Abstract

Cartilage is a protective tissue which covers the knee bone joints and also allows bones to glide easily and prevents friction between bones. Cartilage slowly degenerates due to age, wear and tear and obese causing joint inflammation which is referred as Osteoarthritis (OA). There is need to estimate the cartilage thickness to find out the severity of the OA. In this paper, image processing algorithms are applied to Knee X-ray images to segment the cartilage portion and to find out the thickness. Spatial domain techniques of image processing such as pre-processing, contrast enhancement, segmentation, post processing methods are employed to pre-process the image and segment the cartilage portion. The proposed method works well on the images collected from local hospitals and segments the cartilage portion.

References

1. Spatial Domain Approach for Articular Cartilage Segmentation of X-Ray Image


**Index Terms**

Computer Science  
Image Processing

**Keywords**

Osteoarthritis(OA), Adaptive Histogram Equalization, Thresholding, GLCM, Morphological Operations.