

7 INDIVIDUAL PANELS AND 1 COMPREHENSIVE PANEL FOR INHERITED CARDIOVASCULAR DISEASES

AORTOPATHY (48 genes)

| | | | | | | | |
|----------|----------|--------|--------|--------|-------|----------|--------|
| ABCC6 | ATP6V1A | C1S | COL4A1 | FBLN5 | LOX | PRDM5 | SMAD4 |
| ACTA2 | ATP6V1E1 | CBS | COL5A1 | FBN1 | LTBP4 | PYCR1 | TGFB2 |
| ACVR1 | B3GALT6 | CHST14 | COL5A2 | FBN2 | MFAP5 | SKI | TGFB3 |
| ADAMTS2 | B4GALT7 | COL1A1 | DSE | FKBP14 | MYH11 | SLC2A10 | TGFBR1 |
| ALDH18A1 | BGN | COL1A2 | EFEMP2 | FOXE3 | MYLK | SLC39A13 | TGFBR2 |
| ATP6V0A2 | C1R | COL3A1 | ELN | GORAB | PLOD1 | SMAD3 | ZNF469 |

ARRHYTHMIA (42 genes)

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|----------|-------|--------|-------|-------|--------|-------|
| ABCC9 | CALM1 | GNAI2 | KCNE1 | KCNJ8 | SCN10A | SNTA1 |
| AKAP9 | CALM2 | GPD1L | KCNE2 | KCNQ1 | SCN1B | TBX5 |
| ANK2 | CALM3 | HCN4 | KCNE3 | LMNA | SCN2B | TECL |
| CACNA1C | CASQ2 | KCNA5 | KCNH2 | MYL4 | SCN3B | TNNI3 |
| CACNA2D1 | CAV3 | KCNAB2 | KCNJ2 | NPPA | SCN4B | TRDN |
| CACNB2 | GJA5 | KCND3 | KCNJ5 | RYR2 | SCN5A | TRPM4 |

CARDIOMYOPATHY (98 genes)

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|--------|---------|--------|--------|---------|----------|----------|
| AARS2 | CAV3 | DSP | HCN4 | MYBPC3 | PLN | TAFAZZIN |
| ABCC9 | COA5 | DTNA | HRAS | MYH6 | PPA2 | TCAP |
| ACAD9 | COA6 | ELAC2 | ILK | MYH7 | PRDM16 | TGFB3 |
| ACADVL | COX15 | EMD | JPH2 | MYL2 | PRKAG2 | TK2 |
| ACTA1 | CPT2 | FHL1 | JUP | MYL3 | RAF1 | TMEM43 |
| ACTC1 | CRYAB | FKTN | KARS1 | MYLK2 | RBM20 | TMEM70 |
| ACTN2 | CSRP3 | FLNC | LAMA4 | MYOZ2 | RYR2 | TNNC1 |
| AGK | CTNNA3 | GAA | LAMP2 | MYPN | SCN5A | TNNI3 |
| AKAP9 | DES | GATAD1 | LDB3 | NDUFB11 | SCO2 | TNNT2 |
| ALMS1 | DMD | GBE1 | LMNA | NDUFV2 | SGCD | TPM1 |
| ALPK3 | DNAJC19 | GLA | MIB1 | NEBL | SLC22A5 | TSFM |
| ANKRD1 | DOLK | GTPBP3 | MRPL3 | NEXN | SLC25A20 | TTN |
| BAG3 | DSC2 | HADHA | MRPL44 | PDLIM3 | SLC25A3 | TTR |
| CASQ2 | DSG2 | HADHB | MTO1 | PKP2 | SLC25A4 | VCL |

CONGENITAL HEART DEFECTS (80 genes)

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|--------|--------|-------|-------|--------|--------|----------|--------|---------|
| ACTA2 | CELSR2 | DNAH6 | FOXC1 | HAND2 | MYH7 | PITX2 | SALL4 | TGFBR1 |
| ACTC1 | CELSR3 | DNAI1 | FOXH1 | HRAS | NIPBL | PKD1L1 | SEMA3D | TGFBR2 |
| ACVR2B | CHD4 | DTNA | GANAB | JAG1 | NKX2-5 | PLD1 | SEMA3E | TLL1 |
| AFF4 | CHD7 | EHMT1 | GATA4 | KDM5B | NKX2-6 | POGZ | SMAD6 | TMEM260 |
| BMPR2 | CITED2 | ELN | GATA5 | KMT2D | NME7 | PRDM6 | TAB2 | TPM1 |
| CAD | CREBBP | EVC | GATA6 | MED13L | NODAL | PRKD1 | TBX1 | ZEB2 |
| CFAP53 | CRELD1 | EVC2 | GDF1 | MMP21 | NOTCH1 | RABGAP1L | TBX20 | ZFPM2 |
| CDK13 | DNAH11 | FBN1 | GPC3 | MYH11 | NOTCH2 | RBFOX2 | TBX5 | ZIC3 |
| CELSR1 | DNAH5 | FLNA | HAND1 | MYH6 | NR2F2 | RBM10 | TFAP2B | |

FAMILIAL HYPERCHOLESTEROLEMIA (11 genes)

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|-------|-------|---------|-------|
| ABCA1 | APOA5 | LDLR | LPL |
| ABCG5 | APOB | LDLRAP1 | PCSK9 |
| ABCG8 | APOE | LIPA | |

PULMONARY HYPERTENSION (11 genes)

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|--------|---------|-------|-------|
| ACVRL1 | CAV1 | KCNA5 | SMAD9 |
| BMPR1B | EIF2AK4 | KCNK3 | TBX4 |
| BMPR2 | ENG | SMAD4 | |

RASOPATHIES (30 genes)

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|------|-------|--------|--------|--------|--------|-------|-------|---------|--------|
| AKT3 | CCND2 | KRAS | MAP2K2 | NF2 | PIK3R2 | RAF1 | RIT1 | SHOC2 | SOS2 |
| BRAF | EPHB4 | LZTR1 | MRAS | NRAS | PPP1CB | RASA1 | RRAS | SMARCB1 | SPRED1 |
| CBL | HRAS | MAP2K1 | NF1 | PIK3CA | PTPN11 | RASA2 | SASH1 | SOS1 | STAMPB |

COMPREHENSIVE PANEL (292 genes)

Includes all 292 genes