PEER-REVIEW REPORT

Name of journal: Artificial Intelligence in Cancer

Manuscript NO: 54872

Title: Impact of blurs on machine-learning aided digital pathology image analysis

Reviewer's code: 03505873

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Research Assistant Professor

Reviewer's Country/Territory: United States

Author's Country/Territory: Japan

Manuscript submission date: 2020-03-21

Reviewer chosen by: Jin-Zhou Tang

Reviewer accepted review: 2020-03-31 02:54

Reviewer performed review: 2020-04-03 03:09

Review time: 3 Days

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[ ] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

In this study, the authors report their investigation of the reproducibility of two times' data of machine learning (ML)-based histological classification of the same H&E slide and potential factors that may impact the reproducibility. They have found that the rates of discordant classification of duplicated analysis reaches up to 23.1% of 298 pairs scanned images. They further demonstrate that higher blur index of the slides may partially contribute to the discordance. Generally, the finding of the study is potentially useful and meaningful, which may lead to a better ML-based histological classification. However, I also have some concerns that need to be addressed before it is gotten accepted for publication in the journal. Major concerns 1. ML-aided classification model and criteria for both negative and positive classification should be briefly described. 2. Quantitative analysis of the degree of image blurring and its normalization should also be introduced. 3. May the authors propose potential solutions to avoid the discordance through excluding these disqualified slides?

PEER-REVIEW REPORT

Name of journal: Artificial Intelligence in Cancer

Manuscript NO: 54872

Title: Impact of blurs on machine-learning aided digital pathology image analysis

Reviewer's code: 05038589

Position: Editorial Board

Academic degree: BPharm, MD, MSc, PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: Egypt

Author's Country/Territory: Japan

Manuscript submission date: 2020-03-21

Reviewer chosen by: Jin-Zhou Tang

Reviewer accepted review: 2020-04-01 11:17

Reviewer performed review: 2020-04-17 01:07

Review time: 15 Days and 13 Hours

Scientific quality	[　] Grade A: Excellent　[　] Grade B: Very good　[Y] Grade C: Good [　] Grade D: Fair　[　] Grade E: Do not publish
Language quality	[　] Grade A: Priority publishing　[Y] Grade B: Minor language polishing [　] Grade C: A great deal of language polishing　[　] Grade D: Rejection
Conclusion	[　] Accept (High priority)　[Y] Accept (General priority) [　] Minor revision　[　] Major revision　[　] Rejection
Re-review	[　] Yes　[　] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous　[　] Onymous Conflicts-of-Interest: [　] Yes　[Y] No

SPECIFIC COMMENTS TO AUTHORS

Accept