

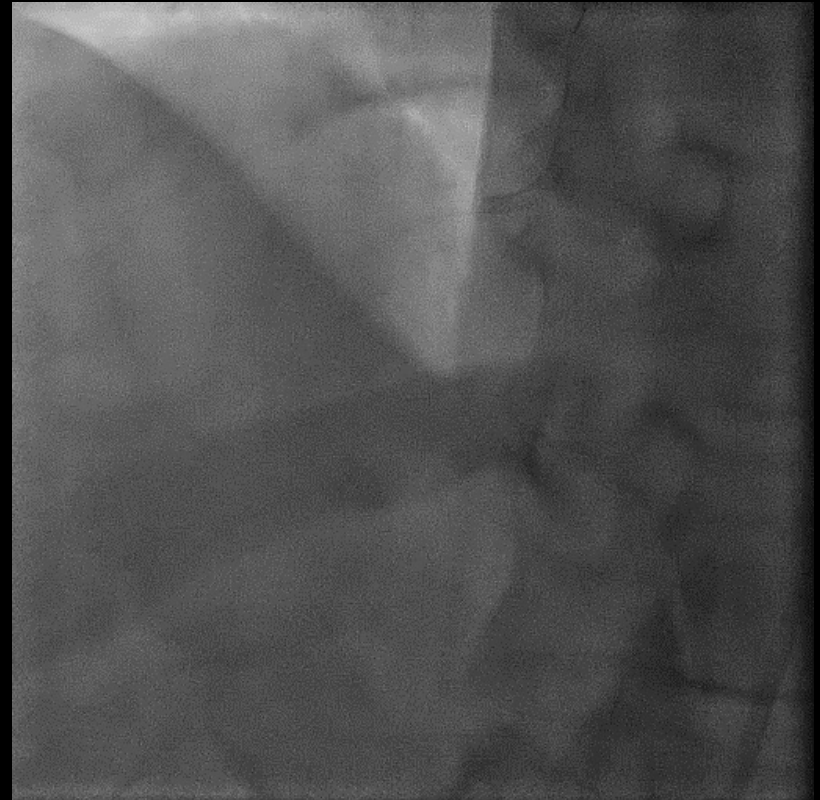
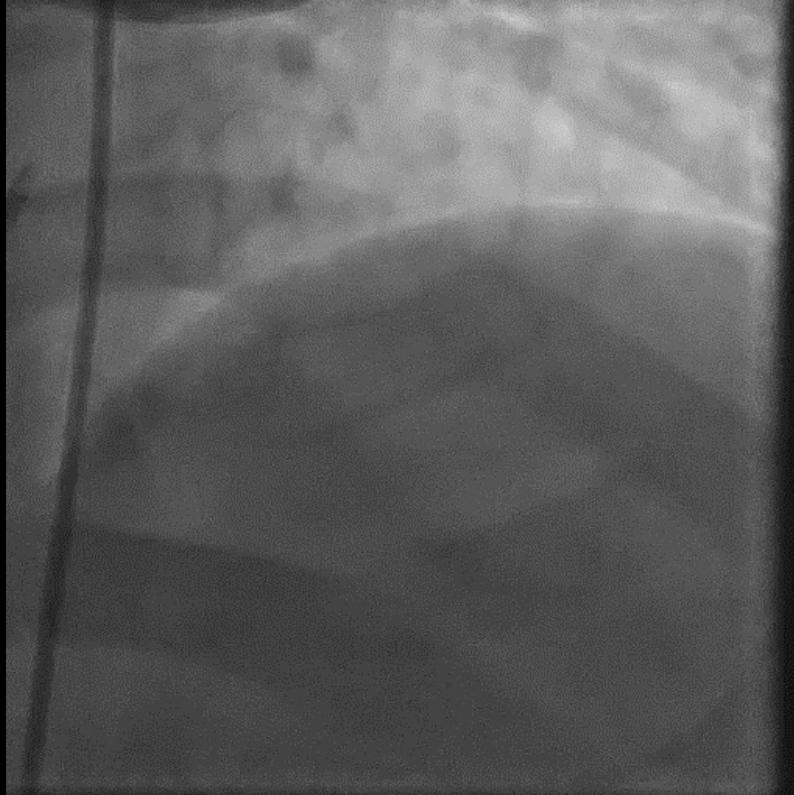
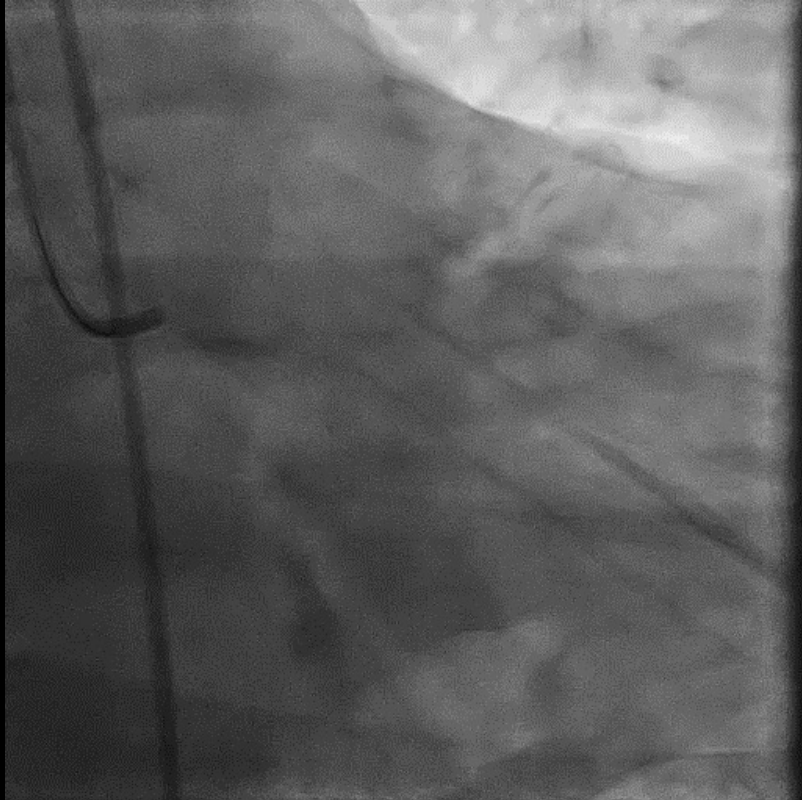
DEFINE PCI in Action

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Case SS

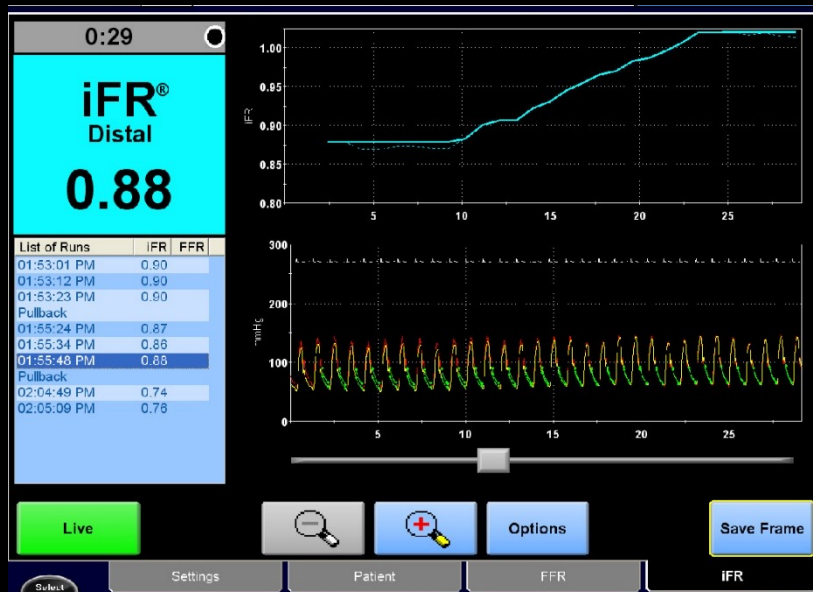
- 75 years old with history of ESRD on HD, HTN and diabetes presented for pre transplant evaluation.
- Was having new onset dyspnea on exertion.
- Denied frank angina.
- Stress test was normal.

Case SS

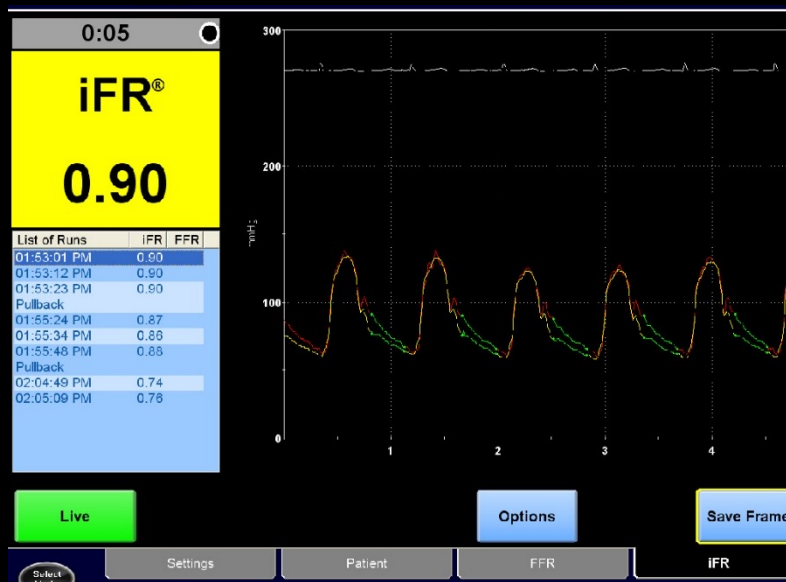


What the heck to do you do now? Does he have multivessel disease?

Case SS



LAD



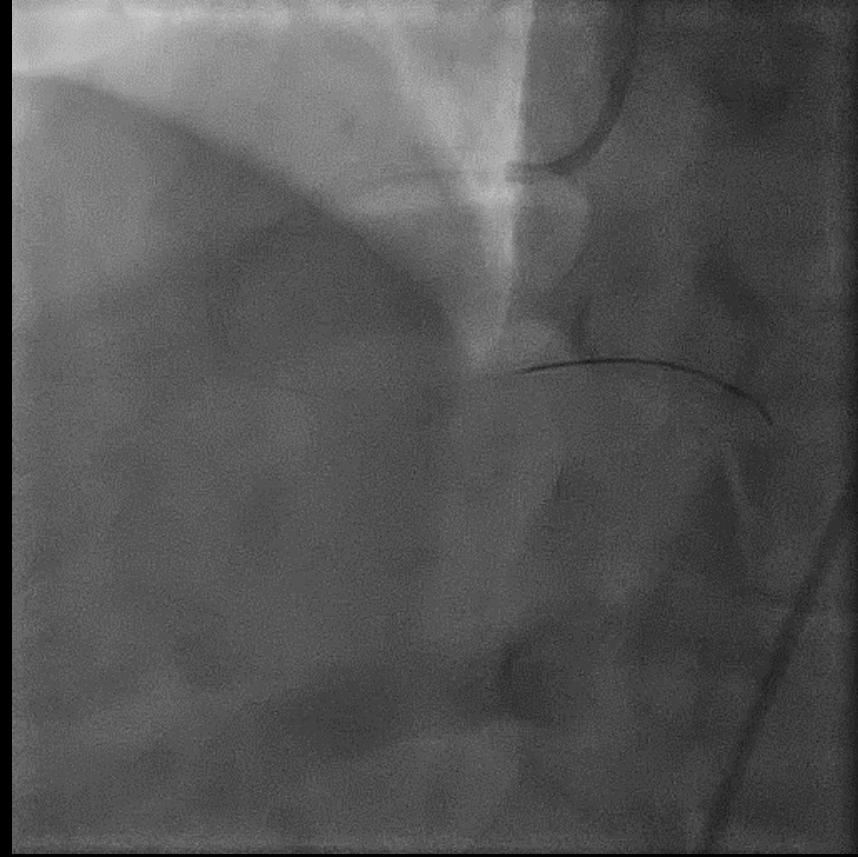
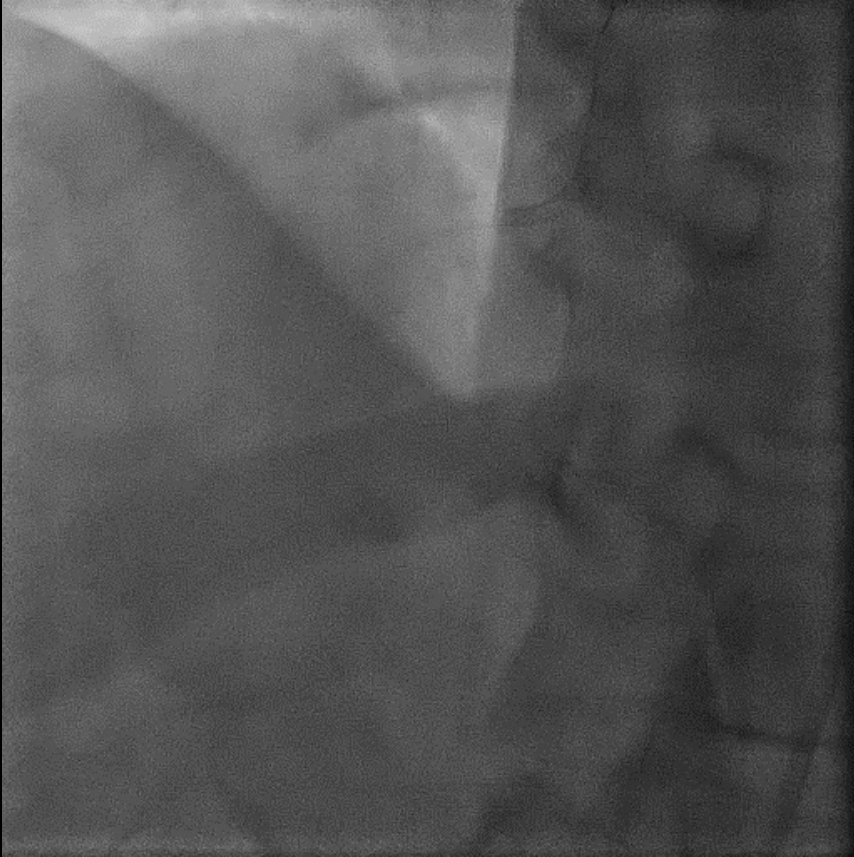
RAMUS



RCA

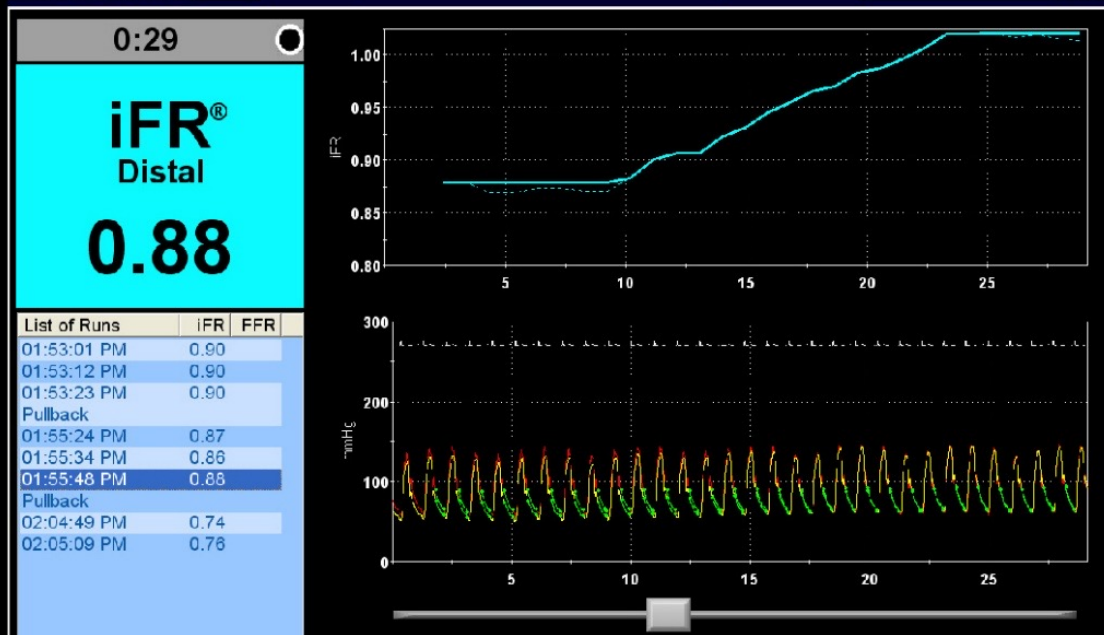
Plan for this physiology?

Case SS

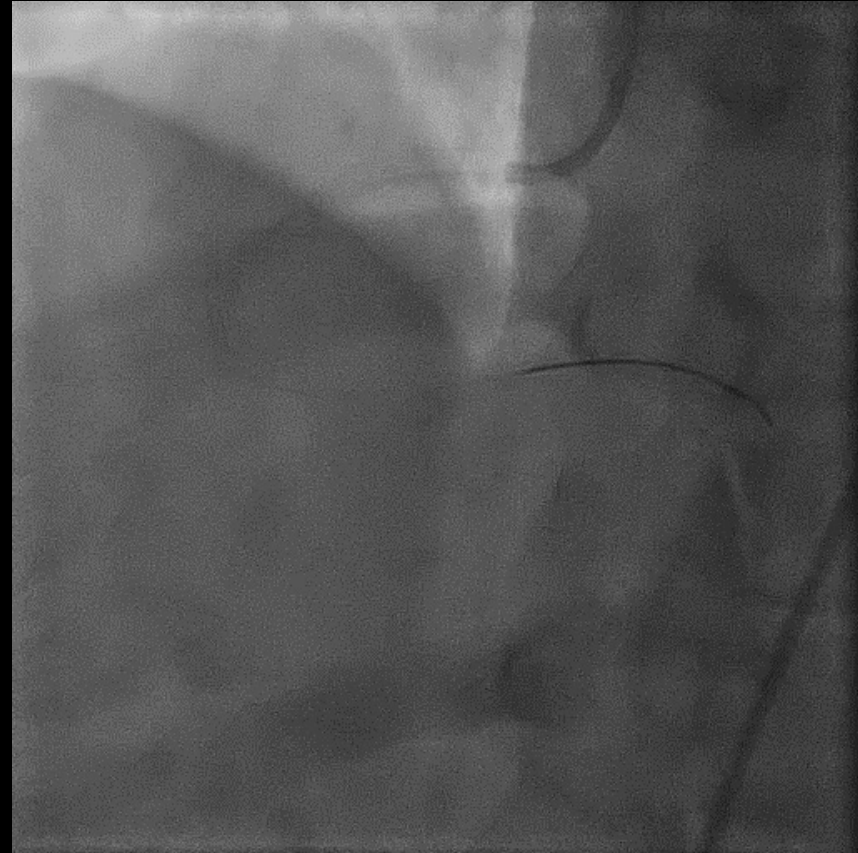


Post PCI 3.0 DES but IVUS won't go distal

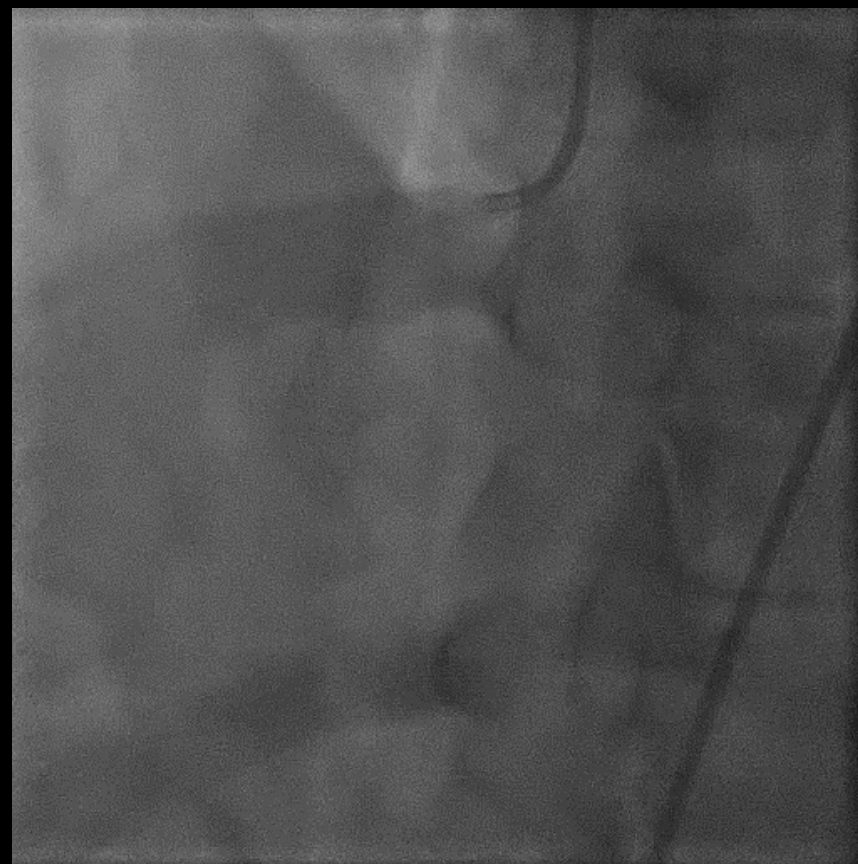
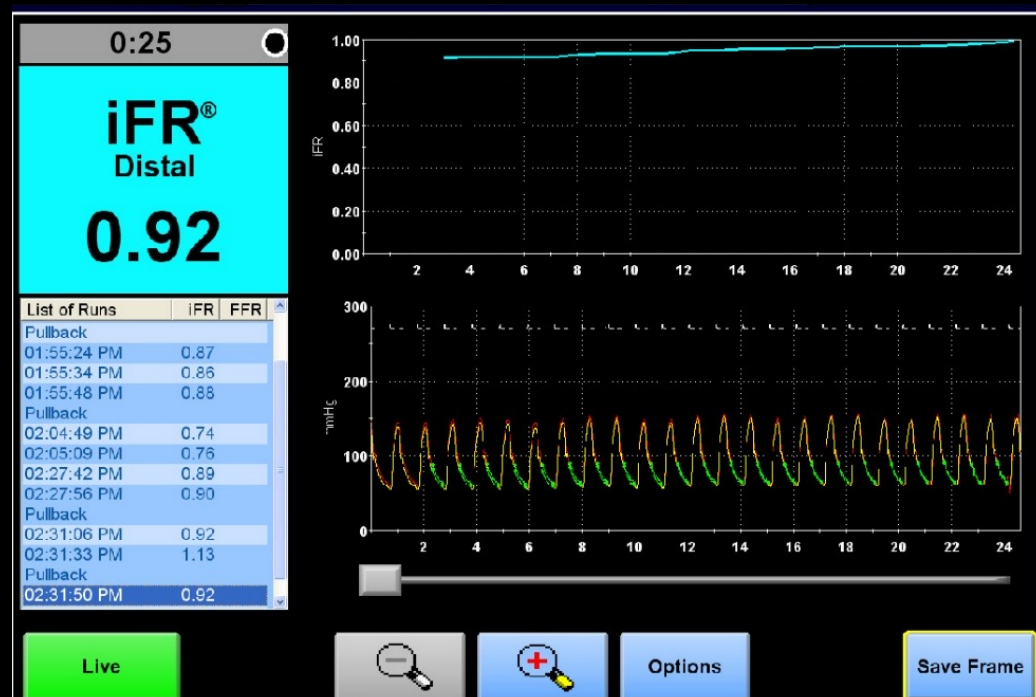
Case SS



Post PCI iFR with wire in the PDA



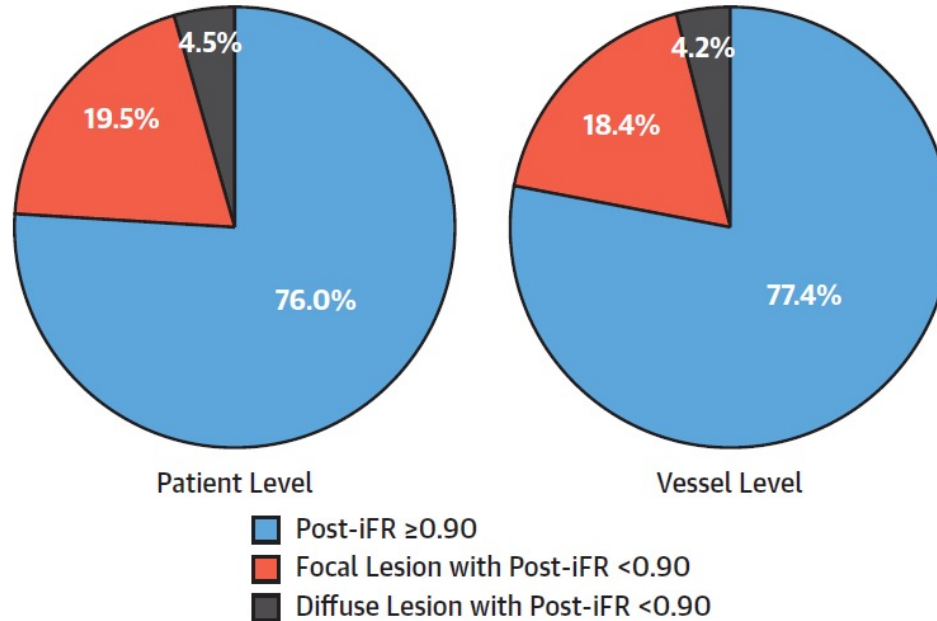
Case SS



Post dilatation with 3.5mm up to 20atm and repeat iFR.

DEFINE PCI

CENTRAL ILLUSTRATION Post-Percutaneous Coronary Intervention Coronary Physiology



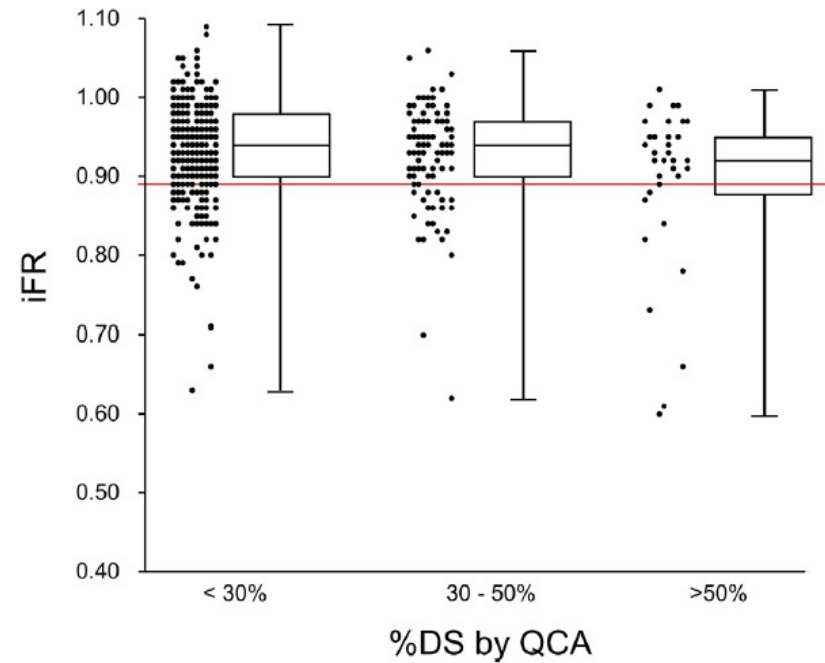
Jeremias, A. et al. J Am Coll Cardiol Interv. 2019;12(20):1991-2001.

Percentage of vessels with post-percutaneous coronary intervention (PCI) ischemia, defined as an instantaneous wave-free ratio (iFR) of < 0.90 on patient level (left) and vessel level (right) after angiographically successful procedure. A total of 24% of patients and 22.6% of vessels had residual ischemia. The majority of vessels with iFR < 0.90 contained focal lesions versus diffuse disease, potentially amendable to further optimization with additional PCI.

22% Residual Ischemia
-38.4% In stent
-31.5% Proximal Stent
-29.5% Distal Stent

DEFINE PCI

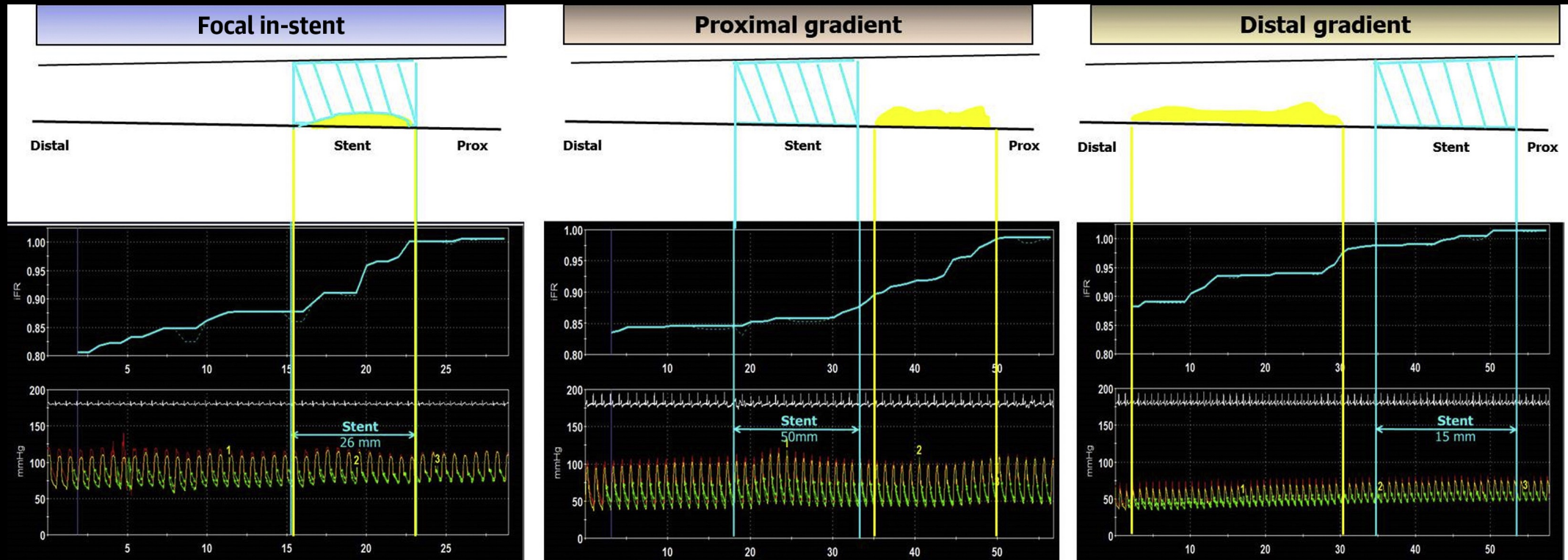
FIGURE 4 Post-Percutaneous Coronary Intervention Physiology in Various Angiographic Subgroups



Mean post-percutaneous coronary intervention instantaneous wave-free ratio (iFR) values (95% confidence interval) and iFR distribution in various angiographic subgroups on the basis of diameter stenosis (DS) by quantitative coronary angiography (QCA). Red line depicts ischemic threshold of <0.90 .

Precision is not achieved by the angiogram alone.

Precision with PCI



Physiology Can help find poor PCI. Imaging Can prevent it.

Conclusion

- We must rely less on the angiogram and more on imaging and physiology.
- Don't be afraid to perform post PCI iFR.
- Incorporate Co-registration into pre and post iFR evaluations.