

Elderly patients with lower blood hemoglobin levels during acute coronary syndrome have higher global mortality risk in the long-term follow up.

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INTRODUCTION & AIM

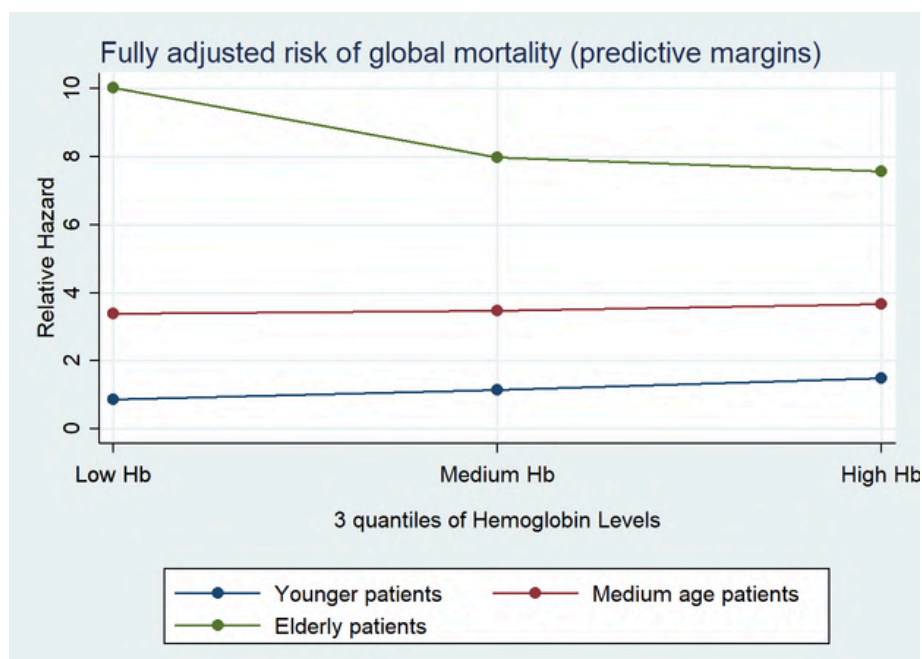
- The prognostic role of baseline blood hemoglobin (Hb) levels, a primary marker of anemia, in predicting long-term mortality after an acute coronary syndrome (ACS) remains unclear.
- This study aimed to evaluate the association between low Hb levels during ACS hospitalization and very long-term overall mortality.

METHODS

- The study prospectively followed 571 ACS patients discharged from three Italian hospitals for up to 26 years (or until death).
- The study analyzed a total of 7,091 person-years of data. Survival analysis was conducted using **Cox regression** models, adjusting for age, gender, heart failure, hypertension, antiplatelet treatment, prior myocardial infarction, and kidney function (eGFR). Statistical analysis was performed using Stata 18.0.

RESULTS

- The cohort had a mean age of 66 years, and 85% of patients died during the follow-up period.
- Initially, univariable analysis showed no significant association between Hb and mortality. After including a formal interaction term for age, baseline Hb showed a **significant positive association** with mortality risk. Specifically, a negative interaction was found between Hb and age (HR: 0.8, $p = 0.01$), which remained consistent in the fully adjusted model.



CONCLUSIONS

- This study demonstrates that low **hemoglobin levels after ACS are associated with a higher long-term mortality risk** specifically in older patients.
- These findings emphasize the clinical and **prognostic importance of managing Hb levels** particularly within the **elderly ACS population**, where its impact on survival is most pronounced.