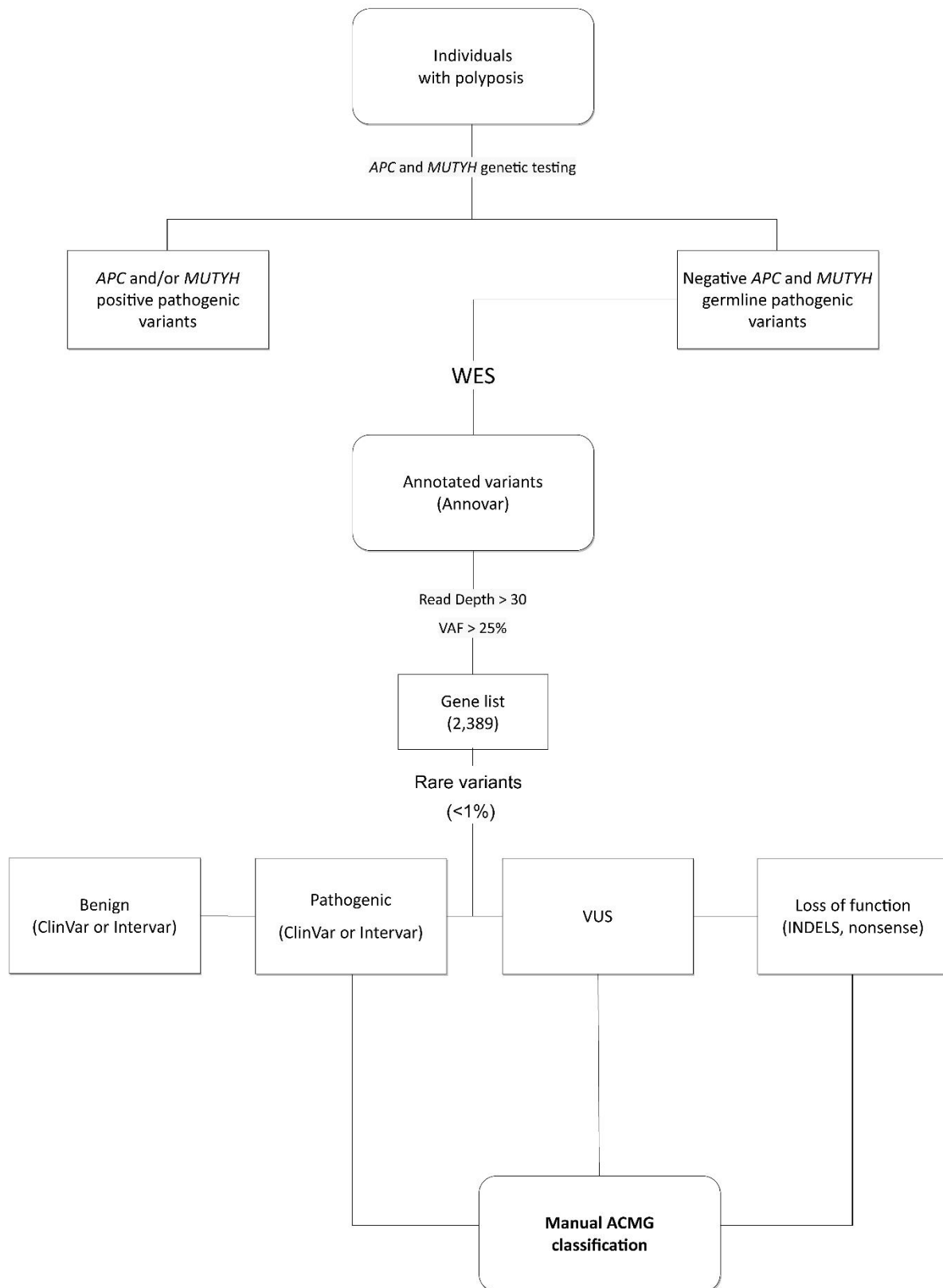




Supplementary Figure 1 Study workflow and variant prioritization.

Supplementary Table 1 Gene set analyzed in the study

Gene	Gene group
<i>SFN</i>	Cancer
<i>PPP2R1B</i>	Cancer
<i>A1BG</i>	Cancer
<i>A1CF</i>	Cancer
<i>AAPK1</i>	Cancer
<i>ABCB1</i>	Cancer
<i>ABCG2</i>	Cancer
<i>ABI1</i>	Cancer
<i>ABI2</i>	Cancer
<i>ABL1</i>	Cancer, repair
<i>ABL2</i>	Cancer
<i>ABLM3</i>	Cancer
<i>ABRX1</i>	Cancer
<i>ABTB1</i>	Cancer
<i>ACACA</i>	Cancer
<i>ACBD4</i>	Cancer
<i>ACK1</i>	Cancer
<i>ACKR3</i>	Cancer
<i>ACL6A</i>	Cancer
<i>ACPH</i>	Cancer
<i>ACS2B</i>	Cancer
<i>ACSL3</i>	Cancer
<i>ACSL5</i>	Cancer
<i>ACSL6</i>	Cancer
<i>ACTB</i>	Cancer
<i>ACTN4</i>	Cancer
<i>ACTZ</i>	Cancer
<i>ACV1B</i>	Cancer
<i>ACVL1</i>	Cancer

<i>ACVR1</i>	Cancer
<i>ACVR2A</i>	Cancer
<i>ADAM17</i>	Cancer
<i>ADAP1</i>	Cancer
<i>AEN</i>	Cancer
<i>AF10</i>	Cancer
<i>AF17</i>	Cancer
<i>AF1Q</i>	Cancer
<i>AF9</i>	Cancer
<i>AFAD</i>	Cancer
<i>AFF1</i>	Cancer
<i>AFF3</i>	Cancer
<i>AFF4</i>	Cancer
<i>AFP</i>	Cancer
<i>AGAP2</i>	Cancer
<i>AGR2</i>	Cancer
<i>AGRA2</i>	Cancer
<i>AGRA3</i>	Cancer
<i>AGRB1</i>	Cancer
<i>AGRF1</i>	Cancer
<i>AGRF2</i>	Cancer
<i>AGRL2</i>	Cancer
<i>AHRR</i>	Cancer
<i>AIFM2</i>	Cancer
<i>AIM2</i>	Cancer
<i>AIP</i>	Cancer, hereditary
<i>AKAP9</i>	Cancer
<i>AKIP1</i>	Cancer
<i>AKP13</i>	Cancer
<i>AKT1</i>	Cancer, hereditary
<i>AKT2</i>	Cancer

<i>AKT3</i>	Cancer
<i>ALB</i>	Cancer
<i>ALDH2</i>	Cancer
<i>ALEX</i>	Cancer
<i>ALK</i>	Cancer, hereditary
<i>ALKBH2</i>	Cancer, repair
<i>ALKBH3</i>	Cancer, repair
<i>ALPK1</i>	Cancer
<i>AMER1</i>	Cancer
<i>AMGO2</i>	Cancer
<i>AN32A</i>	Cancer
<i>ANCHR</i>	Cancer
<i>ANDR</i>	Cancer
<i>ANK1</i>	Cancer
<i>ANM3</i>	Cancer
<i>ANM6</i>	Cancer
<i>ANO1</i>	Cancer
<i>ANS1A</i>	Cancer
<i>ANS1B</i>	Cancer
<i>ANXA5</i>	Cancer
<i>APC</i>	Cancer, hereditary
<i>APC10</i>	Cancer
<i>APCL</i>	Cancer
<i>APEX1</i>	Cancer, repair
<i>APEX2</i>	Cancer, repair
<i>APITD1</i>	Cancer, repair
<i>APLF</i>	Cancer, repair
<i>APOBEC3B</i>	Cancer
<i>APTX</i>	Cancer, repair
<i>AR</i>	Cancer
<i>ARAF</i>	Cancer

<i>ARF</i>	Cancer
<i>ARG39</i>	Cancer
<i>ARHG1</i>	Cancer
<i>ARHG4</i>	Cancer
<i>ARHG5</i>	Cancer
<i>ARHG8</i>	Cancer
<i>ARHGAP26</i>	Cancer
<i>ARHGAP5</i>	Cancer
<i>ARHGC</i>	Cancer
<i>ARHGEF10</i>	Cancer
<i>ARHGEF10L</i>	Cancer
<i>ARHGEF12</i>	Cancer
<i>ARHGI</i>	Cancer
<i>ARHGQ</i>	Cancer
<i>ARI3A</i>	Cancer
<i>ARI3B</i>	Cancer
<i>ARI4A</i>	Cancer
<i>ARI5B</i>	Cancer
<i>ARID1A</i>	Cancer
<i>ARID1B</i>	Cancer
<i>ARID2</i>	Cancer
<i>ARK73</i>	Cancer
<i>ARK74</i>	Cancer
<i>ARNT</i>	Cancer
<i>ASC</i>	Cancer
<i>ASF1A</i>	Cancer, repair
<i>ASPC1</i>	Cancer
<i>ASPP2</i>	Cancer
<i>ASPSCR1</i>	Cancer
<i>ASXL1</i>	Cancer, hereditary
<i>ASXL2</i>	Cancer

<i>ATAD2</i>	Cancer
<i>ATF1</i>	Cancer
<i>ATF5</i>	Cancer
<i>ATF7</i>	Cancer
<i>ATIC</i>	Cancer
<i>ATM</i>	Cancer, hereditary, repair
<i>ATP1A1</i>	Cancer
<i>ATP2B3</i>	Cancer
<i>ATR</i>	Cancer, hereditary, repair
<i>ATRIP</i>	Cancer, repair
<i>ATRX</i>	Cancer
<i>ATXN3</i>	Cancer, repair
<i>AURKA</i>	Cancer
<i>AURKB</i>	Cancer
<i>AXIN1</i>	Cancer
<i>AXIN2</i>	Cancer, hereditary
<i>B2CL2</i>	Cancer
<i>B2L10</i>	Cancer
<i>B2LA1</i>	Cancer
<i>B2M</i>	Cancer
<i>BACH2</i>	Cancer
<i>BAD</i>	Cancer
<i>BAG3</i>	Cancer
<i>BAK</i>	Cancer
<i>BANP</i>	Cancer
<i>BAP1</i>	Cancer, hereditary
<i>BARD1</i>	Cancer, hereditary
<i>BATF</i>	Cancer
<i>BATF2</i>	Cancer
<i>BATF3</i>	Cancer
<i>BAX</i>	Cancer

<i>BAZ1A</i>	Cancer
<i>BC11A</i>	Cancer
<i>BC11B</i>	Cancer
<i>BCAR1</i>	Cancer
<i>BCAS3</i>	Cancer
<i>BCAS4</i>	Cancer
<i>BCCIP</i>	Cancer, repair
<i>BCL10</i>	Cancer
<i>BCL11A</i>	Cancer
<i>BCL11B</i>	Cancer
<i>BCL2</i>	Cancer
<i>BCL2L1</i>	Cancer
<i>BCL2L12</i>	Cancer
<i>BCL3</i>	Cancer
<i>BCL6</i>	Cancer
<i>BCL6B</i>	Cancer
<i>BCL7A</i>	Cancer
<i>BCL9</i>	Cancer
<i>BCL9L</i>	Cancer
<i>BCLAF1</i>	Cancer
<i>BCOR</i>	Cancer
<i>BCORL1</i>	Cancer
<i>BCR</i>	Cancer
<i>BECN1</i>	Cancer
<i>BIK</i>	Cancer
<i>BIN1</i>	Cancer
<i>BIRC3</i>	Cancer
<i>BIRC6</i>	Cancer
<i>BLCAP</i>	Cancer
<i>BLK</i>	Cancer
<i>BLM</i>	Cancer, hereditary, repair

<i>BLNK</i>	Cancer
<i>BMI1</i>	Cancer
<i>BMP5</i>	Cancer
<i>BMPR1A</i>	Cancer, hereditary
<i>BMR1A</i>	Cancer
<i>BMR1B</i>	Cancer
<i>BMX</i>	Cancer
<i>BOREA</i>	Cancer
<i>BRAF</i>	Cancer, hereditary
<i>BRCA1</i>	Cancer, hereditary, repair
<i>BRCA2</i>	Cancer, hereditary, repair
<i>BRCC3</i>	Cancer
<i>BRD1</i>	Cancer
<i>BRD3</i>	Cancer
<i>BRD4</i>	Cancer
<i>BRD7</i>	Cancer
<i>BRD8</i>	Cancer
<i>BRI3B</i>	Cancer
<i>BRIP1</i>	Cancer, hereditary, repair
<i>BRMS1</i>	Cancer
<i>BRNP1</i>	Cancer
<i>BTBD12</i>	Cancer, repair
<i>BTC</i>	Cancer
<i>BTG1</i>	Cancer
<i>BTG2</i>	Cancer
<i>BTG3</i>	Cancer
<i>BTK</i>	Cancer
<i>BUB1B</i>	Cancer, hereditary
<i>C15orf65</i>	Cancer
<i>C17orf70</i>	Cancer, repair
<i>C19orf40</i>	Cancer, repair

<i>C1orf86</i>	Cancer, repair
<i>C1QBP</i>	Cancer
<i>C1TC</i>	Cancer
<i>C2D1A</i>	Cancer
<i>C2orf44</i>	Cancer
<i>C56D2</i>	Cancer
<i>C7orf11</i>	Cancer, repair
<i>CA052</i>	Cancer
<i>CA053</i>	Cancer
<i>CA2D2</i>	Cancer
<i>CA2D3</i>	Cancer
<i>CACNA1D</i>	Cancer
<i>CADH1</i>	Cancer
<i>CADH2</i>	Cancer
<i>CADH3</i>	Cancer
<i>CADM1</i>	Cancer
<i>CADM3</i>	Cancer
<i>CADM4</i>	Cancer
<i>CAH9</i>	Cancer
<i>CALCA</i>	Cancer
<i>CALR</i>	Cancer
<i>CAMTA1</i>	Cancer
<i>CANT1</i>	Cancer
<i>CARD11</i>	Cancer
<i>CARL3</i>	Cancer
<i>CARS</i>	Cancer
<i>CASC3</i>	Cancer
<i>CASC5</i>	Cancer
<i>CASL</i>	Cancer
<i>CASP2</i>	Cancer
<i>CASP3</i>	Cancer

<i>CASP6</i>	Cancer
<i>CASP8</i>	Cancer
<i>CASP9</i>	Cancer, hereditary
<i>CASPA</i>	Cancer
<i>CASR</i>	Cancer
<i>CAV1</i>	Cancer
<i>CAVN3</i>	Cancer
<i>CBFA2T3</i>	Cancer
<i>CBFB</i>	Cancer
<i>CBL</i>	Cancer, hereditary
<i>CBLB</i>	Cancer
<i>CBLC</i>	Cancer
<i>CBLL2</i>	Cancer
<i>CBP</i>	Cancer
<i>CBX8</i>	Cancer
<i>CC85B</i>	Cancer
<i>CCAR2</i>	Cancer
<i>CCD26</i>	Cancer
<i>CCD34</i>	Cancer
<i>CCDB1</i>	Cancer
<i>CCDC6</i>	Cancer
<i>CCL2</i>	Cancer
<i>CCNB1</i>	Cancer
<i>CCNB1IP1</i>	Cancer
<i>CCNC</i>	Cancer
<i>CCND1</i>	Cancer
<i>CCND2</i>	Cancer
<i>CCND3</i>	Cancer
<i>CCNE1</i>	Cancer
<i>CCNE2</i>	Cancer
<i>CCNG1</i>	Cancer

<i>CCNG2</i>	Cancer
<i>CCNH</i>	Cancer, repair
<i>CCNL1</i>	Cancer
<i>CCNT2</i>	Cancer
<i>CCR4</i>	Cancer
<i>CCR7</i>	Cancer
<i>CD19</i>	Cancer
<i>CD209</i>	Cancer
<i>CD274</i>	Cancer
<i>CD28</i>	Cancer
<i>CD34</i>	Cancer
<i>CD38</i>	Cancer
<i>CD3Z</i>	Cancer
<i>CD40LG</i>	Cancer
<i>CD44</i>	Cancer
<i>CD5</i>	Cancer
<i>CD74</i>	Cancer
<i>CD79A</i>	Cancer
<i>CD79B</i>	Cancer
<i>CDC23</i>	Cancer
<i>CDC37</i>	Cancer
<i>CDC42</i>	Cancer
<i>CDC73</i>	Cancer, hereditary
<i>CDCP1</i>	Cancer
<i>CDH1</i>	Cancer, hereditary
<i>CDH10</i>	Cancer
<i>CDH11</i>	Cancer
<i>CDH17</i>	Cancer
<i>CDH2</i>	Cancer
<i>CDK1</i>	Cancer
<i>CDK10</i>	Cancer

<i>CDK12</i>	Cancer
<i>CDK2</i>	Cancer
<i>CDK20</i>	Cancer
<i>CDK4</i>	Cancer, hereditary
<i>CDK6</i>	Cancer
<i>CDK7</i>	Cancer, repair
<i>CDK9</i>	Cancer
<i>CDKA1</i>	Cancer
<i>CDKL1</i>	Cancer
<i>CDKL2</i>	Cancer
<i>CDKN1A</i>	Cancer
<i>CDKN1B</i>	Cancer, hereditary
<i>CDKN1C</i>	Cancer, hereditary
<i>CDKN2A</i>	Cancer, hereditary
<i>CDKN2C</i>	Cancer
<i>CDKN3</i>	Cancer
<i>CDN1A</i>	Cancer
<i>CDN1B</i>	Cancer
<i>CDN1C</i>	Cancer
<i>CDN2A</i>	Cancer
<i>CDN2B</i>	Cancer
<i>CDN2C</i>	Cancer
<i>CDN2D</i>	Cancer
<i>CDON</i>	Cancer
<i>CDT1</i>	Cancer
<i>CDX2</i>	Cancer
<i>CE162</i>	Cancer
<i>CEACAM5</i>	Cancer
<i>CEAM1</i>	Cancer
<i>CEAM5</i>	Cancer
<i>CEAM6</i>	Cancer

<i>CEBPA</i>	Cancer, hereditary
<i>CEBPG</i>	Cancer, repair
<i>CENPK</i>	Cancer
<i>CENPU</i>	Cancer
<i>CENPW</i>	Cancer
<i>CEP57</i>	Cancer, hereditary
<i>CEP89</i>	Cancer
<i>CETN2</i>	Cancer, repair
<i>CHAF1A</i>	Cancer, repair
<i>CHAF1B</i>	Cancer, repair
<i>CHCHD7</i>	Cancer
<i>CHD1L</i>	Cancer
<i>CHD2</i>	Cancer
<i>CHD4</i>	Cancer
<i>CHD5</i>	Cancer
<i>CHDH</i>	Cancer
<i>CHEK1</i>	Cancer, repair
<i>CHEK2</i>	Cancer, hereditary, repair
<i>CHFR</i>	Cancer
<i>CHGA</i>	Cancer
<i>CHIC2</i>	Cancer
<i>CHK1</i>	Cancer
<i>CHK2</i>	Cancer
<i>CHST11</i>	Cancer
<i>CHSTB</i>	Cancer
<i>CIB1</i>	Cancer
<i>CIC</i>	Cancer
<i>CIITA</i>	Cancer
<i>CIP1</i>	Cancer
<i>CIP2A</i>	Cancer
<i>CJ090</i>	Cancer

<i>CK095</i>	Cancer
<i>CKAP2</i>	Cancer
<i>CLD7</i>	Cancer
<i>CLIP1</i>	Cancer
<i>CLK2</i>	Cancer, repair
<i>CLOCK</i>	Cancer
<i>CLP1</i>	Cancer
<i>CLSPN</i>	Cancer, repair
<i>CLTC</i>	Cancer
<i>CLTCL1</i>	Cancer
<i>CLUA1</i>	Cancer
<i>CLUS</i>	Cancer
<i>CMC4</i>	Cancer
<i>CMTA1</i>	Cancer
<i>CNBD1</i>	Cancer
<i>CNBP</i>	Cancer
<i>CNOT3</i>	Cancer
<i>CNTNAP2</i>	Cancer
<i>CNTRL</i>	Cancer
<i>COL1A1</i>	Cancer
<i>COL2A1</i>	Cancer
<i>COL3A1</i>	Cancer
<i>COMD1</i>	Cancer
<i>COP1</i>	Cancer
<i>COX1</i>	Cancer
<i>COX6C</i>	Cancer
<i>CPEB3</i>	Cancer
<i>CPEB4</i>	Cancer
<i>CPNE1</i>	Cancer
<i>CPNE3</i>	Cancer
<i>CQ080</i>	Cancer

<i>CR032</i>	Cancer
<i>CR3L2</i>	Cancer
<i>CR3L3</i>	Cancer
<i>CRADD</i>	Cancer
<i>CRBL2</i>	Cancer
<i>CRCM</i>	Cancer
<i>CREB1</i>	Cancer
<i>CREB3L1</i>	Cancer
<i>CREB3L2</i>	Cancer
<i>CREB5</i>	Cancer
<i>CREBBP</i>	Cancer, hereditary
<i>CREG1</i>	Cancer
<i>CRK</i>	Cancer
<i>CRKL</i>	Cancer
<i>CRLF2</i>	Cancer
<i>CRNKL1</i>	Cancer
<i>CRPAK</i>	Cancer
<i>CRTC1</i>	Cancer
<i>CRTC3</i>	Cancer
<i>CRY1</i>	Cancer, repair
<i>CSDE1</i>	Cancer
<i>CSF1R</i>	Cancer
<i>CSF2</i>	Cancer
<i>CSF3</i>	Cancer
<i>CSF3R</i>	Cancer, hereditary
<i>CSK</i>	Cancer
<i>CSK21</i>	Cancer
<i>CSK22</i>	Cancer
<i>CSK23</i>	Cancer
<i>CSMD3</i>	Cancer
<i>CSN3</i>	Cancer

<i>CSN5</i>	Cancer
<i>CSN6</i>	Cancer
<i>CSPP1</i>	Cancer
<i>CSRN1</i>	Cancer
<i>CTBP1</i>	Cancer
<i>CTCF</i>	Cancer
<i>CTDS2</i>	Cancer
<i>CTDSL</i>	Cancer
<i>CTIP</i>	Cancer
<i>CTLA4</i>	Cancer
<i>CTNB1</i>	Cancer
<i>CTND1</i>	Cancer
<i>CTNNA1</i>	Cancer, hereditary
<i>CTNNA2</i>	Cancer
<i>CTNNB1</i>	Cancer, hereditary
<i>CTNND1</i>	Cancer
<i>CTNND2</i>	Cancer
<i>CUL1</i>	Cancer
<i>CUL2</i>	Cancer
<i>CUL3</i>	Cancer
<i>CUL4A</i>	Cancer, repair
<i>CUL4B</i>	Cancer, repair
<i>CUL5</i>	Cancer
<i>CUL7</i>	Cancer
<i>CUX1</i>	Cancer
<i>CUZD1</i>	Cancer
<i>CXCL12</i>	Cancer
<i>CXCR4</i>	Cancer
<i>CXXC5</i>	Cancer
<i>CYCS</i>	Cancer
<i>CYLD</i>	Cancer, hereditary

<i>CYP19A1</i>	Cancer
<i>CYP1A1</i>	Cancer
<i>CYP2C8</i>	Cancer
<i>CYR61</i>	Cancer
<i>CYSLTR2</i>	Cancer
<i>CYTSB</i>	Cancer
<i>DAB2</i>	Cancer
<i>DAB2P</i>	Cancer
<i>DACH1</i>	Cancer
<i>DACT1</i>	Cancer
<i>DAPK2</i>	Cancer
<i>DAPK3</i>	Cancer
<i>DAXX</i>	Cancer
<i>DCAF1</i>	Cancer
<i>DCAF12L2</i>	Cancer
<i>DCBD2</i>	Cancer
<i>DCC</i>	Cancer
<i>DCLRE1A</i>	Cancer, repair
<i>DCLRE1B</i>	Cancer, repair
<i>DCLRE1C</i>	Cancer, repair
<i>DCNL1</i>	Cancer
<i>DCNL3</i>	Cancer
<i>DCR1B</i>	Cancer
<i>DCTN1</i>	Cancer
<i>DDB1</i>	Cancer, repair
<i>DDB2</i>	Cancer, hereditary, repair
<i>DDIT3</i>	Cancer
<i>DDIT4</i>	Cancer
<i>DDR1</i>	Cancer
<i>DDR2</i>	Cancer
<i>DDX10</i>	Cancer

<i>DDX17</i>	Cancer
<i>DDX3X</i>	Cancer
<i>DDX41</i>	Cancer, hereditary
<i>DDX42</i>	Cancer
<i>DDX5</i>	Cancer
<i>DDX6</i>	Cancer
<i>DEC1</i>	Cancer
<i>DEDD</i>	Cancer
<i>DEDD2</i>	Cancer
<i>DEF1</i>	Cancer
<i>DEK</i>	Cancer
<i>DEMA</i>	Cancer
<i>DENR</i>	Cancer
<i>DEP1A</i>	Cancer
<i>DFFB</i>	Cancer
<i>DGAT2</i>	Cancer
<i>DGCR14</i>	Cancer
<i>DGCR8</i>	Cancer
<i>DHB13</i>	Cancer
<i>DHSD</i>	Cancer
<i>DI3L2</i>	Cancer
<i>DICER</i>	Cancer
<i>DICER1</i>	Cancer, hereditary
<i>DIRA3</i>	Cancer
<i>DIS3L2</i>	Cancer, hereditary
<i>DJC27</i>	Cancer
<i>DKC1</i>	Cancer, hereditary
<i>DKK1</i>	Cancer
<i>DKK2</i>	Cancer
<i>DKK3</i>	Cancer
<i>DKK4</i>	Cancer

<i>DLEC1</i>	Cancer
<i>DLG1</i>	Cancer
<i>DLG3</i>	Cancer
<i>DLGP5</i>	Cancer
<i>DLP1</i>	Cancer
<i>DMAP1</i>	Cancer
<i>DMBT1</i>	Cancer
<i>DMC1</i>	Cancer, repair
<i>DMTF1</i>	Cancer
<i>DNAJB1</i>	Cancer
<i>DNM2</i>	Cancer
<i>DNMT3A</i>	Cancer
<i>DNTT</i>	Cancer, repair
<i>DOCK4</i>	Cancer
<i>DOCK8</i>	Cancer, hereditary
<i>DP13A</i>	Cancer
<i>DPH1</i>	Cancer
<i>DPM3</i>	Cancer
<i>DPOD1</i>	Cancer
<i>DPOE1</i>	Cancer
<i>DPOLQ</i>	Cancer
<i>DROSHA</i>	Cancer
<i>DUS10</i>	Cancer
<i>DUS16</i>	Cancer
<i>DUS26</i>	Cancer
<i>DUS7</i>	Cancer
<i>DUT</i>	Cancer, repair
<i>DUX4L1</i>	Cancer
<i>E2F1</i>	Cancer
<i>E2F2</i>	Cancer
<i>E2F3</i>	Cancer

<i>E2F6</i>	Cancer
<i>E2F7</i>	Cancer
<i>E2F8</i>	Cancer
<i>E41L3</i>	Cancer
<i>E4F1</i>	Cancer
<i>EBF1</i>	Cancer
<i>ECT2</i>	Cancer
<i>ECT2L</i>	Cancer
<i>EED</i>	Cancer
<i>EFNA1</i>	Cancer
<i>EFNA3</i>	Cancer
<i>EFNA4</i>	Cancer
<i>EFNB3</i>	Cancer
<i>EFS</i>	Cancer
<i>EGF</i>	Cancer
<i>EGFR</i>	Cancer, hereditary
<i>EGLN1</i>	Cancer, hereditary
<i>EGLN2</i>	Cancer, hereditary
<i>EGR3</i>	Cancer
<i>EHBP1</i>	Cancer
<i>EHF</i>	Cancer
<i>EI24</i>	Cancer
<i>EIF1AX</i>	Cancer
<i>EIF3E</i>	Cancer
<i>EIF4A2</i>	Cancer
<i>EKI2</i>	Cancer
<i>ELANE</i>	Cancer
<i>ELF3</i>	Cancer
<i>ELF4</i>	Cancer
<i>ELF5</i>	Cancer
<i>ELK1</i>	Cancer

<i>ELK4</i>	Cancer
<i>ELL</i>	Cancer
<i>ELN</i>	Cancer
<i>ELOC</i>	Cancer
<i>EME1</i>	Cancer, repair
<i>EME2</i>	Cancer, repair
<i>EML4</i>	Cancer
<i>EMP2</i>	Cancer
<i>EN113</i>	Cancer
<i>ENDOV</i>	Cancer, repair
<i>ENG</i>	Cancer
<i>ENK18</i>	Cancer
<i>ENK19</i>	Cancer
<i>ENK21</i>	Cancer
<i>ENK24</i>	Cancer
<i>ENK5</i>	Cancer
<i>ENK6</i>	Cancer
<i>ENK7</i>	Cancer
<i>ENK8</i>	Cancer
<i>ENK9</i>	Cancer
<i>ENL</i>	Cancer
<i>ENO2</i>	Cancer
<i>ENTP5</i>	Cancer
<i>EP300</i>	Cancer
<i>EPAS1</i>	Cancer, hereditary
<i>EPC1</i>	Cancer
<i>EPCAM</i>	Cancer, hereditary
<i>EPHA2</i>	Cancer
<i>EPHA3</i>	Cancer
<i>EPHA4</i>	Cancer
<i>EPHA5</i>	Cancer

<i>EPHA7</i>	Cancer
<i>EPHA8</i>	Cancer
<i>EPHB2</i>	Cancer
<i>EPHB3</i>	Cancer
<i>EPHB6</i>	Cancer
<i>EPN1</i>	Cancer
<i>EPS15</i>	Cancer
<i>EPS8</i>	Cancer
<i>ERBB2</i>	Cancer
<i>ERBB3</i>	Cancer
<i>ERBB4</i>	Cancer
<i>ERC1</i>	Cancer
<i>ERCC1</i>	Cancer, repair
<i>ERCC2</i>	Cancer, hereditary, repair
<i>ERCC3</i>	Cancer, hereditary, repair
<i>ERCC4</i>	Cancer, hereditary, repair
<i>ERCC5</i>	Cancer, hereditary, repair
<i>ERCC6</i>	Cancer, hereditary, repair
<i>ERCC6L</i>	Cancer, repair
<i>ERCC8</i>	Cancer, repair
<i>ERD21</i>	Cancer
<i>EREG</i>	Cancer
<i>ERF</i>	Cancer
<i>ERG</i>	Cancer
<i>ERRFI</i>	Cancer
<i>ESCO2</i>	Cancer, repair
<i>ESR1</i>	Cancer
<i>ESR2</i>	Cancer
<i>ESX1</i>	Cancer
<i>ETNK1</i>	Cancer
<i>ETS1</i>	Cancer

<i>ETS2</i>	Cancer
<i>ETV1</i>	Cancer
<i>ETV3</i>	Cancer
<i>ETV4</i>	Cancer
<i>ETV5</i>	Cancer
<i>ETV6</i>	Cancer, hereditary
<i>ETV7</i>	Cancer
<i>EVI2A</i>	Cancer
<i>EVI2B</i>	Cancer
<i>EVI5</i>	Cancer
<i>EWS</i>	Cancer
<i>EWSR1</i>	Cancer
<i>EXO1</i>	Cancer, repair
<i>EXT1</i>	Cancer, hereditary
<i>EXT2</i>	Cancer, hereditary
<i>EYA2</i>	Cancer
<i>EZH2</i>	Cancer, hereditary
<i>EZR</i>	Cancer
<i>F107A</i>	Cancer
<i>F10A5</i>	Cancer
<i>F120A</i>	Cancer
<i>F189B</i>	Cancer
<i>F210B</i>	Cancer
<i>FA32A</i>	Cancer
<i>FA58B</i>	Cancer
<i>FA72A</i>	Cancer
<i>FA83A</i>	Cancer
<i>FA83B</i>	Cancer
<i>FA83D</i>	Cancer
<i>FABP7</i>	Cancer
<i>FACD2</i>	Cancer

<i>FADD</i>	Cancer
<i>FAK1</i>	Cancer
<i>FAM131B</i>	Cancer
<i>FAM135B</i>	Cancer
<i>FAM175A</i>	Cancer
<i>FAM3C</i>	Cancer
<i>FAM46C</i>	Cancer
<i>FAM47C</i>	Cancer
<i>FAN1</i>	Cancer, hereditary, repair
<i>FANCA</i>	Cancer, hereditary, repair
<i>FANCB</i>	Cancer, hereditary, repair
<i>FANCC</i>	Cancer, hereditary, repair
<i>FANCD2</i>	Cancer, hereditary, repair
<i>FANCE</i>	Cancer, hereditary, repair
<i>FANCF</i>	Cancer, hereditary, repair
<i>FANCG</i>	Cancer, hereditary, repair
<i>FANCI</i>	Cancer, hereditary, repair
<i>FANCIJ</i>	Cancer
<i>FANCL</i>	Cancer, hereditary, repair
<i>FANCM</i>	Cancer, hereditary, repair
<i>FAS</i>	Cancer, hereditary
<i>FASLG</i>	Cancer, hereditary
<i>FAT1</i>	Cancer
<i>FAT3</i>	Cancer
<i>FAT4</i>	Cancer
<i>FBLN1</i>	Cancer
<i>FBLN2</i>	Cancer
<i>FBSP1</i>	Cancer
<i>FBW1A</i>	Cancer
<i>FBW1B</i>	Cancer
<i>FBX5</i>	Cancer

<i>FBX7</i>	Cancer
<i>FBXL2</i>	Cancer
<i>FBXO11</i>	Cancer
<i>FBXW7</i>	Cancer, hereditary
<i>FCG2B</i>	Cancer
<i>FCGR2B</i>	Cancer
<i>FCRL4</i>	Cancer
<i>FCSD2</i>	Cancer
<i>FEM1B</i>	Cancer
<i>FEN1</i>	Cancer, repair
<i>FER</i>	Cancer
<i>FES</i>	Cancer
<i>FEV</i>	Cancer
<i>FGF1</i>	Cancer
<i>FGF10</i>	Cancer
<i>FGF2</i>	Cancer
<i>FGF22</i>	Cancer
<i>FGF3</i>	Cancer
<i>FGF4</i>	Cancer
<i>FGF5</i>	Cancer
<i>FGF6</i>	Cancer
<i>FGF7</i>	Cancer
<i>FGF8</i>	Cancer
<i>FGFP1</i>	Cancer
<i>FGFR1</i>	Cancer, hereditary
<i>FGFR1OP</i>	Cancer
<i>FGFR2</i>	Cancer
<i>FGFR3</i>	Cancer
<i>FGFR4</i>	Cancer
<i>FGOP2</i>	Cancer
<i>FGR</i>	Cancer

<i>FH</i>	Cancer, hereditary
<i>FHIT</i>	Cancer
<i>FHL2</i>	Cancer
<i>FIP1L1</i>	Cancer
<i>FKBP9</i>	Cancer
<i>FLCN</i>	Cancer, hereditary
<i>FLI1</i>	Cancer
<i>FLNA</i>	Cancer
<i>FLOT1</i>	Cancer
<i>FLT1</i>	Cancer
<i>FLT3</i>	Cancer
<i>FLT3L</i>	Cancer
<i>FLT4</i>	Cancer
<i>FNBP1</i>	Cancer
<i>FNIP1</i>	Cancer
<i>FNIP2</i>	Cancer
<i>FOLH1</i>	Cancer
<i>FOS</i>	Cancer
<i>FOSL1</i>	Cancer
<i>FOSL2</i>	Cancer
<i>FOXA1</i>	Cancer
<i>FOXD1</i>	Cancer
<i>FOXE1</i>	Cancer, hereditary
<i>FOXL2</i>	Cancer
<i>FOXO1</i>	Cancer
<i>FOXO3</i>	Cancer
<i>FOXO4</i>	Cancer
<i>FOXP1</i>	Cancer
<i>FOXR1</i>	Cancer
<i>FR1OP</i>	Cancer
<i>FRAT1</i>	Cancer

<i>FRK</i>	Cancer
<i>FRMD3</i>	Cancer
<i>FSCN1</i>	Cancer
<i>FSTL3</i>	Cancer
<i>FUBP1</i>	Cancer
<i>FUMH</i>	Cancer
<i>FUND2</i>	Cancer
<i>FURIN</i>	Cancer
<i>FUS</i>	Cancer
<i>FYN</i>	Cancer
<i>FZD1</i>	Cancer
<i>FZR1</i>	Cancer
<i>G3BP1</i>	Cancer
<i>GA45G</i>	Cancer
<i>GADD45A</i>	Cancer, repair
<i>GALNT12</i>	Cancer
<i>GAS7</i>	Cancer
<i>GATA1</i>	Cancer, hereditary
<i>GATA2</i>	Cancer, hereditary
<i>GATA3</i>	Cancer
<i>GCNT3</i>	Cancer
<i>GCR</i>	Cancer
<i>GDS1</i>	Cancer
<i>GEN1</i>	Cancer, repair
<i>GFI1</i>	Cancer
<i>GFI1B</i>	Cancer
<i>GGA1</i>	Cancer
<i>GLPC1</i>	Cancer
<i>GIT1</i>	Cancer
<i>GLI1</i>	Cancer
<i>GLI2</i>	Cancer

<i>GLT12</i>	Cancer
<i>GML</i>	Cancer
<i>GMPS</i>	Cancer
<i>GNA11</i>	Cancer
<i>GNAQ</i>	Cancer
<i>GNAS</i>	Cancer, hereditary
<i>GNAS2</i>	Cancer
<i>GNL3L</i>	Cancer
<i>GO45</i>	Cancer
<i>GOGA5</i>	Cancer
<i>GOLGA5</i>	Cancer
<i>GOPC</i>	Cancer
<i>GOT1B</i>	Cancer
<i>GP15L</i>	Cancer
<i>GP5</i>	Cancer
<i>GPAT3</i>	Cancer
<i>GPC3</i>	Cancer, hereditary
<i>GPC5</i>	Cancer
<i>GPHN</i>	Cancer
<i>GPHRA</i>	Cancer
<i>GPKOW</i>	Cancer
<i>GPS2</i>	Cancer
<i>GRAP</i>	Cancer
<i>GRB10</i>	Cancer
<i>GRB2</i>	Cancer
<i>GRB7</i>	Cancer
<i>GREM1</i>	Cancer, hereditary
<i>GRHL2</i>	Cancer
<i>GRIN2A</i>	Cancer
<i>GRM3</i>	Cancer
<i>GRP1</i>	Cancer

<i>GRWD1</i>	Cancer
<i>GSDMA</i>	Cancer
<i>GSDME</i>	Cancer
<i>GSTM1</i>	Cancer
<i>GSTP1</i>	Cancer
<i>GTF2H1</i>	Cancer, repair
<i>GTF2H2</i>	Cancer, repair
<i>GTF2H3</i>	Cancer, repair
<i>GTF2H4</i>	Cancer, repair
<i>GTF2H5</i>	Cancer, repair
<i>GUAA</i>	Cancer
<i>H2AFX</i>	Cancer, repair
<i>H3F3A</i>	Cancer
<i>H3F3B</i>	Cancer
<i>HABP2</i>	Cancer
<i>HASP</i>	Cancer
<i>HBA1</i>	Cancer
<i>HCK</i>	Cancer
<i>HDAC1</i>	Cancer
<i>HDAC2</i>	Cancer
<i>HDGR2</i>	Cancer
<i>HEAT6</i>	Cancer
<i>HELQ</i>	Cancer, repair
<i>HEMK1</i>	Cancer
<i>HERC1</i>	Cancer
<i>HERPUD1</i>	Cancer
<i>HEXB</i>	Cancer
<i>HEXI1</i>	Cancer
<i>HEXI2</i>	Cancer
<i>HEY1</i>	Cancer
<i>HGF</i>	Cancer

<i>HIC1</i>	Cancer
<i>HIC2</i>	Cancer
<i>HIF1A</i>	Cancer
<i>HIF3A</i>	Cancer, hereditary
<i>HIP1</i>	Cancer
<i>HIPK2</i>	Cancer
<i>HIST1H3B</i>	Cancer
<i>HIST1H4I</i>	Cancer
<i>HLA-A</i>	Cancer
<i>HLF</i>	Cancer
<i>HLTF</i>	Cancer, repair
<i>HMGA1</i>	Cancer
<i>HMGA2</i>	Cancer
<i>HMGB1</i>	Cancer, repair
<i>HMGB2</i>	Cancer, repair
<i>HMGN2P46</i>	Cancer
<i>HNF1A</i>	Cancer, hereditary
<i>HNF1B</i>	Cancer, hereditary
<i>HNRNPA2B1</i>	Cancer
<i>HOOK3</i>	Cancer
<i>HOP</i>	Cancer
<i>HOT</i>	Cancer
<i>HOXA11</i>	Cancer
<i>HOXA13</i>	Cancer
<i>HOXA9</i>	Cancer
<i>HOXB13</i>	Cancer, hereditary
<i>HOXC11</i>	Cancer
<i>HOXC13</i>	Cancer
<i>HOXD11</i>	Cancer
<i>HOXD13</i>	Cancer
<i>HPGDS</i>	Cancer

<i>HRAS</i>	Cancer, hereditary
<i>HS90B</i>	Cancer
<i>HSP90AA1</i>	Cancer
<i>HSP90AB1</i>	Cancer
<i>HTAI2</i>	Cancer
<i>HTATIP2</i>	Cancer, repair
<i>HUS1</i>	Cancer, repair
<i>HUTI</i>	Cancer
<i>HUTU</i>	Cancer
<i>HXA9</i>	Cancer
<i>HXB13</i>	Cancer
<i>HYAL1</i>	Cancer
<i>HYAL3</i>	Cancer
<i>I17RB</i>	Cancer
<i>IASPP</i>	Cancer
<i>ID1</i>	Cancer
<i>ID3</i>	Cancer
<i>IDH1</i>	Cancer
<i>IDH2</i>	Cancer
<i>IER2</i>	Cancer
<i>IF16</i>	Cancer
<i>IF2B3</i>	Cancer
<i>IF4E</i>	Cancer
<i>IF5A2</i>	Cancer
<i>IFFO1</i>	Cancer
<i>IFIX</i>	Cancer
<i>IFM1</i>	Cancer
<i>IFM3</i>	Cancer
<i>IFNA1</i>	Cancer
<i>IFNG</i>	Cancer
<i>IFRD2</i>	Cancer

<i>IGF1</i>	Cancer
<i>IGF1R</i>	Cancer
<i>IGF2</i>	Cancer
<i>IGF2BP2</i>	Cancer
<i>IGH</i>	Cancer
<i>IGK</i>	Cancer
<i>IGL</i>	Cancer
<i>IKBB</i>	Cancer
<i>IKBKB</i>	Cancer
<i>IKZF1</i>	Cancer
<i>IL10</i>	Cancer
<i>IL15</i>	Cancer
<i>IL18</i>	Cancer
<i>IL1B</i>	Cancer
<i>IL2</i>	Cancer
<i>IL21R</i>	Cancer
<i>IL24</i>	Cancer
<i>IL3RB</i>	Cancer
<i>IL4RA</i>	Cancer
<i>IL6</i>	Cancer
<i>IL6ST</i>	Cancer
<i>IL7R</i>	Cancer
<i>IL8</i>	Cancer
<i>ILK</i>	Cancer
<i>ILKAP</i>	Cancer
<i>ING1</i>	Cancer
<i>ING2</i>	Cancer
<i>ING3</i>	Cancer
<i>ING4</i>	Cancer
<i>INSL3</i>	Cancer
<i>INSM1</i>	Cancer

<i>INSR</i>	Cancer
<i>INT6</i>	Cancer
<i>IRF1</i>	Cancer
<i>IRF3</i>	Cancer
<i>IRF4</i>	Cancer
<i>IRF7</i>	Cancer
<i>IRS1</i>	Cancer
<i>IRS4</i>	Cancer
<i>ISK1</i>	Cancer
<i>IST1</i>	Cancer
<i>ISX</i>	Cancer
<i>ITA9</i>	Cancer
<i>ITCH</i>	Cancer
<i>ITGAV</i>	Cancer
<i>ITK</i>	Cancer
<i>ITPA</i>	Cancer
<i>IWS1</i>	Cancer
<i>JAK1</i>	Cancer
<i>JAK2</i>	Cancer, hereditary
<i>JAK3</i>	Cancer
<i>JAZF1</i>	Cancer
<i>JIP4</i>	Cancer
<i>JTB</i>	Cancer
<i>JUN</i>	Cancer
<i>JUND</i>	Cancer
<i>JUPI2</i>	Cancer
<i>KANK1</i>	Cancer
<i>KAP0</i>	Cancer
<i>KAPCB</i>	Cancer
<i>KAT2A</i>	Cancer
<i>KAT2B</i>	Cancer

<i>KAT5</i>	Cancer, repair
<i>KAT6A</i>	Cancer
<i>KAT6B</i>	Cancer
<i>KAT7</i>	Cancer
<i>KC1D</i>	Cancer
<i>KC1E</i>	Cancer
<i>KC1G2</i>	Cancer
<i>KCC4</i>	Cancer
<i>KCD11</i>	Cancer
<i>KCD21</i>	Cancer
<i>KCNA1</i>	Cancer
<i>KCNJ5</i>	Cancer
<i>KCTD6</i>	Cancer
<i>KDM1A</i>	Cancer, hereditary
<i>KDM3B</i>	Cancer, hereditary
<i>KDM5A</i>	Cancer
<i>KDM5C</i>	Cancer
<i>KDM6A</i>	Cancer
<i>KDR</i>	Cancer
<i>KDSR</i>	Cancer
<i>KEAP1</i>	Cancer
<i>KHDR1</i>	Cancer
<i>KI20B</i>	Cancer
<i>KIAA1549</i>	Cancer
<i>KIAA1598</i>	Cancer
<i>KIF1B</i>	Cancer, hereditary
<i>KIF22</i>	Cancer
<i>KIF5B</i>	Cancer
<i>KILIN</i>	Cancer
<i>KIME</i>	Cancer
<i>KISS1</i>	Cancer

<i>KIT</i>	Cancer, hereditary
<i>KLF4</i>	Cancer
<i>KLF5</i>	Cancer
<i>KLF6</i>	Cancer
<i>KLH20</i>	Cancer
<i>KLH22</i>	Cancer
<i>KLH41</i>	Cancer
<i>KLK10</i>	Cancer
<i>KLK2</i>	Cancer
<i>KLK3</i>	Cancer
<i>KMT2A</i>	Cancer
<i>KMT2B</i>	Cancer
<i>KMT2C</i>	Cancer
<i>KMT2D</i>	Cancer
<i>KMT2E</i>	Cancer
<i>KMT5A</i>	Cancer
<i>KNL1</i>	Cancer
<i>KNSTRN</i>	Cancer
<i>KPCA</i>	Cancer
<i>KPCD</i>	Cancer
<i>KPCD2</i>	Cancer
<i>KPCI</i>	Cancer
<i>KPCL</i>	Cancer
<i>KPYM</i>	Cancer
<i>KRAS</i>	Cancer, hereditary
<i>KRIT1</i>	Cancer
<i>KRT19</i>	Cancer
<i>KRT7</i>	Cancer
<i>KS6A2</i>	Cancer
<i>KS6A5</i>	Cancer
<i>KS6B1</i>	Cancer

<i>KS6B2</i>	Cancer
<i>KSYP</i>	Cancer
<i>KTN1</i>	Cancer
<i>L2GL1</i>	Cancer
<i>LACTB</i>	Cancer
<i>LAP4B</i>	Cancer
<i>LARP4B</i>	Cancer
<i>LASP1</i>	Cancer
<i>LATS1</i>	Cancer
<i>LATS2</i>	Cancer
<i>LC7L3</i>	Cancer
<i>LCK</i>	Cancer
<i>LCP1</i>	Cancer
<i>LDB1</i>	Cancer
<i>LEF1</i>	Cancer
<i>LEG1</i>	Cancer
<i>LEG8</i>	Cancer
<i>LEPROTL1</i>	Cancer
<i>LEU1</i>	Cancer
<i>LFG1</i>	Cancer
<i>LG11</i>	Cancer
<i>LGR6</i>	Cancer
<i>LHFP</i>	Cancer
<i>LHX2</i>	Cancer
<i>LHX4</i>	Cancer
<i>LIFR</i>	Cancer
<i>LIG1</i>	Cancer, repair
<i>LIG3</i>	Cancer, repair
<i>LIG4</i>	Cancer, hereditary, repair
<i>LIMA1</i>	Cancer
<i>LIMD1</i>	Cancer

<i>LIMK1</i>	Cancer
<i>LIN7A</i>	Cancer
<i>LIN9</i>	Cancer
<i>LITAF</i>	Cancer
<i>LMBL1</i>	Cancer
<i>LMF1</i>	Cancer
<i>LMNA</i>	Cancer
<i>LMO1</i>	Cancer
<i>LMO2</i>	Cancer
<i>LOX12</i>	Cancer
<i>LPP</i>	Cancer
<i>LRIG3</i>	Cancer
<i>LRP12</i>	Cancer
<i>LRP1B</i>	Cancer
<i>LRRN2</i>	Cancer
<i>LSM14A</i>	Cancer
<i>LSM7</i>	Cancer
<i>LTK</i>	Cancer
<i>LTMD1</i>	Cancer
<i>LUR1L</i>	Cancer
<i>LUZP4</i>	Cancer
<i>LYL1</i>	Cancer
<i>LYN</i>	Cancer
<i>LYOX</i>	Cancer
<i>LZTR1</i>	Cancer, hereditary
<i>LZTS1</i>	Cancer
<i>LZTS2</i>	Cancer
<i>M3K1</i>	Cancer
<i>M3K10</i>	Cancer
<i>M3K11</i>	Cancer
<i>M3K14</i>	Cancer

<i>M3K2</i>	Cancer
<i>M3K5</i>	Cancer
<i>M3K7</i>	Cancer
<i>M3K8</i>	Cancer
<i>M4K5</i>	Cancer
<i>MAD2L2</i>	Cancer, hereditary, repair
<i>MADD</i>	Cancer
<i>MAEA</i>	Cancer
<i>MAF</i>	Cancer
<i>MAFA</i>	Cancer
<i>MAFB</i>	Cancer
<i>MAFF</i>	Cancer
<i>MAFG</i>	Cancer
<i>MAFK</i>	Cancer
<i>MAGI1</i>	Cancer
<i>MAGI3</i>	Cancer
<i>MAK</i>	Cancer
<i>MALAT1</i>	Cancer
<i>MALT1</i>	Cancer
<i>MAML2</i>	Cancer
<i>MANF</i>	Cancer
<i>MAP12</i>	Cancer
<i>MAP2K1</i>	Cancer, hereditary
<i>MAP2K2</i>	Cancer, hereditary
<i>MAP2K4</i>	Cancer
<i>MAP2K7</i>	Cancer
<i>MAP3K1</i>	Cancer, hereditary
<i>MAP3K13</i>	Cancer
<i>MAPK1</i>	Cancer
<i>MAPK3</i>	Cancer
<i>MAPK5</i>	Cancer

<i>MAPK8</i>	Cancer
<i>MAPK8IP1</i>	Cancer
<i>MAPK8IP2</i>	Cancer
<i>MARE1</i>	Cancer
<i>MARE3</i>	Cancer
<i>MAS</i>	Cancer
<i>MATK</i>	Cancer
<i>MATR3</i>	Cancer, repair
<i>MAVS</i>	Cancer
<i>MAX</i>	Cancer, hereditary
<i>MB21D2</i>	Cancer
<i>MBD4</i>	Cancer, repair
<i>MBP</i>	Cancer
<i>MC1R</i>	Cancer
<i>MCF2</i>	Cancer
<i>MCF2L</i>	Cancer
<i>MCL1</i>	Cancer
<i>MCM4</i>	Cancer, hereditary
<i>MCTS1</i>	Cancer
<i>MD1L1</i>	Cancer
<i>MDC1</i>	Cancer, repair
<i>MDGA1</i>	Cancer
<i>MDM2</i>	Cancer
<i>MDM4</i>	Cancer
<i>MDS2</i>	Cancer
<i>MECOM</i>	Cancer
<i>MED1</i>	Cancer
<i>MED10</i>	Cancer
<i>MED12</i>	Cancer
<i>MED28</i>	Cancer
<i>MELK</i>	Cancer

<i>MEN1</i>	Cancer, hereditary
<i>MEP50</i>	Cancer
<i>MERL</i>	Cancer
<i>MERTK</i>	Cancer
<i>MET</i>	Cancer, hereditary
<i>MFHA1</i>	Cancer
<i>MFR1L</i>	Cancer
<i>MGMT</i>	Cancer, repair
<i>MGP</i>	Cancer
<i>MIB2</i>	Cancer
<i>MIEN1</i>	Cancer
<i>MINK1</i>	Cancer
<i>MINP1</i>	Cancer
<i>MINY3</i>	Cancer
<i>MITF</i>	Cancer, hereditary
<i>MK01</i>	Cancer
<i>MK03</i>	Cancer
<i>MK06</i>	Cancer
<i>MK07</i>	Cancer
<i>MK09</i>	Cancer
<i>MK15</i>	Cancer
<i>MKL1</i>	Cancer
<i>MKL2</i>	Cancer
<i>MKRN2</i>	Cancer
<i>MLF1</i>	Cancer
<i>MLH1</i>	Cancer, hereditary, repair
<i>MLH3</i>	Cancer, hereditary, repair
<i>MLLT1</i>	Cancer
<i>MLLT10</i>	Cancer
<i>MLLT11</i>	Cancer
<i>MLLT3</i>	Cancer

<i>MLLT4</i>	Cancer
<i>MLLT6</i>	Cancer
<i>MLX</i>	Cancer
<i>MME</i>	Cancer
<i>MMP1</i>	Cancer, hereditary
<i>MMP14</i>	Cancer
<i>MMP2</i>	Cancer
<i>MMP9</i>	Cancer
<i>MMRN2</i>	Cancer
<i>MMS19</i>	Cancer, repair
<i>MN1</i>	Cancer
<i>MNAT1</i>	Cancer, repair
<i>MNX1</i>	Cancer, hereditary
<i>MO4L1</i>	Cancer
<i>MO4L2</i>	Cancer
<i>MOB1A</i>	Cancer
<i>MOD5</i>	Cancer
<i>MOS</i>	Cancer
<i>MOV10</i>	Cancer
<i>MP2K1</i>	Cancer
<i>MP2K4</i>	Cancer
<i>MP2K6</i>	Cancer
<i>MP2K7</i>	Cancer
<i>MPG</i>	Cancer, repair
<i>MPIP2</i>	Cancer
<i>MPIP3</i>	Cancer
<i>MPL</i>	Cancer
<i>MPP3</i>	Cancer
<i>MRE11</i>	Cancer, hereditary
<i>MRE11A</i>	Cancer, repair
<i>MRGBP</i>	Cancer

<i>MRVI1</i>	Cancer
<i>MSD3</i>	Cancer
<i>MSH2</i>	Cancer, hereditary, repair
<i>MSH3</i>	Cancer, hereditary, repair
<i>MSH4</i>	Cancer, repair
<i>MSH5</i>	Cancer, repair
<i>MSH6</i>	Cancer, hereditary, repair
<i>MSI2</i>	Cancer
<i>MSMB</i>	Cancer
<i>MSN</i>	Cancer
<i>MSRE</i>	Cancer
<i>MTA1</i>	Cancer
<i>MTA2</i>	Cancer
<i>MTA3</i>	Cancer
<i>MTCP1</i>	Cancer
<i>MTG16</i>	Cancer
<i>MTG8</i>	Cancer
<i>MTG8R</i>	Cancer
<i>MTND</i>	Cancer
<i>MTOR</i>	Cancer
<i>MTSS1</i>	Cancer
<i>MTUS1</i>	Cancer
<i>MUC1</i>	Cancer
<i>MUC16</i>	Cancer
<i>MUC4</i>	Cancer
<i>MUL1</i>	Cancer
<i>MUS81</i>	Cancer, repair
<i>MUTYH</i>	Cancer, hereditary, repair
<i>MXI1</i>	Cancer
<i>MXRA5</i>	Cancer
<i>MY18B</i>	Cancer

<i>MYB</i>	Cancer
<i>MYBA</i>	Cancer
<i>MYBB</i>	Cancer
<i>MYC</i>	Cancer
<i>MYCL</i>	Cancer
<i>MYCN</i>	Cancer, hereditary
<i>MYCP1</i>	Cancer
<i>MYD88</i>	Cancer
<i>MYEOV</i>	Cancer
<i>MYH11</i>	Cancer
<i>MYH9</i>	Cancer
<i>MYO5A</i>	Cancer
<i>MYOD1</i>	Cancer
<i>N4BP2</i>	Cancer
<i>NAA15</i>	Cancer
<i>NAB2</i>	Cancer
<i>NACA</i>	Cancer
<i>NACC2</i>	Cancer
<i>NADAP</i>	Cancer
<i>NANO1</i>	Cancer
<i>NANP8</i>	Cancer
<i>NARR</i>	Cancer
<i>NAT6</i>	Cancer
<i>NAV2</i>	Cancer
<i>NBAS</i>	Cancer
<i>NBEA</i>	Cancer
<i>NBL1</i>	Cancer
<i>NBN</i>	Cancer, hereditary, repair
<i>NBPF3</i>	Cancer
<i>NBPFC</i>	Cancer
<i>NCAM1</i>	Cancer

<i>NCKIPSD</i>	Cancer
<i>NCOA1</i>	Cancer
<i>NCOA2</i>	Cancer
<i>NCOA4</i>	Cancer
<i>NCOR1</i>	Cancer
<i>NCOR2</i>	Cancer
<i>NDC80</i>	Cancer
<i>NDE1</i>	Cancer
<i>NDEL1</i>	Cancer
<i>NDKA</i>	Cancer
<i>NDKB</i>	Cancer
<i>NDRG1</i>	Cancer
<i>NDRG2</i>	Cancer
<i>NDUAD</i>	Cancer
<i>NDUC2</i>	Cancer
<i>NDUF4</i>	Cancer
<i>NEB2</i>	Cancer
<i>NEDD4</i>	Cancer
<i>NEDD8</i>	Cancer
<i>NEIL1</i>	Cancer, repair
<i>NEIL2</i>	Cancer, repair
<i>NEIL3</i>	Cancer, repair
<i>NEK2</i>	Cancer
<i>NEK3</i>	Cancer
<i>NEK4</i>	Cancer
<i>NEMF</i>	Cancer
<i>NEMO</i>	Cancer
<i>NENF</i>	Cancer
<i>NEO1</i>	Cancer
<i>NEUL1</i>	Cancer
<i>NF1</i>	Cancer, hereditary

<i>NF2</i>	Cancer, hereditary
<i>NFAT5</i>	Cancer
<i>NFATC2</i>	Cancer
<i>NFE2L2</i>	Cancer
<i>NFIB</i>	Cancer
<i>NFIP1</i>	Cancer
<i>NFIP2</i>	Cancer
<i>NFKB1</i>	Cancer
<i>NFKB2</i>	Cancer
<i>NFKBIE</i>	Cancer
<i>NGAL</i>	Cancer
<i>NGF</i>	Cancer
<i>NHEJ1</i>	Cancer, repair
<i>NIN</i>	Cancer
<i>NINL</i>	Cancer
<i>NKX21</i>	Cancer
<i>NKX2-1</i>	Cancer
<i>NKX31</i>	Cancer
<i>NKX3-1</i>	Cancer
<i>NLS1</i>	Cancer
<i>NMI</i>	Cancer
<i>NOL11</i>	Cancer
<i>NOL7</i>	Cancer
<i>NONO</i>	Cancer
<i>NOP53</i>	Cancer
<i>NOTC4</i>	Cancer
<i>NOTCH1</i>	Cancer
<i>NOTCH2</i>	Cancer
<i>NOV</i>	Cancer
<i>NPAT</i>	Cancer
<i>NPM</i>	Cancer

<i>NPM1</i>	Cancer
<i>NPRL2</i>	Cancer
<i>NR4A3</i>	Cancer
<i>NRAS</i>	Cancer, hereditary
<i>NRG1</i>	Cancer
<i>NS1BP</i>	Cancer
<i>NSA2</i>	Cancer
<i>NSD1</i>	Cancer, hereditary
<i>NSD2</i>	Cancer
<i>NSD3</i>	Cancer
<i>NT5C2</i>	Cancer
<i>NTHL1</i>	Cancer, hereditary, repair
<i>NTRK1</i>	Cancer, hereditary
<i>NTRK3</i>	Cancer
<i>NU214</i>	Cancer
<i>NUAK1</i>	Cancer
<i>NUDT1</i>	Cancer, repair
<i>NUMA1</i>	Cancer
<i>NUP214</i>	Cancer
<i>NUP98</i>	Cancer
<i>NUTM1</i>	Cancer
<i>NUTM2A</i>	Cancer
<i>NUTM2B</i>	Cancer
<i>OBF1</i>	Cancer
<i>OBFC2B</i>	Cancer, repair
<i>OBSCN</i>	Cancer
<i>OGG1</i>	Cancer, repair
<i>OGR1</i>	Cancer
<i>OLIG2</i>	Cancer
<i>OMD</i>	Cancer
<i>OPCM</i>	Cancer

<i>OTU7B</i>	Cancer
<i>P2RY8</i>	Cancer
<i>P3H1</i>	Cancer
<i>P53</i>	Cancer
<i>P73</i>	Cancer
<i>P85A</i>	Cancer
<i>P85B</i>	Cancer
<i>PA216</i>	Cancer
<i>PA2G4</i>	Cancer
<i>PABPC1</i>	Cancer
<i>PAF1</i>	Cancer
<i>PAF15</i>	Cancer
<i>PAFAH1B2</i>	Cancer
<i>PAK1</i>	Cancer
<i>PAK4</i>	Cancer
<i>PAK5</i>	Cancer
<i>PAL4A</i>	Cancer
<i>PALB2</i>	Cancer, hereditary, repair
<i>PALLD</i>	Cancer
<i>PANO1</i>	Cancer
<i>PAR10</i>	Cancer
<i>PAR6A</i>	Cancer
<i>PARK7</i>	Cancer
<i>PARN</i>	Cancer, hereditary
<i>PARP1</i>	Cancer, repair
<i>PARP2</i>	Cancer, repair
<i>PARP3</i>	Cancer, repair
<i>PARP4</i>	Cancer, repair
<i>PATZ1</i>	Cancer
<i>PAWR</i>	Cancer
<i>PAX3</i>	Cancer

<i>PAX5</i>	Cancer, hereditary
<i>PAX7</i>	Cancer
<i>PAX8</i>	Cancer
<i>PAXI</i>	Cancer
<i>PB1</i>	Cancer
<i>PBIP1</i>	Cancer
<i>PBRM1</i>	Cancer, hereditary
<i>PBX1</i>	Cancer
<i>PBX2</i>	Cancer
<i>PBX3</i>	Cancer
<i>PC11Y</i>	Cancer
<i>PCA3</i>	Cancer
<i>PCBP1</i>	Cancer
<i>PCD15</i>	Cancer
<i>PCLI1</i>	Cancer
<i>PCM1</i>	Cancer
<i>PCNA</i>	Cancer, repair
<i>PCSK7</i>	Cancer
<i>PCX2</i>	Cancer
<i>PDCD1LG2</i>	Cancer
<i>PDCD4</i>	Cancer
<i>PDE4DIP</i>	Cancer
<i>PDGFB</i>	Cancer, hereditary
<i>PDGFC</i>	Cancer
<i>PDGFD</i>	Cancer
<i>PDGFRA</i>	Cancer, hereditary
<i>PDGFRB</i>	Cancer, hereditary
<i>PDLI5</i>	Cancer
<i>PDPN</i>	Cancer
<i>PDRG1</i>	Cancer
<i>PDZD4</i>	Cancer

<i>PEA15</i>	Cancer
<i>PEBB</i>	Cancer
<i>PEG10</i>	Cancer
<i>PER1</i>	Cancer, repair
<i>PERP</i>	Cancer
<i>PFD3</i>	Cancer
<i>PGDH</i>	Cancer
<i>PGFRA</i>	Cancer
<i>PGFRB</i>	Cancer
<i>PGFRL</i>	Cancer
<i>PGM1</i>	Cancer
<i>PGR</i>	Cancer
<i>PGRP2</i>	Cancer
<i>PHB</i>	Cancer
<i>PHF23</i>	Cancer
<i>PHF6</i>	Cancer
<i>PHLA3</i>	Cancer
<i>PHLP1</i>	Cancer
<i>PHLP2</i>	Cancer
<i>PHOX2B</i>	Cancer, hereditary
<i>PIAS1</i>	Cancer
<i>PIAS2</i>	Cancer
<i>PIAS4</i>	Cancer
<i>PICAL</i>	Cancer
<i>PICALM</i>	Cancer
<i>PIDD1</i>	Cancer
<i>PIGU</i>	Cancer
<i>PIK3CA</i>	Cancer, hereditary
<i>PIK3CB</i>	Cancer
<i>PIK3R1</i>	Cancer
<i>PIM1</i>	Cancer

<i>PIM2</i>	Cancer
<i>PIM3</i>	Cancer
<i>PIMRE</i>	Cancer
<i>PIN1</i>	Cancer
<i>PININ</i>	Cancer
<i>PINK1</i>	Cancer
<i>PINX1</i>	Cancer
<i>PIR</i>	Cancer
<i>PIWL1</i>	Cancer
<i>PIWL2</i>	Cancer
<i>PK3CA</i>	Cancer
<i>PK3CB</i>	Cancer
<i>PK3CD</i>	Cancer
<i>PKHG2</i>	Cancer
<i>PKHG5</i>	Cancer
<i>PKHO1</i>	Cancer
<i>PLAG1</i>	Cancer
<i>PLAK</i>	Cancer
<i>PLAL1</i>	Cancer
<i>PLCE1</i>	Cancer
<i>PLCG1</i>	Cancer
<i>PLGF</i>	Cancer
<i>PLK1</i>	Cancer
<i>PLK2</i>	Cancer
<i>PLK3</i>	Cancer
<i>PLPL3</i>	Cancer
<i>PLPP5</i>	Cancer
<i>PLXB1</i>	Cancer
<i>PLXB2</i>	Cancer
<i>PLXB3</i>	Cancer
<i>PML</i>	Cancer

<i>PMS1</i>	Cancer, repair
<i>PMS2</i>	Cancer, hereditary, repair
<i>PMS2L3</i>	Cancer, repair
<i>PNKP</i>	Cancer, repair
<i>PO3F2</i>	Cancer
<i>PO4F1</i>	Cancer
<i>PO4F2</i>	Cancer
<i>POLA1</i>	Cancer, repair
<i>POLB</i>	Cancer, repair
<i>POLD1</i>	Cancer, hereditary, repair
<i>POLD2</i>	Cancer, repair
<i>POLD3</i>	Cancer, repair
<i>POLD4</i>	Cancer, repair
<i>POLE</i>	Cancer, hereditary, repair
<i>POLE2</i>	Cancer, repair
<i>POLE3</i>	Cancer, repair
<i>POLE4</i>	Cancer, repair
<i>POLG</i>	Cancer, repair
<i>POLH</i>	Cancer, hereditary, repair
<i>POLI</i>	Cancer, repair
<i>POLK</i>	Cancer, repair
<i>POLL</i>	Cancer, repair
<i>POLM</i>	Cancer, repair
<i>POLN</i>	Cancer, repair
<i>POLQ</i>	Cancer, repair
<i>POT1</i>	Cancer, hereditary
<i>POU2AF1</i>	Cancer
<i>POU5F1</i>	Cancer
<i>PP1A</i>	Cancer
<i>PPARG</i>	Cancer
<i>PPFIBP1</i>	Cancer

<i>PPIE</i>	Cancer
<i>PPM1D</i>	Cancer
<i>PPP2R1A</i>	Cancer
<i>PPP6C</i>	Cancer
<i>PPR18</i>	Cancer
<i>PRAF3</i>	Cancer
<i>PRAM</i>	Cancer
<i>PRC1</i>	Cancer
<i>PRCC</i>	Cancer
<i>PRDM1</i>	Cancer
<i>PRDM16</i>	Cancer
<i>PRDM2</i>	Cancer
<i>PRDM5</i>	Cancer
<i>PRDX6</i>	Cancer
<i>PREX2</i>	Cancer
<i>PRF1</i>	Cancer, hereditary
<i>PRKACA</i>	Cancer
<i>PRKAR1A</i>	Cancer, hereditary
<i>PRKCB</i>	Cancer
<i>PRKDC</i>	Cancer, repair
<i>PRKN</i>	Cancer
<i>PRKX</i>	Cancer
<i>PROM1</i>	Cancer
<i>PRPF19</i>	Cancer, repair
<i>PRPF40B</i>	Cancer
<i>PRR14</i>	Cancer
<i>PRR5</i>	Cancer
<i>PRRX1</i>	Cancer
<i>PRUN1</i>	Cancer
<i>PRUN2</i>	Cancer
<i>PSA5</i>	Cancer

<i>PSCA</i>	Cancer
<i>PSD10</i>	Cancer
<i>PSIP1</i>	Cancer
<i>PSMD6</i>	Cancer
<i>PTC1</i>	Cancer
<i>PTC2</i>	Cancer
<i>PTCH1</i>	Cancer, hereditary
<i>PTEN</i>	Cancer, hereditary
<i>PTGS2</i>	Cancer
<i>PTHB1</i>	Cancer
<i>PTK6</i>	Cancer
<i>PTK7</i>	Cancer
<i>PTN13</i>	Cancer
<i>PTN14</i>	Cancer
<i>PTN18</i>	Cancer
<i>PTN7</i>	Cancer
<i>PTOV1</i>	Cancer
<i>PTPN11</i>	Cancer, hereditary
<i>PTPN13</i>	Cancer
<i>PTPN6</i>	Cancer
<i>PTPRB</i>	Cancer
<i>PTPRC</i>	Cancer
<i>PTPRD</i>	Cancer
<i>PTPRE</i>	Cancer
<i>PTPRH</i>	Cancer
<i>PTPRJ</i>	Cancer
<i>PTPRK</i>	Cancer
<i>PTPRN</i>	Cancer
<i>PTPRO</i>	Cancer
<i>PTPRT</i>	Cancer
<i>PTPRU</i>	Cancer

<i>PTTG1</i>	Cancer, repair
<i>PTTG2</i>	Cancer
<i>PTTG3</i>	Cancer
<i>PUM1</i>	Cancer
<i>PUM2</i>	Cancer
<i>PWWP2A</i>	Cancer
<i>PXMP4</i>	Cancer
<i>QKI</i>	Cancer
<i>R144B</i>	Cancer
<i>RA51C</i>	Cancer
<i>RA51D</i>	Cancer
<i>RA54B</i>	Cancer
<i>RAB11B</i>	Cancer
<i>RAB26</i>	Cancer
<i>RAB5A</i>	Cancer
<i>RAB7A</i>	Cancer
<i>RAB8A</i>	Cancer
<i>RABEP1</i>	Cancer
<i>RAC1</i>	Cancer
<i>RACK1</i>	Cancer
<i>RAD1</i>	Cancer, repair
<i>RAD17</i>	Cancer, repair
<i>RAD18</i>	Cancer, repair
<i>RAD21</i>	Cancer, repair
<i>RAD23A</i>	Cancer, repair
<i>RAD23B</i>	Cancer, repair
<i>RAD50</i>	Cancer, hereditary, repair
<i>RAD51</i>	Cancer, hereditary, repair
<i>RAD51B</i>	Cancer, repair
<i>RAD51C</i>	Cancer, hereditary, repair
<i>RAD51D</i>	Cancer, hereditary, repair

<i>RAD52</i>	Cancer, repair
<i>RAD54</i>	Cancer
<i>RAD54B</i>	Cancer, repair
<i>RAD54L</i>	Cancer, hereditary, repair
<i>RAD9A</i>	Cancer, repair
<i>RAF1</i>	Cancer, hereditary
<i>RAI3</i>	Cancer
<i>RALGDS</i>	Cancer
<i>RANB9</i>	Cancer
<i>RANBP2</i>	Cancer
<i>RAP1A</i>	Cancer
<i>RAP1GDS1</i>	Cancer
<i>RAP2A</i>	Cancer
<i>RAP2B</i>	Cancer
<i>RARA</i>	Cancer
<i>RARB</i>	Cancer
<i>RASA1</i>	Cancer
<i>RASF1</i>	Cancer
<i>RASF2</i>	Cancer
<i>RASF3</i>	Cancer
<i>RASF4</i>	Cancer
<i>RASF5</i>	Cancer
<i>RASF6</i>	Cancer
<i>RASFA</i>	Cancer
<i>RASH</i>	Cancer
<i>RASK</i>	Cancer
<i>RASM</i>	Cancer
<i>RASN</i>	Cancer
<i>RB</i>	Cancer
<i>RB1</i>	Cancer, hereditary
<i>RB11A</i>	Cancer

<i>RB6I2</i>	Cancer
<i>RBBP8</i>	Cancer, repair
<i>RBCC1</i>	Cancer
<i>RBG1L</i>	Cancer
<i>RBL1</i>	Cancer
<i>RBL2</i>	Cancer
<i>RBM10</i>	Cancer
<i>RBM14</i>	Cancer, repair
<i>RBM15</i>	Cancer
<i>RBM5</i>	Cancer
<i>RBM6</i>	Cancer
<i>RBMS1</i>	Cancer
<i>RBMX</i>	Cancer
<i>RBP56</i>	Cancer
<i>RBTN1</i>	Cancer
<i>RBTN2</i>	Cancer
<i>RBX1</i>	Cancer, repair
<i>RBX2</i>	Cancer
<i>RDM1</i>	Cancer, repair
<i>REC6</i>	Cancer
<i>RECK</i>	Cancer
<i>RECQ4</i>	Cancer
<i>RECQL</i>	Cancer, hereditary, repair
<i>RECQL4</i>	Cancer, hereditary, repair
<i>RECQL5</i>	Cancer, repair
<i>RED</i>	Cancer
<i>REL</i>	Cancer
<i>REPS2</i>	Cancer
<i>RET</i>	Cancer, hereditary
<i>RETN</i>	Cancer
<i>REV1L</i>	Cancer, repair

<i>REV3L</i>	Cancer, repair
<i>RFC1</i>	Cancer, repair
<i>RFC2</i>	Cancer, repair
<i>RFC3</i>	Cancer, repair
<i>RFC4</i>	Cancer, repair
<i>RFC5</i>	Cancer, repair
<i>RFIP3</i>	Cancer
<i>RFXD3</i>	Cancer, hereditary
<i>RGCC</i>	Cancer
<i>RGDSR</i>	Cancer
<i>RGPD3</i>	Cancer
<i>RGRF1</i>	Cancer
<i>RGS7</i>	Cancer
<i>RHBDF2</i>	Cancer, hereditary
<i>RHDF2</i>	Cancer
<i>RHG07</i>	Cancer
<i>RHG20</i>	Cancer
<i>RHG21</i>	Cancer
<i>RHG26</i>	Cancer
<i>RHG29</i>	Cancer
<i>RHG35</i>	Cancer
<i>RHNO1</i>	Cancer
<i>RHOA</i>	Cancer
<i>RHOB</i>	Cancer
<i>RHOG</i>	Cancer
<i>RHOH</i>	Cancer
<i>RHXF2</i>	Cancer
<i>RIF1</i>	Cancer, repair
<i>RIG</i>	Cancer
<i>RINT1</i>	Cancer
<i>RIOX1</i>	Cancer

<i>RIOX2</i>	Cancer
<i>RIPK1</i>	Cancer
<i>RIT2</i>	Cancer
<i>RL10</i>	Cancer
<i>RL1D1</i>	Cancer
<i>RL40</i>	Cancer
<i>RL7A</i>	Cancer
<i>RLF</i>	Cancer
<i>RMI1</i>	Cancer, repair
<i>RMI2</i>	Cancer, hereditary, repair
<i>RMP</i>	Cancer
<i>RN135</i>	Cancer
<i>RN139</i>	Cancer
<i>RN149</i>	Cancer
<i>RN167</i>	Cancer
<i>RN213</i>	Cancer
<i>RN5A</i>	Cancer
<i>RNF11</i>	Cancer
<i>RNF168</i>	Cancer, repair
<i>RNF213</i>	Cancer
<i>RNF34</i>	Cancer
<i>RNF4</i>	Cancer, repair
<i>RNF43</i>	Cancer, hereditary
<i>RNF6</i>	Cancer
<i>RNF8</i>	Cancer, repair
<i>RNT2</i>	Cancer
<i>RNZ2</i>	Cancer
<i>ROBO1</i>	Cancer
<i>ROBO2</i>	Cancer
<i>RON</i>	Cancer
<i>ROR1</i>	Cancer

<i>RORA</i>	Cancer
<i>ROS1</i>	Cancer
<i>RPA1</i>	Cancer, repair
<i>RPA2</i>	Cancer, repair
<i>RPA3</i>	Cancer, repair
<i>RPA4</i>	Cancer, repair
<i>RPB1</i>	Cancer
<i>RPL10</i>	Cancer
<i>RPL22</i>	Cancer
<i>RPL5</i>	Cancer
<i>RPN1</i>	Cancer
<i>RRAS2</i>	Cancer
<i>RRM2B</i>	Cancer, repair
<i>RRP1B</i>	Cancer
<i>RS27A</i>	Cancer
<i>RS30</i>	Cancer
<i>RSLAA</i>	Cancer
<i>RSPO2</i>	Cancer
<i>RSPO3</i>	Cancer
<i>RSSA</i>	Cancer
<i>RT11</i>	Cancer
<i>RTKL1</i>	Cancer, hereditary
<i>RTKN</i>	Cancer
<i>RTN4</i>	Cancer
<i>RUBCL</i>	Cancer
<i>RUFY3</i>	Cancer
<i>RUNDC2A</i>	Cancer
<i>RUNX1</i>	Cancer, hereditary
<i>RUNX1T1</i>	Cancer
<i>RUNX2</i>	Cancer
<i>RUNX3</i>	Cancer

<i>RUVB1</i>	Cancer
<i>RUVB2</i>	Cancer
<i>RUXG</i>	Cancer
<i>RXFP2</i>	Cancer
<i>RYK</i>	Cancer
<i>S100A7</i>	Cancer
<i>S10A2</i>	Cancer
<i>S22AA</i>	Cancer
<i>S22AI</i>	Cancer
<i>S2533</i>	Cancer
<i>S2547</i>	Cancer
<i>S35B2</i>	Cancer
<i>S38A3</i>	Cancer
<i>SALL4</i>	Cancer
<i>SAMN1</i>	Cancer
<i>SAPC2</i>	Cancer
<i>SASH1</i>	Cancer, hereditary
<i>SAV1</i>	Cancer
<i>SBDS</i>	Cancer, hereditary
<i>SC23B</i>	Cancer
<i>SC31A</i>	Cancer
<i>SC5A8</i>	Cancer
<i>SCRIB</i>	Cancer
<i>SCUB3</i>	Cancer
<i>SDC1</i>	Cancer
<i>SDC4</i>	Cancer
<i>SDCB1</i>	Cancer
<i>SDCG3</i>	Cancer
<i>SDHA</i>	Cancer, hereditary
<i>SDHAF2</i>	Cancer, hereditary
<i>SDHB</i>	Cancer, hereditary

<i>SDHC</i>	Cancer, hereditary
<i>SDHD</i>	Cancer, hereditary
<i>SE6L1</i>	Cancer
<i>SEM3B</i>	Cancer
<i>SEM3F</i>	Cancer
<i>SEM5A</i>	Cancer
<i>SENP1</i>	Cancer
<i>SENP6</i>	Cancer
<i>SEPT5</i>	Cancer
<i>SEPT6</i>	Cancer
<i>SEPT9</i>	Cancer
<i>SESN1</i>	Cancer
<i>SESN2</i>	Cancer
<i>SET</i>	Cancer
<i>SETBP</i>	Cancer
<i>SETBP1</i>	Cancer, hereditary
<i>SETD1B</i>	Cancer
<i>SETD2</i>	Cancer
<i>SETMAR</i>	Cancer, repair
<i>SETMR</i>	Cancer
<i>SF3B1</i>	Cancer
<i>SFPQ</i>	Cancer, repair
<i>SFRP4</i>	Cancer
<i>SG2A2</i>	Cancer
<i>SGK1</i>	Cancer
<i>SH21B</i>	Cancer
<i>SH2B1</i>	Cancer
<i>SH2B2</i>	Cancer
<i>SH2B3</i>	Cancer, hereditary
<i>SH3G1</i>	Cancer
<i>SH3GL1</i>	Cancer

<i>SH3R2</i>	Cancer
<i>SHB</i>	Cancer
<i>SHC1</i>	Cancer
<i>SHC2</i>	Cancer
<i>SHC3</i>	Cancer
<i>SHCAF</i>	Cancer
<i>SHFM1</i>	Cancer, repair
<i>SHIP2</i>	Cancer
<i>SHPRH</i>	Cancer, repair
<i>SHSA5</i>	Cancer
<i>SIAH1</i>	Cancer
<i>SIK1</i>	Cancer
<i>SIK3</i>	Cancer
<i>SIR1</i>	Cancer
<i>SIR2</i>	Cancer
<i>SIR4</i>	Cancer
<i>SIRPA</i>	Cancer
<i>SIVA</i>	Cancer
<i>SIX1</i>	Cancer
<i>SIX2</i>	Cancer
<i>SKI</i>	Cancer
<i>SKIL</i>	Cancer
<i>SLAP2</i>	Cancer
<i>SLC34A2</i>	Cancer
<i>SLC45A3</i>	Cancer
<i>SLIP</i>	Cancer
<i>SLX1A</i>	Cancer, repair
<i>SLX1B</i>	Cancer, repair
<i>SLX4</i>	Cancer, hereditary
<i>SMAD2</i>	Cancer
<i>SMAD3</i>	Cancer

<i>SMAD4</i>	Cancer, hereditary
<i>SMAD5</i>	Cancer
<i>SMAD6</i>	Cancer
<i>SMAD7</i>	Cancer
<i>SMAGP</i>	Cancer
<i>SMARCA4</i>	Cancer, hereditary
<i>SMARCB1</i>	Cancer, hereditary
<i>SMARCD1</i>	Cancer
<i>SMARCE1</i>	Cancer, hereditary
<i>SMC1A</i>	Cancer, repair
<i>SMC3</i>	Cancer, repair
<i>SMC5</i>	Cancer, repair
<i>SMCA4</i>	Cancer
<i>SMO</i>	Cancer
<i>SMUF2</i>	Cancer
<i>SMUG1</i>	Cancer, repair
<i>SNAI1</i>	Cancer
<i>SNAI2</i>	Cancer
<i>SND1</i>	Cancer
<i>SNF5</i>	Cancer
<i>SNIP1</i>	Cancer
<i>SNTB1</i>	Cancer
<i>SNW1</i>	Cancer
<i>SOCS1</i>	Cancer
<i>SOX2</i>	Cancer
<i>SOX21</i>	Cancer
<i>SP1</i>	Cancer
<i>SP100</i>	Cancer
<i>SPAG1</i>	Cancer
<i>SPECC1</i>	Cancer
<i>SPEN</i>	Cancer

<i>SPI1</i>	Cancer
<i>SPN90</i>	Cancer
<i>SPO11</i>	Cancer, repair
<i>SPOP</i>	Cancer
<i>SPRTN</i>	Cancer, hereditary, repair
<i>SPT13</i>	Cancer
<i>SQSTM</i>	Cancer
<i>SRC</i>	Cancer
<i>SRC8</i>	Cancer
<i>SRGAP3</i>	Cancer
<i>SRGP1</i>	Cancer
<i>SRSF1</i>	Cancer
<i>SRSF2</i>	Cancer
<i>SRSF3</i>	Cancer
<i>SRY</i>	Cancer
<i>SS18</i>	Cancer
<i>SS18L1</i>	Cancer
<i>SSPN</i>	Cancer
<i>SSX1</i>	Cancer
<i>SSX2</i>	Cancer
<i>SSX4</i>	Cancer
<i>SSXT</i>	Cancer
<i>ST134</i>	Cancer
<i>ST14</i>	Cancer
<i>ST17A</i>	Cancer
<i>ST18</i>	Cancer
<i>ST20</i>	Cancer
<i>ST5</i>	Cancer
<i>ST7</i>	Cancer
<i>ST7L</i>	Cancer
<i>STA13</i>	Cancer

<i>STABP</i>	Cancer
<i>STAG1</i>	Cancer
<i>STAG2</i>	Cancer
<i>STAP2</i>	Cancer
<i>STAR8</i>	Cancer
<i>STAT3</i>	Cancer, hereditary
<i>STAT5B</i>	Cancer
<i>STAT6</i>	Cancer
<i>STEA3</i>	Cancer
<i>STEA4</i>	Cancer
<i>STIL</i>	Cancer
<i>STK11</i>	Cancer, hereditary
<i>STK25</i>	Cancer
<i>STK26</i>	Cancer
<i>STK3</i>	Cancer
<i>STK38</i>	Cancer
<i>STK39</i>	Cancer
<i>STK4</i>	Cancer
<i>STRN</i>	Cancer
<i>STYK1</i>	Cancer
<i>SUFU</i>	Cancer, hereditary
<i>SUMO1</i>	Cancer
<i>SUSD2</i>	Cancer
<i>SUSD3</i>	Cancer
<i>SUSD6</i>	Cancer
<i>SUV91</i>	Cancer
<i>SUV92</i>	Cancer
<i>SUZ12</i>	Cancer
<i>SYCC</i>	Cancer
<i>SYCP3</i>	Cancer, repair
<i>SYK</i>	Cancer

<i>SYNP2</i>	Cancer
<i>SYP</i>	Cancer
<i>SZRD1</i>	Cancer
<i>T184B</i>	Cancer
<i>T53I1</i>	Cancer
<i>T53I2</i>	Cancer
<i>TACC1</i>	Cancer
<i>TACC2</i>	Cancer
<i>TACC3</i>	Cancer
<i>TAD2B</i>	Cancer
<i>TAF12</i>	Cancer
<i>TAF15</i>	Cancer
<i>TAF4</i>	Cancer
<i>TAL1</i>	Cancer
<i>TAL2</i>	Cancer
<i>TAOK1</i>	Cancer
<i>TAOK2</i>	Cancer
<i>TAOK3</i>	Cancer
<i>TARG1</i>	Cancer
<i>TAXB1</i>	Cancer
<i>TBC3A</i>	Cancer
<i>TBK1</i>	Cancer
<i>TBL1XR1</i>	Cancer
<i>TBP</i>	Cancer
<i>TBRG1</i>	Cancer
<i>TBX3</i>	Cancer
<i>TCAL7</i>	Cancer
<i>TCAM1</i>	Cancer
<i>TCAM2</i>	Cancer
<i>TCEA1</i>	Cancer
<i>TCF12</i>	Cancer

<i>TCF3</i>	Cancer
<i>TCF7L2</i>	Cancer
<i>TCHP</i>	Cancer
<i>TCL1A</i>	Cancer
<i>TCL1B</i>	Cancer
<i>TCP1L</i>	Cancer
<i>TCTA</i>	Cancer
<i>TDG</i>	Cancer, repair
<i>TDP1</i>	Cancer, repair
<i>TDP2</i>	Cancer, repair
<i>TEC</i>	Cancer
<i>TEF</i>	Cancer
<i>TEFF1</i>	Cancer
<i>TENS4</i>	Cancer
<i>TERC</i>	Cancer, hereditary
<i>TERT</i>	Cancer, hereditary
<i>TES</i>	Cancer
<i>TET1</i>	Cancer
<i>TET2</i>	Cancer, hereditary
<i>TEX10</i>	Cancer
<i>TF2H1</i>	Cancer
<i>TF65</i>	Cancer
<i>TF7L2</i>	Cancer
<i>TFDP1</i>	Cancer
<i>TFDP2</i>	Cancer
<i>TFDP3</i>	Cancer
<i>TFE2</i>	Cancer
<i>TFE3</i>	Cancer
<i>TFEB</i>	Cancer
<i>TFG</i>	Cancer
<i>TFIP8</i>	Cancer

<i>TFPT</i>	Cancer
<i>TFRC</i>	Cancer
<i>TG</i>	Cancer
<i>TGFA</i>	Cancer
<i>TGFB1</i>	Cancer
<i>TGFBR2</i>	Cancer, hereditary
<i>TGFR1</i>	Cancer
<i>TGFR2</i>	Cancer
<i>THA</i>	Cancer
<i>THADA</i>	Cancer
<i>THAP1</i>	Cancer
<i>THB</i>	Cancer
<i>THEM4</i>	Cancer
<i>THOC1</i>	Cancer
<i>THRAP3</i>	Cancer
<i>TIAM1</i>	Cancer
<i>TIE2</i>	Cancer
<i>TIF1A</i>	Cancer
<i>TIFA</i>	Cancer
<i>TINF2</i>	Cancer, hereditary
<i>TIPRL</i>	Cancer
<i>TISB</i>	Cancer
<i>TISD</i>	Cancer
<i>TLK1</i>	Cancer
<i>TLK2</i>	Cancer
<i>TLX1</i>	Cancer
<i>TLX3</i>	Cancer
<i>TM101</i>	Cancer
<i>TM102</i>	Cancer
<i>TM115</i>	Cancer
<i>TM127</i>	Cancer

<i>TM158</i>	Cancer
<i>TM9S4</i>	Cancer
<i>TMED4</i>	Cancer
<i>TMED8</i>	Cancer
<i>TMEM127</i>	Cancer, hereditary
<i>TMF1</i>	Cancer
<i>TMPRSS2</i>	Cancer
<i>TNAP3</i>	Cancer
<i>TNC</i>	Cancer
<i>TNF</i>	Cancer
<i>TNF15</i>	Cancer
<i>TNFAIP3</i>	Cancer
<i>TNFRSF10B</i>	Cancer
<i>TNFRSF14</i>	Cancer
<i>TNFRSF17</i>	Cancer
<i>TNFRSF8</i>	Cancer
<i>TNIP2</i>	Cancer
<i>TNIP3</i>	Cancer
<i>TNK1</i>	Cancer
<i>TNR17</i>	Cancer
<i>TNR1A</i>	Cancer
<i>TNR6A</i>	Cancer
<i>TNR6B</i>	Cancer
<i>TNR6C</i>	Cancer
<i>TOB1</i>	Cancer
<i>TOB2</i>	Cancer
<i>TOP1</i>	Cancer
<i>TOP3A</i>	Cancer, hereditary, repair
<i>TOPB1</i>	Cancer
<i>TOPBP1</i>	Cancer, repair
<i>TOPRS</i>	Cancer

<i>TP4A2</i>	Cancer
<i>TP53</i>	Cancer, hereditary, repair
<i>TP53BP1</i>	Cancer, repair
<i>TP63</i>	Cancer
<i>TPD52</i>	Cancer
<i>TPD53</i>	Cancer
<i>TPGS2</i>	Cancer
<i>TPM3</i>	Cancer
<i>TPM4</i>	Cancer
<i>TPO</i>	Cancer
<i>TPOR</i>	Cancer
<i>TPR</i>	Cancer
<i>TR10B</i>	Cancer
<i>TRA</i>	Cancer
<i>TRADD</i>	Cancer
<i>TRAF1</i>	Cancer
<i>TRAF3</i>	Cancer
<i>TRAF5</i>	Cancer
<i>TRAF6</i>	Cancer
<i>TRAF7</i>	Cancer
<i>TRB</i>	Cancer
<i>TRD</i>	Cancer
<i>TREX1</i>	Cancer, repair
<i>TREX2</i>	Cancer, repair
<i>TRG-GCC2</i>	Cancer
<i>TRI13</i>	Cancer
<i>TRI22</i>	Cancer
<i>TRI27</i>	Cancer
<i>TRI33</i>	Cancer
<i>TRI35</i>	Cancer
<i>TRI36</i>	Cancer

<i>TRI37</i>	Cancer
<i>TRIB3</i>	Cancer
<i>TRIM24</i>	Cancer
<i>TRIM27</i>	Cancer
<i>TRIM33</i>	Cancer
<i>TRIM8</i>	Cancer
<i>TRIP11</i>	Cancer
<i>TRRAP</i>	Cancer
<i>TS101</i>	Cancer
<i>TSC1</i>	Cancer, hereditary
<i>TSC2</i>	Cancer, hereditary
<i>TSHR</i>	Cancer
<i>TSN31</i>	Cancer
<i>TSN6</i>	Cancer
<i>TTC23</i>	Cancer
<i>TTK</i>	Cancer
<i>TTP</i>	Cancer
<i>TUSC1</i>	Cancer
<i>TUSC2</i>	Cancer
<i>TX1B3</i>	Cancer
<i>TXK</i>	Cancer
<i>TXNIP</i>	Cancer
<i>TYDP2</i>	Cancer
<i>TYK2</i>	Cancer
<i>TYRO</i>	Cancer
<i>TYRO3</i>	Cancer
<i>TYW4</i>	Cancer
<i>TTY1</i>	Cancer
<i>TZAP</i>	Cancer
<i>U2AF1</i>	Cancer
<i>U2QL1</i>	Cancer

<i>UB2D2</i>	Cancer
<i>UB2R1</i>	Cancer
<i>UB2R2</i>	Cancer
<i>UB2V2</i>	Cancer
<i>UBB</i>	Cancer
<i>UBC</i>	Cancer
<i>UBC9</i>	Cancer
<i>UBD</i>	Cancer
<i>UBE2A</i>	Cancer, repair
<i>UBE2B</i>	Cancer, repair
<i>UBE2N</i>	Cancer, repair
<i>UBE2T</i>	Cancer, hereditary, repair
<i>UBE2V1</i>	Cancer, repair
<i>UBE2V2</i>	Cancer, repair
<i>UBE4B</i>	Cancer
<i>UBIA1</i>	Cancer
<i>UBIM</i>	Cancer
<i>UBP10</i>	Cancer
<i>UBP2</i>	Cancer
<i>UBP28</i>	Cancer
<i>UBP32</i>	Cancer
<i>UBP4</i>	Cancer
<i>UBP47</i>	Cancer
<i>UBP6</i>	Cancer
<i>UBR5</i>	Cancer
<i>UBS3A</i>	Cancer
<i>UCHL1</i>	Cancer
<i>UFL1</i>	Cancer
<i>UFO</i>	Cancer
<i>UHRF1</i>	Cancer
<i>UHRF2</i>	Cancer

<i>ULA1</i>	Cancer
<i>UNG</i>	Cancer, repair
<i>URFB1</i>	Cancer
<i>US6NL</i>	Cancer
<i>USE1</i>	Cancer
<i>USP1</i>	Cancer, repair
<i>USP44</i>	Cancer
<i>USP6</i>	Cancer
<i>USP8</i>	Cancer, hereditary
<i>UVSSA</i>	Cancer, repair
<i>VATH</i>	Cancer
<i>VAV</i>	Cancer
<i>VAV1</i>	Cancer
<i>VAV2</i>	Cancer
<i>VAV3</i>	Cancer
<i>VEGFA</i>	Cancer
<i>VEGFC</i>	Cancer
<i>VGFR1</i>	Cancer
<i>VGFR2</i>	Cancer
<i>VGFR3</i>	Cancer
<i>VHL</i>	Cancer, hereditary
<i>VIME</i>	Cancer
<i>VMA5A</i>	Cancer
<i>VMP1</i>	Cancer
<i>VOPP1</i>	Cancer
<i>VRK1</i>	Cancer
<i>VTI1A</i>	Cancer
<i>VWA2</i>	Cancer
<i>WAS</i>	Cancer, hereditary
<i>WBP1</i>	Cancer
<i>WDR11</i>	Cancer

<i>WDR48</i>	Cancer, repair
<i>WFDC2</i>	Cancer
<i>WHSC1</i>	Cancer
<i>WHSC1L1</i>	Cancer
<i>WIF1</i>	Cancer
<i>WIP1</i>	Cancer
<i>WIP2</i>	Cancer
<i>WIP3</i>	Cancer
<i>WIP4</i>	Cancer
<i>WISP1</i>	Cancer
<i>WN10B</i>	Cancer
<i>WNK1</i>	Cancer
<i>WNK2</i>	Cancer
<i>WNK3</i>	Cancer
<i>WNK4</i>	Cancer
<i>WNT1</i>	Cancer
<i>WNT2B</i>	Cancer
<i>WNT3</i>	Cancer
<i>WNT4</i>	Cancer
<i>WNT5A</i>	Cancer
<i>WNT6</i>	Cancer
<i>WRN</i>	Cancer, hereditary, repair
<i>WT1</i>	Cancer, hereditary
<i>WWOX</i>	Cancer, hereditary
<i>WWP1</i>	Cancer
<i>WWTR1</i>	Cancer
<i>XAB2</i>	Cancer, repair
<i>XAF1</i>	Cancer
<i>XPB1</i>	Cancer
<i>XIAP</i>	Cancer, hereditary
<i>XPA</i>	Cancer, hereditary, repair

<i>XPC</i>	Cancer, hereditary, repair
<i>XPF</i>	Cancer
<i>XPO1</i>	Cancer
<i>XRCC1</i>	Cancer, repair
<i>XRCC2</i>	Cancer, hereditary, repair
<i>XRCC3</i>	Cancer, repair
<i>XRCC4</i>	Cancer, repair
<i>XRCC5</i>	Cancer, repair
<i>XRCC6</i>	Cancer, repair
<i>XRN1</i>	Cancer
<i>YAF2</i>	Cancer
<i>YAP1</i>	Cancer
<i>YBOX1</i>	Cancer
<i>YES</i>	Cancer
<i>YETS4</i>	Cancer
<i>YWHAE</i>	Cancer
<i>YYAP1</i>	Cancer
<i>ZBT16</i>	Cancer
<i>ZBT17</i>	Cancer
<i>ZBT7A</i>	Cancer
<i>ZBT7C</i>	Cancer
<i>ZBTB16</i>	Cancer
<i>ZBTB4</i>	Cancer
<i>ZC12D</i>	Cancer
<i>ZCCHC8</i>	Cancer
<i>ZDH13</i>	Cancer
<i>ZDH17</i>	Cancer
<i>ZEB1</i>	Cancer
<i>ZFHX3</i>	Cancer
<i>ZGPAT</i>	Cancer
<i>ZKSC3</i>	Cancer

<i>ZMAT3</i>	Cancer
<i>ZMY10</i>	Cancer
<i>ZMY11</i>	Cancer
<i>ZMYM3</i>	Cancer
<i>ZN185</i>	Cancer
<i>ZN217</i>	Cancer
<i>ZN320</i>	Cancer
<i>ZN350</i>	Cancer
<i>ZN365</i>	Cancer
<i>ZN513</i>	Cancer
<i>ZN521</i>	Cancer
<i>ZN655</i>	Cancer
<i>ZN703</i>	Cancer
<i>ZNF198</i>	Cancer
<i>ZNF278</i>	Cancer
<i>ZNF331</i>	Cancer
<i>ZNF384</i>	Cancer
<i>ZNF429</i>	Cancer
<i>ZNF479</i>	Cancer
<i>ZNF521</i>	Cancer
<i>ZNRF3</i>	Cancer
<i>ZRSR2</i>	Cancer
<i>ZSC32</i>	Cancer
<i>ZW10</i>	Cancer
<i>ZWINT</i>	Cancer
<i>ZZEF1</i>	Cancer
<i>ACD</i>	Cancer, hereditary
<i>ANKRD26</i>	Cancer, hereditary
<i>ARMC5</i>	Cancer, hereditary
<i>ASCL1</i>	Cancer, hereditary
<i>ATP4A</i>	Cancer, hereditary

<i>BDNF</i>	Cancer, hereditary
<i>BPGM</i>	Cancer, hereditary
<i>CABLES1</i>	Cancer, hereditary
<i>CASP10</i>	Cancer, hereditary
<i>CD70</i>	Cancer, hereditary
<i>CDH23</i>	Cancer, hereditary
<i>CTC1</i>	Cancer, hereditary
<i>CTR9</i>	Cancer, hereditary
<i>DLST</i>	Cancer, hereditary
<i>DNAJC21</i>	Cancer, hereditary
<i>DNMT3B</i>	Cancer, hereditary
<i>EDN3</i>	Cancer, hereditary
<i>EFL1</i>	Cancer, hereditary
<i>ERCC6L2</i>	Cancer, hereditary
<i>FIBP</i>	Cancer, hereditary
<i>G6PC</i>	Cancer, hereditary
<i>GDNF</i>	Cancer, hereditary
<i>GLMN</i>	Cancer, hereditary
<i>HCLS1</i>	Cancer, hereditary
<i>IPMK</i>	Cancer, hereditary
<i>JAG1</i>	Cancer, hereditary
<i>KLLN</i>	Cancer, hereditary
<i>LAPTM5</i>	Cancer, hereditary
<i>LDAH</i>	Cancer, hereditary
<i>MAGT1</i>	Cancer, hereditary
<i>MDH2</i>	Cancer, hereditary
<i>MSR1</i>	Cancer, hereditary
<i>MTAP</i>	Cancer, hereditary
<i>NHP2</i>	Cancer, hereditary
<i>NME1</i>	Cancer, hereditary
<i>NOP10</i>	Cancer, hereditary

<i>NYNRIN</i>	Cancer, hereditary
<i>OS9</i>	Cancer, hereditary
<i>PPP2R3B</i>	Cancer, hereditary
<i>PSMC3IP</i>	Cancer, hereditary
<i>PTCH2</i>	Cancer, hereditary
<i>RASA2</i>	Cancer, hereditary
<i>RASAL1</i>	Cancer, hereditary
<i>RBBP6</i>	Cancer, hereditary
<i>RNASEL</i>	Cancer, hereditary
<i>RNF139</i>	Cancer, hereditary
<i>RRAS</i>	Cancer, hereditary
<i>RSPO1</i>	Cancer, hereditary
<i>SAMD9</i>	Cancer, hereditary
<i>SAMD9L</i>	Cancer, hereditary
<i>SEC23B</i>	Cancer, hereditary
<i>SERPINA1</i>	Cancer, hereditary
<i>SH2D1A</i>	Cancer, hereditary
<i>SHOC2</i>	Cancer, hereditary
<i>SLC25A11</i>	Cancer, hereditary
<i>SMARCAD1</i>	Cancer, hereditary
<i>SOS1</i>	Cancer, hereditary
<i>SRP54</i>	Cancer, hereditary
<i>SRP72</i>	Cancer, hereditary
<i>TERF2IP</i>	Cancer, hereditary
<i>TEX15</i>	Cancer, hereditary
<i>THSD1</i>	Cancer, hereditary
<i>TMC6</i>	Cancer, hereditary
<i>TMC8</i>	Cancer, hereditary
<i>TPCN2</i>	Cancer, hereditary
<i>TRIM28</i>	Cancer, hereditary
<i>TRIP13</i>	Cancer, hereditary

<i>WIPF1</i>	Cancer, hereditary
<i>WNT10A</i>	Cancer, hereditary
<i>WRAP53</i>	Cancer, hereditary
<i>ZNF687</i>	Cancer, hereditary

Supplementary Table 2 Variants of uncertain significance identified in the participants of study

Index case	Variant of uncertain significance			REVEL	gnomAD (AF)	Classification ACMG/AMP ^a
	Gene	Coding consequence	Protein change			
1469	<i>ABI1</i>	NM_001012750.3:c.452A>G	p.(His151Arg)	0,923	NR	VUS
907	<i>ABTB1</i>	NM_172027.3:c.916C>T	p.(Arg306Ter)	NP	0,004	VUS
1841	<i>ACTB</i>	NM_001101.5:c.694T>A	p.(Ser232Thr)	0,402	NR	VUS
1963	<i>ADAP1</i>	NM_006869.4:c.416G>A	p.(Arg139His)	0,4	2,01E-05	VUS
242	<i>AFF1</i>	NM_001166693.2:c.1346A>G	p.(Glu449Gly)	0,239	5,17E-05	VUS
157	<i>AFF4</i>	NM_014423.4:c.935A>G	p.(Asp312Gly)	0,465	4,07E-06	VUS
106	<i>AFP</i>	NC_000004.11(NM_001134.2):c.*10+2T>C	splicing variant	NP	0,0033	VUS
237	<i>ANK1</i>	NM_000037.4:c.3788A>T	p.(Asp1263Val)	0,41	NR	VUS
1346	<i>APC</i>	NM_000038.6:c.5816A>T	p.(Asp1939Val)	0,481	4,00E-06	VUS
242	<i>APEX1</i>	NM_001641.4:c.871_872del	p.(Leu291ValfsTer6)	NP	1,59E-05	VUS
1831	<i>ARHGEF12</i>	NM_015313.3:c.3707T>A	p.(Ile1236Asn)	0,026	2,81E-05	VUS
907	<i>ARID1A</i>	NM_006015.6:c.973G>A	p.(Ala325Thr)	0,012	NR	VUS
157	<i>ARID1B</i>	NM_017519.3:c.863T>G	p.(Leu288Trp)	0,069	NR	VUS
1337	<i>ATAD2</i>	NM_014109.4:c.4084T>C	p.(Cys1362Arg)	0,705	0,0025	VUS

1488	<i>ATAD2</i>	NM_014109.4:c.1350_1351delAGinsTT	p.(Glu450_Val451delinsAspPhe)	NP	NR	VUS
1664	<i>ATM</i>	NM_000051.4:c.5761A>G	p.(Arg1921Gly)	0,519	NR	VUS
907	<i>ATM</i>	NM_000051.4:c.2770C>T	p.(Arg924Trp)	0,473	4,77E-05	VUS
1841	<i>AXIN1</i>	NM_003502.4:c.2389C>T	p.(Arg797Cys)	0,507	1,60E-05	VUS
237	<i>BCL11A</i>	NM_022893.4:c.1892C>A	p.(Pro631His)	0,272	3,31E-05	VUS
242	<i>BCR</i>	NM_004327.4:c.2006C>G	p.(Pro669Arg)	0,653	1,59E-05	VUS
1536	<i>BLK</i>	NM_001715.3:c.1471del	p.(Glu491ArgfsTer93)	NP	NR	VUS
1831	<i>BLK</i>	NM_001715.3:c.1471del	p.(Glu491ArgfsTer93)	NP	NR	VUS
242	<i>BLK</i>	NM_001715.3:c.337del	p.(Val113TrpfsTer52)	NP	8,21E-06	VUS
278	<i>BMPR1A</i>	NM_004329.3:c.299G>A	p.(Cys100Tyr)	0,963	NR	VUS
1337	<i>BRCA2</i>	NM_000059.4:c.3307T>G	p.(Leu1103Val)	0,14	4,24E-06	VUS
1831	<i>CBFA2T3</i>	NM_005187.6:c.1496G>A	p.(Arg499Gln)	0,337	1,00E-04	VUS
1536	<i>CBX8</i>	NM_020649.3:c.1113G>C	p.(Leu371Phe)	0,23	NR	VUS
1749	<i>CCNB1</i>	NM_031966.4:c.341A>G	p.(Lys114Arg)	0,182	3,98E-06	VUS
517	<i>CD79A</i>	NM_001783.4:c.395C>T	p.(Pro132Leu)	0,361	1,25E-05	VUS
1346	<i>CDC37</i>	NM_007065.4:c.481C>T	p.(His161Tyr)	0,255	NR	VUS
2448	<i>CDH1</i>	NM_004360.5:c.1633C>G	p.(Arg545Gly)	0,127	NR	VUS
2325	<i>CDKN1B</i>	NM_004064.5:c.31C>T	p.(Pro11Ser)	0,566	4,00E-05	VUS
1490	<i>CDKN2A</i>	NM_000077.5:c.365G>T	p.(Gly122Val)	0,906	3,30E-05	VUS

278	<i>CNTNAP2</i>	NM_014141.6:c.470G>C	p.(Arg157Pro)	0,962	NR	VUS
547	<i>COL3A1</i>	NM_000090.4:c.560C>T	p.(Thr187Ile)	0,187	3,59E-05	VUS
1536	<i>CSMD3</i>	NM_198123.2:c.8985T>G	p.(Cys2995Trp)	0,929	NR	VUS
1664	<i>CTC1</i>	NM_025099.6:c.2192G>A	p.(Arg731Gln)	0,494	4,00E-04	VUS
278	<i>CTNND2</i>	NM_001332.4:c.3238A>G	p.(Met1080Val)	0,477	NR	VUS
1664	<i>CUL7</i>	NM_014780.5:c.4972G>A	p.(Glu1658Lys)	0,267	4,54E-05	VUS
2325	<i>CUL7</i>	NM_014780.5:c.136C>T	p.(Arg46Trp)	0,5	3,00E-04	VUS
278	<i>CYLD</i>	NM_001378743.1:c.1763T>C	p.(Ile588Thr)	0,406	4,01E-06	VUS
669	<i>CYP1A1</i>	NM_001319217.2:c.316del	p.(Arg106GlyfsTer37)	NP	5,00E-04	VUS
1490	<i>DCC</i>	NM_005215.4:c.1388C>T	p.(Thr463Met)	0,187	1,00E-04	VUS
242	<i>DCC</i>	NC_000018.9(NM_005215.3):c.3898+2dup	splicing variant	NP	3.978e-06	VUS
1488	<i>DCLRE1A</i>	NM_014881.5:c.350T>G	p.(Val117Gly)	0,328	NR	VUS
1841	<i>DCLRE1A</i>	NM_014881.5:c.412C>T	p.(Arg138Ter)	NP	0,0028	VUS
1346	<i>DCLRE1B</i>	NM_022836.4:c.619C>T	p.(Arg207Cys)	0,702	7,95E-06	VUS
454	<i>DGAT2</i>	NM_032564.5:c.598C>T	p.(Arg200Ter)	NP	7,96E-06	VUS
1337	<i>DIS3L2</i>	NM_001257281.2:c.1774del	p.(Ile592Ter)	NP	NR	VUS
242	<i>DKK2</i>	NM_014421.3:c.545C>G	p.(Pro182Arg)	0,258	NR	VUS
669	<i>DMC1</i>	NM_007068.4:c.581A>G	p.(Tyr194Cys)	0,676	7,95E-06	VUS
1490	<i>DNM2</i>	NM_001005361.3:c.943_945delAAGinsCAT	p.(Lys315His)	NP	NR	VUS

1831	<i>EED</i>	NM_003797.5:c.28C>G	p.(Pro10Ala)	0,148	NR	VUS
237	<i>EGF</i>	NM_001963.6:c.176T>C	p.(Ile59Thr)	0,862	1,19E-05	VUS
106	<i>EGLN2</i>	NM_080732.4:c.235G>A	p.(Gly79Ser)	0,093	4,03E-06	VUS
106	<i>EPHA4</i>	NM_004438.5:c.2200A>G	p.(Met734Val)	0,687	5,57E-05	VUS
517	<i>EPHA4</i>	NM_004438.5:c.1855T>C	p.(Ser619Pro)	0,636	7,96E-06	VUS
547	<i>EPHA8</i>	NM_020526.5:c.2021C>A	p.(Thr674Lys)	0,552	3,99E-06	VUS
278	<i>ERBB2</i>	NM_004448.4:c.3305C>T	p.(Pro1102Leu)	0,173	6,46E-05	VUS
517	<i>ERC1</i>	NM_178040.4:c.2888G>A	p.(Arg963Gln)	0,352	5,97E-05	VUS
1841	<i>ERCC1</i>	NC_000019.9(NM_001983.3):c.-8+1G>C	splicing variant	NP	1,34E-03	VUS
237	<i>ERCC4</i>	NM_005236.3:c.2117T>C	p.(Ile706Thr)	0,609	0,0015	VUS
1346	<i>ESR2</i>	NM_001437.3:c.661A>G	p.(Arg221Gly)	0,794	0,002	VUS
454	<i>ESR2</i>	NM_001437.2:c.661A>G	p.(Arg221Gly)	0,794	0,002	VUS
1346	<i>ETV5</i>	NM_004454.3:c.335A>G	p.(Tyr112Cys)	0,483	0,001	VUS
1346	<i>EZR</i>	NM_001111077.2:c.19G>A	p.(Val7Ile)	0,539	NR	VUS
106	<i>FANCA</i>	NM_000135.4:c.218C>T	p.(Ser73Phe)	0,148	NR	VUS
242	<i>FANCL</i>	NM_018062.4:c.622G>A	p.(Asp208Asn)	0,699	1,00E-04	VUS
106	<i>FAT1</i>	NM_005245.4:c.1615C>T	p.(Arg539Cys)	0,442	4,01E-06	VUS
1488	<i>FAT1</i>	NM_005245.4:c.11410G>A	p.(Glu3804Lys)	0,147	8,02E-06	VUS
669	<i>FAT1</i>	NM_005245.4:c.11758G>A	p.(Gly3920Arg)	0,599	4,42E-05	VUS

917	<i>FAT1</i>	NM_005245.4:c.4516C>T	p.(Arg1506Cys)	0,341	4,00E-04	VUS
1734	<i>FGFR3</i>	NM_000142.5:c.1372G>C	p.(Glu458Gln)	0,836	2,42E-05	VUS
1749	<i>FGFR3</i>	NM_000142.5:c.1826C>T	p.(Ala609Val)	0,706	6,39E-06	VUS
917	<i>FKBP9</i>	NM_007270.5:c.467C>T	p.(Pro156Leu)	0,467	6,00E-04	VUS
106	<i>FLT4</i>	NM_182925.5:c.3647A>G	p.(Asp1216Gly)	0,101	5,58E-05	VUS
1734	<i>FLT4</i>	NM_182925.5:c.3958C>T	p.(Arg1320Trp)	0,228	4,00E-04	VUS
1346	<i>FNIP1</i>	NM_133372.3:c.809T>G	p.(Phe270Cys)	0,314	4,40E-05	VUS
1749	<i>FOSL2</i>	NM_005253.4:c.629G>A	p.(Arg210His)	0,295	2,89E-05	VUS
1490	<i>FOXE1</i>	NM_004473.4:c.608C>G	p.(Pro203Arg)	0,196	0,0013	VUS
1841	<i>FOXO3</i>	NM_001455.4:c.352G>C	p.(Gly118Arg)	0,234	NR	VUS
1536	<i>GCNT3</i>	NM_004751.3:c.451C>T	p.(Arg151Ter)	NP	0,0018	VUS
917	<i>GPAT3</i>	NM_032717.5:c.910G>C	p.(Gly304Arg)	0,972	0,0011	VUS
1488	<i>GRB10</i>	NC_000007.14(NM_001350814.1):c.-46-2A>G	splicing variant	NP	NR	VUS
2325	<i>GTF2H1</i>	NC_000011.9(NM_005316.3):c.-15-1G>A	splicing variant	NP	NR	VUS
1536	<i>HBA1</i>	NM_000558.5:c.154G>A	p.(Gly52Ser)	0,772	3,00E-04	VUS
1664	<i>HCK</i>	NM_002110.4:c.5G>C	p.(Gly2Ala)	0,315	NR	VUS
2448	<i>HERC1</i>	NM_003922.4:c.1652G>A	p.(Arg551His)	0,668	4,02E-06	VUS
547	<i>HIC1</i>	NM_001098202.1:c.1468G>C	p.(Gly490Arg)	0,142	9,59E-06	VUS
1346	<i>HNF1A</i>	NM_000545.8:c.557T>C	p.(Ile186Thr)	0,326	3,18E-05	VUS

517	<i>HSP90AB1</i>	NM_007355.4:c.244C>T	p.(Arg82Cys)	0,417	9,15E-05	VUS
1488	<i>ID3</i>	NM_002167.5:c.65T>C	p.(Leu22Pro)	0,769	7,00E-04	VUS
278	<i>IFFO1</i>	NM_001193457.2:c.346C>T	p.(Arg116Trp)	0,149	8,81E-05	VUS
1165	<i>IGF1R</i>	NM_000875.5:c.4051G>A	p.(Gly1351Arg)	0,793	4,02E-06	VUS
1346	<i>IL21R</i>	NM_181078.3:c.571C>T	p.(Arg191Cys)	0,344	2,00E-04	VUS
106	<i>ING4</i>	NM_016162.4:c.247G>A	p.(Val83Met)	0,39	3,98E-06	VUS
157	<i>ING4</i>	NM_016162.4:c.394C>T	p.(Arg132Trp)	0,165	3,98E-06	VUS
1664	<i>INSM1</i>	NM_002196.3:c.1129C>T	p.(Arg377Cys)	0,519	2,00E-04	VUS
1346	<i>INSR</i>	NM_000208.4:c.2081C>T	p.(Ser694Phe)	0,131	2,79E-05	VUS
237	<i>IRAG1</i>	NM_001098579.3:c.1312G>A	p.(Val438Met)	0,24	4,34E-05	VUS
1461	<i>IRS1</i>	NM_005544.3:c.2623C>T	p.(Arg875Ter)	NP	8,02E-06	VUS
907	<i>ITGAV</i>	NM_002210.5:c.3034G>A	p.(Val1012Ile)	0,485	3,98E-05	VUS
2448	<i>ITK</i>	NM_005546.4:c.1747G>A	p.(Ala583Thr)	0,525	NR	VUS
1469	<i>JAK3</i>	NM_000215.4:c.905G>A	p.(Ser302Asn)	0,16	4,01E-06	VUS
454	<i>KIF1B</i>	NM_001365953.1:c.3443G>A	p.(Gly1148Asp)	0,228	NR	VUS
907	<i>KIF1B</i>	NM_001365953.1:c.2978A>G	p.(Asp993Gly)	0,171	1,20E-05	VUS
547	<i>KMT2A</i>	NM_001197104.2:c.5065C>T	p.(Pro1689Ser)	0,313	NR	VUS
2448	<i>KMT2B</i>	NM_014727.3:c.3101A>C	p.(Glu1034Ala)	0,347	NR	VUS
237	<i>KMT2D</i>	NM_003482.4:c.2380G>A	p.(Gly794Arg)	0,07	NR	VUS

917	<i>KMT2D</i>	NM_003482.4:c.7463C>T	p.(Ser2488Leu)	0,34	8,87E-06	VUS
237	<i>KRT19</i>	NM_002276.5:c.898C>T	p.(Arg300Trp)	0,771	4,38E-05	VUS
242	<i>LASP1</i>	NM_001271608.1:c.13C>T	p.(Arg5Ter)	NP	0,0028	VUS
1831	<i>LHFP</i>	NM_005780.3:c.538G>A	p.(Ala180Thr)	0,195	1,20E-05	VUS
1664	<i>LIG1</i>	NM_000234.3:c.1875G>T	p.(Trp625Cys)	0,824	NR	VUS
1488	<i>LIMA1</i>	NM_001113546.2:c.2251C>T	p.(Arg751Trp)	0,654	1,27E-05	VUS
1165	<i>LMF1</i>	NM_022773.4:c.1132C>T	p.(Leu378Phe)	0,46	4,04E-06	VUS
2325	<i>LRIG3</i>	NC_000012.11(NM_001136051.2):c.56+1G>A	splicing variant	NP	8,00E-04	VUS
1734	<i>LRP1B</i>	NM_018557.3:c.5663G>A	p.(Gly1888Glu)	0,564	1,20E-05	VUS
1664	<i>LYL1</i>	NM_005583.5:c.259C>A	p.(Leu87Met)	0,294	6,26E-06	VUS
517	<i>LYL1</i>	NM_005583.5:c.799C>A	p.(Pro267Thr)	0,202	9,12E-05	VUS
1734	<i>MADD</i>	NM_003682.4:c.3487A>T	p.(Ser1163Cys)	0,19	1,19E-05	VUS
242	<i>MAML2</i>	NM_032427.4:c.1856A>G	p.(Gln619Arg)	0,226	2,57E-05	VUS
1461	<i>MIB2</i>	NM_080875.3:c.521C>T	p.(Thr174Met)	0,779	8,15E-06	VUS
1490	<i>MIB2</i>	NM_080875.3:c.157C>T	p.(Arg53Ter)	NP	7,74E-05	VUS
1469	<i>MLH1</i>	NM_000249.4:c.1153C>T	p.(Arg385Cys)	0,84	5,97E-05	VUS
1963	<i>MMRN2</i>	NM_024756.3:c.1981C>G	p.(Arg661Gly)	0,057	3,09E-05	VUS
1831	<i>MPL</i>	NM_005373.3:c.535T>C	p.(Ser179Pro)	0,527	1,99E-05	VUS
1165	<i>MPP3</i>	NM_001932.6:c.626C>G	p.(Ser209Cys)	0,351	4,15E-06	VUS

547	<i>MSH5</i>	NM_172166.4:c.859C>T	p.(Arg287Cys)	0,753	1,19E-05	VUS
157	<i>MTOR</i>	NM_004958.4:c.2285C>T	p.(Ser762Phe)	0,45	1,19E-05	VUS
242	<i>MTUS1</i>	NM_001001924.2:c.3230A>T	p.(His1077Leu)	0,261	1,62E-05	VUS
1346	<i>MUC4</i>	NM_018406.7:c.15283G>T	p.(Glu5095Ter)	NP	7,00E-04	VUS
278	<i>MUL1</i>	NM_024544.3:c.458A>G	p.(Glu153Gly)	0,341	4,00E-04	VUS
547	<i>MYCN</i>	NM_001293233.2:c.248C>G	p.(Pro83Arg)	NP	6,10E-05	VUS
1831	<i>NACC2</i>	NM_144653.5:c.1621G>A	p.(Glu541Lys)	0,229	8,00E-05	VUS
1734	<i>NBAS</i>	NM_015909.4:c.1216T>C	p.(Cys406Arg)	0,444	3,58E-05	VUS
547	<i>NBAS</i>	NM_015909.4:c.1669T>C	p.(Tyr557His)	0,605	6,77E-05	VUS
1461	<i>NBEA</i>	NM_015678.5:c.2209A>C	p.(Met737Leu)	0,272	8,32E-05	VUS
1337	<i>NCKIPSD</i>	NM_016453.4:c.1651C>T	p.(Pro551Ser)	0,705	0,0086	VUS
669	<i>NCKIPSD</i>	NM_016453.4:c.1651C>T	p.(Pro551Ser)	0,705	0,0086	VUS
454	<i>NCOR2</i>	NM_006312.6:c.5251C>T	p.(Pro1751Ser)	0,018	NR	VUS
517	<i>NCOR2</i>	NM_006312.6:c.5117G>A	p.(Arg1706Gln)	0,47	8,08E-06	VUS
106	<i>NEIL1</i>	NM_001256552.1:c.45G>T	p.(Arg15Ser)	NP	1,32E-05	VUS
1734	<i>NRG1</i>	NM_013962.2:c.175G>C	p.(Ala59Pro)	0,35	0	VUS
1831	<i>NRG1</i>	NM_013956.5:c.1256C>T	p.(Ser419Phe)	0,397	6,38E-05	VUS
1734	<i>NSD3</i>	NM_023034.2:c.2339G>A	p.(Arg780His)	0,786	9,22E-05	VUS
1831	<i>NSD3</i>	NM_023034.2:c.2261C>G	p.(Ser754Trp)	0,703	NR	VUS

2325	<i>NTRK1</i>	NM_002529.3:c.1525G>C	p.(Asp509His)	0,766	3,98E-06	VUS
278	<i>OBSCN</i>	NM_001271223.2:c.23838del	p.(Ser7947ProfsTer82)	NP	0,0017	VUS
1469	<i>OGG1</i>	NM_002542.6:c.137G>A	p.(Arg46Gln)	0,587	0,0022	VUS
1664	<i>OGG1</i>	NM_002542.5:c.137G>A	p.(Arg46Gln)	0,587	0,0022	VUS
907	<i>PCM1</i>	NM_006197.4:c.1111C>T	p.(Leu371Phe)	0,222	2,00E-04	VUS
1536	<i>PIDD1</i>	NM_145886.4:c.2564A>G	p.(Gln855Arg)	0,119	4,08E-06	VUS
1734	<i>PLPP5</i>	NM_001102560.2:c.481del	p.(Thr161LeufsTer14)	NP	4.814e-05	VUS
157	<i>PNKP</i>	NM_007254.4:c.1210C>T	p.(Arg404Cys)	0,386	2,35E-05	VUS
237	<i>POLH</i>	NM_006502.3:c.961T>C	p.(Cys321Arg)	0,607	NR	VUS
157	<i>POLN</i>	NM_181808.4:c.1684T>C	p.(Trp562Arg)	0,876	NR	VUS
1337	<i>PRDM2</i>	NM_012231.4:c.852T>A	p.(Asp284Glu)	0,03599	2,02E-05	VUS
1346	<i>PRF1</i>	NM_001083116.3:c.382G>A	p.(Asp128Asn)	0,277	5,98E-05	VUS
1664	<i>PRKACA</i>	NM_002730.4:c.1010G>A	p.(Arg337Gln)	0,147	1,61E-05	VUS
1346	<i>PSCA</i>	NC_000008.10 (NM_005672.4):c.133+1G>A	splicing variant	0,093	3.03e-05	VUS
907	<i>KISS1</i>	NM_002256.4:c.142G>T	p.(Glu48Ter)	NP	4.224e-06	VUS
547	<i>RAD21</i>	NM_006265.3:c.1892T>C	p.(Ile631Thr)	0,382	NR	VUS
1346	<i>RAD51B</i>	NC_000014.9(NM_001321812.1):c.1037-1G>A	splicing variant	NP	NR	VUS
1831	<i>RAD51B</i>	NM_001321812.1:c.1042A>G	p.(Arg348Gly)	NP	NR	VUS
917	<i>RAD54L</i>	NM_003579.4:c.1241G>A	p.(Cys414Tyr)	0,948	NR	VUS

1749	<i>RBBP6</i>	NM_006910.5:c.2131C>T	p.(Arg711Cys)	0,282	1,99E-05	VUS
106	<i>RBL2</i>	NM_005611.4:c.3092C>T	p.(Ala1031Val)	0,234	0	VUS
917	<i>REL</i>	NM_001291746.2:c.1067A>G	p.(Tyr356Cys)	0,164	1,00E-04	VUS
1469	<i>RGPD3</i>	NM_001144013.2:c.25G>T	p.(Glu9Ter)	NP	0,0038	VUS
1469	<i>RGPD3</i>	NM_001144013.2:c.1717C>T	p.(Pro573Ser)	0,388	0,0038	VUS
106	<i>RHBDF2</i>	NM_024599.5:c.676C>G	p.(Arg226Gly)	0,562	NR	VUS
1337	<i>RHNO1</i>	NM_001252499.3:c.46C>G	p.(Leu16Val)	0,431	0,0033	VUS
1963	<i>RIF1</i>	NM_018151.5:c.341A>G	p.(Asn114Ser)	0,177	1,22E-05	VUS
1536	<i>RINT1</i>	NM_021930.6:c.2231C>T	p.(Ala744Val)	0,36	4,17E-06	VUS
454	<i>RIOX2</i>	NM_153182.4:c.463G>C	p.(Glu155Gln)	0,396	3,00E-04	VUS
1461	<i>RPN1</i>	NM_002950.4:c.98A>G	p.(Asn33Ser)	0,247	6,18E-05	VUS
1734	<i>RSPO1</i>	NM_001242908.2:c.115G>A	p.(Ala39Thr)	0,126	0,001	VUS
106	<i>RTEL1</i>	NM_001283009.2:c.205_206delGCinsTT	p.(Ala69Phe)	NP	NR	VUS
1664	<i>RTEL1</i>	NM_001283009.2:c.1393C>T	p.(His465Tyr)	0,475	4,11E-05	VUS
278	<i>RUNX1T1</i>	NM_001198633.1:c.16G>A	p.(Gly6Ser)	NP	4,00E-04	VUS
1664	<i>SAMD9</i>	NM_017654.4:c.1800_1801del	p.(Glu600AspfsTer12)	NP	5,00E-04	VUS
669	<i>SASH1</i>	NM_015278.5:c.2995G>A	p.(Gly999Arg)	0,406	4,78E-05	VUS
1346	<i>SCRIB</i>	NM_182706.5:c.2099C>T	p.(Ser700Phe)	0,149	NR	VUS
907	<i>SCRIB</i>	NM_182706.5:c.2105C>T	p.(Pro702Leu)	0,211	7,06E-05	VUS

1346	<i>SDHA</i>	NM_004168.4:c.205G>A	p.(Ala69Thr)	0,724	3,19E-05	VUS
1490	<i>SDHA</i>	NM_004168.4:c.1003A>G	p.(Lys335Glu)	0,745	NR	VUS
1963	<i>SDHA</i>	NM_004168.4:c.1979C>G	p.(Ala660Gly)	0,59	1,00E-04	VUS
917	<i>SDHA</i>	NM_004168.4:c.830C>T	p.(Thr277Met)	0,15	8,36E-05	VUS
1664	<i>SEC23B</i>	NM_032986.4:c.660A>C	p.(Gln220His)	0,419	NR	VUS
1664	<i>SETD1B</i>	NM_001353345.2:c.2222_2225delTCCTinsACCA	p.(Ile741_Leu742delinsAsnGln)	NP	NR	VUS
669	<i>SETMAR</i>	NM_006515.3:c.923T>A	p.(Val308Glu)	0,279	NR	VUS
1963	<i>SKIL</i>	NM_005414.5:c.736C>G	p.(Leu246Val)	0,332	NR	VUS
1165	<i>SLC45A3</i>	NM_033102.3:c.70C>G	p.(Leu24Val)	0,551	3,98E-06	VUS
242	<i>SLX4</i>	NM_032444.4:c.4837G>A	p.(Glu1613Lys)	0,17	1,20E-05	VUS
1536	<i>SMARCA4</i>	NM_003072.5:c.1313C>A	p.(Ala438Asp)	0,436	NR	VUS
917	<i>SMO</i>	NM_005631.5:c.172C>A	p.(Pro58Thr)	0,193	0	VUS
1536	<i>SRSF2</i>	NM_001195427.2:c.236T>C	p.(Val79Ala)	0,062	NR	VUS
1664	<i>STAP2</i>	NC_000019.10(NM_001013841.1):c.979+2T>C	splicing variant	NP	NR	VUS
1664	<i>STAT6</i>	NM_003153.5:c.976G>C	p.(Val326Leu)	0,013	7,99E-06	VUS
1337	<i>STIL</i>	NM_001048166.1:c.2243C>G	p.(Ser748Cys)	0,201	1,60E-05	VUS
1841	<i>STK25</i>	NM_001271977.2:c.46C>T	p.(Pro16Ser)	0,423	NR	VUS
454	<i>STK3</i>	NM_006281.4:c.119G>A	p.(Ser40Asn)	0,305	0,003	VUS
1346	<i>SYK</i>	NM_003177.7:c.1558C>T	p.(Arg520Cys)	0,401	1,19E-05	VUS

1490	<i>TG</i>	NM_003235.5:c.4551C>A	p.(Asn1517Lys)	0,331	NR	VUS
237	<i>TGFB1</i>	NM_000660.7:c.13G>C	p.(Gly5Arg)	0,017	5,44E-05	VUS
1461	<i>TGFBR2</i>	NM_003242.6:c.985G>A	p.(Ala329Thr)	0,59	1,00E-04	VUS
157	<i>TIAM1</i>	NM_003253.3:c.4522G>A	p.(Asp1508Asn)	0,141	2,79E-05	VUS
1749	<i>TIAM1</i>	NM_003253.3:c.83G>A	p.(Arg28His)	0,131	5,18E-05	VUS
1536	<i>TINF2</i>	NM_012461.3:c.1065_*3del	stop loss	NP	4,01E-05	VUS
1749	<i>TLK1</i>	NM_012290.5:c.233C>T	p.(Thr78Met)	0,306	3,99E-06	VUS
1346	<i>TMF1</i>	NM_007114.3:c.716G>A	p.(Ser239Asn)	0,28	0,0041	VUS
917	<i>TMF1</i>	NM_007114.3:c.716G>A	p.(Ser239Asn)	0,28	0,0041	VUS
278	<i>TNC</i>	NM_002160.4:c.2246T>G	p.(Met749Arg)	0,269	NR	VUS
547	<i>TNIP3</i>	NM_001244764.2:c.78A>T	p.(Glu26Asp)	0,059	1,00E-04	VUS
157	<i>TOP3A</i>	NM_004618.5:c.2215G>A	p.(Gly739Arg)	0,44	7,00E-04	VUS
242	<i>TOP3A</i>	NM_004618.5:c.524G>A	p.(Arg175Gln)	0,761	3,98E-06	VUS
2448	<i>TPD52</i>	NM_001025253.3:c.508A>G	p.(Lys170Glu)	0,296	NR	VUS
278	<i>TRIB3</i>	NM_021158.4:c.541C>T	p.(Arg181Cys)	0,469	7,00E-04	VUS
517	<i>TRIM8</i>	NM_030912.3:c.1205C>T	p.(Ala402Val)	0,193	3,89E-05	VUS
1831	<i>TTK</i>	NM_003318.5:c.2288A>T	p.(Asp763Val)	0,49	NR	VUS
669	<i>TTK</i>	NM_003318.5:c.323G>C	p.(Ser108Thr)	0,403	NR	VUS
907	<i>TTK</i>	NM_003318.5:c.323G>C	p.(Ser108Thr)	0,403	NR	VUS

907	<i>UBC</i>	NM_021009.7:c.1424C>T	p.(Pro475Leu)	0,454	6,72E-05	VUS
278	<i>USP44</i>	NM_032147.5:c.1141C>T	p.(Leu381Phe)	0,598	1,99E-05	VUS
1841	<i>USP6</i>	NM_001304284.2:c.3565A>T	p.(Lys1189Ter)	NP	0,0014	VUS
1841	<i>VAV3</i>	NM_006113.5:c.1291G>A	p.(Val431Ile)	0,375	4,83E-05	VUS
454	<i>VWA2</i>	NM_001272046.2:c.1778C>T	p.(Ala593Val)	0,277	3,60E-05	VUS
907	<i>WBP1</i>	NM_012477.4:c.631G>A	p.(Asp211Asn)	0,199	4,00E-04	VUS
1749	<i>WDR11</i>	NM_018117.12:c.3450T>G	p.(Phe1150Leu)	0,596	7,00E-04	VUS
1337	<i>WNT2B</i>	NM_024494.3:c.23A>C	p.(Glu8Ala)	0,192	NR	VUS
242	<i>XAB2</i>	NM_020196.3:c.1142C>G	p.(Ala381Gly)	0,287	1,00E-04	VUS
1749	<i>XPC</i>	NM_004628.5:c.2396T>A	p.(Phe799Tyr)	0,191	4,41E-05	VUS
157	<i>ZFHX3</i>	NM_006885.4:c.10026C>G	p.(Phe3342Leu)	0,663	6,39E-05	VUS
2325	<i>ZFHX3</i>	NM_006885.4:c.10982C>T	p.(Ser3661Leu)	0,437	1,99E-05	VUS
669	<i>ZFHX3</i>	NM_006885.4:c.10583C>G	p.(Ser3528Trp)	0,487	8,61E-05	VUS
237	<i>ZZEF1</i>	NM_015113.4:c.7444C>T	p.(Arg2482Trp)	0,531	2,01E-05	VUS

^a Classification based on ACMG/ AMP classification²⁴.

AF: Allele frequency on gnomAD; ACMG: American College of Medical Genetics and Genomics; NR: Not reported; NP: Nnot predicted;
VUS: Variant of uncertain significance; str: Strong; mod: Moderate; sup: Supporting.

Supplementary Table 3 Personal and family history of participants of study

Index case	Gene with P/LP variant	Tumor Polyposis diagnosis)	and/or (age at	Family history Kinship (age at diagnosis): tumor site or polyposis
106	None	CRC; Classic polyposis (51)		Brother (?): polyps; brother (?): polyps; paternal cousin (90): skin; niece (24): leukemia; niece (45): OC; cousin (40): OC; cousin (40): OC; cousin (60): prostate; paternal cousin (70): prostate; paternal cousin (70): LC; paternal cousin (70): prostate; cousin (50): liver; paternal cousin (65): UC; paternal cousin (70): prostate; paternal cousin (80): prostate; paternal cousin (60): bladder; cousin (40): lymphoma; paternal cousin (60): LC; paternal cousin (60): kidney
157	None	CRC; Attenuated polyposis; Thyroid (53; 54; 61)		Sister (?): basal cell; brother (?): GC; brother (?): CRC; sister (45): GC; sister (?): polyposis; sister (42): GC; maternal grandfather (?): throat; maternal aunt (?): BC; maternal cousin (66): prostate
237	None	Attenuated polyposis; Prostate (36; 51)		Father (70): prostate; paternal cousin (?): polyposis
242	None	Attenuated polyposis (46)		Father (68, ?): CRC, polyposis
278	<i>MUC16</i> ; <i>TINF2</i>	CRC; Attenuated polyposis (55)		Father (53): gastrointestinal; mother (?): polyposis; brother (?): polyposis; brother (?): polyposis; sister (?): polyposis; sister (?): polyposis; sister (?): polyposis; sister (?): polyposis;

			paternal aunt (?): gastrointestinal; paternal uncle (47): gastrointestinal; paternal grandfather (51): gastrointestinal
454	FRK	Classic polyposis (19)	Brother (25): polyps; great grandfather (?): larynx
517	PNKP	Attenuated polyposis (56)	Maternal cousin (54): GC; maternal cousin (42): GC; maternal cousin (?): prostate; maternal cousin (44): BC; maternal cousin (69): prostate
547	A1CF	CRC; Attenuated polyposis (51)	Sister (47): polyps; brother (51): CRC; brother (45): CRC; paternal grandmother (40): BC; paternal grandmother (?): unknown
669	None	Attenuated polyposis (42)	Brother (56): CRC; mother (?): GC, polyps; maternal uncle (?): unknown; maternal aunt (56): GC; maternal cousin (?): CRC; maternal cousin (?): polyps
907	AHRR	Attenuated polyposis (61)	Brother (65): LC; sister (?): leukemia; brother (?): leukemia; brother (?): leukemia; brother (?): polyposis; nephew (?): leukemia
917	None	Attenuated polyposis (61)	Mother (74): BC; maternal aunt (?): OC; maternal grandmother (?): OC; maternal great-aunt (70): BC; maternal great-aunt (70): BC; paternal aunt (39): basal cell; paternal cousin (?): intestine; paternal cousin (?): intestine
1165	PCSK7	CRC; Attenuated polyposis (52; 53)	Sister (46): CRC; sister (44): CRC; paternal aunt (53): CRC; paternal aunt (55): UC; maternal uncle (?): GC; maternal grandfather (?): GC
1337	None	Attenuated polyposis (56)	Mother (70): gastrointestinal, CRC; maternal grandfather (31): GC; father (80): LC; paternal uncle (75): LC; paternal uncle (?): bile ducts; paternal cousin (28): lymphoma; paternal cousin (72): bile ducts paternal cousin (50): CRC; paternal

			cousin (42): CRC
			Sister (54): teratoma; mother (62): LC; maternal cousin (44): BC phyllode tumor;
1346	None	CRC; Attenuated polyposis (58; 59)	maternal cousin (35): teratoma; maternal cousin (?): unknown; paternal grandfather (90): prostate; paternal uncle (76): intestine/skin; paternal cousin (?): osteosarcoma; sister (51): polyps
1461	None	CRC; Attenuated polyposis (50)	Father (73): prostate; maternal grandfather (82): prostate; mother (75): polyps; maternal aunt (?): polyps; daughter (26): polyps
1469	None	CRC; Attenuated polyposis (44; 55)	Brother (?): polyps; brother (68): intestine; brother (50): kidney; sister (49): polyposis; father (76): thyroid
1488	<i>DKK4</i> ; <i>NTHL1</i> ; <i>PIDD1</i>	CRC; Attenuated polyposis; Endometrial hyperplasia (40; 40; 50)	Sister (38/50): spine/BC; sister (3): leukemia; paternal aunt (?): leukemia; paternal uncle (?): prostate; paternal aunt (50): BC; paternal grandmother (40): gastrointestinal; paternal grandfather (70): prostate
1490	<i>ST7L</i>	Attenuated polyposis (52)	Brother (45): unknown; sister (54): polyps; paternal aunt (70): unknown; maternal uncle (70): unknown; maternal cousin (23): intestine
1536	<i>CD44</i> ; <i>TG</i>	BC; Attenuated polyposis (58; 66)	Son (?): polyps; nephew (?): GC; maternal aunt (40): BC; maternal uncle (?): CRC; maternal cousin (?): kidney
1664	None	Attenuated polyposis (62)	Brother: polyps; brother: polyps; father: LC; paternal aunt: skin
1734	None	CRC; Attenuated	Sister (58): kidney; sister (60): CRC; sister (?): intestinal polyps; maternal uncle (?):

		polyposis (64)		melanoma; maternal cousin (60): throat; maternal cousin (55): unknown; maternal cousin (60): unknown
1749	None	Attenuated CRC (56; 59)	polyposis;	Sister (49): CRC; father (72): CRC; maternal aunt (85): CRC; maternal uncle (88): CRC
1831	<i>HLTF; MUC16</i>	Attenuated (36)	polyposis	Mother (?): polyps; paternal grandmother (?): unknown; sister (8): unknown
1841	None	Attenuated (62)	polyposis	Niece (30): UC
1963	None	Attenuated	polyposis;	Maternal aunt (70): intestine; maternal aunt (50): intestine; maternal aunt (76): OC; Thyroid; BC (69; 49; 69)
2325	<i>OBSCN</i>	CRC; polyposis (59)	Attenuated	maternal cousin (30): bone; maternal cousin (40): BC; maternal cousin (60): BC Brother (63): melanoma; niece (33): thyroid; father (62): CRC; paternal aunt (65): CNS; paternal uncle (62): throat
2448	<i>PMS2</i>	CRC; polyposis (19)	Attenuated	Maternal great grandmother (70): gastrointestinal

P: Pathogenic; LP: Likely pathogenic; CRC: Colorectal cancer; ?: No information; OC: Ovary cancer; LC: Lung cancer; UC: Uterus cancer; GC: Gastric cancer; BC: Breast cancer; CNS: Central nervous system.

Supplementary Table 4 Fisher's Exact test comparing presence of pathogenic or Likely pathogenic variants and the clinical-pathological assessment of patients

Variable	Presence of P/LP variants		Fisher <i>P value</i>
	No	Yes	
Gender			
Female	8 (53.3%)	5 (41.7%)	0.704
Male	7 (46.7%)	7 (58.3%)	
Family history			
No	1 (6.7%)	1 (8.3%)	> 0.999
Yes	14 (93.3%)	11 (91.7%)	
Polyposis type			
Attenuated polyposis	14 (93.3%)	11 (91.7%)	> 0.999
Classic polyposis	1 (6.7%)	1 (8.3%)	
Primary diagnosed tumor site			
Colorectal	7 (46.7%)	6 (50%)	0.876
Endometrium	-	1 (8.3%)	
Prostate	1 (6.7%)	-	
Thyroid	1 (6.7%)	-	
Breast	-	1 (8.3%)	
None	6 (40%)	4 (33.3%)	
Primary diagnosed tumor stage ¹			
0	1 (12.5%)	1 (16.7%)	0.284
I	2 (25%)	3 (50%)	
II	4 (50%)	-	
III	1 (12.5%)	2 (33.3%)	

¹Participants diagnosed with some tumor type, with information about tumor stage (TNM staging – T: Tumor size; N: Lymph nodes affected; M: Metastasis).

P: Pathogenic; LP: Likely pathogenic.

Supplementary Table 5 Logistic regression analyses of variables and presence or absence of P/LP

Variables	Presence of P/LP variants OR (95% CI)	<i>P value</i>
Age of polyposis diagnosis	0.9 (0.9-1)	0.108
Gender (ref: Female)	1.9 (0.4-9.9)	0.442
Male		
Family history (ref: no)		
Yes	0.9 (0.1-9.8)	> 0.999 ^a
Polyposis type (ref: classic polyposis)		
Attenuated polyposis	1.5 (0.1-26.7)	0.807 ^a
Primary diagnosed tumor site (ref: none)		
Colorectal	1.3 (0.2-7.7)	0.768 ^a
Endometrium	11.7 (0.3-462.2)	0.16 ^a
Breast	38 (0.7-2125.9)	0.055 ^a
Prostate	0.1 (0-3.2)	0.142 ^a
Thyroid	7.3 (0.1-525.3)	0.396 ^a
Tumor Stage (ref: 0)		
I	1.7 (0.1-37.9)	0.727 ^a
II	0.2 (0-6.2)	0.31 ^a
III	1.2 (0-34.7)	> 0.999 ^a
Colon lesions (ref: inflammatory polyp)		
GCHP	52.1 (0.3-7834.7)	0.096 ^a
TALGD	11 (0.2-494.7)	0.185 ^a
TAHGD	4.3 (0.1-238.6)	0.464 ^a
TVAHGD	16.6 (0.1-4274.5)	0.331 ^a
Adenocarcinoma	11.9 (0.3-474.5)	0.156 ^a

^aRegression was conducted using Firth's penalized method to account for data separation in the variables.

P: Pathogenic; LP: Likely pathogenic; ref: Analysis reference; GCHP: Goblet cell-rich hyperplastic polyps, TALGD: Tubular adenoma with low-grade dysplasia; TAHGD: Tubular adenoma with high-grade dysplasia, TVAHD: Tubulovillous adenoma with high-grade dysplasia.