

## Comments to Prediction of Advanced Fibrosis in Nonalcoholic Fatty Liver Disease: An Enhanced Model of BARD Score

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Dear Editor,

I read with interest this paper which introduces an enhanced scoring model to predict advanced fibrosis in nonalcoholic fatty liver disease. The new model added the international normalized ratio (INR) as a risk factor apart from the three factors of body mass index, aspartate transaminase/alanine aminotransferase ratio, and diabetes mellitus (BARD score).<sup>1</sup>

INR is a measure of the extrinsic pathway of coagulation and status of liver damage. It is influenced by vitamin K intake and availability, tobacco consumption, and other variables.<sup>2,3</sup> Common digestive disorders, such as vomiting and malabsorption, create fluctuations in INR. Warfarin resistance has been reported with rapid increase in INR due to interaction with prednisone, vitamin C, leflunomide, and herbal-drug interaction.<sup>4-6</sup> And there are several case reports about Warfarin-cranberry juice interaction.<sup>7</sup> In addition, value of INR increases significantly with time from plasma stored at  $-40^{\circ}\text{C}$  or  $-20^{\circ}\text{C}$ .<sup>8</sup>

The new model presented here maintains the simplicity and strength of the BARD score, and the combination of INR and BARD score reduces the occurrence of false positives. Nevertheless, the INR is influenced by multiple variables as stated above, especially the use of warfarin, which is prescribed worldwide. More studies have been suggested to assess the INR, which is influenced by many variables, before the establishment of a new model. Additionally, the authors state in the introduction section the importance of the diagnosis of fibrosis in the early stage, rather than the advanced stage as mentioned in the title.

### CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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