

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Gastroenterology*

**Manuscript NO:** 78015

**Title:** Application of an artificial intelligence system for endoscopic diagnosis of superficial esophageal squamous cell carcinoma

**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 01221925

**Position:** Editorial Board

**Academic degree:** AGAF, FACS, FICS, MD, PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** Greece

**Author's Country/Territory:** China

**Manuscript submission date:** 2022-06-02

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-06-02 13:32

**Reviewer performed review:** 2022-06-04 11:28

**Review time:** 1 Day and 21 Hours

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 Grade E: Do not publish
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 checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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<b>Peer-reviewer statements</b>	Peer-Review: [ <input checked="" type="checkbox"/> ] Anonymous [ <input type="checkbox"/> ] Onymous Conflicts-of-Interest: [ <input type="checkbox"/> ] Yes [ <input checked="" type="checkbox"/> ] No
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#### **SPECIFIC COMMENTS TO AUTHORS**

This is an excellent paper on a very interesting and timely issue which is the application of artificial intelligence in medicine, and gastroenterology specifically here. The authors provide us with a well-designed experiment, which despite the limitations that they themselves note in the discussion, is an important first step. The only comment that perhaps the authors could add a paragraph about future applications of their methodology.

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**Reviewer's code:** 05260525

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Professor

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** China

**Manuscript submission date:** 2022-06-02

**Reviewer chosen by:** Dong-Mei Wang

**Reviewer accepted review:** 2022-07-12 11:54

**Reviewer performed review:** 2022-07-19 08:43

**Review time:** 6 Days and 20 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" 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
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**Peer-reviewer  
statements**

Peer-Review: ☒ Anonymous ☐ Onymous

Conflicts-of-Interest: ☐ Yes ☒ No

## **SPECIFIC COMMENTS TO AUTHORS**

Artificial intelligence-aided endoscopy has garnered attention, with several studies showing this technique to be a promising tool for improving the detection of early ESCC. Most early stage ESCC are flat and subtle in appearance under white light imaging or image-enhanced endoscopy, which is not easy to identify, especially for inexperienced endoscopists. There are few computer-assisted diagnosis systems for ESCC that support both white light imaging and narrow-band imaging have been applied in clinical practice. This study was designed to develop and validate a novel computer-assisted diagnosis system with a deep neural network algorithm to detect superficial ESCC under upper endoscopy with white light imaging and narrow-band imaging. The study is very well designed and the well performed. The results are very interesting, and well discussed. The reviewer recommends to accept this study after a minor revision. Comments: 1. There are some minor language polishing, which should be corrected. 2. What's the future applications of this methodology? Please make a short discussion. 3. The references should be edited and updated.

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**Reviewer's code:** 05274903

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** China

**Manuscript submission date:** 2022-06-02

**Reviewer chosen by:** Dong-Mei Wang

**Reviewer accepted review:** 2022-07-12 11:54

**Reviewer performed review:** 2022-07-19 08:44

**Review time:** 6 Days and 20 Hours

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#### **SPECIFIC COMMENTS TO AUTHORS**

I read this study with great interest. This study aimed to develop a deep learning computer-assisted diagnosis system for the endoscopic detection of superficial ESCC and investigate its application value. The manuscript is very well written. The methods are clearly described, and the results are reasonable. The results are interesting and import to the clinicians. Well done! Thank you.