Amicale des cardiologues de la Côte d'Azur
RYTHMOSUD
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ESC 2020 Guidelines on Atrial Fibrillation

Les points essentiels

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ESC European Society of Cardiology
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ESC GUIDELINES

2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association of Cardio-Thoracic Surgery (EACTS)

The Task Force for the diagnosis and management of atrial fibrillation of the European Society of Cardiology (ESC)

Developed with the special contribution of the European Heart Rhythm Association (EHRA) of the ESC

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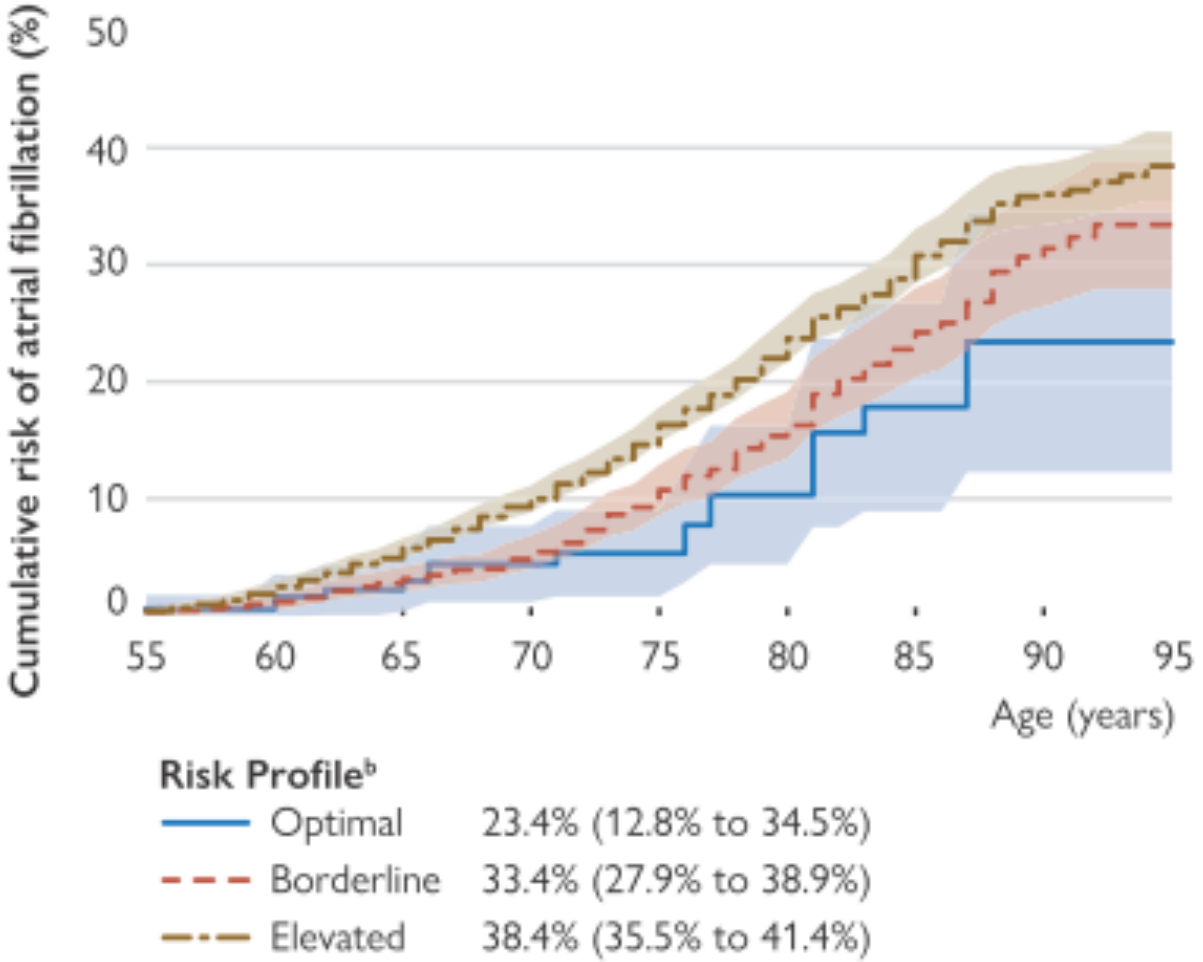
LIFETIME RISK for AF
1 in 3 individuals

of European ancestry
at index age of 55 years
37.0% (34.3% to 39.6%)

Lifetime risk of AF increases with increasing risk factor burden[a]



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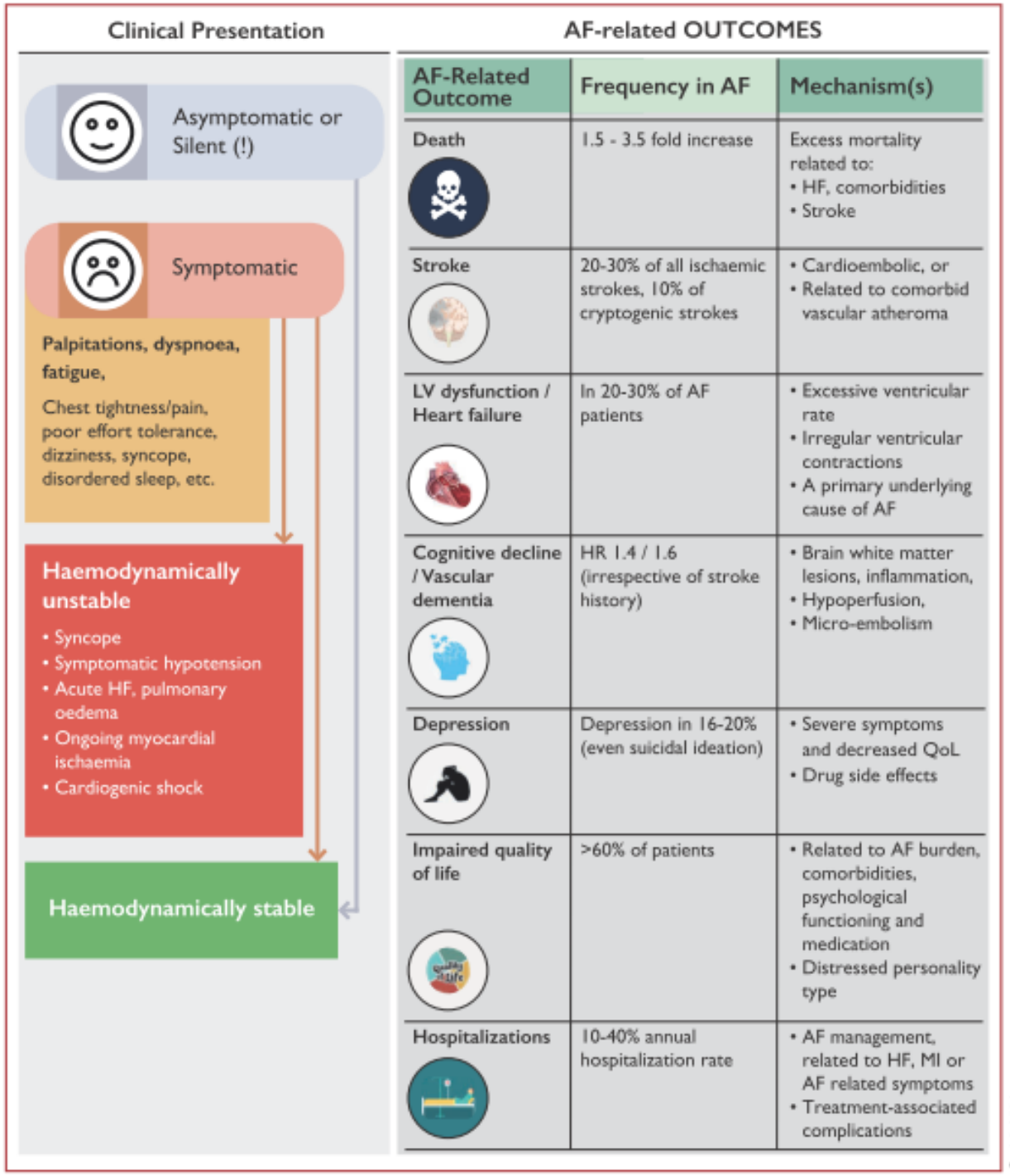

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Confirm AF

3.2 Diagnostic criteria for atrial fibrillation

The diagnosis of AF requires rhythm documentation with an electrocardiogram (ECG) tracing showing AF. By convention, an episode lasting at least 30 s is diagnostic for clinical AF.[6]

Recommendations for diagnosis of AF

Recommendations	Class[a]	Level[b]
ECG documentation is required to establish the diagnosis of AF. • A standard 12-lead ECG recording or a single-lead ECG tracing of ≥30 s showing heart rhythm with no discernible repeating P waves and irregular RR intervals (when atrioventricular conduction is not impaired) is diagnostic of clinical AF.[6]	I	B

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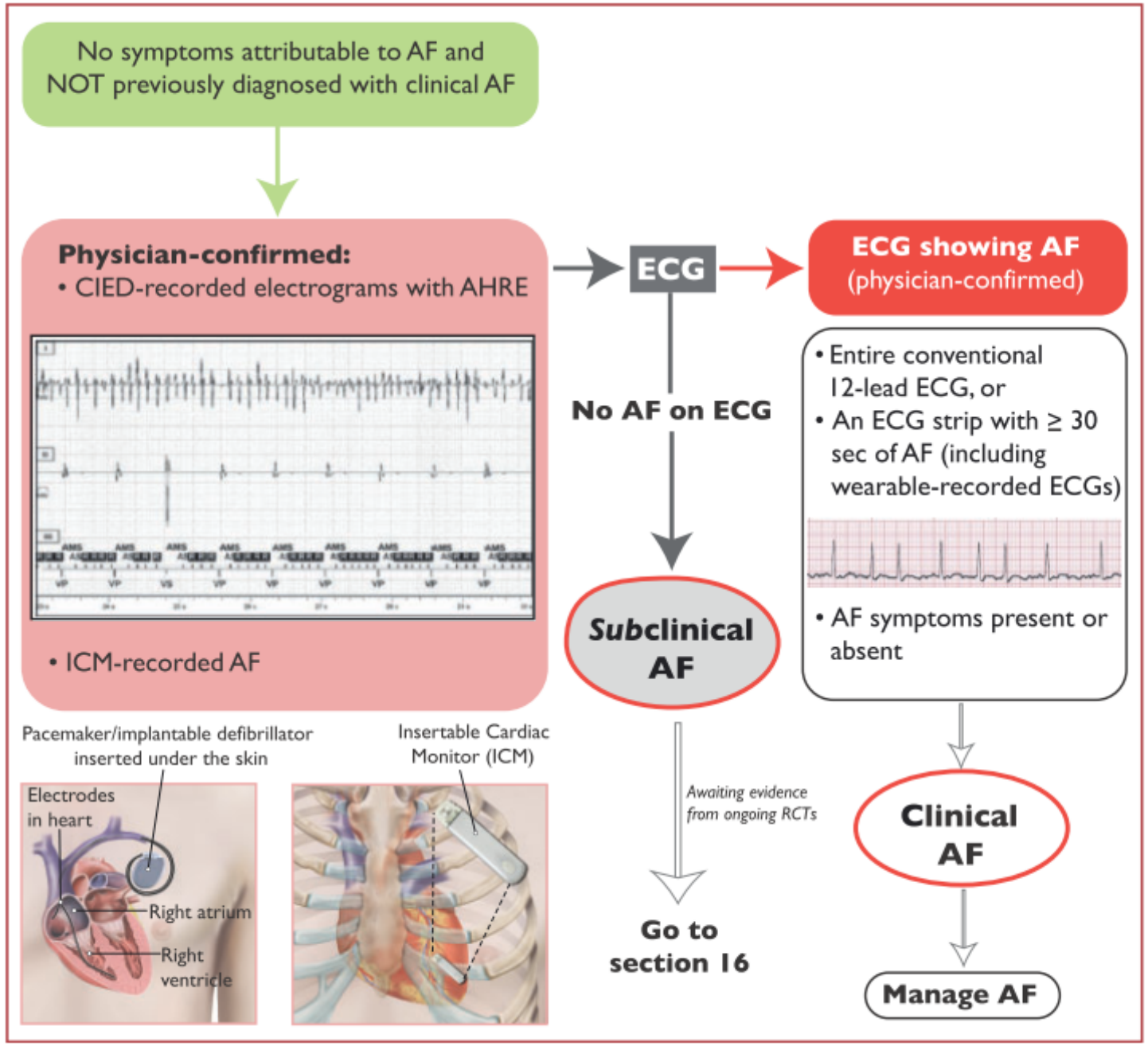
Confirm AF



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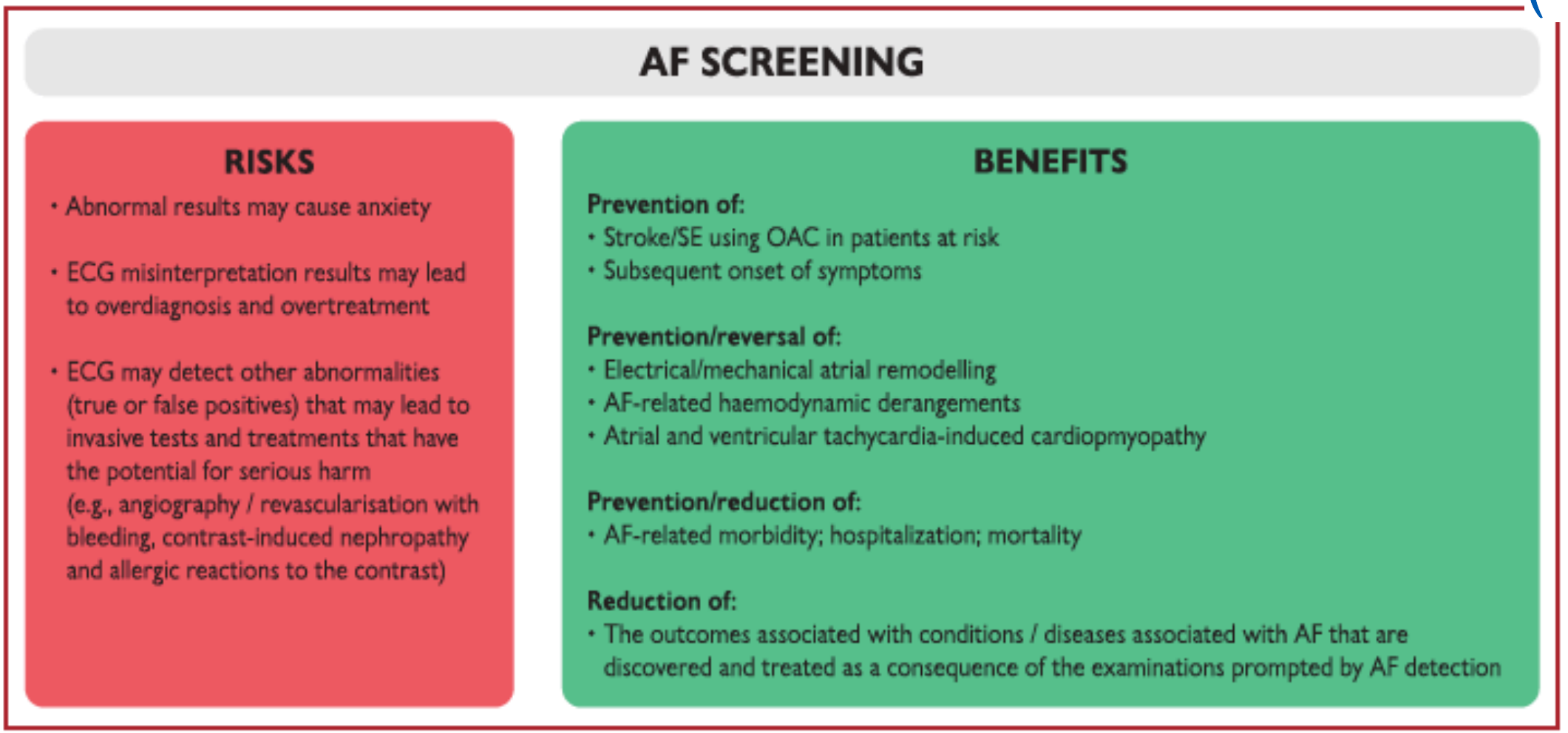

Figure 7 Potential benefits from and risks of screening for AF. AF = atrial fibrillation; ECG = electrocardiogram; OAC = oral anticoagulant; SE =systemic embolism.

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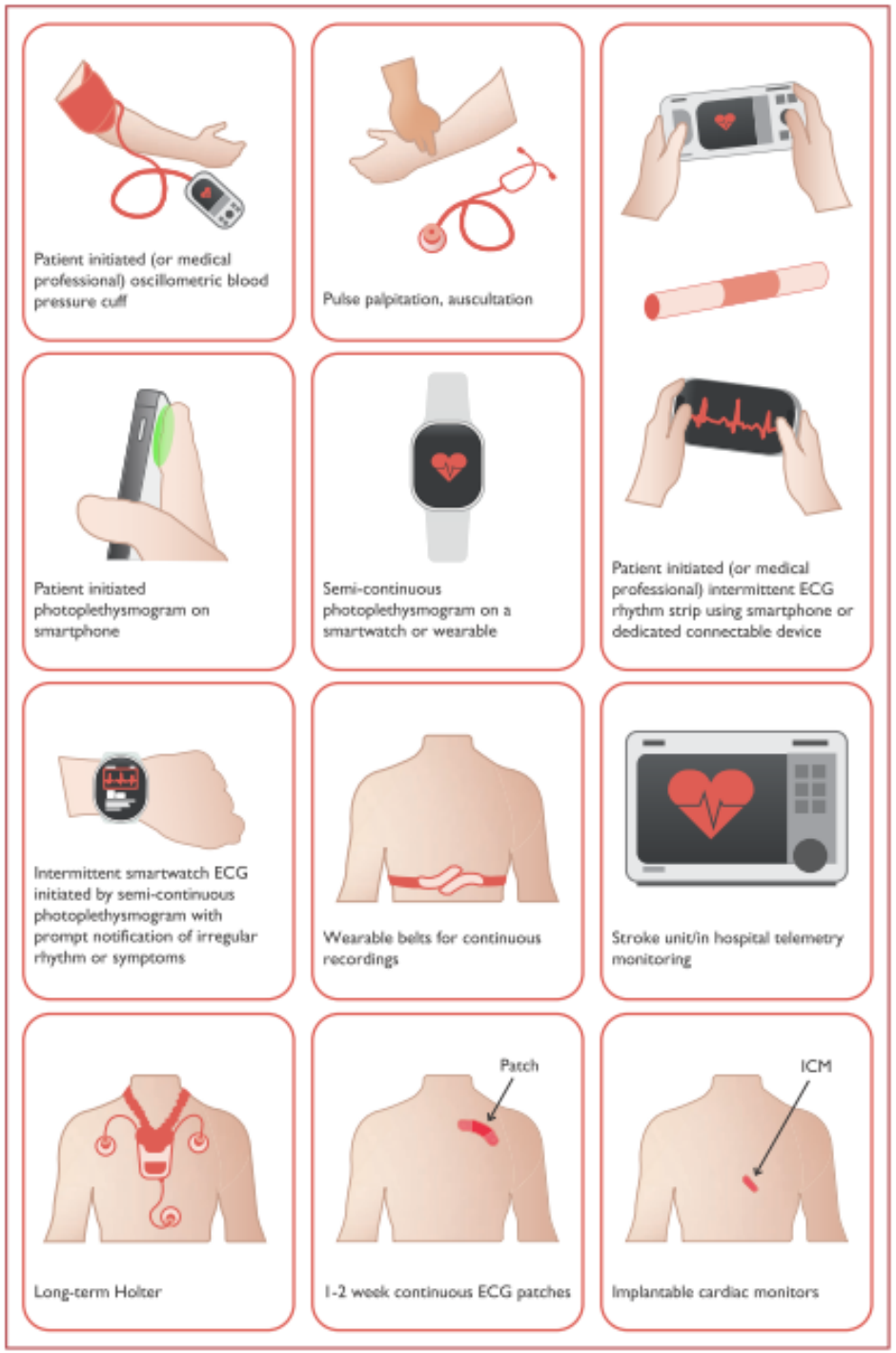

	Sensitivity	Specificity
Pulse taking[203]	87 - 97%	70 - 81%
Automated BP monitors[204–207]	93 - 100%	86 - 92%
Single lead ECG[208–211]	94 - 98%	76 - 95%
Smartphone apps[188,189,191,195,212,213]	91.5 - 98.5%	91.4 - 100%
Watches[196,198,213,214]	97 - 99%	83 - 94%

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AF screening

Recommendations for screening to detect AF

Recommendation	Class[a]	Level[b]
Opportunistic screening for AF by pulse taking or ECG rhythm strip is recommended in patients ≥65 years of age.[188,211,223,225]	I	B
It is recommended to interrogate pacemakers and implantable cardioverter defibrillators on a regular basis for AHRE.[c224,226]	I	B
When screening for AF it is recommended that:[217,218] • The individuals undergoing screening are informed about the significance and treatment implications of detecting AF. • A structured referral platform is organized for screen-positive cases for further physician-led clinical evaluation to confirm the diagnosis of AF and provide optimal management of patients with confirmed AF. • Definite diagnosis of AF in screen-positive cases is established only after physician reviews the single-lead ECG recording of ≥30 s or 12-lead ECG and confirms that it shows AF.	I	B
Systematic ECG screening should be considered to detect AF in individuals aged ≥75 years, or those at high risk of stroke.[212,224,227]	IIa	B

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Classification

- Les définitions de FA paroxystique, persistante, persistante de longue durée, ou permanente restent identiques.

- Il est recommandé **de ne plus utiliser les terminologies** "FA isolée", **"FA valvulaire" ou "FA non valvulaire",** ou encore "FA chronique".

Terminology that should be abandoned	
Lone AF	A historical descriptor. Increasing knowledge about the pathophysiology of AF shows that in every patient a cause is present. Hence, this term is potentially confusing and should be abandoned.[147]
Valvular/non-valvular AF	Differentiates patients with moderate/severe mitral stenosis and those with mechanical prosthetic heart valve(s) from other patients with AF, but may be confusing[148] and should not be used.
Chronic AF	Has variable definitions and should not be used to describe populations of AF patients.

AF = atrial fibrillation.

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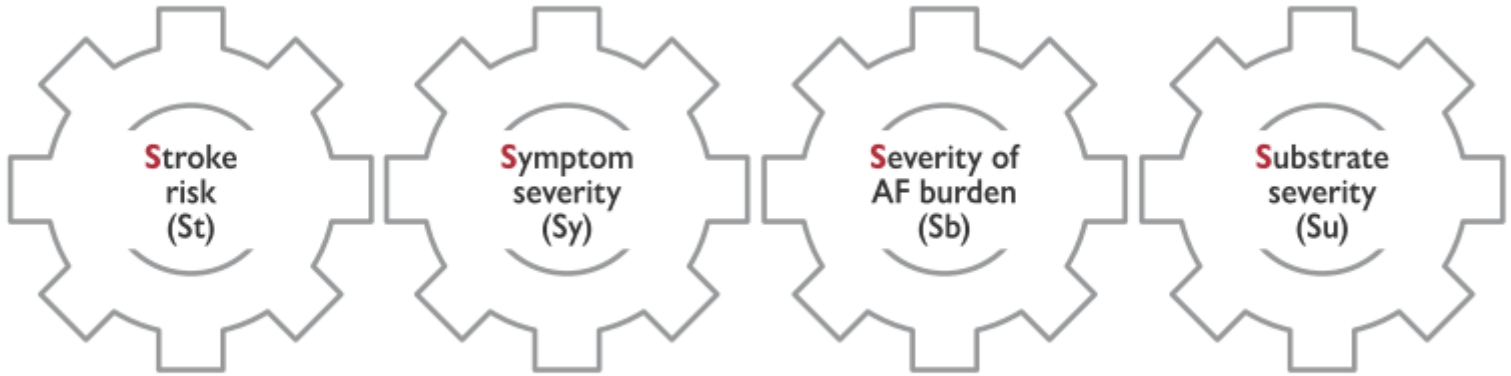
Caractériser la FA : les 4 S



	Stroke risk (St)	Symptom severity (Sy)	Severity of AF burden (Sb)	Substrate severity (Su)
DESCRIPTION	Truly low risk of stroke • Yes • No	• Asymptomatic/mildly symptomatic • Moderate • Severe or disabling	• Spontaneously terminating • AF duration and density of episodes per unit of time	• Comorbidities/ cardiovascular risk factors • Atrial cardiomyopathy (atrial enlargement / dysfunction / fibrosis)
Commonly used assessment tool(s)	CHA_2DS_2-VASc score	EHRA symptom score QoL questionnaires	• **Temporal pattern of AF** (Paroxysmal, Persistent, Long-standing persistent, Permanent) • **Total AF burden** (total time in AF per monitoring period, the longest episode, number of episodes, etc.)	• **Clinical assessment** Incident AF risk scores, AF progression risk scores • **Imaging** (TTE, TOE, CT, cardiac MRI), biomarkers

Recommendations for structured characterization of AF

Recommendations	Class[a]	Level[b]
Structured characterization of AF, which includes clinical assessment of stroke risk, symptom status, burden of AF, and evaluation of substrate, should be considered in all AF patients, to streamline the assessment of AF patients at different healthcare levels, inform treatment decision-making, and facilitate optimal management of AF patients.[151]	IIa	C

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Table 6 EHRA symptom scale

Score	Symptoms	Description
1	None	AF does not cause any symptoms
2a	Mild	Normal daily activity not affected by symptoms related to AF
2b	Moderate	Normal daily activity not affected by symptoms related to AF, but patient troubled by symptoms
3	Severe	Normal daily activity affected by symptoms related to AF
4	Disabling	Normal daily activity discontinued

Recommendations for diagnostic evaluation of patients with AF

Recommendation	Class[a]	Level[b]
In patients with AF, it is recommended to: • Evaluate AF-related symptoms (including fatigue, tiredness, exertional shortness of breath, palpitations, and chest pain) and quantify the patient symptom status using the modified EHRA symptom scale before and after initiation of treatment.[230,232] • Evaluate AF-related symptoms before and after cardioversion of persistent AF to aid rhythm control treatment decisions.[230,232]	I	C

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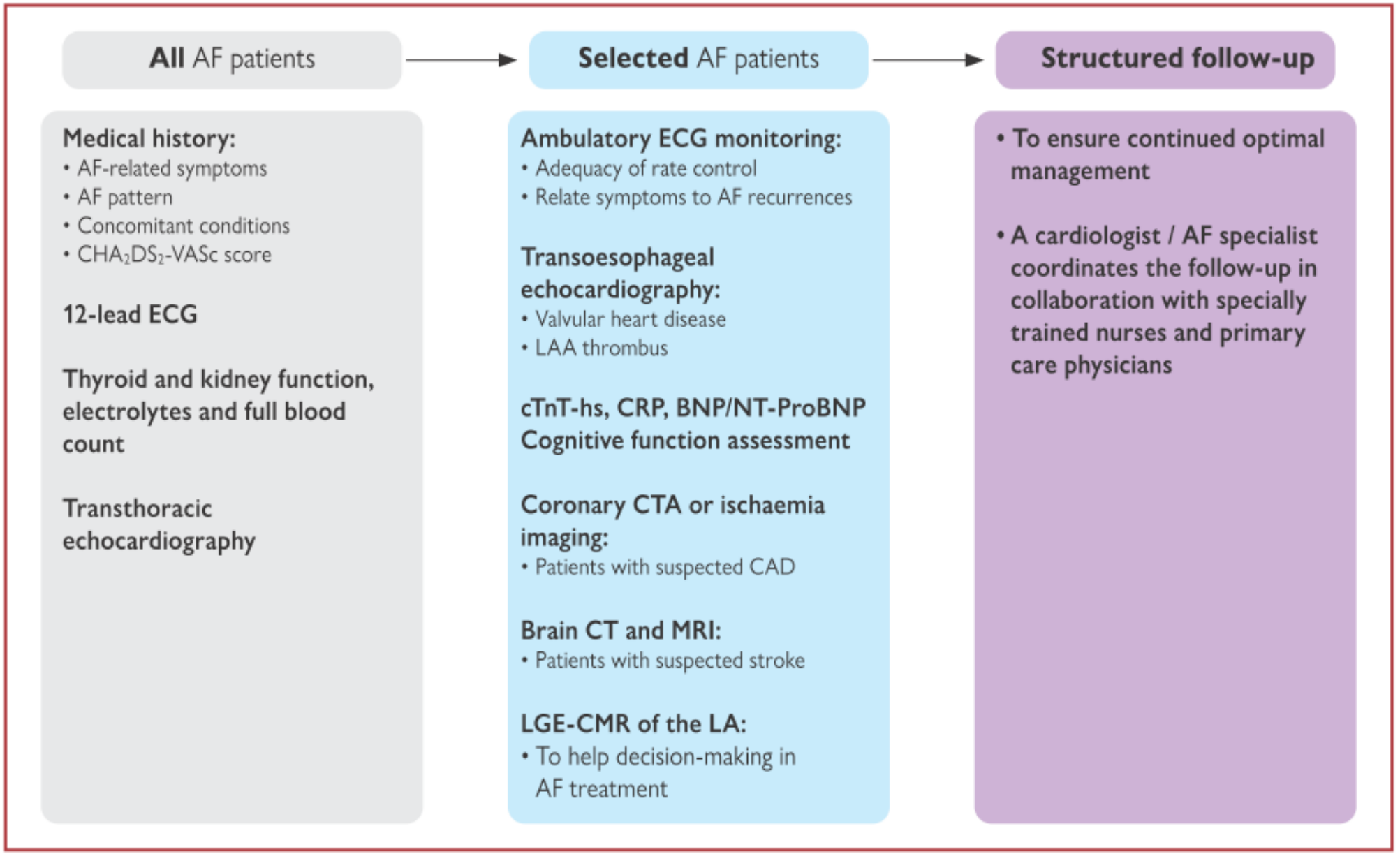

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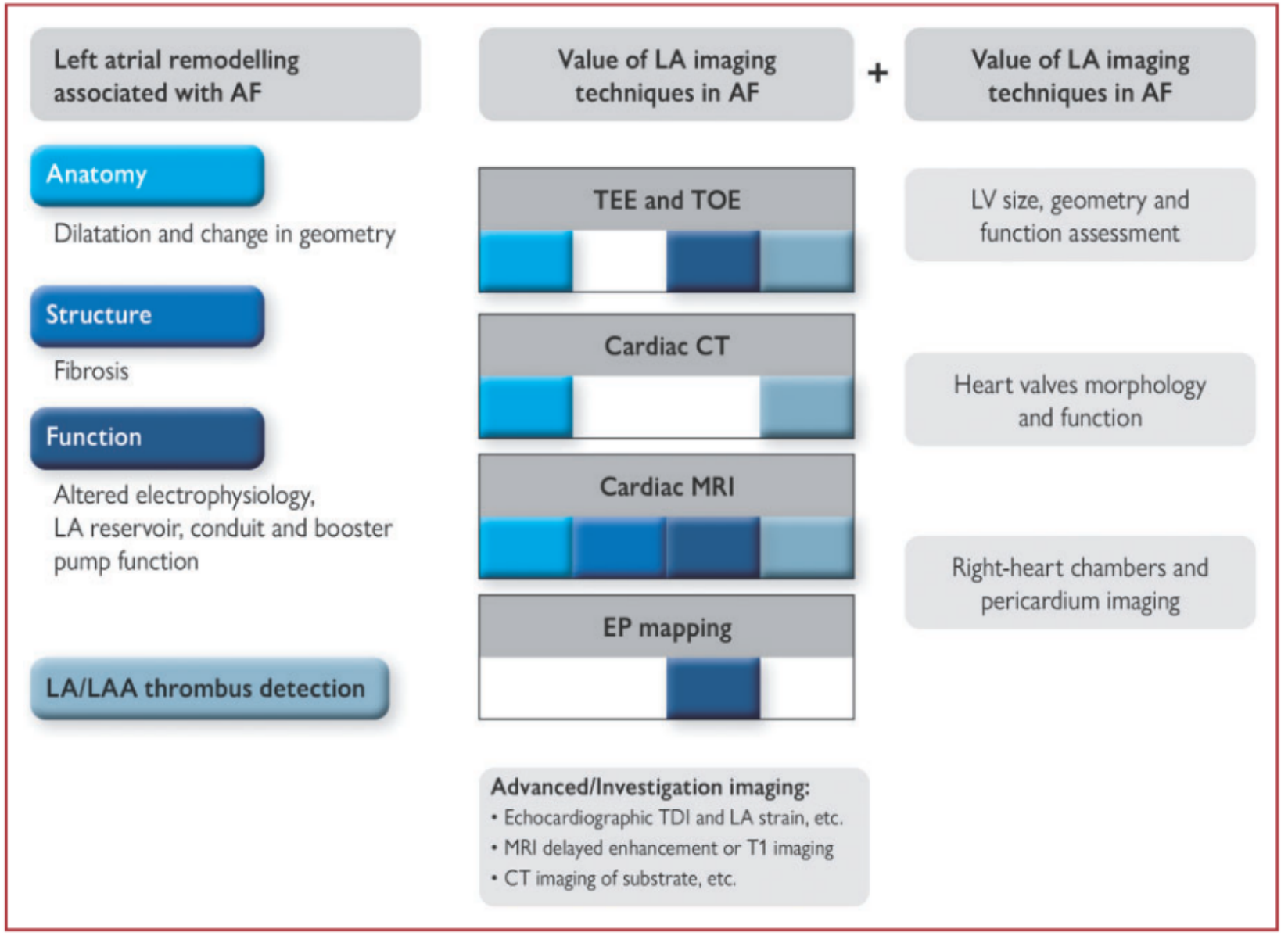

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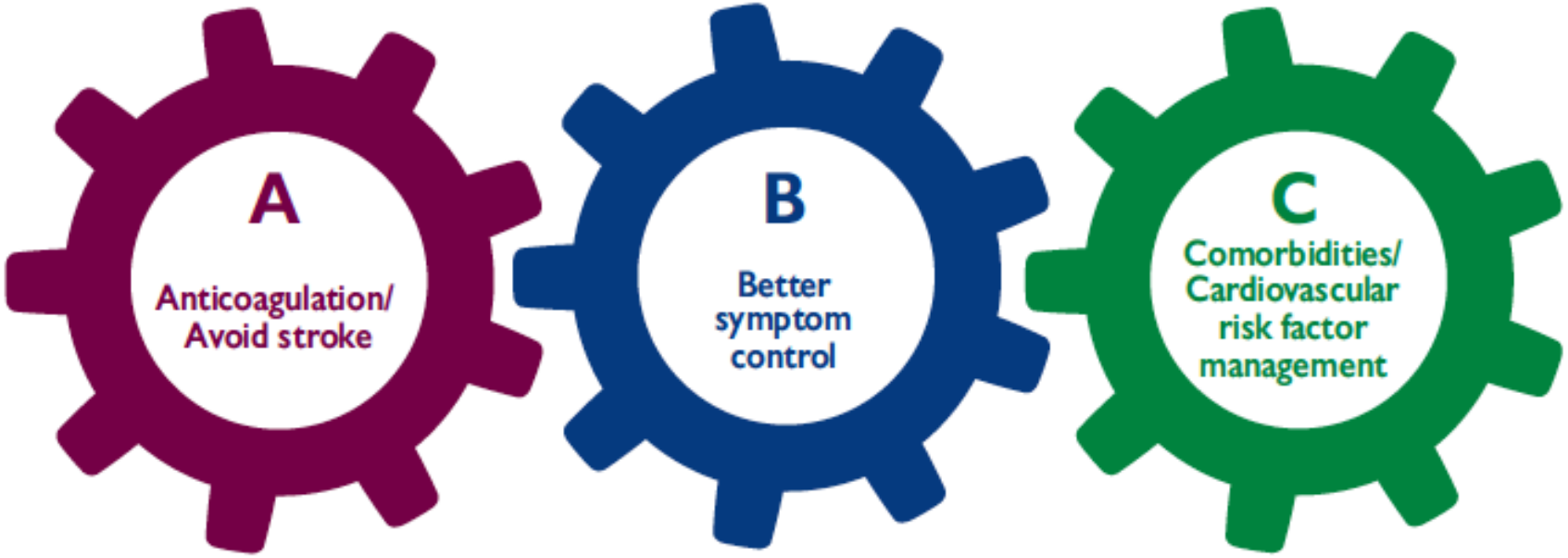
Treat AF: The ABC pathway



1. Identify low-risk patients CHA_2DS_2-VASc 0(m), 1(f)
2. Offer stroke prevention if CHA_2DS_2VASc ≥1(m), 2(f)

Assess bleeding risk, address modifiable bleeding risk factors

3. Choose OAC (NOAC or VKA with well-managed TTR)

Assess symptoms, QoL and patient's preferences

Optimize rate control

Consider a rhythm control strategy (CV, AADs, ablation)

Comorbidities and cardiovascular risk factors

Lifestyle changes (obesity reduction, regular exercise, reduction of alcohol use, etc.)

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A - Anticoagulation/Avoid stroke

A

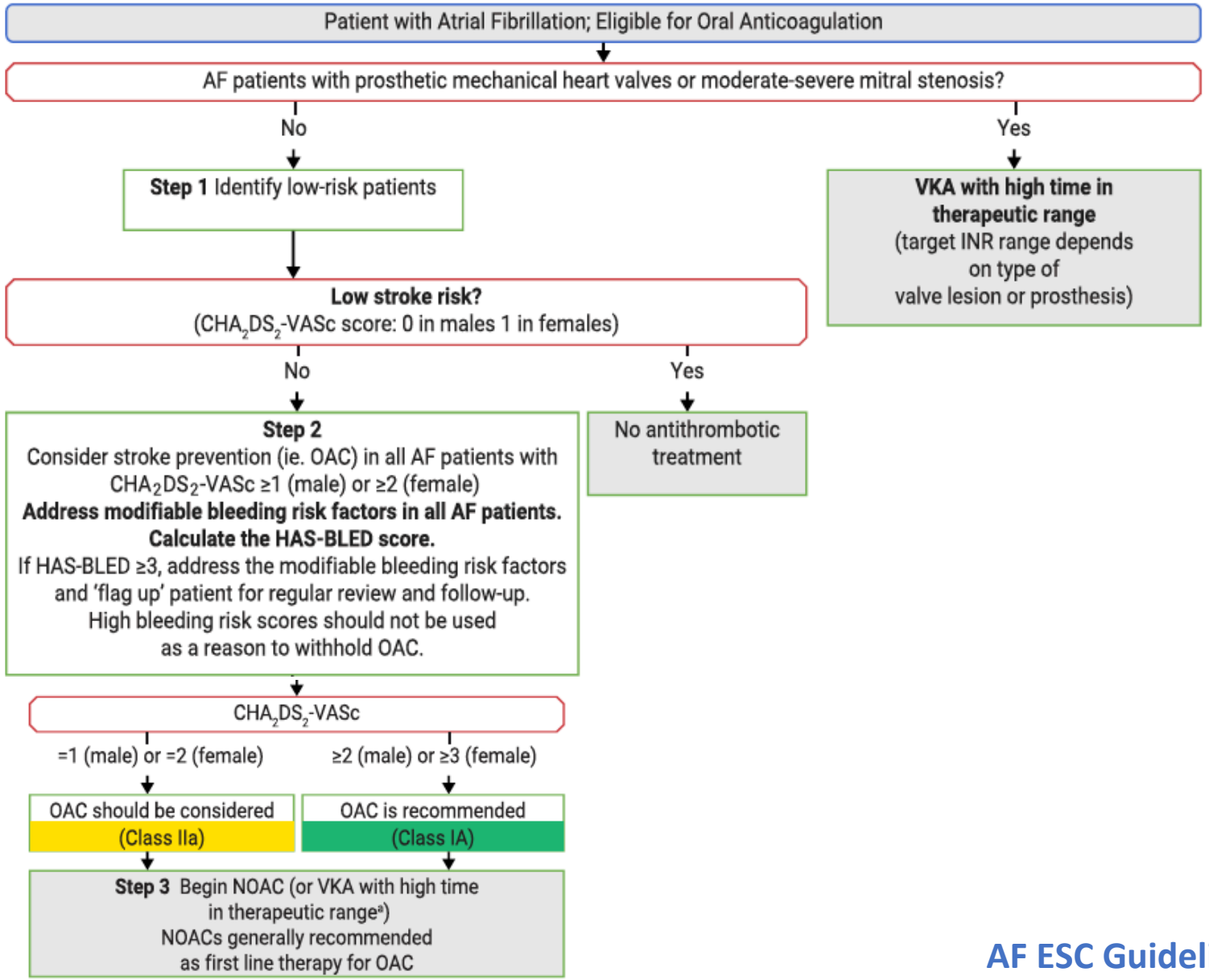

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Table 9 **Risk factors for bleeding with OAC and antiplatelet therapy**

Non-modifiable	Potentially modifiable	Modifiable	Biomarkers
Age >65 years	Extreme frailty ± excessive risk of falls[a]	Hypertension/elevated SBP	GDF-15
Previous major bleeding	Anaemia	Concomitant antiplatelet/NSAID	Cystatin C/CKD-EPI
Severe renal impairment (on dialysis or renal transplant)	Reduced platelet count or function	Excessive alcohol intake	cTnT-hs
Severe hepatic dysfunction (cirrhosis)	Renal impairment with CrCl <60 mL/min	Non-adherence to OAC	von Willebrand factor (+ other coagulation markers)
Malignancy	VKA management strategy[b]	Hazardous hobbies/occupations	
Genetic factors (e.g. CYP 2C9 polymorphisms)		Bridging therapy with heparin	
Previous stroke, small-vessel disease, etc.		INR control (target 2.0 - 3.0), target TTR >70%[c]	
Diabetes mellitus		Appropriate choice of OAC and correct dosing[d]	
Cognitive impairment/dementia			

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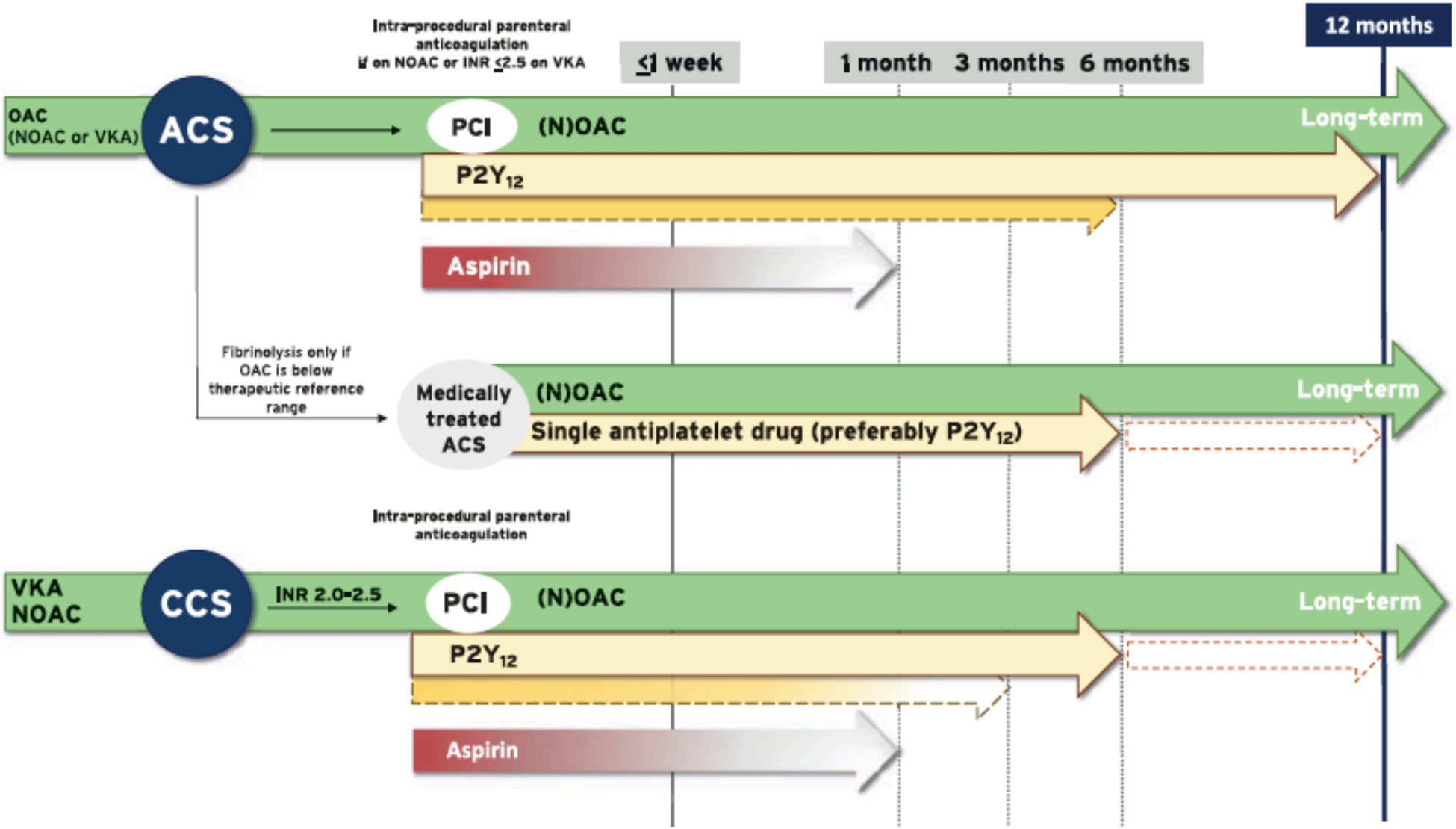
AF and PCI

A



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AF and PCI

A

THROMBOTIC RISK FACTORS

- Diabetes mellitus requiring therapy
- Prior ACS/recurrent myocardial infarction
- Multivessel CAD
- Concomitant PAD
- Premature CAD (occurring at age of <45 y) or accelerated CAD (new lesion within 2 years)
- CKD (eGFR <60 mL/min)
- Clinical presentation (ACS)
- Multivessel stenting
- Complex revascularisation (left main stenting, bifurcation lesion stenting, chronic total occlusion intervention, last patent vessel stenting)
- Prior stent thrombosis on antiplatelet treatment
- Procedural factors (stent expansion, residual dissection, stent length, etc.)

BLEEDING RISK FACTORS

- Hypertension
- Abnormal renal or liver function
- Stroke or ICH history
- Bleeding history or bleeding diathesis (e.g., anaemia with haemoglobin <110 g/L)
- Labile INR (if on VKA)
- Elderly (>65 years)
- Drugs (concomitant OAC and antiplatelet therapy, NSAIDs), excessive alcohol consumption

STRATEGIES TO REDUCE BLEEDING ASSOCIATED WITH PCI

- Radial artery access
- PPIs in patients taking DAPT who are at increased risk of bleeding (e.g., the elderly, dyspepsia, gastro-oesophageal reflux disease, Helicobacter pylori infection, chronic alcohol use)
- Non–administration of unfractionated heparin in patients on VKA with INR >2.5
- Pre-treatment with aspirin only, add a $P2Y_{12}$ inhibitor when coronary anatomy is known or if STEMI
- GP IIb/IIIa inhibitors only for bailout or periprocedural complications
- Shorter duration of combined antithrombotic therapy

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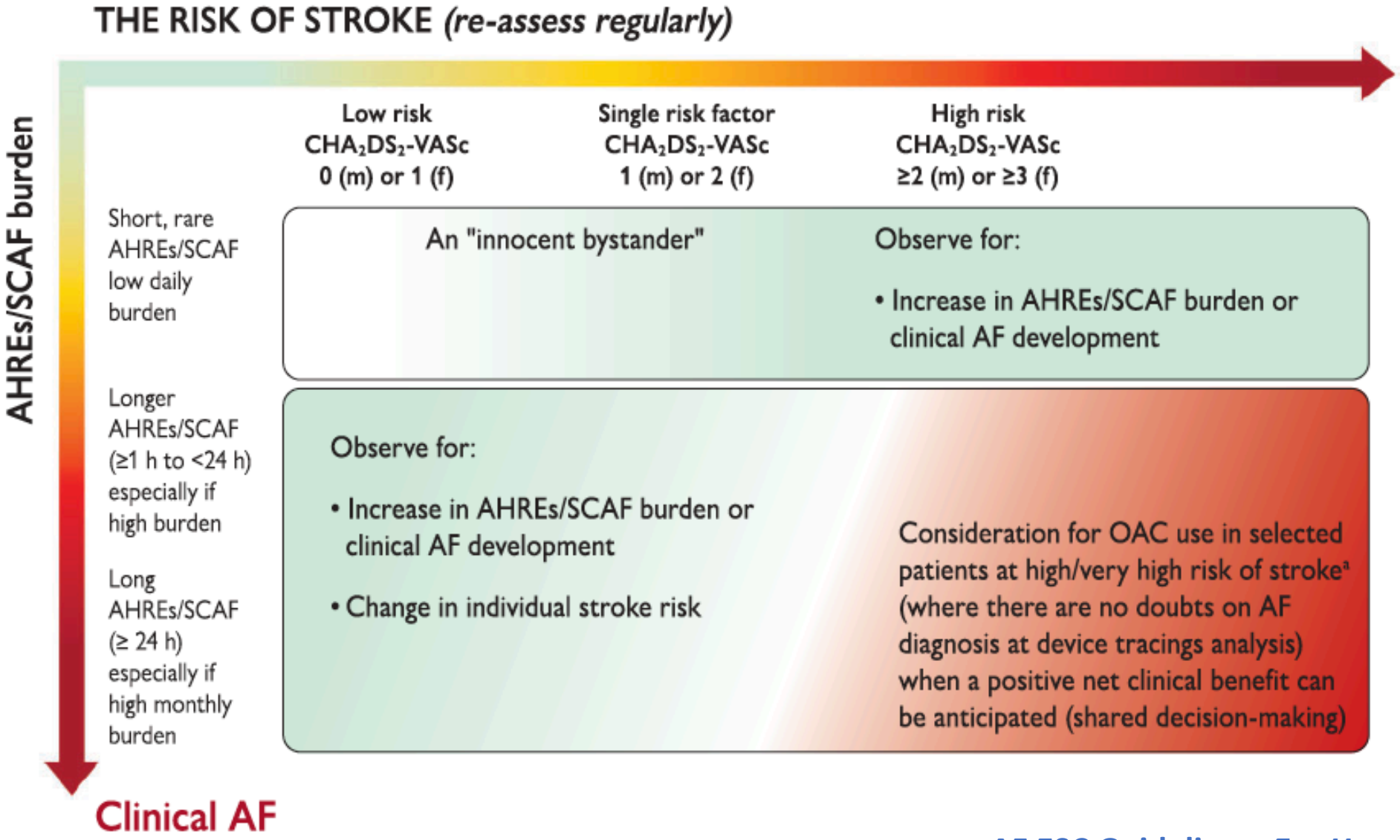
Subclinical AF and AHRE



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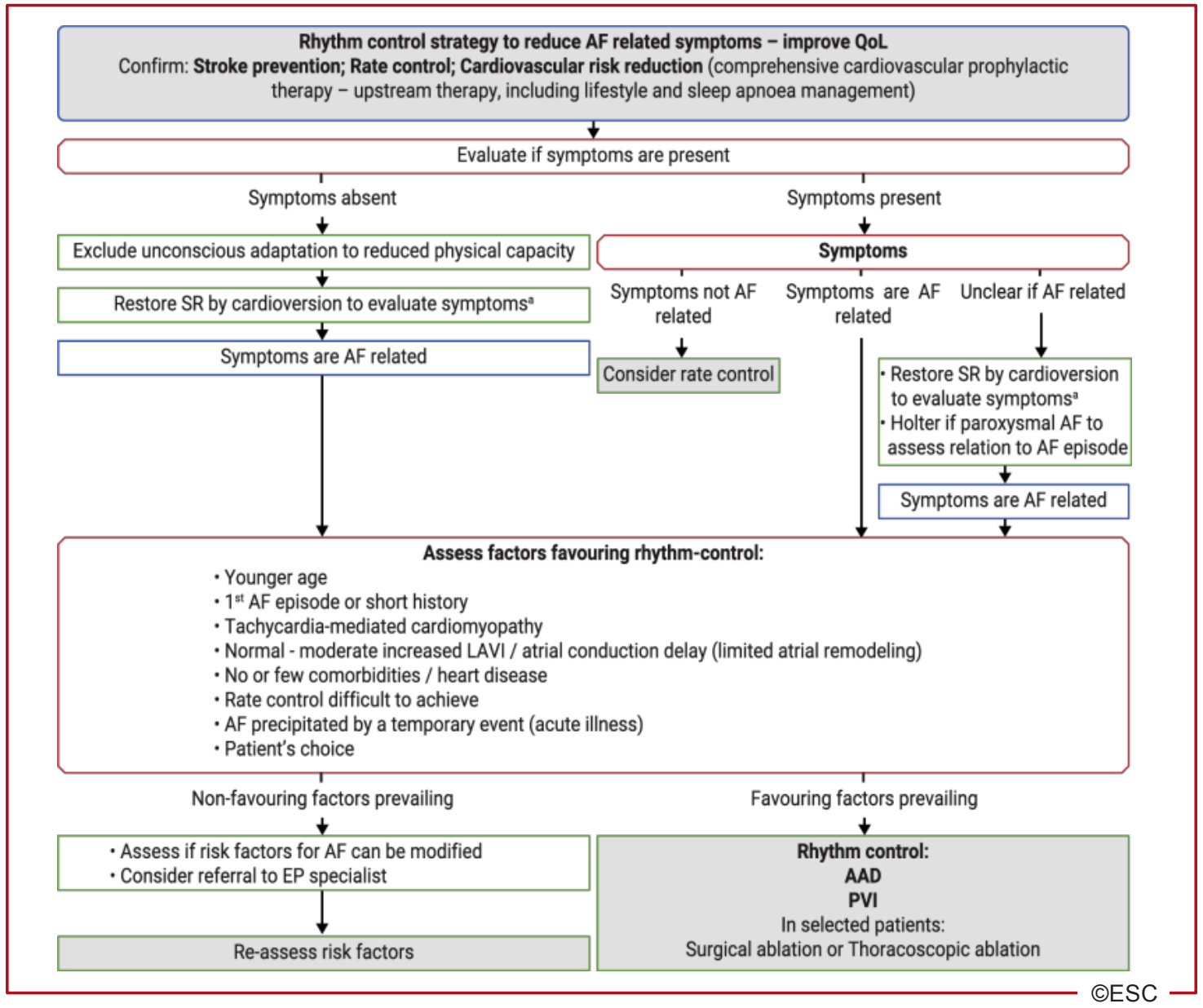
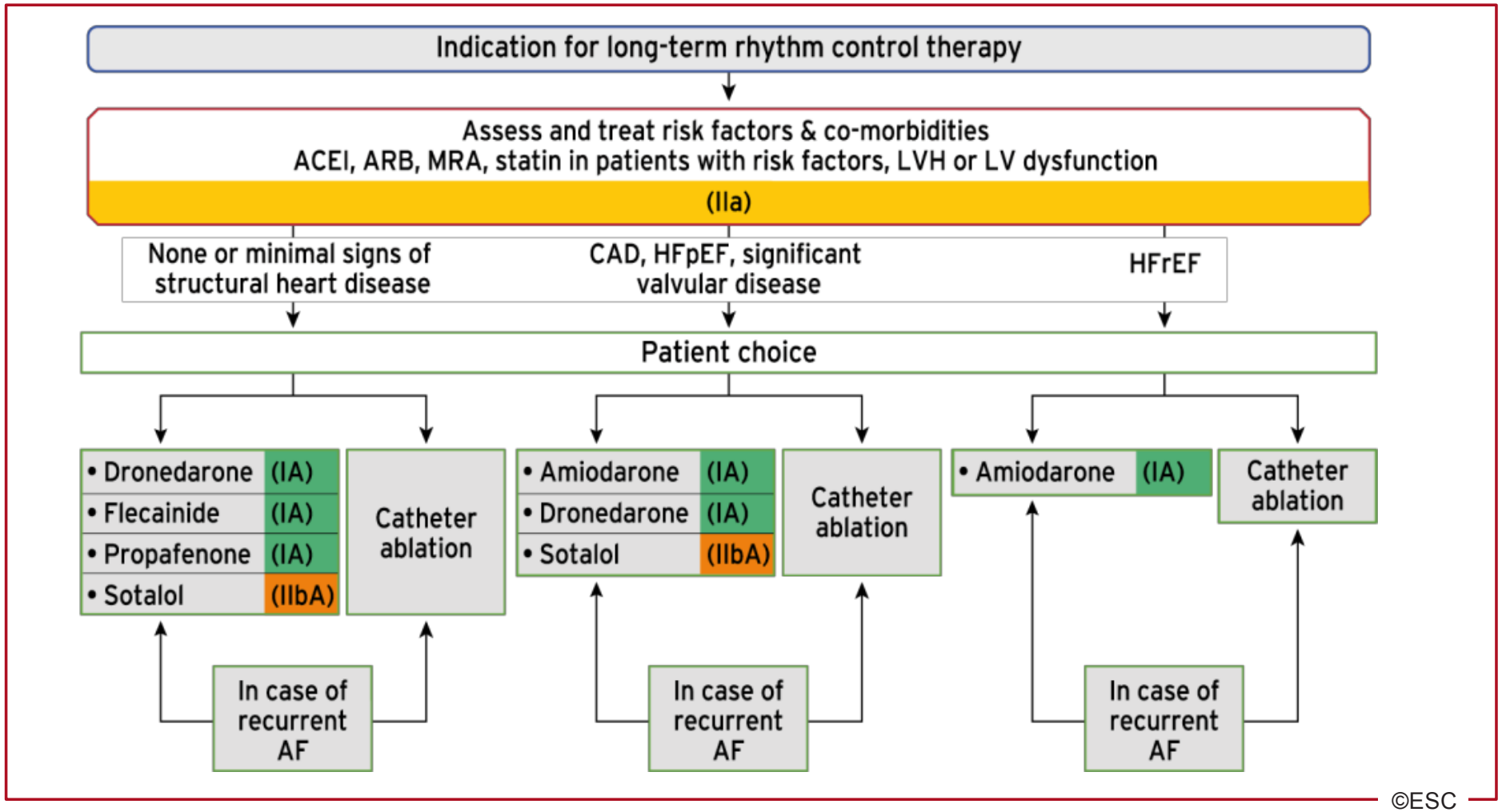


[a]Consider cardioversion to confirm that the absence of symptoms is not due to unconscious adaptation to reduced physical and/or mental capacity.

Figure 19 Long-term rhythm control therapy



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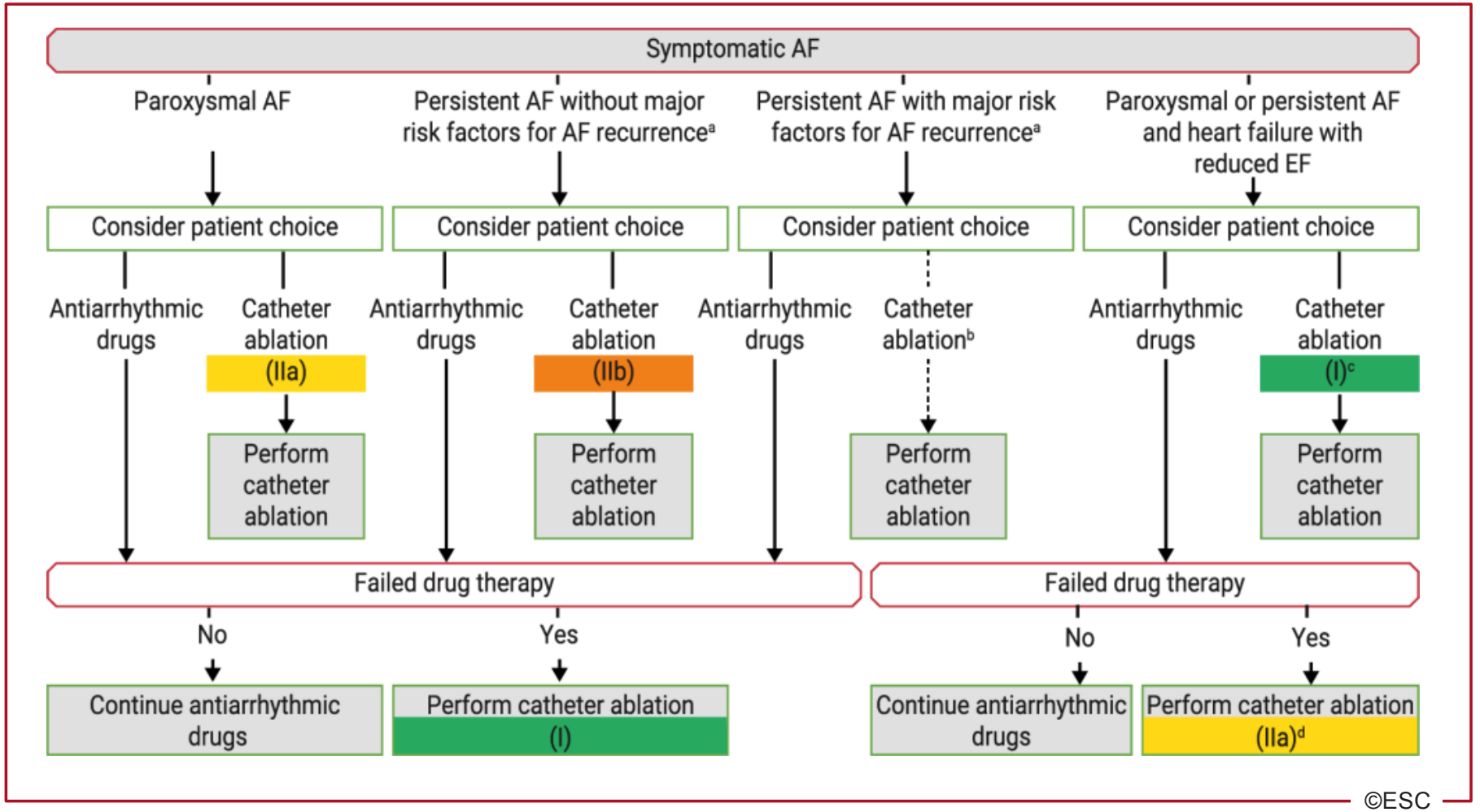
Révision de la classe des antiarythmiques - Commission de la transparence de Septembre 2020

La commission de la transparence a révisé le service médical rendu par les médicaments antiarythmiques oraux de classe IA, IC et III. Cette réévaluation de la classe était motivée par le faible niveau des preuves d'efficacité de la plupart des traitements antiarythmiques et par un signal de surmortalité observé notamment dans plusieurs méta-analyses.

Pour la prévention des arythmies supraventriculaires :

- seule l'amiodarone conserve un service médical rendu important,
- le flécaïnide et la propafénone ont maintenant un service médical rendu modéré
- le sotalol, le disopyramide, l'hydroquinidine et la cibenzoline ont un service médical rendu insuffisant pour justifier leur prise en charge.

Figure 17 Indications for catheter ablation of symptomatic AF



[a]Significantly enlarged LA volume, advanced age, long AF duration, renal dysfunction, and other cardiovascular risk factors. [b]In rare individual circumstances, catheter ablation may be carefully considered as first-line therapy. [c]Recommended to reverse LV dysfunction when tachycardiomyopathy is highly probable.[d]To improve survival and reduce hospitalization.

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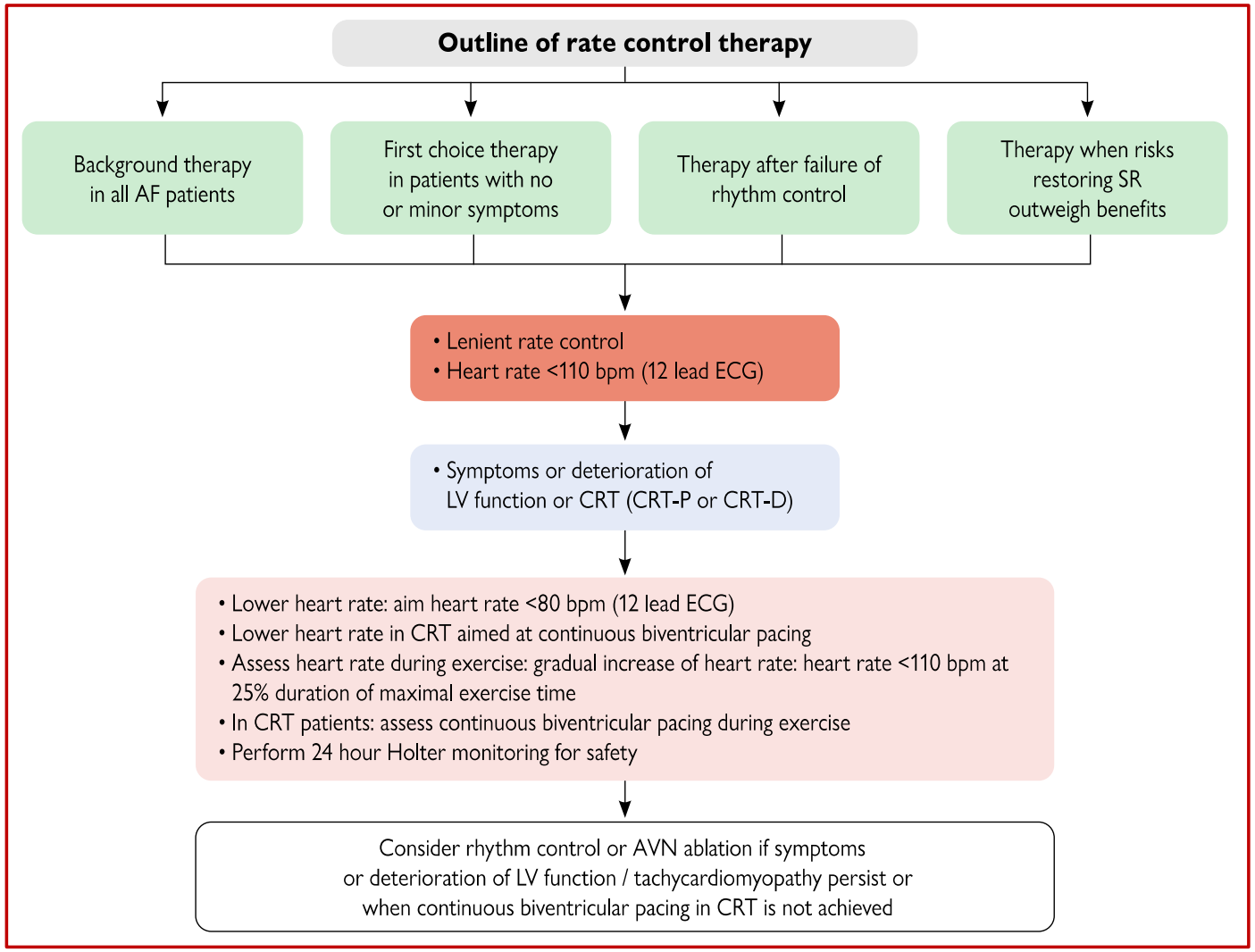
Figure 13 Outline of rate control therapy



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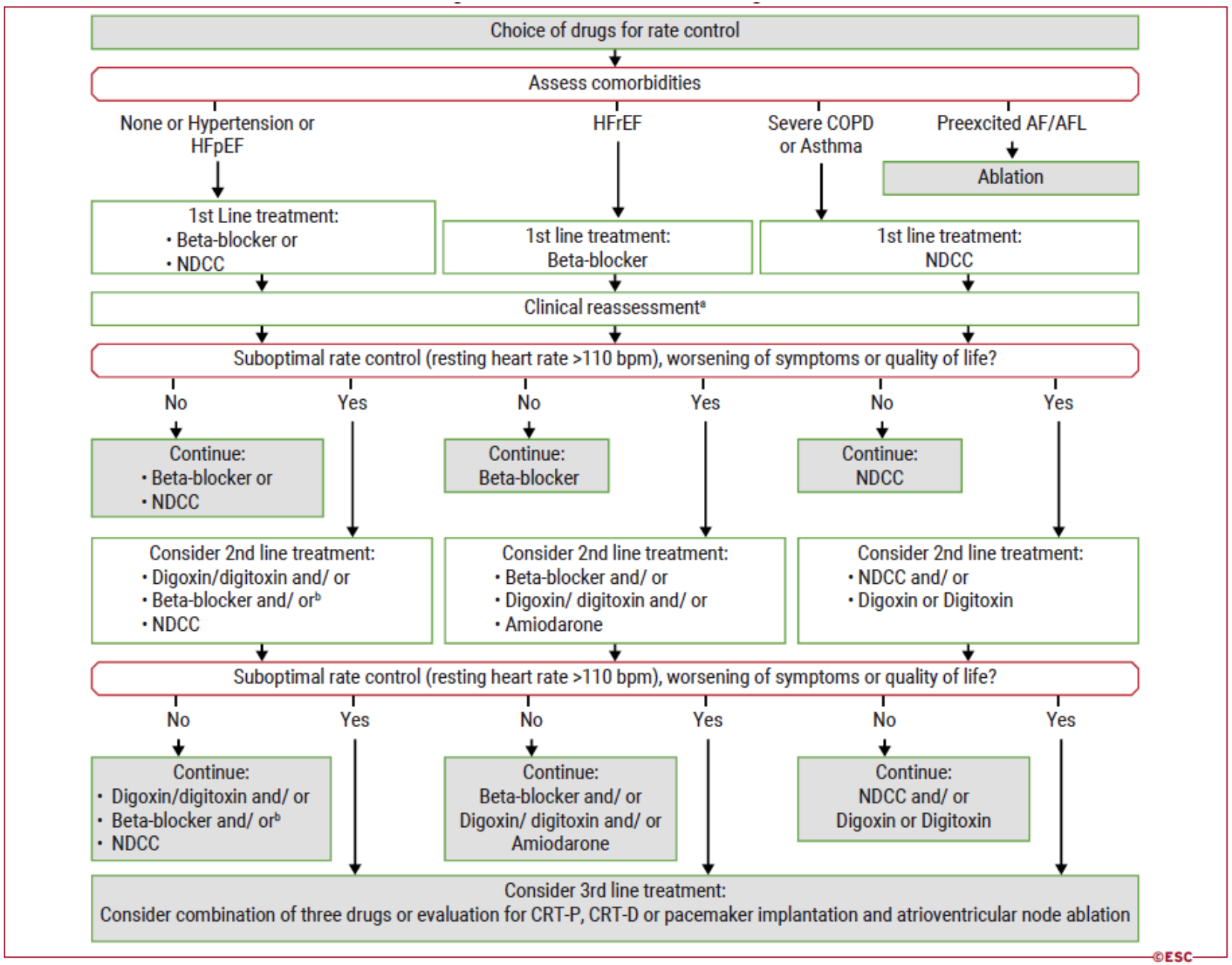
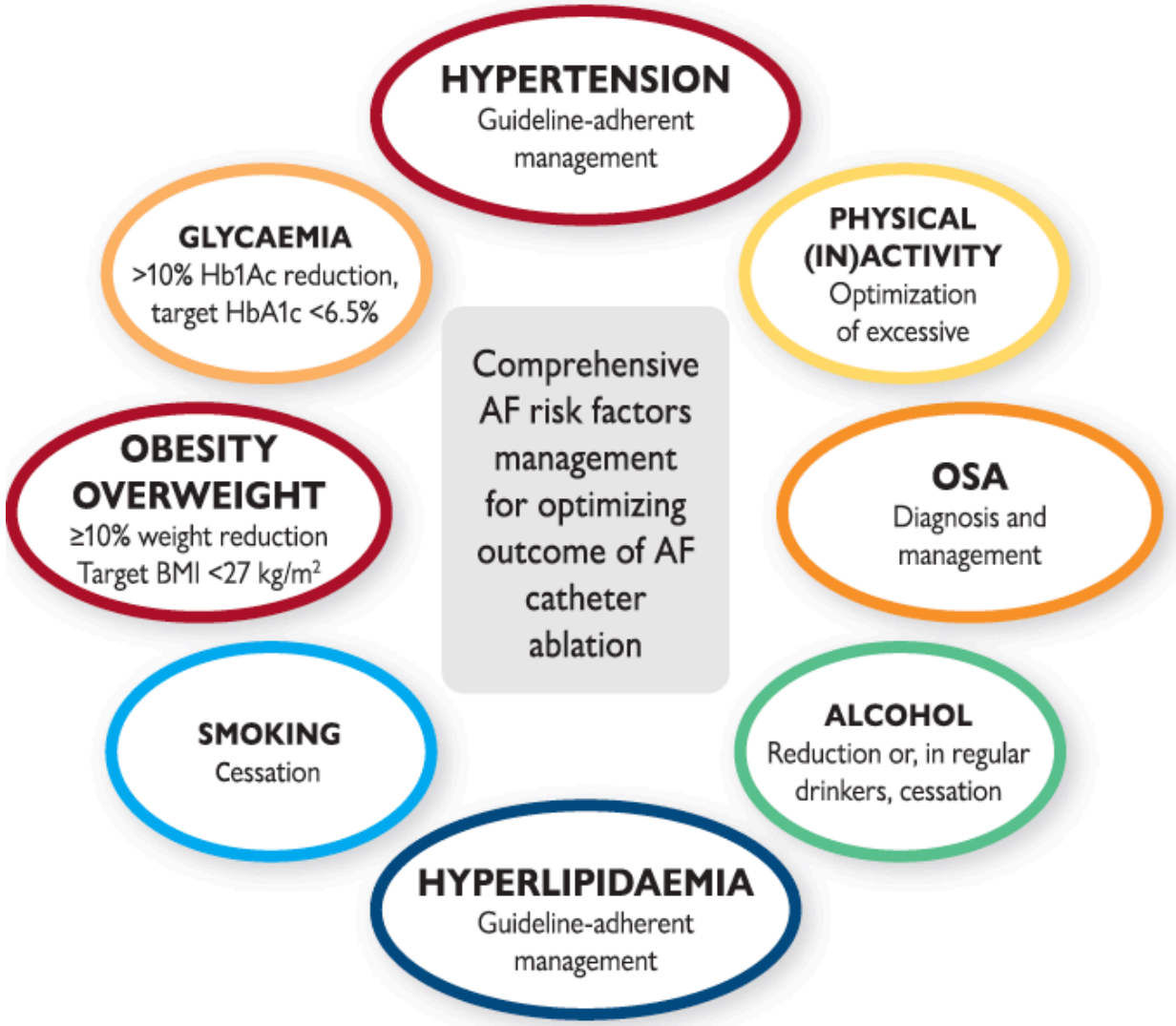


[a]Clinical reassessment should be focused on evaluation of resting heart rate, AF/AFL-related symptoms & quality of life. In case suboptimal rate control (resting heart rate >110 bpm), worsening of symptoms or quality of life consider 2nd line &, if necessary, 3rd line treatment options. [b]Careful institution of beta-blocker and NDCC, 24-hour Holter to check for bradycardia.

Optimizing outcome with catheter ablation

B(+C)



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Contrôle des comorbidités et des facteurs favorisants

Identification and management of risk factors and concomitant diseases is recommended as an integral part of treatment in AF patients.[888]	I	B
Modification of unhealthy lifestyle and targeted therapy of intercurrent conditions is recommended to reduce AF burden and symptom severity.[245,636,887,889,1016,1052]	I	B
Opportunistic screening for AF is recommended in hypertensive patients.[26,172,222]	I	B
Attention to good BP control is recommended in AF patients with hypertension to reduce AF recurrences and risk of stroke and bleeding.[26,1035]	I	B

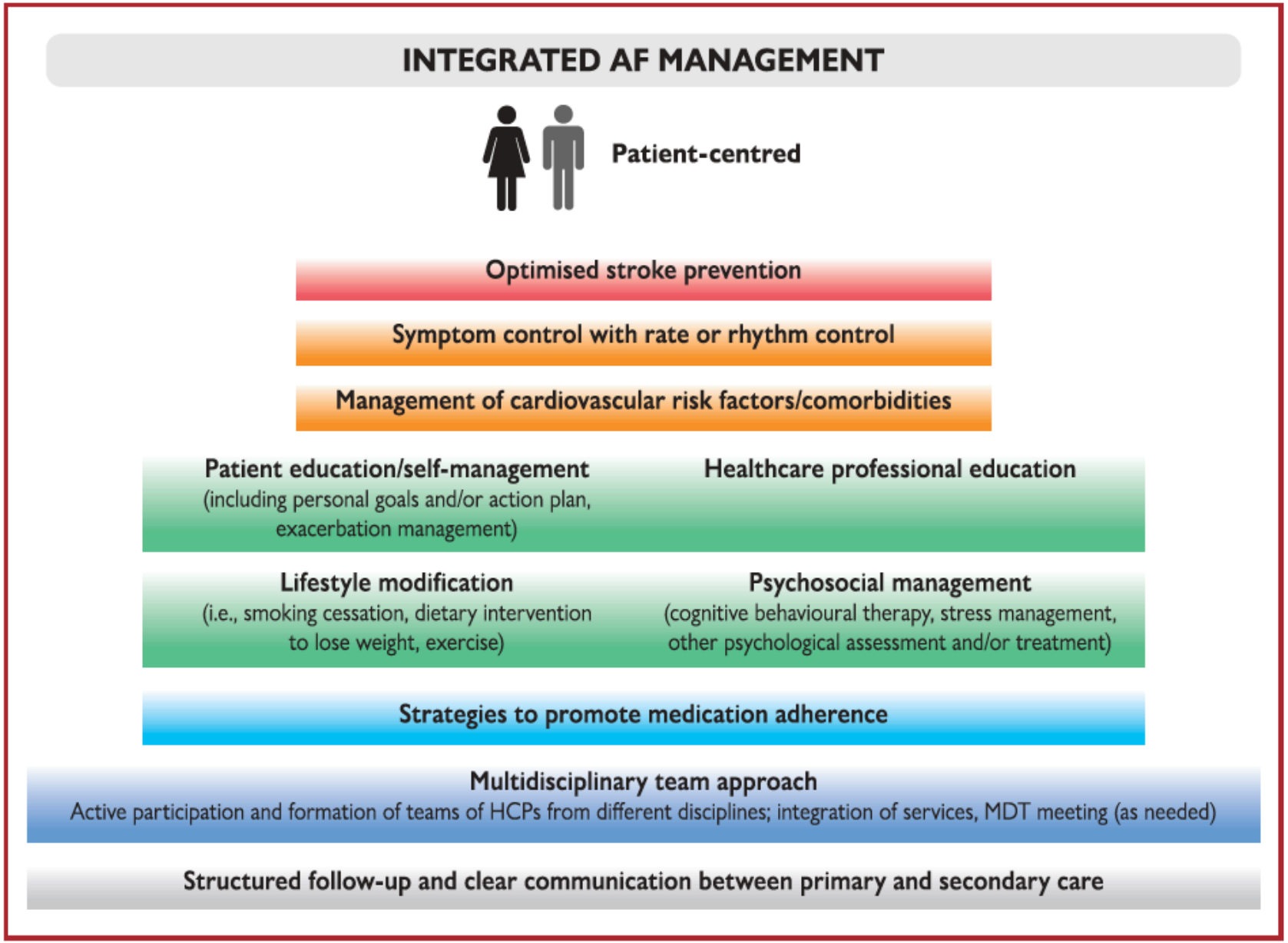
In obese patients with AF, weight loss together with management of other risk factors should be considered to reduce AF incidence, AF progression, AF recurrences, and symptoms.[898,899,1011]	IIa	B
Advice and management to avoid alcohol excess should be considered for AF prevention and in AF patients considered for OAC therapy.[324,1012,1014,1016]	IIa	B
Physical activity should be considered to help prevent AF incidence or recurrence, with the exception of excessive endurance exercise, which may promote AF.[1027–1033,1063]	IIa	C
Opportunistic screening for AF should be considered in patients with OSA.[172]	IIa	C

Optimal management of OSA may be considered, to reduce AF incidence, AF progression, AF recurrences, and symptoms.[650,651,1057–1061,1064,1065]	IIb	C

Risk Factor	Treatment Goal	Comments
Hypertension	Blood pressure <140/90 mmHg[93] Blood pressure <130/80 mmHg[173]	For atrial fibrillation prevention consider angiotensin-converting enzyme inhibitor, angiotensin II-receptor blocker,[174] beta-blocker or mineralocorticoid receptor antagonist
Obesity	BMI 20–25 kg/m^2,[93] BMI 18.5–24.9 kg/m^2, weight loss 5–10 % baseline weight if BMI ≥25 kg/m^2 [174]	Avoid weight fluctuations
Diabetes	HbA_{1c} ≤7.0 %[93,176]	Metformin as first-line therapy[93,174]
Physical inactivity	Physical activity of moderate intensity 150–200 min/week[93] Aerobic exercise 90–150 min/week[173]	
Obstructive sleep apnoea		Appropriate screening, particularly in high-risk patients (hypertension, obesity), manage with continuous positive airway pressure
Alcohol consumption	Maximum of two glasses per day (20 g/day of alcohol) for men and one glass per day (10 g/day of alcohol) for women[93,173]	
Smoking	Complete cessation	
Dyslipidaemia	LDL cholesterol <2.6 mmol/l or at least 50 % if baseline LDL cholesterol 2.6–5.1 mmol/l in patients at high cardiovascular risk[93] No specific LDL cholesterol targets[175]	Use statins

Brandes A et al., Arrhythmia & Electrophysiology Review 2018;7(2):118–27.

C



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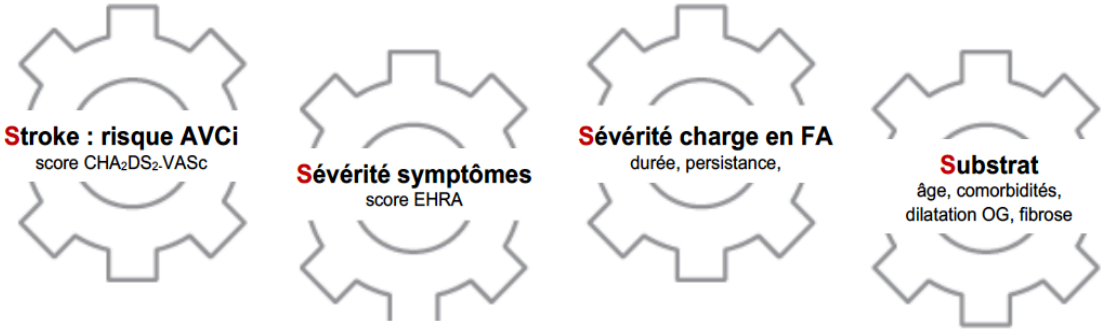
FA : CC et ABC

CC

Confirmer la FA

ECG de surface (12 D ou rythme) montrant un aspect de FA ≥ 30s

Caractériser la FA : 4S



ABC

Traiter la FA : ABC

A	B	C
1. Identifier patients à bas risque CHA_2DS_2-VASc 0 (h), 1 (f) 2. Prévention du risque si CHA_2DS_2-VASc ≥1 (h), 2 (f) Évaluer risque hémorragique et ses facteurs de risque modifiables 3. Anticoagulant (AOD ou AVK avec TTR >70%)	Evaluation des symptômes, QdV et avis du patient Optimisation du contrôle de la FC Envisager un contrôle du rythme (CEE, AA, ablation)	Comorbidités et prise en charge des facteurs de risque Cardiovasculaires Mode de vie (réduction de l'obésité, exercice physique, réduction de l'alcool, etc.

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