CLINICAL and MOLECULAR HEPATOLOGY

The forum for latest knowledge of hepatobiliary diseases



ChatGPT performance on cirrhosis and HCC Questions

TACE for HCC: 2023 KLCA Practical Recommendations TARE vs TKI in HCC with Vp1–3 PVT Core indicators for viral hepatitis elimination in Korea Fatty liver on chronic hepatitis B outcome



CLINICAL and MOLECULAR HEPATOLOGY

Correspondence

https://doi.org/10.3350/cmh.2023.0183 Clinical and Molecular Hepatology 2023;29:821-822

Correspondence on Letter 1 regarding "Assessing the performance of ChatGPT in answering questions regarding cirrhosis and hepatocellular carcinoma"

Yee Hui Yeo¹, Jamil S. Samaan¹, and Wee Han Ng²

¹Karsh Division of Gastroenterology and Hepatology, Department of Medicine, Cedars-Sinai Medical Center, Los Angeles, CA, USA; ²Bristol Medical School, University of Bristol, Bristol, UK

Keywords: Health literacy; Liver cirrhosis; Cancer; Artificial intelligence; Health equity

Dear Editor,

We thank Dr. Ali for his insightful comments and for suggesting that a follow-up study on the potential advantages of the GPT-4 model would be of value. We agreed with his observations about the ongoing advancements in artificial intelligence and its increasing utility in medical decision-making or education.

Cirrhosis and hepatocellular carcinoma (HCC), as highlighted by Dr. Ali, are conditions that requires active and thorough management to mitigate potential complications.² The nature of the disease requires patients to adhere to specific lifestyle changes and treatment protocols. Regular monitoring and timely intervention are essential in managing cirrhosis and HCC, as well as providing emotional support,³ which often requires a comprehensive understanding of the disease by patients. In light of this, an artificial intelligence (AI) model like GPT-4 can play a pivotal role in patient education, rendering detailed and accurate information on basic knowl-

edge and disease management.

Health literacy, indeed, holds paramount importance in improving patient outcomes.⁴ A well-informed patient is more likely to adhere to recommended lifestyle modifications, medical appointments, and treatment plans, ultimately leading to better disease management. This is where ChatGPT can be instrumental.^{5,6} As elucidated by Dr. Ali, GPT-4 can further provide more nuanced and easy-to-understand information, enabling patients to be proactive in their healthcare decisions and potentially reducing complications and readmissions.

Additionally, we would like to point out other features that GPT-4 may provide. We recently found that GPT-4's multimodal capabilities can be valuable in addressing the needs of diverse patient populations.⁷ For instance, it can be trained to understand and respond to queries in multiple languages, extending its potential to provide valuable information to a broader, more diverse patient population. By providing information in patients' native languages, GPT-4 can help over-

Corresponding author: Yee Hui Yeo

Karsh Division of Gastroenterology and Hepatology, Department of Medicine, Cedars-Sinai Medical Center, Los Angeles, CA 90048, USA Tel: +1-310-423-1971, Fax: +1-310-423-2356, E-mail: Yeehui.yeo@cshs.org https://orcid.org/0000-0002-2703-5954

Editor: Seung Up Kim, Yonsei University College of Medicine, Korea

Received: May 27, 2023 / Accepted: May 30, 2023

come language barriers that often contribute to health disparities. Our recent study showed that GPT-4 exhibits significantly higher accuracy in English and non-English cirrhosis-related questions. Specifically, an improvement was found in Mandarin and Korean responses, with a significantly smaller gap in the accuracy of the responses between them and English.

Lastly, we echo Dr. Ali's sentiment regarding the verification of Al-generated information by a licensed healthcare provider. While the precision of responses from GPT-4 is impressive, it should be noted that these Al models supplement and do not replace the expert advice of physicians. Individual patient factors, regional guidelines, and evolving research are aspects that an Al, despite its learning capabilities, may not fully capture. Hence, while Al models like GPT-4 can serve as a reliable source of health information, they must be utilized with professional medical counsel.

Authors' contribution

YHY: drafting of the manuscript. JSS, WHN: critical review and final approval of the manuscript.

Conflicts of Interest -

The authors have no conflicts to disclose.

REFERENCES

- Ali H. Letter regarding "Examining the accuracy and reproducibility of ChatGPT in answering questions on cirrhosis and hepatocellular carcinoma management". Clin Mol Hepatol 2023 May 19. doi: 10.3350/cmh.2023.0120.
- 2. Yoon EL. A need for patient-centered care in managing patients with liver cirrhosis. Clin Mol Hepatol 2021;27:270-272.
- Tan DJH, Quek SXZ, Yong JN, Suresh A, Koh KXM, Lim WH, et al. Global prevalence of depression and anxiety in patients with hepatocellular carcinoma: Systematic review and metaanalysis. Clin Mol Hepatol 2022;28:864-875.
- 4. Gulati R, Nawaz M, Pyrsopoulos NT. Health literacy and liver disease. Clin Liver Dis (Hoboken) 2018;11:48-51.
- Yeo YH, Samaan JS, Ng WH, Ting PS, Trivedi H, Vipani A, et al. Assessing the performance of ChatGPT in answering questions regarding cirrhosis and hepatocellular carcinoma. Clin Mol Hepatol 2023 Mar 22. doi: 10.3350/cmh.2023.0089.
- Samaan JS, Yeo YH, Rajeev N, Hawley L, Abel S, Ng WH, et al. Assessing the accuracy of responses by the language model ChatGPT to questions regarding bariatric surgery. Obes Surg 2023;33:1790-1796.
- 7. Yeo YH, Samaan JS, Ng WH, Ma X, Ting PS, Kwak MS, et al. GPT-4 outperforms ChatGPT in answering non-English questions related to cirrhosis. medRxiv 2023.05.04.23289482 [Preprint]. Available from: https://doi.org/10.1101/2023.05.04.23289482.