Case of the day : Case 1 - CVS

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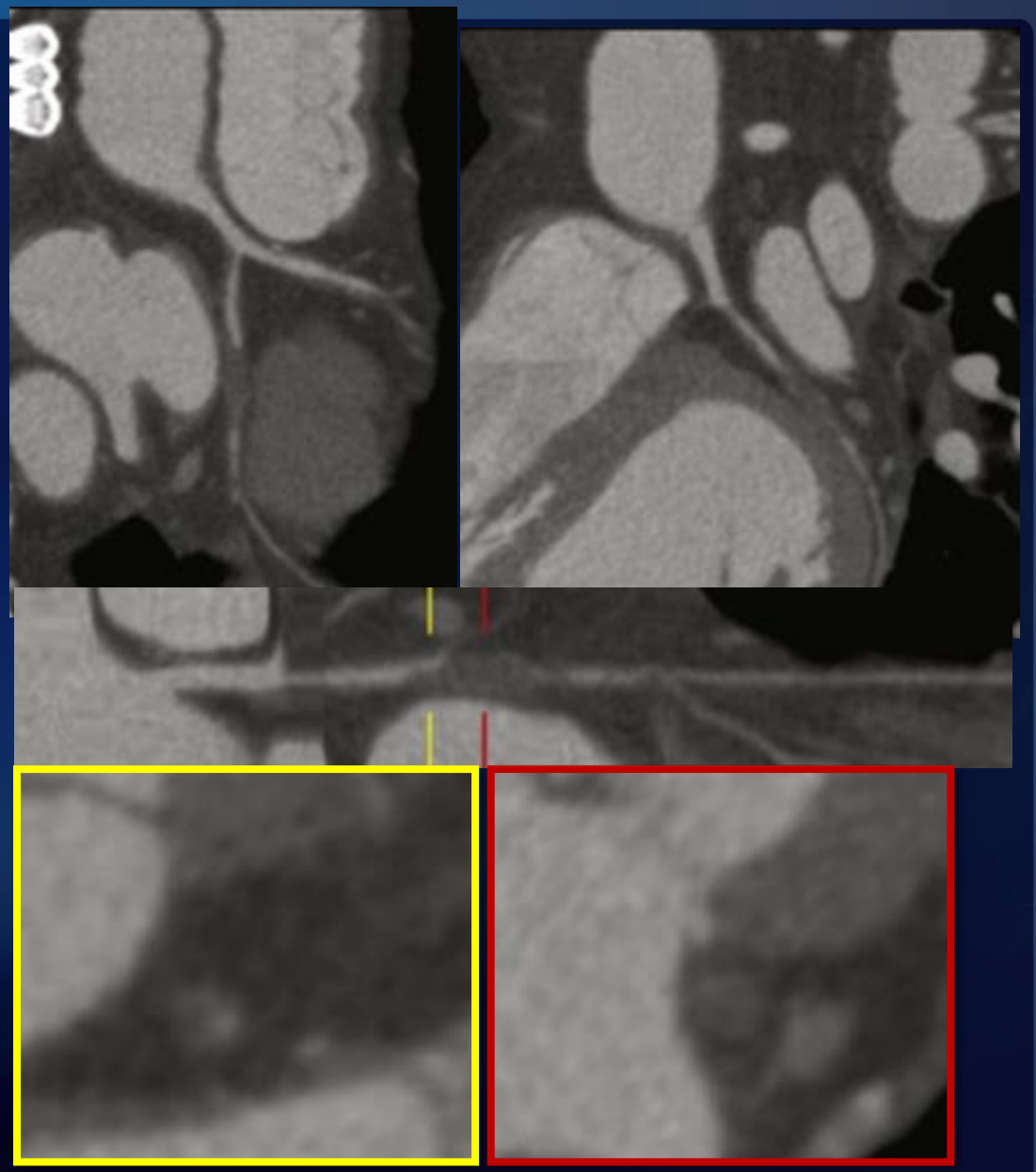
Case of the day : CVS

- What is the severity of this stenosis?

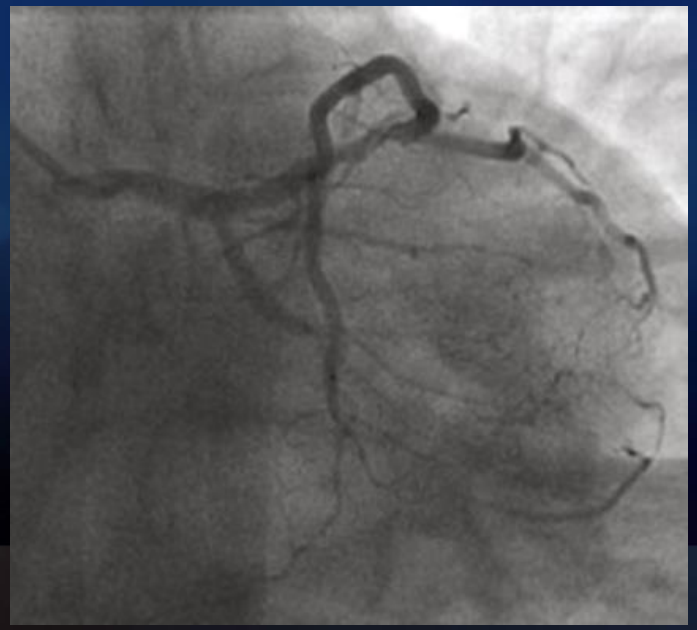
A. 1-24 %
B. 25-49 %
C. 50-69 %
D. 70-99 %
E. 100 %

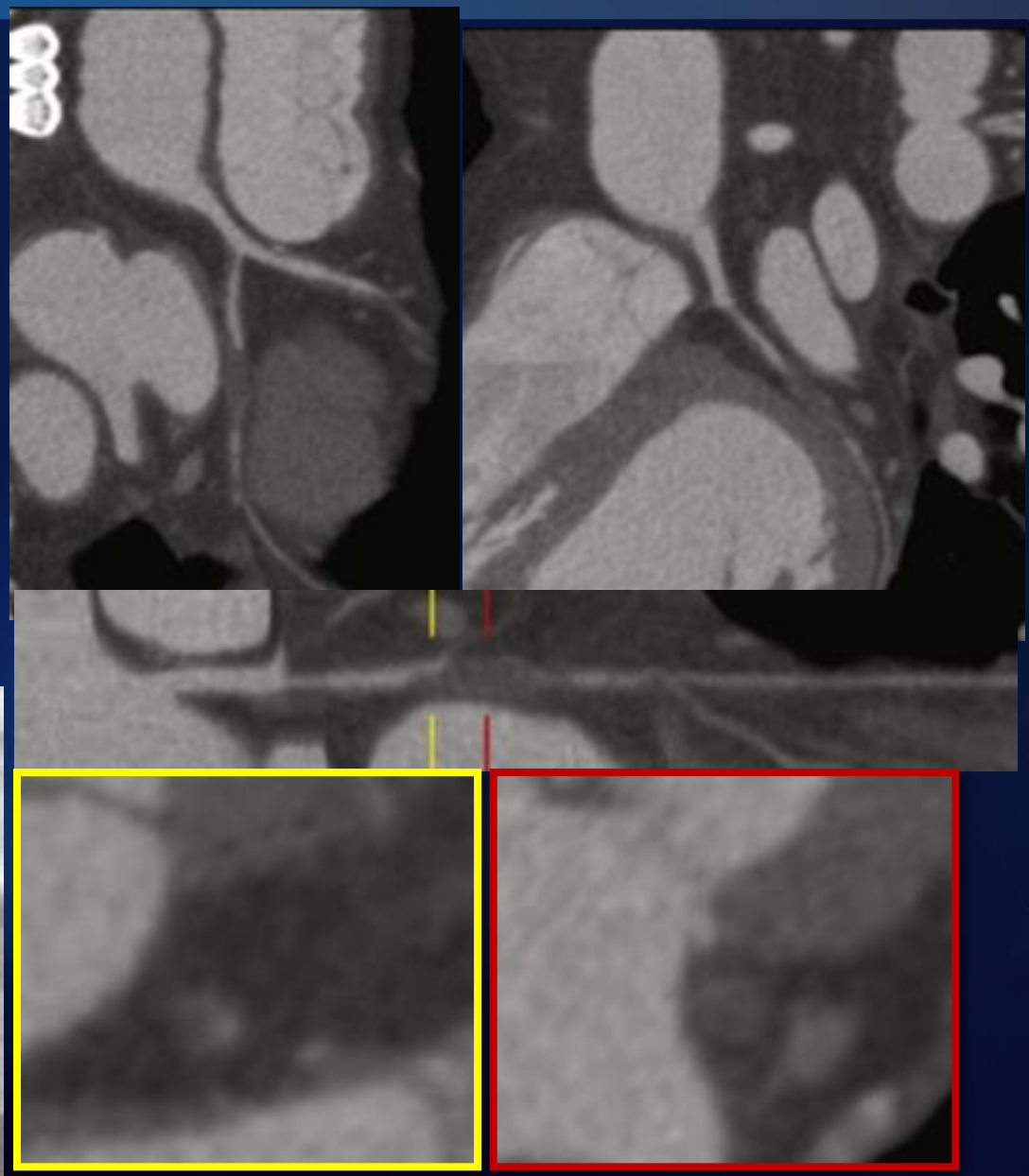


Findings

- Coronary CTA : Non-calcified plaque causing total occlusion of proximal left anterior descending artery (pLAD) with contrast opacified distal to occlusion site feeding by collateral vessels. Blunt stump without bending at the entry or exit site.

- Coronary angiogram : Total occlusion of pLAD.





Diagnosis

- Total occlusion (100%) of pLAD.

Learning Point : Recognize the CTO on CCTA

- Soft tissue density material in lumen with no contrast seen (esp. cross section view).
- Complete absence of contrast → total occlusion.
- Most cases of CTO on CCTA usually show contrast distal to occlusion due to retrograde collateral flow → do not undercall a typical CTO
- Lesion length > 9 mm was 100% specificity and 70% sens. for complete occlusion (Eur Radiol 2008 18:2770-5)

Role of CCTA in the management of CTO

1 IDENTIFICATION OF CTO

2 PREDICTING CLINICAL BENEFIT FROM REVASCULARIZATION

3 PREDICTING THE PROCEDURAL OUTCOME OF PCI

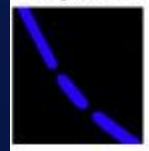
CT-RECTOR Score

- Calcification ≥50% CSA
- Bending ≥45°
- Multiple occlusion sites
- Blunt stump
- Occlusion length
- Shrinkage/negative remodeling

CT-RECTOR Score Calculator

Predictors Definitions

Multiple Occlusion



Presence of ≥2 complete interruptions of the contrast opacification separated by contrast-enhanced segment of ≥5 mm.

Multiple Occlusion
- Presence (1)
- Absence (0)

Blunt Stump

Absence of any tapered stump at the entry or exit site.

Blunt Stump
- Presence (1)
- Absence (0)

Severe Calcification

Presence of any calcium involving ≥50% of the vessel cross-sectional area at the entry or exit site or within the occlusion route.

Severe Calcification
- Presence (1)
- Absence (0)

Bending ≥45°

Presence of any bending ≥45° at the entry or exit site or within the occlusion route.

Bending ≥45°
- Presence (1)
- Absence (0)

Second Attempt

Previously failed PCI at CTO

Second Attempt
- Yes (1)
- No (0)

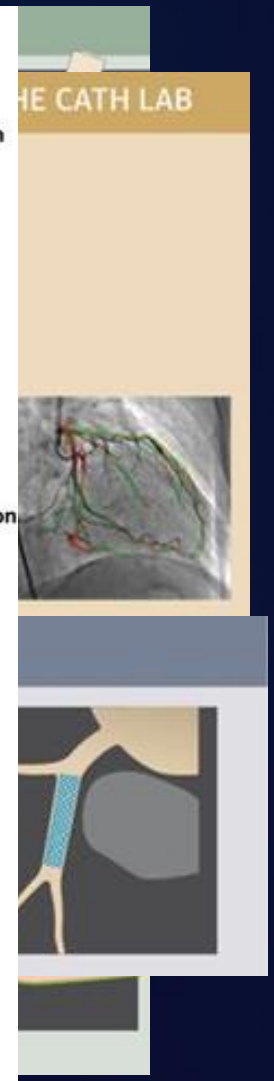
Duration of CTO

Duration of CTO ≥12 months or unknown

Duration of CTO
- Yes (1)
- No (0)

Difficulty Group
- Easy (0)
- Intermediate (1)
- Difficult (2)
- Very Difficult (≥3)

Total Score



References

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