Precision Diagnostics Laboratory

About Us

The Precision Diagnostics laboratory offers molecular pathology testing to facilitates diagnosis, prognosis, and monitoring of residual disease after treatment for both solid tumor and hematological malignancies.

Oncology NGS DNA and RNA panels

Panel highlights:

- Specimen source: EDTA whole blood, bone marrow, fresh frozen tissue, and paraffin embedded tissue
- Average TAT = 14 days
- DNA panel analysis will include evaluation of single nucleotide variants and small insertions/deletions. Copy number evaluation coming soon!
- Multiple disease-specific DNA analysis panels are available (see below). If there is a clinical need for additional or more targeted disease-specific panels, please contact the laboratory.
- RNA analysis will include evaluation of gene fusions and select exon skipping events for a broad spectrum of genes implicated in solid and hematopoietic tumors.
- Comprehensive DNA and RNA analysis is also available for the larger oncology panels and ordering will allow for DNA and RNA results to be reported together in a single report.
- The DNA panels cover clinically important regions of each gene including coding exons, 2 to 10 base pairs of adjacent intronic sequence on either side of the coding exons and select noncoding variants. Challenging gene regions with inadequate quality are clearly stated in the methodology section and are available upon request. A list of transcripts is available upon request.
- A paired **non-tumor "normal" specimen may be** submitted concurrently with the tumor specimen to allow for comparison and classification of variants as germline or somatic.
    - Normal specimens may include blood or buccal swabs for solid tumors and fingernails for hematopoietic tumors.
    - Normal specimens MUST be submitted at the same time as the tumor specimen to allow for paired analysis.
    - Analysis of normal specimens is performed at no additional charge.
    - The ordering clinician has the option to select for reporting of the germline/somatic status of variants at the time of tumor testing or to leave the status unreported until after review of variants identified in the tumor. The order for reporting of the germline/somatic status may be added at any time so long as the normal specimen was submitted at the same time as the tumor.
    - The ordering clinician is responsible for obtaining patient consent for the reporting of germline variants.

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Panel Name	Panel Type	Comprehensive panel	Paired Normal Analysis available
Pan-cancer panel	LAB8586 (DNA)	LAB9078 (DNA & RNA)	Yes LAB9079
Hematopoietic neoplasm panel	LAB7988 (DNA)	LAB9074 (DNA & RNA)	Yes LAB9079
Lymphoid neoplasm panel	LAB9306 (DNA)	LAB9305 (DNA & RNA)	Yes LAB9079
Solid tumor panel	LAB7986 (DNA)	LAB9075 (DNA & RNA)	Yes LAB9079
Neuro-oncology panel	LAB7983 (DNA)	LAB9076 (DNA & RNA)	Yes LAB9079
Myeloid panel	LAB7518 (DNA)	N/A	Yes LAB9079
Comprehensive Somatic overgrowth/vascular anomalies (SOVA)	LAB9077 (DNA)	N/A	Yes LAB9079
Focused Somatic overgrowth/vascular anomalies (SOVA)	LAB9572 (DNA)	N/A	Yes LAB9079
RNA Fusion Analysis	LAB7982 (RNA)	N/A	No
Small Panel and Single Gene Analysis			
Myeloproliferative neoplasm (MPN) panel LAB7525	Single genes: ***ALK*** LAB9124, ***ASXL1*** LAB7517, ***BRAF*** LAB9123, ***CALR*** LAB8572, ***CEBPA*** LAB8573, ***EZH2*** LAB9283, ***JAK2*** LAB8574, ***KIT*** LAB8575, ***PIK3C1*** LAB9547, ***MPL*** LAB8576, ***MYD88*** LAB8577, ***NPM1*** LAB8578, ***RUNX1*** LAB8579, ***SF3B1*** LAB9371 ***TP53*** LAB8581, ***WT1*** LAB8580	
Multiple Myeloma Panel LAB7569			
Histone Gene Panel LAB9125			

DNA Panels: The following panels are available for order. All genes on the smaller panels are included on the Pan-cancer panel.

Pan-cancer panel

This panel includes 301 genes with clinical significance for the diagnosis, prognosis, and therapeutic decision making for solid and hematopoietic neoplasms.

Gene content: *ABL1, ABL2, ACVR1, ACVRL1, AKT1, AKT2, AKT3, ALK, AMER1, ANKRD26, APC, ARAF, ARID1A, ARID1B, ARID2, ASXL1, ASXL2, ATM, ATR, ATRX, AURKA, AURKB, AXIN1, B2M, BCL11B, BCL2, BCL6, BCOR, BCORL1, BRAF, BRCA1, BRCA2, BRD4, BRIP1, CALR, CARD11, CBL, CBLB, CCBE1, CCM2, CCND1, CCND2, CCND3, CCNE1, CCR4, CCR7, CD274, CD58, CD79A, CD79B, CDK12, CDK4, CDK6, CDK8, CDKN1B, CDKN1C, CDKN2A, CDKN2B, CDKN2C, CEBPA, CHD7, CHEK1, CHEK2, CIC, CIITA, CREBBP, CRLF2, CSF1R, CSF3R, CTNNB1, CUX1,CXCL12 CXCR4, DAXX, DDR2, DDX3X, DDX41, DICER1, DIS3L2, DLG2, DNM2, DNMT3A, EBF1, EED, EGFR, ELMO2, ENG, EP300, EPHA7, EPHB4, ERBB2, ERBB3, ERBB4, ERG, ESR1, ETV6, EZH2, FANCA, FANCC, FAS, FASLG, FBXW7, FGFR1, FGFR2, FGFR3, FGFR4, FLCN, FLT1, FLT3, FLT4, FOXC2, FOXO1, FOXP1, FUBP1, GATA1, GATA2, GATA3, GJC2, GLI1, GLI2, GLMN, GNA11, GNA13, GNA14, GNAQ, GNAS, GPC3, H3F3A, H3F3B, HIST1H1C, HIST1H3B, HIST1H3C, HRAS, ID3, IDH1, IDH2, IGF1R, IKZF1, IKZF3, IL7R, INO80, IRS1, JAK1, JAK2, JAK3, JUN, JUNB, KDM4C, KDM5A, KDM5C, KDM6A, KDR, KIF11,KIR3DL2, KIT, KLF2, KMT2A, KMT2C, KMT2D, KRAS, KRIT1, LZTR1, MAP2K1, MAP2K2, MAP2K4, MAP3K1, MAP3K3, MAPK1, MDM2, MDM4, MECOM, MEF2B, MEN1, MET, MLH1, MPL, MSH2, MSH6, MTOR, MYB, MYBL1, MYC, MYCN, MYD88, MYOD1, NBN, NCOR2, NF1, NF2, NOP10, NOTCH1, NOTCH2, NPM1, NRAS, NT5C2, NTRK1, NTRK2, NTRK3, PAX5, PDCD1, PDCD10, PDGFRA, PDGFRB, PHF6, PHOX2B, PIGA, PIK3CA, PIK3CB, PIK3CG, PIK3R1, PIK3R2, PIM1, PML, PMS2, POLE, PPM1D, PRDM1, PRPS1, PSMB5, PTCH1, PTEN, PTPN1, PTPN11, PTPN14, PTPRD, RAD21, RAD51, RAD51C, RAF1, RASA1, RB1, REL, RELN, RET, RHOA, RICTOR, RNF125, RNF135, ROS1, RPTOR, RRAS, RUNX1, SAMD9, SAMD9L, SDHA, SDHB, SDHC, SDHD, SETBP1, SETD2, SF3B1, SGK1, SH2B3, SMAD2, SMAD3, SMAD4, SMARCA4, SMARCB1, SMC1A, SMC3, SMO, SOCS1, SOX18, SRC, SRSF2, STAG2, STAMBP, STAT3, STAT5B, STAT6, STK11, SUFU, SUZ12, TCF3, TEK, TENT5c (FAM46C), TERC, TERT, TET2, TET3, TGFBR2, TINF2, TLX1, TNFAIP3, TNFRSF10A, TNFRSF14, TP53, TP63, TSC1, TSC2, U2AF1, UBE2T, USP7, VEGFC, VHL, WHSC1, WT1, XPO1, ZEB1, ZMYM3, ZRSR2*

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Hematopoietic neoplasm panel

This panel includes 206 genes that have been described in the diagnosis, prognosis, or treatment decision process for a spectrum of lymphoid and myeloid neoplasms.

Gene content: *ABL1, ABL2, ALK, ANKRD26, ARID1A, ARID1B, ARID2, ASXL1, ASXL2, ATM, ATR, ATRX, B2M, BCL11B, BCL2, BCL6, BCOR, BCORL1, BRAF, BRCA1, BRCA2, BRIP1, CALR, CARD11, CBL, CBLB, CCND1, CCND2, CCND3, CCR4, CCR7, CD58, CD79A, CD79B, CDK4, CDK6, CDK8, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CEBPA, CHEK1, CHEK2, CIC, CIITA, CREBBP, CRLF2, CSF1R, CSF3R, CTNNB1, CUX1, CXCL12,CXCR4, DDX3X, DDX41, DNM2, DNMT3A, EBF1, EED, EGFR, EPHA7, EP300, ERBB2, ERBB3, ERBB4, ERG, ESR1, ETV6, EZH2, FANCA, FANCC, FAS, FASLG, FBXW7, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, FOXO1, FOXP1, GATA1, GATA2, GATA3, GLI1, GLI2, GNA13, HRAS, ID3, IDH1, IDH2, IGF1R, IKZF1, IKZF3, IL7R, INO80, JAK1, JAK2, JAK3, JUNB, KDM4C, KDM5A, KDM5C, KDM6A,KIR3DL2, KIT, KLF2, KMT2A, KMT2C, KMT2D, KRAS, MAP2K1, MAPK1, MDM2, MDM4, MECOM, MEF2B, MLH1, MPL, MSH2, MSH6, MTOR, MYC, MYCN, MYD88, NBN, NCOR2, NF1, NF2, NOP10, NOTCH1, NOTCH2, NPM1, NRAS, NT5C2, NTRK3, PAX5, PDGFRA, PDGFRB, PHF6, PIK3CA, PIK3R1, PIM1, PML, PMS2, PPM1D, PRDM1, PRPS1, PSMB5, PTCH1, PTEN, PTPN1, PTPN11, PTPRD, RAD21, RAD51, RAF1, RB1, REL, RELN, RET, RHOA, ROS1, RRAS, RUNX1, SAMD9, SAMD9L, SETBP1, SETD2, SF3B1, SGK1, SH2B3, SMARCA4, SMARCB1, SMC1A, SMC3, SMO, SOCS1, SRSF2, STAG2, STAT3, STAT5B, STAT6, SUZ12, TCF3, TENT5c (FAM46C), TERC, TERT, TET2, TET3, TLX1, TNFAIP3, TNFRSF10A, TNFRSF14, TP53, TP63, U2AF1, UBE2T, USP7, WHSC1, WT1, XPO1, ZEB1, ZMYM3, ZRSR2*

Myeloid neoplasm panel

This panel is similar to the previous version of the myeloid panel, but includes the addition of *CXCR4, DDX41, NF1, PPM1D, SH2B3,* and *STAT3* based on updates to the NCCN Guidelines. The following genes have been removed due to limited clinical utility and/or low frequency of mutations detected: *CBLB, GNAS, MAP2K1, PML, SMC1A, SMC3* to keep the panel at a total of 49 genes.

Gene content: *ASXL1, BCOR, BCORL1, BRAF, CALR, CBL, CEBPA, CSF3R, CXCR4, DDX41, DNMT3A, ETV6, EZH2, FLT3, GATA1, GATA2, HRAS, IDH1, IDH2, JAK1, JAK2, JAK3, KDM6A, KIT, KMT2A, KRAS, MPL, MYD88, NF1, NOTCH1, NPM1, NRAS, PHF6, PPM1D, PTEN, PTPN11, RAD21, RUNX1, SETBP1, SF3B1, SH2B3, SRSF2, STAG2, STAT3, TET2, TP53, U2AF1, WT1, ZRSR2*

Lymphoid neoplasm panel

This panel contains 133 genes that have been described in the diagnosis, prognosis, or treatment decision process for lymphoid neoplasms, including both B- and T-cell neoplasms, as well as both leukemias and lymphomas.

Gene content: *ABL1, ABL2, ALK, ARID1A, ARID2, ASXL1, ATM, B2M, BCL11B, BCL2, BCL6, BCOR, BRAF, CARD11, CCND1, CCND2, CCND3, CCR4, CCR7, CD58, CD79A, CD79B, CDK4, CDK6, CDKN1B, CDKN2A, CDKN2B, CHEK2, CIITA, CREBBP, CRLF2, CSF1R, CTNNB1,CXCL12, CXCR4, DDX3X, DNM2, DNMT3A, EBF1, EED, EP300, EPHA7, ETV6, EZH2, FAS, FASLG, FBXW7, FGFR1, FGFR3, FLT3, FOXO1, FOXP1, GATA3, GNA13, HRAS, ID3, IDH1, IDH2, IKZF1, IKZF3, IL7R, INO80, JAK1, JAK2, JAK3, JUNB, KDM6A, KIR3DL2, KLF2, KMT2A, KMT2C, KMT2D, KRAS, MAP2K1, MAPK1, MDM2, MEF2B, MTOR, MYC, MYCN, MYD88, NF1, NOTCH1, NOTCH2, NRAS, NT5C2, NTRK3, PAX5, PDGFRA, PDGFRB, PHF6, PIK3CA, PIK3R1, PIM1, PPM1D, PRDM1, PRPS1, PSMB5, PTEN, PTPN1, PTPN11, PTPRD, RB1, REL, RELN, RHOA, RUNX1, SETD2, SF3B1, SGK1, SH2B3, SMARCA4, SOCS1, STAT3, STAT5B, STAT6, TCF3, TENT5c (FAM46C), TERT, TET2, TET3, TLX1, TNFAIP3, TNFRSF10A, TNFRSF14, TP53, TP63, USP7, WHSC1, WT1, XPO1, ZEB1, ZMYM3*

Myeloproliferative neoplasm (MPN) panel

Based on updates to the NCCN Guidelines, the MPN panel has been updated to include *CBL, DNMT3A, RUNX1, SH2B3*, and *U2AF1* and now includes a total of 17 genes.

Gene content: *ASXL1, CALR, CBL, DNMT3A, EZH2, IDH1, IDH2, JAK2, KIT, MPL, RUNX1, SF3B1, SH2B3, SRSF2, TET2, TP53, U2AF1*

Myeloma panel

This panel has been updated to add *ATR, B2M, CDKN2C, IKZF3, KDM6A, PSMB5,* and *TENT5C* (*FAM46C*) based on updated clinical utility described in the literature and now includes a total of 16 genes.

Gene content: *ATR, B2M, BRAF, CDKN2C, CXCR4, IDH1, IDH2, IKZF3, KDM6A, KRAS, MYD88, NRAS, PSMB5, PTPN11, TENT5c (FAM46C), TP53*

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Solid tumor panel

This panel contains 163 genes that have been described in the diagnosis, prognosis, or treatment decision process for a variety of solid tumors. This panel was created with a focus on pediatric solid tumors but may be clinically relevant for a variety of adult neoplasms as well.

Gene content: *AKT1, AKT2, AKT3, ALK, AMER1, APC, ARAF, ARID1A, ARID1B, ARID2, ATM, ATR, ATRX, AURKA, AURKB, AXIN1, B2M, BCL2, BCL6, BCOR, BCORL1, BRAF, BRCA1, BRCA2, BRD4, BRIP1, CCND1, CCND2, CCND3, CD274, CDK4, CDK6, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CHEK2, CIC, CREBBP, CTNNB1, DAXX, DDR2, DDX3X, DICER1, DLG2, EED, EGFR, EP300, ERBB2, ERBB3, ERG, ESR1, ETV6, EZH2, FGFR1, FGFR2, FGFR3, FGFR4, FLCN, FUBP1, GLI2, GNA11, GNAQ, GNAS, GPC3, H3F3A, H3F3B, HIST1H1C, HIST1H3B, HRAS, IDH1, IDH2, IGF1R, IRS1, JAK1, JAK2, JAK3, JUN, KDM5A, KDM5C, KDM6A, KDR, KIT, KMT2A, KMT2C, KRAS, MAP2K1, MAP2K2, MAP2K4, MAP3K1, MAP3K3, MAPK1, MDM2, MDM4, MECOM, MEN1, MET, MLH1, MSH2, MSH6, MTOR, MYB, MYBL1, MYC, MYCN, MYOD1, NF1, NF2, NOTCH1, NOTCH2, NRAS, NTRK1, NTRK2, NTRK3, PAX5, PDCD1, PDGFRA, PDGFRB, PHOX2B, PIK3CA, PIK3CB, PIK3CG, PIK3R1, PIK3R2, PMS2, POLE, PPM1D, PTCH1, PTEN, PTPN11, PTPRD, RAF1, RB1, RET, RICTOR, ROS1, RPTOR, SDHA, SDHB, SDHC, SDHD, SETD2, SMAD2, SMAD4, SMARCA4, SMARCB1, SMO, SRC, STAG2, STAT3, STK11, SUFU, SUZ12, TERC, TERT, TGFBR2, TP53, TP63, TSC1, TSC2, VHL, WT1, XPO1*

Neuro-oncology panel

This panel contains 125 genes that have been described in the diagnosis, prognosis, or treatment decision process for central nervous system tumors.

Gene content: *ACVR1, AKT1, AKT2, AKT3, ALK, APC, ARID1A, ARID1B, ARID2, ATM, ATR, ATRX, AURKA, AURKB, BCL2, BCL6, BCOR, BCORL1, BRAF, BRCA1, BRCA2, BRD4, CBL, CCND1, CCND2, CCND3, CD274, CDK4, CDK6, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CHEK2, CIC, CTNNB1, DAXX, DDX3X, DICER1, DNMT3A, EGFR, EPHA7, EZH2, FGFR1, FGFR2, FGFR3, FGFR4, FUBP1, GLI1, GLI2, GNA11, GNAQ, GNAS, H3F3A, H3F3B, hist1H1C, HIST1H3B, HIST1H3C, IDH1, IDH2, JAK2, JAK3, KDM5A, KDM5C, KDM6A, KIT, KMT2A, KMT2C, KMT2D, KRAS, LZTR1, MAP2K1, MDM2, MDM4, MET, MLH1, MSH2, MSH6, MYB, MYBL1, MYC, MYCN, NF1, NF2, NOTCH1, NOTCH2, NRAS, NTRK1, NTRK2, NTRK3, PDCD1, PDGFRA, PDGFRB, PIK3CA, PIK3CB, PIK3CG, PIK3R1, PIK3R2, PMS2, POLE, PPM1D, PTCH1, PTEN, PTPN11, RB1, RET, SDHA, SDHB, SDHC, SDHD, SETD2, SMARCA4, SMARCB1, SMO, STAG2, STAT3, SUFU, TERC, TERT, TET2, TP53, TSC1, TSC2, WT1, ZMYM3*

Histone panel

This panel is composed of 4 histone genes, mutations in which have clinical significance in central nervous system tumors.

Gene content: *H3F3A, H3F3B, HIST1H3B, HIST1H3C*

Single genes

The following genes are available as a single gene orderable:

ALK, ASXL1, BRAF, CALR, CEBPA, EZH2, JAK2, KIT, PIK3CA, MPL, MYD88, NPM1, RUNX1, SF3B1, TP53, WT1

Comprehensive Somatic overgrowth/vascular anomalies (SOVA)

This panel was designed for the identification of variants associated with somatic or mosaic causes of somatic overgrowth and vascular anomalies. It should only be performed on lesional tissue and is not designed as a standalone test for germline mutations.

ACVRL1, AKT1, AKT2, AKT3, ARAF, BRAF, CCBE1, CCM2, CCND2, CCND3, CDKN1C, CTNNB1, DIS3L2, DNMT3A, EED, ELMO2, ENG, EPHB4, EZH2, FGFR1, FLT4, FOXC2, GATA2, GJC2, GLMN, GNA11, GNA14, GNAQ, GNAS, GPC3, HRAS, IDH1, IDH2, KIF11, KRAS, KRIT1, MAP2K1, MAP3K3, MET, MTOR, MYC, NRAS, PDCD10, PDGFRB, PHF6, PIGA, PIK3CA, PIK3R1, PIK3R2, PTCH1, PTEN, PTPN14, PTPRD, RASA1, RNF125, RNF135, SETD2, SMAD4, SMO, SOX18, STAMBP, SUZ12, TEK, TINF2, TSC1, TSC2, VEGFC

Focused Somatic overgrowth/vascular anomalies (SOVA)

This panel was designed for the identification of variants associated with somatic or mosaic causes of somatic overgrowth and vascular anomalies. It should only be performed on lesional tissue and is not designed as a standalone test for germline mutations.

GNA11,GNA14,GNAQ,KRAS,HRAS,NRAS,MAP2K1,PIK3CA,PTEN,TEK

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RNA panel: This panel includes genes that have been described as a partner in a fusion event in solid tumors, hematopoietic neoplasms, or both. This panel is able to detect a fusion event as long as one of the genes involved is present on the panel.

Gene content: *ABI1, ABL1, ABL2, ACACA, ACE, ACER1, ACKR3, ACSL6, ACTB, ADD3, AFF1, AFF3, AFF4, AGR3, AHI1, AHRR, ALK, ANKRD28, AR, ARHGAP20, ARHGAP26, ARNT, ASPSCR1, ASTN2, ATF1, ATIC, ATP1B4, AUTS2, AXL, BACH2, BAG4, BAIAP2L1, BAZ2A, BCAS3, BCAS4, BCL10, BCL11A, BCL11B, BCL2, BCL2L1, BCL3, BCL6, BCL9, BCOR, BCR, BDNF, BICC1, BIRC3, BIRC6, BLNK, BRAF, BRD1, BRD3, BRD4, BRWD3, BTBD18, BTG1, C11orf1, C11orf95, C2CD2L, CAMTA1, CAPRIN1, CARS, CASC5, CASP7, CBFA2T3, CBFB, CBL, CCAR2, CCDC28A, CCDC6, CCDC88C, CCNB1IP1, CCNB3, CCND1, CCND2, CCND3, CD74, CDH11, CDK5RAP2, CDK6, CDX1, CDX2, CEBPA, CEBPB, CEBPD, CEBPE, CEP170B, CEP85L, CHD6, CHIC2, CHMP2B, CHST11, CIC, CIITA, CITED2, CLP1, CLTC, CLTCL1, CMKLR1, CNBP, CNOT2, CNTRL, COG5, COL1A1, COL1A2, COL6A3, COX6C, CPSF6, CRADD, CREB1, CREB3L1, CREB3L2, CREBBP, CRLF1, CRLF2, CRTC1, CSF1, CSF1R, CTDSP2, CTNNB1, CUX1, DAB2IP, DACH1, DACH2, DDIT3, DDX10, DDX20, DEK, DGKH, DMRT1, DNAJB1, DPM1, DUSP22, EBF1, EEFSEC, EGFR, EGR1, EGR2, EGR3, EGR4, EIF4A2, ELF4, ELK4, ELL, ELN, EML1, EML4, EP300, EP400, EPC1, EPOR, EPS15, ERBB2, ERBB3, ERC1, ERCC1, ERG, ERLIN2, ESR1, ETS1, ETV1, ETV4, ETV5, ETV6, EVL, EWSR1, EZR, FAM19A2, FCGR2B, FCRL4, FEN1, FEV, FGF8, FGFR1, FGFR1OP, FGFR1OP2, FGFR2, FGFR3, FGFR4, FGR, FHIT, FIP1L1, FLI1, FLNA, FLT3, FLT3LG, FNBP1, FOS, FOSB, FOSL1, FOXO1, FOXO4, FOXP1, FRK, FRYL, FUS, GAS7, GATA1, GIT2, GLI1, GLIS2, GOSR1, GOT1, GPR128, GPR34, GRHPR, GRID1, GRM1, GTF2I, H2AFX, HAS2, HEY1, HHEX, HIP1, HIPK1, HIST1H4I, HLF, HMGA2, HNF1A, HOXA10, HOXA11, HOXA13, HOXA9, HOXC11, HOXC13, HOXD11, HOXD13, HRAS, HSP90AA1, ID4, IKZF1, IKZF2, IKZF3, IL2, IL21R, IL2RB, IL3, INPP5D, INSR, IQCG, IRF2BP2, IRF4, IRS4, ITK, JAK1, JAK2, JAZF1, KANK1, KAT6A, KAT6B, KDM5A, KIAA1524, KIF5B, KMT2A, KMT2B, KMT2C, KMT2D, KPNB1, KRAS, KSR1, LASP1, LCK, LCP1, LGR5, LHFP, LHX2, LHX4, LMBRD1, LMO1, LMO2, LNP1, LPP, LPXN, LRMP, LRRC37B, LTBP1, LYL1, MACROD1, MAF, MAFB, MALT1, MAML2, MAN2B1, MAPRE1, MBNL1, MBTD1, MDS2, MEAF6, MECOM, MEF2D, MET, MGEA5, MKL1, MKL2, MLF1, MLLT1, MLLT10, MLLT11, MLLT3, MLLT4, MLLT6, MN1, MNX1, MSI2, MSN, MTCP1, MUC1, MUTYH, MYB, MYBL1, MYC, MYH11, MYH9, MYO18A, MYO1F, NAB2, NAPA, NBR1, NCOA1, NCOA2, NCOA3, NCOR1, NDE1, NF1, NFATC2, NFIB, NGF, NGFR, NIN, NIPBL, NKX2-1, NKX2-5, NONO, NOTCH1, NOTCH2, NPM1, NR4A3, NR6A1, NRAS, NRG1, NSD1, NT5C2, NTF3, NTF4, NTRK1, NTRK2, NTRK3, NUMA1, NUMBL, NUP107, NUP214, NUP98, NUTM1, NUTM2A, NUTM2B, OFD1, OLIG2, OLR1, OMD, P2RY8, PAPPA, PATZ1, PAX3, PAX5, PAX7, PAX8, PBX1, PCM1, PDE4DIP, PDGFB, PDGFRA, PDGFRB, PER1, PGR, PHF1, PHF23, PICALM, PIK3CA, PIM1, PKN1, PLAG1, PML, POM121, POU2AF1, POU5F1, PPAP2B, PPARG, PPARGC1A, PPFIBP1, PPP2R1B, PRCC, PRDM16, PRKACA, PRKAR1A, PRKCA, PRKCB, PRKG2, PRRX2, PSIP1, PSMD2, PTK2B, PTPRR, RABEP1, RAD51B, RAF1, RANBP2, RAP1GDS1, RARA, RBM15, RBM6, RCOR1, RCSD1, RELA, RET, RHOH, RNF213, ROS1, RPL22, RPN1, RREB1, RRM1, RSPO2, RSPO3, RTEL1, RUNX1, RUNX1T1, SARNP, SEC31A, SEPTIN2, SEPTIN5, SEPTIN6, SEPTIN9, SERPINE1, SERPINF1, SET, SETBP1, SFPQ, SH3D19, SH3GL1, SIK3, SLC34A2, SLC45A3, SLCO1B3, SMAP1, SMARCA5, SMARCB1, SNHG5, SORBS2, SORT1, SP3, SPECC1, SPTBN1, SQSTM1, SRF, SRSF3, SS18, SS18L1, SSBP2, SSX1, SSX2, SSX4, ST6GAL1, STAT5B, STAT6, STIL, STRN, SUFU, SUGP2, SUZ12, SYK, TACC1, TACC2, TACC3, TAF15, TAL1, TAL2, TAOK1, TBX15, TCF12, TCF3, TCL1A, TCTA, TEAD1, TEAD2, TEAD3, TEAD4, TEC, TENM1, TERT, TET1, TFE3, TFEB, TFG, TFPT, TFRC, TGFBR3, THADA, THRAP3, TIRAP, TLX1, TLX3, TMPRSS2, TNFRSF17, TOP1, TOP2B, TP53BP1, TP63, TP73, TPM3, TPM4, TRA, TRB, TRD, TRHDE, TRIM24, TRIP11, TRPS1, TSLP, TTYH1, TYK2, USP16, USP42, USP6, VGLL2, VGLL3, WASF2, WDR18, WDR70, WHSC1, WHSC1L1, WSB1, WT1, WWTR1, XIAP, YAP1, YTHDF2, YWHAE, ZBTB16, ZC3H7A, ZC3H7B, ZFP64, ZFPM2, ZFYVE19, ZMIZ1, ZMYM2, ZMYND11, ZNF207, ZNF384, ZNF444, ZNF521, ZNF585B, ZNF687*

Thank you for allowing us to partner with you to meet your molecular testing needs. If you have any questions regarding this communication, please do not hesitate to contact me via email or phone.

Jamie Marola, MB(ASCP)^{CM}
Manager of Precision Diagnostics
Phone: (720) 777-9503
Jamie.Marola@childrenscolorado.org

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