Reviewer's report

**Title:** Effect of cinacalcet availability and formulary listing on parathyroidectomy rate trends

**Version:** 1  **Date:** 12 December 2012

**Reviewer:** Orlando Gutierrez

**Reviewer's report:**

This report by Lafrance and colleagues examined the change in PTX rates over time in a single province in Canada and tries to link this to cinacalcet exposure. While an important topic of relevance to the nephrology community, the study suffers from a number of limitations, including the ones listed below:

1.) There was a lack of complete or at least adequate ascertainment of cinacalcet use by all dialysis patients followed in this province during the period of observation, making it very difficult to determine to what extent, if at all, cinacalcet availability contributed to the observed declines in PTX rates.

2.) Given the very low proportion of patients using cinacalcet in 2006, and the virtual absence of prescription claims prior to this time, it is hard to argue that this alone could account for the drop of PTH rates that started even prior to 2006 per Figure 2. The authors offer anecdotal data from Amgen about the number of patients that might have been treated with cinacalcet prior to 2006, but this is unconvincing and certainly not empirical evidence to draw inferences from.

3.) It is unclear why the PTX rates remained stable with the increase in cinacalcet usage. One would surmise the opposite if cinacalcet were indeed the major mitigating factor. The authors' argument about how only a few PTX would be needed to change the rates substantially is unconvincing.

4.) An equally plausible, if not more plausible, explanation for the findings is the decreased use of calcium-based phosphorus binders which coincided with the fall in PTX, perhaps by decreasing the stimulus for hypercalcemia and thus, the clinical impetus for PTX.

For these reasons listed above, though interesting, it is difficult to know to interpret the findings as presented. It appears that PTX declined in Quebec, and based upon the data presented, the most likely explanation is the decline in the use of calcium-based binders and the increase in the use of vitamin D. What, if any role, that cinacalcet exposure had is difficult to determine.

**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.