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Reevaluating Prognostic Nutritional Index in Post-Coronary Artery Bypass Graft Surgery Mortality: A Call for Caution

LETTER TO THE EDITOR

To the Editor,

We read with interest the article by Toprak and Bilgiç[1] evaluating the prognostic role of pre- and postoperative prognostic nutritional index (PNI) in patients undergoing coronary artery bypass grafting (CABG). The authors are to be commended for emphasizing the clinical relevance of nutritional status and for incorporating both perioperative time points of PNI, an easily accessible and cost-effective biomarker.

However, several methodological and interpretative concerns deserve attention. First, the reported in-hospital mortality rate of 21.8% appears substantially higher than expected in contemporary CABG populations.[2,3] This raises questions about the cohort composition—particularly the proportion of urgent, frail, or high-risk patients—which is not explicitly described. The lack of subgroup analysis in these populations limits the generalizability of the findings and complicates risk interpretation.

Second, while the authors assert the predictive power of PNI, the analysis includes both PNI and its components (e.g., albumin) in multivariable models. This introduces potential collinearity and clouds interpretation. Moreover, an unexpected result emerges: postoperative lymphocyte counts were paradoxically higher in non-survivors, yet their PNI values were lower. This contradiction may reflect timing inconsistencies, inflammatory confounders, or analytical noise, and warrants clarification. It also underscores the importance of examining the individual components of composite indices rather than relying solely on the combined score.

The authors further propose that early nutritional interventions may improve outcomes in patients with low PNI. While plausible, this assumption is speculative; no interventional data are presented to support it. Whether low PNI reflects modifiable malnutrition or simply marks underlying disease severity, frailty, or systemic inflammation remains unclear. Prospective, controlled studies are needed to determine if PNI-guided nutritional optimization can alter clinical trajectories in CABG patients.

Finally, although the study suggests integrating PNI into existing risk models, it does not evaluate whether PNI adds predictive value beyond well-established tools such as EuroSCORE II or STS risk scores. Without such comparisons, the standalone utility of PNI remains questionable in preoperative planning.

In conclusion, while this study contributes to the growing body of literature linking nutritional status to surgical outcomes, its findings should be interpreted with caution. Further multicenter, prospective investigations are required to validate the prognostic utility of PNI and to determine its place in clinical decision-making.

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