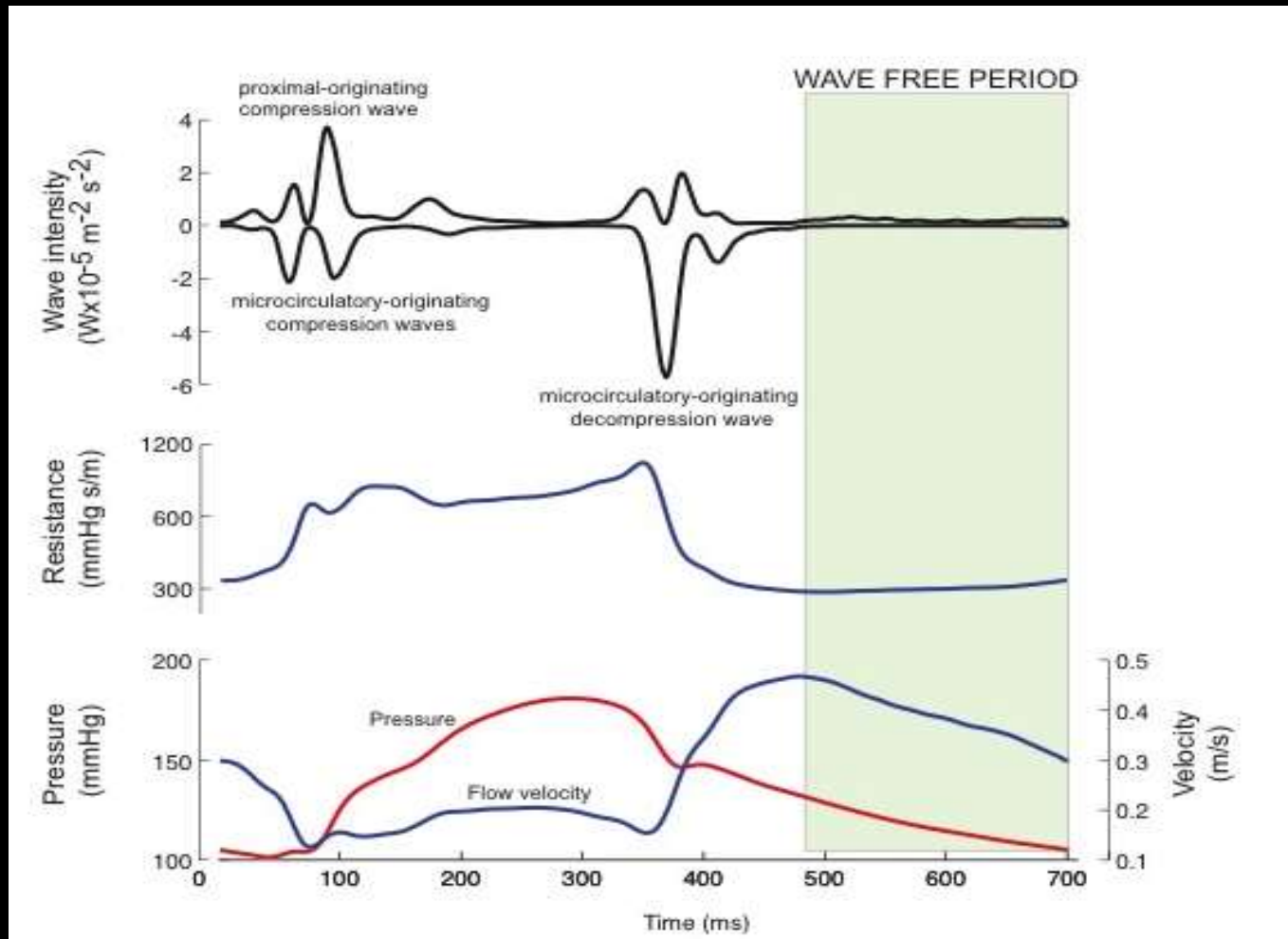


*Physiological Assessment using iFR Scout
-iFR vs iFRa pullback curve-
Is it always same?*

Hitoshi Matsuo M.D.,PhD.,
Gifu Heart Center
Japan

Identification of the naturally occurring diastolic wave-free period using wave intensity analysis



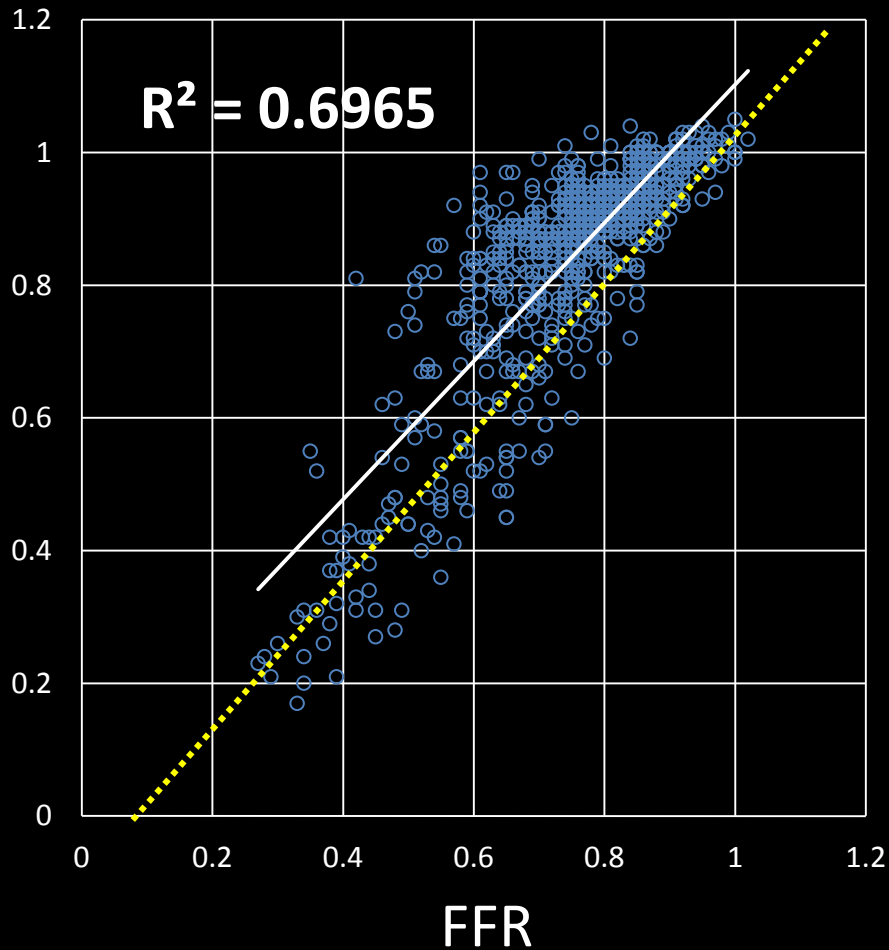
Sen S, Mayet J, Davies JE et al. JACC (in press Nov 2011)

Davies JE, Francis DP, Hughes AD, Mayet J et al. Circulation 2006;113:1767-1778

Davies JE, Parker KH, Hughes AD, Mayet J et al. Circulation 2011;124:1565-1572

Diagnostic accuracy of iFR, iFRa using FFR as the golden standard in 764 vessels from 566 patients measured in Gifu Heart Center

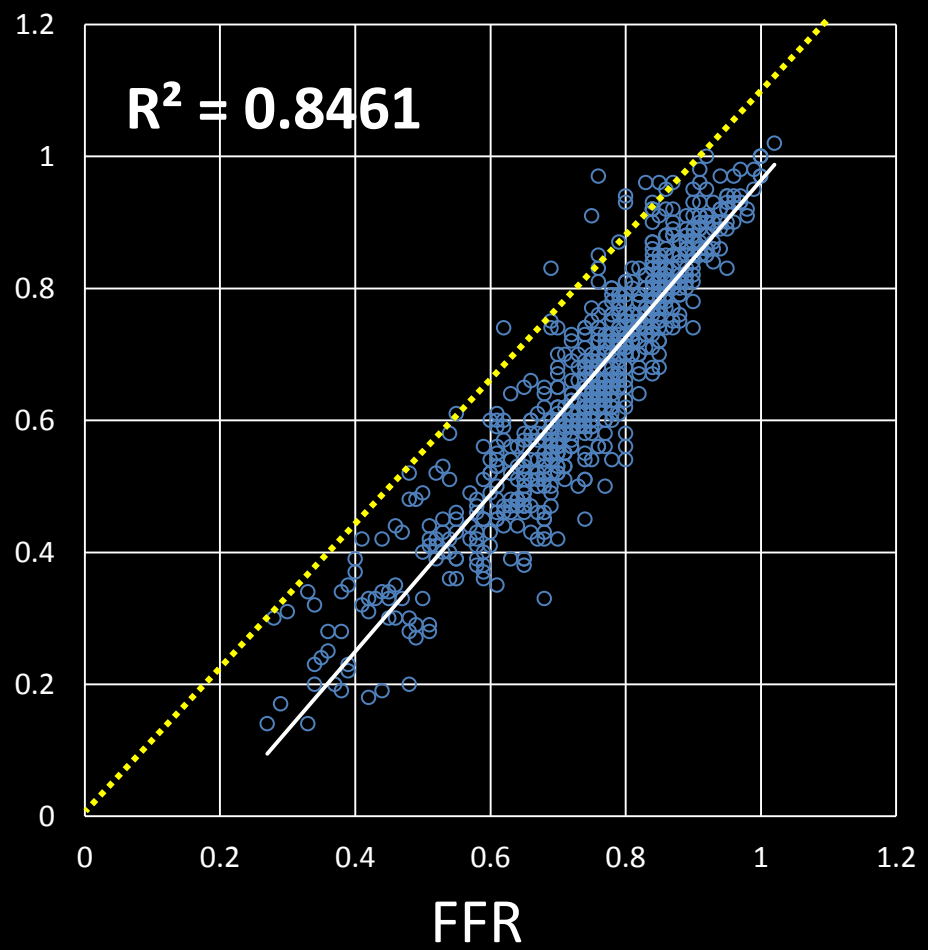
iFR



Best cutoff : 0.90, AUC:0.89
Diagnostic accuracy 81%

2015/12/

iFRa

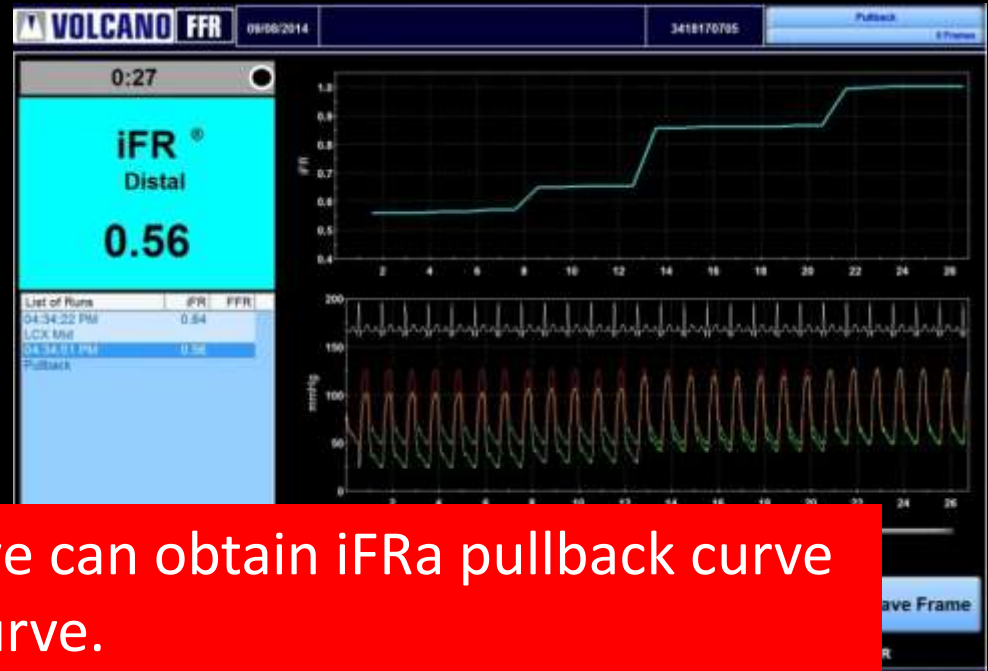


Best cutoff : 0.73, AUC : 0.96
Diagnostic accuracy 91%

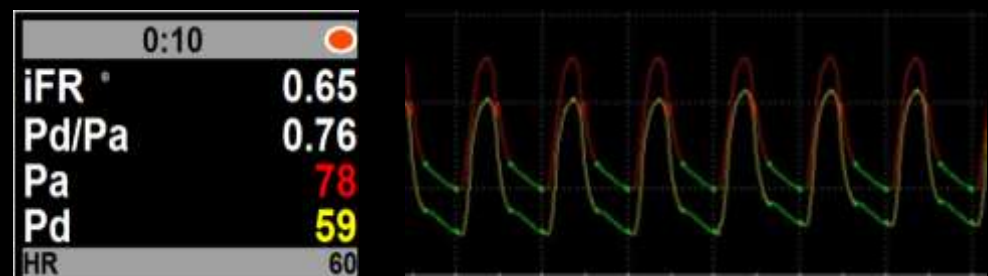
iPS 2015

iFR Scout™ Pullback Software

- Significant Features
 - Live display of single-cycle iFR value
 - Pullback

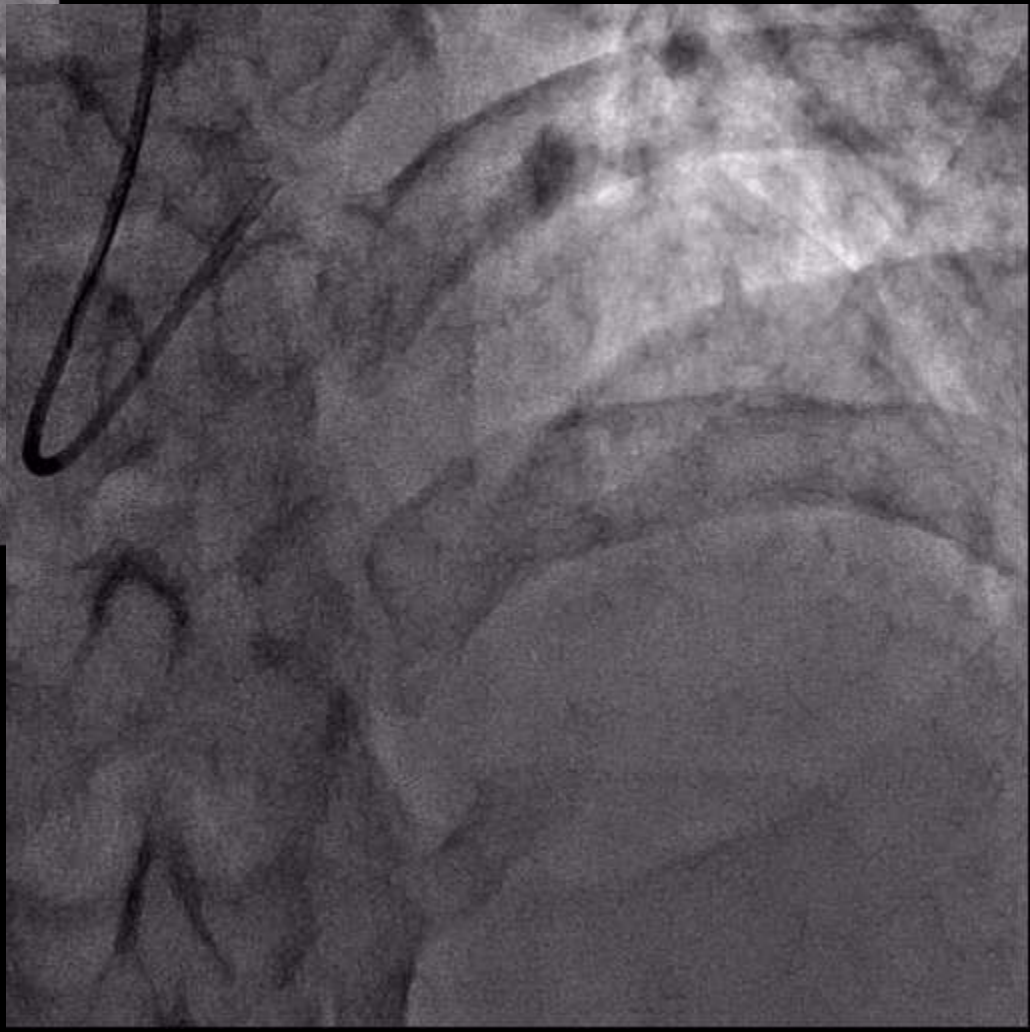
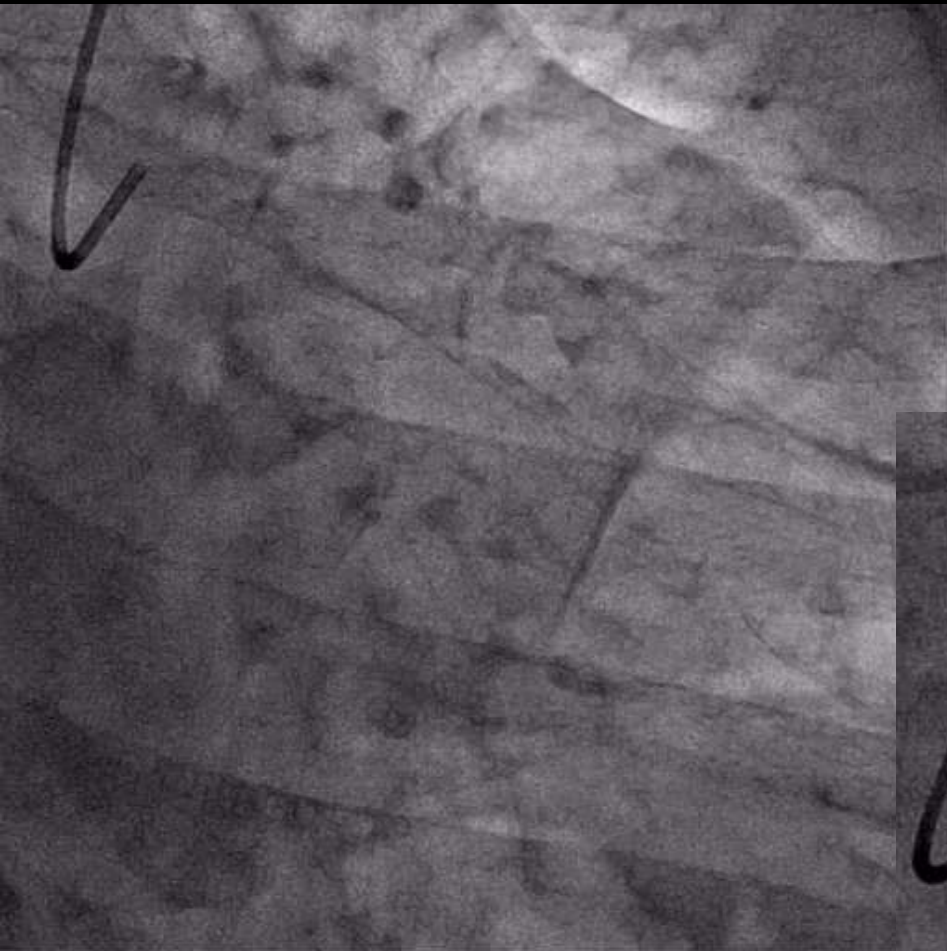


- Highlighting of the Wave-Free Period



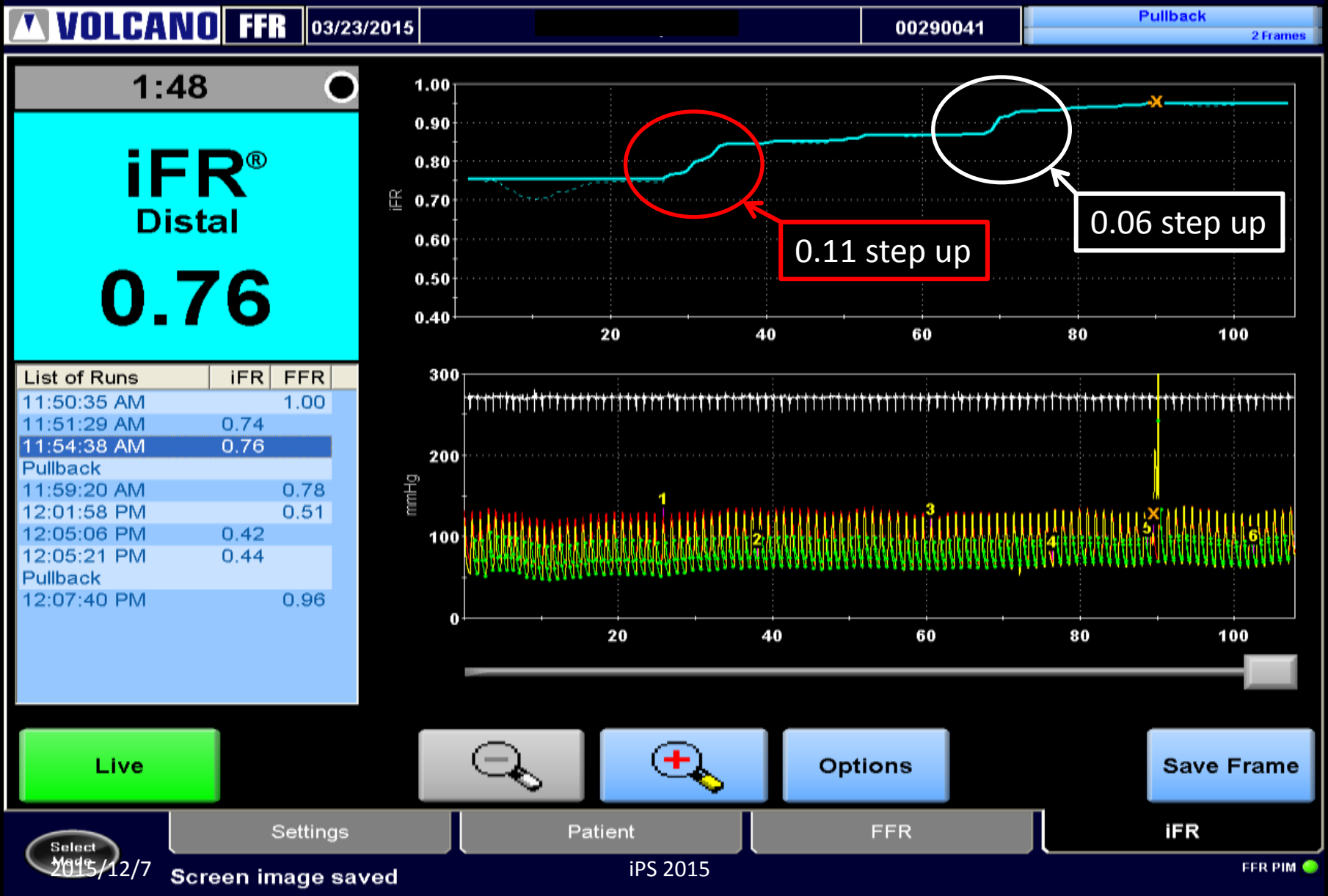
Case2 : 71 y.o. male ID 290041

- Risk factor: Hypertension
- Diagnosis : Effort Angina CCS class2
- CAG : focal tandem lesion in LAD
- iSCOUT pullback at rest and during maximum hyperemia

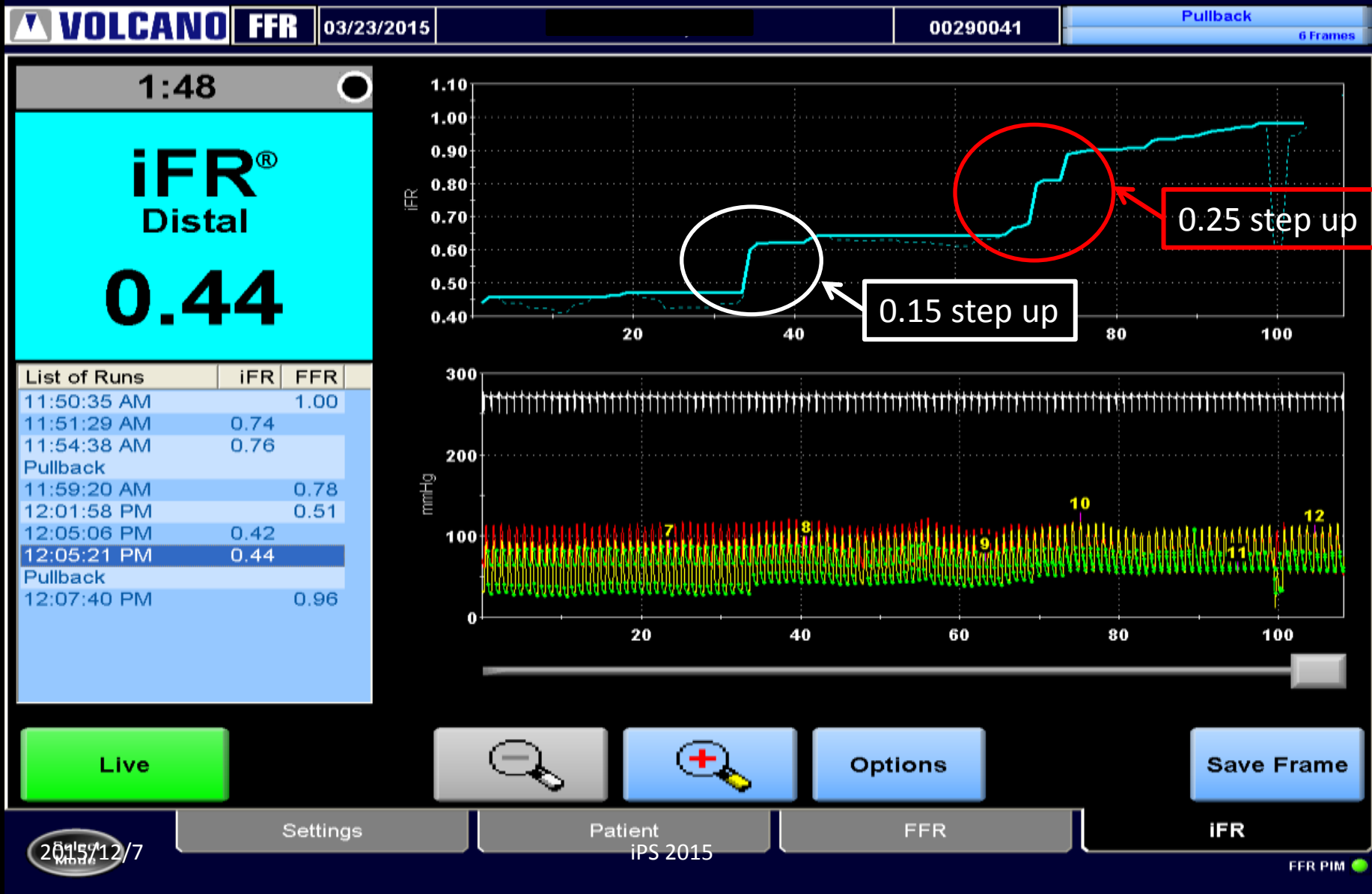


2015/12/7

iFR Pullback LAD



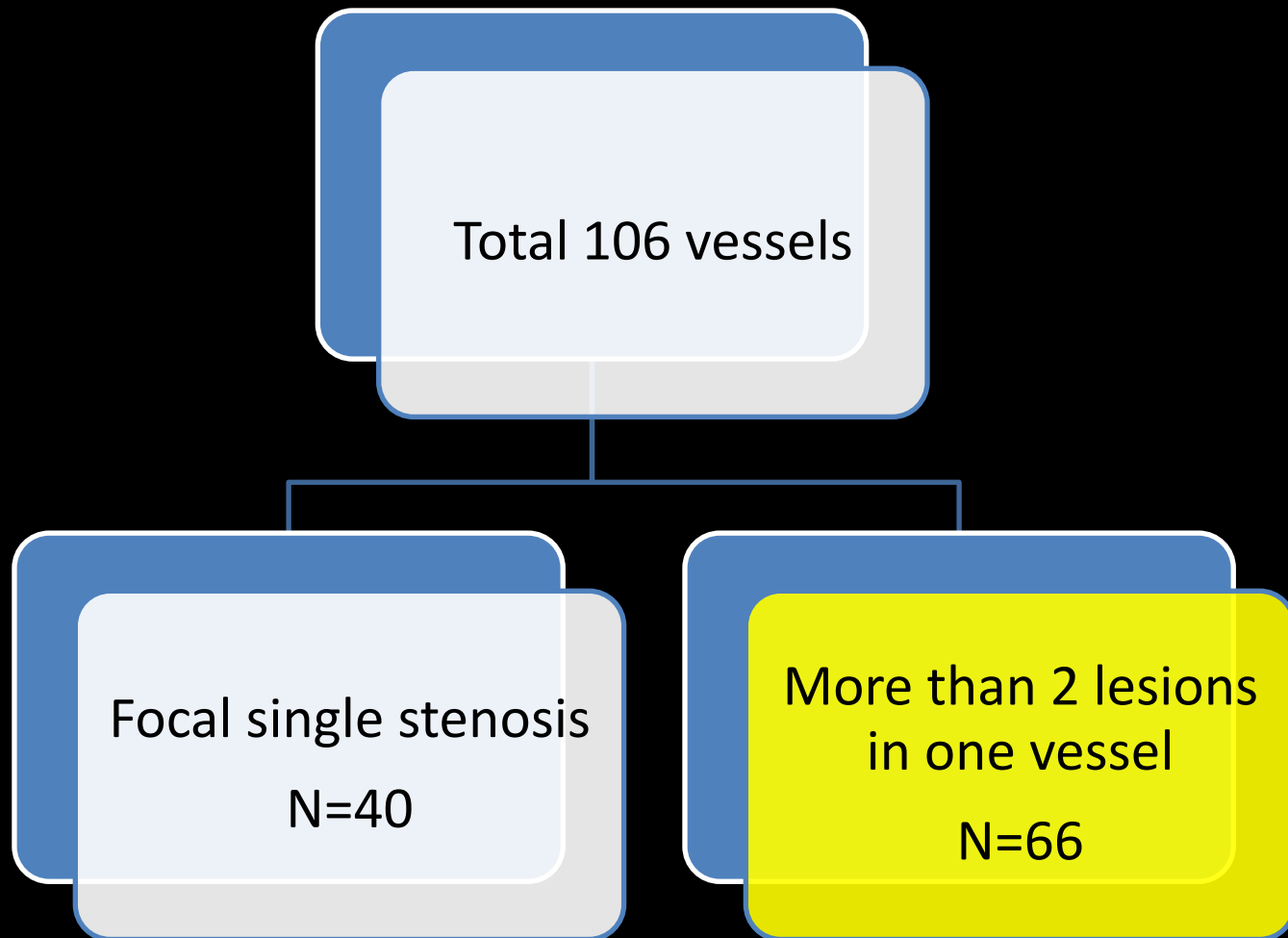
Hyperemic iFR Pullback LAD



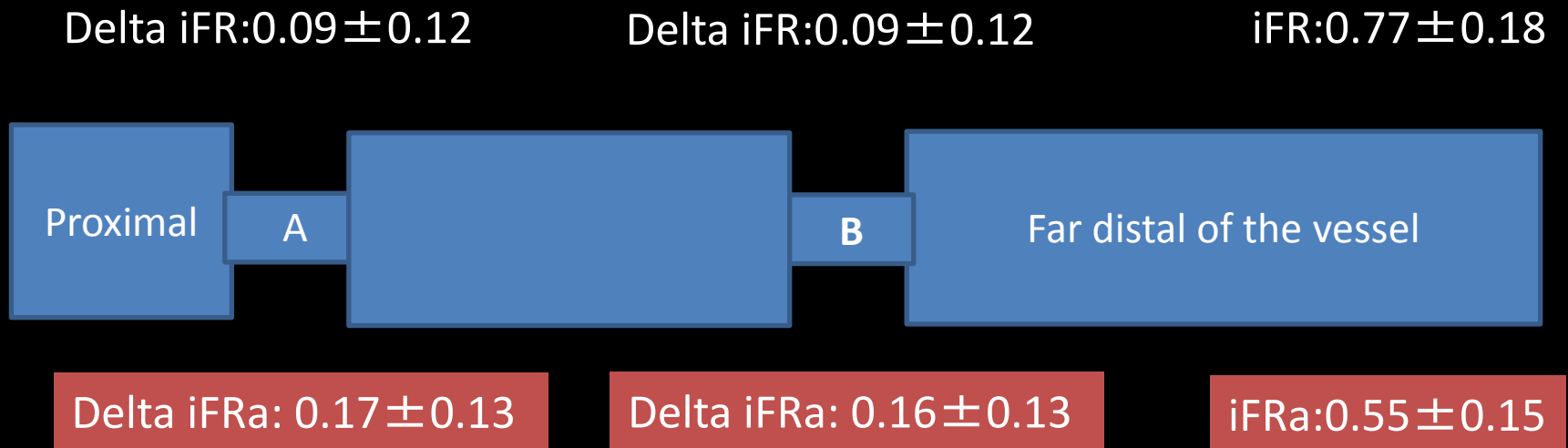
Key questions about decision making by iFR pullback curve using iSCOUT

- Are there any differences on “treat or not treat basis” between iFR and IFRa?
- Is the lesion with biggest delta iFR always same as that recorded during hyperemia?
- How much percentage of the patients were treated differently when iFR pullback curve is used for decision making instead of using hyperemic pullback curve?

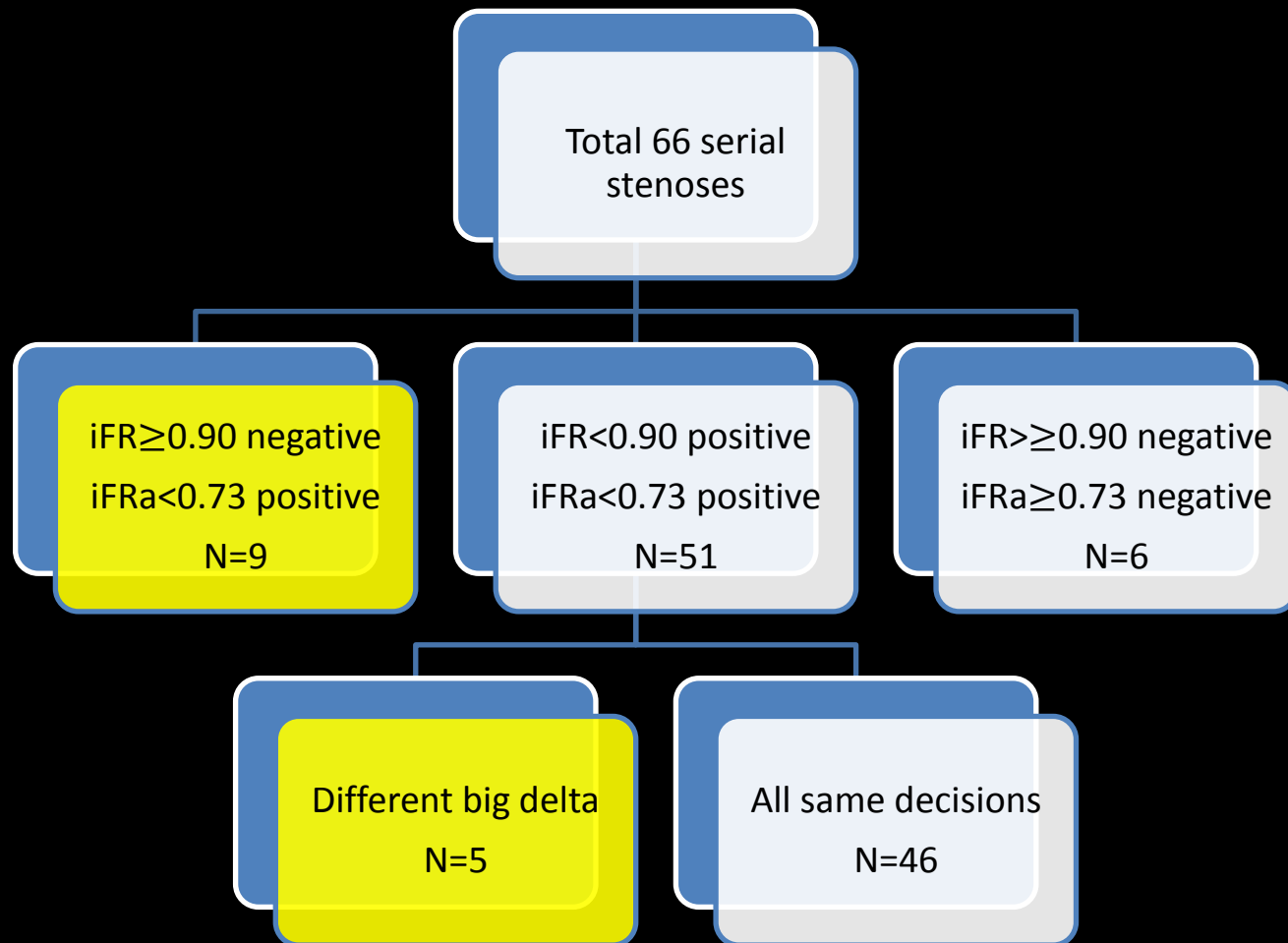
iFR scout experiences in GHC



Schematic representation of the differences between iFR pullback and iFRa pullback



Clinical decisions by iFR and iFRa pullback curves treating serial stenoses



Clinical decisions based on iFR pullback curve may be different from those based on iFRa pullback in 14 out of 66 vessels (21% of total vessels).

Conclusions

- iFR pullback curve using iFR scout system may be useful to identify the lesion with iFR step-up.
- We identified the discordant decisions between iFR and iFRa pullback curve in 21% of the vessels with serial stenosis.
- These data clearly necessitate the further investigation about the prognostic value of such kind of the discordant lesions.

Thank you for your attention.

