Medical Policy
T-Wave Alternans

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Policy Number: 539
BCBSA Reference Number: 2.02.13

Related Policies
- Signal-Averaged Electrocardiography, #134

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity
Microvolt T-wave alternans as a technique of risk stratification for primary or secondary prevention of fatal arrhythmias and sudden cardiac death in patients with a history of myocardial infarction, congestive heart failure, cardiomyopathy, or other cardiac disorders, such as long-QT syndrome (e.g., Brugada syndrome), is INVESTIGATIONAL.

Medicare HMO BlueSM and Medicare PPO BlueSM Members
BCBSMA covers microvolt T-wave alternans for the evaluation of patients at risk for sudden cardiac death (SCD) from ventricular arrhythmias, only when the spectral analysis method is used for Medicare HMO Blue and Medicare PPO Blue members in accordance with CMS NCD:

National Coverage Determination (NCD) for Microvolt T-Wave Alternans (MTWA) (20.30)

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
Prior authorization is NOT required.

Medicare Members: PPO BlueSM
Prior authorization is **NOT** required.

### 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. A draft of future ICD-10 Coding related to this document, as it might look today, is included below for your reference.

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

#### CPT Codes

<table>
<thead>
<tr>
<th>CPT codes</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>93025</td>
<td>Microvolt T-wave alternans for assessment of ventricular arrhythmias</td>
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</table>

#### ICD-9 Diagnosis Coding

<table>
<thead>
<tr>
<th>ICD-9-CM diagnosis codes</th>
<th>Code Description</th>
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<tr>
<td>427.9</td>
<td>Cardiac dysrhythmia, unspecified</td>
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#### ICD-10 Diagnosis Codes

<table>
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<tr>
<th>ICD-10-CM Diagnosis codes</th>
<th>Code Description</th>
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<tr>
<td>I49.9</td>
<td>Cardiac arrhythmia, unspecified</td>
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### Description

The presence of T-wave alternans has been investigated as a risk factor for fatal arrhythmias and sudden cardiac death in patients with a history of myocardial infarction, congestive heart failure, or cardiomyopathy. Microvolt T-wave alternans refers to a beat-to-beat variability in the T-wave amplitude. Because a routine electrocardiogram cannot detect these small fluctuations, this test requires specialized sensors to detect the fluctuations and computer algorithms to evaluate the results.

T-wave alternans is a provocative test that requires gradual elevation of the heart rate to above 110 beats per minute. The test can be performed in conjunction with an exercise tolerance stress test. Test results are reported as the number of standard deviations by which the peak signal of the T-wave exceeds the background noise. This number is referred to as the “alternans ratio.” An alternans ratio of 3 or greater is typically considered a positive result, an absent alternans ratio is considered a negative result, and anything in between is considered indeterminate.

Patient groups are categorized into those who have not experienced a life-threatening arrhythmia (i.e., primary prevention) and those who have (i.e., secondary prevention). Those who have already experienced an arrhythmia are already at high risk and probably do not require testing. T-wave alternans is one of many risk factors that have been investigated for identifying candidates for primary prevention.

T-wave alternans has also been investigated as a diagnostic test for patients with syncope of unknown origin and as a noninvasive test to identify candidates for further invasive electrophysiology testing of the heart.
An example of a T-wave alternans system is the HearTwave® II Cardiac Diagnostic System by Cambridge Heart. All T-wave alternans systems are considered investigational regardless of the commercial name, the manufacturer or FDA approval.

Summary
Results from prospective multicenter studies enrolling various patient populations undergoing ICD placement as part of primary prevention strategies do not support clinical utility from microvolt T-wave alternans used to risk stratify and therefore guide placement. Therefore, this technology is considered investigational.

Policy History

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<tr>
<th>Date</th>
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<tr>
<td>7/2014</td>
<td>Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.</td>
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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