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LETTER TO THE EDITOR

Comment on: Drug Survival of IL-12/23, IL-17 and IL-23 Inhibitors for Psoriasis Treatment: A Retrospective Multi-Country, Multicentric Cohort Study

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To the Editor:

It was with great interest that we read the article "Drug Survival of IL-12/23, IL-17 and IL-23 Inhibitors for Psoriasis Treatment: A Retrospective Multi-Country, Multicentric Cohort Study" [1]. In this paper, the authors aimed to evaluate and compare drug survival for the biologic agents most recently approved for the treatment of moderate-to-severe psoriasis—ustekinumab, secukinumab, ixekizumab, brodalumab, guselkumab, and risankizumab—in a retrospective cohort study.

While the survival analysis seems to be well conducted, we consider it important to highlight some concerns regarding the presentation of the data, and conclusions drawn. It is important that survival analyses are conducted and presented in a way that provides reliable and robust estimates of drug survival. We assert that the concerns detailed below directly impact the applicability of some of the results to real-world clinical practice and may limit the ability of the research to inform clinical decision making.

Notably, the sample size for brodalumab and risankizumab patients is relatively small for a drug survival analysis ($n = 116$ and $n = 118$, respectively). Although the authors do not show the number of patients at risk at subsequent time points, it is clear from the Kaplan-Meier plots that very few patients are included in the analysis past approximately 1 year for both brodalumab and risankizumab. The number of patients at risk of the event at relevant time points is an important indicator of the reliability of drug survival estimates over time when conducting survival analyses. It is considered good practice to display the number of patients event-free and still in follow-up below a Kaplan-Meier plot [2]. Another general recommendation is that survival plots should only extend through periods of follow-up achieved by a reasonable proportion of patients [2, 3]. There is room for discussion about what cutoff is appropriate; Pocock et al. suggest restricting survival curves beyond the point of approximately 10–20% of the population remaining in follow-up [2].

Although the authors note that longer-term data is limited for some treatments, they proceed to conclude that "brodalumab was the biologic drug with the lowest cumulative probability of drug survival at 24 months (64.7%)" (Section 3.5). In addition to the limited patient numbers at later timepoints, this very specific claim is not supported by a *p*-value, as the log-rank test relates to a more general hypothesis. We contend that the data presented are inadequate to reliably estimate the discontinuation rate beyond 12–18 months of follow-up for brodalumab and risankizumab, and that no firm conclusions should be drawn regarding the rank of these therapies at later timepoints.

We recognize that analyses of the comparative drug survival of biologic treatments in psoriasis across different countries are of high value to both clinicians and health care payers. In this letter we highlight the importance of not drawing conclusions on data that are too scarce and of transparently informing readers of the number of patients still in follow-up at relevant timepoints.

Yours sincerely,
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Declarations

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Conflict of interest Emma Borg and Henrik Thoning are both employees at LEO Pharma, who market the drug brodalumab, which is one of the assessed drugs in the paper that we comment on.

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