The pathobiology of inflammation, thrombosis, and myocardial injury associated with SARS-CoV2 infection may be assessed by circulating biomarkers. However, their relative prognostic importance has been incompletely described.

BACKGROUND
• We analyzed data from pts hospitalized with COVID-19 in Jan 2020 to April 2021 at 122 US hospitals in the AHA COVID-19 Cardiovascular Disease Registry.
• Patients with biomarker data for D-Dimer, CRP, ferritin, natriuretic peptides [NP], or cardiac troponin (cTn) at admission were included.
• In patients with all 5 biomarkers, the association between each biomarker quintile [Q] and in-hospital death was assessed by multivariable logistic regression. Q1 = referent for all comparisons.
• Secondary outcomes of interest included (1) a CV composite (ventricular arrythmias, HF, AMI, cardiogenic shock, cardiac arrest, myocarditis, or new AF) and (2) a thrombotic composite (DVT, PE, intracardiac thrombus, or ischemic stroke).

METHODS
• Of 32,636 patients in the AHA COVID-19 CVD registry, 26,424 (81%) had admission values for ≥1 of the key biomarkers (n= 4,527 for all 5 biomarkers at admission).
• Each biomarker revealed a significant gradient of mortality risk from Q1 to Q5: D-dimer 14%–35%, CRP 11%–32%, Ferritin 11%–30%, cTn 13%–43%, and NPs 7%–35% (p_trend for each <0.001, Fig 1).

CONCLUSIONS
• Among pts hospitalized with COVID-19, higher levels of NPs, CRP, Ferritin and cTn at the time of admission were associated with a greater risk of death, whereas D-dimer did not offer independent prognostic information.
• Higher NPs quintiles provided greater prognostic information than higher cTn quintiles for CV events; D-dimer provided the greatest prognostic information for thrombotic events.