

CustomNext-Cardio (9520) or Reaccessioning (9520-A) **supplemental ordering form**

PATIENT INFORMATION			
Last Name	First Name	Middle Initial	DOB (MM/DD/YY)

CUSTOMIZE YOUR PANEL
<p>To create your own panel, select desired genes below OR select a multi-gene test option as a base and add or remove genes below:</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><input type="checkbox"/> ARVCNext (8904): 11 gene arrhythmogenic right ventricular cardiomyopathy test</p> <p><input type="checkbox"/> CardioNext (8911): 92 gene cardiomyopathy and arrhythmia test</p> <p><input type="checkbox"/> CMNext (8887): 56 gene cardiomyopathy test</p> <p><input type="checkbox"/> CPVNext (8902): 4 gene catecholaminergic polymorphic ventricular tachycardia test</p> <p><input type="checkbox"/> DCMNext (8884): 37 gene dilated cardiomyopathy test</p> <p><input type="checkbox"/> FCSNext (8920): 5 genes for familial chylomicronemia syndrome</p> <p><input type="checkbox"/> FHNext (8680): 4 gene familial hypercholesterolemia test</p> <p><input type="checkbox"/> HCMNext (8936): 30 gene hypertrophic cardiomyopathy test</p> </div> <div style="width: 48%;"> <p><input type="checkbox"/> HHTNext (8672): 6 genes for hereditary hemorrhagic telangiectasia</p> <p><input type="checkbox"/> LongQTNext (8890): 17 gene long QT, Brugada, and short QT test</p> <p><input type="checkbox"/> NoonanNext (8402): 18 gene RASopathy test</p> <p><input type="checkbox"/> RhythmNext (8900): 42 gene inherited arrhythmia test</p> <p><input type="checkbox"/> Sitosterolemia (8930): 2 genes for sitosterolemia</p> <p><input type="checkbox"/> TAADNext (8789): 35 genes for thoracic aortic aneurysms/dissections</p> </div> </div> <p style="text-align: right; font-size: small;">A list of genes for each multi-gene test is available on ambrygen.com.</p>

CUSTOM GENE SELECTION																	
<input type="checkbox"/> ADD			AKAP9, ANK2, CACNA1C, CALM1, CALM2, CALM3, CAV3, KCNE1, KCNE2, KCNH2, KCNJ2, KCNJ5, KCNQ1, SCN4B, SCN5A, SNTA1, TRDN <i>(These genes are included in LongQTNext. All 17 genes must be ordered as a bundle.)</i>														
ADD	GENE	REMOVE	ADD	GENE	REMOVE	ADD	GENE	REMOVE	ADD	GENE	REMOVE	ADD	GENE	REMOVE	ADD	GENE	REMOVE
Arrhythmias & Cardiomyopathies			<input type="checkbox"/>	GLA	<input type="checkbox"/>	<input type="checkbox"/>	SCN1B	<input type="checkbox"/>	<input type="checkbox"/>	NRAS	<input type="checkbox"/>	<input type="checkbox"/>	FOXE3	<input type="checkbox"/>	<input type="checkbox"/>	APOB	<input type="checkbox"/>
<input type="checkbox"/>	ABCC9	<input type="checkbox"/>	<input type="checkbox"/>	GPD1L	<input type="checkbox"/>	<input type="checkbox"/>	SCN2B	<input type="checkbox"/>	<input type="checkbox"/>	PPP1CB	<input type="checkbox"/>	<input type="checkbox"/>	LOX	<input type="checkbox"/>	<input type="checkbox"/>	APOC2	<input type="checkbox"/>
<input type="checkbox"/>	ACTC1	<input type="checkbox"/>	<input type="checkbox"/>	HCN4	<input type="checkbox"/>	<input type="checkbox"/>	SCN3B	<input type="checkbox"/>	<input type="checkbox"/>	PTPN1 ²	<input type="checkbox"/>	<input type="checkbox"/>	MAT2A	<input type="checkbox"/>	<input type="checkbox"/>	APOC3	<input type="checkbox"/>
<input type="checkbox"/>	ACTN2	<input type="checkbox"/>	<input type="checkbox"/>	JPH2	<input type="checkbox"/>	<input type="checkbox"/>	TAZ	<input type="checkbox"/>	<input type="checkbox"/>	RAF1 ²	<input type="checkbox"/>	<input type="checkbox"/>	MED12	<input type="checkbox"/>	<input type="checkbox"/>	APOE	<input type="checkbox"/>
<input type="checkbox"/>	ACTN2	<input type="checkbox"/>	<input type="checkbox"/>	JUP	<input type="checkbox"/>	<input type="checkbox"/>	TBX20	<input type="checkbox"/>	<input type="checkbox"/>	RASA1 ¹	<input type="checkbox"/>	<input type="checkbox"/>	MFAP5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Report APOE homozygous e2 allele	
<input type="checkbox"/>	ALMS1	<input type="checkbox"/>	<input type="checkbox"/>	KCND3	<input type="checkbox"/>	<input type="checkbox"/>	TBX5	<input type="checkbox"/>	<input type="checkbox"/>	RIT ²	<input type="checkbox"/>	<input type="checkbox"/>	MYH11	<input type="checkbox"/>	<input type="checkbox"/>	CYP27A1	<input type="checkbox"/>
<input type="checkbox"/>	ALPK3	<input type="checkbox"/>	<input type="checkbox"/>	KCNE3	<input type="checkbox"/>	<input type="checkbox"/>	TCAP	<input type="checkbox"/>	<input type="checkbox"/>	SHOC2	<input type="checkbox"/>	<input type="checkbox"/>	MYLK	<input type="checkbox"/>	<input type="checkbox"/>	GPIHBP1	<input type="checkbox"/>
<input type="checkbox"/>	ANKRD1	<input type="checkbox"/>	<input type="checkbox"/>	KCNJ8	<input type="checkbox"/>	<input type="checkbox"/>	TECRL	<input type="checkbox"/>	<input type="checkbox"/>	SOS1 ²	<input type="checkbox"/>	<input type="checkbox"/>	NOTCH1	<input type="checkbox"/>	<input type="checkbox"/>	LCAT	<input type="checkbox"/>
<input type="checkbox"/>	BAG3	<input type="checkbox"/>	<input type="checkbox"/>	LAMA4	<input type="checkbox"/>	<input type="checkbox"/>	TMEM43	<input type="checkbox"/>	<input type="checkbox"/>	SOS2 ²	<input type="checkbox"/>	<input type="checkbox"/>	PLOD1	<input type="checkbox"/>	<input type="checkbox"/>	LDLR	<input type="checkbox"/>
<input type="checkbox"/>	CACNA2D1	<input type="checkbox"/>	<input type="checkbox"/>	LAMP2	<input type="checkbox"/>	<input type="checkbox"/>	TNNC1	<input type="checkbox"/>	<input type="checkbox"/>	SPRED1	<input type="checkbox"/>	<input type="checkbox"/>	PRDM5	<input type="checkbox"/>	<input type="checkbox"/>	LDLRAP1	<input type="checkbox"/>
<input type="checkbox"/>	CACNB2	<input type="checkbox"/>	<input type="checkbox"/>	LDB3	<input type="checkbox"/>	<input type="checkbox"/>	TNNI3	<input type="checkbox"/>	Thoracic Aortic Aneurysms/Dissections, Marfan, Related Disorders			<input type="checkbox"/>	PRKG1	<input type="checkbox"/>	<input type="checkbox"/>	LIPA	<input type="checkbox"/>
<input type="checkbox"/>	CASQ2	<input type="checkbox"/>	<input type="checkbox"/>	LMNA	<input type="checkbox"/>	<input type="checkbox"/>	TNNT2	<input type="checkbox"/>	<input type="checkbox"/>	ACTA2	<input type="checkbox"/>	<input type="checkbox"/>	SKI	<input type="checkbox"/>	<input type="checkbox"/>	LMF1	<input type="checkbox"/>
<input type="checkbox"/>	CRYAB	<input type="checkbox"/>	<input type="checkbox"/>	MYBPC3	<input type="checkbox"/>	<input type="checkbox"/>	TPM1	<input type="checkbox"/>	<input type="checkbox"/>	BGN	<input type="checkbox"/>	<input type="checkbox"/>	SLC2A10	<input type="checkbox"/>	<input type="checkbox"/>	LPL	<input type="checkbox"/>
<input type="checkbox"/>	CSRP3	<input type="checkbox"/>	<input type="checkbox"/>	MYH6	<input type="checkbox"/>	<input type="checkbox"/>	TRPM4	<input type="checkbox"/>	<input type="checkbox"/>	CBS	<input type="checkbox"/>	<input type="checkbox"/>	SMAD3	<input type="checkbox"/>	<input type="checkbox"/>	PCSK9	<input type="checkbox"/>
<input type="checkbox"/>	DES	<input type="checkbox"/>	<input type="checkbox"/>	MYH7	<input type="checkbox"/>	<input type="checkbox"/>	TTN	<input type="checkbox"/>	<input type="checkbox"/>	CHST14	<input type="checkbox"/>	<input type="checkbox"/>	SMAD4 ¹	<input type="checkbox"/>	<input type="checkbox"/>	SLCO1B1 c.521T>C ³	<input type="checkbox"/>
<input type="checkbox"/>	DMD	<input type="checkbox"/>	<input type="checkbox"/>	MYL2	<input type="checkbox"/>	<input type="checkbox"/>	TTR	<input type="checkbox"/>	<input type="checkbox"/>	COL1A1	<input type="checkbox"/>	<input type="checkbox"/>	TGFB2	<input type="checkbox"/>	Hereditary Hemorrhagic Telangiectasia		
<input type="checkbox"/>	DOLK	<input type="checkbox"/>	<input type="checkbox"/>	MYL3	<input type="checkbox"/>	<input type="checkbox"/>	TXNRD2	<input type="checkbox"/>	<input type="checkbox"/>	COL1A2	<input type="checkbox"/>	<input type="checkbox"/>	TGFB3	<input type="checkbox"/>	<input type="checkbox"/>	TGFB1	<input type="checkbox"/>
<input type="checkbox"/>	DSC2	<input type="checkbox"/>	<input type="checkbox"/>	MYOZ2	<input type="checkbox"/>	<input type="checkbox"/>	VCL	<input type="checkbox"/>	<input type="checkbox"/>	COL3A1	<input type="checkbox"/>	<input type="checkbox"/>	TGFB2	<input type="checkbox"/>	<input type="checkbox"/>	TGFB2	<input type="checkbox"/>
<input type="checkbox"/>	DSG2	<input type="checkbox"/>	<input type="checkbox"/>	MYPN	<input type="checkbox"/>	RASopathies			<input type="checkbox"/>	COL5A1	<input type="checkbox"/>	<input type="checkbox"/>	TNXB	<input type="checkbox"/>	<input type="checkbox"/>	ENG	<input type="checkbox"/>
<input type="checkbox"/>	DSP	<input type="checkbox"/>	<input type="checkbox"/>	NEXN	<input type="checkbox"/>	<input type="checkbox"/>	BRAF	<input type="checkbox"/>	<input type="checkbox"/>	COL5A2	<input type="checkbox"/>	<input type="checkbox"/>	ZNF469	<input type="checkbox"/>	<input type="checkbox"/>	EPHB4	<input type="checkbox"/>
<input type="checkbox"/>	EMD	<input type="checkbox"/>	<input type="checkbox"/>	NKX2-5	<input type="checkbox"/>	<input type="checkbox"/>	CBL	<input type="checkbox"/>	<input type="checkbox"/>	EFEMP2	<input type="checkbox"/>	Lipid Disorders			<input type="checkbox"/>	GDF2	<input type="checkbox"/>
<input type="checkbox"/>	EYA4	<input type="checkbox"/>	<input type="checkbox"/>	PKP2	<input type="checkbox"/>	<input type="checkbox"/>	HRAS	<input type="checkbox"/>	<input type="checkbox"/>	ABCA1	<input type="checkbox"/>	<input type="checkbox"/>	ABCA1	<input type="checkbox"/>	Other		
<input type="checkbox"/>	FHL1	<input type="checkbox"/>	<input type="checkbox"/>	PLN	<input type="checkbox"/>	<input type="checkbox"/>	KRAS	<input type="checkbox"/>	<input type="checkbox"/>	ABCG5	<input type="checkbox"/>	<input type="checkbox"/>	ABCG5	<input type="checkbox"/>	<input type="checkbox"/>	GAA	<input type="checkbox"/>
<input type="checkbox"/>	FKRP	<input type="checkbox"/>	<input type="checkbox"/>	PRKAG2	<input type="checkbox"/>	<input type="checkbox"/>	LZTR1	<input type="checkbox"/>	<input type="checkbox"/>	ABCG8	<input type="checkbox"/>	<input type="checkbox"/>	ABCG8	<input type="checkbox"/>	<input type="checkbox"/>	GATA4	<input type="checkbox"/>
<input type="checkbox"/>	FKTN	<input type="checkbox"/>	<input type="checkbox"/>	RBM20	<input type="checkbox"/>	<input type="checkbox"/>	MAP2K1	<input type="checkbox"/>	<input type="checkbox"/>	APOA1	<input type="checkbox"/>	<input type="checkbox"/>	APOA1	<input type="checkbox"/>	<input type="checkbox"/>	JAG1	<input type="checkbox"/>
<input type="checkbox"/>	FLNC	<input type="checkbox"/>	<input type="checkbox"/>	RYR2	<input type="checkbox"/>	<input type="checkbox"/>	MAP2K2	<input type="checkbox"/>	<input type="checkbox"/>	APOAS	<input type="checkbox"/>	<input type="checkbox"/>	APOAS	<input type="checkbox"/>	<input type="checkbox"/>	TBX1	<input type="checkbox"/>
<input type="checkbox"/>	GATAD1	<input type="checkbox"/>	<input type="checkbox"/>	SCN10A	<input type="checkbox"/>	<input type="checkbox"/>	NF1	<input type="checkbox"/>	<input type="checkbox"/>	FLNA	<input type="checkbox"/>						

¹Also associated with HHT ²Also associated with cardiomyopathy (RAF1 is associated with both DCM and HCM) ³Available as an add-on when other lipid genes are ordered

Total Gene Count (REQUIRED: include total number of genes on your CustomNext-Cardio panel): _____

REFLEX TESTING
1. <input type="checkbox"/> Test Code: _____ Test Name: _____ reflex to 2. <input type="checkbox"/> Test Code: _____ Test Name: _____

RE-REQUISITIONING ORDERS (Available within 90 days of original report date for any of the multi-gene panels listed above)
Accession #: _____ Previously reported hereditary cardiovascular panel: _____ <input type="checkbox"/> (9520-A) Add the gene(s) selected above to the previously-reported panel for this patient
Medical Professional Signature: _____ Date: _____ Medical Professional Name (Print): _____

CustomNext-*Cardio* GENE DECISION GUIDE

With CustomNext-*Cardio*, you can choose from up to 167 genes associated with heritable cardiovascular and lipid disorders to create a customized panel that best fits your patient's needs. Below is a list of genes that you may want to consider for each different condition. Since some genes are associated with more than one condition, genes may be listed under more than one category.

THORACIC AORTIC ANEURYSMS/DISSECTIONS, MARFAN SYNDROME, AND RELATED DISORDERS

ACTA2, BGN, CBS, CHST14, COL1A1, COL1A2, COL3A1, COL5A1, COL5A2, EFEMP2, FBN1, FBN2, FKBP14, FLNA, FOXE3, LOX, MAT2A, MED12, MFAP5, MYH11, MYLK, NOTCH1, PLOD1, PRDM5, PRKG1, SKI, SLC2A10, SMAD3, SMAD4, TGFB2, TGFB3, TGFBFR1, TGFBFR2, TNXB, ZNF469

NOONAN SYNDROME AND OTHER RASOPATHIES

BRAF, CBL, HRAS, KRAS, LZTR1, MAP2K1, MAP2K2, NF1, NRAS, PPP1CB, PTPN11, RAF1, RASA1, RIT1, SHOC2, SOS1, SOS2, SPRED1

HYPERTROPHIC CARDIOMYOPATHY

ACTC1, ACTN2, ALPK3, ANKRD1, CSRP3, FHL1, FLNC, GLA, JPH2, LAMP2, MYBPC3, MYH6, MYH7, MYL2, MYL3, MYPN, NEXN, PLN, PRKAG2, PTPN11, RAF1, RIT1, SOS1, TCAP, TNNC1, TNNI3, TNNT2, TPM1, TTR, VCL

DILATED CARDIOMYOPATHY

ABCC9, ACTC1, ACTN2, ALMS1, ANKRD1, BAG3, CSRP3, DES, DMD, DOLK, DSP, FKRP, FLNC, LAMA4, LAMP2, LDB3, LMNA, MYBPC3, MYH6, MYH7, MYPN, NEXN, NKX2-5, PLN, RAF1, RBM20, SCN5A, TAZ, TBX20, TCAP, TNNC1, TNNI3, TNNT2, TPM1, TTN, TTR, VCL

ARRHYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY

DES, DSC2, DSG2, DSP, JUP, LMNA, PKP2, PLN, RYR2, SCN5A, TMEM43

LONG QT, BRUGADA, AND SHORT QT SYNDROMES

AKAP9, ANK2, CACNA1C, CALM1, CALM2, CALM3, CAV3, KCNE1, KCNE2, KCNH2, KCNJ2, KCNJ5, KCNQ1, SCN4B, SCN5A, SNTA1, TRDN

CATECHOLAMINERGIC POLYMORPHIC VENTRICULAR TACHYCARDIA

CALM1, CASQ2, RYR2, TRDN

HEREDITARY HEMORRHAGIC TELANGIECTASIA

ACVRL1, ENG, EPHB4, GDF2, RASA1, SMAD4

LIPID DISORDERS

- Familial hypercholesterolemia: *APOB, LDLR, LDLRAP1, PCSK9*
- Sitosterolemia: *ABCG5, ABCG8*
- Familial chylomicronemia syndrome: *APOA5, APOC2, GPIHBP1, LMF1, LPL*

OTHER LIPID DISORDERS

- Familial HDL deficiency: *ABCA1, APOA1*
- Lysosomal acid lipase deficiency: *LIPA*
- LCAT deficiency/Fish-eye disease: *LCAT*
- Hyperlipoproteinemia type III: *APOE*
- Cerebrotendinous xanthomatosis (CTX): *CYP27A1*
- Apolipoprotein C-III deficiency: *APOC3*

OTHER CONDITIONS

- Glycogen storage disease type II/Pompe: *GAA*
- Congenital heart defects: *ACTC1, GATA4, JAG1, MED12, MYH6, NKX2-5, NOTCH1, TBX1, TBX5, TBX20*

