

# Tout sur la durée de la DAPT chez le coronarien

 **ESC**  
European Society  
of Cardiology

European Heart Journal (2017) 0, 1–48  
doi:10.1093/eurheartj/ehw419

**ESC GUIDELINES**

## 2017 ESC focused update on dual antiplatelet therapy in coronary artery disease developed in collaboration with EACTS

The Task Force for dual antiplatelet therapy in coronary artery disease of the European Society of Cardiology (ESC) and of the European Association for Cardio-Thoracic Surgery (EACTS)

Thibault LHERMUSIER

# DÉCLARATION DE LIENS D'INTÉRÊT AVEC LA PRÉSENTATION

**Intervenant : Thibault LHERMUSIER, TOULOUSE**

- Je déclare les liens d'intérêt suivants :
- Participation des essais cliniques : ASTRA ZENECA
- Financement d'études cliniques : LILLY, ASTRA ZENECA

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.

- Sujet d'importance majeure : plusieurs millions de patients par an traités par angioplastie avec implantation de stent actif.
- Durée optimale de la DAPT





## What is new in the 2017 ESC focussed update on DAPT?



### Change in recommendations

Before → 2017

- Pretreatment with P2Y<sub>12</sub> inhibitors when PCI is planned
- Liberal use of PPI to mitigate GI bleeding risk
- Elective surgery requiring discontinuation of the P2Y<sub>12</sub> inhibitor after 1 month
- Ticagrelor interruption of 3 days prior elective surgery
- Dual therapy as an alternative to triple therapy when bleeding risk outweighs the ischaemic risk
- Discontinuation of antiplatelet treatment in patients treated with OAC should be considered at 12 months
- Routine platelet function testing to adjust therapy

### New recommendations 2017

- The occurrence of actionable bleeding while on DAPT should prompt reconsideration of type and duration of DAPT regimen.
- The decision for DAPT duration should be dynamic and reassessed during the course of the initially selected DAPT regimen.
- Discontinuation of P2Y<sub>12</sub> inhibitor therapy after 6 months when stenting ACS patients with PRECISE-DAPT ≥ 25
- 6-month DAPT regimen in patients with SCAD treated with drug-coated balloon
- Early administration of ticagrelor/ clopidogrel in NSTEMI-ACS with invasive approach
- Ticagrelor 60 mg b.i.d preferred over other oral P2Y<sub>12</sub> inhibitors for DAPT continuation >12 months in post-MI

■ I    ■ IIA    ■ IIB    ■ III

### New/ revised concepts

- Metallic stent and DAPT duration**
- Switch between P2Y<sub>12</sub> inhibitors**
- Risk scores to guide DAPT duration**
  - PRECISE DAPT score
  - DAPT score
- Specific profiling**
  - Definition of complex PCI
  - Unfavourable profile for OAC and APT
  - Gender considerations and special populations
- DAPT duration without stenting**
  - Medical management
  - CABG or cardiac surgery
- Anticoagulation and DAPT**
  - Acute and chronic setting
  - Dosing regimen



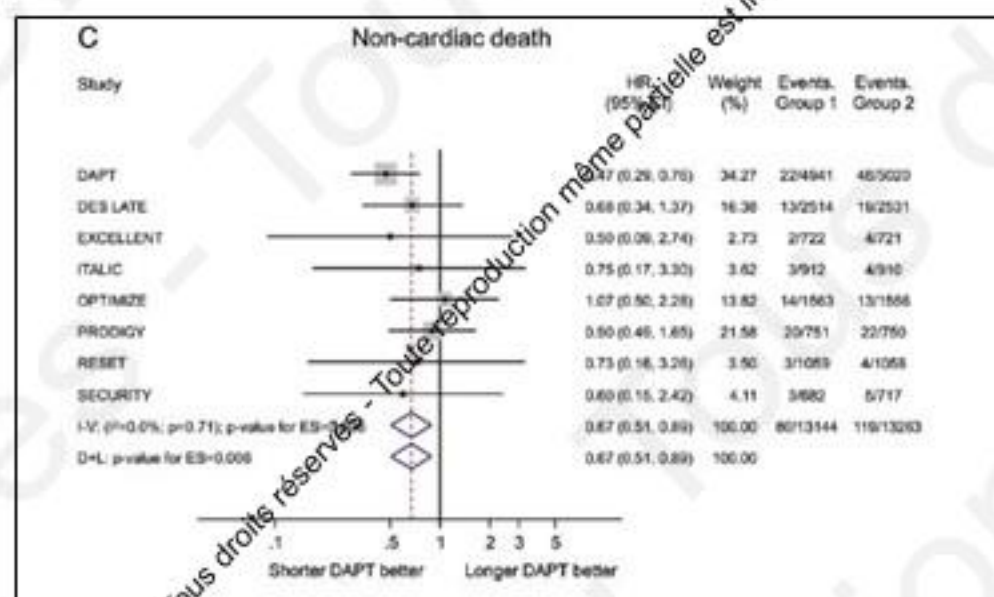
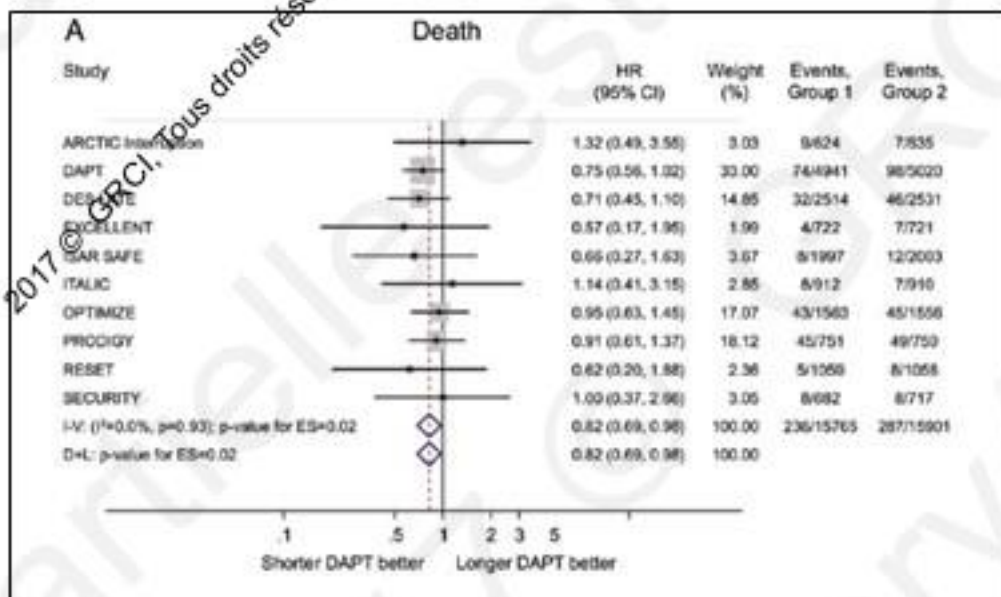
European Heart Journal (2016) 37, 353–364  
doi:10.1093/eurheartj/ehv712

REVIEW

Clinical update

### Optimal duration of dual antiplatelet therapy after drug-eluting stent implantation: conceptual evolution based on emerging evidence

Tullio Palmerini<sup>1</sup> and Gregg W. Stone<sup>2\*</sup>



2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.





European Heart Journal (2017) 38, 1044–1047  
doi:10.1093/eurheartj/ehx110

## EDITORIAL

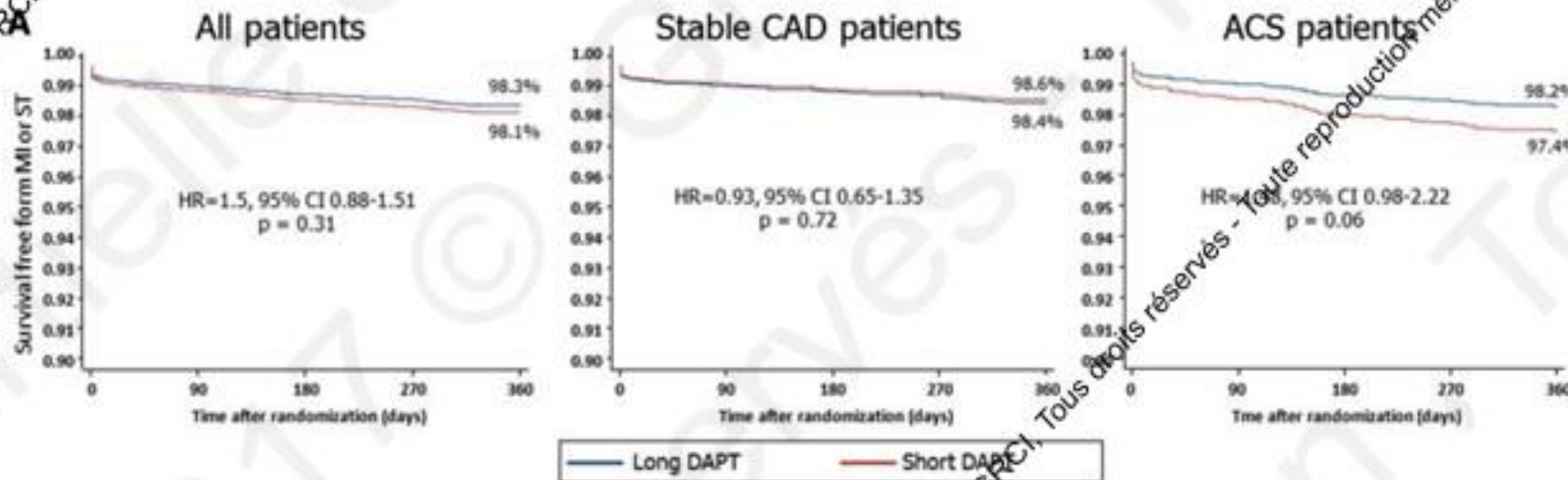
### Duration of antiplatelet therapy after DES implantation: can we trust non-inferiority open-label trials?

Philippe Gabriel Steg<sup>1,3,4,7\*</sup> and Tabassome Simon<sup>1,3,5,6</sup>

### Importance de la présentation clinique

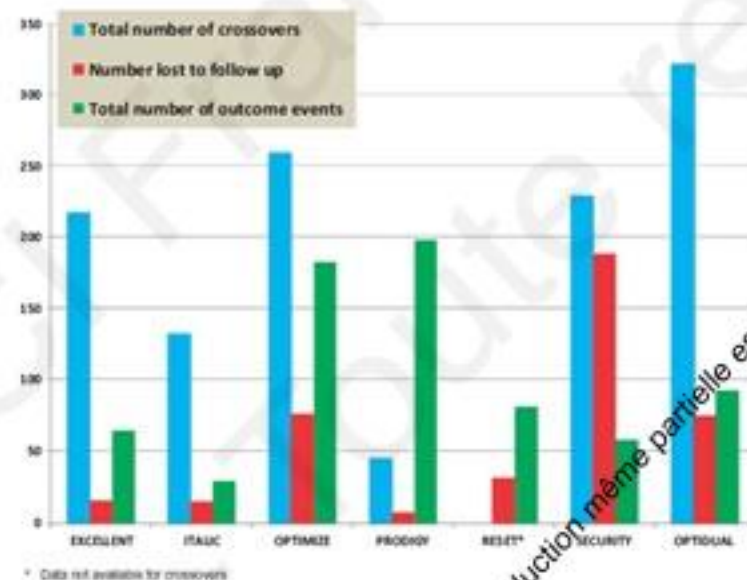
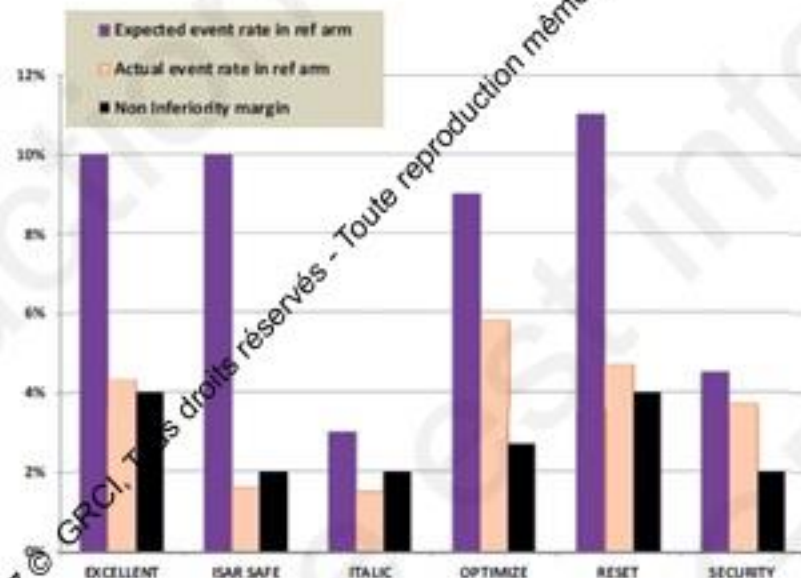


### Risque d'infarctus à 1 an : sous groupe des patients stables et des SCA



2017 © GRCI. Tous droits réservés - toute reproduction même partielle est interdite.

2017 © GRCI. Tous droits réservés - toute reproduction même partielle est interdite.



### Méthodologie critiquable de ces essais

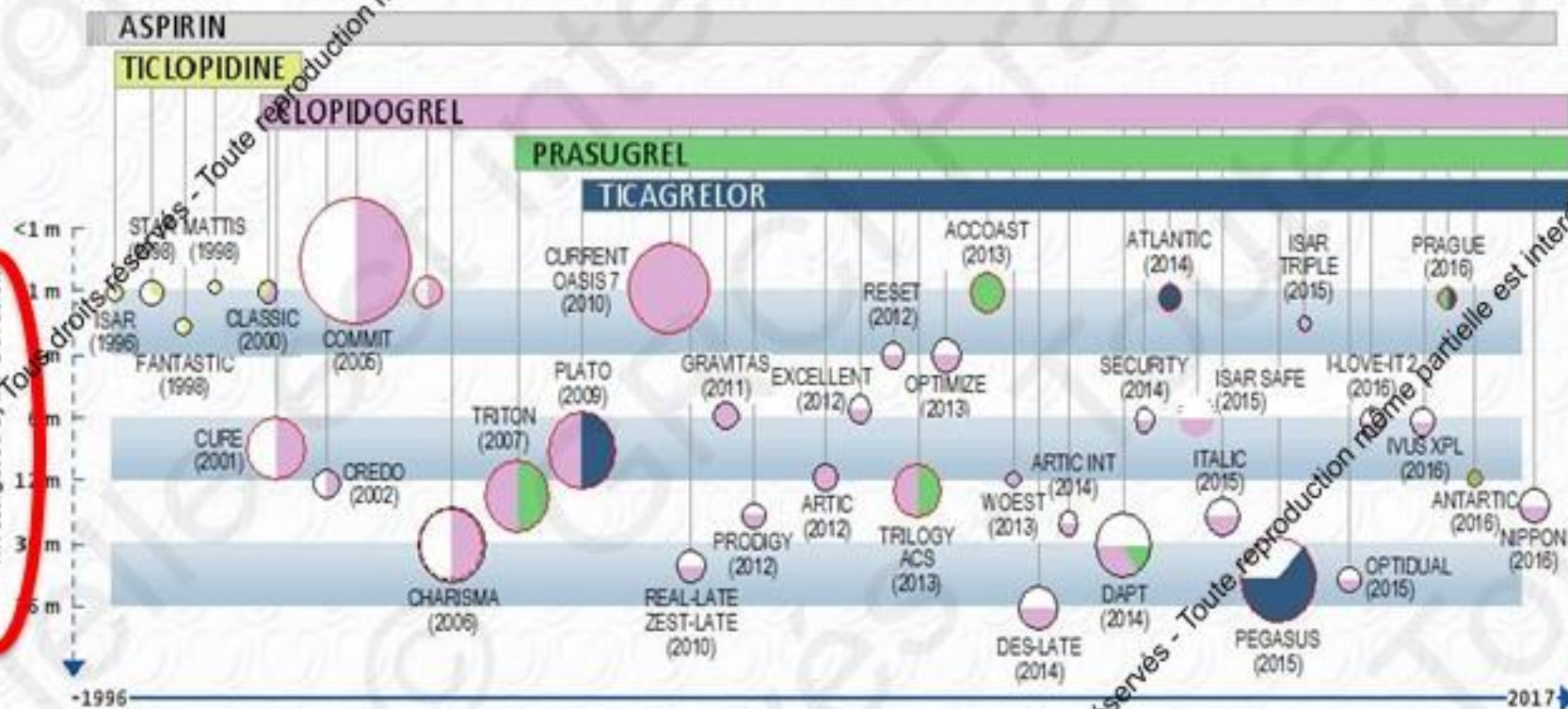
- Essai de non infériorité (marges larges de non infériorité)
- Sous dimensionné pour recherche d'événements ischémiques
- Population bas risque
- Essais ouverts => nombreux crossover
- Nombreux perdus de vue

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.



2017 © GRCI. Tous droits réservés - Toute reproduction même partielle est interdite.

2017 © GRCI. Tous droits réservés - Toute reproduction même partielle est interdite.



Size of the circles denotes sample size



Perimeter of the circles denotes type of investigated population

- Mixed clinical presentation at the time of stent implantation
- Acute coronary syndrome at presentation
- DAPT initiated in patients with prior myocardia infarction
- DAPT for primary prevention



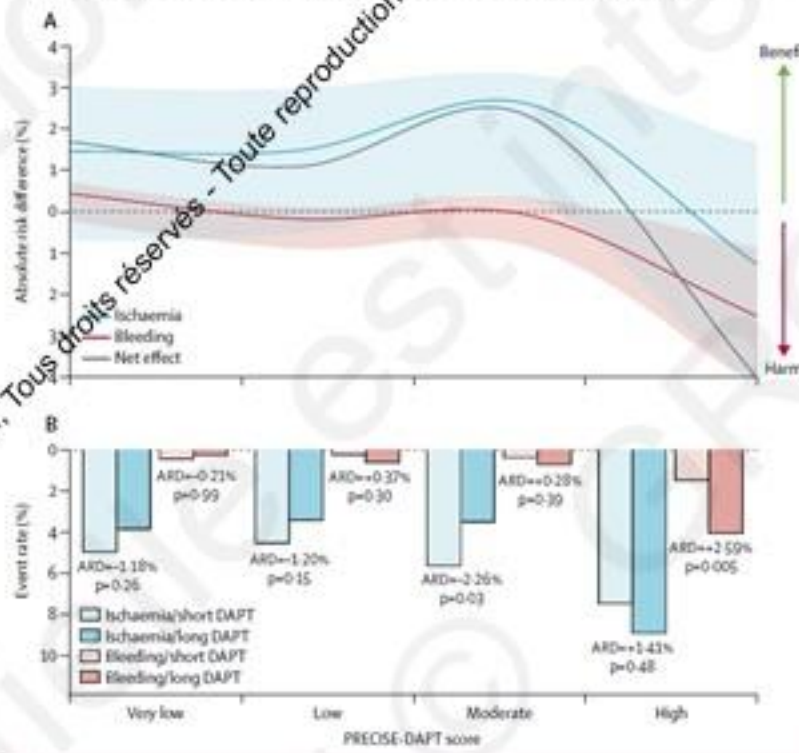
## Comment évaluer le rapport bénéfice/risque?

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
The use of risk scores designed to evaluate the benefits and risks of different DAPT durations <sup>c</sup> may be considered. <sup>15,18</sup>	IIb	A

	PRECISE-DAPT score <sup>18</sup>	DAPT score <sup>15</sup>
Time of use	At the time of coronary stenting	After 12 months of uneventful DAPT
DAPT duration strategies assessed	Short DAPT (3–6 months) vs. Standard/long DAPT (12–24 months)	Standard DAPT (12 months) vs. Long DAPT (30 months)
Score calculation <sup>a</sup>	<p>HB</p> <p>WBC</p> <p>Age</p> <p>CrCl</p> <p>Prior Bleeding</p> <p>Score Points</p>	<p>Age</p> <ul style="list-style-type: none"> <li>≥75: -2 pt</li> <li>65 to &lt;75: -1 pt</li> <li>&lt;65: 0 pt</li> </ul> <p>Cigarette smoking: +1 pt</p> <p>Diabetes mellitus: +1 pt</p> <p>MI at presentation: +1 pt</p> <p>Prior PCI or prior MI: +1 pt</p> <p>Paclitaxel-eluting stent: +1 pt</p> <p>Stent diameter &lt; 3 mm: +1 pt</p> <p>CHF or LVEF &lt; 30%: +2 pt</p> <p>Vein graft stent: +2 pt</p>
Score range	0 to 100 points	-2 to 10 points
Decision making cut-off suggested	Score ≥25 → Short DAPT Score <25 → Standard/long DAPT	Score ≥2 → Long DAPT Score <2 → Standard DAPT
Calculator	<a href="http://www.precisedaptscore.com">www.precisedaptscore.com</a>	<a href="http://www.daptstudy.org">www.daptstudy.org</a>

## Precise DAPT score

Score de risque hémorragique



PRECISE  $\geq 25$  = risque hémorragique élevé

PRECISE  $< 25$  = pas d'élévation du risque hémorragique avec  
franche réduction du risque ischémique

## DAPT score

Rapport bénéfice / risque d'une DAPT prolongée

Score  $< 2$

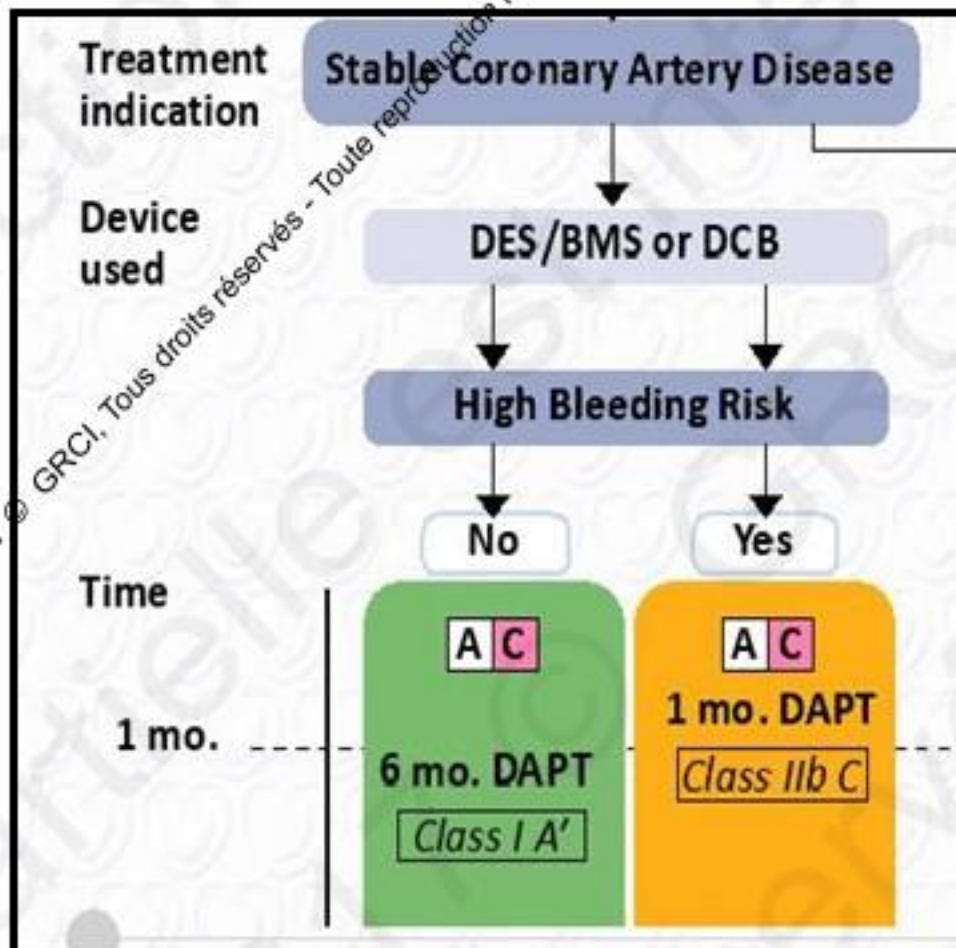
Pas de bénéfice sur le risque ischémique  
Prix hémorragique fort (NNT = 64)

Score  $\geq 2$

Grand bénéfice sur le risque ischémique (NNT = 34)  
Faible prix hémorragique (NNT = 272)



## DAPT après angioplastie dans la maladie coronaire stable

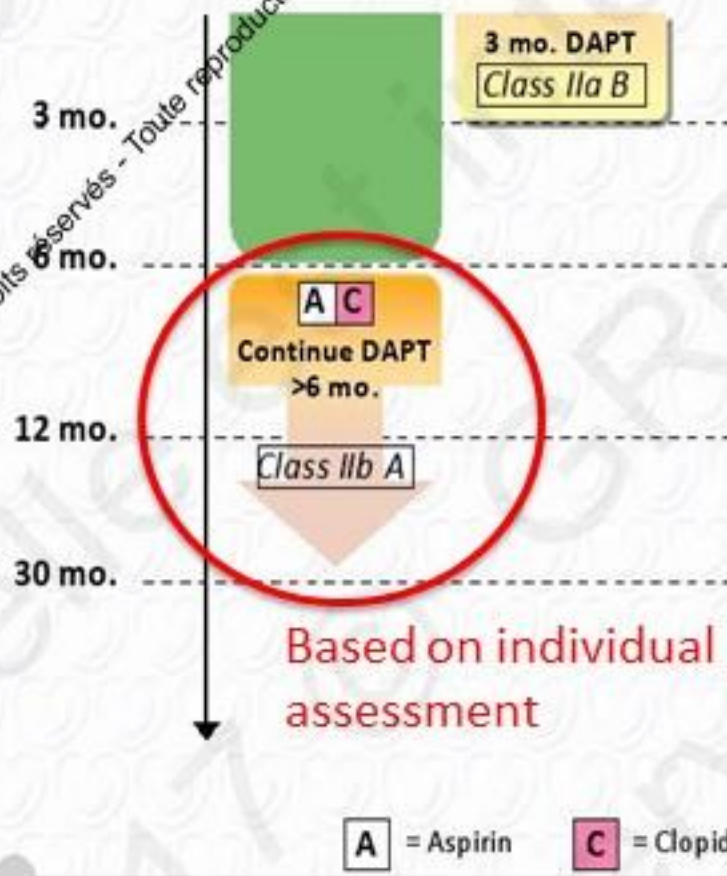


Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
In patients with stable CAD treated with coronary stent implantation, DAPT consisting of clopidogrel in addition to aspirin is generally recommended <sup>c</sup> for 6 months, irrespective of the stent type. <sup>100,101,104,126-130</sup>	I	A
Irrespective of the intended DAPT duration, DES <sup>c</sup> is the preferred treatment option. <sup>128,132</sup>	I	A
In patients with stable CAD in whom 3-month DAPT poses safety concerns, DAPT for 1 month <sup>d</sup> may be considered.	IIb	C

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.

## DAPT après angioplastie dans la maladie coronaire stable



Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
In patients with stable CAD considered at high bleeding risk (e.g. PRECISE-DAPT $\geq 25$ ), DAPT for 3 months <sup>d</sup> should be considered. <sup>105,106</sup>	IIa	B
In patients with stable CAD who have tolerated DAPT without a bleeding complication and who are at low bleeding but high thrombotic risk, continuation of DAPT with clopidogrel for >6 months and $\leq 30$ months may be considered. <sup>26, 107-109</sup>	IIb	A

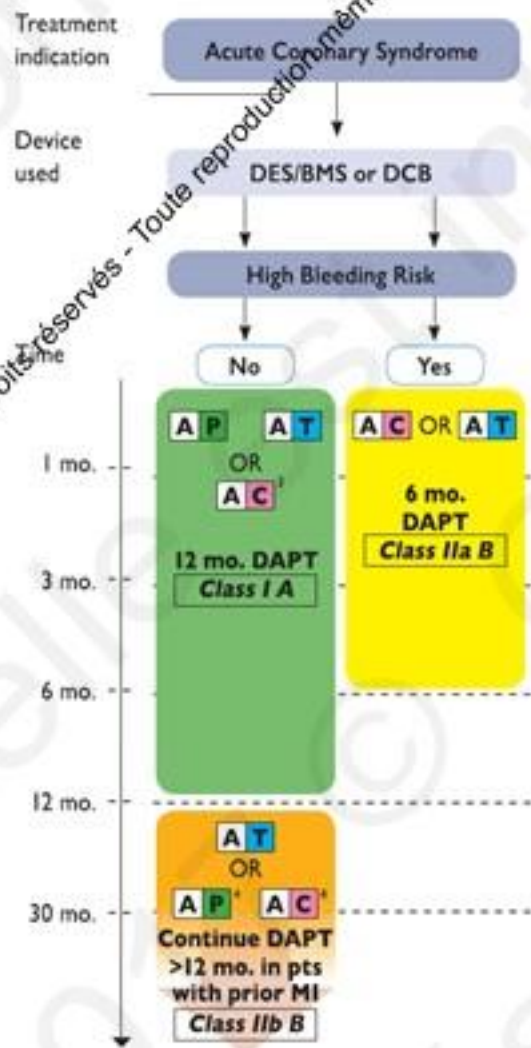
DCB In patients with stable CAD treated with drug-coated balloon, DAPT for 6 months should be considered. <sup>122,124,133</sup>	IIa	B
BVS In patients with stable CAD treated with bioresorbable vascular scaffolds, DAPT for at least 12 months should be considered.	IIa	C

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.



## DAPT après angioplastie dans le syndrome coronarien aigu

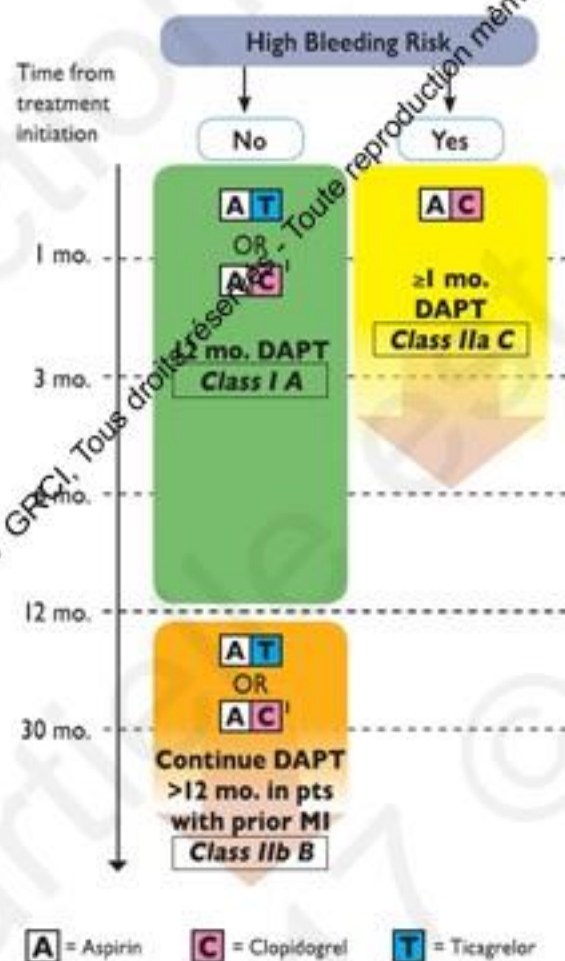


Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
In patients with ACS treated with coronary stent implantation, DAPT with a P2Y <sub>12</sub> inhibitor on top of aspirin is recommended for 12 months unless there are contraindications such as excessive risk of bleeding (e.g. PRECISE-DAPT $\geq 25$ ). <sup>20,23,40</sup>	I	A
In patients with ACS and stent implantation who are at high risk of bleeding (e.g. PRECISE-DAPT $\geq 25$ ), discontinuation of P2Y <sub>12</sub> inhibitor therapy after 6 months should be considered. <sup>12,16,143</sup>	IIa	B
In patients with ACS treated with bioresorbable vascular scaffolds, DAPT for at least 12 months should be considered.	IIa	C
In patients with ACS who have tolerated DAPT without a bleeding complication, continuation of DAPT for longer than 12 months may be considered. <sup>24,129</sup>	IIb	A
In patients with MI and high ischaemic risk <sup>c</sup> who have tolerated DAPT without a bleeding complication, ticagrelor 60 mg b.i.d. for longer than 12 months on top of aspirin may be preferred over clopidogrel or prasugrel. <sup>29,115,142</sup>	IIb	B

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.

2017 © GRCI, Tous droits réservés - Toute reproduction même partielle est interdite.

## DAPT après SCA chez les patients traités médicalement



Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
In patients with ACS who are managed with medical therapy alone and treated with DAPT, it is recommended to continue P2Y <sub>12</sub> inhibitor therapy (either ticagrelor or clopidogrel) for 12 months. <sup>20,40</sup>	I	A
Ticagrelor is recommended over clopidogrel, unless the bleeding risk outweighs the potential ischaemic benefit. <sup>20</sup>	I	B
In patients with medically managed ACS who are at high risk of bleeding (e.g. PRECISE-DAPT ≥25), DAPT for at least 1 month should be considered.	IIa	C
In patients with prior MI at high ischaemic risk <sup>4</sup> who are managed with medical therapy alone and have tolerated DAPT without a bleeding complication, treatment with DAPT in the form of ticagrelor 60 mg b.i.d. on top of aspirin for longer than 12 months and up to 36 months may be considered. <sup>1,29</sup>	IIb	B
In patients with prior MI not treated with coronary stent implantation, who have tolerated DAPT without a bleeding complication and who are not eligible for treatment with ticagrelor, continuation of clopidogrel on top of aspirin for longer than 12 months may be considered.	IIb	C
Prasugrel is not recommended in medically managed ACS patients. <sup>24</sup>	III	B

Bithérapie 12 mois

T > C - Pas de B (Trilogy ACS study)

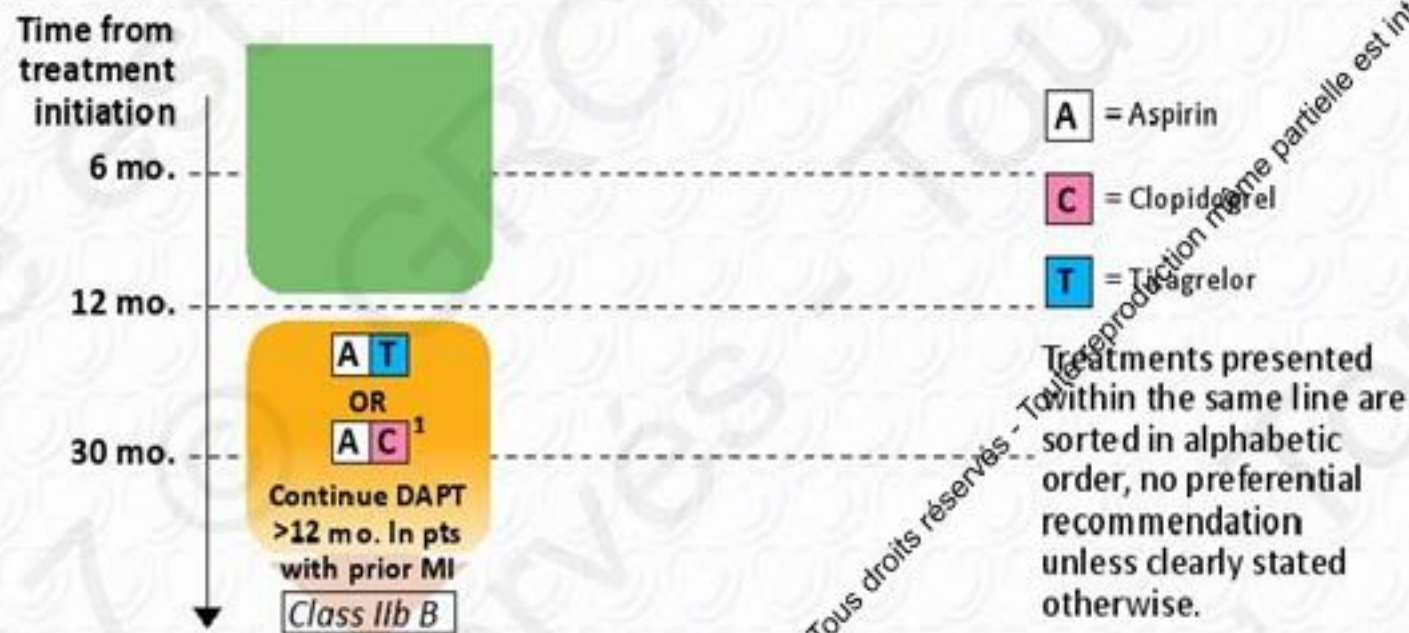
> 12 mois selon évaluation individuelle du risque



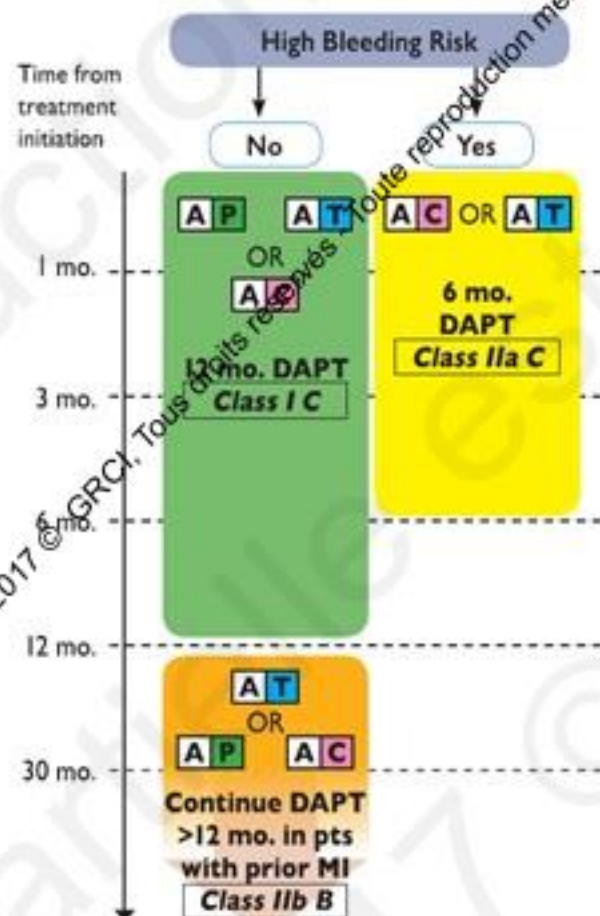
## Algorithm for dual antiplatelet therapy (DAPT) in patients with acute coronary syndrome undergoing medical management (continued)



### Patients with Acute Coronary Syndrome Undergoing Medical Treatment Alone (continued)



## DAPT chez les patients traités par PAC pour SCA



**A** = Aspirin    **C** = Clopidogrel  
**P** = Prasugrel    **T** = Ticagrelor

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
It is recommended that the heart team estimates the individual bleeding and ischaemic risks, and guides the timing of CABG as well as the antithrombotic management.	I	C
In patients on aspirin who need to undergo non-emergent cardiac surgery, it is recommended to continue aspirin at a low daily regimen throughout the perioperative period.	I	C
In patients treated with DAPT after coronary stent implantation who subsequently undergo cardiac surgery, it is recommended to resume P2Y <sub>12</sub> inhibitor therapy post-operatively as soon as is deemed safe so that DAPT continues until the recommended duration of therapy is completed.	I	C
In patients with ACS (NSTEMI-ACS or STEMI) treated with DAPT, undergoing CABG, and not requiring long-term DAPT therapy, resumption of P2Y <sub>12</sub> inhibitor therapy as soon as is deemed safe after surgery and continuation up to 12 months is recommended.	I	C
In patients on P2Y <sub>12</sub> inhibitors who need to undergo non-emergent cardiac surgery, postponing surgery for at least 3 days after discontinuation of ticagrelor, at least 5 days after clopidogrel, and at least 7 days after prasugrel should be considered. <sup>152,153,160</sup>	IIa	B
In CABG patients with prior MI who are at high risk of severe bleeding (e.g. PRECISE-DAPT <sub>2</sub> ≥25), discontinuation of P2Y <sub>12</sub> inhibitor therapy after 6 months should be considered.	IIa	C
Platelet function testing may be considered to guide decisions on timing of cardiac surgery in patients who have recently received P2Y <sub>12</sub> inhibitors. <sup>169,172-174</sup>	IIb	B
In patients perceived to be at high ischaemic risk with prior MI and CABG, who have tolerated DAPT without a bleeding complication, treatment with DAPT for longer than 12 and up to 36 months may be considered.	IIb	C



# Populations spécifiques

Recommendations	Class	Level
Similar type and duration of DAPT are recommended in male and female patients.	I	A
It is recommended to reassess the type, dose and duration of DAPT in patients with actionable bleeding complication while on treatment.	I	C
Similar type and duration of DAPT should be considered in patients with and without diabetes mellitus.	IIa	B
Prolonged (i.e. >12 months) DAPT duration should be considered in patients with prior stent thrombosis, especially in the absence of correctable causes (e.g. lack of adherence or correctable mechanical stent-related issues).	IIa	C



réévaluation

Toute reproduction même partielle est interdite.

2017 © GRCI, Tous droits réservés.

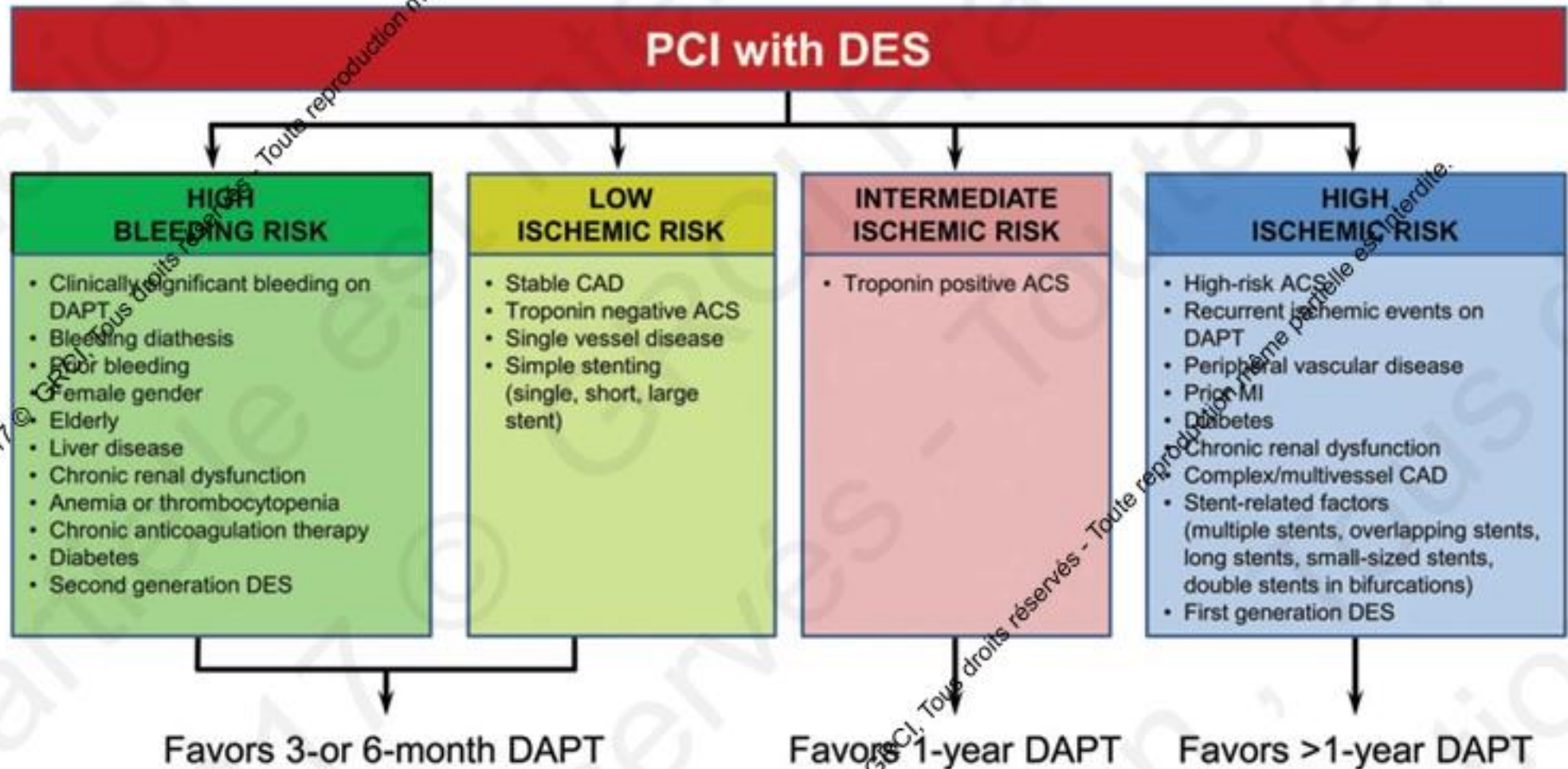
# Populations spécifiques

Recommendations	Class	Level
Prolonged (i.e. >12 months) DAPT duration may be considered in CAD patients with LEAD.	IIb	B
Prolonged (i.e. >6 months) DAPT duration may be considered in patients who underwent complex PCI.	IIb	B

Complex PCI : peu de preuves recommandation intuitive basée sur 1 méta analyse

- Au moins 3 stents implantés
- Au moins 3 lésions traitées
- Bifurcation à 2 stents
- Longueur de stent > 60 mm
- CTO





# Conclusion et perspectives

Beaucoup d'autres questions et des éléments de réponse récents ou à venir...

- Stratégie STEP DOWN
- NACO
- Monothérapie à long terme par inhibiteur du P2Y<sub>12</sub>