WHAT’S NEW?
Effective Wednesday, February 20, 2013, all PeaceHealth Laboratories in Oregon and Alaska will perform immature granulocyte percentage as an additional parameter on the complete blood count with auto diff (unit code 2000).

This new parameter reflects improvements in technology now available with the latest instrumentation, at no additional charge.

IMMATURE GRANULOCYTE PERCENTAGE
IG percentage is an automated measurement of intermediate neutrophils at the metamyelocyte, myelocyte and promyelocyte stages of maturation. Blasts and more mature forms (band and segmented neutrophils) are not included in the IG percentage quantitation.

Routine CBCs will now be reported with an automated 6-part differential including:
- Neutrophils
- Lymphocytes
- Monocytes
- Eosinophils
- Basophils
- Immature granulocytes

Any slide flagged by the instruments for possible left shift, significantly elevated IG percentage (IG% ≥2.0%), or samples that violate other rules including significantly low or high white blood cell or neutrophil counts, will continue to be manually inspected by a laboratory technician.

If a slide review detects an increase in band or younger forms, it will continue to be reported as a left shift parameter (see table below). In addition, the CBC will also include separate automated measurements of mature neutrophils and younger forms.

CBC Neutrophil Parameters

<table>
<thead>
<tr>
<th>Automated Differential Percentage</th>
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<tbody>
<tr>
<td>Neutrophil percent</td>
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<tr>
<td>Includes segs/bands</td>
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<table>
<thead>
<tr>
<th>Manual “Left Shift” Parameter*</th>
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<tbody>
<tr>
<td>Not reported if normal</td>
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<tr>
<td>0-10%</td>
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* Derived from manual evaluation of bands/metamyelocyte, myelocyte and promyelocyte stages of maturation.

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Background
Studies performed by PeaceHealth Laboratories confirm the published IG percentage normal range of 0-0.5% which will appear on the patient report. These studies have shown good correlation between manual and automated IG counts. The automated counts show much higher precision due to the large number of cells analyzed, allowing results to be reported in increments of 0.1%.

In one published study, IG percentage was found to correlate better with infection and positive blood culture results than the WBC count and was equal to the absolute neutrophil count in predicting infection. This study reported 35% sensitivity and 90% specificity for the IG percentage and, while confirming clinical utility, concluded that all screening parameters have low sensitivity and are not useful as sole screening tests for infection.  

Another study on neonatal samples showed that hospitalized premature infants more than seven days old are three times more likely to have a positive blood culture if any IG are present on the manual differential, or if the IG percentage exceeds 0.5% (upper limit of normal).

REFERENCES

QUESTIONS?
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