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: 9 June 2013

Reviewer: Hung-Bin Tsai

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Major Compulsory Revisions

#1 Please explain the 496 subjects from your results. I could only catch the information of the lost 12 subjects from Table 2. Three parts of your article mentioned about 90% as follows:

In abstract line 18, renal dysfunction (stage 1-3) at age 85 years was highest for C-G(90%), Page 8 Results line 23, Using this formula, in 496 subjects (90%), a creatinine clearance lower than 60 ml/min was found, and Page 11 Discussion line 4, prevalence of renal dysfunction (CKD stage 1-3) at age 85 years was highest for C-G (90%).

#2 For stage 1~3 CKD patients using CKD-EPI formula, creatinine is not the only criteria for diagnosis. We will use proteinuria criteria as well. However, your study didn't have urine protein data. In daily clinical practice, severe proteinuria could also predict stroke, acute myocardial infarction, and dementia, so called diseases related to vascular endothelial dysfunction. It seems that your conclusion recommended MDRD formula to predict mortality best. However, CKD-EPI provided more information for clinical practice and predict hospital mortality and length of stay (LOS). Since your mortality data was between 1 Sept. 1997 and 1 Feb. 2009, the casual relationship between the three CKD criteria and death is very difficult to explain.

#3 In P.12 section of eGFR in the oldest old, line 7, Whereas based on these results......to line 10, and also other therapeutic implications. Cannot understand your viewpoints.

Since you will check 24hrCCr after hospitalization or refer to nephrologist to confirm the oldest old patients' renal function, to apply CKD-EPI or MDRD as screening is not the bad to raise more hospitalizations or unnecessary costs. Please cite more references to support your viewpoints.

Here are some information about diagnosis of geriatric AKI for your reference.

1. Chao CT, Tsai HB, Ko WJ. Acute kidney injury in the elderly: only the tip of the iceberg. J Clin Gerontol Geriatr 2013 Apr (accepted)

2. Chao CT, Wu VC, Lai CF, Shiao CC, Huang TM, Wu PC, Tsai IJ, Hou CC, Wang WJ, Tsai HB, Lin YF, Chiang WC, Lin SL, Tsai PR, Ko WJ, Wu MS, Wu KD, the NSARF group. Advanced age affects the outcome-predictive power of

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

**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