Nouveautés dans l'usage des NACOs
Lignes directrices de la société canadienne de cardiologie en matière de fibrillation auriculaire

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Université de Montréal

Objectifs

- Comparer les différents NACOs en fibrillation auriculaire.
- Revoir l'utilité et les dangers de l'AAS (en monothérapie ou en association).
- Connaitre l'utilité possible des NACOs en MCAS stable et maladie artérielle périphérique.

Canadian Cardiovascular Society Atrial Fibrillation Guidelines 2010: Implementing GRADE and Achieving Consensus

Gillis et al. Canadian Journal of Cardiology 2011;27:27-30

Focused 2012 Update of the Canadian Cardiovascular Society Atrial Fibrillation Guidelines: Recommendations for Stroke Prevention and Rate/Rhythm Control

Skanes et al. Canadian Journal of Cardiology 2012;28:125-36

2014 Focused Update of the Canadian Cardiovascular Society Guidelines for the Management of Atrial Fibrillation

Verma et al. Canadian Journal of Cardiology 2014;30:1114-30

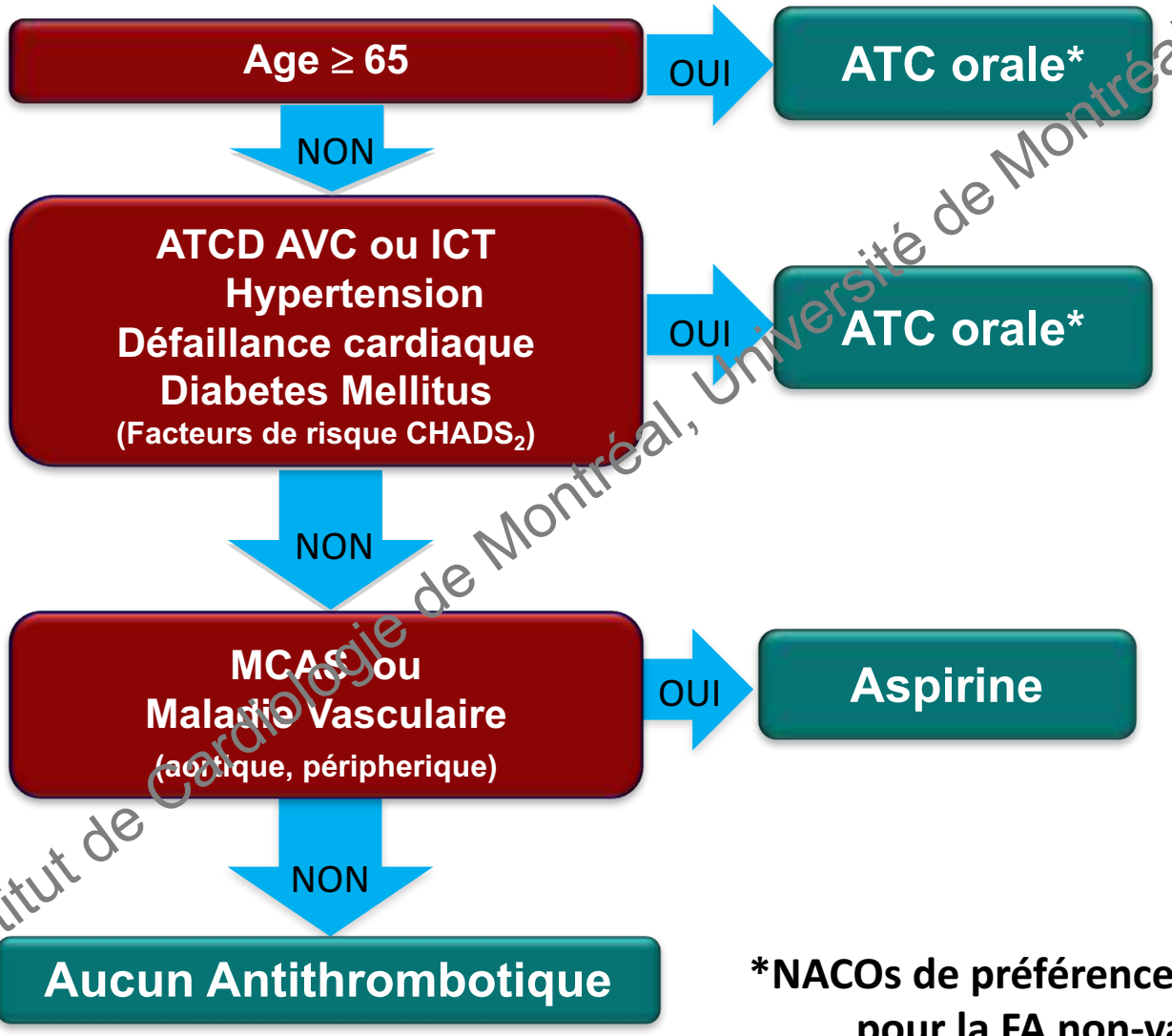
The 2014 Atrial Fibrillation Guidelines Companion: A Practical Approach to the Use of the Canadian Cardiovascular Society Guidelines

Macle et al. Canadian Journal of Cardiology 2015;31:1207-18

2016 Focused Update of the Canadian Cardiovascular Society Guidelines for the Management of Atrial Fibrillation

Macle et al. Canadian Journal of Cardiology 2016;32:1170-85

Algorithme CCS pour le traitement antithrombotique (CHADS65)



***NACOs de préférence au Coumadin pour la FA non-valvulaire**

Risque Thrombo-embolique: Scores $CHADS_2$ et CHA_2DS_2-VASc

Rates of Ischemic Stroke According to Both $CHADS_2$ and CHA_2DS_2-VASc Scores

Score $CHADS_2$	Risque annuel d'AVC
0	1.9 %
1	2.8 %
2	4.0 %
3	5.9 %
4	8.5 %
5	12.5 %
6	18.2 %

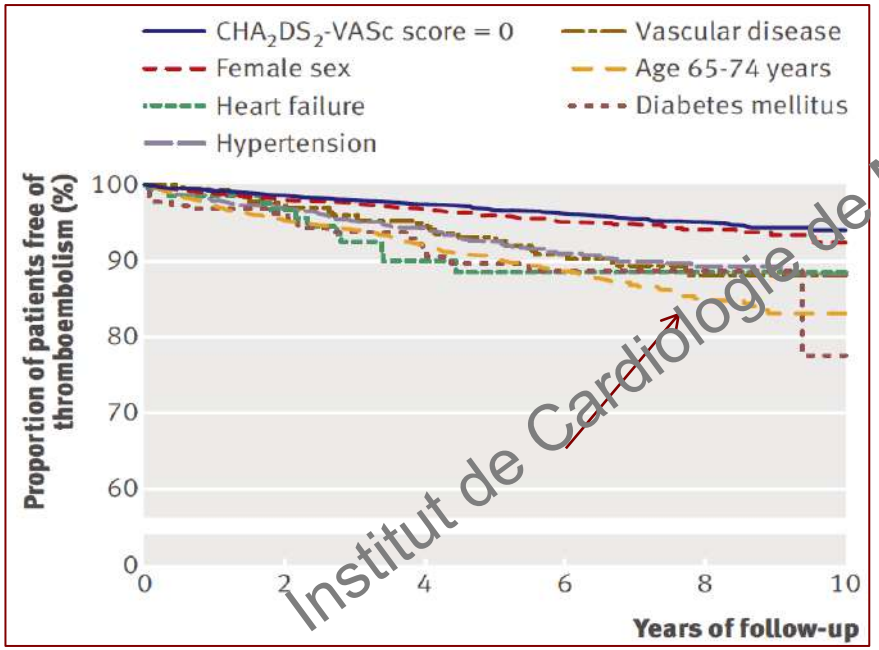
Gage et al. JAMA 2001; 285:2864-2870

Score	Adjusted stroke rate (%/year) based on CHA_2DS_2-VASc score
0	0
1	1.3
2	2.2
3	3.2
4	4.0
5	6.7
6	9.8
7	9.6
8	6.7
9	15.2

ESC 2012

Validation of risk stratification schemes for predicting stroke and thromboembolism in patients with AF: a nationwide cohort study

Cohorte Danoise; 73 538 patients, FA non-valvulaire, Non anticoagulés



Hospital admission and death due to thromboembolism (5yr Follow-up)

Risk factor	Annual risk	HR (95% CI)	P value
CHA_2DS_2-VASc = 0	0.69 %	1.0	
CHA_2DS_2-VASc = 1			
Heart Failure	2.35 %	3.39 (1.84-6.26)	<0.0001
Diabetes Mellitus	2.28 %	3.31 (2.00-5.46)	<0.0001
Hypertension	1.60 %	2.32 (1.75-3.07)	<0.0001
Age 65-74	2.13 %	3.07 (2.48-3.80)	<0.0001
Vascular disease	1.40 %	2.04 (1.29-3.22)	0.002
Female sex	0.86 %	1.25 (0.96-1.63)	0.10

Olesen et al BMJ 2011;342:124-33

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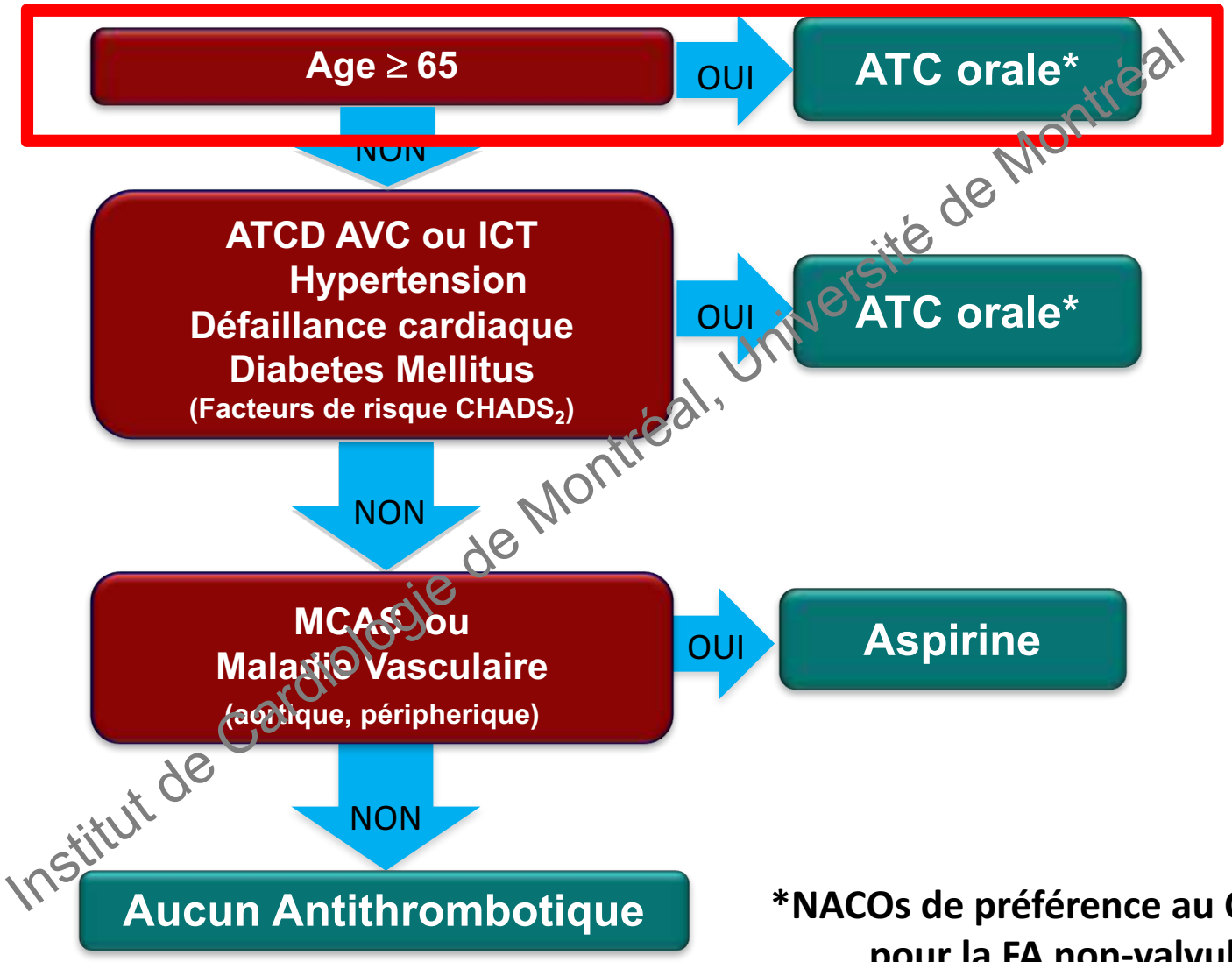

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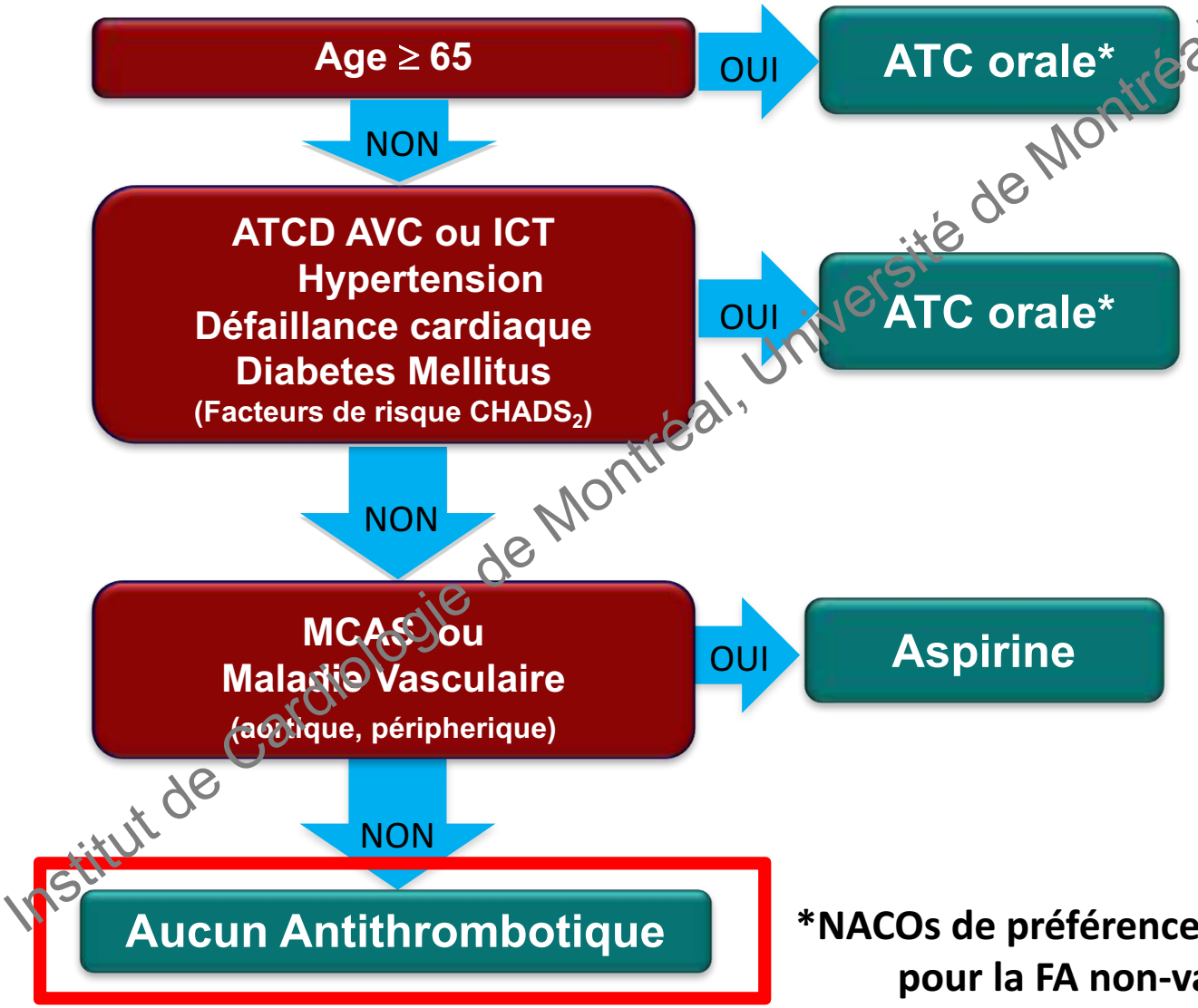
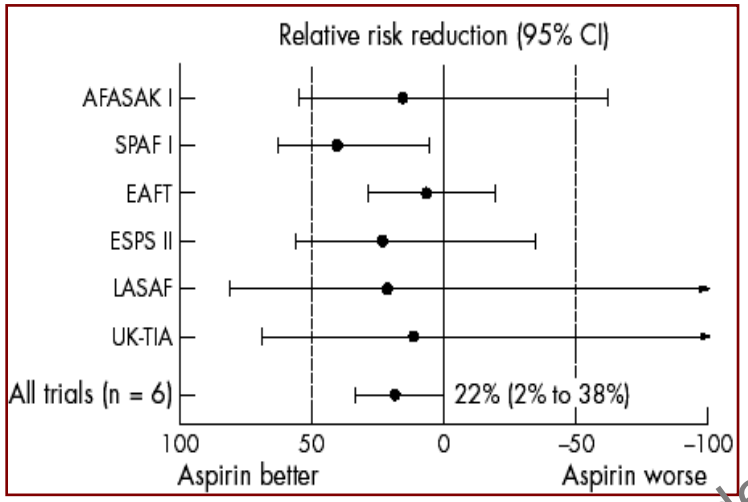
Algorithme CCS pour le traitement antithrombotique (CHADS65)



***NACOs de préférence au Coumadin pour la FA non-valvulaire**

Aspirine vs Aucun Traitement Antithrombotique

Méta-analyse
6 études, 3119 patients



Hart et al. Ann Int med 1999; 131:492-501

Registre Danois (132,372 pts)
Hazard Ratio vs. Warfarin

	HR Stroke	HR Bleeding
ASA	1.81 (1.73-1.90)	0.93 (0.89-0.97)
No Treatment	1.86 (1.78-1.95)	0.84 (0.81-0.88)

Adapted from Olesen et al
Thromb Haemost 2011;106:739-749

Registre Suédois (115 185 pts)

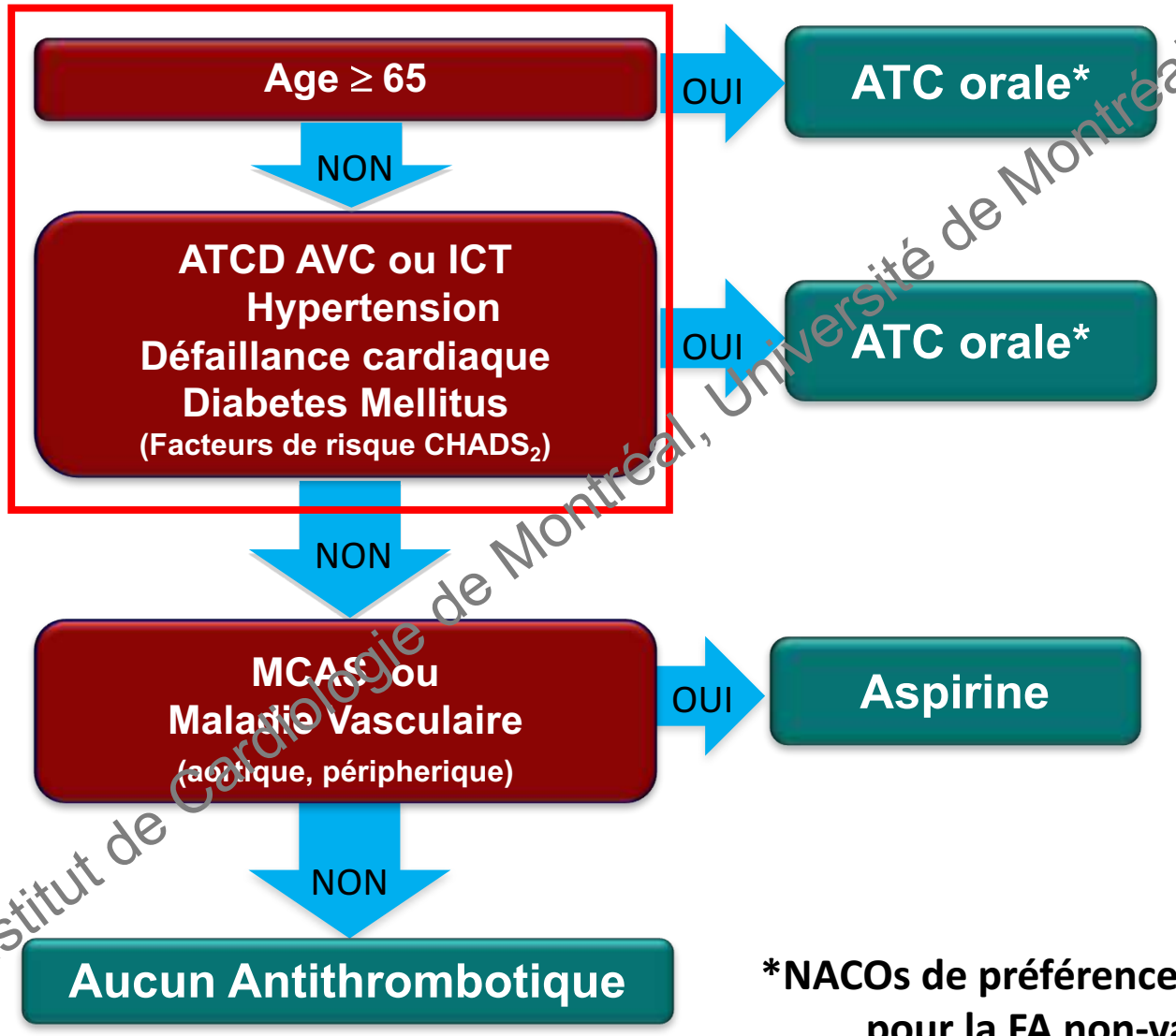
Annualized incidence (95% CI) of outcome events according to propensity score matching

	ASA	No antithrombotic treatment	P
Ischaemic stroke	7.37% (7.11–7.63)	6.61% (6.37–6.86)	<0.001
Thrombo-embolic event	10.60% (10.29–10.92)	9.53% (9.24–9.83)	<0.001

« Our results suggest that patients with AF, who are not suitable for oral anticoagulation, may benefit more from abstaining from ASA, than from using it. »

Själander et al. Europace 2014;16:631-38

Algorithme CCS pour le traitement antithrombotique (CHADS65)

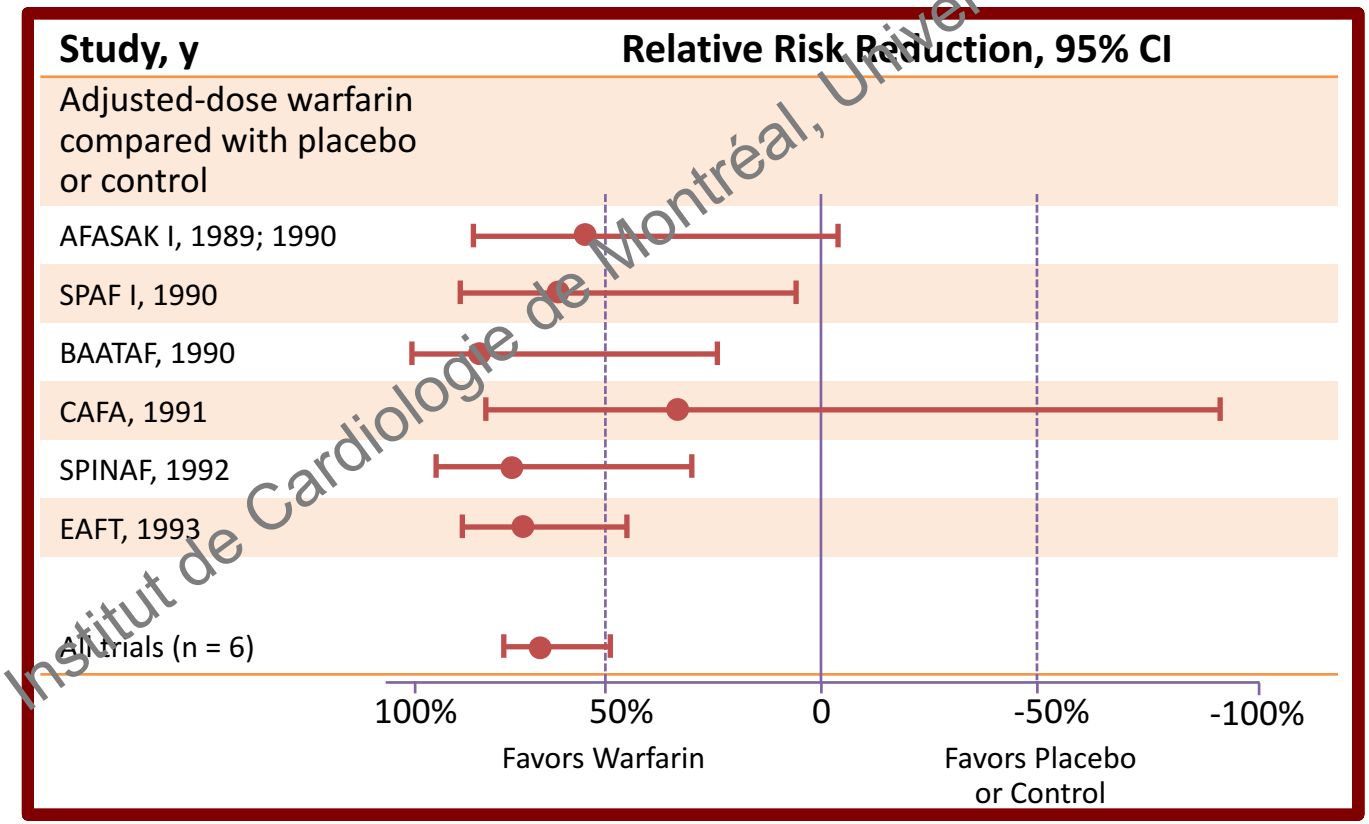


***NACOs de préférence au Coumadin pour la FA non-valvulaire**

Anticoagulants: Coumadin

Réduction du risque d'AVC en FA

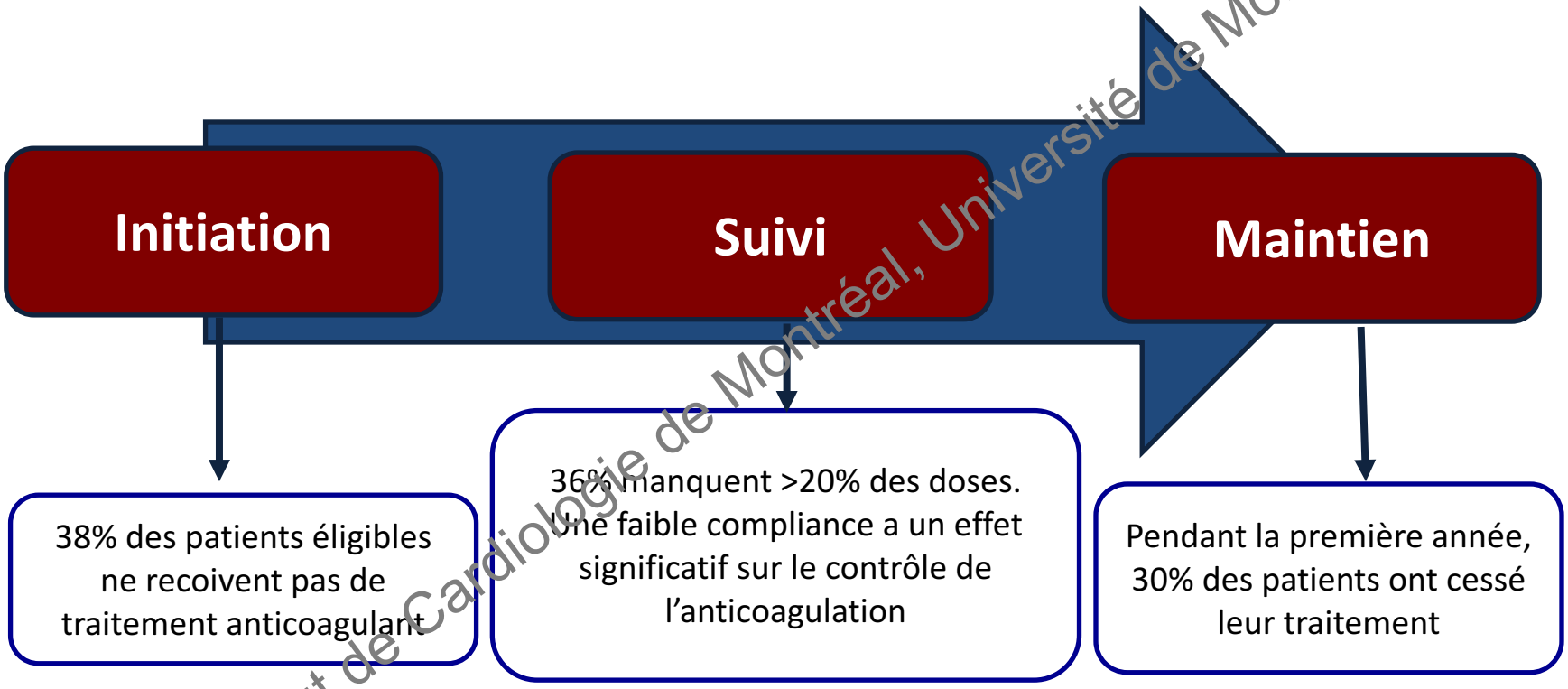
Meta-analyses d'études cliniques randomisées avec Coumadin:
Réduction de 64% des AVC chez les patients en FA



Hart RG, et al. Ann Intern Med. 2007;146:857-67.

Anticoagulants: Coumadin

Problématique du traitement avec Coumadin



Kakkar, PLoS one, 2013, 8, e63479
Kimmel, AIM, 2007, 167, 229
Gallagher, JTH, 2008, 6, 1500

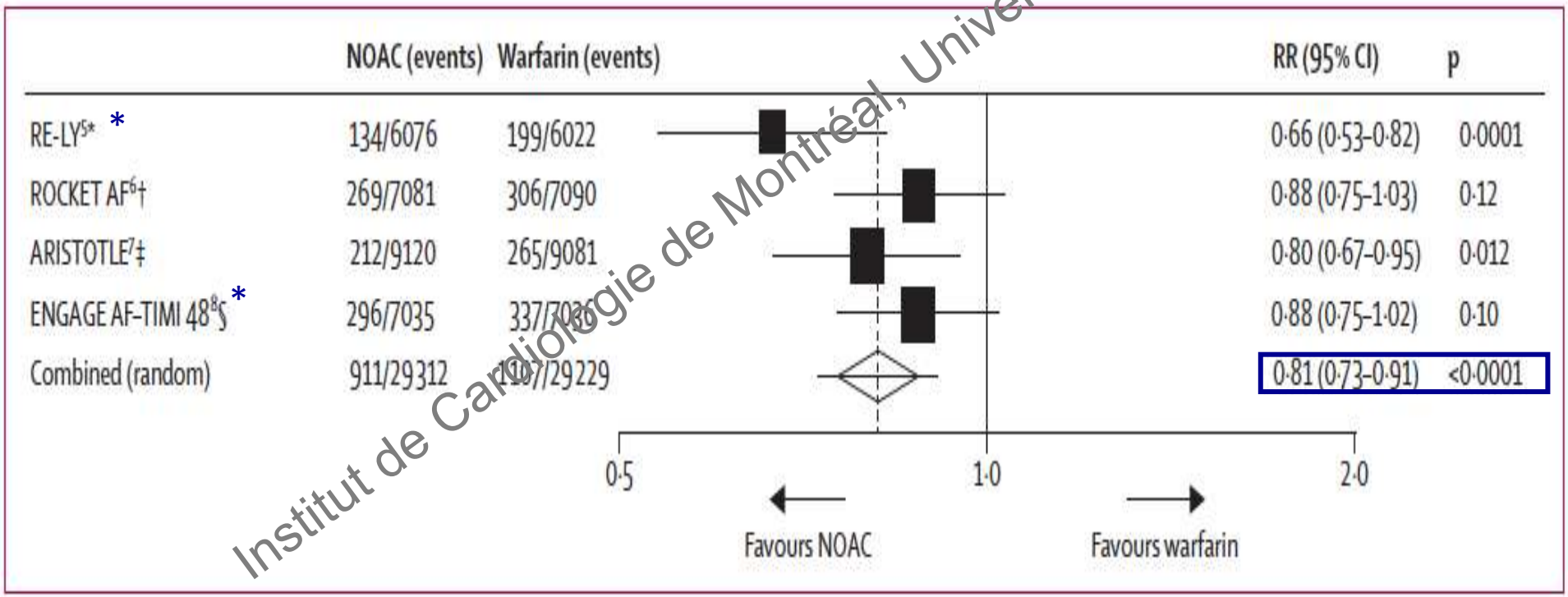
Anticoagulants: NACOs

	RE-LY[1]	ROCKET AF[2]	ARISTOTLE[3]	ENGAGE-AF[4]
Number of patients	18 113	14 264	18 201	21 105
Primary goal	Non-inferiority	Non-inferiority	Non-inferiority	Non-inferiority
Study drug	Two dabigatran doses, double blind	Rivaroxaban, double blind	Apixaban, double blind	Two Edoxaban doses, double blind
Control	Warfarin, open label (INR : 2-3)	Warfarin, double blind (INR : 2-3)	Warfarin, double blind (INR : 2-3)	Warfarin, double blind (INR : 2-3)
Risk profile according to $CHADS_2$ score	▪ ≤ 1 : 31,9 % ▪ 2 : 35,6 % ▪ ≥3 : 32,4 % Mean = 2,1	▪ ≤ 1 : < 1 % ▪ 2 : 13,0 % ▪ ≥3 : 86,9 % Mean = 3,5	▪ ≤ 1 : 34,0 % ▪ 2 : 35,8 % ▪ ≥3 : 30,2 % Mean = 2,1	▪ ≤ 1 : < 1% ▪ 2 : 47% ▪ ≥ 3: 53% Mean = 2,8
Prior stroke	20%	55%	19%	28%
Median age	71,5 years	73 years	70 years	72 years
Median FU	2,0 years	1,9 year	1,8 year	2,8 years

1. Connolly et al. NEJM 2009; 2. Patel et al. NEJM 2011; 3. Granger et al. NEJM 2011; 4. Giugliano et al. NEJM 2013

Comparison of the efficacy and safety of new oral anticoagulants with warfarin in patients with atrial fibrillation: a meta-analysis of randomised trials

Prévention Thrombo-embolique (AVC et Embolies systémiques)

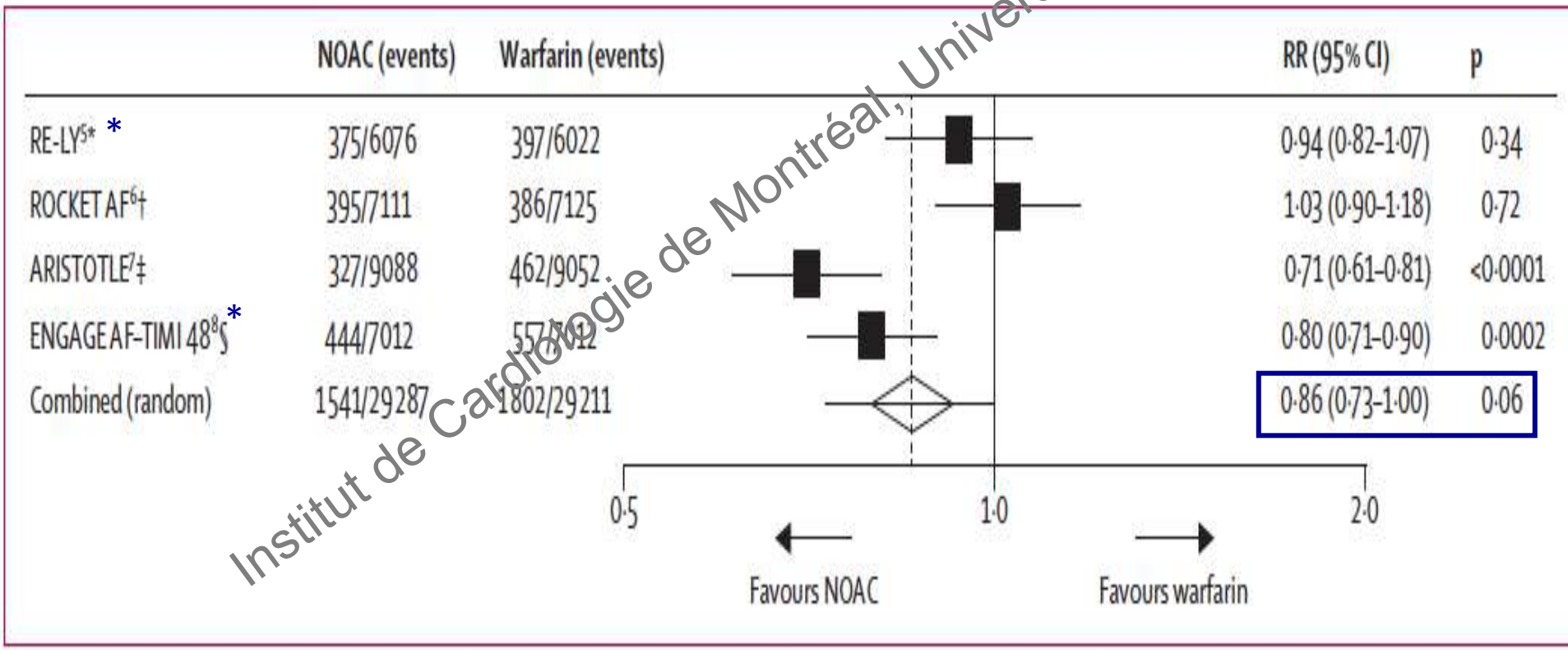


4 trials (*using higher dose regimen)
N = 58,541 patients

Ruff CT et al. Lancet 2014;383:955-62

Comparison of the efficacy and safety of new oral anticoagulants with warfarin in patients with atrial fibrillation: a meta-analysis of randomised trials

Hémorragies majeures

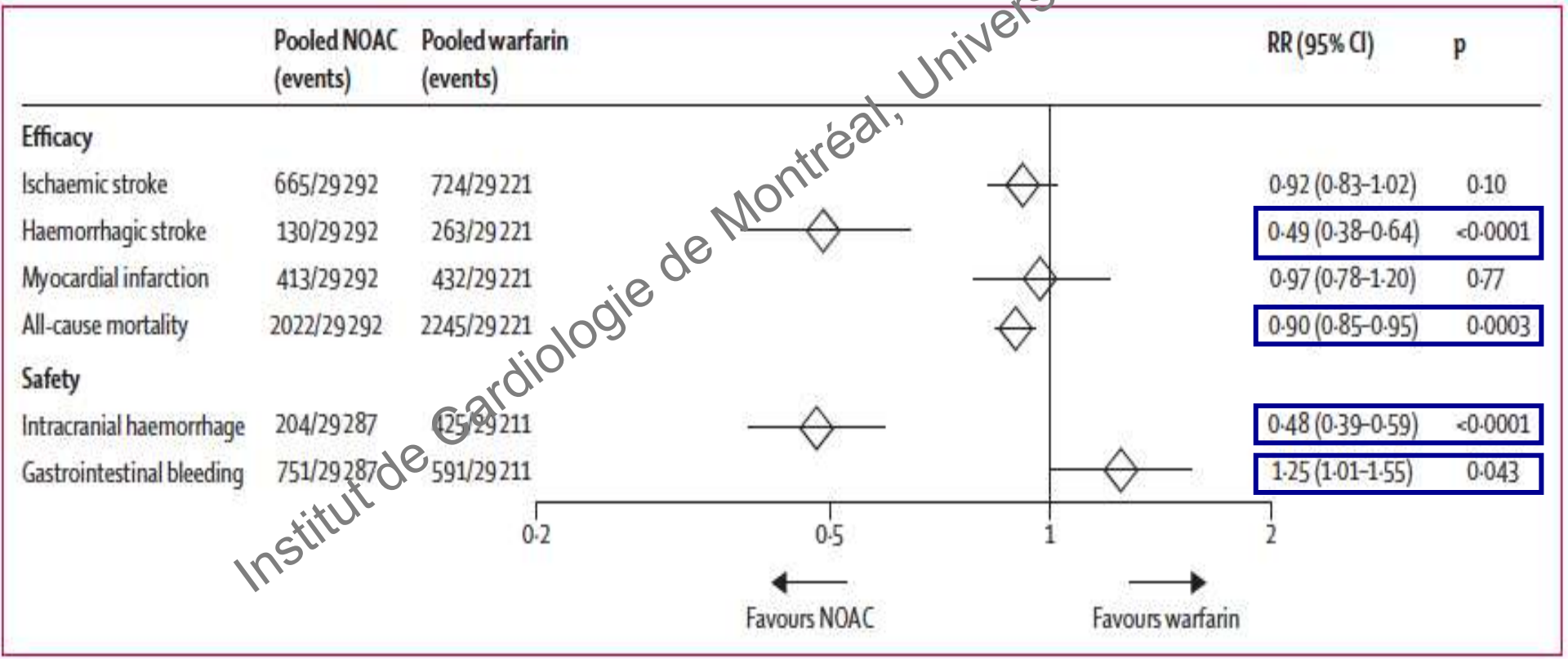


4 trials (*using higher dose regimen)
N = 58,498 patients

Ruff CT et al. Lancet 2014;383:955-62

Comparison of the efficacy and safety of new oral anticoagulants with warfarin in patients with atrial fibrillation: a meta-analysis of randomised trials

Secondary efficacy and safety outcomes



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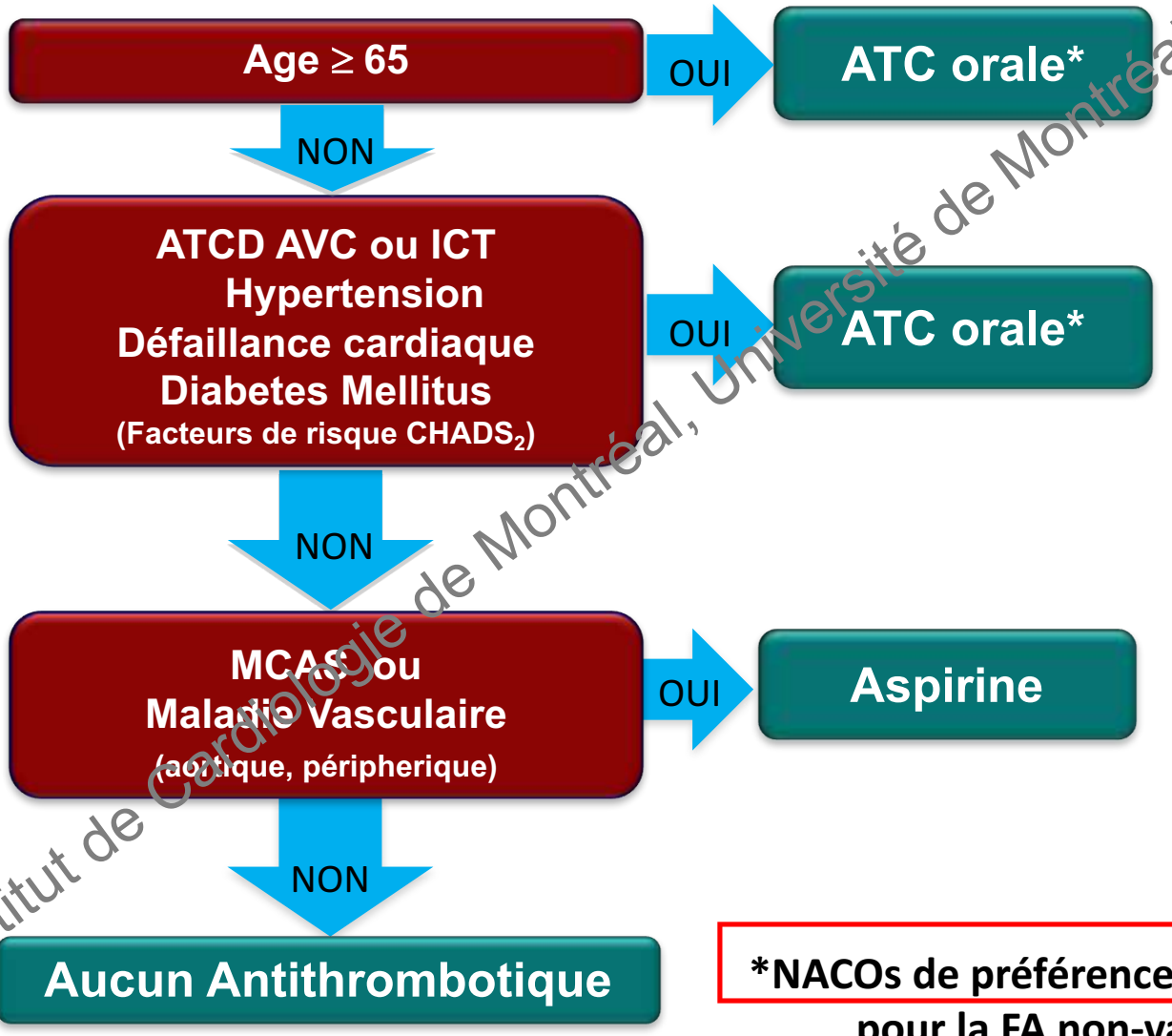


***NACOs de préférence au Coumadin pour la FA non-valvulaire**

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

Age ≥65

Oral anticoagulation therapy to prevent thromboembolism should be considered in male AF patients with a CHA_2DS_2-VASc score of 1, considering individual characteristics and patient preferences.	IIa	B
Oral anticoagulation therapy to prevent thromboembolism should be considered in female AF patients with a CHA_2DS_2-VASc score of 2, considering individual characteristics and patient preferences.	IIa	B

« Importantly, age (≥65 years) conveys a relatively high and continuously increasing stroke risk. »

Aspirine

In male or female AF patients without additional stroke risk factors, anticoagulant or antiplatelet therapy is not recommended for stroke prevention.	III (harm)	B
Antiplatelet monotherapy is not recommended for stroke prevention in AF patients, regardless of stroke risk.	III (harm)	A

NACO>Warfarin

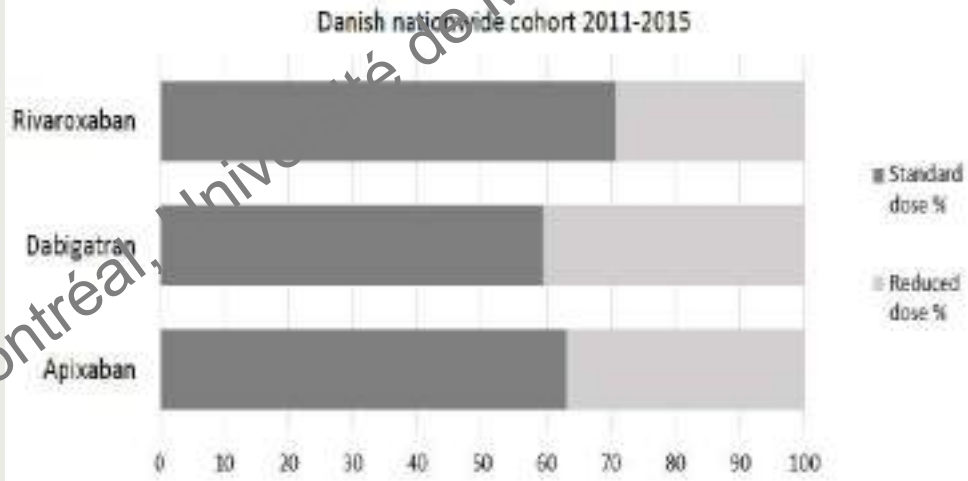
When oral anticoagulation is initiated in a patient with AF who is eligible for a NOAC (apixaban, dabigatran, edoxaban, or rivaroxaban), a NOAC is recommended in preference to a Vitamin K antagonist.	I	A

Kirchhof et al Europace 2016;18(11):1609-78.

Real Life Data with NOACs

Utilisation des doses appropriées…

Fay et al. ESC 2016



Staerk et al. EHJ Oct 2016

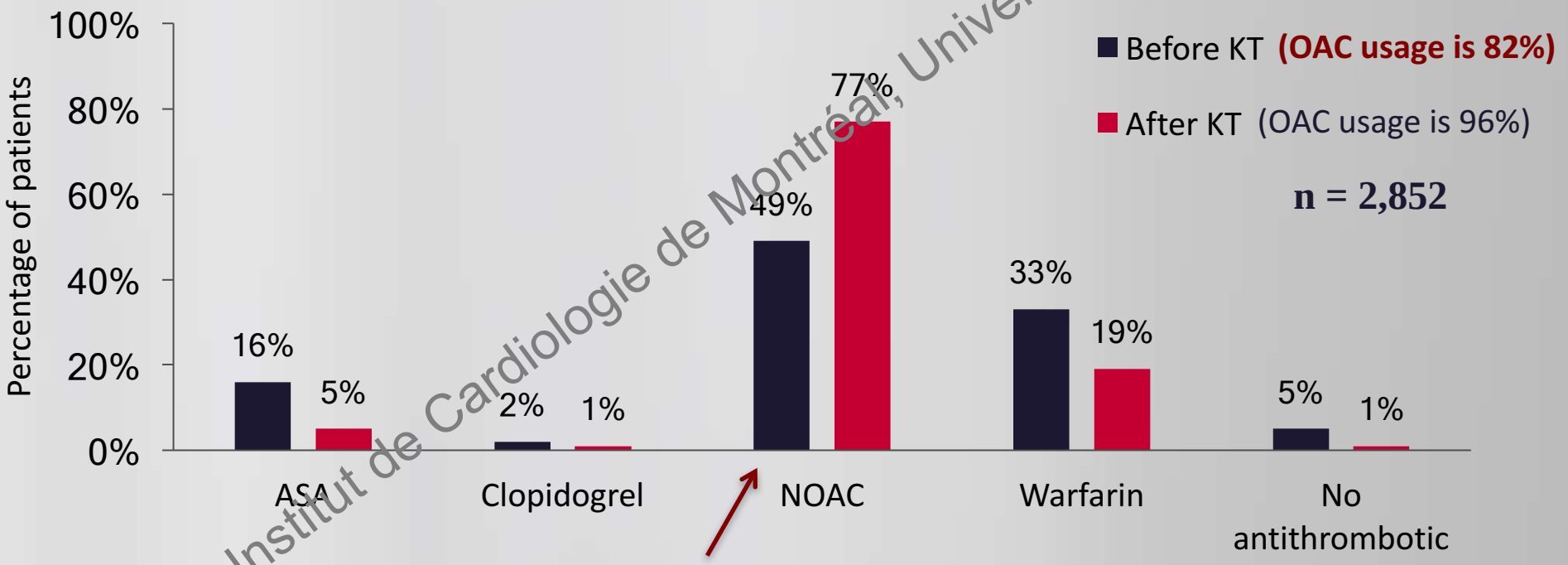
Revisit-US	
Apixaban 2.5 BID	**15.5%**
Dabigatran 75 BID	**10.3%**
Rivaroxaban 15 DIE	**17.3%**

Coleman et al. ESC 2016

THE GUIDELINE CONNECT PROGRAM

SONDAGE (EMC) :77 CARDIOLOGUES ET 201 MDs FAMILLE

PATIENTS AVEC RECOMMANDATION D'ACO POUR PREVENTION AVC



20% des patients recevaient la petite dose de NACO de façon inappropriée

Macle et al, CCC 2015

RISQUE D'HÉMORRAGIE : SCORE HAS-BLED P/R AU RISQUE D'HÉMORRAGIE PERÇU PAR LE MÉDECIN

Score HAS-BLED (moyenne / n)	1,5 ±1,1 / 1 463

- Chez 314 patients (21%), le score HAS-BLED ne correspondait pas au risque d'hémorragie perçu par le cardiologue :
  - **Le risque d'hémorragie était *surestimé* chez 283 patients (19 %).**
  - Le risque d'hémorragie était *sous-estimé* chez 31 patients (2 %).

ÉCHELLE HAS-BLED POUR L'ÉVALUATION DU RISQUE D'HÉMORRAGIE

Facteur de risque	Score
Hypertension (non maîtrisée, tension systolique > 160 mm Hg)	1
Anomalie de la fonction rénale (+1) ou hépatique (+1)	2
Antécédents d'AVC (***S**troke*)	1
Antécédents d'hémorragie majeure ou prédisposition aux hémorragies (***B**leeding*)	1
INR **L**abile (INR instable/élevé)	1
Âge >65 ans (***E**lderly*)	1
Médicaments (***D**rugs*), c.-à-d. antiagrégants plaquettaires, AINS (+1), ou consommation excessive d'alcool (≥ 8 consommations par semaine) (+1)	2
Score maximal	**9**

Niveau d'évidence clinique pour les doses réduites

Trial	Drug	Dose	N (Total)	N (High dose)	N (Low dose)
RE-LY	Dabigatran	150 & 110 mg BID	18,113	150 mg 6076	110 mg 6015
ROCKET-AF	Rivaroxaban	20 / 15 mg QD	14,264	20 mg 7131	(15 mg) 1474
ARISTOTLE	Apixaban	5 / 2.5 mg BID	18,201	5 mg 9120	(2.5mg) 428
ENGAGE AF	Edoxaban	60 / 30 mg QD	21,105	60 mg 5251	(30mg) 1784

« À moins de raison spécifique, les patients doivent recevoir la dose normale »

	Dabigatran	Rivaroxaban	Apixaban	Edoxaban
Recommandations pour doses réduites	"Age ≥75 yrs" Considérer si CrCL: 30-49 mL/min	CrCl: 30-49 mL/min	If ≥2 of the following: • Age ≥80 years, • Body weight ≤60 kg, • Creatinine ≥133 µmol/L	If any of the following: • CrCl: 30-49 mL/min • Body weight ≤60 kg

Connolly et al. NEJM. 2009; 361:1139−1151
Patel et al. NEJM. 2011; 365:883−891
Granger et al. NEJM. 2011; 365:981−992
Giugliano RP et al. NEJM 2013; 369:2093–2104

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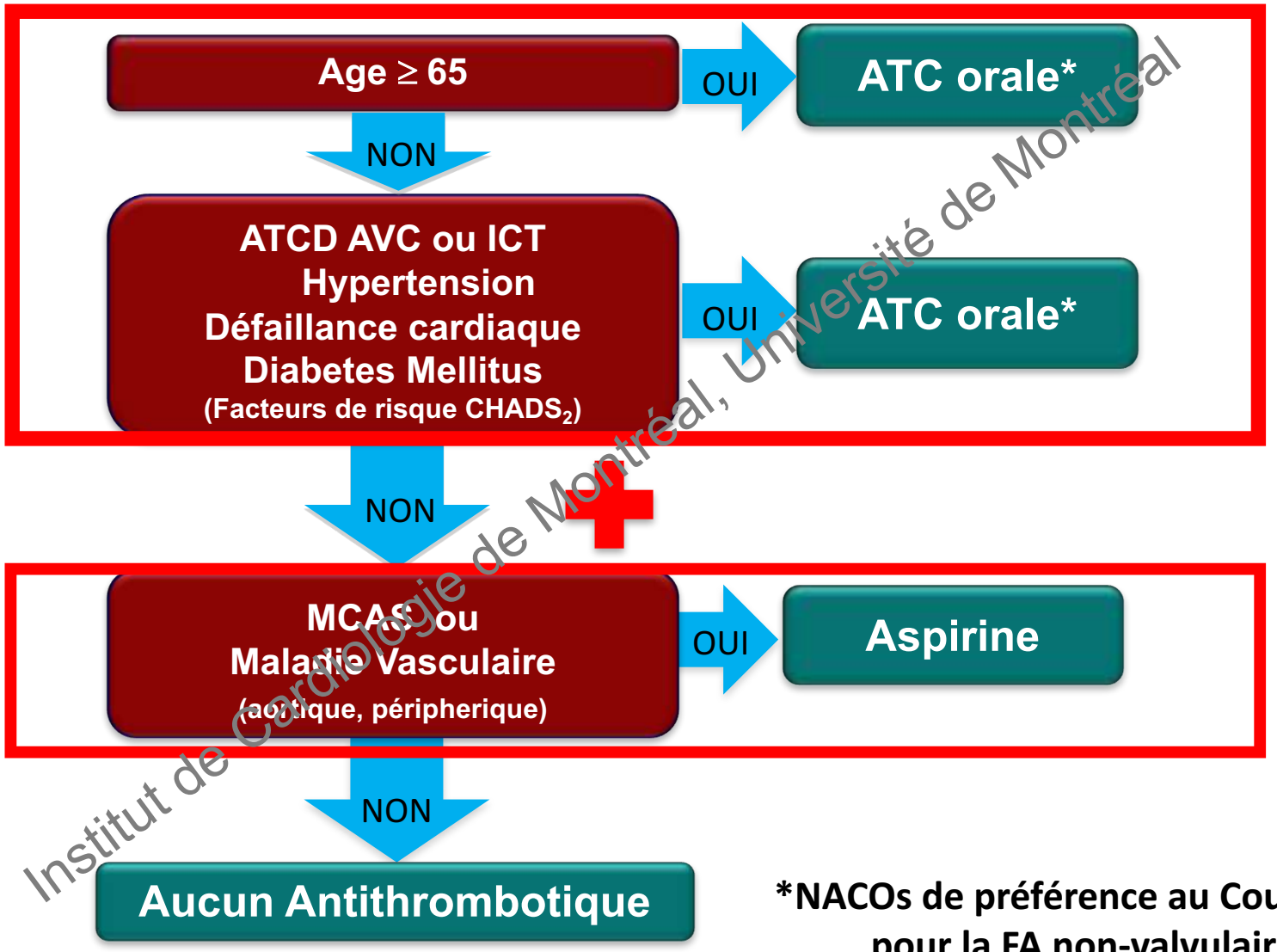
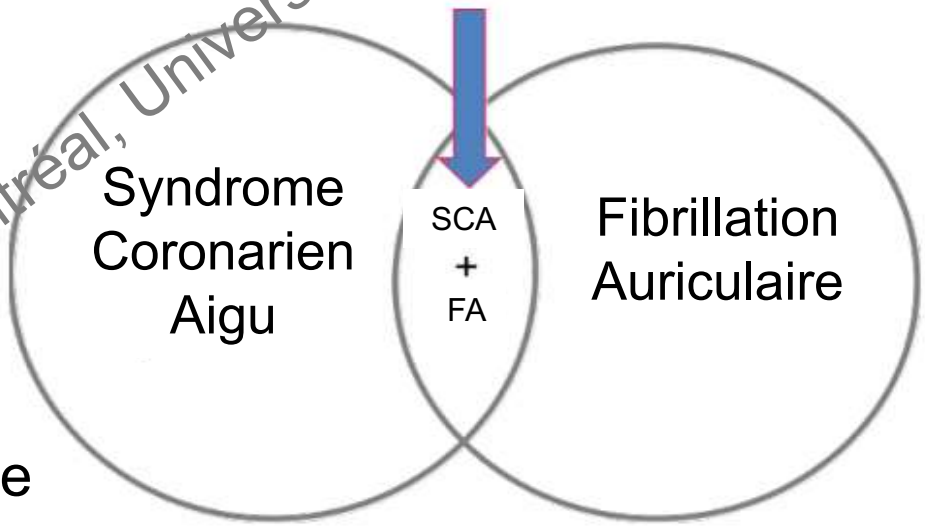


***NACOs de préférence au Coumadin pour la FA non-valvulaire**

FA et MCAS concomittante

- MCAS présente chez 20-30% des patients avec FA
- FA+MCAS
  - ⇧Hospitalisations
  - ⇧Mortalité à 30jrs et à 1an[4]
- FA de novo chez MCAS
  - ⇧Mortalité Hospitalière (OR 5.2)
  - ⇧Mortalité à 30jrs (OR 3.9)
  - ⇧Mortalité à 1an (OR 3.1)[4]
- ⇧Prévalence FA et MCAS avec âge
  - Antithrombotiques indiqués pour les 2 pathologies

Incidence FA lors SCA: 2-21% patients[5]



1. Nieuwlaat R, et al. *Eur Heart J.* 2005;26:2422-2434. 2. Nabauer M, et al. *Europace.* 2009;11:423-434.
3. Goette A, et al. *Eur Heart J.* 2009;30:1411-1420. 4. Hersi A, et al. *Angiology.* 2012;63:466-471. 5. Schmitt J, et al. *Eur Heart J.* 2009;30:1038-1045.

Traitement Antithrombotique chez les Patients avec FA et MCAS

Anticoagulants Oraux pour prévention des ICT/AVC/embolies systémiques liés à la FA

Antiplaquettaires pour prévention des évènements coronariens liés à la MCAS

Combinaison ACO +Antiplaquettaires utilisée post Angioplastie et SCA chez les patients avec FA

Traitement Antithrombotique

Danish Registry (132,372 pts)
Hazard Ratio vs. Warfarin

	HR Stroke	HR Bleeding
ASA	1.81 (1.73-1.90)	0.93 (0.89-0.97)
No Treatment	1.86 (1.78-1.95)	0.84 (0.81-0.88)

Patients avec FA

- ASA: Bénéfice marginal
  - Saignements

Thromb Haemost 2011;106:739-749.NEJM 2011;364(9):806-17. NEJM 2009;360:2066-78
Lancet 2006;367:1903-12.Lancet 2014;383:955-62. CJC 2013; 29(7):S60-70

Traitement Antithrombotique

Patients avec FA

- ASA: Bénéfice marginal
  - Saignements
- ASA+Clopidogrel > ASA
  - Encore plus de saignements

Danish Registry (132,372 pts)
Hazard Ratio vs. Warfarin

	HR Stroke	HR Bleeding
ASA	1.81 (1.73-1.90)	0.93 (0.89-0.97)
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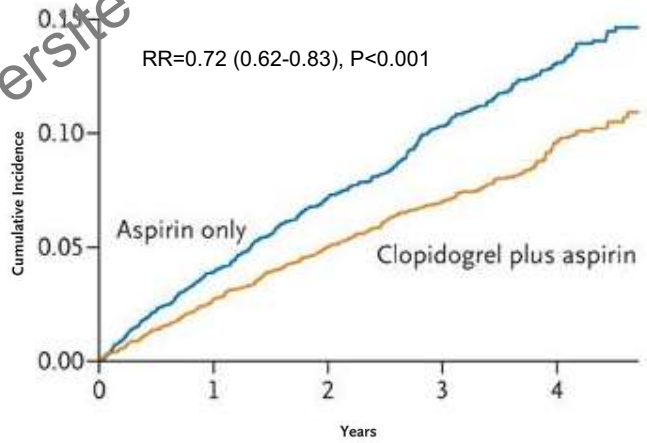

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Traitement Antithrombotique

Patients avec FA

- ASA: Bénéfice marginal
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- Coumadin > ASA+Clopidogrel

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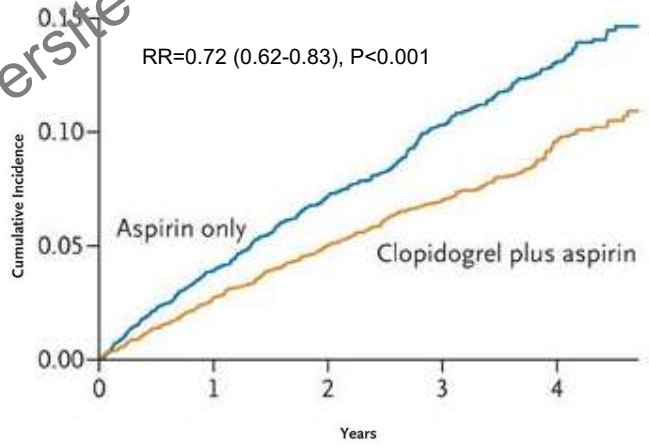

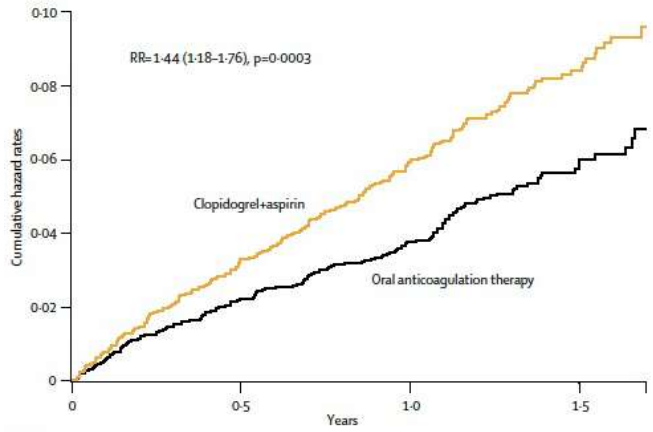

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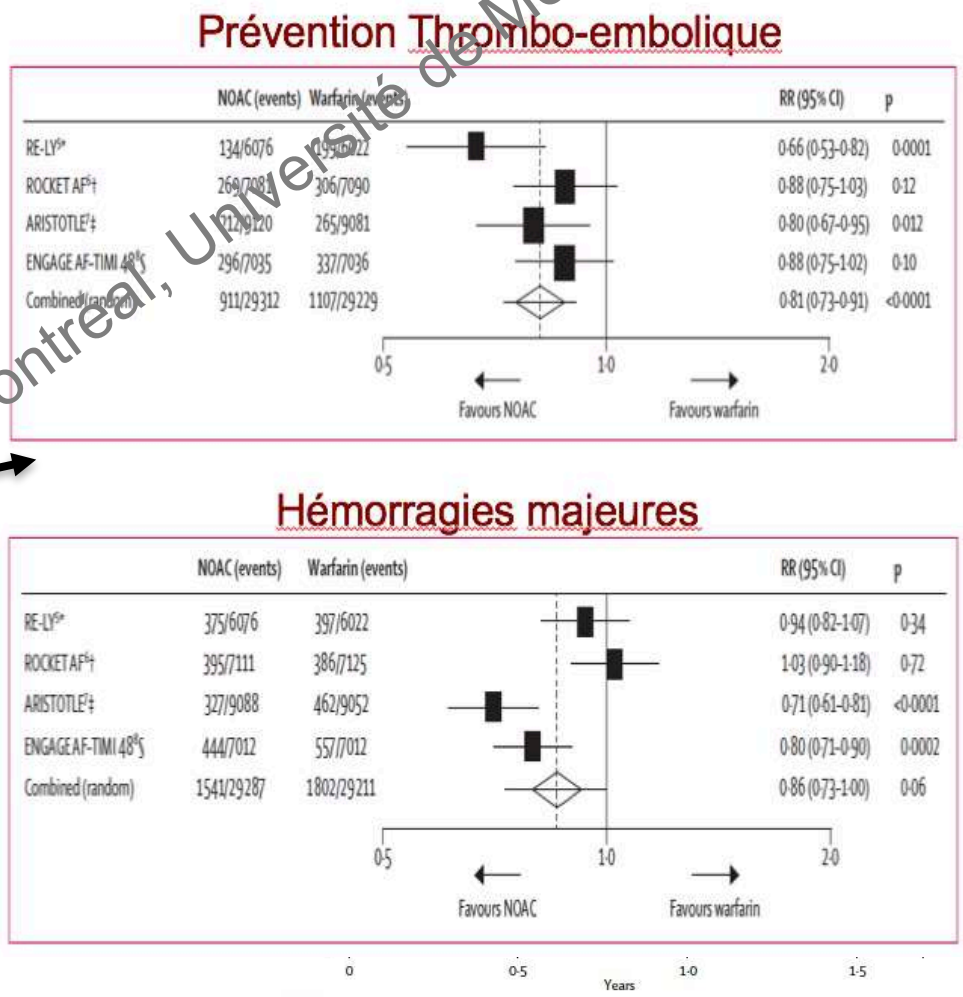
Lancet 2006;367:1903-12.Lancet 2014;383:955-62. CJC 2013; 29(7):S60-70

Traitement Antithrombotique

Patients avec FA

- ASA: Bénéfice marginal
  - Saignements
- ASA+Clopidogrel > ASA
  - Encore plus de saignements
- Coumadin > ASA+Clopidogrel
- NACO ≥ Coumadin
  - Efficacité
  - Saignements
  - Mortalité



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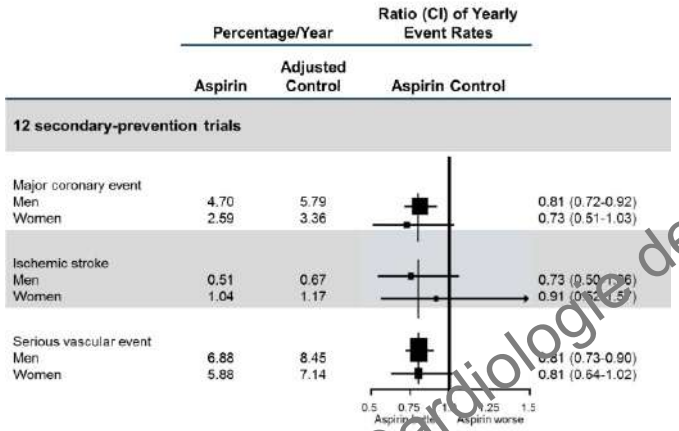

Patients avec MCAS

- Bénéfice net de ASA
  - Prévention Primaire si risque de MCAS > 1-2%/an
  - Prévention Secondaire chez patients avec MCAS connue

Thromb Haemost 2011;106:739-749.NEJM 2011;364(9):806-17. NEJM 2009;360:2066-78
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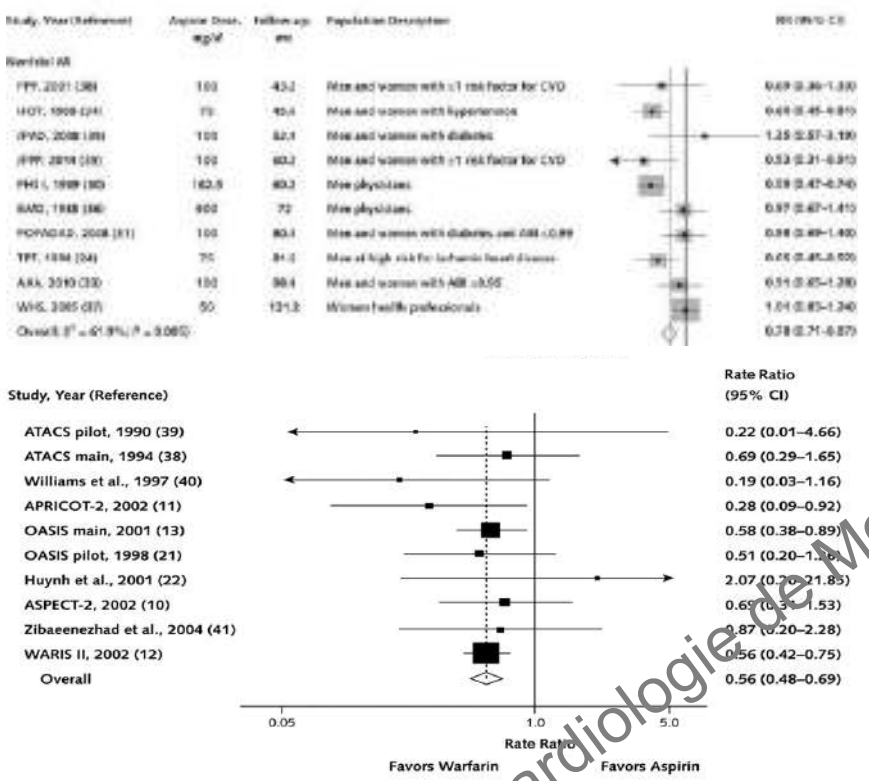
Traitement Antithrombotique

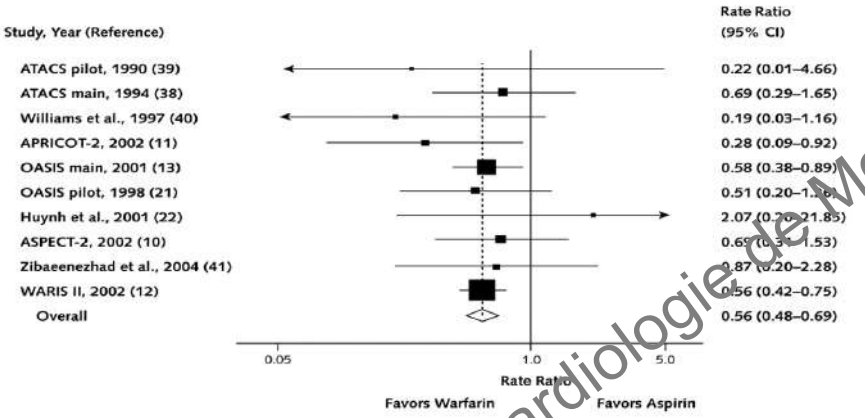


Patients avec MCAS

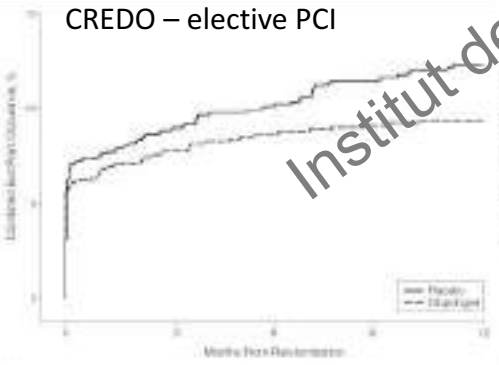
- Bénéfice net de ASA
  - Prévention Primaire si risque de MCAS > 1-2%/an
  - Prévention Secondaire chez patients avec MCAS connue
- Coumadin aussi efficace que ASA pour prévention secondaire

Thromb Haemost 2011;106:739-749.NEJM 2011;364(9):806-17. NEJM 2009;360:2066-78
Lancet 2006;367:1903-12.Lancet 2014;383:955-62. CJC 2013; 29(7):S60-70

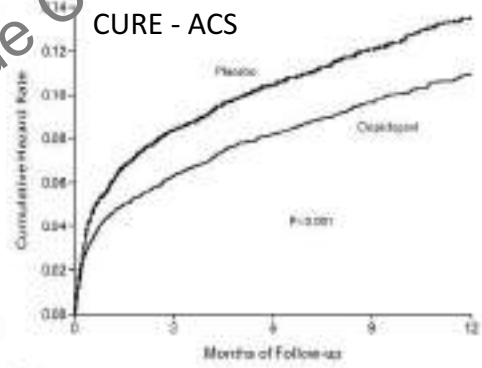
Traitement Antithrombotique



CREDO – elective PCI



CURE - ACS



Patients avec MCAS

- Bénéfice net de ASA
  - Prévention Primaire si risque de MCAS > 1-2%/an
  - Prévention Secondaire chez patients avec MCAS connue
- Coumadin aussi efficace que ASA pour prévention secondaire
- Bénéfice net de DAPT chez patients haut-risque:
  - SCA ≥ 1 an
  - Angioplastie ≥ 1 mois post BMS et ≥ 3-12 mois post DES

Thromb Haemost 2011;106:739-749.NEJM 2011;364(9):806-17. NEJM 2009;360:2066-78
Lancet 2006;367:1903-12.Lancet 2014;383:955-62. CJC 2013; 29(7):S60-70

Traitement Antithrombotique chez les Patients avec FA et MCAS

Patients avec FA

- ASA: Bénéfice marginal
  - Saignements
- ASA+Clopidogrel > ASA
  - Encore plus de saignements
- Coumadin > ASA+Clopidogrel
- NACO ≥ Coumadin
  - Efficacité
  - Saignements
  - Mortalité

Patients avec MCAS

- Bénéfice net de ASA
  - Prévention Primaire si risque de MCAS > 1-2%/an
  - Prévention Secondaire chez patients avec MCAS connue
- Coumadin aussi efficace que ASA pour prévention secondaire
- Bénéfice net de DAPT chez patients haut-risque:
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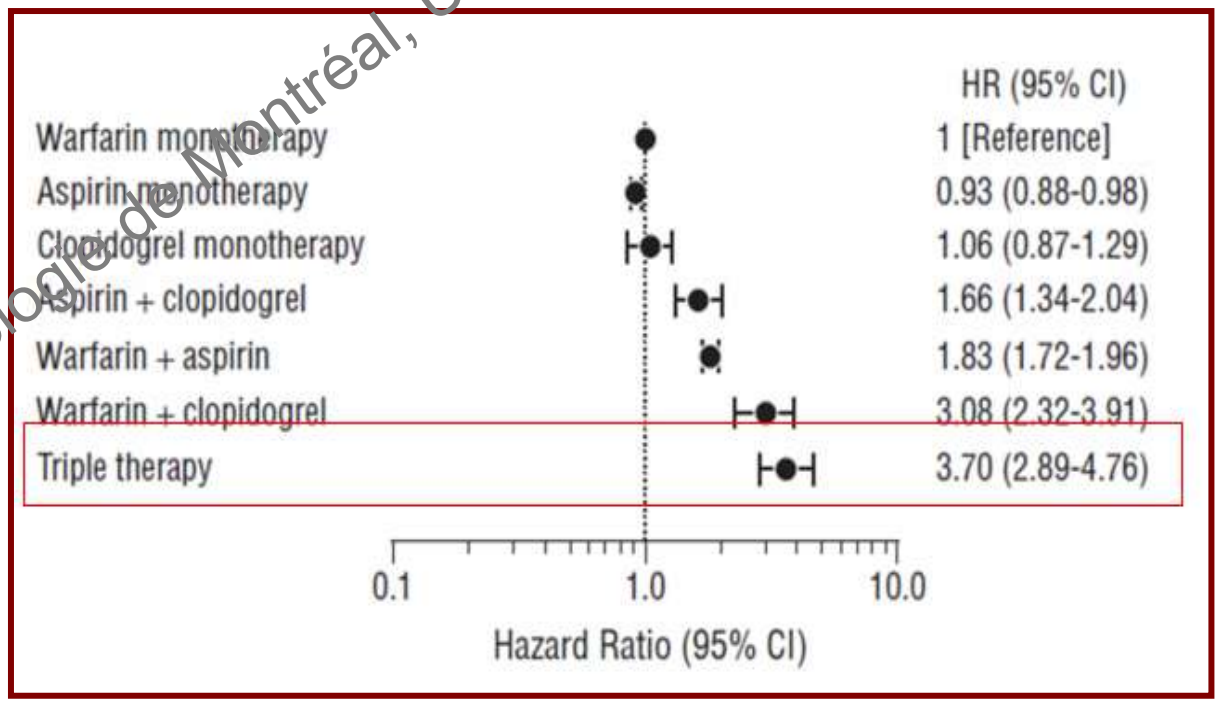
Thromb Haemost 2011;106:739-749.NEJM 2011;364(9):806-17. NEJM 2009;360:2066-78
Lancet 2006;367:1903-12.Lancet 2014;383:955-62. CJC 2013; 29(7):S60-70

Taux Annuels de Saignements Majeurs avec Combinaisons Traitement Antithrombotique

Risk of bleeding with single, dual, triple therapy with warfarin, aspirin, and clopidogrel

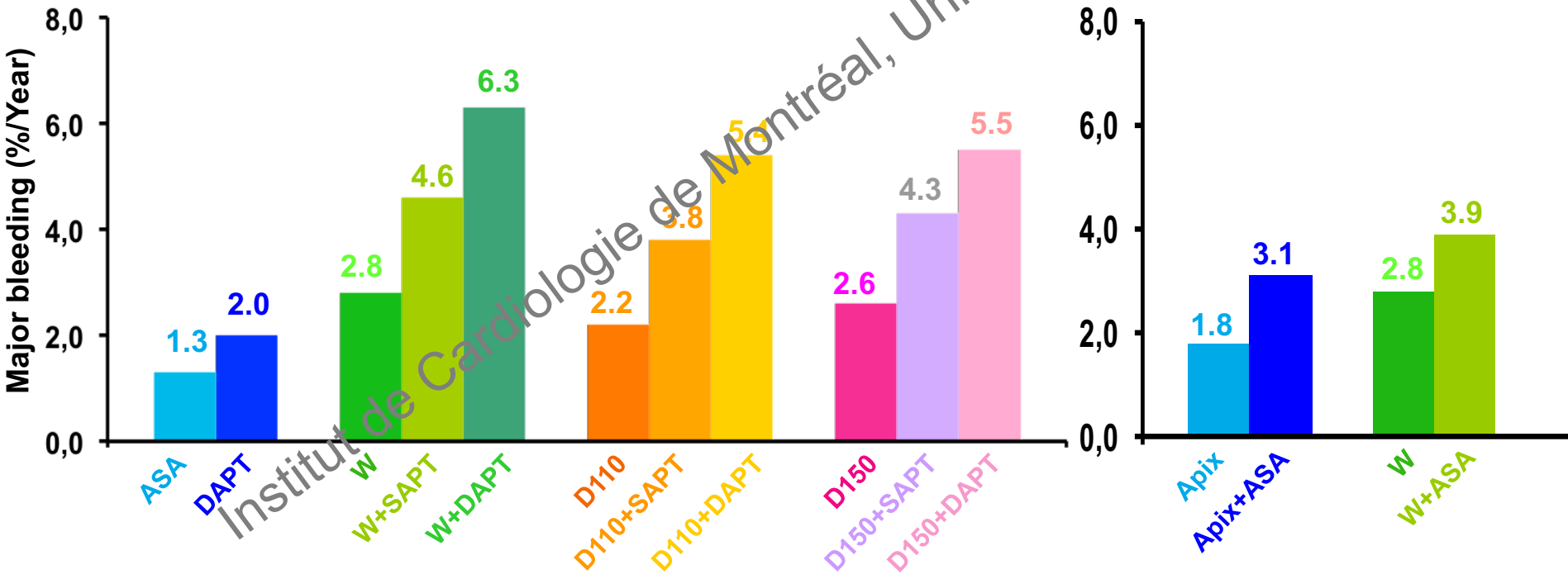
- Registre Danois
- 82k patients avec FA
- 1997-2006
- F-up moyen
  - 3.3 ans
- Incidence saignements (non-fatal ou fatal): 11.4%



Hansen ML et al. Arch Intern Med 2010;170:1433-41

Taux Annuels de Saignements Majeurs avec Combinaisons Traitement Antithrombotique

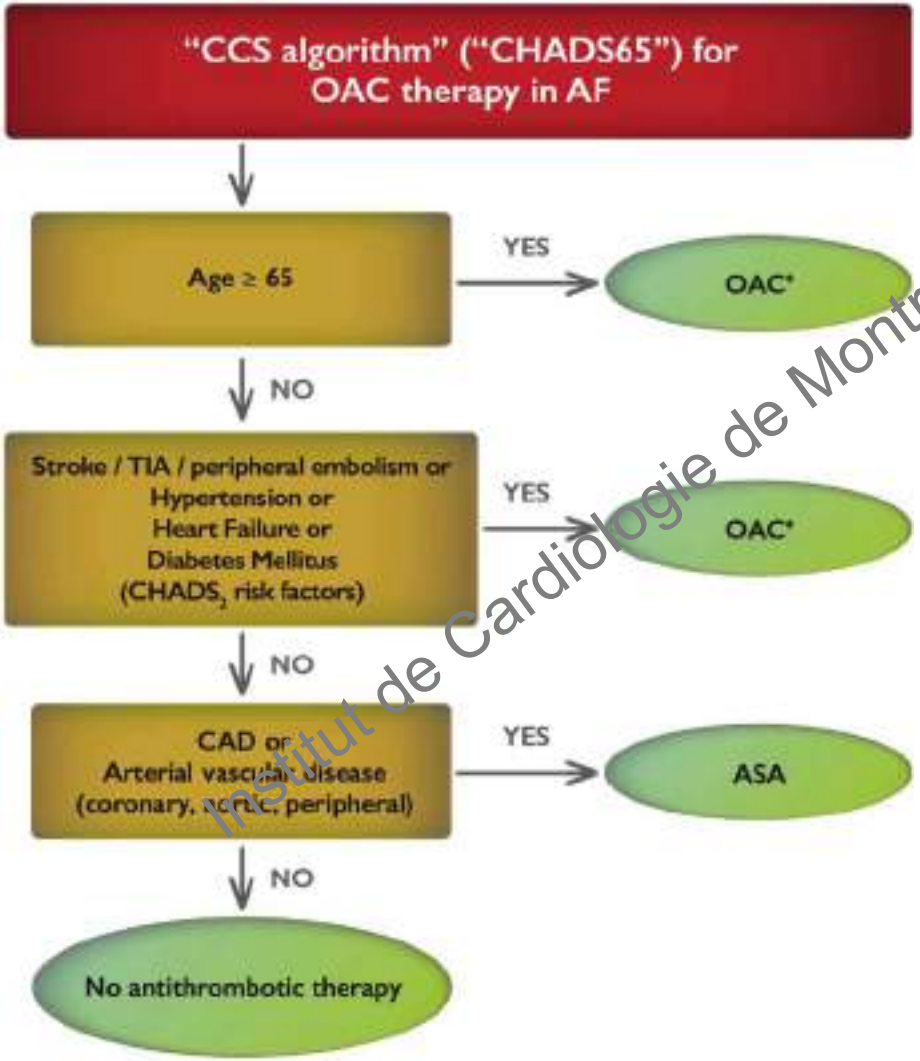
- ACTIVE-A (N=7554), RE-LY (N=18113), ARISTOTLE (N=18201)



Active Investig. NEJM 2009; 360(20):2066-78. Dans AL et al. Circulation 2013; 127(5):634-40. Alexander et al. EHJ 2014; 35: 224-32

Traitement Antithrombotique chez les Patients avec FA et MCAS

Risque Thrombo-embolique

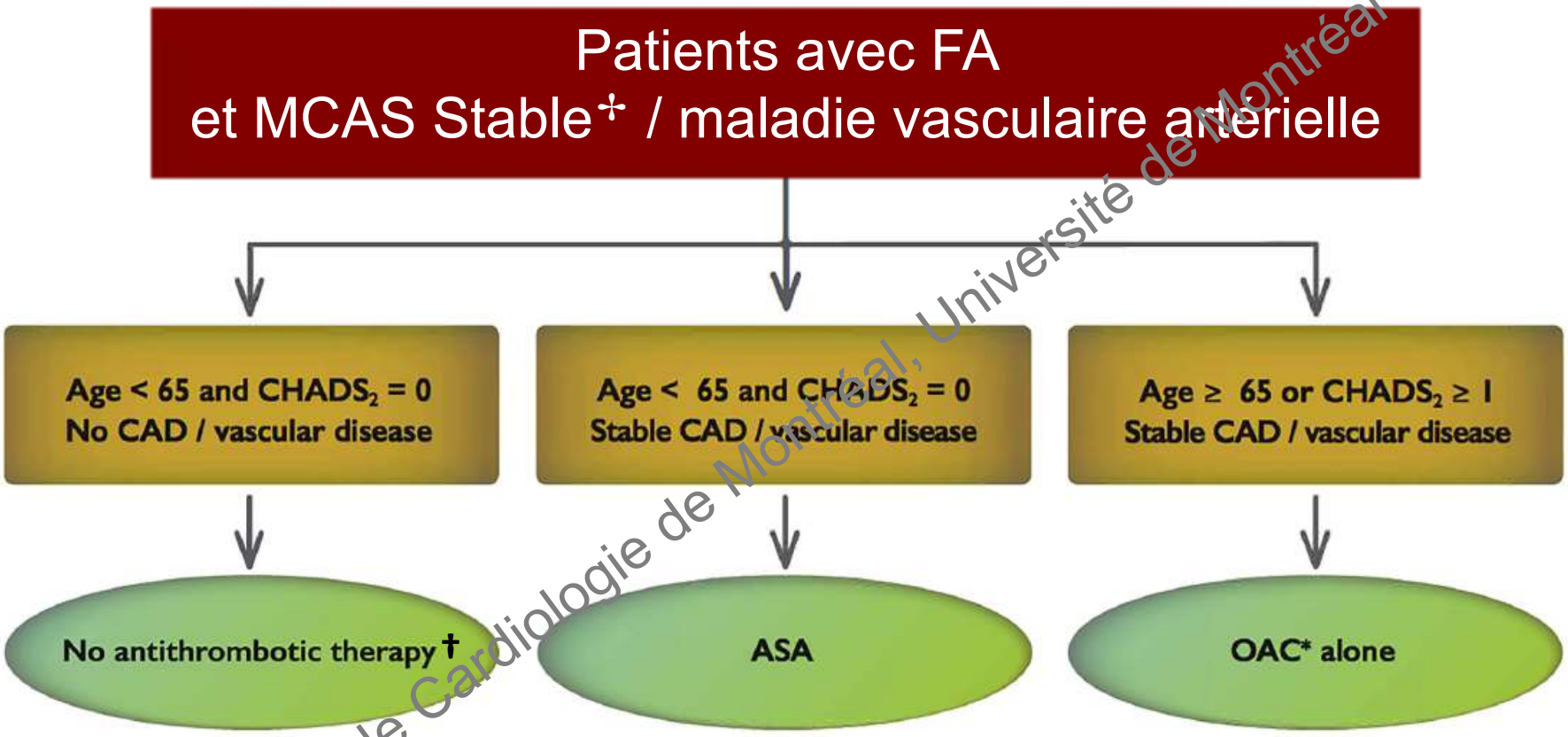


Risque d'évènements Coronariens

1. MCAS Stable
2. Angioplastie Elective
3. SCA

Macle et al. Canadian Journal of Cardiology 2016;32:1170-85

Traitement Antithrombotique chez les Patients avec FA et MCAS



✢MCAS Stable: absence de syndrome coronarien aigu dans les derniers 12 mois.

† Primary CAD prevention with ASA may be considered in selected high-risk patients.

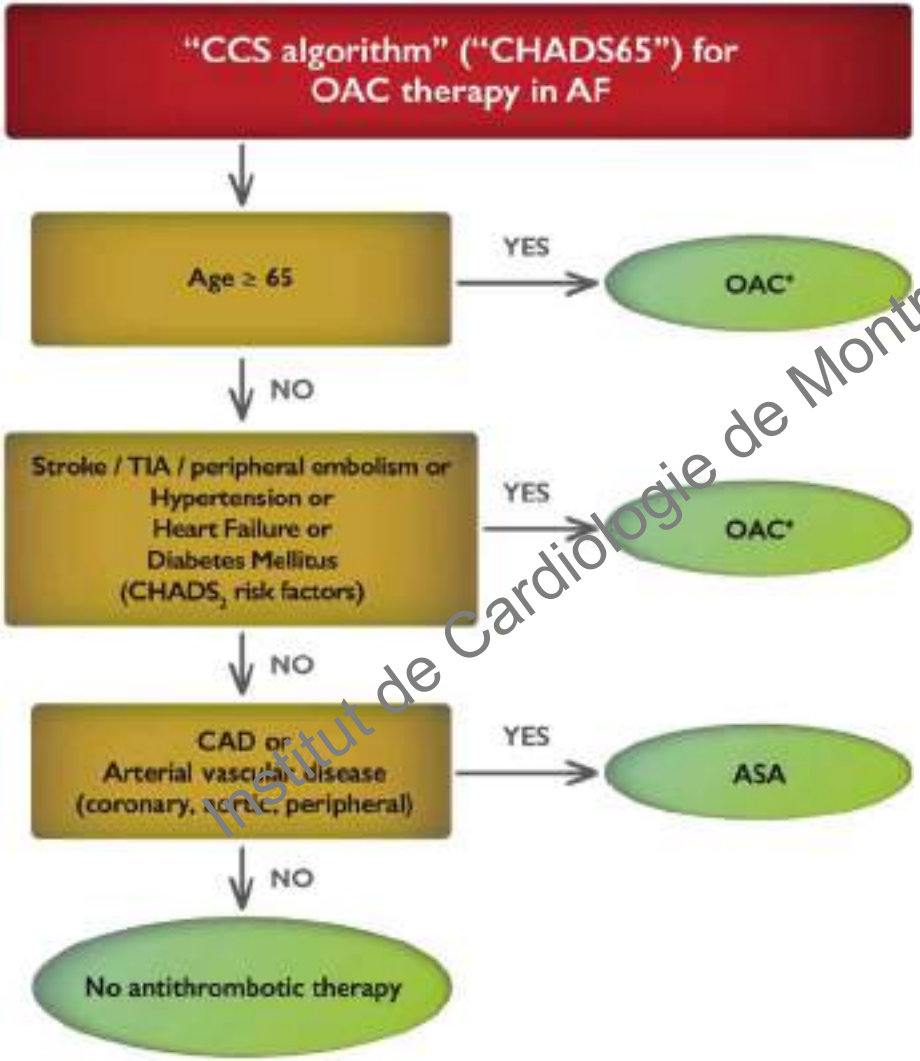
*A NOAC is preferred over warfarin for non-valvular AF.

Values and preferences:

The suggestion for use of a NOAC rather than warfarin places relatively greater weight on the ease of use of NOACs versus warfarin and on the data from RCTs of NOACs versus warfarin for NVAF, showing equal or greater reduction of stroke, equal or less major bleeding, less intracranial bleeding and no net increase in CAD outcomes. It places relatively less weight on the absence of long-term data on the effect of NOACs on coronary outcomes as opposed to the data for efficacy of warfarin

Traitement Antithrombotique chez les Patients avec FA et MCAS

Risque Thrombo-embolique



Présentation Clinique de MCAS

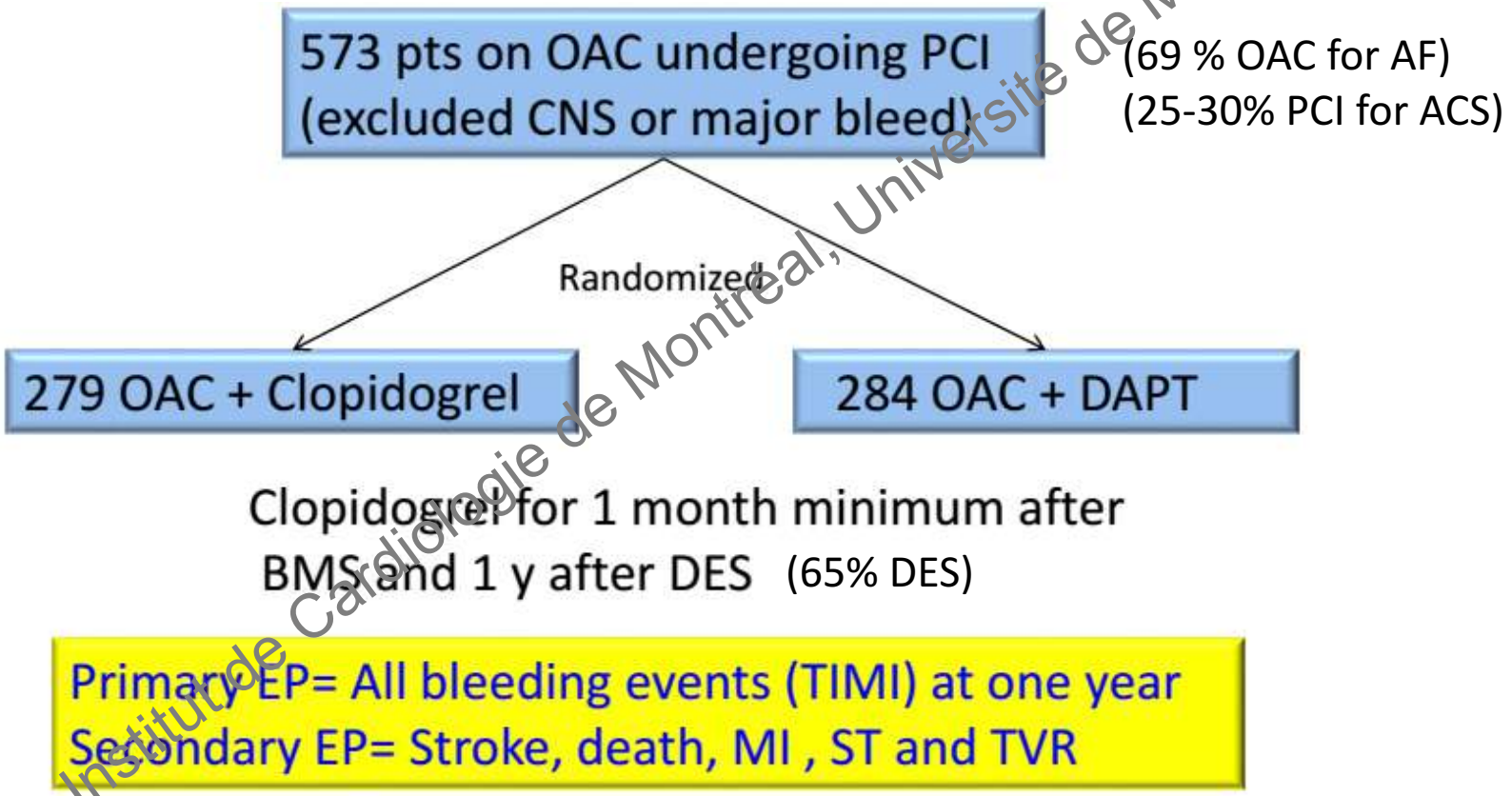
1. MCAS Stable

2. Angioplastie Elective

3. SCA

Macle et al. Canadian Journal of Cardiology 2016;32:1170-85

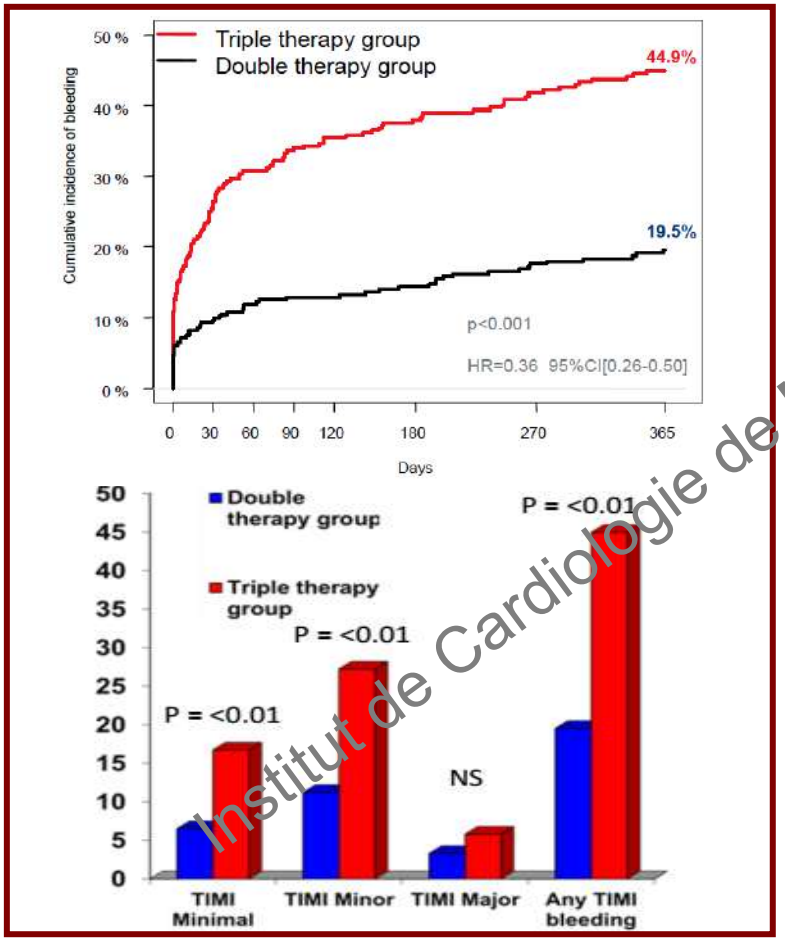
WOEST: Use of clopidogrel with or without aspirin in patients taking oral anticoagulant therapy and undergoing PCI: an open-label, randomised, controlled trial



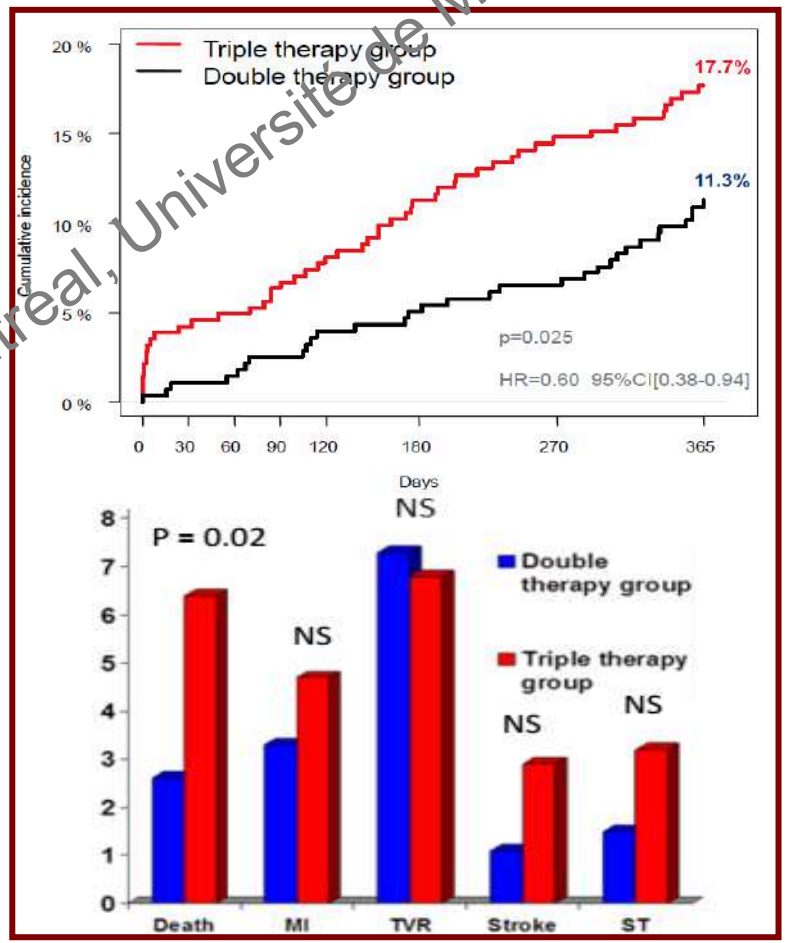
Dewilde et al. Lancet. 2013 Mar 30;381:1107-15

WOEST: Use of clopidogrel with or without aspirin in patients taking oral anticoagulant therapy and undergoing PCI: an open-label, randomised, controlled trial

Total number of Bleeding events

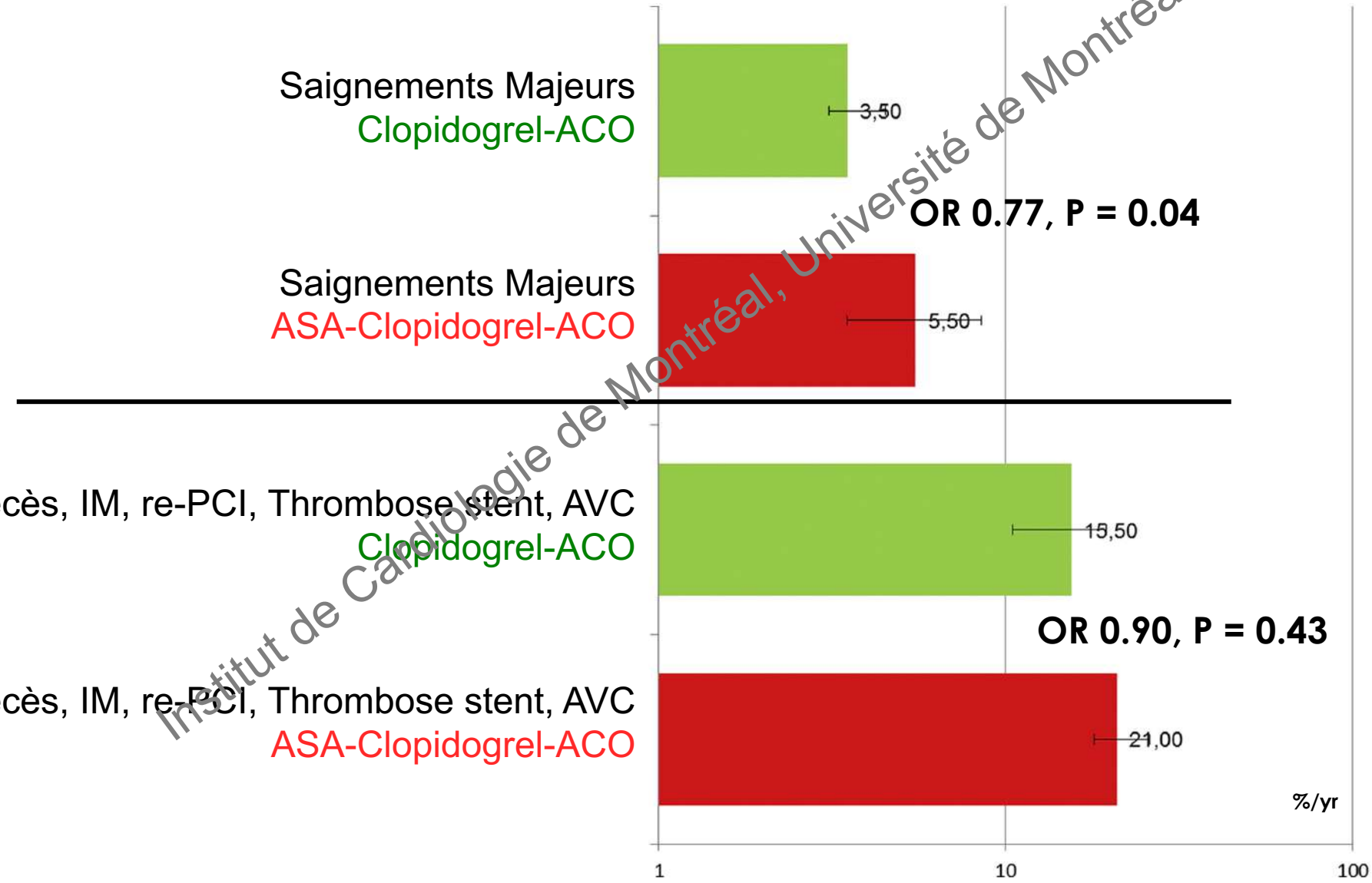


Death, MI, TVR, Stroke, Stent thrombosis



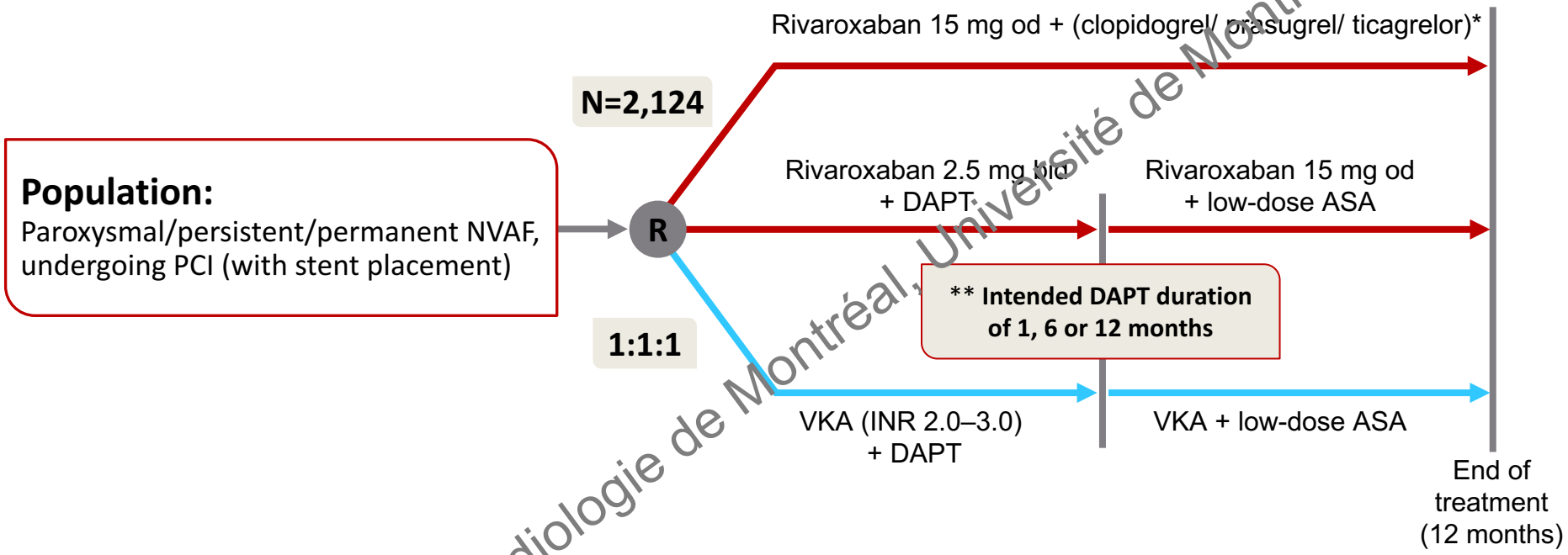
Dewilde et al. Lancet. 2013 Mar 30;381:1107-15

Meta-Analyse: Clopidogrel-ACO vs Triple thérapie (ASA/Clopidogrel/ACO)
Saignements Majeurs et Évènements Coronariens post Angioplastie



D'Ascenzo F. Am J Cardiol 2015;115:1185

Pioneer-AF PCI



- 44% Paroxysmal AF
- CHADSVASC
  - >50% 4 or more
- 66% DES
- Indication for PCI:
  - 12% STEMI; 40% NSTEMI/UA

**Stratified by planned DAPT duration (MD decision)

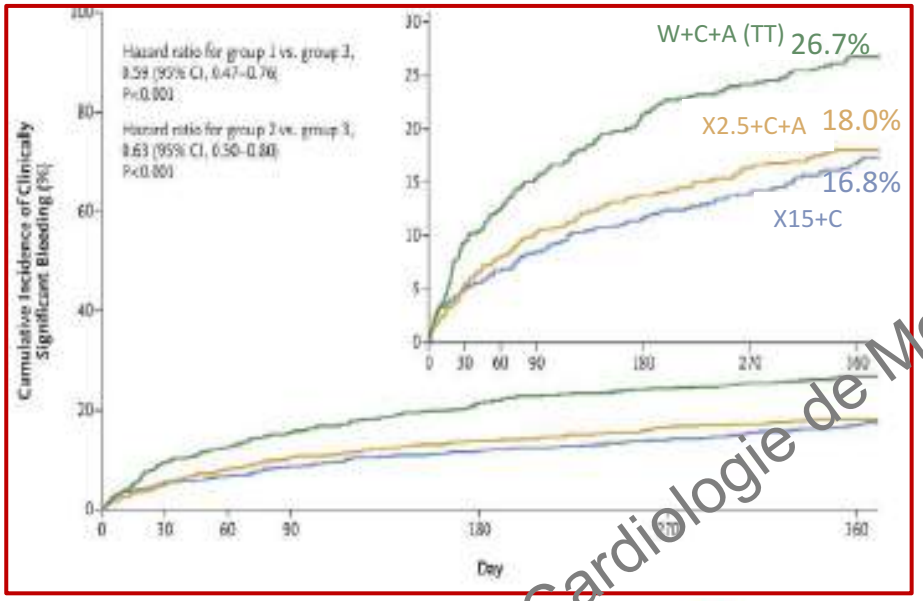
- *P2Y12: 93-96% Clopidogrel

Gibson et al. NEJM 2016; 375:2423-34

Pioneer-AF PCI

Primary safety end point

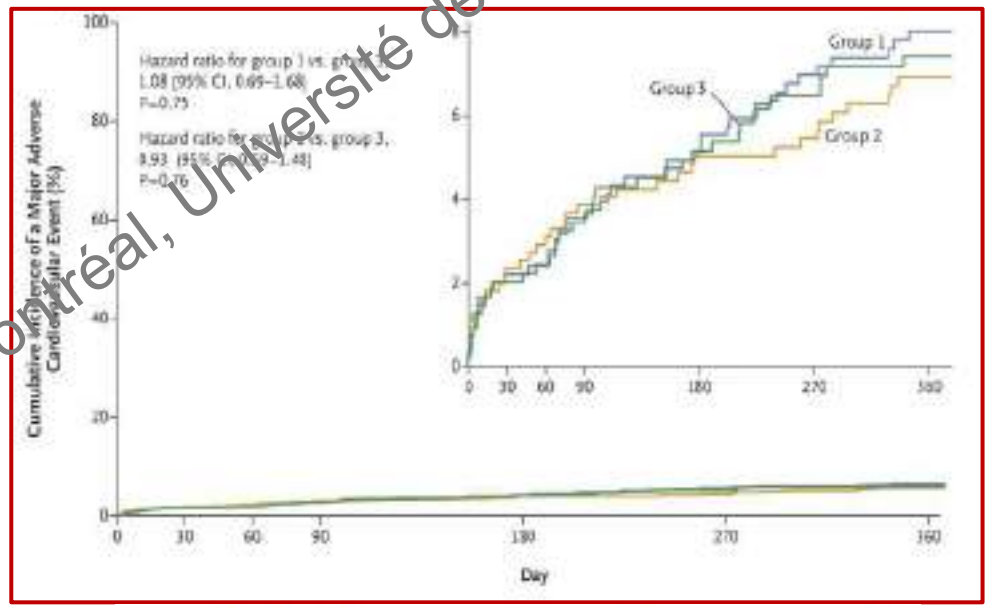
- **Clinically significant bleeding**
  - Composite of TIMI major bleeding, TIMI minor bleeding according, or bleeding requiring medical attention



Cohort and End Point	Group 1	Group 2	Groups 1 and 2	Group 3
	No. of Participants with Events (Kaplan–Meier Event Rate)			
All participants — no.	696	706	1402	697
Clinically significant bleeding	109 (16.8)	117 (18.0)	226 (17.4)	167 (26.7)
Major bleeding	14 (2.1)	12 (1.9)	26 (2.0)	20 (3.3)
Minor bleeding	7 (1.1)	7 (1.1)	14 (1.1)	13 (2.2)
Bleeding requiring medical attention	93 (14.6)	102 (15.8)	195 (15.2)	139 (22.6)

Secondary Efficacy end point

- **Composite of death from CV causes, MI, or stroke**



Cohort and End Point	Group 1	Group 2	Group 3
	No. of Participants with Events (Kaplan–Meier Event Rate)		
All participants — no.	694	704	695
Major adverse cardiovascular event	41 (6.5)	36 (5.6)	36 (6.0)
Death from cardiovascular causes	15 (2.4)	14 (2.2)	11 (1.9)
Myocardial infarction	19 (3.0)	17 (2.7)	21 (3.5)
Stroke	8 (1.3)	10 (1.5)	7 (1.2)
Stent thrombosis	5 (0.8)	6 (0.9)	4 (0.7)
Major adverse cardiovascular event or stent thrombosis	41 (6.5)	36 (5.6)	36 (6.0)

Group 1: X15+C, Group 2: X2.5+C+A, Group 3: W+C+A (TT)

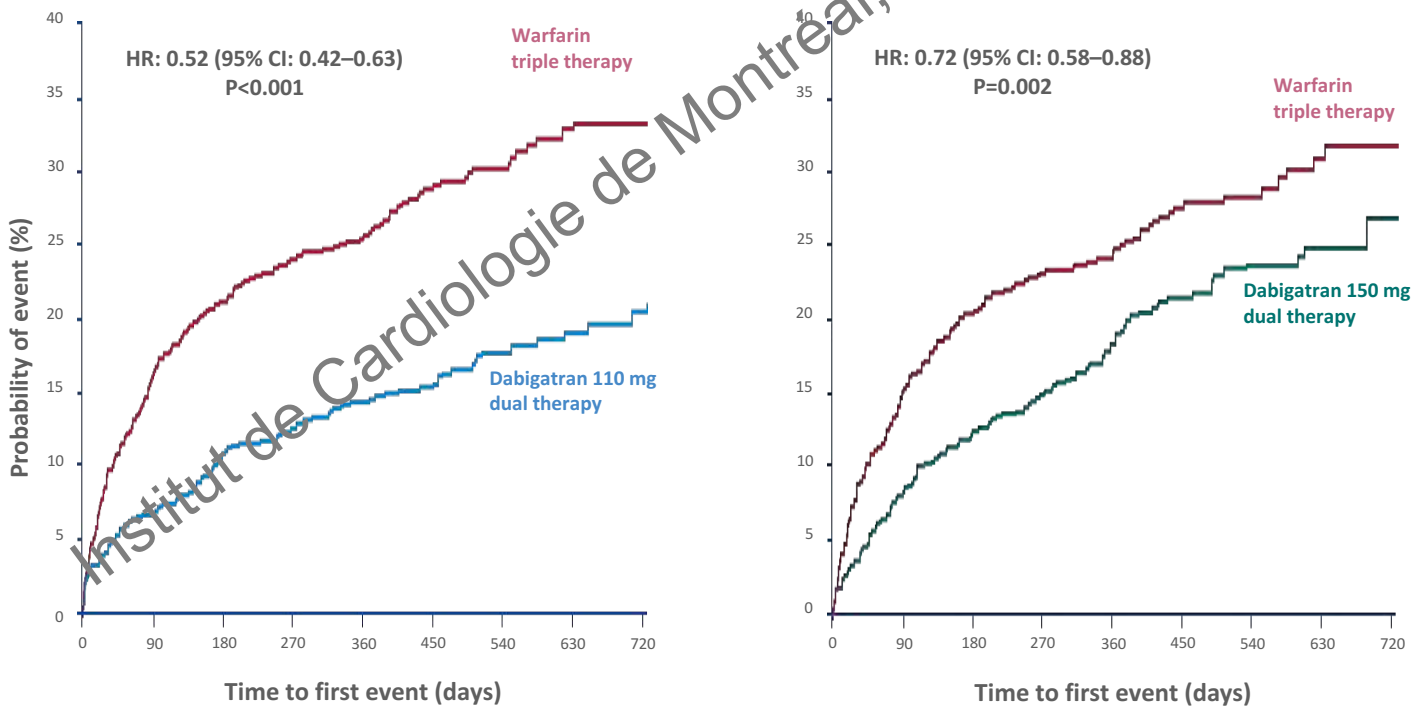
Gibson et al. NEJM 2016; 375:2423-34

RE-DUAL PCI

- 2725 patients with AF undergoing PCI
- Dabi (110 or 150mg BID) + P2Y12 VS Triple therapy (W+P2Y12+ASA)

Primary end point

- **Major or Clinically relevant non-major bleeding**



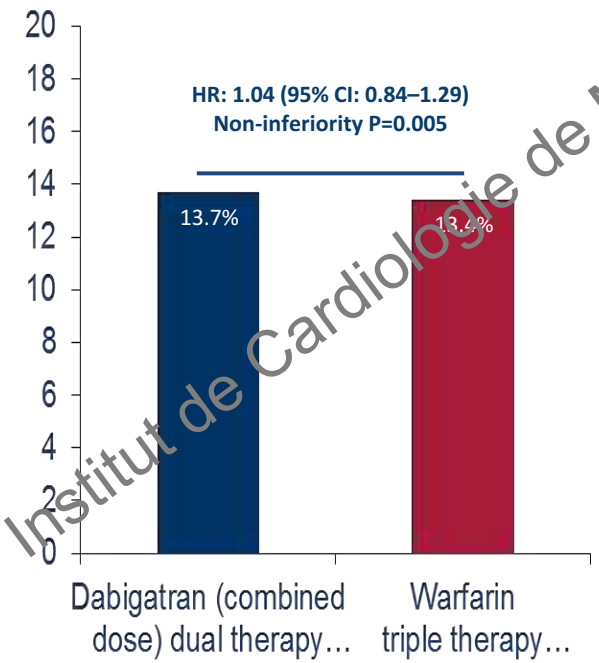
Cannon CP *et al,* NEJM 2017; 377:1513-1524

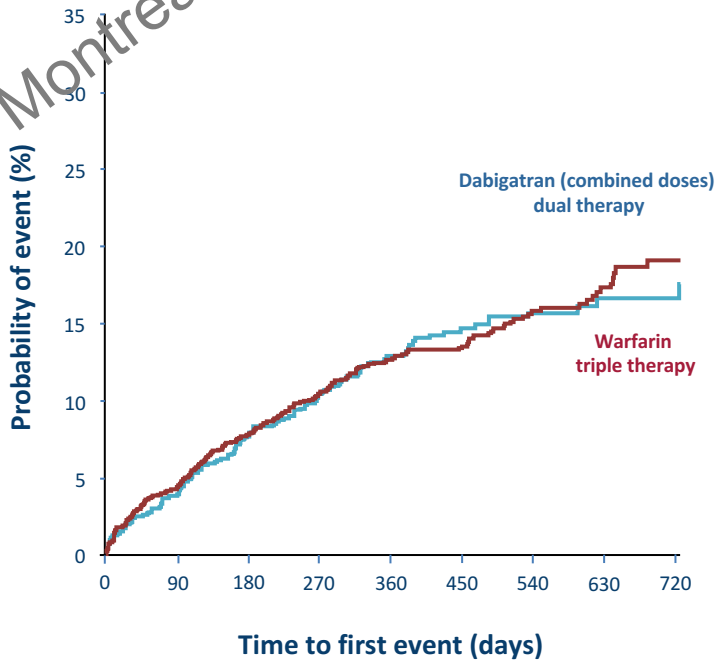
RE-DUAL PCI

- 2725 patients with AF undergoing PCI
- Dabi 110 + P2Y12 vs Dabi 150 + P2Y12 vs Triple therapy (W+P2Y12+ASA)

Efficacy end point

- **Composite of thromboembolic events (myocardial infarction, stroke, or systemic embolism), death, or unplanned revascularization**





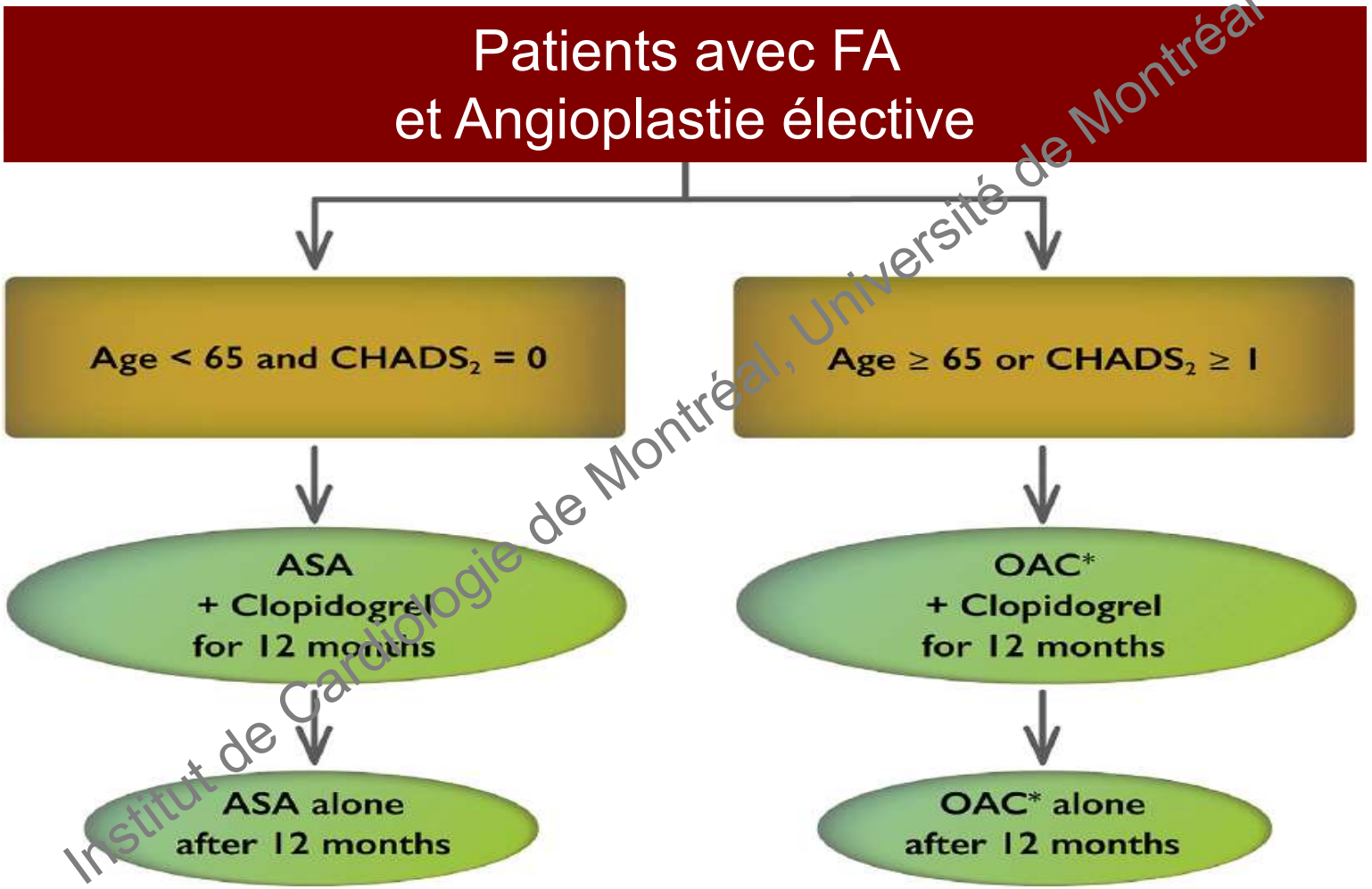
Cannon CP *et al,* NEJM 2017; 377:1513-1524

Données pour le Traitement Antithrombotique après Angioplastie /SCA chez les Patients

trial	n	experimental arm	control arm	clinicaltrials.gov	primary endpoint
PIONEER AF-PCI[1]	2,100	rivaroxaban P2Y12	warfarin P2Y12 aspirin	01830543	bleeding
RE-DUAL PCI	2,500	dabigatran* P2Y12	warfarin P2Y12 aspirin	02164864	bleeding
AUGUSTUS**	4,600	apixaban/warfarin P2Y12	warfarin P2Y12 aspirin	02415400	bleeding
ENTRUST AF-PCI	1,500	edoxaban P2Y12	warfarin P2Y12 aspirin	n.a.	bleeding
MANJUSRI[2]	296	warfarin ticagrelor	warfarin clopidogrel aspirin	02206815	bleeding

[1]AHJ 2015;169:472-78, [2]Contemp Clin Trials 2015;40:166-71

Traitement Antithrombotique chez les Patients avec FA et MCAS



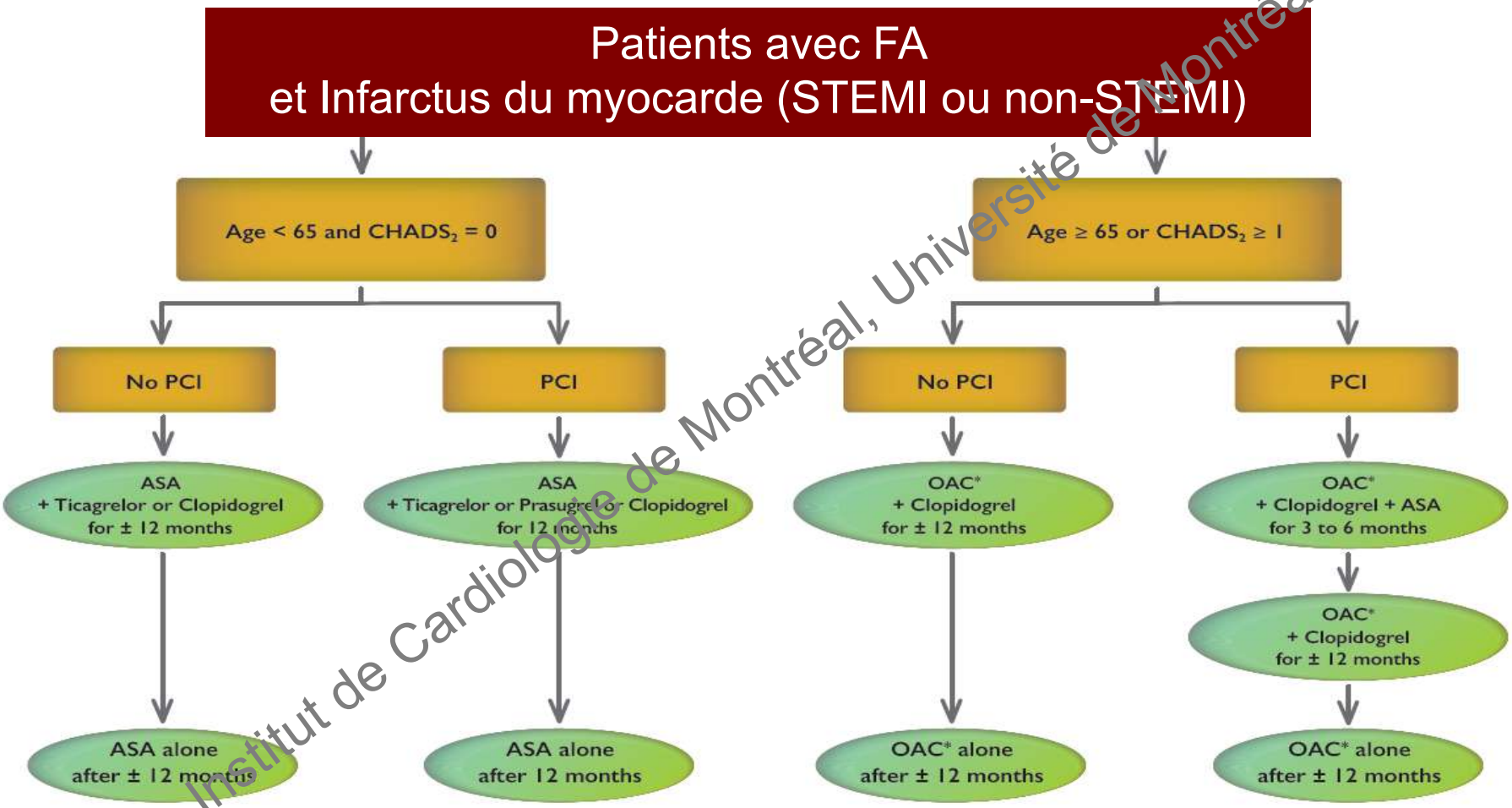
Practical tips:

High risk of stent thrombosis and acceptable major bleeding risk :

1. May continue (ASA+Clopidogrel) or (OAC+Clopidogrel) >12 months.
2. Might prompt initial use of TT in selected patients.

High risk of major bleed: (ASA+Clopidogrel) or (OAC+Clopidogrel) converted to ASA alone or OAC alone <12 months.

Traitement Antithrombotique chez les Patients avec FA et MCAS



Practical tips:

High risk of stent thrombosis and acceptable major bleeding risk: may continue (C+ASA) or (C+OAC) >12 months.

High risk of bleeding: may have (C+ASA) or (C+OAC) converted to OAC alone <12 months.

High risk of bleeding and ACS+PCI: some clinicians may prefer C+OAC over TT

High risk of coronary events and ACS+PCI (at the lower end of the stroke risk spectrum): some clinicians may consider ASA+ticagrelor, ASA+prasugrel, or ASA+clopidogrel over TT.

Traitement Antithrombotique chez les Patients avec FA et MCAS

Practical tip: Measures to reduce bleeding

- **Avoid prasugrel and ticagrelor** in conjunction with OAC
- Target the **lower end of the INR** range (warfarin)
- Consider the use of **lower effective NOAC** dose
- **Delay non-urgent catheterization** until there is clarity about coagulation and renal status
- Measures during **invasive procedures**
  - radial access, small-diameter sheaths, early removal from femoral site and minimized use of acute procedural anti-thrombotic therapies
- Consider routine **proton pump inhibitor** (PPI)

Macle et al. Canadian Journal of Cardiology 2016;32:1170-85

Lignes directrices de la SCC en matière de FA

- **Mise à jour 2018…**
  - Modification des facteurs de risque
  - FA et MCAS
    - SCA / Angioplastie
  - Anticoagulation peri-cardioversion
    - Timing, NACOs, ETO
  - Ablation par cathéter
  - Antidotes pour NOACs

Merci !