To the editor:

Comparison of prognostic scoring systems in primary myelofibrosis

We read with interest the description by Cervantes and the International Working Group for Myelofibrosis Research and Treatment (IWG-MRT) of a new prognostic index for patients with primary myelofibrosis.1 This system, based on 5 adverse characteristics, identified 4 prognostic subgroups. Using the c index of Harrell, the authors stated that the IWG-MRT scores have higher discriminating power than previous scores. However, the use of this index on the sample for which the classification score has been tailor-made is seldom of interest because it estimates probability of concordance between predicted and observed responses.2 The estimation of separation parameter D would better assess whether increasing complexity results in a useful increase in discriminating power.3

Using the bootstrap resampling method, we compared the separation parameters4 of IWG-MRT1 and Lille scores5 in a series of 229 patients (163 and 171 previously reported by Dupriez and Cervantes, respectively) diagnosed between 1963 and 2006 (median age, 64 years; median overall survival, 52 months; 10% of patients lost to follow-up). There was no difference in the distribution of characteristics of the present series and previous reports,1,2 except a low frequency of deaths in the IWG-MRT series (78% vs 49%).

IWG-MRT low- (14%), intermediate-low– (32%), intermediate-high– (32%), and high-risk patients (22%) had significantly different median survival (136, 86, 45 and 21 months, respectively; P < .001). Median survival of Lille low- (49%), intermediate- (42%), and high-risk patients (9%) were 109, 30, and 15.5 months, respectively, without significant difference between the latter 2 subgroups in the present analysis, as previously reported.1 Thus, combining intermediate- and high-risk patients may improve the interest of Lille score by identifying a large subset of patients eligible for innovative approaches with a median survival of 26 months (95% confidence interval [CI], 22-36 months). In addition, we confirmed that Lille low-risk patients aged less than 55 years (14%) had a median survival estimated at 172 months (95% CI, 100-204 months),6 similar to that of IWG-MRT low-risk patients.

Estimate of the separation parameter was DLille3 = 1.28 (95% CI, 0.96-1.65) and DWGMRT = 1.29 (95% CI, 0.95-1.66) for the Lille and IWG-MRT scoring systems, respectively. This difference was not statistically significant. Combining Lille intermediate- and high-risk patients, a similar lack of difference was observed (DLille2 = 1.26; 95% CI, 0.94-1.62).

Response

Capturing variables with prognostic relevance in development of a new scoring system for primary myelofibrosis

Morel and Duhamel question the statistical methodology used in the validation of the new prognostic scoring system for primary myelofibrosis (PMF) recently proposed by the International Working Group for Myelofibrosis Research and Treatment (IWG-MRT)1 and the need for a new prognostic score. Instead, they suggest combining the intermediate- and high-risk groups of the Lille

References

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Pierre Morel and Alain Duhamel