



Etat des lieux de la prévention de l'insuffisance cardiaque

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Financial Disclosure



I currently have, or have had over the last two years, an affiliation or financial interests or interests of any order with a company or I receive compensation or fees or research grants with a commercial company :

I have the following potential disclosure to report

Novartis (Consultant- Expert)

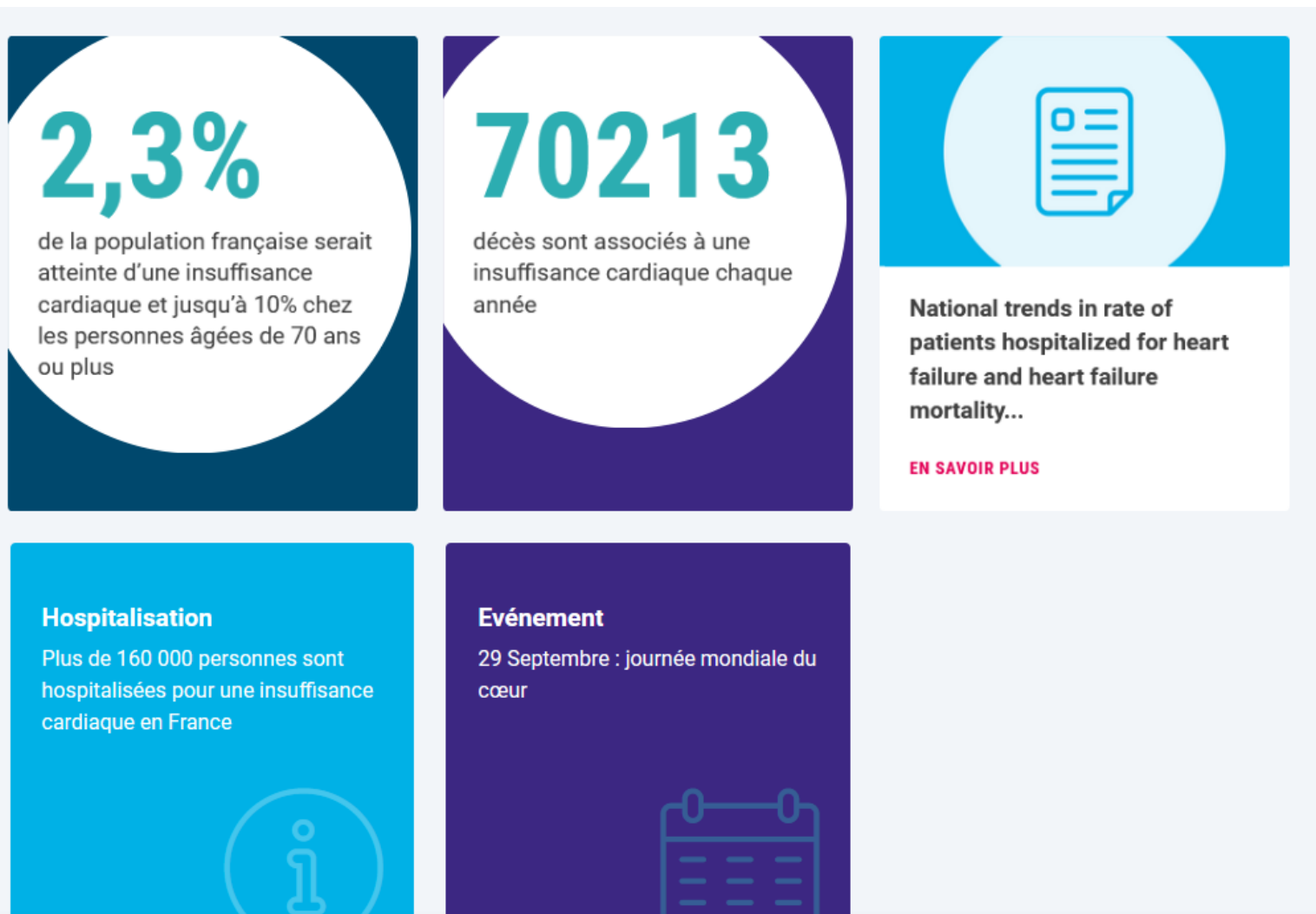
Boeringher (Consultant- Expert)

Bayer (Consultant- Expert)

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Epidémiologie de l'Insuffisance cardiaque en France



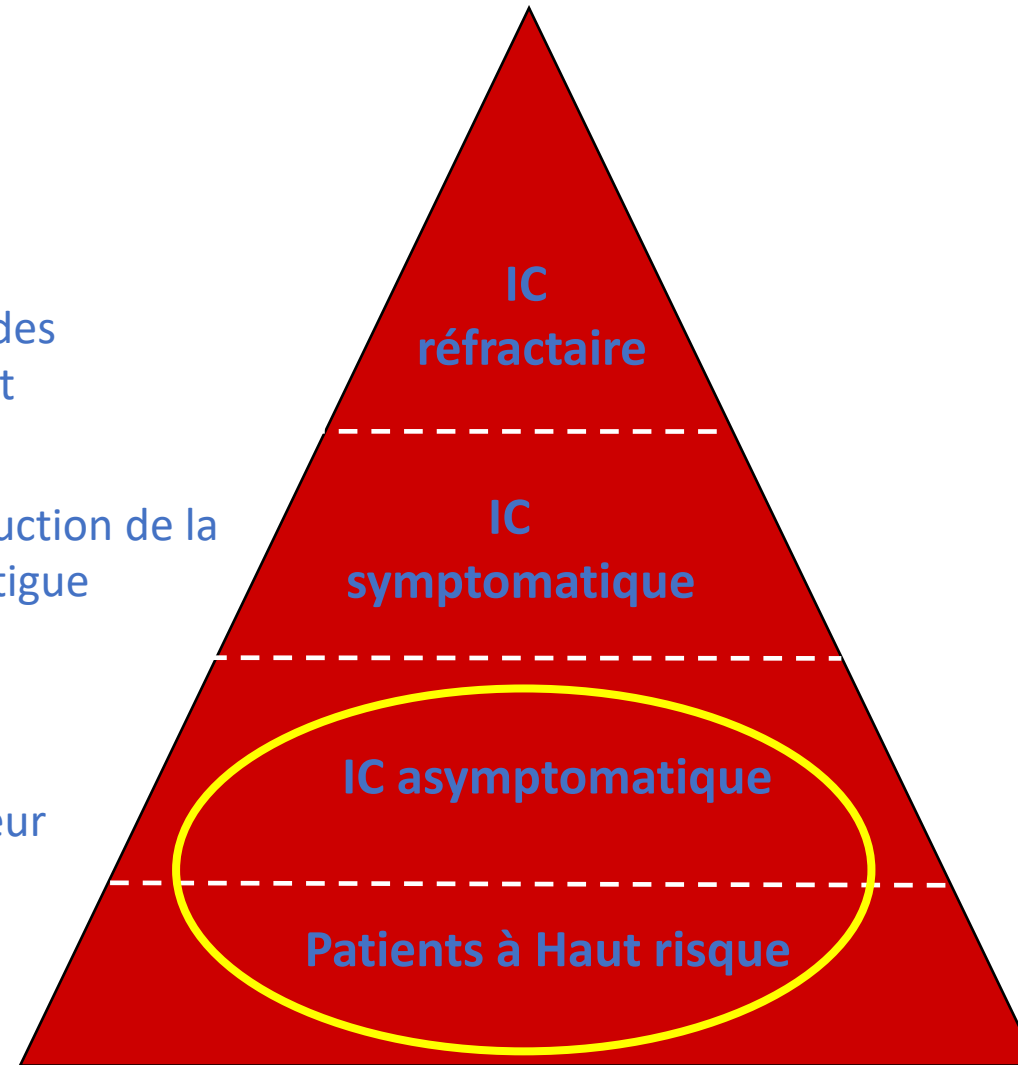
Stades d'IC

IC terminale persistance des symptômes malgré le traitement

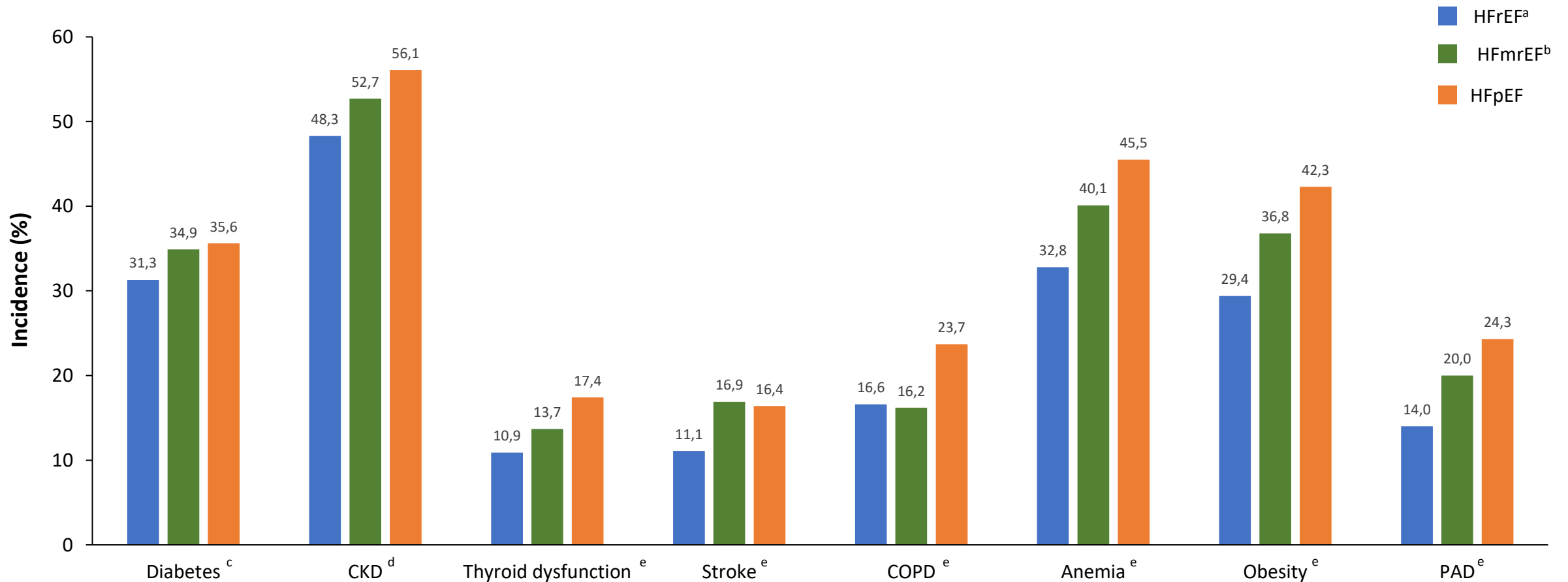
IC symptomatique réduction de la capacité d'exercice, dyspnée, fatigue

IC asymptomatique
détérioration structurelle du cœur

Facteurs de risque d'IC HTA, maladie coronaire, diabète, antécédent familial, dyslipidémie, tabac

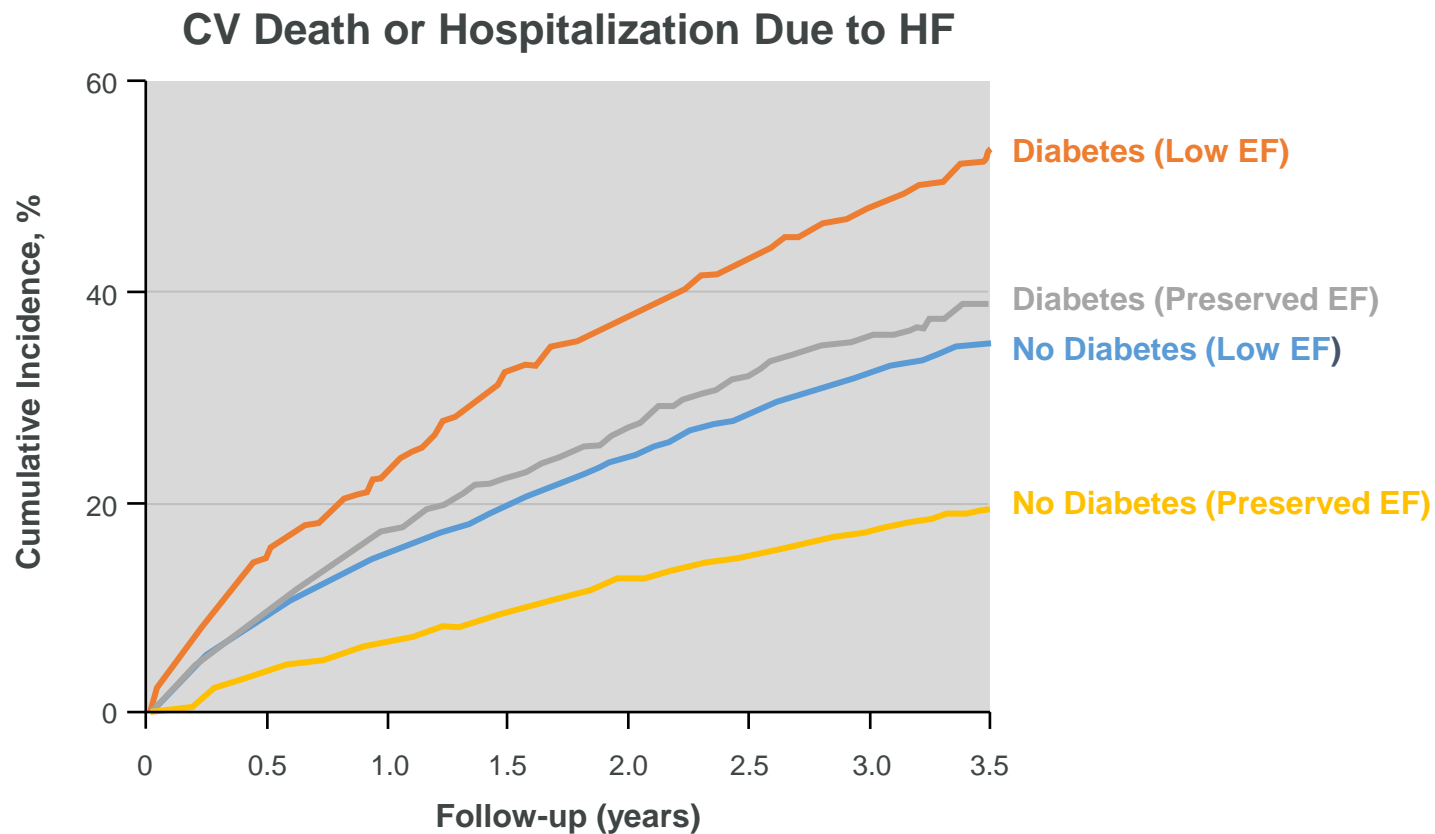


Dans l'IC, certaines comorbidités sont très prévalentes



- Data from the BIOlogy Study to Tailored Treatment in Chronic Heart Failure (BIOSTAT-CHF) study (N=3499). Streg KW et al. *Int J Cardiol.* 2018;271:132-139.
- ^aReference defines this group as EF <40%; ^bReference uses the term HF with mid-range EF (EF 40-50%) for this group; ^cp=0.060; ^dp=0.002; ^ep<0.001.
- CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disease; EF = ejection fraction; HFmrEF = heart failure with mildly reduced ejection fraction; HFpEF = heart failure with preserved ejection fraction; HFrEF = heart failure with reduced ejection fraction; PAD = peripheral arterial disease.

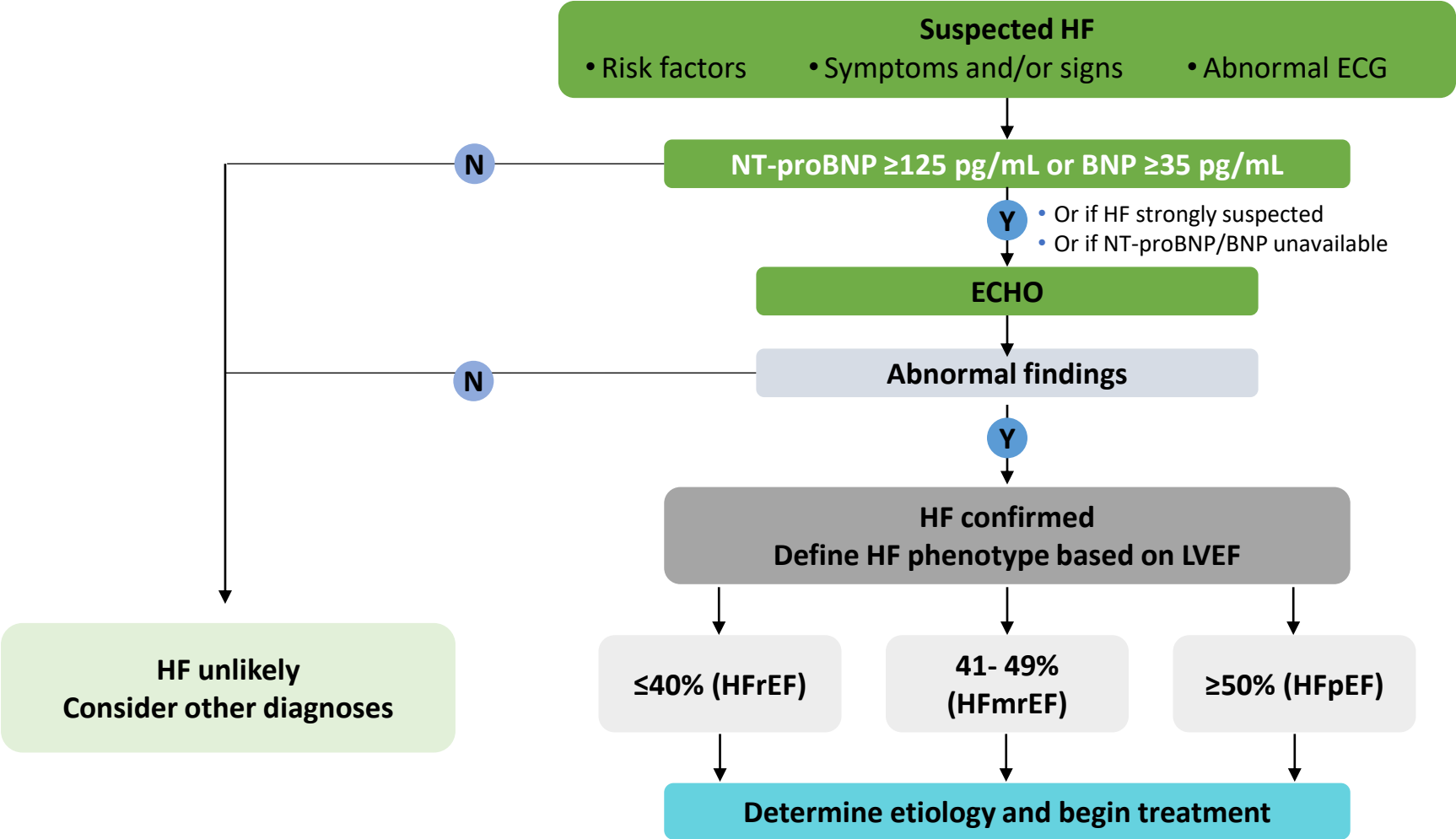
Quels sont les facteurs de risque dans l'IC ?



Diabetes Increases the Risk of CV Events and Death Due to HF

- CV = cardiovascular; EF = ejection fraction; HF = heart failure; T2D = type 2 diabetes mellitus.
- MacDonald MR et al. *Eur Heart J.* 2008;29:1377-1385.

ESC Diagnostic Algorithm for HF



- BNP = B-type natriuretic peptide; ECG = electrocardiogram; ECHO = echocardiography; ESC = European Society of Cardiology; HF = heart failure; HFmrEF = heart failure with mildly reduced ejection fraction; HFpEF = heart failure with preserved ejection fraction; HFrEF = heart failure with reduced ejection fraction; LVEF = left ventricular ejection fraction; NT-proBNP = N-terminal pro-B-type natriuretic peptide.
- McDonagh TA et al. *Eur Heart J.* 2021;42:3599-3726.

HFpEF

HFpEF

Screening for, and treatment of, aetiologies, and CV and non-CV comorbidities are recommended in patients with HFpEF (see relevant sections of this document).

I

Rechercher l'amylose cardiaque et la traiter

Recommendations	Class ^a	Level ^b
Tafamidis is recommended in patients with genetic testing proven hereditary hTTR-CMP and NYHA class I or II symptoms to reduce symptoms, CV hospitalization and mortality. ⁹⁷⁹	I	B
Tafamidis is recommended in patients with wtTTR-CA and NYHA class I or II symptoms to reduce symptoms, CV hospitalization and mortality. ⁹⁷⁹	I	B

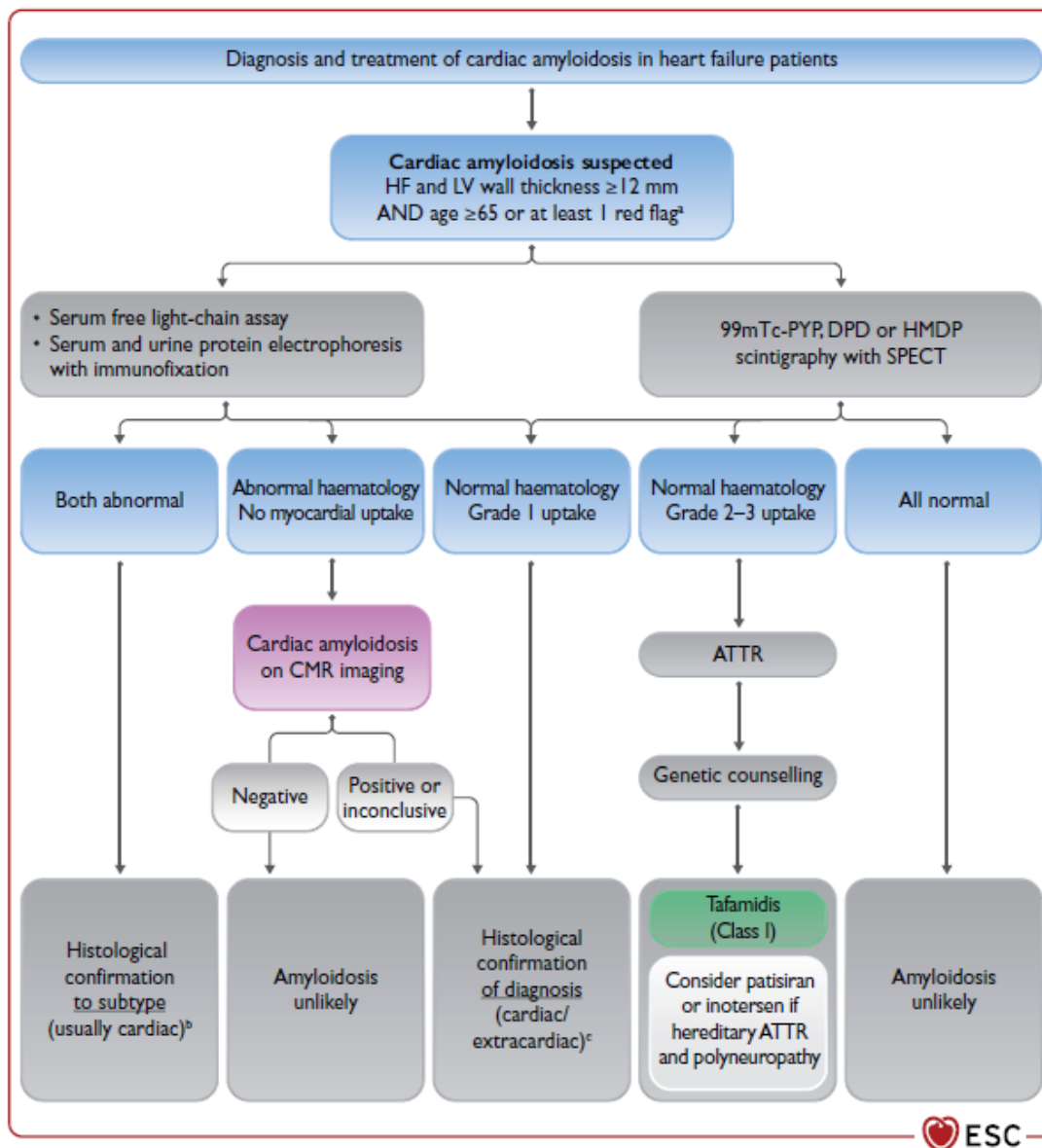
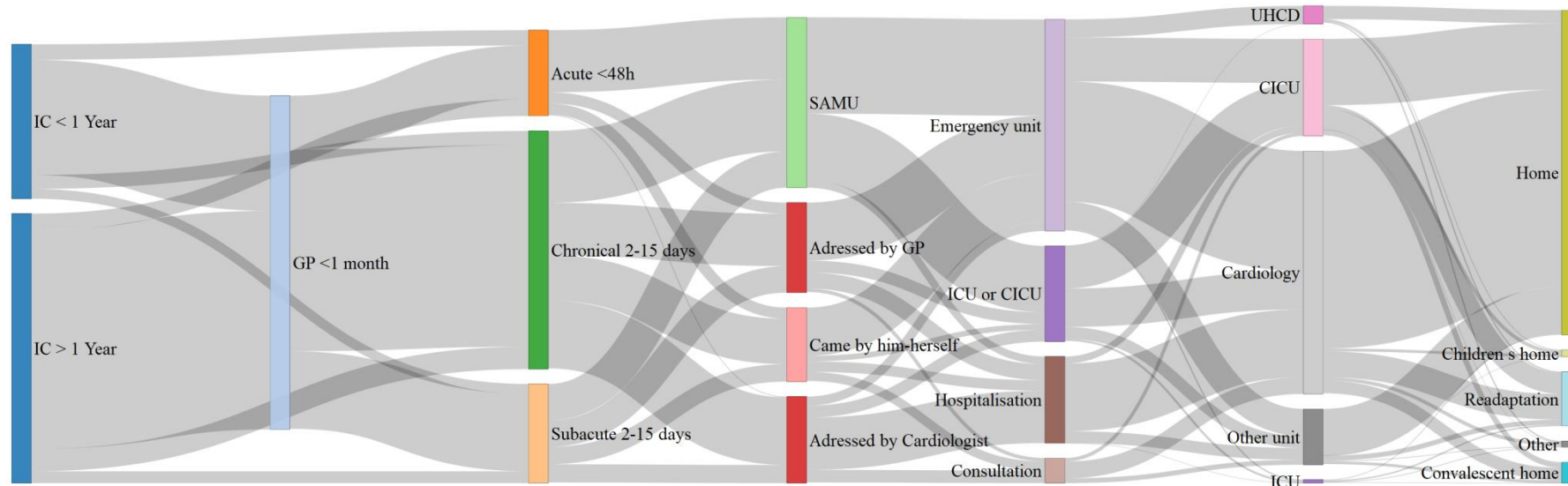


Figure 21 Diagnosis and treatment of cardiac amyloidosis in heart failure patients. Based on.⁹⁷³ ATTR = transthyretin amyloidosis; CMR = cardiac magnetic resonance; DPD = 3,3-diphosphono-1,2-propanodicarboxylic acid; HF = heart failure; HMDP = hydroxymethylene diphosphonate; LV = left ventricular; SPECT = single-photon emission computed tomography; ^{99m}Tc-PYP = technetium-labelled ^{99m}Tc-pyrophosphate. *Red flags are listed in Table 35. ^bGenerally requires endomyocardial biopsy for a diagnosis of the cardiac subtype. ^cRequires biopsy that may be cardiac or abdominal.

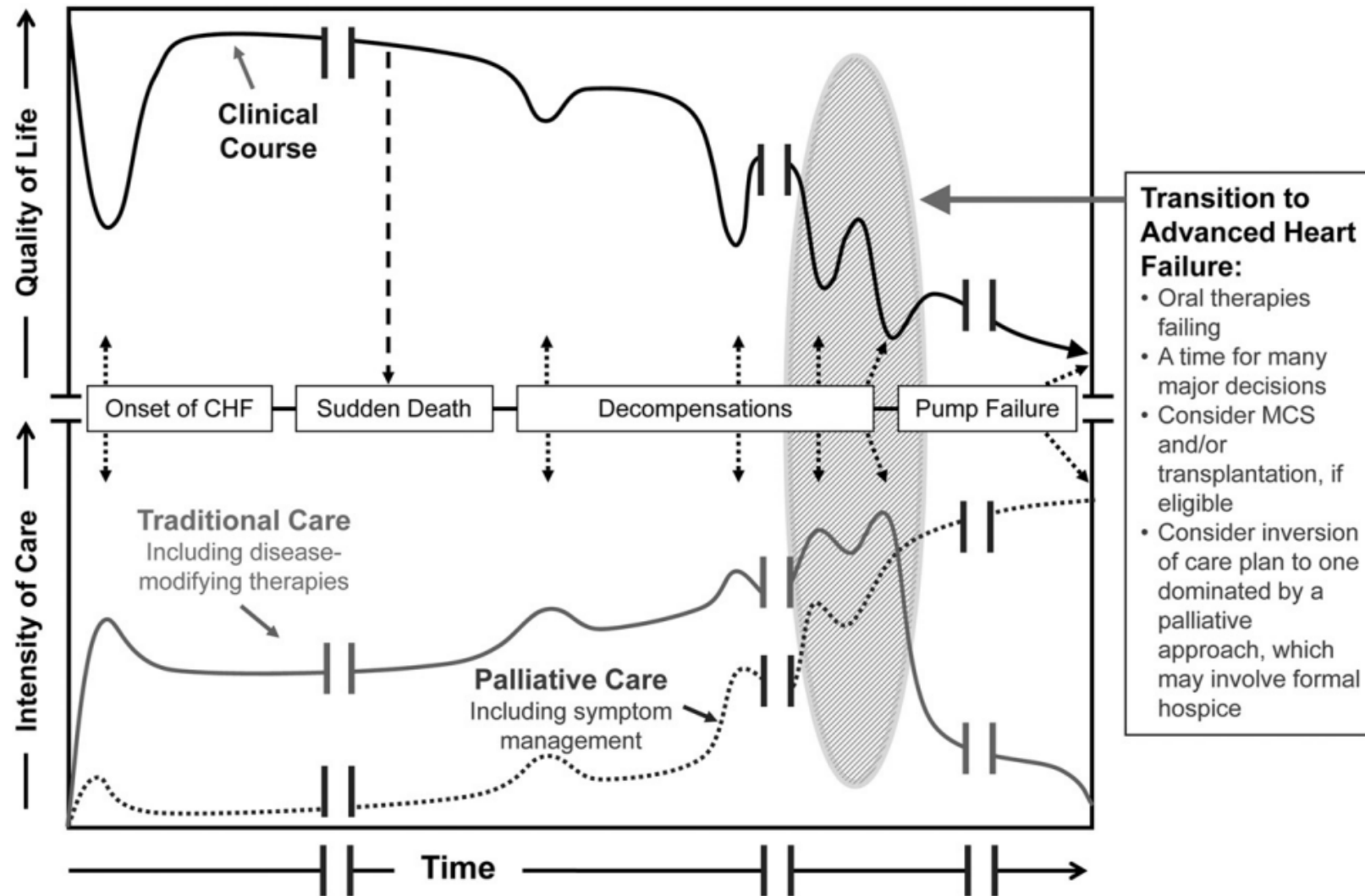
Retard au diagnostic : enquête ICPS2



Acute Heart Failure HealthCare PathWay

- 793 patients were included,
- 59.0% were men,
- 1/3 unaware of their
- Mean age ; 72.9 ± 14.5 years.
- The symptoms : dyspnea (64.7%) and lower limb edema (27.7%).
- 1/2 had already experienced symptoms for 15 days; 1/3 of them for 2 months.
- Referral to hospital was made by the emergency medical assistance service (SAMU, 41.6%), a general practitioner (GP, 22.3%), a cardiologist (19.5%), or the patient (16.6%).

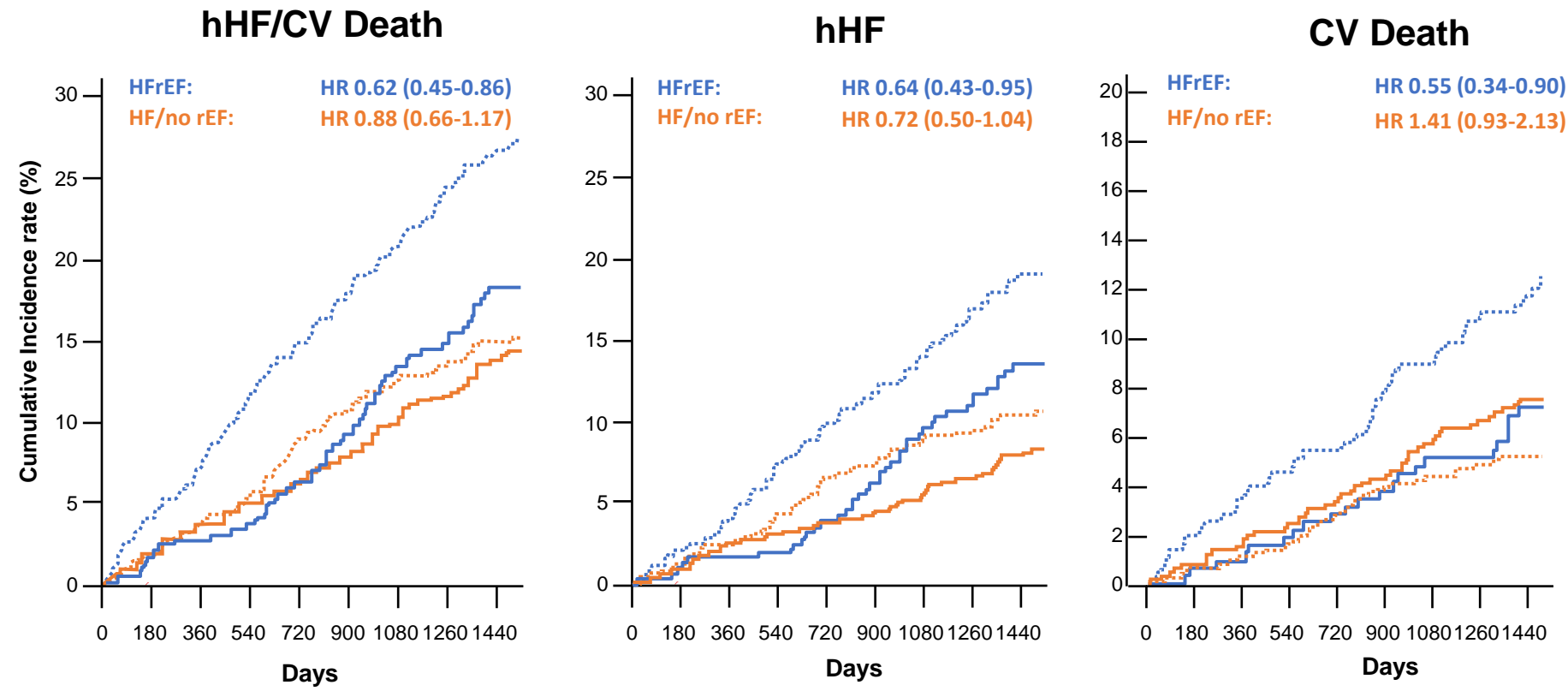
Mode d'évolution de l'IC



- L'IC stable n'existe pas
- L'inertie tue
- Il faut détecter l'IC le plus tôt possible
- Mettre en place une stratégie de dépistage précoce
- Et ... Traiter précocément

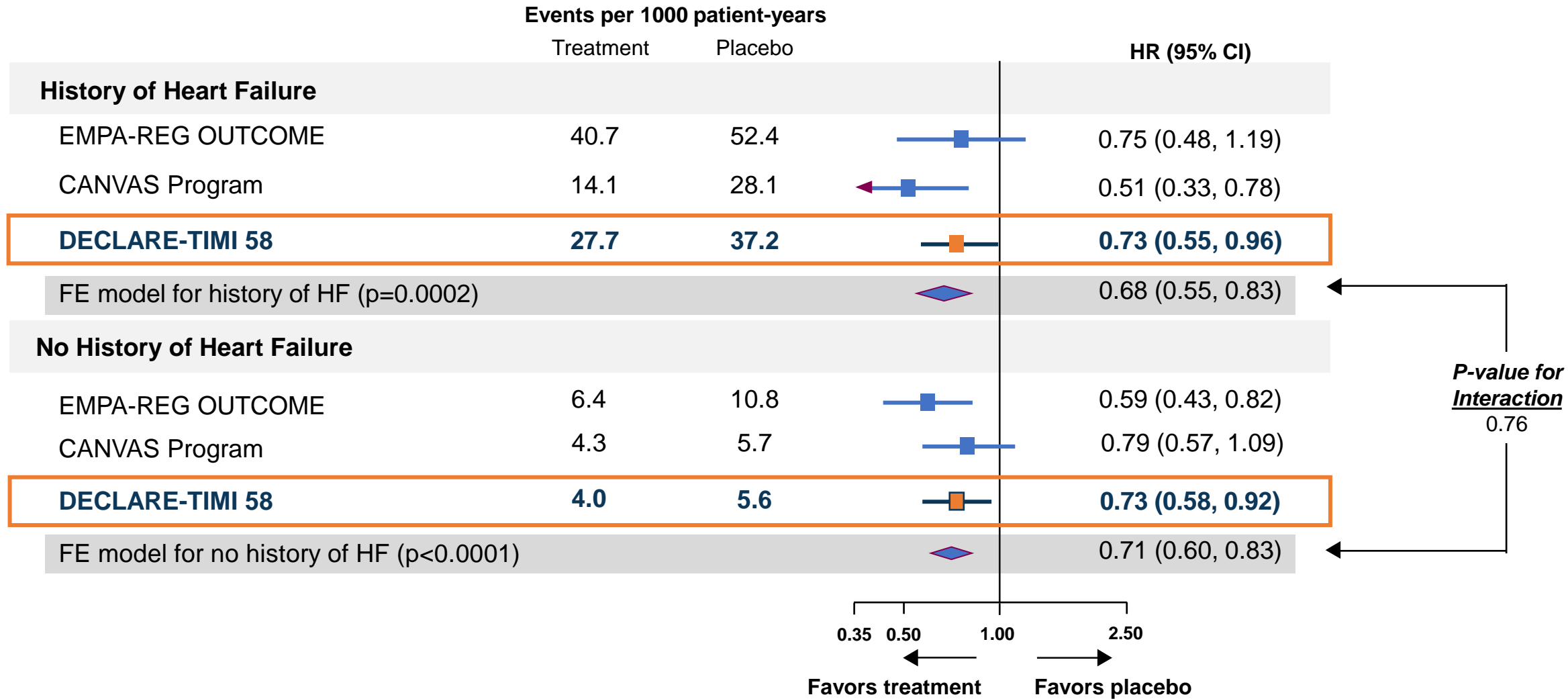


Cardiovascular Outcomes in Patients with or without HFrEF: DECLARE TIMI 58



- CV = cardiovascular; DAPA = dapagliflozin; HFrEF = heart failure with reduced ejection fraction; hHF = hospitalization for heart failure; HR = hazard ratio; ; PBO = placebo; rEF = reduced ejection fraction.
- Kato ET et al. *Circulation*. 2019;139:2528-2536.

IC chez le diabétique avec ou sans IC: Metaanalyse



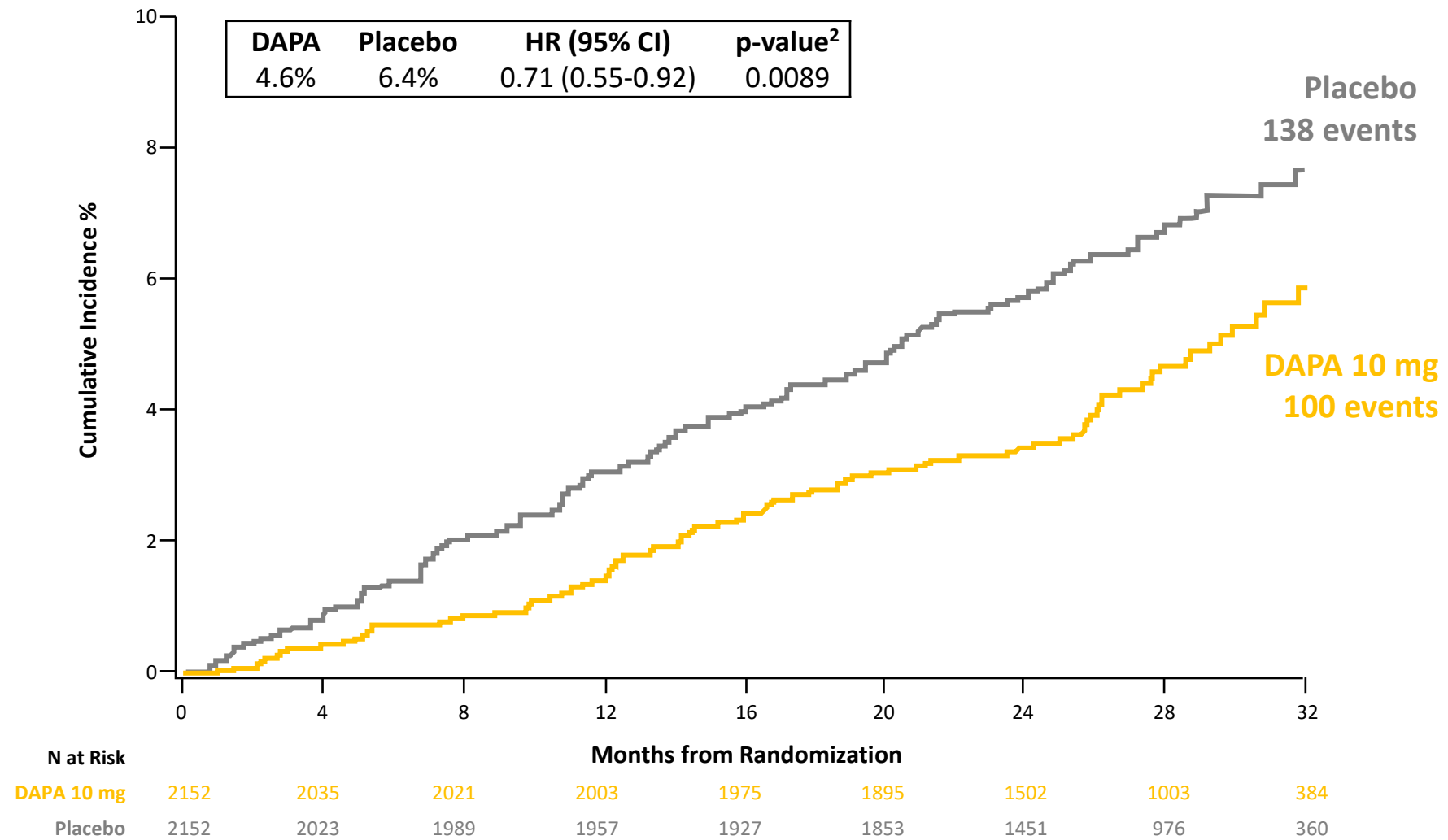
- History of HF: Q statistic = 2.14, p=0.34, I²= 6.6%; no history of HF: Q statistic=1.73, p=0.42, I²= 0%.
- FE, fixed effects; hHF, hospitalization for heart failure; HF, heart failure; HR, hazard ratio.
- Zelniker TA et al. Article and supplementary appendix. *Lancet*. 2019;393:31-39.

DAPA CKD endpoints by Baseline History of HF

	Dapagliflozin n/N (%)	Placebo n/N (%)	Hazard Ratio (95% CI)	Interaction P-Value
Primary outcome: eGFR decline \geq50%, ESKD, or kidney or CV death				
All patients	197/2152 (9.2)	312/2152 (14.5)	0.61 (0.51 to 0.72)	
No heart failure	166/1917 (8.7)	261/1919 (13.6)	0.62 (0.51 to 0.75)	0.59
Heart failure	31/235 (13.2)	51/233 (21.9)	0.58 (0.37 to 0.91)	
Secondary outcome: eGFR decline \geq50%, ESKD, or kidney death				
All patients	142/2152 (6.6)	243/2152 (11.3)	0.56 (0.45 to 0.68)	
No heart failure	129/1917 (6.7)	216/1919 (11.3)	0.57 (0.46 to 0.71)	0.36
Heart failure	13/235 (5.5)	27/233 (11.6)	0.45 (0.23 to 0.87)	
Secondary outcome: CV death or hospitalization for heart failure				
All patients	100/2152 (4.6)	138/2152 (6.4)	0.71 (0.55 to 0.92)	
No heart failure	64/1917 (3.3)	90/1919 (4.7)	0.70 (0.51 to 0.97)	0.90
Heart failure	36/235 (15.3)	48/233 (20.6)	0.68 (0.44 to 1.05)	
Secondary outcome: All-cause death				
All patients	101/2152 (4.7)	146/2152 (6.8)	0.69 (0.53 to 0.88)	
No heart failure	77/1917 (4.0)	106/1919 (5.5)	0.73 (0.54 to 0.97)	0.39
Heart failure	24/235 (10.2)	40/233 (17.2)	0.56 (0.34 to 0.93)	
Prespecified exploratory outcome: Heart failure hospitalization				
All patients	37/2152 (1.7)	71/2152 (3.3)	0.51 (0.34 to 0.76)	
No heart failure	17/1917 (0.9)	42/1919 (2.2)	0.40 (0.23 to 0.70)	0.28
Heart failure	20/235 (8.5)	29/233 (12.4)	0.62 (0.35 to 1.10)	

RR de 29% (p=0.0089) pour le risque d'hospitalisation pour insuffisance cardiaque et de décès cardio-vasculaires et de 31% concernant le risque de décès toutes causes confondues.

- CV = cardiovascular; eGFR = estimated glomerular filtration rate; ESKD = end-stage kidney disease; hHF = hospitalization for heart failure.
- McMurray JJV et al. *JACC Heart Fail.* 2021;9:807-820.



Résultats confortés dans EMPA-KIDNEY et CREDENCE

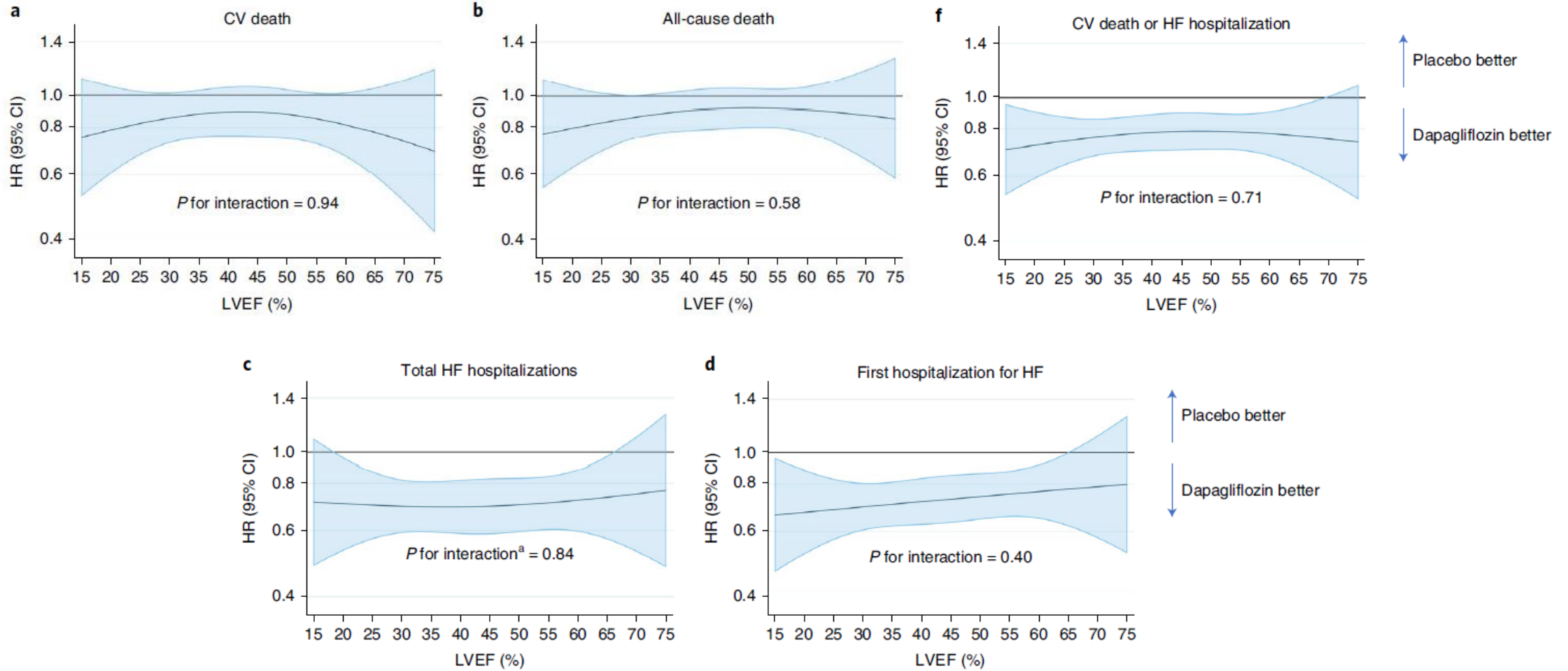
Heerspink HJL et al. *N Engl J Med.* 2020; 383:1436-1446; 2. Heerspink HJL. Presented at: ESC Congress – The Digital Experience; August 29 – September 1, 2020.

DAPA-HF

Pre-specified patient-level pooled analysis

DELIVER

Chez le patient IC

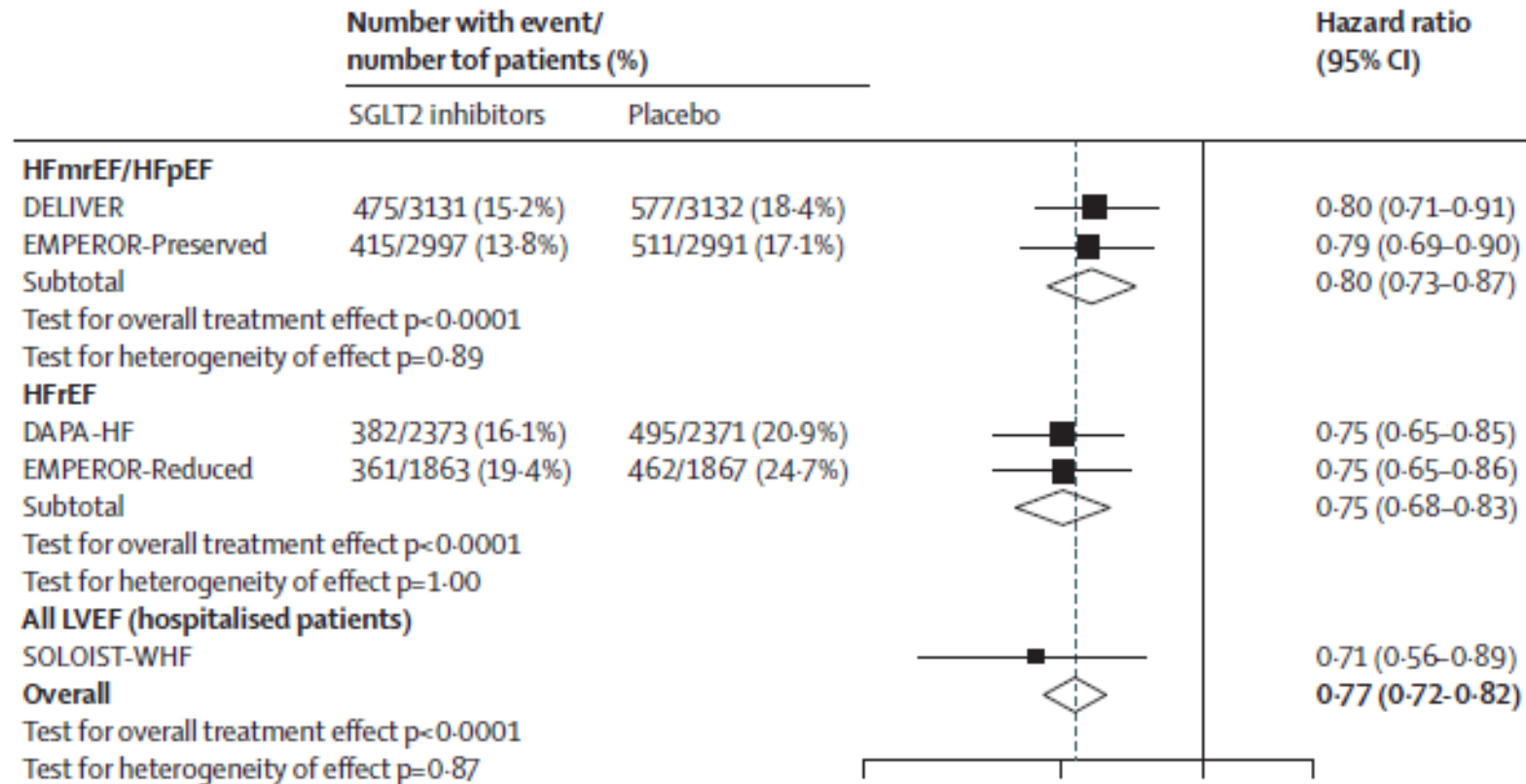


• Jhund PS et al. *Nat Med.* 2022;28(9):1956-1964;

SGLT-2 inhibitors in patients with heart failure: a comprehensive meta-analysis of five randomised controlled trials

Muthiah Vaduganathan*, Kieran F Docherty*, Brian L Claggett, Pardeep S Jhund, Rudolf A de Boer, Adrian F Hernandez, Silvio E Inzucchi, Mikhail N Kosiborod, Carolyn S P Lam, Felipe Martinez, Sanjiv J Shah, Akshay S Desai, John J V McMurray†, Scott D Solomon†

Cardiovascular death or heart failure hospitalisation



Conclusion

- Insuffisance cardiaque : un syndrome, des phénotypes.
- Retard au diagnostic important
- Outil de diagnostic : EPOF / NTproBNP / ETT
- Screening chez les populations à risque
 - Risque de développer une insuffisance cardiaque en fonction des comorbidités
 - Profils différents en fonction de l'IC à FEVG réduite et IC à FEVG préservée
 - Evolution de la maladie : l'IC stable n'existe pas
- Penser à instaurer un traitement précoce chez les patients à haut risque