عنوان مقاله:

Novel Detection of Breast Cancer in Thermography Images Using Manhattan Technique

محل انتشار:

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خلاصه مقاله:

Breast cancer is the uncontrolled growth of abnormal cells in the breast area and it is one of the widespread causes of mortality in today's world. So that 8000 people are diagnosed with breast cancer of a year in Iran. The exact and precise diagnosis is considered as the vital point in the process of treatment. Among the various methods of screening, thermography is a non-invasive and safe method to detect breast cancer. In this article a classification algorithm of thermograms with the purpose of detection of breast cancer from gray level co-occurrence matrix based features texture has been proposed. For this purpose, 52 images from the breast of healthy and unhealthy people from the data were collected. The preprocessing and segmentation of data was performed in gray level for the creation of temperature matrix. Finally the gray level co-occurrence matrix based features was extracted from the matrix and the collection of features using Manhattan technique was the input for weighted K-nearest neighbor classifier. The result of Accuracy was 85.6, Sensitivity was 91.7 and Specificity Index was 81.2 selected as the optimal structure compared to other methods that have been proposed so far.

کلمات کلیدی:

thermography image, breast cancer, gray level co-occurrence matrix