TEST ID: NGAML

NEXT-GENERATION SEQUENCING (NGS), ACUTE MYELOID LEUKEMIA, 8-GENE PANEL

USEFUL FOR
- Evaluation of acute myeloid Leukemia (AML) at the time of diagnosis, to assist in appropriate classification and prognosis
- This test can be used at the time of AML relapse to determine if a different gene mutation profile is present

CLINICAL INFORMATION
Next-generation sequencing (NGS) is a rapidly evolving and complex methodology that can interrogate multiple regions of genomic tumor DNA in a single assay. Many hematologic neoplasms, including acute myeloid leukemia (AML), are characterized by morphologic or phenotypic similarities, but can have characteristic somatic mutations in many genes. In addition, many cases of AML lack a clonal cytogenetic finding at diagnosis (normal karyotype) and can be better classified according to gene mutation profile. The presence and pattern of gene mutations in AML can provide critical prognostic information and may help in guiding therapeutic management decisions by physicians.

GENETICS INFORMATION
Targeted Genes Interrogated by Next Generation Sequencing, Acute Myeloid Leukemia, 8-Gene Panel

<table>
<thead>
<tr>
<th>GENE</th>
<th>EXONS</th>
<th>GENE</th>
<th>EXONS</th>
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<tbody>
<tr>
<td>CEBPA</td>
<td>1</td>
<td>KRAS</td>
<td>2-3</td>
</tr>
<tr>
<td>FLT3</td>
<td>14-20</td>
<td>NPM1</td>
<td>9, 11, and 12</td>
</tr>
<tr>
<td>IDH1</td>
<td>4</td>
<td>NRAS</td>
<td>2-3</td>
</tr>
<tr>
<td>IDH2</td>
<td>4</td>
<td>TP53</td>
<td>4-9</td>
</tr>
</tbody>
</table>

INTERPRETATION
Mutations (gene alterations) identified, if present. An interpretive report will be provided.

MOBILE APPS FROM MAYO MEDICAL LABORATORIES

Lab Catalog for iPad and Lab Reference for iPhone and iPod Touch
Requires iOS 5.1+

REFERENCE VALUES
An interpretive report will be provided.

ANALYTIC TIME
14 days
INCIDENCE OF TARGETED GENE MUTATIONS and FUNCTIONAL PATHWAYS

SIGNAL TRANSDUCTION
- FLT3 20%
- KRAS 5%
- NRAS 5%

TRANSCRIPTION FACTOR
- CEBPA 10%

DNA DAMAGE / REPAIR
- NPM1 45%

EPIGENETIC
- IDH1/2 10%

TUMOR SUPPRESSOR
- TP53 5%

CLINICAL REFERENCE