

CARDIOLOGY

REFERRING DOCTOR (mandatory)	
Name (or print label):	ID number:
Hospital:	Service:
E-mail:	Telephone:
Signature:	Date: ____/____/____
Do you authorize the report to be sent by e-mail? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If yes, please write your institutional e-mail address: _____	

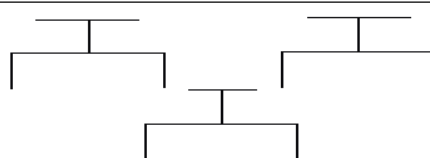
PACIENTE IDENTIFICATION (mandatory or past label)	
Name:	Gender: F <input type="checkbox"/> M <input type="checkbox"/>
Identification number:	Date of birth: ____/____/____
<i>GenoMed use only:</i>	
Conferred by:	Post label(s)

CLINICAL DATA AND DIAGNOSIS*
Ideal expected date: ____/____/____
<small>*Attach, whenever possible and can be justified, any relevant clinical information, family data including consanguinity, other cases in the family, family tree, etc.</small>

FAMILY INFORMATION		
Index case (affected) <input type="checkbox"/>	Familial case (affected) <input type="checkbox"/>	Familial case (asymptomatic) <input type="checkbox"/>
Known familial variant?	NO <input type="checkbox"/>	YES <input type="checkbox"/>
If yes*: Gene/RefSeq: ____/____ Variant: _____		
Was the index case studied at GenoMed? NO <input type="checkbox"/> YES <input type="checkbox"/>		
<small>*For carrier studies and predictive testing (familial variant study), please attach a copy of the index case, whenever possible and applicable.</small>		
According to the Portuguese law, (article 9º, law nº 12/2005), carrier studies and predictive testing (conducted in healthy individuals) it is ESSENTIAL that the clinical geneticist makes the request and that the patient informed consent is obtained.		

Information for Pedigree construction:

<input type="checkbox"/> Man	<input type="checkbox"/> Woman	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Affected	<input checked="" type="checkbox"/> <input type="checkbox"/> Carrier	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Deceased	<input type="checkbox"/> <input type="checkbox"/> Consanguinity	<input checked="" type="checkbox"/> Index case
------------------------------	--------------------------------	--	--	--	---	--



SAMPLE	COLLECTION
Blood (EDTA) <input type="checkbox"/> DNA <input type="checkbox"/> Tumor <input type="checkbox"/> ____% (infiltration percentage)	Date: ____/____/____
Other (specify) _____	Hour: ____:____

INFORMED CONSENT (to be filled by the referring doctor)	
I hereby declare that the patient informed consent for diagnosis was obtained.	YES <input type="checkbox"/> NO <input type="checkbox"/>
I hereby declare that the patient informed consent for investigation was obtained.	YES <input type="checkbox"/> NO <input type="checkbox"/>

INFORMED CONSENT (mandatory – to be filled by the patient)	
I hereby declare to authorize the collection of mine/my _____ [affiliation], _____ [name], born on ____/____/____, to the execution of the genetic testing described above, whose purposes and limitations were explained by the aforementioned physician. Herewith I declare that I have been informed about the consequences resulting from the teste results. I agree that the sample may be stored in order to allow repetition of the tests or further related tests at GenoMed or authorized partners around the world. The data/test results are subject to medical confidentiality and should only be disclosed to family members or other physicians with my permission. I am entitled to revoke this consent at any time.	
	<input type="checkbox"/> Agree <input type="checkbox"/> Not agree
I also declare that the data/test results may be used in scientific investigations and publications in an anonymized form when and only approved by the Ethics Committee	
	<input type="checkbox"/> Agree <input type="checkbox"/> Not agree
<small>(According to the Direction of General Health Standard nº 015/2013 updated.)</small>	
Patient's signature: _____	Date: ____/____/____

CONTACT PERSONS: Dr.ª Diana Antunes, MD (dianaantunes@medicina.ulisboa.pt) / Dr.ª Ana Coutinho, PhD (anacoutinho@medicina.ulisboa.pt) Ext. 47301/47308.

GENETIC TEST REQUIRED

Disease/Gene(s): _____

Study for familial variant (specify at "familial information") _____

NGS genetic panel (panel name): _____

Additional genes (if you want to personalize the above panel please specify which genes do you want to add or remove): _____

With CNVs analysis*
* Additional cost.

Additional NGS genes analysis (based on total exome) for:

NGS panel (panel name): _____

Gene(s) (specify): _____

DNA extraction

Other studies

Cardiomyopathies

- Cardiomyopathies - panel of 103 genes by NGS:** AARS2, ABCC9, ACTA1, ACTC1, ACTN2, ANKRD1, BAG3, CALR3, CASQ2, CAV3, CAVIN4, CHRM2, COA5, CRYAB, CSRP3, CTF1, CTNNA3, DES, DMD, DOLK, DSC2, DSG2, DSP, DTNA, EMD, EYA4, FHL1, FHL2, FHOD3, FKTN, FLNC, FOXRED1, FXN, GAA, GATAD1, GLA, GLB1, GUSB, HRAS, ILK, JPH2, JUP, KCNQ1, KLF10, KRAS, LAMA4, LAMP2, LDB3, LMNA, MAP2K1, MAP2K2, MIB1, MRPL3, MYBPC3, MYH6, MYH7, MYL2, MYL3, MYLK2, MYOM1, MYOZ1, MYOZ2, MYPN, NEBL, NEXN, NRAS, OBSCN, PDLIM3, PKP2, PLN, PRDM16, PRKAG2, PSEN1, PSEN2, PTPN11, RAF1, RBM20, RIT1, RYR2, SCN5A, SCO2, SGCA, SGCD, SHOC2, SLC25A3, SLC25A4, SOS1, TAZ, TCAP, TGFB3, TMEM43, TMEM70, TMPO, TNNC1, TNNI3, TNNT2, TPM1, TRDN, TRIM63, TSFM, TTN, TTR, VCL
- Arrhythmogenic cardiomyopathy - panel of 17 genes by NGS:** CASQ2, CTNNA3, DES, DSC2, DSG2, DSP, FLNC, JUP, LMNA, MIB1, PKP2, PLN, RYR2, SCN5A, TGFB3, TMEM43, TTN
- Left ventricular noncompaction - panel of 16 genes by NGS:** ACTC1, ACTN2, DTNA, FHL2, FHOD3, ILK, LAMP2, LMNA, LDB3, MIB1, MYBPC3, MYH7, PRDM16, TAZ, TNNT2, TPM1
- Left ventricular noncompaction / Barth syndrome:** TAZ gene

Dilated Cardiomyopathy

- Dilated cardiomyopathy - panel of 47 genes by NGS:** ABCC9, ACTC1, ACTN2, ANKRD1, BAG3, CRYAB, CSRP3, CTF1, DES, DMD, DSG2, DSP, EMD, EYA4, FHL2, FHOD3, FKTN, FLNC, GATAD1, ILK, LAMA4, LAMP2, LDB3, LMNA, MYBPC3, MYH6, MYH7, MYOZ1, MYPN, NEXN, PKP2, PLN, PSEN1, PSEN2, RBM20, SCN5A, SGCA, SGCD, TAZ, TCAP, TMPO, TNNC1, TNNI3, TNNT2, TPM1, TTN, VCL
- Dilated cardiomyopathy - panel of 32 genes by NGS:** ACTC1, ACTN2, ANKRD1, BAG3, CSRP3, DES, DSG2, DMD, DSP, EMD, EYA4, LDB3, LMNA, MYBPC3, MYH6, MYH7, NEXN, PLN, PSEN1, PSEN2, RBM20, SCN5A, SGCD, TAZ, TCAP, TMPO, TNNC1, TNNI3, TNNT2, TPM1, TTN, VCL
- Dilated cardiomyopathy:** ACTC1 gene
- Dilated cardiomyopathy:** LMNA gene
- Dilated cardiomyopathy:** MYH7 gene
- Dilated cardiomyopathy:** TNNT2 gene
- Dilated cardiomyopathy:** TPM1 gene
- Dilated cardiomyopathy:** MYH7, TNNT2, TPM1, ACTC1 genes

Hypertrophic Cardiomyopathy

- Hypertrophic cardiomyopathy (sarcomeric genes) - panel of 8 genes by NGS:** ACTC1, MYBPC3, MYH7, MYL2, MYL3, TNNI3, TNNT2, TPM1
- Hypertrophic cardiomyopathy - panel of 68 genes by NGS:** AARS2, ACTA1, ACTC1, ACTN2, ANKRD1, BAG3, CALR3, CASQ2, CAV3, COA5, CRYAB, CSRP3, DES, FHL1, FHOD3, FLNC, FOXRED1, FXN, GAA, GLA, GLB1, GUSB, HRAS, JPH2, KCNQ1, KLF10, KRAS, LAMP2, LDB3, LMNA, MAP2K1, MAP2K2, MRPL3, MYBPC3, MYH6, MYH7, MYL2, MYL3, MYLK2, MYOM1, MYOZ2, MYPN, NEXN, NRAS, OBSCN, PDLIM3, PLN, PRKAG2, PTPN11, RAF1, RIT1, RYR2, SCO2, SHOC2, SLC25A3, SLC25A4, SOS1, TCAP, TMEM70, TNNC1, TNNI3, TNNT2, TPM1, TRIM63, TSFM, TTN, TTR, VCL

- Hypertrophic cardiomyopathy - panel of 25 genes by NGS:** CTC1, ACTN2, CSRP3, GLA, KRAS, LAMP2, MYBPC3, MYH6, MYH7, MYL2, MYL3, MYOZ2, NEXN, PLN, PRKAG2, PTPN11, RAF1, RIT1, RIT1, SOS1, TCAP, TNNC1, TNNI3, TNNT2, TPM1, TTR
- Hypertrophic cardiomyopathy:** ACTC1 gene
- Hypertrophic cardiomyopathy:** CSRP3 gene
- Hypertrophic cardiomyopathy:** FHL1 gene
- Hypertrophic cardiomyopathy:** MYBPC3 gene
- Hypertrophic cardiomyopathy:** MYH7 gene
- Hypertrophic cardiomyopathy:** MYL2 gene
- Hypertrophic cardiomyopathy:** MYL3 gene
- Hypertrophic cardiomyopathy:** TNNI3 gene
- Hypertrophic cardiomyopathy:** TNNT2 gene
- Hypertrophic cardiomyopathy:** TPM1 gene
- Fabry disease:** GLA gene - index case
- Fabry disease:** GLA gene - familial case

Arrhythmia / Cardiac Conduction Diseases

- Cardiac arrhythmias - panel of 189 genes by NGS:** A2ML1, AARS2, ABCC9, ACAD9, ACADVL, ACTA1, ACTC1, ACTN2, AGK, AGL, AGPAT2, AKAP9, ALMS1, ANK2, ANKRD1, ANO5, ATP5E, ATPAF2, BAG3, BRAF, BSCL2, CACNA1C, CACNA1D, CACNA2D1, CACNB2, CALM1, CALM2, CALM3, CALR3, CAPN3, CASQ2, CAV3, CAVIN4, CHRM2, COA5, COA6, COQ2, COX15, COX6B1, CRYAB, CSRP3, CTNNA3, DES, DLD, DMD, DNAJC19, DOLK, DSC2, DSG2, DSP, DTNA, ELAC2, EMD, EYA4, FAH, FHL1, FHL2, FHOD3, FKRP, FKTN, FLNC, FOXD4, FOXRED1, FXN, GAA, GATA4, GATA6, GATAD1, GFM1, GJA1, GJA5, GLA, GLB1, GNPTAB, GPD1L, GUSB, HCN4, HRAS, JPH2, JUP, KCND2, KCND3, KCNE1, KCNE2, KCNE3, KCNE5, KCNH2, KCNJ2, KCNJ5, KCNJ8, KCNK17, KCNQ1, KRAS, LAMA2, LAMA4, LAMP2, LDB3, LDLR, LIAS, LMNA, LZTR1, MAP2K1, MAP2K2, MIB1, MLYCD, MRPL3, MRPL44, MRPS22, MTO1, MYBPC3, MYH6, MYH7, MYL2, MYL3, MYOM1, MYOT, MYOZ2, MYPN, NEBL, NEXN, NF1, NKX2-5, NKX2-6, NNT, NRAS, OBSCN, PDHA1, PHKA1, PITX2, PKP2, PLN, PMM2, PRDM16, PRKAG2, PSEN1, PSEN2, PTPN11, RAF1, RANGRF, RASA2, RBM20, RIT1, RRAS, RYR2, SCN10A, SCN1B, SCN2B, SCN3B, SCN4B, SCN5A, SCO2, SDHA, SGCD, SHOC2, SLC22A5, SLC25A3, SLC25A4, SLMAP, SNTA1, SOS1, SOS2, SPEG, SPRED1, SURF1, SYNE1, SYNE2, TAZ, TBX20, TBX5, TCAP, TGFB3, TMEM43, TMEM70, TMPO, TNNC1, TNNI3, TNNI3K, TNNT2, TOR1AIP1, TPM1, TRDN, TRIM63, TRPM4, TSFM, TTN, TTR, TXNRD2, VCL, XK
- Sudden death without structural cardiopathy - panel of 65 genes by NGS:** ABCC9, ACTC1, AKAP9, ANK2, CACNA1C, CACNA1D, CACNA2D1, CACNB2, CALM1, CALM2, CALM3, CASQ2, CAV3, CAVIN4, DES, DSC2, DSG2, DSP, EMD, FGF12, FHL2, FLNC, GAA, GJA5, GLA, GPD1L, HCN4, JUP, KCND2, KCND3, KCNE1, KCNE2, KCNE3, KCNE5, KCNH2, KCNJ2, KCNJ5, KCNJ8, KCNK17, KCNQ1, LAMP2, LMNA, NKX2-5, PKP2, PLN, PRKAG2, RANGRF, RYR2, SCN10A, SCN1B, SCN2B, SCN3B, SCN4B, SCN5A, SLMAP, SNTA1, TBX5, TMEM43, TNNC1, TNNI3, TNNI3K, TNNT2, TRDN, TRPM4, TTR
- Brugada syndrome - panel of 31 genes by NGS:** ANK2, ANK3, ABCC9, CACNA1C, CACNA1D, CACNA2D1, CACNB2, CAV3, CLASP2, DPP6, FGF12, GPD1L, HCN4, IRX5, KCND2, KCND3, KCNE3, KCNE5, KCNH2, KCNJ8, PKP2, PXDNL, RANGRF, SCN1B, SCN2B, SCN3B, SCN5A, SCN10A, SEMA3A, SLMAP, TRPM4

CARDIOLOGY

- 34900 **Brugada syndrome:** *SCN5A* gene
- 34900 **Long QT syndrome - panel of 15 genes by NGS:** *AKAP9, ANK2, CACNA1C, CALM1, CALM2, CAV3, KCNE1, KCNE2, KCNH2, KCNJ2, KCNJ5, KCNQ1, SCN4B, SCN5A, SNTA1*
- 34900 **Long QT syndrome:** *KCNQ1, KCNH2, SCN5A* genes
- 34900 **Long QT syndrome (LQT1):** *KCNQ1* gene
- 34900 **Long QT syndrome (LQT2):** *KCNH2* gene
- 34900 **Long QT syndrome (LQT3):** *SCN5A* gene
- 34900 **Long QT syndrome (LQT5):** *KCNE1* gene
- 34900 **Catecholaminergic polymorphic ventricular tachycardia - panel of 8 genes by NGS:** *ANK2, CALM1, CALM2, CALM3, CASQ2, KCNJ2, RYR2, TRDN*

Aortopathies / Conjunctivopathies

- Aortic/Connective tissue diseases - panel of 62 genes by NGS:** *ABL1, ACTA2, ADAMTS10, ADAMTS17, ADAMTS2, ADAMTSL4, ATP7A, B3GALT6, B3GLCT, B4GALT7, BGN, C1R, C1S, CBS, CHST14, COL11A1, COL11A2, COL12A1, COL1A1, COL1A2, COL2A1, COL3A1, COL4A1, COL5A1, COL5A2, COL9A1, COL9A2, DSE, EFEMP2, ELN, FBN1, FBN2, FKBP14, FLCN, FLNA, FOXE3, GAA, HRAS, KCNJ8, LOX, LTBP2, MAT2A, MED12, MFAP5, MYH11, MYLK, NOTCH1, PLOD1, PRDM5, PRKG1, PTPN11, SKI, SLC2A10, SLC39A13, SMAD2, SMAD3, SMAD4, TGFB2, TGFB3, TGFB3, TGFB3, TGFB3, ZNF469*
- 34900 **Aortic diseases - panel of 28 genes by NGS:** *ACTA2, CBS, COL3A1, COL5A1, COL5A2, EFEMP2, ELN, FBN1, FBN2, FLNA, GATA5, MAT2A, MED12, MFAP5, MYH11, MYLK, NOTCH1, PLOD1, PRKG1, SKI, SLC2A10, SMAD3, SMAD4, SMAD6, TGFB2, TGFB3, TGFB3, TGFB3*
- 34900 **Ehlers-Danlos syndrome - panel of 20 genes by NGS:** *ADAMTS2, ATP7A, B3GALT6, B4GALT7, CHST14, COL1A1, COL1A2, COL3A1, COL5A1, COL5A2, DSE, FKBP14, FLNA, KIF22, PLOD1, SLC39A13, TNXB, ZNF469, PRDM5, SCN9A*
- 34900 **Marfan and Marfan-like syndrome - panel of 9 genes by NGS:** *COL3A1, FBN1, FBN2, SKI, SLC2A10, SMAD3, TGFB2, TGFB3, TGFB3*
- 34900 **Aneurysm/Thoracic aortic dissection:** *ACTA2* gene
- 34900 **Ehlers-Danlos syndrome, classic form:** *COL5A1* gene
- 34900 **Ehlers-Danlos syndrome, vascular type:** *COL3A1* gene
- 34900 **Loeys-Dietz syndrome:** *TGFB3* gene
- 34900 **Loeys-Dietz syndrome:** *TGFB2* gene
- 34900 **Marfan syndrome:** *FBN1* gene

Other pathologies

- Cardiomyopathy and arrhythmia - panel of 196 genes by NGS:** *A2ML1, AARS2, ABCC9, ACAD9, ACADVL, ACTA1, ACTN2, AGK, AGL, AGPAT2, AKAP9, ALMS1, ANK2, ANKRD1, ANO5, ATP5E, ATPAF2, BAG3, BRAF, BSCL2, CACNA1C, CACNA1D, CACNA2D1, CACNB2, CALM1, CALM2, CALM3, CALR3, CAPN3, CASQ2, CAV3, CAVIN4, CHRM2, COA5, COA6, COQ2, COX15, COX6B1, CRYAB, CSRP3, CTF1, CTNNA3, DES, DLD, DMD, DNAJC19, DOLK, DDC2, DSG2, DSP, DTNA, ELAC2, EMD, EYA4, FAH, FGF12, FHL1, FHL2, FHOD3, FKRFP, FKTN, FLNC, FOXD4, FOXRED1, FXN, GAA, GATA4, GATA6, GATAD1, GFM1, GJA1, GJA5, GLA, GLB1, GNPTAB, GPD1L, GUSB, HCN4, HRAS, ILK, JPH2, JUP, KCND2, KCND3, KCNE1, KCNE2, KCNE3, KCNE5, KCNH2, KCNJ2, KCNJ5, KCNJ8, KCNK17, KCNQ1, KLF10, KRAS, LAMA2, LAMA4, LAMP2, LDB3, LDLR, LIAS, LMNA, LZTR1, MAP2K1, MAP2K2, MIB1, MLYCD, MRPL3, MRPL44, MRPS22, MT01, MYBPC3, MYH6, MYH7, MYL2, MYL3, MYLK2, MYOM1, MYOT, MYOZ1, MYOZ2, MYPN, NEBL, NEXN, NF1, NKX2-5, NKX2-6, NNT, NRAS, OBSCN, PDHA1, PDLIM3, PHKA1, PITX2, PKP2, PLN, PMM2, PRDM16, PRKAG2, PSEN1, PSEN2, PTPN11, RAF1, RANGRF, RASA2, RBM20, RIT1, RRAS, RYR2, SCN10A, SCN1B, SCN2B, SCN3B, SCN4B, SCN5A, SCD2, SDHA, SGCA, SGCD, SHOC2, SLC22A5, SLC25A3, SLC25A4, SLMAP, SNTA1, SOS1, SOS2, SPEG, SPRED1, SURF1, SYNE1, SYNE2, TAZ, TBX20, TBX5, TCAP, TGFB3, TMEM43, TMEM70, TMPO, TNNC1, TNNI3, TNNI3K, TNNT2, TOR1AIP1, TPM1, TRDN, TRIM63, TRPM4, TSFM, TTN, TTR, TXNRD2, VCL, XK*
- 34900 **Noonan syndrome/Rasopathies - panel of 23 genes by NGS:** *A2ML1, BRAF, CBL, FGD1, HRAS, KAT5B, KRAS, LZTR1, MAP2K1, MAP2K2, MRAS, NF1, NRAS, PPP1CB, PTPN11, RAF1, RASA2, RIT1, RRAS, SHOC2, SOS1, SOS2, SPRED1*
- Ciliopathies - panel of 174 genes by NGS:** *ACVR2B, ADGRV1, AHI1, AIPL1, ALMS1, ANKS6, ARL13B, ARL6, ARMC4, ATXN10, B9D1, B9D2, BBIP1, BBS1, BBS10, BBS12, BBS2, BBS4, BBS5, BBS7, BBS9, C21orf59, C2orf71, C5orf42, CC2D2A, CCDC103, CCDC114, CCDC151, CCDC28B, CCDC39, CCDC40, CCDC65, CCDC96, CCNO, CDH23, CENPF, CEP104, CEP120, CEP164, CEP290, CEP295, CEP41, CEP83, CFAP53, CFTR, CLRN1, CRB1, CRELD1, CRX, CSPP1, DCDC2, DEUP1, DNAAF1, DNAAF2, DNAAF3, DNAAF4, DNAAF5, DNAH1, DNAH11, DNAH5, DNAH8, DNAH9, DNAI1, DNAI2, DNAJB13, DNAL1, DRC1, DYNC2H1, EVC, EVC2, EXOC8, FAM166B, FOXH1, GAS2L2, GAS8, GDF1, GLIS2, GUCY2D, HYDIN, HYL51, IFT122, IFT140, IFT172, IFT27, IFT43, IFT80, IMPDH1, INPP5E, INVS, IQCB1, KCNJ13, KIAA0556, KIAA0586, KIF14, KIF7, LCA5, LEFTY2, LRAT, LRRC34, LRRC6, LZTFL1, MAPKBP1, MCIDAS, MKKS, MKS1, MRE11, MYO7A, NEK1, NEK8, NKX2-5, NME8, NODAL, NPHP1, NPHP3, NPHP4, OFD1, PCDH15, PDE6D, PIEZO2, PIH1D3, PKD2, PKHD1, RD3, RDH12, RPE65, RPGR, RPGRIP1, RPGRIP1L, RSPH1, RSPH3, RSPH4A, RSPH9, SCNN1A, SCNN1B, SCNN1G, SDCCAG8, SPAG1, SPATA7, TCTN1, TCTN2, TCTN3, TMEM107, TMEM138, TMEM17, TMEM216, TMEM231, TMEM237, TMEM67, TOPORS, TRIM32, TSC1, TSC2, TTC21B, TTC23, TTC25, TTC6, TTC8, TULP1, UMOD, USH1C, USH1G, USH2A, VHL, WDR19, WDR34, WDR35, WDR60, WHRN, XPNPEP3, ZIC3, ZMYND10, ZNF423*
- 34900 **Heritable pulmonary arterial hypertension - panel of 11 genes by NGS:** *ACVRL1, BMPR1B, BMPR2, CAV1, CBLN2, EIF2AK4, ENG, FOXP1, KCNA5, KCNK3, SMAD9*
- 34900 **Monogenic hypertension - panel of 27 genes by NGS:** *AOC1, ASIC3, CLCNKB, CUL3, CYP11B1, CYP11B2, CYP17A1, HSD11B2, KCNH2, KCNJ1, KLHL3, NOS3, NR3C2, PDE3A, RET, SDHA, SDHAF2, SDHB, SDHC, SDHD, SLC12A1, SLC12A3, SCNN1B, SCNN1G, VHL, WNK1, WNK4*
- 34900 **Angiotensin converting enzyme (ACE) I/D polymorphism genotype**