

Medical Coverage Policy | Signal- Averaged Electrocardiography



EFFECTIVE DATE: 12|01|2001

POLICY LAST UPDATED: 12|06|2016

OVERVIEW

Signal-averaged electrocardiography (SAECG) is a technique involving computerized analysis of small segments of a standard ECG to detect abnormalities, termed ventricular late potentials (VLPs), that would be otherwise obscured by “background” skeletal muscle activity.

MEDICAL CRITERIA

Not applicable.

PRIOR AUTHORIZATION

Not applicable.

POLICY STATEMENT

BlueCHiP for Medicare and Commercial

Signal-averaged electrocardiography is not medically necessary as there is insufficient medical literature to support the efficacy of this service.

COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement or Benefit Booklet for not medically necessary coverage/benefits.

BACKGROUND

Ventricular late potentials (VLPs) reflect aberrant, asynchronous electrical impulses arising from viable isolated cardiac muscle bordering an infarcted area and are thought to be responsible for ventricular tachyarrhythmias. Therefore, VLPs, as measured by SAECG, have been investigated as a risk factor for arrhythmic events in patients with a variety of cardiac conditions, including cardiomyopathy and prior history of myocardial infarction (MI). Patients considered at high risk of ventricular arrhythmias and thus sudden death may be treated with drugs to suppress the emergence of arrhythmias or with implantable cardiac defibrillators (ICDs) to promptly detect and terminate tachyarrhythmias when they occur. Because sudden cardiac death, whether from arrhythmias or pump failure, is one of the most common causes of death after a previous MI, there is intense interest in risk stratification to target therapy. Patient groups are divided into those who have not experienced a life-threatening arrhythmia (i.e., primary prevention) and those who have (i.e., secondary prevention). SAECG is just one of many risk factors that have been investigated. Others include left ventricular ejection fraction (LVEF), arrhythmias detected on Holter monitor or electrophysiologic studies, heart rate variability, and baroreceptor sensitivity. T-wave alternans is another technique for risk stratification; it measures beat-to-beat variability, while SAECG measures beat-averaged conduction.

SAECG has not demonstrated improvements in health outcomes and remains not medically necessary for all indications.

CODING

The following code is not medically necessary for BlueCHiP for Medicare and Commercial products:

93278 Signal-averaged electrocardiography (SAECG), with or without ECG

RELATED POLICIES

Not applicable.

PUBLISHED

Provider Update, January 2017
Provider Update, May 2015
Provider Update, July 2014
Provider Update, September 2012
Provider Update, March 2012
Provider Update, January 2011
Provider Update, January 2010
Policy Update, January 2007
Policy Update, January 2006
Policy Update, November 2000
Professional Bulletin, June 1990

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3. Bailey JJ, Berson AS, Handelsman H et al. Utility of current risk stratification tests for predicting major arrhythmic events after myocardial infarction. *J Am Coll Cardiol* 2001; 38(7):1902-11.
4. Grimm W, Christ M, Bach J et al. Noninvasive arrhythmia risk stratification in idiopathic dilated cardiomyopathy: results of the Marburg Cardiomyopathy Study. *Circulation* 2003; 108(23):2883-91.
5. Huikuri HV, Tapanainen JM, Lindgren K et al. Prediction of sudden cardiac death after myocardial infarction in the betablocking era. *J Am Coll Cardiol* 2003; 42(4):652-8.
6. Bauer A, Guzik P, Barthel P et al. Reduced prognostic power of ventricular late potentials in post-infarction patients of the reperfusion era. *Eur Heart J* 2005; 26(8):755-61.
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9. Julian DG, Camm AJ, Frangin GR, et al. European Myocardial Infarct Amiodarone Trial Investigators. *Lancet* 1997; 349(9053):667-74.

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