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Résultats à long terme des anévrysmes de l'aorte abdominale

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Statement of financial interest

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 :

Speaker's name : Blandine MAUREL

☑ Proctoring fees : Cook Medical, Gore

☑ Speaking fees : Getinge, Cook Medical

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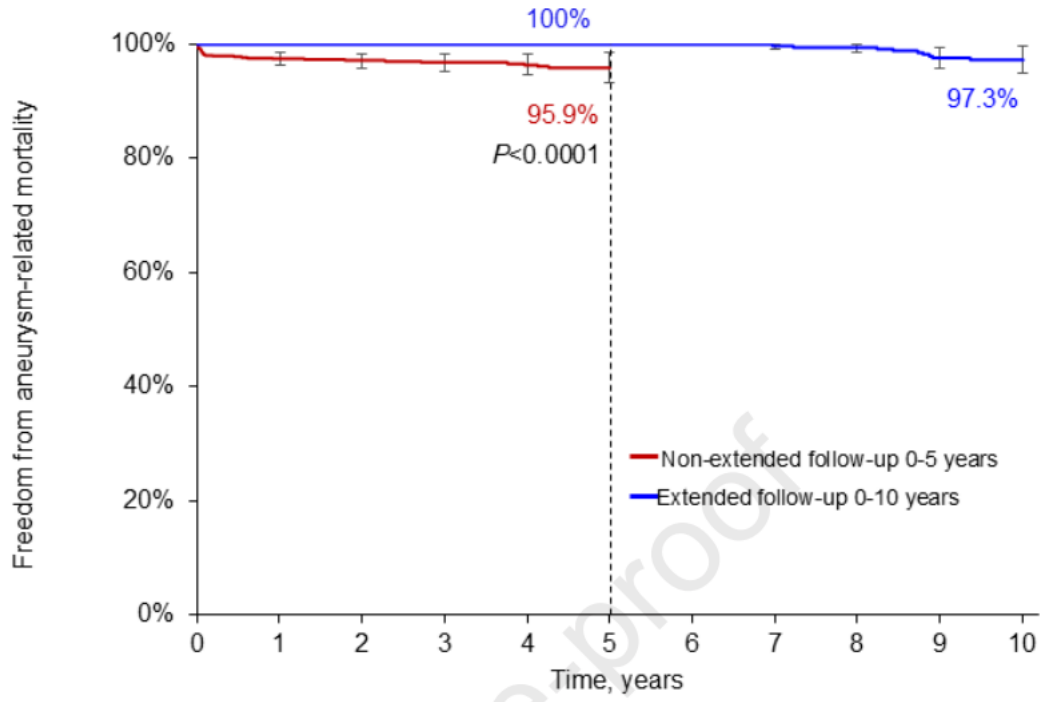
CONTEXTE : *données à 10 ans après EVAR (Medtronic)*

Age moyen 70 +/- 7 ans

Survie sans décès lié à l'aorte



No. at risk											
Extended follow-up, 0-5 years	390	390	390	390	390	390	NA	NA	NA	NA	NA
Non-extended follow-up, 0-5 years	873	760	658	507	406	236	NA	NA	NA	NA	NA
Extended follow-up, >5-10 years	NA	NA	NA	NA	NA	NA	389	378	337	304	186

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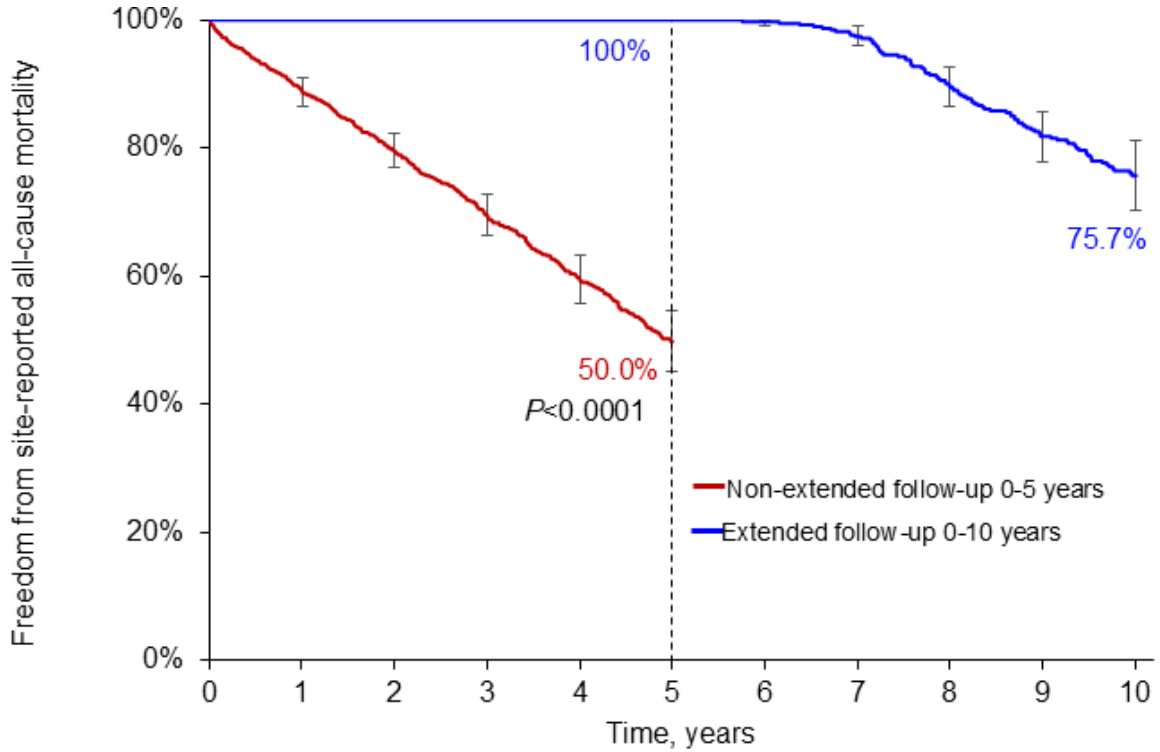
Verhagen HJM, et al. EJVES 2025 Jun

CONTEXTE : *données à 10 ans après EVAR (Medtronic)*

Survie globale



No. at risk											
Extended follow-up, 0-5 years	390	390	390	390	390	390	NA	NA	NA	NA	NA
Non-extended follow-up, 0-5 years	873	760	658	507	406	236	NA	NA	NA	NA	NA
Extended follow-up, >5-10 years	NA	NA	NA	NA	NA	NA	389	378	337	304	186

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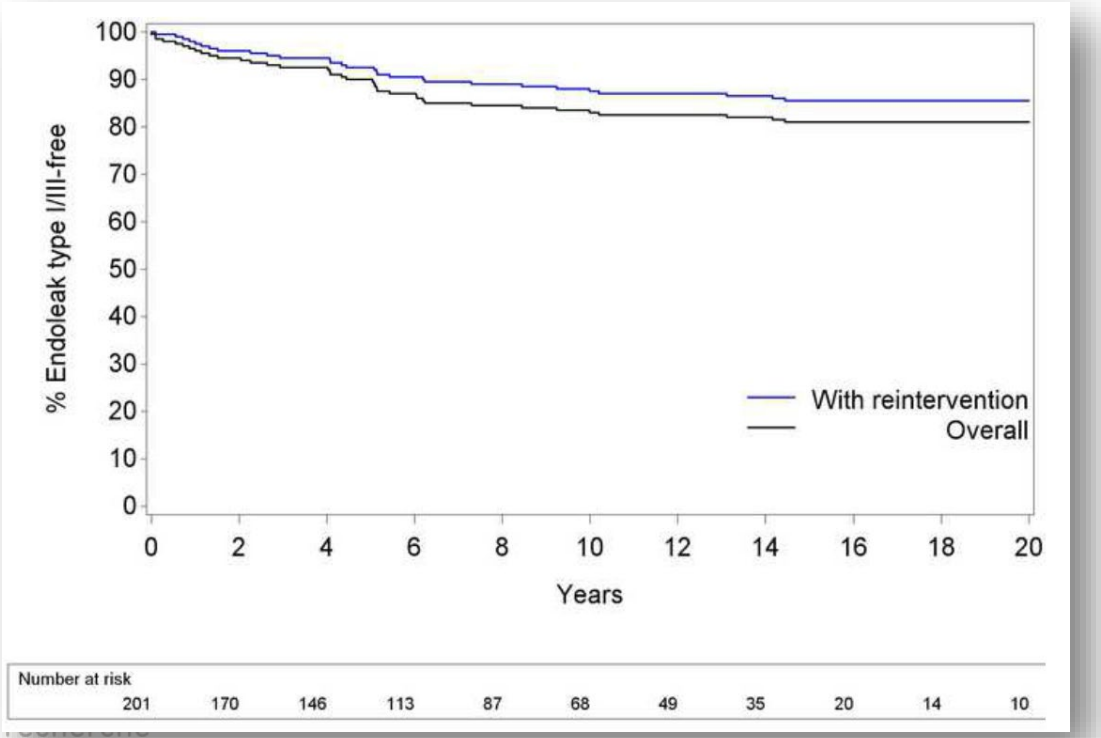
Verhagen HJM, et al. EJVES 2025 Jun

CONTEXTE : *données à 20 ans après EVAR (Cook)*

Expérience initiale : 201 patients entre 1998 et 2009
Age moyen 72 ans
Endofuite type I - III



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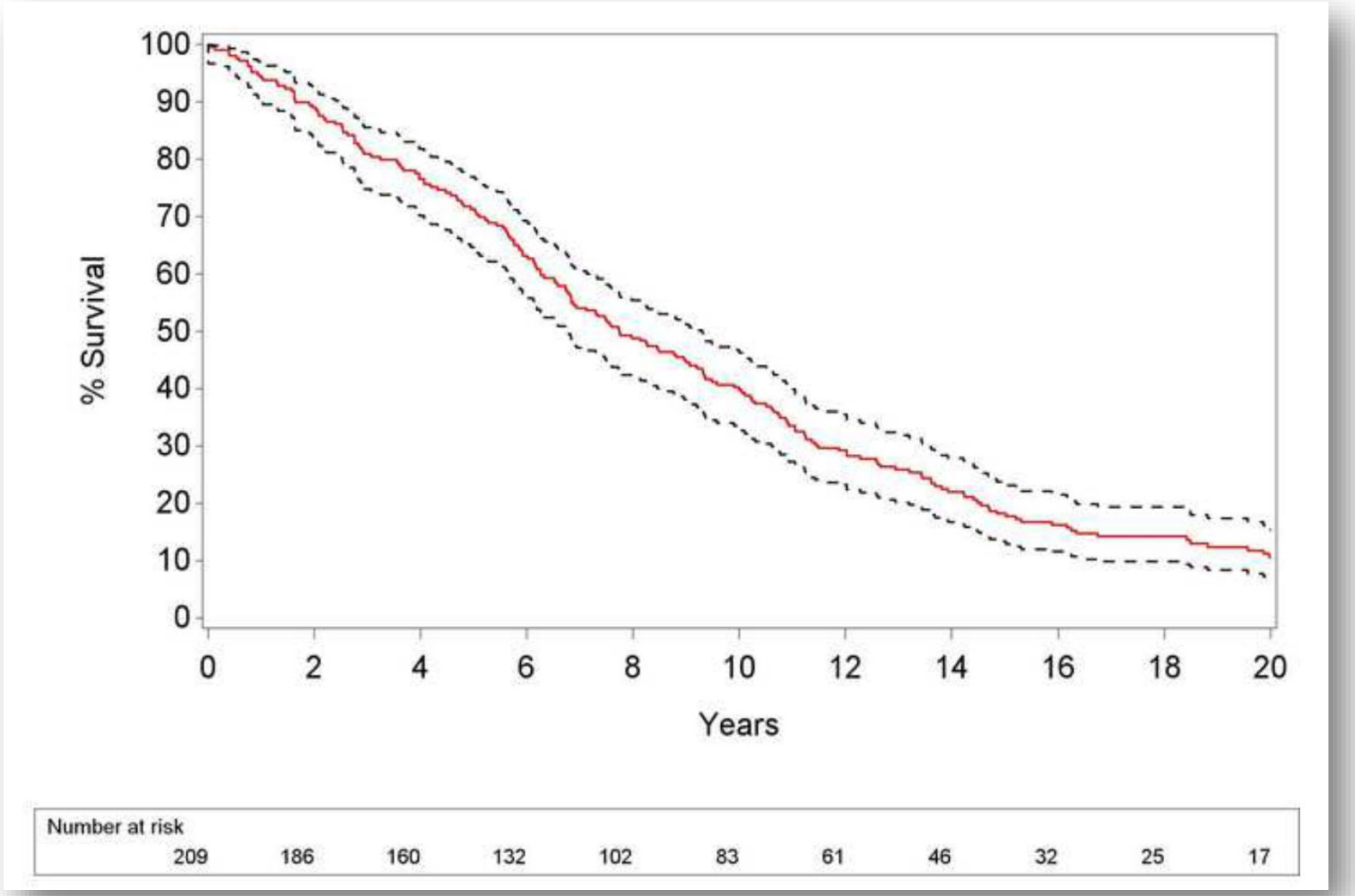
& Santé des Populations

Jessie Reymen, et al. EJVES 2025 in press

CONTEXTE : *données à 20 ans après EVAR (Cook)*

Survie globale



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Jessie Reymen, et al. EJVES 2025 in press

CONTEXTE

Projections :

- **Europe: nonagénaires x3 d'içi 2080 (1M to 3M)**
- **US : >80 ans = 4.3% de la population en 2050**

Eurostat, 2023
Kim TL et al Am Surg, 2020;86(1):56–64

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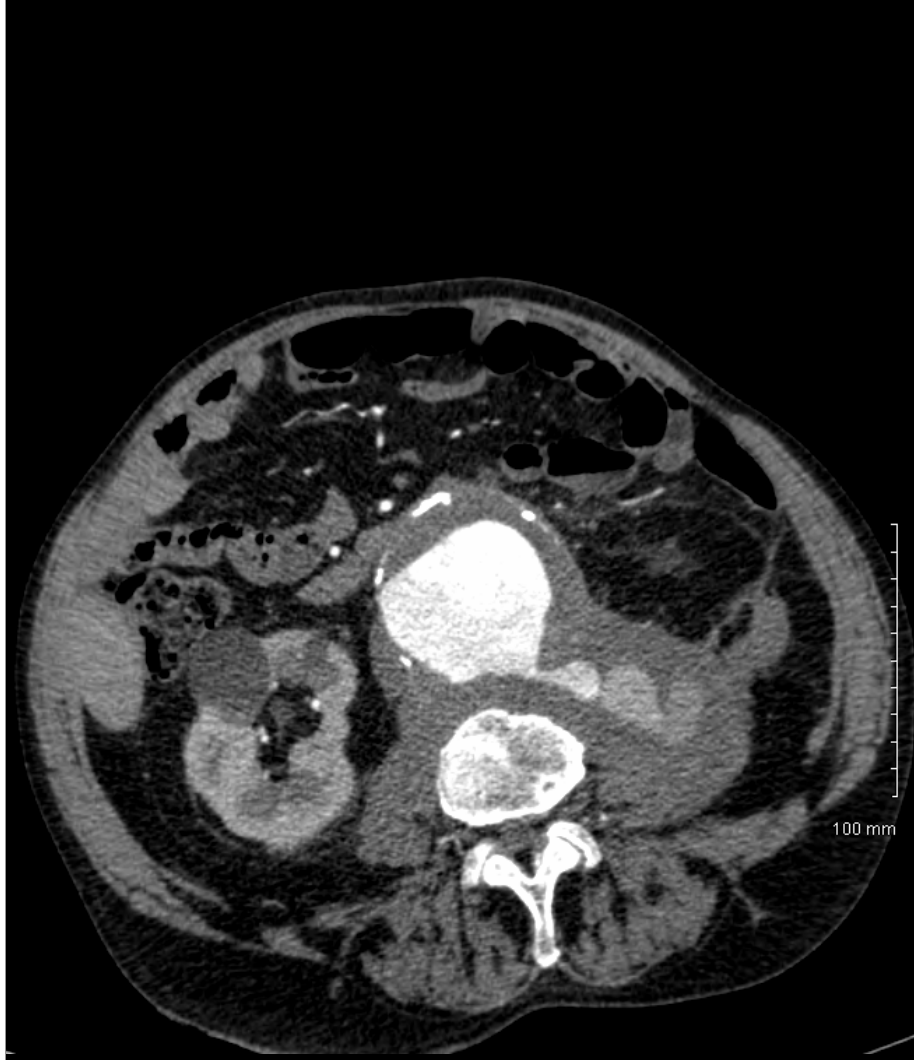
CONTEXTE

Traitement préventif du risque de rupture

	♀	♂
50-55 mm	3.4%	0.6%
50-60 mm		2.2%
60-70 mm	12%	4.2%
Diamètre moyen à la rupture	67 mm	75-80 mm

EJVES 2020;59:890e7
Guidelines, EJVES 2024



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CONTEXTE

Pas d'impact sur la qualité de vie

Risque d'altération de la qualité de vie en cas de complications

Recommendation 20 — New

Men with an asymptomatic abdominal aortic aneurysm < 55 mm are not recommended for elective repair.

Class	Level	References	ToE
III	A	Lederle *et al.* (2002),[238] Powell *et al.* (2007),[239] Cao *et al.* (2011),[240] Ouriel *et al.* (2010)[241]	

Recommendation 21 — New

Women with an asymptomatic abdominal aortic aneurysm < 50 mm are not recommended for elective repair.

Class	Level	References
III	C	Consensus

Recommendation 22 — Changed

Men with an abdominal aortic aneurysm ≥ 55 mm should be considered for elective repair.

Class	Level	References	ToE
IIa	C	Oliver-Williams *et al.* (2019),[117] Filardo *et al.* (2015)[265]	

Guidelines, EJVES 2024

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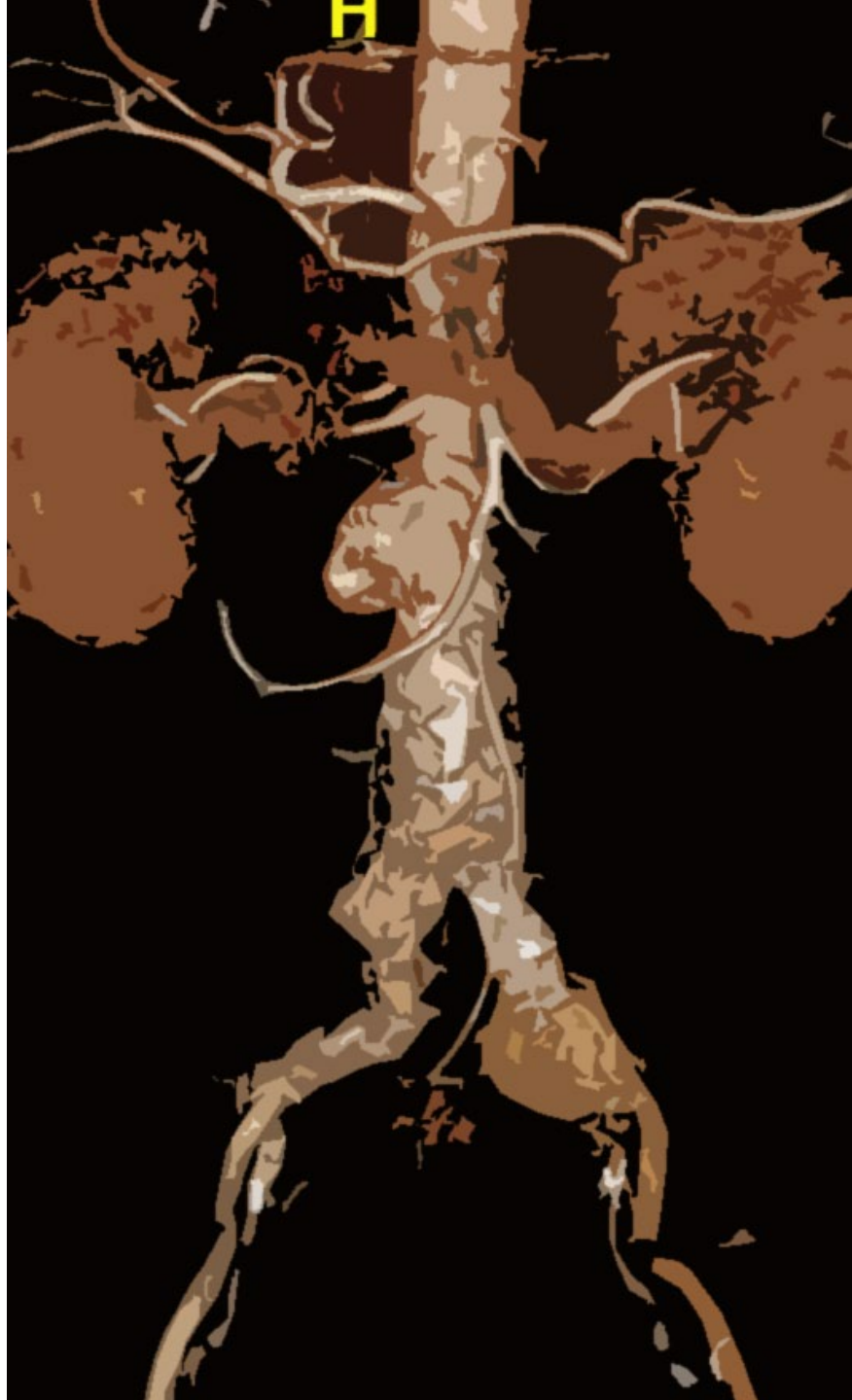
But de l'étude



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Notre question

- **Vu la mortalité liée à l'âge**
- **Vu les enjeux médico économiques**

Faut-il se baser uniquement sur le diamètre ou prendre également en compte d'autres paramètres pour poser une indication opératoire ?

Méthodes

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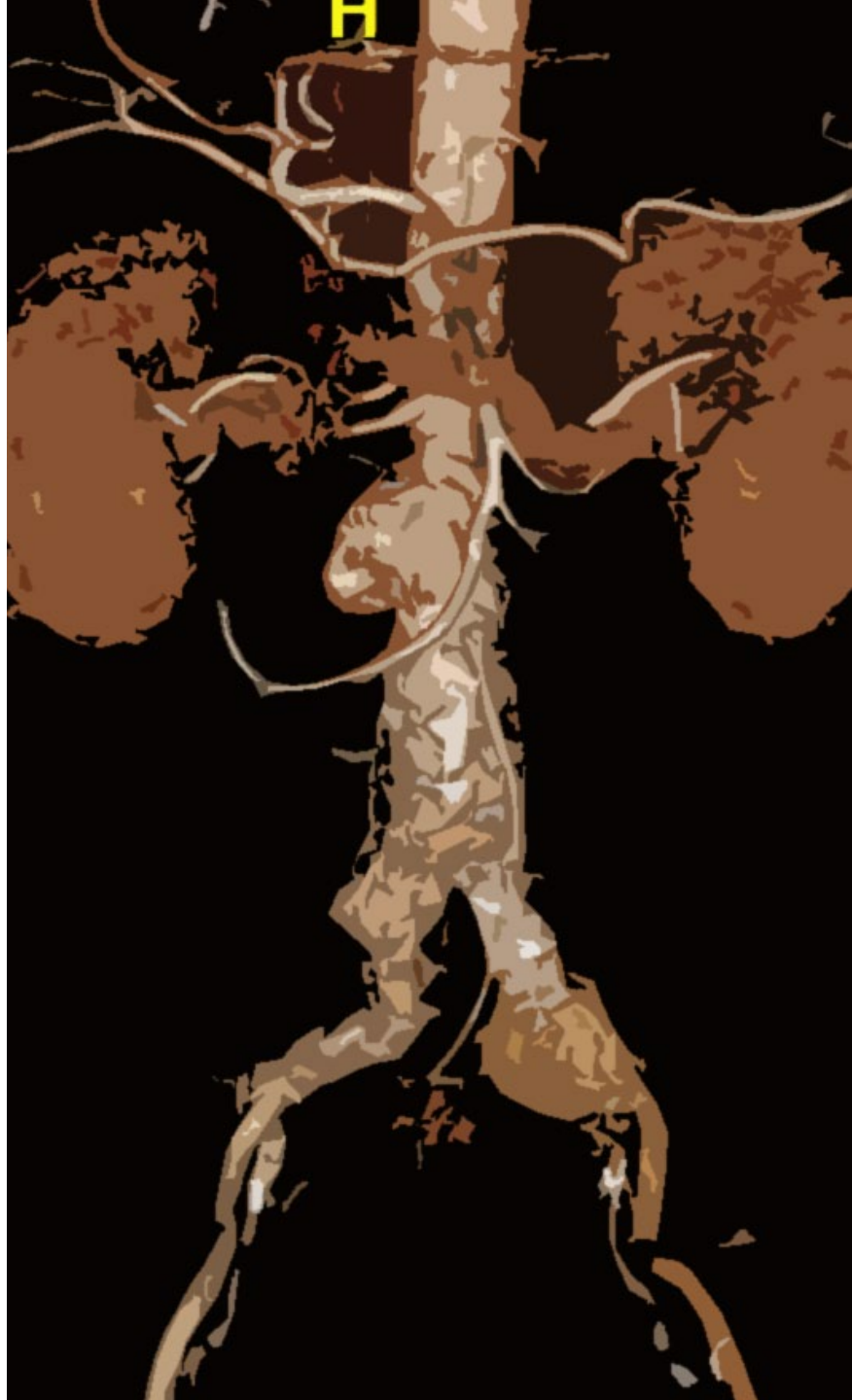

Etude de cohorte française sur 10 ans (SNDS)

Exclusion :
- RAAA
- Jumeaux
- Conversion
- Données manquantes

15 929 PATIENTS
- > 80 ans
- 1ère PEC d'un AAA
- 2013 - 2023

2068 Ouvert (13%)

13 861 Endo (87%)

9% femmes

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Etude de cohorte française sur 10 ans (SNDS)

Endpoints :

- **Mortalité à 30 jours / 2 ans / 5 ans**
- **Stratification du risque sur la fragilité**
- **Mortalité sur la période et selon la stratégie opératoire**

Résultats

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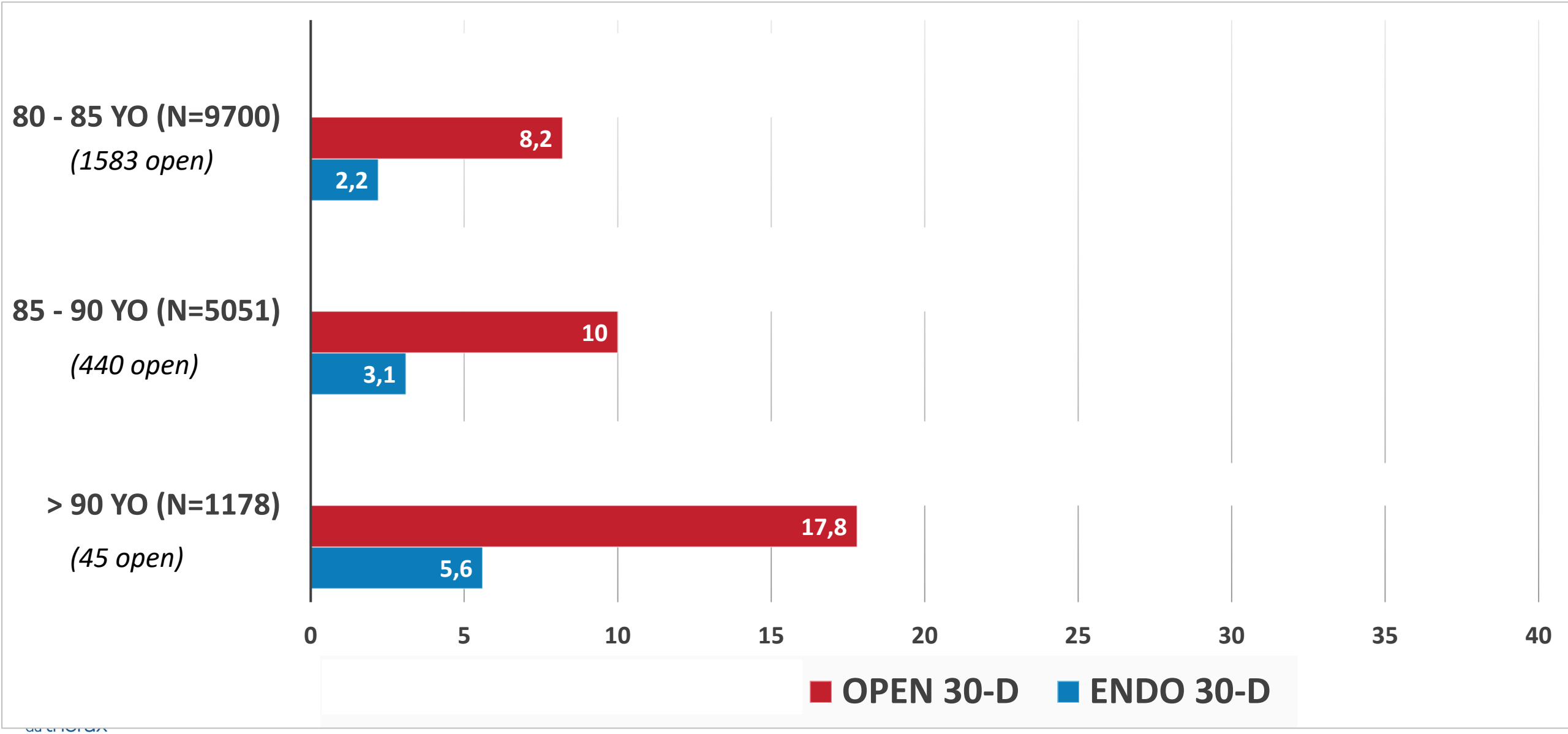
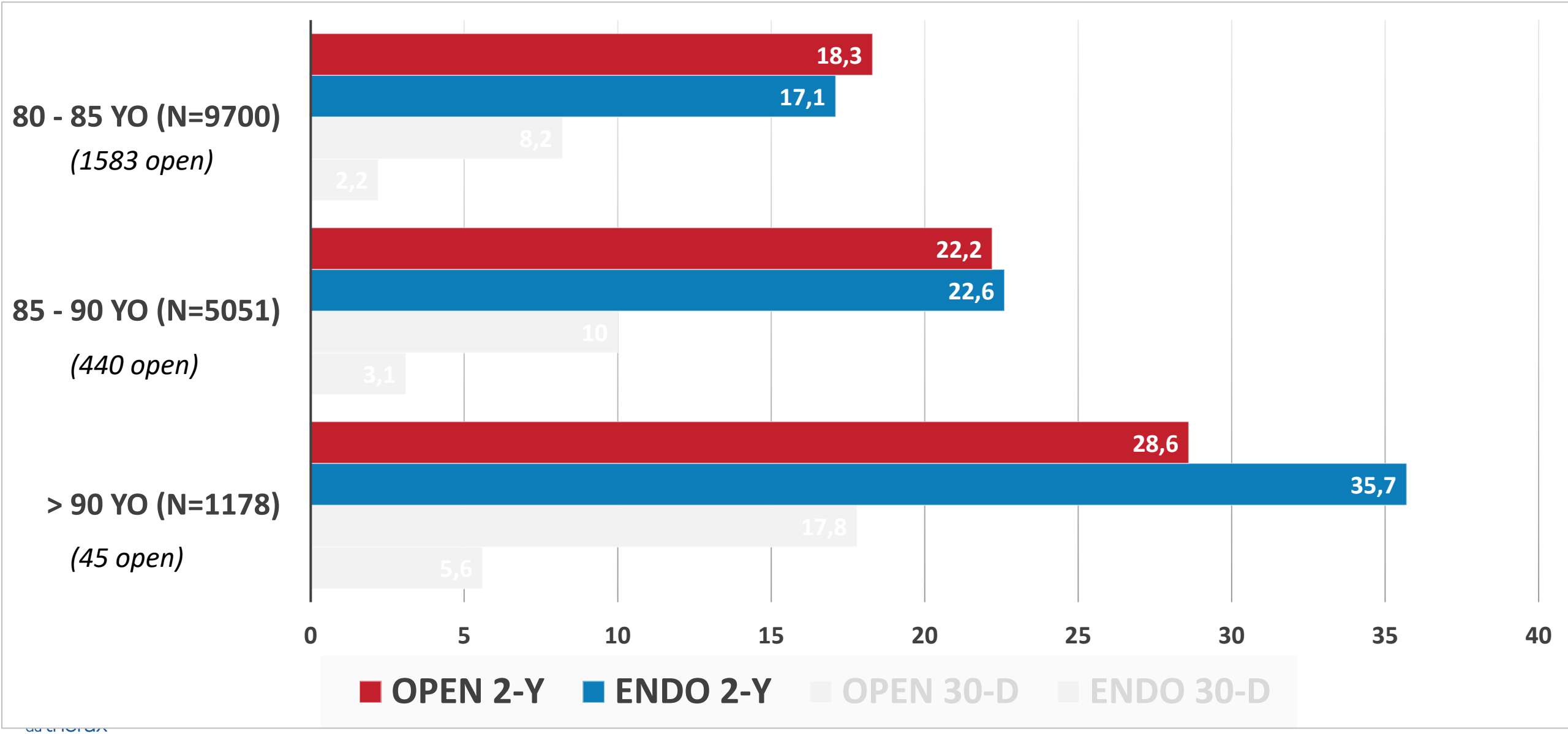
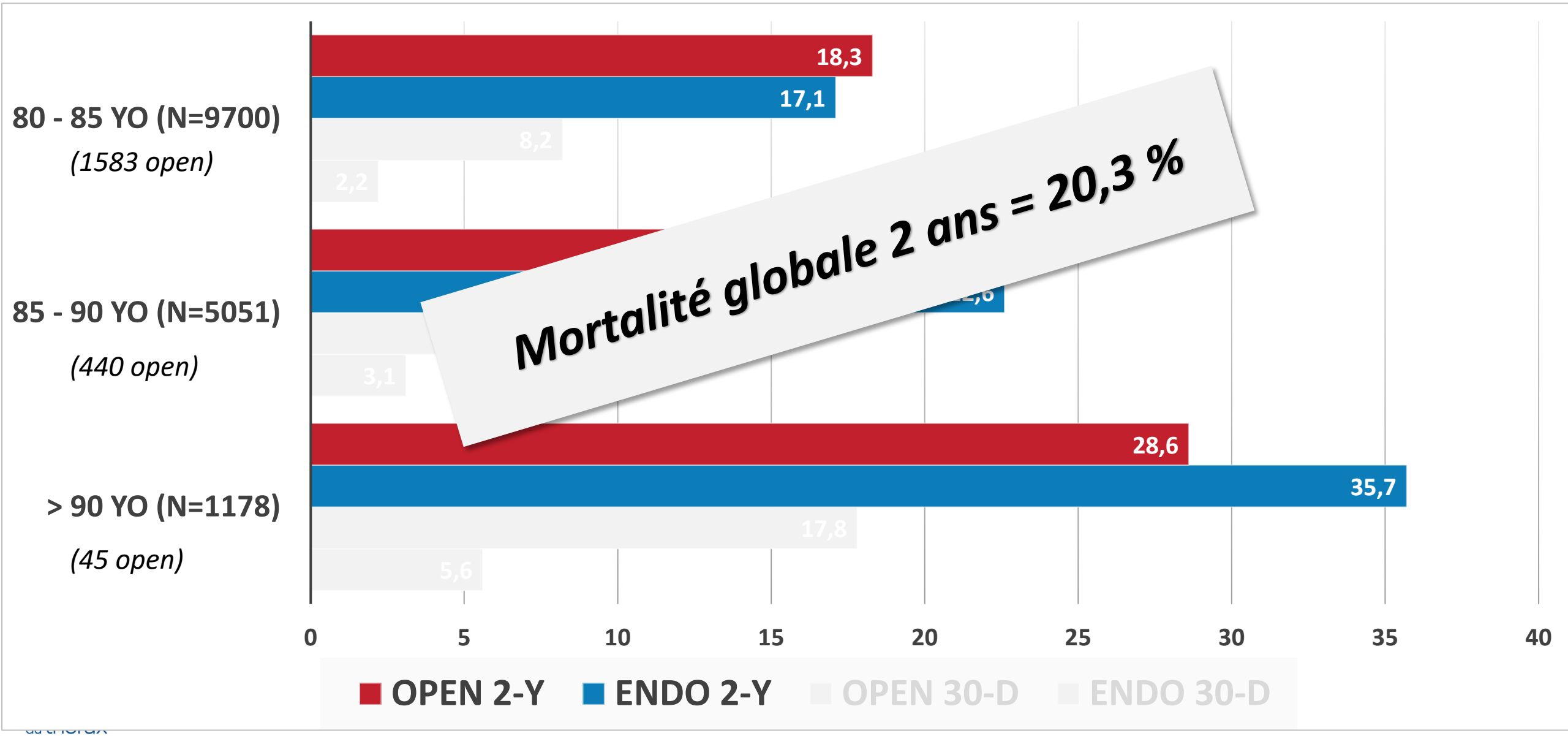
AAA (n=15 929) : mortalité à 30 jours



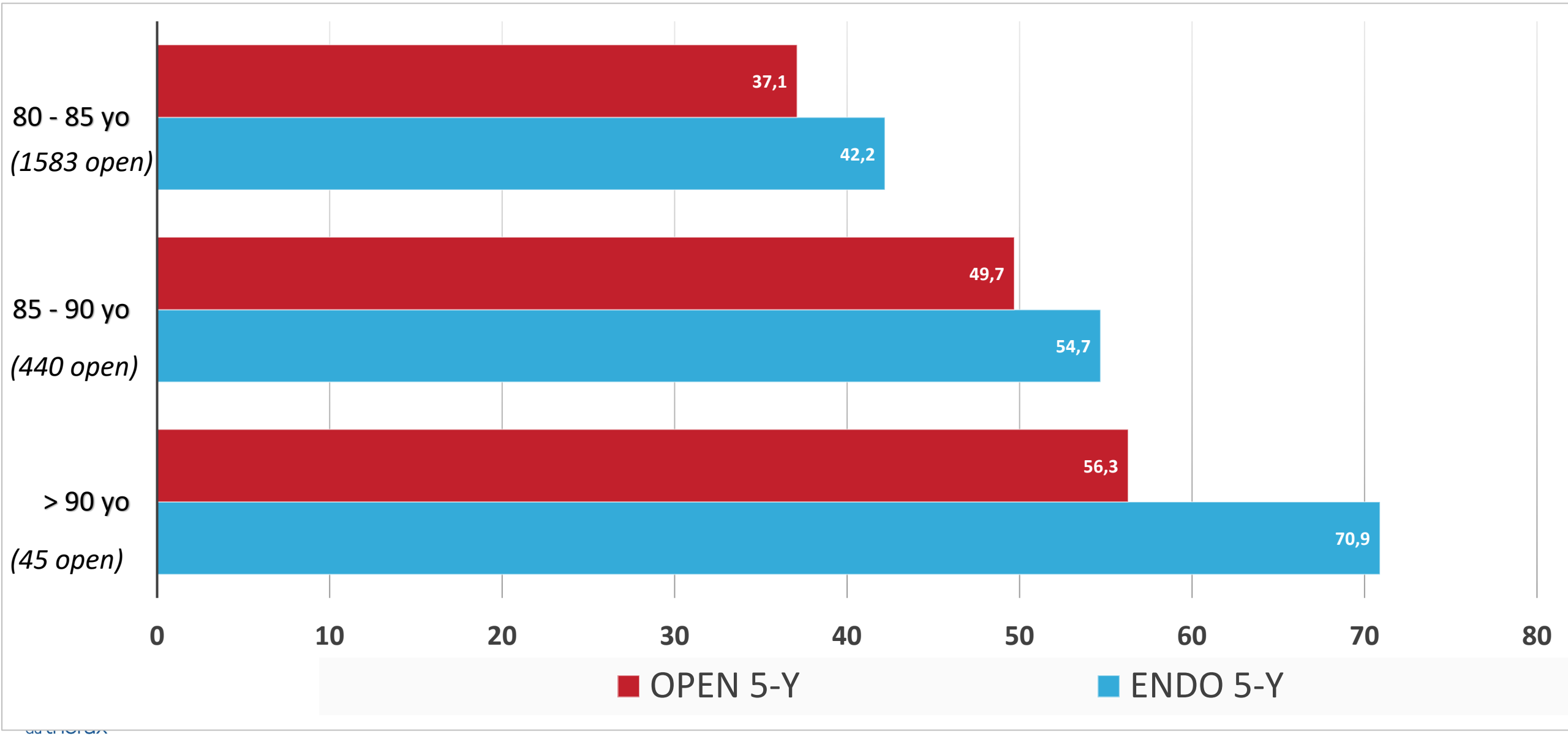
AAA (n=15 929) : mortalité globale à 2 ans



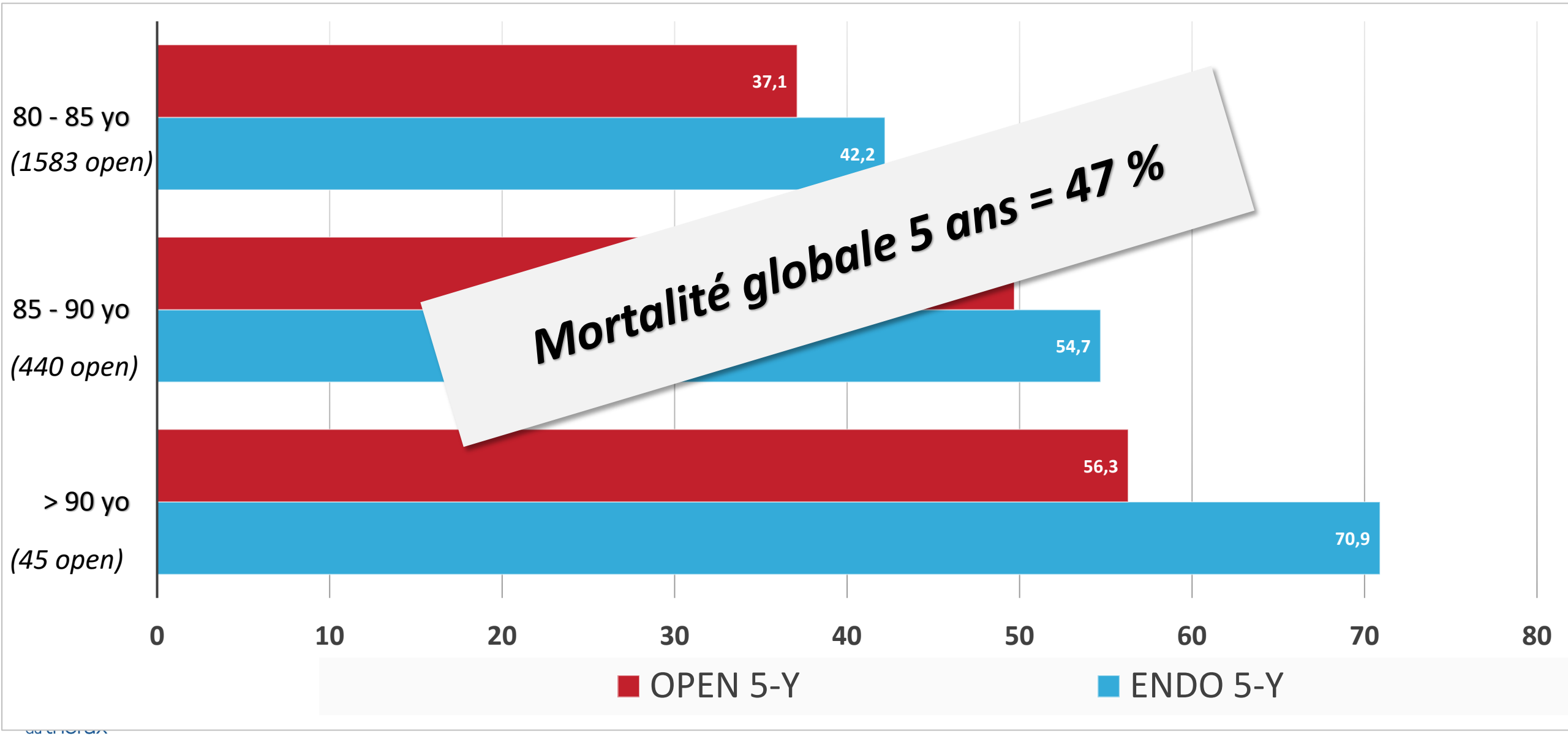
AAA (n=15 929) : mortalité globale à 2 ans



AAA (n=15 929) : mortalité globale à 5 ans



AAA (n=15 929) : mortalité globale à 5 ans



AAA (n=15 929) : ajustement sur la fragilité

Score de fragilité de « routine » :

- **Nombre de jours d'hospitalisation prévu / non prévu dans les 2 ans précédents**
- **Comorbidités parmi 40 items avec coeff de pondération**

Articles

Development and validation of a Hospital Frailty Risk Score focusing on older people in acute care settings using electronic hospital records: an observational study

Thomas Gilbert*, Jenny Neuburger*, Joshua Kraindler*, Eilis Keeble, Paul Smith, Cono Ariti, Sandeepa Arora, Andrew Street, Stuart Parker, Helen C Roberts, Martin Bardsley, Simon Conroy

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See Comment page 1751

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Correspondence to: Prof Simon Conroy, Department of Health Sciences, College of Life Sciences, University of Leicester, Centre for Medicine, Leicester, LE1 7RH, UK
spc3@le.ac.uk

Summary

Background Older people are increasing users of health care globally. We aimed to establish whether older people with characteristics of frailty and who are at risk of adverse health-care outcomes could be identified using routinely collected data.

Methods A three-step approach was used to develop and validate a Hospital Frailty Risk Score from International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) diagnostic codes. First, we carried out a cluster analysis to identify a group of older people (≥75 years) admitted to hospital who had high resource use and diagnoses associated with frailty. Second, we created a Hospital Frailty Risk Score based on ICD-10 codes that characterised this group. Third, in separate cohorts, we tested how well the score predicted adverse outcomes and whether it identified similar groups as other frailty tools.

Findings In the development cohort (n=22 139), older people with frailty diagnoses formed a distinct group and had higher non-elective hospital use (33·6 bed-days over 2 years compared with 23·0 bed-days for the group with the next highest number of bed-days). In the national validation cohort (n=1 013 590), compared with the 429 762 (42·4%) patients with the lowest risk scores, the 202 718 (20·0%) patients with the highest Hospital Frailty Risk Scores had increased odds of 30-day mortality (odds ratio 1·71, 95% CI 1·68–1·75), long hospital stay (6·03, 5·92–6·10), and 30-day readmission (1·48, 1·46–1·50). The c statistics (ie, model discrimination) between individuals for these three outcomes were 0·60, 0·68, and 0·56, respectively. The Hospital Frailty Risk Score showed fair overlap with dichotomised Fried and Rockwood scales (kappa scores 0·22, 95% CI 0·15–0·30 and 0·30, 0·22–0·38, respectively) and moderate agreement with the Rockwood Frailty Index (Pearson's correlation coefficient 0·41, 95% CI 0·38–0·47).

Interpretation The Hospital Frailty Risk Score provides hospitals and health systems with a low-cost, systematic way to screen for frailty and identify a group of patients who are at greater risk of adverse outcomes and for whom a frailty-attuned approach might be useful.

Funding National Institute for Health Research.

Introduction

Older people (conventionally aged at least 65 years according to WHO) are major users of acute hospital care in developed countries,[1,2] and increasingly in the developing world.[3] In England, a fifth of hospital admissions in 2014–15 were among people aged 75 years and older, accounting for around 40% of all days spent in hospital.[4] For some older people, hospital admission is associated with an increased risk of harm over and above the presenting clinical condition.[5] Several attempts have been made to identify people at high risk of poor outcomes, many focusing on frailty.[5,6] Frailty describes a decline in function across several organ systems, linked to ageing, but progressing at different rates in different people; it is characterised by increased risk of poor outcomes in individuals exposed to an apparently innocuous stressor.[7]

Since frailty is potentially a determinant of the way care resources are used, the assessment of frailty should also inform processes of planning service provision and resource allocation, but there are major barriers to identification of frail older people. First, although many tools are available to measure frailty, commonly used measures show only moderate overlap in their identification of frailty[8] and there is substantial variability in which tool is chosen and when it is used.[9] Second, most tools are too complicated for use in acute care settings, and even shorter tools such as the Clinical Frailty Scale[10] and Identification of Seniors at Risk[11] tool require some form of manual assessment process, which can be time consuming and subject to inter-operator error. Finally, when frailty tools are used, they are applied for only a subset of patients, with most older people in hospital not having their frailty assessed at all.

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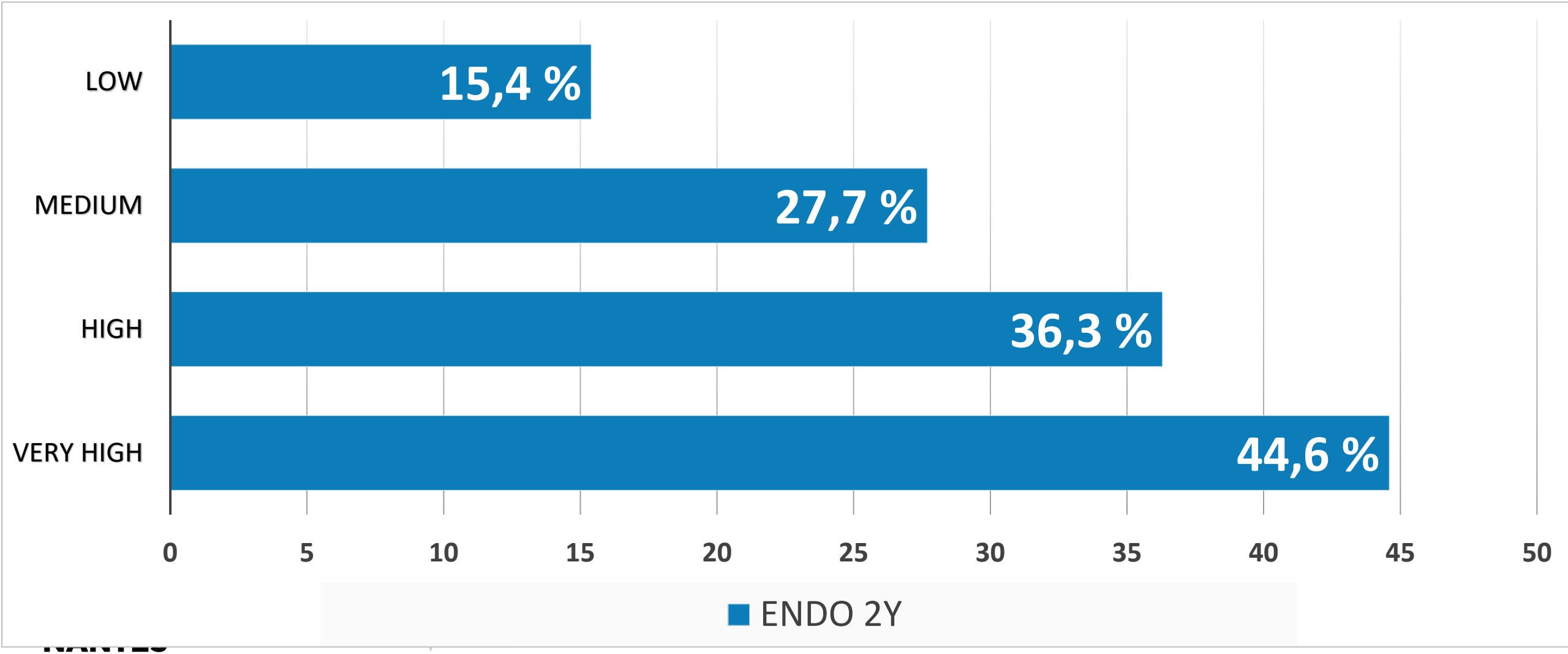
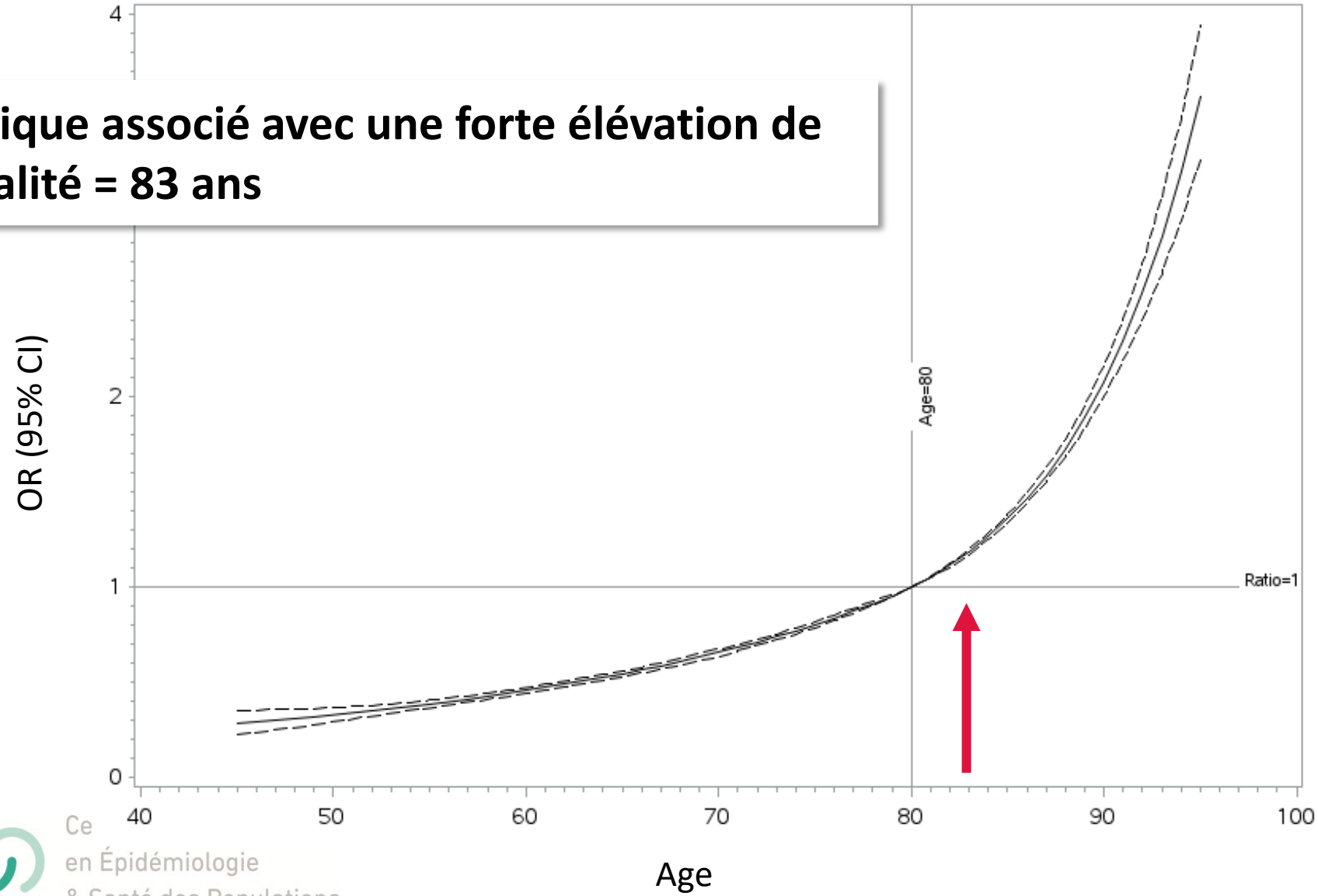
AAA (n=15 929) : ajustement sur la fragilité / mortalité à 2 ans



AAA (n=15 929) : ajustement sur la fragilité / mortalité à 2 ans

Age critique associé avec une forte élévation de la mortalité = 83 ans



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DISCUSSION

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vascularnews
Keeping you connected with the vascular world

Are we overtreating aortic aneurysms in the elderly?

26th September 2024 1891

DISCUSSION

EVAR programmé

	Meta analyse N=315000	Notre étude N=27563
Mortalité J30		
- <80	1.1%	1.2%
- >80	2.3%	2.2 – 5.6 %
Mortalité à 2 ans		
- <80		13.6%
- >80	22.8%	17.1 – 35.7%
Mortalité à 5 ans		
- <80		32.8%
- >80	51.1%	42.2-70.9%

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Review

JOURNAL OF ENDOVASCULAR THERAPY

Journal of Endovascular Therapy
1–14

DOI: 10.1177/15266028241283669
www.jevt.org
Sage

The Safety and Outcomes of Elective Endovascular Aneurysm Repair in the Elderly: A Systemic Review and Meta-Analysis

Sebastian Vaughan-Burleigh, BMBCh, MRCS[1],
Ya Yuan Rachel Leung, MB, ChB[1], Faaraz Khan, MB, ChB[1],
Patrick Lintott, MD, FRCS[1], and Dominic P. J. Howard, DPhil, FRCS[1,2]

Abstract

Purpose: Prevalence of abdominal aortic aneurysms (AAAs) increases with age. Previous trials confirm that elective endovascular aneurysm repair (EVAR) is an effective intervention for AAA. However, few elderly patients were recruited into randomized trials, whereas in contemporary clinical practice, elective repair is commonly performed on octogenarians. We evaluated the safety and outcome of elective EVAR in elderly patients to inform clinical practice and vascular service provision.

Methods: A systematic review and meta-analysis of studies reporting risk of complications and death in patients undergoing elective EVAR was performed (PROSPERO CRD: 42022308423). Observational studies and interventional arms of randomized trials were included if the outcome rates or raw data were provided. Primary outcome was 30-day mortality. Secondary outcomes were longer-term mortality, 30-day major adverse events, and aneurysm-related mortality. Primary and secondary outcomes were compared between octogenarians and non-octogenarians. Exclusion criteria were emergency procedures, non-infrarenal aneurysms, and lack of octogenarian data.

Results: A total of 41 studies were eligible from 10099 citations, including 10 national and 5 international registries, 26 retrospective studies, and our own prospective cohort. The analysis included 208 997 non-octogenarians (mean age=70.19 [SD=0.62]) and 106 188 octogenarians (mean age=83.75 [SD=0.35]). The 30-day mortality post-elective EVAR was higher in octogenarians (1.08% in non-octogenarians, 2.31% in octogenarians, odds ratio [OR]=2.27 [2.08-2.47], p<0.0001). Linear regression demonstrated a 0.83% increase in 30-day mortality for every 10-year age increase above 60 years old. Mortality for octogenarians increased significantly during follow-up: 11.35% (OR=1.87 [1.65-2.13], p<0.001), 22.80% (OR=1.89 [1.52-2.35], p<0.001), 32.00% (OR=1.98 [1.66-2.37], p<0.001), 47.53%, and 51.08% (OR=2.40 [1.90-3.03], p<0.001) at 1-through-5-year follow-up, respectively. The 30-day major adverse events after elective EVAR were higher in octogenarians (OR=1.75-2.83, p<0.001).

Conclusions: Octogenarians experience higher but acceptable peri-operative morbidity and mortality compared with younger patients. However, 3-year to 5-year survival is very low among octogenarians. Our findings challenge the notion of routine intervention in elderly patients and support very careful selection for elective EVAR. Many octogenarians with peri-threshold (<6 cm) AAAs may derive no benefit from EVAR due to limited 3-year to 5-year overall survival and low risk of aneurysm rupture with conservative management. An adjusted threshold for intervention in octogenarians may be warranted.

Clinical Impact

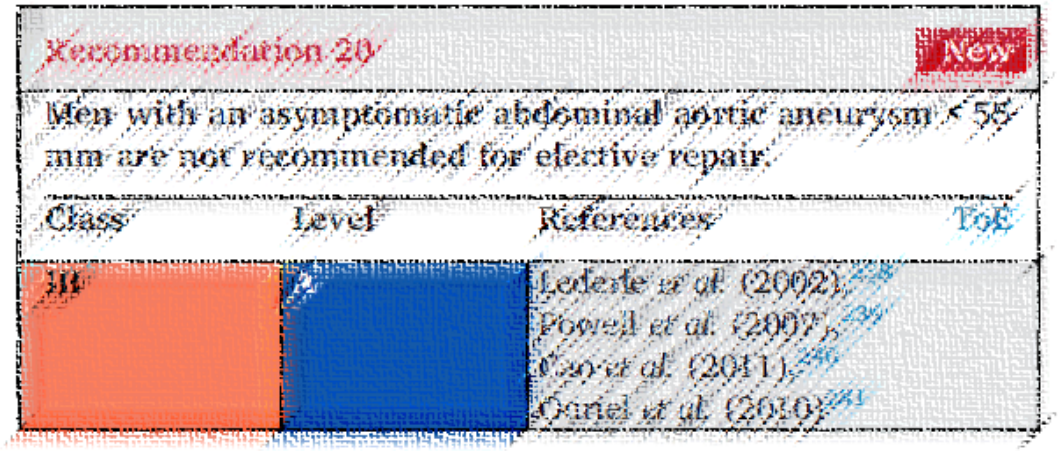
Octogenarians with infra-renal AAA are increasingly managed with elective EVAR. Previous studies have demonstrated that EVAR is safer than open repair for octogenarians, with lower peri-operative mortality and major adverse events. However, randomised trials, on which much of contemporary evidence is based, recruited a relatively younger population of participants. This systematic review and meta-analysis provides a contemporary synthesis of the literature comparing outcomes in octogenarians to younger patients. The results of this analysis, together with low rupture rates amongst octogenarians in existing literature, question the benefit of routine elective intervention for peri-threshold aneurysms and an adjusted threshold for intervention in octogenarians may be warranted.

Keywords

abdominal aortic aneurysm, endovascular aneurysm repair, EVAR, elective, octogenarians, mortality, post-operative complications, systematic review, meta-analysis

Conclusion

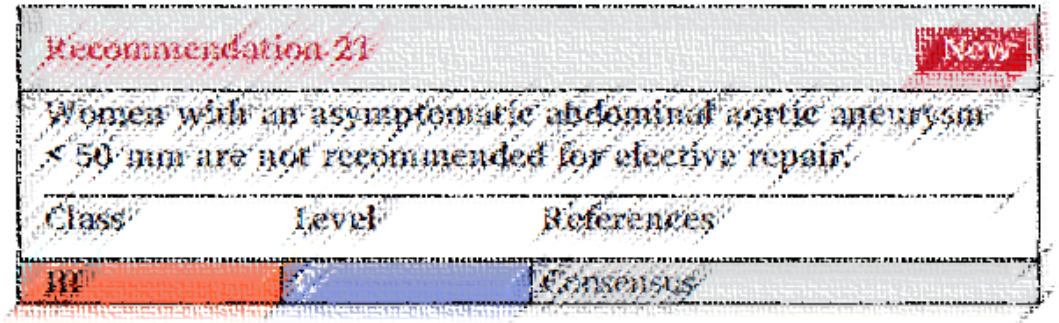
Probablement, au-delà du diamètre de l'anévrysme, il semble nécessaire d'intégrer non seulement l'âge mais aussi la fragilité du patient évaluée par un score de routine



Recommendation 20 — New

Men with an asymptomatic abdominal aortic aneurysm < 55 mm are not recommended for elective repair.

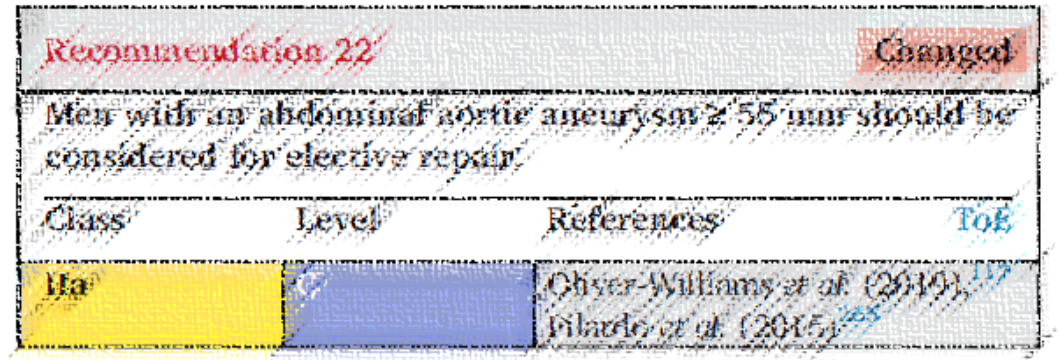
Class	Level	References	ToE
III	B	Lederle et al. (2002), Powell et al. (2007), Cao et al. (2011), Oariel et al. (2010)	



Recommendation 21 — New

Women with an asymptomatic abdominal aortic aneurysm < 50 mm are not recommended for elective repair.

Class	Level	References
III	C	Consensus



Recommendation 22 — Changed

Men with an abdominal aortic aneurysm ≥ 55 mm should be considered for elective repair.

Class	Level	References	ToE
IIa	B	Oliver-Williams et al. (2010), Filardo et al. (2015)	

l'institut du thorax

Merci

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