



# Managing Heart Failure with Preserved Ejection Fraction

Jason T. Slyer, DNP, RN, FNP-BC, CHF, FNAP • Director, Doctor of Nursing Practice Program  
Pace University, New York, NY

The prevalence of heart failure (HF) continues to increase, and HF remains the leading cause of hospitalization in patients greater than 65 years of age. Approximately 50 percent of patients with HF have a preserved ejection fraction (HFpEF).<sup>1</sup> The exact prevalence is difficult to estimate given the lack of standardized diagnostic criteria with EF cut offs ranging from > 40 to 55 percent across studies.

The 2013 ACCF/AHA guidelines define HFpEF as an EF  $\geq$ 50 percent and patients with an EF between 40 and 50 percent represent an intermediate group.<sup>1</sup> The diagnosis of HFpEF remains largely one of exclusion as patients present with typical clinical signs and symptoms of HF with echocardiographic findings of left ventricular diastolic dysfunction and a preserved EF. The use of biomarkers in the diagnosis of symptomatic patients is emerging. Natriuretic peptides (BNP, NT-proBNP) are increased in HFpEF, though they are less predictable in comparison to patients with HF with reduced EF (HFrEF).<sup>2</sup>

Patients with HFpEF are typically older and female, and burdened by multiple comorbidities.<sup>1</sup> Unlike patients with HFrEF (LVEF  $\leq$ 40%), there are no clinical practice guidelines or evidence-based therapies to decrease mortality and morbidity in patients with HFpEF. Guidelines for HFpEF focus on the use of diuretics to control symptoms related to pulmonary congestion and peripheral edema and the management of comorbid conditions, using established evidence-based guidelines.<sup>1</sup> Blood pressure management is essential as uncontrolled hypertension is a frequent presenting sign and the likely cause of cardiovascular changes leading to HFpEF. Atrial fibrillation is another common presenting sign and efforts to restore sinus rhythm should be attempted in patients with symptomatic HFpEF.

HF nurses must work as part of interprofessional teams to assist patients in controlling comorbidities that can impact HFpEF, such as hypertension, atrial fibrillation, diabetes, coronary artery disease, obesity, chronic kidney disease, sleep apnea and anemia. The combination of HFpEF and one or more comorbid conditions may increase mortality, heightening the need to use evidence-based, patient-centered therapies to reduce comorbid disease progression and control symptoms.

The diagnosis and pharmacological management of HFpEF remains a challenge. New agents aimed at altering the pathophysiology of HFpEF are currently being investigated. Until evidence-based therapies are approved for use, HF nurses must continue to do what we do best — educate patients on the importance of lifestyle modifications and self-care strategies. Sodium restriction, daily exercise and weight loss are shown to reduce blood pressure. A patient’s understanding of the importance of sodium restriction (to prevent volume overload) is also essential. Patients with HFpEF may benefit from using a self-adjusted diuretic protocol, especially if they are overly sensitive to fluctuations in volume. For example, if excess volume leads to symptom exacerbation and excessive diuretic use leads to symptoms of hypovolemia. A self-management regimen and access to the interprofessional team increases patients’ support and control over HF and may be a factor that reduces symptom exacerbation and hospitalization. Exercise training demonstrated an improvement in quality of life and exercise capacity, although it was not associated with improvement in cardiac factors.<sup>3,4</sup> Nevertheless, exercise remains an important therapeutic objective. Nurses should help patients find an appropriate exercise regimen and encourage ongoing adherence.

As the population continues to age and people are living longer with multiple comorbidities, the incidence of HFpEF will likely continue to rise. HF nurses, as members of interprofessional teams, play a significant role in managing this chronic condition and assisting patients to make lifestyle changes that improve self-care. ♥

## References

1. Yancy CW, Jessup M, Bozkurt B, et al. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *Circ*. 2013;128:e240-e327. doi: 10.1161/CLIR.0b013e31829e8776
2. Van Veldhuisen D, Linssen G, Jaarsma T, et al. B-type natriuretic Peptide and prognosis in heart failure patients with preserved and reduced ejection fraction. *JACC*. 2013;61(14):1498-1506. doi: 10.1016/j.jacc.2012.12.044.
3. Li J, Becher PM, Blankenberg S, Westermann D. Current treatment of heart failure with preserved ejection fraction: Should we add life to the remaining years or add years to the remaining life. *Cardiol Res Pract*. 2013;130724. doi:10.1155/2013/130724.
4. Ades PA, Keteyian SJ, Balady GJ, et al. Cardiac rehabilitation exercise and self-care for chronic heart failure. *JACC: Heart Fail*. 2013;1(6):540-547. doi:10.1016/j.jchf.2013.09.002.