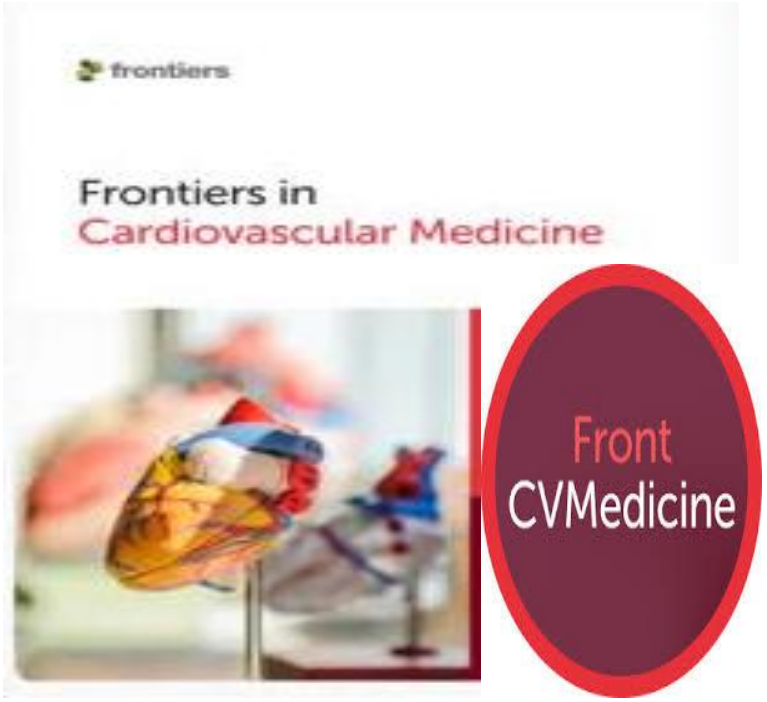
SESIÓN BIBLIOGRÁFICA 26 ABRIL 2024

Dra. Ana Castañón López



Complejo Asistencial Universitario de León | Sacyl | Junta de Castilla y León

ELSEVIER

Journal of the American College of Cardiology

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Clinical Practice Guideline

2023 ACC/AHA/ACCP/HRS Guideline for the Diagnosis and Management of Atrial Fibrillation: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines

1	2	3				4
At risk for AF	**Pre-AF**	**AF**				**Permanent AF**
		Patients may transition among different substages of AF				
Presence of modifiable and nonmodifiable risk factors associated with AF. Modifiable risk factors: • Obesity • Lack of fitness • Hypertension • Sleep apnea • Alcohol • Diabetes Nonmodifiable risk factors: • Genetics • Male sex • Age	Evidence of structural or electrical findings further predisposing a patient to AF: • Atrial enlargement • Frequent atrial ectopy • Short bursts of atrial tachycardia • Atrial flutter • Other high AF risk scenarios*	Paroxysmal AF (3A) AF that is intermittent and terminates within ≤7 d of onset	Persistent AF (3B) AF that is continuous and sustains for >7 d and requires intervention	Long-standing persistent AF (3C) AF that is continuous for >12 mo in duration	Successful AF ablation (3D) Freedom from AF after percutaneous or surgical intervention to eliminate AF	No further attempts at rhythm control after discussion between patient and clinician
		Treat Modifiable Risk Factors				
	Consider heightened surveillance	**Ongoing monitoring as clinically appropriate for AF burden**				
		Is AF associated with pathophysiological changes?				
		Stroke risk assessment and therapy if appropriate				
		Treat symptoms				

Other conditions				
CKD	SR/MA	CKD: ↑ risk (HR, 1.47)[58]	↑↔ Risk	N/A
	MR	Bidirectional relation between CKD and AF[59] AF causal for CKD; CKD not causal for AF[60]		
Obstructive sleep apnea	SR/MA	OSA: ↑ risk (OR, 1.71), with potential dose response relation by severity[61]	↑ Risk	Observational studies of SDB treatment: ↓ AF burden[62–67] Small RCTs of SDB treatment: ↔[68–70]
	MR	Genetically predicted OSA: ↑ risk (OR, 1.21)[71]		
Thyroid disease	SR/MA	Clinical hyperthyroidism: ↑ risk (RR, 2.35)[72]	↑ Risk	
	MR	Hyperthyroidism: ↑ risk (OR, 1.31)[73]		
Sepsis	Single study	Severe sepsis: ↑ risk (OR, 6.82)[74]; Medicare population[75]	↑ Risk	N/A
	SR/MA	Sepsis severity: ↑ risk[76]		
Markers on ECG				
PR interval	SR/MA	Prolonged PR: ↑ risk (RR, 1.45)[77]	Prolonged PR: ↑ risk PR interval polygenic risk score: ↓ risk PR interval risk SNPs: variable ↑↓ risk	N/A
	MR	Polygenic risk score PR interval prolongation: ↓ AF risk (OR, 0.95; P=4.30×10^{-8}) with some variants associated with ↑ and some with ↓ AF risk[78]		
LVH	Single study	ECG LVH: Population attributable fraction 10.4% ↓ d over time to 1.8%[26]	↑ Risk	N/A
	SR/MA	LVH: ↑ risk (RR, 1.46)[79]		
Biomarkers				
Natriuretic peptides	MA	BNP: ↑ risk (HR per 1-SD ln-BNP, 1.66)[80]	↑↔ Risk	N/A
	MR	Natriuretic peptides not associated[81]		
Inflammatory markers	SR/MA	CRP: ↑ risk (SMD, 0.95)[82] IL-6: ↑ risk (SMD, 0.89)[82] TNF-α: ↑ risk (SMD, 2.20)[82]	CRP, IL-6, TNF-α, DUSP13, FKBP7, Spondin-1: ↑ risk IL-6R, TNFS12: ↓ risk	N/A
	MR	DUSP13, FKBP7, Spondin-1 ↑ risk[33] IL-6R, TNFS12 ↓ risk[33]		
Lp(a)	SR/MA	Lp(a): HR, 1.03; only 39% of Lp(a) risk mediated via ASCVD[83]	↑ Risk	N/A
	MR	Genetically predicted ↑ Lp(a): ↑ risk (HR per 23 mg/dL genetically predicted ↑		

Table 7. C_2HEST Risk Score for Detecting Incident AF* (Table view)

Acronym	Risk Factor	Points
C_2	CAD/COPD	1-2
H	Hypertension	1
E	Elderly (age ≥75 y)	2
S	Systolic heart failure	2
T	Thyroid disease (hyperthyroidism)	1

* Total points 0-8. For the C_2HEST score, the C statistic was 0.749, with 95% CI of 0.729–0.769.[10] The incident rate of AF increased significantly with higher C_2HEST scores.

AF indicates atrial fibrillation; CAD, coronary artery disease; C_2HEST, coronary artery disease or chronic obstructive pulmonary disease [1 point each]; hypertension [1 point]; elderly [age ≥75 y, 2 points]; systolic HF [2 points]; thyroid disease [hyperthyroidism, 1 point]; and COPD, chronic obstructive pulmonary disease.

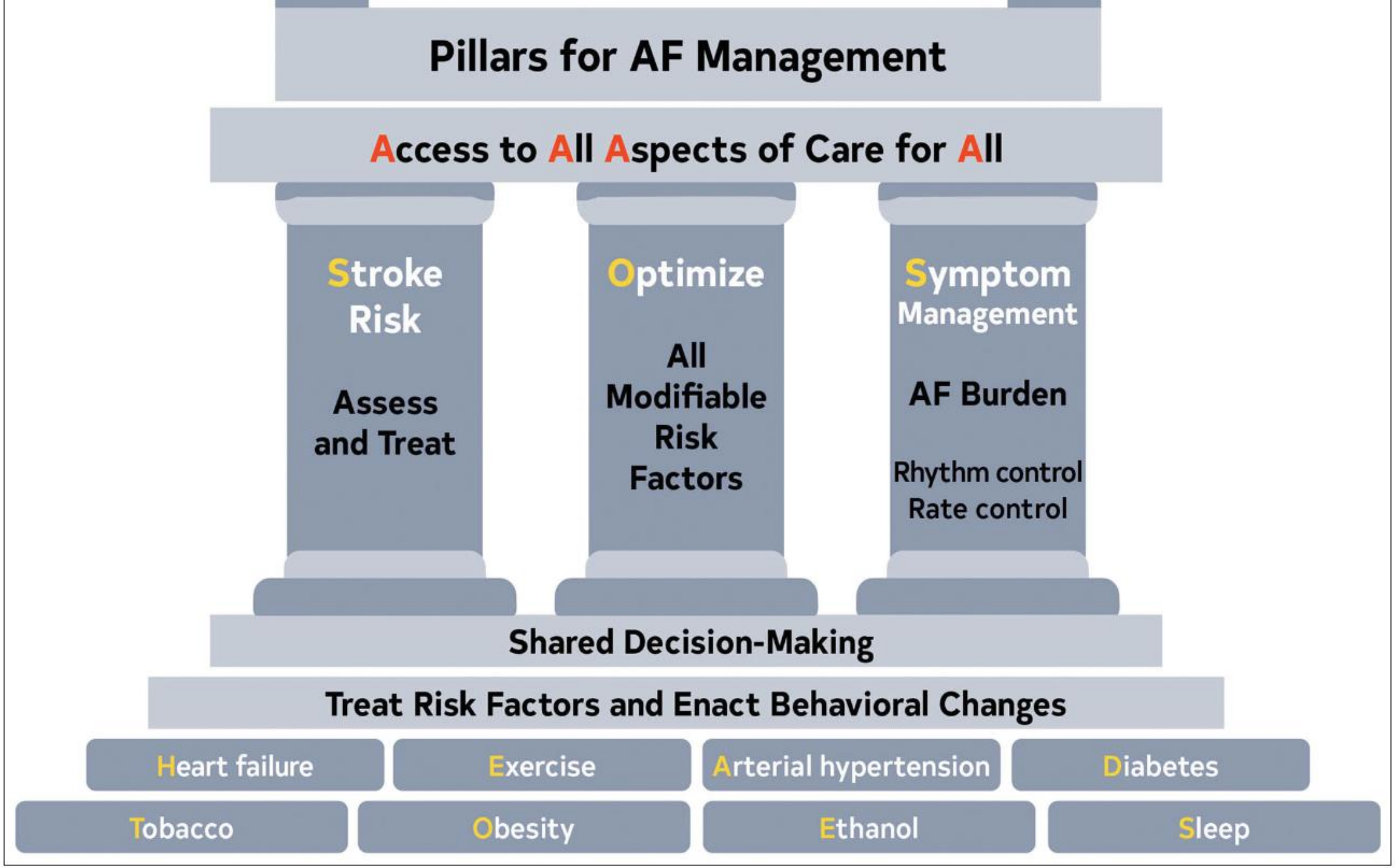


Figure 5. **Pillars for AF Management.** AF indicates atrial fibrillation.

5.2.5. Caffeine Consumption

Recommendation for Caffeine Consumption Referenced studies that support the recommendation are summarized in the Online Data Supplement.		
COR	**LOE**	**Recommendation**
3: No Benefit	**B-NR**	1. For patients with AF, recommending caffeine abstention to prevent AF episodes is of no benefit, although it may reduce symptoms in patients who report caffeine triggers or worsens AF symptoms.[1–9]

5.2.9. Sleep

Recommendation for Sleep Referenced studies that support the recommendation are summarized in the Online Data Supplement.		
COR	**LOE**	**Recommendation**
2b	**B-NR**	1. Among patients with AF, it may be reasonable to screen for obstructive sleep apnea, given its high prevalence in patients with AF, although the role of treatment of sleep-disordered breathing (SDB) to maintain sinus rhythm is uncertain.[1–13]

4.2.1. Basic Clinical Evaluation

Recommendations for Basic Clinical Evaluation Referenced studies that support the recommendations are summarized in the Online Data Supplement.		
COR	**LOE**	**Recommendations**
1	**B-NR**	1. In patients with newly diagnosed AF, a transthoracic echocardiogram[1–4] to assess cardiac structure, laboratory testing to include a complete blood count, metabolic panel, and thyroid function,[5–7] and when clinical suspicion exists, targeted testing to assess for other medical conditions associated with AF are recommended to determine stroke and bleeding risk factors, as well as underlying conditions that will guide further management.
3: No benefit	**B-NR**	2. In patients with newly diagnosed AF, protocolized testing for ischemia, acute coronary syndrome (ACS), and pulmonary embolism (PE) should not routinely be performed to assess the etiology of AF unless there are additional signs or symptoms to indicate those disorders.[8–10]

Recommendations for Antithrombotic Therapy
Referenced studies that support the recommendations are summarized in the Online Data Supplement.

COR	LOE	Recommendations
1	A	1. For patients with AF and an estimated annual thromboembolic risk of ≥2% per year (eg, CHA_2DS_2-VASc score of ≥2 in men and ≥3 in women), anticoagulation is recommended to prevent stroke and systemic thromboembolism.[1–7]
1	A	2. In patients with AF who do not have a history of moderate to severe rheumatic mitral stenosis or a mechanical heart valve, and who are candidates for anticoagulation, DOACs are recommended over warfarin to reduce the risk of mortality, stroke, systemic embolism, and ICH.[1–7]
2a	A	3. For patients with AF and an estimated annual thromboembolic risk of ≥1% but <2% per year (equivalent to CHA_2DS_2-VASc score of 1 in men and 2 in women), anticoagulation is reasonable to prevent stroke and systemic thromboembolism.[1,3]
3: Harm	B-R	4. In patients with AF who are candidates for anticoagulation and without an indication for antiplatelet therapy, aspirin either alone or in combination with clopidogrel as an alternative to anticoagulation is not recommended to reduce stroke risk.[8,9]
3: No Benefit	B-NR	5. In patients with AF without risk factors for stroke, aspirin monotherapy for prevention of thromboembolic events is of no benefit.[10,11]

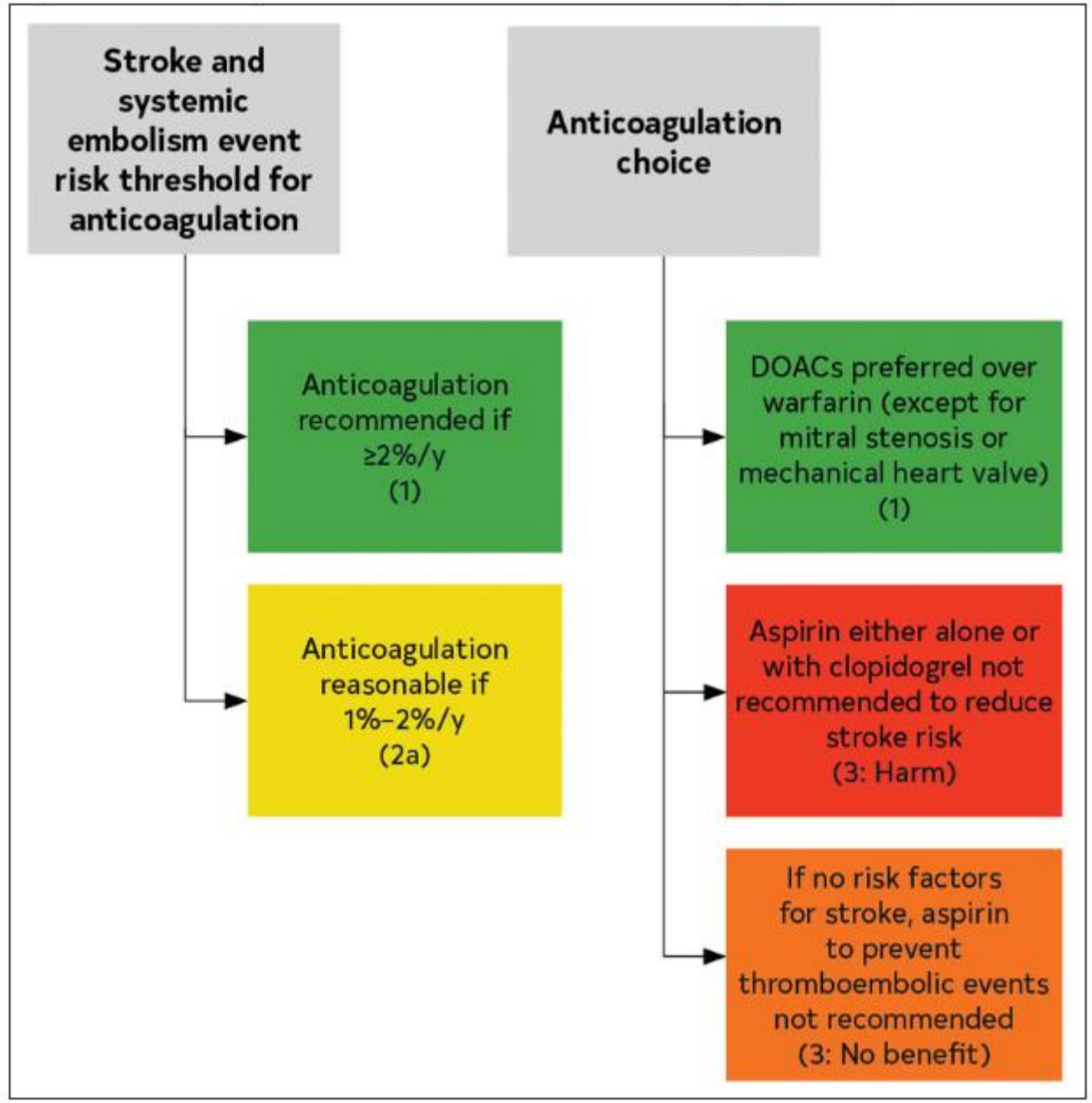

Stroke and systemic embolism event risk threshold for anticoagulation
Anticoagulation recommended if ≥2%/y (1)
Anticoagulation reasonable if 1%–2%/y (2a)
Anticoagulation choice
DOACs preferred over warfarin (except for mitral stenosis or mechanical heart valve) (1)
Aspirin either alone or with clopidogrel not recommended to reduce stroke risk (3: Harm)
If no risk factors for stroke, aspirin to prevent thromboembolic events not recommended (3: No benefit)

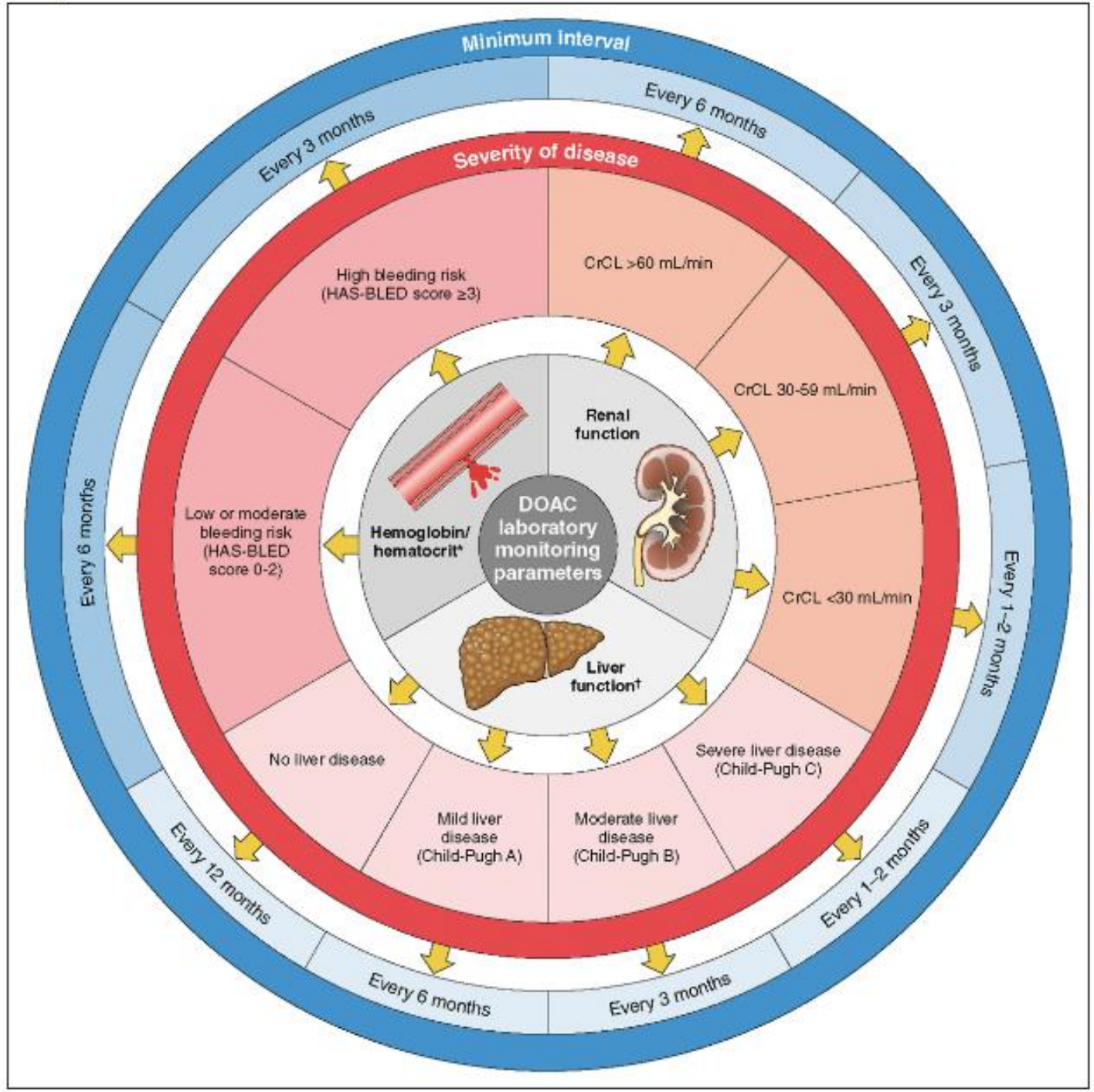
Table 11. Additional Risk Factors That Increase Risk of Stroke Not Included in CHA_2DS_2-VASc (Table view)

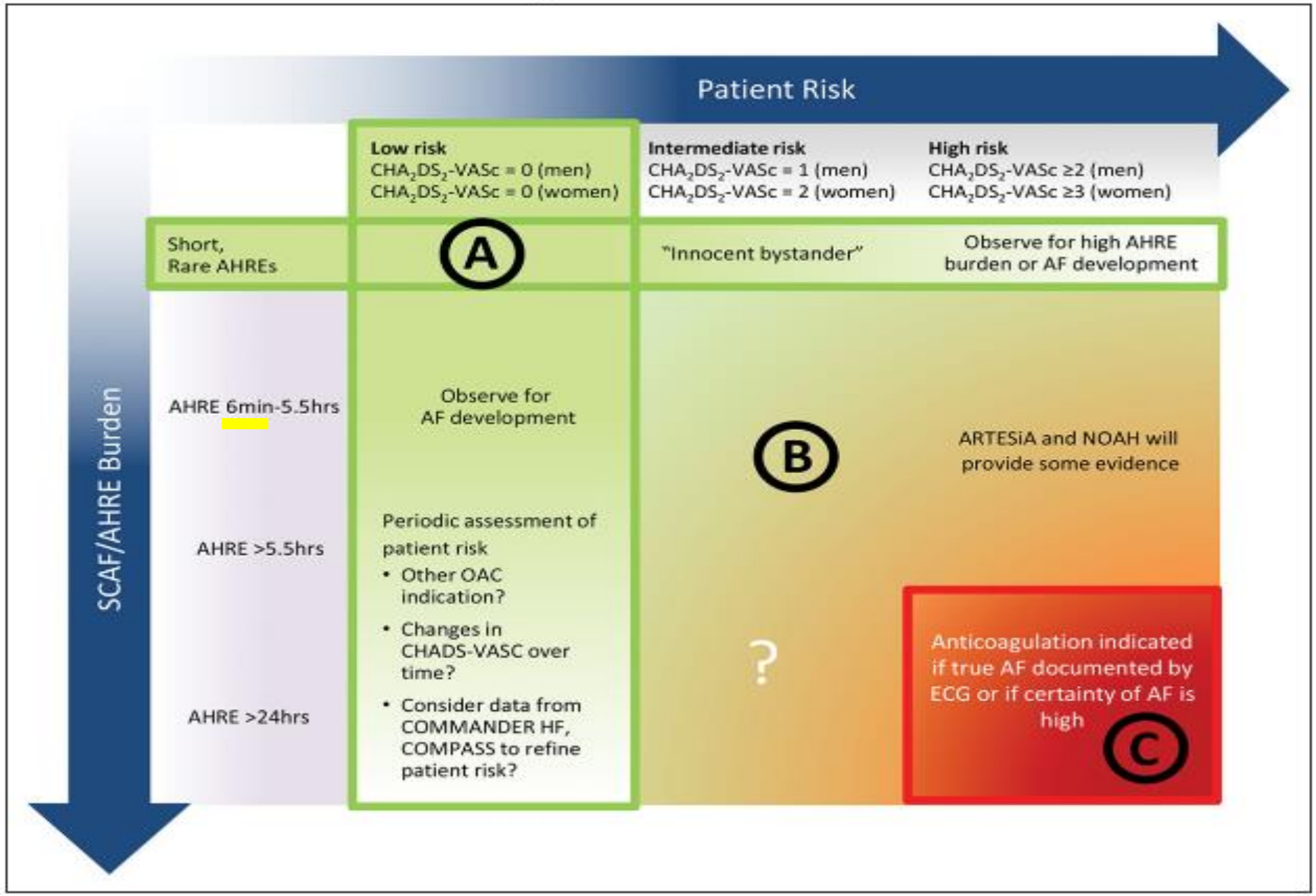
Higher AF burden/Long duration
Persistent/permanent AF versus paroxysmal
Obesity (BMI, ≥30 kg/m^2)
HCM
Poorly controlled hypertension
eGFR (<45 mL/h)
Proteinuria (>150 mg/24 h or equivalent)
Enlarged LA volume (≥73 mL) or diameter (≥4.7 cm)

10.4. Anticoagulation Considerations in Patients With Class III Obesity

Recommendations for Anticoagulation Considerations in Patients With Class III Obesity
Referenced studies that support the recommendations are summarized in the Online Data Supplement.

COR	LOE	Recommendations
2a	B-NR	1. In patients with AF and class III obesity (BMI ≥ 40 kg/m^2), DOACs are reasonable to choose over warfarin for stroke risk reduction.[1–5]
2b	C-LD	2. In patients with AF who have undergone bariatric surgery, warfarin may be reasonable to choose over DOACs for stroke risk reduction in view of concerns about DOAC drug absorption.[6,7]


Minimum interval
Every 3 months
Every 6 months
Every 3 months
Every 6 months
Every 12 months
Every 6 months
Every 3 months
Every 1–2 months
Every 1–2 months
Severity of disease
High bleeding risk (HAS-BLED score ≥3)
CrCL >60 mL/min
CrCL 30-59 mL/min
CrCL <30 mL/min
Severe liver disease (Child-Pugh C)
Moderate liver disease (Child-Pugh B)
Mild liver disease (Child-Pugh A)
No liver disease
Low or moderate bleeding risk (HAS-BLED score 0-2)
Renal function
Hemoglobin/ hematocrit*
DOAC laboratory monitoring parameters
Liver function†


Patient Risk
SCAF/AHRE Burden
Low risk
CHA2DS2-VASc = 0 (men)
CHA2DS2-VASc = 0 (women)
Intermediate risk
CHA2DS2-VASc = 1 (men)
CHA2DS2-VASc = 2 (women)
High risk
CHA2DS2-VASc ≥2 (men)
CHA2DS2-VASc ≥3 (women)
Short, Rare AHREs
A
"Innocent bystander"
Observe for high AHRE burden or AF development
AHRE 6min-5.5hrs
Observe for AF development
B
ARTESiA and NOAH will provide some evidence
AHRE >5.5hrs
Periodic assessment of patient risk
• Other OAC indication?
• Changes in CHADS-VASC over time?
?
AHRE >24hrs
• Consider data from COMMANDER HF, COMPASS to refine patient risk?
Anticoagulation indicated if true AF documented by ECG or if certainty of AF is high
C

Long-Term Anticoagulation Contraindicated	Long-Term Anticoagulation Is Still Reasonable
Severe bleeding due to a nonreversible cause involving the gastrointestinal, pulmonary, or genitourinary systems Spontaneous intracranial/intraspinal bleeding due to a nonreversible cause Serious bleeding related to recurrent falls when cause of falls is not felt to be treatable	Bleeding involving the gastrointestinal, pulmonary, or genitourinary systems that is treatable Bleeding related to isolated trauma Bleeding related to procedural complications

Recommendations for Percutaneous Approaches to Occlude the LAA
Referenced studies that support the recommendations are summarized in the Online Data Supplement.

COR	LOE	Recommendations
2a	B-NR	1. In patients with AF, a moderate to high risk of stroke (CHA_2DS_2-VASc score ≥2), and a contraindication (Table 14) to long-term oral anticoagulation due to a nonreversible cause, percutaneous LAAO (pLAAO) is reasonable.[1–4]
2b	B-R	2. In patients with AF and a moderate to high risk of stroke and a high risk of major bleeding on oral anticoagulation, pLAAO may be a reasonable alternative to oral anticoagulation based on patient preference, with careful consideration of procedural risk and with the understanding that the evidence for oral anticoagulation is more extensive.[1–3,5,6]

Recommendations for Anticoagulation Use in Patients With Liver Disease

Referenced studies that support the recommendations are summarized in the Online Data Supplement.

COR	LOE	Recommendations
2a	B-NR	1. For patients with AF who are at increased risk of systemic thromboembolism and mild or moderate liver disease (Child-Pugh* class A or B), OAC therapy is reasonable in the absence of clinically significant liver disease–induced coagulopathy or thrombocytopenia.[1–7]
2a	B-NR	2. For patients with AF who are at increased risk of systemic thromboembolism and mild or moderate liver disease (Child-Pugh class A or B) and who are deemed to be candidates for anticoagulation, it is reasonable to prescribe DOACs (Child-Pugh class A: any DOAC; Child-Pugh class B: apixaban, dabigatran, or edoxaban) over warfarin.[1,7–11]
3: Harm	C-LD	3. For patients with AF and moderate liver disease (Child-Pugh class B) at increased risk of systemic thromboembolism, rivaroxaban is contraindicated due to the potentially increased risk of bleeding.[12]

6.8.4. Chronic Kidney Disease (CKD)/Kidney Failure

Recommendations for CKD/Kidney Failure Referenced studies that support the recommendations are summarized in the Online Data Supplement.		
COR	**LOE**	**Recommendations**
1	**B-R**	1. For patients with AF at elevated risk for stroke and CKD stage 3, treatment with warfarin or, preferably, evidence-based doses of direct thrombin or factor Xa inhibitors (Table 19) is recommended to reduce the risk of stroke.[1–3]
2a	**B-NR**	2. For patients with AF at elevated risk for stroke and CKD stage 4, treatment with warfarin or labeled doses of DOACs is reasonable to reduce the risk of stroke.[4,5]
2b	**B-NR**	3. For patients with AF at elevated risk for stroke and who have end-stage CKD (CrCl <15 mL/min) or are on dialysis, it might be reasonable to prescribe warfarin (INR 2.0-3.0) or an evidence-based dose of apixaban for oral anticoagulation to reduce the risk of stroke.[6,7]

Table 19. Recommended Doses of Currently Approved DOACs According to Renal Function (Table view)

	CrCl (mL/min)				
DOAC	>95	51-95	31-50	15-30	<15 or on dialysis
Apixaban	5 or 2.5 mg twice daily*	5 or 2.5 mg twice daily*	5 or 2.5 mg twice daily*	5 or 2.5 mg twice daily*	5 or 2.5 mg twice daily*
Dabigatran	150 mg twice daily	150 mg twice daily	150 mg twice daily	75 mg twice daily	Contraindicated
Edoxaban	Contraindicated	60 mg once daily	30 mg once daily	30 mg once daily	Contraindicated
Rivaroxaban	20 mg once daily	20 mg once daily	15 mg once daily	15 mg once daily	15 mg once daily†

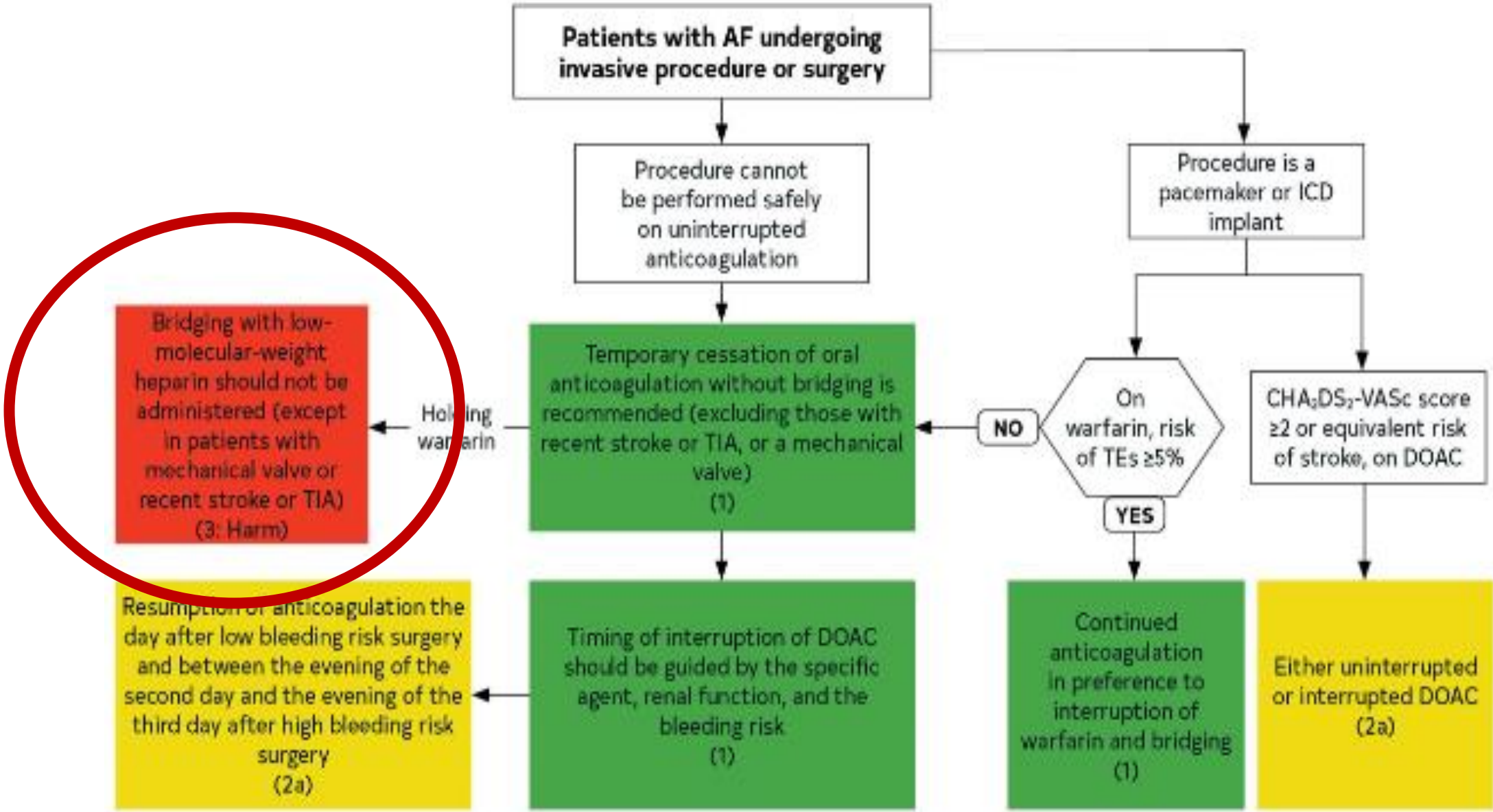
6.8.2. Chronic Coronary Disease (CCD)

Recommendation for CCD
Referenced studies that support the recommendation are summarized in the Online Data Supplement.

COR	LOE	Recommendation
1	B-R	1. In patients with AF and CCD (beyond 1 year after revascularization or CAD not requiring coronary revascularization) without history of stent thrombosis, oral anticoagulation monotherapy is recommended over the combination therapy of OAC and single APT (aspirin or P2Y12 inhibitor) to decrease the risk of major bleeding.[1–3]

Table 18. Timing of Discontinuation of OACs in Patients With AF Scheduled to Undergo an Invasive Procedure or Surgery in Whom Anticoagulation Is to Be Interrupted (Table view)

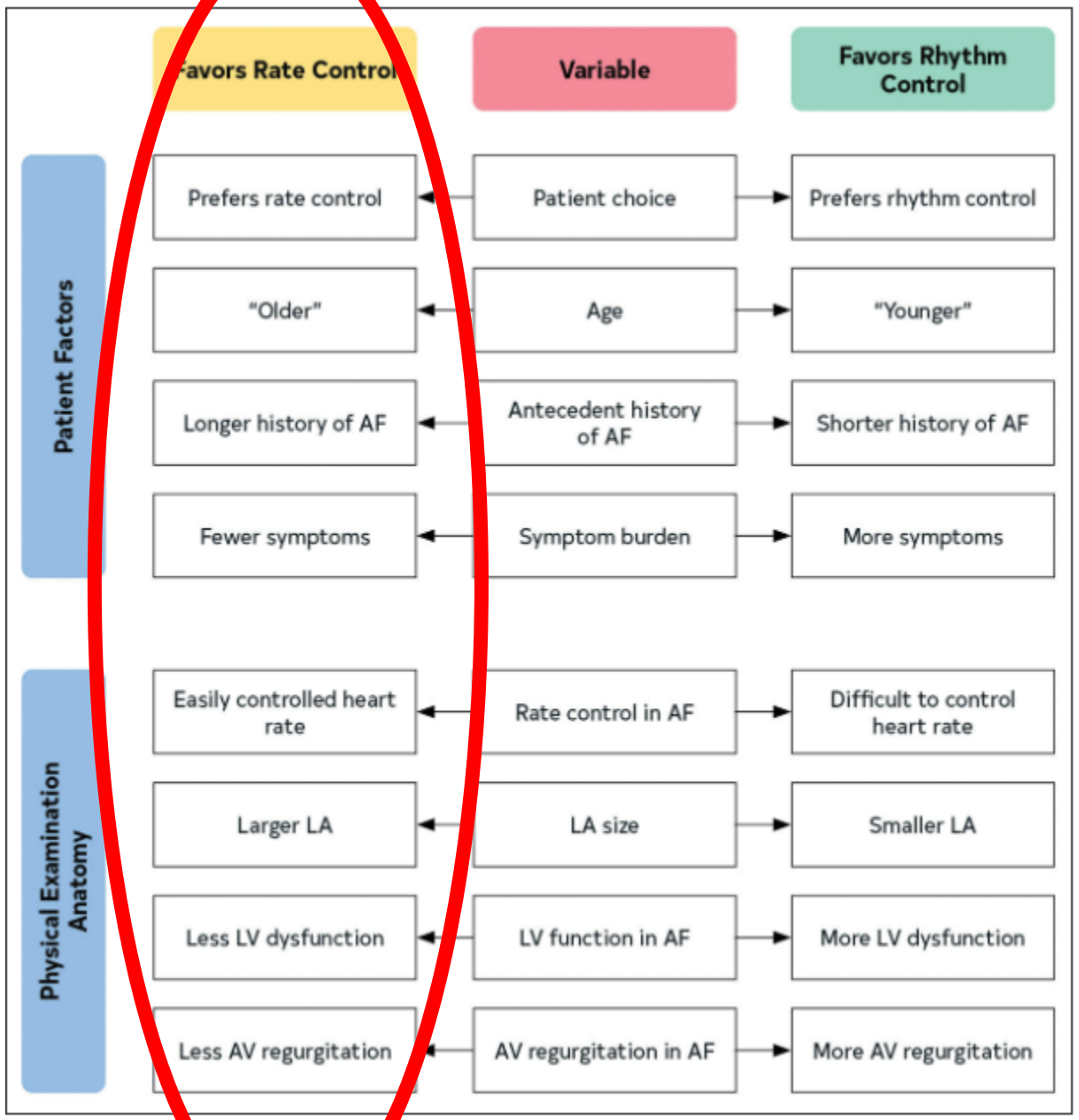
Anticoagulant	Low Bleeding Risk Procedure	High Bleeding Risk Procedure
Apixaban (CrCl >25 mL/min)*	1 d†	2 d
Dabigatran (CrCl >50 mL/min)	1 d	2 d
Dabigatran (CrCl 30-50 mL/min)	2 d	4 d
Edoxaban (CrCl >15 mL/min)	1 d	2 d
Rivaroxaban (CrCl >30 mL/min)	1 d	2 d
Warfarin	5 d for a target INR <1.5 2-3 d for a target INR <2	5 d


Patients with AF undergoing invasive procedure or surgery
Procedure cannot be performed safely on uninterrupted anticoagulation
Procedure is a pacemaker or ICD implant
Temporary cessation of oral anticoagulation without bridging is recommended (excluding those with recent stroke or TIA, or a mechanical valve) (1)
Bridging with low-molecular-weight heparin should not be administered (except in patients with mechanical valve or recent stroke or TIA) (3: Harm)
Holding warfarin
NO
On warfarin, risk of TEs ≥5%
YES
CHA2DS2-VASc score ≥2 or equivalent risk of stroke, on DOAC
Timing of interruption of DOAC should be guided by the specific agent, renal function, and the bleeding risk (1)
Resumption of anticoagulation the day after low bleeding risk surgery and between the evening of the second day and the evening of the third day after high bleeding risk surgery (2a)
Continued anticoagulation in preference to interruption of warfarin and bridging (1)
Either uninterrupted or interrupted DOAC (2a)

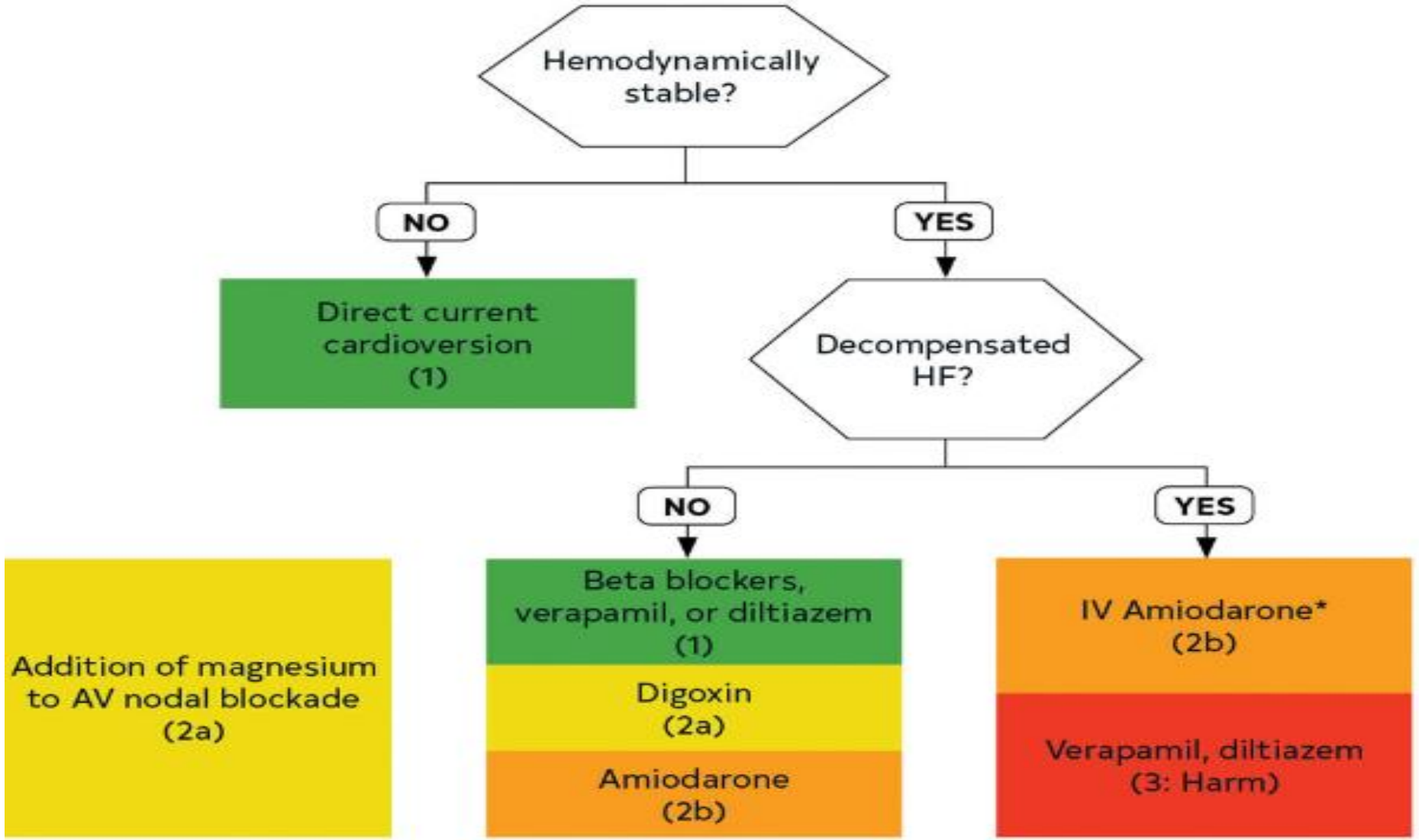
Recommendations for Management of Patients With AF and ICH
Referenced studies that support the recommendations are summarized in the Online Data Supplement.

COR	LOE	Recommendations
2a	C-LD	1. In patients with AF and conditions associated with very high risk of thromboembolic events (>5%/year), such as rheumatic heart disease or a mechanical heart valve, early (1-2 weeks) resumption of anticoagulation after ICH is reasonable to reduce the risk of thromboembolic events.[1]
2b	C-LD	2. In patients with AF and ICH, delayed (4-8 weeks) resumption of anticoagulation may be considered to balance the risks of thromboembolic and hemorrhagic complications after careful risk benefit assessment.[2–5]
2b	B-NR	3. In patients with AF and conditions associated with high risk of recurrent ICH (eg, cerebral amyloid angiopathy) anticoagulation-sparing strategies (eg, LAAO) may be considered to reduce the risk of recurrent hemorrhage.[6,7]

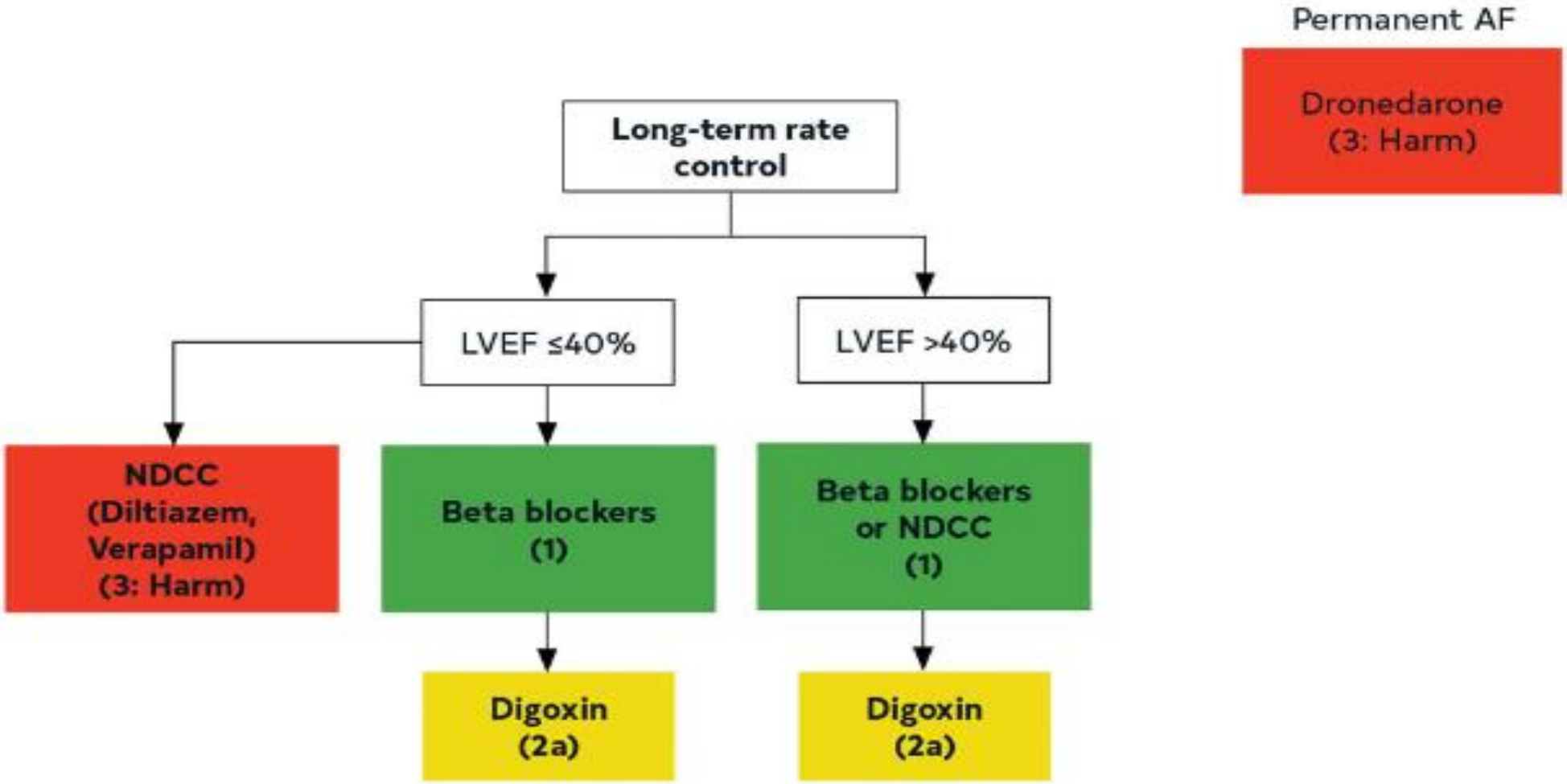
Factors Associated With High Risk of Thromboembolism	Factors Associated With High Risk of Recurrent ICH
Mechanical heart valve	Suspected cerebral amyloid angiopathy
Rheumatic valve disease	Lobar IPH
Previous history of stroke/thromboembolism	Older age
Hypercoagulable state (eg, active malignancy, genetic thrombophilia)	>10 cerebral microbleeds on MRI
High CHA_2DS_2-VASc score (>5)	Disseminated cortical superficial siderosis on MRI
	Poorly controlled hypertension
	Previous history of spontaneous ICH
	Genetic/acquired coagulopathy
	Untreated symptomatic vascular malformation or aneurysm


Favors Rate Control
Variable
Favors Rhythm Control
Patient Factors
Prefers rate control
Patient choice
Prefers rhythm control
"Older"
Age
"Younger"
Longer history of AF
Antecedent history of AF
Shorter history of AF
Fewer symptoms
Symptom burden
More symptoms
Physical Examination Anatomy
Easily controlled heart rate
Rate control in AF
Difficult to control heart rate
Larger LA
LA size
Smaller LA
Less LV dysfunction
LV function in AF
More LV dysfunction
Less AV regurgitation
AV regurgitation in AF
More AV regurgitation

CONTROL DE RITMO



CONTROL DE FRECUENCIA



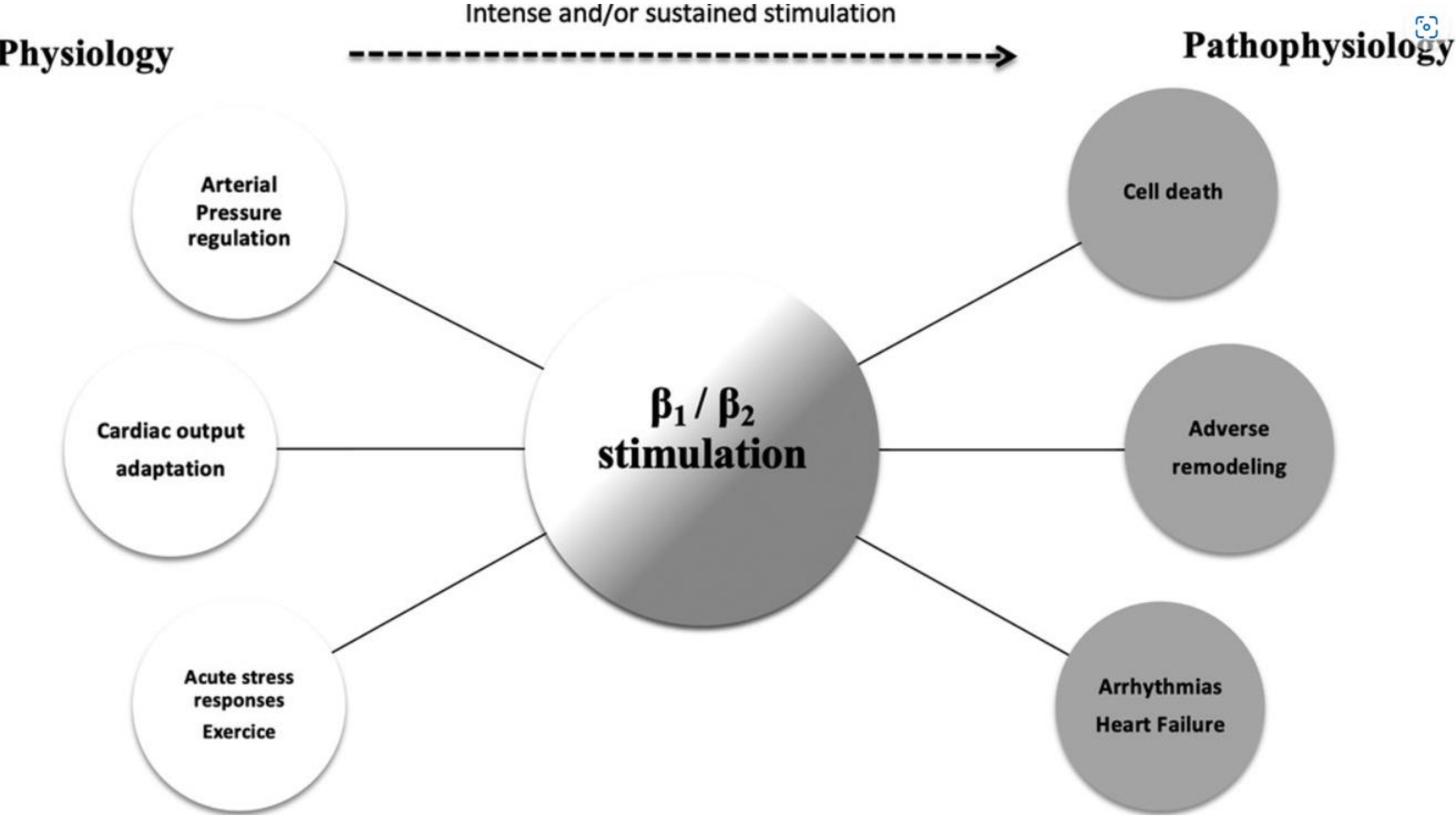
Review > Front Cardiovasc Med. 2023 Nov 16:10:1263482. doi: 10.3389/fcvm.2023.1263482. eCollection 2023.

Beta-blocker management in patients admitted for acute heart failure and reduced ejection fraction: a review and expert consensus opinion

Guillaume Schurtz [1], Nathan Mewton [2], Gilles Lemesle [1 3 4 5], Clément Delmas [6], Bruno Levy [7], Etienne Puymirat [8], Nadia Aissaoui [9], Fabrice Bauer [10], Edouard Gerbaud [11 12], Patrick Henry [13], Laurent Bonello [14], Thomas Bochaton [15], Eric Bonnefoy [15], François Roubille [16], Nicolas Lamblin [17 18]

Affiliations + expand

PMID: 38050613 PMCID: PMC10693984 DOI: 10.3389/fcvm.2023.1263482


Intense and/or sustained stimulation
Physiology
Pathophysiology
Arterial Pressure regulation
Cardiac output adaptation
Acute stress responses Exercice
β1 / β2 stimulation
Cell death
Adverse remodeling
Arrhythmias Heart Failure

Generation	Compound Name	β1/β2 selectivity	α1 blocking effect	Half-life (hours)	Heart Rate	Cardiac Index	PCWP	SVR
First Non-selective	Propanolol	**2.1**	**0**	**3-4**	↓↓	↓↓	=	↑
Second Selective β1	Metoprolol	**74**	**0**	**3-7**	↓	↓	=	↑
	Bisoprolol	**119**	**0**	**9-12**	/	/	/	/
Third β- vasodilator	Carvedilol	**7.3**	++ direct β vasodilatation	**7-10**	↓	↑	↓↓	↓
	Nebivolol	**293**	++ NO-mediated vasodilatation	**8-27**	/	/	/	/

1. Accurate blood volume management

- **Physical examination** (dyspnea, rales, periph. oedema, jugular veins)
- **TTE** (mitral inflow, IVC diameter and distensibility), **lung ultrasounds**
- **Biomarkers** (hematocrit, natriuretic peptides, renal and hepatic markers)
- **RHC for complex cases** (shock, refractory congestion, respiratory failure)

2. Perfusion status optimization

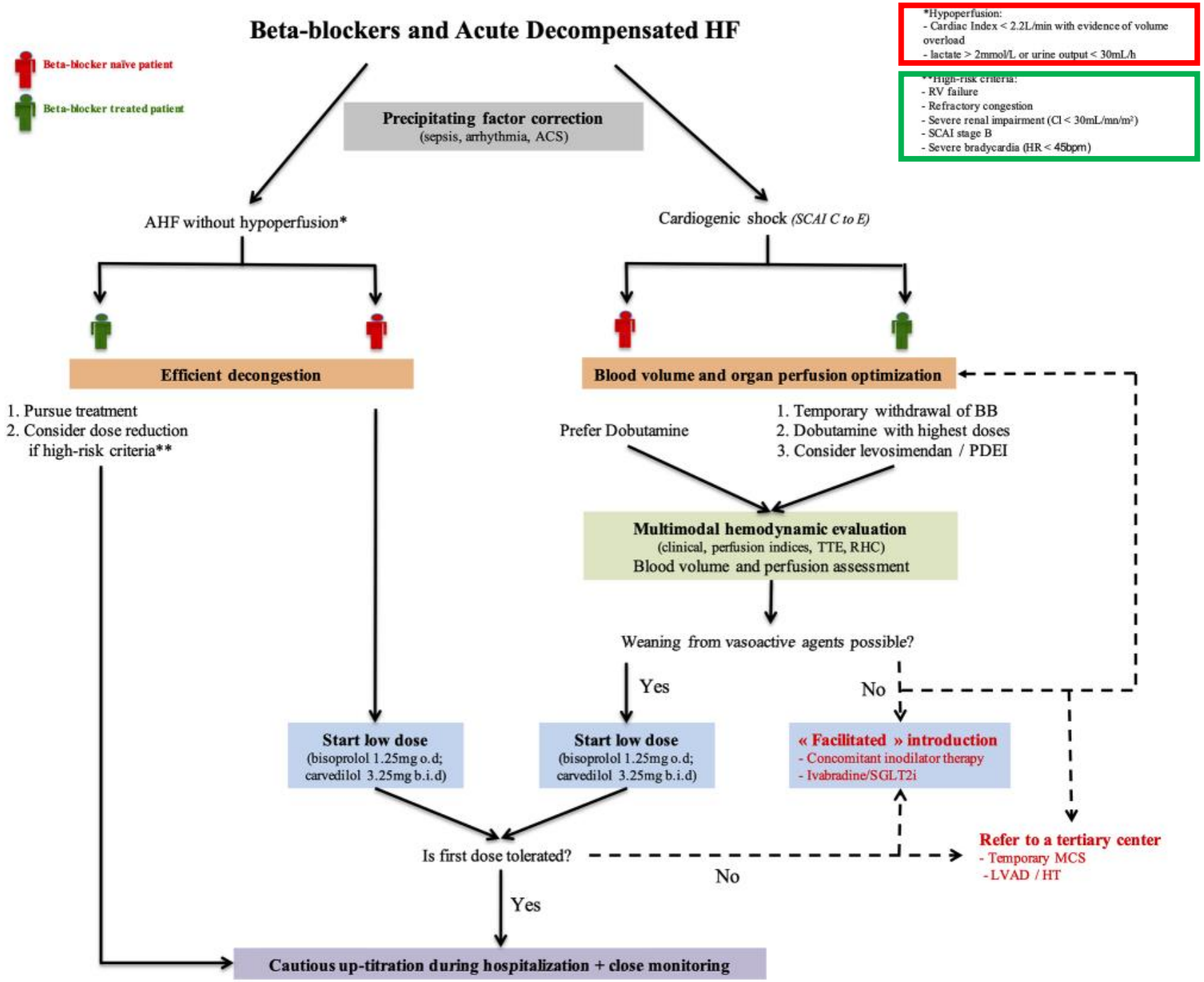
- **Clinical assessment** (CRT, urine output, skin mottling)
- **Macrocirculatory parameters** (MAP, CO, CVP)
- **Tissular oxygenation indices** (lactate, SvO2)
- **RV function** (volume, TAPSE, S', RVFAC)

3. Cautious start

- **Introduction at the lowest dose** (bisoprolol 1.25mg *o.d*, carvedilol 3.125 *b.i.d*)
- **If ACEI is chosen first, start beta-blocker at least 24h apart**
- **Consider concomitant gliflozin co-prescription** (dapagliflozin, empagliflozin)

4. After initiation

- **Close monitoring** (first 2-3 dose adjustments)
- **Uptitration** (adapted to clinical response, HR, BP, natriuretic peptides)
- **Pursue until optimal tolerated dose is reached**
- **Patience**


Beta-blocker naïve patient
Beta-blocker treated patient
Beta-blockers and Acute Decompensated HF
*Hypoperfusion:
- Cardiac Index < 2.2L/min with evidence of volume overload
- lactate > 2mmol/L or urine output < 30mL/h
**High-risk criteria:
- RV failure
- Refractory congestion
- Severe renal impairment (Cl < 30mL/mn/m²)
- SCAI stage B
- Severe bradycardia (HR < 45bpm)
Precipitating factor correction
(sepsis, arrhythmia, ACS)
AHF without hypoperfusion*
Cardiogenic shock (SCAI C to E)
Efficient decongestion
Blood volume and organ perfusion optimization
1. Pursue treatment
2. Consider dose reduction if high-risk criteria**
Prefer Dobutamine
1. Temporary withdrawal of BB
2. Dobutamine with highest doses
3. Consider levosimendan / PDEI
Multimodal hemodynamic evaluation
(clinical, perfusion indices, TTE, RHC)
Blood volume and perfusion assessment
Weaning from vasoactive agents possible?
Yes
No
Start low dose
(bisoprolol 1.25mg o.d; carvedilol 3.25mg b.i.d)
Start low dose
(bisoprolol 1.25mg o.d; carvedilol 3.25mg b.i.d)
« Facilitated » introduction
- Concomitant inodilator therapy
- Ivabradine/SGLT2i
Is first dose tolerated?
No
Refer to a tertiary center
- Temporary MCS
- LVAD / HT
Yes
Cautious up-titration during hospitalization + close monitoring

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VOL. 83, NO. 13, 2024

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THE PRESENT AND FUTURE

JACC REVIEW TOPIC OF THE WEEK

Enhanced Decongestive Therapy in Patients With Acute Heart Failure

JACC Review Topic of the Week

Gad Cotter, MD,[a,b,c] Beth Davison, PhD,[a,b,c] Ovidiu Chioncel, MD[d]

FIGURE 1 Randomized Clinical Trials of Decongestion and GDMT Uptitration

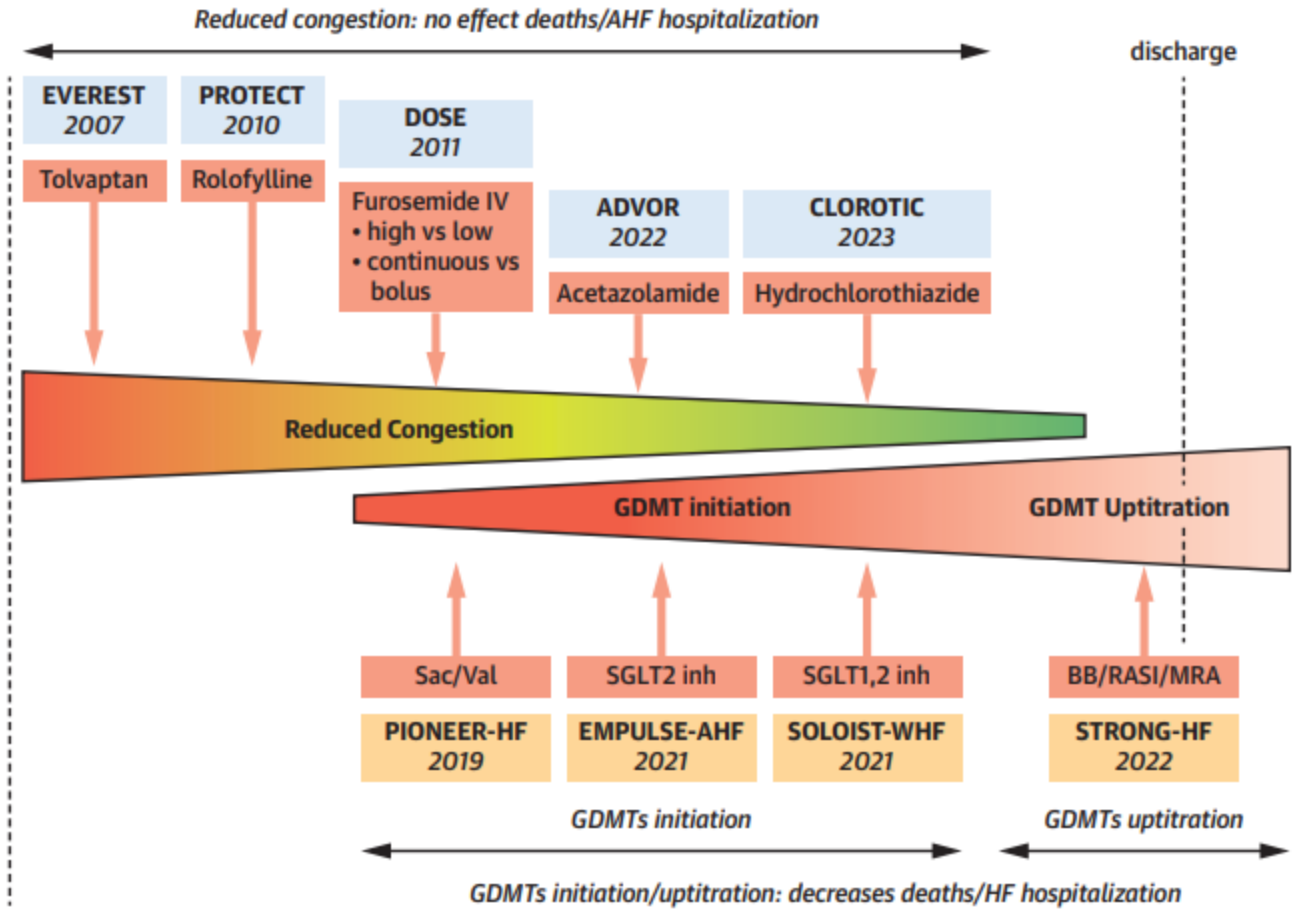
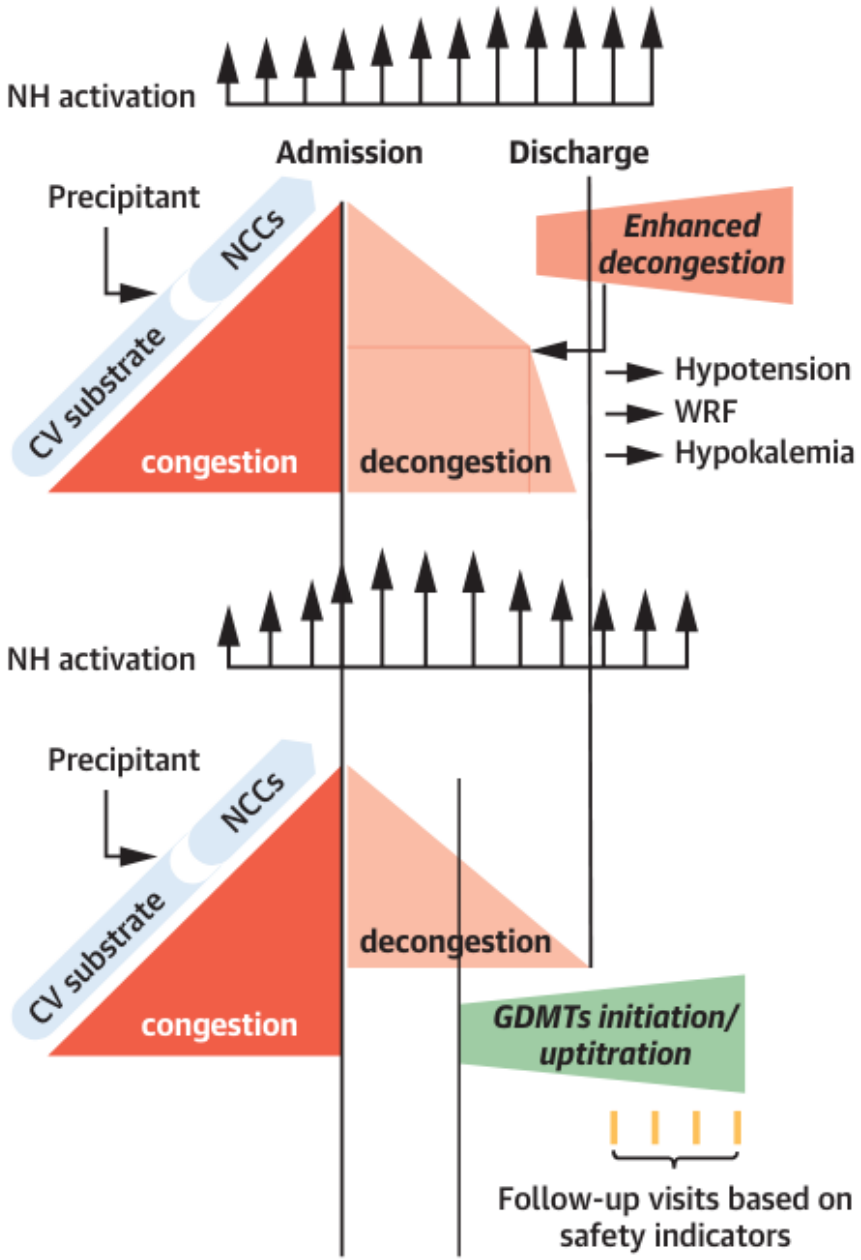
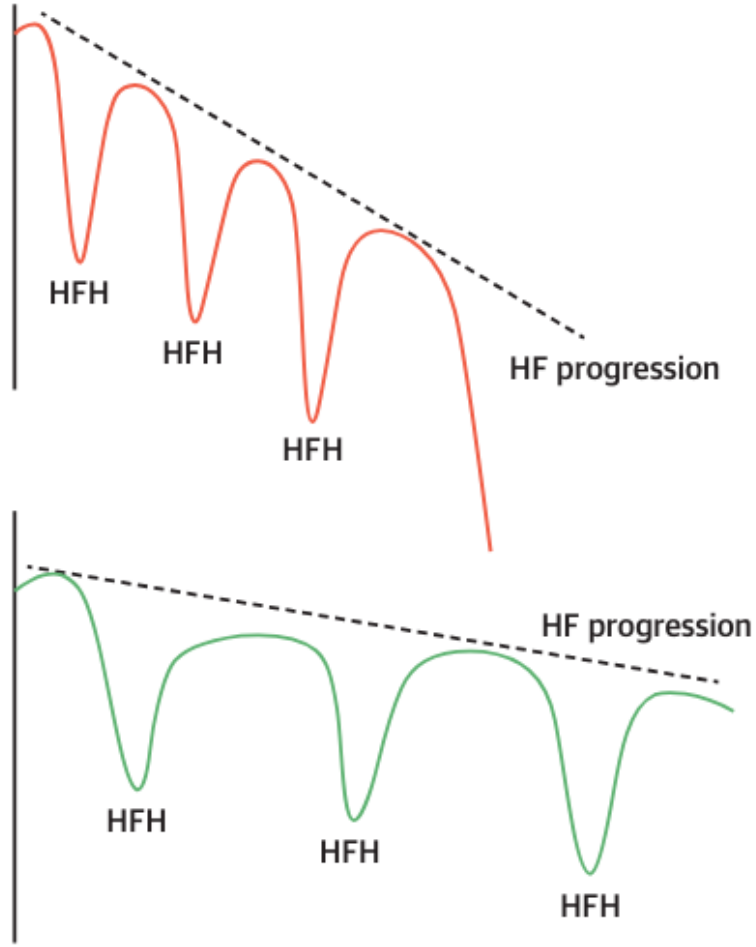
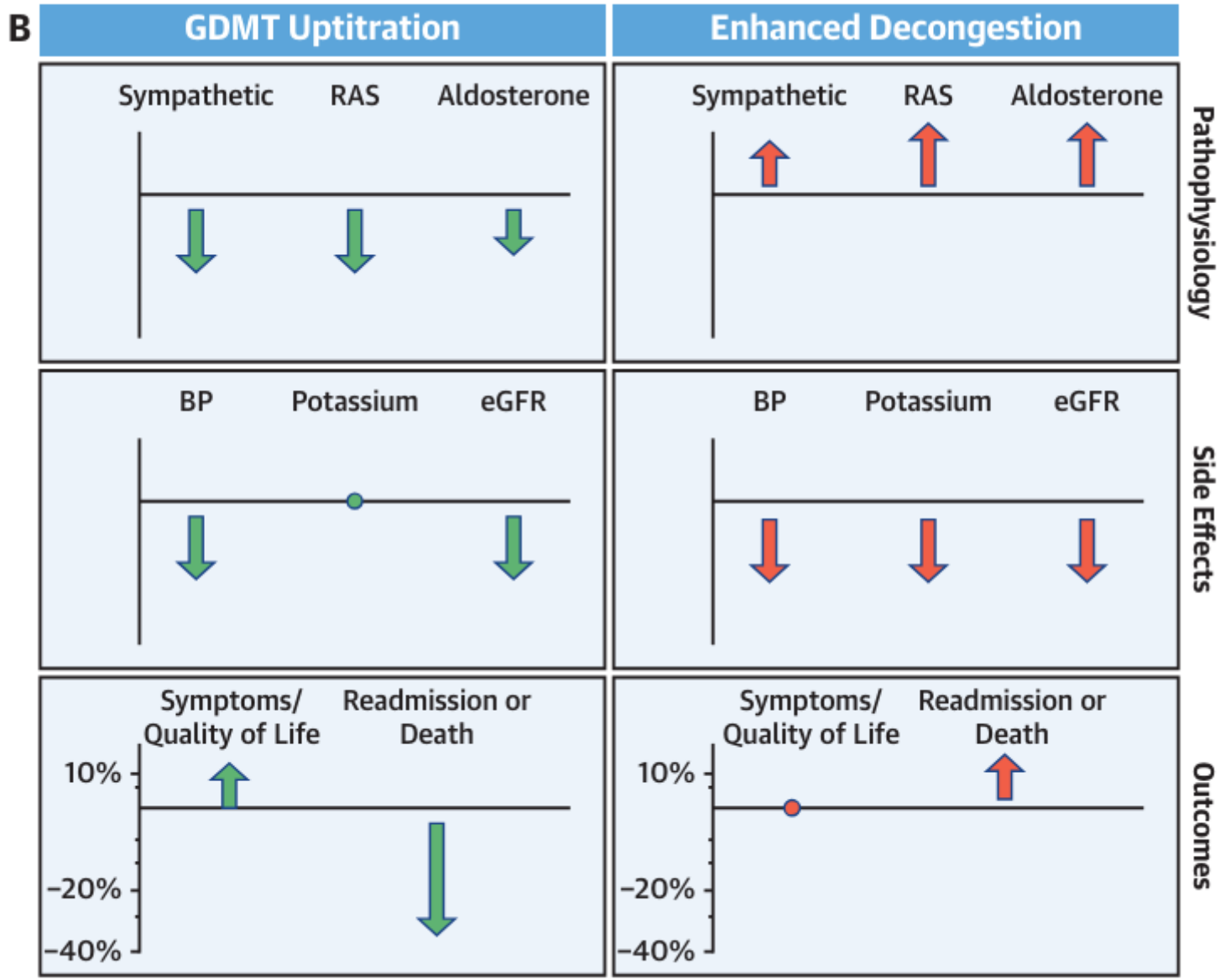


FIGURE 2 The Relationship Between Decongestion and Uptitration of GDMTs in AHF

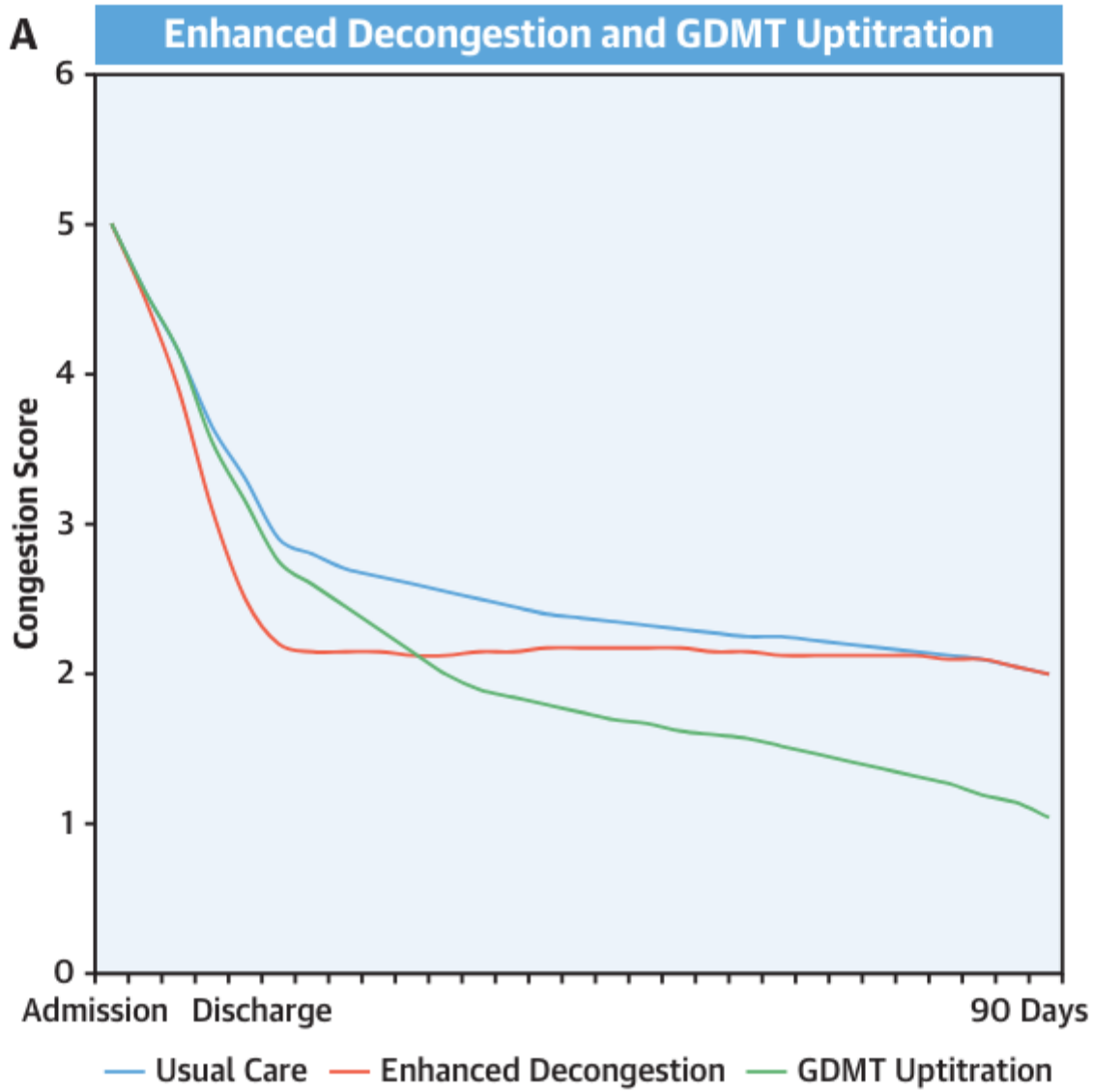






Cotter G, et al. J Am Coll Cardiol. 2024;83(13):1243-1252.

CENTRAL ILLUSTRATION **Comparison Between Enhanced Decongestion Strategies and Uptitration of Guideline-Directed Medical Therapies**



Current Heart Failure Reports
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REVIEW

Combinational Diuretics in Heart Failure

Joan Carles Trullàs[1,2] · Jesús Casado[3] · Marta Cobo-Marcos[4] · Francesc Formiga[5] · José Luís Morales-Rull[6] · Julio Núñez[7,8,9,10] · Luís Manzano[11]

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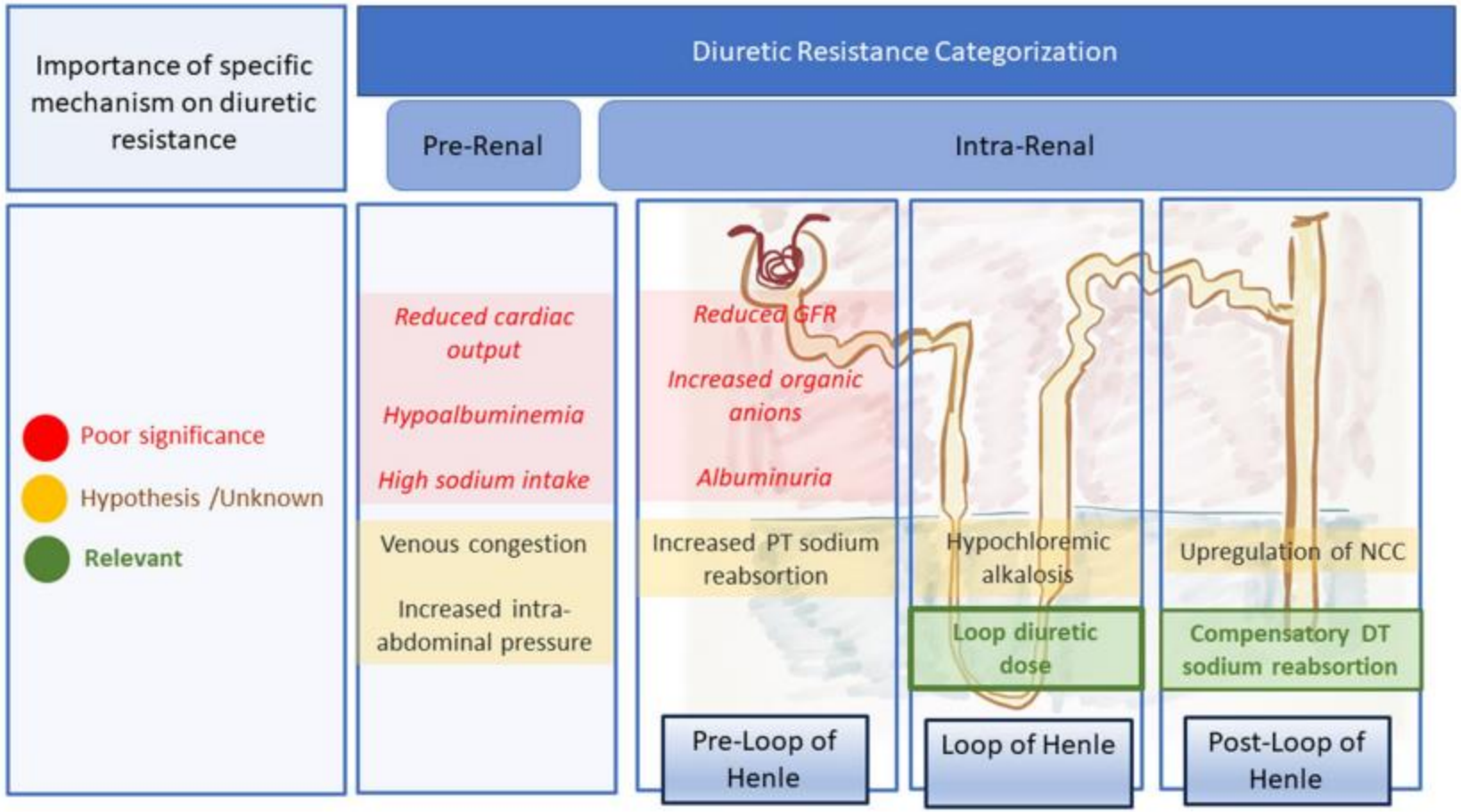
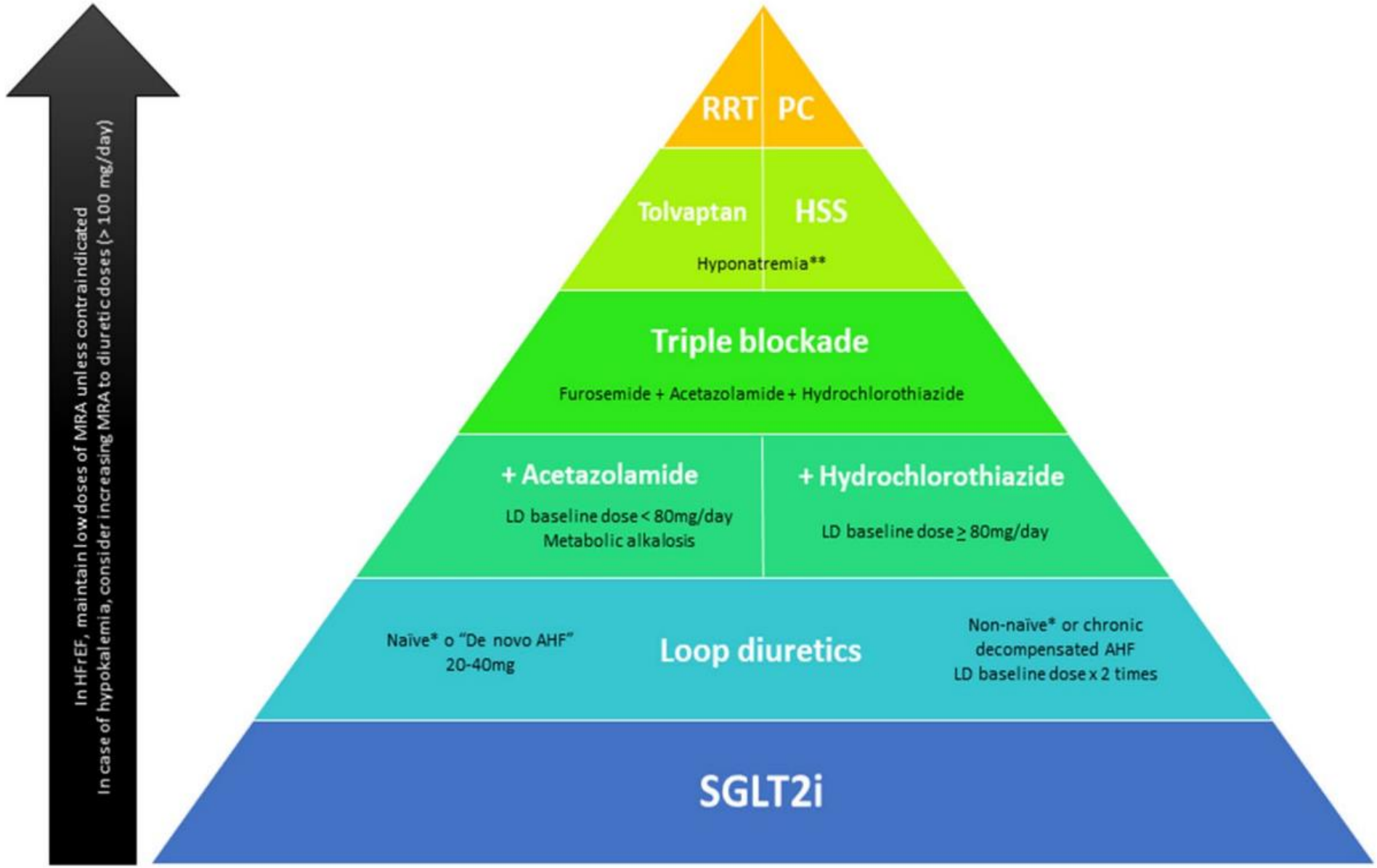


Fig. 1 Mechanisms of diuretic resistance

Diuretic pyramid in the treatment of congestion in acute heart failure



Abbreviations: HFrEF: HF with reduced ejection fraction; HSS: hypertonic saline solution; LD: loop diuretics; MRA: mineralocorticoid receptor antagonists; PC: palliative care; RRT: renal replacement therapy; SGLT2i: sodium-glucose cotransporter-2 inhibitors

*__Naïve__: patient who has not been treated with loop diuretics

**__Hyponatremia:__ consider prioritizing these strategies over the previous ones

PROTOCOLO DE USO DE VERICIGUAT

PACIENTE CON IC FEr CRÓNICA CON TRATAMIENTO ÓPTIMO

Y QUE HA PRESENTADO UN EPISODIO DE DESCOMPENSACIÓN QUE REQUIRIÓ TRATAMIENTO DIURÉTICO IV HACE MÁS DE 24 HORAS

VERICIGUAT 2,5 MG

Iniciar si PAS≥100 mmHg y TFGe≥15 ml/min/1,73m2

14 DIAS Y PAS ≥100 MMHG

Si PAs 90-100 no subir dosis
Si<90 mmHg o síntomas de hipotensión SUSPENDER

VERICIGUAT 5 MG

14 DIAS Y PAS ≥100 MMHG

Si PAs entre 90-100 mmHg no subir dosis
Si<90 bajar a 2,5 mg si asintomático, con síntomas suspender

VERICIGUAT 10 MG

CONSIDERACIONES ESPECIALES

- No contraindicado en ancianos
- Se puede triturar los comprimidos
- No requiere ajuste dosis en:
  - Ancianos
  - FG>15 ml/min/1,73m2
  - Insuf. Hepática leve-moderada
- Reducción dosis si hipotensión
- No asociar con inhibidores PDE (sildenafilo...)
- Precaución en PA sistólica <100 mmHg
- Puede haber cierto grado de anemia al inicio del tratamiento (clínicamente no relevante)

CONTRAINDICACIONES

- FG<15 ml/min/1,73m2
- Diálisis
- Insuf. Hepática grave
- Embarazo y/o lactancia
- Intolerancia fármaco
- Otros estimuladores de GCS (riociguat,etc)

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