Reviewer's report

Title: Changes in fibroblast growth factor 23 levels in normophosphatemic patients with chronic kidney disease stage 3 treated with lanthanum carbonate: results of the PREFECT study, a phase 2a, double blind, randomized, placebo-controlled trial

Version: 1 Date: 4 December 2013

Reviewer: Bjorn Meijers

Reviewer's report:

The manuscript entitled “Changes in FGF23 levels in normophosphatemic patients with CKD stage 3 with lanthanum carbonate: results of the PREFECT study” by Urena-Torres et al describes the results of a randomized placebo-controlled trial with lanthanum carbonate in patients with CKD stage 3. The authors conclude that, while phosphaturia was adequately reduced, lanthanum carbonate did not lead to sustained reductions in iFGF23, suggesting that factors other than phosphate burden may be responsible for increases of FGF23.

The study design is adequate and the results are well presented and interpreted. Limitations of the study (mainly small number of patients) are addressed by the authors. Some comments and suggestions are given below.

Major Compulsory Revisions

-P6: how was completeness of 24h urine samples assessed?

-P8: were the observed differences (e.g., age, proportion of men/black patients, …) statistically significant? Please add p-values.

-P12: safety evaluation: were the differences in adverse events also statistically significant? Again, please add p-values.

-In the discussion, could you add a paragraph describing the effect of other calcium- and non-calcium-based phosphate binders on FGF23 levels in previous studies? Could the lack of effect with lanthanum be drug-specific? Differences in treatment period? Based on these results, are there any clinically significant differences between non-calcium based phosphate binders? It may be useful to add a Table describing all available studies, number of patients, treatment, result

Minor Essential Revisions

- Additional figure 1 is not visible

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.