



Review of Pap Smears Cell Segmentation and Classification Techniques for Cervical Cancer Analysis

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ABSTRACT Cervical cancer is the second most common gynecologic cancer among women. Cervical cancer can be prevented completely if found at the initial stages. Pap smear test is a simple screening procedure for detecting the cervical cancer at the early stage. Pap smear image analysis is an open issue which does not show satisfactory results. The limitation of the analysis is due to the complexity of the cell structure. The smear image analysis struggles with issues like overlapping and folding of cells. Segmentation of individual cytoplasm and nuclei from the cluster of overlapped cervical cell helps in detecting the cancer. Appropriate classifiers are used to classify the smear image as normal/abnormal using the identified parameters. This paper provides collective reviews on cervical cancer analysis which includes various segmentation approaches for overlapping problems, parameter identification methodologies and classifiers used for smear image analysis.