CARDIO RUN 2025
17ème CONGRÈS DE PATHOLOGIE CARDIO-VASCULAIRE
17-18-19 SEPTEMBRE 2025
Hôtel Saint Alexis ILE DE LA RÉUNION France

FA détectée par les prothèses implantées

Anticoagulation ou non ?

Philippe Mabo
Université de Rennes
17 septembre 2025

Mes relations avec l'industrie

Consultant:

Biosency, Implicity, Medinthepocket, Oktoscience

Détecter la FA – ESC guidelines 2000

It is recommended to interrogate pacemakers and implantable cardioverter defibrillators on a regular basis for AHRE.[c224,226]	I	B

Arythmies atriales infracliniques détectées par les prothèses implantables Feu vert pour l'anticoagulation ?

2 essais randomisés

NOAH-AFNET 6 and ARTESIA trials

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

August 25 2023

Anticoagulation with Edoxaban in Patients with Atrial High-Rate Episodes

P. Kirchhof, T. Toennis, A. Goette, A.J. Camm, H.C. Diener, N. Becher, E. Bertaglia, C. Blomstrom Lundqvist, M. Borlich, A. Brandes, N. Cabanelas, M. Calvert, G. Chlouverakis, G.-A. Dan, J.R. de Groot, W. Dichtl, B. Kravchuk, A. Lubiński, E. Marijon, B. Merkely, L. Mont, A.-K. Ozga, K. Rajappan, A. Sarkozy, D. Scherr, R. Sznajder, V. Velchev, D. Wichterle, S. Sehner, E. Simantirakis, G.Y.H. Lip, P. Vardas, U. Schotten, and A. Zapf, for the NOAH-AFNET 6 Investigators*

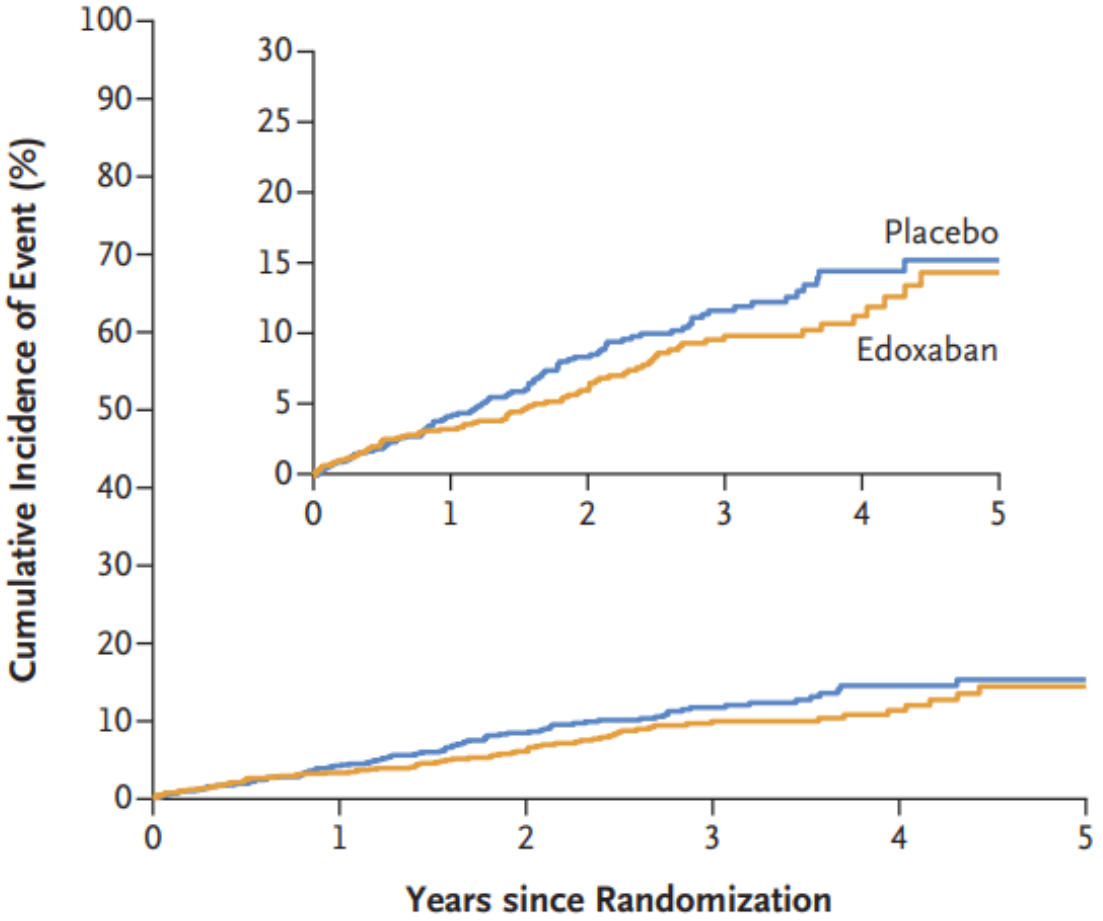
Device-detected atrial high-rate episodes (AHREs)
Age ≥ 65 years
1 additional stroke risk factor
AHREs lasting at least 6 mn
1:1 Randomization Edoxaban or placebo

Primary efficacy outcome: composite of CV death, stroke, systemic embolism
Safety outcome: death from any cause or major bleeding

Patient characteristics

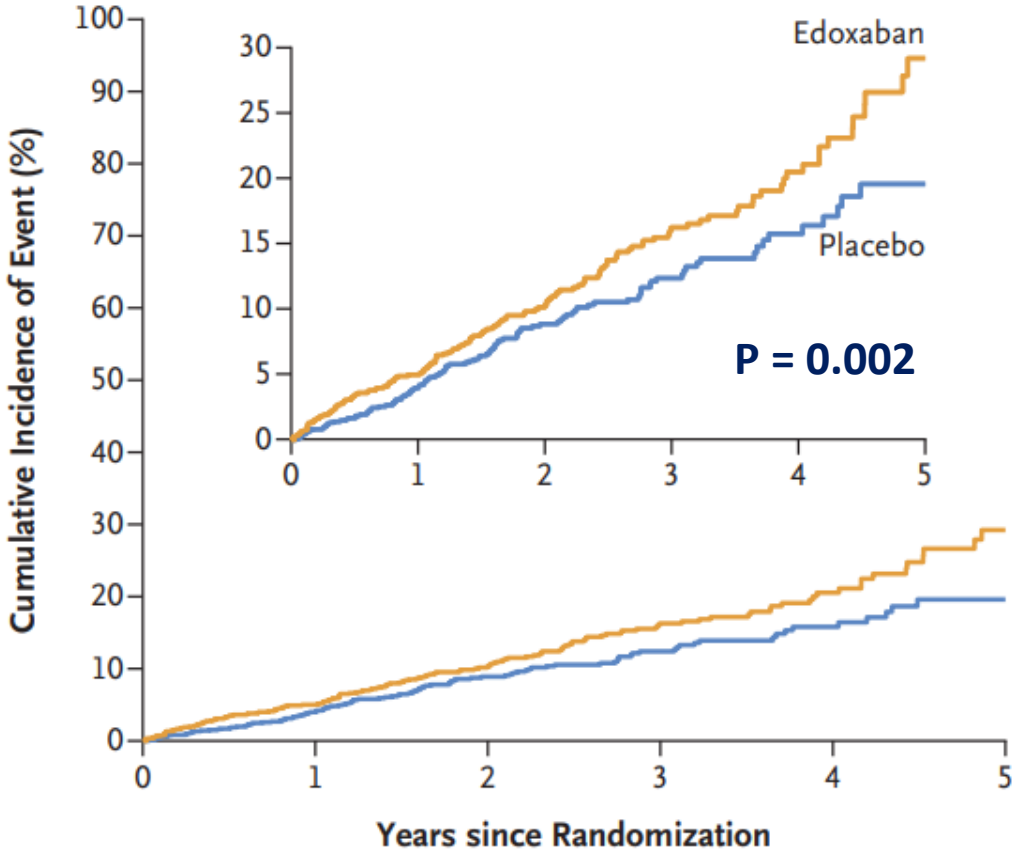
Characteristic	Edoxaban (N=1270)	Placebo (N=1266)	Total (N=2536)
Age — yr	77.4±6.5	77.5±6.8	77.5±6.7
Age ≥75 yr — no./total no. (%)	845/1270 (66.5)	855/1266 (67.5)	1700/2536 (67.0)
Female sex — no./total no. (%)	469/1270 (36.9)	480/1266 (37.9)	949/2536 (37.4)
Device used to record AHREs — no./total no. (%)			
Pacemaker	1017/1270 (80.1)	1055/1266 (83.3)	2072/2536 (81.7)
Defibrillator	100/1270 (7.9)	88/1266 (7.0)	188/2536 (7.4)
Cardiac resynchronization device	138/1270 (10.9)	113/1266 (8.9)	251/2536 (9.9)
Implanted loop recorder	15/1270 (1.2)	10/1266 (0.8)	25/2536 (1.0)
Median duration of AHREs (IQR) — hr†	2.8 (0.8–9.2)	2.8 (0.7–9.5)	2.8 (0.8–9.4)
AHREs with atrial rates >200 beats/ min — no./total no. (%)	918/944 (97.2)	896/925 (96.9)	1814/1869 (97.1)
Median CHA_2DS_2-VASc score (IQR)‡	4 (3–5)	4 (3–5)	4 (3–5)
Median CHA_2DS_2-VA score (IQR)‡	3 (3–4)	3 (3–4)	3 (3–4)
Heart failure — no./total no. (%)§	361/1270 (28.4)	335/1266 (26.5)	696/2536 (27.4)
Hypertension — no./total no. (%)¶	1096/1270 (86.3)	1109/1266 (87.6)	2205/2536 (86.9)
Diabetes mellitus — no./total no. (%)	350/1270 (27.6)	331/1266 (26.1)	681/2536 (26.9)
Previous stroke or transient ischemic attack — no./total no. (%)	122/1270 (9.6)	131/1266 (10.3)	253/2536 (10.0)
Indication for acetylsalicylic acid at randomization — no./total no. (%)‖	684/1270 (53.9)	683/1266 (53.9)	1367/2536 (53.9)

Stroke, systemic embolism, CV death



No. at Risk (no. of events)						
Edoxaban	1270 (37)	873 (20)	559 (19)	327 (3)	148 (4)	42
Placebo	1266 (44)	822 (30)	534 (16)	329 (7)	137 (1)	50

Major bleeding or death from any cause



No. at Risk (no. of events)

Edoxaban	1270 (57)	866 (41)	551 (30)	324 (11)	145 (10)	44
Placebo	1266 (42)	829 (36)	538 (17)	332 (9)	138 (5)	49

Safety outcome

Outcome	Edoxaban (N=1270)	Placebo (N=1266)	Adjusted Hazard Ratio (95% CI)	P Value
	no. of patients with event/patient-yr (% per patient-yr)			
Composite safety outcome†	149/2534 (5.9)	114/2508 (4.5)	1.31 (1.02 to 1.67)	0.03
Death from any cause	111/2595 (4.3)	94/2540 (3.7)	1.16 (0.88 to 1.53)	0.28
Cardiovascular death	52/2595 (2.0)	57/2540 (2.2)	—	—
Cancer-related death	22/2595 (0.8)	9/2540 (0.4)	—	—
Covid-19–associated death	15/2595 (0.6)	12/2540 (0.5)	—	—
Death due to acute infection or sepsis	12/2595 (0.5)	9/2540 (0.4)	—	—
Death due to frailty or old age	3/2595 (0.1)	2/2540 (0.1)	—	—
Death due to accident or poly-trauma	3/2595 (0.1)	1/2540 (<0.1)	—	—
Death due to lung disease	2/2595 (0.1)	1/2540 (<0.1)	—	—
Death due to acute abdomen	0	2/2540 (0.1)	—	—
Kidney-related death	1/2595 (<0.1)	0	—	—
Dementia-related death	0	1/2540 (<0.1)	—	—
Suicide	1/2595 (<0.1)	0	—	—
Major bleeding	53/2534 (2.1)	25/2508 (1.0)	2.10 (1.30 to 3.38)	0.002
Mean no. of major bleeding events per patient	0.06±0.35	0.02±0.16	3.06 (1.74 to 5.36)‡	<0.001

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Apixaban for Stroke Prevention in Subclinical Atrial Fibrillation

J.S. Healey, R.D. Lopes, C.B. Granger, M. Alings, L. Rivard, W.F. McIntyre, D. Atar, D.H. Birnie, G. Boriani, A.J. Camm, D. Conen, J.W. Erath, M.R. Gold, S.H. Hohnloser, J. Ip, J. Kautzner, V. Kutyifa, C. Linde, P. Mabo, G. Mairesse, J. Benezet Mazuecos, J. Cosedis Nielsen, F. Philippon, M. Proietti, C. Sticherling, J.A. Wong, D.J. Wright, I.G. Zarraga, S.B. Coutts, A. Kaplan, M. Pombo, F. Ayala-Paredes, L. Xu, K. Simek, S. Nevills, R. Mian, and S.J. Connolly, for the ARTESIA Investigators*

NEJM 12 novembre 2023

ARTESIA

Inclusion Criteria:

- Permanent pacemaker or defibrillator (with or without resynchronization) or insertable cardiac monitor capable of detecting Sub Clinical AF
- At least one episode of SCAF ≥ 6 minutes but no single episode > 24 hours
- CHA2 DS2 -VASc score ≥ 3
- Age ≥ 55 years
- Risk Factor(s) for Stroke:
  - Previous stroke, TIA or systemic arterial embolism
  - or Age at least 75
  - or Age 65-74 with at least 2 other risk factors
  - or Age 55-64 with at least 3 other risk factors
- Randomization: Apixaban vs aspirin 81 mg
- Efficacy endpoint: ischemic stroke and ischemic embolism
- Safety outcome: major bleeding

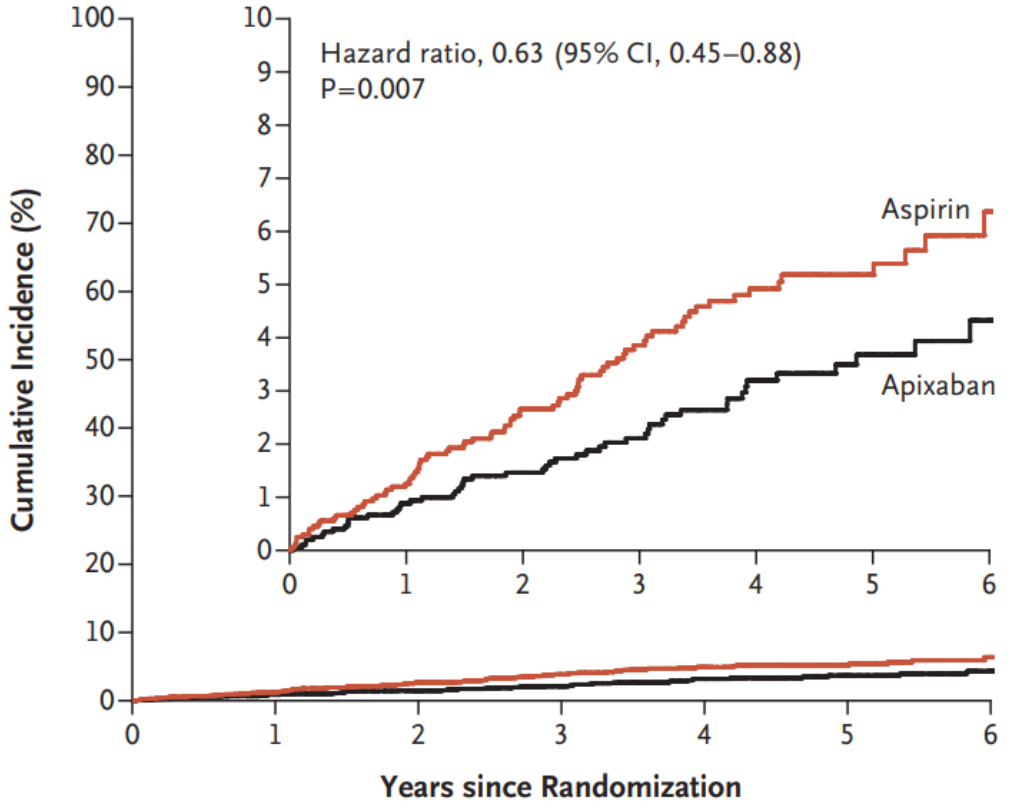
Population

Characteristic	Apixaban (N = 2015)	Aspirin (N = 1997)	Total (N = 4012)
Age — yr	76.9±7.6	76.7±7.7	76.8±7.6
Female sex — no. (%)	719 (35.7)	728 (36.5)	1447 (36.1)
CHA_2DS_2-VASc score†			
Mean	3.9±1.1	3.9±1.1	3.9±1.1
Score ≥4 — no. (%)	1220 (60.5)	1214 (60.8)	2434 (60.7)
History of hypertension — no. (%)	1643 (81.5)	1626 (81.4)	3269 (81.5)
History of coronary artery disease — no. (%)	731 (36.3)	754 (37.8)	1485 (37.0)
Peripheral arterial disease — no. (%)	168 (8.3)	166 (8.3)	334 (8.3)
Diabetes mellitus — no. (%)	583 (28.9)	584 (29.2)	1167 (29.1)
History of heart failure — no. (%)	550 (27.3)	587 (29.4)	1137 (28.3)
History of stroke, systemic embolism, or TIA — no. (%)	180 (8.9)	181 (9.1)	361 (9.0)

Population

Characteristic	Apixaban (N=2015)	Aspirin (N=1997)	Total (N=4012)
Baseline antiplatelet use — no. (%)			
Aspirin	1165 (57.8)	1137 (56.9)	2302 (57.4)
Other single antiplatelet agent	77 (3.8)	81 (4.1)	158 (3.9)
Dual antiplatelet therapy	67 (3.3)	70 (3.5)	137 (3.4)
Creatinine clearance — ml/min	70.8±26.7	72.1±30.6	71.4±28.7
Weight — kg	82.5±18.3	82.9±18.1	82.7±18.2
History of major bleeding >6 mo before enrollment — no. (%)	50 (2.5)	47 (2.4)	97 (2.4)
Blood pressure — mm Hg			
Systolic	135.0±18.9	135.0±18.7	135.0±18.8
Diastolic	75.4±10.4	75.5±10.4	75.5±10.4
Device type — no. (%)			
Pacemaker	1414 (70.2)	1370 (68.6)	2784 (69.4)
ICD	270 (13.4)	284 (14.2)	554 (13.8)
CRT-ICD or CRT pacemaker	228 (11.3)	237 (11.9)	465 (11.6)
ICM	103 (5.1)	106 (5.3)	209 (5.2)

Primary efficacy outcome – Stroke or systemic embolism



No. at Risk							
Aspirin	1997	1777	1539	1120	780	468	200
Apixaban	2015	1786	1558	1157	820	474	214

Other outcomes - Major bleeding

Outcome	Apixaban (N = 2015)		Aspirin (N = 1997)		Hazard Ratio (95% CI)	P Value
	no. of patients with event	*%/patient-yr*	*no. of patients with event*	*%/patient-yr*		
Stroke, systemic embolism, or death from cardiovascular causes	148	2.10	171	2.47	0.85 (0.68–1.06)	
Stroke, myocardial infarction, systemic embolism, or death	419	6.01	418	6.10	0.98 (0.86–1.12)	
Myocardial infarction	37	0.52	41	0.59	0.89 (0.57–1.40)	
Death	362	5.06	341	4.82	1.04 (0.90–1.21)	
Death from cardiovascular causes	105	1.47	108	1.53	0.96 (0.73–1.25)	
Major bleeding¶	106	1.53	78	1.12	1.36 (1.01–1.82)	0.04
Fatal bleeding	10	0.14	14	0.20	0.70 (0.31–1.57)	
Symptomatic intracranial hemorrhage	17	0.24	23	0.33	0.73 (0.39–1.36)	
Gastrointestinal bleeding	55	0.78	31	0.44	1.76 (1.13–2.74)	
Transfusion performed	35	0.49	31	0.44	1.11 (0.68–1.80)	

Other outcomes

Outcome	Apixaban (N = 2015)		Aspirin (N = 1997)		Hazard Ratio (95% CI)	P Value
	no. of patients with event	*%/patient-yr*	*no. of patients with event*	*%/patient-yr*		
Stroke, systemic embolism, or death from cardiovascular causes	148	2.10	171	2.47	0.85 (0.68–1.06)	
Stroke, myocardial infarction, systemic embolism, or death	419	6.01	418	6.10	0.98 (0.86–1.12)	
Myocardial infarction	37	0.52	41	0.59	0.89 (0.57–1.40)	
Death	362	5.06	341	4.82	1.04 (0.90–1.21)	
Death from cardiovascular causes	105	1.47	108	1.53	0.96 (0.73–1.25)	
Major bleeding¶	106	1.53	78	1.12	1.36 (1.01–1.82)	0.04
Fatal bleeding	10	0.14	14	0.20	0.70 (0.31–1.57)	
Symptomatic intracranial hemorrhage	17	0.24	23	0.33	0.73 (0.39–1.36)	
Gastrointestinal bleeding	55	0.78	31	0.44	1.76 (1.13–2.74)	
Transfusion performed	35	0.49	31	0.44	1.11 (0.68–1.80)	

NOAH-AFNET 6 TRIAL vs ARTESIA

- **Baseline characteristics were similar**
- **NOAHAFNET 6 trial was stopped early, had relatively few stroke events, and was thus underpowered.**
- **The primary efficacy outcome of the NOAH-AFNET 6 trial included death from cardiovascular causes. Because deaths in this population of patients are rarely due to stroke and are commonly due to underlying cardiovascular disease and old age, adding death from cardiovascular causes to the primary outcome dilutes any potential signal related to stroke reduction.**
- **The control group in the ARTESIA trial were assigned to receive aspirin. Aspirin is effective for stroke prevention in patients with previous stroke, but whether it reduces the risk of stroke among patients with atrial fibrillation is controversial. The use of aspirin in the control group in the ARTESIA trial probably had little effect on the signal for reduction in stroke but almost certainly mitigated the signal for harm, because aspirin is known to increase bleeding.**

NOAH-AFNET 6 + ARTESIA trials

Circulation
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https://doi.org/10.1161/CIRCULATIONAHA.123.067512

American Heart Association.

ORIGINAL RESEARCH ARTICLE

Direct Oral Anticoagulants for Stroke Prevention in Patients With Device-Detected Atrial Fibrillation: A Study-Level Meta-Analysis of the NOAH-AFNET 6 and ARTESiA Trials

Editorial, see p 989

William F. McIntyre, MD, PhD, Alexander P. Benz, MD, MSc, Nina Becher, MD, Jeffrey S. Healey, MD, MSc, Christopher B. Granger, MD, Lena Rivard, MD, MSc, A. John Camm, MD, Andreas Goette, MD, Antonia Zapf, PhD, Marco Alings, MD, PhD, Stuart J. Connolly, MD, MSc, Paulus Kirchhof, MD, and Renato D. Lopes, MD, MHS, PhD

NOAH-AFNET 6 + ARTESIA trials

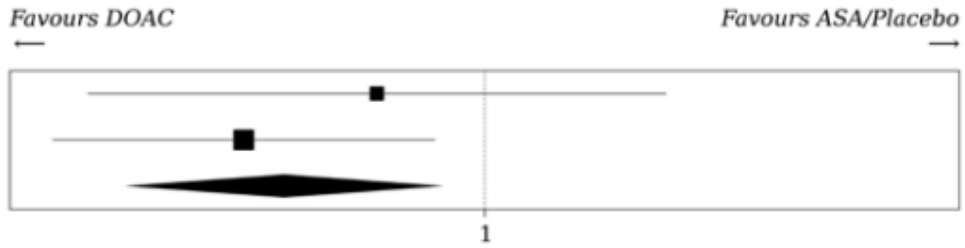
Ischemic Stroke

Study	DOAC	(%)	ASA/Placebo	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	22/1,270	(1.7%)	27/1,266	(2.1%)	30.4%	0.81 [0.47, 1.42]
ARTESiA	45/2,015	(2.2%)	71/1,997	(3.6%)	69.6%	0.63 [0.43, 0.91]
Pooled Estimate	67/3,285	(2.0%)	98/3,263	(3.0%)	I^2: 0%	0.68 [0.5, 0.92]

Mantel-Haenszel, DerSimonian-Laird Random Effects

p=0.01, z=2.47
τ^2=0.00

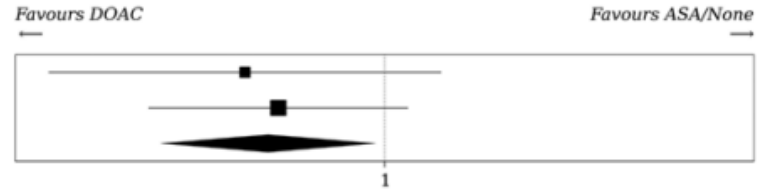
RR: Risk Ratio
CI: Confidence Interval



Composite of All-cause Stroke, Peripheral Arterial Embolism, Myocardial Infarction, Pulmonary Embolism or Cardiovascular Death

Study	DOAC	(%)	ASA/None	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	83/1,270	(6.5%)	101/1,266	(8.0%)	30.4%	0.82 [0.62, 1.08]
ARTESiA	189/2,015	(9.4%)	218/1,997	(10.9%)	69.6%	0.86 [0.71, 1.03]
Pooled Estimate	272/3,285	(8.3%)	319/3,263	(9.8%)	I^2: 0%	0.85 [0.73, 0.99]

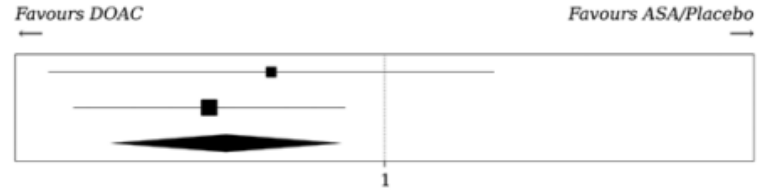
Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.03, z=2.11
τ^2=0.00
RR: Risk Ratio
CI: Confidence Interval



All-cause Stroke

Study	DOAC	(%)	ASA/Placebo	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	22/1,270	(1.7%)	29/1,266	(2.3%)	27.1%	0.76 [0.44, 1.31]
ARTESiA	55/2,015	(2.7%)	84/1,997	(4.2%)	72.9%	0.65 [0.46, 0.91]
Pooled Estimate	77/3,285	(2.3%)	113/3,263	(3.5%)	I^2: 0%	0.68 [0.51, 0.9]

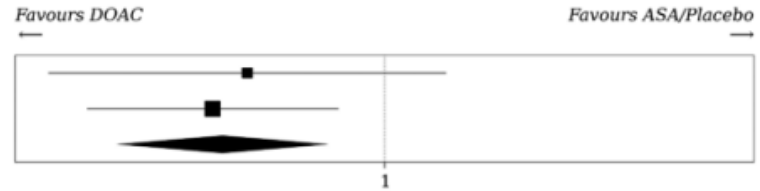
Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.01, z=2.68
τ^2=0.00
RR: Risk Ratio
CI: Confidence Interval



All-cause Stroke or Systemic Embolism

Study	DOAC	(%)	ASA/Placebo	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	23/1,270	(1.8%)	33/1,266	(2.6%)	28.5%	0.69 [0.41, 1.18]
ARTESiA	55/2,015	(2.7%)	86/1,997	(4.3%)	71.5%	0.63 [0.45, 0.88]
Pooled Estimate	78/3,285	(2.4%)	119/3,263	(3.6%)	I^2: 0%	0.65 [0.49, 0.86]

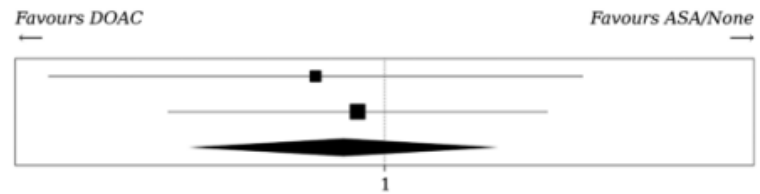
Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.00, z=2.99
τ^2=0.00
RR: Risk Ratio
CI: Confidence Interval



Cardiovascular Death

Study	DOAC	(%)	ASA/None	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	52/1,270	(4.1%)	57/1,266	(4.5%)	33.6%	0.91 [0.63, 1.31]
ARTESiA	105/2,015	(5.2%)	108/1,997	(5.4%)	66.4%	0.96 [0.74, 1.25]
Pooled Estimate	157/3,285	(4.8%)	165/3,263	(5.1%)	I^2: 0%	0.95 [0.76, 1.17]

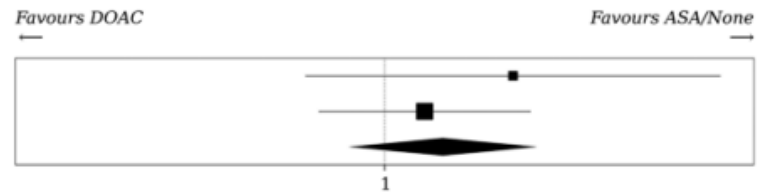
Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.60, z=0.52
τ^2=0.00
RR: Risk Ratio
CI: Confidence Interval



All-cause Mortality

Study	DOAC	(%)	ASA/None	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	111/1,270	(8.7%)	94/1,266	(7.4%)	20.6%	1.18 [0.9, 1.53]
ARTESiA	362/2,015	(18.0%)	341/1,997	(17.1%)	79.4%	1.05 [0.92, 1.2]
Pooled Estimate	473/3,285	(14.4%)	435/3,263	(13.3%)	I^2: 0%	1.08 [0.96, 1.21]

Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.23, z=1.21
τ^2=0.00
RR: Risk Ratio
CI: Confidence Interval

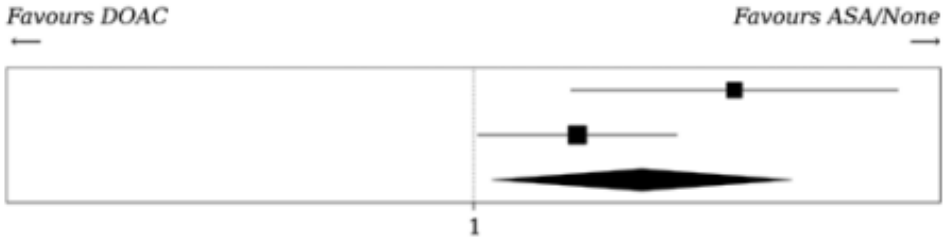


NOAH-AFNET 6 + ARTESIA trials

Major Bleeding

Study	DOAC	(%)	ASA/None	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	53/1,270	(4.2%)	25/1,266	(2.0%)	41.1%	2.11 [1.32, 3.38]
ARTESiA	106/2,015	(5.3%)	78/1,997	(3.9%)	58.9%	1.35 [1.01, 1.79]
Pooled Estimate	159/3,285	(4.8%)	103/3,263	(3.2%)	I^2: 61%	1.62 [1.05, 2.5]

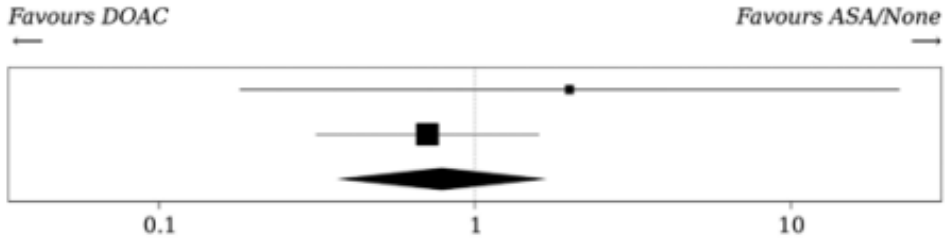
Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.03, z=2.18
τ^2=0.06
RR: Risk Ratio
CI: Confidence Interval



Fatal Bleeding

Study	DOAC	(%)	ASA/None	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	2/1,270	(0.2%)	1/1,266	(0.1%)	10.2%	1.99 [0.18, 21.96]
ARTESiA	10/2,015	(0.5%)	14/1,997	(0.7%)	89.8%	0.71 [0.32, 1.59]
Pooled Estimate	12/3,285	(0.4%)	15/3,263	(0.5%)	I^2: 0%	0.79 [0.37, 1.69]

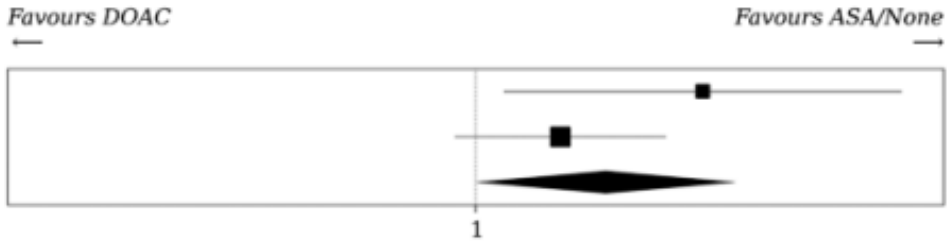
Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.54, z=0.61
τ^2=0.00
RR: Risk Ratio
CI: Confidence Interval



All-cause Mortality or Major Bleeding

Study	DOAC	(%)	ASA/None	(%)	Weight	RR [95% CI]
NOAH-AFNET 6	149/1,270	(11.7%)	114/1,266	(9.0%)	31.9%	1.3 [1.03, 1.64]
ARTESiA	431/2,015	(21.4%)	387/1,997	(19.4%)	68.1%	1.1 [0.98, 1.25]
Pooled Estimate	580/3,285	(17.7%)	501/3,263	(15.4%)	I^2: 35%	1.16 [1.0, 1.35]

Mantel-Haenszel, DerSimonian-Laird Random Effects
p=0.05, z=1.96
τ^2=0.00
RR: Risk Ratio
CI: Confidence Interval



CONCLUSIONS

The results of the NOAH-AFNET 6 and ARTESiA trials are consistent with each other. Meta-analysis of these 2 large randomized trials provides high-quality evidence that oral anticoagulation with edoxaban or apixaban reduces the risk of stroke in patients with device-detected AF and increases the risk of major bleeding.

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Que faire en pratique?

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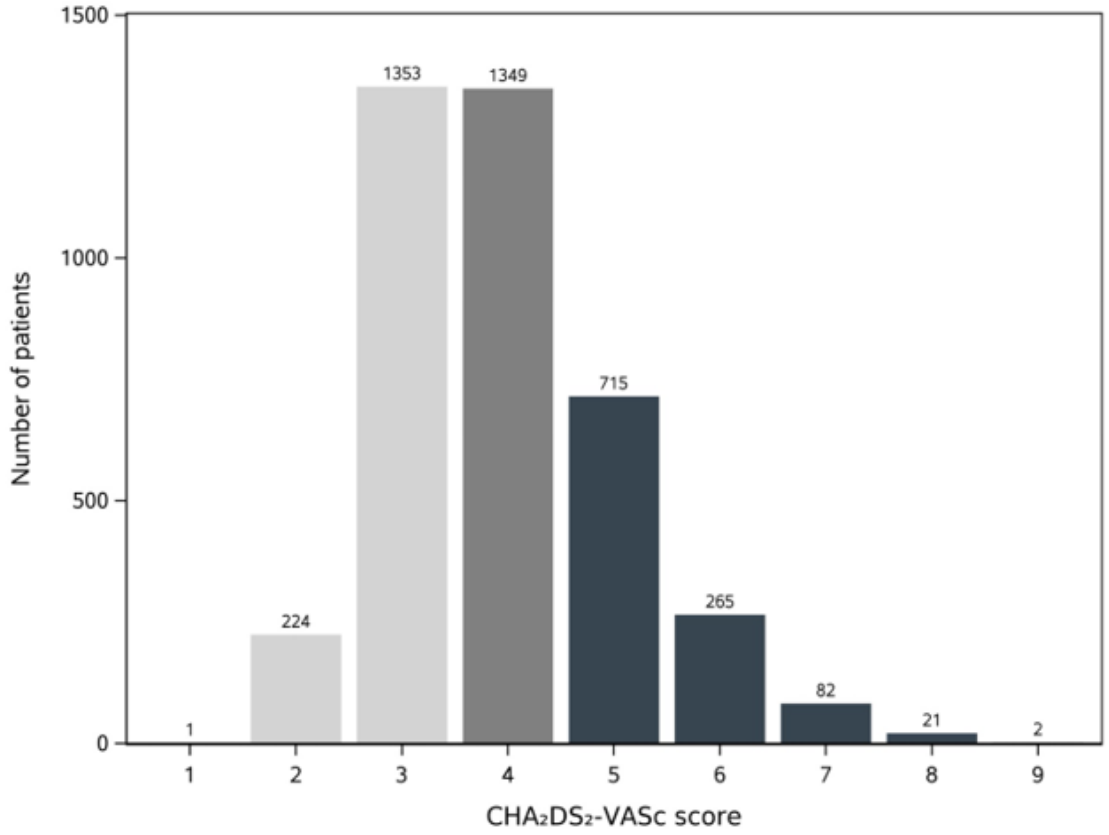
Que faire en pratique?

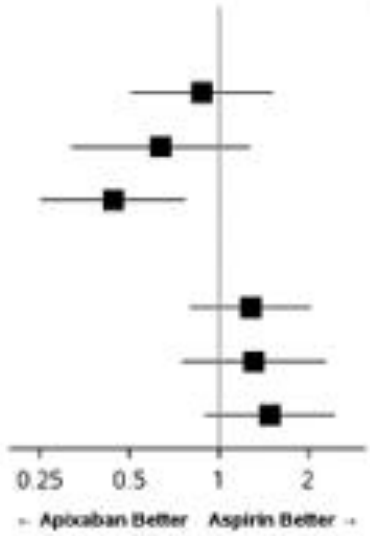
Prendre en compte le score CHADSVA ?

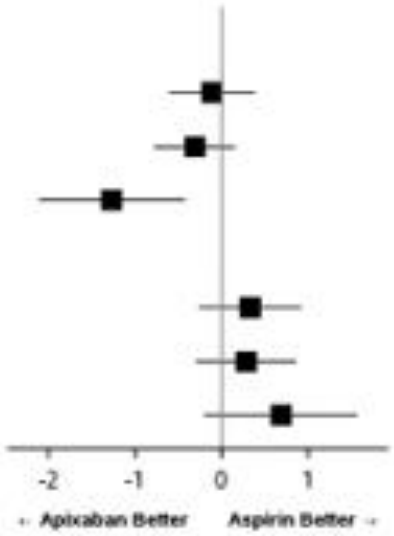
ARTESIA – CHADSVASc score



ARTESIA – CHADSVASc score

Outcome	Events (rate) Apixaban	Aspirin	Hazard Ratio Apixaban vs. Aspirin	Interaction p-value	Absolute Risk Reduction Apixaban - Aspirin	Interaction p-value
Stroke or systemic embolism				0.23		0.06
CHA2DS2-VASc < 4	24 (0.85)	27 (0.97)	0.87 (0.50, 1.52)		-0.12 (-0.62, 0.38)	
CHA2DS2-VASc = 4	13 (0.54)	21 (0.86)	0.63 (0.32, 1.27)		-0.32 (-0.79, 0.16)	
CHA2DS2-VASc > 4	18 (0.98)	38 (2.25)	0.44 (0.25, 0.77)		-1.28 (-2.12, -0.43)	
ISTH Major Bleeding				0.91		0.75
CHA2DS2-VASc < 4	40 (1.44)	31 (1.11)	1.27 (0.80, 2.03)		0.33 (-0.27, 0.92)	
CHA2DS2-VASc = 4	28 (1.18)	22 (0.90)	1.31 (0.75, 2.29)		0.28 (-0.30, 0.86)	
CHA2DS2-VASc > 4	38 (2.13)	25 (1.45)	1.48 (0.89, 2.45)		0.68 (-0.21, 1.57)	

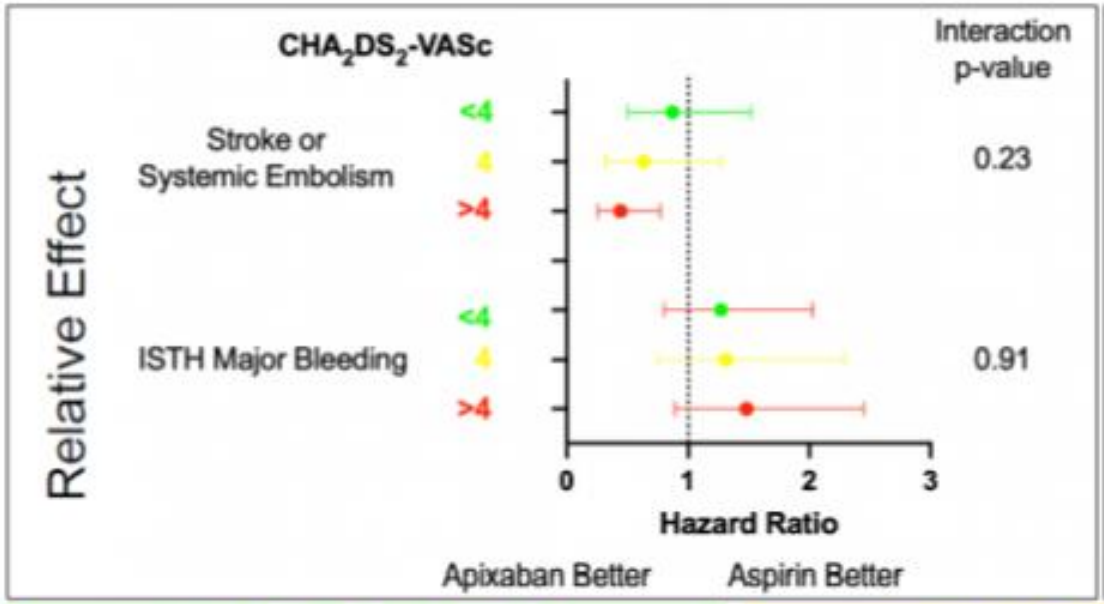


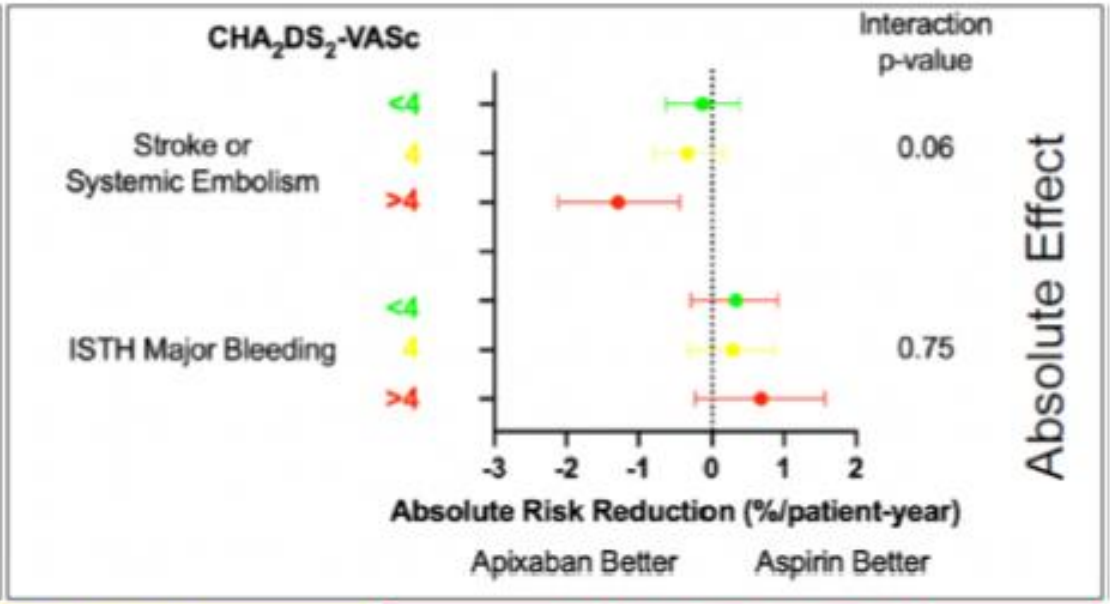


Footnote: rates per 100 patient-years of follow-up, absolute risk reduction per 100 patient-years of follow-up

ARTESiA: Apixaban versus aspirin in patients with subclinical atrial fibrillation

Treatment benefit according to CHA_2DS_2-VASc Score





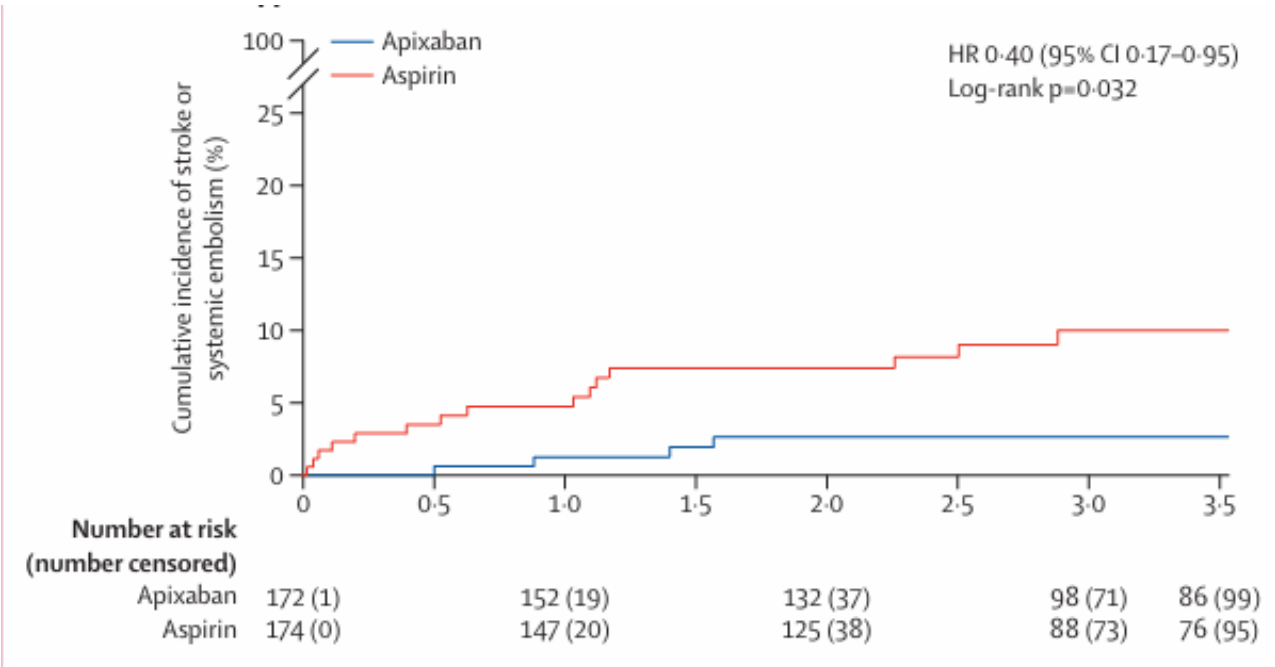
CHA_2DS_2-VASc < 4	CHA_2DS_2-VASc = 4	CHA_2DS_2-VASc > 4
Low risk	Intermediate risk	High risk
Likely no benefit with apixaban	Consider apixaban based on bleeding risk and patient values	Treat with apixaban
Exception: Treat if prior Stroke		Unless prohibitive bleeding risk

Que faire en pratique?
Prendre en compte les antécédents d'accidents emboliques ?

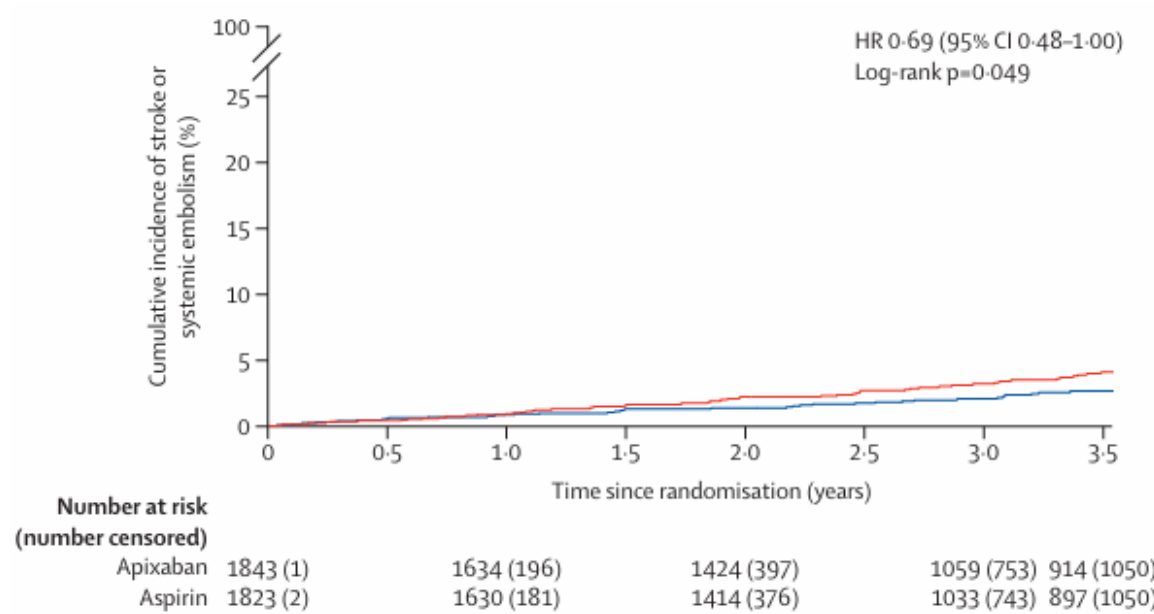
Apixaban versus aspirin for stroke prevention in people with subclinical atrial fibrillation and a history of stroke or transient ischaemic attack: subgroup analysis of the ARTESiA randomised controlled trial

*Ashkan Shoamanesh, Thalia S Field, Shelagh B Coutts, Mukul Sharma, David Gladstone, Robert G Hart, Giuseppe Boriani, David J Wright, Christian Sticherling, David H Birnie, Michael R Gold, Julia W Erath, Valentina Kutyifa, Rajibul Mian, Alexander P Benz, Christopher B Granger, William F McIntyre, Stuart J Connolly, Jens Cosedis Nielsen, Marco Alings, Lena Rivard, Renato D Lopes, Jeff S Healey, on behalf of the ARTESiA study investigators**

Lancet Neurol 2025; 24: 140–51



History of stroke or transient ischemic attack



No history of stroke or transient ischemic attack

Que faire en pratique?

Prendre en compte les caractéristiques des épisodes documentés ?

Circulation

ORIGINAL RESEARCH ARTICLE

Risk of Stroke or Systemic Embolism According to Baseline Frequency and Duration of Subclinical Atrial Fibrillation: Insights From the ARTESiA Trial

William F. McIntyre, MD, PhD; Alexander P. Benz, MD, MSc; Jeff S. Healey, MD, MSc; Stuart J. Connolly, MD, MSc; Mu Yang, MSc; Shun Fu Lee, PhD; Thalia S. Field, MD, MHSc; Marco Alings, MD, PhD; J. Benezet-Mazuecos, MD; Giuseppe Boriani, MD, PhD; J. Cosedis Nielsen, MD, DMSc, PhD; Michael R. Gold, MD, PhD; Francesco Pergolini, MD; Taya V. Glotzer, MD; Christopher B. Granger, MD; Renato D. Lopes, MD, MHS, PhD

Circulation. 2024;150:1747–1755.

ARTESIA - Nombre et durée des épisodes

Model type	Overall events/n (% per person-year)	Apixaban events/n (% per person-year)	Aspirin events/n (% per person-year)	Apixaban vs aspirin		$P_{interaction}$	P_{trend}
				HR (95% CI)	*P* value		
Duration of longest SCAF episode, h							
<1	39/1030 (1.0)	11/534 (0.6)	28/496 (1.5)	0.37 (0.18– 0.74)	0.005	0.2	
1–6	61/1421 (1.2)	23/679 (1.0)	38/742 (1.5)	0.62 (0.37– 1.05)	0.075		0.1
>6	27/832 (1.0)	13/437 (0.9)	14/395 (1.1)	0.90 (0.42– 1.92)	0.786		

HeartRhythm Heart Rhythm Society 2025 Aug 5

Apixaban for stroke prevention in subclinical atrial fibrillation detected by an implantable cardiac monitor: A subgroup analysis of ARTESiA

Lucas Yixi Xing, MD, PhD [1,2] · Renato Delascio Lopes, MD, PhD [3] · William Finlay McIntyre, MD, PhD [1] · Roopinder K. Sandhu, MD, MPH, FHRS [4] · José Manuel Rubio Campal, MD [5] · Clarence Khoo, MD [6] · Christopher Bull Granger, MD [3] · Michael R. Gold, MD, PhD, FHRS [7] · Jesper Hastrup Svendsen, MD, DMSc [2,8] · Søren Zöga Diederichsen, MD, PhD [2] · Marco Alings, MD, PhD [9] · Philippe Mabo, MD [10] · Valentina Kutyifa, MD, PhD, FHRS [11,12] · Jens Cosedis Nielsen, MD, PhD [13,14] · David H. Birnie, MD [15] · Alexander P. Benz, MD [1,16] · Thenmozhi Mani, PhD [1] · Chinthanie Ramasundarahettige, MSc [1] · Jeffrey Sean Healey, MD, FHRS [1] On behalf of the ARTESiA investigators (NCT01938248) Show less

ARTESIA – Implantable Cardiac Monitor

	ICM	PM/ICD
N	209 (5.2%)	3803 (94.8%)
Man age (years)	74.9 ± 7.4	76.9 ± 7.6
Female	50.2%	35.3%
Previous stroke	24.9%	7.7%

	Apixaban	Aspirin
Stroke/systemic embolism	1 / 103 (0.3%/year)	9 /106 (2.6%/year)

HR 0.11 ; 95% CI 0.01–0.88]

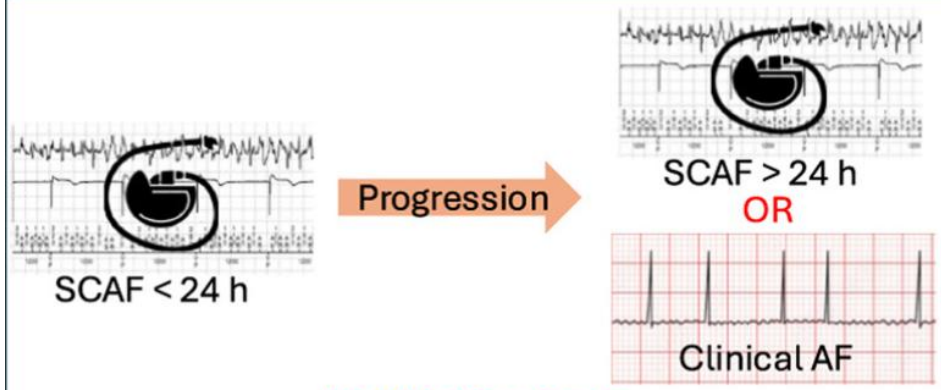
Absolute risk reduction 2.31%/year [95% CI, 0.55–4.07]

Adapted from LY Xing, Heart Rhythm 2025

ARTESIA

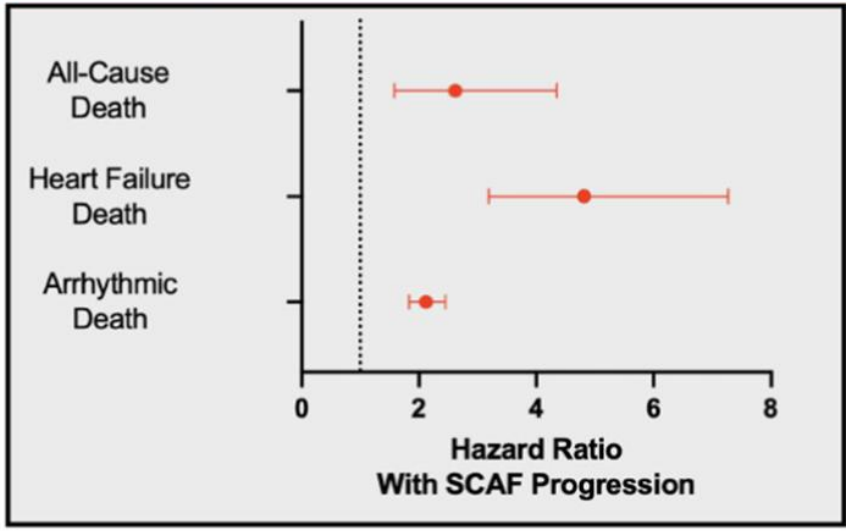
Progression from subclinical atrial fibrillation (SCAF) < 24 hours to clinical AF or SCAF > 24 hours in the ARTESIA trial

Total follow-up: 4.1 ± 1.7 years



31.2% of patients
9.3% per patient-year

Post-progression follow-up: 2.3 ± 1.6 years



SCAF progression modestly predicted by:
age, male sex, heart failure, diabetes, left atrial diameter > 4.1 cm, baseline duration of longest SCAF episode >1hr

Rate of stroke/systemic embolism in aspirin-treated patients following progression to SCAF > 24 hours:

$CHA_2DS_2VASc \leq 4$:
2.21% per patient-year

$CHA_2DS_2VASc > 4$:
1.51% per patient-year

Prévention du risque embolique
FA infraclinique détectée par les prothèses
Après ARTESIA et NOAH

Patients had a low burden of device-detected subclinical AF in both trials (median duration 1.5 h and 2.8 h, respectively), with lower rates of thromboembolism (around 1% per patient-year) than would be expected for an equivalent cohort of patients with clinical AF and a CHA_2DS_2-VASc score of 4.

ESC guidelines 2024

Prévention du risque embolique
FA infraclinique détectée par les prothèses
Après ARTESIA et NOAH

Considering the trade-off between potential benefit and the risk of major bleeding, this task force concludes that DOAC therapy may be considered in subgroups of patients with asymptomatic device-detected subclinical AF who have high estimated stroke risk and an absence of major bleeding risk factors (see *Section* 6.7).

ESC guidelines 2024

Prévention du risque embolique
FA infraclinique détectée par les prothèses
Après ARTESIA et NOAH

The duration and burden of subclinical AF that could indicate potential benefit from OAC remains uncertain.[344] Regardless of the initial decision on OAC, patients with subclinical AF should receive management and follow-up for all aspects of AF-CARE as the risk of developing clinical AF is high (6%–9% per year).

ESC guidelines 2024

Prévention du risque embolique
FA infraclinique détectée par les prothèses
Après ARTESIA et NOAH

Direct oral anticoagulant therapy may be considered in patients with asymptomatic device-detected subclinical AF and elevated thromboembolic risk to prevent ischaemic stroke and thromboembolism, excluding patients at high risk of bleeding.[281,282]	IIb	B

ESC guidelines 2024

Conclusions

- Un concept de prévention qui a du mal à trouver sa population
- Les « croyances » même fortes nécessitent toujours une évaluation
- Des recommandations désormais « timides »
- Comment avancer au-delà des essais randomisés ?
- L’IA, un outil pour redistribuer les cartes