

Have you ruled out ATTR-cardiac amyloidosis (ATTR-CM) in your HFpEF patients?

An underrecognized, underdiagnosed disease hiding in plain sight.¹

Heart failure (HF) is the **leading cause of hospitalization** for Americans over 65. Among medical and surgical conditions, HF accounts for almost **1/3 of total readmissions**²

In one study, **51.5% of HF patients** had HFpEF^{3*}

~1 in 10 HFpEF patients aged 60 years and over have ATTR-CM^{4,*5}

HF with amyloidosis was associated with **higher odds of 30-day readmission and longer length of stay**. HF was the most common primary readmission diagnosis in HF patients with amyloidosis⁸

One study showed that in the **3 years prior to diagnosis, ATTR-CM patients** suffered from **twice as many inpatient hospitalizations and ED visits** due to CV-related events than matched controls without ATTR-CM^{7†}

Misdiagnosis occurs in **more than 1/3 of ATTR-CM patients**⁶

Consider ATTR-CM in hospitalized HF patients

Simplify clinical criteria to raise suspicion^{1,9}:

- HFpEF
- ECHO: increased LV wall thickness
- ECG abnormalities: pseudoinfarct pattern, discordance (QRS voltage relative to LV mass), atrial fibrillation
- Cardiac biomarkers: mild increase in troponin levels on repeated occasions, elevated NT-proBNP
- Intolerance to standard HF therapies

Watch out: 36% of patients presenting with new-onset HF do not receive a diagnostic echocardiogram during hospitalization¹⁰

Consider ATTR-CM in hospitalized HF patients

The median length of stay for CHF patients was 4 days.^{11‡} Help them get the answers they need while they're in your care:

AL rule-out¹²

Confirm ATTR-CM diagnosis

- Technetium pyrophosphate (^{99m}Tc-PYP) scintigraphy

^{99m}Tc-PYP is not FDA-approved for this use.¹³

The 2022 ACC/AHA/HFSA guidelines highlight the importance of diagnosing ATTR-CM and the high level of suspicion required¹²

Abbreviations: ACC, American College of Cardiology; AHA, American Heart Association; AL-CM, amyloid cardiomyopathy; ATTR-CM, cardiac amyloidosis or transthyretin amyloid cardiomyopathy; CHF, congestive heart failure; ECG, electrocardiogram; HF, heart failure; HFpEF, heart failure with preserved ejection fraction; HFSA, Heart Failure Society of America; LV, left ventricular; NT-proBNP, aminoterminal pro B-type natriuretic peptide; QRS, QRS complex.

References: 1. Wittles RM, Bokhari S, Damy T, et al. *JACC Heart Fail.* 2019;7(8):709-716. 2. Gheorghiu M, Vaduganathan M, Fonarow GC, Bonow RO. *J Am Coll Cardiol.* 2013;61(4):391-403. 3. Avula HR, Leong TK, Lee KK, Sung SH, Go AS. *Am J Cardiol.* 2018;122(6):1008-1016. 4. Hahn VS, Yanek LR, Vaishnav J, et al. *JACC Heart Fail.* 2020;8(9):712-724. 5. González-López E, Gallego-Delgado M, Guzzo-Merello G, et al. *Eur Heart J.* 2015;36(38):2585-2594. 6. Rozenbaum MH, Large S, Bhambhani R, et al. *Cardiol Ther.* 2021;10(1):141-159. 7. Nativi-Nicolau J, Fine NM, Ortiz-Pérez JT, et al. *J Comp Eff Res.* 2022;11(14):1031-1044. 8. Arora S, Patil NS, Strassle PD, et al. *JACC CardioOncol.* 2020;2(5):710-718. 9. Nativi-Nicolau JN, Karam C, Khella S, Maurer MS. *Heart Fail Rev.* 2022;27(3):785-793. 10. Doshi D, Ben-Yehuda O, Bonafede M, et al. *J Am Coll Cardiol.* 2016;68(5):450-458. 11. Clark KAA, Reinhardt SW, Chouairi F, et al. *J Card Fail.* 2022;28(2):171-180. 12. Heidenreich PA, Bozkurt B, Aguilar D, et al. *Circulation.* 2022;145(18):e895-e1032. 13. Technescan™ PYP™. Package Insert. Maryland Heights, MO. Mallinckrodt Pharmaceuticals; 2017.

*In a study published in 2015, a prospective, cross-sectional, single-center analysis was completed at a tertiary university hospital in Madrid, Spain. This study included 120 patients ≥60 years of age (59% women, mean age: 82±8 years) admitted for HFpEF, with LV ejection fraction ≥50% and LV hypertrophy ≥12 mm. ATTR-CM was confirmed using ^{99m}Tc-diphosphono-1,2-propanodicarboxylic acid (^{99m}Tc-DPD).⁵

†Data from a retrospective analysis of Medicare claims between January 1, 2011, and December 31, 2018, of 552 patients diagnosed with ATTR and 552 ATTR-free matched controls. The mean age (SD) was 78.3 (6.3) years, ~36% were female, and the majority of patients were white (ATTR vs control: 83.9 vs 91.5%; P<0.001). Physician characteristics, including diagnosing physician specialty at index date and frequently visited physician specialty, were described. The Charlson Comorbidity Index was used to establish comorbidity burden, and the Healthcare Cost and Utilization Project chronic condition indicator was used to count the number of chronic conditions.⁷

‡Analysis of the National Inpatient Sample (NIS) to examine US hospitalization trends for overall HF and HFpEF and HFpEF subtypes from 2008 to 2018.¹¹