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## AN EMPIRICAL COMPARISON OF IMAGE SEGMENTATION METHOD IN MAMMOGRAM IMAGES

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## Abstract

Mass detection is one of the main requirements of computer-aided mammographic breast cancer detection techniques. Image segmentation is used to partition an image into a set of disjointed regions with different properties for image analysis and understanding. However, the typical diagnostic signs such as microcalcification and masses are difficult to detect because mammograms are low-contrast and noisy images. In this paper we compare to various segmentation methods in mammogram images, such as Expectation Maximization algorithm, Moving K means algorithm, Fuzzy C means algorithm and we implemented a new segmentation method combining with mathematical morphology. The purpose of this paper is to find which segmentation method is more appropriate for recognition and diagnosis in mammogram images. And finally we compare the mass detection area in different algorithms.

**Keywords:** EM algorithm, Moving K means algorithm, Fuzzy C means algorithm, Morphology, Mammogram segmentation.

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