



## Letter to the Editor

# MAFLD Not NAFLD is Associated with Impairment of Health-related Quality of Life

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To the Editor,

We read with great interest the article by Yu *et al.*<sup>1</sup> who reported that the metabolic dysfunction-associated fatty liver disease (MAFLD) criteria are more practical and improve the identification of high-risk patients with fatty liver disease compared with the previous nonalcoholic fatty liver disease (NAFLD) criteria. NAFLD and steatohepatitis are associated with significant impairment of health-related quality of life (HRQOL),<sup>2</sup> and as fibrosis progresses, the negative impact on HRQOL becomes more pronounced. However, the relative impact of NAFLD on HRQOL compared with MAFLD has not been investigated. A consecutive series of 284 patients, 191 with hepatic steatosis diagnosed by ultrasound and 93 healthy controls, were prospectively enrolled at two tertiary care centers in Egypt. The local ethics committees approved the study, which was in compliance with the ethical principles of the Helsinki declaration.

A MAFLD diagnosis does not exclude other liver diseases, and to compare MAFLD and NAFLD patients with an alcohol intake of >20 g/day for men and >10 g/day for women. Those with cirrhosis or other chronic diseases such as human immunodeficiency virus, hepatitis C virus, hepatitis B virus, cancer, or end-stage kidney disease, were excluded. Those without any of the conditions were healthy controls. All patients completed the chronic liver disease questionnaire, which is validated, frequently used, and includes 29 items that measure HRQOL.<sup>3</sup> The participants included 177 with MAFLD/NAFLD and 14 with NAFLD without metabolic impairments (NAFLD only group). Because of the low alcohol intake in Egypt, that was not a confounding factor.

The MAFLD/NAFLD group was older (48.24±14.98 years) than the NAFLD group (38±10.69 years,  $p=0.01$ ) and the healthy controls (39.5±15.9,  $p=0.001$ ). Sixty-nine patients

in the MAFLD/NAFLD group (38.9%), five in the NAFLD only group (35.7%), and 32 in the healthy control group (34.4%) were men ( $p=0.1$ ). The proportion of participants who rated their health as excellent was significantly higher in the control group (25.3%) than in the MAFLD/NAFLD group (9.6%,  $p=0.0006$ ), and the NAFLD only group (25.3% vs. 35.7%,  $p=0.4$ ). After adjusting for age and gender, multivariate analysis showed that the correlation remained significant for a diagnosis of MAFLD/NAFLD (B=-0.23, 95% confidence interval: -0.582 to -0.188,  $p=0.0001$ , Table 1). Compared with healthy controls, MAFLD patients had a worse HRQOL across the majority of the measured domains. Differences in the HRQOL scores of NAFLD only patients and healthy controls were not significant.

Impairment of HRQOL resulted in a reduction of patient ability to perform their daily activities. The control patients were more likely to report no days of having physical health problems compared with MAFLD patients (63.4% vs. 27.2%,  $p<0.0001$ ) and the difference in HRQOL in patients with only NAFLD and healthy controls were not significant (63.4% vs. 50%,  $p=0.3$ , Table 1). Between-group differences in mental health status were not significant.

In conclusion, in line with the results reported by Yu *et al.*,<sup>1</sup> our data show that patients with MAFLD but not NAFLD only experienced significant impairment in HRQOL and performance of physical activities than healthy controls. This study adds to the growing body of evidence demonstrating the utility of the novel MAFLD definition<sup>4,5</sup> to identify patients at high risk of hepatic fibrosis, cardiovascular disease, chronic kidney disease, colonic polyps, and mortality<sup>6–9</sup> and the importance of consideration of MAFLD criteria in the clinical management of fatty liver disease.<sup>10–12</sup>

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## Conflict of interest

YF has been an editorial board member of *Journal of Clinical and Translational Hepatology* since 2021. The other authors have no conflict of interests related to this publication.

**Abbreviations:** HRQOL, health related quality of life; MAFLD, Metabolic (dysfunction) associated fatty liver disease; NAFLD, non-alcoholic fatty liver disease.

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**Table 1. MAFLD and not NAFLD is associated with impairment of HRQOL**

Domain	MAFLD (n=177)	NAFLD (n=14)	Control (n=93)	p-value <sup>a</sup>	p-value <sup>b</sup>	p-value <sup>c</sup>
Excellent HRQOL, n (%)	17 (9.6)	5 (35.7)	24 (25.3)	0.0006	0.4	0.01
Days of physical health problems, n (%)	48 (27.2)	7 (50)	59 (63.4)	0.0001	0.3	0.2

<sup>a</sup>MAFLD vs. Control, chi-square test. <sup>b</sup>NAFLD vs. Control, chi-square test. <sup>c</sup>MAFLD vs. NAFLD, chi-square test. HRQOL, health related quality of life; MAFLD, Metabolic (dysfunction) associated fatty liver disease; NAFLD, non-alcoholic fatty liver disease.

## Author contributions

All authors equally contributed to the work.

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