

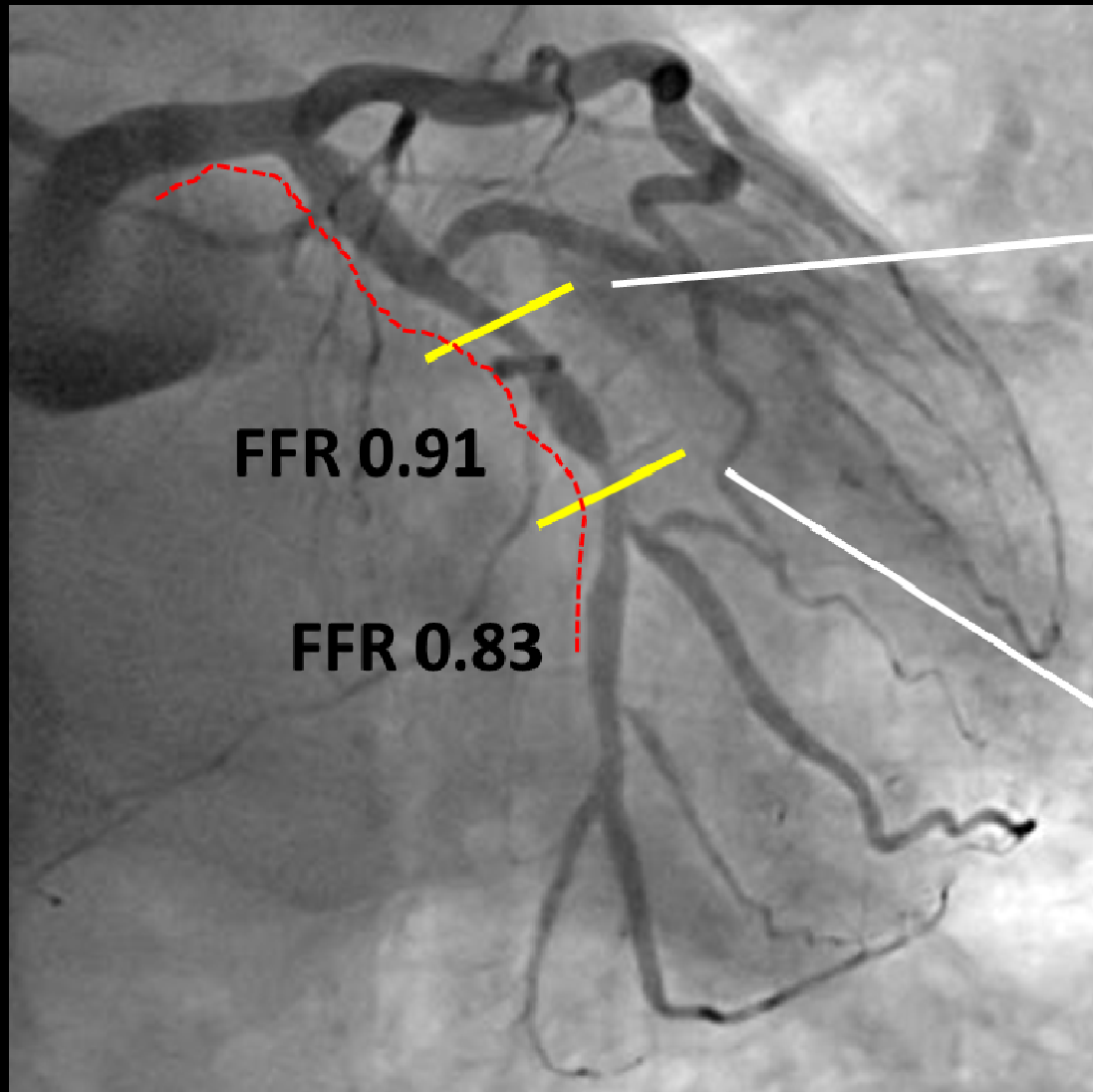
# The use of FFR in multivessel disease

**Kim June-Hong MD. PhD.**

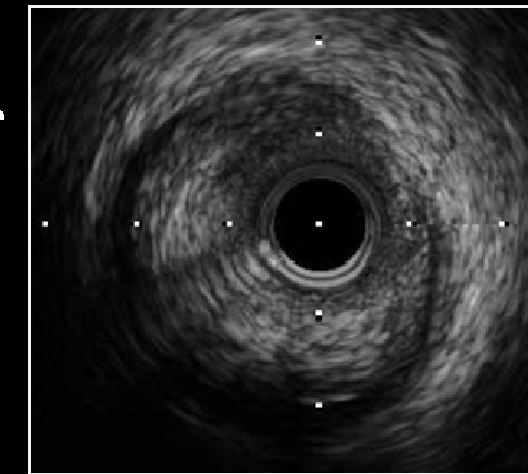
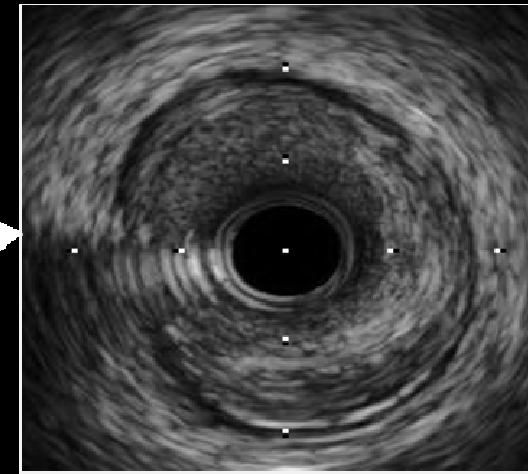
**Cardiovascular center**

**Pusan National University Yangsan Hospital**

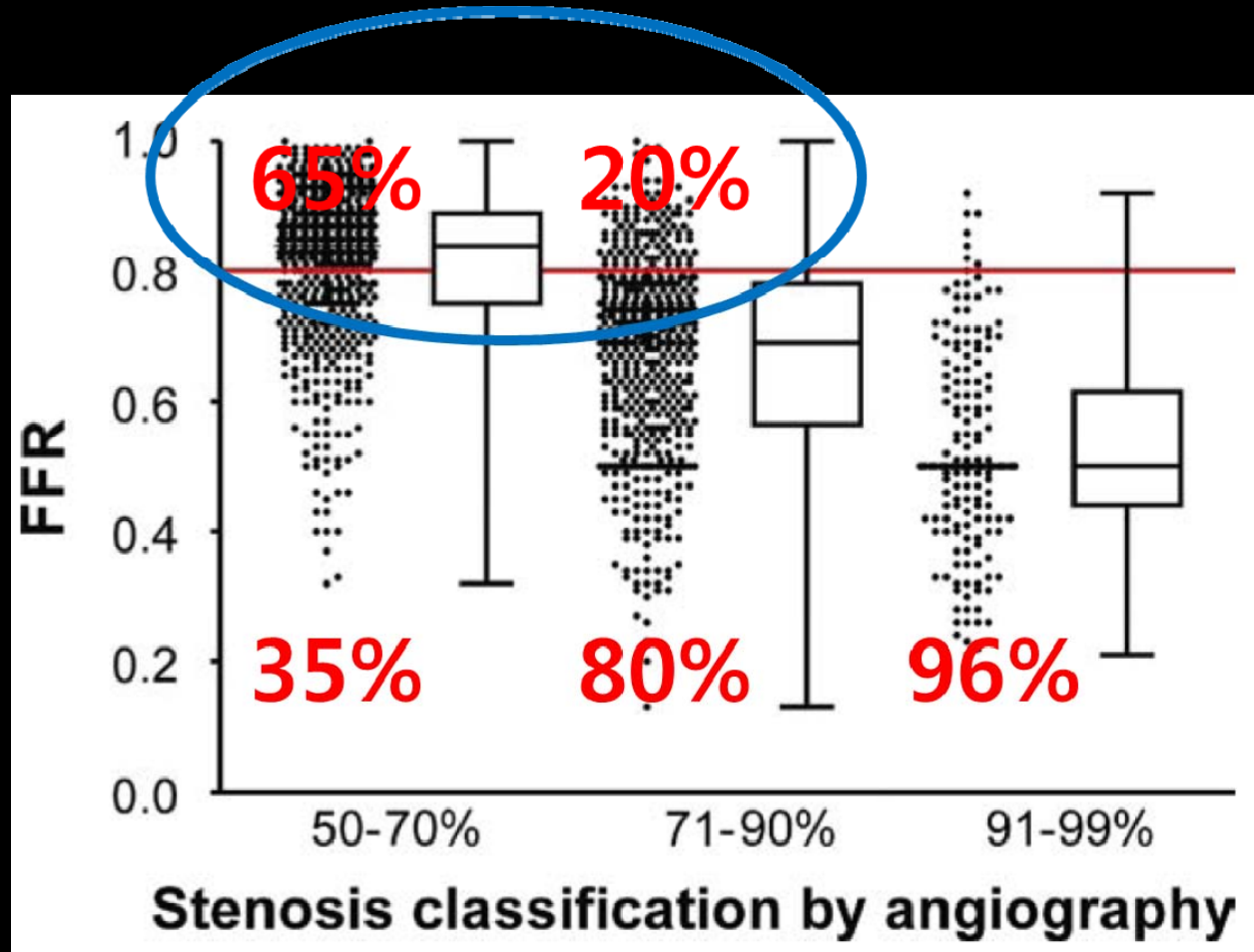
# Morphology(angio) $\neq$ function (FFR)



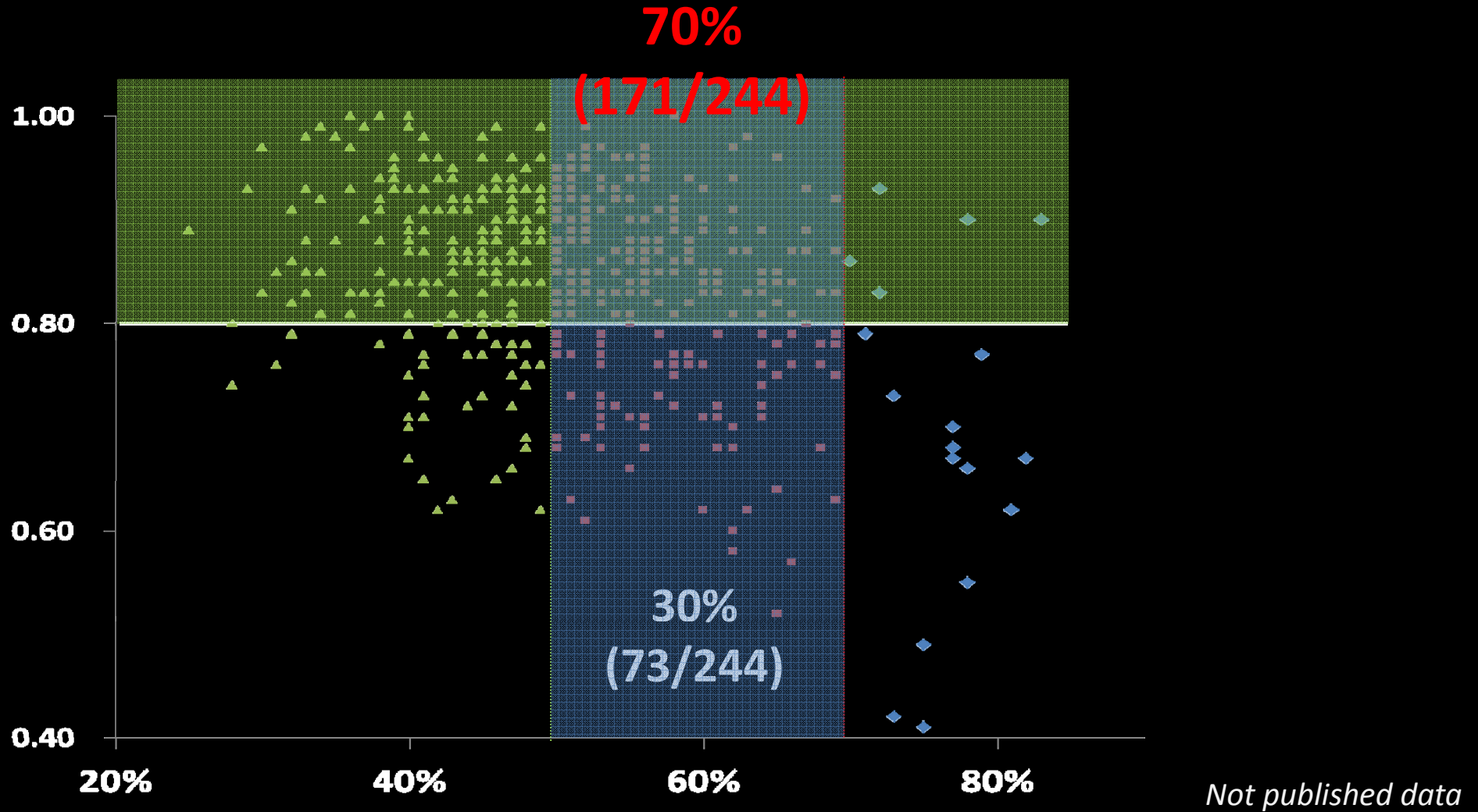
72/M , chest pain (+)



# Intermediate stenosis of coronary artery

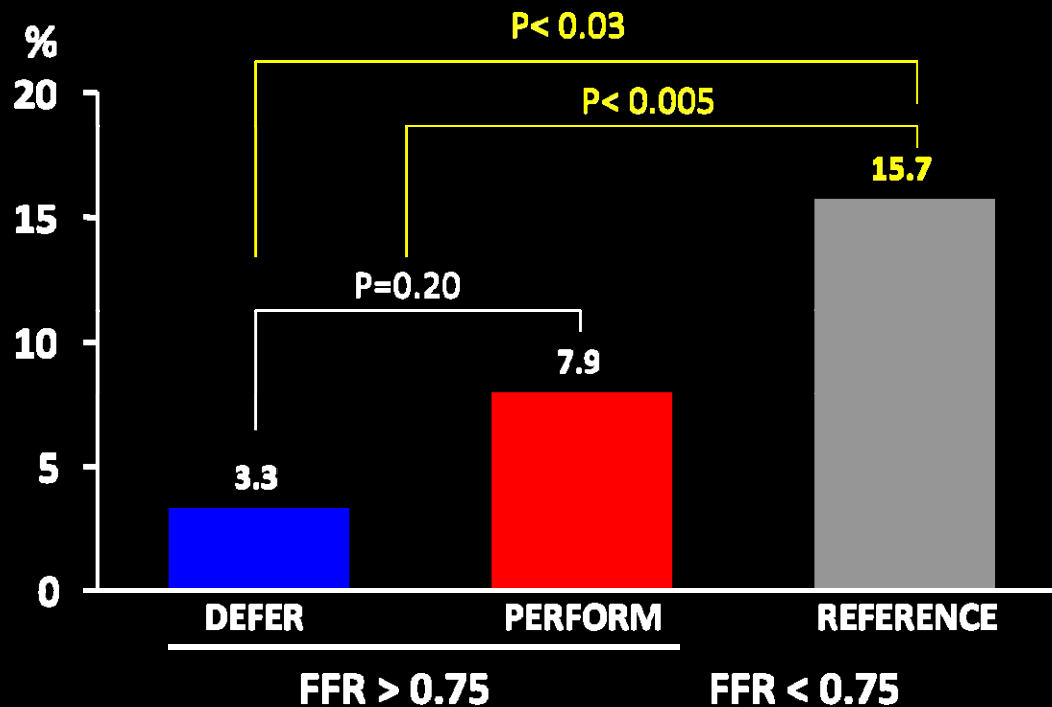


# PNUYH data (n=644)

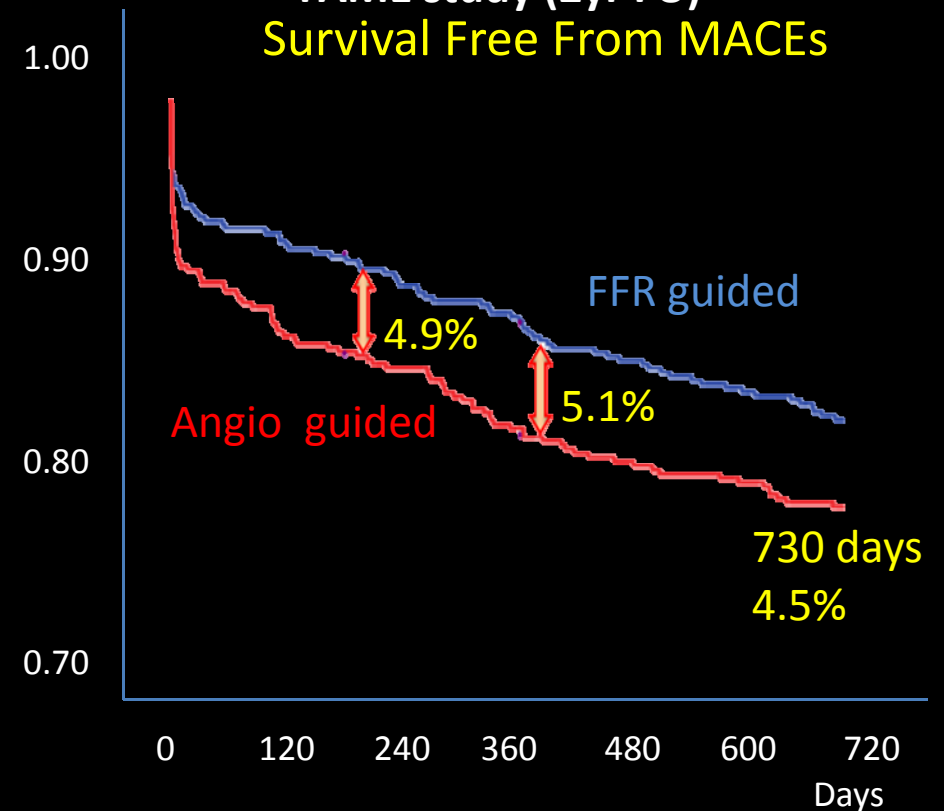


# The Vessel 'Function' rather than 'morphology' is the one that matters!

DEFER study: Cardiac Death and AMI after 5 years



FAME study (2yr FU)  
Survival Free From MACEs



# 2010 ESC Guidelines on PCI

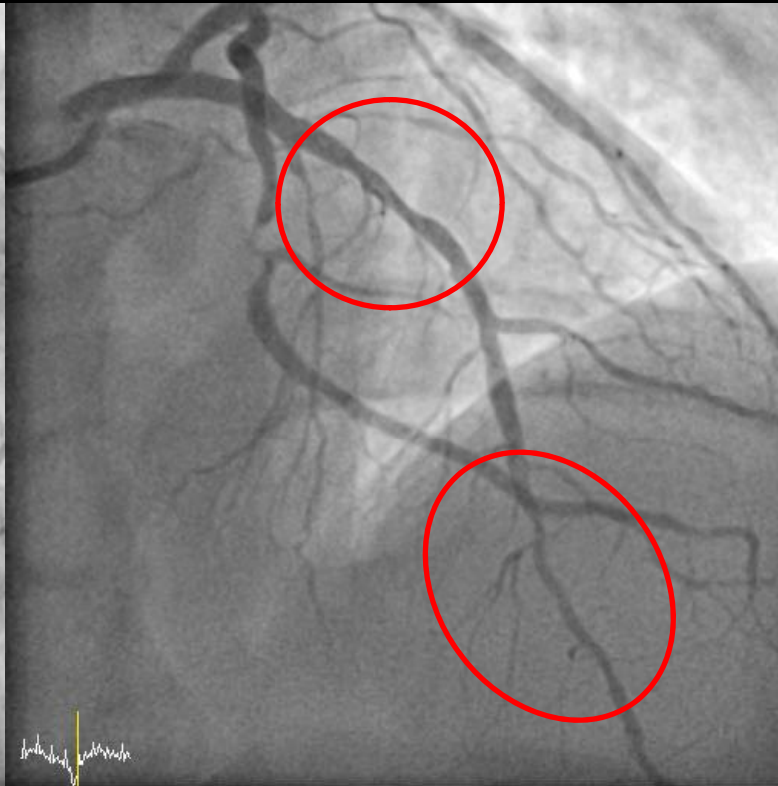
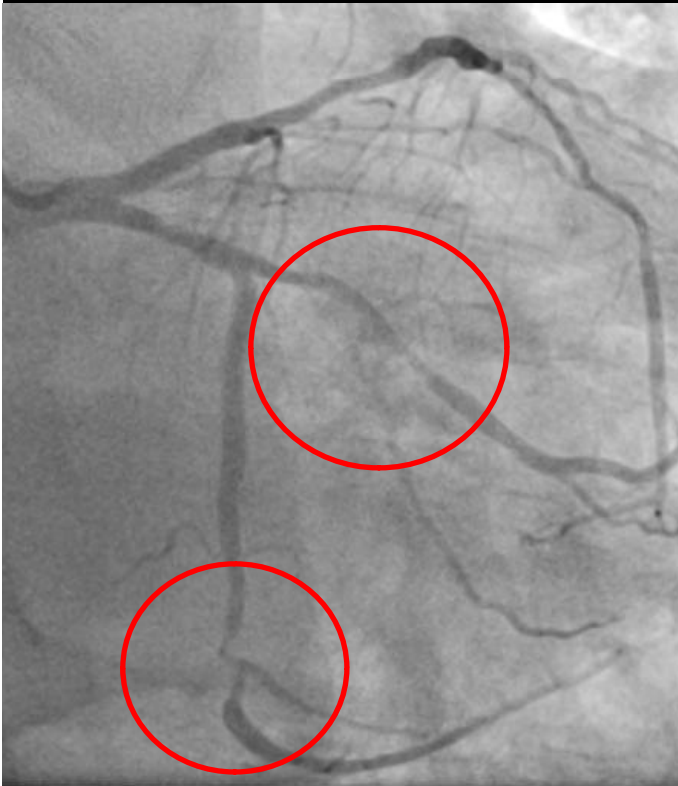
Objective evidence of ischemia regardless of stenosis degree

	Class	Level
FFR-guided PCI is recommended for detection of ischemia-related lesion when <b>objective evidence of vessel-related ischemia</b> is not available	<b>I</b>	<b>A</b>

# **The role of FFR in multivessel disease in usual case**

# Case 1

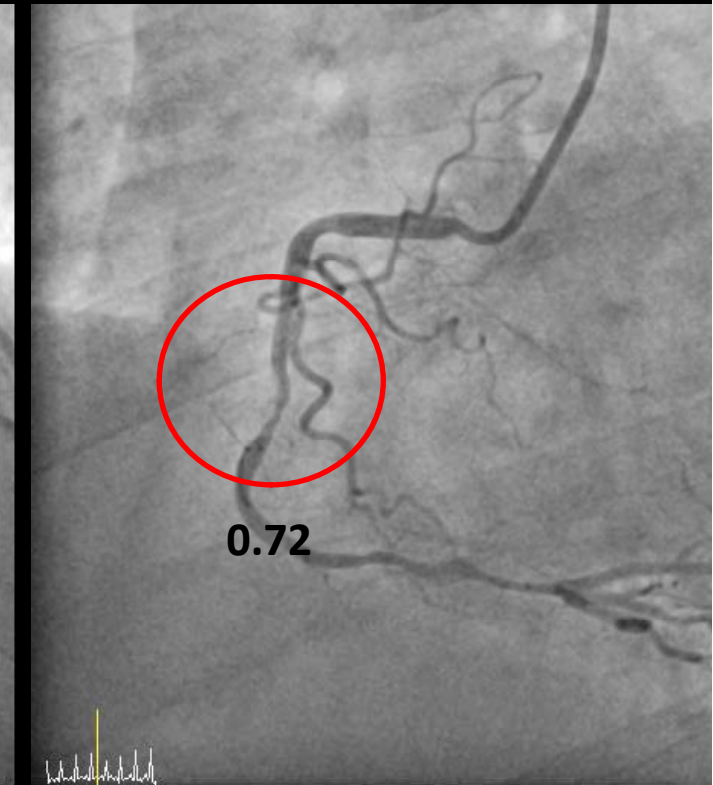
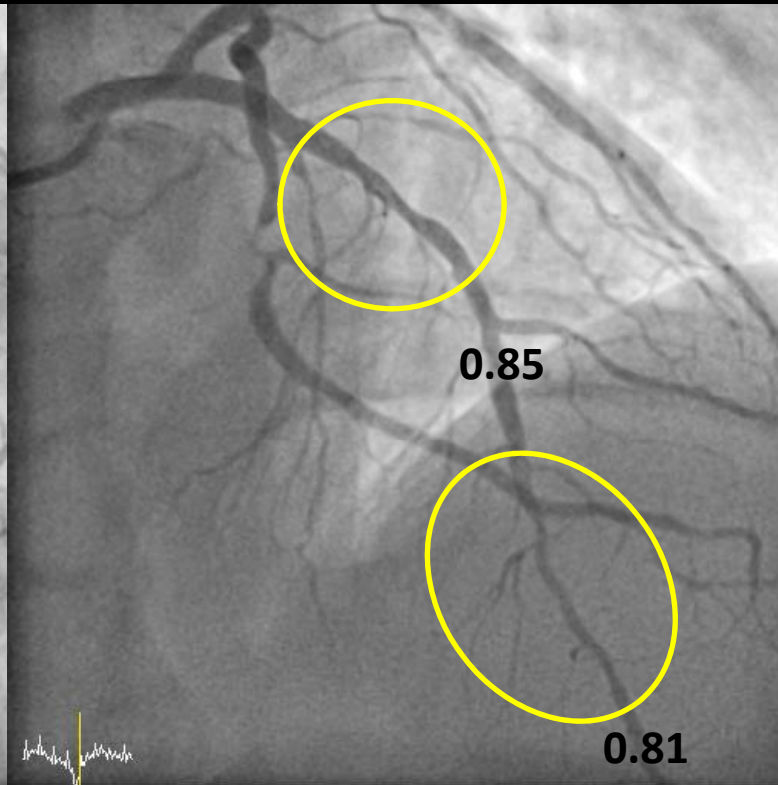
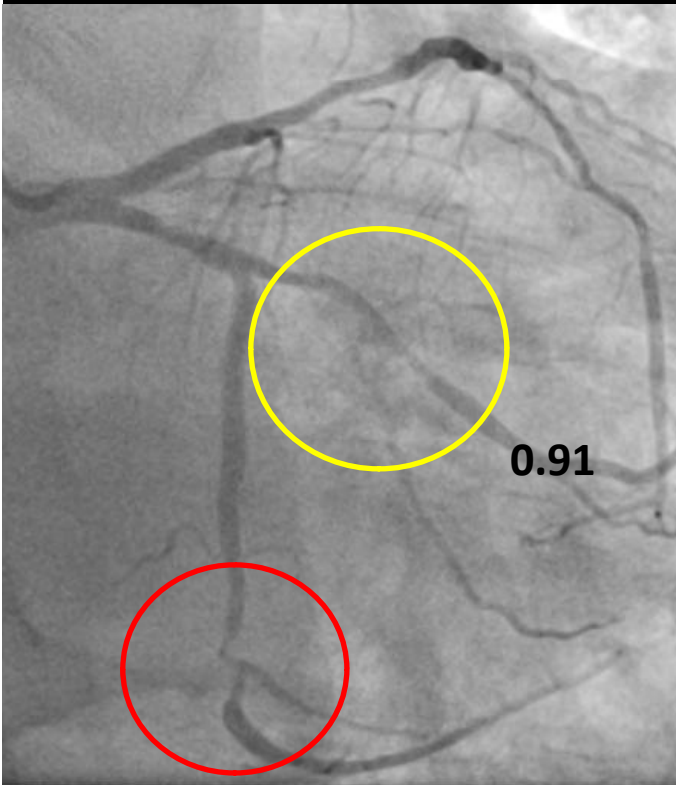
52/male, unstable angina





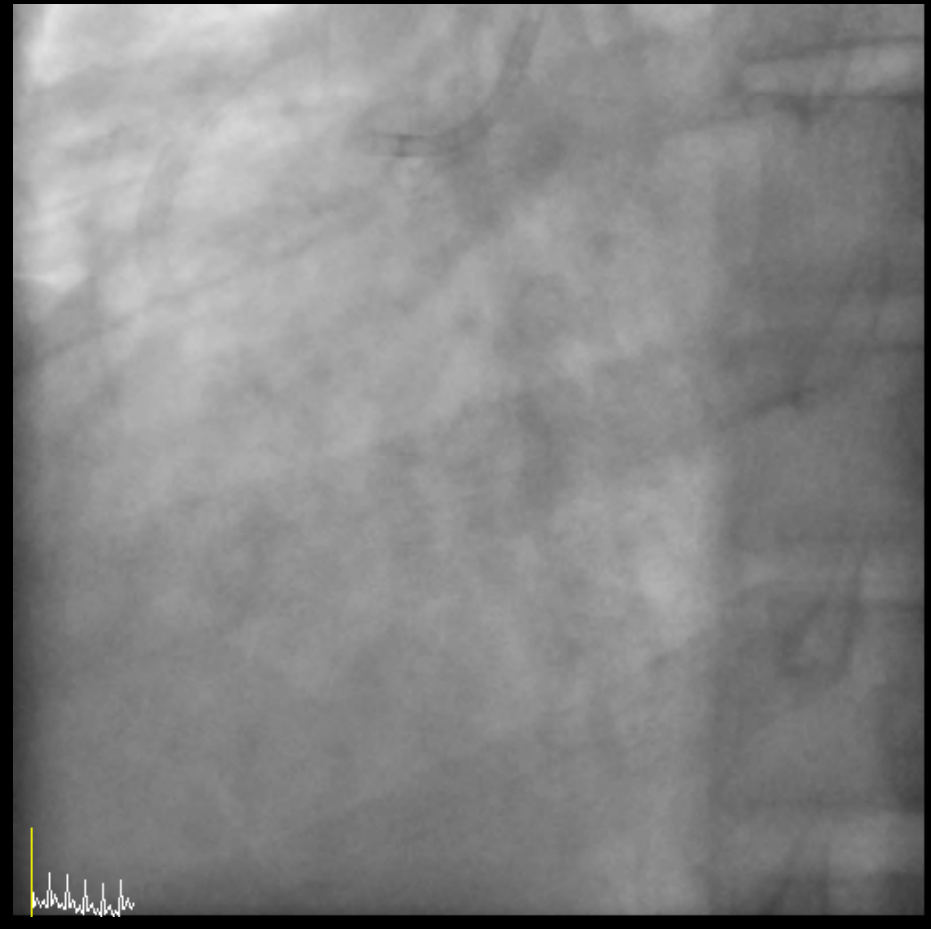
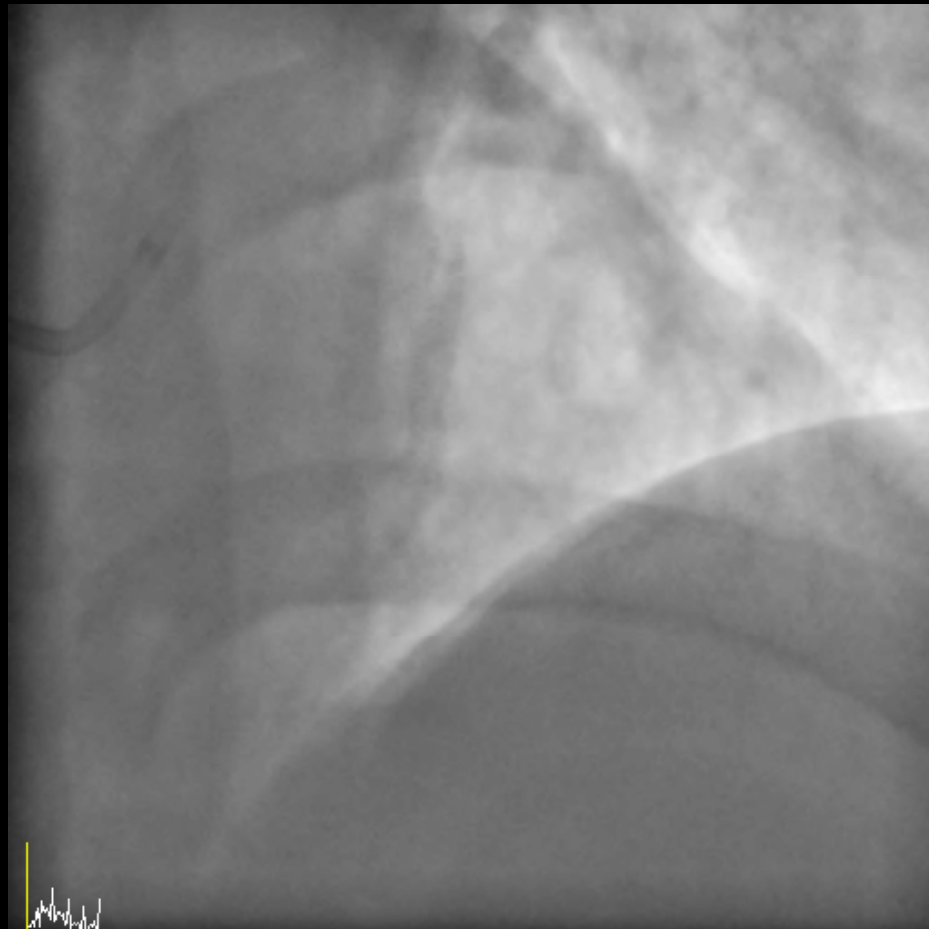
# Case 1

52/male, unstable angina



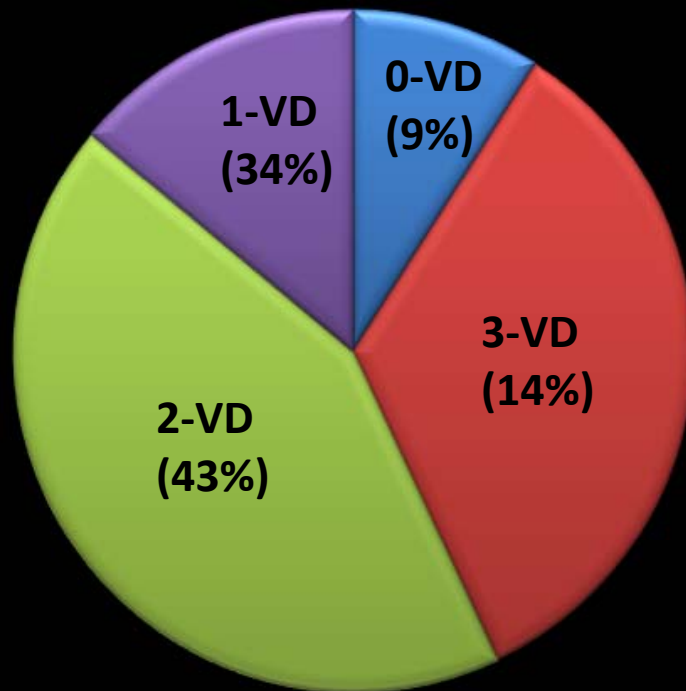
# Case 1

52/male, unstable angina

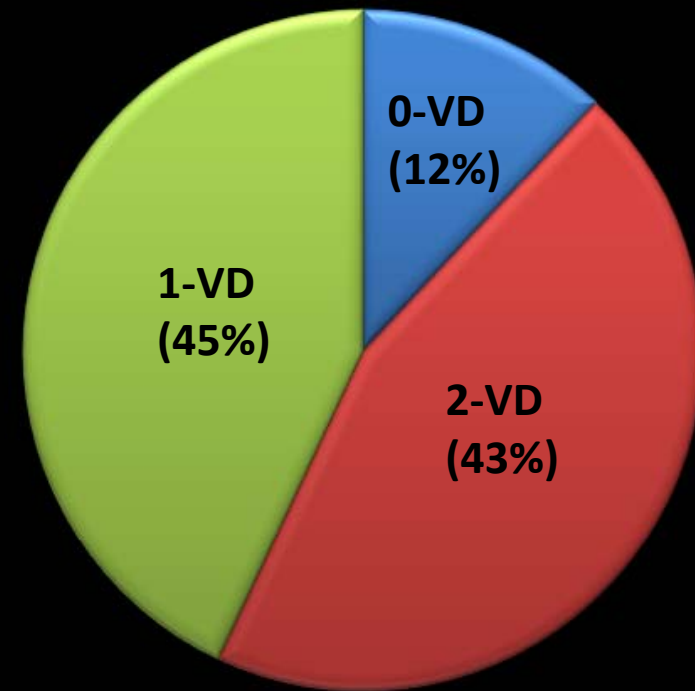


# MVD: Angiographically & Functionally

Angiographically 3VD



Angiographically 2VD

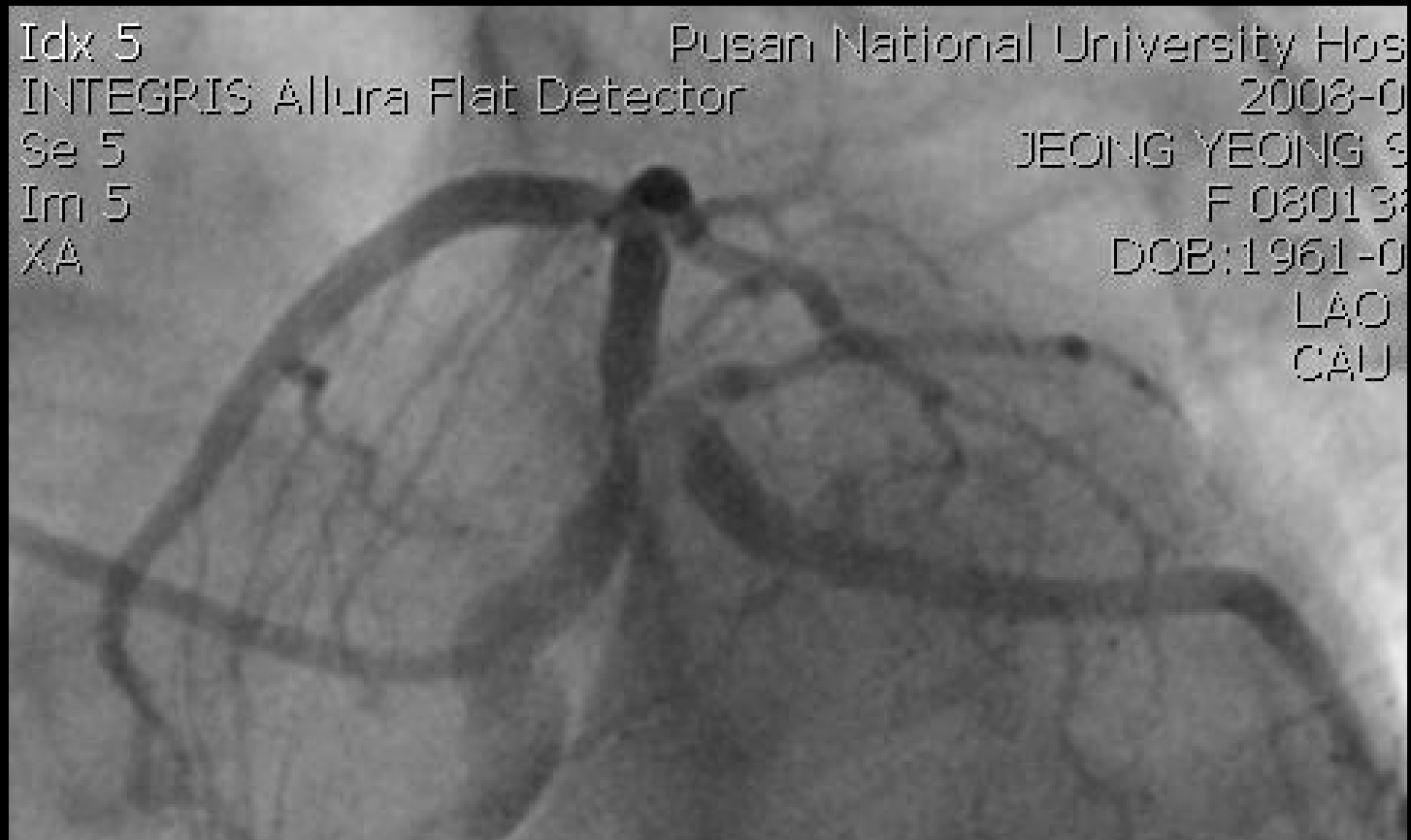


**Mismatch!**

# **The role of FFR in multivessel disease in special cases**

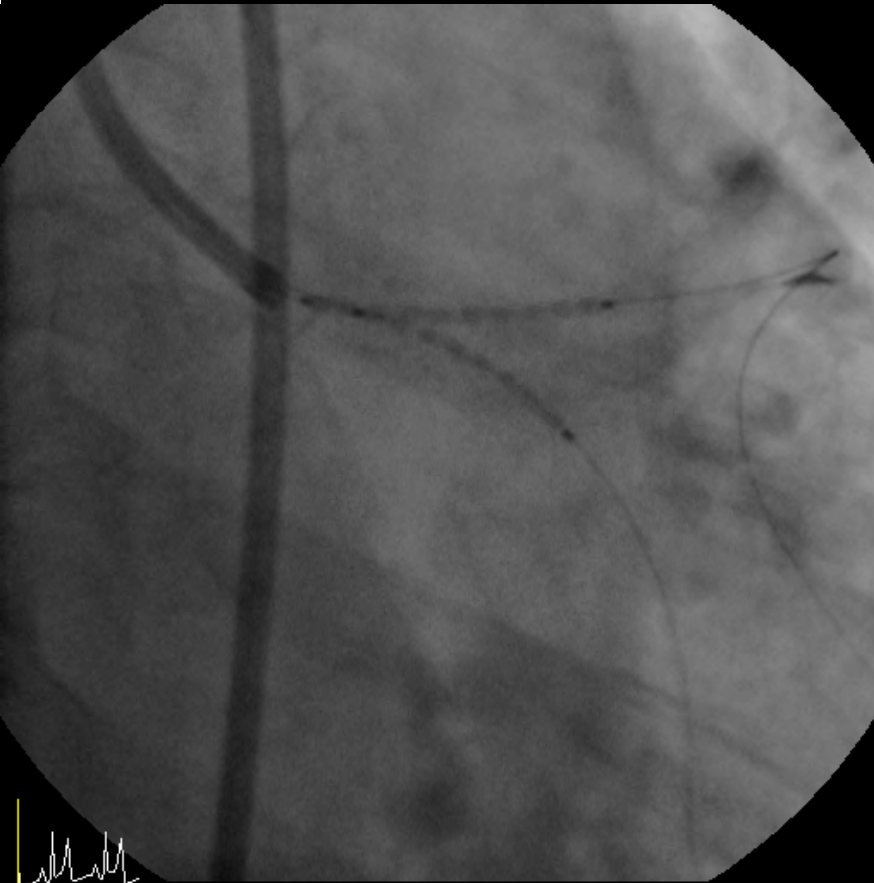
## Case 2

57/female, highly unstable angina

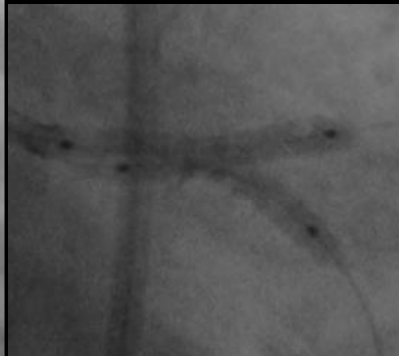


## Case 2

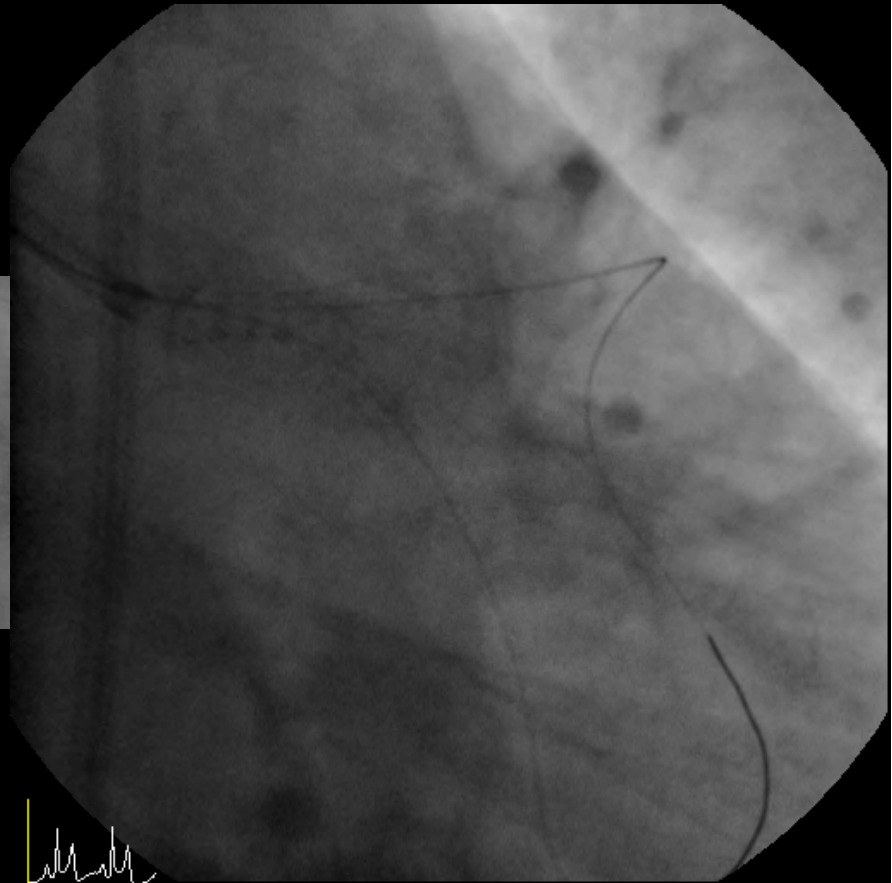
57/female, highly unstable angina



Two stenting with crushing tech



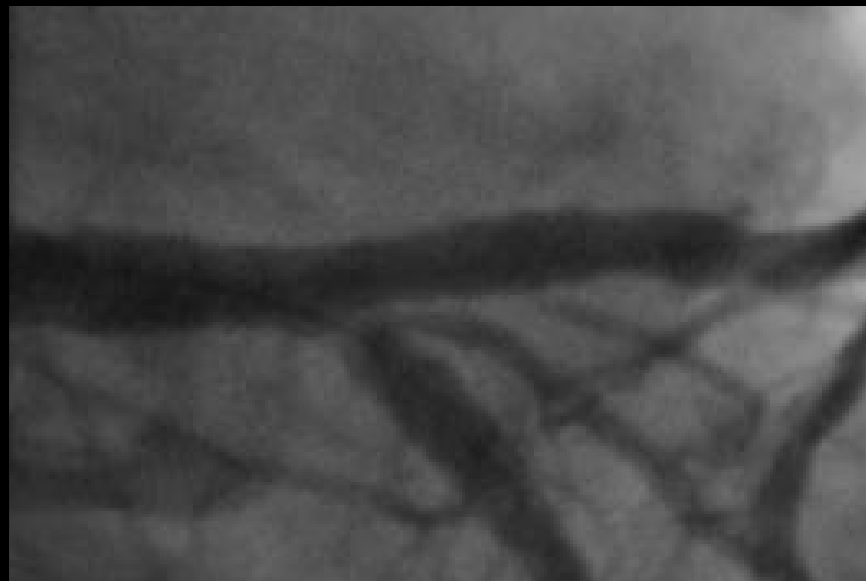
Final kissing

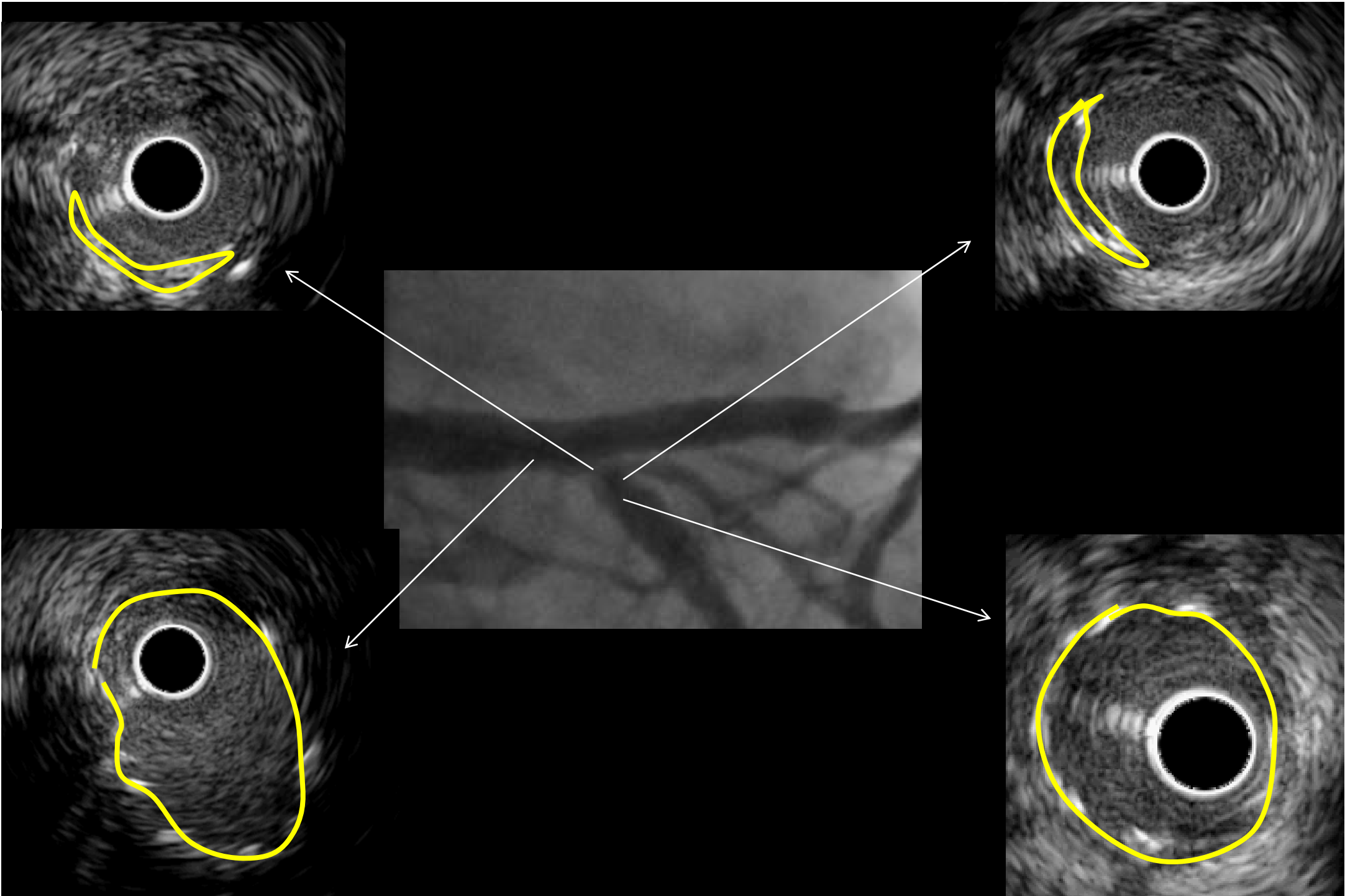


Final angio

## Case 2

What happened here???

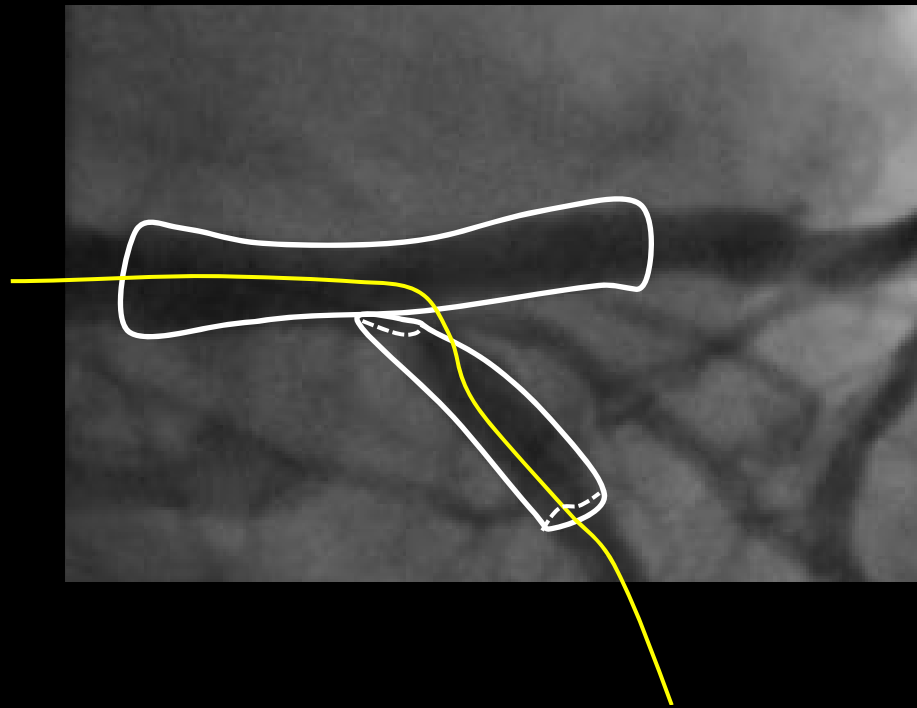






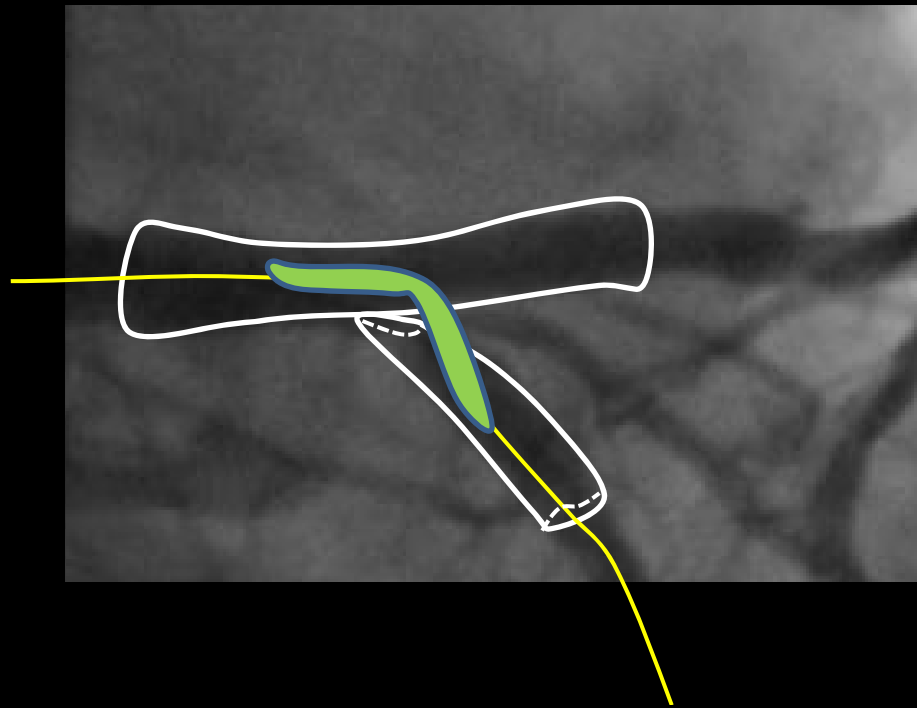
## Case 2

What happened here???



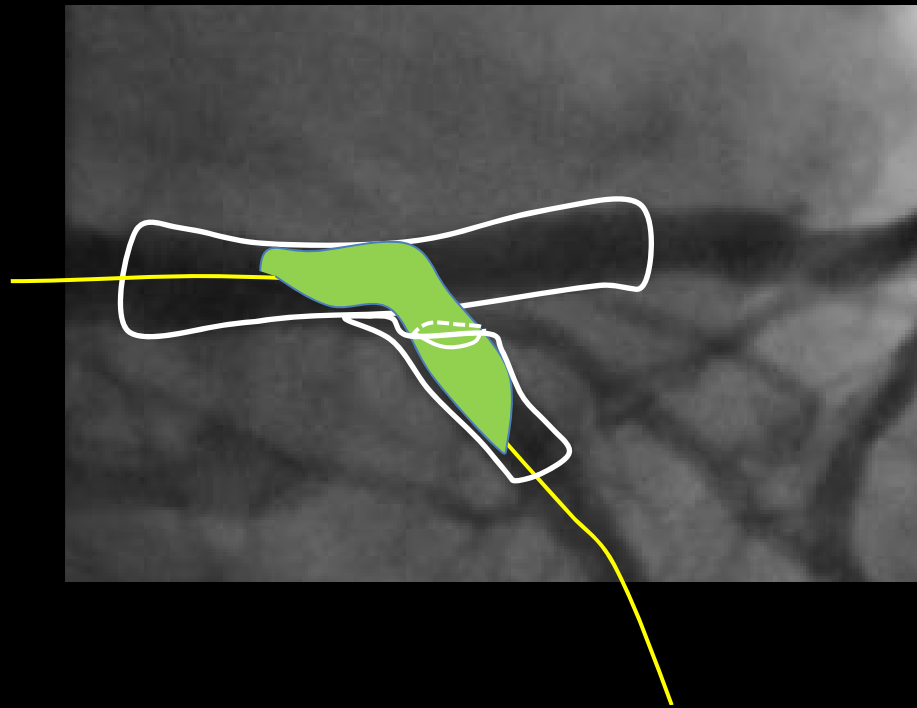
## Case 2

What happened here???



## Case 2

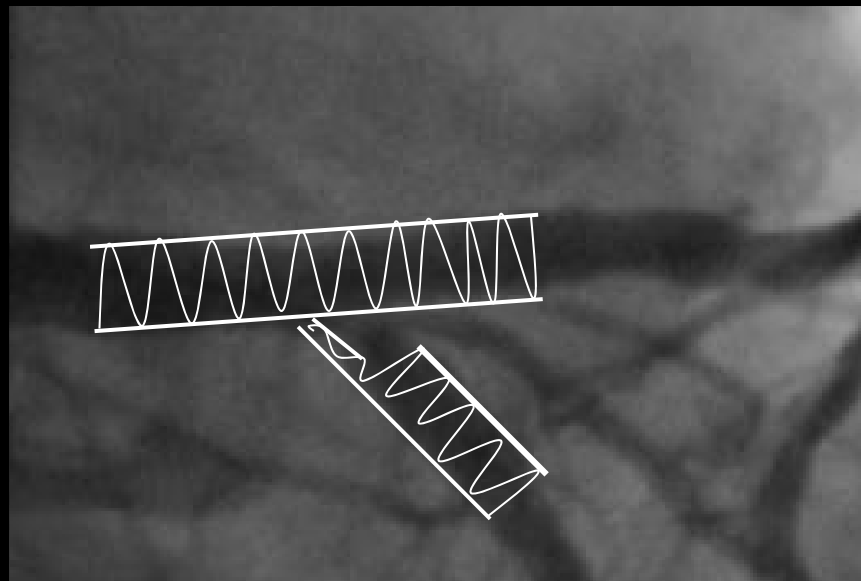
What happened here???



## Case 2

What would do in this case?

Put an another  
stent ??

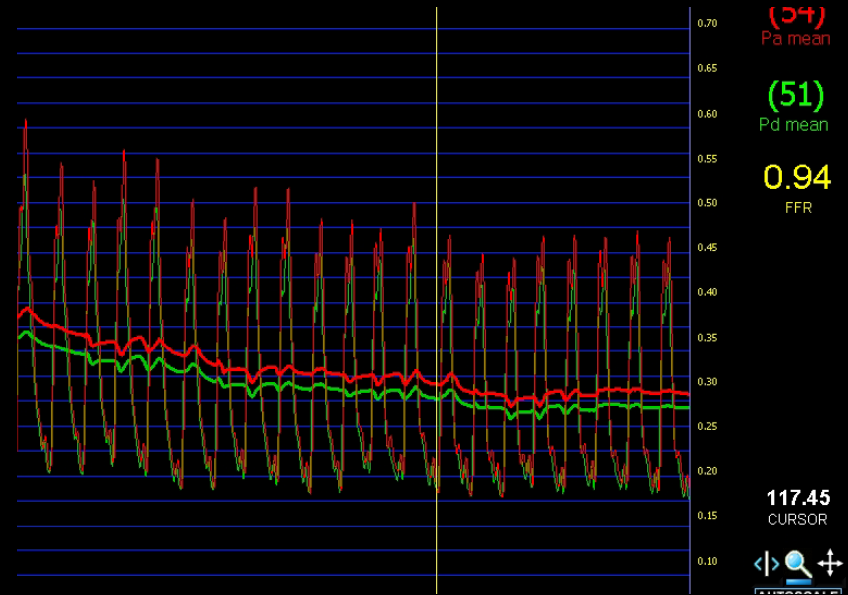
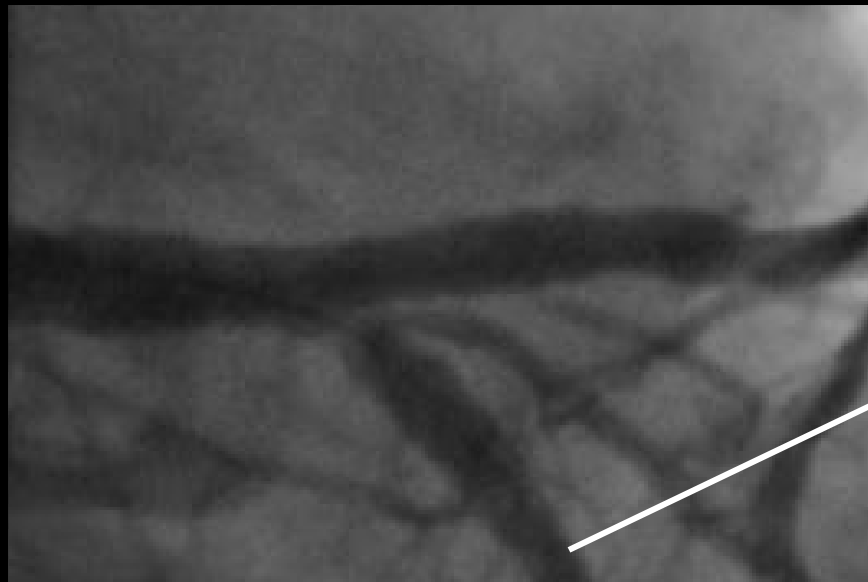


Send her to  
CABG ??

**I did FFR !!**

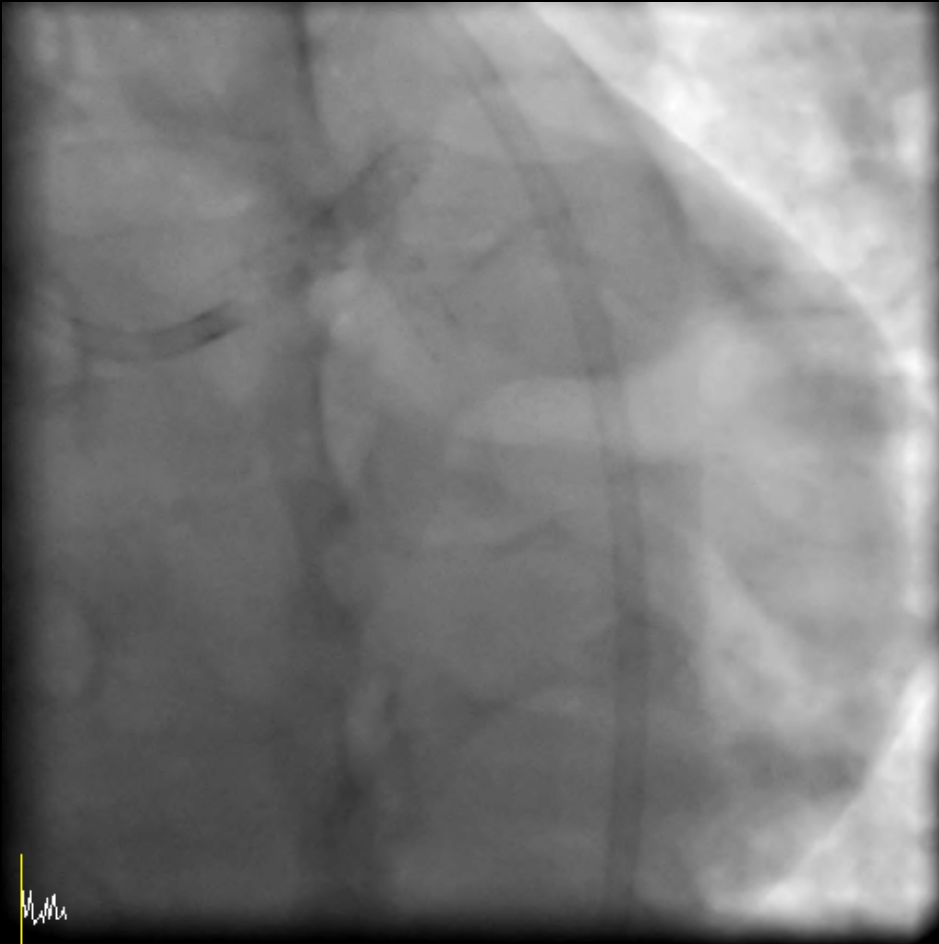
## Case 2

Simply leave it alone!

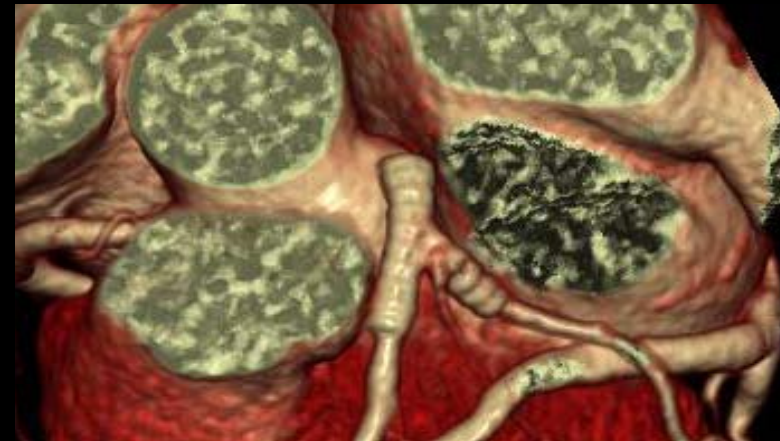
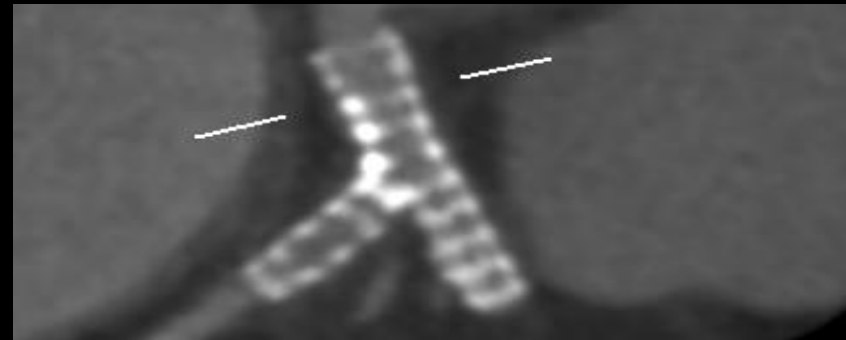


## Case 2 : No event up-to 3 yr FU

1 yr FU CAG, same FFR value (0.94)



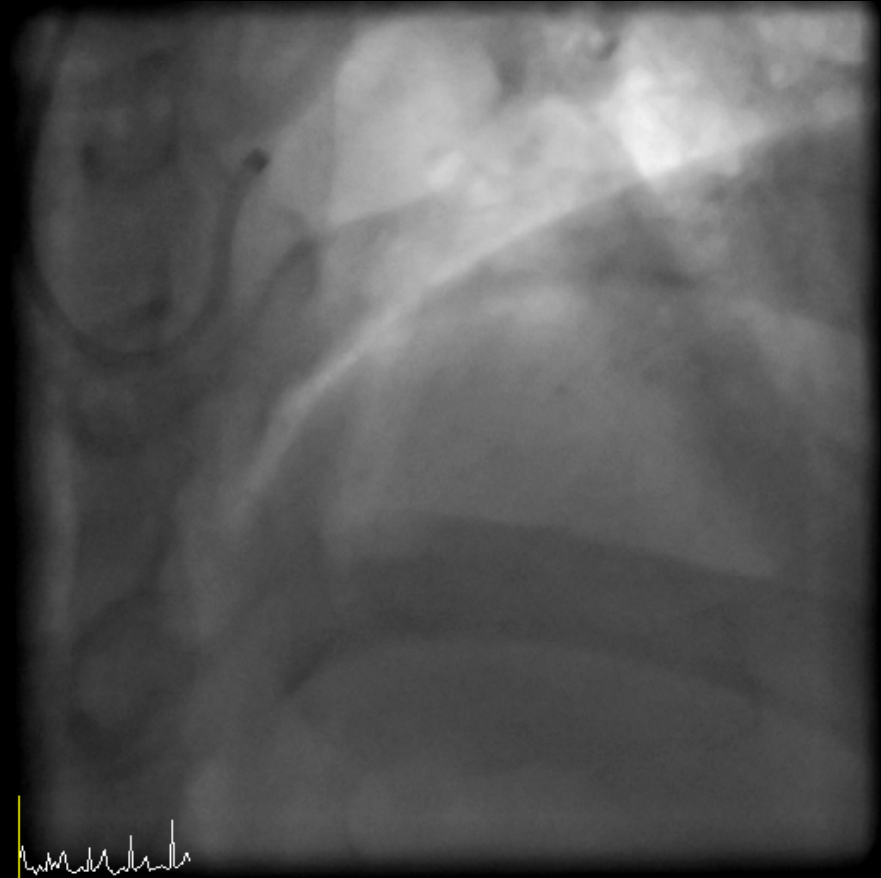
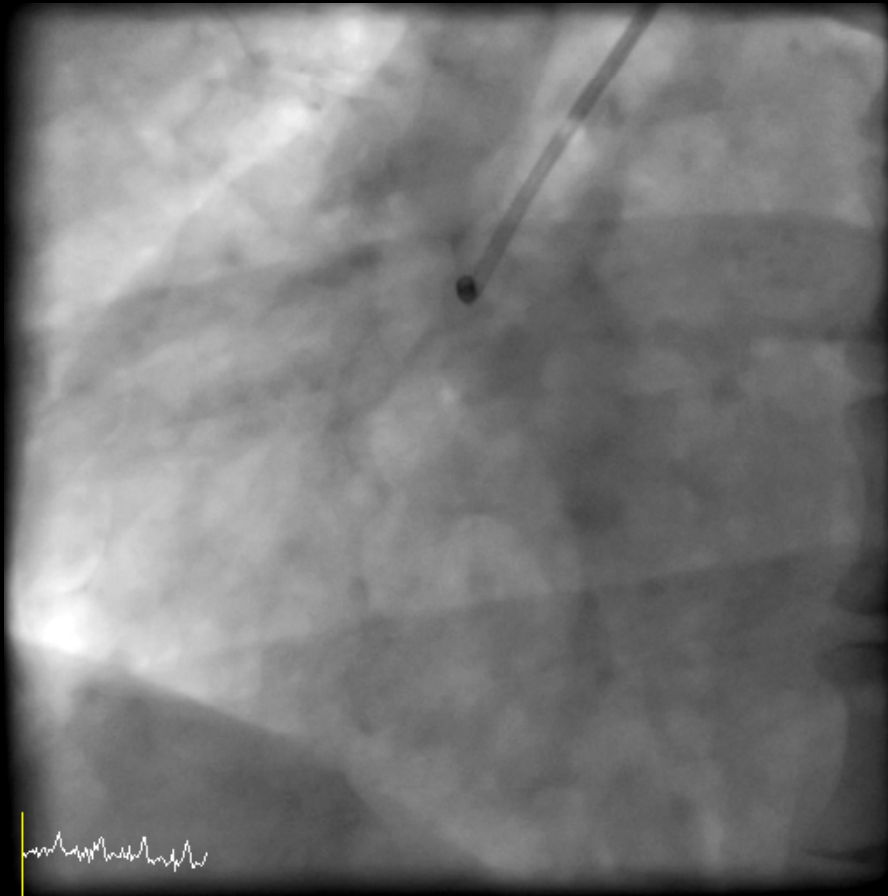
3 yr FU of CT with adenosine stress perfusion



Adenosine perfusion negative

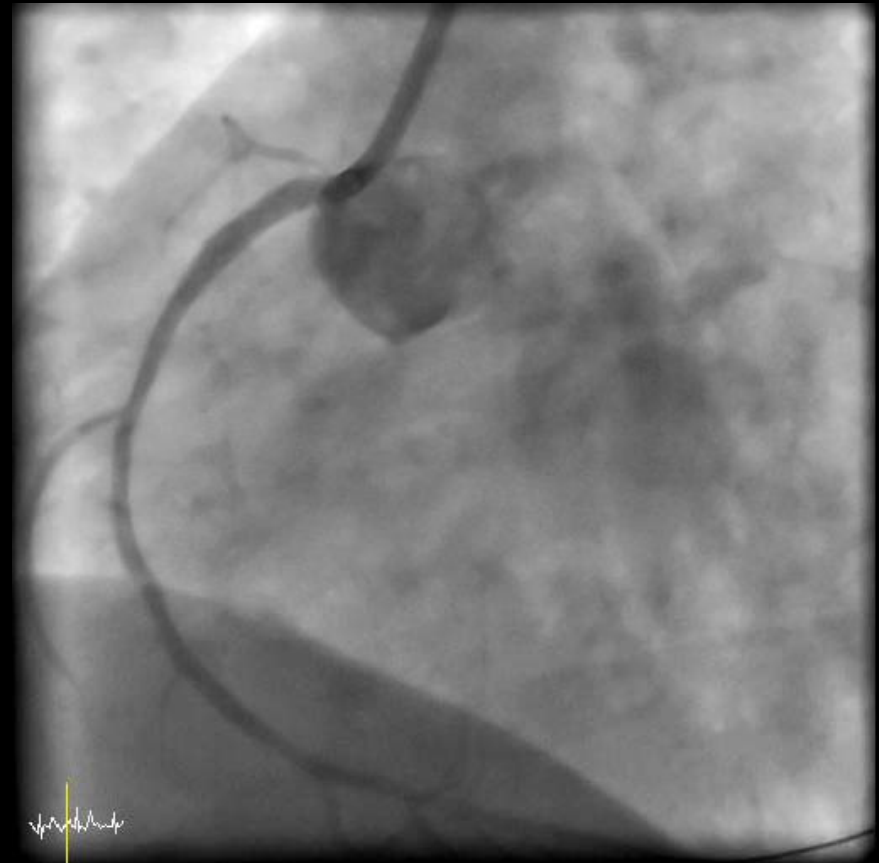
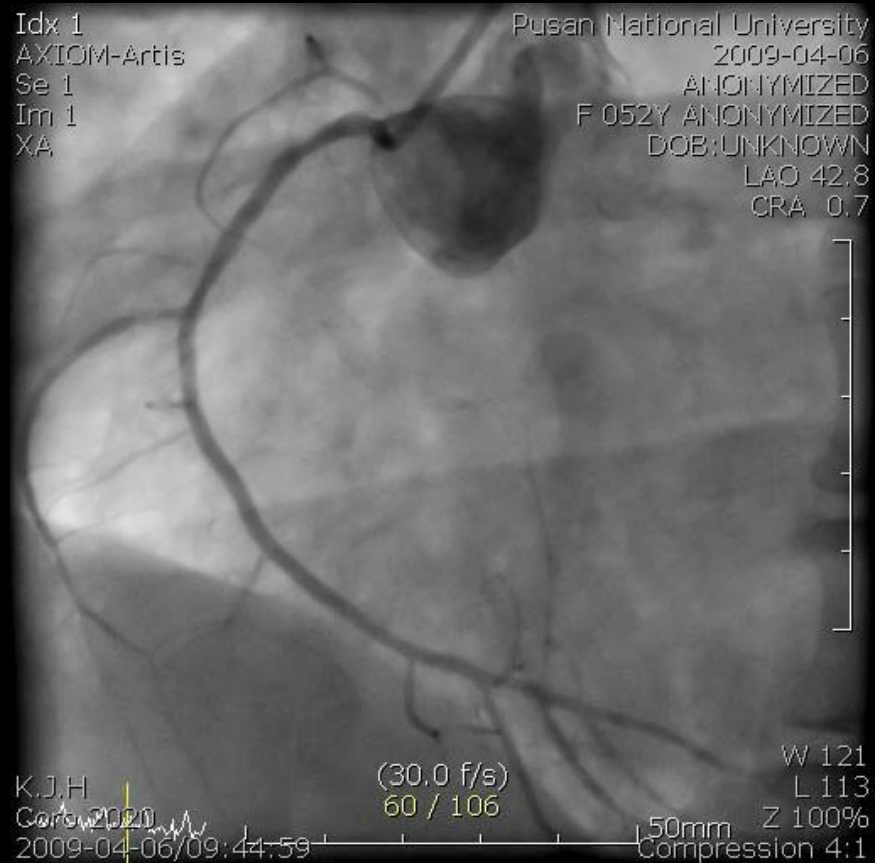
## Case 3

55/female, DM, effort related chest pain, TMT stage I (+)



# Case 3

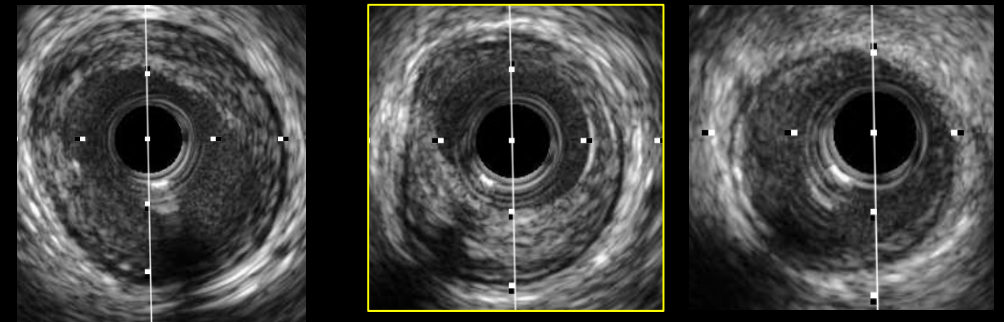
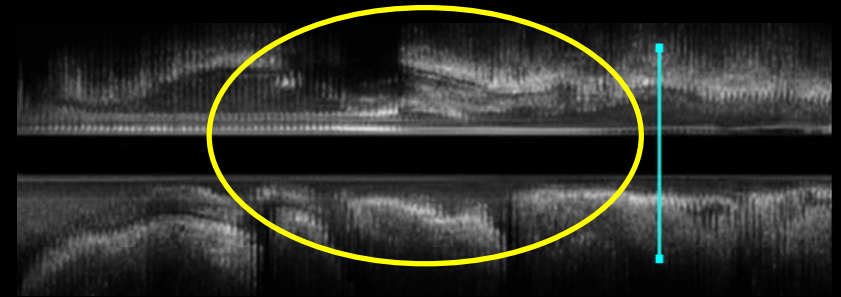
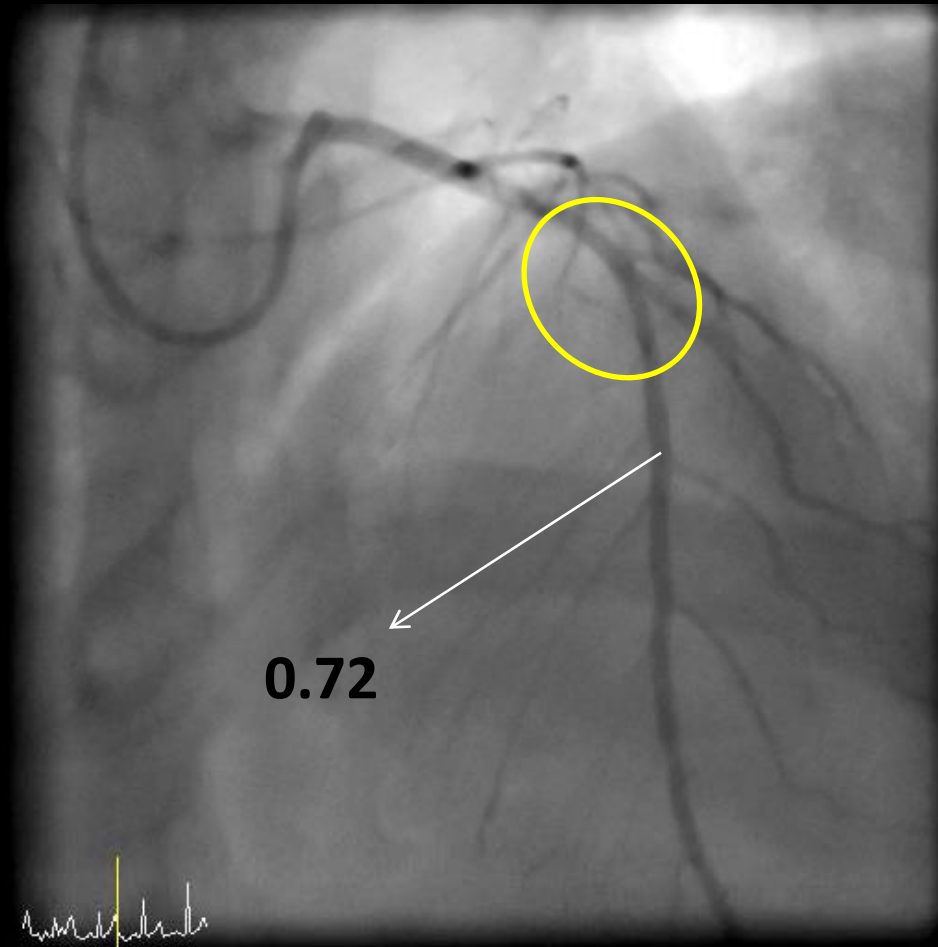
pRCA stenting => still have chest pain ???





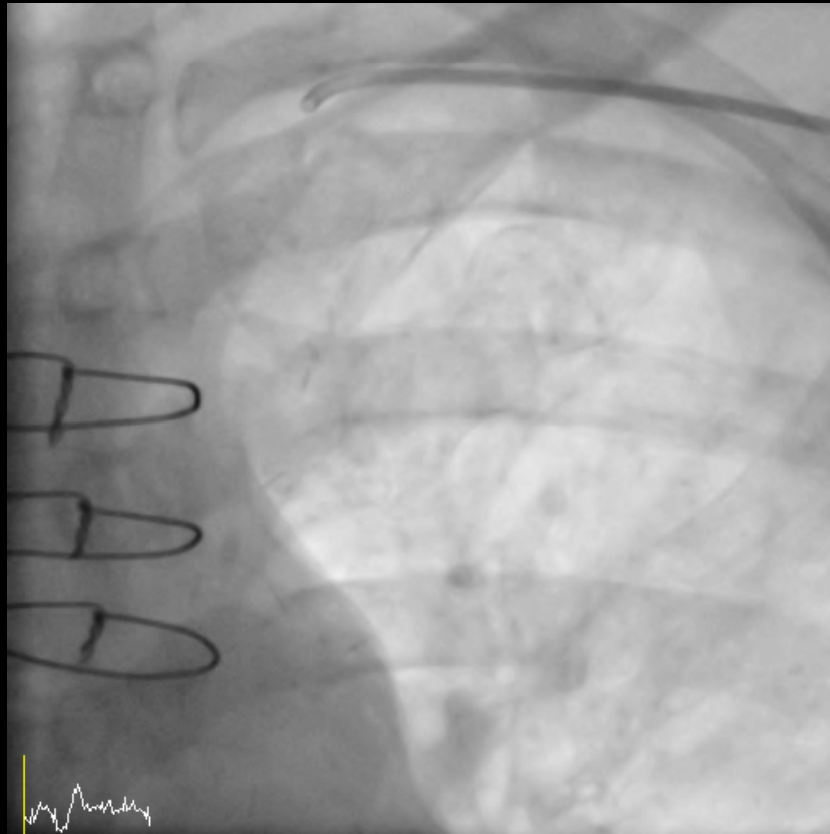
# Case 3

FFR study in LAD



## Case 3

CABG : LAMA to LAD -> Symptom free



# Summary

- In multivessel disease, FFR may help you lead to avoid unnecessary procedure
- In complex cases with a special situation in which you don't know what to do, FFR may give you a valuable information for guiding the procedure