

基于多小波的胃癌病理细胞图像边缘检测与分析

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本文是一种综合胃癌病理细胞图像特点的多小波变换边缘检测的研究。论文的目的是为了医学图像信息融合分析准备数据源。文中提出了解决相关问题的方法,并归纳了改善小波边缘检测效果的一些策略。为了检验小波边缘检测的性能,本文获得了相关的实验结果。从结果对比中发现,对于具有复杂纹理的医学病理细胞图像,采用传统的边缘检测方法会产生伪边缘,它将影响图像边缘检测的可信度。运用小波变换的时频尺度特性和对奇异变化的优良检测性能,得到了无噪声污染的图像实际边缘。

Edge Detection and Analysis for Gastric Tumor Pathologic Cell Images Based on Multi-Wavelet

A research of edge detection based on multi-wavelet transform for gastric tumor pathologic cell images is presented here, combined with the feature of cell morphology. The purpose of the paper is expected to prepare data sources for the information fusion analysis of the images. The relative methods were brought forward to the problems of the edge detection, and some strategy was summed up to improve the effect of the wavelet edge detection. To test the performance of the wavelet edge detection, the relative results are obtained. From comparison with the results, it is discovered that traditional methods of the edge detection may produce the false edges for complex texture of pathologic cell images, which influence the reliability of the edge detection. However, the real edges of images uncontaminated by noise can be made by multi-wavelet, which has spatial-temporal characteristic and excellent detection capability to odd changes.

关键词

细胞图像; 多小波; 边缘检测(Cell images; Multi-wavelet; Edge detections)