3rd IMAGING & PHYSIOLOGY Summit 2009

A Case of ACS Patient With In-Stent Plaque Rupture After BMS Implantation

Seung-Ho Hur, MD, PhD, FACC

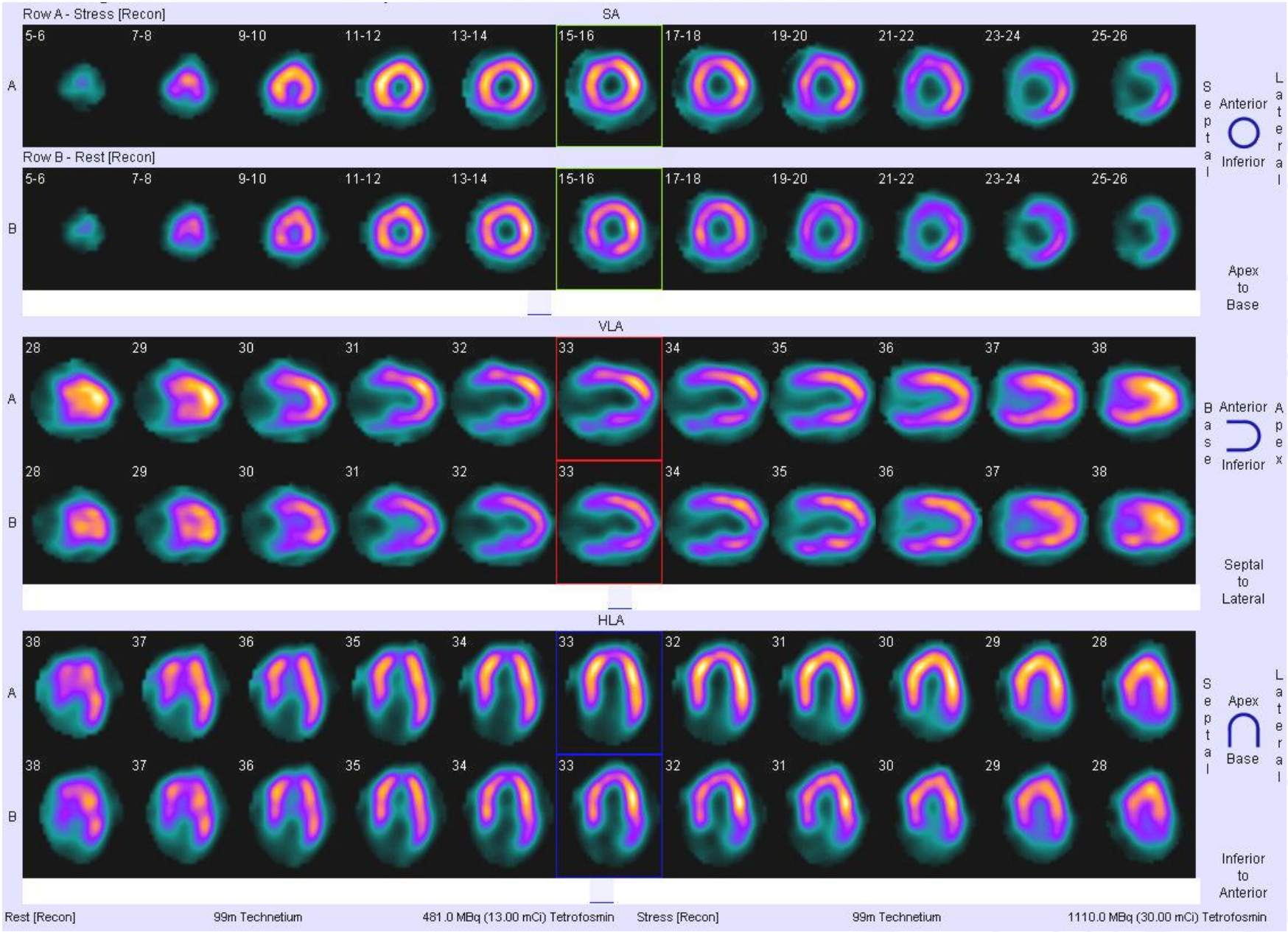
Keimyung University Dongsan Hospital

Patient Profile

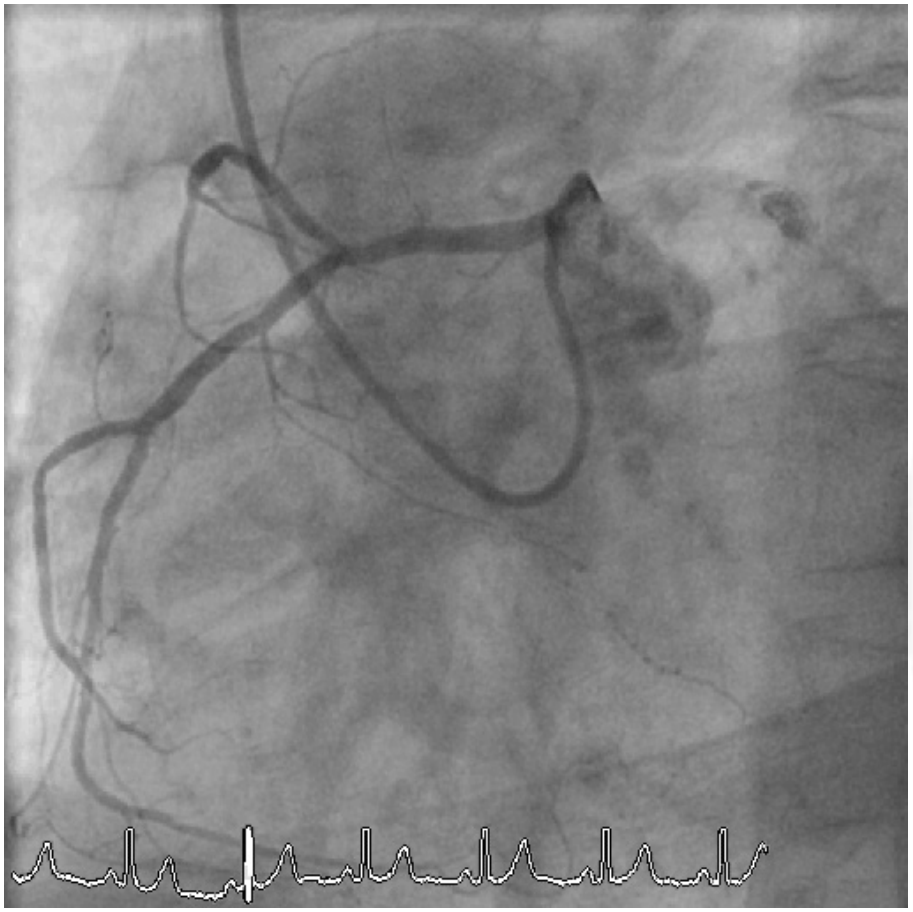
- 58 YO/ Male
- C/C : aggravated chest pain for 1 month
- CVDRF : HTN (10 Y), Smoking (40 PY)
- PHx: PCI on LAD (10 Y, NIR® stent)
- Vital sign: 120/70 – 68 – 20 – 36.5
- Lab: TC/LDL 191/134 mg/dl

  CK-MB/cTnI 0.6/0.06 ug/L
- ECG: NSR, ST-T change (-)
- TTE: 67%, no RWMA
- Clinical Dx: *Unstable Angina*

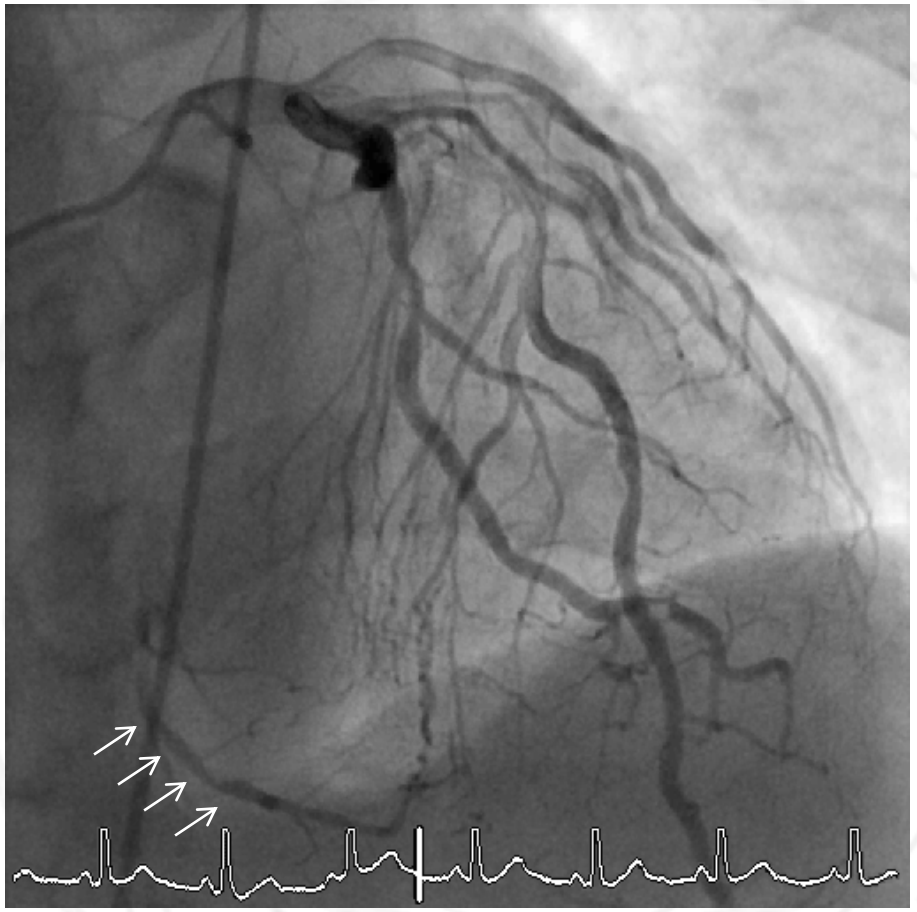
Myocardial SPECT



Baseline CAG: RCA

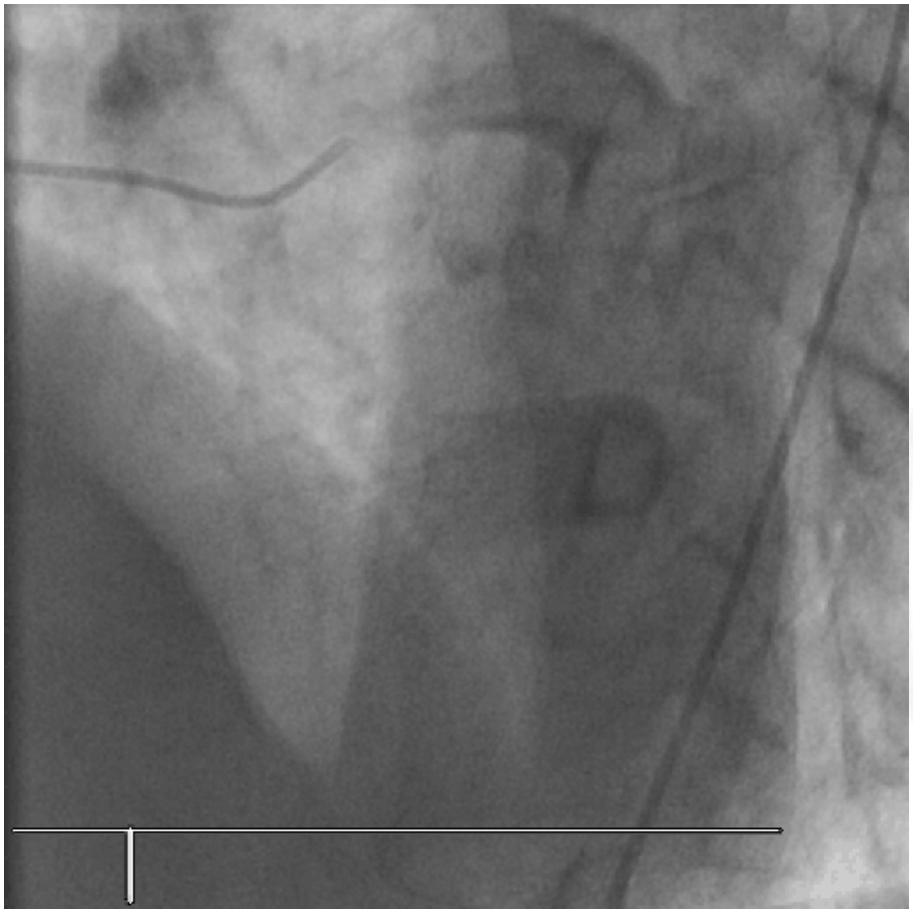


LAO 45°

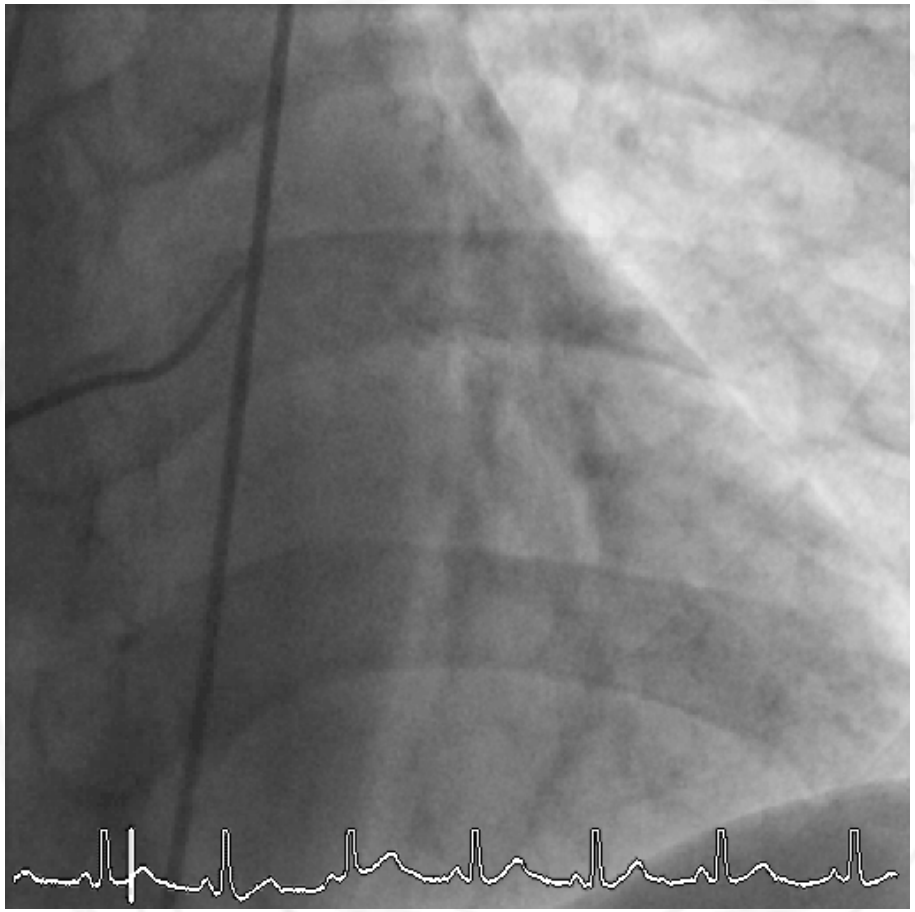


Collateral flow (+)

Baseline CAG: LCA



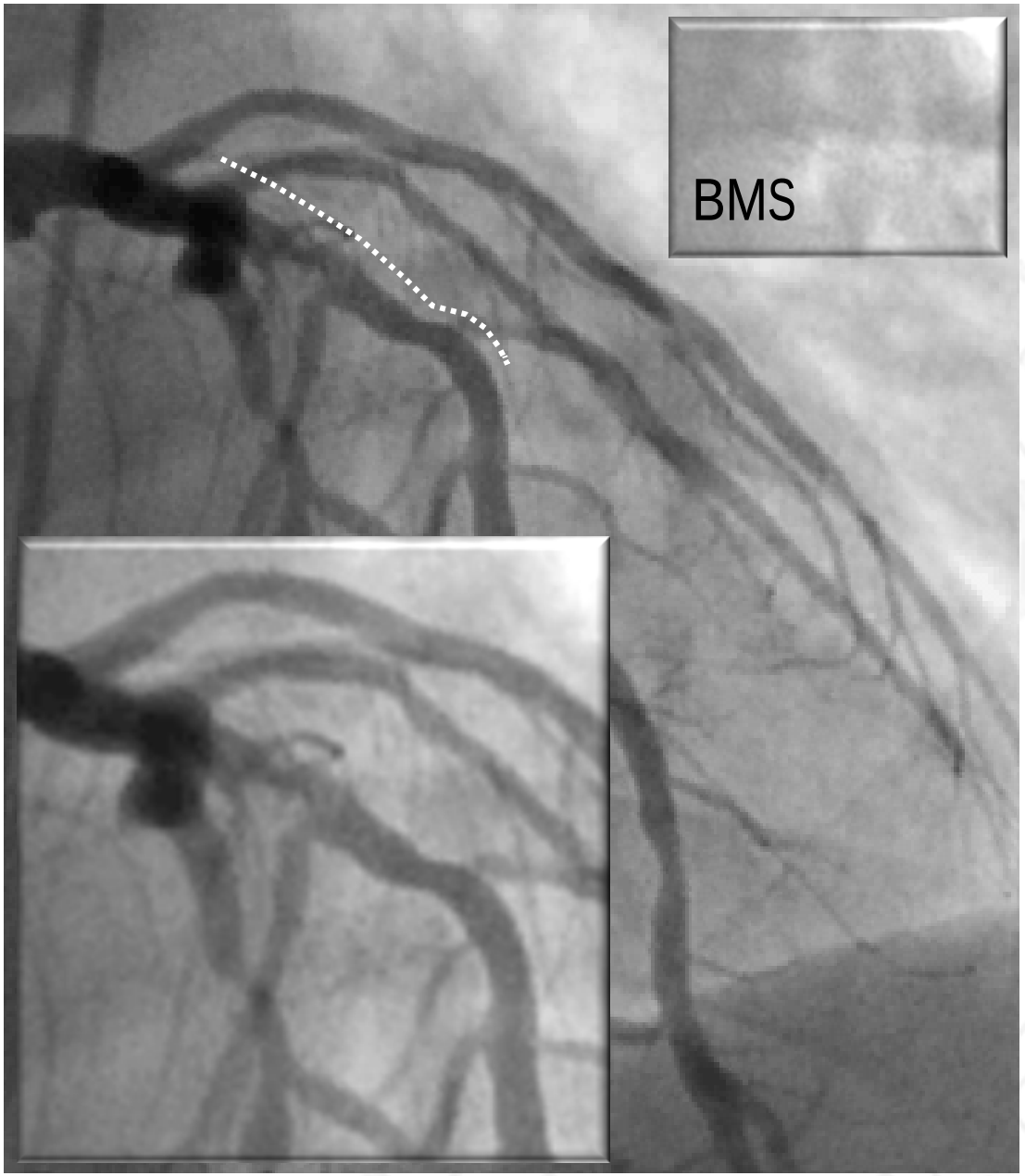
LAO 45° & Cranial 30°



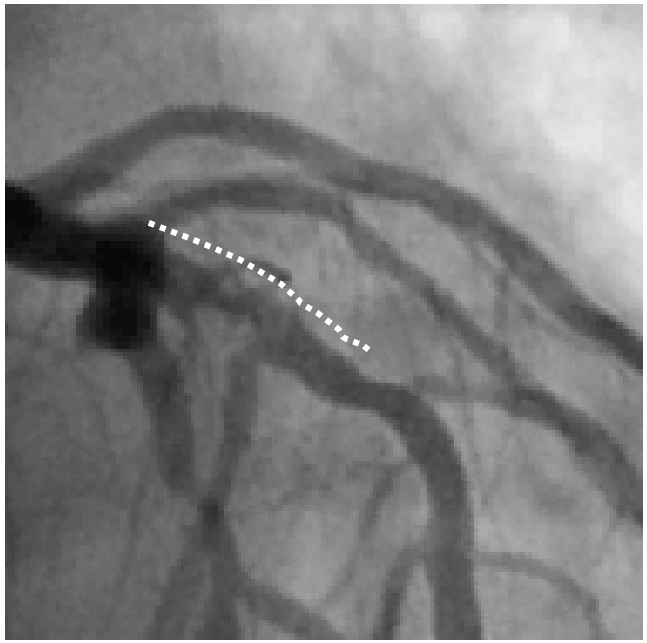
AP & Cranial 30°

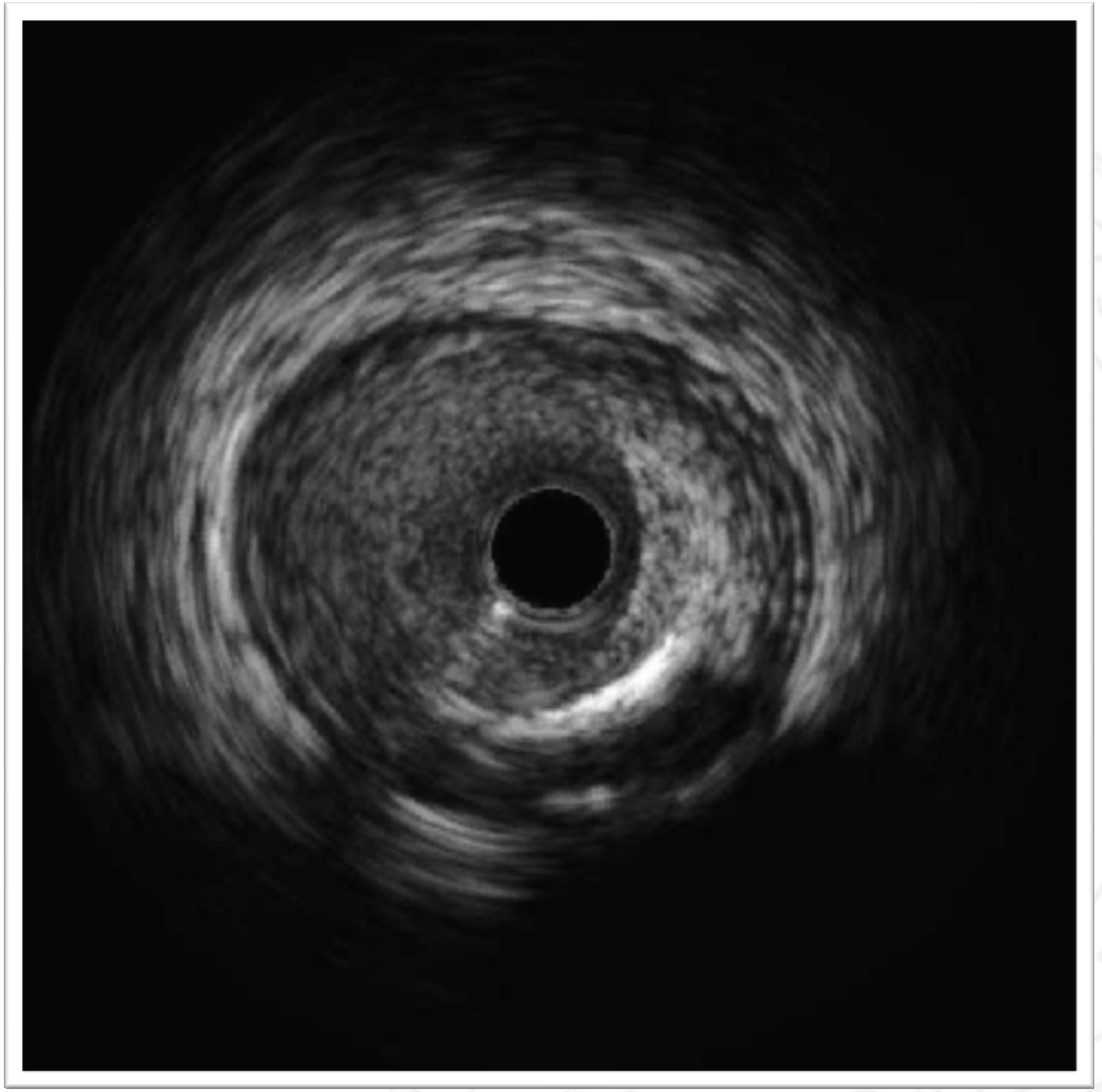
Prior Stented Segments

In-Stent Restenosis
or
Thrombus
?

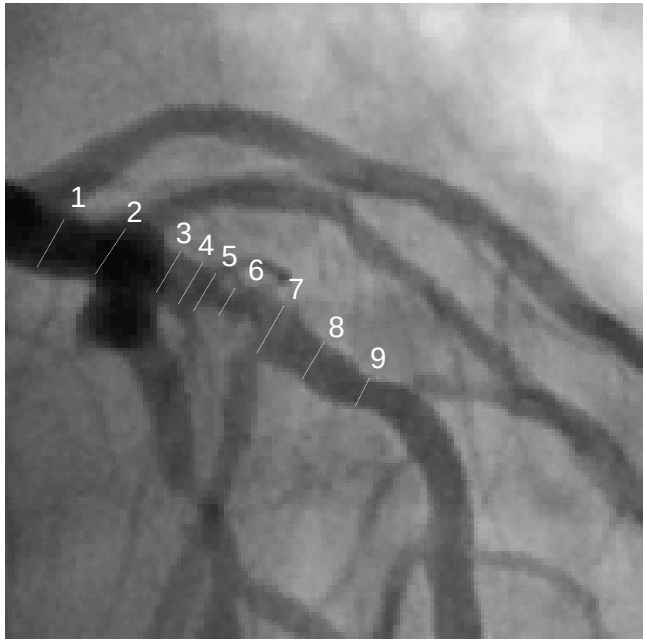


Pre-PCI IVUS Finding

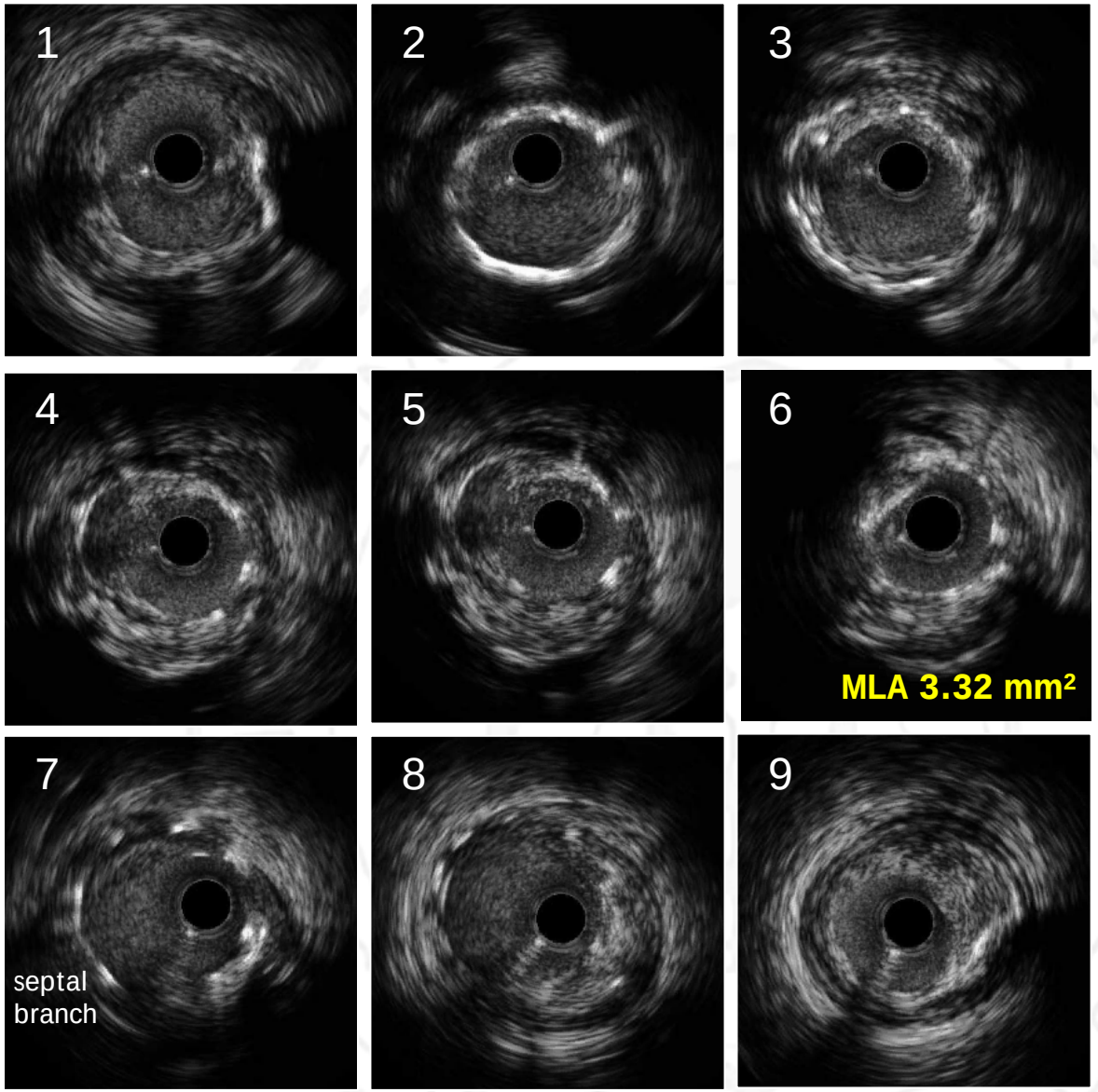




Focused IVUS Images

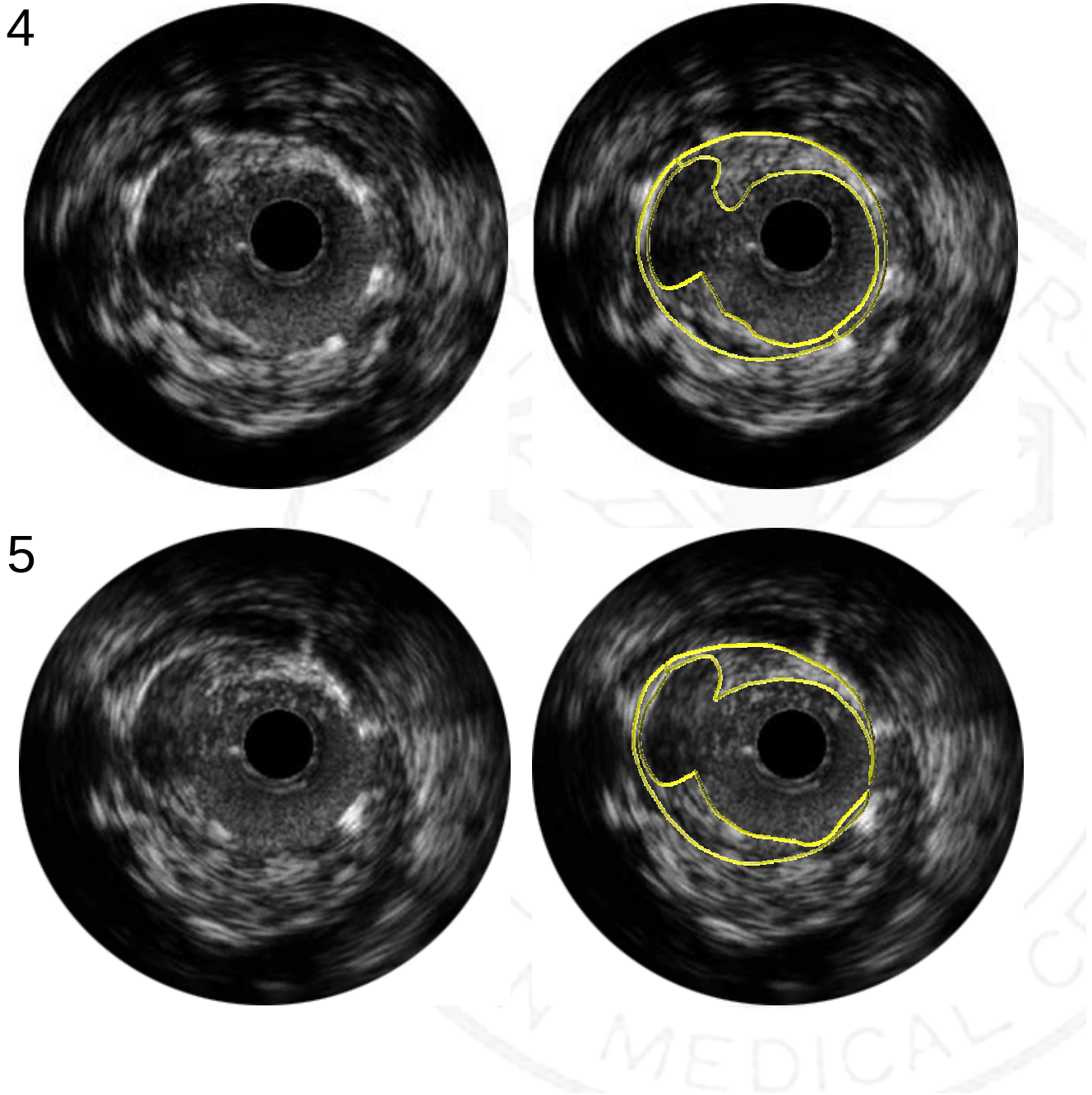


proximal

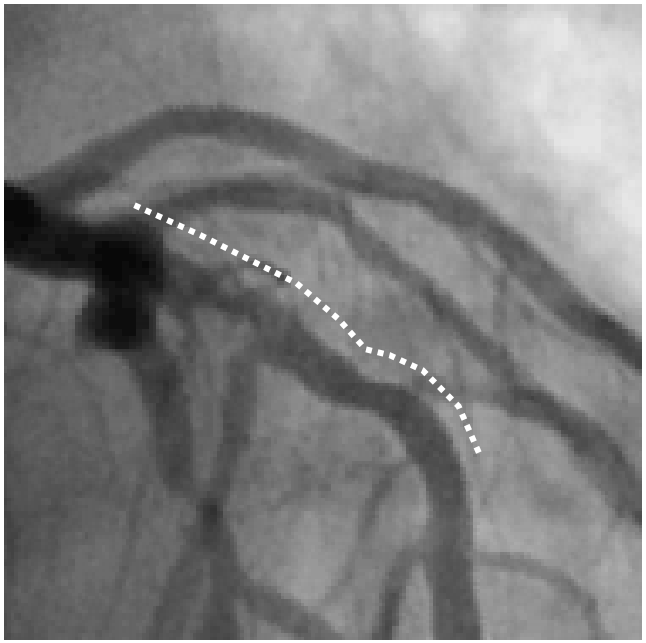


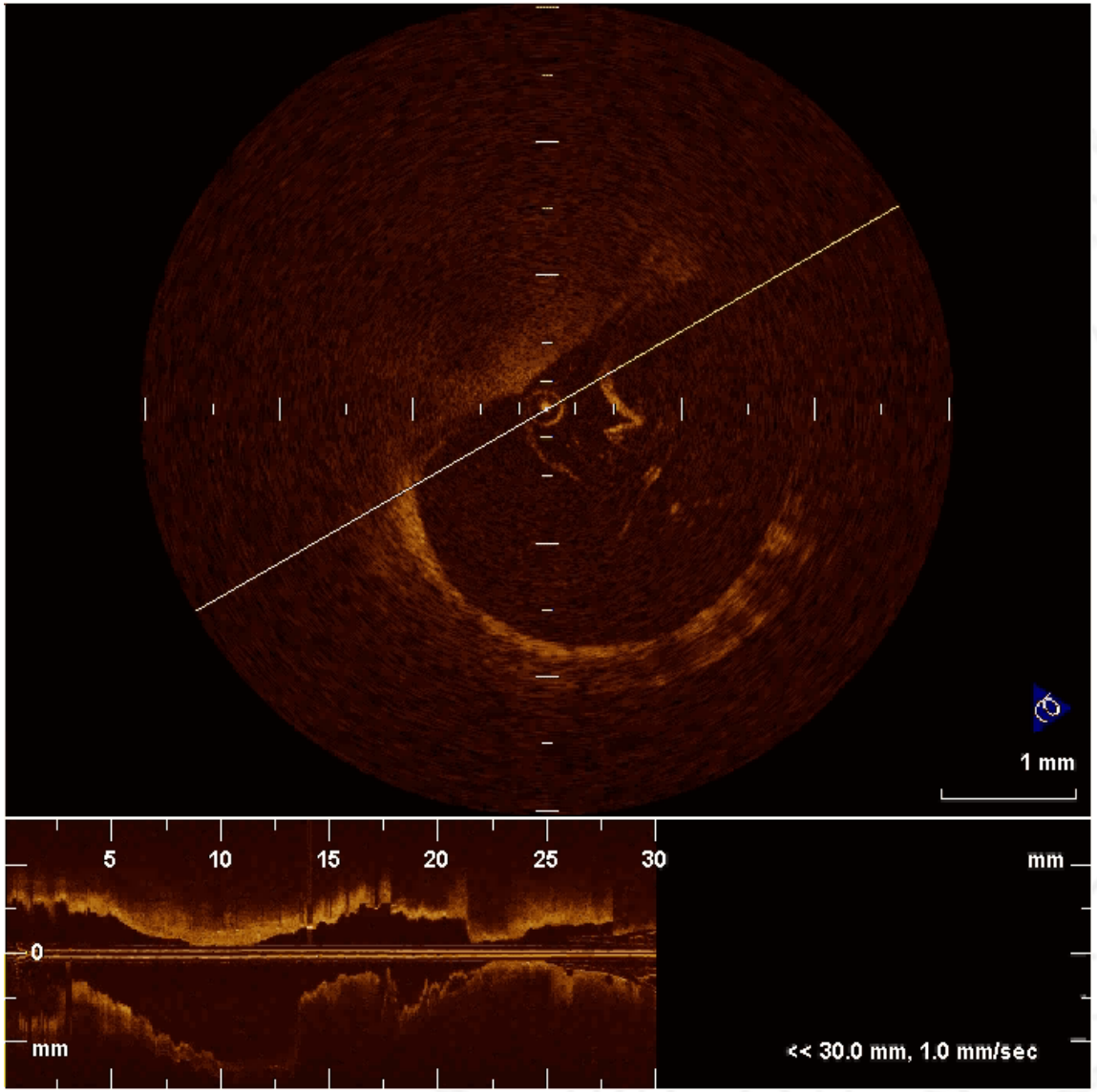
distal

In-Stent Plaque Rupture by IVUS

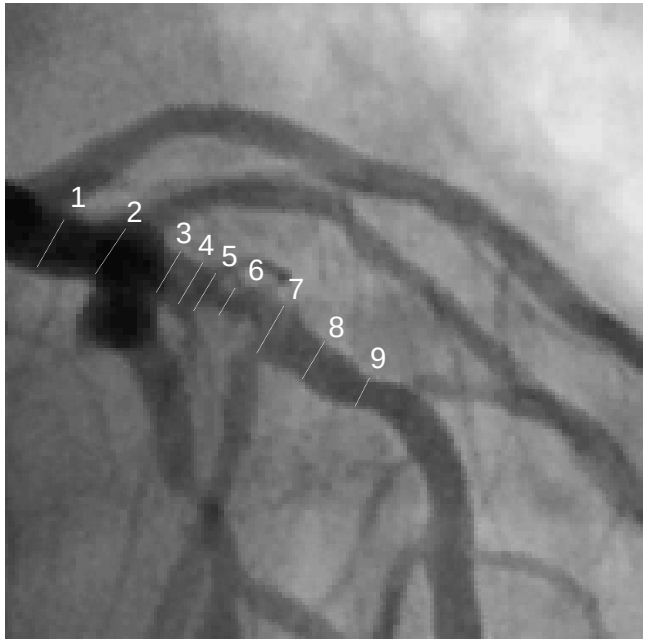


Pre-PCI OCT Finding

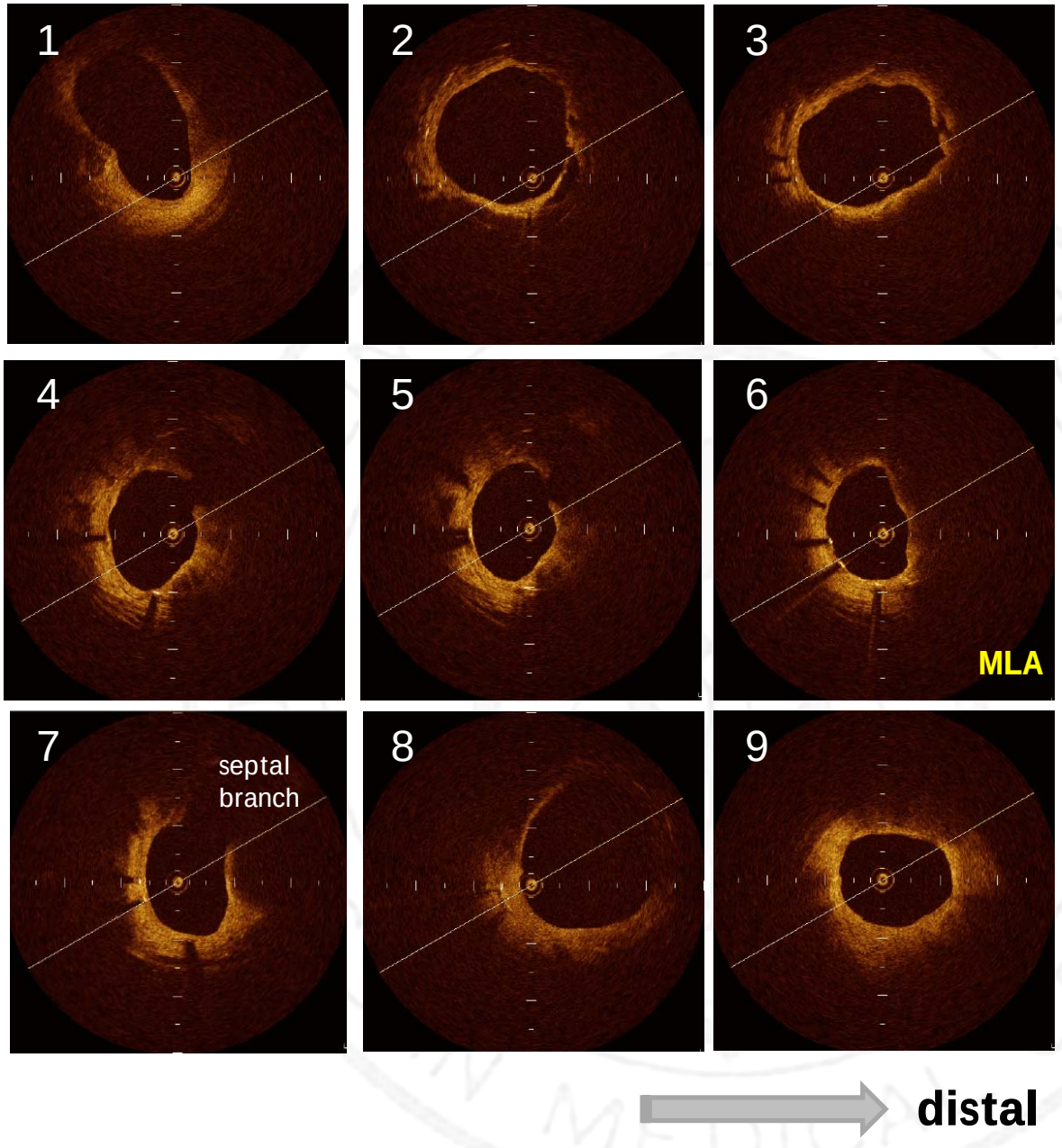




Focused OCT Images



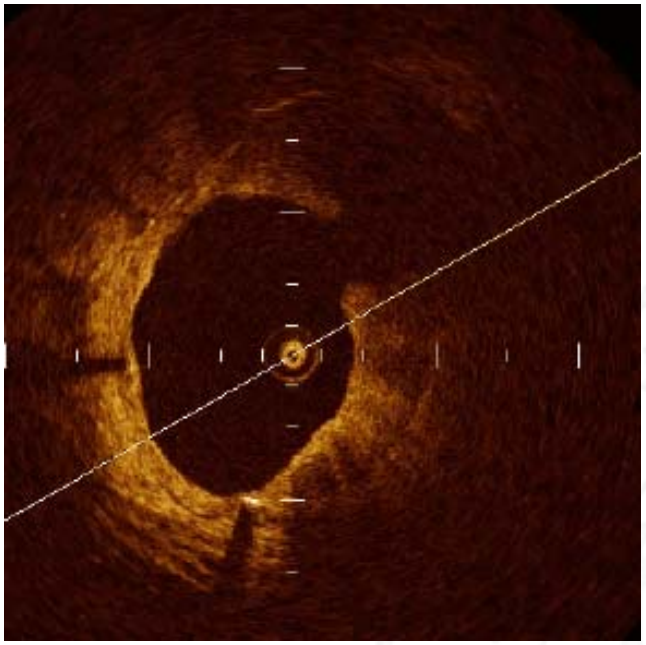
proximal

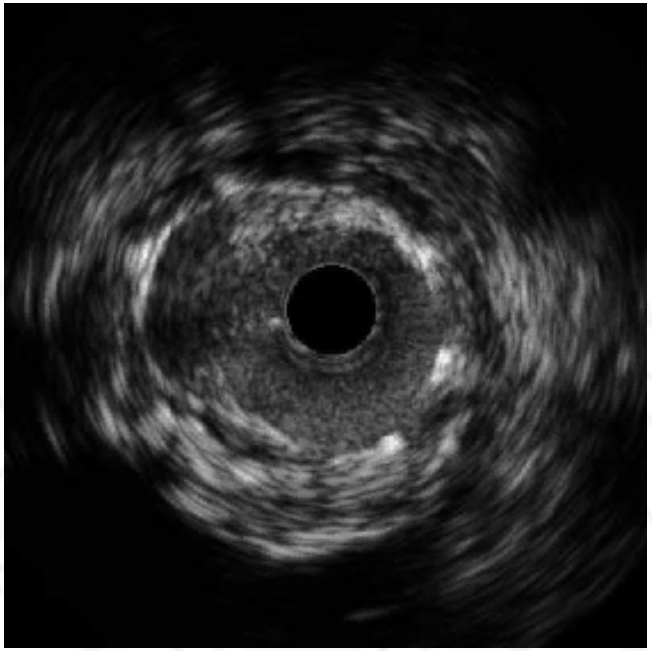


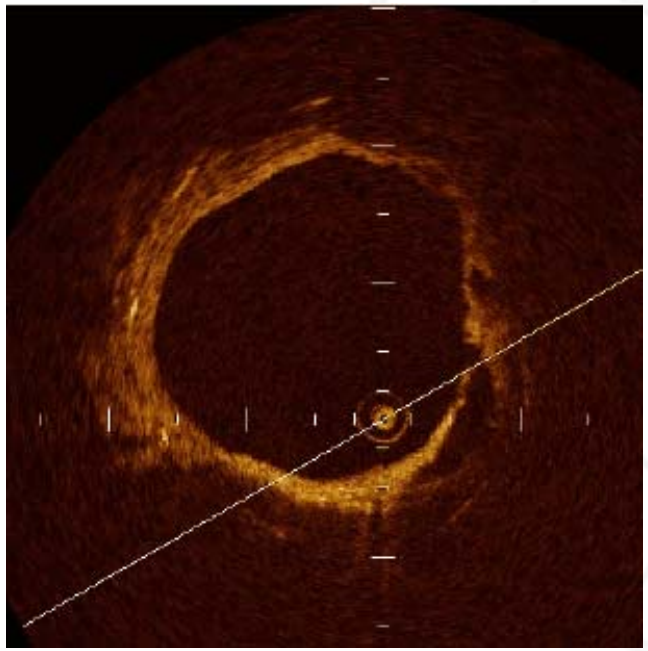
distal

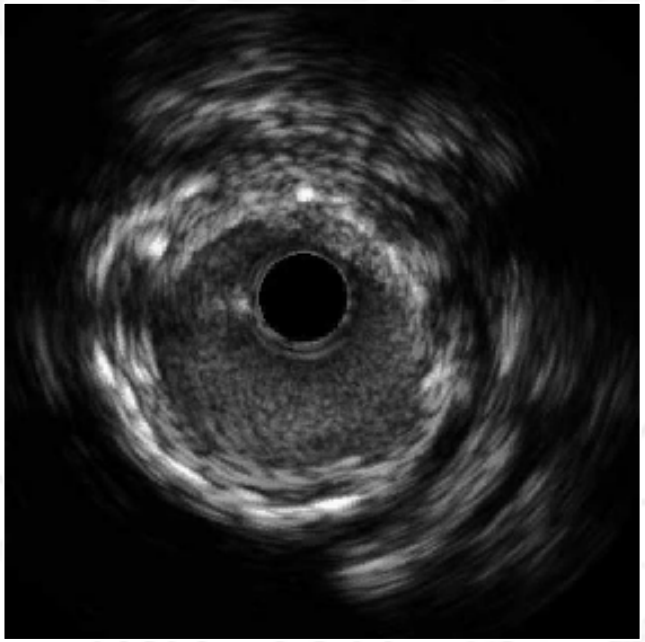
In-Stent Plaque Rupture

: OCT vs. IVUS

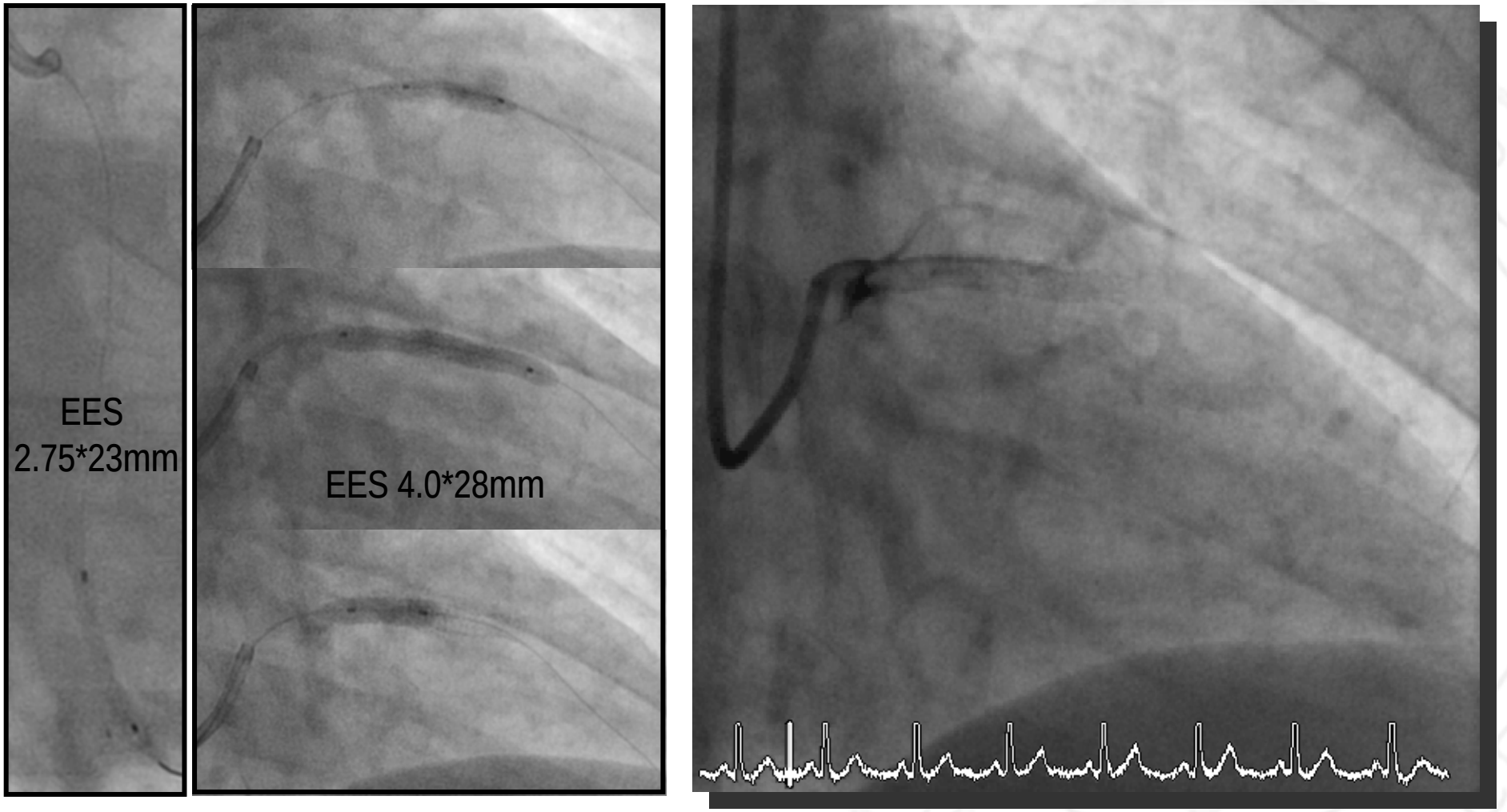




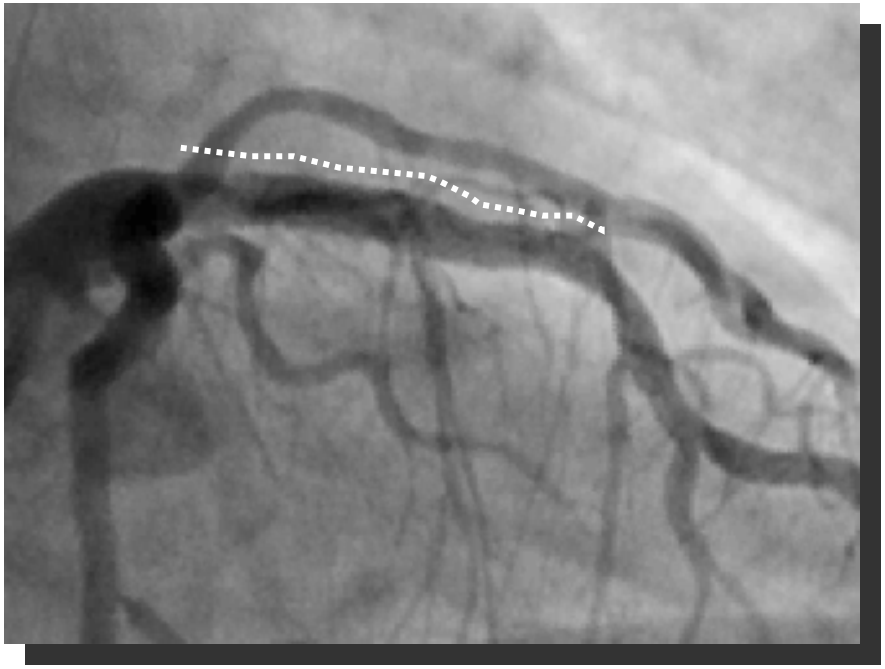


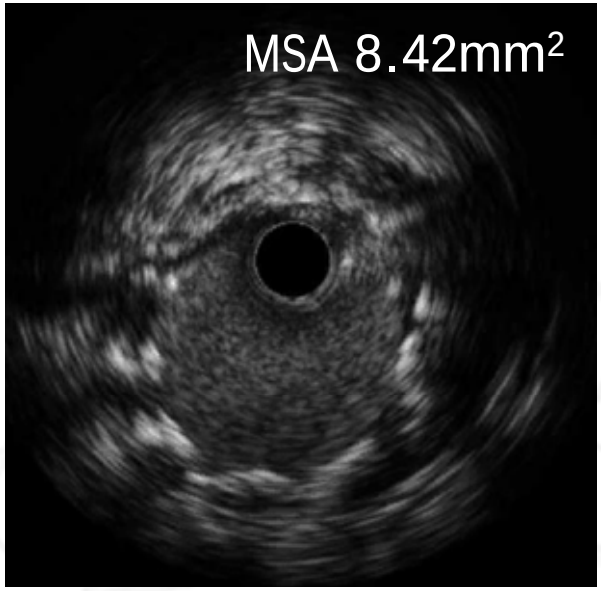


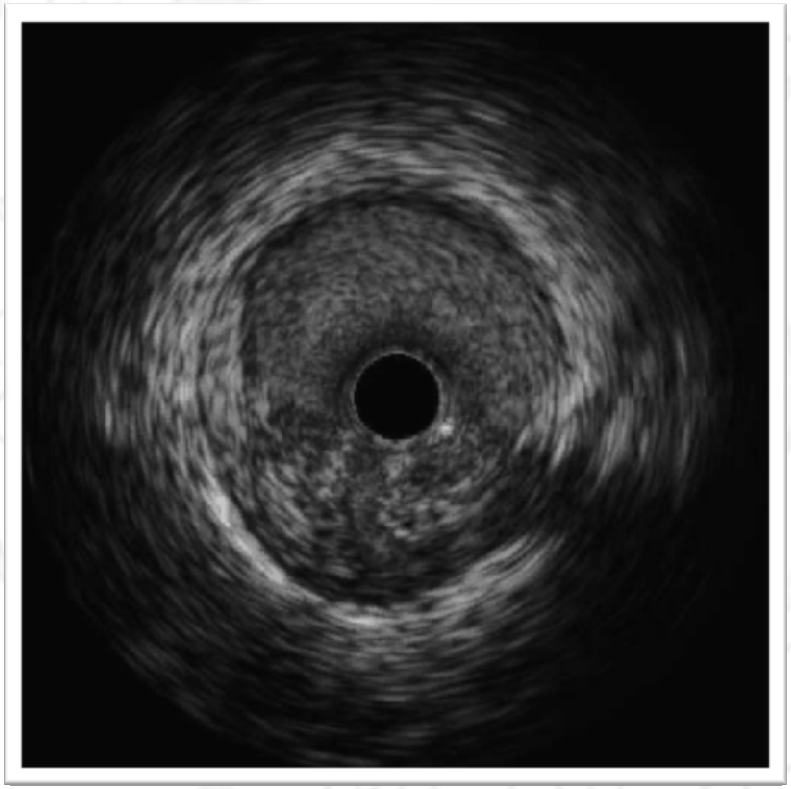
POBA & Stenting / Final CAG



Post-PCI IVUS Finding







THANK YOU FOR YOUR ATTENTION

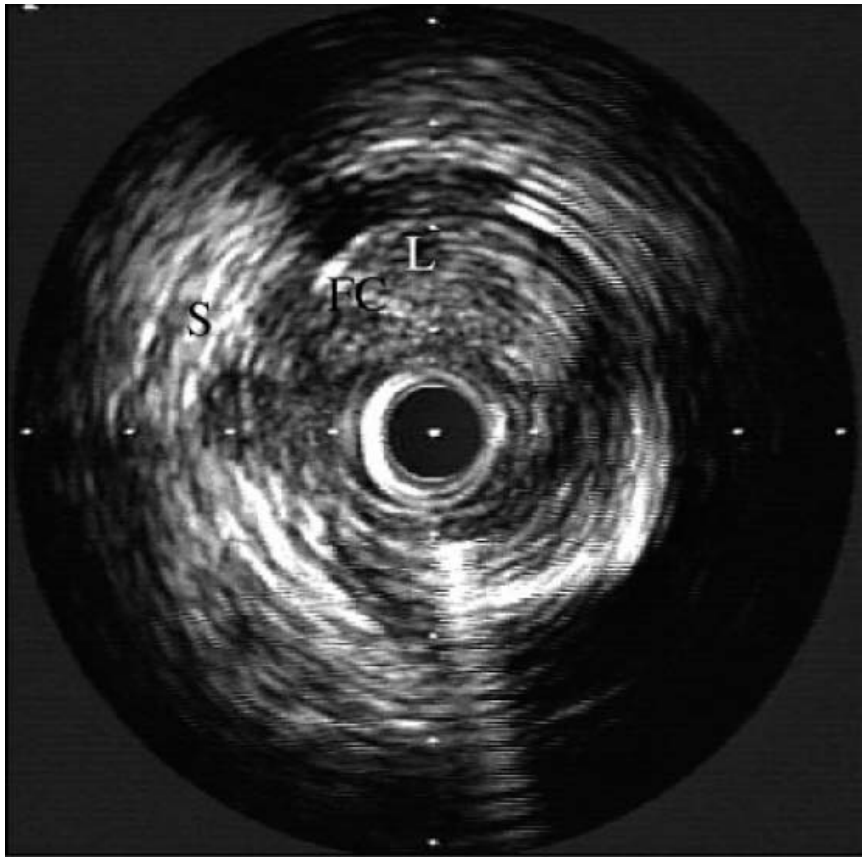
Histopathological Findings of New In-Stent Lesions Developed Beyond Five Years

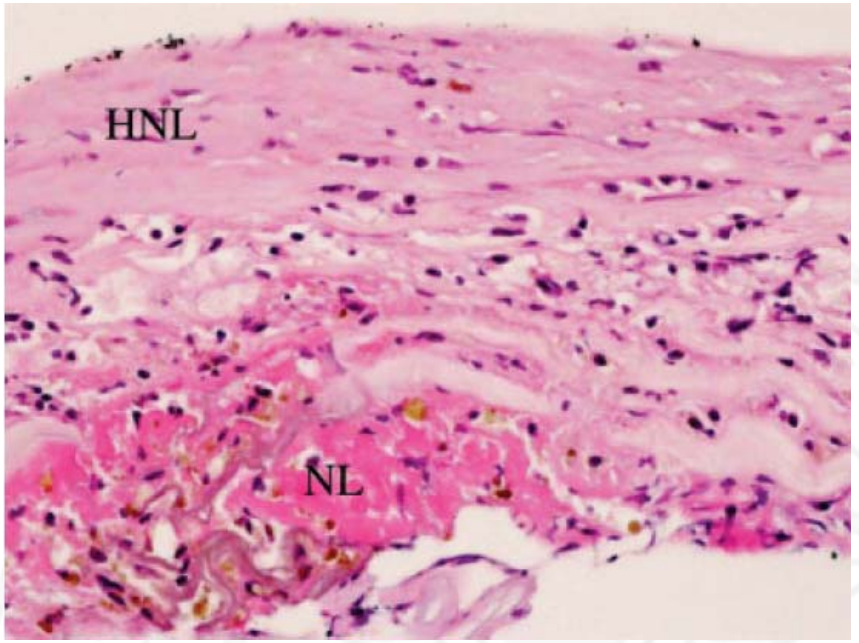
Katsuyuki Hasegawa,[1] MD, Hideo Tamai,[1]* MD, FJCC, Eisho Kyo,[1] MD, Kunihiko Kosuga,[1] MD, Shigeru Ikeguchi,[1] MD, Tatsuhiko Hata,[1] MD, Masaharu Okada,[1] MD, Shinya Fujita,[1] MD, Takafumi Tsuji,[1] MD, Shinsaku Takeda,[1] MD, Rei Fukuhara,[1] MD, Yuetsu Kikuta,[1] MD, Seiichiro Motohara,[1] MD, Kazuo Ono,[2] MD, and Eiji Takeuchi,[2] MD

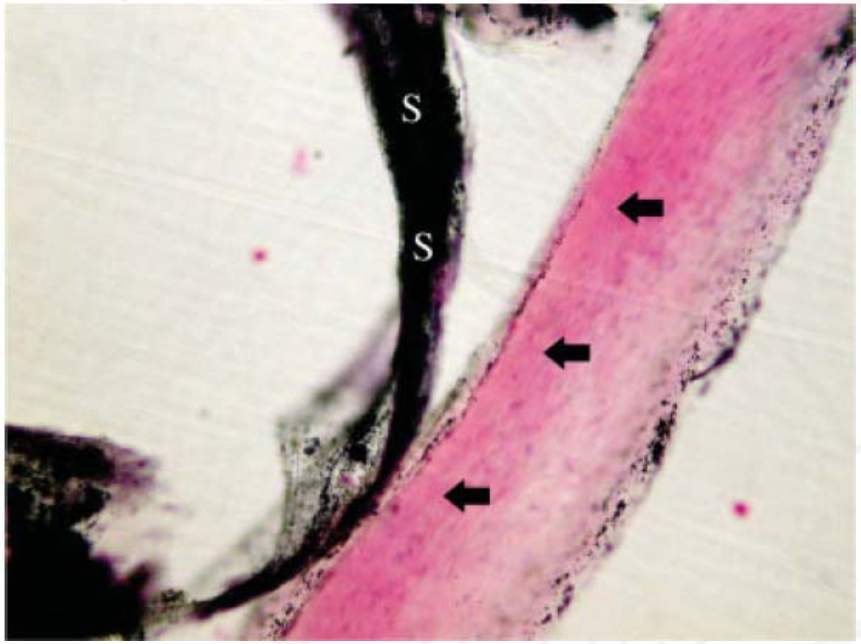
We analyzed 14 cases of new lesions inside implanted bare-metal stents. In every case, there was no angiographic restenosis within 3 years, but a new lesion was observed inside a stented segment at long-term follow-up (>5 years). Fourteen cases were evaluated: 9 with Wiktor stents, 2 with Palmaz-Schatz stents, and 3 with ACS Multilink stents. The interval from stent implantation to follow-up angiography was 63–147 months (89 ± 23). Thirteen lesions were treated by percutaneous coronary intervention (PCI) and stenotic tissue was obtained by directional coronary atherectomy (DCA) in 10 cases. All retrieved samples were composed of newly developed atherosclerosis facing the healed neointimal layer, and four samples showed histopathological findings of acute coronary syndrome. Stent struts were retrieved in four cases and no inflammation was observed surrounding them. Qualitative and quantitative analysis of stent struts was performed in two cases that showed no metal corrosion. These findings suggest that new atherosclerotic progression occurred inside the implanted stent without peristrut inflammation. © 2006 Wiley-Liss, Inc.

(DCA) in 10 cases. All retrieved samples were composed of newly developed atherosclerosis facing the healed neointimal layer, and four samples showed histopathological findings of acute coronary syndrome. Stent struts were retrieved in four cases and no inflammation was observed surrounding them. Qualitative and quantitative analysis of stent struts was performed in two cases that showed no metal corrosion. These findings suggest that new atherosclerotic progression occurred inside the implanted stent without peristrut inflammation. © 2006 Wiley-Liss, Inc.

•HNL: healed neointima layer
•NL: newly deveolped atherosclerotic lesion







ECG