Reviewer's report

Title: Renal function during long-term lithium treatment: a cross-sectional and longitudinal study.

Version: 1 Date: 25 October 2014

Reviewer: George Kirov

Reviewer's report:

This is an impressive study by a team with an established reputation in lithium research. The analysis is performed correctly, namely the effect of age has been separated from the effect of the duration of lithium treatment (the two are highly correlated). It appears that lithium provides an additional effect on eGFR, similar to the effect of age. It is also useful to see that stopping lithium did not change the course of kidney decline.

I have only one major point. The graphs of survival analysis see to have been restricted to patients who actually reach stage 3a or 3b, or something on those lines. This is a bit misleading as the reader might think that everybody gets there. I suggest to show the survival of the whole sample, with the outcome (event) being reaching the relevant stage.

Minor points. 1) At least one relevant paper is not referenced: Tredjet et al 2010. 2) I felt that the Discussion was much too long and distracted from the main findings.

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I have no competing interests