

## Performance evaluation of the immature granulocyte parameter on the Sysmex XE-2100 automated hematology analyzer

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Recently, St. Anthony's Medical Center Laboratory (SAMC) in St. Louis, Missouri, installed a new automated hematology analyzer, the Sysmex XE-2100. The XE-2100 has an additional differential parameter, the immature granulocyte (IG) parameter. Prior to implementation, the IG parameter was evaluated by comparison to the manual immature granulocyte count. Immature granulocytes counted manually, as well as the automated count, included metamyelocytes, myelocytes, and promyelocytes. Manual differentials were performed on each specimen by 2 experienced medical technologists using the National Committee for Clinical Laboratory Standards (NCCLS) document H20-A. In addition to evaluating the IG parameter, St. Anthony's laboratory plans to report the automated IG count from the XE-2100, with  $\leq 0.54$  IG percentage and  $\leq 0.1 \times 10^3$  IG number considered to be normal and to redefine its manual review criteria. An IG percentage  $\geq 5\%$  and an absolute IG number of  $\geq 0.5 \times 10^3$  will require differentiation by a manual differential count. An IG percentage  $< 5\%$  and an absolute IG number of  $< 0.5 \times 10^3$  will not require differentiation by manual slide review. In this comparison of the IG count on the XE-2100 to the manual count, the correlation coefficient was 0.83. The XE-2100 IG results showed significant correlation with the results from the manual immature granulocyte count. We concluded that the XE-2100 IG demonstrated comparable performance to the manual IG count.

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