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Supplementary and Evaluation of Bibliometric Analyses of Liver Metastases from Gastric Cancer- Letter to the Editor

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letter to the Editor

Commentary on “A bibliometric analysis of gastric cancer liver metastases: advances in mechanisms of occurrence and treatment options” (Int J Surg 2024, Chenyuan Wang, BS).

The study by Chenyuan Wang et al. [1] provides a bibliometric analysis of gastric cancer liver metastasis from 2000 to 2022. The article employs numerous statistical charts and visual maps, enhancing its readability. Additionally, the structure is quite engaging, with keyword clustering discussed in separate sections, a novel approach that highlights key points in the field review. However, we have the following suggestions and additions to Chenyuan Wang et al.'s work.

For the analysis of publication volume in the field of gastric cancer liver metastasis, Chenyuan Wang et al. performed only annual statistics, lacking predictions for future trends. To address this, we used the ARIMA model for time series analysis to forecast publication volume. As shown in **Figure 1A**, the dark blue line on the left represents the actual publication volume, while the red line shows the fitted historical data, capturing trend changes. The shaded area on the right side of the figure represents the confidence interval for future predictions, with the dark and light colors corresponding to 90% and 95% confidence levels, respectively. The predicted annual average publication volume is indicated by the light blue line in the middle of the shaded area. According to the model's predictions, the publication volume in 2030 will reach 62 articles, with a 95% confidence interval ranging from 31 to 93 articles. This addition will provide a clearer observation of the trend in publication volume in this field. Furthermore, we believe there is an issue with the description of the publication analysis by Chenyuan Wang et al. The statement "continuous growth from 2000, peaking in 2015" clearly does not align with the data. From 2002 to 2006, the publication volume trend showed a yearly decrease. We suggest the authors describe the results more precisely to enhance the scientific accuracy and detail of the article.

For the keyword analysis in the field of gastric cancer liver metastasis (GCLM), Chenyuan Wang et al. did not include data beyond 2022, potentially resulting in outdated findings and bias. We conducted a separate keyword analysis on the missing data using the search strategy provided by Chenyuan Wang et al. The results not only supplement and refine the original study but also serve as a validation of the initial research. We used VOSviewer to perform a keyword clustering analysis on the literature from January 1, 2023, to May 10, 2024 (**Figure 1B**).

The keywords in the red cluster had the highest total frequency, representing the "clinical pathological characteristics and biomarkers of GCLM." This cluster focuses on the biological behavior of GCLM, such as tumor growth, cell apoptosis, and the tumor microenvironment, while also emphasizing serum markers like "alpha-fetoprotein." Additionally, by exploring "prognostic factors" and treatment "efficacy," this cluster not only elucidates the biological mechanisms of the disease but also provides crucial information for clinical treatment and prognosis assessment. The

green cluster represents "chemotherapy and targeted therapy strategies for GCLM," focusing on advanced chemotherapy and targeted treatment methods. The dark blue cluster represents "GCLM and immunotherapy," centering on emerging therapies such as immune checkpoint inhibitors to activate the patient's immune system against cancer. The yellow cluster represents "prognostic assessment and surgical treatment of GCLM," concentrating on the impact of surgical treatment on patient survival. The research findings in this cluster provide significant guidance for treatment strategies and patient management of GCLM. The purple cluster represents "surgical treatment and long-term survival of GCLM," focusing on surgical interventions and long-term survival outcomes. The research results in this cluster have important clinical significance for improving surgical treatment strategies and enhancing patient survival. The light blue cluster has the lowest total keyword frequency, representing "molecular mechanisms of GCLM and recurrence."

Overall, the red cluster—"clinical pathological characteristics and biomarkers of GCLM"—illustrates that the biological mechanisms, clinical treatment, and prognosis of GCLM have been hot topics in the past year, consistent with the description in the original study. However, the light blue cluster—"molecular mechanisms of GCLM and recurrence"—has the lowest keyword frequency, contradicting the original study's assertion that "research on molecular mechanisms has always been a hot topic." We believe this discrepancy may be due to the "research on molecular mechanisms of GCLM" reaching saturation, leading to a gradual decrease in related studies.

Additionally, we have a few suggestions and additions to the original study. First, Chenyuan Wang et al. listed the top ten authors in terms of publication volume, along with information on their total citation frequency and average citation frequency, but lacked specific descriptions of these prolific authors. We recommend elaborating on the research areas of these authors. For example, the scholar with the highest publication volume, Yasuhiro Kodera, focuses on the surgical treatment of gastrointestinal malignancies, the detection and treatment of micrometastasis, chemotherapy sensitivity testing and drug resistance issues, and the development and optimization of multimodal gastrointestinal cancer treatment. Such specific information can more effectively help scholars understand the fundamental status of the field.

Moreover, the visual maps created by Chenyuan Wang et al. have some flaws. For instance, the author collaboration network graph in the original study has overly concentrated nodes, omitting many authors' names. We recommend using "Pajek," a complex network visualization and analysis tool, to adjust the node distances to avoid overlap and ensure all author names are visible.

Ethical approval

Not applicable.

Consent

Not applicable.

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Conflicts of interest disclosure

The authors declare that they have no competing interests.

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Data availability statement

None.

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Disclosure

Not applicable.

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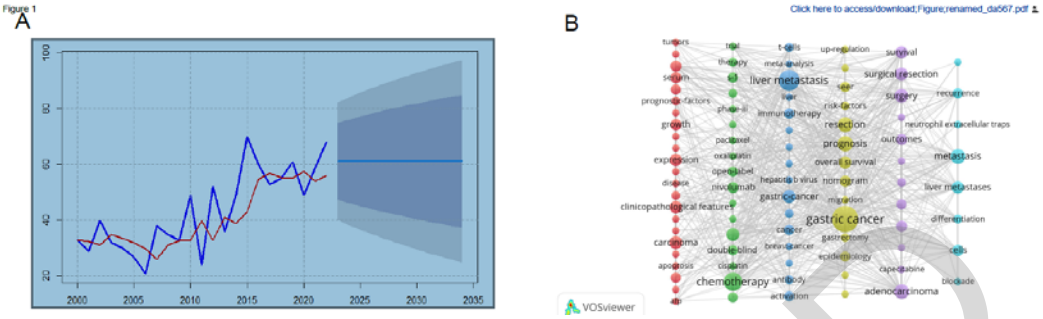
Reference

[1] Wang C, Zhang Y, Zhang Y, Li B. A bibliometric analysis of gastric cancer liver metastases: advances in mechanisms of occurrence and treatment options. *Int J Surg*. Apr 1 2024;110(4):2288-2299. doi:10.1097/js9.0000000000001068

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Figure 1



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