



**DATE:** June 3, 2016

**TO:** All Physicians at HHS and SJH, Clinical Managers and Educators at HHS and SJH,  
All Residents

**FROM:** Dr. Mark Crowther, Core Laboratory Professional Staff Lead  
Denise Legeard, HRLMP Project Leader/Lean Six Sigma

**RE: CBC Analyzer Change**

The Hamilton Regional Laboratory Medicine Program will be implementing its new complete blood cell (CBC) analyzers in the very near future. There are a few important changes in CBC reports that we would like everyone to be aware of before we make the transition.

There are five new parameters that can be reported on our CBC samples once we go live:

- 1) We will be reporting Nucleated Red Blood Cells (NRBCS) as part of the regular result panel. They will display on the report as relative and absolute results. Previously they were reported as present or absent but not quantified.
- 2) We will also be reporting a 6 part differential; currently we report a five part differential. The new analyzers will quantify Immature Granulocytes and these will be a standard part of our automated differential report (ABS IMM GRANS). The Immature Granulocyte component encompasses metamyelocytes, myelocytes and promyelocytes.
- 3) A new parameter called Immature Platelet Fraction (IMM PLT FRACT) is reported in some cases. Through evaluation of the platelet size and the amount of RNA contained in the platelets, the analyzer is able to determine the percentage of platelets that are immature. This can assist in determining if platelets are being produced and consumed, or if there is a platelet production problem.
- 4) Reticulocyte counts will be accompanied by 2 new parameters, the Immature Reticulocyte Fraction (IMM RETIC FRAC) and the Reticulocyte Hemoglobin (RETIC HGB). These two parameters will provide a clearer picture of the body's production of reticulocytes and the amount of hemoglobin that is being incorporated into the new cells.

Additional changes attributable to the new analyzers will also allow us to reduce turnaround times for many samples.

Our Hematologist group has reviewed and updated our smear making criteria which is now programmed into the analyzer. Most smears will be generated automatically based on the CBC results. If necessary, physicians can still request a manual smear if it is felt needed.

**As we implement the new analyzers every CBC will be “new” to the analyzer, even if the patient has long-standing abnormalities. As a result, in the first months of implementation, you will see a significantly higher number of smears being performed. This could create delays in the first few weeks. Staff will prioritize areas where the timely release of these results is most critical. We appreciate your patience during this transition period.**

There will be some minor changes to our reference intervals (RI) on the patient reports for MCHC and MPV. The majority of RI's will remain the same. There will also be RI's introduced for the new parameters.

Another memo will be issued at the end of next week with a full listing of Reference Interval changes and a schedule of dates that each site will transition to the new analyzers. We would ask for your patience during the time of transition as the staff adjusts to operating the new instrumentation. Please address any question to Dr Mark Crowther ([crowthrm@mcmaster.ca](mailto:crowthrm@mcmaster.ca))