



Tumours Detection in Breast MRI Images Using Improved Methods

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Improved Computer Image Processing Methods for Tumours Segmentation and Detection in Breast Magnetic Resonance Imaging | Breast cancer is the leading cause of death amongst cancer patients afflicting women and the second most common cancer around the world. Magnetic Resonance Imaging (MRI) is one of the most effective radiology tools to screen breast cancer. However, image processing techniques are needed to help radiologists in interpreting the images and segmenting tumours regions to reduce the number of false-positive. In this study, a segmentation approach with automatic features is developed for breast MRI tumours. The methodology starts with data acquisition followed by pre-processing. This is then followed with breast skin-line exclusion using integrated method of Level Set Active Contour and Morphological Thinning. Next, regions of interests are detected using proposed Mean Maximum Raw Thresholding method. In the tumour segmentation phase, two modified Seeded Region Growing (SRG) methods are proposed; i.e. Breast MRI Tumour using Modified Automatic SRG and Breast MRI Tumour using SRG based on Particle Swarm Optimization Image Clustering. From the evaluation results, it can be noticed that the proposed approaches scored high results using various measures comparing to previous methods. | Format:...



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