Reviewer's report

Title: Prevalence and Determinants of Chronic Kidney Disease in Community-Dwelling Elderly by Various Estimating Equations

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Reviewer: Pierre Delanaye

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Major Compulsory Revisions

The author studied a specific elderly cohort from the general population to estimate the prevalence of CKD. The topic is certainly of great interest because we lack data in this specific population. The article has thus the potential to be published in BMC Public Health. However, we have major remarks regarding some crucial methodological points.

1) The authors used an IDMS creatinine with the abbreviated MDRD study equation including the coefficient "186". This is not the right equation. With their creatinine, the authors should use the equation with the coefficient "175", ie the equation adapted for the IDMS creatinine (see [1]). This is fundamental and could largely influence the results.

2) Is the cystatin C calibrated? This should be shortly discussed [2-4].

3) The choice of the cystatin C equation is very questionable. The Arnal equation is not well validated from our point of view. We think the authors should study the equations proposed by the Levey group [3].

4) The following study having compared cystatin C – and creatinine based equations could be cited and shortly discussed [5]. In the same view, the following references could be cited [6;7].

5) The authors wrote “Several studies consistently found a better prognostic value of CysC-based estimating equations with all-cause mortality, CVD and ERSD”. We agree with the concept but, in most of these studies, only cystatin C is studied (not cystatin C-based equations).

6) There is a hot debate in the literature about the definition of CKD in the elderly subjects. In other words, it is questionable to assert that an elderly subject (over 80 y) has CKD (D=disease) if estimating GFR is at 45 or 50 mL/min.1.73 m². Indeed, decreasing in GFR with age might be considered as physiological. This could be shortly discussed (even if authors don’t have the data to end the debate)[8;9].

Reference List


Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I have no conflict of interest to declare