Abstract

In order to improve patient diagnosis various image processing software are developed to extract useful information from medical images. An essential part of the diagnosis and treatment of leukemia is the visual examination of the patient’s peripheral blood smear under the microscope. Morphological changes in the white blood cells are commonly used to determine the nature of the malignant cells, namely blasts. Morphological analysis of blood slides are influenced by factors such as hematologists experience and tiredness, resulting in non standardized reports. So there is always a need for a cost effective and robust automated system for leukemia screening which can greatly improve the output without being influenced by operator fatigue. This paper presents an application of image segmentation, feature extraction, selection and cell classification to the recognition and differentiation of normal cell from the blast cell. The system is applied for 108 images available in public image dataset for the study of leukemia. The methodology demonstrates that the application of pattern recognition is a powerful tool for the differentiation of normal cell and blast cell leading to the improvement in the early effective treatment for leukemia.[1]
References


Index Terms

Computer Science

Biomedical

Keywords

AML, ALL, ALLDC, ALLCD