COMPUTER AIDED DETECTION/DIAGNISIS FOR BREAST CANCER DETECTION IN COMPUTED TOMOGRAPHY LASER MAMMOGRAPHY (CTLM)

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Breast cancer is the leading cancer killer among women. Early detection and new treatments have improved survival rates. Although mammography is the gold standard for breast cancer screening, increasing awareness indicate that there is some limitation for part of women whom mammography reduce sensitivity based on their breast density. Other modalities such as ultrasound and magnetic resonance imaging and recently computed tomography laser mammography (CTLM) are often suggested as an adjunct to mammography to achieve additional information and increase sensitivity. The angiogenesis is known a critical for tumor growth and spread of breast cancers. Computed tomography laser mammography (CTLM) CTLM has been introduced to verify angiogenesis at early stage. In this modality, there are no restriction factors such as age or breast density. Main difficulty for radiologists is closeness of color shade to interpret CTLM images. Computer-aided detection /diagnosis (CAD) systems have been developed to help radiologists in order to increase diagnosis accuracy. Generally, a CAD system consists of four stages: (a) pre-processing, (b) segmentation of regions of interest, (c) feature extraction and selection, and finally (d) classification. The aim of this research is to develop a CAD system in computed tomography laser mammography (CTLM) to detect and classify benign and malignant lesions in the breast.   .