**LETTER OF MEDICAL NECESSITY FOR GENETIC TESTING FOR**    
**CATECHOLAMINERGIC POLYMORPHIC VENTRICULAR TACHYCARDIA (CPVTNext)**

Date: Date of Service/Claim

To: Utilization Review Department

Insurance Company Name, Address, City, State

Re: Patient Name, DOB, ID #

ICD-10 Codes:

The ICD-10 codes listed below are commonly received by Ambry from ordering providers for the testing described in this letter. Ambry provides this information as a customer service but makes no recommendations regarding the use of any diagnosis codes. As a reminder, it is the ordering provider’s responsibility to always determine, for the specific date of service, the appropriate diagnostic codes based on the patient’s signs and symptoms.

Code Description

I46.9 CARDIAC ARREST, CAUSE UNSPECIFIED

I47.1 SUPRAVENTRICULAR TACHYCARDIA

Z82.49 FAMILY HISTORY OF ISCHEMIC HEART DISEASE AND OTHER DISEASES OF THE CIRCULATORY SYSTEM

This letter is regarding my patient and your subscriber, referenced above, to request full coverage of medically indicated genetic testing for catecholaminergic polymorphic ventricular tachycardia (CPVTNext) to be performed by Ambry Genetics Corporation.

CPVTNext analyzes genes that are known to cause catecholaminergic polymorphic ventricular tachycardia (CPVT). CPVT results in a predisposition to ventricular tachycardia in the presence of a structurally normal heart and normal resting ECG. **Young individuals are often asymptomatic but at risk for sudden cardiac death, especially when triggered by exercise or emotional distress**. The genetic etiology of ARVC is most often associated with a gene that encodes for the cardiac ryanodine receptor (*RYR2*).1

**Significant aspects of my patient’s personal and/or family medical history that suggest CPVT are below:** [check all that apply]

* Clinical suspicion for CPVT based on exercise- or stress-induced ventricular arrhythmia
* Personal or family history of palpitations, syncope, stress and/or exercise intolerance
* Personal or family history of sudden cardiac death, especially in young individuals
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Heart Rhythm Society (HRS) has recognized the clinical utility of genetic testing for CPVT and supports it as standard of care. 1-4**

Identification of a mutation through genetic testing confirms a diagnosis of CPVT. Genetic testing also informs prognosis, screening and treatment options, prevention efforts, and genetic counseling, which can vary depending on the specific gene and inheritance pattern implicated in the disease.  Beta blockers are standard of care in patients with a confirmed diagnosis of CPVT. In CPVT patients with ventricular arrhythmias, combination therapy with the addition of Flecainide, along with possible left cardiac sympathetic denervation, may also be initiation. Implantable defibrillators are not recommended in CPVT patients3. Specifically for this patient, the impact of testing may include1-6: [check all that apply]

* Genetic testing could allow immediate management and prevention of cardiac arrest
* Genetic testing could inform lifestyle modifications for the patient
* Genetic testing could assist in long-term management and monitoring of suspected disease progression based on the results of the testing
* Genetic testing could lead to informed decisions and medical surveillance for other family members that may be at risk
* Genetic testing could alleviate the need for long-term clinical surveillance in individuals who test negative for any disease-causing variants found in my patient
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Based on the screening, lifestyle, and treatment modifications indicated above, this test has clinical utility for my patient. Due to the **risk of sudden cardiac death** associated with these mutations and the interventions available to reduce these risks, I am requesting coverage for this testing as medically necessary care and affirm that my patient has provided informed consent for genetic testing. I recommend that you support this request for coverage of genetic testing for CPVTNext for my patient.

Thank you for your time and please don’t hesitate to contact me with any questions.

Sincerely,

Ordering Clinician Name (Signature Provided on Test Requisition Form)

(MD/DO, Clinical Nurse Specialist, Nurse-Midwives, Nurse Practitioner, Physician Assistant, Genetic Counselor\*)

\*Authorized clinician requirements vary by state

**Test Details**

Test Name: CPVTNext

CPT codes: 81479

Laboratory: Ambry Genetics Corporation (TIN 33-0892453 / NPI 1861568784), a CAP-accredited and CLIA-certified laboratory located at 7 Argonaut, Aliso Viejo, CA 92656

**References**

1. Ackerman MJ, et al. HRS/EHRA expert consensus statement on the state of genetic testing for the channelopathies and cardiomyopathies. [Heart Rhythm.](https://www.ncbi.nlm.nih.gov/pubmed/?term=21787999) 2011 Aug;8(8):1308-39.
2. Priori SG, et al. HRS/EHRA/APHRS expert consensus statement on the diagnosis and management of patients with inherited primary arrhythmia syndromes. Heart Rhythm. 2013a;10:1932–63.
3. Wilde AAM, et al. EHRA/HRS/APHRS/LAHRS expert consensus statement on the state of genetic testing for cardiac diseases. Heart Rhythm. 2022 Jul;19(7):e1-e60.
4. Musunuru K, et al. Genetic Testing for Inherited Cardiovascular Diseases: Scientific Statement From the American Heart Association. Circulation. 2020;13(4):e000067.
5. Al-Khatib SM, et al. 2017 AHA/ACC/HRS Guideline for Management of Patients with Ventricular Arrhythmias and Prevention of Sudden Cardiac Death: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. J Am Coll Cardiol. 2018;72:e91–e220.
6. Schwartz PJ, et al. Impact of genetics on the clinical management of channelopathies. J Am Coll Cardiol. 2013;62:169-180.