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SOCIETAL STATEMENT

2023 Atrial Fibrillation Guideline-at-a-Glance

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INTRODUCTION

The 2023 ACC/AHA/ACCP/HRS Guideline for the Diagnosis and Management of Atrial Fibrillation (ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline) provides guidance for clinicians on the management of patients with atrial fibrillation (AF).[1] The guideline emphasizes a rhythm control strategy similar to what is recommended in the most recent atrial fibrillation guideline from the European Society of Cardiology (ESC).[2] The recommendations also highlight the need for lifestyle and risk factor modification in addition to medical treatment. In this Guideline-at-a-Glance, practice-changing recommendations from the guideline are highlighted to accelerate adoption into clinical practice.

The dissemination of ACC Guidelines is an organization-wide effort overseen by the Solution Set Oversight Committee, whose goal it is to ensure that guideline content is integrated throughout the ACC's clinical policy, education, registry, membership, and advocacy efforts. The clinical tools presented here are part of a larger ACC dissemination strategy to facilitate the implementation of key changes in practice.

Three of the top 10 take-home messages from the ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline are presented here to provide a framework for initial dissemination. The 3 selected messages are focused on the new stages of atrial fibrillation (take-home message 1), the importance of early rhythm control (take-home message 5), and the use of catheter ablation as first-line therapy in select patients (take-home message 6). These messages are emphasized in various ACC clinician tools: the *JACC* **Central Illustrations**, as well as comparison tables to highlight the changes between the new ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline and the previous version as well as the relevant 2020 ESC guideline.

TOP 10 TAKE-HOME MESSAGES

The following Top 10 Take-Home Messages are taken directly from the ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline.[1] Messages in **bold** were selected as key themes for this Guideline-at-a-Glance because they represent the most impactful changes in these recommendations compared with previous guidelines and address known gaps in clinical practice.

1. **Stages of atrial fibrillation (AF): The previous classification of AF, which was based only on arrhythmia duration, although useful, tended to emphasize therapeutic interventions. The new proposed classification, using stages, recognizes AF as a disease continuum that requires a variety of strategies at the different stages, from prevention, lifestyle and risk factor modification, screening, and therapy.**
2. AF risk factor modification and prevention: This guideline recognizes lifestyle and risk factor modification as a pillar of AF management to prevent onset, progression, and adverse outcomes. The guideline emphasizes risk factor management throughout the disease continuum and offers more prescriptive recommendations, accordingly, including management of obesity, weight loss, physical activity, smoking cessation, alcohol moderation, hypertension, and other comorbidities.
3. Flexibility in using clinical risk scores and expanding beyond CHA_2DS_2-VASc for prediction of stroke and systemic embolism: Recommendations for anticoagulation are now made based on yearly thromboembolic event risk using a validated clinical risk score, such as CHA_2DS_2-VASc. However, patients at an intermediate annual risk score who remain uncertain about the benefit of anticoagulation can benefit from consideration of

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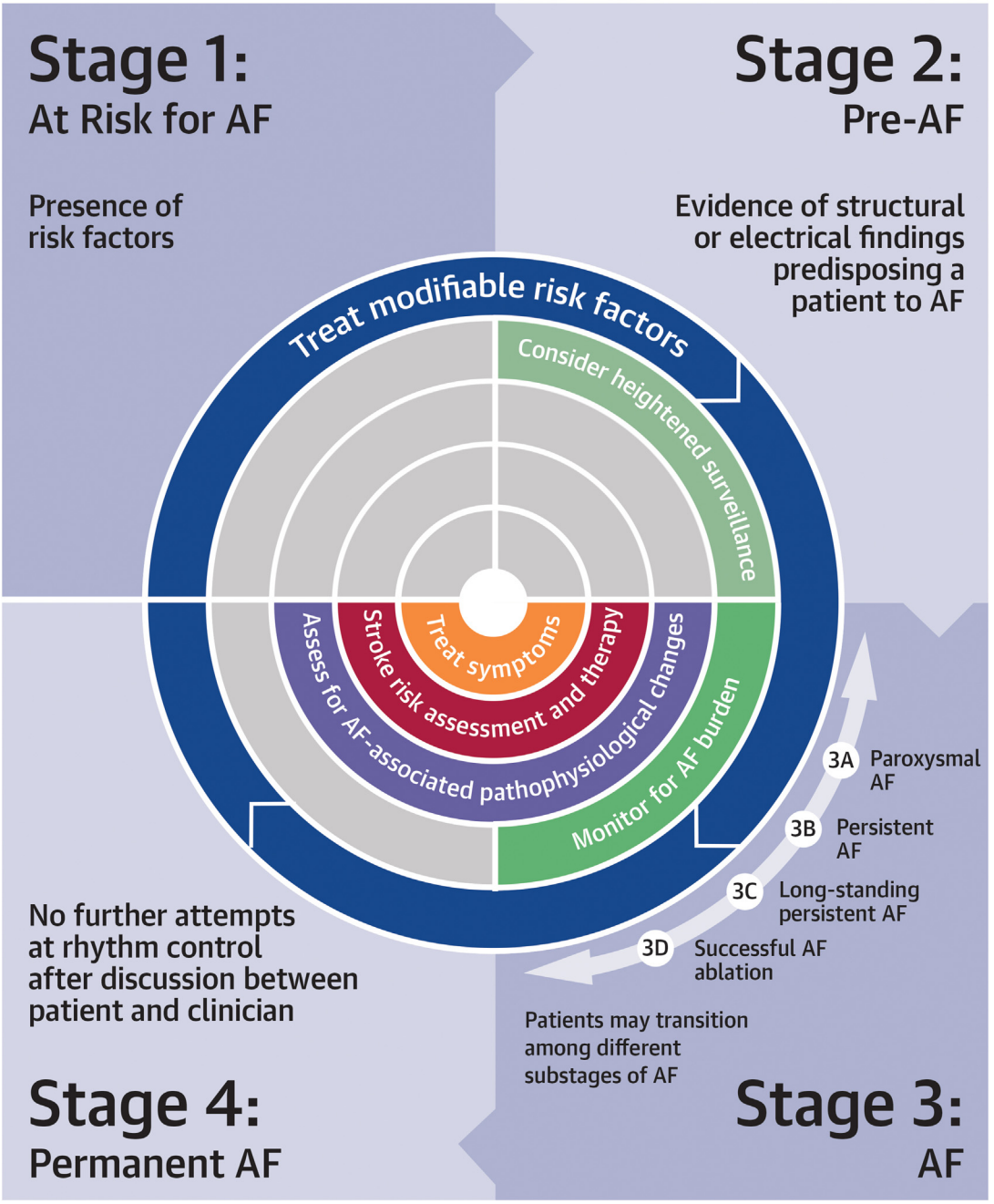
CENTRAL ILLUSTRATION **ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline**

Management Strategies for New Classification of Atrial Fibrillation

Recognizing AF as a Disease Continuum Improves Patient Outcomes



Wiggins BS, et al. J Am Coll Cardiol. November 30, 2023. 10.1016/j.jacc.2023.10.021.

AF = atrial fibrillation.

TABLE 1 Select Differences Between the 2014/2019 Guidelines and the 2023 ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline

	2014/2019[5,8]	2023[1]
Stages of atrial fibrillation	AF is defined in 5 terms: ■ Paroxysmal AF ■ Persistent AF ■ Long-standing persistent AF ■ Permanent AF ■ Nonvalvular AF Each term is defined in Table 4. Definitions of AF: A Simplified Scheme.	Atrial arrhythmia progression is split up into 4 stages: 1. At risk for AF 2. Pre-AF (evidence of structural or electrical findings predisposing a patient to AF) 3. AF (including paroxysmal, persistent, long-standing persistent, and successful AF ablation) 4. Permanent AF Each stage is defined in Figure 4. AF Stages: Evolution of Atrial Arrhythmia Progression, and special considerations across stages are listed, including treating modifiable risk factors throughout the entire atrial arrythmia progression.
Early rhythm control	A heart rate control (resting heart rate <80 beats/min) strategy is reasonable for symptomatic management of AF (COR 2a).	In patients with reduced LV function and persistent (or high burden) AF, a trial of rhythm control should be recommended to evaluate whether AF is contributing to the reduced LV function (COR 1).
Catheter ablation of AF as first-line therapy in selected patients	In patients with recurrent symptomatic paroxysmal AF, catheter ablation is a reasonable initial rhythm-control strategy before therapeutic trials of antiarrhythmic drug therapy, after weighing the risks and outcomes of drug and ablation therapy (COR 2a).	In selected patients (generally younger with few comorbidities) with symptomatic paroxysmal AF in whom rhythm control is desired, catheter ablation is useful as first-line therapy to improve symptoms and reduce progression to persistent AF (COR 1).

Colors in the table align with the classification system found in Table 2, "Applying American College of Cardiology/American Heart Association Class of Recommendation and Level of Evidence to Clinical Strategies, Interventions, Treatments, or Diagnostic Testing in Patient Care" in the 2023 ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline.[1]

ACC = American College of Cardiology; AF = atrial fibrillation; AHA = American Heart Association; COR = Class of Recommendation; LV = left ventricular.

other risk variables to help inform the decision, or the use of other clinical risk scores to improve prediction, facilitate shared decision making, and incorporate into the electronic medical record.

4. Consideration of stroke risk modifiers: Patients with AF at intermediate to low (<2%) annual risk of ischemic stroke can benefit from consideration of factors that might modify their risk of stroke, such as the characteristics of their AF (eg, burden), nonmodifiable risk factors (sex), and other dynamic or modifiable factors (blood pressure control) that may inform shared decision-making discussions.
5. **Early rhythm control: With the emergence of new and consistent evidence, this guideline emphasizes the importance of early and continued management of patients with AF that should focus on maintaining sinus rhythm and minimizing AF burden.**
6. **Catheter ablation of AF receives a Class 1 indication as first-line therapy in selected patients: Recent randomized studies have demonstrated the superiority of catheter ablation over drug therapy for rhythm control in appropriately selected patients. In view of the most recent evidence, we upgraded the Class of Recommendation.**
7. Catheter ablation of AF in appropriate patients with heart failure with reduced ejection fraction receives a Class 1 indication: Recent randomized studies have demonstrated the superiority of catheter ablation over drug therapy for rhythm control in patients with heart failure and reduced ejection failure. In view of the data, we upgraded the Class of Recommendation for this population of patients.
8. Recommendations have been updated for device-detected AF: In view of recent studies, more prescriptive recommendations are provided for patients with device-detected AF that consider the interaction between episode duration and the patient's underlying risk for thromboembolism. This includes considerations for patients with AF detected via implantable devices and wearables.
9. Left atrial appendage occlusion devices receive higher level Class of Recommendation: In view of additional data on safety and efficacy of left atrial appendage occlusion devices, the Class of Recommendation has been upgraded to 2a compared with the 2019 AF Focused Update for use of these devices in patients with long-term contraindications to anticoagulation.
10. Recommendations are made for patients with AF identified during medical illness or surgery (precipitants): Emphasis is made on the risk of recurrent AF after AF is discovered during noncardiac illness or other precipitants, such as surgery.

JACC ILLUSTRATIONS

Central Illustration: Management Strategies for New Classification of Atrial Fibrillation

An important message of the most recent guideline is the new classification system of AF. The previous classification system was based on arrythmia duration and focused primarily on therapeutic interventions. The new classification identifies AF as a disease continuum that requires a variety of strategies at different stages—from prevention

TABLE 2 AF Classification and Treatment Strategies: Select Comparison of ACC/AHA/ACCP/HRS Guideline and ESC Guideline

	ESC Guideline[2]	ACC/AHA/ACCP/HRS Guideline[1]
Stages of AF	Classification of AF split up into 5 AF patterns: ■ First diagnosed ■ Paroxysmal ■ Persistent ■ Long-standing persistent ■ Permanent Each stage is split up according to pattern of AF and risk factors are not included.	Atrial arrhythmia progression is split up into 4 stages: 1. At risk for AF 2. Pre-AF (evidence of structural or electrical findings predisposing a patient to AF) 3. AF (including paroxysmal, persistent, long-standing persistent, and successful AF ablation) 4. Permanent AF Each stage is defined in Figure 4. AF Stages: Evolution of Atrial Arrhythmia Progression, and special considerations across stages are listed, including treating modifiable risk factors throughout the entire atrial arrythmia progression.
Early rhythm control	Rhythm control therapy is recommended for symptom and QoL improvement in symptomatic patients with AF (COR 1).	In patients with reduced LV function and persistent (or high burden) AF, a trial of rhythm control should be recommended to evaluate whether AF is contributing to the reduced LV function (COR 1).
Catheter ablation of AF as first line therapy in selected patients	AF catheter ablation for PVI should/may be considered as first-line rhythm control therapy to improve symptoms in selected patients with symptomatic: paroxysmal AF episodes (COR 2a). …or persistent AF without major risk factors for AF recurrence (COR 2b), as an alternative to AAD class I or III, considering patient choice, benefit, and risk.	In selected patients (generally younger with few comorbidities) with symptomatic paroxysmal AF in whom rhythm control is desired, catheter ablation is useful as first-line therapy to improve symptoms and reduce progression to persistent AF (COR 1).

Colors in the table align with the classification system found in Table 2, "Applying American College of Cardiology/American Heart Association Class of Recommendation and Level of Evidence to Clinical Strategies, Interventions, Treatments, or Diagnostic Testing in Patient Care," in the 2023 ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline.[1]

AAD = antiarrhythmic drug; ACC = American College of Cardiology; AF = atrial fibrillation; AHA = American Heart Association; COR = Class of Recommendation; ESC = European Society of Cardiology; LV = left ventricular; PVI = pulmonary vein isolation; QOL = quality of life.

to lifestyle and risk factor modification, screening, and therapy. This new classification system parallels the idea of disease continuum in other guidelines[3,4] with a goal to prevent the progression of AF.

The *JACC* **Central Illustration** for the ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline focuses on the importance of AF as a disease continuum in the new classification system of AF. This clinician tool focuses on Top 10 Take-Home Message 1 and aims to change clinical practice. The educational tool is intended to communicate information quickly and memorably from the guideline, especially related to modifiable risk factors that must be treated throughout atrial arrythmia progression. For additional information, see Section 2.2.1 of the guideline, "AF classification."[1]

Interactive Illustration: Catheter Ablation as First-Line Therapy for Rhythm Control

Another important message of the guideline is the superiority of catheter ablation over pharmacologic therapy for rhythm control in select patients. The guideline updated the Class of Recommendation from a 2a (moderate) in the 2014 AHA/ACC/HRS Atrial Fibrillation Guideline[5] to a Class of Recommendation 1 (strong) in 2023.[1] Evidence from the EARLY-AF (Early Aggressive Invasive Intervention for Atrial Fibrillation)[6] and STOP AF First (Cryoballoon Catheter Ablation in an Antiarrhythmic Drug Naive Paroxysmal Atrial Fibrillation)[7] trials are the foundation for this change.

The *JACC* Interactive Illustration for the AHA/ACC/ACCP/HRS Atrial Fibrillation Guideline focuses on understanding which patients are more likely to benefit from catheter ablation as first-line therapy for rhythm control. The tool is accessible at https://www.jacc.org/guidelines/AtrialFibrillation/interactive.

This interactive clinician tool focuses on Take-Home Messages 5, 6, and 7 and represents a change in clinical practice. Within the interactive tool, clinicians can select groupings of clinical variables that best describe the patient. The corresponding guideline recommendations are presented to help determine if the selected clinical variables favor a rhythm or rate control strategy and if the patient is likely to benefit from catheter ablation as first-line therapy. Within the interactive tool, clinicians can select groups of clinical variables to help understand their impact on recommendations for treatment.

For additional information, see the guideline Section 8.4, "AF Catheter Ablation," Section 9.2, "Management of AF in Patients With Heart Failure," and Section 8.1, "Goals of Therapy With Rhythm Control."[1]

COMPARISON TO PREVIOUS ACC/AHA/ACCP/HRS GUIDELINES

The scope of the ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline[1] includes and updates content previously covered in 2 other guidelines.[5,8] **Table 1** outlines changes on the classification of AF, rhythm control strategies, and catheter ablation between the 2019 AHA/ACC/HRS Focused Update of the 2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation and the 2023 ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline.

Information for **Table 1** can be found in the following 2023 ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline sections:

- Stages of atrial fibrillation (Top 10 Take-Home Message 1): Section 2.2.1, "AF Classification";
- Recommendations for early rhythm control (Top 10 Take-Home Message 5): Section 8.1, "Goals of Therapy with Rhythm Control";
- Recommendations for catheter ablation of AF as first line therapy in selected patients (Top 10 Take Take-Home Message 6): Section 8.4, "AF Catheter Ablation."

ACC/AHA/ACCP/HRS GUIDELINE COMPARISON TO ESC GUIDELINE

The ESC published an atrial fibrillation clinical practice guideline in 2020. **Table 2** highlights the subtle differences in classification, rhythm vs rate control, and catheter ablation recommendations between the 2023 ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline[1] and the 2020 ESC guidelines for the diagnosis and management of atrial fibrillation.[2] The comparison table is focused on Top 10 Take-Home Messages 1, 5, and 6.

Information for **Table 2** can be found in the following 2023 ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline sections:

- Section 2.2.1, "AF Classification";
- Section 8.1, "Goals of Therapy with Rhythm Control";
- Section 8.4, "AF Catheter Ablation."

Information can also be found in the following 2020 ESC Atrial Fibrillation Guideline sections:

- Section 6.1, "Classification of Atrial Fibrillation";
- Section 10.2.2, "Rhythm Control";
- Section 10.2, "'B'-Better Symptom Control."

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