



ACMG GENE LIST FOR SECONDARY/UNRELATED FINDINGS

As of March 2013 (updated 2016) the ACMG specifically recommends testing for the following list of 59 specific genes for 31 diseases/disorders in which findings would have medical benefit for the patients and families of patients. These genes include some cancer or tumor syndromes, some connective tissue diseases, cardiomyopathies, and arrhythmias. Some of these conditions have onset in adulthood and an individual may not have recognizable features now. These disorders were selected because there may be changes in medical management for an individual if the individual is known to have a genetic susceptibility to one or more of these disorders. Details regarding individual genes on this list will be provided to you upon request.

Hereditary breast and ovarian cancer	BRCA1, BRCA2
Li-Fraumeni syndrome	TP3
Familial adenomatous polyposis	APC
Peutz-Jeghers syndrome	STK11
Lynch syndrome	MLH1, MSH2, MSH6, PMS2
MYH-associated polyposis	MUTYH
Juvenile polyposis	BMPR1A, SMAD4
Von Hippel-Lindau syndrome	VHL
Multiple endocrine neoplasia type 1	MEN1
Multiple endocrine neoplasia type 2	RET
PTEN hamartoma tumor syndrome	PTEN
Retinoblastoma	RB1
Hereditary paraganglioma-pheochromocytoma syndrome	SDHD, SDHAF2, SDHC, SDHB
Tuberous sclerosis complex	TSC1, TSC2
WT1-related Wilms tumor	WT1
Neurofibromatosis type 2	NF2
Vascular, Ehlers Danlos syndrome	COL3A1
Familial thoracic aortic aneurysm	ACTA2, MYH11
Marfan syndrome	FBN1
Loeys-Dietz syndrome	TGFBR1, TGFBR2, SMAD3
Hypertrophic cardiomyopathy, dilated cardiomyopathy	MYBPC3, MYH7, TNNT2, TNNT3, TPM1, MYL3, ACTC1, PRKAG2, GLA, MYL2, LMNA
Catecholaminergic polymorphic ventricular tachycardia	RYR2

Arrhythmogenic right ventricular cardiomyopathy	PKP2, DSP, DSC2, TMEM43, DSG2
Long QT syndrome	KCNQ1, KCNH2
Long QT syndrome; Brugada syndrome; dilated cardiomyopathy	SCN5A
Familial hypercholesterolemia	LDLR, APOB, PCSK9
Wilson disease	ATP7B
Ornithine transcarbamylase deficiency	OTC
Malignant hyperthermia susceptibility	RYR1, CACNA1S

If a genetic change is identified in one of these genes, further testing for that specific gene may be recommended. The absence of a reportable finding in these genes does not mean that an individual has no disease-causing changes in these genes, so future testing if the individual has symptoms or features of one of the conditions caused by these genes should be considered. Coverage of these genes through whole exome sequencing may not be as comprehensive as in panels specifically designed to investigate them.