

# Serum aldosterone in patients with heart failure with a preserved ejection fraction

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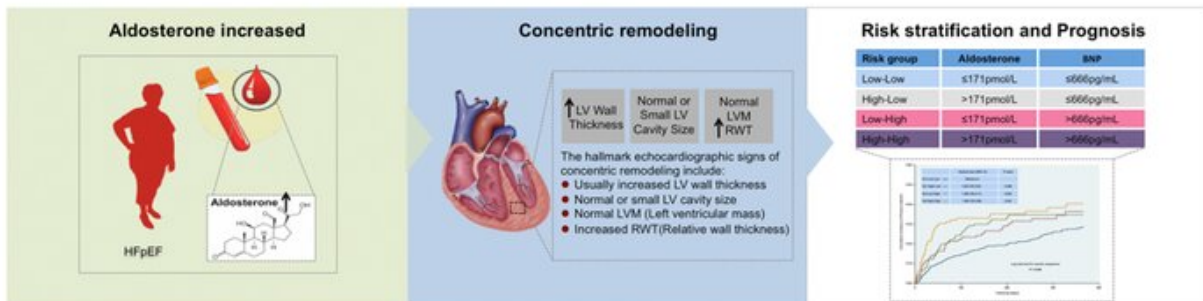
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Currently, patients with HFpEF have high risk of morbidity and mortality, but there is no effective measure for evaluating the prognosis. Studies have found that a variety of pathways can lead to the development of HFpEF, including neurohormones or heart damage. Aldosterone plays an especially important role in the development of heart failure. The renin- angiotensin- aldosterone system is activated,

which stimulates aldosterone secretion from the adrenal cortex. The elevated aldosterone is associated with myocardial hypertrophy and fibrosis, leading to arterial stiffness, cardiac dysfunction, and risk of morbidity and mortality in heart failure. In this context, the association of serum aldosterone level with all-cause mortality and HF-hospitalization for patients with HFpEF is assessed.

"We demonstrate that level of serum aldosterone is independently associated with all-cause [mortality](#) (adjusted hazard ratio (aHR), 1.55; 95% confidence interval (95%CI) 1.06–2.27; P=0.024) and primary endpoint (aHR, 1.43; 95%CI 1.11–1.85; P=0.006) in HFpEF." said Dr. Bingbing Ke, the first author for this work. The results of this research indicate that aldosterone is an independent predictor of HFpEF prognosis.

"The higher aldosterone level is associated with more risk of concentric left ventricular remodeling (adjusted odds ratio (aOR), 1.45; 95% CI 1.03–2.04; P=0.034), and poor prognosis. Moreover, patients with high aldosterone and BNP concentrations were at a higher risk of the primary endpoint (hazard ratio (HR), 1.85; 95%CI 1.29–2.66; P=0.001)." said Professor Jie Du, the co-corresponding author. Serum aldosterone concentrations provide a new measure for risk evaluation of all-cause mortality and HF re-hospitalization in HFpEF patients. Measurement of serum [aldosterone](#) concentration provides additive prognostic value when combined with BNP.



Serum aldosterone can be used to risk stratification in patients with HFpEF.  
Credit: Science China Press

**More information:** Bingbing Ke et al, Aldosterone dysregulation predicts the risk of mortality and rehospitalization in heart failure with a preserved ejection fraction, *Science China Life Sciences* (2021). [DOI: 10.1007/s11427-021-1945-6](https://doi.org/10.1007/s11427-021-1945-6)

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