Journées Scientifiques de Broca

13e édition

AMYLOSE CARDIAQUE : Nouvelles données chez le sujet âgé

Dr Olivier TOULZA
CHU Toulouse – Cardiogériatrie
Gérontopôle

01/10/2026



JSB 2026

- Liens d’intérêts :
  - En relation avec le sujet : Pfizer, Bayer, Alnylam
  - Sans relation avec le sujet : Novartis, Boehringer, Astra Zeneca

Journées Scientifiques de Broca

Amylose cardiaque

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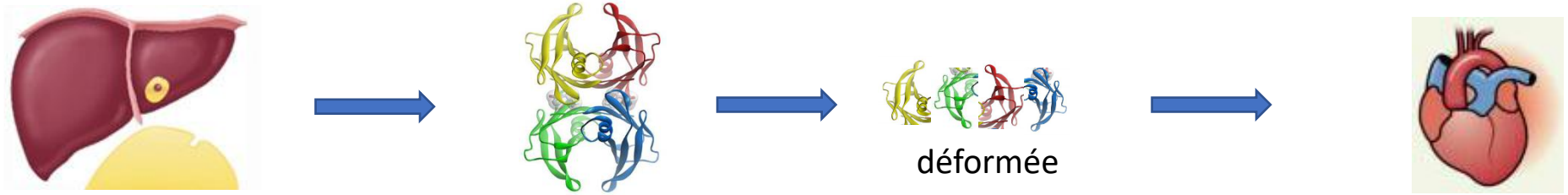
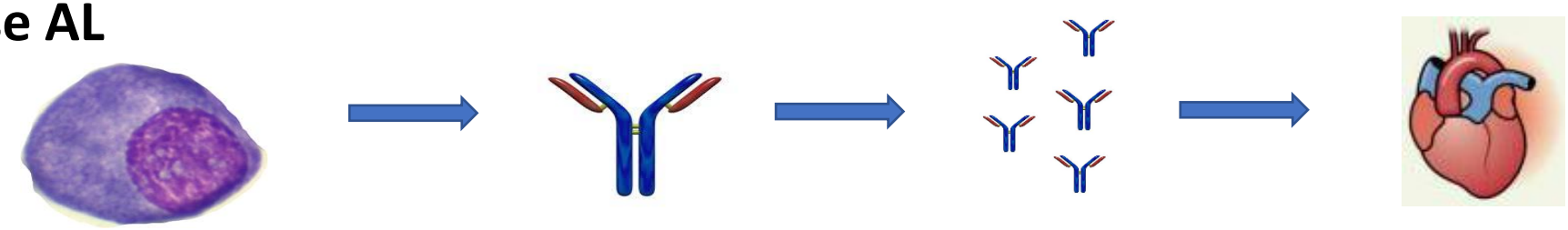
- 2 types d'Amylose cardiaque :

  - **Amylose à Transthyrétine** (protéine de transport des hormones thyroïdiennes)



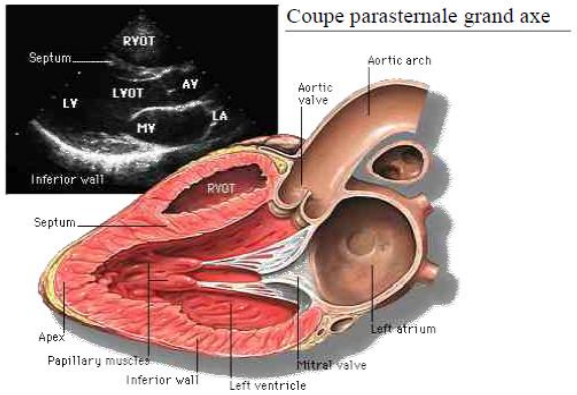
    - **« sauvage »** (ou « sénile) = lié au vieillissement
    - **« mutée »** = héréditaire

  - **Amylose AL**



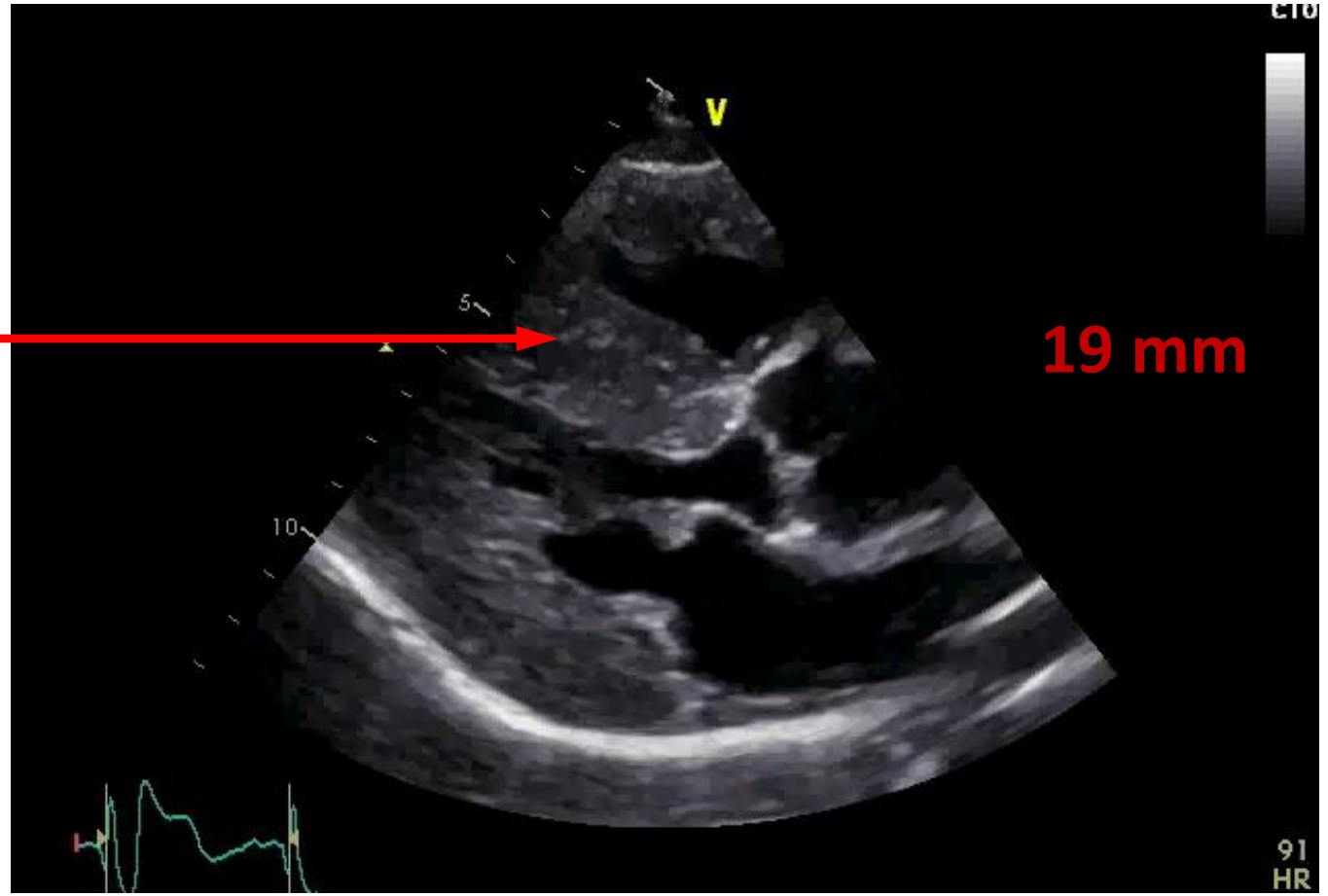
Clone lympho ou plasmocytaire
MGUS, myélome, lymphome…

Chaînes légères d'Ig
Lambda > kappa



Epaisseur du septum interventriculaire :

- Norme < 12 mm



Symptômes

- Ceux de l'insuffisance cardiaque



Essoufflement
Prise de poids
Oedèmes
Fatigue

- Signes extracardiaques



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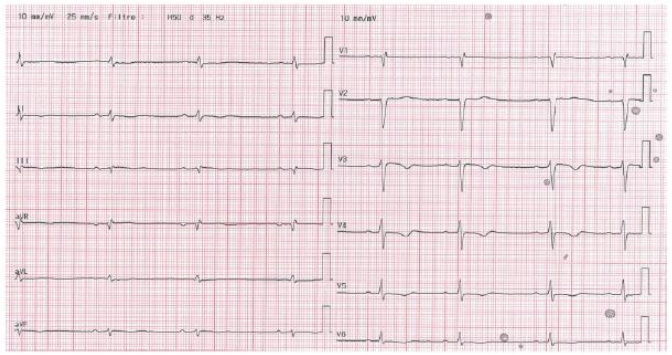
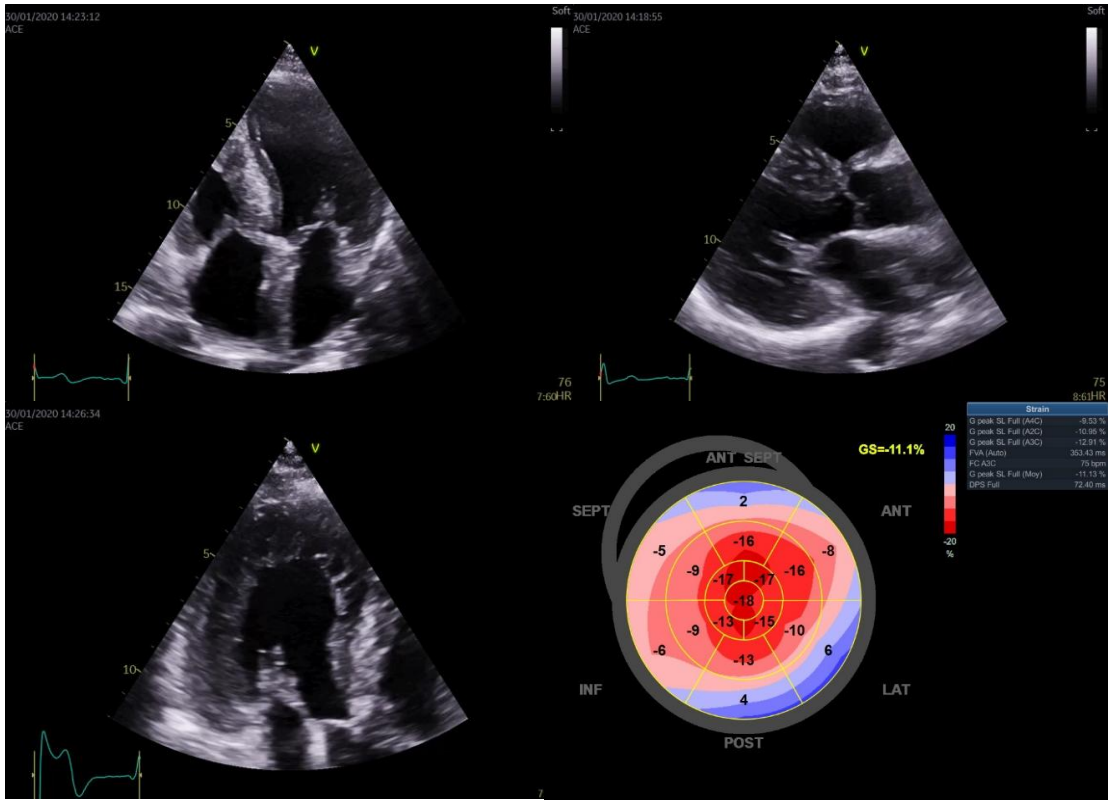
Examens complémentaires



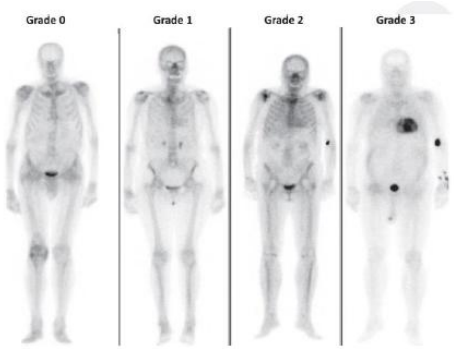
ECG

Microvoltage

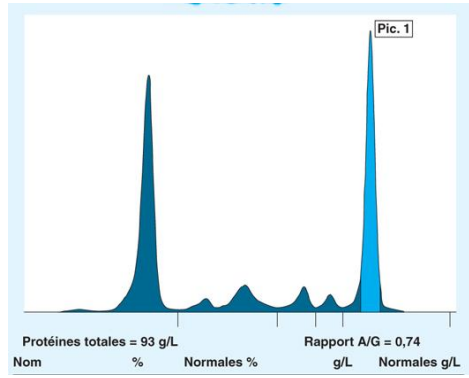


ETT

Hyperthrophie VG



Scintigraphie aux Disphosphonates



Electrophorèse des protéines

(sang et urine)

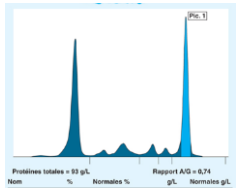
Signes et symptômes, ECG, Echocardio évocateurs d'amylose

D'après « **ESC working group on myocardial and pericardial disease** »
European Heart Journal (2021) 42, 1554–1568

Scintigraphie osseuse aux Biphosphonates



ET



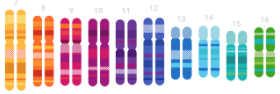
Tests hématologiques
EPP, dosage chaînes légères sériques, immunofixation sériques et urinaire, chaînes légères urinaires.

Tests hématologiques NEGATIFS

Scinti grade **0** → Amylose cardiaque <u>non probable</u>

Scinti grade **1-3**

- Grade **1** → **Biopsies** (extracardiaques /cardiaques)
- Grade **2-3** → Amylose cardiaque **ATTR** <u>confirmée</u> → **Tests génétiques** (héréditaire ou sauvage)



Tests hématologiques POSITIFS

Scinti grade **0** → **IRM cardiaque**

- négative → Amylose cardiaque <u>non probable</u>
- positive → **Biopsies** (extracardiaques /cardiaques)

Scinti grade **1-3** → Amylose cardiaque <u>confirmée</u> → **Biopsies** EC et myocardiques (**AL** ou **ATTR**)

Journal of *Clinical Medicine*

MDPI

Article

Estimating the Prevalence of Cardiac Amyloidosis in Old Patients with Heart Failure—Barriers and Opportunities for Improvement: The PREVAMIC Study

Rocío Ruiz-Hueso [1], Prado Salamanca-Bautista [1,2,*], Maria Angustias Quesada-Simón [3], Sergi Yun [4,5,6], Alicia Conde-Martel [7], José Luis Morales-Rull [8], Roi Suárez-Gil [9], José Ángel García-García [10], Pau Llàcer [11], Eva María Fonseca-Aizpuru [12], Beatriz Amores-Arriaga [13], Ángel Martínez-González [14], Arola Armengou-Arxe [15], José Luis Peña-Somovilla [16], Manuel Lorenzo López-Reboiro [17] and Óscar Aramburu-Bodas [1,2,†] on behalf of the PREVAMIC Investigators Group

2023

- 453 patients (30 centres) , âge moyen 85 ans
- > 65 ans, ATCD d'IC , SIV > 12mm, NT proBNP > 1800 A , > 600 C
- Scinti Tc99m – bilan immuno

Red flags				
Low BP, previous hypertension, n (%)	22 (24.2)	48 (13.3)	70 (15.5)	0.033
History of syncope, n (%)	7 (7.7)	36 (9.9)	43 (9.5)	0.564
History of back pain, n (%)	31 (34.1)	119 (32.9)	150 (33.1)	0.077
History of anaemia, n (%)	41 (45.1)	170 (47.0)	211 (46.6)	0.811
Intolerance of ACEI/ARBs, n (%)	8 (8.8)	12 (3.3)	20 (4.4)	0.014
Intolerance of beta-blockers, n (%)	15 (16.5)	23(6.4)	38 (8.4)	0.009
Intolerance of CCBs, n (%)	2 (2.2)	5 (1.4)	7 (1.5)	0.116
Intolerance of digoxin, n (%)	4 (4.4)	8 (2.2)	12 (2.6)	0.578
Carpal tunnel syndrome, n (%)	21 (23.1)	17 (4.7)	38 (8.4)	<0.001
Spinal stenosis, n (%)	8 (8.8)	19 (5.2)	27 (6.0)	0.001
Biceps tendon ruptura, n (%)	3 (3.3)	1 (0.3)	4 (0.9)	0.012
Periorbital purpura, n (%)	1 (1.1)	1 (0.3)	2 (0.4)	0.772
Macroglosia, n (%)	2 (2.2)	1 (0.3)	3 (0.7)	0.221
MGUS, n (%)	11 (12.1)	16 (4.4)	27 (6.0)	0.047
Peripheral neuropathy, n (%)	11 (12.1)	20 (5.5)	31 (6.8)	0.068
Autonomic dysfuncion, n (%)	2 (2.2)	8 (2.2)	10 (2.2)	0.980
Nephrotic syndrome, n (%)	0 (0)	6 (1.7)	6 (1.3)	0.478
Signs and symptoms				
Dyspnoea, n (%)	67 (73.6)	260 (71.8)	327 (72.2)	0.573
Fatigue, n (%)	69 (75.8)	196 (54.1)	265 (58.5)	0.001
Muscular weakness, n (%)	44 (48.4)	108 (29.3)	152 (33.6)	0.002
Eye symptoms, n (%)	15 (16.5)	68 (18.8)	83 (18.3)	0.866
Dry cough, n (%)	14 (15.4)	55 (15.2)	69 (15.2)	0.992
Angina, n (%)	10 (11)	30 (8.3)	40 (8.8)	0.487
Palpitations, n (%)	13 (14.3)	80 (22.1)	93 (20.5)	0.248
Weightloss, n (%)	17 (18.7)	36 (9.9)	53 (11.7)	0.067
Diarrhea, n (%)	9 (9.9)	21 (5.8)	30 (6.6)	0.363
Constipation, n (%)	17 (18.7)	82 (22.7)	99 (21.9)	0.715
Paresthesia, n (%)	12 (13.2)	27 (7.5)	39 88.6)	0.214
Delusionsm n (%)	8 (8.8)	16 (4.4)	24 (5.3)	0.227

Prévalence : **20 %**

(84% TTr, 3 % AL , 13%UD)

PHRC ARNOLD Pr Hanon, Pr Damy

- **80 ans, OAP récent, SIV > 12 mm / National (20 centres), 2024-2027**

→ **Données de prévalence / Paramètre gériatriques (fragilité) / Suivi**

JSB 2026

Données sur le traitement chez les sujets âgés ?

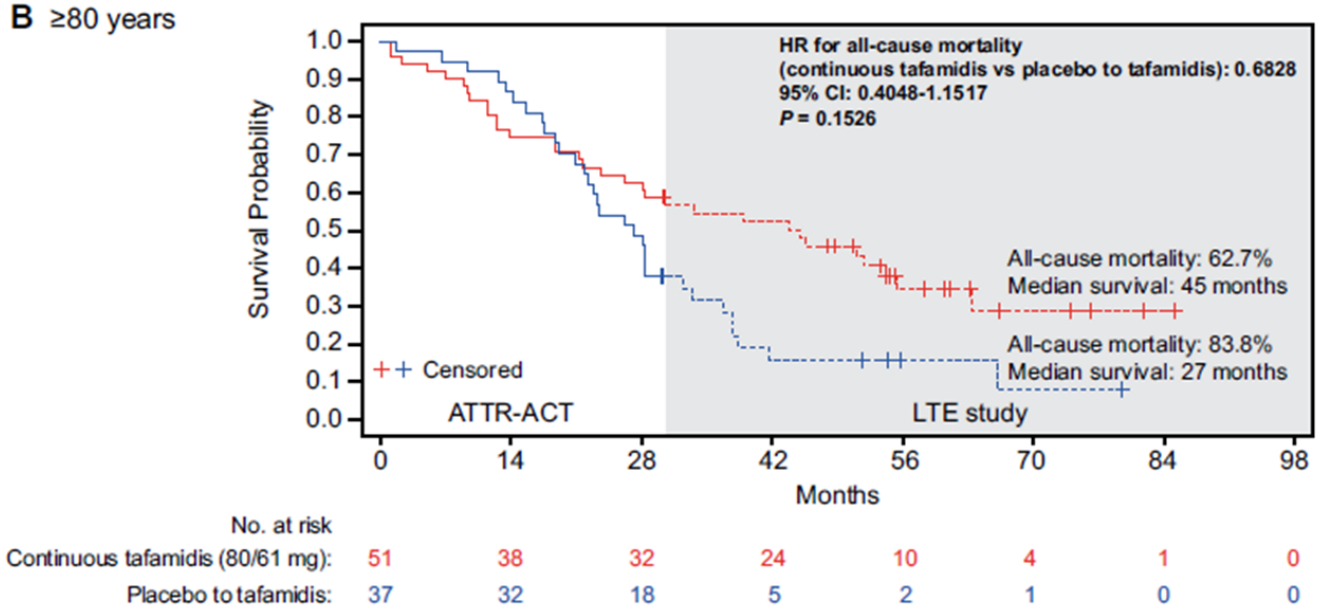
Tafamidis Efficacy Among Octogenarian Patients in the Phase 3 ATTR-ACT and Ongoing Long-Term Extension Study

Etude ATTR-ACT

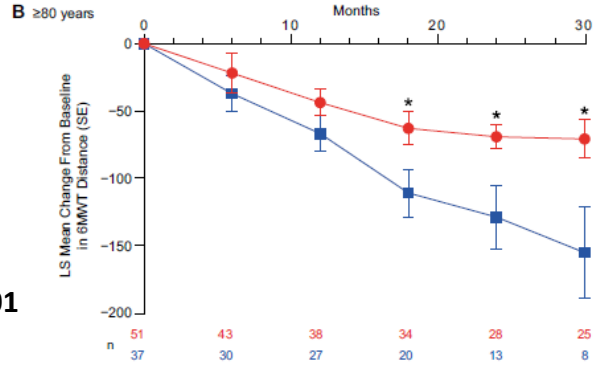
JACC, Janv 2024

Pablo Garcia-Pavia, MD, PhD,[a,b,c] Marla B. Sultan, MD, MBA,[d] Balarama Gundapaneni, MS,[e] Yoshiki Sekijima, MD,[f] Federico Perfetto, MD,[g] Mazen Hanna, MD,[h] Ronald Witteles, MD[i]

Patients aged ≥80 years
51 received tafamidis and 37 received placebo



Survie

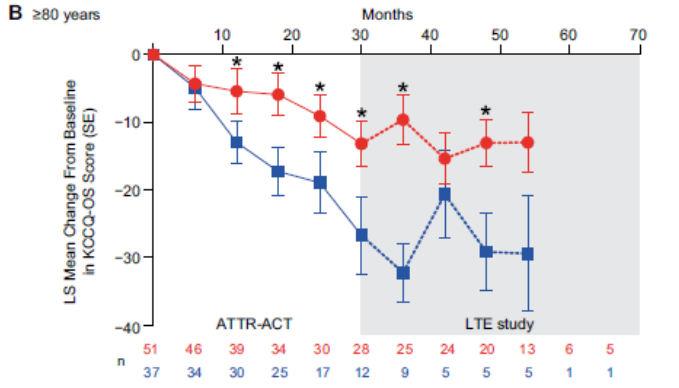


P<0.01

6-MWT

Qualité de vie

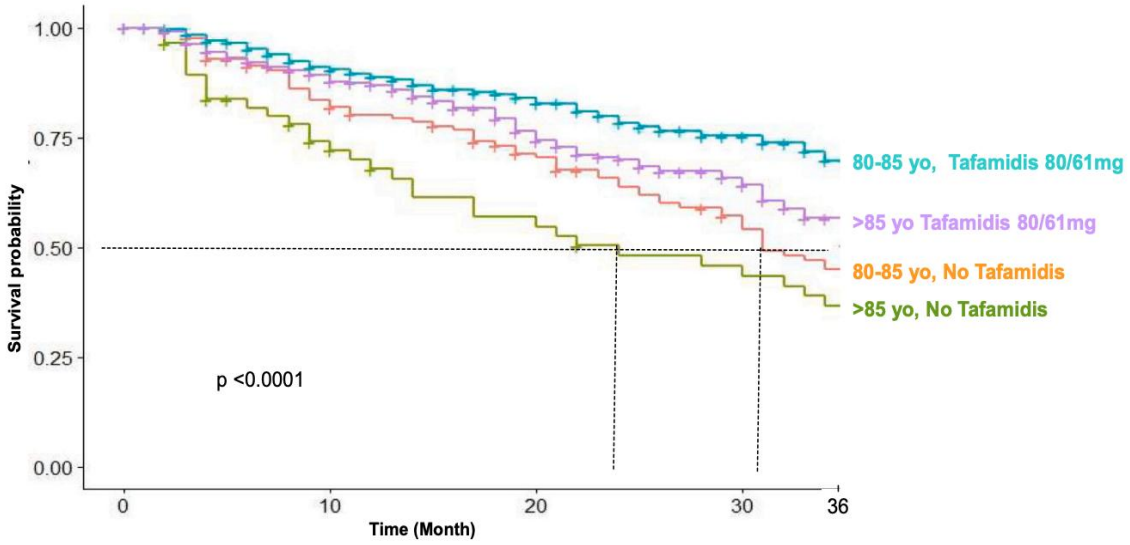
P<0.05

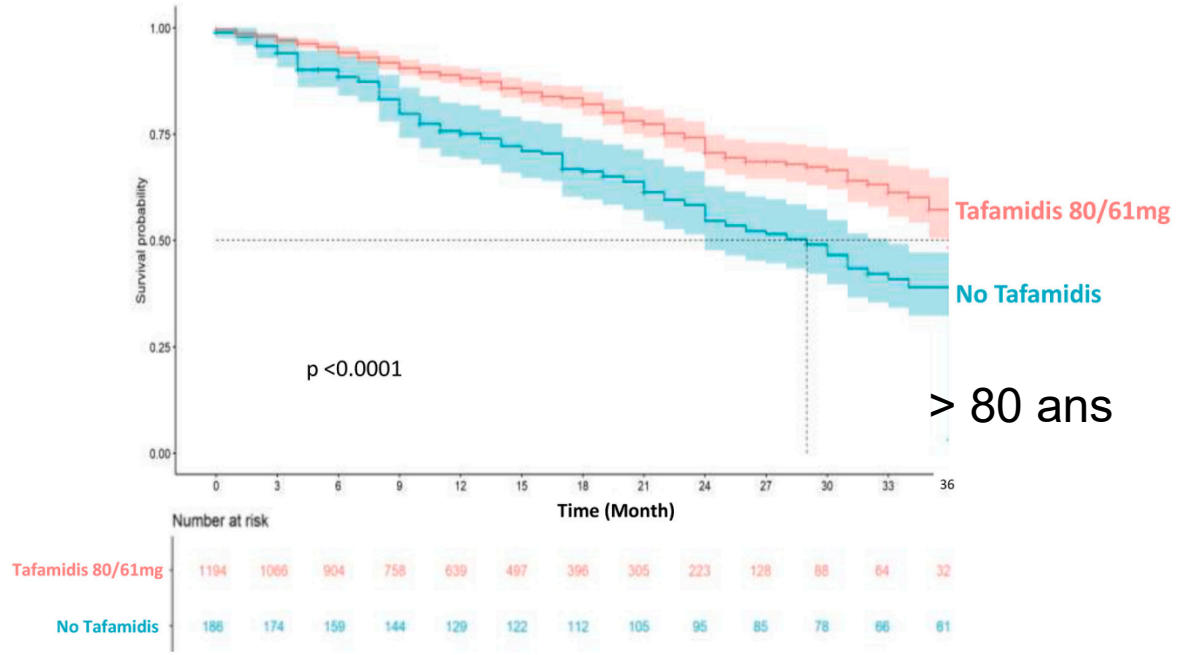


Impact of Tafamidis on survival in elderly patients: Insights from the Healthcare European Amyloidosis Registry

Int J Card. Oct 2025

Antoine Jobbé-Duval [a,b,1,*], Mounira Kharoubi [c,d,e,1], Erwan Donal [f,1], Fabrice Bauer [g,1], Amaury Broussier [h,i,1], Arnaud Bisson [j,1], Océane Bouchot [k,1], Phillipe Charron [l,ai,aj,1], Jérôme Costa [m,1], Pierre-Yves Courand [n,ak,1], Charlotte Dagrenat [o,1], François Delelis [p,1], Jean-Christophe Eicher [q,1], Antoine Fraix [r,1], Barnabas Gellen [s,1], Jean-Pierre Gueffet [t,1], Gilbert Habib [u,1], Jocelyn Inamo [v,1], Julien Jeanneteau [w,1], Damien Legallois [x,1], Léa Margerit [y,1], Basile Mouhat [z,1], Nicolas Piriou [aa,1], Tania Puscas [ab,1], Patricia Réant [ac,1], François Roubille [ad,1], Romain Trésorier [ae,1], Jean-Jacques Von Hunolestein [af,1], Charles Taieb [ag,1], Amira Zaroui [c,d,e,1], Olivier Lairez [ah,1], Thibaud Damy [c,d,e,1]





> 80 ans

Fig. 1. Survival in patients over 80 years old treated with tafamidis 80/61mg versus no treatment: Kaplan-Meier curve.

- Survie à 3 ans : 57% (ttt) vs 40 % (no ttt)
- Nécessité d'un diagnostic précoce
- Suivi gériatrique des patients

ESC European Society of Cardiology
European Heart Journal (2025) **46**, 1057–1070
https://doi.org/10.1093/eurheartj/ehae923

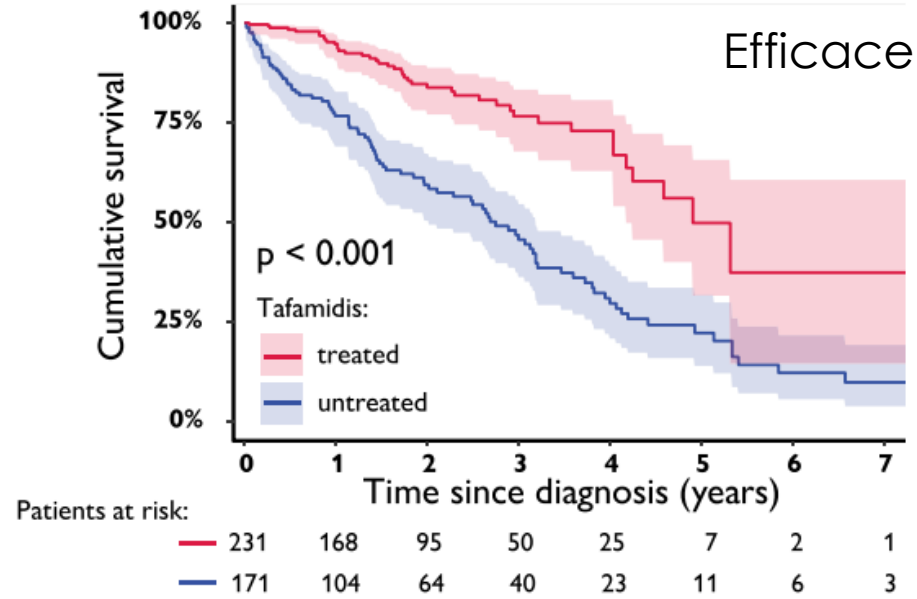
CLINICAL RESEARCH
Heart failure and cardiomyopathies

Tafamidis in octogenarians with wild-type transthyretin cardiac amyloidosis: an international cohort study

Philippe Debonnaire [1,*], **Karl Dujardin**[2], **Nicolas Verheyen** [3],

Février 2025

B **Total study population: octogenarians**



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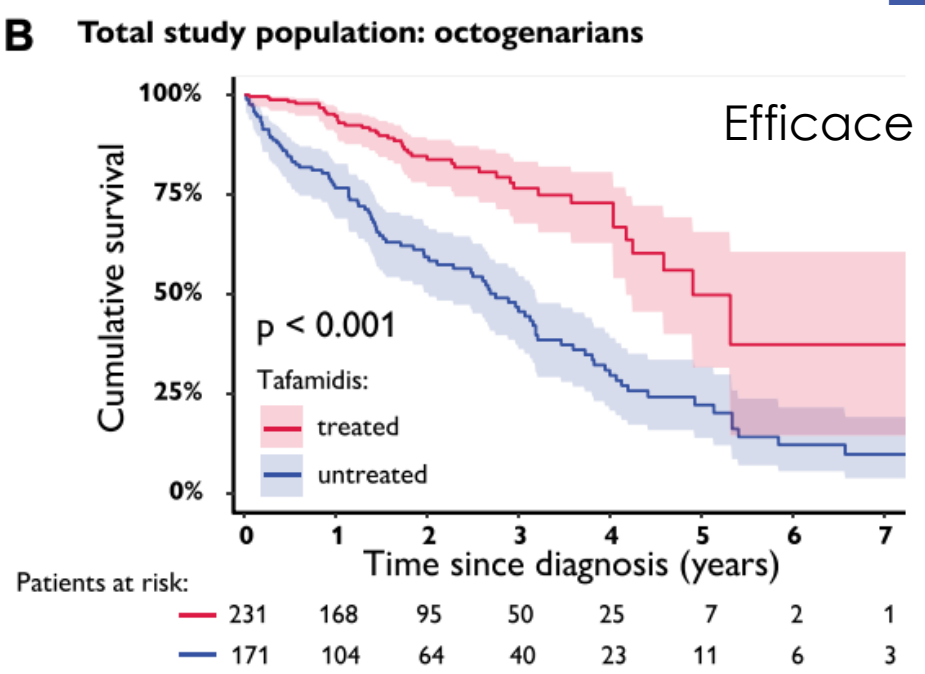

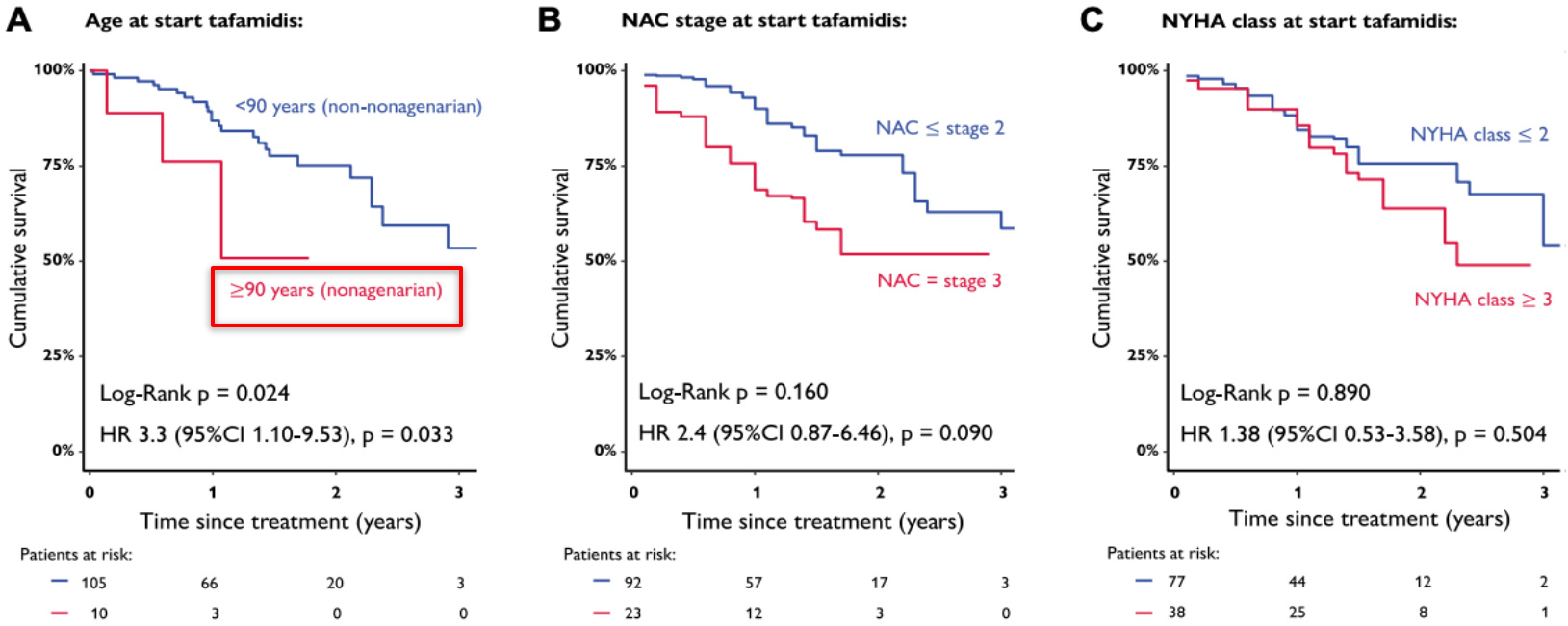

Traitement moins efficace :
- Les + graves (clinique et bio)
- Les plus de 90 ans ?

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ESC European Society of Cardiology
European Heart Journal (2025) **46**, 4133–4134
https://doi.org/10.1093/eurheartj/ehaf482

DISCUSSION FORUM
Heart failure and cardiomyopathies

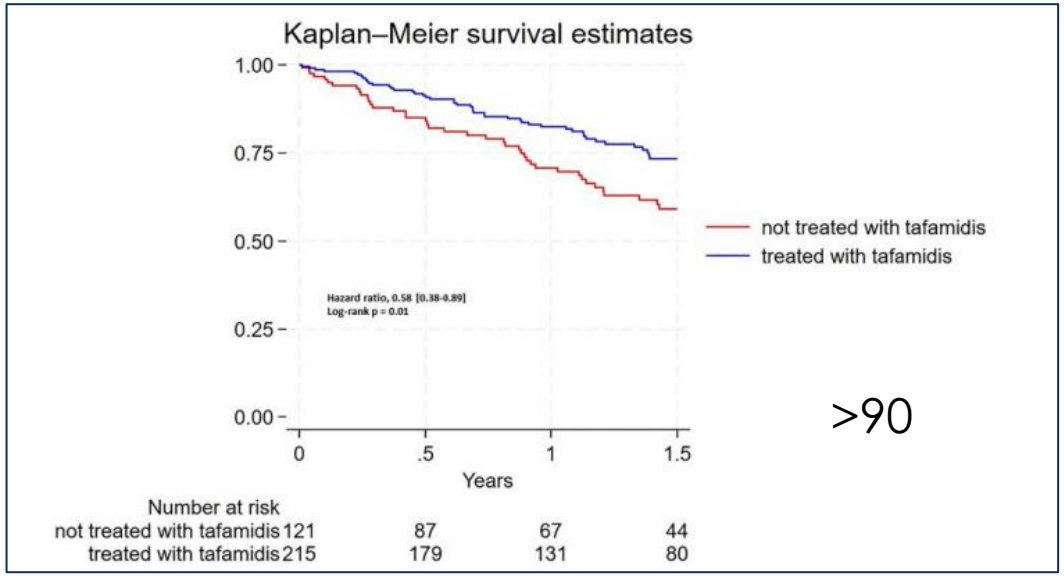
Nonagenarian patients with ATTR cardiac amyloidosis: should they be treated with tafamidis?

Antoine Jobbé-Duval [1,*], **Thibaud Damy** [2,3,4], **and Amaury Broussier** [4,5]

[1]Department of Cardiology, Médipôle Hôpital Mutualiste, 158 rue Léon Blum, Villeurbanne F-69100, France; [2]Department of Cardiology, Referral Center for Cardiac Amyloidosis, Filiere Cardiogen, GRC Amyloid Research Institute, all at APHP CHU Henri Mondor, Créteil F-94010, France; [3]Heart's Foundation, Vincennes F-94300, France; [4]CepiA, Paris Est Creteil University, INSERM, IMRB, Creteil F-94010, France; and [5]Department of Geriatric Medicine, AP-HP, Henri-Mondor University Hospital, Limeil-Brevannes F-94456, France

Online publish-ahead-of-print 7 August 2025

EHJ - Aout 2025



>90

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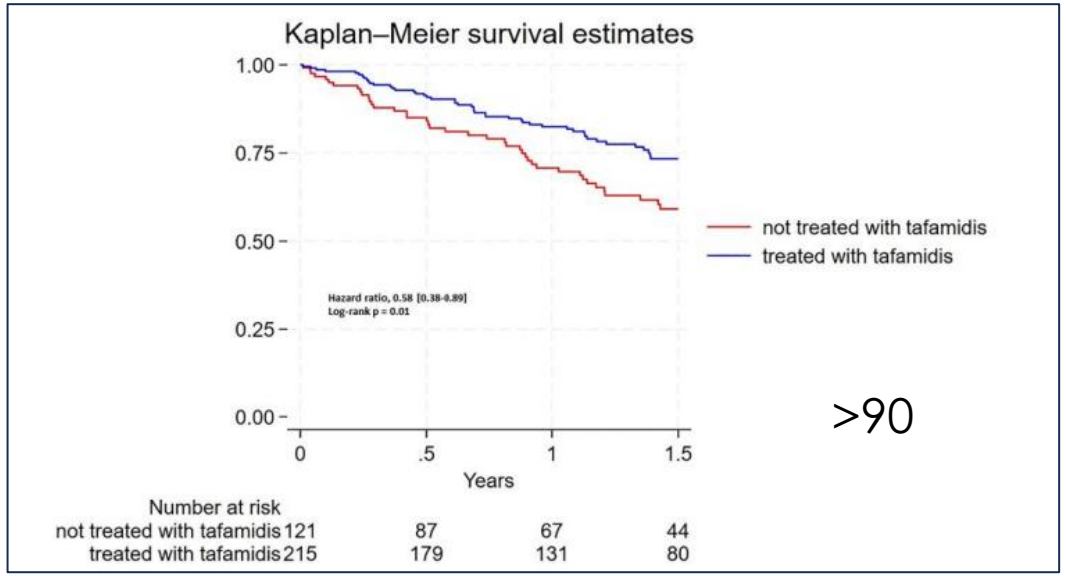


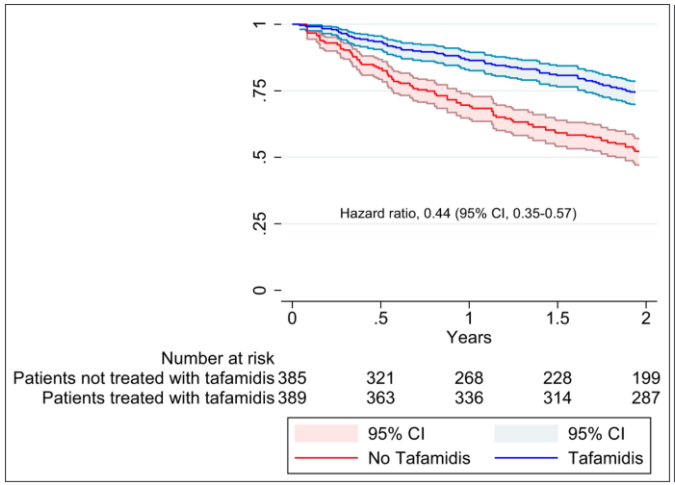
>90

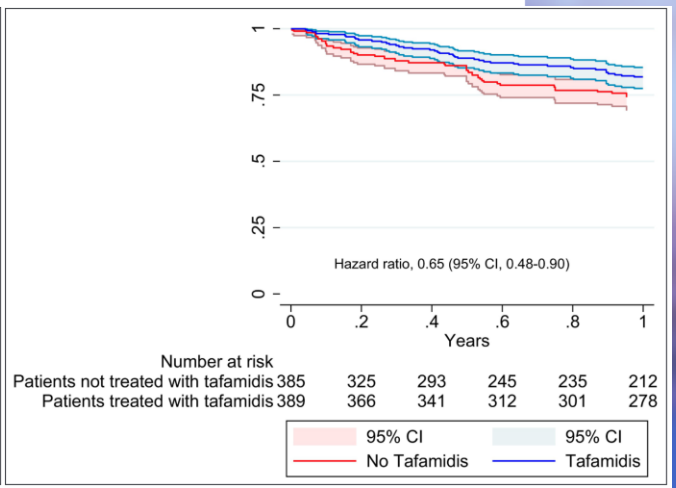
Tafamidis Reduces Death and Hospitalization for Acute Heart Failure in Octogenarian Patients With Transthyretin Cardiac Amyloidosis: A Propensity Score–Weighted Cohort Study

Louise Zmuda, MD, MsC; Amira Zaroui, MD, MsC; Mounira Kharoubi, PhD ; Emmanuelle Boutin, MsC; Frédéric Roca, MD, PhD ; Silvia Oghina, MD, MsC ; Emmanuel Teiger, MD, PhD ; Marie Laurent, MD, PhD; Florence Canoui-Poitrine, MD, PhD ; Thibaud Damy, MD, PhD *; Amaury Broussier, MD, PhD *

J Am Heart Assoc - Dec 2025

>80





Survie

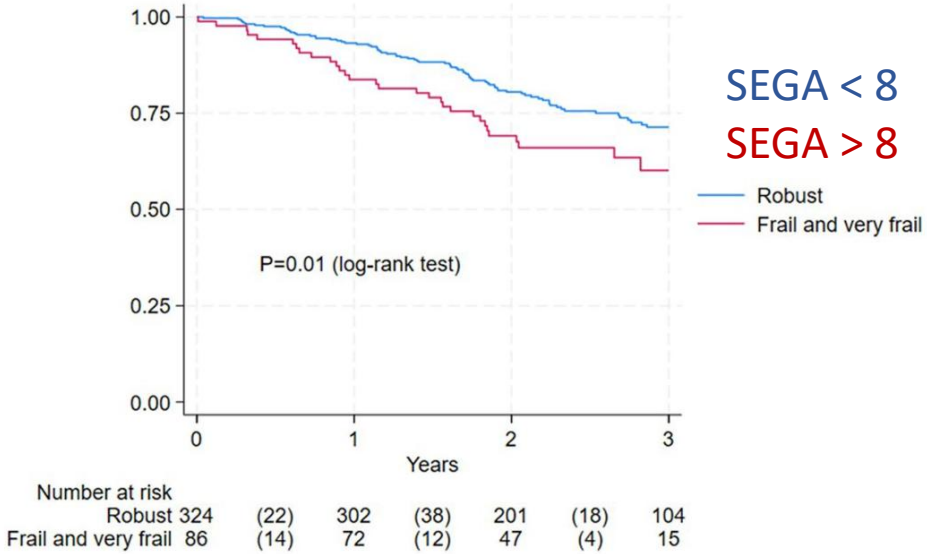
Ré hospitalisation

13e édition

Frailty is a mortality risk factor in tafamidis-treated patients with transthyretin cardiac amyloidosis

Amaury Broussier, Amira Zaroui , Mounira Kharoubi , Silvia Oghina , Charlotte Lafont , Marie Laurent , Nina Liu , Nathalie Marie-Nelly , Jea Philippe David , Emmanuel Teiger , Sylvie Bastuji Garin & Thibaud Dar

Amyloid 2026; 1-12



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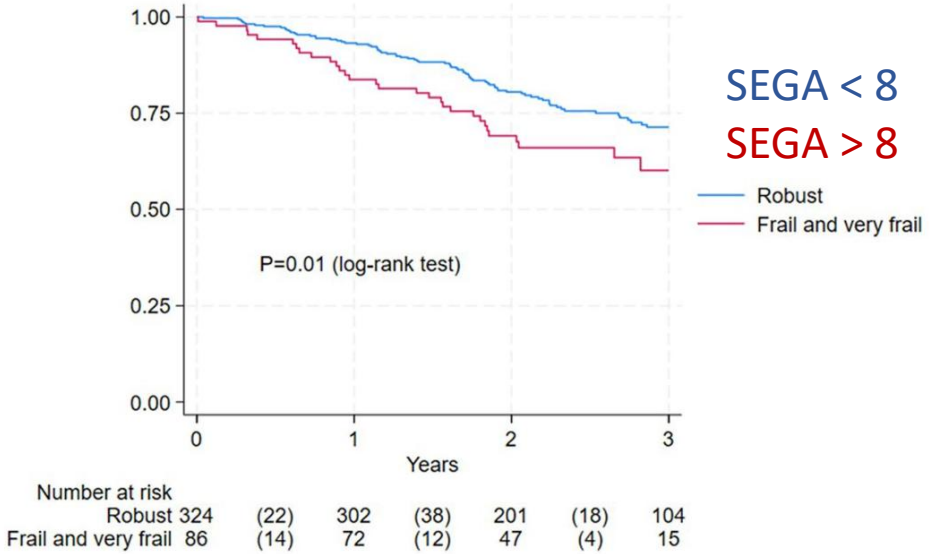
Amyloid 2026; 1-12



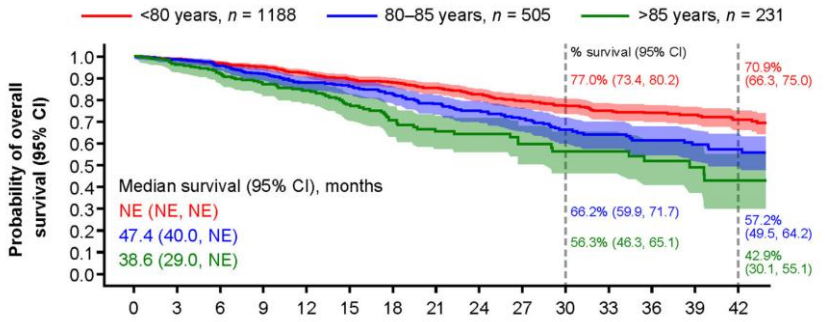
Phenotypic Considerations for Tafamidis Use in a Real-World Cohort of Older Patients with Transthyretin Amyloid Cardiomyopathy

Carlo Fumagalli · Francesco Cappelli · Mathew S. Maurer · Fabian aus dem Siepen · Angela Dispenzieri · Pablo Garcia-Pavia · Mazen Hanna · Martin Carlsson · Thibaud Damy

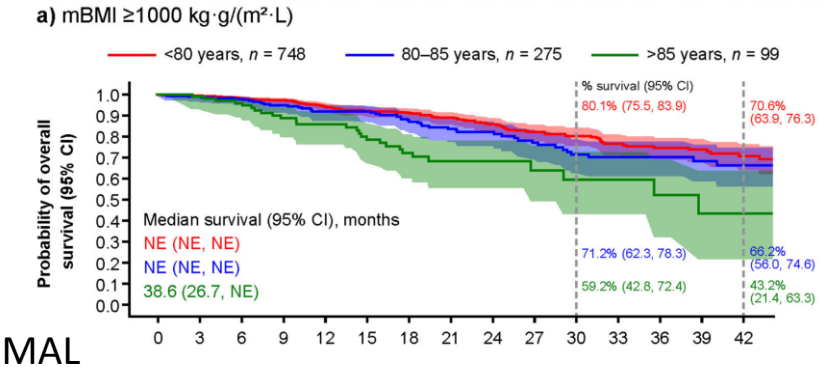
Cardiology and Therapy

Cardiol Thera 2026

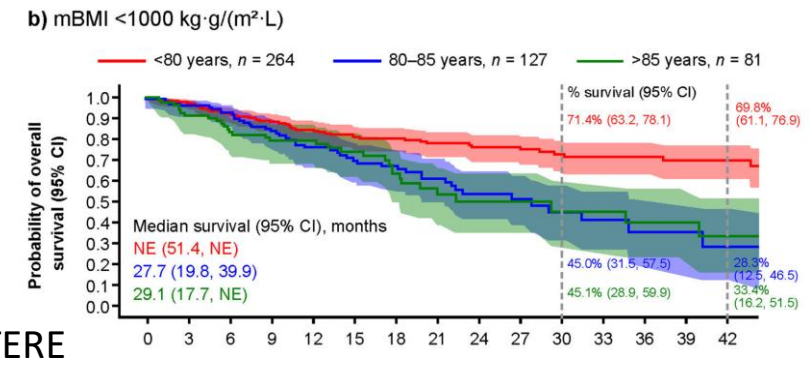
AGE



Nutrition (mBMI)



NORMAL



ALTERE

- DFG
- NYHA
- …

Journées Scientifiques de Broca

Autres traitements spécifiques

- Acoramidis (stabilisateur)

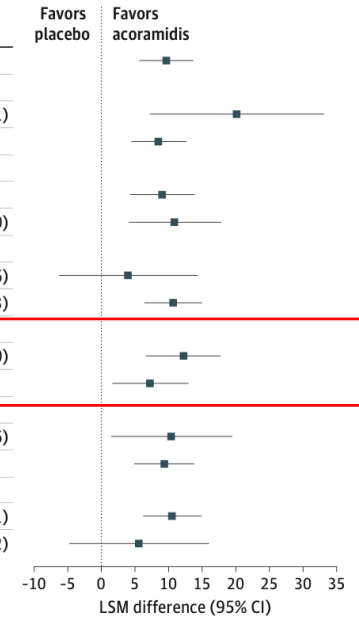
JAMA Cardiology | Original Investigation

Effect of Acoramidis on Heart Failure–Related Health Status

A Secondary Analysis of the ATTRibute-CM Randomized Clinical Trial

Figure 3. Forest Plot for Change From Baseline in Kansas City Cardiomyopathy Questionnaire Overall Summary Score (KCCQ-OS) to Month 30 by Subgroup

Subgroup	No. of participants[a] (%)	LSM difference (95% CI)	*P* value
Overall	606 (100)	9.9 (6.0 to 13.9)	<.001
ATTR-CM genotype			.09[b]
ATTRv-CM	59 (10)	20.3 (7.5 to 33.1)	.002
ATTRwt-CM	547 (90)	8.8 (4.6 to 13.0)	<.001
NT-proBNP, ng/L			.66[b]
≤3000	398 (66)	9.3 (4.5 to 14.1)	<.001
>3000	208 (34)	11.2 (4.4 to 18.0)	.001
eGFR, mL/min/1.73 m^2			.24[b]
<45	93 (15)	4.4 (−5.9 to 14.6)	.40
≥45	513 (85)	11.0 (6.7 to 15.3)	<.001
Age, y			.23[b]
<78	298 (49)	12.4 (6.9 to 18.0)	<.001
≥78	308 (51)	7.6 (2.0 to 13.2)	.008
Country			.85[b]
US	117 (19)	10.7 (1.8 to 19.6)	.02
Rest of world	489 (81)	9.7 (5.3 to 14.1)	<.001
YHA class			.39[b]
I, II	507 (84)	10.8 (6.5 to 15.1)	<.001
III	99 (16)	6.0 (−4.3 to 16.2)	.25



JSB 2026

Autres traitements spécifiques

- Acoramidis (stabilisateur)

JAMA Cardiology | Original Investigation

Effect of Acoramidis on Heart Failure–Related Health Status
A Secondary Analysis of the ATTRibute-CM Randomized Clinical Trial

Figure 3. Forest Plot for Change From Baseline in Kansas City Cardiomyopathy Questionnaire Overall Summary Score (KCCQ-OS) to Month 30 by Subgroup

Subgroup	No. of participants[a] (%)	LSM difference (95% CI)	*P* value
Overall	606 (100)	9.9 (6.0 to 13.9)	<.001
ATTR-CM genotype			.09[b]
ATTRv-CM	59 (10)	20.3 (7.5 to 33.1)	.002
ATTRwt-CM	547 (90)	8.8 (4.6 to 13.0)	<.001
NT-proBNP, ng/L			.66[b]
≤3000	398 (66)	9.3 (4.5 to 14.1)	<.001
>3000	208 (34)	11.2 (4.4 to 18.0)	.001
eGFR, mL/min/1.73 m^2			.24[b]
<45	93 (15)	4.4 (−5.9 to 14.6)	.40
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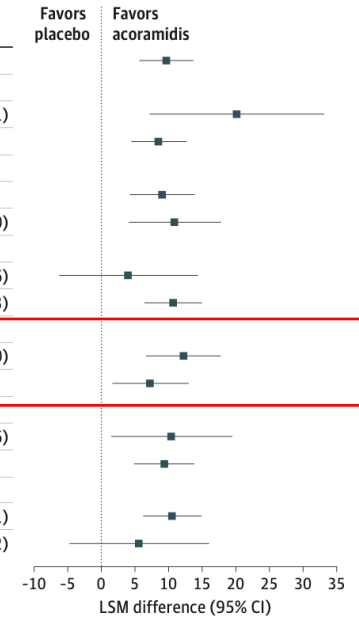
≥78	308 (51)	7.6 (2.0 to 13.2)	.008
Country			.85[b]
US	117 (19)	10.7 (1.8 to 19.6)	.02
Rest of world	489 (81)	9.7 (5.3 to 14.1)	<.001
YHA class			.39[b]
I, II	507 (84)	10.8 (6.5 to 15.1)	<.001
III	99 (16)	6.0 (−4.3 to 16.2)	.25



- Patisiran, Vutrisiran, Enotersen (« silencers »)
  - Blocage de la synthèse de Transthyrétine
  - TTT de deuxième ligne (RCP nationale)
  - Pas de données chez le sujet âgé

Conclusion

- Des traitements validés même chez le sujet âgé
- Un cut off de l'âge discutable (…) : rôle du gériatre pour EVALUER
- Des innovations thérapeutiques en cours (inclure des sujets âgés)
- Importance du diagnostic précoce et du suivi des patients
- Introduction ET arrêt des traitements

Les rôles du gériatre dans l'amylose cardiaque :

- **Dépister et diagnostiquer l'amylose cardiaque**
- **Orienter vers le centre de référence de l'amylose cardiaque**
- **Evaluer la fragilité :**
  - Aide à la décision d'initiation de traitement
  - Prise en charge globale et prévention de la perte d'autonomie



Réseau Amylose (reseau-amylose.org)