

The bigger picture: Genetic testing for inherited arrhythmias and cardiomyopathies



INVITAE

Arrhythmias and cardiomyopathies may have a genetic cause that affects prognosis and management. Testing can:

- Confirm a clinical diagnosis and differentiate from other causes
- Predict response to pharmacotherapies
- Inform avoidance of arrhythmia triggers, including swimming, startling, sleeping, and certain medications
- Aid in the decision to place an ICD or pacemaker

Testing also enables life-saving interventions for asymptomatic or pre-symptomatic family members. Family cascade genetic testing is universally recommended across all heritable arrhythmias and cardiomyopathies by ACC, AHA, HRS, HFSA, and PACES.

Questions? Call Invitae Clinical Consult at 800-436-3037.
Learn more about Invitae's high-quality, affordable genetic testing at www.invitae.com/cardiology.

References:

1. Al-Khatib SM *et al.* 2017 AHA/ACC/HRS guidelines for management of patients with ventricular arrhythmias and the 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.
2. Hershberger RE *et al.* Genetic evaluation of cardiomyopathy - a Heart Failure Society of America practice guideline. *J Card Fail.* 2018;24(5):281-302.
3. Ackerman MJ *et al.* HRS/EHRA expert consensus statement on the state of genetic testing for the channelopathies and cardiomyopathies. *Heart Rhythm.* 2011;8:1308-39.

2017 ACC/AHA/HRS GUIDELINE RECOMMENDATIONS

	Condition	Patient with established or suspected diagnosis	Family members
Arrhythmia	LQTS	Recommended: Class I	Recommended: Class I
	CPVT	Reasonable: Class IIa	Recommended: Class I
	Brugada syndrome	May be useful: Class IIb	Recommended: Class I
	SQTS	May be useful: Class IIb	Recommended: Class I
Cardiomyopathy	ARVC	Reasonable: Class IIa	Recommended: Class I
	HCM	Reasonable: Class IIa	Recommended: Class I
	NICM w/CCD	Reasonable: Class IIa	Recommended: Class I
SCA or SCD	Postmortem	Reasonable: Class IIa	Recommended: Class I
	SCA/D <40 years old	Further clinical evaluation for targeted genetic testing	Recommended: Class I

ARVC = arrhythmogenic right ventricular cardiomyopathy

CCD = cardiac conduction disease

CPVT = catecholaminergic polymorphic ventricular tachycardia

HCM = hypertrophic cardiomyopathy

LQTS = long QT syndrome

NICM = non-ischemic cardiomyopathy

SCA = sudden cardiac arrest

SCD = sudden cardiac death

SQTS = short QT syndrome