



PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 114286

Title: Individual chemotherapy for patients colorectal cancer based on patient-derived tumor-like cell clusters

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 08647939

Position: Peer Reviewer

Academic degree and professional title: MD, PhD

Reviewer's Country/Territory: Japan

Author's Country/Territory: China

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Reviewer chosen by: AI Editor

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Content to be reviewed	Does the manuscript's content fall within the scope of the journal? 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 Is there any Key Word that is not included in the manuscript title? 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 of the Results true and reliable? **Yes**

Are the experimental data presented in the manuscript's biostatistics content 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? **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**



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 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?	No

SPECIFIC COMMENTS TO AUTHORS

This study explores the application of the PTC model in personalized chemotherapy for colorectal cancer. The overall experimental design is systematic, and the data are robust. Particularly noteworthy is the rich microscopic images presented, which visually demonstrate the diversity of PTCs and their response patterns to drugs—a very convincing approach. The authors successfully revealed the heterogeneous responses of different patients to chemotherapy regimens in vitro and proposed that PTC testing may help optimize clinical protocols, a line of thought with clear research value. However,



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upon closer reading, I also found several issues that warrant further clarification. I. The standardization details of TC culture and drug sensitivity testing: The paper mentions using an "optimized efficiency concentration," but doesn't explain how this concentration was determined. I'm personally curious whether this concentration was set with reference to clinical blood drug concentrations or based on preliminary gradient experiments. After all, different drugs have significantly different in vivo metabolic characteristics; if only a single fixed concentration is used, can it truly simulate the patient's actual drug exposure level during treatment? I hope the authors can supplement the explanation of the basis for the concentration selection and appropriately discuss the potential limitations of this strategy. II. Regarding the evaluation method for drug efficacy—defining cell killing efficiency (KE) based on changes in the area of the PTC (percutaneous transcellular matrix)—while technically feasible, its underlying biological significance may require further confirmation. For example, to what extent does area reduction actually represent cell death? Is it possible that cell clusters are simply deaggregating without actual cell death? It is recommended that the authors perform a correlation analysis on the image analysis results with classic cell viability assays such as CellTiter-Glo used in the article in typical cases to verify the reliability of the imaging-quantitative method. III. The discussion section's mention of FOLFOXIRI's toxic side effects is necessary, but I believe it could be explored further. Since a dual-drug regimen is suggested for some patients to reduce toxicity, could existing in vitro efficacy data be combined with known toxicity profiles to further explore how to integrate and analyze these data to make a more reasonable clinical trade-off between efficacy and safety? Such extended discussion would significantly enhance the clinical reference value of the article's conclusions.