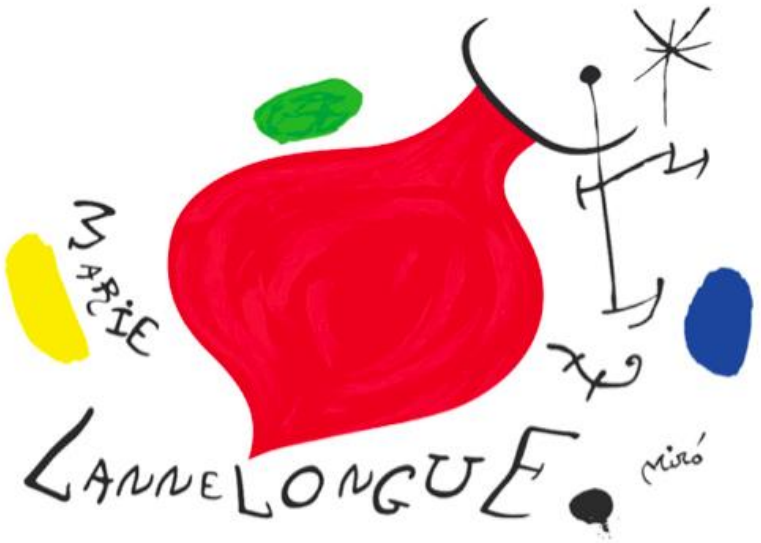
Syndromes coronaires aigus et diabète

Dr Saïd GHOSTINE

Hôpital Marie Lannelongue

Le Plessis Robinson

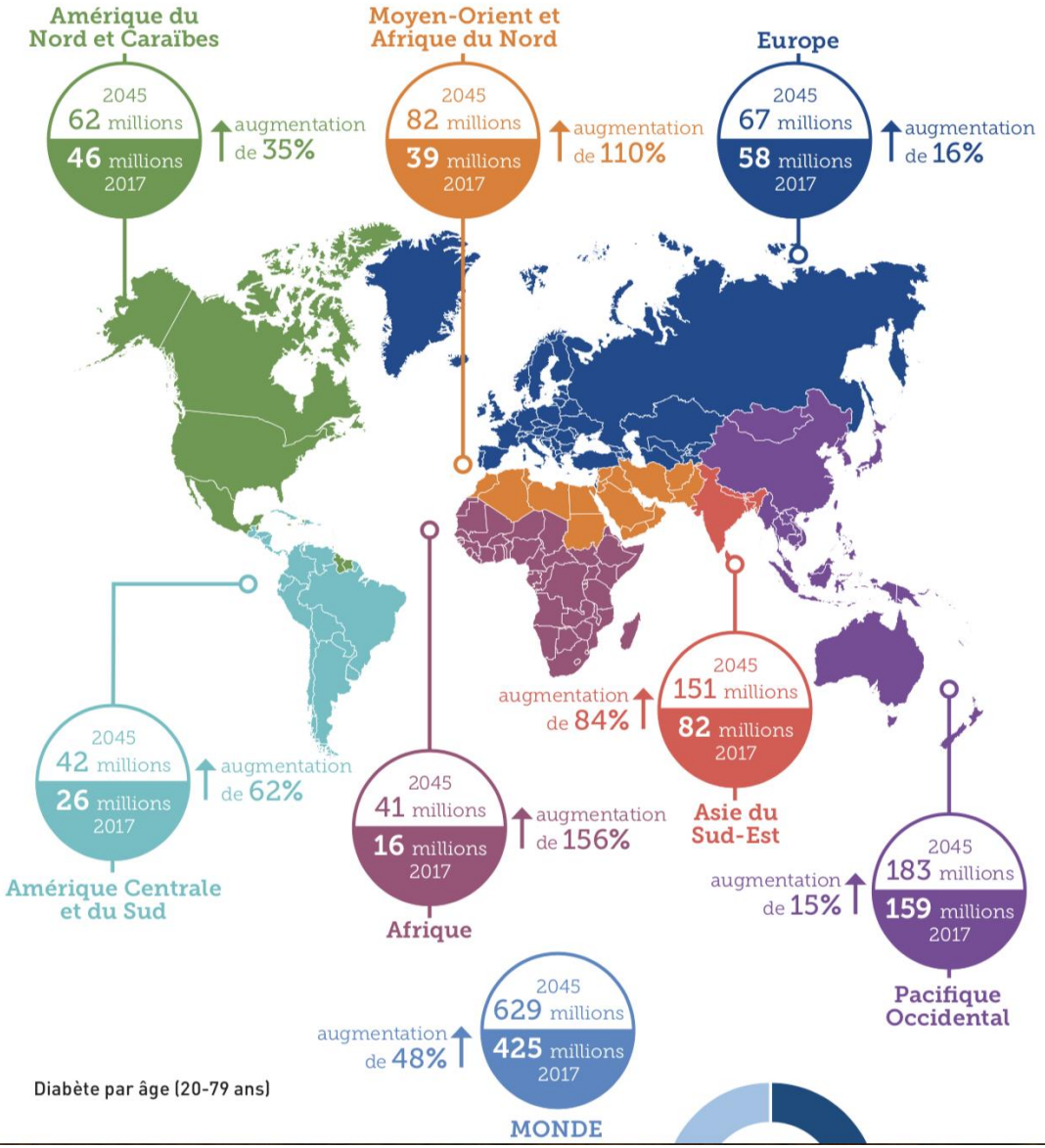


DÉCLARATION DE LIENS D'INTÉRÊT AVEC LA PRÉSENTATION

Intervenant : Saïd GHOSTINE, Le Plessis-Robinson

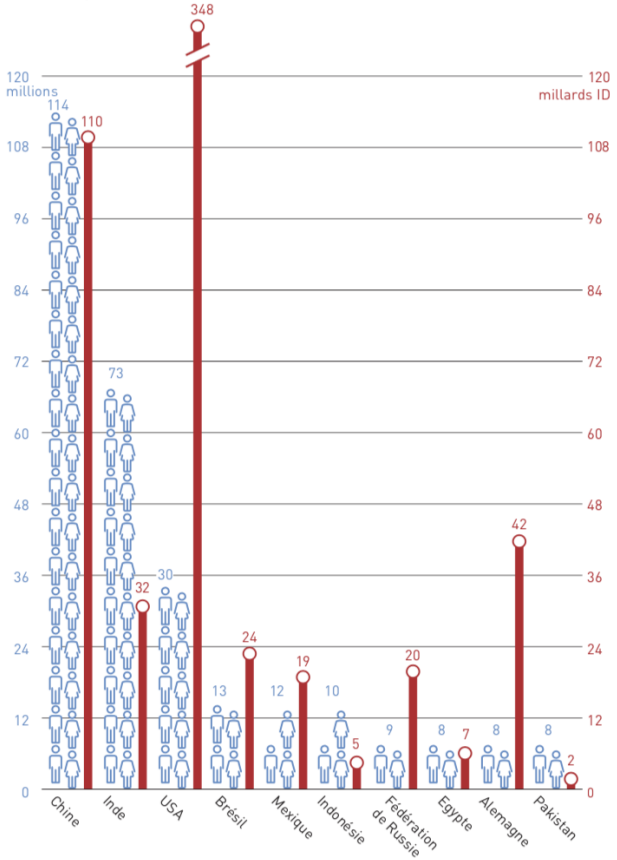
☑ Je n'ai pas de lien d'intérêt à déclarer

Nombre estimé de personnes atteintes de diabète au niveau mondial et par région en 2017 et 2045 (20-79 ans)

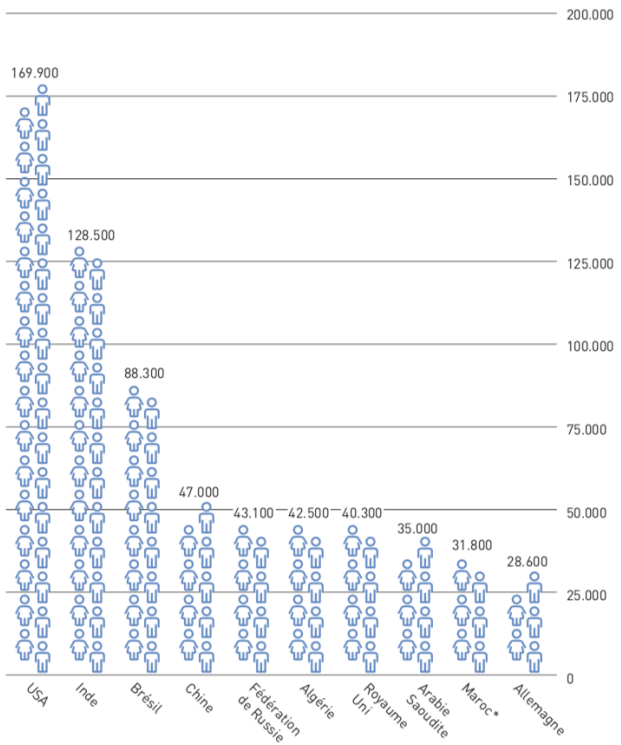


Diabète par âge (20-79 ans)

Top 10 des pays en nombre d'adultes atteints de diabète (20-79 ans) et leurs dépenses liées au diabète, 2017



Top 10 des pays en nombre de nouveaux cas de diabète chez les enfants et les adolescents (0-19 ans)

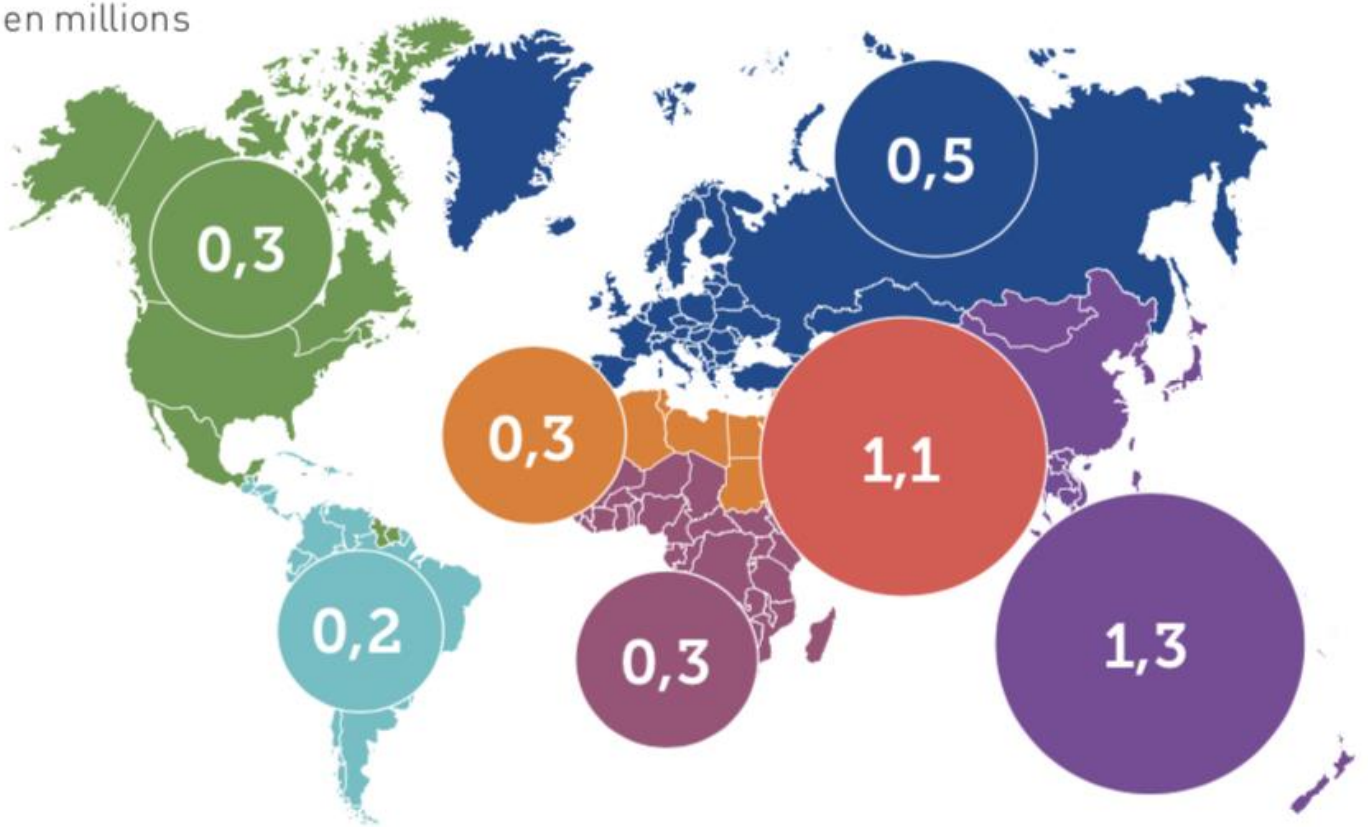


*Les données pour le Maroc sont extrapolées de celles de l'Algérie

Un **DIABÈTE** doit être diagnostiqué si **UN OU PLUSIEURS** des critères suivants sont satisfaits	Une **INTOLÉRANCE AU GLUCOSE (IG)** doit être diagnostiquée lorsque **LES DEUX** critères suivants sont remplis	Une **ANOMALIE DE LA GLYCEMIE A JEUN (AGJ)** doit être diagnostiquée lorsque **LES DEUX** critères suivants sont satisfaits
Glycémie à jeun ≥7,0 mmol/L (126 mg/dL)	Glycémie à jeun < 7,0 mmol/L (126 mg/dL)	Glycémie à jeun 6,1-6,9 mmol/L (110 to 125 mg/ dL)
ou	et	et
Glycémie à deux heures après ingestion de glucose orale de 75 g (test oral de tolérance au glucose (HGPO)) ≥ 11,1 mmol/L (200 mg/dL)	Glycémie à deux heures après ingestion de glucose orale de 75 g de 7,8-11,1 mmol/L (140-200 mg/dL)	Glycémie à deux heures après ingestion de glucose orale de 75 g de <7,8mmol/L (140 mg/dL)
ou		
Glycémie aléatoire > 11,1 mmol/L (200 mg/dL) ou HbA_{1c} ≥ 48 mmol/mol (équivalant à 6,5 %)		

Nombre de décès dus au diabète (20-79 ans) en 2017

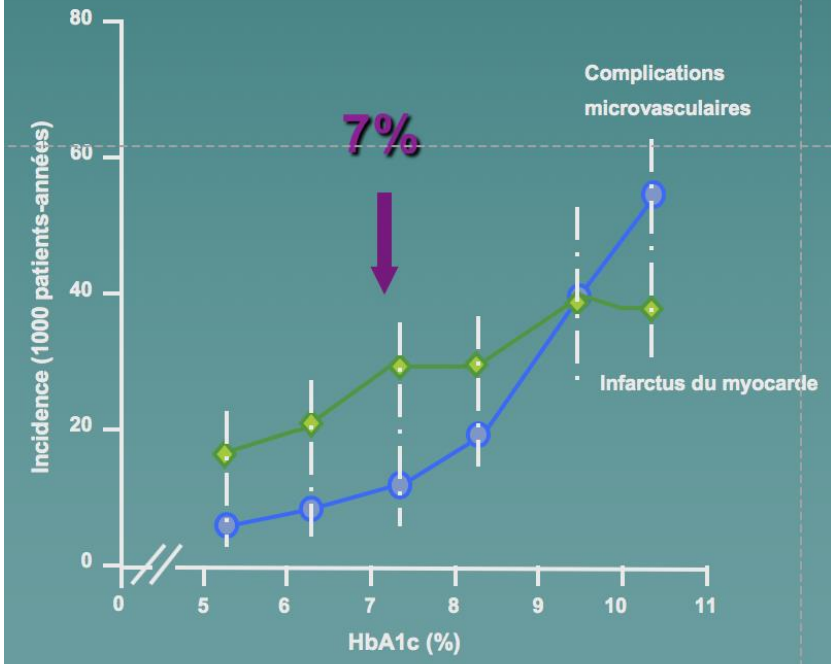
en millions



Cible HbA1c < 7%

Relation entre l'HbA_{1c} et le risque de survenue des complications

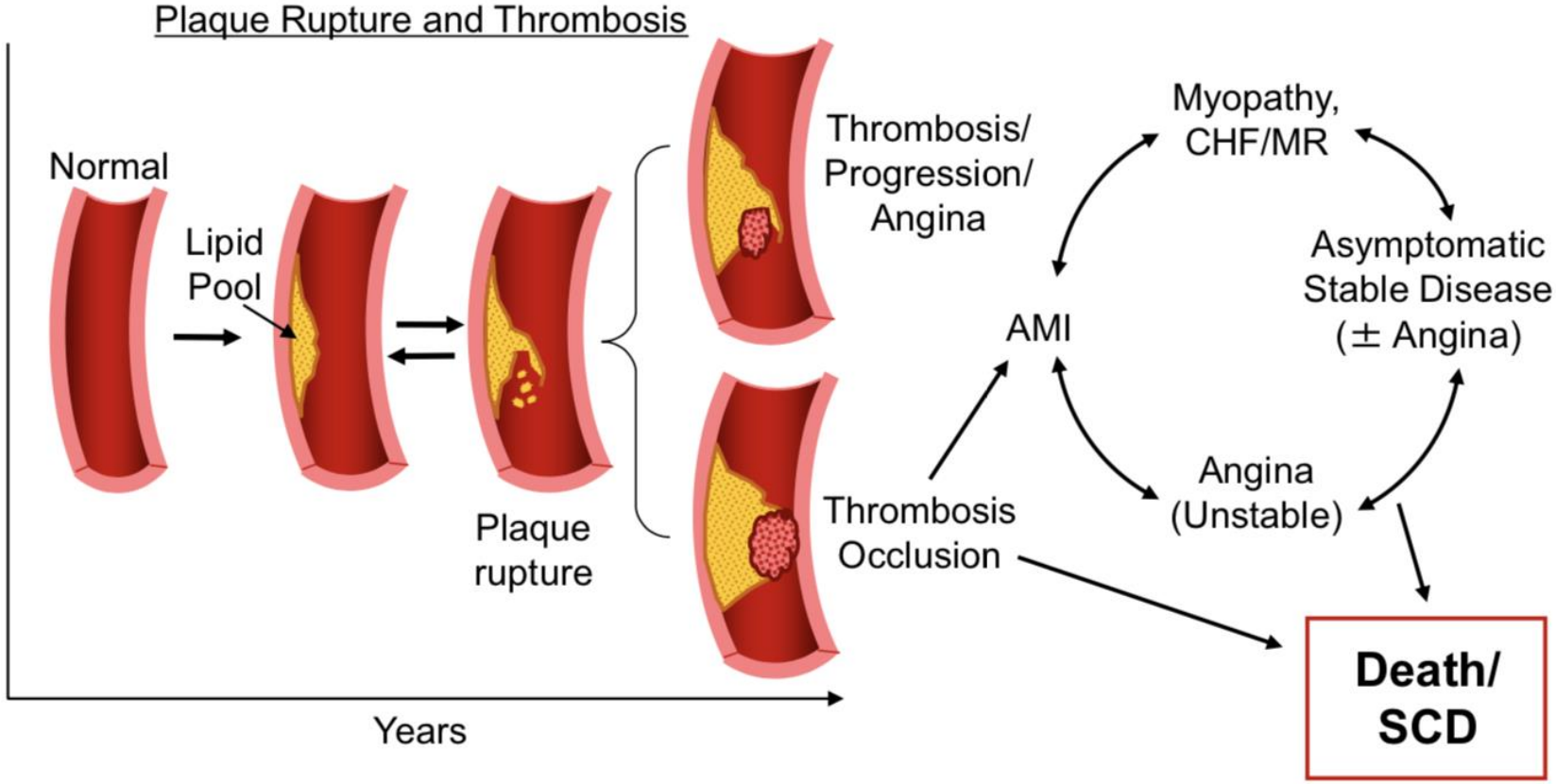
Etude UKPDS : diabète de type 2



Diminution du risque relatif de complication associée à chaque diminution de 1 point de la valeur de l'HbA_{1c} dans le cadre de l'UKPDS

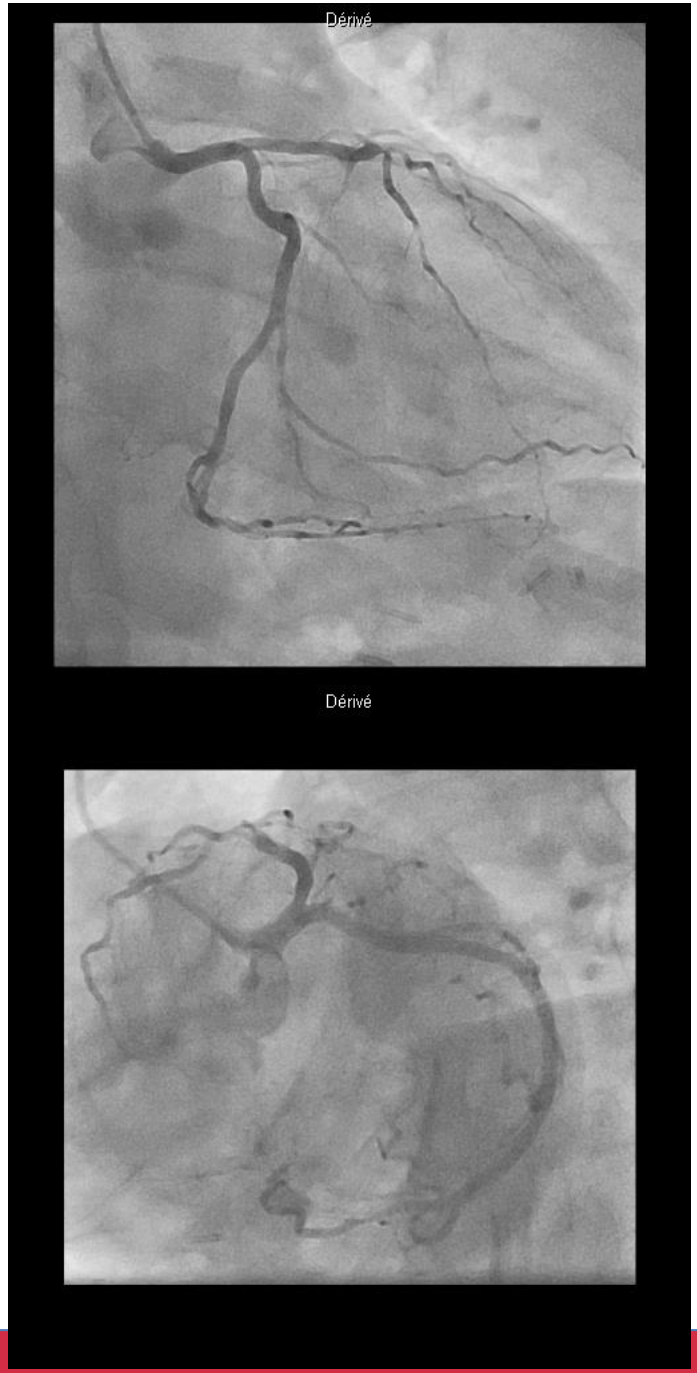
	Diminution du risque relatif (%)
Mortalité liée au diabète	21
Événement microvasculaire	37
Infarctus	14
Accident vasculaire cérébral	12

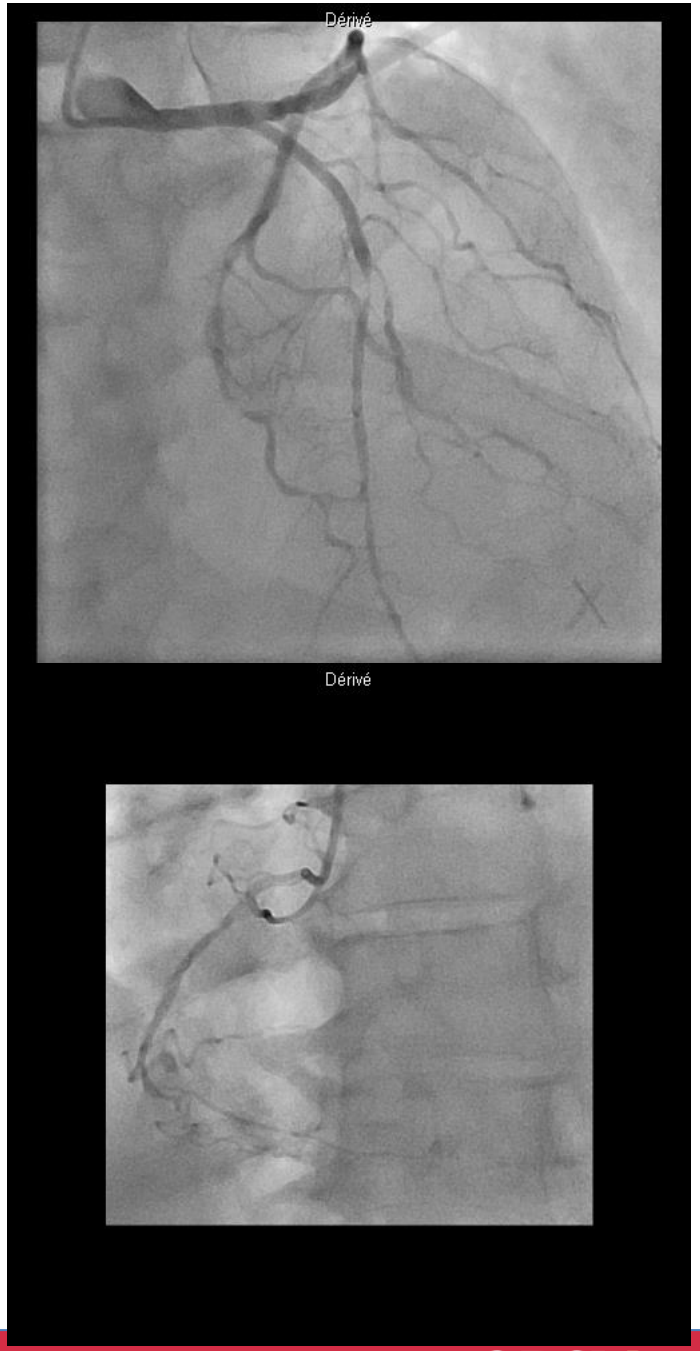
Stratton I.M et al (UKPDS 35). BMJ 2000; 321 : 405-12.


Plaque Rupture and Thrombosis
Normal
Lipid Pool
Plaque rupture
Thrombosis/ Progression/ Angina
Thrombosis Occlusion
Years
Myopathy, CHF/MR
Asymptomatic Stable Disease (± Angina)
AMI
Angina (Unstable)
Death/ SCD

Coronaropathie diabétique

- Coronaropathie fréquente, sévère, diffuse et évolutive
- Athérosclérose précoce: multiples facteurs
- Plus de multitronculaire
- Moins bons résultats: PCI et CABG
- Comorbidités (IR)
- Moins bon pronostic
- Activation plaquettaire
- Resténose


Dérivé
Dérivé

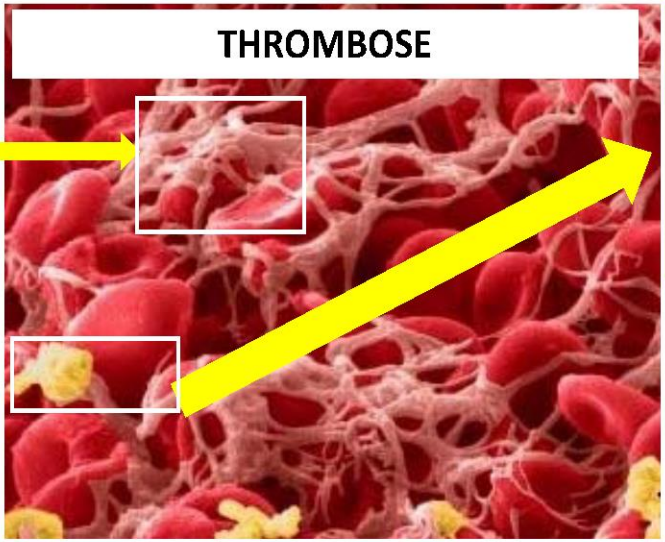

Dérivé
Dérivé

Diabète : Etat prothrombotique

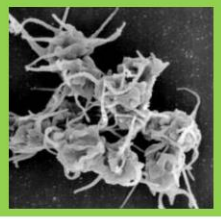
Altération coagulation:
- fibrinogene
- vWF
- Thrombine
- FVIIet VIII
- AT II

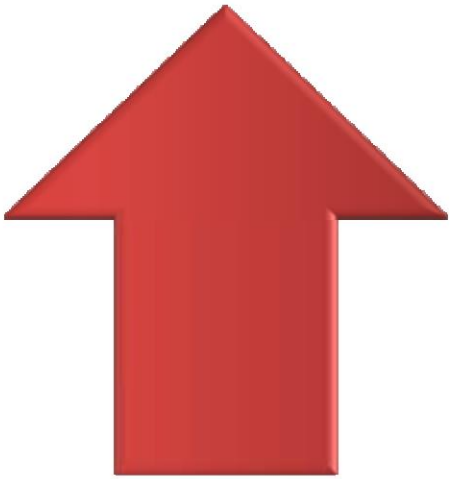
Baisse fibrinolyse
- PAI 1
- t PA

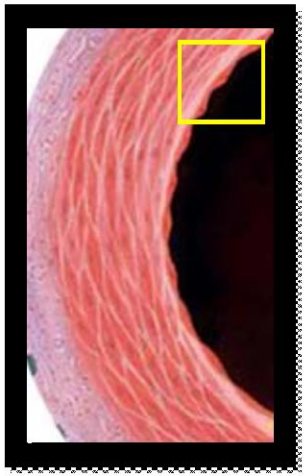
THROMBOSE



Fonction plaquettaire
- Adhésion
- Agrégation
- Activation







DYSFONCTION ENDOTHELIALE

- molécules d'adhesion (VCAM)
- Stress Oxydatif

Altération vasodilatation

Altération génération endothelium

Diabète : Altération de la fonction plaquettaire

Notion de « thrombopathie du diabétique »

Altération homéostasie Ca et Mg++

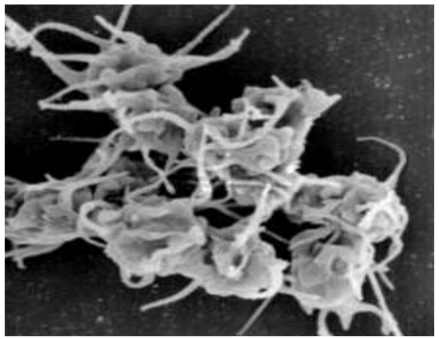
Augmentation métabolisme Acide Arachidonique

Augmentation synthèse TXA2

Diminution production prostacycline

Diminution production NO

Diminution production antioxydant

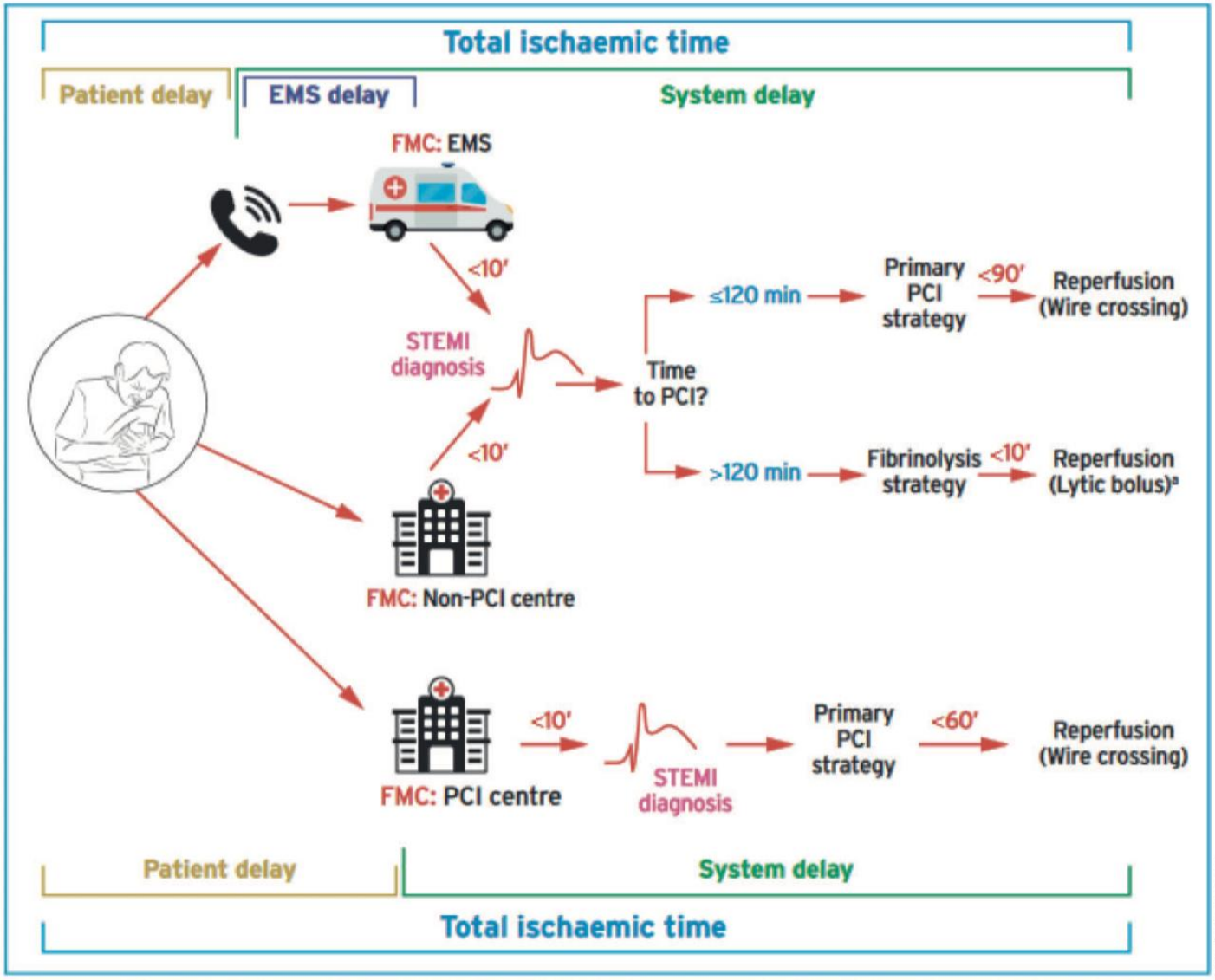


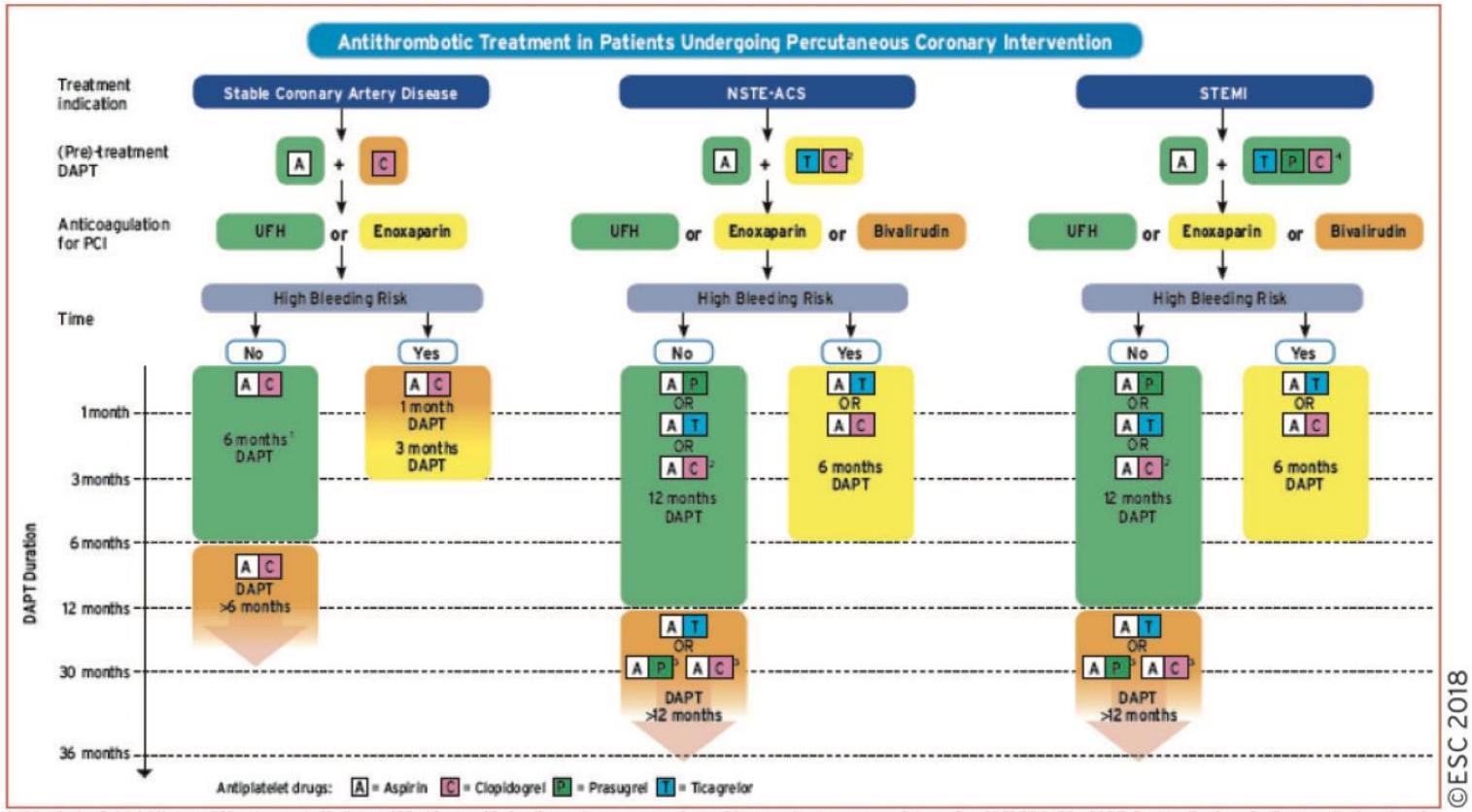
Augmentation expression des molécules d'adhésion P selectine , IIbIIIa

INTERET TT AAP

ASCEND ESC 18 : négatif

STEMI


Total ischaemic time
Patient delay
EMS delay
System delay
FMC: EMS
<10′
STEMI diagnosis
Time to PCI?
≤120 min
Primary PCI strategy
<90′
Reperfusion (Wire crossing)
>120 min
Fibrinolysis strategy
<10′
Reperfusion (Lytic bolus)a
<10′
FMC: Non-PCI centre
FMC: PCI centre
<10′
STEMI diagnosis
Primary PCI strategy
<60′
Reperfusion (Wire crossing)
Patient delay
System delay
Total ischaemic time
©ESC 2018



DAPT = dual antiplatelet therapy; DCB = drug-coated balloon; NSTE-ACS = non-ST-elevation acute coronary syndrome; PCI = percutaneous coronary intervention; PRECISE-DAPT = PREdicting bleeding Complications In patients undergoing Stent implantation and subsEquent Dual Anti Platelet Therapy; STEMI = ST-elevation myocardial infarction; UFH = unfractioned heparin.
Colour-coding refers to the ESC classes of recommendations (green = Class I; yellow = Class IIa; orange = Class IIb).
[1]After PCI with DCB 6 months DAPT should be considered (class IIa) - [2]Clopidogrel if patient is not eligible for a treatment with prasugrel or ticagrelor; or in a setting of DAPT de-escalation (Class IIb).
[3]Clopidogrel or prasugrel if patient is not eligible for a treatment with ticagrelor - [4]Pretreatment before PCI (or at the latest at the time of PCI); clopidogrel if potent P2Y12 inhibitors are contraindicated or not available.
(For scores see Supplementary Table 4.).
High bleeding risk is considered as an increased risk of spontaneous bleeding during DAPT (e.g. PRECISE-DAPT score ≥25)

Figure 10 Algorithm for the use of antithrombotic drugs in patients undergoing percutaneous coronary intervention. High bleeding risk is considered as an increased risk of spontaneous bleeding during DAPT (e.g. PRECISE-DAPT score ≥25). Colour-coding refers to the ESC classes of recommendations (green = class I; yellow = class IIa; and orange = class IIb).

Recommendations for antithrombotic treatment in patients with non-ST-elevation acute coronary syndromes undergoing percutaneous coronary intervention

Recommendations	Class[a]	Level[b]
Pre-treatment and antiplatelet therapy		
Aspirin is recommended for all patients without contraindications at an initial oral loading dose of 150–300 mg (or 75–250 mg i.v.), and at a maintenance dose of 75–100 mg daily long-term.[681,683,721]	I	A
A $P2Y_{12}$ inhibitor is recommended in addition to aspirin, maintained over 12 months unless there are contraindications such as an excessive risk of bleeding.[701,702,722,723] Options are:	I	A
• Prasugrel in $P2Y_{12}$-inhibitor naïve patients who proceed to PCI (60 mg loading dose, 10 mg daily dose).[701]	I	B
• Ticagrelor irrespective of the preceding $P2Y_{12}$ inhibitor regimen (180 mg loading dose, 90 mg b.i.d.).[702]	I	B
• Clopidogrel (600 mg loading dose, 75 mg daily dose) only when prasugrel or ticagrelor are not available or are contraindicated.[722–724]	I	B
GP IIb/IIIa antagonists should be considered for bail-out if there is evidence of no-reflow or a thrombotic complication.	IIa	C
For pre-treatment in patients with NSTE-ACS undergoing invasive management, ticagrelor administration (180 mg loading dose, 90 mg b.i.d.), or clopidogrel (600 mg loading dose, 75 mg daily dose) if ticagrelor is not an option, should be considered as soon as the diagnosis is established.	IIa	C
Cangrelor may be considered in $P2Y_{12}$-inhibitor naïve patients undergoing PCI.[673]	IIb	A
GP IIb/IIIa antagonists may be considered in $P2Y_{12}$-inhibitor naïve patients undergoing PCI.	IIb	C
Pre-treatment with GP IIb/IIIa antagonists in patients in whom coronary anatomy is not known is not recommended.[713,714,725]	III	A
Administration of prasugrel in patients in whom coronary anatomy is not known is not recommended.[165]	III	B

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Diabetes & Metabolism 38 (2012) 113–127

Review

Consensus statement on the care of the hyperglycaemic/diabetic patient during and in the immediate follow-up of acute coronary syndrome

B. Vergès [a,*], A. Avignon [b], F. Bonnet [c], B. Catargi [d], S. Cattan [e], E. Cosson [f], G. Ducrocq [g], M. Elbaz [h], A. Fredenrich [i], P. Gourdy [j], P. Henry [k], O. Lairez [h], A.M. Leguerrier [c], C. Monpère [l], P. Moulin [m], B. Vergès-Patois [n], R. Roussel [o], G. Steg [g], P. Valensi [f], Diabetes and Cardiovascular Disease study group of the *Société francophone du diabète* (SFD), in collaboration with the *Société française de cardiologie* (SFC)

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[c] *Service d'endocrinologie, diabétologie et nutrition, CHU de Rennes, 35000 Rennes, France*
[d] *Service d'endocrinologie, CHU de Bordeaux, 33000 Bordeaux, France*
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[h] *Service de cardiologie, CHU de Toulouse, 31059 Toulouse, France*
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[k] *Service de cardiologie, CHU Lariboisière, 75010 Paris, France*
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[n] *Service de réadaptation cardiaque, Les Rosiers, 21000 Dijon, France*
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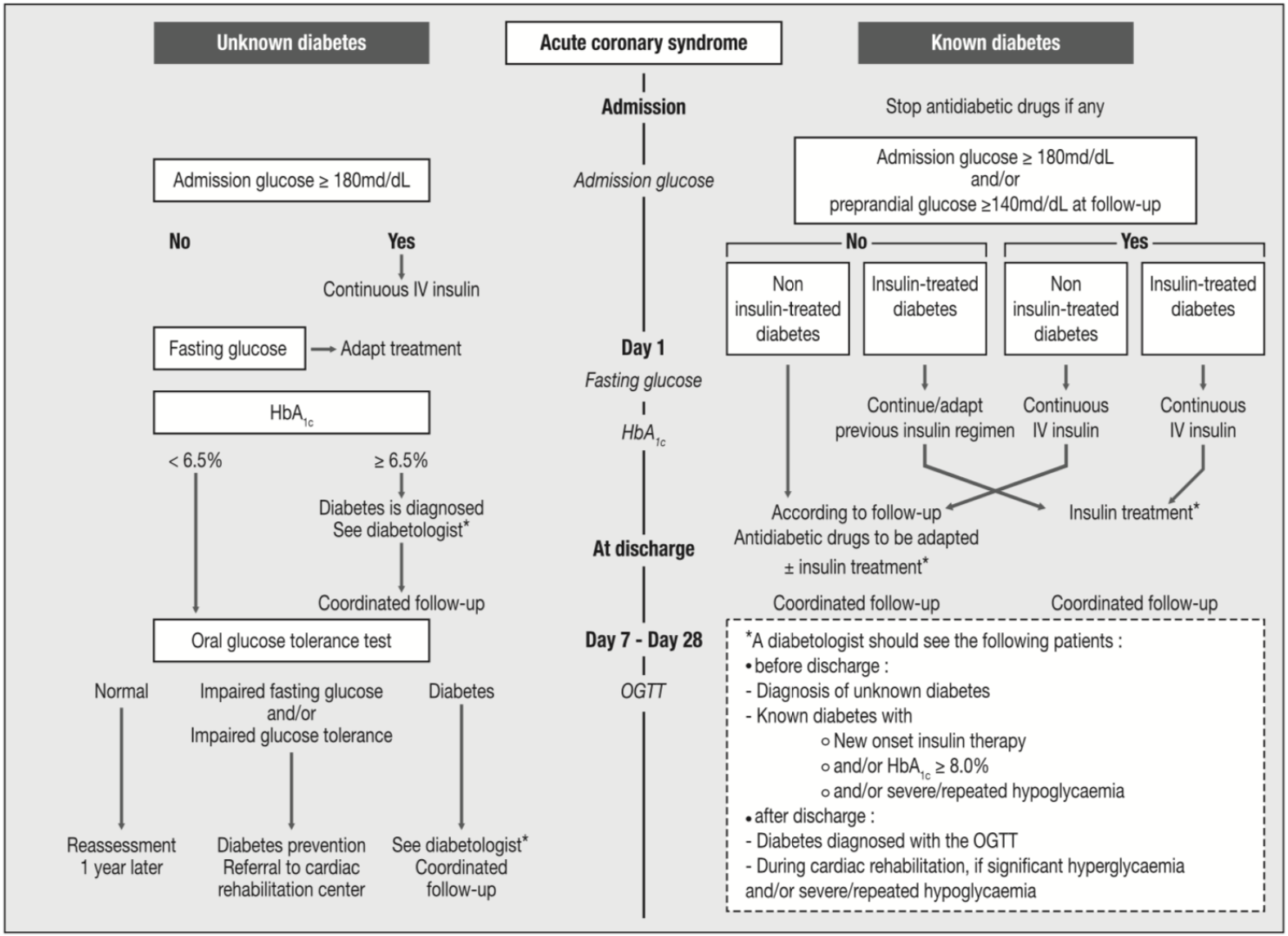


Fig. 1. Summary of the consensus statement on care of the hyperglycaemic/diabetic patient during and in the immediate follow-up of an ACS.

THE LANCET

INDIVIDUAL PATIENT-DATA POOLED ANALYSIS OF 11,518 PATIENTS FROM 11 RANDOMIZED TRIALS

Mortality after coronary artery bypass grafting versus percutaneous coronary intervention with stenting for coronary artery disease: a pooled analysis of individual patient data

Stuart J Head, Milan Milojevic, Joost Daemen, Jung-Min Ahn, Eric Boersma, Evald H Christiansen, Michael J Domanski, Michael E Farkouh, Marcus Flather, Valentin Fuster, Mark A Hlatky, Niels R Holm, Whady A Hueb, Masoor Kamalesh, Young-Hak Kim, Timo Mäkikallio, Friedrich W Mohr, Grigorios Papageorgiou, Seung-Jung Park, Alfredo E Rodriguez, Joseph F Sabik 3rd, Rodney H Stables, Gregg W Stone, Patrick W Serruys, Arie Pieter Kappetein

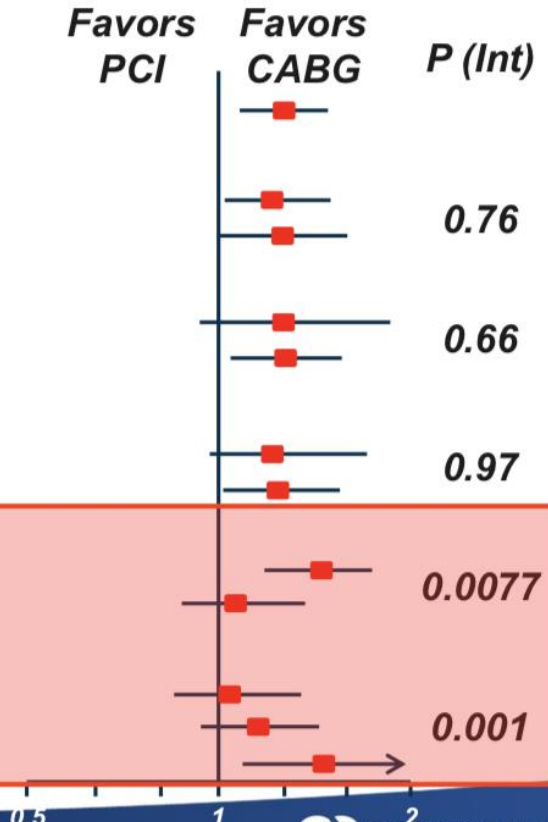
Summary

Background Numerous randomised trials have compared coronary artery bypass grafting (CABG) with percutaneous coronary intervention (PCI) for patients with coronary artery disease. However, no studies have been powered to detect a difference in mortality between the revascularisation strategies.

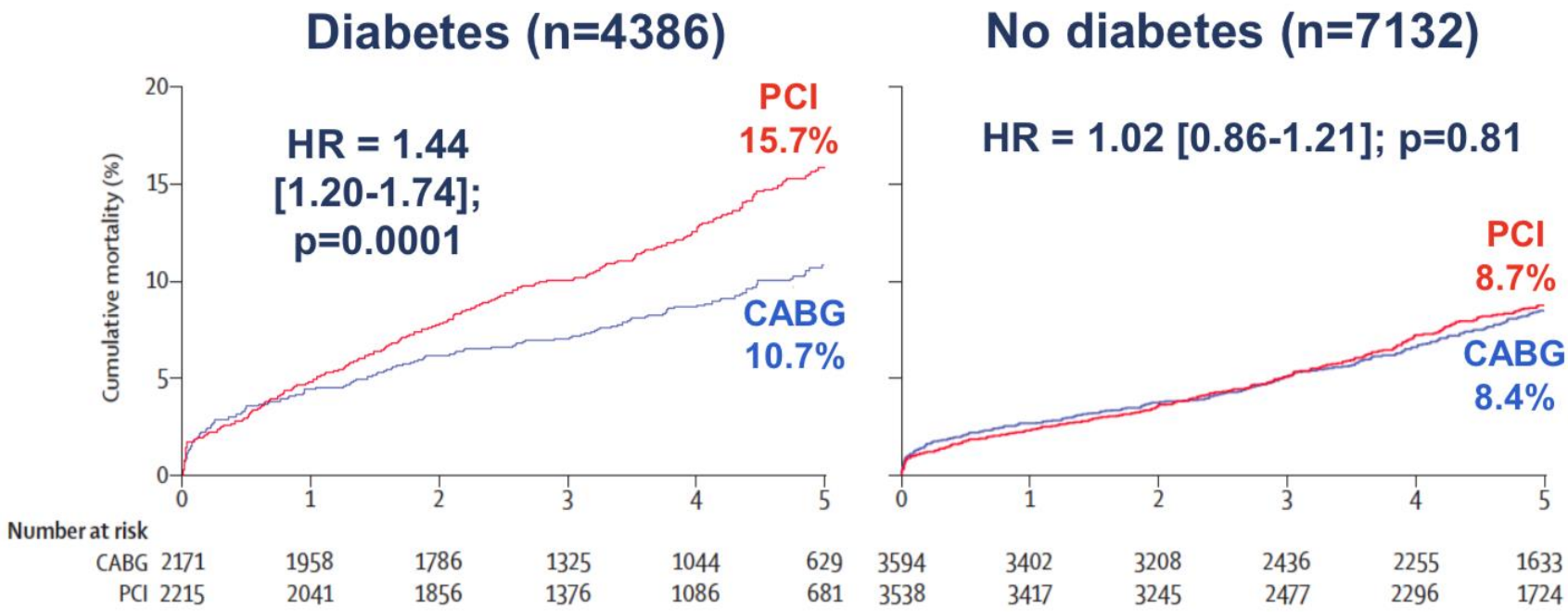
Published Online
February 22, 2018
http://dx.doi.org/10.1016/
S0140-6736(18)30423-9

5-Year All-Cause Death

	PCI	CABG	HR [95% CI]	P (Int)
All patients	11.2%	9.2%	1.20 [1.06, 1.37]	
Hypercholesterolemia				
- Yes	11.0%	9.1%	1.19 [1.02, 1.39]	0.76
- No	11.6%	9.5%	1.24 [1.00, 1.55]	
Peripheral vascular disease				
- Yes	20.7%	16.0%	1.35 [0.96, 1.90]	0.66
- No	10.6%	8.7%	1.21 [1.05, 1.39]	
Previous myocardial infarction				
- Yes	14.2%	11.6%	1.21 [0.97, 1.50]	0.97
- No	10.2%	8.4%	1.22 [1.03, 1.44]	
Diabetes				
- Yes	15.7%	10.7%	1.44 [1.20, 1.74]	0.0077
- No	8.7%	8.4%	1.02 [0.86, 1.21]	
SYNTAX Score				
- 0-22	8.8%	8.1%	1.02 [0.77, 1.34]	0.001
- 23-32	12.4%	10.9%	1.20 [0.94, 1.51]	
- ≥33	16.5%	11.6%	1.52 [1.15, 2.02]	



IMPACT OF DIABETES

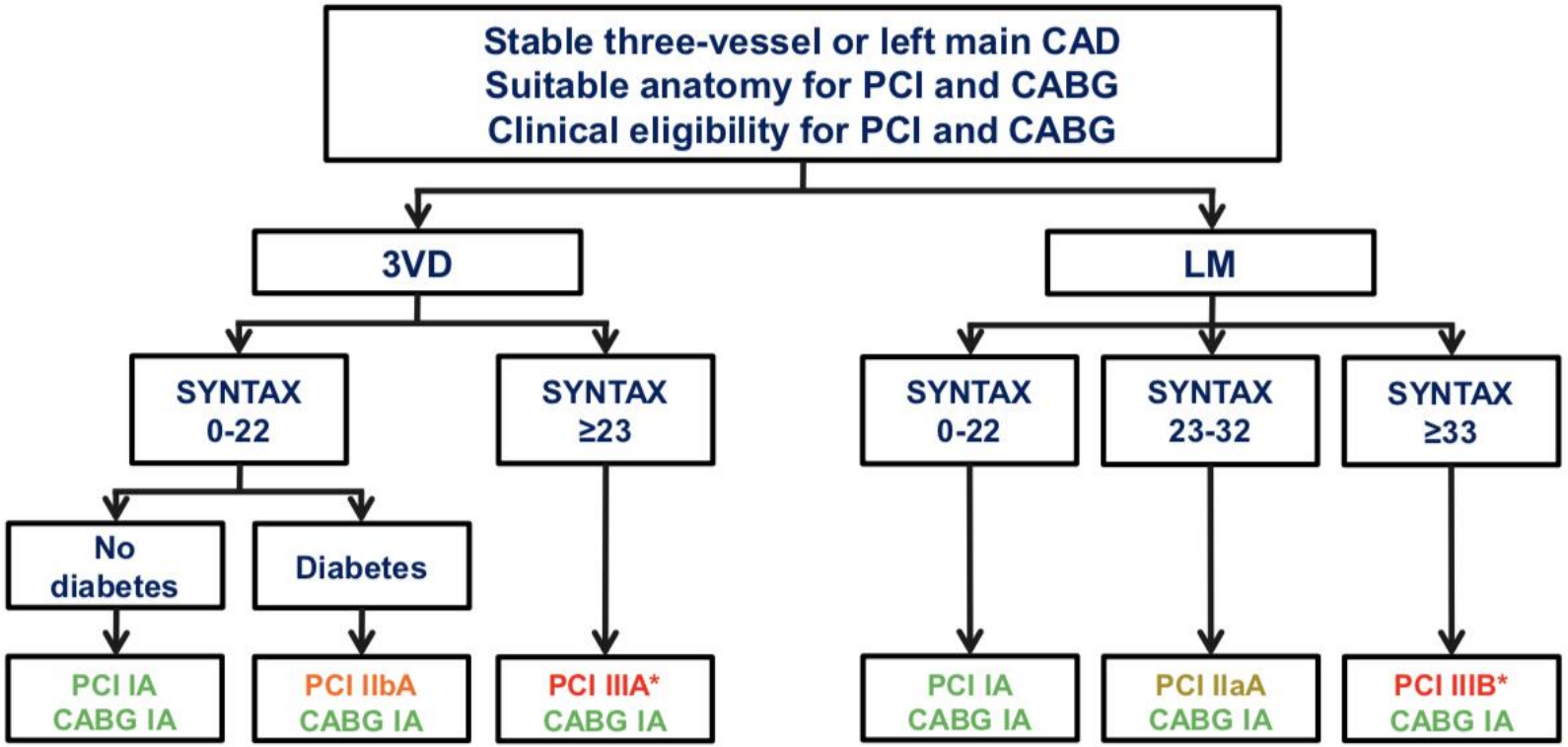


tct2018

Head SJ et al. Lancet 2018; 391: 939-48

Cardiovascular Research Foundation

TYPE OF REVASCULARIZATION IN PATIENTS WITH 3VD OR LM



Windecker S et al. Eur Heart J 2018; in press

Multifactorial preventive Intervention

- **Exercise – regular endurance and resistance training**
- **Initially HbA1c < 6.5 %, according to duration of disease and complications < 7.5 %** (avoiding hypoglycemia, weight neutral)
- **LDL-cholesterol < 70 mg/dl (or at least > 50 % Reduktion)**
  (based on statins ± ezetimibe primarily)
- **Blood pressure 130-140 / 80-90 mmHg**
  (RAS-inhibition first line)
- **Inhibition of platelet aggregation**
  (DM & 1 additional RF)

Conclusion

- ↑ Incidence et Prévalence
- Problème de santé public
- 75% de la mortalité du diabétique = Maladie CxVx
- Diabétique : Moins bon pronostic
- Revascularisation complexe et à discuter au staff
- Prise en charge de tous les FRCV

Merci pour votre attention