

# **Directional Scoring Effect Attained by an Unique Structure of Scoreflex**

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# Introduction

□ Lesion modification is very important when we treat the lesions as follows.

## 1. Calcified lesion

- ✓ Difficult to achieve enough stent expansion and it leads stent failure like a stent thrombosis or a restenosis.

## 2. Eccentric lesion

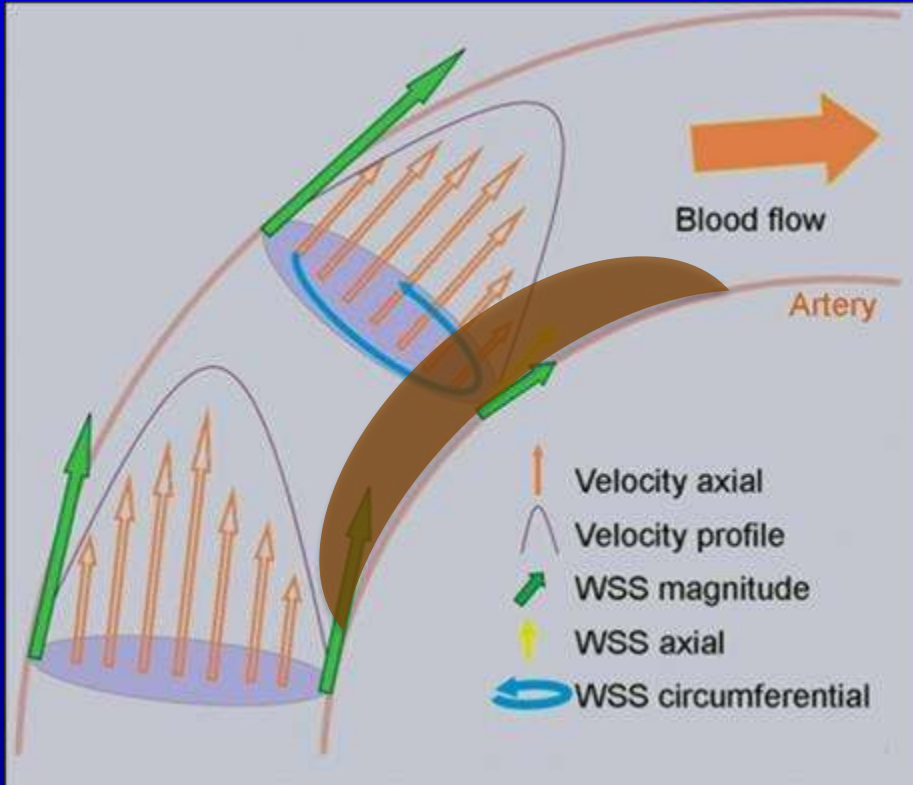
- ✓ Difficult to achieve enough stent expansion.
- ✓ Risk of coronary rupture by an overexpansion of healthy vessel wall.

## 3. Bifurcated lesion

- ✓ An occlusion or a severe narrowing of side branch ostium due to carina shift or plaque shift.

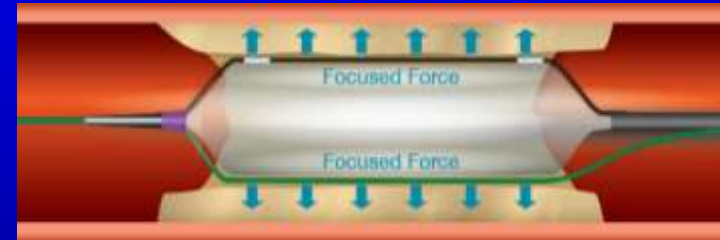
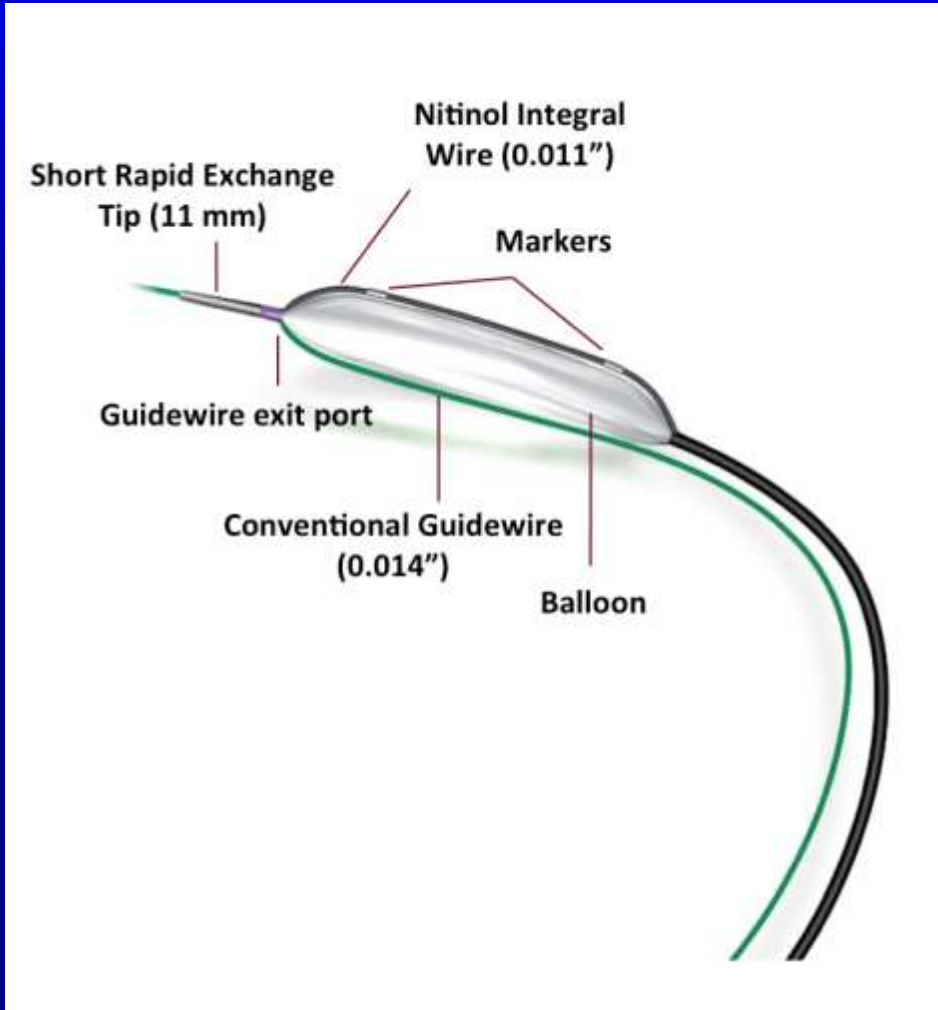
## Eccentric Lesion

### Plaque distribution at vessel curvature



- ❑ There exists a low shear stress site in the lesser curvature.
- ❑ Atherosclerotic plaque usually distributes in this low shear stress site.
- ❑ Generally, lesion modification to a plaque distributes in lesser curvature by conventional balloon is difficult.

## Structure of Scoreflex



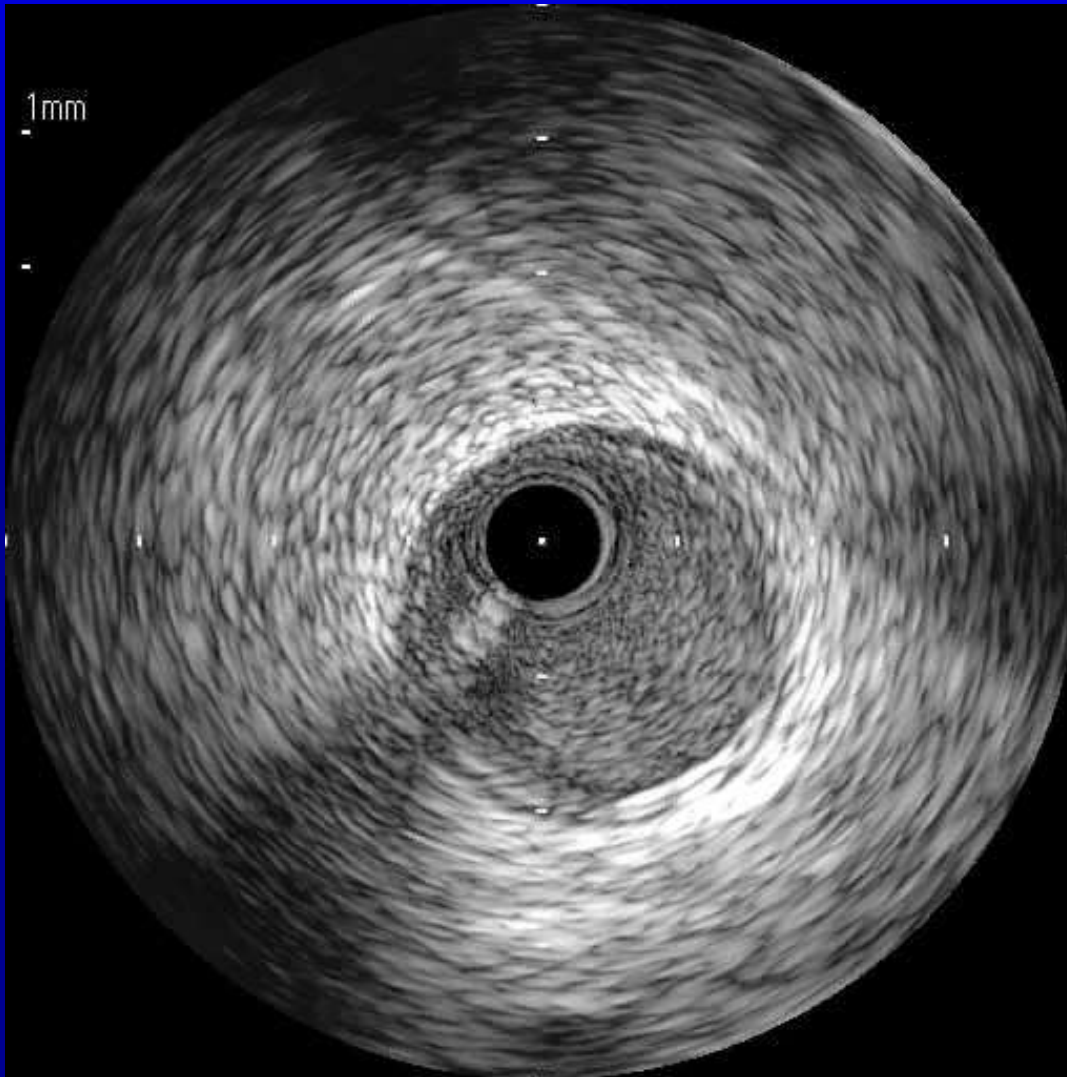
- Because of short rapid exchange tip, delivery guide wire pass through outside the balloon.
- Delivery guide wire (0.014inch) and nitinol integral wire (0.011inch) contribute to make focused force toward vessel wall.

## Directional scoring with Scoreflex



- ✓ Scoreflex has unique short monorail structure.
- ✓ Because of this structure, balloon catheter generally goes to a greater curvature and delivery wire distributes to a lesser curvature.
- ✓ Push the balloon catheter toward the lesion and pull the delivery guide wire makes this phenomenon remarkable.

## LAD eccentric lesion with calc

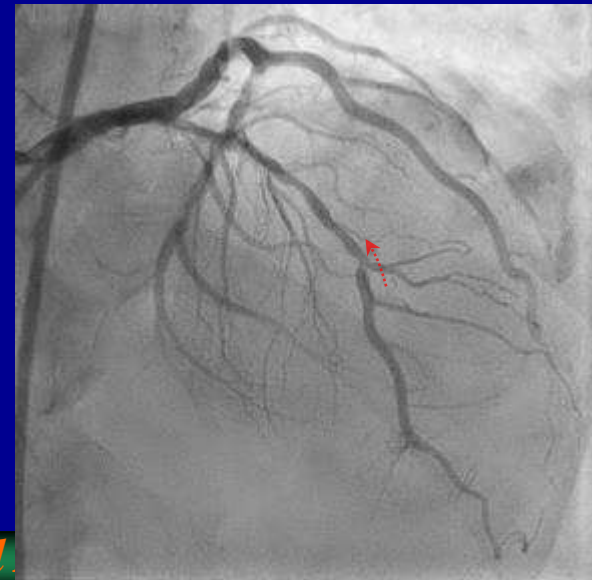


### System

Femoral approach

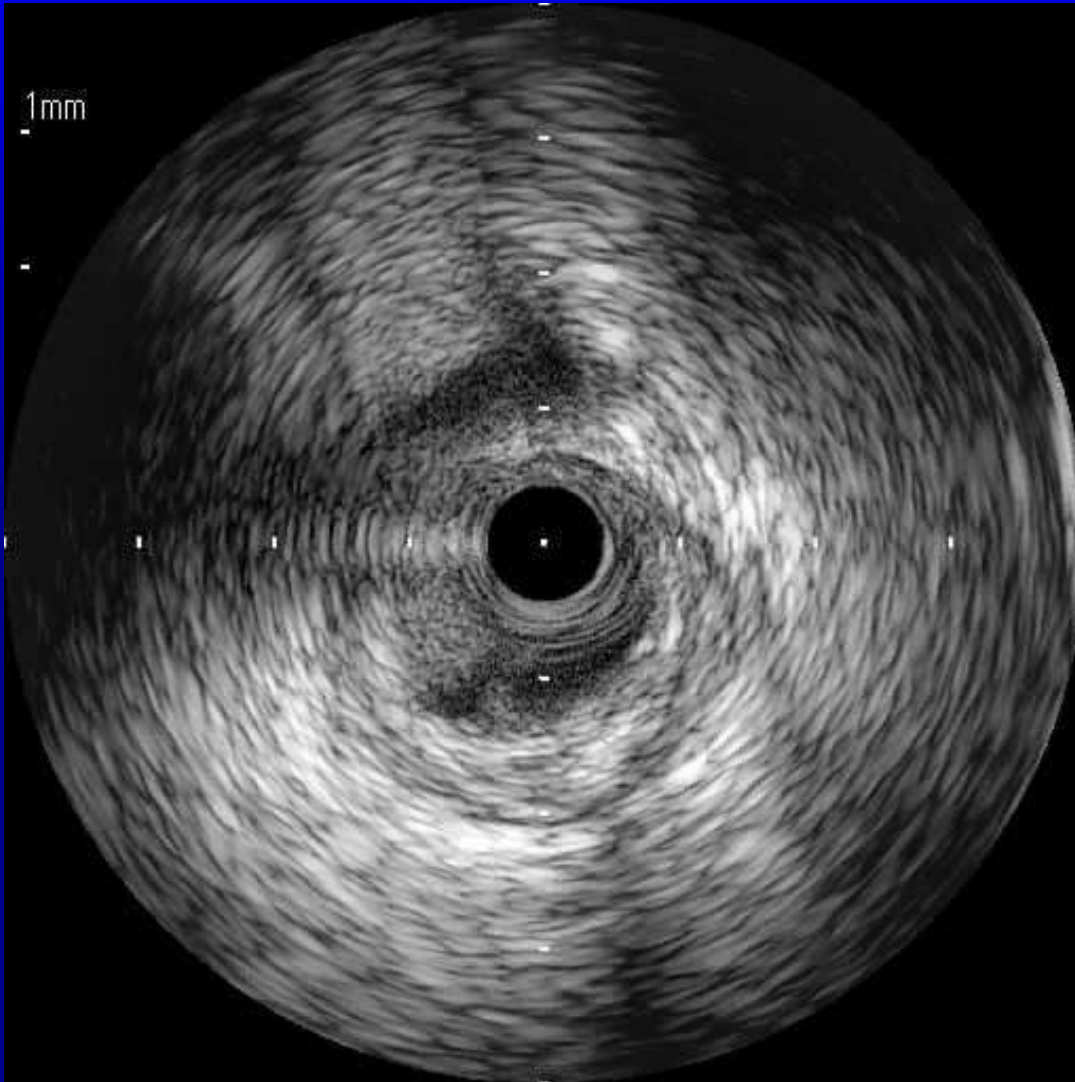
7Fr Hyperion SPB3.5 with SHs

- ❑ LAD diffuse lesion with calc
- ❑ There existed the eccentric lesion at the bifurcation of diagonal branch.
- ❑ Because full moon calc was observed by IVUS in proximal lesion, we performed 1.75mm sized rotablation.





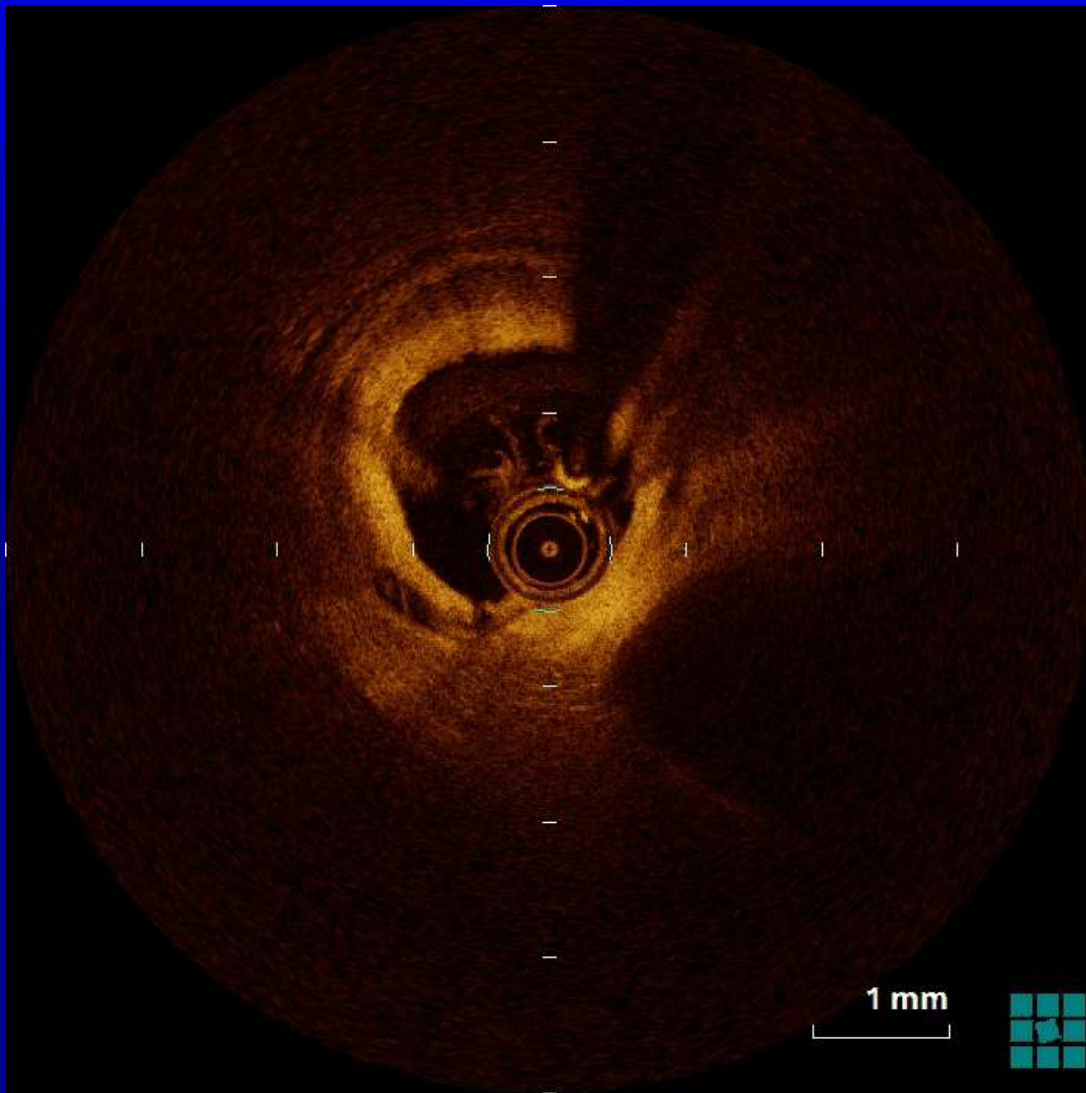
## LAD eccentric lesion with calc



- We dilated this eccentric lesion with Scoreflex by using previously described method.  
[push the balloon catheter toward lesion and pull the delivery wire]
- As you can see here, delivery wire was positioned to a lesser curvature.
- We looked IVUS after two times dilation by a Scoreflex.

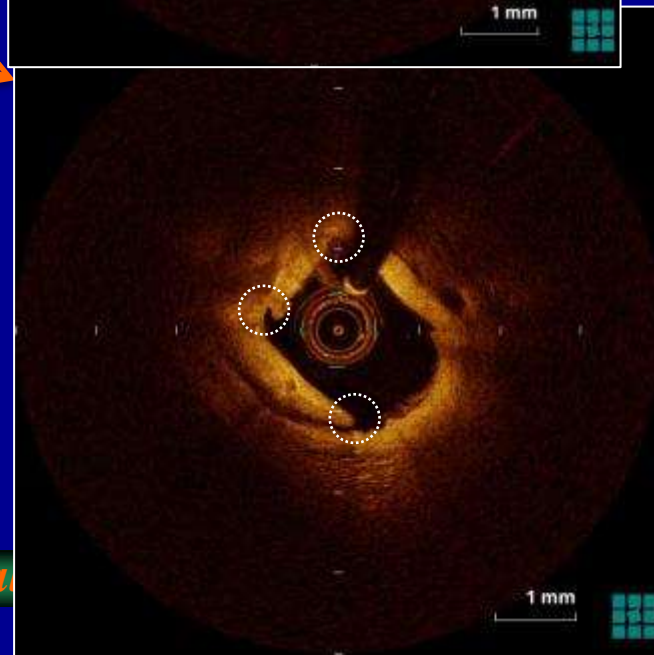
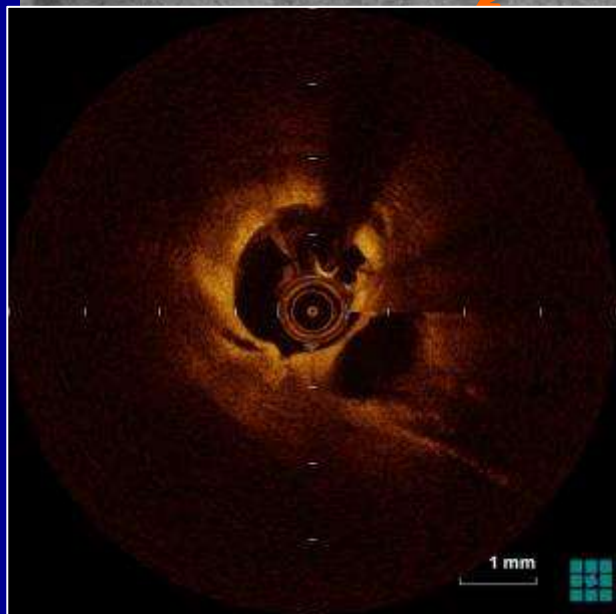
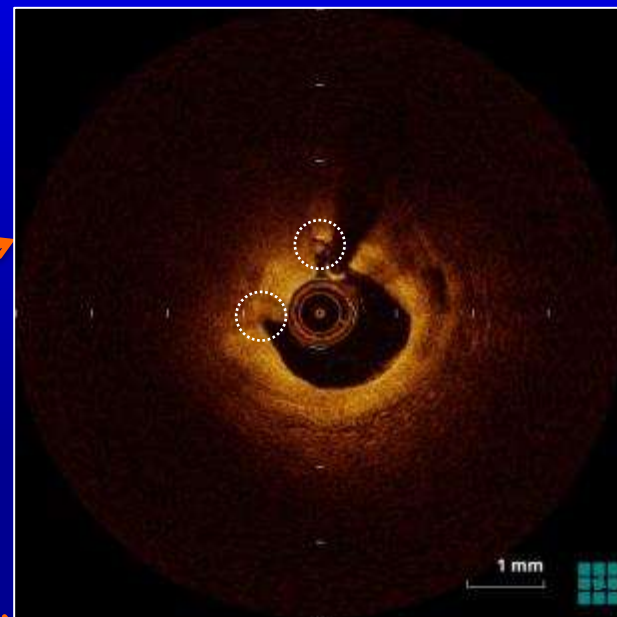
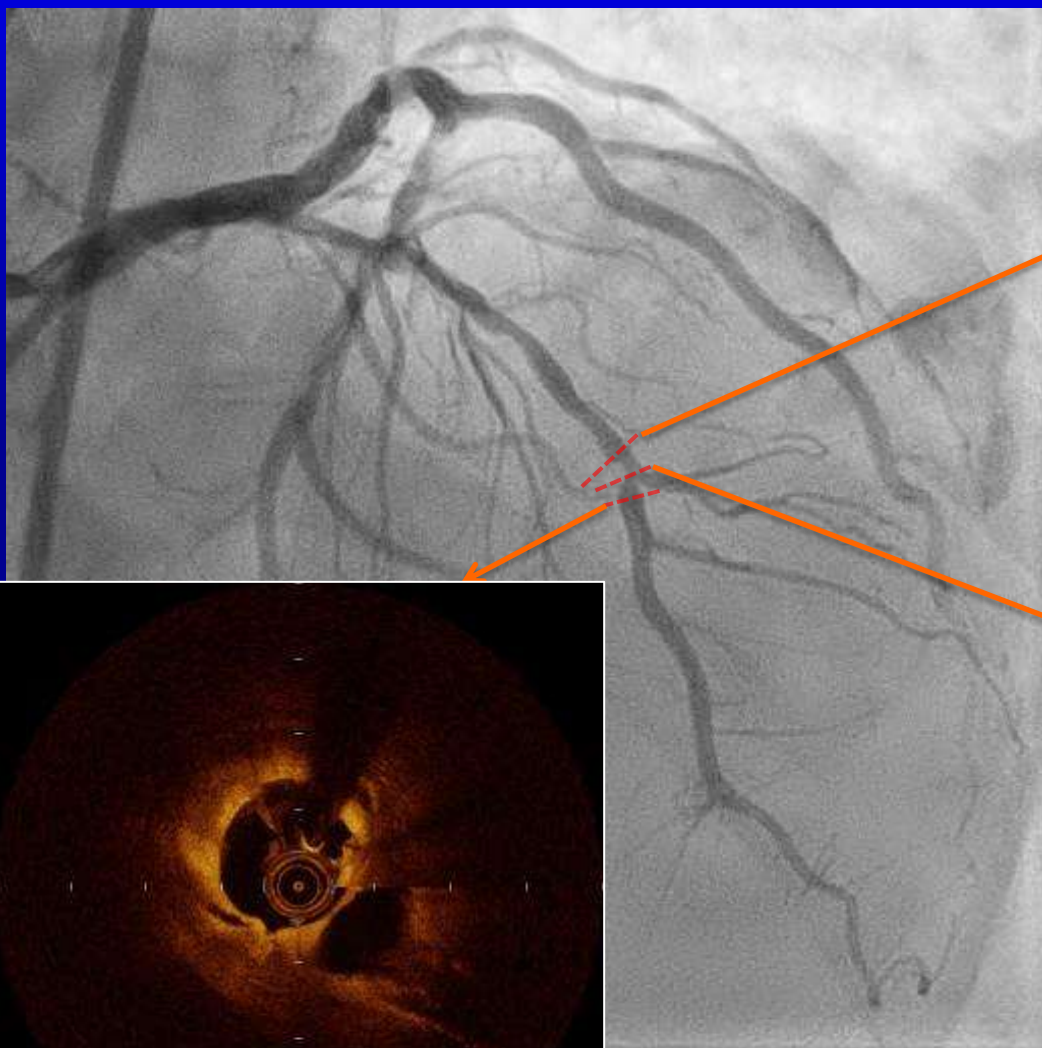


## Post Scoreflex OCT



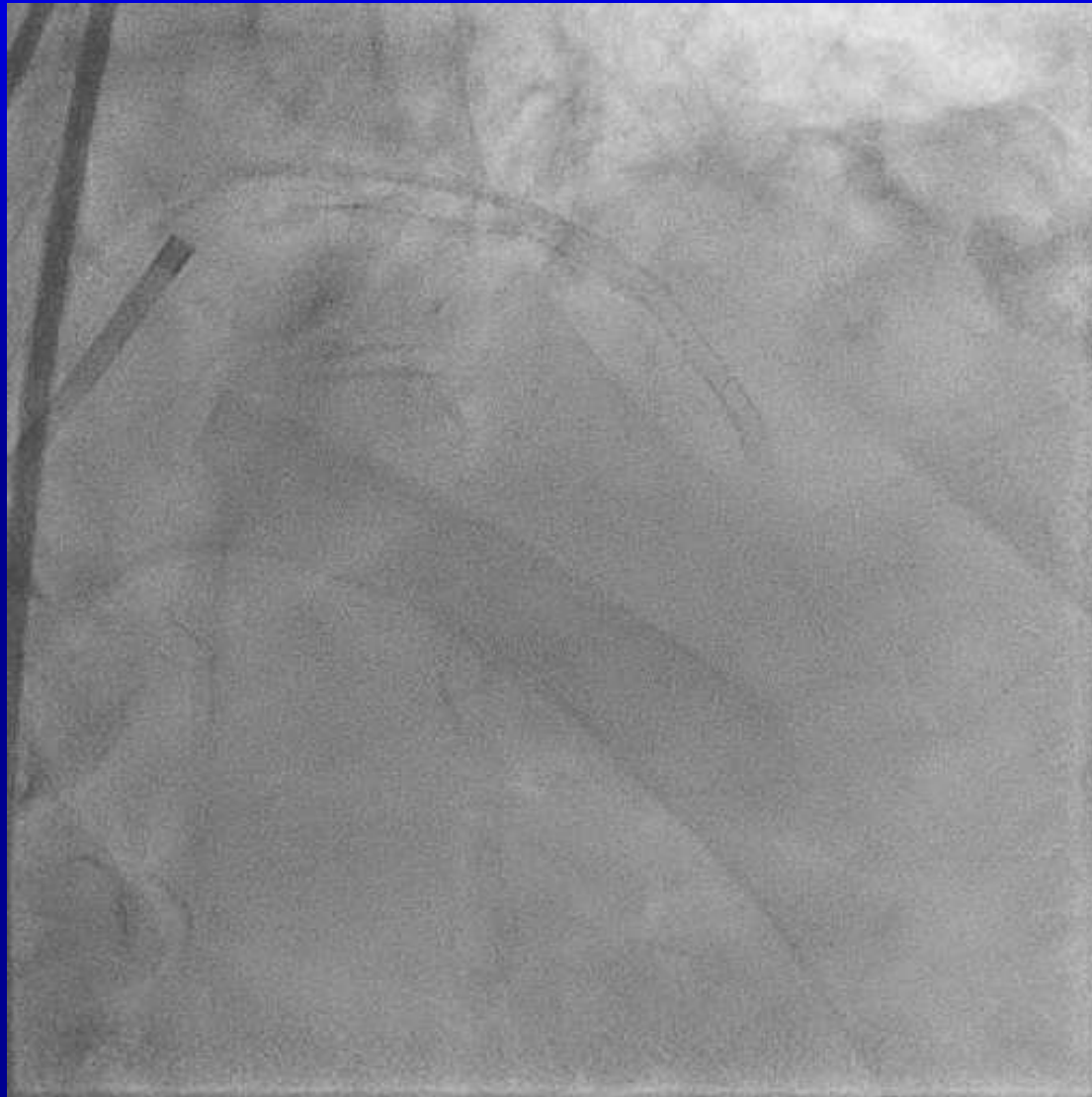


## Post Scoreflex OCT



*2017 / 12 / 01 2<sup>nd</sup> COMPLEX PCI*

## **Final angiogram**



*Hyogo Prefectural Amagasaki General Medical Center*

## Summary and Conclusion

1. In case of eccentric lesion, focusing a force to the plaque is difficult by using conventional balloon.
2. Scoreflex has unique structures.
3. Short monorail is one of its feature.
4. We can focus a dilating force to a plaque distribute in a lesser curvature by utilizing this feature.
5. It helps us to attain an optimal result.

*Thank you for your attention !*