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PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 109407

Title: Image and intracavitary electrocardiogram-guided arm port placement in colorectal cancer: A retrospective comparative study

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 08396823
Position: Peer Reviewer
Academic degree and professional title: Chief Physician
Reviewer's Country/Territory: Greece
Author's Country/Territory: China

Manuscript submission date: 2025-06-17

Reviewer chosen by: AI Editor

Reviewer accepted review: 2025-06-18 07:28

Reviewer performed review: 2025-07-08 10:00

Review time: 20 Days and 2 Hours

Content to be reviewed	Does the manuscript's content fall within the scope of the journal? **Yes** Is there any Key Word that is not included in the manuscript title? **Yes** Do authors' affiliations correspond to the content of the manuscript? **Yes** Does the Abstract contain the contents of each part of the manuscript (IMRaD)? **Yes** Are the Key Words complete? **Yes**

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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** 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** Do the selection and design of the figures and tables follow the principles of necessity and clarity? **Yes** 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? **Yes** 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? **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? **Yes**

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Scientific quality	Grade B (Very good)
Novelty of this manuscript	Grade C (Good)
Creativity or innovation of this manuscript	Grade B (Very Good)
Scientific significance of the conclusion in this manuscript	Grade C (Good)
Language quality	Grade C (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	Minor revision
Re-review	No
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	

SPECIFIC COMMENTS TO AUTHORS

The investigation of image pre-measurement combined with intracavitary electrocardiogram (IC-ECG) positioning for arm port implantation presents a novel approach to improving catheter placement accuracy and reducing complications. The comparison with traditional anatomical landmark techniques provides robust evidence supporting the superiority of the proposed method, particularly in high-risk subgroups (e.g., females, obese patients, and advanced-stage cases). The findings are highly relevant to clinical practice and align with current trends toward precision medicine in

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oncology. The study design, though retrospective, is well-structured, with clear inclusion/exclusion criteria and a sufficiently large sample size (n=216) to ensure statistical power. The stratification into experimental (image/IC-ECG-guided) and control (traditional landmark) groups is logical, and baseline characteristics are well-balanced, minimizing potential confounding biases. The use of standardized endpoints (e.g., technical success rate, catheter tip accuracy, complication rates) adheres to established guidelines, enhancing the validity of the results. The statistical methods are appropriate, with multivariate analyses identifying independent risk factors (e.g., traditional technique, BMI > 25 kg/m2) and protective effects of the combined approach. The presentation of odds ratios (ORs) with 95% confidence intervals (CIs) strengthens the reliability of the associations reported. The study provides actionable insights for oncologists, interventional radiologists, and nursing teams involved in vascular access. The technique's ability to reduce radiation exposure is particularly noteworthy, aligning with global efforts to minimize occupational hazards. The discussion contextualizes the findings within existing literature and highlights potential mechanisms (e.g., real-time IC-ECG feedback reducing positional errors). Discuss cost implications of the combined technique (e.g., IC-ECG equipment availability) to guide adoption in resource-limited settings. The innovative combination of image pre-measurement and IC-ECG positioning demonstrates significant improvements in efficacy, safety, and patient outcomes. The rigorous methodology, compelling results, and clear clinical relevance justify acceptance for publication. With minor revisions (if needed), this study will serve as an important reference for optimizing arm port implantation in colorectal cancer and beyond.