

Key words

Haemoglobin WBC count CBC Screen Morphology

Lewis, S. M., et al., The use of the white blood cell count and haemoglobin in combination as an effective screen to predict normality of the full blood count, *Int. Jnl. Lab. Hem.*, 2011.
doi: 10.1111/j.1751-553X.2011.01365.x

Summary of publication

The use of the white blood cell count and haemoglobin in combination as an effective screen to predict normality of the full blood count

S. M. Lewis, et. al (2011)



The complete blood count (CBC) is one of the most frequently requested pathological tests by clinicians and the utility of the test is vast with each parameter serving as a tool to aid diagnosis and monitor disease progression. However, the effectiveness of the test is hampered because of the increased workload and lack of interpretation. In the effort to redress this issue, the combined use of the white blood cell (WBC) count and haemoglobin in predicting the normality of the CBC was evaluated.

CBC data were collected from 2,191 patients and classified into two groups depending on whether the WBC and the haemoglobin were within the reference range. Blood

films were examined on the abnormal CBC samples in each group and graded on morphology.

The CBC was normal in 89.6 % of cases in the presence of a normal WBC and haemoglobin with subtle abnormalities (< 1+ grading) in the remainder. However, when the WBC and/or haemoglobin was abnormal, the corresponding blood films were grossly abnormal; 2+/3+ grading in 96 % of cases.

Conclusion:

In the presence of normal WBC and haemoglobin, the CBC is normal in almost all cases and measuring these two parameters could be used as an effective screen to predict CBC normality.

The HemoCue® WBC system

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