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cases	<table><tr><td>**authors**</td><td>• Xi, P. • Shu, C. • Goubran, R.</td></tr><tr><td>**title**</td><td>Abnormality Detection in Mammography using Deep Convolutional Neural Networks</td></tr><tr><td>**publication_date**</td><td>2018-01-01 00:00:00</td></tr><tr><td>**source**</td><td>SupportedSources.CROSSREF</td></tr><tr><td>**journal**</td><td></td></tr><tr><td>**volume**</td><td></td></tr><tr><td>**doi**</td><td>10.1109/memea.2018.8438639</td></tr><tr><td>**urls**</td><td>• http://xplorestaging.ieee.org/ielx7/8410663/8438594/08438639.pdf?arnumber=8438639 • http://dx.doi.org/10.1109/memea.2018.8438639</td></tr><tr><td>**id**</td><td>id8822182636844630268</td></tr><tr><td>**abstract**</td><td></td></tr><tr><td>**versions**</td><td></td></tr></table>	<table><tr><td>**authors**</td><td>• Pengcheng Xi • Chang Shu • Rafik Goubran</td></tr><tr><td>**title**</td><td>Abnormality Detection in Mammography using Deep Convolutional Neural Networks</td></tr><tr><td>**publication_date**</td><td>2018-03-05 20:04:56+00:00</td></tr><tr><td>**source**</td><td>SupportedSources.ARXIV</td></tr><tr><td>**journal**</td><td>None</td></tr><tr><td>**volume**</td><td></td></tr><tr><td>**doi**</td><td></td></tr><tr><td>**urls**</td><td>• http://arxiv.org/pdf/1803.01906v1 • http://arxiv.org/abs/1803.01906v1 • http://arxiv.org/pdf/1803.01906v1</td></tr><tr><td>**id**</td><td>id-5759063516475952476</td></tr><tr><td>**abstract**</td><td>Breast cancer is the most common cancer in women worldwide. The most common screening technology is mammography. To reduce the cost and workload of radiologists, we propose a computer aided detection approach for classifying and localizing calcifications and masses in mammogram images. To improve on conventional approaches, we apply deep convolutional neural networks (CNN) for automatic feature learning and classifier building. In computer-aided mammography, deep CNN classifiers cannot be trained directly on full mammogram images because of the loss of image details from resizing at input layers. Instead, our classifiers are trained on labelled image patches and then adapted to work on full mammogram images for localizing the abnormalities. State-of-the-art deep convolutional neural networks are compared on their performance of classifying the abnormalities. Experimental results indicate that VGGNet receives the best overall accuracy at 92.53\% in classifications. For localizing abnormalities, ResNet is selected for computing class activation maps because it is ready to be deployed without structural change or further training. Our approach demonstrates that deep convolutional neural network classifiers have remarkable localization capabilities despite no supervision on the location of abnormalities is provided.</td></tr><tr><td>**versions**</td><td></td></tr></table>	DUPLICATES	169