

عنوان مقاله:

Detection of Acute Leukemia Cells in Color Images with RGB and HSI Format Using Image Processing Method

محل انتشار:

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خلاصه مقاله:

The word leukemia which is means white blood. Leukemia or blood cancer is a progressive disease and malignant hematopoietic organs of the body. The disease is caused by incomplete proliferation and development of white blood cells and their precursors in the blood and bone marrow. In patients with leukemia, the bone marrow produces abnormal white blood cells. At first, leukemia cells performance almost normal. After a while, the accumulation of leukemia cells instead of white cells, red cells and platelets, cell performance is difficult [4]. There are four different models of leukemia that in patients with excessive leukemic, these cells multiply rapidly and develop [7]. The types of leukemia are grouped by type of white blood cell involved. The origin of leukemia can be lymphoid cells or myeloid [4]. Four models of leukemia include: - Acute Lymphoblastic Leukemia (ALL); - Acute Myelogenous Leukemia (AML); - Chronic Lymphoblastic Leukemia (CLL); - Chronic Myelogenous Leukemia (CML); This disease is one of the four most common cancers among children. Detect and classify cancer cells in leukemia images can be very helpful for rapid diagnosis and treatment of leukemia. The early diagnosis of leukemia in these patients can also increase their chances of recovery. Since conventional diagnostic methods are very time consuming and contains errors, so hematologists are looking for a way to detect leukemia with lower error rate and lower time of diagnosis of this disease. The conventional method of manually counting cells using a microscope performed the operation, in addition to being time-consuming, as the technician into a lot of stress. Also, each model of this disease has unique features that only trained professionals can see them using microscopic images of cells infected. However, it is usually due to a variety of feature detection and the uncertainty of the images is difficult. One of the existing diagnostic methods are the safety phenotype and cytogenetic abnormality. These problems can be time consuming and costly procedure. Therefore, a rapid and cost-effective method is needed to identify the different types of leukemia [7]. Recently, many methods have been proposed that all of them diagnostic by image processing. In these methods, microscopic images slides are processed of bone marrow and blood. Most of these methods are generally classified based on microscopic images which by processing orders, leukemic cells recognize. Detection of leukemic cells can be useful in diagnosing ... leukemia, because the detection and classification of blasts can be obtained features t

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