

## KARDİYOLOJİ POLİKLİNİĞİ

Doğuştan meydana gelen kalp anomalileri, belirli bölgelerde yer alan aort hastalıkları, kalp kasında meydana gelen değişimler, kan damarını etkileyen kalıtsal bağ dokusu bozuklukları, aşırı genişlemiş kapiller ve venüllere bağlı kanamalar gibi kardiyolojik durumlara cevap bulmak ve tedaviyi kolaylaştırıp yenidoğan ünitelerinde erken teşhis oluşturabilmek için yapılan çalışmaların olduğu panellerdir.

### 1. Kalıtsal Torasik Aorta Hastalıkları Paneli Genleri;

- ✓ ABCC6, ABL1, ACTA2, ADAMTS10, ADAMTS17, ADAMTS2, ADAMTSL4, ALDH18A1, ATP7A, B3GAT3, BGN, CBS, COL1A1, COL1A2, COL2A1, COL3A1, COL4A5, COL5A1, COL5A2, COLGALT1, EFEMP2, ELN, ENPP1, FBLN5, FBN1, FBN2, FKBP14, FLNA, FOXE3, GATA5, HCN4, LOX, MAT2A, MED12, MFAP5, MYH11, MYLK, NOTCH1, PLOD1, PRKG1, SKI, SLC2A10, SLC39A13, SMAD2, SMAD3, SMAD4, SMAD6, TGFB2, TGFB3, TGFB1, TGFB2, ZDHHC9

### 2. Aritmi (non-LQTS) Paneli Genleri;

- ✓ ABCC9, AKAP9, ANK2, BAG3, CACNA1C, CACNB2, CALM1, CALM2, CALM3, CASQ2, CAV3, CDH2, CTNNA3, DBH, DES, DSC2, DSG2, DSP, FLNC, GATA6, HADHA, HCN4, JUP, KCNA5, KCNE1, KCNE2, KCNH2, KCNJ2, KCNJ5, KCNQ1, LDB3, LEMD2, LMNA, MYH6, MYH7, MYL4, NKX2-5, NOS1AP, NUP155, PKP2, PLN, PPA2, RYR2, SALL4, SCN10A, SCN1B, SCN3B, SCN5A, TBX5, TECRL, TGFB3, TMEM43, TNNI3, TNNI3K, TNNT2, TRDN, TRPM4, TTN

### 3. Aritmojenik Sağ Ventriküler Kardiyomiopati (ARVC) Paneli Genleri;

- ✓ BAG3, CDH2, CTNNA3, DES, DSC2, DSG2, DSP, FLNC, JUP, LDB3, LEMD2, LMNA, MYH7, NKX2-5, PKP2, PLN, RYR2, SCN5A, TGFB3, TMEM43, TTN

**4. Atriyal Fibrilasyon Paneli Genleri;**

- ✓ CACNB2, GATA6, HCN4, KCNA5, KCNE1, KCNE2, KCNH2, KCNJ2, KCNJ5, KCNQ1, LDB3, LMNA, NUP155, RYR2, SCN10A, SCN1B, SCN3B, SCN5A, TBX5

**5. Brugada Sendromu Paneli Genleri;**

- ✓ CACNA1C, CACNB2, HCN4, KCNH2, SCN3B, SCN5A, TRPM4

**6. Kardiyomiyopati Paneli Genleri;**

- ✓ AARS2, ABCC6, ABCC9, ACAD9, ACADVL, ACTA1, ACTC1, ACTN2, AGK, AGL, ALMS1, ALPK3, ANO5, APOA1, BAG3, BRAF, CALR3, CAPN3, CASQ2, CASZ1, CBL, CDH2, CHRM2, COX15, CPT2, CRYAB, CSRP3, CTNNA3, DBH, DES, DMD, DNAJC19, DOLK, DPM3, DSC2, DSG2, DSP, DTNA, DYSF, EEF1A2, ELAC2, EMD, EPG5, ETFA, ETFB, ETFDH, FBXL4, FBXO32, FHL1, FHOD3, FKRP, FKTN, FLNC, FOXD4, FOXRED1, FXN, GAA, GATA4, GATA6, GATAD1, GATC, GBE1, GFM1, GLA, GLB1, GMPPB, GSK3B, GTPBP3, GUSB, HADHA, HAND1, HCN4, HFE, HRAS, IDUA, ILK, ISPD, JPH2, JUP, KLHL24, KRAS, LAMA2, LAMP2, LARGE, LDB3, LEMD2, LMNA, LMOD2, LRRC10, LZTR1, MAP2K1, MAP2K2, MAP3K8, MIPEP, MLYCD, MT-ATP6, MT-ATP8, MT-CO1, MT-CO2, MT-CO3, MT-CYB, MT-ND1, MT-ND2, MT-ND3, MT-ND4, MT-ND4L, MT-ND5, MT-ND6, MT-RNR1, MT-RNR2, MT-TA, MT-TC, MT-TD, MT-TE, MT-TF, MT-TG, MT-TH, MT-TI, MT-TK, MT-TL1, MT-TL2, MT-TM, MT-TN, MT-TP, MT-TQ, MT-TR, MT-TS1, MT-TS2, MT-TT, MT-TV, MT-TW, MT-TY, MTO1, MYBPC3, MYBPHL, MYH6, MYH7, MYL2, MYL3, MYL4, MYOT, MYPN, MYRF, NDUFAF2, NEXN, NF1, NKX2-5, NONO, NRAP, NRAS, PCCA, PCCB, PKP2, PLEC, PLEKHM2, PLN, PNPLA2, PPA2, PPCS, PPP1CB, PRDM16, PRKAG2, PTPN11, QRSL1, RAF1, RASA2, RBCK1, RBM20, RIT1, RMND1, RRAS, RYR2, SCN5A, SCNN1B, SCNN1G, SCO1, SCO2, SDHA, SELENON, SGCA, SGCB, SGCD, SGCG, SHOC2, SLC22A5, SLC25A20, SLC25A4, SMCHD1, SOS1, SOS2, SPEG, SPRED1, TAB2, TAZ, TBX20, TBX5, TCAP, TGFB3, TMEM43, TMEM70, TNNC1, TNNI3, TNNI3K, TNNT2, TOR1AIP1, TPM1, TRIM32, TSFM, TTN, TTR, VCL, VCP, VPS13A, XK

**7. Katekolaminerjik  
Polimorfik  
Ventriküler Taşikardi  
(CPVT) Paneli  
Genleri;**

- ✓ ANK2, CALM1 , CALM2, CALM3, CASQ2, KCNJ2, LMNA, RYR2, TECRL, TRDN

**8. Konjenital Yapısal  
Kalp Hastalığı Paneli  
Genleri;**

- ✓ ABL1, ACTA2, ACTB, ACTC1, ACTG1, ACVR1, ACVR2B, ADAMTS10, ADAMTS17, AFF4, AMMECR1, ARHGAP31, ARID1A, ARID1B, B3GAT3 , BCOR, BMPR2, BRAF , C12ORF57, CBL, CDK13, CDK9, CFAP53, CHD4, CHD7, CHRM2, CREBBP, CRELD1, CTC1, DHCR7, DLL4, DOCK6, EFTUD2, EHMT1, EIF2AK4, ELN, ENG, EOGT, EP300, EVC, EVC2, FLNA, FOXC1, FOXF1, FOXH1, FOXP1, GATA4 , GATA5, GATA6, GDF1, GJA1 , GJA5, GPC3, HAND1, HAND2, HDAC8, HNRNPK, HOXA1, HRAS, JAG1, KDM6A, KMT2D, KRAS , KYNU, LEFTY2 , MED12, MED13L, MEIS2, MMP21, MYCN, MYO18B, MYRF, NAA15, NF1 , NIPBL, NKX2-5, NKX2-6, NODAL, NONO, NOTCH1, NOTCH2 , NR2F2, NSD1, PITX2, PKD1L1, PPP1CB, PRDM6, PRKD1, PTPN11, PUF60, RAB23, RAF1, RBM10, RERE , RIT1, SALL4, SMARCB1, SMC1A, SMC3, SOS1, SOS2, STAG2, STRA6, TAB2, TBX1, TBX20, TBX5, TFAP2B, TGDS, TLL1, TMEM94, ZEB2 , ZFPM2, ZIC3

## 9. Kapsamlı Kardiyoloji Paneli Genleri;

- ✓ AARS2, ABCC6, ABCC9, ACAD9, ACADVL, ACTA1, ACTA2, ACTC1, ACTN2, AGK , AGL, AGPAT2, AKAP9, ALMS1 , ALPK3, ANK2, ANO5, APOA1, ATPAF2, BAG3, BRAF, CACNA1C , CACNB2, CALM1 , CALM2, CALM3, CALR3, CAPN3, CASQ2, CASZ1, CAV3, CBL, CDH2, CHRM2, COX15, CPT2, CRYAB, CSRP3, CTNNA3, DBH, DES, DMD, DNAJC19, DOLK, DPM3, DSC2, DSG2, DSP, DTNA, DYSF, EEF1A2, ELAC2, EMD, ENPP1, EPG5, ETFA, ETFB, ETFDH, FAH, FBXL4, FBXO32, FHL1 , FHOD3, FKRP, FKTN, FLNC , FOXD4 , FOXRED1, FXN , GAA, GATA4 , GATA5, GATA6, GATAD1, GATC , GBE1, GFM1, GLA, GLB1, GMPPB, GSK3B, GTPBP3, GUSB , HADHA, HAND1, HAND2, HCN4, HFE, HRAS, IDUA, ILK, ISPD, JPH2, JUP, KCNA5, KCNE1, KCNE2, KCNH2, KCNJ2, KCNJ5, KCNQ1, KLHL24, KRAS , LAMA2, LAMP2, LARGE, LDB3, LEMD2, LMNA, LMOD2, LRRC10, LZTR1, MAP2K1, MAP2K2, MAP3K8, MIPEP , MLYCD, MRPL3, MRPL44, MRPS22, MT-ATP6, MT-ATP8, MT-CO1, MT-CO2, MT-CO3, MT-CYB, MT-ND1, MT-ND2, MT-ND3, MT-ND4, MT-ND4L, MT-ND5, MT-ND6, MT-RNR1, MT-RNR2, MT-TA, MT-TC, MT-TD, MT-TE, MT-TF, MT-TG, MT-TH, MT-TI, MT-TK, MT-TL1, MT-TL2, MT-TM, MT-TN, MT-TP, MT-TQ, MT-TR, MT-TS1, MT-TS2, MT-TT, MT-TV, MT-TW, MT-TY, MTO1, MYBPC3, MYBPHL, MYH6, MYH7, MYL2, MYL3, MYL4, MYO18B, MYOT, MYPN, MYRF, NDUFAF2, NEXN, NF1, NKX2-5, NONO, NOS1AP, NRAP, NRAS, NUP155, PARS2, PCCA, PCCB , PKP2, PLEC, PLEKHM2, PLN, PNPLA2, POMT1, PPA2 PPCS, PPP1CB, PRDM16, PRKAG2, PTPN11, QRSL1, RAF1, RASA2, RBCK1, RBM20, RIT1, RMND1 , RRAS, RYR2, SALL4, SCN10A, SCN1B, SCN3B, SCN5A, SCNN1B, SCNN1G, SCO1, SCO2, SDHA , SELENON , SGCA, SGCB, SGCD, SGCG, SHOC2, SLC22A5, SLC25A20, SLC25A3, SLC25A4, SMCHD1, SOS1, SOS2, SPEG, SPRED1, STAG2, TAB2, TAZ, TBX20 , TBX5, TCAP, TECRL, TGFB3, TMEM43, TMEM70, TNNC1, TNNI3, TNNI3K, TNNT2, TOR1AIP1, TPM1, TRDN, TRIM32, TRPM4, TSFM , TTN, TTR, VARS2, VCL, VCP, VPS13A, XK

**10. Dilate  
Kardiyomiyopati  
(DCM) Paneli Genleri;**

- ✓ ABCC6, ABCC9, ACTA1, ACTC1, ACTN2, ALMS1, ALPK3, APOA1, BAG3, CASZ1, CHRM2, DES, DMD, DOLK, DPM3, DSC2, DSG2, DSP, DYSF, EEF1A2, EMD, EPG5, ETFA, ETFB, ETFDH, FBXO32, FHOD3, FKTN, FLNC, FOXD4, GATA4, GATA6, GATC, GBE1, GLB1, GSK3B, HAND1, HCN4, ILK, JPH2, JUP, KLHL24, LAMP2, LDB3, LEMD2, LMNA, LMOD2, LRRC10, MLYCD, MT-ATP6, MT-ATP8, MT-CO1, MT-CO2, MT-CO3, MT-CYB, MT-ND1, MT-ND2, MT-ND3, MT-ND4, MT-ND4L, MT-ND5, MT-ND6, MT-RNR1, MT-RNR2, MT-TA, MT-TC, MT-TD, MT-TE, MT-TF, MT-TG, MT-TH, MT-TI, MT-TK, MT-TL1, MT-TL2, MT-TM, MT-TN, MT-TP, MT-TQ, MT-TR, MT-TS1, MT-TS2, MT-TT, MT-TV, MT-TW, MT-TY, MYBPC3, MYBPHL, MYH6, MYH7, MYL4, NKX2-5, NRAP, PCCA, PCCB, PKP2, PLEKHM2, PLN, PPCS, PRDM16, QRSL1, RAF1, RBCK1, RBM20, RMND1, SCN5A, SPEG, TAB2, TAZ, TBX20, TBX5, TCAP, TMEM43, TNNC1, TNNI3, TNNI3K, TNNT2, TOR1AIP1, TPM1, TTN, TTR, VCL, VPS13A

**11. Ehlers-Danlos  
Sendromu Paneli  
Genleri;**

- ✓ ABCC6, ADAMTS2, ALDH18A1, ATP6V0A2, ATP7A, B4GALT7, BGN, CBS, CHST14, COL11A1, COL1A1, COL1A2, COL2A1, COL3A1, COL5A1, COL5A2, DSE, EFEMP2, ELN, FBLN5, FBN1, FBN2, FKBP14, FLNA, PLOD1, PYCR1, SLC39A13, SMAD3, TGFB2, TGFB1, TGFB2, ZNF469

**12. Kaltsal  
Hemorajik  
Telanjektazi (HHT)  
Paneli Genleri;**

- ✓ ACVRL1, ENG, EPHB4, GDF2, RASA1, SMAD4

**13. Heterotaksi ve Situs İnverson Paneli Genleri;**

- ✓ ACVR2B, ANKS6, ARMC4, C21ORF59, CCDC103, CCDC114, CCDC151, CCDC39, CCDC40, CFAP53, DNAAF1, DNAAF2, DNAAF3, DNAAF5, DNAH11 , DNAH5, DNAI1, DNAI2, DNAL1, DYX1C1, FOXH1, GDF1, INVS, LEFTY2 , LRRC6, MMP21, NODAL, PIH1D3, PITRM1, PKD1L1, SPAG1, TTC25, ZIC3, ZMYND10

**14. Hiperlipidemi Çekirdek Paneli Genleri;**

- ✓ APOB, LDLR, LDLRAP1, PCSK9

**15. Hiperlipidemi Paneli Genleri;**

- ✓ ABCA1, ABCG5, ABCG8, ALMS1 , APOA1, APOA5, APOB, APOC2, APOC3, APOE, CREB3L3, GPIHBP1, LDLR, LDLRAP1, LIPA, LMF1, LPL, PCSK9

**16. Hipertrofik Kardiyomiyopati (HKMP) Paneli Genleri;**

- ✓ ABCC9, ACAD9, ACADVL, ACTA1, ACTC1, ACTN2, AGK , AGL, ALPK3, APOA1, BAG3, BRAF , CBL, COX15, CSRP3, ELAC2, EPG5, FBXL4, FHL1 , FHOD3, FLNC , FXN , GAA, GLA, GSK3B, HRAS, JPH2, KLHL24, LAMP2, MIPEP , MT-ATP6, MT-ATP8, MT-CO1, MT-CO2, MT-CO3, MT-CYB, MT-ND1, MT-ND2, MT-ND3, MT-ND4, MT-ND4L, MT-ND5, MT-ND6, MT-RNR1, MT-RNR2, MT-TA, MT-TC, MT-TD, MT-TE, MT-TF, MT-TG, MT-TH, MT-TI, MT-TK, MT-TL1, MT-TL2, MT-TM, MT-TN, MT-TP, MT-TQ, MT-TR, MT-TS1, MT-TS2, MT-TT, MT-TV, MT-TW, MT-TY, MYBPC3, MYH7, MYL2, MYL3, NDUFAF2, PLN, PRKAG2, PTPN11, RAF1, RIT1, SLC25A4, SOS1, TNNC1, TNNI3, TNNT2, TPM1, TTR

**17. Sol Ventriküler  
Sıkıştırılmamış  
Kardiyomiyopati  
(LVNC) Paneli  
Genleri;**

- ✓ ABCC9, BAG3, CTNNA3, DES, DMD, DSC2, DSG2, DSP, DTNA, EMD, FBXO32, FLNC, HCN4, JPH2, JUP, LAMP2, LMNA, MIPEP, MYBPC3, MYH6, MYH7, PKP2, PLEKHM2, PLN, RAF1, RBM20, RYR2, SCN5A, TCAP, TNNT2, TPM1, TTN, VCL

**18. Liddle Sendromu  
Paneli Genleri;**

- ✓ SCNN1B, SCNN1G

**19. Uzun QT  
Sendromu (LQTS)  
Paneli Genleri;**

- ✓ AKAP9, ANK2, CACNA1C, CALM1, CALM2, CALM3, CAV3, KCNE1, KCNE2, KCNH2, KCNJ2, KCNJ5, KCNQ1, NOS1AP, SCN5A, TECRL

**20. Marfan Sendromu  
Paneli Genleri;**

- ✓ ABL1, ADAMTS10, ADAMTS17, ADAMTSL4, B3GAT3, BGN, CBS, COL11A1, COL11A2, COL1A1, COL1A2, COL2A1, COL3A1, COL5A1, COL5A2, DLG4, EFEMP2, FBN1, FBN2, LOX, MAT2A, MED12, PLOD1, SKI, SLC2A10, SMAD3, SMAD6, TGFB2, TGFB3, TGFB1, TGFB2, UPF3B, VCAN, ZDHHC9

**21. Noonan Sendromu  
Paneli Genleri;**

- ✓ ACTB, ACTG1, BRAF, CBL, CCNK, CDC42, EPHB4, FGD1, HRAS, KAT6B, KRAS, LZTR1, MAP2K1, MAP2K2, MAP3K8, MRAS, NF1, NF2, NRAS, NSUN2, PPP1CB, PTPN11, RAF1, RASA1, RASA2, RIT1, RRAS, SASH1, SHOC2, SMARCB1, SOS1, SOS2, SPRED1, STAMBP, SYNGAP1



**22. Pulmoner  
Hipertansiyon (PAH)  
Paneli Genleri;**

- ✓ ABCC8, ACVRL1, AQP1, ATP13A3, BMPR1B, BMPR2, CAV1, EIF2AK4, ENG, FOXF1, GDF2, KCNA5, KCNK3, KLF2, NFU1, NOTCH3, RASA1, SARS2, SMAD4, SMAD9, SOX17, STRA6, TBX4



**23. Kısa QT Sendromu  
(SQTS) Paneli Genleri;**

- ✓ CACNA1C , CACNB2, KCNH2, KCNJ2, KCNQ1