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.
**Funding:** This research received no external funding and has been partially supported by the eVida Group of the Basque Government.

**Acknowledgments:** The authors would especially like to express their gratitude to the National Institute of Cancerology. Thanks also to radiologist and specialist in mammary pathology Kictzia Yigal Larios at FUCAM A.C., radiologist and specialist in mammary pathology Raquel Balbás at FUCAM A.C., surgeon mastologist Guillermo Peralta at Cancer Center Tec 100 by MRC International, and radiologist and specialist in mammary pathology Néstor Piña at Cancer Center Tec 100 by MRC International.