Genetics Diagnostic Laboratory
Cardiomyopathy and Arrhythmia Requisition

Blood Work Instructions For Non-CHEO Patients:
Bring requisition to local community lab for blood collection

Sample to be shipped to:
Genetics Diagnostics Laboratory
401 Smyth Road, Rm W3401
Ottawa, ON, K1H 8L1
Tel: (613) 738-3230
Fax: (613) 738-4814
Website: www.cheo.on.ca/GDL

Patient Name: _____
Last First Initial

Health Card Number: _____

DOB (yy/mm/dd): _____

Address: _____

Telephone: _____

Legal Sex: ☐ Male ☐ Female ☐ Unknown

Optional - Sex assigned at birth: ☐ Male ☐ Female ☐ Unknown ☐ Uncertain ☐ Not recorded

Optional - Patient Consent to share results:

Sharing results for family testing: By checking the box below, the patient authorizes CHEO to use their results to guide testing or interpretation for relatives within CHEO's Genetic Diagnostic Lab. Results are used only to inform family member testing decisions. Consent can be changed at any time by contacting the lab.

☐ Patient consents to sharing results with family members

Priority of Testing	**Sample Type** (for prenatal/cord blood: separate MCC requisition required)		For Lab Use Only
☐ Routine **Expedited:** ☐ Patient/Partner Pregnant ☐ Prenatal Diagnosis ☐ Newborn (≤3 months) ☐ Clinical management contingent upon STAT results	☐ Blood 2×6 mL EDTA ☐ Blood 3 mL EDTA ☐ Blood 2×3 mL EDTA ☐ Cord blood 3 mL EDTA ☐ DNA _____ µg source: _____	☐ Cultured Amniocytes 2×T25 ☐ Cultured CVS 2×T25 ☐ Direct amniotic fluid 20 mL ☐ Direct CVS 10–20 mg ☐ Cultured cells source: _____	**Collection Date:** _____ **Collection Centre:** _____ **Collected By:** _____

Billing (Non-OHIP / Institutional Only- *Attach Ministry of Health or IFHP approval documentation)

☐ Ministry of Health Approved (e.g. RAMQ)*
☐ Ministry of Health Pending Approval
☐ IFHP Approved*
☐ Non-insured (i.e. self-pay)

☐ Institutional Billing (complete details below)
Institution Name: _____
City: _____ **Province:** _____ **Postal Code:** _____
Tel: _____ **Fax:** _____

Authorizing Health Care Provider(s) (testing will be accepted from the following specialties: genetics, cardiology, neonatology)

Provider Name: _____
Registration #: _____
Address: _____
Telephone: _____ **Fax:** _____

COPY TO Name: _____
Registration #: _____
Address: _____
Telephone: _____ **Fax:** _____

Clinical Indication (required–testing will not proceed unless completed)

☐ Confirmed or suspected diagnosis of disease
☐ Not affected ☐ Family history
☐ Other clinical features (specify): _____

☐ Familial variant testing (attach family report)

Specify family relationship: _____

Privacy statement: By ordering this test, I attest that my patient/patient's guardian has obtained express consent or I have obtained express consent from the family member for CHEO to use the family member's report for the purpose of genetic testing and evaluation.

Test/Panel Requested

☐ **Adult CM** ☐ **Adult Hypertrophic Cardiomyopathy (HCM)** ☐ **Pediatric CM** ☐ **Pediatric HCM** ☐ **Arrhythmia**

☐ **Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT)** ☐ **Long QT** ☐ **Brugada single gene (SCN5A)**

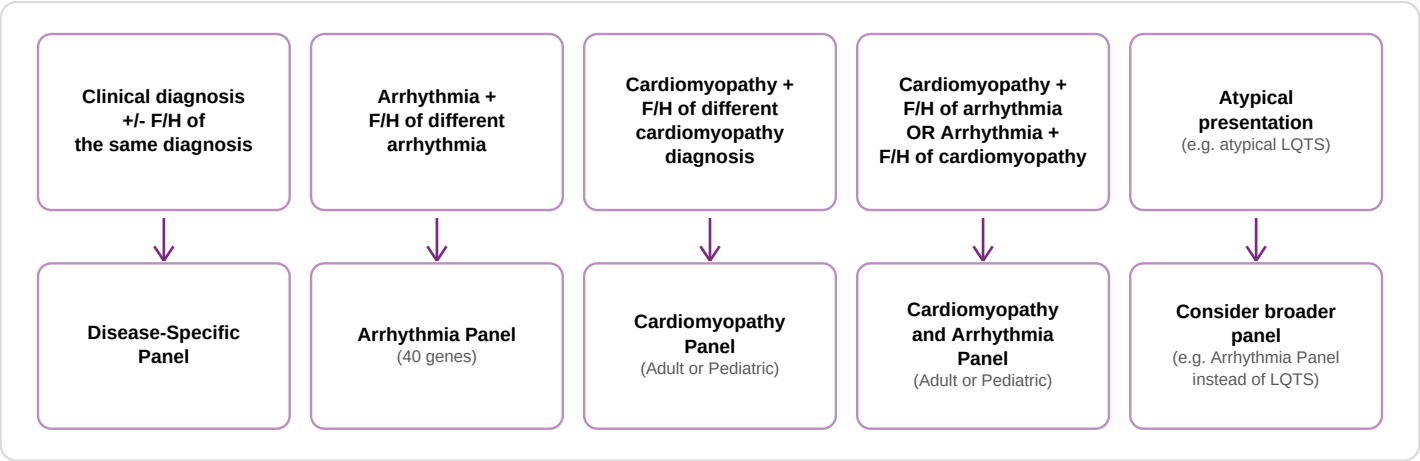
☐ **Combined Adult CM and Arrhythmia**

☐ **Combined Pediatric CM and Arrhythmia**

☐ **Familial variant testing** gene(s) and variant(s): _____ ☐ **Single gene testing** specify: _____

☐ **Maternal Cell Contamination (MCC)** ☐ **DNA Storage (2-year retention)**

Cardiomyopathy and Arrhythmia Panels - Genetic Testing Utilization Considerations



F/H- family history. **LQTS-** long QT syndrome. The pediatric panel is used for individuals aged 18 and under. It may also be ordered for individuals diagnosed up to age 25, at the ordering clinician's discretion.

Atypical or complex presentations: consider subspecialty cardiology and/or Genetics consultation.

Sudden unexplained death: where a post-mortem or banked DNA sample from the decedent exists, test that first; if no sample is available, test the closest affected or symptomatic living relative on the combined cardiomyopathy and arrhythmia panel, then cascade to other relatives.

Gene content for the Cardiomyopathy and Arrhythmia Panels

Panel	# Genes	Genes Included
Cardiomyopathy Panels		
Adult HCM	45	ABCC9, ACTC1, ACTN2, ALPK3, BRAF, CACNA1C, CSRP3, DES, FHL1, FHOD3, FLNC, GLA, HRAS, JPH2, KLHL24, KRAS, LAMP2, LZTR1, MAP2K1, MAP2K2, MRAS, MT-TI, MYBPC3, MYH7, MYL2, MYL3, MYO6, NRAS, PLN, PPP1CB, PRKAG2, PTPN11, RAF1, RIT1, RRAS2, SHOC2, SOS1, SOS2, TNNC1, TNNI3, TNNT2, TPM1, TRIM63, TTR, VCL
Adult Cardiomyopathy	81	ABCC9, ACADVL, ACTC1, ACTN2, ALPK3, BAG3, BRAF, CACNA1C, CAV3, CSRP3, CTNNA3, DES, DMD, DSC2, DSG2, DSP, DYSF, EMD, FHL1, FHOD3, FKRP, FKTN, FLNC, GAA, GATA4, GLA, HCN4, HRAS, JPH2, JUP, KLHL24, KRAS, LAMP2, LDB3, LMNA, LZTR1, MAP2K1, MAP2K2, MIB1, MRAS, MT-TI, MYBPC3, MYH7, MYL2, MYL3, MYO6, NEXN, NKX2-5, NRAP, NRAS, OBSCN, PKP2, PLEKHM2, PLN, PPP1CB, PRDM16, PRKAG2, PTPN11, RAF1, RBM20, RIT1, RRAGD, RRAS2, RYR2, SCN5A, SHOC2, SOS1, SOS2, TAFAZZIN, TBX5, TMEM43, TMEM70, TNNC1, TNNI3, TNNI3K, TNNT2, TPM1, TRIM63, TTN, TTR, VCL
Pediatric HCM	56	ABCC9, ACTC1, ACTN2, AGL, ALPK3, BRAF, CACNA1C, CBL, CSRP3, DES, FHL1, FHOD3, FLNC, GAA, GLA, HRAS, JPH2, KLHL24, KRAS, LAMP2, LZTR1, MAP2K1, MAP2K2, MAP3K8, MRAS, MT-TI, MTO1, MYBPC3, MYH7, MYL2, MYL3, MYO6, NF1, NRAS, PLN, PPP1CB, PRKAG2, PTPN11, RAF1, RIT1, RRAS, RRAS2, SHOC2, SLC22A5, SLC25A4, SOS1, SOS2, SPRED2, TAB2, TNNC1, TNNI3, TNNT2, TPM1, TRIM63, TTR, VCL
Pediatric Cardiomyopathy	100	ABCC9, ACADVL, ACTC1, ACTN2, AGL, ALMS1, ALPK3, BAG3, BRAF, CACNA1C, CAV3, CBL, CPT2, CSRP3, CTNNA3, DES, DMD, DSC2, DSG2, DSP, DYSF, EMD, FHL1, FHOD3, FKRP, FKTN, FLNC, GAA, GATA4, GLA, HADHA, HADHB, HCN4, HRAS, JPH2, JUP, KLHL24, KRAS, LAMP2, LDB3, LMNA, LZTR1, MAP2K1, MAP2K2, MAP3K8, MIB1, MRAS, MT-TI, MTO1, MYBPC3, MYH7, MYL2, MYL3, MYO6, NEXN, NF1, NKX2-5, NRAP, NRAS, OBSCN, PKP2, PLEKHM2, PLN, PPA2, PPP1CB, PRDM16, PRKAG2, PTPN11, RAF1, RBM20, RIT1, RRAGD, RRAS, RRAS2, RYR2, SCN5A, SGCD, SHOC2, SLC22A5, SLC25A20, SLC25A4, SOS1, SOS2, SPRED2, TAB2, TAFAZZIN, TBX20, TBX5, TCAP, TMEM43, TMEM70, TNNC1, TNNI3, TNNI3K, TNNT2, TPM1, TRIM63, TTN, TTR, VCL
Arrhythmia Panels		
Long QT Syndrome	12	CACNA1C, CALM1, CALM2, CALM3, KCNE1, KCNE2, KCNH2, KCNJ2, KCNQ1, SCN5A, TECRL, TRDN
CPVT	8	CALM1, CALM2, CALM3, CASQ2, KCNJ2, RYR2, TECRL, TRDN
Brugada Syndrome	1	SCN5A
Arrhythmia	40	CACNA1C, CALM1, CALM2, CALM3, CASQ2, CTNNA3, DES, DSC2, DSG2, DSP, EMD, FLNC, GLA, HCN4, JUP, KCNE1, KCNE2, KCNH2, KCNJ2, KCNQ1, LAMP2, LMNA, NKX2-5, PKP2, PLN, PPA2, PRKAG2, RBM20, RYR2, SCN5A, SLC22A5, SLC4A3, TBX5, TECRL, TMEM43, TNNI3K, TRDN, TRPM4, TTN, TTR
Combined Cardiomyopathy and Arrhythmia Panels		
Adult CM and Arrhythmia	96	ABCC9, ACADVL, ACTC1, ACTN2, ALPK3, BAG3, BRAF, CACNA1C, CALM1, CALM2, CALM3, CASQ2, CAV3, CSRP3, CTNNA3, DES, DMD, DSC2, DSG2, DSP, DYSF, EMD, FHL1, FHOD3, FKRP, FKTN, FLNC, GAA, GATA4, GLA, HCN4, HRAS, JPH2, JUP, KCNE1, KCNE2, KCNH2, KCNJ2, KCNQ1, KLHL24, KRAS, LAMP2, LDB3, LMNA, LZTR1, MAP2K1, MAP2K2, MIB1, MRAS, MT-TI, MYBPC3, MYH7, MYL2, MYL3, MYO6, NEXN, NKX2-5, NRAP, NRAS, OBSCN, PKP2, PLEKHM2, PLN, PPA2, PPP1CB, PRDM16, PRKAG2, PTPN11, RAF1, RBM20, RIT1, RRAGD, RRAS2, RYR2, SCN5A, SHOC2, SLC22A5, SLC4A3, SOS1, SOS2, TAFAZZIN, TBX5, TECRL, TMEM43, TMEM70, TNNC1, TNNI3, TNNI3K, TNNT2, TPM1, TRDN, TRIM63, TRPM4, TTN, TTR, VCL
Pediatric CM and Arrhythmia	113	ABCC9, ACADVL, ACTC1, ACTN2, AGL, ALMS1, ALPK3, BAG3, BRAF, CACNA1C, CALM1, CALM2, CALM3, CASQ2, CAV3, CBL, CPT2, CSRP3, CTNNA3, DES, DMD, DSC2, DSG2, DSP, DYSF, EMD, FHL1, FHOD3, FKRP, FKTN, FLNC, GAA, GATA4, GLA, HADHA, HADHB, HCN4, HRAS, JPH2, JUP, KCNE1, KCNE2, KCNH2, KCNJ2, KCNQ1, KLHL24, KRAS, LAMP2, LDB3, LMNA, LZTR1, MAP2K1, MAP2K2, MAP3K8, MIB1, MRAS, MT-TI, MTO1, MYBPC3, MYH7, MYL2, MYL3, MYO6, NEXN, NF1, NKX2-5, NRAP, NRAS, OBSCN, PKP2, PLEKHM2, PLN, PPA2, PPP1CB, PRDM16, PRKAG2, PTPN11, RAF1, RBM20, RIT1, RRAGD, RRAS, RRAS2, RYR2, SCN5A, SGCD, SHOC2, SLC22A5, SLC25A20, SLC25A4, SLC4A3, SOS1, SOS2, SPRED2, TAB2, TAFAZZIN, TBX20, TBX5, TCAP, TECRL, TMEM43, TMEM70, TNNC1, TNNI3, TNNI3K, TNNT2, TPM1, TRDN, TRIM63, TRPM4, TTN, TTR, VCL