

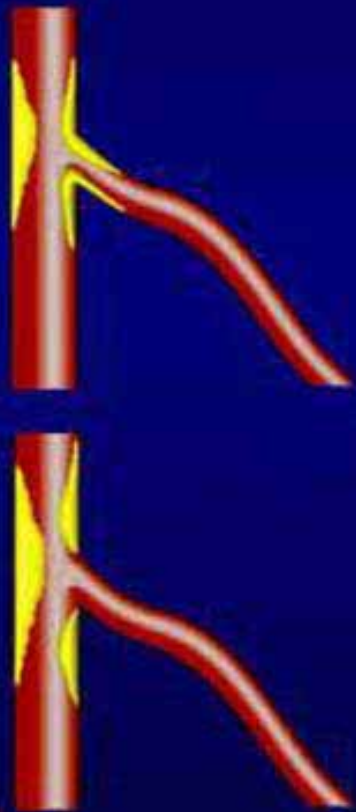
复旦大学附属中山医院心内科  
上海市心血管病研究所



# Efficacy of FX Minirail Balloon in Bifurcation Lesions

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# PCI in bifurcation lesions



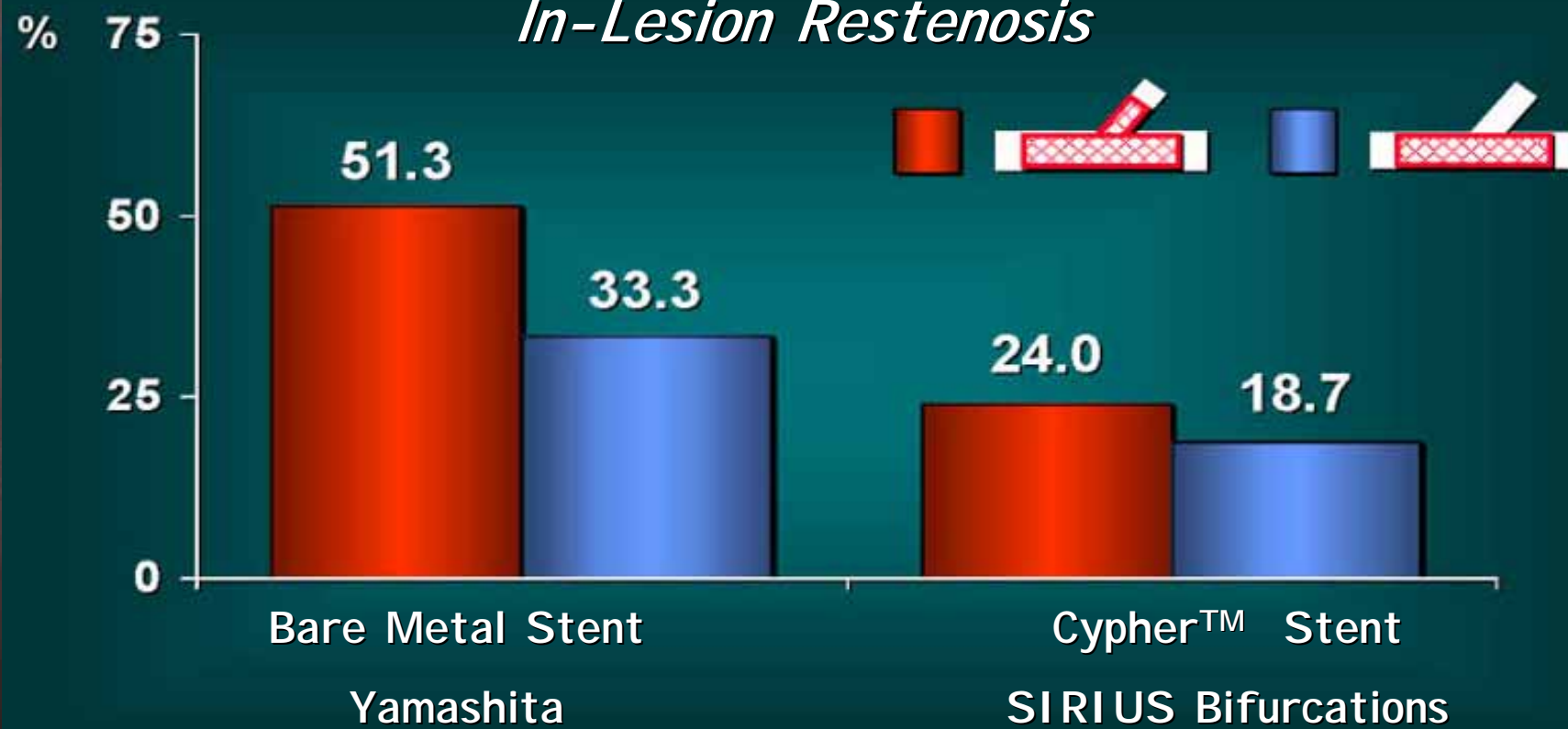
- Until recently, PCI in bifurcation lesions had remained technically challenging.
- Immediate and mid-term results using balloon angioplasty were poor:
  - Low angiographic success rate (75-85%)
  - High incidence of complication (8-22%)
  - High restenosis rate (40-65%)

# Cypher™ Compared with Bare Metal Stents

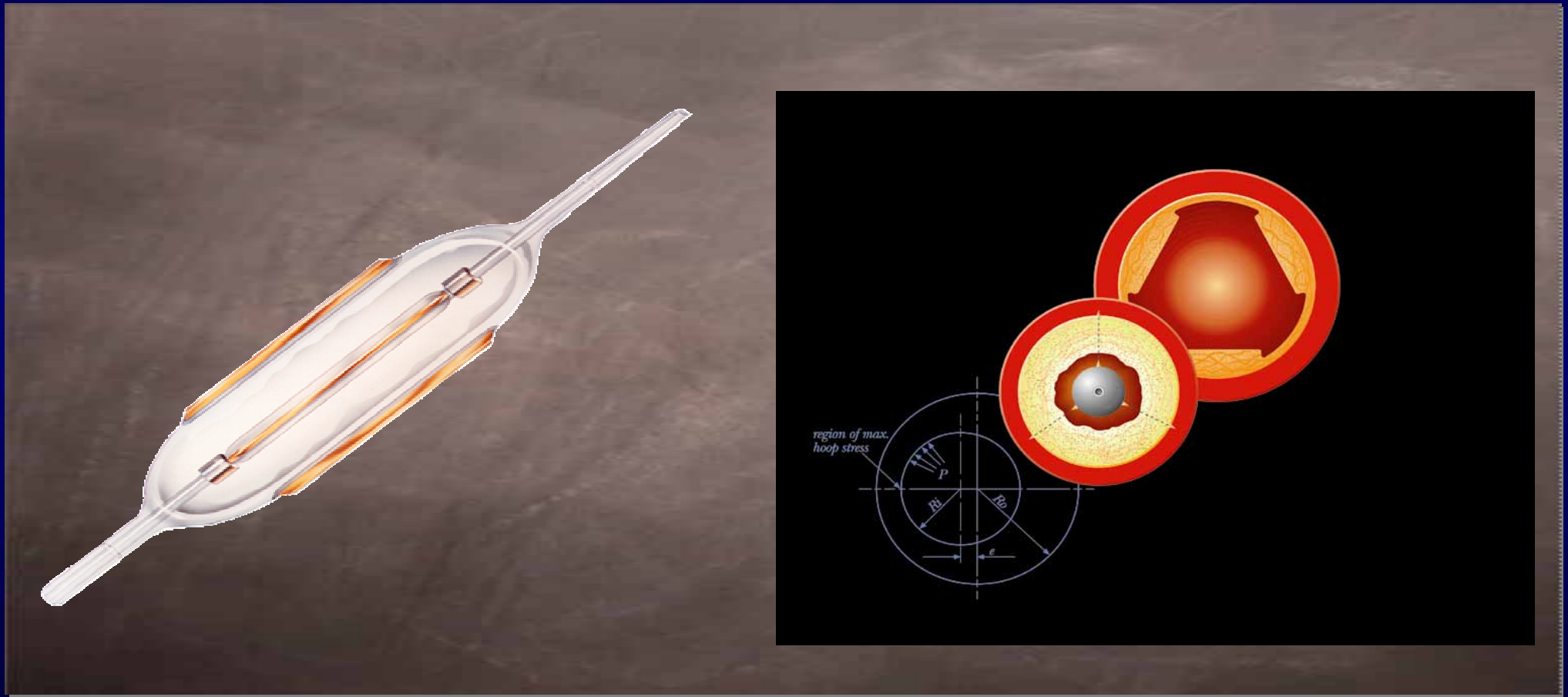


## Side-Branch

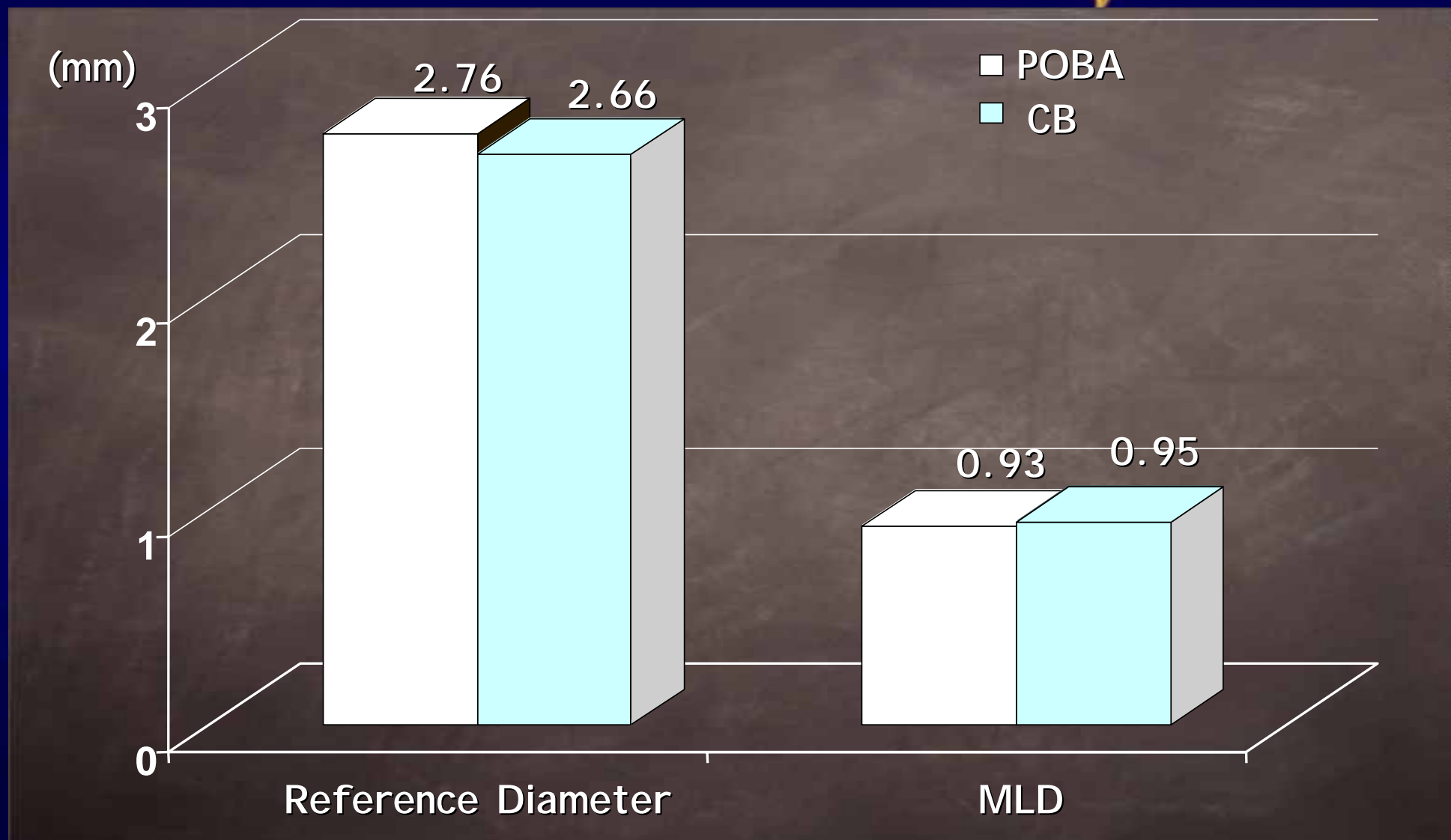
### In-Lesion Restenosis



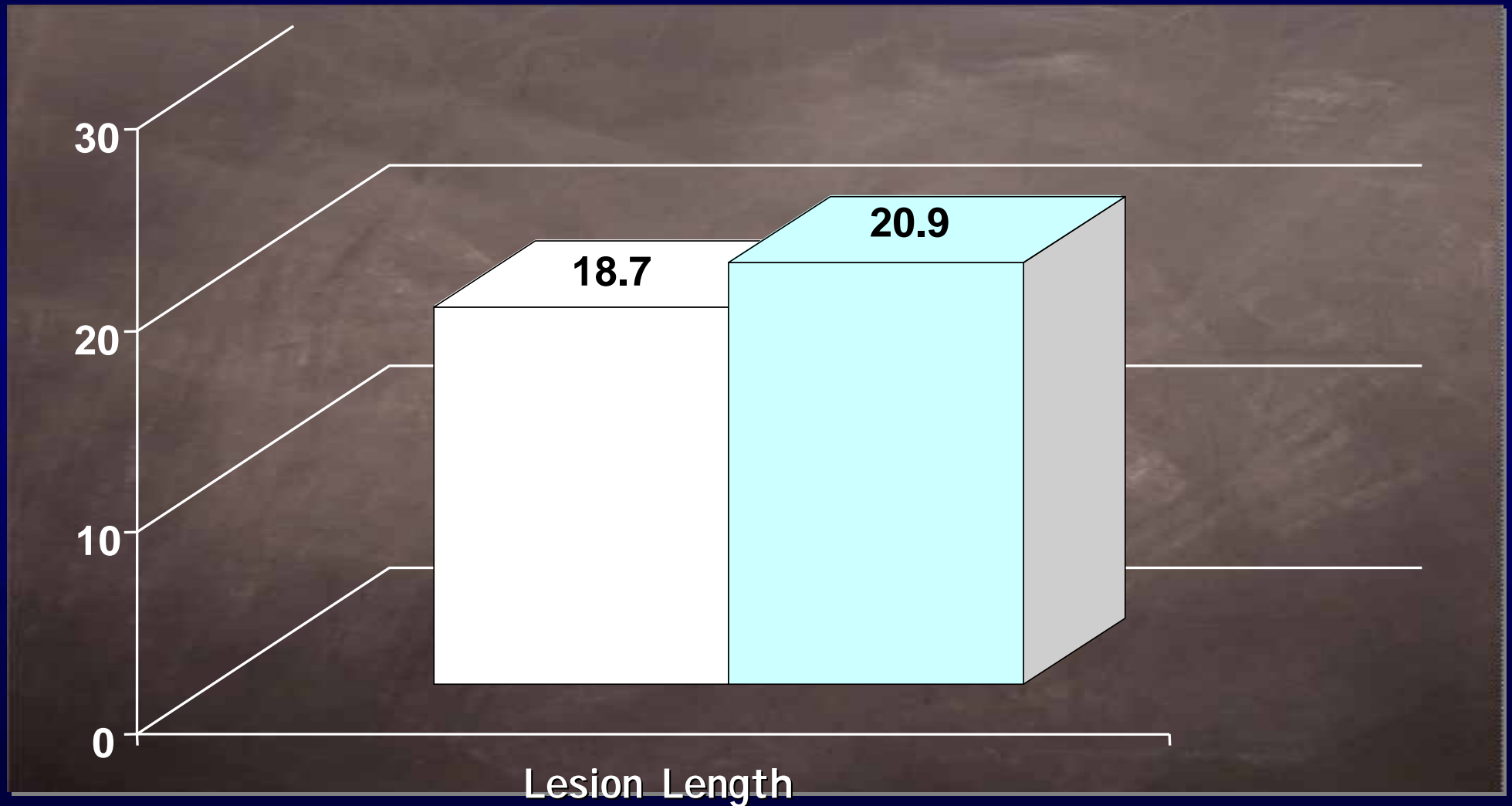
# Cutting Balloon™



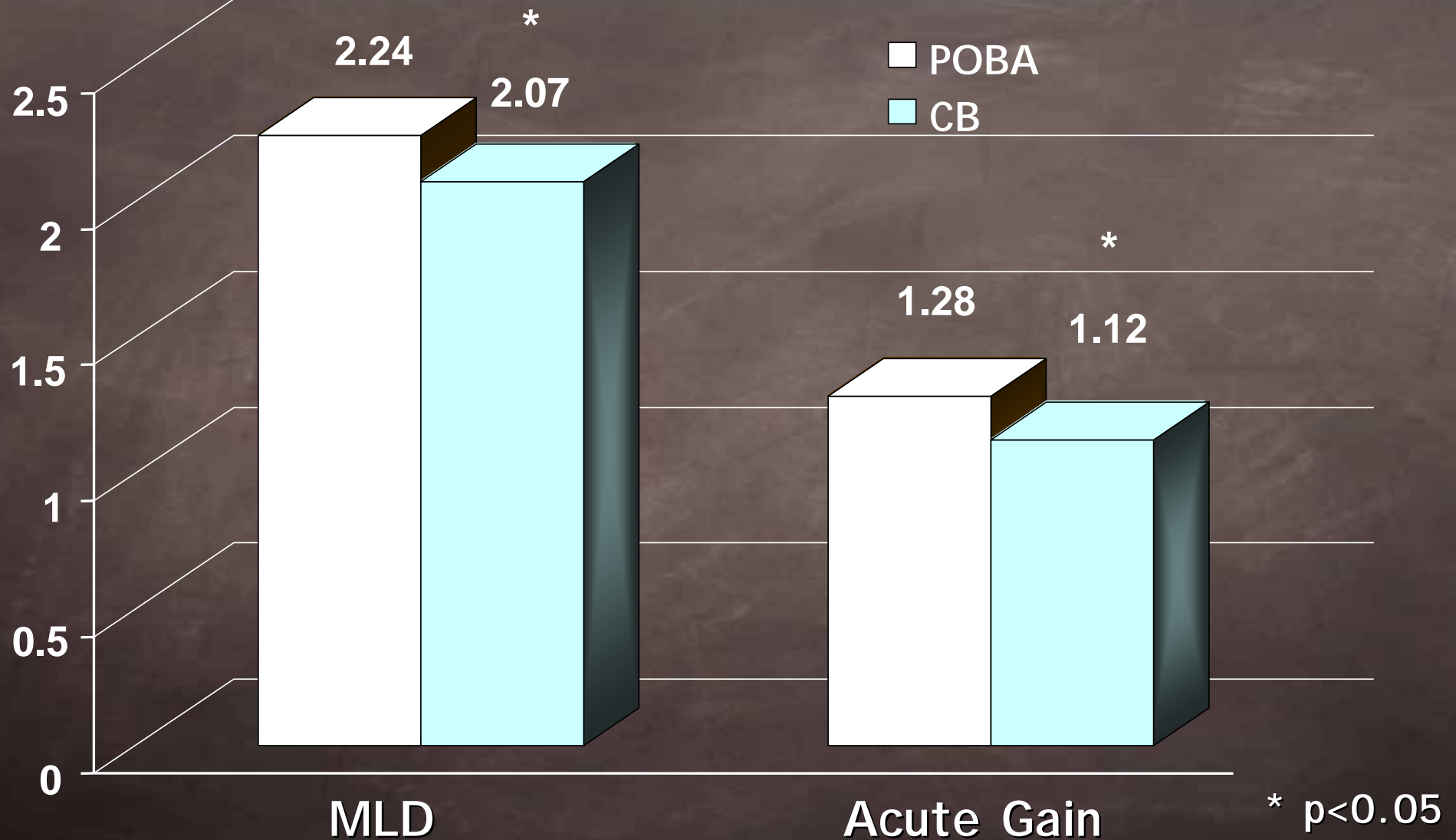
# QCA Analysis (Baseline)



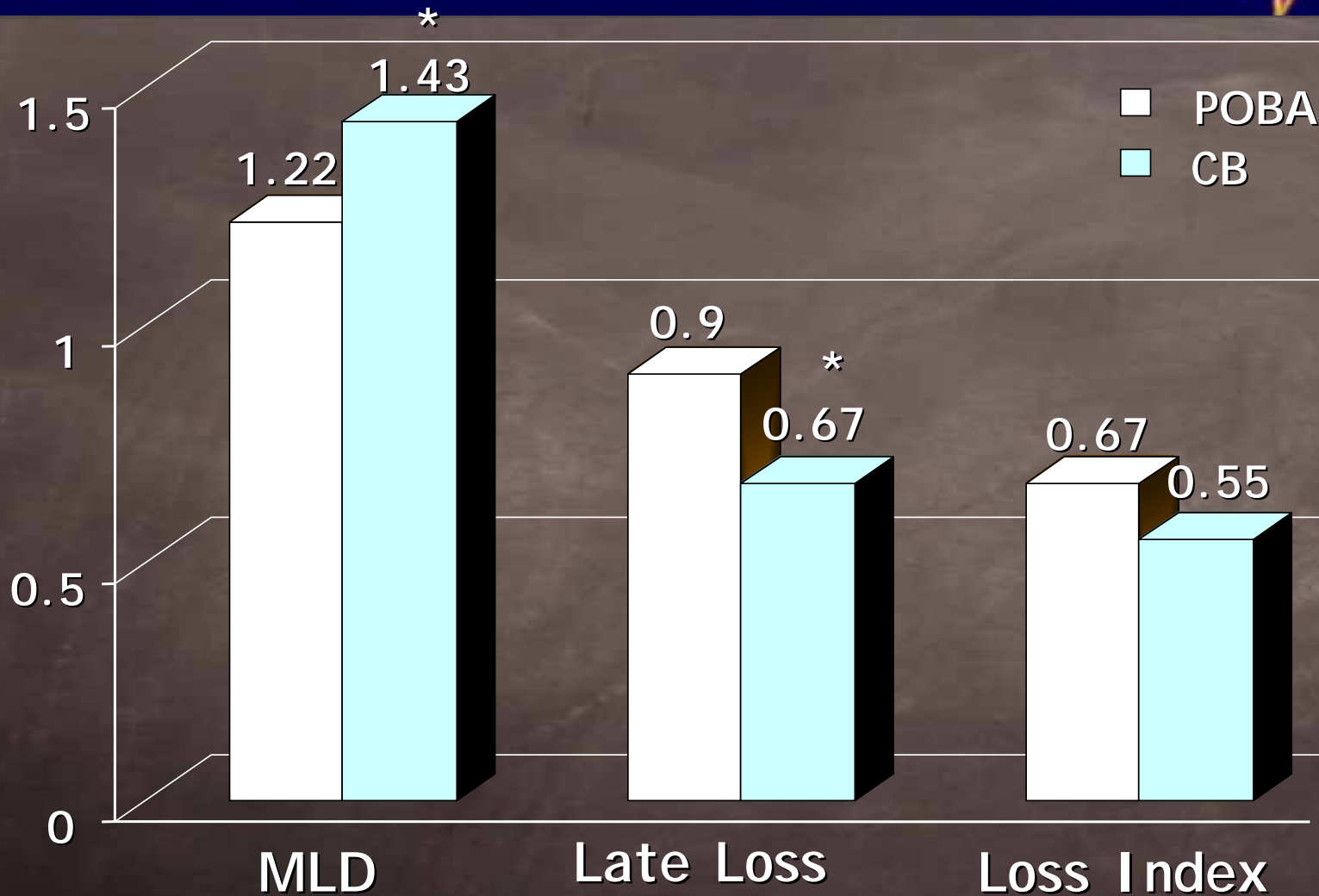
# QCA Analysis (Baseline)



# QCA Analysis (Post Procedure)



# QCA Analysis (Follow-up)

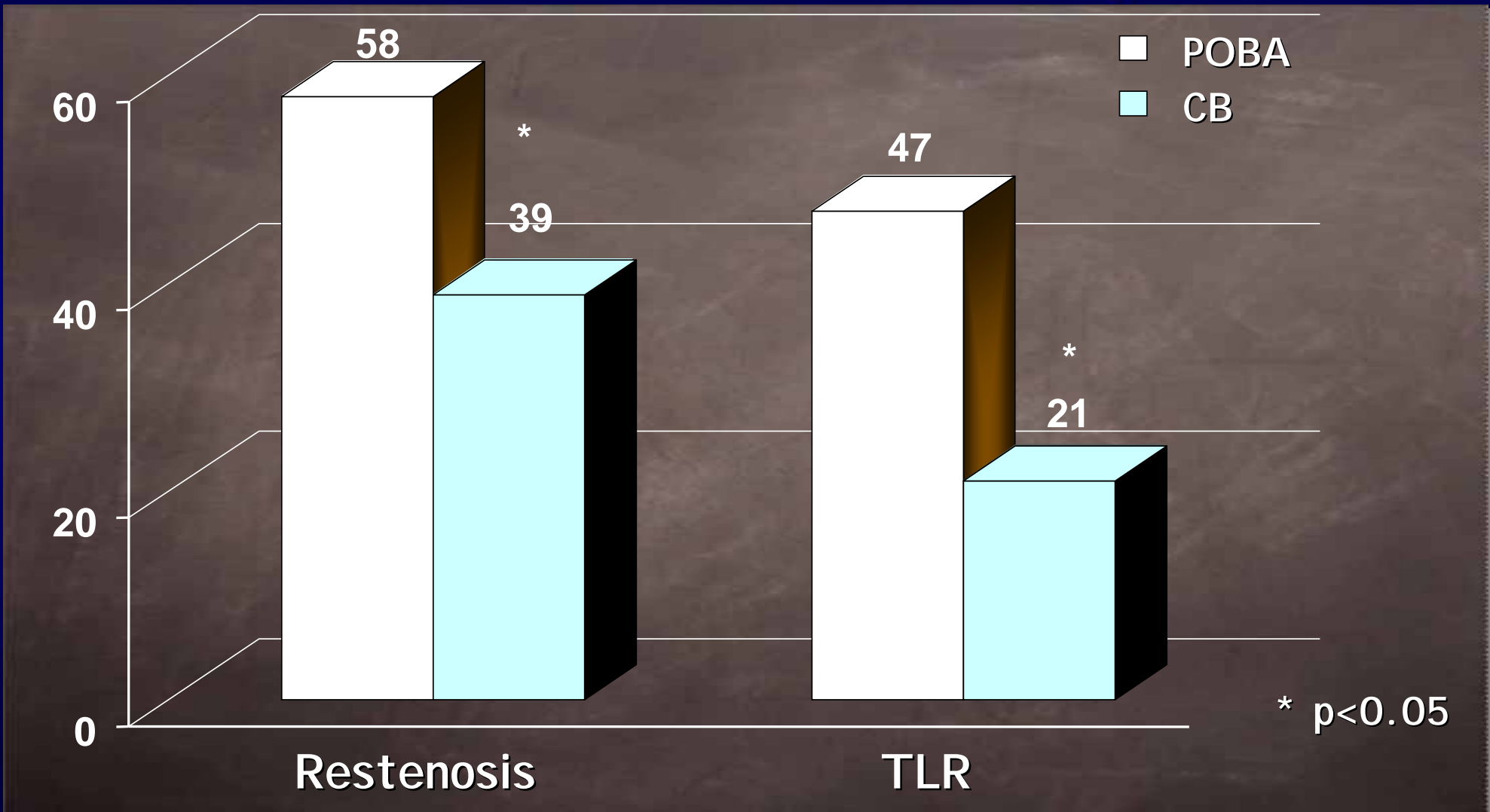


- Follow-up period:  $5.7 \pm 2.3$  mo.
- Follow-up Rate: 63.9%

\*  $p < 0.05$



# Restenosis & TLR

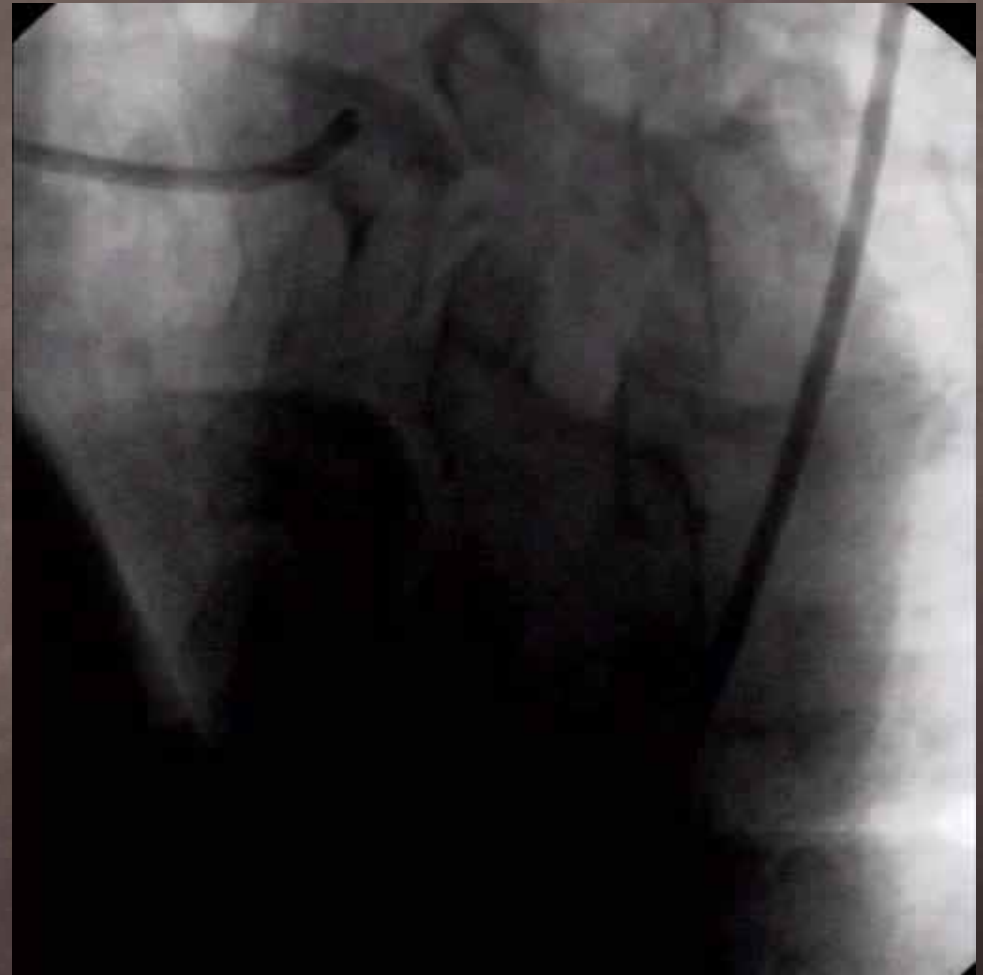


# Cutting balloon angioplasty in proximal LAD bifurcation lesion



## Case # 1

- Male, 58 yr
- Anterior MI 1 month ago
- Pre-intervention angiogram



# Cutting balloon angioplasty in proximal LAD bifurcation lesion



## Case # 1

- Proximal LAD
- C.B 3.5mm \* 8atm



# Cutting balloon angioplasty in proximal LAD bifurcation lesion



## Case # 1

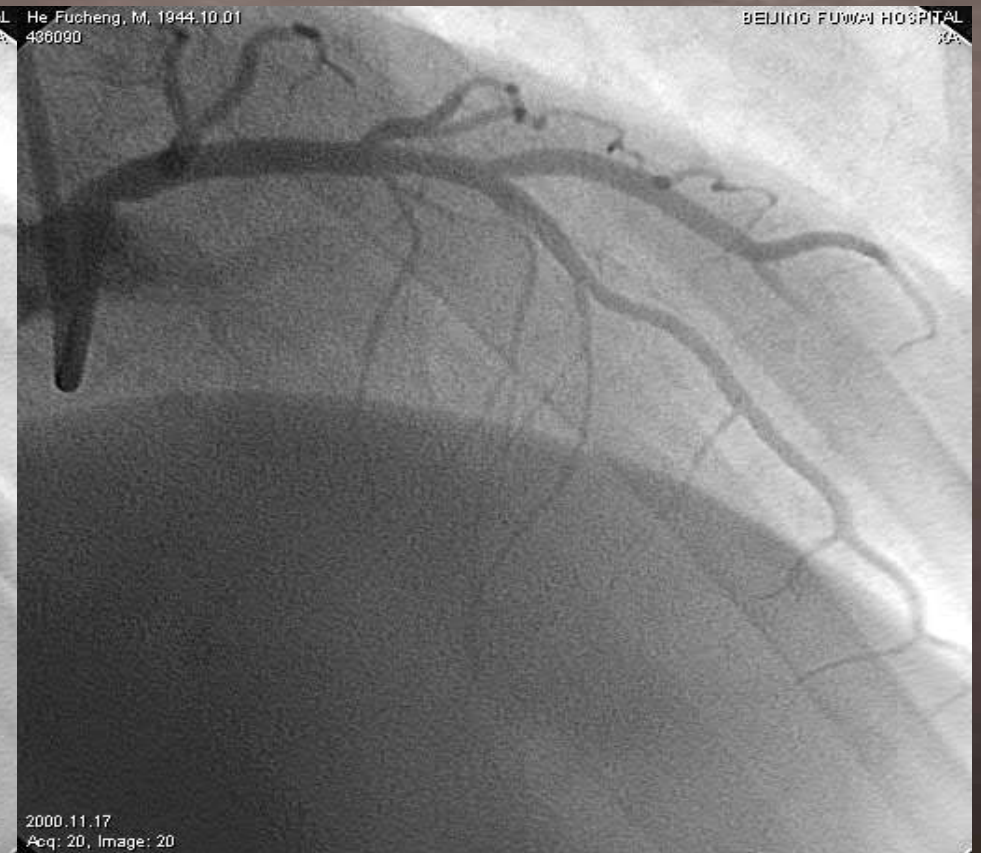
- Final result



# Cutting balloon angioplasty in proximal LAD bifurcation lesion



## Case # 1

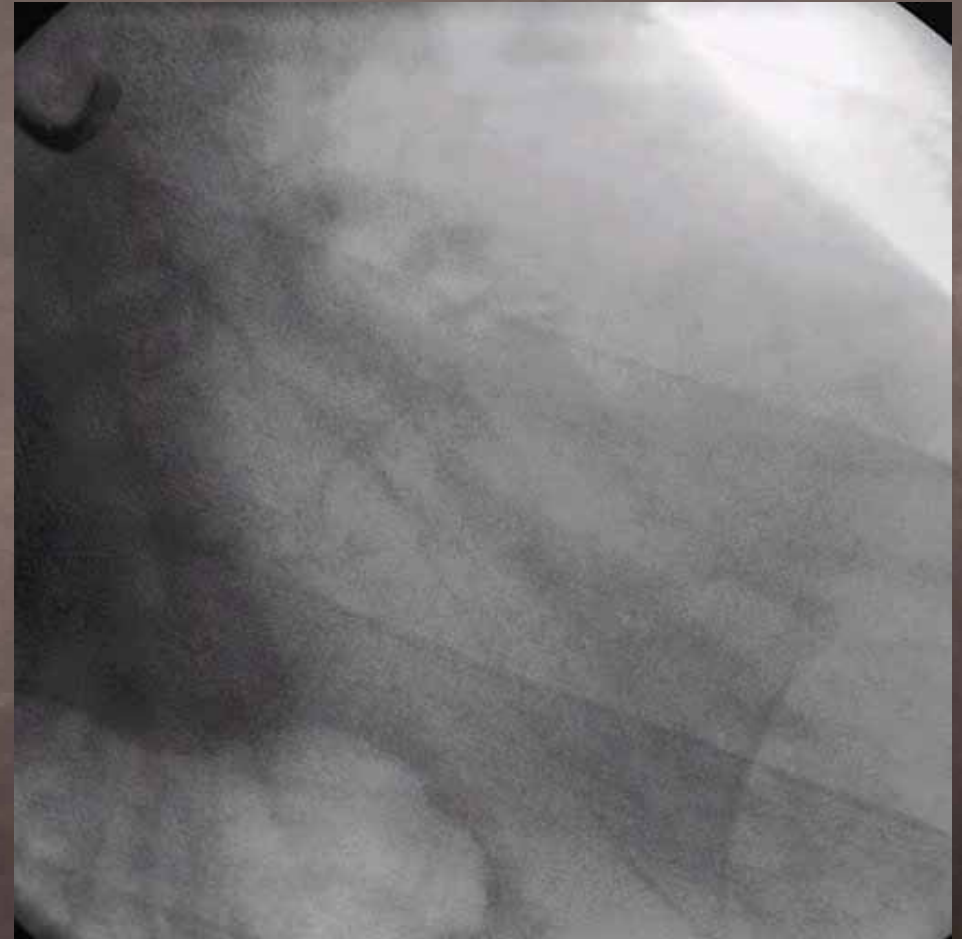


# Cutting balloon angioplasty prior to stenting in bifurcation lesion

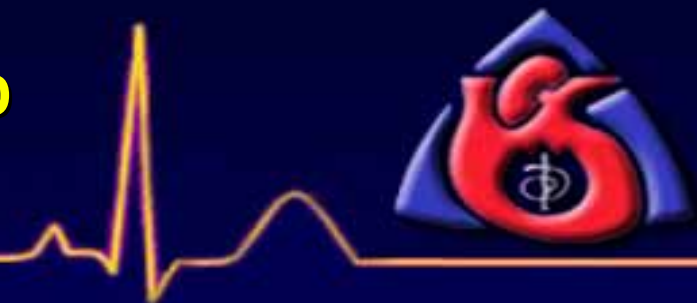


## Case # 2

- Male, 52 yr
- Exertional angina
- Pre-intervention angiogram



# Cutting balloon angioplasty prior to stenting in bifurcation lesion



Case # 2

▪ Ostial Diag

▪ C.B 2.75mm \* 10atm

▪ LAD

▪ C.B 2.75mm \* 10atm

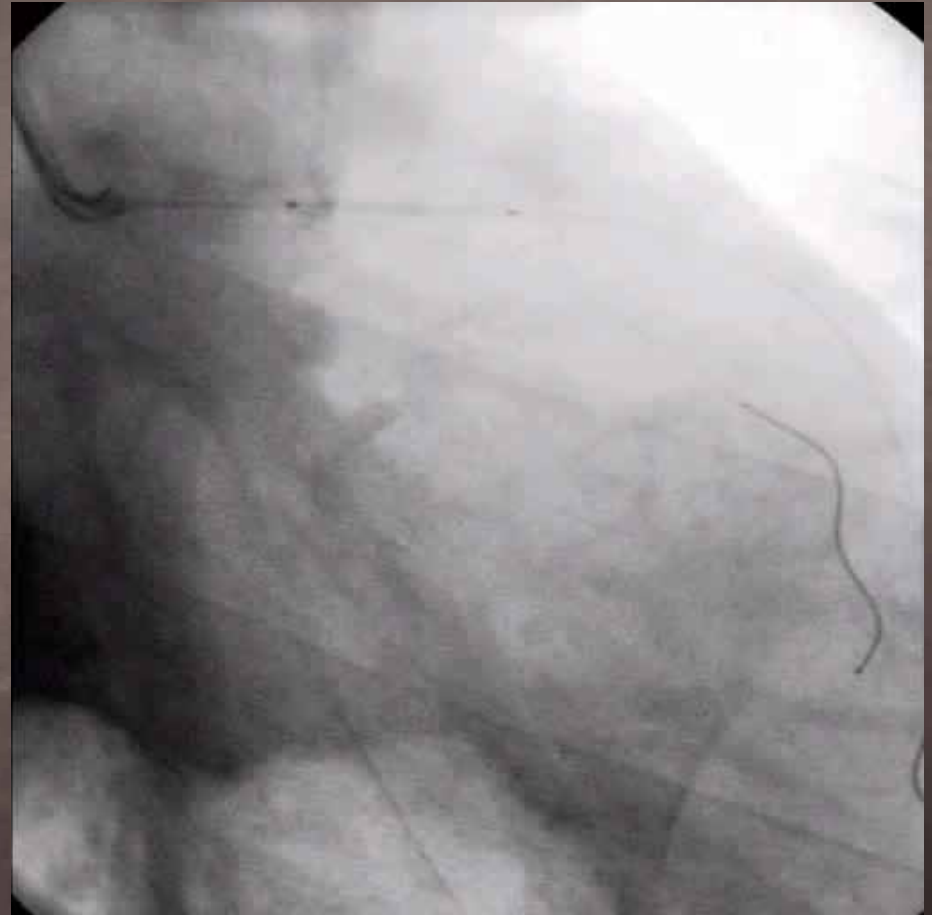


# Cutting balloon angioplasty prior to stenting in bifurcation lesion



## Case # 2

- LAD stenting
- 3.5mm\*18mm stent





# Cutting balloon angioplasty prior to stenting in bifurcation lesion



## Case # 2

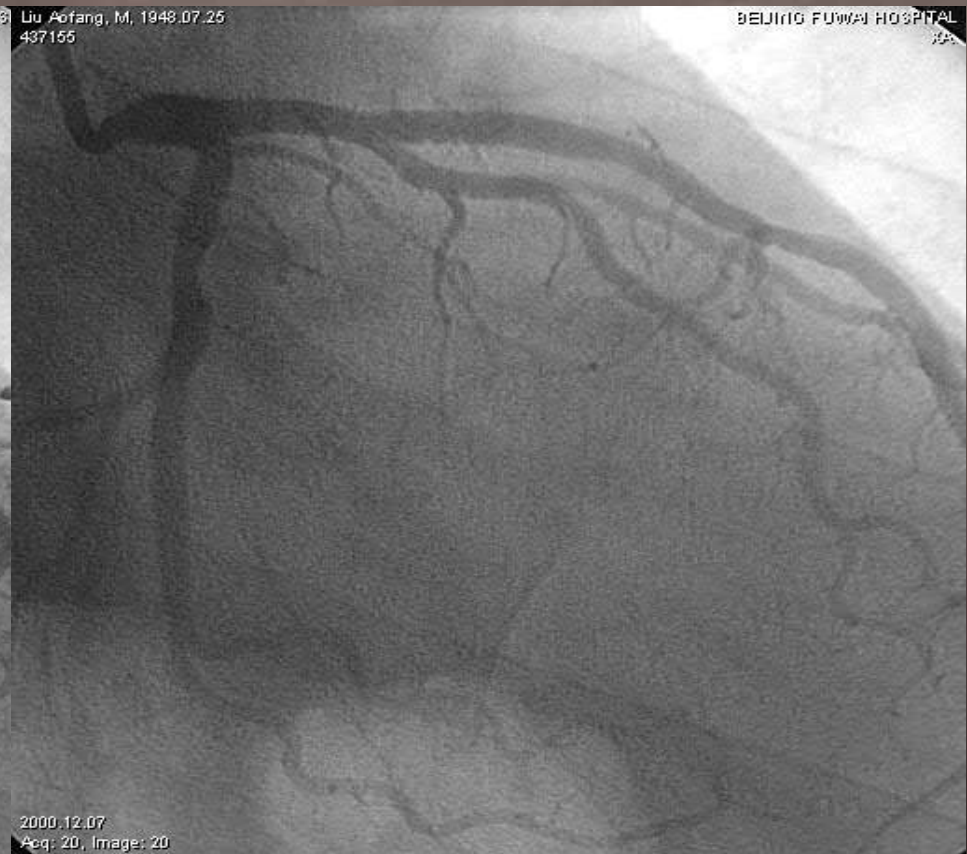
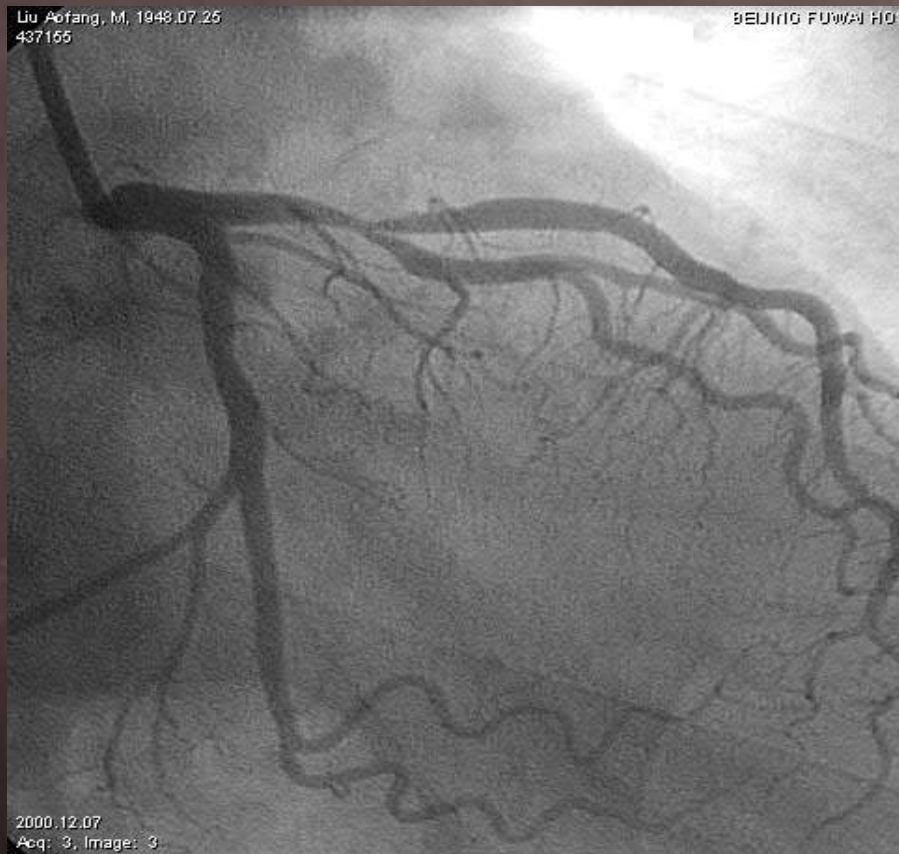
- Final result



# Cutting balloon angioplasty prior to stenting in bifurcation lesion



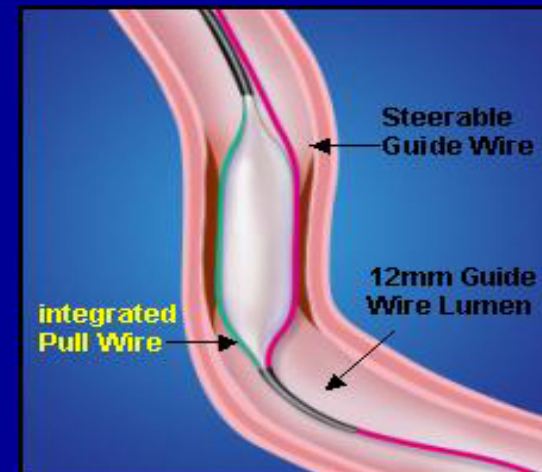
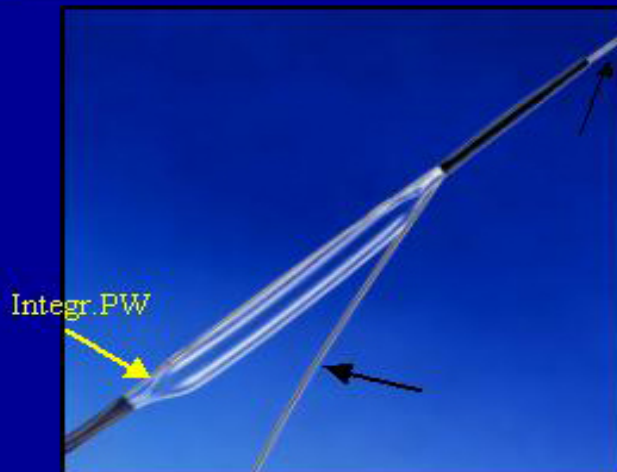
## Case # 2



# FX miniRAIL™ RX PTCA Catheter



## FX miniRAIL™ RX PCI Catheter

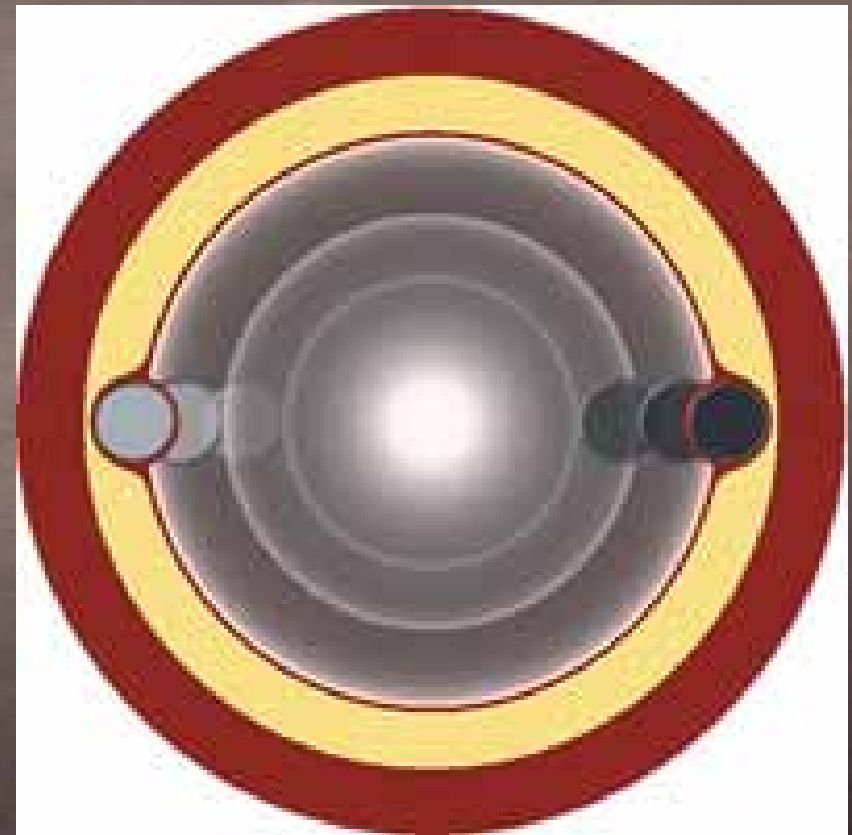


- 2.0 – 4.0mm diameters, half sizes
- 10, 15, 20 & 30mm lengths
- Semi-compliant balloon material
- .014" guide wire & 6F guide compatible

# FX miniRAIL™ Angioplasty



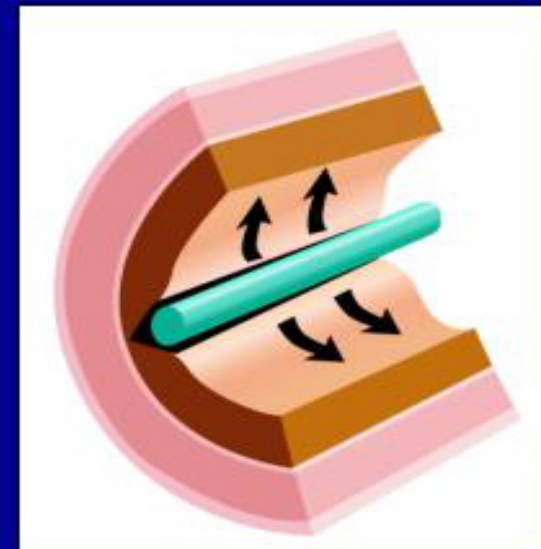
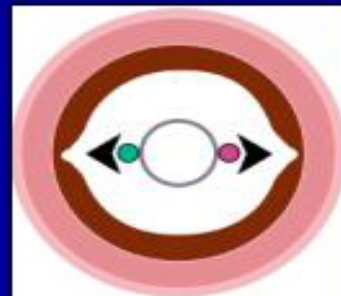
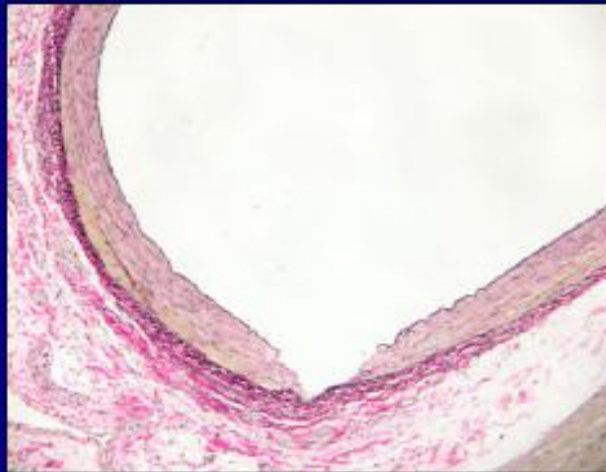
- FX miniRAIL™ Catheter: A well-rounded approach to a cutting-edge solution.
- Concentrated stress creates expansion planes at low pressures for controlled dilatation.
- Stress concentration
- Stability
- Pushability



# FX miniRAIL™ Angioplasty



## FOCUSED FORCE™ Mechanism

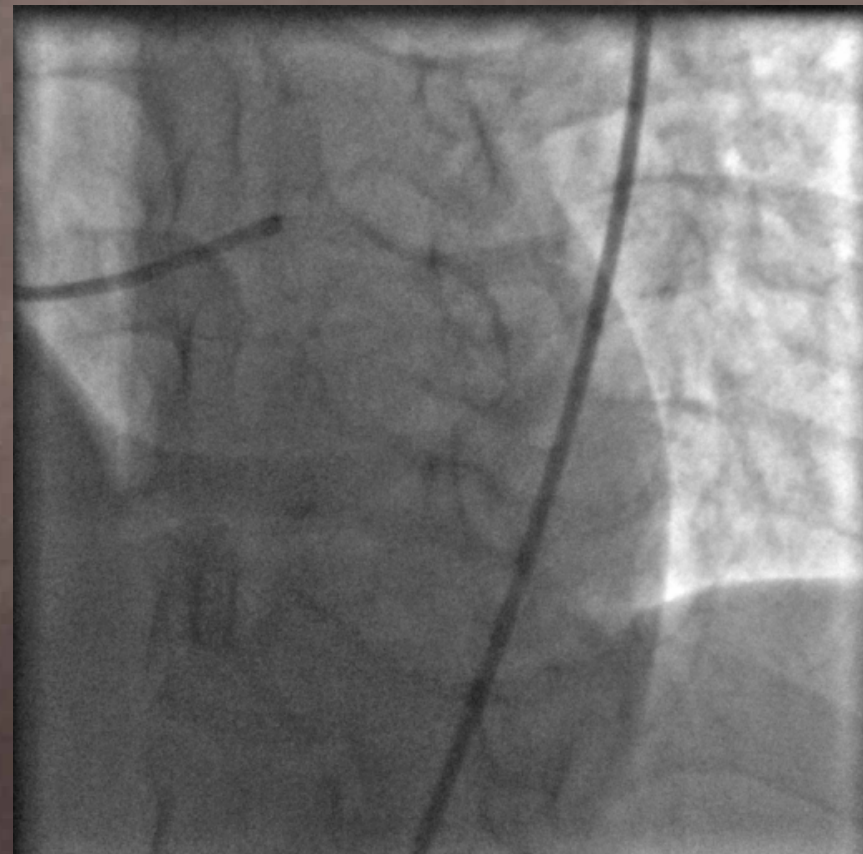
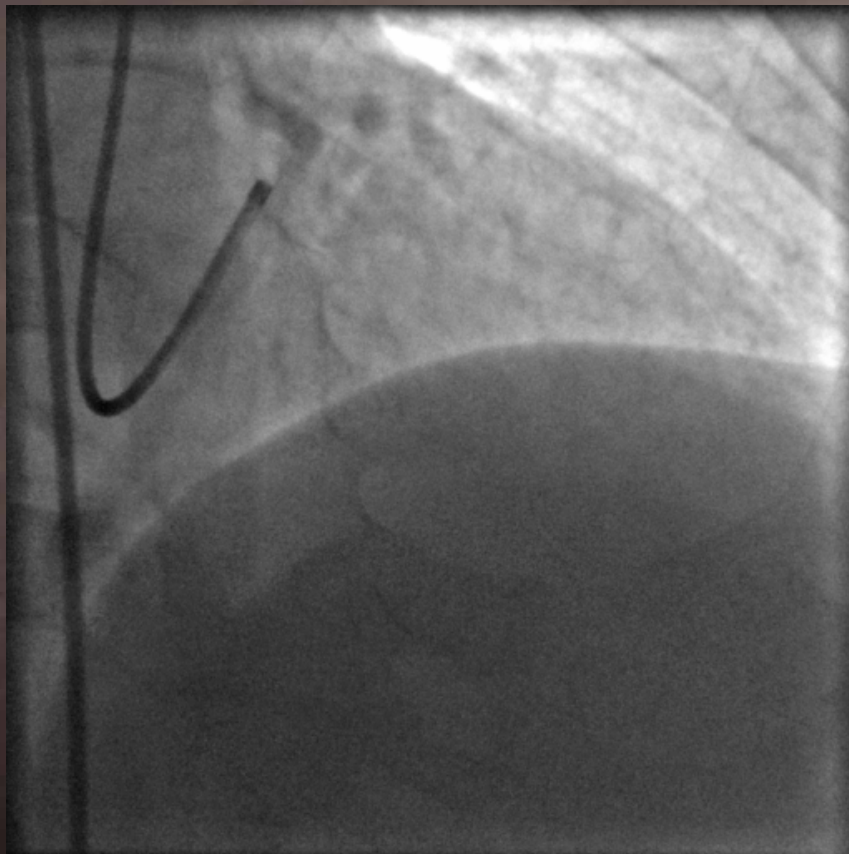


Dual wires create  
longitudinal expansion planes

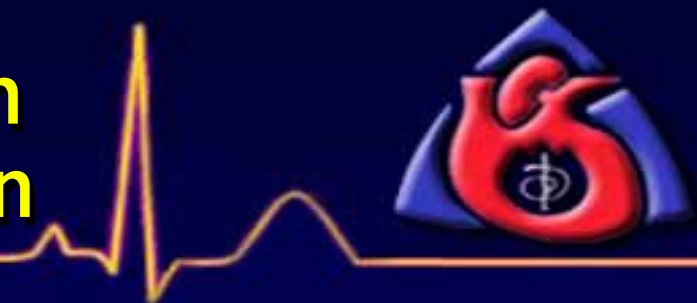
# FX miniRAIL™ angioplasty in proximal LAD bifurcation lesion



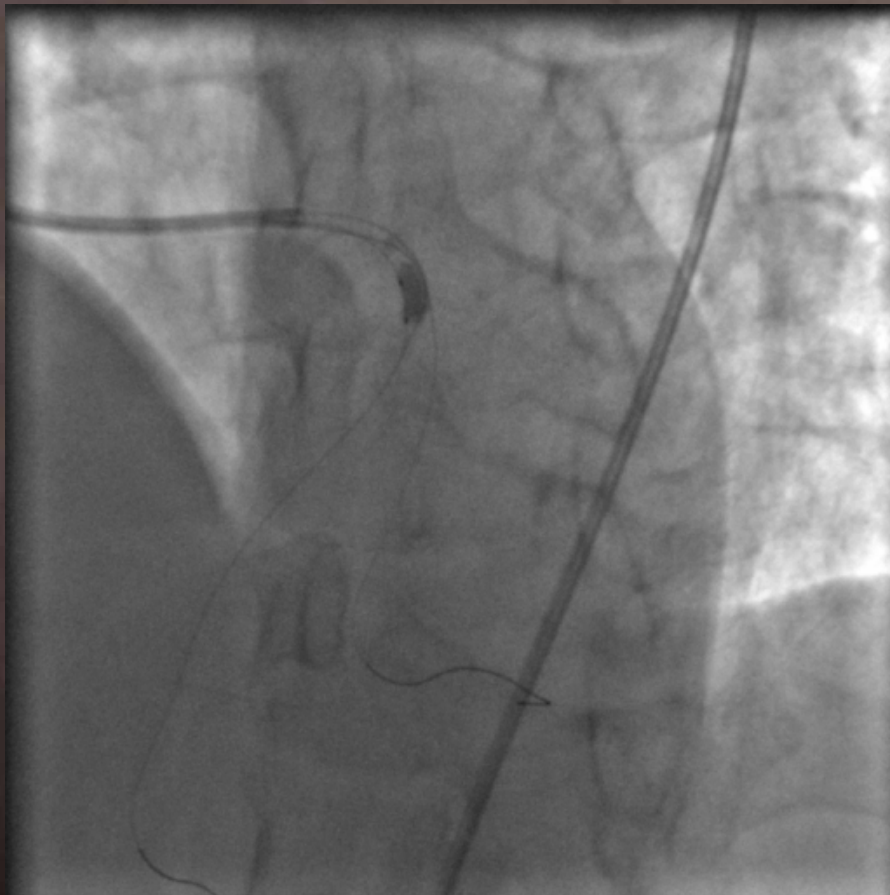
Case # 1



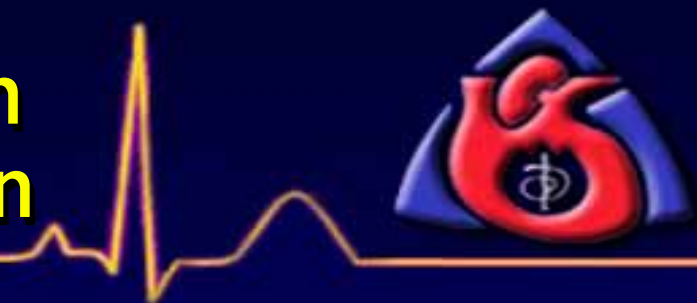
# FX miniRAIL™ angioplasty in proximal LAD bifurcation lesion



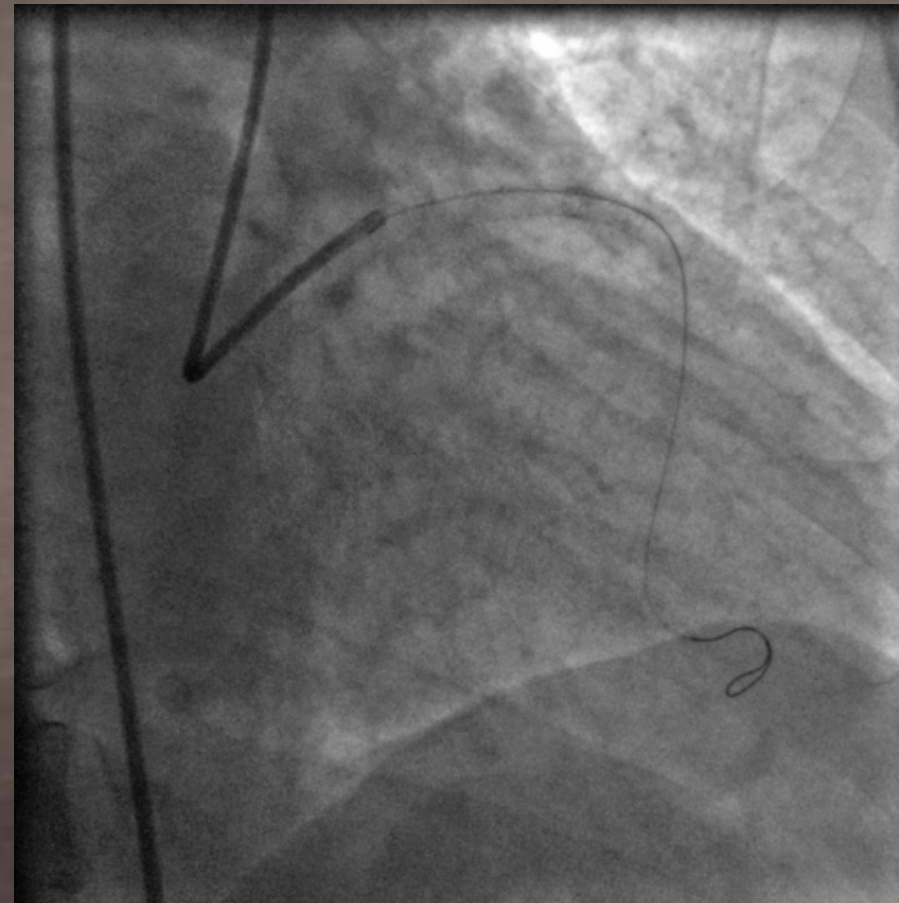
Case # 1



# FX miniRAIL™ angioplasty in proximal LAD bifurcation lesion



Case # 1

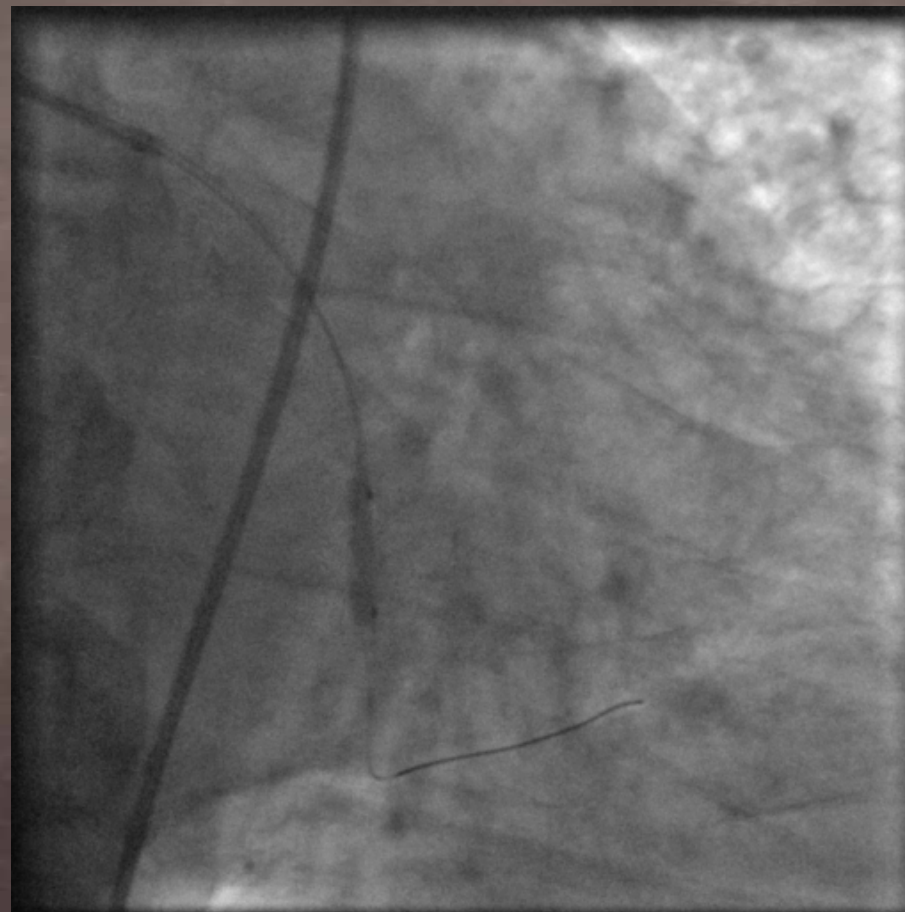
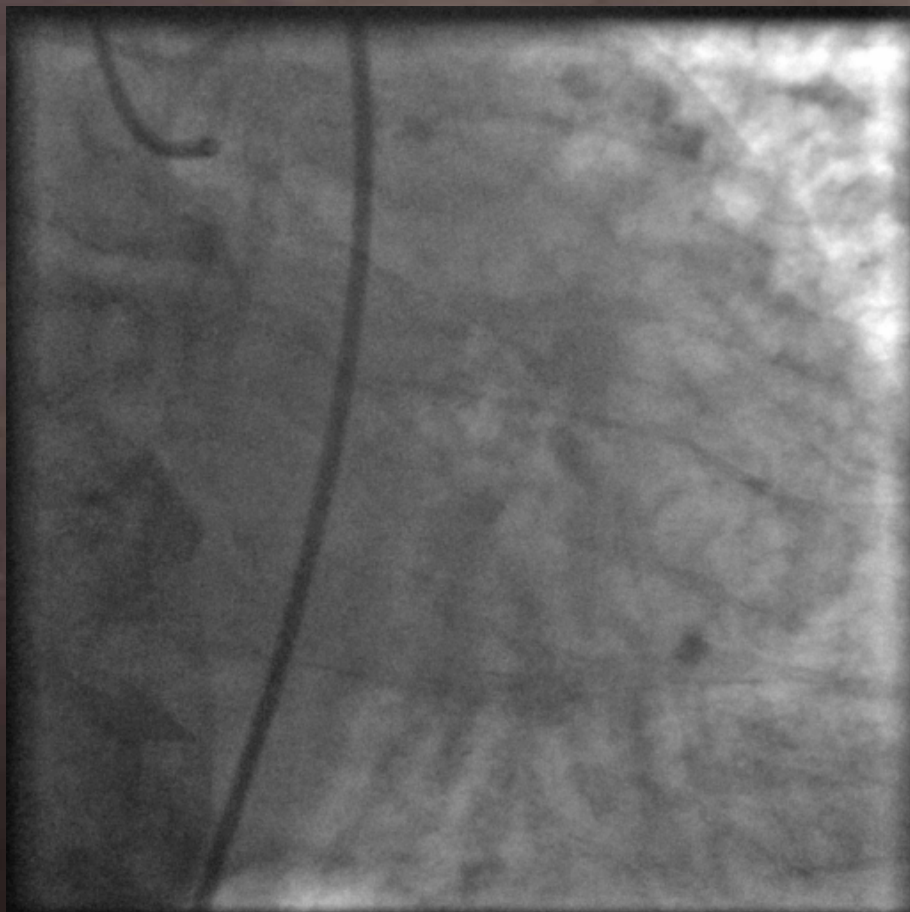




# FX miniRAIL™ angioplasty in a diffuse atherosclerotic lesion



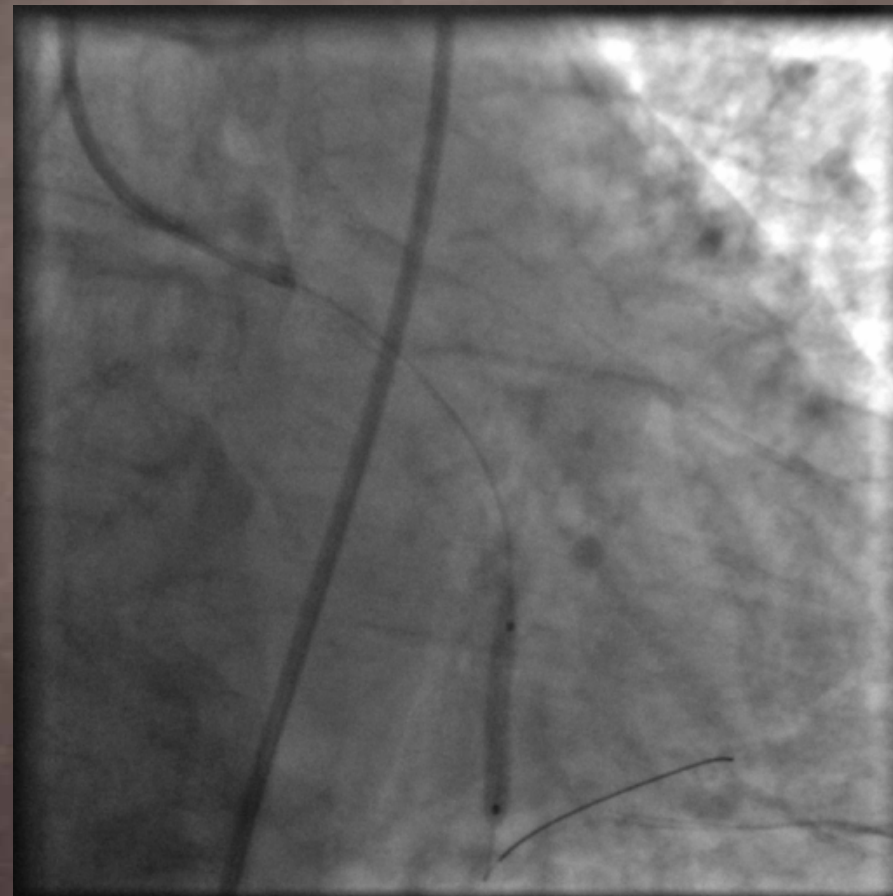
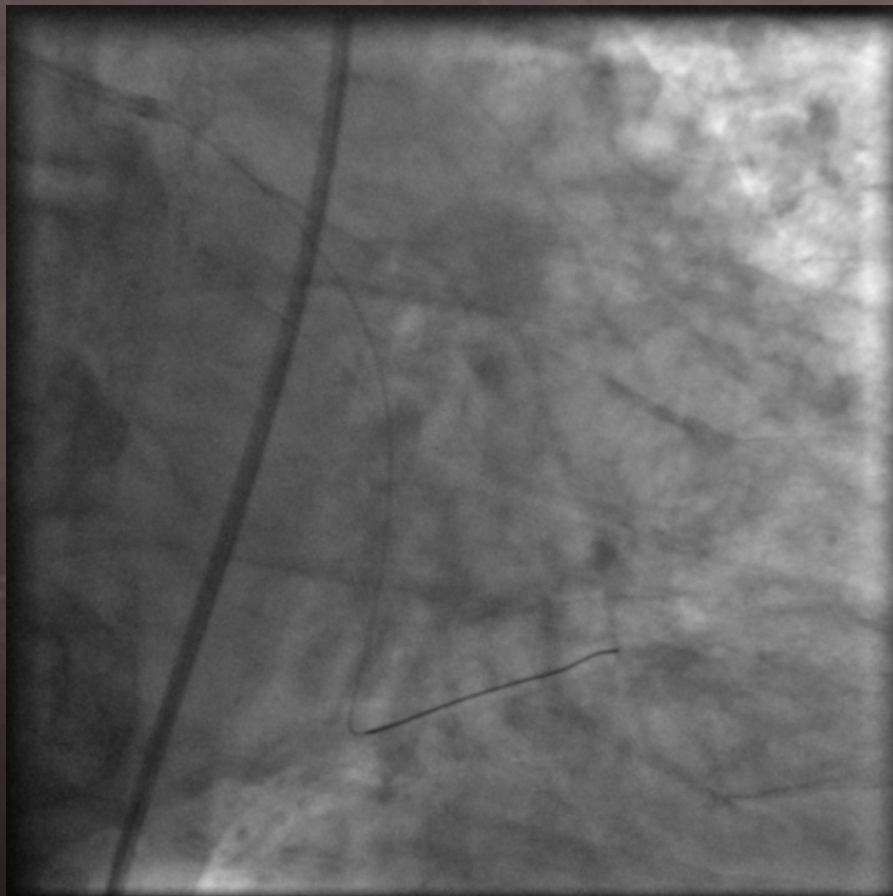
Case # 2



# FX miniRAIL™ angioplasty in a diffuse atherosclerotic lesion



Case # 2



# FX miniRAIL™ angioplasty in a diffuse atherosclerotic lesion



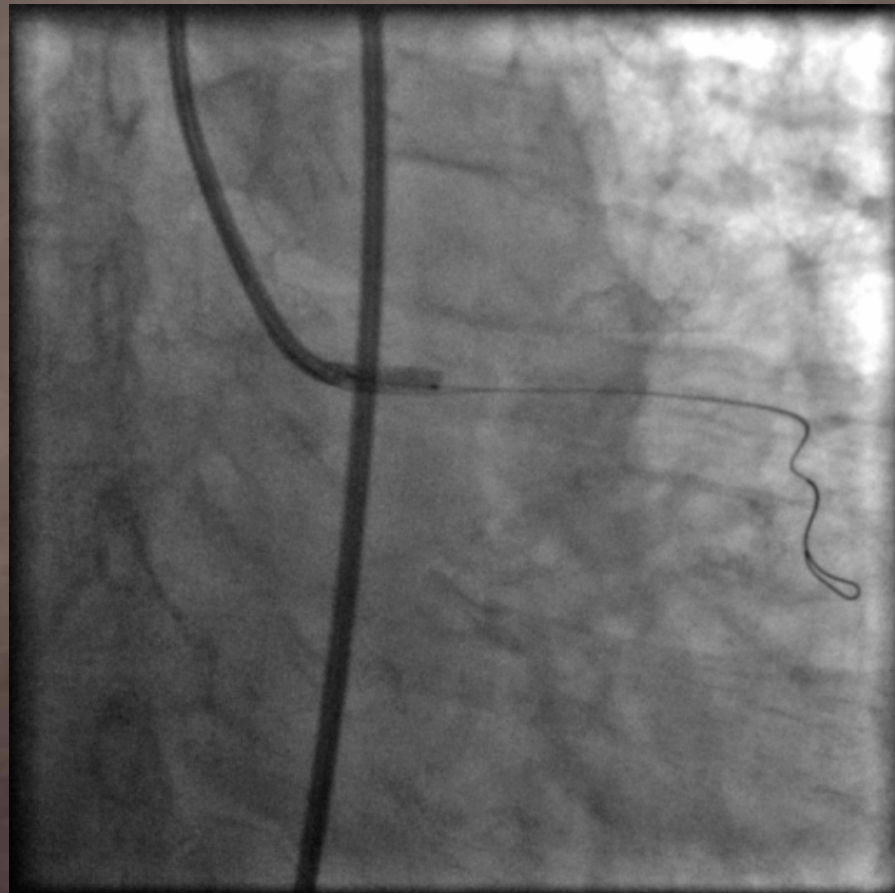
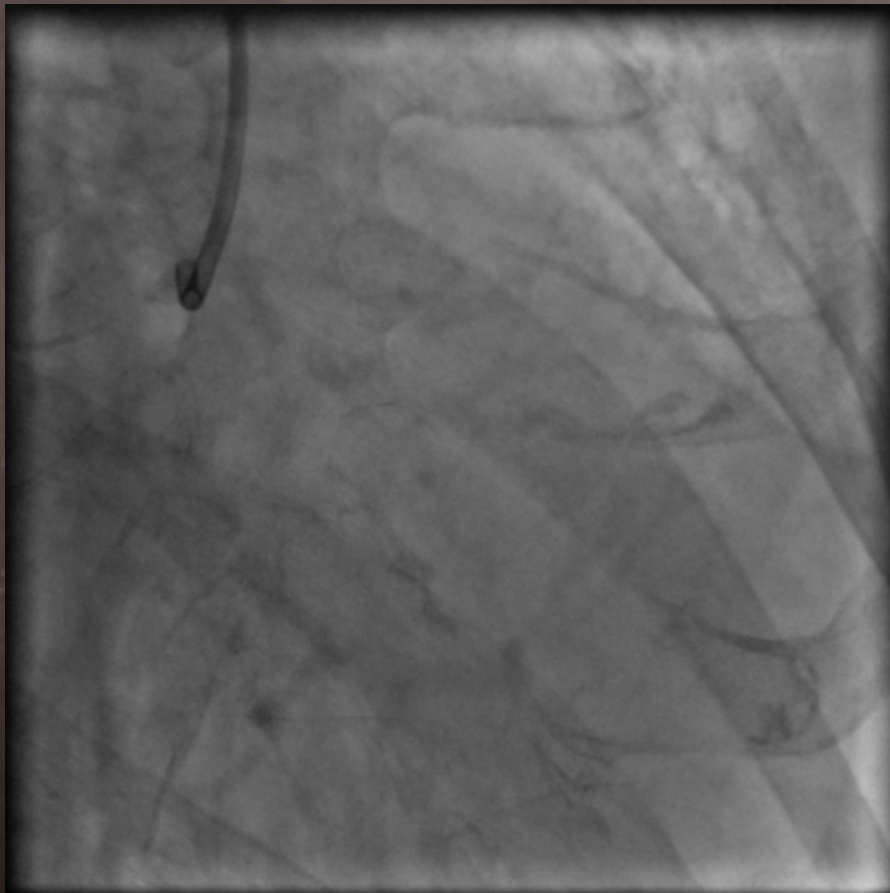
Case # 2



# FX miniRAIL™ angioplasty in Left Main Lesion



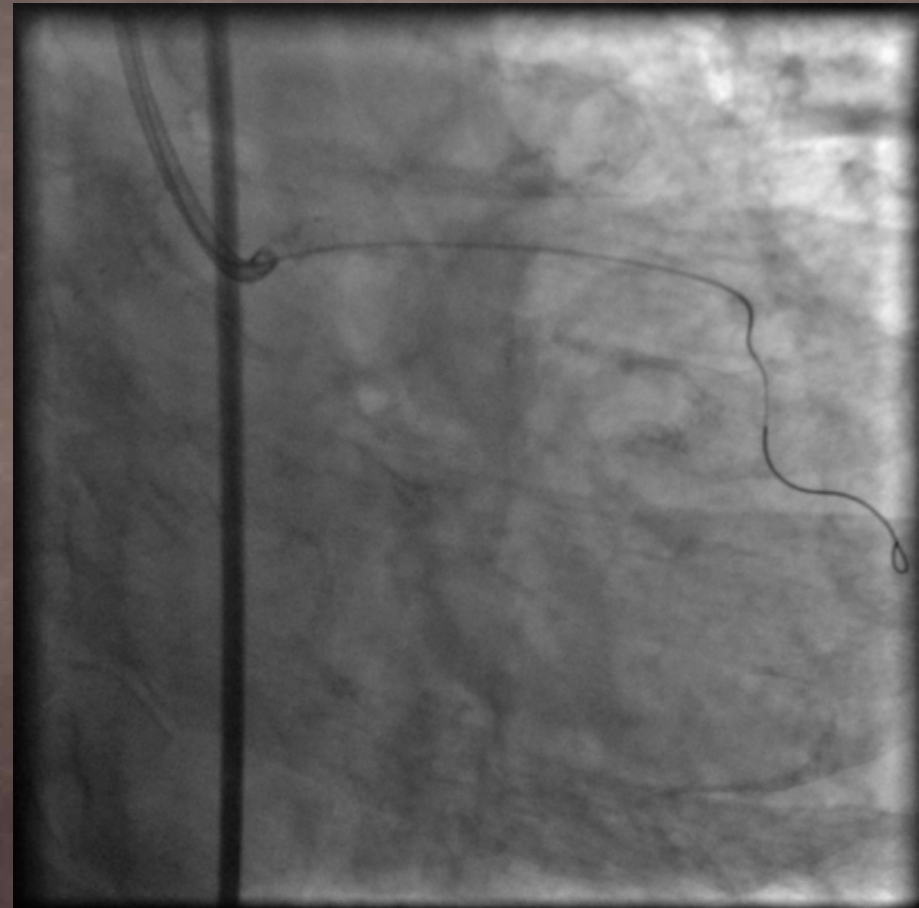
Case # 3



# FX miniRAIL™ Angioplasty in Left Main Lesion



Case # 3



# Conclusions



- FX minirail balloon is effective in treatment of bifurcation lesions which causes less plaque shifting.
- In comparison to cutting balloon, FX minirail balloon achieves equally results in bifurcation lesions.
- Further studies needed in the treatment of bifurcation lesions to prove the longterm benefit even in the DES era.