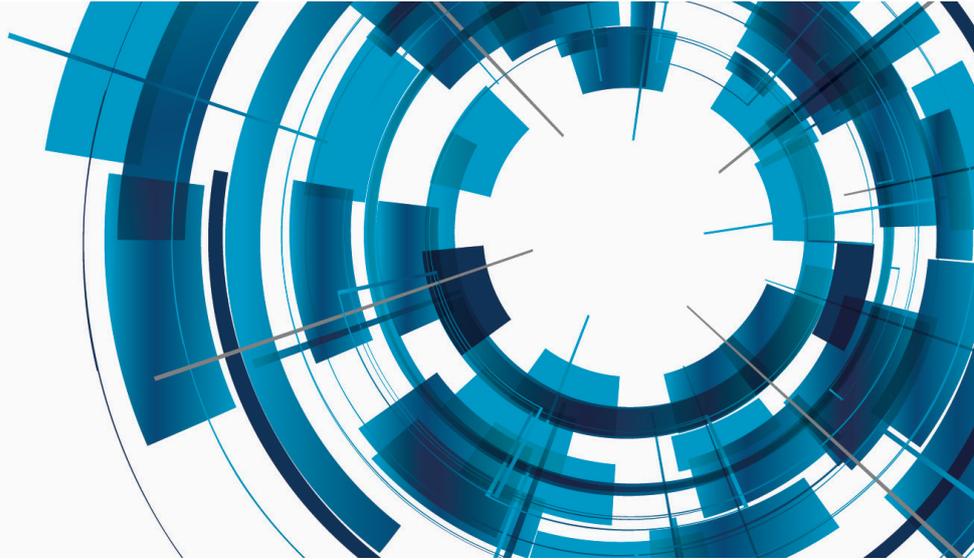


cardiac

gene panels



What are genetic heart conditions?

Genetic heart conditions are a complex group of diseases that affect the function of the heart muscle and its large blood vessels. Genetic heart disorders are caused by changes in genes responsible for the development and function of the heart and blood vessels. These gene changes, known as variants, cause changes to the structure of the heart, which means it doesn't work as it should.

What are cardiac gene panels?

Gene testing for genetic heart disorders at VCGS is performed using testing 'panels'. These panels use a technology called Next Generation Sequencing. VCGS offers eight cardiac gene panels.

Some panels are disease specific, that is they only test for one condition, such as Brugada syndrome (a specific panel). Other panels test for genes associated with a group of related cardiac conditions, such as cardiomyopathy (general panel). Your doctor will choose the panel most appropriate for you.

Our cardiac panels

Arrhythmia panels:	Full arrhythmia panel (33 genes)
	Long QT syndrome panel (13 genes)
	Brugada syndrome panel (12 genes)
	Catecholaminergic Polymorphic Ventricular Tachycardia panel (7 genes)
	Short QT syndrome panel (3 genes)
	Familial Atrial Fibrillation panel (4 genes)
Cardiomyopathy panels:	Full cardiomyopathy panel (63 genes)
	Dilated cardiomyopathy panel (39 genes)
	Hypertrophic cardiomyopathy panel (34 genes)
	Arrhythmogenic right ventricular cardiomyopathy panel (8 genes)
	Left ventricular non-compaction cardiomyopathy panel (8 genes)
Other panels:	Full aortopathy panel (17 genes)
	Structural congenital cardiac anomalies panel (18 genes)
Comprehensive genetic cardiac disorders panel:	All genes from the arrhythmia, cardiomyopathy & aortopathy panels (111 genes)
Customised panels (on request):	Custom selection of up to 5 genes

*The comprehensive panel contains all genes except those from the congenital heart disease panel. As our understanding of these disorders improves, the genes in each panel may change.

Types of heart conditions

Genetic heart disorders fall into three categories, depending on how they affect the heart or blood vessels. The genetics of these disorders is complex and involves many genes.

Cardiomyopathies:

These disorders affect the heart muscle which becomes weak, stretched, or has other structural problems. There are many types of cardiomyopathy, including dilated, hypertrophic, arrhythmogenic and non-compaction.

Arrhythmia syndromes:

Genetic arrhythmia syndromes affect the regular rate and rhythm of the heartbeat. The heart can beat too fast, too slow, or with an irregular rhythm.

Aortopathies:

These disorders affect the aorta, the main artery of the heart. Problems include the aorta becoming enlarged or weakened.

How is testing arranged?

			
A request form is required from your referring specialist doctor.	This test also requires a completed patient consent form	Blood sample collection from pathology collection service (4ml EDTA blood).	Test results are reported to the referring doctor within 8-10 weeks.

How are panel results reported?

Panel results are reported based on the type of variant found. Each will have different implications, both for the individual being tested and their family members. Your doctor will discuss these implications with you.

Variant type	What this means
Pathogenic	This variant is the likely cause of your cardiac condition.
Variant of unknown significance (VUS)	It is not known whether this variation is the cause of your cardiac condition.
No variant found	No variants that cause cardiac conditions were found.
Additional findings	A pathogenic variant in a gene associated with a different cardiac condition was found.

*More information about variant can be found on our website: vcgs.org.au/cardiac

If I have a pathogenic variant, will I develop a cardiac disorder?

No. If you have tested positive for a disease causing-variant you will not necessarily develop a cardiac disorder. You are at increased risk however, and it is recommended that you have regular heart checks. You will also have a 1 in 2 chance (50%) of passing this variant on to any children. It is recommended that you speak with a genetic counsellor about reproductive testing options.

How much does panel testing cost?

Please see vcgs.org.au/cardiac for current pricing.

Contact details

VCGS is a not-for-profit provider of a comprehensive range of clinical and laboratory genetics services. We provide genetic counselling support before and after testing.

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