Abstract

Lung cancer is one of the death threatening diseases among human beings. Early and accurate
detection of lung cancer can increase the survival rate from lung cancer. Computed
Tomography (CT) images are commonly used for detecting the lung cancer. Nowadays the lung
cancer is staged according to the TNM staging method where T means Tumor, N means
Nodule and M means Metastases. The existing lung cancer detection algorithms cannot stage
cancer according to the TNM staging method. The proposed system can identify the T stage of
the cancer accurately. The proposed system includes different stages such as pre-processing,
segmentation, feature extraction, tumor detection and tumor stage identification. The proposed
system promises better result than the existing systems, which would be beneficial for the
radiologist for the accurate and early detection of cancer. The method has been tested on 200
slices of CT images of various stages of cancer obtained from Regional Cancer Centre
Trivandrum and is found to give good results. The accuracy of the proposed method in this
dataset is 94.4%
References


Index Terms

Computer Science          Image Processing
Keywords

CT image, Pre-processing, Segmentation, Feature Extraction, TNM stage