



SDI Review Form 1.6

Journal Name:	Advances in Research
Manuscript Number:	2014_AIR_13219
Title of the Manuscript:	Investigation of Diagnostic Test Performance Using Receiver Operating Characteristic And Fundamental Concepts Of Information Theory
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>Emphasize following: "With regard to ASO values, it is concluded that I. Turbidimetric test is more likely to show the similarity to Nefelometric test in comparison with II. Turbidimetric test". How did you compare the test results?</p> <p>Line # 22, do not agree. ROC is still used widely for receivers/detectors performance measurement.</p> <p>Find the threshold value for mutual information by using information theory and compare it to your recommended value.</p> <p>Few statements are duplicated "exactly" from "Evaluation and Comparison of Diagnostic Test Performance Based on Information Theory" by Özlem Ege Oruç , Armağan Kanca. Published in International Journal of Statistics and Applications, 2011. Re-write this information in your own word. {for example see your line #90-93: "A fundamental concept of information theory, entropy and mutual information, is directly applicable to evaluation of diagnostic test performance".}</p>	<p>* Figure 2 represents statistical comparison of two ROC curves of two tests. In addition to this, AUC values of two tests are compared in the paragraph including lines #180 and #181.</p> <p>* The phrase of "this use decreased gradually in the following decade" in the line # 22 was omitted.</p> <p>* Table 4 represents 'the best four threshold values' for information theory analysis and their mutual information values. The other threshold values are omitted.</p> <p>* We added our own reference in the bracket at the end of the sentence.</p>



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<u>Minor</u> REVISION comments	Clarify sentence ended in line # 185 and # 192. Grammatical format issue, see line 50, 60 {e.g.; you} Need reference for Table -1. Need reference for AUC description. Need reference for line# 91. Need reference for line # 158. Need reference for line # 223.	<p>* We clarified the line # 185 as 'Probabilities of detecting actually ill people on these threshold values are the greatest among all threshold values' and the line #192 as 'Probabilities of detecting actually healthy people on these threshold values are the greatest among all threshold values'</p> <p>* The sentences in the line # 50 and #60 were converted to passive form.</p> <p>* We added website reference at the end of the line # 158.</p> <p>* For the line # 223, we tried to indicate that different threshold values which had the greatest information gain could be offered alternatives apart from ROC analysis results.</p>
<u>Optional/General</u> comments	AUC plot provides total insight when comparing multiple ROC curves. If possible show a plot of AUC curves with respect to threshold values.	<p>* We thought that including all plots of AUC curves in terms of all threshold values would be unnecessary for the article.</p>