# La FFR à quoi ça sert ?

**Thibault LHERMUSIER**

# Cas clinique n° 1 : lésion de bifurcation

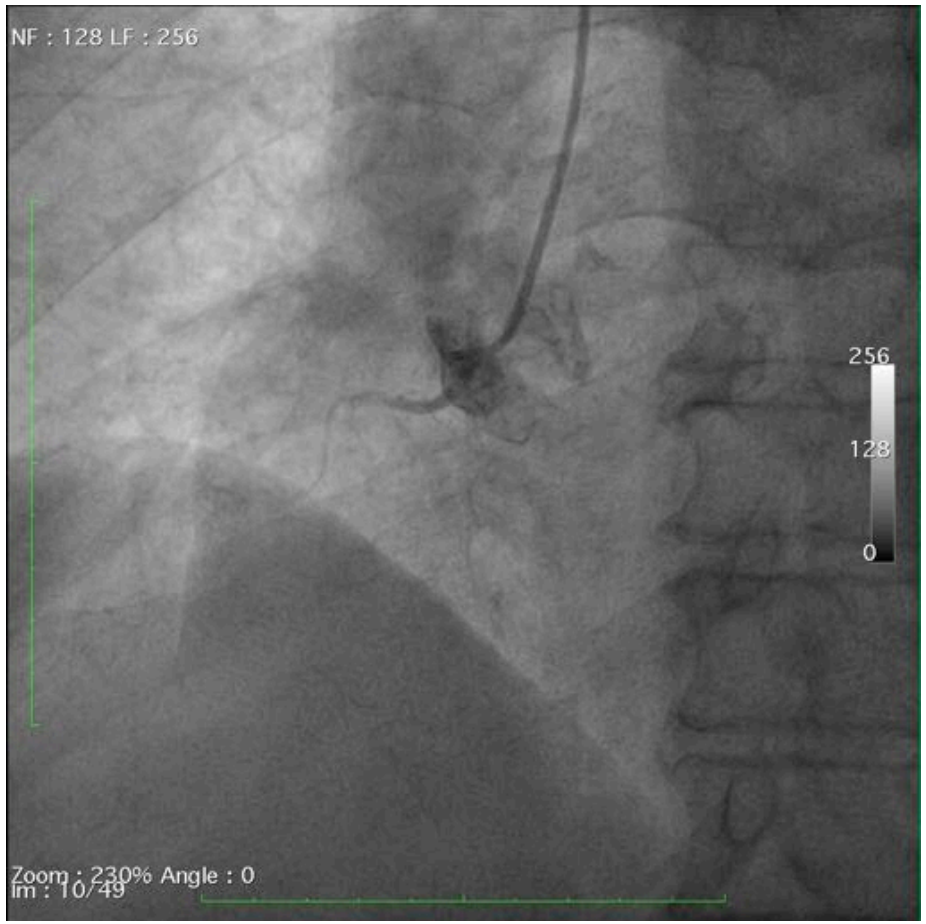
Mme S, 83 ans

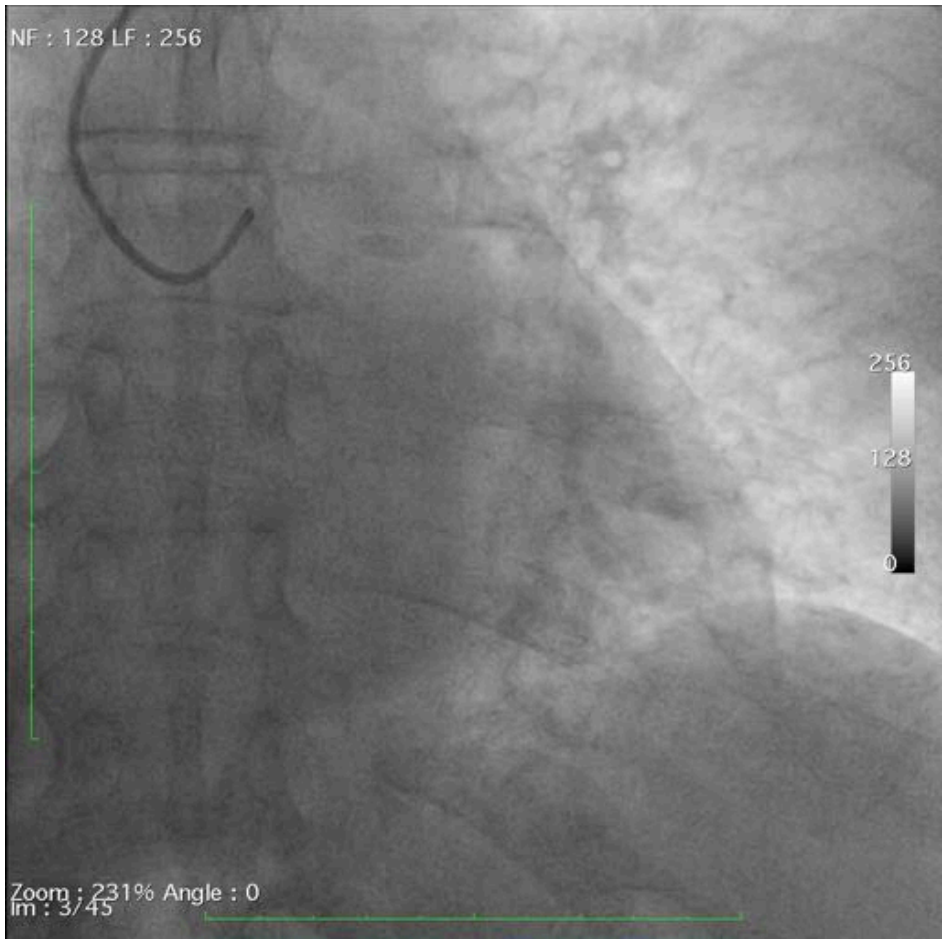
HTA, dyslipidémie,

AOMI

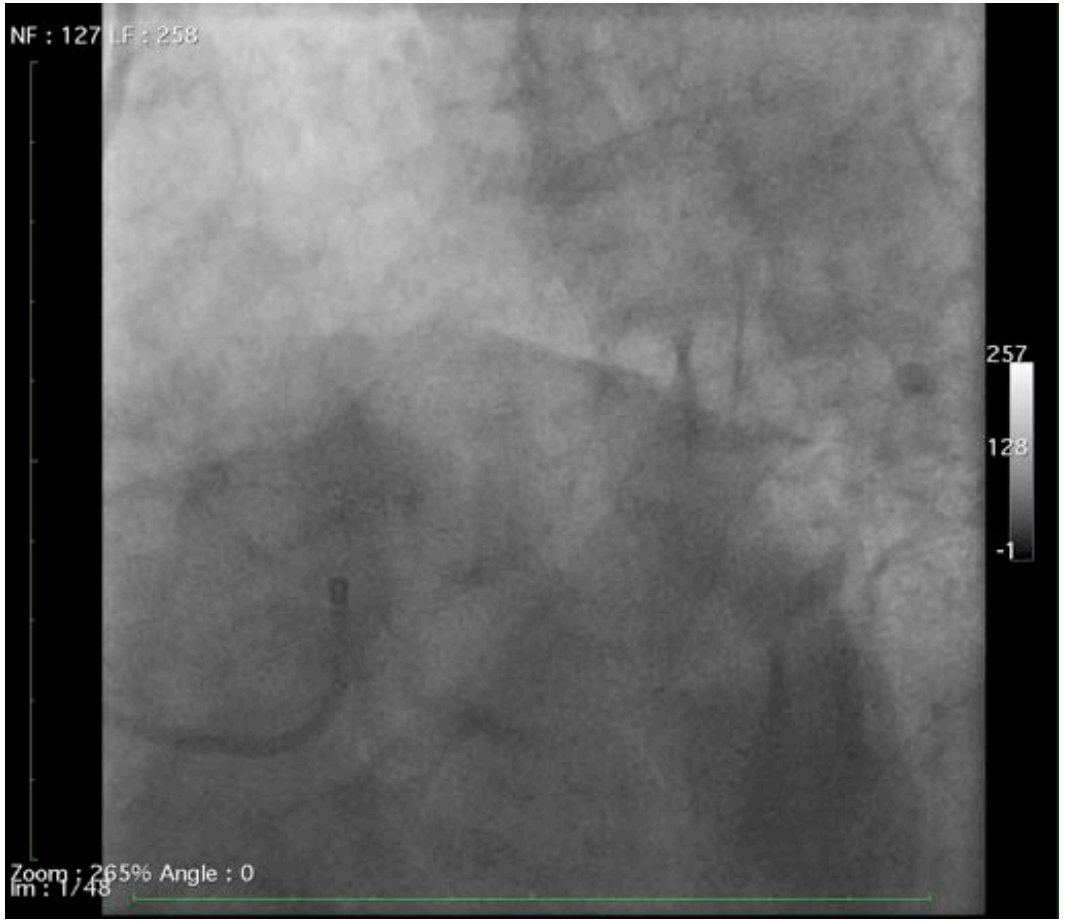
SCA non ST + tropo +
Modifications des ondes T dans les dérivations inférolatérales

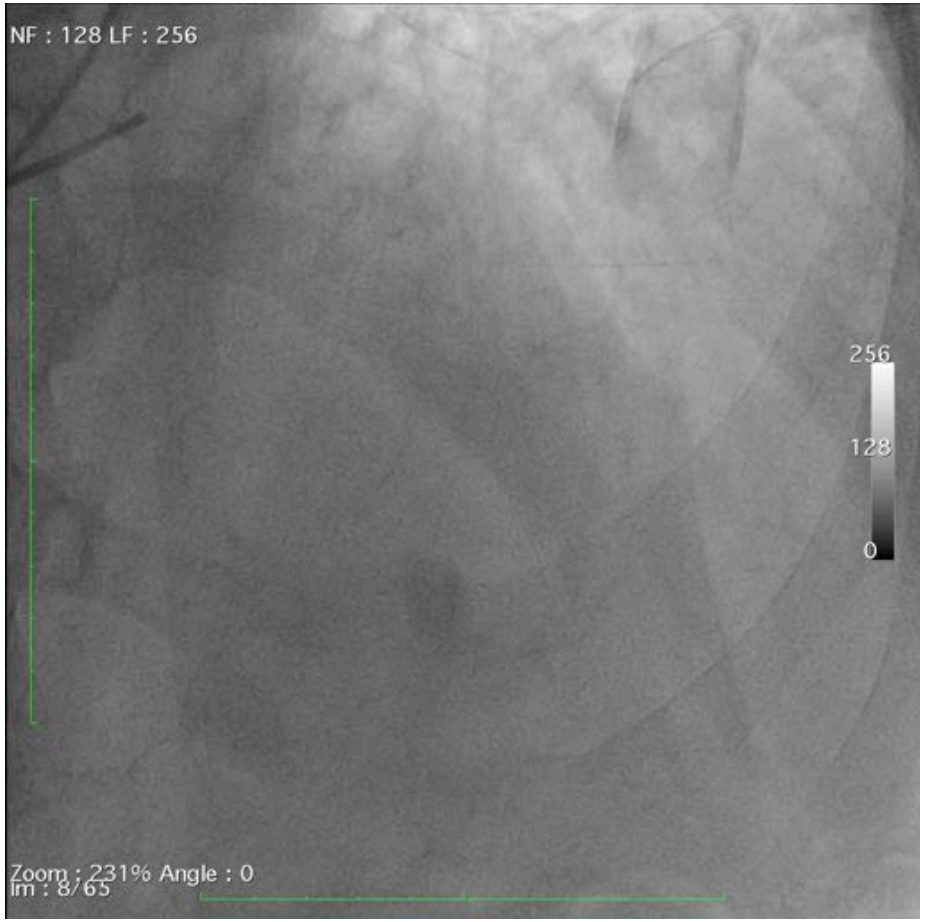
FE conservée


NF : 128 LF : 256
256
128
0
Zoom : 230% Angle : 0
Im : 10/49

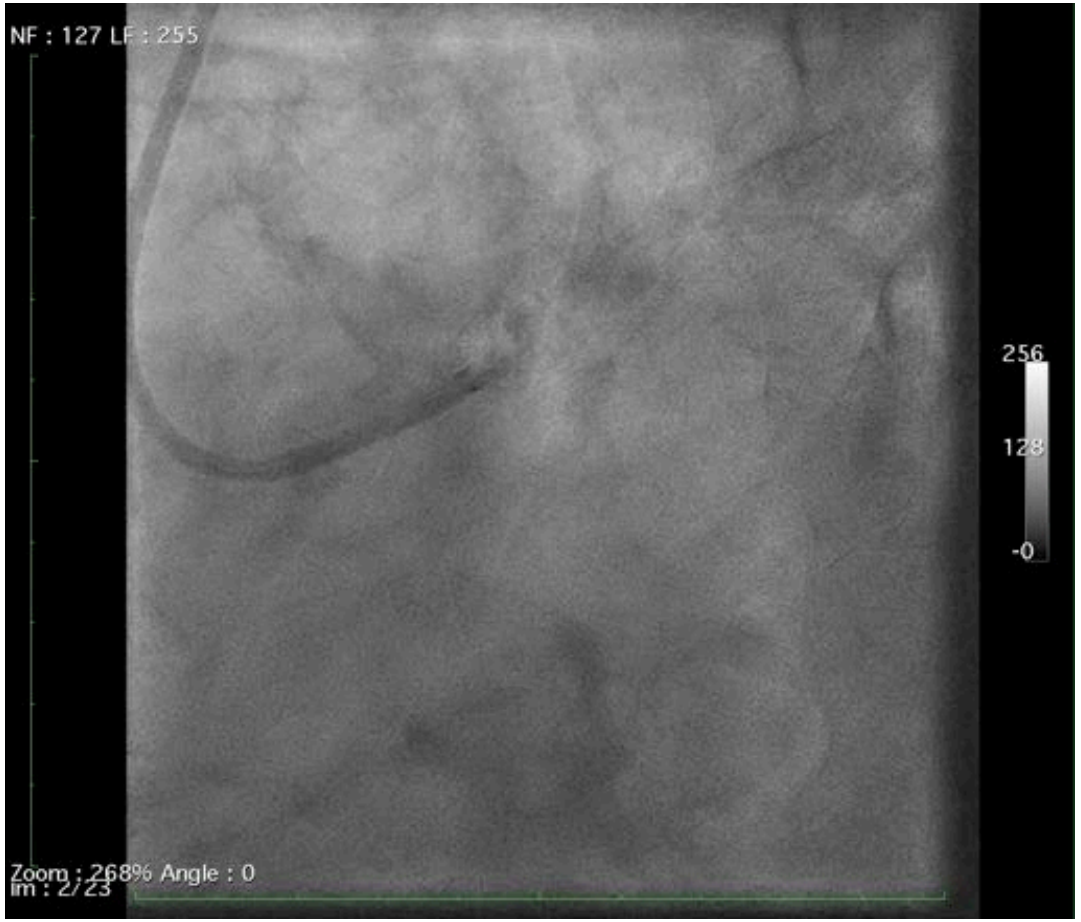

NF : 128 LF : 256
256
128
0
Zoom : 231% Angle : 0
Im : 3/45

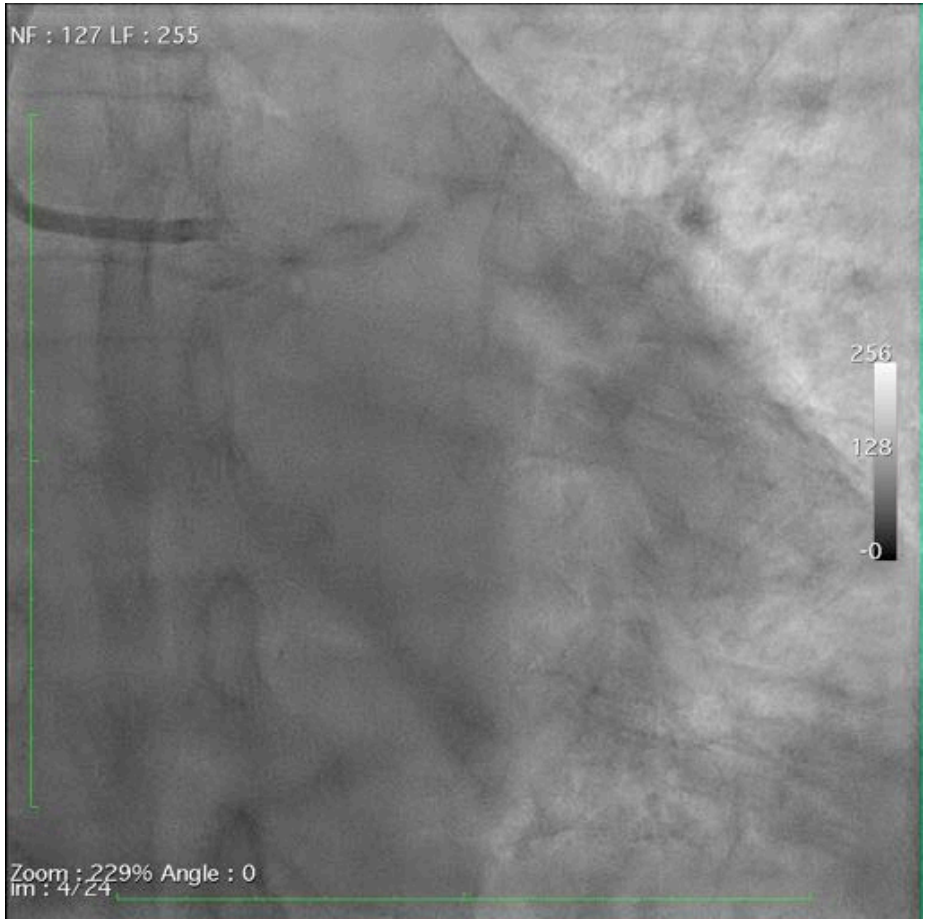
CD dominée




Atteinte 1-1-0 du TCG ?




Lésion de bifurcation 1-1-0 - réseau Cx dominant

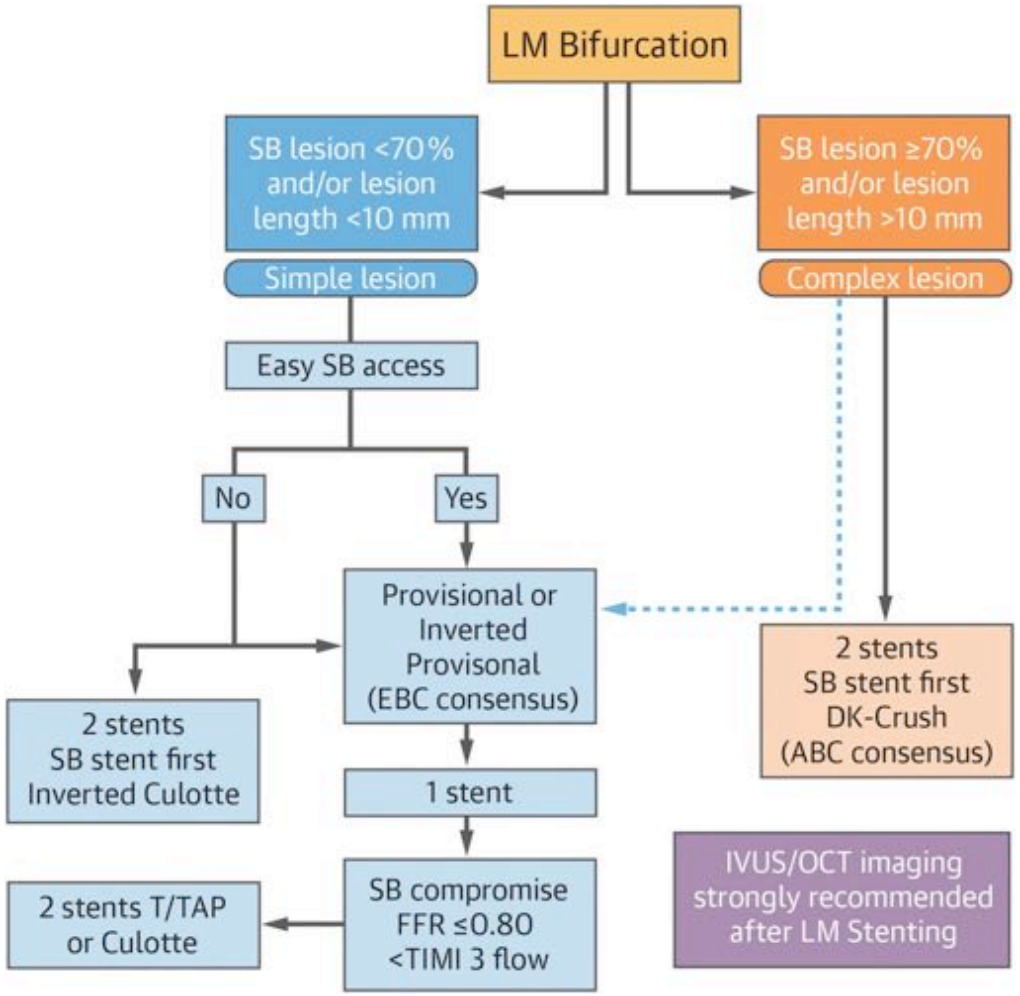
# Stratégie

Atteinte de l'IVA (branche fille) ?

Provisionnal side Branch stenting

Ou

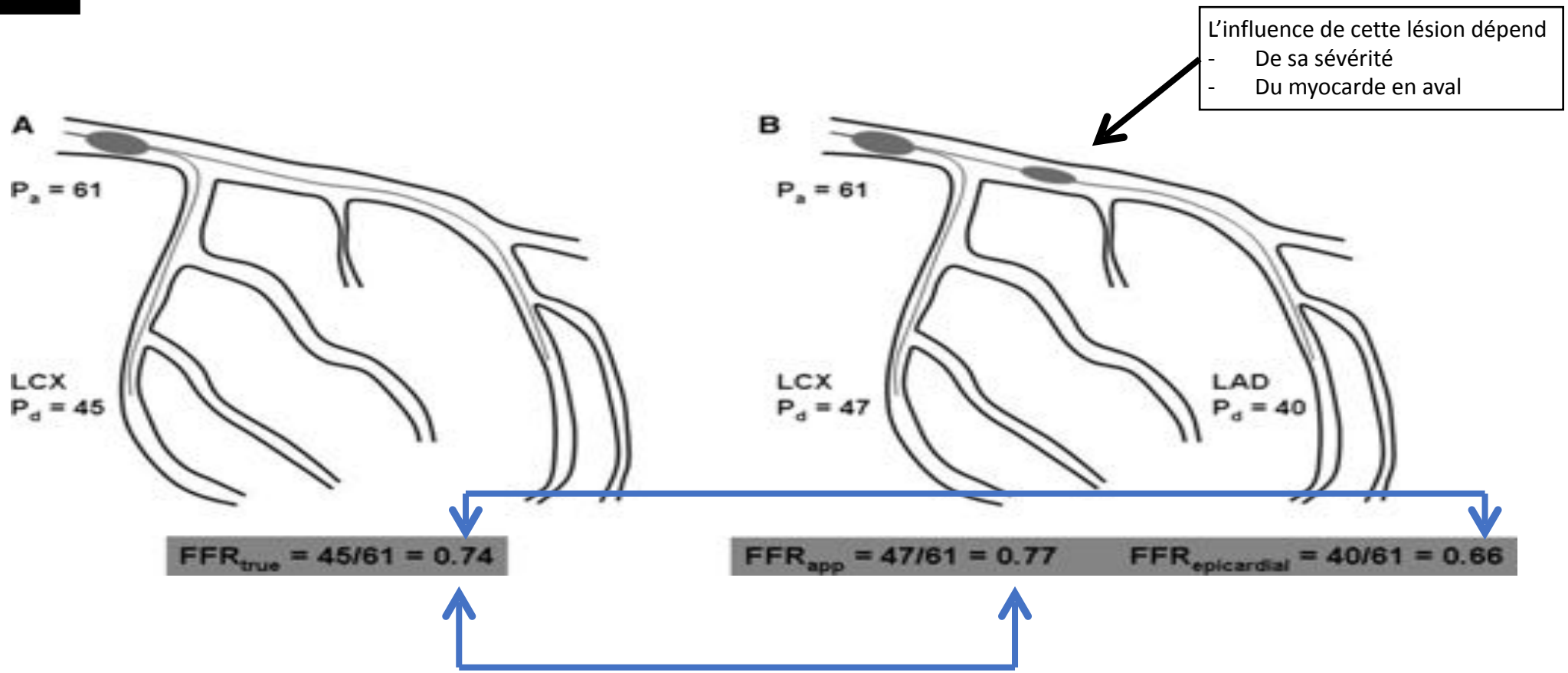
Stratégie à 2 stents d' emblée.




***State of the art – Left main bifurcation JACC: Cardiovascular Interventions-mai 2017***

Comment je l'évalue?

# La FFR




- Evaluation du retentissement des 2 sténoses lorsque le guide est dans la branche pathologique
- Surestimation de la valeur de la FFR lorsque le guide est dans la branche la moins malade

Donc un risque de « faux négatif ».

*Andy S.C. Yong et al. Circ Cardiovasc Interv. 2013*
*JACC CV Intervent 2015;8:398-403.*

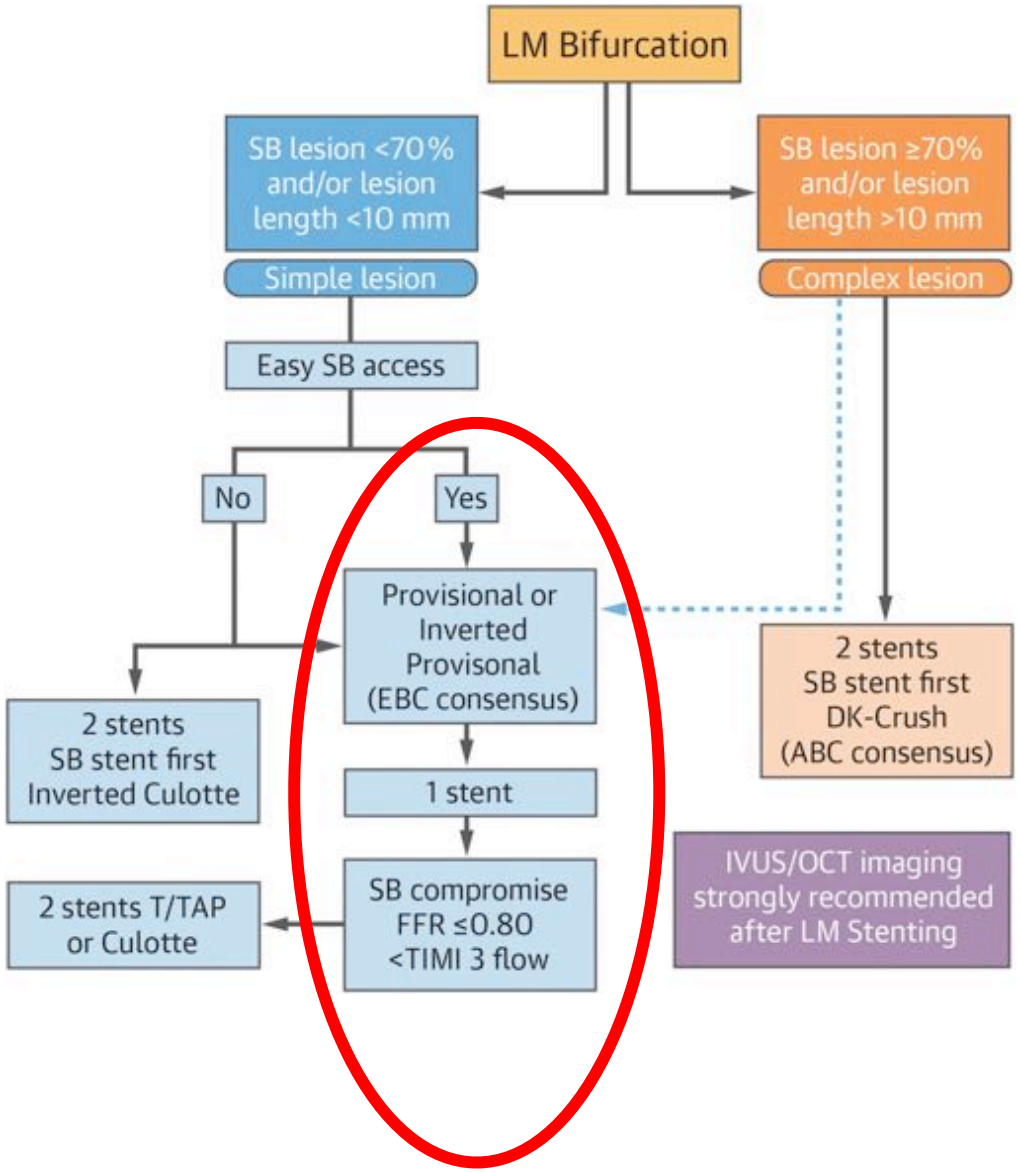
# Stratégie

Atteinte de l'IVA (branche fille)

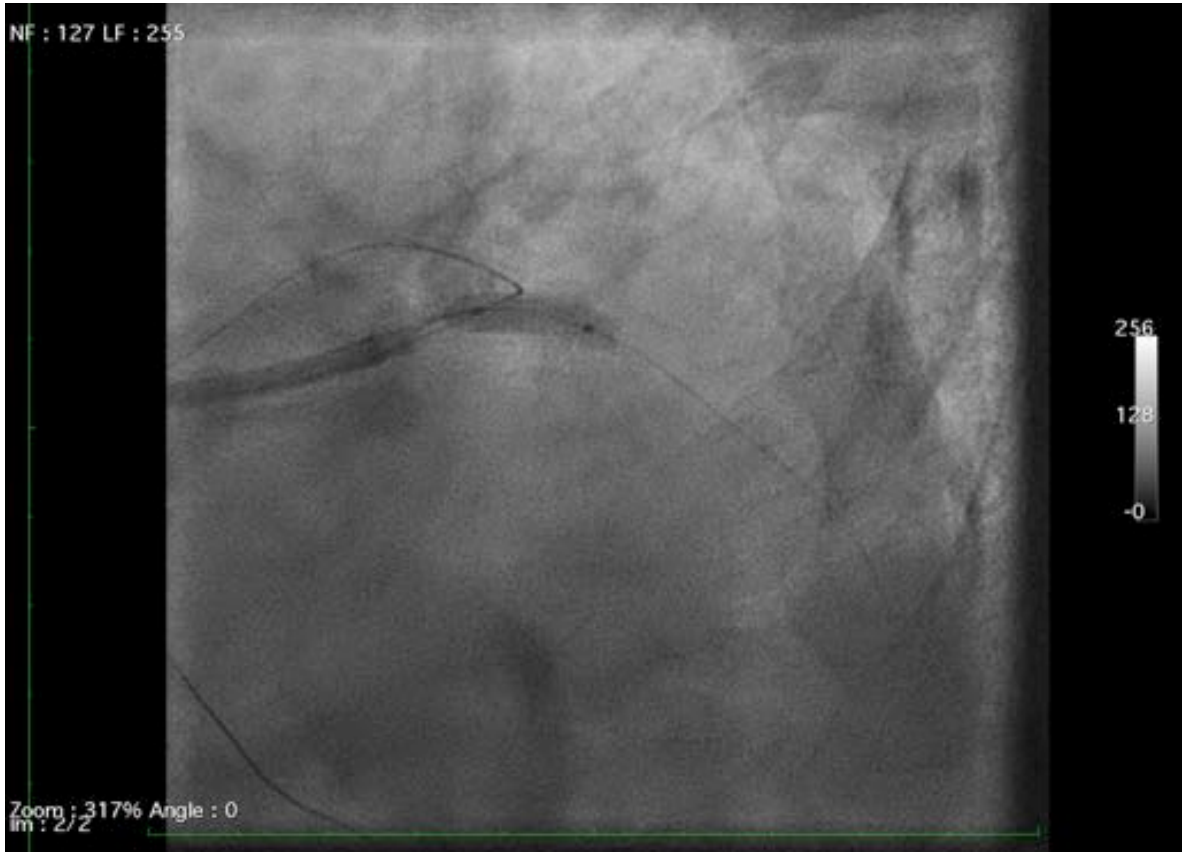
**Provisionnal side Branch stenting**

Ou

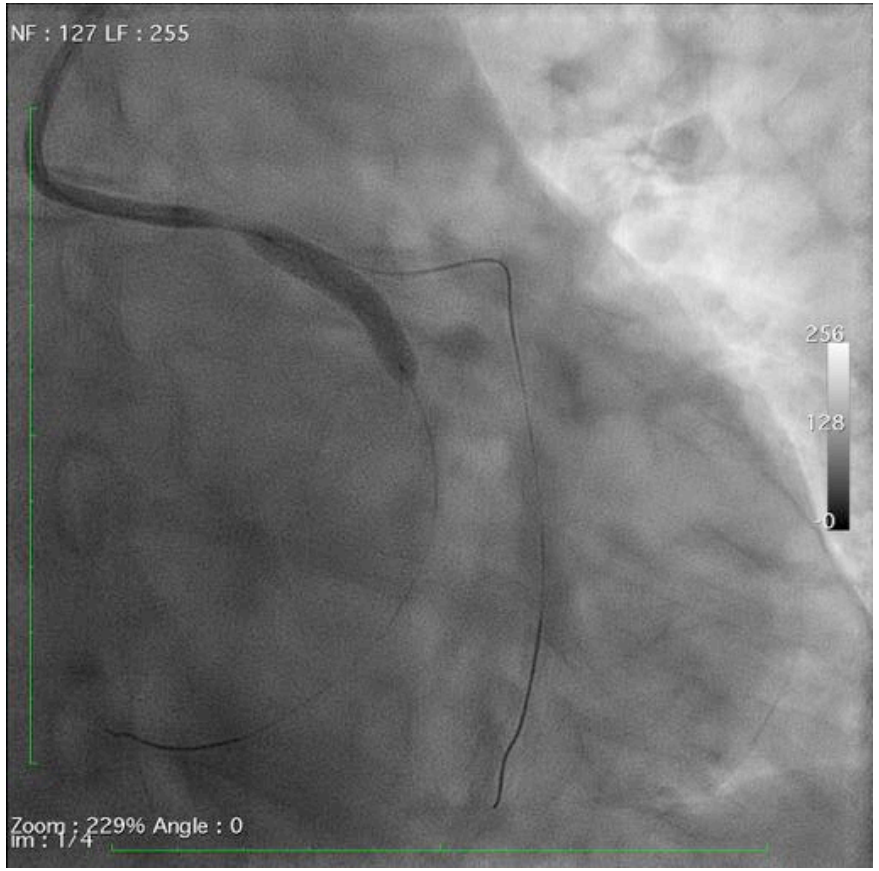
Stratégie à 2 stents d' emblée.



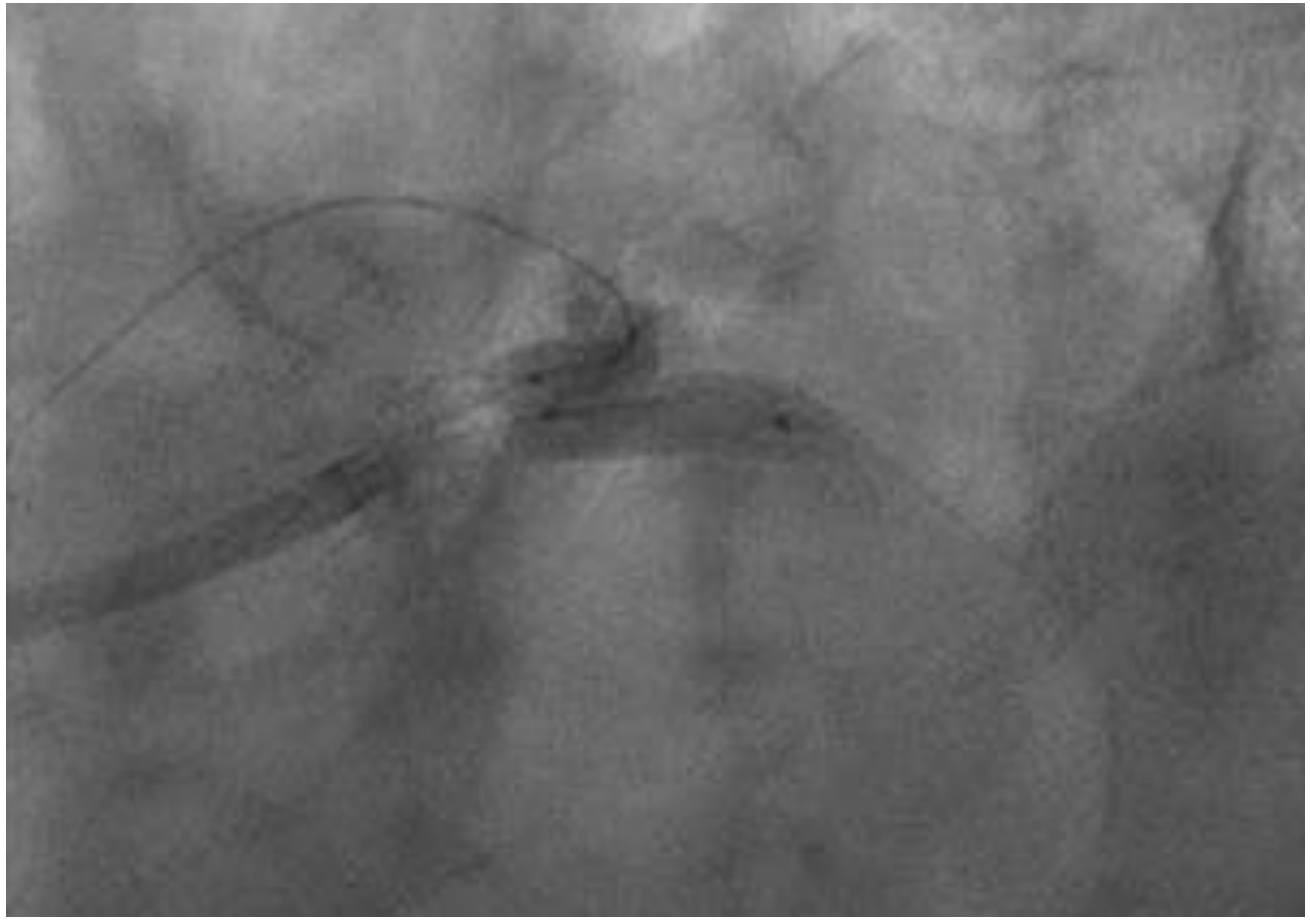

***State of the art – Left main bifurcation JACC: Cardiovascular Interventions-mai 2017***



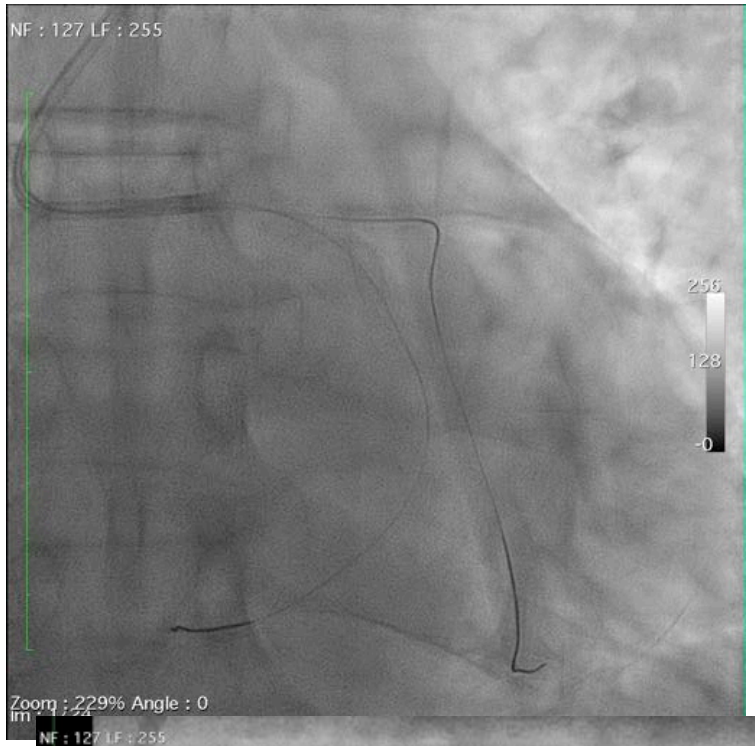

Prédilatation au ballon de 3.5x15 mm

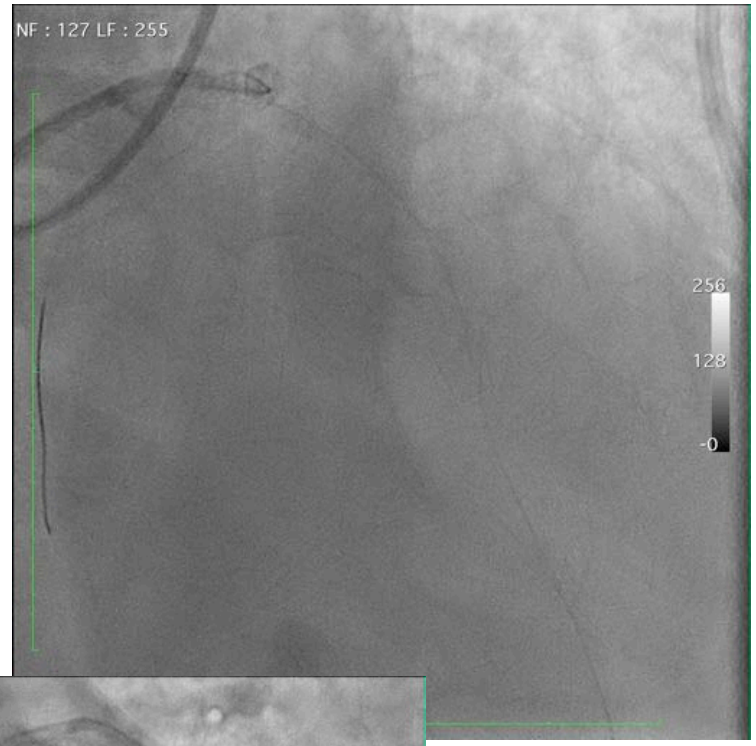


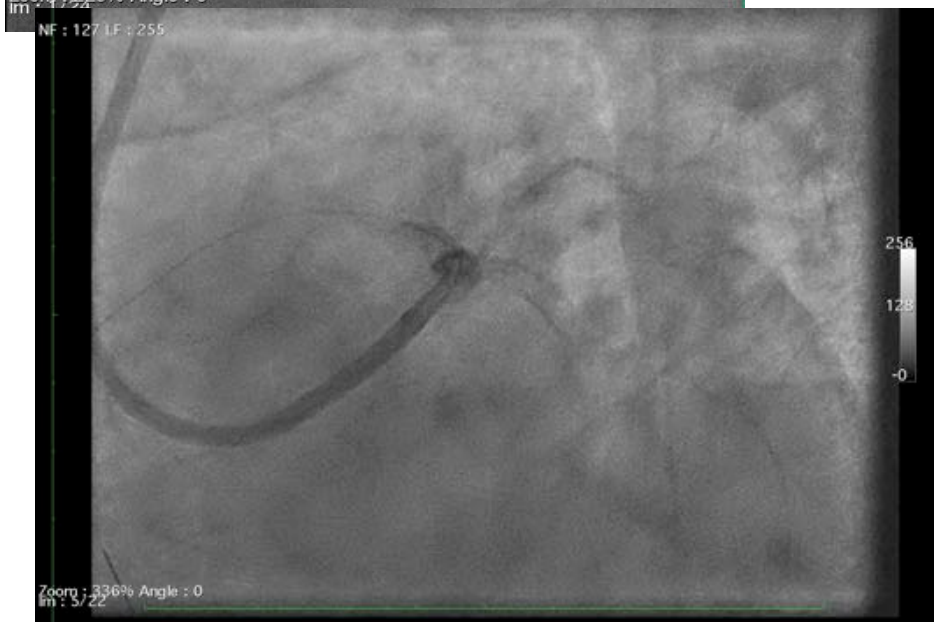

Stent actif SYNERGY 4x20 mm

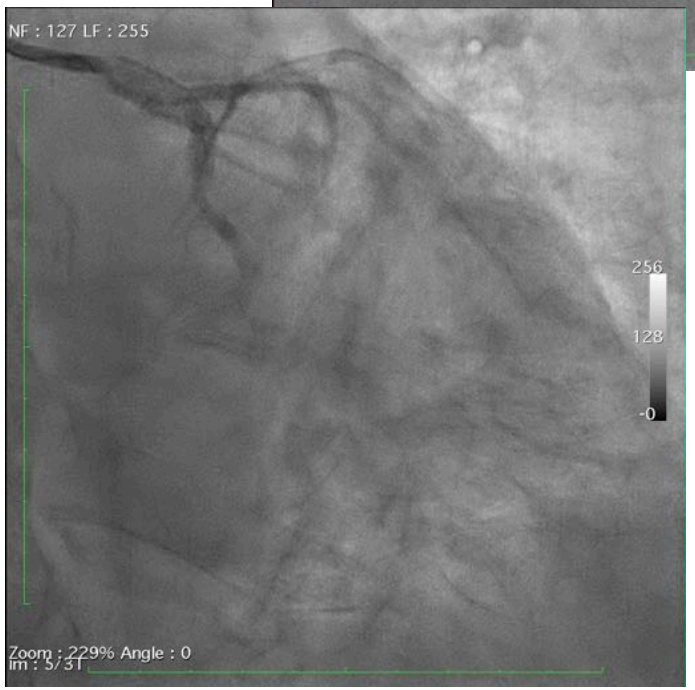


Kissing balloon (ballons de 3.5x15 et 4x15 mm) puis POT au ballon de 5 mm


NF : 127 LF : 255
256
128
-0
Zoom : 229% Angle : 0


NF : 127 LF : 255
256
128
-0


NF : 127 LF : 255
256
128
-0
Zoom : 336% Angle : 0


NF : 127 LF : 255
256
128
-0
Zoom : 229% Angle : 0

# Provisionnal side branch intervention

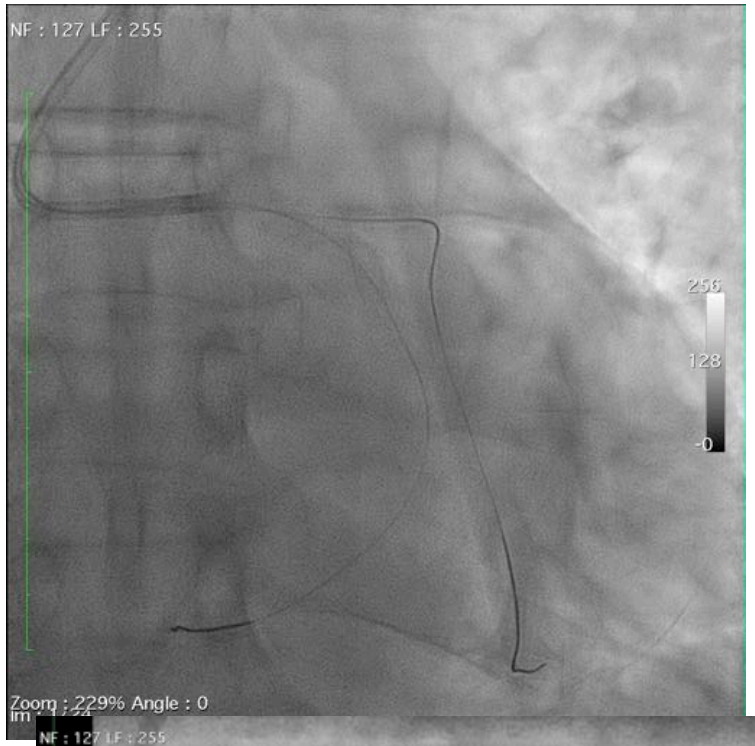
**Sur quels critères traiter la branche fille après angioplastie dans la branche mère ?**

Diamètre > 2 mm ?

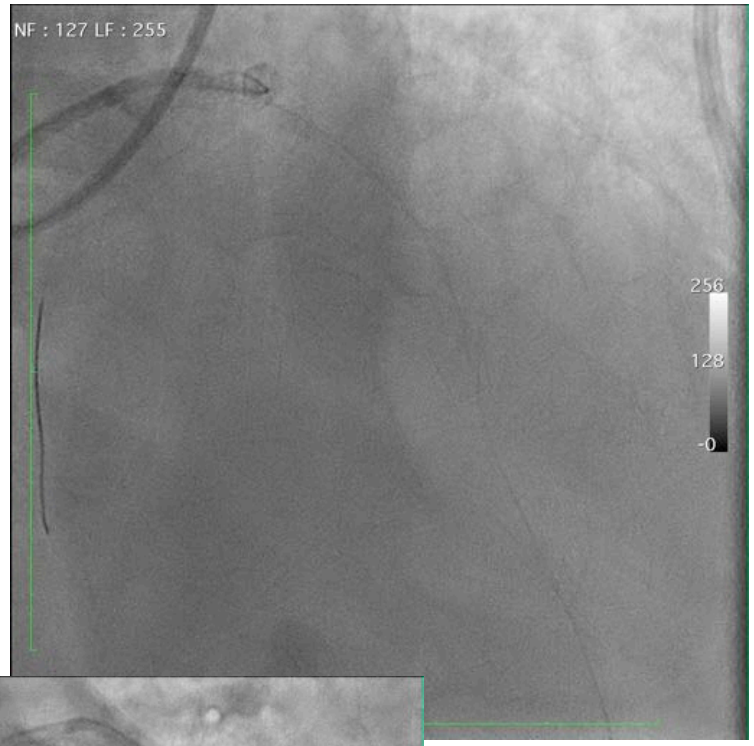
Sténose > 70 % ?

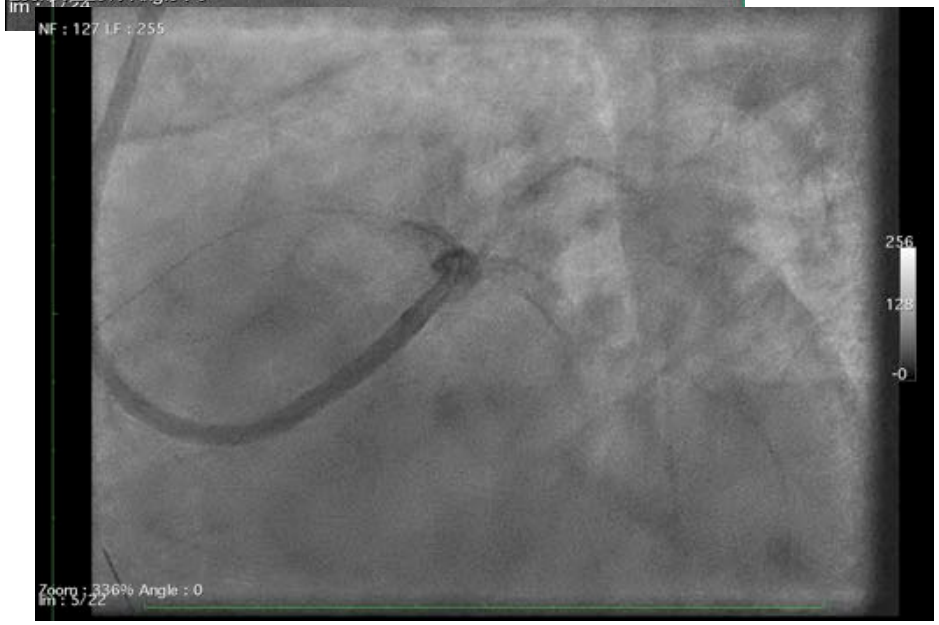
Territoire myocardique large ?

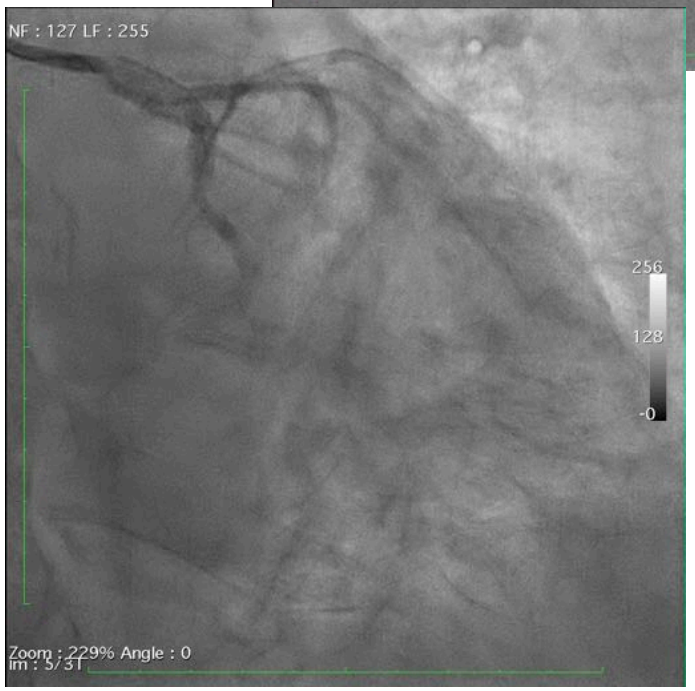
Le QCA surestime l'importance des lésions retrouvées. La plupart des lésions résiduelles ne nécessitent aucune intervention


NF : 127 LF : 255
256
128
-0
Zoom : 229% Angle : 0

FFR = 0,93

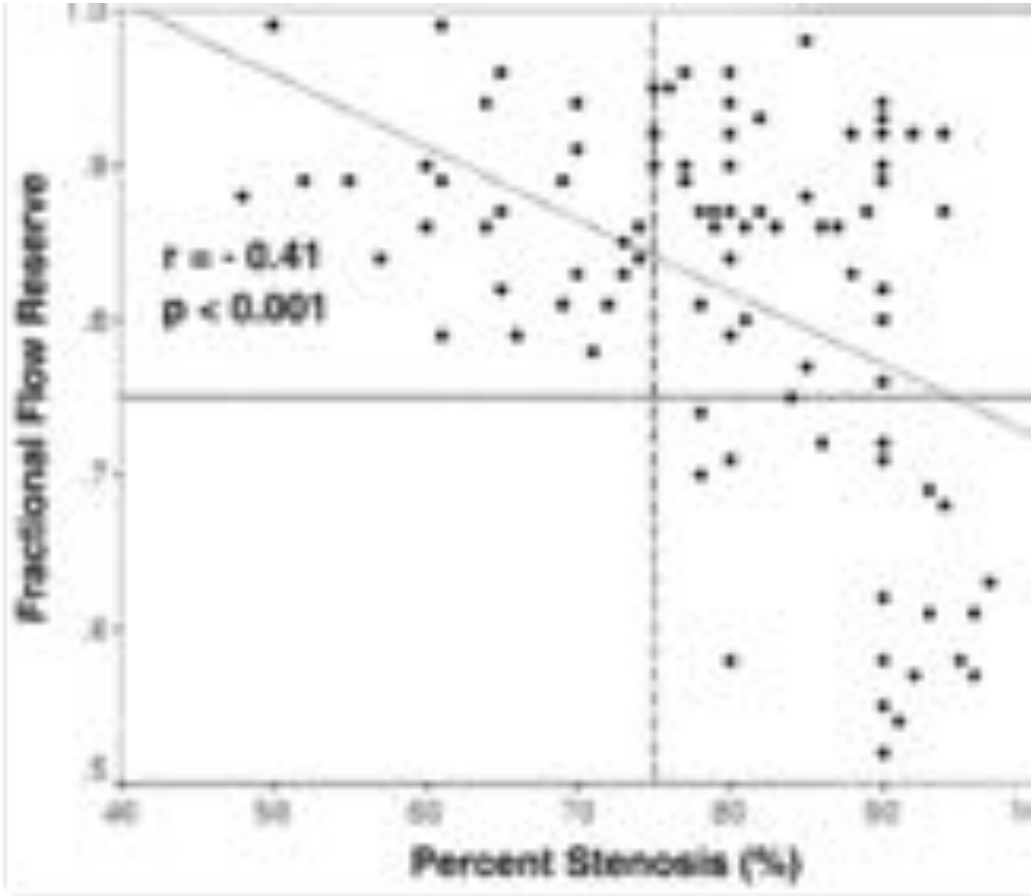

NF : 127 LF : 255
256
128
-0


NF : 127 LF : 255
256
128
-0
Zoom : 336% Angle : 0


NF : 127 LF : 255
256
128
-0
Zoom : 229% Angle : 0

# The « jailed pressure wire technique »

Corrélations QCA et FFR sur la lésion résiduelle de la branche fille




*Koo JACC 2005*

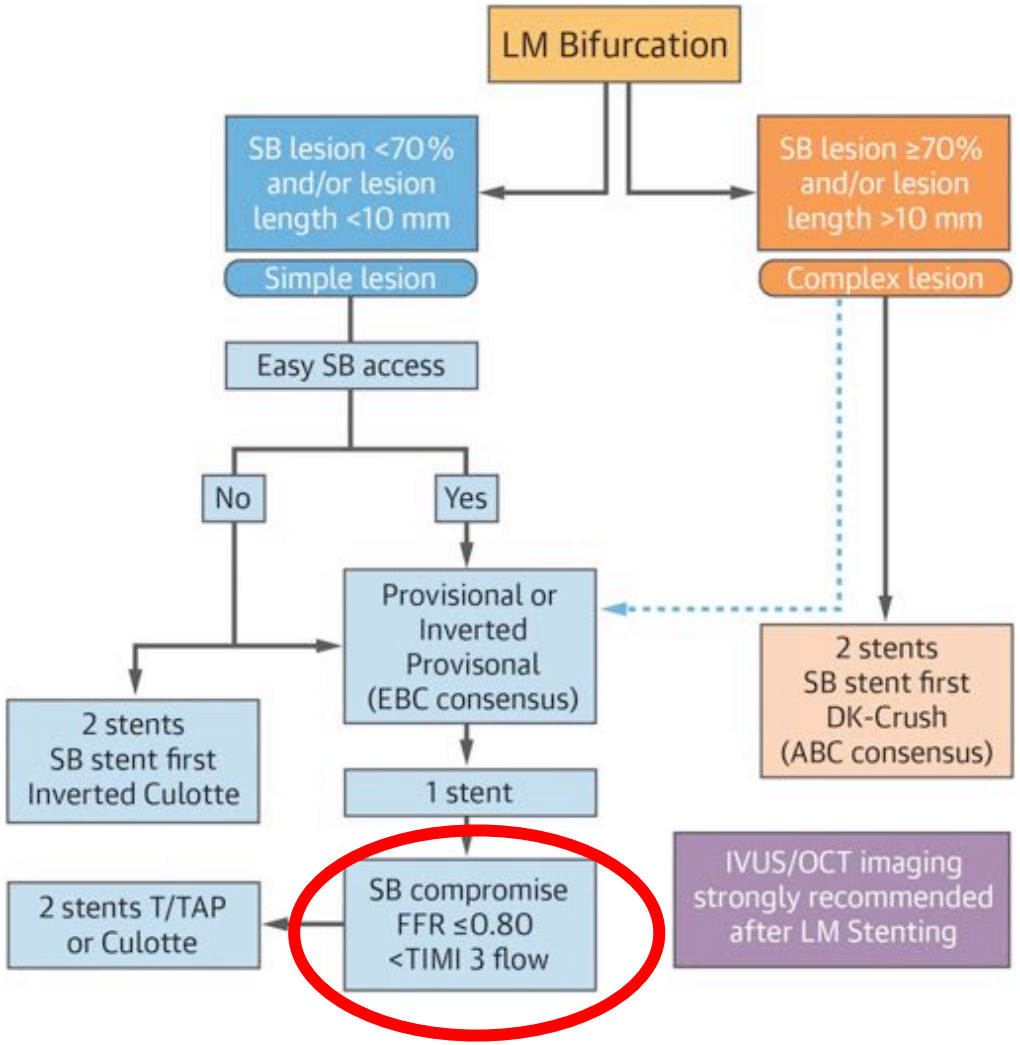
# Stratégie

Atteinte de l'IVA (branche fille)

**Provisionnal side Branch stenting**

Ou

Stratégie à 2 stents d' emblée.



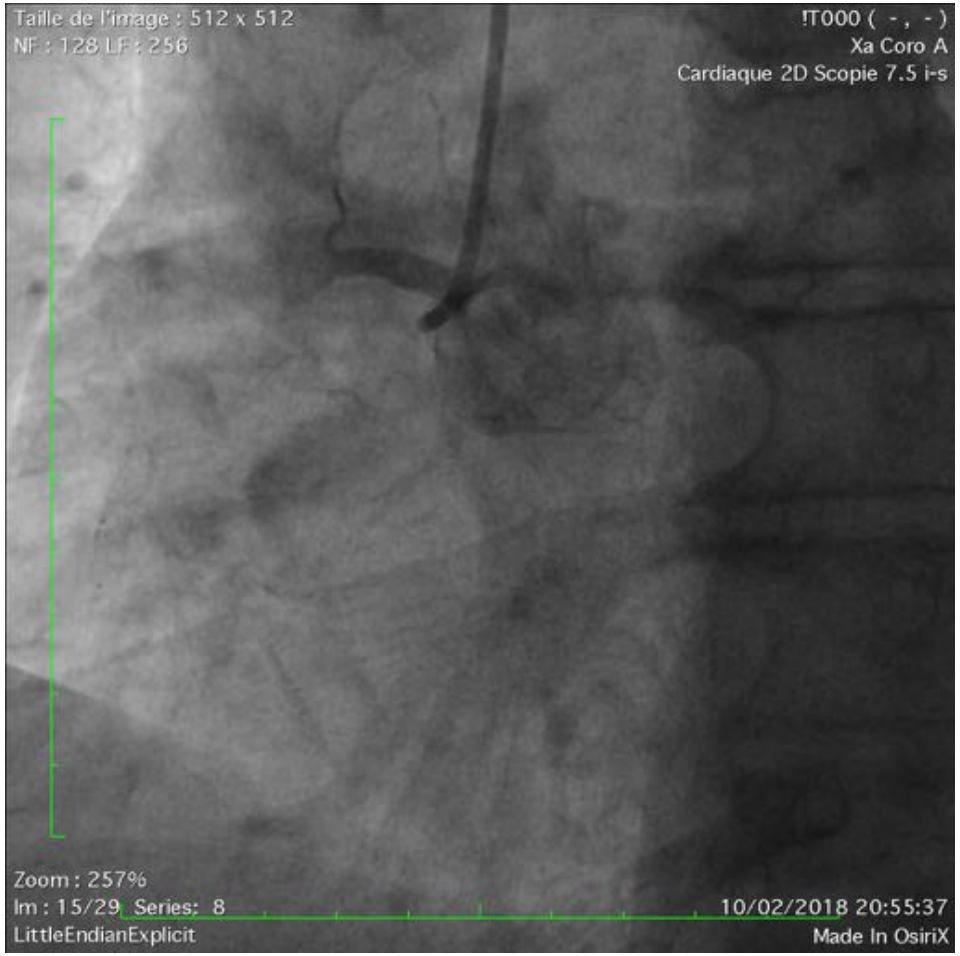

***State of the art – Left main bifurcation JACC: Cardiovascular Interventions-mai 2017***

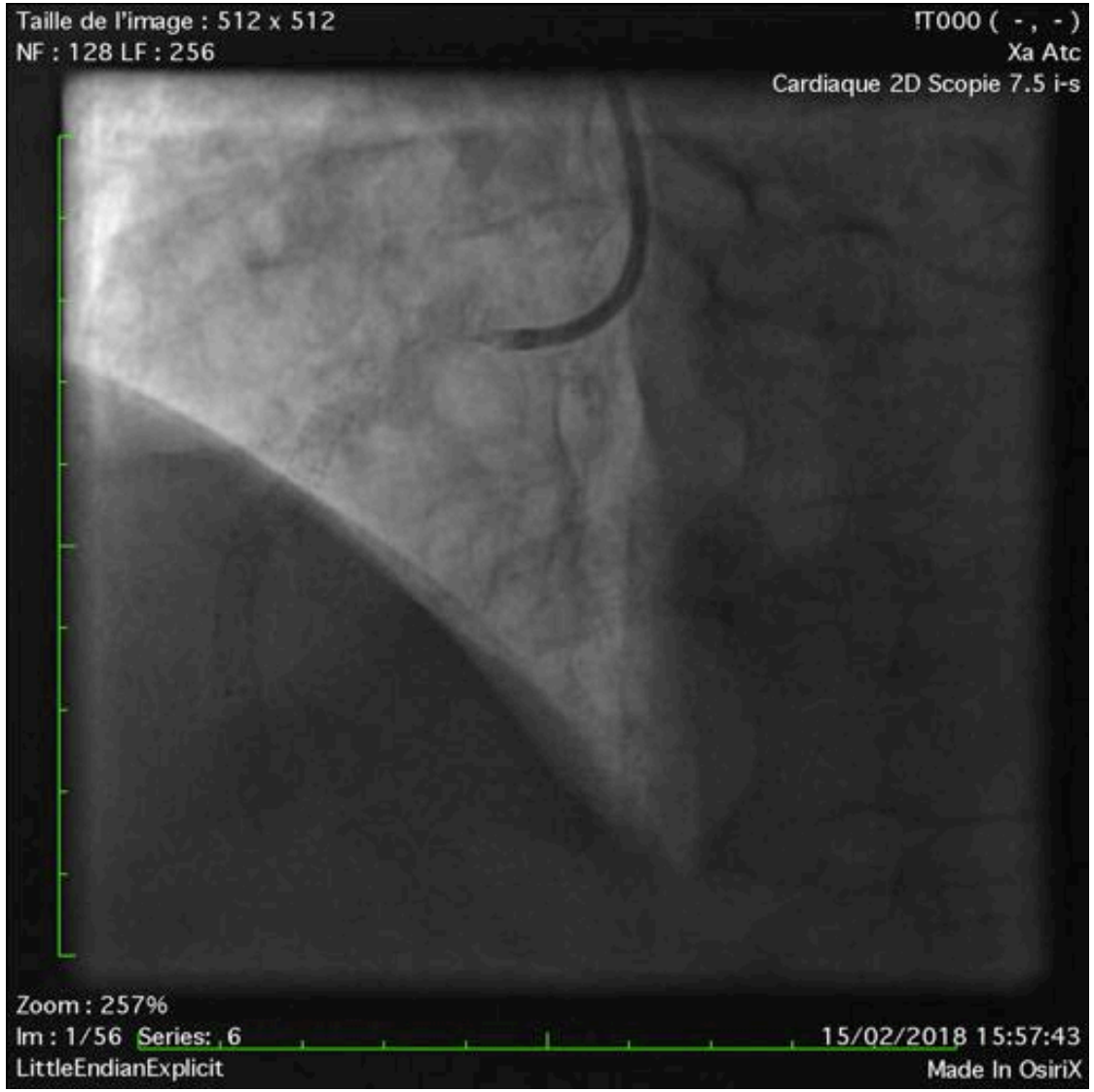
# Cas clinique n° 2 : SCA

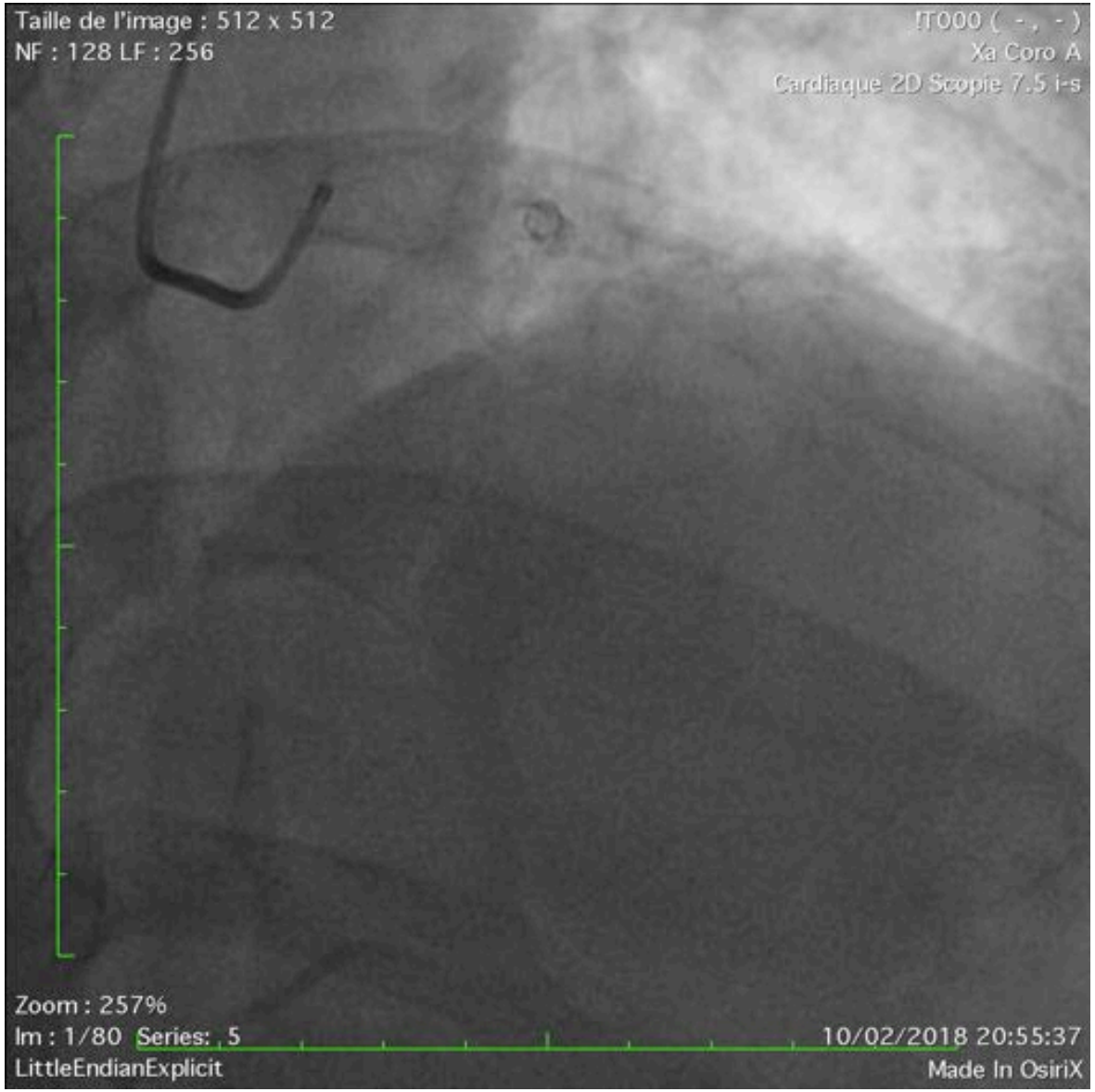
Mme T, 54 ans

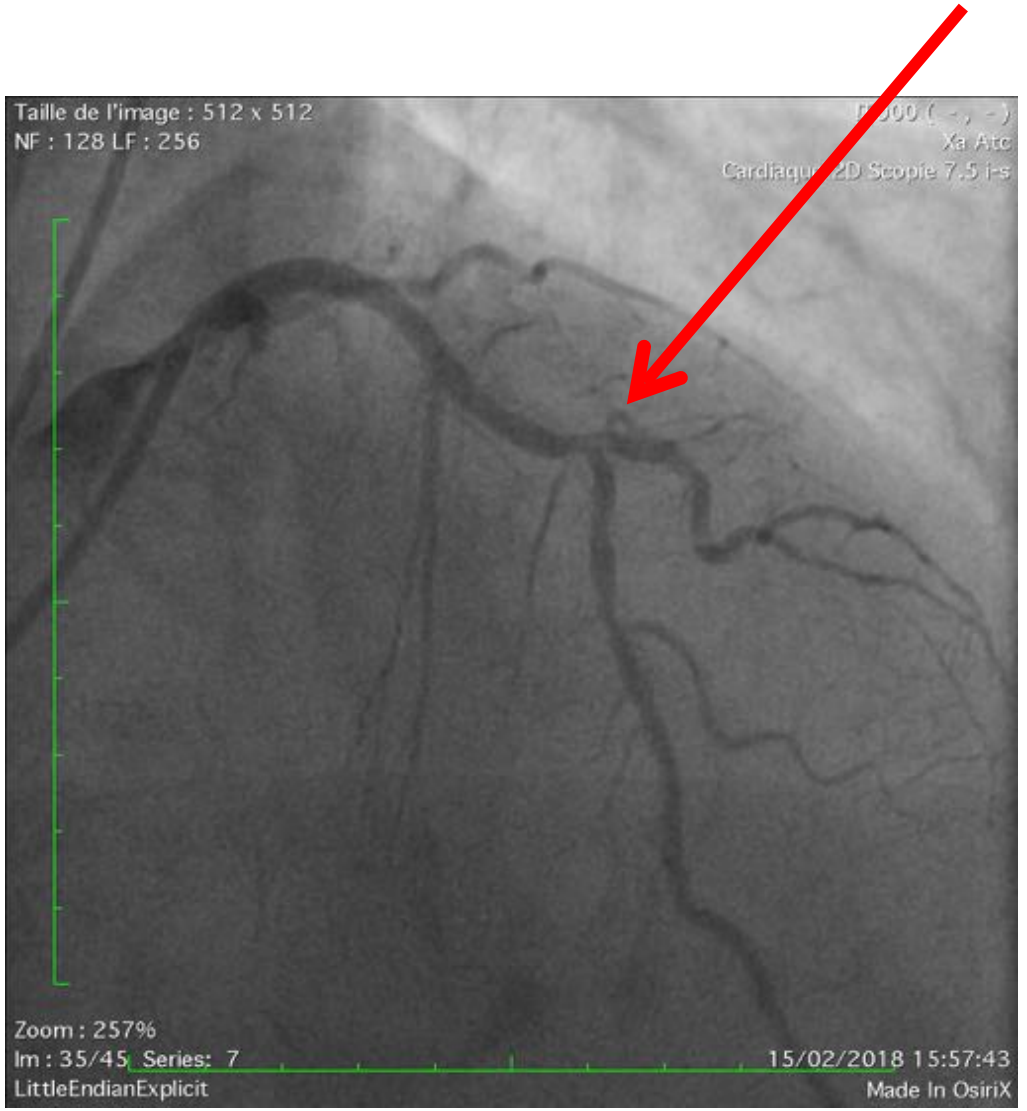
SCA ST + en territoire inférieur

FE conservée


Taille de l'image : 512 x 512
NF : 128 LF : 256
!T000 ( - , - )
Xa Coro A
Cardiaque 2D Scopie 7.5 i-s
Zoom : 257%
Im : 15/29 Series: 8
10/02/2018 20:55:37
LittleEndianExplicit
Made In OsiriX

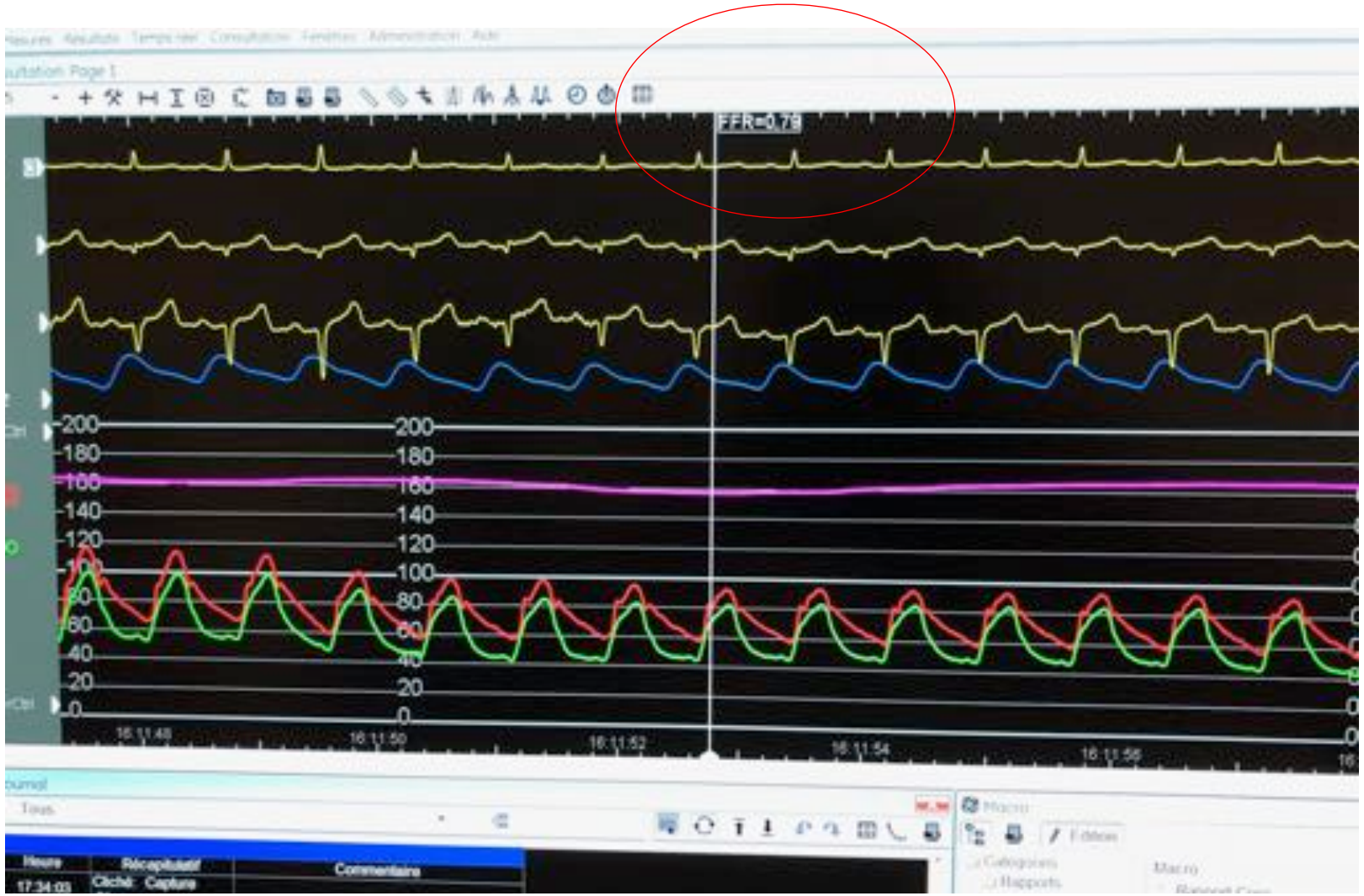

Taille de l'image : 512 x 512
NF : 128 LF : 256
!T000 ( - , - )
Xa Atc
Cardiaque 2D Scopie 7.5 i-s
Zoom : 257%
Im : 1/56 Series: 6
15/02/2018 15:57:43
LittleEndianExplicit
Made In OsiriX

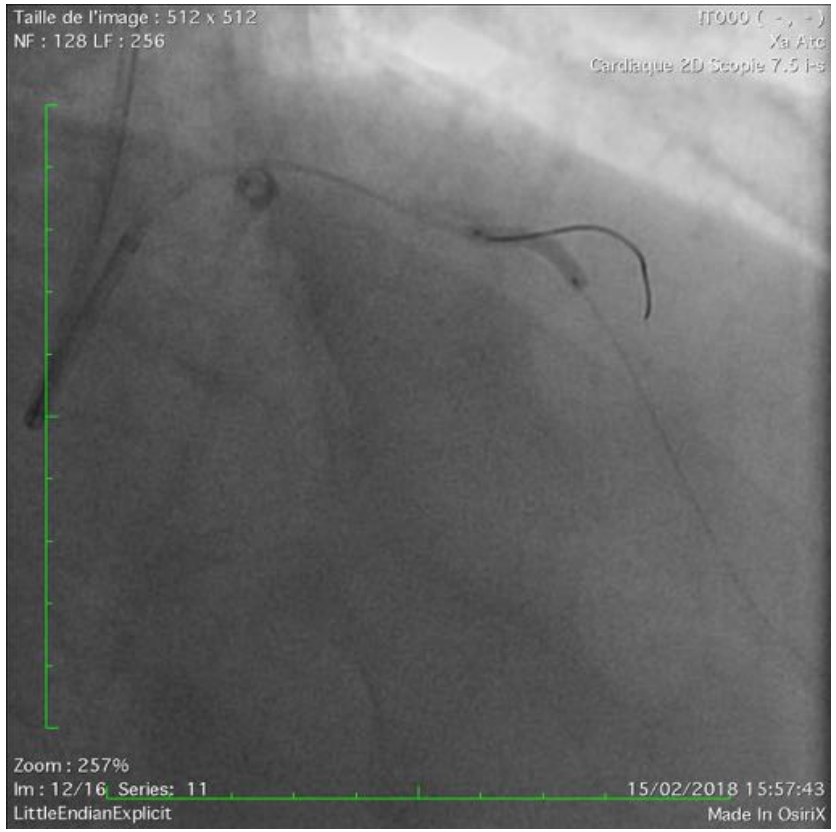


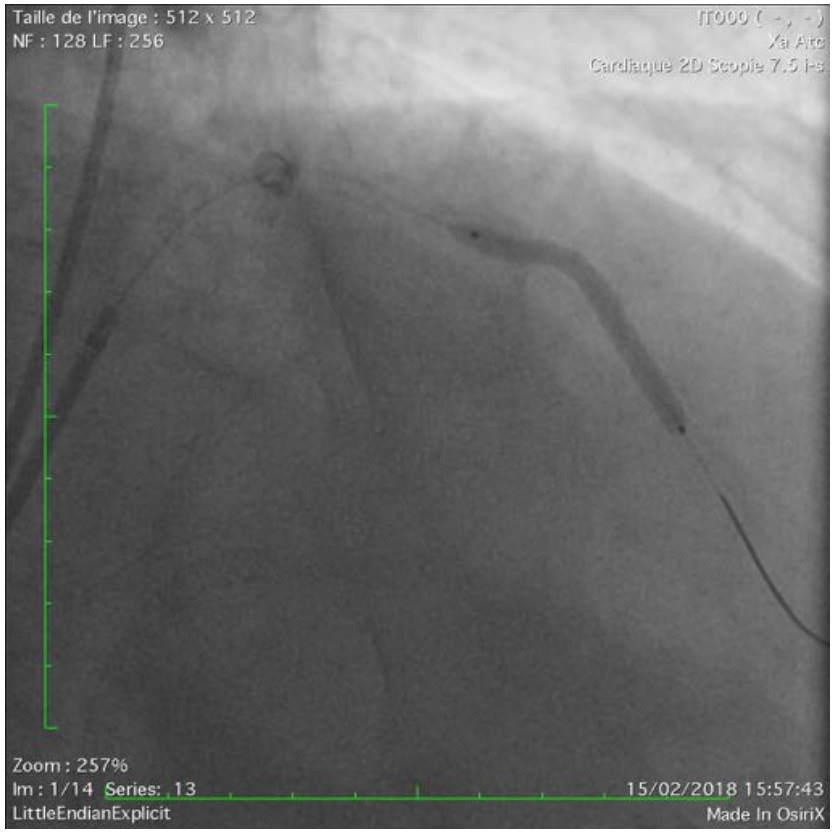

Lésion intermédiaire de l'IVA moyenne

# FFR

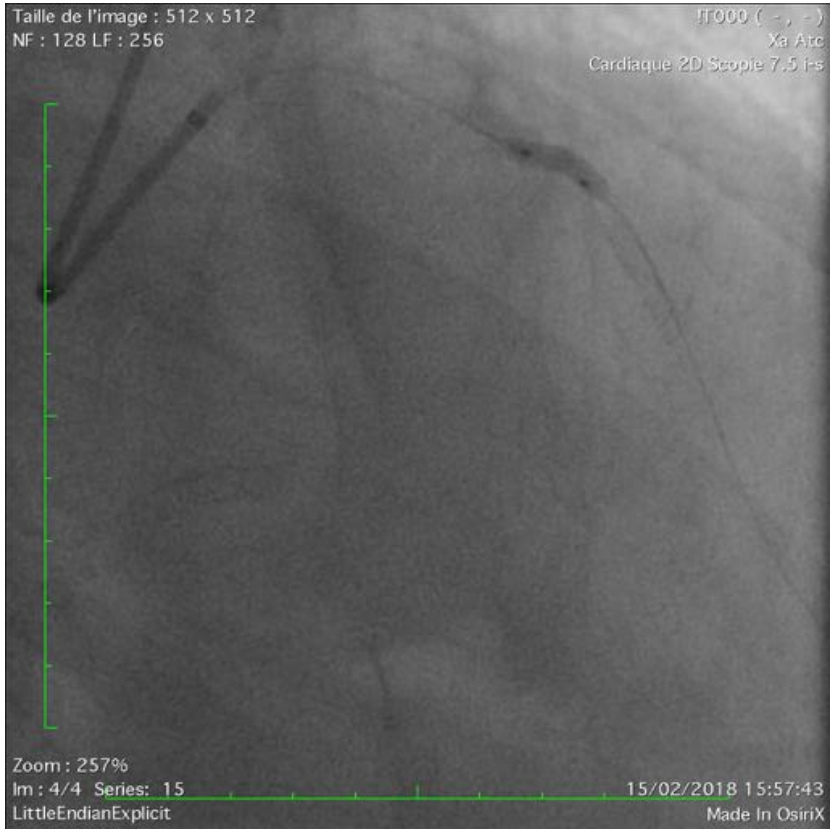

FFR=0.79
200
180
160
140
120
100
80
60
40
20
0
16:11:48
16:11:50
16:11:52
16:11:54
16:11:56
Heure
Récapitulatif
Commentaire
Cliché
Capture



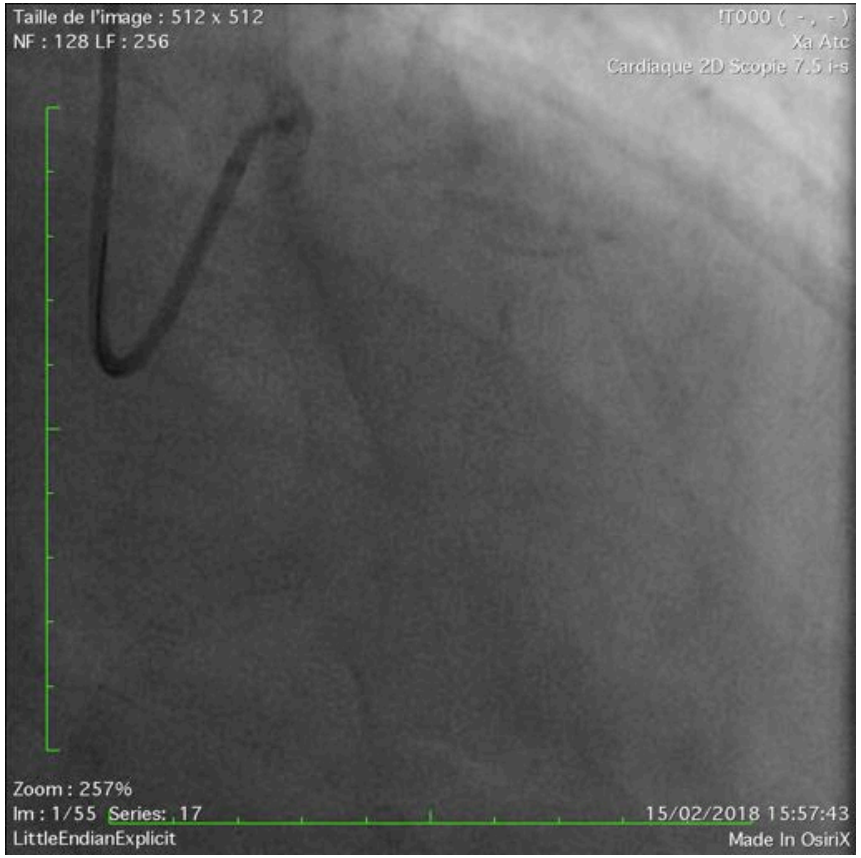

Prédilatation au ballon 2,5x15

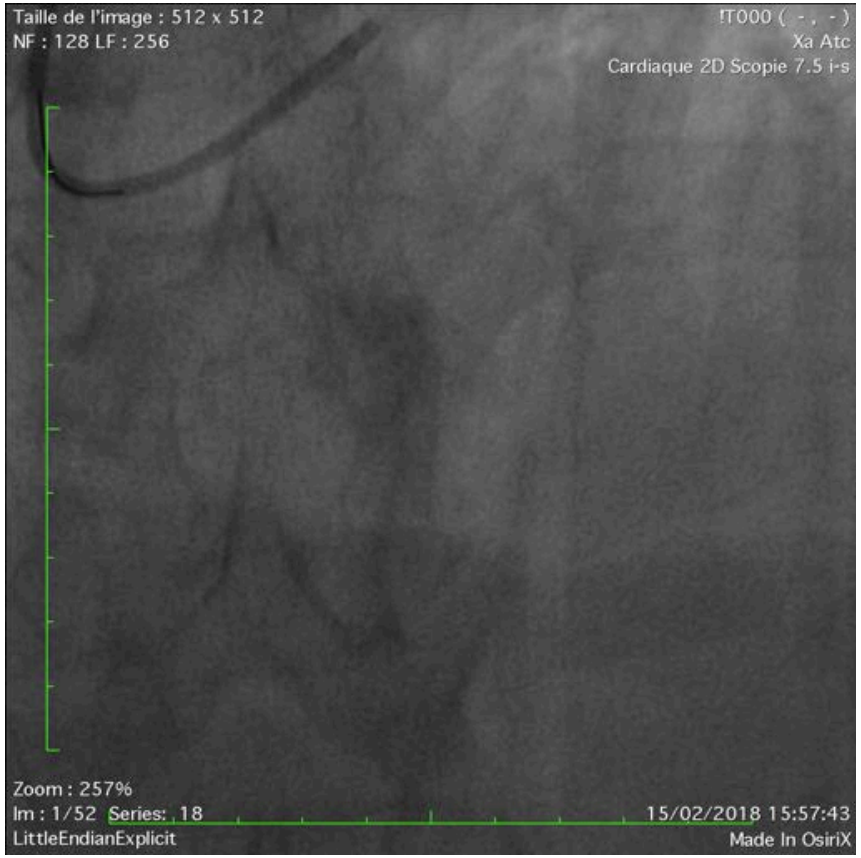



SYNERGY 2,75x32




Post dilatation au ballon de 3x8 mm




Résultat final

© 2010 BY THE AMERICAN COLLEGE OF CARDIOLOGY FOUNDATION
PUBLISHED BY ELSEVIER INC.

CLINICAL RESEARCH

# Fractional Flow Reserve for the Assessment of Nonculprit Coronary Artery Stenoses in Patients With Acute Myocardial Infarction

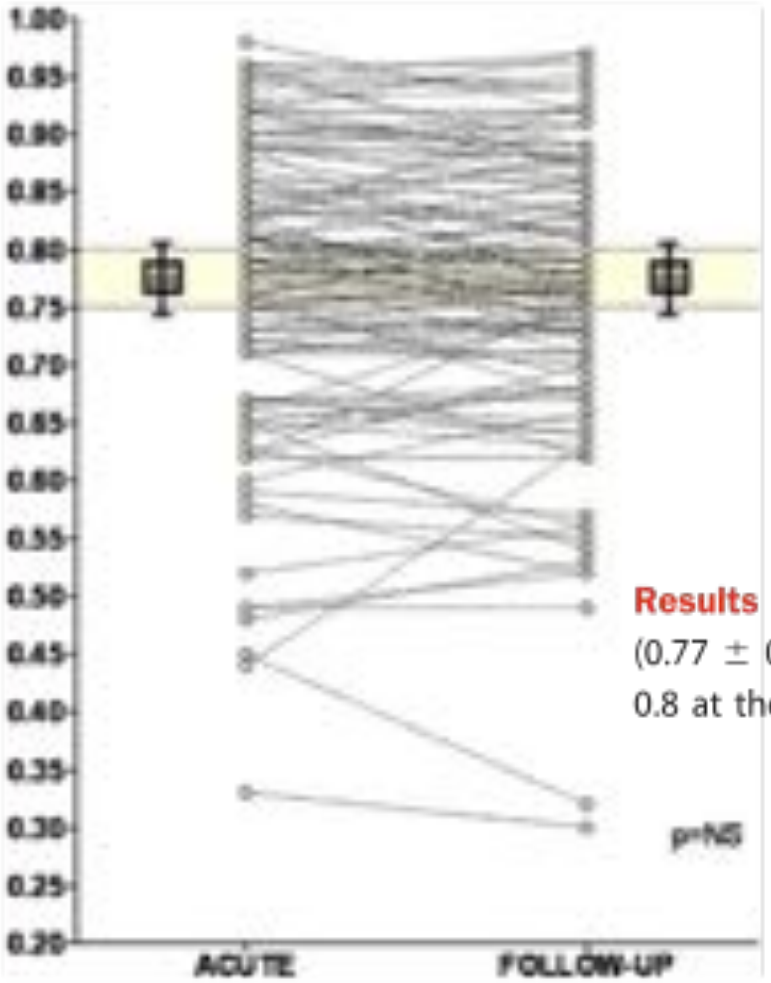



Figure 1. Plot of FFR Values of Nonculprit Coronary Artery Stenoses During the Acute Phase and at Follow-Up

FFR = fractional flow reserve; NS = not statistically significant.

**Results** The FFR value of the nonculprit stenoses did not change between the acute and follow-u (0.77 ± 0.13 vs. 0.77 ± 0.13, respectively, p = NS). In only 2 patients, the FFR value was higher tha 0.8 at the acute phase and lower than 0.75 at follow-up. The TIMI flow, cTFC, percentage diameter

# Conclusion : la FFR dans les branches filles

- Faisable
- Rationnel
- Peu de preuves cliniques

# Conclusion : la FFR dans le SCA (lésion non coupable)

- Faisable
- Rationnel
- Manque de preuves cliniques – inclusion en cours dans FLOWER MI