Author's response to reviews

Title: Dynamics of cinacalcet use and biochemical control in hemodialysis patients: A Retrospective New-User Cohort Design

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Reviewer's report:

Major compulsory revisions

1. The most recent dose of cinacalcet prior to discontinuation seems to be a predictor of this (at 90mg/day, HR was 1.15 with 95%CI 1.03 to 1.29). Consequently, comments about the impact of daily dose should be added to both the Results and Discussion sections.

   Updates to the results and discussion sections have been made reflecting the dose of cinacalcet results. Results section, lines 228-232. Discussion section, lines 305-307.

2. I agree with the comment added in the revised version regarding the precise cause of discontinuation. However, it does not change my initial observation about the speculative nature of the statement related to the patients’ adherence to chronic medications (lines 286-288). Since it is possible that the discontinuation was the result of a medical decision (due to the excessive reduction of calcium or iPTH, for example) it can not be defined entirely as “patient’s poor adherence” to a prescribed drug. Please try to rephrase the sentences in order to clarify this potential misunderstanding (maintain the term of adherence only to describe the patient’s self choice).

   Wording has been further updated in the discussion section, lines 290-296.

Minor essential revisions

1. The presentation modality of studied variables is not a matter of preference. It is imposed by the type of variable’s distribution. Therefore, the serum iPTH (which appears as a non-parametric variable based on the level of SD greater than one third of the mean), and possible other biochemical parameters (if the statistical normality tests would prove their non-uniform distribution) should be expressed by non-parametric descriptive statistics, i.e. by median. Please make all the appropriate changes in the manuscript.

   We disagree with the assertion that the distribution of the variable imposes a requirement on the kinds of statistics that can be reported. Regardless of the distribution of the variable being summarized, the sample mean minimizes the squared-error loss function. So even if one is summarizing a highly skewed distribution, the sample mean is a well-defined and reasonable measure that is an optimal summary measure for a particular loss function. There is absolutely no requirement that the mean can only be used for only Normal distributions or even symmetric distributions.
Nevertheless the median is less likely to be less influenced by extreme observations and therefore is a reasonable statistic if one is concerned about a few very large observations, particularly if they are imbalanced across groups that are being compared. We report the means and medians of all laboratory values during specific follow-up months in the Supplemental Material, table S4.

**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 have received speaker fees and financial support for attending scientific meetings from Amgen, Abbvie, Fresenius, Sanofi-Aventis, Vifor Pharma