



NextGen Oncomine

Myeloid 69 Gene Panel



Rapid



Accurate



Automated



Complete Myeloid Genomic Profiling by NGS

Guidelines

In 2017, the genetic risk assessment of AML was updated by European Leukemia Network and classified as favorable, intermediate, and adverse groups

Favorable

Biallelic CEBPA mutation and NPM1 mutation without FLT3-ITD or with FLT3-ITD^{low} are the genetic variations classified in the favorable group

Intermediate

NPM1 mutation FLT3-ITD^{high} and wild-type NPM1 without FLT3-ITD or with FLT3-ITD^{low} are classified in the intermediate group

Adverse

Wild-type NPM1 and FLT3-ITD^{high}, RUNX1 mutation, ASXL1 mutation, and TP53 mutation are classified in the adverse group

- Screening of FLT3, NPM1, CEBPA, and KIT mutations is recommended also by National Comprehensive Cancer Network¹
- SF3B1 and actionable IDH1, IDH2 mutations are also advised to be tested. Common somatic mutations in AML are in FLT3, NPM 1 and DNMT3A at a rate of 25-30% and IDH1/2 and TET2 at a rate of 5-15%

The panel is comprised of 40 key genes while the RNA panel includes a broad fusion panel of 29 driver genes, covering the most relevant targets associated with major myeloid disorders, including...

- Acute myeloid leukemia (AML)
- Myeloid dysplastic syndrome (MDS)
- Myeloproliferative neoplasms (MPN)
- Chronic myeloid leukemia (CML)
- Chronic myelomonocytic leukemia (CMML)
- Juvenile myelomonocytic leukemia (JMML)

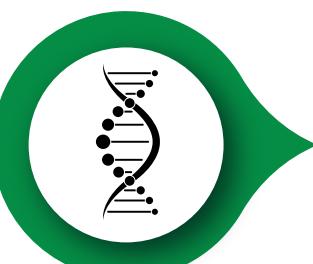
With a single assay, you can profile key targets such as...

- FLT3 (FMS- Like Tyrosine Kinase 3)
- NPM1 (Nucleophosmin)

- BCR-ABL 1
- TP53 (Tumor Protein)

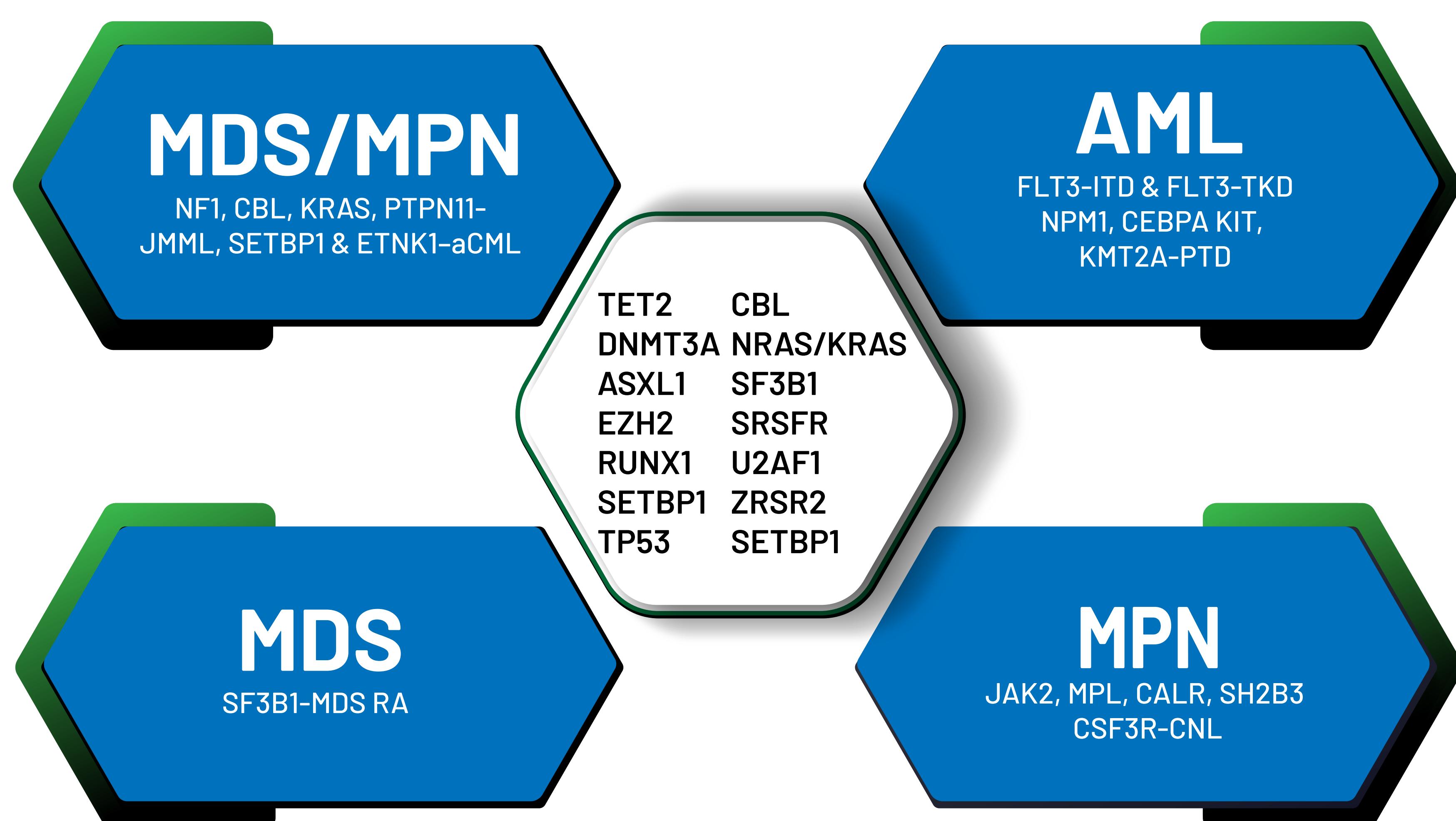
- IDH1/2
- PML-RARA

Benefits of Myeloid 69 Panel

-  Comprehensive coverage 40 key DNA genes and 29 RNA fusion transcript driver genes
-  Coverage of challenging targets genomic regions such as CEBPA and internal tandem duplications of FLT3 (FLT3-ITDs)
-  Accurately detects variants and SNV in genes with long homopolymers like CEBPA and ASXL1
-  Comprehensive clinical report generation with annotated variants in Oncomine Knowledgebase Reporter, which links to relevant FDA labels and guidelines, and global clinical trials recommendations
-  Faster turnaround time

Determine the diagnosis, prognosis and targeted treatment options with a single test¹

Figure 1: Role of various genes in Myeloid Neoplasms



05: Expression genes

17: Full genes

28: Hotspot Genes

29: Fusion Drivers

700: Fusion Isotypes

Gene list

DNA Panel: Hotspot gene(28)

ABL1
BRAF
CBL
CSF3R
DNMT3A
FLT3
GATA2
HRAS
IDH1
IDH2
JAK2
KIT

KRAS
MPL
MYD88
NPM1
NRAS
PTPN11
SETBP1
SF3B1
SRSF2
U2AF1
WT1

DNA Panel: Full gene(17)

ASXL1
BCOR
CALR
CEBPA
ETV6
EZH2
IKZF1
NF1
PHF6

PRPF8
RBI
RUNX1
SH2B3
STAG2
TET2
Tp53
ZRSR

RNA Panel: Fusion driver gene(29)

ABL1
ALK
BCL2
BRAF
CCND1
CREBBP
EGFR
ETV6
FGFR1
FGFR2
FUS
HMGA2
JAK2
KMT2A (MLL)

MECOM
MET
MLLT10
MLLT3
MYBL1
MYH11
NTRK3
NUP214
PDGFRA
PDGFRB
RARA
RBM15
RUNX1
TCF3
TFE3

RNA Panel: Expression gene(5)

BAALC
MECOM
MYC
SMCIA
WT1

RNA Panel: Expression control gene(5)

EIF2B1
FBXW2
PSMB2
PUM1
TRIM27

Test Name

NextGen Oncomine
Myeloid 69 Gene Panel

Test Code

L0142

TAT

25th Day

Method

NGS

References: Kahraman CY, Sincan G, Tatar A. Next-Generation Sequencing Panel Test in Myeloid Neoplasms and Evaluation with the Clinical Results. Eurasian J Med. 2022 Jun;54(2):181-185. doi: 10.5152/eurasianjmed.2022.21102. PMID: 35703527; PMCID: PMC9634881.

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