

# Comment on: FLT3 ligand kinetic profile predicts response to treatment in patients with high-risk myelodysplastic syndrome/chronic myelomonocytic leukemia receiving CPX-351: a study from the Groupe Francophone des Myélodysplasies

We read Peterlin’s impressive study<sup>1</sup> with great interest. In their multivariate analysis, considering age, sex, Revised International Scoring System (R-IPSS) and soluble Fms-like tyrosine kinase 3 ligand (sFL) kinetics, an FLD profile was the only factor associated with a higher complete response/complete response with incomplete count recovery (CR/CRI) rate (odds ratio: 25.3; 95% confidence interval: 2.02–3,843;  $P=0.004$ ). However, we would like to point out that a great statistical pitfall may have been ignored and that, consequently the predictor result of this study may not be accurate.

For multivariate analysis the basic fundamental statistical rule is that for a single outcome event ten variables are required for the predictor regression analysis.<sup>2</sup> Thus, 28 patients could at most be used to analyze three variables for the multivariate analysis. In contrast, seven variables were analyzed in the *Online Supplementary Figure S1* of this study.<sup>1</sup> This overfitted predictor regression analysis model may not produce reliable results.

Furthermore, what were the selection criteria for these variables in the multivariate analysis of *Online Supplementary Figure S1*? Were they based on statistically significant factors between the outcome and non-outcome groups, univariate analysis, or were they based on the well-known clinical criteria?

Despite these comments, we show great gratitude to Peterlin’s impressive study.

## References

1. Peterlin P, Gaschet J, Turlure P, et al. FLT3 ligand kinetic profile predicts response to treatment in patients with high-risk myelodysplastic syndrome/chronic myelomonocytic leukemia receiving CPX-351: a study from the Groupe Francophone des

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