




Hagerstown Medical Laboratory

TO: Meritus Medical Center Medical Staff
Hagerstown Medical Laboratory Clients

FROM: Gary M. Mire, M.D. 
Director of Laboratory Hematology

DATE: January 25, 2011

RE: Comprehensive Blood Count

In our efforts to provide the latest technology, we are pleased to announce that Hagerstown Medical Laboratory will begin using the Sysmex XE series analyzers to provide you with a new comprehensive blood count. This test will provide a six part automated differential and two additional clinical parameters, immature platelet fraction (IPF) and reticulocyte hemoglobin (RET-He). The new tests are available as rapidly as the traditional CBC and require no additional blood.

SIX PART DIFFERENTIAL:

The automated differential is performed using fluorescence flow cytometry and now includes reported immature granulocytes (IG). The immature granulocyte count includes metamyelocytes, myelocytes, and promyelocytes. Comparison testing in our laboratory shows excellent correlation with the manual differential. In published data, the automated IG parameter shows excellent correlation to the reference flow cytometric immature granulocyte count, establishing that the automated IG count can replace the manual differential. Preliminary studies have indicated that the automated IG count shows promise as an early screening for sepsis or infection. Values over 3% correlate with serious inflammatory processes or systemic infections. The ability to provide a more accurate and precise automated immature granulocyte count without performing a manual differential will decrease turnaround time to provide you with results sooner.

IMMATURE PLATELET FRACTION (IPF):

Immature platelet fraction is an index of thrombopoiesis and can help to determine the mechanism of thrombopoiesis. The normal range established in our institution is 1-7%. In thrombocytopenic patients, an elevated IPF is indicative of adequate megakaryocyte production. Decreased IPF is indicative of decreased marrow production.

RETICULOCYTE HEMOGLOBIN (RET-He):

Traditional chemistry test used for iron assessment are indirect measurements. The RET-He is a direct assessment of the incorporation of iron into erythrocyte hemoglobin and thus is a direct estimate of the functional availability of iron into the erythron. Published data shows a RET-He cutoff of 27 pg/cell. A value below this range suggests a decreased amount of iron available for hemoglobinization.

We have been performing correlation studies for the past month and plan to begin using the instruments on Tuesday, February 1, 2011. Please note that results will be slightly delayed for the first few days in that there is no previous patient data in the instruments. Therefore, delta checks with previous results will be performed manually. If there are any questions concerning these new parameters, please give me a call at 301-665-4908.