



OCT Guided LM Bifurcation Treatment --Strategy Change

The 2nd affiliated hospital of HMU
Ren Xuefeng

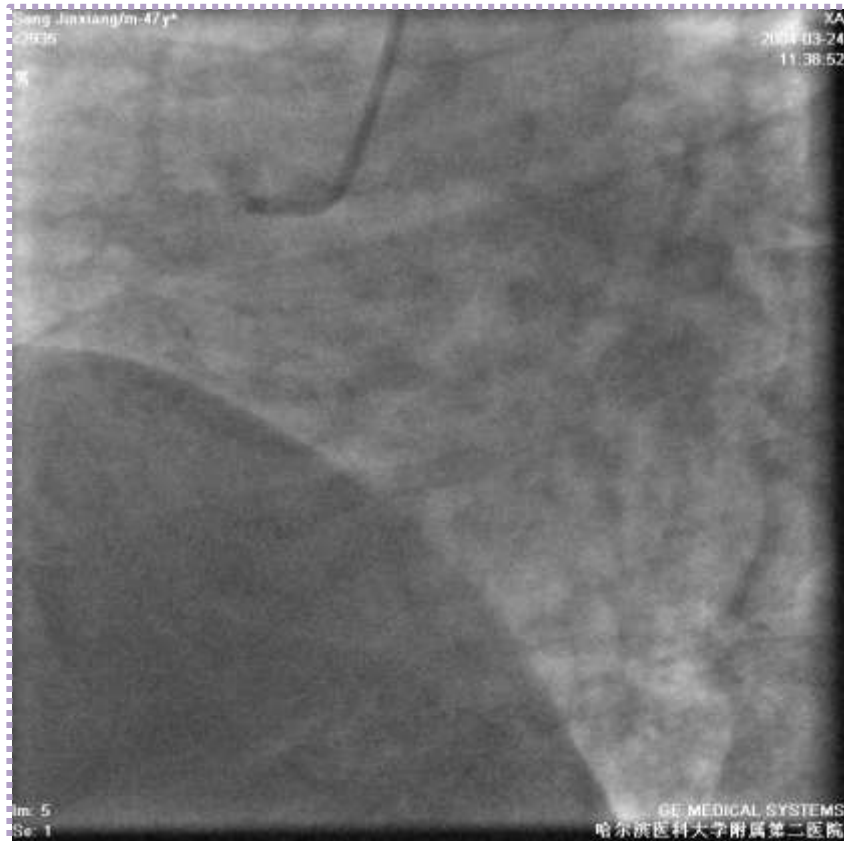


General Information

- **56-years old male.**
- **Chest pain for 9 years, accompanied with dyspnea for 1 month.**
- **Myocardial infarction history 9 years.**
- **Hypertension history more than 10 years with highest blood pressure 160/110 mmHg, well controlled.**
- **Type 2 DM, oral medication, not well controlled.**

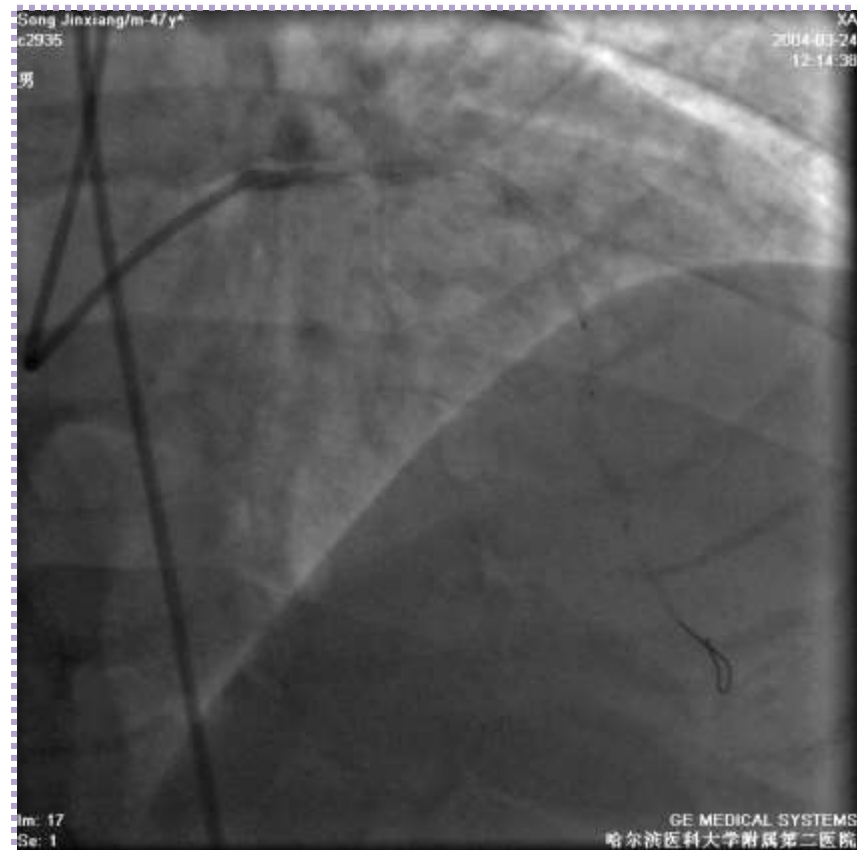
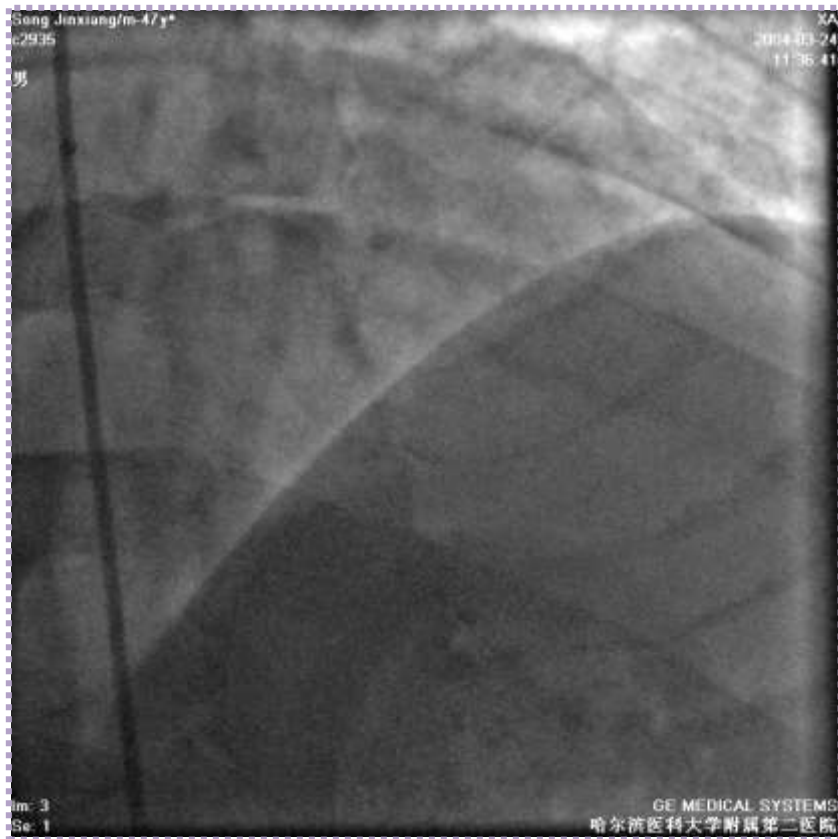
Previous PCI

Date	Target coronary artery	Stent number
2004-3-24	LAD+RCA	LAD 2 RCA 1



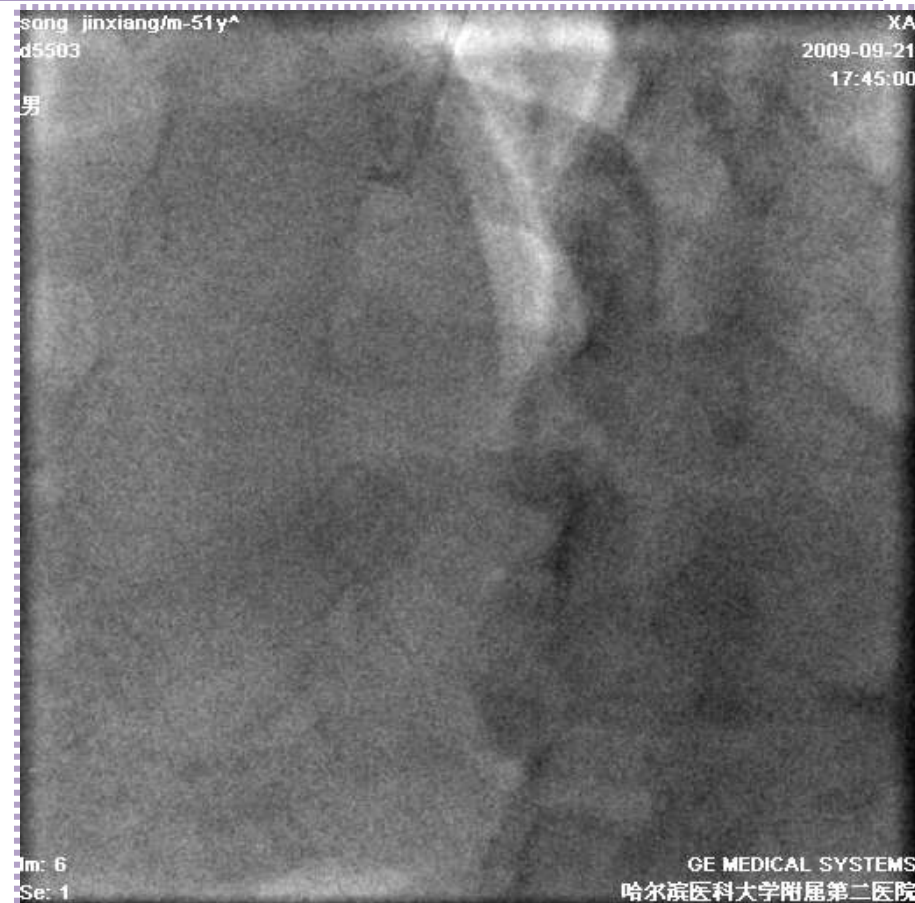
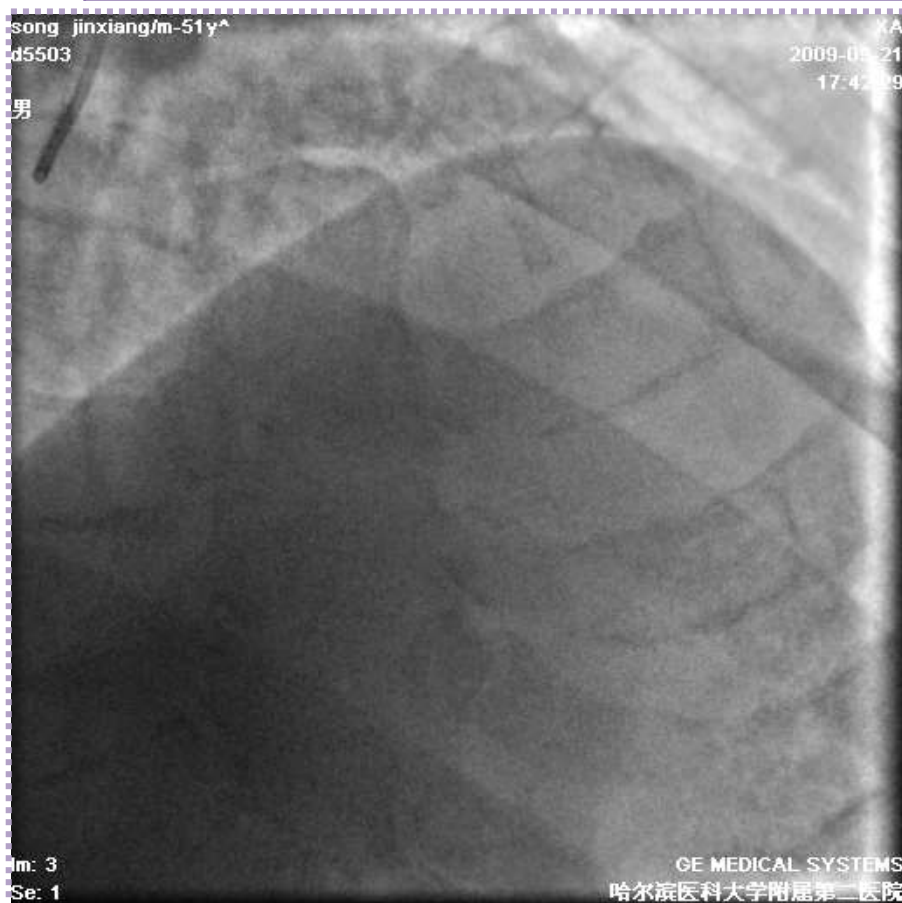
Previous PCI

Date	Target coronary artery	Stent number
2004-3-24	LAD+RCA	LAD 2 RCA 1



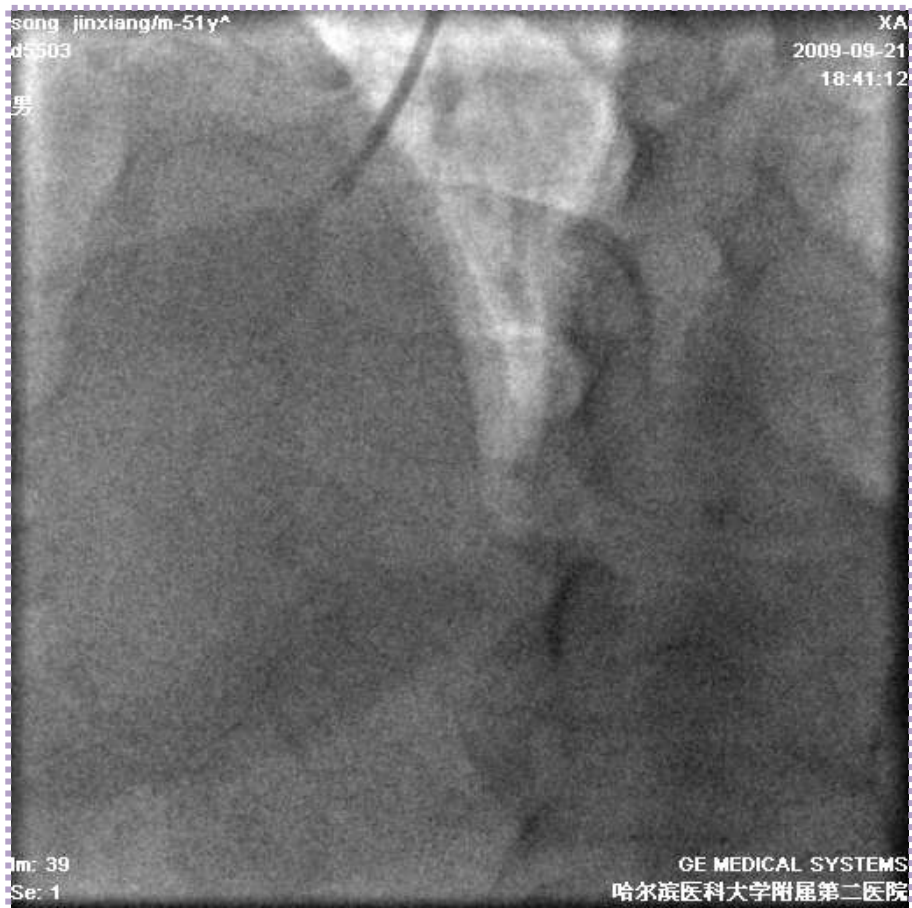
Previous PCI

Date	Target coronary artery	Stent number
2009-9-21	RCA	1



Previous PCI

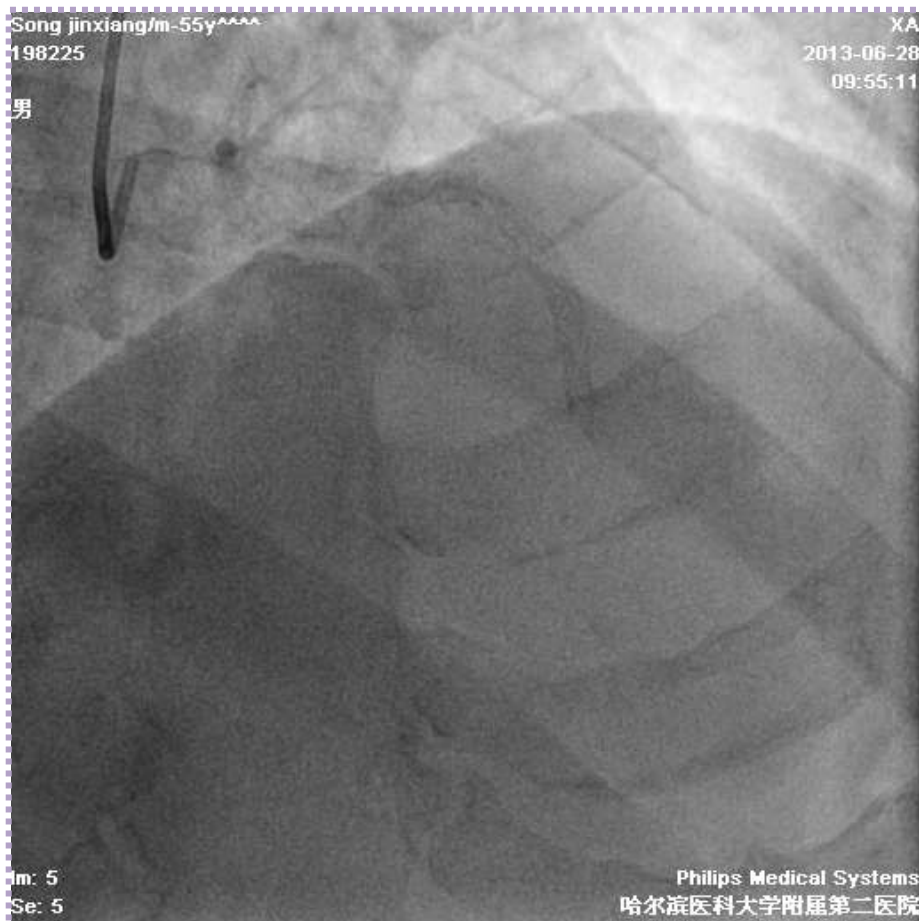
Date	Target coronary artery	Stent number
2009-9-21	RCA	1



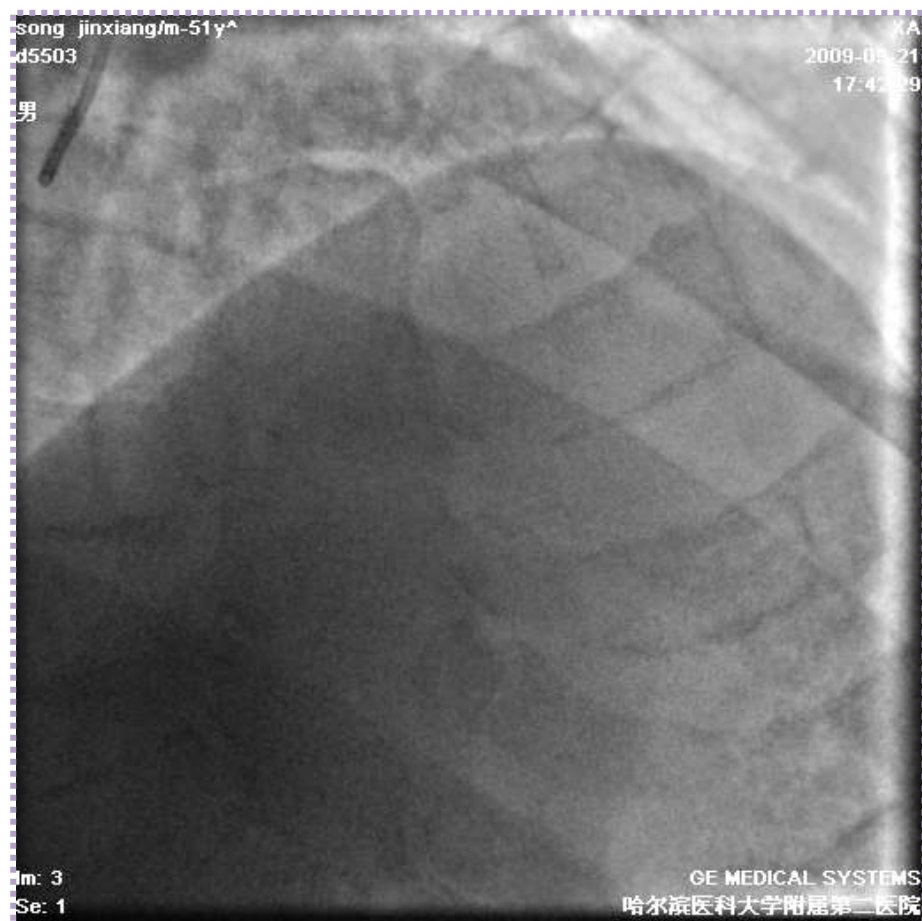
2013 Laboratory Test

	Result
Blood Lipid	TC: 4.35 mmol/L TG: 1.36 mmol/L HDL: 1.61 mmol/L LDL: 2.31 mmol/L
Hs-CRP	0.31mg/L
FPG	7.6 mmol/L
TnI	0.05 µg/L
CK-MB	(-)
UCG	LVED: 43.1mm,EF: 61%

CAG (LCA)

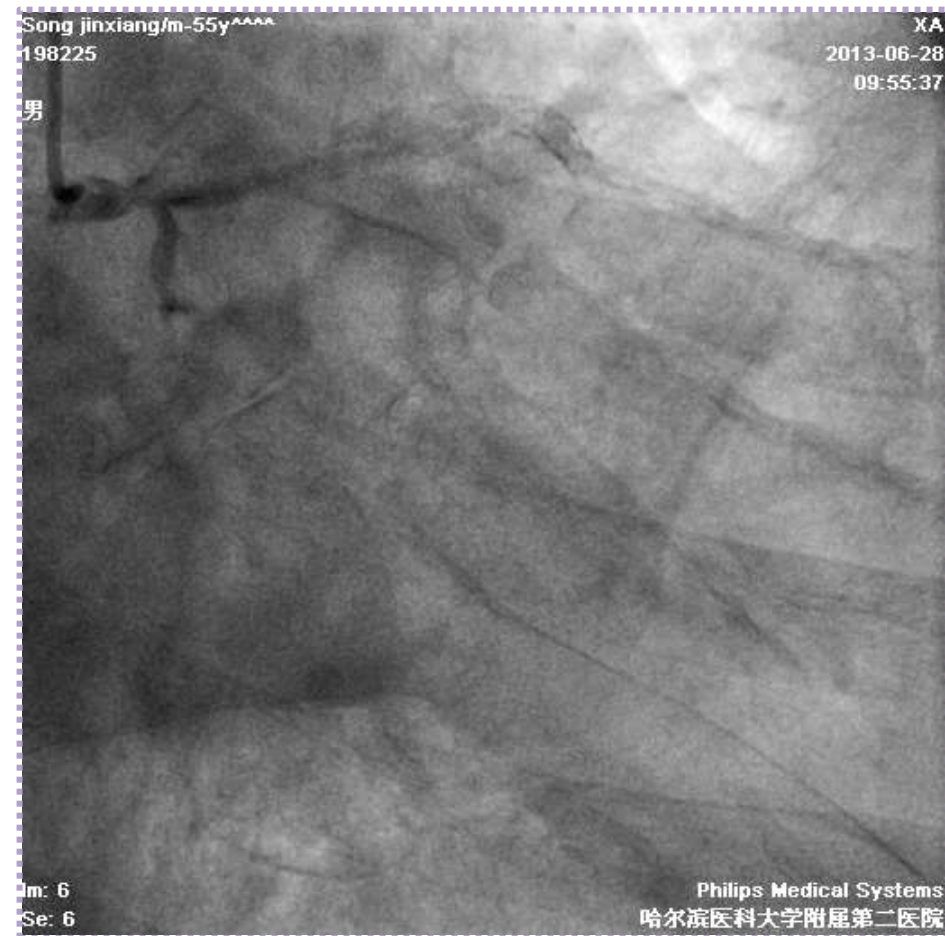


2013-6

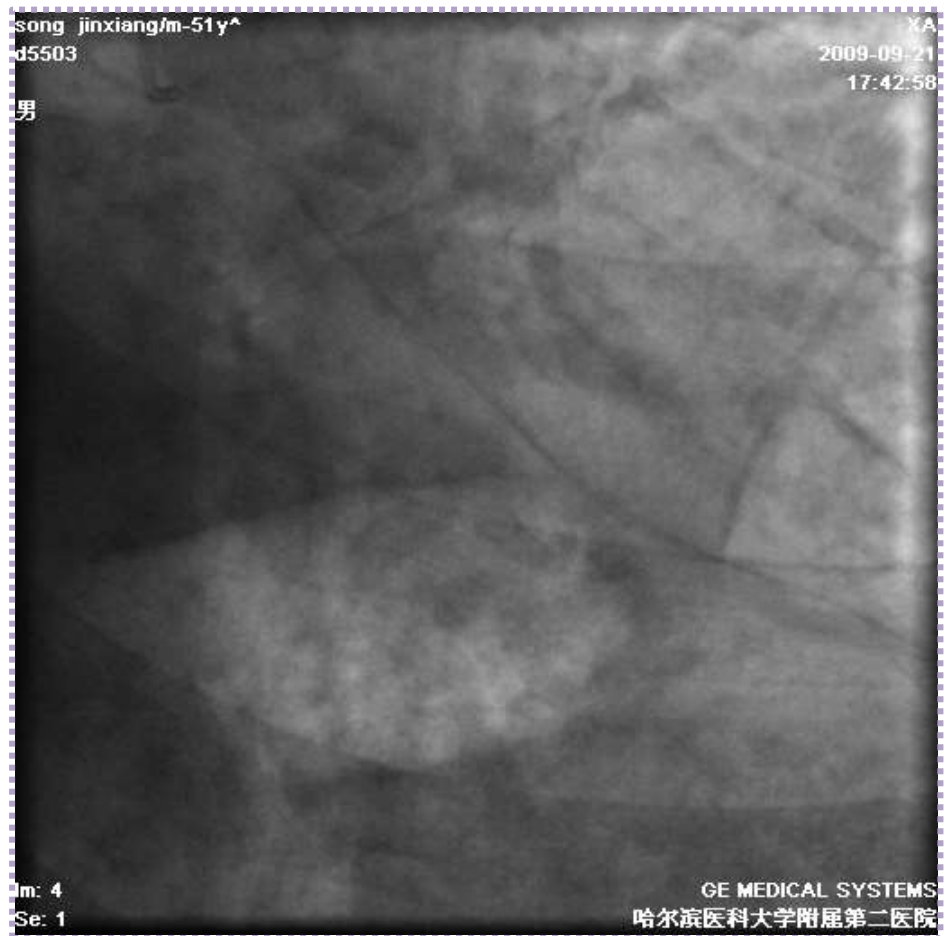


2009-9

CAG (LCA)

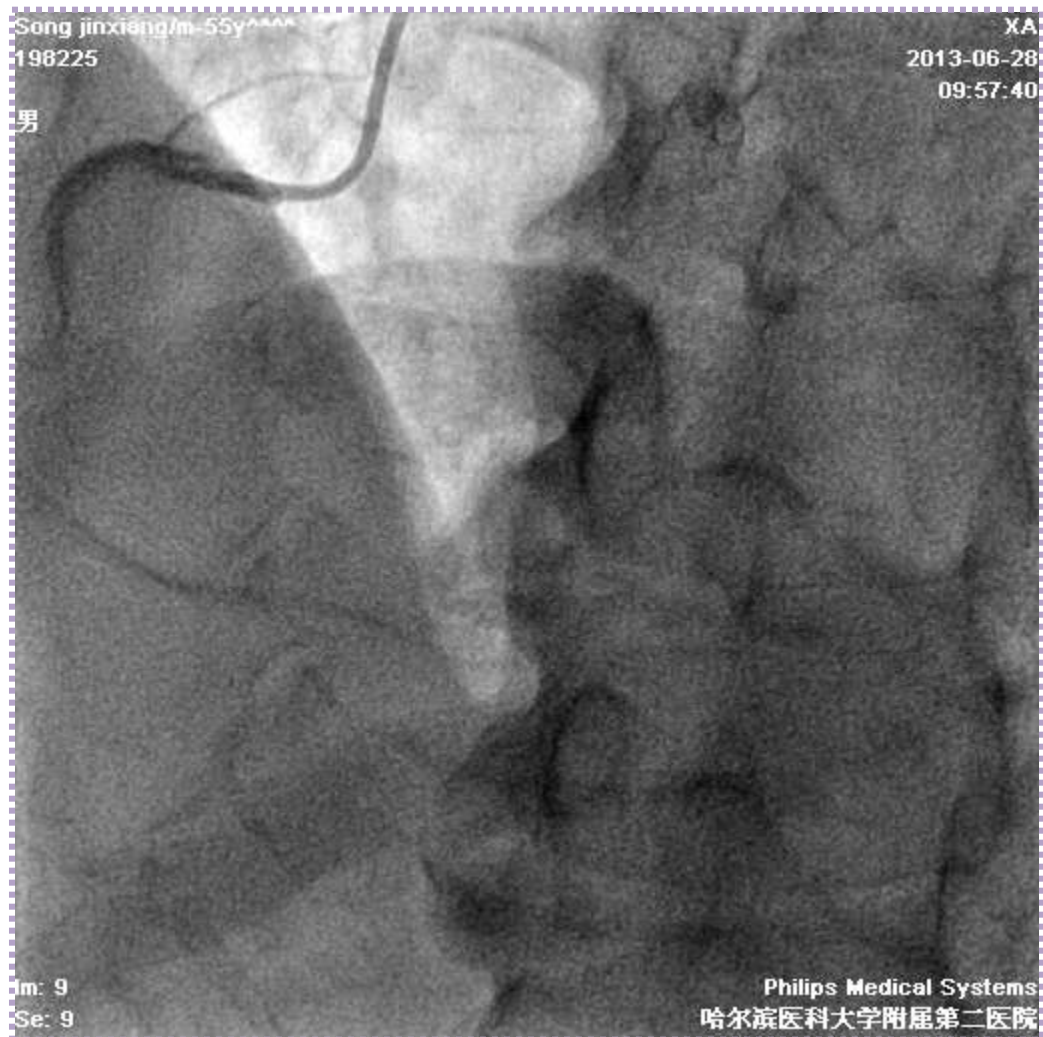


2013-6



2009-9

CAG (RCA)



Strategy

CABG or PCI?

Refused

One or Two Stents?

One stent cross over

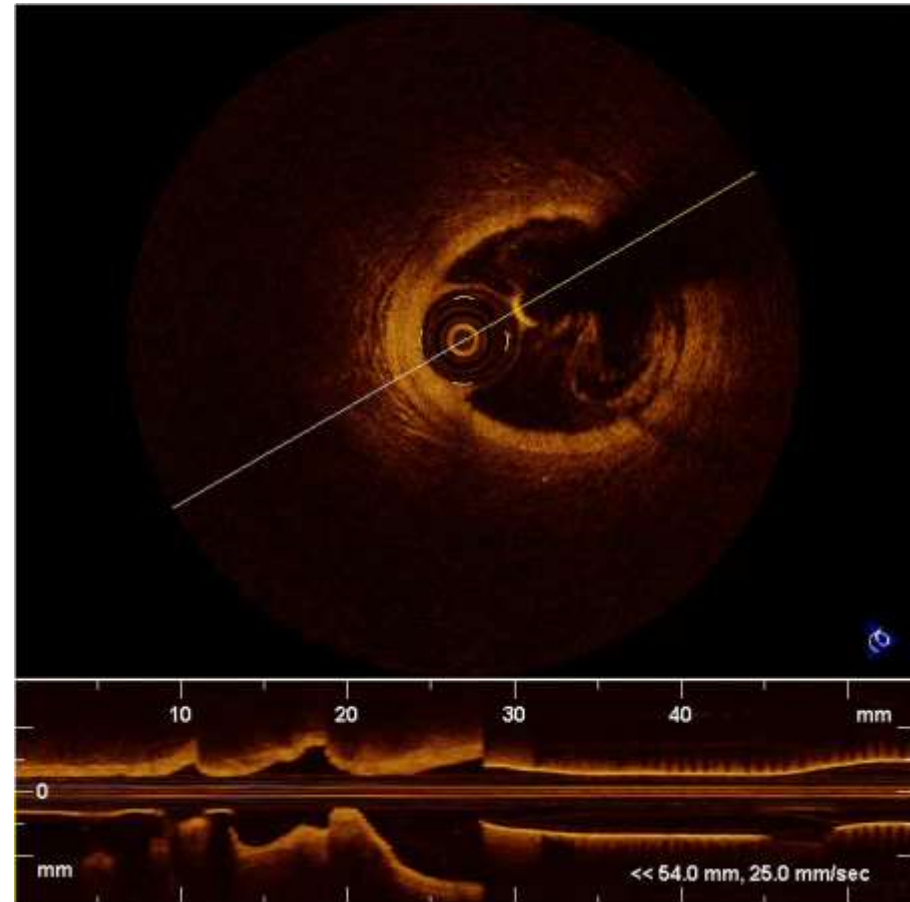
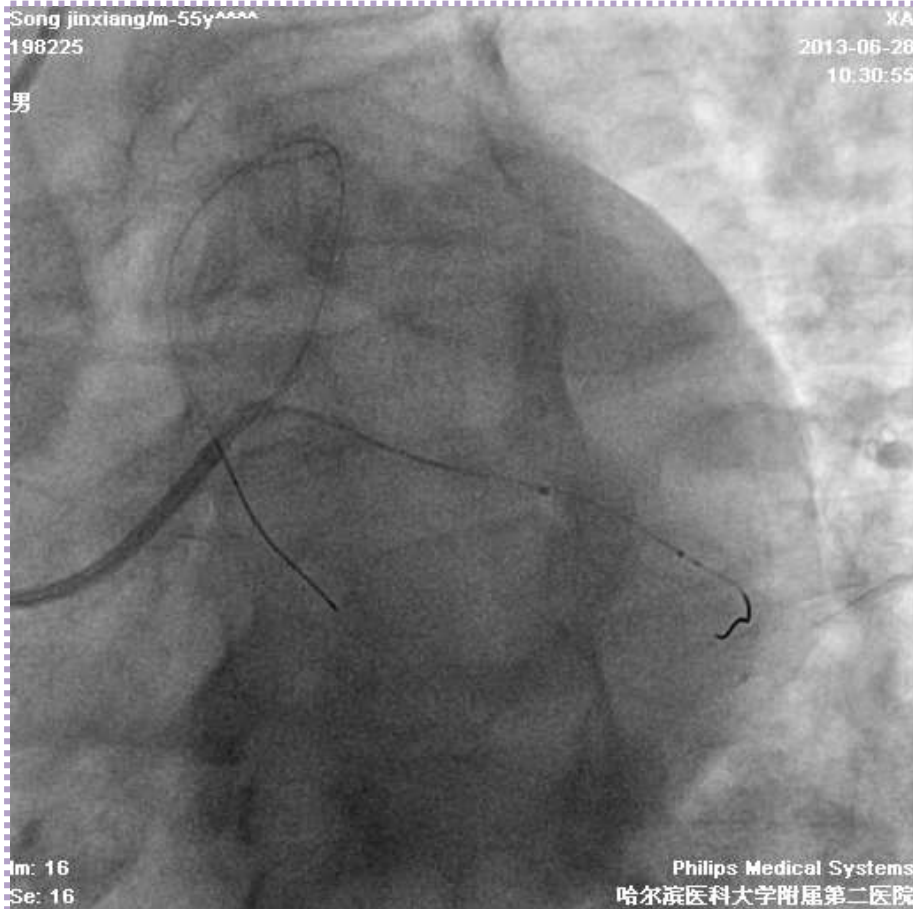


FD-OCT imaging



Two stent implantation

PCI (OCT imaging)



**2.5*15 mm balloon pre-dilatation
of LAD to LM**

Strategy

What kind of double stents technique?

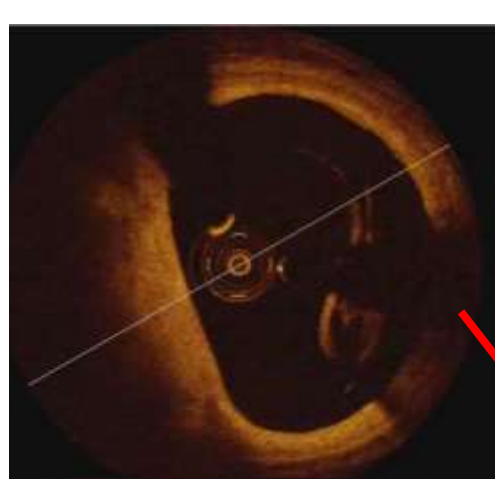
Crush



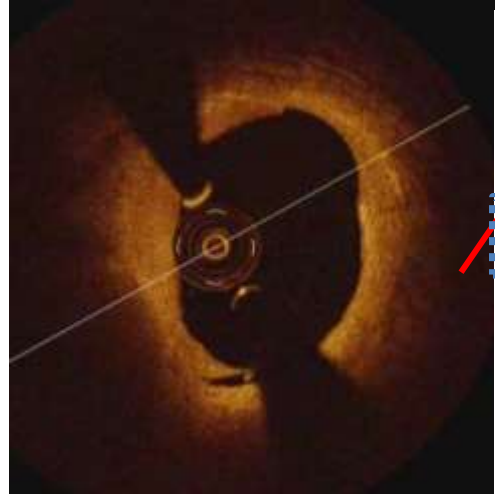
FD-OCT imaging



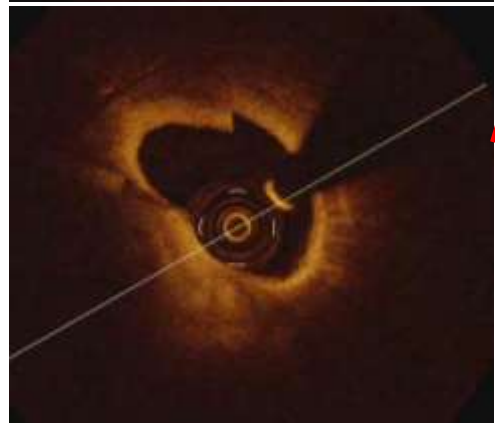
Cullote



Proximal LM

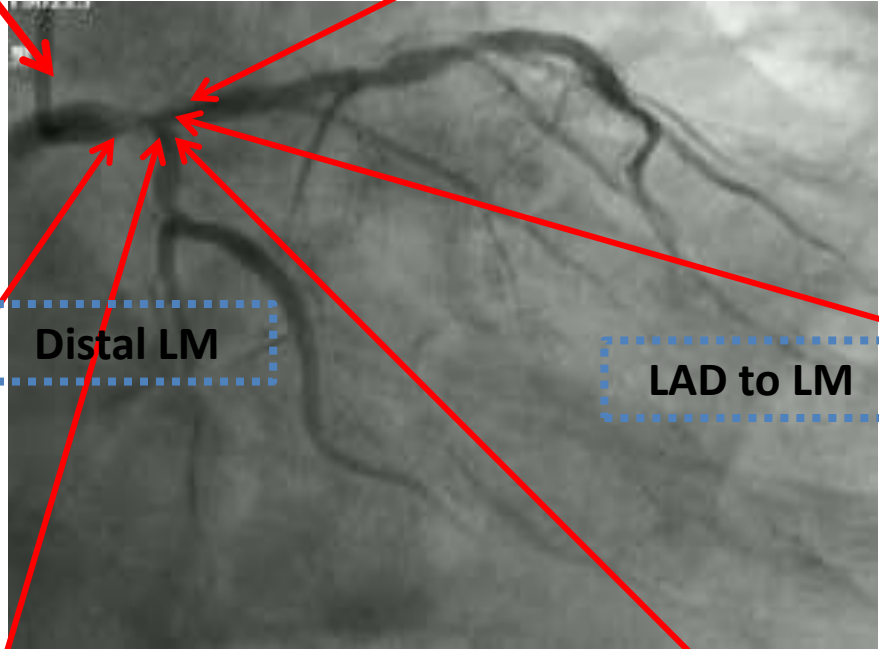
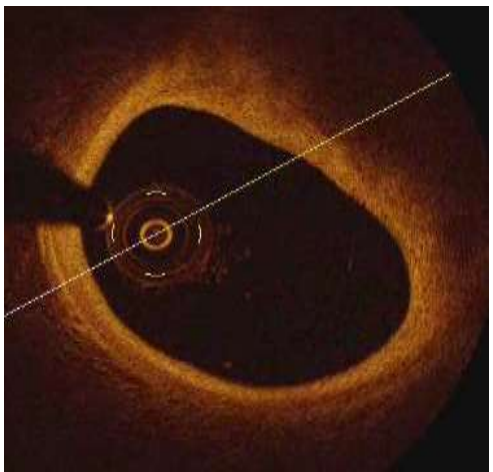


Distal LM

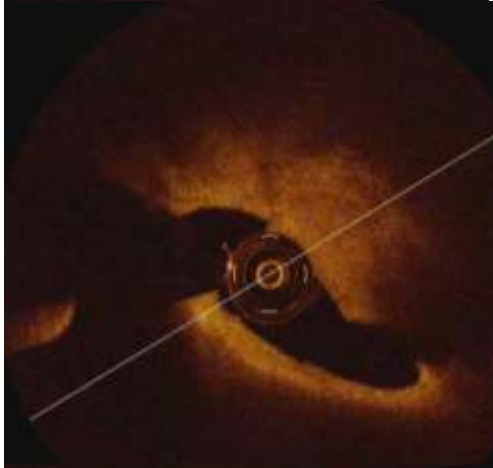


Proximal LCX

Proximal LAD

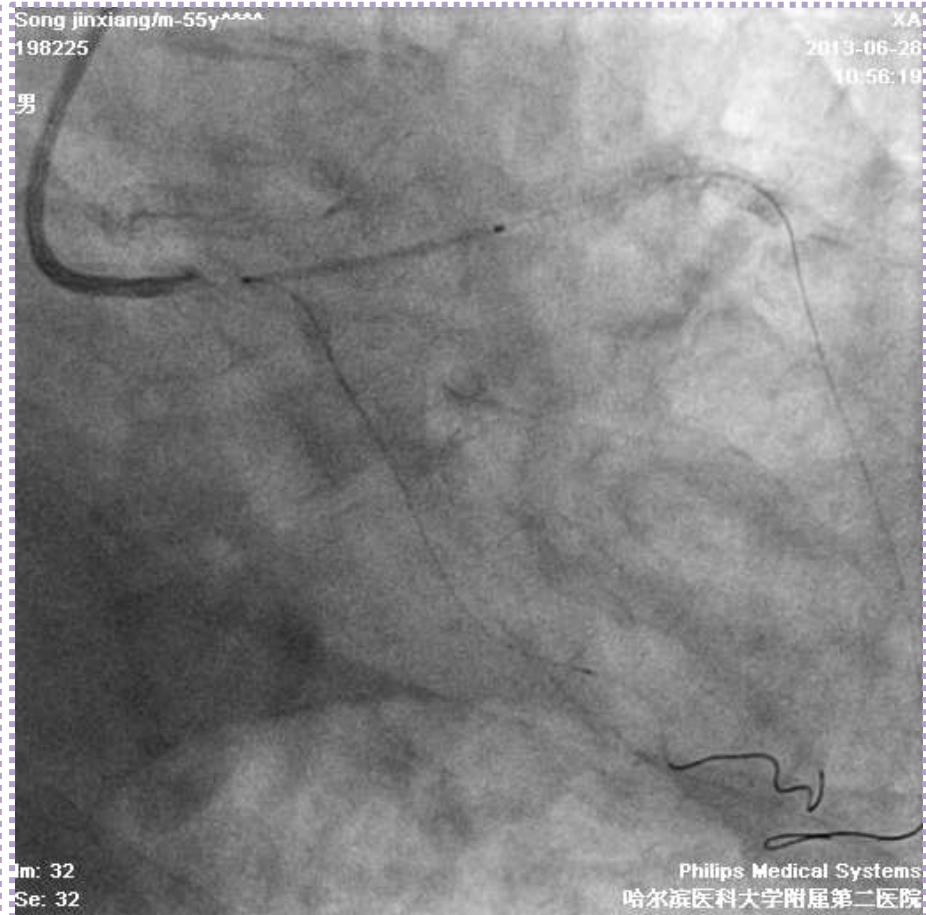
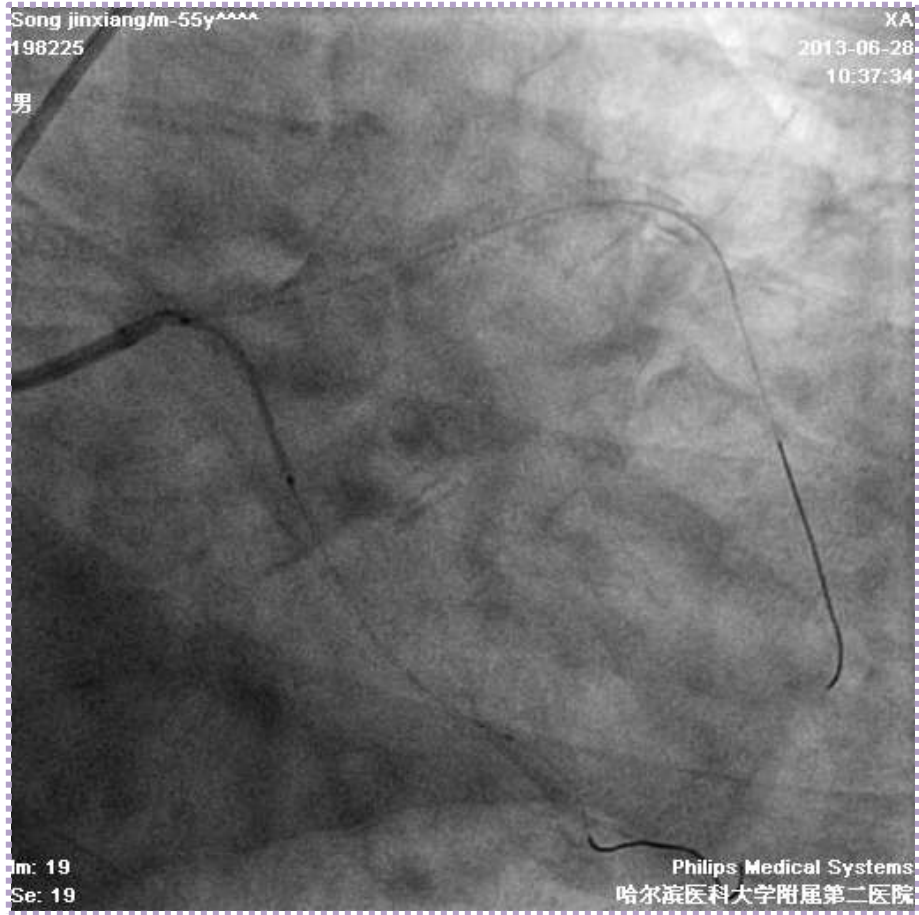


LAD to LM



LCX to LM

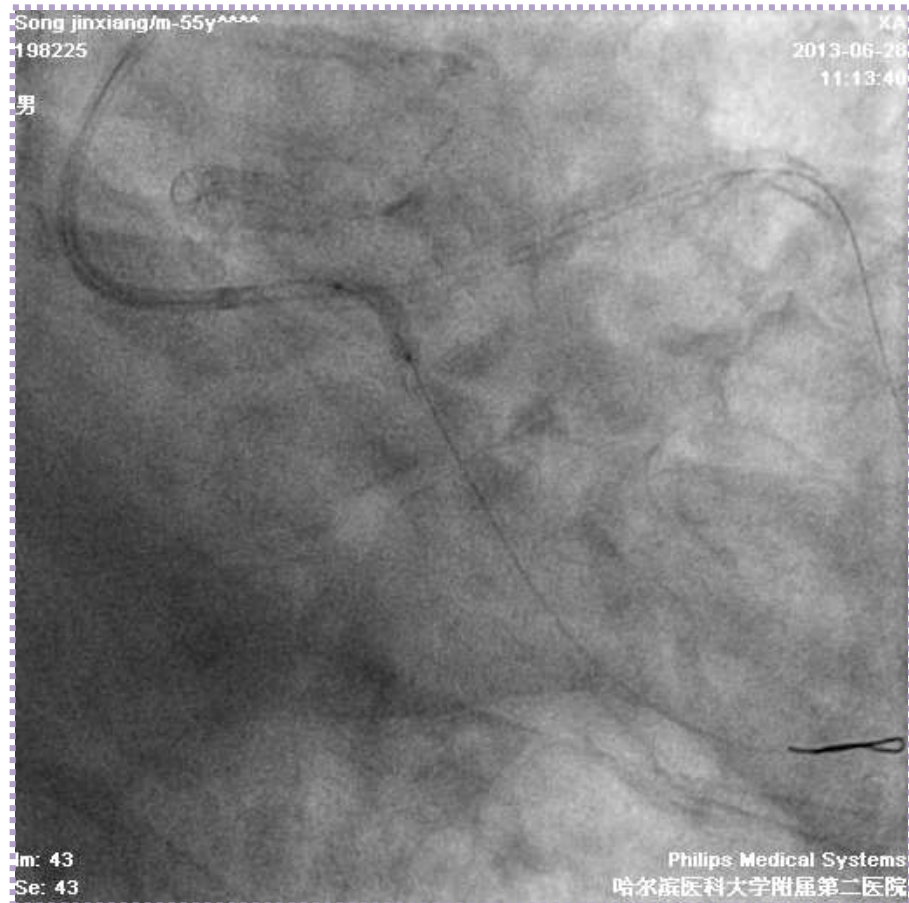
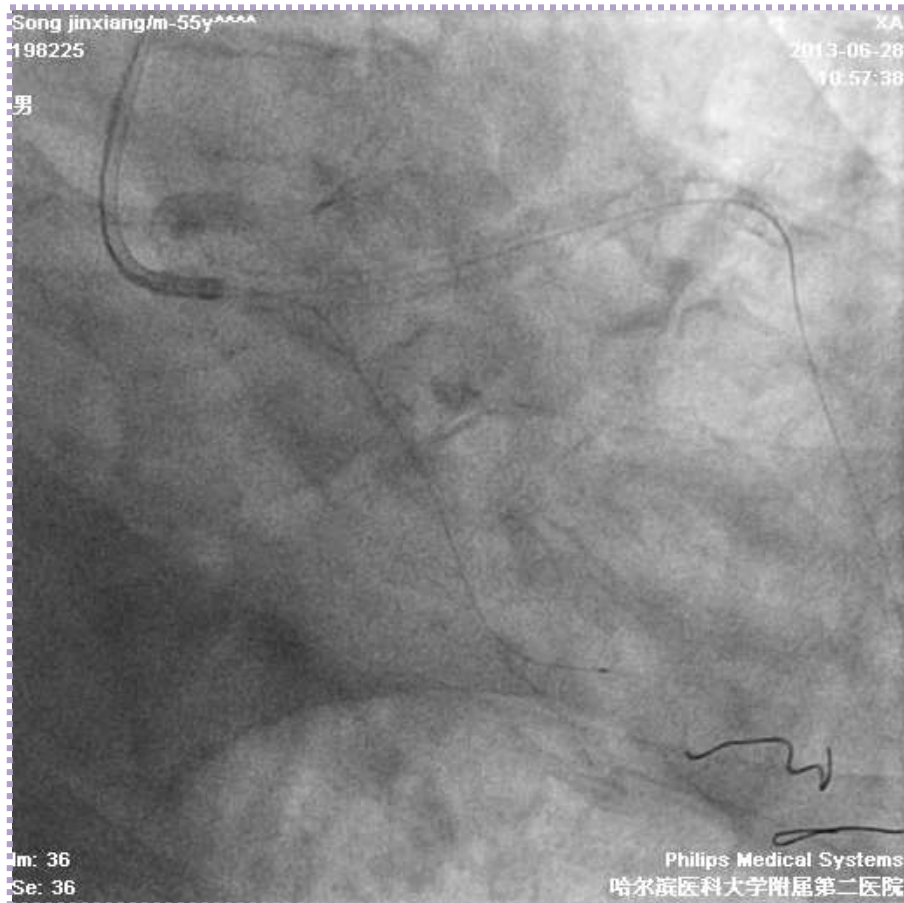
PCI



Resolute 2.75*24mm

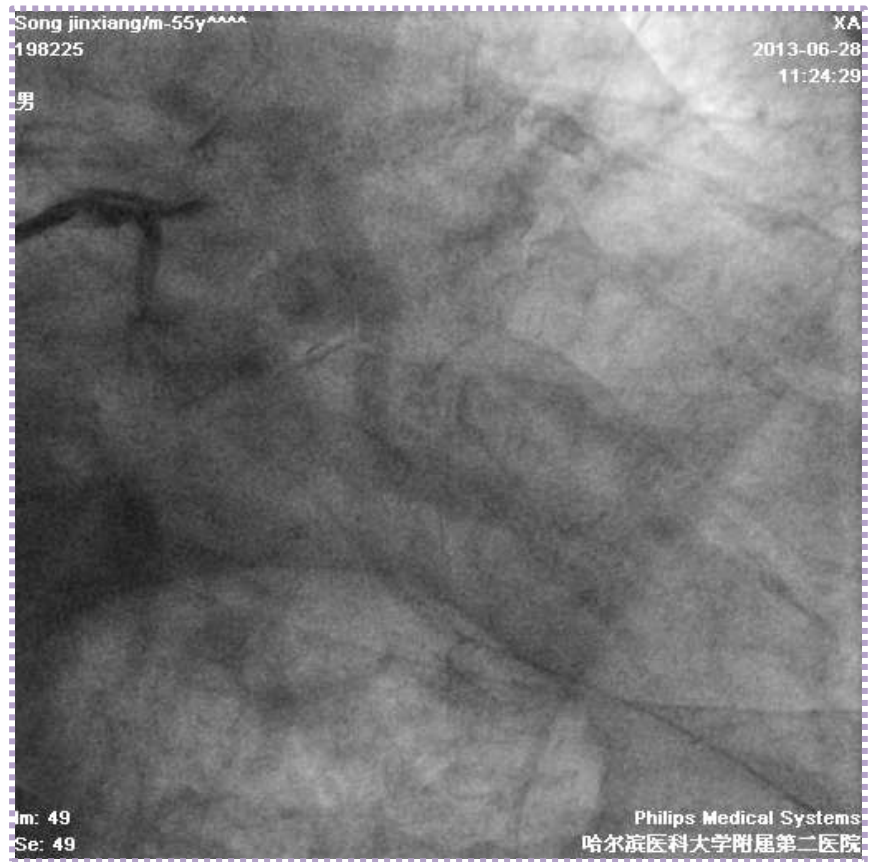
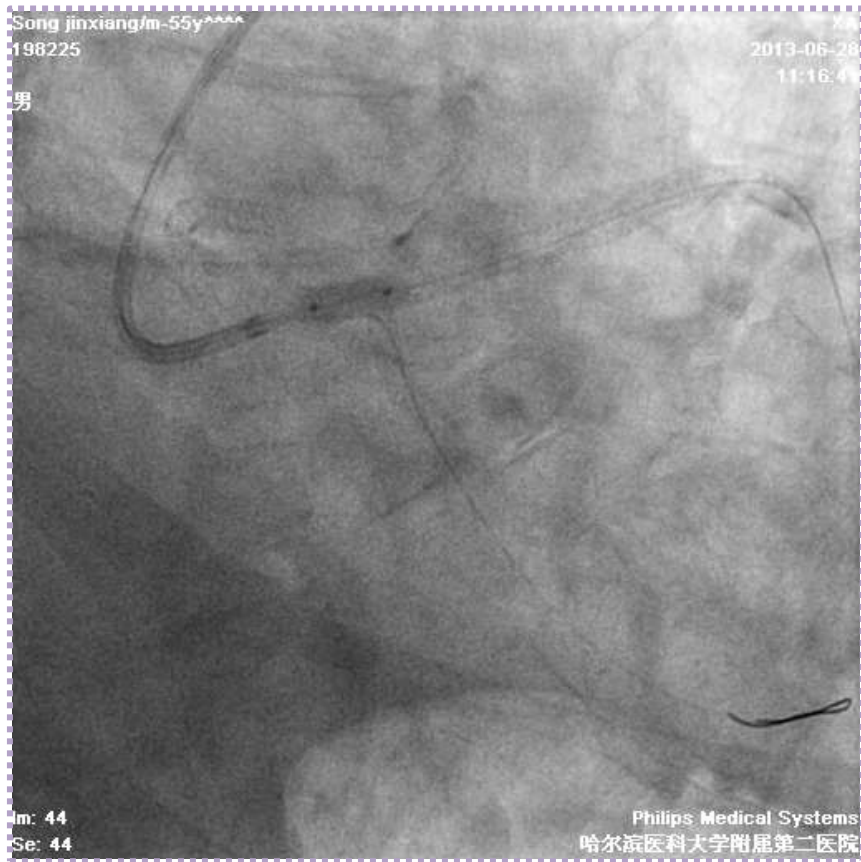
Resolute 3.5*24mm

PCI



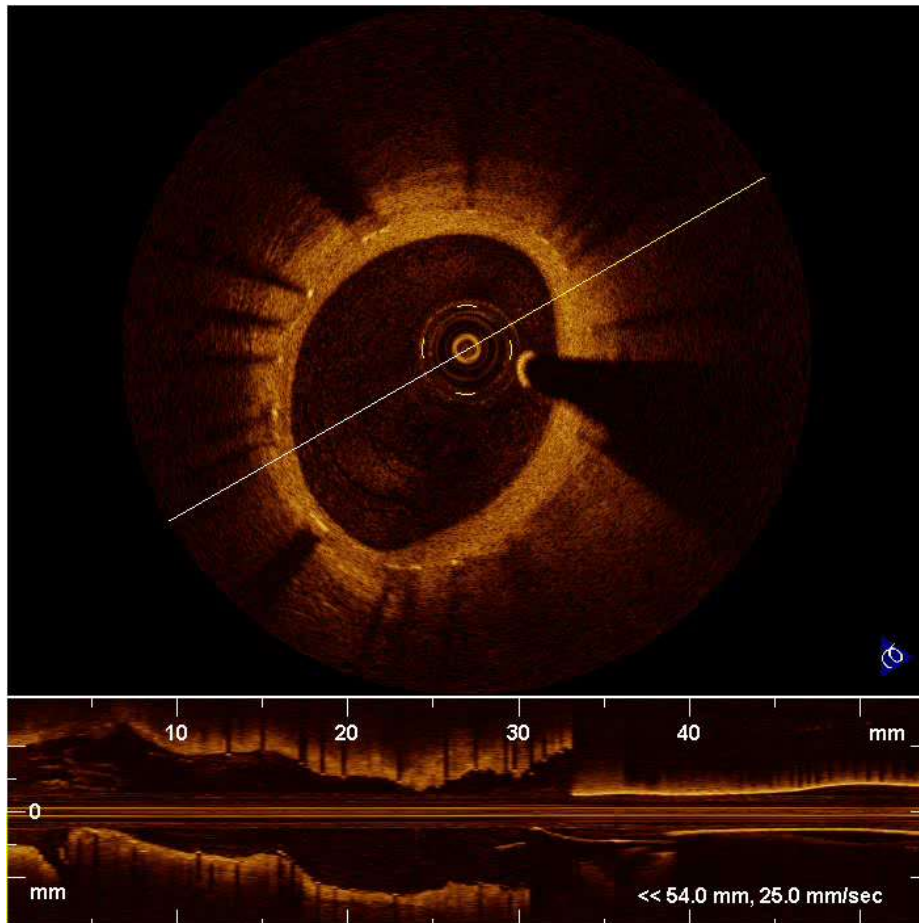
Balloon 2.75*15mm, 18atm

PCI

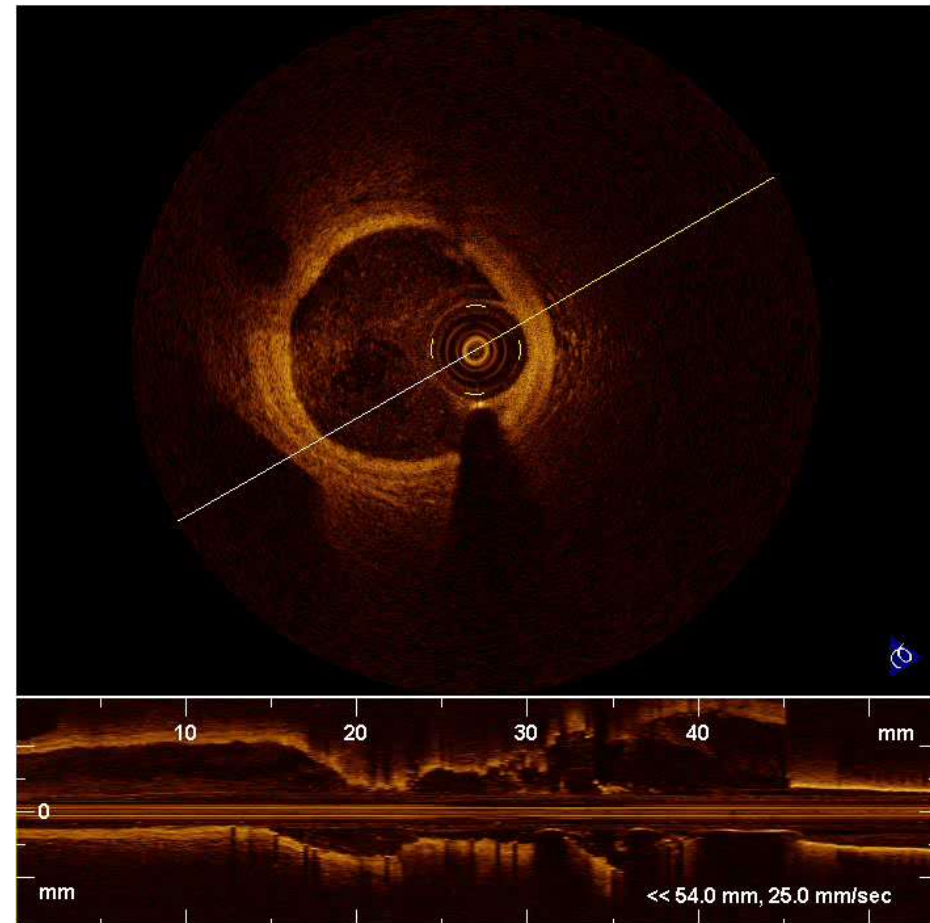


Post-dilatation 4.0*8mm, 12-22atm

Stent apposition

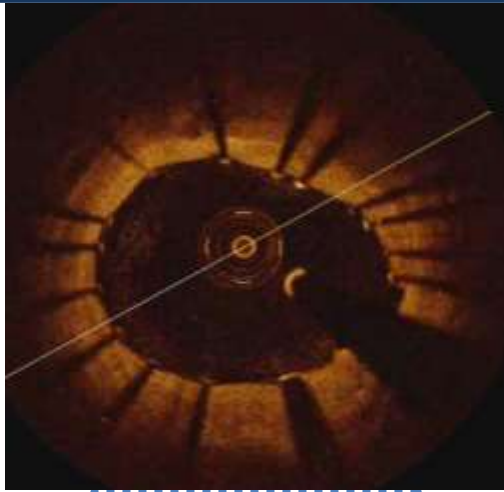


LAD to LM

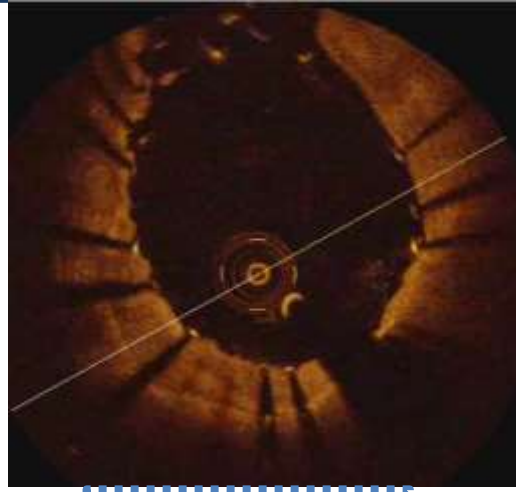


LCX to LM

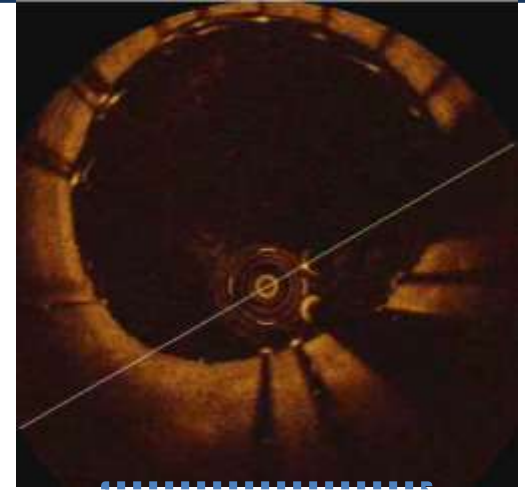
OCT images around bifurcation



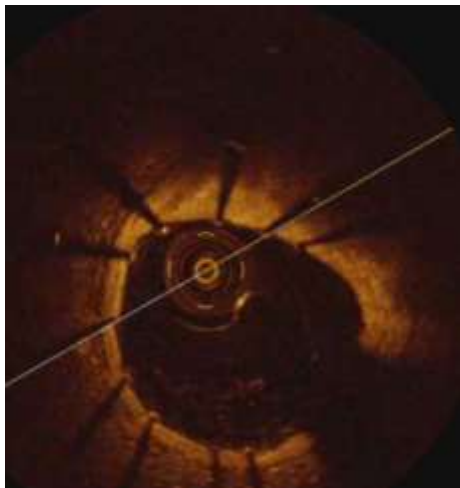
Proximal LAD



LAD to LM



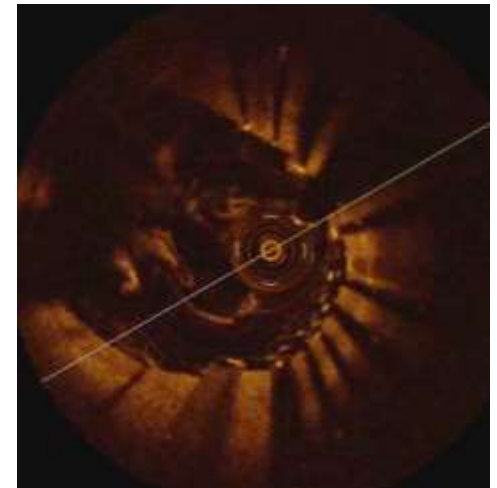
LM



Proximal LCX

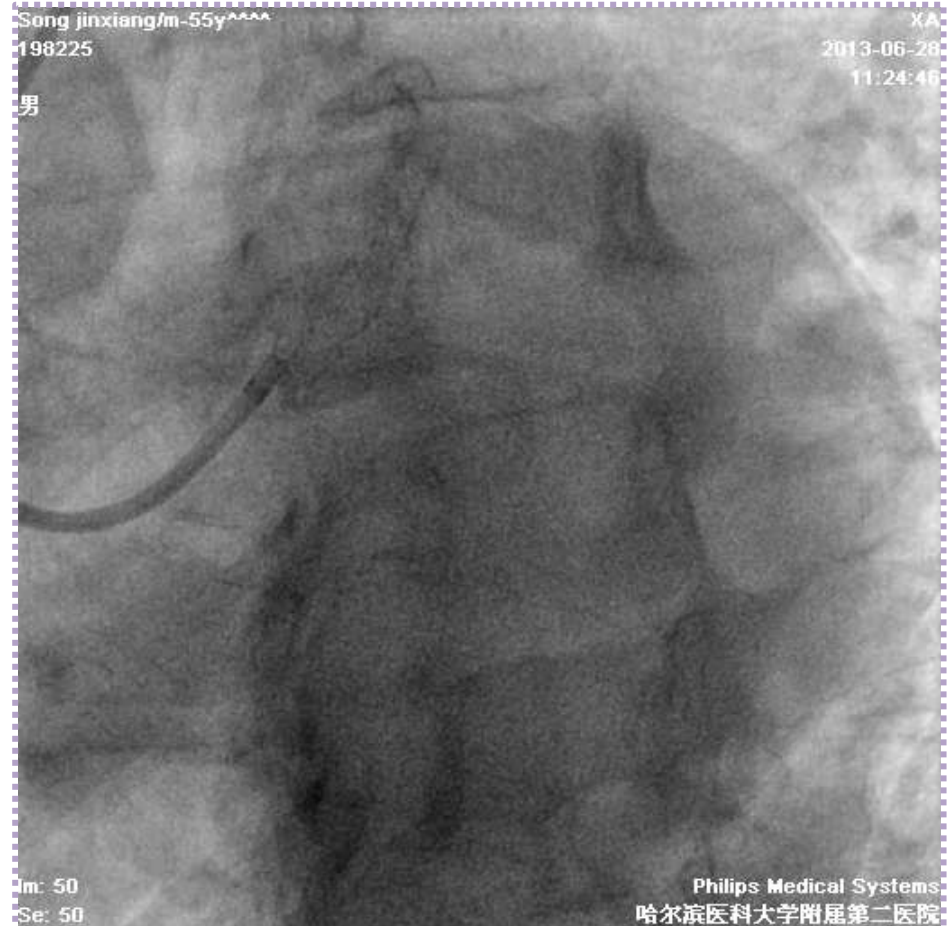


Root of LCX

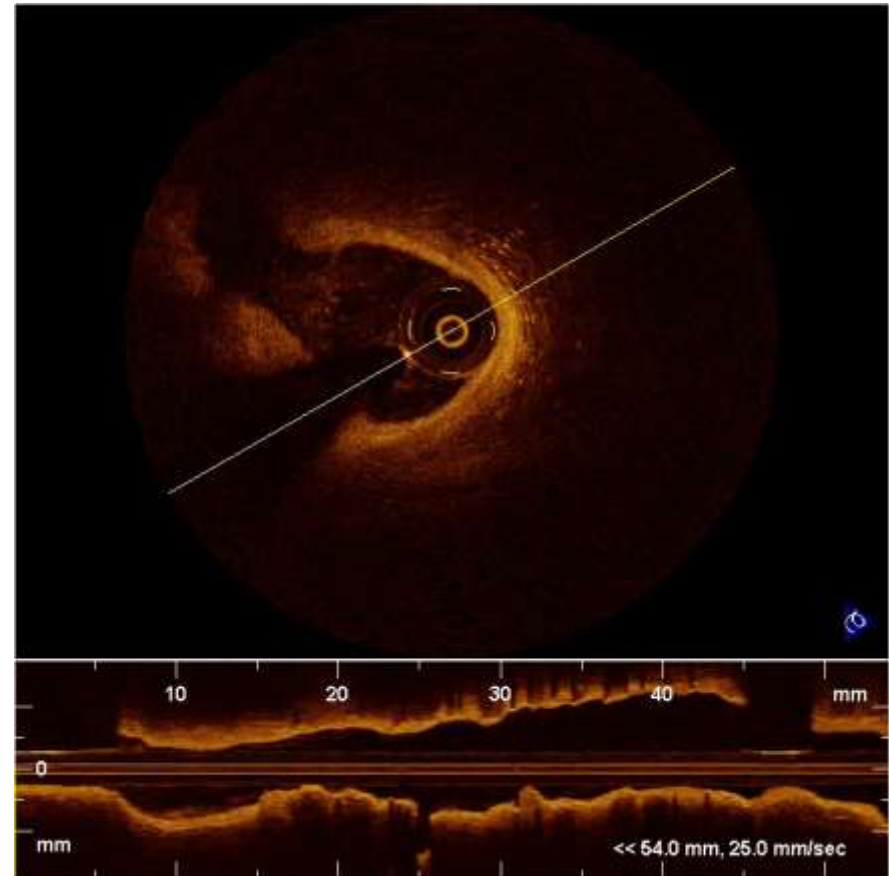
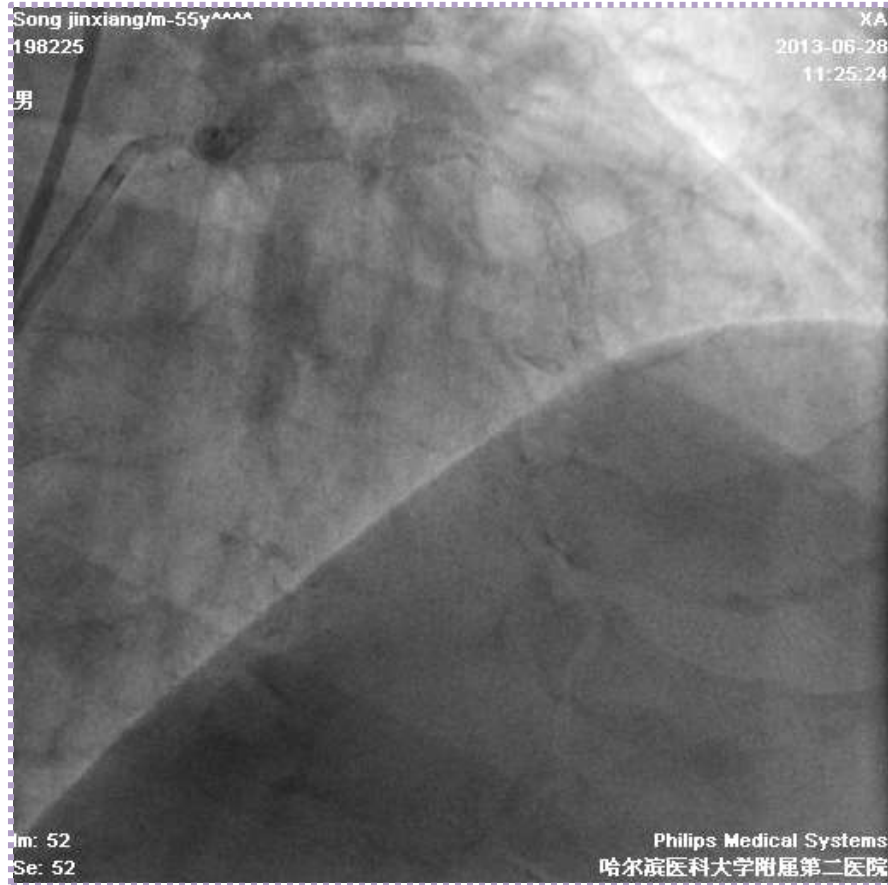


LCX to LM

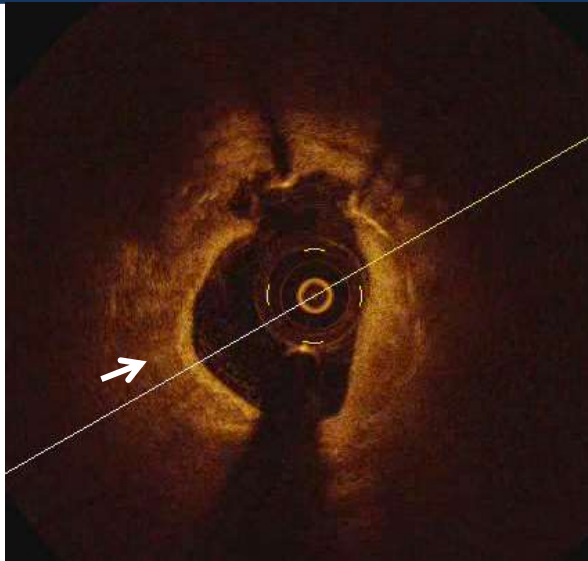
PCI Result



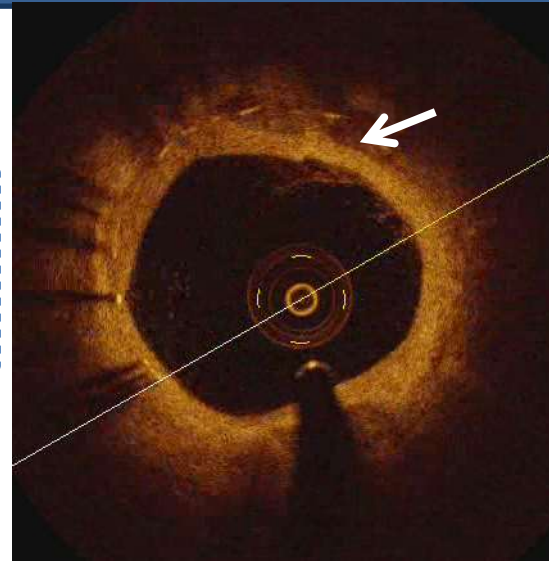
What happened in re-stenosis?



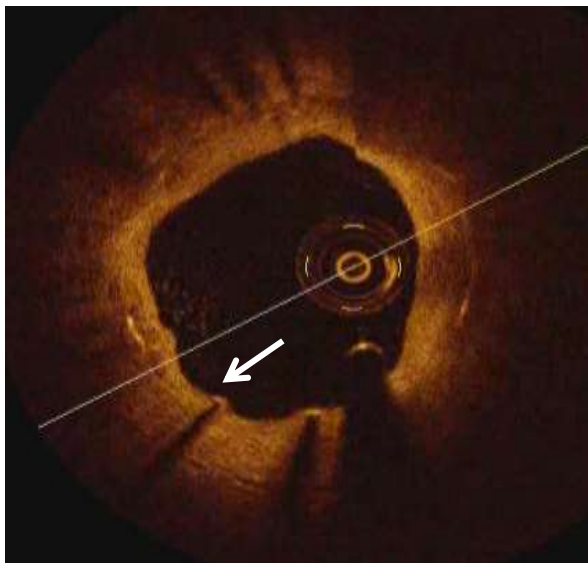
OCT images for stent neo-intimal



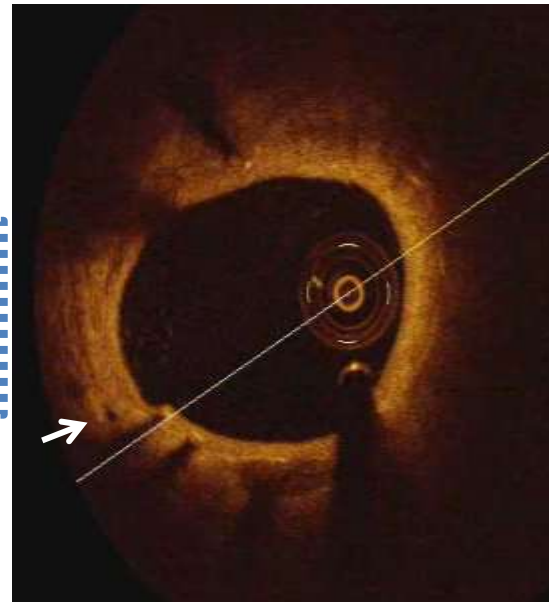
Restenosis
lipid
deposition



neo-intimal

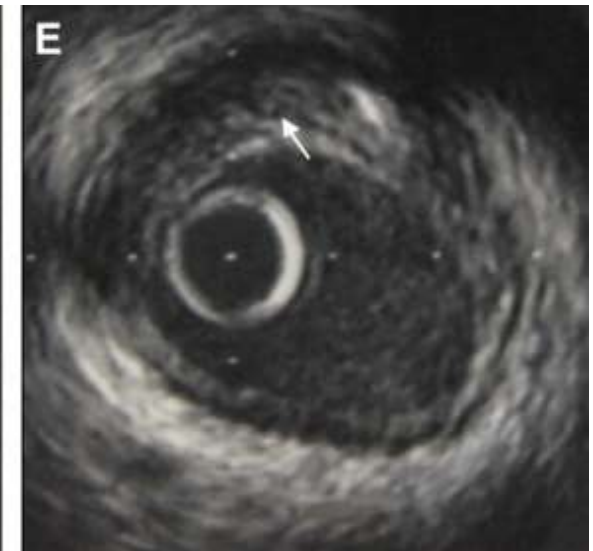
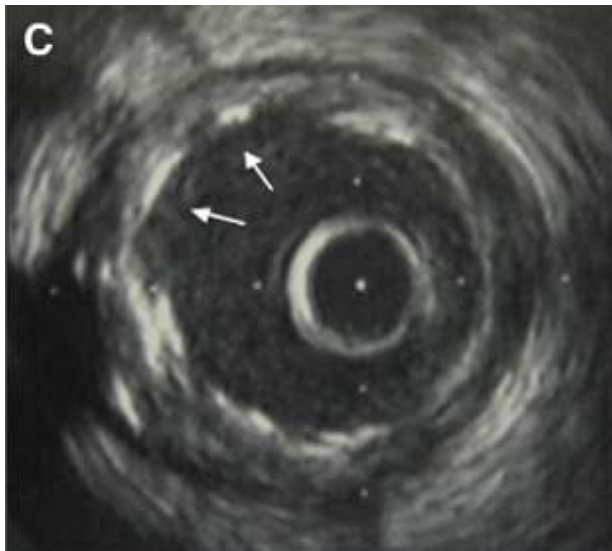
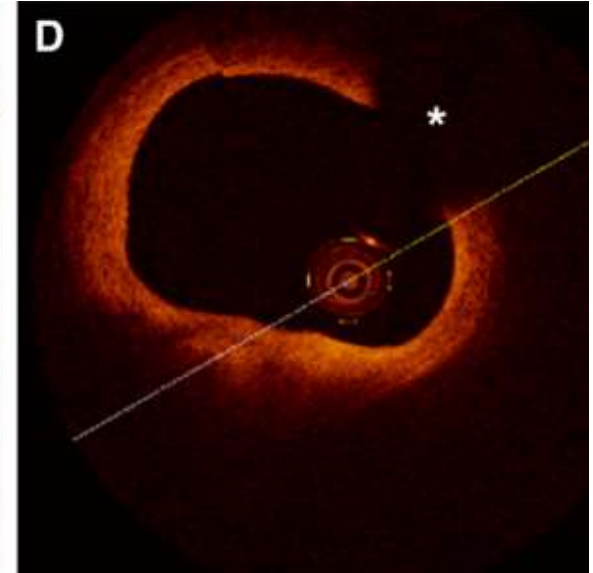
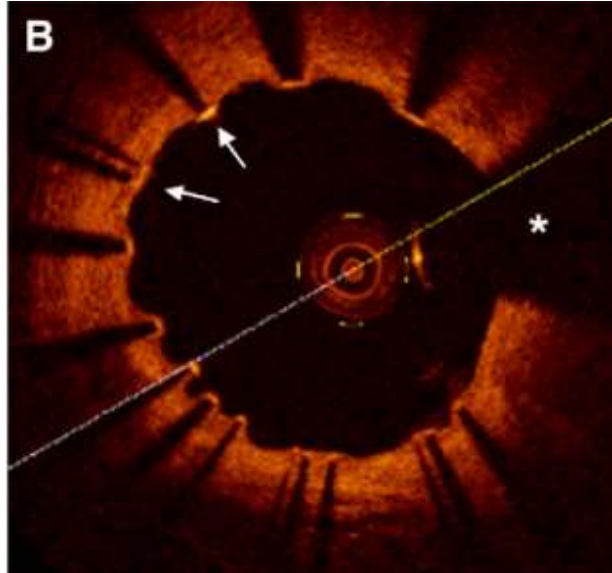
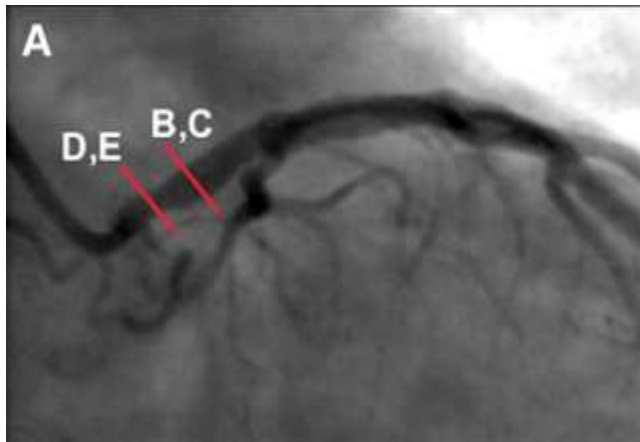


Uncover and
protruding
stent struts



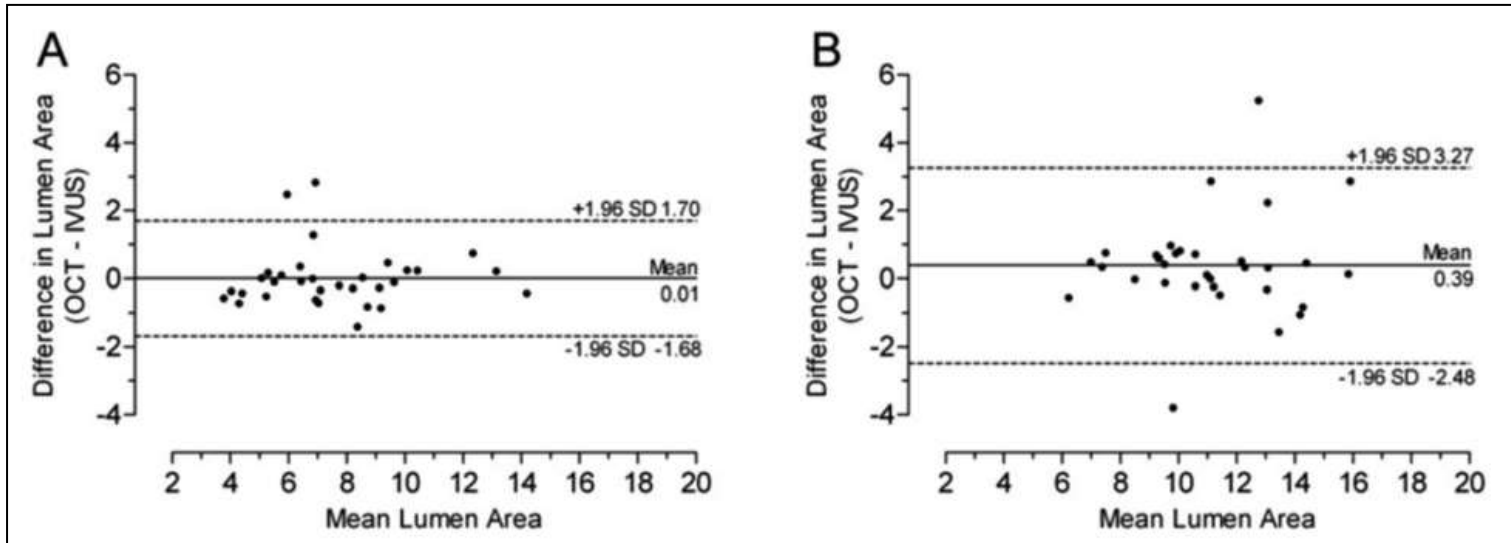
Micro-
channel in
neo-intimal

FD-OCT in LM distal bifurcation



Without balloon occlusion and with 25 mm/s scanning speed, it is possible to using FD-OCT in LM distal bifurcation lesion.

FD-OCT in LM



Pre-PCI MSA

Post-PCI LA

FD-OCT indexes are highly correlated with IVUS parameters.

Thank you.



哈尔滨医科大学附属二院

心血管病医院心内科

Harbin Medical University The 2nd Affiliated Hospital