



PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 114538

Title: Noninvasive diagnosis of colorectal adenoma: The emerging potential of blood-based biomarkers

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 03479334

Position: Editorial Board

Academic degree and professional title: Chief Physician, MD, PhD

Reviewer’s Country/Territory: Japan

Author’s Country/Territory: China

Manuscript submission date: 2025-09-22

Reviewer chosen by: Jia-Lin Zhang

Reviewer accepted review: 2025-11-11 09:30

Reviewer performed review: 2025-11-12 00:59

Review time: 15 Hours

Content to be reviewed	<p>Does the manuscript’s content fall within the scope of the journal? Yes</p> <p>Is there any Key Word that is not included in the manuscript title? No</p> <p>Do authors’ affiliations correspond to the content of the manuscript? Yes</p> <p>Does the Abstract contain the contents of each part of the manuscript (IMRaD)? Yes</p> <p>Are the Key Words complete? Yes</p>
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Is the content of the Introduction adequate? **Yes**
Is the content of the Materials and Methods complete?
Yes
Is the description of the experiments clear and
complete? **Yes**
Are the experimental data presented in the
manuscript's biostatistics content reliable? **Yes**
Are the experimental data of the Results true and
reliable? **Yes**
Are the quality and resolution of the images up to
standard? **Yes**
Do the selection and design of the figures and tables
follow the principles of necessity and clarity? **Yes**
Is there any duplication between various parts of the
manuscript and between the main text and the content
presented in the figures and tables? **No**
Are the figures and tables numbered consecutively in
the order in which they appear in the manuscript? **Yes**
Is the content of the Discussion reasonable? **No**
Is the Conclusion reasonable? **Yes**
Are all references necessary and reasonable? **Yes**
Do authors omit important references? **No**
Are all references related to the topic of the
manuscript? **Yes**
Do authors only cite their own earlier publications? **No**
Is the manuscript's text correct, concise, and clear? **No**
Will the manuscript's content be of interest to readers?
Yes
Are additional experiments needed for the study? **Yes**
Does the research scope comply with ethics? **Yes**



Scientific quality	Grade B (Very good)
Novelty of this manuscript	Grade B (Very Good)
Creativity or innovation of this manuscript	Grade C (Good)
Scientific significance of the conclusion in this manuscript	Grade B (Very Good)
Language quality	Grade B (Very good)
Does this manuscript describe a study of the existing knowledge system?	Yes
Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	No
Conclusion	Major revision
Re-review	Yes
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	No

SPECIFIC COMMENTS TO AUTHORS

Thank you for submitting this manuscript.

This manuscript provides a comprehensive and clearly written overview of current research on blood-based biomarkers for the detection of colorectal adenomas. The topic is relevant to clinical gastroenterology, and the review summarizes key findings across transcriptomics, epigenetics, proteomics, and metabolomics. It also highlights the promising role of integrating multiomics data with machine learning for early and noninvasive diagnosis. The overall structure is logical, and the organization and



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readability are generally good, allowing readers to follow the complex information with ease. The review reflects an understanding of recent developments and has the potential to become a reference for future studies in this field.

I have the following comments.

- 1) Please add a dedicated subsection that critically evaluates study quality and reproducibility. Explicitly discuss common limitations such as small sample sizes, retrospective designs, lack of external validation, and inter-laboratory variability in assay methodologies. Highlighting these issues will increase the manuscript's analytical depth, transparency, and overall credibility. Discussing how these limitations might influence diagnostic accuracy or clinical applicability would also be helpful.
- 2) Please include a concise table summarizing major biomarkers or panels (with AUC, sensitivity, specificity, cohort size, and study design) so readers can quickly compare diagnostic performance across different studies. This addition would make the review more practical and informative.
- 3) The section on noncoding RNAs is disproportionately long. Please consider shortening it or expanding the proteomics and metabolomics sections for a more balanced coverage. A comparative paragraph summarizing the maturity, advantages, and limitations of each omics field would further improve the review's balance and comprehensiveness.
- 4) When discussing AI and multiomics integration, please provide one or two specific examples of applied machine learning models or prospective validation studies that demonstrate clinical feasibility and remaining barriers.
- 5) Please standardize gene and protein nomenclature, ensure consistent abbreviation definitions at first appearance, and conduct light language polishing to improve clarity and flow.



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Title: Noninvasive diagnosis of colorectal adenoma: The emerging potential of blood-based biomarkers

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Peer-review model: Single blind

Reviewer’s code: 06488318

Position: Peer Reviewer

Academic degree and professional title: Associate Professor

Reviewer’s Country/Territory: Indonesia

Author’s Country/Territory: China

Manuscript submission date: 2025-09-22

Reviewer chosen by: Jia-Lin Zhang

Reviewer accepted review: 2025-11-12 06:07

Reviewer performed review: 2025-11-15 15:03

Review time: 3 Days and 8 Hours

Content to be reviewed	<p>Does the manuscript’s content fall within the scope of the journal? Yes</p> <p>Is there any Key Word that is not included in the manuscript title? No</p> <p>Do authors’ affiliations correspond to the content of the manuscript? Yes</p> <p>Does the Abstract contain the contents of each part of the manuscript (IMRaD)? Yes</p> <p>Are the Key Words complete? Yes</p>
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Is the content of the Introduction adequate? **Yes**

Is the content of the Materials and Methods complete?

Yes

Is the description of the experiments clear and complete? **Not Applicable**

Are the experimental data presented in the manuscript's biostatistics content reliable? **Not Applicable**

Are the experimental data of the Results true and reliable? **Not Applicable**

Are the quality and resolution of the images up to standard? **Not Applicable**

Do the selection and design of the figures and tables follow the principles of necessity and clarity? **Not Applicable**

Is there any duplication between various parts of the manuscript and between the main text and the content presented in the figures and tables? **Not Applicable**

Are the figures and tables numbered consecutively in the order in which they appear in the manuscript? **Not Applicable**

Is the content of the Discussion reasonable? **Yes**

Is the Conclusion reasonable? **Yes**

Are all references necessary and reasonable? **Yes**

Do authors omit important references? **Yes**

Are all references related to the topic of the manuscript? **Yes**

Do authors only cite their own earlier publications? **No**

Is the manuscript's text correct, concise, and clear? **Yes**

Will the manuscript's content be of interest to readers?



	Yes Are additional experiments needed for the study? No Does the research scope comply with ethics? No
Scientific quality	Grade B (Very good)
Novelty of this manuscript	Grade B (Very Good)
Creativity or innovation of this manuscript	Grade B (Very Good)
Scientific significance of the conclusion in this manuscript	Grade B (Very Good)
Language quality	Grade B (Very good)
Does this manuscript describe a study of the existing knowledge system?	No
Does this manuscript report a revolutionary innovation?	Yes
Does this manuscript report an unconventional innovation?	No
Conclusion	Minor revision
Re-review	Yes
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	No

SPECIFIC COMMENTS TO AUTHORS

The following is an intriguing topic that is related to the pathophysiology of colorectal cancer: The text is no longer subject to any grammatical errors that need to be fixed on the inside, owing to the fact that the content is written in such a beautiful way.

In terms of providing an explanation of the research's primary emphasis, both the



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abstract and the title are of equal significance.

The following short reviews have already touched upon the matter of the innovative nature of the early diagnosis and detection of adenoma in the colon.

The introductory section provides an adequate amount of information that can be used to give an overview of the principal topic matter that is addressed by these research.

As a part of the process, the references have already been updated to reflect the most current information. Would you be able to provide us with some information that would assist us in determining whether or not the examination of the biomarker is practical, as well as how beneficial it would be in our clinical practice on a daily basis? This is of particular significance in situations in which we find ourselves confronted by a circumstance that is challenging to recognize, even in instances where the symptoms and indicators have already made their presence known. Please be sure to include these particulars in your evaluation.

These biomarkers are far less invasive as compared to the standard colonoscopy procedure, which is used for the purpose of diagnosing colorectal adenoma.

Even if this biomarker is essentially a non-invasive method, the following issue still has not been answered: in the unlikely case that the biomarker is able to make a prediction regarding the adenoma based on the results of the biomarker itself, what actions do you plan to take? In this particular situation, is it still considered necessary to perform a colonoscopy?



RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Reviewer’s code: 03479334

Position: Editorial Board

Academic degree and professional title: Chief Physician, MD, PhD

Reviewer’s Country/Territory: Japan

Author’s Country/Territory: China

Manuscript submission date: 2025-09-22

Reviewer chosen by: Ming Fan

Reviewer accepted review: 2025-12-10 08:25

Reviewer performed review: 2025-12-10 10:44

Review time: 2 Hours

Content to be reviewed	<p>Does the manuscript’s content fall within the scope of the journal? Yes</p> <p>Is there any Key Word that is not included in the manuscript title? No</p> <p>Do authors’ affiliations correspond to the content of the manuscript? Yes</p> <p>Does the Abstract contain the contents of each part of the manuscript (IMRaD)? Yes</p> <p>Are the Key Words complete? Yes</p>
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Will the manuscript's content be of interest to readers?
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Are additional experiments needed for the study? **No**
Does the research scope comply with ethics? **Yes**



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Novelty of this manuscript	Grade B (Very Good)
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Scientific significance of the conclusion in this manuscript	Grade B (Very Good)
Language quality	Grade B (Very good)
Does this manuscript describe a study of the existing knowledge system?	Yes
Does this manuscript report a revolutionary innovation?	Yes
Does this manuscript report an unconventional innovation?	Yes
Conclusion	Accept
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	No

SPECIFIC COMMENTS TO AUTHORS

The authors satisfactorily addressed the issues raised. I do not have further comments.