Reviewer’s report

**Title:** Long-term effects of phosphate binders on pre-dialysis serum bicarbonate in end-stage kidney disease patients on maintenance haemodialysis

**Version:** 2  **Date:** 1 December 2012

**Reviewer:** Stanley Fan

**Reviewer’s report:**

A study to examine difference in bicarbonate levels after long-term (18 month) treatment of different phosphate binders is novel and would be of interest. I am, however, a little confused by the methodology of the study. The authors have identified 292 patients that I presume remained on HD during the 18 month study period (Dec 2008 – June 2010). These patients switched phosphate binder usage during the 18 month study period. Were these patients removed from the subsequent analysis? If a patient that switched phosphate binder, moved from 1 group to another, this means their data does not really represent the effect of “long term” usage.

Please provide the number of patients that remain at each of the 6 month study points.

Please provide information of the baseline phosphate binder usage in Table 3.

The authors should also provide the demographic information in Table 2 for the different groups.

The study design means that the “pre” phosphate binder bicarbonate values are not available. Hence, it is possible that differences are due to bias by indication.

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

**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 held research and educational grants from Genzyme.