

# Unique Techniques for Challenging LAD and LCX Ostial PCI

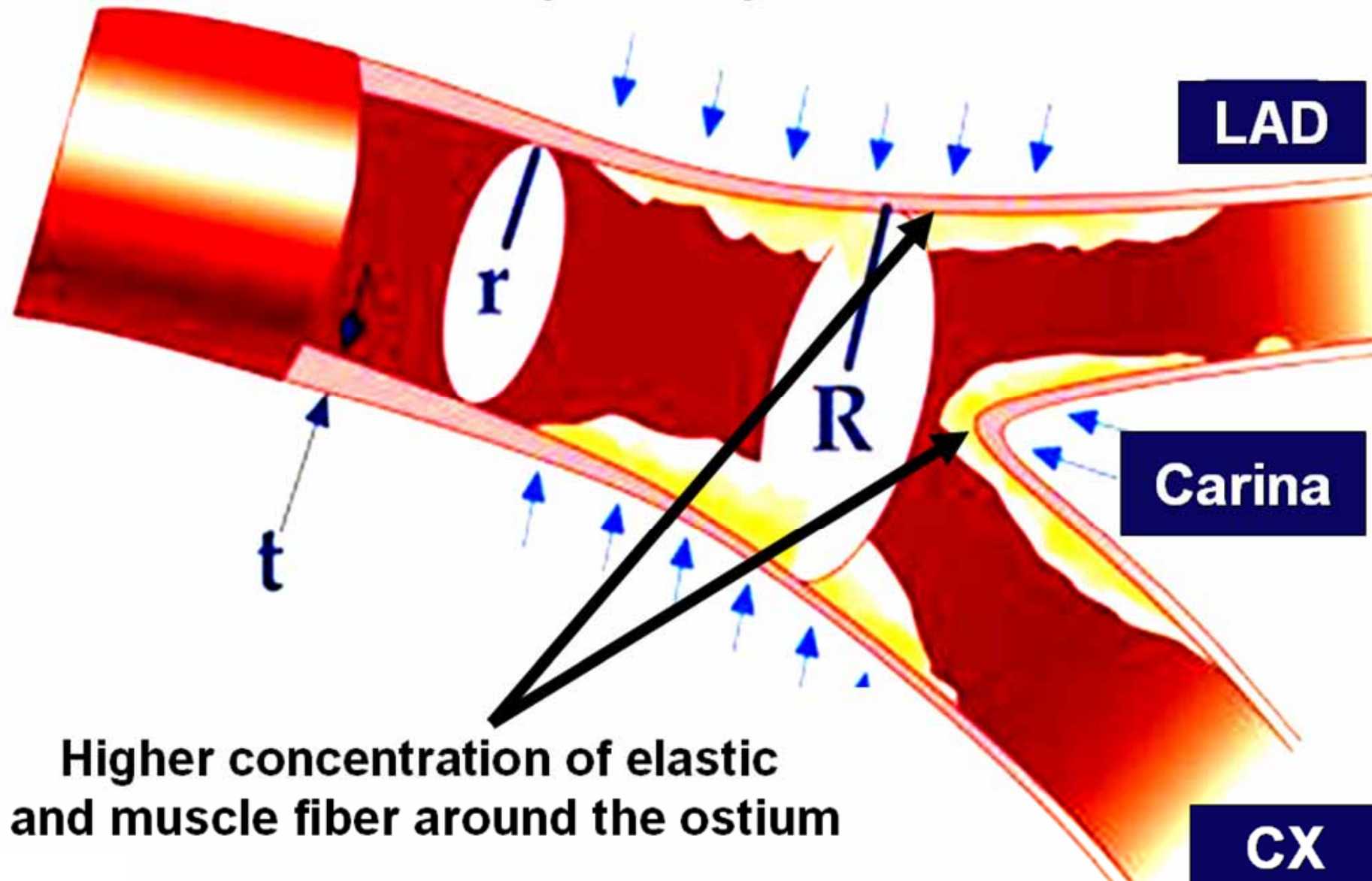
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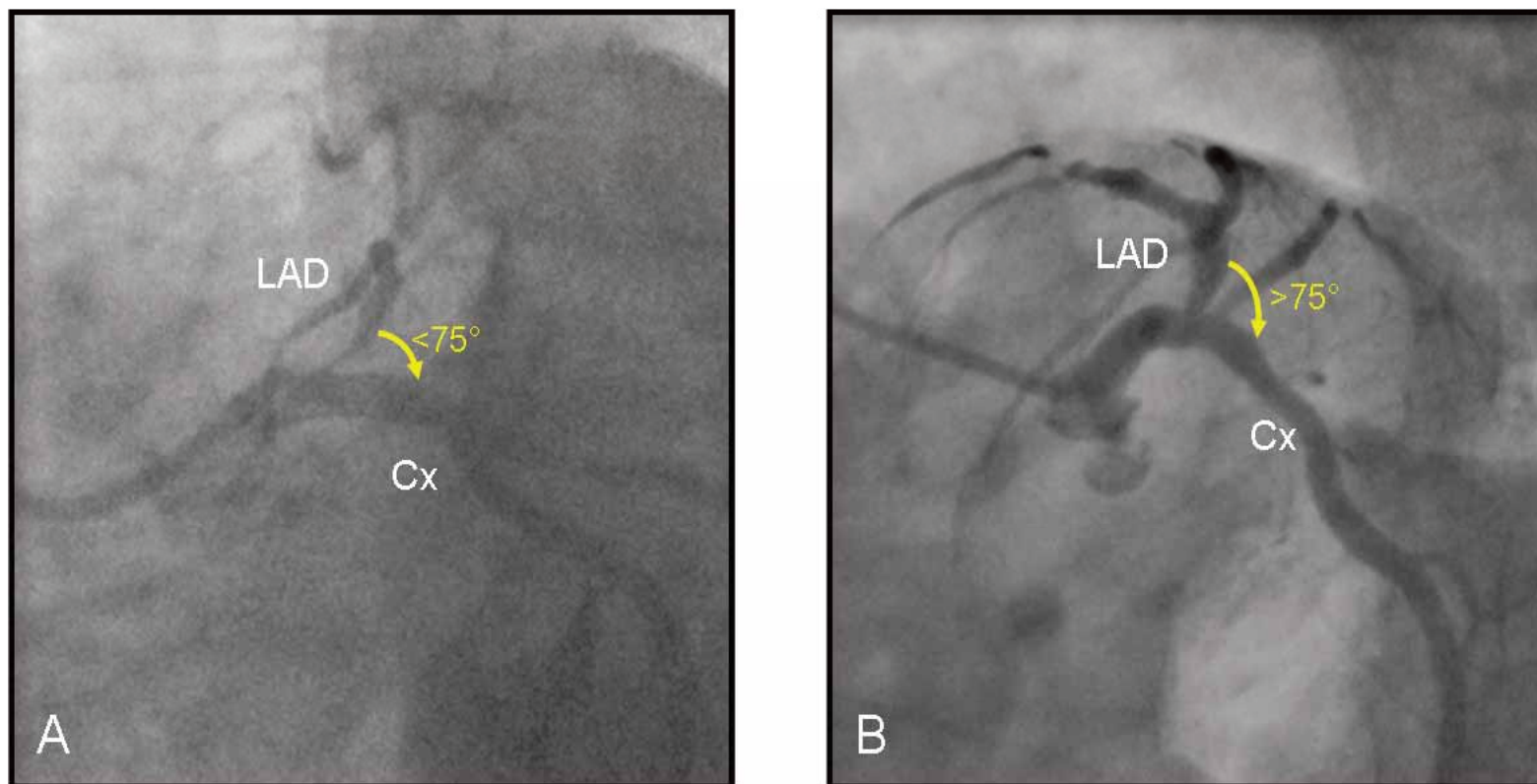
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# Ostial left anterior descending (LAD) coronary artery stenosis





*Figure 4 .Two examples of ostial LAD stenosis with differing bifurcation angle. In (a) there is an acute angle with the Cx which increases the difficulty for precise ostial stent placement; In (b) the angle is more favourable ( $>75^\circ$ )*

# Strategy ?

Proximal strut of stent extended into distal LM

Stenting Covering the Distal LMCA

Precise Location at Ostium

## ***Past Strategy***



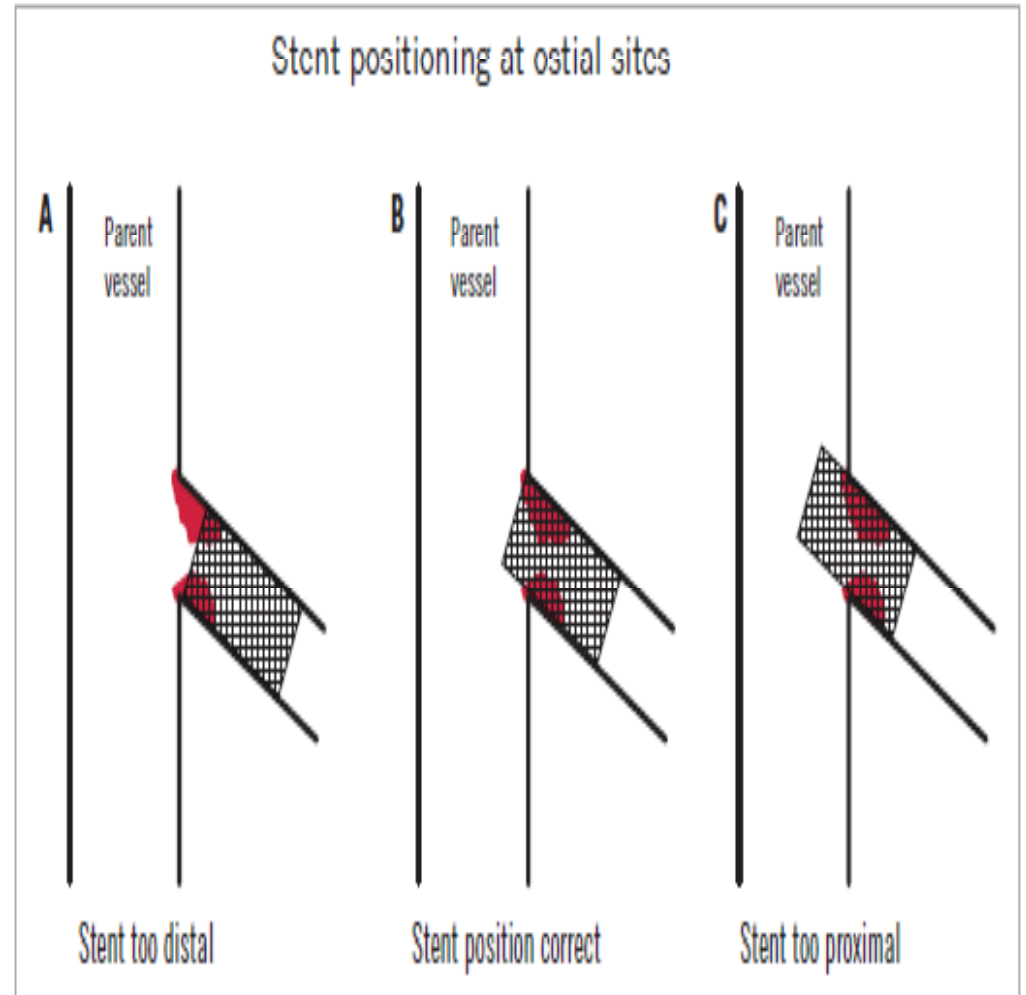
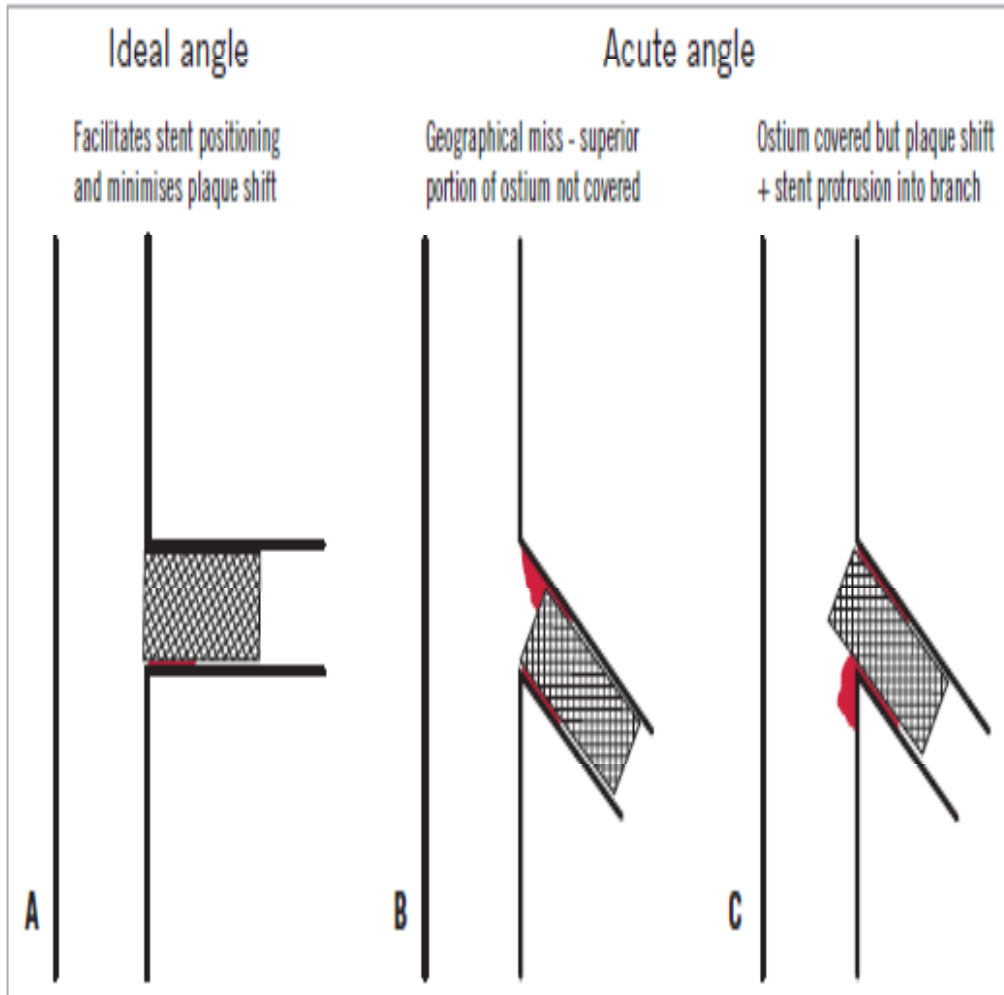
***Proximal strut of stent extended into the distal LM***

## ***Current recommended Strategy***



***Precise placement***

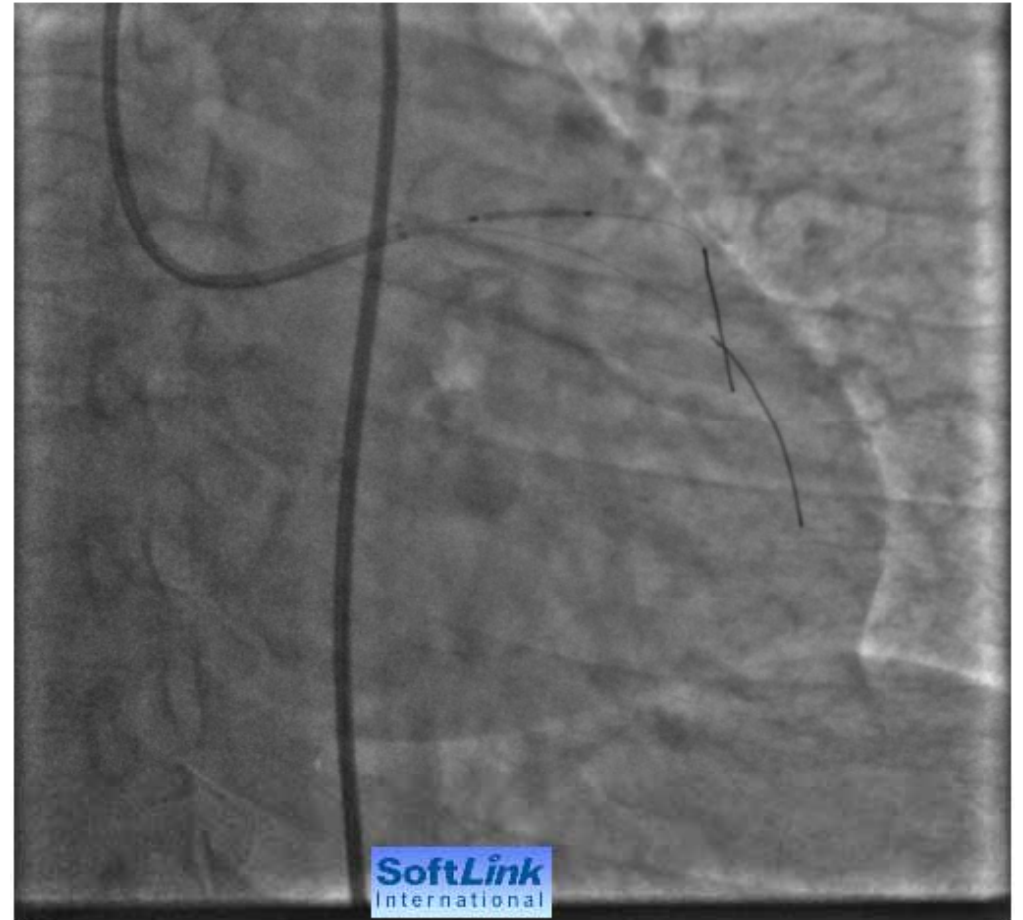
***Park SJ, et al, Cathet Cardiovasc Intervent. 49:267-271, 2000***





# Ostial PCI Challenges

- Rigidity, High Elastic recoil
- Stump
- Angle between LAD & LCX for precise stent implantation
- **Stent placement difficulty due to excessive stent movement**
  - Concern for major side branch occlusion
  - Guiding catheter support
  - LM injury
- **Long term outcomes**
  - Higher restenosis rates



# Techniques to prevent excessive stent movement

## **Respiratory motion :**

- a breath-hold
- gentle shallow breathing.–

## **Cardiac motion :**

Pharmacological methods.

Rapid ventricular pacing

## **Partial pre-inflation technique**

**Disadvantage :** short time window may potential distress the patient  
Can be counterproductive



# Case Presentation (Case 1)

## *Patient Demographics —*

Age: 53 yr

Gender: Male

Patient ID : MAK

Hypertension

↑ Lipids

+ Family History

## *— Past Medical History —*

None

## *— Clinical Presentation —*

Effort angina on mild activity on maximal medical therapy

ECG : Normal

ECHO: Normal LV function

# Coronary angiography



# PCI RCA

600 mg clopidogrel

Guide Catheter JR3.5, 6F

RCA Crossed with All Star wire

DES 3.5 x15 mm

Postdilatation



# PCI LAD

600 mg clopidogrel

Guide Catheter 3.5, 7F

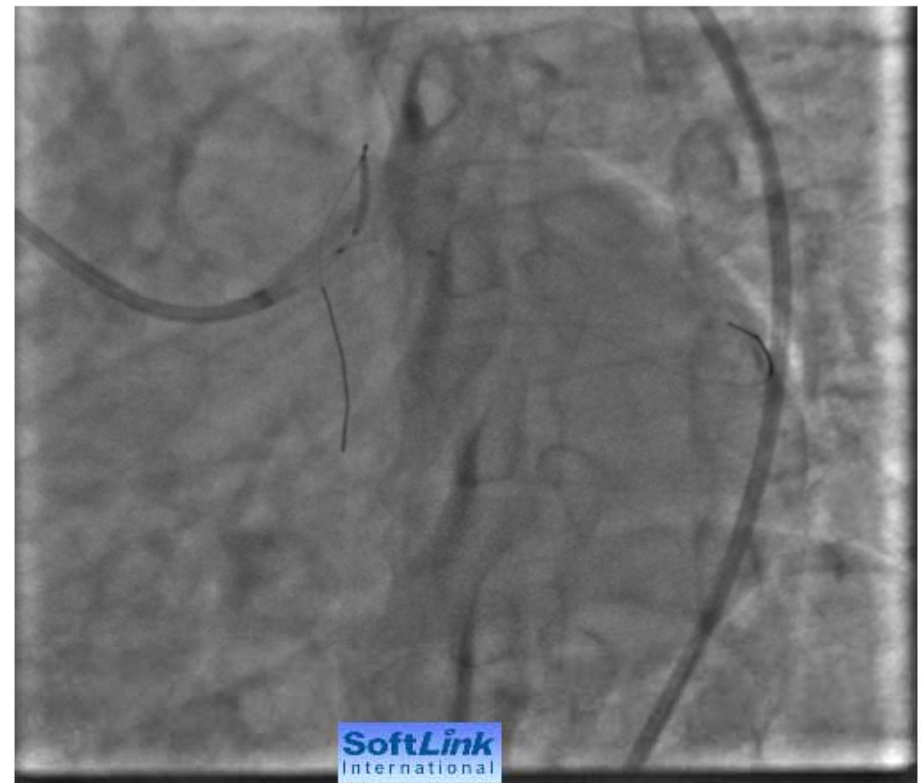
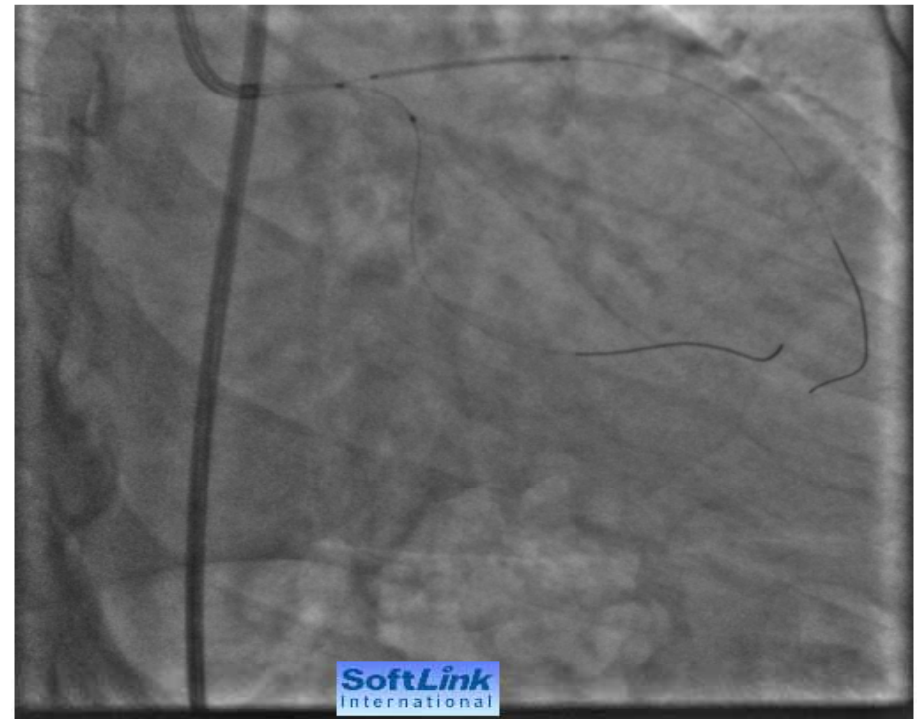
LAD Crossed with BMW

Another BMW wire in to LCX

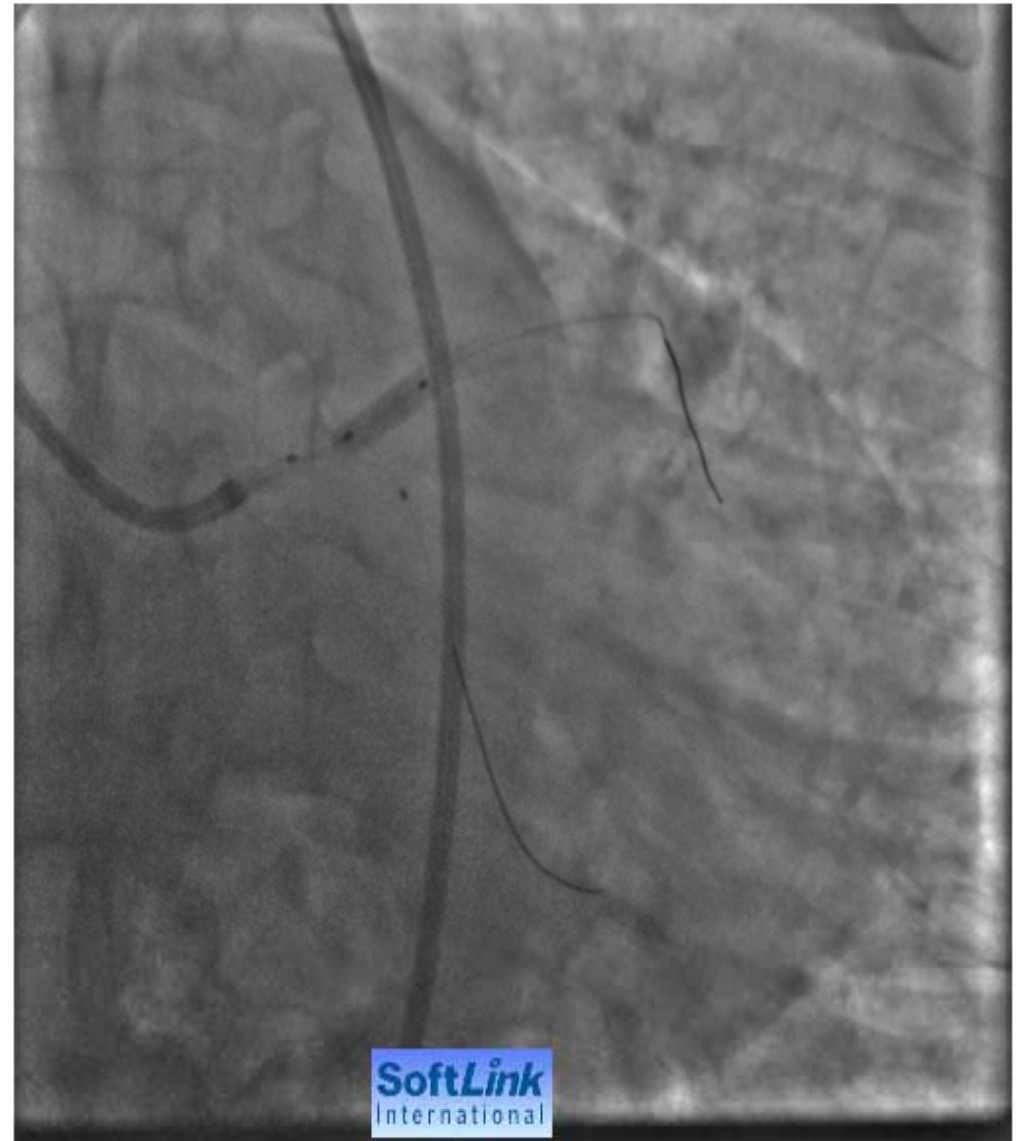
Predilatation

DES 2.75 x18 mm

Balloon 2.5 x15 mm

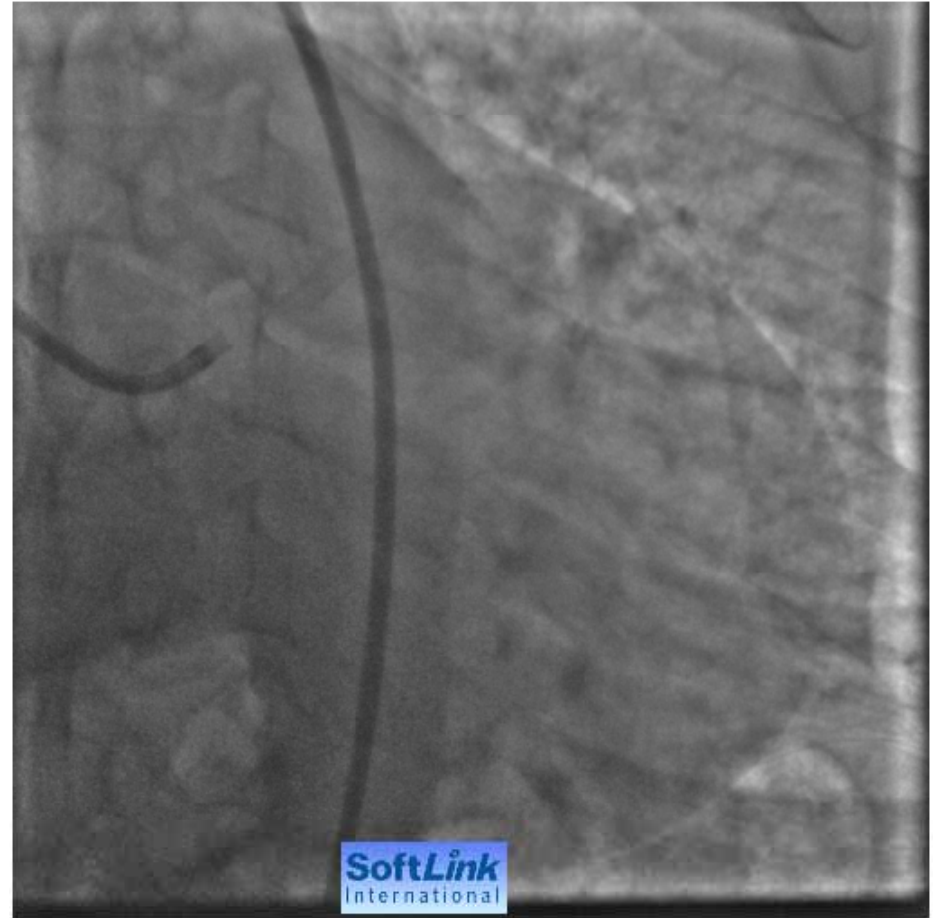
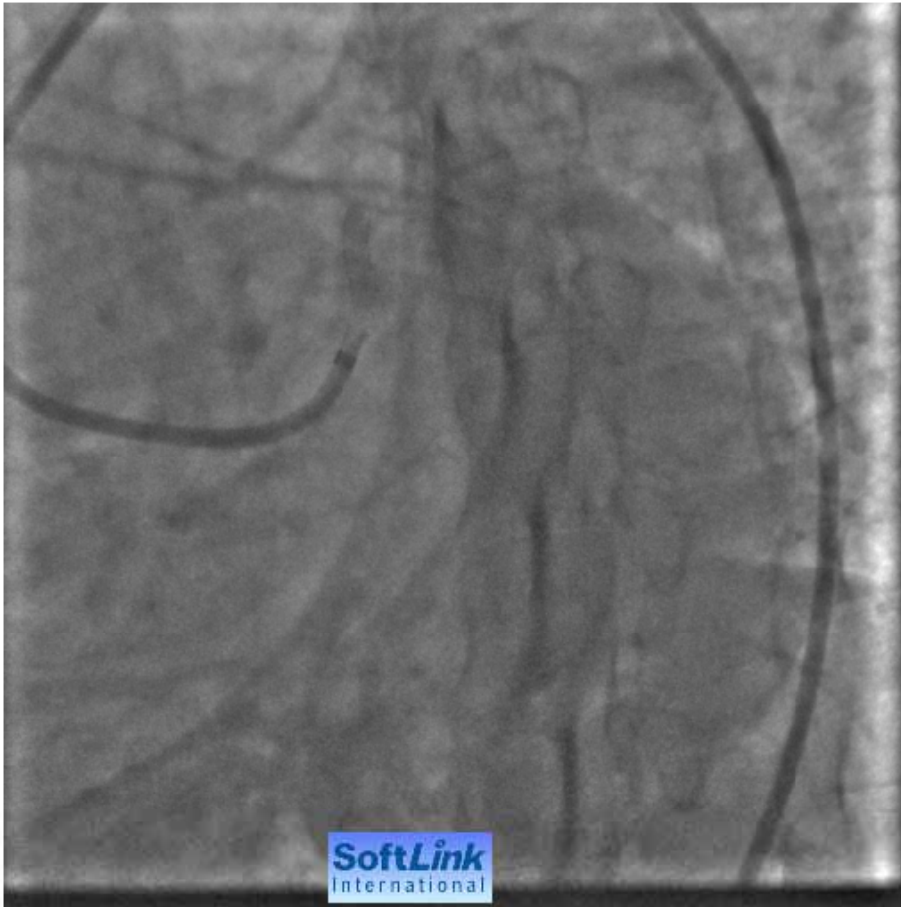


# PCI LAD





# Final Result



# Case Presentation (Case 2)

## - *Patient Demographics* —

Age: 58 yr  
Gender: Male

Hypertension  
↑ Lipids  
+ Family History

## — *Past Medical History* —

None

## — *Clinical Presentation* —

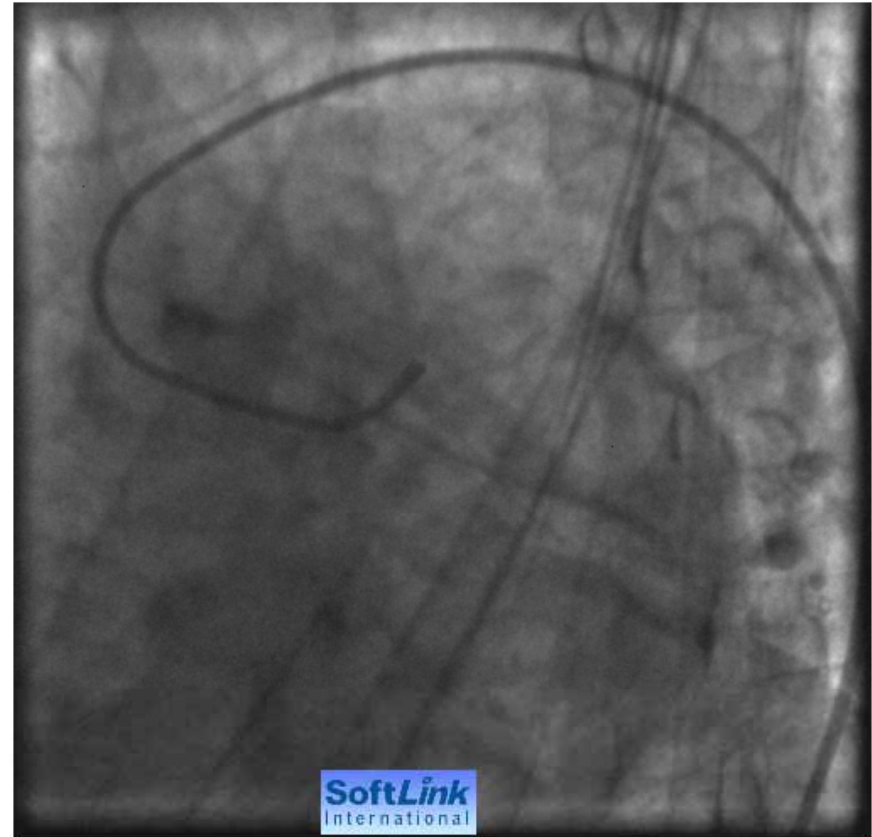
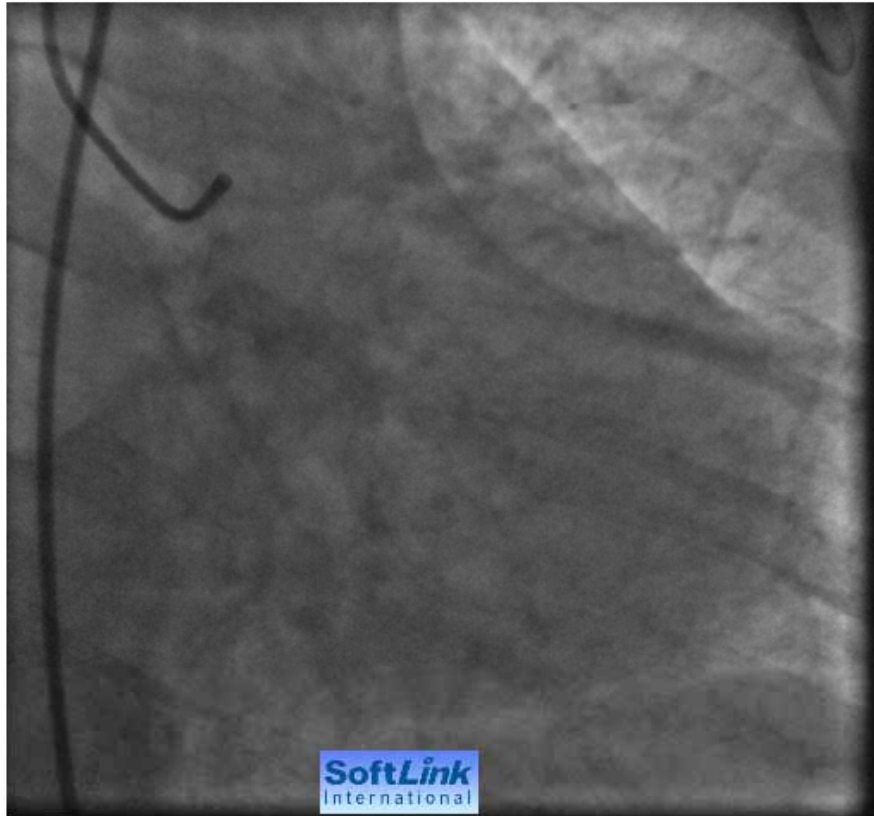
Effort angina on mild activity on maximal medical therapy

ECG : Normal

ECHO: Normal LV function



# Coronary angiography



# Coronary angiography



# PCI LCX

600 mg clopidogrel

Guide Catheter EBU 3.5, 7F

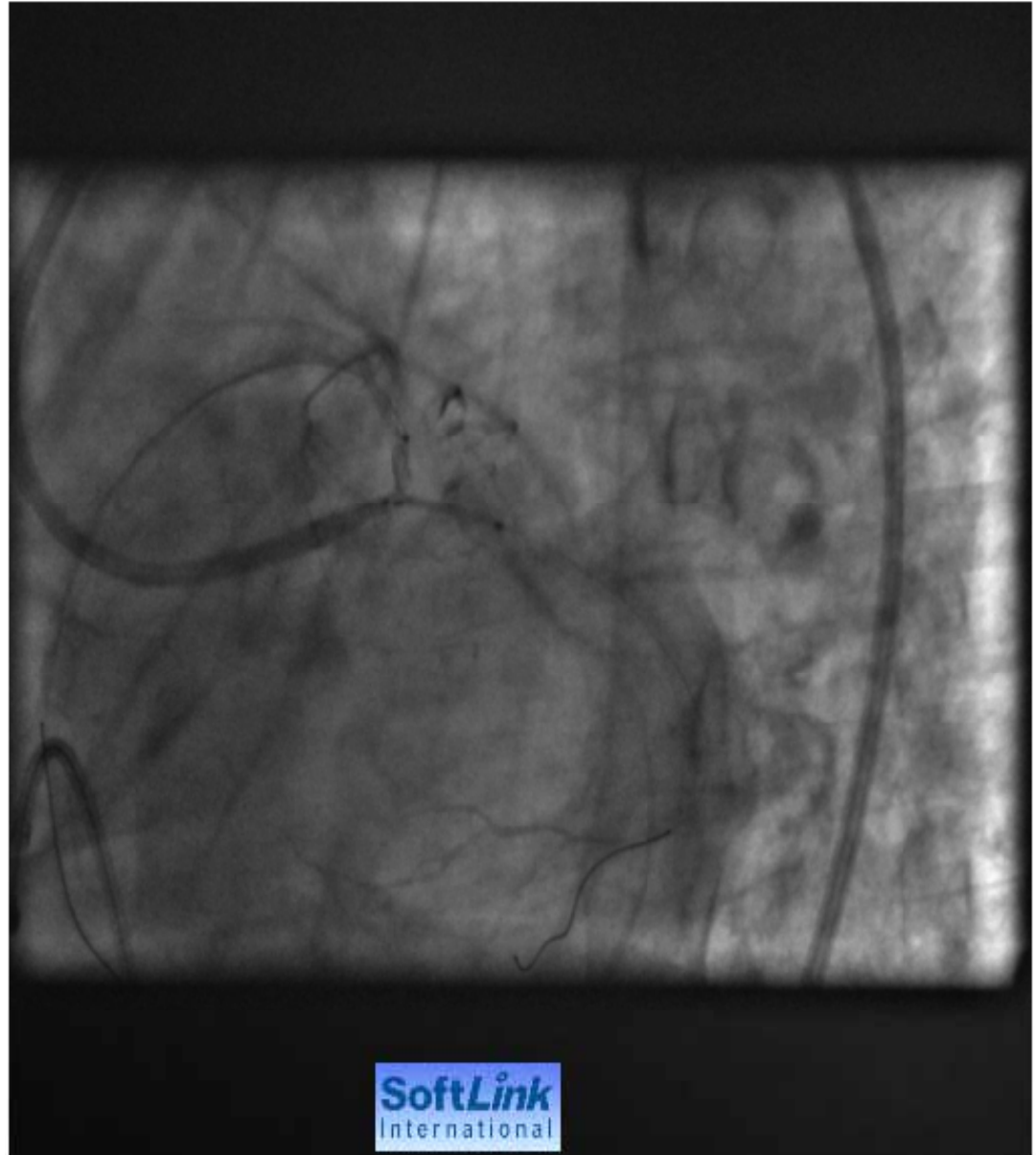
LCX Crossed with All Star wire

Another BMW wire in to LAD

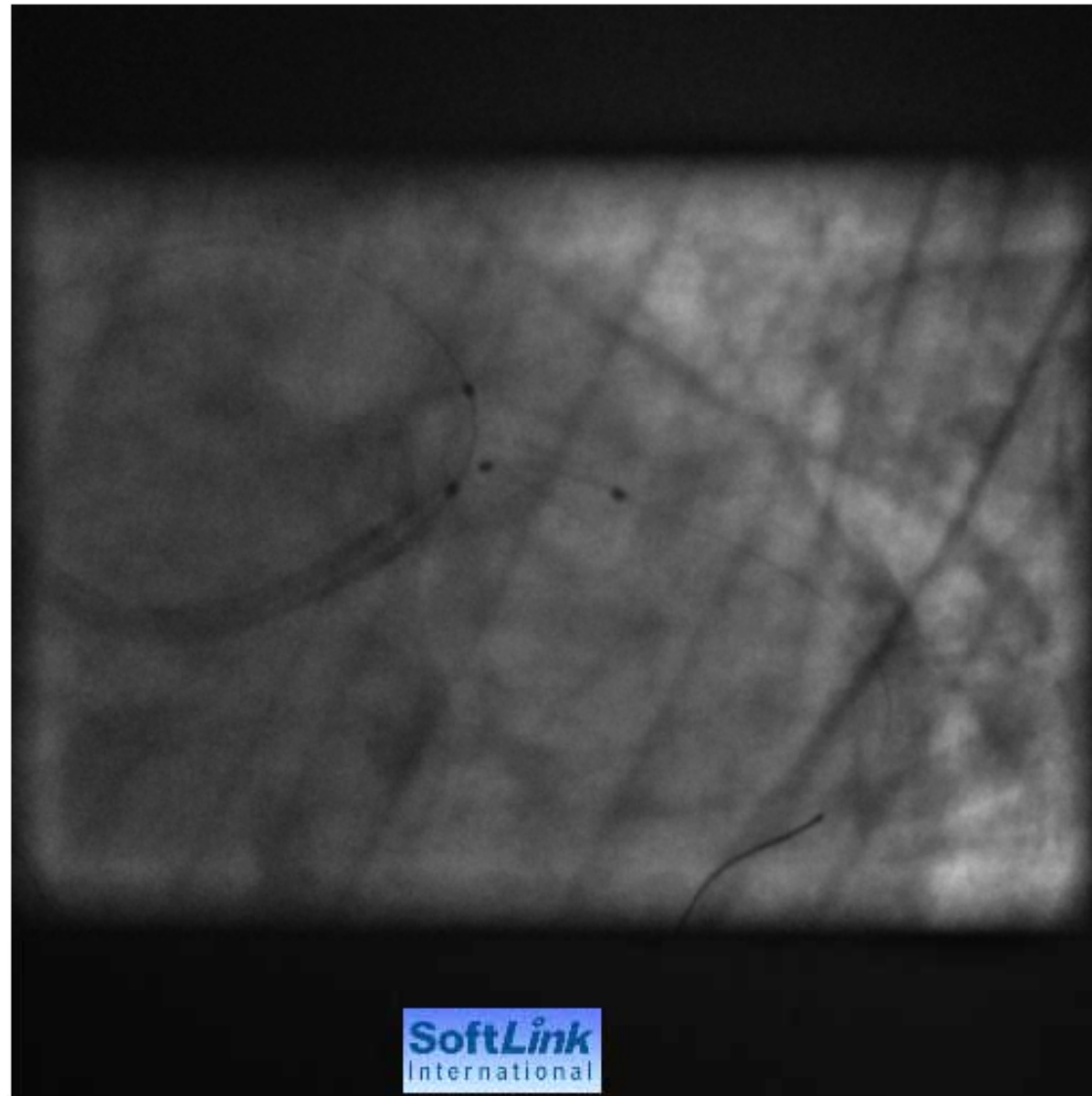
Predilatation

DES 3 x12 mm

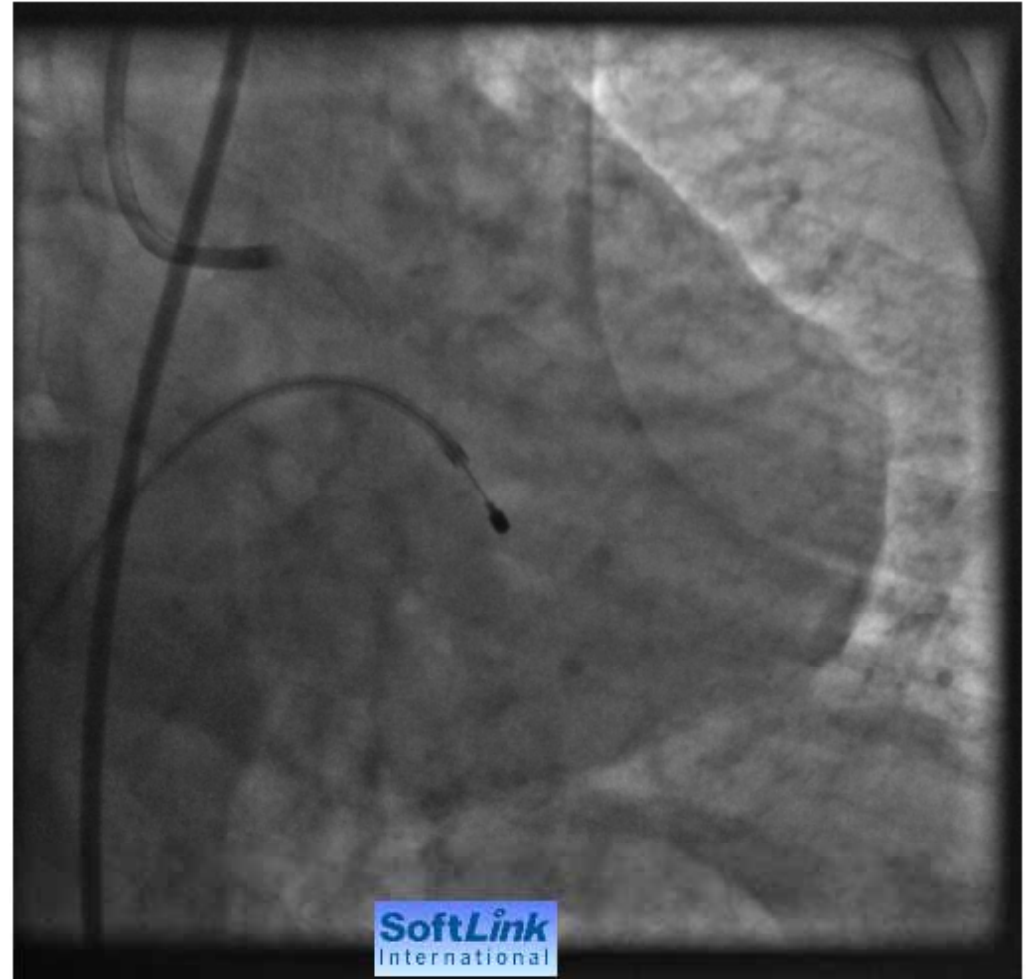
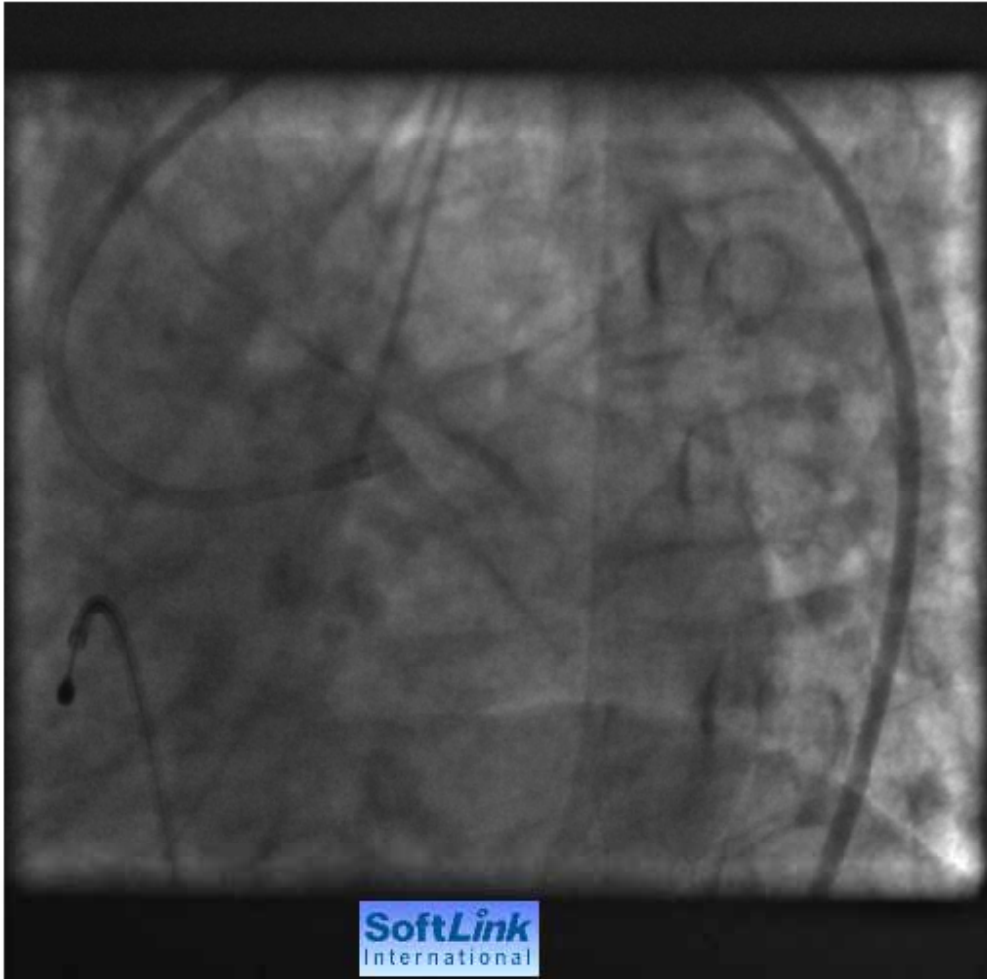
Balloon 2.5 x15 mm



# PCI LCX



# Final Result



# Take Home Message

Simultaneous balloon placement is technically simple approach for prevention of unwanted stent movement during Stent placement

Operators should also consider :

7 Fr guiding catheter

Superzooming

RAD caudal or LAD caudal view

DES stent with High radial force

Good visibility of the stent

Our technique is quick, effective, and technically simple approach for precise Stent placement at LAD and LCX Ostium