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PHYSIOLOGIE & MEDECINE EXPERIMENTALE
COEUR MUSCLES
MONTPELLIER

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Inflammation dans les pathologies cardiovasculaires : de la physiopathologie aux études d'intervention

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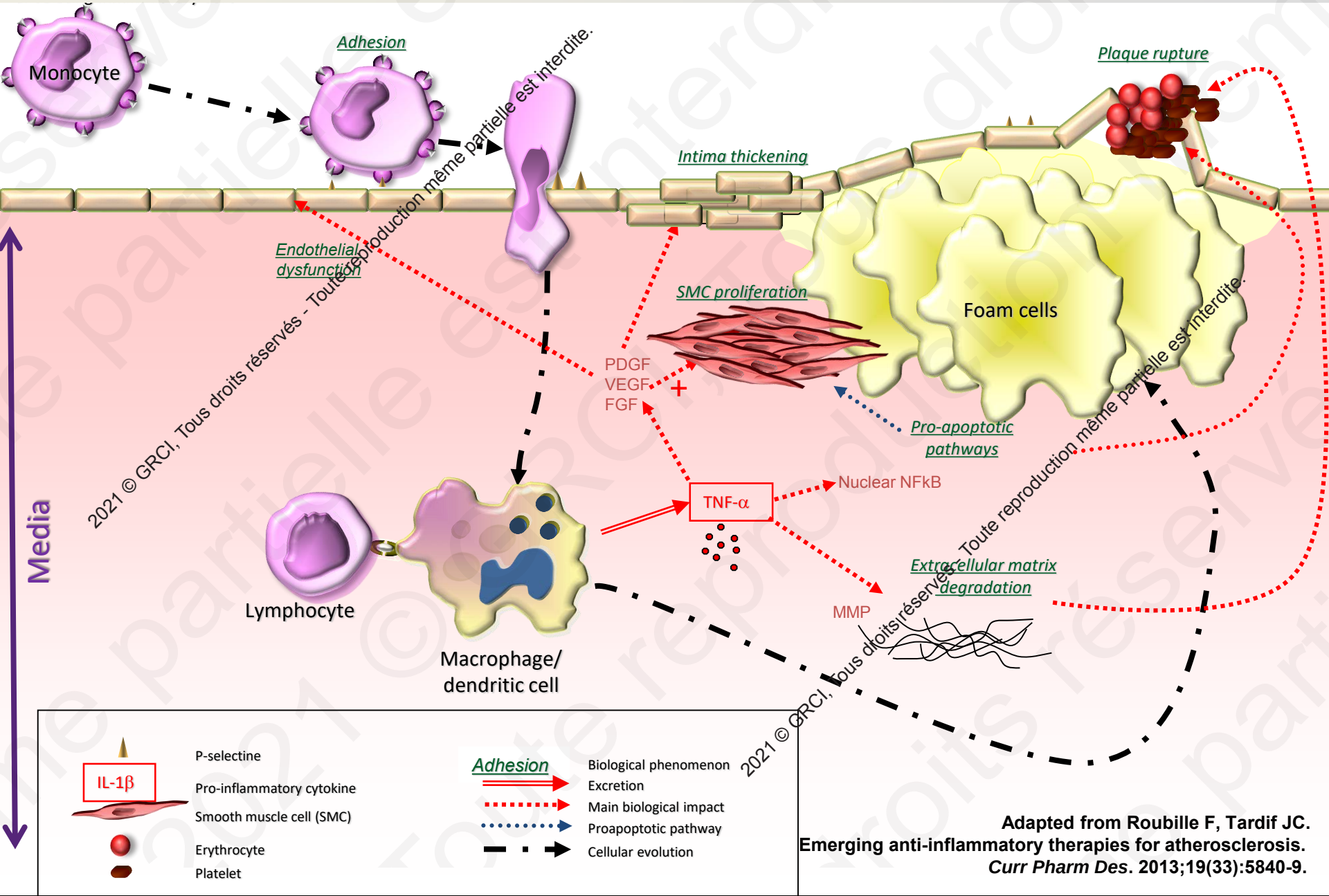
Conflits d'intérêt

Affiliation/Financial Relationship	Company
Grant/Research Support	Servier, Medtronic, Astra-Zeneca, LVL, Eole Santé, air liquide, Resmed, ISIS
Consulting Fees/Honoraria	Medtronic, Novartis, AZ, MSD, Actelion, Abbott
Major Stock Shareholder/Equity	0
Royalty Income	0
Ownership/Founder	0
Intellectual Property Rights	0
Other Financial Benefit	

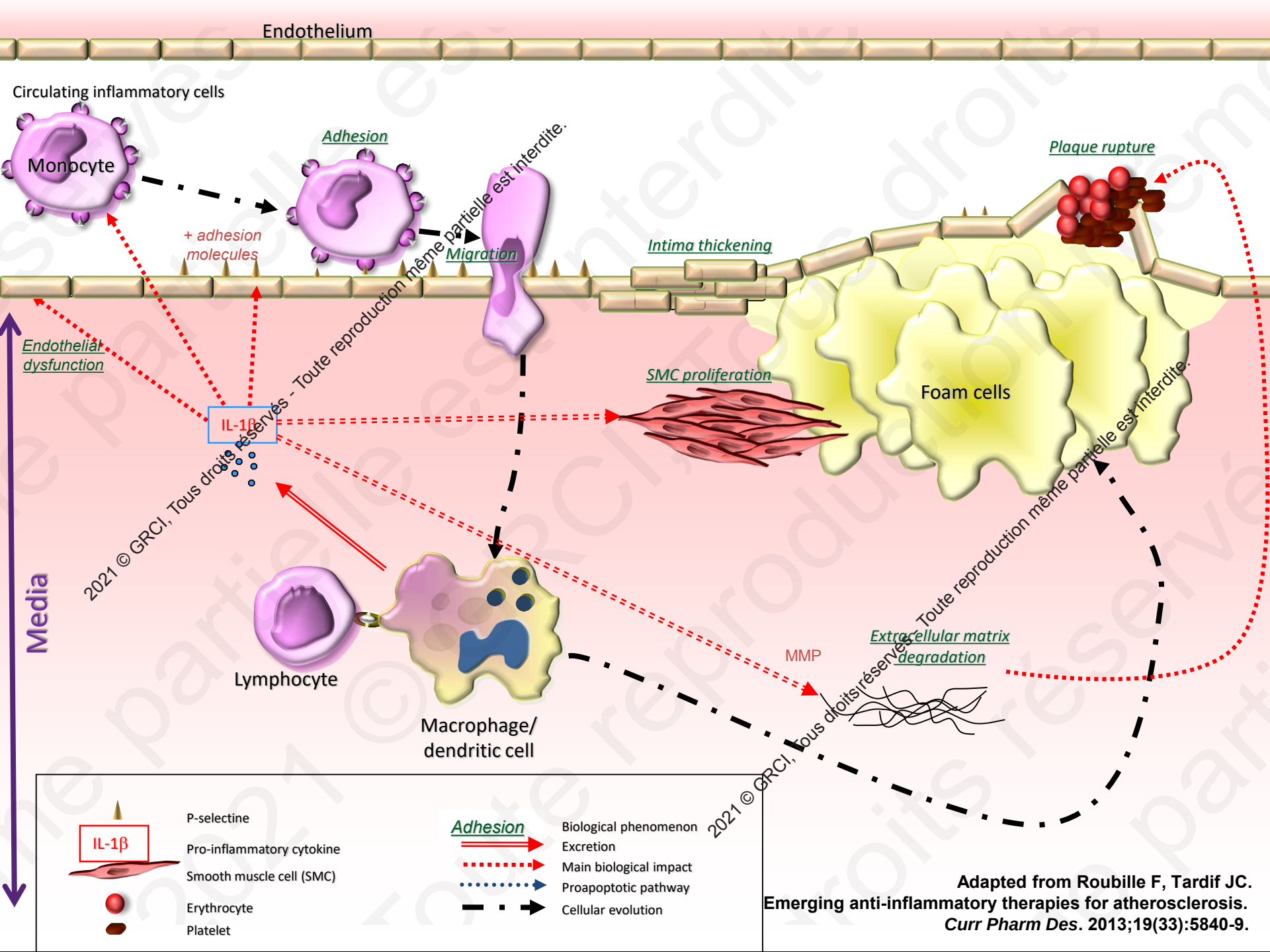
PharmScience has provided both colchicine and placebo for the trial.
No conflict of interest regarding this study.

Public grants (federal government of Canada and Quebec).

Atherosclerosis is at least partly an inflammatory disease…



Adapted from Roubille F, Tardif JC. Emerging anti-inflammatory therapies for atherosclerosis. *Curr Pharm Des*. 2013;19(33):5840-9.



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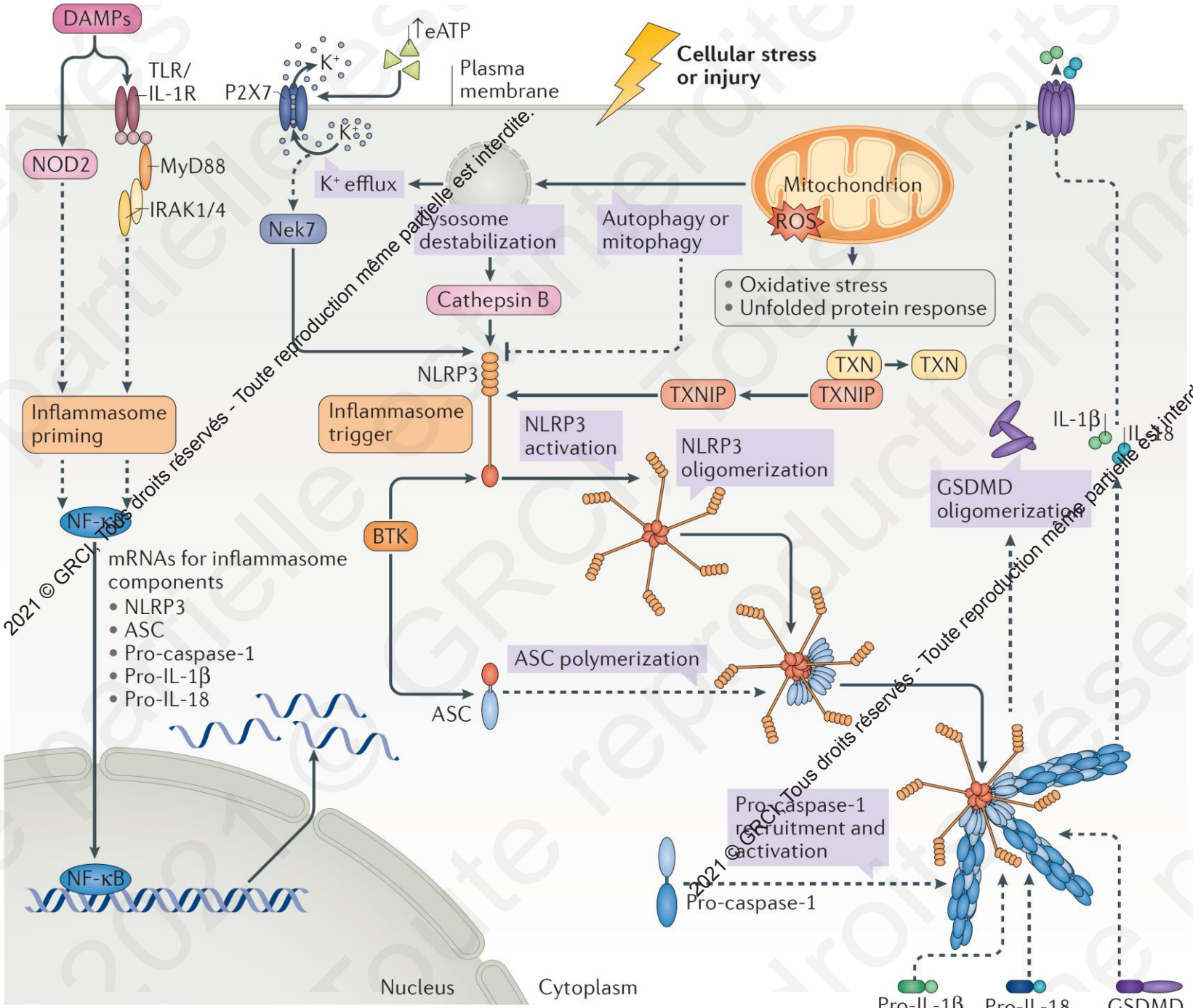

Toldo S, Abbate A. The NLRP3 inflammasome in acute myocardial infarction. *Nat Rev Cardiol*. 2018 Apr;15(4):203-214.

ORIGINAL ARTICLE

Antiinflammatory Therapy with Canakinumab for Atherosclerotic Disease

P.M. Ridker, B.M. Everett, T. Thuren, J.G. MacFadyen, W.H. Chang, C. Ballantyne, F. Fonseca, J. Nicolau, W. Koenig, S.D. Anker, J.J.P. Kastelein, J.H. Cornel, P. Pais, D. Pella, J. Genest, R. Cifkova, A. Lorenzatti, T. Forster, Z. Kobalava, L. Vida-Simiti, M. Flather, H. Shimokawa, H. Ogawa, M. Dellborg, P.R.F. Rossi, R.P.T. Troquay, P. Libby, and R.J. Glynn, for the CANTOS Trial Group*

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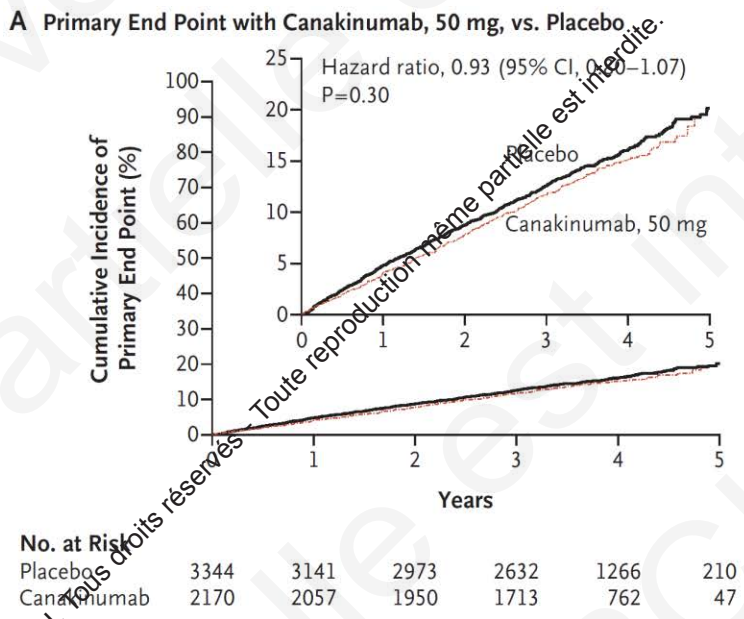
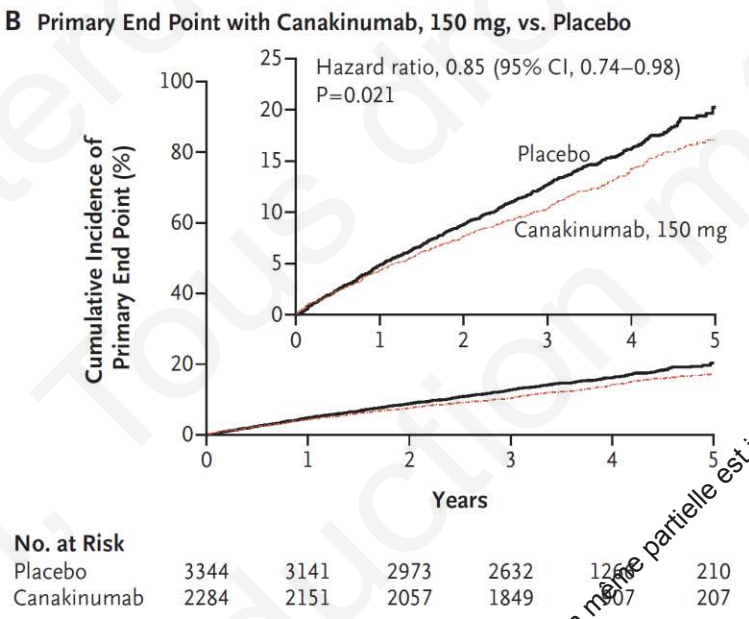
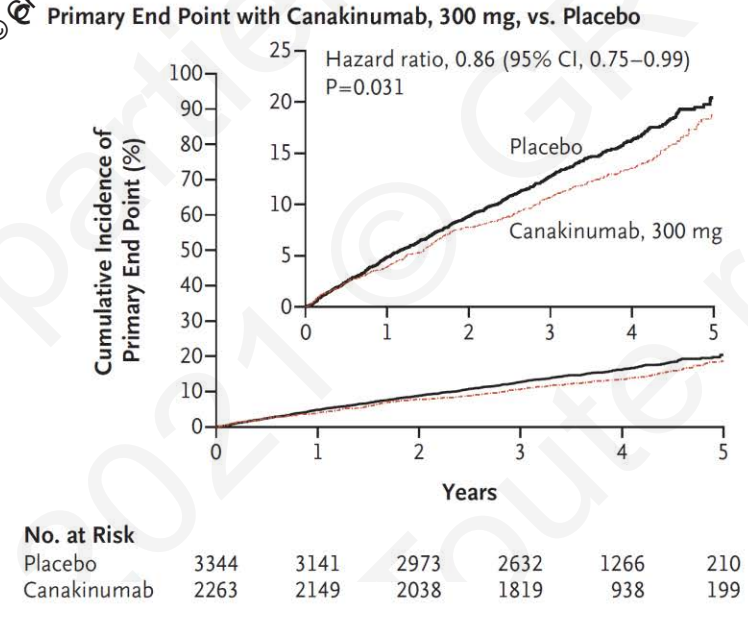
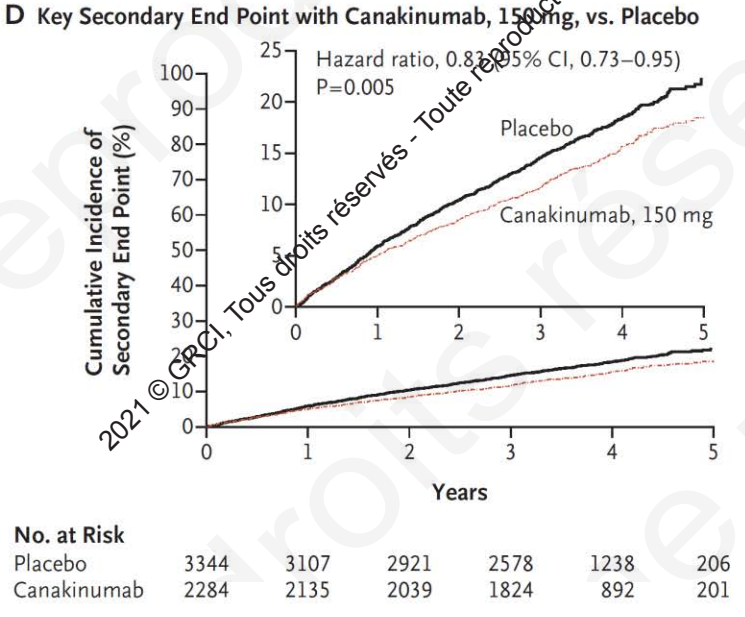
CANTOS: results









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Ridker PM, et al.
Antiinflammatory Therapy with Canakinumab for Atherosclerotic Disease.
N Engl J Med. 2017 Sep 21;377(12):1119-1131.

CANTOS: adverse effects

Table 3. Incidence Rates and Numbers of Serious Adverse Events and Selected Safety Laboratory Data During Treatment, Stratified According to Trial Group.*

Adverse Event or Laboratory Variable	Placebo Group (N=3344)	Canakinumab				P Value	
		50-mg Group (N=2170)	150-mg Group (N=2284)	300-mg Group (N=2263)	All Doses (N=6717)	For Trend across Doses vs. Placebo	For Combined Dose Groups vs. Placebo
Event — incidence rate per 100 person-yr (no. of patients with event)							
Any serious adverse event	11.96 (1202)	11.41 (741)	11.71 (812)	12.33 (836)	11.82 (2389)	0.43	0.79
Any serious adverse event of infection	2.86 (342)	3.03 (230)	3.13 (258)	3.25 (265)	3.14 (753)	0.12	0.14
Cellulitis	0.24 (30)	0.24 (19)	0.37 (32)	0.41 (35)	0.34 (86)	0.02	0.09
Pneumonia	0.90 (112)	0.94 (74)	0.94 (80)	0.99 (84)	0.95 (238)	0.56	0.62
Urinary tract infection	0.22 (27)	0.18 (14)	0.24 (21)	0.20 (17)	0.21 (52)	0.84	0.88
Opportunistic infection†	0.18 (23)	0.16 (13)	0.15 (13)	0.20 (17)	0.17 (43)	0.97	0.78
Pseudomembranous colitis	0.03 (4)	0.13 (10)	0.05 (4)	0.12 (10)	0.10 (24)	0.13	0.03
Fatal infection or sepsis	0.18 (23)	0.31 (25)	0.28 (24)	0.34 (29)	0.31 (78)	0.09	0.02
Any cancer‡	1.88 (231)	1.85 (144)	1.69 (143)	1.72 (144)	1.75 (431)	0.31	0.38
Fatal cancer‡	0.64 (81)	0.55 (44)	0.50 (44)	0.31 (27)	0.45 (115)	<0.001	0.02
Other adverse event							
Injection-site reaction†	0.23 (29)	0.27 (21)	0.28 (24)	0.30 (26)	0.28 (71)	0.49	0.36
Arthritis	3.32 (385)	2.15 (164)	2.17 (180)	2.47 (201)	2.26 (545)	0.002	<0.001
Osteoarthritis	1.67 (202)	1.21 (94)	1.12 (95)	1.30 (109)	1.21 (298)	0.04	<0.001
Gout	0.80 (99)	0.43 (34)	0.35 (30)	0.37 (32)	0.38 (96)	<0.001	<0.001
Drug-induced liver injury†	0.18 (23)	0.15 (12)	0.13 (11)	0.05 (4)	0.11 (27)	0.004	0.05
Leukopenia	0.24 (30)	0.30 (24)	0.37 (32)	0.52 (44)	0.40 (100)	0.002	0.01
Neutropenia	0.06 (7)	0.05 (4)	0.07 (6)	0.18 (15)	0.10 (25)	0.01	0.17
Any hemorrhage	4.01 (462)	3.33 (249)	4.15 (327)	3.82 (301)	3.78 (877)	0.94	0.31
Thrombocytopenia	0.43 (53)	0.56 (44)	0.54 (46)	0.71 (60)	0.60 (150)	0.02	0.03
Hepatic variable — percent of patients with condition (no.)							
Alanine aminotransferase >3× normal value	1.4 (46)	1.9 (42)	1.9 (44)	2.0 (45)	2.0 (131)	0.19	0.06
Aspartate aminotransferase >3× normal value	1.1 (36)	1.5 (32)	1.5 (35)	1.5 (34)	1.5 (101)	0.30	0.11
Alkaline phosphatase >3× normal value	0.4 (15)	0.5 (11)	0.4 (10)	0.5 (12)	0.5 (33)	0.67	0.82
Bilirubin >2× normal value	0.8 (26)	1.0 (21)	0.7 (15)	0.7 (15)	0.8 (51)	0.34	0.83

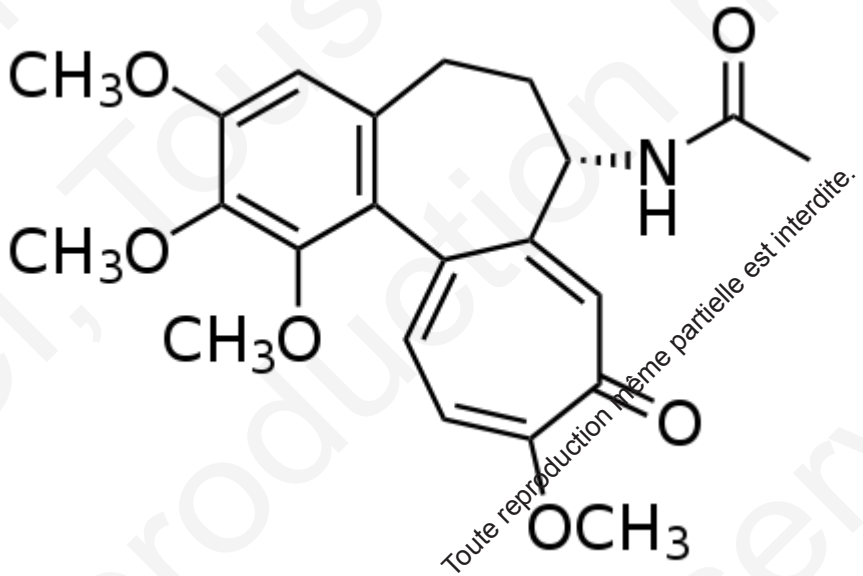
Ridker PM, et al.

Antiinflammatory Therapy with Canakinumab for Atherosclerotic Disease.

***N Engl J Med.* 2017 Sep 21;377(12):1119-1131.**

Colchicine: an old wine in a new bottle?

Colchicum autumnale



Chemical structure of colchicine

Roubille F, …, Tardif JC.
Colchicine: an old wine in a new bottle?

***Antiinflamm Antiallergy Agents Med Chem.* 2013;12(1):14-23.**

COLCOT

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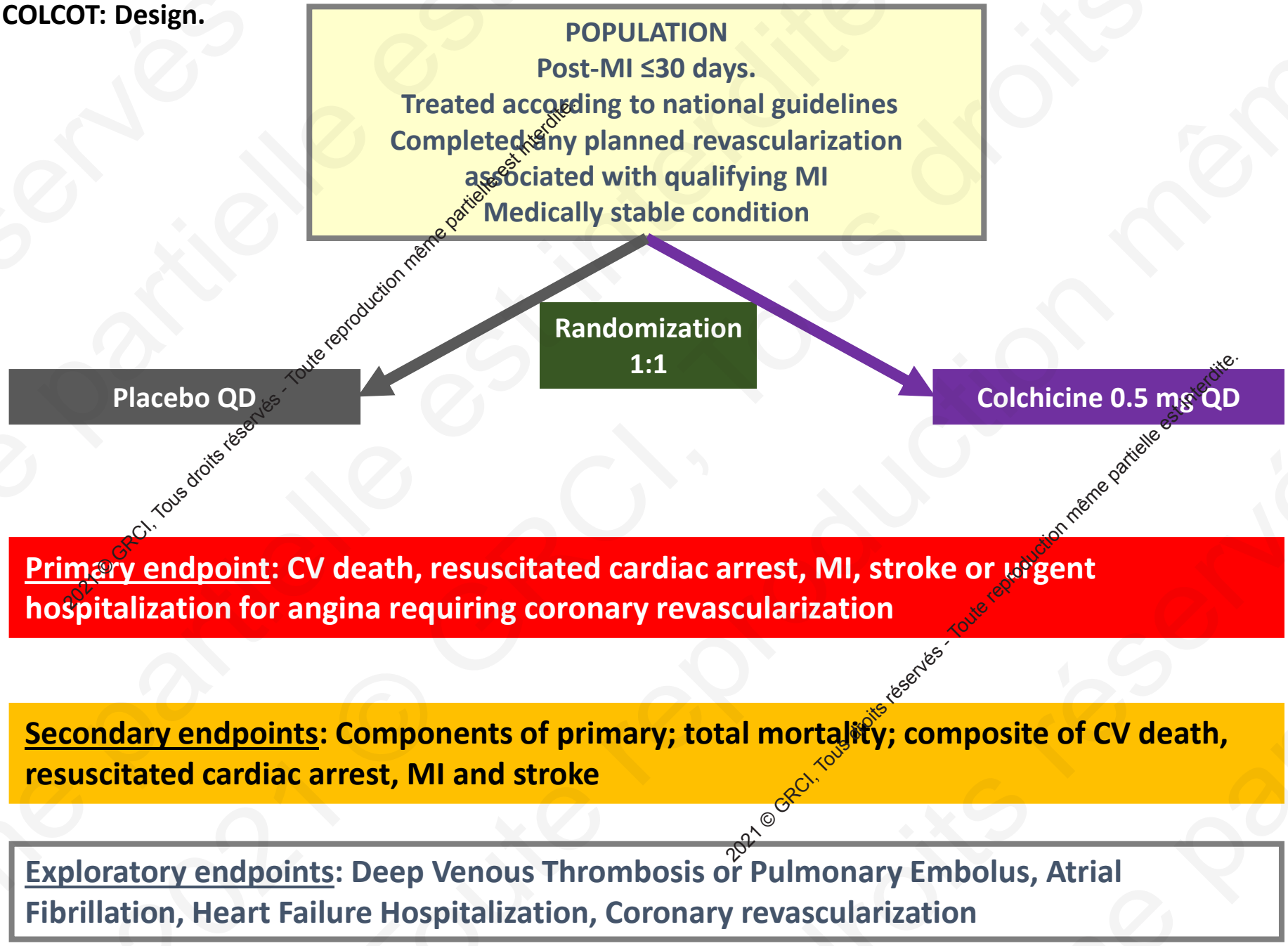
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

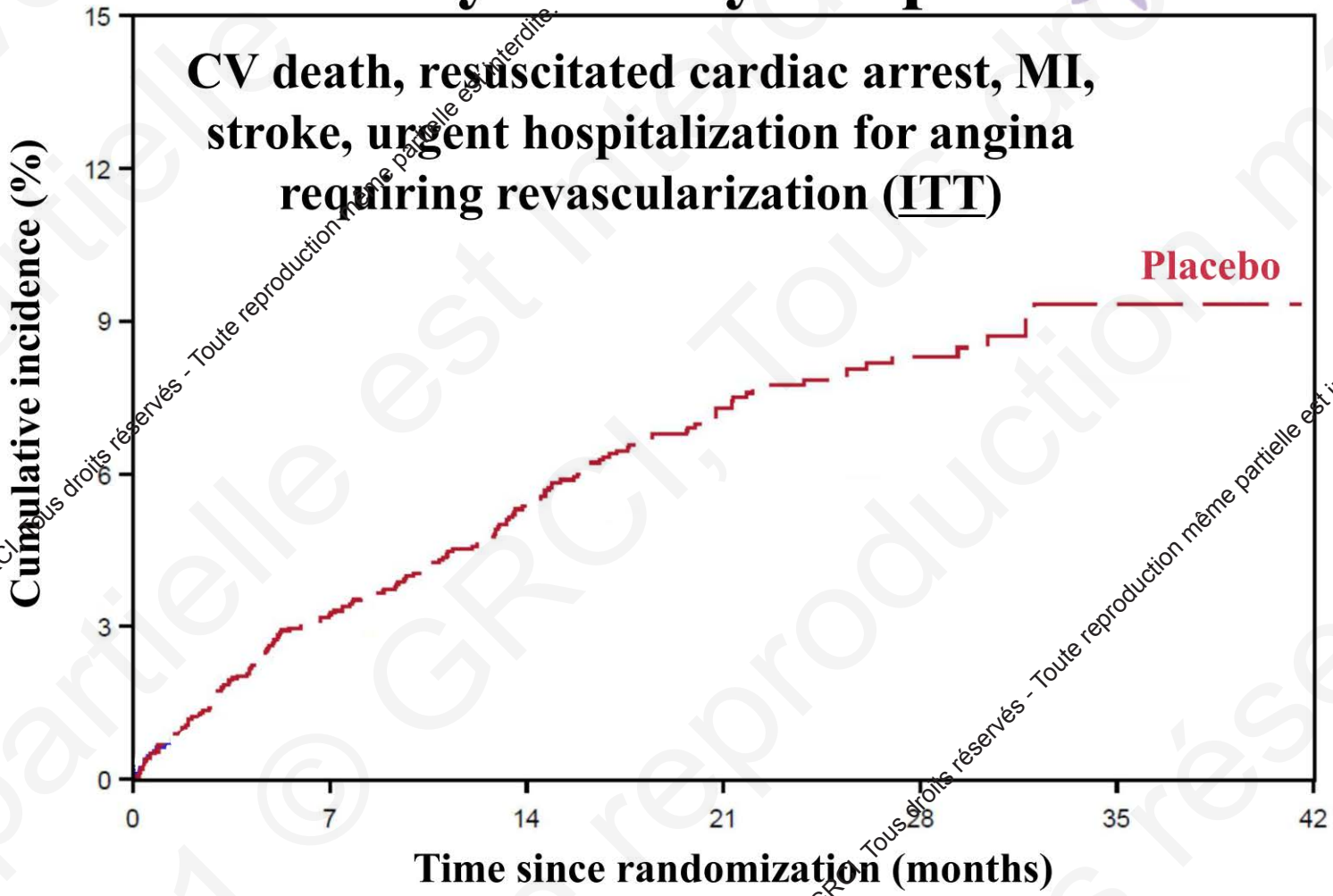
Efficacy and Safety of Low-Dose Colchicine after Myocardial Infarction

Jean-Claude Tardif, M.D., Simon Kouz, M.D., David D. Waters, M.D., Olivier F. Bertrand, M.D., Ph.D., Rafael Diaz, M.D., Aldo P. Maggioni, M.D., Fausto J. Pinto, M.D., Ph.D., Reda Ibrahim, M.D., Habib Gamra, M.D., Ghassan S. Kiwan, M.D., Colin Berry, M.D., Ph.D., José López-Séndon, M.D., Petr Ostadal, M.D., Ph.D., Wolfgang Koenig, M.D., Denis Angoulvant, M.D., Jean C. Grégoire, M.D., Marc-André Lavoie, M.D., Marie-Pierre Dubé, Ph.D., David Rhainds, Ph.D., Mylène Provencher, Ph.D., Lucie Blondeau, M.Sc., Andreas Orfanos, M.B., B.Ch., Philippe L. L'Allier, M.D., Marie-Claude Guertin, Ph.D., and François Roubille, M.D., Ph.D.

COLCOT: Design.



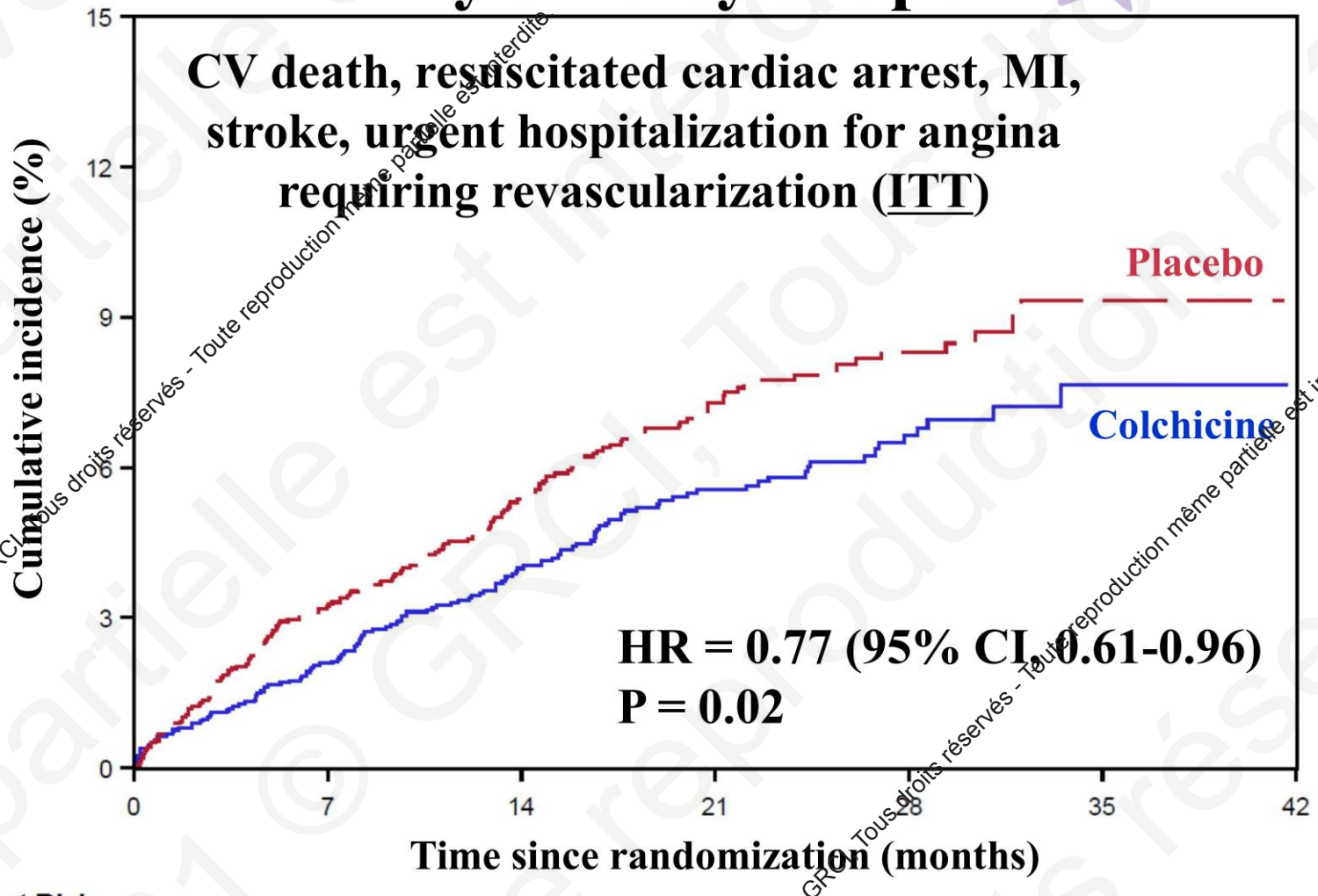
Primary efficacy endpoint



No. at Risk							
Colchicine	2366	2284	1868	1230	628	153	0
Placebo	2379	2261	1854	1224	622	144	0

Primary efficacy endpoint

COLCOT

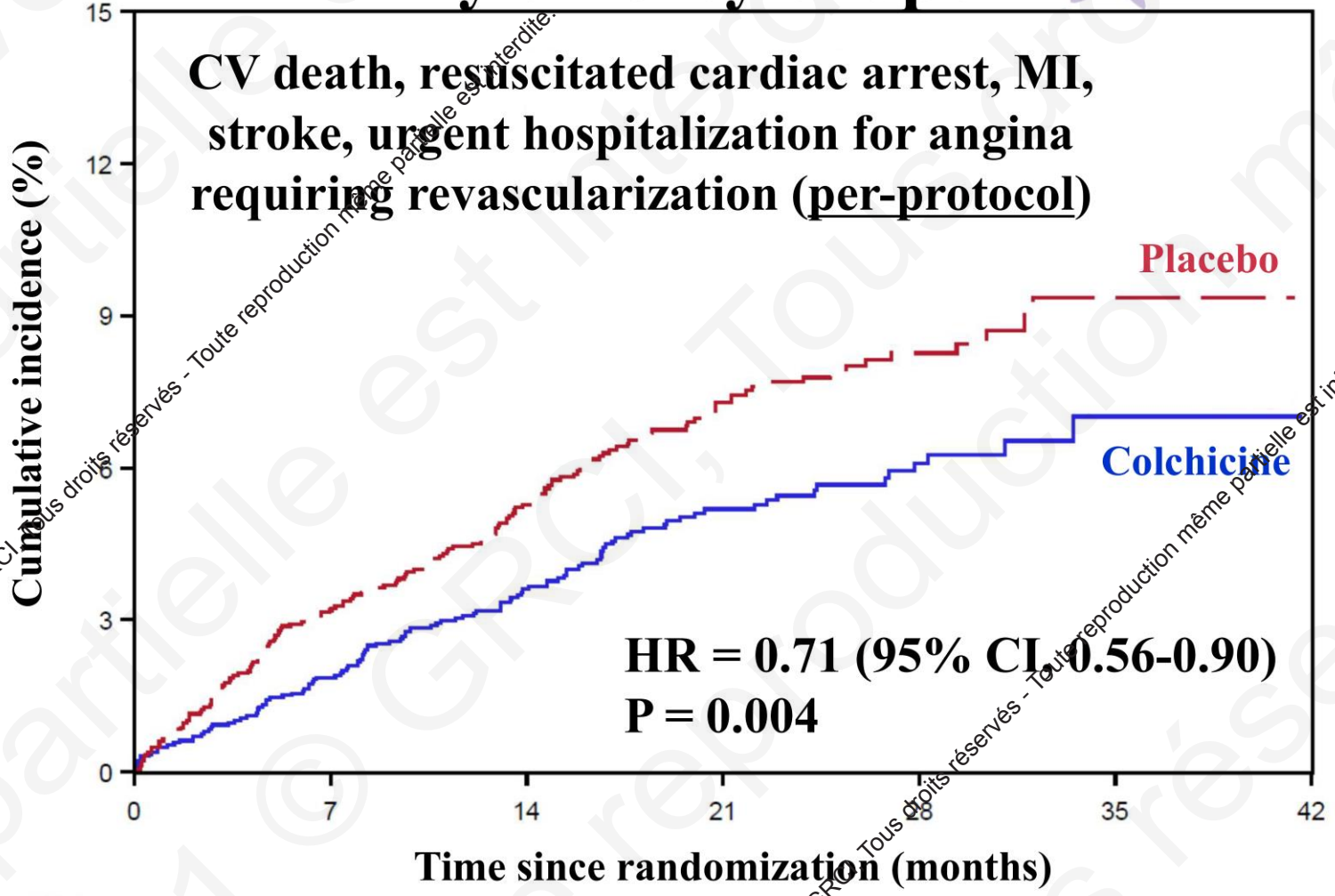


No. at Risk							
Colchicine	2366	2284	1868	1230	628	153	0
Placebo	2379	2261	1854	1224	622	144	0

Major Clinical Outcomes

Clinical Outcome Intent-to-treat population	Colchicine N=2366	Placebo N=2379	Hazard Ratio (95% CI)	P Value
Primary composite endpoint - no. (%)	131 (5.5%)	170 (7.1%)	0.77 (0.61-0.96)	0.02
CV death - no. (%)	20 (0.8%)	24 (1.0%)	0.84 (0.46-1.52)	
Resuscitated cardiac arrest - no. (%)	5 (0.2%)	6 (0.3%)	0.83 (0.25-2.73)	
Myocardial infarction - no. (%)	89 (3.8%)	98 (4.1%)	0.91 (0.68-1.21)	
Stroke - no. (%)	5 (0.2%)	19 (0.8%)	0.26 (0.10-0.70)	
Urgent hospitalization for angina requiring revascularization - no. (%)	25 (1.1%)	50 (2.1%)	0.50 (0.31-0.81)	
Secondary composite endpoint - no. (%)	111 (4.7%)	130 (5.5%)	0.85 (0.66-1.10)	
Death - no. (%)	43 (1.8%)	44 (1.8%)	0.98 (0.64-1.49)	
DVT or pulmonary embolus - no. (%)	10 (0.4%)	7 (0.3%)	1.43 (0.54-3.75)	
Atrial fibrillation - no. (%)	36 (1.5%)	40 (1.7%)	0.93 (0.59-1.46)	

Primary efficacy endpoint



No. at Risk							
Colchicine	2260	2197	1791	1169	601	140	0
Placebo	2270	2169	1778	1173	596	135	0

Total (First + Recurrent) Primary Endpoint Events (ITT)

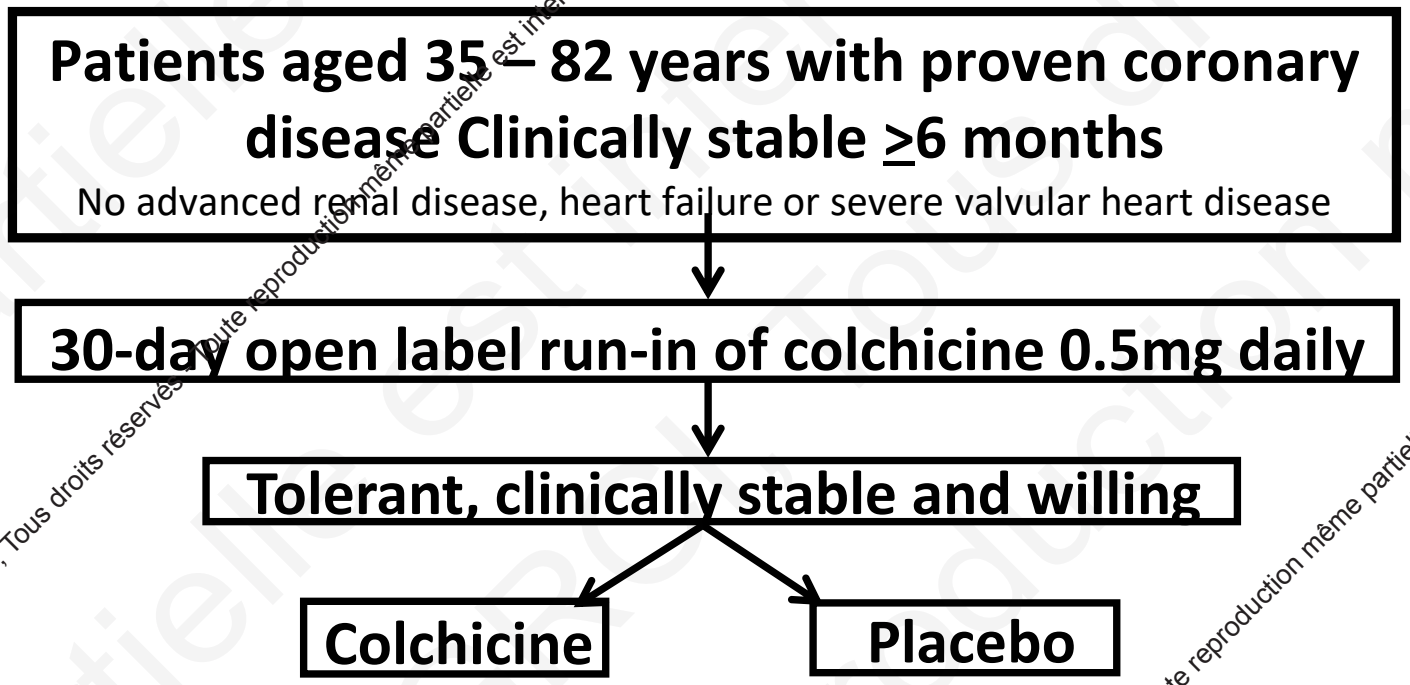
Endpoint / Model		Colchicine N=2366	Placebo N=2379	Hazard / Rate Ratio (95% CI)
Total number of primary endpoint events		154	223	
Rate of primary endpoint events per 100 patient-months		0.29	0.42	
Negative binomial model				0.66 (0.51; 0.86)
Andersen-Gill model				0.69 (0.54; 0.88)
Wei-Lin-Wessfeld model	1st event			0.77 (0.61; 0.96)
Wei-Lin-Wessfeld model	2nd event			0.73 (0.48; 1.11)
Wei-Lin-Wessfeld model	3rd event			0.64 (0.37; 1.10)
Wei-Lin-Wessfeld model	Average			0.77 (0.61; 0.96)

Adverse events

Safety population	Colchicine (N=2330)	Placebo (N=2346)	P Value
Any related AE - no. (%)	372 (16.0%)	371 (15.8%)	0.89
Any SAE - no. (%)	383 (16.4%)	404 (17.2%)	0.47
Gastro-intestinal AE - no. (%)	408 (17.5%)	414 (17.6%)	0.90
Gastro-intestinal SAE - no. (%)	46 (2.0%)	36 (1.5%)	0.25
Diarrhea AE - no. (%)	225 (9.7%)	208 (8.9%)	0.35
Nausea AE - no. (%)	43 (1.8%)	24 (1.0%)	0.02
Flatulence AE - no. (%)	15 (0.6%)	5 (0.2%)	0.02
GI haemorrhage AE - no. (%)	7 (0.3%)	5 (0.2%)	0.56
Infection SAE - no. (%)	51 (2.2%)	38 (1.6%)	0.15
Pneumonia SAE - no. (%)	21 (0.9%)	9 (0.4%)	0.03
Septic shock SAE - no. (%)	2 (0.1%)	2 (0.1%)	0.99
HF hospitalization - no. (%)	25 (1.1%)	17 (0.7%)	0.21
Cancer - no. (%)	43 (1.8%)	46 (2.0%)	0.77
Anemia - no. (%)	14 (0.6%)	10 (0.4%)	0.40
Leukopenia - no. (%)	2 (0.1%)	3 (0.1%)	0.66
Thrombocytopenia - no. (%)	3 (0.1%)	7 (0.3%)	0.21

LoDoCo2

Protocol



Primary endpoint: Composite of CV death, MI, ischemic stroke or ischemia-driven coronary revascularization

Planned to begin close-out 12 months after the last participant had been randomized*

** If 331 primary events had accrued – sufficient to detect a 30% effect of therapy with 90% power*

Nidorf SM et al. N Engl J Med 2020 Aug 31

LODOCO2

6528 **Enrolled**

91.3% Tolerated open label therapy

5522 **Randomized**

Followed for a median of 29 months (12-64 months)

90.3% in each arm continued their trial medication

3.4% in each arm ceased due to perceived effects

5521 **Close-out**

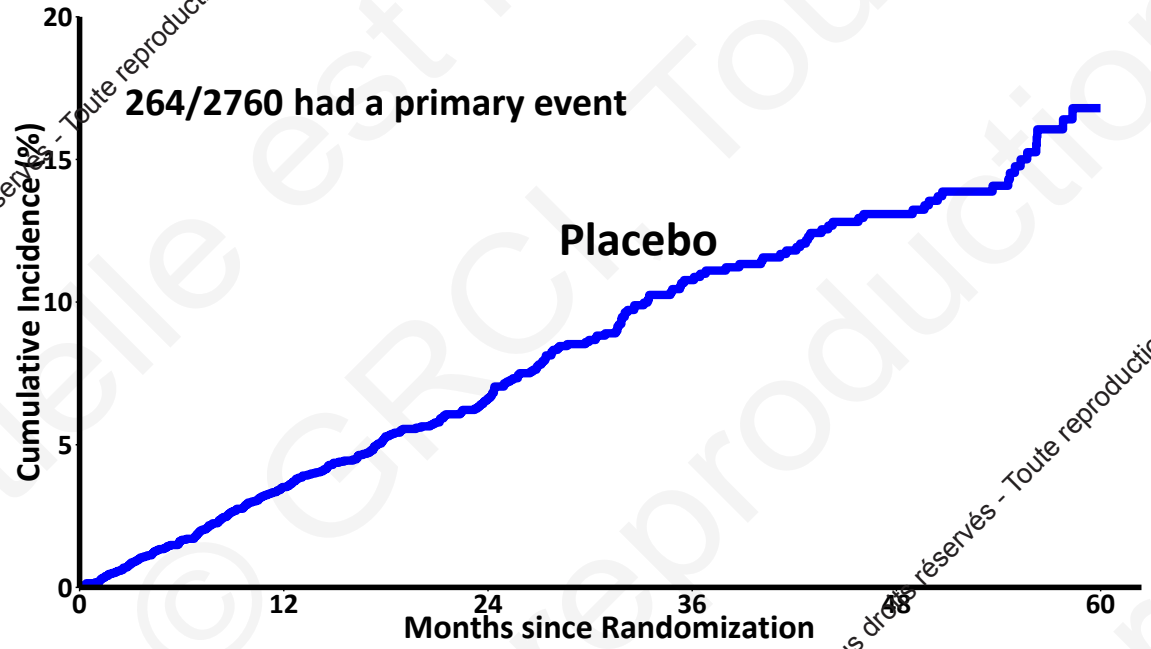
Began on December 4, 2019; Ended February 17, 2020

99.9% Final, end point status known

Nidorf SM et al. N Engl J Med 2020 Aug 31

Primary endpoint

Cardiovascular death, myocardial infarction, ischemic stroke or ischemia-driven coronary revascularization



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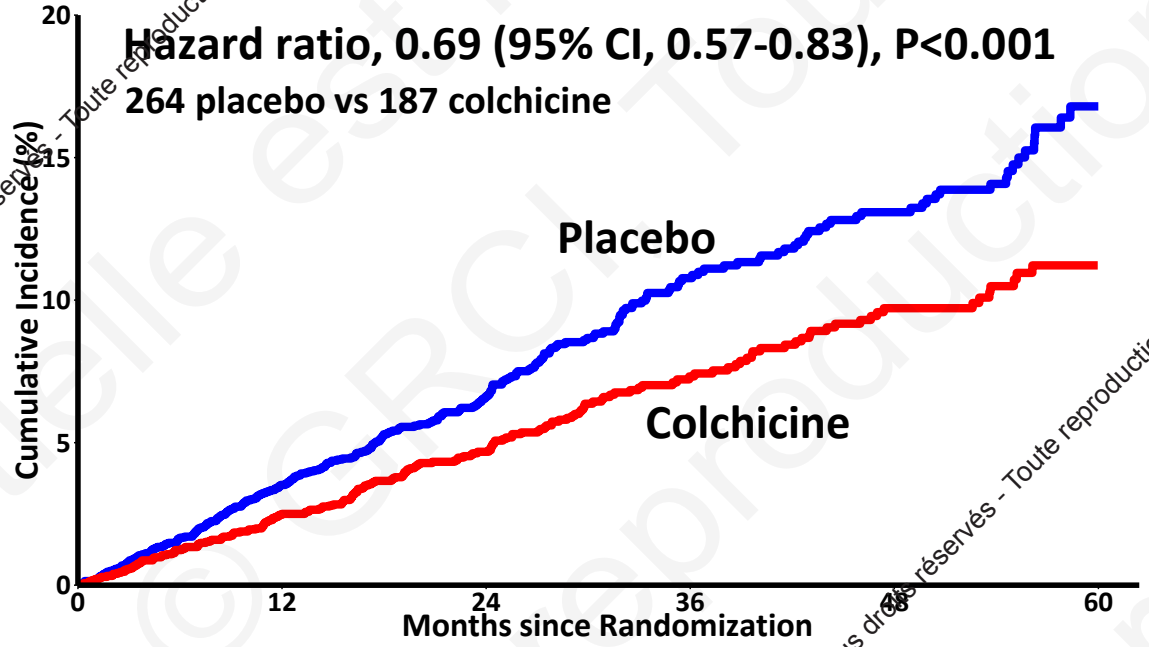
Primary endpoint

Cardiovascular death, myocardial infarction, ischemic stroke or ischemia-driven coronary revascularization



ESC Congress 2020
The Digital Experience

Nidorf SM et al. N Engl J Med 2020 Aug 31

Serious adverse events

	Colchicine (N = 2762)	Placebo (N = 2760)
Non-cardiovascular death	53(1.9)	35(1.3)
Diagnosis of new cancer	120(4.3)	122(4.4)
Hospitalization for infection	137(5.0)	144(5.2)
Hospitalization for pneumonia	46(1.7)	55(2.0)
Hospitalization for gastro-intestinal reason	53(1.9)	50(1.8)
Neutropenia	3(0.1)	3(0.1)
Myotoxicity	4(0.1)	3(0.1)

Nidorf SM et al. N Engl J Med 2020 Aug 31

COLCOT
Mieux vaut traiter tôt en cas de SCA

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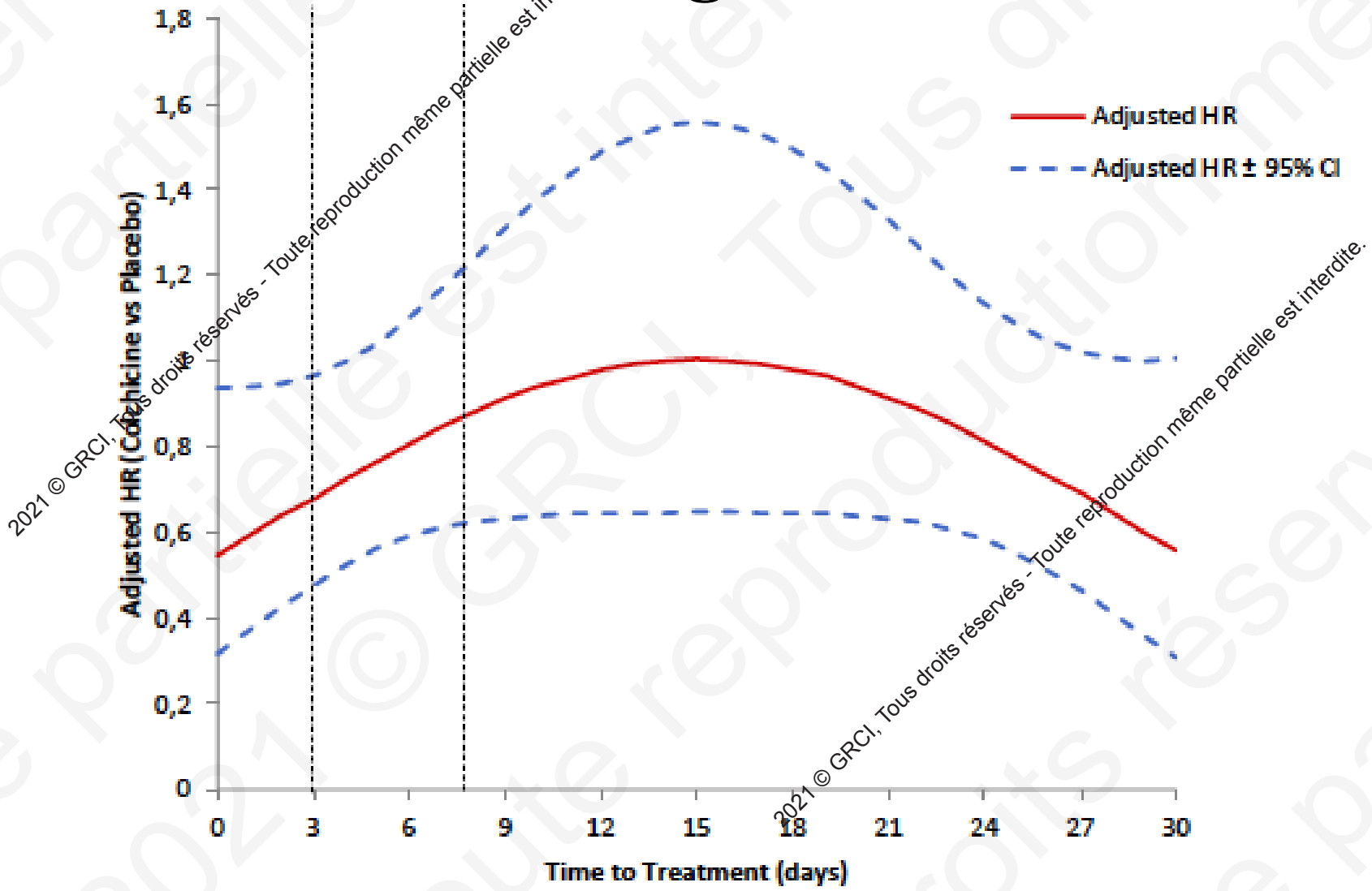
Primary efficacy endpoint according to TTI



Quadratic model

COLCOT
Les patients avec profil inflammatoire en tirent encore plus profit

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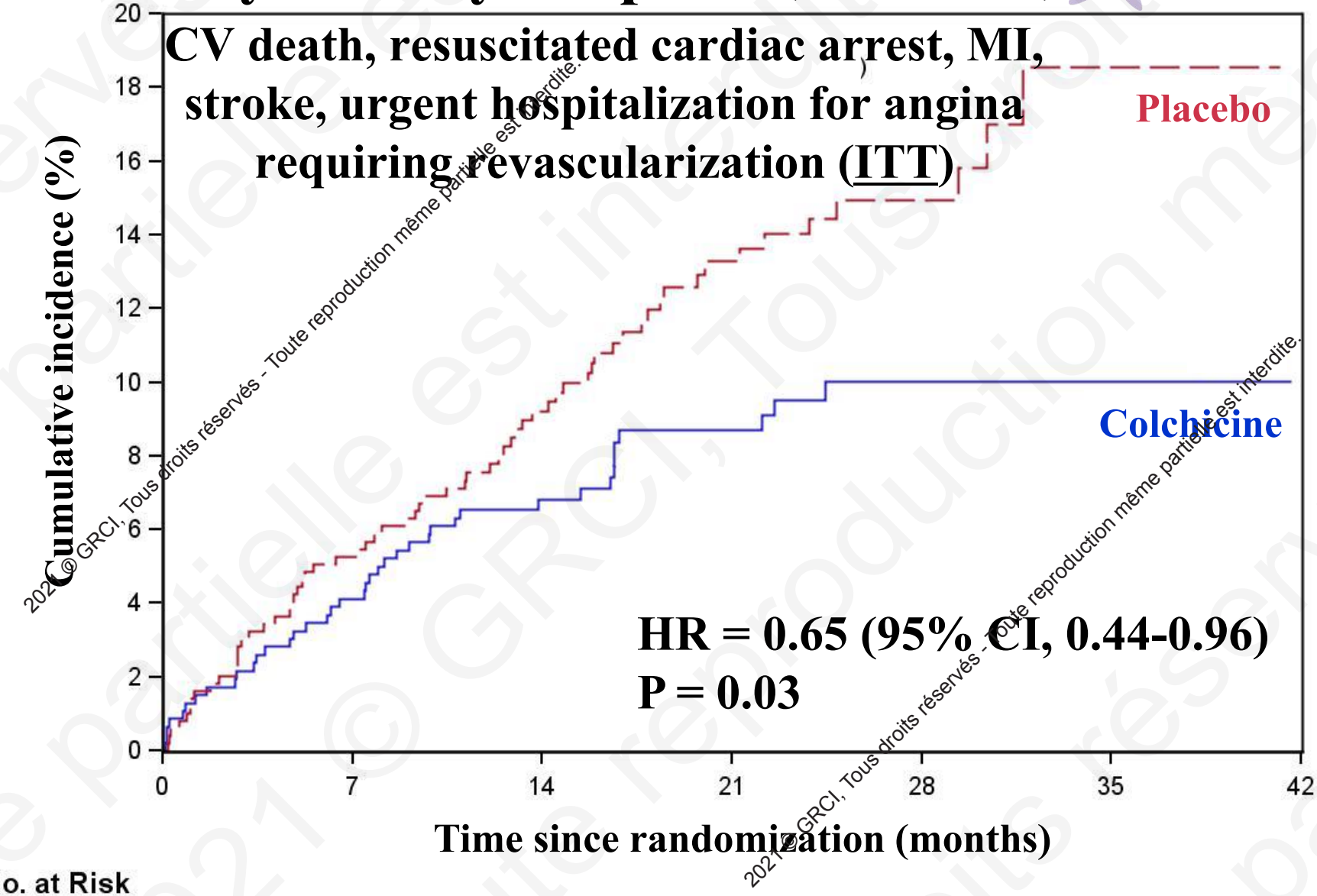
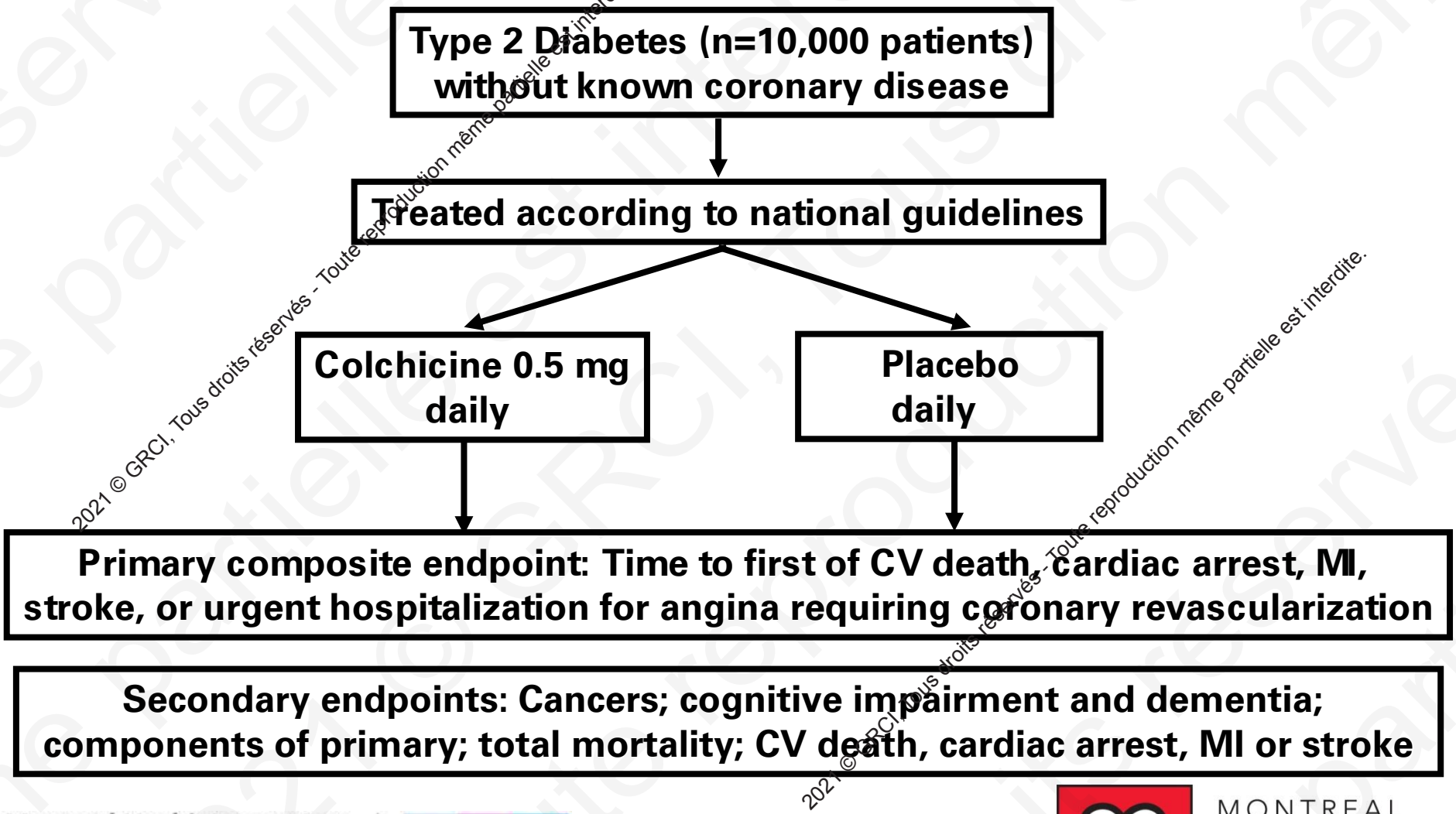
Primary efficacy endpoint (DIABETES)



COLCOT-T2D – Study design

COLCOT-T2D



Montreal Health Innovations Coordinating Center
A Division of the Montreal Heart Institute

MHICC

MONTREAL HEART INSTITUTE

ESC guidelines August 2021

Recommendation for anti-inflammatory therapy

Recommendation	Class[a]	Level[b]
Low-dose colchicine (0.5 mg *o.d.*) may be considered in secondary prevention of CVD, particularly if other risk factors are insufficiently controlled or if recurrent CVD events occur under optimal therapy.[85,86]	IIb	A

CVD = cardiovascular; *o.d.* = *omni die* (once a day).
[a]Class of recommendation.
[b]Level of evidence.

La colchicine pour quels patients?

Patients SCA ou coronariens stables

0,5 mg par jour voire moins, au long cours

Contexte micro-inflammatoire: diabète, maladie inflammatoire?

Absence de contre-indication à la colchicine

Patients récidivants, témoignant d'un risque résiduel élevé.

Y a-t-il une alerte sur la mortalité non CV?

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Circulation

EDITORIAL

Colchicine for Secondary Cardiovascular Prevention in Coronary Disease

Roubille F, Tardif JC.
Colchicine for Secondary Cardiovascular Prevention in Coronary Disease.
Circulation 2020;142:1901-1904.

Randomization group	COLCOT				COPS				LoDoCo2			
	N=4745		Hazard ratio (95% CI)	*P* value	N=795		Hazard ratio (95% CI)	*P* value	N=5522		Hazard ratio (95% CI)	*P* value
	Colchicine n=2366	Placebo n=2379			Colchicine n=396	Placebo n=399			Colchicine n=2762	Placebo n=2760		
Age, y	≥ 18				18–85				35–82			
Acute coronary syndrome	< 30 days postmyocardial infarction				yes†				Stable CAD No event in the past 6 mo			
Coronary artery disease	Myocardial infarction				≥30% luminal stenosis in epicardial vessel of >2·5 mm diameter by angiographic assessment				Invasive or CT coronary angiography Coronary artery calcium score > 400 U			
Median follow-up, mo	22.6				12				28.6			
Components of the primary end point	cardiovascular death, cardiac arrest, myocardial infarction, stroke, or urgent hospitalization for angina requiring coronary revascularization				death, acute coronary syndrome, ischemia-driven urgent revascularization, or stroke				cardiovascular death, myocardial infarction, ischemic stroke, or ischemia-driven coronary revascularization			
Primary efficacy end point, n (%)	131 (5.5)	170 (7.1)	0.77 (0.61–0.96)	0.02	24	38	0.64 (0.38–1.09)	0.09	187 (6.8)	264 (9.6)	0.69 (0.57–0.83)	<0.001
Mortality												
All-cause mortality death, n (%)	43 (1.8)	44 (1.8)	0.98 (0.64–1.49)		8	1	8.2 (1.03–65.61)	0.047	73 (2.6)	60 (2.2)	1.21 (0.86–1.71)	
CV death, n (%)	20 (0.8)	24 (1.0)	0.84 (0.46–1.52)		3	1	3.1 (0.32–29.71)		20 (0.7)	25 (0.9)	0.80 (0.44–1.44)	
Non CV death, n (%)	23 (1.0)	20 (0.8)			5	0		0.023	53 (1.9)	35 (1.3)	1.51 (0.99–2.31)	
Components of the composite primary end point, ITT population												
Deaths due to any cause	Not included among primary end point				8	1	8.2 (1.03–65.61)	0.047	Not included among primary end point			
CV death, n (%)	20 (0.8)	24 (1.0)	0.84 (0.46–1.52)		Not included among primary end point				20 (0.7)	25 (0.9)	0.80 (0.44–1.44)	
Resuscitated CA, n (%)	5 (0.2)	6 (0.3)	0.83 (0.25–2.73)		Not included among primary end point				Not included among primary end point			
MI, n (%)	89 (3.8)	98 (4.1)	0.91 (0.68–1.21)		Not included among primary end point				83 (3.0)	116 (4.2)	0.70 (0.53–0.93)	0.01
ACS	Not included among primary end point				11	20	0.56 (0.27–1.18)	0.13	Not included among primary end point			
Stroke, n (%)	5 (0.2)	19 (0.8)	0.26 (0.10–0.70)		2	5	0.41 (0.08–2.10)	0.28	16 (0.6)	24 (0.9)	0.66 (0.35–1.25)	0.20
UHARCR or unplanned revascularization, n (%)	25 (1.1)	50 (2.1)	0.50 (0.31–0.81)		3	12	0.26 (0.07–0.92)	0.037*	135 (4.9)	177 (6.4)	0.75 (0.60–0.94)	0.01
Selected secondary end points												
DVT or PE, n (%)	10 (0.4)	7 (0.3)	1.43 (0.54–3.75)		NA				17 (0.6)	16 (0.6)	1.06 (0.53–2.10)	
Atrial fibrillation (and flutter in LoDoCo2), n (%)	36 (1.5)	40 (1.7)	0.93 (0.59– 1.46)		NA				126 (4.6)	148 (5.4)	0.84 (0.66–1.07)	

Randomization group	COLCOT				COPS				LoDoCo2			
	N=4745		Hazard ratio (95% CI)	*P* value	N=795		Hazard ratio (95% CI)	*P* value	N=5522		Hazard ratio (95% CI)	*P* value
	Colchicine n=2366	Placebo n=2379			Colchicine n=396	Placebo n=399			Colchicine n=2762	Placebo n=2760		
Age, y	≥ 18				18–85				35–82			
Acute coronary syndrome	< 30 days postmyocardial infarction				yes†				Stable CAD No event in the past 6 mo			
Coronary artery disease	Myocardial infarction				≥30% luminal stenosis in epicardial vessel of >2·5 mm diameter by angiographic assessment				Invasive or CT coronary angiography Coronary artery calcium score > 400 U			
Median follow-up, mo	22.6				12				28.6			
Components of the primary end point	cardiovascular death, cardiac arrest, myocardial infarction, stroke, or urgent hospitalization for angina requiring coronary revascularization				death, acute coronary syndrome, ischemia-driven urgent revascularization, or stroke				cardiovascular death, myocardial infarction, ischemic stroke, or ischemia-driven coronary revascularization			
Primary efficacy end point, n (%)	131 (5.5)	170 (7.1)	0.77 (0.61–0.96)	0.02	24	38	0.64 (0.38–1.09)	0.09	187 (6.8)	264 (9.6)	0.69 (0.57–0.83)	<0.001
Mortality												
All-cause mortality death, n (%)	43 (1.8)	44 (1.8)	0.98 (0.64–1.49)		8	1	8.2 (1.03–65.61)	0.047	73 (2.6)	60 (2.2)	1.21 (0.86–1.71)	
CV death, n (%)	20 (0.8)	24 (1.0)	0.84 (0.46–1.52)		3	1	3.1 (0.32–29.71)		20 (0.7)	25 (0.9)	0.80 (0.44–1.44)	
Non CV death, n (%)	23 (1.0)	20 (0.8)			5	0		0.023	53 (1.9)	35 (1.3)	1.51 (0.99–2.31)	
Components of the composite primary end point, ITT population												
Deaths due to any cause	Not included among primary end point				8	1	8.2 (1.03–65.61)	0.047	Not included among primary end point			
CV death, n (%)	20 (0.8)	24 (1.0)	0.84 (0.46–1.52)		Not included among primary end point				20 (0.7)	25 (0.9)	0.80 (0.44–1.44)	
Resuscitated CA, n (%)	5 (0.2)	6 (0.3)	0.83 (0.25–2.73)		Not included among primary end point				Not included among primary end point			
MI, n (%)	89 (3.8)	98 (4.1)	0.91 (0.68–1.21)		Not included among primary end point				83 (3.0)	116 (4.2)	0.70 (0.53–0.93)	0.01
ACS	Not included among primary end point				11	20	0.56 (0.27–1.18)	0.13	Not included among primary end point			
Stroke, n (%)	5 (0.2)	19 (0.8)	0.26 (0.10–0.70)		2	5	0.41 (0.08–2.10)	0.28	16 (0.6)	24 (0.9)	0.66 (0.35–1.25)	0.20
UHARCR or unplanned revascularization, n (%)	25 (1.1)	50 (2.1)	0.50 (0.31–0.81)		3	12	0.26 (0.07–0.92)	0.037*	135 (4.9)	177 (6.4)	0.75 (0.60–0.94)	0.01

In conclusion, colchicine at a dose of 0.5 mg once daily reduces inflammasome activation and neutrophil degranulation and lowers the risk of ischemic cardiovascular events both in patients with a recent MI and in those with stable chronic coronary artery disease. In the postMI setting, initiation of colchicine within the first 3 days after the event, before hospital discharge, appears to provide even greater benefits.[5] In patients with chronic coronary disease, colchicine should not be administered with strong cytochrome P450 3A4 inhibitors. The addition of colchicine to standard of care has been shown to be an economically dominant strategy that generates cost savings.[12] Given that it reduces nonfatal cardiovascular events without affecting all-cause mortality, low-dose colchicine could be considered for patients with coronary disease and no severe renal dysfunction to reduce the considerable related cardiovascular morbidity.

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Colchicine reduces atherosclerotic plaque vulnerability in rabbits

François Roubille [a], Nolwenn Merlet [a], David Busseuil [a], Marine Ferron [a], Yanfen Shi [a], Teodora Mihalache-Avram [a], Mélanie Mecteau [a], Geneviève Brand [a], Daniel Rivas [a], Marième Cossette [c], Marie-Claude Guertin [c], Eric Rhéaume [a, b], Jean-Claude Tardif [a, b, *]

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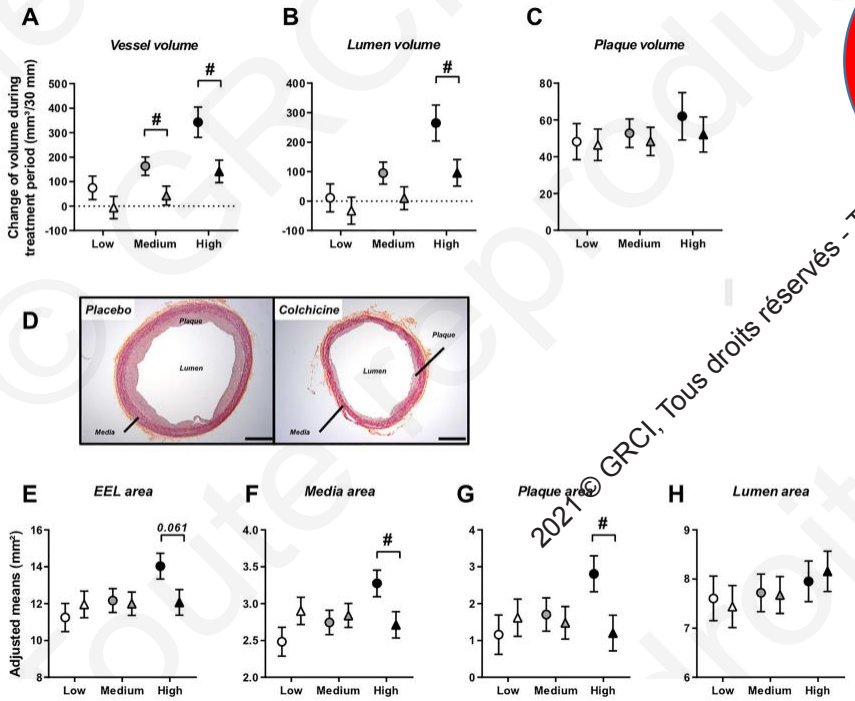

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ORIGINAL ARTICLE

Pharmacogenomics of the Efficacy and Safety of Colchicine in COLCOT

Marie-Pierre Dubé, PhD, Marc-André Legault, BSc, Audrey Lemaçon, PhD, Louis-Philippe Lemieux Perreault, PhD, René Fouodjio, MSc, David D. Waters, MD, Simon Kouz, MD, Fausto J. Pinto, MD, PhD, Aldo P. Maggioni, MD, Rafael Diaz, MD, Colin Berry, MD, PhD, Wolfgang Koenig, MD, Jose Lopez-Sendon, MD, Habib Gamra, MD, Ghassan S. Kiwan, MD, Géraldine Asselin, MSc, Sylvie Provost, MSc, Amina Barhdadi, PhD, Maxine Sun, MSc, Marième Cossette, MSc, Lucie Blondeau, MSc, Ian Mongrain, MSc, Anick Dubois, PhD, David Rhainds, PhD, Nadia Bouabdallaoui, MD, Michelle Samuel, MPH, Phil, Simon de Denus, BPharm, PhD, Philippe L. L'Allier, MD, Marie-Claude Guertin, PhD, François Roubille, MD, PhD, and Jean-Claude Tardif, MD

Archives of Cardiovascular Diseases
Volume 113, Issue 10, October 2020, Pages 652-659

Review in translational cardiovascular medicine

Colchicine and myocardial infarction: A review

Colchicine et infarctus du myocarde : revue

Mariama Akodad [a, b], Pierre Sicard [b], Jérémy Fauconnier [b], François Roubille [a, b]

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Circulation
Volume 142, Issue 20, 17 November 2020; Pages 1901-1904
https://doi.org/10.1161/CIRCULATIONAHA.120.051240

EDITORIAL

Colchicine for Secondary Cardiovascular Prevention in Coronary Disease

Role of IL-1β in acute myocardial infarction in a murine model:

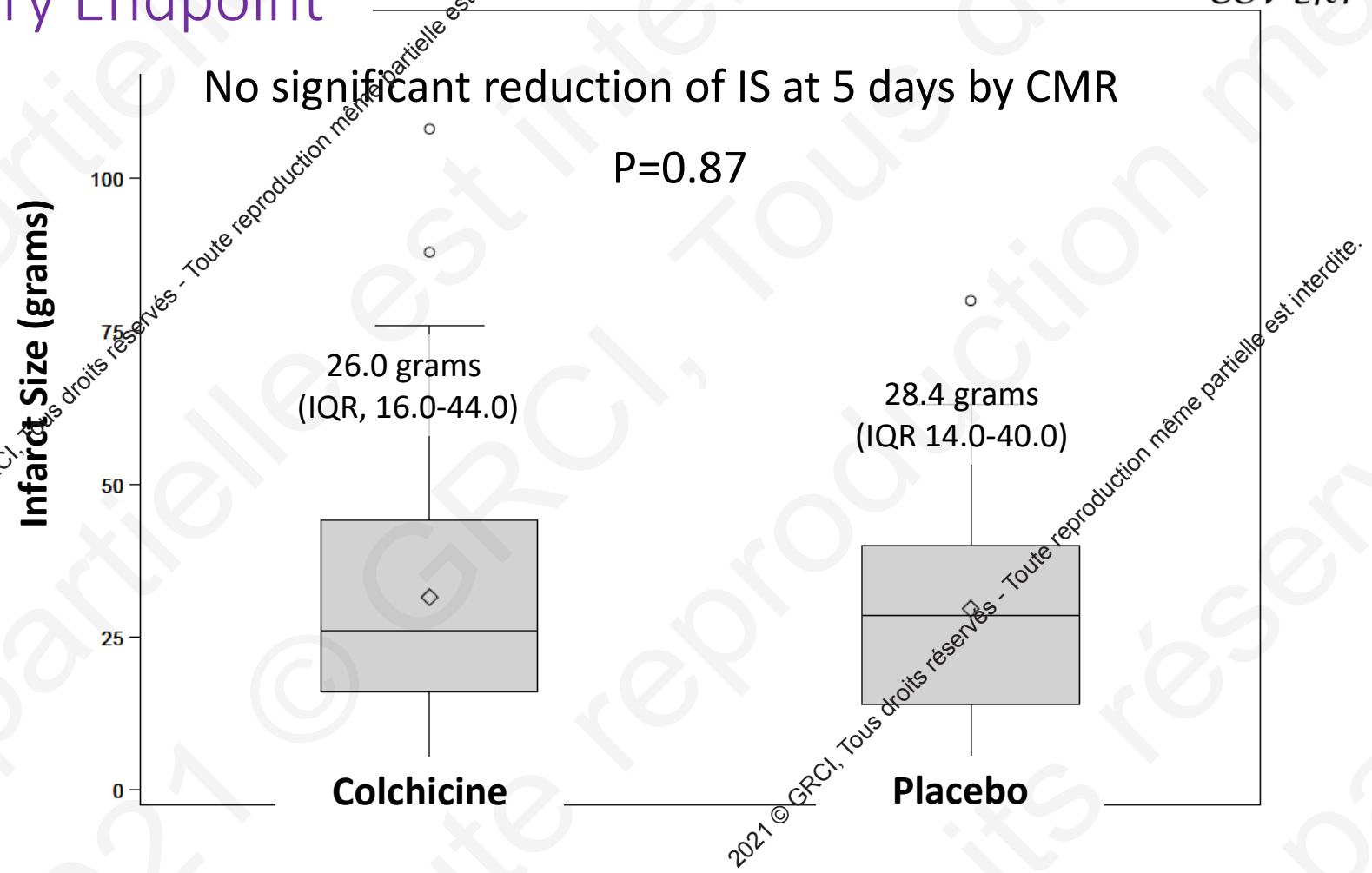
Lost intranslation? The COVERT-MI trial

Primary Endpoint

COVERT - MI

No significant reduction of IS at 5 days by CMR

P=0.87



Mewton, Roubille et al. *Circulation.* 2021 Sep 14;144(11):859-869.

Short Communication

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Future Science OA

Low-dose colchicine prevents sympathetic denervation after myocardial ischemia-reperfusion: a new potential protective mechanism

Fabien Huet[1,†], Jérémy Fauconnier[1,2], Marion Legall[2], Pierre Sicard[2], Catherine Lozza[2], Alain Lacampagne[1,2] & François Roubille*[1,‡]

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‡Authors contributed equally
†Authors contributed equally

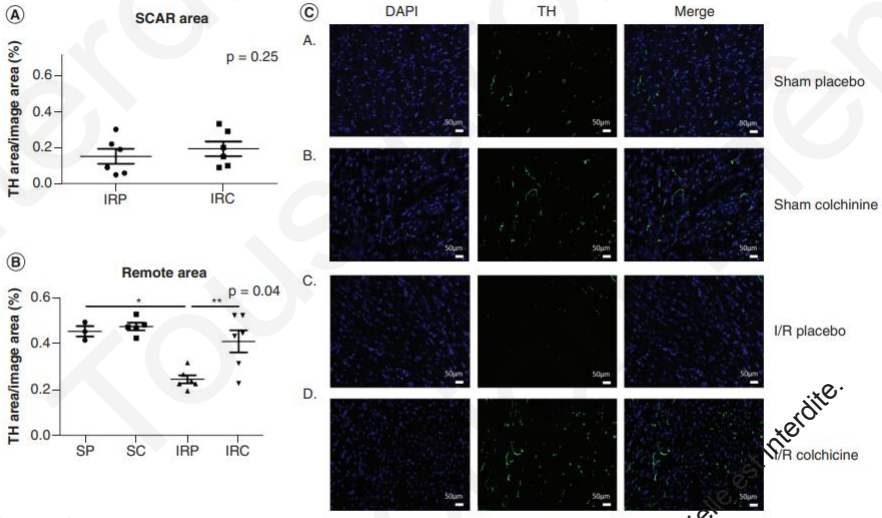


Figure 2. Sympathetic nerves quantification in the scar (A) and remote (B) areas of ischemic hearts on immune-fluorescence, with a typical example of remote area immunofluorescence (C). SP; SC; IRP; IRC; TH (specific antibody for sympathetic nerves immune-fixation); Note the important denervation in the remote area after myocardial infarction, reversed by Colchicine.
*$p < 0.05$.
IRC: IR colchicine; IRP: IR placebo; SC: Sham colchicine; SP: Sham placebo; TH: tyrosine hydroxylase.

medicina

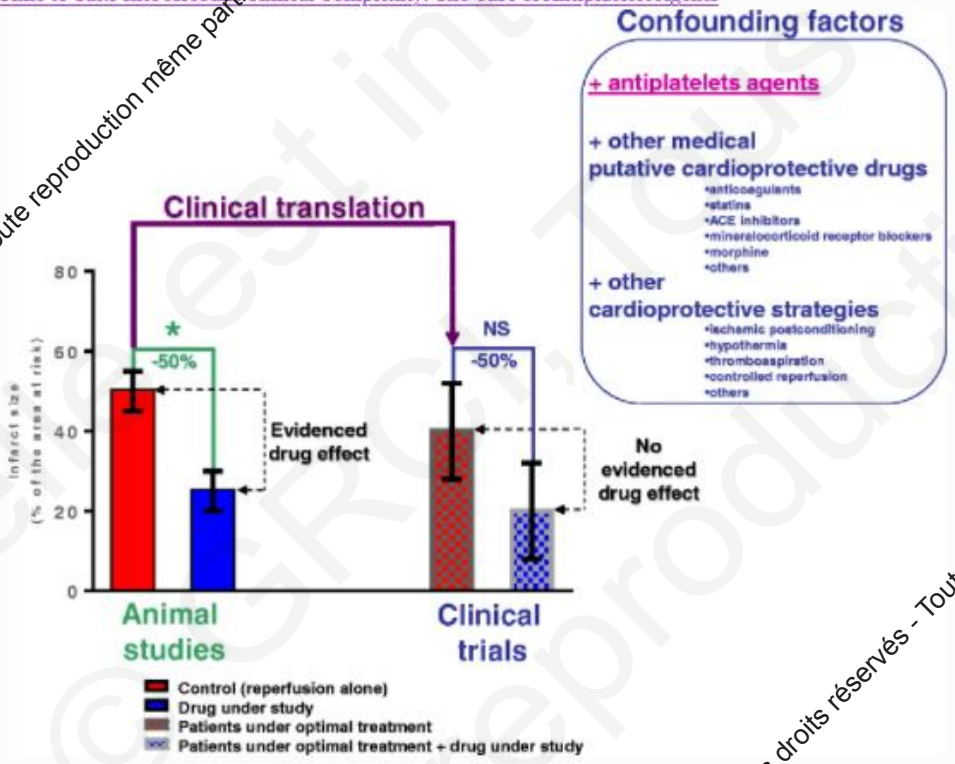
Study Protocol

Colchicine to Prevent Sympathetic Denervation after an Acute Myocardial Infarction: The COLD-MI Trial Protocol

Fabien Huet [1,†], Quentin Delbaere [1,2,†], Sylvain Aguilhon [1], Valentin Dupasquier [1], Delphine Delseny [1], Richard Gervasoni [1], Jean-Christophe Macia [1], Florence Leclercq [1], Nidal Jammoul [1], Sandra Kahlouche [1], Sonia Soltani [1], Fanny Cardon [3], Anne-Marie Dupuy [4], Jean-Paul Cristol [4], Denis Mariano-Goulart [5], Myriam Akodad [1,2], Nicolas Nagot [3] and François Roubille [1,2,*]

Fig. 1

From: Cardioprotection—Time to Take Into Account Clinical Complexity: The Case of Antiplatelet Agents



Roubille et al. Cardiovascular Drugs and Therapy **volume 27**, pages105–107 (2013)