

Con il Patrocinio di



# **Malattia coronarica cronica in paziente già sottoposto a PCI: dallo studio Compass alla pratica clinica**

Strategie vincenti nella gestione  
della terapia antitrombotica nel paziente  
con cardiopatia ischemica cronica

# Malattia coronarica cronica in paziente già sottoposto a PCI: dallo studio COMPASS alla pratica clinica

*“Strategie vincenti nella gestione della terapia antitrombotica del paziente con cardiopatia ischemica cronica”*

Moderatori: **Giuseppe Musumeci, Andrea Rognoni, Ferdinando Varbella**

Discussants: **Tiziana Aranzulla, Chiara Cavallino, Enrico Cerrato, Sebastian Cinconze, Antonella Corleto, Federico Conrotto, Maurizio D'Amico, Michele De Benedictis, Antonio Dellavalle, Baldassarre Doronzo, Stefano Drago, Fabio Ferrari, Alfonso Gambino, Sara Giolitto, Pietro Greco Luchina, Emanuele Meliga, Marco Giovanni Mennuni, Annamaria Nicolino, Francesco Pisano, Tania Silvestri, Emanuele Tizzani, Daniele Tucci Fenga**

- 17.45 Caso Clinico 2 - Paziente diabetico con storia di PCI  
**Dario Casolati**
- 18.15 Caso Clinico 3 - Paziente con vasculopatia periferica e storia di PCI  
**Matteo Vercellino**
- 18.45 Discussione
- 19.00 Take home messages  
**Ferdinando Varbella**
- 19.15 Conclusione dell'incontro  
**Giuseppe Musumeci, Andrea Rognoni, Ferdinando Varbella**
- 19.30 Compilazione questionario ECM

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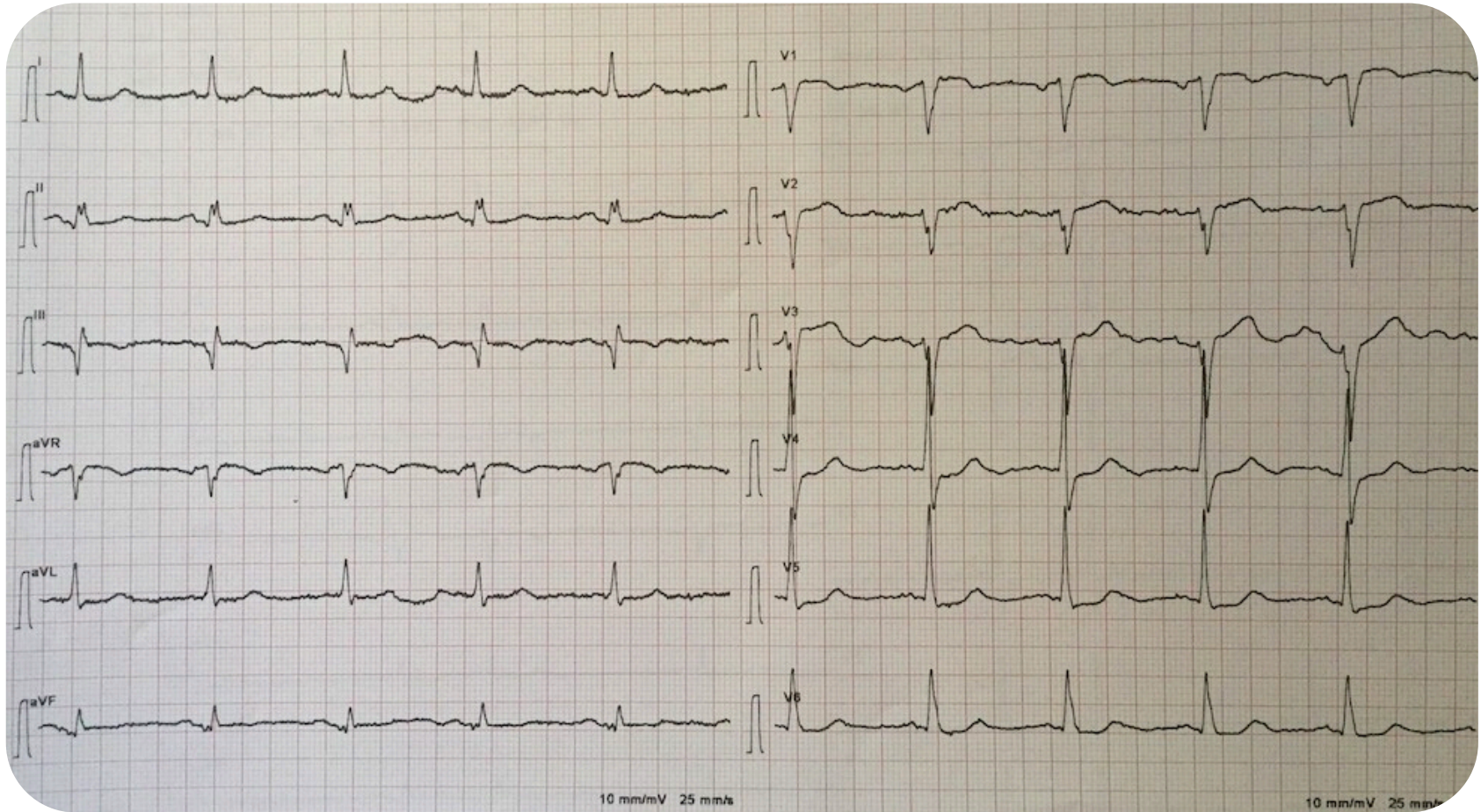
# CASO CLINICO

- 76 anni; sesso maschile; 170 cm; 85 Kg
- **FDR:** ipertensione arteriosa; dislipidemia; ex fumo; sovrappeso (BMI 29 Kg/m<sup>2</sup>);
- Creatinina 1,1 mg/dL; VFG CKD-EPI/MDRD=65 ml/min/1.73m<sup>2</sup>
- Tosse da ACE inibitore;
- Luglio 2017 **doppler TSA**→**occlusione ACI sinistra; stenosi 60% ACI destra**
- **Claudicatio intermittens** (Fontaine IIa; Rutherford I2) in vasculopatia periferica diffusa >50% senza localizzazioni critiche; ABI borderline 0.90-1.0

Visita cardiologica ambulatoriale Novembre 2018 per dispnea da sforzo progressivamente ingravescente (NYHA II) insorta da circa un anno; mai angor

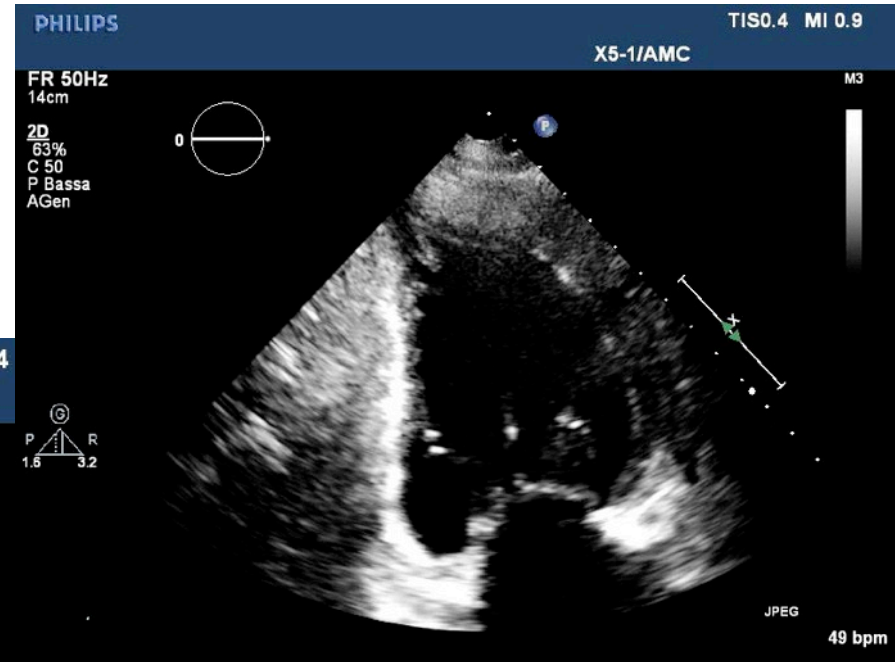
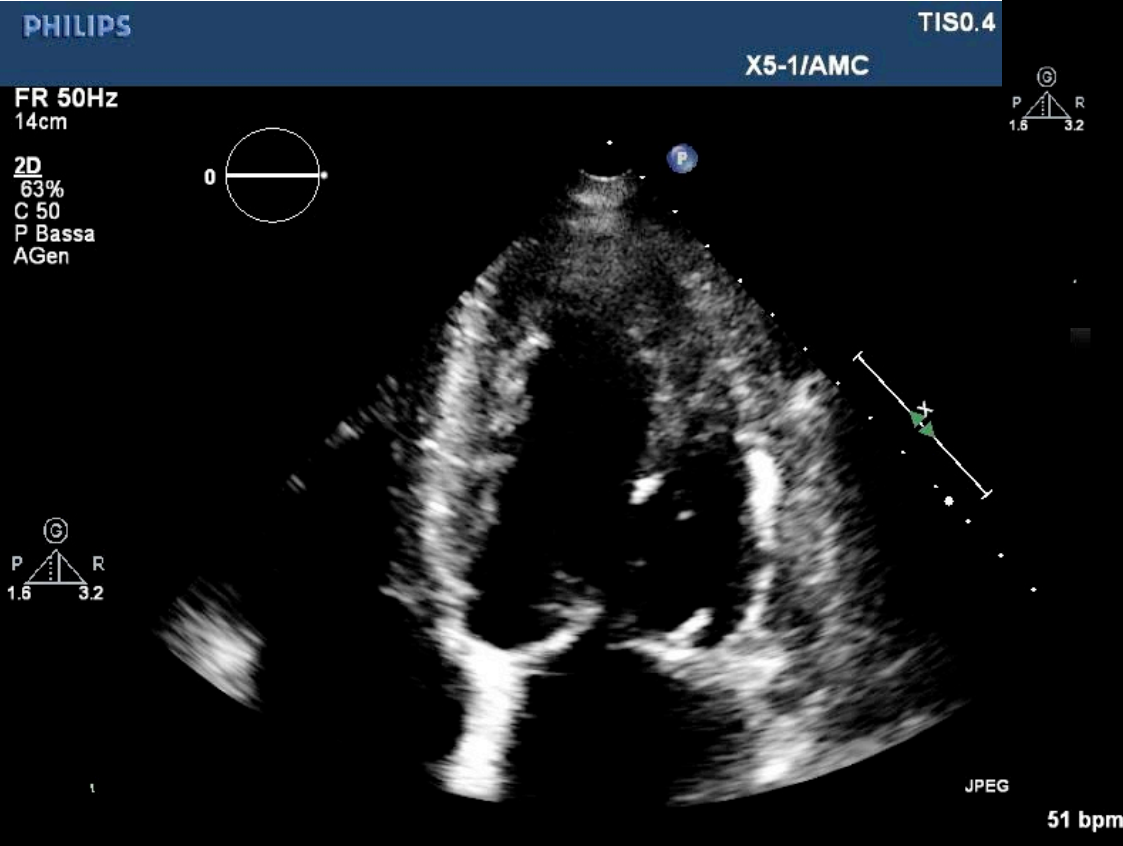
# ECG di presentazione

RS 60 bpm; Turba minore sinistra; anomala progressione R V1-V3, onde Q inferiori; anomalie aspecifiche della ripolarizzazione



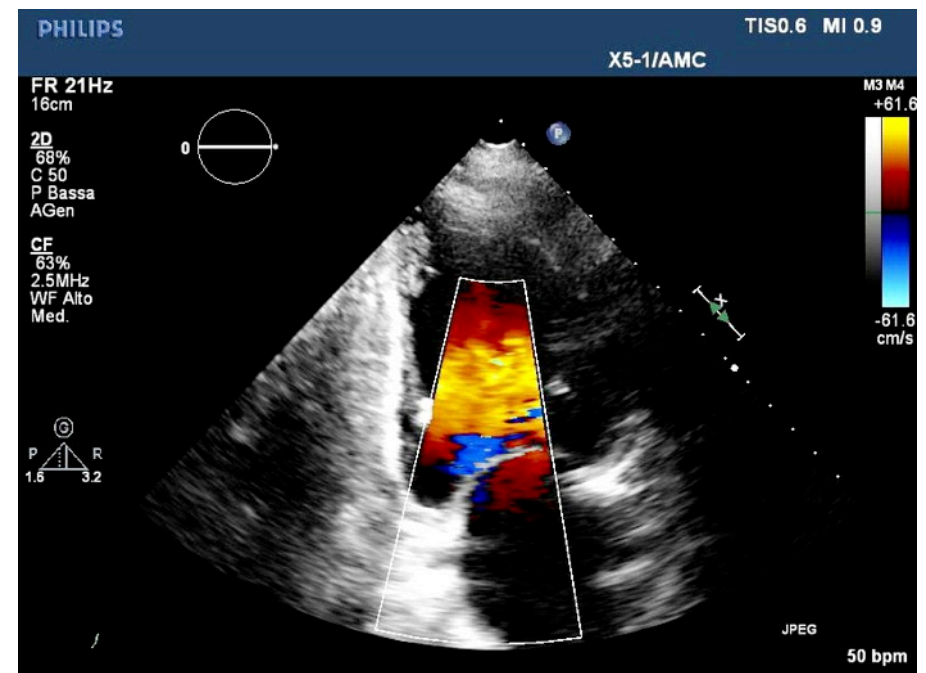
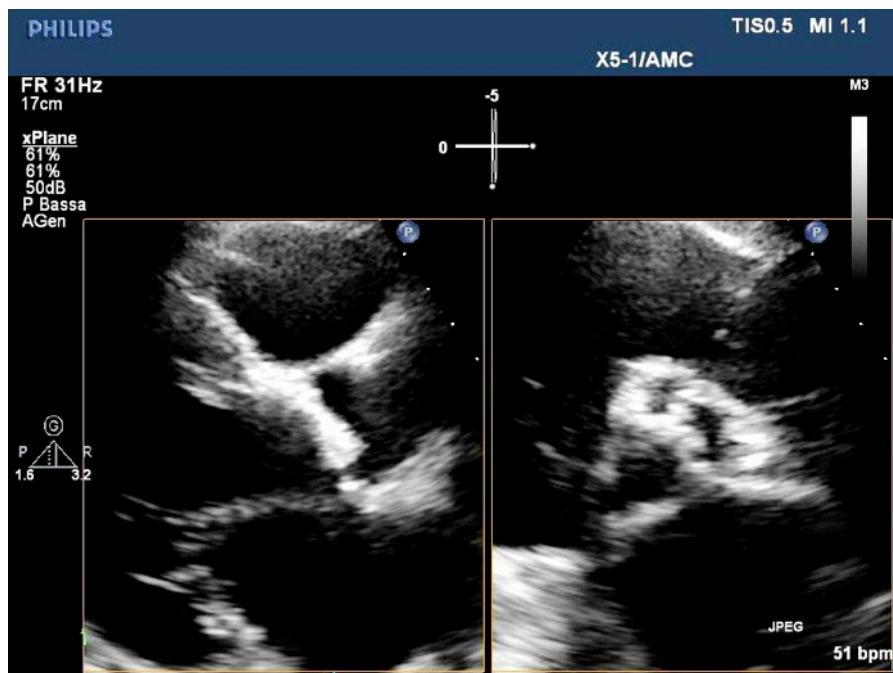
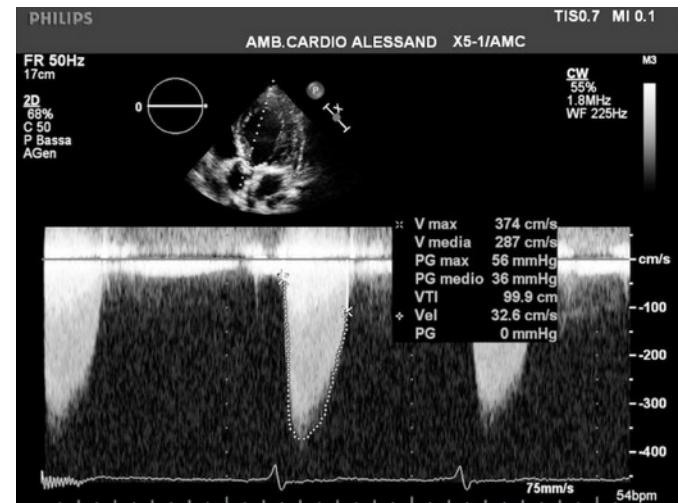
# Ecocardiogramma

- Vnsn dilatato (EDV=166 ml; 78 ml/m<sup>2</sup>)
- FEVS 47% per acinesia e fibrosi della parete inferiore
- Alterato rilasciamento diastolico



# Ecocardiogramma

- SVAO moderata (DP 53/33; AVA planimetrica 1.3cm<sup>2</sup>)
- IM lieve-moderata a doppio jet a meccanismo misto organico e funzionale
- Atrio sinistro dilatato (108 ml; 51 ml/m<sup>2</sup>)
- TAPSE 28 mm; PG IT 26 mmHg



# Indicazione a coronarografia

## Clinical Frailty Scale\*



1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.



2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.



3 **Managing Well** – People whose **medical problems are well controlled**, but are **not regularly active** beyond routine walking.



7 **Severely Frail** – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).



8 **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



9. **Terminally Ill** - Approaching the end of life. This category applies to people with a **life expectancy <6 months**, who are **not otherwise evidently frail**.



- Naftidrofurile 200 mg
- Valsartan 160 mg ore 18:00
- ASA 100 mg ore 12:00
- Pantoprazolo 20 mg
- Atorvastatina 40 mg
- Bisoprololo 2.5 mg
- Doxazosina 2 mg
- Clonidina cerotto TTS2 1 volta a settimana

dependent on others for **limit activities**. A common up", and/or being tired

people often have **more help** in **high order IADLs** heavy housework, medical progressively impairs alone, meal preparation

people need help with **all keeping house**. Inside, they stairs and need **help with** minimal assistance (cuing,

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In moderate dementia, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In severe dementia, they cannot do personal care without help.

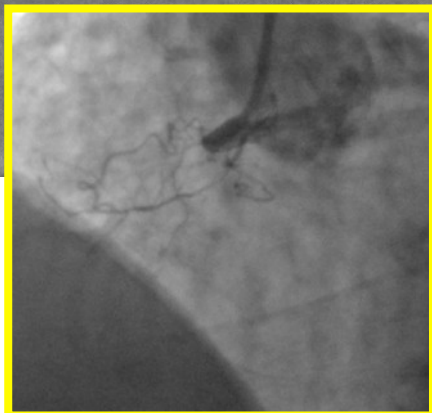
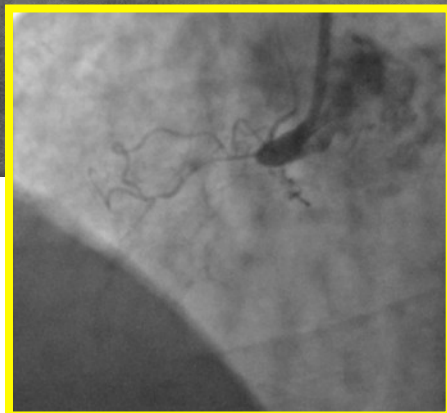
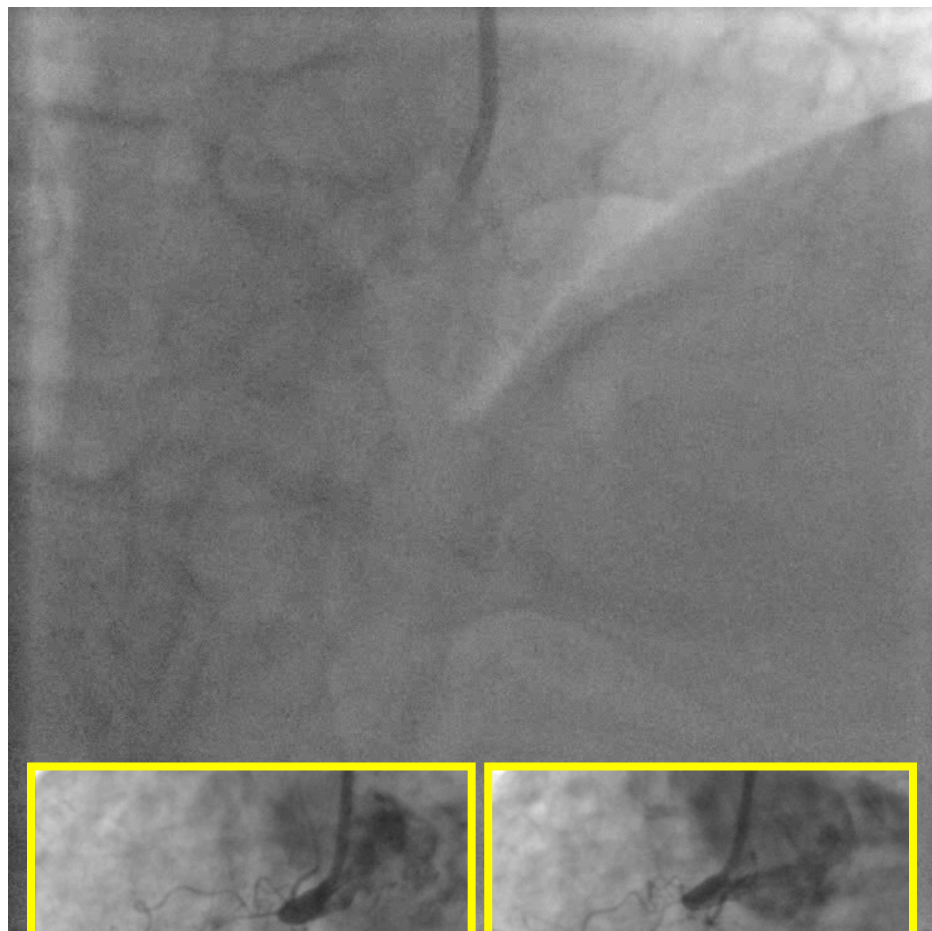
\* 1. Canadian Study on Health & Aging, Revised 2008.

2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CHAJ 2005; 173:469-495.

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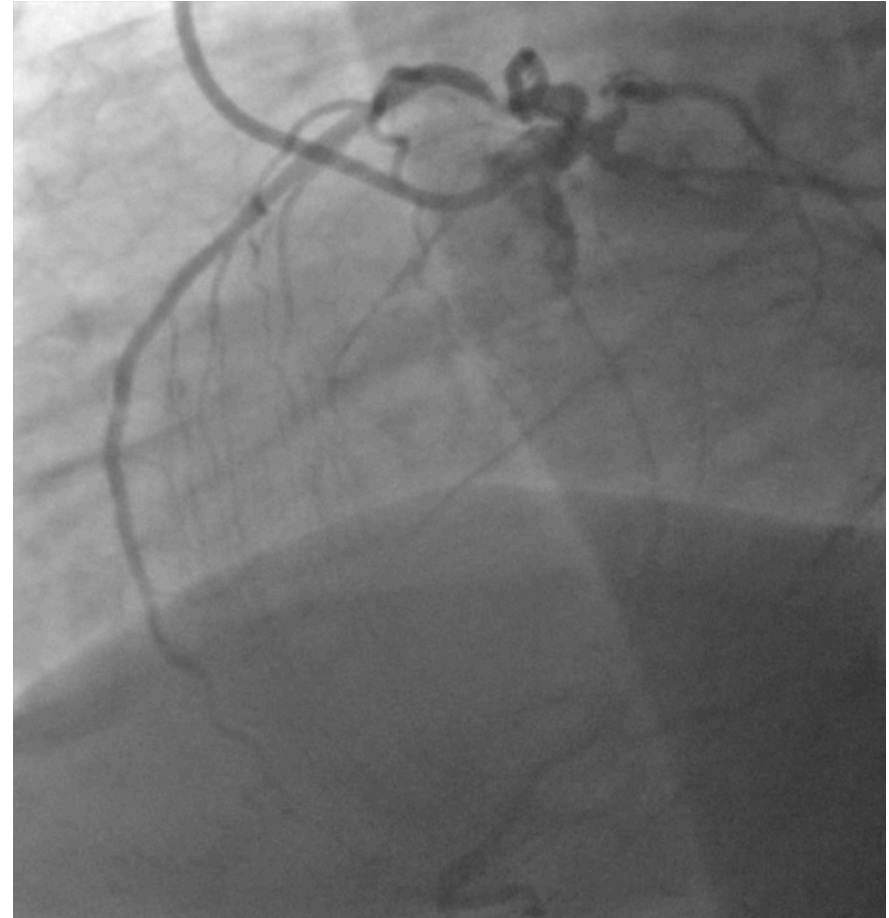
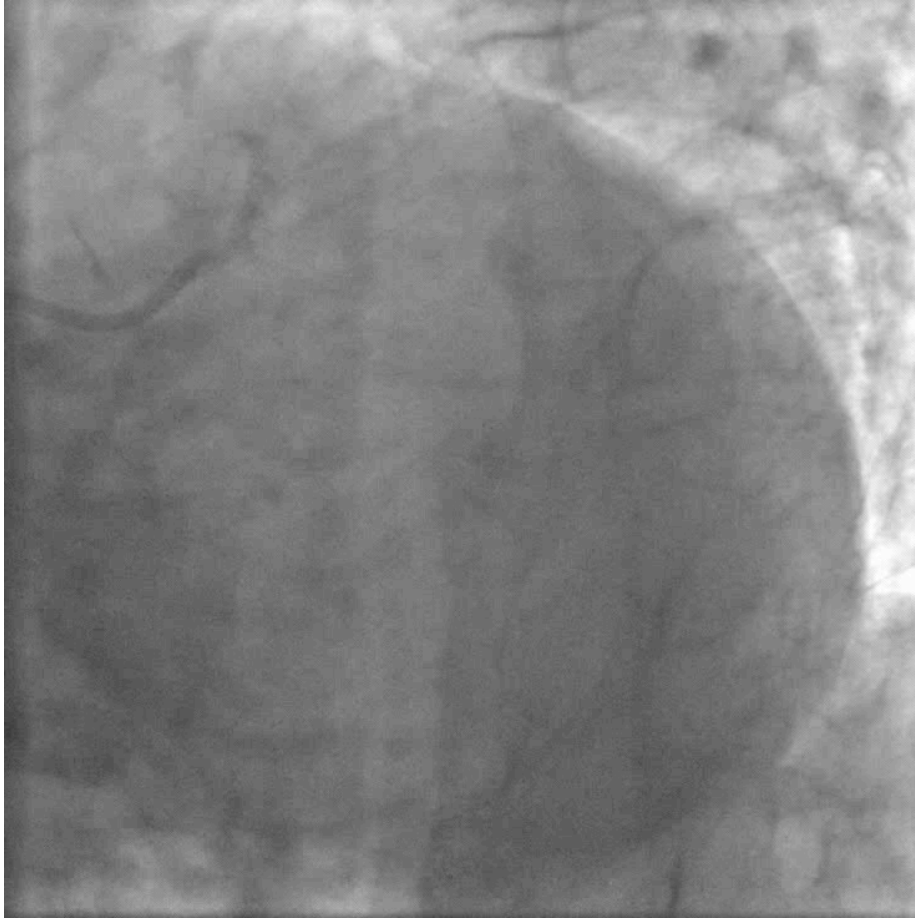
RICOVERO ELETTIVO PER **CORONAROGRAFIA** CON SOSPETTO CLINICO DI  
CARDIOPATIA ISCHEMICA CRONICA → clopidogrel in associazione ad ASA

# Coronarografia

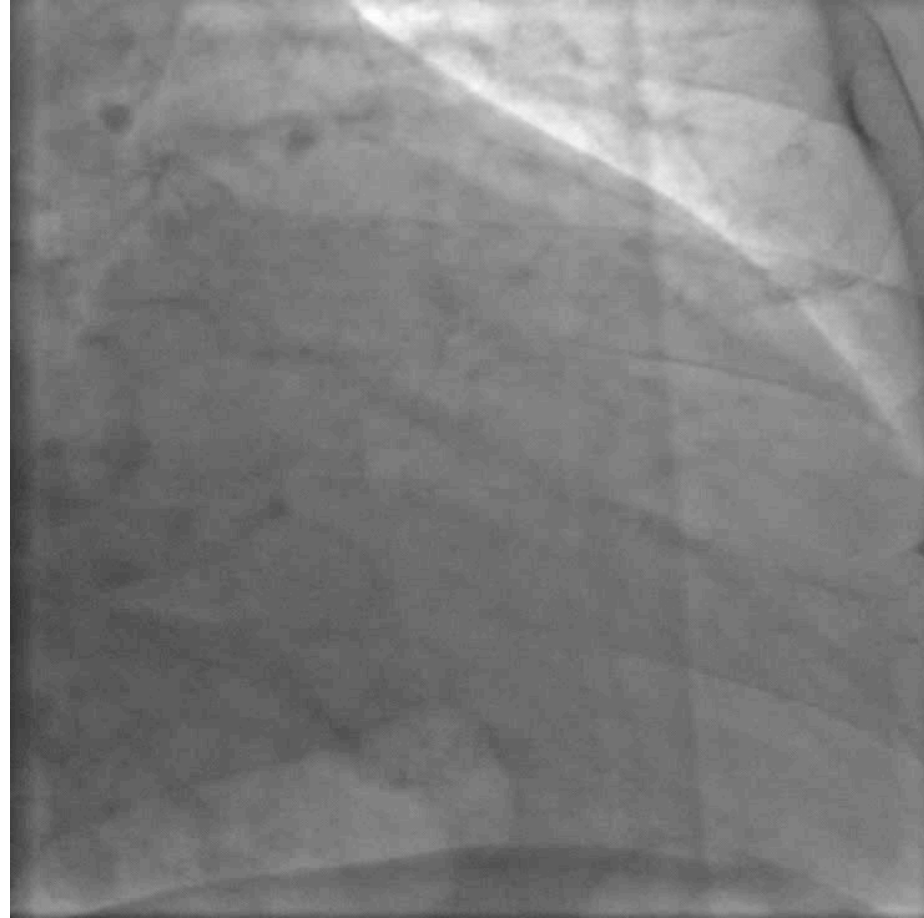




# Coronarografia



# Coronarografia



# SNODO 1



1) Trattamento chirurgico della CAD e della SVAO

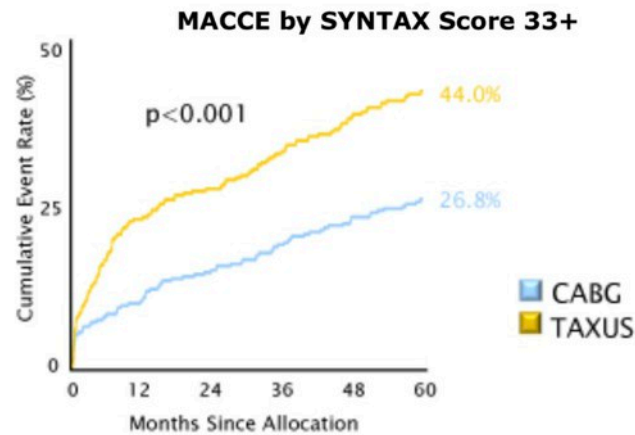
2) Trattamento chirurgico della CAD subito e trattamento percutaneo della SVAO (TAVI) in caso di progressione della malattia valvolare aortica nel FUP

3) Trattamento percutaneo della CAD subito e trattamento percutaneo della SVAO (TAVI) in caso di progressione della malattia valvolare aortica nel FUP

# SYNTAX score

TOTAL SYNTAX SCORE I:

47



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

Recommendations according to extent of CAD	CABG		PCI	
	Class <sup>a</sup>	Level <sup>b</sup>	Class <sup>a</sup>	Level <sup>b</sup>
<b>Left main CAD</b>				
Left main disease with low SYNTAX score (0 - 22). <sup>69,121,122,124,145-148</sup>	I	A	I	A
Left main disease with intermediate SYNTAX score (23 - 32). <sup>69,121,122,124,145-148</sup>	I	A	IIa	A
Left main disease with high SYNTAX score (≥33). <sup>c 69,121,122,124,146-148</sup>	I	A	III	B

# Rischio chirurgico

Fattori Pazienti				Fattori cardiaci			
età	76		0	<a href="#">angina instabile<sup>6</sup></a>	No		0
sesso	maschio		0	EF	30-50%		.4191643
<a href="#">patologia polmonare cronica<sup>1</sup></a>	No		0	<a href="#">IMA recente<sup>7</sup></a>	No		0
<a href="#">arteriopatia extracardiaca<sup>2</sup></a>	sì		.6558917	<a href="#">ipertensione polmonare<sup>8</sup></a>	No		0
<a href="#">disfunzione neurologica<sup>3</sup></a>	No		0	Fattori chirurgici			
precedenti interventi di cardiocirurgia	No		0	<a href="#">emergenza<sup>9</sup></a>	No		0
creatininemia preop > 200 µmol/ L	No		0	BPAC + altra cardiocirurgia	sì		.5420364
<a href="#">endocardite attiva<sup>4</sup></a>	No		0	chirurgia aorta ascendente, arco, aorta toracica prediaframmatica	No		0
<a href="#">condizioni preoperatorie<sup>5</sup></a>	No		0	STS Adult Cardiac Surgery Database Version 2.9			
Logistic <b>EuroSCORE</b>				12.21 %			

## RISK SCORES

Procedure: **AVR + CAB**

CALCULATE

Risk of Mortality: 3.951%

Renal Failure: 3.793%

Permanent Stroke: 2.247%

Prolonged Ventilation: 11.795%

DSW Infection: 0.483%

Reoperation: 5.703%

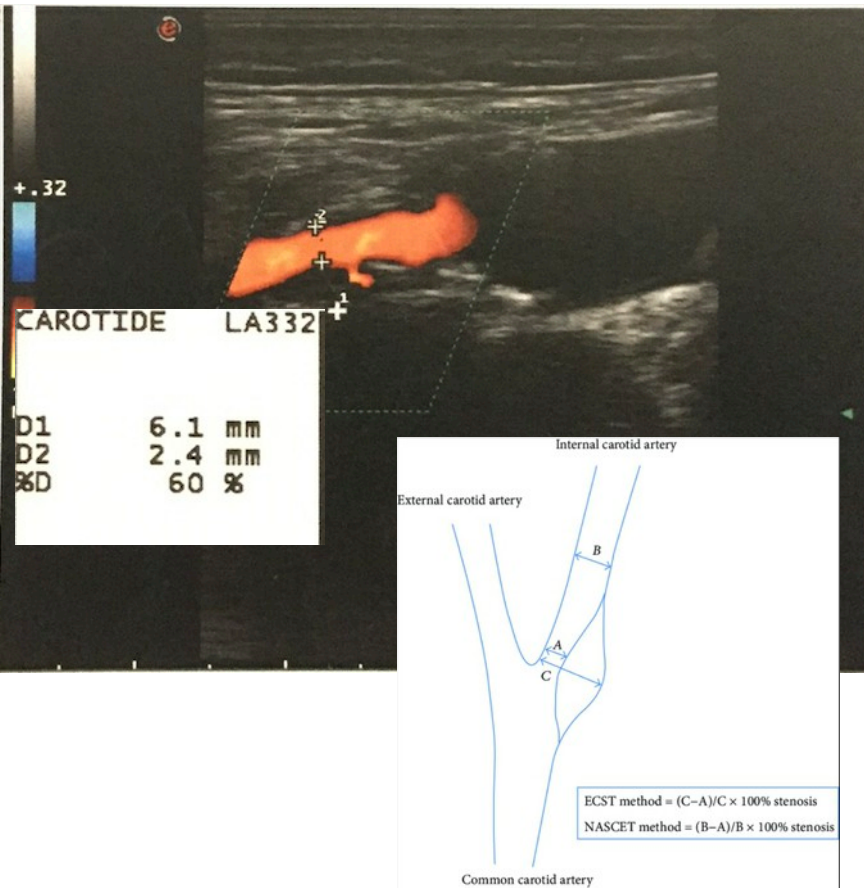
Morbidity or Mortality: 21.318%

Short Length of Stay: 19.245%

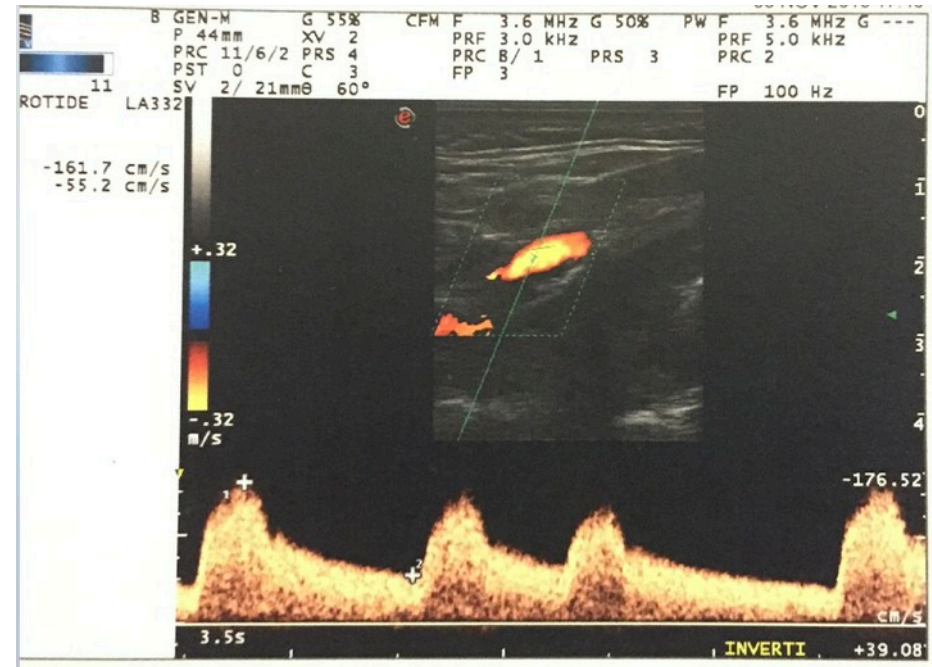
Long Length of Stay: 8.022%

# Doppler TSA

Occlusione nota ACI sinistra + stenosi 60% ACI destra

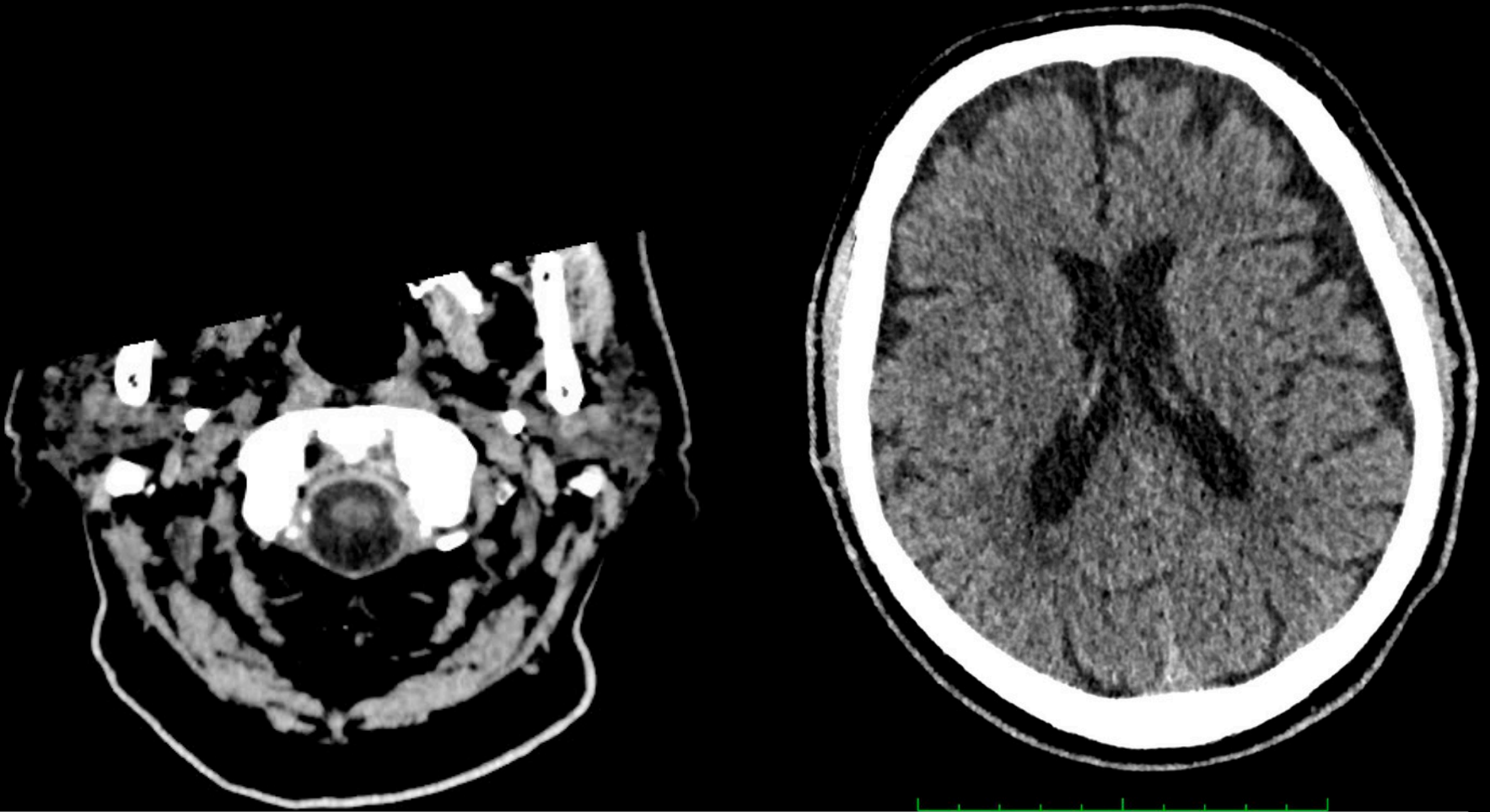


PSV=160 cm/sec  
EDV=55 cm/sec



**50-69% ICA stenosis** ICA PSV is 125-230 cm/sec and plaque is visible sonographically  
additional criteria include ICA/CCA PSV ratio of 2.0-4.0 and ICA EDV of 40-100 cm/sec

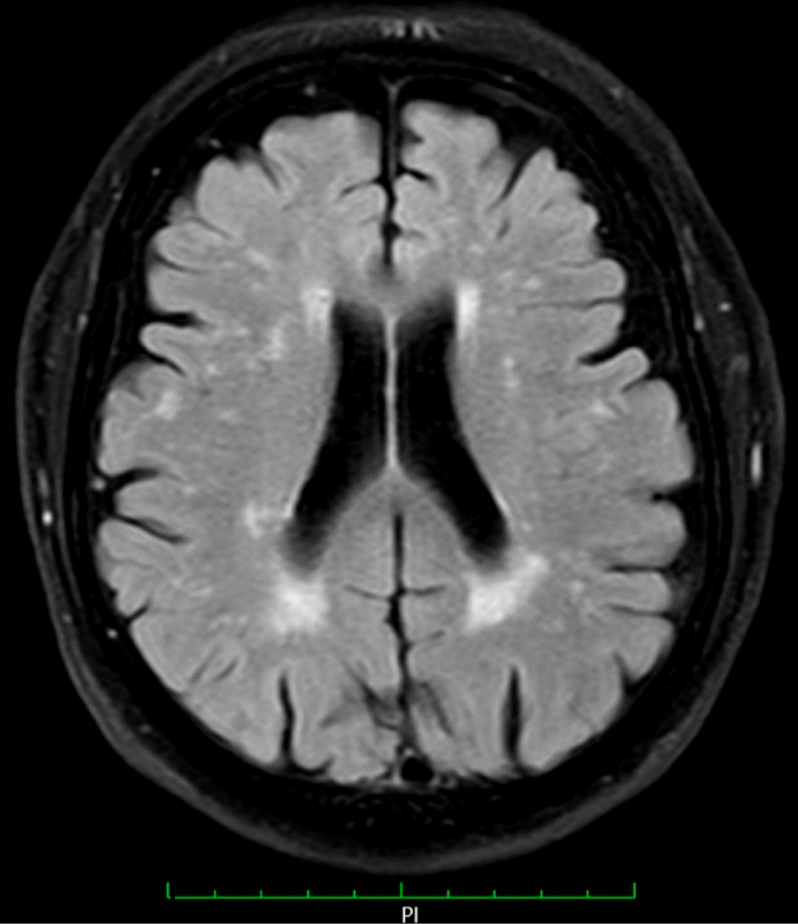
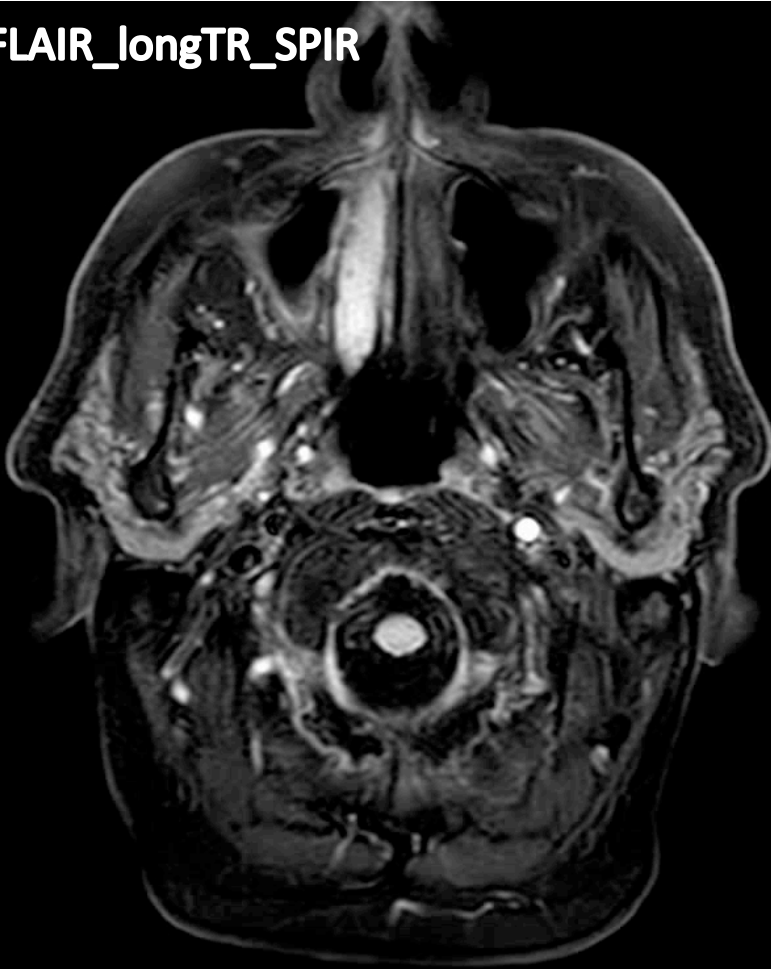
# TC encefalo



Multipli focolai di ipodensità nella sostanza bianca sopratentoriale bilaterale → in prima ipotesi **sofferenza vascolare ischemica cronica**

# RM encefalo 2017

FLAIR\_longTR\_SPIR

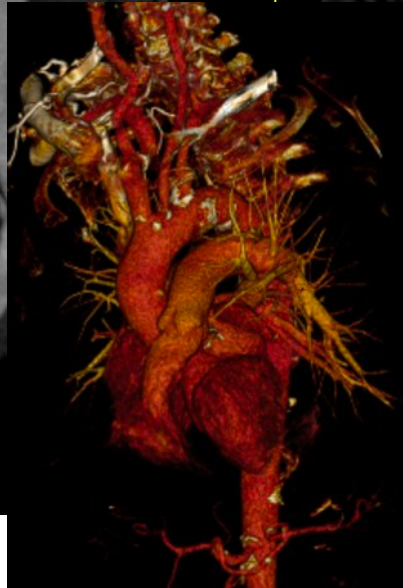
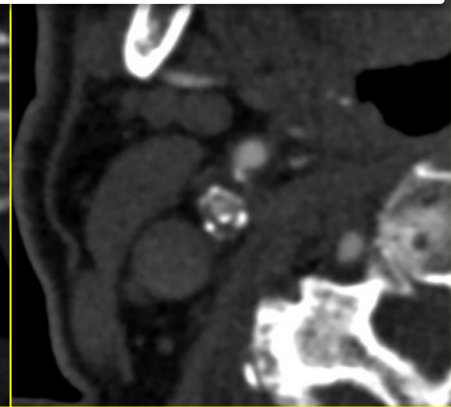
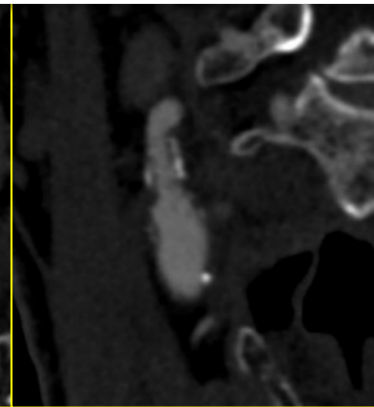
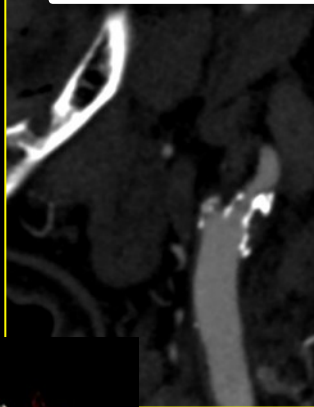
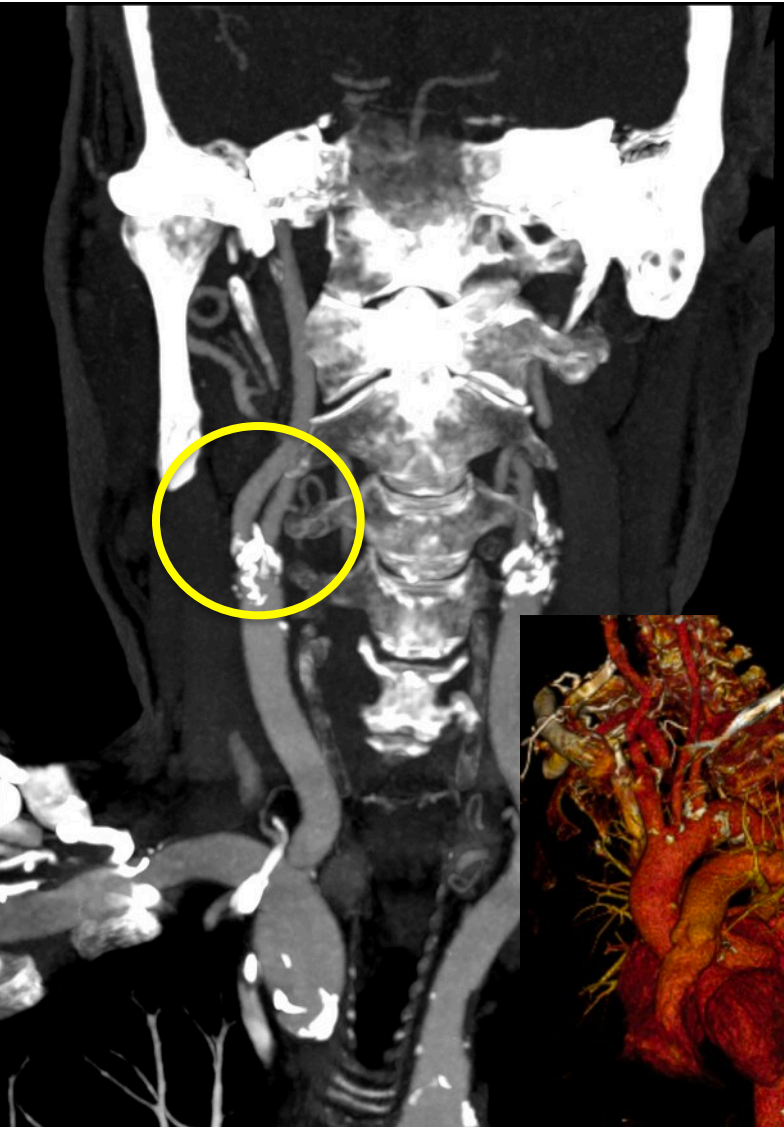


- Lesioni gliotiche post-ischemiche a livello della sostanza bianca in sede corticale e sottocorticale bilaterale in particolare a carico della corona radiata
  - Normali le sequenze DWI/diffusione



# Angio TC: vasi esocranici

“A livello della biforcazione carotidea destra placca a componente prevalentemente calcifica che coinvolge l'origine di ACI dove determina stenosi del 60-70%; occlusione ACI sinistra”



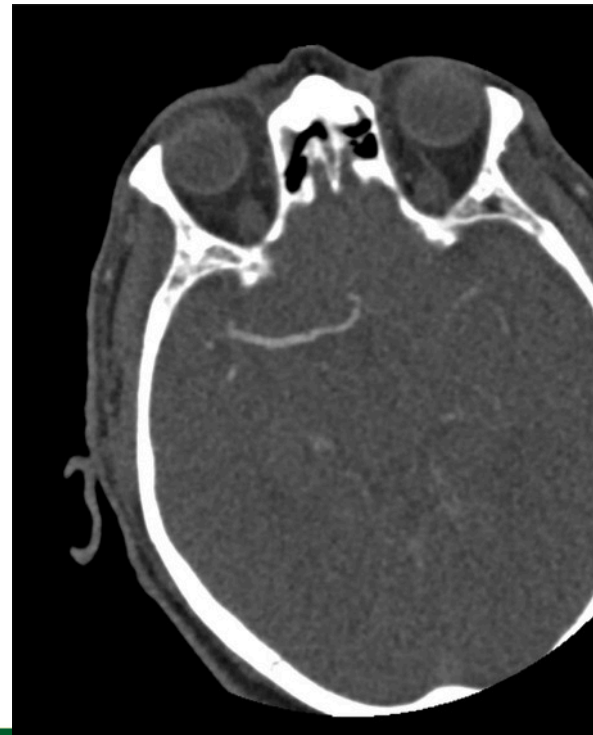
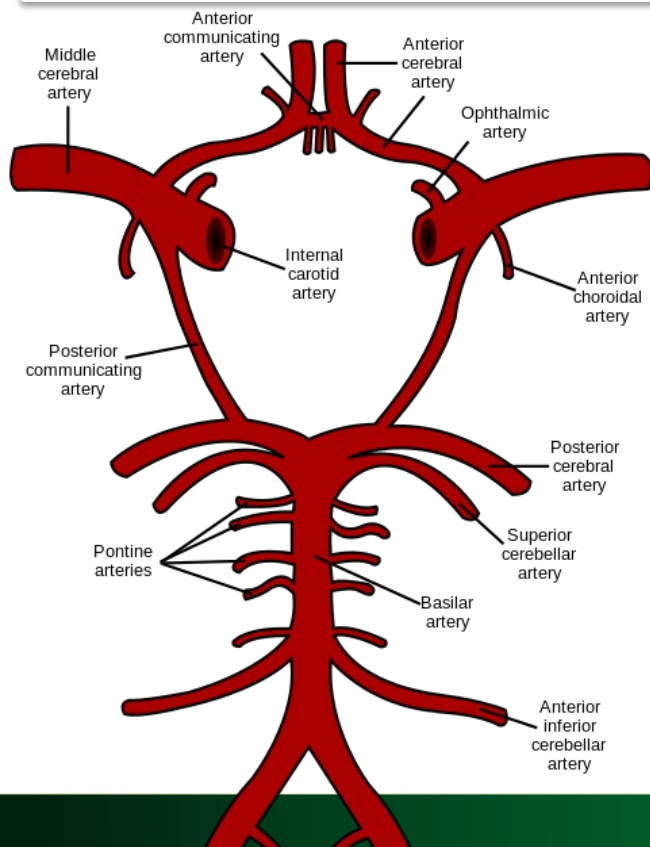
# Angio TC: vasi endocranici

ACI sinistra riabitata dall'arteria oftalmica omolaterale

ACM sinistra e suo territorio di distribuzione di calibro ridotto e con flusso rallentato

CP sinistra e A1 sinistra scarsamente opacizzabili

A1 destra vascolarizza entrambi i tratti A2



# SNODO 2



1) Terapia conservativa della PAD carotidea

2) Terapia percutanea con CAS della PAD carotidea

3) Terapia chirurgica con CEA della PAD carotidea

# SNODO 2

In neurologically asymptomatic patients scheduled for CABG:

- Carotid revascularization may be considered in patients with bilateral 70 - 99% carotid stenosis or 70 - 99% carotid stenosis and contralateral occlusion.
- Carotid revascularization may be considered in patients with a 70 - 99% carotid stenosis, in the presence of one or more characteristics that may be associated with an increased risk of ipsilateral stroke,<sup>c</sup> in order to reduce stroke risk beyond the perioperative period.
- Routine prophylactic carotid revascularization in patients with a 70 - 99% carotid stenosis is not recommended.

IIb	C	
IIb	C	
III	C	

CONSULENZA VASCOLARE  
*“Non indicazione a trattamento chirurgico o endovascolare” → FUP doppler US semestrale*

# Discussione multidisciplinare

## Recommendations

It is recommended that the...  
if so, the method and timing...  
revascularization be individ...  
cussion within a multidiscip...  
including a neurologist.

V. Aboyans et al.



“... territorio di ACM  
all’unanimità  
... lochirurgico  
... to rischio  
... er il paziente”

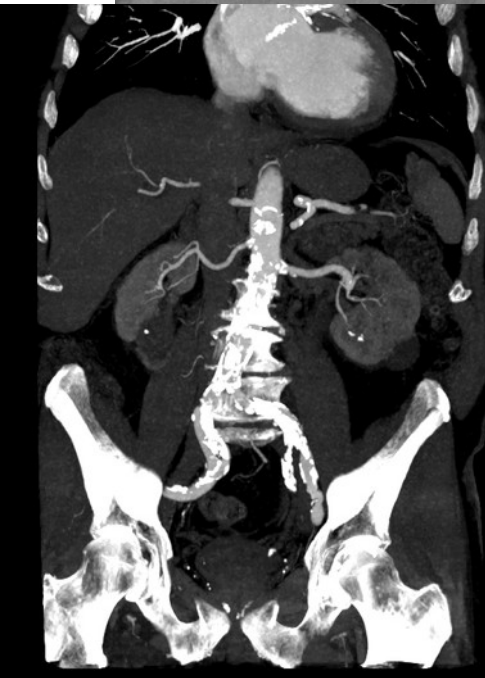
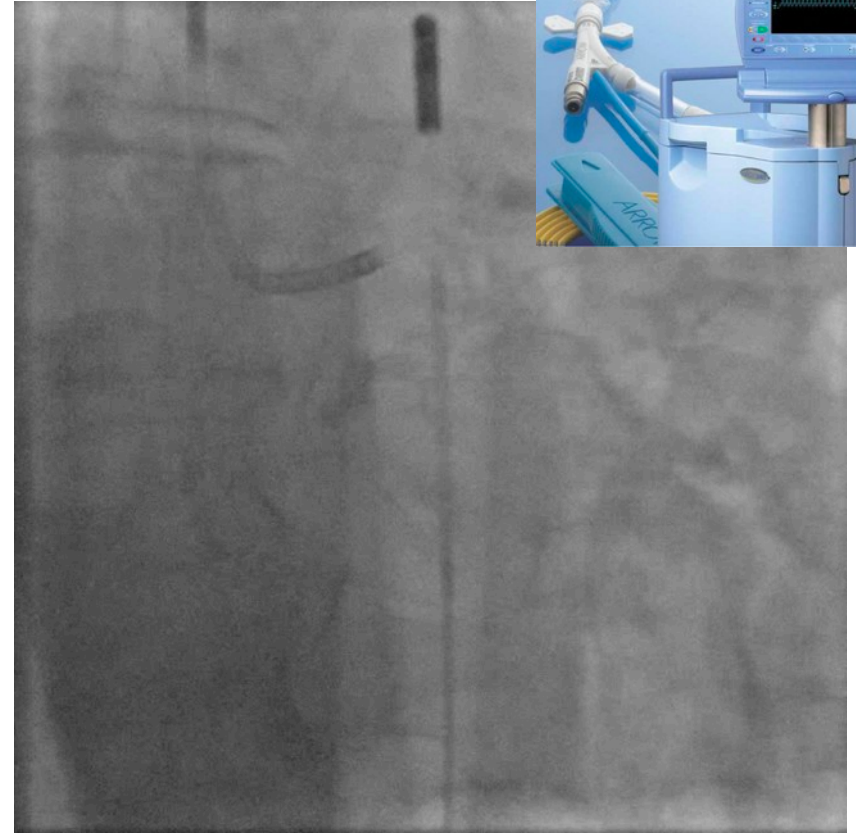
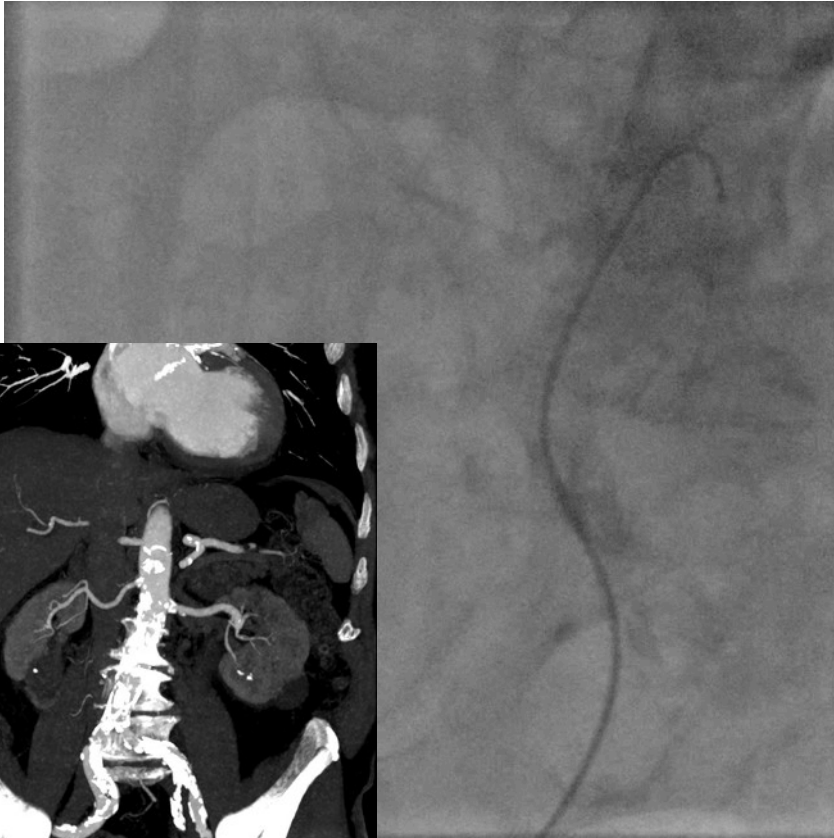
# Strategia

PTCA multilesionale coronaria sinistra IVUS guidata con accesso radiale (Glidesheat slender 7 Fr)

IAPB upstream con accesso femorale destro

FUP della valvulopatia aortica e della CTO

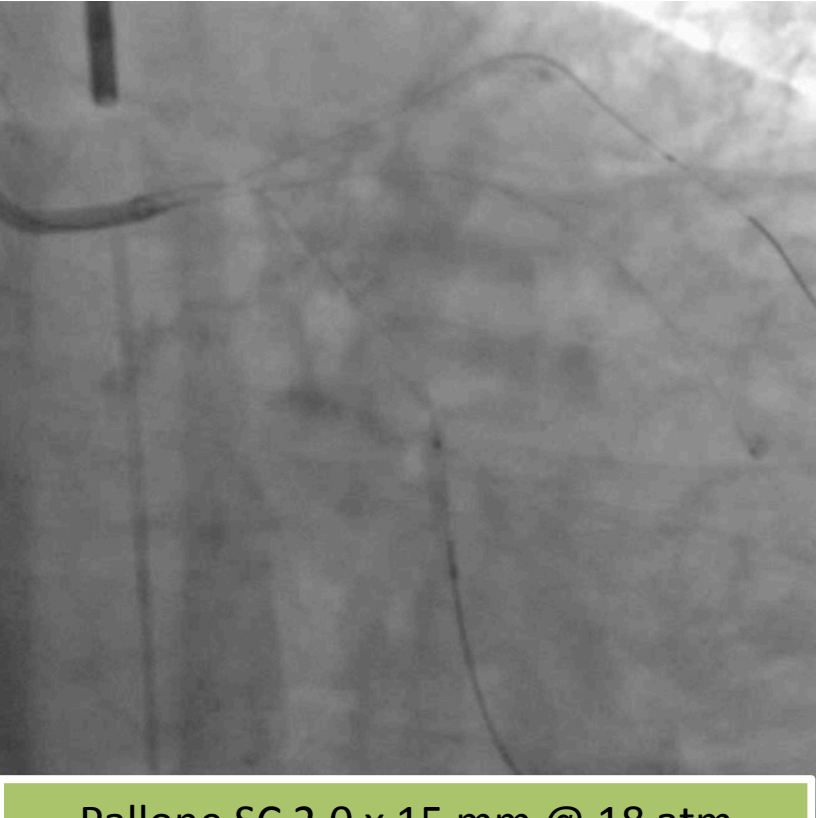
# IAPB?!



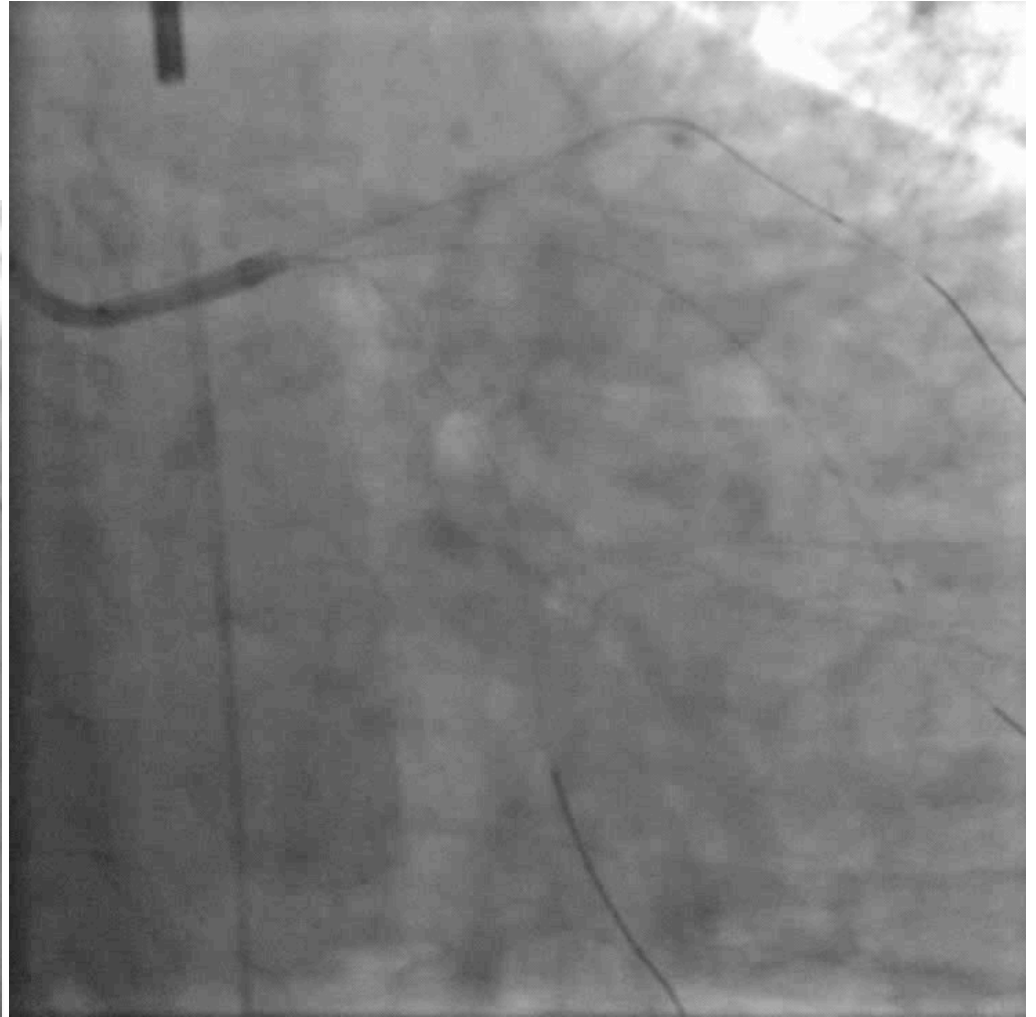
# PTCA CX



Catetere guida EBU 3.757Fr

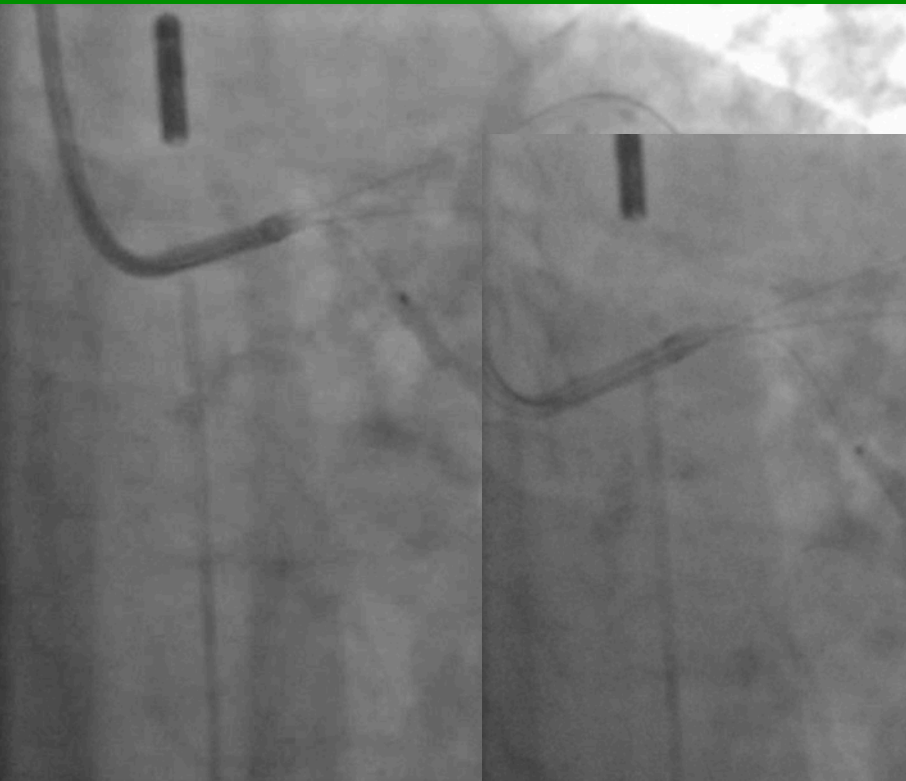


Pallone SC 2.0 x 15 mm @ 18 atm

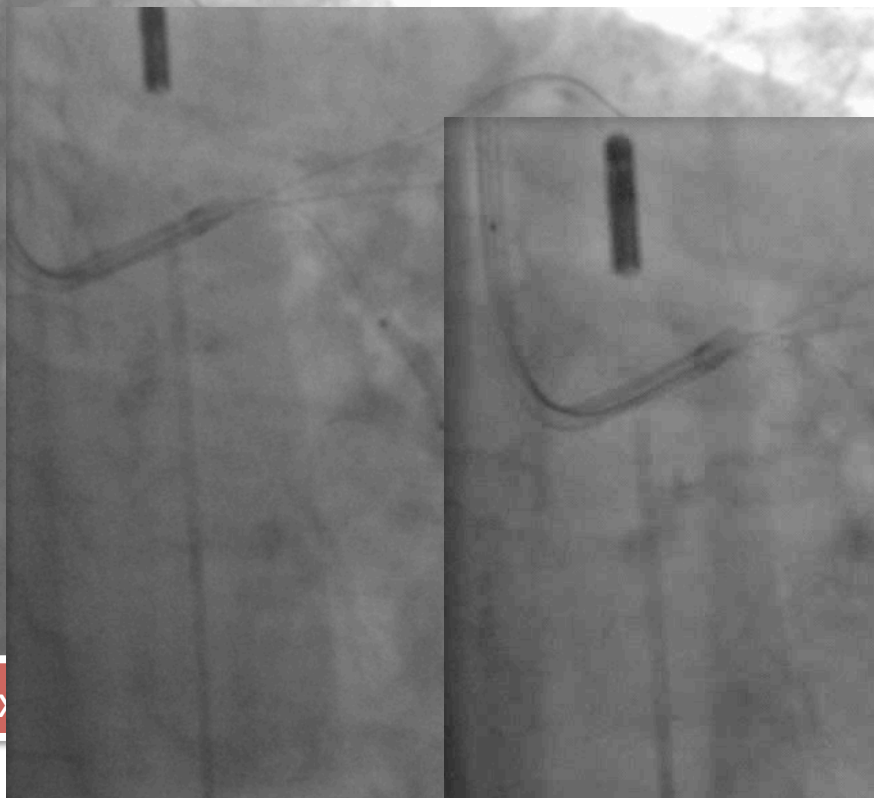




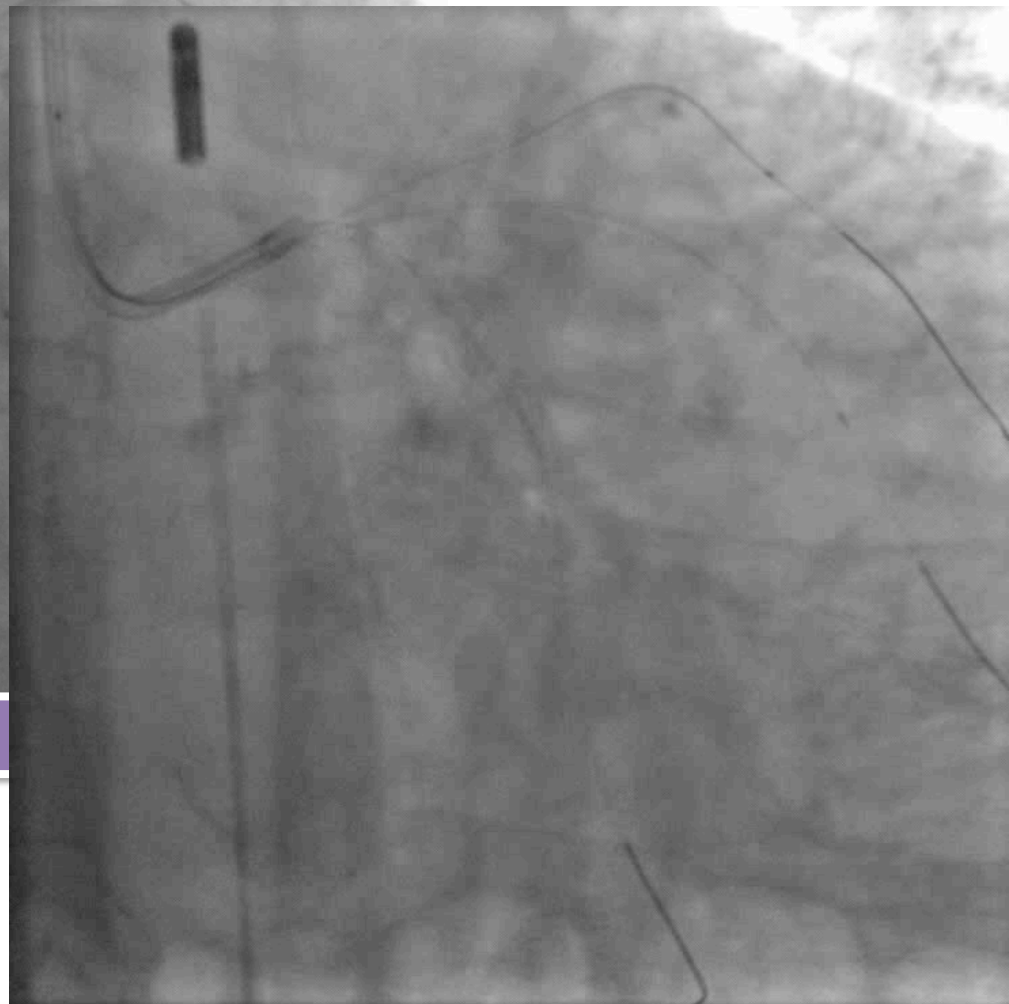
# PTCA CX



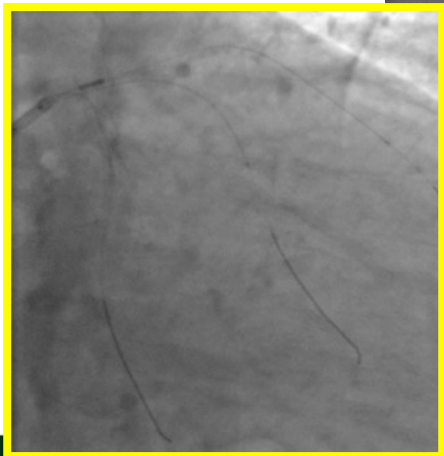
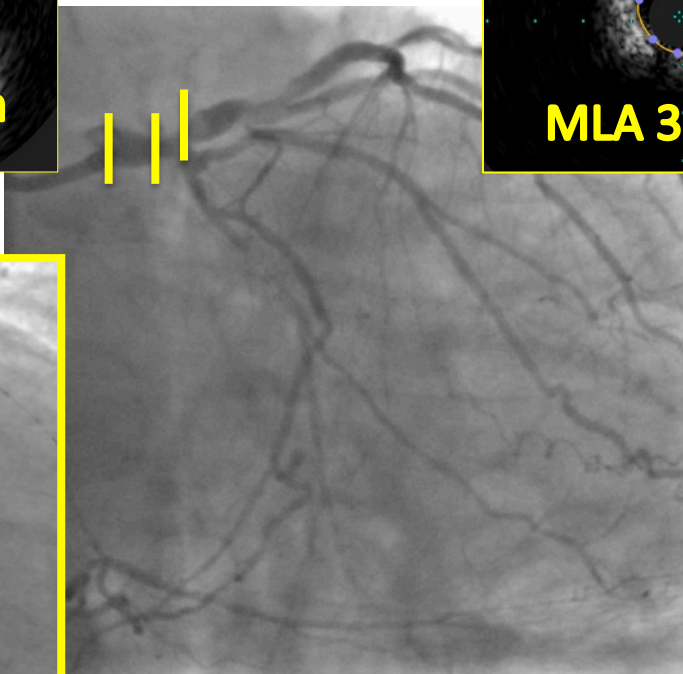
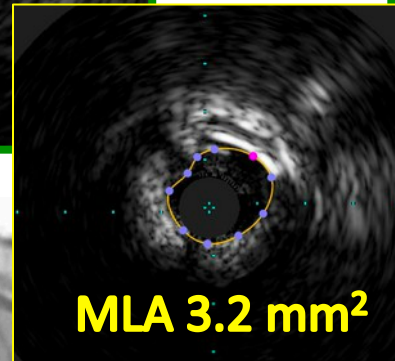
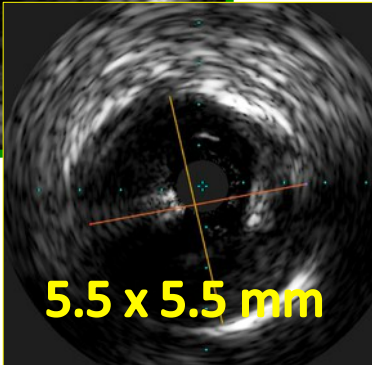
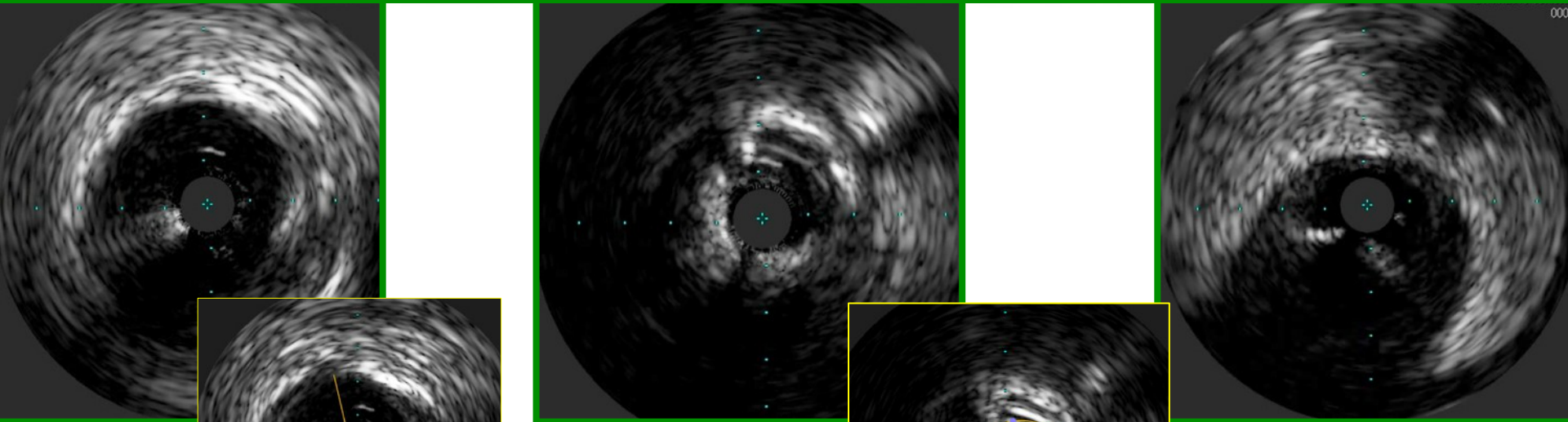
DES Everolimus 2.25 x



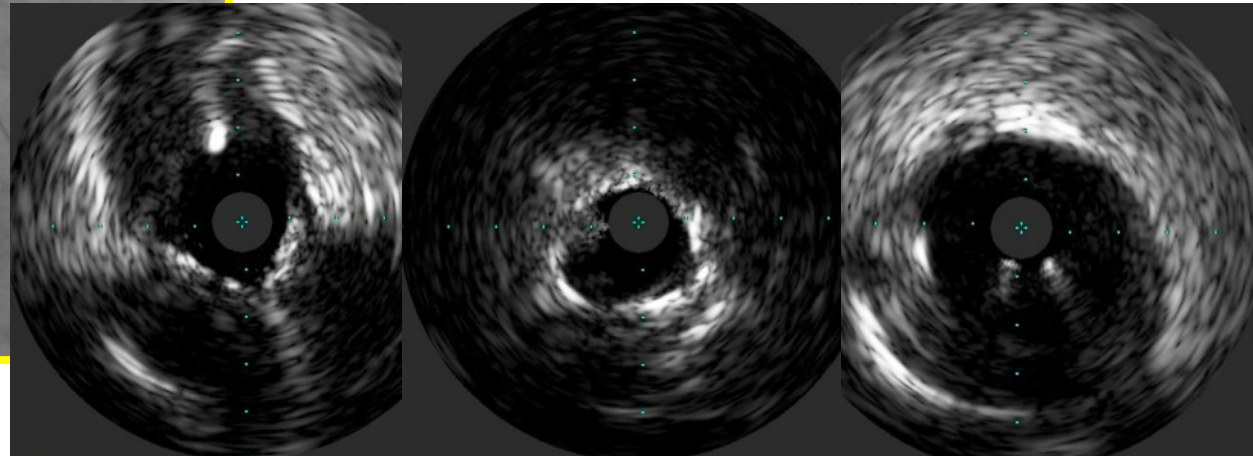
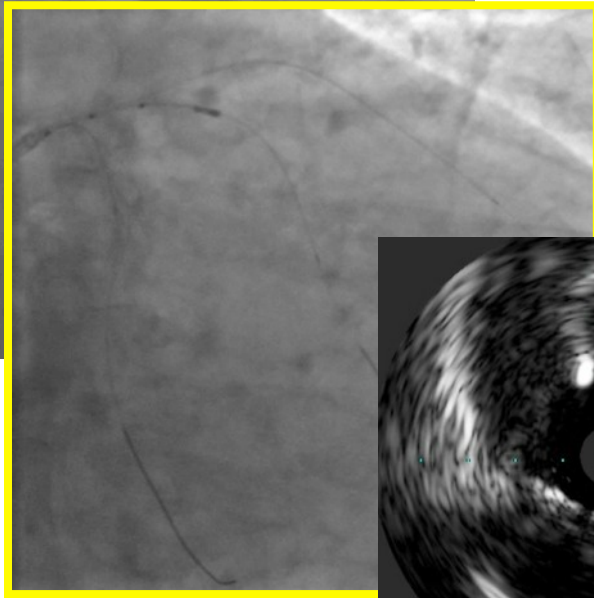
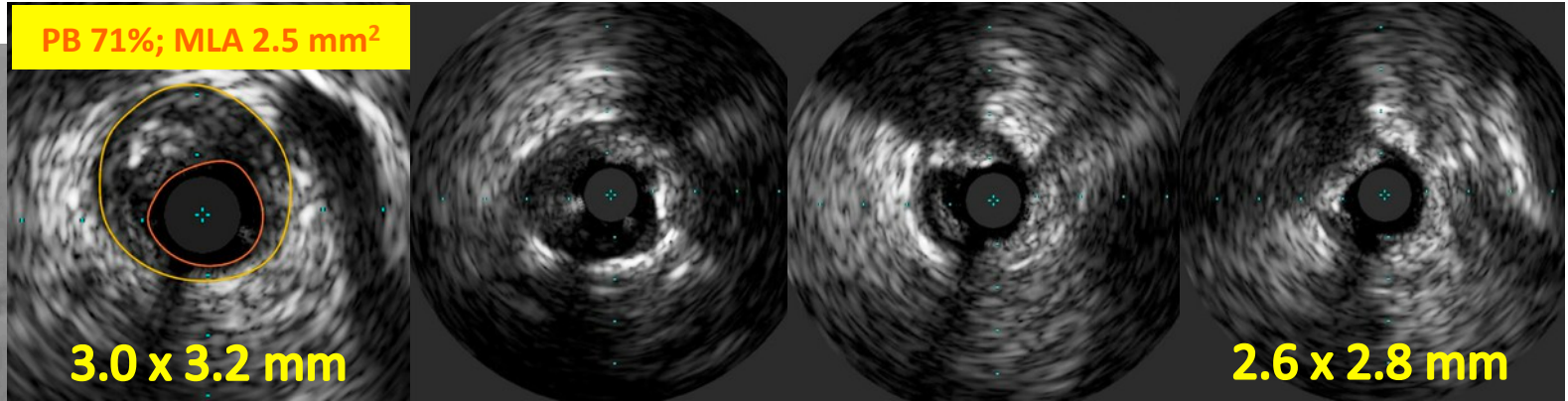
Pallone NC 2.5 x



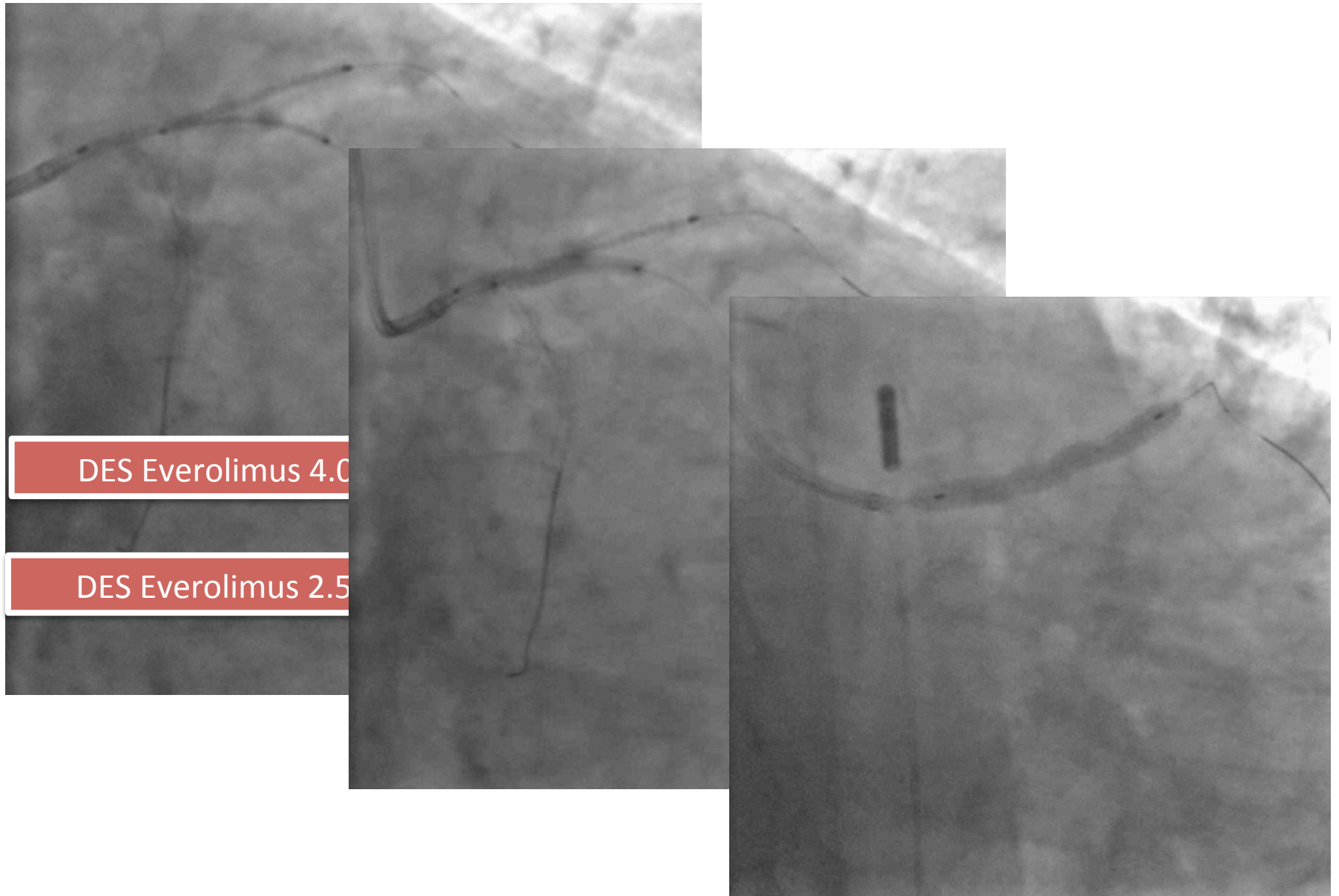
# IVUS DA-TC



# IVUS Ramo intermedio



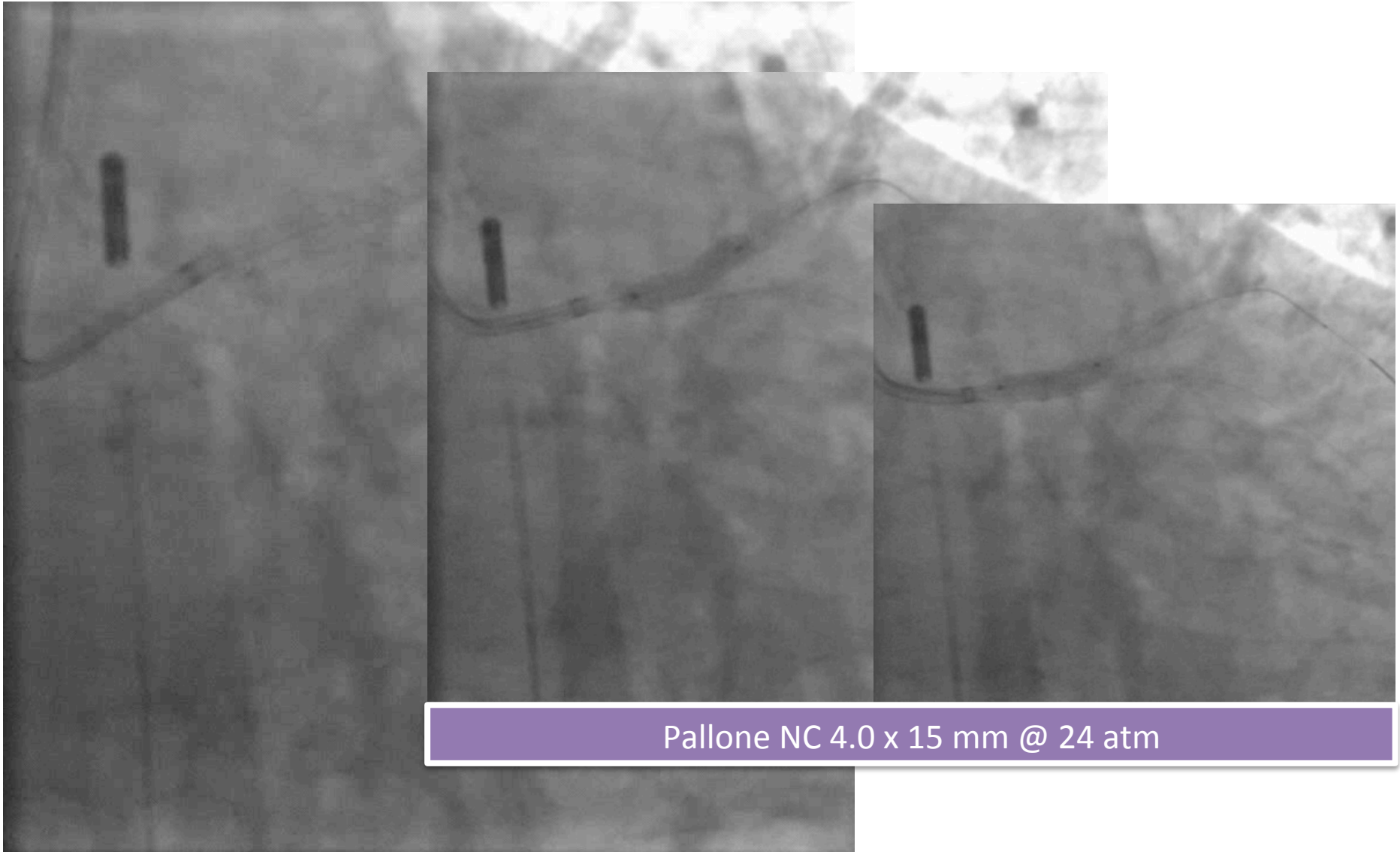
# “mini-crush technique IVA-RI”



DES Everolimus 4.0

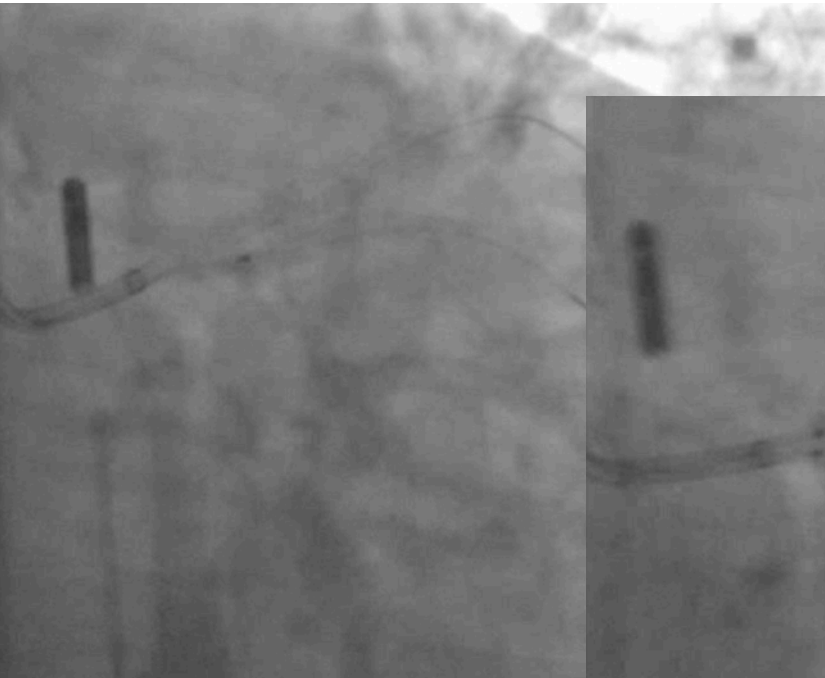
DES Everolimus 2.5

# PTCA

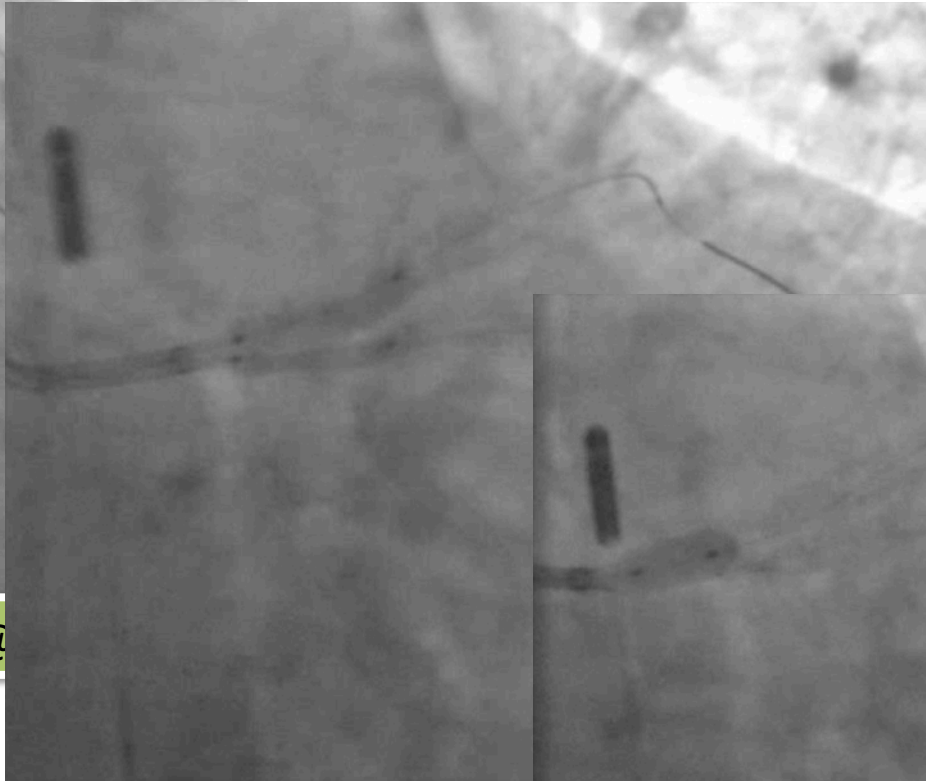


Pallone NC 4.0 x 15 mm @ 24 atm

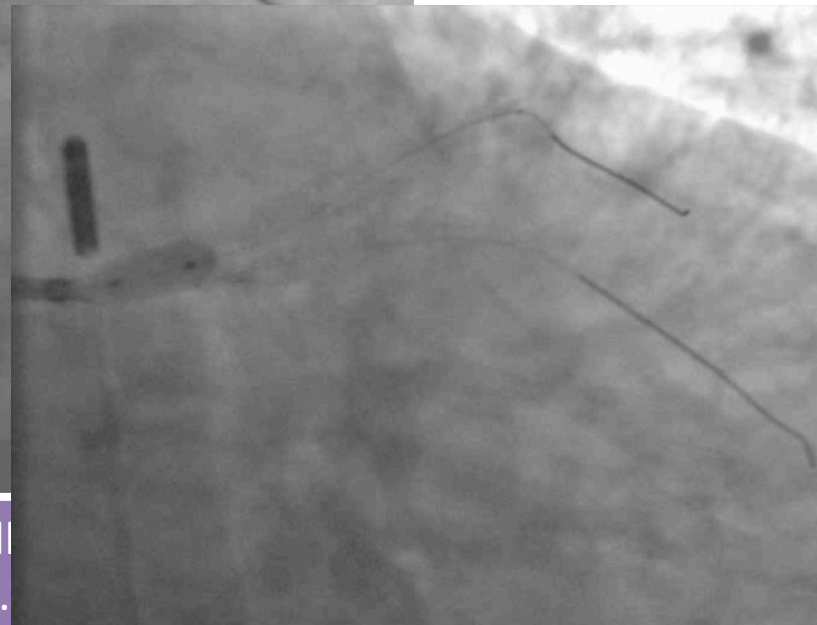
# PTCA



Pallone SC 1.5 x 15 mm @

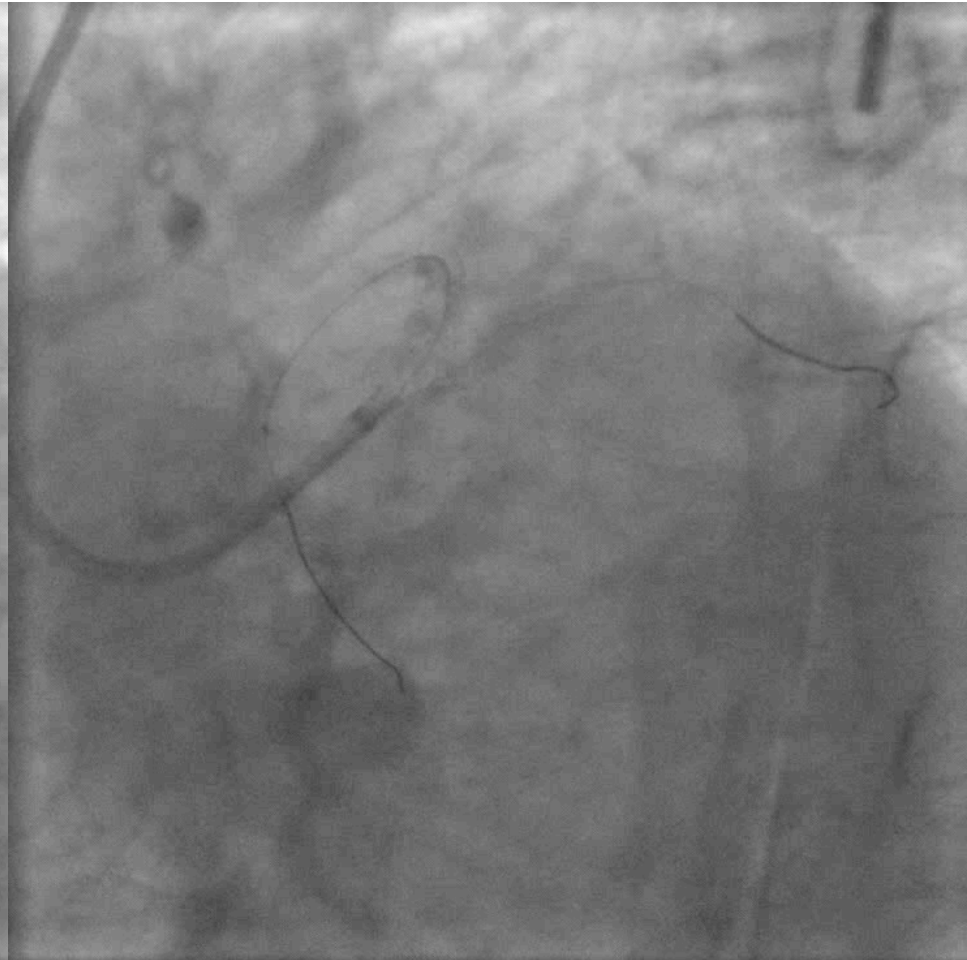
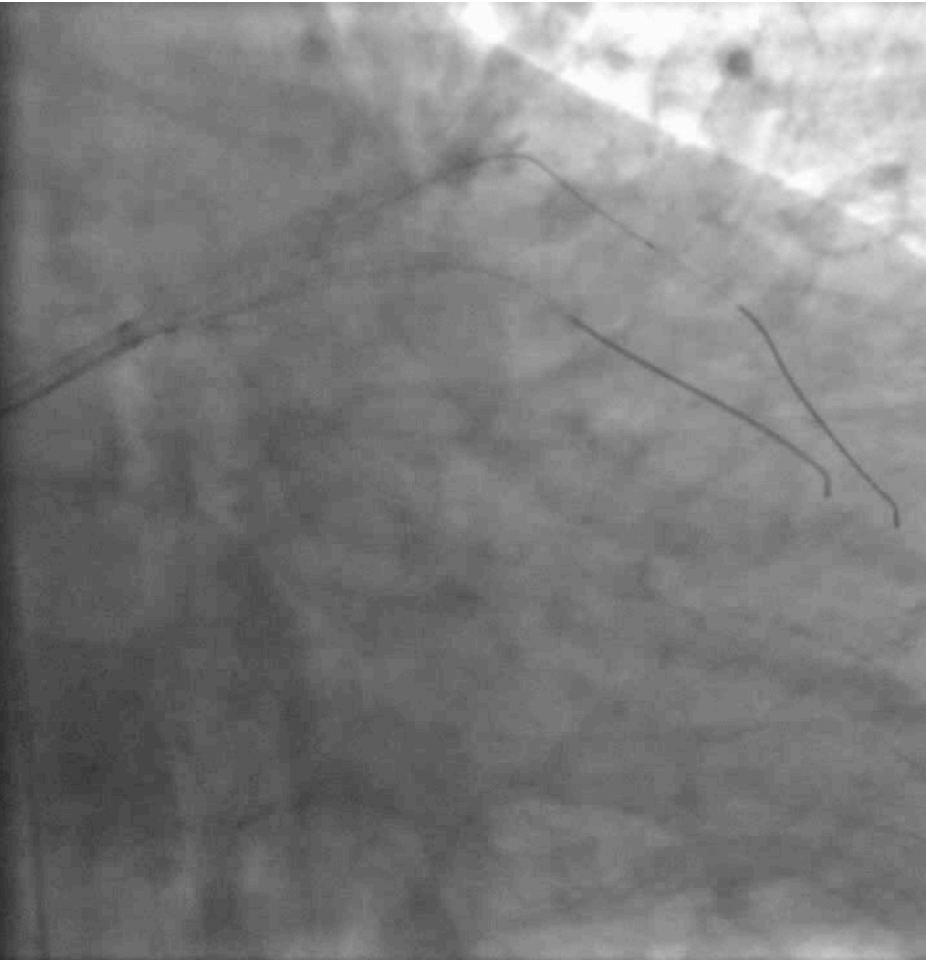


Kissing ball  
Palloni NC 4.0x15 mm + 2.



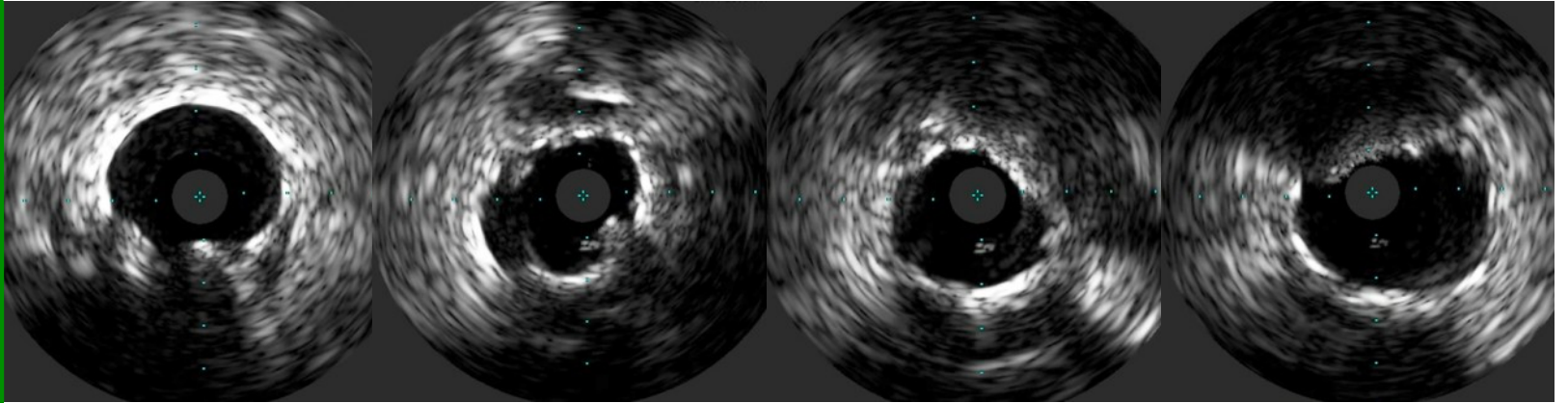
POT  
Pallone NC 5.0 x 8 mm @ 22 atm

# Risultato angiografico

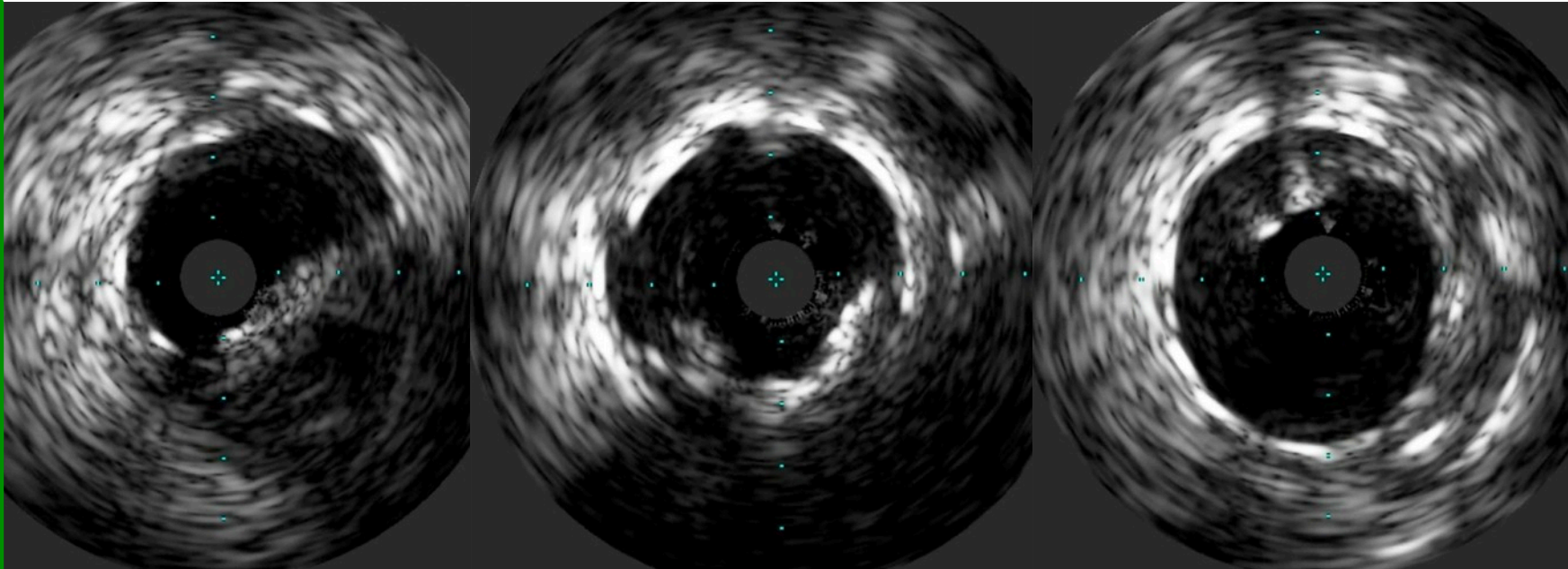


# IVUS

DA

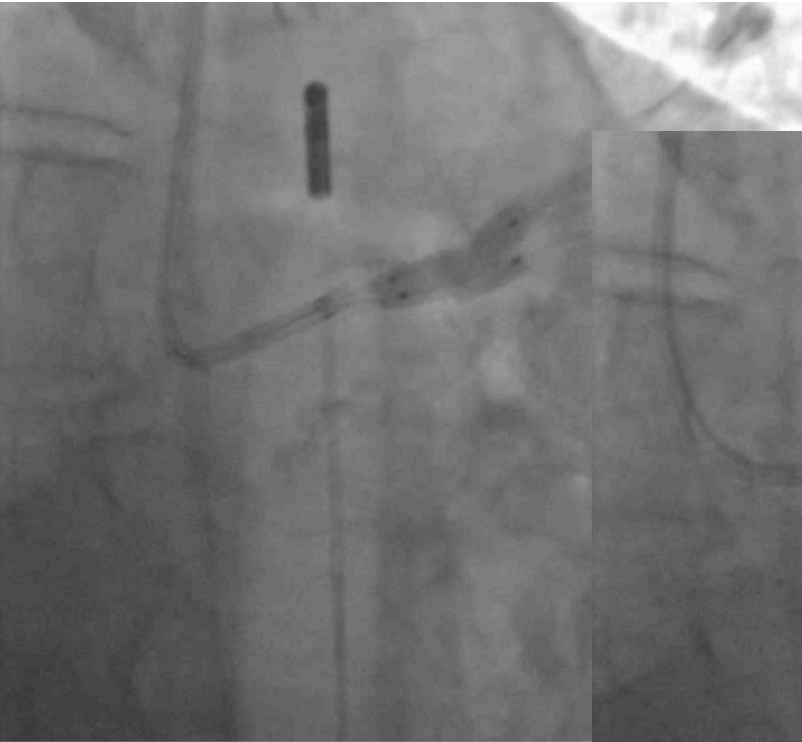


LM

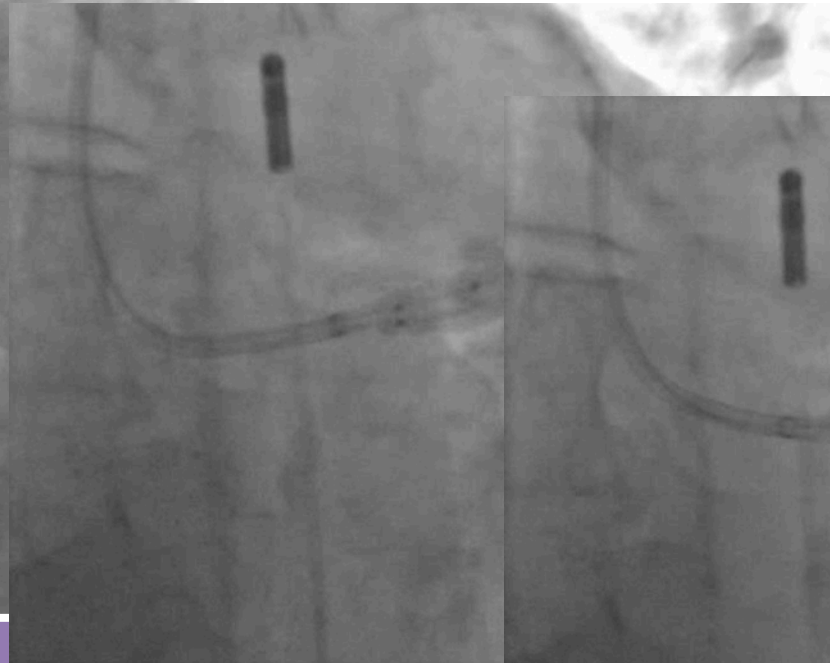




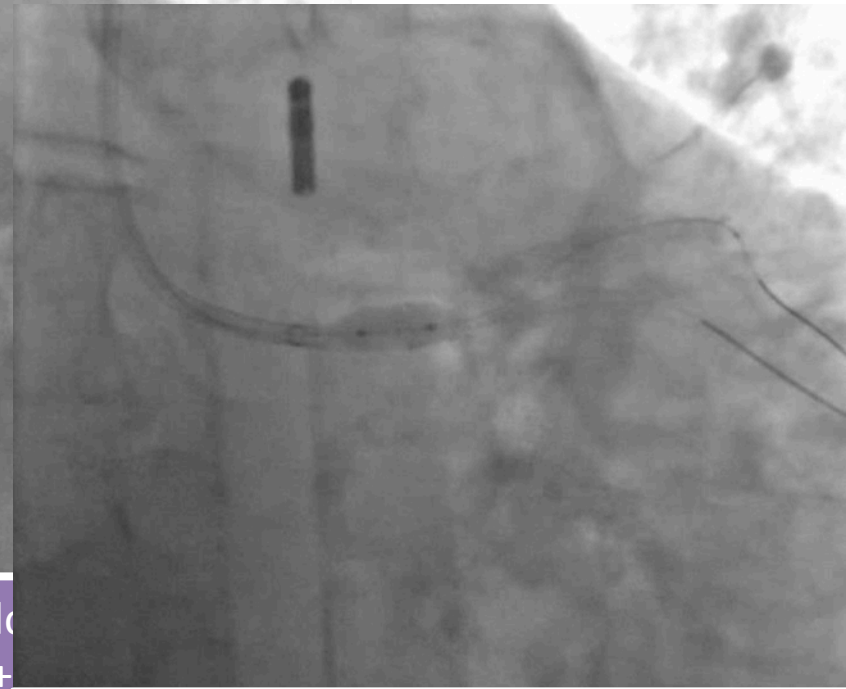
# PTCA



Kissing balloon  
OPN 3.5x15 mm + NC 2.75x15 mm  
18 atm

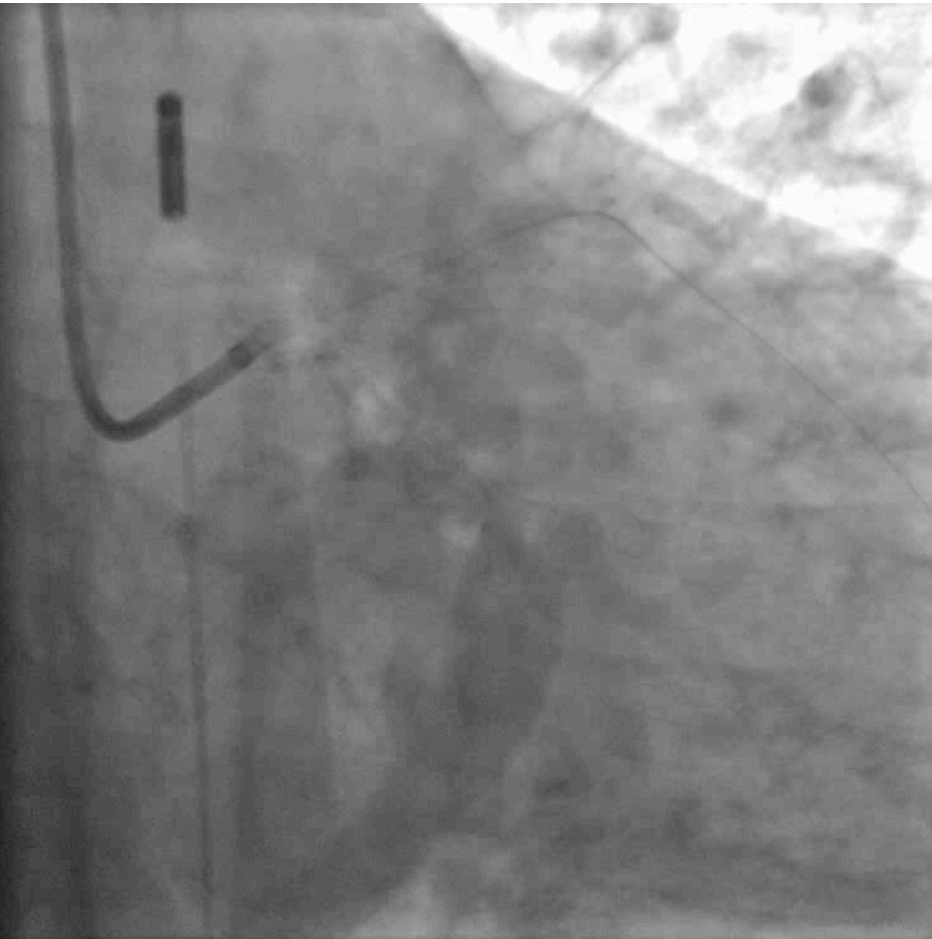


Kissing balloon  
Palloni NC 4.0 x 8 mm +  
OPN 3.5 x 15 mm  
16 atm

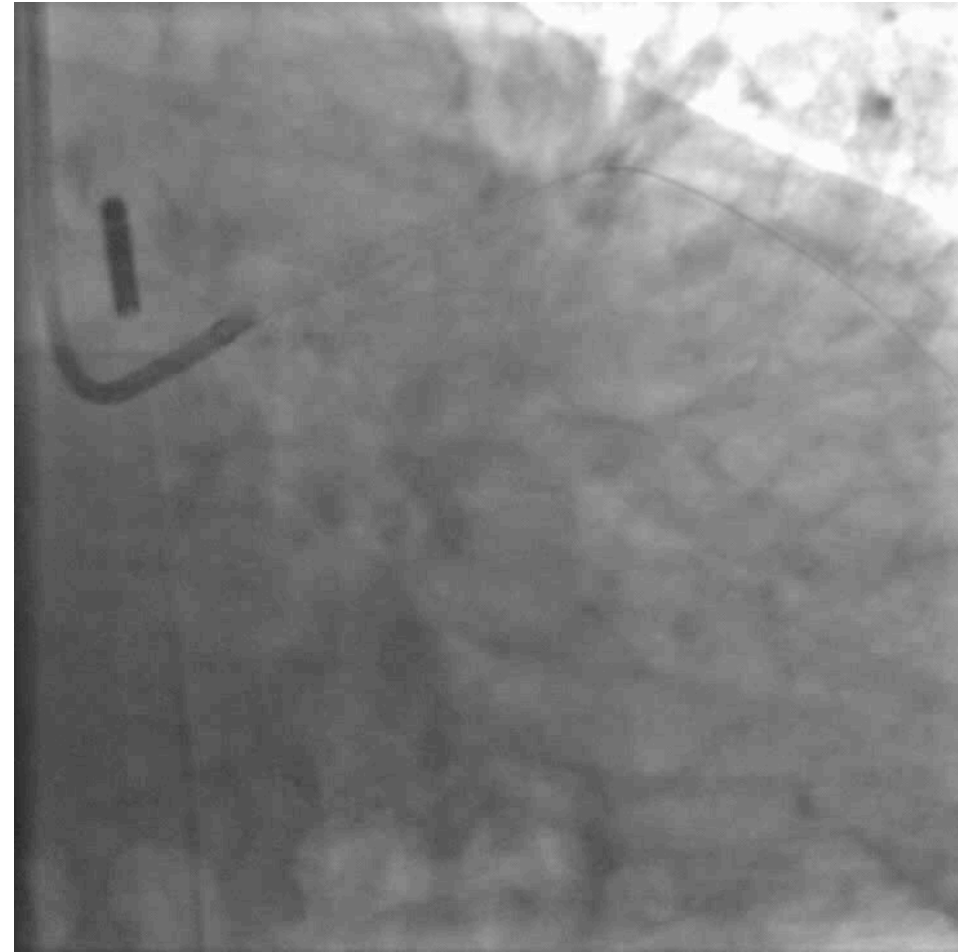
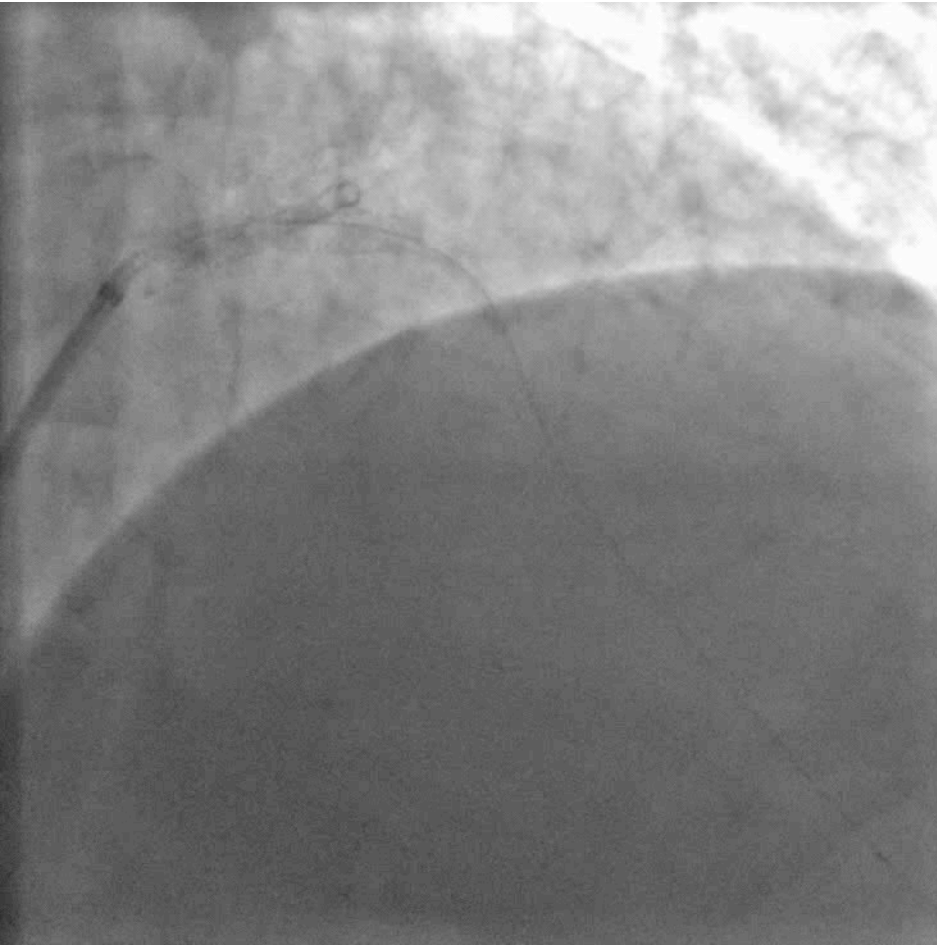


POT  
Pallone NC 5.0 x 8 mm @ 18 atm

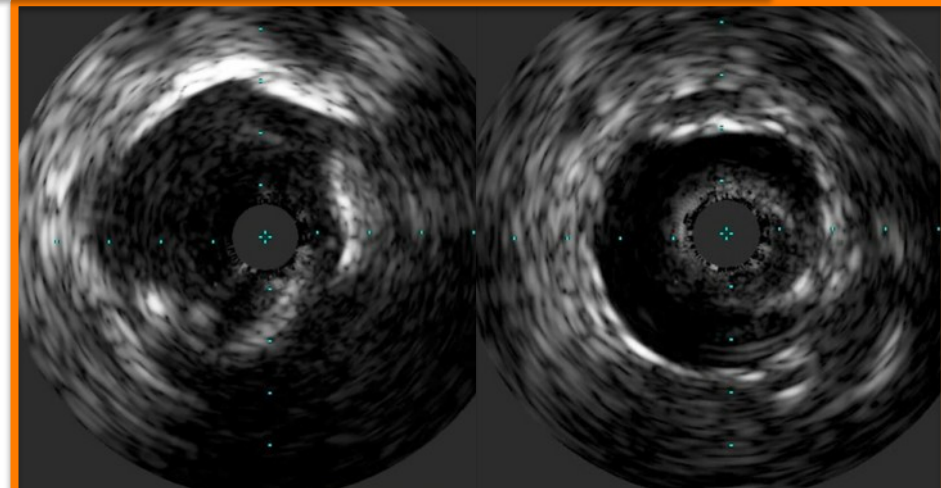
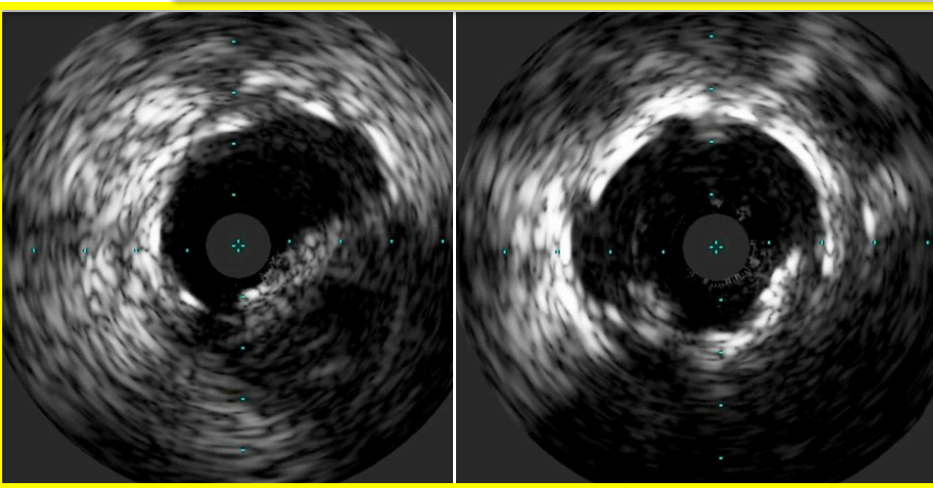
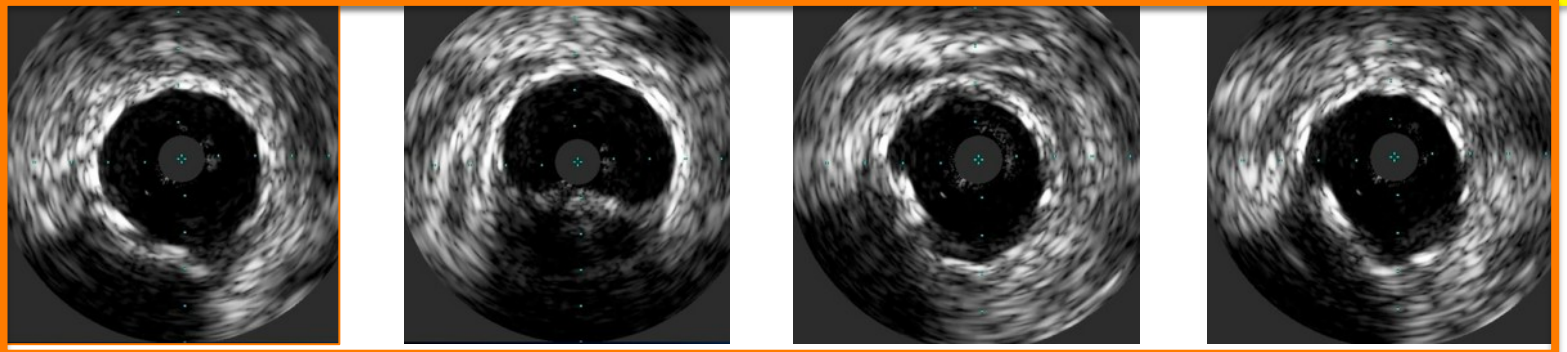
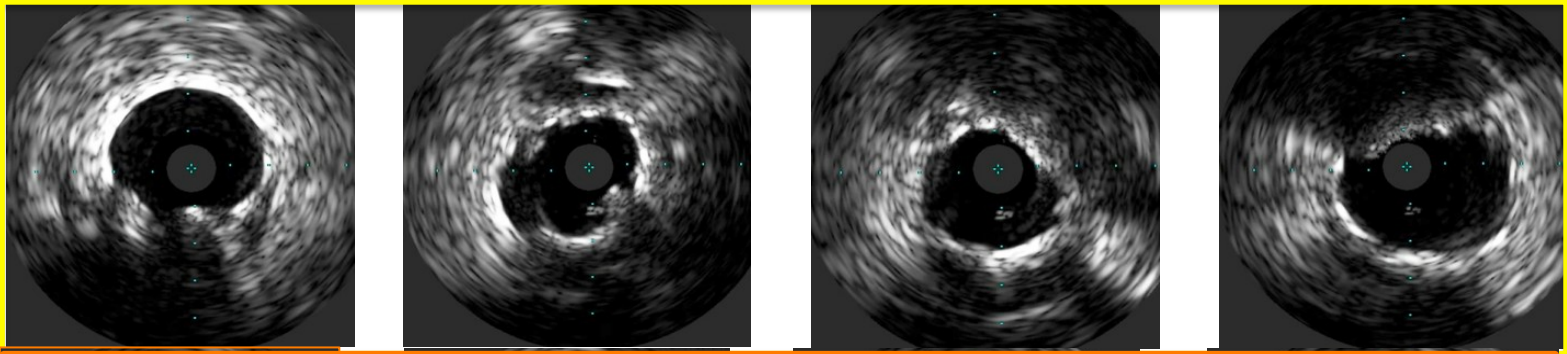
# Risultato angiografico finale



# Risultato angiografico finale



# IVUS finale



# DIMISSIONE E FUP

- **ASA 100 mg ore 12:00**
- **Clopidogrel 75 mg ore 12:00**
- Furosemide 25 mg ore 8:00
- Pantoprazolo 20 mg ore 8.00
- Bisoprololo 3.75 mg ore 8.00
- Doxazosina 2 mg ore 16:00
- Valsartan 160 mg ore 18:00
- Atorvastatina 80 mg ore 22:00
- Clonidina cerotto TTS2 1 volta a settimana
- Naftidrofurile 200 mg

- Visita cardiologica 2-6-12 mesi

- 6 mesi → Ecostress dobutamina
- (valutazione vitalità + riserva contrattile e stenosi aortica)

- Controllo angiografico 12 mesi (??)

# PRECISE DAPT



Haemoglobin ?

unit

g/dl

mmol/L

Age (years)

White blood cells ?

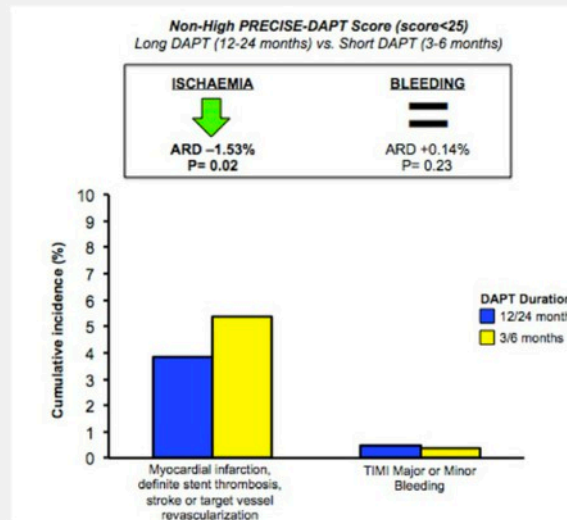
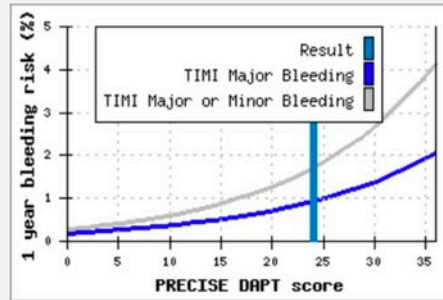
unit

u/mcL

10<sup>9</sup>/L

Creatinine Clearance (mL/min) ?

Prior Bleeding ?



RESULT:

Cluster of risk:

**Moderate**

Score Calculated

**24**

12 months risk of TIMI

major or minor

Bleeding

**1.7%**

12 months risk of TIMI

Major Bleeding

**0.9%**

# SNODO 3

Al termine dell'anno di DAPT con ASA e clopidogrel quale terapia?

1) Terapia con ASA 100 mg

2) DAPT ASA/clopidogrel 30 mesi

1) Monoterapia con ticagrelor per 12 mesi

3) ASA + rivaroxaban 2.5 mg x 2 24 mesi

# COMPASS e prevenzione CV

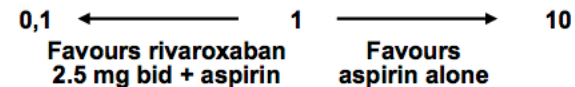
RRR	Lipid lowering (1 mmol/L) <sup>1,2</sup>	BP lowering (10 mmHg) <sup>3</sup>	ACEI (HOPE) <sup>4</sup>	COMPASS <sup>5</sup>
MACE	21%	20%	22%	26%

+ Riva  
2.5 mg  
bid &

Str **- 46% MALE reduction – 70% MAJOR AMPUTATION reduction**

MI	Rivaroxaban 2.5 mg bid + aspirin n (%*)	Aspirin n (%*)	HR	HR (95% CI)	p-value
De CV < death, stroke, MI (MACE)	126 (5.1)	174 (6.9)	0.72		<0.005
E Acute limb ischaemia or chronic limb ischaemia (MALE)	30 (1.2)	56 (2.2)	0.54		0.005
Major amputation	5 (0.2)	17 (0.7)	0.30		0.01
MACE, MALE or major amputation	157 (6.3)	225 (9.0)	0.69		0.0003

Anand SS *et al*, *Lancet* 2018;391:219–229



1. CTT Collaboration. *Lancet* 2015;385:1397–1405; 2. Collins R *et al*. *Lancet* 2016;388:2532–2561; 3. Ettehad D *et al*. *Lancet* 2016;387:957–967; 4. HOPE Investigators. *N Engl J Med*. 2000;342:145–153; 5. Connolly SJ *et al*. *Lancet* 2017; doi:10.1016/S0140-6736(17)32458-3.



Con il Patrocinio di



**Grazie per l'attenzione.....**

**Malattia coronarica cronica  
in paziente già sottoposto a PCI:  
dallo studio Compass alla pratica clinica**

Strategie vincenti nella gestione  
della terapia antitrombotica nel paziente  
con cardiopatia ischemica cronica