

B-0962 First experiences with a self-test for Dutch breast screening radiologists as a quality assurance tool

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Purpose: To evaluate the use of a self-test as a quality assurance tool for screening radiologists in the Dutch breast cancer screening programme.

Methods and Materials: 144 screening radiologists were invited to voluntarily complete a test set of 60 screening mammograms. The following grading criteria were assigned regarding the most suspicious lesion: location, level of suspicion, BI-RADS, laterality, type (well defined mass, ill defined mass, spiculated mass, microcalcification clusters, architectural distortion and asymmetric density) and mammographic density are assigned. Also, several reader characteristics, such as years of experience and number of cases read per year, were to be completed. Case and lesion sensitivity and specificity were determined for all readers. The Spearman correlation coefficient was used to determine correlation between reader characteristics and performance measured by the area under the receiver operator characteristics (ROC) curve (AUC).

Results: 112 radiologists completed the test set (78%). The mean age was 49 (range 33-68) and on radiologists read on average 10,000 (range 700-60,000) screening mammograms per year. The median AUC value was 0.91, case sensitivity 91 %, lesion sensitivity was 91 % and specificity 94 %. The AUC was not correlated to reader characteristics. The test-set revealed interobserver variation in assigning lesion types.

Conclusion: Overall, a good performance was seen among all screening radiologists. Readers are able to determine their educational needs and compare it with peers during training or audits. It is therefore a useful quality assurance tool. Medical education should be dedicated to reducing interobserver variation.