INVITAE detect

ORDER ID
For Invitae internal use only

Requisition Form
Invitae Detect Cardio Program TRF955-2

This requisition form can be used to submit a specimen for the Invitae Detect Cardiomyopathy and Arrhythmia program, a complimentary testing program for patients suspected of having a familial cardiomyopathy or arrhythmia. Please confirm that the patient meets the eligibility requirements for the program. To submit orders for genetic testing outside of this program, please order through Invitae's online portal or use a standard requisition form: www.invitae.com/order-forms.

PROGRAM ELIGIBILITY:

This program is available to patients in the U.S. and Canada suspected of having a familial cardiomyopathy or arrhythmia.

PATIENT INFORMATION

First name | MI | Last name

Date of birth (MM/DD/YYYY) | Biological sex ◯ M ◯ F | MRN (medical record number)

Ancestry ◯ Asian ◯ Black/African American ◯ White/Caucasian ◯ Ashkenazi Jewish ◯ Hispanic ◯ Native American ◯ Pacific Islander ◯ French Canadian ◯ Sephardic Jewish ◯ Mediterranean ◯ Other: _____

Phone | Email address

Address | City

State | Zip code | Country

SPECIMEN INFORMATION

Label each tube with the patient's full name, date of birth, and specimen collection date.
A requisition form MUST accompany each specimen. www.invitae.com/specimen-requirements

Specimen type : ◯ Blood ◯ Saliva ◯ Assisted saliva ◯ DNA - source: _____

DNA must be extracted in a CLIA or other suitably certified laboratory

We are unable to accept blood/saliva from patients with:

- *Allogeneic bone marrow transplants*
- *Blood transfusion <2 weeks prior to specimen collection*

Collection date (MM/DD/YYYY) *If not provided, date will be 1 day prior to our receipt of specimen. For DNA, provide date retrieved from archive.*

Special cases : ◯ History of/current hematologic malignancy

REASON FOR TESTING

Previous results *(if applicable and not included in clinical criteria, enclose copy of report)*

ORGANIZATION INFORMATION

Organization name and address

Organization name

Phone | Fax

Address | City

State | Zip code | Country

Primary clinical contact

Name | Role/title

Phone | NPI

Email address (for report access)

Ordering physician

◯ **Same as primary clinical contact**

Name | NPI

Email address (for report access)

Additional clinical or laboratory contact (optional)

Name | Email address (for report access)

INVITAE PARTNER CODE CARDIO

RE-REQUISITION

Invitae offers one re-requisition at no additional charge within 90 days for genes related to the original clinical area. For more information and to request online, please visit **www.invitae.com/re-requisition**.

ASSAY

Invitae is a CAP-accredited and CLIA-certified clinical diagnostic laboratory performing full-gene sequencing and deletion/duplication analysis using next-generation sequencing technology. Search for details on the analysis of any gene in our test catalog at **www.invitae.com/physician/search**.

To request a complimentary specimen collection kit, visit **www.invitae.com/request-a-kit**.

SHIPPING INSTRUCTIONS

Please ship specimen to Invitae:

Attn: Invitae Client Services
1400 16th Street
San Francisco, CA 94103 USA

INVITAE DETECT CARDIOMYOPATHY AND ARRHYTHMIA PROGRAM CLINICAL INFORMATION

Required clinical history (check all that apply):

☐ **Suspicion or known diagnosis of a familial cardiomyopathy or arrhythmia**

Diagnosis: ☐ HCM ☐ DCM ☐ ARVC ☐ LVNC
☐ LQTS ☐ CPVT ☐ BrS ☐ Other: _____

Age at diagnosis: _____

Index of clinical suspicion: ☐ High ☐ Moderate ☐ Low

☐ **Family history of a primary cardiomyopathy or arrhythmia**

Diagnosis: ☐ HCM ☐ DCM ☐ ARVC ☐ LVNC
☐ LQTS ☐ CPVT ☐ BrS ☐ Other: _____

☐ **Family history of unexplained sudden cardiac death**

Age(s): _____

☐ **Patient is deceased** ☐ Yes ☐ No

Age of death: _____

Additional clinical history (the following clinical and diagnostic information may help Invitae scientists improve the results of genetic testing for your patient and their family members):

Clinical history	Y	N	UNKNOWN
Syncope with stress	☐	☐	☐
Syncope without stress	☐	☐	☐
History of aborted SCD	☐	☐	☐
Congenital deafness	☐	☐	☐
Skeletal muscle weakness	☐	☐	☐

List other relevant history:

_____
_____
_____
_____

Histological and biochemical findings	Y	N	UNKNOWN
Fibrofatty replacement of myocardium	☐	☐	☐
Amyloid-positive tissue biopsy	☐	☐	☐
Elevated creatine kinase	☐	☐	☐

Imaging findings	Y	N	UNKNOWN
CMRI delayed enhancement	☐	☐	☐
LV noncompaction	☐	☐	☐
Dilation of the right ventricle	☐	☐	☐
Dilation of the left ventricle	☐	☐	☐
Myocardial scarring	☐	☐	☐
LV outflow tract obstruction	☐	☐	☐
LV ejection fraction	_____ %		☐
RV ejection fraction	_____ %		☐
Maximum LV wall thickness	_____ mm		☐
LV end systolic diameter	_____ mm		☐
LV end diastolic diameter	_____ mm		☐

List other relevant abnormalities:

_____
_____
_____
_____

ECG findings	Y	N	UNKNOWN
Normal ECG	☐	☐	☐
AV Block	☐	☐	☐
Ventricular fibrillation	☐	☐	☐
Ventricular tachycardia	☐	☐	☐
Bidirectional VT	☐	☐	☐
Torsade de pointes	☐	☐	☐
T wave alternans	☐	☐	☐
Notched T wave in 3 leads	☐	☐	☐
Positive exercise stress test	☐	☐	☐
Low heart rate for age	☐	☐	☐
Cardiac conduction defects	☐	☐	☐
QTc interval	_____ ms		☐

List other relevant abnormalities:

_____
_____
_____
_____

TEST OPTIONS

Invitae continually updates its panels based on the most recent evidence. Please note that if an order is placed using an older version of this form, Invitae reserves the right to upgrade any ordered panel(s) to the current version(s).

Test code	Test name		# gene(s)	Gene list
Arrhythmia and Cardiomyopathy				
○ 02101	Invitae Arrhythmia and Cardiomyopathy Comprehensive Panel		67	ABCC9, ACTC1, ACTN2, AGL, ANK2, BAG3, CACNA1C, CACNB2, CALM1, CALM2, CALM3, CASQ2, CAV3, CRYAB, CSRP3, DES, DMD, DOLK, DSC2, DSG2, DSP, EMD, EYA4, FHL1, FKRP, FKTN, FLNC, GAA, GLA, GPD1L, HCN4, JUP, KCNA5, KCNE1, KCNE2, KCNH2, KCNJ2, KCNQ1, LAMP2, LMNA, MYBPC3, MYH7, MYL2, MYL3, MYL4, NKX2-5, PKP2, PLN, PRKAG2, RAF1, RBM20, RYR2, SCN5A, SGCD, SLC22A5, TAZ, TCAP, TGFB3, TMEM43, TNNC1, TNNI3, TNNT2, TPM1, TRDN, TTN, TTR, VCL
	○ 02101.1	Add-on preliminary-evidence genes	47	AKAP9, ANKRD1, CACNA2D1, CALR3, CHRM2, CTF1, CTNNA3, DTNA, FHL2, GATA4, GATA6, GATAD1, GJA5, ILK, JPH2, KCND3, KCNE3, KCNE5, KCNJ5, KCNJ8, KCNK3, LAMA4, LDB3, LRRC10, MED12, MYH6, MYLK2, MYOM1, MYOZ2, MYPN, NEBL, NEXN, NPPA, PDLIM3, PLEKHM2, PRDM16, RANGRF, SCN10A, SCN1B, SCN2B, SCN3B, SCN4B, SLMAP, SNTA1, TMPO, TRPM4, TXNRD2
	○ 02101.2	Add-on RASopathy genes not included in panel	17	A2ML1, BRAF, CBL, HRAS, KRAS, MAP2K1, MAP2K2, NF1, NRAS, PTPN11, RASA1, RIT1, RRAS, SHOC2, SOS1, SOS2, SPRED1
	○ 02101.3	Add-on genes associated with autosomal recessive syndromic pediatric cardiomyopathy	8	ACADVL, ALMS1, CPT2, DNAJC19, ELAC2, MTO1, SDHA, TMEM70
	○ 02101.4	Add-on sudden unexpected death in epilepsy (SUDEP) genes for arrhythmia and cardiomyopathy	11	DEPDC5, KCNA1, KCNQ2, KCNQ3, KCNT1, PCDH19, PRRT2, SCN1A, SCN8A, SCN9A, SLC2A1

By signing this form, the medical professional acknowledges that the individual/family member authorized to make decisions for the individual (collectively, the "Patient") has been supplied information regarding and consented to undergo genetic testing, substantially as set forth in Invitae's Informed Consent for Genetic Testing (www.invitae.com/patient-consent). In connection with the Program the Patient has been informed that Invitae may notify them of clinical updates related to genetic test results (in consultation with the ordering medical professional as indicated) and has been informed that de-identified Patient data may be used and shared with third parties, for research and commercial purposes and, in the U.S., to contact their medical professional. For orders originating in Canada, the Patient has been informed that their personal information and specimen will be transferred to and processed in the U.S. and that de-identified Patient data may be used and shared for research and commercial purposes in the U.S. The medical professional warrants that he/she will not seek reimbursement for this no-charge test from any third party, including but not limited to federal healthcare programs. The medical professional also hereby acknowledges that organization and clinician contact information provided in the order may be shared with third parties, including commercial organizations, that may contact the medical professional directly in connection with the Program, and that they have made the Patient aware that de-identified Patient data may be used and shared with such third parties, for purposes which include contacting their medical professional directly in connection with the Program. A list of third party partners may be provided upon request. In addition to the above, I attest that I am the ordering physician, or I am authorized by the ordering physician to order this test, or I am authorized under applicable state law to order this test.

Medical professional signature (required)	Date