

Data S1

List of gene symbols in the sequencing panel. ABL1, ACVR1B, AKT1, AKT2, AKT3, ALK, ALOX12B, AMER1, APC, APCDD1, AR, ARAF, ARFRP1, ARID1A, ARID1B, ARID2, ASXL1, ATM, ATR, ATRX, AURKA, AURKB, AXIN1, AXL, B2M, BACH1, BAP1, BARD1, BCL2, BCL2L2, BCL6, BCOR, BCORL1, BCR, BLM, BRAF, BRCA1, BRCA2, BRIP1, BTG1, BTK, C11orf30, CARD11, CASP8, CBFEB, CBL, CCND1, CCND2, CCND3, CCNE1, CD79A, CD79B, CDC73, CDH1, CDK12, CDK4, CDK6, CDK8, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CEBPA, CHEK1, CHEK2, CHUK, CIC, CRBN, CREBBP, CRKL, CRLF2, CSF1R, CTCF, CTNNA1, CTNNB1, CUL4A, CUL4B, CUX1, CYLD, CYP17A1, CYP2C8, CYP2D6, DAXX, DDR2, DIS3, DNMT1, DNMT3A, DOT1L, DPYD, EGFR, ELF3, EP300, EPHA3, EPHA5, EPHB1, EPOR, ERBB2, ERBB3, ERBB4, ERG, ESR1, ETV1, ETV4, ETV5, ETV6, EWSR1, EZH2, FAM46C, FANCA, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FAT3, FBXW7, FGF10, FGF14, FGF19, FGF23, FGF3, FGF4, FGF6, FGF7, FGFR1, FGFR2, FGFR3, FGFR4, FLT1, FLT3, FLT4, FOXL2, FUBP1, GATA1, GATA2, GATA3, GID4, GNA11, GNA13, GNAQ, GNAS, GPR124, GRIN2A, GSK3B, H3F3A, HGF, HIST1H3B, HLA-A, HLA-B, HLA-C, HNF1A, HRAS, IDH1, IDH2, IGF1,

IGF1R, IGF2, IGF2R, IKBKE, IKZF1, IL7R, INHBA, IRF4, IRS2, JAK1, JAK2, JAK3, JUN, KAT6A, KDM5A, KDM5C, KDM6A, KDR, KEAP1, KIT, KMT2A, KMT2C, KMT2D, KLF4, KLHL6, KRAS, LMO1, LRP1B, MAML1, MAP2K1, MAP2K2, MAP2K4, MAP3K1, MAP3K13, MAPK1, MCL1, MDM2, MDM4, MED12, MEF2B, MEN1, MET, MITF, MLH1, MPL, MRE11A, MSH2, MSH6, MTHFR, MTOR, MUTYH, MYC, MYCL, MYCN, MYD88, NBN, NCOA3, NCOR1, NF1, NF2, NFE2L2, NFKBIA, NKX2-1, NOTCH1, NOTCH2, NOTCH3, NOTCH4, NPM1, NRAS, NSD1, NTRK1, NTRK2, NTRK3, NUP93, PAK3, PAK7, PALB2, PARP1, PARP2, PARP3, PARP4, PAX5, PBRM1, PDGFRA, PDGFRB, PDK1, PHF6, PIK3C2G, PIK3C3, PIK3CA, PIK3CG, PIK3R1, PIK3R2, PMS2, PNRC1, PPP2R1A, PRDM1, PRKAR1A, PRKDC, PRSS8, PTCH1, PTEN, PTPN11, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54L, RAF1, RARA, RB1, REL, RET, RICTOR, RNF43, ROS1, RPA1, RPTOR, RUNX1, RUNX1T1, SETBP1, SETD2, SF3B1, SH2B3, SKP2, SMAD2, SMAD3, SMAD4, SMARCA4, SMARCB1, SMARCD1, SMO, SOCS1, SOX10, SOX2, SOX9, SPEN, SPOP, SRC, SRSF2, STAG2, STAT1, STAT3, STAT4, STK11, SUFU, SYK, TBX3, TET2, TGFBR2, TIPARP, TMPRSS2, TNFAIP3, TNFRSF14, TOP1, TP53, TPMT, TRAF7, TRRAP, TSC1, TSC2, TSHR, TYMS, U2AF1, UGT1A1, VHL, WISP3, WT1, XPO1, XRCC1, XRCC3, ZNF217, ZNF703.