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LETTER

Analysis of Risk Factors for Carbapenem Resistant *Klebsiella pneumoniae* Infection and Construction of Nomogram Model: A Large Case-Control and Cohort Study from Shanxi, China [Letter]

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Dear editor

We highly appreciate the article titled "Analysis of Risk Factors for Carbapenem-Resistant Klebsiella pneumoniae Infection and Construction of a Nomogram Model: A Large Case-Control and Cohort Study from Shanxi, China" published in the journal Infection and Drug Resistance. The study conducted by Wang et al provides valuable insights into the risk factors associated with carbapenem-resistant *Klebsiella pneumoniae* (CRKP) infection and the development of a nomogram model to predict CRKP infection.[1] The findings of this study are particularly important given the increasing global concern regarding healthcare-associated infections caused by CRKP. The authors were able to create a prediction model based on multiple variables filtered by Lasso regression, which could potentially assist healthcare professionals in screening for early risk of CRKP infection. Adding six clinically relevant indicators to the nomogram model and testing its discrimination and calibration using ROC curves and calibration curves showed that the model was robust and could be useful in the clinical setting.

However, it is important to note that this study has certain limitations that need to be addressed. Firstly, this study was a single retrospective study at a single medical center, so generalization of the findings to a wider population may be limited. Secondly, some important variables, such as history of drug combination therapy and *Klebsiella pneumoniae* bacterial colonization, were not included in the analysis, which may affect the prediction accuracy of CRKP infection. In addition, the article did not provide an adequate explanation of how the prediction model could be implemented clinically and how the results could influence clinical practice. Lastly, the article does not provide recommendations for further studies that could improve on the weaknesses in this study, such as a larger multi-regional prospective study and more comprehensive variable inclusion.

To correct the limitations in the article, a follow-up study involving multiple medical centers in different regions is recommended. A broader, multi-regional prospective study may be helpful in validating the findings from this study and expanding the generalizability of the results.[2,3] To get a better idea of who will get CRKP, it's also important to include a wider range of factors, like previous drug combination therapy and the presence of *Klebsiella pneumoniae* bacteria. The article could also be enriched by providing a more detailed explanation of the clinical implementation of the developed prediction model as well as its impact on clinical practice.[4] Recommendations for further studies that are more in-depth and inclusive can also make a valuable contribution to improving the shortcomings of this study, as well as expanding the understanding of risk factors and the prediction of CRKP infection. In conclusion, Wang et al's study makes a valuable contribution to the understanding of CRKP infection and the development of predictive models. Further multi-regional prospective studies are needed to validate and extend the findings of this study.

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Disclosure

The authors report no conflicts of interest in this communication.

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