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This Letter to the Editor is in response to 2019 Global NAFLD Prevalence: A Systematic Review and Meta-analysis with Mindie H. Nguyen as corresponding authors.

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To the editor:

It has been several years since there was an update on the global prevalence of NAFLD. Hence, we read with great interest the meta-analysis entitled "2019 Global NAFLD Prevalence: A Systematic Review and Meta-analysis" by Le et al., published in Clinical Gastroenterology and Hepatology.¹ We commend the authors for undertaking this task in which they pooled data from 245 studies from 1990 to 2019 with over 5 million individuals. The authors found a global NAFLD prevalence of 29.8%, substantially higher than previous meta-analysis.²

The considerable increase of NAFLD prevalence over the last decades (+ 0.7% per year) was of particular interest, which has important consequences for future meta-analyses assessing NAFLD prevalence. Specifically, when including all available studies in the presence of an ongoing significant increase of a disease prevalence, the obtained results will always be an underestimation of the actual prevalence. In this study, the overall prevalence (29.8%) was indeed lower compared to studies published after 2016 (33.8%) and their model estimated the prevalence even to be 37% in 2019. Remarkably, these predictions already exceed the predicted 2030 prevalence of previous modelling.³

Although the underestimation has been addressed in this study, there are some comments. The year of publication was used for stratification; however, a more sophisticated approach would be using the years of data inclusion as done by the authors in their prediction model. In one of our meta-analysis comprising over 100 studies assessing the prevalence of fatty liver disease among obese individuals, we noticed great differences between the year of publication and the period of data inclusion.⁴ On average, studies reported on data collected between 4.1 SD 2.8 (start data collection) and 6.6 SD 4.3 (end of data collection) years prior to publication. Therefore, using the years of publication will still lead to underestimating the actual prevalence. Moreover, the large standard deviations implicate large variability in lead time, indicating that the year of publication is not a good representative for the year the data originates.
Furthermore, a linear trend was assumed for the estimated prevalence in 2019, while a plateau has been reached for the prevalence of metabolic comorbidity in several countries.\(^5\) It has been suggested that NAFLD will follow this plateau with a delay of five years.\(^3\) Assuming a linear trend could thus result in an overestimation of the NAFLD prevalence by the prediction model. Therefore, the predicted estimates of these models should be interpreted with caution and only reflects the scenario of an ongoing increase of NAFLD prevalence, rather than a stabilizing NAFLD pandemic due to several policies combating metabolic dysfunction. Future studies should take into account the non-linearity of these trends.

Nonetheless, the authors have convincingly shown that NAFLD has increased rapidly over the last decades and has become an even greater health concern worldwide. Now it has been shown that NAFLD prevalence has almost doubled since 1990, NAFLD prevalence data may thus expire. Therefore, we advocate that future meta-analysis reporting on the prevalence of NAFLD focus only on the most recent data and take into account the year of data inclusion rather than the year of publication.

References