Mise au point sur les traitements en cardiologie

GROUPE HOSPITALIER DU HAVRE

Florence VANDEVELDE

Insuffisance cardiaque

titre 1
titre 2
titre 2

N° RPPS

cp-ville
tel
mention secretariat
mention rendez-vous

N° AM

6 janvier 2020

Monsieur XX
Né le 23/08/1942

ALD 100 %

ACIDE ACETYLSALICYLIQUE 75 mg : 1 sachet par jour

ENTRESTO 49/51 mg : 1 comprimé matin et soir

BISOPROLOL 10 mg : 1 comprimé le matin

EPLERENONE 25 mg : 1 comprimé le matin

ATORVASTATINE 40 mg : 1 comprimé le soir

PANTOPRAZOLE 20 mg : 1 comprimé par jour

European Heart Journal (2016) **37**, 2129–2200
doi:10.1093/eurheartj/ehw128

2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure

The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)

Developed with the special contribution of the Heart Failure Association (HFA) of the ESC

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European Heart Journal (2016) 37, 2129–2200
doi:10.1093/eurheartj/ehw128

Table 3.1 Definition of heart failure with preserved (HFpEF), mid-range (HFmrEF) and reduced ejection fraction (HFrEF)

Type of HF		HFrEF	HFmrEF	HFpEF
CRITERIA	1	Symptoms ± Signs[a]	Symptoms ± Signs[a]	Symptoms ± Signs[a]
	2	LVEF <40%	LVEF 40–49%	LVEF ≥50%
	3	–	1. Elevated levels of natriuretic peptides[b]; 2. At least one additional criterion: a. relevant structural heart disease (LVH and/or LAE), b. diastolic dysfunction (for details see Section 4.3.2).	1. Elevated levels of natriuretic peptides[b]; 2. At least one additional criterion: a. relevant structural heart disease (LVH and/or LAE), b. diastolic dysfunction (for details see Section 4.3.2).

BNP = B-type natriuretic peptide; HF = heart failure; HFmrEF = heart failure with mid-range ejection fraction; HFpEF = heart failure with preserved ejection fraction; HFrEF = heart failure with reduced ejection fraction; LAE = left atrial enlargement; LVEF = left ventricular ejection fraction; LVH = left ventricular hypertrophy; NT-proBNP = N-terminal pro-B type natriuretic peptide.

[a]Signs may not be present in the early stages of HF (especially in HFpEF) and in patients treated with diuretics.

[b]BNP > 35 pg/ml and/or NT-proBNP > 125 pg/mL.

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Bétâbloquants et IEC

Antagonistes minéralo-corticoïdes

Seuil FE ≤ 35 % :

- **ARA 2/ inhibiteur néprilysine** en remplacement IEC
- CRT-D
- Ivabradine

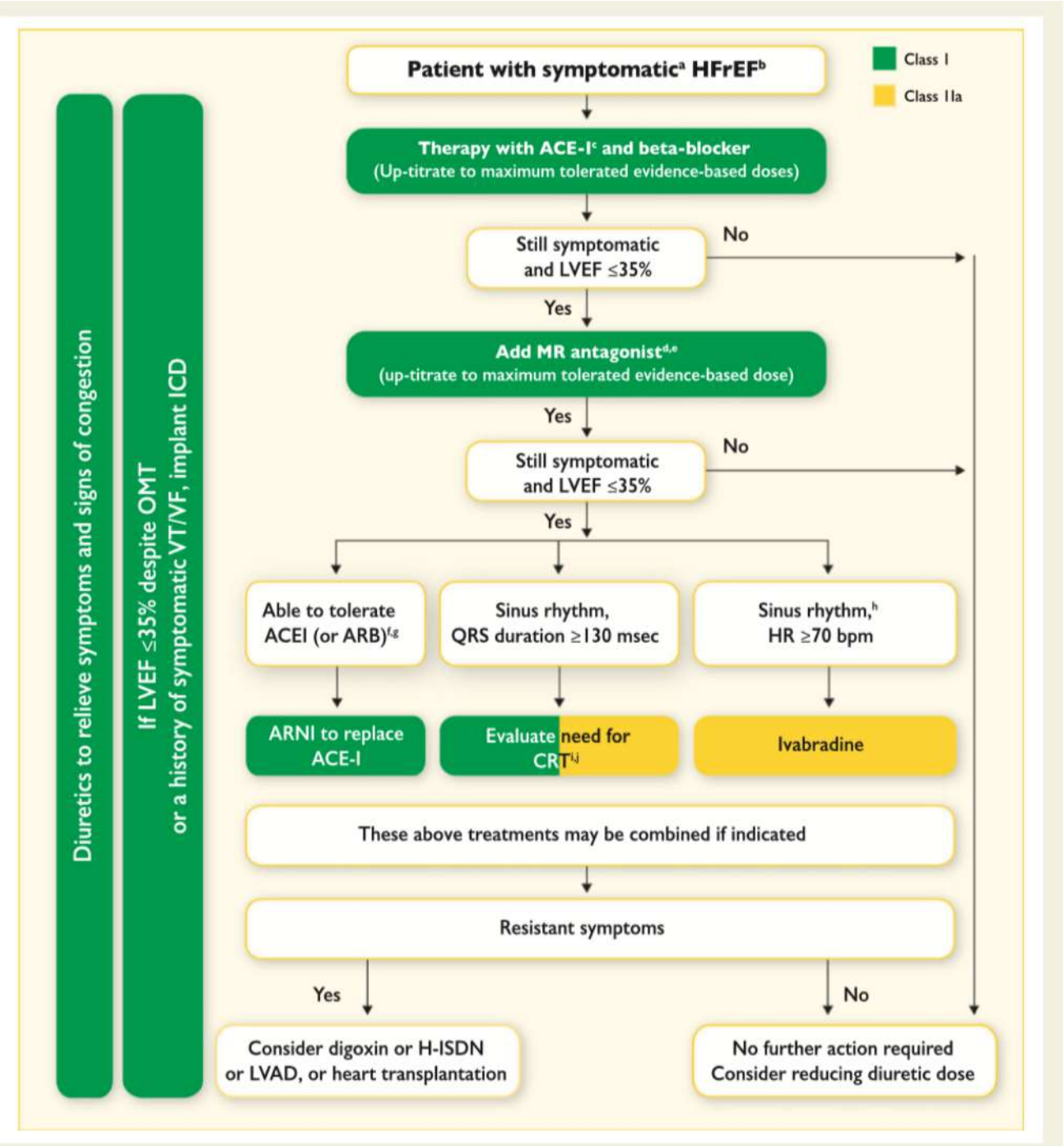


Figure 7.1 Therapeutic algorithm for a patient with symptomatic heart failure with reduced ejection fraction. Green indicates a class I recom-

ESC Guidelines Acute and Chronic Heart Failure, EHJ, 2016

Dose optimale

Titration thérapeutique

Table 7.2 **Evidence-based doses of disease-modifying drugs in key randomized trials in heart failure with reduced ejection fraction (or after myocardial infarction)**

	Starting dose (mg)	Target dose (mg)
ACE-I		
Captopril[a]	6.25 *t.i.d.*	50 *t.i.d.*
Enalapril	2.5 *b.i.d.*	10–20 *b.i.d.*
Lisinopril[b]	2.5–5.0 *o.d.*	20–35 *o.d.*
Ramipril	2.5 o.d.	10 *o.d.*
Trandolapril[a]	0.5 *o.d.*	4 *o.d.*
Beta-blockers		
Bisoprolol	1.25 *o.d.*	10 *o.d.*
Carvedilol	3.125 *b.i.d.*	25 *b.i.d.*[d]
Metoprolol succinate (CR/XL)	12.5–25 *o.d.*	200 o.d.
Nebivolol[c]	1.25 *o.d.*	10 *o.d.*
ARBs		
Candesartan	4–8 *o.d.*	32 *o.d.*
Valsartan	40 *b.i.d.*	160 *b.i.d.*
Losartan[b,c]	50 *o.d.*	150 *o.d.*
MRAs		
Eplerenone	25 *o.d.*	50 *o.d.*
Spironolactone	25 *o.d.*	50 *o.d.*
ARNI		
Sacubitril/valsartan	49/51 *b.i.d.*	97/103 *b.i.d.*
If-channel blocker		
Ivabradine	5 *b.i.d.*	7.5 *b.i.d.*

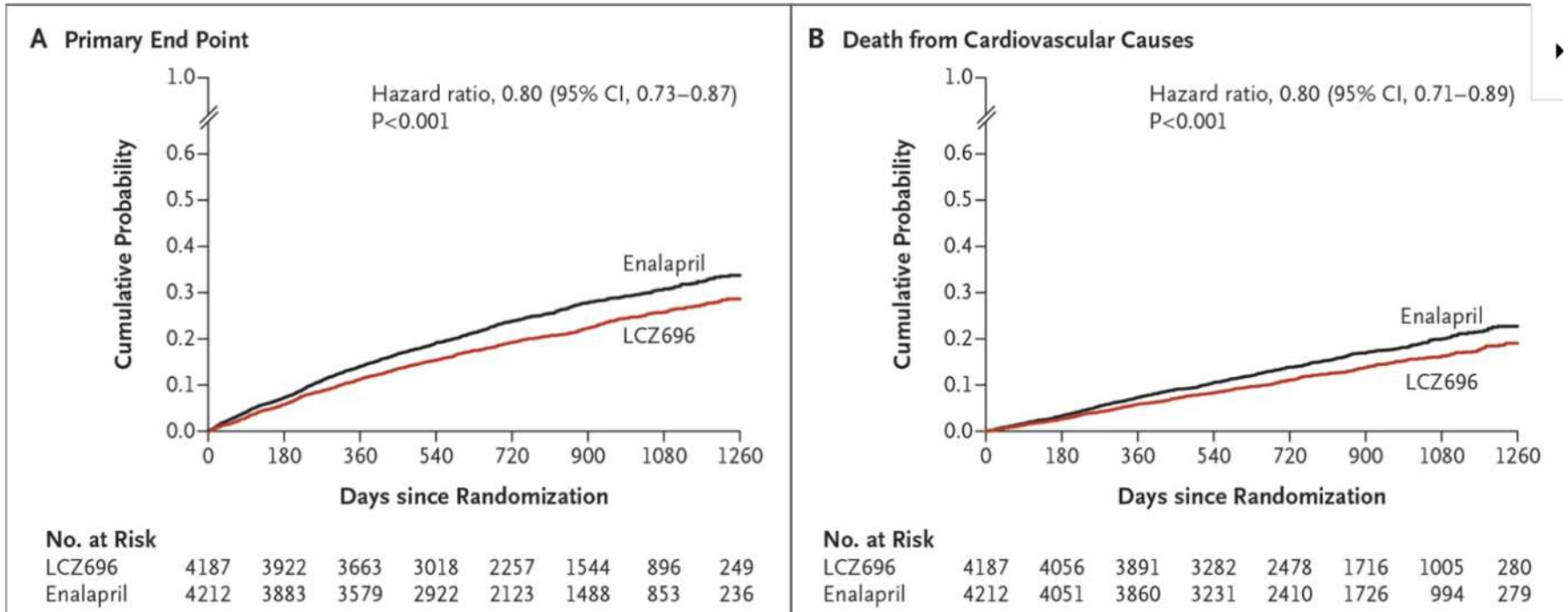
ESC Guidelines Acute and Chronic Heart Failure, EHJ, 2016


Entresto™
(sacubitril/valsartan) tablets
24/26mg • 49/51mg • 97/103mg

Angiotensin–Neprilysin Inhibition versus Enalapril in Heart Failure

John J.V. McMurray, M.D., Milton Packer, M.D., Akshay S. Desai, M.D., M.P.H., Jianjian Gong, Ph.D., Martin P. Lefkowitz, M.D., Adel R. Rizkala, Pharm.D., Jean L. Rouleau, M.D., Victor C. Shi, M.D., Scott D. Solomon, M.D., Karl Swedberg, M.D., Ph.D., and Michael R. Zile, M.D. for the PARADIGM-HF Investigators and Committees*

NEJM, 2014




NDC 0078-0659-20
Entresto™
(sacubitril/valsartan) tablets
24 mg/26 mg
Rx only
60 Tablets
NOVARTIS
NDC 0078-0777-20
Entresto™
(sacubitril/valsartan) tablets
49 mg/51 mg
Rx only
60 Tablets
NOVARTIS
NDC 0078-0696-20
Entresto™
(sacubitril/valsartan) tablets
97 mg/103 mg
Rx only
60 Tablets
NOVARTIS

Stop taking your
ACE
inhibitor*

Wait for
36
hours

Start taking
ENTRESTO,
as prescribed

ENTRESTO® - sacubitril/valsartan (DCI)

LABORATOIRE NOVARTIS PHARMA SAS

MÉDICAMENT DE L'INSUFFISANCE CARDIAQUE

Comprimés pelliculés à 24 mg/26 mg, (boîte de 28), 49 mg/51 mg (boîte de 56) et 97 mg/103 mg (boîte de 56).

- Prescription et délivrance : liste I.
- **Remboursement Sécurité sociale à 65 %. Collectivités.**
- **ASMR IV**

INDICATION : INSUFFISANCE CARDIAQUE

Chez les patients adultes dans le traitement de l'insuffisance cardiaque chronique symptomatique à fraction d'éjection réduite.

MÉCANISME D'ACTION : ASSOCIATION D'INHIBITEUR DE NÉPRILYSINE ET DE SARTAN

Double mécanisme d'action grâce à ses deux composés.

- **Le sacubitril,** inhibiteurs de néprilysine (via son métabolite actif, le LBQ657).
  La néprilysine a pour rôle de dégrader les peptides natriurétiques. Ces peptides ne sont donc plus dégradés et entraînent une amélioration de l'état cardiaque grâce divers effets pharmacologiques : vasodilatation, natriurèse et diurèse, augmentation de la filtration glomérulaire et du débit sanguin rénal, inhibition de la libération de rénine et d'aldostérone, diminution de l'activité sympathique, des effets anti-hypertrophique et anti-fibrotique.
- **Le valsartan,** antagoniste des récepteurs de type 1 (AT1) de l'angiotensine II bien connu, empêche les effets néfastes cardio-vasculaires et rénaux de l'angiotensine II en bloquant sélectivement les récepteurs AT1 ainsi que la libération d'aldostérone dépendante de l'angiotensine II.

POSOLOGIE

Dose initiale : 1comprimé de 49 mg/51 mg 2 fois/j pendant ou en dehors des repas.
Dose doublée toutes les 2 à 4 semaines jusqu'à la dose cible de 97 mg/103 mg 2 fois/j.
Diminution de doses dans certains cas :

- pression artérielle systolique basse,
- hypotension symptomatique,
- hyperkaliémie,
- altération de la fonction rénale,
- sujet âgé,
- insuffisance hépatique modérée.

CONTRE-INDICATIONS

- Hypersensibilité aux substances actives, ou à l'un des excipients.
- Utilisation concomitante d'IEC. Entresto® ne doit être administré que 36 heures après l'arrêt de l'IEC.
- Antécédent d'angiœdème lié à un traitement antérieur par IEC ou ARA II.
- Angiœdème héréditaire ou idiopathique.
- Insuffisance hépatique sévère, cirrhose biliaire ou cholestase.
- Deuxième et troisième trimestres de la grossesse.

EFFETS INDÉSIRABLES *(Consulter le RCP pour une liste exhaustive)*

Les plus fréquents : hypotension, hyperkaliémie, altération de la fonction rénale.

En cas d'angiœdème, le traitement par Entresto® doit être arrêté immédiatement. Un traitement et une surveillance appropriés doivent être mis en place jusqu'à la disparition totale et durable des signes et symptômes. Il ne doit pas être réadministré.

QUELLES PRÉCAUTIONS D'EMPLOI ET QUELLE SURVEILLANCE DU TRAITEMENT

KALIEMIE

Pas d'initiation du traitement si kaliémie > 5,4 mmol/L.

Surveillance de la kaliémie en particulier si facteurs de risque (insuffisance rénale, diabète, hypoaldostéronisme), si régime alimentaire riche en potassium, si prise d'antagonistes du récepteur des minéralocorticoïdes.

Si hyperkaliémie cliniquement significative : adaptation des traitements concomitants, diminution de posologie ou arrêt.

Kaliémie > 5,4 mmol/L : arrêt du traitement.

HYPOTENSION

Surveillance de la pression artérielle lors de l'initiation du traitement, de l'adaptation de dose d'Entresto® puis en routine.

Pas d'initiation du traitement si PAS n'est pas > 100 mmHg.

Dose initiale de 24 mg/26 mg 2 fois/j si PAS comprise entre 100 et 110 mmHg.

FONCTION RÉNALE

Surveillance car les patients atteints d'insuffisance rénale légère et modérée ont plus de risque de développer une hypotension. Par ailleurs, l'administration d'Entresto® peut être associée à une dégradation de la fonction rénale.

PRINCIPAUX CONSEILS AU PATIENT LORS DE LA DISPENSATION D'ENTRESTO®

- **Conservez ce médicament** à température ambiante. Gardez-le bien hors de la vue et de la portée des enfants.
- **Prenez bien votre médicament** deux fois par jour.
- **Avalez les comprimés** entiers avec de l'eau, pendant ou en dehors des repas.
- **En cas d'oubli d'une dose,** vous prendrez la prochaine dose au moment habituel.
- **N'arrêtez jamais votre traitement** et ne modifiez jamais la dose prescrite ou le rythme d'administration sans avis de votre médecin prescripteur.
- **Si des effets indésirables surviennent,** il est important d'en parler rapidement à votre médecin. Lui seul pourra vous indiquer la marche à suivre.
- **Un bilan sanguin** vous est régulièrement demandé, n'oubliez pas vos rendez-vous au laboratoire d'analyses médicales.
- **Buvez suffisamment d'eau** au cours de la journée.
- **Pas d'automédication** pendant votre traitement, demandez toujours conseil à un professionnel de santé avant de prendre un médicament ou une tisane quels qu'ils soient, il peut exister un risque d'interaction médicamenteuse.
- **Si vous ressentez de la fatigue ou des vertiges,** soyez prudent lors de la conduite de véhicules ou l'utilisation de machines.

Supplémentation de la carence martiale

FEVG < 40 %

Ferritine < 100 µg/L
Ou 100 – 299 µg/L et CST < 20 %

Recommendations for the treatment of other co-morbidities in patients with heart failure

Recommendations	Class [a]	Level [b]	Ref [c]
Iron deficiency			
Intravenous FCM should be considered in symptomatic patients with HFrEF and iron deficiency (serum ferritin <100 µg/L, or ferritin between 100–299 µg/L and transferrin saturation <20%) in order to alleviate HF symptoms, and improve exercise capacity and quality of life.	IIa	A	469, 470
Diabetes			
Metformin should be considered as a first-line treatment of glycaemic control in patients with diabetes and HF, unless contra-indicated.	IIa	C	440 ,441

FCM = ferric carboxymaltose; HF = heart failure; HFrEF = heart failure with reduced ejection fraction.
[a]Class of recommendation.
[b]Level of evidence.
[c]Reference(s) supporting recommendations.
Treatments not recommended for other co-morbidities in patients with heart failure

ESC Guidelines Acute and Chronic Heart Failure, EHJ, 2016

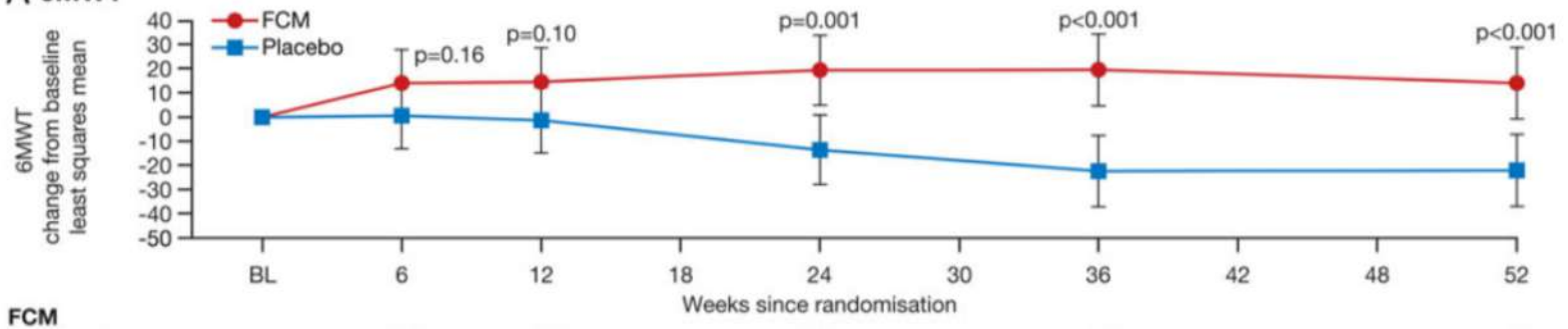
European Heart Journal (2015) **36**, 657–668
doi:10.1093/eurheartj/ehu385

FASTTRACK ESC HOT LINE
Heart failure/cardiomyopathy

Beneficial effects of long-term intravenous iron therapy with ferric carboxymaltose in patients with symptomatic heart failure and iron deficiency†

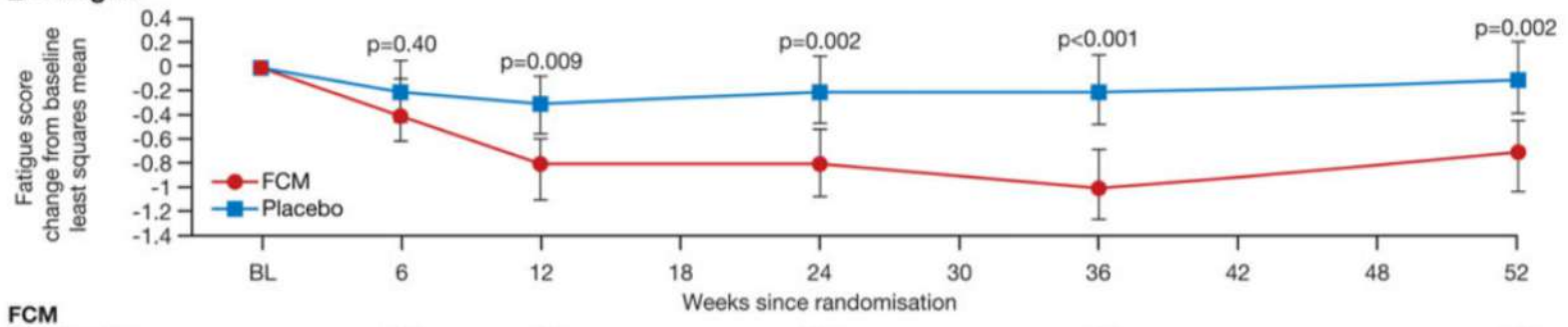
Piotr Ponikowski[1,2]*, Dirk J. van Veldhuisen[3], Josep Comin-Colet[4], Georg Ertl[5,6], Michel Komajda[7], Viacheslav Mareev[8], Theresa McDonagh[9], Alexander Parkhomenko[10], Luigi Tavazzi[11], Victoria Levesque[12], Claudio Mori[12], Bernard Roubert[12], Gerasimos Filippatos[13], Frank Ruschitzka[14], and Stefan D. Anker[15], for the CONFIRM-HF Investigators

A 6MWT



FCM					
No of patients	143	137	130	122	125
LS mean (95% CI)	14 (0, 28)	15 (1, 29)	19 (5, 34)	20 (5, 34)	14 (-1, 29)
Placebo					
No of patients	148	146	131	123	121
LS mean (95% CI)	1 (-13, 14)	-1 (-15, 12)	-14 (-28, 1)	-22 (-37, -8)	-22 (-37, -7)
FCM vs Placebo	14 (-5, 33)	16 (-3, 35)	33 (13, 53)	42 (21, 62)	36 (16, 57)

B Fatigue



FCM					
No of patients	139	128	121	111	110
LS mean (95% CI)	-0.4 (-0.6, -0.1)	-0.8 (-1.1, -0.5)	-0.8 (-1.1, -0.5)	-1.0 (-1.3, -0.7)	-0.7 (-1.0, -0.4)
Placebo					
No of patients	141	138	120	111	103
LS mean (95% CI)	-0.2 (-0.4, 0.1)	-0.3 (-0.6, -0.1)	-0.2 (-0.5, 0.1)	-0.2 (-0.5, 0.1)	-0.1 (-0.4, 0.2)
FCM vs Placebo	-0.2 (-0.5, 0.2)	-0.5 (-0.9, -0.1)	-0.6 (-1.0, -0.2)	-0.8 (-1.2, -0.4)	-0.7 (-1.1, -0.2)

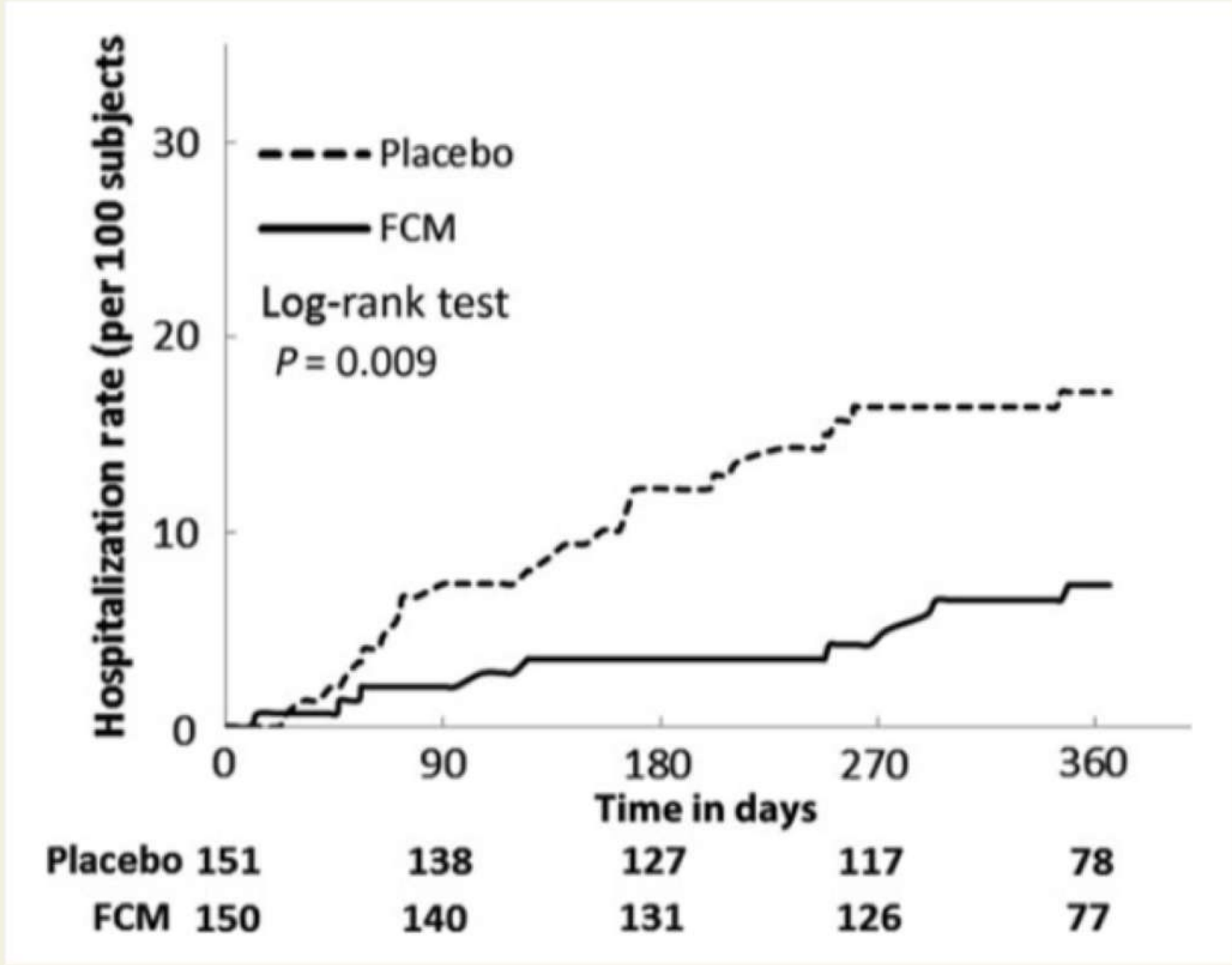
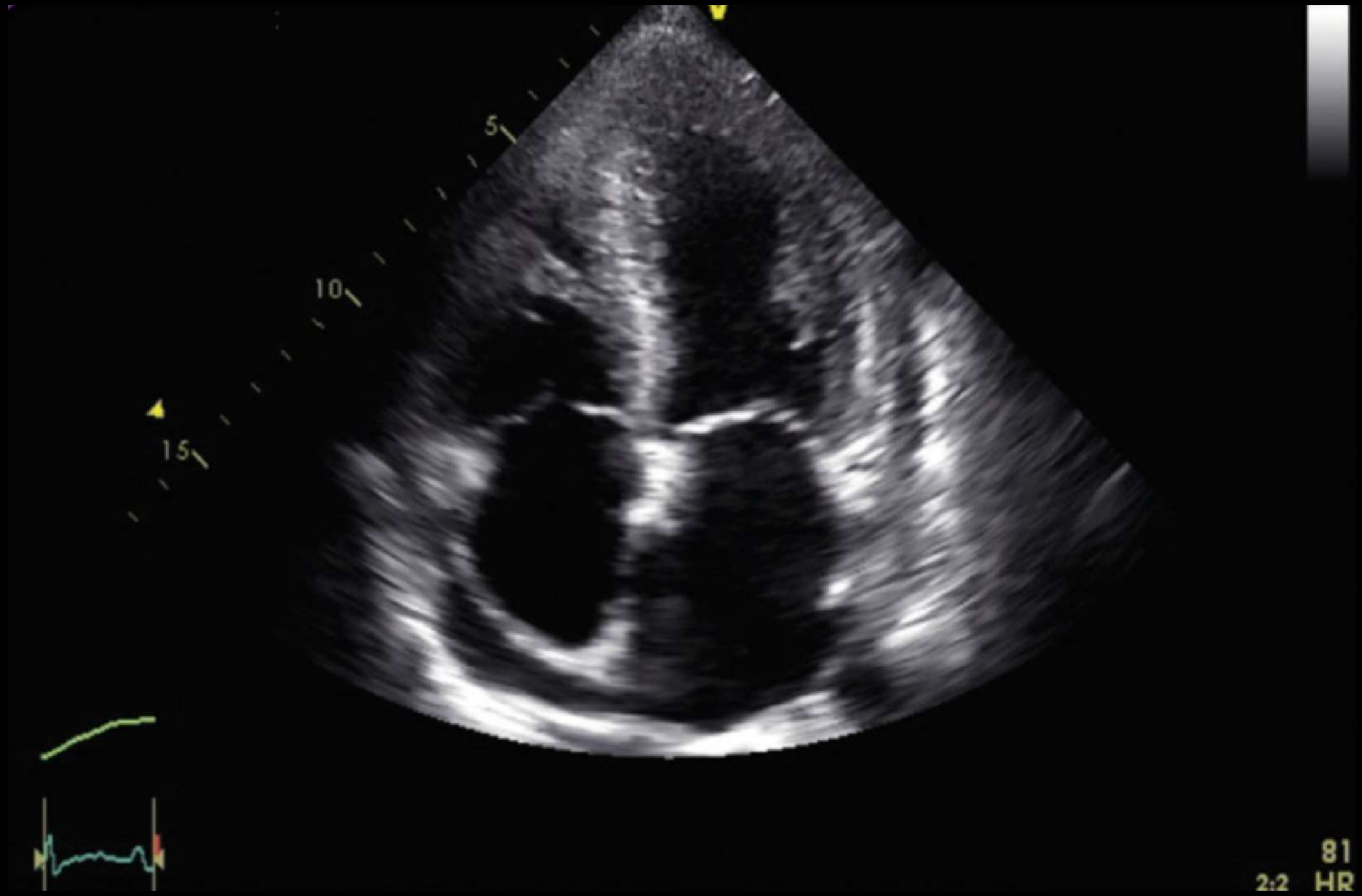


Figure 4 Time to first hospitalization due to worsening heart failure. The time to first hospitalization due to worsening heart failure was estimated using the Kaplan–Meier method, on the full-analysis set. Subjects were censored at their death, study completion, or withdrawal date.

ÉDUCATION THÉRAPEUTIQUE

Retour à domicile dans le cadre du protocole PRADO
Télésurveillance de l'insuffisance cardiaque : SCAD
Rééducation cardiaque
UTIC
Consultations de titration
Associations de patients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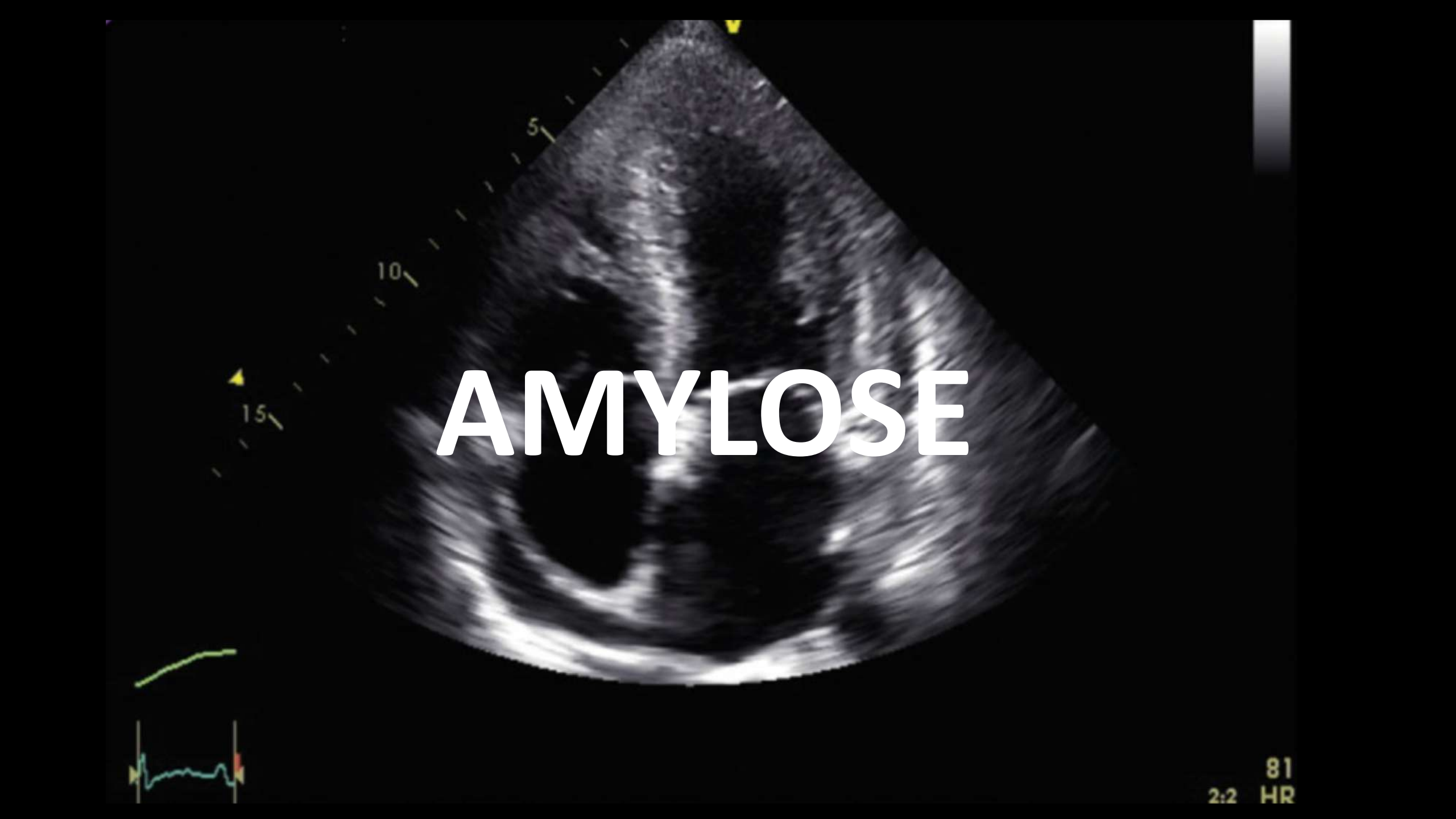
10
15
81
2:2 HR


AMYLOSE
5
10
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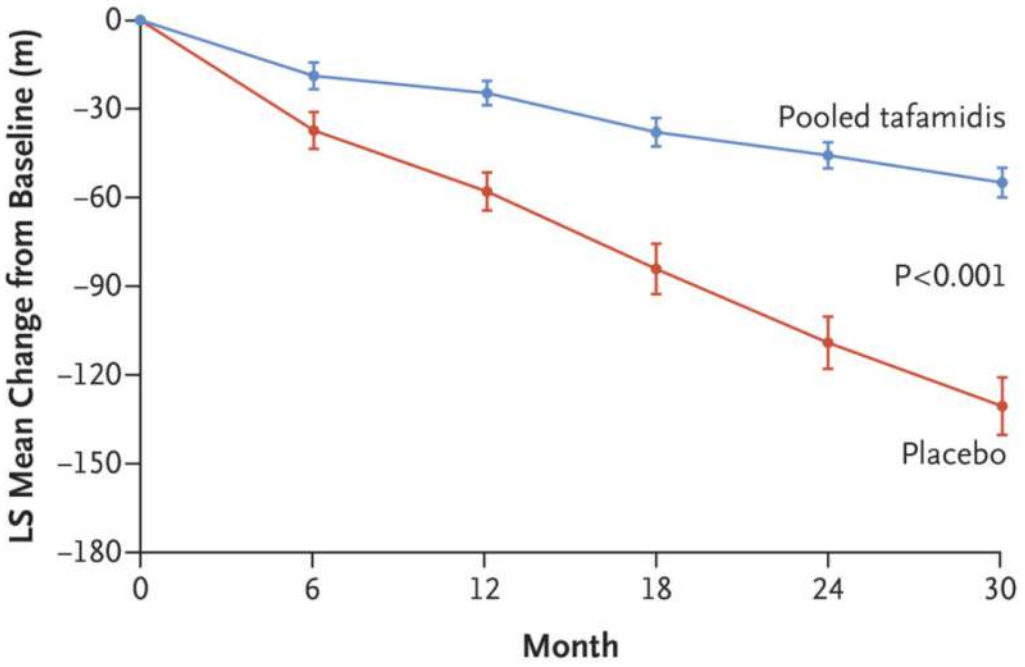
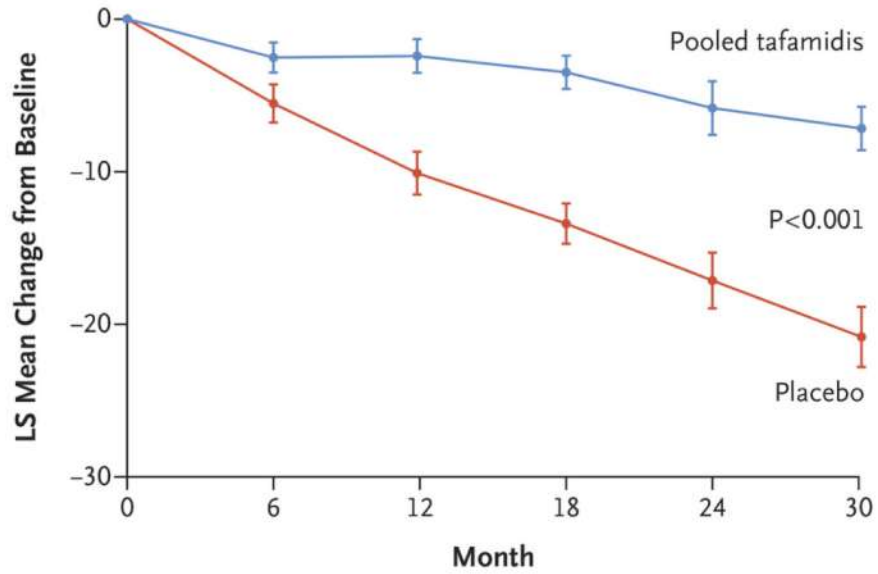
81
2:2 HR

A Change from Baseline in 6-Minute Walk Test



No. of Patients						
Tafamidis	264	233	216	193	163	155
Placebo	177	147	136	111	85	70

B Change from Baseline in KCCQ-OS



No. of Patients						
Tafamidis	264	241	221	201	181	170
Placebo	177	159	145	123	96	84

Tafamidis Treatment for Patients with Transthyretin Amyloid Cardiomyopathy

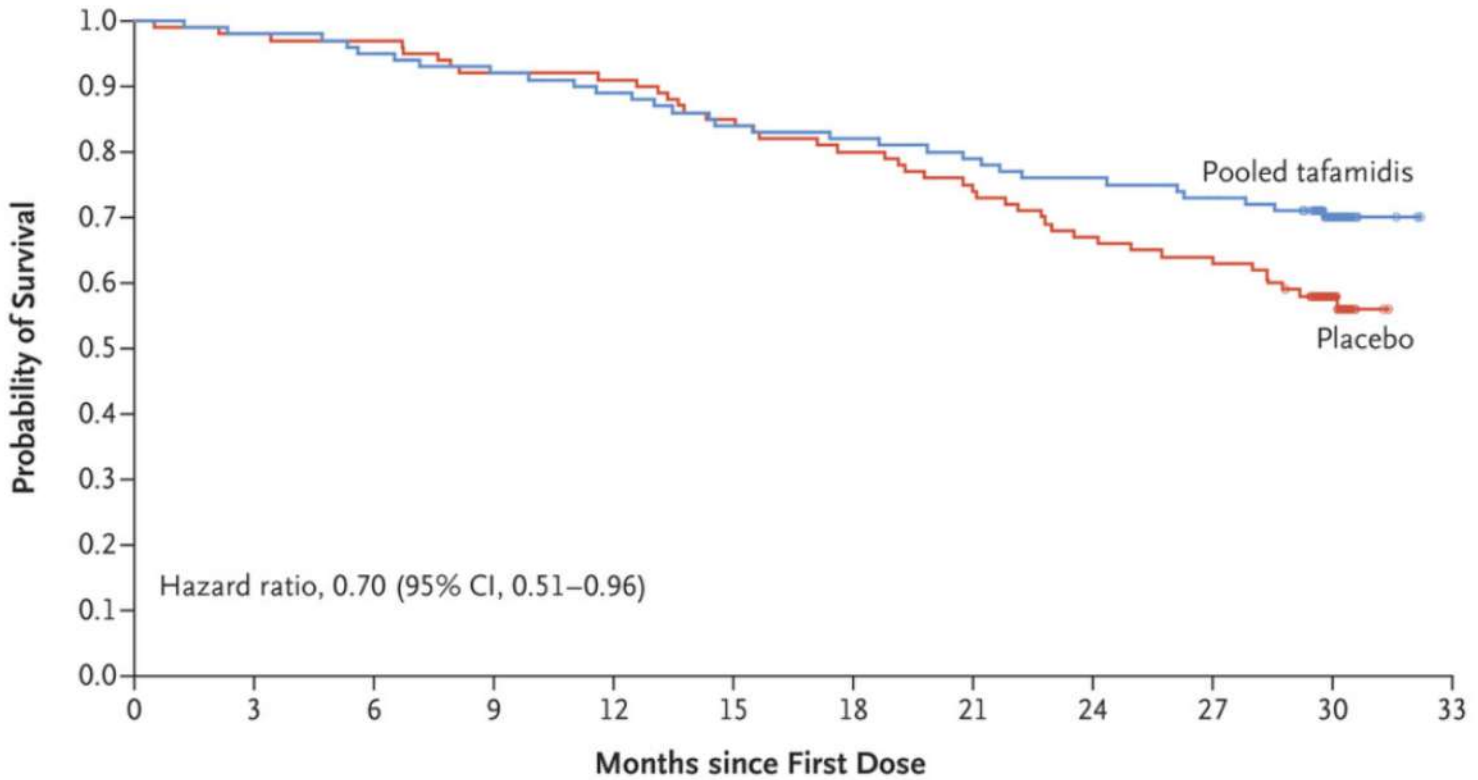
Mathew S. Maurer, M.D., Jeffrey H. Schwartz, Ph.D., Balarama Gundapaneni, M.S., Perry M. Elliott, M.D., Giampaolo Merlini, M.D., Ph.D., Marcia Waddington-Cruz, M.D., Arnt V. Kristen, M.D., Martha Grogan, M.D., Ronald Witteles, M.D., Thibaud Damy, M.D., Ph.D., Brian M. Drachman, M.D., Sanjiv J. Shah, M.D., et al., for the ATTR-ACT Study Investigators*

NEJM, 2018

Tafamidis Treatment for Patients with Transthyretin Amyloid Cardiomyopathy

Mathew S. Maurer, M.D., Jeffrey H. Schwartz, Ph.D., Balarama Gundapaneni, M.S., Perry M. Elliott, M.D., Giampaolo Merlini, M.D., Ph.D., Marcia Waddington-Cruz, M.D., Arnt V. Kristen, M.D., Martha Grogan, M.D., Ronald Witteles, M.D., Thibaud Damy, M.D., Ph.D., Brian M. Drachman, M.D., Sanjiv J. Shah, M.D., et al., for the ATTR-ACT Study Investigators*

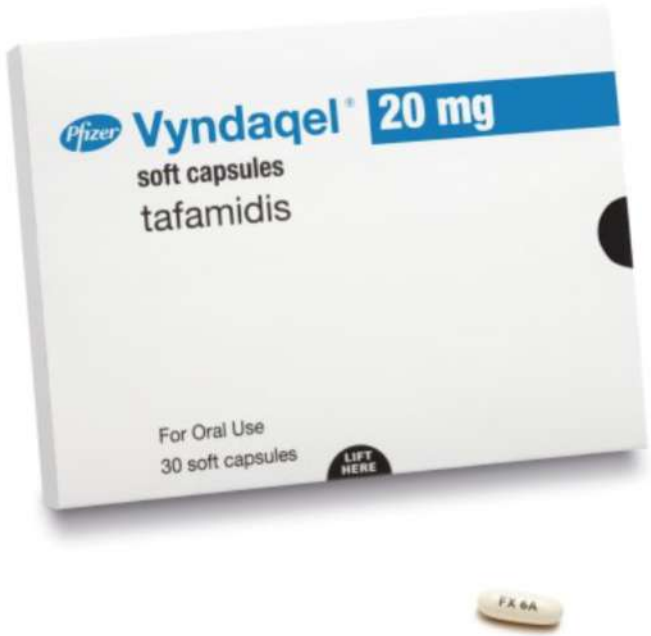
B Analysis of All-Cause Mortality

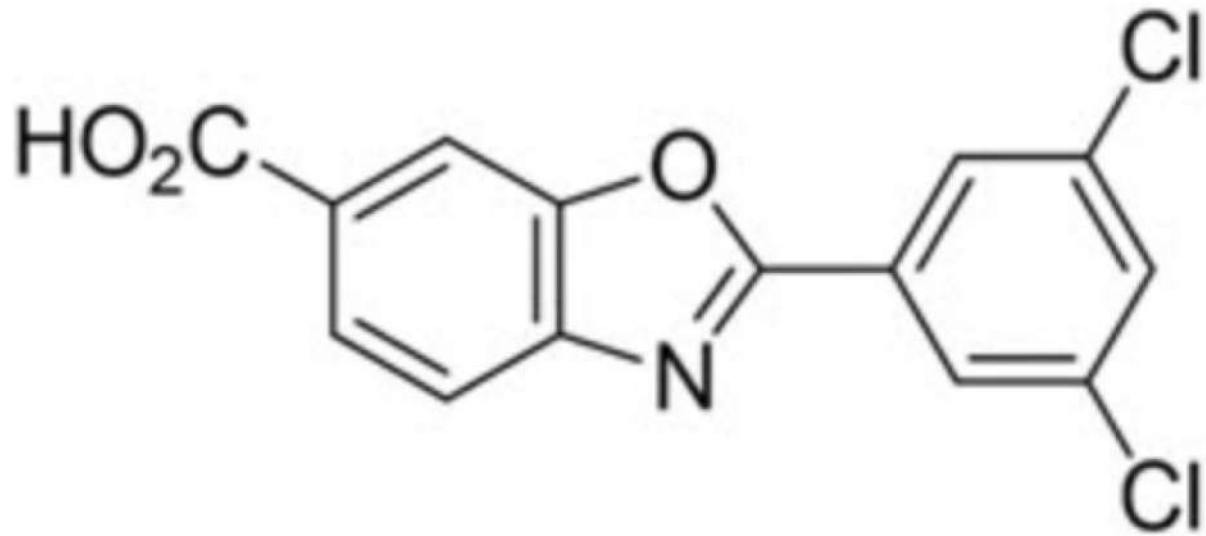


No. at Risk (cumulative no. of events)

Pooled tafamidis	264 (0)	259 (5)	252 (12)	244 (20)	235 (29)	222 (42)	216 (48)	209 (55)	200 (64)	193 (71)	99 (78)	0 (78)
Placebo	177 (0)	173 (4)	171 (6)	163 (14)	161 (16)	150 (27)	141 (36)	131 (46)	118 (59)	113 (64)	51 (75)	0 (76)

NEJM, 2018


Pfizer
Vyndaqel®
20 mg
soft capsules
tafamidis
For Oral Use
30 soft capsules
LIFT HERE
FX 6A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HAUTE AUTORITÉ DE SANTÉ

RECOMMANDATION RELATIVE A LA PRISE EN CHARGE A TITRE DEROGATOIRE DU TAFAMIDIS DANS LE CADRE D'UNE RECOMMANDATION TEMPORAIRE D'UTILISATION

VYNDAQEL 20 mg, capsule molle

Laboratoire PFIZER

DCI	tafamidis
Code ATC	**N07XX08 (autre médicament du système nerveux)**
Motif de l'examen	**Auto saisine de la HAS en vue de la prise en charge à titre dérogatoire prévue à l'article L. 162-17-2-1.**
Indication concernée	**« Traitement de l'amylose cardiaque à transthyrétine de forme héréditaire ou sénile, chez les patients adultes présentant une insuffisance cardiaque restrictive de classe NYHA I, II ou III. »**

Critères de prise en charge	☒ Absence d'alternative appropriée (absence de spécialité de même principe actif, de même dosage et de même forme pharmaceutique disposant d'une AMM ou d'une ATU) ☒ Utilisation de la spécialité indispensable à l'amélioration de l'état de santé du patient ou pour éviter sa dégradation ☒ Intérêt de la spécialité pour les patients (article R163-26 du code de la sécurité sociale)
Population concernée	Estimation : inférieure à 20 000 patients en France (cf. paragraphe 06)
Conclusion	**☒ Avis favorable pour la prise en charge à titre dérogatoire** **☐ Avis défavorable pour la prise en charge à titre dérogatoire**

RECOMMANDATION TEMPORAIRE D'UTILISATION (RTU)

PROTOCOLE DE SUIVI DES PATIENTS traités par

VYNDAQEL 20 mg, capsule molle (tafamidis)

dans le

TRAITEMENT DE L'AMYLOSE CARDIAQUE A TRANSTHYRÉTINE

Novembre 2018

2. LE TAFAMIDIS DANS LE TRAITEMENT DE L'AMYLOSE CARDIAQUE A TRANSTHYRÉTINE

L'ANSM a élaboré une RTU visant à permettre l'utilisation du tafamidis dans le traitement de l'amylose cardiaque à TTR. En effet, dans cette indication non couverte par l'AMM actuelle de VYNDAQEL et pour laquelle il existe un besoin thérapeutique, le rapport bénéfice/risque du tafamidis est présumé favorable sur la base des données scientifiques d'efficacité et de sécurité disponibles à ce jour (cf. argumentaire, Annexe III).

Outre le présent protocole, il est impératif que le médecin prescrivant du tafamidis dans le cadre de cette RTU prenne connaissance du résumé des caractéristiques du produit (RCP) annexé à l'AMM (cf. http://base-donneespublique.medicaments.gouv.fr/) notamment pour ce qui concerne les contre-indications, mises en garde, et effets indésirables.

Indication de la RTU :

Traitement de l'amylose cardiaque à transthyrétine de forme héréditaire ou sénile, chez les patients adultes présentant une insuffisance cardiaque restrictive de classe NYHA I, II ou III.

Posologie :

La posologie recommandée est de 20 mg ou 80 mg (4 capsules de 20 mg) par jour, par voie orale, en 1 prise par jour.

En l'état actuel des données, les doses de 20 mg et de 80 mg ont un rapport bénéfice/risque présumé positif. Aucune des posologies recommandées n'a prouvé sa supériorité en matière de bénéfice et de risque par rapport à l'autre.

Important : le rapport bénéfice/risque de l'utilisation du tafamidis doit toujours être évalué au regard de l'optimisation des traitements standards de référence en cardiologie et des alternatives thérapeutiques possibles, notamment pour les patients candidats à la transplantation.

Outre le présent protocole, il est impératif que le médecin prescrivant VYNDAQEL dans le cadre de la RTU prenne connaissance du résumé des caractéristiques du produit (RCP) annexé à l'AMM et notamment les contre-indications, mises en garde et effets indésirables.

Conditions de prescription et de délivrance :

Dans le cadre de la RTU, VYNDAQEL est soumis à prescription hospitalière et réservé aux cardiologues spécialisés dans la prise en charge des amyloses cardiaques.

Fibrillation atriale

15 janvier 2020

Madame XX
Née le 17/12/1950

RIVAROXABAN 20 mg : 1 comprimé le soir

ATENOLOL 25 mg : 1 comprimé le matin

FLECAINE LP 50 mg : 1 comprimé par jour

Principales caractéristiques des NACOs			
	Dabigatran	**Rivaroxaban**	**Apixaban**
Action	Anti-IIa (thrombine)	Anti-Xa	Anti-Xa
Posologie	Biprise 150 mg/12 h 110 mg/12 h	Monoprise 20 mg/24 h 15 mg/24 h	Biprise 5 mg/12 h 2,5 mg/12 h
Délai de Cmax	2 h	2-4 h	1-3 h
Demi-vie	12-14 h	9-13 h	8-15 h
Élimination rénale	80 %	66 %	25 %
Étude de Phase III	RE-LY	ROCKET-AF	ARISTOTLE

Tableau I : Propriétés pharmacologiques des NACOs.

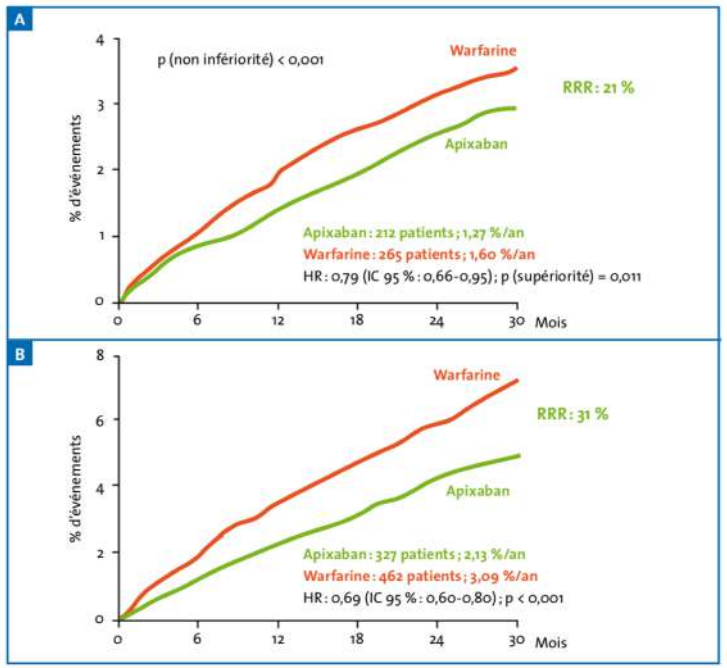


Fig. 3 : Incidence des AVC et embolies périphériques (**A**) et des hémorragies majeures (**B**) sous apixaban *vs* AVK dans l'étude ARISTOTLE.

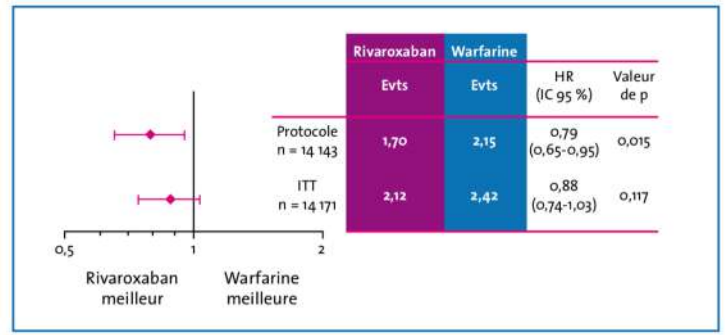


Fig. 2 : Incidence des AVC et embolies périphériques sous rivaroxaban *vs* AVK en analyse perprotocole et en intention de traiter dans l'étude ROCKET-AF.

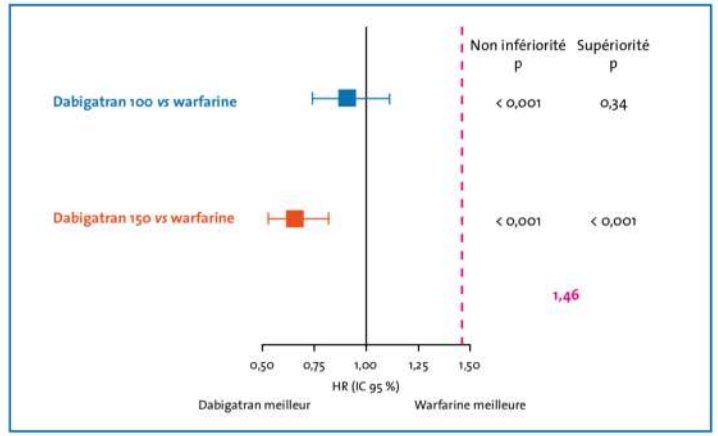
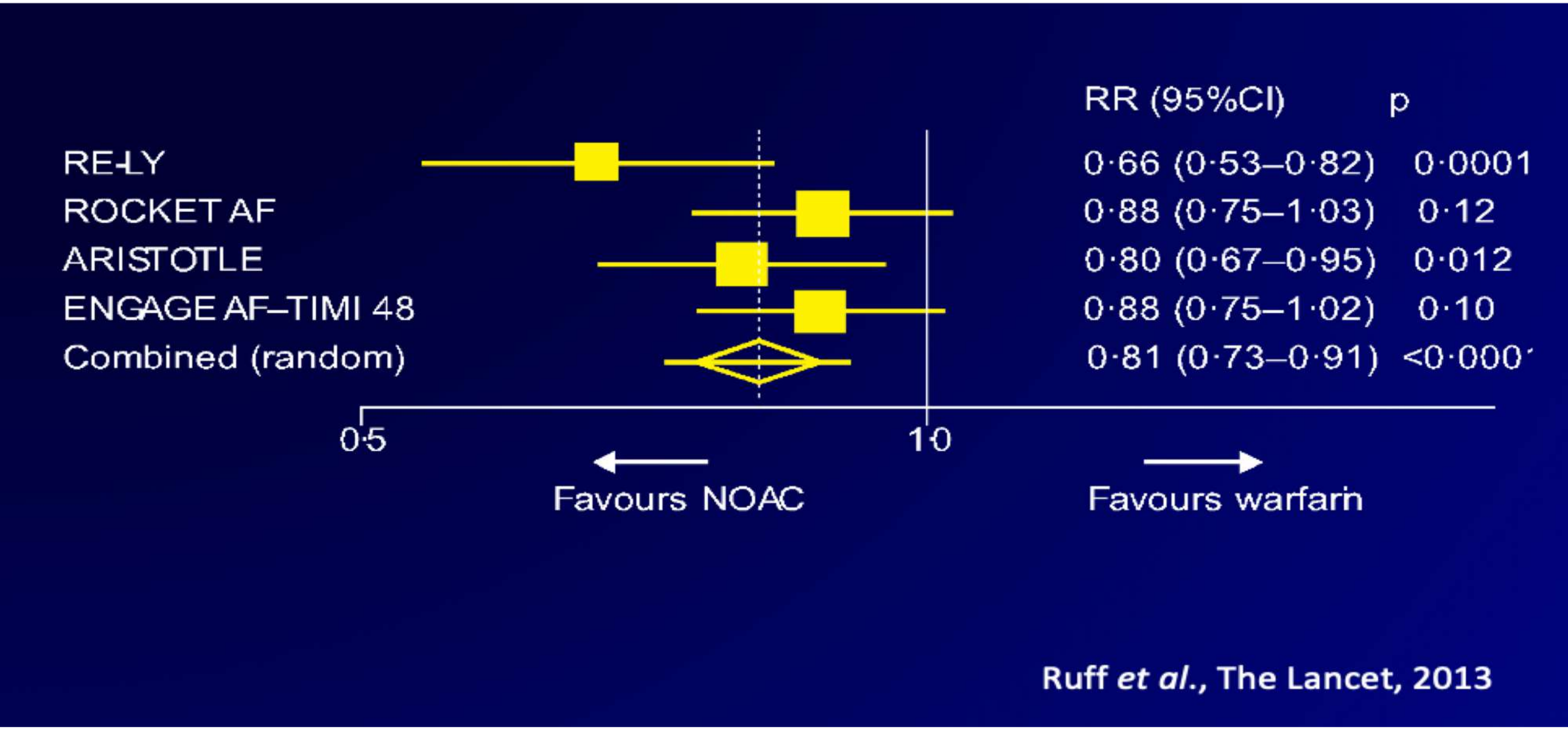
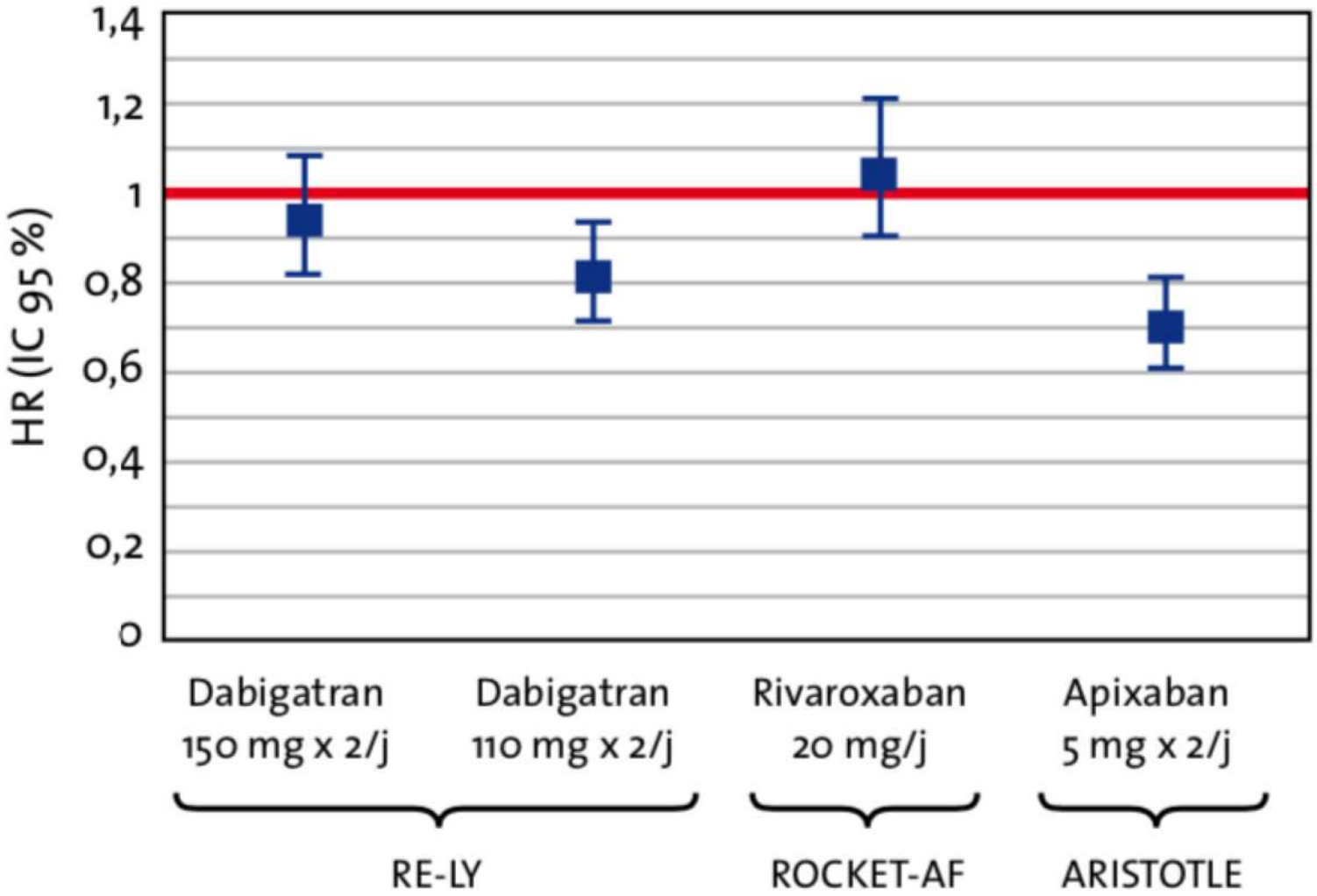


Fig. 1 : Incidence des AVC et embolies périphériques sous dabigatran 150 mg et dabigatran 110 mg *vs* AVK dans l'étude RE-LY.

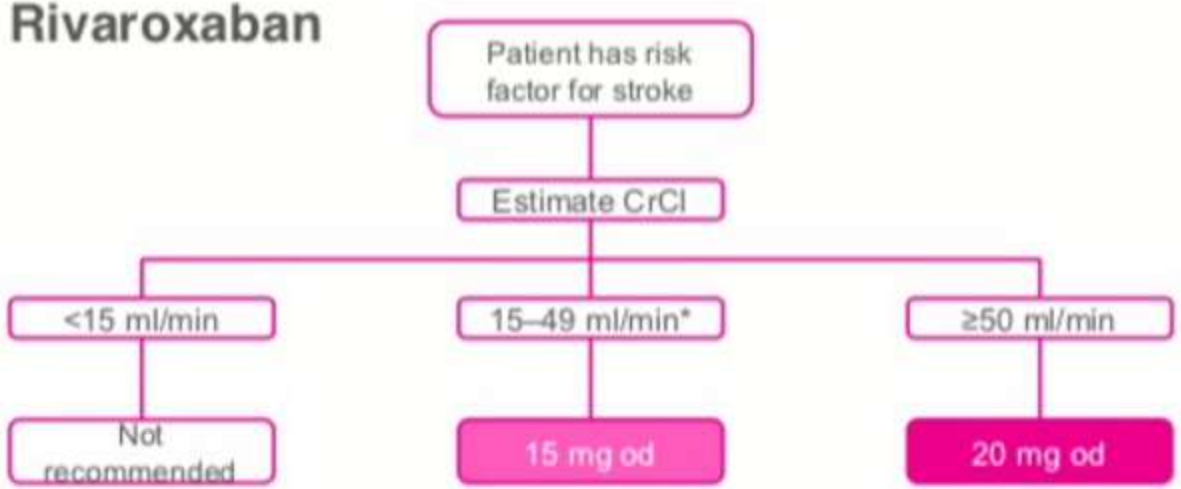


Ruff *et al.*, The Lancet, 2013

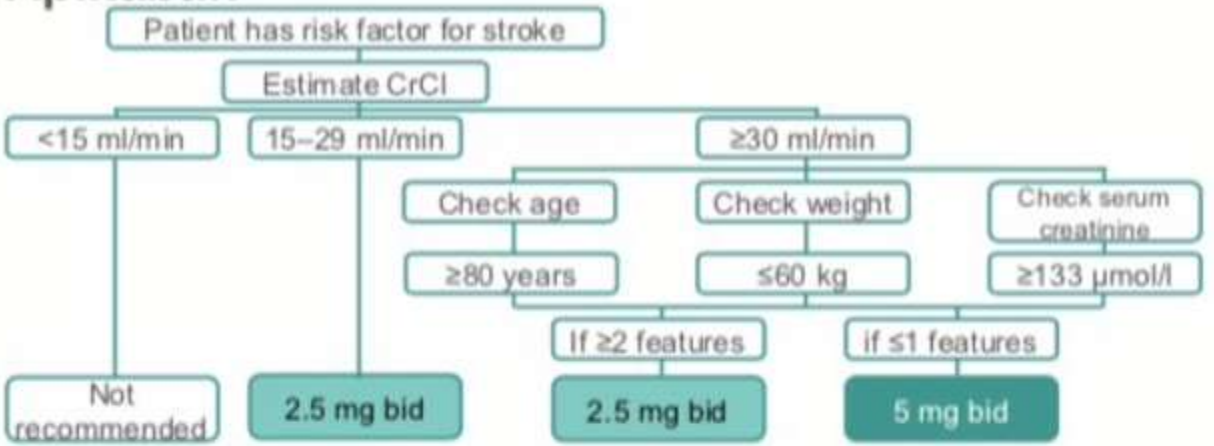
Événements hémorragiques



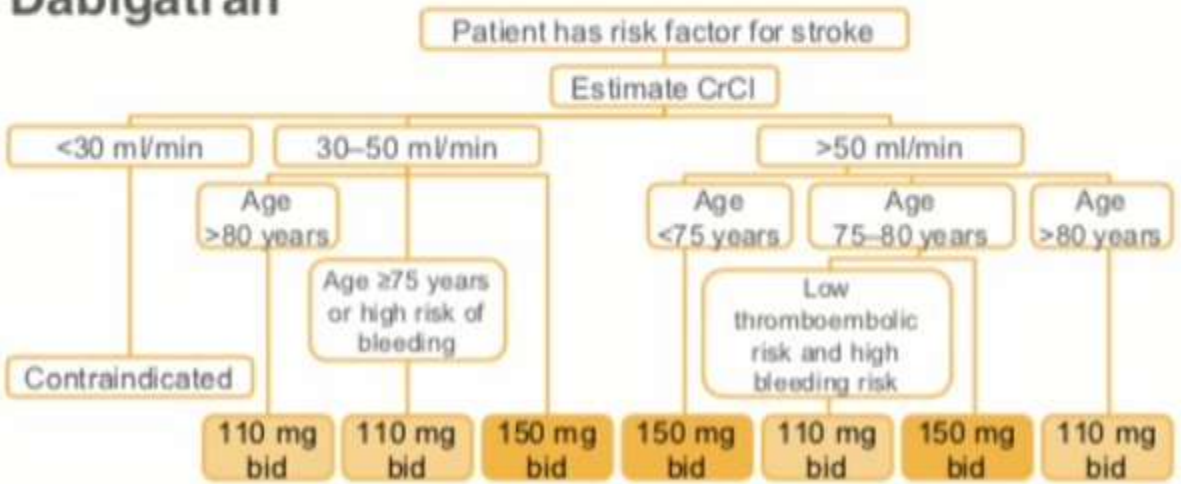
Rivaroxaban



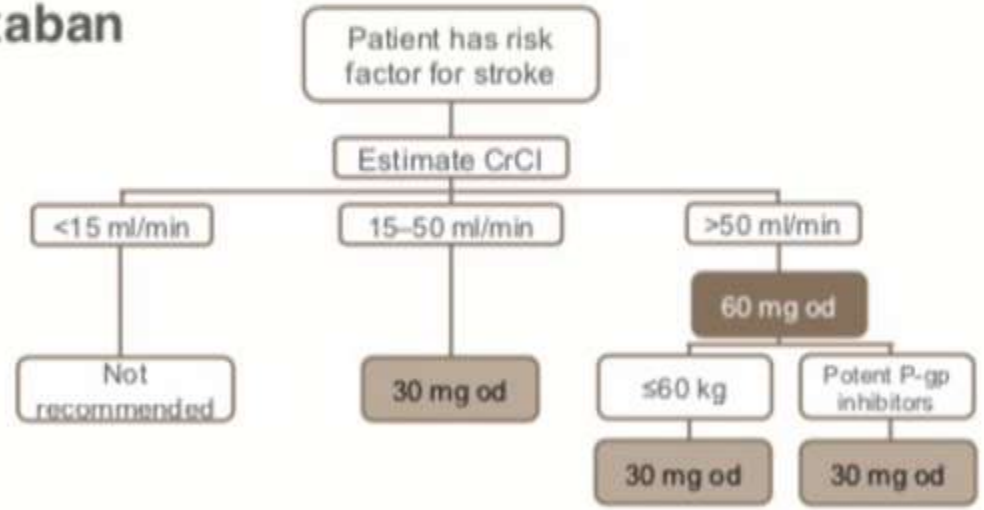
Apixaban



Dabigatran

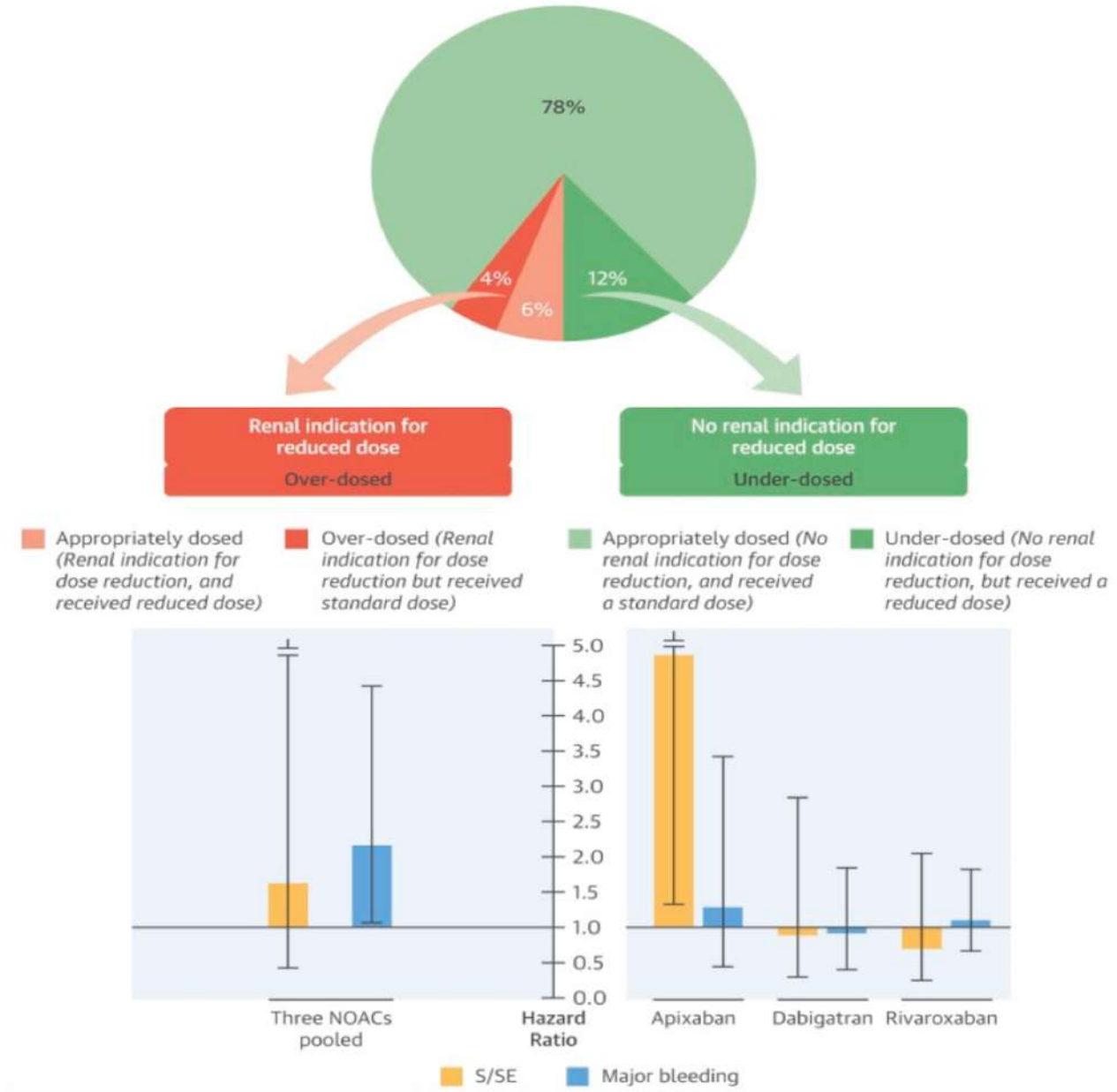


Edoxaban



1. Rivaroxaban SmPC; 2. Apixaban SmPC; 3. Dabigatran SmPC; 4. Edoxaban SmPC

CENTRAL ILLUSTRATION: Prevalence and Impact of Inappropriate NOAC Dosing



Yao, X. et al. J Am Coll Cardiol. 2017;69(23):2779-90.

INFORMATIONS
SÉCURITÉ PATIENTS

INFORMATION TRANSMISE SOUS L'AUTORITE DE L'ANSM

Lettre aux professionnels de santé

1er décembre 2018

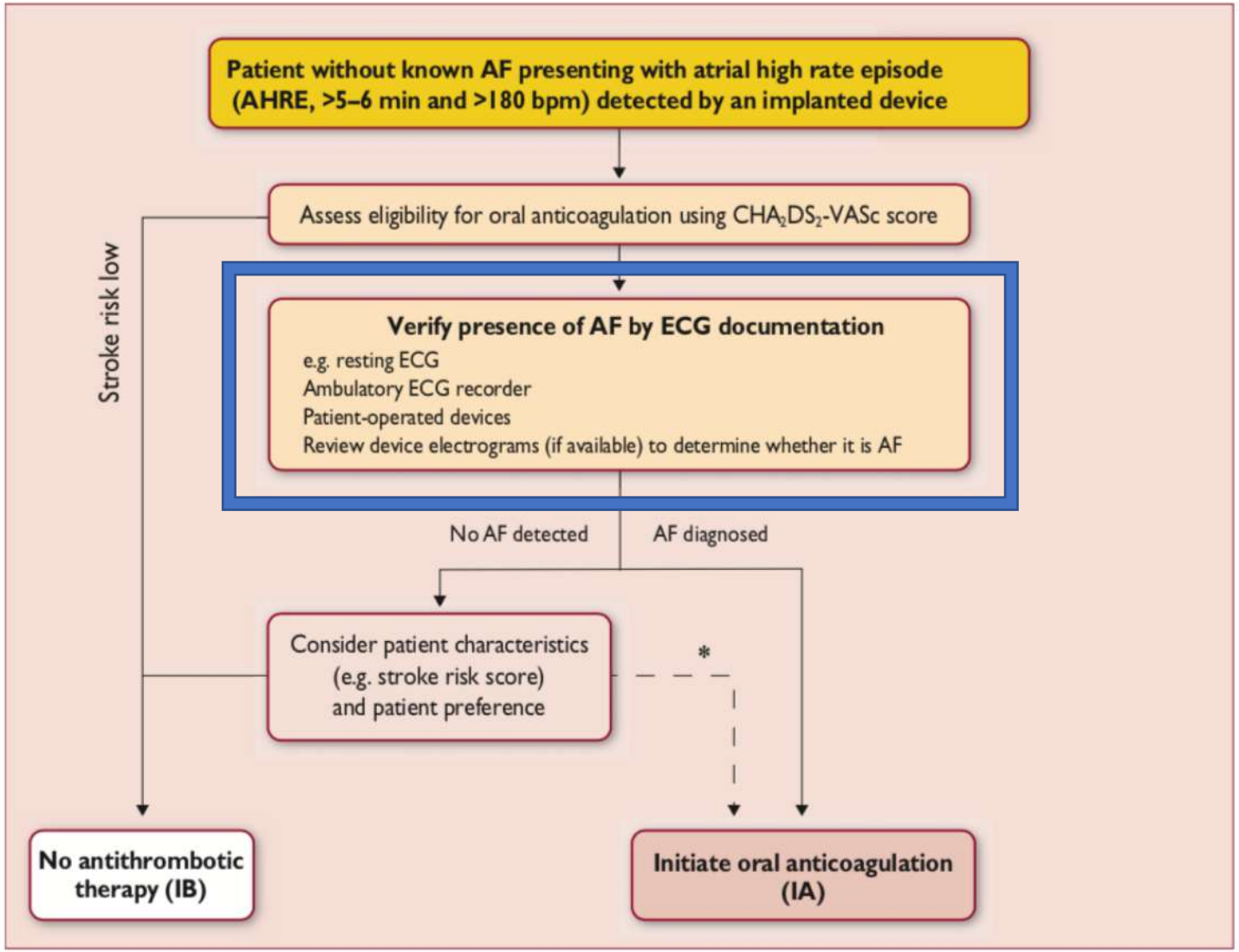
Traitement par antivitamines K (AVK) : nouvelles informations

- **PREVISCAN (fluindione) : Prescription restreinte au seul renouvellement de traitement**
- **COUMADINE, PREVISCAN, SINTROM et MINISINTROM (warfarine, fluindione, acénocoumarol) : Contre-indication au cours de la grossesse**

Information destinée aux cardiologues, médecins généralistes, urgentistes, internistes, gériatres, gynécologues, obstétriciens, sages-femmes, pharmaciens d'officine, pharmaciens hospitaliers.

Résumé

- La spécialité PREVISCAN est à présent **réservée au renouvellement** du traitement des patients équilibrés par fluindione. **L'initiation de traitement par PREVISCAN n'est plus autorisée à partir du 1er décembre 2018.**
- Par ailleurs, **l'utilisation des antivitamines K est désormais contre-indiquée au cours de la grossesse, sauf chez les femmes enceintes portant une valve cardiaque mécanique qui présentent un risque thromboembolique élevé** et pour lesquelles les bénéfices potentiels du traitement l'emportent sur les risques. En cas de poursuite d'un traitement par antivitamine K pendant la grossesse, la patiente doit être pleinement informée des risques pour le fœtus.



AF = atrial fibrillation; AFNET = German Competence NETwork on Atrial Fibrillation; AHRE = atrial high rate episodes; bpm = beats per minute; CHA_2DS_2-VASc = Congestive Heart failure, hypertension, Age ≥75 (doubled), Diabetes, Stroke (doubled), Vascular disease, Age 65–74, and Sex (female); ECG = electrocardiogram; EHRA = European Heart Rhythm Association.

*In rare individual circumstances, oral anticoagulation may be considered in patients with AHRE, but without diagnosed AF. This clearly needs discussion with the patient and careful evaluation of perceived benefit and risk.

[a]Adapted from the report of the 3rd AFNET/EHRA consensus conference.[150]

Figure 3 Management of AHRE detected by an implanted device. Adapted from the report of the 3rd AFNET/EHRA consensus conference.[150]

ESC Guidelines FA, EHJ, 2016

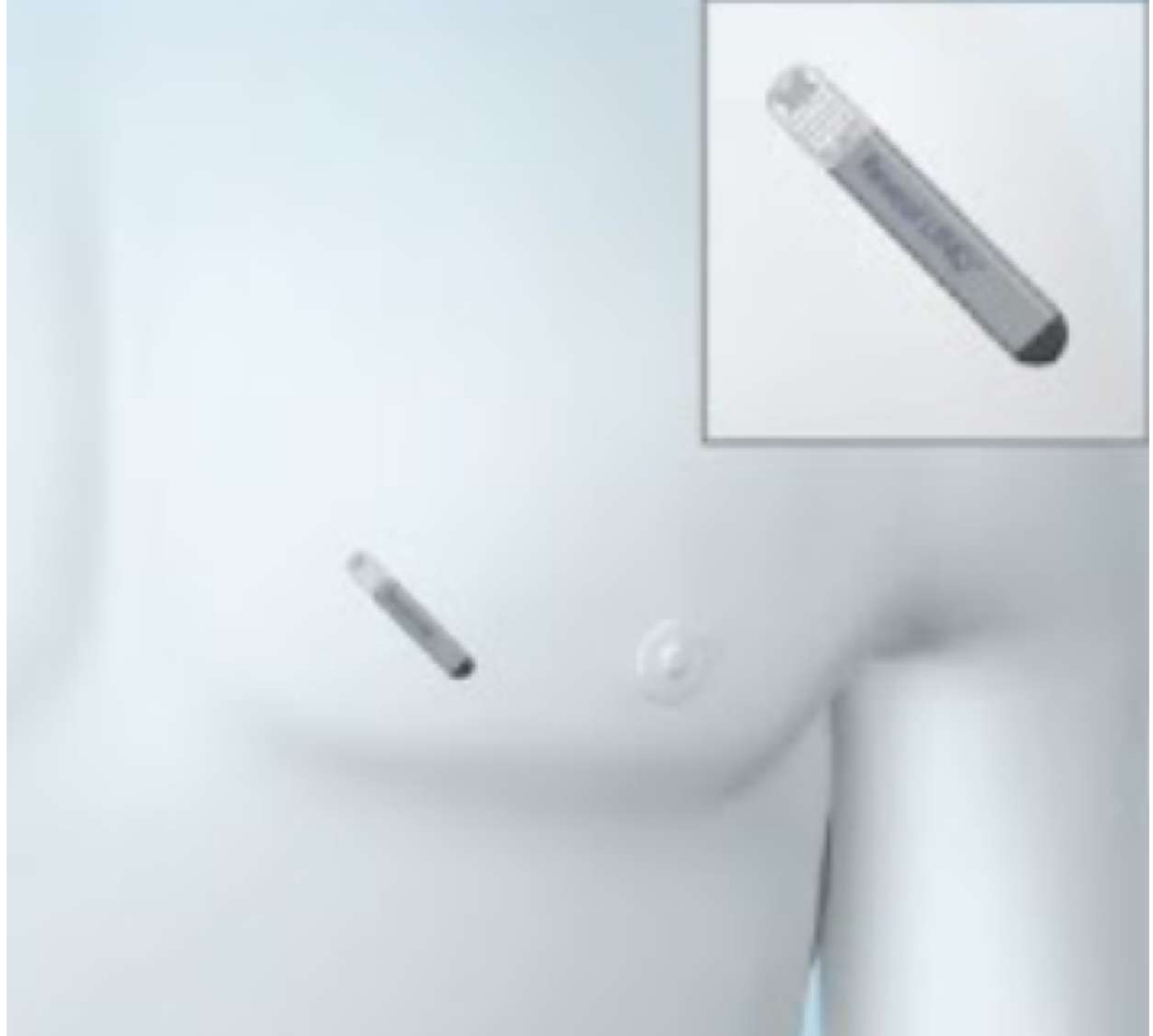
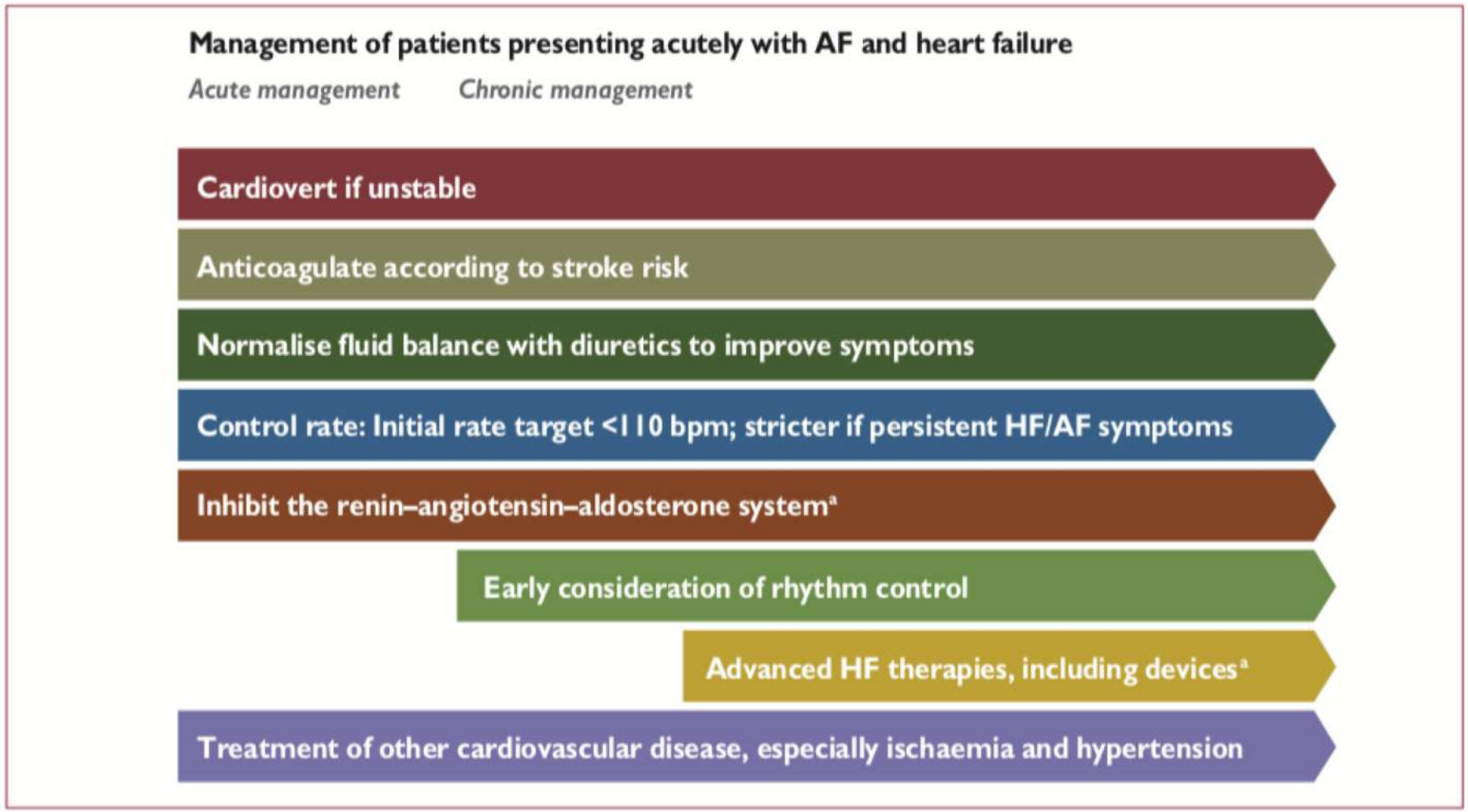


Table 8 Cardiovascular and other conditions independently associated with atrial fibrillation

Characteristic/comorbidity	Association with AF
Genetic predisposition (based on multiple common gene variants associated with AF)[64]	HR range 0.4–3.2
Older age[19] 50–59 years 60–69 years 70–79 years 80–89 years	HR: 1.00 (reference) 4.98 (95% CI 3.49–7.10) 7.35 (95% CI 5.28–10.2) 9.33 (95% CI 6.68–13.0)
Hypertension (treated) vs. none[19]	HR 1.32 (95% CI 1.08–1.60)
Heart failure vs. none[19]	HR 1.43 (95% CI 0.85–2.40)
Valvular heart disease vs. none[205]	RR 2.42 (95% CI 1.62–3.60)
Myocardial infarction vs. none[19]	HR 1.46 (95% CI 1.07–1.98)
Thyroid dysfunction[206,207] Hypothyroidism Subclinical hyperthyroidism Overt hyperthyroidism	(reference: euthyroid) HR 1.23 (95% CI 0.77–1.97) RR 1.31 (95% CI 1.19–1.44) RR 1.42 (95% CI 1.22–1.63)
Obesity[19,208] None (BMI <25 kg/m²) Overweight (BMI 25–30 kg/m²) Obese (BMI ≥31 kg/m²)	HR: 1.00 (reference) 1.13 (95% CI 0.87–1.46) 1.37 (95% CI 1.05–1.78)
Diabetes mellitus vs. none[19]	HR 1.25 (95% CI 0.98–1.60)
Chronic obstructive pulmonary disease[209] FEV1 ≥80% FEV1 60–80% FEV1 <60%	RR: 1.00 (reference) 1.28 (95% CI 0.79–2.06) 2.53 (95% CI 1.45–4.42)
Obstructive sleep apnoea vs. none[210]	HR 2.18 (95% CI 1.34–3.54)
Chronic kidney disease[211] None Stage 1 or 2 Stage 3 Stage 4 or 5	OR: 1.00 (reference) 2.67 (95% CI 2.04–3.48) 1.68 (95% CI 1.26–2.24) 3.52 (95% CI 1.73–7.15)
Smoking[212] Never Former Current	HR: 1.00 (reference) 1.32 (95% CI 1.10–1.57) 2.05 (95% CI 1.71–2.47)
Alcohol consumption[213] None 1– 6 drinks/week 7–14 drinks/week 15–21 drinks/week >21 drinks/week	RR: 1.00 (reference) 1.01 (95% CI 0.94–1.09) 1.07 (95% CI 0.98–1.17) 1.14 (95% CI 1.01–1.28) 1.39 (95% CI 1.22–1.58)
Habitual vigorous exercise[214] Non-exercisers <1 day/week 1–2 days/week 3–4 days/week 5–7 days/week	RR: 1.00 (reference) 0.90 (95% CI 0.68–1.20) 1.09 (95% CI 0.95–1.26) 1.04 (95% CI 0.91–1.19) 1.20 (95% CI 1.02–1.41)

AF = atrial fibrillation; BMI = body mass index; CI = confidence interval; FEV1 = forced expiratory volume in 1 second; HR = hazard ratio; OR = odds ratio; RR = risk ratio.

ESC Guidelines FA, EHJ, 2016



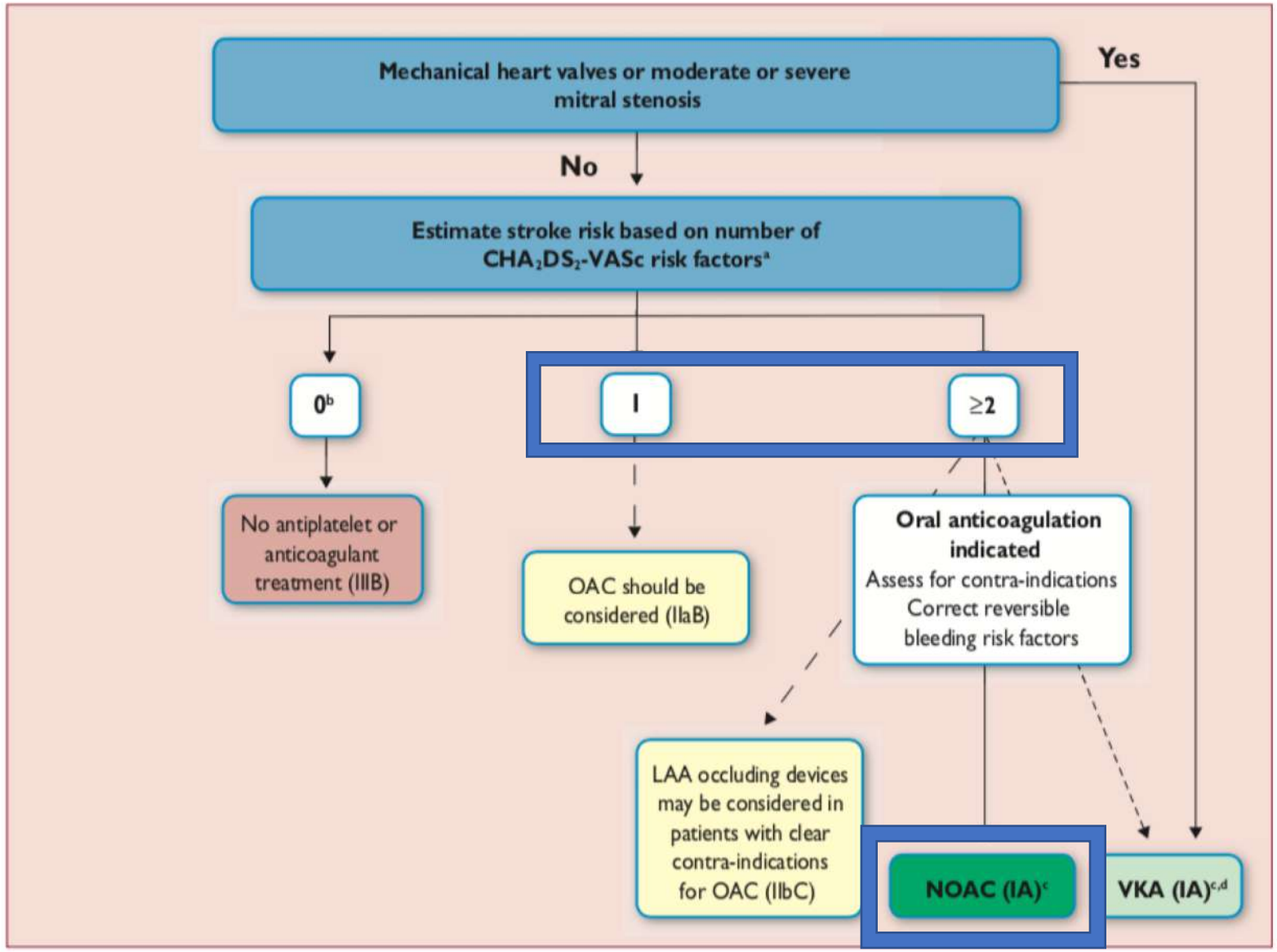
ACE = angiotensin-converting enzyme; AF = atrial fibrillation; ARB = angiotensin receptor blocker; ARNI = angiotensin receptor neprilysin inhibition; bpm = beats per minute; HF = heart failure.

[a]In patients with heart failure and reduced ejection fraction. Also consider combined ARNI in patients able to tolerate an ACE inhibitor or ARB with ongoing symptoms.

*Adapted from Kotecha and Piccini.[218]

Figure 4 Initial management of newly diagnosed concomitant heart failure and AF. Adapted from Kotecha and Piccini.[218]

ESC Guidelines FA, EHJ, 2016



AF = atrial fibrillation; LAA = left atrial appendage; NOAC = non-vitamin K antagonist oral anticoagulant; OAC = oral anticoagulation; VKA = vitamin K antagonist.
[a]Congestive heart failure, Hypertension, Age ≥75 years (2 points), Diabetes, prior Sstroke/TIA/embolus (2 points), Vascular disease, age 65–74 years, female Sex.
[b]Includes women without other stroke risk factors.
[c]IIaB for women with only one additional stroke risk factor.
[d]IB for patients with mechanical heart valves or mitral stenosis.

Figure 8 Stroke prevention in atrial fibrillation.

ESC Guidelines FA, EHJ, 2016

Table 11 Clinical risk factors for stroke, transient ischaemic attack, and systemic embolism in the CHA_2DS_2-VASc score

CHA_2DS_2-VASc risk factor	Points
Congestive heart failure Signs/symptoms of heart failure or objective evidence of reduced left-ventricular ejection fraction	+1
Hypertension Resting blood pressure >140/90 mmHg on at least two occasions or current antihypertensive treatment	+1
Age 75 years or older	+2
Diabetes mellitus Fasting glucose >125 mg/dL (7 mmol/L) or treatment with oral hypoglycaemic agent and/or insulin	+1
Previous stroke, transient ischaemic attack, or thromboembolism	+2
Vascular disease Previous myocardial infarction, peripheral artery disease, or aortic plaque	+1
Age 65–74 years	+1
Sex category (female)	+1

CHA_2DS_2-VASc = Congestive Heart failure, hypertension, Age ≥75 (doubled), Diabetes, Stroke (doubled), Vascular disease, Age 65–74, and Sex (female).

ESC Guidelines FA, EHJ, 2016

CHA_2DS_2-VASc score of 1, considering individual characteristics and patient preferences.	IIa	B	375–3
Oral anticoagulation therapy to prevent thromboembolism should be considered in female AF patients with a CHA_2DS_2-VASc score of 2, considering individual characteristics and patient preferences.	IIa	B	371, 3 377
Vitamin K antagonist therapy (INR 2.0–3.0 or higher) is recommended for stroke prevention in AF patients with moderate-to-severe mitral stenosis or mechanical heart valves.	I	B	274 435–4
When oral anticoagulation is initiated in a patient with AF who is eligible for a NOAC (apixaban, dabigatran, edoxaban, or rivaroxaban), a NOAC is recommended in preference to a Vitamin K antagonist.	I	A	39, 318–3 404
When patients are treated with a vitamin K antagonist, time in therapeutic range (TTR) should be kept as high as possible and closely monitored.	I	A	395, 4 441-4
AF patients already on treatment with a vitamin K antagonist may be considered for NOAC treatment if TTR is not well controlled despite good adherence, or if patient preference without contra-indications to NOAC (e.g. prosthetic valve).	IIb	A	39, 31 319, 4 408
Combinations of oral anticoagulants and platelet inhibitors increase bleeding risk and should be avoided in AF patients without another indication for platelet inhibition.	III (harm)	B	429, 4
In male or female AF patients without additional stroke risk factors, anticoagulant or antiplatelet therapy is not recommended for stroke prevention.	III (harm)	B	368, 3 376, 3
Antiplatelet monotherapy is not recommended for stroke prevention in AF patients, regardless of stroke risk.	III (harm)	A	38, 42 430
NOACs (apixaban, dabigatran, edoxaban, and rivaroxaban) are not recommended in patients with mechanical heart valves (Level of evidence B) or moderate-to-severe mitral stenosis (Level of evidence C).	III (harm)	B C	318–3 400, 4

ESC Guidelines FA, EHJ, 2016

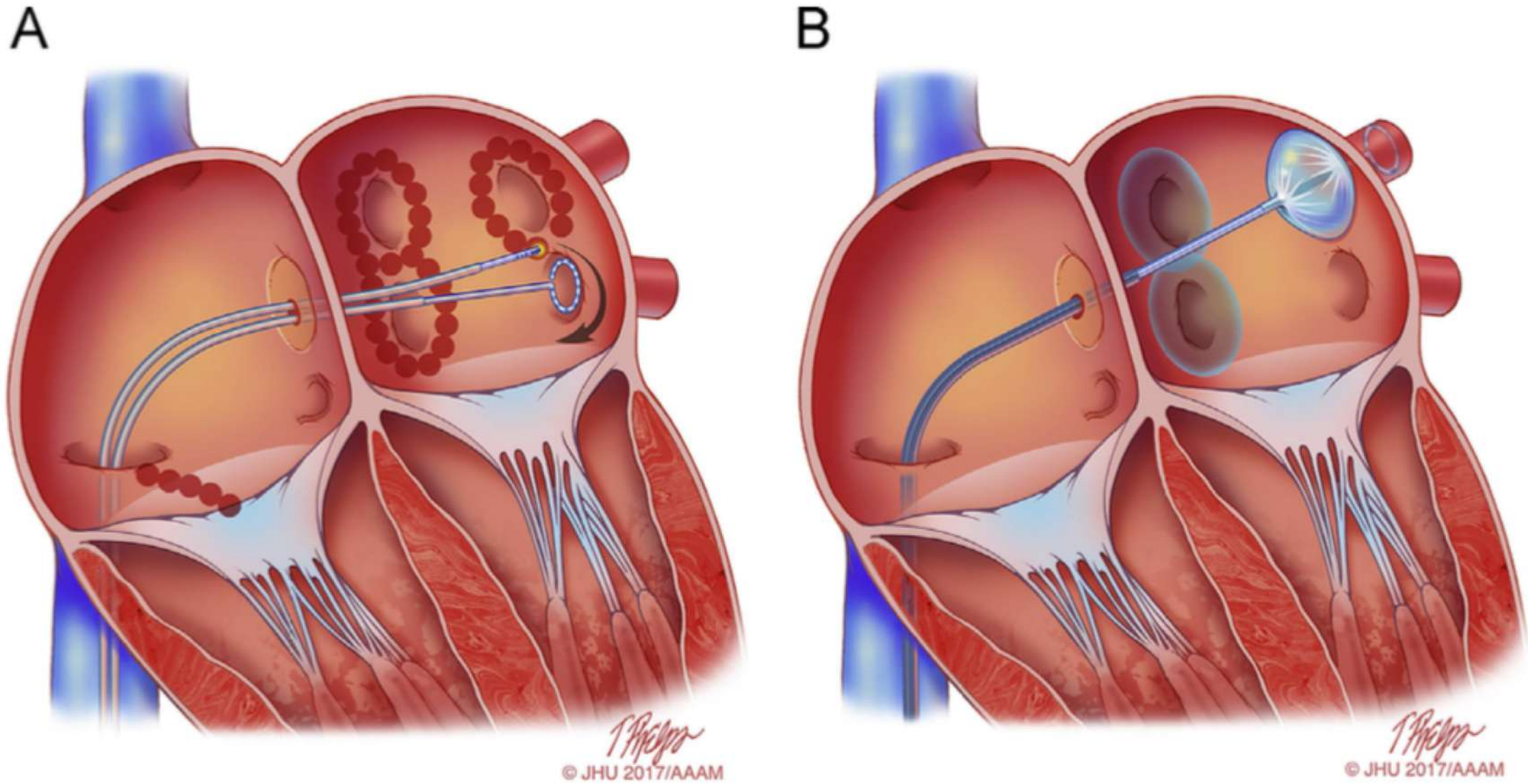
Contrôle du poids

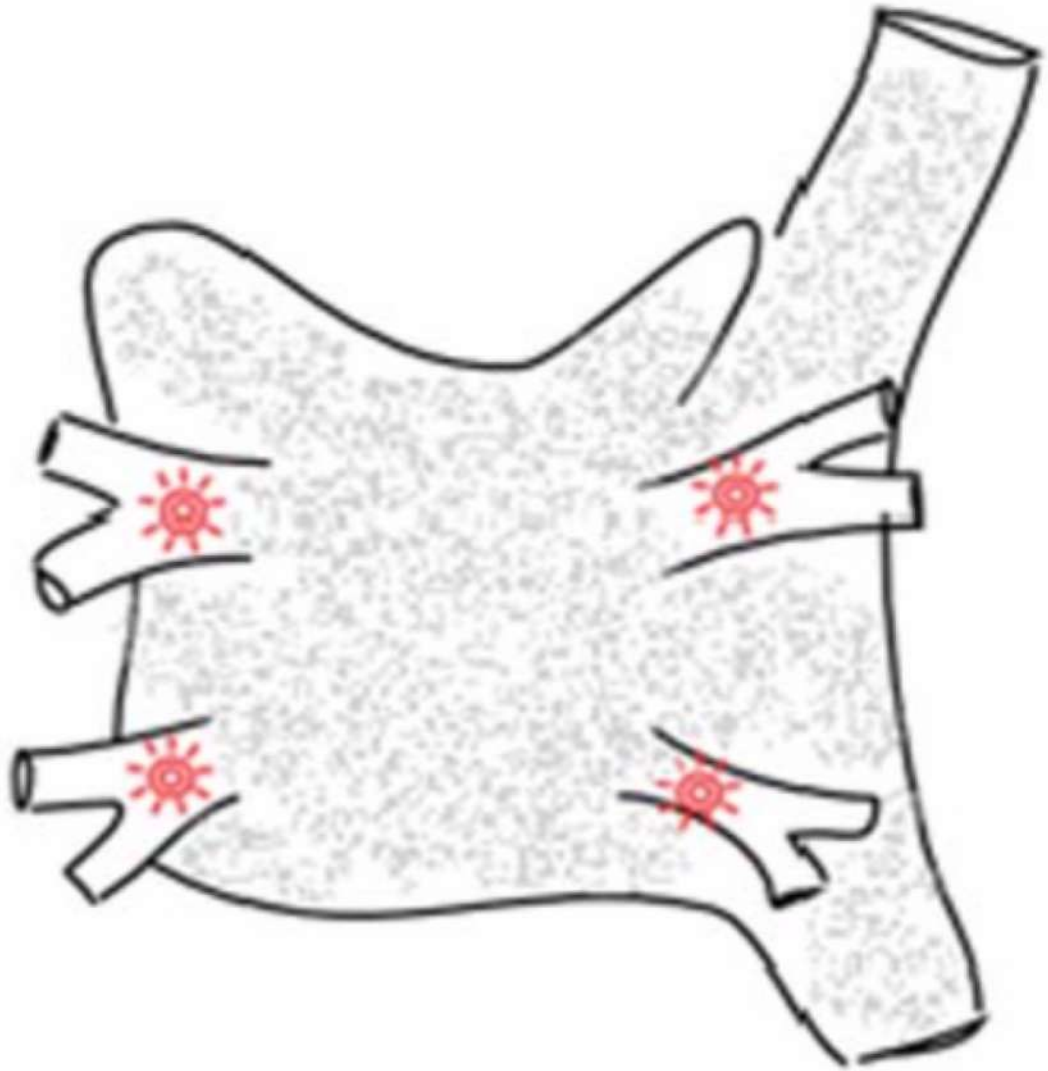
Contrôle de la PA

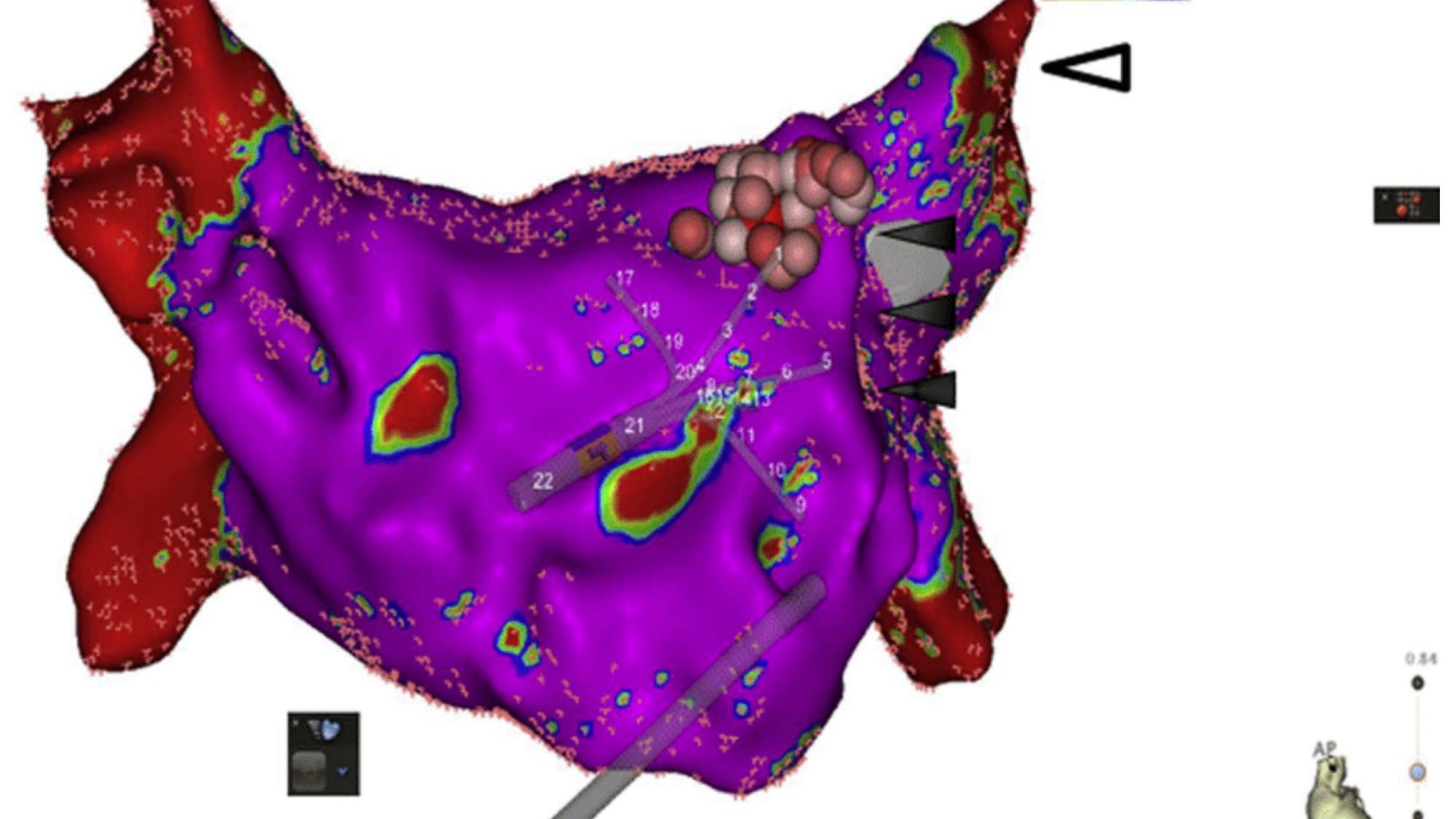

MEDICAL
MEDICAL
MEDICAL
MEDICAL
MEDICAL
MEDICAL

ESC 2019: Catheter ablation may be up to 10 times more effective than drug therapy alone at delaying AF progression

2nd September 2019 2420


A
B
© JHU 2017/AAAM
© JHU 2017/AAAM

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AP

Coronaropathies

titre 1
titre 2
titre 2

cp-ville
tel
mention secretariat
mention rendez-vous

10 janvier 2020

ALD 100 %

Monsieur XX
né le 12/10/1952

ACIDE ACETYLSALICYLIQUE 75 mg : 1 sachet par jour - AU LONG COURS

TICAGRELOR 90 mg : 1 comprimé matin et soir pendant 12 mois

BISOPROLOL 5 mg : 1 comprimé le matin

PERINDOPRIL 4 mg : 1 comprimé le soir

ATORVASTATINE 80 mg : 1 comprimé le soir

PANTOPRAZOLE 20 mg : 1 comprimé par jour

NATISPRAY : si douleurs thoraciques

Régime peu salé, méditérranéen
Sevrage tabagique

HAUTE AUTORITÉ DE SANTÉ

COMMISSION DE LA TRANSPARENCE

Avis
11 janvier 2017

Date d'examen par la Commission : 21 septembre 2016

L'avis de la commission de la Transparence adopté le 5 octobre 2016 a fait l'objet d'une audition le 11 janvier 2017.

ticagrélor

BRILIQUE 60 mg, comprimés pelliculés
Boite de 56 comprimés (CIP : 34009 300 572 9 2)
Boite de 60 comprimés (CIP : 34009 300 573 0 8)
Boite de 168 comprimés (CIP : 34009 300 573 1 5)
Boite de 180 comprimés (CIP : 34009 300 573 2 2)

Laboratoire ASTRAZENECA

Code ATC	**B01AC24 (antithrombotiques, inhibiteurs de l'agrégation plaquettaire héparine exclue)**
Motif de l'examen	**Inscription**
Listes concernées	**Sécurité Sociale** (CSS L.162-17) **Collectivités** (CSP L.5123-2)
Indication concernée	**« BRILIQUE, en association avec l'acide acétylsalicylique (AAS), est indiqué dans la prévention des événements athérothrombotiques chez les patients adultes ayant des antécédents d'infarctus du myocarde (IDM) et à haut risque de développer un événement athérothrombotique ».**

SMR	**<u>Insuffisant</u> pour justifier une prise en charge par la solidarité nationale, en tant que traitement au long cours, au delà d'un an, chez des patients ayant des antécédents d'IDM et à haut risque de développer un événement athérothrombotique.**

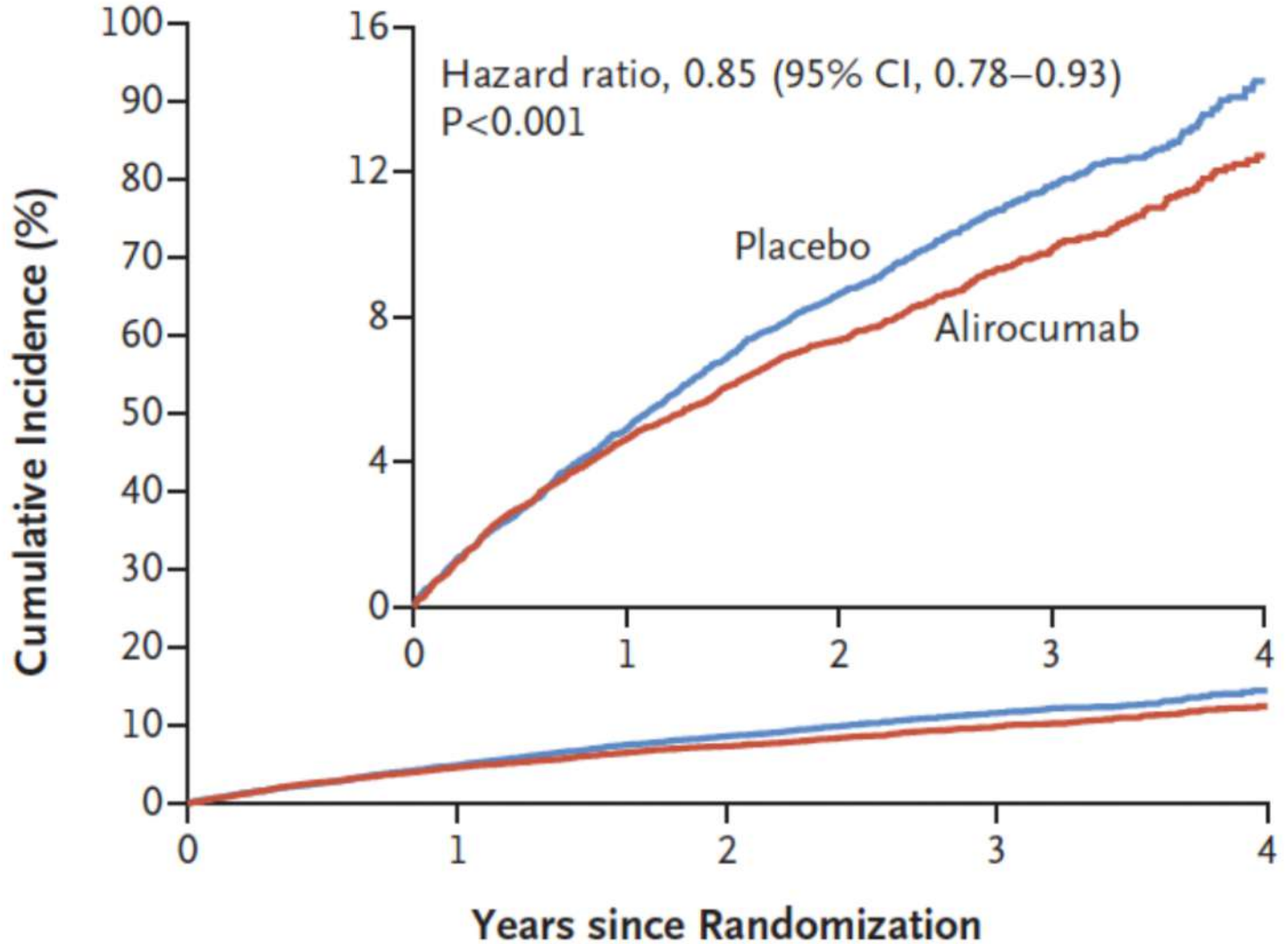
Recommendations for lipid-lowering therapy in very-high-risk patients with acute coronary syndromes

Recommendations	Class[a]	Level[b]
In all ACS patients without any contraindication or definite history of intolerance, it is recommended that high-dose statin therapy is initiated or continued as early as possible, regardless of initial LDL-C values.[438,440,442]	I	A
Lipid levels should be re-evaluated 4–6 weeks after ACS to determine whether a reduction of ≥50% from baseline and goal levels of LDL-C <1.4 mmol/L (<55 mg/dL) have been achieved. Safety issues need to be assessed at this time and statin treatment doses adapted accordingly	IIa	C
If the LDL-C goal is not achieved after 4–6 weeks with the maximally tolerated statin dose, combination with ezetimibe is recommended.[33]	I	B
If the LDL-C goal is not achieved after 4–6 weeks despite maximal tolerated statin therapy and ezetimibe, the addition of a PCSK9 inhibitor is recommended.[119,120]	I	B
in patients with confirmed statin intolerance or in patients in whom a statin is contraindicated, ezetimibe should be considered.	IIa	C
For patients who present with an ACS and whose LDL-C levels are not at goal, despite already taking a maximally tolerated statin dose and ezetimibe, the addition of a PCSK9 inhibitor early after the event (during hospitalization for the ACS event if possible) should be considered.	IIa	C

ESC Guidelines, Management of dyslipidemias : lipid modification to reduce cardiovascular risk, EHJ, 2019

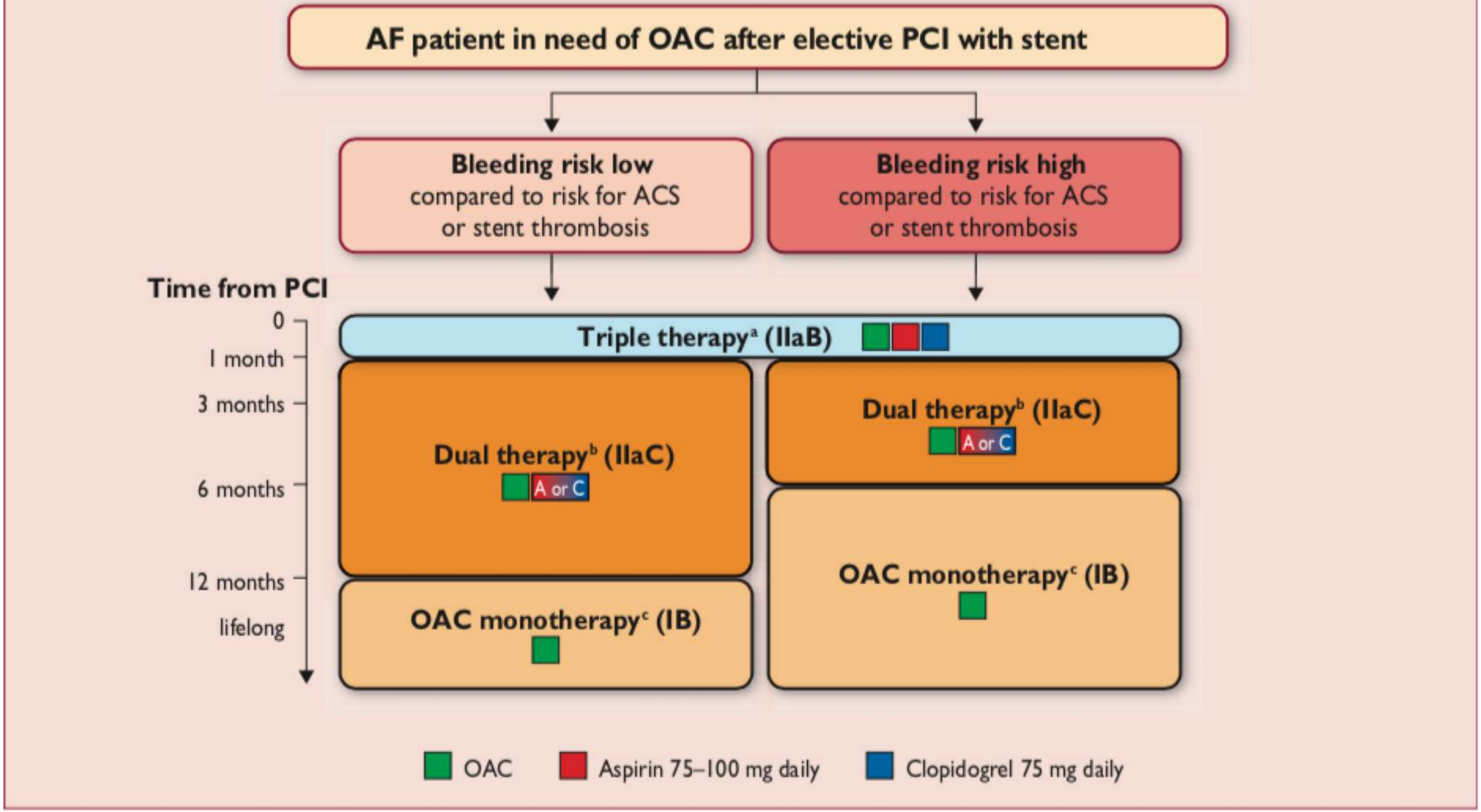
Alirocumab and Cardiovascular Outcomes after Acute Coronary Syndrome

G.G. Schwartz, P.G. Steg, M. Szarek, D.L. Bhatt, V.A. Bittner, R. Diaz, J.M. Edelberg, S.G. Goodman, C. Hanotin, R.A. Harrington, J.W. Jukema, G. Lecorps, K.W. Mahaffey, A. Moryusef, R. Pordy, K. Quintero, M.T. Roe, W.J. Sasiela, J.-F. Tamby, P. Tricoci, H.D. White, and A.M. Zeiher, for the ODYSSEY OUTCOMES Committees and Investigators*



No. at Risk					
Placebo	9462	8805	8201	3471	629
Alirocumab	9462	8846	8345	3574	653

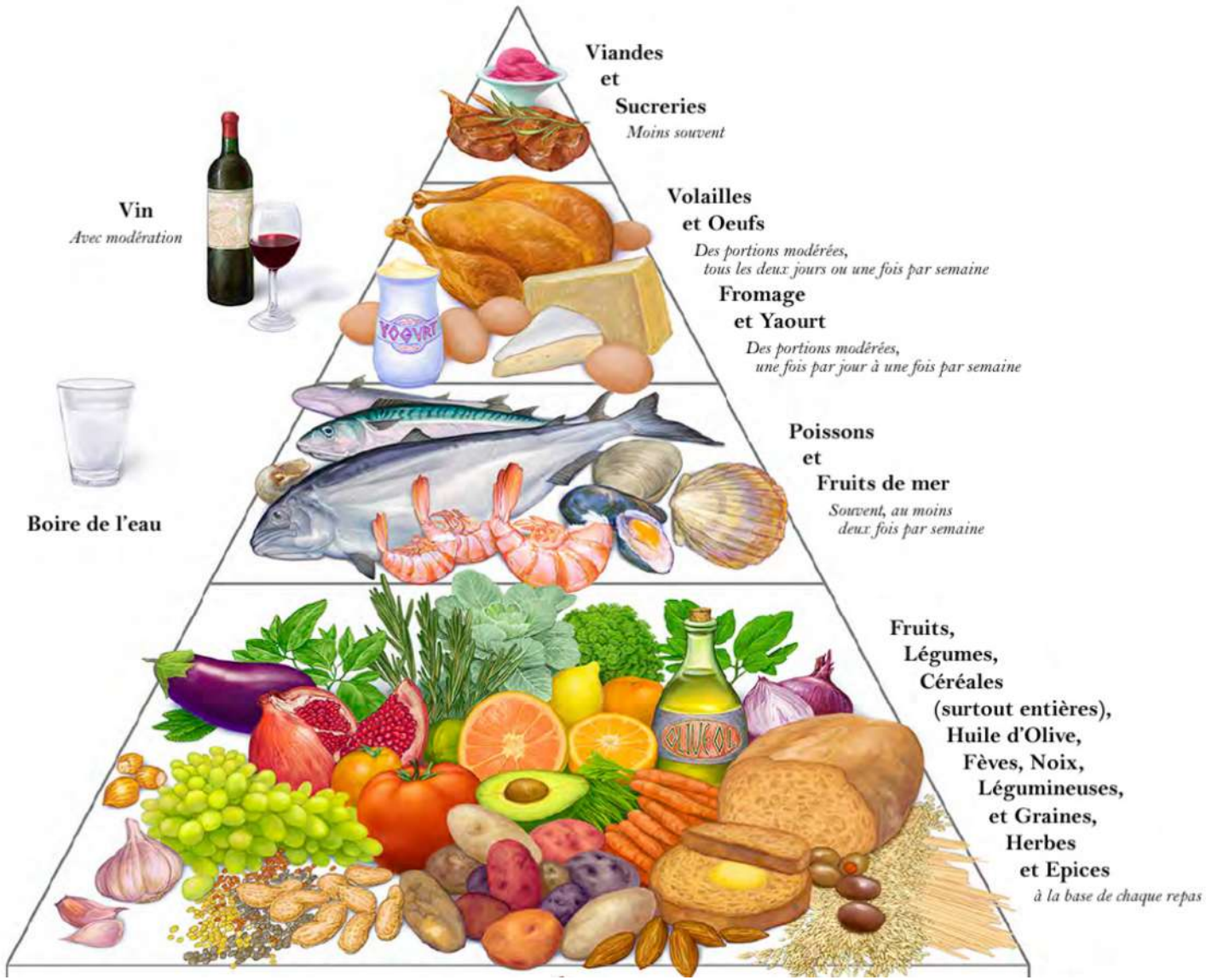
NEJM, 2018



ACS = acute coronary syndrome; AF = atrial fibrillation; OAC = oral anticoagulation (using vitamin K antagonists or non-vitamin K antagonist oral anticoagulants); PCI = percutaneous coronary intervention.

[a]Dual therapy with OAC and aspirin or clopidogrel may be considered in selected patients.

ESC Guidelines FA, EHJ, 2016


Viandes
et
Sucreries
Moins souvent
Volailles
et Oeufs
Des portions modérées,
tous les deux jours ou une fois par semaine
Fromage
et Yaourt
Des portions modérées,
une fois par jour à une fois par semaine
Poissons
et
Fruits de mer
Souvent, au moins
deux fois par semaine
Fruits,
Légumes,
Céréales
(surtout entières),
Huile d'Olive,
Fèves, Noix,
Légumineuses,
et Graines,
Herbes
et Epices
à la base de chaque repas
Vin
Avec modération
Boire de l'eau
YOGURT
OLIVE OIL

Dyslipidémies

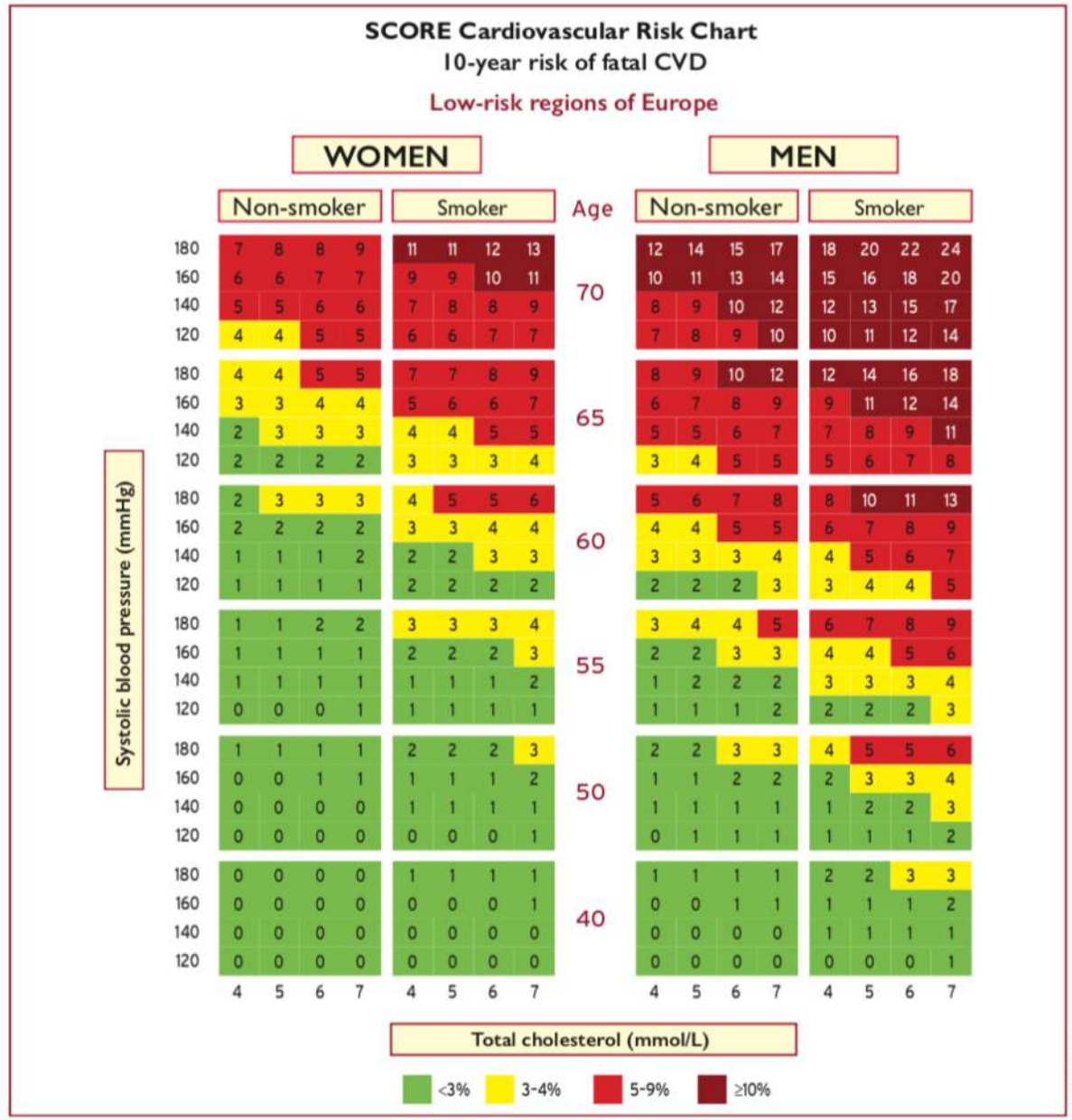


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Table 4 Cardiovascular risk categories

Very-high-risk	People with any of the following: Documented ASCVD, either clinical or unequivocal on imaging. Documented ASCVD includes previous ACS (MI or unstable angina), stable angina, coronary revascularization (PCI, CABG, and other arterial revascularization procedures), stroke and TIA, and peripheral arterial disease. Unequivocally documented ASCVD on imaging includes these findings that are known to be predictive of clinical events, such as significant plaque on coronary angiography or CT scan (multivessel coronary disease with two major epicardial arteries having >50% stenosis), or on carotid ultrasound. DM with target organ damage,[a] or at least three major risk factors, or early onset of T1DM of long duration (>20 years). Severe CKD (eGFR <30 mL/min/1.73 m^2). A calculated SCORE ≥10% for 10-year risk of fatal CVD. FH with ASCVD or with another major risk factor.
High-risk	People with: Markedly elevated single risk factors, in particular TC >8 mmol/L (>310 mg/dL), LDL-C >4.9 mmol/L (>190 mg/dL), or BP ≥180/110 mmHg. Patients with FH without other major risk factors. Patients with DM without target organ damage,[a] with DM duration ≥10 years or another additional risk factor. Moderate CKD (eGFR 30–59 mL/min/1.73 m^2). A calculated SCORE ≥5% and <10% for 10-year risk of fatal CVD.
Moderate-risk	Young patients (T1DM <35 years; T2DM <50 years) with DM duration <10 years, without other risk factors. Calculated SCORE ≥1 % and <5% for 10-year risk of fatal CVD.
Low-risk	Calculated SCORE <1% for 10-year risk of fatal CVD.

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Table 5 Intervention strategies as a function of total cardiovascular risk and untreated low-density lipoprotein cholesterol levels

	Total CV risk (SCORE) %	Untreated LDL-C levels					
		<1.4 mmol/L (55 mg/dL)	1.4 to <1.8 mmol/L (55 to <70 mg/dL)	1.8 to <2.6 mmol/L (70 to <100 mg/dL)	2.6 to <3.0 mmol/L (100 to <116 mg/dL)	3.0 to <4.9 mmol/L (116 to <190 mg/dL)	≥4.9 mmol/L (≥190 mg/dL)
Primary prevention	<1, low-risk	Lifestyle advice	Lifestyle advice	Lifestyle advice	Lifestyle advice	Lifestyle intervention, consider adding drug if uncontrolled	Lifestyle intervention and concomitant drug intervention
	Class[a]/Level[b]	I/C	I/C	I/C	I/C	IIa/A	IIa/A
	≥1 to <5, or moderate risk (see *Table 4*)	Lifestyle advice	Lifestyle advice	Lifestyle advice	Lifestyle intervention, consider adding drug if uncontrolled	Lifestyle intervention, consider adding drug if uncontrolled	Lifestyle intervention and concomitant drug intervention
	Class[a]/Level[b]	I/C	I/C	IIa/A	IIa/A	IIa/A	IIa/A
	≥5 to <10, or high-risk (see *Table 4*)	Lifestyle advice	Lifestyle advice	Lifestyle intervention, consider adding drug if uncontrolled	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention
	Class[a]/Level[b]	IIa/A	IIa/A	IIa/A	I/A	I/A	I/A
	≥10, or at very-high risk due to a risk condition (see *Table 4*)	Lifestyle advice	Lifestyle intervention, consider adding drug if uncontrolled	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention
	Class[a]/Level[b]	IIa/B	IIa/A	I/A	I/A	I/A	I/A
Secondary prevention	Very-high-risk	Lifestyle intervention, consider adding drug if uncontrolled	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention	Lifestyle intervention and concomitant drug intervention
	Class[a]/Level[b]	IIa/A	I/A	I/A	I/A	I/A	I/A

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Recommendations for treatment goals for low-density lipoprotein cholesterol

Recommendations	Class[a]	Level[b]
In secondary prevention for patients at very-high risk,[c] an LDL-C reduction of ≥50% from baseline[d] and an LDL-C goal of <1.4 mmol/L (<55 mg/dL) are recommended.[33–35,119,120]	I	A
In primary prevention for individuals at very-high risk but without FH,[c] an LDL-C reduction of ≥50% from baseline[d] and an LDL-C goal of <1.4 mmol/L (<55 mg/dL) are recommended.[34–36]	I	C
In primary prevention for individuals with FH at very-high risk, an LDL-C reduction of ≥50% from baseline and an LDL-C goal of <1.4 mmol/L (<55 mg/dL) should be considered.	IIa	C
For patients with ASCVD who experience a second vascular event within 2 years (not necessarily of the same type as the first event) while taking maximally tolerated statin-based therapy, an LDL-C goal of <1.0 mmol/L (<40 mg/dL) may be considered.[119,120]	IIb	B
In patients at high risk,[c] an LDL-C reduction of ≥50% from baseline[d] and an LDL-C goal of <1.8 mmol/L (<70 mg/dL) are recommended.[34,35]	I	A
In individuals at moderate risk,[c] an LDL-C goal of <2.6 mmol/L (<100 mg/dL) should be considered.[34]	IIa	A
In individuals at low risk,[c] an LDL-C goal <3.0 mmol/L (<116 mg/dL) may be considered.[36]	IIb	A

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Table 7 **Treatment targets and goals for cardiovascular disease prevention**

Smoking	No exposure to tobacco in any form.
Diet	Healthy diet low in saturated fat with a focus on wholegrain products, vegetables, fruit, and fish.
Physical activity	3.5–7 h moderately vigorous physical activity per week or 30–60 min most days.
Body weight	BMI 20–25 kg/m^2, and waist circumference <94 cm (men) and <80 cm (women).
Blood pressure	<140/90 mmHg.[a]
LDL-C	**Very-high risk in primary or secondary prevention:** A therapeutic regimen that achieves ≥50% LDL-C reduction from baseline[b] and an LDL-C goal of <1.4 mmol/L (<55 mg/dL). No current statin use: this is likely to require high-intensity LDL-lowering therapy. Current LDL-lowering treatment: an increased treatment intensity is required. **High risk:** A therapeutic regimen that achieves ≥50% LDL-C reduction from baseline[b] and an LDL-C goal of <1.8 mmol/L (<70 mg/dL). **Moderate risk:** A goal of <2.6 mmol/L (<100 mg/dL). **Low risk:** A goal of <3.0 mmol/L (<116 mg/dL).
Non-HDL-C	Non-HDL-C secondary goals are <2.2, 2.6, and 3.4 mmol/L (<85, 100, and 130 mg/dL) for very-high-, high-, and moderate-risk people, respectively.
ApoB	ApoB secondary goals are <65, 80, and 100 mg/dL for very-high-, high-, and moderate-risk people, respectively.
Triglycerides	No goal, but <1.7 mmol/L (<150 mg/dL) indicates lower risk and higher levels indicate a need to look for other risk factors.
Diabetes	HbA1c: <7% (<53 mmol/mol).

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LDL-C	**Very high risk: primary or secondary prevention:** A therapeutic regimen that achieves ≥50% LDL-C reduction from baseline[b] and an LDL-C goal of <1.4 mmol/L (<55 mg/dL). No current statin use: this is likely to require high-intensity LDL-lowering therapy. Current LDL-lowering treatment: an increased treatment intensity is required. **High risk:** A therapeutic regimen that achieves >50% LDL-C reduction from baseline[b] and an LDL-C goal of <1.8 mmol/L (<70 mg/dL). **Moderate risk:** A goal of <2.6 mmol/L (<100 mg/dL). **Low risk:** A goal of <3.0 mmol/L (<116 mg/dL).
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Triglycerides	No goal, but <1.7 mmol/L (<150 mg/dL) indicates lower risk and higher levels indicate a need to look for other risk factors.
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PRISE EN CHARGE GLOBALE

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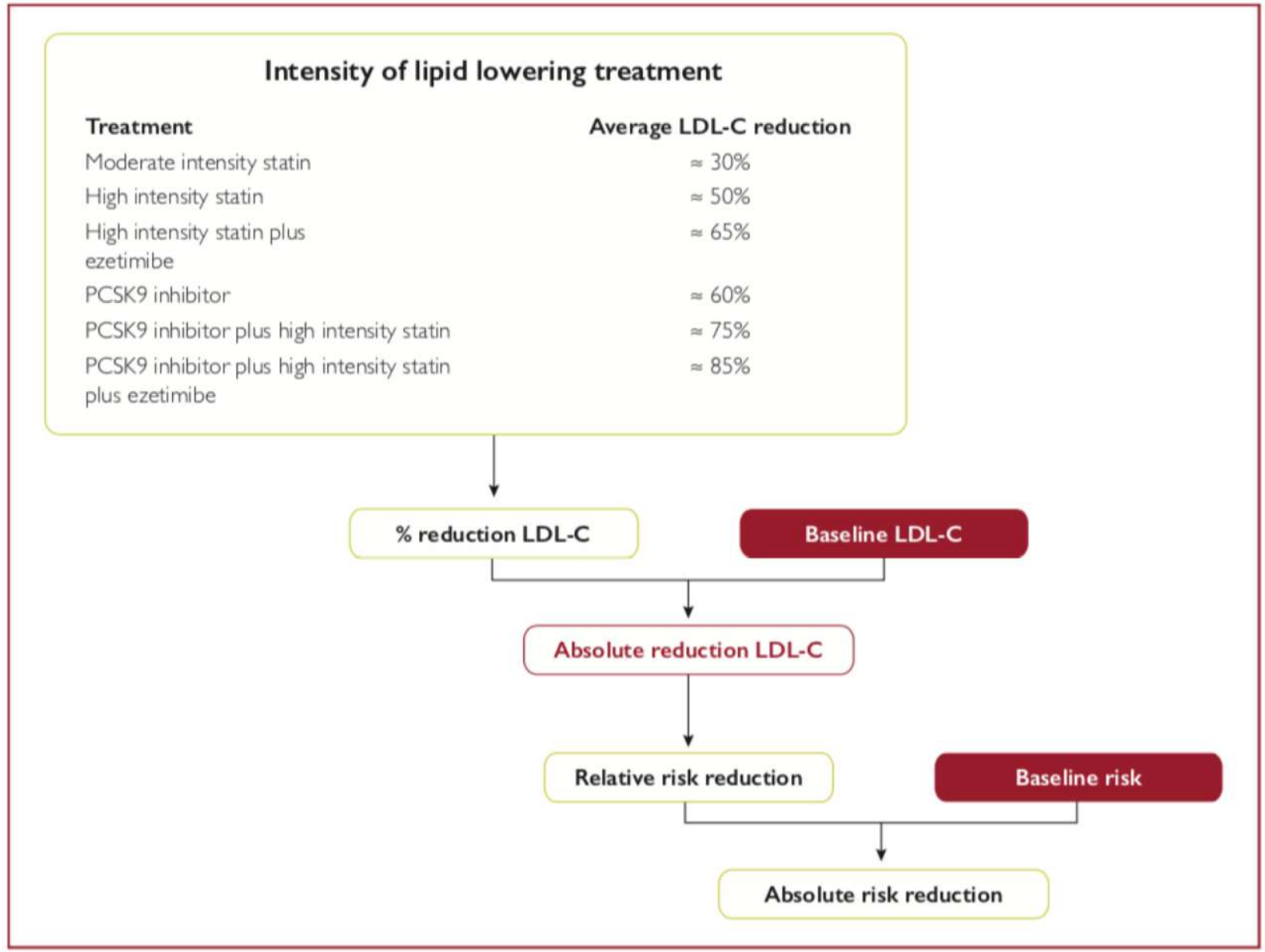

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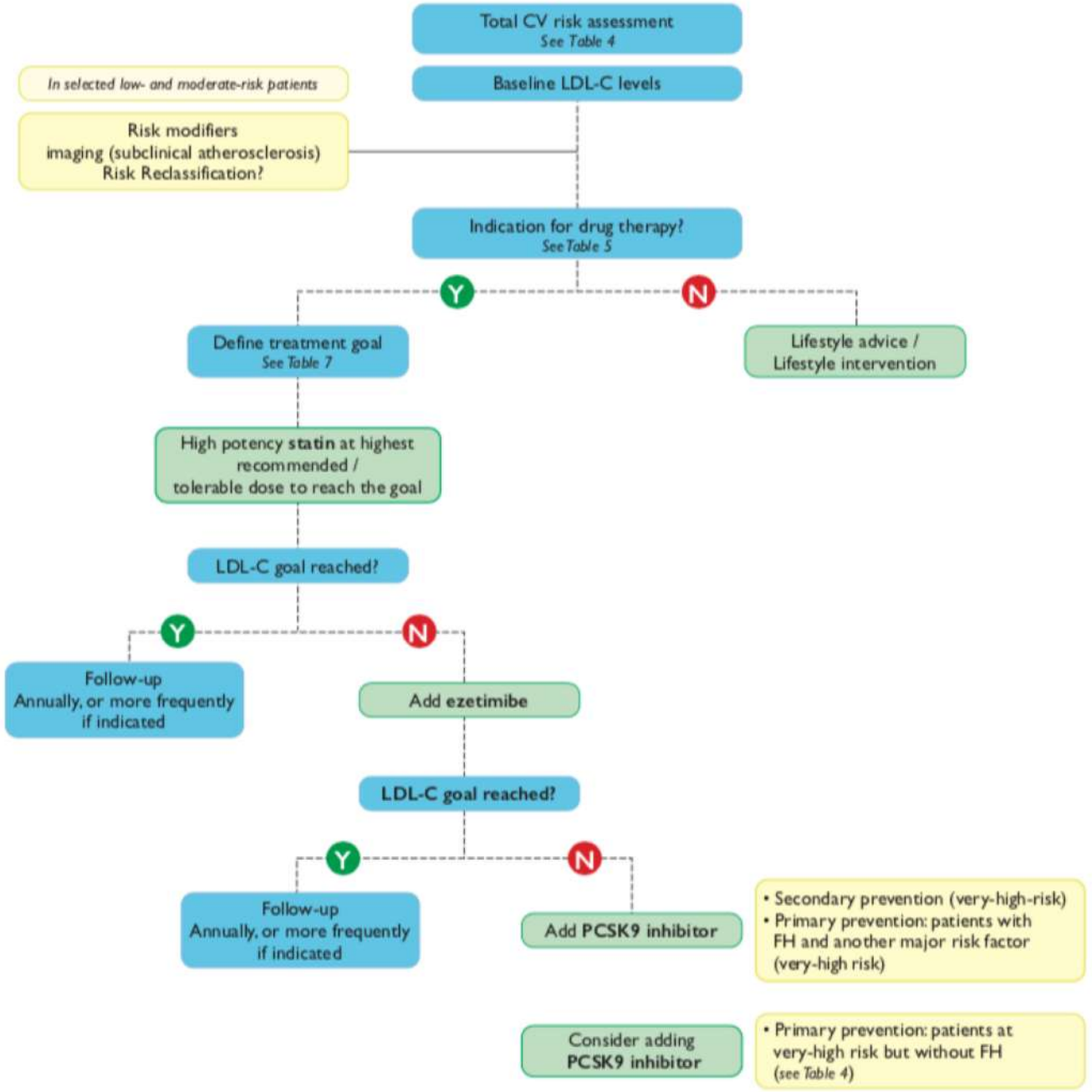
RHD

STATINES

EZETIMIBE

ANTI-PCSK9



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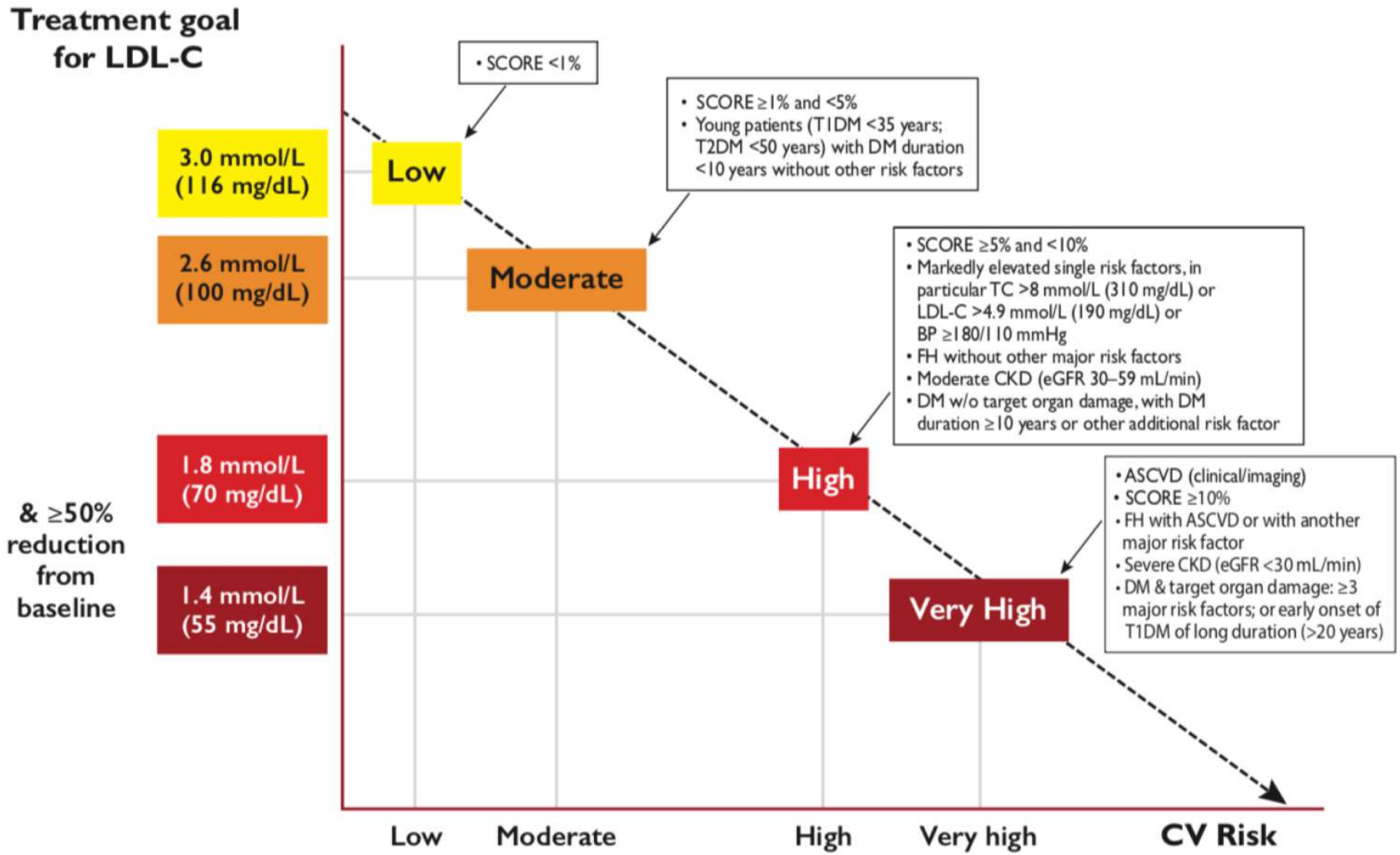

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Recommendations for drug treatment of patients with hypertriglyceridaemia

Recommendations	Class[a]	Level[b]
Statin treatment is recommended as the first drug of choice to reduce CVD risk in high-risk individuals with hypertriglyceridaemia [TG levels >2.3 mmol/L (>200 mg/dL)].[355]	I	B
In high-risk (or above) patients with TG levels between 1.5–5.6 mmol/L (135–499 mg/dL) despite statin treatment, n-3 PUFAs (icosapent ethyl 2×2 g/day) should be considered in combination with a statin.[194]	IIa	B
In primary prevention patients who are at LDL-C goal with TG levels >2.3 mmol/L (>200 mg/dL), fenofibrate or bezafibrate may be considered in combination with statins.[305–307,356]	IIb	B
In high-risk patients who are at LDL-C goal with TG levels >2.3 mmol/L (>200 mg/dL), fenofibrate or bezafibrate may be considered in combination with statins.[305–307,356]	IIb	C

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Recommendations for the treatment of dyslipidaemias in older people (aged >65 years)

Recommendations	Class[a]	Level[b]
Treatment with statins is recommended for older people with ASCVD in the same way as for younger patients.[217]	I	A
Treatment with statins is recommended for primary prevention, according to the level of risk, in older people aged ≤75 years.[217]	I	A
Initiation of statin treatment for primary prevention in older people aged >75 years may be considered, if at high-risk or above.[217]	IIb	B
It is recommended that the statin is started at a low dose if there is significant renal impairment and/or the potential for drug interactions, and then titrated upwards to achieve LDL-C treatment goals.	I	C

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Table 13 **Summary of recommendations for monitoring lipids and enzymes in patients, before and on lipid-lowering therapy**

Testing lipids
How often should lipids be tested?
• Before starting lipid-lowering drug treatment, at least two measurements should be made, with an interval of 1–12 weeks, with the exception of conditions where prompt drug treatment is suggested, such as ACS and very high-risk patients.
How often should a patient's lipids be tested after starting lipid-lowering treatment?
• After starting treatment: 8 (±4) weeks. • After adjustment of treatment: 8 (±4) weeks until the goal is achieved.
How often should lipids be tested once a patient has achieved the target or optimal lipid level?
• Annually (unless there are adherence problems or other specific reasons for more frequent reviews).

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Monitoring liver and muscle enzymes

How often should liver enzymes (ALT) be routinely measured in patients on lipid-lowering drugs?

- Before treatment.
- Once, 8–12 weeks after starting a drug treatment or after dose increase.
- Routine control of ALT thereafter is not recommended during statin treatment, unless symptoms suggesting liver disease evolve. During treatment with fibrates, control of ALT is still recommended.

What if liver enzymes become elevated in a person taking lipid-lowering drugs?

If ALT <3× ULN:

- Continue therapy.
- Recheck liver enzymes in 4–6 weeks.

If ALT rises to ≥3× ULN

- Stop lipid-lowering therapy or reduce dose and recheck liver enzymes within 4–6 weeks.
- Cautious reintroduction of therapy may be considered after ALT has returned to normal.
- If ALT remains elevated check for the other reasons.

How often should CK be measured in patients taking lipid-lowering drugs?

Pre-treatment

- Before starting therapy.
- If baseline CK is >4× ULN, do not start drug therapy; recheck.

Monitoring:

- Routine monitoring of CK is not necessary.
- Check CK if patient develops myalgia.

Be alert regarding myopathy and CK elevation in patients at risk, such as: elderly patients, those on concomitant interfering therapy, multiple medications, liver or renal disease, or athletes.

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- Caution in introduction of therapy may be considered after ALT has returned to normal.
- If ALT remains elevated check for the other reasons.

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PAS DE DOSAGE DES ENZYMES HÉPATIQUES ET DES CPK EN SYSTÉMATIQUE SOUS TRAITEMENT PAR STATINES

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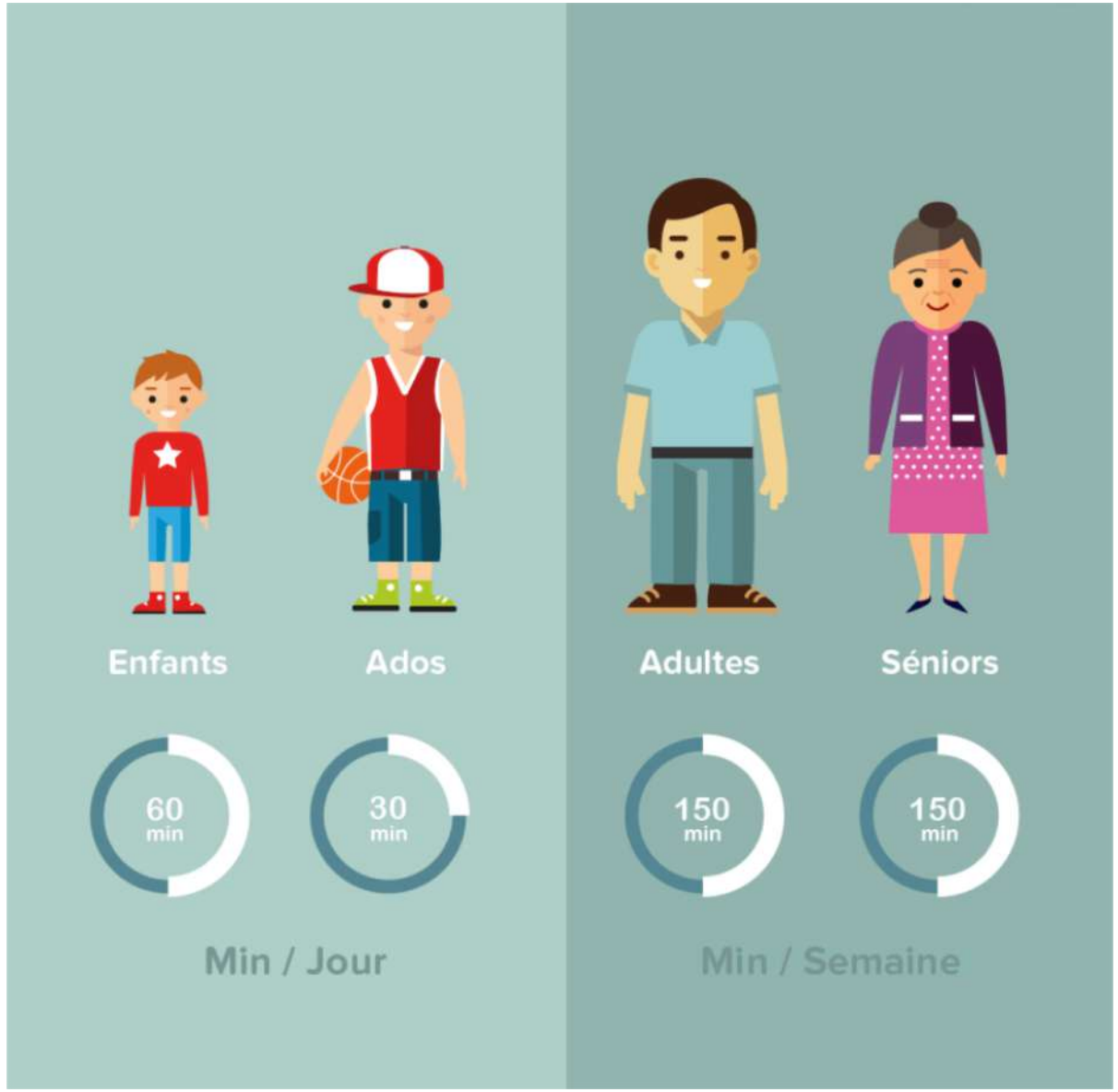
Enfants
Ados
Adultes
Séniors
60 min
30 min
150 min
150 min
Min / Jour
Min / Semaine

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