Reviewer's report

Title: 25-Hydroxyvitamin D level is Inversely Associated with Serum MMP-9 in a cross-sectional study of African American ESRD Patients

Version: 2 Date: 17 December 2010

Reviewer: Michal Melamed

Reviewer's report:

Major Compulsory Revisions:
None

Minor Essential Revisions:

page 5- reference 12 is not in the US ESRD population but in the general population - you can just take out reference or add "within the US ESRD and general population"

page 7 - under Definition of variables:
it says that the values were obtained closest to the baseline blood sample - what is the range of time between the baseline bloods and the other labs. When possible, I believe it is better to have samples from before the baseline date than after (because things may change after the blood draw). Can the authors provide a time range for how close these are and how many are before and after?

Page 9 - The sentence that starts "To adjust for these associations..." doesn't make sense to me - I think it is better to say "to adjust for possible confounding of these associations" we used... Next sentence - it should be variables significant at the "less than" 5% level.

Under statistics - the authors should include a power calculation - what differences could they detect in their sample?

Page 10 - I'm not sure you need to point out the differences in 25(OH)D levels between <15 and >15 - isn't this fairly obvious that they should be very different?

Overall, I think you need to add a table or columns to table 1 comparing AVG and AVFs - as they are very different usually - AVG generally sicker, older - and this may be the reason for the differences seen rather than just the difference in access.

Page 12 - last sentence - we did not observe a significant parallel increase in MMP-9 and CRP and concentrations? - not quite sure what this means, I think there may be an extra and - but also it should be "higher" levels not increase because it is cross-sectional - increase implies change over time
PAge 13 - Top paragraph - after reference 22 - would take out "Finally," because you only discuss one other reason.

Another reference you may want to add is Agarwal’s study in Hypertension where I think he showed lower CRPs after giving vitamin D.

The authors should also add a sentence that after log transforming these variables, they were normally distributed (if they were) because sometimes log transformation does not completely make variables normal.

The authors should also note whether the blood collection for this study was specifically for this protocol (was this the primary outcome looked at) or did they use available samples from another study. While the data is the same in both, if it was collected for a different study, readers may use stricter p-values because it is a secondary analysis.

Discretionary Revisions:
None

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.