS trials. *J Am Coll Cardiol*, 51(4), 435-443. doi:10.1016/j.jacc.2007.05.057

Itakura, H., Yokoyama, M., Matsuzaki, M., Saito, Y., Origasa, H., Ishikawa, Y., . . . Matsuzawa, Y. (2011). Relationships between plasma fatty acid composition and coronary artery disease. *J Atheroscler Thromb*, 18(2), 99-107. Retrieved from <http://dx.doi.org/>

Jaffe, A. (2020). Troponin testing: Analytical considerations. Retrieved from https://www.uptodate.com/contents/troponin-testing-analytical-considerations?topicRef=86&source=see_link



Jaffe, A., Morrow, David. (2019). Biomarkers of cardiac injury other than troponin. Retrieved from https://www.uptodate.com/contents/biomarkers-of-cardiac-injury-other-than-troponin?sectionName=Why%20troponin%20is%20preferred&topicRef=86&anchor=H516921337&source=see_link#H516921337

Januzzi, J. L., Jr., Ahmad, T., Mulder, H., Coles, A., Anstrom, K. J., Adams, K. F., . . . O'Connor, C. M. (2019). Natriuretic Peptide Response and Outcomes in Chronic Heart Failure With Reduced Ejection Fraction. *J Am Coll Cardiol*, 74(9), 1205-1217. doi:10.1016/j.jacc.2019.06.055

Jellinger, P. S., Handelsman, Y., Rosenblit, P. D., Bloomgarden, Z. T., Fonseca, V. A., Garber, A. J., . . . Davidson, M. (2017). American Association Of Clinical Endocrinologists And American College Of Endocrinology Guidelines For Management Of Dyslipidemia And Prevention Of Cardiovascular Disease. *Endocr Pract*, 23(Suppl 2), 1-87. doi:10.4158/ep171764.appgl

Jepsen, A.-M. K., Langsted, A., Varbo, A., Bang, L. E., Kamstrup, P. R., & Nordestgaard, B. G. (2016). Increased Remnant Cholesterol Explains Part of Residual Risk of All-Cause Mortality in 5414 Patients with Ischemic Heart Disease. *Clinical Chemistry*, 62(4), 593. doi:10.1373/clinchem.2015.253757

Joshi, P. H., Khokhar, A. A., Massaro, J. M., Lurette, S. T., Griswold, M. E., Martin, S. S., . . . Group, t. L. I. C. L. S. (2016). Remnant Lipoprotein Cholesterol and Incident Coronary Heart Disease: The Jackson Heart and Framingham Offspring Cohort Studies. doi:10.1161/JAHA.115.002765

Karadag, A. S., Gumrukcuoglu, H. A., Gunes Bilgili, S., Ozkol, H. U., Ertugrul, D. T., Simsek, H., . . . Calka, O. (2012). Does isotretinoin therapy have any effects on electrocardiography, heart rate and blood pressure? *J Dermatolog Treat*, 23(3), 168-171. doi:10.3109/09546634.2010.546831

Kessler, T., Vilne, B., & Schunkert, H. (2016). The impact of genome-wide association studies on the pathophysiology and therapy of cardiovascular disease. *EMBO Mol Med*, 8(7), 688-701. doi:10.15252/emmm.201506174

Kilicaslan, E. E., Karakilic, M., & Erol, A. (2019). The Relationship between 10 Years Risk of Cardiovascular Disease and Schizophrenia Symptoms: Preliminary Results. *Psychiatry Investig*, 16(12), 933-939. doi:10.30773/pi.2019.0063

Kongpakkattana, K., Ademi, Z., Chaiyasothi, T., Nathisuwan, S., Zomer, E., Liew, D., & Chaiyakunapruk, N. (2019). Cost-Effectiveness Analysis of Non-Statin Lipid-Modifying Agents for Secondary Cardiovascular Disease Prevention Among Statin-Treated Patients in Thailand. *Pharmacoconomics*, 37(10), 1277-1286. doi:10.1007/s40273-019-00820-6

Kuwahara, K., Nakagawa, Y., & Nishikimi, T. (2018). Cutting Edge of Brain Natriuretic Peptide (BNP) Research - The Diversity of BNP Immunoreactivity and Its Clinical Relevance. *Circ J*, 82(10), 2455-2461. doi:10.1253/circj.CJ-18-0824

Lamprea-Montealegre, J. A., Staplin, N., Herrington, W. G., Haynes, R., Emberson, J., Baigent, C., & de Boer, I. H. (2020). Apolipoprotein B, Triglyceride-Rich Lipoproteins, and Risk of Cardiovascular Events in Persons with CKD. *Clin J Am Soc Nephrol*, 15(1), 47-60. doi:10.2215/cjn.07320619

Lee, Y. H., Scharnitz, T. P., Muscat, J., Chen, A., Gupta-Elera, G., & Kirby, J. S. (2016). Laboratory Monitoring During Isotretinoin Therapy for Acne: A Systematic Review and Meta-analysis. *JAMA Dermatol*, 152(1), 35-44. doi:10.1001/jamadermatol.2015.3091

Li, N., & Wang, J. A. (2005). Brain natriuretic peptide and optimal management of heart failure. *J Zhejiang Univ Sci B*, 6(9), 877-884. doi:10.1631/jzus.2005.B0877

Liu, G., Dong, M., Ma, S., Fu, L., Xiao, Y., Zhong, L., & Geng, J. (2019). Serum leptin is associated with first-ever ischemic stroke, lesion size and stroke severity in a Chinese cohort. *Neurol Res*, 41(2), 125-131. doi:10.1080/01616412.2018.1544399

LPSC. (2010). Lipoprotein-associated phospholipase A2 and risk of coronary disease, stroke, and mortality: collaborative analysis of 32 prospective studies. *The Lancet*, 375(9725), 1536-1544. doi:10.1016/S0140-6736(10)60319-4

Mach, F., Baigent, C., Catapano, A. L., Koskinas, K. C., Casula, M., Badimon, L., . . . Wiklund, O. (2019). 2019 ESC/EAS Guidelines for the management of dyslipidaemias: lipid modification to reduce cardiovascular risk. *Eur Heart J*. doi:10.1093/eurheartj/ehz455

MacNamara, J., Eapen, D. J., Quyyumi, A., & Sperling, L. (2015). Novel biomarkers for cardiovascular risk assessment: current status and future directions. *Future Cardiol*, 11(5), 597-613. doi:10.2217/fca.15.39

Mallat Z, Lambeau G, Tedqui A. Lipoprotein-associated and secreted phospholipases A2 in cardiovascular disease: roles as biological effectors and biomarkers. *Circulation*. Nov 23 2010; 122:2183-2200. PMID 21098459

Maners, J., Gill, D., Pankratz, N., & Tang, W. (2019).

Mark, D. B., Cowper, P. A., Anstrom, K. J., Sheng, S., Daniels, M. R., Knight, J. D., . . . Felker, G. M. (2018). Economic and Quality-of-Life Outcomes of Natriuretic Peptide-Guided Therapy for Heart Failure. *J Am Coll Cardiol*, 72(21), 2551-2562. doi:10.1016/j.jacc.2018.08.2184

Mehta, A., Virani, S. S., Ayers, C. R., Sun, W., Hoogeveen, R. C., Rohatgi, A., . . . Khera, A. (2020). Lipoprotein(a) and Family History Predict Cardiovascular Disease Risk. *J Am Coll Cardiol*, 76(7), 781-793. doi:10.1016/j.jacc.2020.06.040

Mohler, E. R., 3rd, Ballantyne, C. M., Davidson, M. H., Hanefeld, M., Ruilope, L. M., Johnson, J. L., & Zalewski, A. (2008). The effect of darapladib on plasma lipoprotein-associated phospholipase A2 activity and cardiovascular biomarkers in patients with stable coronary heart disease or coronary heart disease risk equivalent: the results of a multicenter, randomized, double-blind, placebo-controlled study. *J Am Coll Cardiol*, 51(17), 1632-1641. doi:10.1016/j.jacc.2007.11.079

Morita, S. Y. (2016). Metabolism and Modification of Apolipoprotein B-Containing Lipoproteins Involved in Dyslipidemia and Atherosclerosis. *Biol Pharm Bull*, 39(1), 1-24. doi:10.1248/bpb.b15-00716

Moyer, V. A. (2013). Screening for primary hypertension in children and adolescents: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*, 159(9), 613-619. doi:10.7326/0003-4819-159-9-201311050-00725



Mozaffarian, D. (2019). Fish oil and marine omega-3 fatty acids. Retrieved from https://www.uptodate.com/contents/fish-oil-and-marine-omega-3-fatty-acids?search=Omega-3%20Fatty%20Acid&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

Musunuru, K., Ingelsson, E., Fornage, M., Liu, P., Murphy Anne, M., Newby, L. K., . . . Woo, D. (2017). The Expressed Genome in Cardiovascular Diseases and Stroke: Refinement, Diagnosis, and Prediction: A Scientific Statement From the American Heart Association. *Circulation: Cardiovascular Genetics*, 10(4), e000037. doi:10.1161/HCG.0000000000000037

Newman, C. B., Blaha, M. J., Boord, J. B., Cariou, B., Chait, A., Fein, H. G., . . . Tannock, L. R. (2020). Lipid Management in Patients with Endocrine Disorders: An Endocrine Society Clinical Practice Guideline. *The Journal of Clinical Endocrinology & Metabolism*, 105(12), 3613-3682. doi:10.1210/clinem/dgaa674

NICE. (2016). Cardiovascular disease: risk assessment and reduction, including lipid modification. Retrieved from <https://www.nice.org.uk/guidance/cg181/chapter/1-Recommendations>

O'Malley, P. G., Arnold, M. J., Kelley, C., Spacek, L., Buelt, A., Natarajan, S., . . . Downs, J. R. (2020). Management of Dyslipidemia for Cardiovascular Disease Risk Reduction: Synopsis of the 2020 Updated U.S. Department of Veterans Affairs and U.S. Department of Defense Clinical Practice Guideline. *Ann Intern Med*, 173(10), 822-829. doi:10.7326/m20-4648

Palomaki, G. E., Melillo, S., & Bradley, L. A. (2010). Association between 9p21 genomic markers and heart disease: a meta-analysis. *Jama*, 303(7), 648-656. doi:10.1001/jama.2010.118

Palotie, A., Havulinna, A. S., De Livera, A. M., Tikkainen, E., Sijbrands, E. J., Abraham, G., . . . Salomaa, V. (2016). Genomic prediction of coronary heart disease. *Eur Heart J*, 37(43), 3267-3278. doi:10.1093/eurheartj/ehw450

Patel, R. S., Asselbergs, F. W., Quyyumi, A. A., Palmer, T. M., Finan, C. I., Tragante, V., . . . Holmes, M. V. (2014). Genetic variants at chromosome 9p21 and risk of first versus subsequent coronary heart disease events: a systematic review and meta-analysis. *J Am Coll Cardiol*, 63(21), 2234-2245. doi:10.1016/j.jacc.2014.01.065

Paynter, N. P., Chasman, D. I., Buring, J. E., Shiffman, D., Cook, N. R., & Ridker, P. M. (2009). Cardiovascular disease risk prediction with and without knowledge of genetic variation at chromosome 9p21.3. *Ann Intern Med*, 150(2), 65-72. Retrieved from <http://dx.doi.org/>

Piepoli, M. F., Hoes, A. W., Agewall, S., Albus, C., Brotons, C., Catapano, A. L., . . . Binno, S. (2016). 2016 European Guidelines on cardiovascular disease prevention in clinical practice: The Sixth Joint Task Force of the European Society of Cardiology and Other Societies on

Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of 10 societies and by invited experts)Developed with the special contribution of the European Association for Cardiovascular Prevention & Rehabilitation (EACPR). *Eur Heart J*, 37(29), 2315-2381. doi:10.1093/eurheartj/ehw106

Pieters, M., Ferreira, M., de Maat, M. P. M., & Ricci, C. (2020). Biomarker association with cardiovascular disease and mortality - The role of fibrinogen. A report from the NHANES study. *Thromb Res*, 198, 182-189. doi:10.1016/j.thromres.2020.12.009

Pignone, M. P. (2020). Management of elevated low density lipoprotein-cholesterol (LDL-C) in primary prevention of cardiovascular disease. Retrieved from <https://www.uptodate.com/contents/management-of-elevated-low-density-lipoprotein-cholesterol-ldl-c-in-primary-prevention-of-cardiovascular-disease>

Pile, H. D., & Sadiq, N. M. (2019). Isotretinoin. In StatPearls. Treasure Island (FL): StatPearls Publishing StatPearls Publishing LLC.

Polcwiartek, C., Kragholm, K., Schjerning, O., Graff, C., & Nielsen, J. (2016). Cardiovascular safety of antipsychotics: a clinical overview. *Expert Opin Drug Saf*, 15(5), 679-688. doi:10.1517/14740338.2016.1161021

Quest. (2019). CardioIQ® 9p21 Genotype Retrieved from <https://www.questdiagnostics.com/testcenter/TestDetail.action?ntc=90648&searchString=>

Rao, G., Powell-Wiley, T., Ancheta, I., Hairston, K., Kirley, K., Lear, S., . . . Rosal, M. (2015). Identification of Obesity and Cardiovascular Risk in Ethnically and Racially Diverse Populations - A Scientific Statement From the American Heart Association. *Circulation*, 132, 457–472. Retrieved from <https://www.ahajournals.org/lookup/doi/10.1161/CIR.0000000000000223>

Reklou, A., Katsiki, N., Karagiannis, A., & Athyros, V. (2020). Effects of Lipid Lowering Drugs on Arterial Stiffness: One More Way to Reduce Cardiovascular Risk? *Curr Vasc Pharmacol*, 18(1), 38-42. doi:10.2174/1570161117666190121102323

Ridker, P., MacFadyen, J., Glynn, R., & Chasman, D. (2011). Kinesin-Like Protein 6 (KIF6) Polymorphism and the Efficacy of Rosuvastatin in Primary Prevention. *Circulation: Cardiovascular Genetics*, 4(3), 312-317. doi:10.1161/CIRGENETICS.110.959353

Rizos, E. C., Ntzani, E. E., Bika, E., Kostapanos, M. S., & Elisaf, M. S. (2012). Association between omega-3 fatty acid supplementation and risk of major cardiovascular disease events: a systematic review and meta-analysis. *Jama*, 308(10), 1024-1033. doi:10.1001/2012.jama.11374

Robinson, J. G., Williams, K. J., Gidding, S., Boren, J., Tabas, I., Fisher, E. A., . . . Sniderman, A. (2018). Eradicating the Burden of Atherosclerotic Cardiovascular Disease by Lowering Apolipoprotein B Lipoproteins Earlier in Life. *J Am Heart Assoc*, 7(20), e009778. doi:10.1161/jaha.118.009778

Rosenberg, S., Elashoff, M. R., Beineke, P., Daniels, S. E., Wingrove, J. A., Tingley, W. G., . . . Topol, E. J. (2010). Multicenter validation of the diagnostic accuracy of a blood-based gene expression test for assessing obstructive coronary artery disease in nondiabetic patients. *Ann Intern Med*, 153(7), 425-434. doi:10.7326/0003-4819-153-7-201010050-00005

Rosenson, R. (2017). Lipoprotein classification, metabolism, and role in atherosclerosis. Retrieved from https://www.uptodate.com/contents/lipoprotein-classification-metabolism-and-role-in-atherosclerosis?search=apolipoprotein%20b&source=search_result&selectedTitle=1~67&usage_type=default&display_rank=1

Rosenson, R. (2018). Lipoprotein(a) and cardiovascular disease. Retrieved from https://www.uptodate.com/contents/lipoprotein-a-and-cardiovascular-disease?source=see_link



- Rosenson, R. (2020a). HDL cholesterol: Clinical aspects of abnormal values. Retrieved from https://www.uptodate.com/contents/hdl-cholesterol-clinical-aspects-of-abnormal-values?topicRef=4565&source=see_link
- Rosenson, R. (2020b). Lipoprotein classification, metabolism, and role in atherosclerosis. Retrieved from https://www.uptodate.com/contents/lipoprotein-classification-metabolism-and-role-in-atherosclerosis?search=apolipoprotein%20b&source=search_result&selectedTitle=1~67&usage_type=default&display_rank=1
- Rosenson, R. (2020c). Lipoprotein(a) and cardiovascular disease. Retrieved from https://www.uptodate.com/contents/lipoprotein-a-and-cardiovascular-disease?source=see_link
- Rosenson, R. (2020d). Measurement of blood lipids and lipoproteins. Retrieved from https://www.uptodate.com/contents/measurement-of-blood-lipids-and-lipoproteins?search=lipid%20panel&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2
- Rosenson, R. S., Smith, C. Christopher, Bauer, Kenneth A. (2020). Overview of homocysteine. Retrieved from https://www.uptodate.com/contents/overview-of-homocysteine?search=Homocysteine&source=search_result&selectedTitle=1~149&usage_type=default&display_rank=1#H3163022070
- Rosenson, R. S., & Stafforini, D. M. (2012). Modulation of oxidative stress, inflammation, and atherosclerosis by lipoprotein-associated phospholipase A2. *J Lipid Res*, 53(9), 1767-1782. doi:10.1194/jlr.R024190
- Rotella, F., Cassioli, E., Calderani, E., Lazzeretti, L., Ragghianti, B., Ricca, V., & Mannucci, E. (2020). Long-term metabolic and cardiovascular effects of antipsychotic drugs. A meta-analysis of randomized controlled trials. *Eur Neuropsychopharmacol*. doi:10.1016/j.euroneuro.2019.12.118
- Ruiz-Ramos, D., Hernández-Díaz, Y., Tovilla-Zárate, C. A., Juárez-Rojop, I., López-Narváez, M. L., González-Castro, T. B., . . . Baños-González, M. A. (2015). The Trp719Arg polymorphism of the KIF6 gene and coronary heart disease risk: systematic review and meta-analysis. *Hereditas*, 152, 3. doi:10.1186/s41065-015-0004-7
- Rule, A., Glasscock, Richard. (2020). The aging kidney. Retrieved from https://www.uptodate.com/contents/the-aging-kidney?search=Cystatin%20C%20CVD&source=search_result&selectedTitle=4~150&usage_type=default&display_rank=4
- Samani, N. J., Erdmann, J., Hall, A. S., Hengstenberg, C., Mangino, M., Mayer, B., . . . Schunkert, H. (2007). Genomewide association analysis of coronary artery disease. *N Engl J Med*, 357(5), 443-453. doi:10.1056/NEJMoa072366
- Sandhu, P. K., Musaad, S. M., Remaley, A. T., Buehler, S. S., Strider, S., Derzon, J. H., . . . Christenson, R. H. (2016). Lipoprotein Biomarkers and Risk of Cardiovascular Disease: A Laboratory Medicine Best Practices (LMBP) Systematic Review. *J Appl Lab Med*, 1(2), 214-229. doi:10.1373/jalm.2016.021006

Sarnak, M., Gibson, Michael, Henrich, William. (2019). Chronic kidney disease and coronary heart disease. Retrieved from <https://www.uptodate.com/contents/chronic-kidney-disease-and-coronary-heart-disease>

SIGN. (2017). SIGN 149 • Risk estimation and the prevention of cardiovascular disease. Retrieved from <https://www.sign.ac.uk/assets/sign149.pdf>

Singulex. (2019). Singulex Clinical Lab Blood Tests. Retrieved from <http://dev1.singulex.boldfocus.com/blood-tests-descriptions/>

Siscovick, D. S., Barringer, T. A., Fretts, A. M., Wu, J. H., Lichtenstein, A. H., Costello, R. B., . . . Mozaffarian, D. (2017). Omega-3 Polyunsaturated Fatty Acid (Fish Oil) Supplementation and the Prevention of Clinical Cardiovascular Disease: A Science Advisory From the American Heart Association. *Circulation*, 135(15), e867-e884. doi:10.1161/cir.0000000000000482

Sudhir, K. (2006). Lipoprotein-associated phospholipase A2, vascular inflammation and cardiovascular risk prediction. *Vasc Health Risk Manag*, 2(2), 153-156. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1994000/>

Superko, H. R., Superko, A. R., Lundberg, G. P., Margolis, B., Garrett, B. C., Nasir, K., & Agatston, A. S. (2014). Omega-3 Fatty Acid Blood Levels Clinical Significance Update. *Curr Cardiovasc Risk Rep*, 8(11). doi:10.1007/s12170-014-0407-4

Suthahar, N., Meems, L. M. G., van Veldhuisen, D. J., Walter, J. E., Gansevoort, R. T., Heymans, S., . . . de Boer, R. A. (2020). High-Sensitivity Troponin-T and Cardiovascular Outcomes in the Community: Differences Between Women and Men.

Tang, O., Matsushita, K., Coresh, J., Hoogeveen, R. C., Windham, B. G., Ballantyne, C. M., & Selvin, E. (2020). High-Sensitivity Cardiac Troponin I for Risk Stratification in Older Adults. *J Am Geriatr Soc*. doi:10.1111/jgs.16912

Tedeschi-Reiner, E., Strozzì, M., Skoric, B., & Reiner, Z. (2005). Relation of atherosclerotic changes in retinal arteries to the extent of coronary artery disease. *Am J Cardiol*, 96(8), 1107-1109. doi:10.1016/j.amjcard.2005.05.070

Thomas, G., Voros, S., McPherson, J., Lansky, A., Winn, M. E., Bateman, T., . . . Rosenberg, S. (2013). A Blood-Based Gene Expression Test for Obstructive Coronary Artery Disease Tested in Symptomatic Nondiabetic Patients Referred for Myocardial Perfusion Imaging The COMPASS Study. *Circulation: Cardiovascular Genetics*, 6(2), 154-162. doi:10.1161/CIRGENETICS.112.964015

Tobe, S. W., Stone, J. A., Anderson, T., Bacon, S., Cheng, A. Y. Y., Daskalopoulou, S. S., . . . Liu, P. P. (2018). Canadian Cardiovascular Harmonized National Guidelines Endeavour (C-CHANGE) guideline for the prevention and management of cardiovascular disease in primary care: 2018 update. *Cmaj*, 190(40), E1192-e1206. doi:10.1503/cmaj.180194

Tomcsányi, J., Somlói, M., Bózsik, B., Frész, T., & Nagy, E. (2018). [The value of early repeated N-terminal pro-B-type natriuretic peptide measurement in acute heart failure]. *Orv Hetil*, 159(25), 1009-1012. doi:10.1556/650.2018.31095



BlueCross BlueShield
of Texas

Trenkwalder, T., Nelson, C. P., Musameh, M. D., Mordi, I. R., Kessler, T., Pellegrini, C., . . . Samani, N. J. (2019). Effects of the coronary artery disease associated LPA and 9p21 loci on risk of aortic valve stenosis. *Int J Cardiol*, 276, 212-217. doi:10.1016/j.ijcard.2018.11.094

Trompet, S., Packard, C. J., & Jukema, J. W. (2018). Plasma apolipoprotein-B is an important risk factor for cardiovascular disease, and its assessment should be routine clinical practice. *Curr Opin Lipidol*, 29(1), 51-52. doi:10.1097/mol.0000000000000476

USPSTF. (2015). Screening for abnormal blood glucose and type 2 diabetes mellitus: U.S. preventive services task force recommendation statement. *Ann Intern Med*, 163(11), 861-868. doi:10.7326/M15-2345

USPSTF. (2018). Risk assessment for cardiovascular disease with nontraditional risk factors: U.S. preventive services task force recommendation statement. *Jama*, 320(3), 272-280. doi:10.1001/jama.2018.8359

Varbo, A., Benn, M., & Nordestgaard, B. G. (2014). Remnant cholesterol as a cause of ischemic heart disease: evidence, definition, measurement, atherogenicity, high risk patients, and present and future treatment. *Pharmacol Ther*, 141(3), 358-367. doi:10.1016/j.pharmthera.2013.11.008

Varbo, A., Benn, M., Tybjaerg-Hansen, A., Jorgensen, A. B., Frikke-Schmidt, R., & Nordestgaard, B. G. (2013). Remnant cholesterol as a causal risk factor for ischemic heart disease. *J Am Coll Cardiol*, 61(4), 427-436. doi:10.1016/j.jacc.2012.08.1026

Virani Salim, S., Alonso, A., Benjamin Emelia, J., Bittencourt Marcio, S., Callaway Clifton, W., Carson April, P., . . . null, n. (2020). Heart Disease and Stroke Statistics—2020 Update: A Report From the American Heart Association. *Circulation*, 141(9), e139-e596. doi:10.1161/CIR.0000000000000757

Virani, S. S., Brautbar, A., Lee, V. V., Elayda, M., Morrison, A. C., Grove, M. L., . . . Ballantyne, C. M. (2012). Chromosome 9p21 Single Nucleotide Polymorphisms are Not Associated with Recurrent Myocardial Infarction in Patients with Established Coronary Artery Disease. *Circ J*, 76(4), 950-956. Retrieved from <http://dx.doi.org/>

WellnessFX. (2021). Your Wellness In Your Hands. Retrieved from <https://www.wellnessfx.com/>

Whelton, P. K., Carey, R. M., Aronow, W. S., Casey, D. E., Jr., Collins, K. J., Dennison Himmelfarb, C., . . . Wright, J. T., Jr. (2018). 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: Executive Summary: A

Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Hypertension*, 71(6), 1269-1324. doi:10.1161/hyp.0000000000000066

Willeit, P., Ridker, P. M., Nestel, P. J., Simes, J., Tonkin, A. M., Pedersen, T. R., . . . Tsimikas, S. (2018). Baseline and on-statin treatment lipoprotein(a) levels for prediction of cardiovascular events: individual patient-data meta-analysis of statin outcome trials. *Lancet*, 392(10155), 1311-1320. doi:10.1016/s0140-6736(18)31652-0



Wilson, D. P., Jacobson, T. A., Jones, P. H., Koschinsky, M. L., McNeal, C. J., Nordestgaard, B. G., & Orringer, C. E. (2019). Use of Lipoprotein(a) in clinical practice: A biomarker whose time has come. A scientific statement from the National Lipid Association. *J Clin Lipidol*, 13(3), 374-392. doi:10.1016/j.jacl.2019.04.010

Wilson, P. (2017). Overview of the possible risk factors for cardiovascular disease - UpToDate. In B. Downey (Ed.), UpToDate. Retrieved from https://www.uptodate.com/contents/overview-of-the-possible-risk-factors-for-cardiovascular-disease?source=search_result&search=genetic%20cardiovascular%20risk&selectedTitle=1~150#H1267867

Wilson, P. (2020a). Cardiovascular disease risk assessment for primary prevention: Our approach. Retrieved from https://www.uptodate.com/contents/cardiovascular-disease-risk-assessment-for-primary-prevention-our-approach?search=biomarkers%20CVD&source=search_result&selectedTitle=5~150&usage_type=default&display_rank=5

Wilson, P. (2020b). Overview of the possible risk factors for cardiovascular disease - UpToDate. In B. Downey (Ed.), UpToDate. Retrieved from https://www.uptodate.com/contents/overview-of-the-possible-risk-factors-for-cardiovascular-disease?source=search_result&search=genetic%20cardiovascular%20risk&selectedTitle=1~150#H1267867

Xin H, Chen ZY, Lv XB, et al. Serum secretory phospholipase A2-IIa (sPLA2-IIa) levels in patients surviving acute myocardial infarction. *Eur Rev Med Pharmacol Sci*. Apr 2013; 17(8):999-1004. PMID 23661511

Yang, H., Guo, W., Li, J., Cao, S., Zhang, J., Pan, J., . . . Zhang, S. (2017). Leptin concentration and risk of coronary heart disease and stroke: A systematic review and meta-analysis. *PLoS One*, 12(3), e0166360. doi:10.1371/journal.pone.0166360

Zane, L. T., Leyden, W. A., Marqueling, A. L., & Manos, M. M. (2006). A population-based analysis of laboratory abnormalities during isotretinoin therapy for acne vulgaris. *Arch Dermatol*, 142(8), 1016-1022. doi:10.1001/archderm.142.8.1016

Zhernakova, D. V., Le, T. H., Kurilshikov, A., Atanasovska, B., Bonder, M. J., Sanna, S., . . . consortium, B. (2018). Individual variations in cardiovascular-disease-related protein levels are driven by genetics and gut microbiome. *Nat Genet*, 50(11), 1524-1532. doi:10.1038/s41588-018-0224-7

Policy Update History:

5/1/2022	New policy
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