Quoi de neuf en gériatrie ?

Pathologies cardio-vasculaires

Pr Olivier Hanon

Hôpital broca, Paris

Conflits d'intérêt

Professeur Olivier Hanon

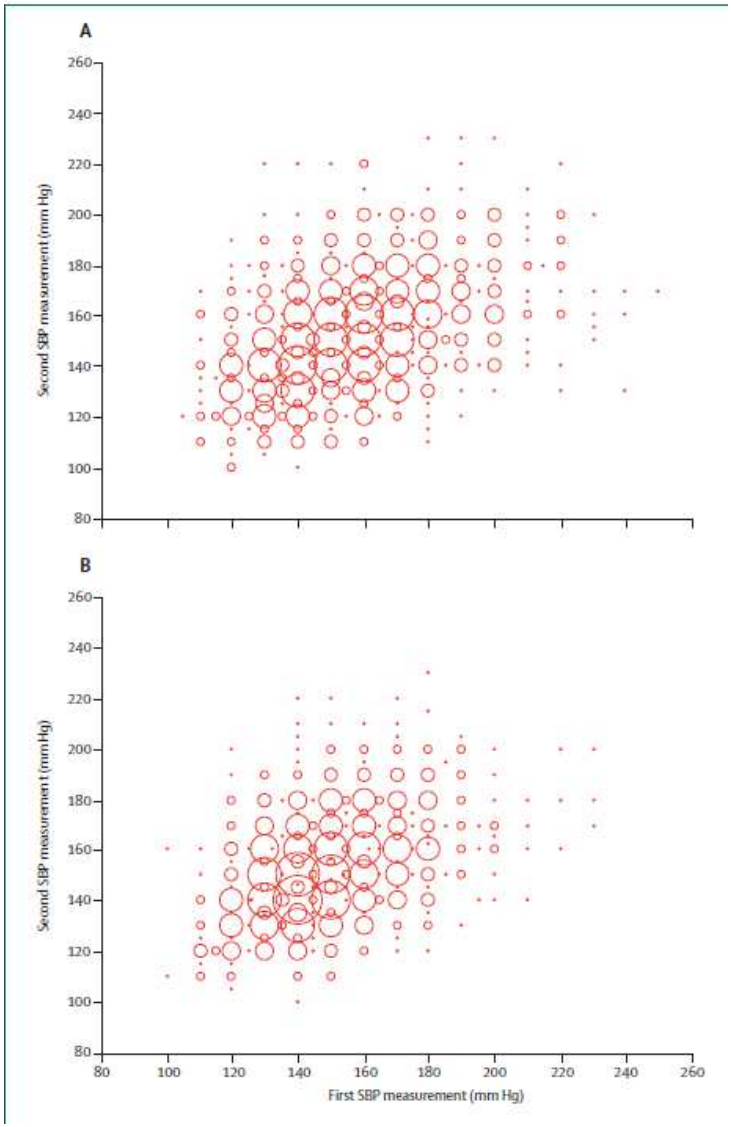
	Conferences	Etudes cliniques	Conseils
Jansen	X		
Eisai	X		
Lunbeck	X		
Novartis	X	X	X
Boehringer-Ingelheim	X		X
Ménarini	X	X	
Pfizer	X		X
Bayer	X		X
Astra-Zeneca	X		X
Sanofi-Aventis	X	X	X
BMS	X		X
Servier	X	X	X
Solvay, Abott	X	X	X
Exonhit	X	X	X

Hypertension artérielle

La variabilité tensionnelle +++

Prognostic significance of visit-to-visit variability, maximum systolic blood pressure, and episodic hypertension

Peter M Rothwell, Sally C Howard, Eamon Dolan, Eoin O'Brien, Joanna E Dobson, Bjorn Dahlöf, Peter S Sever, Neil R Poulter



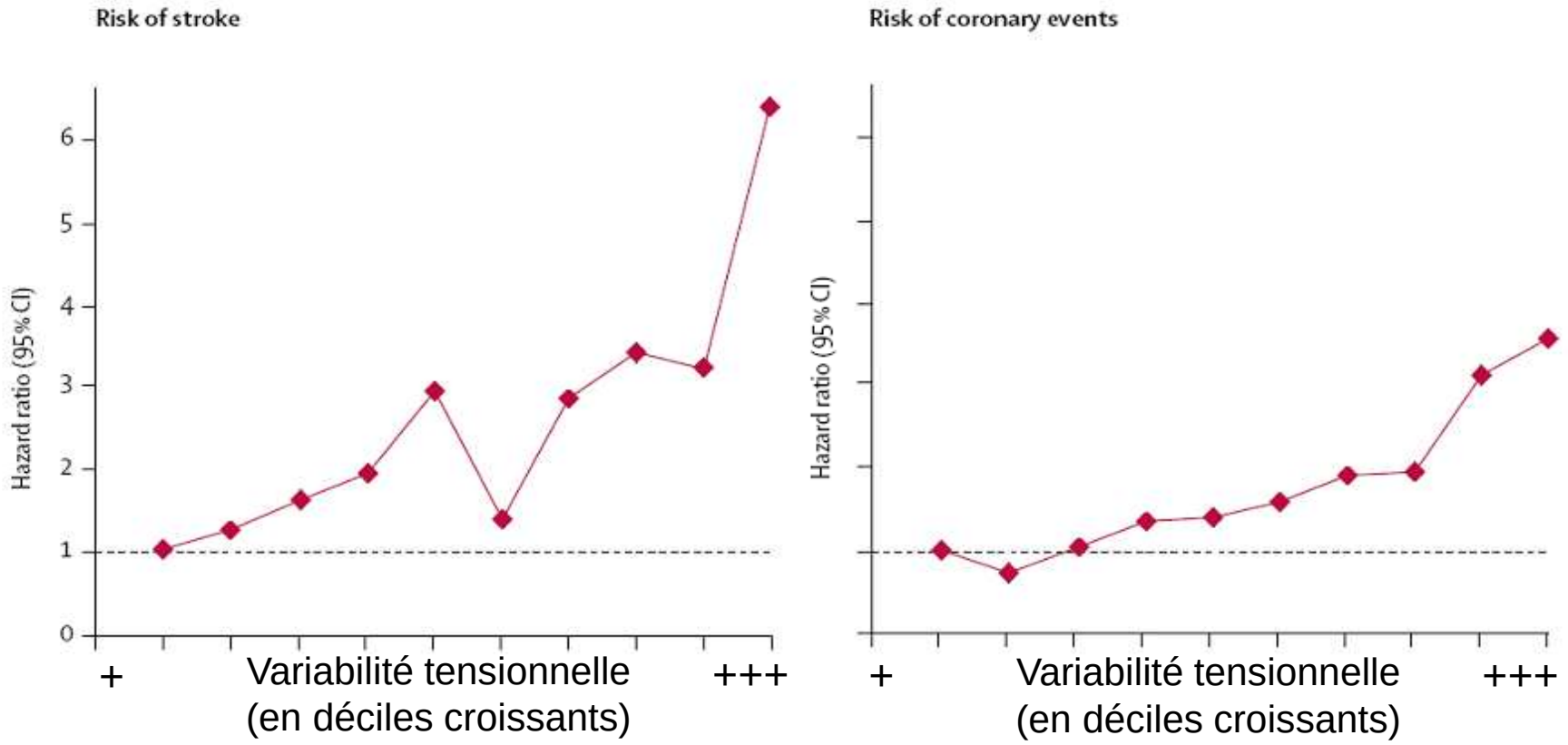
4 études
UK-TIA=2 435
ESPS1=2 500
Dutch TIA n=3 150
ASCOT-BPLA trial n=18 530

Variabilité tensionnelle entre les consultations

=> Coefficient de variation

Lancet 2010; 375: 895–905

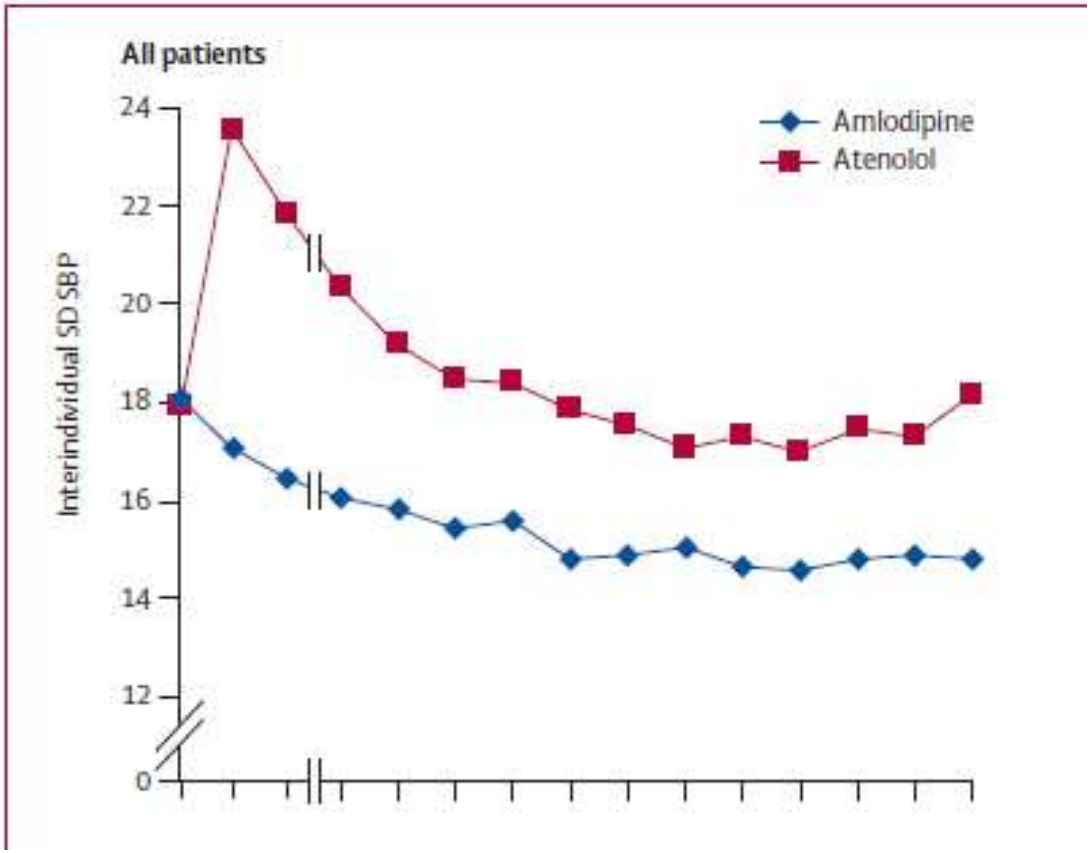
La variabilité tensionnelle intervisite est un facteur prédictif majeur des AVC et des événements coronaires



Lancet 2010; 375: 895–905

Effects of β blockers and calcium-channel blockers on within-individual variability in blood pressure and risk of stroke

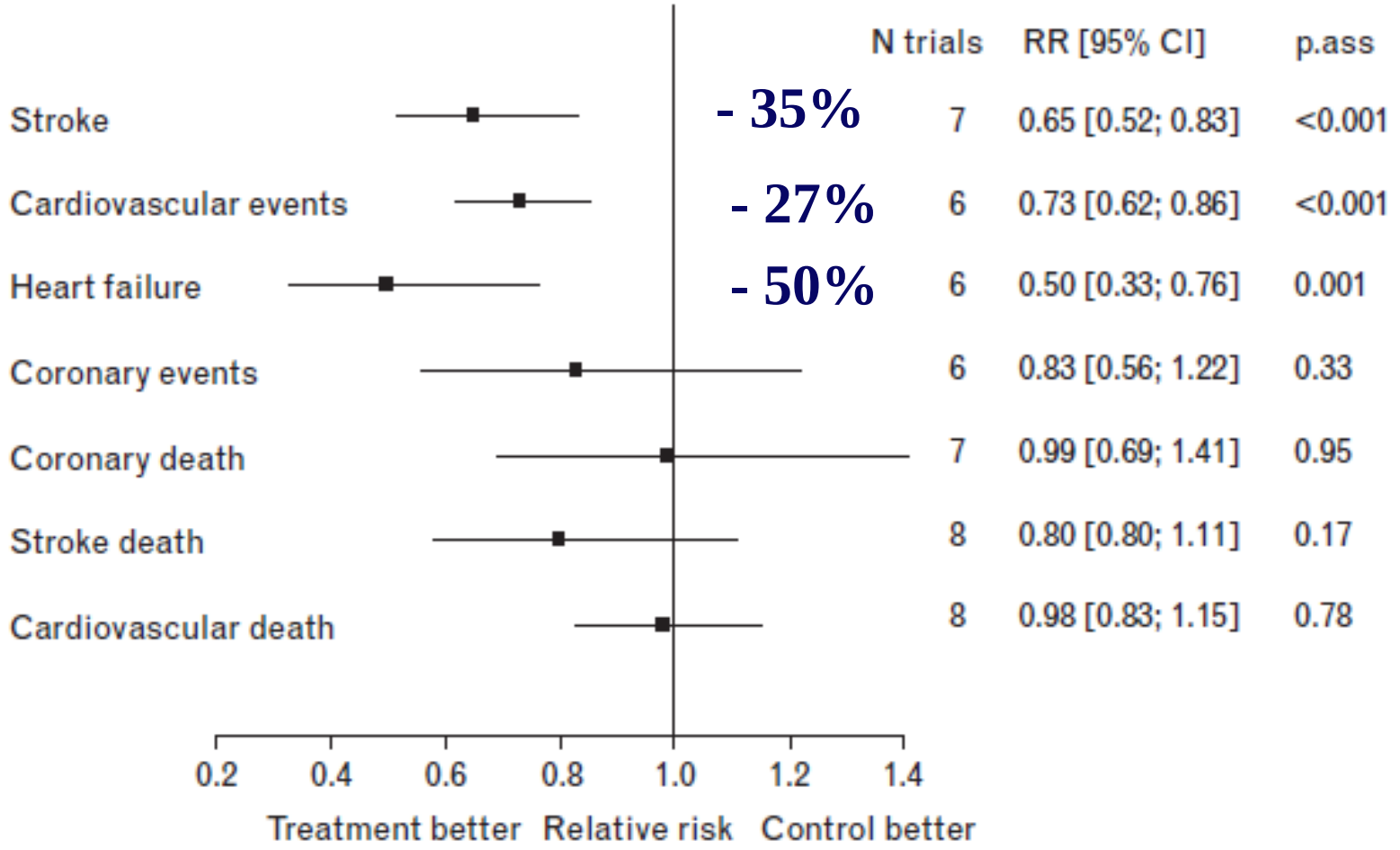
Lancet March 12, 2010



Intérêt du traitement de l'HTA après 80 ans ?

Treatment of hypertension in patients 80 years and older: the lower the better? A meta-analysis of randomized controlled trials

N= 6701 patients



Journal of Hypertension 2010, 28:1366–1372

Risk of falls associated with antihypertensive medication: population-based case–control study

UK, 9682 chuteurs vs 52 100 contrôles, population générale, 2003-2006

Exposure	Cases *n* = 9,682	Controls *n* = 52,100	Odds ratio (95% confidence intervals) Unadjusted	Odds ratio (95% confidence intervals) Adjusted for CHD, Charlson and other antihypertensives
Thiazide				
Never prescribed	8,817 (91%)	49,066 (94%)	1.00	1.00
Ever prescribed	865 (9%)	3,034 (6%)	1.48 (1.37–1.61)	1.25 (1.15–1.36)
Previously prescribed	228 (2%)	851 (2%)	1.41 (1.22–1.65)	1.19 (1.02–1.39)
Recently prescribed	43 (0%)	161 (0%)	1.42 (1.01–1.99)	1.16 (0.82–1.64)
Currently prescribed	594 (6%)	2,022 (4%)	1.52 (1.38–1.68)	1.28 (1.16–1.42)
Beta blocker				
Never prescribed	6,246 (65%)	34,562 (66%)	1.00	1.00
Ever prescribed	3,436 (35%)	17,538 (34%)	1.10 (1.05–1.16)	0.95 (0.90–1.00)
Previously prescribed	1,463 (15%)	7,003 (13%)	1.18 (1.10–1.25)	1.00 (0.94–1.07)
Recently prescribed	193 (2%)	944 (2%)	1.15 (0.98–1.35)	1.01 (0.86–1.19)
Currently prescribed	1,780 (18%)	9,591 (18%)	1.05 (0.99–1.11)	0.90 (0.85–0.96)
ACE inhibitor				
Never prescribed	6,437 (66%)	37,468 (72%)	1.00	1.00
Ever prescribed	3,245 (34%)	14,632 (28%)	1.30 (1.24–1.36)	1.09 (1.04–1.16)
Previously prescribed	1,096 (11%)	4,841 (9%)	1.32 (1.23–1.42)	1.15 (1.05–1.25)
Recently prescribed	169 (2%)	740 (1%)	1.32 (1.11–1.56)	1.09 (0.92–1.30)
Currently prescribed	1,980 (20%)	9,051 (17%)	1.28 (1.21–1.36)	1.07 (1.01–1.14)
Angiotensin-II receptor antagonist				
Never prescribed	8,770 (91%)	47,624 (91%)	1.00	1.00
Ever prescribed	912 (9%)	4,476 (9%)	1.12 (1.04–1.21)	0.95 (0.87–1.03)
Previously prescribed	184 (2%)	915 (2%)	1.09 (0.92–1.28)	0.89 (0.75–1.05)
Recently prescribed	62 (1%)	275 (1%)	1.26 (0.95–1.67)	1.11 (0.83–1.47)
Currently prescribed	666 (7%)	3,286 (6%)	1.12 (1.02–1.22)	0.95 (0.87–1.04)
Calcium channel blocker				
Never prescribed	6,517 (67%)	36,992 (71%)	1.00	1.00
Ever prescribed	3,165 (33%)	15,108 (29%)	1.19 (1.14–1.25)	1.01 (0.96–1.07)
Previously prescribed	1,234 (13%)	5,456 (10%)	1.28 (1.19–1.37)	1.07 (0.99–1.15)
Recently prescribed	173 (2%)	834 (2%)	1.18 (1.00–1.40)	0.99 (0.84–1.18)
Currently prescribed	1,758 (18%)	8,818 (17%)	1.14 (1.07–1.21)	0.98 (0.92–1.04)
Antidepressant				
Never prescribed	6,021 (62%)	38,490 (74%)	1.00	1.00
Ever prescribed	3,661 (38%)	13,610 (26%)	1.78 (1.70–1.87)	1.67 (1.59–1.75)
Previously prescribed	1,864 (19%)	8,534 (16%)	1.45 (1.37–1.54)	1.36 (1.29–1.45)
Recently prescribed	187 (2%)	678 (1%)	1.82 (1.54–2.15)	1.69 (1.43–2.00)
Currently prescribed	1,610 (17%)	4,398 (8%)	2.40 (2.25–2.56)	2.23 (2.09–2.39)

Age and Ageing 2010; 39: 592–597

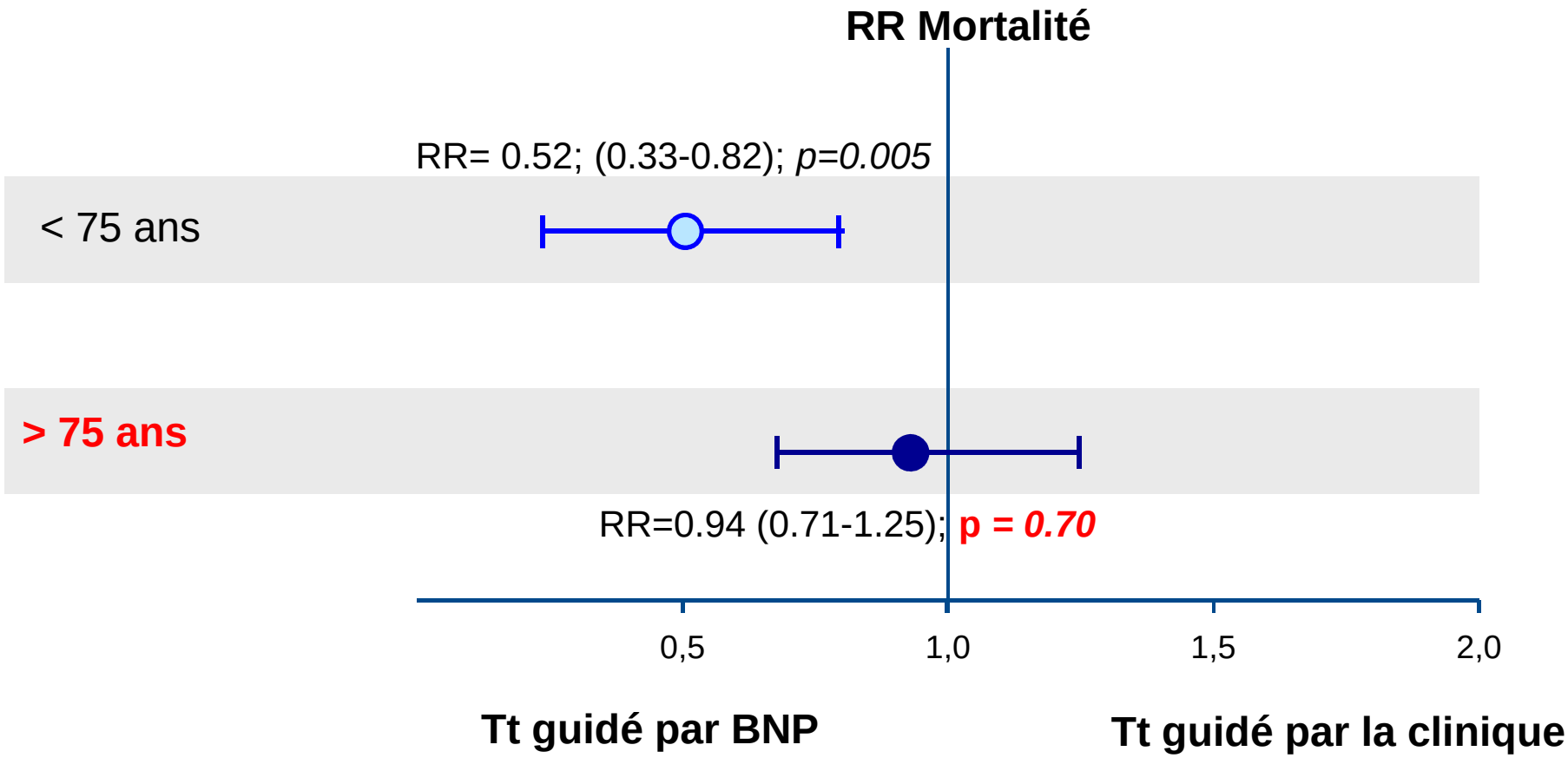
Intérêt du BNP chez le sujet âgé ?

BNP augmente avec l’âge
Moins spécificique

B-Type Natriuretic Peptide–Guided Heart Failure Therapy

A Meta-analysis

1726 patients, 8 essais randomisés
Traitement guidé par BNP vs par la clinique (sans BNP)



Arch Intern Med. 2010;170(6):507-514

Les anti-coagulants

Underuse of Oral Anticoagulants in Atrial Fibrillation: A Systematic Review

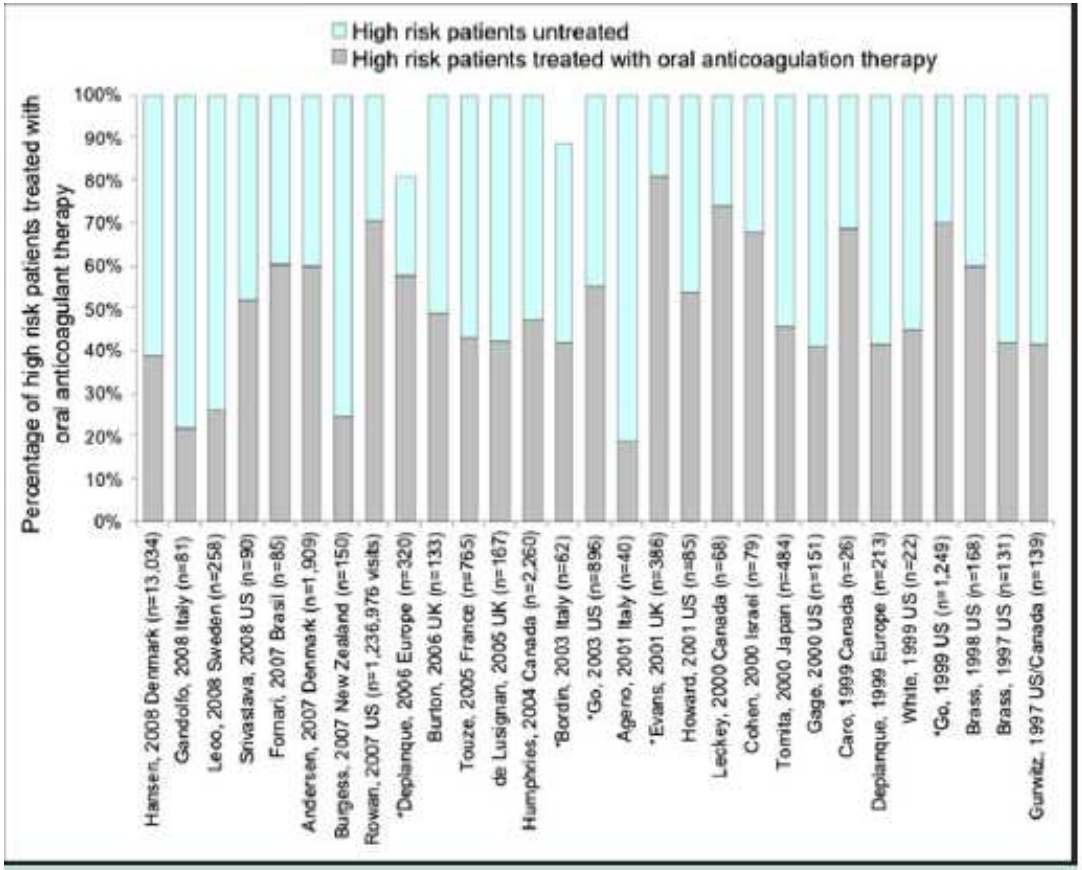


Figure 2 Patients with atrial fibrillation and prior stroke/transient ischemic attack: oral anticoagulation treatment levels as a proportion of patients eligible for oral anticoagulation therapy.
*Contraindications taken into account.

50% des patients éligibles aux AVK ne sont pas traités

The American Journal of Medicine (2010) 123, 638-645

Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

Critères d'inclusion

- Sujets âgés de 80 ans et plus se trouvant dans une structure gériatrique le 21 juin 2011(court séjour, SSR, SLD ou EHPAD).
- Recevant un traitement anti vitamine K (AVK) le 21 juin 2011ou ayant reçu un AVK les 7 jours précédants.

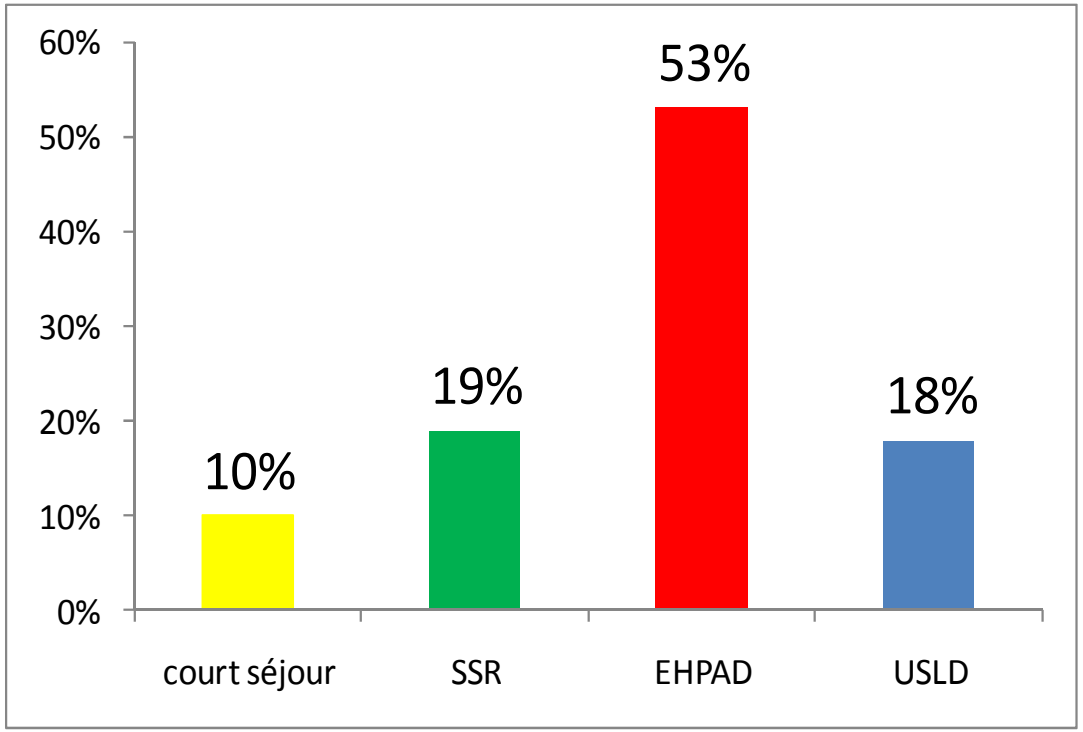
SFGG In press 2011

PRATIQUES ET USAGES EN GÉRIATRIE ET GÉRONTOLOGIE

Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

N=482 investigateurs, 22 542 patients

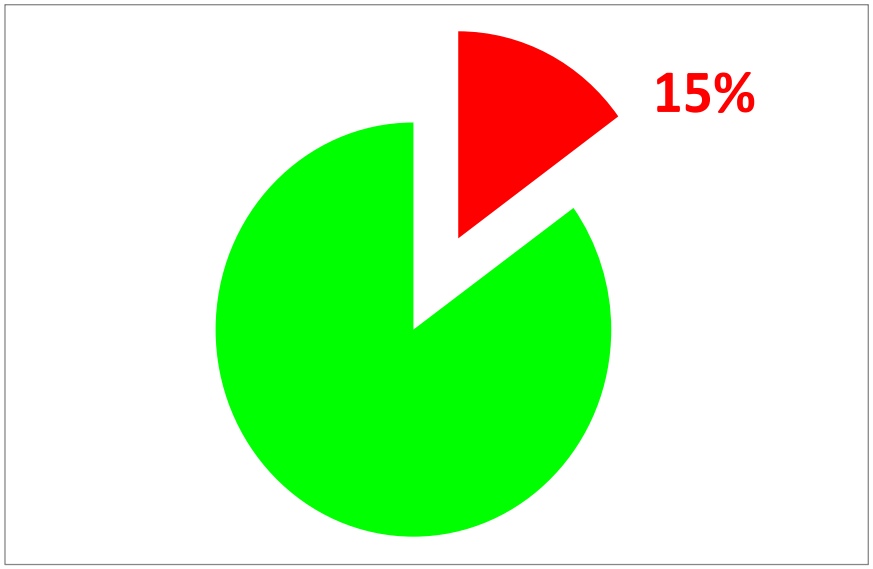


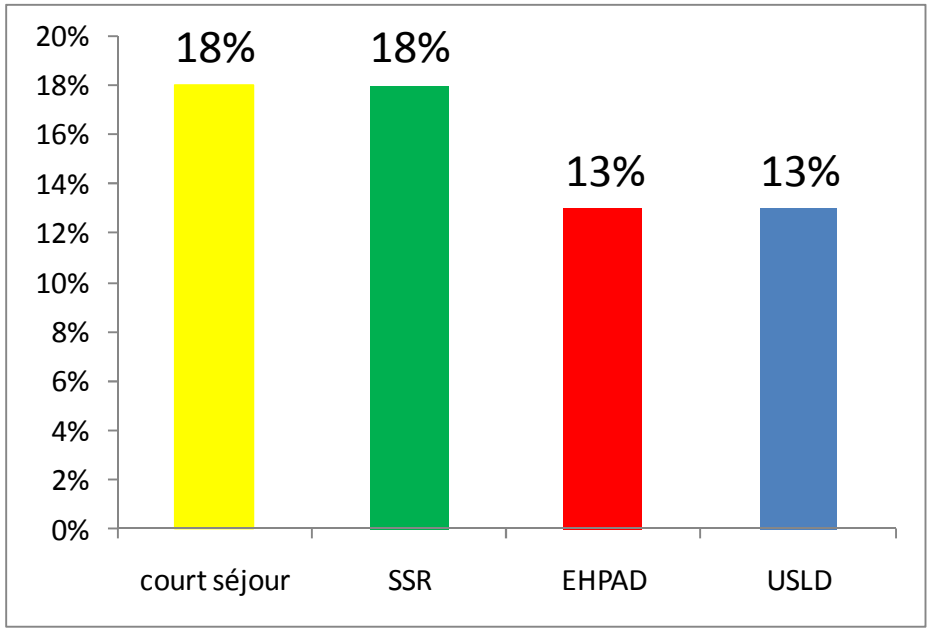
PRATIQUES ET USAGES EN GÉRIATRIE ET GÉRONTOLOGIE

Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

Prescription des AVK en gériatrie : prévalence 15% (3265 / 22 542)

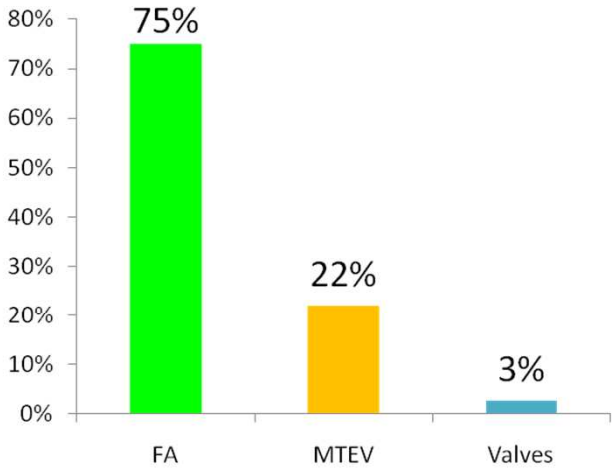


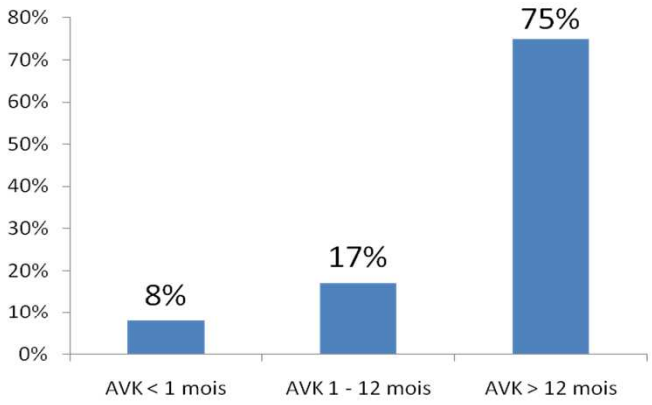


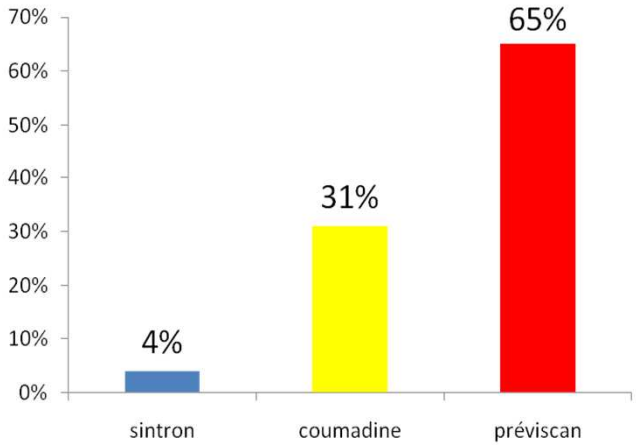
Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

n= 3 265 sujets, 86.8 ±5 ans, femmes 71%



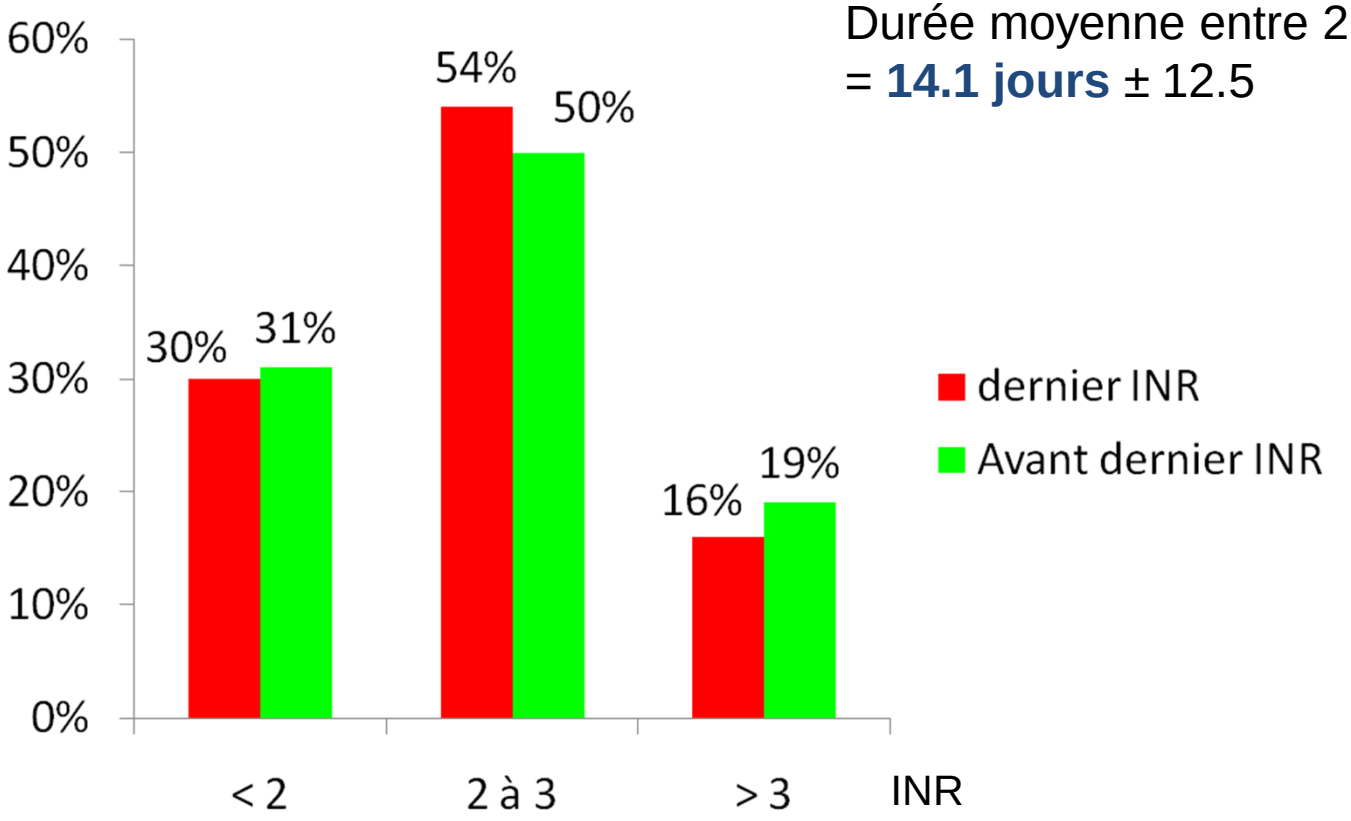




Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

Durée moyenne entre 2 dosages
= **14.1 jours** ± 12.5



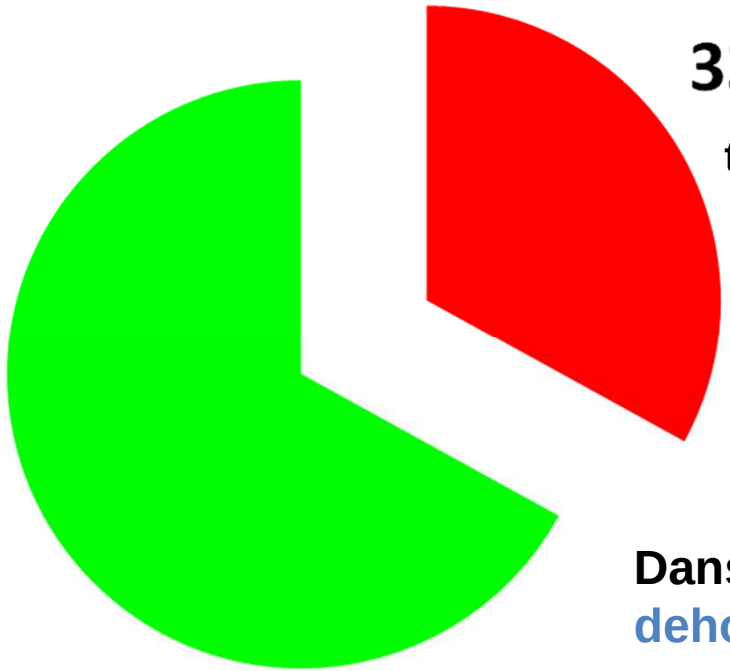
PRATIQUES ET USAGES EN GÉRIATRIE ET GÉRONTOLOGIE

Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

Temps dans la zone thérapeutique = 33%

Proportion des sujets bien équilibrés (INR entre 2 et 3) sur les 2 derniers dosages



33%

temps dans la zone thérapeutique

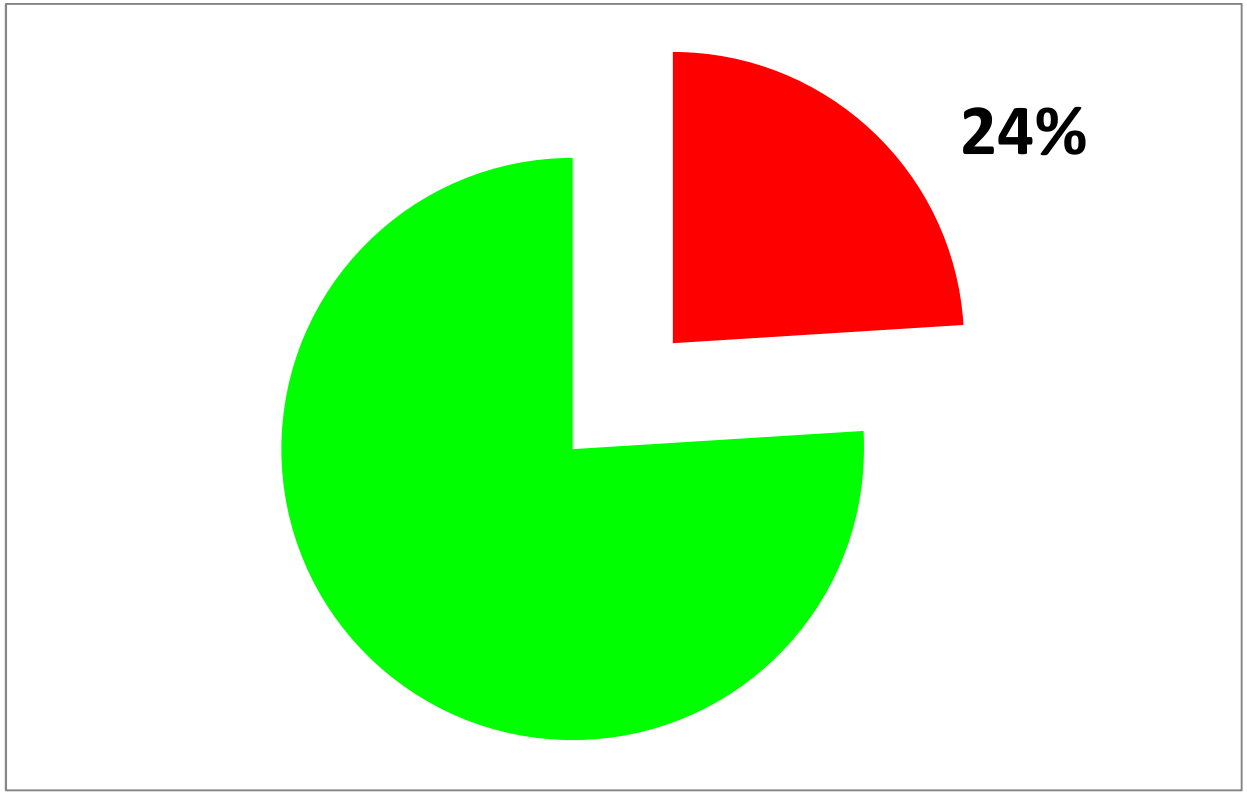
Dans 67% des cas l'INR est en dehors de la zone thérapeutique

PRATIQUES ET USAGES EN GÉRIATRIE ET GÉRONTOLOGIE

Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

INR > 4.5 pendant l'hospitalisation / hébergement = 24%

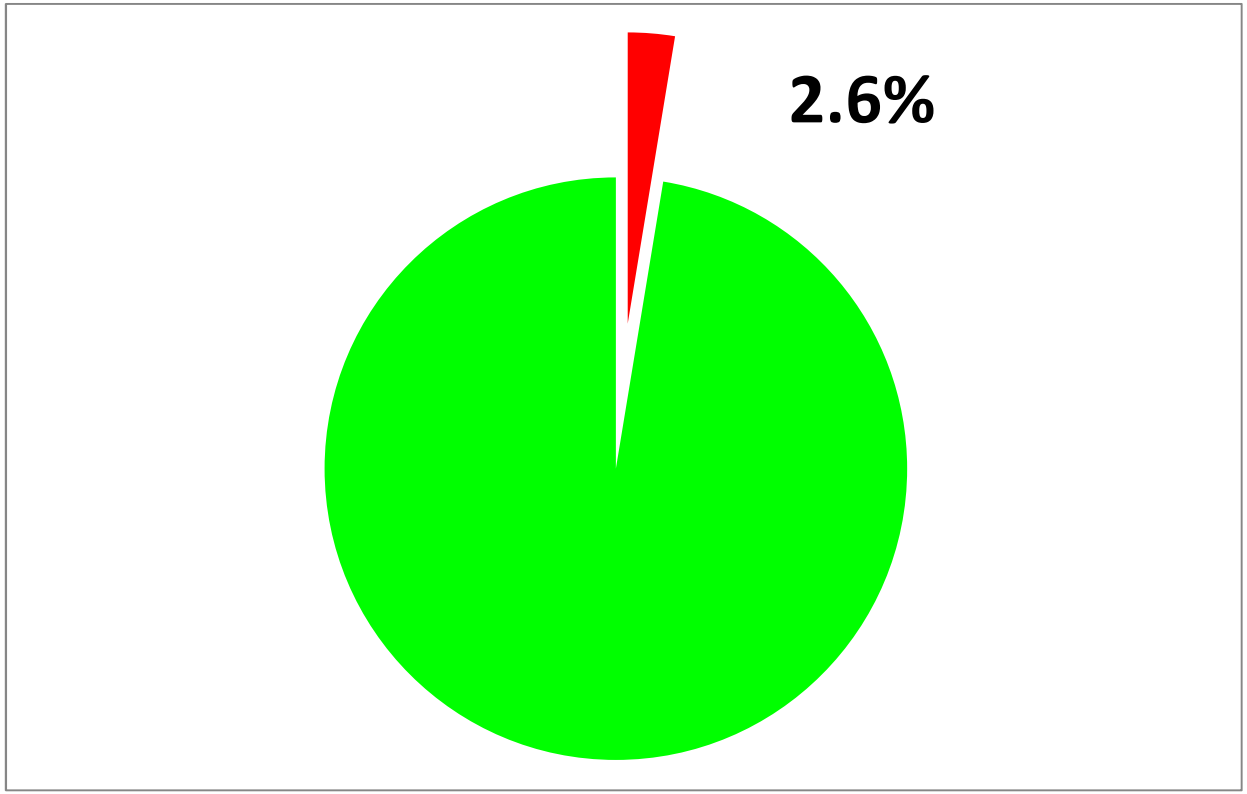


PRATIQUES ET USAGES EN GÉRIATRIE ET GÉRONTOLOGIE

Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

ATCD d'hémorragie grave = 2,6%



Des nouveaux anticoagulants ?

The NEW ENGLAND JOURNAL of MEDICINE

Dabigatran versus Warfarin in Patients with Atrial Fibrillation

NEJM Sept, 2009

ORIGINAL ARTICLE

Rivaroxaban versus Warfarin in Nonvalvular Atrial Fibrillation

NEJM August 10, 2011

ORIGINAL ARTICLE

Apixaban versus Warfarin in Patients with Atrial Fibrillation

NEJM August 28, 2011

Nouveaux anticoagulants

Plus simples ?
Plus efficaces ?
Plus de sécurité ?

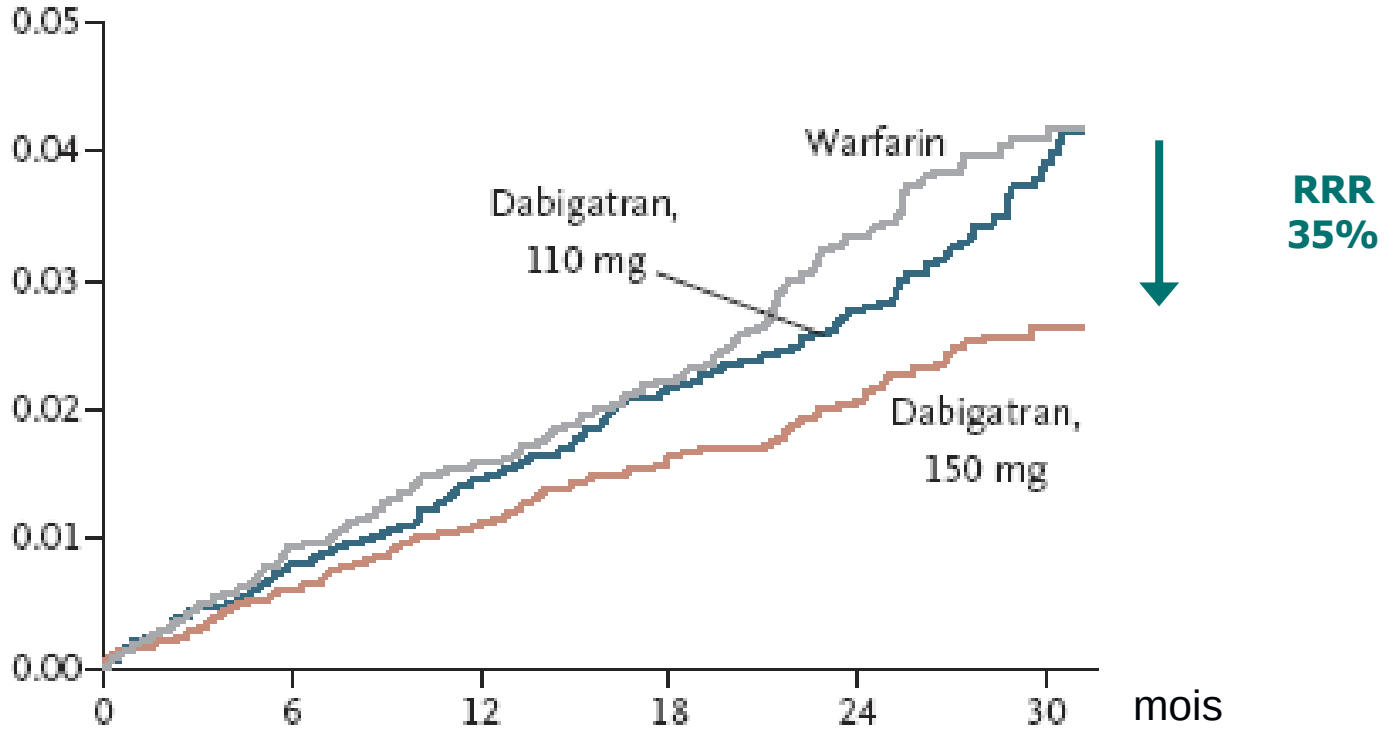
	RELY (dabigatran)	ARISTOTLE (apixaban)	ROCKET (rivaroxaban)
	Anti IIa	Anti Xa	Anti Xa
N=50 578	n=18 113	n=18 201	n=14 264
Age	71.5	70	73.1
> 75 ans (n=19 064)	40% (n=7 258)	31% (n=5 642)	43% (n=6 164)
CHADS2	2.1	2.0	3.46

Dabigatran versus Warfarin in Patients with Atrial Fibrillation

RELY
Essai randomisé en ouvert
n=18113
dont 7258 patients ≥75 ans (40%)

Anti II a, 150mgx2 ou 110mx2 ou warfarine

AVC / embols systémiques



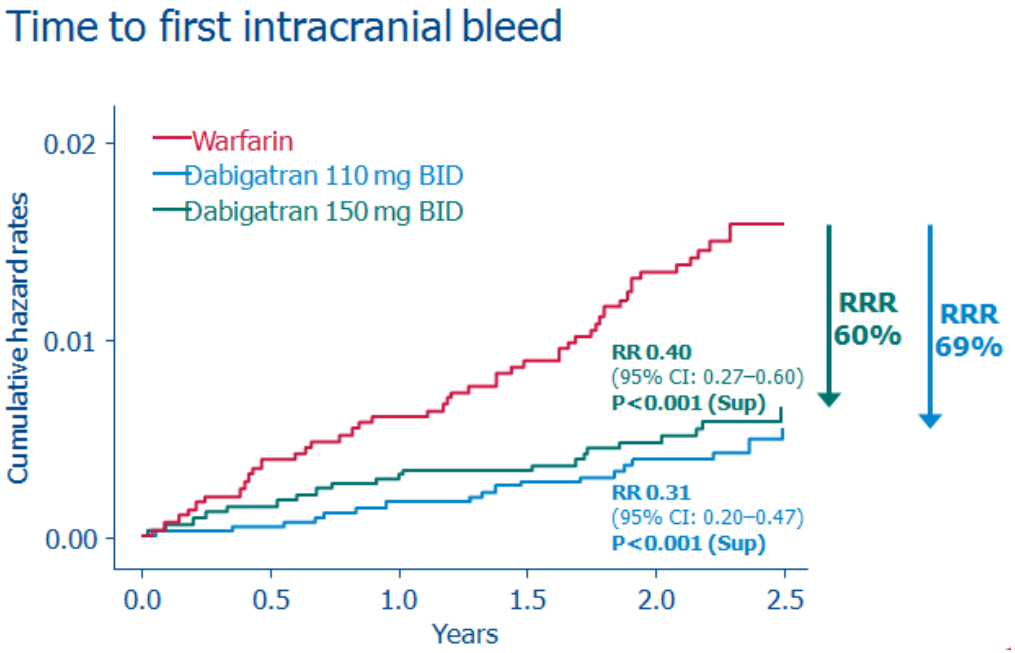
N Engl J Med 2009;361:1139-51.

Dabigatran versus Warfarin in Patients with Atrial Fibrillation

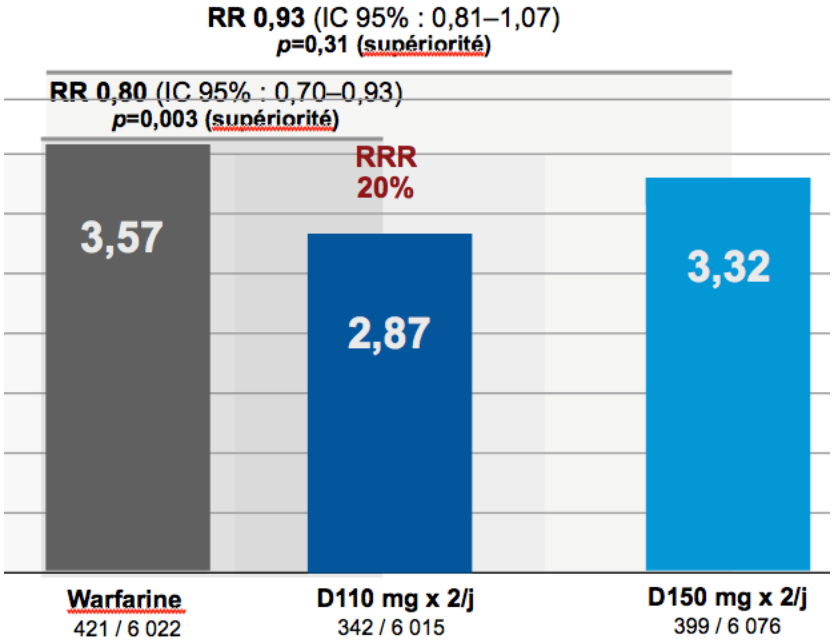
Anti II a, 150mgx2 ou 110mx2 ou warfarine

RELY,
n=18113
dont 7258 patients ≥75 ans (40%)

Hémorragies cérébrales



Hémorragies majeures



ORIGINAL ARTICLE

Rivaroxaban versus Warfarin in Nonvalvular Atrial Fibrillation

ROCKET
Anti Xa vs warfarine
Essai randomisé double aveugle

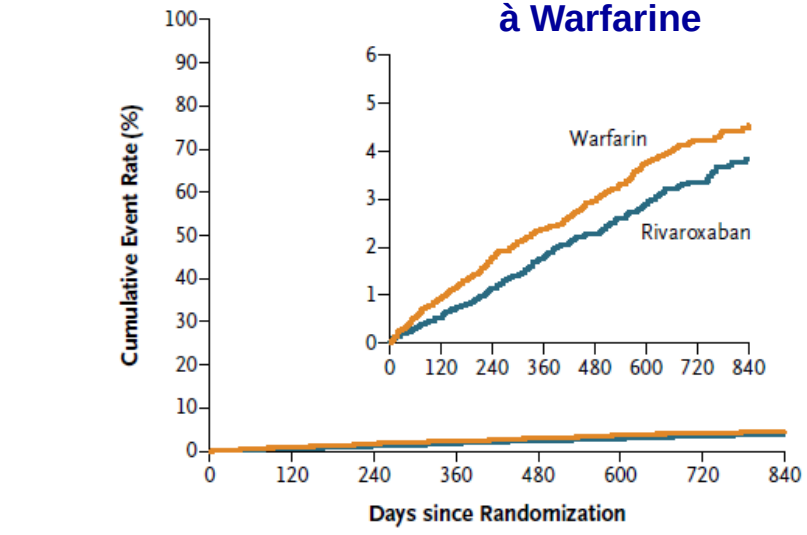
N Engl J Med August 10, 2011

n=14 264
dont 43% (n=6 164) > 75 ans

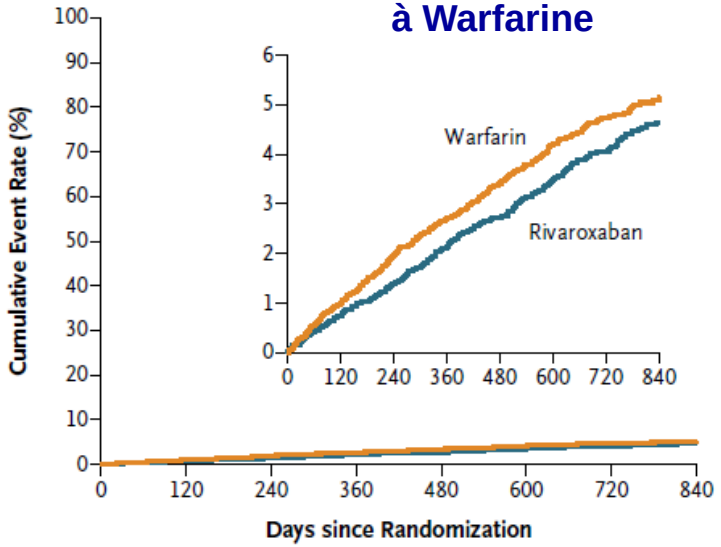
Une prise par jour

CHADS = 3.46

Rivaroxaban non inférieur à Warfarine



Rivaroxaban non supérieur à Warfarine



Study Population	Rivaroxaban			Warfarin			Hazard Ratio (95% CI)†	P Value	
	No. of Patients	No. of Events	Event Rate no./100 patient-yr	No. of Patients	No. of Events	Event Rate no./100 patient-yr		Noninferiority	Superiority
Per-protocol, as-treated population‡	6958	188	1.7	7004	241	2.2	0.79 (0.66–0.96)	<0.001	
Intention-to-treat population§	7081	269	2.1	7090	306	2.4	0.88 (0.75–1.03)	<0.001	0.12

Rivaroxaban versus Warfarin in Nonvalvular Atrial Fibrillation

N Engl J Med August 10, 2011

Table 3. Rates of Bleeding Events.*

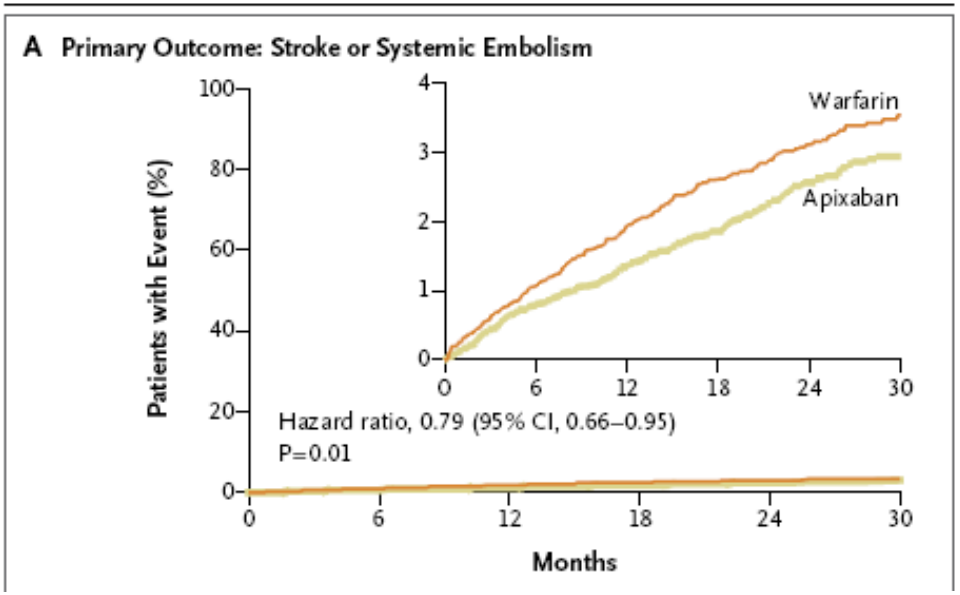
Variable	Rivaroxaban (N=7111)		Warfarin (N=7125)		Hazard Ratio (95% CI)†	P Value‡
	Events	Event Rate	Events	Event Rate		
	no. (%)	*no./100 patient-yr*	*no. (%)*	*no./100 patient-yr*		
Principal safety end point: major and nonmajor clinically relevant bleeding§	1475 (20.7)	14.9	1449 (20.3)	14.5	1.03 (0.96–1.11)	0.44
Major bleeding						
Any	395 (5.6)	3.6	386 (5.4)	3.4	1.04 (0.90–1.20)	0.58
Decrease in hemoglobin ≥2 g/dl	**305 (4.3)**	**2.8**	**254 (3.6)**	**2.3**	**1.22 (1.03–1.44)**	**0.02**
Transfusion	183 (2.6)	1.6	149 (2.1)	1.3	1.25 (1.01–1.55)	0.04
Critical bleeding¶	**91 (1.3)**	**0.8**	**133 (1.9)**	**1.2**	**0.69 (0.53–0.91)**	**0.007**
Fatal bleeding	27 (0.4)	0.2	55 (0.8)	0.5	0.50 (0.31–0.79)	0.003
Intracranial hemorrhage	**55 (0.8)**	**0.5**	**84 (1.2)**	**0.7**	**0.67 (0.47–0.93)**	**0.02**
Nonmajor clinically relevant bleeding	1185 (16.7)	11.8	1151 (16.2)	11.4	1.04 (0.96–1.13)	0.35

ORIGINAL ARTICLE

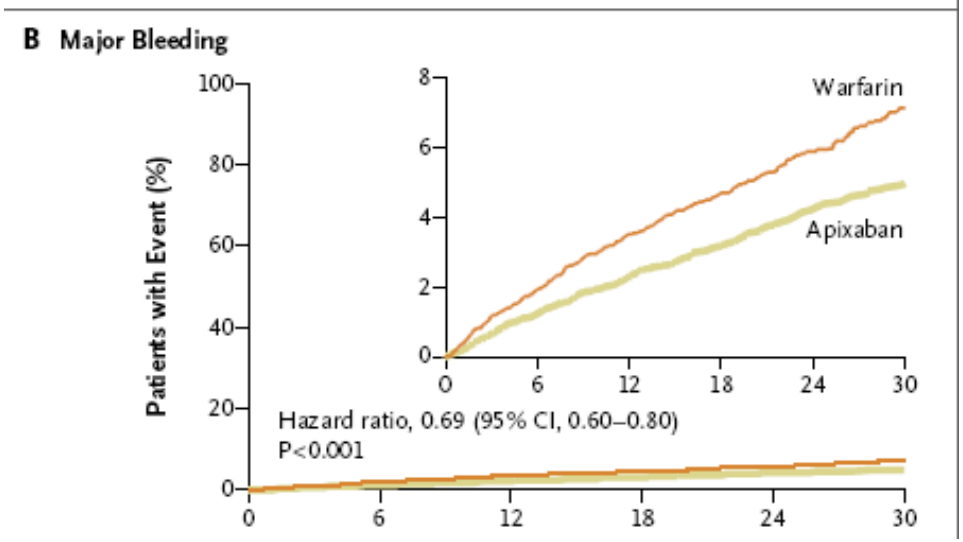
Apixaban versus Warfarin in Patients with Atrial Fibrillation

ARISTOTLE
Anti Xa vs warfarine
Essai randomisé double aveugle

n=18 201
dont 31% (n=5 642) > 75 ans



Réduction des AVC / embols de 21% (p=0.01)



Réduction des hémorragies majeures de 31% (p<0.001)

NEJM August 28, 2011

Apixaban versus Warfarin in Patients with Atrial Fibrillation

Réduction des hémorragies

Table 3. Bleeding Outcomes and Net Clinical Outcomes.*

Outcome	Apixaban Group (N=9088)		Warfarin Group (N=9052)		Hazard Ratio (95% CI)	P Value
	Patients with Event	Event Rate	Patients with Event	Event Rate		
	no.	*%/yr*	*no.*	*%/yr*		
Primary safety outcome: ISTH major bleeding†	327	2.13	462	3.09	0.69 (0.60–0.80)	<0.001
Intracranial	52	0.33	122	0.80	0.42 (0.30–0.58)	<0.001
Other location	275	1.79	340	2.27	0.79 (0.68–0.93)	0.004
Gastrointestinal	105	0.76	119	0.86	0.89 (0.70–1.15)	0.37
Major or clinically relevant nonmajor bleeding	613	4.07	877	6.01	0.68 (0.61–0.75)	<0.001
GUSTO severe bleeding	80	0.52	172	1.13	0.46 (0.35–0.60)	<0.001
GUSTO moderate or severe bleeding	199	1.29	328	2.18	0.60 (0.50–0.71)	<0.001
TIMI major bleeding	148	0.96	256	1.69	0.57 (0.46–0.70)	<0.001
TIMI major or minor bleeding	239	1.55	370	2.46	0.63 (0.54–0.75)	<0.001
Any bleeding	2356	18.1	3060	25.8	0.71 (0.68–0.75)	<0.001
Net clinical outcomes						
Stroke, systemic embolism, or major bleeding	521	3.17	666	4.11	0.77 (0.69–0.86)	<0.001
Stroke, systemic embolism, major bleeding, or death from any cause	1009	6.13	1168	7.20	0.85 (0.78–0.92)	<0.001

	Dabigatran 150	Dabigatran 110	Apixaban	Rivaroxaban
AVC/embolies	↓	=	↓	=
Hémorragies cérébrales	↓	↓	↓	↓
Hémorragies menaçant pronostic vital	↓	↓	↓	↓
Hémorragies majeures	=	↓	↓	=
Mortalité CV	↓	=	↓	=

Effet similaire si > 75 ans

Plus simples ? OUI

Plus efficaces ? OUI

Plus de sécurité ? OUI

Oui mais

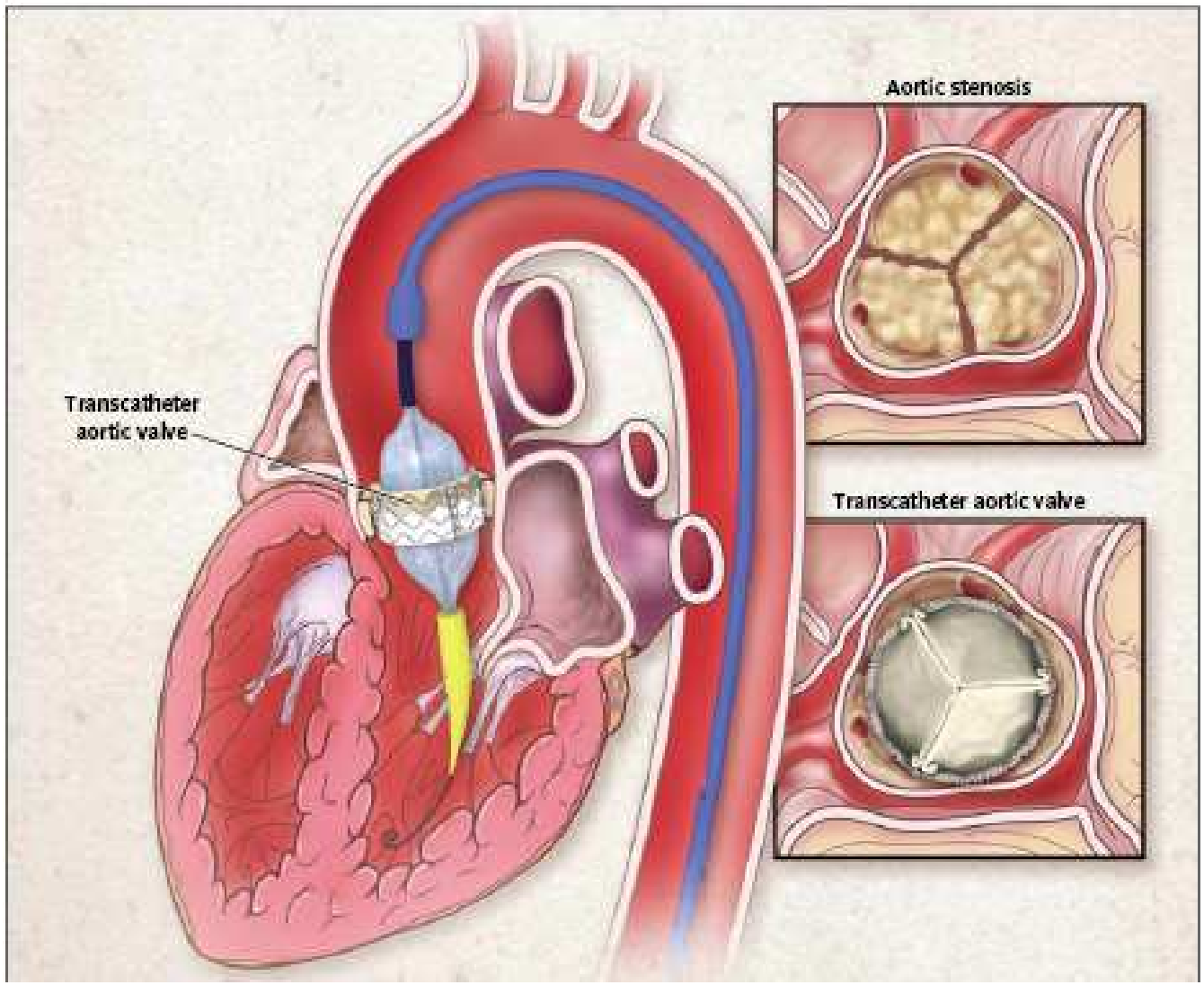
- **Ce sont des anticoagulants**
  - Attention au risque de banalisation lié à leur facilité d'emploi
- **Elimination rénale (CI si cl < 30 ml/min) +++**
- **L'observance doit être bonne**
- **Pas d'étude spécifique chez le patient âgé (> 80 ans) fragile**

Attention au mésusage +++

Les valvulopathies

TAVI

(Transcatheter Aortic-Valve Implantation)



Transcatheter Aortic-Valve Implantation for Aortic Stenosis in Patients Who Cannot Undergo Surgery

The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 OCTOBER 21, 2010 VOL. 363 NO. 17

Étude PARTNER

Table 1. Baseline Characteristics of the Patients and Echocardiographic Findings.*

Characteristic	TAVI (N=179)	Standard Therapy (N=179)	P Value
Age — yr	83.1±8.6	83.2±8.3	0.95
Male sex — no. (%)	82 (45.8)	84 (46.9)	0.92
STS score†	11.2±5.8	12.1±6.1	0.14
Logistic EuroSCORE‡	26.4±17.2	30.4±19.1	0.04
NYHA class — no. (%)			0.68
II	14 (7.8)	11 (6.1)	
III or IV	165 (92.2)	168 (93.9)	
Coronary artery disease — no. (%)	121 (67.6)	133 (74.3)	0.20
Previous myocardial infarction — no./total no. (%)	33/177 (18.6)	47/178 (26.4)	0.10
Previous intervention — no./total no. (%)			
CABG	58/155 (37.4)	73/160 (45.6)	0.17
PCI	47/154 (30.5)	39/157 (24.8)	0.31
Balloon aortic valvuloplasty	25/154 (16.2)	39/160 (24.4)	0.09
Cerebral vascular disease — no./total no. (%)	48/175 (27.4)	46/167 (27.5)	1.00
Peripheral vascular disease — no./total no. (%)	54/178 (30.3)	45/179 (25.1)	0.29
COPD — no. (%)			
Any	74 (41.3)	94 (52.5)	0.04
Oxygen-dependent	38 (21.2)	46 (25.7)	0.38
Creatinine >2 mg/dl (177 μmol/liter) — no./total no. (%)	10/178 (5.6)	17/178 (9.6)	0.23
Atrial fibrillation — no./total no. (%)	28/85 (32.9)	39/80 (48.8)	0.04
Permanent pacemaker — no./total no. (%)	35/153 (22.9)	31/159 (19.5)	0.49
Pulmonary hypertension — no./total no. (%)	50/118 (42.4)	53/121 (43.8)	0.90
Frailty — no./total no. (%)§	21/116 (18.1)	33/118 (28.0)	0.09
Extensively calcified aorta — no. (%)	34 (19.0)	20 (11.2)	0.05
Deleterious effects of chest-wall irradiation — no. (%)	16 (8.9)	15 (8.4)	1.00
Chest-wall deformity — no. (%)	15 (8.4)	9 (5.0)	0.29
Liver disease — no./total no. (%)	6/177 (3.4)	6/178 (3.4)	1.00
Echocardiographic findings			
Aortic-valve area — cm^2	0.6±0.2	0.6±0.2	0.97
Mean aortic-valve gradient — mm Hg	44.5±15.7	43.0±15.3	0.39
Mean LVEF — %	53.9±13.1	51.1±14.3	0.06
Moderate or severe mitral regurgitation — no./total no. (%)¶	38/171 (22.2)	38/165 (23.0)	0.90

N= 358 patients,
RAC non opérable,
83 ± 8 ans

TAVI ou traitement standard

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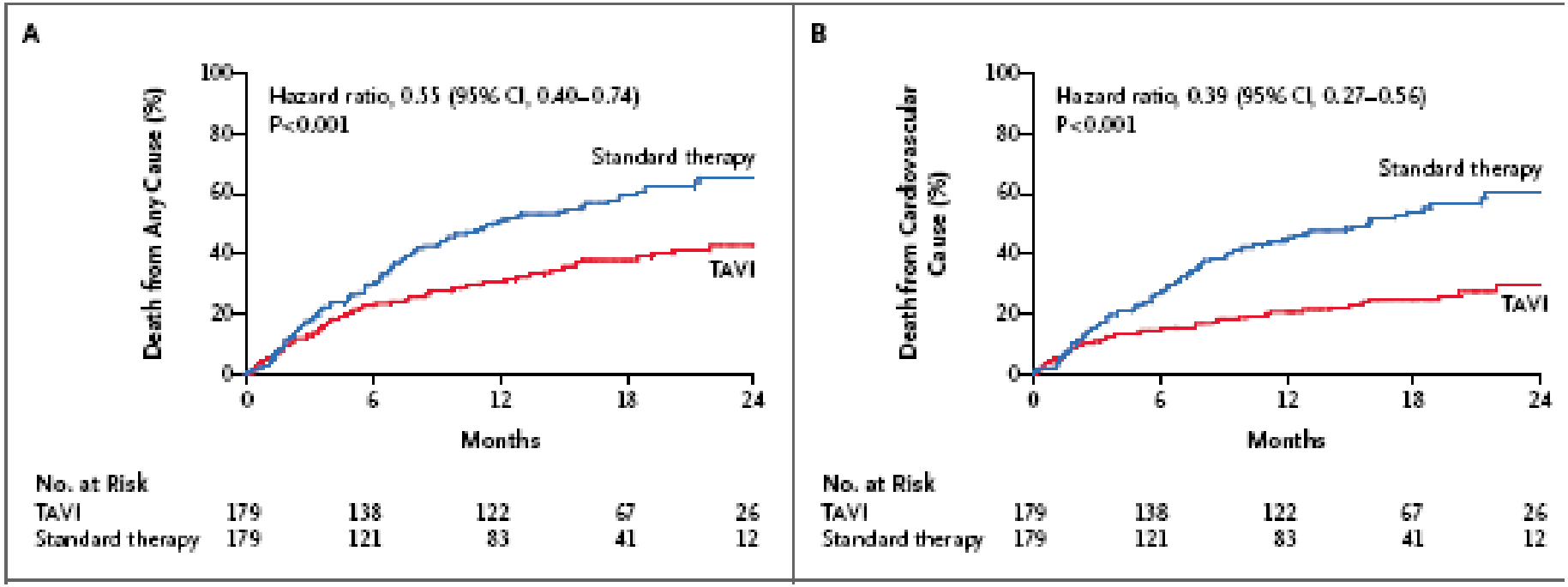
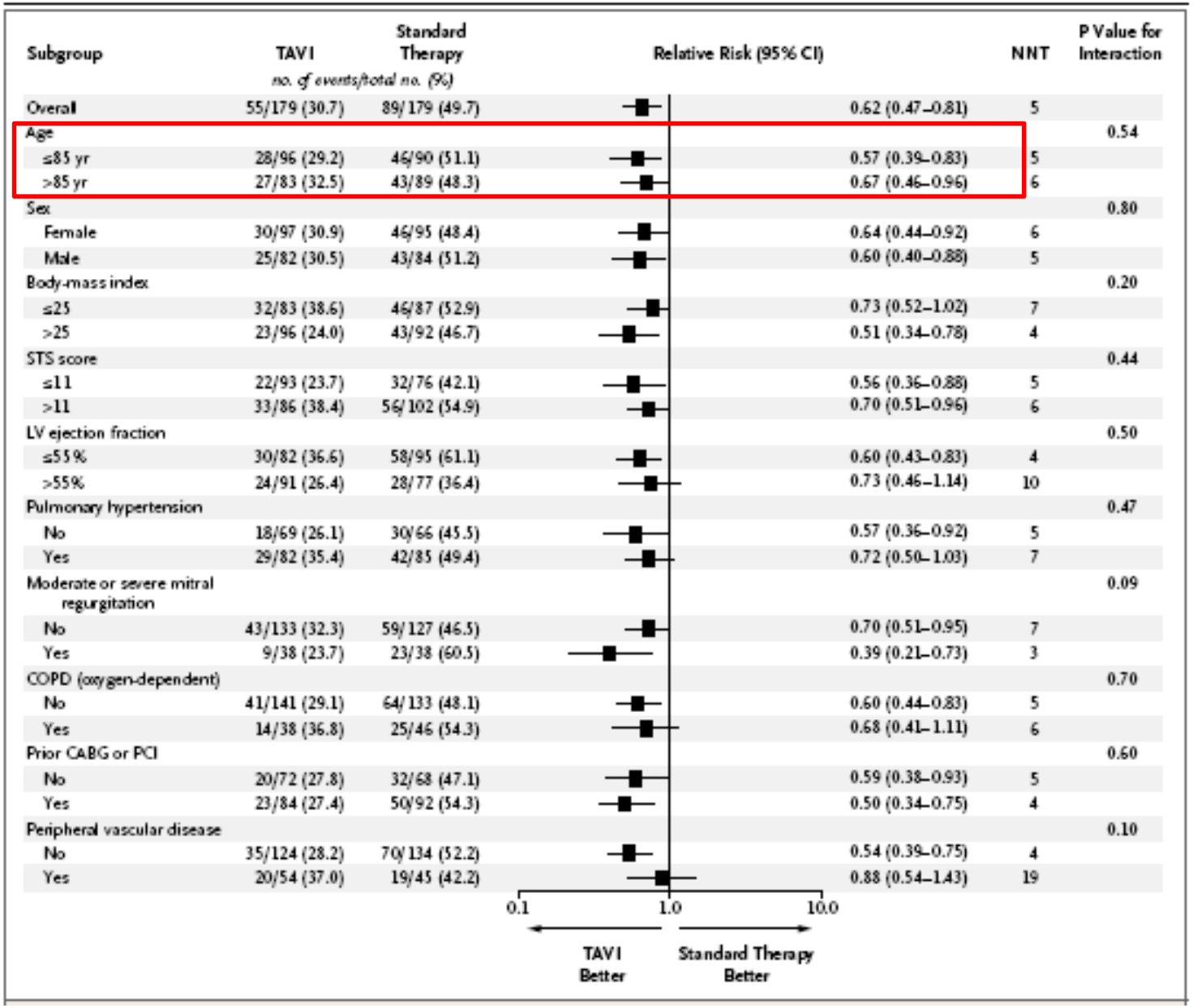


TAVI

Réduction mortalité de 45% (p<0.001)

TAVI

Réduction mortalité CV 61% (p<0.001)



TAVI à J30

↑ AIT/AVC

↑ Complications Vx

↑ saignements

Outcome	30 Days		
	TAVI (N=179)	Standard Therapy (N=179)	P Value†
	no. of patients (%)		
Death			
From any cause	9 (5.0)	5 (2.8)	0.41
From cardiovascular cause‡	8 (4.5)	3 (1.7)	0.22
Repeat hospitalization§	10 (5.6)	18 (10.1)	0.17
Death from any cause or repeat hospitalization§	19 (10.6)	22 (12.3)	0.74
Stroke or TIA			
All	12 (6.7)	3 (1.7)	0.03
TIA	0	0	—
Stroke			
Minor	3 (1.7)	1 (0.6)	0.62
Major	9 (5.0)	2 (1.1)	0.06
Death from any cause or major stroke	15 (8.4)	7 (3.9)	0.12
Myocardial infarction			
All	0	0	—
Periprocedural	0	0	—
Vascular complications			
All	55 (30.7)	9 (5.0)	<0.001
Major	29 (16.2)	2 (1.1)	<0.001
Acute kidney injury			
Creatinine >3 mg/dl (265 μmol/liter)¶	0	1 (0.6)	1.00
Renal-replacement therapy‖	2 (1.1)	3 (1.7)	1.00
Major bleeding	30 (16.8)	7 (3.9)	<0.001
Cardiac reintervention			
Balloon aortic valvuloplasty	1 (0.6)**	2 (1.1)	1.00
Repeat TAVI††	3 (1.7)	NA	—
Aortic-valve replacement	0	3 (1.7)	0.25
Endocarditis	0	0	—
New atrial fibrillation	1 (0.6)	2 (1.1)	1.00
New pacemaker	6 (3.4)	9 (5.0)	0.60

TAVI à J30

↑ AIT/AVC

↑ Complications Vx

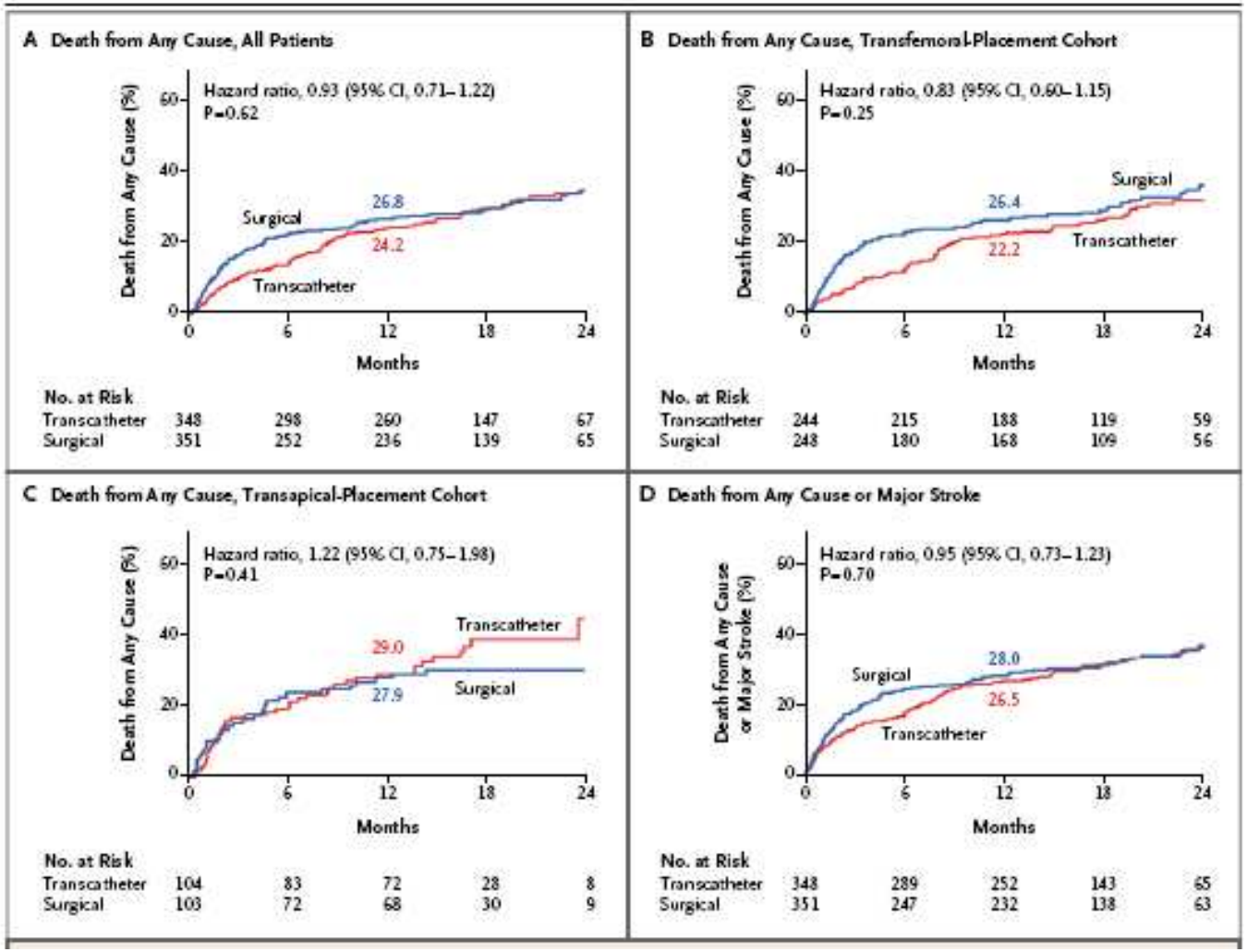
↑ saignements

Transcatheter versus Surgical Aortic-Valve Replacement in High-Risk Patients

The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 JUNE 9, 2011 VOL. 364 NO. 23

N= 699 patients, RAC sérré, 83 ± 7 ans

TAVI vs chirurgie

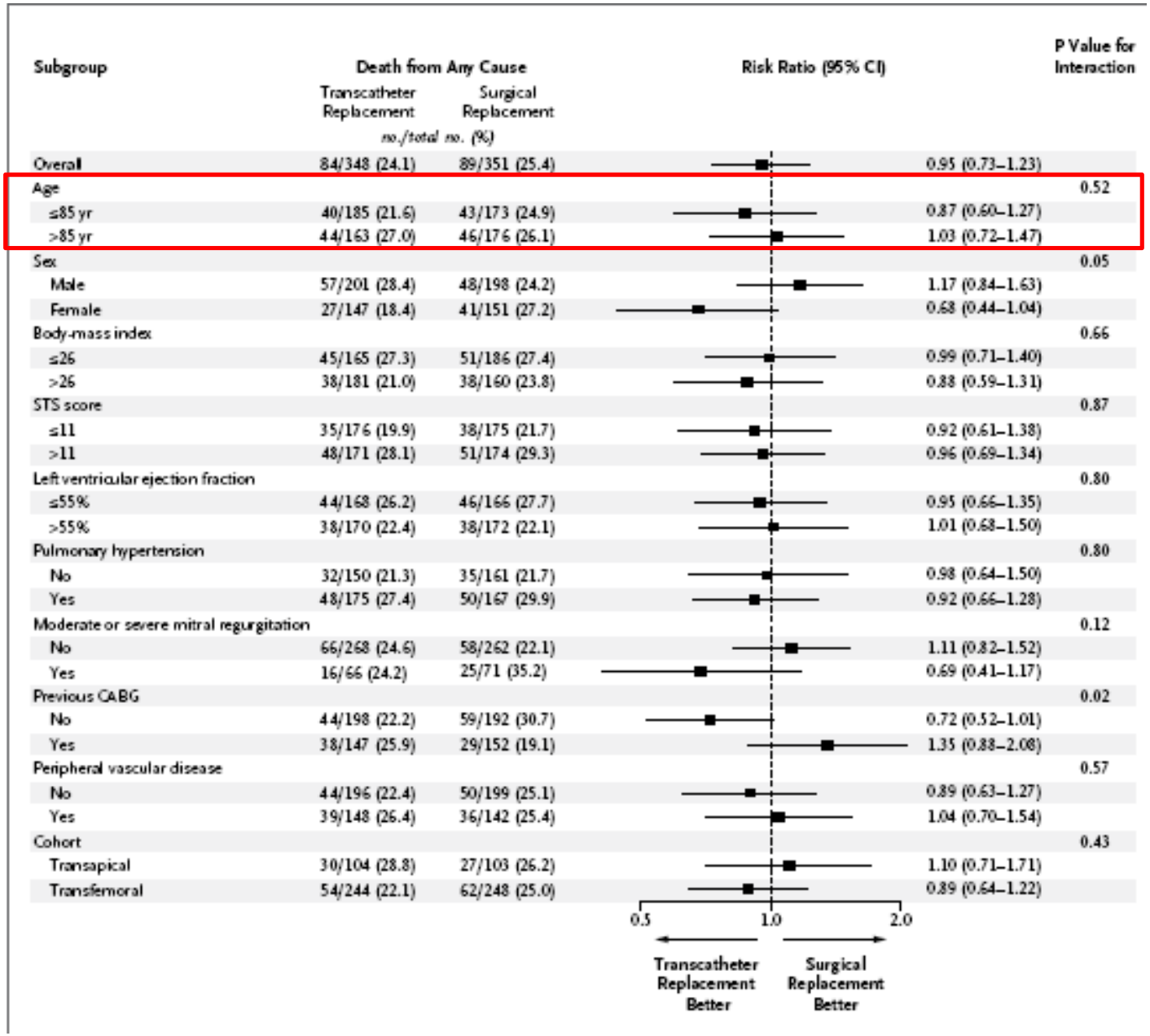


TAVI à J30

↑ complications Vx

TAVI à J30

↓ saignements


Subgroup
Death from Any Cause
Transcatheter Replacement
Surgical Replacement
no./total no. (%)
Risk Ratio (95% CI)
P Value for Interaction
Overall 84/348 (24.1) 89/351 (25.4) 0.95 (0.73–1.23)
Age 0.52
≤85 yr 40/185 (21.6) 43/173 (24.9) 0.87 (0.60–1.27)
>85 yr 44/163 (27.0) 46/176 (26.1) 1.03 (0.72–1.47)
Sex 0.05
Male 57/201 (28.4) 48/198 (24.2) 1.17 (0.84–1.63)
Female 27/147 (18.4) 41/151 (27.2) 0.68 (0.44–1.04)
Body-mass index 0.66
≤26 45/165 (27.3) 51/186 (27.4) 0.99 (0.71–1.40)
>26 38/181 (21.0) 38/160 (23.8) 0.88 (0.59–1.31)
STS score 0.87
≤11 35/176 (19.9) 38/175 (21.7) 0.92 (0.61–1.38)
>11 48/171 (28.1) 51/174 (29.3) 0.96 (0.69–1.34)
Left ventricular ejection fraction 0.80
≤55% 44/168 (26.2) 46/166 (27.7) 0.95 (0.66–1.35)
>55% 38/170 (22.4) 38/172 (22.1) 1.01 (0.68–1.50)
Pulmonary hypertension 0.80
No 32/150 (21.3) 35/161 (21.7) 0.98 (0.64–1.50)
Yes 48/175 (27.4) 50/167 (29.9) 0.92 (0.66–1.28)
Moderate or severe mitral regurgitation 0.12
No 66/268 (24.6) 58/262 (22.1) 1.11 (0.82–1.52)
Yes 16/66 (24.2) 25/71 (35.2) 0.69 (0.41–1.17)
Previous CABG 0.02
No 44/198 (22.2) 59/192 (30.7) 0.72 (0.52–1.01)
Yes 38/147 (25.9) 29/152 (19.1) 1.35 (0.88–2.08)
Peripheral vascular disease 0.57
No 44/196 (22.4) 50/199 (25.1) 0.89 (0.63–1.27)
Yes 39/148 (26.4) 36/142 (25.4) 1.04 (0.70–1.54)
Cohort 0.43
Transapical 30/104 (28.8) 27/103 (26.2) 1.10 (0.71–1.71)
Transfemoral 54/244 (22.1) 62/248 (25.0) 0.89 (0.64–1.22)
0.5
1.0
2.0
Transcatheter Replacement Better
Surgical Replacement Better

Outcome	30 Days		
	Transcatheter Replacement (N=348)	Surgical Replacement (N=351)	P Value
	no. of patients (%)		
Death			
From any cause	12 (3.4)	22 (6.5)	0.07
From cardiac causes	11 (3.2)	10 (3.0)	0.90
Repeat hospitalization	15 (4.4)	12 (3.7)	0.64
Death or repeat hospitalization	25 (7.2)	33 (9.7)	0.24
Stroke or transient ischemic attack			
Either	19 (5.5)	8 (2.4)	0.04
Transient ischemic attack	3 (0.9)	1 (0.3)	0.33
Stroke			
Minor	3 (0.9)	1 (0.3)	0.34
Major	13 (3.8)	7 (2.1)	0.20
Death from any cause or major stroke	24 (6.9)	28 (8.2)	0.52
Myocardial infarction	0	2 (0.6)	0.16
Vascular complication			
Any	59 (17.0)	13 (3.8)	<0.001
Major	38 (11.0)	11 (3.2)	<0.001
Acute kidney injury			
Creatinine >3 mg/dl (265 μmol/liter)	4 (1.2)	4 (1.2)	0.95
Renal-replacement therapy	10 (2.9)	10 (3.0)	0.95
Major bleeding	32 (9.3)	67 (19.5)	<0.001
Endocarditis	0	1 (0.3)	0.32
New-onset atrial fibrillation†	30 (8.6)	56 (16.0)	0.006
New pacemaker	13 (3.8)	12 (3.6)	0.89

TAVI à J30
↓ saignements
↓ FA
↓ mortalité (Ns)

TAVI à J30
↑ complications Vx

Pour finir : un peu de chocolat ?

Habitual Chocolate Intake and Vascular Disease: A Prospective Study of Clinical Outcomes in Older Women

≥ 1 portion / semaine

1216 femmes âgées, suivis 9.5 ans
(essai randomisé supplémentation calcique)

Table. Atherosclerotic Vascular Disease (ASVD) Hospitalization and Mortality Events Over 9.5 Years According to Frequency of Chocolate Consumption

Event	Chocolate, Servings/wk		*P* Value
	<1	≥1	
Total No. of women	579	637	
ASVD events			
Events per 1000 person-years	33.2	24.3	
Event, No. (%)	158 (27.3)	132 (20.7)	.01
Age-adjusted HR (95% CI)	1 [Reference]	0.74 (0.59-0.94)	.01
Multivariable-adjusted HR (95% CI)[a]	1 [Reference]	0.76 (0.60-0.97)	.03
Ischemic heart disease events			
Event, No. (%)	88 (15.2)	65 (10.2)	.01
Age-adjusted OR (95% CI)	1 [Reference]	0.65 (0.46-0.92)	.01
Multivariable-adjusted OR (95% CI)[a]	1 [Reference]	0.65 (0.46-0.94)	.02
Heart failure events			
Event, No. (%)	35 (6.0)	18 (2.8)	.01
Age-adjusted OR (95% CI)	1 [Reference]	0.46 (0.26-0.83)	.01
Multivariable-adjusted OR (95% CI)[a]	1 [Reference]	0.41 (0.22-0.76)	.01
Carotid ultrasonography	(n=516)	(n=574)	
Carotid atherosclerotic plaques			
Event, No. (%)	271 (52.5)	263 (45.8)	.03
Age-adjusted OR (95% CI)	1 [Reference]	0.77 (0.61-0.98)	.03
Multivariable-adjusted OR (95% CI)[a]	1 [Reference]	0.77 (0.60-0.98)	.04

Evts CV - 24%

IDM - 35%

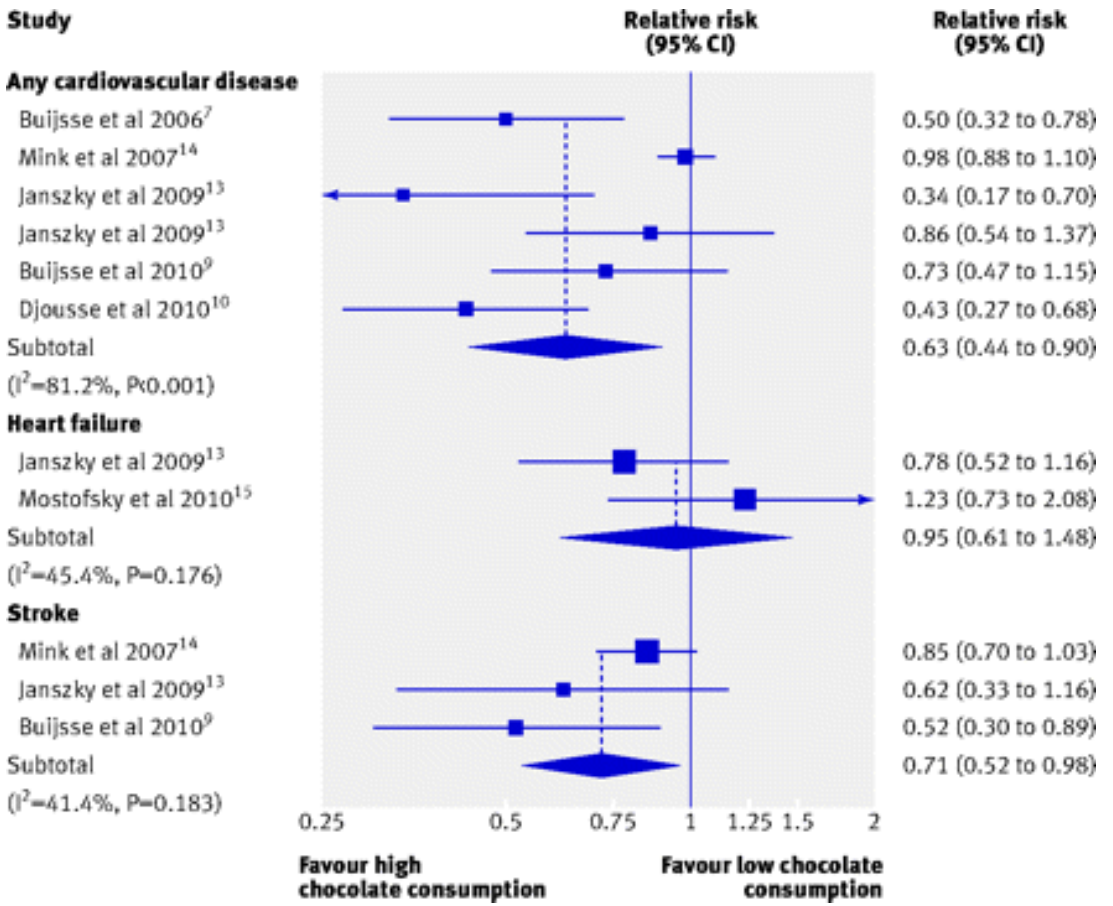
IC - 59%

Plaques carotides - 23%

ARCH INTERN MED 170 (NO. 21), NOV 8, 2010

Chocolate consumption and cardiometabolic disorders: systematic review and meta-analysis

7 études de cohorte, 114 000 participants



Pathologies CV - 37%

AVC - 29%

BMJ. 2011 Aug 26;343:d4488.

Discussion

- Effet protecteur : polyphénols ?
  - Baisse PA
  - Amélioration fonction endothéliale

- Mais :
  - Essais non randomisés (biais de sélection…)
  - Les fréquences et les quantités consommées sont répertoriées de façon très hétérogènes (> 1fois /semaines, , > 5fois /semaines, >2.5g/j, > 7g/j…)

  - Chocolat a aussi une forte valeur énergétique (environ 500 kcal/100 g)

PRATIQUES ET USAGES EN GÉRIATRIE ET GÉRONTOLOGIE

Société Française de Gériatrie et Gérontologie

Enquête nationale sur l'usage des anti vitamine K en Gériatrie après 80 ans

Encore merci pour votre participation aux PUGG

Et à l'année prochaine….