

Test set performance indicators correlate well with clinical audit

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BaoLin Pauline Soh, Ph.D., from Singapore General Hospital, and colleagues generated clinical audit data for each of 20 radiologists over a two-year period. The test set comprised 60 mammographic examinations, consisting of 40 normal and 20 cancer cases. Any identifiable cancer was located and levels of confidence were scored from 2 to 5, with 3 and above considered a recall rating. The authors calculated Jackknifing free response operating characteristic (JAFROC) figure-of-merit (FOM), location [sensitivity](#), and specificity for

individual readers.

The researchers observed significant correlations for JAFROC FOM with recall rate at first round of screening, rate of small invasive cancers per 10,000 reads, percentage of cancer reads that were not recalled, and sensitivity (all $P = 0.002$). Significant correlations were seen for location sensitivity with rate of small invasive cancers per 10,000 reads ($P = 0.04$), rate of ductal carcinoma in situ (DCIS) per 10,000 reads ($P = 0.05$), detection rate of all invasive cancers and DCIS per 10,000 reads ($P = 0.01$), percentage of all cancers not recalled ($P = 0.009$), and sensitivity ($P = 0.009$). There were no other significant correlations noted.

"Performance indicators from test set demonstrate significant correlations with specific aspects of clinical performance, although caution needs to be exercised when generalizing test set specificity to the clinical situation," the authors write.

One author is employed by Ziltron; Hologic and Sectra facilitated the workshop and provided the equipment necessary for the sessions.

More information: [Abstract](#)
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