

Case presentation, decision making in three vessel disease

PD Dr. med.

Pedrazzini Giovanni

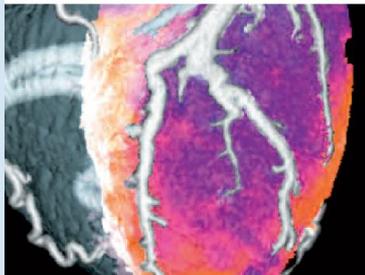
MD, FESC

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Associated Institute
of the University of Zurich



**University of
Zurich**
UZH


CARDIOCENTROTICINO

Guidelines on myocardial revascularization

The Task Force on Myocardial Revascularization of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS)

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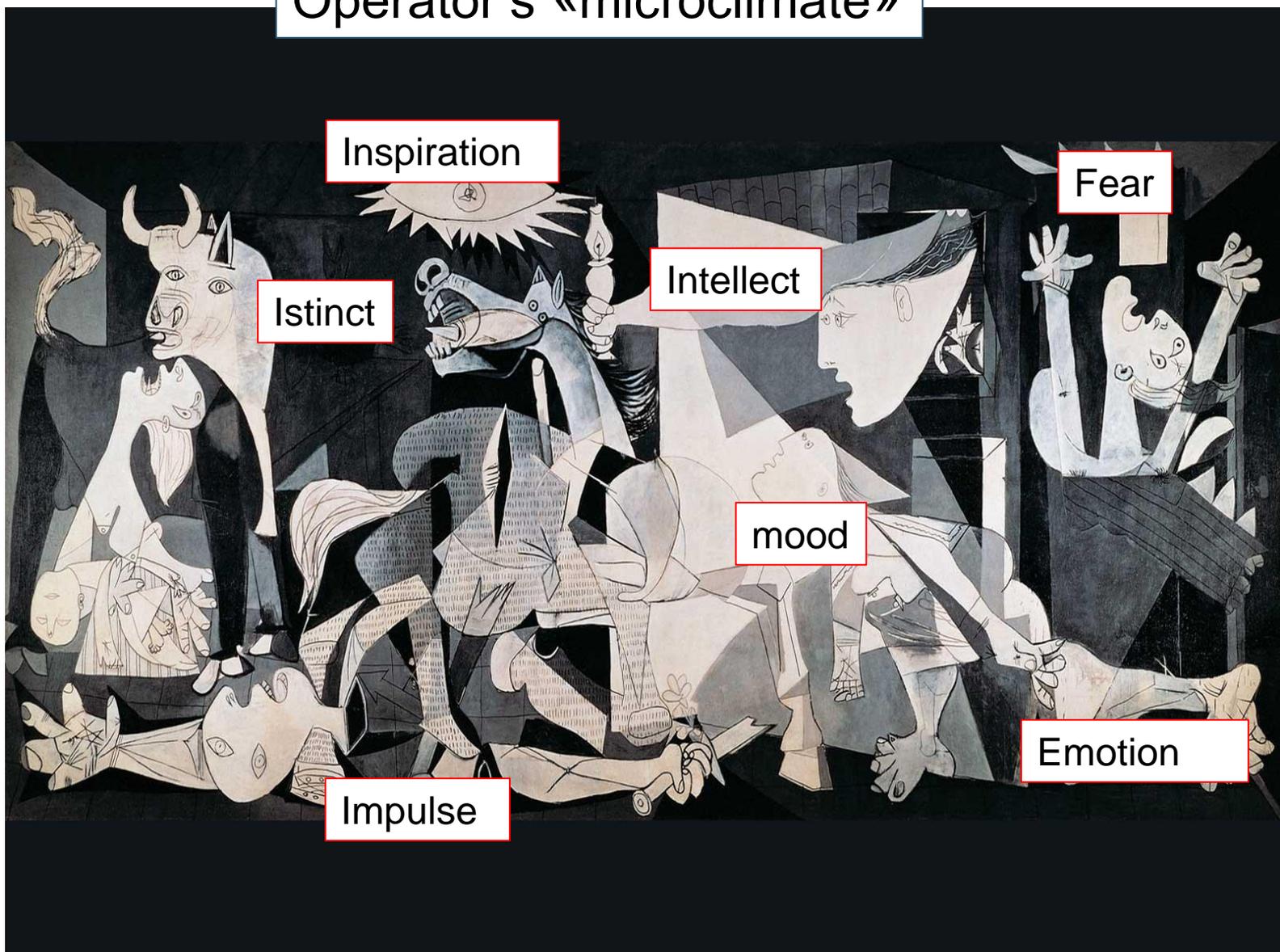
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Table 8 Indications for revascularization in stable angina or silent ischaemia

	Subset of CAD by anatomy	Class ^a	Level ^b	Ref. ^c
For prognosis	1 left main >50% ^d	I	A	30, 31, 34
	Any proximal LAD >50% ^d	I	A	30–37
	2VD or 3VD with impaired LV function ^d	I	B	30–37
	Proven large area of ischaemia (>10% LV)	I	B	13, 14, 38
	Single remaining patent vessel >50% stenosis ^d	I	C	—
For symptoms	1VD without proximal LAD and without >10% ischaemia	III	A	39, 40, 53
	Any stenosis >50% with limiting angina or angina equivalent, unresponsive to OMT	I	A	30, 31, 39–43
	Dyspnoea/CHF and >10% LV ischaemia/viability supplied by >50% stenotic artery	IIa	B	14, 38
	No limiting symptoms with OMT	III	C	—

Operator's «microclimate»



Inspiration

Instinct

Intellect

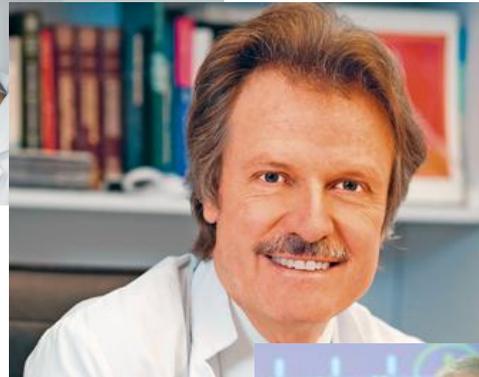
mood

Fear

Emotion

Impulse

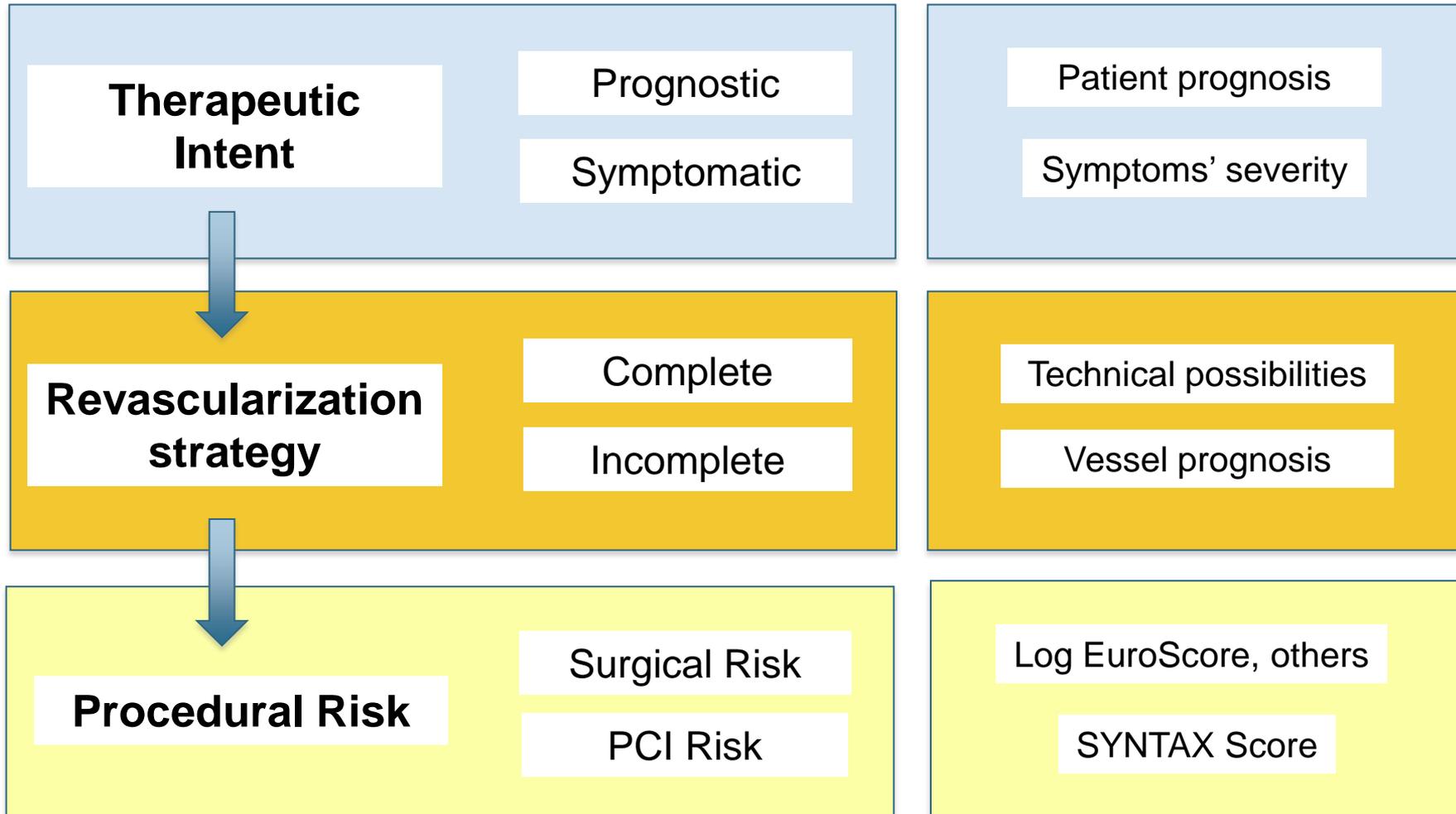
Role of the personal attitude



Multidisciplinary decision – PCI vs CABG

Negotiation's points

Discussion/Evaluation points

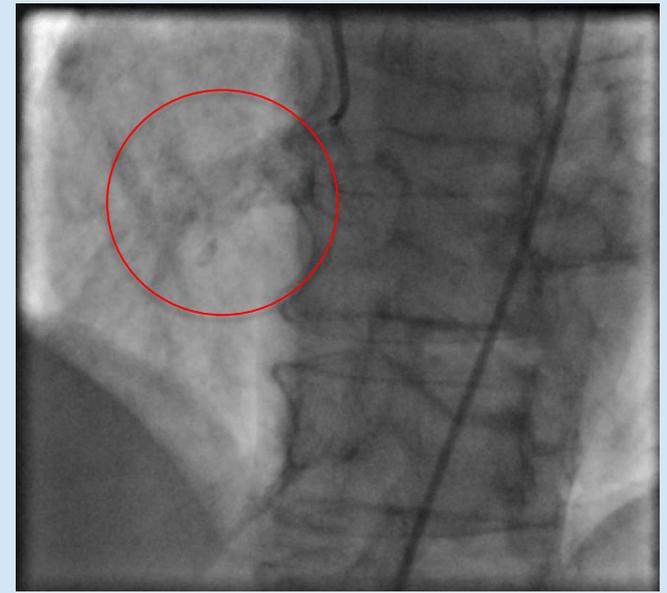
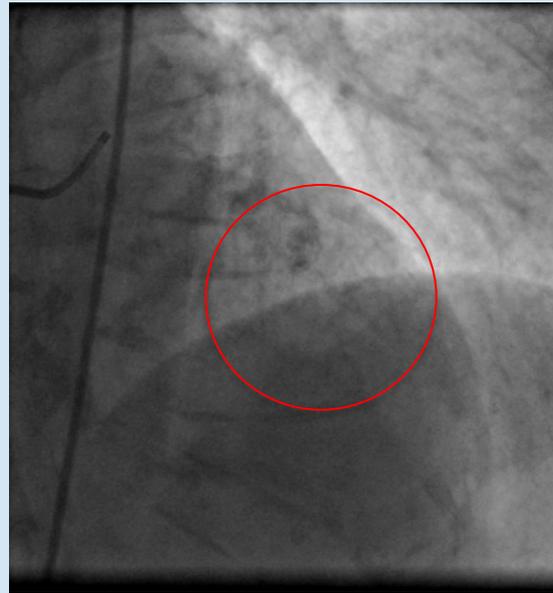


Decision making in three vessel disease

Angiography forms the basis of most revascularization decisions. This approach is perfectly reasonable when the angiogram clearly demonstrates either a severely stenosed coronary artery or a normal one.

...however, angiography has well-known limitations and the significance of lesions of only moderate severity is often difficult to determine based on just the angiogram. This uncertainty may result in inappropriate care with stenting of nonflow limiting lesions or failure to revascularize significant ones.

Case nr 1 (average difficulty)



83-year-old lady, AP CCS III for 3 months, positive stress test at 75W, log ES 6

Syntax Score 16

Your decision

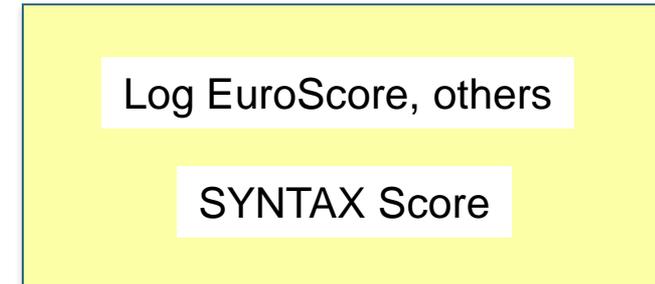
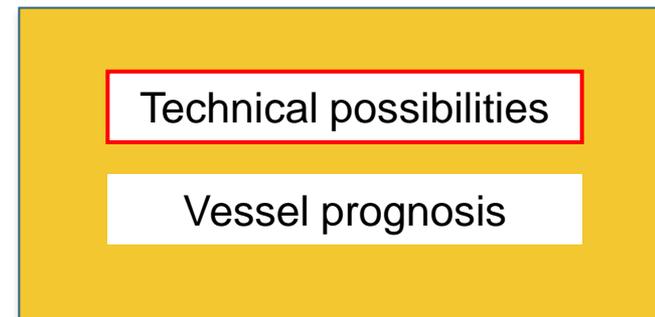
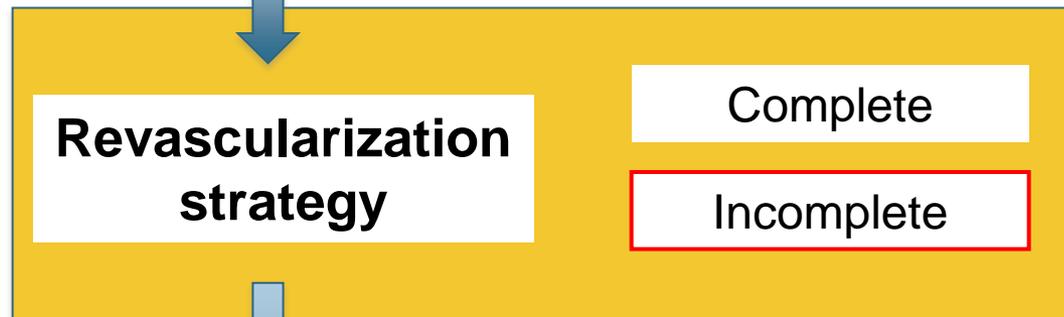
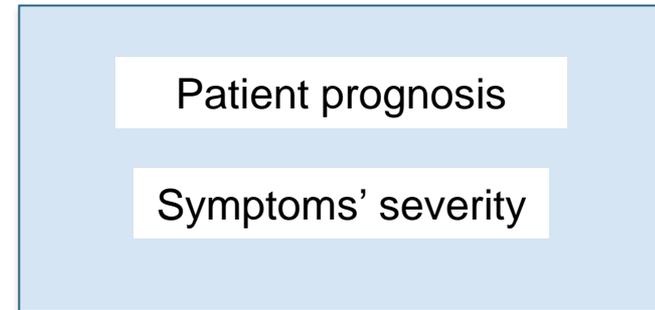
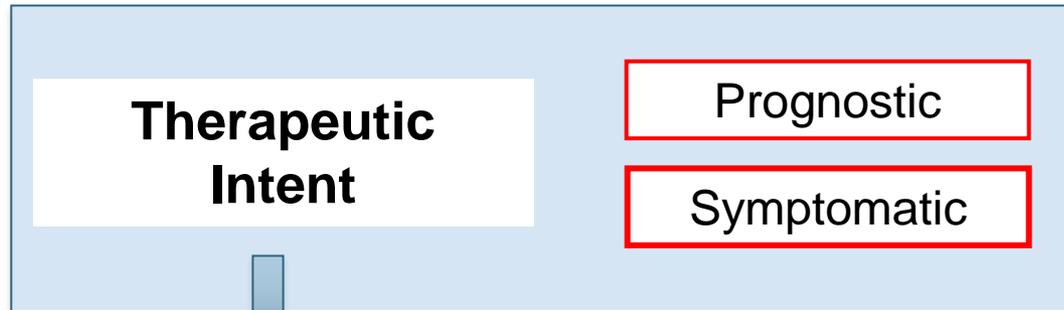
1. PCI LAD
2. PCI LAD + CTO RCA
3. Single Bypass on LAD
4. Bypass LAD/RCA



Multidisciplinary decision – PCI vs CABG

Negotiation's points

Discussion/Evaluation points



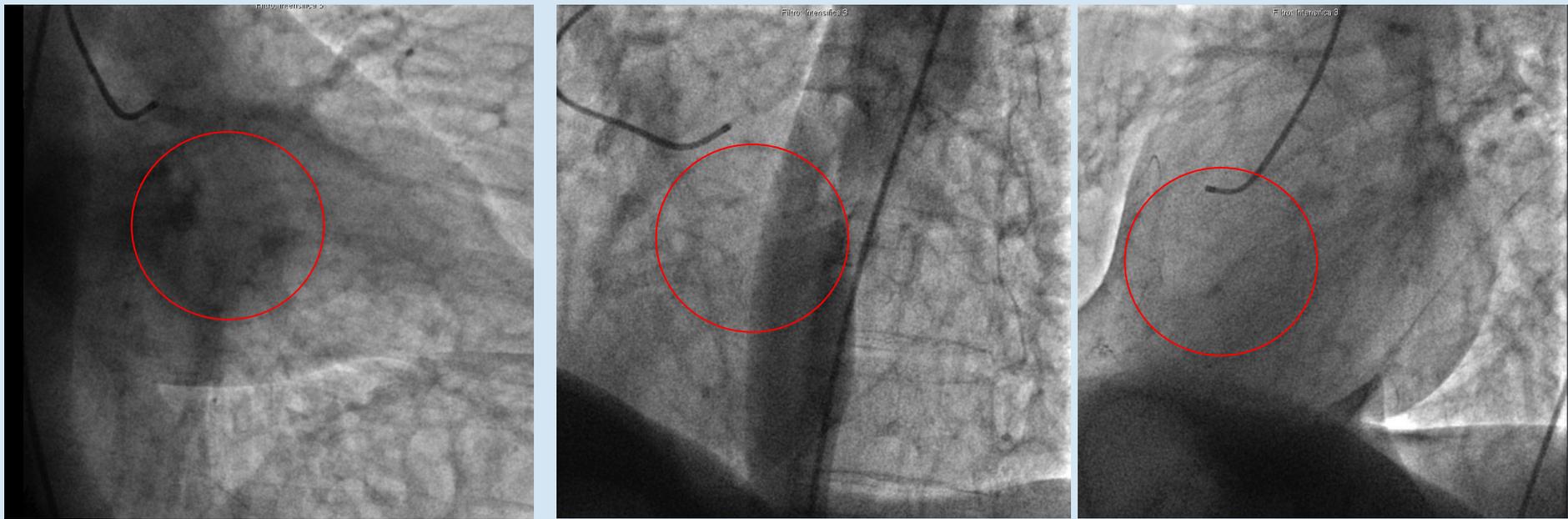
Your decision

1. PCI LAD + CTO RCA
2. Single Bypass on LAD
3. Bypass LAD/RCA



Our decision: Single Bypass LIMA on LAD

Case nr 2 (more difficult)



63-year-old male, AP CCS II to III for 1 months, positive stress test at 50W, EF 60%,
BPCO Gold III

Syntax Score 18

Your decision

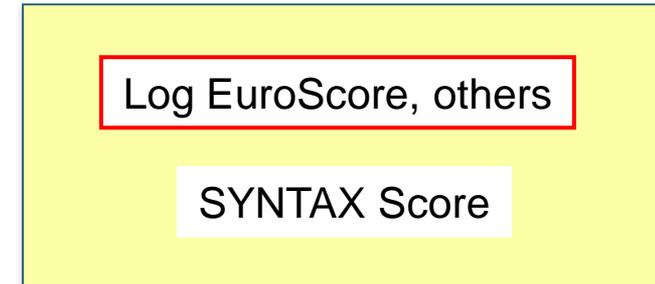
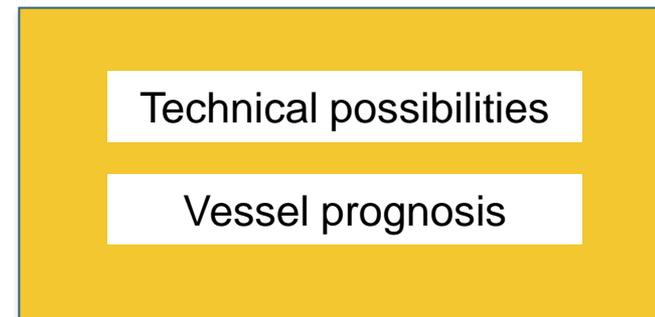
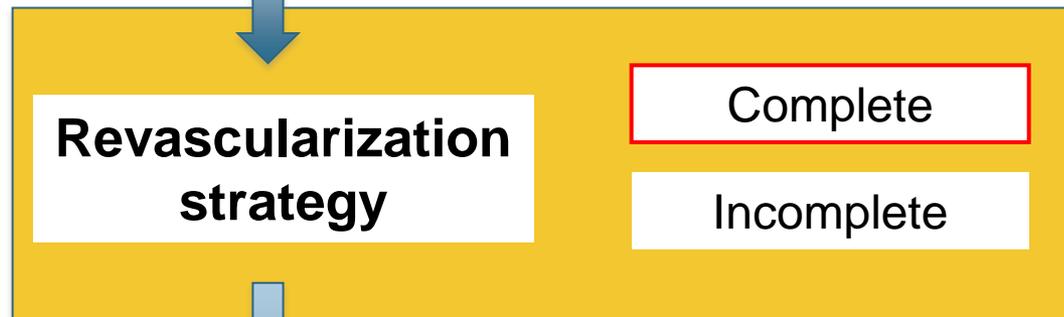
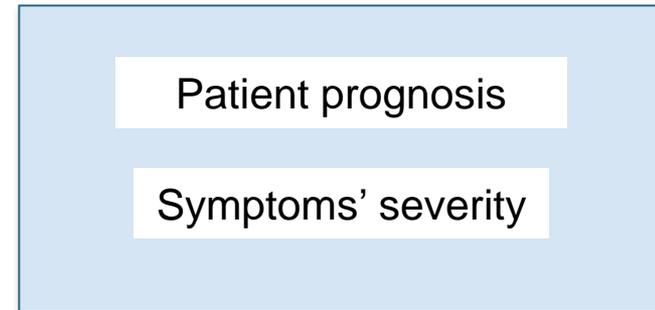
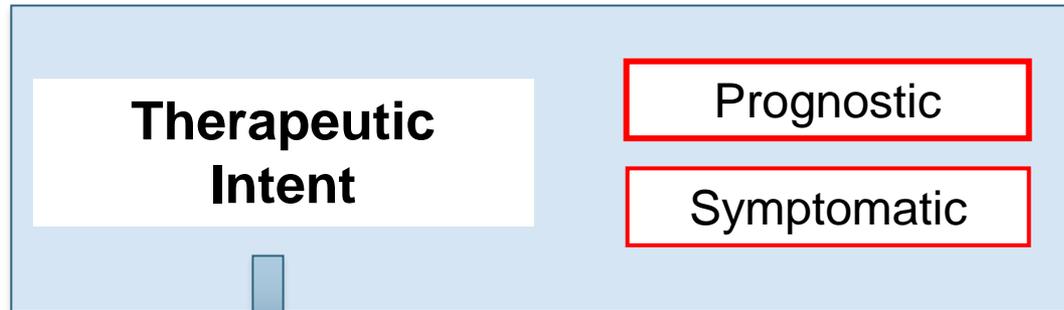
1. 3 x Bypass
2. Conservative treatment
3. PCI LCX/LAD
4. CTO RCA + PCI LCX/LAD



Multidisciplinary decision – PCI vs CABG

Negotiation's points

Discussion/Evaluation points

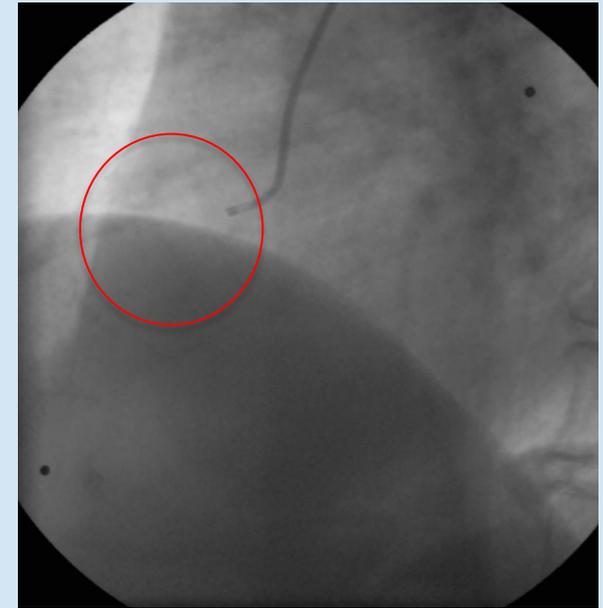
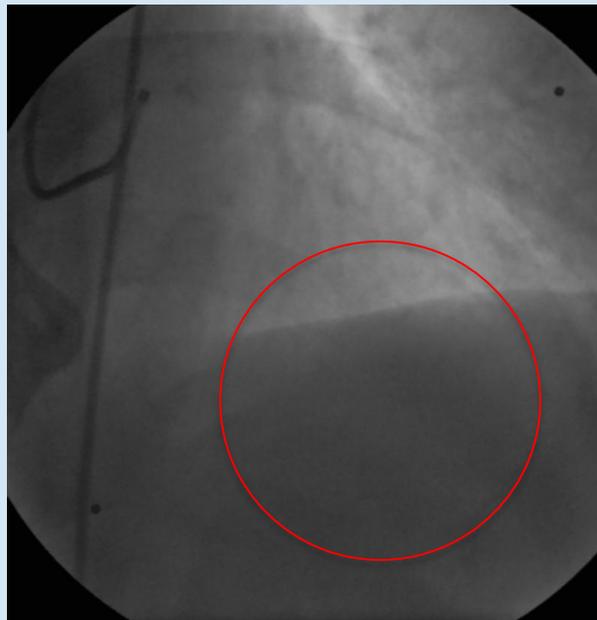
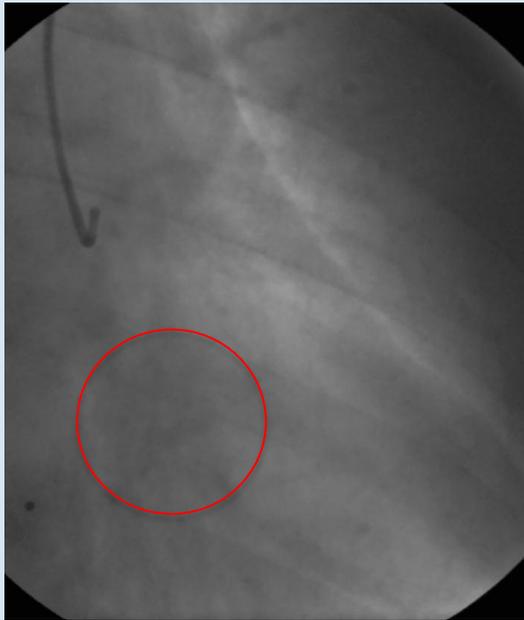


Case nr 2, our decision



Staged PCI procedure

Case nr 3 (increasingly difficult, whatever you do...is wrong)



72-year-old lady, AP CCS III for 2 months, positive stress test, EF 60%,

Syntax Score 17

Your decision

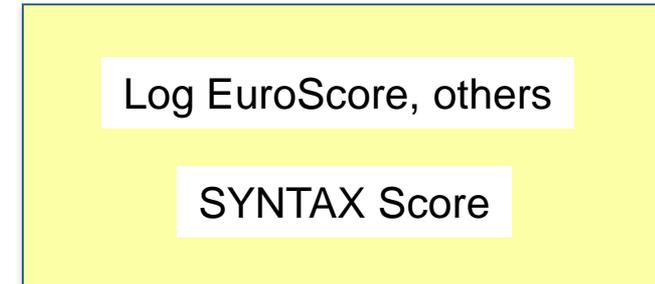
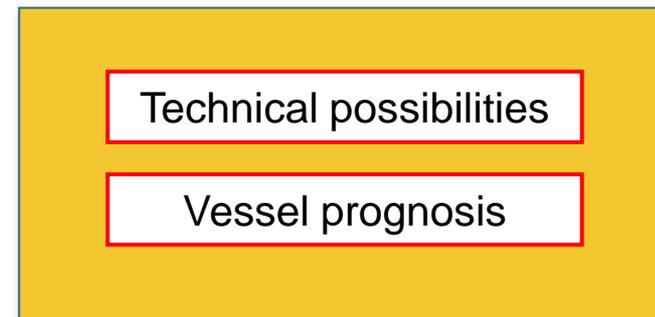
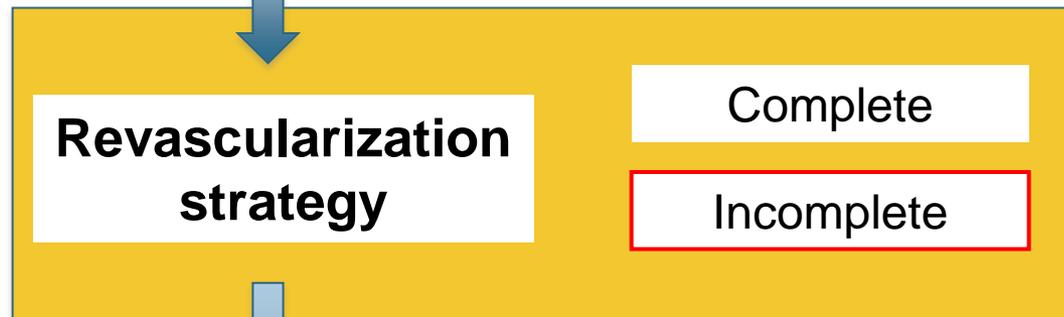
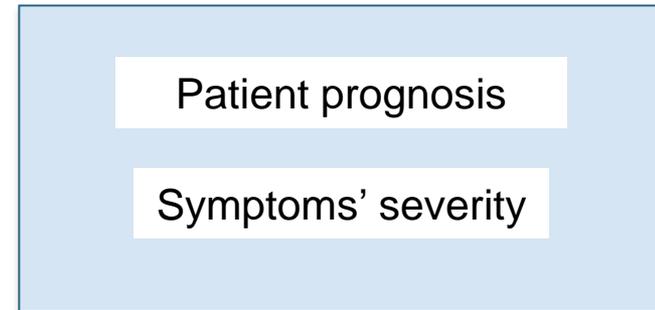
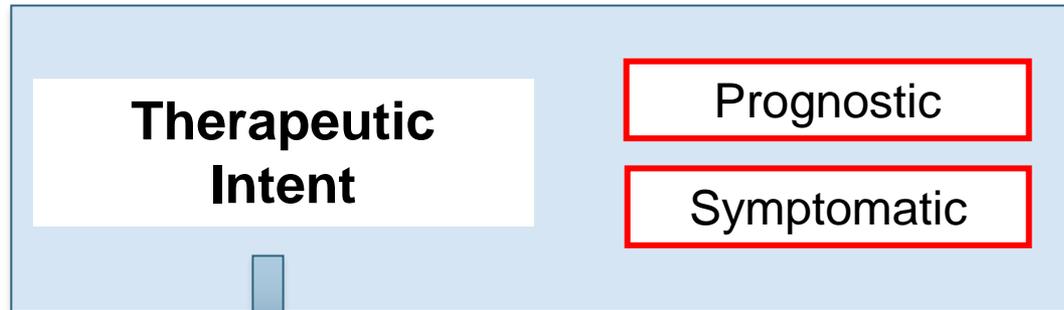
1. PCI LAD + RCA
2. PCI RCA
3. Bypass LAD/RCA/LCX



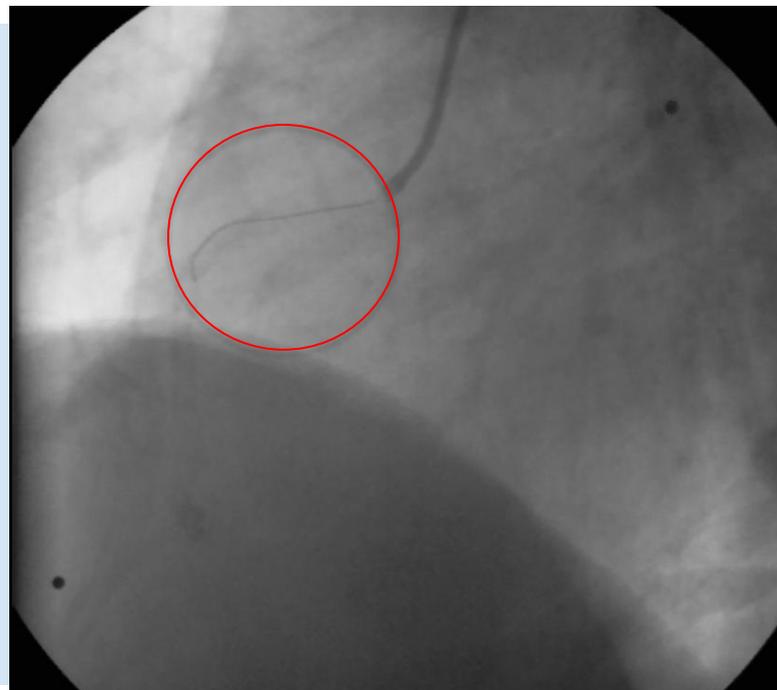
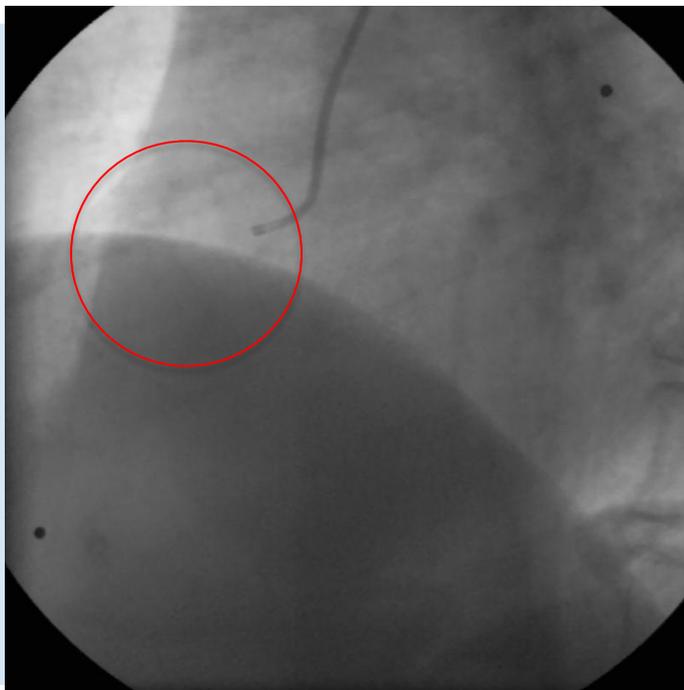
Multidisciplinary decision – PCI vs CABG

Negotiation's points

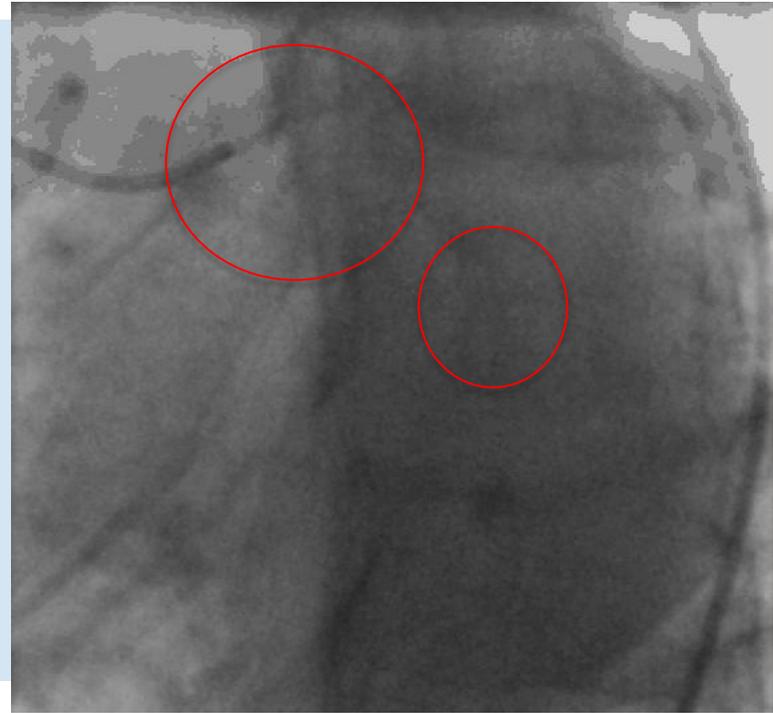
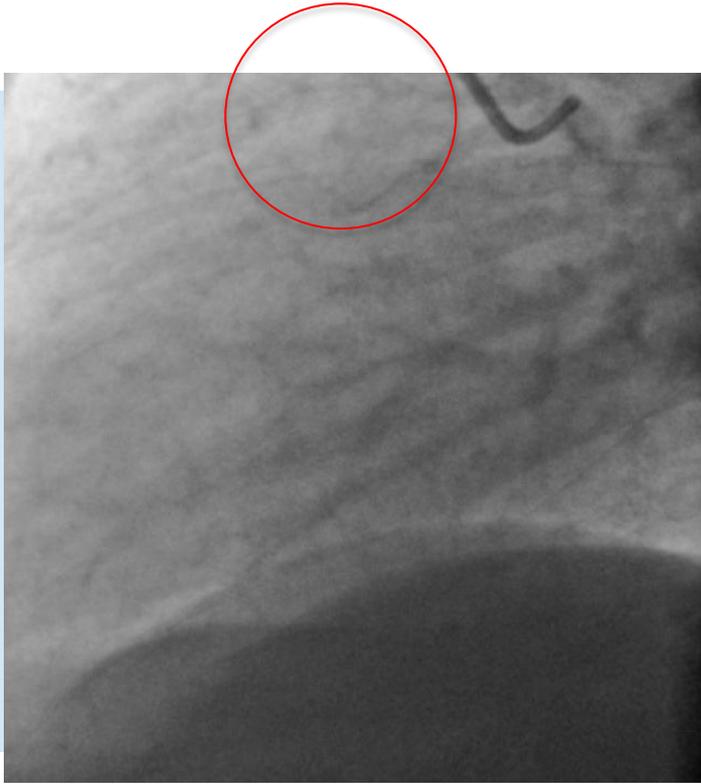
Discussion/Evaluation points



Our decision



Case nr 4 (embarassing)



52-year-old male, asymptomatic, electrical positive stress test, EF 65%

Syntax Score 15

Your decision

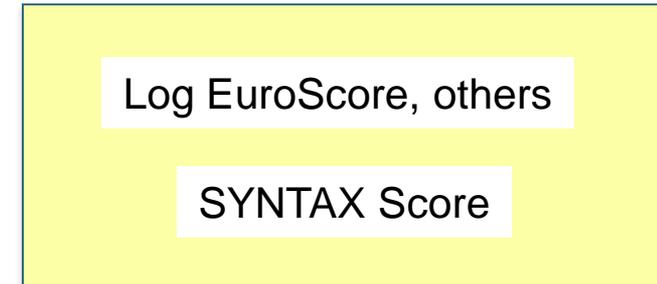
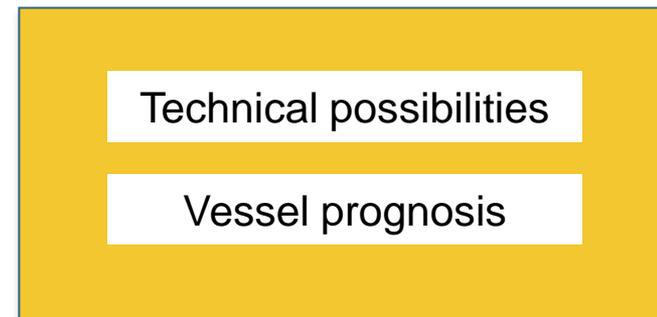
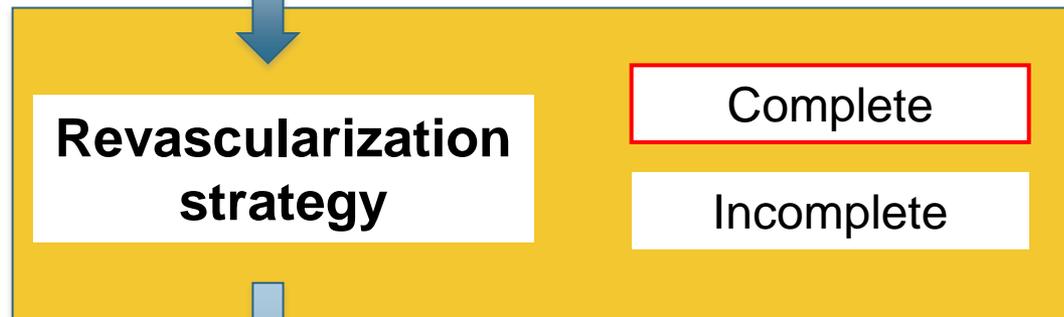
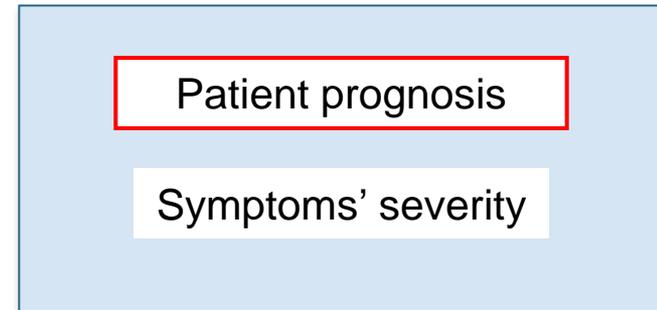
1. Isolated PCI LCX
2. PCI LCX/LAD
3. CABG LCX/LAD
4. Other



Multidisciplinary decision – PCI vs CABG

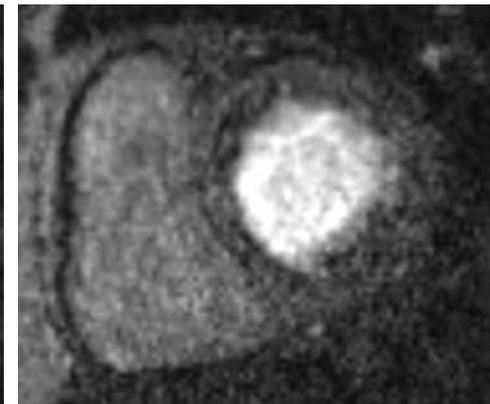
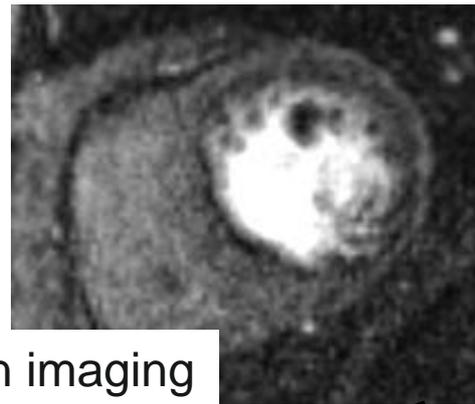
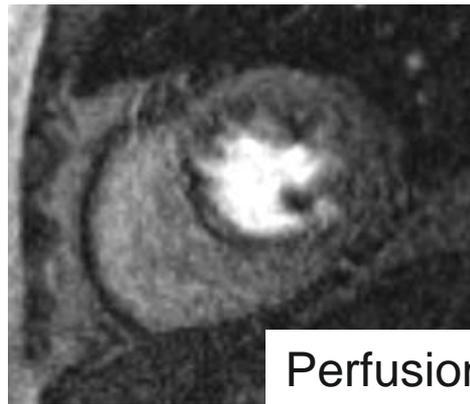
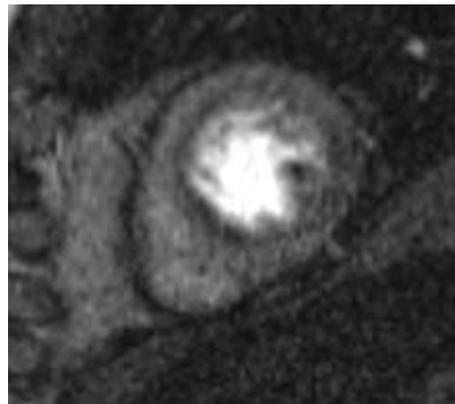
Negotiation's points

Discussion/Evaluation points

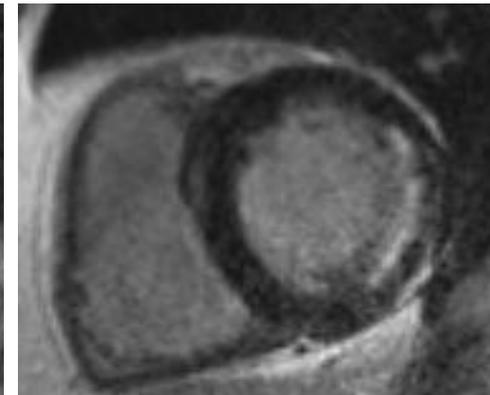
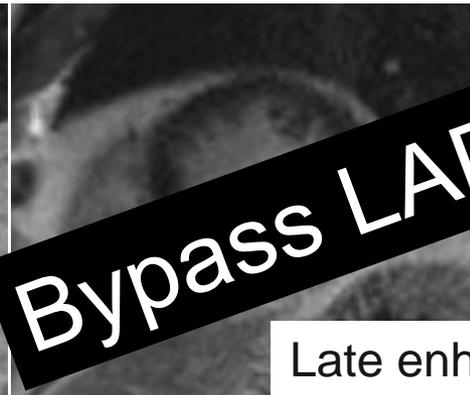
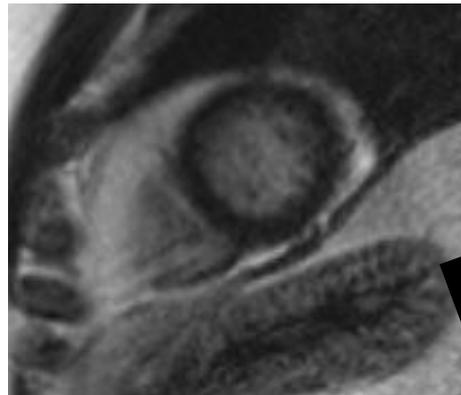


Decision making in three vessel disease

Angiography forms the basis of most revascularization decisions. This approach is perfectly reasonable when the angiogram clearly demonstrates either a severely stenosed coronary artery or a normal one. **However, angiography has well-known limitations and the significance of lesions of only moderate severity is often difficult to determine based on just the angiogram. This uncertainty may result in inappropriate care with stenting of nonflow limiting lesions or failure to revascularize significant ones.**

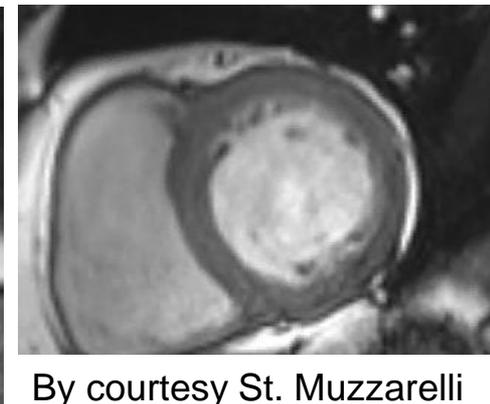
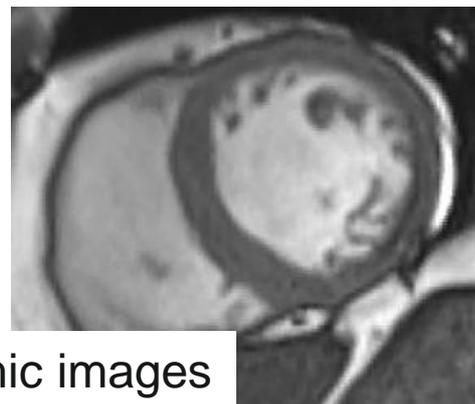
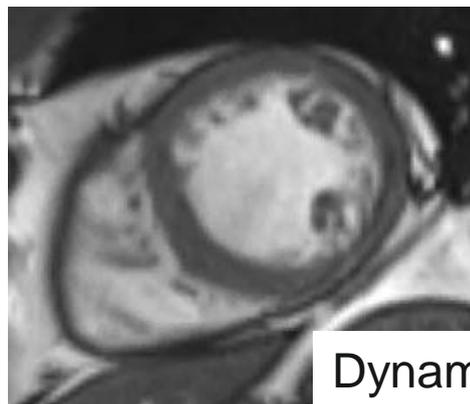
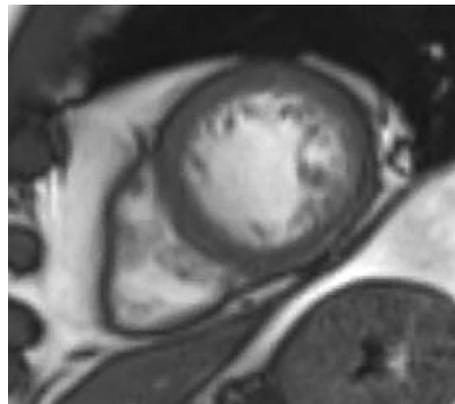


Perfusion imaging



Bypass LAD and LCX

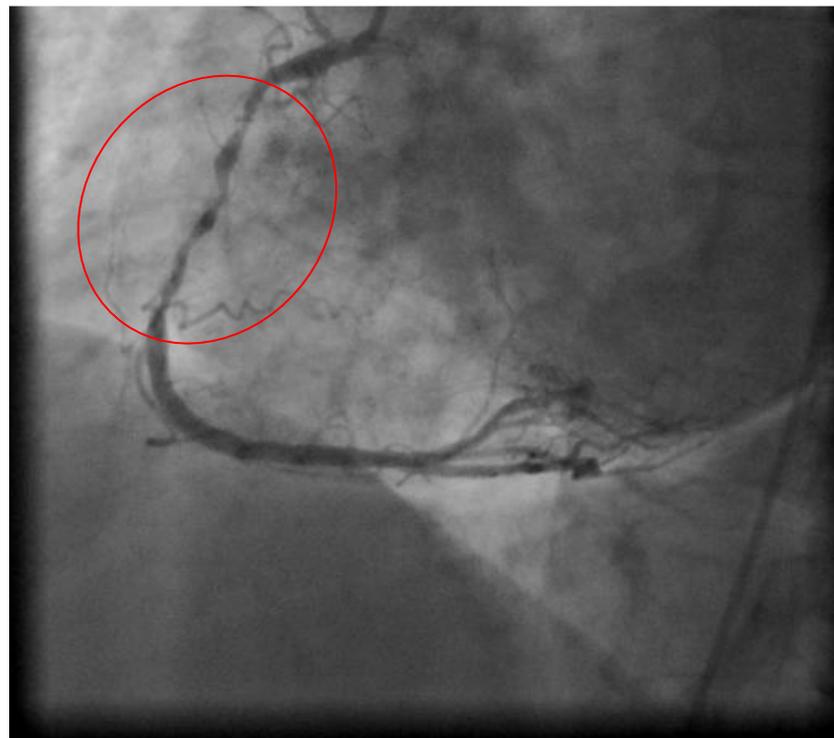
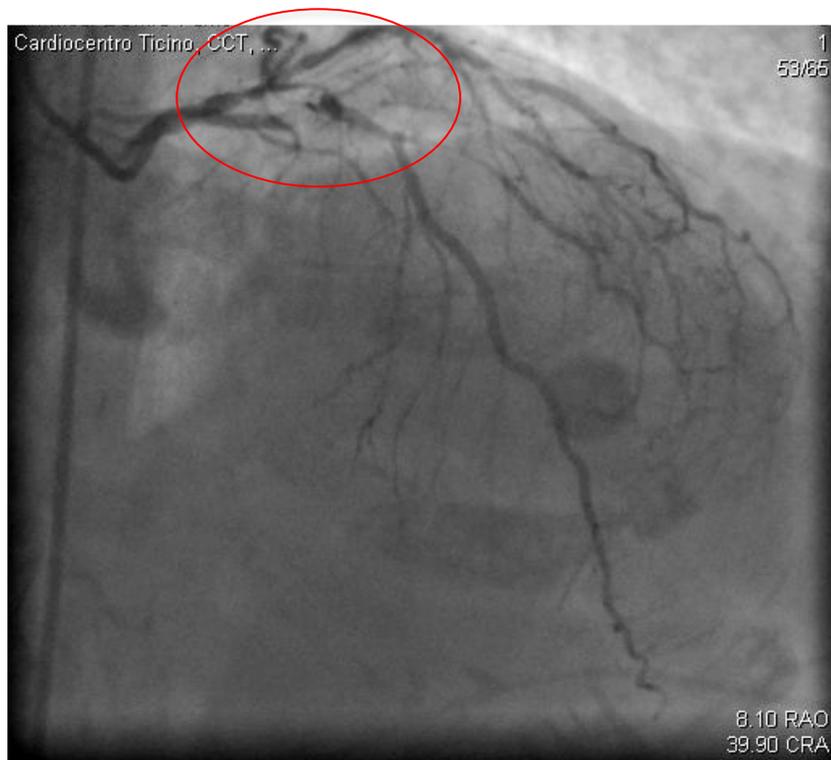
Late enhancement



Dynamic images

By courtesy St. Muzzarelli

Case Nr 4 (whatever you decide ... is dangerous)



85-y-old woman, angina CCS III-IV, MVD,

Syntax Score 38

Your decision

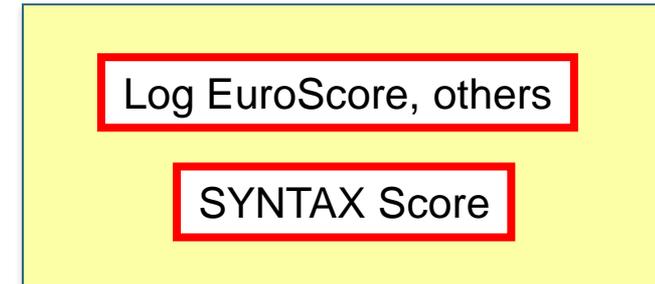
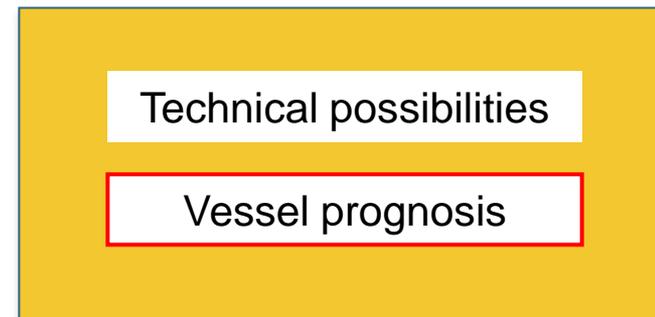
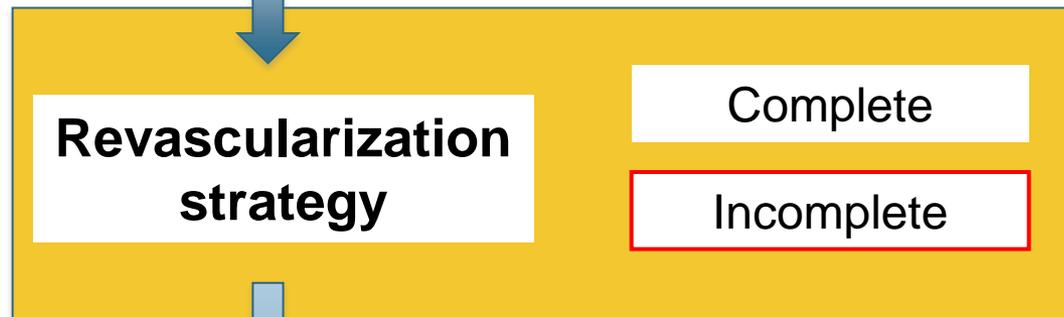
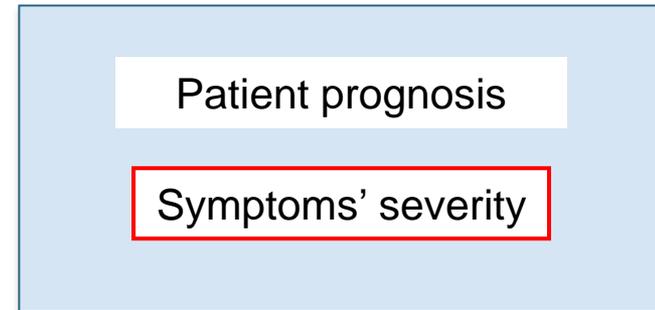
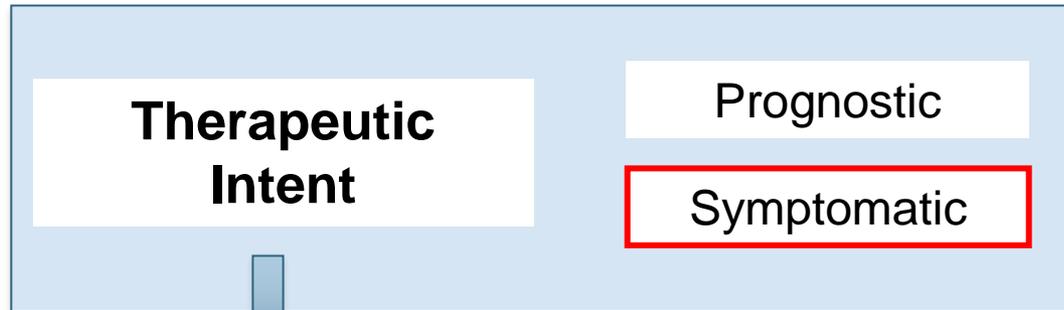
1. CABG (beating heart)
2. CABG with cardiac arrest
3. PCI RCA/LAD



Multidisciplinary decision – PCI vs CABG

Negotiation's points

Discussion/Evaluation points



Your decision

1. CABG (beating heart)
2. CABG with cardiac arrest
3. **PCI RCA/LAD**



CONCLUSIONS, decision making in three vessel disease

- Whatever we decide (PCI, CABG, ...), the decision should be based on strong arguments
- Guidelines (particularly ESC-GL on revascularization) are very helpful as long as the final decision is individualized to the single patient
- Functional tests have become an essential part of decisional process
- For difficult cases/decision the heart team has become an essential part of the decision process

We have no other alternative than...



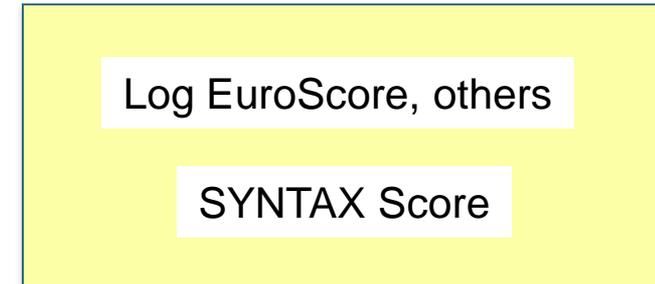
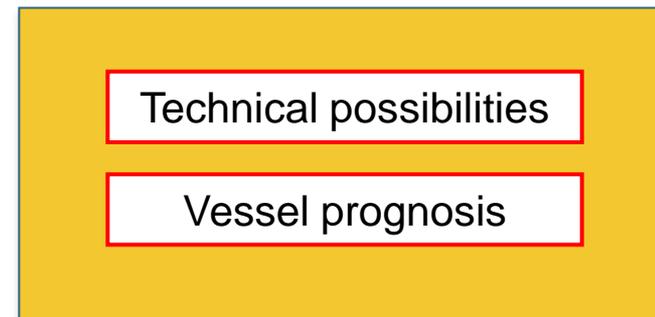
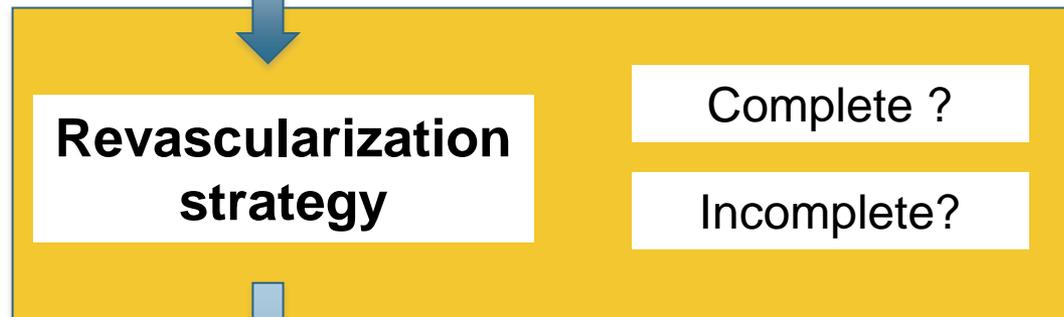
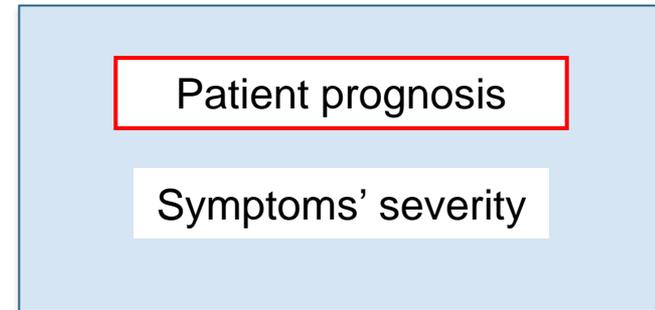
Walk together



Multidisciplinary decision – PCI vs CABG

Negotiation's points

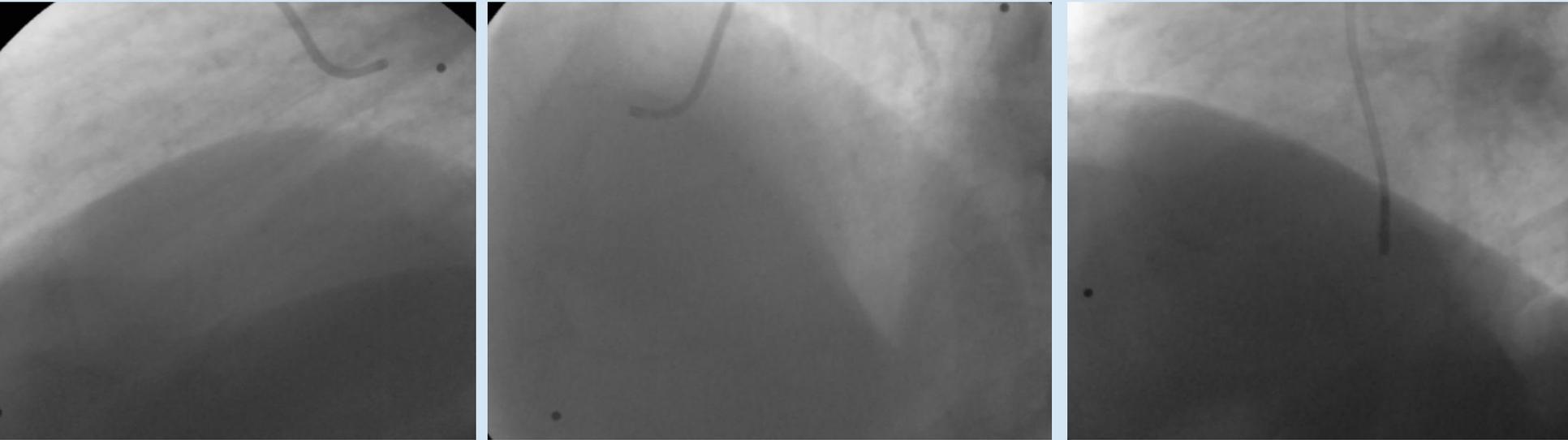
Discussion/Evaluation points



Our decision

1. PCI RCA
2. CABGr

Case nr 5 (the diabetic patient)



69-year-old male, asymptomatic, diabetic on insulin, positive stress test, EF 50%

Syntax Score

THANK YOU
for your attention

*Associated Institute
of the University of Zurich*



**University of
Zurich**^{UZH}

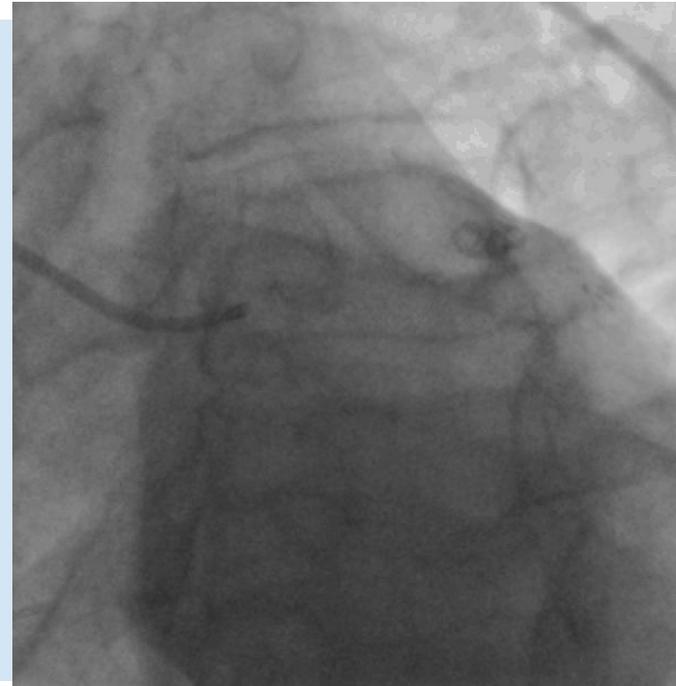
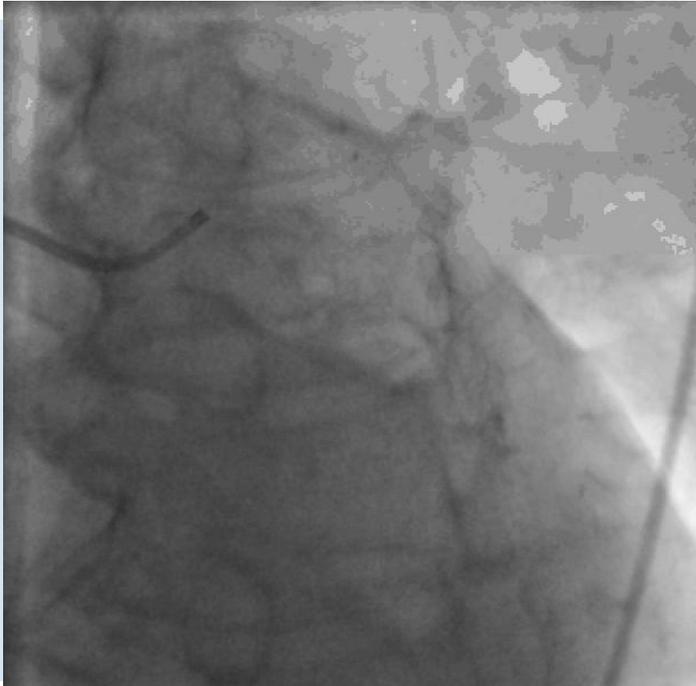


CONCLUSIONS

- The new Guidelines on revascularization are an essential and daily useful tool in the increasingly complex revascularization “word”
- The different risk scores offer a valid tool to individualize procedural risk and benefit
- The multidisciplinary approach needs to take into account all the different variables and not just the therapeutic goal



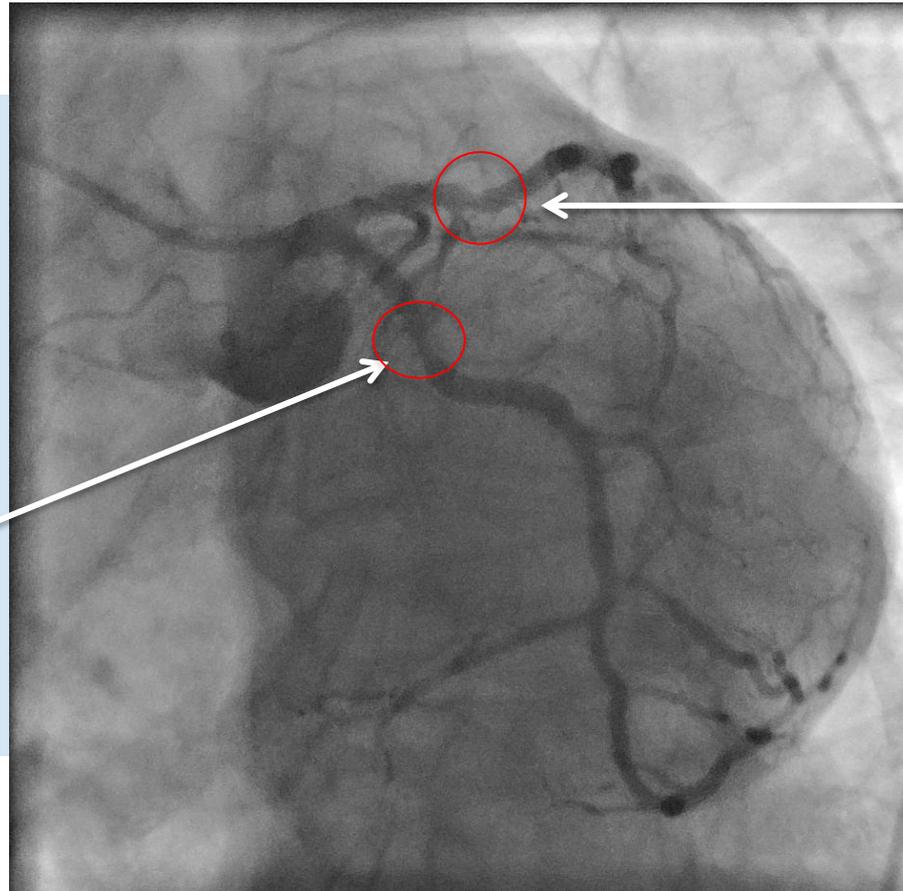
Case nr 4 (conceptual)



70-year-old man, AP CCS III for 2 months, non conclusive stress test, EF 70%

Syntax Score

Our decision



FFR 0.86

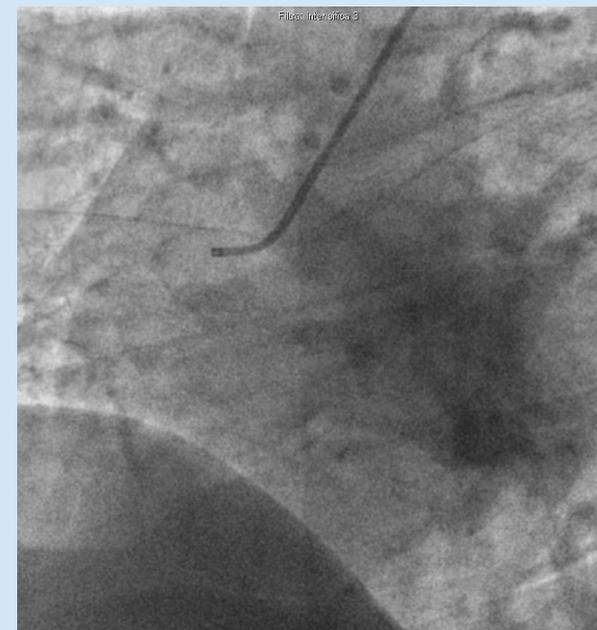
FFR 0.77

Isolated PCI LCX

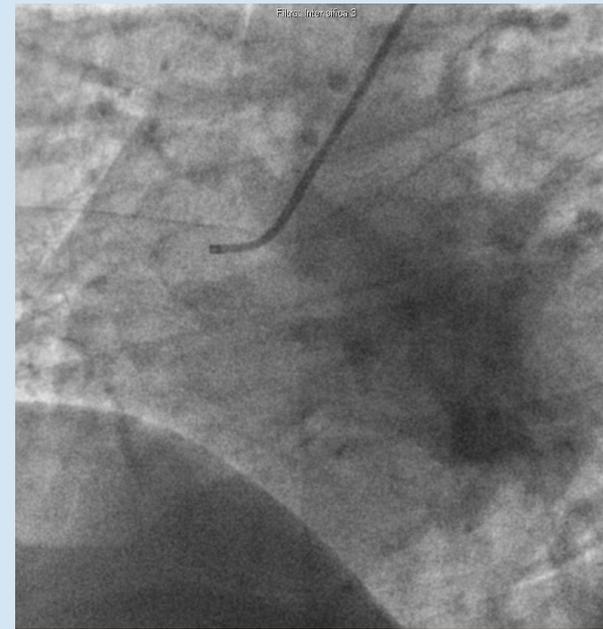
Case nr 1 (Male Bernardino)

Syntax Score

Case Nr 4 (extremely difficult)

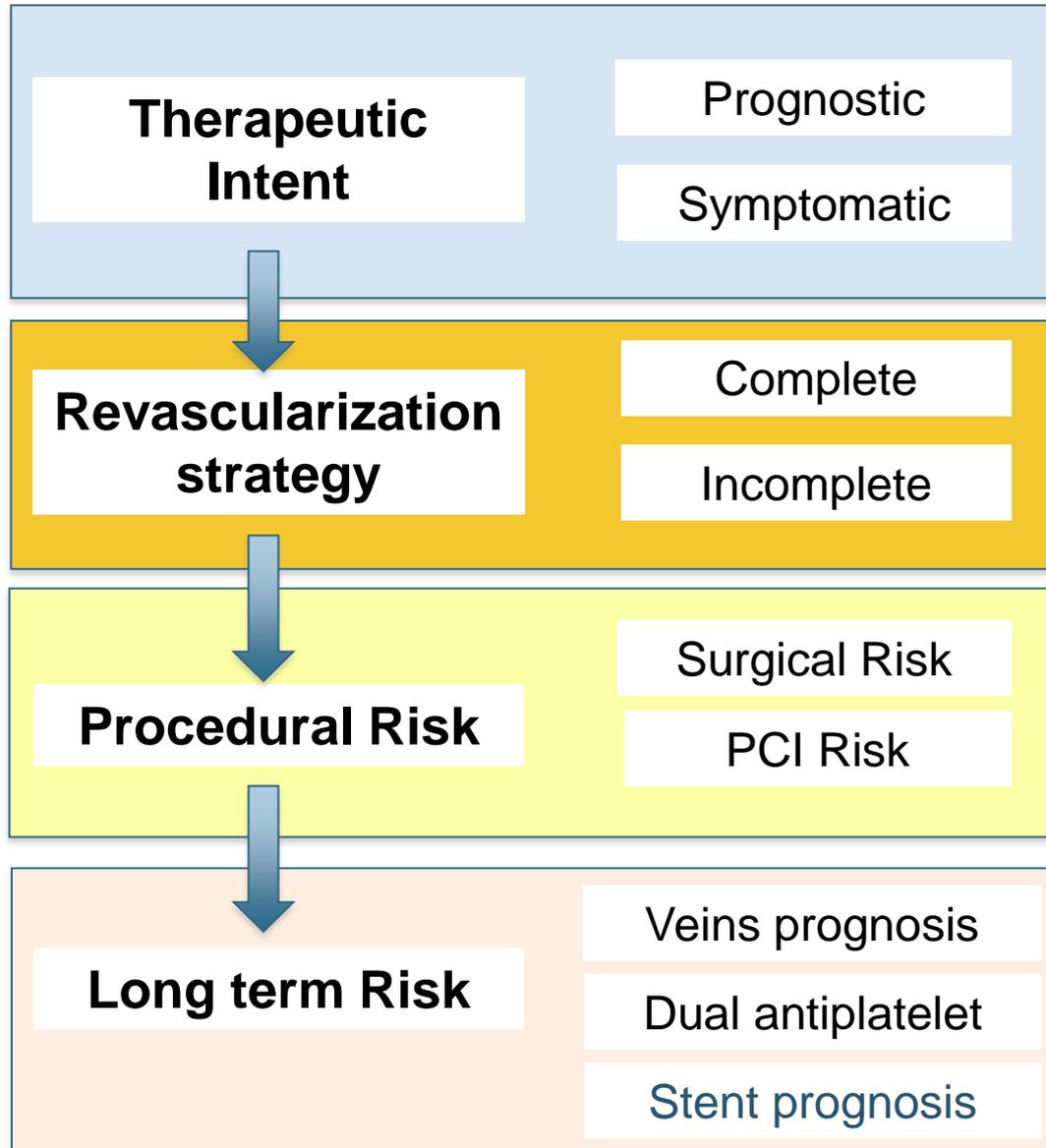


Case nr 4



Multidisciplinary decision – PCI vs CABG

Negotiation's points



Discussion/Evaluation points

