

# HEMESCREEN<sup>®</sup> MPN PANEL

The HemeScreen MPN Panel detects somatic mutations in targets of interest related to myeloproliferative neoplasms and MDN. This assay is specifically designed to identify mutations in **JAK2, MPL and CALR genes**.

## Turn-Around Time

**3 Days** upon receipt of specimen

## Clinical Relevance

WHO 2022 5th Edition Guidelines recommend the testing of these 3 genes for all patients with MDN and MPD to assess for therapy selection, prognosis and likelihood of evolving into Leukemia.\*\*

| Gene   | Indication   | NCCN Guidelines Clinical Action  |
|--|--|--|
| JAK2 - V617F<br>JAK2 - Exon 12<br>JAK2 - Exon 13 | (+) indicated possible response to Jakafi <sup>®</sup> ***                                   | Prescribe Jakafi   |
| MPL  | <b>Prognostic indicators</b><br>(-) indicates poor prognosis<br>(+) indicates good prognosis | (-) poor prognosis may direct to a more aggressive Treatment to avoid leukemic evolution**** |
| CALR   |  |  |

\*\*<https://www.ncbi.nlm.nih.gov/pubmed/27069254>

\*\*\*Jakafi<sup>®</sup> is an FDA approved tyrosine kinase inhibitor (TKI) targeted therapy inhibiting dysregulated JAK signaling, shown to be effective for patients with JAK2 mutations. \*\*\*\*<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5335805/>

| Disease State   | Clinical Indications     | Genes and % Patient Occurrence* |                |     |         |
|---|--------------------------|---------------------------------|----------------|-----|---------|
|   |                          | JAK2-V617F                      | JAK2-Ex. 12&13 | MPL | CALR    |
| <b>Polycythemia vera</b>  | BCR/ABL1-negative MPN    | >95%                            |                |     |         |
|   | Myelofibrosis            | ~50%                            |                |     |         |
|   | JAK2-V617F-negative      |                                 | ~50%           |     |         |
| <b>ET (Essential Thrombocythemia)</b>   | Thrombocytosis           | ~50%                            | ~20%           | ~4% | ~10%    |
| <b>RARS-T</b><br>(refractory anemia with ring sideroblasts with thrombocytosis)   | Increase in sideroblasts | >5%                             |                |     |         |
|   | Macrocytic anemia        | >5%                             |                |     |         |
| <ul style="list-style-type: none"> <li>• Acute myeloid leukemia</li> <li>• MDS</li> <li>• Other myeloid malignancies including CML</li> </ul> | Increase in blasts       |                                 |                | ~2% | ~5%-10% |
|   | JAK2-V617F-negative      |                                 | ~30%           |     |         |
| <b>Reactive PV</b>  |                          |                                 |                |     |         |
| <b>MDN/MPN</b><br>(myelodysplastic/myeloproliferative neoplasms)  | Primary myelofibrosis    |                                 |                | ~8% | ~25%    |
|   | MDN with 5q deletion     |                                 |                | ~4% | ~2%     |

\* All numbers are approximations based on existing literature.



## Case Studies

Case studies of real world patient care supported by HemeScreen technology:

## Ordering Information

HemeScreen can be ordered separately, or will be included as part of the **Omnia**<sup>™</sup> workup. To place an order or request collection kits, please call our customer service at 203.787.1717 or email [cs@precipiodx.com](mailto:cs@precipiodx.com)

### Sample Requirements

1-2 mL of peripheral blood or bone marrow aspirate in a lavender EDTA tube

### Shipping Requirements

Ship at room temperature

The HemeScreen MPN Panel is a Research Use Only (RUO) assay. This test has been validated as a lab-derived test at Precipio. It has not been approved by the FDA.