Automatic classification of the ganglion and spiculated mass in mammography

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Abstract

The proposed technique is based on Mask-RCNN and was evaluated using INCAN Data base. We obtained a ganglion and spiculated mass detection rate of 87% and segmentation performances with 82.9% sensitivity, 93.7% precision and 88.0 F1. The database is validated by 5 experts, an oncologist specializing in breast pathology, three radiation oncologists and a mastologist. This approach allows us to employ deep learning techniques to provide assistance to healthcare professionals in the medical diagnosis for breast cancer.

Keywords: mammography, classification, Mask-RCNN.

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