**Seznam analyzovaných genů****odbornost 816/4 a 823/2****P-G-30 CTL**

Analýza fúzních transkriptů v genech (vybrané exony):

ALK (2,4,6,10,16,17,18,19,(intron19),20,21,22,23), AXL (18,19,20), BRAF (7,8,9,10,11), BRAF (7,8,10), CCND1 (1,2,4), CCND1 (1,2,3,4), EGFR (8), FGFR1 (2,8,9,10,17), FGFR1 (17), FGFR2 (17), FGFR2 (2,5,7,8,9,10), FGFR3 (3,5,8,9,10), FGFR3 (17,(intron17)), MET (2), MET (2,4,5,6,13,14,16,17,21), MET (15), NRG1 (1,2,3,6), NTRK1 (2,4,6,8,10,11,12,13), NTRK2 (5,7,9,11,12,13,14,15,16,17), NTRK3 (4,7,10,13,14,15,16), NTRK3 (15), PPARG (1,2,3,5), RAF1 (4,5,6,7,9,10,11,12), RET (2,4,6,8,9,10,11,12,13,14), ROS1 (2,4,7,31,32,33,34,35,36,37), THADA (24,25,26,27,28,29,30,36,37)

Analýza SNV a INDEL v genech (vybrané exony):

AKT1 (3), ALK (21,22,23,25), BRAF (11,15), CTNNB1 (3), DDR2 (17), EGFR (18,19,20,21), ERBB2 (20), FGFR1 (13), GNAS (8,9), HRAS (2,3), IDH1 (4), IDH2 (4), KRAS (2,3,4), MAP2K1 (2,3), NRAS (2,3), PIK3CA (10,21), RET (11,13,14,), ROS1 (38)

P-G-34 SWIFT

Analýza SNV a INDEL v genech (vybrané exony):

BRAF (15), BRAF (11), EGFR (3), EGFR (7), EGFR (15), EGFR (18), EGFR (19), EGFR (20), EGFR (21), KRAS (4), KRAS (3), KRAS (2), NRAS (4), NRAS (3), NRAS (2)

P-G-36 TS500

Analýza fúzních transkriptů v genech(Full CDS):

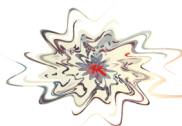
ABL1, AKT3, ALK, AR, AXL, BCL2, BRAF, BRCA1, BRCA2, CDK4, CSF1R, EGFR, EML4, ERBB2, ERG, ESR1, ETS1, ETV1, ETV4, ETV5, EWSR1, FGFR1, FGFR2, FGFR3, FGFR4, FLI1, FLT1, FLT3, JAK2, KDR, KIF5B, KIT, KMT2A, MET, MLLT3, MSH2, MYC, NOTCH1, NOTCH2, NOTCH3, NRG1, NTRK1, NTRK2, NTRK3, PAX3, PAX7, PDGFRA, PDGFRB, PIK3CA, PPARG, RAF1, RET, ROS1, RPS6KB1, TMRSS2

Analýza CNV v genech:

AKT2, ALK, AR, ATM, BRAF, BRCA1, BRCA2, CCND1, CCND3, CCNE1, CDK4, CDK6, EGFR, ERBB2, ERBB3, ERCC1, ERCC2, ESR1, FGF1, FGF10, FGF14, FGF19, FGF2, FGF23, FGF3, FGF4, FGF5, FGF6, FGF7, FGF8, FGF9, FGFR1, FGFR2, FGFR3, FGFR4, CHEK1, CHEK2, JAK2, KIT, KRAS, LAMP1, MDM2, MDM4, MET, MYC, MYCL, MYCN, NRAS, NRG1, PDGFRA, PDGFRB, PIK3CA, PIK3CB, PTEN, RAF1, RET, RICTOR, RPS6KB1, TFRC

Analýza SNV a INDEL v genech(Full CDS):

ABL1, ABL2, ACVR1, ACVR1B, AKT1, AKT2, AKT3, ALK, ALOX12B, ANKRD11, ANKRD26, APC, AR, ARAF, ARFRP1, ARID1A, ARID1B, ARID2, ARID5B, ASXL1, ASXL2, ATM, ATR, ATRX, AURKA, AURKB, AXIN1, AXIN2, AXL, B2M, BAP1, BARD1, BBC3, BCL10, BCL2, BCL2L1, BCL2L11, BCL2L2, BCL6, BCOR, BCORL1, BCR, BIRC3, BLM, BMPR1A, BRAF, BRCA1, BRCA2, BRD4, BRIP1, BTG1, BTK, C11orf30, CALR, CARD11, CASP8, CBF, CBL, CCND1, CCND2, CCND3, CCNE1, CD274, CD276, CD74, CD79A, CD79B, CDC73, CDH1, CDK12, CDK4, CDK6, CDK8, CDKN1A, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CEBPA, CENPA, CIC, CREBBP, CRKL, CRLF2, CSF1R, CSF3R, CSNK1A1, CTCF, CTLA4, CTNNA1, CTNNB1, CUL3, CUX1, CXCR4, CYLD, DAXX, DCUN1D1, DDR2, DDX41, DHX15, DICER1, DIS3, DNAJB1, DNMT1, DNMT3A, DNMT3B, DOT1L, E2F3, EED, EGFL7, EGFR, EIF1AX, EIF4A2, EIF4E, EML4, EP300, EPCAM, EPHA3, EPHA5, EPHA7, EPHB1, ERBB2, ERBB3, ERBB4, ERCC1, ERCC2, ERCC3, ERCC4, ERCC5, ERG, ERFF1, ESR1, ETS1, ETV1, ETV4, ETV5, ETV6, EWSR1, EZH2, FAM123B, FAM175A, FAM46C, FANCA, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FAS, FAT1, FBXW7, FGF1, FGF10, FGF14, FGF19, FGF2, FGF23, FGF3, FGF4, FGF5, FGF6, FGF7, FGF8, FGF9, FGFR1, FGFR2, FGFR3, FGFR4, FH, FLCN, FLI1, FLT1, FLT3, FLT4, FOXA1, FOXL2, FOXO1, FOXP1, FRS2, FUBP1, FYN, GABRA6, GATA1, GATA2, GATA3, GATA4, GATA6, GEN1, GID4, GLI1, GNA11, GNA13, GNAQ, GNAS, GPR124, GPS2, GREM1, GRIN2A, GRM3, GSK3B, H3F3A, H3F3B, H3F3C, HGF, HIST1H1C, HIST1H2BD, HIST1H3A, HIST1H3B, HIST1H3C, HIST1H3D, HIST1H3E,

**Seznam analyzovaných genů**

HIST1H3F, HIST1H3G, HIST1H3H, HIST1H3I, HIST1H3J, HIST2H3A, HIST2H3C, HIST2H3D, HIST3H3, HLA-A, HLA-B, HLA-C, HNF1A, HNRNP, HOXB13, HRAS, HSD3B1, HSP90AA1, CHD2, CHD4, CHEK1, CHEK2, ICOSLG, ID3, IDH1, IDH2, IFNGR1, IGF1, IGF1R, IGF2, IKBKE, IKZF1, IL10, IL7R, INHA, INHBA, INPP4A, INPP4B, INSR, IRF2, IRF4, IRS1, IRS2, JAK1, JAK2, JAK3, JUN, KAT6A, KDM5A, KDM5C, KDM6A, KDR, KEAP1, KEL, KIF5B, KIT, KLF4, KLHL6, KMT2B, KMT2C, KMT2D, KRAS, LAMP1, LATS1, LATS2, LMO1, LRP1B, LYN, LZTR1, MAGI2, MALT1, MAP2K1, MAP2K2, MAP2K4, MAP3K1, MAP3K13, MAP3K14, MAP3K4, MAPK1, MAPK3, MAX, MCL1, MDC1, MDM2, MDM4, MED12, MEF2B, MEN1, MET, MGA, MITF, MLH1, MLL, MLLT3, MPL, MRE11A, MSH2, MSH3, MSH6, MST1, MST1R, MTOR, MUTYH, MYB, MYC, MYCL1, MYCN, MYD88, MYOD1, NAB2, NBN, NCOA3, NCOR1, NEGR1, NF1, NF2, NFE2L2, NFKBIA, NKX2-1, NKX3-1, NOTCH1, NOTCH2, NOTCH3, NOTCH4, NPM1, NRAS, NRG1, NSD1, NTRK1, NTRK2, NTRK3, NUP93, NUTM1, PAK1, PAK3, PAK7, PALB2, PARK2, PARP1, PAX3, PAX5, PAX7, PAX8, PBRM1, PDCD1, PDCD1LG2, PDGFRA, PDGFRB, PDK1, PDPK1, PGR, PHF6, PHOX2B, PIK3C2B, PIK3C2G, PIK3C3, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIK3R3, PIM1, PLCG2, PLK2, PMAIP1, PMS1, PMS2, PNRC1, POLD1, POLE, PPARG, PPM1D, PPP2R1A, PPP2R2A, PPP6C, PRDM1, PREX2, PRKAR1A, PRKCI, PRKDC, PRSS8, PTEN, PTCH1, PTPN11, PTPRD, PTPRS, PTPRT, QKI, RAB35, RAC1, RAD21, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54L, RAF1, RANBP2, RARA, RASA1, RB1, RBM10, RECQL4, REL, RET, RFWD2, RHEB, RHOA, RICTOR, RIT1, RNF43, ROS1, RPS6KA4, RPS6KB1, RPS6KB2, RPTOR, RUNX1, RUNX1T1, RYBP, SDHA, SDHAF2, SDHB, SDHC, SDHD, SETBP1, SETD2, SF3B1, SH2B3, SH2D1A, SHQ1, SLIT2, SLX4, SMAD2, SMAD3, SMAD4, SMARCA4, SMARCB1, SMARCD1, SMC1A, SMC3, SMO, SNCAIP, SOCS1, SOX10, SOX17, SOX2, SOX9, SPEN, SPOP, SPTA1, SRC, SRSF2, STAG1, STAG2, STAT3, STAT4, STAT5A, STAT5B, STK11, STK40, SUFU, SUZ12, SYK, TAF1, TBX3, TCEB1, TCF3, TCF7L2, TERC, TERT, TET1, TET2, TFE3, TFRC, TGFB1, TGFB2, TMEM127, TMPRSS2, TNFAIP3, TNFRSF14, TOP1, TOP2A, TP53, TP63, TRAF2, TRAF7, TSC1, TSC2, TSHR, U2AF1, VEGFA, VHL, VTCN1, WISP3, WT1, XIAP, XPO1, XRCC2, YAP1, YES1, ZBTB2, ZBTB7A, ZFHX3, ZNF217, ZNF703, ZRSR2

P-G-37 LUNG

Analýza fúzních transkriptů v genech (vybrané exony):

ALK (2,4,6,8,10,12,14,16,17,18,19,intron19,20,mid-exon20,21,22,23,26), ALK (1,2), BRAF (1,2,3,7,8,10,13,14,18), BRAF (2,3,4,5,7,8,9,10,11,12,15,16), EGFR (1,24,25,mid-exon25,26), EGFR (7,8,9,14,15,16,17,18,19,20), ERBB2 (15,23,24,25,mid-exon26,26), ERBB2 (4,5,13,15,17), FGFR1 (2*,3,4,5,6,7,8,9,10,11,17), FGFR1 (12,17), FGFR2 (2*,3,5,6,7,8,9,10), FGFR2 (16,17,18), FGFR3 (16,17,intron17,mid-exon18), FGFR3 (3,5,8,9,10,11,12,13,14), MET (2,4,5,6,13,14,15,16,17,21), MET (2,13), NRG1 (1,3,4,5), NRG1 (1,2,3,4,5,6), NRG1 (1), NRG1 (1,3), NRG1 (1), NRG1 (1,3), NTRK1 (1,2), NTRK1 (1,2,3,4,5,6,7,8,9,10,11,12,13,14), NTRK2 (4,5,6,7,8,9,10,11,12,13,14,15,16,17,18), NTRK2 (11,14), NTRK3 (3,4,5,6,7,8,9,10,11,12,13,14,15,16), NTRK3 (13,14,15,17), NTRK3 (15), NUTM1 (2*,3,mid-exon3,4,5,mid-exon6,6), PIK3CA (2,15), RET (2,4,6,8,9,10,11,mid-exon11,12,13,14), ROS1 (2,4,7,31,32,33,34,35,36,37)

Analýza SNV a INDEL v genech (vybrané exony):

ALK (22,23,25), BRAF (15), EGFR (18,19,20,21), ERBB2 (8,2), FGFR1 (4,13,14), FGFR2 (7,9,12,13,14), FGFR3 (7,9,13,14,16), KRAS (2,3,4), NTRK1 (13,14,15,16,17), NTRK2 (16,17,18,19,20,21), NTRK3 (15,16,17,18,19), PIK3CA (2,3,5,6,8,10,14,21), RET (15,16), ROS1 (38)

P-G-38 VOLA

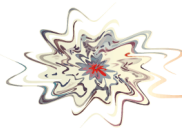
Analýza SNV a INDEL v genech (vybrané exony):

BRCA1 (2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27), BRCA1 (13), BRCA2 (2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23)

P-G-39 CoReLu

Analýza SNV a INDEL v genech(Full CDS):

AKT1, ALK, ARAF, ARID1A, ARID1B, ATM, ATR, BRAF, BRCA1, BRCA2, CDK12, CDKN2A, DDR2, EGFR, ERBB2, ESR1, FAT1, FGFR1, FGFR2, FGFR3, CHEK1, IDH1, IDH2, KEAP1, KRAS, MAP2K1, MET, MTOR, NF1, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PIK3CA, PIK3R1, PTEN, RB1,

**Seznam analyzovaných genů**

RET, STK11, SYNE1, TP53

P-G-41 AST

Analýza fúzních transkriptů v genech (vybrané exony):

AKT3 (1,2,3), ALK (19,(intron19),20,21,22), ARHGAP26 (2,10,11,12), AXL (19,20), BRAF (7,8,9,10,11,12), BRAF (7,8), BRAF (15), BRD3 (9,10,11,12), BRD4 (10,11), EGFR (24,25), EGFR (7,9,16,20), ERG (2,3,4,5,6,7,8,9,10,11), ESR1 (3,4,5,6), ETV1 (3,4,5,6,7,8,9,10,11,12,13), ETV4 (2,4,5,6,7,8,9,10), ETV5 (2,3,7,8,9), ETV6 (1,2,3,4,5,6), ETV6 (2,3,5,6,7), EWSR1 (4,5,6,7,8,9,10,11,12,13,14), FGFR1 (2,8,9,10,17), FGFR2 (2,8,9,10), FGFR2 (17), FGFR3 (8,9,10), FGFR3 (17, Intron17), FGR (2), INSR (12,13,14,15,16,17,18,19), INSR (20,21,22), MAML2 (2,3), MAST1 (7,8,9,18,19,20,21), MAST2 (2,3,5,6), MET (2,13,14,15), MSMB (2,3,4), MUSK (7,8,9,11,12,13,14), MYB (7,8,9,11,12,13,14,15,16), NOTCH1 (2,4,29,30,31), NOTCH1 (26,27,28,29(internalexon3-27deletion)), NOTCH2 (5,6,7), NOTCH2 (26,27,28), NRG1 (1,2,3,6), NTRK1 (8,10,11,12,13), NTRK2 (11,12,13,14,15,16,17), NTRK3 (15), NTRK3 (13,14,15,16), NUMBL (3), NUTM1 (3), PDGFRA (10,11,12,13,14), PDGFRB (8,9,10,11,12,13,14), PIK3CA (2), PKN1 (10,11,12,13), PPARG (1,2,3), PRKCA (4,5,6), PRKCB (3), RAF1 (4,5,6,7,9), RAF1 (4,5,6,7,9,10,11,12), RELA (3,4), RET (8,9,10,11,12,13), ROS1 (31,32,33,34,35,36,37), RSPO2 (1,2), RSPO3 (2), TERT (2), TFE3 (2,3,4,5,6), TFE3 (2,3,4,5,6,7,8), TFEB (1,2), THADA (28), TMPRSS2 (1,2,3,4,5,6), TMPRSS2 (1)

Analýza SNV a INDEL v genech (vybrané exony):

BRAF (15), EGFR (8), MET (13,15), PDGFRA (7), PDGFRA (15,18)

P-G-42 LYM

Analýza fúzních transkriptů v genech (vybrané exony):

ALK (2,4,6,10,16,17,18,19,20,21,22,23), BCL2 (3), BCL2 (2), BCL6 (2,3), BCR (1,2,3,8,12,13,14,15,16), BIRC3 (4,5,6,7), CBFB (4,5), CCND1 (5), CCND3 (2), CDK6 (1,2,3,4), CIITA (1,2), CREBBP (2,3,4,5,6), DEK (2,3), DUSP22 (1,2), EIF4A1 (2,3), ETV6 (1,2,3,4,5,6), ETV6 (2,3,4,5,6), FGFR1 (12,17), FGFR1 (2,3,4,5,6,7,8,9,10,11,17), CHIC2 (1,2,3), JAK2 (6,7,8,9,10,11,12,13,15,16,17,18,19,20), JAK2 (9,10,11,12), KMT2A (2,3), KMT2A (4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35), MALT1 (9), MKL1 (4,5,6), MLF1 (2,3,4), MLLT10 (7,8,9,10), MLLT10 (2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18), MYC (1,2), NFKB2 (14,15,16,17,18,19,20,21), NOTCH1 (24), NOTCH1 (34), NOTCH1 (24,25,26,27,28,29), P2RY8 (1), PDCD1LG2 (1,2,3), PDCD1LG2 (5,6), PDGFRA (9,10,11,12,13,14), PRDM16 (1,2,3,4), STIL (1,2), TCF3 (11,12,13,14,15,16,17,18), TP63 (3,4,5)

Analýza SNV a INDEL v genech(Full CDS):

AKT3, ALK, BAX, BCL2, BIRC3, BRAF, BTK, CARD11, CCND1, CD79B, CREBBP, DNMT3A, ETV6, EZH2, FBXW7, IDH1, IDH2, JAK2, JAK3, KRAS, MYD88, NOTCH1, NOTCH2, NRAS, PDGFRA, PLCG1, PLCG2, RHOA, SF3B1, STAT3, STAT5B, STAT6, WT1, XPO1

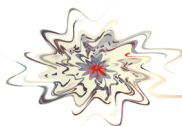
P-G-43 MYE

Analýza fúzních transkriptů v genech (vybrané exony):

ABL1 (1,2,3,4,5), CSF1R (9,10,11,12,13,14), GLIS2 (2,3), CHD1 (1,2), IKZF3 (2,3,4,5,6,7), KAT6A (13,14,15,16), MECOM (1,2,3,4), MLLT4 (2), MYH11 (7,8,9,10,11,14,15,16), NF1 (14), NF1 (36), NOTCH1 (24,25,26,27,28,29), NUP214 (17,18,19), NUP98 (8,9,10,11,12,13,14,15,16,17), NUP98 (12,13), PICALM (16,17,18,19), PML (2), PML (2,3,4,5,6,7), RARA (2,3,4,5), RBM15 (1), RUNX1 (5,6,7,8,9), RUNX1 (2,3,4,5,6,7,8), RUNX1T1 (2,3), SETD2 (1,2,3,4,5,6,7,8,9,10,11,12)

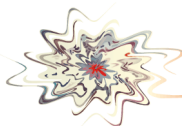
Analýza SNV a INDEL v genech(Full CDS):

ABL1, ASXL1, CALR, CBL, CEBPA, CREBBP, CSF3R, DCK, DNMT2, ETV6, EZH2, FBXW7, FLT3, GATA1, GATA2, IKZF3, JAK1, KDM6A, KIT, MPL, NPM1, PHF6, PML, PTPN11, RARA, SETBP1, SLC29A1, SRSF2, U2AF1, WT1

**Seznam analyzovaných genů****P-G-44 UST**

Analýza fúzních transkriptů v genech (vybrané exony):

ACVR2A (1,2,3), AKT1 (5,4,3,2), AKT2 (11), AKT2 (5,2), AKT3 (3,2,1), ALK (2,1), ALK (26,23,22,21,20,19,18,17,16,14,12,10,8,6,4,2), AR (1), AR (1,2,3,4,5,6,7,8), ARHGAP26 (2,10,11,12), ARHGAP6 (2), AXL (10), AXL (17,15,5), AXL (18,19), BCOR (15,15,15,14,12,10,7,6,4,2), BCOR (8), BCOR (15,15,15,11,9,8,7,6,5,4,3), BCORL1 (4), BCORL1 (6,7,5,4), BRAF (16,15,12,11,10,9,8,7,5,4,3,2), BRAF (13,10,8,7,3,2,1), BRD3 (12,11,10,9), BRD4 (2), BRD4 (14,13,11,10), C11orf95 (5,4,3,2), CALCA (4,3), CAMTA1 (3), CAMTA1 (8,9,10), CCNB3 (2,3,4,5,6), CCND1 (1,2,3,4), CCND1 (1,2,3,4,5), CD274 (7), CD274 (2,3,4,5), CDK4 (2,3,4), CDK4 (8,7,5), CIC (12), CIC (14,15,16,17,18,19,20), CRTC1 (1,2,3,4), CSF1 (5,6,7,8,3,4,2), CSF1 (2,3,4,5,6), CSF1 (9), CSF1R (13,12,11), DDX3X (6), DNAJB1 (2,1), EGF (16,17,18,19), EGFR (7,8,9,14,15,16,17,18,19,20), EGFR (1,24,25,26), EPC1 (11,10,9), ERBB2 (4,5,13,15,17), ERBB2 (15,23,24,25,26), ERBB4 (23,18,17,16,15,14,4,3,2), ERG (11,10,9,8,7,6,5,4,3,2), ESR1 (3,4,5,6,7), ESR1 (7,8), ESR1 (6,7), ESRRA (2,3), ETV1 (13,12,11,10,9,8,7,6,5,4,3), ETV4 (10,9,8,7,6,5,4,3,2), ETV5 (9,8,7,3,2), ETV6 (1,2,3,4,5,6), ETV6 (2,3,4,5,6,7), EWSR1 (4,5,6,7,8,9,10,11,12,13,14), EWSR1 (8), FGF1 (2), FGFR1 (17,11,10,9,8,7,6,5,4,3,2), FGFR1 (17,12), FGFR2 (18,17,16), FGFR2 (10,9,8,7,6,5,3,2), FGFR3 (3,5,8,9,10,11,12,13,14), FGFR3 (16,17), FGR (3,2), FN1 (27,23,42), FOS (3,1,2), FOS (4,3,2), FOSB (2), FOSB (4), FOXO1 (3,2,1), FOXO4 (2,3), FUS (3,4,5,6,7,8,9,10,11,13,14), GFI1 (6,4,3,5), GFI1 (2,2), GFI1B (2), GFI1B (4,3,5), GLI1 (4,5,6,7), GLI2 (4,1), GNAS (10,9), GNAS (7,8), GPI (7,11), GPI (12), GRB7 (10,11,12), HMGA2 (1,2,3,4,5,5), CHMP2A (4,2), CHMP2A (3), CHMP2B (1), CHMP2B (6,5,3,4,2), IGF1R (13,14,15), INSR (22,21,20), INSR (19,18,17,16,15,14,13,12,2), JAK2 (6,7,8,9,10,11,12,13,14,15,16,17,18,19,20), JAK2 (9,10,11,12,22), JAK3 (23), JAK3 (19,18,17,12,11,10), JAZF1 (4,3,2), KIT (1), KIT (8), KMT2A (5,4), KRT20 (5), KRT20 (2), KRT7 (7), KRT7 (2), MAML2 (2), MAML2 (2,3), MAP2K1 (2), MAP3K3 (9,8), MAP3K8 (8), MAST1 (7,8,9,18,19,20,21), MAST2 (2,3,5,6), MAST2 (15,16,17), MBTD1 (17,16,15), MBTD1 (3), MDM2 (2,4,6,8,10,7), MDM2 (5,9,11), MDM4 (11,3), MDM4 (10,7,6,8,2,5), MEAF6 (5,4), MET (2,4,5,6,13,14,15,16,17,21), MET (2,13), MGEA5 (15,14,13,12,9,8,7,6,5,4), MGEA5 (14,9,4,15), MITF (3,4), MKL2 (11,12,13), MN1 (2,1), MSMB (2,3,4), MTG1 (9), MUSK (7,9,10,12,13,14,15), MYB (7,8,9,11,12,13,14,15,16), MYBL1 (15,14,13,12,11,10,9,8), MYC (1,2,3), MYC (1,2), MYOD1 (1,1,1), MYOD1 (1,1,1,1,2), NCOA1 (11), NCOA1 (12,13,14,15), NCOA2 (22,16,15,14,13,12,11), NCOA2 (14), NCOA3 (2,13,14,15,16), NCOA3 (20), NCOA3 (12,11), NFATC2 (10,9,3,2), NFE2L2 (5,4,3,2,1), NFIB (9), NFIB (2), NFIB (9,8), NOTCH1 (31,30,29,24,4,2), NOTCH1 (29,28,27,26,25,24,5), NOTCH2 (29,28,27,26,25,24), NOTCH2 (7,6,5), NOTCH3 (29), NR4A3 (2,3,4,5,7,9,8,6), NR4A3 (8), NRG1 (1), NRG1 (1,4,8), NRG1 (1,2,3,5,6), NRG1 (1,3), NRG1 (10), NTRK1 (2), NTRK1 (1,2,3,4,5,6,7,8,10,11,12,13,13,14,14,15,16,17,17), NTRK1 (13,13,14,15,16,17,17), NTRK2 (4,5,6,7,8,9,10,12,13,14,15,16,17,18,18,19,20,21,21), NTRK2 (11,14,17,19,19,20,21), NTRK3 (19,19,18,17,16,15,14,13,12,10,9,8,7,6,5,4,3), NTRK3 (19,18,17,16,15,14,13), NTRK3 (15), NUMBL (3), NUTM1 (3,4,5), NUTM1 (1,7), PAX3 (8,7,6,3,4), PAX3 (8,4,2), PAX3 (5), PAX3 (2), PAX8 (10,9,8,7,6), PAX8 (3), PAX8 (2,1), PDGFB (3,2), PDGFD (7,6,5), PDGFRA (10,11,15,12,13,14), PDGFRA (7), PDGFRB (14,13,12,11,10,9,8), PHF1 (1,2,13,9,7,5,3), PHF1 (10,11,12), PHKB (4), PIK3CA (2,15), PIP4K2A (2), PKN1 (10,11,12,13), PLAG1 (4,3,2,1,5), PLAG1 (4,3,2), PPARG (1,2,3,5), PPARG (5), PRDM10 (14,13), PRDM6 (7,5,3), PRDM6 (6,4,2), PRKACA (2,10), PRKACB (2,3,4,10), PRKCA (8,7,3,1), PRKCA (4,5,6,9,15,16,3), PRKCB (1,3,7,8,9), PRKCD (9,10,11,12,15), PRKCD (18), PRKD1 (13,12,11,10,2), PRKD2 (13,12,11,10,18,17,16,14,15,9,8,6,7,4,5,2,3), PRKD3 (18,16,17,15,14), PRKD3 (13,12,11,10), PTEN (2,4), PTH (3), PTH (1), PTPN1 (4,6), PTPN1 (9,4,8,7), RAB7A (3,6), RAB7A (3), RAD51B (3,4,5,6,7,8,9), RAD51B (8), RAF1 (12,11,10,9,8,7,6,5,4,2), RAF1 (9,7,6,5,4), RB1 (14,2,9,22), RB1 (6,26,17), RELA (11,4,3), RET (2,4,6), RET (8,9,10,11,12,13,14), ROS1 (37,36,35,34,33,32,31,7,4,2), RPS19 (5), RSPO2 (3,2,1), RSPO3 (2), SERPINE1 (7,6,5,3,4,2), SLC5A5 (8), SLC5A5 (4), SMARCA4 (28,24,34,20,11,7,2,15), SMARCB1 (8,7,1), SMARCB1 (9,4,3), SRF (6,3), SS18 (11,10,6,5,3,2), SS18 (10,9,8,6,5,4), SS18 (4), SS18L1 (1,2,3,8,9,10), STAT6 (20,19,18,17,16,15,7,6,5,4,3,2,1), TAF15 (5,6,7,9), TAF15 (6,7), TCF12 (4,5,6), TERT (15,9,3), TERT (12,11,10,7,5,3,2), TFE3 (8,7,6,5,4,3,2), TFE3 (6,5,4,3,2), TFEB (9), TFEB (6,4,3,2,1), TFG (3,4,5,6,7), TFG (6), THADA (37,36,31,30,29,28,27,26,25,24), TMPRSS2 (6,5,4,3,1), TMPRSS2 (2,1), TSC2 (33,40,18,36,25,10,3), TTF1 (10), TTF1 (4), TTYH1 (8,4,5,3), USP6 (1,2,3), VCP (12), VCP (10,3), VGLL2 (1,2,3,4), VGLL3 (4,3,2,1), VGLL3 (2,3,4,1), WWTR1 (4,3), YAP1 (1,2,3,4,8,9), YAP1 (1,2,3,4,5,6,7), YWHAE (5)

**Seznam analyzovaných genů****P-G-45 MYEcore**

Analýza SNV a INDEL v genech (vybrané exony):

ABL1 (4,5,6,7,8,9,10), ANKRD26 (1), ASXL1 (11,12,13), BCOR (2,3,4,5,6,7,8,9,10,11,12,13,14,15), BRAF (11,15), CALR (8,9), CBL (8,9), CEBPA (1), CSF3R (10,18), CSF3R (17), CSF3R (14,15,16), DDX41 (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17), DNMT3A (2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23), DNMT3A (1,2), ETNK1 (3), ETV6 (1,2,3,4,5,6,7,8), EZH2 (2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20), FLT3 (8,9,10,11,12,13,14,15,16,17,19,20,21), GATA1 (2), GATA2 (2,3,4,5,6), IDH1 (3,4), IDH2 (4,6), JAK2 (12,13,14,15,16), KIT (2,8,9,10,11,12,13,14,15,17,18), KRAS (2,3,4), MPL (10,12), NPM1 (11), NRAS (2,3,4), PHF6 (9), PHF6 (10), PHF6 (2,3,4,5,6,7,8), PTPN11 (3,4,7,8,11,12,13), RUNX1 (5), RUNX1 (2,3,4,5,6,7,8,9), SETBP1 (4), SF3B1 (13,14,15,16,17,18), SRSF2 (1,2), STAG2 (2,33), STAG2 (32), TET2 (4,5,6,7,8,9,10,11), TET2 (3), TP53 (2,3,4,5,6,7,8,9,10,11), TP53 (9,1), TP53 (1), U2AF1 (2,6), U2AF1 (6), WT1 (1,2,3,4,5,6,7,8,9), ZRSR2 (1,2,3,4,5,6,7,8,9,10,11)

P-G-46 VCTL

Analýza CNV v genech: (vybrané exony):

MDM2 (2,3,4,6,8,10)

Analýza CNV v genech:

CCND1

Analýza SNV, INDEL a CNV v genech (vybrané exony):

ALK (21,22,23,25), DDR2 (12,13,14,15,16,17,18), EGFR (3,7,15,18,19,20,21), ERBB2 (10,19,20,21,24), FGFR1 (4,7,8,13,15,17), FGFR2 (7,9,12,14), FGFR3 (7,8,9,14,15,16,18), GNAS (6,7,8,9), KIT (2,8,9,10,11,13,14,15,17,18), KRAS (2,3,4,5), MET (2,11,14,16,19,21), NRAS (2,3,4,5), PDGFRA (12,14,15,18,23), PIK3CA (2,5,7,8,10,14,19,21), PTEN (1,2,3,4,5,6,7,8,9), RET (10,11,13,14,15,16), STK11 (1,2,3,4,5,6,7,8,9), TP53 (1,2,3,4,5,6,7,8,9,10,11)

Analýza SNV a INDEL v genech (vybrané exony):

AKT1 (3,6), BRAF (11,15), CTNNB1 (3), EIF1AX (1,2,3,4,5,6,7), HRAS (2,3), IDH1 (3,4), IDH2 (4), MAP2K1 (2,3), ROS1 (38), TERT (Promoter,1), TSHR (10)

P-G-47 VGYN

Analýza SNV, INDEL a CNV v genech(Full CDS):

ARID1A, BCOR, BRCA1, BRCA2, CTNNB1, ERBB2, KRAS, MLH1, MSH2, MSH6, NRAS, PIK3CA, PIK3R1, PMS2, POLD1, POLE, PTEN, TP53

P-G-48 VST

Analýza CNV v genech: (vybrané exony):

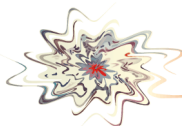
MDM2 (2,3,4,6,8,10)

Analýza CNV v genech:

CCND1, MYC, MYCN

Analýza SNV, INDEL a CNV v genech (vybrané exony):

ABL1 (4,5,6,7), ALK (21,22,23,25), APC (16), ATM (8,9,12,17,26,34,35,36,39,50,54,55,56,59,61,63), AURKA (2,5,6,7,8), CCNE1 (3,4,5,6,7,8,10,12), CDH1 (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16), CDK4 (2,3,4,5,6,7), CDKN2A (1,2,3), DDR2 (12,13,14,15,16,17,18), EGFR (3,7,15,18,19,20,21), ERBB2 (10,19,20,21,24), ERBB3 (2,3,7,8), ERBB4 (3,4,6,7,8,9,15,23), FBXW7 (1,2,3,4,5,6,7,8,9,10,11), FGFR1 (4,7,8,13,15,17), FGFR2 (7,9,12,14), FGFR3 (7,8,9,14,15,16,18), FLT3 (11,14,16,20), GNAS (6,7,8,9), JAK2 (11,13,14,16,19), JAK3 (4,13,16), KDR (6,7,11,19,21,26,27,30), KIT (2,8,9,10,11,13,14,15,17,18), KRAS (2,3,4,5), MET (2,11,14,16,19,21), NOTCH1 (25,26,27,34), NRAS (2,3,4,5), PDGFRA (12,14,15,18,23), PIK3CA (2,5,7,8,10,14,19,21), PIK3R1 (1,2,3,4,5,6,7,8,9,10), PTEN (1,2,3,4,5,6,7,8,9), RB1 (4,6,10,11,14,17,18,20,21,22*), RET (10,11,13,14,15,16), SMAD4 (2,3,4,5,6,7,8,9,10,11,12), SMARCB1 (2,4,5,9), SMO (3,5,6,9,11), STK11 (1,2,3,4,5,6,7,8,9), TP53 (1,2,3,4,5,6,7,8,9,10,11), VHL (1,2,3)

**Seznam analyzovaných genů**

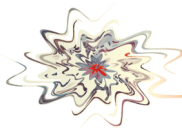
Analýza SNV a INDEL v genech (vybrané exony):

AKT1 (3,6), BRAF (11,15), CSF1R (7,22), CTNNB1 (3), ESR1 (8), EZH2 (16), FOXL2 (1), GNA11 (5), GNAQ (4,5), H3F3A (2), HNF1A (3,4), HRAS (2,3), IDH1 (3,4), IDH2 (4), MAP2K1 (2,3), MLH1 (12), MPL (10), NPM1 (11), PTPN11 (3,13), RHOA (2,3), ROS1 (38), SRC (14), TERT (Promoter,1)

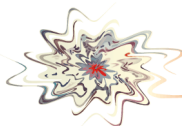
P-G-49 TS500P

Analýza fúzních transkriptů v genech(Full CDS):

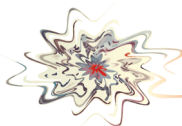
ABCC3, ABI1, ABL1, ABL2, ABLIM1, ACACA, ACE, ACER1, ACKR3, ACSBG1, ACSL3, ACSL6, ACVR1B, ACVR1C, ACVR2A, ADD3, ADM, AFF1, AFF3, AFF4, AGR3, AHCYL1, AHI1, AHR, AHRR, AIP, AK2, AK5, AKAP12, AKAP6, AKAP9, AKR1C3, AKT1, AKT2, AKT3, ALDH1A1, ALDH2, ALDOC, ALK, AMER1, AMH, ANGPT1, ANKRD28, ANLN, APC, APH1A, APLP2, APOD, AR, ARAF, ARFRP1, ARHGAP20, ARHGAP26, ARHGEF12, ARHGEF7, ARID1A, ARID2, ARIH2, ARNT, ARRDC4, ASMTL, ASPH, ASPSCR1, ASTN2, ASXL1, ATF1, ATF3, ATG13, ATG5, ATIC, ATL1, ATM, ATP1B4, ATP8A2, ATR, ATRNL1, ATRX, AURKA, AURKB, AUTS2, AXIN1, AXL, BAG4, BACH1, BACH2, BAIAP2L1, BAP1, BARD1, BAX, BAZ2A, BCAS3, BCAS4, BCL10, BCL11A, BCL11B, BCL2, BCL2A1, BCL2L1, BCL2L2, BCL3, BCL6, BCL7A, BCL9, BCOR, BCORL1, BCR, BDNF, BHLHE22, BICC1, BIN1, BIRC3, BIRC6, BLM, BMP4, BMPR1A, BRAF, BRCA1, BRCA2, BRD1, BRD3, BRD4, BRIP1, BRSK1, BRWD3, BTBD18, BTG1, BTG2, BTK, BTLA, BUB1B, C11orf1, C11orf30, C11orf54, C11orf95, C2CD2L, C2orf44, C3orf27, CACNA1F, CACNA1G, CACNA2D3, CAD, CALR, CAMK2A, CAMK2B, CAMK2G, CAMTA1, CANT1, CAPRIN1, CAPZB, CARD11, CARM1, CARS, CASC5, CASP3, CASP7, CASP8, CAV1, CBFA2T3, CBFB, CBL, CBLB, CBLC, CCAR2, CCDC28A, CCDC6, CCDC88C, CCK, CCL2, CCNA2, CCNB1IP1, CCNB3, CCND1, CCND2, CCND3, CCNE1, CCNG1, CCT6B, CD19, CD22, CD274, CD28, CD36, CD44, CD58, CD70, CD74, CD79A, CD79B, CD8A, CDC14A, CDC14B, CDC25A, CDC25C, CDC42, CDC73, CDH1, CDH11, CDK1, CDK12, CDK2, CDK4, CDK5RAP2, CDK6, CDK7, CDK8, CDK9, CDKL5, CDKN1A, CDKN1B, CDKN1C, CDKN2A, CDKN2B, CDKN2C, CDKN2D, CDX1, CDX2, CEBPA, CEBPB, CEBPD, CEBPE, CENPF, CENPU, CEP170B, CEP57, CEP85L, CIC, CIITA, CIRH1A, CIT, CKB, CKS1B, CLP1, CLTA, CLTC, CLTCL1, CMKLR1, CNBP, CNOT2, CNTN1, CNTRL, COG5, COL11A1, COL1A1, COL1A2, COL3A1, COL6A3, COL9A3, COMMD1, COX6C, CPNE1, CPS1, CPSF6, CRADD, CREB1, CREB3L1, CREB3L2, CREBBP, CRKL, CRLF2, CRTCL1, CRTCL3, CSF1, CSF1R, CSF3, CSF3R, CSNK1G2, CSNK2A1, CTCF, CTDSP2, CTLA4, CTNNA1, CTNNB1, CTNND2, CTRB1, CTSA, CUX1, CXCL8, CXCR4, CXXC4, CYFIP2, CYLD, CYP1B1, CYP2C19, DAB2IP, DACH1, DACH2, DAXX, DCLK2, DCN, DDB2, DDIT3, DDR2, DDX10, DDX20, DDX39B, DDX3X, DDX5, DDX6, DEK, DGKB, DGKI, DGKZ, DICER1, DIRAS3, DIS3L2, DKK1, DKK2, DKK4, DLEC1, DLL1, DLL3, DLL4, DMRT1, DMRTA2, DNAJB1, DNM1, DNM2, DNM3, DNMT1, DNMT3A, DOCK1, DOT1L, DPM1, DPYD, DST, DTX1, DTX4, DUSP2, DUSP22, DUSP26, DUSP9, DUX4, E2F1, EBF1, ECT2L, EDIL3, EDNRB, EED, EEFSEC, EGF, EGFR, EGR1, EGR2, EGR3, EGR4, EIF4A2, EIF4E, ELF4, ELK4, ELL, ELN, ELOVL2, ELP2, EML1, EML4, ENPP2, EP300, EP400, EPC1, EPCAM, EPHA10, EPHA2, EPHA3, EPHA5, EPHA7, EPHB1, EPHB6, EPO, EPOR, EPS15, ERBB2, ERBB3, ERBB4, ERC1, ERCC1, ERCC2, ERCC3, ERCC4, ERCC5, ERCC6, ERG, ERLIN2, ESR1, ETS1, ETS2, ETV1, ETV4, ETV5, ETV6, EWSR1, EXOSC6, EXT1, EXT2, EYA1, EYA2, EZH2, EZR, FAF1, FAM127C, FAM19A2, FAM19A5, FAM46C, FAM64A, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FAS, FASLG, FBN2, FBXO11, FBXO31, FBXW7, FCGBP, FCGR2B, FCRL4, FEN1, FEV, FGF1, FGF10, FGF13, FGF14, FGF19, FGF2, FGF23, FGF3, FGF4, FGF6, FGF8, FGF9, FGFR1, FGFR1OP, FGFR1OP2, FGFR2, FGFR3, FGFR4, FH, FHIT, FHL2, FIGF, FIP1L1, FLCN, FLI1, FLNA, FLNC, FLT1, FLT3, FLT3LG, FLT4, FLYWCH1, FNBP1, FOS, FOSB, FOSL1, FOXL2, FOXO1, FOXO3, FOXO4, FOXP1, FRK, FRMPD4, FRS2, FRYL, FSTL3, FUS, FUT1, FZD10, FZD2, FZD3, FZD6, FZD7, FZD8, GAB1, GABRG2, GADD45B, GANAB, GAS1, GAS5, GAS7, GATA1, GATA2, GATA3, GATA6, GBP2, GDF6, GFAP, GHR, GID4, GIT2, GLI1, GLI3, GMPS, GNA11, GNA12, GNA13, GNAI1, GNAQ, GNAS, GNG4, GOLGA5, GOPC, GOSR1, GOT1, GPC3, GPHN, GPR124, GPR128, GPR34, GRB10, GRB2, GRHRP, GRID1, GRIN2A, GRIN2B, GRM1, GRM3, GSK3B, GSN, GSTT1, GTF2I, GTSE1, H2AFX, H3F3A, HAS2, HDAC1, HDAC2, HDAC3, HDAC4, HDAC5, HDAC6, HDAC7, HECW1, HEPH, HERPUD1, HES1, HES5, HEY1, HGF, HHEX, HIF1A, HIP1, HIPK1, HIPK2, HIST1H1C, HIST1H1D, HIST1H1E, HIST1H2AC, HIST1H2AG, HIST1H2AL, HIST1H2AM, HIST1H2BC, HIST1H2BJ, HIST1H2BK, HIST1H2BO, HIST1H3B, HIST1H4I, HLF, HMGA1, HMGA2,

**Seznam analyzovaných genů**

HMGB1, HMGN2P46, HNF1A, HNRNPA2B1, HOOK3, HOXA10, HOXA11, HOXA13, HOXA3, HOXA9, HOXC11, HOXC13, HOXD11, HOXD13, HOXD9, HRAS, HSP90AA1, HSP90AB1, HSPA1A, HSPA2, HSPA4, HSPA5, HTRA1, HUWE1, CHD2, CHD6, CHEK1, CHEK2, CHCHD7, CHIC2, CHL1, CHMP2B, CHN1, CHST11, CHUK, IBSP, ICAM1, ICK, ID1, ID3, ID4, IDH1, IDH2, IFNG, IFRD1, IGF1, IGF1R, IGFBP2, IGFBP3, IKBKB, IKBKE, IKZF1, IKZF2, IKZF3, IL12RB2, IL13, IL13RA2, IL15, IL1B, IL1R1, IL1RAP, IL2, IL21R, IL2RA, IL3, IL6, IL7R, INHBA, INPP4A, INPP4B, INPP5A, INPP5D, IQCG, IRF1, IRF2BP2, IRF4, IRF8, IRS1, IRS2, IRS4, ITGA5, ITGA7, ITGA8, ITGAV, ITGB3, ITK, ITPKA, JAG2, JAK1, JAK2, JAK3, JARID2, JAZF1, JUN, KALRN, KANK1, KAT2B, KAT6A, KAT6B, KCNB1, KDM1A, KDM2B, KDM4C, KDM5A, KDM5C, KDM6A, KDR, KDSR, KEAP1, KIAA0232, KIAA1524, KIAA1549, KIAA1598, KIF5B, KIT, KLF4, KLHL6, KLK2, KLK7, KMT2A, KMT2B, KMT2C, KMT2D, KPNB1, KRAS, KSR1, KTN1, LAMA1, LAMA5, LAMP2, LASP1, LCK, LCP1, LEF1, LEFTY2, LFNG, LGALS3, LGR5, LHFP, LHX2, LHX4, LIFR, LINC00598, LINC00982, LINGO2, LMBRD1, LMO1, LMO2, LMO7, LNP1, LOX, LPAR1, LPP, LPXN, LRIG3, LRMP, LRP1B, LRP5, LRPPRC, LRRC37B, LRRC59, LRRC7, LRRK2, LTBP1, LYL1, LYN, MACROD1, MAD2L1, MADD, MAF, MAFB, MAGED1, MAGEE1, MALAT1, MALT1, MAML1, MAML2, MAP2, MAP2K1, MAP2K2, MAP2K3, MAP2K4, MAP2K5, MAP2K6, MAP2K7, MAP3K1, MAP3K14, MAP3K6, MAP3K7, MAPK1, MAPK3, MAPK8, MAPK8IP2, MAPK9, MAPRE1, MATK, MAX, MB21D2, MBNL1, MBTD1, MCL1, MDC1, MDH1, MDM2, MDM4, MDS2, MEAF6, MECOM, MED12, MEF2B, MEF2C, MEF2D, MELK, MEN1, MET, METTL18, METTL7B, MFNG, MGEA5, MGMT, MIB1, MIPOL1, MITF, MKI67, MKL1, MKL2, MLF1, MLH1, MLLT1, MLLT10, MLLT11, MLLT3, MLLT4, MLLT6, MMP7, MMP9, MN1, MNAT1, MNX1, MPL, MRE11A, MSH2, MSH3, MSH6, MSI2, MSN, MTCP1, MTOR, MTUS2, MUC1, MUTYH, MYB, MYBL1, MYC, MYCL, MYCN, MYD88, MYH11, MYH9, MYO18A, MYO1F, NAB2, NACA, NAPA, NAV3, NBEAP1, NBN, NBR1, NCAM1, NCKIPSD, NCOA1, NCOA2, NCOA3, NCOA4, NCOR2, NCSTN, NDC80, NDE1, NDRG1, NDUFAF1, NEDD4, NEURL1, NF1, NF2, NFATC1, NFATC2, NFE2L2, NFIB, NFKB1, NFKB2, NFKBIA, NGF, NGFR, NIN, NIPBL, NKX2-1, NKX2-5, NOD1, NODAL, NONO, NOS3, NOTCH1, NOTCH2, NOTCH3, NOTCH4, NPM1, NPM2, NR3C1, NR4A3, NR6A1, NRAS, NSD1, NT5C2, NTF3, NTF4, NTRK1, NTRK2, NTRK3, NUMA1, NUP107, NUP214, NUP93, NUP98, NUTM1, NUTM2A, NUTM2B, OFD1, OLIG1, OLIG2, OLR1, OMD, P2RY8, PAFAH1B2, PAG1, PAK1, PAK3, PAK6, PAK7, PALB2, PAPP, PASK, PATZ1, PAX3, PAX5, PAX7, PAX8, PBRM1, PBX1, PC, PCBP1, PCLO, PCM1, PCNA, PCSK7, PDCD1, PDCD11, PDCD1LG2, PDE4DIP, PDGFA, PDGFB, PDGFD, PDGFRA, PDGFRB, PDK1, PEG3, PER1, PFDN5, PHB, PHF1, PHF23, PHF6, PHOX2B, PI4KA, PICALM, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIM1, PKM, PLA2G2A, PLA2G5, PLAG1, PLAT, PLAU, PLCB1, PLCB4, PLCG1, PLCG2, PLEKHM2, PML, PMS1, PMS2, POFUT1, POLD1, POLD4, POLR2H, POM121, POMGNT1, POSTN, POT1, POU2AF1, POU5F1, PPAP2B, PPARG, PPARGC1A, PPFIA2, PPFIBP1, PPM1D, PPP1CB, PPP1R13B, PPP1R13L, PPP2CB, PPP2R1A, PPP2R1B, PPP2R2B, PPP2R4, PPP3CA, PPP3CB, PPP3CC, PPP3R1, PPP3R2, PPP4C, PQLC3, PRCC, PRDM1, PRDM16, PRDM7, PRF1, PRG2, PRICKLE1, PRKACA, PRKACG, PRKAR1A, PRKCA, PRKCB, PRKCD, PRKCG, PRKDC, PRKG2, PRMT1, PRMT8, PROM1, PRRX1, PRRX2, PRSS8, PSD3, PSEN1, PSIP1, PSMD2, PTBP1, PTCRA, PTEN, PTGS2, PTCH1, PTK2, PTK2B, PTK7, PTPN11, PTPN2, PTPN6, PTPRA, PTPRK, PTPRO, PTPRR, PTTG1, PVT1, RABEP1, RAC1, RAC2, RAC3, RAD21, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAF1, RALGDS, RANBP17, RANBP2, RANBP2, RAP1GDS1, RARA, RASAL1, RASGEF1A, RASGRF1, RASGRF2, RASGRP1, RB1, RBM15, RBM6, RCOR1, RCSD1, RECQL4, REEP3, RELA, RELN, RERG, RET, RGS7, RHBDF2, RHOA, RHOD, RHOH, RCHY1, RICTOR, RLTPR, RMI2, RNF213, RNF43, ROBO1, ROBO2, ROS1, RPA3, RPL22, RPN1, RPN2, RPS21, RPS6KA1, RPS6KA2, RPS6KA3, RPTOR, RREB1, RRM1, RRM2B, RTEL1, RTN3, RUNX1, RUNX1T1, RUNX2, RYR3, S1PR2, SARNP, SBDS, SCN8A, SDC4, SDHA, SDHAF2, SDHB, SDHC, SDHD, SEC31A, SEPT2, SEPT5, SEPT6, SEPT9, SERP2, SERPINE1, SERPINF1, SET, SETBP1, SETD2, SETD7, SF3B1, SFPQ, SFRP2, SFRP4, SGK1, SGPP2, SH2D5, SH3BP1, SH3D19, SH3GL1, SH3GL2, SHC1, SHC2, SIK3, SIN3A, SIRT1, SKP2, SLC1A2, SLC34A2, SLC45A3, SLC7A5, SLCO1B3, SLX4, SMAD2, SMAD3, SMAD4, SMAD6, SMAP1, SMARCA1, SMARCA4, SMARCA5, SMARCB1, SMC1A, SMC3, SMO, SNAPC3, SNCG, SNHG5, SNW1, SNX29, SNX9, SOCS1, SOCS2, SOCS3, SOD2, SORBS2, SORT1, SOS1, SOX10, SOX11, SOX2, SP1, SP3, SPECC1, SPEN, SPOP, SPP1, SPRY2, SPRY4, SPTAN1, SPTBN1, SQSTM1, SRC, SRF, SRGAP3, SRRM3, SRSF2, SRSF3, SS18, SS18L1, SSBP2, SSX1, SSX2, SSX4, ST6GAL1, STAG2, STAT1, STAT3, STAT4, STAT5A, STAT5B, STAT6, STIL, STK11, STL, STRN, STX5, STYK1, SUFU,

**Seznam analyzovaných genů**

SUGP2, SULF1, SUV39H2, SUZ12, SYK, SYP, TACC1, TACC2, TACC3, TAF1, TAF15, TAL1, TAL2, TAOK1, TBL1XR1, TBX15, TCEA1, TCF12, TCF3, TCF7L2, TCL1A, TCL6, TCTA, TEAD1, TEAD2, TEAD3, TEAD4, TEC, TENM1, TERF1, TERF2, TERT, TET1, TET2, TFAP2A, TFDP1, TFE3, TFEB, TFG, TFPT, TFRC, TGFB2, TGFB3, TGFBI, TGFB2, TGFB3, THADA, THBS1, THRAP3, TIAM1, TIRAP, TLL2, TLR4, TLX1, TLX3, TMEM127, TMEM230, TMEM30A, TMPRSS2, TNC, TNF, TNFAIP3, TNFRSF10B, TNFRSF10D, TNFRSF11A, TNFRSF14, TNFRSF17, TNFRSF6B, TOP1, TOP2A, TOP2B, TP53, TP53BP1, TP63, TP73, TPD52L2, TPM3, TPM4, TPO, TPR, TRAF2, TRAF3, TRAF5, TRHDE, TRIM24, TRIM27, TRIM33, TRIP11, TRPS1, TSC1, TSC2, TSHR, TTK, TTL, TUSC3, TYK2, TYMS, U2AF1, U2AF2, UBE2B, UBE2C, UFC1, UFM1, USP16, USP42, USP5, USP6, USP7, VCAM1, VEGFA, VEGFC, VGLL3, VHL, VTI1A, WASF2, WDFY3, WDR1, WDR18, WDR70, WDR90, WEE1, WHSC1, WHSC1L1, WIF1, WISP3, WNT10A, WNT10B, WNT11, WNT16, WNT2B, WNT3, WNT4, WNT5B, WNT6, WNT7B, WNT8B, WRN, WSB1, WT1, WWOX, WWTR1, XBP1, XIAP, XKR3, XPA, XPC, XPO1, XRCC6, YAP1, YPEL5, YTHDF2, YWHAE, YY1AP1, ZBTB16, ZC3H7A, ZC3H7B, ZFP64, ZFPM2, ZFYVE19, ZIC2, ZMIZ1, ZMYM2, ZMYM3, ZMYND11, ZNF207, ZNF217, ZNF24, ZNF331, ZNF384, ZNF444, ZNF521, ZNF585B, ZNF687, ZNF703, ZRSR2

**Seznam analyzovaných genů****P-G-55 MSKLB**

Analýza fúzních transkriptů v genech (vybrané exony):

ALK (17, 18, 19), BRAF (7, 8, 9, 10), EGFR (7, 17, 24, 25, 26), ETV6 (4, 5), FGFR2 (16, 17), FGFR3 (15, 16, 17, 18), MET (13, 14), NTRK1 (3, 7, 8, 9, 10, 11, 12), RET (7, 8, 9, 10, 11), ROS1 (30, 31, 32, 33, 34, 35)

Analýza CNV v genech:

AKT1, ALK, APC, AR, ARAF, ARID1A, ASXL1, ATM, BAP1, BRAF, BRCA1, BRCA2, CDH1, CDK12, CDK4, CDKN2A, CHEK2, CREBBP, DNMT3A, EGFR, EP300, ERBB2, ERBB3, ERCC2, ESR1, FBXW7, FGFR1, FGFR2, FGFR3, FOXA1, FOXL2, GATA3, KDM6A, KEAP1, KIT, KRAS, MAP2K1, MAP2K2, MET, MLH1, MSH2, MSH6, MTOR, MYC, MYCN, NF1, NTRK1, NTRK2, NTRK3, PAK5, PALB2, PDGFRA, PIK3CA, PIK3R1, PMS2, PPM1D, PTCH1, PTEN, RAF1, RB1, RET, ROS1, SF3B1, SMAD4, SMARCA4, STK11, TET2, TP53, TSC1, TSC2, VHL

Analýza SNV a INDEL v genech(Full CDS):

APC, AR, ARID1A, ASXL1, ATM, BAP1, BRCA1, BRCA2, CDH1, CDK12, CDK4, CDKN2A, CHEK2, DNMT3A, ERCC2, FBXW7, FOXL2, GATA3, HIST1H3B, KDM6A, KEAP1, KRAS, MLH1, MSH2, MSH6, NF1, PALB2, PMS2, PPM1D, PTCH1, PTEN, RB1, SMAD4, STK11, TET2, TP53, TSC1, TSC2, VHL

Analýza SNV a INDEL v genech (vybrané exony):

AKT1 (3, 6, 7, 8, 9, 10, 11, 12), ALK (5, 9, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29), ARAF (7, 10, 11, 12, 13, 14, 15, 16), ARID2 (8), B2M (1), BCL2 (2), BCOR (10), BRAF (11, 12, 13, 14, 15, 16, 17, 18), CARD11 (13), CBL (9), CCND1 (5), CD79B (5), CIC (5), CREBBP (26, 27, 30), CTCF (6), CTNNB1 (3, 7, 8), DICER1 (27), DIS3 (10), EGFR (3, 6, 7, 15, 18, 19, 20, 21, 22, 23, 24), EIF1AX (1, 2), EP300 (26, 27), ERBB2 (3, 6, 7, 8, 12, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27), ERBB3 (3, 6, 7, 8, 9, 18, 19, 20, 21, 22, 23, 24), ESR1 (6, 7, 8, 9), EZH2 (16), FGFR1 (12, 13, 14, 15, 16, 17, 18, 19), FGFR2 (3, 5, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18), FGFR3 (7, 9, 11, 12, 13, 14, 15, 16, 17, 18), FGFR4 (13), FLT3 (14, 20), FOXA1 (2), FOXO1 (1), FOXP1 (14), FUBP1 (14), GNA11 (5), GNAQ (5), GNAS (6, 8, 9), H3F3A (2), HRAS (2, 3, 4), IDH1 (4, 5), IDH2 (4), IKZF1 (8), INPPL1 (2), JAK1 (19), JAK2 (14), KIT (8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21), KNSTRN (1), MAP2K1 (2, 3, 4, 5, 6, 7, 8, 9, 10, 11), MAP2K2 (2, 3, 4, 5, 6, 7, 8, 9, 10, 11), MAPK1 (7), MAX (2, 4), MED12 (2, 26), MET (13, 14, 15, 16, 17, 18, 19, 20, 21), MSH3 (7), MTOR (29, 30, 31, 39, 40, 43, 44, 46, 47, 48, 49, 50, 53, 56, 57), MYC (2), MYCN (2), MYD88 (5), MYO10 (1), NFE2L2 (2), NOTCH1 (6, 8), NPM1 (11), NRAS (2, 3, 4), NTRK1 (13, 14, 15, 16, 17), NTRK2 (15, 16, 17, 18, 19), NTRK3 (15, 16, 17, 18, 19, 20), NUP93 (2), PAK5 (4), PDGFRA (5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21), PHF6 (5, 9), PIK3CA (2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 19, 20, 21), PIK3CB (24), PIK3R1 (10, 11, 13, 14), PIK3R2 (10), PIM1 (1), POLE (1, 9, 13), POT1 (6), PPP2R1A (5, 6), PPP6C (7), PRKCI (15), PTPN11 (3, 13), RAC1 (2), RAD54L (10), RAF1 (7, 10, 11, 12, 13, 14, 15, 16, 17), RET (8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19), RHOA (2, 3), RIT1 (5), ROS1 (36, 37, 38, 39, 40, 41, 42), RRAS2 (1, 3), RXRA (10), SETD2 (7), SF3B1 (14, 15, 18), SMAD3 (6), SMARCA4 (19, 25, 26), SMARCB1 (9), SOS1 (5), SPOP (4, 5), SRSF2 (1), STAT3 (20), STK19 (1), TCF7L2 (14), TGFB1 (4, 9), TGFB2 (8), TP63 (9, 14), U2AF1 (2, 6), XPO1 (15)

P-G-56 UNIV8

Analýza klonálních přestaveb genů:(Full CDS):

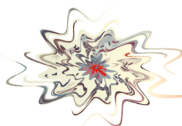
IGH, IGK, IGL, TRA, TRB, TRG, TRD

Analýza fúzních transkriptů v genech(Full CDS):

ALK , BCL2 , BCL6 , BIRC3 , CCND1 , CD274 , CRLF2 , DUSP22 , KMT2A , MYC , PDCDILG2 , STIL , TCF3

Analýza SNV a INDEL v genech(Full CDS):

ARID1A, ATM, B2M, BCL2, BTG1, BTK, CDKN2A, CDKN2B, CDKN2C, CKS1B, EP300, ERG, FAT1, H1-2, H1-3, H1-4, H1-5, ID3, KLF2, KMT2D, MAP3K14, MAPK1, MYC, PAX5, PHF6, POT1, PTEN,

**Seznam analyzovaných genů**

PTPRD, RHOA, RUNX1, SAMHD1, SOCS1, TCF3, TENT5C, TET2, TNFAIP3, TP53, TRAF2, TRAF3, WT1

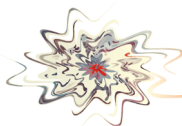
Analýza SNV a INDEL v genech (vybrané exony):

ABL1 (4,5,6,7,8,9), ASXL1 (12), BIRC3 (8,9), BRAF (11,15), CARD11 (2,3,4,5,6,7,8,9,10,11,12,13,14,15,16), CCND1 (1), CCND3 (5), CD79A (4,5), CD79B (4,5,6), CREBBP (2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30), CXCR4 (2), DIS3 (1,2,3,9,10,11,12,13,14,15,16,17,18), DNMT3A (8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23), EGR2 (2), EZH2 (15,16,17), FBXW7 (1,2,3,4,5,6,7,8,9,10,11,12), FOXO1 (1), IDH1 (4), IDH2 (4,7), IKZF1 (2,3,4,5,6,7), IL7R (6), IRF4 (2,3), JAK1 (12,13,14,15), JAK2 (12,13,14,15), JAK3 (11,12,13,14,15,16,17,18,19,20,21,22,23,24), KIT (9,11,13,17,18), KRAS (2,3,4), MAP2K1 (1,2,3,4,5,6,7,8), MEF2B (2,3,4), MYD88 (3,4,5), NFKBIE (1), NOTCH1 (26,27,34), NOTCH2 (34), NRAS (2,3,4), NT5C2 (9,10,11,12,13,14,15), PIK3CA (2,5,10,21), PLCG1 (1,11,15,16,17,19,29), PLCG2 (19,20,24), SF3B1 (12,17), STAT3 (10,11,12,13,14,15,16,20,21), STAT5B (13,14,15,16,17,18,19), STAT6 (5,9,11,12,14), XPO1 (15,16)

P-G-57 ODD

Analýza SNV a INDEL v genech(Full CDS):

ABL1, ABL2, ACVR1, ACVR1B, ADARB2, AGO1, AGO2, AJUBA, AKT1, AKT2, AKT3, ALB, ALK, ALOX12B, AMER1, ANKRD11, ANKRD26, APC, APLNR, AR, ARAF, ARFRP1, ARHGAP35, ARID1A, ARID1B, ARID2, ARID5B, ASXL1, ASXL2, ATM, ATR, ATRX, ATXN7, AURKA, AURKB, AXIN1, AXIN2, AXL, B2M, BABAM1, BAP1, BARD1, BBC3, BCL10, BCL2, BCL2L1, BCL2L11, BCL2L2, BCL6, BCOR, BCORL1, BCR, BIRC3, BLM, BMPR1A, BRAF, BRCA1, BRCA2, BRD4, BRIP1, BTG1, BTG2, BTK, CALR, CARD11, CARM1, CASP8, CBFB, CBL, CCNB3, CCND1, CCND2, CCND3, CCNE1, CD276, CD70, CD74, CD79A, CD79B, CDC42, CDC73, CDH1, CDH4, CDK12, CDK4, CDK6, CDK7, CDK8, CDKN1A, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CEBPA, CENPA, CIC, CMTR2, CNTN4, CREBBP, CRKL, CRLF2, CSDE1, CSF1R, CSF3R, CSNK1A1, CTCF, CTLA4, CTNNA1, CTNNB1, CTR9, CUL3, CUL4A, CUX1, CXCR4, CYLD, CYP17A1, CYP19A1, CYP2C19, CYP2D6, CYSLTR2, DAXX, DCUN1D1, DDR1, DDR2, DDX41, DHX15, DICER1, DIS3, DNAJB1, DNMT1, DNMT3A, DNMT3B, DOT1L, DPYD, DROSHA, DUSP4, E2F3, EED, EGFL7, EGFR, EIF1AX, EIF4A2, EIF4E, ELF3, EML4, EMSY, EP300, EPAS1, EPCAM, EPHA3, EPHA5, EPHA7, EPHB1, EPHB4, ERBB2, ERBB3, ERBB4, ERCC1, ERCC2, ERCC3, ERCC4, ERCC5, ERF, ERG, ERFF1, ESR1, ETAA1, ETS1, ETV1, ETV4, ETV5, ETV6, EWSR1, EZH1, EZH2, EZR, FAM175A, FAM46C, FAM58A, FANCA, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FAS, FAT1, FBXW7, FGF1, FGF10, FGF12, FGF14, FGF19, FGF2, FGF23, FGF3, FGF4, FGF5, FGF6, FGF7, FGF8, FGF9, FGFR1, FGFR2, FGFR3, FGFR4, FH, FLCN, FLI1, FLT1, FLT3, FLT4, FOXA1, FOXF1, FOXL2, FOXO1, FOXP1, FRS2, FUBP1, FYN, GAB1, GAB2, GABRA6, GATA1, GATA2, GATA3, GATA4, GATA6, GEN1, GID4, GLI1, GNA11, GNA13, GNAQ, GNAS, GNB1, GPR124, GPS2, GREM1, GRIN2A, GRM3, GSK3B, H3F3A, H3F3B, H3F3C, HDAC1, HGF, HIST1H1C, HIST1H2BD, HIST1H3A, HIST1H3B, HIST1H3C, HIST1H3D, HIST1H3E, HIST1H3F, HIST1H3G, HIST1H3H, HIST1H3I, HIST1H3J, HIST2H3A, HIST2H3C, HIST2H3D, HIST3H3, HLA-A, HLA-B, HLA-C, HNF1A, HNRNP, HOXB13, HRAS, HSD3B1, HSP90AA1, CHD2, CHD4, CHEK1, CHEK2, ICOSLG, ID3, IDH1, IDH2, IFNGR1, IGF1, IGF1R, IGF2, IKBKE, IKZF1, IL10, IL7R, INHA, INHBA, INPP4A, INPP4B, INPPL1, INSR, IRF2, IRF4, IRS1, IRS2, JAK1, JAK2, JAK3, JUN, KAT6A, KBTBD4, KDM5A, KDM5C, KDM6A, KDR, KEAP1, KEL, KIF5B, KIT, KLF4, KLF5, KLHL6, KMT2A, KMT2B, KMT2C, KMT2D, KMT5A, KNSTRN, KRAS, LAMP1, LATS1, LATS2, LMO1, LRP1B, LTK, LYN, LZTR1, MAD2L2, MAGI2, MALT1, MAP2K1, MAP2K2, MAP2K4, MAP3K1, MAP3K13, MAP3K14, MAP3K4, MAPK1, MAPK3, MAPKAP1, MAX, MCL1, MDC1, MDM2, MDM4, MED12, MEF2B, MEN1, MET, MGA, MITF, MLH1, MLLT1, MLLT3, MPL, MRE11A, MSH2, MSH3, MSH6, MSI1, MSI2, MST1, MST1R, MTAP, MTOR, MUTYH, MYB, MYC, MYCL, MYCN, MYD88, MYOD1, NAB2, NADK, NBN, NCOA3, NCOR1, NEGR1, NF1, NF2, NFE2L2, NFKBIA, NKX2-1, NKX3-1, NOTCH1, NOTCH2, NOTCH3, NOTCH4, NPM1, NRAS, NRG1, NSD1, NT5C2, NTHL1, NTRK1, NTRK2, NTRK3, NUF2, NUP93, NUTM1, OPCML, P2RY8, PAK1, PAK3, PAK7, PALB2, PARK2, PARP1, PARP2, PARP3, PAX3, PAX5, PAX7, PAX8, PBRM1, PD-1, PDGFRA, PDGFRB, PDK1, PD-L1, PD-L2, PDPK1, PGBD5, PGR, PHF6, PHOX2B, PIGA, PIK3C2B, PIK3C2G, PIK3C3, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIK3R3, PIM1, PLCG2, PLK2, PMAIP1, PMS1, PMS2,

**Seznam analyzovaných genů**

PNRC1, POLD1, POLE, POT1, PPARG, PPM1D, PPP2R1A, PPP2R2A, PPP4R2, PPP6C, PRDM1, PRDM14, PREX2, PRKAR1A, PRKCI, PRKD1, PRKDC, PRSS8, PTEN, PTCH1, PTP4A1, PTPN11, PTPRD, PTPRN2, PTPRS, PTPRT, QKI, RAB35, RAC1, RAC2, RAD21, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54L, RAF1, RANBP2, RARA, RASA1, RB1, RBM10, RECQL, RECQL4, REL, REST, RET, RFWD2, RHEB, RHOA, RICTOR, RIT1, RNF43, ROS1, RPS6KA4, RPS6KB1, RPS6KB2, RPTOR, RRAGC, RRAS, RRAS2, RSPO2, RTEL1, RUNX1, RUNX1T1, RXRA, RYBP, SCG5, SDC4, SDHA, SDHAF2, SDHB, SDHC, SDHD, SERPINB3, SERPINB4, SESN1, SESN2, SESN3, SETBP1, SETD2, SETDB1, SF3B1, SGK1, SH2B3, SH2D1A, SHOC2, SHQ1, SLC34A2, SLFN11, SLIT2, SLX4, SMAD2, SMAD3, SMAD4, SMARCA2, SMARCA4, SMARCB1, SMARCD1, SMARCE1, SMC1A, SMC3, SMO, SMYD3, SNCAIP, SNTG2, SOCS1, SOS1, SOX10, SOX17, SOX2, SOX9, SPEN, SPOP, SPRED1, SPRTN, SPTA1, SRC, SRSF2, STAG1, STAG2, STAT3, STAT4, STAT5A, STAT5B, STK11, STK19, STK40, SUFU, SUZ12, SYK, TAF1, TAP1, TAP2, TBX3, TCEB1, TCF3, TCF7L2, TEK, TERT, TET1, TET2, TFE3, TFRC, TGFB1, TGFB2, TIPARP, TMEM127, TMPRSS2, TNFAIP3, TNFRSF14, TOP1, TOP2A, TP53, TP53BP1, TP63, TPMT, TRAF2, TRAF7, TRIP13, TSC1, TSC2, TSHR, TYRO3, U2AF1, UGT1A1, UPF1, USP8, VEGFA, VHL, VTCN1, WHSC1, WHSC1L1, WISP3, WT1, WWTR1, XIAP, XPO1, XRCC2, YAP1, YES1, ZBTB2, ZBTB7A, ZFH3, ZNF217, ZNF703, ZNRF3, ZRSR2

Dne: 4. 11. 2025

Aktualizace formuláře: 5. 9. 2025