Author's response to reviews

Title: Comparison of two laboratory- developed PCR methods for the diagnosis of Pulmonary Tuberculosis in Brazilian patients with and without HIV infection

Authors:

Luciene Cardoso Scherer (luciene.scherer@hotmail.com)
Rosa Dea Sperhacke (deasperhacke@hotmail.com)
Carla Jarczewski (jarczews@terra.com.br)
Patrícia Isquerdo Cafrune (patricia_cafrune@hotmail.com)
Candice Michellon (cmichellon@hotmail.com)
Rubia Rupenthal (rrupenthal@hotmail.com)
Marta Osorio Ribeiro (martaoso@terra.com.br)
Antonio Ruffino Netto (aruffino@fmrp.usp.br)
Maria Lúcia R. Rossetti (mrossett@terra.com.br)
Afrânio Lineu Kritski (kritskia@gmail.com)

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Author's response to reviews: see over
Rio de Janeiro, 31th December, 2010

Rachel Neilan, MSc
Scientific Editor
BMC-series Journals
BioMed Central
Floor 6, 236 Gray's Inn Road
London, WC1X 8H
e-mail: editorial@biomedcentral.com

R2

This is a covering letter with a point-by- point description of the changes made in manuscript

Contribution of two revelation systems of in house PCR (colorimetric and non colorimetric) in the diagnosis of Pulmonary Tuberculosis in Brazilian patients with and without HIV infection MS: 1037585323765168

Manuscript revised with point- by-point description of the changes made.

Reviewer 1:

Reviewer's report

Reviewer's report

Title: Contribution of two laboratory- developed PCR methods for the diagnosis of Pulmonary Tuberculosis in Brazilian patients with and without HIV infection
Version: 2 Date: 29 November 2010

Reviewer: Moses Joloba

Reviewer's report:

The authors addressed most of the serious issues previously raised.

However, the title need some improvement to reflect the manuscript content.

The word contribution in the title is somewhat a misfit!

I would suggest you use comparison instead of contribution?

Major Compulsory Revisions

In the title, "Comparison" may be a better substitute for contribution.

The manuscript was revised and changed in Title

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests
Reviewer's report

Title: Contribution of two laboratory-developed PCR methods for the diagnosis of Pulmonary Tuberculosis in Brazilian patients with and without HIV infection

Version: 2 Date: 21 December 2010

Reviewer: David Stivers

Reviewer's report:

Major Compulsory Estimates

(1) All estimations of proportions (such as sensitivity and specificity, NPV and PPV) should have 95% CI reported for them, ideally using Wilson score w/out continuity correction, but exact or Wald is acceptable; whatever method is used should be stated.

The manuscript was revised and changed in Methods Section and in table 2 and 3..

(2) PPV/NPV is a little problematic - PPV/NPV is extremely prevalence dependent - it's only applicable in the population in which the test is applied; in particular, reporting PPV / NPV for artificially constructed samples (e.g., by pooling disparate groups in which the prevalence of disease is known or suspected to be different) does not result in interpretable values of PPV and
NPV; in particular, the prevalence of TB in the non-treated group and past group is markedly different (p <10E-4 using Wilson score without continuity correction), and thus it is invalid to report PPV and NPV in these groups combined without a proper weighting and justification.

The manuscript was revised and changed in Discussion Section.

(3) I am concerned about reporting AUC for a dichotomous predictor - AUC is certainly a measure of the information in a test, but for a dichotomous predictor, it is is simply the average of sensitivity and specificity (simple geometry can be used to confirm this); if the authors do wish to report AUC, it should be stated that for a dichotomous predictor, AUC is simply the average of sensitivity and specificity, and the ROC curves should be considered strictly optional.

The manuscript was revised and changed in Results and Conclusion Section.

Minor Essential Revisions

(4) reporting sens/spec for a component of the reference standard could be construed as misleading - there should be a footnote to the 100% specificity reported for the sputum culture clarifying that, as it is a component of the gold standard and must be positive for the presence of TB to be presumed, it is tautological that specificity is 100% for this test.
More interesting, perhaps, is the sensitivity of the sputum culture, which measures agreement between the clinical definition of TB and the sputum culture test.

The manuscript was revised and changed in Methods Section.

(5) Authors may wish to consider reporting odds-ratios (with 95% CI) instead of or in addition to PPV/NPV, especially since PPV and NPV are not universally applicable.

The manuscript was revised and changed in Results and Conclusion Section.

Discretionary Revisions

(6) Why are the sample sizes for TB non-treated group == HIV-, and TB past == HIV+? Is this merely coincidental?

Yes

Level of interest: An article of importance in its Field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests
Luciene Cardoso Scherer M.D.

Center of Improvement Scientific and Technologic –CDCT
State Foundation by Research in Health –FEPPS/RS
Av Ipiranga 5400, 3° andar
Porto Alegre, Brazil
CEP 90610-000.
phone/fax: (+55) 51 3352 0336
e-mail: luciene.scherer@hotmail.com

Afranio Kritski M.D., PhD.
Tuberculosis Academic Program, Coordinator
IDT-HUCFF Hospital Complex
Internal Medicine Department, Chief
Medical School of Federal University of Rio de Janeiro
Av Brigadeiro Trompowsky s/n - Ilha Fundao - Predio HUCFF 4 andar
Rio de Janeiro, Brazil
CEP 21 941 590/ phone/fax: 55 21 2550 69 03/ email: kritskia@gmail.com