





**STCCCV**

Société Tunisienne de Cardiologie  
& de Chirurgie Cardio-Vasculaire



# Syndromes coronariens aigus sans sus-décalage du ST Un cas difficile

Service de cardiologie B  
Hôpital universitaire F Bourguiba de  
Monastir

# DECLARATION DE CONFLITS D'INTERET

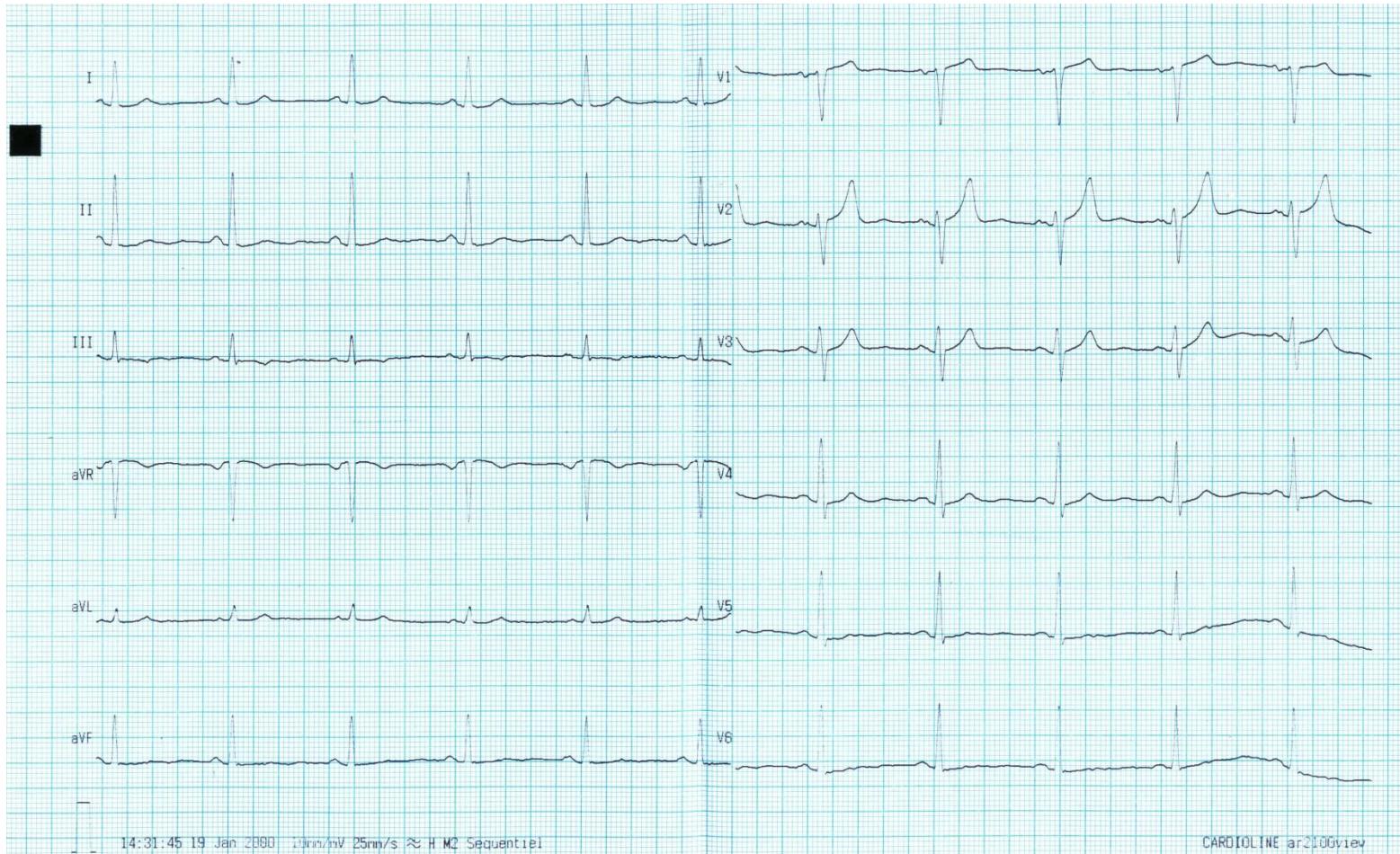
J'ai rien à déclarer.

# Présentation du cas

- Femme de 66 ans.
- Les facteurs de risque: l'hypertension artérielle depuis 2 ans, le diabète insulino-dépendant depuis 10 ans et dyslipidémie.
- Angine de poitrine à l'effort depuis 3 mois.
- Deux épisodes de douleur thoracique la semaine dernière.
- Dernier épisode de douleur thoracique au repos le matin de l'admission.
- Pas de dyspnée à l'effort.
- Pas de coronaropathie connue.

- Admission en USIC.
- Pas de douleurs thoraciques.
- ECG 12 dérivations à 10 minutes.

# ECG



# Biologie

- Glycémie: 20.8 mmol/l.
- Créatinine: 88 umol/l.
- CRP: 5 mg/l.
- Troponine I: 0.74 ug/l.
- CK: 93 UI/l.
- Hb: 9.2 g/dl.
- HCT: 29.8 %.

**Diagnostic clinique: NSTEMI**

# Prise en charge immédiate

- Aspirine: 300 mg DDC puis 100 mg/j.
- Clopidogrel: 600 mg DDC puis 75 mg/j (le seul anti-P2Y12 disponible en Tunisie).
- Enoxaparine: 80 mg sous-cut deux fois par jour.
- Continuer le reste des médicaments (insuline, perindopril, atorvastatine).

# Stratification du risque

- GRACE score et GRACE 2.0.
- Score de risque hémorragique CRUSADE.



# ACS Risk Model

At Admission (in-hospital/to 6 months)

Age

60-69

HR

70-89

SBP

120-139

Creat.

0.8-1.19

CHF

I (no CHF)

Cardiac arrest at admission

ST-segment deviation

Elevated cardiac enzymes/markers

Probability of      Death      Death or MI

In-hospital

4%

18%

To 6 months

8%

31%

SI Units

Reset

Display Score



# ACS Risk Model

At Admission (in-hospital/to 6 months)

Age

60-69

HR

70-89

SBP

120-139

Creat.

0.8-1.19

CHF

I (no CHF)

Cardiac arrest at admission

ST-segment deviation

Elevated cardiac enzymes/markers

Probability of      Death      Death or MI

In-hospital

152

213

To 6 months

120

176

SI Units

Reset

Display Risk

# Calculator

**1. INPUT DATA > 2. DEATH / DEATH MI RESULTS**

Age ( years )

66

Heart rate ( bpm )

80-89

Systolic blood pressure ( mmHg )

120-129

CHF ( Killip class )

I

Diuretic usage

ST-segment deviation

Cardiac arrest at admission

Elevated troponin\*

\* Or other necrosis cardiac biomarkers

Creatinine ( mg dL<sup>-1</sup> /  $\mu$ mol L<sup>-1</sup> )

0.8-1.19 / 7

Renal failure

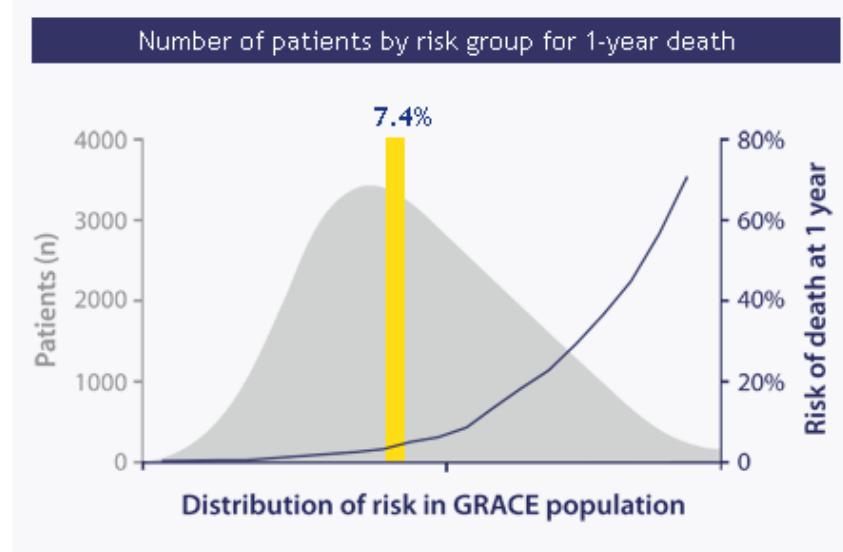
**RESET****CALCULATE**

# Calculator

**1. INPUT DATA > 2. DEATH / DEATH MI RESULTS**

Death		
Time	% Risk (Score)	Histograms
In hospital	3.4	Not available
6 months	6.8-7.9 (122)	Not available
1 year	6.8-7.9	<b>GRAPH</b>
3 years	25	<b>GRAPH</b>

Death/MI		
Time	% Risk	Histograms
1 year	11	<b>GRAPH</b>

**EDIT INPUT****NEW CALCULATION**

Area plot: distribution (log scale) of risk based on the entire GRACE population of 102,341 patients.

Line: risk of death or death/MI



Bleeding Score  
Calculator

INTRODUCTION

CALCULATOR

ABOUT

REFERENCES

LINKS

DISCLAIMER

DOWNLOADS

Last Updated:  
March 2008

Enter values in drop-down boxes below:

Baseline Hematocrit [?](#)

< 31

Prior Vascular Disease [?](#)

No

GFR: Cockcroft-Gault [?](#)

61 - 90

[Calculate GFR](#)

Diabetes Mellitus

Yes

Heart rate on admission

71 - 80

Signs of CHF on admission [?](#)

No

Systolic blood pressure  
on admission

101 - 120

Sex

Female

[Clear Selections](#)

CRUSADE  
Bleeding Score [?](#)

46

High Risk

Risk of In-Hospital  
Major Bleeding [?](#)

11.1%

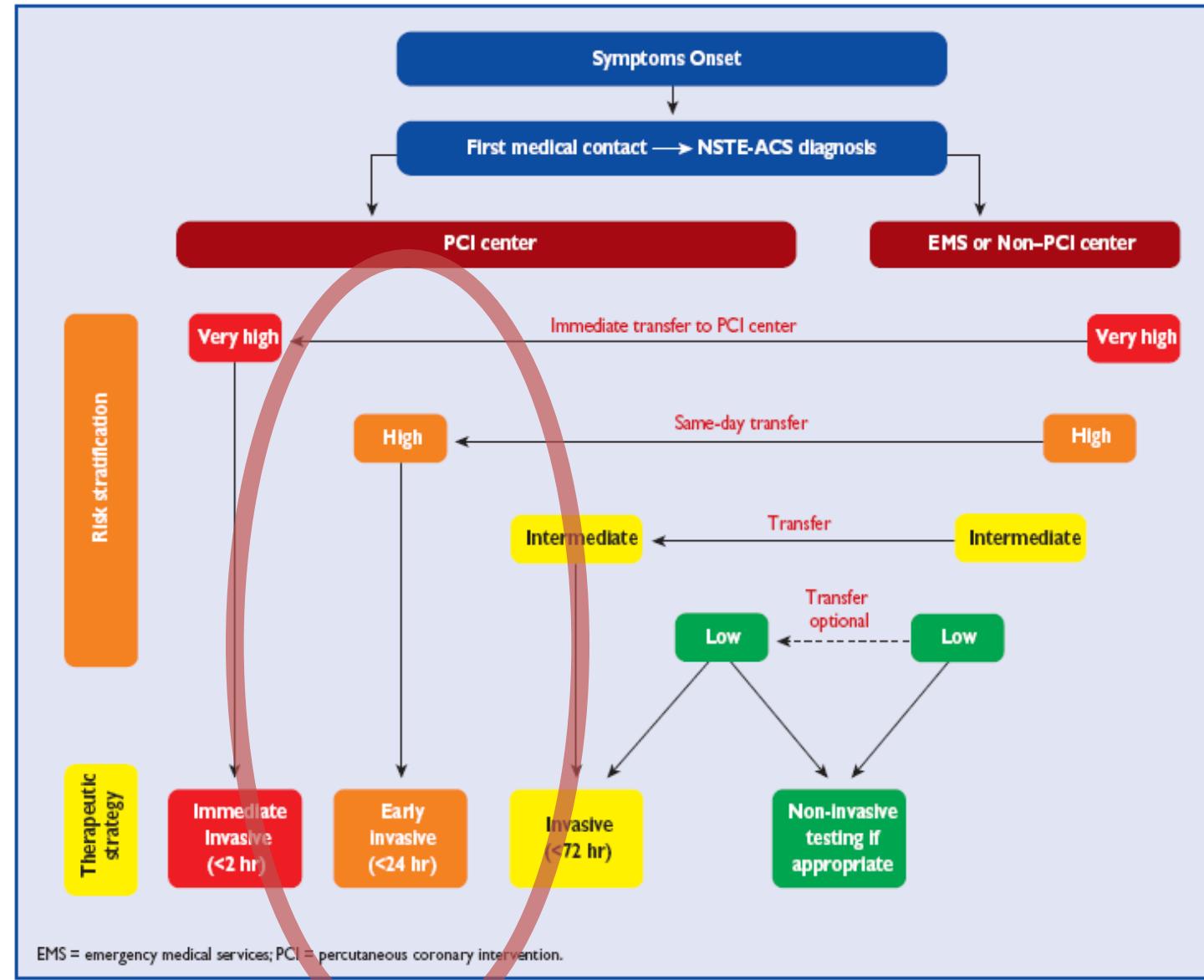
Palm OS and Pocket PC versions of this calculator are available on the [downloads page](#).

## À ce stade:

- NSTEMI à haut risque: GRACE 152.
- Risque hémorragique élevé aussi: CRUSADE 46.

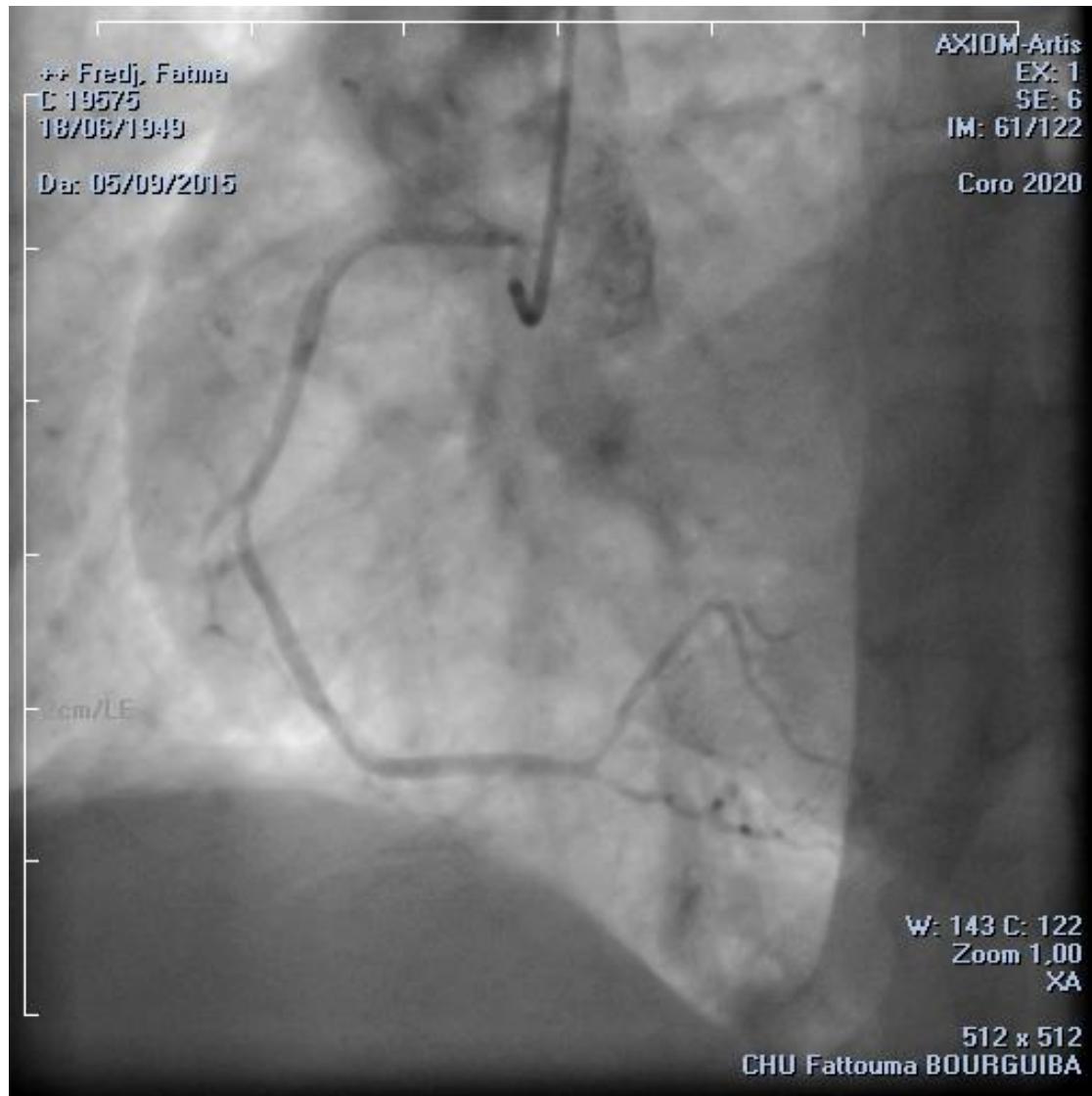
**Table 13** Risk criteria mandating invasive strategy in NSTE-ACS

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 MI
• 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 MI
• 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 <sup>2</sup> )
• LVEF <40% or congestive heart failure
• Early post-infarction angina
• Prior PCI
• Prior CABG
• GRACE risk score >109 and <140
Low-risk criteria
• Any characteristics not mentioned above

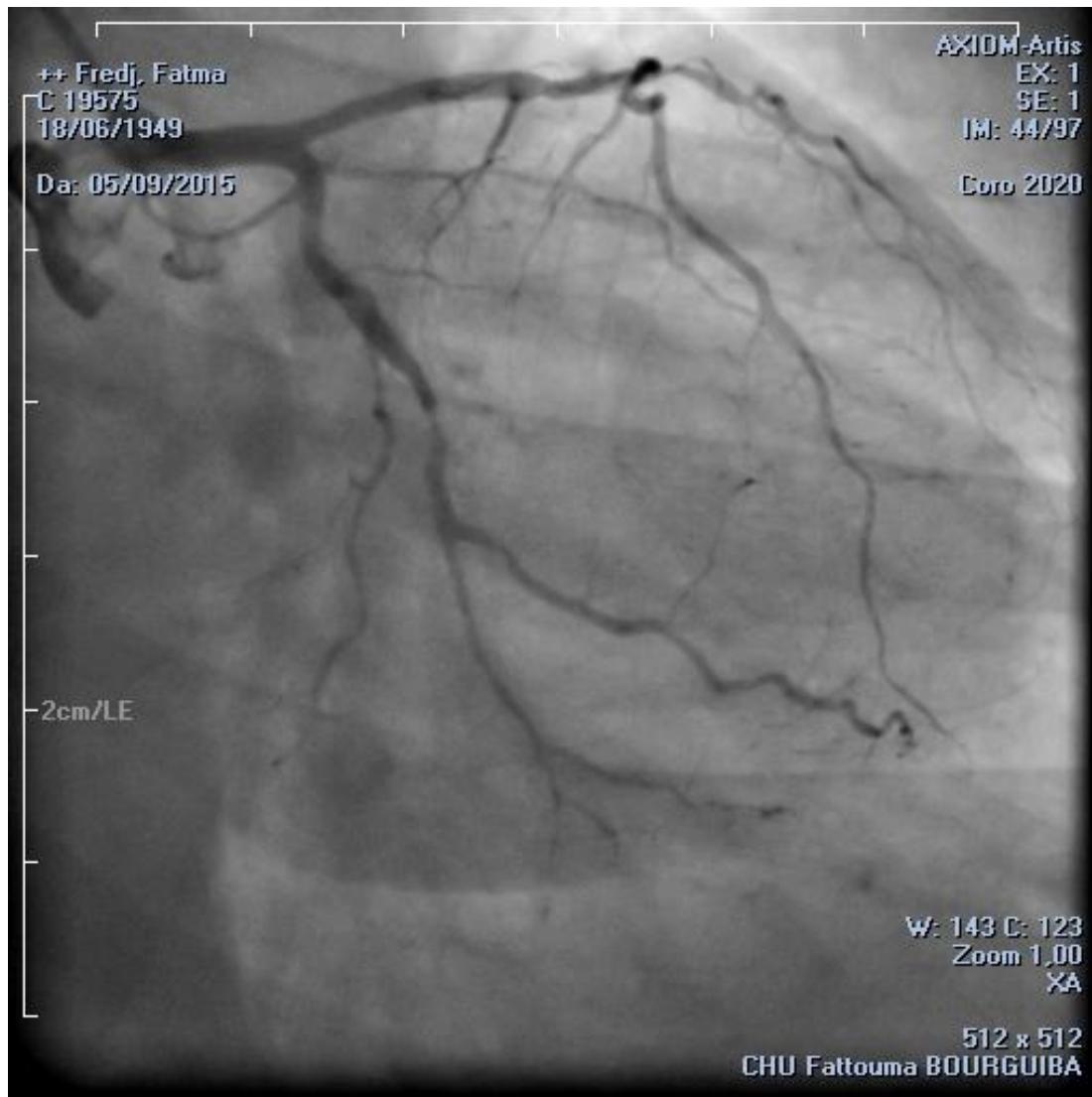


**Figure 6** Selection of non-ST-elevation acute coronary syndrome (NSTE-ACS) treatment strategy and timing according to initial risk stratification.

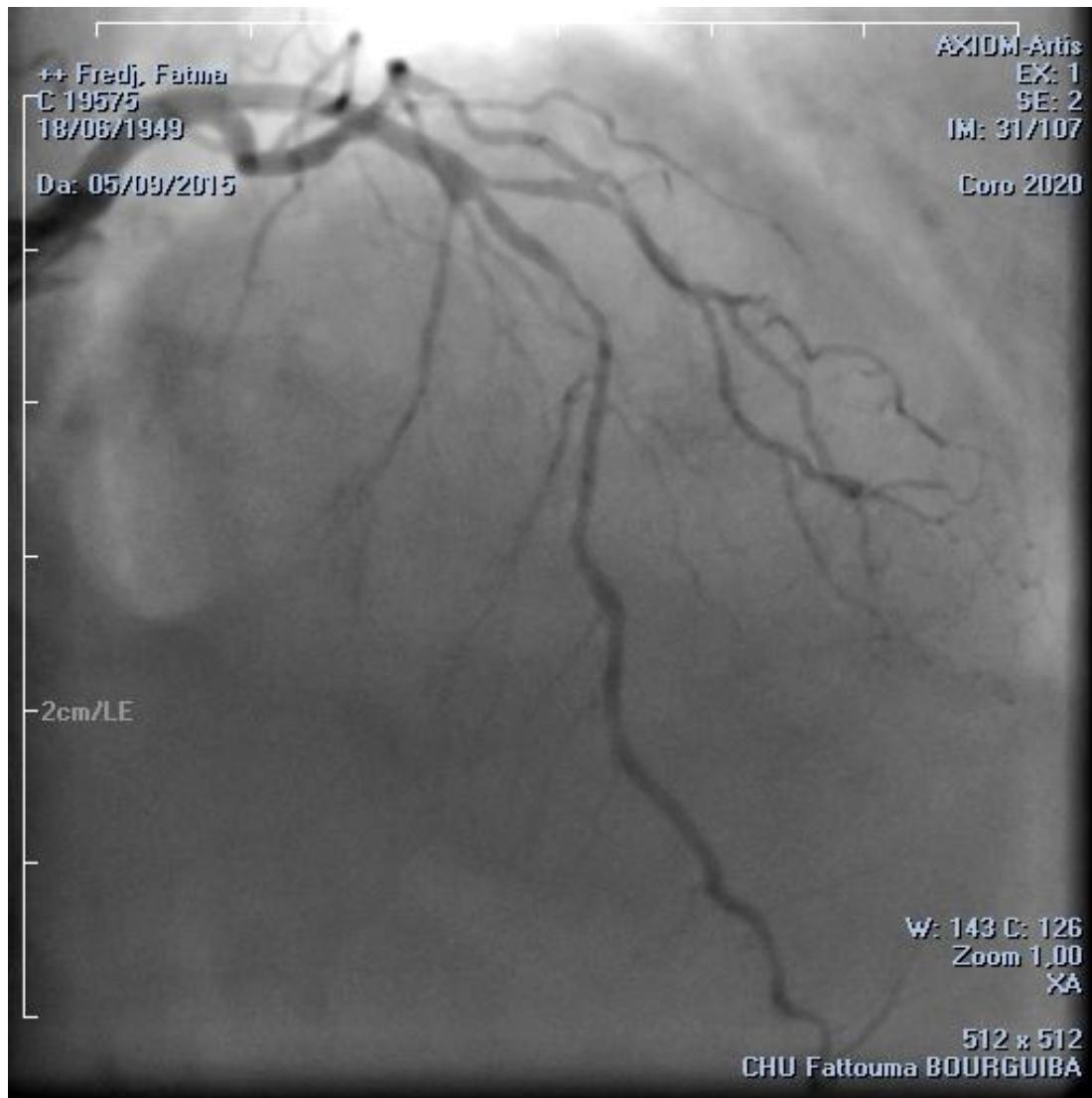
# Angiographie de la coronaire droite

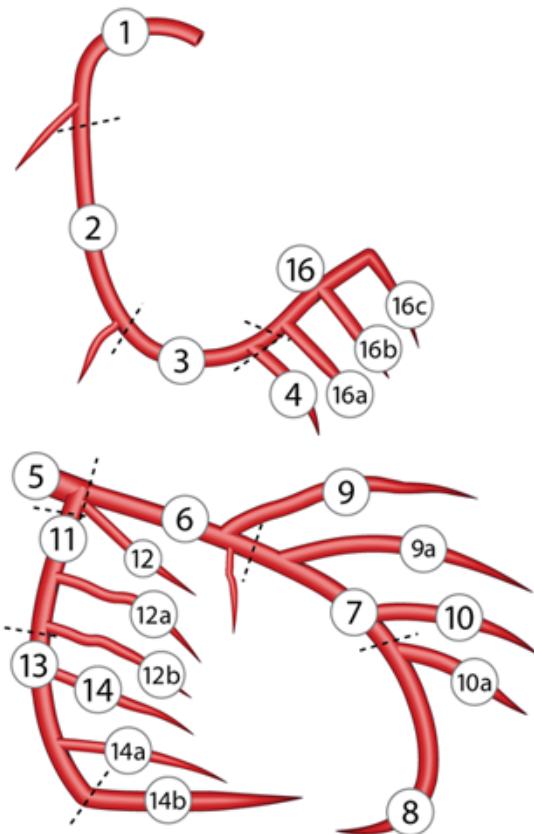


# Angiographie de la coronaire gauche



# Angiographie de la coronaire gauche



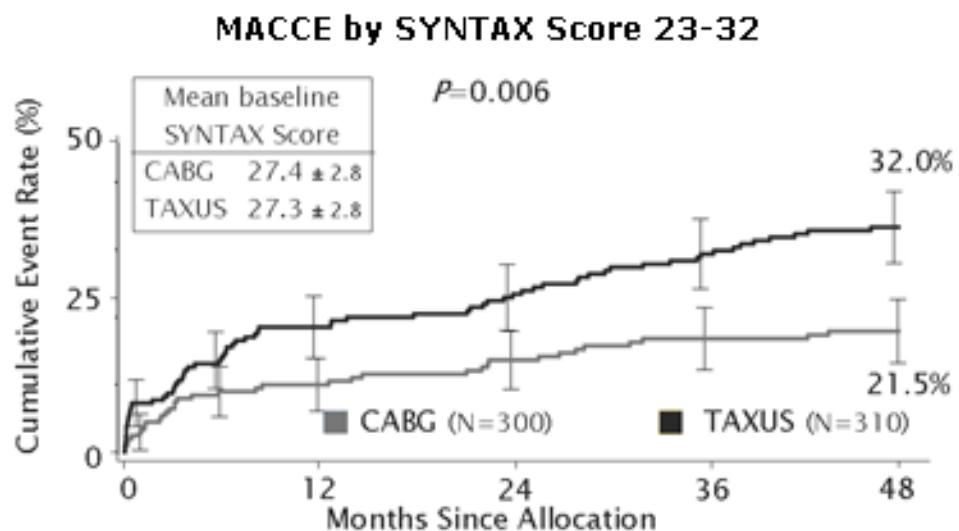


**3. Specify which segments are diseased for lesion 1.** (i)

Click on the coronary tree image to select or unselect segments.

	Segments:	Lesion:	1
<b>RCA</b>	RCA proximal	1	<input type="checkbox"/>
	RCA mid	2	<input checked="" type="checkbox"/>
	RCA distal	3	<input type="checkbox"/>
	Posterior descending	4	<input checked="" type="checkbox"/>
	Posterolateral from RCA	16	<input type="checkbox"/>
	Posterolateral from RCA	16a	<input type="checkbox"/>
	Posterolateral from RCA	16b	<input type="checkbox"/>
	Posterolateral from RCA	16c	<input type="checkbox"/>
<b>LM</b>	Left main	5	<input type="checkbox"/>
<b>LAD</b>	LAD proximal	6	<input type="checkbox"/>
	LAD mid	7	<input checked="" type="checkbox"/>
	LAD apical	8	<input type="checkbox"/>
	First diagonal	9	<input checked="" type="checkbox"/>
	Add. first diagonal	9a	<input type="checkbox"/>
	Second diagonal	10	<input type="checkbox"/>
	Add. second diagonal	10a	<input type="checkbox"/>
<b>LCX</b>	Proximal circumflex	11	<input type="checkbox"/>
	Intermediate/anterior lateral	12	<input type="checkbox"/>
	Obtuse marginal	12a	<input checked="" type="checkbox"/>
	Obtuse marginal	12b	<input type="checkbox"/>
	Distal circumflex	13	<input type="checkbox"/>
	Left posterolateral	14	<input type="checkbox"/>
	Left posterolateral	14a	<input type="checkbox"/>
	Left posterolateral	14b	<input type="checkbox"/>

next



The cumulative MACCE rate is displayed for the SYNTAX Trial group this score corresponds to.

## Summary

### Lesion 1

(segment 2):  $1 \times 2 =$   
Sub total lesion 1

2  
2

### Lesion 2

(segment 4):  $1 \times 2 =$   
Bifurcation Type: Medina 0,1,0:  
Heavy calcification  
Sub total lesion 2

2  
1  
2  
5

### Lesion 3

(segment 7):  $2.5 \times 2 =$   
Bifurcation Type: Medina 1,1,1:  
Angulation  $<70^\circ$   
Length  $>20$  mm  
Heavy calcification  
Sub total lesion 3

5  
2  
1  
1  
2  
11

### Lesion 4

(segment 9):  $1 \times 2 =$   
Bifurcation Type: Medina 1,1,1:  
Angulation  $<70^\circ$   
Length  $>20$  mm  
Sub total lesion 4

2  
2  
1  
1  
6

### Lesion 5

(segment 12a):  $1 \times 2 =$   
Heavy calcification  
Sub total lesion 5

2  
2  
4

### Diffuse disease/Small vessels

Segment 7  
Sub total diffuse disease/small vessels

1  
1

TOTAL:

29

**Important:** The previous additive<sup>1</sup> and logistic<sup>2</sup> EuroSCORE models are out of date. A new model has been prepared from fresh data and is launched at the 2011 EACTS meeting in Lisbon. The model is called EuroSCORE II<sup>3</sup> - this online calculator has been updated to use this new model. If you need to calculate the older "additive" or "logistic" EuroSCORE please visit the old calculator by [clicking here](#).

Patient related factors		Cardiac related factors		
<b>Age<sup>1</sup> (years)</b>	66	0.20	<b>NYHA</b>	II ▼
<b>Gender</b>	female ▼	.2196434	<b>CCS class 4 angina<sup>8</sup></b>	yes ▼
<b>Renal impairment<sup>2</sup></b> <i>See calculator below for creatinine clearance</i>	moderate (CC >50 & <85) ▼	.303553	<b>LV function</b>	good (LVEF > 50%) ▼
<b>Extracardiac arteriopathy<sup>3</sup></b>	no ▼	0	<b>Recent MI<sup>9</sup></b>	yes ▼
<b>Poor mobility<sup>4</sup></b>	no ▼	0	<b>Pulmonary hypertension<sup>10</sup></b>	no ▼
<b>Previous cardiac surgery</b>	no ▼	0	<b>Operation related factors</b>	
<b>Chronic lung disease<sup>5</sup></b>	no ▼	0	<b>Urgency<sup>11</sup></b>	elective ▼
<b>Active endocarditis<sup>6</sup></b>	no ▼	0	<b>Weight of the intervention<sup>12</sup></b>	isolated CABG ▼
<b>Critical preoperative state<sup>7</sup></b>	no ▼	0	<b>Surgery on thoracic aorta</b>	no ▼
<b>Diabetes on insulin</b>	yes ▼	.3542749		
<b>EuroSCORE II</b> ▼	2.26 %			
* Note: This is				

**Recommendation for the type of revascularization (CABG or PCI) in patients with SCAD with suitable coronary anatomy for both procedures and low predicted surgical mortality**

Recommendations according to extent of CAD	CABG		PCI		Ref <sup>c</sup>
	Class <sup>a</sup>	Level <sup>b</sup>	Class <sup>a</sup>	Level <sup>b</sup>	
One or two-vessel disease without proximal LAD stenosis.	IIb	C	I	C	
One-vessel disease with proximal LAD stenosis.	I	A	I	A	107,108,160, 161,178,179
Two-vessel disease with proximal LAD stenosis.	I	B	I	C	108,135,137
Left main disease with a SYNTAX score ≤ 22.	I	B	I	B	17,134,170
Left main disease with a SYNTAX score 23–32.	I	B	IIa	B	17
Left main disease with a SYNTAX score >32.	I	B	III	B	17
Three-vessel disease with a SYNTAX score ≤ 22.	I	A	I	B	17,157,175,176
Three-vessel disease with a SYNTAX score 23–32.	I	A	III	B	17,157,175,176
Three-vessel disease with a SYNTAX score >32.	I	A	III	B	17,157,175,176

CABG = coronary artery bypass grafting; LAD = left anterior descending coronary artery; PCI = percutaneous coronary intervention; SCAD = stable coronary artery disease.

<sup>a</sup>Class of recommendation.

<sup>b</sup>Level of evidence.

<sup>c</sup>References.