



JCF Journal of Cardiac Failure



# 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure

Heidenreich PA, *et al.* *J Card Fail* 2022

# Top 10 Take-Home Messages (1/2)

1. GDMT for HFrEF includes 4 medication classes that include SGLT2i
2. SGLT2i have a 2a recommendation in HFmrEF
3. New recommendations for HFpEF for SGLT2i (2a), MRAs (2b) & ARNi (2b)
4. Improved LVEF refers to HFrEF where LVEF is now >40%; these patients should continue HFrEF treatment
5. Value statements for recommendations where high-quality, cost-effectiveness studies have been published
6. Amyloid heart disease has new recommendations for screening, testing and treatment
7. Evidence supporting increased filling pressures is important for HF diagnosis if LVEF >40%

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# Top 10 Take-Home Messages (2/2)

8. Patients with advanced HF who wish to prolong survival should be referred to a team specializing in HF including palliative care consistent with the patient's goals of care
9. Stages of HF were revised to emphasize new terminologies including those "at risk" for HF (stage A) or "pre-HF" (stage B) where primary prevention is important
10. Recommendations are provided for patients with HF and iron deficiency, anemia, hypertension, sleep disorders, type 2 diabetes, atrial fibrillation, coronary artery disease, and malignancy

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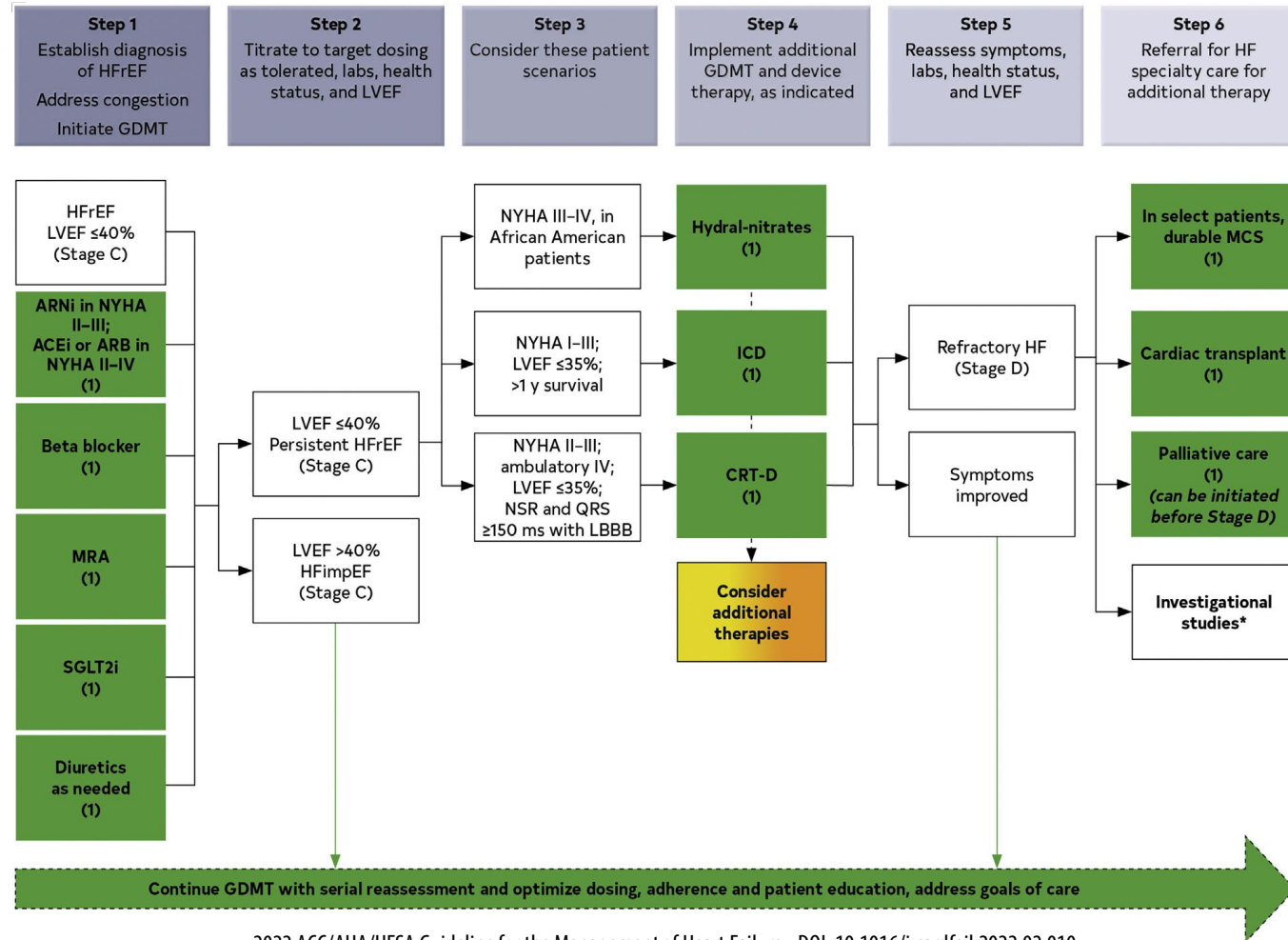
# 1) GDMT for HFrEF includes 4 medication classes

COR	LOE	Recommendations
1	A	In patients with HFrEF and NYHA class II to III symptoms, the use of <b>ARNi</b> is recommended to reduce morbidity and mortality
1	A	In patients with previous or current symptoms of chronic HFrEF, the use of <b>ACEi</b> is beneficial to reduce morbidity and mortality when the use of ARNi is not feasible
1	B - R	In patients with chronic symptomatic HFrEF NYHA class II or III who tolerate an ACEi or ARB, <b>replacement by an ARNi</b> is recommended to further reduce morbidity and mortality
1	A	In patients with HFrEF, with current or previous symptoms, use of 1 of the 3 <b>beta blockers</b> proven to reduce mortality is recommended to reduce mortality and hospitalizations
1	A	In patients with HFrEF and NYHA class II to IV symptoms, an <b>MRA</b> is recommended to reduce morbidity and mortality, if eGFR >30 mL/min/1.73 m <sup>2</sup> and serum potassium is <5.0 mEq/L
1	A	In patients with symptomatic chronic HFrEF, <b>SGLT2i</b> are recommended to reduce hospitalization for HF and cardiovascular mortality, irrespective of the presence of type 2 diabetes

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# GDMT for HFrEF



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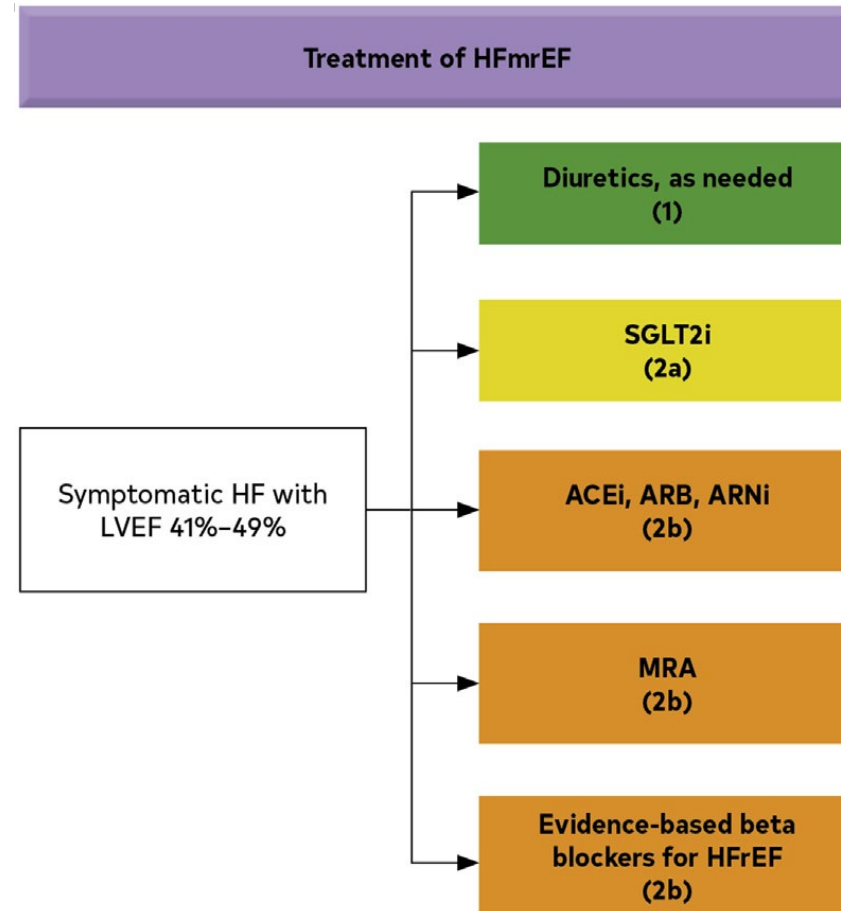
## 2) New recommendations in HFmrEF (LVEF 41-49%)

COR	LOE	Recommendations
2a	B - R	In patients with HFmrEF, <b>SGLT2i</b> can be beneficial in decreasing HF hospitalizations and cardiovascular mortality
2b	B - NR	Among patients with current or previous symptomatic HFmrEF, use of evidence-based beta blockers for HFrEF, <b>ARNi, ACEi, or ARB, and MRAs</b> may be considered, to reduce the risk of HF hospitalization and cardiovascular mortality, <u>particularly among patients with LVEF on the lower end of this spectrum</u>

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# Recommendations for HFmrEF



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### 3) New recommendations in HFpEF

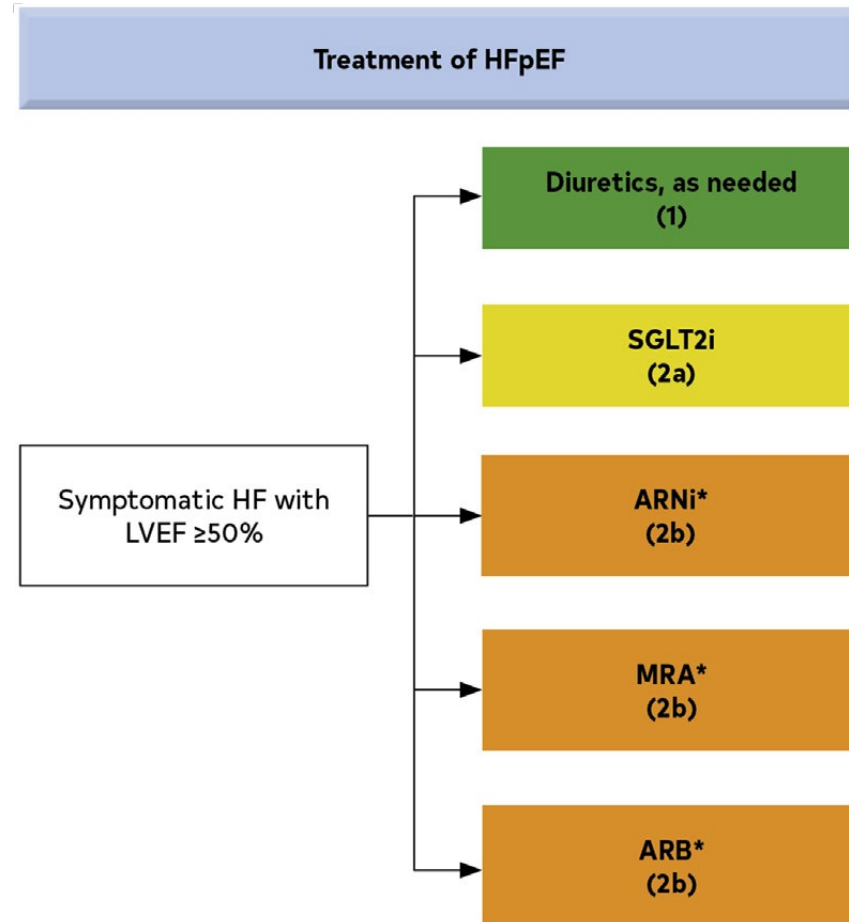
COR	LOE	Recommendations
2a	B - R	In patients with HFpEF, <b>SGLT2i</b> can be beneficial in decreasing HF hospitalizations and cardiovascular mortality
2b	B - R	In selected patients with HFpEF, <b>MRAs</b> may be considered to decrease hospitalizations, <u>particularly among patients with LVEF on the lower end of this spectrum</u>
2b	B - R	In selected patients with HFpEF, <b>ARNi</b> may be considered to decrease hospitalizations, <u>particularly among patients with LVEF on the lower end of this spectrum</u>

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# Recommendations for HFpEF



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## 4) Recommendations for HFimpEF

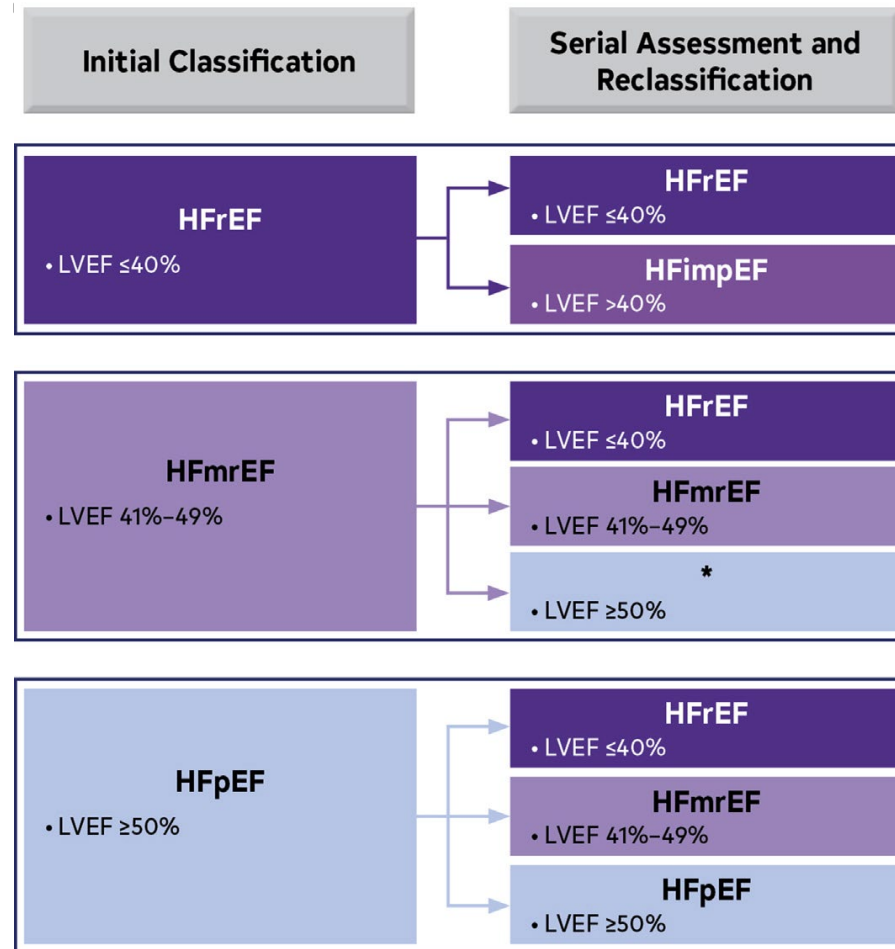
Improved LVEF is used to refer to those with previous HFrEF who now have an LVEF >40%

COR	LOE	Recommendations
1	B - R	In patients with HFimpEF after treatment, GDMT should be continued to prevent relapse of HF and left ventricular dysfunction, even in patients who may become asymptomatic

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# Classification & Trajectories of HF Based on LVEF



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# 5) Value Statements for Recommendations (1/2)

Level	Statements
High	In patients with previous or current symptoms of chronic HFrEF, in whom ARNi is not feasible, treatment with an <b>ACEi or ARB</b> provides high economic value
High	In patients with chronic symptomatic HFrEF, treatment with an <b>ARNi</b> instead of an ACEi provides high economic value
High	In patients with HFrEF, with current or previous symptoms, <b>beta-blocker</b> therapy provides high economic value
High	In patients with HFrEF and NYHA class II to IV symptoms, <b>MRA</b> therapy provides high economic value
High	For patients self-identified as African American with NYHA class III to IV HFrEF who are receiving optimal medical therapy with ACEi or ARB, beta blockers, and MRA, the combination of <b>hydralazine and isosorbide dinitrate</b> provides high economic value
High	A <b>transvenous ICD</b> provides high economic value in the primary prevention of sudden cardiac death particularly when the patient's risk of death caused by ventricular arrhythmia is deemed high and the risk of nonarrhythmic death is deemed low based on the patient's burden of comorbidities and functional status
High	For patients who have LVEF $\leq 35\%$ , sinus rhythm, LBBB with a QRS duration of $\geq 150$ ms, and NYHA class II, III, or ambulatory IV symptoms on GDMT, <b>CRT implantation</b> provides high economic value

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# Value Statements for Recommendations (2/2)

Level	Statements
Intermediate	In patients with symptomatic chronic HFrEF, <b>SGLT2i</b> therapy provides intermediate economic value
Intermediate	In patients with stage D (advanced) HF despite GDMT, <b>cardiac transplantation</b> provides intermediate economic value
Low	At 2020 list prices, <b>tafamidis</b> provides low economic value (>\$180,000 per QALY gained) in patients with HF with wild-type or variant transthyretin cardiac amyloidosis
Uncertain	In patients with advanced HFrEF who have NYHA class IV symptoms despite GDMT, <b>durable mechanical circulatory support devices</b> provide low to intermediate economic value based on current costs and outcomes
Uncertain	In patients with NYHA class III HF with a HF hospitalization within the previous year, wireless monitoring of the pulmonary artery pressure by an <b>implanted hemodynamic monitor</b> provides uncertain value

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# 6) New Recommendations for Amyloid Heart Disease

## Diagnosis of Cardiac Amyloidosis

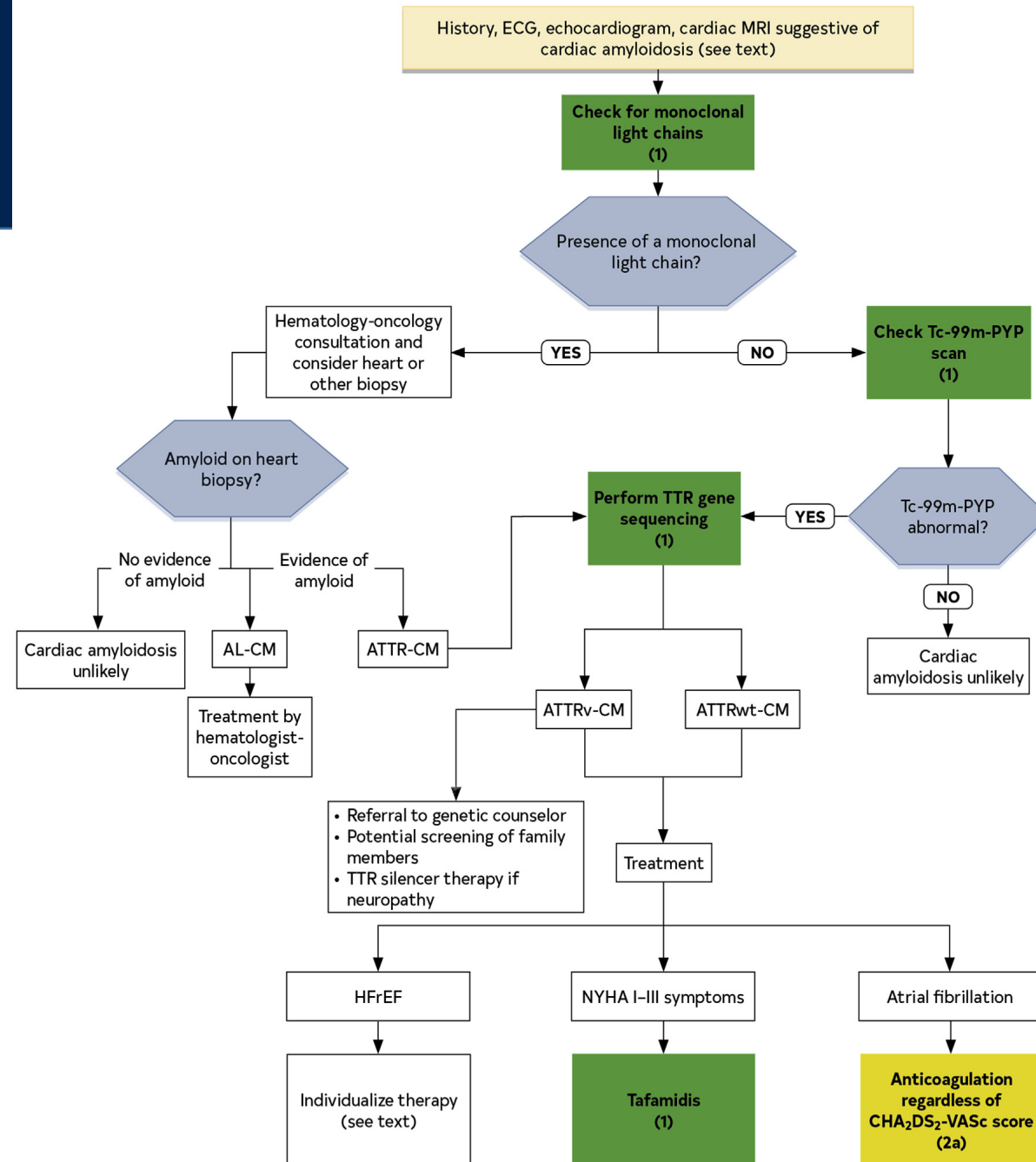
COR	LOE	Recommendations
1	B - NR	Patients for whom there is a clinical suspicion for cardiac amyloidosis should have screening for serum and urine monoclonal light chains with <b>serum and urine immunofixation electrophoresis</b> and <b>serum free light chains</b>
1	B - NR	In patients with high clinical suspicion for cardiac amyloidosis, without evidence of serum or urine monoclonal light chains, <b>bone scintigraphy</b> should be performed to confirm the presence of transthyretin cardiac amyloidosis
1	B - NR	In patients for whom a diagnosis of transthyretin cardiac amyloidosis is made, <b>genetic testing with TTR gene sequencing</b> is recommended to differentiate hereditary variant from wild-type transthyretin cardiac amyloidosis

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# Diagnostic and Treatment of Transthyretin Cardiac Amyloidosis Algorithm

## Diagnostic and Treatment Algorithm of Cardiac Amyloidosis



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# New Recommendations for Amyloid Heart Disease

## Treatment of Cardiac Amyloidosis

COR	LOE	Recommendations
1	B - R	In select patients with wild-type or variant transthyretin cardiac amyloidosis and NYHA class I to III HF symptoms, <b>transthyretin tetramer stabilizer therapy (tafamidis)</b> is indicated to reduce cardiovascular morbidity and mortality
2a	C - LD	In patients with cardiac amyloidosis and AF, <b>anticoagulation</b> is reasonable to reduce the risk of stroke regardless of the CHA <sub>2</sub> DS <sub>2</sub> -VASc (congestive heart failure, hypertension, age ≥75 years, diabetes mellitus, stroke or TIA, vascular disease, age 65 to 74 years, sex category) score

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# 7) HF diagnosis if LVEF >40%: ↑ filling pressures

## Classification of HF by LVEF

Type of HF According to LVEF	Criteria
HFrEF	LVEF $\leq$ 40%
HFimpEF	Previous LVEF $\leq$ 40% and a follow-up measurement of LVEF >40%
HFmrEF	<ul style="list-style-type: none"><li>• LVEF 41%–49%</li><li>• Evidence of spontaneous or provokable increased LV filling pressures (e.g., elevated natriuretic peptide, noninvasive and invasive hemodynamic measurement)</li></ul>
HFpEF	<ul style="list-style-type: none"><li>• LVEF <math>\geq</math>50%</li><li>• Evidence of spontaneous or provokable increased LV filling pressures</li></ul>

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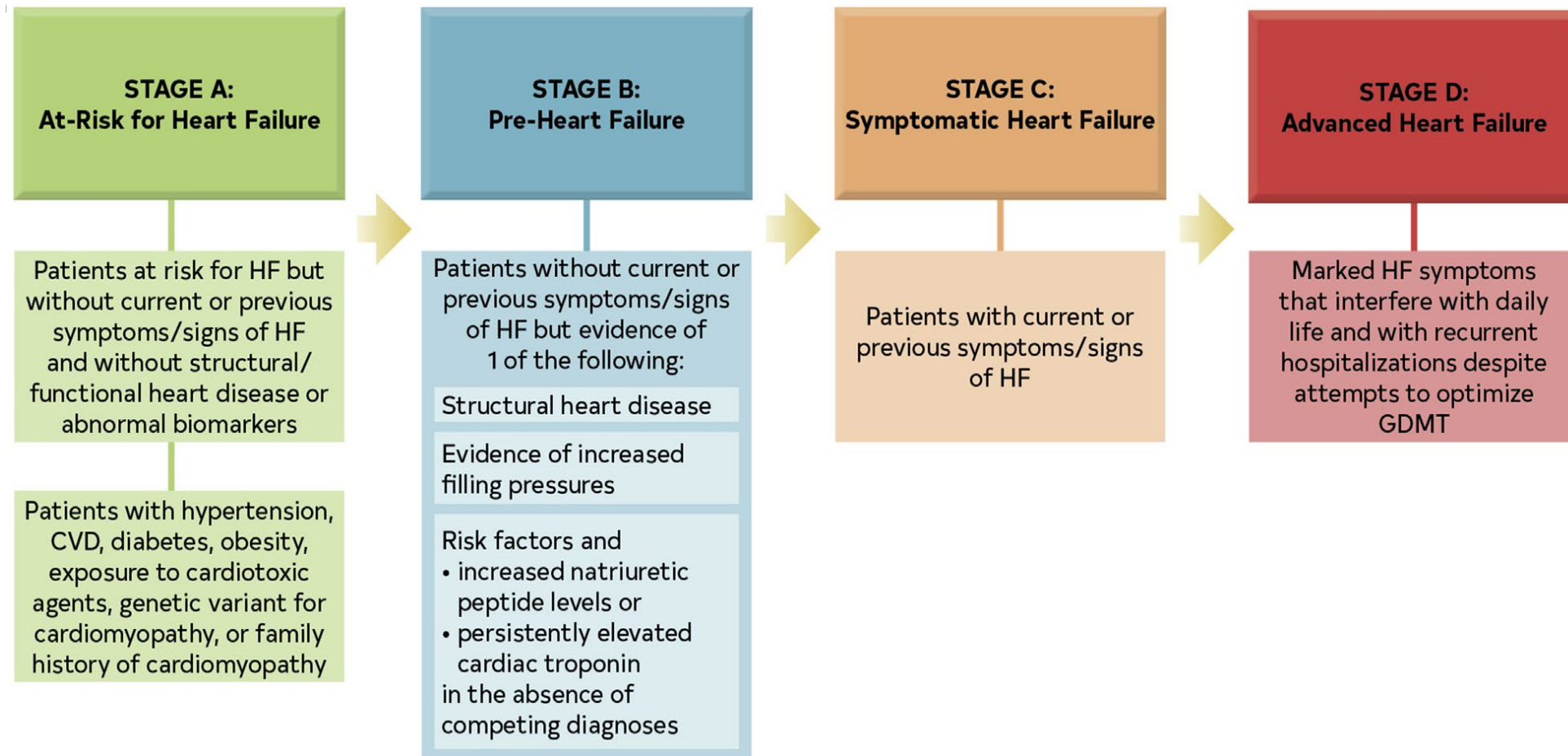
## 8) Patients with advanced HF who wish to prolong survival should be referred to a team specializing in HF

COR	LOE	Recommendations
1	C – LD	In patients with advanced HF, when consistent with the patient’s goals of care, timely <b>referral for HF specialty</b> care is recommended to review HF management and assess suitability for advanced HF therapies (e.g., left ventricular assist devices, cardiac transplantation, palliative care, and palliative inotropes)

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# 9) Revised HF Stages and Primary Prevention



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# Recommendations for Patients at Risk for HF (Stage A: Primary Prevention)

COR	LOE	Recommendations
1	A	In patients with hypertension, <b>blood pressure</b> should be controlled in accordance with GDMT for hypertension to prevent symptomatic HF
1	A	In patients with type 2 diabetes and either established cardiovascular disease or at high cardiovascular risk, <b>SGLT2i</b> should be used to prevent hospitalizations for HF
1	B - NR	In the general population, <b>healthy lifestyle habits</b> such as regular physical activity, maintaining normal weight, healthy dietary patterns, and avoiding smoking are helpful to reduce future risk of HF
2a	B - R	For patients at risk of developing HF, <b>natriuretic peptide</b> biomarker–based screening followed by <b>team-based care</b> , including a cardiovascular specialist optimizing GDMT, can be useful to prevent the development of LV dysfunction (systolic or diastolic) or new-onset HF
2a	B - NR	In the general population, <b>validated multivariable risk scores</b> can be useful to estimate subsequent risk of incident HF

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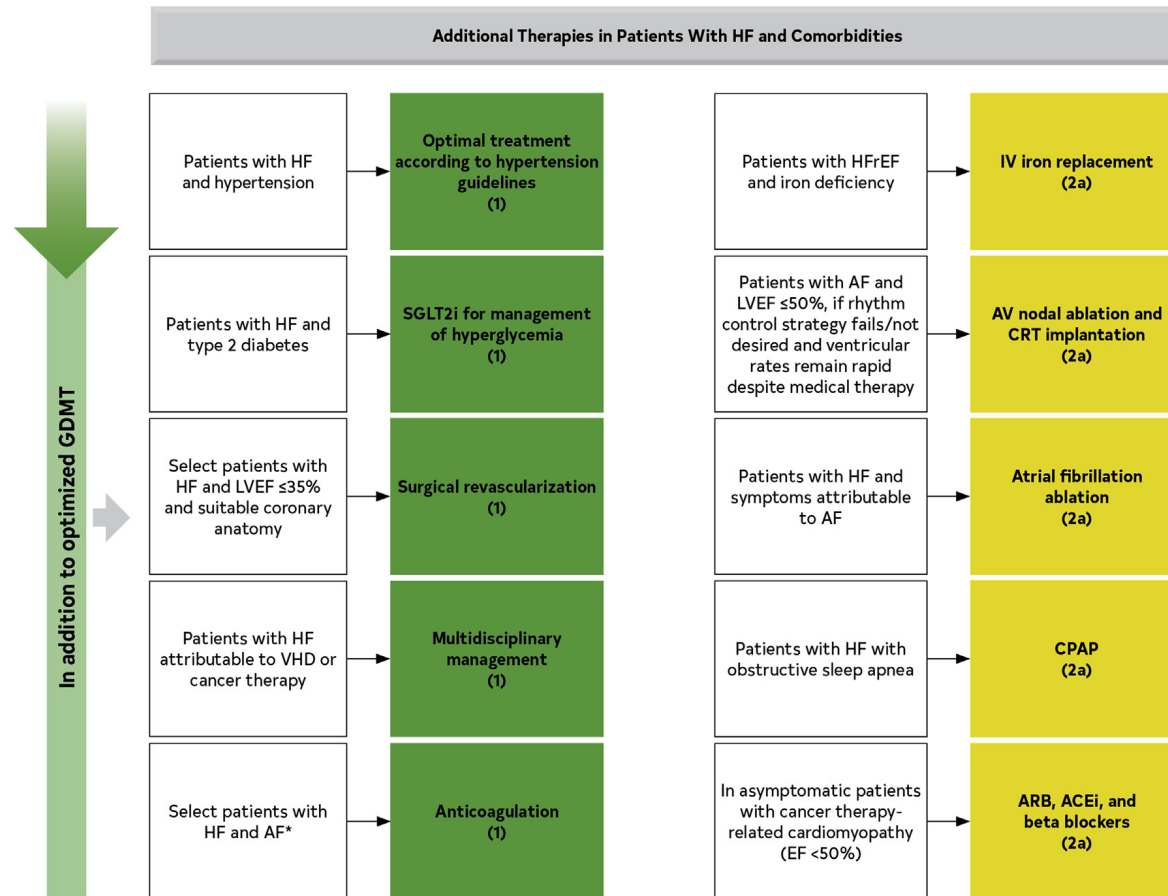
# Recommendations for Management of Stage B

COR	LOE	Recommendations
1	A	In patients with LVEF $\leq$ 40%, <b>ACEi</b> should be used to prevent symptomatic HF and reduce mortality
1	A	In patients with a recent or remote history of myocardial infarction or acute coronary syndrome, <b>statins</b> should be used to prevent symptomatic HF and adverse cardiovascular events
1	B - R	In patients with a recent myocardial infarction and LVEF $\leq$ 40% who are intolerant to ACEi, <b>ARB</b> should be used to prevent symptomatic HF and reduce mortality
1	B - R	In patients with a recent or remote history of myocardial infarction or acute coronary syndrome and LVEF $\leq$ 40%, <b>evidence-based beta blockers</b> should be used to reduce mortality
1	B - R	In patients who are at least 40 days post–myocardial infarction with LVEF $\leq$ 30% and NYHA class I symptoms while receiving GDMT and have reasonable expectation of meaningful survival for >1 year, an <b>ICD</b> is recommended for primary prevention of sudden cardiac death to reduce total mortality
1	C - LD	In patients with LVEF $\leq$ 40%, <b>beta blockers</b> should be used to prevent symptomatic HF

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# 10) Recommendations for Treatment of Patients With Selected HF and Comorbidities



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