New protein risk score shows strong clinical utility for predicting death from heart failure

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A new protein risk score developed to predict the risk of death for persons with heart failure (HF) has demonstrated good calibration and may help clinicians better stratify mortality risk in these patients. The score is published in *Annals of Internal Medicine*.

Heart failure is a complex clinical syndrome with high mortality rates. Current risk stratification approaches that capture the biological complexity of the HF syndrome and show clinical utility are limited. High-throughput proteomics could improve risk prediction, but its use in clinical practice to guide the management of patients with HF depends on validation and evidence of clinical benefit.

Researchers from the National Institutes of Health developed and validated a protein risk score to stratify mortality risk in persons with heart failure using a community-based cohort of 7,289 plasma proteins in 1,351 patients with HF.

In the development cohort, 38 unique proteins were selected for the protein risk score. The protein risk score demonstrated good calibration, reclassified mortality risk particularly at the extremes of the risk distribution, and showed greater clinical utility compared with the clinical model.

According to the researchers, these findings foreshadow the clinical utility of large-scale proteomic assays for precision risk prediction in HF. This tool may help clinicians select candidates for rapid drug titration or patients with advanced HF, at particularly high risk for adverse outcomes, that should be considered for mechanical circulatory support or transplantation.

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