Automated Immature Granulocytes (IG)

Immature Granulocytes and Absolute Immature Granulocytes are reported at no additional charge as part of our automated differential (included with test code 3000 - CBC w/Diff, w/Plt)*

Identifies and Quantifies Immature Myeloid Cells
Counts 32,000 cells - More sensitive and precise than manual differential¹

IG = Metas + Myelos + Pros

Early screen for sepsis
- Better indicator for infection than WBC²
- Comparable to Absolute Neutrophil Count²
- IG% >1% indicates a left shift
- IG% >3% may predict positive blood cultures with 98% specificity and 92% Positive Predictive Value²

Detects Myeloproliferative Disorders

Neutrophil count includes bands
Flags atypical cells and reflexes to manual review

Automated Immature Platelet Fraction (IPF)

Immature Platelet Fraction (IPF) is reported as part of test 3511 - Platelet Count with IPF

- Evaluate mechanism causing thrombocytopenia³
- Determine need for platelet transfusion
- Predict platelet count recovery
- IPF recovers ~3 days earlier than platelet count⁴

Plts + IPF ➔ Peripheral destruction or BM Recovery
Plts + IPF ➔ BM production disorder
**Retic Comprehensive with RET-He & Immature Retic Fraction**

Reticulocyte Count, Absolute Reticulocytes, Immature Reticulocyte Fraction (IRF), and Reticulated Hb Equivalent (RET-He) will be reported as part of test 3111 - Retic Comprehensive with RET-He & Immature Retic Fraction.

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### Red Blood Cells

**3-Part Retic**

1. Retic # & Retic %
2. IRF (Immature Reticulocyte Fraction)
3. RET-He (Reticulated Hemoglobin Equivalent)

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### Reticulocyte Count and Percent (Retic # & Retic %)

- **IRF (Immature Reticulocyte Fraction)**
  - Quantitative measure of immature retics
  - Indicates bone marrow response to anemia
  - Elevated IRF indicates increased red blood cell response from bone marrow

- **RET-He (Reticulated Hemoglobin Equivalent)**
  - Qualitative measure of Hb in reticulocytes
  - Cellular evaluation of iron status
  - Diagnose iron deficiency and monitor response to treatment
  - Not affected by inflammation or uremia
  - Used by National Kidney Foundation clinical practice guidelines to detect iron deficiency anemia in chronic kidney disease
  - Adopted by AHRQ for management of patients with End Stage Renal Disease
  - Cited in clinical guidelines for the diagnosis of iron deficiency anemia in children 0-3 years old
  - Study: Pre-op evaluation of anemia in orthopedic patients --> decreased red blood cell transfusions

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### Automated Nucleated Red Blood Cells (NRBCs)

Automated Nucleated Red Blood Cells (NRBCs) will be reported at no additional charge as part of our automated differential testing performed at our main laboratories in Tempe and Tucson, as well as at our Health Diagnostics Laboratory (HDL) in Phoenix. Please note that for all other performing locations, NRBCs will continue to be reported as part of a manual differential if indicated.

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### Red Blood Cells

**NRBCs**

(Nucleated Red Blood Cells)

- The appearance of NRBCs in the peripheral blood of children and adults signifies bone marrow damage or stress and potentially serious underlying disease
- One NRBC in an adult is an important finding
- Study: ICU Mortality rate 3X higher if NRBCs present when patient moved from ICU to floor, compared to ICU patients with no NRBCs

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**REFERENCES:**


*Excluding testing performed at our Prescott Valley laboratory*