Medical Policy
KIF6 Genotyping for Predicting Cardiovascular Risk and/or Effectiveness of Statin Therapy

Table of Contents
- Policy: Commercial
- Coding Information
- Policy: Medicare
- Description
- Authorization Information
- Policy History
- Information Pertaining to All Policies
- References

Policy Number: 129
BCBSA Reference Number: 2.04.67

Related Policies
- Gene Expression Testing to Predict Coronary Artery Disease, #349
- Genetic Testing for Lipoprotein-a Variants as a Decision Aid for Aspirin Treatment, #339
- Genotyping for 9p21 Single Nucleotide Polymorphisms to Predict Risk of Cardiovascular Disease or Aneurysm, #340
- Homocysteine Testing in the Screening, Diagnosis, and Management of Cardiovascular Disease, #016
- Measurement of Lipoprotein-Associated Phospholipase A2 (Lp-PLA2) in the Assessment of Cardiovascular Risk, #558
- Novel Lipid Risk Factors in Risk Assessment and Management of Cardiovascular Disease, #283

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity
Medicare Members: Managed Care HMO BlueSM and Medicare PPO BlueSM
KIF6 genotyping for predicting cardiovascular risk and/or the effectiveness of statin therapy is considered INVESTIGATIONAL.

Prior Authorization Information
Commercial Members: Managed Care (HMO and POS)
This is NOT a covered service.

Commercial Members: PPO, and Indemnity
This is NOT a covered service.

Medicare Members: HMO BlueSM
This is NOT a covered service.

Medicare Members: PPO BlueSM
This is NOT a covered service.
CPT Codes / HCPCS Codes / ICD-9 Codes

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable

CPT Codes
There is no specific CPT code for this service.

Description
Genetic testing to determine the KIF6 Trp719Arg variant status of patients is being evaluated as a prognostic test to predict risk of future cardiovascular events and/or as a pharmacogenetic test to predict response to statin therapy, particularly in high-risk patients.

Analysis of prospective observational studies of cardiovascular health and of the placebo arm of randomized controlled trials of statin intervention in at-risk populations has suggested a significant association between the Trp719Arg single nucleotide polymorphism (SNP; rs20455) in kinesin-like protein 6 (KIF6) and the development of clinical coronary artery disease (CAD).

Approximately 60% of the population carries the putative KIF6 high-risk 719Arg allele. Moreover, carriers of the 719Arg allele in the treatment arms of the statin trials appeared to be at no increased risk, or at decreased risk, of CAD or recurrent myocardial infarction (MI), depending on the intensity of the statin therapy. These results supported the development of a KIF6 Trp719Arg genotyping test for use as a predictor of CAD risk and of the likely effectiveness of statin therapy.

Summary
The data supporting the association of the KIF6 Trp719Arg SNP with coronary artery disease (CAD) outcomes are contradictory. The biologic function of the KIF6 protein is currently unknown. Evidence from large populations at different levels of vascular risk does not support a significant association with future CAD outcomes. The most recent results of treatment trials suggest that the efficacy of statin treatment appears to be similar in both carriers and non-carriers of the mutation. Because clinical validity has not been established, and it has not been determined whether the results of KIF6 genotyping can be used to improve patient management, testing for KIF6 status to predict cardiovascular risk and/or determine statin treatment benefit is considered investigational.

Policy History

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Information Pertaining to All Blue Cross Blue Shield Medical Policies
Click on any of the following terms to access the relevant information:

Medical Policy Terms of Use
Managed Care Guidelines
Indemnity/PPO Guidelines
Clinical Exception Process
Medical Technology Assessment Guidelines
References