

NEW SYSMEX HEMATOLOGY ANALYZER PROVIDES VALUABLE NEW INFORMATION

St. Elizabeth and Tri Health continue to work collaboratively, through our Preferred Lab Partners (PLP) joint venture, to provide the best lab services and most accurate results in the market. Effective May 14, 2018, the new Sysmex hematology analyzer will go live at the Edgewood Hospital Campus and home of Preferred Lab Partners. This analyzer offers advanced clinical parameters which benefit patient care, including the following innovative technologies:

IMMATURE GRANULOCYTE (IG) percent and absolute number:

The Sysmex provides a reliable 6-part WBC differential using flow cytometry technology which analyzes 32,000 cells. The IG portion of the differential is a measure of the # and % of promyelocytes + myelocytes + metamyelocytes. IG >1% represents a left shift and provides an early indication of an infection or inflammatory process; elevated IG% may be present before there is an elevation of the WBC. **IG greater than 3% may predict positive blood cultures with 98% specificity and 92% PPV (*Ansari-Lari).**

The Sysmex neutrophil count measures segs plus bands; the Edgewood and PLP lab will not be reporting bands on manual differentials due to the known subjective and unreliable nature of the band count.

IMMATURE PLATELET FRACTION (IPF) LAB8561: IPF % AND #

The immature platelet fraction allows one to evaluate the etiology of thrombocytopenia. A low platelet count + low IPF is consistent with a bone marrow production disorder. A low platelet (PLT) count + high IPF is consistent with peripheral consumption or destruction. For patients on chemotherapy, trending of serial IPF measurements can be used to evaluate bone marrow response.

RETICULOCYTE DIAGNOSTIC PANEL LAB8560: includes retic #, %, IRF, and Retic Hgb

IMMATURE RETICULOCYTE FRACTION (IRF): This is a direct measure of erythropoiesis, since it represents reticulocytes released from the bone marrow within the last 24 hours. Like the IPF, IRF can be very useful in evaluating bone marrow recovery.

RETICULOCYTE HEMOGLOBIN EQUIVALENT (Ret-He): Ret-He is a direct measure of the incorporation of iron into the erythron. A low Ret-He is indicative of iron deficiency (absolute or functional) and is not influenced by inflammation. The Ret-He will show response to therapy within 2-3 days and therefore allows for assessment of efficacy of treatment modalities.

Some of the hematology parameters will have slightly different reference ranges on our new Sysmex analyzers. Abnormalities will be flagged.

If you have questions about these advanced clinical parameters, please contact Dr. Kathleen Matthews, Medical Director (859-301-8035) or Debbie Dunn, Hematology Manager (859-301-6035)

*Ansari-Lari, M., et al. (2003). Immature granulocyte measurement using the Sysmex XE-2100. *American Journal of Clinical Pathology*, 120:5, 795 – 799. www.stelizabeth.com

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