Prise en charge à la phase aigue des SCA

2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST segment élévation

2017 ESC focused update on dual antiplatelet theray in coronary artery disease

Dr Siham ZAIMI

SCA : DEFINITIONS

Douleur thoracique

Suspicion de syndrome coronaire aigu

Sus décalage de ST **SCAST+**

Sans sus décalage de ST **SCAST-**

IDM avec sus décalage de ST
STEMI

IDM sans sus décalage de ST NSTEMI

Angor instable
Autres Diagnostics

SCA : DEFINITIONS

Douleur thoracique

Suspicion de syndrome coronaire aigu

Sus décalage de ST **SCAST+**

IDM avec sus décalage de ST
STEMI

Sans sus décalage de ST **SCAST-**

Anomalies de ST ou de l onde T
ECG normal

Troponine +

IDM sans sus décalage de ST NSTEMI

Troponine -

Angor instable
Autres Diagnostics

SCA ST- : Dosage ultrasensible de la troponine

Recommendations	Class	Level
It is recommended to measure cardiac troponins with sensitive or high-sensitivity assays and obtain the results within 60 min.	I	A
A rapid rule-out protocol at 0h and 3h is recommended if high-sensitivity cardiac troponin tests are available.	I	B
A rapid rule-out and rule-in protocol at 0h and 1h is recommended if a high-sensitivity cardiac troponin test with a validated 0h/1h algorithm is available. Additional testing after 3–6h is indicated if the first two troponin measurements are not conclusive and the clinical condition is still suggestive of ACS.	I	B

ACS = acute coronary syndromes.

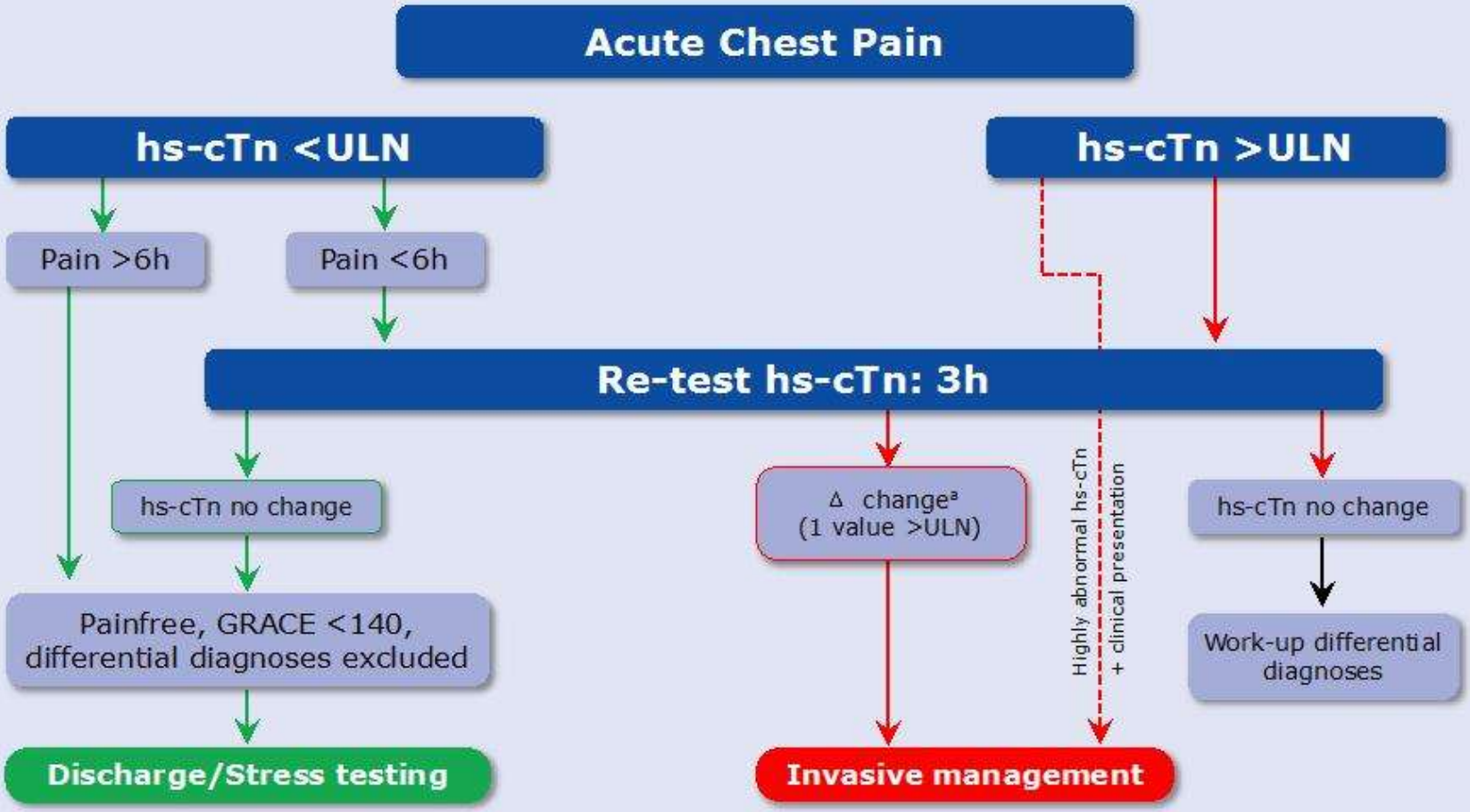
European Heart Journal 2016;37:267-315 - doi: 10.1093/eurheartj/ehv320

SCA ST- : Dosage ultrasensible de la troponine

Compared with standard cardiac troponin assays, high-sensitivity assays:
• Have higher negative predictive value for acute myocardial infarction (MI).
• Reduce the "troponin-blind" interval leading to earlier detection of acute MI.
• Result in a ~4% absolute and ~20% relative increase in the detection of type 1 MI and a corresponding decrease in the diagnosis of unstable angina.
• Are associated with a 2-fold increase in the detection of type 2 MI.
Levels of high-sensitivity cardiac troponin should be interpreted as quantitative markers of cardiomyocyte damage (i.e. the higher the level, the greater the likelihood of MI):
• Elevations beyond 5-fold the upper reference limit have high (>90%) positive predictive value for acute type 1 MI.
• Elevations up to 3-fold the upper reference limit have only limited (50–60%) positive predictive value for acute MI and may be associated with a broad spectrum of conditions.
• It is common to detect circulating levels of cardiac troponin in healthy individuals.
Rising and/or falling cardiac troponin levels differentiate acute from chronic cardiomyocyte damage (the more pronounced the change, the higher the likelihood of acute MI).

European Heart Journal 2016;37:267-315 - doi: 10.1093/eurheartj/ehv320

0h/3h diagnostic algorithm using high-sensitivity cardiac troponin (hs-cTn) assays



GRACE = Global Registry of Acute Coronary Events score; hs-cTn = high sensitivity cardiac troponin; ULN = upper limit of normal, 99th percentile of healthy controls.

[a]Δ change, dependant on assay, Highly abnormal hs Tn defines values beyond 5-fold the upper limit of normal.

European Heart Journal 2016;37:267-315 - doi: 10.1093/eurheartj/ehv320

MINOCA : Myocardial Infarction with Non Obstructive Coronary Arteries

Diagnostic criteria for myocardial infarction with non-obstructive coronary arteries

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IDM de type II: 1-14%des STEMI

The diagnosis of MINOCA is made immediately upon coronary angiography in a patient presenting with features consistent with an AMI, as detailed by the following criteria:
(1) Universal AMI criteria.
(2) Non-obstructive coronary arteries on angiography, defined as no coronary artery stenosis ≥50% in any potential IRA.
(3) No clinically overt specific cause for the acute presentation.

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Diagnostic test flow chart in MINOCA *(continued)*

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SUSPECTED DIAGNOSIS AND FURTHER DIAGNOSTIC TESTS

	Non-invasive	Invasive
Myocarditis	**TTE Echo** (Pericardial effusion) **CMR** (Myocarditis, pericarditis)	**Endomyocardial biopsy** (myocarditis)
Coronary (epicardial/ microvascular)	**TTE Echo** (Regional wall motion abnormalities, embolic source) **CMR** (small infarction) **TOE/Bubble Contrast Echo** (Patent foramen ovale, atrial septal defect)	**IVUS/OCT** (Plaque disruption/dissection) **Ergonovine/Ach test** (Spasm) **Pressure/Doppler wire** (Microvascular dysfunction)
Myocardial disease	**TTE Echo** **CMR** (Takotsubo, others)	
Pulmonary Embolism	**D-dimer**(Pulmonary embolism) **CT scan** (Pulmonary embolism) **Thrombophilia screen**	
Oxygen supply/ demand imbalance- Type 2 MI	**Blood test,** **Extracardiac investigation**	

Prise en charge à la phase aigue des SCA

- DEFINITIONS
- SCA ST+
  - Diagnostic initial

SCA ST+ : Diagnostic

Recommendations	Class	Level
ECG monitoring		
12-lead ECG recording and interpretation is indicated as soon as possible at the point of FMC, with a maximum target delay of 10 min.	I	B
ECG monitoring with defibrillator capacity is indicated as soon as possible in all patients with suspected STEMI.	I	B
The use of additional posterior chest wall leads (V7–V_9) in patients with high suspicion of posterior myocardial infarction (circumflex occlusion) should be considered.	IIa	B
The use of additional right precordial leads (V_3R and V_4R) in patients with inferior myocardial infarction should be considered to identify concomitant RV infarction.	IIa	B
Blood sampling		
Routine blood sampling for serum markers is indicated as soon as possible in the acute phase but should not delay reperfusion treatment.	I	C

SCA ST+ : Diagnostic

Isolated posterior myocardial infarction

Isolated ST depression ≥0.5 mm in leads V_1–V_3 and ST-segment elevation (≥0.5 mm) inposterior chest wall leads V_7-V_9

Ischaemia due to left main coronary artery occlusion or multivessel disease

ST depression ≥1 mm in eight or more surface leads, coupled with ST-segment elevationin aVR and/or V_1, suggests left main-, or left main equivalent- coronary obstruction, or severe three vessel ischaemia.

SCA ST+ : Diagnostic initial

Bundle branch block

Criteria that can be used to improve the diagnostic accuracy of STEMI in LBBB:

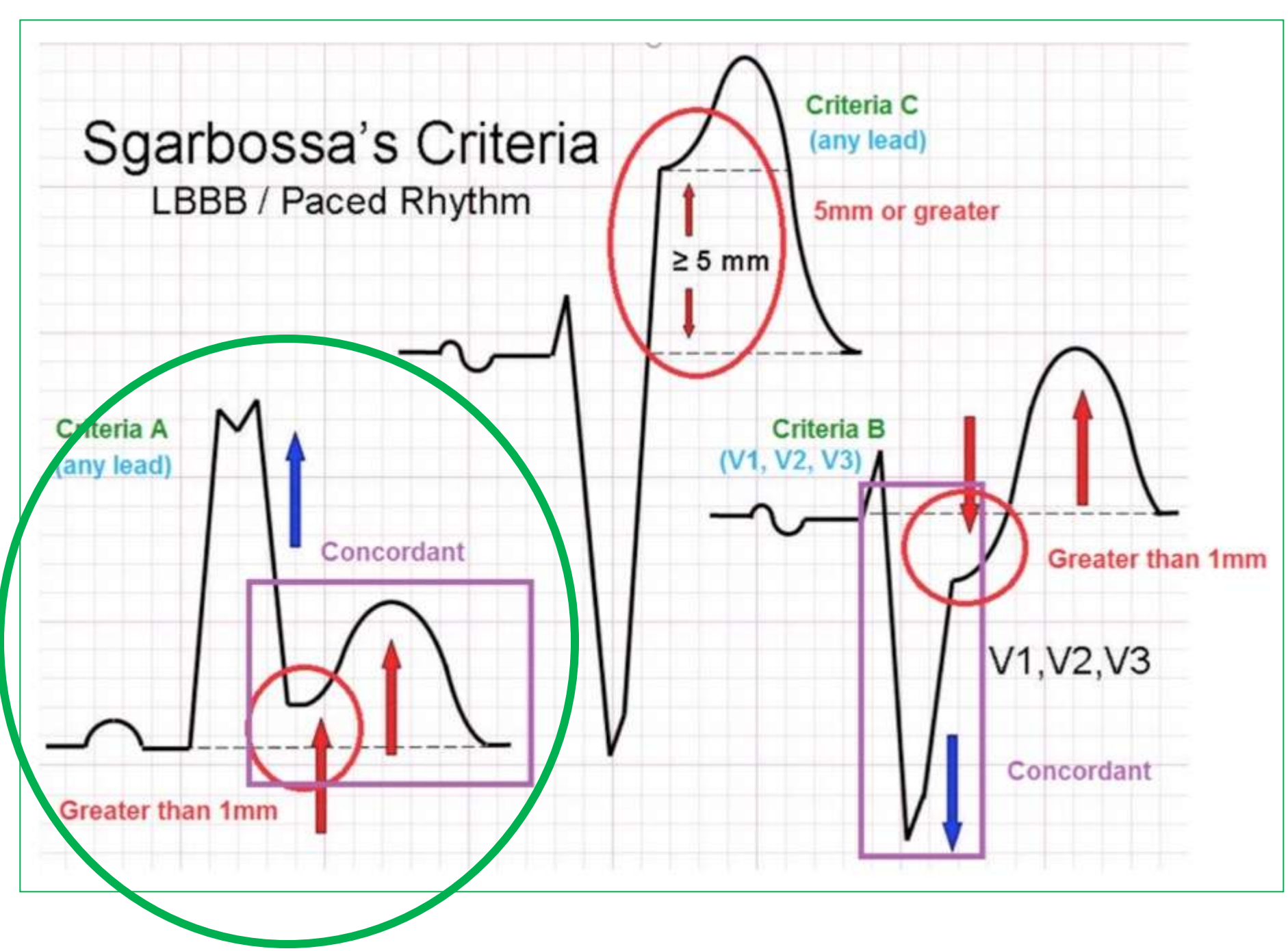
- Concordant ST-segment elevation ≥1 mm in leads with a positive QRS complex
- Concordant ST-segment depression ≥1 mm in V_1-V_3
- Discordant ST-segment elevation ≥5 mm in leads with a negative QRS complex

The presence of RBBB may confound the diagnosis of STEMI.

Ventricular paced rhythm

During RV pacing, the ECG also shows LBBB and the above rules also apply for the diagnosis of myocardial infarction during pacing; however, they are less specific.

Recommandations 2017 :Le BBD est un équivalent de sus décalage de ST


Sgarbossa's Criteria
LBBB / Paced Rhythm
Criteria C
(any lead)
5mm or greater
≥ 5 mm
Criteria A
(any lead)
Concordant
Greater than 1mm
Criteria B
(V1, V2, V3)
Greater than 1mm
V1,V2,V3
Concordant

SCA ST+ : Traitement

Recommendations	Class	Level
Hypoxia		
Oxygen is indicated in patients with hypoxaemia (SaO2 <90% or PaO2 <60 mmHg).	I	C
Routine oxygen is not recommended in patients with SaO2 ≥90%.	III	B
Symptoms		
Titrated i.v. opioids should be considered to relieve pain.	IIa	C
A mild tranquillizer (usually a benzodiazepine) should be considered in very anxious patients.	IIa	C

Prise en charge à la phase aigue des SCA

- DEFINITIONS
- SCA ST+
  - Diagnostic initial
  - Traitement de revascularisation
    - **Jusqu' a quel délai peut on proposer un traitement de revascularisation ?**

Reperfusion strategies in the infarct-related artery according to time from symptoms onset

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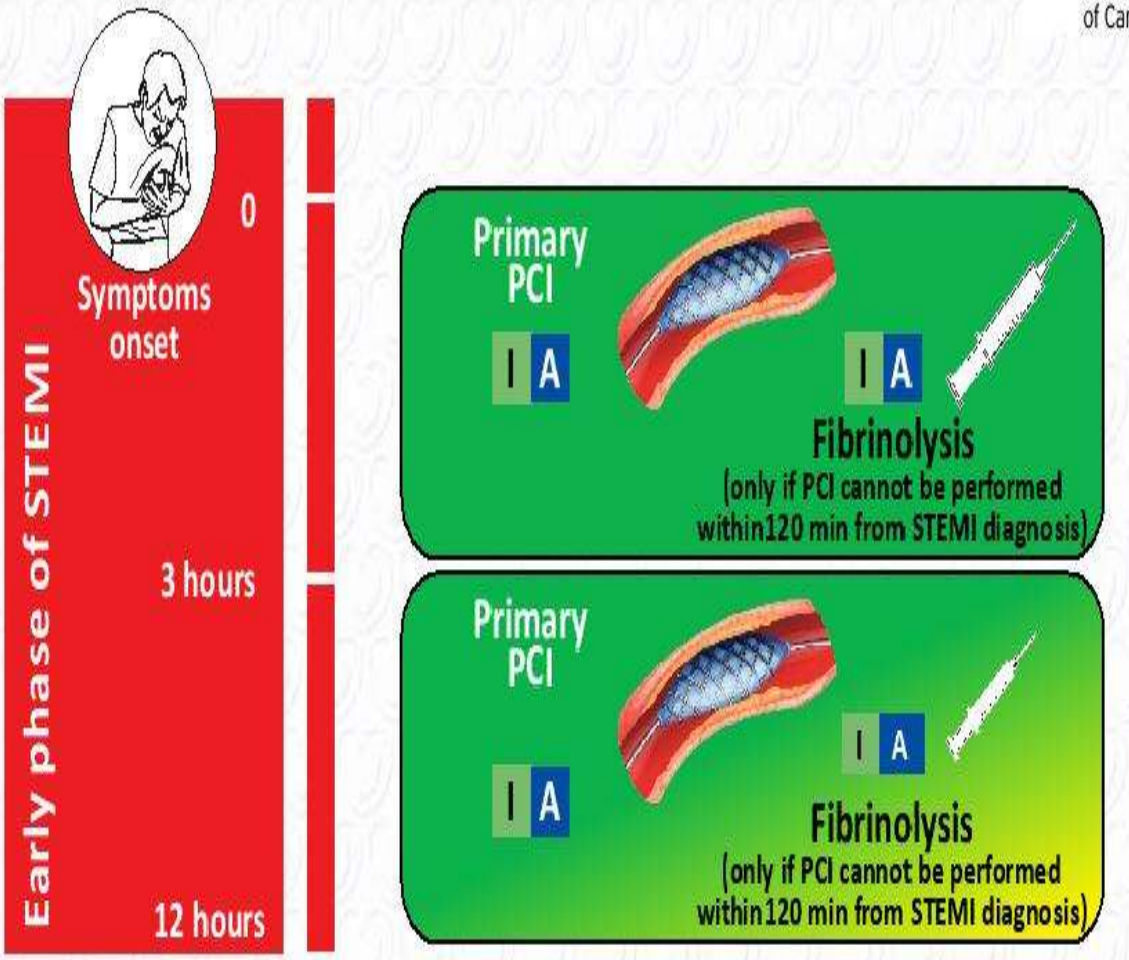

Début de la douleur
Avant la 12 ème h
IA

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Reperfusion strategies in the infarct-related artery according to time from symptoms onset *(continued)*

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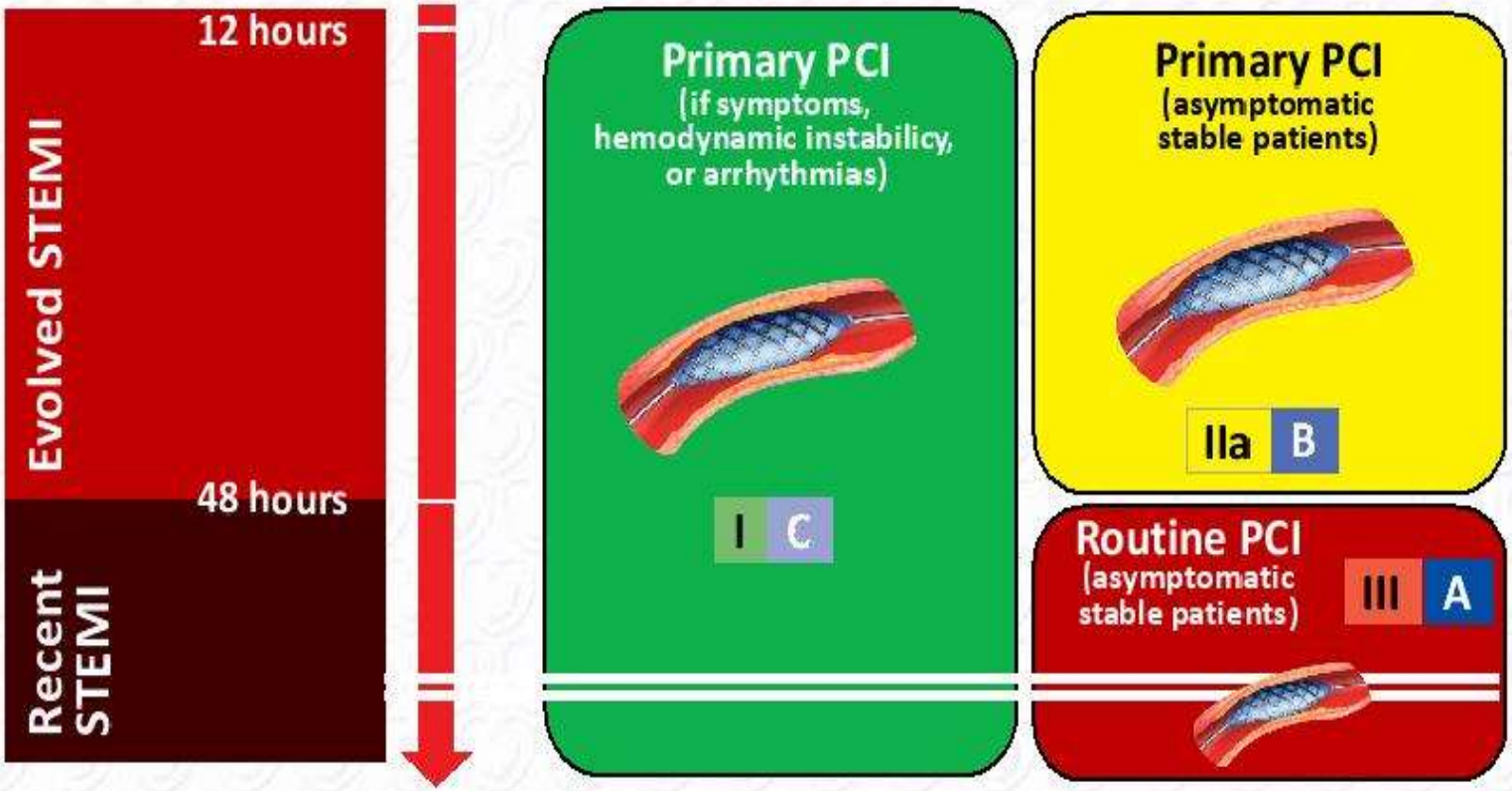

Prise en charge à la phase aigue des SCA

- DEFINITIONS
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  - Diagnostic initial
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    - **Jusqu' a quel délai peut on proposer un traitement de revascularisation ?**
    - **Quel traitement proposer : Angioplastie primaire ou thrombolyse ?**

Maximum target times according to reperfusion strategy selection in patients presenting via EMS or in a non-PCI centre

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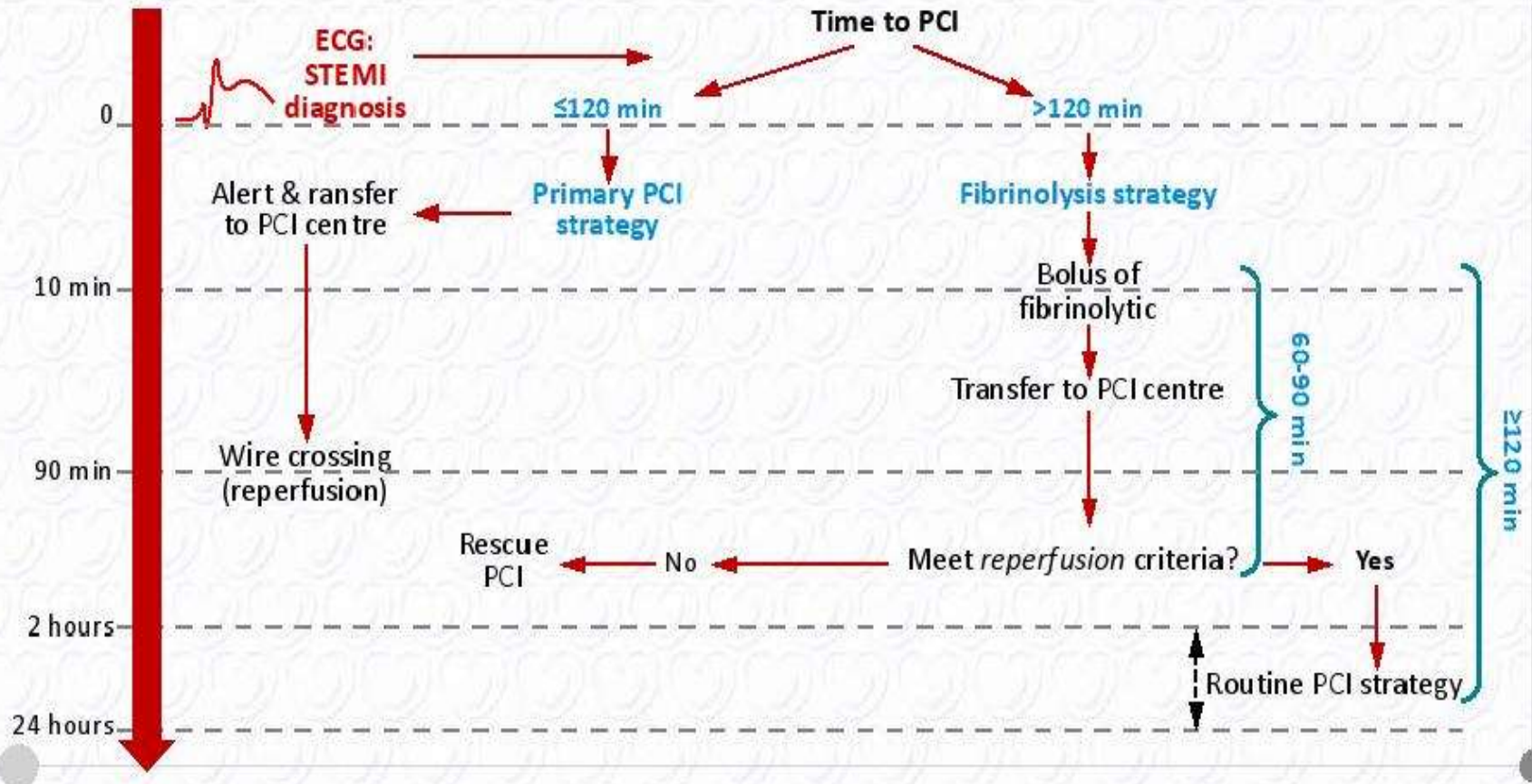

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Modes of patient presentation, components of ischaemic time and flowchart for reperfusion strategy selection

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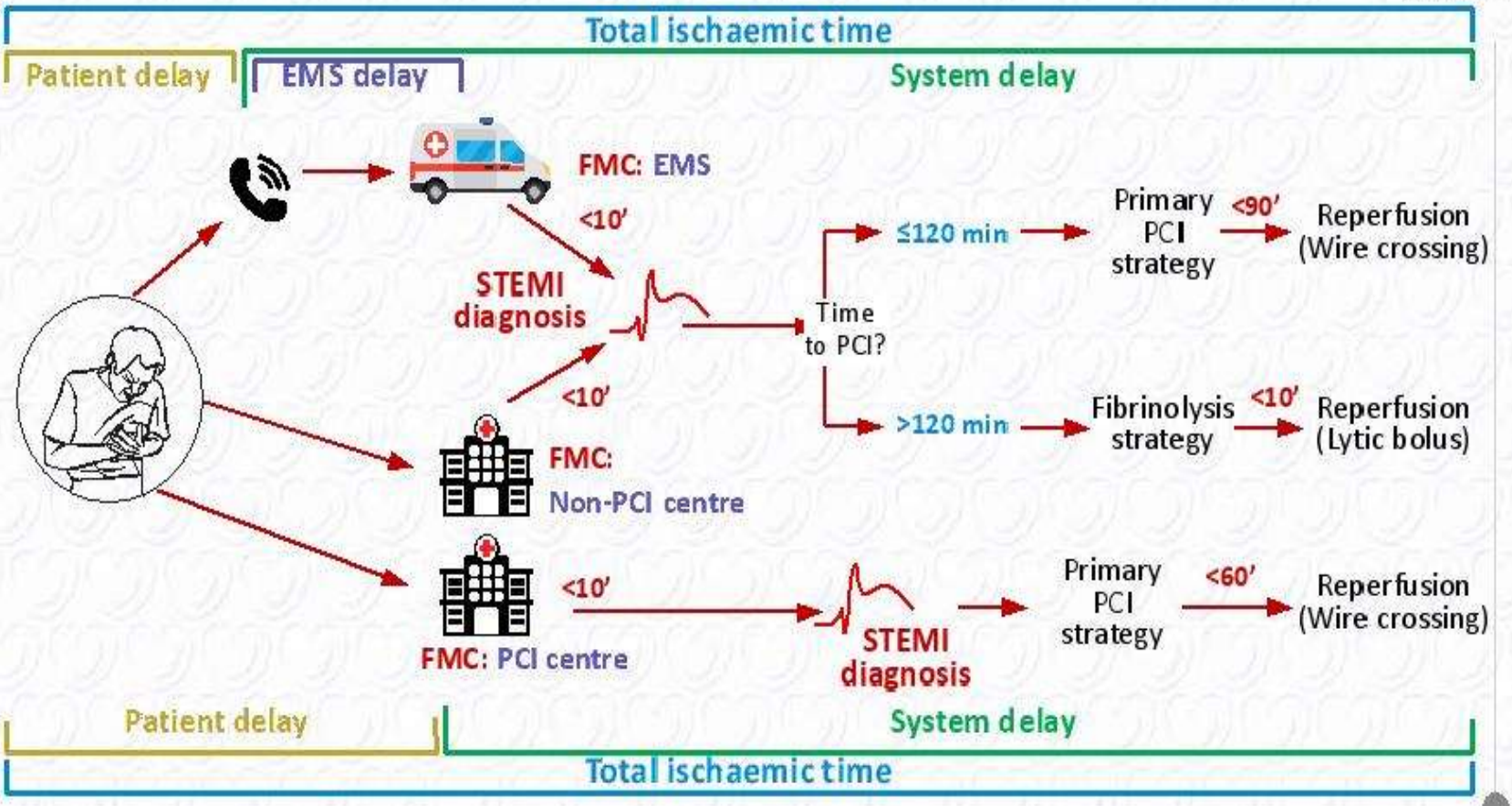

Revascularisation : thrombolyse

Intervals	Time targets
Maximum time from STEMI diagnosis to bolus or infusion start of fibrinolysis in patients unable to meet primary PCI target times.	≤10 min
Time delay from start of fibrinolysis to evaluation of its efficacy (success or failure).	60-90 min
Time delay from start of fibrinolysis to angiography (if fibrinolysis is successful).	2-24 hours

Prise en charge à la phase aigue des SCA

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    - **Quel traitement proposer : Angioplastie primaire ou thrombolyse ?**
    - **Thrombolyse**

Thrombolyse : traitement adjuvent

Recommendations	Class	Level
When fibrinolysis is the reperfusion strategy, it is recommended to initiate this treatment as soon as possible after STEMI diagnosis, preferably in the prehospital setting.	I	A
A fibrin-specific agent (i.e. tenecteplase, alteplase, reteplase) is recommended.	I	B
A half-dose of tenecteplase should be considered in patients ≥75 years of age.	IIa	B
Antiplatelet co-therapy with fibrinolysis		
Oral or i.v. aspirin is indicated.	I	B
Clopidogrel is indicated in addition to aspirin.	I	A
DAPT (in the form of aspirin plus a $P2Y_{12}$ inhibitor) is indicated for up to 1 year in patients undergoing fibrinolysis and subsequent PCI.	I	C

Tenectéplase à demi dose :
âge ≥ 75 ans

DAAP
ASP + Clopidogrel (300 mg)

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Thrombolyse : traitement adjuvent

Recommendations	Class	Level
Anticoagulation co-therapy with fibrinolysis		
Anticoagulation is recommended in patients treated with lytics until revascularization (if performed) or for the duration of hospital stay up to 8 days. The anticoagulant can be:	I	A
• Enoxaparin i.v. followed by s.c. (preferred over UFH).	I	A
• UFH given as a weight-adjusted i.v. bolus followed by infusion.		
• In patients treated with streptokinase: fondaparinux i.v. bolus followed by an s.c. dose 24 hours later.	IIa	B
Transfer after fibrinolysis		
Transfer to a PCI-capable centre following fibrinolysis is indicated in all patients immediately after fibrinolysis.	I	A

Anticoagulant de 1 er choix
Enoxaparine
HNF

Métalyse , Asp, Copidogrel(300 mg), Enoxaparine

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Prise en charge à la phase aigue des SCA

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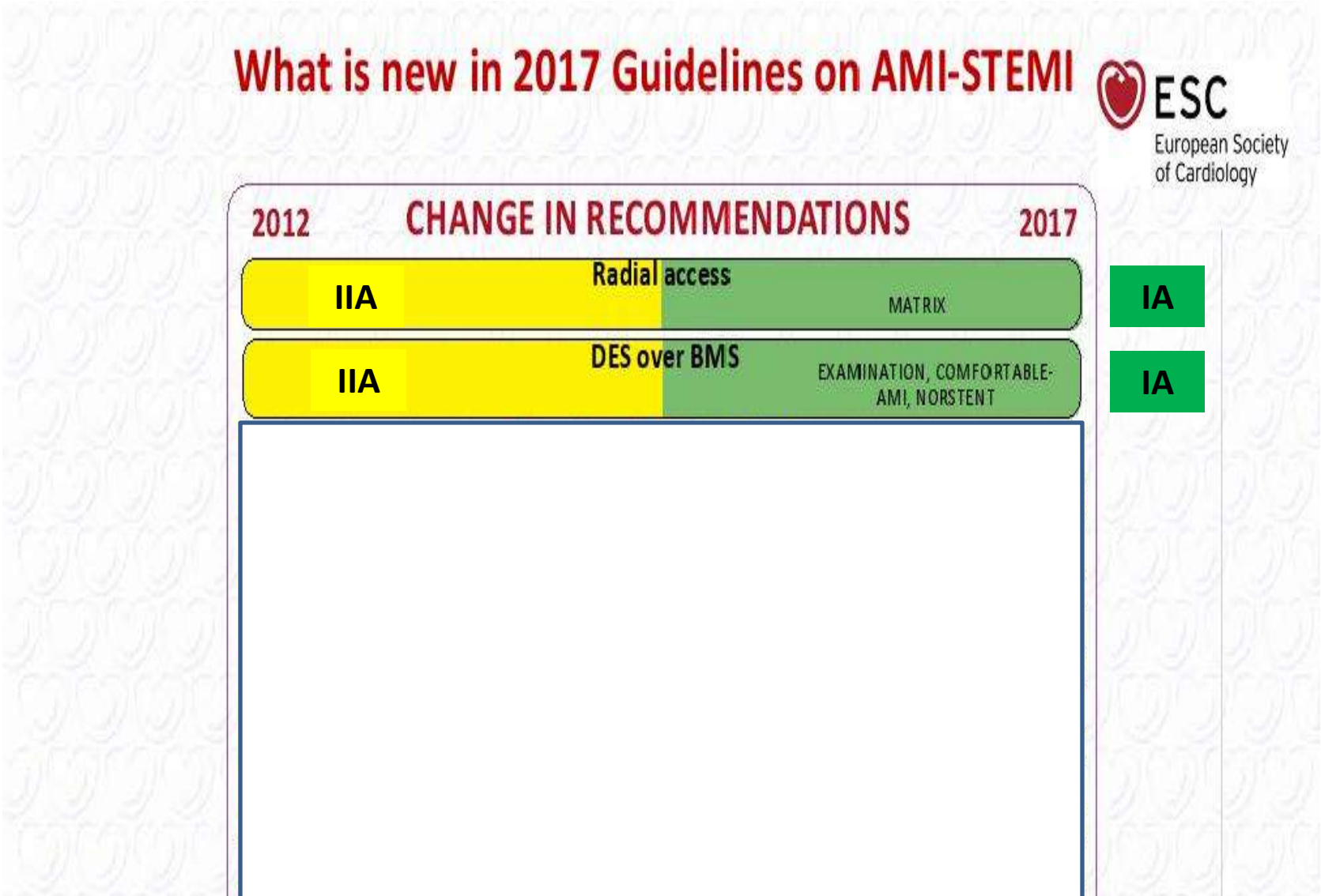
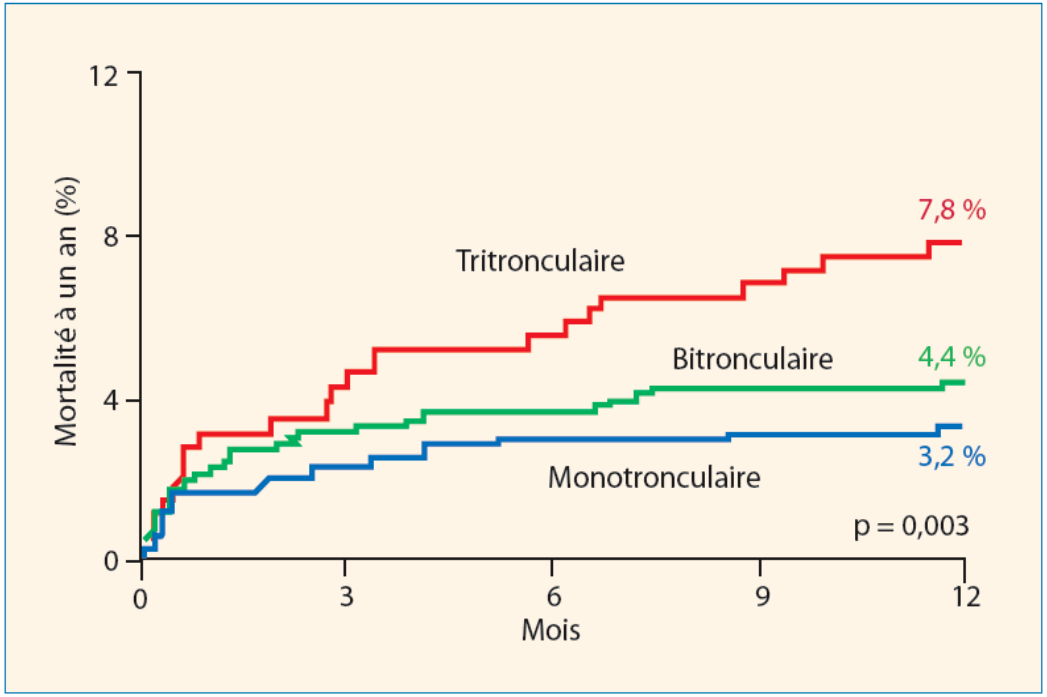
    - **Thrombolyse**
    - **Angioplastie primaire : Aspects techniques**

Angioplastie : Aspects techniques



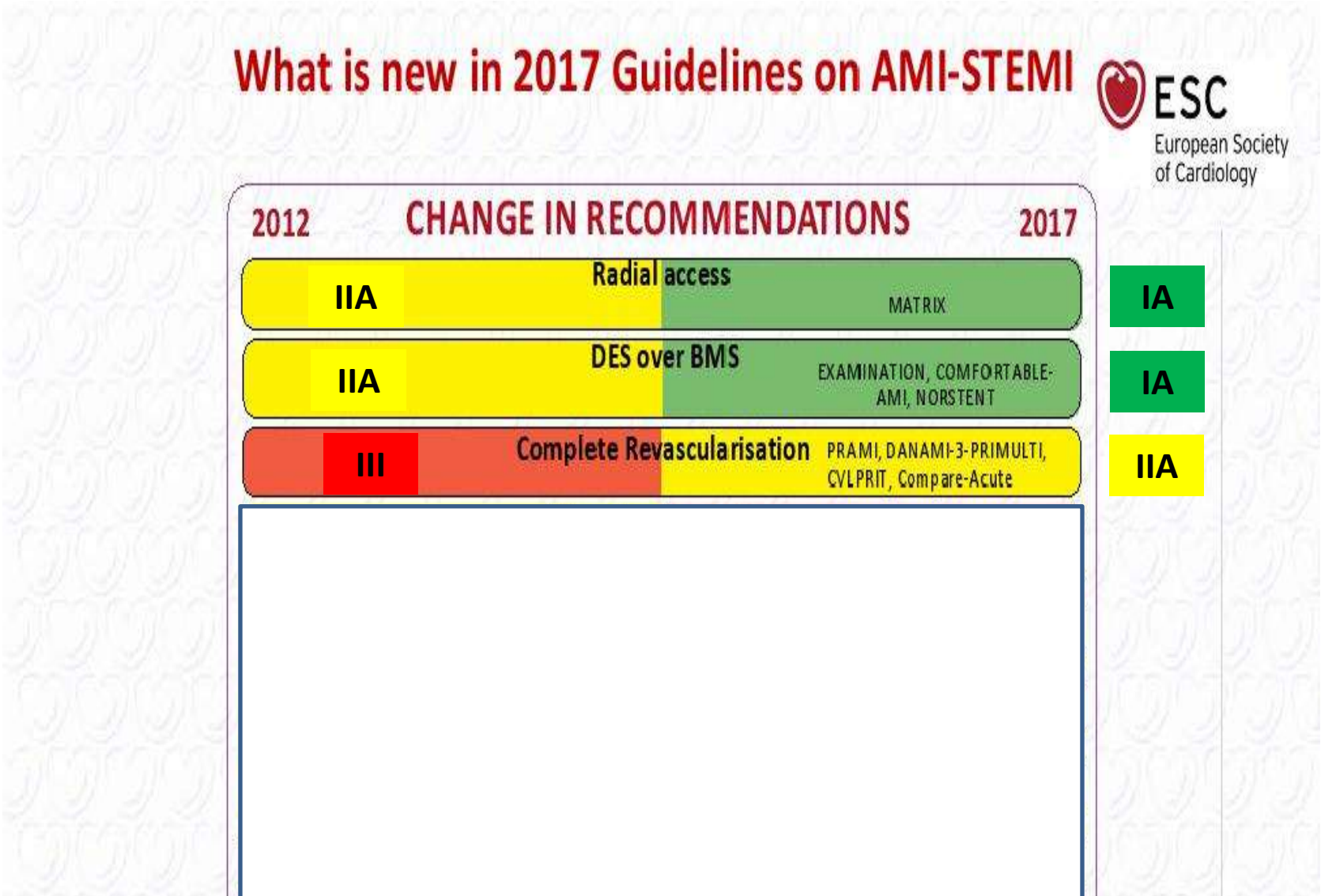
Revascularisation chez le pluri- tronculaire

- Traiter seulement l' artère coupable ?
- Revasculariser systématiquement les autres lésions serrées non coupables ?
- Revascularisation dans la foulée ou de façon programmée avant la sortie ?
- Faut il faire une FFR ?



Sorajja P et al. Eur Heart J 2007.

Angioplastie : Aspects techniques



Revascularisation chez le pluri tronculaire

Tableau. Études randomisées comparant chez les patients pluritronculaires avec SCA ST+ stables après angioplastie de l'artère coupable, angioplastie ou traitement médical de l'artère non coupable.

	Randomisation lors de la procédure initiale d'angioplastie	Randomisation lors de l'hospitalisation initiale	Durée suivi	Taux d'événement cardiaque après angioplastie de la lésion non coupable	Taux d'événement cardiaque sous traitement médical de la lésion non coupable	p
CULPRIT 296 pts	+	+	12 mois	10 %	21 %	0,009
PRAMI 465 pts	+		36 mois	10 %	23 %	< 0,001
DANAMI3-PRIMULTI 627 pts		+	27 mois	13 %	22 %	0,004
PRAGUE-13 241 pts		+	38 mois	16 %	14 %	NS

Revascularisation chez le pluri tronculaire

Recommendations	Class	Level
IRA technique *(continued)*		
Routine use of thrombus aspiration is not recommended.	III	A
Routine use of deferred stenting is not recommended.	III	B
Non-IRA strategy		
Routine revascularization of non-IRA lesions should be considered in STEMI patients with multivessel disease before hospital discharge	IIa	A
Non-IRA PCI during the index procedure should be considered in patients with cardiogenic shock.	IIa	C
CABG should be considered in patients with ongoing ischaemia and large areas of jeopardized myocardium if PCI of the IRA cannot be performed.	IIa	C

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Attendre les résultats : CULPRIT Shok, COMPLETE, FLOWER MI

Prise en charge à la phase aigue des SCA

- DEFINITIONS
- SCA ST+
  - diagnostic initial
  - Traitement de revascularisation
    - Thrombolyse
    - Angioplastie primaire : Aspects techniques
    - **Angioplastie primaire : Traitement adjuvent**

Angioplastie : traitement AAP

Periprocedural and postprocedural antithrombotic therapyc in patients undergoing primary percutaneous coronary intervention

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Recommendations	Class	Level
Antiplatelet therapy		
A potent $P2Y_{12}$ inhibitor (prasugrel or ticagrelor), or clopidogrel if these are not available or are contra-indicated, is recommended before (or at latest at the time of) PCI and maintained over 12 months unless there are contra-indications such as excessive risk of bleeding.	I	A
Aspirin (oral or i.v, if unable to swallow) is recommended as soon as possible for all patients without contra-indications.	I	B
GP IIb/IIIa inhibitors should be considered for bailout if there is evidence of no-reflow or a thrombotic complication.	IIa	C
Cangrelor may be considered in patients who have not received $P2Y_{12}$ receptor inhibitors.	IIb	A

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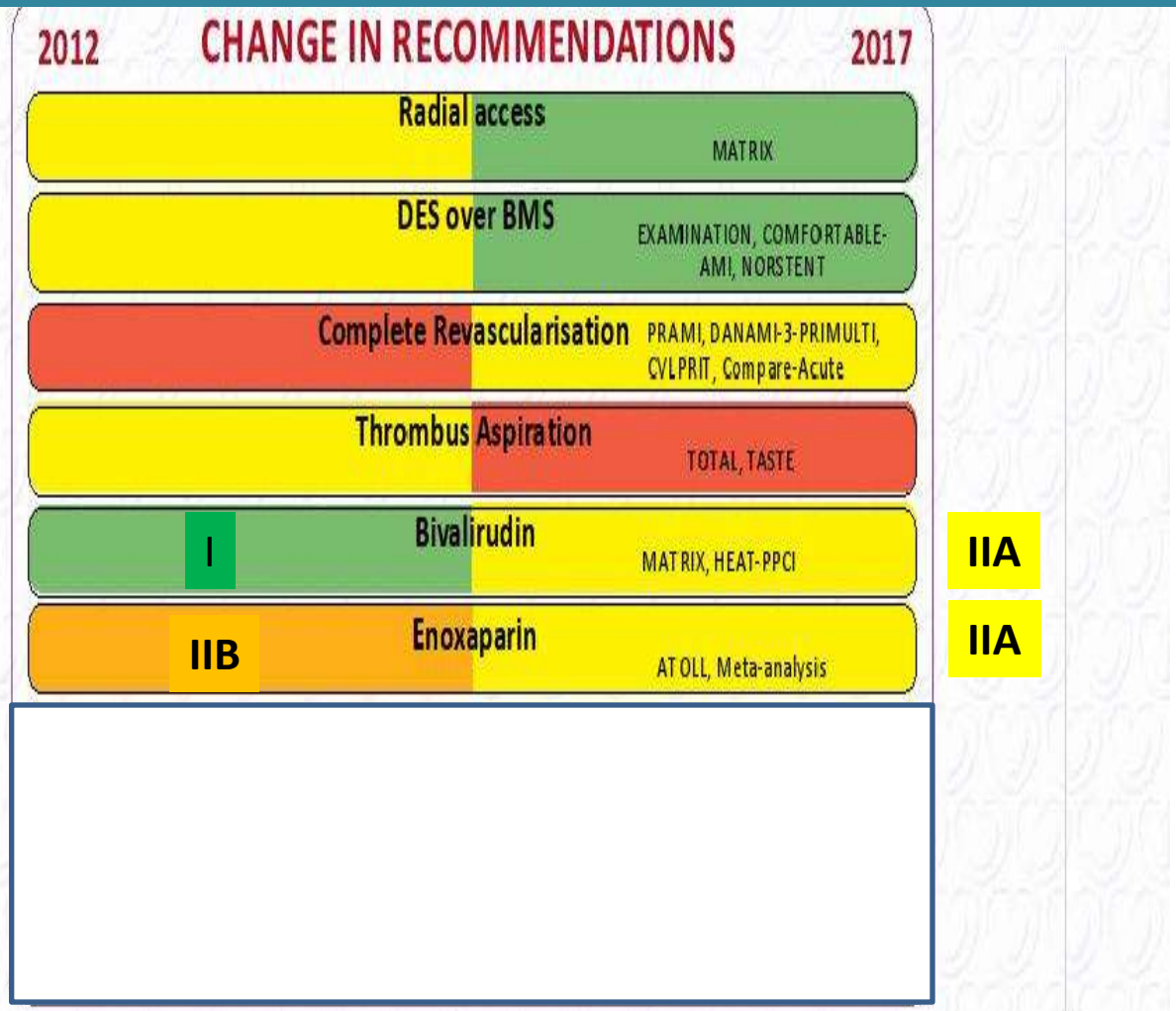
Prasugrel – Ticagrelor: 1ere intention
Prétraitement ?

Cangrelor : IIB CHAMPION

Anti GP IIb IIa : IIA

Angioplastie : traitement anticoagulant



3 Anticoagulants :

HNF : IC

Enoxaparine /Bivalirudine : IIA

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Angioplastie chez les patients sous anticoagulants oraux

- Angioplastie indépendamment des délais
- Voie radiale
- Anticoagulant parentérale indépendamment de la dernière prise de l’ anticoagulant oral
- Aspirine + clopidogrel (600 mg)
- Pas de Ticagrelor ni prasugrel
- L’ IPP est recommandé

Angioplastie chez les patients sous anticoagulants oraux

- Assess ischaemic and bleeding risks using validated risk predictors (e.g. CHA_2DS_2-VASc, ABC, HAS-BLED) with a focus on modifiable risk factors.
- Keep triple therapy duration as short as possible; dual therapy after PCI (oral anticoagulant and clopidogrel) to be considered instead of triple therapy.
- Consider the use of NOACs instead of VKA when NOACs are not contra-indicated.
- Consider a target INR in the lower part of the recommended target range and maximize time in therapeutic range (i.e. >65–70%) when VKA is used.
- Consider the lower NOAC regimen tested in approval studies and apply other NOAC regimens based on drug-specific criteria for drug accumulation.
- Clopidogrel is the $P2Y_{12}$ inhibitor of choice.
- Use low-dose (≤100 mg daily) aspirin.
- Routine use of PPIs.

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✓**Préférer les NOAC**
Dose minime recommandée

✓**AVK : INR entre 2-2.5**

✓**Aspirine : dose< 100 mg/j**

✓**Clopidogrel**

Rivaroxaban 15 mg/j + clopidogrel 75mg/j+ Asprine 75mg/j

Prise en charge à la phase aigue des SCA

- DEFINITIONS
- SCA ST+
- SCA ST-
  - Stratégie invasive ou non ?

SCA ST- : Stratification du risque

Very-high-risk criteria
• Haemodynamic instability or cardiogenic shock
• Recurrent or ongoing chest pain refractory to medical treatment
• Life-threatening arrhythmias or cardiac arrest
• Mechanical complications of myocardial infarction
• Acute heart failure
• Recurrent dynamic ST-T wave changes, particularly with intermittent ST-elevation
High-risk criteria
• Rise or fall in cardiac troponin compatible with myocardial infraction
• Dynamic ST- or T-wave changes (symptomatic or silent)
• GRACE score >140
Intermediate-risk criteria
• Diabetes mellitus
• Renal insufficiency (eGFR <60 mL/min/1.73 m^2)
• LVEF <40% or congestive heart failure
• Early post-infarction angina
• Prior percutaneous coronary intervention
• Prior coronary artery bypass surgery
• GRACE risk score >109 and <140
Low-risk criteria
• Any characteristics not mentioned above

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European Heart Journal 2016; 37:267-315 - doi: 10.1093/eurheartj/ehv320

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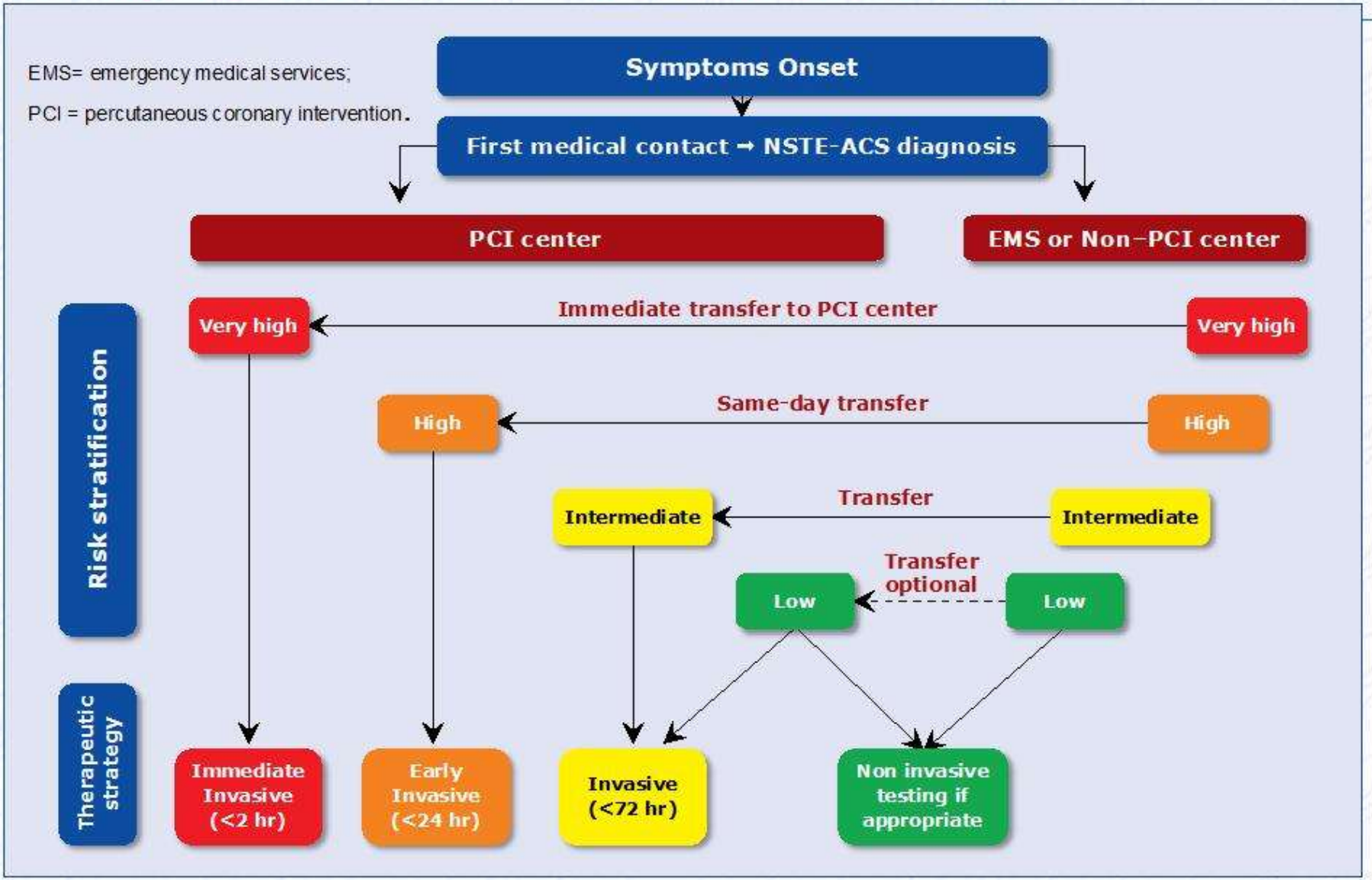
SCA ST- : STEMI like

Recommendations	Class	Level
In the absence of ST-segment elevation, a *primary PCI strategy* is indicated in patients with suspected ongoing ischaemic symptoms suggestive of myocardial infarction and at least one of the following criteria present: – haemodynamic instability or cardiogenic shock, – recurrent or ongoing chest pain refractory to medical treatment, – life-threatening arrhythmias or cardiac arrest, – mechanical complications of myocardial infarction, – acute heart failure, – recurrent dynamic ST-segment or T-wave changes, particularly with intermittent ST-segment elevation.	I	C

Selection of NSTE-ACS treatment strategy and timing according to initial risk stratification



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Prise en charge à la phase aigue des SCA ST-

- Stratégie invasive ou non ?
- Angioplastie : Aspect techniques
- Angioplastie : Traitement adjuvent

SCA ST- : Traitement AAP

Recommendations	Class	Level
Oral antiplatelet therapy		
Aspirin is recommended for all patients without contraindications at an initial oral loading dose of 150–300 mg (in aspirin-naive patients) and a maintenance dose of 75–100 mg daily long-term regardless of treatment strategy.	I	A
A $P2Y_{12}$ inhibitor is recommended, in addition to aspirin, for 12 months unless there are contraindications such as excessive risk of bleeds.	I	A
• **Ticagrelor** (180 mg loading dose, 90 mg twice daily) is recommended, in the absence of contraindications, for all patients at moderate- to high risk of ischaemic events (e.g. elevated cardiac troponins), regardless of initial treatment strategy and including those pretreated with clopidogrel (which should be discontinued when ticagrelor is started).	I	B
• **Prasugrel** (60 mg loading dose, 10 mg daily dose) is recommended in patients who are proceeding to PCI if no contraindication.	I	B
• **Clopidogrel** (300–600 mg loading dose, 75 mg daily dose) is recommended for patients who cannot receive ticagrelor or prasugrel or who require oral anticoagulation.	I	B
$P2Y_{12}$ inhibitor administration for a shorter duration of 3–6 months after DES implantation may be considered in patients deemed at high bleeding risk.	IIb	A
It is not recommended to administer prasugrel in patients in whom coronary anatomy is not known.	III	B

Nouveaux anti P2Y12

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European Heart Journal 2016; 37:267-315 - doi: 10.1093/eurheartj/ehv320
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SCA ST- : Prétraitement AAP

Recommendations	Class	Level
Pre-treatment with a $P2Y_{12}$ inhibitor is generally recommended in patients in whom coronary anatomy is known and the decision to proceed to PCI is made as well as in patients with STEMI.	I	A
In patients with NSTE-ACS undergoing invasive management, ticagrelor administration (180 mg loading dose, 90 mg twice daily), 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
In patients with stable CAD pre-treatment with clopidogrel may be considered if the probability of PCI is high.	IIb	C

✓**Pas de Prasugrel avant de connaitre l anatomie coronaire**

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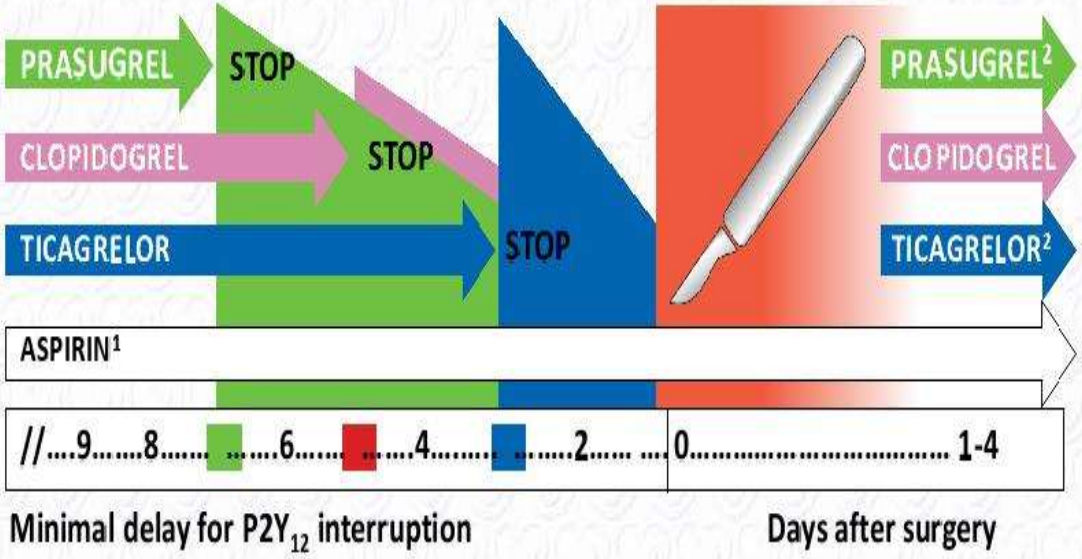
Prise en charge à la phase aigue des SCA

- DEFINITIONS
- SCA ST-
  - Stratégie invasive ou non ?
  - Angiplastie : Aspect techniques
  - Angioplastie : Traitement adjuvent
  - Pontage aorto coronaire

SCA- : Pontage aorto-coronaire



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✓10%des SCA-seront pontés

✓ Arrêter les anti P2Y12
- -3j :Ticagrelor
- - 5j Clopidogrel
- - 7 j Prasugrel
- - 0j Aspirine

✓Reprise dés que possible

✓Durée 12 mois (Ticagrelor-Aspirine)

SCA- : Stratégie non invasive

Recommendations	Class	Level
In patients with ACS who are managed with medical therapy alone and treated with DAPT, it is recommended to continue $P2Y_{12}$ inhibitor therapy (either ticagrelor or clopidogrel) for 12 months.	I	A
Ticagrelor is recommended over clopidogrel, unless the bleeding risk outweighs the potential ischaemic benefit.	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

2017 ESC Focused Update on DAPT in Coronary Artery Disease, developed in collaboration with EACTS (European Heart Journal 2017 - doi:10.1093/eurheartj/ehx419)

Durée de la bithérapie en post infarctus

Durée de la bithérapie après angioplastie

Recommendations	Class	Level
In patients with ACS treated with coronary stent implantation, DAPT with a $P2Y_{12}$ inhibitor on top of aspirin is recommended for 12 months unless there are contra-indications such as excessive risk of bleeding (e.g. PRECISE-DAPT ≥25).	I	A
In patients with ACS and stent implantation who are at high-risk of bleeding (e.g. PRECISE-DAPT ≥25), discontinuation of $P2Y_{12}$ inhibitor therapy after 6 months should be considered.	IIa	B
In patients with ACS treated with bioresorbable vascular scaffolds, DAPT for at least 12 months should be considered.	IIa	C

- **Pas de distinction entre stent nu et stent actif**
- **12 mois : IA**
- **6 mois : risque Hgique élevé: IIA**

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Score PRECISE-DAPT
Predicting bleeding Complications in patients undergoing stent implantation .

	Score PRECISE-DAPT	Score DAPT
Quand l'utiliser ?	Au moment du stenting	Après 12 mois sans événement
Évaluation de la durée du DAPT	DAPT court (3-6 mois) D *vs* DAPT standard/prolongé (12-24 mois)	DAPT standard (12 mois) *vs* DAPT prolongé (30 mois)
Calcul du score	HB : ≥ 2 ; 11-5 ; 11 ; 10-5 ; ≤ 10 GlBl : ≤ 5 ; 8 ; 10 ; 12 ; 14 ; 16 ; 18 ; ≥ 20 Âge : ≤ 50 ; 60 ; 70 ; 80 ; ≥ 90 ClCr : ≥ 100 ; 80 ; 60 ; 40 ; 20 ; 0 Antécédents de saignements : Non ; Oui Points de score : 0 ; 2 ; 4 ; 6 ; 8 ; 10 ; 12 ; 14 ; 16 ; 18 ; 20 ; 22 ; 24 ; 26 ; 28 ; 30	Âge ≥ 75 : -2 pts 65 à < 75 : -1 pt < 65 : 0 pt Tabagisme : +1 pt Diabète de type 2 : +1 pt IDM à l'entrée : +1 pt Antécédent de PCI ou d'IDM : +1 pt Stent au paclitaxel : +1 pt Diamètre stent < 3 mm : +1 pt IC ou FEVG < 30 % : +2 pts Stent sur pontage veineux : +2 pts
Score	0 à 100 points	-2 à 10 points
Prise de décision cut-off suggéré	Score ≥ 25 ➡ DAPT court Score < 25 DAPT ➡ standard/prolongé	Score ≥ 2 ➡ DAPT prolongé Score < 2 ➡ DAPT standard
Calculateur	www.precisedaptscore.com	www.daptstudy.org

Durée de la bithérapie après angioplastie

Recommendations	Class	Level
In patients with ACS who have tolerated DAPT without a bleeding complication, continuation of DAPT for longer than 12 months may be considered.	IIb	A
In patients with MI and high ischaemic risk 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.	IIb	B

PEGASUS TIMI 54 :
Ticagrelor jusqu' à 36 mois

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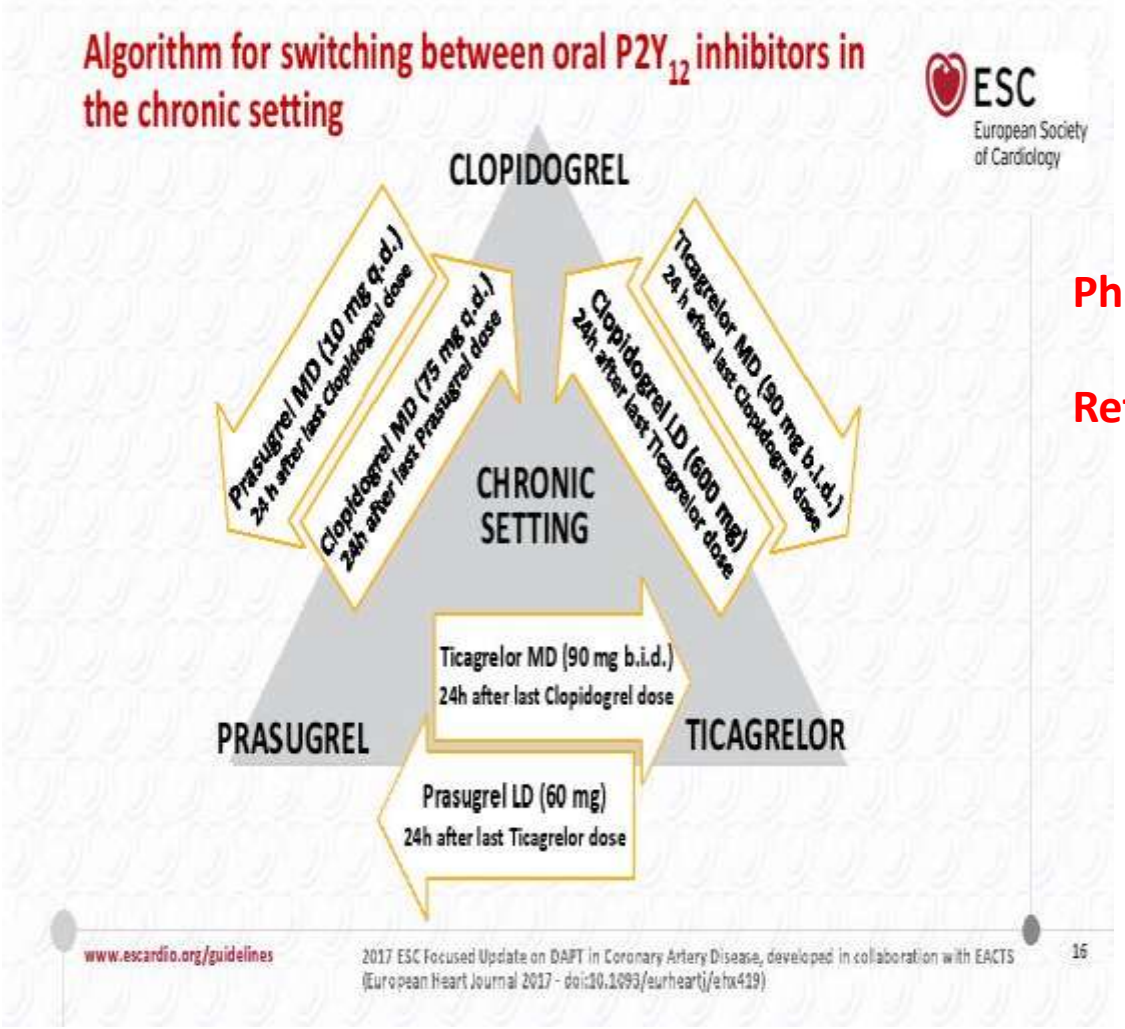
Bithérapie en post infarctus: Stratégie désescalade :



Phase aigu : Ticagrelor prasugrel

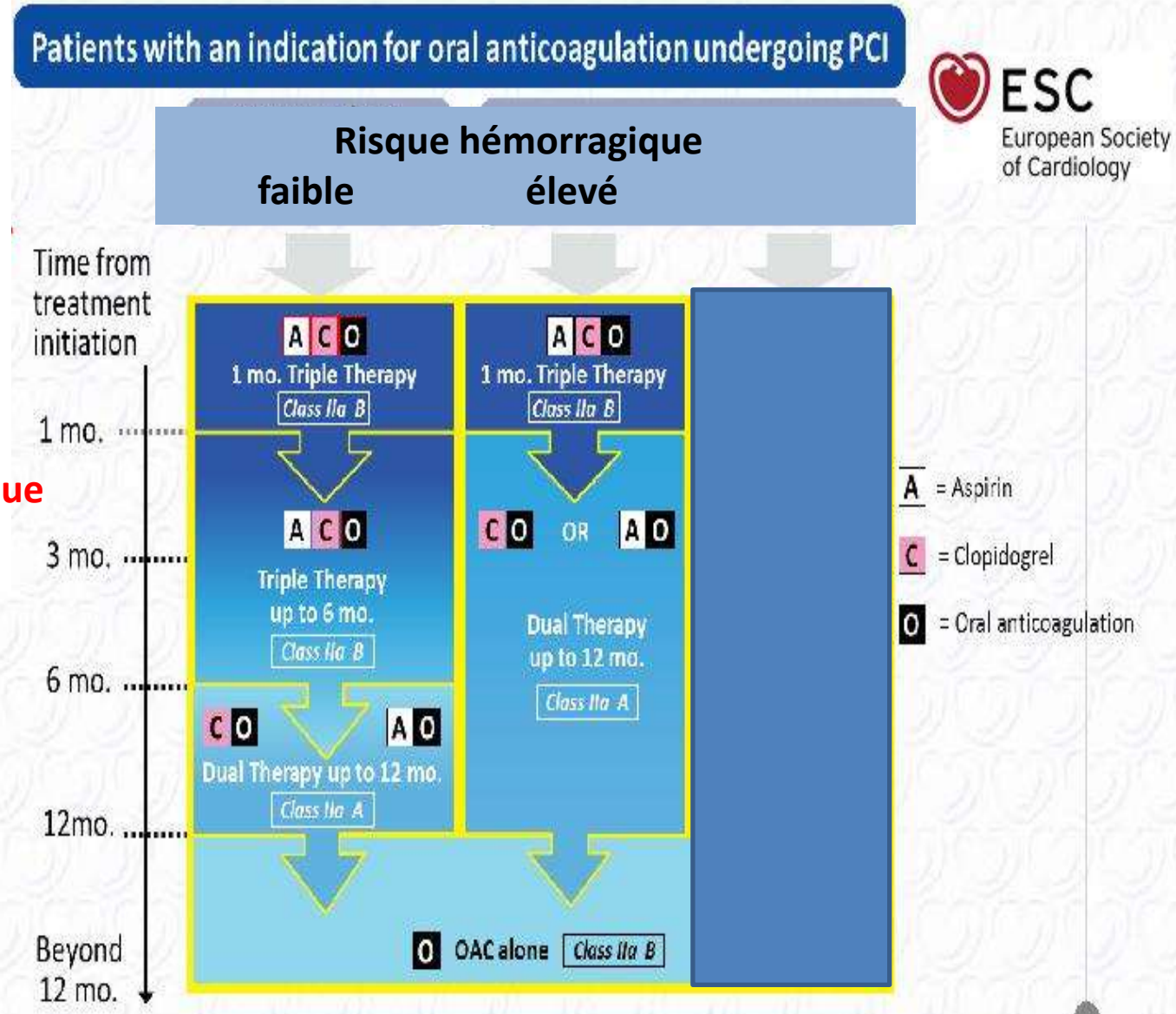
Retour au Clopidogre

Durée de la bithérapie après angioplastie chez un patient sous anticoagulant oral

Trithérapie :

1 mois minimum

3-6 mois si risque Hgique faible



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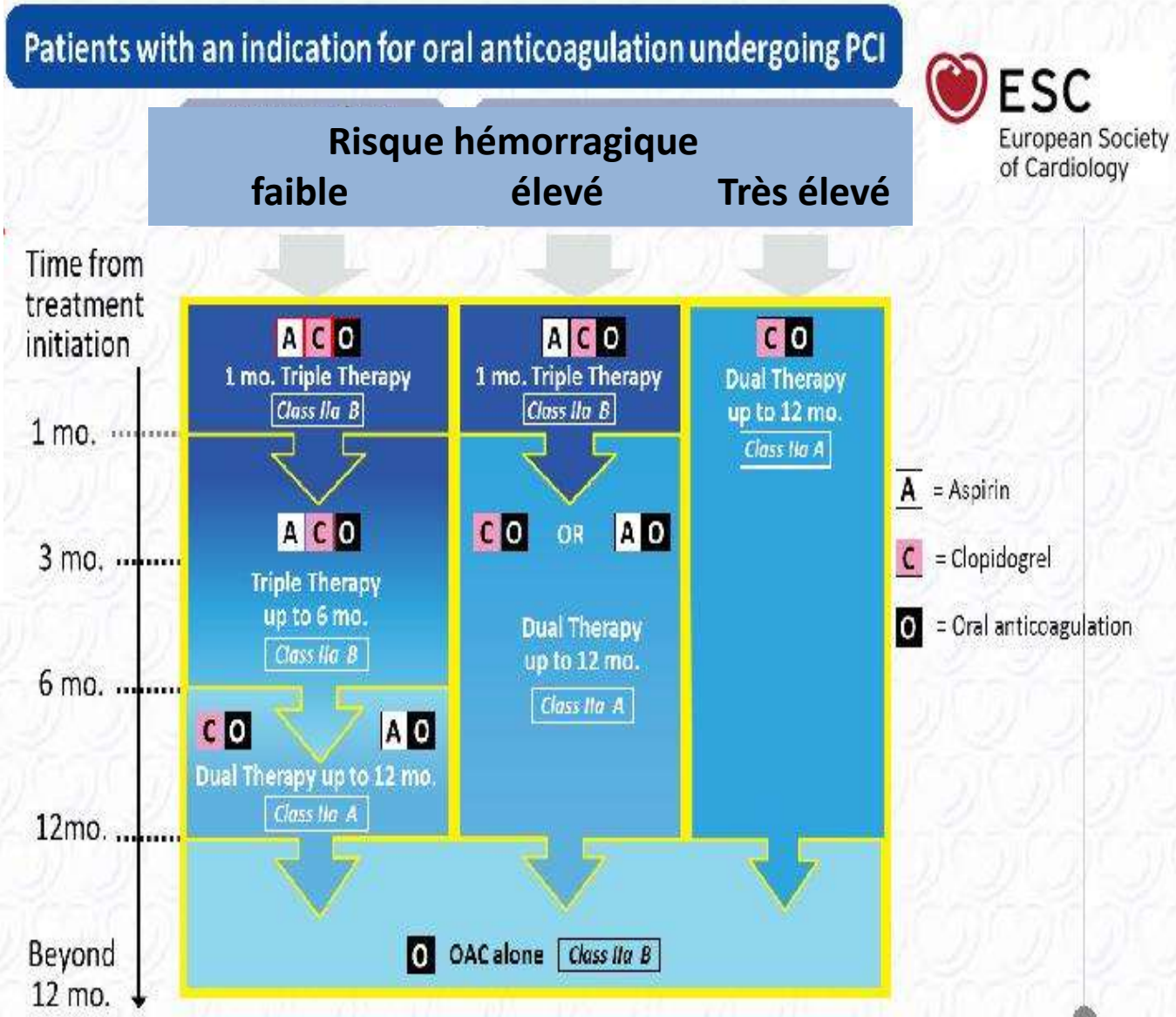
Bithérapie d' emblée si risque Hgique très élevé



2017 ESC Focused Update on DAPT in Coronary Artery Disease, developed in collaboration with EACTS
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What is new in 2017 Guidelines on AMI-STEMI

CHANGE IN RECOMMENDATIONS

2012		2017
	Radial access	MATRIX
	DES over BMS	EXAMINATION, COMFORTABLE-AMI, NORSTENT
	Complete Revascularisation	PRAMI, DANAMI-3-PRIMULTI, CVLPRIT, Compare-Acute
	Thrombus Aspiration	TOTAL, TASTE
	Bivalirudin	MATRIX, HEAT-PPCI
	Enoxaparin	ATOLL, Meta-analysis
	Early Hospital Discharge	Small trials & observational data
Oxygen when SaO2 <95%	OXYGEN	Oxygen when SaO2 <90% AVOID, DETO2X
Same dose i.V in all patients	TNK-tPA	Half dose i.v. in Pts ≥75 years STREAM

What is new in 2017 Guidelines on AMI-STEMI *(continued)*

2017 NEW RECOMMENDATIONS

- Additional lipid lowering therapy if LDL >1.8 mmol/L (70 mg/dL) despite on maximum tolerated statins. ***IMPROVE-IT, FOURIER***
- Complete revascularization during index primary PCI in STEMI patients in shock. Expert opinion

- Cangrelor if $P2Y_{12}$ inhibitors have not been given. ***CHAMPION***
- Switch to potent $P2Y_{12}$ inhibitors 48 hours after fibrinolysis. Expert opinion
- Extend Ticagrelor up to 36 months in high-risk patients. ***PEGASUS-TIMI 54***
- Use of polypill to increase adherence. ***FOCUS***

- Routine use of deferred stenting. ***DANAMI 3-DEFER***

I
IIa
IIb
III

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

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Change in recommendations

Before → 2017

- Pretreatment with $P2Y_{12}$ inhibitors when PCI is planned
- Liberal use of PPI to mitigate GI bleeding risk
- Elective surgery requiring discontinuation of the P2Y12 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 $P2Y_{12}$ 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 NSTE-ACS with invasive approach
- Ticagrelor 60 mg b.i.d preferred over other oral P2Y12 inhibitors for DAPT continuation >12 months in post-MI

I IIA IIB III

New/revised concepts

Metallic stent and DAPT duration

Switch between $P2Y_{12}$ 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

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Doses of antiplatelet and anticoagulant co-therapies in primary PCI

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Doses of antiplatelet and parenteral anticoagulant co-therapies in primary PCI	
Antiplatelet therapies	
Aspirin	Loading dose of 150-300 mg orally or of 75-250 mg i.v. if oral ingestion is not possible, followed by a maintenance dose of 75-100 mg/day.
Clopidogrel	Loading dose of 600 mg orally, followed by a maintenance dose of75 mg/day.
Prasugrel	Loading dose of 60 mg orally, followed by a maintenance dose of 10 mg/day. In patients with body weight ≤60 kg, a maintenance dose of 5 mg/day is recommended. Prasugrel is contra-indicated in patients with previous stroke. In patients ≥75 years, prasugrel is generally not recommended, but a dose of 5 mg/day should be used if treatment is deemed necessary.

Doses of antiplatelet and anticoagulant co-therapies in primary PCI *(continued)*

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Doses of antiplatelet and parenteral anticoagulant co-therapies in primary PCI	
Antiplatelet therapies *(continued)*	
Ticagrelor	Loading dose of 180 mg orally, followed by a maintenance dose of 90 mg b.i.d.
Abciximab	Bolus of 0.25 mg/kg i.v. and 0.125 µg/kg/min infusion (maximum 10 µg/min) for 12 hours.
Eptifibatide	Double bolus of 180 µg/kg i.v. (given at a 10-min interval) followed by an infusion of 2.0 µg/kg/min for up to 18 hours.
Tirofiban	25 µg/kg over 3 min i.v., followed by a maintenance infusion of 0.15 µg/kg/min for up to 18 hours.

Doses of antiplatelet and anticoagulant co-therapies in primary PCI*(continued)*

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Doses of antiplatelet and parenteral anticoagulant co-therapies in primary PCI	
Parenteral anticoagulant therapies	
UFH	70-100 IU/kg i.v. bolus when no GP IIb/IIIa inhibitor is planned 50-70 IU/kg i.v. bolus with GP IIb/IIIa inhibitors.
Enoxaparin	0.5 mg/kg i.v. bolus.
Bivalirudin	0.75 mg/kg i.v. bolus followed by i.v. infusion of 1.75 mg/kg/hour for up to 4 hours after the procedure.

Differential diagnoses of ACS

Cardiac	Pulmonary	Vascular
Myopericarditis Cardiomyopathies	**Pulmonary embolism**	**Aortic dissection**
Tachyarrhythmias	**(Tension)-Pneumothorax**	Symptomatic aortic aneurysm
Acute heart failure	Bronchitis, pneumonia	Stroke
Hypertensive emergencies	Pleuritis	
Aortic valve stenosis		
Tako-Tsubo cardiomyopathy		
Coronary spasm		
Gastro-intestinal	**Orthopaedic**	**Other**
Oesophagitis, reflux or spasm	Musculoskeletal disorders	Anxiety disorders
Peptic ulcer, gastritis	Chest trauma	Herpes zoster
Pancreatitis	Muscle injury/inflammation	Anaemia
Cholecystitis	Costochondritis	
	Cervical spine pathologies	

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Most frequent in bold

European Heart Journal 2016; 37:267-315 - doi: 10.1093/eurheartj/ehv320

Conditions other than acute MI type 1 associated with cardiac troponin elevation

Tachyarrhythmias
Heart failure
Hypertensive emergencies
Critical illness (e.g. shock / sepsis / burns)
Myocarditis
Tako-Tsubo cardiomyopathy
Structural heart disease (e.g. aortic stenosis)
Aortic dissection
Pulmonary embolism, pulmonary hypertension
Renal dysfunction and associated cardiac disease
Coronary spasm
Acute neurological event (e.g. stroke or subarachnoid haemorrhage)
Cardiac contusion or cardiac procedures (CABG, PCI, ablation, pacing, cardioversion, or endomyocardial biopsy)
Hypo- and hyperthyroidism
Infiltrative diseases (e.g. amyloidosis, haemochromatosis, sarcoidosis, scleroderma)
Myocardial drug toxicity or poisoning (e.g. doxorubicin, 5-fluorouracil, herceptin, snake venoms)
Extreme endurance efforts
Rhabdomyolysis

European Heart Journal 2016; 37:267-315 - doi: 10.1093/eurheartj/ehv320

Most frequent in bold CABG = coronary artery bypass surgery; PCI = percuatenous coronary intervention.

Directives sur le monitorage cardiaque

NSTEMI : syndrome coronarien aigu sans sus-décalage du segment ST.a En l'absence des critères suivants : instabilité hémodynamique, arythmies majeures, fraction d'éjection du ventricule gauche

Présentation clinique	Unité d'hospitalisation	Durée du monitorage du rythme cardiaque
Angor instable	Normale ou retour à domicile	Aucun
NSTEMI à bas risque d'arythmie[a]	Soins intermédiaires ou coronariens	≤24 heures
NSTEMI à risque intermédiaire ou élevé d'arythmie[b]	Soins intensifs ou intermédiaires	>24 heures

a: Si aucun des éléments suivants n est présent : instabilité hémodynamique , arythmie majeure , FE VG <40%, échec de la reperfusion , autre sténose coronaire critique , complication liée à l'ATL

b: Si au moins un des critères ci-dessus est présent

Enoxaparin

Age <75 ans : 30 mgIV en bolus suivi 15 min apres par 1mg/kg en S/C /12h

Age >75 ans : Pas de bolus . 0.75 mg/hg /12h en S/C

Clopidogrele Dose de charge : 300 mg puis 75 mg /j

Age >75 ans pas de dose de charge

Tenectéplase (Metalyse : moitie dose si age >75 ans