REGIONAL MEDICAL LABORATORY

# M E M O

**To:** **Regional Medical Laboratory (RML) Clients**

**From:** **Lawrence R. Johnson, MD, FCAP, Medical Director of Hematology, Flow Cytometry, Coagulation, and Urinalysis**
**Lizbeth Carreiro, MT (ASCP), Manager Hematology, Coagulation, and Molecular Diagnostics**

**Subject:** **Immature Platelet Fraction (IPF)**

**Date:** **December 4, 2008**

RML is pleased to announce the availability of a new testing parameter, the immature platelet fraction (IPF). The test will be available December 8th, 2008; RML is currently one of a few laboratories in this region offering this parameter.

The IPF is a measure of effective platelet production much like the absolute reticulocyte count is a measure of effective red blood cell production. A brief overview of the IPF's usefulness and implications are as follows:

An elevated IPF value occurring in the setting of thrombocytopenia or a decreased platelet count relative to previous platelet counts suggests a peripheral consumptive process as the dominant cause of the thrombocytopenia. Such causes could include sequestration at a site of tissue injury, including bleeding, peripheral destruction from immune or non-immune related causes, hypersplenism, heparin induced thrombocytopenia (HIT), disseminated intravascular coagulation (DIC), idiopathic/immune thrombocytopenic purpura (ITP), and thrombotic thrombocytopenic purpura (TTP). In addition, the monitoring of the IPF is of significant advantage in the setting of blood loss when the patient is unable to mount an absolute reticulocyte response due to suppressed or inadequate erythropoiesis.

Historically, an elevated mean platelet volume (MPV), an indicator of platelet size, has been used to suggest increased platelet consumption. The IPF is a superior parameter to the MPV as the MPV suffers from very high CVs at lower platelet counts, and it is less sensitive and specific than the IPF.

A normal IPF value occurring in the setting of thrombocytopenia or a decreased platelet count relative to previous platelet counts suggests a central production problem as the dominant cause of thrombocytopenia such as from suppressed or inadequate platelet production.

Further applications of the IPF relate to bone marrow transplantation and chemotherapy patients. Studies have shown that the IPF value spikes or rises before other parameters, including the absolute neutrophil count (ANC), total white blood cell count (WBC), absolute reticulocyte count, and immature reticulocyte fraction (IRF) to indicate engraftment and or recovery of the bone marrow following these procedures.

Additionally, the IPF may reduce platelet transfusion requirements. A rising IPF value suggests against the need for platelet transfusion in a patient with thrombocytopenia, indicating that the patient's platelet count is recovering on its own.

The ordering information for the IPF parameter is as follows:
**01-00475 IPF LEVEL IMMATURE PLATELET FRACTION (CPT 85055)**
Specimen Requirements: 2mL EDTA blood. If kept at room temperature, specimen must less than 48hrs.

For questions or comments contact Lizbeth Carreiro at (918) 744-3131 ext 16254, or Dr. Lawrence Johnson at (918) 744-2553. Or contact us by email at Lizbeth.carreiro@sjmc.org or lrjohnson@sjmc.org.

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**To:** **Regional Medical Laboratory (RML) Clients**
**St. John Medical Center and Nursing Staff**
**St. John Owasso Medical Center and Nursing Staff**
**St. John Sapulpa Medical Center and Nursing Staff**
**Jane Phillips Medical Center and Nursing Staff**

**From:** **Lawrence R. Johnson, MD, FCAP, Medical Director of Hematology, Flow Cytometry, Coagulation, and Urinalysis**
**Lizbeth Carreiro, MT (ASCP), Manager Hematology, Coagulation, and Molecular Diagnostics**

**Subject:** **Additional Parameter to Anemia Analyzer, PBS/Heme Path Consult, and Bone Marrow Biopsy Analysis**

**Date:** **December 15, 2008**

In an effort to improve the sensitivity and diagnostic specificity of our current PBS/Heme Path Consults, Anemia Analyzers, and Bone Marrow Biopsies, Regional Medical Laboratory (RML) is pleased to announce the addition of the Immature Platelet Fraction (IPF) level to these panels.

The IPF is a measure of effective platelet production much like the absolute reticulocyte count is a measure of effective red blood cell production. This parameter harbors diagnostic significance when assessing not only possible causes of thrombocytopenia but also assessing a patient's need for platelet transfusion. In addition, the IPF can also assist in evaluating cases of anemia, especially those related to blood loss, and in evaluating bone marrow recovery following transplantation or chemotherapy.

As of January 15, 2009 the IPF value will be added to the following tests:

| Test Code | Order Mnemonic | Full Name |
|---|---|---|
| 01-10800 | ANEMIA AN | ANEMIA ANALYZER |
| 29-04600 | PBS RML | PERIPHERAL BLOOD SMEAR |
| 01-03980 | PBS CONS | HEMEPATH CONSULT BLD SMR REVIEW |
| 29-17900 | BONE MARR | BONE MARROW - RML |
| 15-00855 | DIC PR | DIC PROFILE |

**The CPT4 Code for the IPF is 85055.**

Also, as of January 15, 2009 a retic count will be included in the DIC PROFILE (Test code: 15-00855).
**The CPT4 Code for the RETIC COUNT is 85045**.

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