

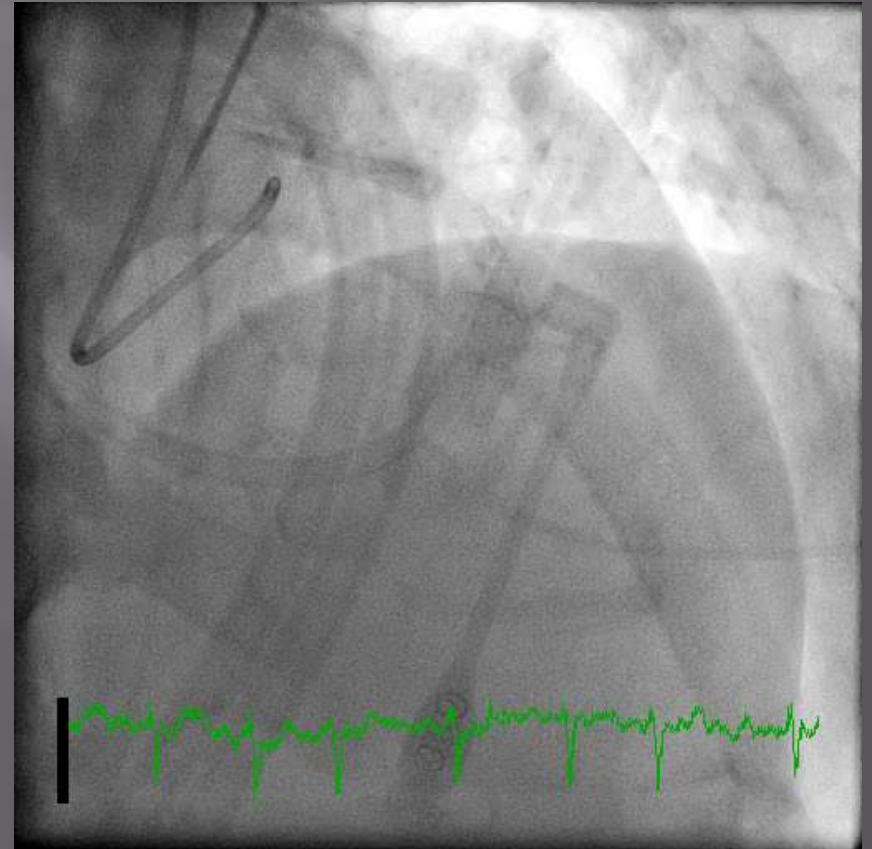
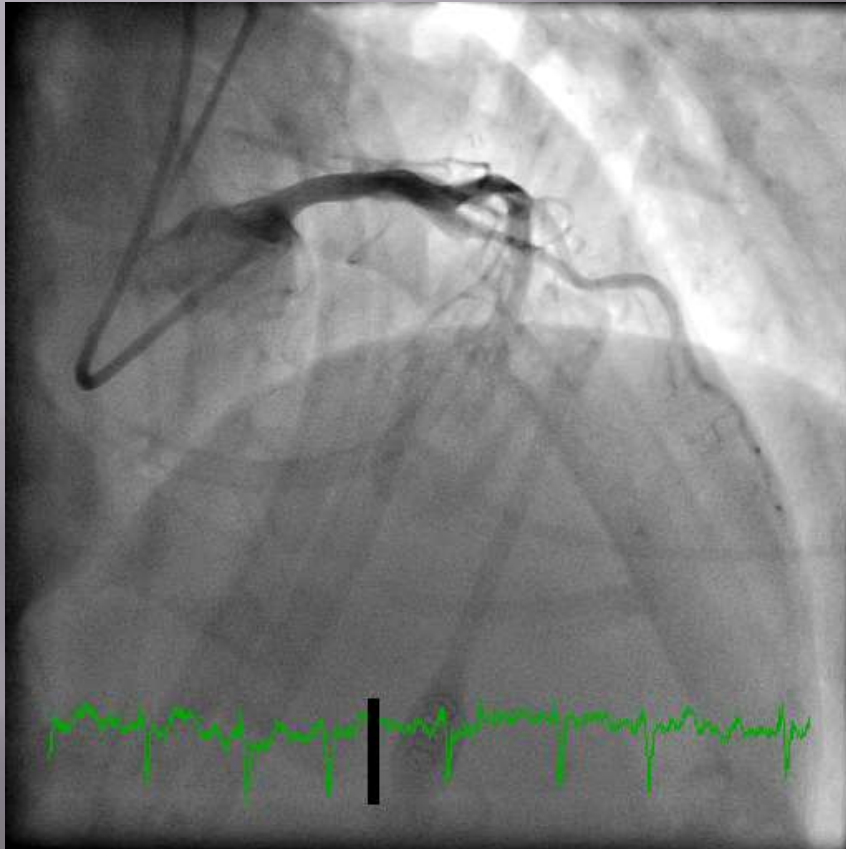
OFDI/OCT GUIDED INTERVENTION FOR LATE STENT THROMBOSIS

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Hong Kong

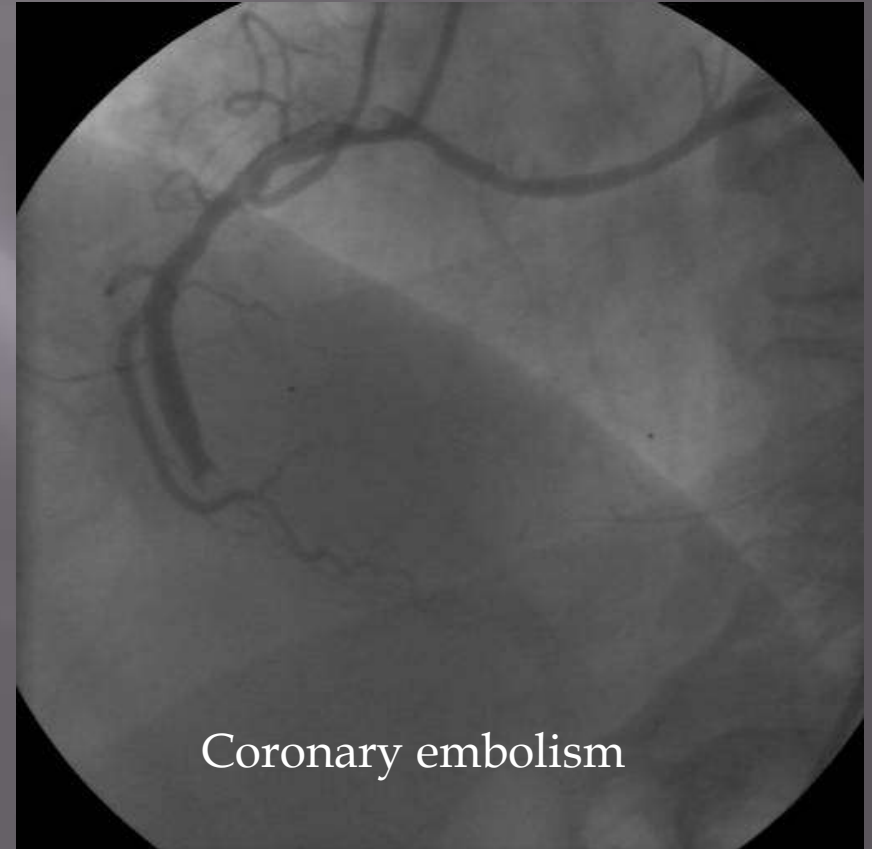
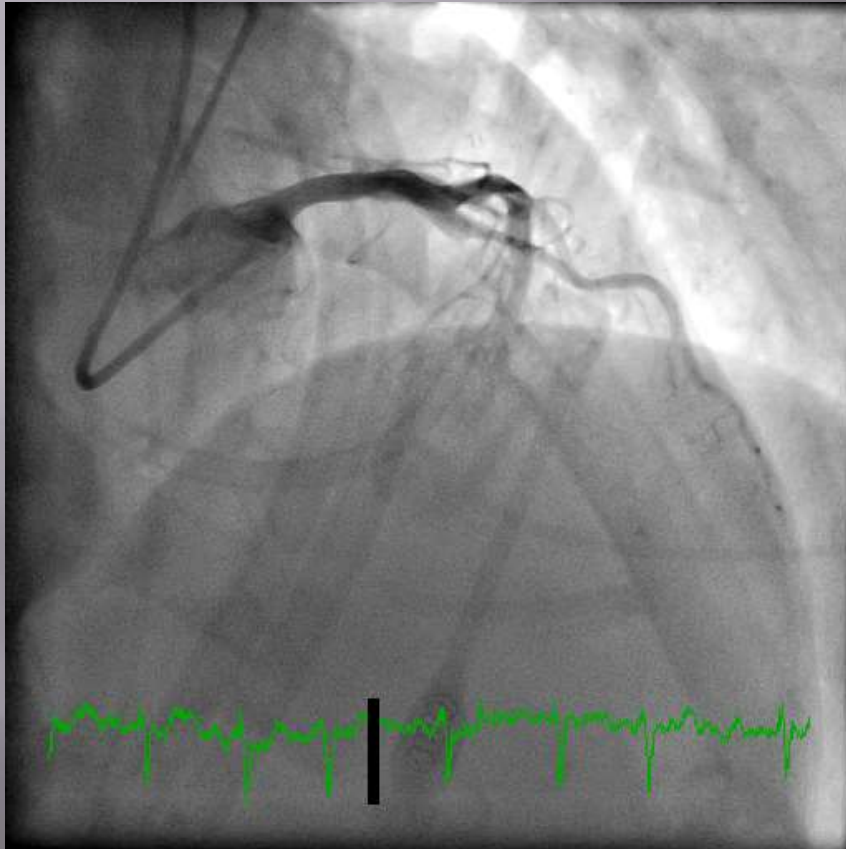
Clinical Summary

- ▣ Male/76
- ▣ AF, CHD, Dyslipidemia on sotalol, warfarin, nitrate, statin
- ▣ CTCA 60% mid LAD stenosis
- ▣ Sept 2013, DES 3.0 implanted in LAD at another hospital
- ▣ Clopidogrel + Warfarin for 6 months and clopidogrel stopped in Feb 2014
- ▣ Haematuria admitted to hospital at the end of Feb 2014, INR 5.3
- ▣ Warfarin stopped, no aspirin
- ▣ Developed VT and cardiac arrest
- ▣ Emergency PCI

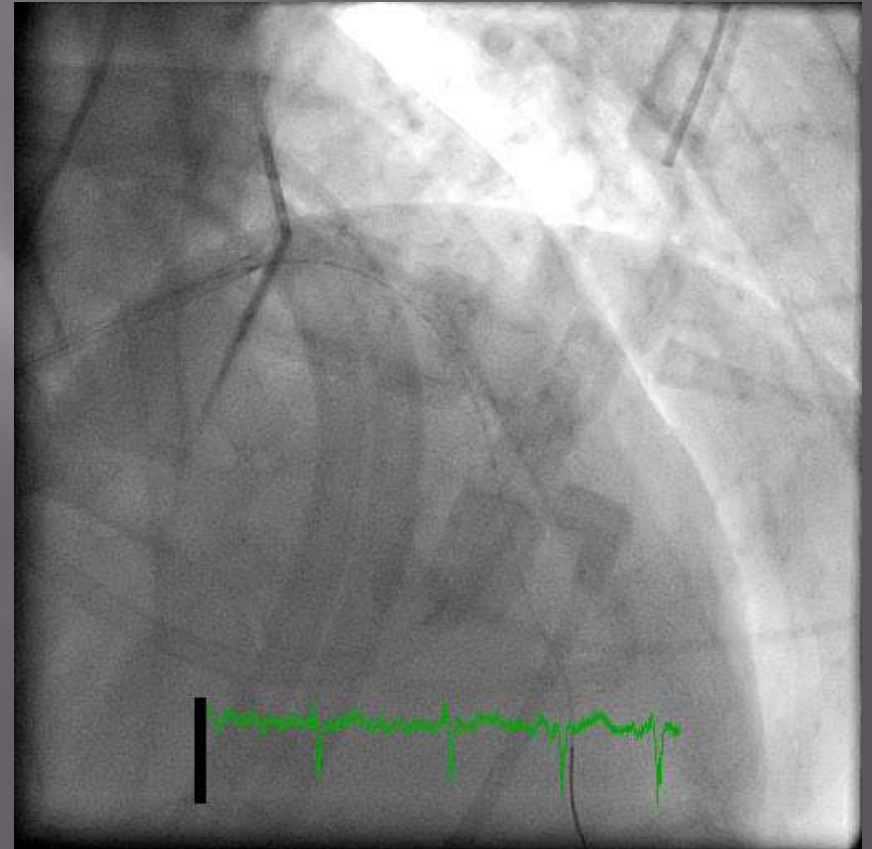
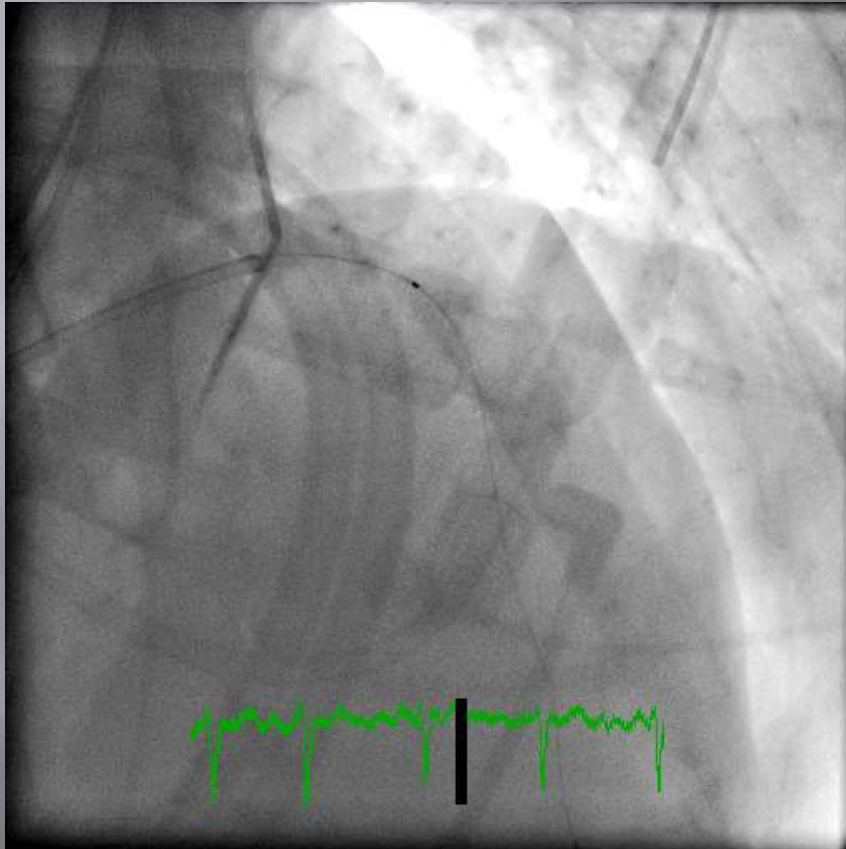
Late stent thrombosis? Coronary embolism?



Late Stent Thrombosis vs Coronary Embolism



Thrombosuction in LAD

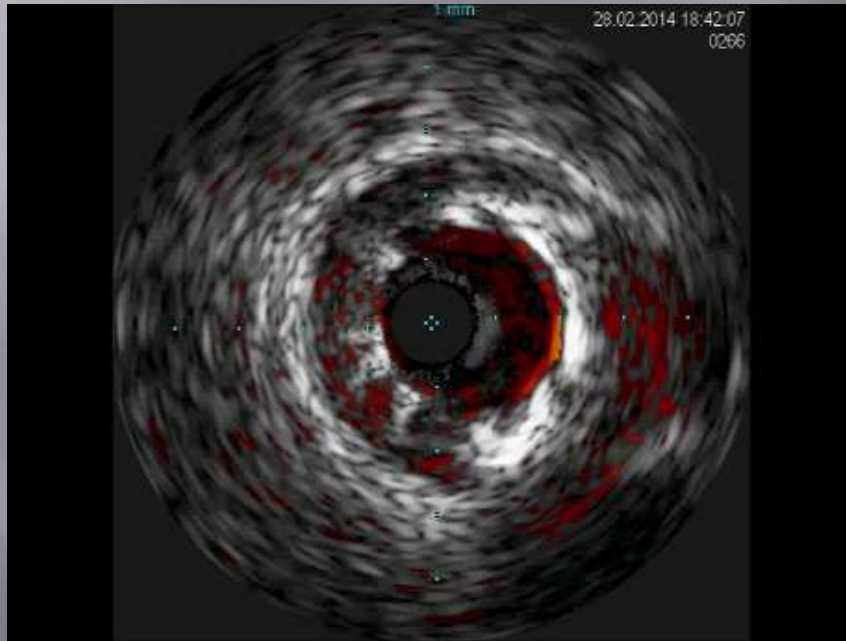


Risk Factors of Stent Thrombosis

- ▣ Patient- and Lesion-Related Factors
 - Low EF
 - DM
 - Old age
 - ACS/AMI
 - Renal failure
 - Bifurcation
- ▣ Procedure-Related factors
 - **Under expansion**
 - **Acute or delayed malapposition**
 - Long or multiple stents
 - Geographical miss
 - Dissection
 - Positive remodeling
- ▣ Antiplatelet Therapy
 - **Duration of DAPT (3,6,12,>12m)**
 - Drug resistance
- ▣ Thrombogenicity of DES
 - Polymer biocompatibility
 - Permanent versus bioabsorbable polymer
 - Limus versus Paclitaxel
 - **EPC coating**
 - Bioabsorbable versus nonabsorbable stent

IVUS

STENT MALAPPOSITION
WITH GAPS

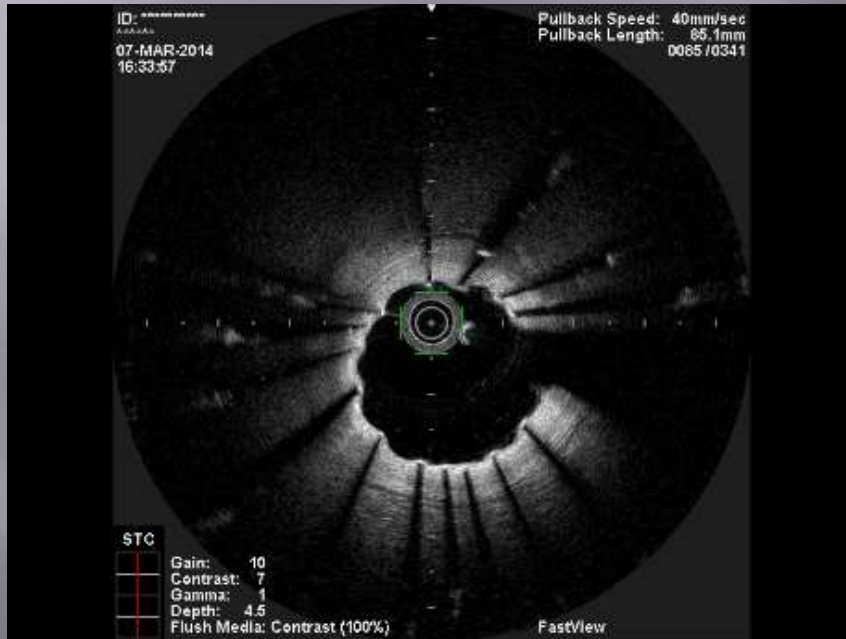


STENT MALAPPOSITION
WITH ?CLOTS

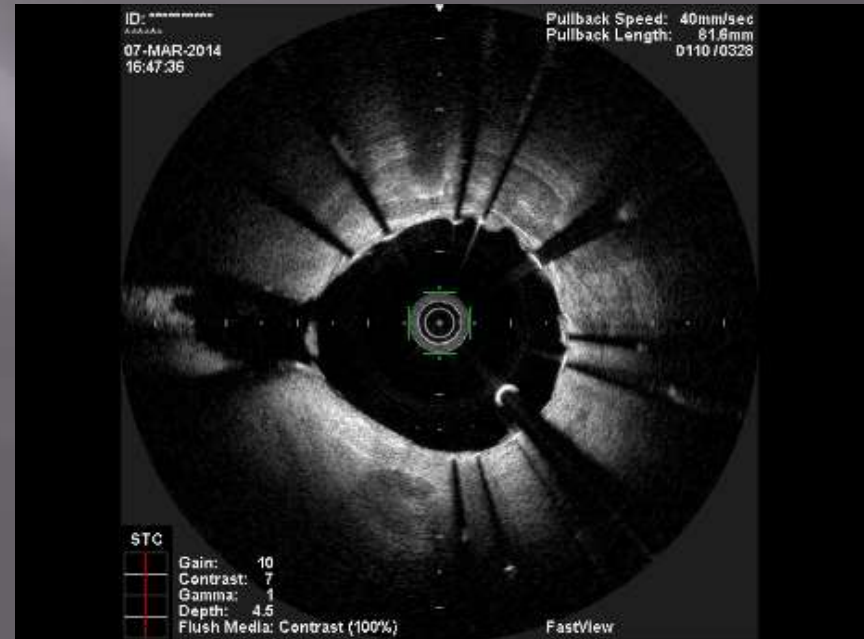


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DISTAL STENT



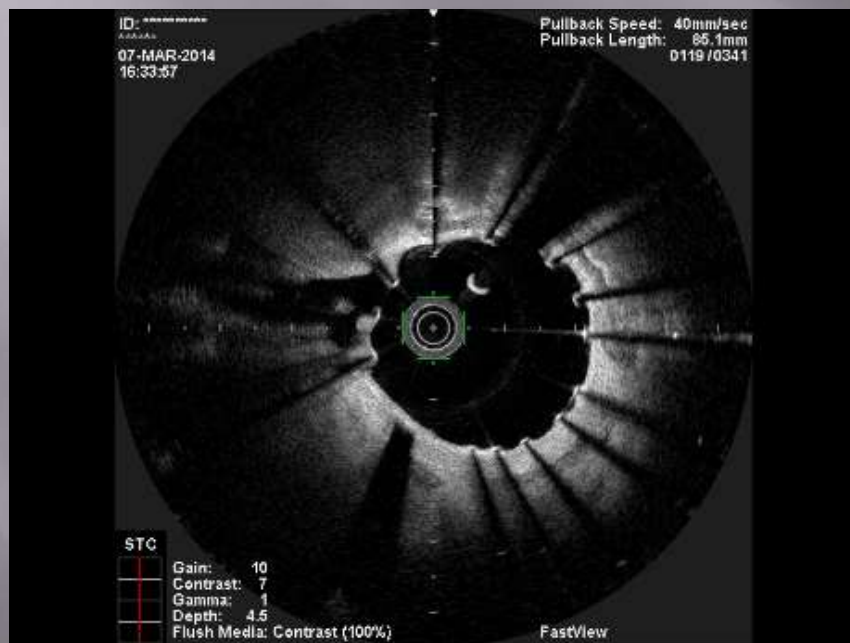
PARTIALLY COVERED STENT



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CLOT UNDER STRUT AT
SEPTAL BRANCH

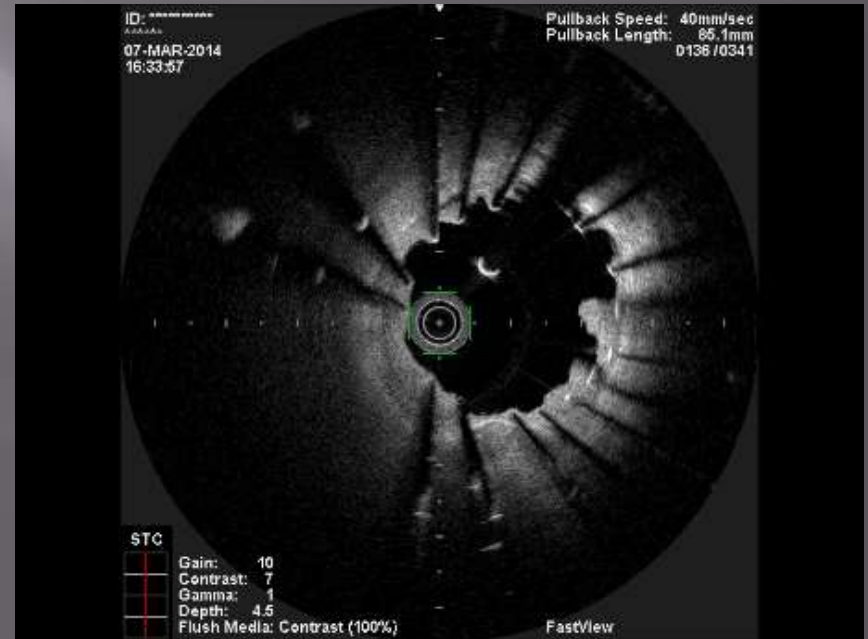
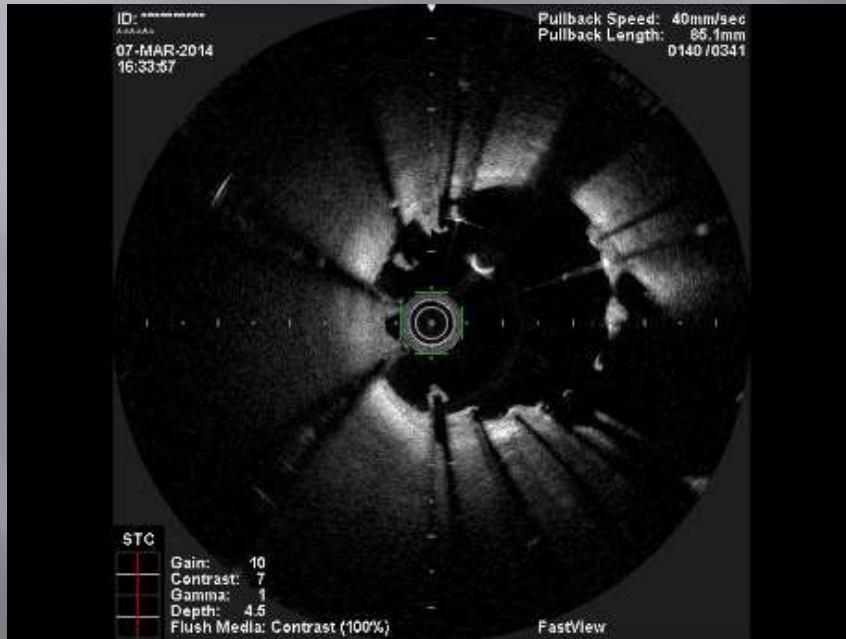
UNCOVERED STENT



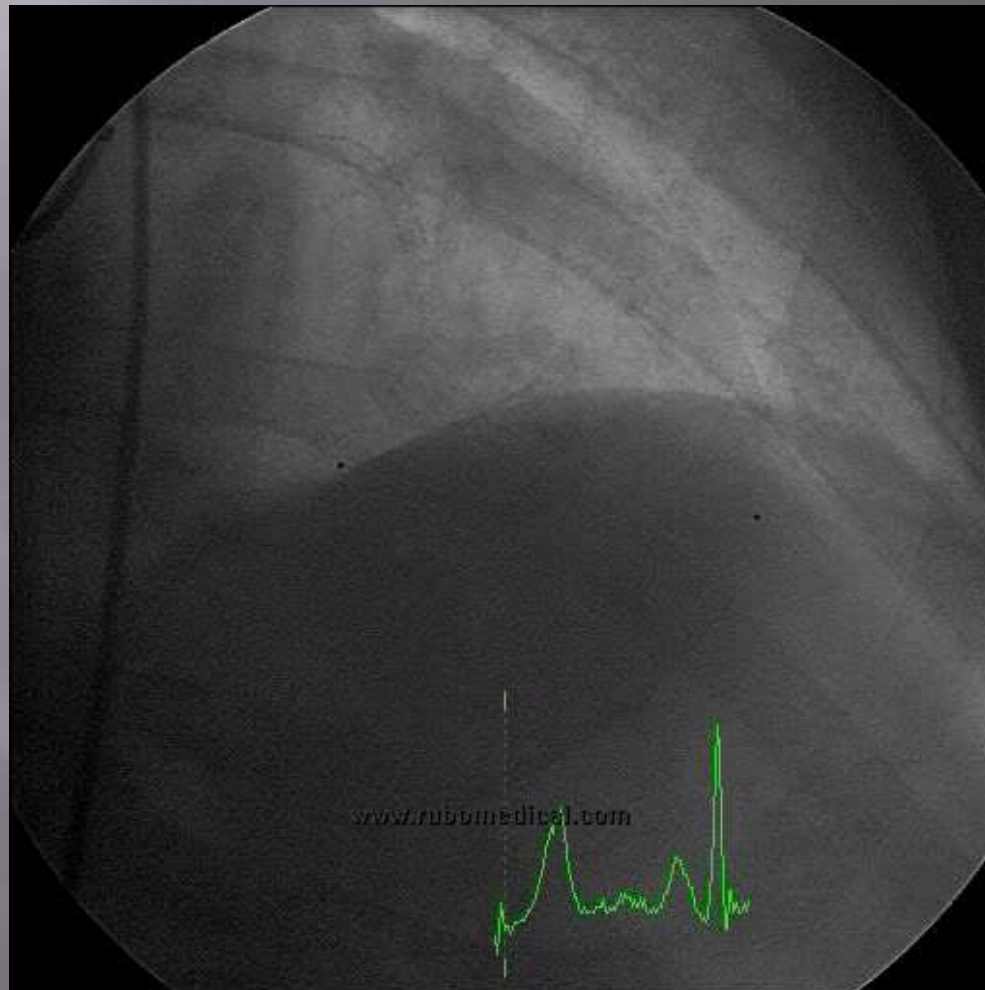
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STENT MALAPPOSITION AT
DIAGONAL

STENT MALAPPOSITION
WITH CLOTS



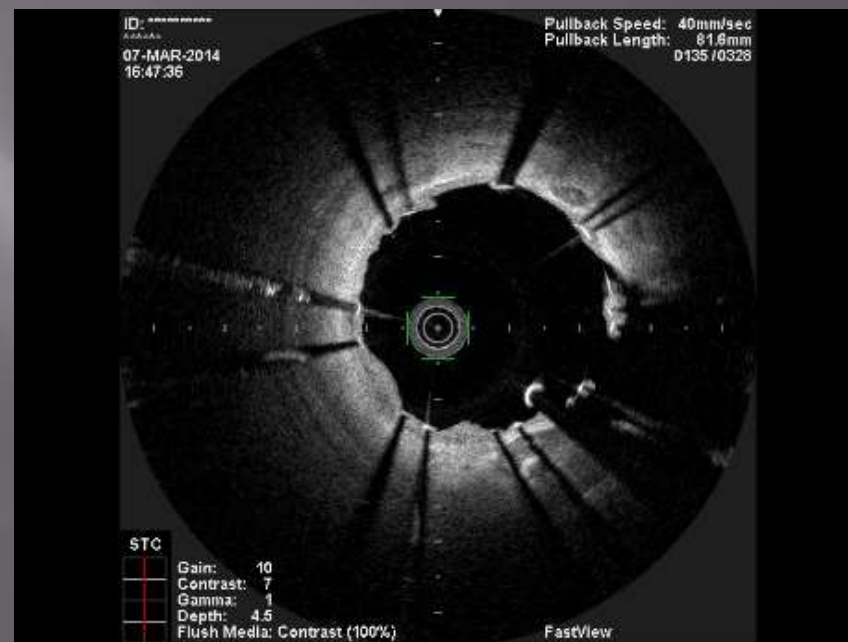
BMS Stent Thrombosis



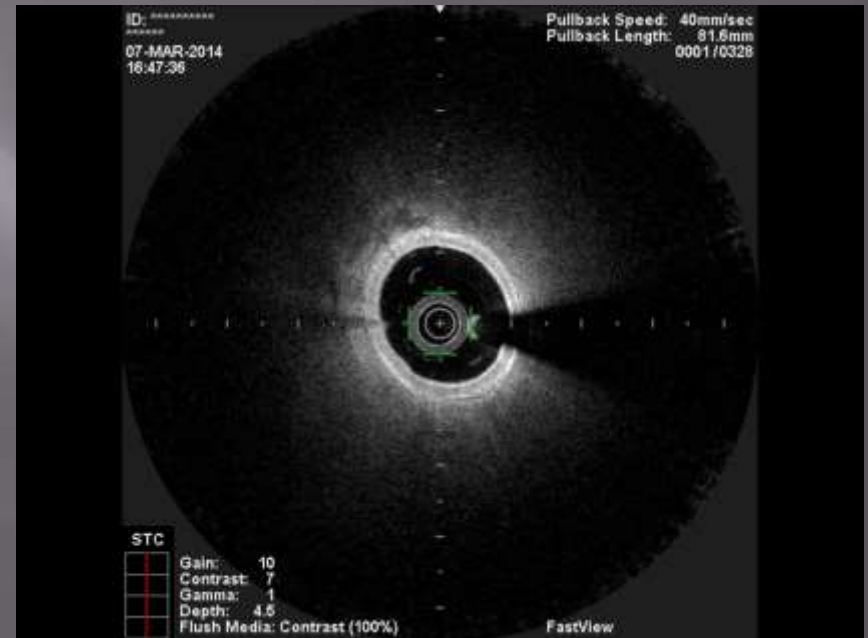
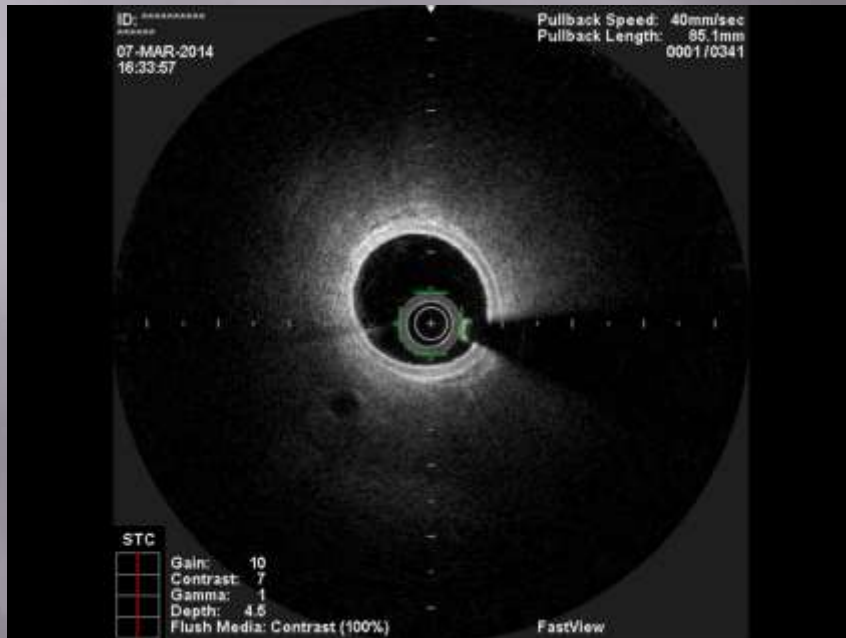
Strategies after Late Stent Thrombosis?

- ▣ Long term DAPT
- ▣ Implant another stent
 - BMS?
 - Other new generation DES?
- ▣ POBA
- ▣ OFDI/OCT guided therapy

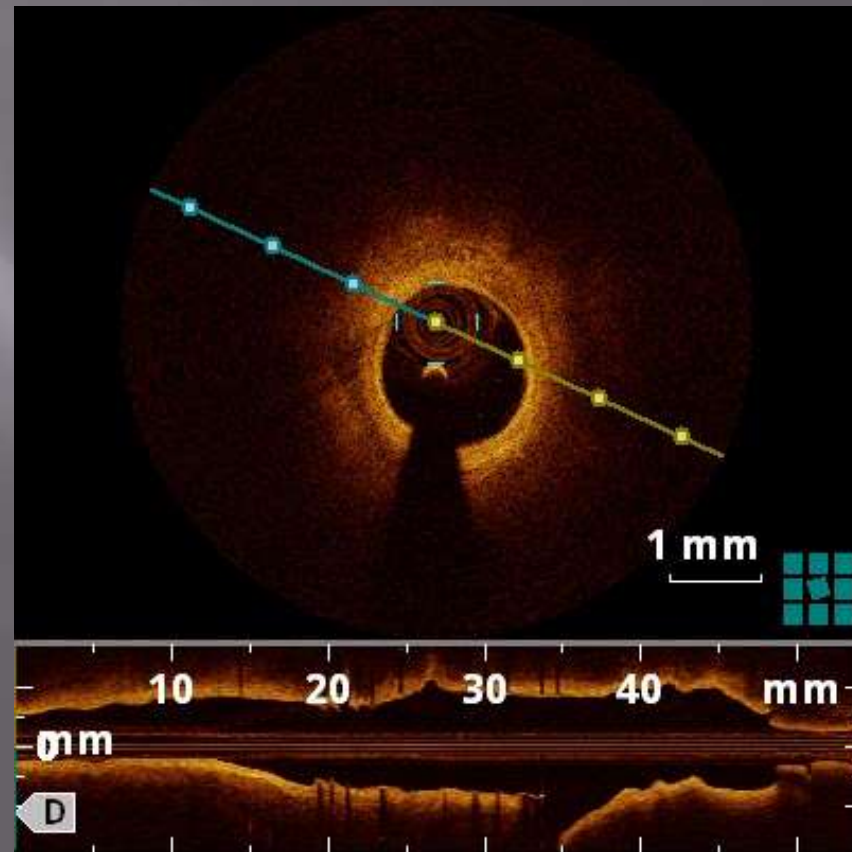
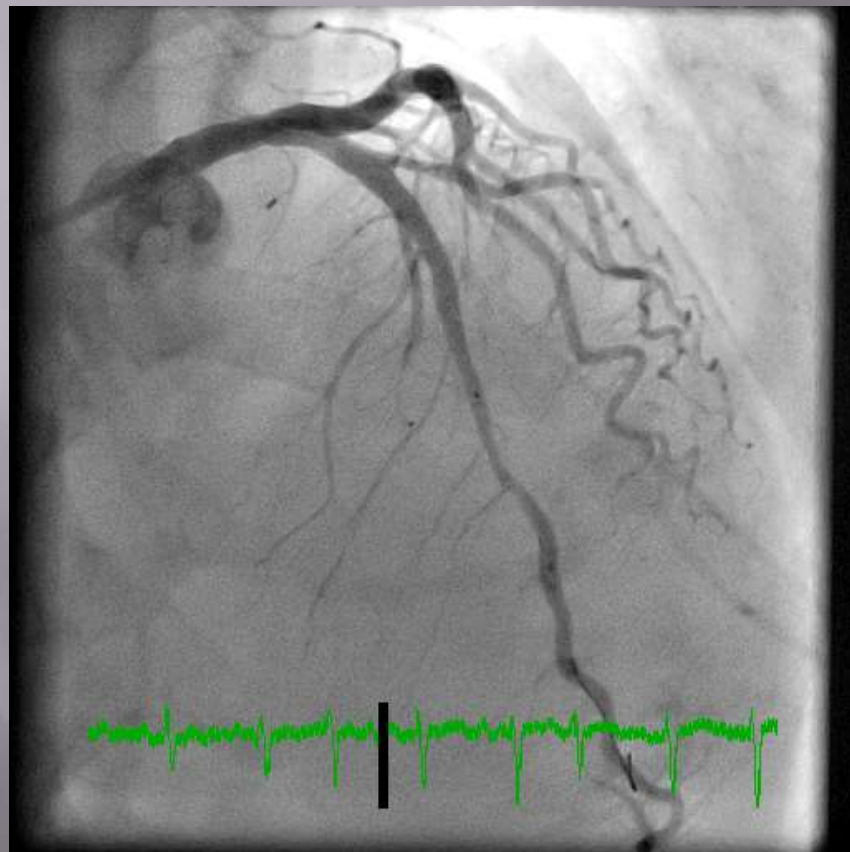
HP 4.0 POBA



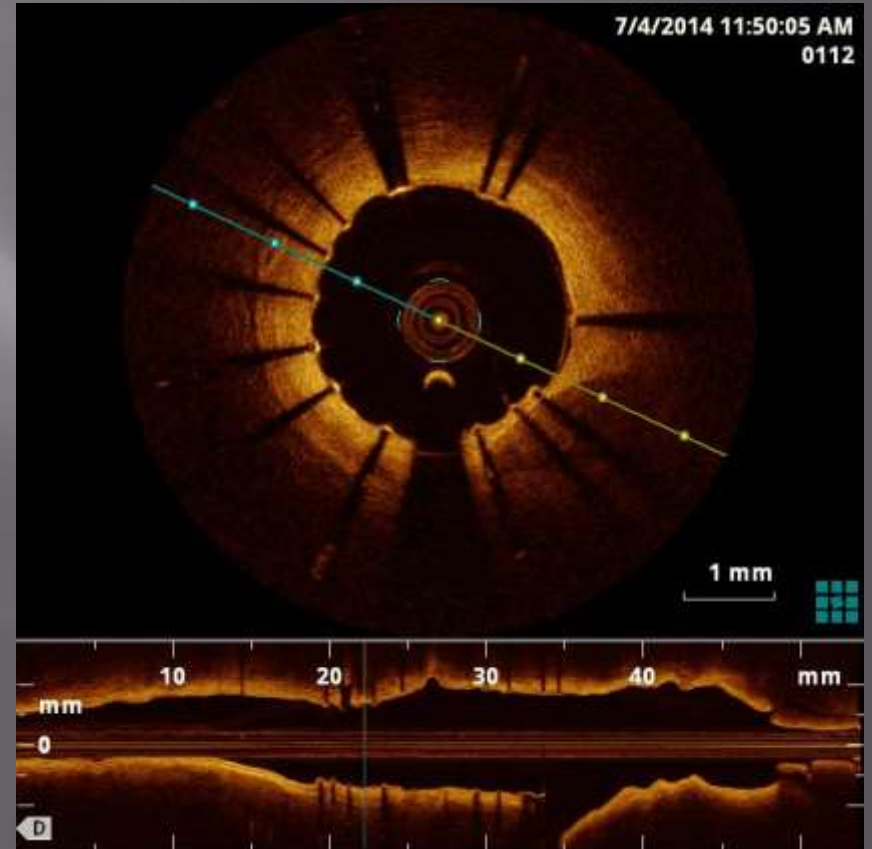
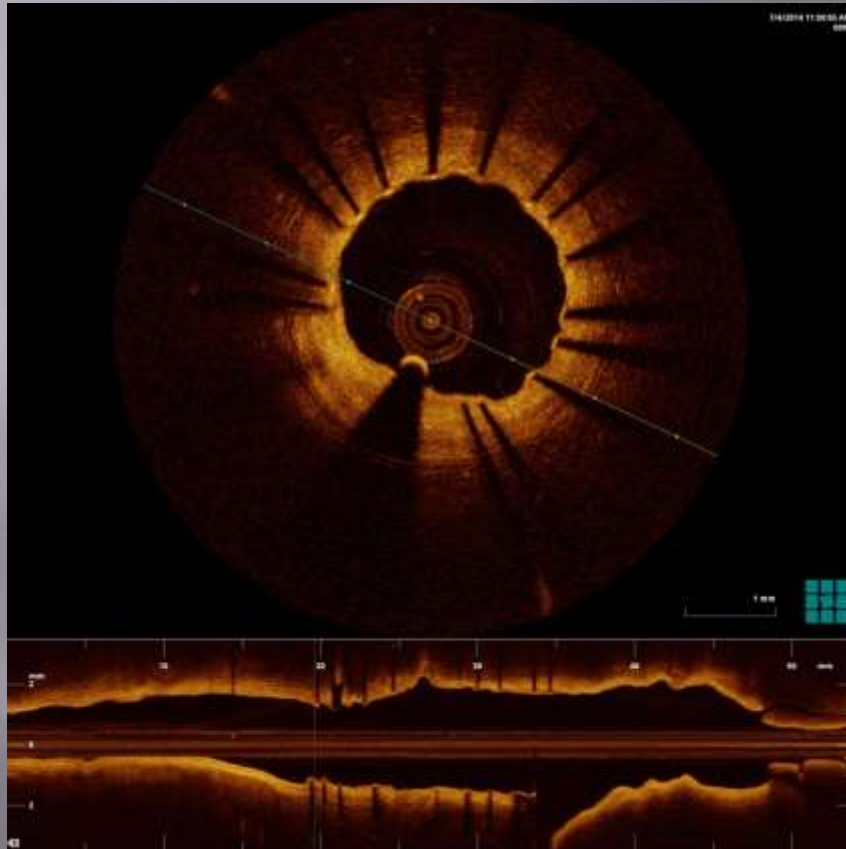
OFDI pre- and post-POBA



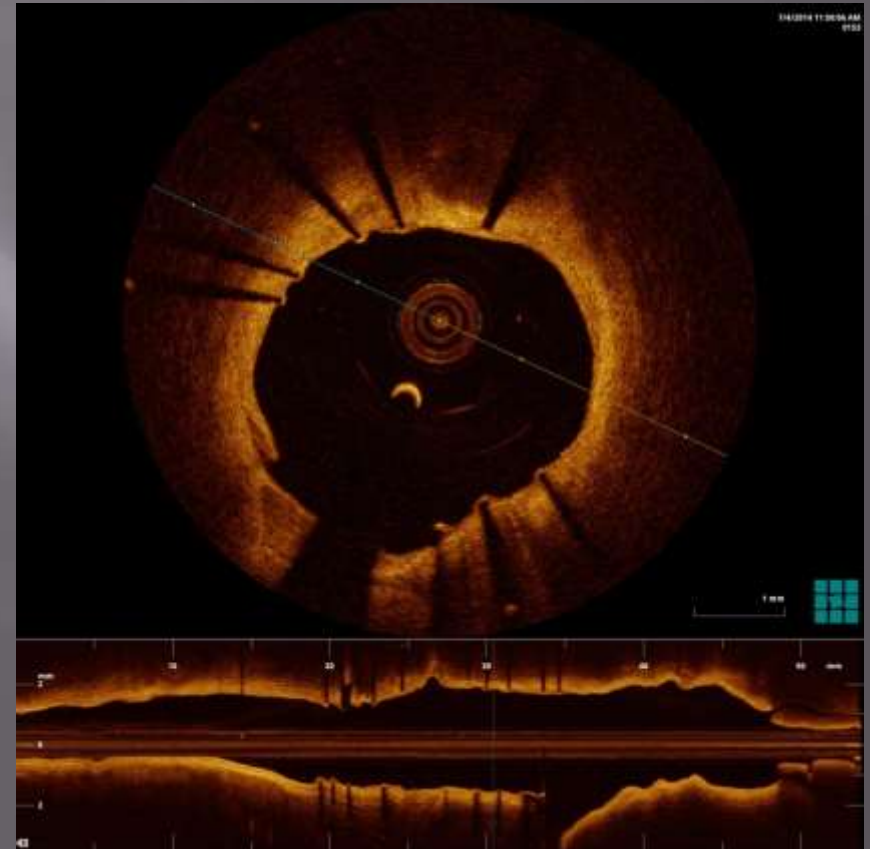
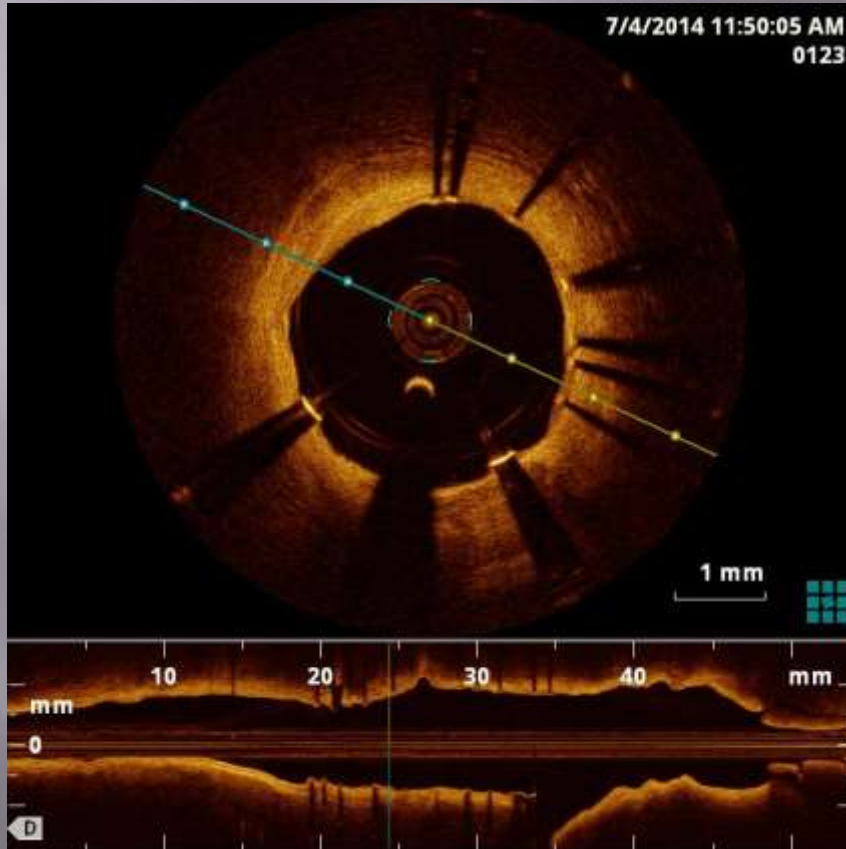
Follow-up OCT Four Months Later



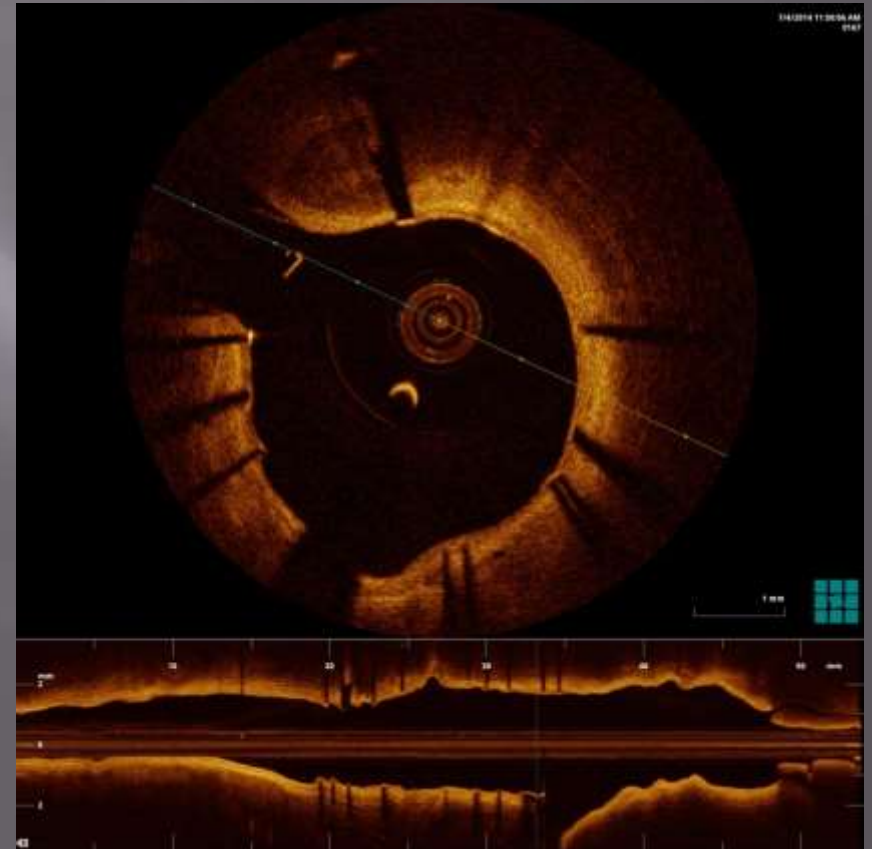
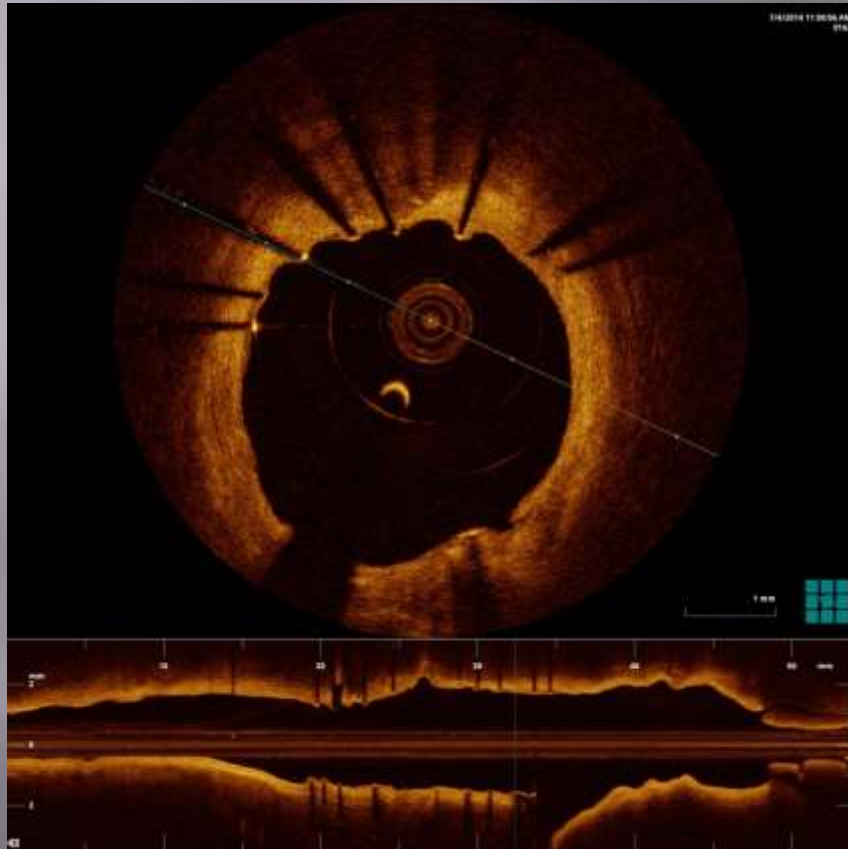
Covered Distal Stent



Covered Middle Stent



Covered Proximal Stent



Conclusions

- ▣ Stent thrombosis may occur in any stent if it is poorly deployed
- ▣ OFDI/OCT gives us high resolution images for understanding mechanism of late stent thrombosis and guiding intervention
- ▣ Simple POBA may be an option to achieve better stent apposition and healing can be confirmed by OFDI/OCT