Classification of Heart Failure (HF) by Left Ventricular Ejection Fraction (LVEF):

Classification	Ejection Fraction (EF) (%)	Interpretation
HF with Reduced EF (HFrEF)	≤ 40	Guideline-directed medical therapy (GDMT) should be initiated and optimized per tolerability
HF with Improved EF (HFimpEF)	Previously ≤ 40 and a follow-up of > 40	GDMT should be continued
HF with Preserved EF (HFpEF)	≥ 50*	New recommendations for HFpEF, however therapies are minimal
HF with Mildly Reduced EF (HFmrEF)	41-49*	In a dynamic trajectory to improvement from HFrEF or to deterioration to HFrEF. Weak recommendations for therapy interventions

*Evidence of spontaneous or provokable increased LV filling pressures (eg, elevated natriuretic peptide, noninvasive and invasive hemodynamic measurement)

Clinical Management of HF by Stage and Classification:

Stage	NYHA Class	Management
A	None	- Optimal control of BP - Patients with type 2 diabetes and CVD or high risk for CVD should be started on an SGLT2i - Prevention by treating risk factors: smoking, weight gain, etc.
B	None	- Continue preventative measures, monitoring for the development of HF symptoms. - Patients with LVEF ≤ 40% started on ACEI or ARB (if ACEi intolerant) and BB
C	I-IV	- Evidence-based therapies to reduce symptoms and improve outcomes - Diuretics used as needed
D	IV	- Refer to specialist and establish patient specific goal for care - GDMT advanced as tolerated

NYHA: New York Heart Association; ACEi: angiotensin converting enzyme inhibitor; ARB: angiotensin receptor blocker; BB: beta-blocker

American Heart Association (AHA)/ American College of Cardiology (ACC) Stages of HF:

Stage	Classification	Description
A	At-risk for HF	Patients at risk for HF but without current or previous symptoms/signs of HF and without structural/functional heart disease or abnormal biomarkers*
B	Pre-HF	Patients without current or previous signs/symptoms of HF but evidence of 1 of the following: - Structural heart disease - Evidence of increased filling pressures - Risk factors and increased natriuretic peptide levels or persistently elevated cardiac troponin in the absence of competing diagnosis.
C	Symptomatic HF	Patients with current or previous signs/symptoms of HF
D	Advanced HF	Marked HF symptoms that interfere with daily life and with recurrent hospitalizations despite attempts to optimize GDMT

*Patients with hypertension, cardiovascular disease, diabetes, obesity, exposure to cardiotoxic agents, genetic variant for cardiomyopathy, or family history of cardiomyopathy

New York Heart Association (NYHA) Functional Classification

Class	Patient Symptoms
NYHA Class I	No restrictions on physical activity, and no symptoms during regular or restful periods
NYHA Class II	Mild restrictions on physical activity with symptoms during ordinary exertion; no symptoms at rest
NYHA Class III	Significant restrictions on physical activity with symptoms occurring with less than ordinary exertion; no symptoms at rest
NYHA Class IV	Incapacity to engage in physical activity without experiencing heart failure symptoms; symptoms persist even at rest

Medications to avoid and recommend discontinuation of:

- Non-steroidal anti-inflammatory drugs (NSAIDs): aspirin, meloxicam, sulindac, ibuprofen, naproxen, ketorolac, celecoxib
- Cold and cough medications with pseudoephedrine and phenylephrine
- Alka-seltzer
- Thiazolidinediones (TZDs): pioglitazone
- Non-dihydropyridine calcium channel blockers (Non-DHP CCBs): cardizem and verapamil
- Always question herbals and natural supplements

References:

1. 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(18):e895-e1032. doi:10.1161/CIR.0000000000001063