



AMERICAN
COLLEGE of
CARDIOLOGY®

USE OF SGLT2 INHIBITORS IN THE MANAGEMENT OF PATIENTS WITH HEART FAILURE POCKET GUIDE

*Transformation of Heart Failure Care:
SGLT2is as the New Pillar in Heart Failure*

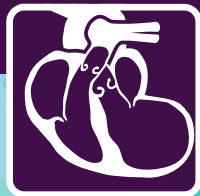


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POCKET GUIDE OVERVIEW

This pocket guide is a practical, streamlined resource for clinicians regarding the use of sodium-glucose cotransporter-2 inhibitors (SGLT2i) when managing patients with heart failure. It includes key information from the following clinical policies:

- 2023 ACC Expert Consensus Decision Pathway on Management of Heart Failure with Preserved Ejection Fraction
- 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure
- 2021 Update to the 2017 ACC Expert Consensus Decision Pathway for Optimization of Heart Failure Treatment: Answers to 10 Pivotal Issues About Heart Failure With Reduced Ejection Fraction



FIGURE 1. Guideline-Directed Medical Therapy Across Heart Failure Stages

Use this tool to reference guideline-directed medical therapy (GDMT) across the four ACC/AHA stages of Heart Failure (HF) as outlined in the 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure. See the guideline for specific patient population criteria.

GDMT of major medication classes	Stage A	Stage B	Stage C: Symptomatic Heart Failure Stage D: Advanced Heart Failure		
	At-Risk for Heart Failure	Pre-Heart Failure	HFrEF LVEF $\leq 40\%$	HFmrEF LVEF 41-49%	HFpEF LVEF $\geq 50\%$
	SGLT2i in pts with DM (1)	SGLT2i in pts with DM (1)	ARNi in NYHA II-III; ACEi or ARB in NYHA II-IV (1)	Diuretics, as needed (1)	Diuretics, as needed (1)
		ACEi (1)	Beta blocker (1)	SGLT2i (2a)	SGLT2i (2a)
		ARB if ACEi intolerant (1)	MRA (1)	ACEi, ARB, ARNi (2b)	ARNi (2b)
		Beta blocker (1)	SGLT2i (1)	MRA (2b)	MRA (2b)
			Diuretics, as needed (1)	Beta blocker (2b)	ARB (2b)
			Hydral-nitrates for NYHA III-IV, in African American pts (1)		
Additional Medical Therapies once GDMT optimized	Optimal control of BP (1)	Optimal control of BP (1)	Ivabradine (2a)		
	Optimal management of CVD (1)	Optimal management of CVD (1)	Vericiguat (2b)		
			Digoxin (2b)		
			PUFA (2b)		
			Potassium binders (2b)		

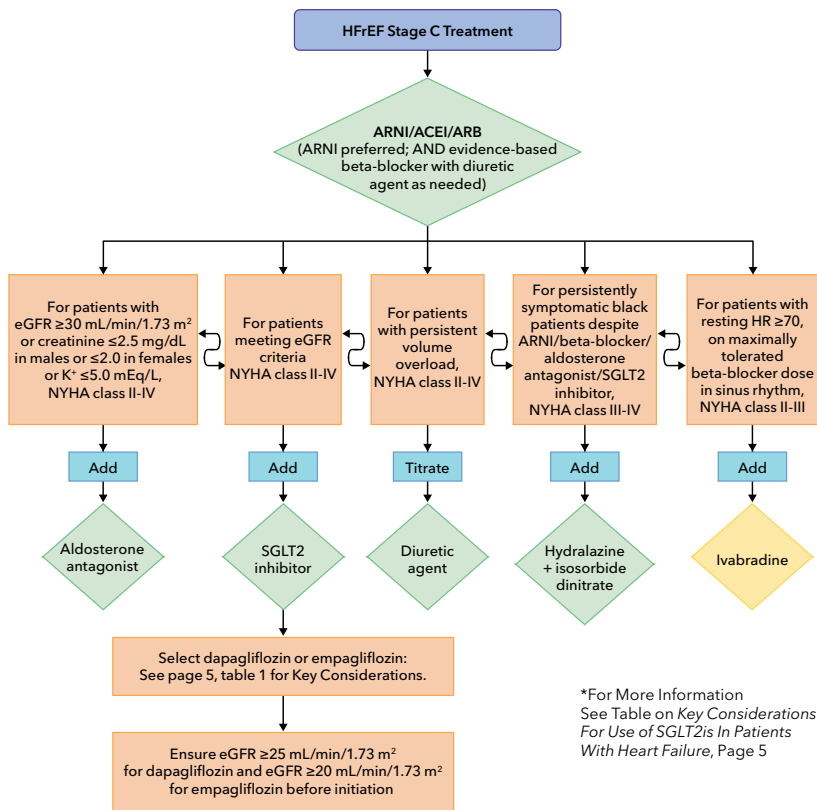
1 (Strong)
 2a (Moderate)
 2b (Weak)



Please scan the QR code to access JACC Central Illustration: [Guideline-Directed Medical Therapy Across Heart Failure Stages.](#)

Please refer to the manuscript for footnote information.

FIGURE 2. Treatment Algorithm For Guideline-Directed Medical Therapy in HFReF



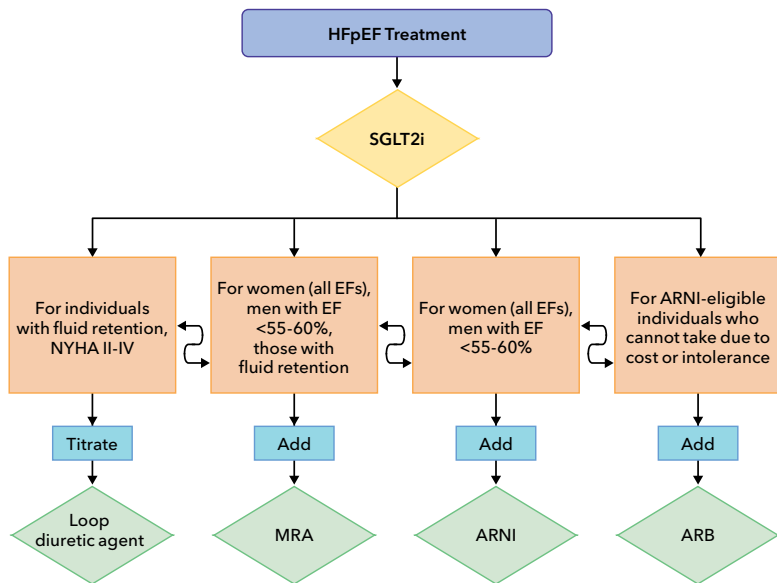
*For More Information
See Table on Key Considerations
For Use of SGLT2is In Patients
With Heart Failure, Page 5

Green color identifies a Class 1 therapy from clinical practice guidelines, yellow color indicates a Class 2a therapy, and orange color denotes a Class 2b therapy. SGLT2i receives a Class 2a indication in the 2022 ACC/AHA/HFSA HF Guidelines, but the benefit now confirmed in 2 randomized trials suggests that **SGLT2i may receive a stronger class of the recommendation in future guidelines**. AF=atrial fibrillation; ARB=angiotensin receptor blocker; ARNi=angiotensin receptor-neprilysin inhibitor; BB=beta-blocker; LVEF=left ventricular ejection fraction; MI=myocardial infarction; MRA=mineralocorticoid antagonist; SGLT2i=sodium-glucose cotransporter 2 inhibitor.

* See table Key Considerations For Use of SGLT2is In Patients With Heart Failure, on page 5. Please refer to the manuscript for additional footnote information.



FIGURE 3. Treatment Algorithm For Guideline-Directed Medical Therapy in HFpEF



Kittleson M, Panjrath G, Amancherla K, et al. 2023 ACC Expert Consensus Decision Pathway on Management of Heart Failure With Preserved Ejection Fraction. *J Am Coll Cardiol.* 2023 May, 81 (18) 1835-1878. <https://doi.org/10.1016/j.jacc.2023.03.393>

*For More Information See Table on Key Considerations For Use of SGLT2is In Patients With Heart Failure, opposite page

Please refer to the manuscript for additional footnote information.

TABLE 1. Key Considerations For Use of SGLT2i in Patients With Heart Failure

Indications for Use of SGLT2i	<ul style="list-style-type: none"> • All forms of heart failure, with or without diabetes • NYHA class II-IV symptoms • Administered in conjunction with a background of GDMT for HF 	
Stage Information	Dapagliflozin	Empagliflozin
Stage A* <i>Patients with T2D and CVD or high risk for CVD</i>	10 mg PO daily	
Stage B† <i>Patients with T2D and CVD or high risk for CVD</i>		
Stage C‡ & D§		
Contraindications[¶]	<ul style="list-style-type: none"> • Patients with type I diabetes • History of serious hypersensitivity reaction to drug • On dialysis • Lactation 	
Cautions[¶]	<ul style="list-style-type: none"> • Kidney impairment <ul style="list-style-type: none"> - dapagliflozin: eGFR <25 mL/min/1.73 m²[¶] - empagliflozin: eGFR <20 mL/min/1.73m²[¶] • Pregnancy • Increased risk of mycotic genital infections • May contribute to volume depletion or hypotension • Ketoacidosis (including euglycemic) in individuals with poorly controlled diabetes, dehydration, or fasting • Acute kidney injury • Necrotizing fasciitis of the perineum (Fournier's gangrene) is rare but can be serious and life-threatening 	

*Stage A: At Risk for HF but without symptoms, structural heart disease, or cardiac biomarkers of stretch or injury.

†Stage B: Pre-HF; no symptoms or signs of HF and evidence of 1 of the following (Structural Heart Disease, Evidence for Increased Filling Pressures, or Patients with Risk Factors and Increased levels of BNP's or Persistently Elevated Cardiac Troponin (in the absence of competing diagnoses resulting in such biomarker evaluations such as acute coronary syndrome, CKD, pulmonary embolus, or myopericarditis).

‡Stage C: Symptomatic HF; structural heart disease with current or previous symptoms of HF.

§Stage D: Advanced HF; marked HF symptoms that interfere with daily life and with recurrent hospitalizations despite attempts to optimize GDMT.

¶Cautions and Contraindications for diabetes versus heart failure are different.

[¶]Do not initiate therapy; may continue 10 mg PO daily to reduce eGFR decline if eGFR falls after initiation.

[¶]Not studied. Do not initiate therapy; may continue 10 mg PO daily to reduce eGFR decline if eGFR falls after initiation.



TABLE 2. Ten Considerations to Improve Adherence

1. Capitalize on opportunities when patients are most predisposed to adherence

- In-hospital/pre-discharge initiation following decompensation

2. Consider the patient's perspective

- Start with the goals of therapy (feeling better and living longer) and then discuss how specific actions (medication initiation, intensification, monitoring, and adherence) support those goals (e.g.: [ACC's My Heart Failure Action Plan](#))
- Use decision aids when available (e.g.: [CardioSmart Heart Failure Resources](#))
- Ask patient how they learn best and provide education accordingly
- Use culturally relevant patient education materials

3. Educate using practical, patient-friendly information

- Provide a written explanation of the purpose of each medication prescribed
- Plan pharmacist visits for complex medication regimens
- Use the "teach back" principle to reinforce education

4. Simplify medication regimens whenever possible

- Use combination therapy, when possible
- Consult with a pharmacist

5. Consider costs and access

- Become familiar with and advocate for systems that help make cost sharing automatic, immediate, and transparent
- Prescribe lower-cost medications if of similar efficacy
- Facilitate access to copay assistance
- Discuss out-of-pocket copays proactively
- Prescribe 90-day quantities for refills

6. Communicate with other clinicians involved in care, ideally facilitated by electronic health records

7. Recommend tools that support adherence in real time

- Pill boxes to be filled by patient or care partner a week at a time
- Alarms for each time of the day medications are due
- Smartphone or other mobile health applications that provide an interactive platform for education, reminders, warnings, and adherence tracking

8. Consider behavioral supports

- Motivational interviewing
- Participate in engaged benefit designs

9. Anticipate problems

- Communicate common side effects
- Provide instructions on how to obtain medication refills or report concerns
- Remind patients using pharmacy assistance programs that refills/reorders are not automatic

10. Monitor adherence and target patients at risk

- Inquire patients directly (e.g., "In a typical week, how often do you miss a dose of your medications?")
- Perform medicine reconciliation at visits, identify and resolve discrepancies
- Assess remaining dosage units (i.e., count excess remaining tablets)
- Monitor pharmacy refills, using available clinical databases or automated alerts for failed fills or refills
- Review available drug levels (e.g., digoxin, INR) or concentrations of BNP/NT-proBNP
- Plan home-based nursing visits for appropriate patients

Please refer to the 2021 Update to the 2017 ACC Expert Consensus Decision Pathway for Optimization of Heart Failure Treatment: Answers to 10 Pivotal Issues About Heart Failure With Reduced Ejection Fraction for additional footnote information.



Expert Consensus Decision Pathways

ACC has modernized Expert Consensus Documents to target key points of care with concise decision pathways rather than the traditional longer documents.

These Expert Consensus Decision Pathways (ECDPs) leverage the expert insights drawn from a multidisciplinary group of experts and relevant stakeholders who are convened for Roundtables and Think Tanks often held as part of ACC quality programs. ECDPs are intended to provide guidance for clinicians in areas where evidence may be limited, new and evolving, or lack sufficient data to fully inform clinical decision making.

They include algorithms that are more actionable and can be translated into tools or apps to further accelerate the use of ACC clinical policy at point of care.

Translated Into Clinical Apps



TreatHF App

This app helps clinicians confirm which therapies are suggested for their patients with symptomatic heart failure with reduced ejection fraction (stage C HFrEF) and provides guidance on the use of each therapy.

- Enter patient indications
- Review individualized next steps for medical therapy
- Email or print a summary of the next steps
- Reference detailed information on
 - Initiation, titration, and monitoring of each medication
 - Guidance for optimizing your overall medication strategy



To find out more and access other relevant ACC mobile tools and apps, visit: [ACC.org/Apps](https://www.acc.org/Apps)



- For practice guidelines on heart failure, visit the ACC Guideline Clinical App



To access the tool, please scan this QR code or visit:
[ACC.org/Apps](https://www.acc.org/Apps)

- For additional ACC resources related to the medication management of heart failure, visit:



To access the page, please scan this QR code or visit:
[ACC.org/ClinicalSolutionsHFMedications](https://www.acc.org/ClinicalSolutionsHFMedications)

The ACC's Heart Failure and SGLT2is: The New Pillar in Care Initiative

is designed to provide practical guidance for clinicians on the implementation of sodium-glucose cotransporter-2 inhibitors (SGLT2is) into treatment of patients with heart failure.





For additional resources related to the *ACC's Heart Failure and SGLT2is: The New Pillar in Care* initiative, scan this QR code or visit: **ACC.org/SGLT2isInitiative**

This pocket guide
is supported by:



Boehringer
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