PROMETHEUS® TPMT Genetics
PROMETHEUS® TPMT Enzyme

A recently published American Gastroenterological Association Medical Position Statement suggests that individuals should have TPMT genotype or phenotype assessed before initiation of thiopurines.⁴

PROMETHEUS® Thiopurine Metabolites

“Mean/median 6-TGN levels were higher among patients in remission than in those with active disease,...”

Osterman et al ⁵

To order diagnostic or therapy monitoring tests, please call Prometheus Client Services at 888-423-5227 or fax to 877-816-4019.

Prometheus diagnostic services provide important information to aid in the diagnosis and management of certain diseases and conditions. How this information is used to guide patient care is the responsibility of the physician.

References:
1. Seidman EG. Clinical use and practical application of TPMT enzyme and 6-mercaptopurine metabolite monitoring in IBD. Rev Gastroenterol Disord. 2003;3(suppl 1):S30-S38.

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CLASSIFY BEFORE THERAPY & OPTIMIZE DURING THERAPY
### Metabolites monitoring identifies treatment failures who may be converted to responders^{3,c}

<table>
<thead>
<tr>
<th>6-TGN (pmol/8 x 10^8 erythrocytes)</th>
<th>6-MMP (pmol/8 x 10^8 erythrocytes)</th>
<th>Interpretation</th>
<th>Patients n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undetectable</td>
<td>Undetectable</td>
<td>Noncompliance</td>
<td>283 (3%)</td>
</tr>
<tr>
<td>&lt; 230</td>
<td>&lt; 5700</td>
<td>Underdosed</td>
<td>4260 (46%)</td>
</tr>
<tr>
<td>&lt; 230</td>
<td>&gt; 5700</td>
<td>Preferential metabolism via TPMT pathway</td>
<td>534 (6%)</td>
</tr>
<tr>
<td>230-450</td>
<td>&lt; 5700</td>
<td>Therapeutic goal</td>
<td>2444 (27%)</td>
</tr>
<tr>
<td>230-450</td>
<td>&gt; 5700</td>
<td>Potential hepatotoxicity</td>
<td>552 (6%)</td>
</tr>
<tr>
<td>&gt; 450</td>
<td>&lt; 5700</td>
<td>Potential TPMT deficiency (potential myelotoxicity)</td>
<td>936 (10%)</td>
</tr>
<tr>
<td>&gt; 1000</td>
<td>Undetectable</td>
<td>Potential TPMT absence (potential myelotoxicity)</td>
<td>58 (1%)</td>
</tr>
<tr>
<td>&gt; 450</td>
<td>&gt; 5700</td>
<td>Overdosed</td>
<td>140 (2%)</td>
</tr>
</tbody>
</table>

- Based on 9187 6-MP/azathiopurine metabolite panels reviewed and interpreted by gastroenterologists.

### Thiopurine drug metabolism^{2}

Each individual’s TPMT activity results in differences in metabolism, directly affecting efficacy and risk of toxicity.

- **6-TGN** levels correlate with efficacy and myelotoxicity
- **6-MMP** associated with hepatotoxicity

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1. Ongoing monitoring of CBCs and LFTs is recommended.
2. Prometheus proprietary and patented technology.
3. The use of 6-MP or azathiopurine in inflammatory bowel disease has not been approved by the FDA.