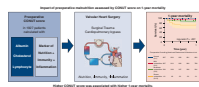


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REPLY FROM AUTHORS: OBJECTIVE NUTRITIONAL INDEX AS A SIMPLE AND

EFFECTIVE TOOL FOR THE ASSESSMENT OF MORTALITY RISK AFTER CARDIAC SURGERY

Reply to the Editor:

We thank Carosella¹ for his thoughtful and valuable comments regarding our article.² We agree that a risk score cannot replace clinical judgment in predicting a patient's risk before surgery and that it would be ideal to conduct an omnidirectional evaluation for a more accurate prediction. As Carosella¹ commented, although nutrition assessment—1 of 4 parameters of frailty—is an important measure for risk assessment, this assessment might be further improved by assessing mobility, cognitive status, and activities of daily living, as well. However, evaluation of mobility, cognitive status, and activities of daily living take significant resources and time. They require patient cooperation and are not possible for patients with communication disabilities. In addition, the complexity and subjectivity of these measures hinder their routine application in preoperative evaluation.

In contrast, the Controlling Nutritional Status score, Prognostic Nutritional Index, and Geriatric Nutritional Risk Index are simple and objective nutritional risk screening tools based on standard, available laboratory parameters (eg, serum albumin, lymphocyte, and cholesterol levels). Our study shows that these nutrition indices are independent predictors for 1-year mortality after cardiac surgery, and the Controlling Nutritional Status score combined with the European System for Cardiac Operative Risk Evaluation II score significantly improves the predictive accuracy for mortality compared with the European System

for Cardiac Operative Risk Evaluation score alone. Our findings demonstrate the validity of objective nutrition assessments in patients undergoing cardiac surgery, and therefore we suggest that a nutrition assessment using these simple nutrition indices should be performed before surgery. We do not claim that a nutrition index alone is better than a comprehensive battery of tests related to frailty. However, frailty and malnutrition coexist as geriatric syndromes and are closely related.³ A correlation between frailty and nutritional status has been demonstrated in several studies, and malnutrition is strongly associated with frailty, as evaluated by several methods, including the Frailty Instrument of the Survey of Health, Ageing, and Retirement in Europe study,⁴ the 5-item Fatigue, Resistance, Ambulation, Illnesses, and Loss of Weight scale score,³ and Fried criteria.⁵ Because a more accurate assessment of patient risk can better predict prognosis, an objective nutrition index is a simple and effective tool for preoperative assessment that should be an integral component of predictive algorithms for mortality risk after surgery.

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