

## **Reply to Reviewers**

### **Reviewer #1:**

**Scientific Quality: Grade C (Good)**

**Language Quality: Grade B (Minor language polishing)**

**Conclusion: Accept (General priority)**

Specific Comments to Authors: This review article intends to discuss various aspects of artificial intelligence in Ophthalmology. The author goes through enormous article of the ophthalmology territory, and provide the high quality review comment for readers. I suggested the author can provide the difficult of the ophthalmology in artificial territory, which can provide a route for future research. Moreover, who to apply the AI from research to reality is still the big question in the ophthalmology territory. I also suggest author can provide more information about this issue, which can enrich the manuscript and enhance the impact of research territory.

### **Author's reply**

- Respected reviewer, we sincerely thank you for taking out your valuable time and suggestive critical constructive changes. Respected reviewer, we have made the suggested changes and have added a paragraph on limitation of artificial intelligence in Ophthalmology.

**Changes made on page and line – Page no. 20-21,Line no. 444-457**

### **Reviewer #2:**

**Scientific Quality: Grade C (Good)**

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors: This manuscript is a review article on the use of artificial intelligence (AI) for major diseases in the field of ophthalmology. The authors report the use of AI for eight diseases, Diabetic retinopathy, Age-related macular degeneration, Glaucoma, Retinopathy of prematurity, Keratoconus, Corneal dystrophies and dysplasia, Dry eye and Cataract. And for each of which, several papers that utilise AI are evaluated. The content of the review for each disease is generally considered to be acceptable. However, in order to improve readers' understanding of the papers, the reviewer requires improvements in the following points; Inappropriate title. The title is 'Diabetic Retinopathy and in Ocular Science' and there is no doubt that authors have written a lot about diabetic retinopathy. However, the inclusion of one specific disease name in the title is likely to deter potential readers with an interest in other diseases. The structure of the article is confusing. Between the Introduction and Conclusion, there appears to be a chapter called Review. There then seems to be a hierarchy of two sections (AI basics, Use of AI in ophthalmology) and several subsections within the chapter Review. However, this is difficult to understand. This is probably due to the difficulty in distinguishing the title expression of each chapter (or section). As a suggestion, it would be easier to read and understand if a chapter called "AI basics" is created after Introduction, followed by a chapter called "Use of AI in ophthalmology", and the description of various types of AI and review for each disease are to be written as sections within each chapter. In addition, as the current structure, this manuscript includes a review of AI itself. Authors' purpose of this manuscript is only to review papers about ophthalmology. Also from this viewpoint, the entire manuscript needs to be reconstructed into different chapters. In addition, the section 'Smartphone-based apps using AI in ophthalmology' seems

to be an independent chapter, but the difference from Reference 54 (which is itself a review article) should be stated. For the various AIs and each disease, there is no description of the selection criteria for the papers reviewed. For example, what databases were used, the year (year of articles published?) range, and the criteria by which, if any, papers were removed from the review after the search. The abbreviations 'CML' and 'CM-L' have no written etymology. All abbreviations should have an etymology, as the reader may not an ophthalmologist. It is also not clear whether these two are the same word. Immediately after the reference, "," and "." are superscripts in many places. There is an \* mark after DWT in the chapter on Dry eye, but the intent is unclear.

Author's reply

Respected reviewer, we sincerely thank you for taking out valuable time and providing critical constructive comments. Respected reviewer, we do agree with your suggestion that diabetic retinopathy in the title can be misleading and can create bias for readers. Respected reviewer, since a lot of detailed analysis has been done in DR and AI in DR is booming, we wanted catch attention of both DR patients as well as non-DR patients, hence we have added ocular surface disease and other retinal disorders . We have modified the ocular science as ocular pathologies to make it appear more appealing and interesting(Page 1 , Lines1&2) .

Respected reviewer, the structure of the article has been updated as per the valuable suggestion.

Respected reviewer, as per your valuable suggestion a paragraph on AI basics, use of AI in Ophthalmology along with description of various types of AI and review for each diseases has been added. The entire manuscript has been updated in various chapters (Page 5 , Lines 95 to 109), (Page 20 , Lines 435 to 442 ) .

Respected reviewer as per your suggestion, the differences from the reference 54 have been highlighted(Page 19 , Lines 416 to 417) .

Respected reviewer, we reviewed all the articles from 2000-21 and the articles were taken from PubMed, Google Scholar, Scopus database, Cochrane library, Embase database and Web of Science. Only latest articles with high citations published in English were taken into consideration (Page 4-5 , Lines 86 to 93 ) .

Respected reviewer, All entomology and superscripted phrases and punctuations are corrected as suggested \* symbol is removed from article as in advent error. Once again we sincerely thank you for providing valuable comments(Page 9 , Lines 182 ) (Page 18, Line 384) .

**Authors are requested to send their revised manuscript to a professional English language editing company or a native English-speaking expert to polish the manuscript further. When the authors submit the subsequent polished manuscript to us, they must provide a new language certificate along with the manuscript.**

Respected team, as per your valuable suggested English language has been updated with the help of an expert in the field with good native English speaking skills (Dr. BG). Certificate attached .

**Reviewer 3- Science editor:**

The manuscript has been peer-reviewed, and it' s ready for the first decision.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade C (Good)

Respected Science editor, we sincerely thank you for these critical inputs.

**Reviewer 4- Company editor-in-chief:**

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Diabetes, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the Reference Citation Analysis (RCA). RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In

it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: <https://www.referencecitationanalysis.com/>.

Please provide decomposable Figures (in which all components are movable and editable), organize them into a single PowerPoint file. Please authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT):  
Copyright ©The Author(s) 2022.

### **Author's reply**

Respected reviewer, as per your valuable suggestion article based on RCA analysis were searched and added in the manuscript and the editable version of modified table has been added. The authors copyright information has also been added.