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Authors' reply

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We sincerely thank Teperikidis L, *et al* for their insightful commentary on our recent publication evaluating the efficacy of antidepressants in irritable bowel syndrome (IBS) [1]. We are pleased that our systematic review and meta-analysis were received with interest and that our methodological approach was acknowledged as rigorous and clinically meaningful.

We read with great interest the authors' description of how they used a novel large language model (LLM)-based tool to replicate and extend our study. The successful identification of all 20 studies included in our meta-analysis, as well as 6 additional randomized controlled trials reporting binary outcomes, is a valuable contribution. This reinforces the strength of their artificial intelligence (AI)-assisted screening process and reflects the growing utility of AI in streamlining the review process. It is particularly encouraging that their broad search strategy yielded additional data while maintaining high sensitivity, which is essential for the reliability of systematic reviews.

The fact that their second LLM tool was able to automatically generate R code for meta-analytic computations is also noteworthy. The reproducibility of our original findings using this automated pipeline strengthens the overall robustness of the conclusions, and demonstrates how AI can complement traditional approaches, especially in complex evidence synthesis tasks. These developments are promising for the future of systematic reviews, particularly in areas where the literature is extensive and heterogeneous.

We also appreciate Teperikidis L, *et al*'s identification of additional studies without extractable binary outcome data, similar to some included in our original analysis. This highlights an ongoing challenge in meta-research—the variability in outcome reporting across trials—which future guidelines should continue to address.

Importantly, we agree with the authors' suggestion regarding the inclusion of both odds ratios (OR) and risk ratios (RR) in future analyses. This dual reporting can improve clarity and enhance the interpretability of findings for clinicians, researchers, and other stakeholders. We will certainly consider this approach in upcoming work, and we believe it could become a standard practice in quantitative syntheses going forward.

Overall, we commend the Teperikidis L, *et al*'s initiative and the creative integration of LLM tools to assess and build upon our work. Their efforts not only contribute to methodological transparency and reproducibility, but also open new pathways for collaboration between traditional and AI-enhanced systematic reviewing practices.

We thank the authors once again for their constructive feedback and for contributing to the advancement of research methodology in this field. We look forward to future discussions and potential collaborations as we continue to refine how we evaluate and synthesize clinical evidence.

Reference

1. Teperikidis L, Mademlis C, Hatzinakos G, Lazaridis N. Replication and extension of a meta-analysis of antidepressants for irritable bowel syndrome: a comparison of odds ratios and risk ratios using artificial intelligence-powered tools. *Ann Gastroenterol* 2025 (in press)

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