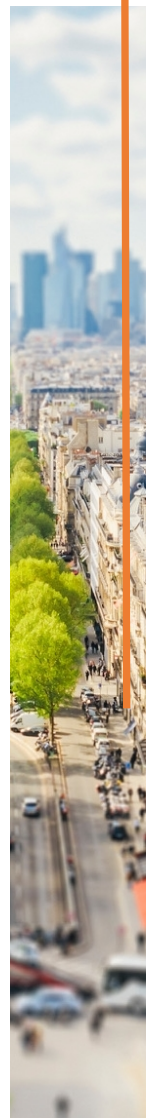
SOCIÉTÉ FRANÇAISE DE GÉRIATRIE & GÉRONTOLOGIE

Prise en charge de l'AVC ischémique du patient âgé
A la phase aigüe

Pr Sandrine Deltour

UNV de l'Hôpital Raymond Poincaré, APHP, Garches
Université Versailles Saint Quentin en Yvelines



Hôpitaux Universitaires Paris Ile-de-France Ouest
RAYMOND POINCARÉ • BERCK
AMBROISE PARÉ • SAINTE PÉRINE

UNIVERSITÉ DE VERSAILLES ST-QUENTIN-EN-YVELINES
université PARIS-SACLAY

SOCIÉTÉ FRANÇAISE DE GÉRIATRIE & GÉRONTOLOGIE

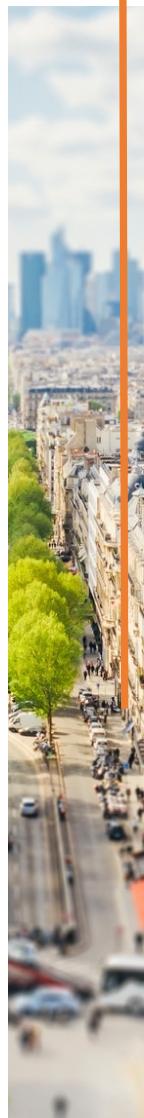
Liens d'intérêt

Conférence-conseil scientifique:

BMS, Boehringer-Ingelheim, Astra Zeneca, Bayer, Pfizer

Essai (investigateur):

Sanofi-Aventis, Astra-Zeneca



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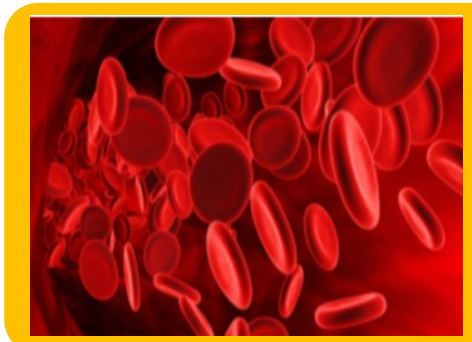
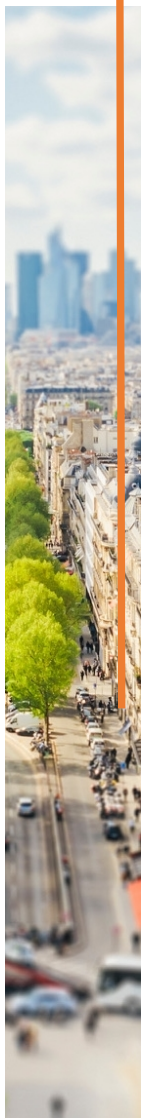
DE GÉRIATRIE
& GÉRONTOLOGIE



Anti-Thrombotique

Contrôle des ACSOS

Positionnement



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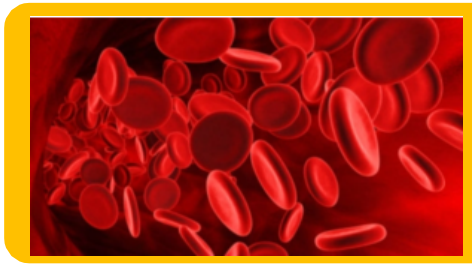
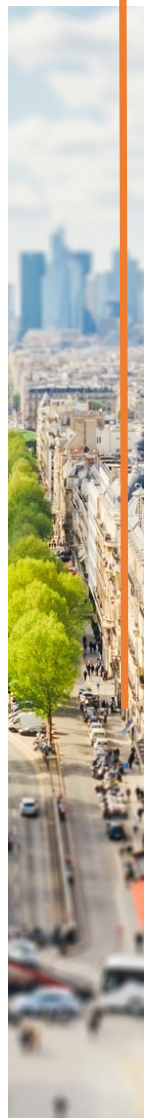


Anti-Thrombotique

- Quel type? AAP ou antico?
- Si anticoagulant, quand?
- Association d'antiagrégant? Combien de temps?
- Prophylaxie des complications thromboemboliques ?

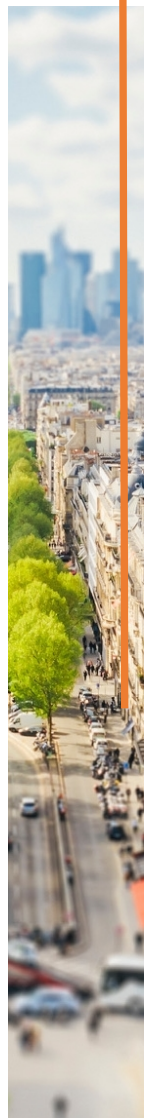


Anticoagulation Efficace

- **Cardiopathie emboligène : FA+++**
- SAPL avéré
- Rares situations : thrombus flottant….

Antiagrégant

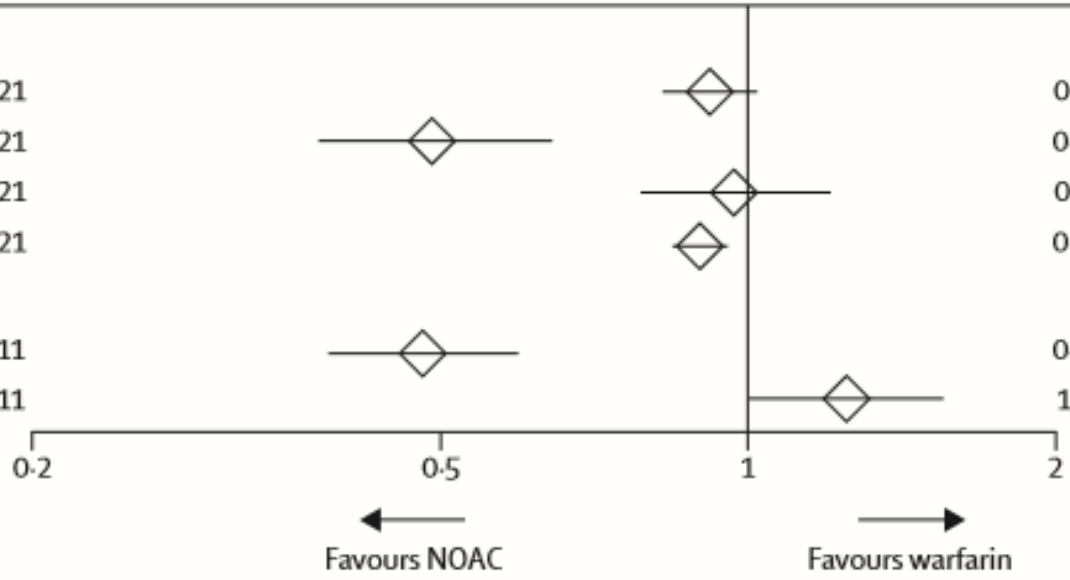
- **Tous les autres**
  - Athérome
  - Maladie des petites artères
  - Causes Indéterminées



AOD versus AVK dans la FANV
Méta-analyse études RE-LY, ROCKET AF, ARISTOTLE et ENGAGE-AF-TIMI 48
(n = 71 683)

Profil risque-bénéfice favorable
Réduction de la mortalité

	Pooled NOAC (events)	Pooled warfarin (events)	RR (95% CI)	p
Efficacy				
Ischaemic stroke	665/29292	724/29221	0·92 (0·83–1·02)	0·10
Haemorrhagic stroke	130/29292	263/29221	0·49 (0·38–0·64)	<0·0001
Myocardial infarction	413/29292	432/29221	0·97 (0·78–1·20)	0·77
All-cause mortality	2022/29292	2245/29221	0·90 (0·85–0·95)	0·0003
Safety				
Intracranial haemorrhage	204/29287	425/29211	0·48 (0·39–0·59)	<0·0001
Gastrointestinal bleeding	751/29287	591/29211	1·25 (1·01–1·55)	0·043



AOD non inférieurs ou supérieurs à la warfarine sur le risque embolique

(RR 0,48 IC 95% 0,30-0,59, *p* <0,0001)

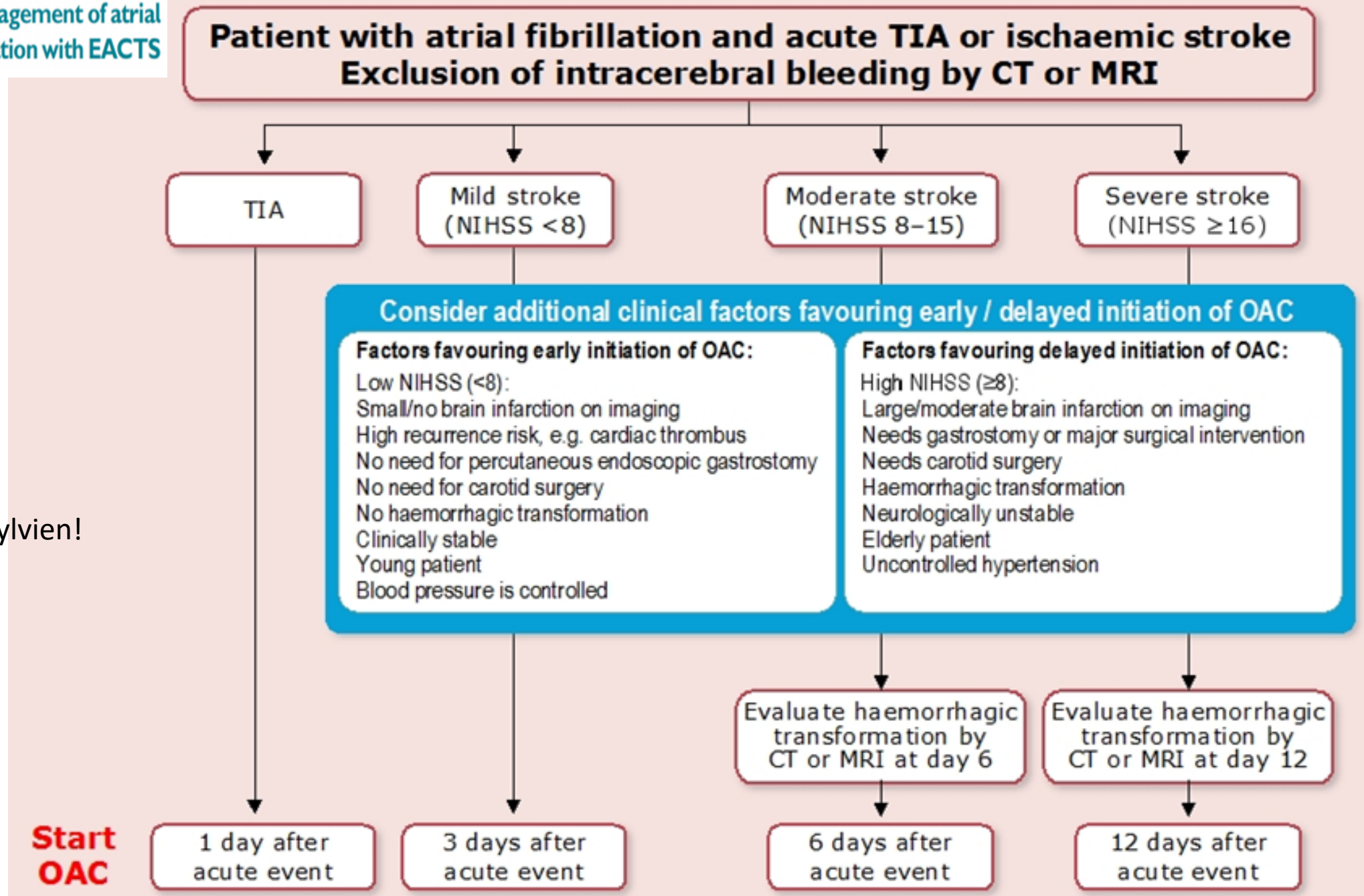
Risque d'hémorragie intracrânienne réduit de 50%

Ruff *et al.*, *Lancet* 2014

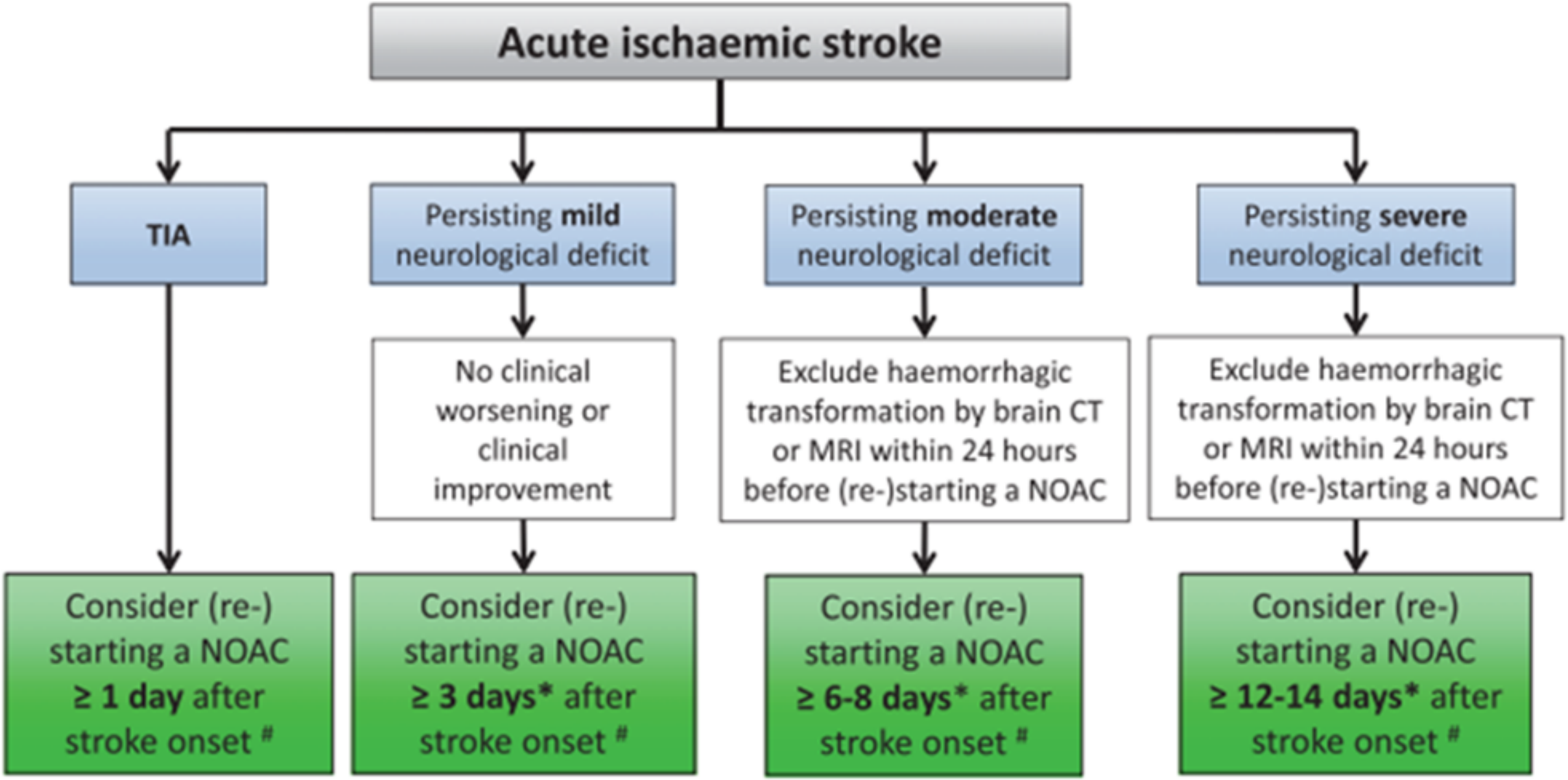
2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

European Heart Journal
doi:10.1093/eurheartj/ehw210

Valable pour AIC sylvien!



This approach is based on consensus within the Task Force, not on evidence.
NIHSS = National Institutes of Health Stroke Scale



Steffel J et al. Eur Heart J. 2018;39(16):130-1393

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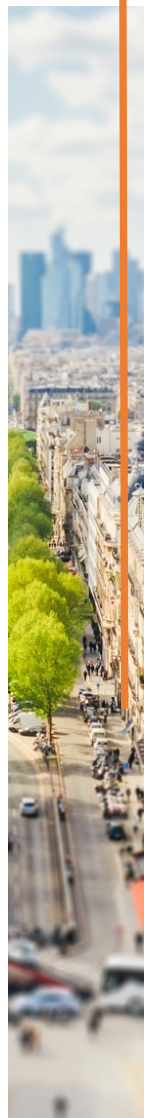
Situation moins tranchée en 2020…..

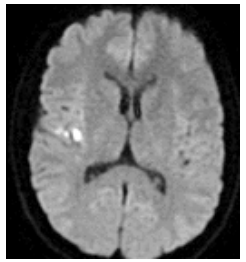
2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association of Cardio-Thoracic Surgery (EACTS)

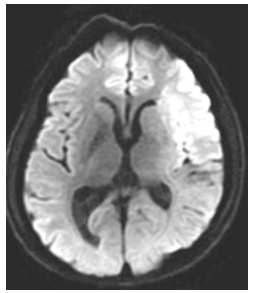
European Heart Journal (2020) **00**, 1–125

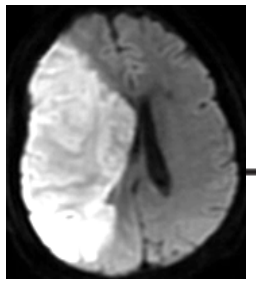
Whereas infarct size/stroke severity is used clinically to guide timing of OAC initiation,[1090] the usefulness of such an approach in estimating the net benefit of early treatment may be limited. Robust data to inform optimal timing for (re)initiation of OAC after acute stroke are lacking. From the cardiological perspective, OAC should be (re)initiated as soon as considered possible from the neurological perspective (in most cases within the first 2 weeks). A multidisciplinary approach with involvement of stroke specialists, cardiologists, and patients is considered appropriate.



ANTICOAGULATION INITIATION AFTER STROKE

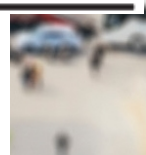






Known infarct volume characterized on MRI or CT[b]	Unknown Infarct volume (no MRI or CT with reliable visualization of infarct)[b]	Hemorrhagic transformation or remote hemorrhage present
• TIA (no acute infarct on MRI): initiate as soon as possible after acute event • Small stroke volume (<2 cm^3): initiate ≥ 3 days after acute event • Moderate stroke volume (≥2 cm^3 and < 30 cm^3): evaluate for hemorrhagic transformation at day 6, initiate ≥ 6 days after acute event • Large stroke volume (≥30 cm^3): evaluate hemorrhagic transformation at day 12, initiate ≥ 12 days after acute event	• TIA (no acute infarct on MRI): initiate as soon as possible after acute event • Mild stroke (NIHSS score<8): initiate ≥ 3 days after acute event • Moderate stroke (NIHSS score 8–16): evaluate hemorrhagic transformation at day 6, initiate ≥ 6 days after acute event • Severe stroke (NIHSS score> 16): evaluate hemorrhagic transformation at day 12, initiate ≥ 12 days after acute event	• Hemorrhagic infarction 1 or 2 (small or confluent petechiae): consider delaying until at least day 6; evaluate for stability of hemorrhage prior to initiating • Parenchymal hemorrhage 1 (homogeneous hemorrhage occupying<1/3 of the infarct): consider delaying until day 12; evaluate for stability of hemorrhage prior to initiating • Parenchymal hemorrhage 2 (homogeneous hemorrhage occupying> 1/3 of the infarct, with mass effect) or hemorrhage remote from infarct: consider delaying until days 12–28; evaluate for stability of hemorrhage prior to initiating

Pharmacotherapy 2020, Smythe et al



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Antiagrégant

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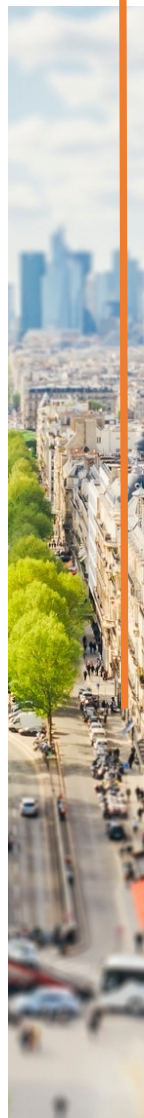
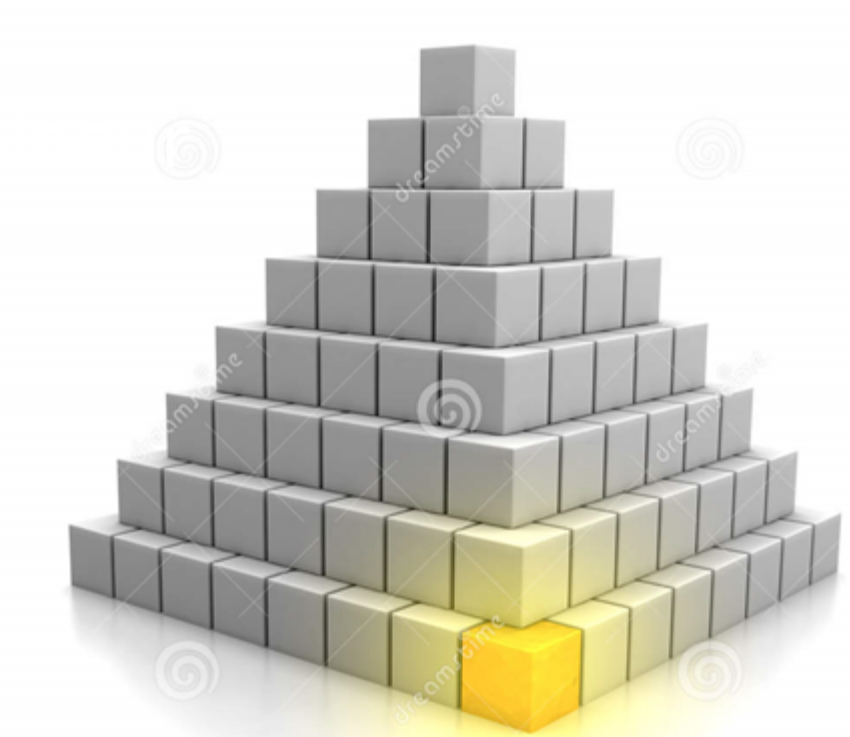
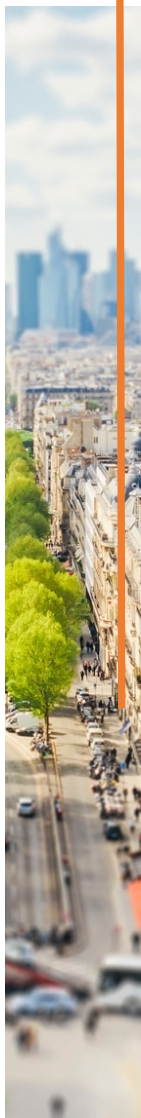


Double anti-agrégation après un AVC ischémique





La double anti-agrégation : une action synergique potentielle pour inhiber l'agrégation plaquettaire

Antagonistes de la voie de l'ADP

Cyclopentyl-triazolo-pyrimidines

Bloque réversiblement liaison ADP au Récepteur plaquettaire P2Y12 Directement actif

Ticagrelor

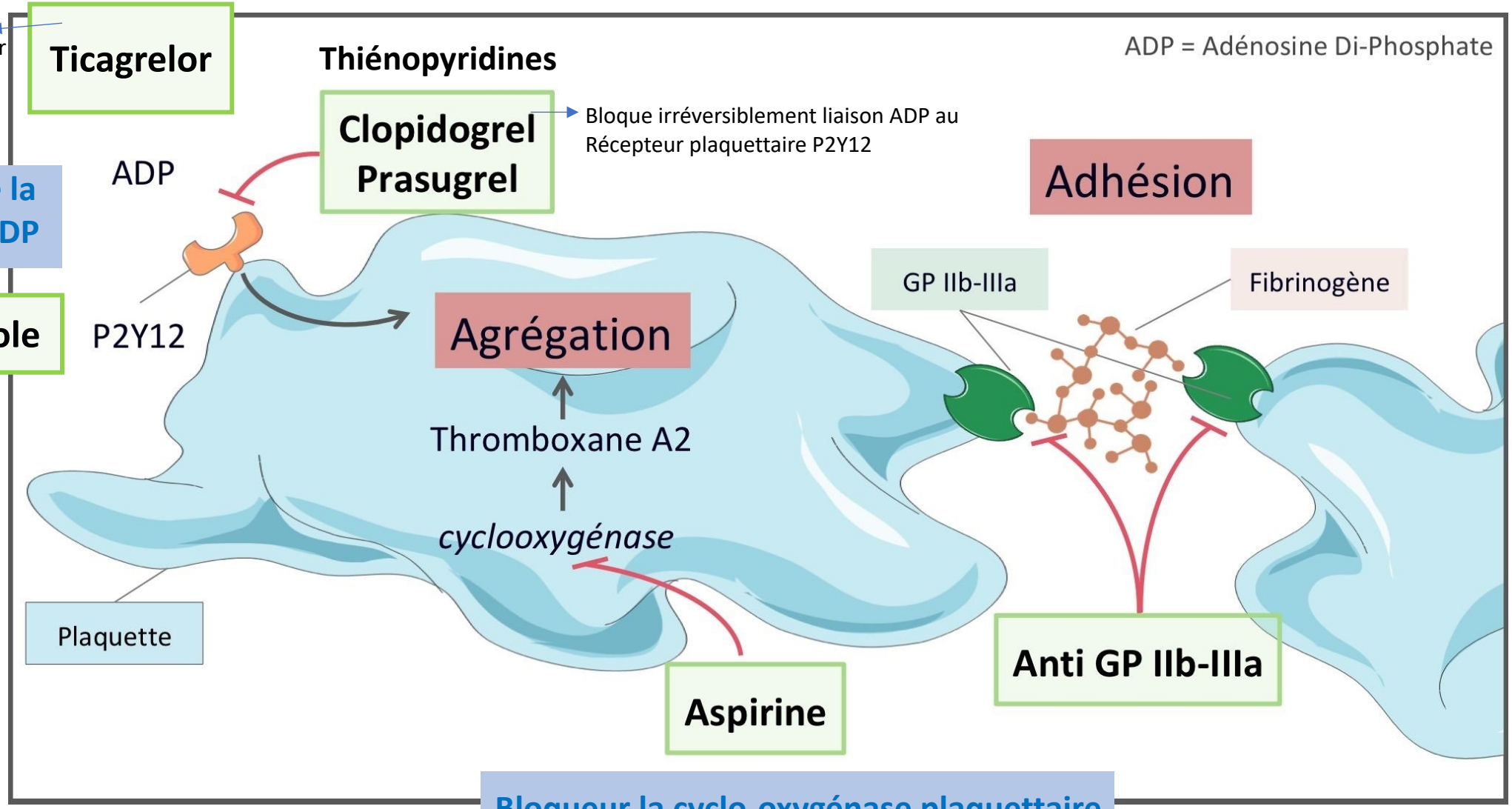
Thiénopyridines

Clopidogrel
Prasugrel

Bloque irréversiblement liaison ADP au Récepteur plaquettaire P2Y12

Inhibiteur de la Synthèse d'ADP

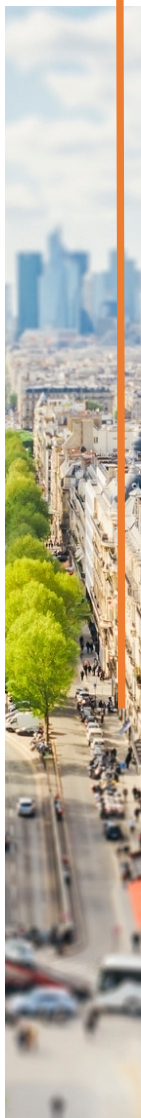
Dipyridamole



Bloqueur la cyclo-oxygénase plaquettaire

Double anti-agrégation après un AVC ischémique

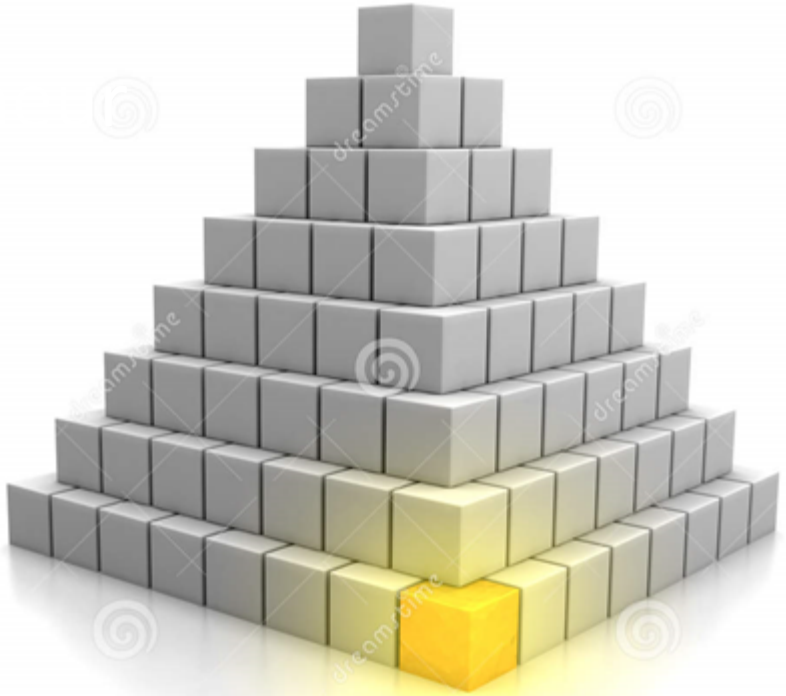
Pour qui?

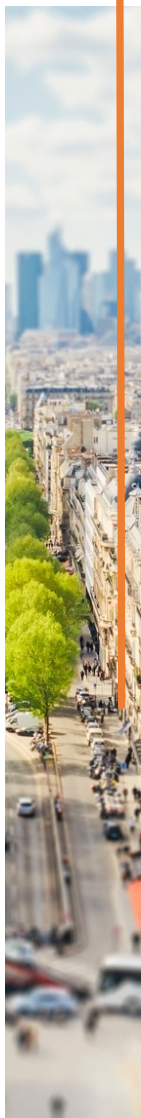


Double anti-agrégation après un AVC ischémique

AVC ischémique à faible risque hémorragique

AVC ischémique à haut risque de récidive



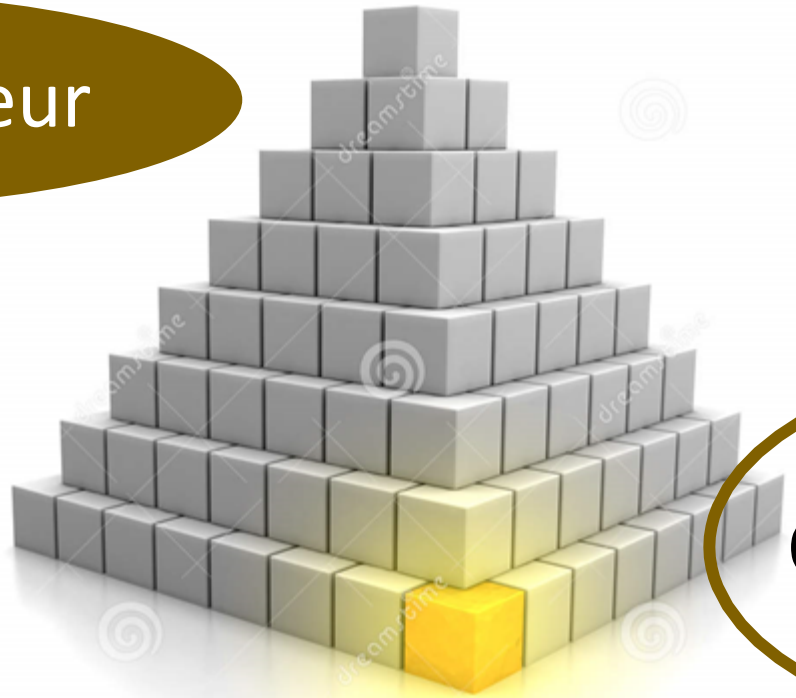


Double anti-agrégation après un AVC ischémique

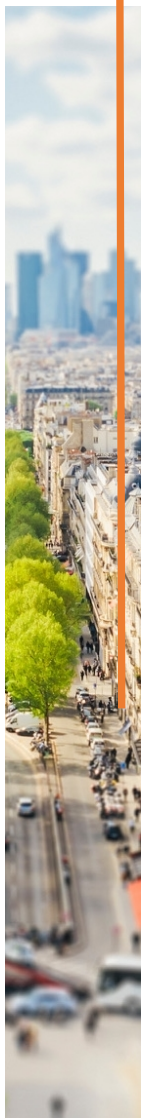
AVC ischémique à faible risque hémorragique

AIT et AIC mineur

AVC ischémique à haut risque de récidive



Quelle durée?
Quelle association?
Quelle dose?



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE NEJM, 2013

Clopidogrel with Aspirin in Acute Minor Stroke or Transient Ischemic Attack

Yongjun Wang, M.D., Yilong Wang, M.D., Ph.D., Xingquan Zhao, M.D., Ph.D., Liping Liu, M.D., Ph.D., David Wang, D.O., F.A.H.A., F.A.A.N., Chunxue Wang, M.D., Ph.D., Chen Wang, M.D., Hao Li, Ph.D., Xia Meng, M.D., Ph.D., Liying Cui, M.D., Ph.D., Jianping Jia, M.D., Ph.D., Qiang Dong, M.D., Ph.D., Anding Xu, M.D., Ph.D., Jinsheng Zeng, M.D., Ph.D., Yansheng Li, M.D., Ph.D., Zhimin Wang, M.D., Haiqin Xia, M.D., and S. Claiborne Johnston, M.D., Ph.D., for the CHANCE Investigators*

ORIGINAL ARTICLE NEJM, 2018

Clopidogrel and Aspirin in Acute Ischemic Stroke and High-Risk TIA

S. Claiborne Johnston, M.D., Ph.D., J. Donald Easton, M.D., Mary Farrant, M.B.A., William Barsan, M.D., Robin A. Conwit, M.D., Jordan J. Elm, Ph.D., Anthony S. Kim, M.D., Anne S. Lindblad, Ph.D., and Yuko Y. Palesch, Ph.D., for the Clinical Research Collaboration, Neurological Emergencies Treatment Trials Network, and the POINT Investigators*

JAMA Neurology | Original Investigation JAMA Neurol. 2019;76(12):1466-1473

Outcomes Associated With Clopidogrel-Aspirin Use in Minor Stroke or Transient Ischemic Attack

A Pooled Analysis of Clopidogrel in High-Risk Patients With Acute Non-Disabling Cerebrovascular Events (CHANCE) and Platelet-Oriented Inhibition in New TIA and Minor Ischemic Stroke (POINT) Trials

Yuesong Pan, PhD; Jordan J. Elm, PhD; Hao Li, PhD; J. Donald Easton, MD; Yilong Wang, MD, PhD; Mary Farrant, RN, MBA; Xia Meng, MD, PhD; Anthony S. Kim, MD; Xingquan Zhao, MD, PhD; William J. Meurer, MD, MS; Liping Liu, MD, PhD; Dennis Dietrich, MD; Yongjun Wang, MD; S. Claiborne Johnston, MD, PhD

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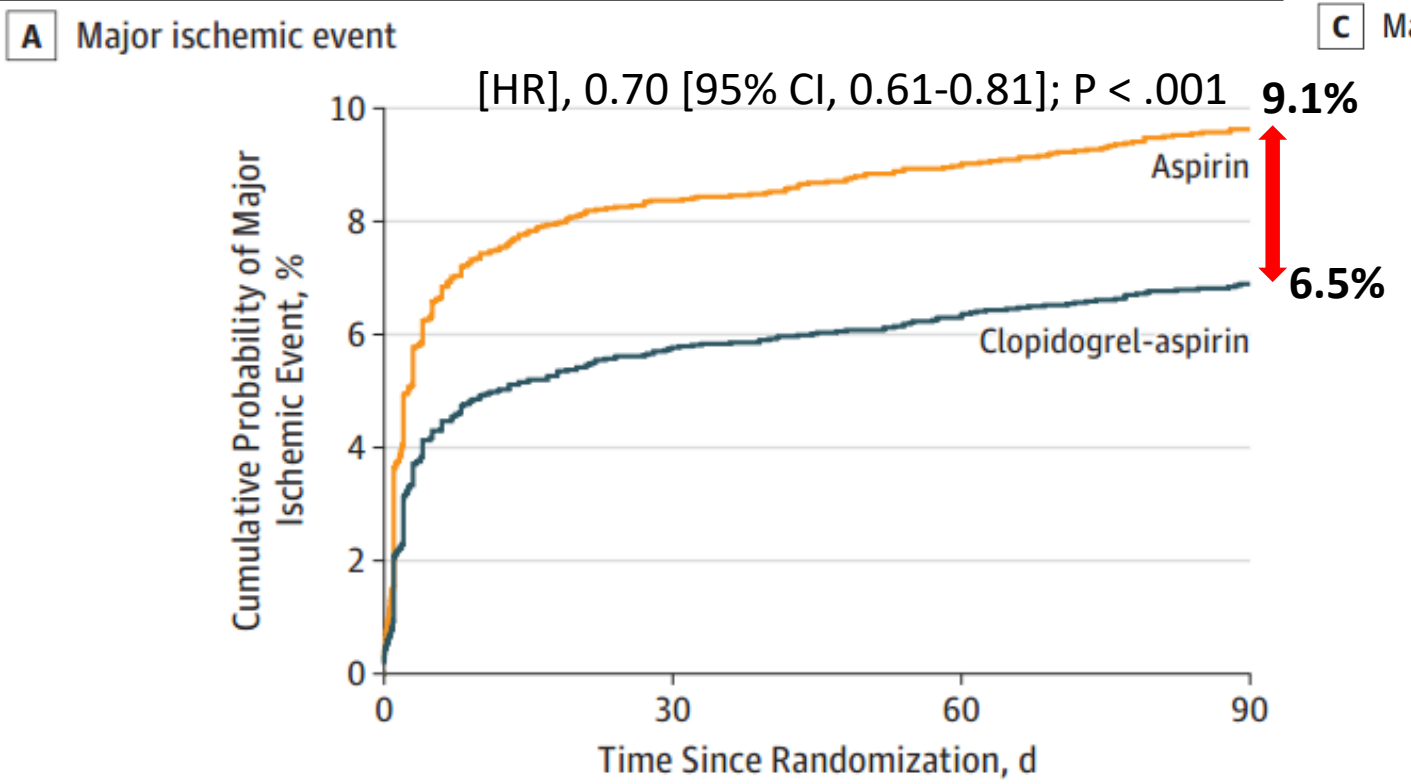
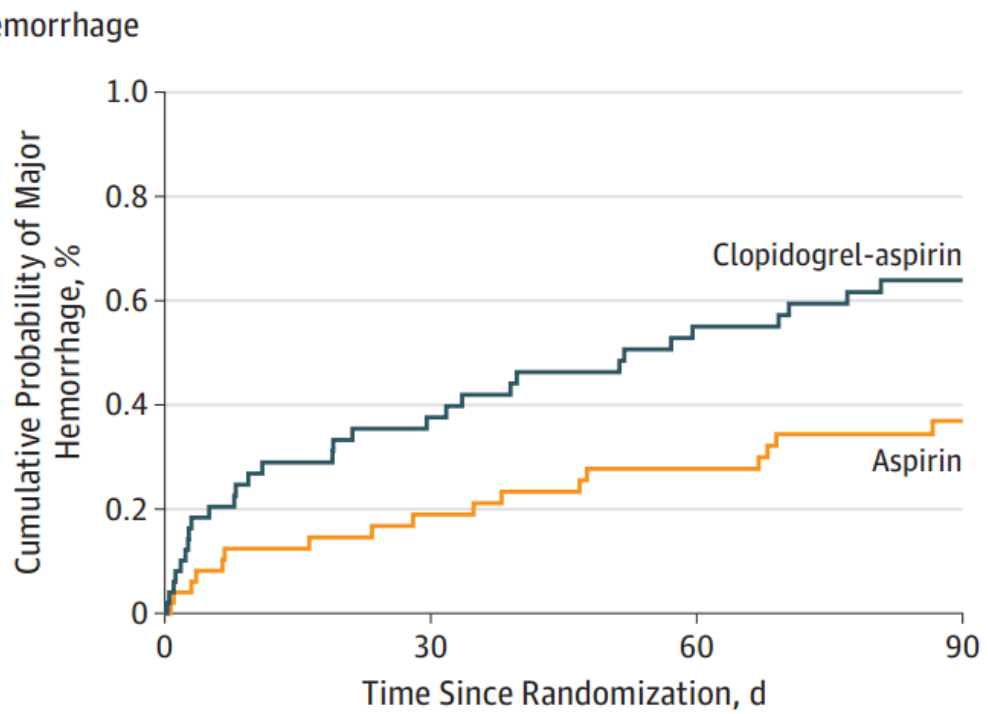
JAMA Neurol 2019

NIHSS≤ 3 ou TIA avec ABCD2 score≥4

10 051 patients: 5016 clopidogrel-aspirine et 5035 aspirine
Age median: 63.2 ans
CPJ: Infarctus cérébral, IDM ou mort d'origine vasculaire





En faveur de l'association sans excès significatif d'hémorragies majeures

JAMA Neurology | Original Investigation

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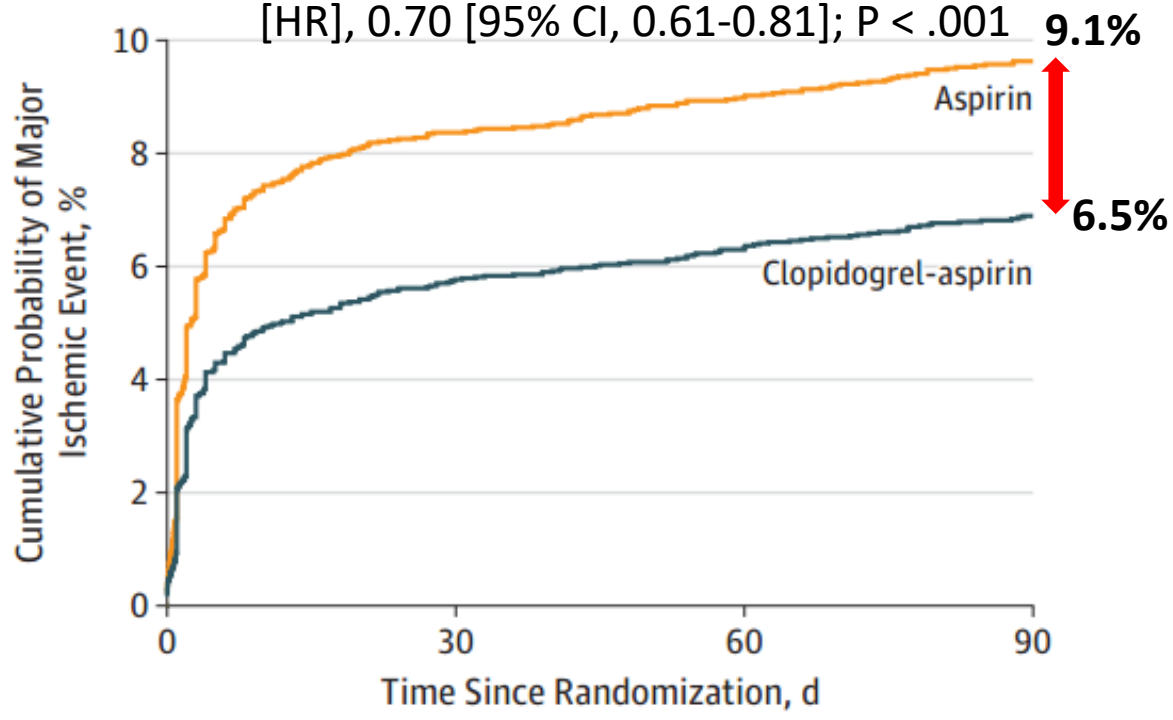
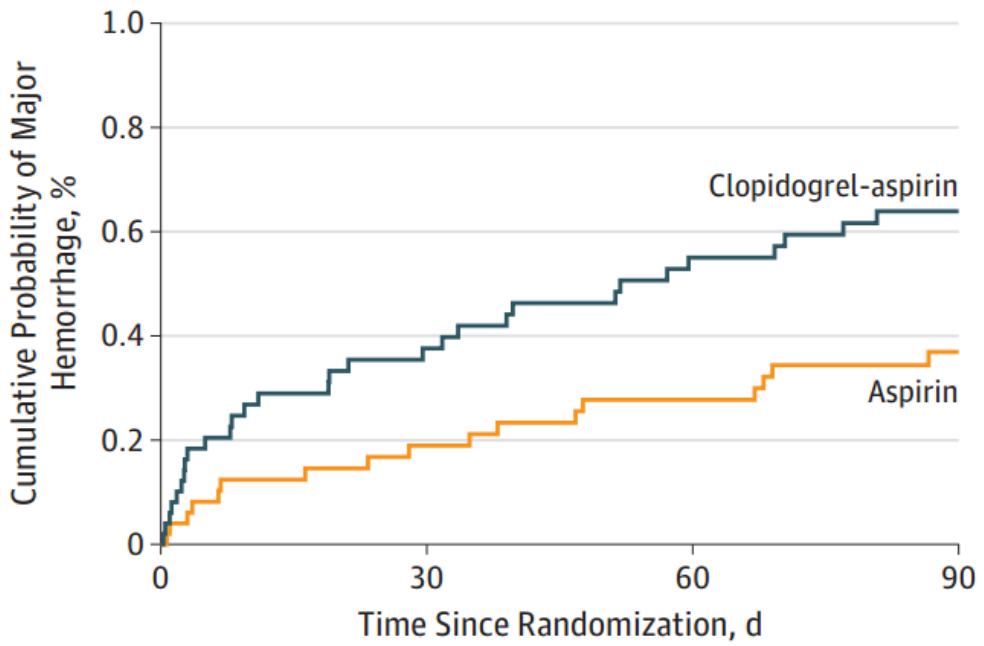
A Major ischemic event

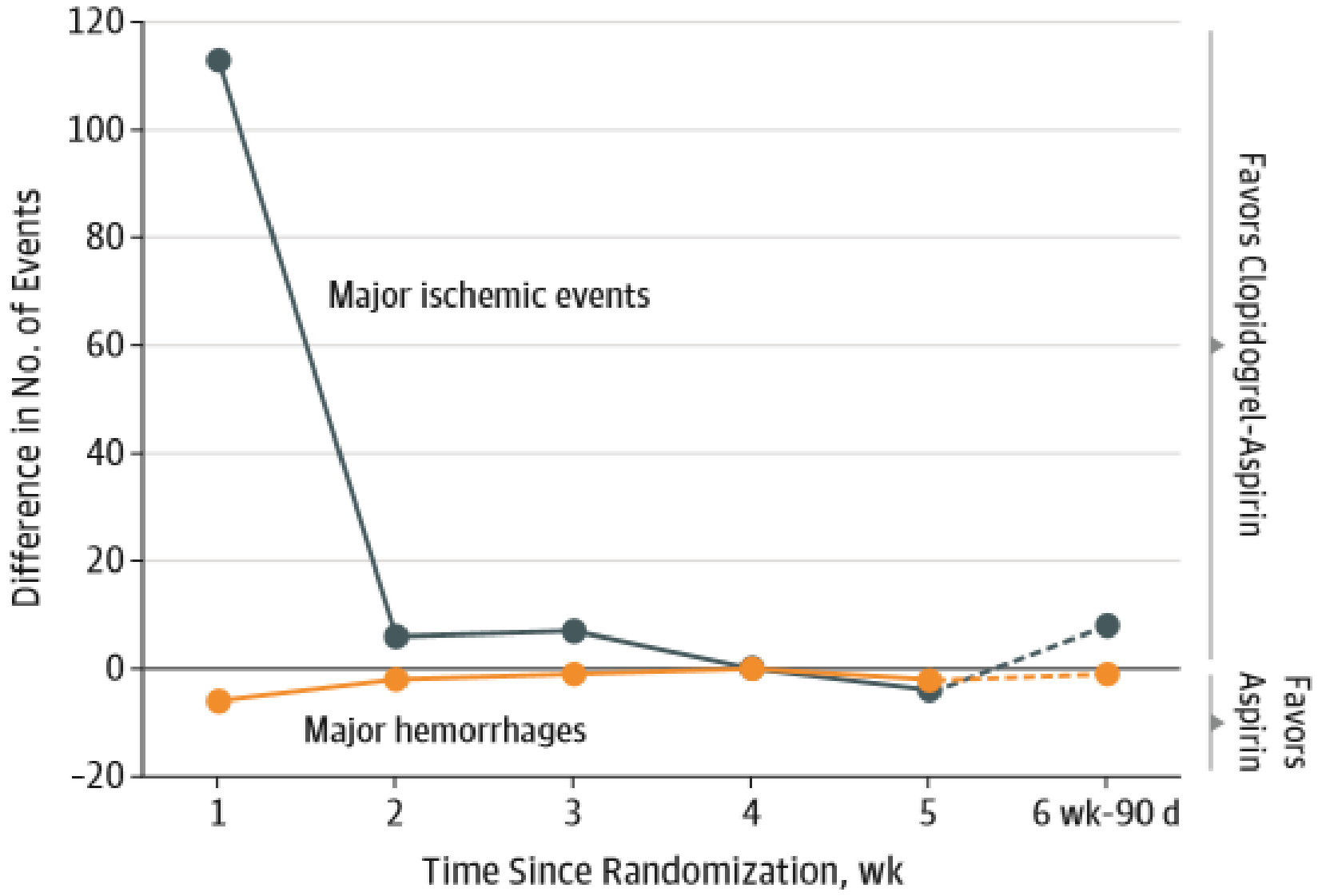


C Major hemorrhage



Characteristic	Total (n=10051)	Aspirin (n=5035)	Clopidogrel-aspirin (n=5016)	p value
Age (yr), median (IQR)	63.2(55.0-72.9)	63.0(55.0-72.7)	63.6(55.0-73.0)	0.16

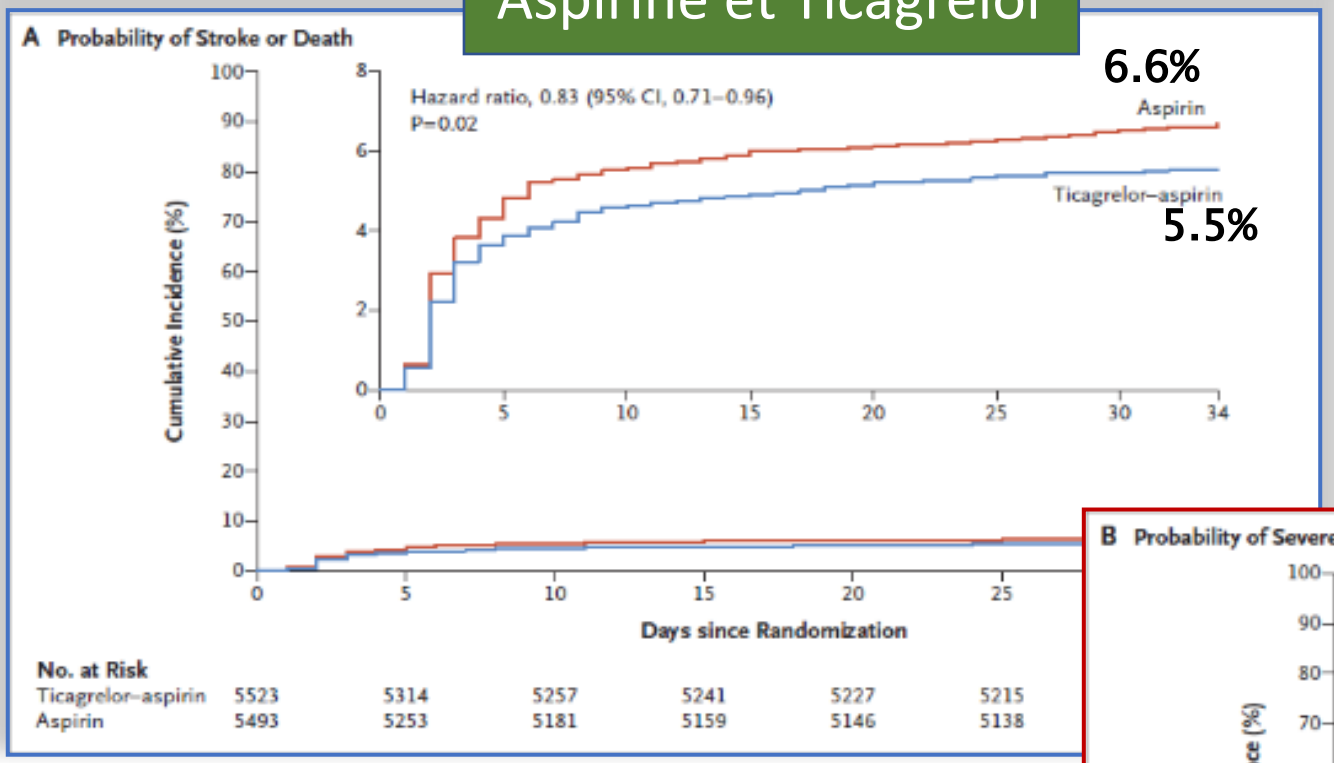
Figure 2. Difference in Number of Events by Week



Supériorité dans les 21 jours 5.2% vs 7.8% HR, 0.66 [95% CI, 0.56-0.77]; P < .001), mais pas entre 22 et 90 jours

THALES

Aspirine et Ticagrelor



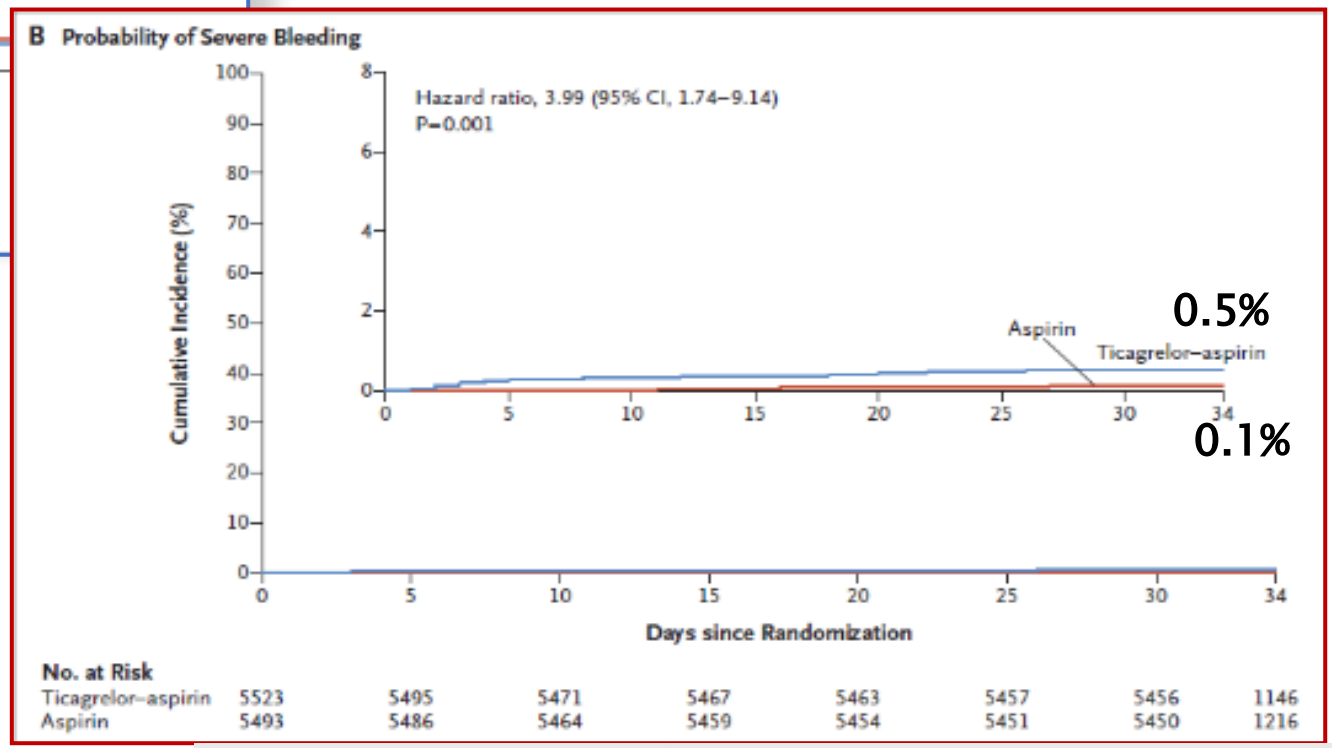
The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JULY 16, 2020 VOL. 383 NO. 3

Ticagrelor and Aspirin or Aspirin Alone in Acute Ischemic Stroke or TIA

S. Claiborne Johnston, M.D., Ph.D., Pierre Amarenco, M.D., Hans Denison, M.D., Ph.D., Scott R. Evans, Ph.D., Anders Himmelmann, M.D., Ph.D., Stefan James, M.D., Ph.D., Mikael Knutsson, Ph.D., Per Ladenvall, M.D., Ph.D., Carlos A. Molina, M.D., Ph.D., and Yongjun Wang, M.D., for the THALES Investigators*

➔ **92** patients traités pour éviter 1 AVC (ou décès)



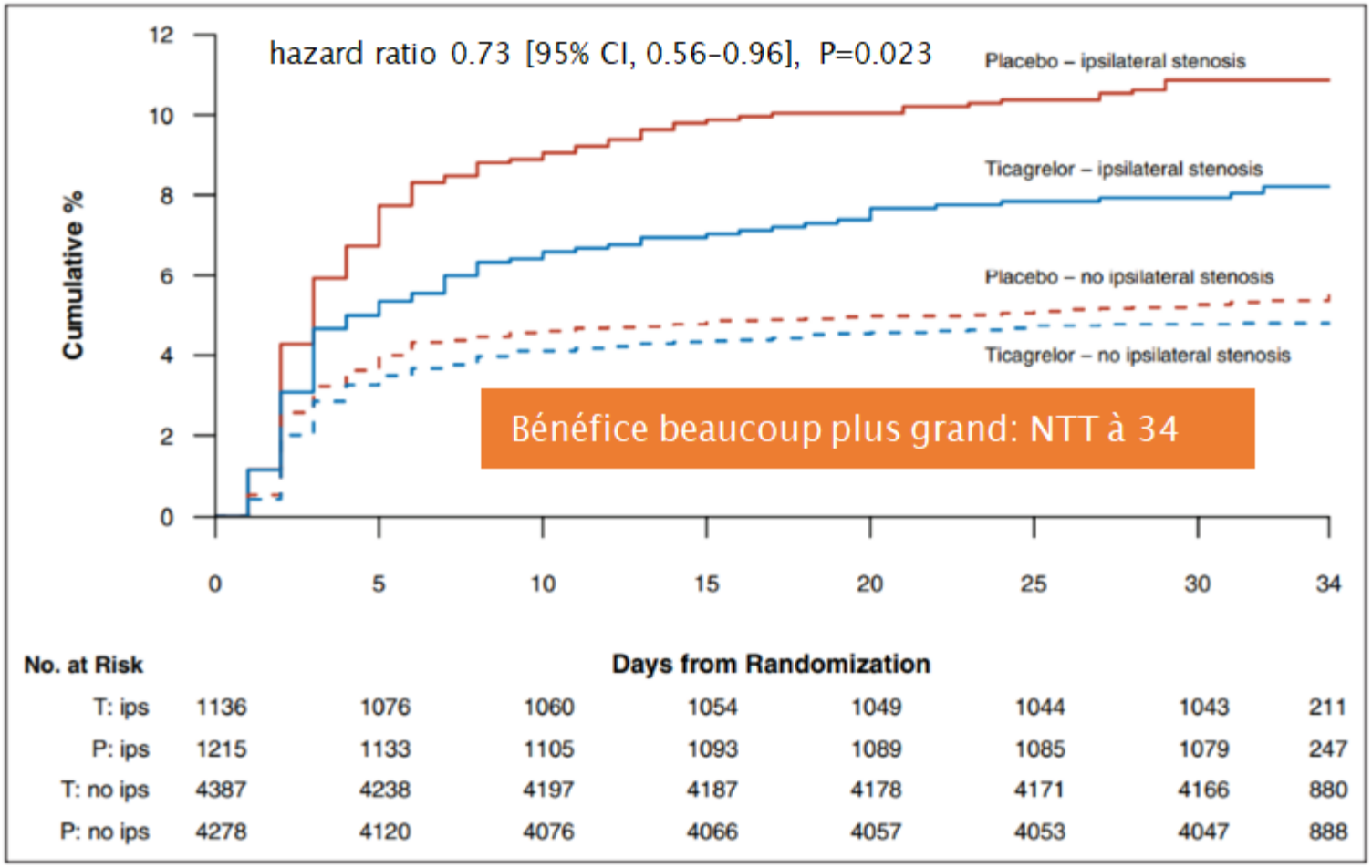
AIT à haut risques **ABCD2 score≥6**
AIC mineurs **NIHSS≤ 5**
Initiation: ≤24h
Durée: 1 mois
DAPT: **Aspirine + Ticagrelor**
Outcome: 30jours
n= 11,1016 patients

Johnston SC et *al.* **NEJM**, 2020

➔ **263** patients traités pour 1 hémorragie sévère

THALES

Aspirine et Ticagrelor



10.9%

8.1%

Sous-groupe: Athérome

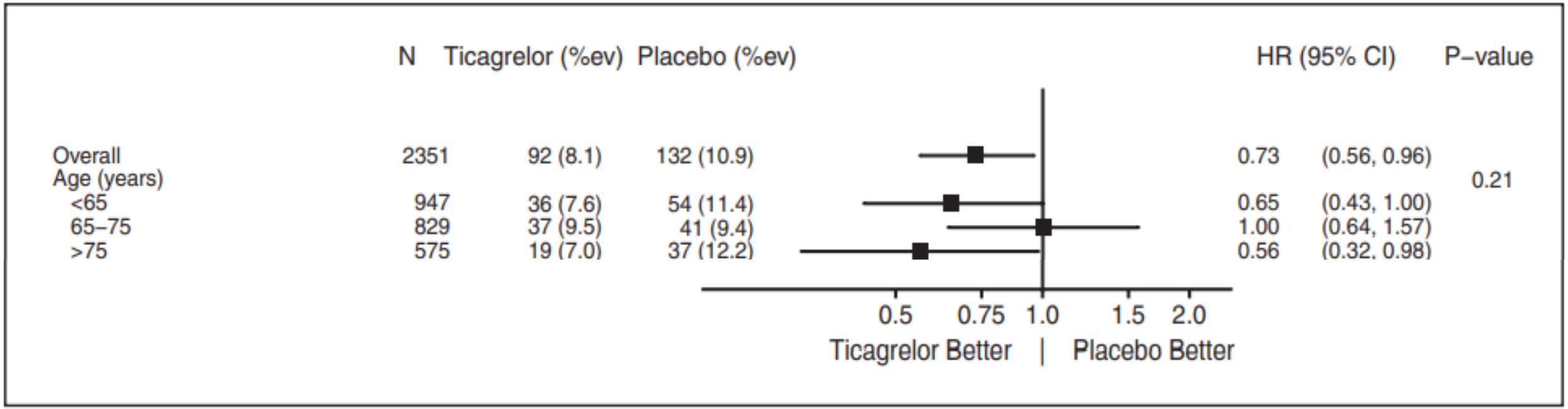
(21.3%) avec Sténose ≥ 30% ipsilatérale

- **92 → 34 patients traités pour éviter 1 AVC (ou décès)**
- **263 → 953 patients traités pour 1 hémorragie sévère**

Sans excès significatif de complications hémorragiques majeures

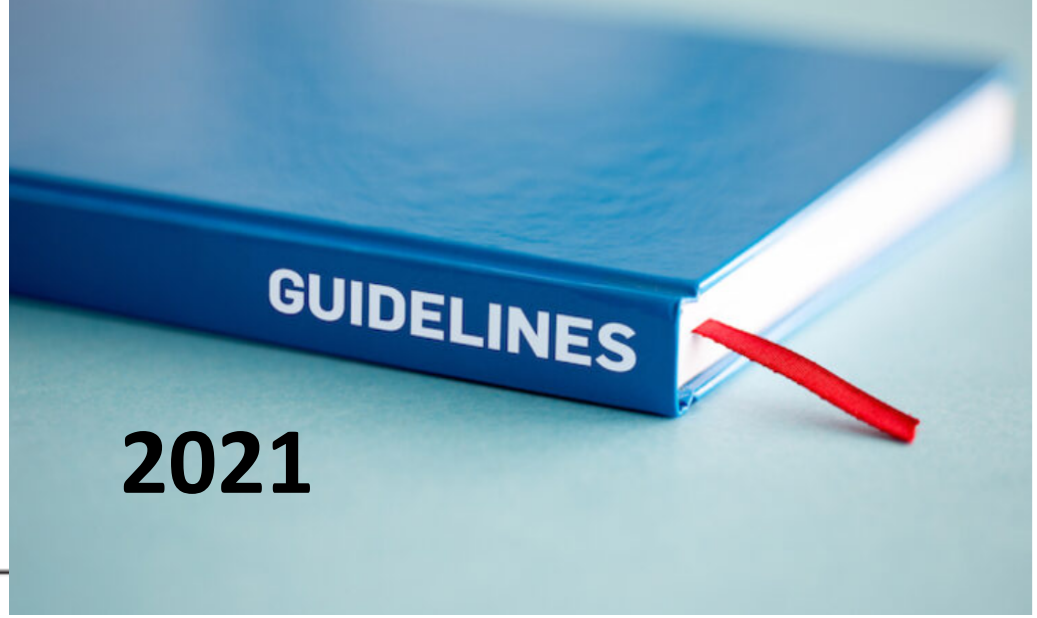
0.4% versus 0.2% respectivement (P=NS)

Amarenco et al. Stroke 2020



Amarenco et al. Stroke 2020

Aspirine et Clopidogrel



Aspirine et Ticagrelor

Recommendation 1

In people with a non-cardioembolic minor ischaemic stroke (NIHSS score of 3 or less) or high-risk TIA (ABCD2 score of 4 or more) in the past 24 hours, we recommend 21-days of dual antiplatelet therapy with aspirin and clopidogrel, followed by antiplatelet monotherapy thereafter.

Quality of evidence: High ⊕⊕⊕⊕

Strength of recommendation: Strong for intervention ↑↑

Dawson and al. Eur Stroke J. 2021

ESO EUROPEAN STROKE ORGANISATION

Recommendation 2

In people with non-cardioembolic mild to moderate ischaemic stroke (NIHSS of 5 or less) or high-risk TIA (ABCD2 score of 6 or more or other high-risk features*) in the past 24 hours, we suggest 30-days of dual antiplatelet therapy with aspirin and ticagrelor followed by antiplatelet monotherapy thereafter.

*defined as either intracranial atherosclerotic disease or at least 50% stenosis in an internal carotid artery that could account for the presentation.

Quality of evidence: Moderate ⊕⊕⊕

Strength of recommendation: Weak for intervention ↑?

Guidelines

EUROPEAN STROKE JOURNAL

European Stroke Journal
2016, Vol. 1(1) 6–19

DOI: 10.1177/2396987316628384
eso.sagepub.com
SAGE

European Stroke Organisation (ESO) guidelines for prophylaxis for venous thromboembolism in immobile patients with acute ischaemic stroke

Méta-analyse d'essais randomisés et revues systématiques:

- Bas de contention: CLOTS 3 $_{n=2867}$ +2 smaller trials
- Compression pneumatique intermittente: 1 very large trial (n=14 578), 4 small trials of UFH, 8 small trials of LMWHs or heparinoids, and 1 trial of a heparinoid
- Anticoagulation prophylactique par HBPM ou HNF (5000X2 ou X3/J): 1 large trial (N=1762) and 2 smaller trials comparing LMWH with UFH and 4 small trials comparing heparinoids with UFH.

Chez des patients immobile après un AVC ischémique

Critères d'évaluation: Réduction du risque Thromboembolique et complications hémorragiques

Outcome	No. of RCTs	Events/Patients (%)		Absolute diff (%)	Heterogeneity		Treatment effect OR < 1.0 indicates benefit		
Graduated compression stockings		GCS	Control		I^2	p	Odds ratio	95% CI	p
Death or dependency at final follow up	1	865/1256 (68.9)	888/1262 (70.4)	−1.5	n/a		0.93	0.79–1.10	0.41
Death in treatment period	2	131/1321 (9.9)	114/1294 (8.8)	+1.1	0	1.0	1.13	0.87–1.47	0.39
Pulmonary emboli in treatment period	2	13/1321 (1.0)	20/1294 (1.6)	−0.6	n/a		0.65	0.33–1.30	0.23
DVT in treatment period	2	206/1321 (15.6)	228/1294 (17.6)	−2.0	79	0.03	0.88	0.72–1.08	0.23
Skin breaks in treatment period	1	64/1256 (5.1)	16/1262 (1.3)	+3.8	n/a		3.47	2.22–5.41	<0.001

Outcome	No. of RCTs	Events/Patients (%)		Absolute diff (%)	Heterogeneity		Treatment effect OR < 1.0 indicates benefit		
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Skin breaks in treatment period	1	64/1256 (5.1)	16/1262 (1.3)	+3.8	n/a		3.47	2.22–5.41	<0.001
Intermittent pneumatic compression		IPC	Control						
Death or dependency at final follow up	1	1126/1428 (78.9)	1127/1428 (78.9)	0	n/a		1.00	0.83–1.19	0.96
Death in treatment period	3	167/1502 (11.1)	199/1500 (13.3)	−2.2	21	0.28	0.82	0.66–1.02	0.07
Survival to 6 months	1	n/a	n/a	−2.8[a]	n/a		HR = 0.86	0.74–0.99	0.042
Pulmonary emboli in treatment period	1	29/1428 (2.0)	35/1428 (2.5)	−0.5			0.83	0.50–1.35	0.45
Symptomatic DVT in treatment period	2	67/1489 (4.5)	90/1487 (6.1)	−1.6	23	0.25	0.73	0.53–1.01	0.06
Any DVT (including asymptomatic) in treatment period	3	240/1500 (16.0)	310/1502 (20.6)	−4.6	0	0.48	0.73	0.61–0.88	<0.001
Skin breaks in treatment period	1	44/1428 (3.1)	20/1428 (1.4)	+1.7	n/a		2.15	1.31–3.53	0.002

Low dose anticoagulation		Anticoagulant	Control						
Death or dependency at final follow up	6	3281/5363 (61.2)	6300/10,197 (61.8)	−0.6	30	0.21	1.00	0.93–1.07	0.97
Death in treatment period	11	464/5234 (8.9)	934/10,075 (9.3)	−0.6	29	0.18	0.95	0.85–1.07	0.41
Intracranial haemorrhage in treatment period	9	49/5434 (0.9)	50/10,254 (0.5)	+0.4	0	0.76	1.68	1.11–2.55	0.01
Pulmonary emboli in treatment period	10	41/5501 (0.7)	102/10,322 (1.0)	−0.3	22	0.26	0.69	0.49–0.98	0.04
Significant extracranial bleed	9	31/5798 (O.5)	38/10,029 (0.40)	+0.1	0	0.74	1.65	1.0–2.72	0.05
Any DVT (including asymptomatic) in treatment period	9	66/392 (16.8)	195/393 (49.6)	−32.8	66	0.21	0.21	0.15–0.29	<0.001

Low dose anticoagulation		Anticoagulant	Control						
Death or dependency at final follow up	6	3281/5363 (61.2)	6300/10,197 (61.8)	−0.6	30	0.21	1.00	0.93–1.07	0.97
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Pulmonary emboli in treatment period	10	41/5501 (0.7)	102/10,322 (1.0)	−0.3	22	0.26	0.69	0.49–0.98	0.04
Significant extracranial bleed	9	31/5798 (O.5)	38/10,029 (0.40)	+0.1	0	0.74	1.65	1.0–2.72	0.05
Any DVT (including asymptomatic) in treatment period	9	66/392 (16.8)	195/393 (49.6)	−32.8	66	0.21	0.21	0.15–0.29	<0.001
		LMWH /Heparinoid	UFH						
Death or dependency at final follow up	1	450/876 (51.4)	437/870 ((50.2)	+1.2	n/a		1.05	0.87–1.26	0.63
Death in treatment period	7	193/1570 (12.3)	174/1442 (12.1)	+0.2	0	0.51	1.0	0.80–1.25	0.98
Intracranial haemorrhage in treatment period	7	13/1570 (0.8)	15/1442 (1.0)	−0.2	0	0.96	0.78	0.37–1.66	0.52
Pulmonary emboli in treatment period	6	8/686 (1.1)	12/564 (2.1)	−1.0	0	0.69	0.57	0.23–1.41	0.23
Significant extracranial bleed	7	12/1570 (0.8)	2/1442 (0.1)	+0.7	0	0.55	3.79	1.30–11.06	0.01
Any DVT (including asymptomatic) in treatment period	7	140/1352 (10.3)	206/1233 (16.7)	−6.4	0	0.52	0.55	0.44–0.70	<0.001

AHA/ASA Guideline

Stroke. 2019 Dec;50(12):3331-3332

4.9. Deep Vein Thrombosis Prophylaxis	COR	LOE	New, Revised, or Unchanged
1. In immobile stroke patients without contraindications, intermittent pneumatic compression (IPC) in addition to routine care (aspirin and hydration) is recommended over routine care to reduce the risk of deep vein thrombosis (DVT).	I	B-R	Recommendation revised from 2016 Rehab Guidelines.
	Benefit >>> Risk		
2. The benefit of prophylactic-dose subcutaneous heparin (unfractionated heparin [UFH] or LMWH) in patients with AIS is not well established.	IIb	A	New recommendation.
3. When prophylactic anticoagulation is used, the benefit of prophylactic-dose LMWH over prophylactic-dose UFH is uncertain. *	IIb	B-R	New recommendation.
	Benefit ≥ Risk		
* should be weighed against the higher risk of extracranial bleeding, higher drug costs and risks in elderly patients with poor renal function associated with LMWH and heparinoids.			
4. In ischemic stroke, elastic compression stockings should not be used.	III: Harm	B-R	Recommendation wording modified from 2016 Rehab Guidelines to match COR III stratifications. COR and LOE amended to conform with ACC/AHA 2015 Recommendation Classification System.

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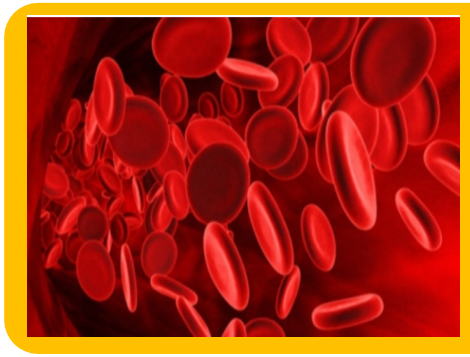
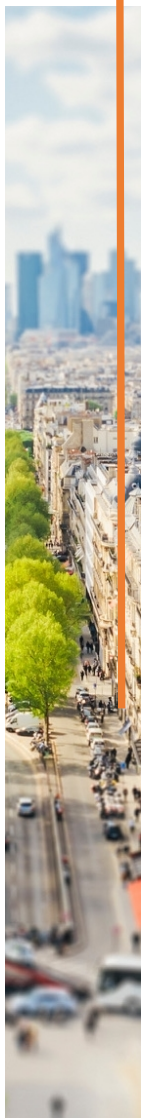


Anti-Thrombotique

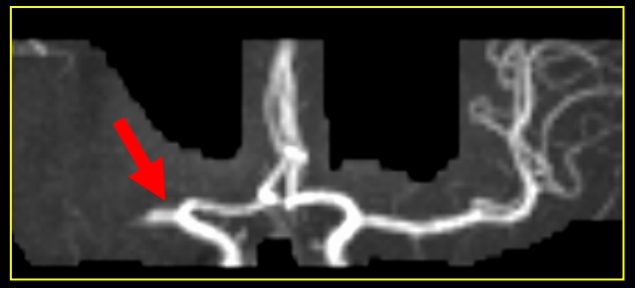
Contrôle des ACSOS

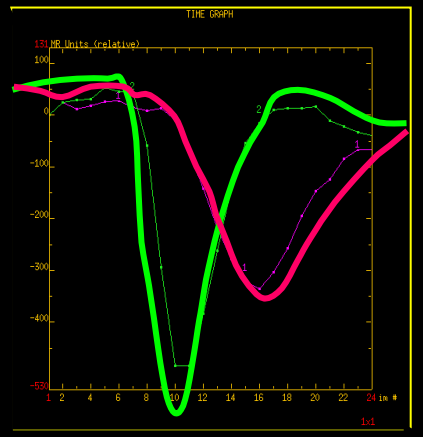
Positionnement



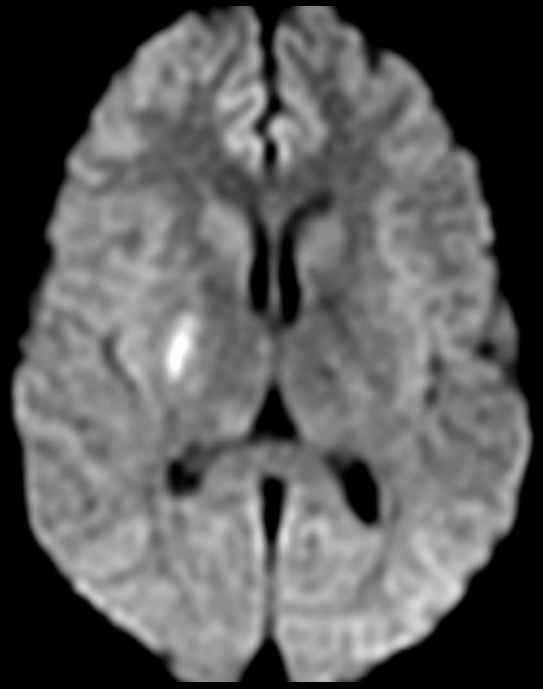

97
82/60
99
HR/ECG
Art
SpO2
1/min
mmHg sys/dia
%
79
152/79
95
HR/ECG
Art
SpO2
1/min
mmHg sys/dia
%
64
93/55

H2

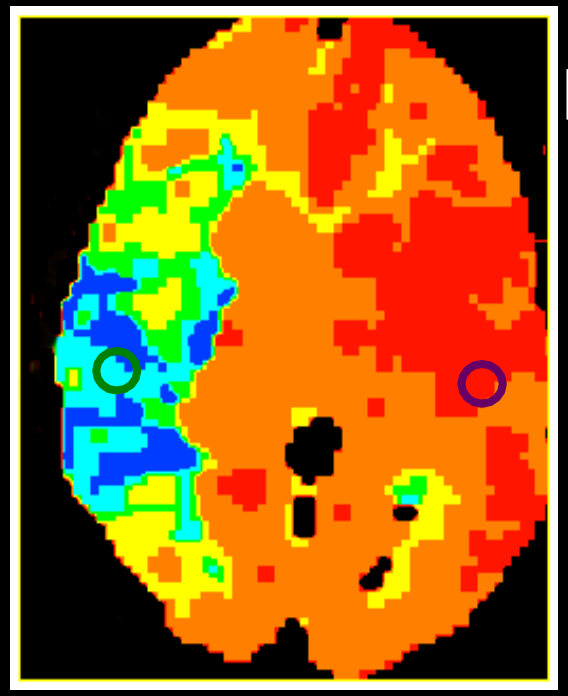




NIHSS à 16

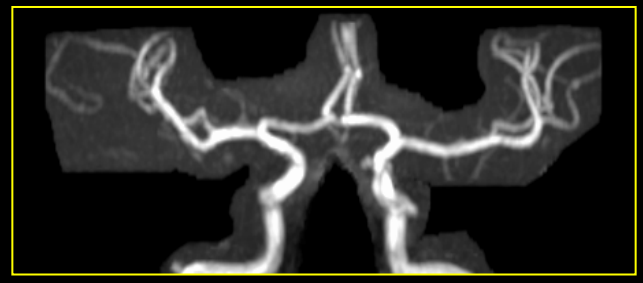


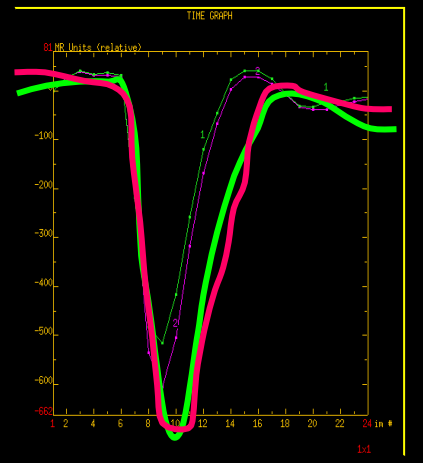
Diffusion



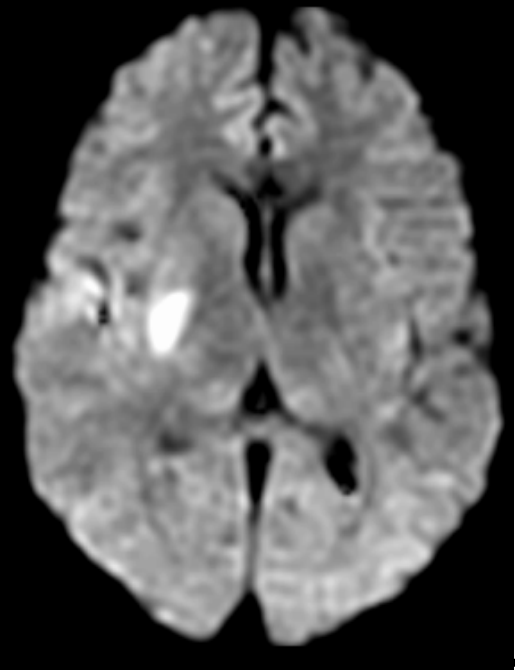
Perfusion

H20

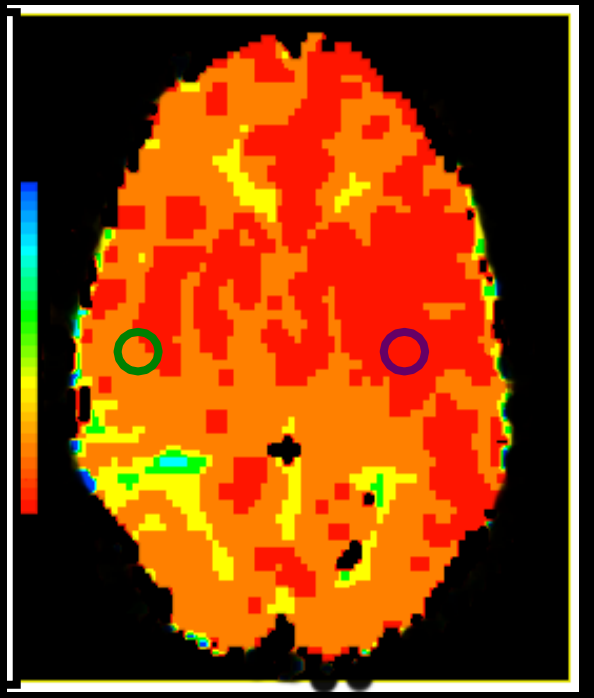




NIHSS à 2



Diffusion



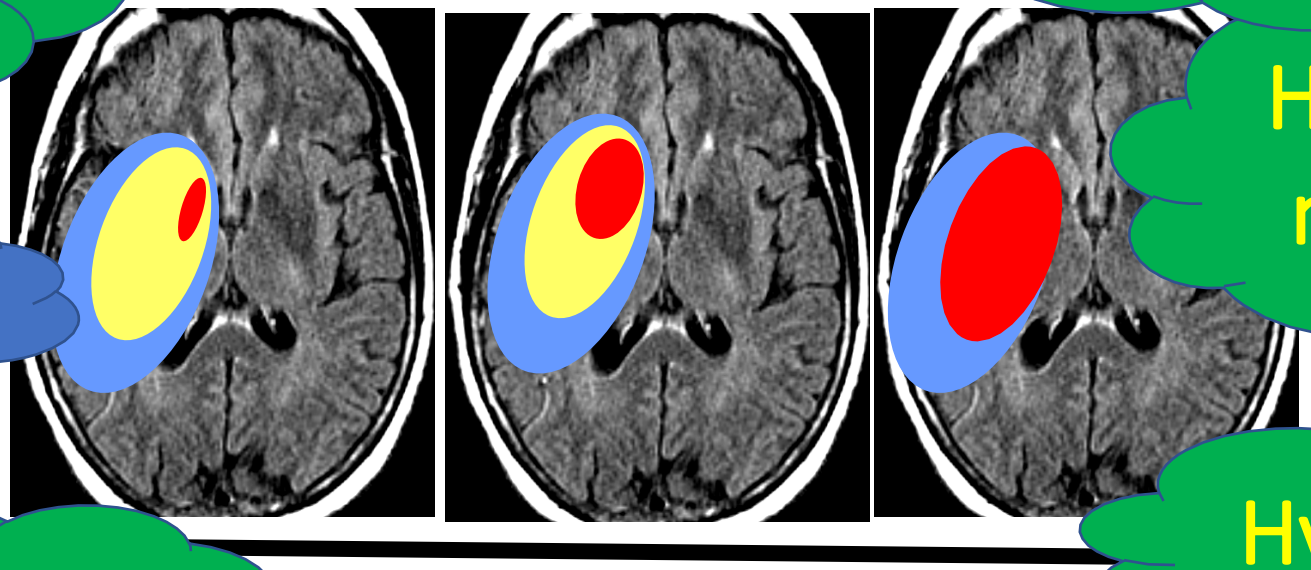
Perfusion

Les facteurs aggravants la progression de la pénombre en infarctus

Hypoxémie

Hypotension artérielle

Ventilation



Hypertension artérielle

Hyperglycémie

Hyperthermie

Œdème cérébral

		COR	LOE	New, Revised, or Unchanged
Oxygenation	Supplemental oxygen should be provided to maintain oxygen saturation >94%.	I	C-LD	Recommendation and COR unchanged from 2013 AIS Guidelines. LOE amended to conform with ACC/AHA 2015 Recommendation Classification System.
Temperature	Sources of hyperthermia (temperature >38°C) should be identified and treated, and antipyretic medications should be administered to lower temperature in hyperthermic patients with stroke.	I	C-LD	Recommendation and COR unchanged from 2013 AIS Guidelines. LOE amended to conform with ACC/AHA 2015 Recommendation Classification System.
Blood Glucose	Hypoglycemia (blood glucose <60 mg/dL) should be treated in patients with AIS.	I	C-LD	Recommendation and COR unchanged from 2013 AIS Guidelines. LOE amended to conform with ACC/AHA 2015 Recommendation Classification System.
	Evidence indicates that persistent in-hospital hyperglycemia during the first 24 hours after AIS is associated with worse outcomes than normoglycemia, and thus, it is reasonable to treat hyperglycemia to achieve blood glucose levels in a range of 140 to 180 mg/dL and to closely monitor to prevent hypoglycemia in patients with AIS.	IIa	C-LD	Recommendation and COR unchanged from 2013 AIS Guidelines. LOE amended to conform with ACC/AHA 2015 Recommendation Classification System.

Guidelines AHA-ASA. Stroke. 2019 Dec;50(12):3331-3332

Blood Pressure	. In patients with BP ≥220/120 mm Hg who did not receive IV alteplase or mechanical thrombectomy and have no comorbid conditions requiring urgent antihypertensive treatment, the benefit of initiating or reinitiating treatment of hypertension within the first 48 to 72 hours is uncertain. It might be reasonable to lower BP by 15% during the first 24 hours after onset of stroke.	IIb	C-EO	New recommendation.
	. In patients with BP <220/120 mm Hg who did not receive IV alteplase or nechanical thrombectomy and do not have a comorbid condition requiring rgent antihypertensive treatment, initiating or reinitiating treatment of ypertension within the first 48 to 72 hours after an AIS is not effective to revent death or dependency.	III: No Benefit	A	Recommendation revised from 2013 AIS Guidelines.

Guidelines AHA-ASA. Stroke. 2019 Dec;50(12):3331-333

Blood Pressure

. In patients with BP ≥220/120 mm Hg who did not receive IV alteplase or mechanical thrombectomy and have no comorbid conditions requiring urgent antihypertensive treatment, the benefit of initiating or reinitiating treatment of hypertension within the first 48 to 72 hours is uncertain. It might be reasonable to lower BP by 15% during the first 24 hours after onset of stroke.	IIb	C-EO	New recommendation.
. In patients with BP <220/120 mm Hg who did not receive IV alteplase or mechanical thrombectomy and do not have a comorbid condition requiring urgent antihypertensive treatment, initiating or reinitiating treatment of hypertension within the first 48 to 72 hours after an AIS is not effective to prevent death or dependency.	III: No Benefit	A	Recommendation revised from 2013 AIS Guidelines.

Guidelines AHA-ASA. Stroke. 2019 Dec;50(12):3331-3332

Guideline

2021

EUROPEAN STROKE JOURNAL

European Stroke Organisation (ESO) guidelines on blood pressure management in acute ischaemic stroke and intracerebral haemorrhage

European Stroke Journal
2021, Vol. 6(2) X48–L89

DOI: 10.1177/23969873211012133
journals.sagepub.com/home/eso

Expert consensus statement

In patients with acute ischaemic stroke not treated with intravenous thrombolysis or mechanical thrombectomy and blood pressure >220/120 mm Hg, careful blood pressure reduction (<15% systolic blood pressure reduction in 24 hours) is reasonable and likely to be safe. No specific blood pressure lowering agent can be recommended. Vote 10 of 10.

Recommendations

In hospitalised patients with acute ischaemic stroke and blood pressure < 220/110 mm Hg not treated with intravenous thrombolysis or mechanical thrombectomy, we suggest against the routine use of blood pressure lowering agents at least in first 24 hours following symptom onset, unless this is necessary for a specific comorbid condition*.

Quality of evidence: Moderate⊕⊕⊕

Strength of recommendation: Weak ↓?

*encéphalopathie hypertensive, dissection aortique, défaillance rénal, OAP ou IDM.

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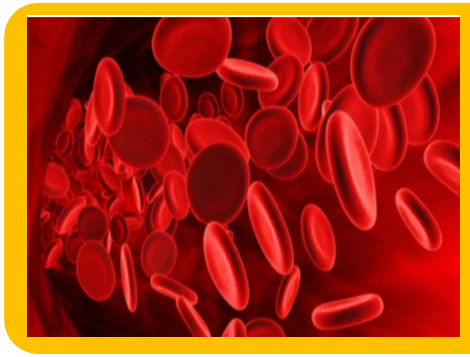

Anti-Thrombotique

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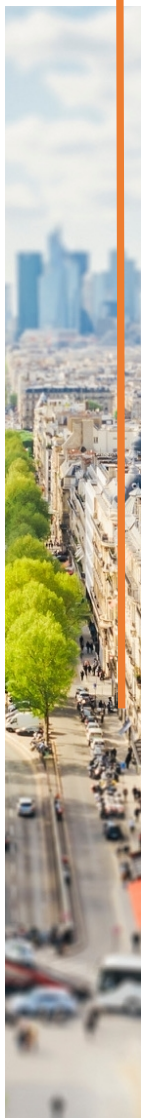
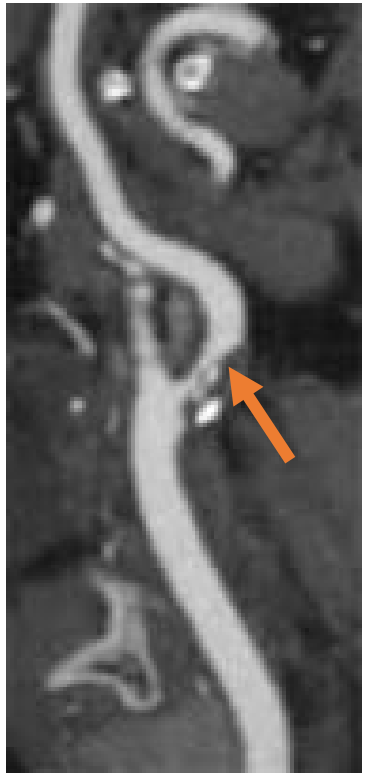


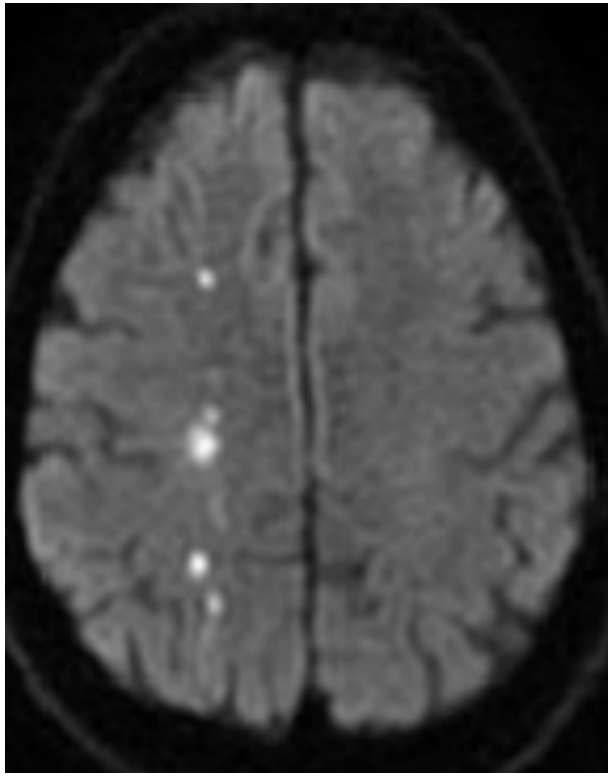
En absence de sténose intra/extra crânienne

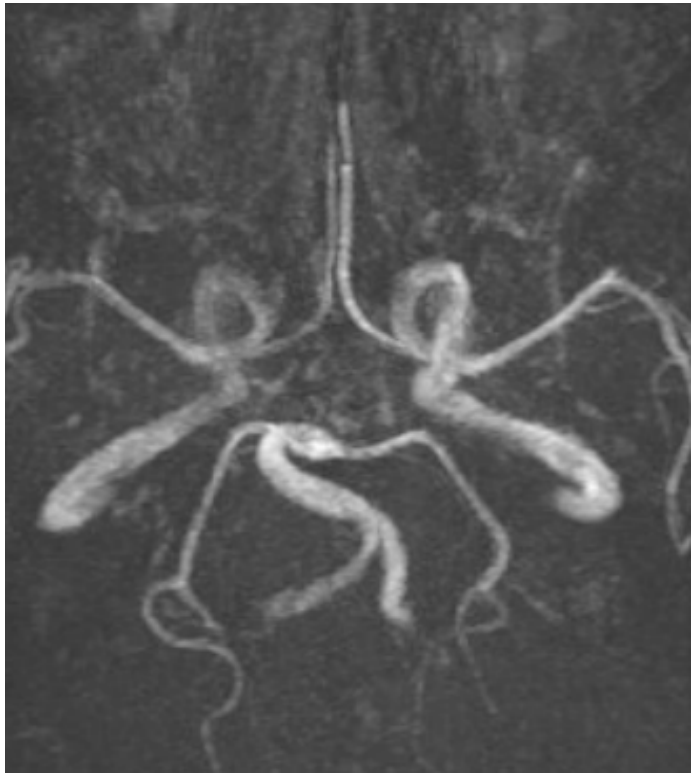
- Up and see!

Lors de sténose intra/extra crânienne

- Repos au lit







A plat strict ou 30° ?

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE 2017

Cluster-Randomized, Crossover Trial of Head Positioning in Acute Stroke

C.S. Anderson, H. Arima, P. Lavados, L. Billot, M.L. Hackett, V.V. Olavarría, P. Muñoz Venturelli, A. Brunser, B. Peng, L. Cui, L. Song, K. Rogers, S. Middleton, J.Y. Lim, D. Forshaw, C.E. Lightbody, M. Woodward, O. Pontes-Neto, H.A. De Silva, R.-T. Lin, T.-H. Lee, J.D. Pandian, G.E. Mead, T. Robins, and C. Watkins, for the HeadPoST Investigators and Coordinators

11,093 patients with acute stroke (85% of the strokes were ischemic)
Randomisé-contrôlé
Comparaison lying-flat position or a sitting-up position with the head elevated to at least 30 degrees for 24h
Median of 14h after
Primary outcome: mRks à 3 mois

Table 1. Characteristics of the 11,093 Patients with Acute Stroke at Baseline.*

Characteristic	Lying Flat (N=5295)	Sitting Up (N=5799)
Age — yr	67.8±13.9	68.1±13.7
Median NIHSS score (IQR)‡	4.0 (2.0–8.0)	4.0 (2.0–8.0)
Median time from stroke onset to intervention (IQR) — hr	14.0 (5.0–35.0)	14.0 (5.0–35.0)
Median time from hospital admission to intervention (IQR) — hr	7.0 (2.0–26.0)	7.0 (2.0–27.0)
Final diagnosis at time of hospital discharge — no. (%)§		
Condition mimicking stroke	232 (4.4)	319 (5.5)
Transient ischemic attack	106 (2.0)	106 (1.8)
Acute ischemic stroke	4532 (85.6)	4953 (85.4)
Large-artery occlusion due to substantial atheroma	1390 (30.7)	1558 (31.5)
Small-vessel or perforating arteriole lacunar disease	1352 (29.8)	1511 (30.6)
Cardioembolism	592 (13.1)	643 (13.0)
Other or uncertain cause	1195 (26.4)	1235 (25.3)
Primary intracerebral hemorrhage	420 (7.9)	511 (8.8)

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE 2017

Cluster-Randomized, Crossover Trial of Head Positioning in Acute Stroke

C.S. Anderson, H. Arima, P. Lavados, L. Billot, M.L. Hackett, V.V. Olavarría, P. Muñoz Venturelli, A. Brunser, B. Peng, L. Cui, L. Song, K. Rogers, S. Middleton, J.Y. Lim, D. Forshaw, C.E. Lightbody, M. Woodward, O. Pontes-Neto, H.A. De Silva, R.-T. Lin, T.-H. Lee, J.D. Pandian, G.E. Mead, T. Robinson, and C. Watkins, for the HeadPoST Investigators and Coordinators*

11,093 patients with acute stroke (85% of the strokes were ischemic)
Randomisé-contrôlé
Comparaison lying-flat position or a sitting-up position with the head elevated to at least 30 degrees for 24h
Median of 14h after
Primary outcome: mRks à 3 mois

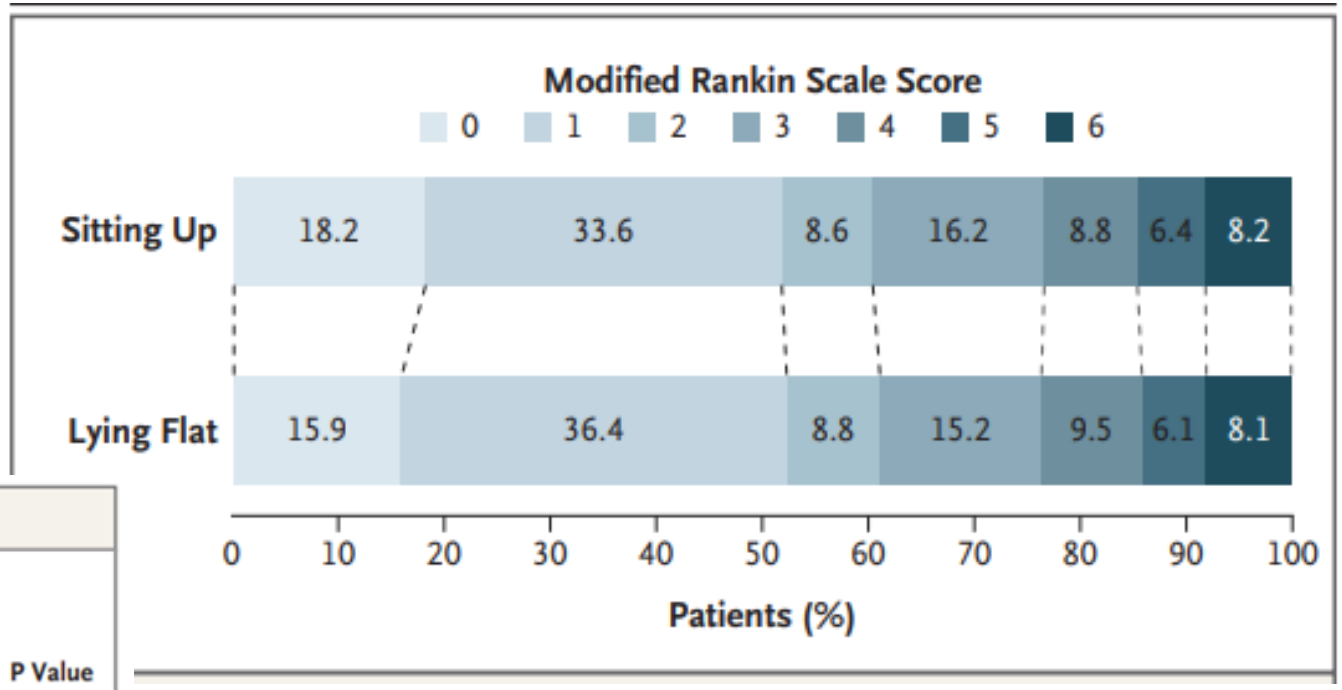


Table 2. (Continued.)

Outcome	Lying Flat (N=4676)	Sitting Up (N=5072)	Odds Ratio with Sitting Up as Reference (95% CI)	P Value
	no./total no. (%)			
Safety				
Patients with any serious adverse event	756/5295 (14.3)	784/5798 (13.5)	1.05 (0.91–1.20)‡	0.51
Patients with pneumonia	164/5295 (3.1)	198/5798 (3.4)	0.86 (0.68–1.08)‡	0.19

4.2 Head Positioning	COR	LOE	New, Revised, or Unchanged
1. The benefit of flat-head positioning early after hospitalization for stroke is uncertain.	IIb	B-R	New recommendation.

Benefit ≥ Risk

Guidelines AHA-ASA. Stroke. 2019 Dec;50(12):3331-3332

SOCIÉTÉ FRANÇAISE DE GÉRIATRIE & GÉRONTOLOGIE

Take Home Message

Prise en charge de l'AVC ischémique du patient âgé A la phase aigüe

❑ Anti Agrégation en phase aigue

- Double pour les AIT à haut risque de récidive et AIC mineur
  - ABCD2 ≥ 4 ou NIHSS ≤ 3 (aspirine + clopidogrel)
  - ou ABCD2>5 ou ATS>50% ou NIHSS≤5 (aspirine + ticagrelor)
  - Volontiers chez les patients avec sténose ipsilatérale ≥ 30% (Ticagrelor)
- Pendant une courte durée : Max 3 semaines, puis revenir à 1 AAP
- A administrer le plus tôt possible < 24 heures

❑ Prévention complications Thrombo-embolique veineuse (MTEV)

- Pas de bas de contention élastique
- Contention pneumatique intermittente en dehors de CI
- Antico préventive: moins de MTEV, plus de complications hémorragiques - HBPM>HNF?

❑ Contrôle des ACSOS

- Température: Objectif normothermie / Traiter ≥ 38°/ Pas d'hypothermie
- Glycémie: Recommander d'obtenir des glycémies entre 6-8 mmol/L
- Tension Artérielle: Ne traiter que si PAS > 220 ou PAD > 120 mm Hg, Baisse de 15% dans les 24H

❑ Positionnement patient

- Sténose /occlusion : Patient hémodynamique – Repos au lit
- Pour les autres: Up and see!