

LA CTO AU FIL DU TEMPS

Que devient le patient traité?



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Déclaration de liens d'intérêts

Affiliation/Financial Relationship

- Grant/Research Support
- Consulting Fees/Honoraria
- Major Stock Shareholder/Equity
- Royalty Income
- Ownership/Founder
- Intellectual Property Rights
- Other Financial Benefit

Company

- Astra Zeneca, Boston Scientific
- Abbott, Astra Zeneca, BSC, Biotronik,
- None
- None
- None
- None
- None

**QUE DEVIENNENT LES PARAMÈTRES
FONCTIONNELS APRÈS TRAITEMENT DES CTO?**

**QUEL EST L'IMPACT DU TRAITEMENT DES CTO SUR
LE SUIVI ET LES FUTURES REVASCULARISATIONS ?**



**QUE DEVIENT LE PRONOSTIC APRÈS TRAITEMENT
DES CTO?**



Assessment of Inducible Myocardial Ischemia, Quality of Life, and Functional Status After Successful Percutaneous Revascularization in Patients With Chronic Total Coronary Occlusion

Comparison of 6-minute walk test findings at baseline and at 6-month follow-up after chronic total coronary occlusion revascularization (n = 40)

Variable	Basal	6 m post-PCI	P-value
Systolic blood pressure (mm Hg)	149±20	152±19	0.385
Diastolic blood pressure (mm Hg)	83±9	81±12	0.198
Heart rate (bpm)	74±12	79±13	0.030
Oxygen Saturation by Pulse Oximetry (%)	97±1	97±1	0.208
Walked distance (meters)	417±126	463±103	0.002
Chest pain at the end of the test	15 (39%)	3 (8%)	<0.001



Assessment of Inducible Myocardial Ischemia, Quality of Life, and Functional Status After Successful Percutaneous Revascularization in Patients With Chronic Total Coronary Occlusion

Comparison of SF-36 survey results at baseline and at 6-month follow-up after chronic total coronary occlusion revascularization (n = 43)

Variable	Basal	6 m post-PCI	P-value
Physical Functioning	39±10	46±9	<0.001
Role-Physical	39±13	47±12	<0.001
Bodily Pain	42±11	47±10	0.015
General Health	40±9	45±10	<0.001
Vitality	40±11	48±11	<0.001
Social Functioning	37±14	43±13	0.003
Role-Emotional	39±15	45±14	0.005
Mental Health	44±12	48±12	0.018
Global Physical Health	39±10	46±9	<0.001
Global Mental Health	41±16	46±14	0.029



Assessment of Inducible Myocardial Ischemia, Quality of Life, and Functional Status After Successful Percutaneous Revascularization in Patients With Chronic Total Coronary Occlusion

Comparison of cardiac magnetic resonance findings before percutaneous intervention and at 6-month follow-up after chronic total coronary occlusion revascularization (n = 47)

Variable	Basal	6 m post-PCI	P-value
Necrotic mass (g)	4.3±5.4	3.8±3.9	0.131
Necrotic percentage (%)	3.5±4.36	3.0±3.1	0.108
Left ventricular ejection fraction (%)	62±10	64±9	0.097
Number of segments with perfusion defect (n, % of total segments)	4.9±2.3 (31±14%)	1.1±1.8 (7±11%)	<0.001
Number of segments with persistent perfusion defect (n, % of total segments)	1.7±1.6 (10±10%)	0.3±0.7 (2±4%)	<0.001
Number of segments with transmural perfusion defect (n, % of total segments)	1.4±1.7 (9±11%)	0.3±0.7 (2±4%)	<0.001
Number of segments with inducible contractile dysfunction (n, % of total segments)	1.6±1.8 (10±11%)	0.2±0. (1±4%)	<0.001
Ischemic burden index (%)	19±10	3±6	<0.001

Successful Percutaneous Coronary Intervention Improves Cardiopulmonary



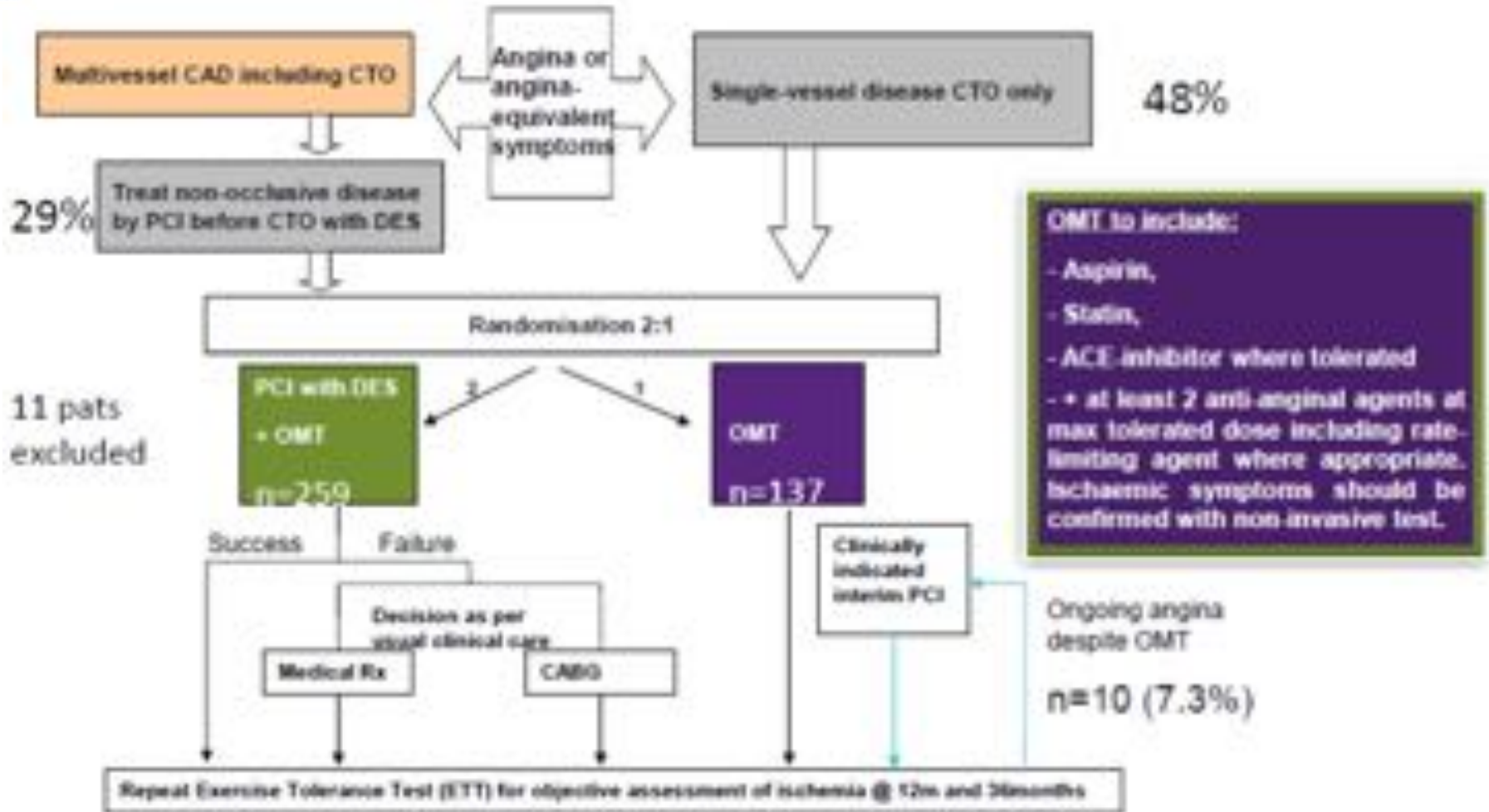
TABLE 1 Changes of Parameters of CPET Before and at Midterm Follow-up After Successful CTO-PCI

Parameter	Baseline	Change From Baseline to 7 Months		p Value
		Absolute	Change in % (95% Confidence Interval)	
Cardiopulmonary exercise testing				
V _{O2max} , mL/min	1,458.06 ± 449.99	1,629.34 ± 487.09	12.25 (8.32-16.18)	0.001
V _{O2max} , mL/min/kg	16.59 ± 5.10	18.42 ± 5.25	12.40 (8.53-16.28)	0.001
Work rate, W	106.36 ± 37.95	117.54 ± 41.47	13.62 (8.25-20.99)	0.001
Anaerobic threshold, mL/min	1,009.78 ± 329.69	1,267.3 ± 417.34	27.87 (20.19-35.55)	0.001
CO-pulse, mL/beat	12.65 ± 3.14	13.56 ± 3.29	8.75 (3.83-13.68)	0.003
Maximal exercise ventilation, L/min	57.90 ± 20.52	60.75 ± 18.79	6.32 (1.86-14.70)	0.204
Echocardiography				
Ejection fraction, %	52.08 ± 12.57	54.48 ± 11.75	6.79 (2.18-11.40)	0.007
Symptoms				
NYHA functional class	2.26 ± 0.10	1.56 ± 0.10	-	0.0001
CCS	1.88 ± 0.12	1.14 ± 0.08	-	0.0001

Mashayekhi K. et al.



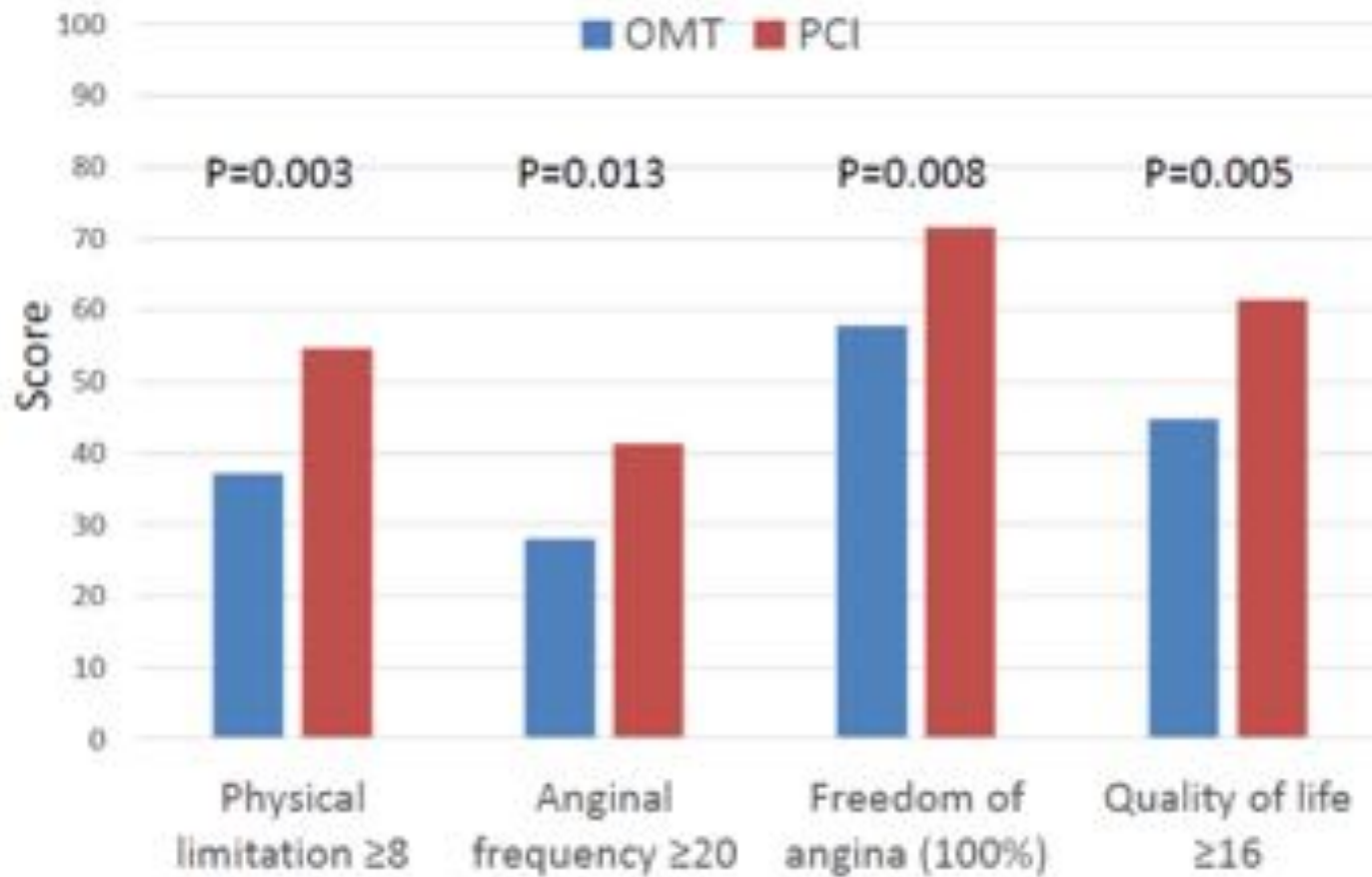
EURO-CTO





EURO-CTO

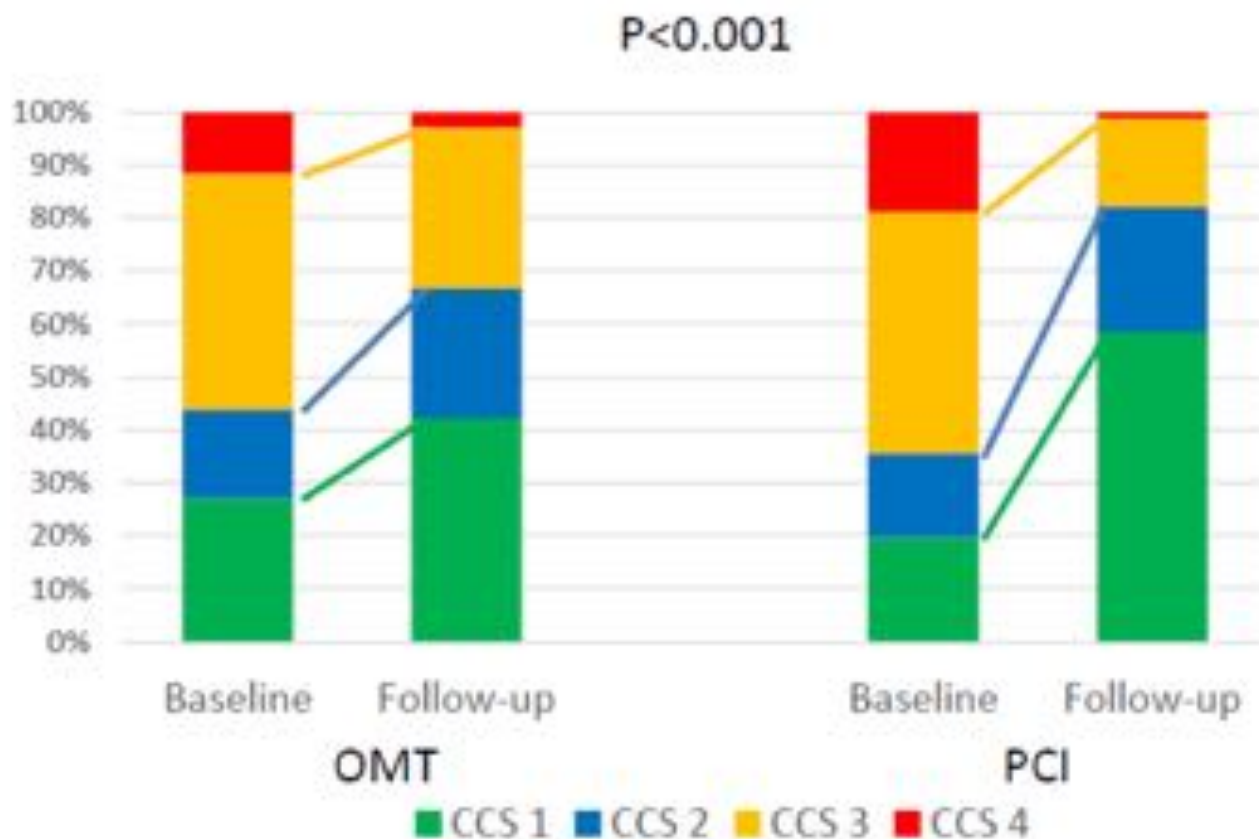
Change in SAQ subscale score





EURO-CTO

Change in CCS class



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Tests d'imagerie cardiaque (Echo stress, Scintigraphie,IRM)

Contrôles coronarographiques plus fréquents

Réévaluation de la lésion résiduelle, dissection, vasomotricité

Nouvelles implantations de stent aux zones de jonction

Diminution de la fréquence des pontages aorto-coronariens

Progression de la maladie

Effet vasomoteur après revascularisation

The Recanalization of Chronic Total Occlusion Leads to Lumen Area Increase in Distal Reference Segments in Selected Patients

An Intravascular Ultrasound Study

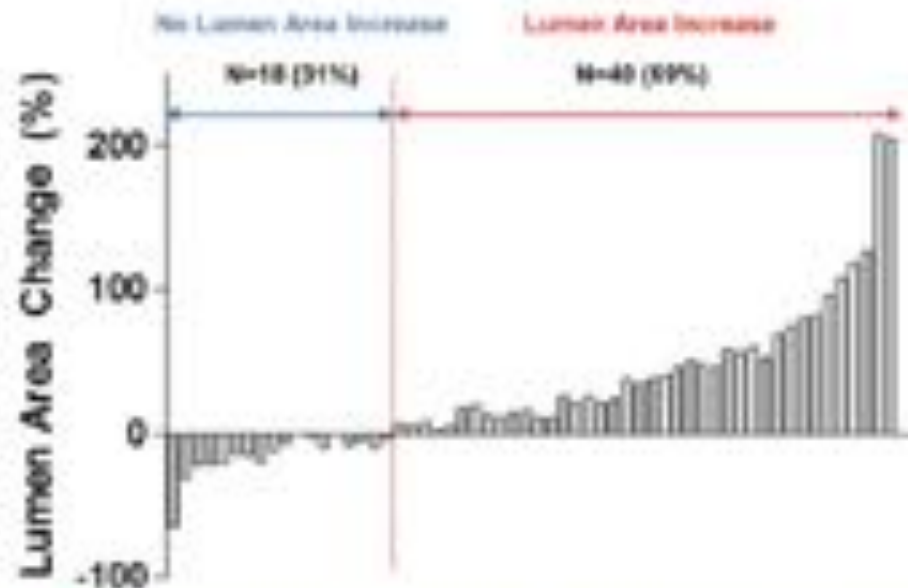


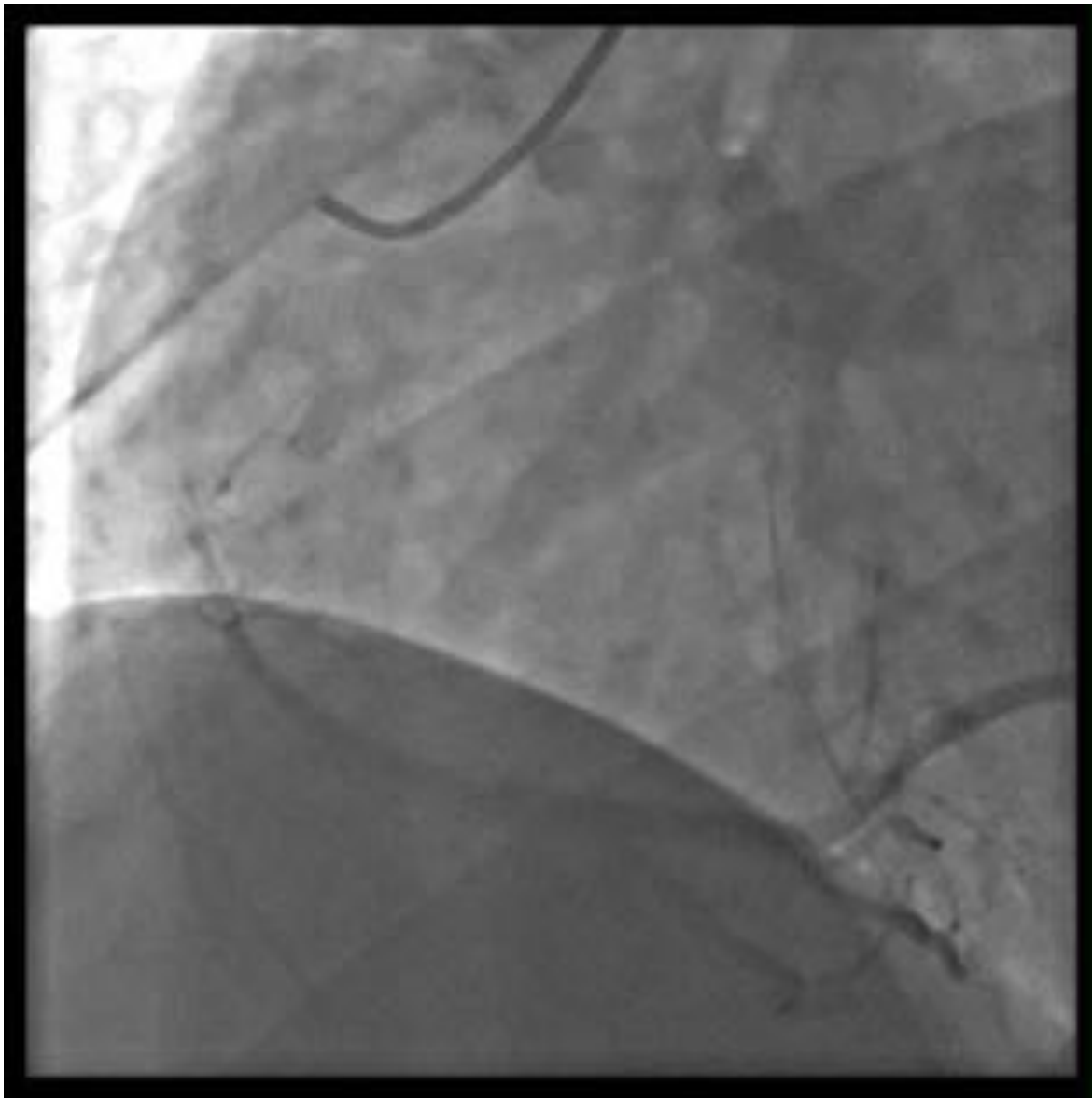
Figure 2. Change of Lumen Area Between Baseline and 6 Months After TO Recanalization of the 58 Patients

Homme, 20 ans → SCA ST + inférieur

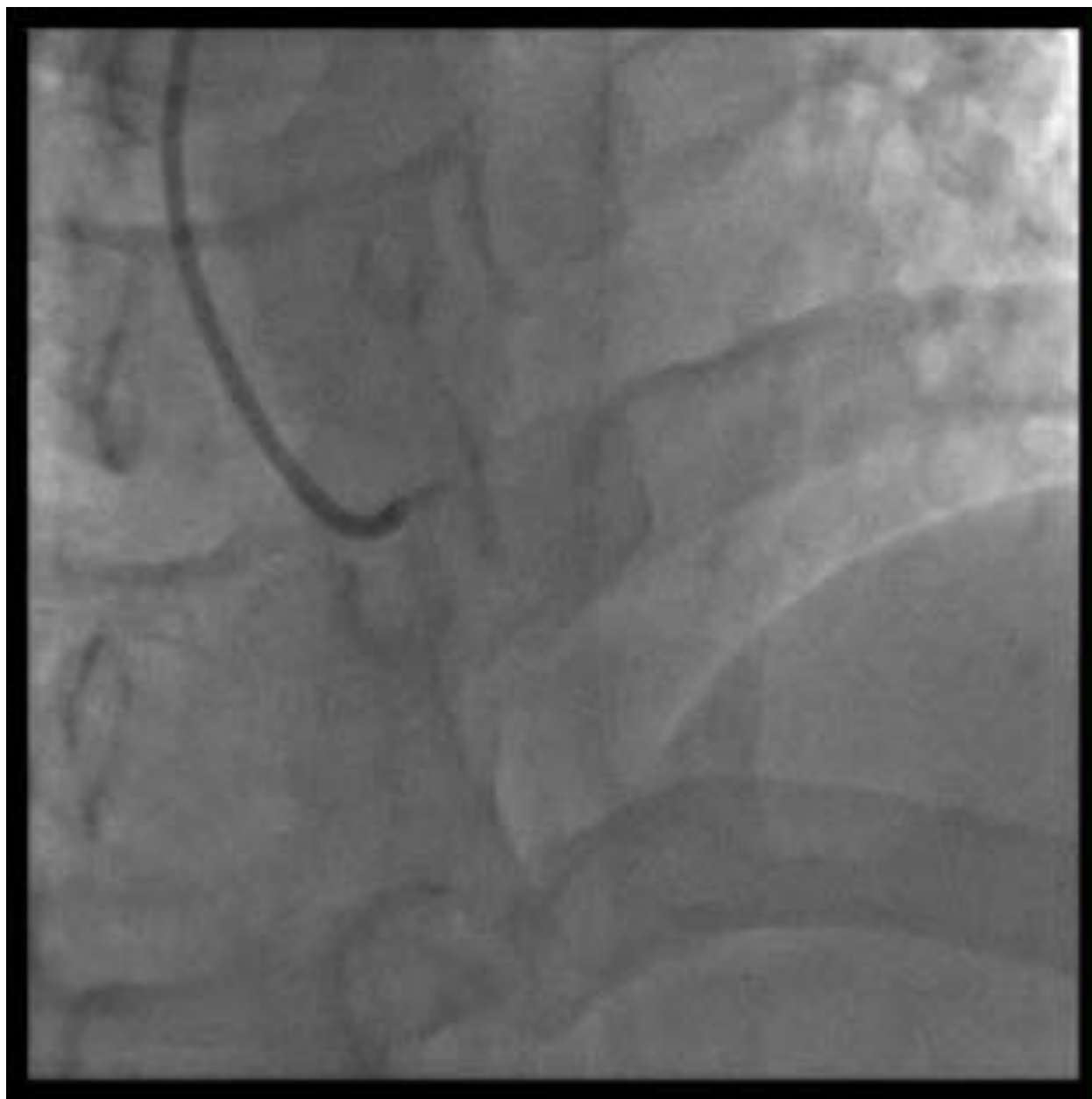
Pas d' ATCD. **FDR**: tabac 2,5PA, IMC 24

Le 14/09/2014:

- **15h15**: douleur épigastrique à type de brûlure avec irradiation cervicale lors d'un match de football
- **16h30**: arrivée aux urgences d'un centre hospitalier général par ses propres moyens



Lésion thrombotique IVA ostio-proximale, embolisation IVP

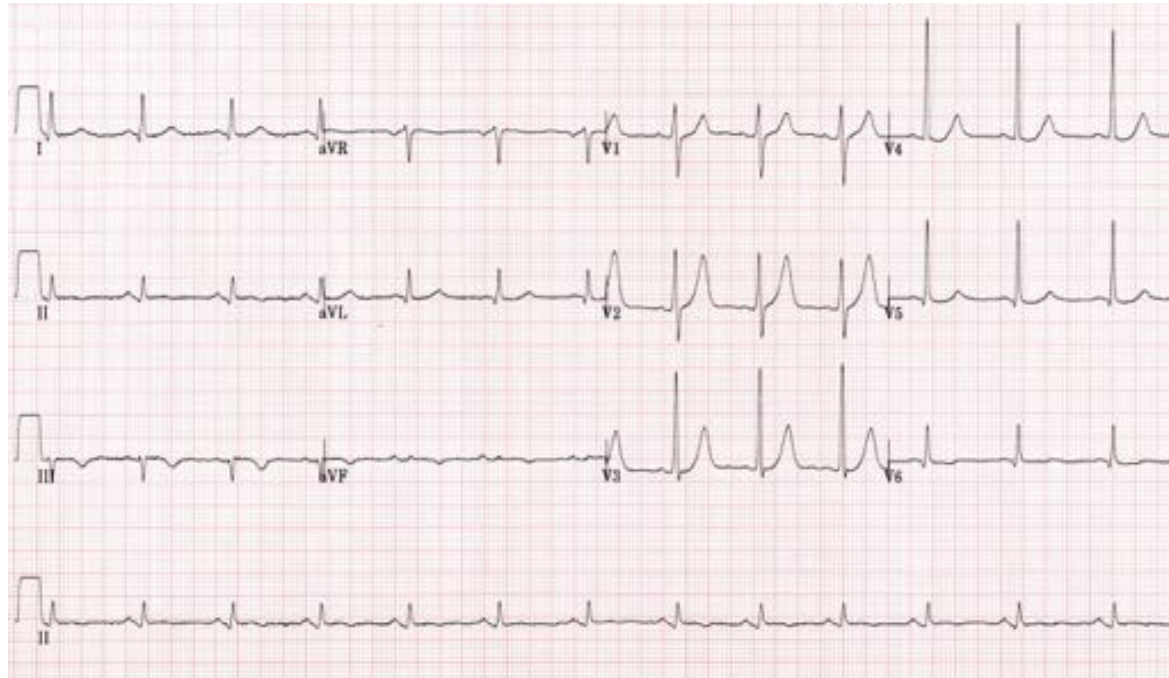


Echocardiographie:

FEVG 55%, hypokinésie inférobasale, pas de trouble de la cinétique en antérieur, péricarde sec

Contrôle coronarographique:

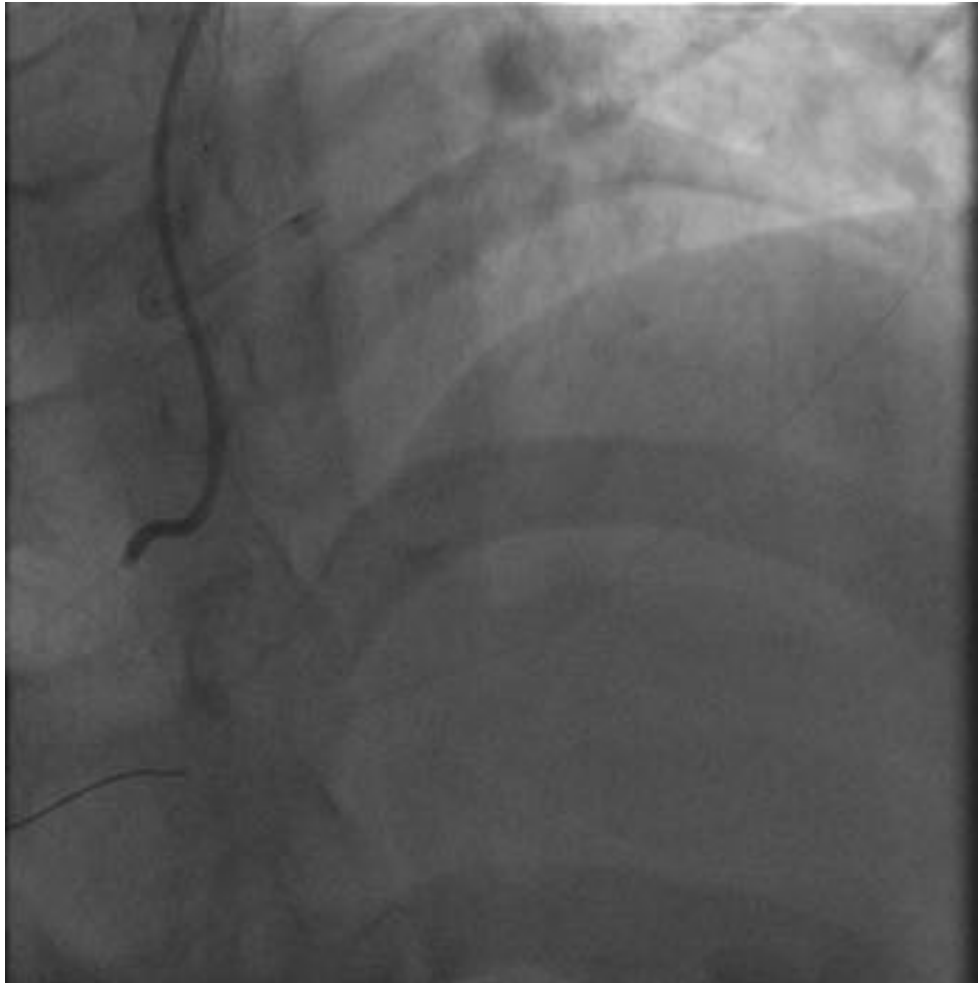
Régression thrombotique, pas de sténose résiduelle de la coronaire droite



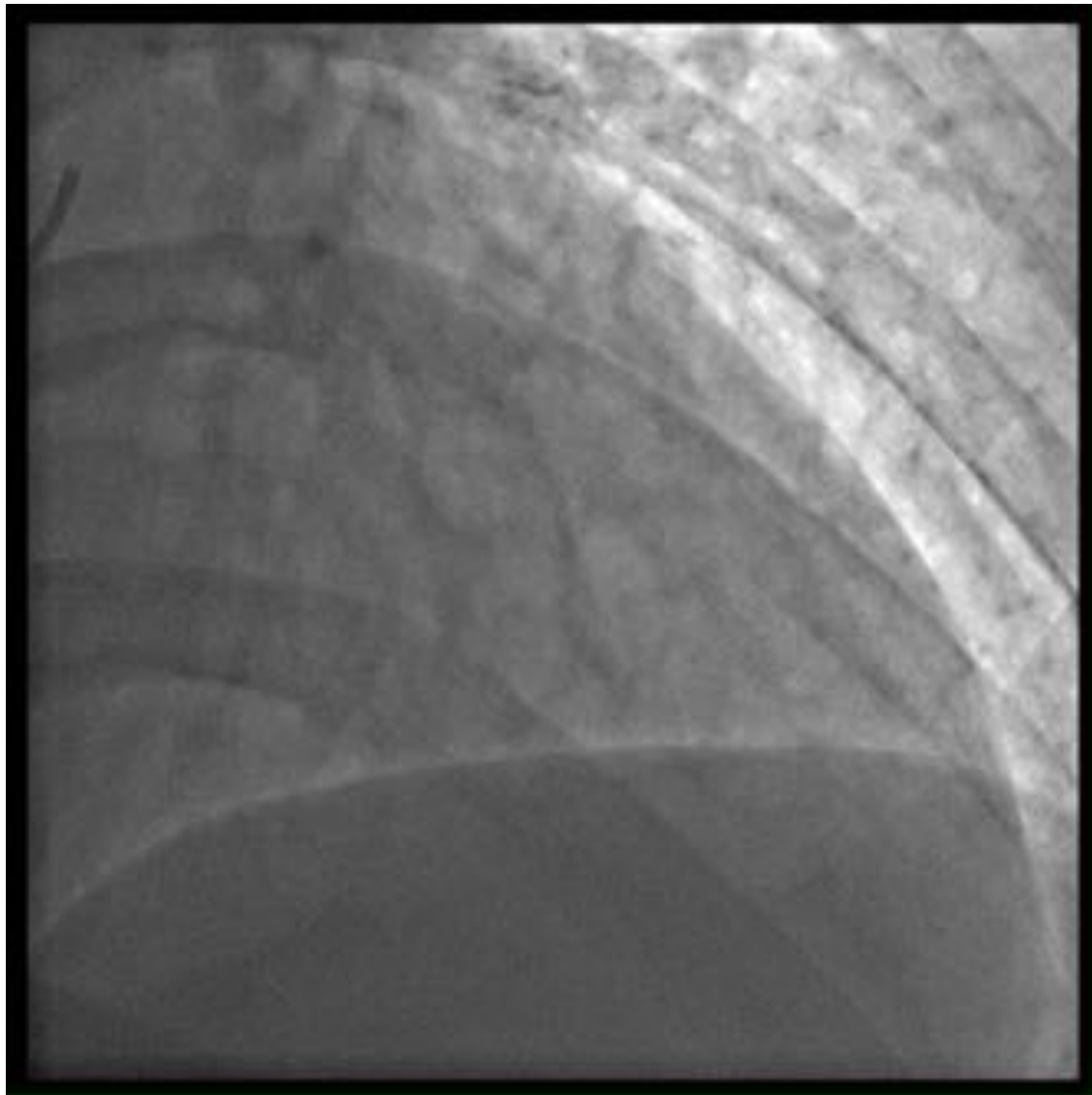




- Collatérales non fonctionnelles après angioplastie
- Implantation en bifurcation de deux stents biorésorbables (BVS)



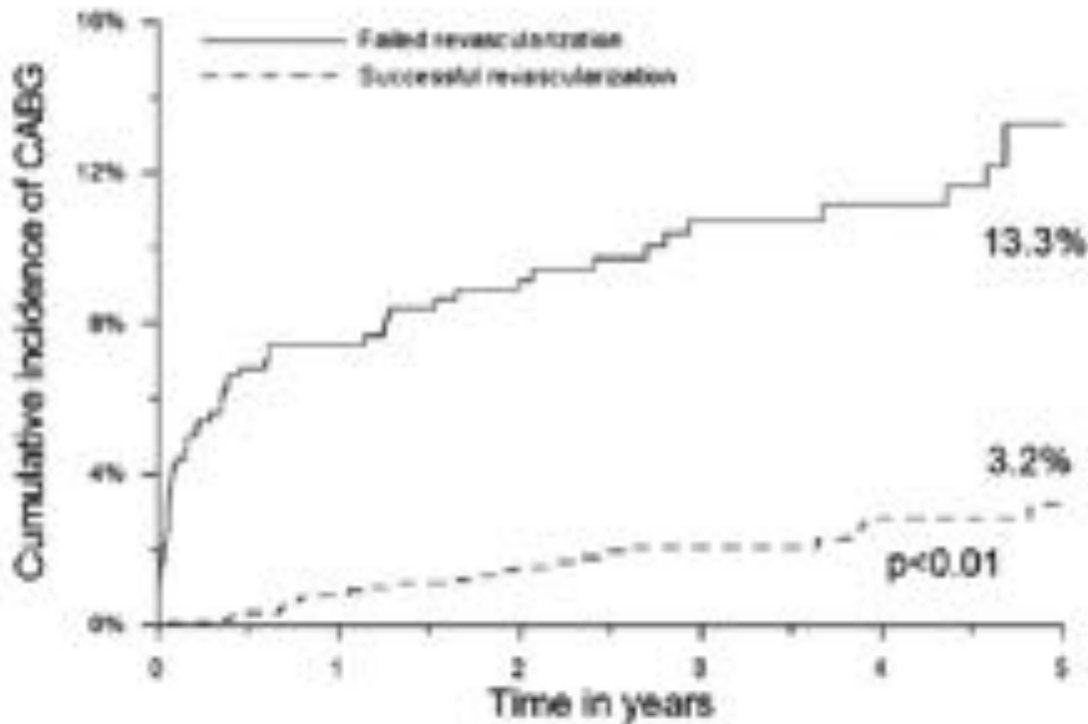
- Contrôle final post angioplastie.
- Bonne évolution immédiate
- Nouveau contrôle à 3 mois (nécessité d'une angioplastie complémentaire?)



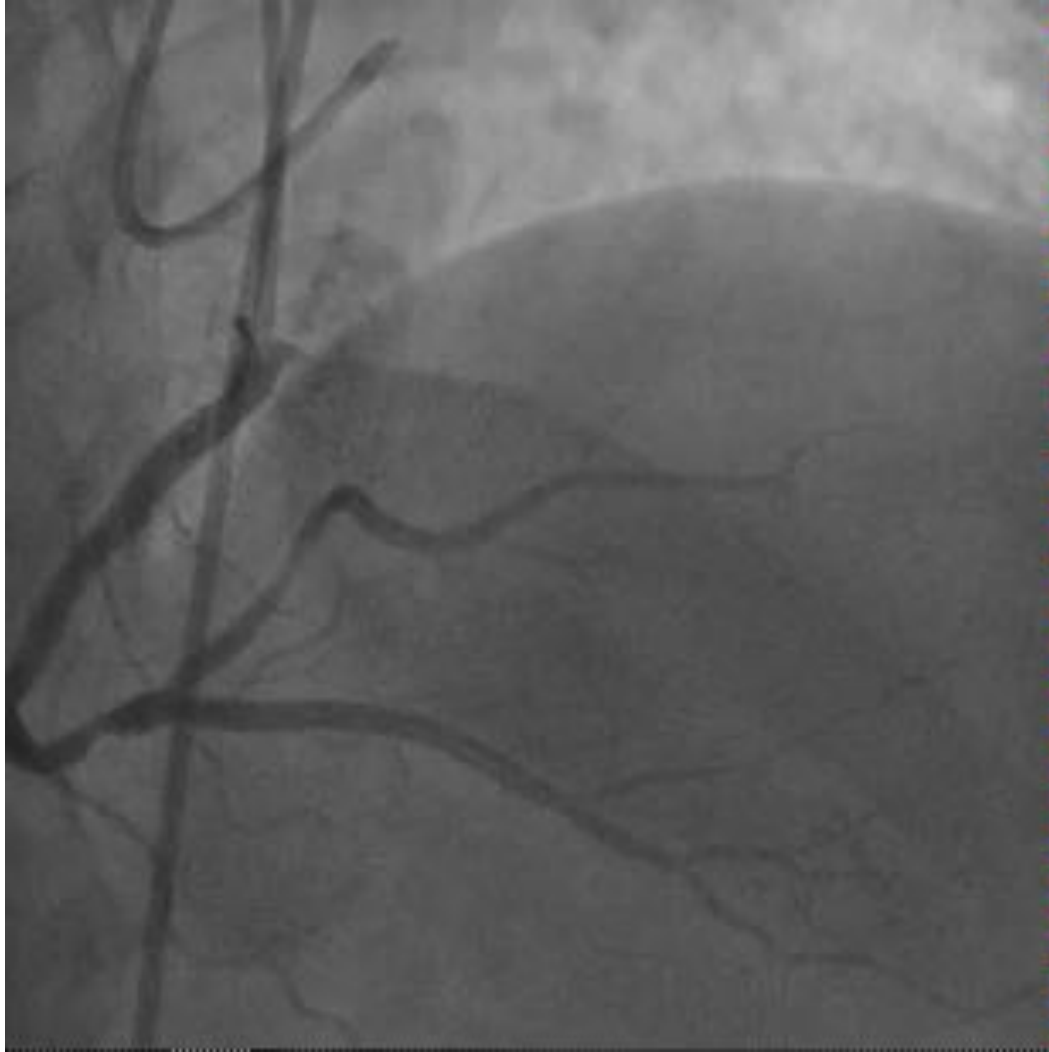


Long-Term Outcome of Percutaneous Coronary Intervention for Chronic Total Occlusions

IMPACT SUR LES PONTAGES



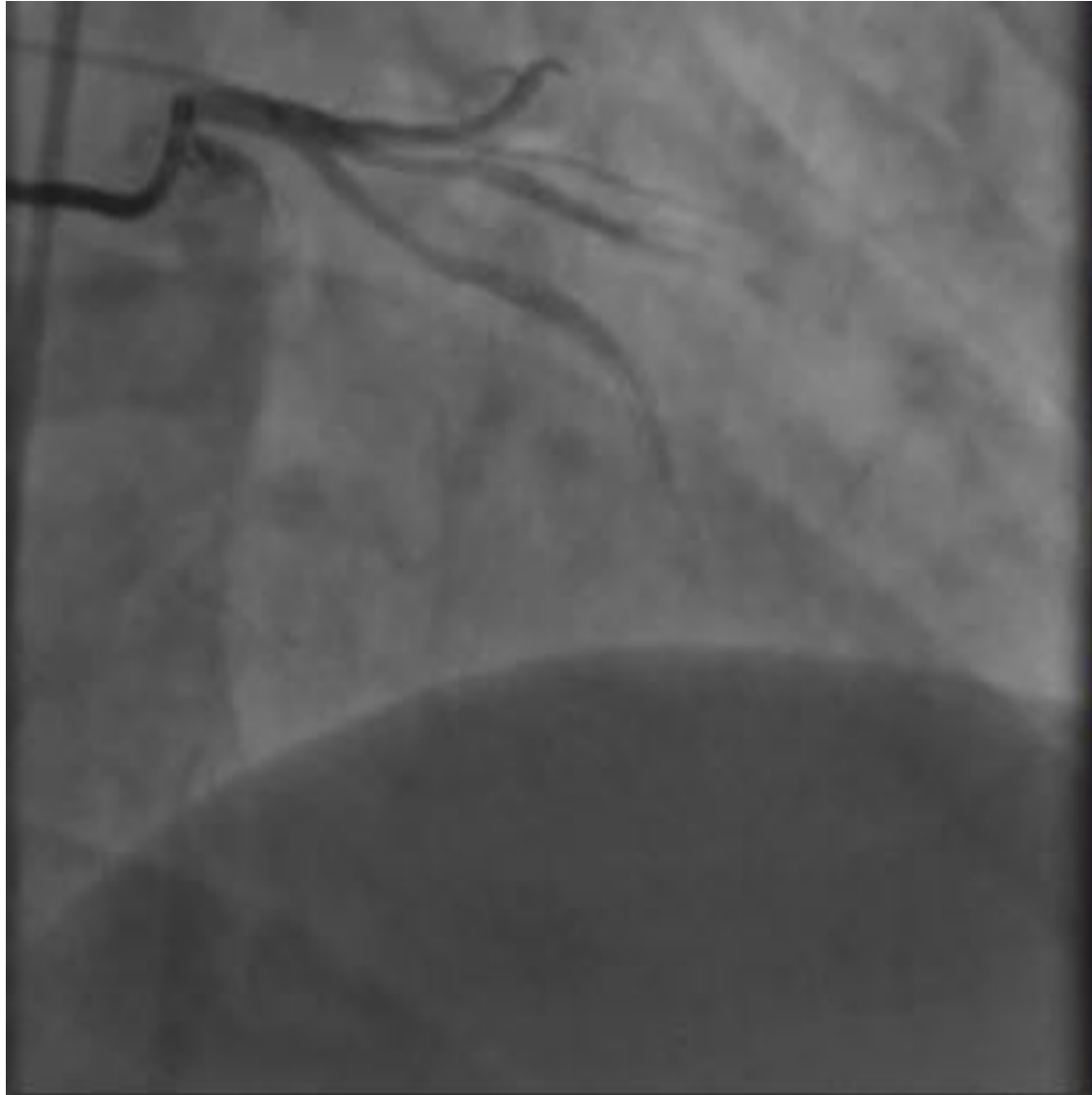
Angioplastie CTO IVA



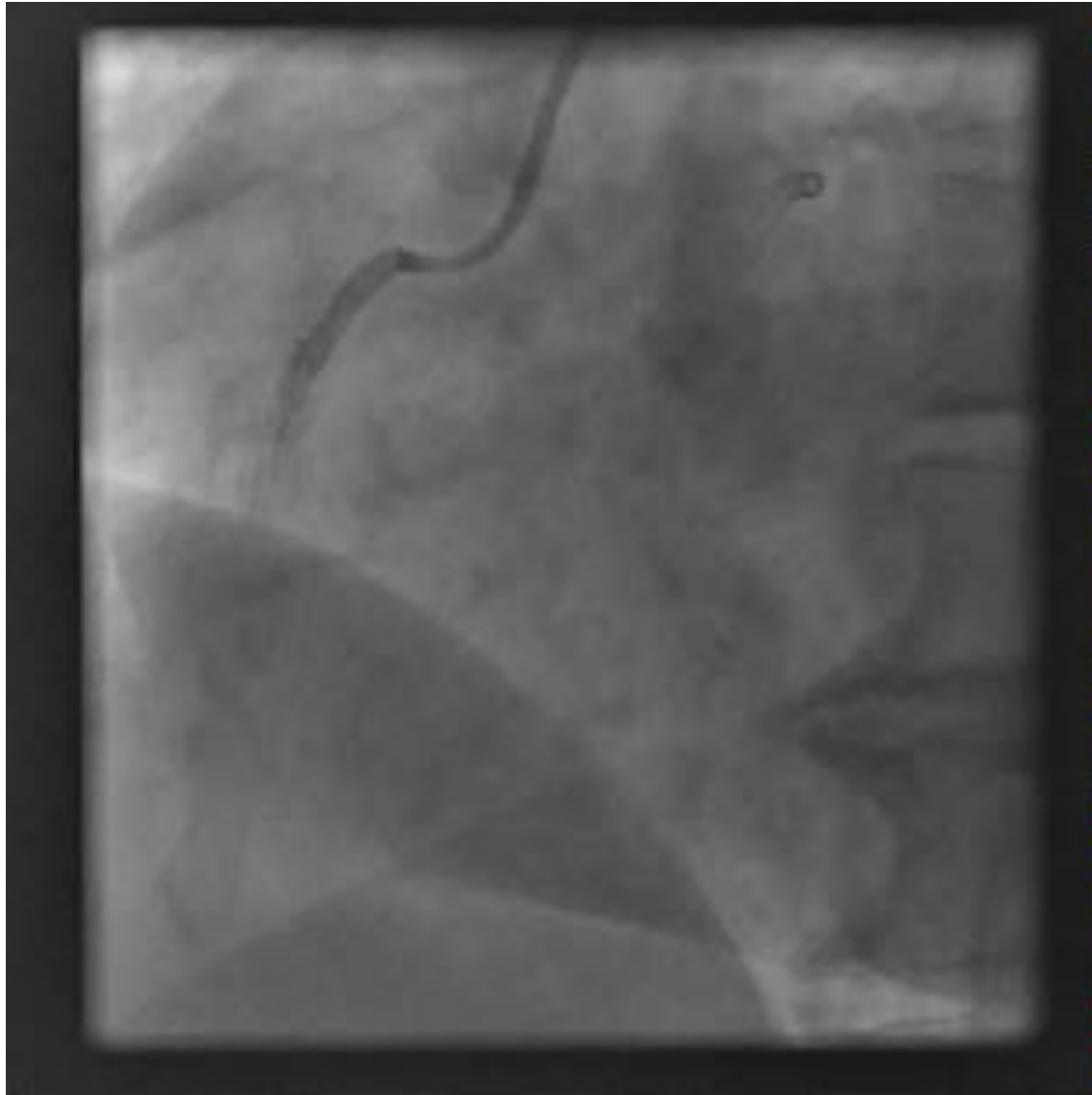
Contrôle final



Contrôle à 4 mois (SCA)



Contrôle à 4 mois (SCA)



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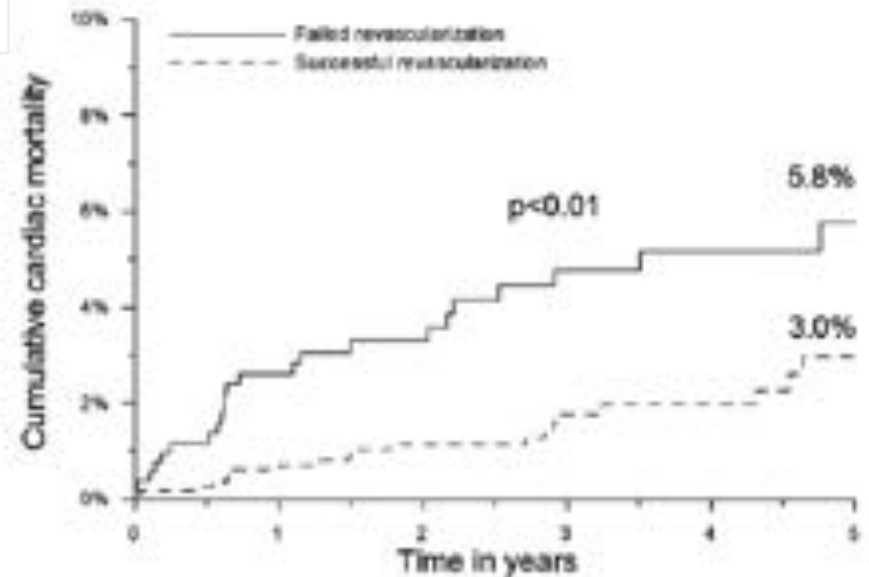
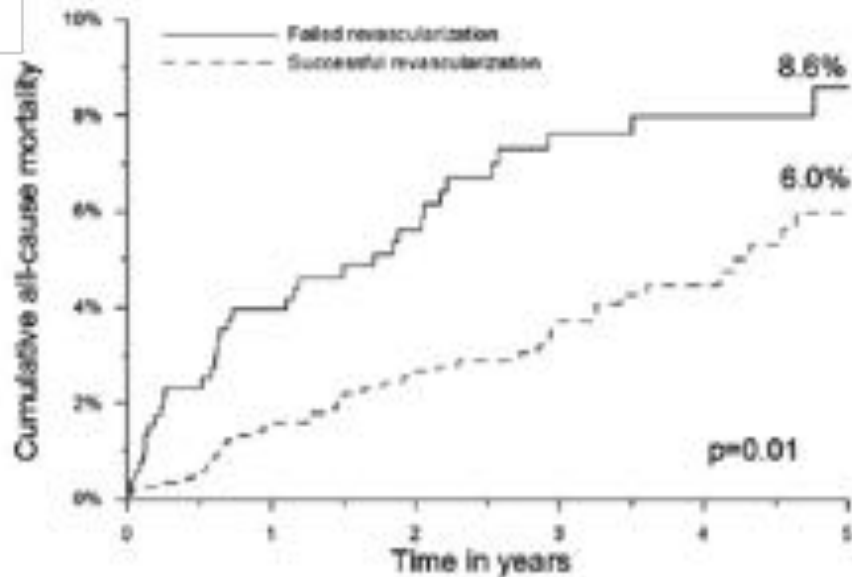


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Long-Term Outcome of Percutaneous Coronary Intervention for Chronic Total Occlusions

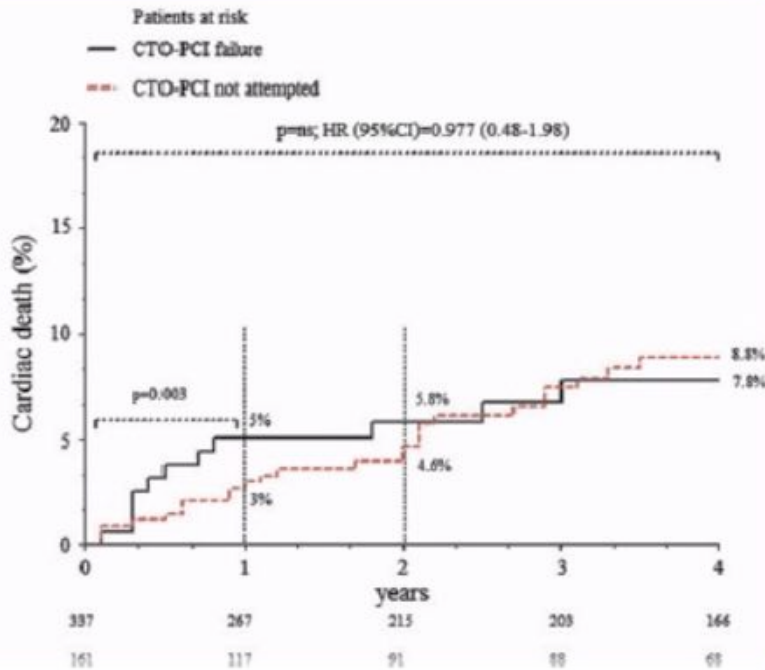
IMPACT SUR LA MORTALITÉ



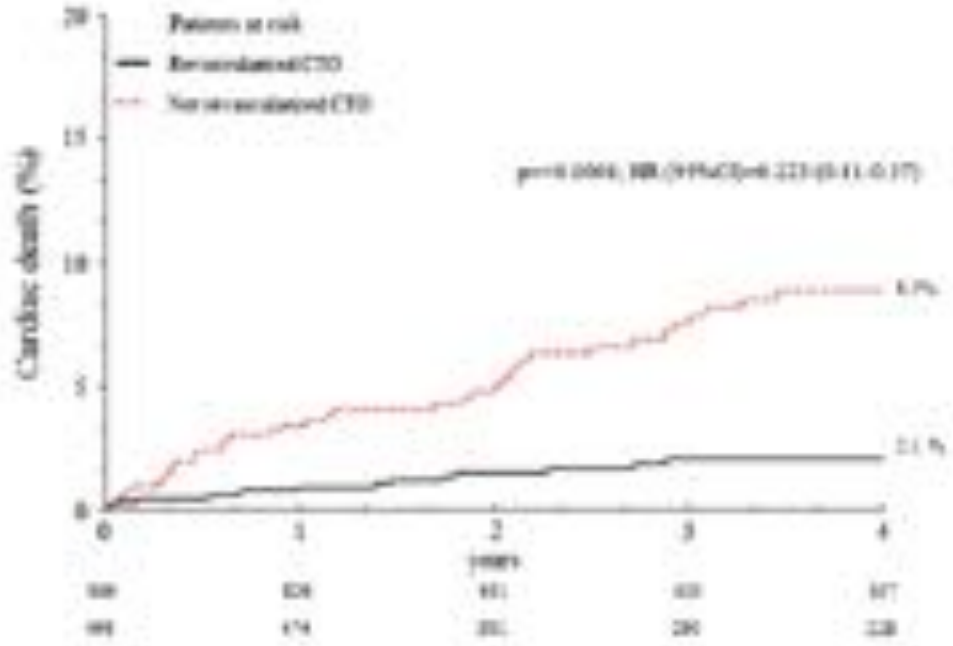
CTOs non revascularisées: pronostic

Predictors of cardiac death in patients with coronary chronic total occlusion not revascularized by PCI

Mortalité cardiaque à 4 ans



CTO échec vs non tentée

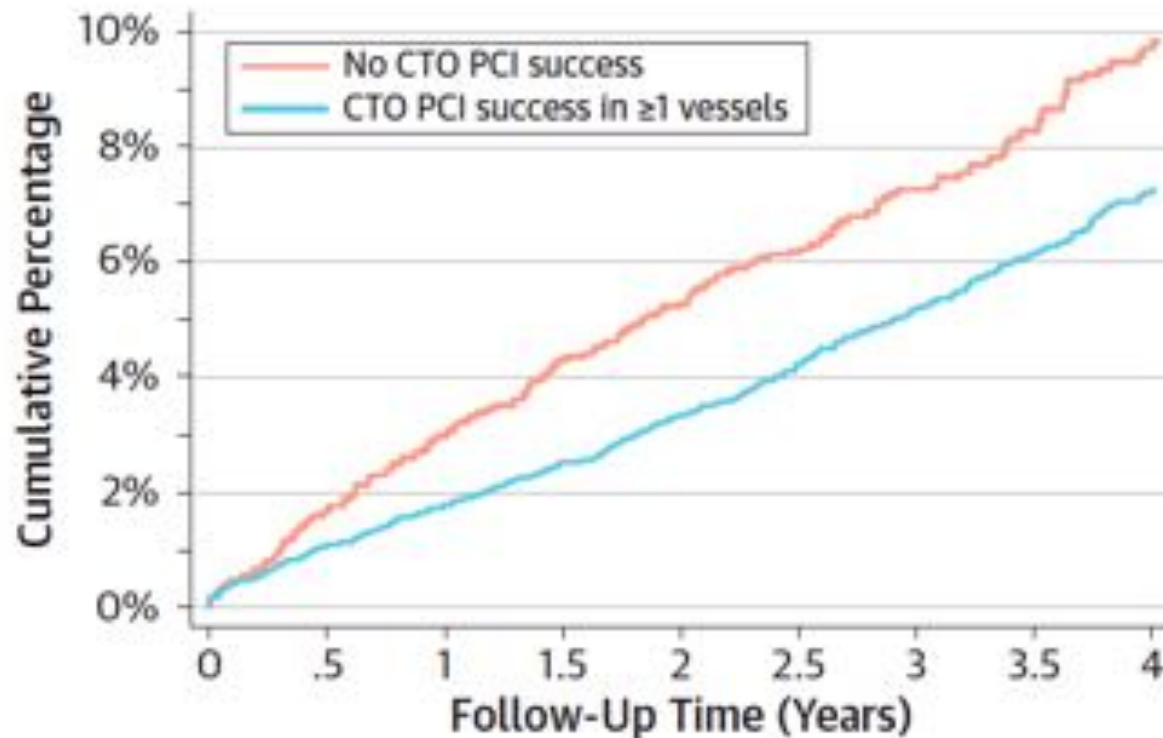


CTO revascularisée vs non revascularisée

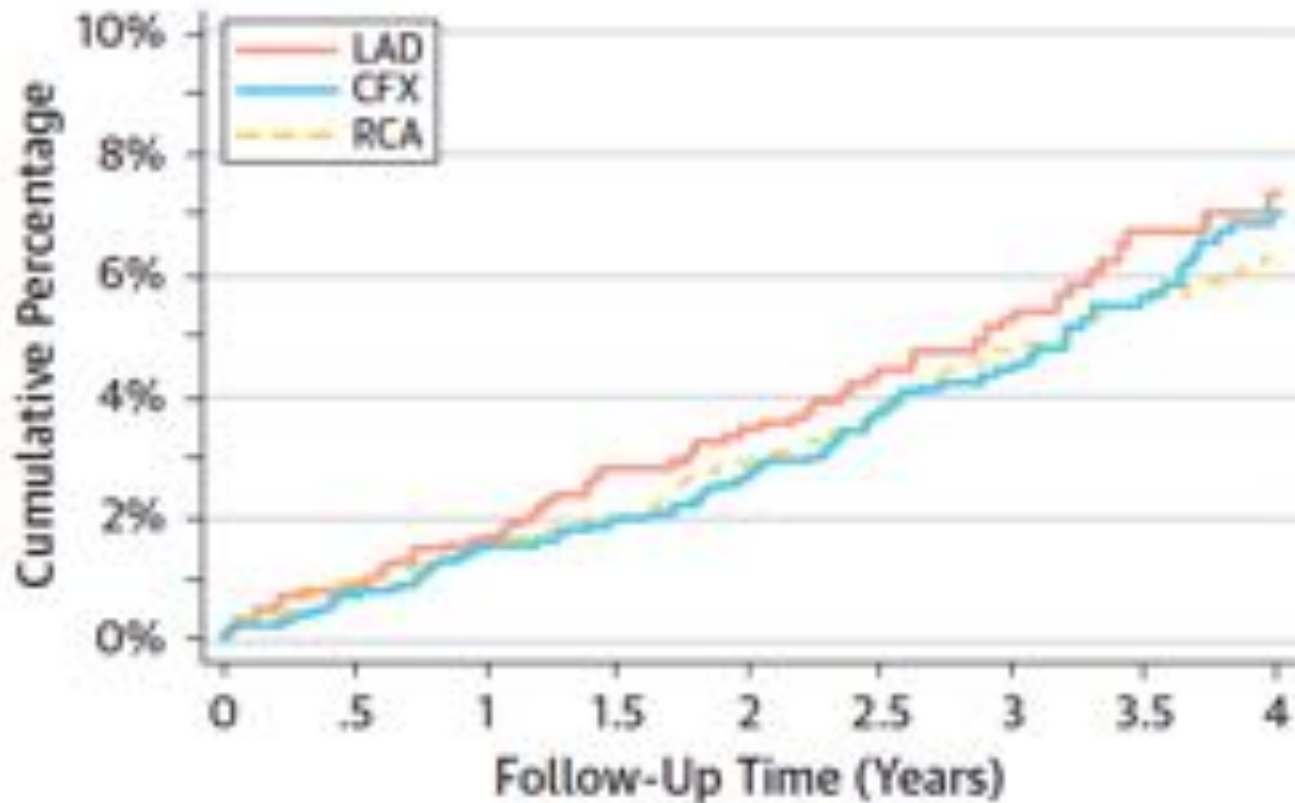


Long-Term Follow-Up of Elective Chronic Total Coronary Occlusion Angioplasty

IMPACT SUR LA MORTALITÉ

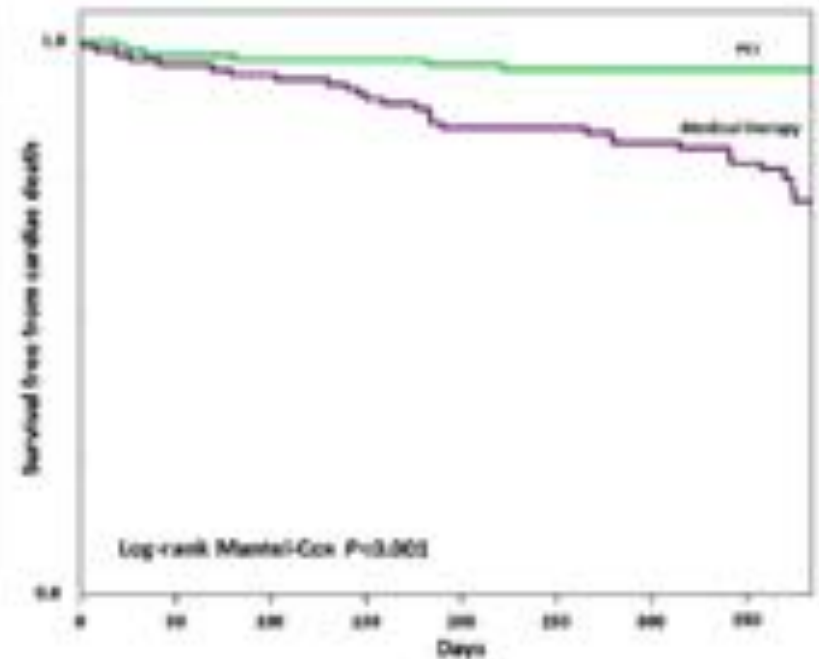
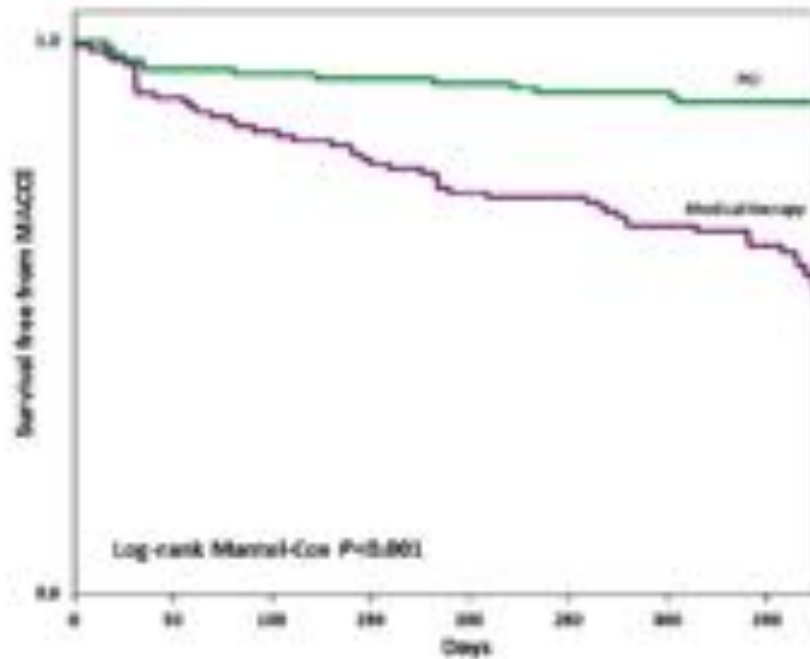


Le bénéfice est le même quelque soit l'artère revascularisée



Pronostic après angioplastie des CTOs

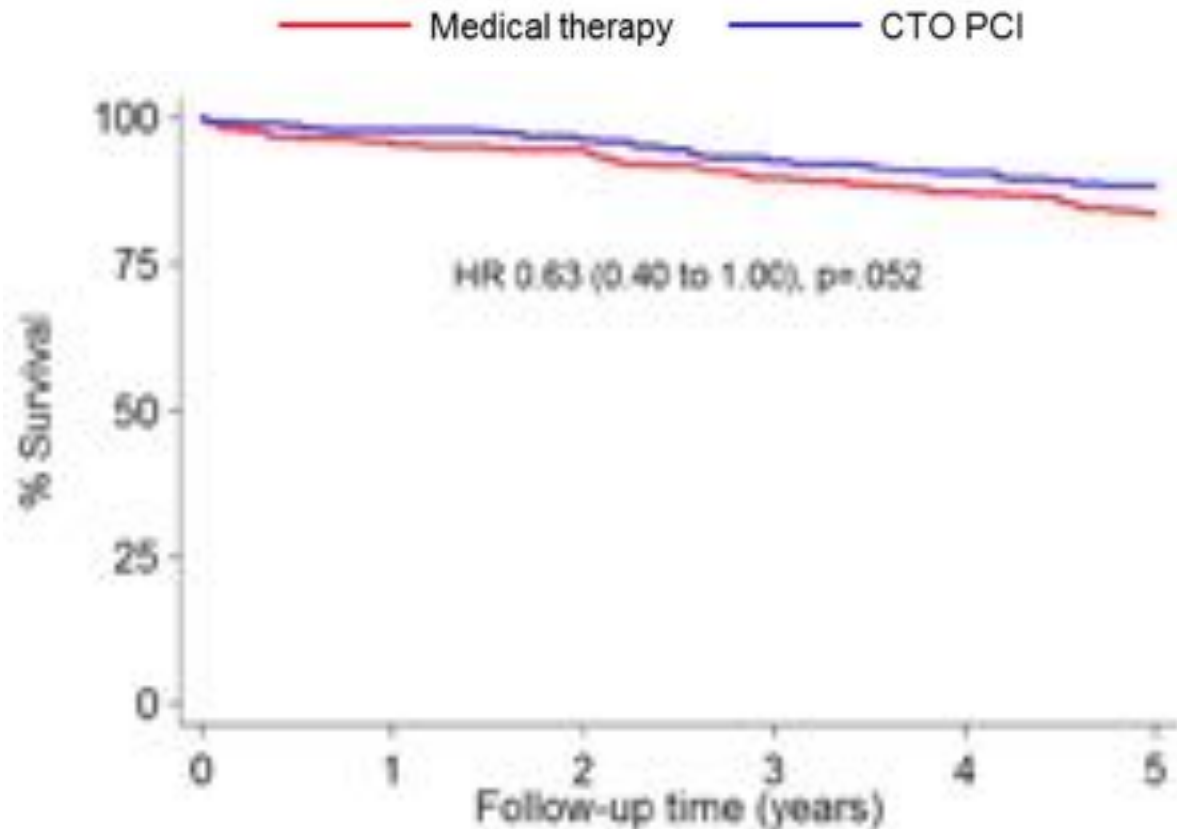
Management strategies in patients affected by chronic total occlusions: results from the Italian Registry of Chronic Total Occlusions





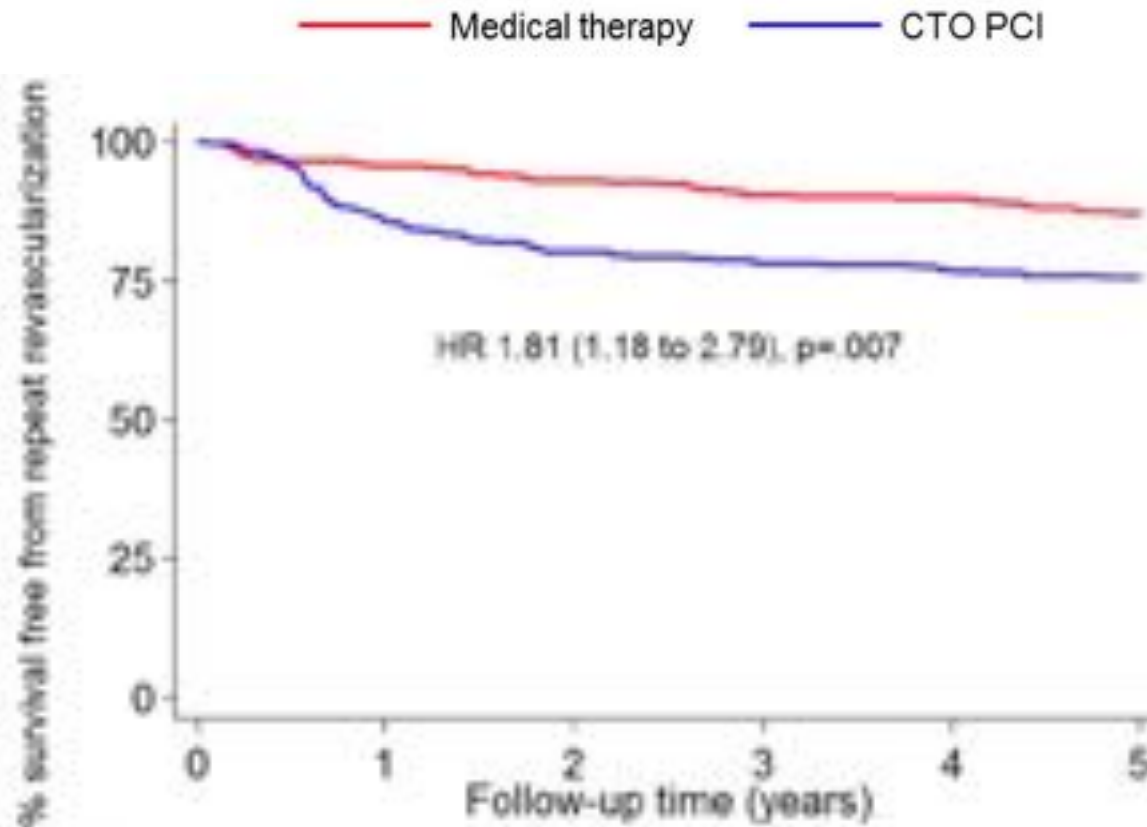
Medical therapy, percutaneous coronary intervention and prognosis in patients with chronic total occlusions

IMPACT SUR LA MORTALITÉ





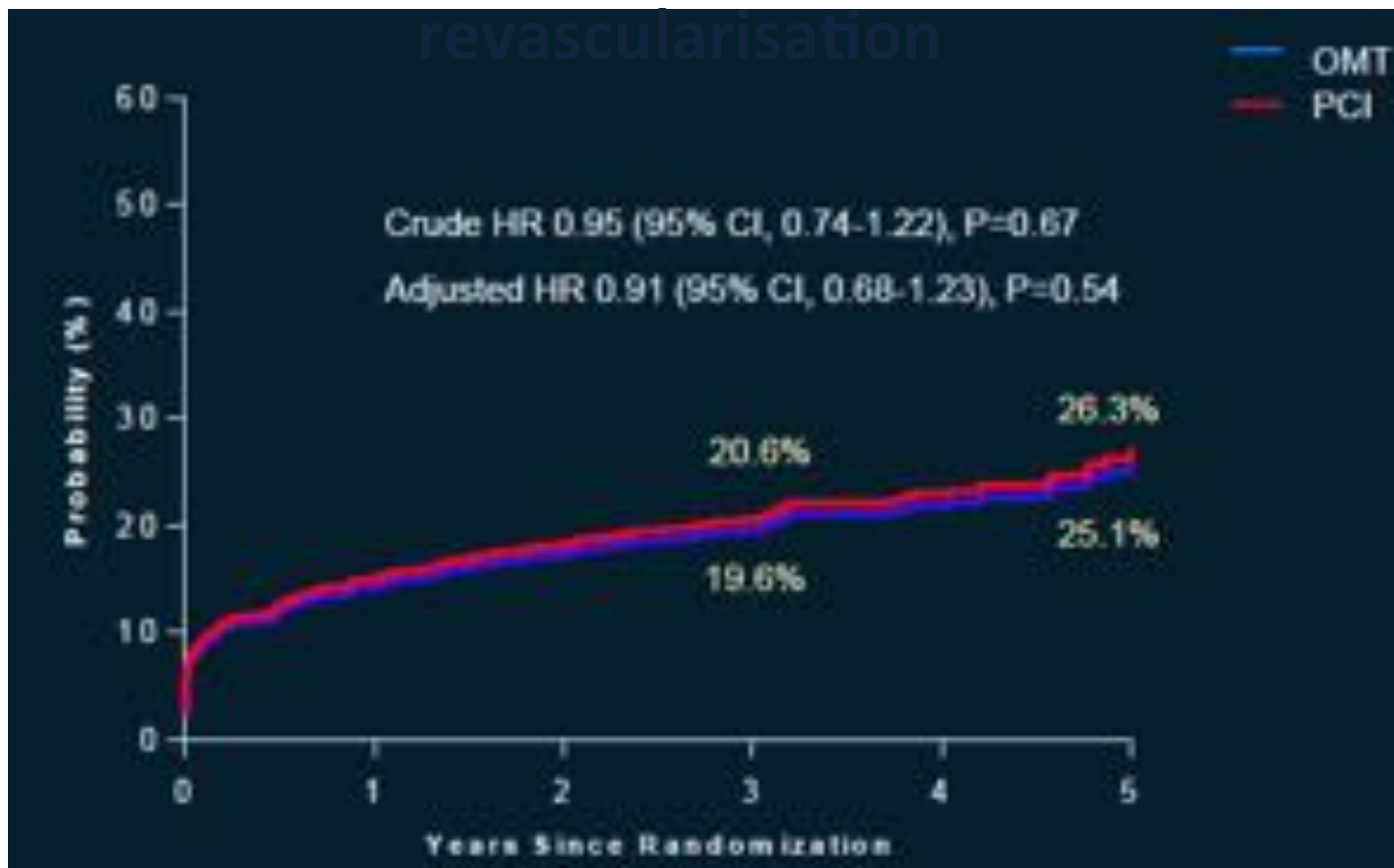
Medical therapy, percutaneous coronary intervention and prognosis in patients with chronic total occlusions





DECISION-CTO

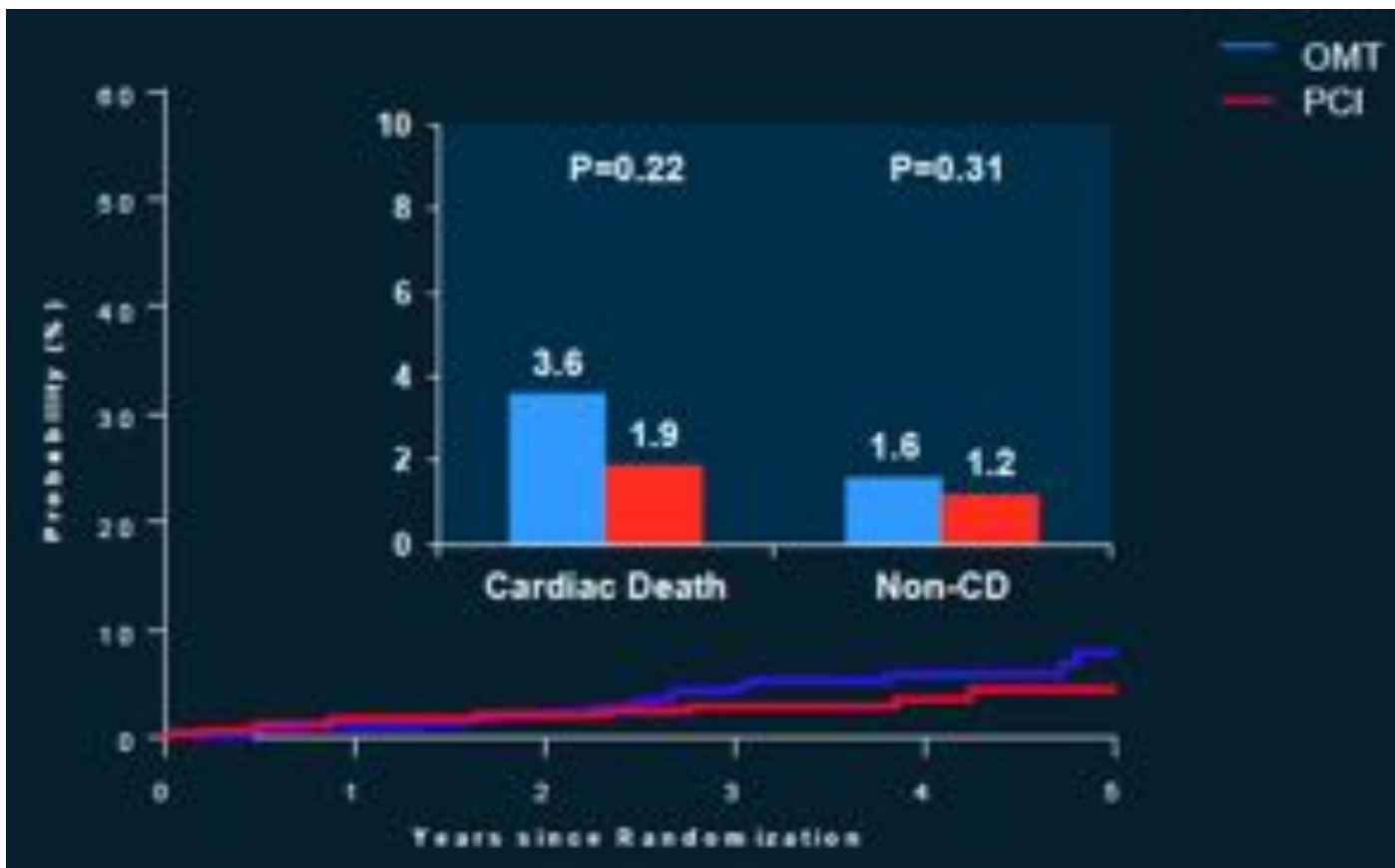
Death, MI, Stroke, any





DECISION-CTO

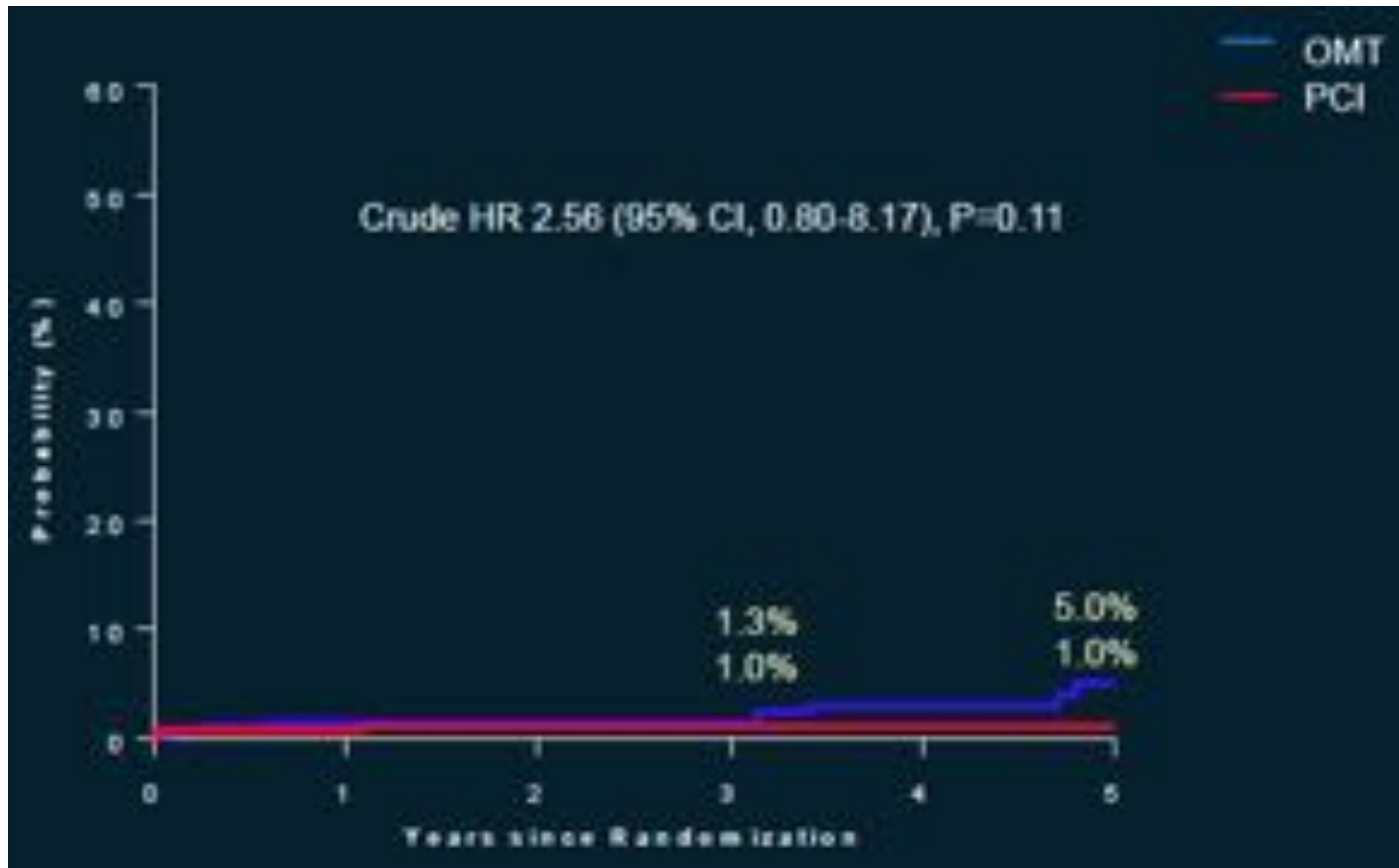
Death from any cause





DECISION-CTO

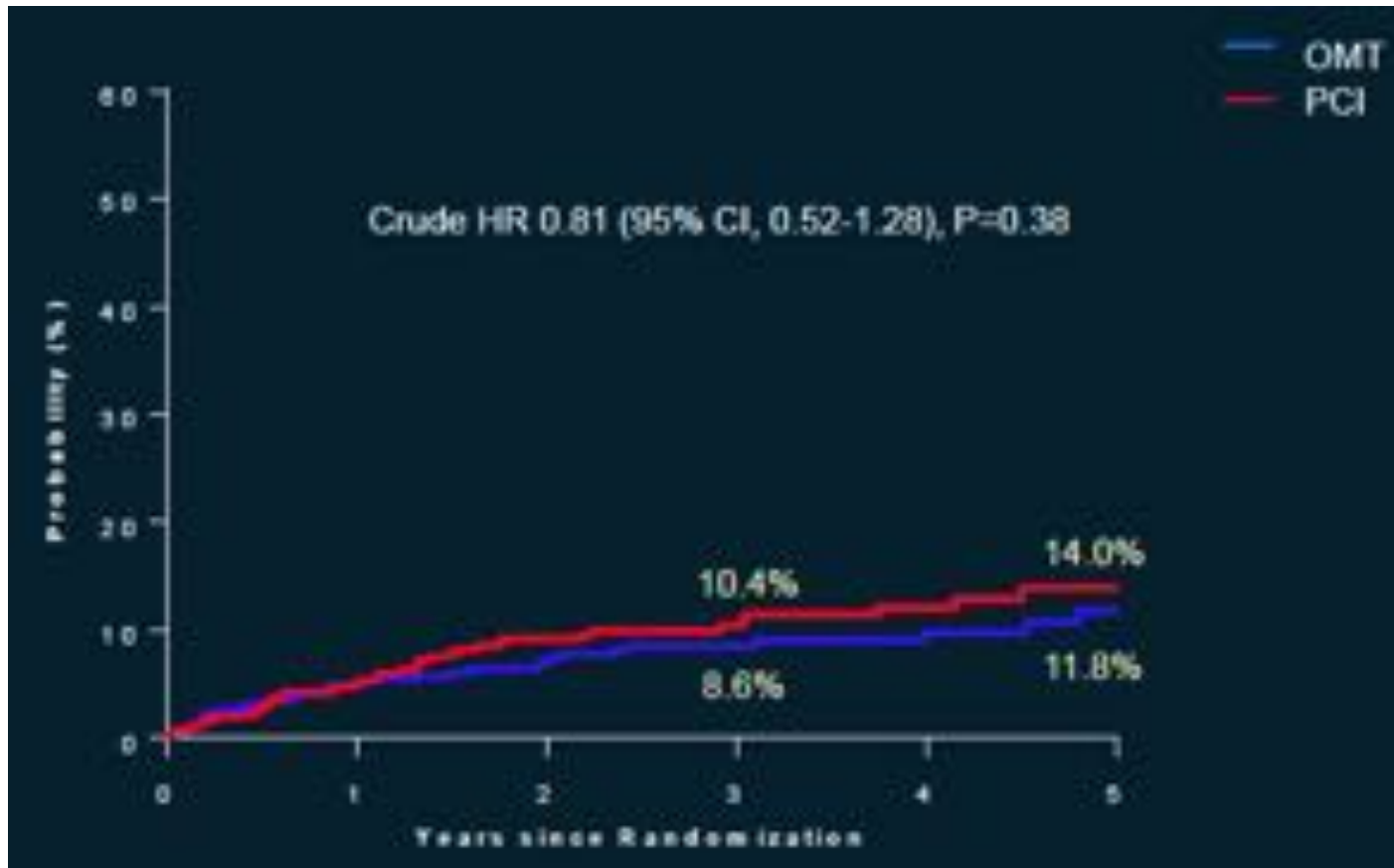
Stroke





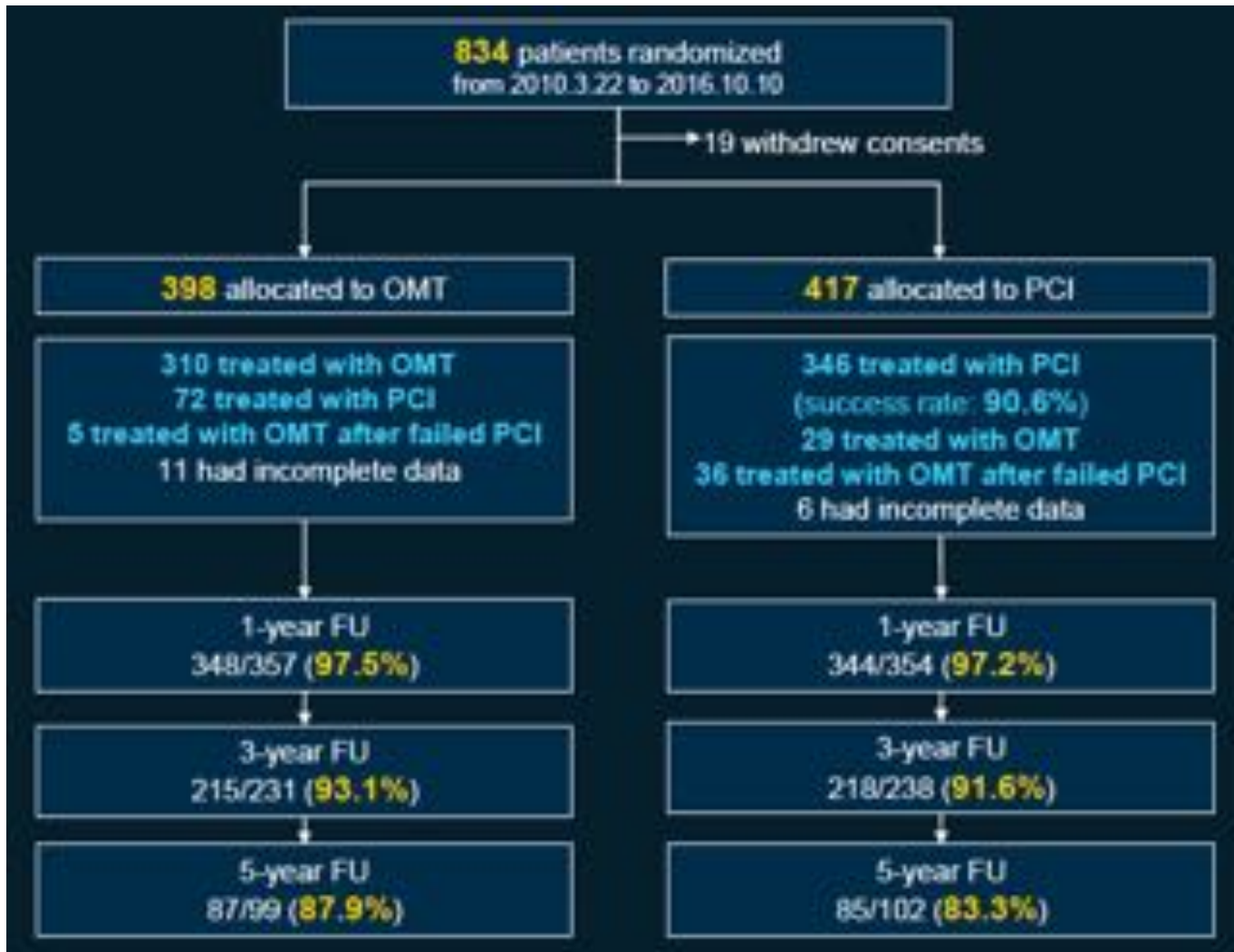
DECISION-CTO

Repeat revascularization





DECISION-CTO





CONCLUSION

Approche similaire des CTO comme des autres lésions

Recherche d'ischémie et/ou de viabilité myocardique

Amélioration fonctionnelle significative

Amélioration de la vasomotricité

Réduction fréquente des événements cardiaques majeurs