Author's response to reviews

Title: Accuracy and limitations of equations for predicting of the glomerular filtration rate during follow-up of patients with non-diabetic nephropathies

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Andrea BUCCEI
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To the Editor,

We are pleased to submit a revised version of our manuscript MS 1575766542564507 entitled “Accuracy and limitations of equations for predicting the glomerular filtration rate during follow-up of patients with non-diabetic nephropathies”.

We have taken into account the reviewers’ comments as follows

Reviewer 1: Prof Peter Rossing
1) We have now analyzed separately patients followed-up for a longer period and having 3 GFR measurements or more interestingly this yielded similar conclusions but also a better correlation and a smaller bias, suggesting a statistical phenomenon of regression toward the mean.
2) We have now analyzed the potential clinical factors of inaccuracy in the formulae
3) In the discussion, we now refer also to the collaborative study by Stevens on cystatin C.

Reviewer 2: Prof Vincent Rigalleau
1) We have now analyzed the whole population of 126 patients and give GFR inulin and estimates at baseline and analyze their discrepancies by ANOVA, the Pierson coefficient and accuracy 10%, 20% and 50%.
1) We have analyzed the trends in GFR and creatinine in the whole population of 126 patients by comparing baseline and final values, showing the lack of
statistical modification. This may be related to the fact that half the population had a deterioration in GFR while the other half improved quite symmetrically.

2) We now give the GFR slope and estimates for the whole population and show similar estimates with the reference method; we must stress that the analysis is skewed by the fact that half the population had a negative slope GFR slop that was cancelled out by the near-symmetrical positive slope of improvers.

As suggested by the reviewer, the dichotomy of the population allowed us to calculate the ROC curves of the estimates and thus to differentiate progressors from improvers.

- The Discussion on cystatin C has been deleted from the introduction section
- We have reanalyzed all our creatinine data with the Mayo quadratic equation and provide the performance of this new equation
- We found that proteinuria at onset was higher in the progressor group

I hope you will find this revised version suitable for publication in BMC-Nephrology and look forward to hearing from you.

Sincerely yours
Guy Rostoker, MD PhD