Hematology test changes take effect May 1

WHAT’S NEW?
Effective Sun., May 1, the Bellingham, Friday Harbor and Sedro-Woolley laboratories will transition to a new information system from MultiSite to CareConnect.

WHAT’S CHANGED?
- CBC reporting will be simplified with IG% replacing metamyelocyte and myelocyte cell types on manual blood differentials.
- CBC morphology will also have small changes due to standardization efforts.
- Retic reporting will have new parameters added at no additional charge.
  - RET-HE provides rapid and sensitive screening for Fe deficiency.
  - IRF provides rapid and sensitive assessment for early marrow recovery in patients with marrow suppression affecting red cells, such as chemotherapy patients.

TEST CHANGE DETAIL:
CBC reporting changes (IG%)
Reporting immature granulocytes as a replacement for metamyelocytes and myelocytes on manual differentials will provide easier comparison between automated and manual differentials. Promyelocytes will continue to be reported separately when seen. Additional minor changes concerning the grading of RBC morphology will occur at the same time.

Reticulocyte reporting changes
Improvements in technology have allowed new automated parameters to be added to the reticulocyte count at no additional cost.

Reticulocyte Hemoglobin (RET-HE)
RET-HE is a measurement of hemoglobin concentration in the RBC reticulocyte fraction. It is a very early detector of iron deficiency, reported in many studies to be more sensitive than ferritin and Fe/TIBC measurements. Unlike other iron deficiency markers, RET-HE is unaffected by inflammation and uremia.

Renal disease application: In end-stage renal dialysis patients, RET-HE allows detection of functional iron deficiency, which inhibits the therapeutic effect of erythropoietin (EPO). The National Kidney Foundation recommends use of RET-HE in its clinical practice guidelines for chronic renal disease.

Pediatric and pregnancy related iron deficiency application: RET-HE also has much higher sensitivity and specificity for iron deficiency compared to hemoglobin concentration in children ages 0-3 years old. In the U.S., 10% of infants and toddlers have iron deficiency, but only 2.1% are anemic. Zinc protoporphyrin detects long-term iron deficiency; RET-HE detects shorter-term iron deficiency since reticulocytes in circulation have a lifespan of only a few days. RET-HE has reported efficacy in screening for development of iron deficiency in pregnancy also.

Immature reticulocyte fraction (IRF)
IRF is a measurement of immature reticulocytes as a percentage of total reticulocytes. IRF is a better indicator of marrow response than reticulocyte count in many conditions and may begin to climb before the reticulocyte count. IRF is low in suppressed marrows, and climbs above 5.0% 2-3 days before the neutrophil count recovers above 0.5 K/μL in patients rebounding from chemotherapy. In addition to detecting marrow recovery after chemotherapy, IRF can also be useful to assess marrow response to EPO therapy, and to detect early engraftment after BM transplantation. IRF also increases with Fe replacement therapy, though RET-HE has been better studied for that purpose.

Continued on next page
<table>
<thead>
<tr>
<th>Test Name</th>
<th>Unit Code New code (previous code)</th>
<th>Specimen requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reticulocyte Hemoglobin (RET-HE)</td>
<td>LAB296 (21150)</td>
<td>Collect: 1 lavender EDTA Stable: 48 hours refrigerated Performed: Daily</td>
</tr>
<tr>
<td>Immature reticulocyte fraction (IRF)</td>
<td>LAB296 (21150)</td>
<td>Collect: 1 lavender EDTA Stable: 48 hours refrigerated Performed: Daily</td>
</tr>
</tbody>
</table>

**QUESTIONS?**

Greg Wolgamot, MD, PhD  
Medical Director, United General/Peace Island  
Pathologist, Northwest Pathology  
360-734-2800  
greg.wolgamot@nwpathology.com

Michael Suter, MT(ASCP) SH  
Senior Clinical Scientist, Hematology  
541-687-2134 ext. 8182  
800-826-3616 ext. 8182  
541-968-4917 cell  
msuter@peacehealthlabs.org

Melissa Eiene, MT(ASCP), MBA  
Bellingham Core Testing Supervisor, Hematology  
360-788-6300 ext. 2971  
meiene@peacehealthlabs.org

**REFERENCES**