Skin Disease Analysis and Tracking based on Image Segmentation

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Abstract:

The proposed method is based on two steps - the first step is a preprocessing one which consists in image segmentation to detect the edge of the infected skin region. In the second one, another proposed method is applied to measure the wound 'size' and control the illness evolution. A comparative study was realized to select the most suitable segmentation technique referred to a proposed criterion based on 'edge accuracy' EAC. The new criterion was compared with the 'surface accuracy' based on ROC space.

Advantages:

These methods have encountered many problem like transparency tracing grid preprinted in 1mm 2 areas so take more counting time and are not suited to routine practice as well it's so hard to keep the transparency grid or the ruler against the ulcer and it can be discomfort to patients afraid of the risk of contamination or cross-infection. But in this work a computerized method is used to measure the skin disease (i.e.)the measurement of the surface of the infected skin using the counting the digital pixels.

Disadvantages:

FCM method has some disadvantages such as its need for a large amount of time to converge and it is more sensitive to the noise and outliers in the data. In ROC,Confidence scores used to build ROC curves may be difficult to assign. False-positive and false-negative diagnoses have different misclassification costs.