

PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Oncology*

Manuscript NO: 88767

Title: Leveraging electrochemical sensors to improve efficiency of cancer detection

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05776275

Position: Peer Reviewer

Academic degree: PhD

Professional title: Research Associate

Reviewer's Country/Territory: United Kingdom

Author's Country/Territory: China

Manuscript submission date: 2023-10-08

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-11-21 05:46

Reviewer performed review: 2023-12-01 05:51

Review time: 10 Days

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

A very well structured and excellently written manuscript. The manuscript provided detailed review on the need for creative electrochemical detection of cancer in timely manner for early intervention. The authors adequately discussed the challenges of electrochemical detection: the manuscript outlined the challenges in electrochemical biosensor development: "challenges persist in terms of enhancing selectivity, enabling multiplexing, device miniaturization, biomarker validation, data interpretation, nanotoxicity and navigating regulatory approval". This manuscript discussed the importance of selectivity in electrochemical biosensing and highlighted the possibility of eliminating this challenge. The manuscript is a grammatically and scientifically well written manuscript. Also, this manuscript discussed the limitations and how these can be addressed.