Reporting

- Samples for the Adult-Onset Disease Risk Screening undergo a genotyping array with custom analysis of specific variants in 78 genes associated with medically-actionable disease (ACMG SF3.1). Pathogenic variants in these genes are rare; therefore, most individuals receive a negative report (no actionable findings). For individuals with a pathogenic or likely pathogenic variant (per ACMG/AMP guidelines) in one or more of these genes, orthogonal testing for the variant is performed prior to reporting.

Adult-Onset Disease Risk Screening List				
Gene	**Disease/Phenotype**	**Disorder MIM**	**Inheritance**	**Variants to report**
ACTA2	Familial thoracic aortic aneurysm	611788	AD	All P/LP
ACTC1	Hypertrophic cardiomyopathy	612098	AD	All P/LP
ACVRL1	Hereditary hemorrhagic telangiectasia	600376	AD	All P/LP
APC	Familial adenomatous polyposis	175100	AD	All P/LP
APOB	Familial hypercholesterolemia	144010	AD	All P/LP
ATP7B	Wilson disease	277900	AR	P/LP (2 variants)
BAG3	Dilated cardiomyopathy	613881	AD	All P/LP
	Myofibrillar myopathy	612954	AD	All P/LP
BMPR1A	Juvenile polyposis syndrome	174900	AD	All P/LP
BRCA1	Hereditary breast and ovarian cancer	604370	AD	All P/LP
BRCA2	Hereditary breast and ovarian cancer	612555	AD	All P/LP
BTD	Biotinidase deficiency	253260	AR	P/LP (2 variants)
CACNA1S	Malignant hyperthermia	601887	AD	All P/LP
CASQ2	Catecholaminergic polymorphic ventricular tachycardia	611938	AR	P/LP (2 variants)
COL3A1	Ehlers-Danlos syndrome, vascular type	130050	AD	All P and LP
DES	Dilated cardiomyopathy	604765	AD	All P/LP
DES	Myofibrillar myopathy	601419	AD	All P/LP
DSC2	Arrhythmogenic right ventricular cardiomyopathy	610476	AD	All P/LP
DSG2	Arrhythmogenic right ventricular cardiomyopathy	610193	AD	All P/LP
DSP	Arrhythmogenic right ventricular cardiomyopathy	607450	AD	All P/LP
	Dilated cardiomyopathy	615821	AD	All P/LP
ENG	Hereditary hemorrhagic telangiectasia	187300	AD	All P/LP

FBN1	Marfan syndrome	154700	AD	All P/LP
FLNC	Dilated cardiomyopathy	617047	AD	All P/LP
	Myofibrillar myopathy	609524	AD	All P/LP
GAA	Pompe disease	232300	AR	P/LP (2 variants)
GLA	Fabry disease	301500	XL	All hemi, het, hom P/LP
HFE	Hereditary hemochromatosis	235200	AR	p.C282Y hom only
HNF1A	Maturity-onset of diabetes of the young	600496	AD	All P/LP
KCNH2	Long-QT syndrome type 2	613688	AD	All P/LP
KCNQ1	Long-QT syndrome type 1	192500	AD	All P/LP
LDLR	Familial hypercholesterolemia	143890	AD	All P/LP
LMNA	Dilated cardiomyopathy	115200	AD	All P/LP
MAX	Hereditary paraganglioma-pheochromocytoma syndrome	171300	AD	All P/LP
MEN1	Multiple endocrine neoplasia type 1	131100	AD	All P/LP
MLH1	Lynch syndrome	609310	AD	All P/LP
MSH2	Lynch syndrome	120435	AD	All P/LP
MSH6	Lynch syndrome	614350	AD	All P/LP
MUTYH	*MUTYH*-associated polyposis	608456	AR	P/LP (2 variants)
MYBPC3	Hypertrophic cardiomyopathy	115197	AD	All P/LP
MYH11	Familial thoracic aortic aneurysm	132900	AD	All P/LP
MYH7	Hypertrophic cardiomyopathy	192600	AD	All P/LP
	Dilated cardiomyopathy	613426	AD	All P/LP
MYL2	Hypertrophic cardiomyopathy	608758	AD	All P/LP
MYL3	Hypertrophic cardiomyopathy	608751	AD	All P/LP
NF2	Neurofibromatosis type 2	101000	AD	All P/LP
OTC	Ornithine transcarbamylase deficiency	311250	XL	All hemi, het, hom P/LP
PALB2	Hereditary breast cancer	114480	AD	All P/LP
PCSK9	Familial hypercholesterolemia	603776	AD	All P/LP
PKP2	Arrhythmogenic right ventricular cardiomyopathy	609040	AD	All P/LP
PMS2	Lynch syndrome	614337	AD	All P/LP
PRKAG2	Hypertrophic cardiomyopathy	600858	AD	All P/LP

PTEN	*PTEN* hamartoma tumor syndrome	158350	AD	All P/LP
RB1	Retinoblastoma	180200	AD	All P/LP
RBM20	Dilated cardiomyopathy	613172	AD	All P/LP
RET	Familial medullary thyroid cancer	155240	AD	All P/LP
	Multiple endocrine neoplasia type 2A	171400	AD	All P/LP
	Multiple endocrine neoplasia type 2B	162300	AD	All P/LP
RPE65	*RPE65*-related retinopathy	204100, 613794	AR	P/LP (2 variants)
RYR1	Malignant hyperthermia	145600	AD	All P/LP
RYR2	Catecholaminergic polymorphic ventricular tachycardia	604772	AD	All P/LP
SCN5A	Long QT syndrome type 3	603830	AD	All P/LP
	Brugada syndrome	601144	AD	All P/LP
	Dilated cardiomyopathy	601154	AD	All P/LP
SDHAF2	Hereditary paraganglioma-pheochromocytoma syndrome	601650	AD	All P/LP
SDHB	Hereditary paraganglioma-pheochromocytoma syndrome	115310, 171300	AD	All P/LP
SDHC	Hereditary paraganglioma-pheochromocytoma syndrome	605373	AD	All P/LP
SDHD	Hereditary paraganglioma-pheochromocytoma syndrome	168000, 171300	AD	All P/LP
SMAD3	Loeys-Dietz syndrome	613795	AD	All P/LP
SMAD4	Juvenile polyposis syndrome	174900	AD	All P/LP
	Hereditary hemorrhagic telangiectasia	175050	AD	All P/LP
STK11	Peutz-Jeghers syndrome	175200	AD	All P/LP
TGFBR1	Loeys-Dietz syndrome	609192	AD	All P/LP
TGFBR2	Loeys-Dietz syndrome	610168	AD	All P/LP
TMEM127	Hereditary paraganglioma-pheochromocytoma syndrome	171300	AD	All P/LP
TMEM43	Arrhythmogenic right ventricular cardiomyopathy	604400	AD	All P/LP
TNNC1	Dilated cardiomyopathy	611879	AD	All P/LP
TNNI3	Hypertrophic cardiomyopathy	613690	AD	All P/LP
TNNT2	Dilated cardiomyopathy	601494	AD	All P/LP
	Hypertrophic cardiomyopathy	115195	AD	All P/LP

TP53	Li-Fraumeni syndrome	151623	AD	All P/LP
TPM1	Hypertrophic cardiomyopathy	115196	AD	All P/LP
TRDN	Catecholaminergic polymorphic ventricular tachycardia	615441	AR	All P/LP
	Long QT syndrome	n/a	AR	All P/LP
TSC1	Tuberous sclerosis complex	191100	AD	All P/LP
TSC2	Tuberous sclerosis complex	613254	AD	All P/LP
TTN	Dilated cardiomyopathy	604145	AD	P/LP (truncating variants only)
TTR	Hereditary transthyretin-related amyloidosis	105210	AD	All P/LP
VHL	Von Hippel-Lindau syndrome	193300	AD	All P/LP
WT1	*WT1*-related Wilms tumor	194070	AD	All P/LP
Inheritance: AD=autosomal dominant; AR=autosomal recessive inheritance; XL=X-linked Variants to report: P=pathogenic; LP=likely pathogenic; hemi=hemizygous; het=heterozygous; hom=homozygous				

- Sample Report