CARDIO RUN 2025

17ème CONGRÈS DE PATHOLOGIE CARDIO-VASCULAIRE

17-18-19 SEPTEMBRE 2025

Hôtel Saint Alexis ILE DE LA RÉUNION France


Frédéric Lapostolle

SAMU 93, UF Recherche - Enseignement

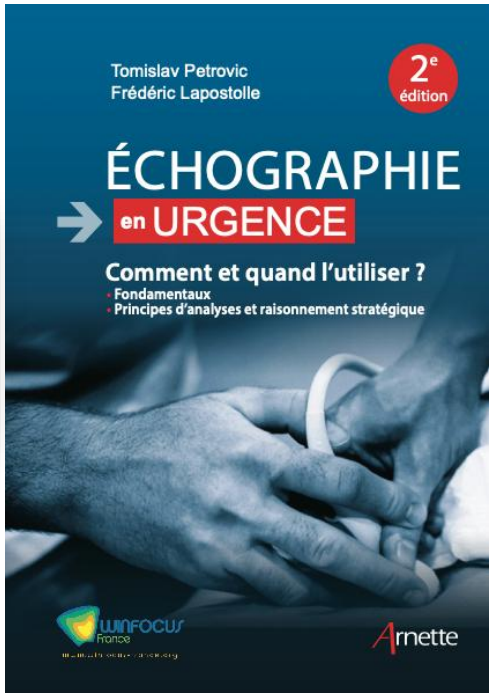
Hôpital Avicenne & Université Paris 13, Bobigny

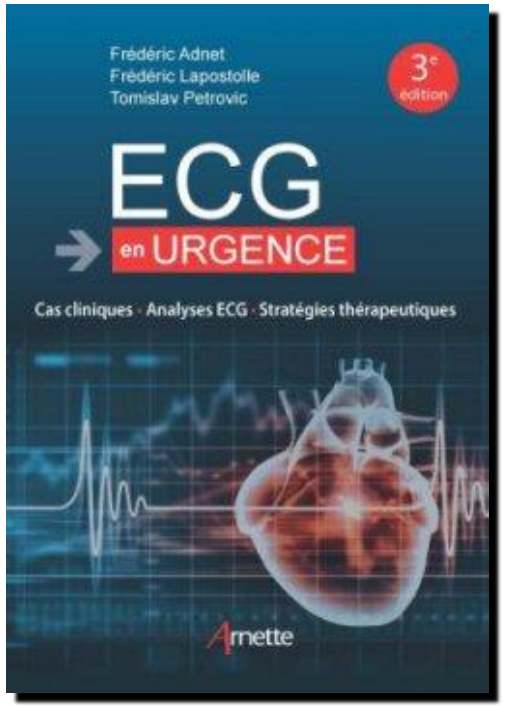

Hôpitaux Universitaires Avicenne Jean-Verdier René-Muret Paris-Seine Saint-Denis

# Disclosures

## Partenariat recherche : Mundipharma, Serb, Teleflex

FORMATION SANTÉ EDUPRAT





# Les trois choses que l'urgentiste n'ose pas dire au cardiologue

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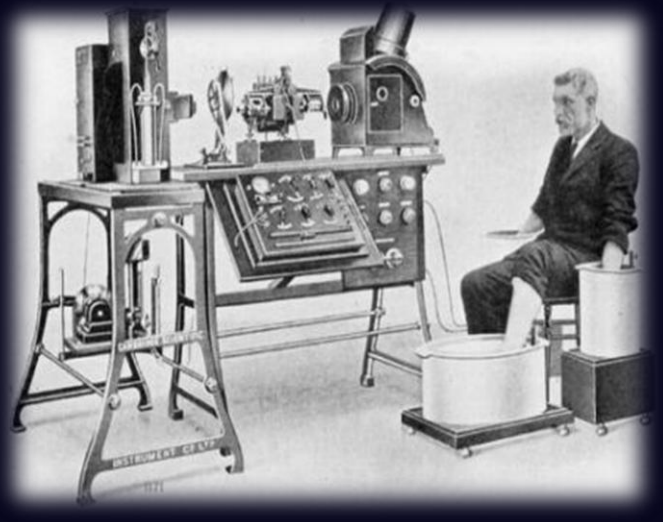
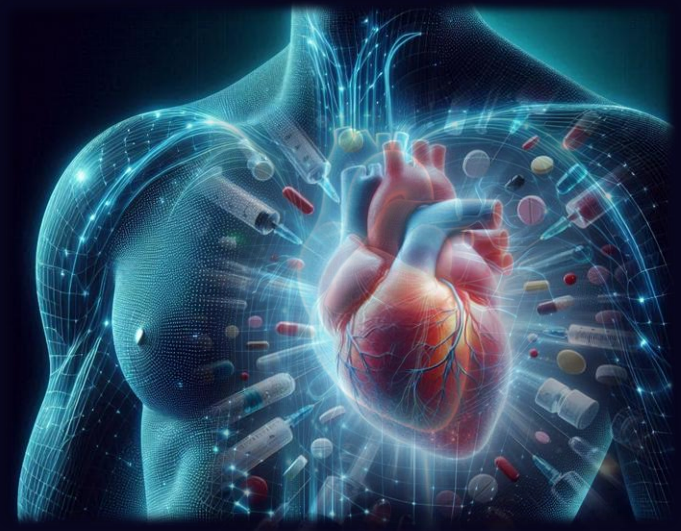
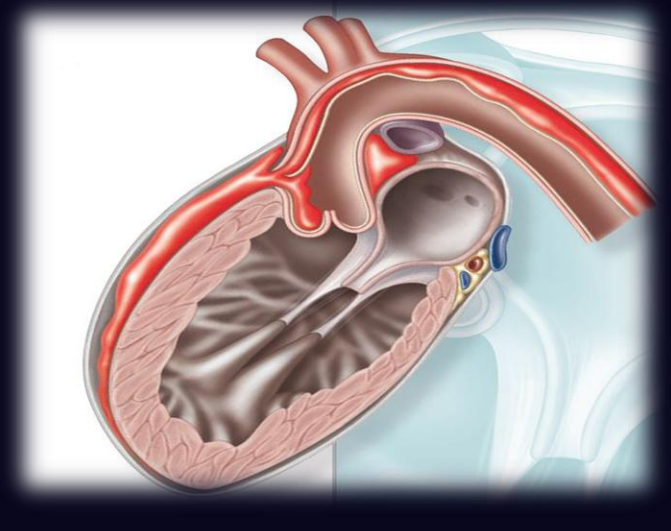
## 1. On vous admire

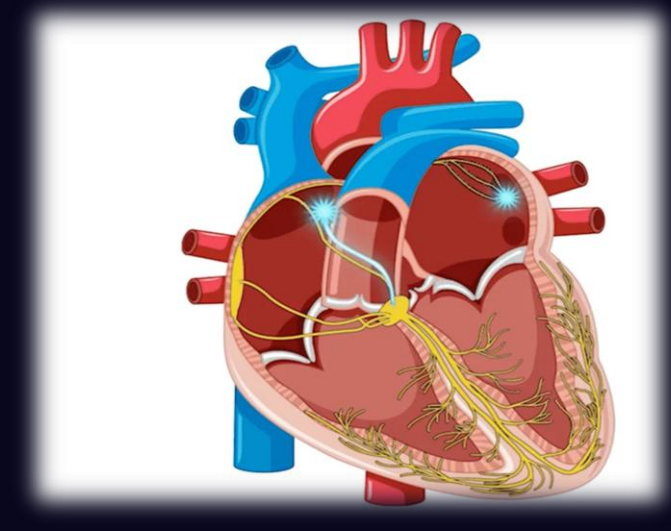
RADIOLOGIE

ÉCHOGRAPHIE









## ACS encompasses a spectrum

Unstable angina — NSTEMI — STEMI

### 1 Think 'A.C.S.' at initial assessment

- **A** — Abnormal ECG?
- **C** — Clinical context?
- **S** — Stable patient?

### 2 Think invasive management

| STEMI | Very high-risk NSTE-ACS | High-risk NSTE-ACS |
|---|---|---|
| Primary PCI OR Fibrinolysis (If timely primary PCI not feasible) | Immediate angiography ± PCI | Early (<24 h) angiography should be considered |

### 3 Think antithrombotic therapy

| Antiplatelet therapy | | AND | Anticoagulant therapy | | | |
|---|---|---|---|---|---|---|
| Aspirin | + $P2Y_{12}$ inhibitor | | UFH | OR LMWH | OR Bivalirudin | OR Fondaparinux |

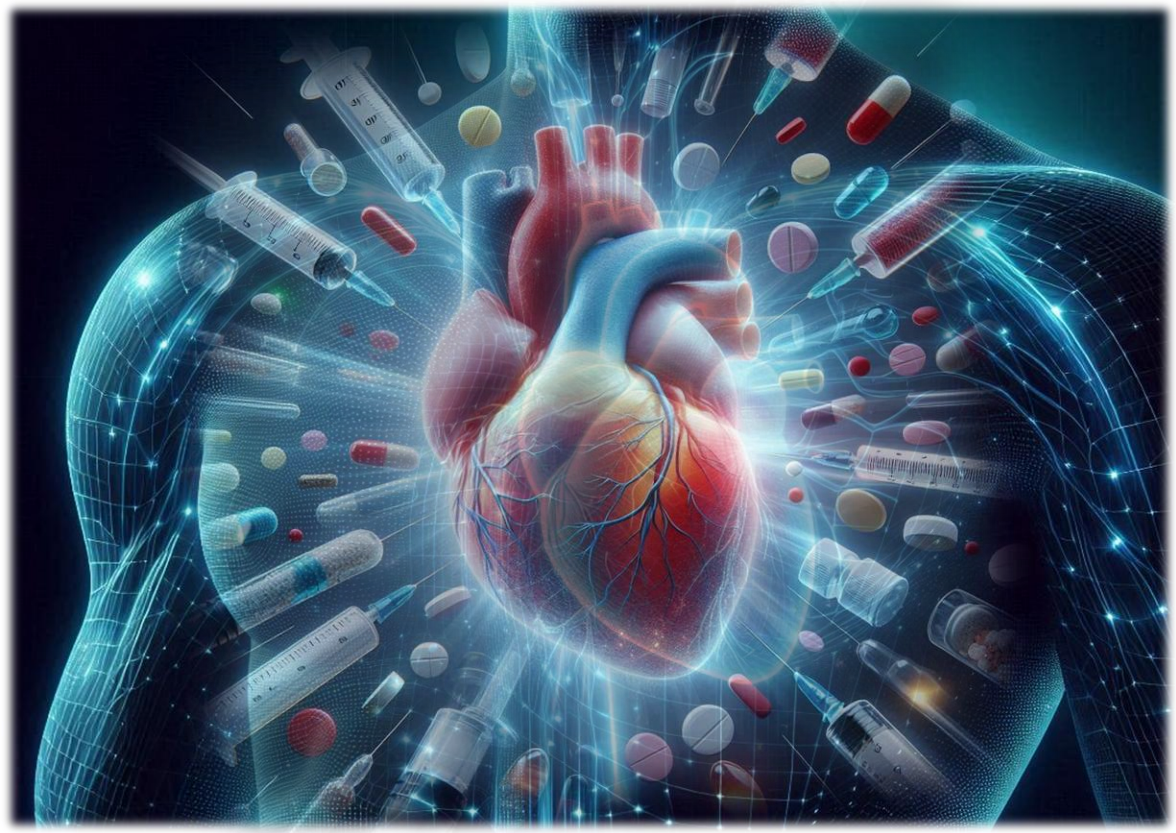
### 4 Think revascularization

| Based on clinical status, co-morbidities, and disease complexity | Aim for complete revascularization | Consider adjunctive tests to guide revascularization | |
|---|---|---|---|
| PCI OR CABG | | Intravascular imaging | Intravascular physiology |

### 5 Think secondary prevention

- Antithrombotic therapy
- Lipid lowering therapy
- Smoking cessation
- Cardiac rehabilitation
- Risk factor management
- Psychosocial considerations

ESC



The NEW ENGLAND JOURNAL of MEDICINE

CORRESPONDENCE

ous Volume 359:2071-2073 November 6, 2008 Number 19

# A New ECG Sign of Proximal LAD Occlusion

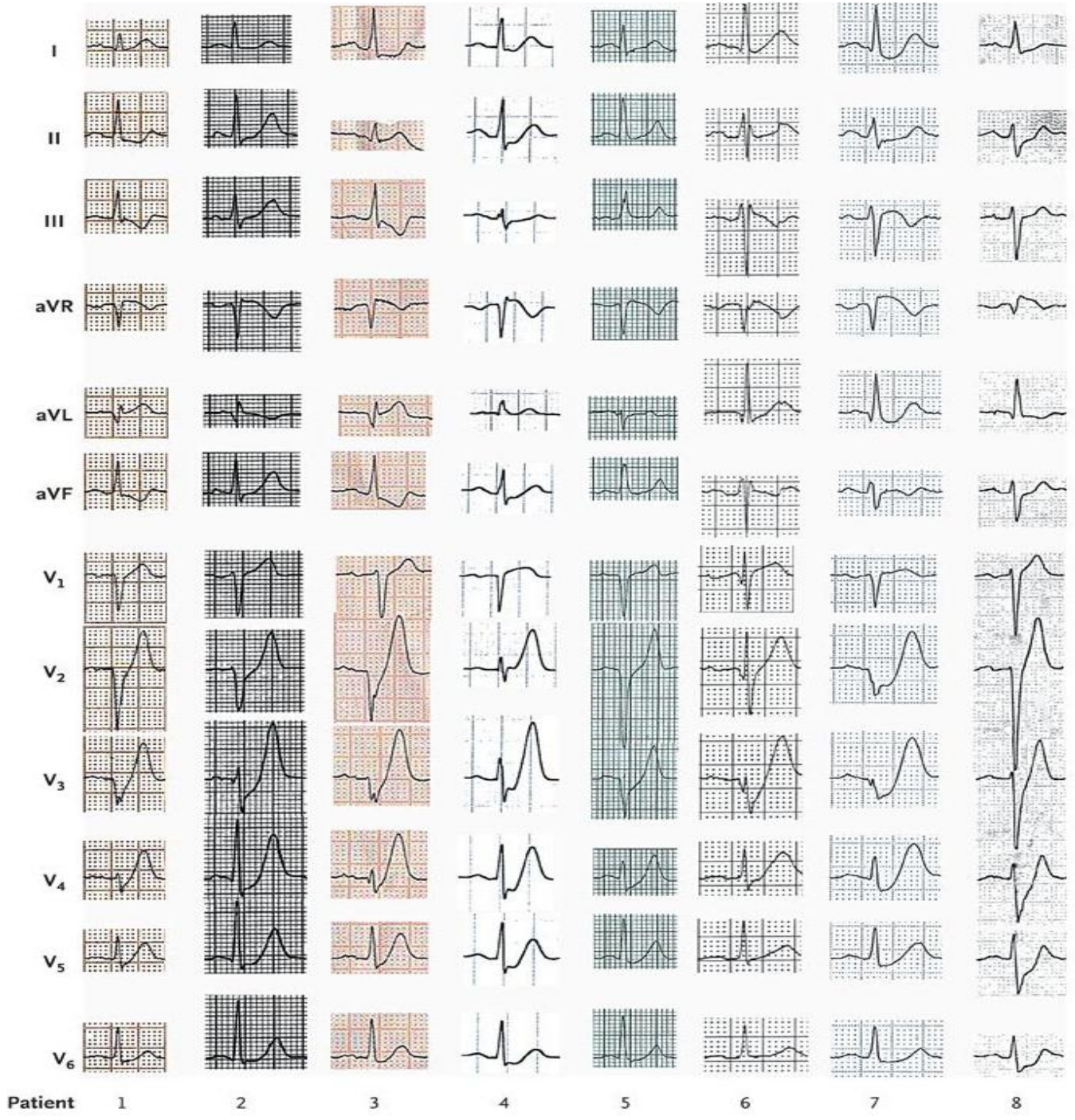
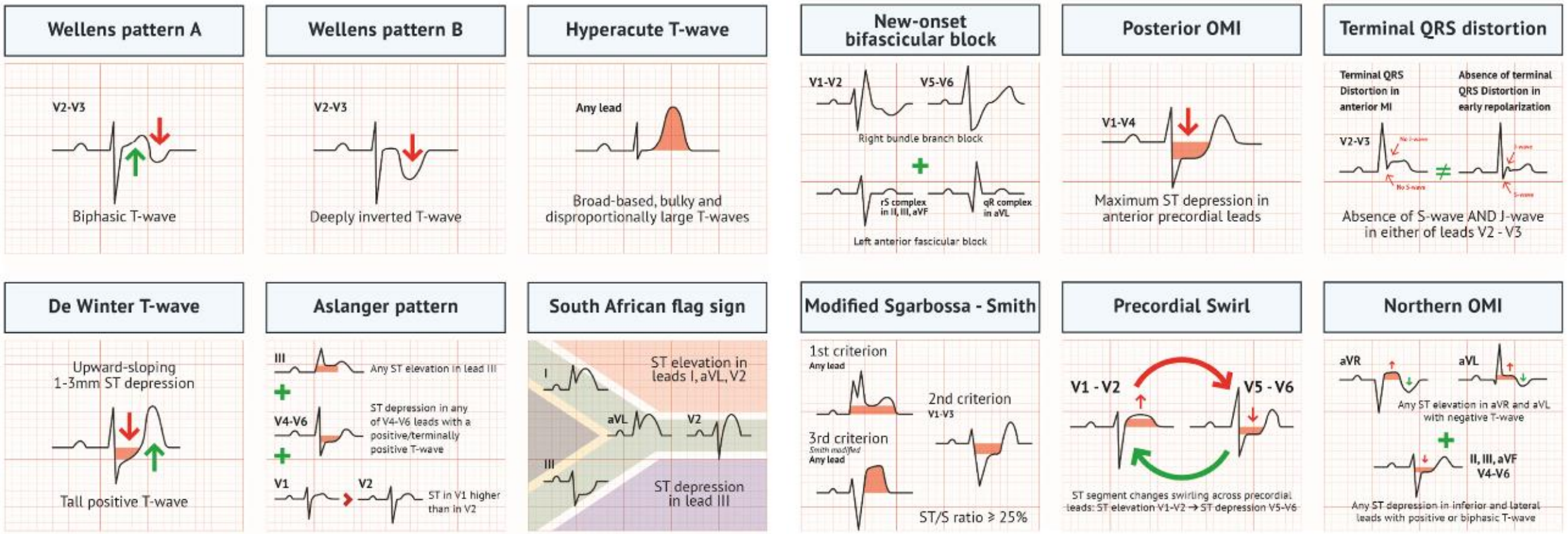


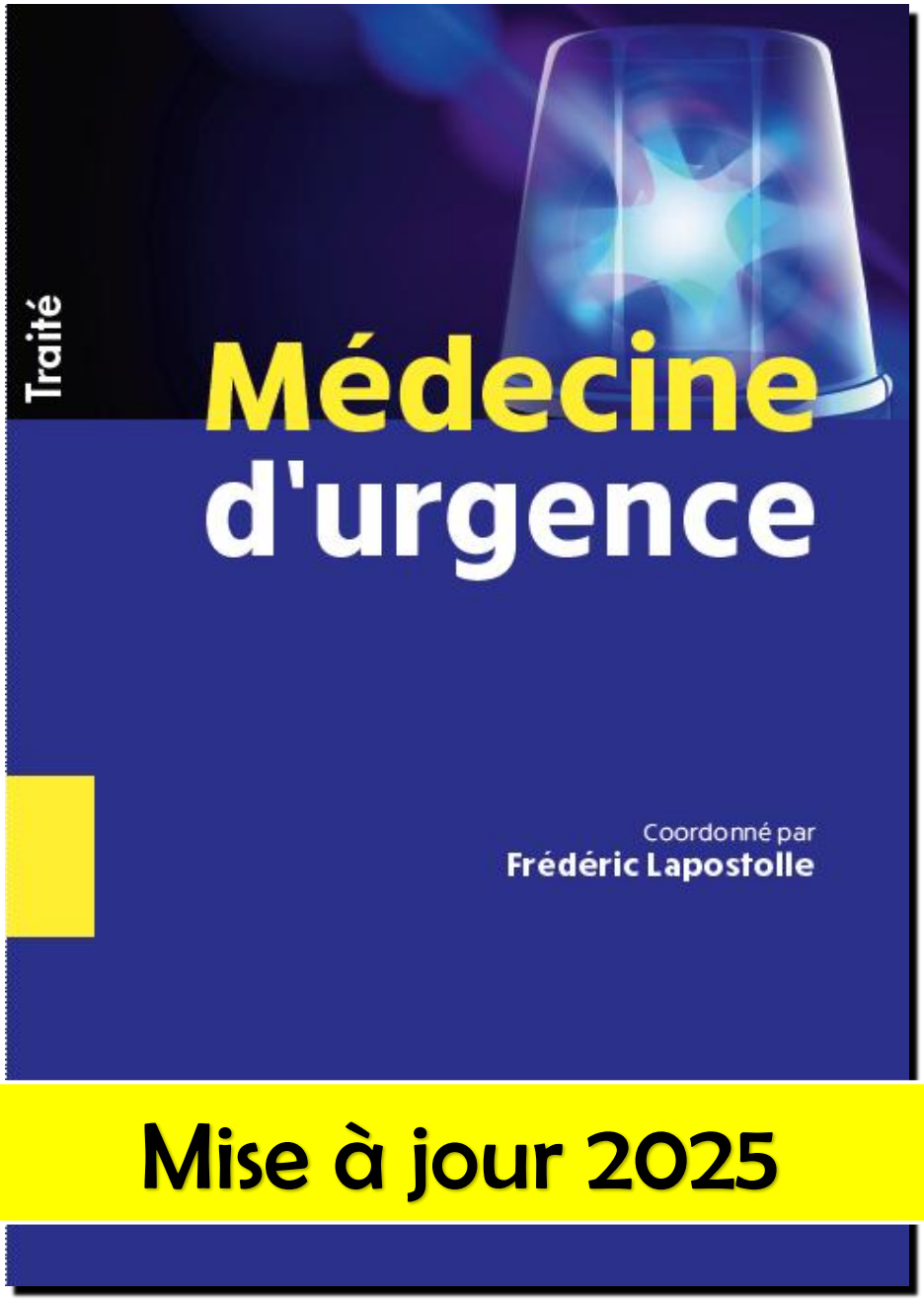

Figure 1. Unique Precordial ST-Segment and T-Wave Morphology.

These 12-lead ECG recordings of eight patients show precordial ST-segment depression at the J point followed by peaked, positive T waves. In addition, lead aVR shows slight ST-segment elevation in most cases. All eight of these patients underwent primary percutaneous coronary intervention because of an occlusion of the proximal LAD.

Ricci, Ann Emerg Med, 2024

# ECG Patterns of Occlusion Myocardial Infarction: A Narrative Review






**Mise à jour 2025**

## Partie 3
## Cœur

par Frédéric Lapostolle, Jean-Pierre Torres


RECOMMENDED

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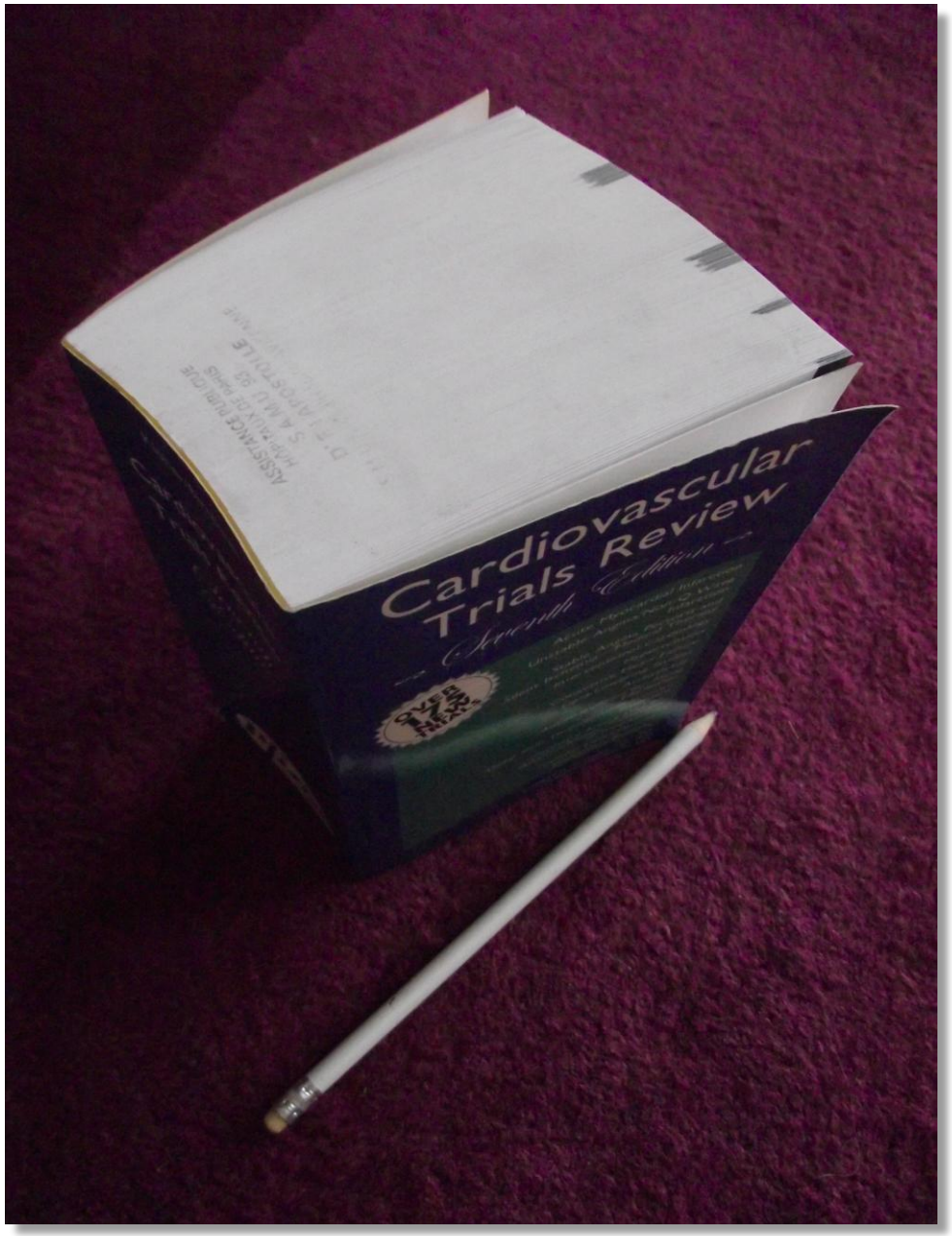
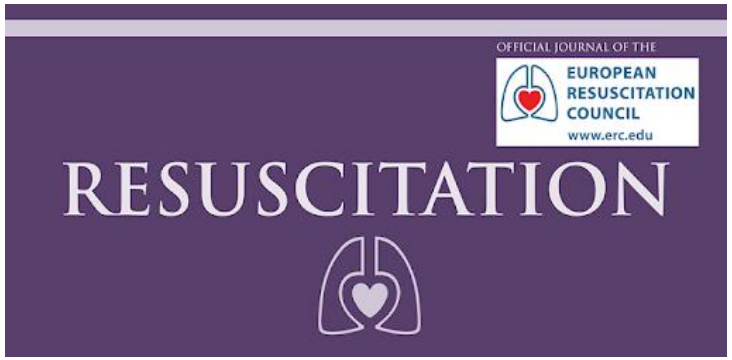

Cardiovascular
Trials Review
Fourth Edition

# Beta-Blocker Interruption or Continuation after Myocardial Infarction

The NEW ENGLAND JOURNAL of MEDICINE

Karim Aacha [1], Abdourahmane Diallo [1], Eric Vicaut [1], Gilles Montalescot [1];
ABYSS Investigators of the ACTION Study Group

| | |
|---|---|
| Nat Rev Cardiol | 41,7 |
| Eur Heart J | 38,1 |
| Circulation | 35,6 |
| J Am Coll Cardiol | 21,7 |
| Eur J Heart Fail | 16,9 |
| Circ Res | 16,5 |
| JAMA Cardiol | 14,7 |
| JACC CardioOncol | 13,6 |
| JACC Cardiovasc Imaging | 12,8 |
| JACC Cardiovasc Interv | 11,7 |
| Cardiovasc Res | 10,4 |
| JACC Heart Fail | 10,3 |
| Nat Cardiovasc Res | 9,4 |
| Circ Arrhythm Electrophysiol | 9,1 |
| Eur J Prev Cardiol | 8,6 |
| Cardiovasc Diabetol | 8,5 |
| JACC Basic Transl Sci | 8,4 |
| JACC Clin Electrophysiol | 8,0 |
| Circ Heart Fail | 7,9 |
| Europace | 7,9 |
| EuroIntervention | 7,8 |
| Basic Res Cardiol | 7,5 |
| Trends Cardiovasc Med | 7,3 |
| Rev Esp Cardiol | 7,2 |
| Rev Esp Cardiol (Engl Ed) | 7,2 |
| Eur Heart J Cardiovasc Imaging | 6,7 |
| J Card Fail | 6,7 |
| Circ Cardiovasc Imaging | 6,5 |


# Les trois choses que l'urgentiste n'ose pas dire au cardiologue

## 1. On vous admire

Les trois choses que l'urgentiste n'ose pas dire au cardiologue

# 2. Vous avez le melon


RECOMMENDED

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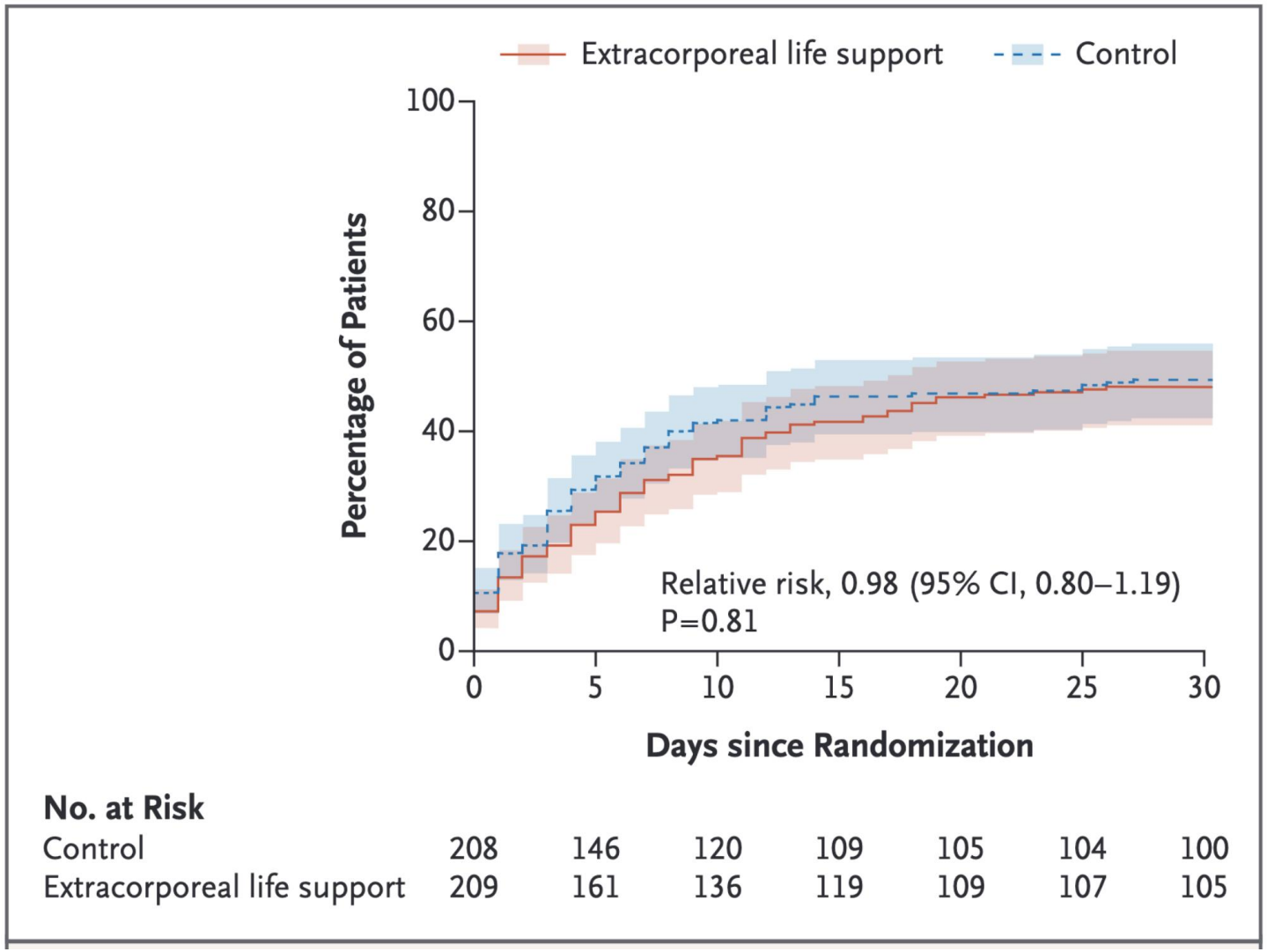
In patients with ACS and severe/refractory CS, short-term mechanical circulatory support may be considered.

**IIb** **C**




**No. at Risk**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Control | 208 | 146 | 120 | 109 | 105 | 104 | 100 |
| Extracorporeal life support | 209 | 161 | 136 | 119 | 109 | 107 | 105 |

ORIGINAL ARTICLE

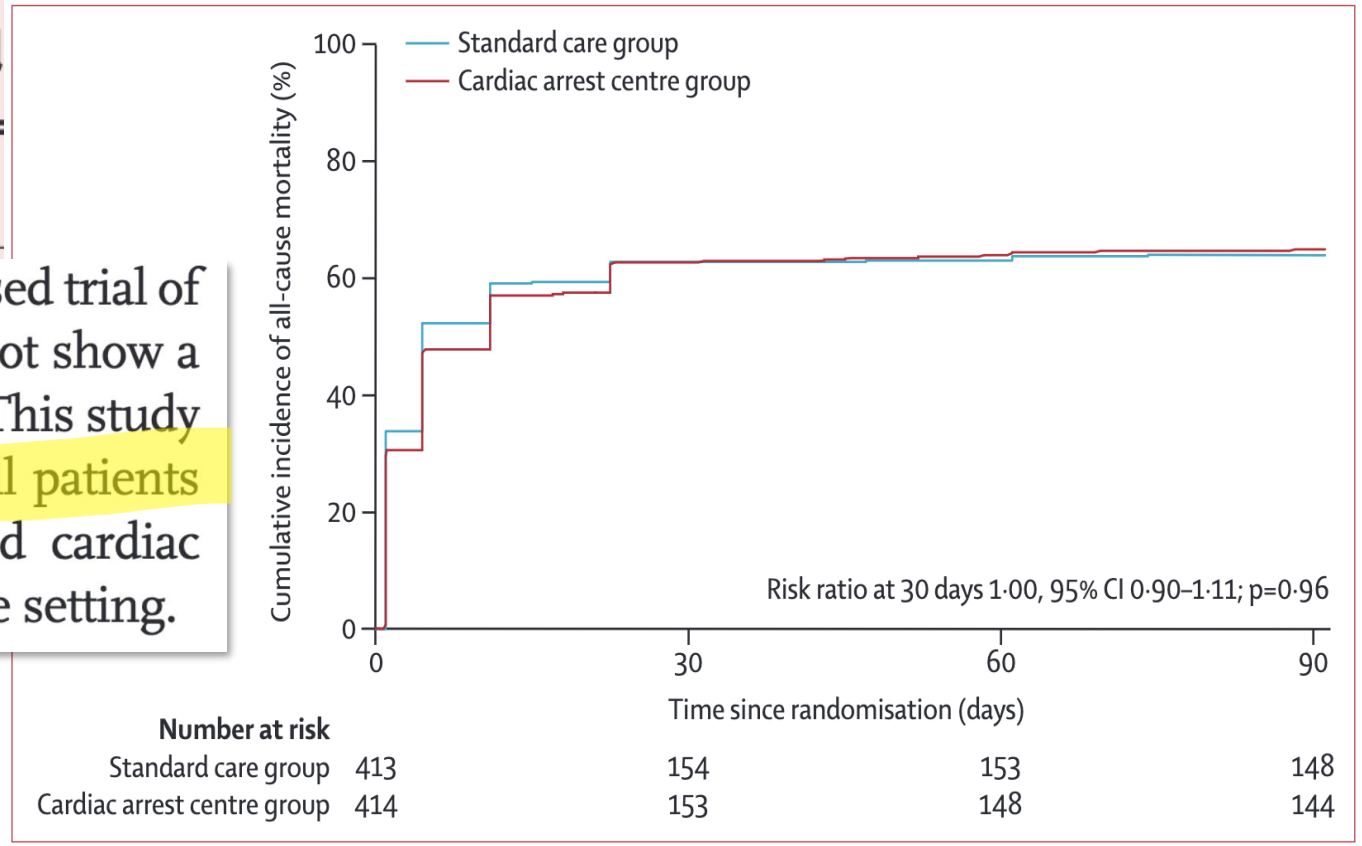
# Extracorporeal Life Support in Infarct-Related Cardiogenic Shock

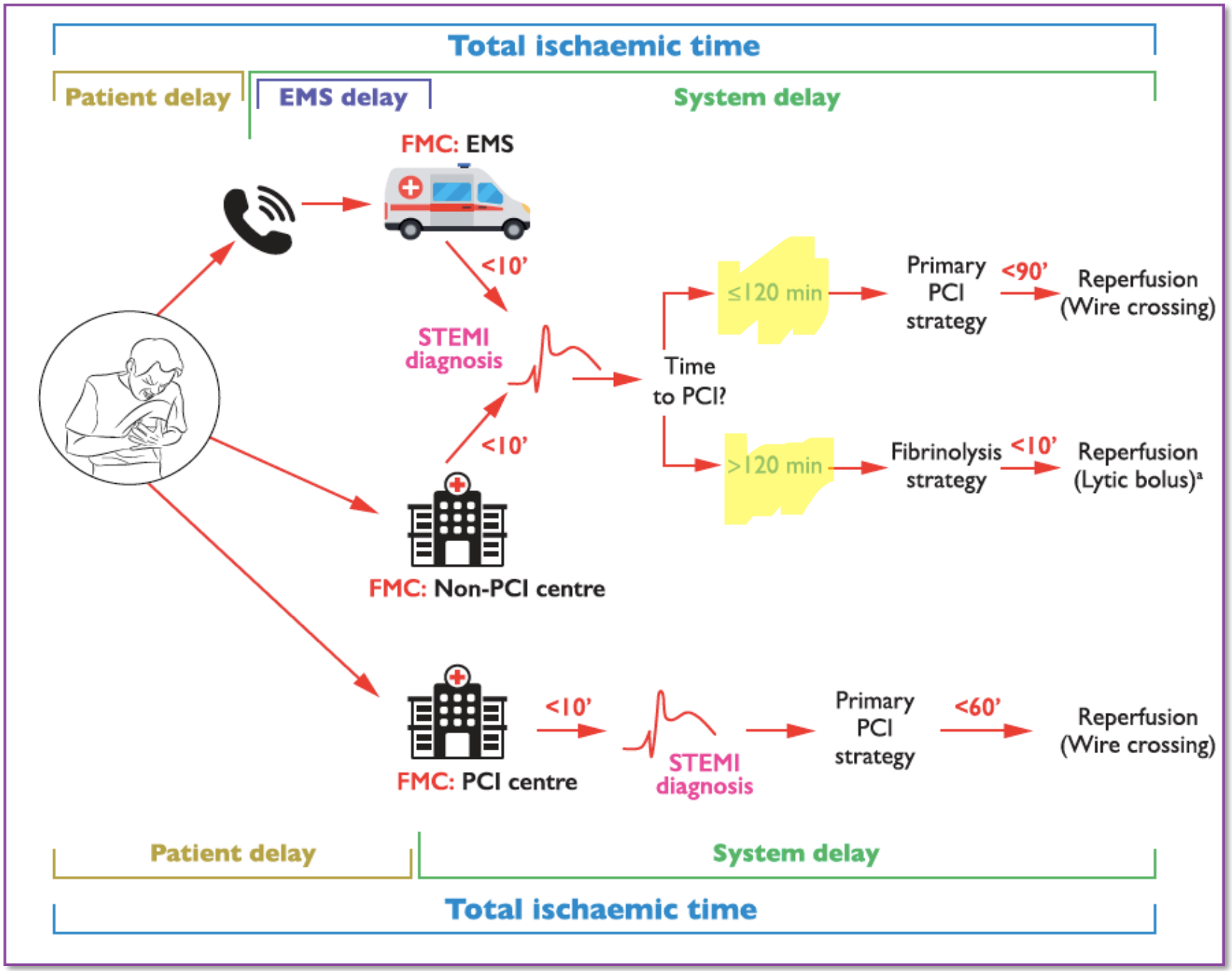
H. Thiele, U. Zeymer, I. Akin, M. Behnes, T. Rassaf, A.A. Mahabadi, R. Lehmann, I. Eitel, T. Graf, T. Seidler, A. Schuster, C. Skurk, D. Duerschmied, P. Clemmensen, M. Hennersdorf, S. Fichtlscherer, I. Voigt, M. Seyfarth, S. John, S. Ewen, A. Linke, E. Tigges, P. Nordbeck, L. Bruch, C. Jung, J. Franz, P. Lauten, T. Goslar, H.-J. Feistritzer, J. Pöss, E. Kirchhof, T. Ouarrak, S. Schneider, S. Desch, and A. Freund, for the ECLS-SHOCK Investigators*

| ***Recommendations for cardiac arrest and out-of-hospital cardiac arrest*** | | |
|---|---|---|
| Evaluation of neurological prognosis (no earlier than 72 h after admission) is recommended in all comatose survivors after cardiac arrest. | **I** | **C** |
| Transport of patients with out-of-hospital cardiac arrest to a cardiac arrest centre according to local protocol should be considered. | **IIa** | **C** |

| | Cardiac arrest centre group (n=414) | Standard group (n= |
|---|---|---|

In conclusion, this large, multicentre, randomised trial of expedited transfer to a cardiac arrest centre did not show a survival benefit compared with standard of care. This study does not support prehospital transportation of all patients to a cardiac arrest centre following resuscitated cardiac arrest without ST elevation within this health-care setting.



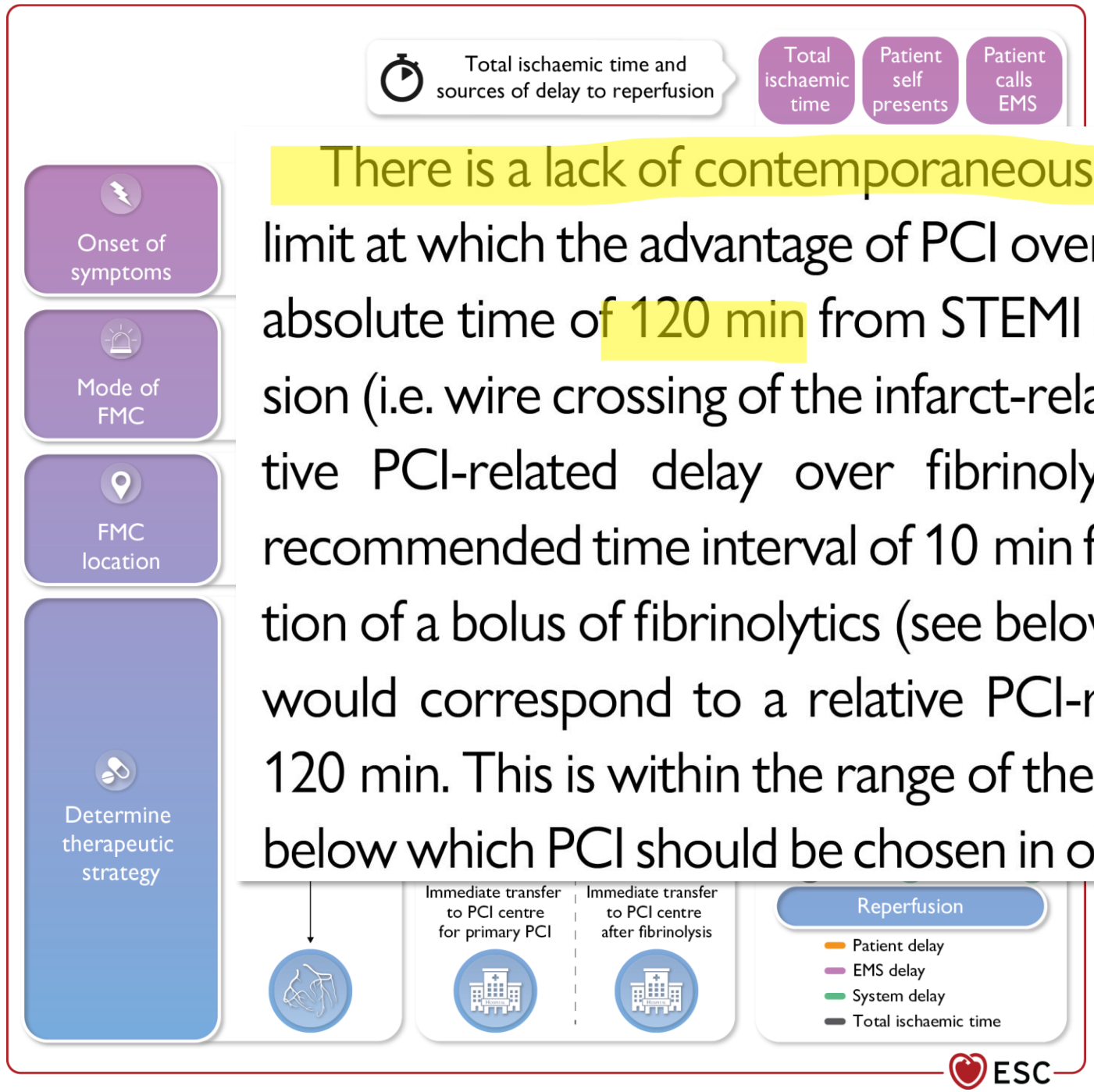



ESC European Society of Cardiology
European Heart Journal (2017) 00, 1–66
doi:10.1093/eurheartj/ehx393
ESC GUIDELINES

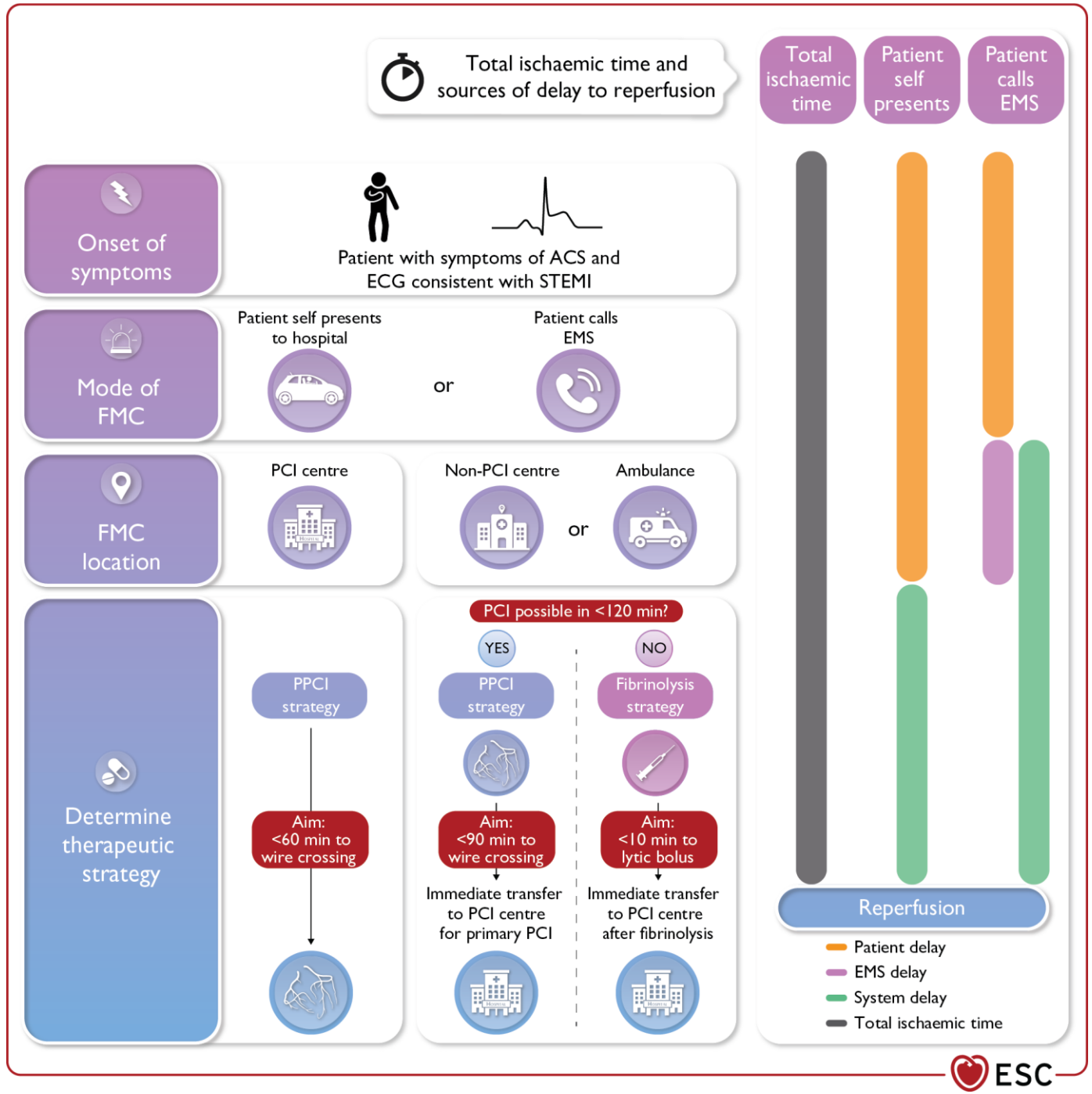
## 2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation

**The Task Force for the management of acute myocardial infarction in patients presenting with ST-segment elevation of the European Society of Cardiology (ESC)**

outcomes. This Task Force recognizes the lack of contemporaneous data to set the limit to choose PCI over fibrinolysis. For simplicity, an absolute time from STEMI diagnosis to PCI-mediated reperfusion [i.e. wire crossing of the infarct-related artery (IRA)] rather than a relative PCI-related delay over fibrinolysis has been chosen. This limit is set to 120 min. Given the maximum limit of 10 min from STEMI diagnosis to bolus of fibrinolytics (see below), the 120 min absolute time would correspond to a PCI-related delay in the range of 110–120 min, being in the range of the times identified in old studies and registries as the limit delay to choose PCI.[107,117–120]




There is a lack of contemporaneous data to inform the treatment delay limit at which the advantage of PCI over fibrinolysis is lost. For simplicity, an absolute time of 120 min from STEMI diagnosis to PCI-mediated reperfusion (i.e. wire crossing of the infarct-related artery [IRA]) rather than a relative PCI-related delay over fibrinolysis has been chosen. Given the recommended time interval of 10 min from STEMI diagnosis to administration of a bolus of fibrinolytics (see below), the 120 min absolute time delay would correspond to a relative PCI-related delay in the range of 110–120 min. This is within the range of the times identified as the limit of delay below which PCI should be chosen in older studies and registries.[176,180–184]


Total ischaemic time and sources of delay to reperfusion
Total ischaemic time
Patient self presents
Patient calls EMS
Onset of symptoms
Patient with symptoms of ACS and ECG consistent with STEMI
Mode of FMC
Patient self presents to hospital
or
Patient calls EMS
FMC location
PCI centre
Non-PCI centre
or
Ambulance
Determine therapeutic strategy
PPCI strategy
Aim: <60 min to wire crossing
PCI possible in <120 min?
YES
NO
PPCI strategy
Aim: <90 min to wire crossing
Immediate transfer to PCI centre for primary PCI
Fibrinolysis strategy
Aim: <10 min to lytic bolus
Immediate transfer to PCI centre after fibrinolysis
Reperfusion
Patient delay
EMS delay
System delay
Total ischaemic time
ESC


DWW


| Anticoagulant therapy | | |
|---|---|---|
| Anticoagulation is recommended for all patients in addition to antiplatelet therapy during primary PCI. | I | C |
| | | |
| In patients with heparin-induced thrombocytopenia, bivalirudin is recommended as the anticoagulant agent during primary PCI. | I | C |
| Routine use of enoxaparin i.v. should be considered.[200–202] | IIa | A |
| Routine use of bivalirudin should be considered.[209,215] | IIa | A |
| Fondaparinux is not recommended for primary PCI.[199] | III | B |

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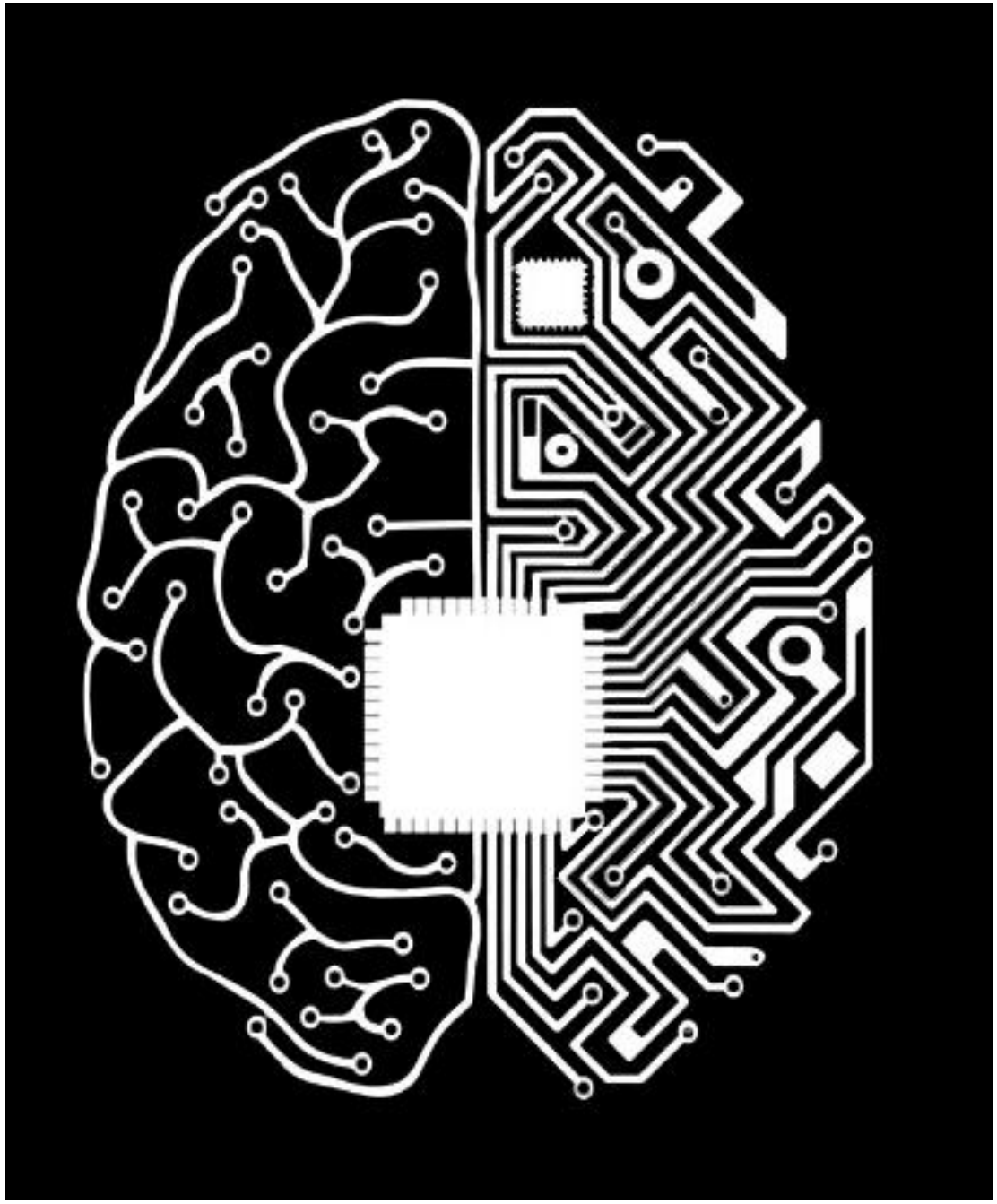
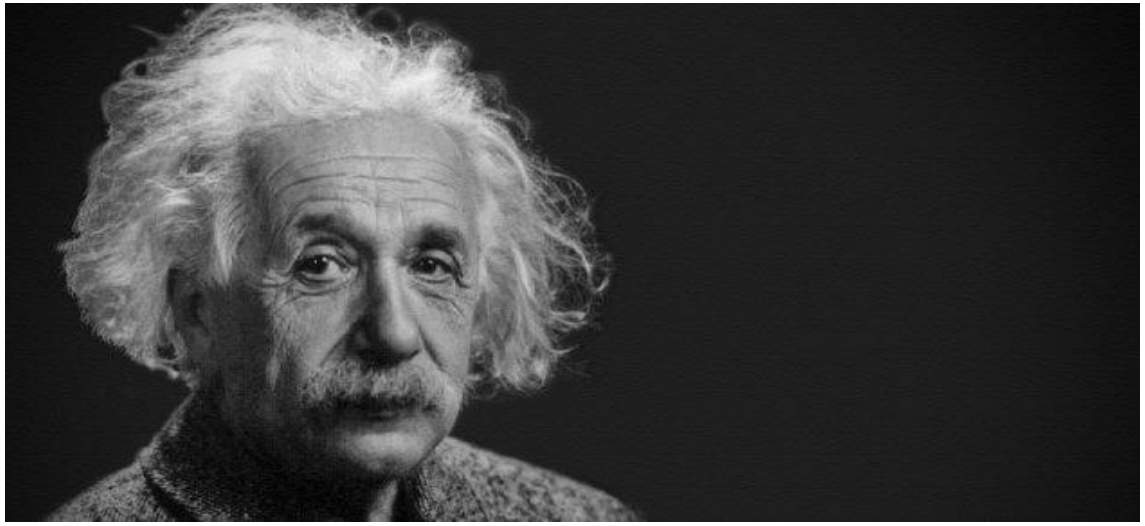
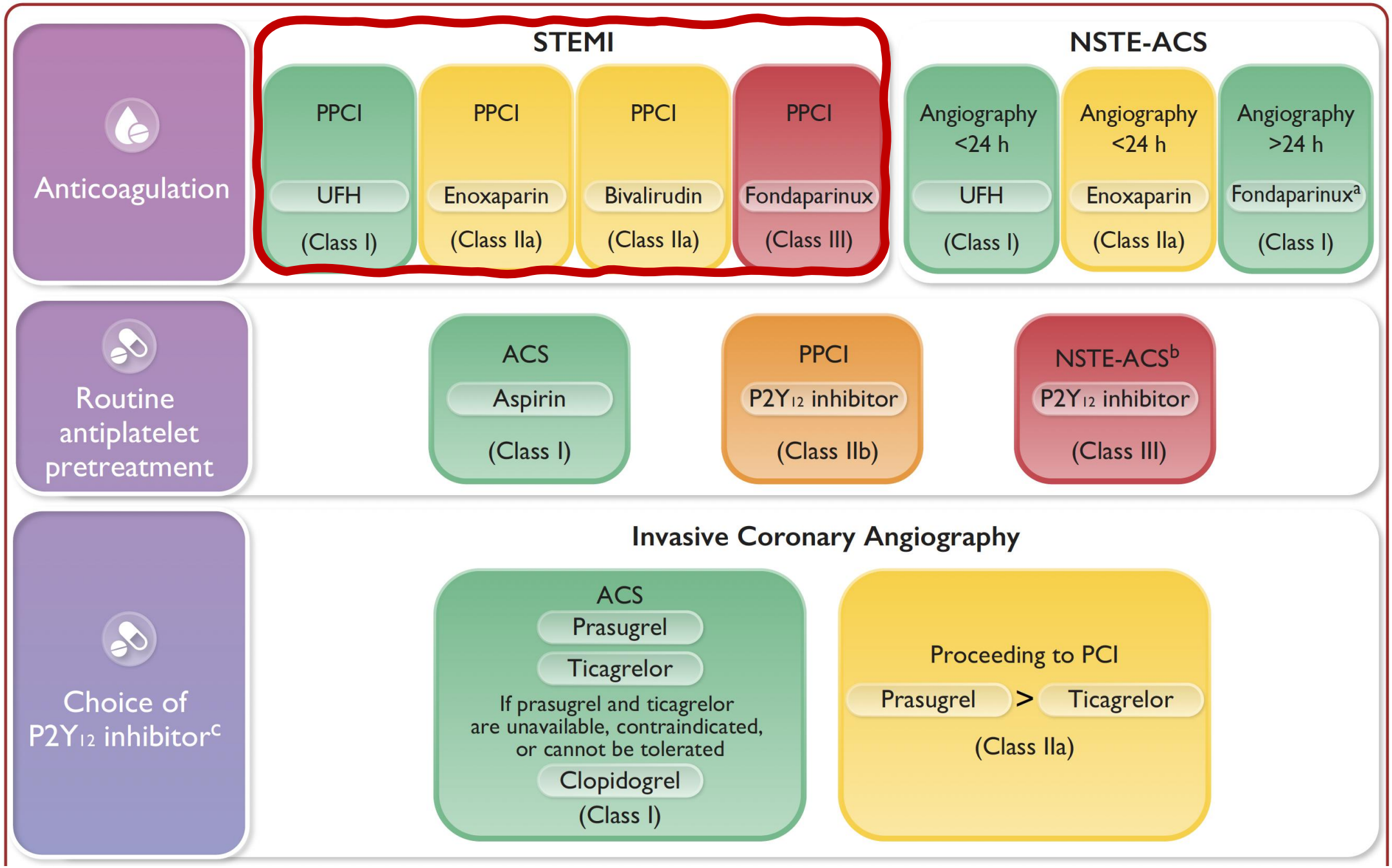





Anticoagulation
STEMI
PPCI
UFH
(Class I)
PPCI
Enoxaparin
(Class IIa)
PPCI
Bivalirudin
(Class IIa)
PPCI
Fondaparinux
(Class III)
NSTE-ACS
Angiography <24 h
UFH
(Class I)
Angiography <24 h
Enoxaparin
(Class IIa)
Angiography >24 h
Fondaparinux[a]
(Class I)
Routine antiplatelet pretreatment
ACS
Aspirin
(Class I)
PPCI
P2Y12 inhibitor
(Class IIb)
NSTE-ACS[b]
P2Y12 inhibitor
(Class III)
Choice of P2Y12 inhibitor[c]
Invasive Coronary Angiography
ACS
Prasugrel
Ticagrelor
If prasugrel and ticagrelor are unavailable, contraindicated, or cannot be tolerated
Clopidogrel
(Class I)
Proceeding to PCI
Prasugrel > Ticagrelor
(Class IIa)

# Les trois choses que l'urgentiste n'ose pas dire au cardiologue

## 3. Ces choses que vous devez cesser de nous dire...

# Les trois choses que l'urgentiste n'ose pas dire au cardiologue

## 3. Ces choses que vous devez cesser de nous dire...

# Je garde le lit pour un ST+

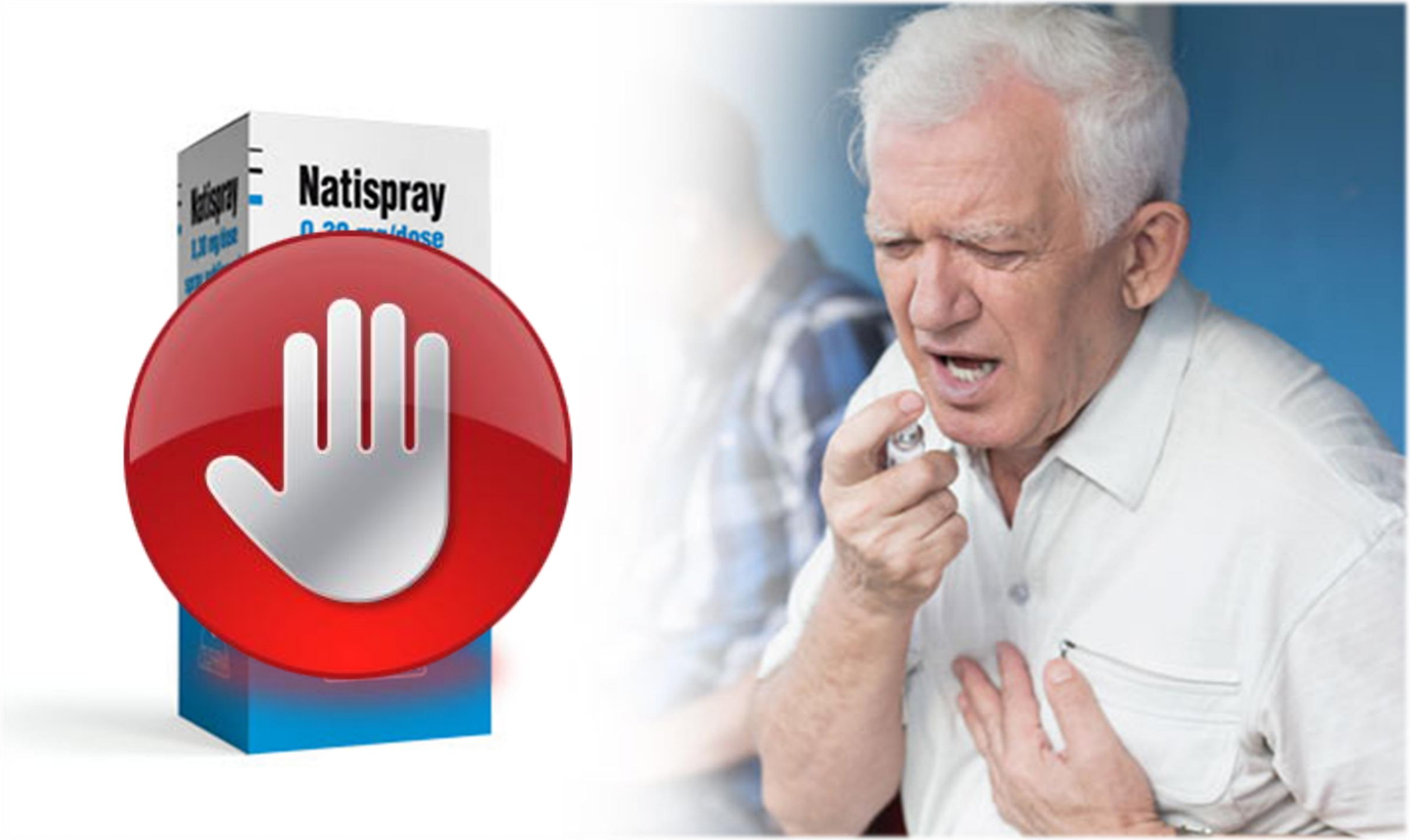

**Il est 04:00 du matin**

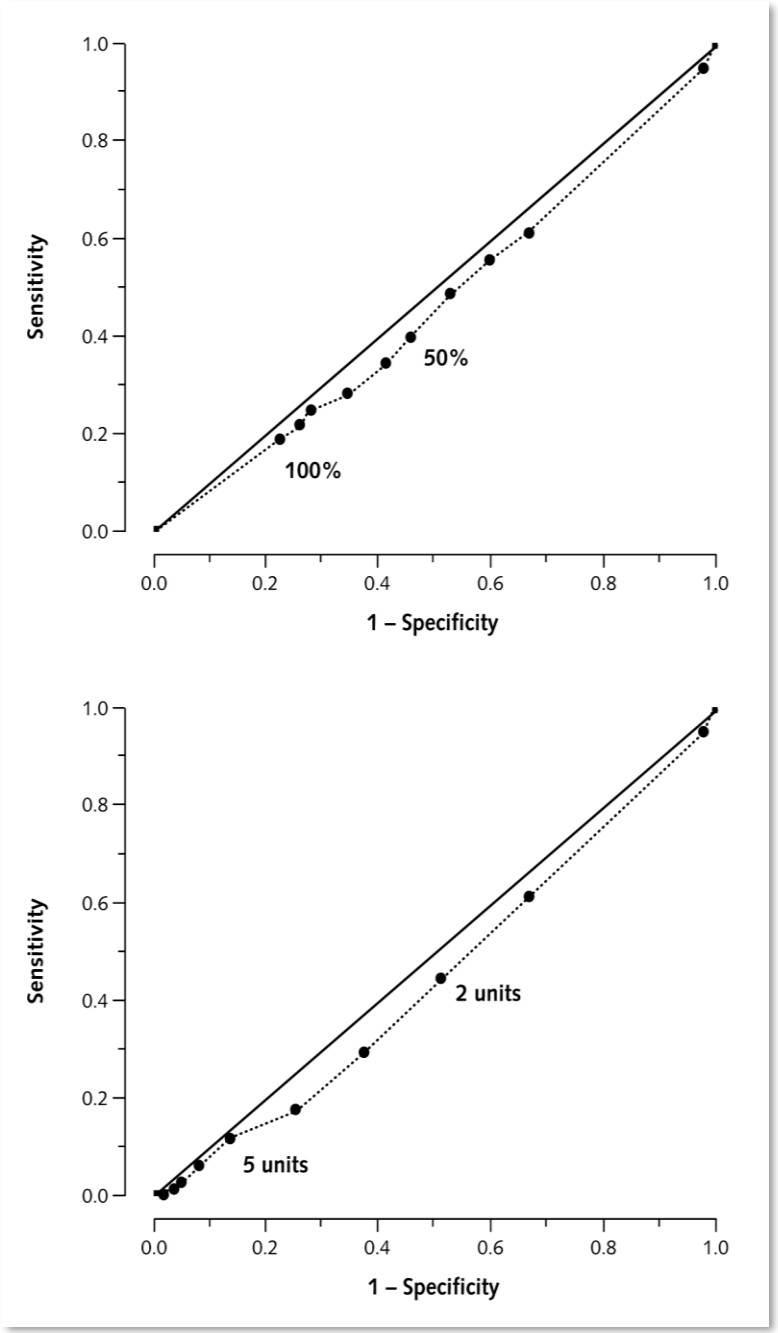
10 SCA ST+ par mois

40% nocturne = 4 SCA ST+ par mois

**Probabilité de SCA ST+ = 0,05 = NS !!!**

# T'as fait un test à la trinitrine ?


Natispray




A reduction in chest pain after nitroglycerin (glyceryl trinitrate) administration can be misleading and is not recommended as a diagnostic manoeuvre.[35] In cases of symptom relief after nitroglycerin administration, another 12-lead ECG must be obtained.

## Chest Pain Relief by Nitroglycerin Does Not Predict Active Coronary Artery Disease

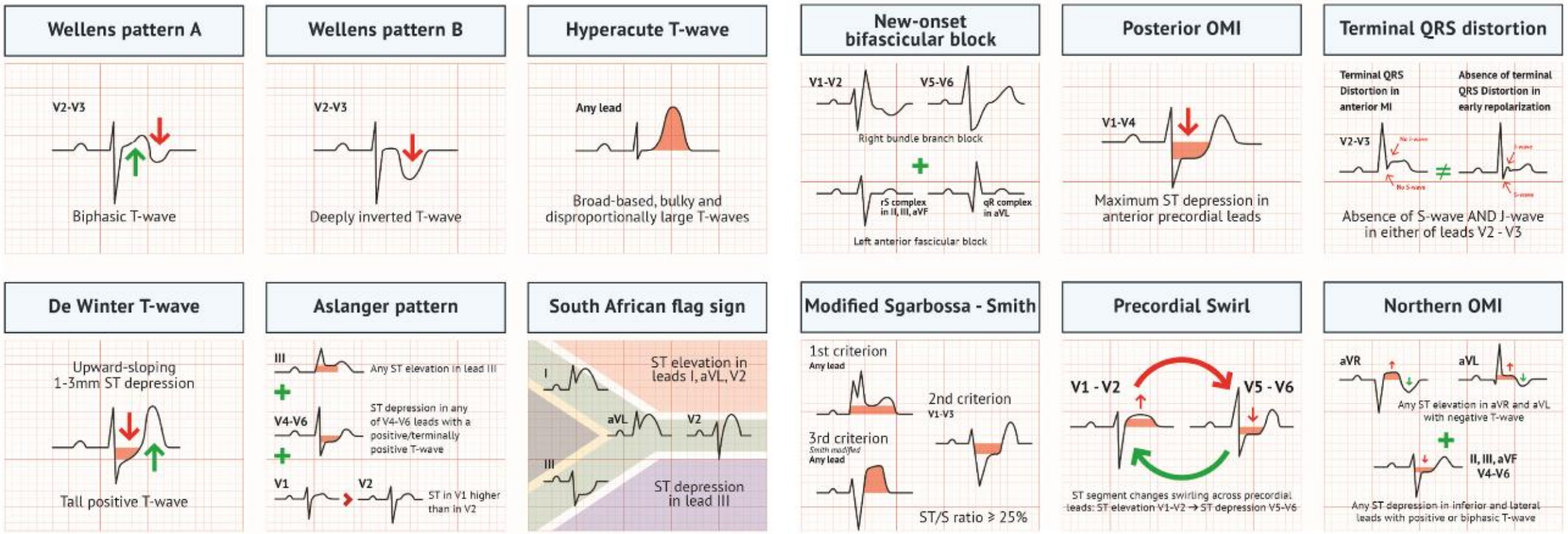
Henrikson, *Ann Intern Med*, 2003

*Figure 3.* Receiver-operating characteristic curves for chest pain relief by nitroglycerin and active coronary artery disease.

# Faxe moi l'ECG ?

Ricci, Ann Emerg Med, 2024

# ECG Patterns of Occlusion Myocardial Infarction: A Narrative Review



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Elsevier Masson France
EM|consulte
www.em-consulte.com

Article original

Prise en charge de l'infarctus avant l'hôpital : identifions nos ennemis !

*Managing STEMI before the hospital : let's identify our enemies!*

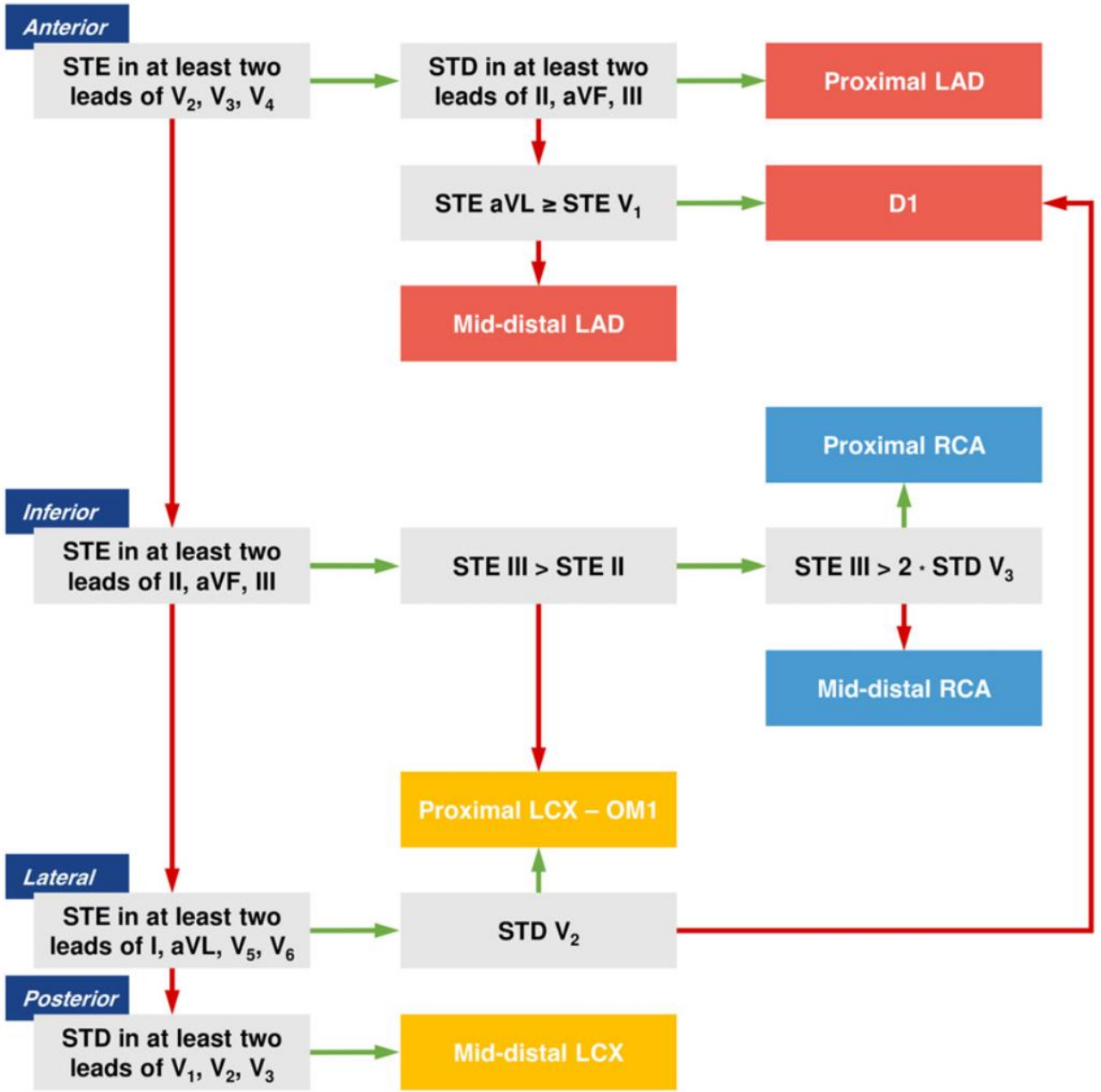
Frédéric Lapostolle[1,*], Yves Lambert[2], Tomislav Petrovic[1]

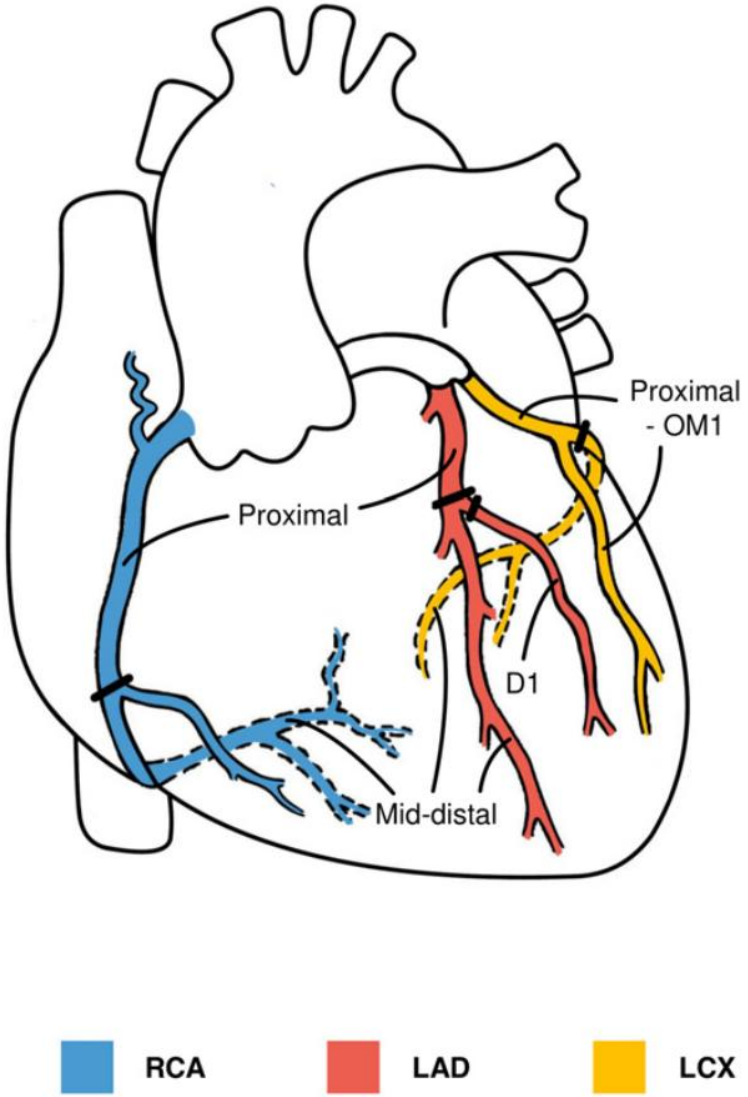
*« Soumettre la décision de prise en charge d'un patient à l'envoi d'un fax relève d'un autre temps. »*


Lapostolle, *Arch Mal Cœur Vaiss, 2022*

# Pourquoi tu l'as thrombolysé ?

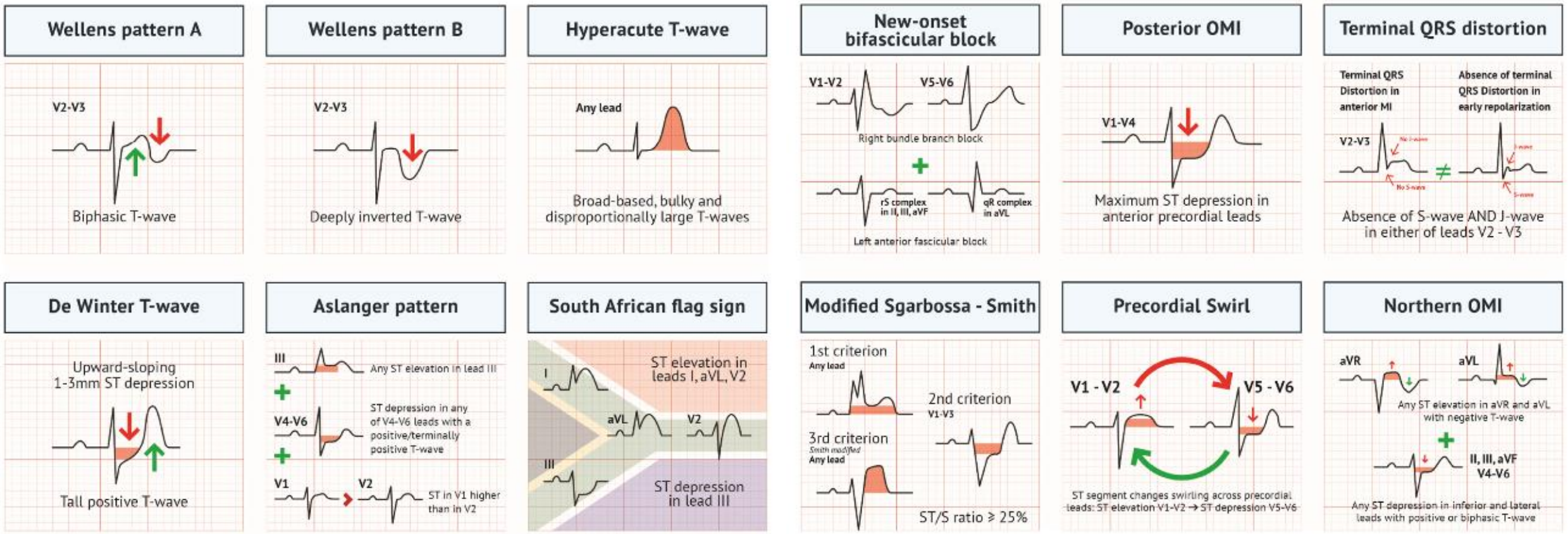
Gaspardone, Am Heart J, 2023



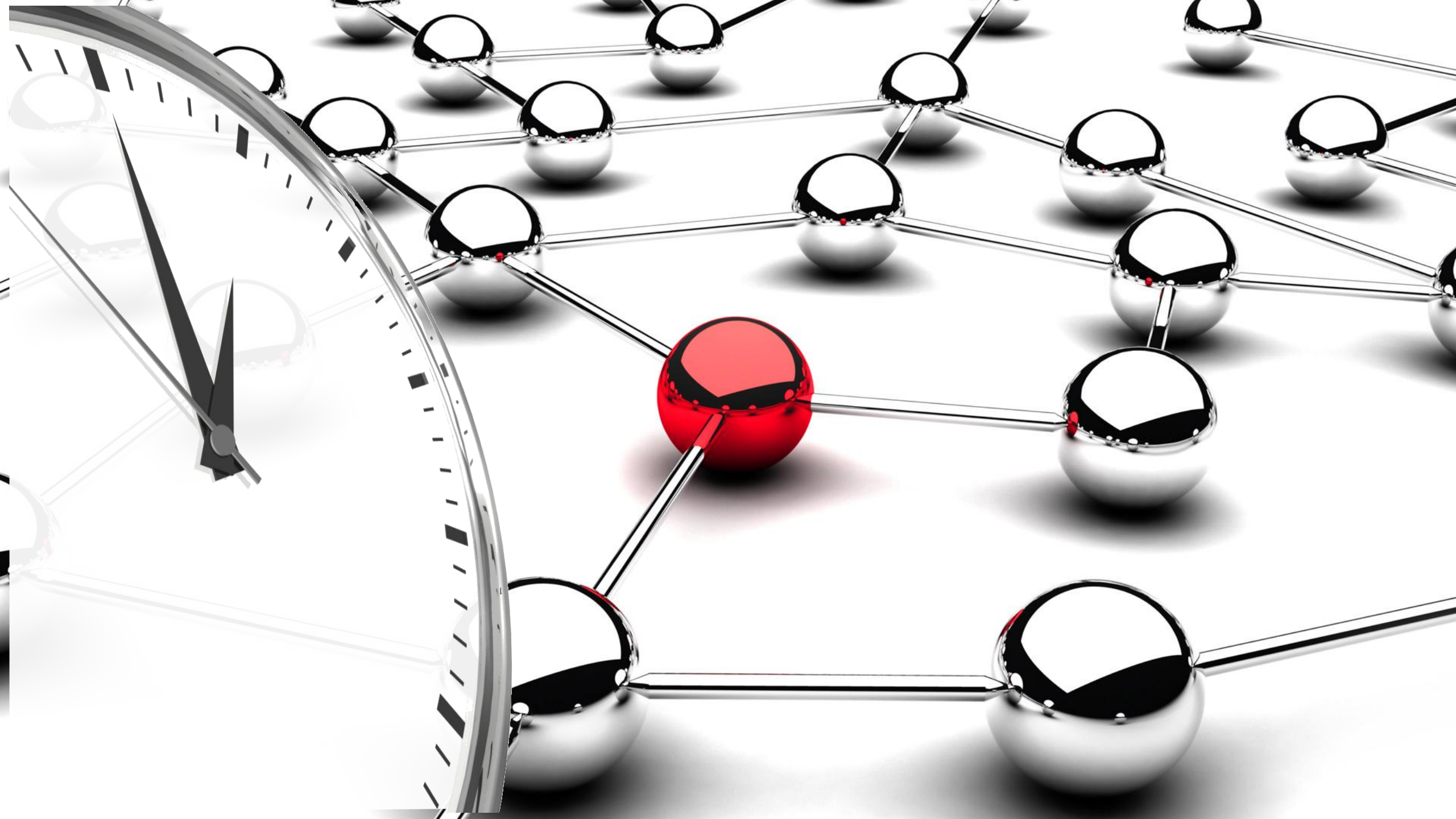



Ricci, Ann Emerg Med, 2024

# ECG Patterns of Occlusion Myocardial Infarction: A Narrative Review



# Les trois choses que l'urgentiste n'ose pas dire au cardiologue




HAS
HAUTE AUTORITÉ DE SANTÉ

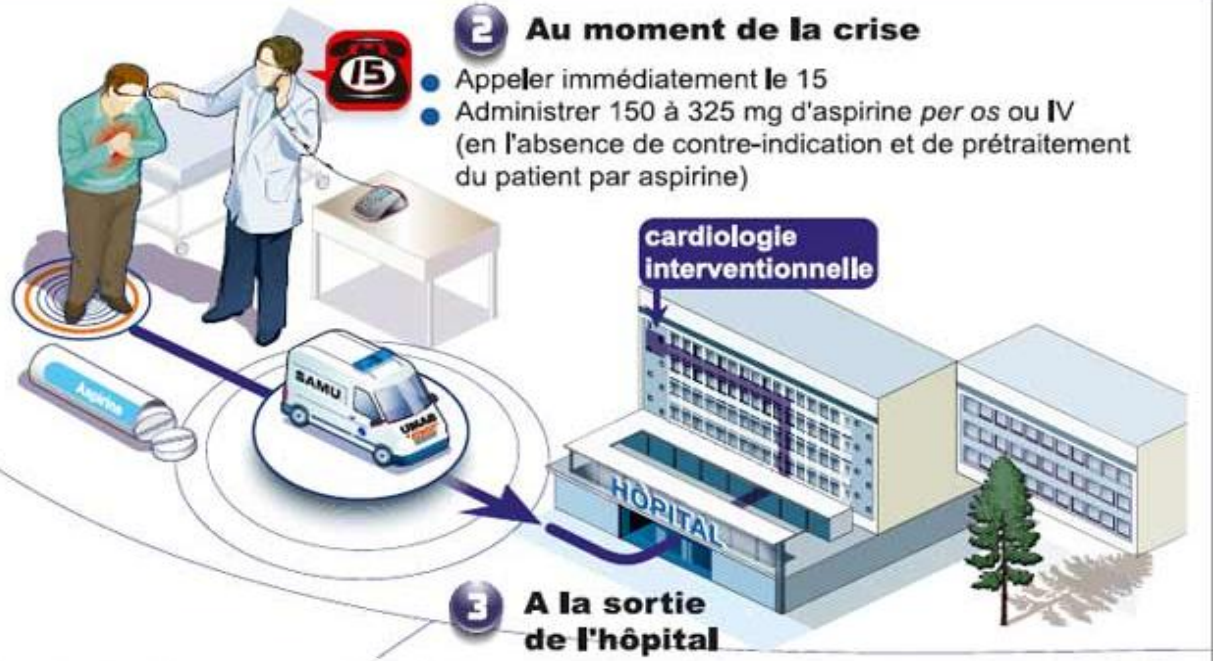
## 1 De façon préventive

- Informer les patients coronariens qu'en cas de douleur thoracique irradiante et prolongée au-delà de 20 minutes, leur premier réflexe doit être d'appeler le 15, sans chercher à se rendre à l'hôpital ou à consulter un médecin



## 2 Au moment de la crise

- Appeler immédiatement le 15
- Administrer 150 à 325 mg d'aspirine *per os* ou IV (en l'absence de contre-indication et de prétraitement du patient par aspirine)




## 3 A la sortie de l'hôpital

- Donner des conseils au patient pour améliorer son hygiène de vie : arrêt impératif du tabac, alimentation équilibrée, activité physique quotidienne (au moins 30 minutes de marche par jour)
- Contrôler et éventuellement corriger les principaux facteurs de risque (HTA, hypercholestérolémie, diabète)
- Prescription médicamenteuse BASI (Bétabloquant, Antiagrégants plaquettaires (aspirine, clopidogrel), Statine, Inhibiteur de l'enzyme de conversion)



## 4 Lors du suivi au long cours

- Informer le patient qu'il doit consulter son médecin traitant tous les 3 mois et son cardiologue une fois par an. Proposer une éducation thérapeutique. S'assurer de l'observance des traitements.

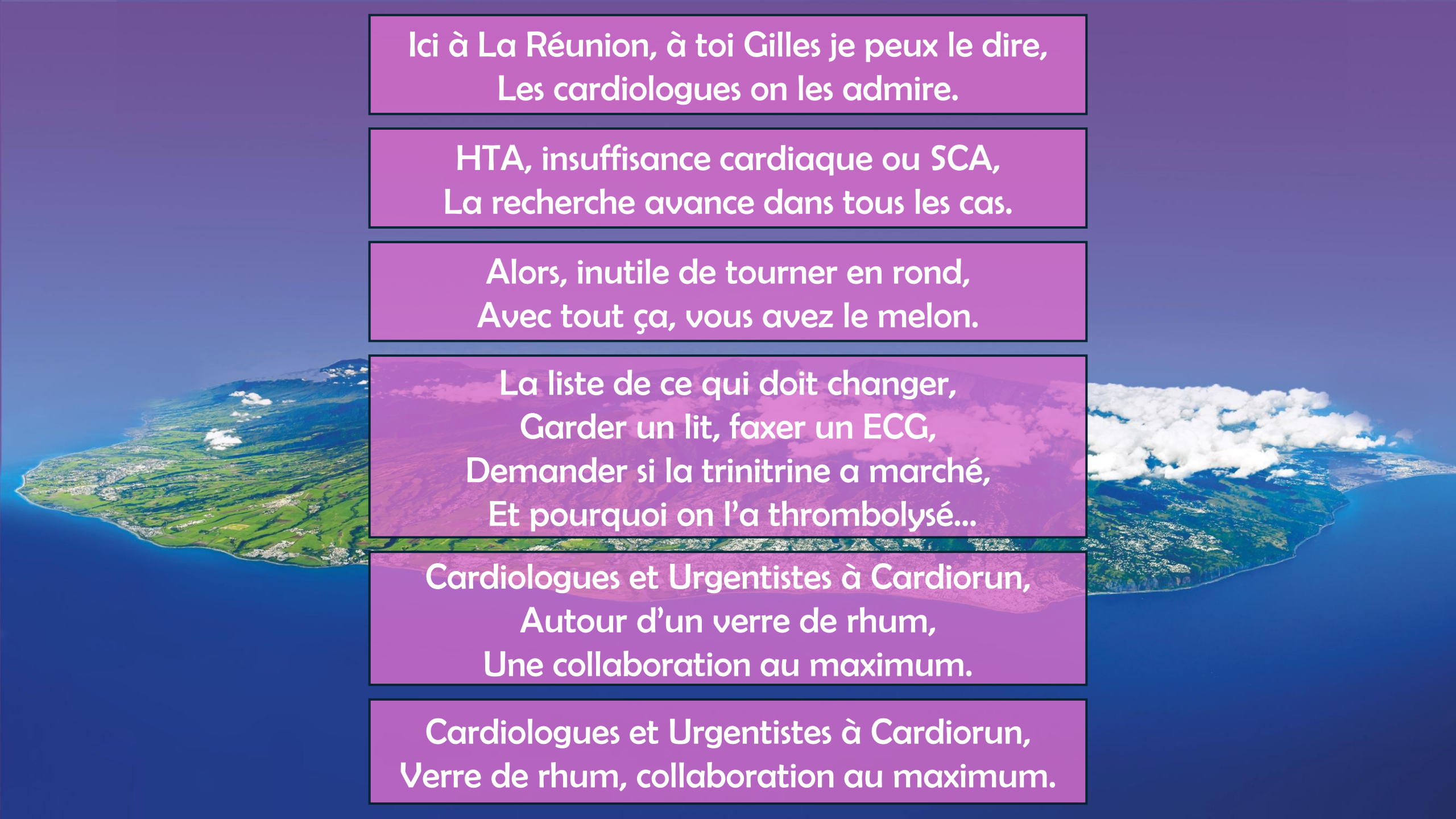
# Participation des équipes d'urgentistes Français aux dernières grandes études internationales

| Etude | Délai douleur-inclusion | Dates d'inclusion | Pays | Total patients | Patients France |
|---|---|---|---|---|---|
| STREAM | < 3 h | 03/2008-07/2012 | 15 | 1.892 | 751 (40%) |
| ATOLL | < 12 h | 07/2008-01/2010 | 4 | 910 | 755 (83%) |
| EUROMAX | < 12 h | 03/2010-06/2013 | 9 | 2.218 | 795 (36%) |
| ATLANTIC | < 6 h | 04/2011-10/2013 | 12 | 1.870 | 625 (33%) |
| TOTAL | | 03/2008-10/2013 | 10 (8-13) | 6.887 | 2.925 (42%) |

Lapostolle, *Presse Med*, 2015


BE
ASK THE
EXPERT!


Cardiologues



Ici à La Réunion, à toi Gilles je peux le dire,
Les cardiologues on les admire.

HTA, insuffisance cardiaque ou SCA,
La recherche avance dans tous les cas.

Alors, inutile de tourner en rond,
Avec tout ça, vous avez le melon.

La liste de ce qui doit changer,
Garder un lit, faxer un ECG,
Demander si la trinitrine a marché,
Et pourquoi on l'a thrombolysé...

Cardiologues et Urgentistes à Cardiorun,
Autour d'un verre de rhum,
Une collaboration au maximum.

Cardiologues et Urgentistes à Cardiorun,
Verre de rhum, collaboration au maximum.

Foto FLapo SAMU 93

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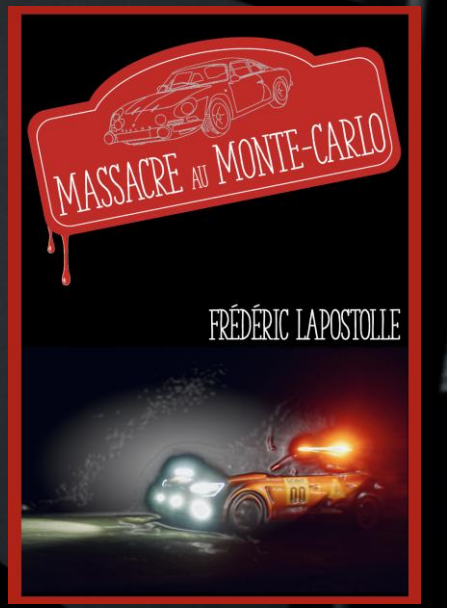
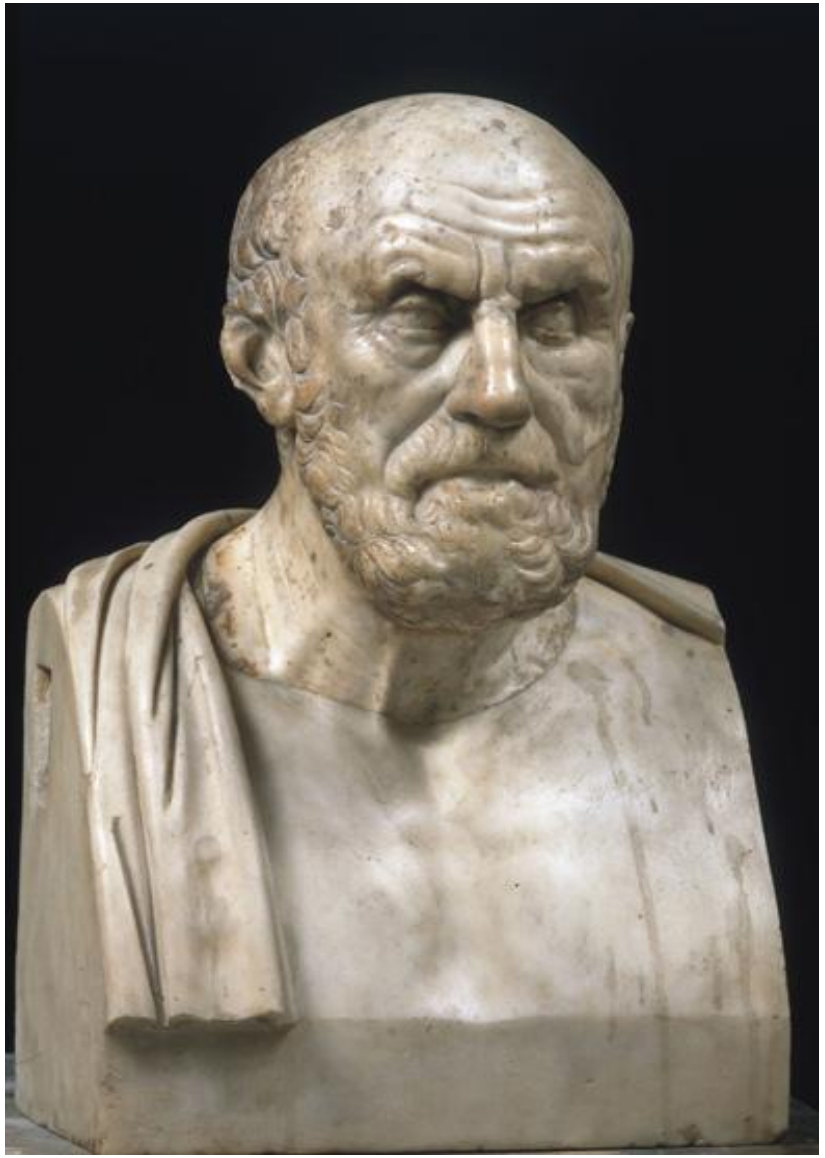


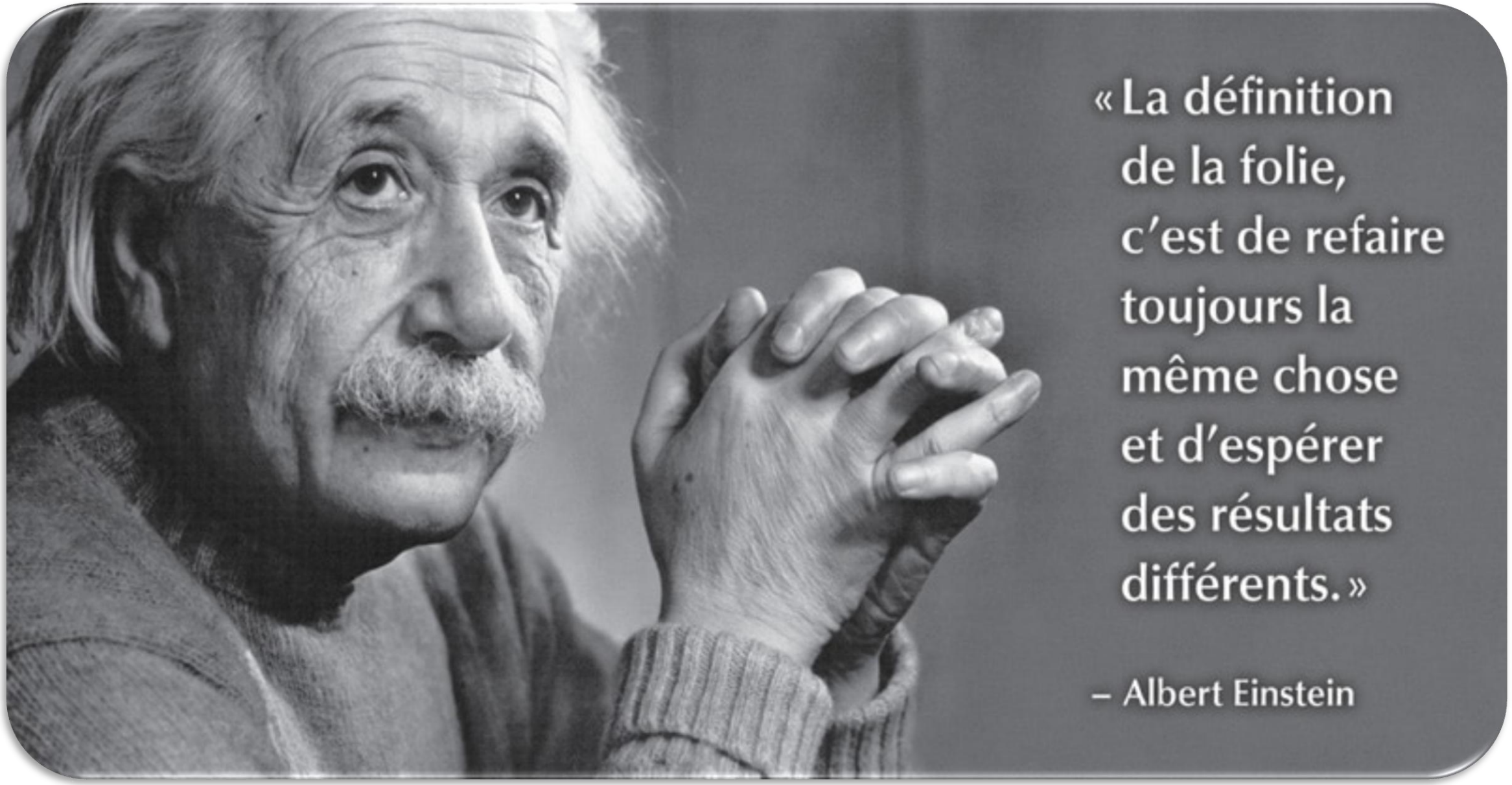

*frederic.lapostolle@aphp.fr*



*Hippocrate, 460-370 av JC*

Les moments favorables pour intervenir passent promptement et la mort survient si on a trop différé.

Il existe ainsi des occasions opportunes dans toutes les maladies.


« La définition de la folie, c'est de refaire toujours la même chose et d'espérer des résultats différents. »
– Albert Einstein