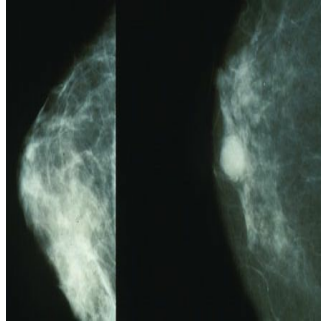


Test Set Mammography Data Can Reasonably Describe Actual Clinical Reporting



A recently published study in Radiology sought to establish the extent to which test set reading can represent actual clinical reporting in screening mammography.

Researchers in Sydney, Australia used two hundred mammographic examinations to create 10 reader-specific test sets. Data generated from actual clinical reports were compared with three test set conditions: clinical test set reading with prior images, laboratory test set reading with prior images, and laboratory test set reading without prior images. A further five expert screen readers interpreted a common set of images in two identical test set conditions to establish a baseline for intraobserver variability. Confidence scores (from 1 to 4) were assigned to the respective decisions made by readers. Region-of-interest (ROI) figures of merit (FOMs) and side-specific sensitivity and specificity were described for the actual clinical reporting of each reader-specific test set and were compared with those for the three test set conditions. Agreement between pairs of readings was performed by using the Kendall coefficient of concordance.

Moderate or acceptable levels of agreement were evident ($W = 0.69-0.73$, $P < .01$) when describing group performance between actual clinical reporting and test set conditions that were reasonably close to the established baseline ($W = 0.77$, $P < .01$) and were lowest when prior images were excluded. Higher median values for ROI FOMs were demonstrated for the test set conditions than for the actual clinical reporting values; this was possibly linked to changes in sensitivity.

The authors conclude that reasonable levels of agreement between actual clinical reporting and test set conditions can be achieved. However, inflated sensitivity may be evident with test set conditions.

Reference: Screening Mammography: Test Set Data Can Reasonably Describe Actual Clinical Reporting BaoLin P. Soh, Warwick Lee, Mark F. McEntee, Peter L. Kench, Warren M. Reed, Rob Heard, Dev P. Chakraborty and Patrick C. Brennan. Radiology. Published online before print March 12, 2013, doi:10.1148/radiol.13122399

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