Classification of White Blood Cell Abnormalities
For Early Detection Of Leukemia

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ABSTRACT

Blood is an important element supporting human life. Blood is a fluid that transports oxygen and nutrients to the cells and carries carbon dioxide and other body waste products out of the body. In blood consists of blood plasma and some blood cells, red blood cells (erythrocytes), white blood cells (leukocytes) and blood pieces (platelets). Generally, blood screening in the laboratory is FBC (Full Blood Count) which is a component of hemoglobin, determining the percentage of red blood cells, white blood cells and platelets. Calculate the type of blood cells usually assess the size and shape of the blood cells. Calculation of white blood cells manually, done after diluting aliquot blood in the solvent lyses of red blood cells and stain the nucleus of white blood cells. White blood cells are calculated with a microscopic, nucleated red blood cell (NRBC) that is not easily distinguishable from the white blood cells in calculating. The Manual is generally quite accurate, but their accuracy is poor, while automatic calculations are generally quite precise but sometimes inaccurate. From this problem, research on classification of white blood cell abnormalities for early detection of leukemia. The study uses the K-Nearest Neighbor method in which the method uses a value of k = 23 and generated an accuracy rate of 94.3%.

***Keywords**: K-Nearest Neighbor, Blood, White Blood Cell*