

## PEER-REVIEW REPORT

**Name of journal:** *Artificial Intelligence in Gastrointestinal Endoscopy*

**Manuscript NO:** 75135

**Title:** Artificial intelligence in the endoscopic approach of biliary tract diseases: a current review

**Provenance and peer review:** Invited manuscript; externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 02914303

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

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

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

**Manuscript submission date:** 2022-01-16

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-01-17 15:05

**Reviewer performed review:** 2022-01-20 01:54

**Review time:** 2 Days and 10 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input 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: [ ] Anonymous [ **Y** ] Onymous

Conflicts-of-Interest: [ ] Yes [ **Y** ] No

## **SPECIFIC COMMENTS TO AUTHORS**

Congratulations for such a great literature review regarding the use and implementation of computational resources to develop an automatic AI-based algorithm for managing such complex clinical situation that the biliary gallstones represent, especially the migrating ones that require a prompt therapeutic response for a good overall clinical outcome of the patient. All surgeons, especially those that operate in a laparoscopic manner biliary lithiasis are facing difficult times when it comes to recognize early the possibility of such complications to develop. Of course, there are many human-based key-point decision algorithms to aid establishing an early diagnosis, but the learning curve is steep and often involves considerable clinical and imaging resources. These algorithms even extended within the realm of iatrogenic bile duct injuries that occur during complex cholecystectomies (<http://scholar.valpo.edu/jmms/vol4/iss1/9>), a situation very similar to the one researched in this paper, but the rapidity, clarity and precision of AI-based system is at a different level in regards to speed and accuracy. Your paper comes in hand to keep general surgeons as well as gastroenterologists up to date in this ever changing and developing world of AI-based algorithms that, for sure, will completely replace sooner rather than later, the human implication in an early diagnosis system, but this still requires larger studies with better integration of the AI algorithms with the imaging machines, such as Colangio-MRI, Colangio-CT, ultrasound, etc. A minor suggestion though: please make a small change in the title of the paper so it would better reflect that this is a literature review and not a personal experience.

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**Provenance and peer review:** Invited manuscript; externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 03845526

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Chief Doctor

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

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

**Manuscript submission date:** 2022-01-16

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-01-20 13:20

**Reviewer performed review:** 2022-01-25 07:54

**Review time:** 4 Days and 18 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
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 checked="" 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

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

The author made a comprehensive review regarding the effect of AI in biliary diseases including diagnosis of cholelithiasis and undertermined biliary stricture and treatment of biliary stones briefly. AI had been employed in GI endoscopy, especially in the detection and diagnosis of early GI cancer but rare development in biliary diseases. Many unknown areas of AI for biliary diseases deserve to be exploited. This review ignite the spark of research and application focused on biliarypancreatic diseases for endoscopist.

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**Peer-review model:** Single blind

**Reviewer's code:** 04559712

**Position:** Editorial Board

**Academic degree:** MD

**Professional title:** Associate Professor

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

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

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**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-01-19 23:14

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**Review time:** 10 Days and 2 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" 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 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

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

This minireview summarizes the state of the art of artificial intelligence in the diagnosis and treatment of biliary diseases. Here are my opinions. 1. Most of the references are up to date. This review mainly focuses on endoscopic imaging. The CT and MRI on biliary disease are not discussed in the review, so the title may be misleading. 2. Figure 4 is not shown, but mentioned in the main text.