Reviewer’s report

Title: Assessment of anterior chamber depth measurements using the Orbscan II ultrasound biomicroscope and Artemis-2 VHF scanner

Version: 1 Date: 25 February 2013

Reviewer: Gabor Nemeth

Reviewer’s report:

First impression: Good paper needs essential revisions before publication.

The Authors compare ACD results obtained by the Orbscan II ultrasound biomicroscope and Artemis-2 VHF scanner and state that they three instruments showed high repeatability and UMB and Artemis-2 VHFUS can be used interchangeably for measuring ACD.

Comments:

Please avoid using Pentacam and Visante in the text. We have other devices with Scheimpflug and OCT technology, so use only “Scheimpflug cameras” and “anterior segment OCT” words or mention all devices (Galilei, Sirius).

In abstract, “accuracy” is mentioned; however this is not measurement of accuracy of, rather comparing data of different devices.

In abstract, several typo-errors in word “Artemis” presented.

In addition, you wrote that „The aim of this study was to assess the precision of ACD measurements using the Orbscan II, UBM and Artemis-2 VHFUS.„, however these are not precision measurements. You can only calculate differences between devices and repeatability.

First, you wrote that „This study enrolled 60 eyes of 60 consecutive, healthy, oculovisually normal subjects (32 males).„, after „One eye was selected from each subject“, after: „and the eye was selected randomly“. So, results are from 30 or 60 eyes?

I think this issue is very confusing for the reader: please clarify. It would be better to calculate with only right or left eyes of a patient.

Methods: If you decided to do a repeatability study, you have to calculate coefficient of variations and intraclass correlation coefficients. Bland-Altman analysis is not enough for your conclusions. It is not clear, how you calculated intraobserver repeatability if you do so. It is not mentioned in methods.

At the end of the first paragraph of discussion, there is a typo error („glauco ma“)

Figure 1 has to be divided into 3 different figures for better visibility.
Only minor, but essential corrections are necessary.

In conclusion, the manuscript is a well-written report with new information from the topic “ACD measurements”.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests