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CORRESPONDENCE

Bayesian analysis supports the role of apixaban for cancer patients

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To the Editor

The efficacy and safety of direct oral anticoagulants (DOACs) for preventing and treating venous thromboembolism (VTE) in cancer patients is uncertain and several questions remain unanswered in this setting. In the current systematic review and network meta-analysis (NMA) published by Wu et al., the authors pulled together twenty clinical trials for a total of 6162 patients [1]. According to the results of the Bayesian NMA, Wu and colleagues suggested that apixaban may be considered as the most efficient and safest DOAC and presents better efficacy and relatively low bleeding risk among the VTE prevention and treatment drugs for patients with cancer [1].

Wu et al. performed Bayesian NMA to optimize data extrapolation and to compare different treatments when no direct comparative trial was available and to obtain more precise effect estimated by jointly considering direct and indirect comparisons [2]. Herein, the authors used rigorous, well-accepted methods to assess evidence across clinical trials, also acknowledging important limitations.

However, we believe some methodological issues would deserve discussion.

First, Bayesian NMA — similarly to pairwise meta-analysis — may be associated with the inflation of false-positive (type 1) and false-negative (type 2) errors; since these specific errors have been suggested to play an important role to validating true-positive as well as true-negative findings in meta-analyses, this issue should be carefully considered [3].

In our view, Wu et al. are to be commended for this interesting NMA aimed at evaluating a timely topic in cancer patients. At the same time, Bayesian NMA has some limitations that should be considered, and cannot replace head-to-head clinical trials comparison. Based on these premises, the NMA by Wu and colleagues further emphasizes the need for large-scale, well-designed clinical trials aimed at investigating the use of including dabigatran, apixaban, rivaroxaban, and edoxaban for preventing and treating VTE in cancer patients.

We invite the authors to share their view on these remarks.

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Declarations

Ethical approval Not applicable.

Conflict of interest The authors declare no competing interests.

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