Abstract

Image enhancement plays an important role in computer vision and image processing. Leukemia is a malignant disease (cancer) seen in people of any age groups either in children or adults aged over 50 years. It is characterized by the uncontrolled accumulation of immature white blood cells. Further the noises and blurriness effect often lead to false diagnosis of leukemia. The recognition of acute leukemia blood cell based on color image is one of the most challenging tasks in image processing. Also, the conventional method of manual counting using a microscope is a time consuming, produces errors and put an intolerable amount of stress to technicians. As a solution to this problem, this paper proposed vector quantization technique for segmentation of blast in acute leukemia images. This method is applied on 115 microscopic images and succeeds with specificity of 90% and sensitivity of 60% to detect abnormal white blood cells (blast). Images used are available at www.dti.unimi.it/fscotti/all

References


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Index Terms

Computer Science  Image Processing

Keywords

Leukemia  Segmentation  VQ  LBG  KPE.