



# The prognostic value of thyroid stimulating hormone for long-term all-cause mortality in heart failure treated patients-a comparative analysis across the ejection fraction spectrum

Diana Ionescu<sup>1</sup>, Caterina Delcea<sup>1,2</sup>, Cătălin Adrian Buzea<sup>1,2</sup>, Ancuta Vîjan<sup>1,2</sup>, Anca Breha<sup>1,2</sup>, Elisabeta Bădilă<sup>1,2</sup>, Gheorghe-Andrei Dan<sup>1,2</sup>

<sup>1</sup> Colentina University Hospital, Bucharest, Romania <sup>2</sup> 'Carol Davila' University of Medicine and Pharmacy, Bucharest, Romania

## Objective

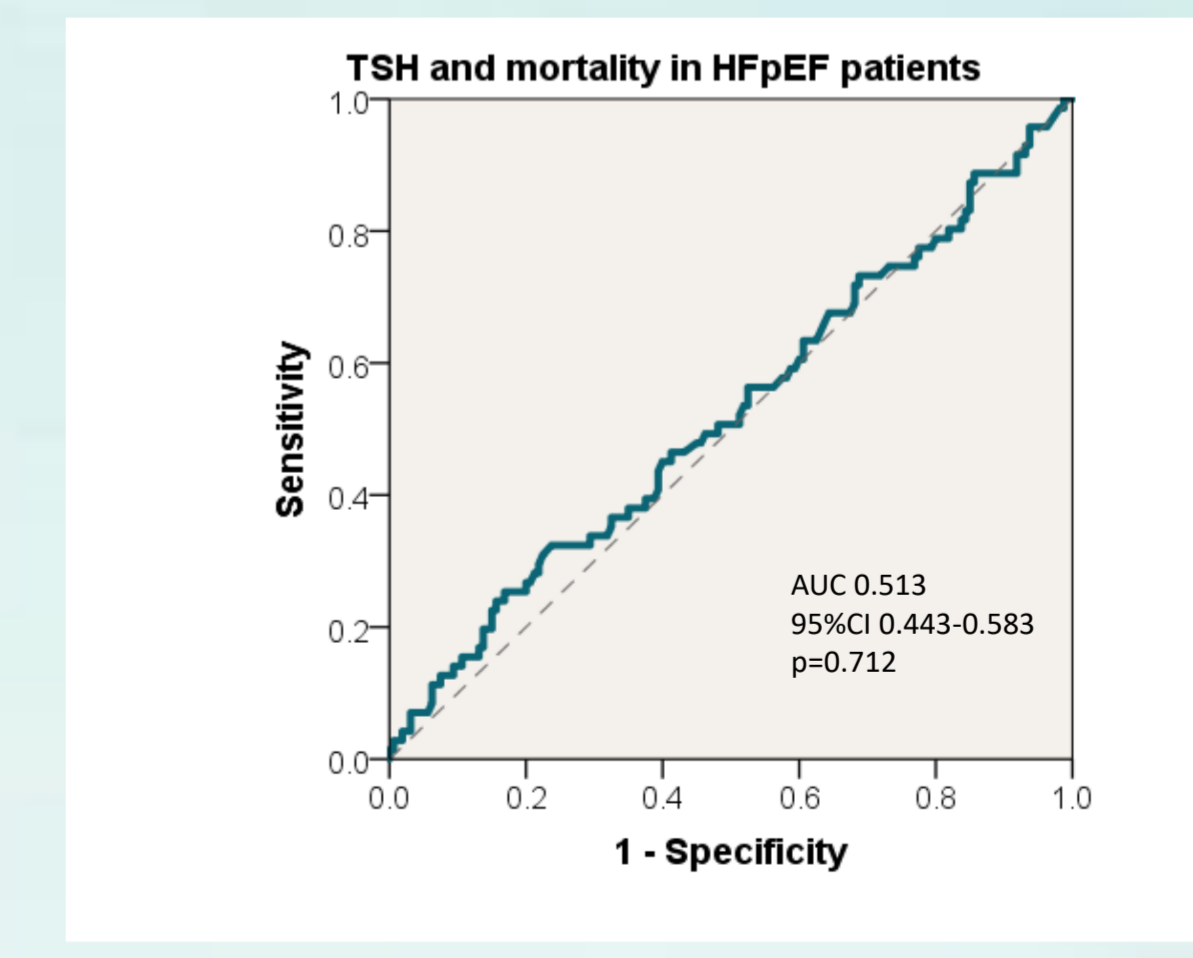
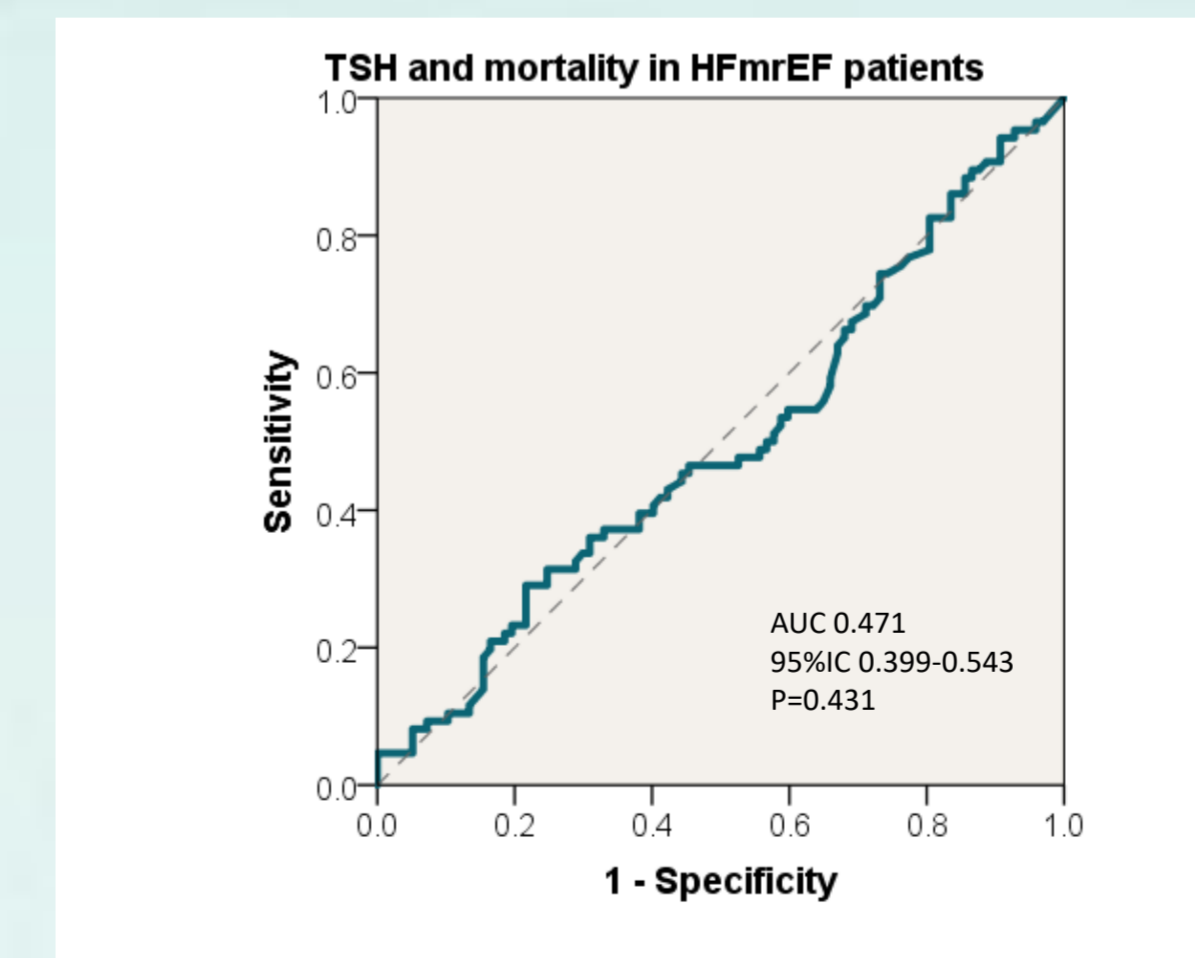
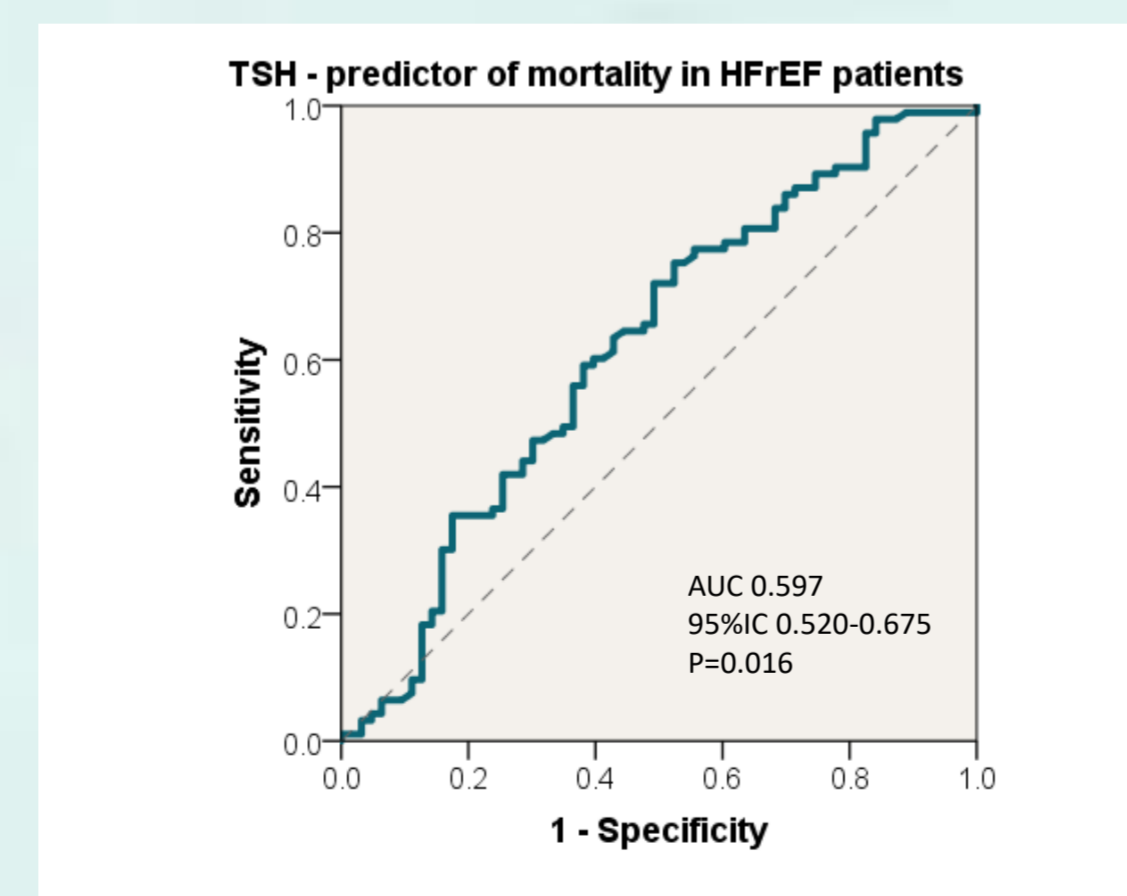
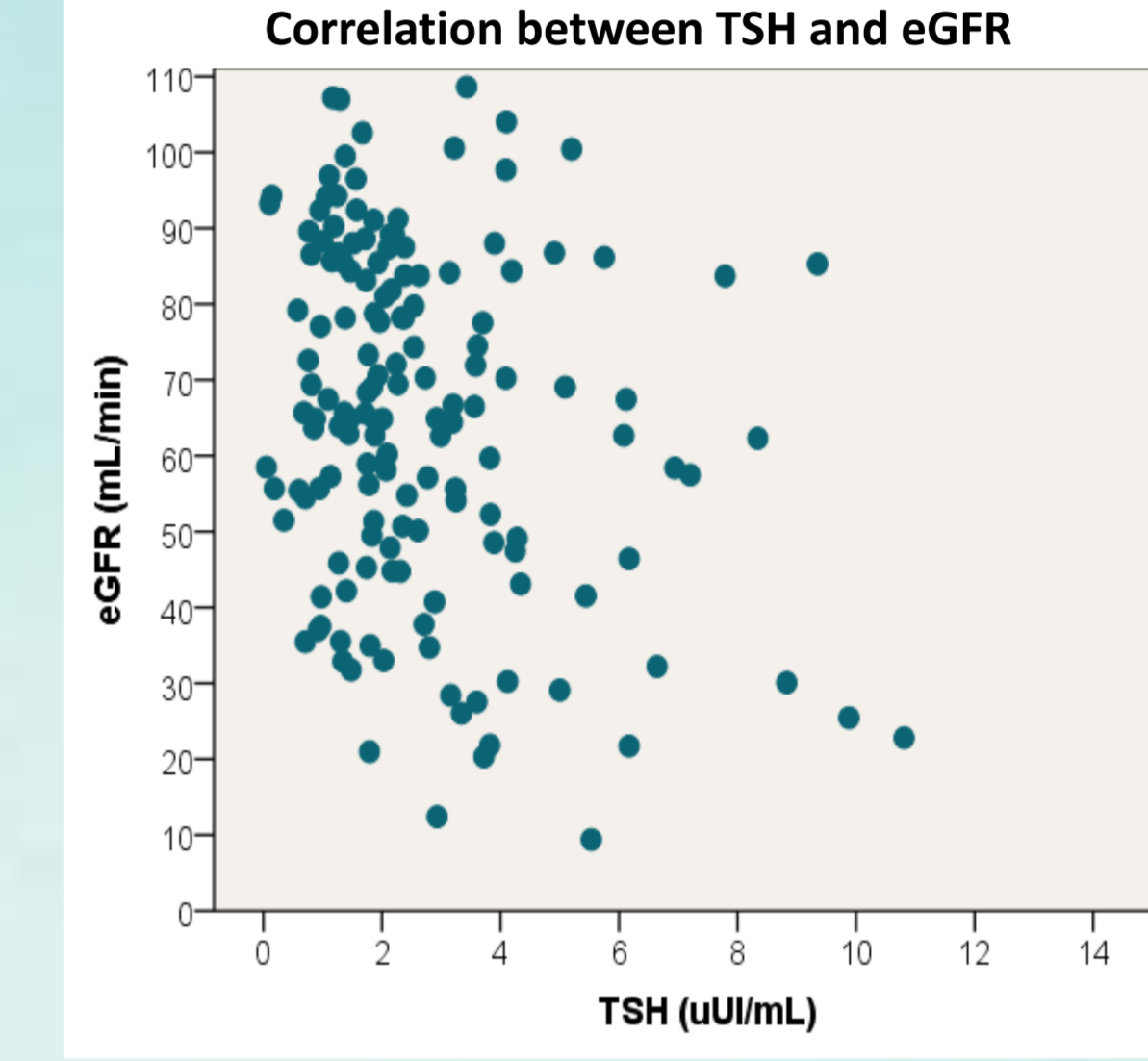
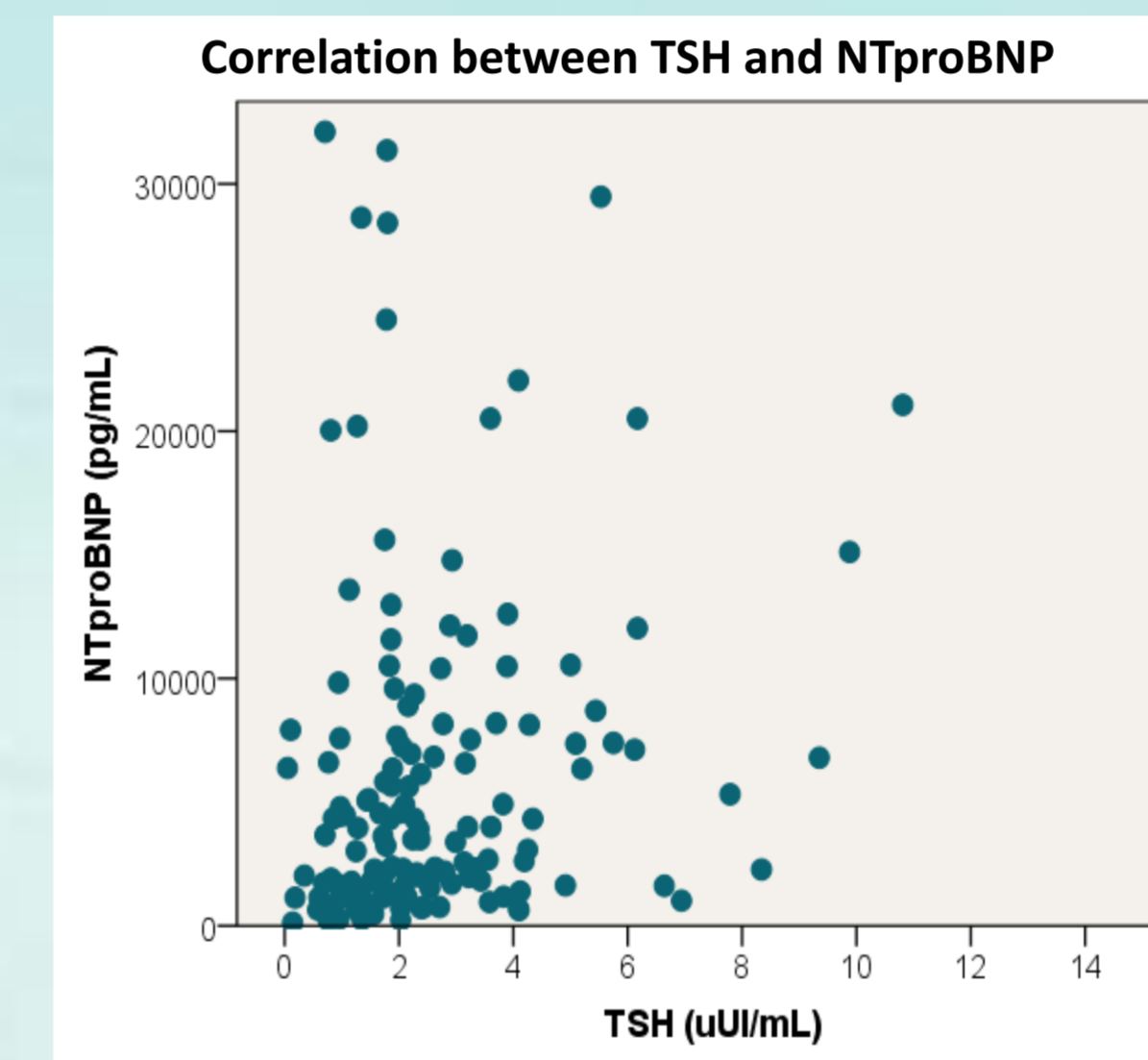
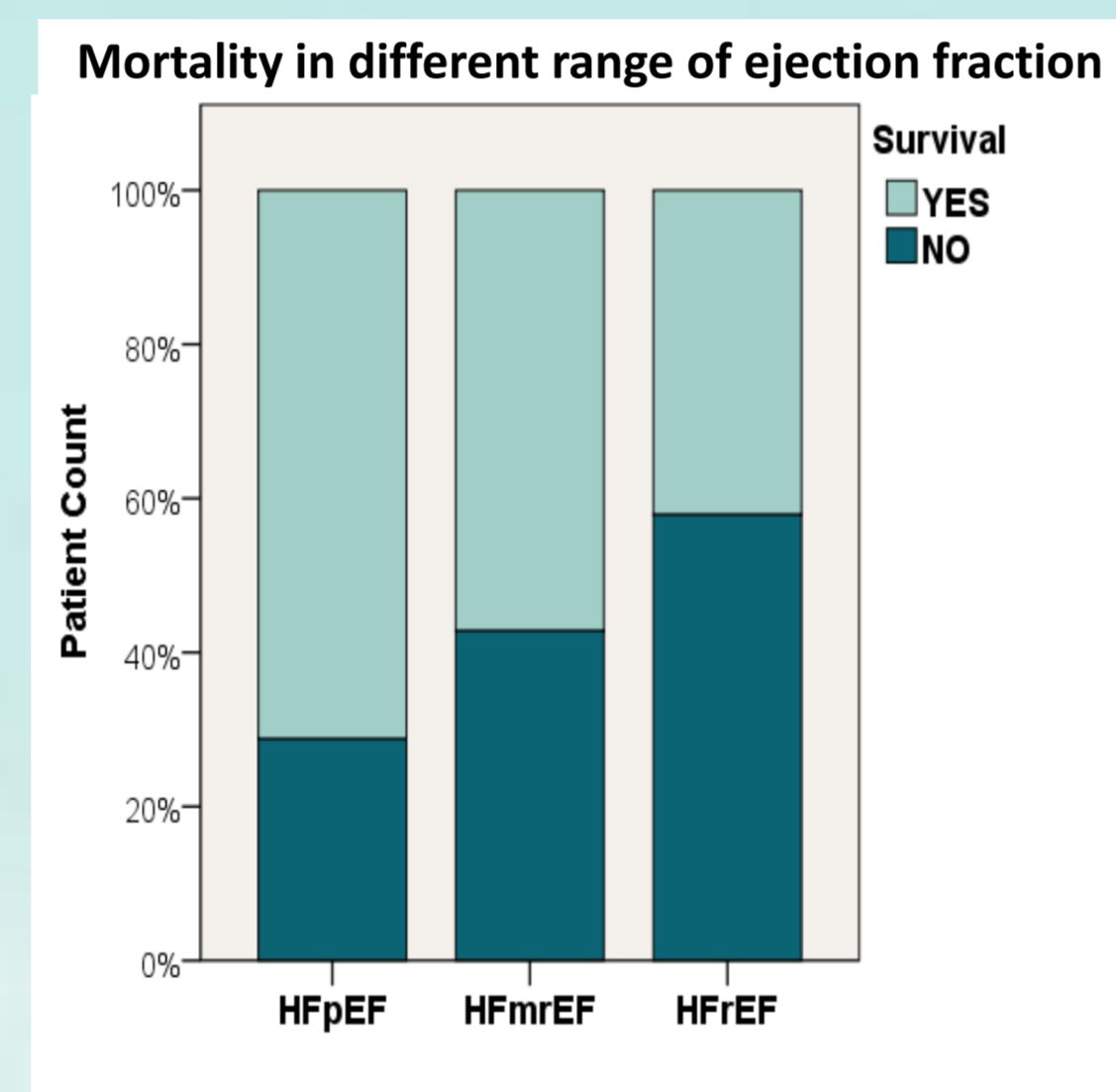
- The aim of our study was to evaluate the relation between the elevated thyroid stimulating hormone (TSH) value and all-cause long-term mortality in heart failure (HF) patients with all ranges of ejection fraction (EF) treated according to the contemporary European Guidelines.

## Methods

- We retrospectively included consecutive HF patients admitted to our Cardiology Department from 2011 to 2014. Patients without contemporary guideline-directed medical therapy, those with in-hospital mortality, or incomplete data were excluded. TSH was measured at admission.
- All-cause mortality was assessed in June 2020 after a median follow-up of 96 months.

## Results:

- All cause mortality in the entire cohort was 40.54%, respectively 56.46% for HF<sub>r</sub>EF, 42.47% for HF<sub>m</sub>rEF and 28.70% for HF<sub>p</sub>EF.
- Elevated TSH was a predictor of long-term mortality for entire cohort (AUC 0.545, 95%CI:0.504-0.586, p=0.029).



## Conclusion:

- Elevated TSH value was a predictor of all-cause mortality in HF<sub>r</sub>EF patients, but it was not correlated with long-term survival of HF<sub>m</sub>rEF and HF<sub>p</sub>EF patients.

General characteristics		N = 804 patients
Age		Mean age 81.5
Female patients		57.7%
HF <sub>r</sub> EF		26%
HF <sub>m</sub> rEF		32.2%
HF <sub>p</sub> EF		41.16%
All-cause mortality		40.54%