Abstract

Lung cancer has been the reason for fatality for many people in recent years. The manifestation of lung nodules is the prominent reason of lung cancer. Early detection of cancer facilitates early treatment which improves the chance of survival of patients. The most trivial way to discover lung cancer is by working with Computed Tomography (CT) image. Computer Aided Diagnosis (CAD) is a system that is designed by the integration of medical science and computers. A CAD system that is used for the diagnosis of lung cancer accepts lung CT images as input and depending on an algorithm helps doctors to implement image analysis. It includes three main steps to detect lung nodule: preprocessing, segmentation and classification of cancer nodule using support vector machine (SVM). With the aid of CAD, doctors can take the last word. Images include some redundant data and some feature that are critical for processing; pre-processing upgrade images by eliminating distortion and boost the important features. After pre-processing step the lung cancer nodule is drawn out. The obtained image through previous steps is used for training and finding the accuracy of the system in detecting cancer.
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**Keywords**

Segmentation, Dilation, Erosion, Support Vector Machine (SVM), Classifier.