

Successful Bailout of Stent Deformation by FD-OCT Guidance

Nara Medical University

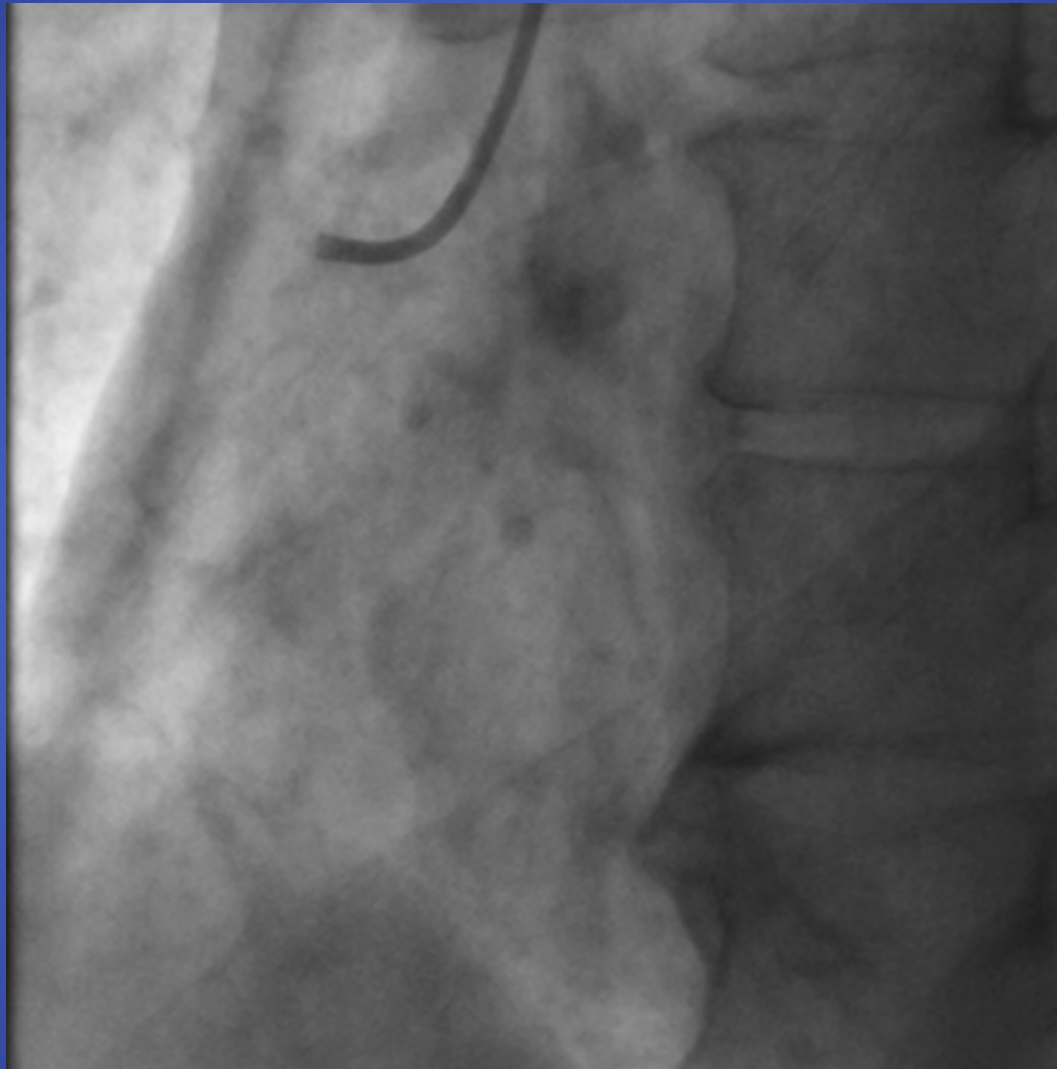
First Department of Internal Medicine

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Case Presentation

- A 62-year-old, Male
- Acute anterior myocardial infarction (AMI)
- LAD culprit lesion (#7) was successfully treated by primary PCI.
- Coronary angiography showed 90% non-culprit stenosis at the middle segment of RCA (#2) , and staged PCI for RCA was performed on 11th hospital day.

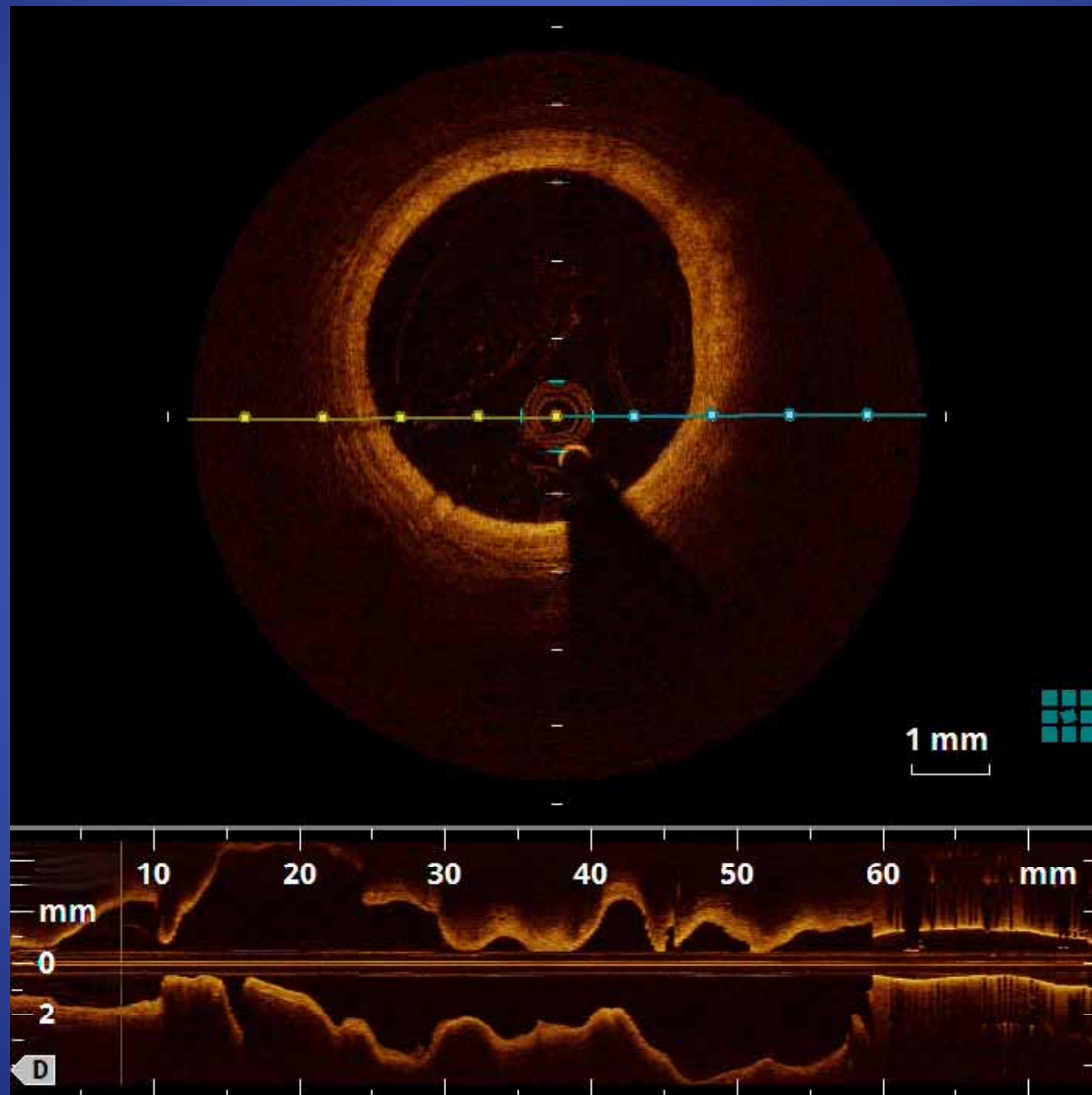
Angiography of the RCA



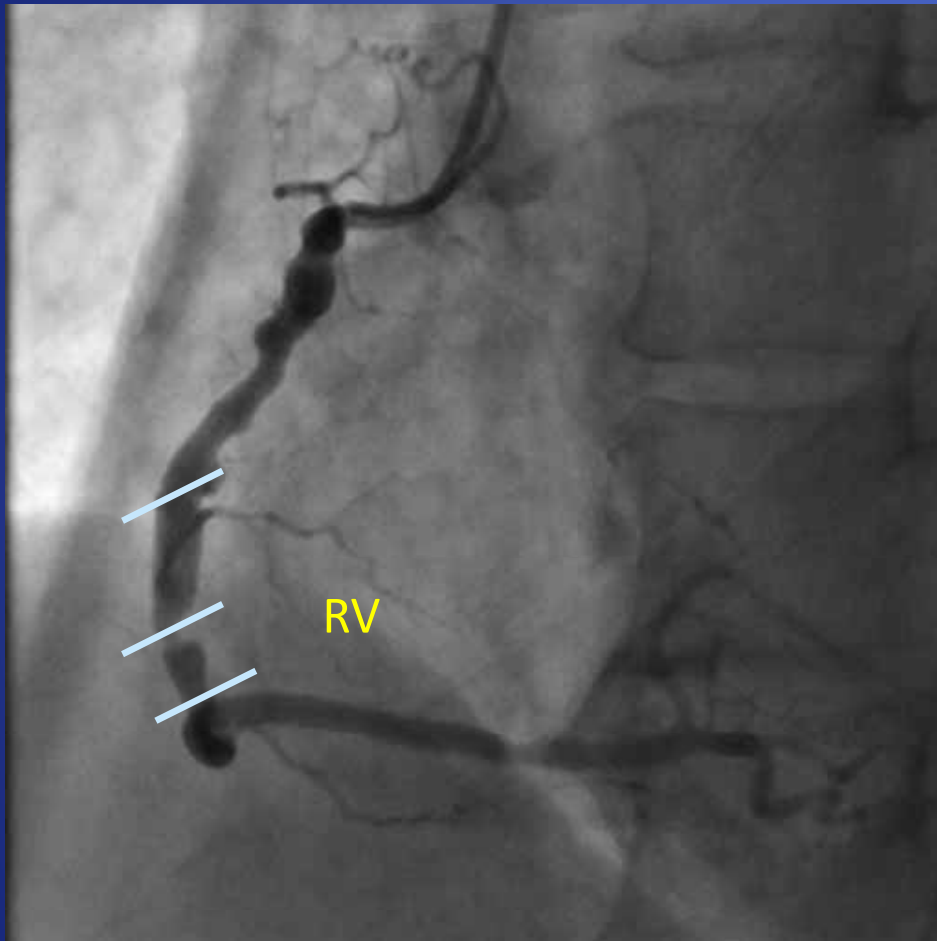
RCA angiography showed,

- 1) severe stenotic lesion in the middle part of RCA,
- 2) diffuse atherosclerotic changes.

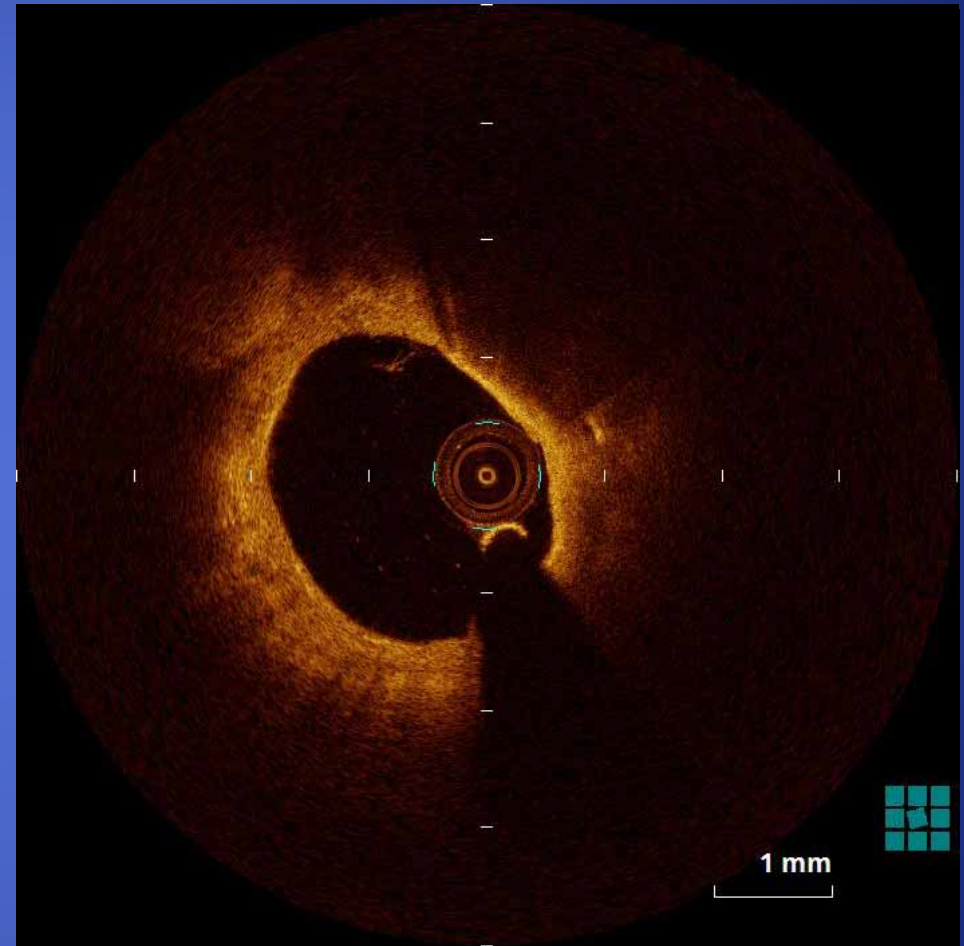
FD-OCT Imaging before PCI



CAG



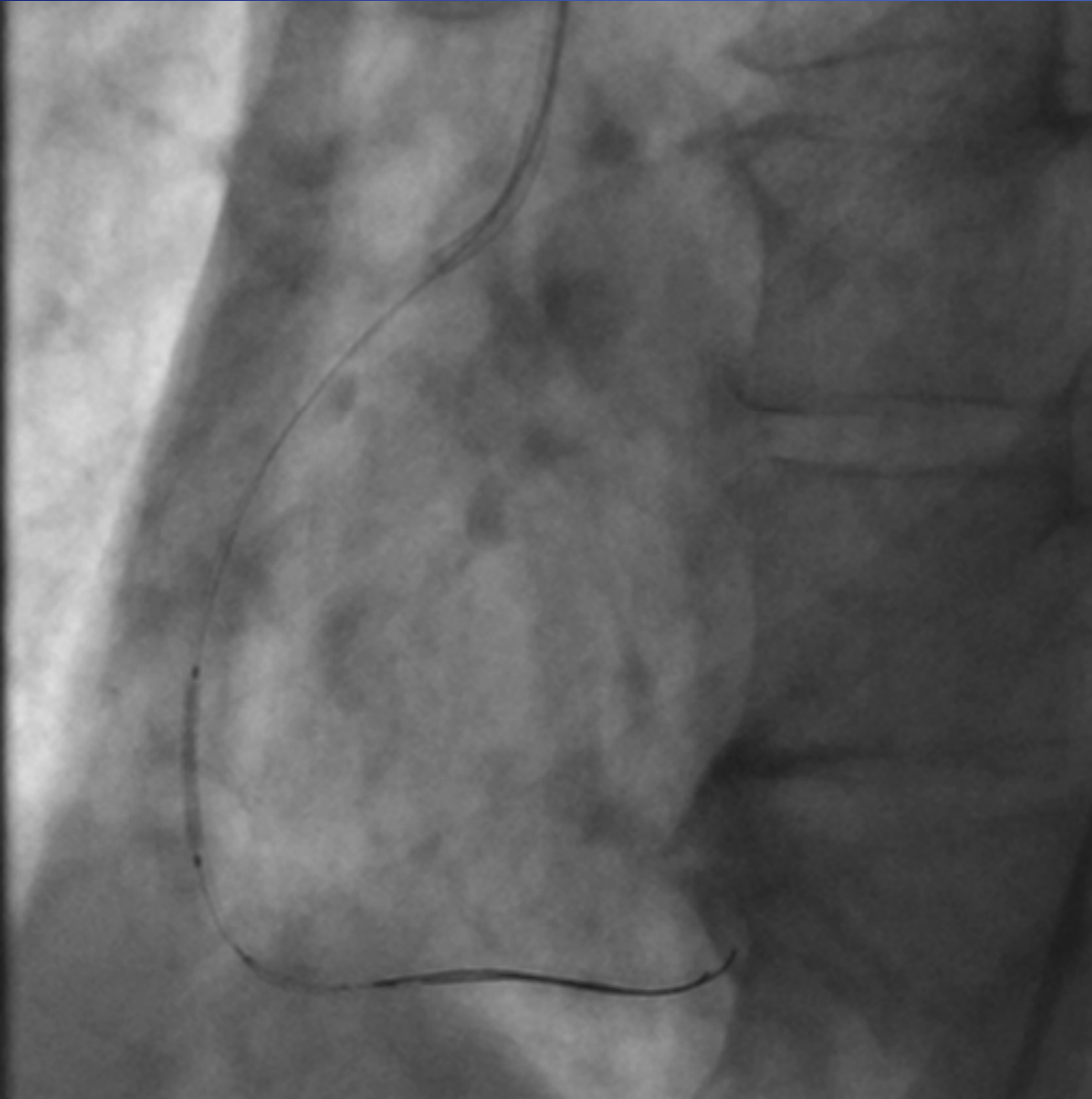
FD-OCT



FD-OCT showed **plaque rupture, large lipid pool, macrophage infiltration** around culprit lesion.

We decided to use distal protection device (**Filtrap**).

PCI Procedure



Lt. TFI

6Fr JR4.0

Guide wire TGV NEXT

Filtrap

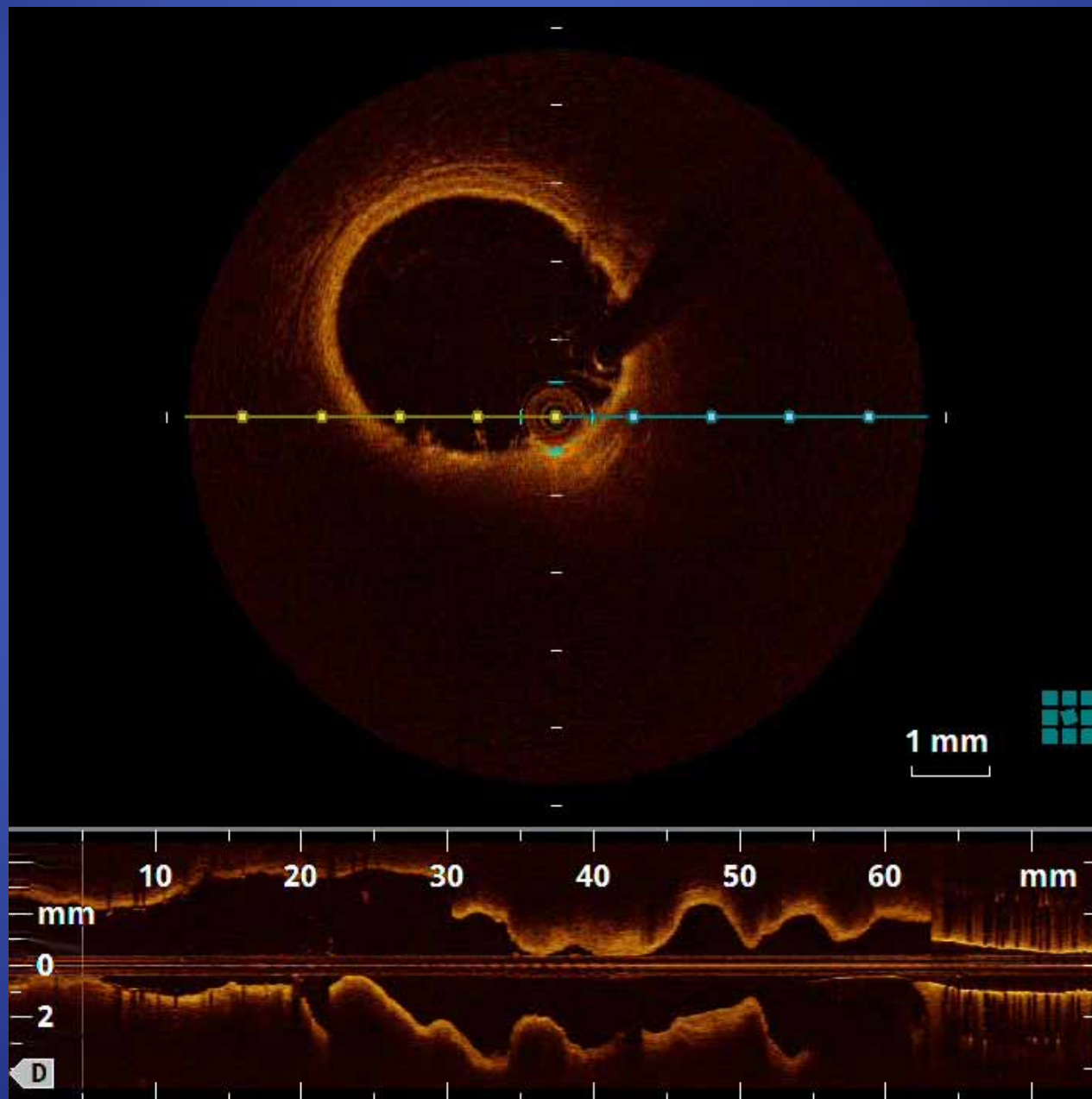


BES (Nobori 3.5/14mm)

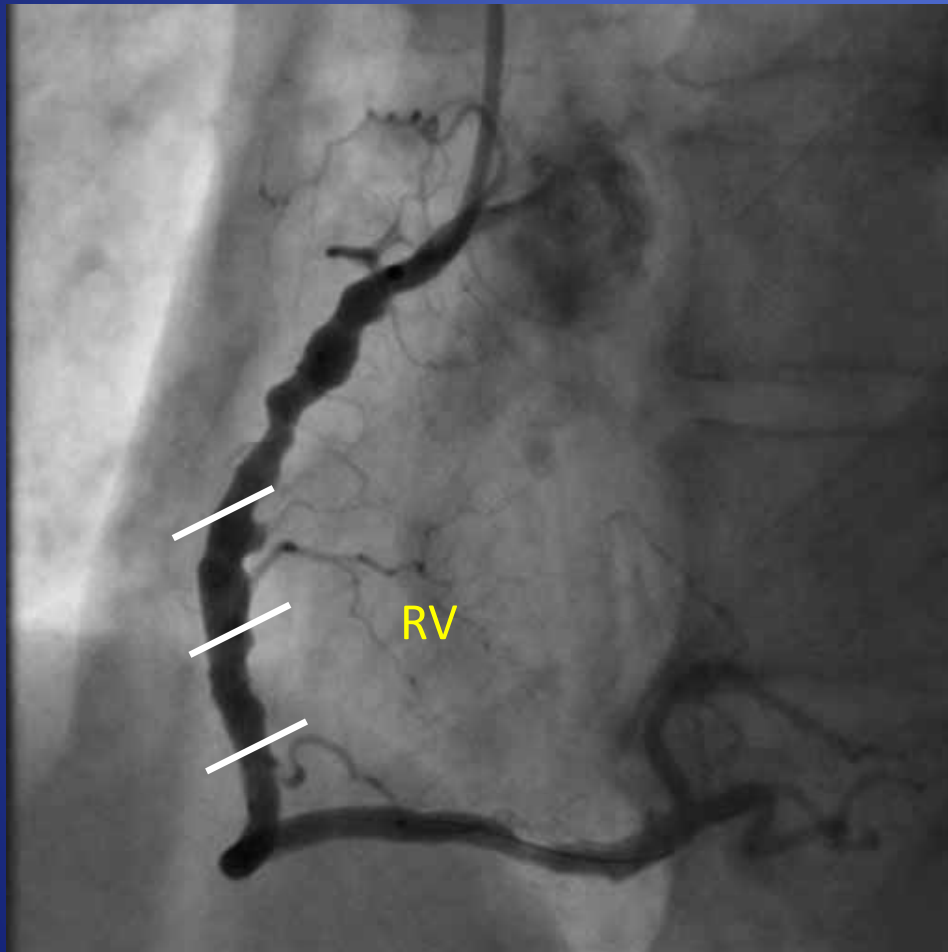
Post-stent dilatation

Maverick 4.5/12mm

FD-OCT Imaging after Retrieving of Filtrap

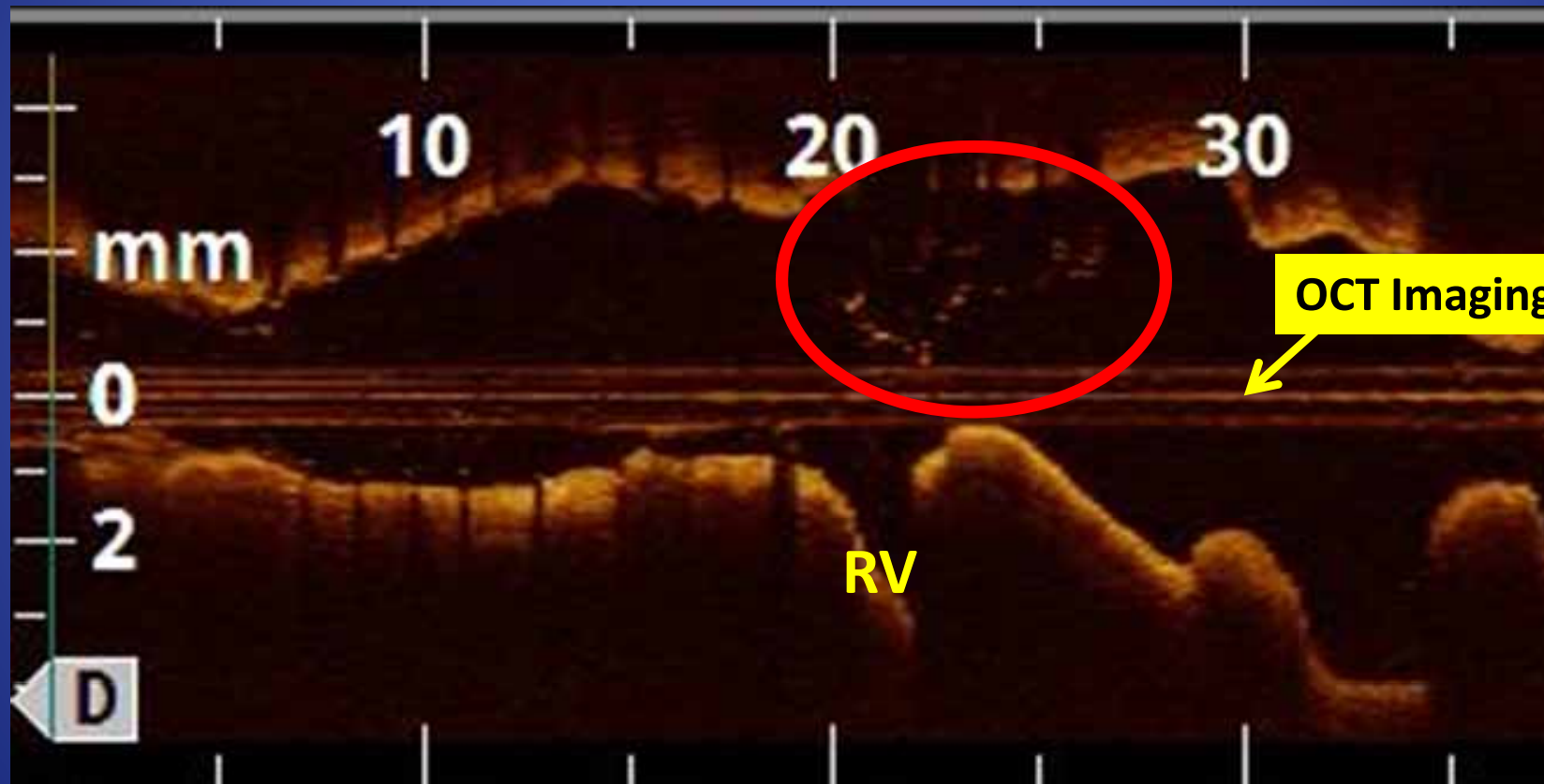


First Recrossing Guide Wire was Incorrectly Positioned outside of the Stent Lumen

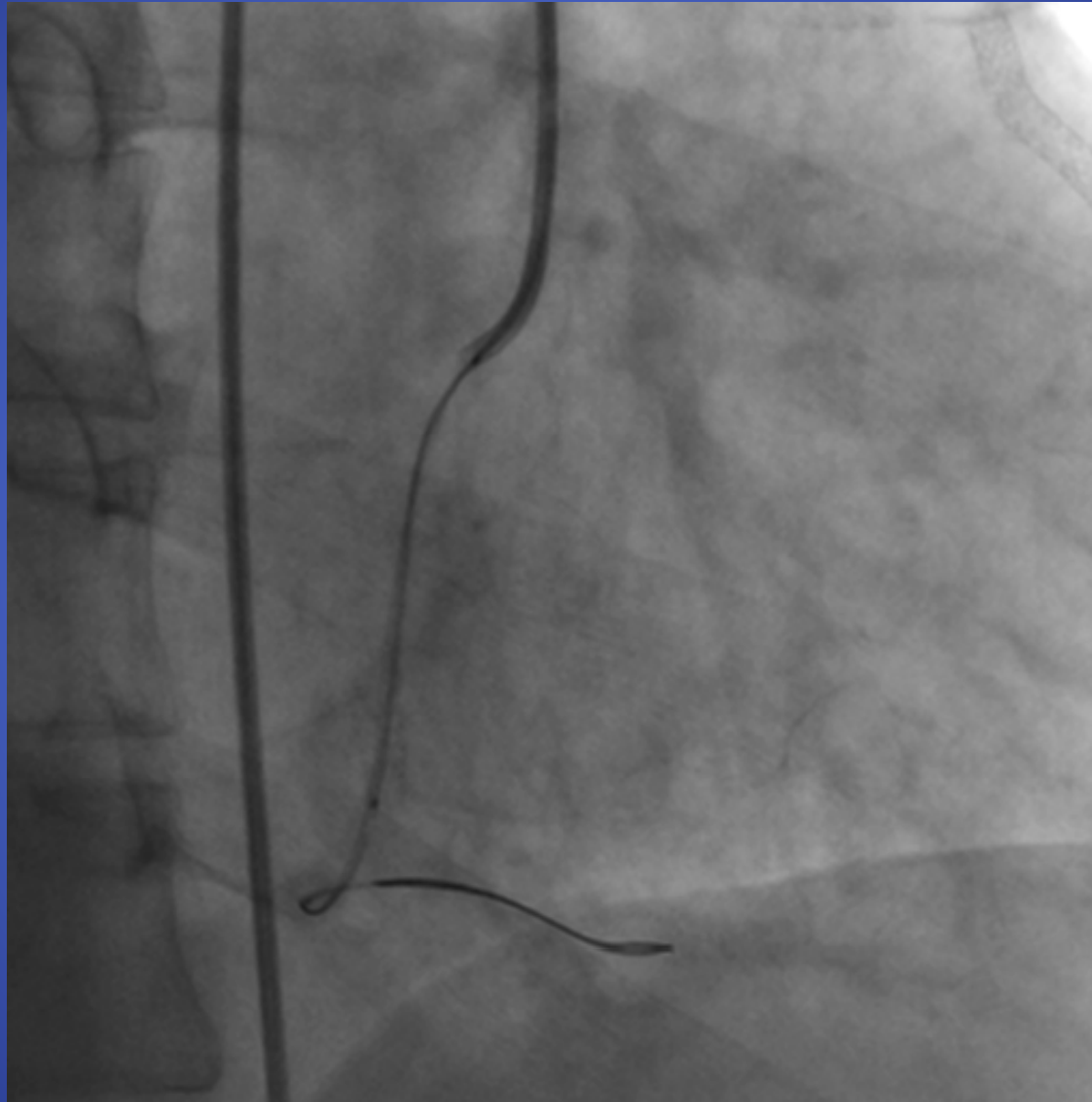


Long-Axis View of Deformed Stent

Mal-distributed Stent Struts

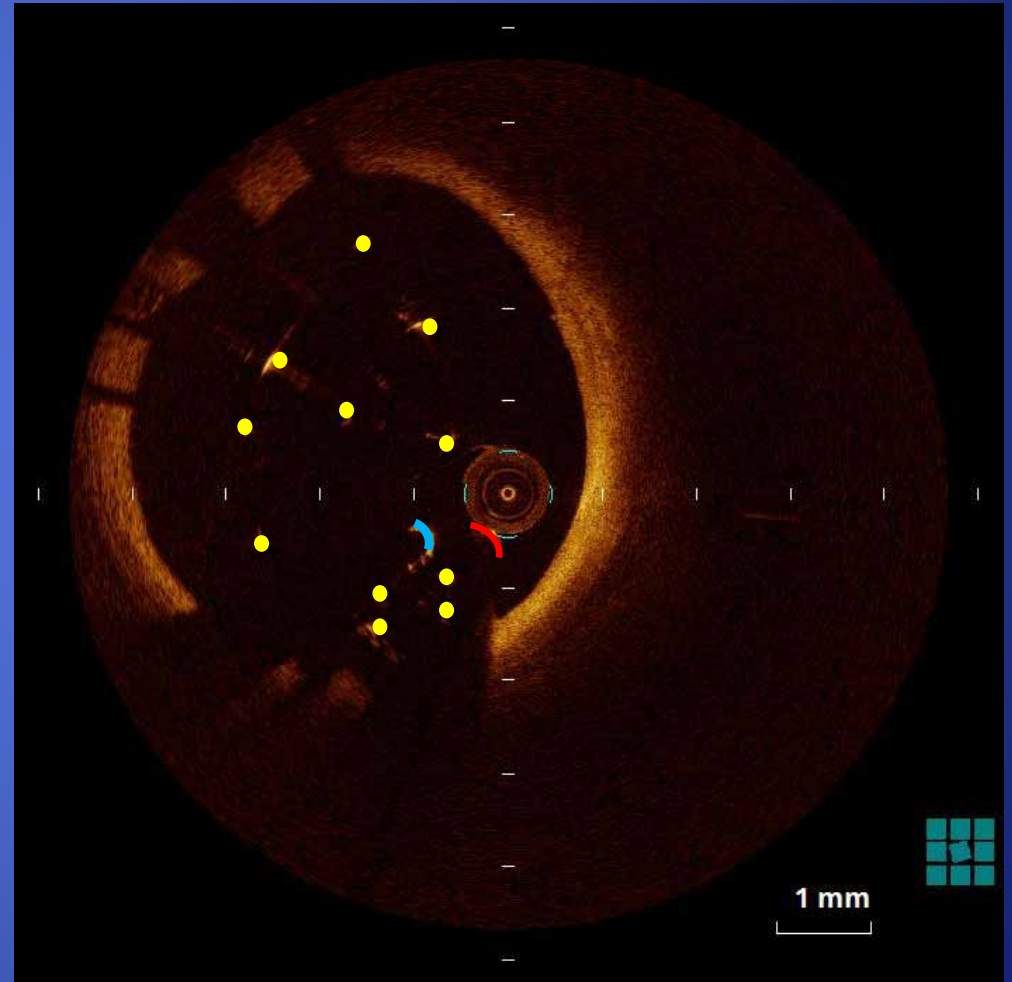
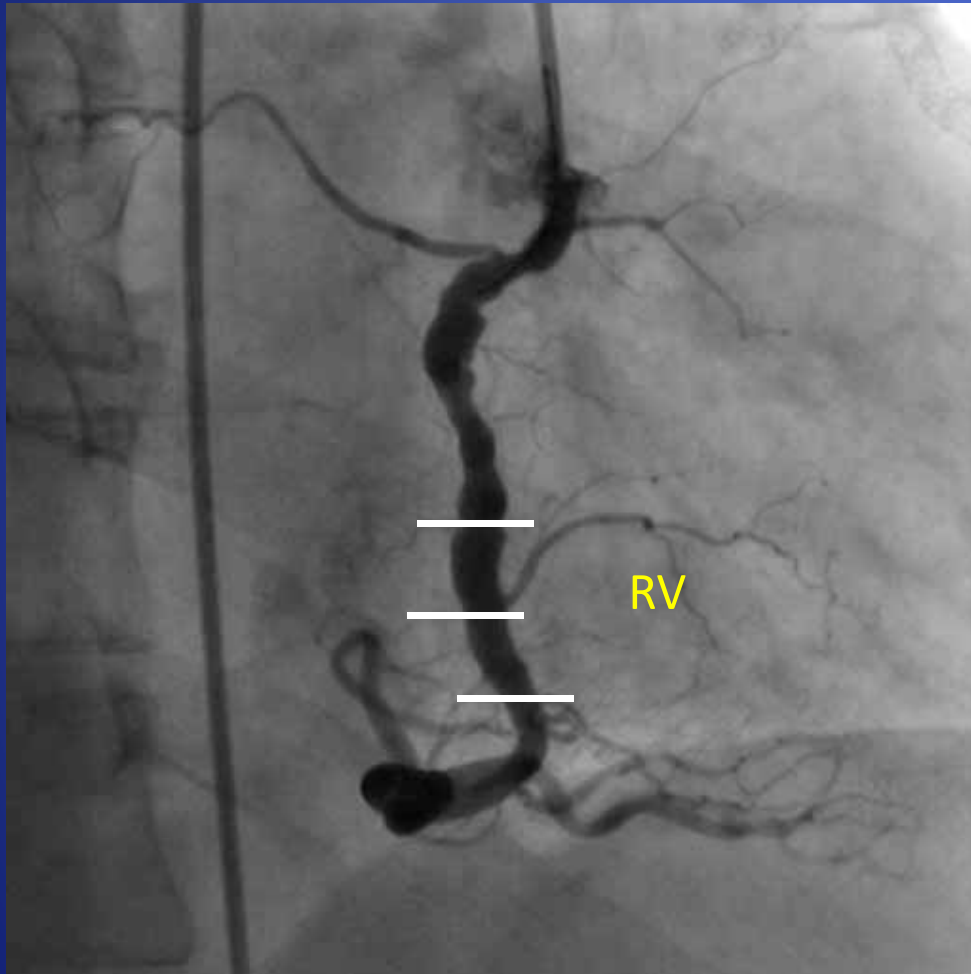


RAO View of RCA

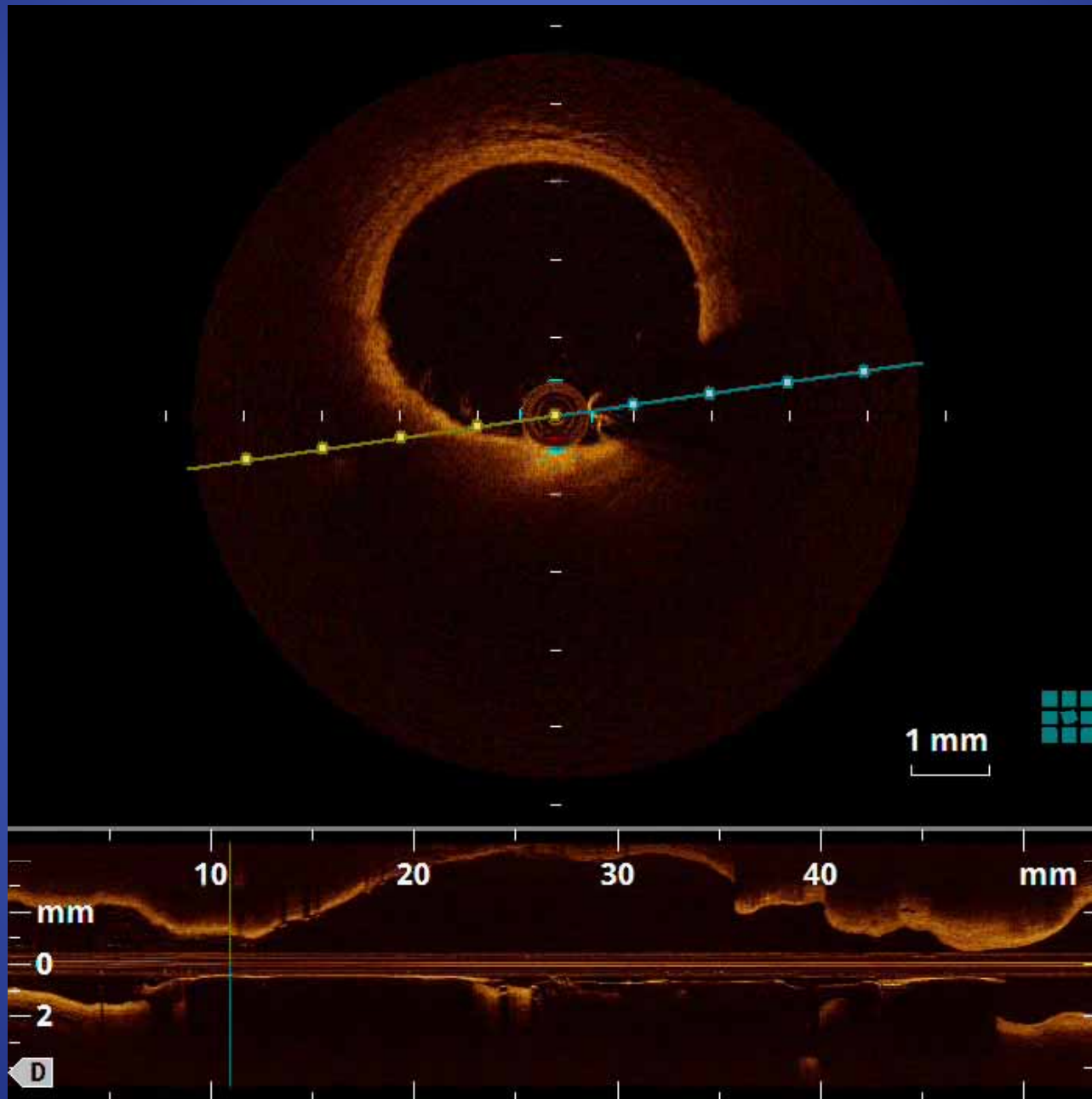


By referring the findings of both **FD-OCT** and RAO view of **CAG**, we tried to correctly induce the second guide-wire into the deformed stent lumen.

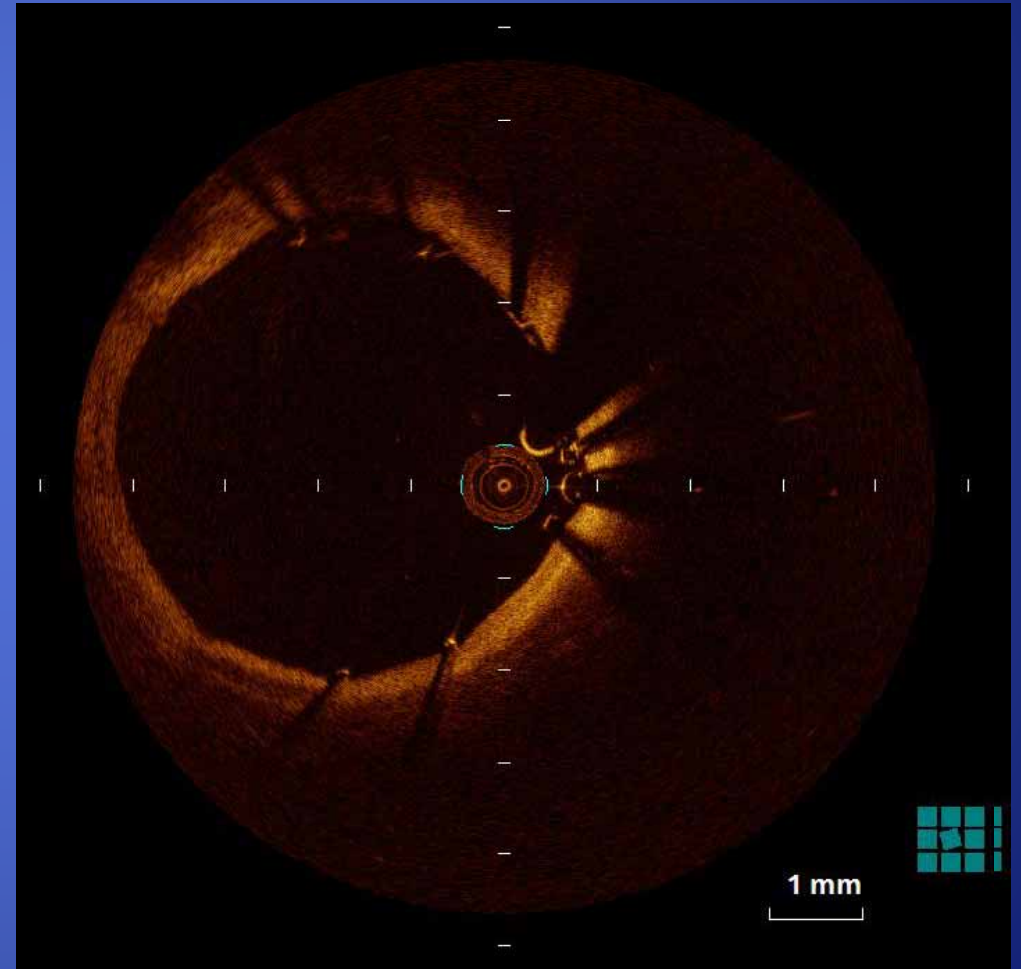
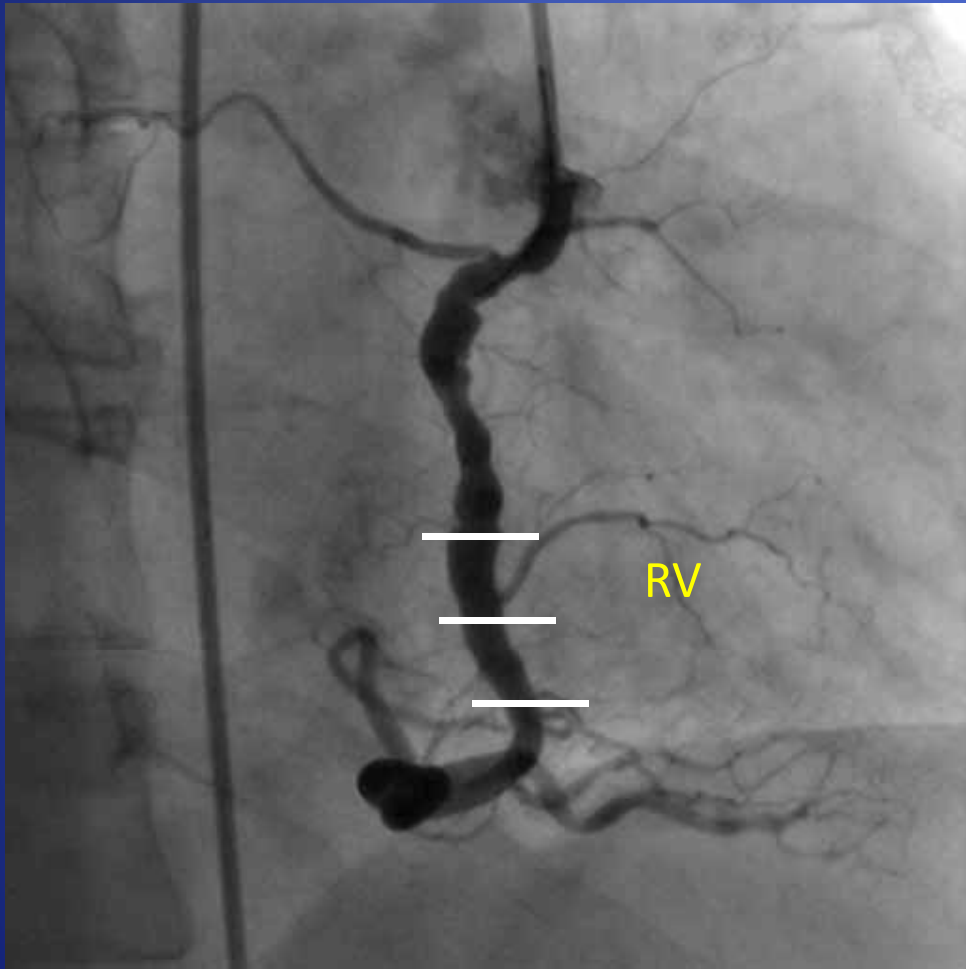
Second Guide Wire Successful Recrossed into Deformed Stent Lumen



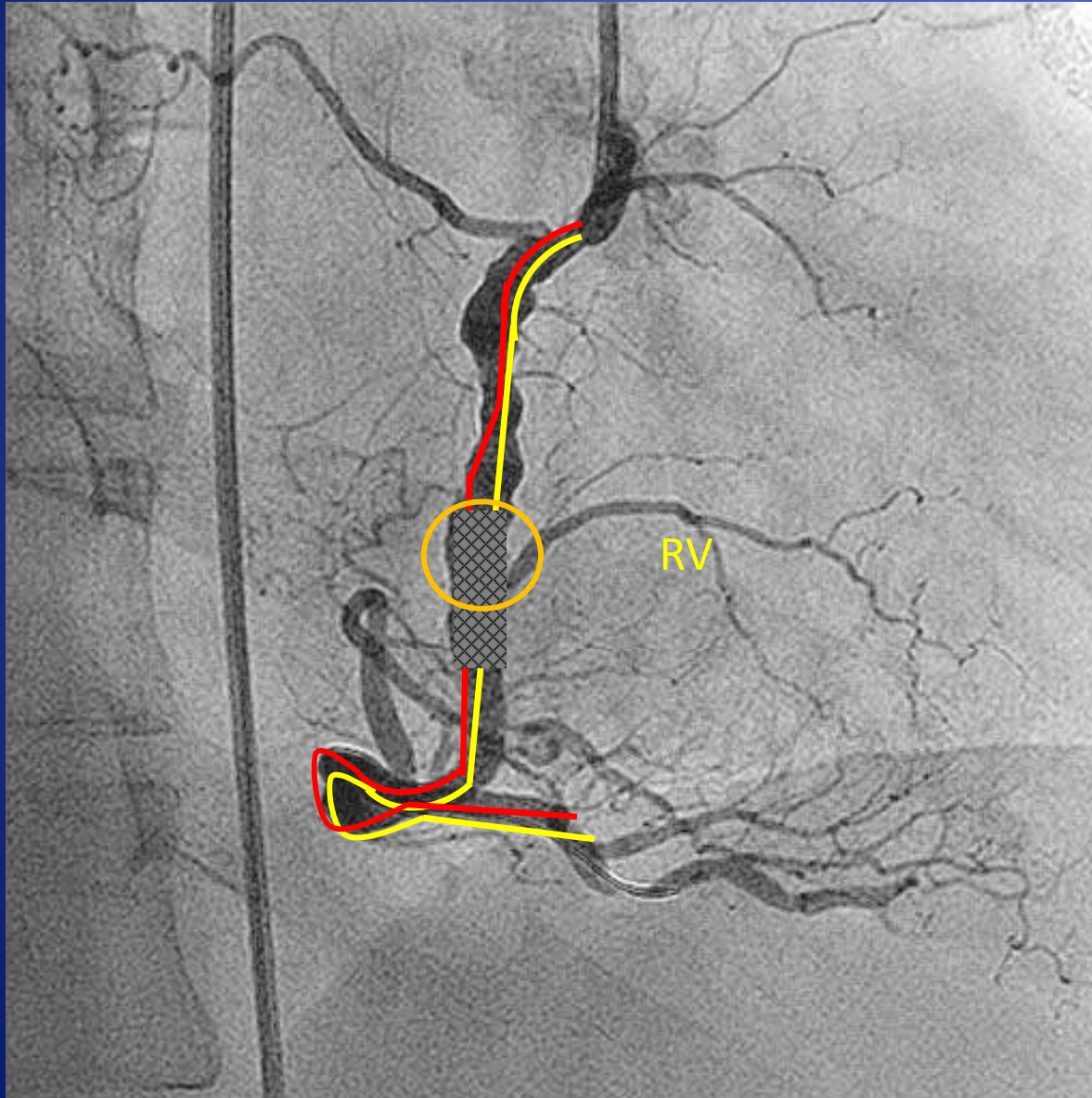
FD-OCT Imaging after Bailout Balloon Dilation of Stent Deformation



FD-OCT Imaging after Bailing Balloon Dilation of Stent Deformation



Summary of Procedure



- 1) Stent implantation with distal protection (Filtrap)
- 2) Stent deformation occurred when we retrieved Filtrap after stent implantation.
- 3) First guidewire recrossing: OCT showed inappropriate wire position and stent deformation.
- 4) Second guidewire recrossing: By inducing the second guide wire to the opposite side of RV branch, the wire appropriately crossed into true stent lumen.
- 5) OCT confirmation of appropriate wire position.
- 6) Bailout balloon dilatation.

Conclusions

- We experienced a case with stent deformation which occurred during the detraction of distal protection device.
- FD-OCT clearly showed structural deformation of the stent and wire position during bailout procedure.
- FD-OCT was useful for the guide of rescuing PCI related complications.