Supplementary Table 1. Characteristics of target genes panels used for mutational screening

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| **Target genes panel** | **Number of genes** | **List of genes** | **Number of oligoprimers pairs** | **Mean amplicon length, bp** | **Mean overlap between consecutive amplicons, bp** | **Total targets size, bp** | **Number DNA samples tested** |
| Panel I: Genes encoding desmosomal and associated proteins | 16 | *PKP2, DSG2, DSP, DSC2, JUP, TMEM43, TGFB3, LMNA, DES, EMD, CRYAB, SCN5A, FLNC, PLN, CTNNA3, LDB3*  | 521 | 240 | 30 | 94100 | 119 |
| Panel II: Genes encoding sarcomeric and associated proteins | 10 | *MYBPC3, MYH7, TNNT2, TNNI3, TPM1, MYL2, MYL3, ACTC1, TAZ, LDB3* | 294 | 198 | 48 | 29000 | 10 |
| Panel III: Genes encoding K+/Na+ ion channels | 11 | *SCN5A, SCN1B, SCN3B, SCN4B, SNTA1, KCNQ1, KCNH2, KCNJ2, KCNE1, KCNE2, KCNE3* | 234 | 195 | 33 | 30000 | 114 |