# Recurrent unstable coronary syndrome

**DR. FOGARASSY GY., DR. BUJÁKY CS., DR. FALUKÖZY J.**

**STATE HOSPTAL FOR CARDIOLOGY**

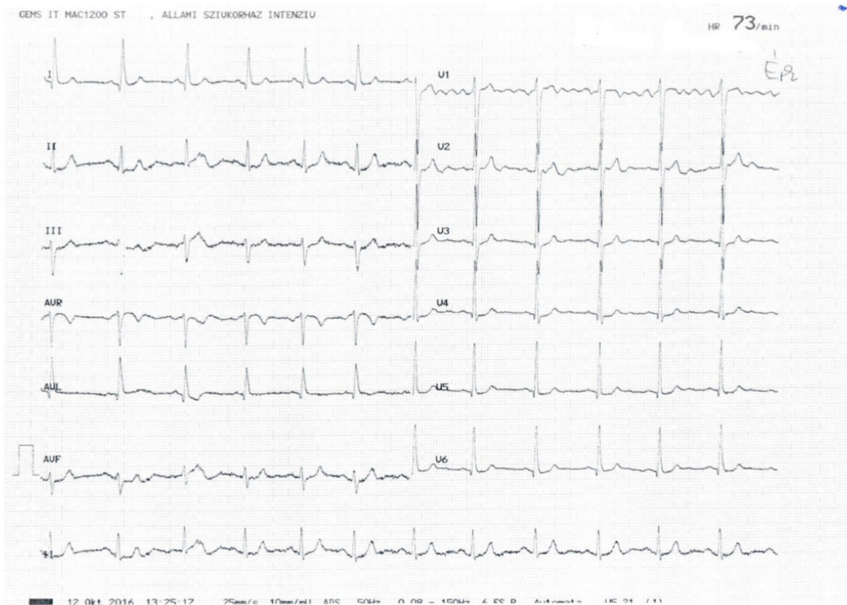
**BALATONFÜRED**

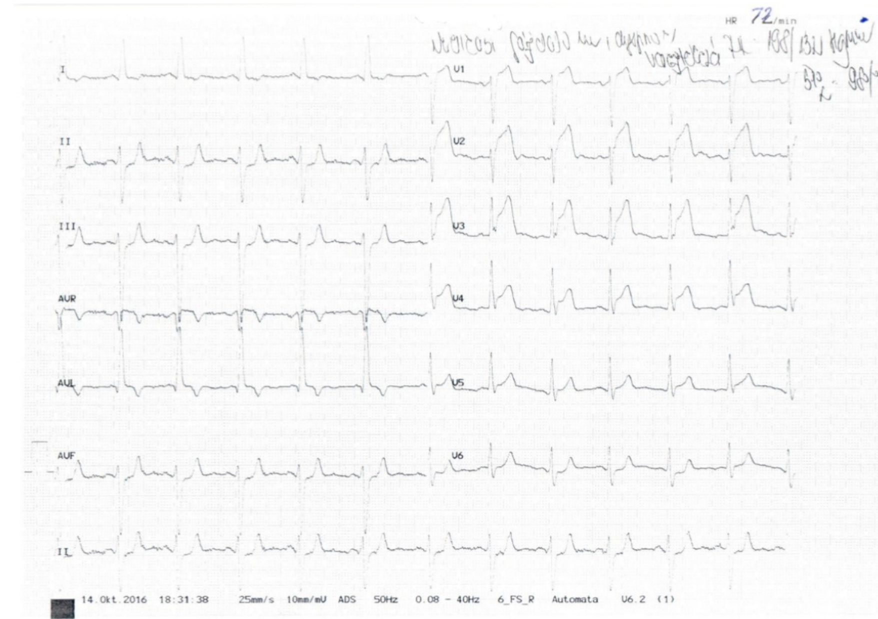
# Case history

- 50 year-old hypertensive smoker man
- 16. Sept. 2016: Typical chest pain lasting for one hour
  - Transient anterior STE, Trop. pos.
  - ECHO: good LV syst. function, hypokinesis in LAD terr.
  - Coro.: culprit lesion non identifiable, LAD proximal focal 25% stenosis
  - Vasospasm suspected, th: 10 mg perindopril, 2x90 mg diltiazem+transdermal NG, 40 mg rosuvastatin, DAPT

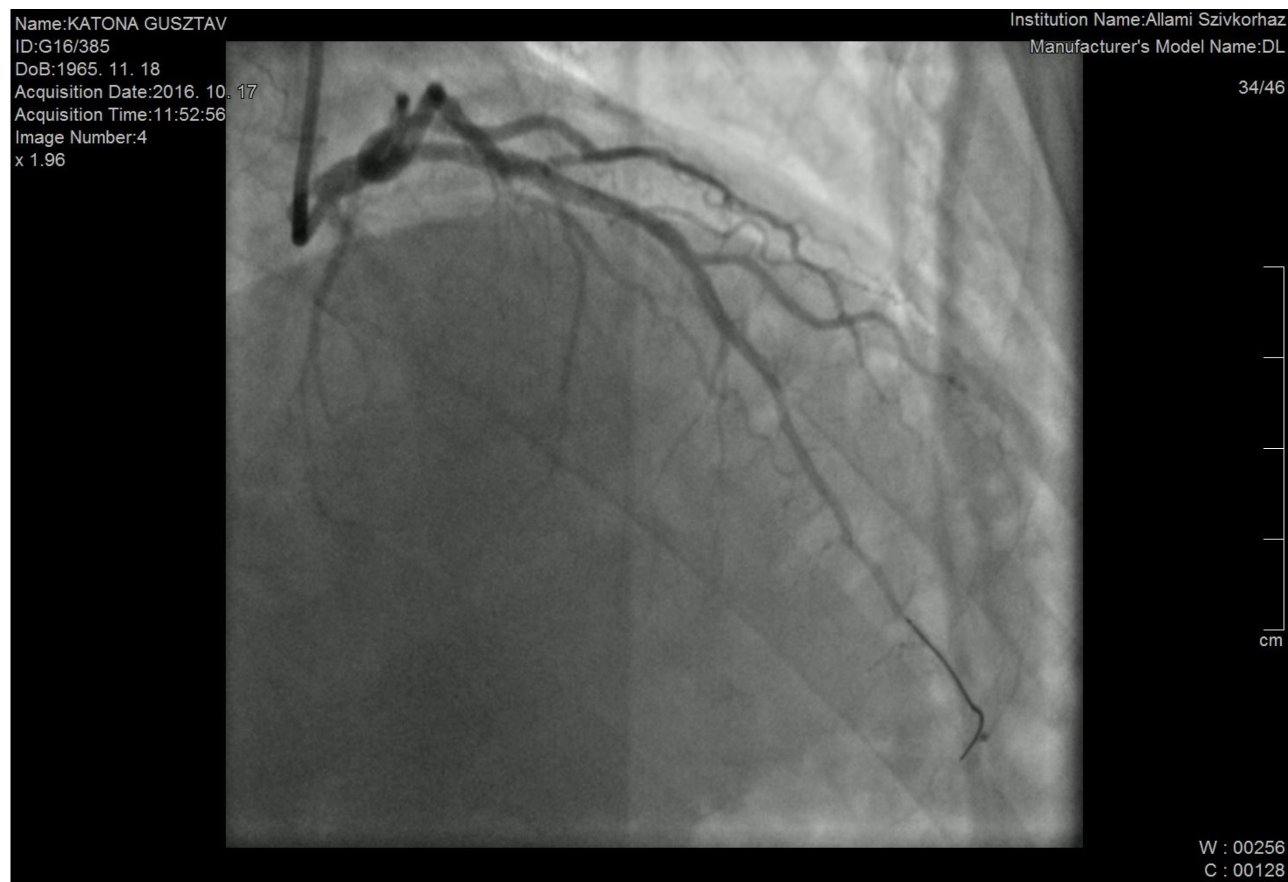
# Case history – 1 month later

- 12. Oct. 2016: repetitive typical chest pain with Trop. pos.
  - Urgent coro.: no change
- After temporaly stabilisation recurrent angina with transient anterior STE

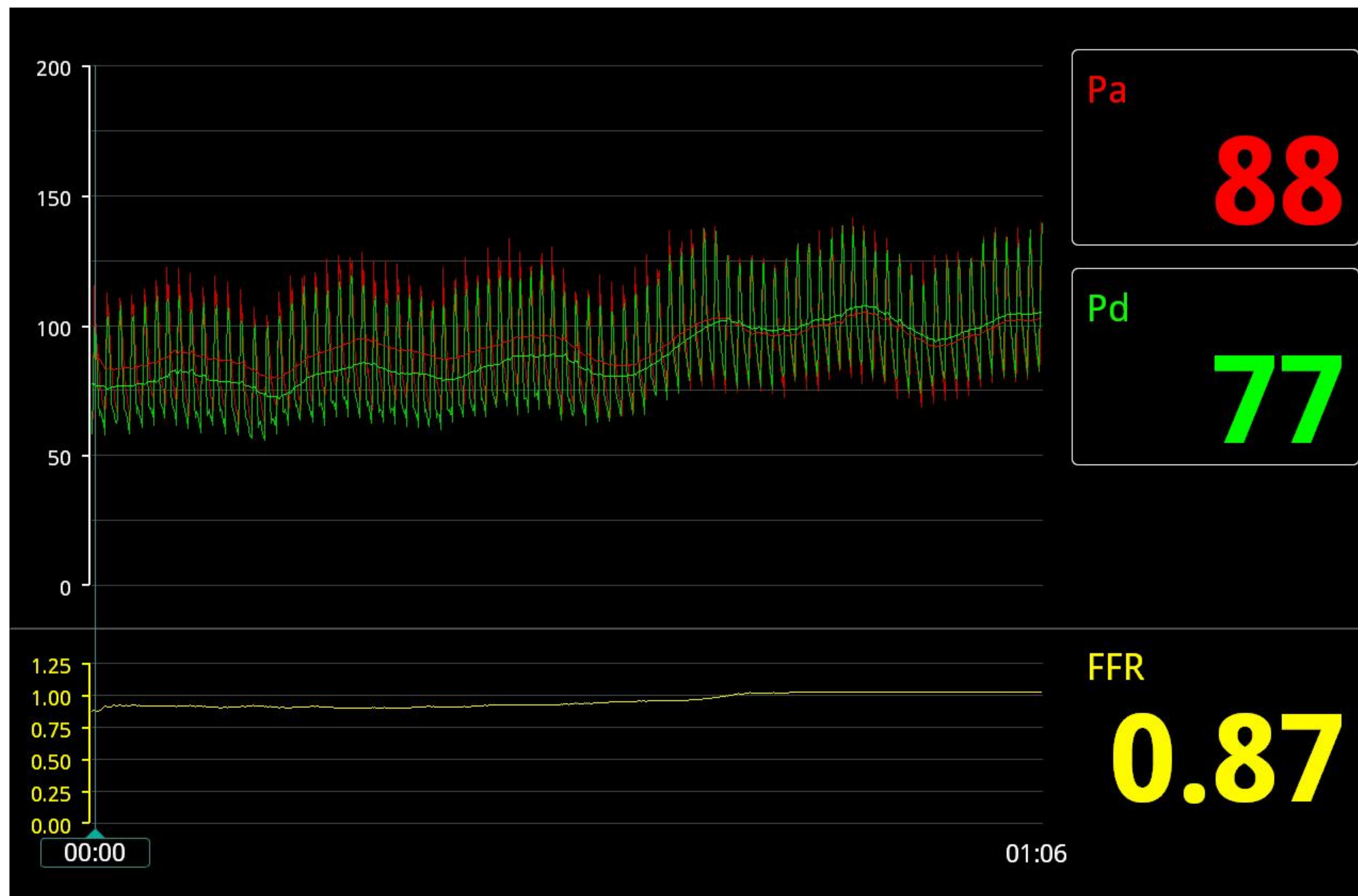


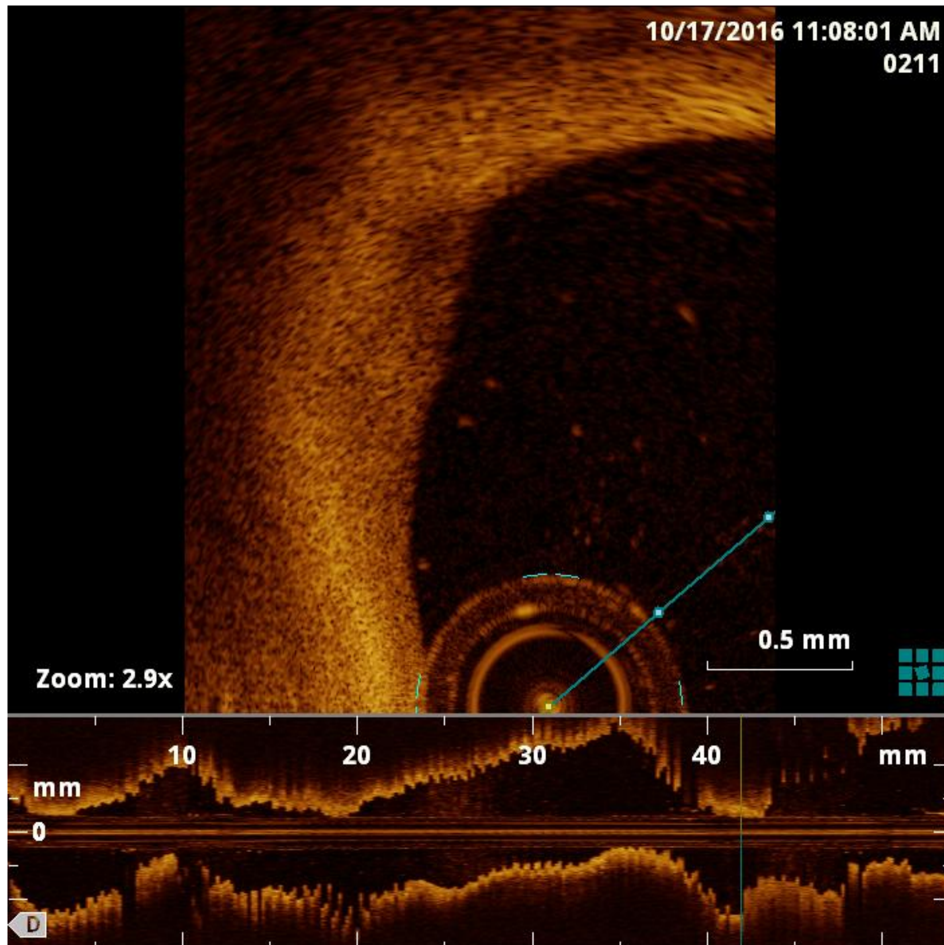
# 17.Oct. 2016, coro.: mild proximal LAD stenosis, no change

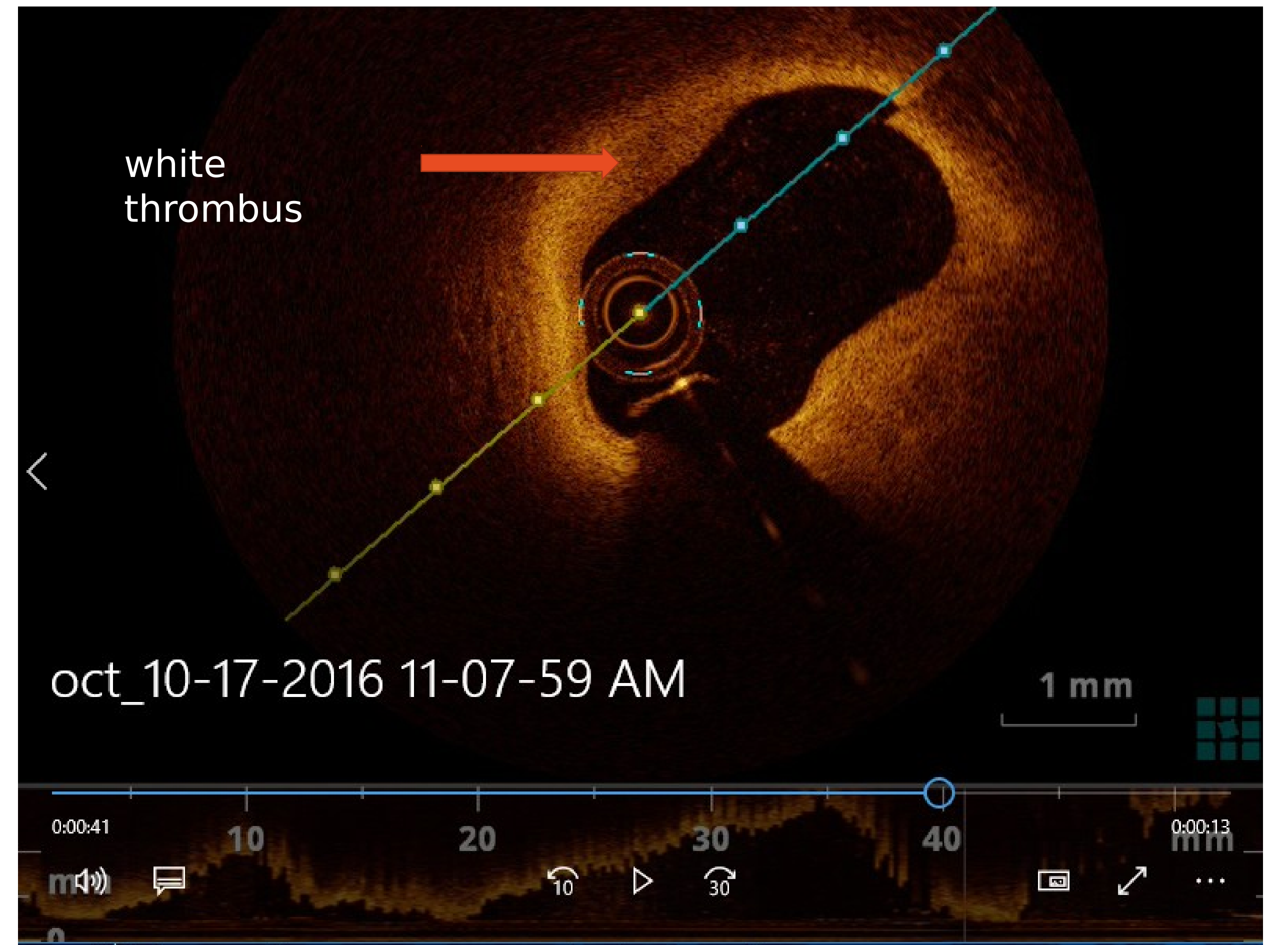


# 17.Oct. 2016. PW LAD



# 17. Oct. 2016 OCT: Plaque erosion with overlying white thrombus in ostial LAD segment



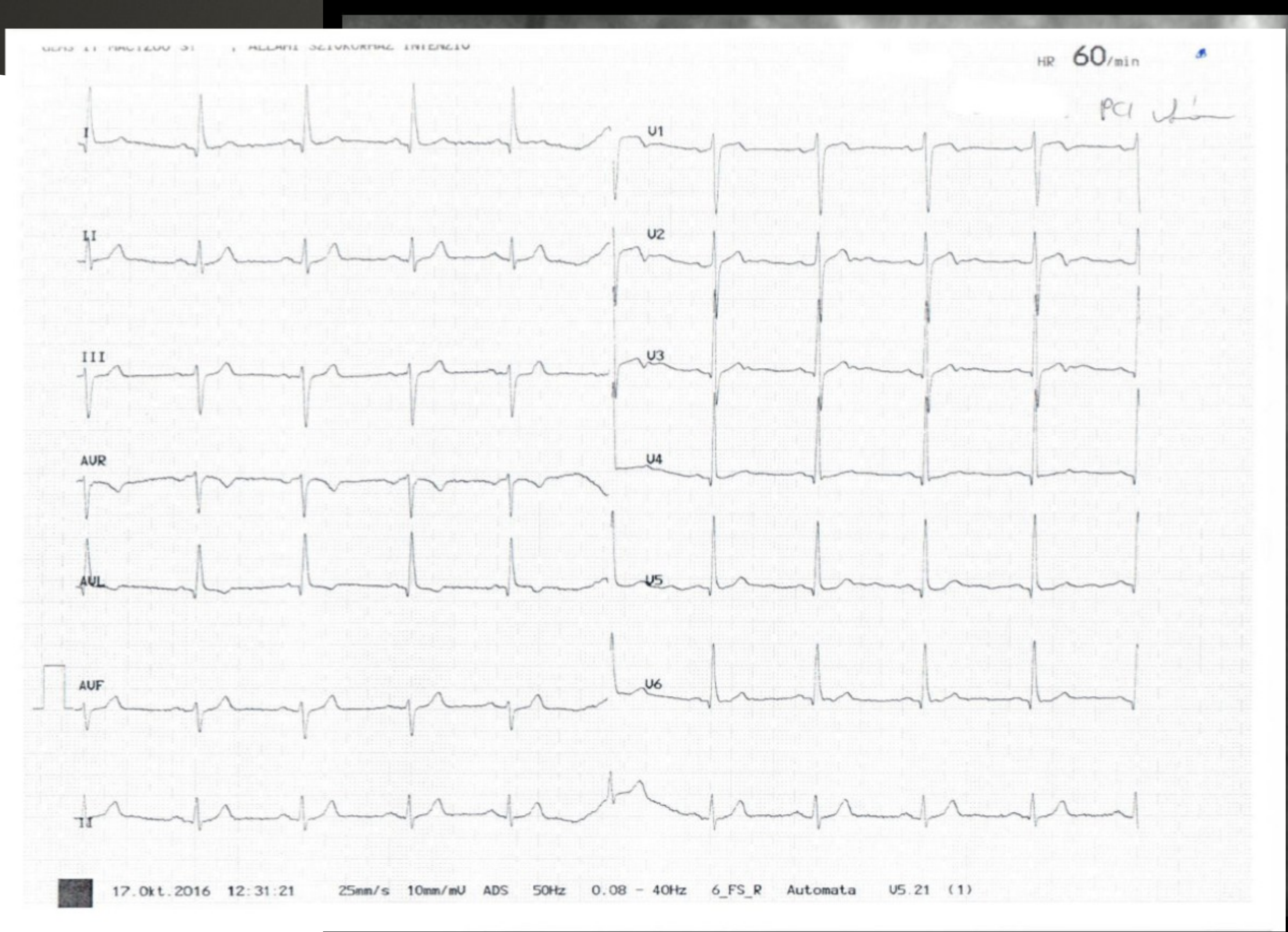



# 17. Oct. 2016: to do LAD PCI, or not

- ACS due to plaque erosion without significant stenosis can be treated medically with good results
- Regarding the recurrent, refractory STE angina, PCI was decided.

Haibo J et al. Effective anti-thrombotic therapy without stenting: intravascular optical coherence tomography-based management in plaque erosion (the EROSION study) *European Heart Journal*. 2017; 38(11): 792–800,

# 17. Oct. 2016: LAD PCI

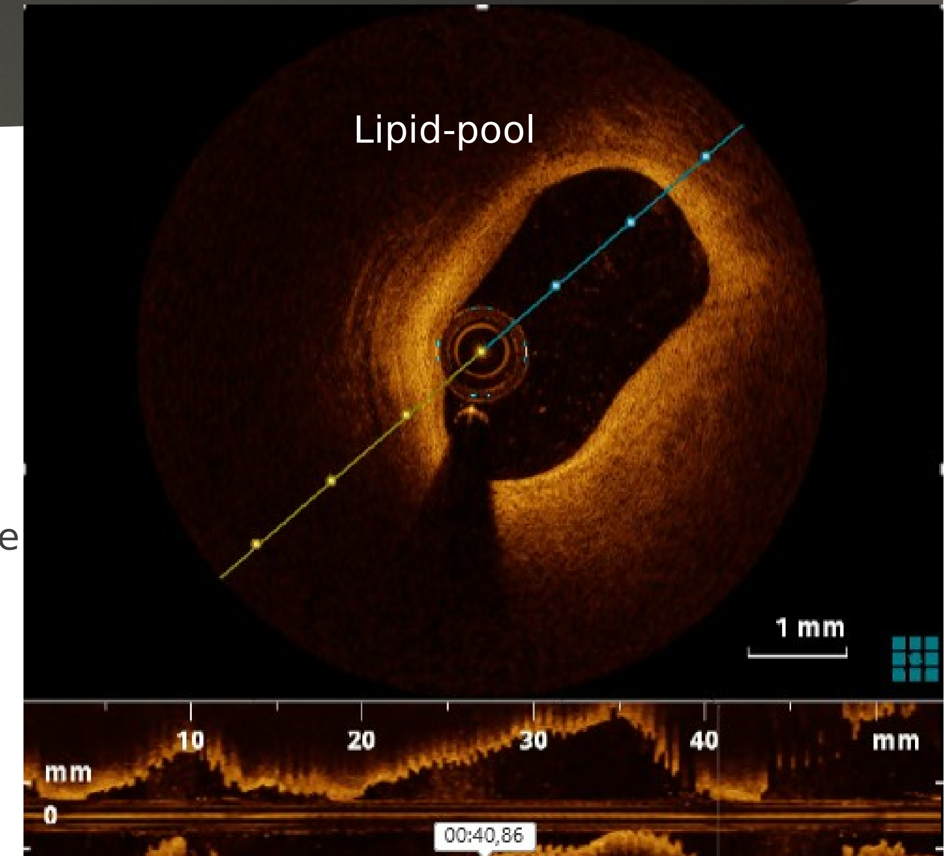



After LAD PCI the patient got symptom-free, ECG normalized. No angina reoccured during F-U untill today.

Haibo J et al. Effective anti-thrombotic therapy without stenting: intravascular optical coherence tomography-based management in plaque erosion (the EROSION study) *European Heart Journal*. 2017; 38(11): 792–800,

# Plaque erosion in ACS

- Plaque erosion as culprit lesion in 30-45 % of ACS
- More frequent:
  - Younger patients (<55 years)
  - NSTEMI
- Characteristics:
  - No evidence of plaque rupture
  - Absence of TCFA and superficial large lipid-rich plaque/big necrotic core
  - Intact, thick fibrous cap rich in smooth muscle cells
  - Lipid-pool in deep intima, negative vascular remodelling frequent
  - Overlying white thrombus
  - Vasospasm





Kwon JE, et al. Multimodality Intravascular Imaging Assessment of Plaque Erosion versus Plaque Rupture in Patients with Acute Coronary Syndrome. Korean Circ J. 2016 Jul; 46(4): 499–506.

Kajander OA et al. Culprit plaque morphology in STEMI – an optical coherence tomography study: insights from the TOTAL-OCT substudy. Eurointervention. 2016;12(6):716-23.

Park HC et al. Comparison of morphologic findings obtained by optical coherence tomography in acute coronary syndrome caused by vasospasm and chronic stable variant angina. Int J Cardiovasc Imaging. 2015;31(2):229-37.

# Conclusion

- Plaque erosion is a frequent culprit lesion of ACS (NSTEMI, STEMI)
  - OCT  is  the only tool to reveal it
  - It can mostly be managed medically with success
- OCT is crucial to indentify lesions causing refractory unstable symptomes to guide PCI

# Thanks for the attention!