Abstract

Breast density, defined as the proportion of fibroglandular tissue over the entire breast has been linked with a higher risk of developing breast cancer, in fact it has been suggested that women with a mammographic breast density higher than 75 percent have a four-to six-fold higher risk of developing breast cancer than women with little or no dense tissue. Therefore, automatic methods of measuring breast density could potentially aid clinicians to provide more precise breast cancer risk estimates. This paper proposes a novel method of segmenting breast density, which extracts objects with the same density using fusion of super pixels and a watershed based technique, this idea is based on the principle that both super pixel and watershed often results in over segmentation, for the later algorithm, over segmentation may be due to contours which have been suppressed according to similarity of contrast and topological measures, we took advantage of super pixel to consolidate space information and efficiently process the intensity non-homogeneity problem, afterward, re-introduced this contour with watershed transform to get a better segmentation.
References

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and risk classification based on mammographic parenchymal patterns and geometric moments.

Index Terms

Computer Science Biomedical

Keywords

Watershed, Super pixel, Mammograms, Segmentation