MEDICAL POLICY

POLICY TITLE	GENETIC TESTING FOR STATIN-INDUCED MYOPATHY
POLICY NUMBER	MP 2.361

Effective Date:	3/1/2023

I. POLICY

Genetic testing for the presence of variants in the *SLCO1B1* gene to identify members at risk of statin-induced myopathy is considered **not medically necessary**.

Genetic testing for the presence of variants in the SLCO1B1 is considered investigational in all other situations. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

II. PRODUCT VARIATIONS

TOP

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations as discussed in Section VI. Please see additional information below.

FEP PPO - Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at: https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies

III. DESCRIPTION/BACKGROUND

TOP

Statins

HMG-CoA reductase inhibitors, or statin drugs, are the primary pharmacologic treatment for hypercholesterolemia worldwide. In the United States, an estimated 38 million people took statins in 2008. The use of statins is associated with an approximately 30% reduction in cardiovascular events across a wide variety of populations. A variety of socioeconomic disparities in cardiovascular outcomes and implementation of risk-reducing measures, including use of statins and other agents for managing hypercholesterolemia, have been identified. Women with coronary artery disease are less likely to be receiving a statin than men, and those taking statins are less likely to have therapy intensified and to achieve lipid control compared to men taking statins. Black individuals at high risk of atherosclerotic cardiovascular disease are significantly less likely to be prescribed statins compared to similar White individuals, and rates of lipid control are lower among Black and non-White Hispanic individuals taking statins compared to White individuals taking statins. These observations are mediated in part through disparities in social determinants of health, such as income, insurance, and immigration status.

Commercially Available *SLCO1B* Molecular Diagnostic Tests
Several commercial and academic labs offer genetic testing for statin-induced myopathy (*SLCO1B1*) variants, including Boston Heart Diagnostics and ARUP Laboratories. Other labs offer panel tests for drug metabolism that include the *SLCO1B1* gene..

Regulatory Status
Clinical laboratories may develop and validate tests in-house and market them as a laboratory service; laboratory-developed tests must meet the general regulatory standards of the Clinical Laboratory Improvement Amendments. The Boston Heart Statin Induced Myopathy (SLCO1B1) Genotype test and ARUP Laboratories Statin Sensitivity SLCO1B1 are available under the auspices of the Clinical Laboratory Improvement Amendments. Laboratories that offer laboratory-developed tests must be licensed by the Clinical Laboratory Improvement Amendments for high-complexity testing. To date, the Food and Drug Administration has chosen not to require any regulatory review of this test.

IV. RATIONALE

TOP

Summary of Evidence
For individuals who are taking statin drugs who receive genetic testing for SLCO1B1 variants, the evidence includes a systematic review. Relevant outcomes are symptoms, quality of life, morbid events, and treatment-related morbidity. Direct evidence for clinical utility in this setting would come from studies demonstrating that using the SLCO1B1 genotype to inform statin therapy (statin dose or choice of a specific drug) has positive outcomes in terms of lower rates of myopathy with adequate lipid control and tolerability of alternative treatments. The systematic review findings suggested that certain alleles carry less risk of statin-induced myopathy compared with others. Two randomized controlled trials were identified that evaluated adherence to medication and/or lipid control in patients whose physicians were informed of the SLCO1B1 haplotype at the beginning or at the end of the study. No significant benefits were identified in adherence to medications or in pain related to myopathy with knowledge of the SLCO1B1 haplotype status. There was a short-term (3-month) decrease (LDL in the active treatment group in one trial, but knowledge of SLCO1B1 status did not provide benefit in LDL lowering in the other trial after 12 months. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

V. DEFINITIONS

TOP

N/A

VI. BENEFIT VARIATIONS

TOP

The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member's health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits and which require preauthorization. There are

different benefit plan designs in each product administered by Capital Blue Cross. Members and providers should consult the member's health benefit plan for information or contact Capital Blue Cross for benefit information.

VII. DISCLAIMER

TOP

Capital Blue Cross's medical policies are developed to assist in administering a member's benefits, do not constitute medical advice and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member's plan of benefits, please contact Capital Blue Cross' Provider Services or Member Services. Capital Blue Cross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law

VIII. CODING INFORMATION

TOP

Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Not medically necessary; therefore, not covered:

Procedure Codes							
81328							

IX. REFERENCES

TOP

1. *Boston Heart Diagnostics Corp. The science behind the Boston Heart Statin Induced Myopathy (SLCO1B1) Genotype test 2016.*
2. *Danik JS, Chasman DI, MacFadyen JG, et al. Lack of association between SLCO1B1 polymorphisms and clinical myalgia following rosuvastatin therapy. Am Heart J. Jun 2013;165(6):1008-1014. PMID 23708174*
3. *de Keyser CE, Peters BJ, Becker ML, et al. The SLCO1B1 c.521T>C polymorphism is associated with dose decrease or switching during statin therapy in the Rotterdam Study. Pharmacogenet Genomics. Jan 2014;24(1):43-51. PMID 24263182*
4. *Hoffman JM, Haidar CE, Wilkinson MR, et al. PG4KDS: A model for the clinical implementation of pre-emptive pharmacogenetics. Am J Med Genet C Semin Med Genet. Mar 2014;166(1):45-55. PMID 24619595*
5. *Law M, Rudnicka AR. Statin safety: a systematic review. Am J Cardiol. Apr 17 2006;97(8A):52C-60C. PMID 16581329*
6. *Link E, Parish S, Armitage J, et al. SLCO1B1 variants and statin-induced myopathy--a genomewide study. N Engl J Med. Aug 21 2008; 359(8): 789-99. PMID 18650507*

7. *Luzum JA, Kitzmiller JP, Isackson PJ, et al. GATM polymorphism associated with the risk for statin-induced myopathy does not replicate in case-control analysis of 715 dyslipidemic individuals. Cell Metab. Apr 7 2015;21(4):622-627. PMID 25863251*
8. *Maggo SD, Kennedy MA, Clark DW. Clinical implications of pharmacogenetic variation on the effects of statins. Drug Saf. Jan 1 2011;34(1):1-19. PMID 21142270*
9. *McGrath SP, Walton N, Williams MS, Kim KK, Bastola K. Are providers prepared for genomic medicine: interpretation of Direct-to-Consumer genetic testing (DTC-GT) results and genetic self-efficacy by medical professionals. BMC Health Serv Res. 2019 Nov 25;19(1):844. doi: 10.1186/s12913-019-4679-8. PMID:31760949*
10. *McKenney JM, Davidson MH, Jacobson TA, et al. Final conclusions and recommendations of the National Lipid Association Statin Safety Assessment Task Force. Am J Cardiol. Apr 17 2006;97(8A):89C-94C. PMID 16581336*
11. *Pasternak RC, Smith SC, Jr., Bairey-Merz CN, et al. ACC/AHA/NHLBI Clinical Advisory on the Use and Safety of Statins. Circulation. Aug 20 2002;106(8):1024-1028. PMID 12186811*
12. *Ramsey LB, Johnson SG, Caudle KE, et al. The Clinical Pharmacogenetics Implementation Consortium guideline for SLCO1B1 and simvastatin-induced myopathy: 2014 update. Clin Pharmacol Ther. Oct 2014;96(4):423-428. PMID 24918167*
13. *Schech S, Graham D, Staffa J, et al. Risk factors for statin-associated rhabdomyolysis. Pharmacoepidemiol Drug Saf. Mar 2007;16(3):352-358. PMID 16892458*
14. *Search Collaborative Group, Link E, Parish S, et al. SLCO1B1 variants and statin-induced myopathy--a genomewide study. N Engl J Med. Aug 21 2008;359(8):789-799. PMID 18650507*
15. *Vassy JL, Chun S, Advani S, et al. Impact of SLCO1B1 pharmacogenetic testing on patient and healthcare outcomes: a systematic review. Clin Pharmacol Ther. Aug 23 2018. PMID 30137643*
16. *Vladutiu GD. Genetic predisposition to statin myopathy. Curr Opin Rheumatol. Nov 2008;20(6):648-655. PMID 18946323*
17. *Voora D, Shah SH, Spasojevic I, et al. The SLCO1B1*5 genetic variant is associated with statin-induced side effects. J Am Coll Cardiol. Oct 20 2009;54(17):1609-1616. PMID 19833260*
18. *Voora D. Genetically Guided Statin Therapy (Report no. AFRL-SA-WP-TR-2017-0005). Wright-Patterson Air Force Base, OH: USAF School of Aerospace Medicine; 2017.*
19. *Wilke RA, Ramsey LB, Johnson SG, et al. The clinical pharmacogenomics implementation consortium: CPIC guideline for SLCO1B1 and simvastatin-induced myopathy. Clin Pharmacol Ther. Jul 2012;92(1):112-117. PMID 22617227*
20. *Xiang Q, Chen SQ, Ma LY, et al. Association between SLCO1B1 T521C polymorphism and risk of statin-induced myopathy: a meta-analysis. Pharmacogenomics J. Dec 2018; 18(6): 721-729. PMID 30250148*
21. *Blue Cross Blue Shield Association Medical Policy Reference Manual. 2.04.96 Genetic Testing for Statin-Induced Myopathy, December 2022.*

X. POLICY HISTORY

TOP

MP 2.361	**5/7/18 New policy**. BCBSA adopted. Genetic testing for statin- induced myopathy is considered not medically necessary.
	3/25/19 Consensus review. No changes to policy statements. References updated.
	3/12/20 Consensus review. No changes to policy statements. References reviewed and updated. FEP variation updated.
	5/10/2021 Consensus review. Policy statement unchanged. Background, Rationale and References updated.
	11/27/2022 Consensus review. Policy statement unchanged. References, background, rationale reviewed and updated. FEP variation updated. Policy statement change from patients to members, no change to intent.

Top