Abstract

This paper, first analysis the performance of image segmentation techniques; K-mean clustering algorithm and region growing for cyst area extraction from liver images, then enhances the performance of K-mean by post-processing. The K-mean algorithm makes the clusters effectively. But it could not separate out the desired cluster (cyst) from the image. So, to enhance its performance for cyst region extraction, morphological opening-by-reconstruction is applied on the output of K-mean clustering algorithm. The results are presented both qualitatively and quantitatively, which demonstrate the superiority of enhanced K-mean as compared to standard K-mean and region growing algorithm.

Reference


**Index Terms**

Computer Science  
Image Processing
Enhanced K-Mean Clustering Algorithm for Liver Image Segmentation to Extract Cyst Region

Key words

- Image segmentation
- region of interest
- k-mean clustering
- region growing