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LETTER TO THE EDITORS

Galectin-3-independent prognosis in heart failure

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Sirs:

I read the report on galectin-3 in heart failure by Lok et al. [1] with great interest. The authors concluded that "plasma galectin-3 is a novel biomarker in patients with heart failure, which seems to have important prognostic value. Although it is generally elevated in heart failure, this prognostic value is independent of the severity of disease, as assessed by NT-proBNP levels".

Galectin-3 seems to be a good biomarker but we wonder how much it would be able to contribute to heart failure's prognosis.

Independent association in a multivariate model is not sufficient to establish good prognostic models; both discrimination and calibration are vital to establish prognostication or risk prediction. Moreover, the authors should assess the impact of adding the new predictor (galectin-3) to a known set of other predictors (NT-proBNP, and other known prognostic factors). At times discrimination assessed by the area under a receiver operating-characteristic (ROC) curve (AUC) or c statistic might not be sensitive enough to see an improvement with the addition of a new predictor, so the authors should have considered, in addition, using "clinical reclassification" [2]. The increased discriminative value of a biomarker may also be examined with a method described by Pencina et al. [3]. This method is based on the difference between two models in the individual estimated probability that a case subject will be categorized as a case subject. An increased probability that case subjects will be categorized as case subjects and a decreased probability that control subjects will be categorized as case subjects implies better prediction ability, whereas the opposite implies worse prediction ability. Net reclassification improvement (NRI) requires that there exist a priori meaningful risk categories.

References

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