Kidney Tumor Segmentation and Classification on Abdominal CT Scans

Abstract

This paper, deals with systematic study of simple segmentation and classification algorithms for kidney tumor using Computed Tomography images. Tumors are of different types having different characteristics and also have different treatment. It becomes very important to detect the tumor and classify it at the early stage so that appropriate treatment can be planned. This CT scans are visually examined by the physician for detection and diagnosis of kidney tumor. However this method lacks accuracy and detection of size of the tumor. So to overcome this, a computer aided segmentation technique has been proposed, which extracts the tumor part from the kidney, further on which feature extraction method is performed for extracting certain features and the type of tumor i.e. malignant or benign is displayed by using simple classifiers.

References

Keywords

Pre-processing, Fuzzy C-means, Grey Level Co-occurrence Matrix, K Nearest Neighbour classifier, Support Vector Machine classifier