Reviewer’s report

Title: Survey of Practitioners' Competency for Diagnosis of Acute Diseases Manifest on Chest X-ray

Version: 3 Date: 16 Jun 2017

Reviewer: Ernest Ekpo

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The major flaw in this paper has not been addressed. This is an observer performance study, correlation and chi-square analyses are not performance metrics, they simply assess association between variables (correlation) and differences between variables (chi-square).

Being an observer performance study, where the true diagnosis is known and there is only one vignette per case and normal cases in the test-set, the best analysis would be ROC or FROC to obtain AUC, sensitivity and specificity for each reader and for all readers.

The previous comments that I raised in the results and discussion have not been addressed and no explanation was given for this. These comments were:

Results: Predictors of Correct Answers: Predictors of correct answers: It is unclear how total certainty score would be a predictor of performance. I would think predictors should be related to reader characteristics that influence performance. E.g experience, years since graduation, period spent in Radiology department etc. This too has not been addressed by the authors

Discussion

P11lines 44-48: There is no evidence to show that performance was related to experience. The statement "Certainty should stem from both knowledge and experience. While some of the participants in our survey were independently-practicing GPs with noticeable prior experience, their responses were similarly undesirable" contradicts the point raised. If knowledge and experience are determinants of performance, then why was their responses undesirable?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess
Are the conclusions drawn adequately supported by the data shown?
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No

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I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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