Reviewer's report

**Title:** Non-linear association of serum 25-hydroxyvitamin D with urinary albumin excretion rate in normoalbuminuric subjects

**Version:** 1

**Date:** 16 April 2014

**Reviewer:** Shin-Wook Kang

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Minor Essential Revisions

The authors showed the inverse relationship between serum vitamin D levels and urinary albumin excretion rate in normoalbuminuric subjects, demonstrating that vitamin D deficiency may cause an increase in UAE in even subjects with normoalbuminuria. In general, this manuscript is well-written, the statistical analyses are relatively well performed, and the results do support the conclusions. This study is meaningful and interesting because the association between serum vitamin D levels and urinary albumin excretion rate in normoalbuminuric subjects has not yet been reported. However, several points regarding the results need to be clarified.

1. The authors showed the association of vitamin D deficiency with low grade urinary albumin excretion in normoalbuminuric subjects. In respect that low serum vitamin D levels were associated with high-normal urine albumin excretion (UAE) in apparently healthy population, the findings of present study could have significant clinical novelty. Previous studies have shown that the association of vitamin D with microalbuminuria in even general population recently. Therefore, the readers wonder how the results were when the analysis included subjects with microalbuminuria.

2. Diabetes or diabetic nephropathy is one of the important risk factors for albuminuria or microalbuminuria. Although the present study limited analysis to subjects with UAE<30mg/g, diabetes patients without microalbuminuria were also included. We could not sure that the relationships of vitamin D levels with UAE were same in diabetes patients and non-diabetes patients who were both in normoalbuminuric range. Thus, we recommend the analysis should be performed in diabetes and non-diabetes group, separately.

3. To combine laboratory data from different institutes, quintile normalization method was used. The authors should explain a little more detail about the quintile normalization method.

4. In figure 3, there is no explanation for what dashed lines represent.

5. Reference No 21. is not complete.

**Level of interest:** An article of importance in its field
Quality of written English: Acceptable

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.