Reviewer's report

**Title:** Comparison of corneal endothelial cell measurements by two non-contact specular microscopes

**Version:** 1  **Date:** 7 April 2015

**Reviewer:** Nino Hirnschall

**Reviewer's report:**

This paper deals with an important topic, the comparison of different specular microscopes. The methods section is clearly explained. However, the analysis of the data could be improved (please see below). Furthermore, the outliers could be discussed in more detail.

- **sample size:** Was a sample size calculation performed (why were 34 eyes included)? If no sample size calculation was performed, please add a post hoc power analysis.
- **Why was the paired t-test used?** Were data normally distributed? Please specify, which test was used to detect, if data was normally distributed. If data was not normally distributed, please use a non-parametric test.
- **Results:** First two lines of the results section are already mentioned in the methods section.
- **The more recent literature is not referenced and not discussed in the paper.**
- **Figure 1:** Bland-Altman plots are very useful, correlation scatter plots should be avoided.
- **Bland-Altman figures:** why are the limits of agreement not shown horizontally? It would be important to show the line of the average difference and the limits of agreement as horizontal lines.

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

**Quality of written English:** Needs some language corrections before being published.

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.