Author’s response to reviews

Title: Functional Results and Photic Phenomena with new Extended-Depth-of-Focus Intraocular Lens

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Dr. Joann J. Kang
BMC Ophthalmology

Re: Manuscript, “Functional Results and Photic Phenomena with new Extended-Depth-of-Focus Intraocular Lens”
Dear Dr. Kang,

thank you for your e-Mail of July 11th, 2019, regarding our manuscript. We are pleased at the positive reception of our work. Below we provide a point-by-point response to your comments:

Reviewer #1:

“First, there is no enough information about the biochemical properties of this new IOL lens materia. The authors should particularly specify if it is hydrophilic or hydrophobic.”
- Thank you for your comment. We now added this information to our manuscript.

“Please define the size of capsulorhexis and specify the duration of the use of postoperative drugs in the methods part?”
- For femtosecond-laser assisted capsulorhexis, the size was always 5.0 mm. For manual capsulorhexis, the intended diameter of the rhexis was also 5.0 mm. The duration of the postoperative drug regimen was 2 weeks. This information has also been added to the to the Methods section.

“In the result part it will be better to add the postoperative biomicroscopic results like the appearance of the capsule (pcO, shrinkage, opacification), position of the IOL (displacement, distortion), information about refractive predictability (difference between preop-postop MRSE).”
- Thank you for your comment. The slit lamp examination of the anterior segment did not show any abnormalities (eg, PCO, IOL displacement/distortion, etc.).

“Please rewrite the following sentence and clarify its meaning. “With the trifocal IOL, on the other hand, patients achieved a better distance corrected near reading acuity.”
- Please excuse us for the type-error. We meant to say “distance-corrected” near visual acuity.
“The manuscript needs a limitation paragraph including limited number of participants, lack of control group, short follow-up period and – if could not be added – lack of predictability results. However, in the conclusion paragraph there is a sentence “In general, the Mini WELL shows good predictability of refractive correction…….” claiming that this IOL had good predictability results there is no evidence for that. There is a need for adding a table showing difference between preop-postop MRSE.”

- Thank you for your comment. We now added a Limitation paragraph at the end of the Discussion. All claims that cannot be justified by our data have been removed.

“In conclusion paragraph it will be better to add “…….also with longer follow-up periods.” to the last sentence “These results should be confirmed with increased patient numbers…”

- This sentence has been revised accordingly.

Reviewer #2:

“Even if there are 16 binocular implanted patients, You studied 14 patients (due to one macular edema and one death). It would be more precise writing the right number of patients and eyes studied from the “Abstract” (not only in the Results).”

- Thank you for your comment. We now revised the number of patients accordingly.

“Strehl Ratio and MTF are not directly taken into consideration. They would be rather important data to be collected.”

- We also agree with your views. The data, however, has not been published yet. Currently we have submitted a laboratory paper assessing the in-vitro performance of the Mini WELL IOL using a standardized optical bench.

“You did not write the value of the Binocular UDVA.”

- We now added the binocular UDVA value.
“You did not specify how many manual curvilinear capsulorhexis and how many femtosecond laser-assisted capsulorhexis was performed.”

- Manual curvilinear capsulorhexis was performed in 13 patients and femtosecond laser-assisted capsulorhexis in one patient. We also added this information to the Methods section.

“Can You please explain why did You choose a subjective examination such as a the haloes and glare simulator to verify the photic phenomena? Eyes implanted with multifocal IOLs could not give precise values of the photic phenomena perceived with a simulator. This kind of examination could be maybe worthy in order to compare IOLs, but is hard to interpret as an absolute value.”

- As you know, there is currently no widely established, easily accessible means to objectively evaluate the perception of photic phenomena in a clinical setting. Therefore, we used this Halo and Glare Simulator which had also been published in a previous clinical study (see Reference No. 35).

“Why did You not mention the study "Functional assessment of a new extended depth of focus intraocular lens" written by G. Savini, N. Balducci, C. Carbonara, S. Rossi, M. Alteri, N. Frugis, E. Zappulla, R. Bellucci, G. Alessio on 97 patients implanted with the same EDOF IOL?”

- Thank you for your comment. At the time when this manuscript was finalized, the paper you mentioned above was not published online yet. However, it has now been added to our Discussion.

“Pupillometry would be an interesting data to be recorded.”

- Thank you for your comment. We also agree with your view. However, this data has not been collected during this study. Future studies should assess the correlation between the pupil size and the lens performance.
Thank you again for your assistance with our manuscript. Please let us know if further issues arise.

We look forward to hear from you.

Sincerely yours,

Gerd Auffarth, MD, PhD
Corresponding Author