Myeloid disorders are difficult to analyze owing to complex aberrations across the genome, such as multiple mutations and chromosomal rearrangements. A traditional combination of FISH, qPCR and Sanger sequencing has low throughput and requires multiple samples, whereas whole exome sequencing or large NGS panels take longer turnaround time (TAT) and may have issues analyzing internal tandem duplications (ITDs) in key gene drivers.

Oncomine™ Myeloid Assay (OMA) v2 on the Genexus™ system is a focused panel for myeloid disorders that simultaneously detects 45 DNA genes and 30 RNA genes with a rapid and fully integrated workflow. Gene content on the panel covers relevant targets for all major myeloid disorders associated with acute myeloid leukemia (AML), myeloid dysplastic syndrome (MDS), myeloproliferative neoplasms (MPN), chronic myeloid leukemia (CML), chronic myelomonocytic leukemia (CMML) and juvenile myelomonocytic leukemia (JMML). The workflow at our CAP/CLIA lab automates nucleic acid extraction, library preparation, sequencing and reporting of the variants and gene fusions in as little as one day. Optimized primer design and chemistry of the assay enable accurate detection of ITDs in FLI3, SNVs in long homopolymer regions such as CEBPA and ASXL1 and indels in challenging genes like CALR. Operated in our CAP/CLIA laboratory, OMA offers a rapid and robust solution to accurately assess myeloid malignancies and may be developed as a companion diagnostic assay.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validation level</td>
<td>Research use only*</td>
</tr>
<tr>
<td>Validated samples</td>
<td>Blood and bone marrow samples</td>
</tr>
<tr>
<td>TAT</td>
<td>2 weeks**</td>
</tr>
<tr>
<td>Batch size</td>
<td>6 plus 2 controls</td>
</tr>
<tr>
<td>Limit of detection</td>
<td>5% VAF for SNV and indel, 20 copies for gene fusion</td>
</tr>
</tbody>
</table>

*Additional validation coming soon
**Real-time testing option in the future

1. Specimens arrive at NeoGenomics
2. Automated specimen to report workflow
3. Report review

Fresh whole blood or bone marrow aspirate are accessioned at our global sites.

Nucleic acid extraction and quantification, library preparation, sequencing and variant calling on the Genexus system.

Variants reviewed by our scientist and pathologist.
### DNA SNV/indel

(1,662 hotspots)

- ABL1
- ANKRD26
- ASXL1
- BCOR
- BAF
- CALR
- CBL
- CEBPA
- CSF3R

### RNA gene fusion

(779 fusion isoforms)

- ABL1
- ALK
- BCL2
- BRAF
- CCND1
- CREBBP
- ETV6
- FGFR1
- FGFR2

### Expression genes

- BAALC
- NECOM
- MYC
- SMCT1A
- WT1

### Expression control genes

- EIF2B1
- FBXW2
- PSMB2
- PUM1
- TRIM27

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### About NeoGenomics Pharma Services

NeoGenomics Pharma Services unifies several innovative companies’ scientific and medical leadership under one leading brand, offering one of the most comprehensive laboratory services menu available for biomarker testing supporting oncology clinical trials globally. We provide our clients with an unparalleled level of expertise, service, flexibility, and scalability. Additionally, we offer alternative business models and solutions across the continuum of development from pre-clinical research and development through commercialization.

**To learn more about NeoGenomics Pharma Services, visit us online at neogenomics.com/pharma-services, call us at 866.776.5907 or email us at pharmaservices@neogenomics.com**

NeoGenomics Laboratories is a specialized oncology reference laboratory providing the latest technologies, testing, partnership opportunities and interactive education to the oncology and pathology communities. We offer the complete spectrum of diagnostic services in molecular testing, FISH, cytogenetics, flow cytometry and immunohistochemistry through our worldwide network of CAP-accredited, CLIA-certified laboratories.

Committed to research as the means to improve patient care, we provide Pharma Services for pharmaceutical companies, in vitro diagnostic manufacturers and academic scientist-clinicians. We promote joint publications with our client physicians. NeoGenomics welcomes your inquiries for collaborations. Please contact us for more information.