

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Meta-Analysis

**Manuscript NO:** 47592

**Title:** Current state and future direction of screening tool for colorectal cancer

**Reviewer's code:** 03478911

**Reviewer's country:** South Korea

**Science editor:** Ze-Mao Gong

**Reviewer accepted review:** 2019-03-19 01:38

**Reviewer performed review:** 2019-03-25 07:15

**Review time:** 6 Days and 5 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

This review is a very well organized relating to all the ways to diagnose colorectal cancer.

This reviewer do not have any concern to raise critically.

### INITIAL REVIEW OF THE MANUSCRIPT



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- ☐ The same title
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- ☐ Plagiarism
- ☐ No

*BPG Search:*

- ☐ The same title
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- ☐ No

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Meta-Analysis

**Manuscript NO:** 47592

**Title:** Current state and future direction of screening tool for colorectal cancer

**Reviewer's code:** 03473233

**Reviewer's country:** Italy

**Science editor:** Ze-Mao Gong

**Reviewer accepted review:** 2019-03-19 08:04

**Reviewer performed review:** 2019-04-02 07:38

**Review time:** 13 Days and 23 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

In their paper "Current state and future direction of screening tool for colorectal cancer", Hong and Kim report a review of the current tests that are being used for colorectal cancer (CRC) screening and on a series of tests that have been studied in the last years and which could eventually be useful for screening in the future. The Authors carried



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out a huge job in order to review the current literature on diagnostic test for CRC; however, I found not appropriate including in a paper focused on “screening tools for CRC” such a large amount of tests that showed performance levels that are not adequate for a screening tool. If, on one side, a screening test cannot be discarded due to an excessively low sensitivity (as repeated tests could yield a satisfying cumulative sensitivity), on the other side an excessively low specificity represents a tomb stone. Specificity levels lower than 92%-93% are not acceptable for a screening test within a mass screening programme, because the positivity rate would generate an excessive workload for diagnostic workups, and the false positive rate would be unacceptable too.

Major comments Abstract: I would stress a bit more the necessity to prevent CRC through the diagnosis of advanced adenoma Introduction, last sentence of the first paragraph: the necessity of finding “new” screening tools suggests that the current ones are not adequate. This should be demonstrated. Introduction, second paragraph: one further quality of screening tools that should be cited is acceptability by the target population. The performance parameters of a test are not enough. Chapter 1.1: as the FIT is intended to be repeated, I find not adequate to refer to single-sample sensitivity and specificity, even if there are no comparisons between repeated FITs vs. colonoscopy. However, some evidence has started being published. See for instance PMID 29101260 Chapter 1.1: The reported price of FIT refers to the US. In general, much of this paper is centred on the US (e.g., only the ACS guidelines are cited in paragraph 1). Therefore, the Authors should more clearly refer this manuscript to the US setting, e.g. in the title, abstract and tables. Chapter 1.1: sentence “...the sensitivity of FIT could improve to 77% when the specificity was as high as that of mt-sDNA (86.6%)”. A specificity lower than – say – 90% is not acceptable in a mass screening programme. Chapter 1.3.1: the description of the mSEPT9 test is not clear. The Authors state that “sensitivity for cancer is lower than that of FIT”, but the last paragraph starts with “in comparison with

suggested screening tests, the aforementioned studies showed increases in sensitivity...". They also state that detection of advanced adenoma is impossible and subsequently they report a sensitivity and specificity parameters for advanced adenoma... In general, given the long series of disadvantages of this test (listed in the second paragraph), it is not clear why the Authors dedicate so much space to it. Chapter 1.4: this chapter could be deleted, as the main limitations of all test have been reported in the previous chapters. Further, it is misleading to refer to CEA and Ca19-9 in a paper focusing on screening tools. Chapter 2.1.3. Sentence "They proposed that ... mRNA expression... may be useful as a CRC screening test". The specificity of the test was 74%, which is absolutely unacceptable for a screening test. Chapter 2.1.4. Opposite concepts are reported. TFPI2 gene methylation and SDC2 gene obtained outstanding performances (spec 93% sens 89% and spec 95% and sens 87%, respectively). But in the last paragraph the Authors state that "...studies have failed to produce a ... biomarker that could be used for ... screening". Please clarify. Table 1. Colonoscopy: please consider including acceptability and participation among the disadvantages. The same applies to CTC and FS Minor Chapter 1.: please add a reference when referring to the ACS guideline Chapter 1.1: please add a reference when referring to the "multiple consistent RCTs" on gFOBT Chapter 1.1: please replace "However, the use of FOBT.." with "However, the use of gFOBT.." Chapter 1.2: sentence "colonoscopy is usually performed with anaesthesia". To which area are the Authors referring to? Please add a reference. Chapter 1.3.1: did FDA specifically approve this test for individuals who "continuously rejected undergoing other types of screening tests"? Please clarify this point. Chapter 2.1.1. What does "From 1997 to 2010..." mean? Did Liang take 13 years to carry out his meta-analysis? Please clarify. Chapter 2.1.1. What does "From 1997 to 2010" mean? Did Liang take 13 years to carry out his meta-analysis? Please clarify. Chapter 2.2.1.2. Sentence "from those ten, the formula of one was not identified, while that of the six were identified". What about the



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last three? Anyway, this detail seems superfluous. Table 1. Add “in the US” in the title. Table 1. HSgFOBT: I am not aware of consistent evidence of incidence reduction. Please add references Table 3. Evidence of efficacy of blood based biomarkers. What do 85.7% and 52.1% refer to? And 71.0% and 75.0%? Table 3. Advantages and disadvantages: Please specify all sentences beginning with “Less” or “more”. For instance: “Less affected by diet” than???

## **INITIAL REVIEW OF THE MANUSCRIPT**

### ***Google Search:***

- ☐ The same title
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- ☐ No