

# **Bifurcations du TC : je n'utilise pas la technique du P.O.T.**

Nicolas Meneveau CHU Besançon  
Biarritz le 8 Juin 2016

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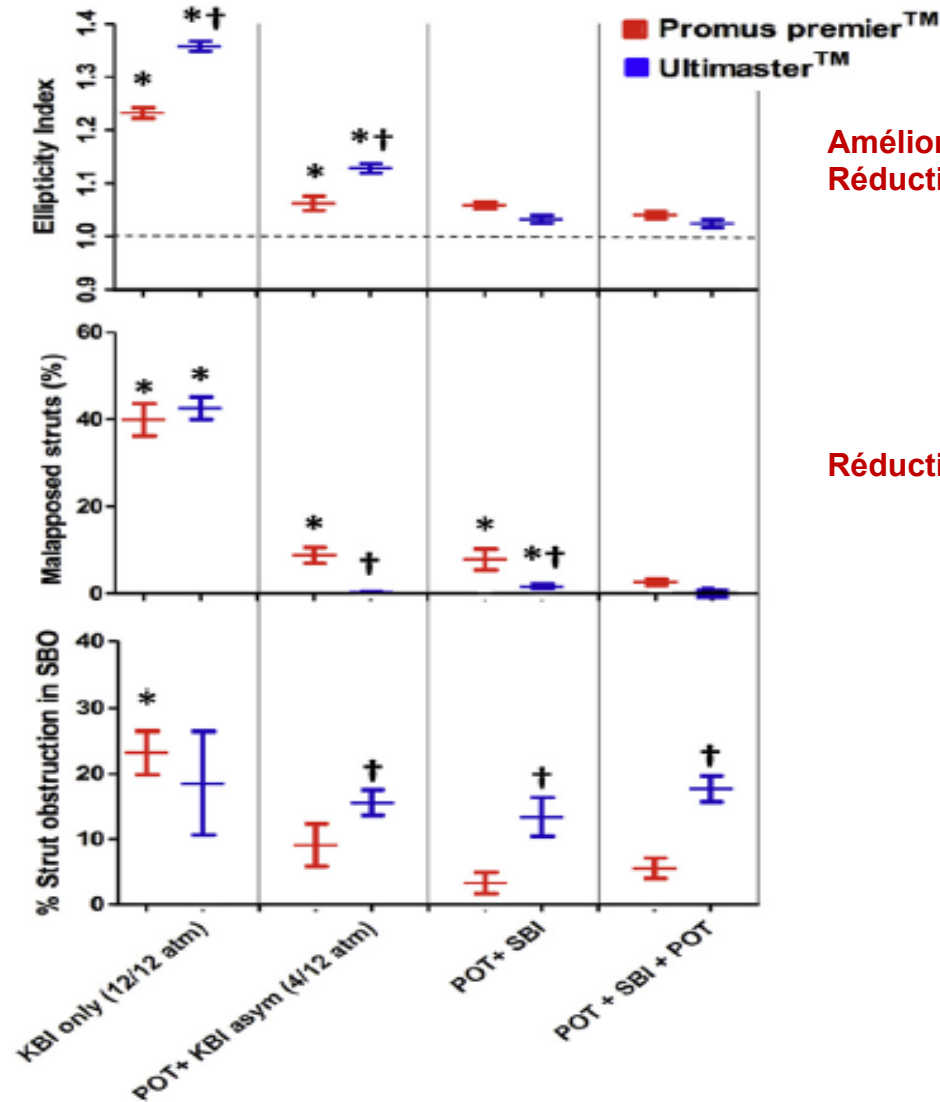
# Comparative Analysis of Sequential Proximal Optimizing Technique Versus Kissing Balloon Inflation Technique in Provisional Bifurcation Stenting

## Fractal Coronary Bifurcation Bench Test

**CONCLUSIONS** In comparison with 5 other techniques, the re-POT sequence significantly optimized the final result of provisional coronary bifurcation stenting, maintaining circular geometry while significantly reducing SB ostium strut obstruction and global strut malapposition. These experimental findings confirm that provisional stenting may be optimized more effectively without KBI using re-POT. (J Am Coll Cardiol Intv 2015;8:1308-17)

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# POT & re-POT : les données expérimentales



Amélioration de la géométrie du stent  
Réduction de sa déformation



Réduction de la malapposition

# Que disent les guidelines ?

- SB diameter and length can both be used visually as surrogates for volume of muscle at risk.
- Wiring of the SB before MV stenting is recommended when the SB is deemed important by the operator.
- Main vessel (MV) stenting with provisional SB treatment, needed, is recommended as the preferred technique for the majority of bifurcation lesions.
- Large SBs with significant ostial disease extending further into the SB are likely to require a two-stent strategy.
- Larger SBs whose access is particularly challenging should be secured by stenting once accessed.
- The MV stent should be sized according to the distal MV reference diameter.
- The MV stent should allow for expansion to the reference diameter of the proximal main vessel.
- Predilatation of the SB is in most cases probably not needed, but may be considered.
- Predilatation of the SB is recommended in some circumstances (extensive ostial SB involvement, heavy calcification, etc.), even with a provisional SB stenting approach.
- The POT may be used in cases with large differences in reference diameter between proximal and distal MV.
- The POT might be used to aid difficult recrossing into a SB with either a wire or a balloon.
- Kissing balloon inflations may be used when an angiographically significant ( $>75\%$  DS or TIMI flow  $<3$ ) ostial SB lesion remains after MV stenting.
- Non-compliant balloons are recommended for kissing inflations.
- Final kissing balloon dilatation is mandatory in any two-stent technique.
- T-stenting is appropriate for near 90 degree bifurcations.
- Final post-dilatation of the proximal MV segment may be considered for reducing malapposition of multiple strut layers and for correction of proximal stent distortion after kissing balloon inflation.
- Provisional stenting is the preferred strategy in LMCA bifurcation lesions.
- POT may be of particular importance in LMCA bifurcation treatment.
- Intracoronary imaging is recommended to ensure adequate stent and vessel expansion in all LMCA bifurcation segments.

# Que disent les guidelines ?

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# Quid de la géométrie circulaire du TC ??

Index d'ellipticité = 1,08



Index d'ellipticité = 1,43



Espérer obtenir une géométrie circulaire du stent et empêcher la malapposition est illusoire dans le TC pour un certain nb de pts

Index



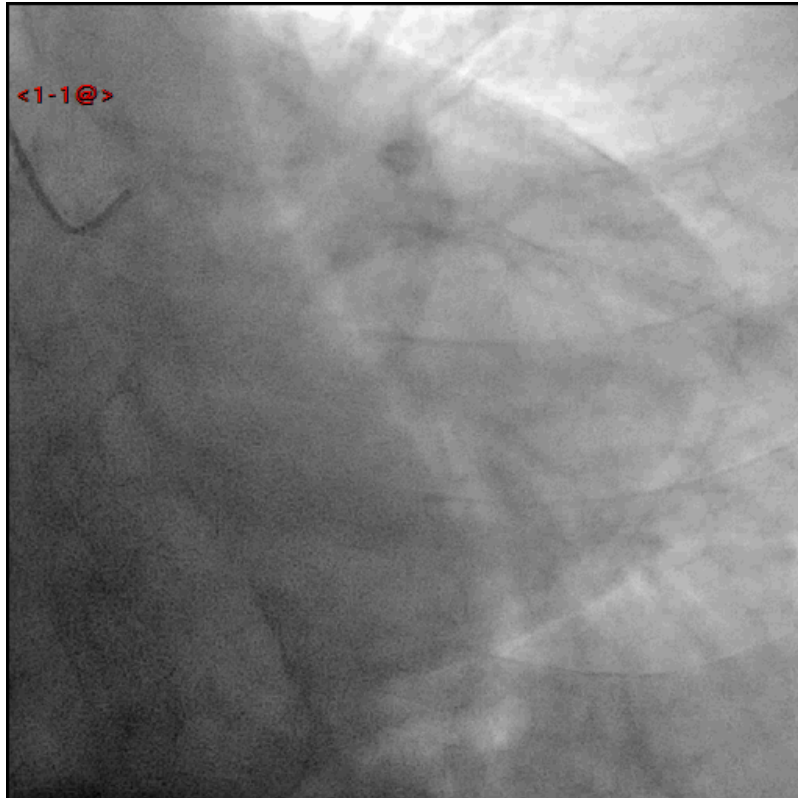
2,72



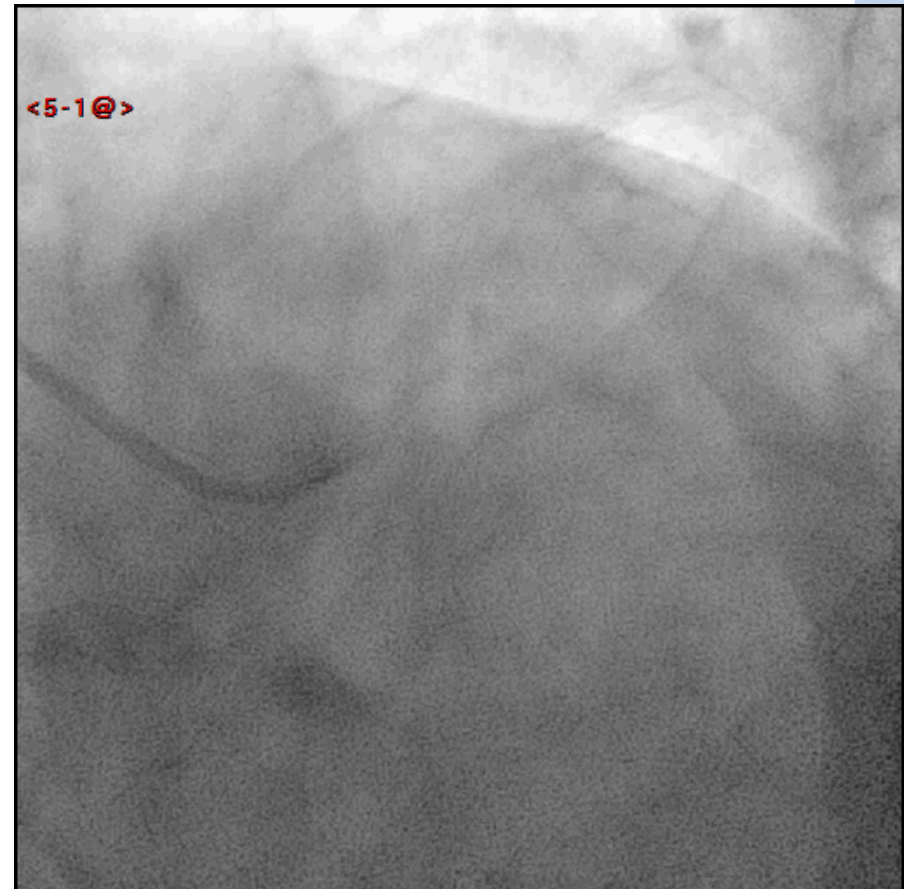
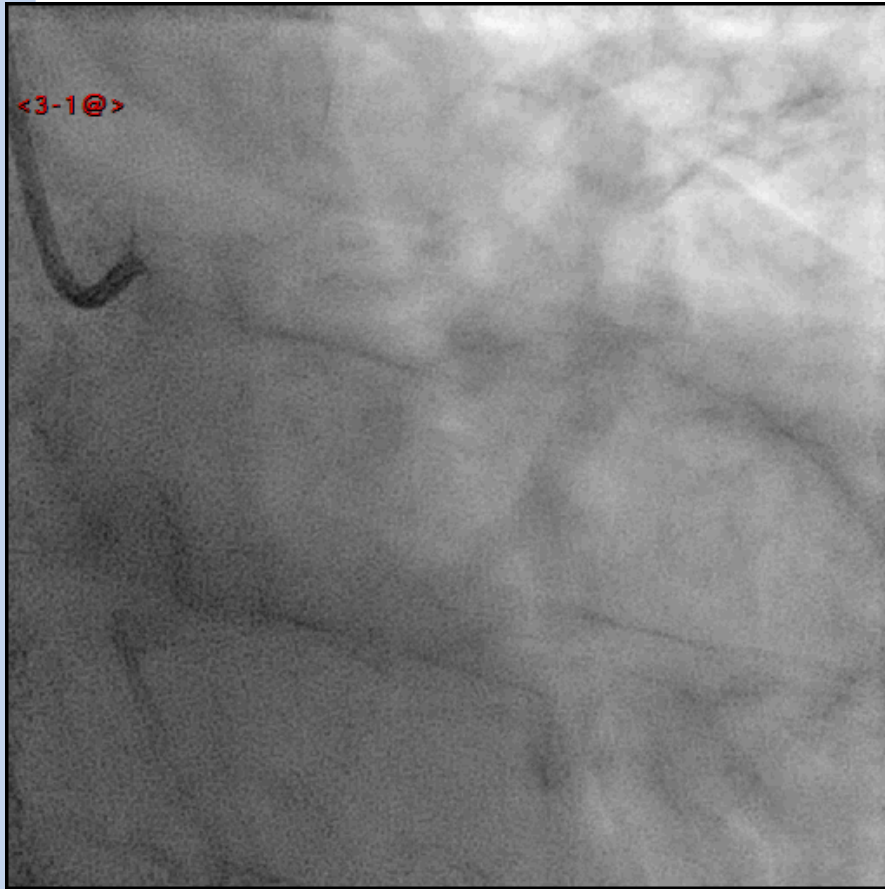
# Cas Clinique

- ♂ 74 ans
- FDRCV : HTA et tabac
- ATCD :
  - AOMI,
  - exogénose chronique,
  - carcinome épidermoïde bronchique (lobe supérieur Dt récusé au plan chirurgical et traité par chimiothérapie)
- Angor d'effort documenté (EE positive)
- Coronarographie

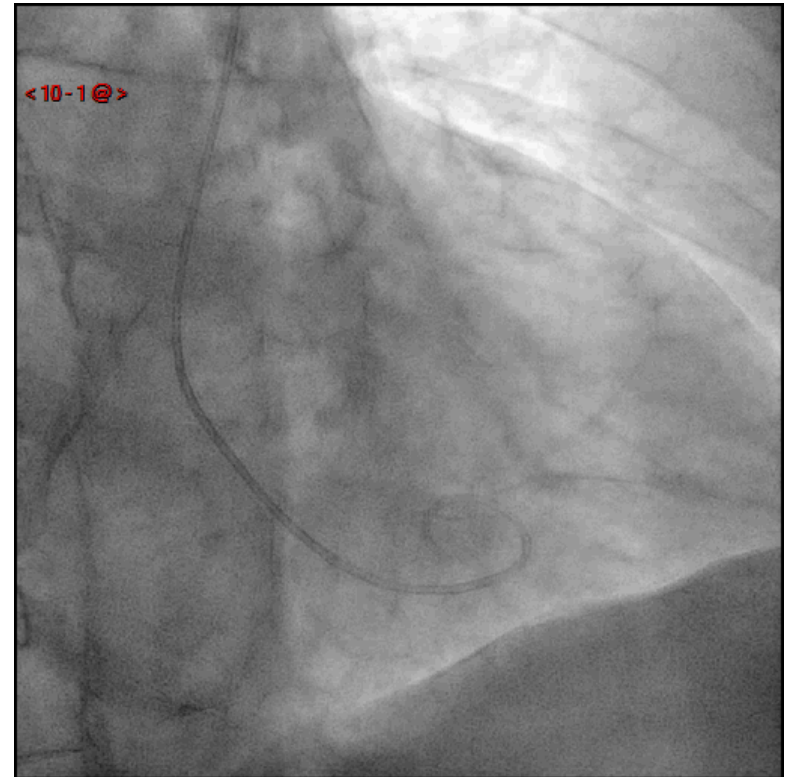
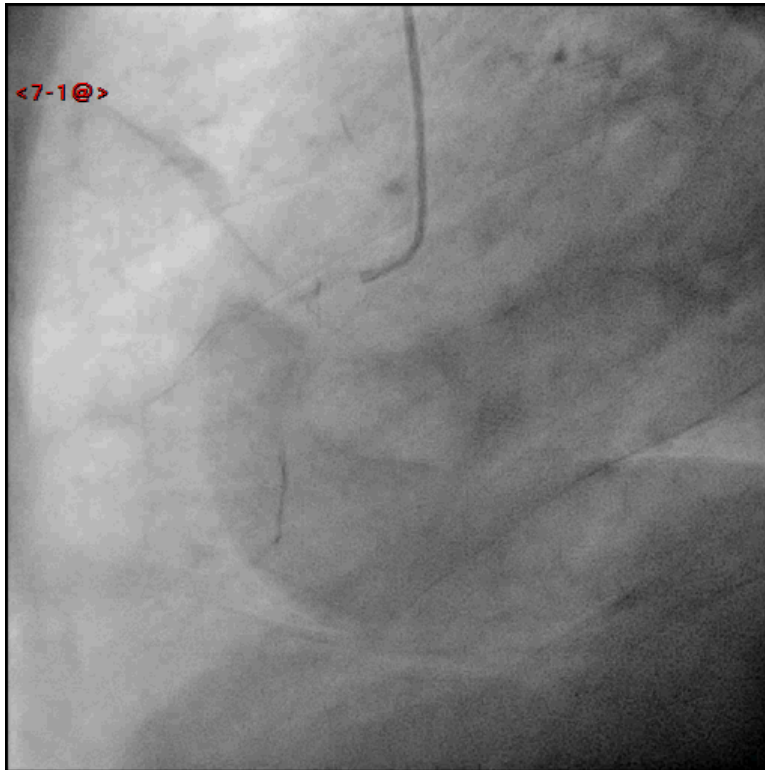
# Angiographie initiale (1)



# Angiographie initiale



# Angiographie initiale (2)



**FEVG 53%**

# Cas Clinique

- Discussion Heart Team: récusé pour une revascularisation chirurgicale

## SYNTAX Score II

SYNTAX II

*Decision making -between CABG and PCI- guided by the SYNTAX Score II to be endorsed by the Heart Team.*

### PCI

|                       |        |
|-----------------------|--------|
| SYNTAX Score II:      | 55.1   |
| PCI 4 Year Mortality: | 44.2 % |

### CABG

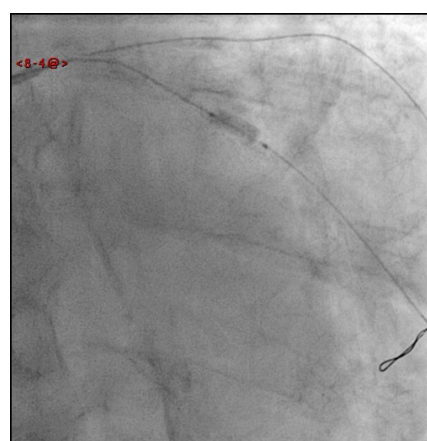
|                        |        |
|------------------------|--------|
| SYNTAX Score II:       | 63.7   |
| CABG 4 Year Mortality: | 69.8 % |

Treatment recommendation ⓘ: CABG or **PCI**

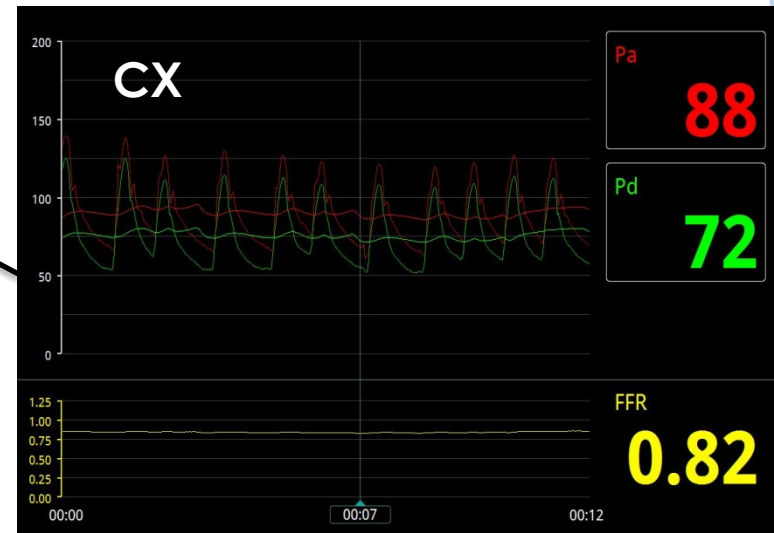
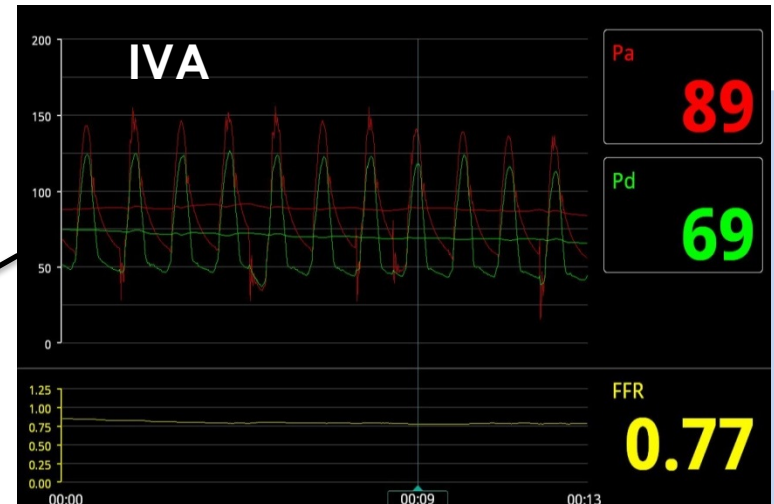
## Angioplastie IVA : Resolute Onyx Medtronic 3.5 X 12 mm



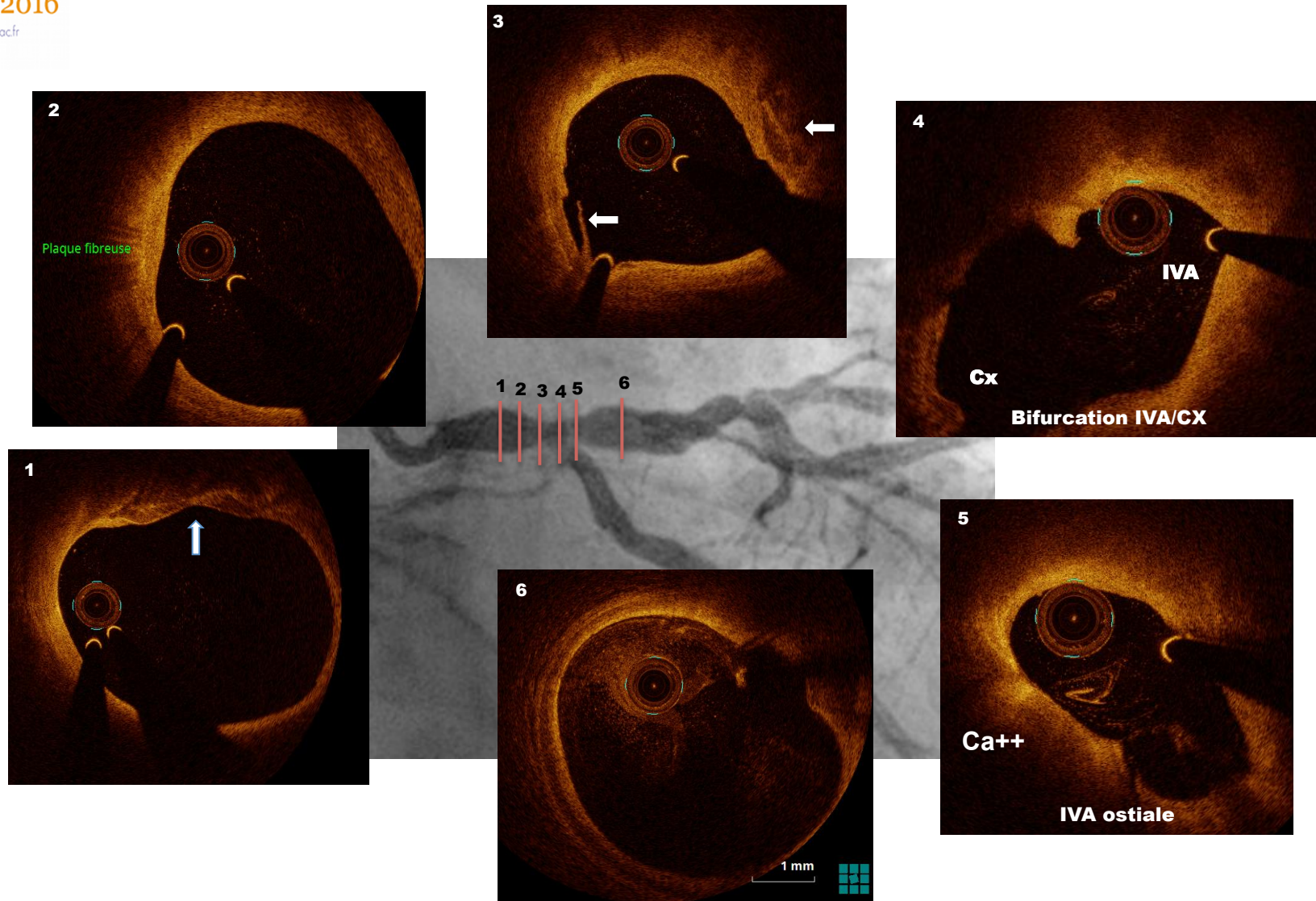
## Angioplastie marginale : Resolute Onyx Medtronic 3.0 X 12 mm



# Mesure FFR de la lésion du TC

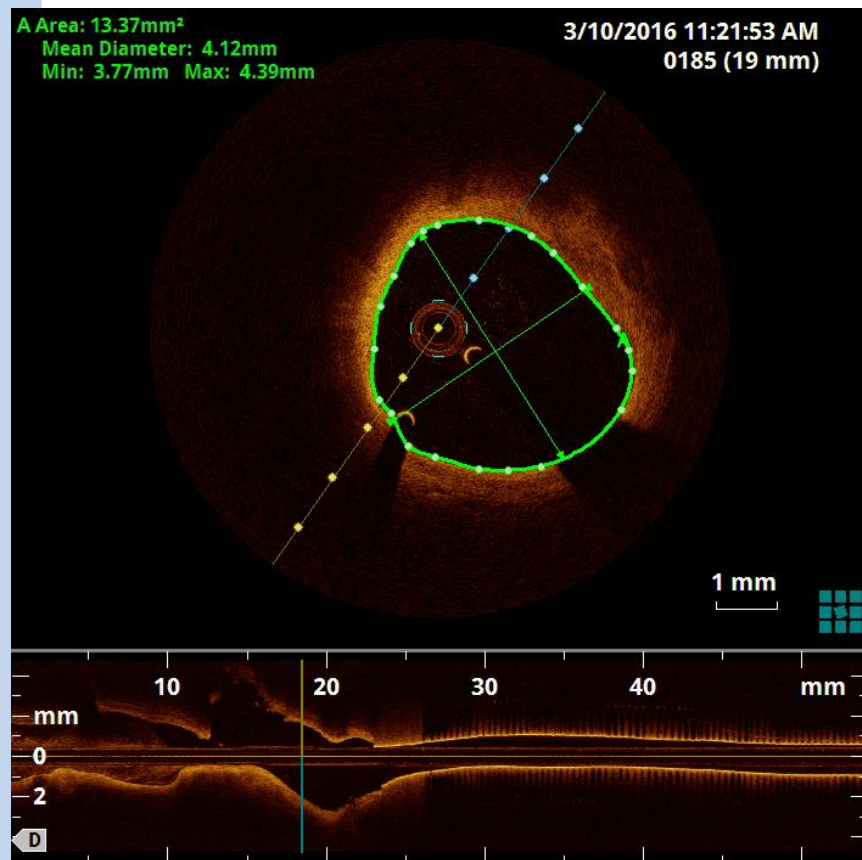


# Analyse OCT pré-angioplastie

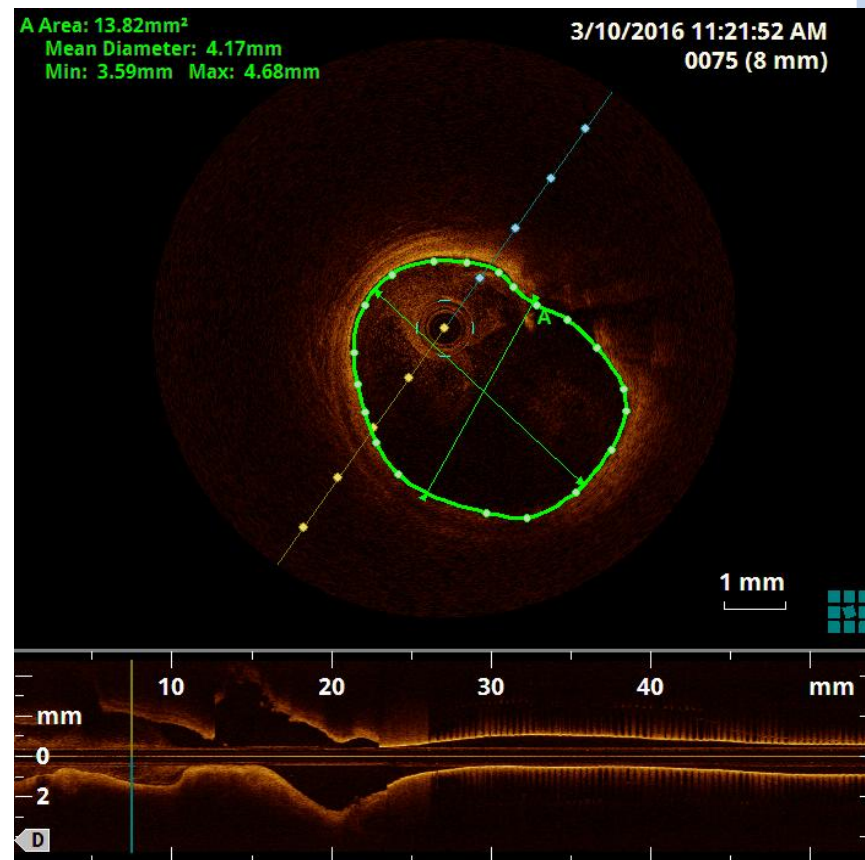


# Analyse quantitative OCT

## Tronc Commun distal



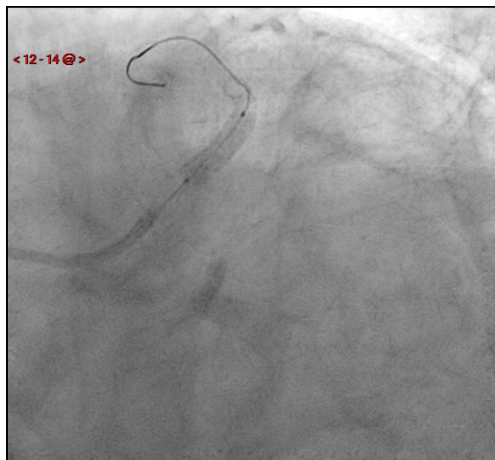
## IVA proximale



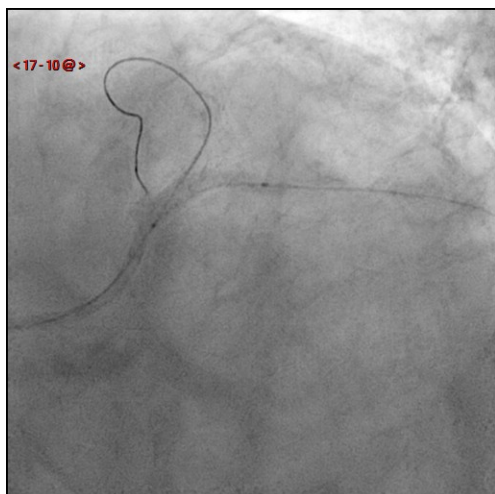
### EBC consensus :

- The MV stent should be sized according to the distal MV reference diameter.

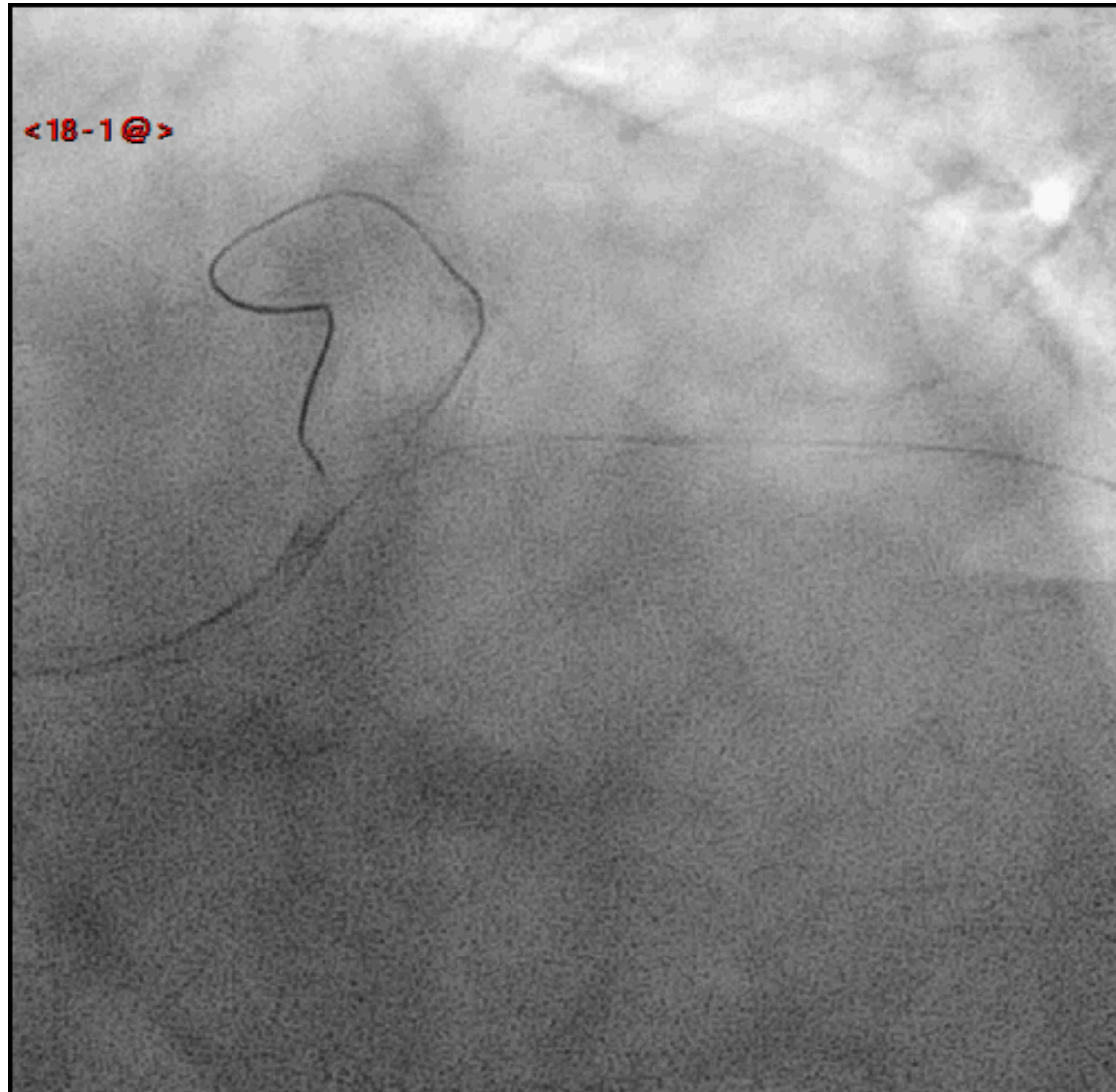
## Stenting TC/IVA ostiale : DES 4.0 x 16 mm, 18 atm

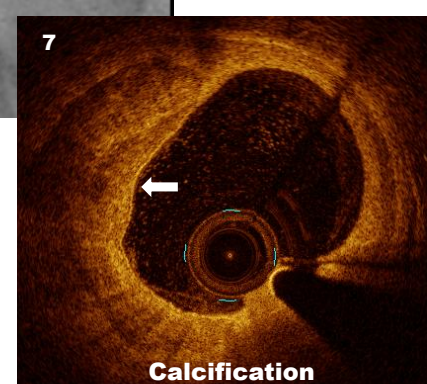
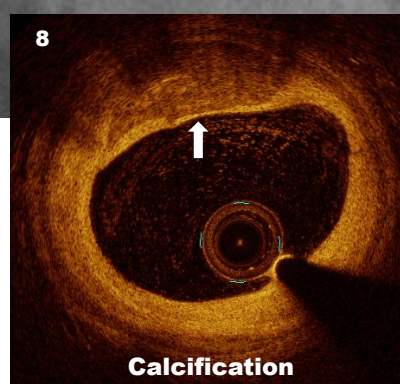
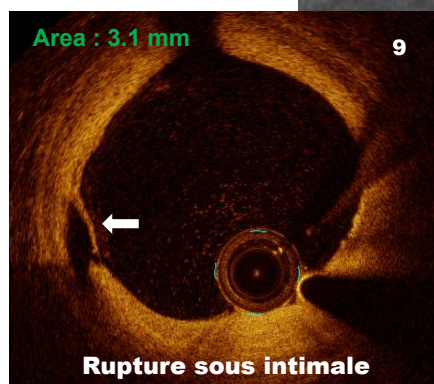
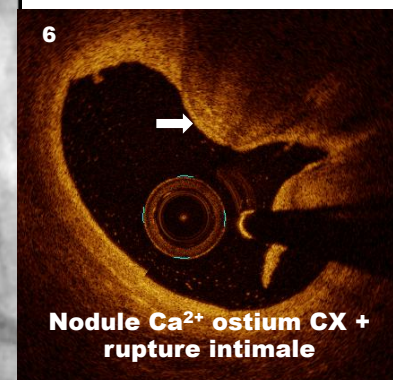
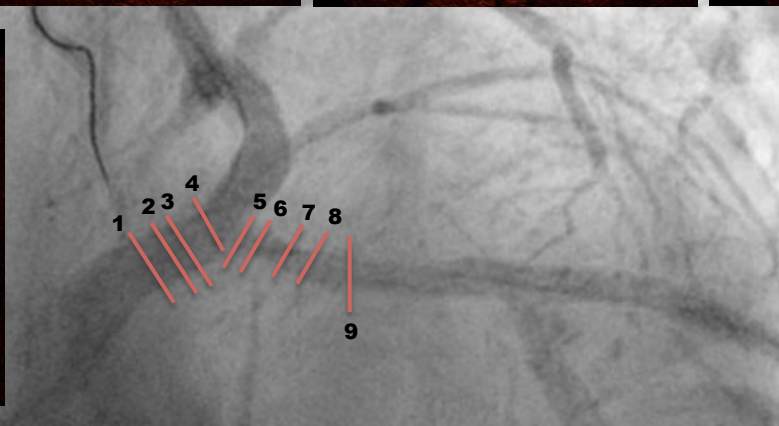
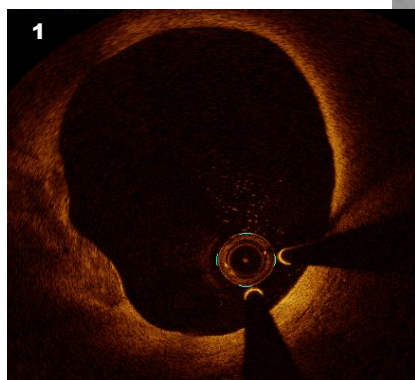
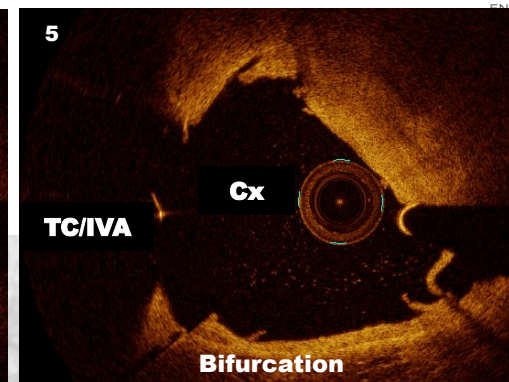
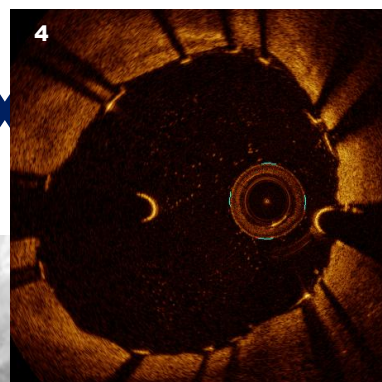
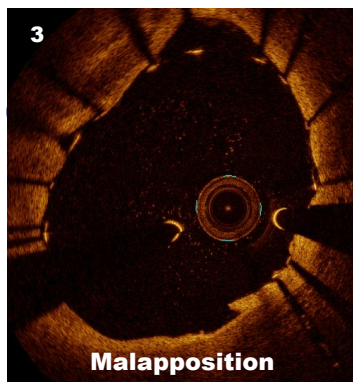


## Angioplastie Cx ostiale : ballon 3.0 x 20 mm, 18 atm

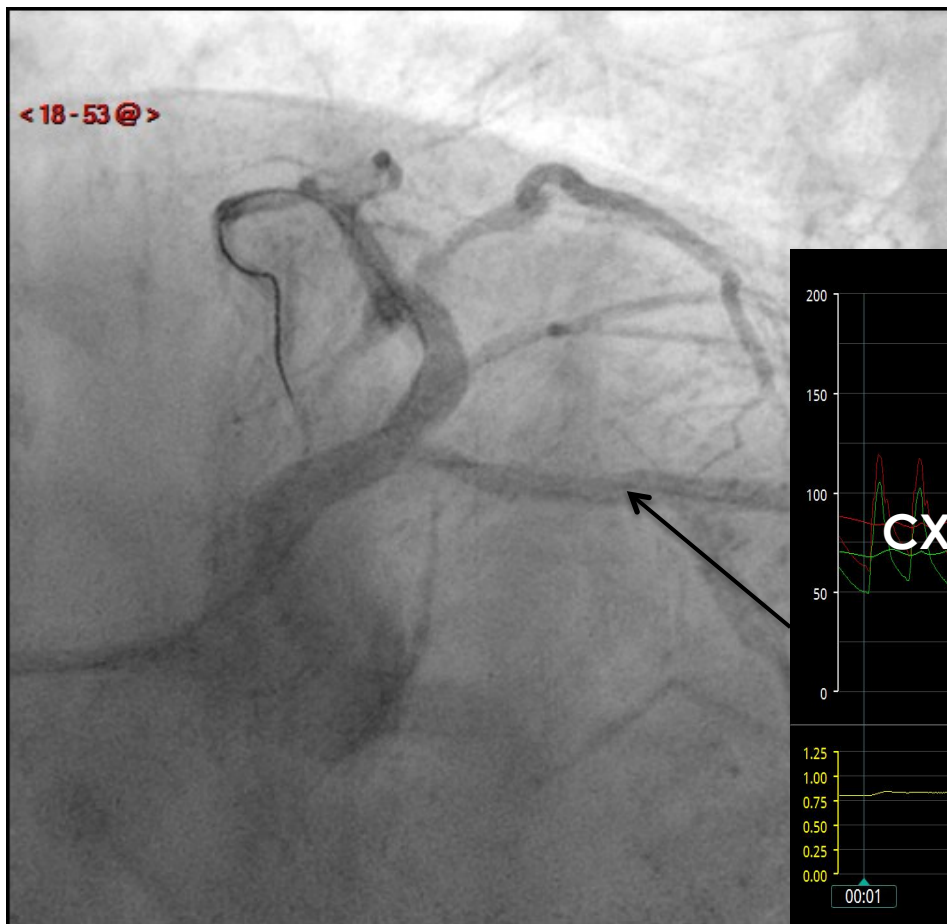


# Contrôle angiographique





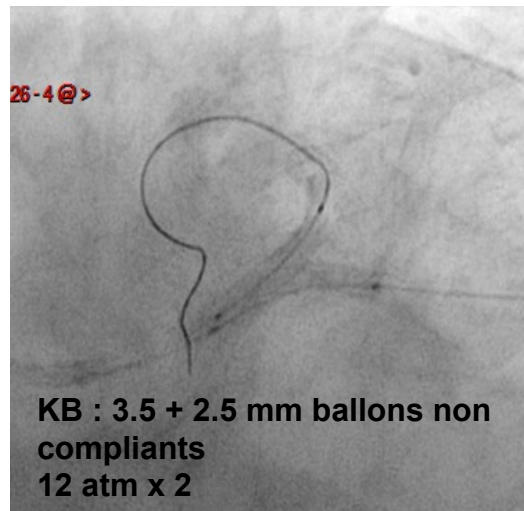
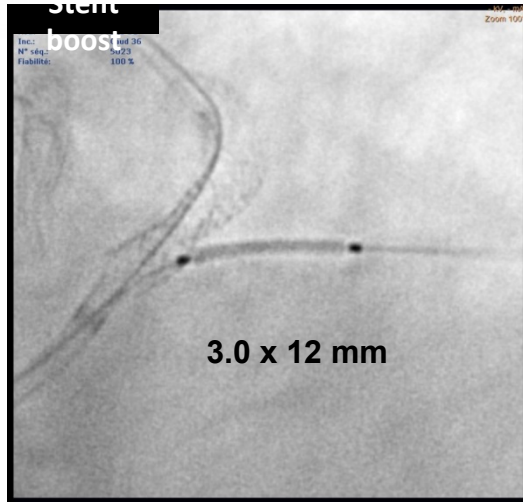
# Mesure FFR : post ballon CX ostiale



## EBC consensus :

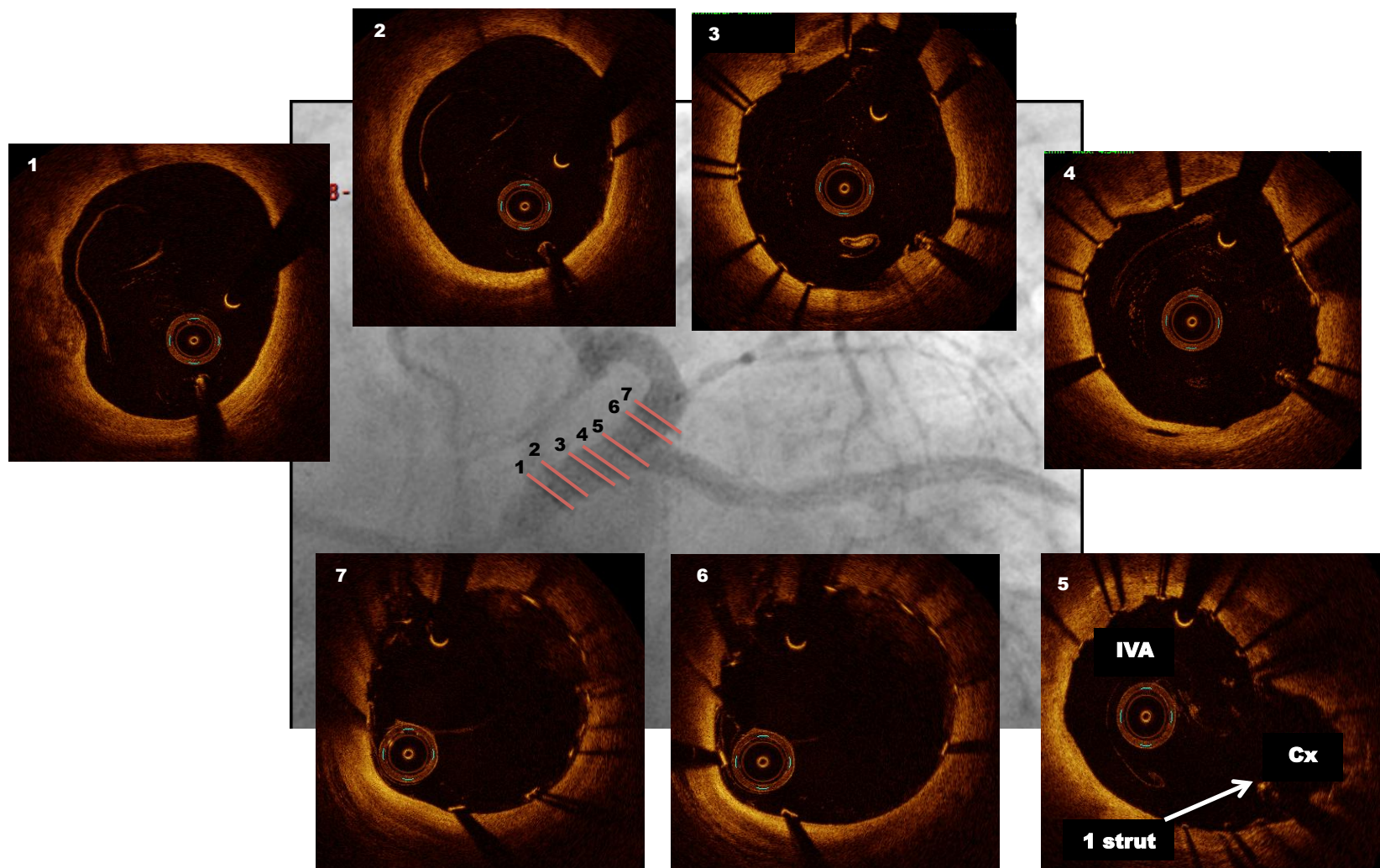
- Large size branches with ostial disease extending > 5 mm from the carina are likely to require a two-stent strategy.

# T Stenting ostium CX puis Kissing

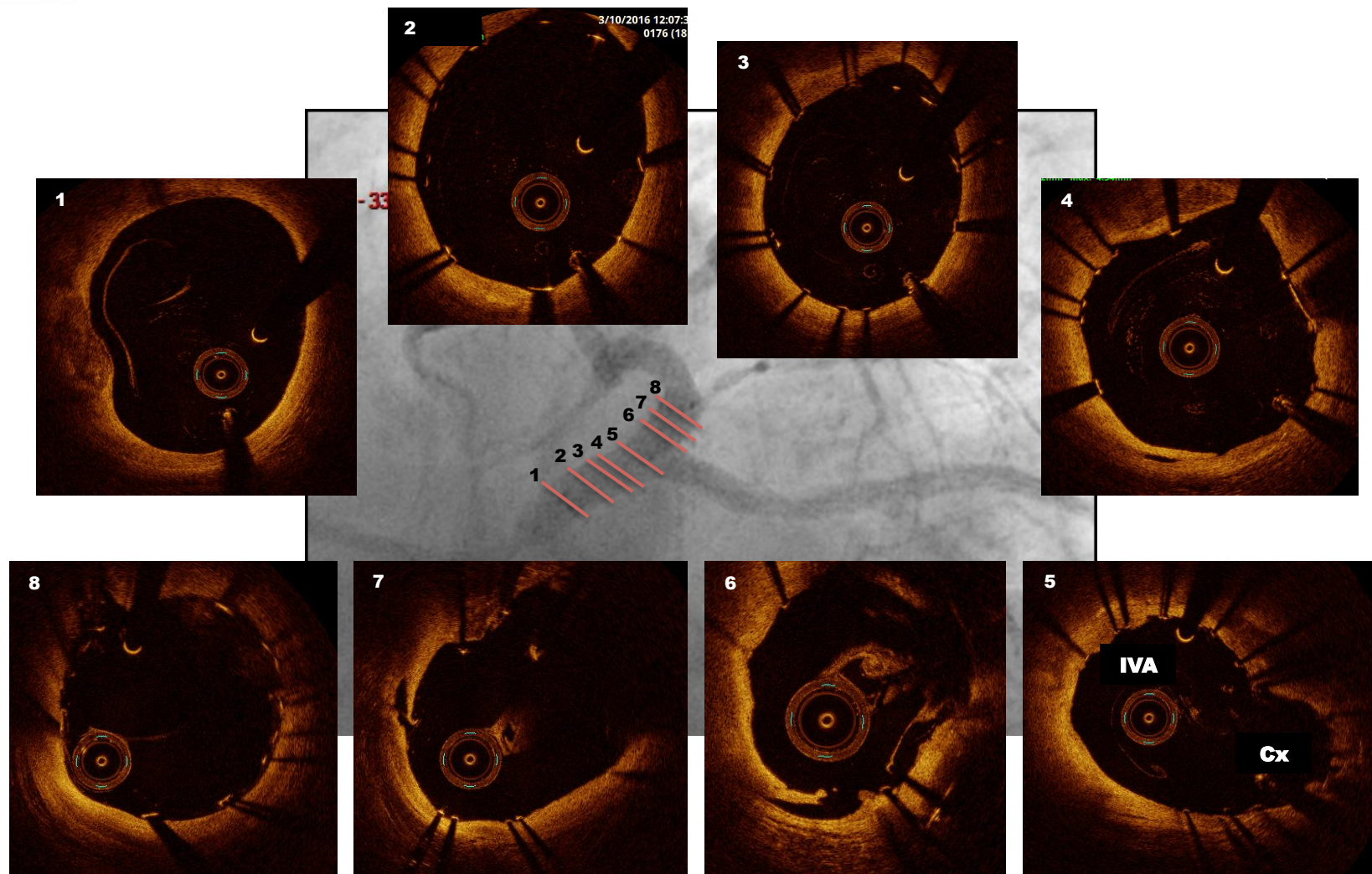


- Final kissing balloon dilatation is mandatory in any two-stent technique. EBC Consensus 2014.

# Analyse OCT finale



# Analyse OCT finale...



# Conclusion

- Pas de dogme ni de stratégie unique
- Stratégie guidée par une imagerie endocoronaire pré- et post-PCI :
- **OCT pré :**
  - Vérifier la géométrie circulaire ou non du TC : index d'ellipticité
  - Mesurer les dimensions exactes du TC
- **OCT post :**
  - Contrôler le déploiement optimal du stent
  - Contrôler la malapposition des mailles
- **Et....ajuster la stratégie au cas par cas :**
  - POT, Re-POT, KBI, ....
  - .....dans l'intérêt du Pt

# Que disent les guidelines ?

- Main vessel (MV) stenting with provisional SB treatment, if needed, is recommended as the preferred technique for the majority of bifurcation lesions.
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- Intracoronary imaging is recommended to ensure adequate stent and vessel expansion in all LMCA bifurcation segments.

# Mesure FFR CX et IVA

