

Review of the New York Heart Association (NYHA) Functional Classification for Heart Failure

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Evidence to Action: Official Journal of MDCalc

Vol. 022026, Issue 01, 2026

Article Information

Keywords: New York Heart Association, NYHA functional classification, heart failure, functional status, symptom burden, exercise tolerance, heart failure staging, clinical assessment

<https://doi.org/10.65357/001c.162327>

Submitted: February 26, 2026 EDT

Accepted: May 14, 2026 EDT

Published: June 05, 2026 EDT

Abstract

The New York Heart Association (NYHA) Functional Classification is a clinician-assigned tool that categorizes patients with heart failure according to symptom burden and limitation with physical activity. It remains widely used in clinical practice, guidelines, and clinical trials to inform prognosis, guide management decisions, and standardize communication due to its simplicity, prognostic relevance, and role in considering patients for therapies. The scoring system marks functional limitations which are associated with heart failure hospitalizations and death. Although subjective and limited by interobserver variability, NYHA class provides a practical framework that should be interpreted alongside objective measures and patient-reported outcomes when assessing disease severity and planning care.

I. HOW TO USE

When to Use

Use in patients with signs and symptoms of heart failure.

Pearls / Pitfalls

- NYHA class is subjective, relying on patient-reported symptoms and clinician interpretation, and shows only moderate interobserver agreement (56% according to [one study](#) by Goldman et al), yet persists as a common clinical and research standard due to its simplicity and historical use. Variability may impact risk stratification.
- Functional class is not necessarily linked to treatment strategy; the more modern [ACC/AHA Heart Failure Staging](#) is one attempt to bridge the gap.
- Management decisions should not rely on NYHA class alone; clinicians should integrate it with disease staging and objective measures to guide therapy.
- NYHA class may help guide intensification of therapy and aid in the comprehensive evaluation process for considering advanced therapies.
- Use with caution in patients who have non cardiac limitations in functional capacity (e.g., arthritis) and may be less reliable in patients with heart failure with preserved ejection fraction (HFpEF), where symptoms may not correlate well with objective measures of cardiac function.

- Useful for broad, general stratification of functional status in heart failure but not precise assessment or for short term monitoring.

Why to Use

Use the NYHA functional classification to quickly assess symptom burden and functional limitation in patients with heart failure, helping guide prognosis, inform treatment discussions, and standardize communication across clinicians and clinical trials.

II. NEXT STEPS

Advice

Use objective measures of heart failure severity such as echocardiography, clinical context, other classification methods (e.g., ACC/AHA staging) and additional functional capacity data alongside the NYHA functional classification. These include echocardiographic measures (e.g., ejection fraction), biomarkers (e.g., BNP or NT-proBNP), exercise capacity (e.g., 6-minute walk test), and patient-reported outcomes such as the Kansas City Cardiomyopathy Questionnaire.

Management

Use NYHA functional class to contextualize symptom burden and help guide heart failure management. NYHA can help assess functional limitations which are important components for consideration of therapies, such as

resynchronization therapy, certain guideline directed medical therapies, and consideration of advanced therapies. Because NYHA classification is subjective, treatment decisions should be based on a comprehensive assessment that includes clinical evaluation, biomarkers, imaging, and patient-reported clinical features.

Critical Actions

No critical actions specific to this tool. Clinical decision-making should prioritize identification of decompensated heart failure or high-risk features that may provide important additional clinical context to NYHA classification.

III. EVIDENCE

Evidence Appraisal

The NYHA classification was developed by expert consensus rather than a formal derivation study. It was introduced by the New York Heart Association to standardize descriptions of functional limitations in cardiac disease and has been carried forward in clinical practice and guidelines (Criteria Committee of the New York Heart Association, 1964). Evidence suggests that the NYHA classification is subjective with poor interobserver agreement (~54%) and no standardized method for assigning class (Raphael et al., 2007). Another study showed that NYHA classification has only modest reproducibility (~56% agreement between physicians) and limited correlation with objective exercise performance, highlighting its subjectivity (Goldman et al., 1981). However, evidence does suggest predictive benefit of the score. In an analysis of 8326 patients in PARADIGM-HF, patients with higher NYHA stage III had higher rates of cardiovascular events (HR: 1.84 compared to NYHA I), though with earlier stages (I/II) having greater overlap in prognosis than later stages (Rhode et al., 2023). A literature review concluded that NYHA class is a valid measure of functional status but has uncertain reliability and limited evidence supporting reproducibility, particularly when used as a research outcome (Bennett et al. 2025). The authors recommend reporting how NYHA is assigned and caution against using it as the sole measure of change in clinical studies (Bennett et al. 2025). A systematic review found that NYHA classification predicts functional limitation in heart failure but has limited evidence in certain subtypes of heart failure and has variable reproducibility (Stamp et al., 2025). The authors emphasize the need for clearer, more objective definitions or complementary measures to improve consistency in assigning functional class (Stamp et al., 2025).

Overall, the 2022 AHA/ACC/HFSA guideline recommends using NYHA classification to characterize symptom burden in patients with symptomatic (Stage C–D) heart failure, recognizing that it is a subjective assessment that can change over time (Heidenreich et al., 2022). NYHA class remains widely used to guide eligibility for therapies and assess prognosis but should be interpreted alongside objective clinical data (Heidenreich et al., 2022).

Derivation & Validation Study:

Criteria Committee of the New York Heart Association.

Nomenclature and Criteria for Diagnosis of Diseases of the Heart and Great Vessels. Little, Brown & Co; 1964

Additional validations:

<https://pmc.ncbi.nlm.nih.gov/articles/PMC1861501/>

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Clinical Practice Guidelines

<https://pubmed.ncbi.nlm.nih.gov/35363499/>

Heidenreich PA, Bozkurt B, Aguilar D, et al. 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2022;145:e895–e1032. doi:10.1161/CIR.0000000000001063.

Systematic Reviews/Meta-analyses

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Bennett JA, Riegel B, Bittner V, Nichols J. *Validity and reliability of the NYHA classes for measuring research outcomes in patients with cardiac disease*. Heart Lung. 2002;31(4):262–270. PMID: 12122390.

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Stamp KD, Prasun MA, McCoy TP, Rathman L. Utility of the New York Heart Association functional classification compared to other measures: A systematic review. *Health Sciences Review*. 2025;17:100241. doi:10.1016/j.hsr.2025.100241.

NYHA Heart Failure Classification	Criteria
Class I	No limitation of physical activity; ordinary physical activity does not cause undue fatigue, palpitation, or dyspnea
Class II	Slight limitation of physical activity; comfortable at rest; ordinary physical activity results in fatigue, palpitation, or dyspnea
Class III	Marked limitation of physical activity; comfortable at rest; less than ordinary activity causes fatigue, palpitation, or dyspnea
Class IV	Unable to carry on any physical activity without discomfort; symptoms of heart failure at rest; if any physical activity is undertaken, discomfort increases

Facts & Figures

Literature

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