Image segmentation is considered the most critical step in image processing and plays a vital role in computer vision especially in the medical field. In this work, the segmentation framework based on the color perception characteristics of eyes for acute lymphoblastic leukemia (ALL) images is proposed to segment each leukemia image into two regions: blasts and background. This work is based on nonlinear transformation of microscope color images from RGB color space to HSV color space. In the HSV color space, hue channel is used as a method in segmentation of WBC from its complicated background. The results show that the proposed segmentation framework can differentiate well between normal bone marrow and ALL and become useful for hematologists in further analysis.
Segmentation Framework on Digital Microscope Images for Acute Lymphoblastic Leukemia Diagnosis based on HSV Color Space

References


Index Terms

Computer Science

Image Processing
Keywords
Microscope Images  Segmentation  ALL  HSV