Reviewer's report

Title: Performance of Cockroft-Gault, MDRD, and CKD-EPI in estimating prevalence of renal function and predicting survival in the oldest old

Version: 1 Date: 6 June 2013

Reviewer: francesco pizzarelli

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In this study Willems et al tried to investigate relationships between increasing age and different equations to estimate renal function in subjects aged 20-85 years (study 1). They also investigated the performance of equations in predicting mortality in a population based large sample of octogenarians (study 2).

Major points

• It is well known that renal function declines with age. In Nhanes 3, just to quote one of the many studies addressing the matter, the regression of eGFR on age was demonstrated in more than 15,000 citizens

• Study 1 leaves this reviewer more dubious than persuaded. Numerosity is inadequate, being in the region of 40 subjects in the various age categories analyzed.

• Creatinine was determined by Jaffe method using Hitachi 747. AA ought to specify if this is a calibrated, standardized, IDMS-traceable assay. Should not be the case, AA are not allowed to utilize both the re-expressed MDRD equation with 175 multiplier, nor the CKDepi

• At first reading, text is not fluent, often repetitive

Minor points

• C G is an estimate of creatinine clearance and MDRD of glomerular filtration rate. Please revise accordingly the manuscript

• In the paper quoted as reference 18 the slope of regression of renal function with age was much steeper with CG than with MDRD. Consequently CG was progressively lower than MDRD with increasing age (check fig 4). Please revise the sentence on page 11

• Manuscript needs perusal revision for typing or grammar errors

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published
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