



Chronic myeloproliferative neoplasms

Response to: Ruxolitinib withdrawal due to the COVID-19

Tiziano Barbui ¹ · Alessandra Carobbio ¹

Received: 22 January 2021 / Revised: 26 January 2021 / Accepted: 2 February 2021 / Published online: 25 February 2021
© The Author(s), under exclusive licence to Springer Nature Limited 2021

To the Editor:

The comment raised by Dr. Lucijanac and Kusec that the effect on high mortality in patients with MPN and COVID-19 could not so much be due to the suspension of ruxolitinib but to the greater severity of the disease was obviously considered in our analysis [1], both in the multivariate model and in the propensity score (PS) matching.

First of all, we clarify that the logistic model presented was not only performed on 45 patients exposed to ruxolitinib. The model considered the entire cohort and adjusted the exposition to ruxolitinib for its discontinuation through the technique of mediation analysis [2].

We were aware that, given the low number of events, the logistic model did not allow to correct for many confounders and for this reason we also performed a sensitivity analysis applying the PS matching. As Supplementary Table 1S shows, there were no significant differences between those who discontinued and those who did not discontinue after PS matching.

This finding should alert the haematologist who cares for patients with MPN treated with ruxolitinib, who contract COVID-19.

Compliance with ethical standards

Conflict of interest The authors declare no competing interests.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

References

1. Barbui T, Vannucchi AM, Alvarez-Larran A, Iurlo A, Masciulli A, Carobbio A, et al. High mortality rate in COVID-19 patients with myeloproliferative neoplasms after abrupt withdrawal of ruxolitinib. *Leukemia*. 2021. <https://doi.org/10.1038/s41375-020-01107-y>.
2. Richiardi L, Bellocco R, Zugna D. Mediation analysis in epidemiology: methods, interpretation and bias. *Int J Epidemiol*. 2013;42:1511–9.

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1038/s41375-021-01187-4>.

✉ Tiziano Barbui
tbarbui@fondazionefrom.it

¹ FROM Research Foundation, Papa Giovanni XXIII Hospital, Bergamo, Italy