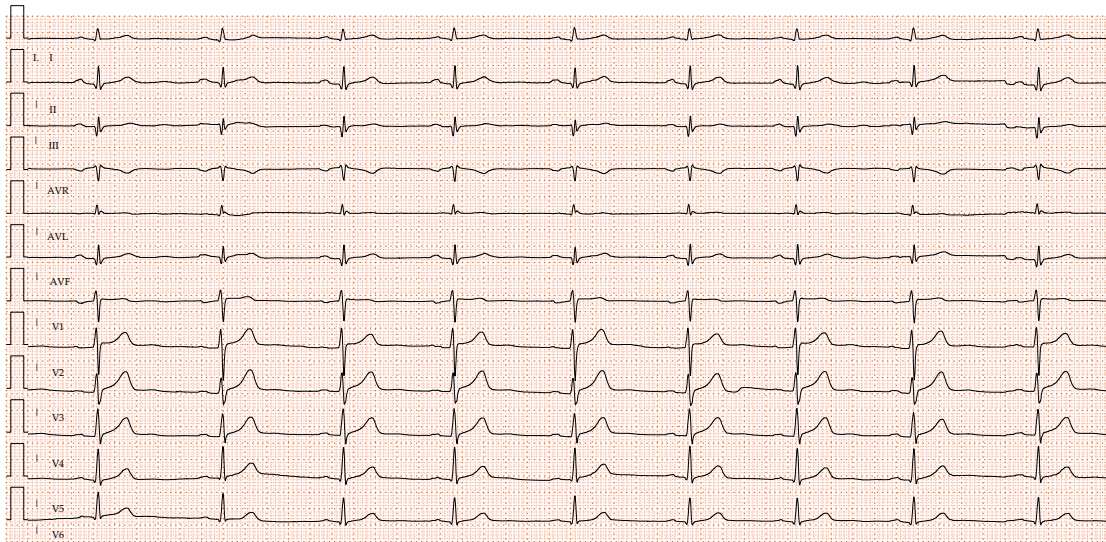
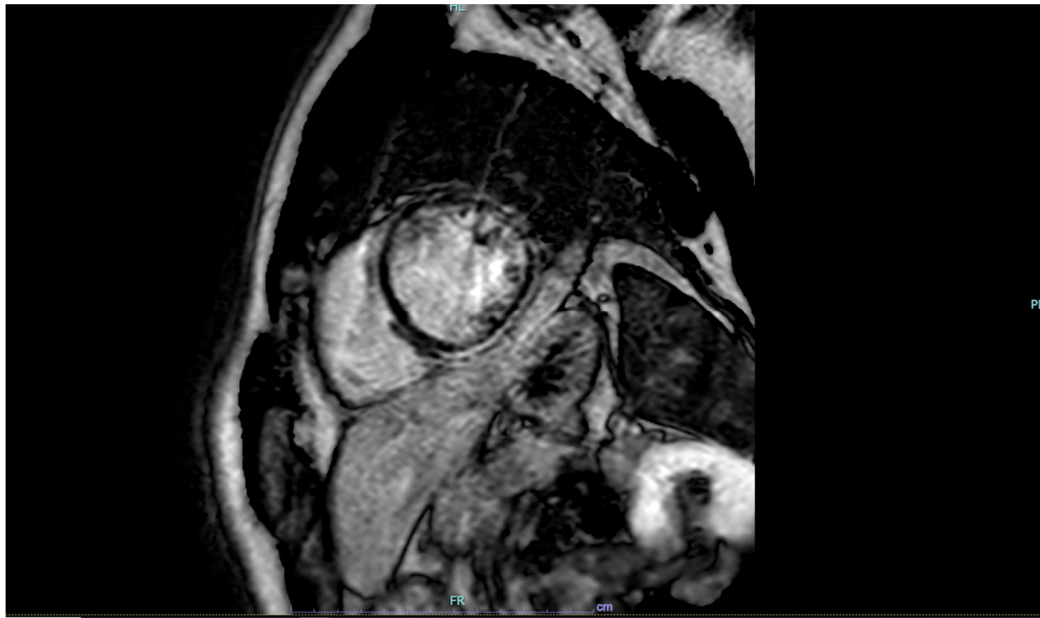


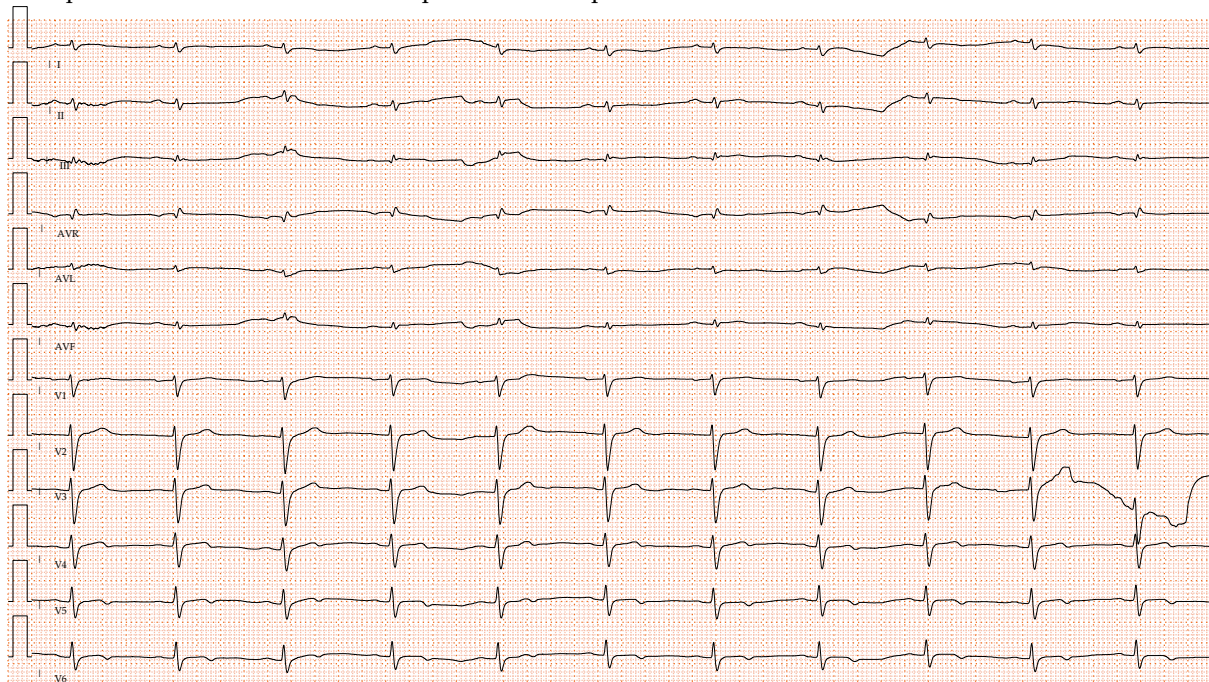
Supplementary Figure S1A: Cardiac magnetic resonance imaging of Patient ID 7. Short- axis view. PSIR images shows the presence of subepicardial and midwall LGE in the inferior septum, inferior and posterior wall.



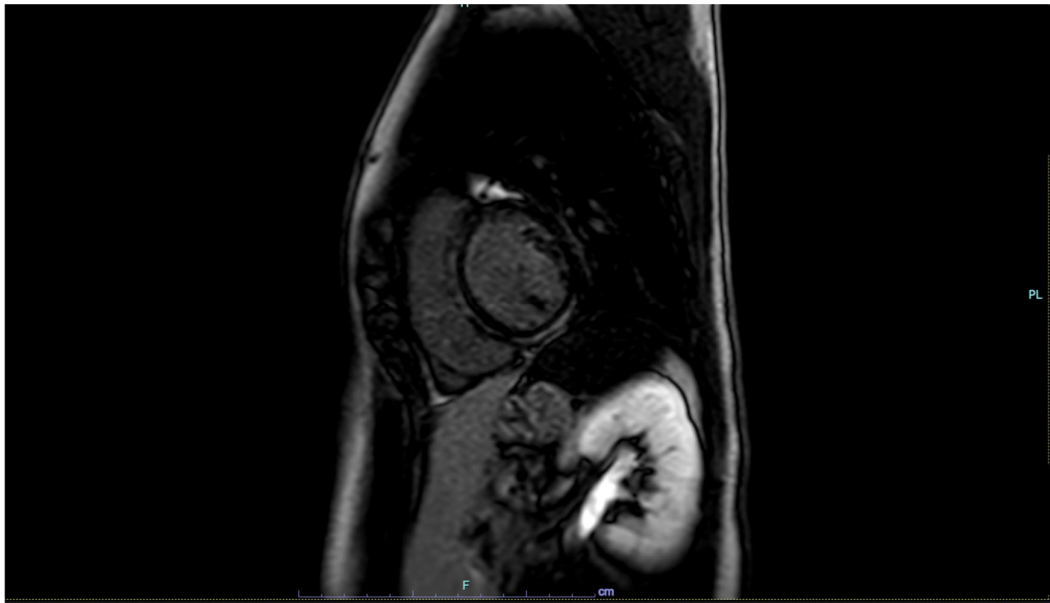
Supplementary Figure S1B: 12-ECG leads of Patient ID 7 shows the presence of pathological Q wave in inferior leads, epsilon-like wave in AVL and low QRS voltages in limb leads.



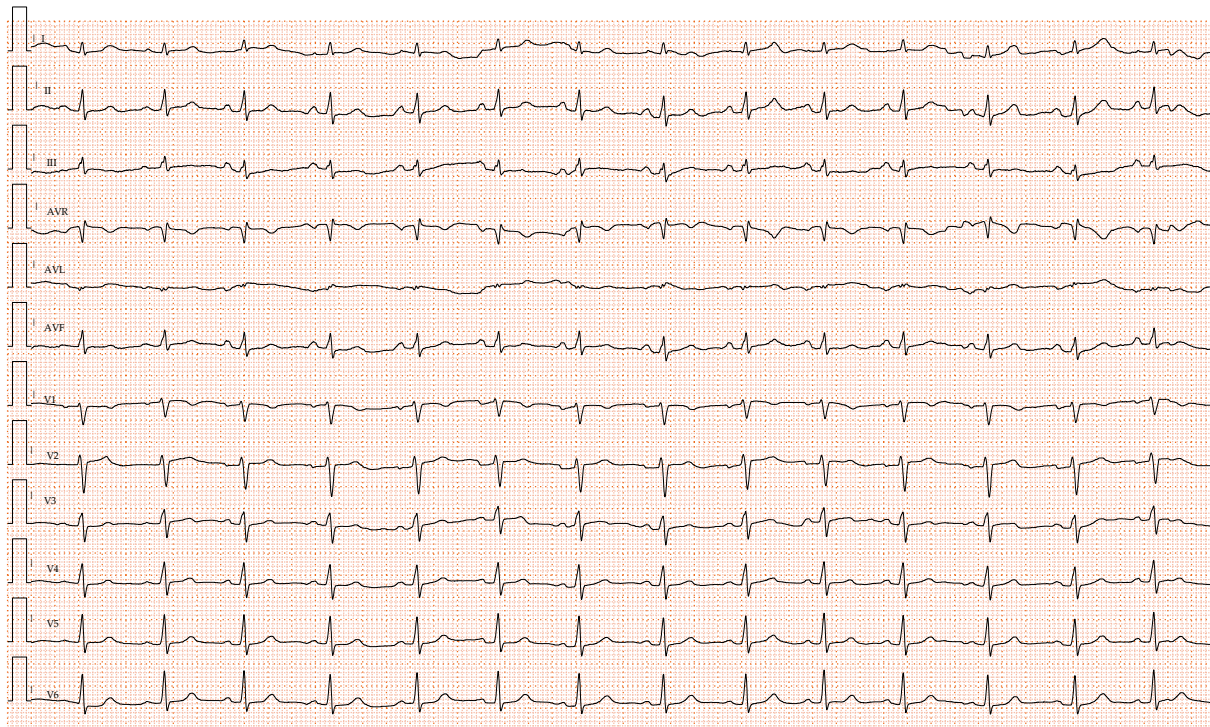
Supplementary Figure S2A: Cardiac magnetic resonance imaging of Patient ID 8. Short- axis view. Ring like pattern LGE involves inferior septum, inferior, posterior and lateral wall.



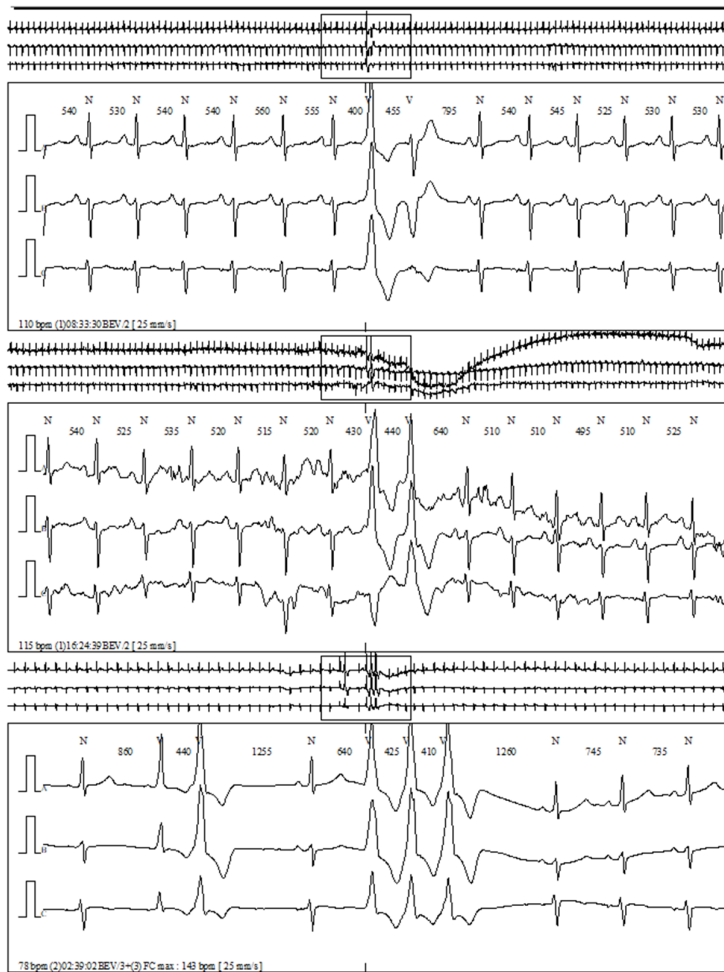
Supplementary Figure S2B: 12-ECG leads of Patient ID 8 shows the presence of low QRS voltages in limb leads and T waves inversion in V5-V6.



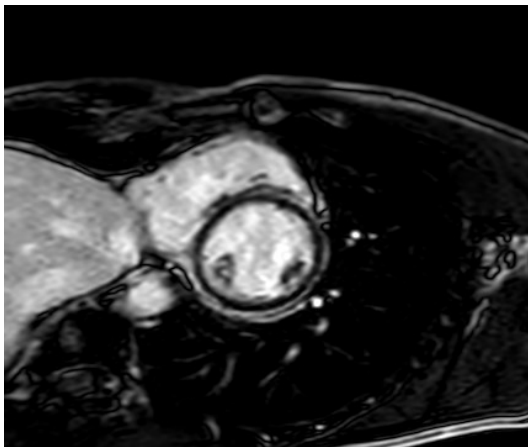
Supplementary Figure S3A: Cardiac magnetic resonance imaging of Patient ID 9. Short- axis view. PSIR images shows ring like LGE pattern involving anterior, septal and inferior wall.



Supplementary Figure S3B: 12-ECG leads of Patient ID 9 shows low QRS voltages (<0.5 mV, peak to peak) in DI, aVL in absence of other repolarization and depolarization ECG abnormalities.



Supplementary Figure S3C: premature ventricular beats in couplets and monomorphic triplets in 24 hours ECG monitoring of Patient ID 9.



Supplementary Figure S4: Cardiac magnetic resonance imaging of Patient ID 10: Short-axis view. PSIR images shows LV subepicardial ring like LGE pattern.

Table S1: Genes included in NGS target panel

Gene	RefSeq
<i>ACTC1</i>	NM_005159
<i>CACNA1C</i>	NM_001129841
<i>CACNA2D1</i>	NM_000722
<i>CACNB2</i>	NM_201596
<i>CAV3</i>	NM_001234
<i>DSC2</i>	NM_024422
<i>DSG2</i>	NM_001943
<i>DSP</i>	NM_004415
<i>FLNC</i>	NM_001458
<i>GLA</i>	NM_000169
<i>JUP</i>	NM_002230
<i>KCNH2</i>	NM_000238
<i>KCNQ1</i>	NM_000218
<i>LAMP2</i>	NM_013995
<i>LDB3</i>	NM_001171610
<i>LMNA</i>	NM_170707
<i>MYBPC3</i>	NM_000256
<i>MYH7</i>	NM_000257
<i>MYL2</i>	NM_000432
<i>MYL3</i>	NM_000258
<i>PKP2</i>	NM_004572
<i>PLN</i>	NM_002667
<i>PRKAG2</i>	NM_016203
<i>RBM20</i>	NM_001134363
<i>RYR2</i>	NM_001035
<i>SCN5A</i>	NM_00109940
<i>TNNC1</i>	NM_003280
<i>TNNI3</i>	NM_000363
<i>TNNT2</i>	NM_001276347
<i>TPM1</i>	NM_001018006
<i>TTN</i>	NM_001267550
<i>TTR</i>	NM_000371

Table S2: Oligonucleotide sequences used for Sanger sequencing

HGVSc	Exon	Primers
c.6154C>T	24	Fw: TGACACCTCCAAGCTG Rv: AAGGACATGCTTCTCTTC
c.2497C>T	18	Fw: GGAACAAATACTGGGAAATGC Rv: TTCTTCAGTGGTTCCCTTCAA
c.2848del	20	Fw: GGATAGGCCCCAGAAAACAGG Rv: GCACCTACCACCAGTCAAAG
c. 1352G>C	11	Fw: CTGCATAGCTTCTGGAGAGTG Rv: TCAAAGACATTGACTGTGGTGAT
c.5851C>T	24	Fw: GCTCACAGTGTATCCAGGGA Rv: TGTCGACAGTCAGCTTCTCA
c.3203_3204del	23	Fw: ATATGAGCAGCTGGTGCAA Rv: TCTCCTTGATGGCTTTCTC
c.5210del	23	Fw: AGCCATCAAAATCACCAACC Rv: TTTGAGAAACAGTGAAGCTGT
c.170+2T>G	-	Fw: GGTAGCGAGCAGCGACCTC Rv: GCGGGAGGGGAGAAAGGTA
c.3206_3207del	23	Fw: ATATGAGCAGCTGGTGCAA Rv: TCTCCTTGATGGCTTTCTC
c.2506C>T	18	Fw: GGAACAAATACTGGGAAATGC Rv: TTCTTCAGTGGTTCCCTTCAA
c.879_890dup	7	Fw: GCCTTTGAACCTCCTGTGCA Rv: GAGGGCAACAACACACACTG
c.3724_3739del	23	Fw: AGGAGAACCTTGGTTGGCAG Rv: CTGAATGGTCTTGGCAGCCT
c.5601G>A	24	Fw: GCTCACAGTGTATCCAGGGA Rv: TGTCGACAGTCAGCTTCTCA
c.1067C>A	9	Fw: GGTGAGAAATTCTCTTTCCAAC Rv: TCAGTGCTTTATAAAACACACTC
c.3932_3936del	23	Fw: AGGAGAACCTTGGTTGGCAG Rv: CTGAATGGTCTTGGCAGCCT
c.816_817delinsAT	7	Fw: GCCTTTGAACCTCCTGTGCA Rv: GAGGGCAACAACACACACTG