

# Comment on “Prediction of impacts on liver enzymes from the exposure of low-dose medical radiations through artificial intelligence algorithms”

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Dear Editor,

We have recently read an article entitled “Prediction of impacts on liver enzymes from the exposure of low-dose medical radiations through artificial intelligence algorithms<sup>1</sup>.” In this study, artificial intelligence-based predicting model random forest was proved accurate in prediagnosing alterations in liver enzymes.

However, we still have some suggestions to discuss with researchers.

First, the goal of this study was to explore liver function damage. The increase in transaminase is only one of the laboratory indicators of liver function damage, which still needs to be confirmed by follow-up, clinical symptoms, or imaging.

Second, the population samples collected in the training set and test set of this study should exclude exposure to other factors, such as alcohol, drugs, and basic diseases, causing liver function damage.

Third, supervised learning is a “negative or positive” model based on standard setting. There is a complex process of progression and recovery when it is in the early liver function damage and the subclinical liver function before the damage reaching irreversible state. Therefore, the criteria set by the model used in the study, i.e., whether it can fully define the pathological state of the real world need to be considered carefully.

In fact, many of these deficiencies are due to the limitations of research conditions. Therefore, we look forward to further studies by researchers.

## REFERENCE

1. Shahid S, Masood K, Khan AW. Prediction of impacts on liver enzymes from the exposure of low-dose medical radiations through artificial intelligence algorithms. *Rev Assoc Med Bras* (1992). 2021;67(2):248-59. <https://doi.org/10.1590/1806-9282.67.02.20200653>

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