

## Comprehensive Arrhythmia and Cardiomyopathy (Sudden Cardiac or Unexplained Death) Panels

- I. Comprehensive panels including genes for both cardiomyopathies and arrhythmias are considered **medically necessary** when:
  - A. The member meets clinical criteria for Comprehensive Cardiomyopathy Panels, **AND**
  - B. The member meets clinical criteria for Comprehensive Arrhythmia Panels.
- II. Comprehensive panels including genes for both cardiomyopathies and arrhythmias are considered **investigational** for all other indications.

## Comprehensive Cardiomyopathy Panels

- I. Comprehensive cardiomyopathy panels are considered **medically necessary** when:
  - A. The member has a diagnosis of cardiomyopathy, **OR**
  - B. The member has a first-degree relative with sudden cardiac death (SCD) or sudden unexplained death (SUD), **AND**
    1. This relative's autopsy revealed unspecified cardiomyopathy (e.g., cardiomegaly or cardiomyopathy), **OR**
    2. This relative's autopsy revealed an anatomically normal heart, **AND**
      - a) The autopsy did not reveal a cause of death.
- II. Comprehensive cardiomyopathy panels are considered **investigational** for all other indications.

**NOTE:** Multigene panels that are targeted to the cardiomyopathy phenotype observed are recommended by professional guidelines

## Comprehensive Arrhythmia Panels

- I. Comprehensive arrhythmia panels are considered **medically necessary** when:
  - A. The member meets one of the following:
    1. The member has a first-degree relative with sudden cardiac death (SCD) or sudden unexplained death (SUD) before age 50 years, **OR**
    2. The member has a first-degree relative with sudden cardiac death (SCD) at age 50 years or older, **AND**
      - a) The deceased individual had family history of premature SCD, **OR**
      - b) The deceased individual's death is suspicious for genetic heart disease, **OR**
  - B. The member has unexplained sudden cardiac arrest, **AND**
    1. Clinical tests were non-diagnostic for reversible, ischemic, or structural causes (e.g., ECG, cardiac stress tests, echocardiogram, intravenous pharmacologic provocation testing).
- II. Comprehensive arrhythmia panels are considered **investigational** for all other indications.

## DEFINITIONS

1. **Close relatives** include first, second, and third degree blood relatives:
  - a. **First-degree relatives** are parents, siblings, and children

- b. **Second-degree relatives** are grandparents, aunts, uncles, nieces, nephews, grandchildren, and half siblings
  - c. **Third-degree relatives** are great grandparents, great aunts, great uncles, great grandchildren, and first cousins
2. **Sudden cardiac arrest** is defined as “the sudden cessation of cardiac activity so that the victim becomes unresponsive, with no normal breathing and no signs of circulation. If corrective measures are not taken rapidly, this condition progresses to sudden death. Cardiac arrest should be used to signify an event as described above, that is reversed, usually by CPR and/or defibrillation or cardioversion, or cardiac pacing” (Buxton, et al).
  3. **Sudden cardiac death (SCD)** is death due to a cardiovascular cause that occurs within one hour of the onset of symptoms
  4. **Sudden unexplained death (SUD)** (also known as Sudden unexplained death syndrome or SUDS) refers to a sudden cardiac death that occurs in an apparently healthy and often young individual within an hour of the onset of symptoms and for no apparent reason

## REFERENCES

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2. Stiles MK, Wilde AAM, Abrams DJ, et al. 2020 APHRS/HRS Expert Consensus Statement on the Investigation of Decedents with Sudden Unexplained Death and Patients with Sudden Cardiac Arrest, and of Their Families [published online ahead of print, 2020 Oct 13]. *Heart Rhythm.* 2020;S1547-5271(20)30953-X. doi:10.1016/j.hrthm.2020.10.010

3. Wilde AAM, Semsarian C, Márquez MF, et al. European Heart Rhythm Association/Heart Rhythm Society/Asia Pacific Heart Rhythm Society/Latin American Heart Rhythm Society expert consensus statement on the state of genetic testing for cardiac diseases. [published correction appears in Europace. 2022 Aug 30]. *Europace*. 2022;24(8):1307-1367. doi:10.1093/europace/euac030