



AER
ACTUALITÉS EN RÉANIMATION

Devenir des patients après arrêt cardiaque



Inserm

Guillaume Geri, MD, PhD
Université Paris Saclay

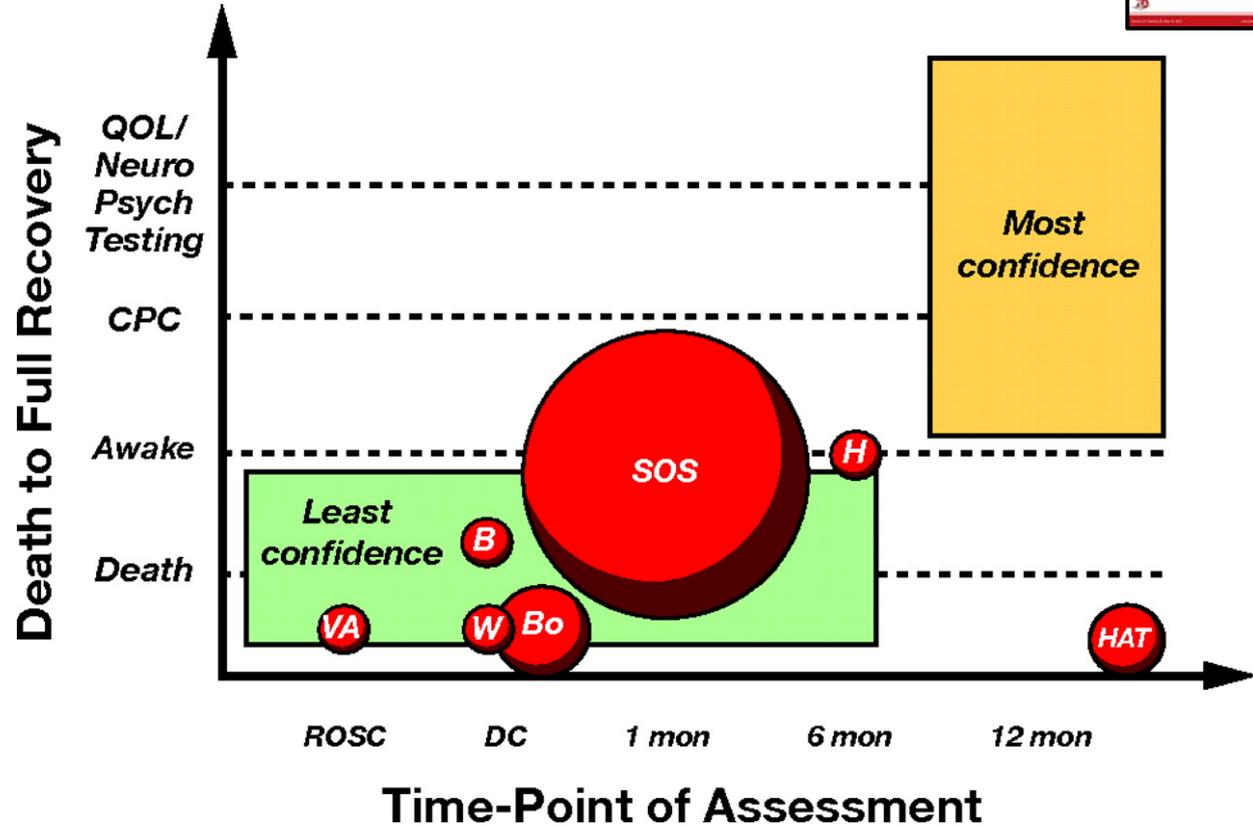
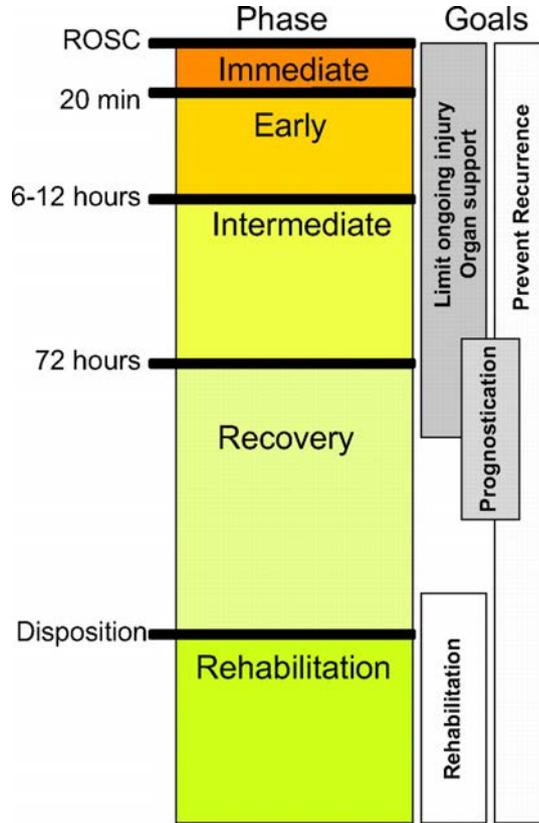


Liens d'intérêt

- Académiques
 - PHRC-IR: PREDICT
 - PHRC-N: HYVAPRESS

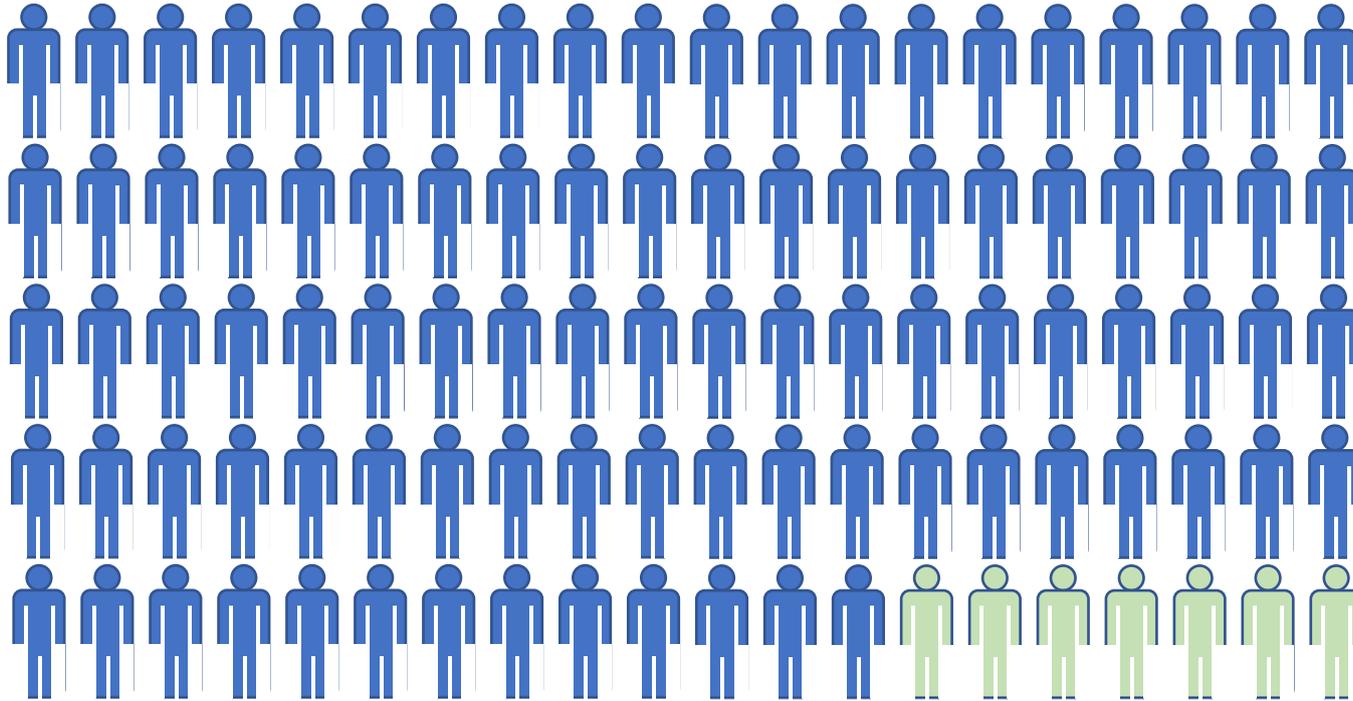
- Industriels
 - Bard/BD: accomodation fees

Une histoire de temps...



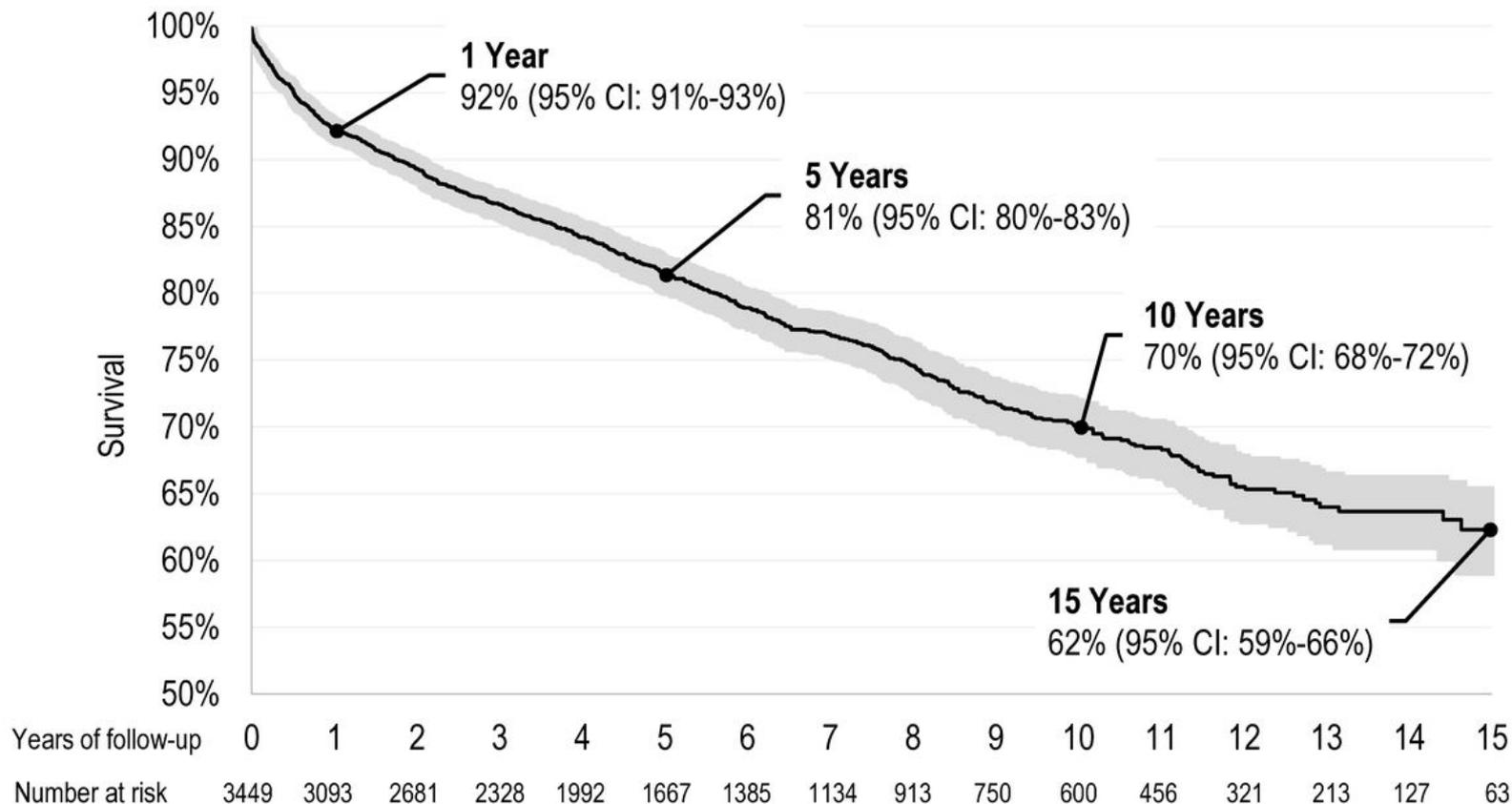
- Neumar RW, *Circulation* 2008
- Becker L, *Circulation* 2011

Une histoire de nombres...



7%

Pronostic à long-terme



Pronostic à long-terme

Devenir

*Devenir
neurologique*

*Santé à
distance*

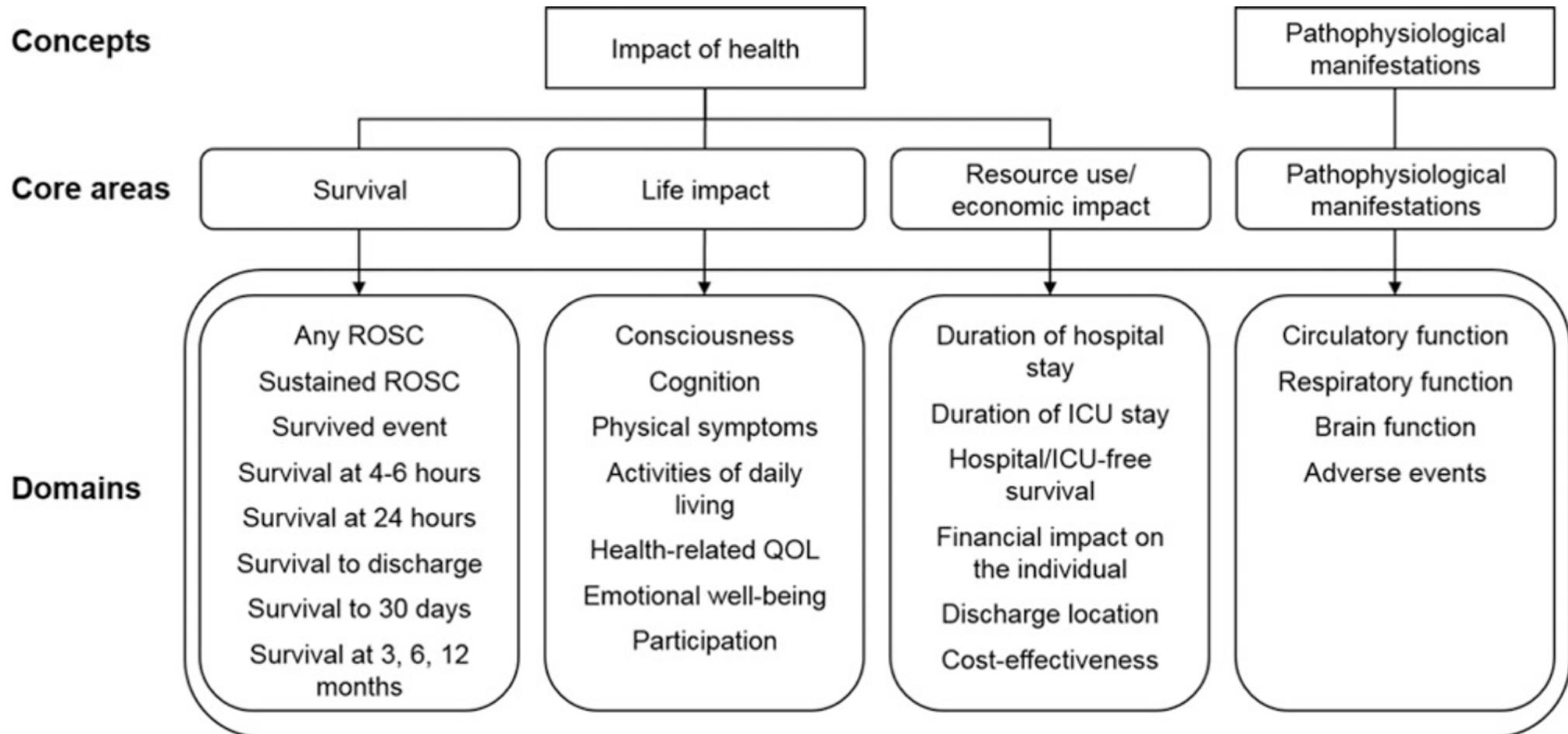
Vie quotidienne

Participation
sociale

Qualité de vie

Retour au travail

Pronostic à long-terme



Pronostic à long-terme

Devenir

***Devenir
neurologique***

***Santé à
distance***

Vie quotidienne

Participation
sociale

Qualité de vie

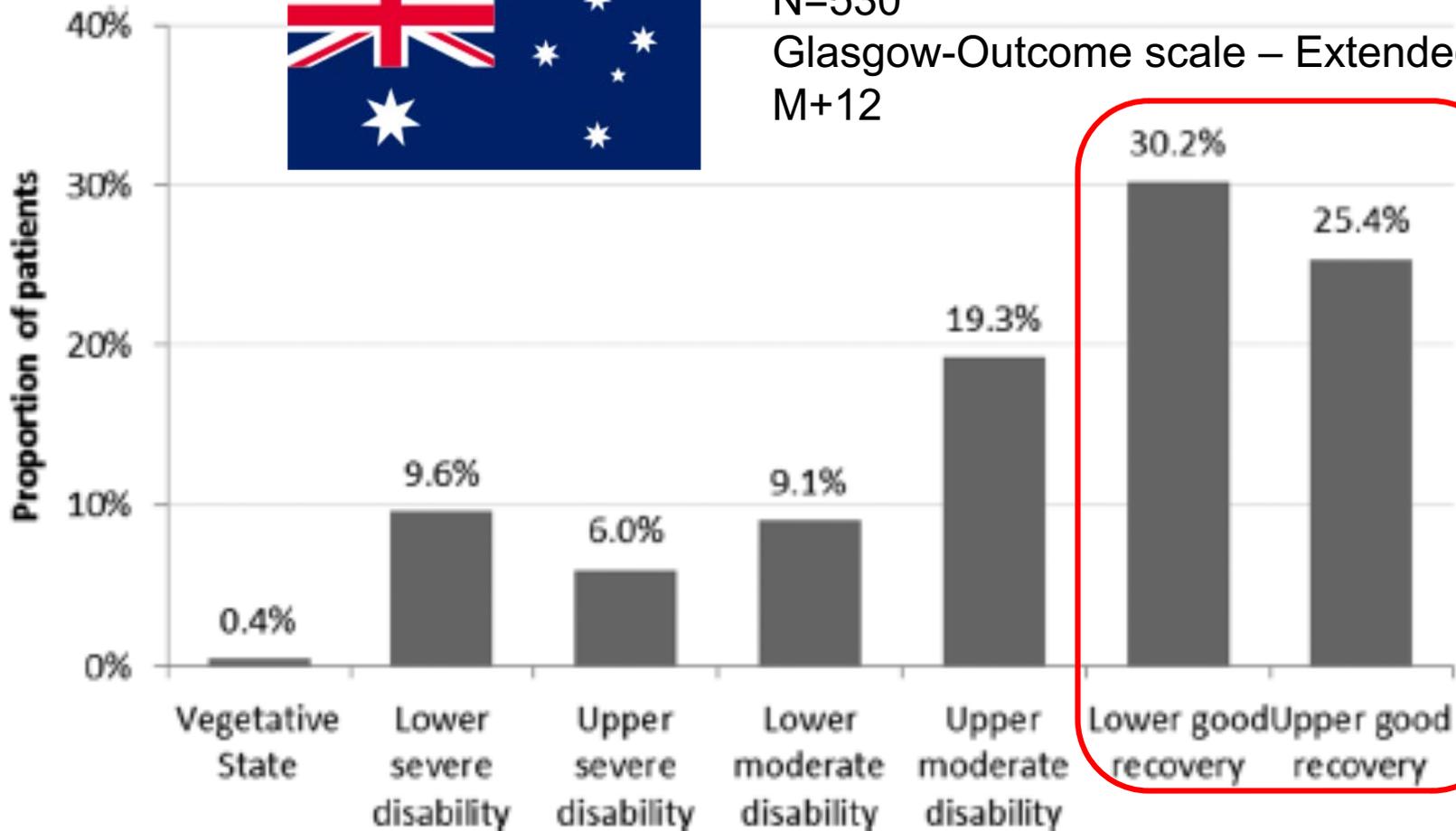
Retour au travail

Neuro: cela semble bon...



N=530

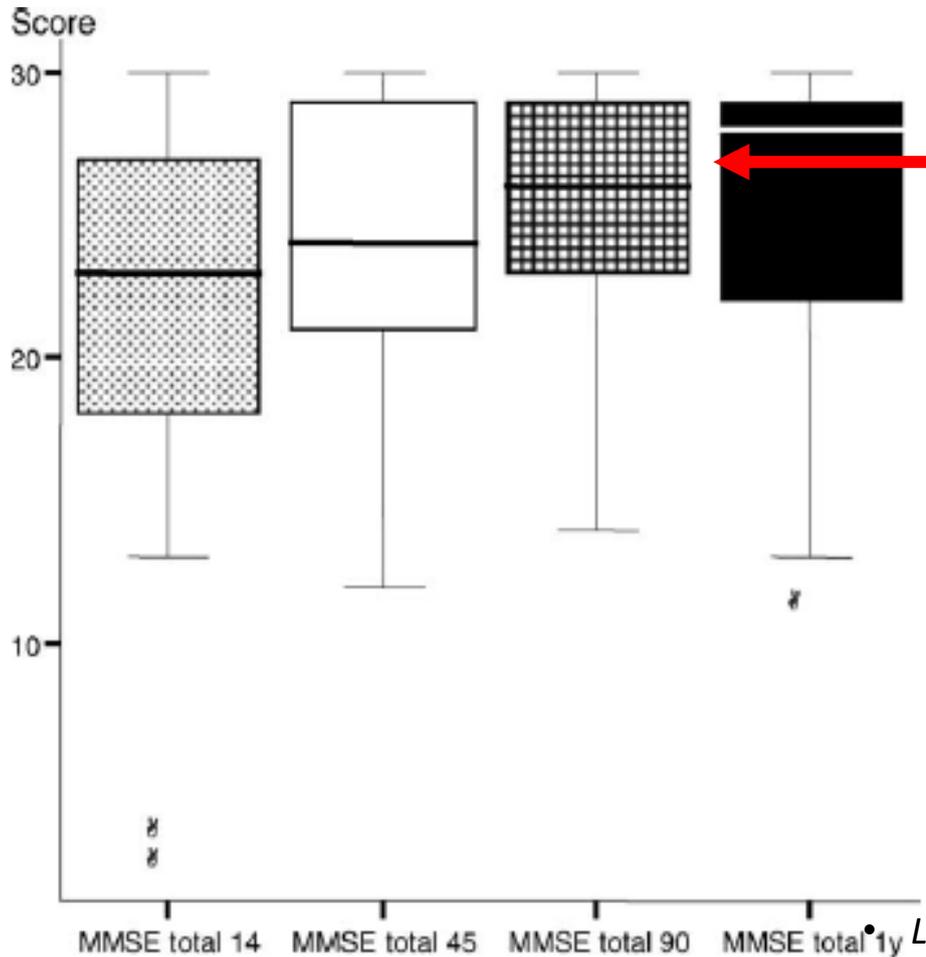
Glasgow-Outcome scale – Extended
M+12



Neuro: bon après évolution?



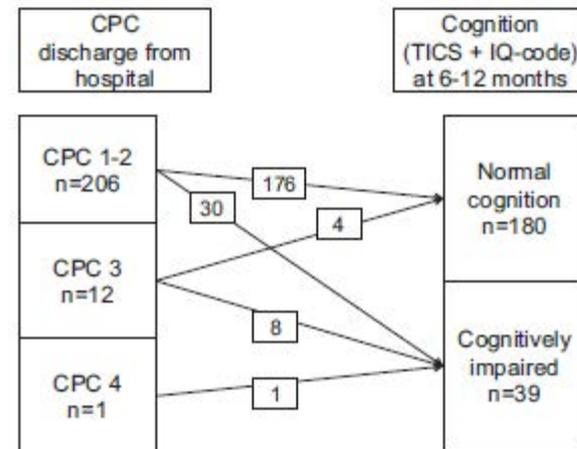
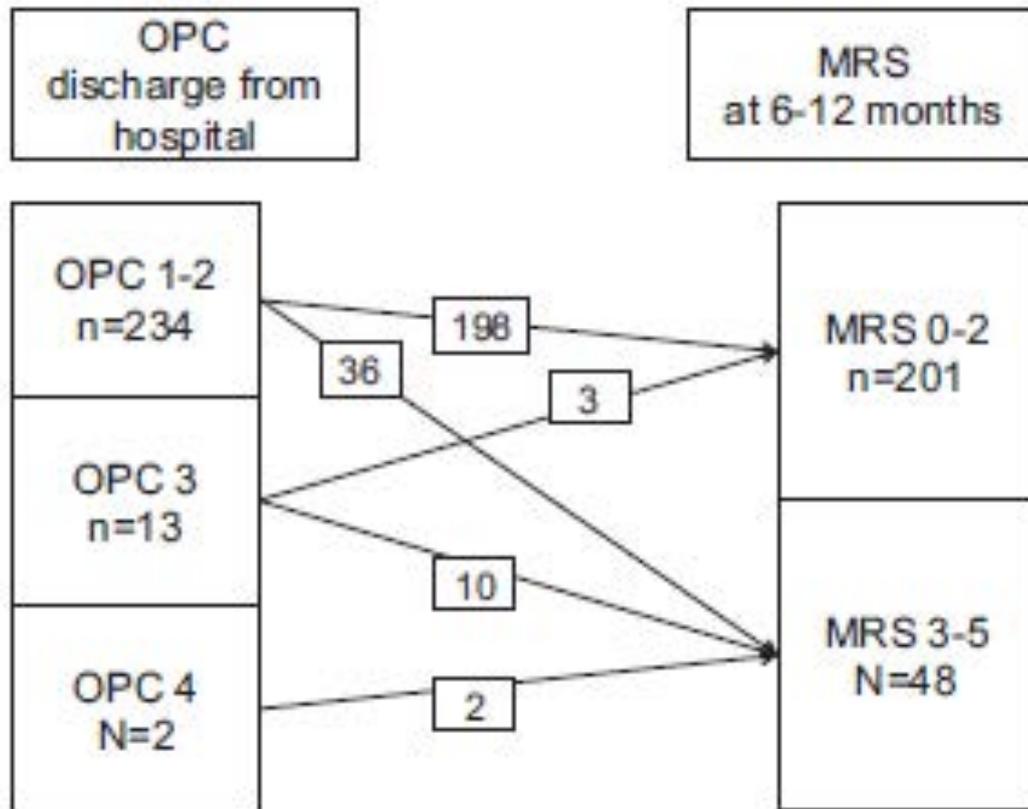
N=5
1



TTM trial
M+6mois



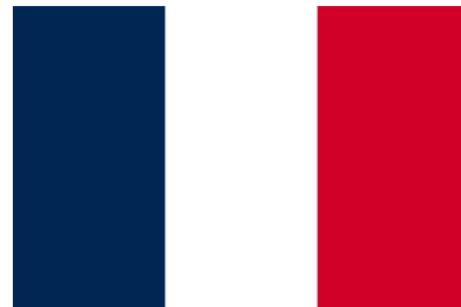
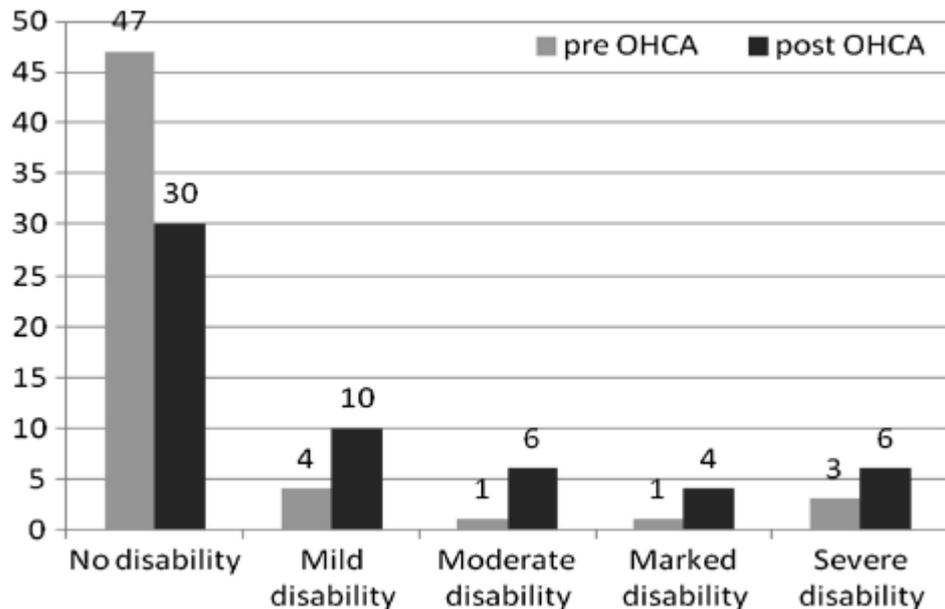
Tout est évolutif...



Autonomie de la vie quotidienne



N=60
Global Outcome Assessment
+ 5 ans

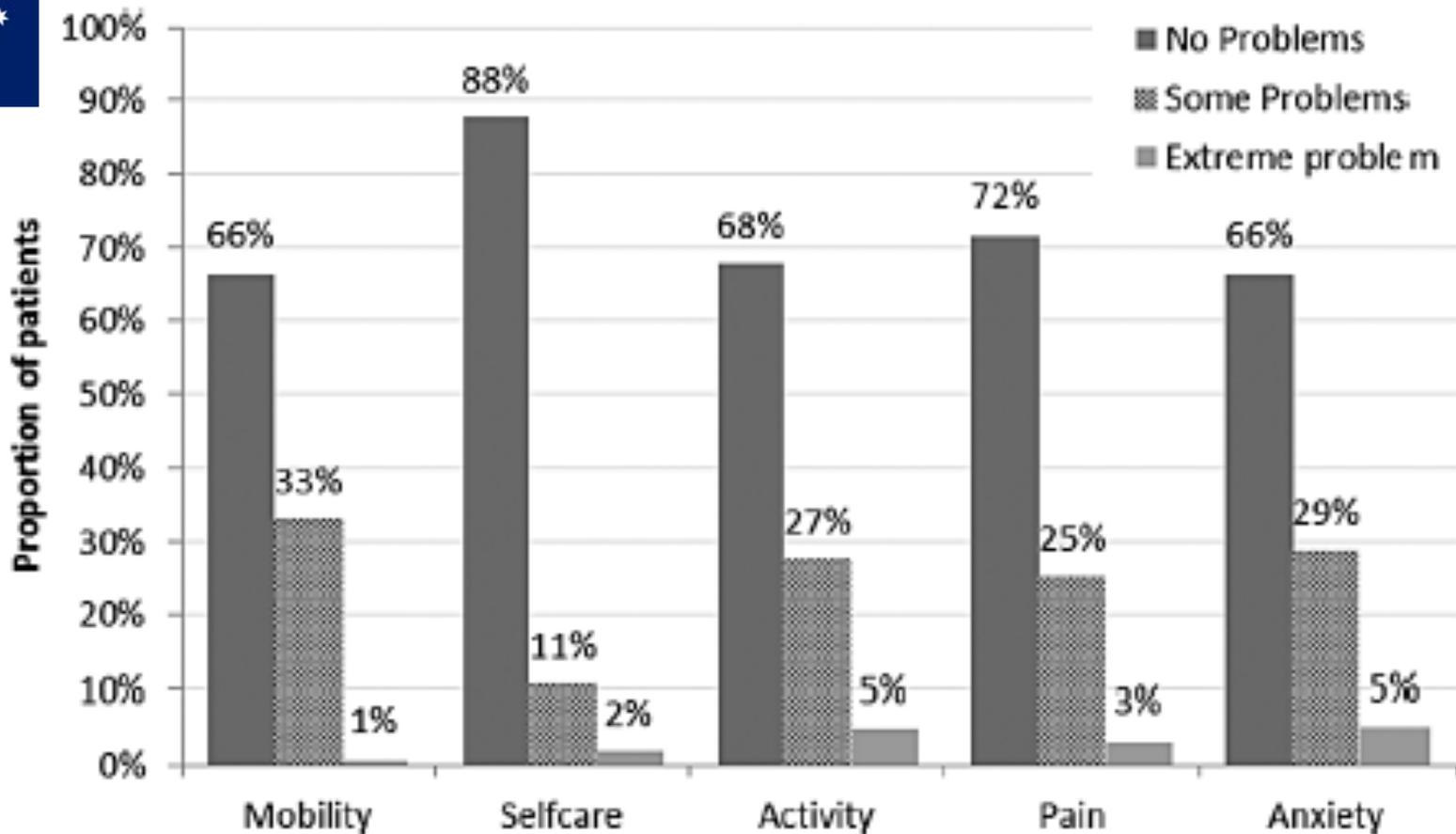


N=255
Echelle ADL
+ 3 ans

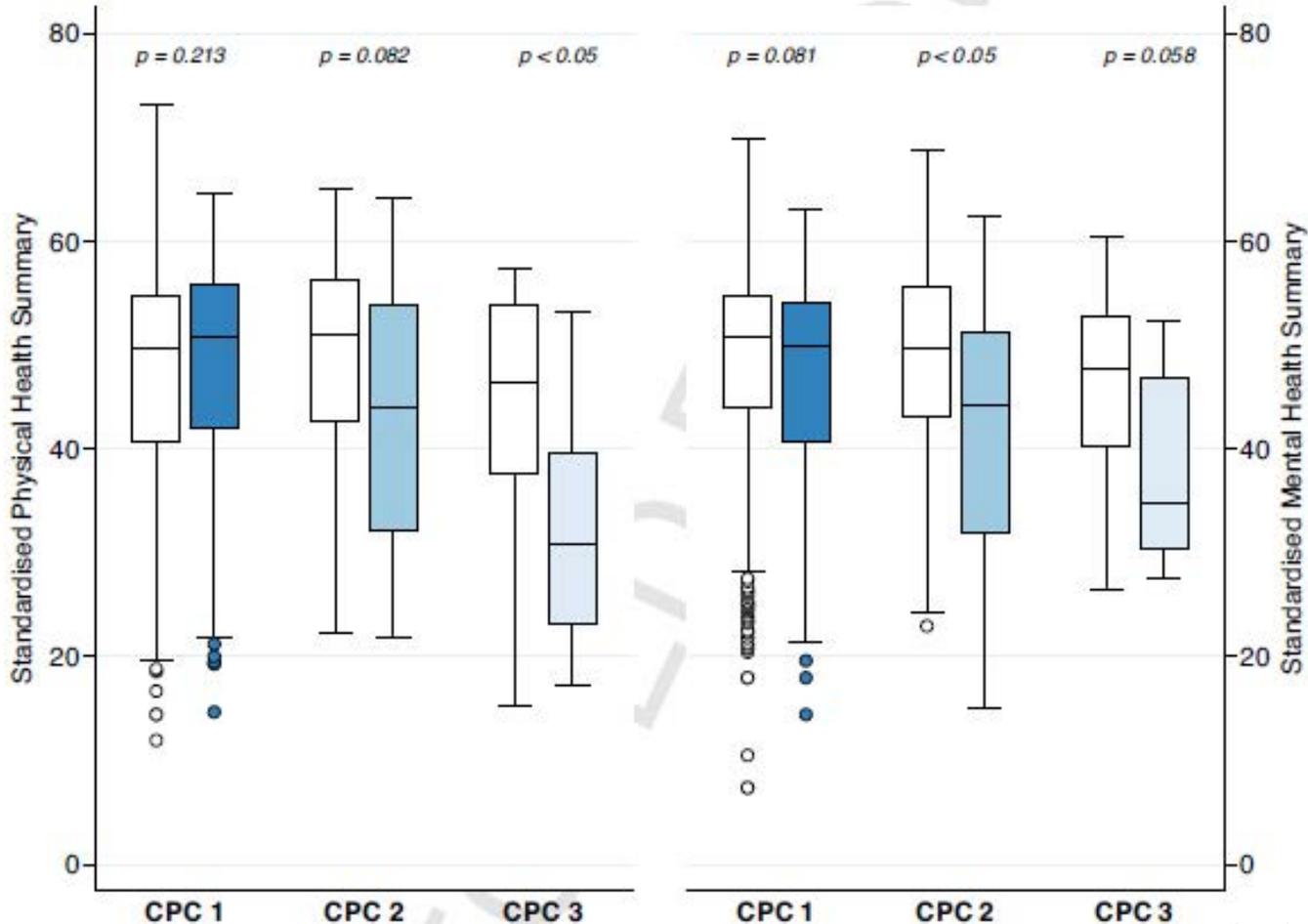
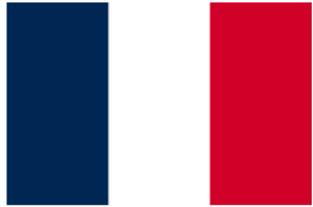
83% ADL 6/6

- Deasy C, *Emerg Med J* 2013
- Geri G. *Resuscitation* 2017

Qualité de vie



Qualité de vie et devenir neuro

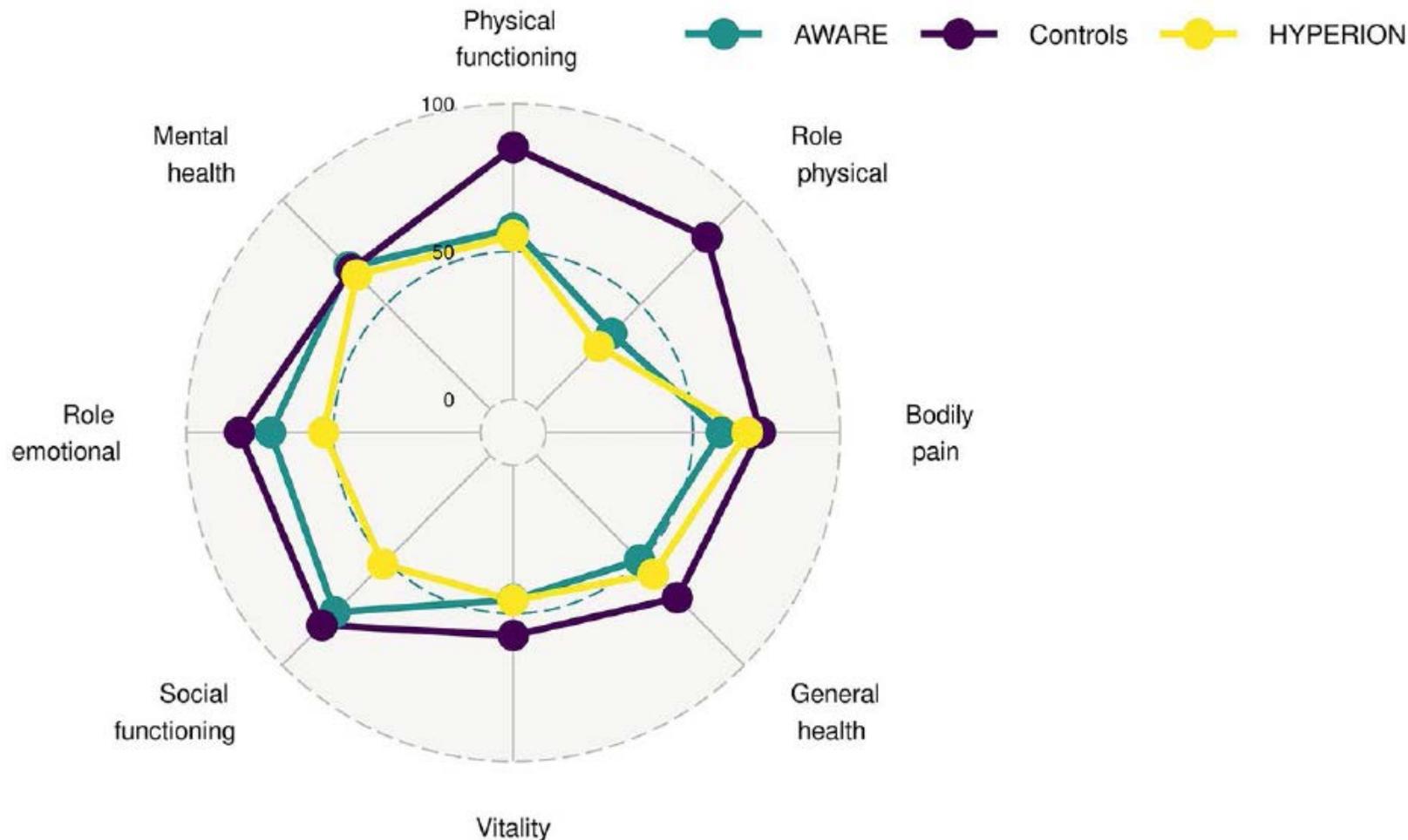


Qualité de vie... chez les non-choquables

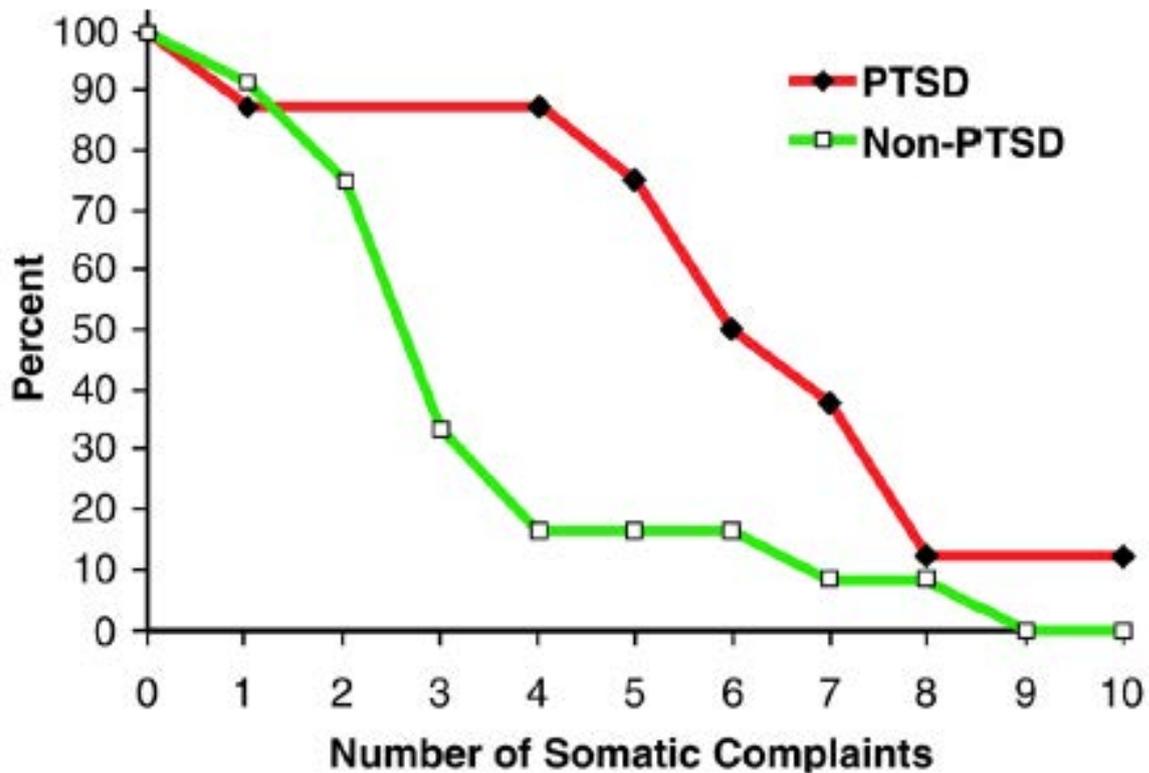


Etudes
HYPERION
AWARE
INSEE – décennale

J90



Complications psychiatriques



Facteurs associés au PTSD

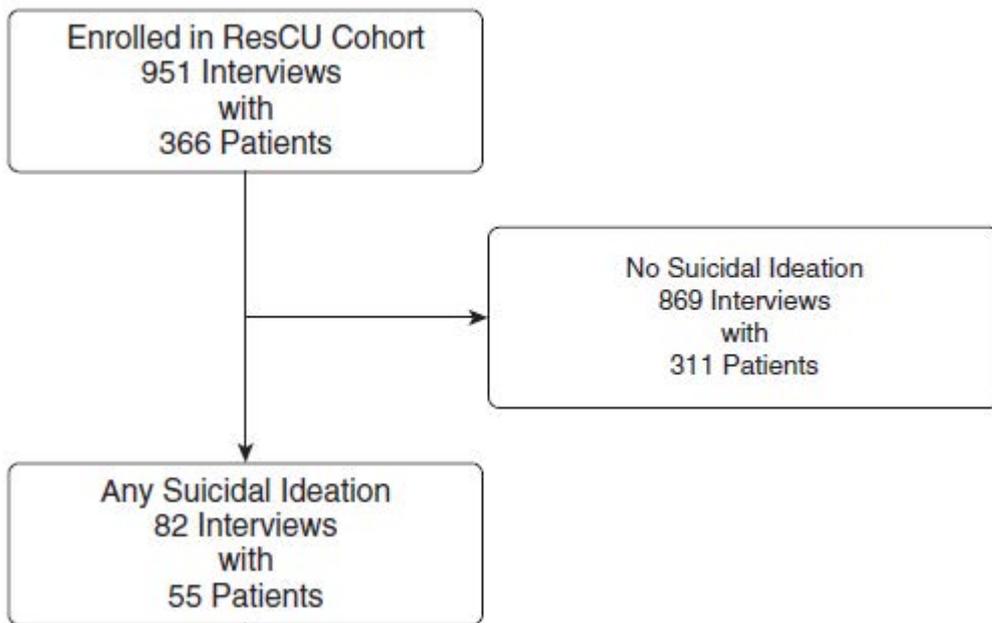
	OR (p)
Age > 60ans	1.58 (0.54)
Genre masculin	3.17 (0.19)
RCP par le témoin	1.15 (0.83)
Sédation prolongée	5.00 (0.06)

^a $t = -2.48$, $df = 18$, $p < 0.003$.

Risque suicidaire

Suicide Risk Management Protocol in Post-Cardiac Arrest Survivors: Development, Feasibility, and Outcomes

Rachel A. Bucy¹, Kaitlyn A. Hanisko¹, Lee A. Kamphuis¹, Brahmajee K. Nallamothu^{1,2}, Theodore J. Iwashyna^{1,2,3}, and Paul N. Pfeiffer^{1,4}



Level of Suicidal Ideation	N	%
Passive ideation	56	81
Active ideation without method or intent	3	4
Suicidal thoughts with method	7	10
Suicidal intent without method	1	2
Suicidal thoughts with specific method and intent	2	3

Pronostic à long-terme

Devenir

*Devenir
neurologique*

*Santé à
distance*

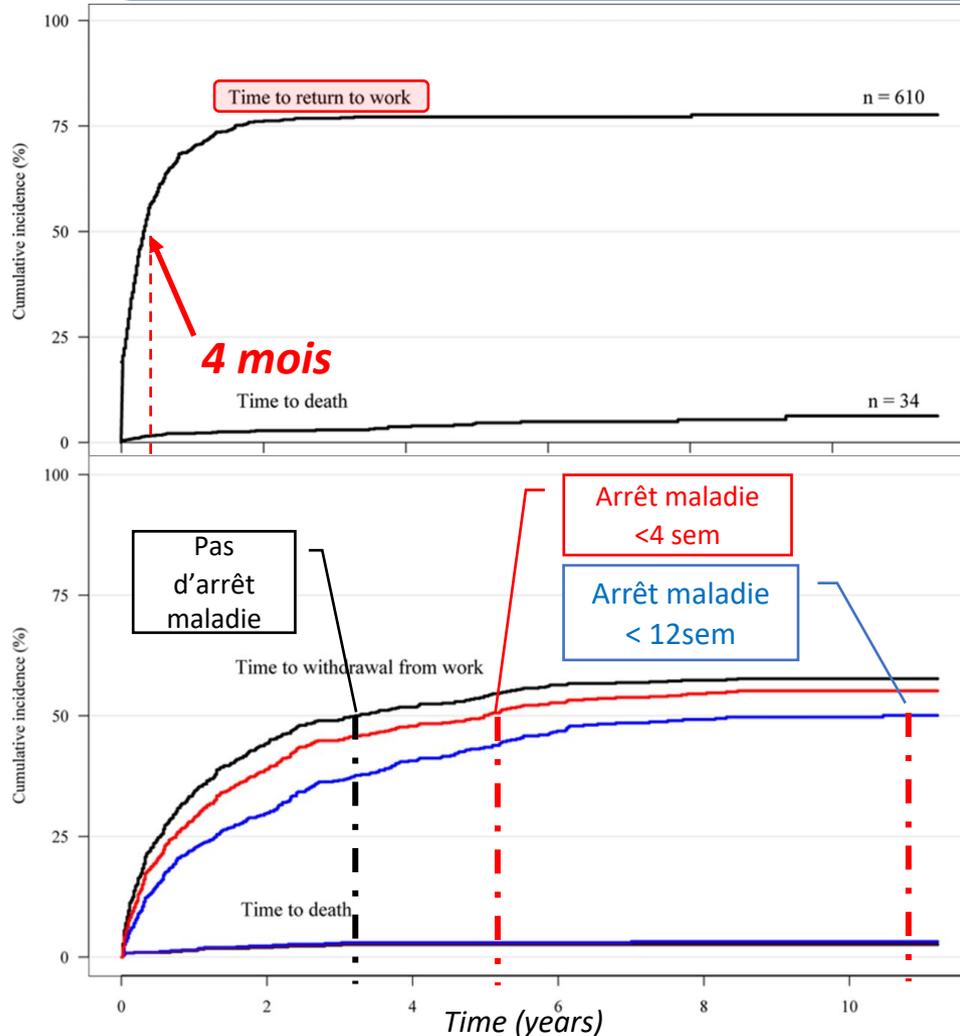
Vie quotidienne

Participation
sociale

Qualité de vie

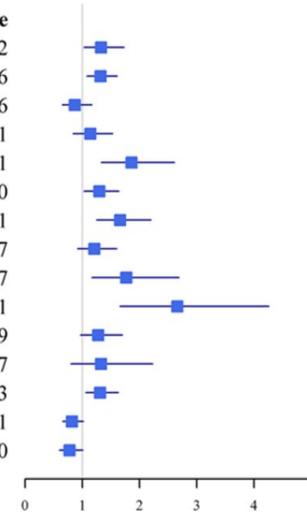
Retour au travail

Retour au travail



Facteurs associés à une reprise d'activité professionnelle

Parameter	HR	Low 95%	High 95%	P Value
Male gender	1.33	1.03	1.73	0.032
Agegroup 18-49 years vs 50-65 years	1.32	1.08	1.61	0.006
Not living alone	0.87	0.65	1.17	0.36
Household income group 2	1.14	0.84	1.53	0.41
Household income group 3	1.86	1.33	2.61	<0.001
Education group 2	1.30	1.03	1.64	0.030
Education group 3	1.66	1.25	2.20	<0.001
Charlson score 0 vs >0	1.21	0.92	1.60	0.17
Arrest witnessed by bystander	1.77	1.17	2.69	0.007
Arrest witnessed by EMS	2.66	1.66	4.26	<0.001
Bystander CPR	1.28	0.97	1.70	0.079
Presumed cardiac cause of arrest	1.33	0.80	2.23	0.27
Arrest in years 2006-2011 vs 2001-2005	1.31	1.06	1.63	0.013
Length of stay in hospital (5-12 days)	0.82	0.66	1.02	0.071
Length of stay in hospital (>12 days)	0.78	0.60	1.01	0.060



- Kragholm K, Circulation 2015
- D'Escatha A. Resuscitation 2019

Pronostic à long-terme

Devenir

*Devenir
neurologique*

*Santé à
distance*

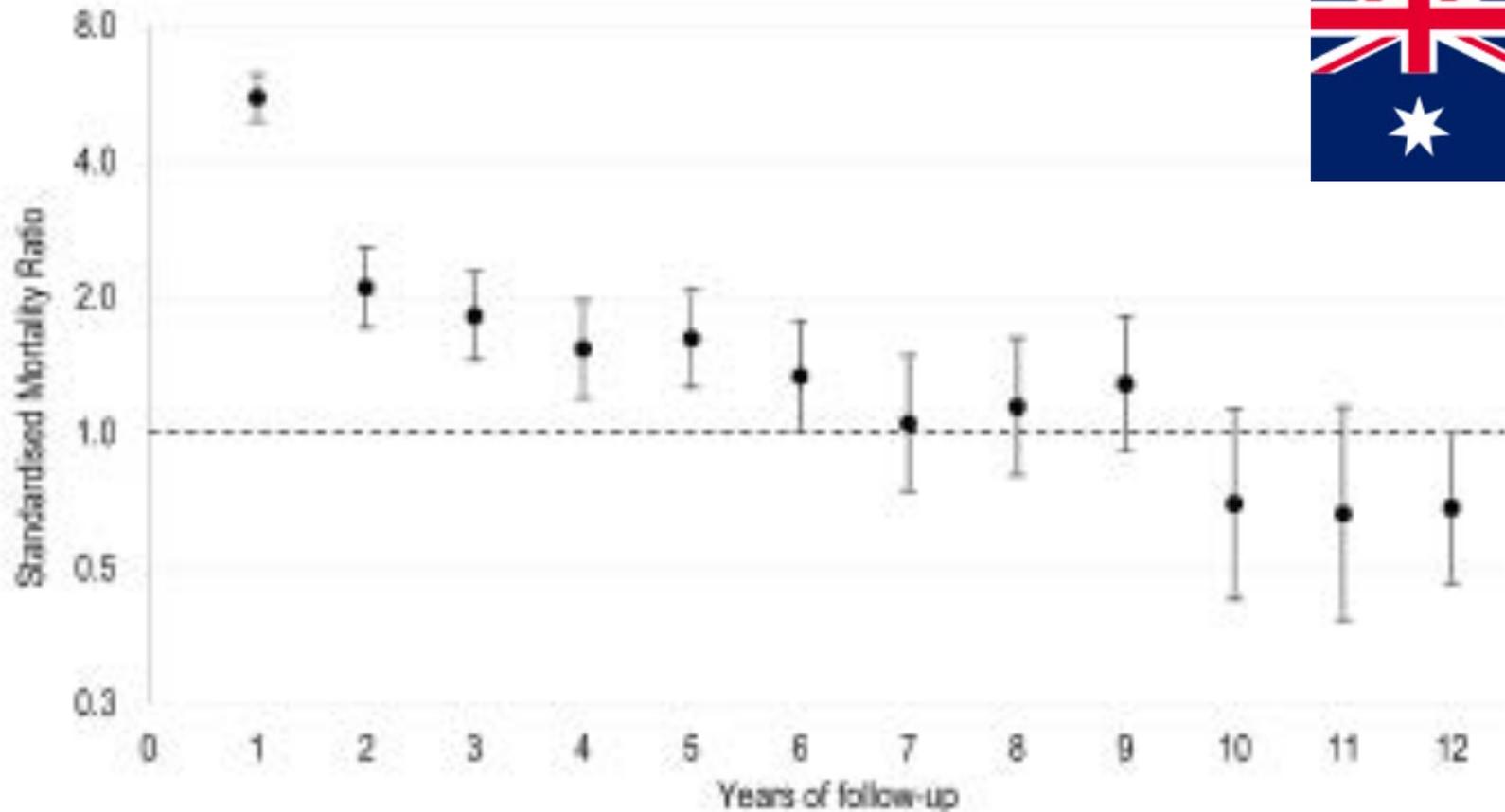
Vie quotidienne

Participation
sociale

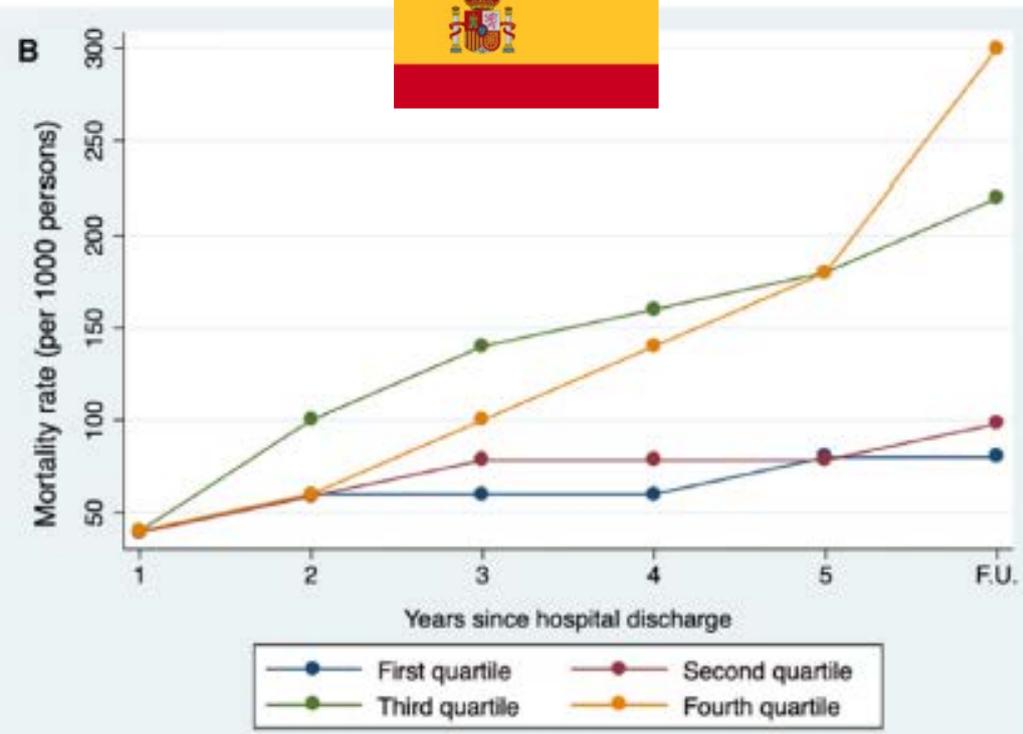
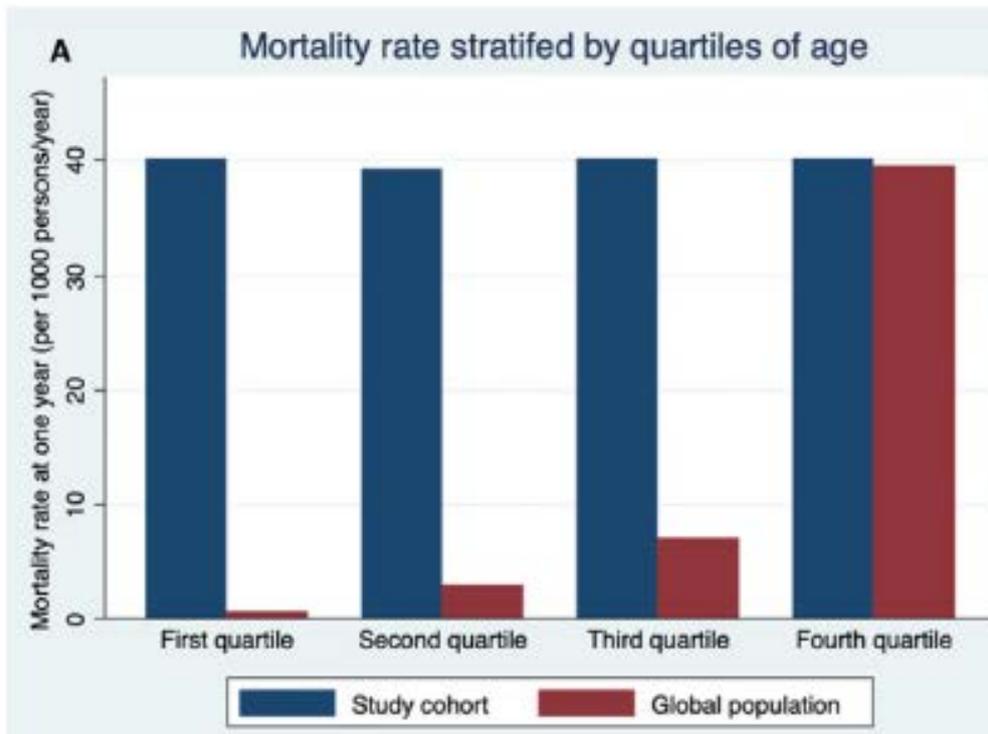
Qualité de vie

Retour au travail

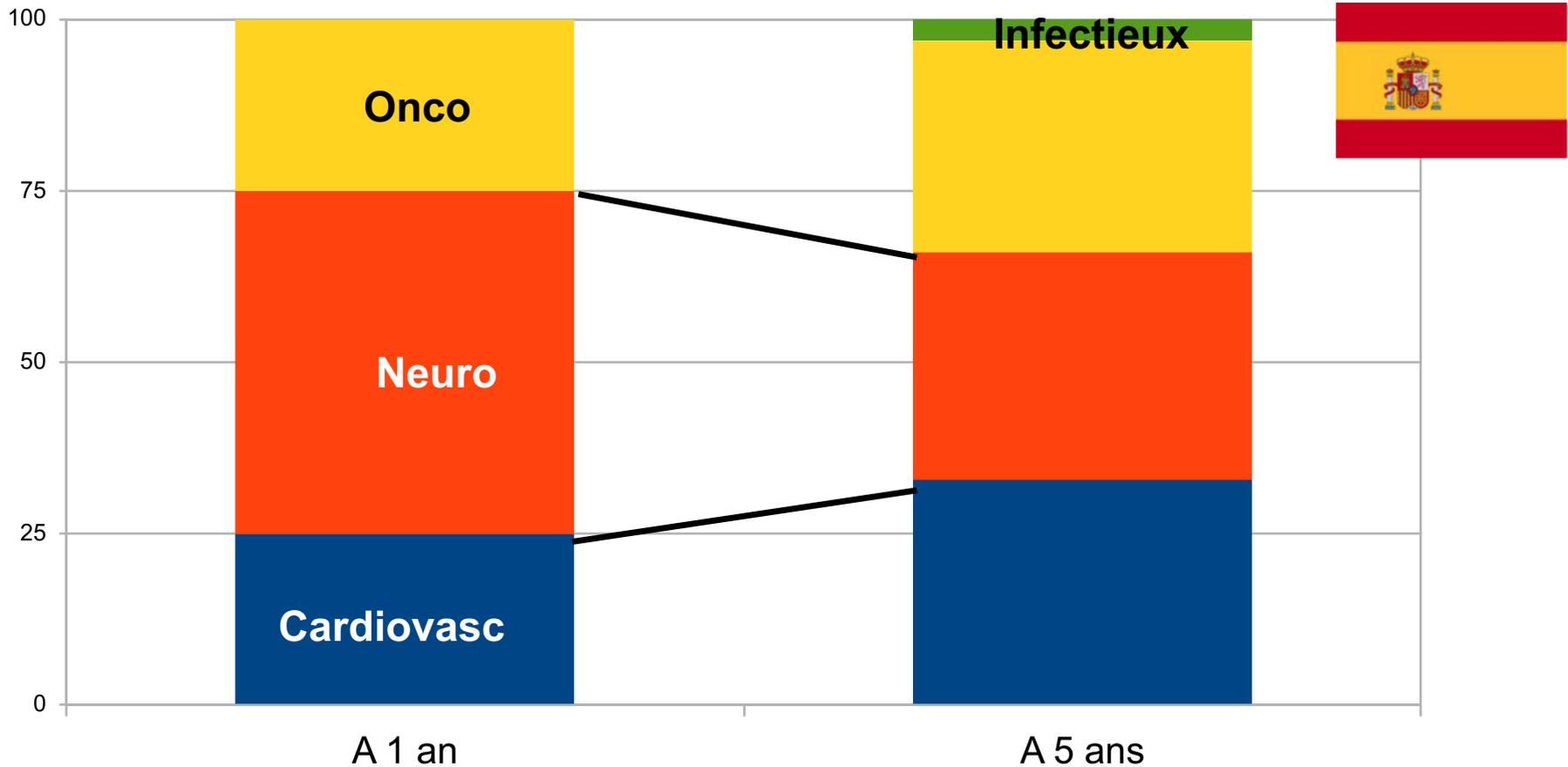
Une surmortalité... au début



Surmortalité des plus fragiles



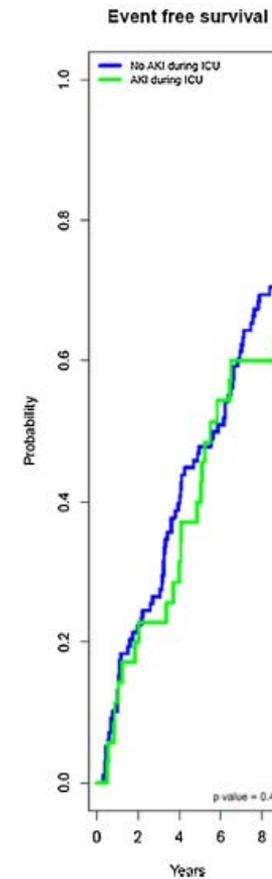
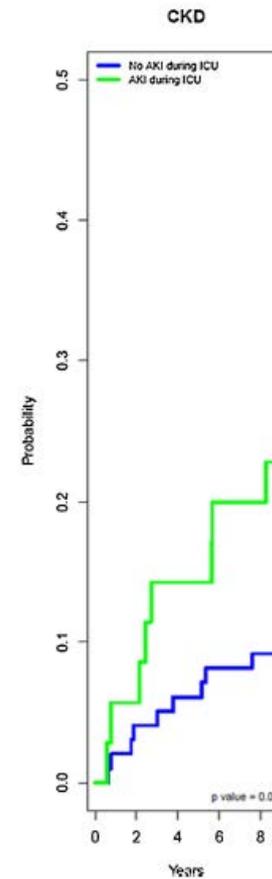
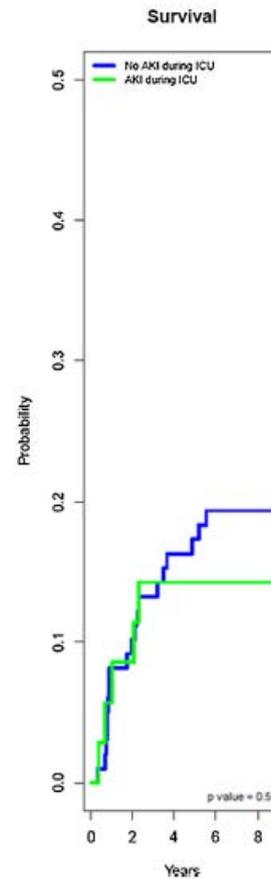
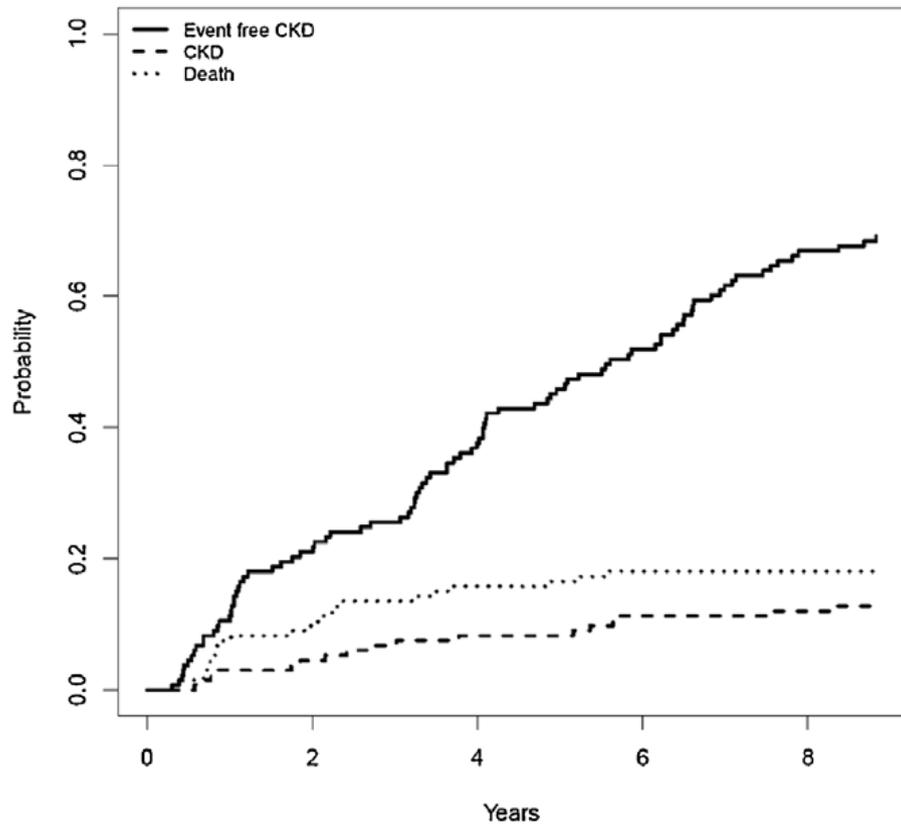
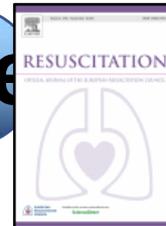
Causes de décès au cours du temps



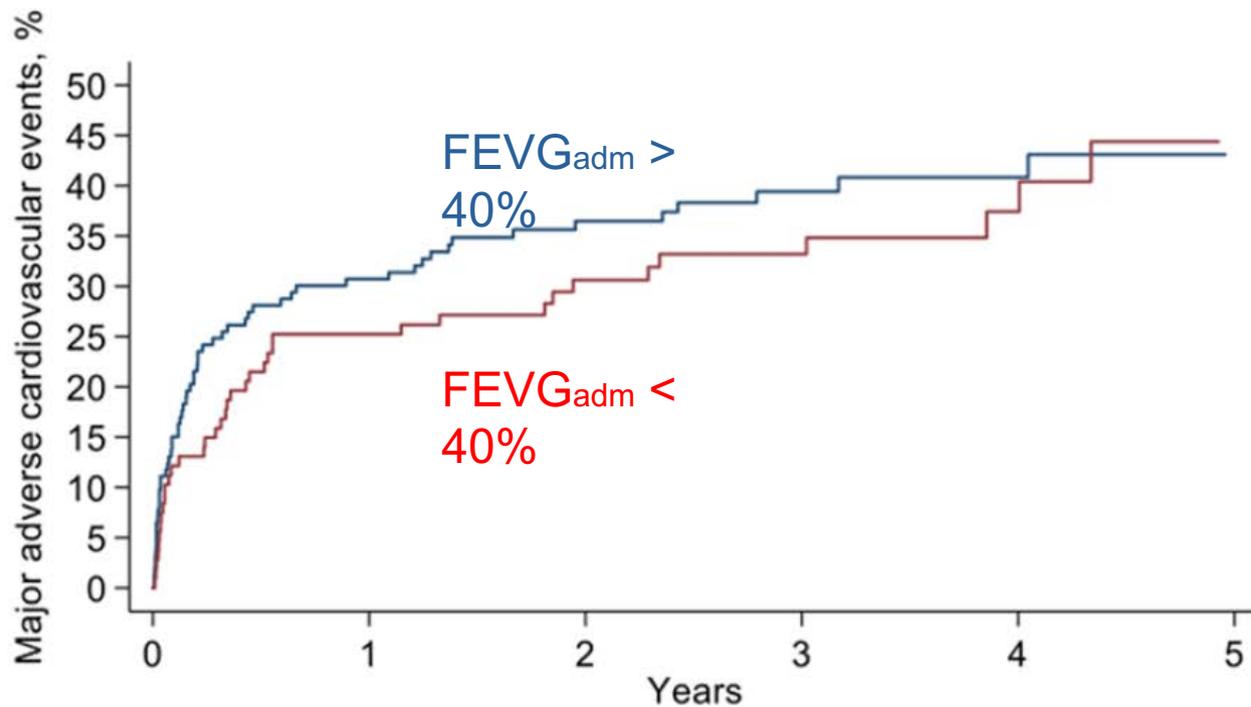
Morbidity post ACR

	At one year	At the end of follow-up
Death	8 (4.0%)	36 (17.9%)
Causes of death		
Cardiovascular	2 (25.0%)	12 (33.3%)
Neurological	4 (50.0%)	12 (33.3%)
Oncological	2 (25.0%)	11 (30.6%)
Infectious	0 (0.0%)	1 (2.8%)
CV related admission	20 (10.4%)	53 (26.4%)
Heart Failure	5 (2.5%)	22 (11.0%)
Myocardial infarction	2 (1.0%)	6 (3.0%)
Coronary revascularization	2 (1.0%)	10 (5.0%)
Ventricular arrhythmias*	8 (4.0%)	18 (9.0%)
ICD during follow-up	3 (1.5%)	7 (3.5%)
HVD intervention	2 (1%)	6 (3.0%)
Cancer	7 (3.5%)	22 (11.0%)
Stroke	2 (1%)	13 (6.5%)

Défaillance rénale post ACR et long-terme



Devenir de la dysfonction myocardique

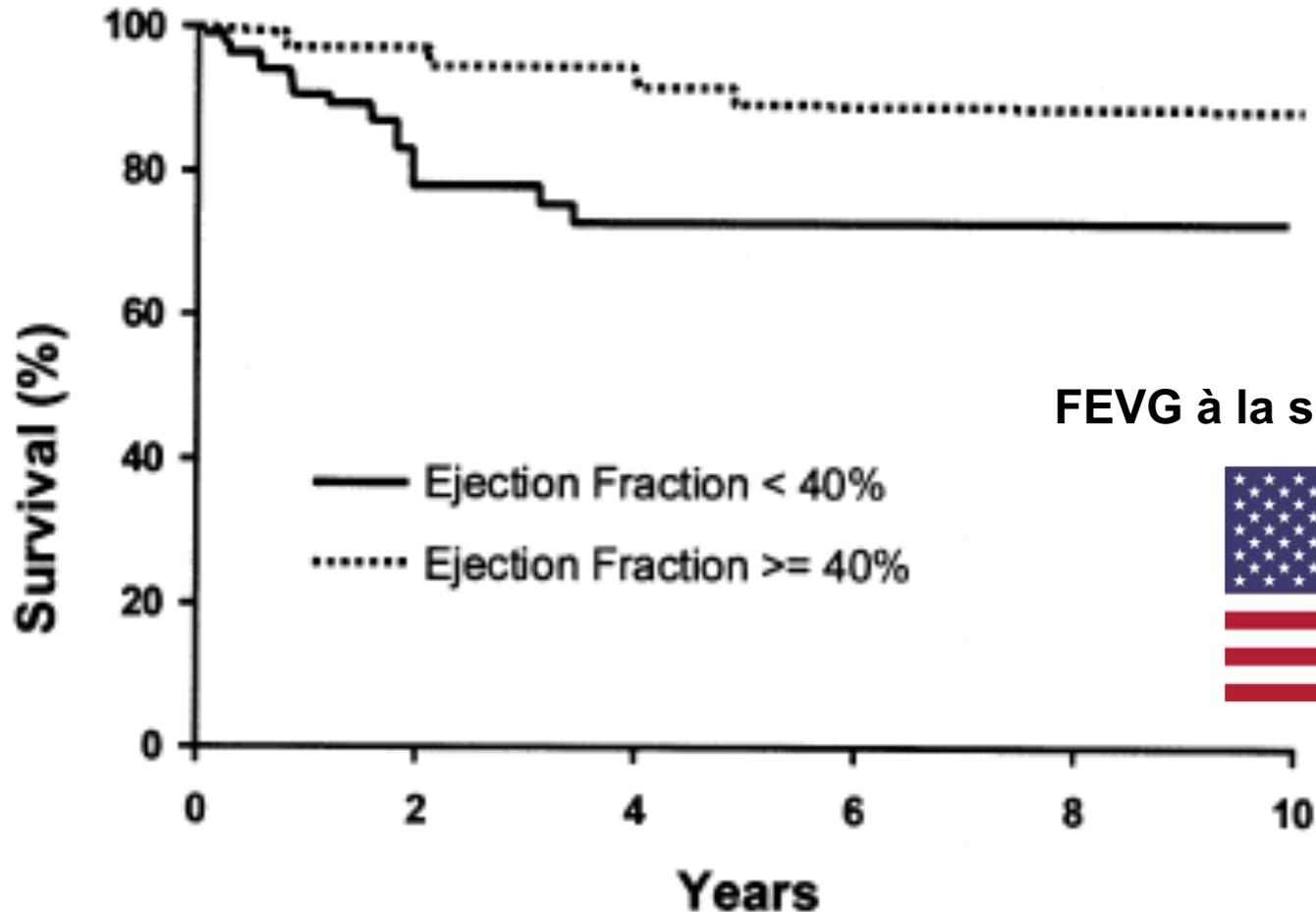


No. at Risk							
LVEF > 40%	153	106	74	49	28	7	
LVEF ≤ 40%	107	80	59	41	21	4	

• Ortuno S, submitted

• avec la permission de W Bouaouin

Evenements cardio-vasculaires

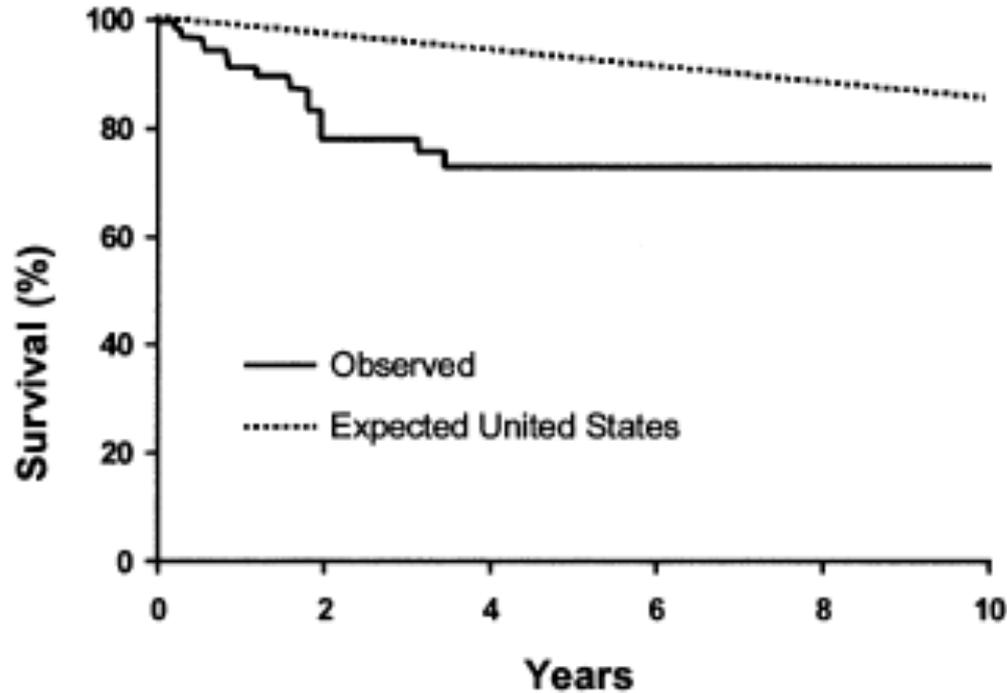


FEVG à la sortie de l'hôpital

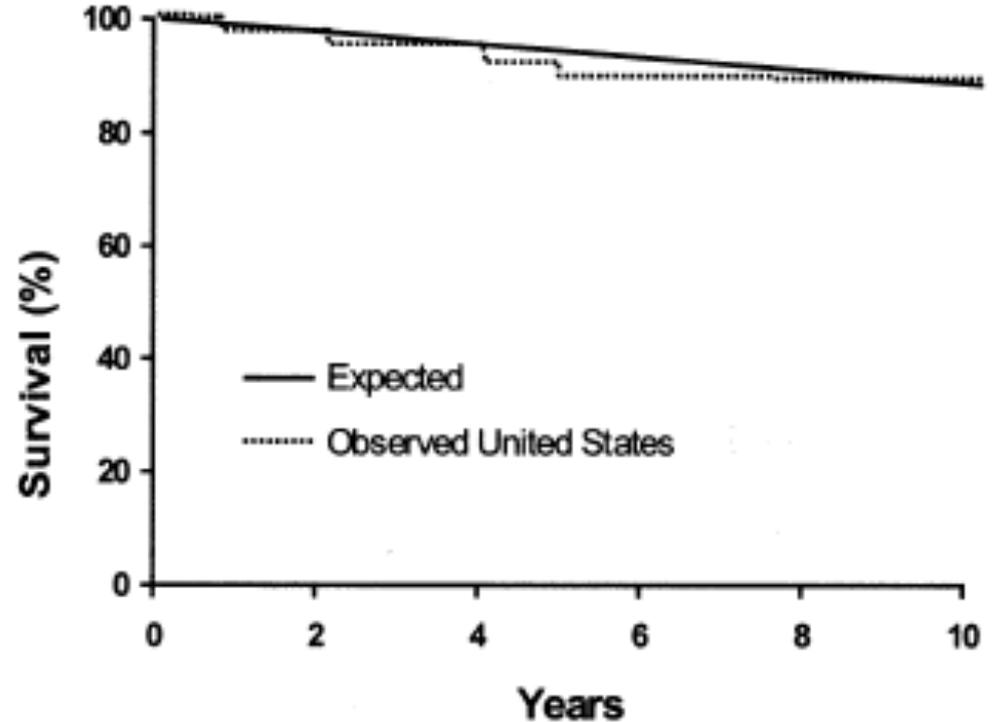


Evenements cardio-vasculaires

FEVG < 40%



FEVG > 40%



Pronostic à long-terme

Intervention

*Devenir
neurologique*

Devenir

*Santé à
distance*

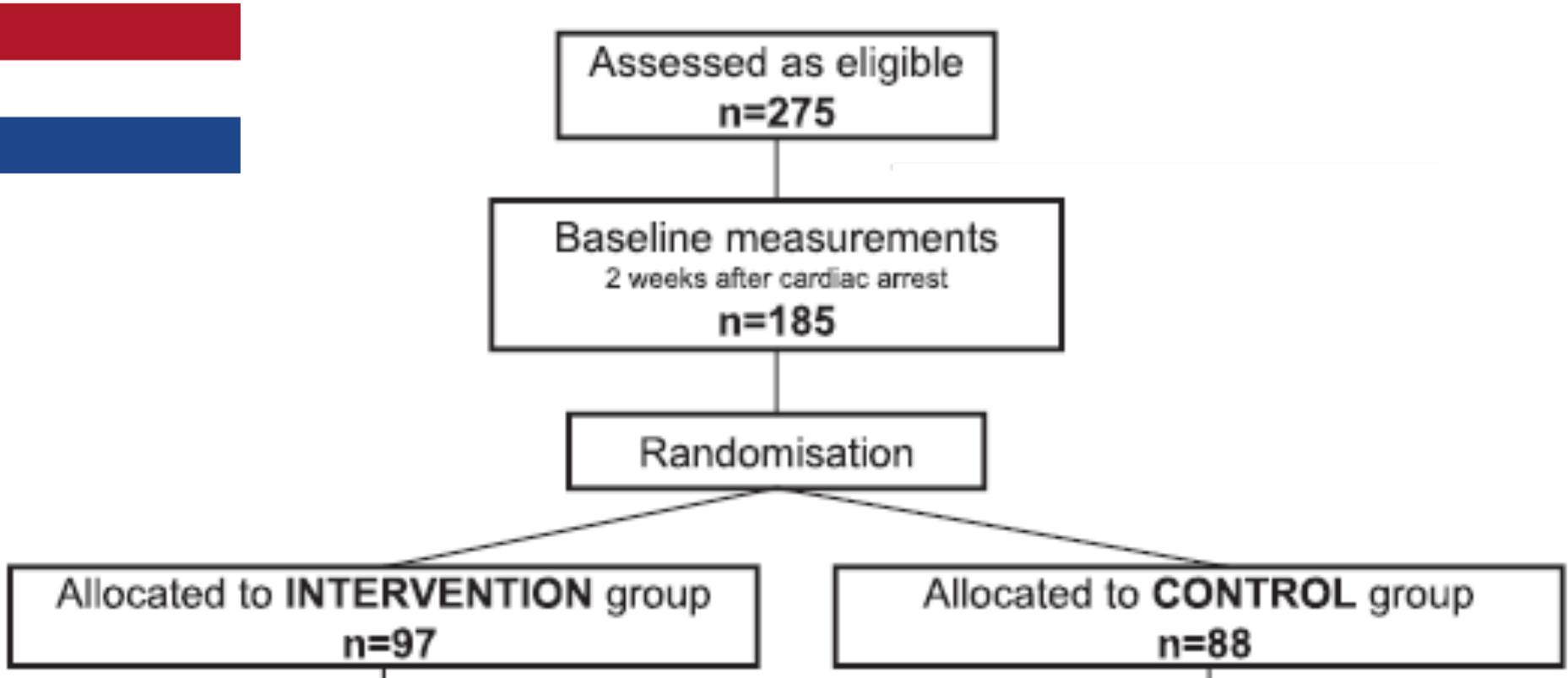
Vie quotidienne

Participation
sociale

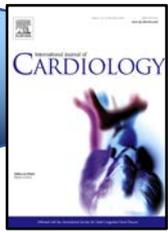
Qualité de vie

Retour au travail

Réhabilitation post-ACR

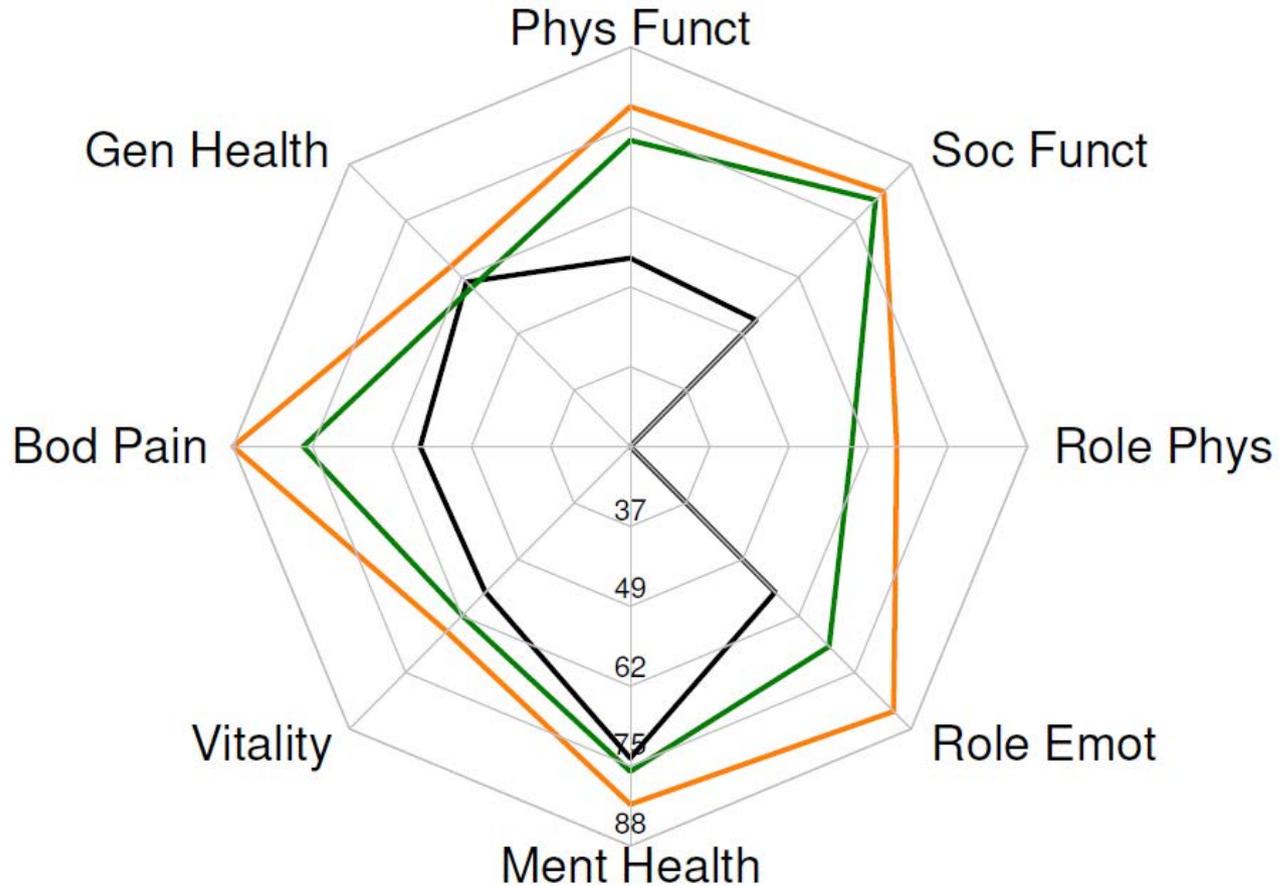


Prise en charge post réa...



J0

Intervention
Controles



Prise en charge post réa...

Rehabilitation for Survivors of Cardiac Arrest Focused on Fatigue (SCARF)



The safety and scientific validity of this study is the responsibility of the study sponsor and investigators. Listing a study does not mean it has been evaluated by the U.S. Federal Government. Read our [disclaimer](#) for details.

ClinicalTrials.gov Identifier: NCT04114773

Recruitment Status ⓘ : Completed

First Posted ⓘ : October 3, 2019

Last Update Posted ⓘ : July 27, 2021

Sponsor:

Odense University Hospital

Collaborators:

REHPA The Danish Knowledge Center for Rehabilitation and Palliative Care

University of Southern Denmark

Odense Patient Data Explorative Network

Center for Rehabilitation of brain injury, Copenhagen

Information provided by (Responsible Party):

Vicky Joshi, Odense University Hospital

Réhabilitation physique, mentale et sociale



Take home messages

- Pathologie complexe
 - car multiforme
 - car évolutive
- Devenir neurologique directement associé à de multiples dimensions à long terme
- Ne pas oublier les comorbidités *de novo* post ACR
- Il ne faudrait pas que les survivants deviennent les oubliés...



« **Surviving cardiac arrest**
***is just the first step in
a delicately complex journey
to a survivor's achievement of
optimal health and well-being.*** »

Danette Culver, RN