**AVISE MTX Test Report**

Current Methotrexate Polyglutamate (MTXPG) Level:

<table>
<thead>
<tr>
<th>Date Current Dose Initiated</th>
<th>Current Dose</th>
<th>Date MTX Initiated</th>
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<tbody>
<tr>
<td>1/6/2018</td>
<td>10</td>
<td>8/8/2014</td>
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**Current and Prior 5 MTXPG Levels**

**MTXPG Level**
- Therapeutic (>60 nmol/L)
  - Patient is metabolizing MTX effectively. Level is consistent with clinical efficacy
- Intermediate (20-60 nmol/L)
  - Patient may need more exposure to MTX
- Sub-therapeutic (<20 nmol/L)
  - Patient may not be metabolizing MTX effectively or patient may be non-compliant with therapy

**Test Method Description**

AVISE MTX measures red blood cell methotrexate polyglutamates, the active metabolites of methotrexate as an aid in optimizing methotrexate dose and therapeutic efficacy in the treatment of rheumatoid arthritis. In a cohort of 256 rheumatoid arthritis patients taking methotrexate (range 5-25 mg/wk, median 15 mg/wk) for more than 3 months, those with a MTXPG level below 20 nmol/L were 3-fold more likely to have a poor response to methotrexate vs. those with level >=20 nmol/L (OR =2.9; 95% CI: 1.4-5.9). Those with a MTXPG level above 60 nmol/L were 5-fold more likely to have a good response to methotrexate vs. those with level <=60 nmol/L (OR=5.5; 95% CI:2.5-12.0).

The MTXPG level is obtained by a liquid chromatographic method coupled with tandem mass spectrometry. The concentration from venous blood is expressed as nmol/L packed red blood cells (RBC). The concentration determined from whole capillary blood is expressed as nmol/L RBC equivalent. Studies supporting the clinical utility of this test are based on patients receiving methotrexate for at least 3 months. Caution should be used in interpreting results for patients on therapy for less than three months.

**References**