

Evaluation de la fragilité de la personne âgée: Qui transporter aux urgences ?

Anne-Laure Féral-Pierssens

SAMU 93 - Urgences

Hôpitaux Universitaires Paris Seine Saint Denis





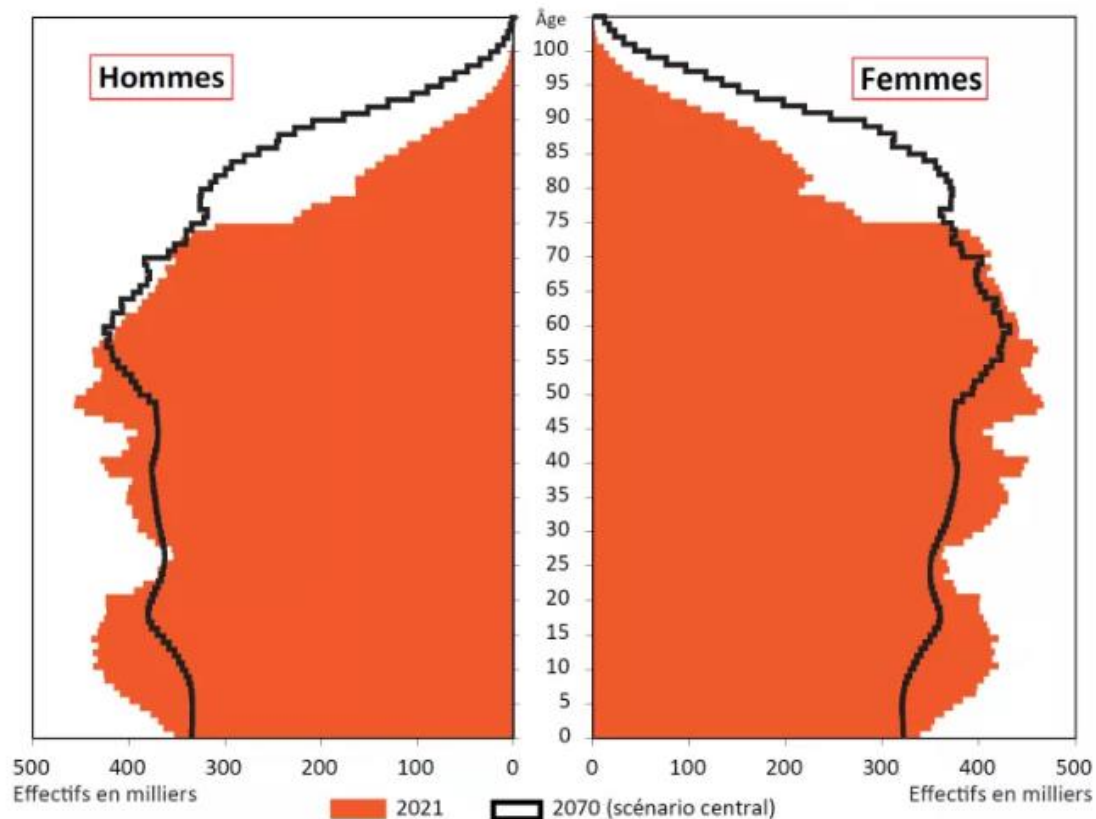
OCTOGENAIRES

is
the
new

SEPTUAGENAIRES



Figure 1. Pyramide des âges de la France en 2021 et 2070 selon le scénario central de l'Insee

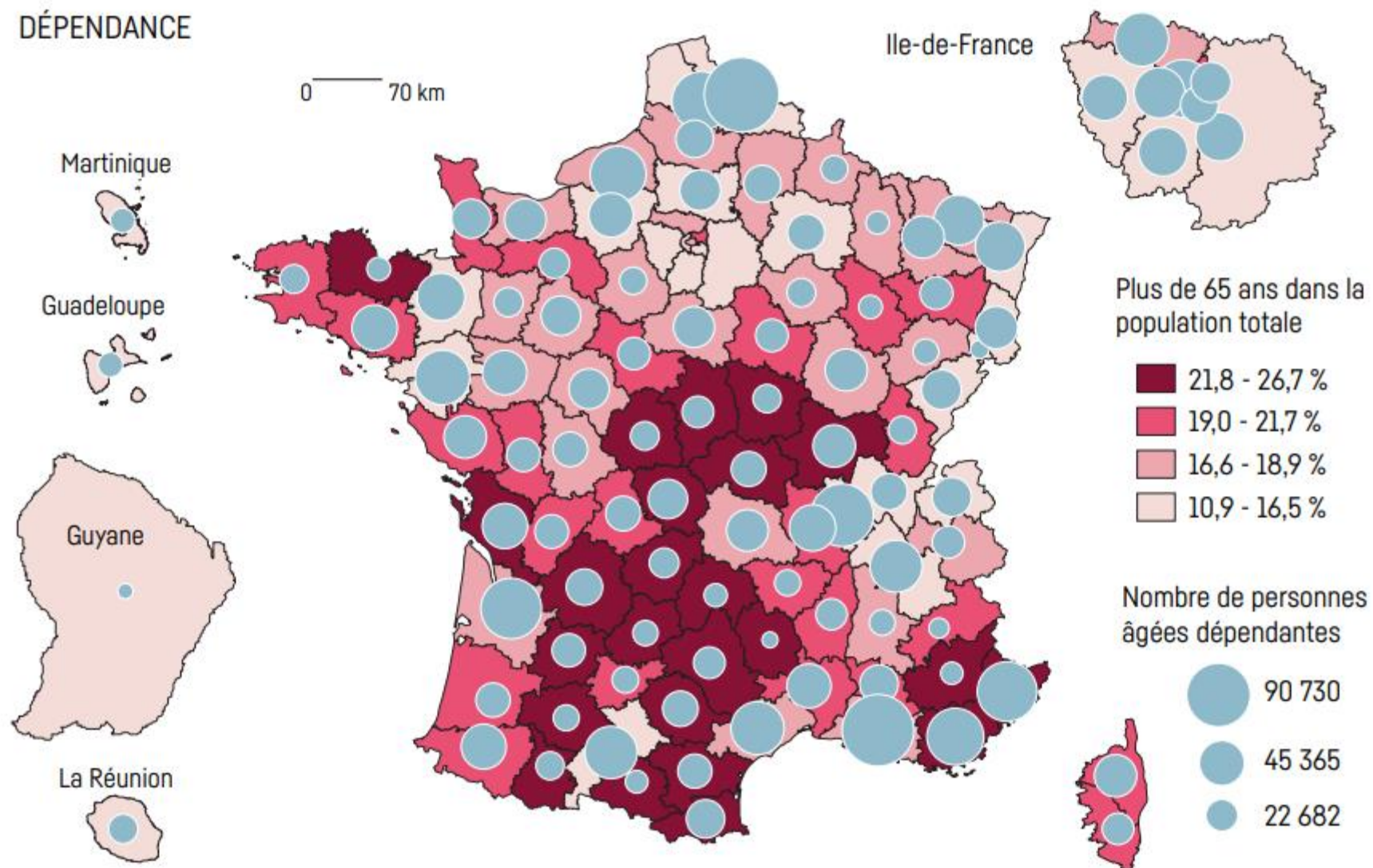


L. Toulemon *et al.*, *Population & Sociétés*, n° 597, INED, février 2022.
Source : [2]

Évolution de la population de la France d'ici 2070 d'après différents scénarios. Laurent Toulemon, Élisabeth Algava, Nathalie Blanpain, Gilles Pison, 2022 © L.Toulemon



DÉPENDANCE



Source : CNAV [2015], INSEE [2014], Paquid [2013].

Indicateur de prédisposition territoriale aux
situations d'isolement des personnes âgées (domicile)

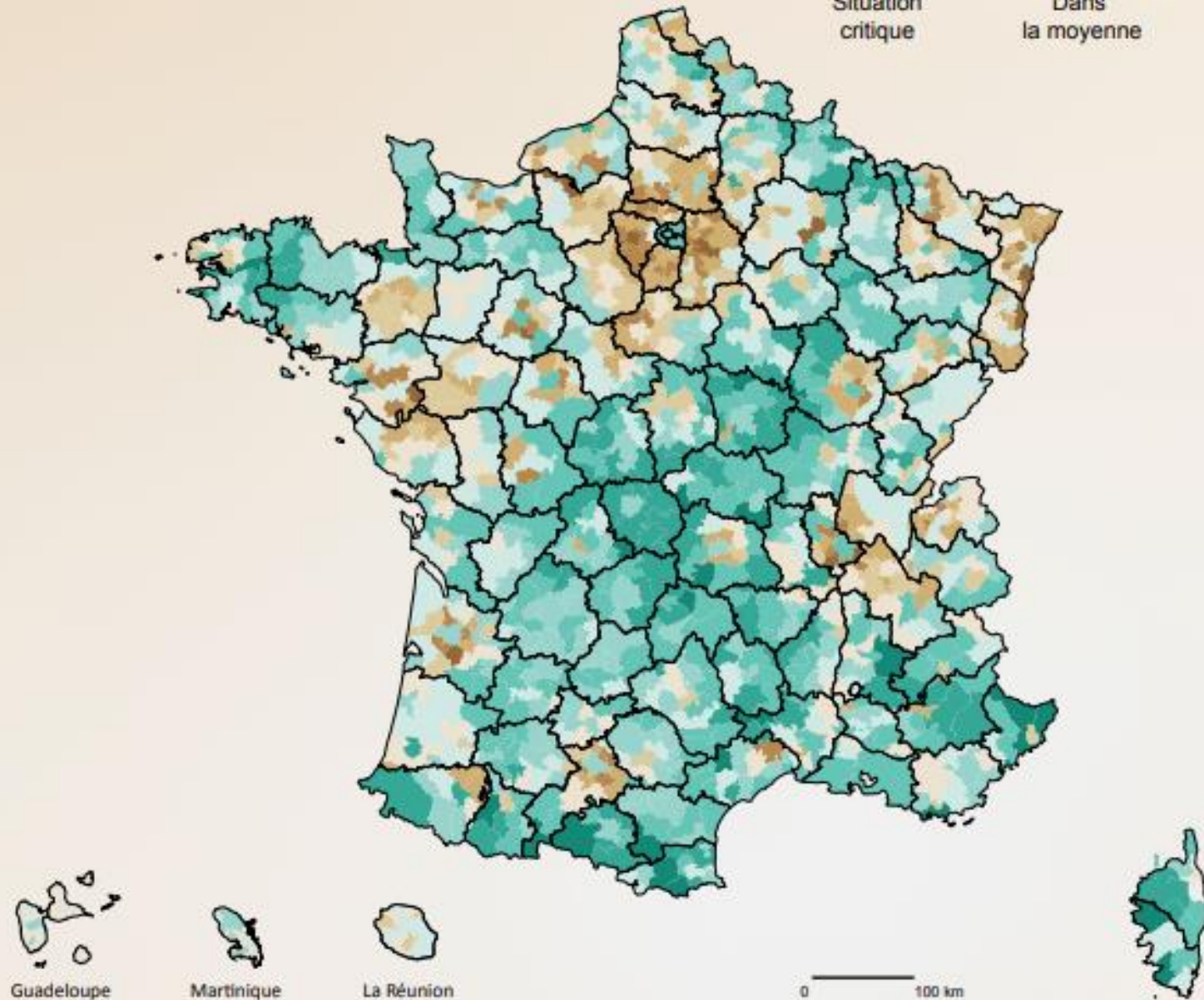
1 2 3 4 5 6 7 8 9 10



Situation
critique

Dans
la moyenne

Situation
favorable

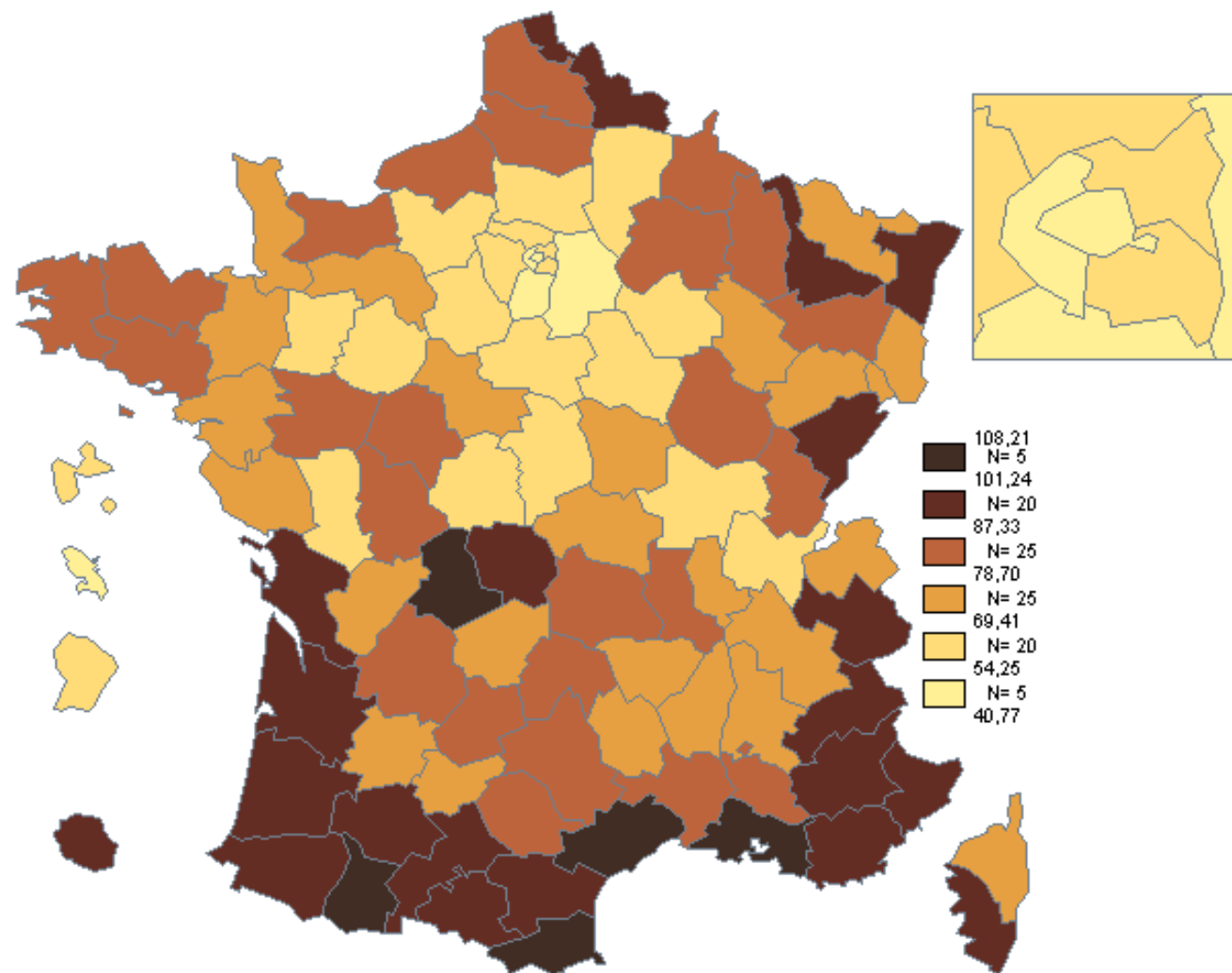


Guadeloupe

Martinique

La Réunion

0 100 km

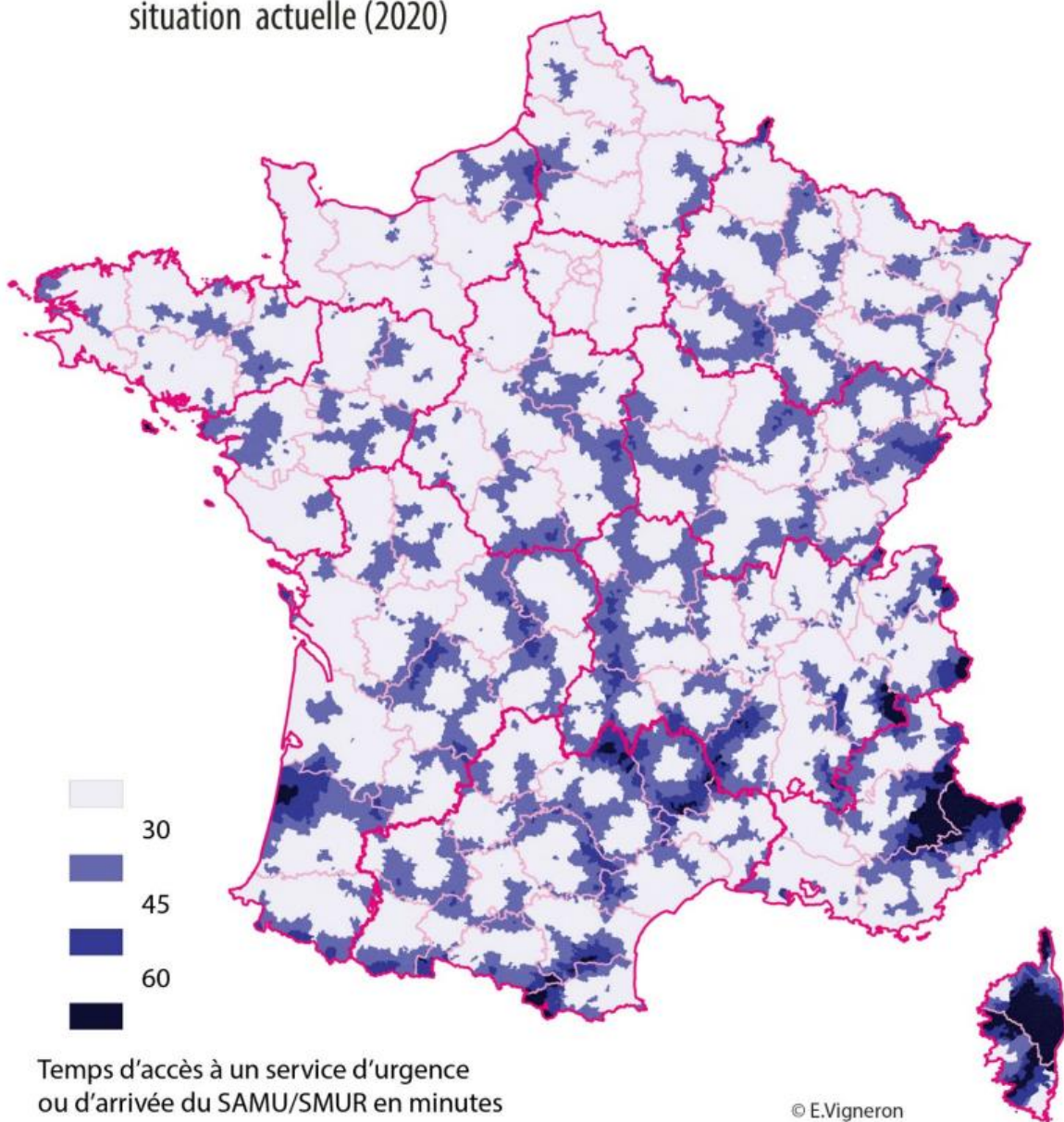


Taux de généralistes secteur 1

Source : DREES, 2013

Distance aux services d'URGENCE

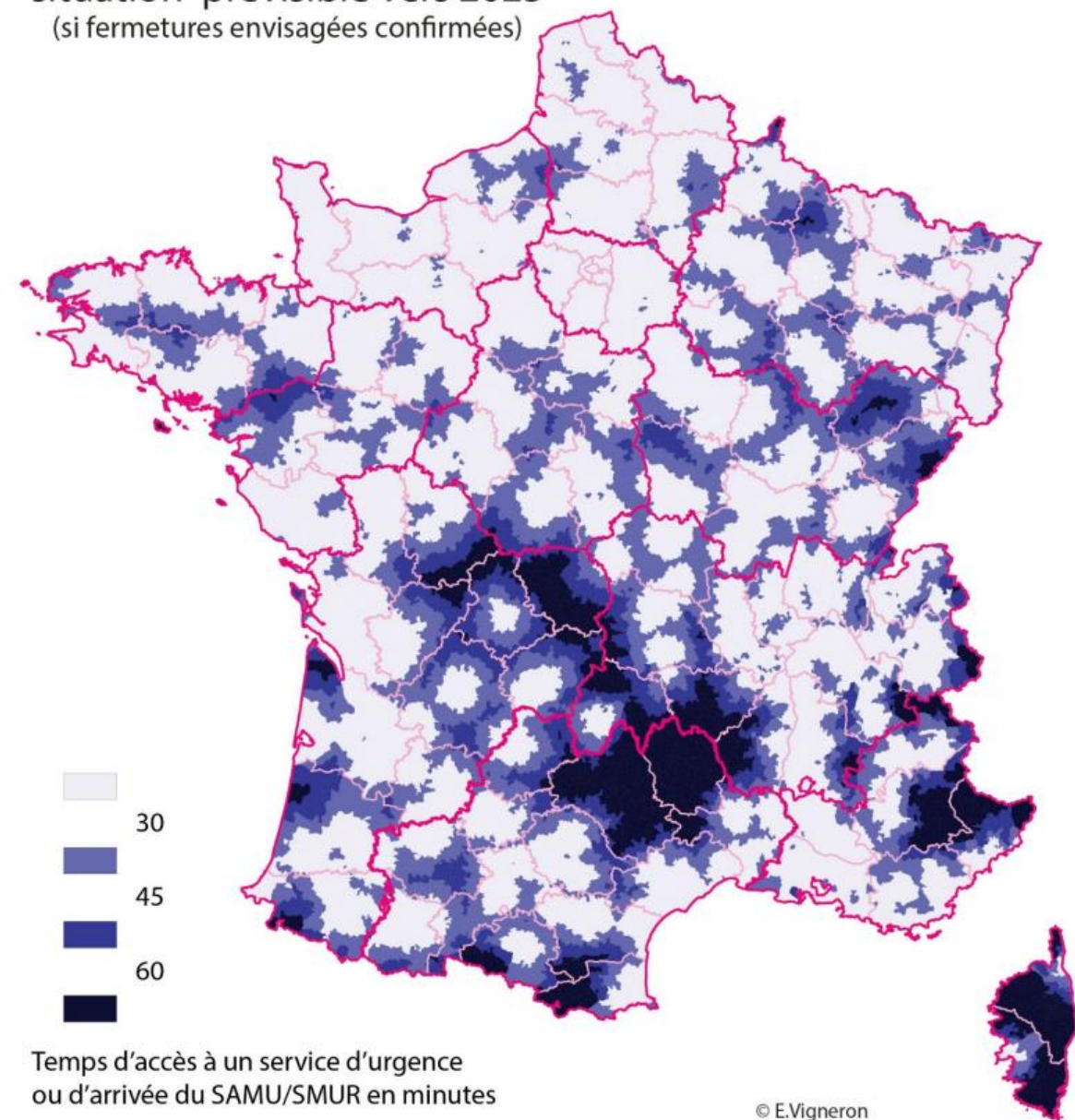
situation actuelle (2020)



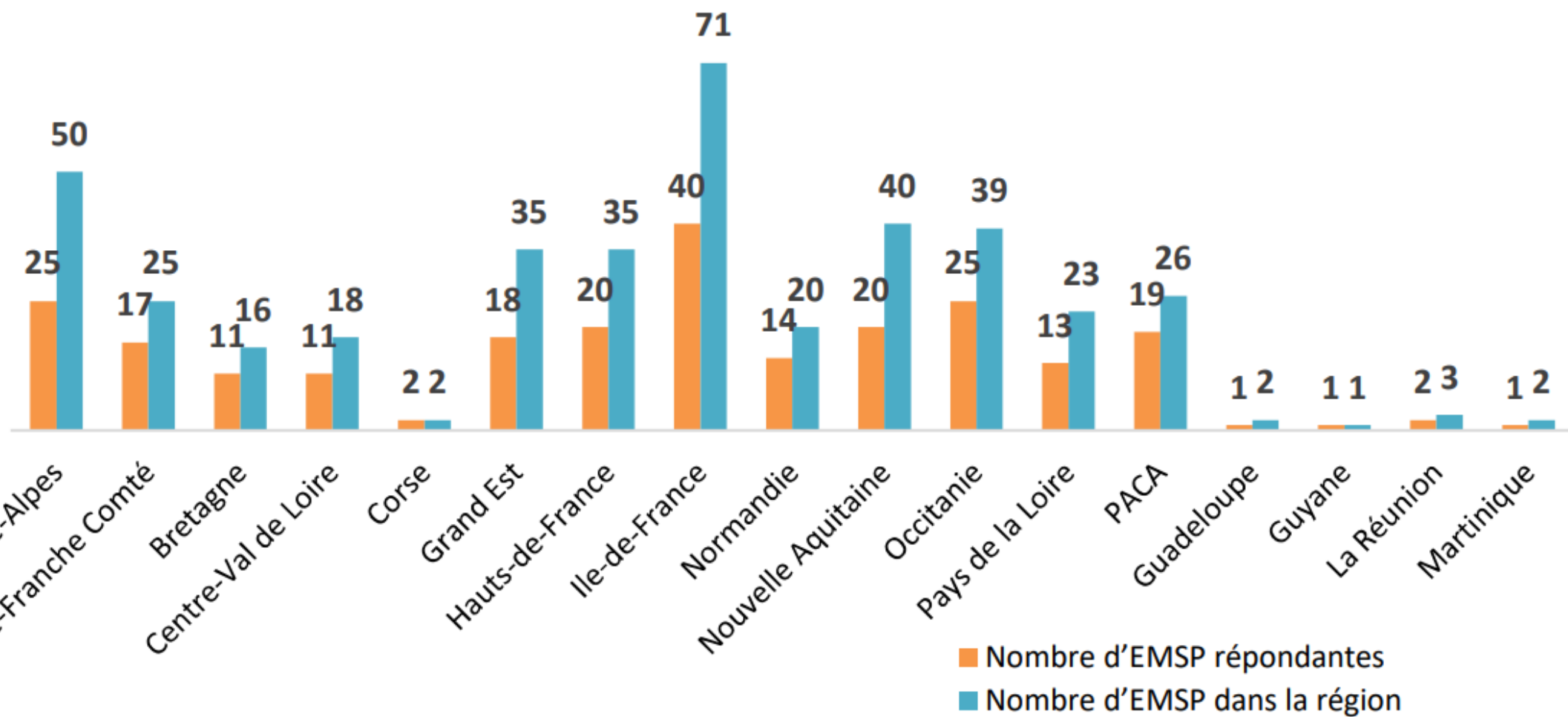
Distance aux services d'URGENCE

situation prévisible vers 2025

(si fermetures envisagées confirmées)



EMSP répondantes







14%



32%

25% traumatologiques
17% cardiovasculaires
11% respiratoires



Table 1 Health characteristics, autonomy assessment and home services of elderly patients visiting EDs according to professional home services' presence

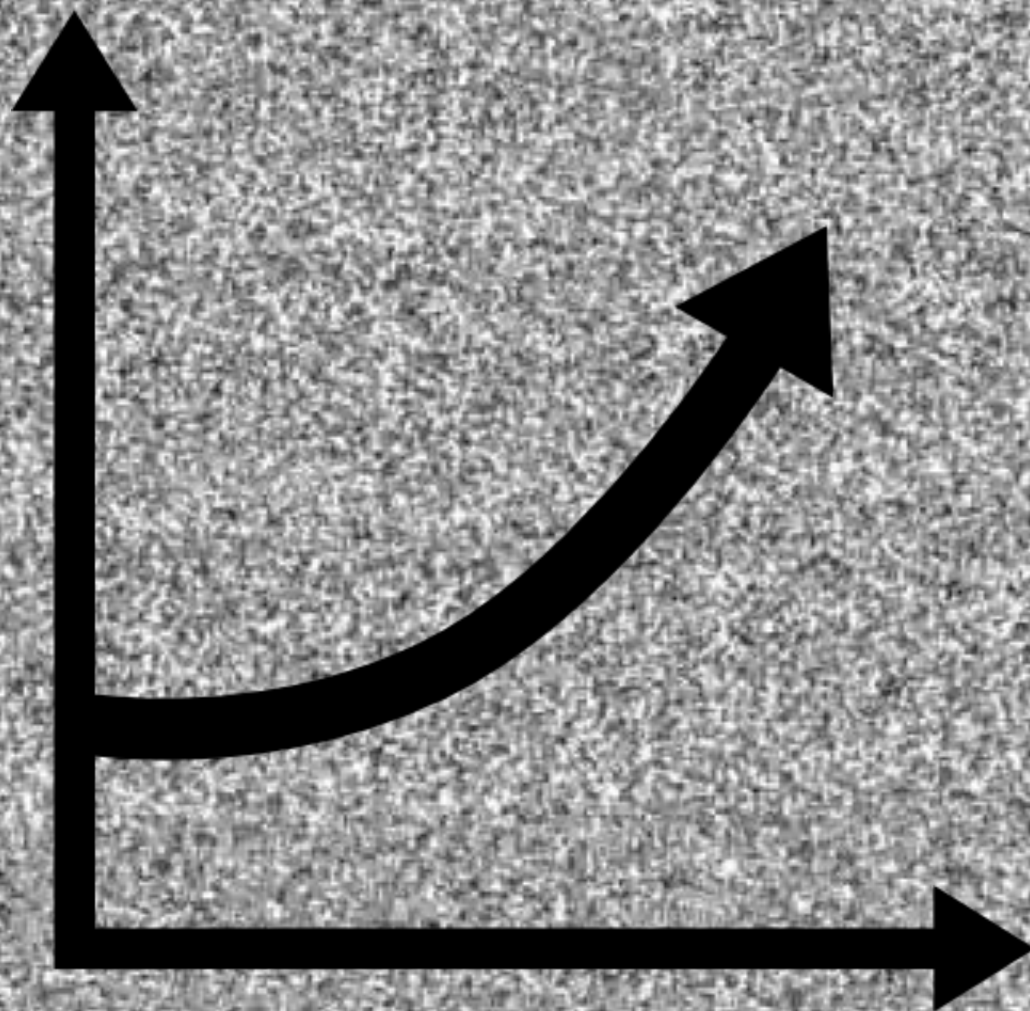
Characteristics	All patients <i>N</i> = 1168 <i>N</i> (%)	No services <i>N</i> = 800 <i>N</i> (%)	Services <i>N</i> = 368 <i>N</i> (%)	<i>P</i> -value*
Knaus classification				
A	437(37)	385(48)	52(14)	< 0.001
B	451(39)	281(35)	170(46)	< 0.001
C	230(20)	97(12)	133(36)	< 0.001
D	4(0.3)	0(0)	4(1)	0.003
Autonomy assessment:				
ADL ^a , median (Q1;Q3)	1(0;4)	0(0;1)	3(1;6)	< 0.001
Severe disability (ADL ^a ≥ 10)	66(6)	29(4)	37(10)	< 0.001
Loss of autonomy (ADL ^a ≥ 6)	194(17)	73(9)	121(33)	< 0.001
Early disability (ADL ^a ≤ 4)	877(75)	674(84)	203(55)	< 0.001
Disability for intimate tasks	136(12)	41(5)	95(26)	< 0.001
Walking disability	123(11)	57(7)	66(18)	< 0.001

Table 2 Emergency department outcome of elderly patients according to professional home services' presence

	All population <i>N</i> = 1168 N(%)	No services <i>N</i> = 800 N(%)	Services <i>N</i> = 368 N(%)	<i>P</i> -value
Outcome after ED visit:				
Death	2(0.2)	0(0)	2(0.5)	0.037
Admitted	773(66)	505(63)	268(73)	0.001
Admitted for "having difficulties coping at home"	128(11)	80(10)	48(13)	0.124
ED short unit	262(22)	175(22)	87(24)	0.496
Other medical unit	460(39)	290(36)	170(46)	0.001
Intensive care Unit	51(4)	40(5)	11(3)	0.119
Runaway	4(0.3)	3(0.4)	1(0.3)	0.780
Discharged against medical advice	7(0.6)	5(0.6)	2(0.5)	0.868
On Day 30 among admitted patients:				
Death	52(7)	26(5)	26(10)	0.014
Still hospitalized	213(29)	133(28)	80(32)	0.298
Discharged home	450(61)	314(65)	136(54)	0.002
Entering Elder facility	17(2)	7(2)	10(4)	0.032
Length-of-stay:				
Days, median (Q1;Q3)	<i>N</i> = 630 8 (3;14)	<i>N</i> = 415 8(3;14)	<i>N</i> = 215 8(3;14)	0.917

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On Day 30 among admitted patients:				
	<i>N</i> = 732	<i>N</i> = 480	<i>N</i> = 252	
Death	52(7)	26(5)	26(10)	0.014
Still hospitalized	213(29)	133(28)	80(32)	0.298
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Days, median (Q1;Q3)	8 (3;14)	8(3;14)	8(3;14)	0.917



Nemec 2010
Quinn 2015
Van Damn 2023

Table 3

Associations with adverse outcomes after 30 days: nonspecific complaints versus specific complaints.

Adverse health outcomes	NSC crude model OR (95% CI)	NSC adjusted model 1 OR (95% CI)	NSC adjusted model 2 OR (95% CI)
Admission after initial ED visit	1.00 (0.74 - 1.36)	0.97 (0.71 - 1.32)	0.88 (0.63 - 1.22)
Length of stay $\geq$ 5 days	0.94 (0.66 - 1.34)	0.89 (0.62 - 1.28)	0.78 (0.53 - 1.14)
Functional decline	2.14 (1.50 - 3.05)	1.87 (1.30 - 2.70)	1.84 (1.26 - 2.69)
Institutionalization	3.64 (2.32 - 5.70)	2.94 (1.85 - 4.67)	2.46 (1.51 - 4.00)
Mortality	1.35 (0.67 - 2.73)	1.42 (0.69 - 2.91)	1.26 (0.58 - 2.73)
Return visit to ED in 30 days after initial ED visit	0.86 (0.54 - 1.39)	0.93 (0.57 - 1.52)	0.89 (0.54 - 1.46)
Hospital admission in 30 days after initial ED visit	1.04 (0.65 - 1.66)	1.18 (0.73 - 1.91)	1.14 (0.69 - 1.88)

Multivariable logistic regression with specific complaints as reference group.

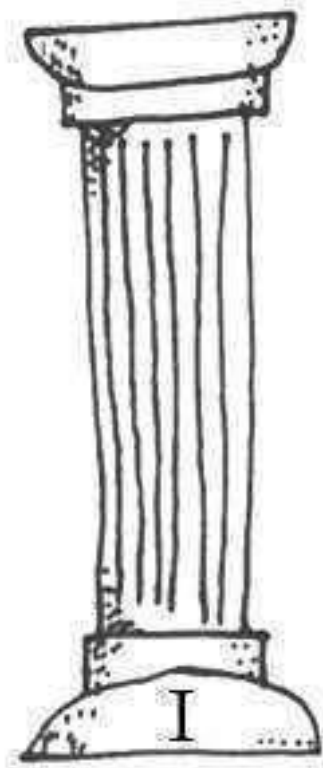
Model 1: Adjusted for: age, sex.

Model 2: Adjusted for: age, sex, living situation, Katz ADL at baseline, CCI, self-reported memory problems, ISAR-HP.

Nemec 2010

Quinn 2015

Van Damn 2023



Bienfaisance





EXT 32



Where

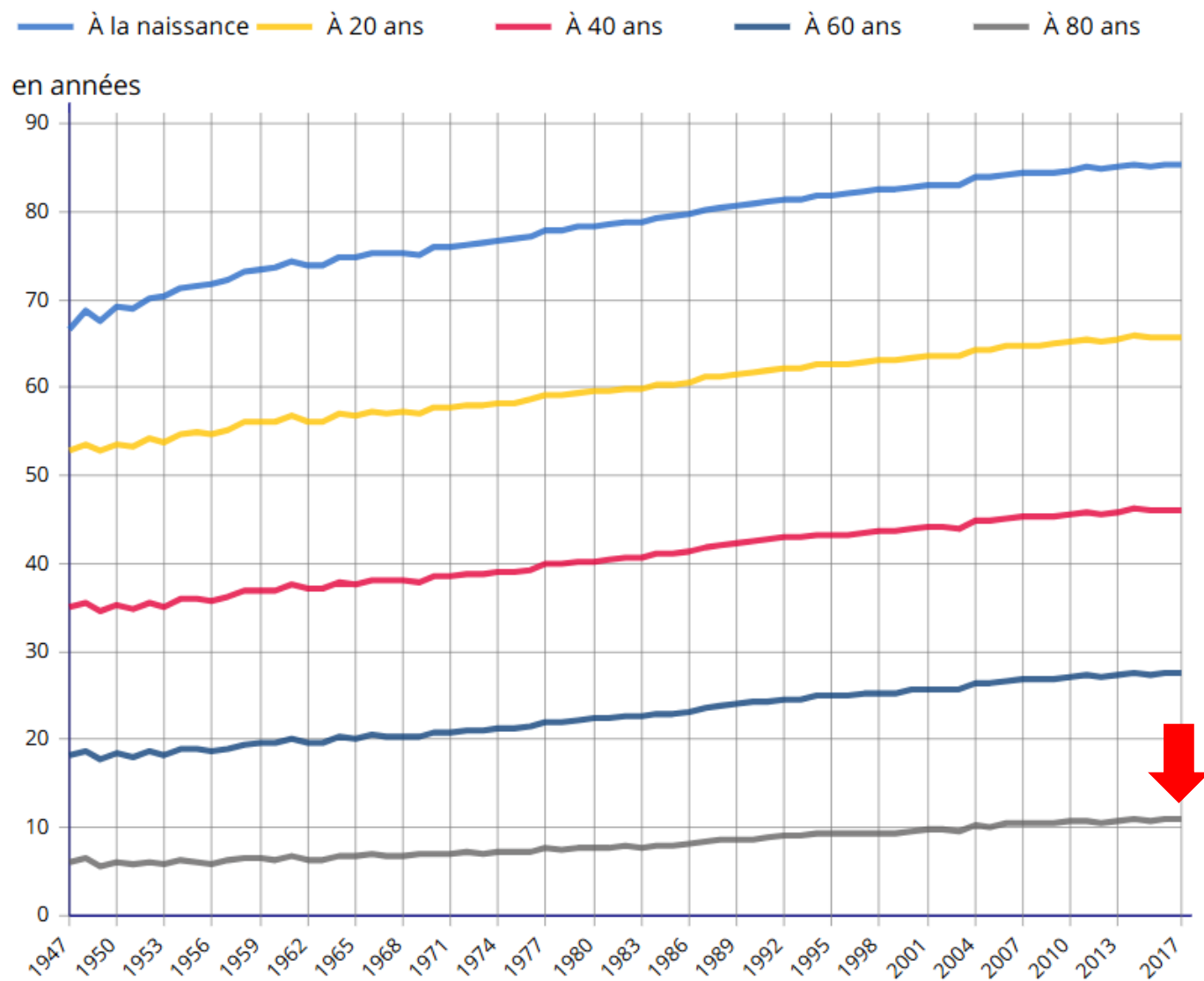
Déclin fonctionnel ?

Autonomie ?

Qualité de vie ?

Survie ?

Figure 1a - Espérance de vie des femmes à différents âges depuis 1947



Lecture : le nombre moyen d'années restant à vivre aux femmes au-delà de 80 ans est de 10,96 ans, dans les conditions de mortalité par âge de 2017.

Champ : France métropolitaine

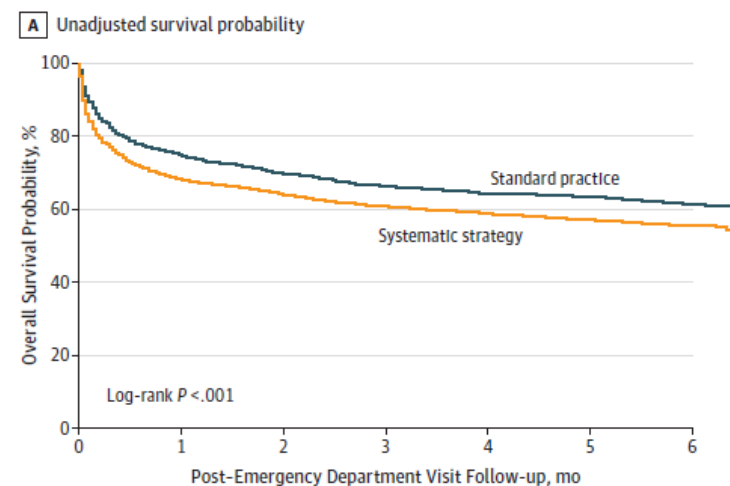
Source : Insee, statistiques de l'état civil, estimations de population.

 Check for updates

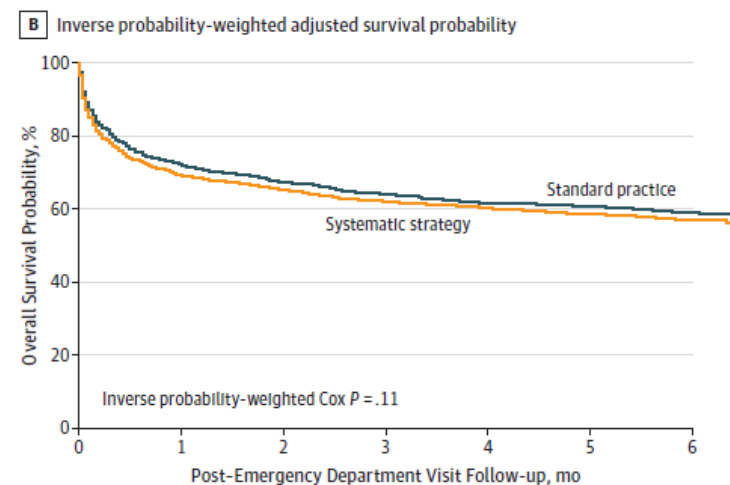
Sara Thietart^{1*} , Ariane Boumendil², Dominique Pateron³, Bertrand Guidet^{1,4} and H  l  ne Vallet⁵,
the ICE-CUB2 Study Network

Effect of Systematic Intensive Care Unit Triage on Long-term Mortality Among Critically Ill Elderly Patients in France: A Randomized Clinical Trial

Bertrand Guidet ^{1 2 3}, Guillaume Leblanc ^{1 4}, Tabassome Simon ^{2 5}, Maguy Woimant ⁶,
Jean-Pierre Quenot ^{7 8}, Olivier Ganansia ⁹, Maxime Maignan ¹⁰, Youri Yordanov ¹¹,



No. at risk							
Standard practice	1518	1126	1042	992	961	941	912
Systematic strategy	1518	1029	966	919	887	860	826



No. at risk							
Standard practice	1518	1126	1042	992	961	941	912
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Recovery after critical illness in patients aged 80 years or older: a multi-center prospective observational cohort study

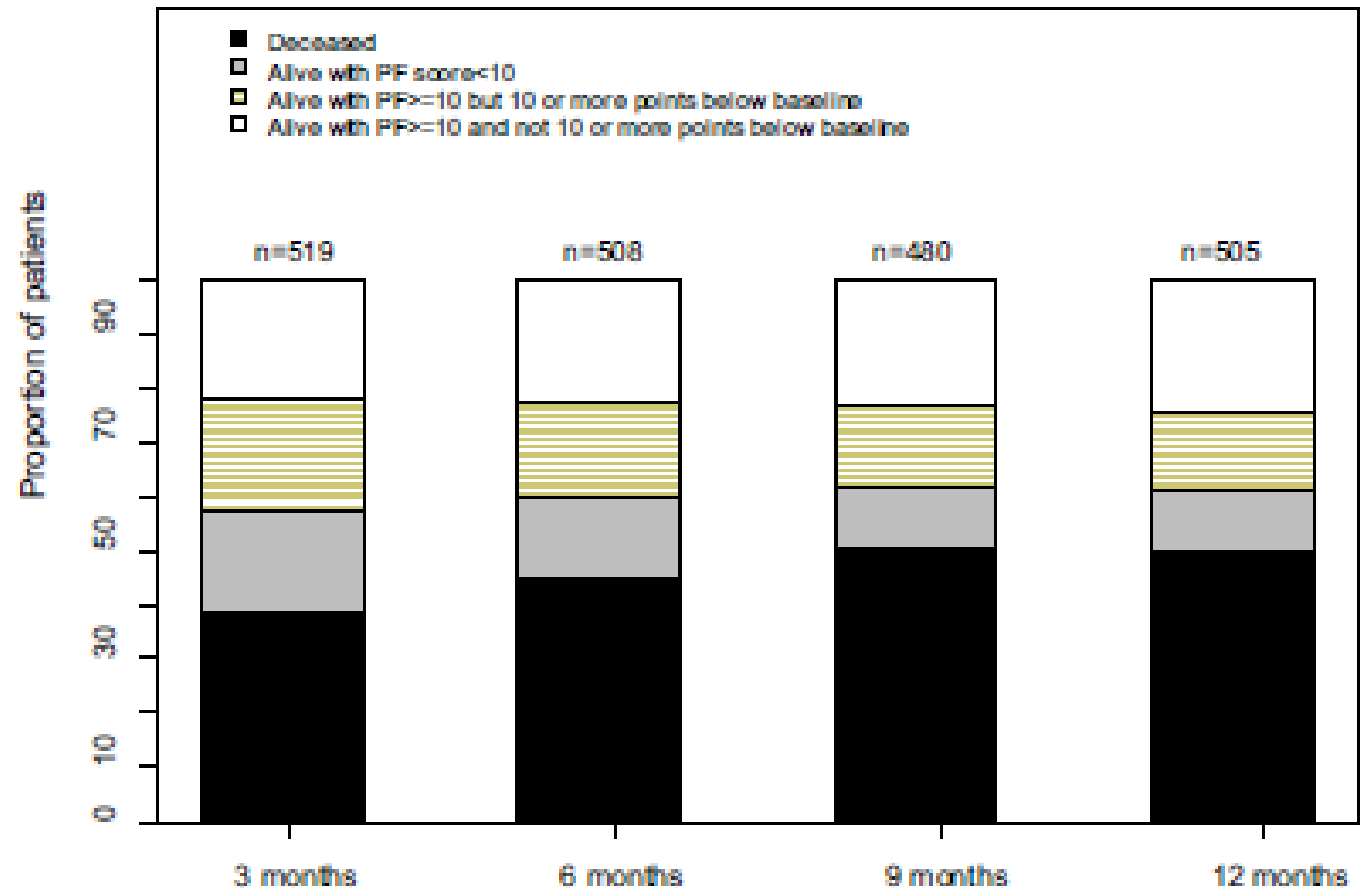


Réa: 14%

Hopital: 26%

1 an: 44%

26% récup fonctionnelle à 1 an



Outcome	Group; no. (%) of patients*		Association, OR (95% CI) or difference in medians (<i>p</i> value†)
	Frail <i>n</i> = 138	Not frail <i>n</i> = 283	
Adverse event‡	54 (39.1)	83 (29.3)	1.54 (1.01–2.37)
Death			
In ICU	16 (11.6)	27 (9.5)	1.37 (0.72–2.62)
In hospital	44 (31.9)	45 (15.9)	1.81 (1.09–3.01)
Duration of stay, d, median (IQR)			
In ICU	7 (4–13)	6 (3–10)	1 d (0.02)
In hospital	30 (10–64)	18 (10–40)	12 d (0.02)
Discharge disposition§	<i>n</i> = 91	<i>n</i> = 235	
Home, living independently	20 (22.0)	104 (44.3)	0.35 (0.20–0.61)
Home, living with help	33 (36.3)	58 (24.7)	1.67 (1.00–2.81)
Other¶	38 (41.8)	73 (31.1)	1.51 (0.92–2.48)
Discharged newly dependent**	24 (70.6)	96 (51.6)	2.25 (1.03–4.89)
Hospital readmission§	51 (56.0)	92 (39.1)	1.98 (1.22–3.23)

Note: CI = confidence interval, ICU = intensive care unit, OR = odds ratio.
 *Unless stated otherwise.
 †Mann–Whitney test.
 ‡Composite of medication errors, self-extubation/reintubation, nosocomial infection, death.
 §Among 91 frail and 235 nonfrail patients for whom data on discharge disposition and on hospital readmission within 12 mo after discharge could be ascertained (data missing, *n* = 1 per group; in hospital at end of follow-up, *n* = 2 per group).
 ¶Continuing care facility, subacute care facility or other.
 **Among 34 frail and 186 nonfrail patients who were living independently at baseline.

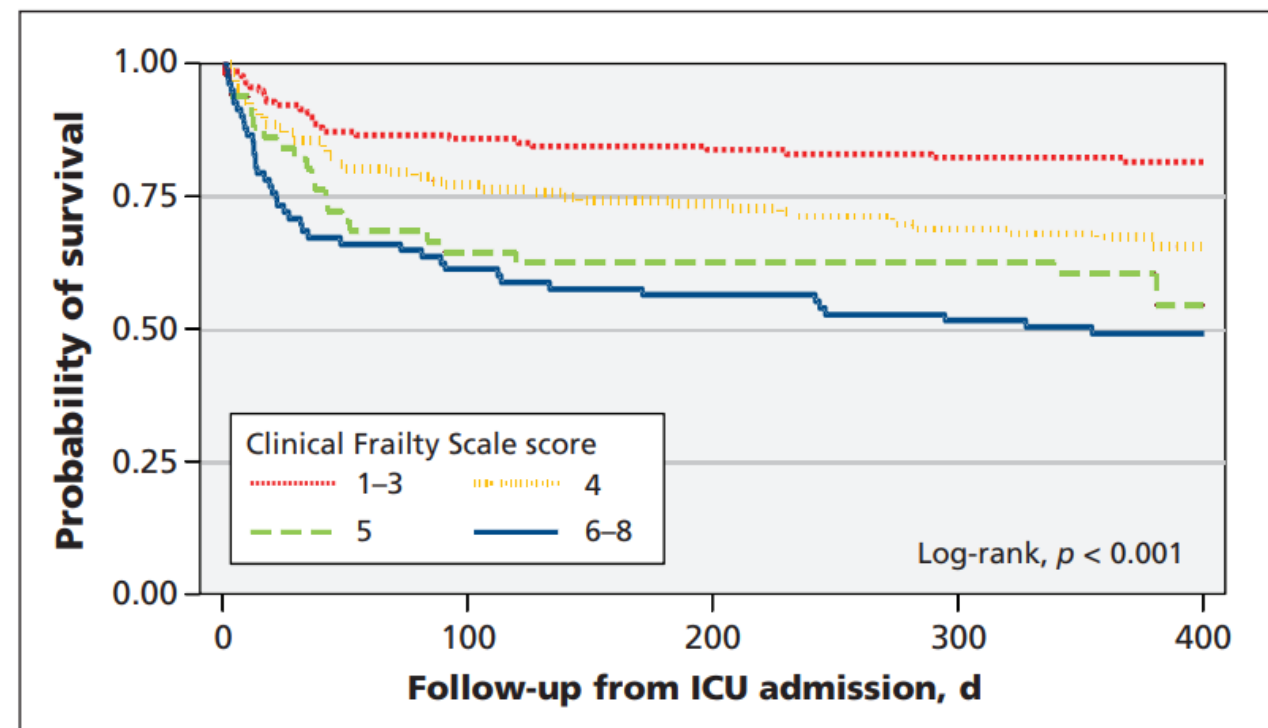


Figure 4: Kaplan–Meier survival curves stratified by Clinical Frailty Scale score.



Evolution of REperfusion Strategies and impact on mortality in Old and Very OLD STEMI patients. The RESOVOLD-e-MUST study

FRÉDÉRIC LAPOSTOLLE^{1,2}, TOMISLAV PETROVIC^{1,2}, BRICE MOITEAUX³, AURÉLIE LOYEAU³, THÉVY BOCHÉ⁴, ROGER KADJI KALABANG⁵, GAËLLE LE BAIL⁶, LIONEL LAMHAUT⁷, MARINA LAFAY⁸, FRANÇOIS DUPAS⁹, MARINE SCANNAVINO¹⁰, HAKIM BENAMER¹¹, SOPHIE BATAILLE¹², YVES LAMBERT¹³

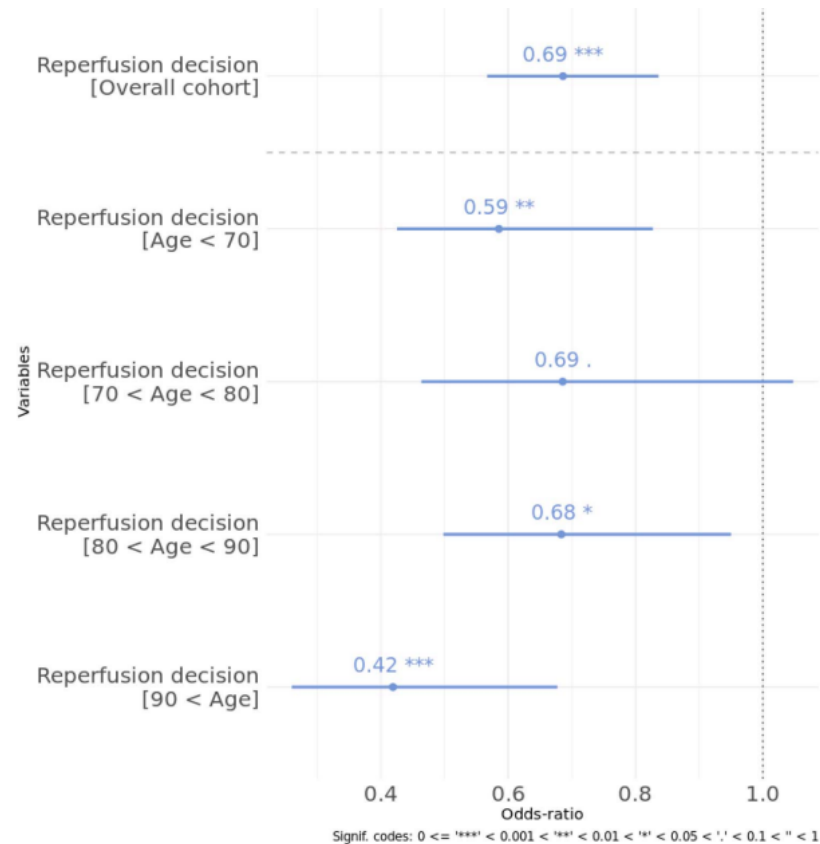


figure 4. Mortality determinants. Stratified multivariate analysis ($N = 27,690$).

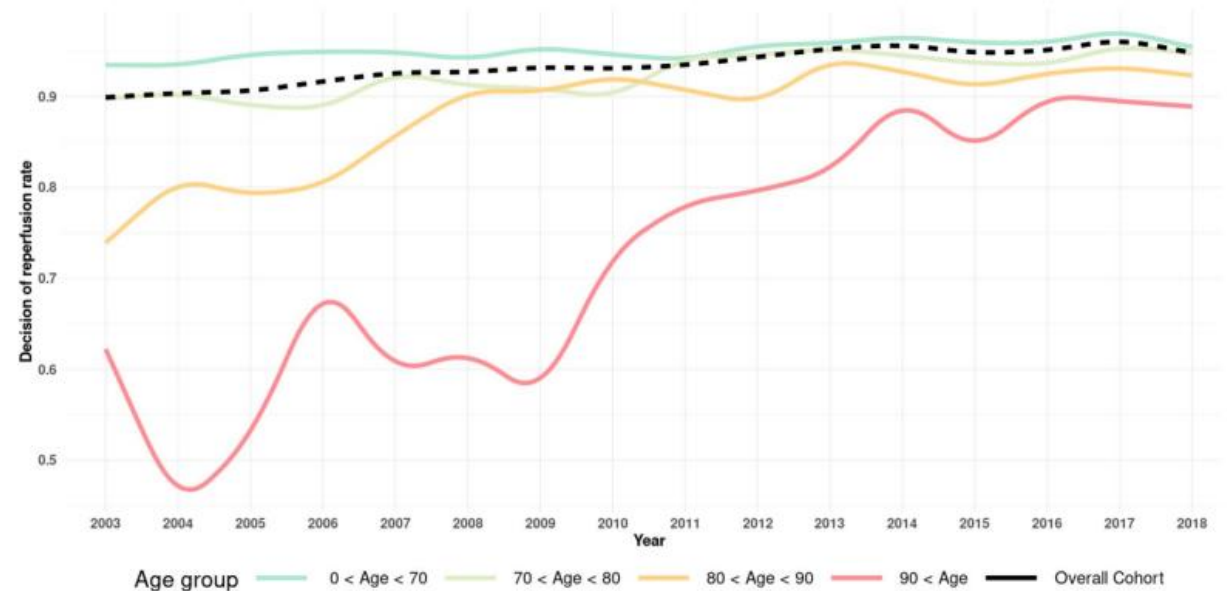


Figure 2. Time course of prehospital myocardial reperfusion decision rate by age decade ($N = 27,690$) (Cochran–Armitage test: $P < 0.0001$ for every group. Details in Appendix Tables S1 and S2).

31% complications pré hosp
25% mortalité

Invasive versus conservative strategy in patients aged 80 years or older with non-ST-elevation myocardial infarction or unstable angina pectoris (After Eighty study): an open-label randomised controlled trial

[Nicolai Tegn, MD](#) • [Prof Michael Abdelnoor, PhD](#) • [Lars Aaberge, MD](#) • [Knut Endresen, MD](#) • [Prof Pål Smith, MD](#) • [Prof Svend Aakhus, MD](#) • et al. [Show all authors](#)

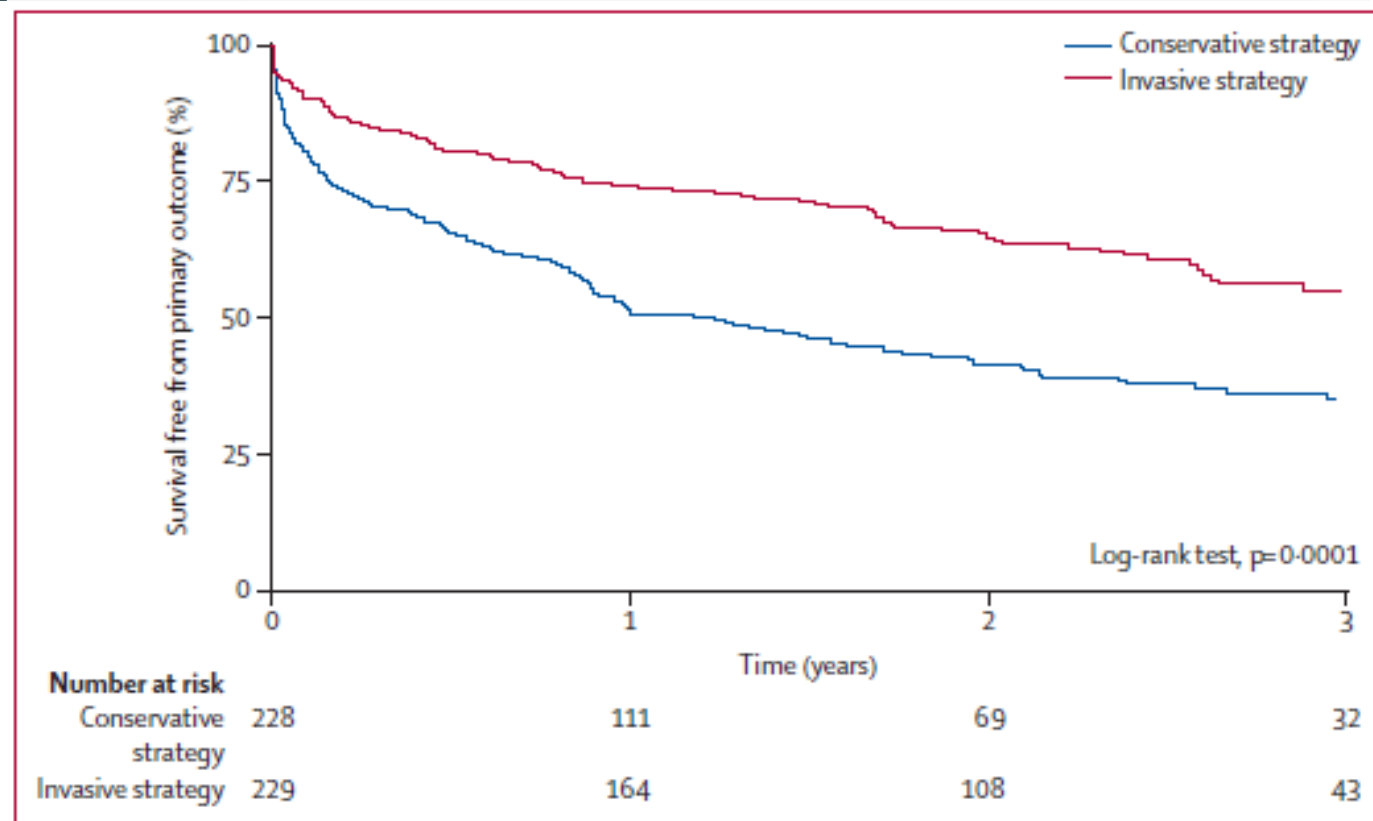
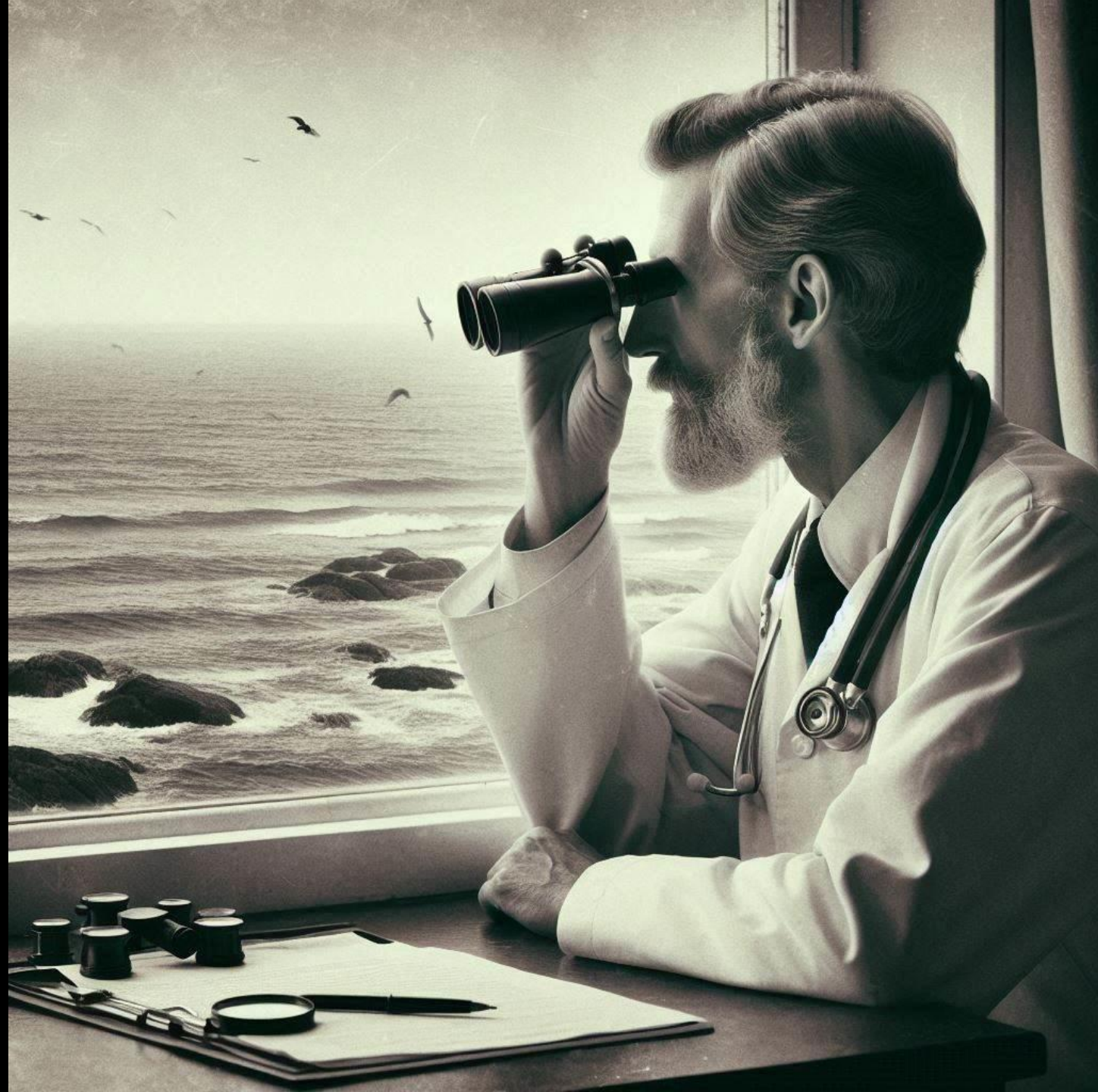


Figure 2: Kaplan-Meier curves of survival free from composite outcome

The primary outcome was a composite of myocardial infarction, need for urgent revascularisation, stroke, and death.





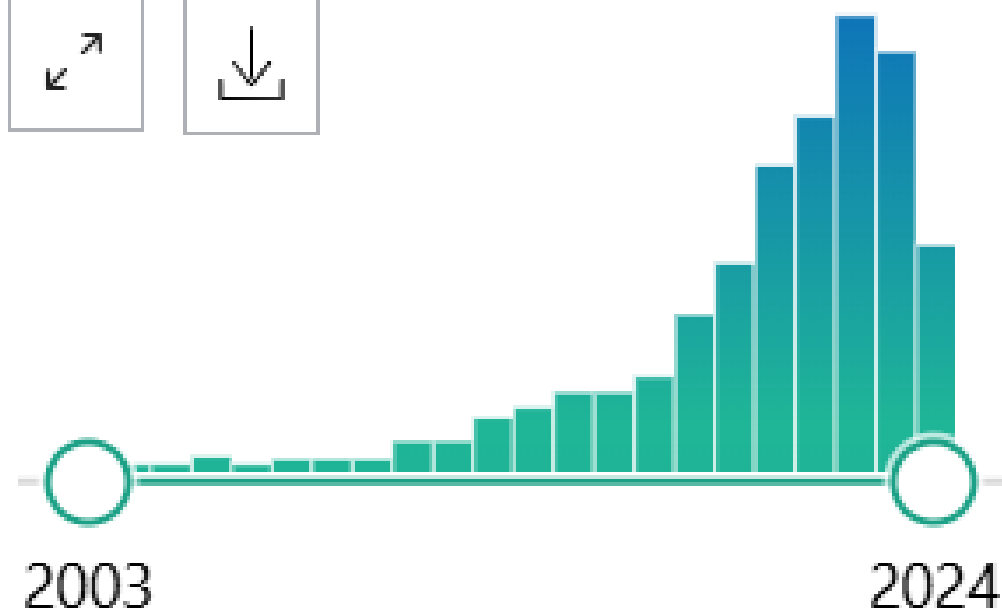
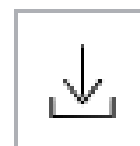
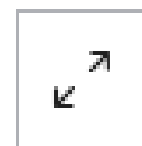
Evaluation gériatrique standardisée

Dimension	Outil d'évaluation
Dépendance fonctionnelle	ADL et IADL
Cognition	MMS,.....miniCog, Codex
Confusion	CAM
Thymie	GDS, miniGDS
Etat nutritionnel	Poids, variation du poids, MNA
Polymédication	Nombre de médicaments
Risque d'escarre	Echelle de Braden Echelle de Norton
Douleur	EVA, EN, EVS Doloplus, ECPA
Risque de chute	Get up and Go Test Station monopodale





RESULTS BY YEAR

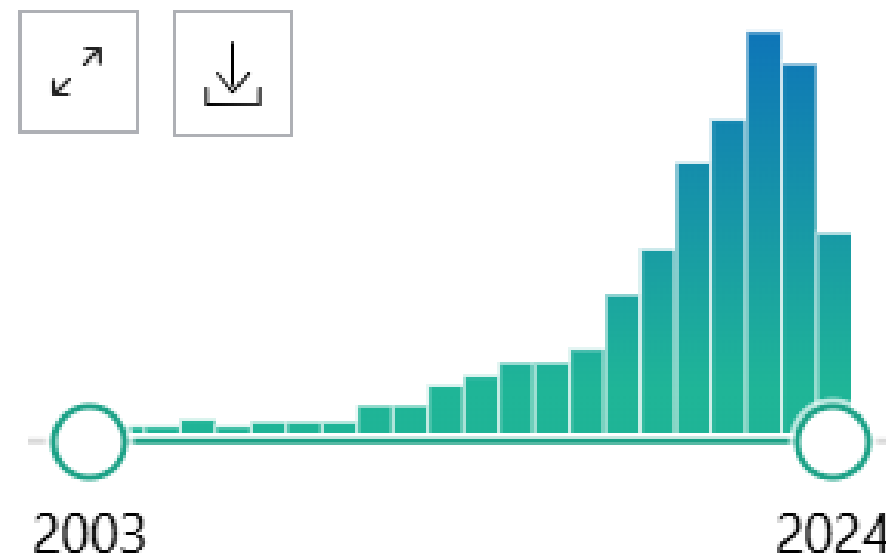


RIGAMA
CAM ICU
4 AT
APOP

CFS
6 CIT
InterRAI



RESULTS BY YEAR



Risk factors and screening instruments to predict adverse outcomes for undifferentiated older emergency department patients: a systematic review and meta-analysis

Christopher R Carpenter ¹, Erica Shelton, Susan Fowler, Brian Suffoletto, Timothy F Platts-Mills, Richard E Rothman, Teresita M Hogan

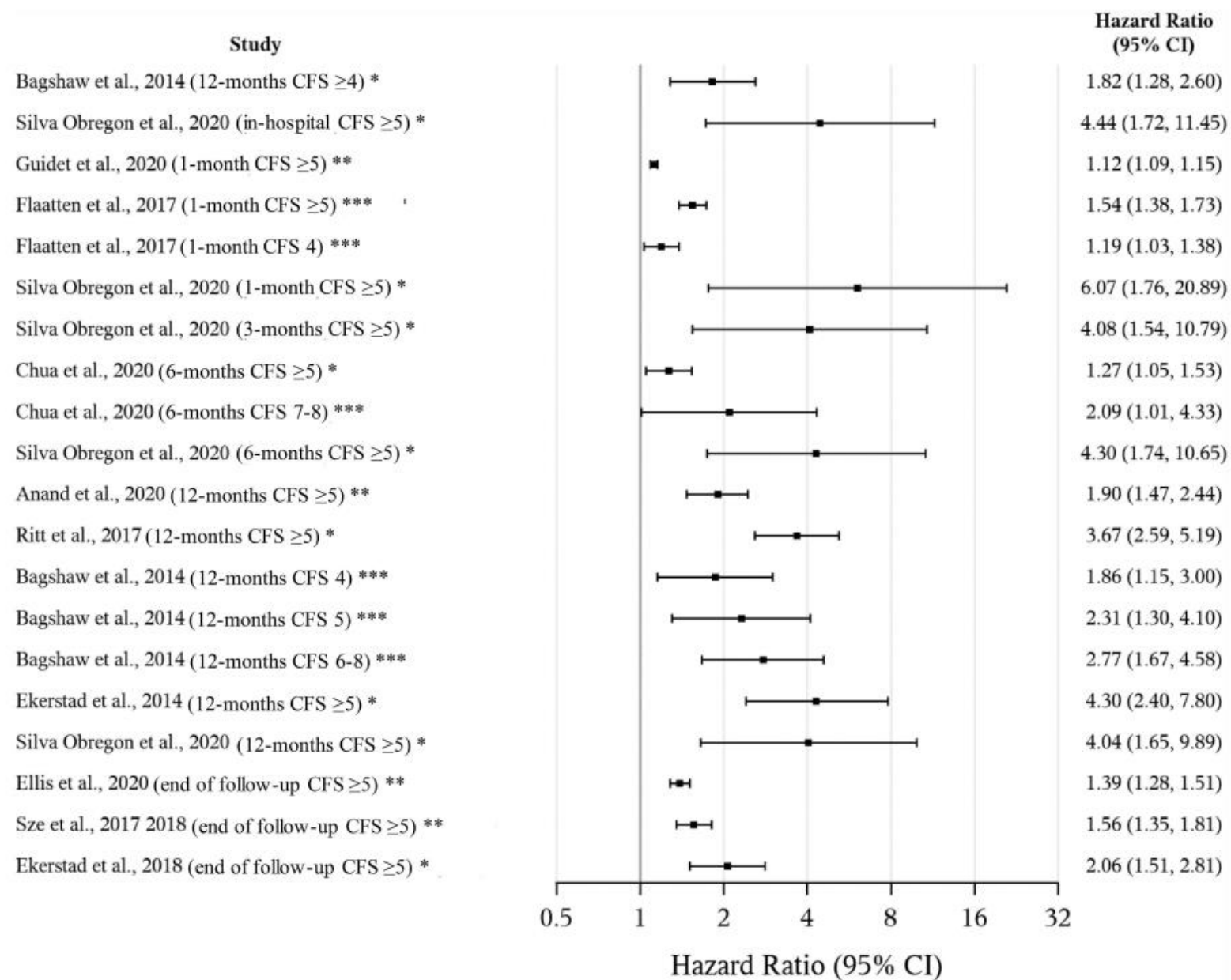


Figure 2 The adjusted risk of all-cause mortality (in-hospital, within 1-, 3-, 6-, 12-months, or end of follow-up). *CFS was treated as a dichotomous variable, **as a discrete variable, ***or a grouped variable in the analysis.

CLINICAL FRAILITY SCALE



1. Very fit
People who are robust, active, energetic and motivated. They commonly exercise regularly and are among the fittest for their age



2. Well
People who have no active disease symptoms but are less fit than category 1. Typically, they exercise or are very active occasionally, such as seasonally



3. Managing well
People whose medical problems are well controlled but are not regularly active beyond routine walking



4. Vulnerable
While not dependent on others for daily help, often symptoms limit activities. A common complaint is being 'slowed up' and/or being tired during the day



5. Mildly frail
People often have more evident slowing and need help with high-order IADLs. Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework



6. Moderately frail
People need help with all outside activities, housework and cooking. They often need help with stairs and bathing, and might need minimal assistance with dressing



7. Severely frail
People completely dependent for personal care. However, they seem stable and not at high risk of dying (within ~6 months)



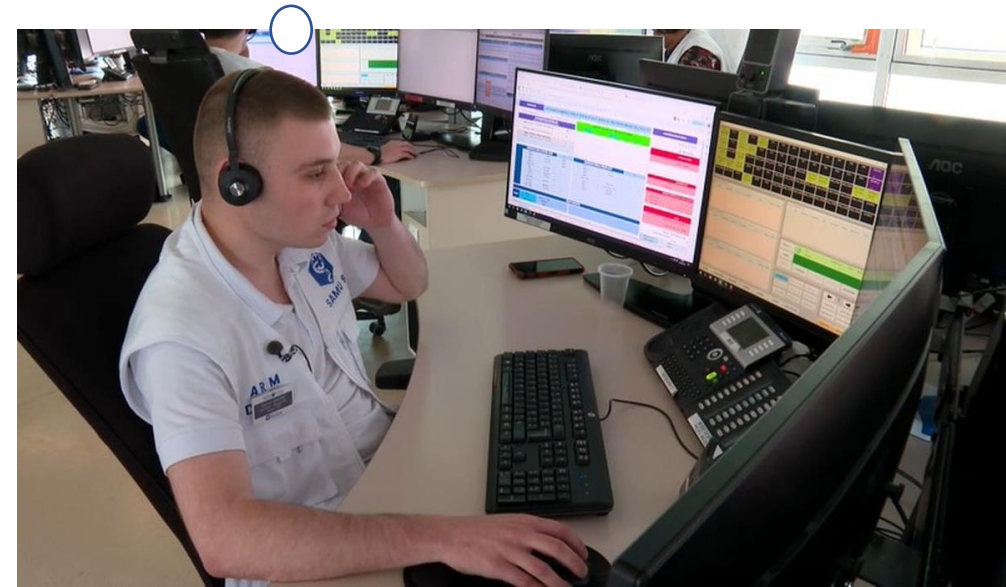
8. Very severely frail
People completely dependent and approaching the end of life. Typically, they could not recover even from a minor illness



9. Terminally ill
People approaching the end of life. This category applies to people with a life expectancy of <6 months, who are not otherwise evidently frail

Church 2020

IADL = instrumental activity of daily living (such as finances, transport, heavy housework or medication(s))



CLINICAL FRAILITY SCALE

Basic ADL (DE²ATH)

- Dressing
- Eating (feeding self)
- Evacuation (bladder/bowel)
- Ambulation (walking/transfer)
- Toileting
- Hygiene (bathing)

Instrumental ADL (SHAFT²)

- Shopping
- Housekeeping
- Accounting
- Food preparation
- Transportation
- Takes own medications

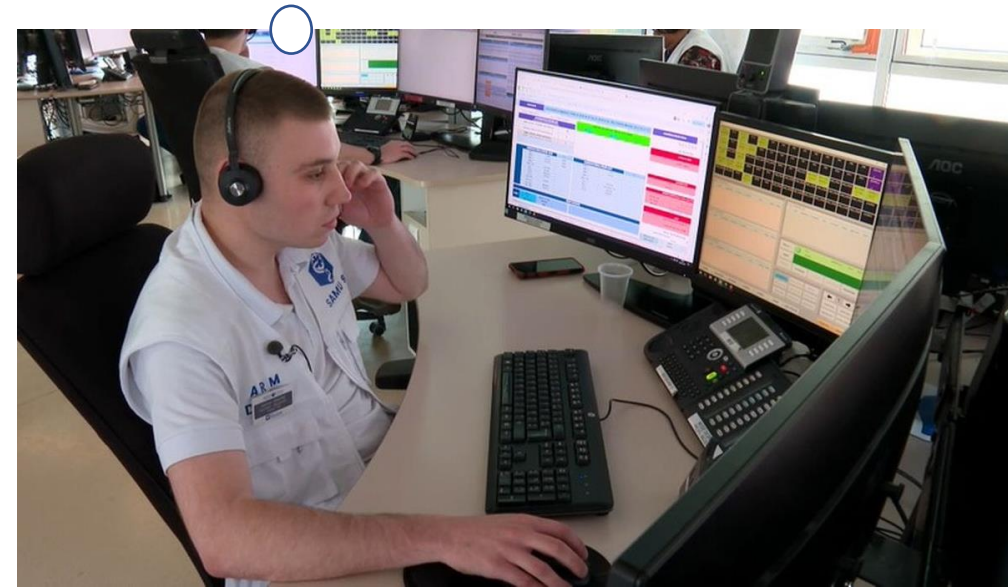


Table 6 Odds ratios of a patient being conveyed to hospital if their Clinical Frailty Score increased in the two weeks prior to their ambulance call

Characteristic	Odds ratio
Frailty score increased	2.16 (1.48–3.15)
NEWS2 $\geq$ 5	5.24 (2.54–10.79)
Deprivation (ref: 1, Most)	
2	1.09 (0.77–1.54)
3	1.32 (0.89–1.96)
4	1.19 (0.79–1.78)
5 (Least)	1.38 (0.90–2.13)
Age (ref: 50–54)	
55–59	0.88 (0.38–2.03)
60–64	0.76 (0.37–1.56)
65–69	0.94 (0.45–1.97)
70–74	0.62 (0.31–1.22)
75–79	0.59 (0.30–1.16)
80–84	0.54 (0.28–1.03)
85–89	0.66 (0.34–1.28)
90+	0.56 (0.29–1.10)
Male	1.14 (0.87–1.50)
Rural	0.94 (0.69–1.30)
Constant	2.82 (1.71–4.63)

Assessment of frailty by paramedics using the clinical frailty scale - an inter-rater reliability and accuracy study

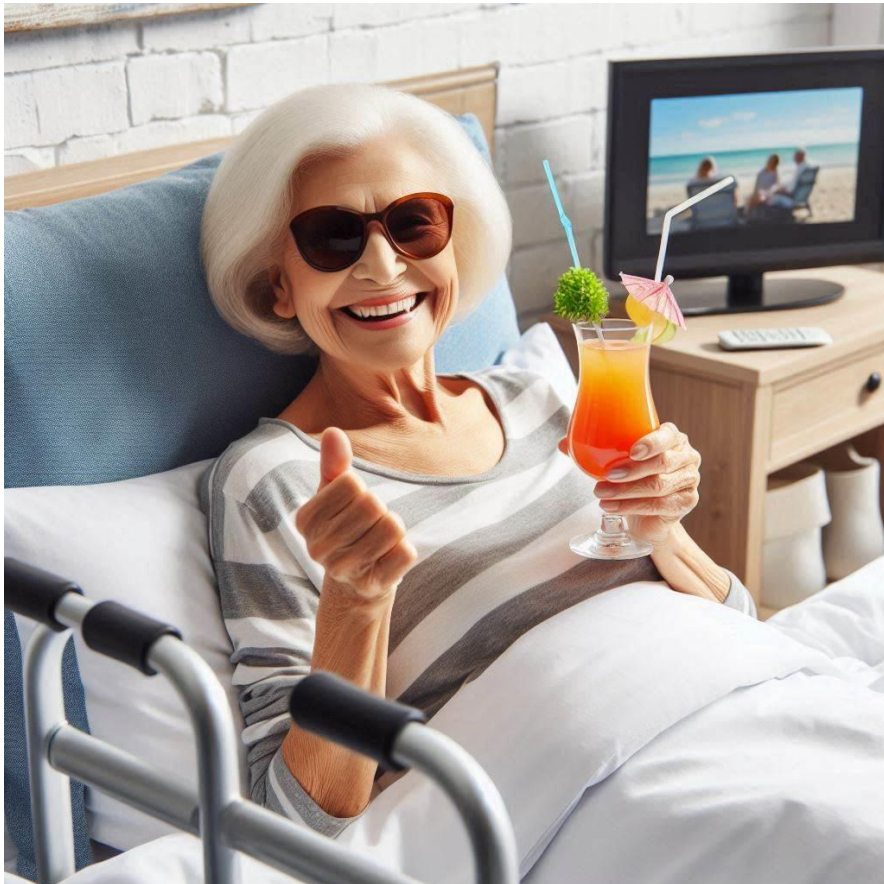
Christophe A. Fehlmann^{1,2*} , Loric Stuby³ , Christophe Graf⁴ , Matthieu Judah Goldstein⁶ , Debra Eagles^{2,7,8}  and Laurent Suppan¹ 



Article

Health-Related Quality of Life (HRQoL) of People over 65 Years of Age

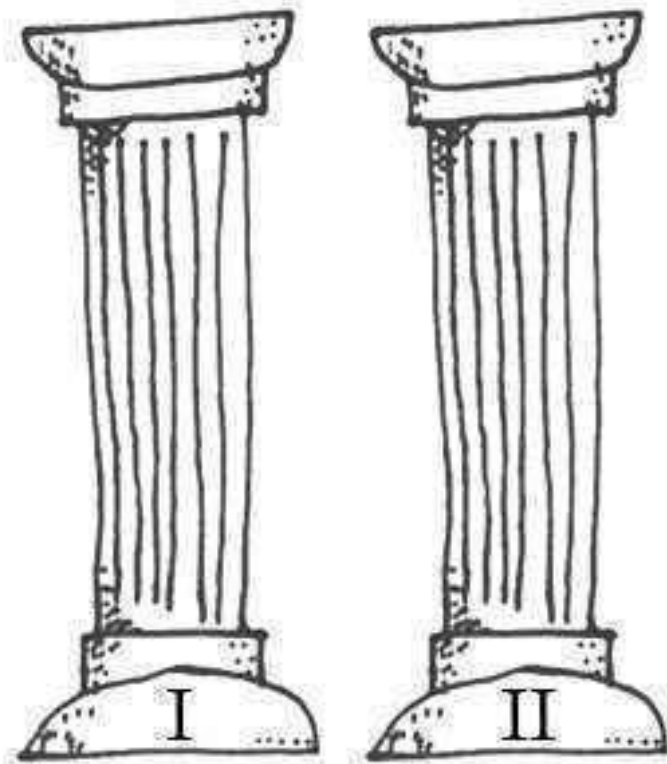
Marlena Krawczyk-Suszek * and Andrzej Kleinrok



Summarizing health-related quality of life (HRQOL): development and testing of a one-factor model

Shaoman Yin^{1*} , Rashid Njai², Lawrence Barker², Paul Z. Siegel² and Youlian Liao²





Bienfaisance

Non
malfaisance



PRIMUM NON
NOCERE

- HIPPOCRATES -

DEPENDANCE IATROGENE

≥ 70 ans = 29% des séjours hospitaliers en médecine aigue

Etape critique exposant au risque de perte d'autonomie

Se lever, marcher, s'habiller, se laver

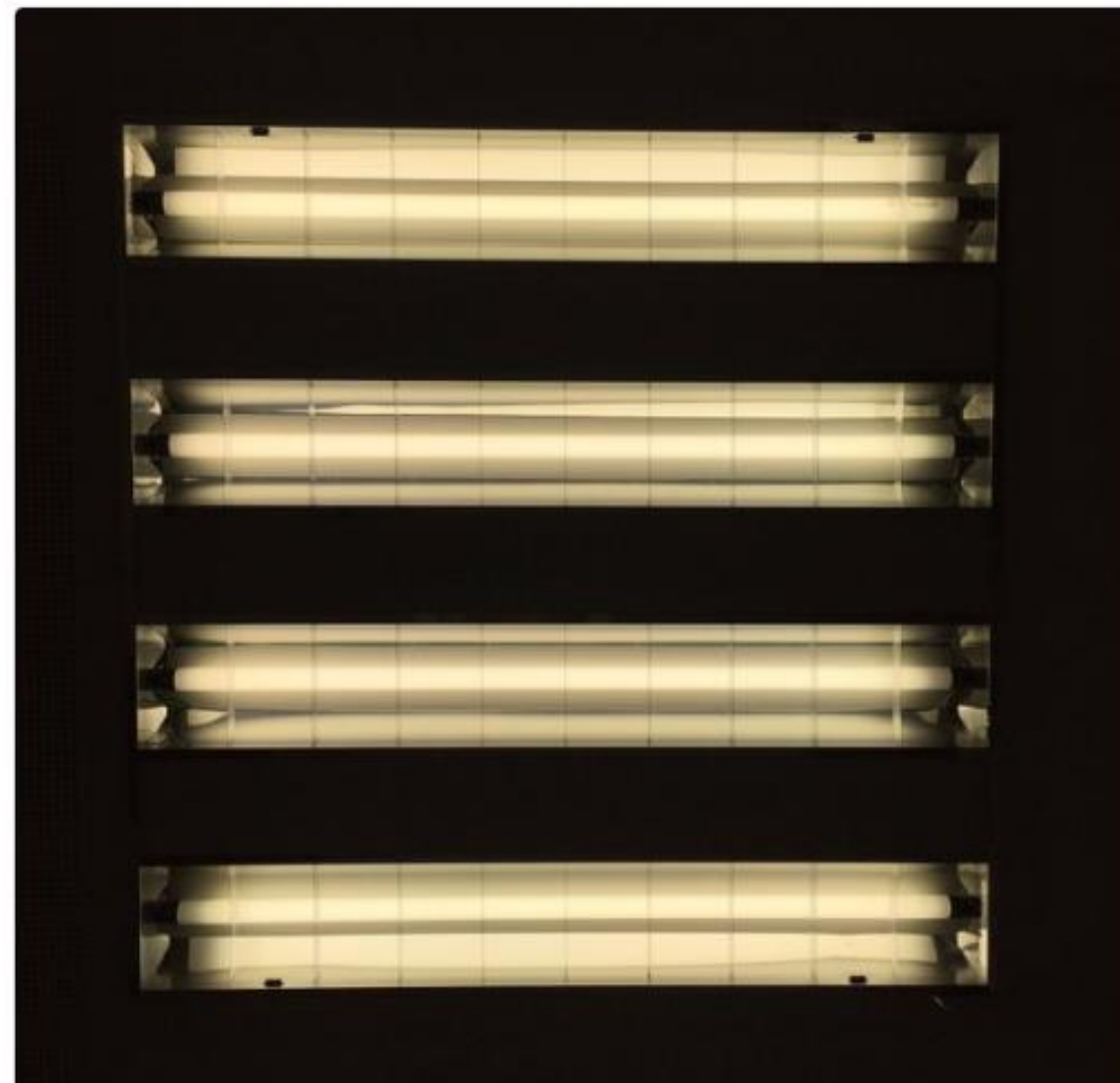
Overnight Stay in the Emergency Department and Mortality in Older Patients

Melanie Roussel, MD; Dorian Teissandier, MD; Youri Yordanov, MD, PhD; Frederic Balen, MD; Marc Noiz; Karim Tazarourte, MD, PhD; Ben Bloom, MD, PhD; Pierre Catoire, MD; Laurence Berard, MD; Marine Cachanado, MSc; Tabassome Simon, MD, PhD; Said Laribi, MD, PhD; Yonathan Freund, MD, PhD for the FHU IMPEC-IRU SFMU Collaborators

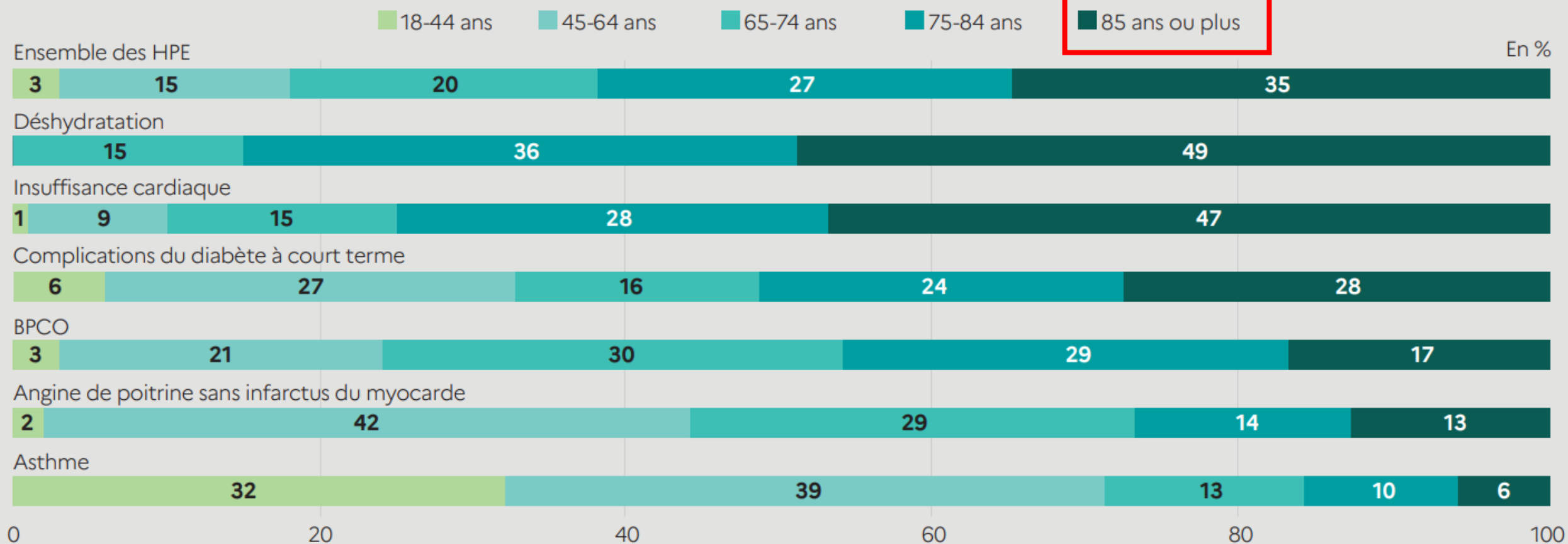


qffwffq @qffwffq · 2 mars

Champs des possibles quand à 92 ans, grabataire, allongée sur un brancard, l'ambulancier t'as oublié.



Graphique 2 Répartition des hospitalisations potentiellement évitables par âge, selon le motif, en 2017

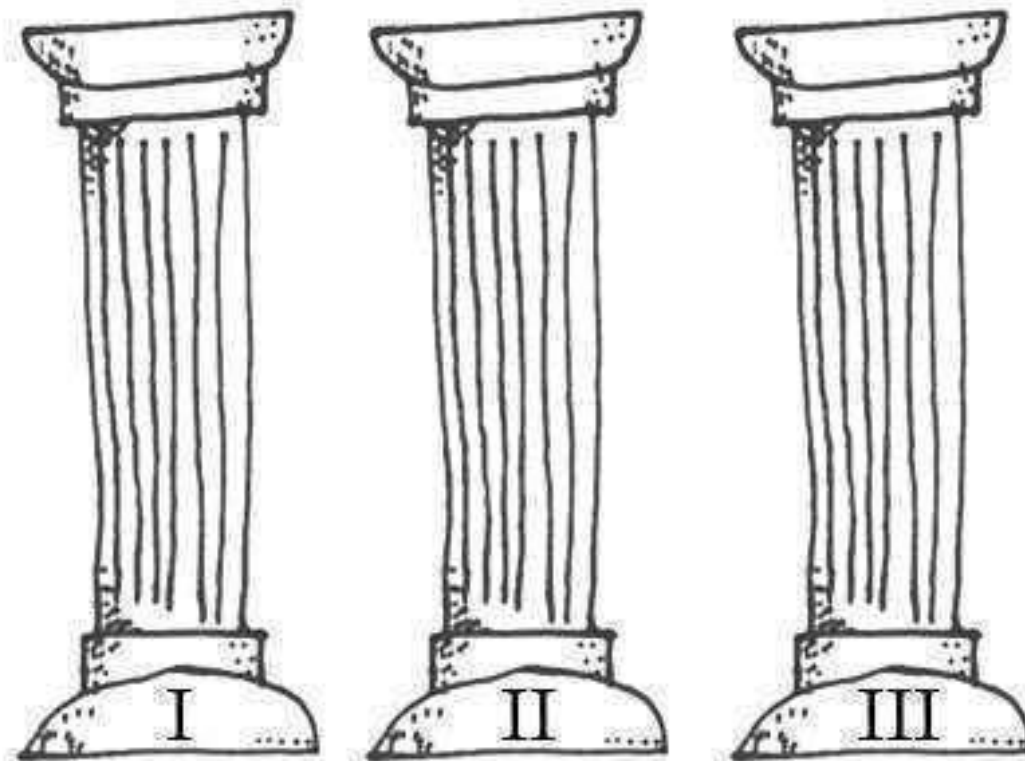


HPE : hospitalisation potentiellement évitable ; BPCO : bronchopneumopathie chronique obstructive.

Lecture • En 2017, 1 % des hospitalisations potentiellement évitables ont pour motif une insuffisance cardiaque concernaient des patients âgés de 35 à 44 ans.

Champ • France hors Mayotte.

Source • DREES-CNAM-Insee, EDP-Santé 2017.



Bienfaisance

Non
malfaisance

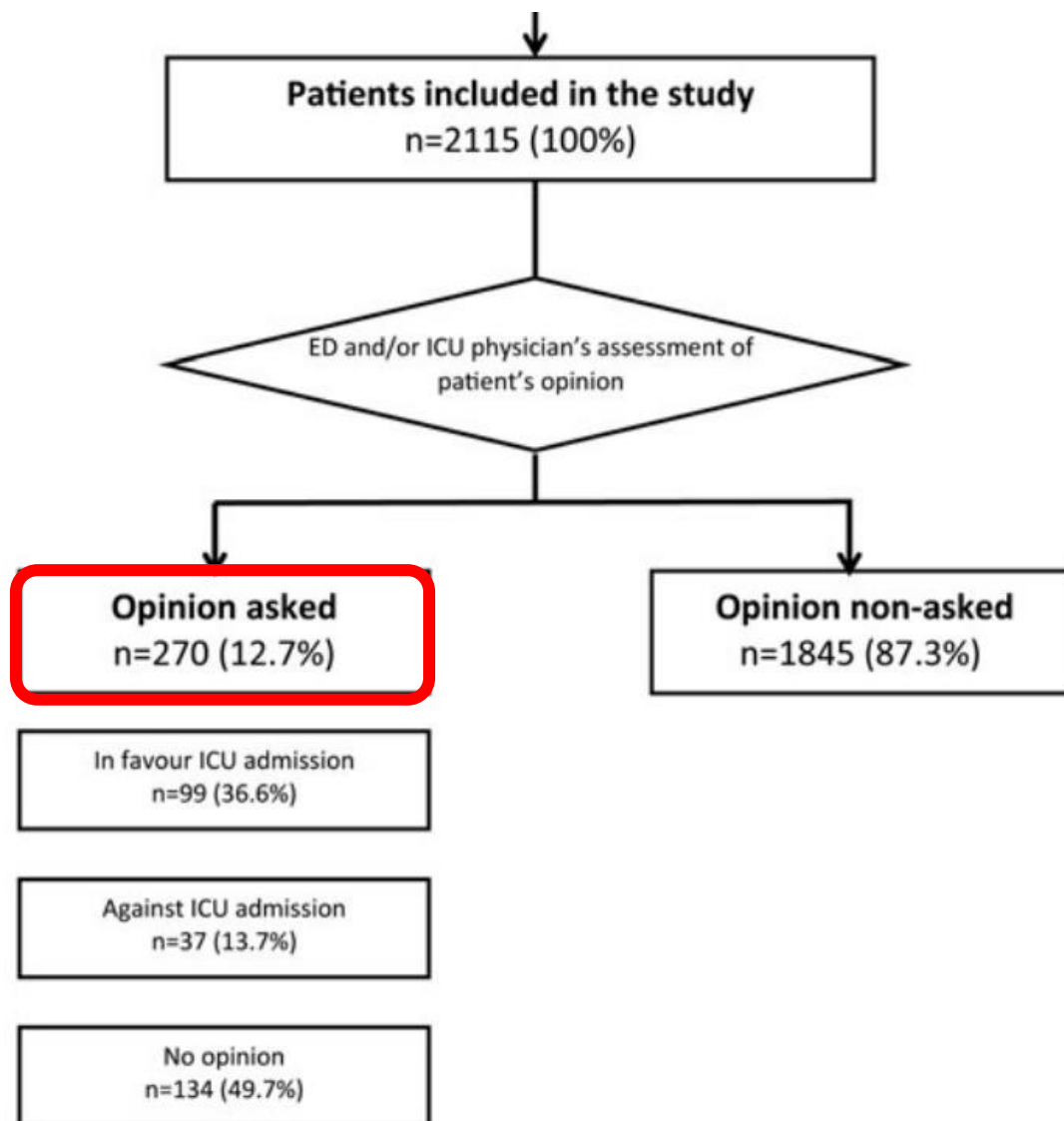
Autonomie

Table 2. Multivariate analysis of factors affecting the seeking of patients' opinion

	Odds ratio	CI 95%	P
Age (per 1 year increase)	0.97	0.94–1.00	0.07
Living place			
Home versus nursing home/hospital	0.65	0.39–1.04	0.08
Chronic conditions			
Dementia	0.47	0.25–0.83	0.01
Chronic neurological disease	0.65	0.35–1.11	0.13
Autonomy			
Full autonomy versus severe FI	2.10	1.39–3.21	<0.01
Moderate FI versus severe FI	1.53	0.95–2.46	0.08
ED physician			
Senior versus junior	0.48	0.35–0.66	<0.01
Relative			
Asked versus not asked	5.46	3.80–7.88	<0.01

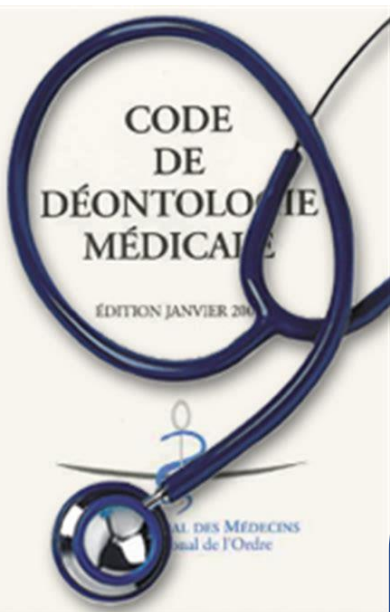
Adjusted on sex, MPM and presenting condition, all non-significant.

CI, confidence interval; FI, functional impairment.



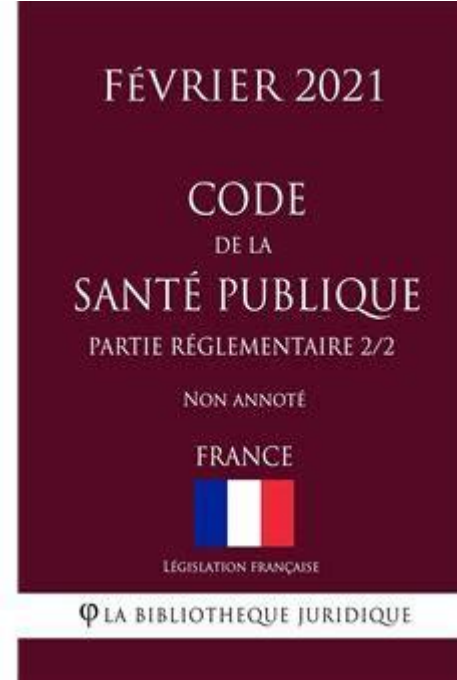






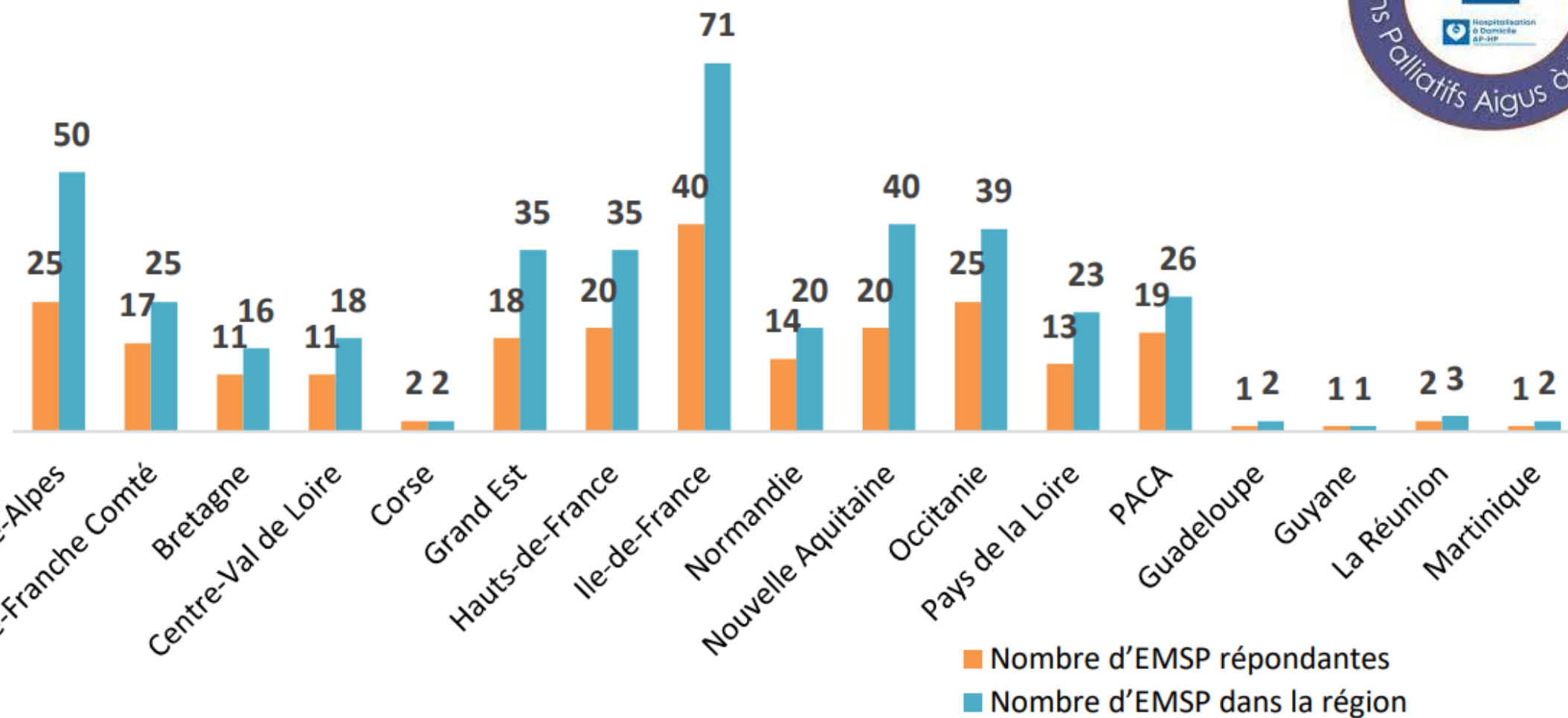
Article 38 (article R.4127-38 du code de la santé publique)

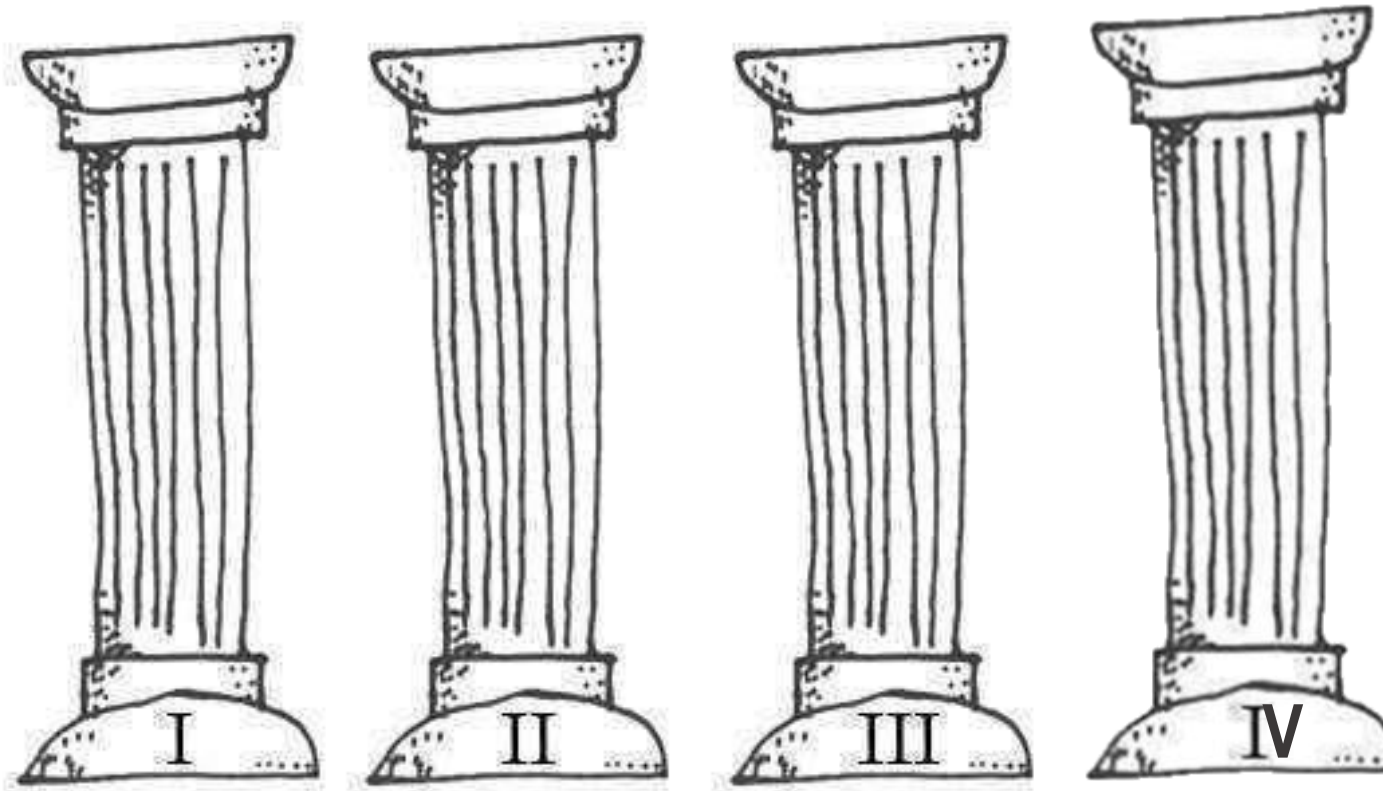
Le médecin doit accompagner le mourant jusqu'à ses derniers moments, **assurer** par des soins et mesures appropriés la **qualité d'une vie qui prend fin**, **sauvegarder la dignité du malade** et **réconforter son entourage**.





EMSP répondantes





Bienfaisance

Non
malfaisance

Autonomie

Justice
distributive

Jusqu'où aller ? Comment évaluer ?



Juste soins
Eviter l'obstination déraisonnable
Identifier les **bons candidats** aux soins invasifs
Avis du patient +++
Fragilité : Clinical Frailty Scale
Qualité de vie, dépendance, fonctionnelle
Eviter les biais cognitifs/stigmatisation
Accompagner si fin de vie