



28-30
JANVIER
2026

MARSEILLE
PALAIS DU PHARO

Discussions autour d'un cas

Mr D. 77 ans

Consulte pour blockpnée d'effort

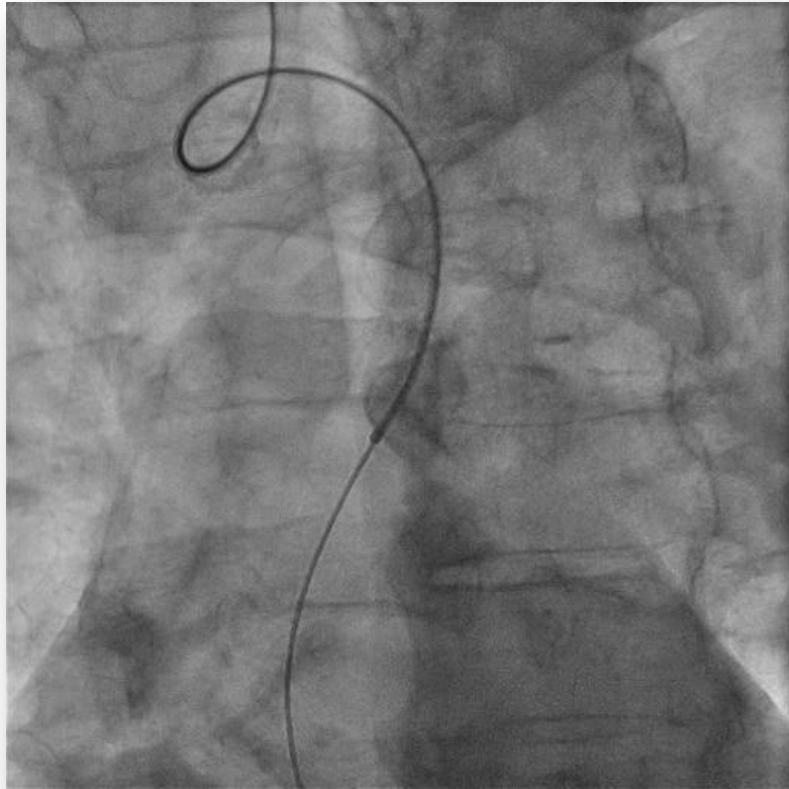
- FRCV = Age, Diabète, HTA, dyslipidémie
- ATCD = SAOS appareillé
FA permanente, ablation fin 2025
- Ttt = AOD, anti-diabétiques, statines et antihypertenseurs



Coro car symptômes, haut risque CV et TDM péjoratif

Mr D. 77 ans

Coro diagnostique



Mr D. 77 ans

Coro diagnostique



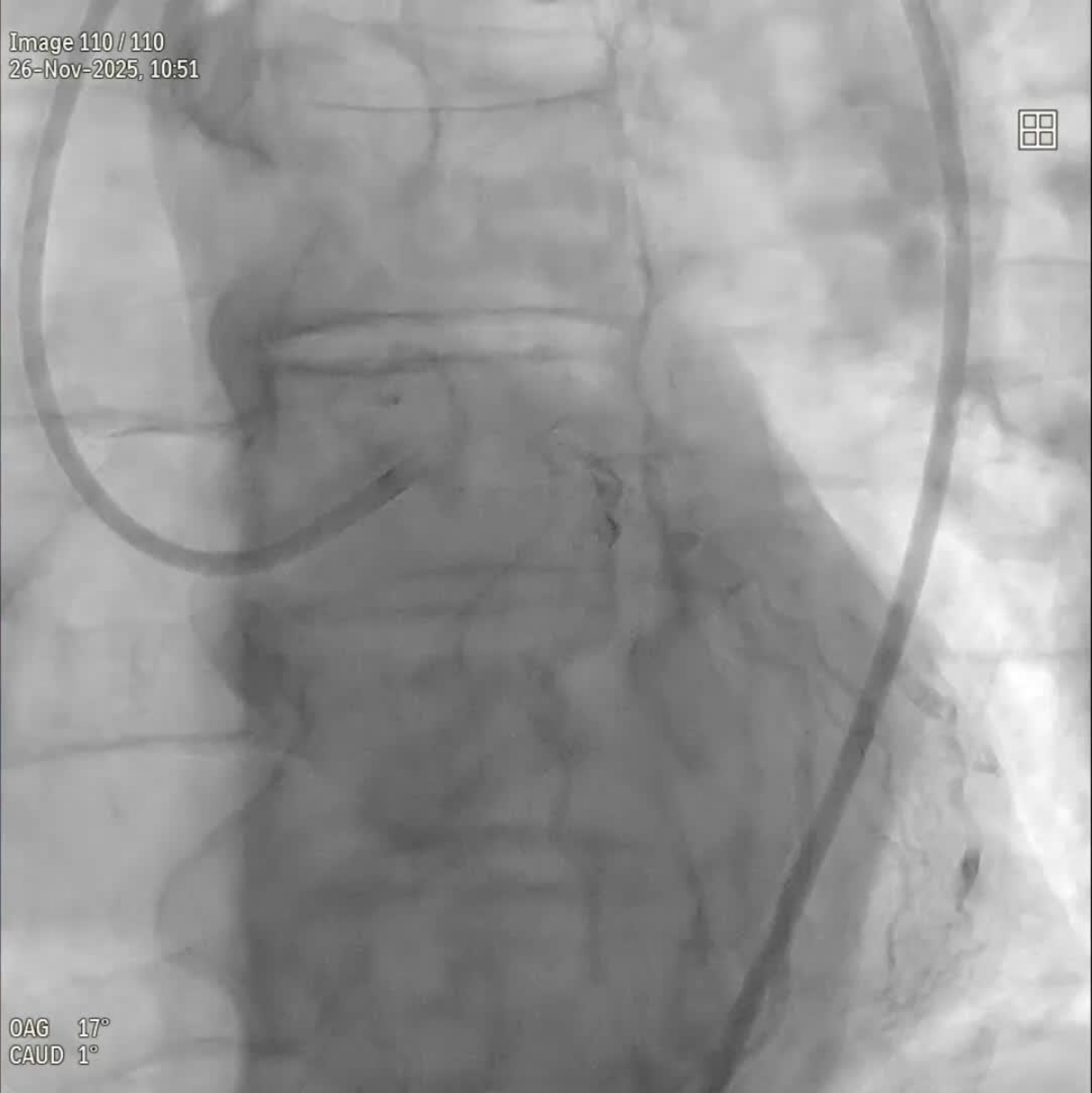
Mr D. 77 ans

Décision de réévaluation du réseau gauche + **revascularisation**



- Maintien du **Xarelto 20mg**
- **Aspirine** : 100 mg à J-1 puis 100 mg/j pdt 8j
- **Clopidogrel** : 600 mg à J-1 puis 75mg/j pdt 6 mois

Image 110 / 110
26-Nov-2025, 10:51

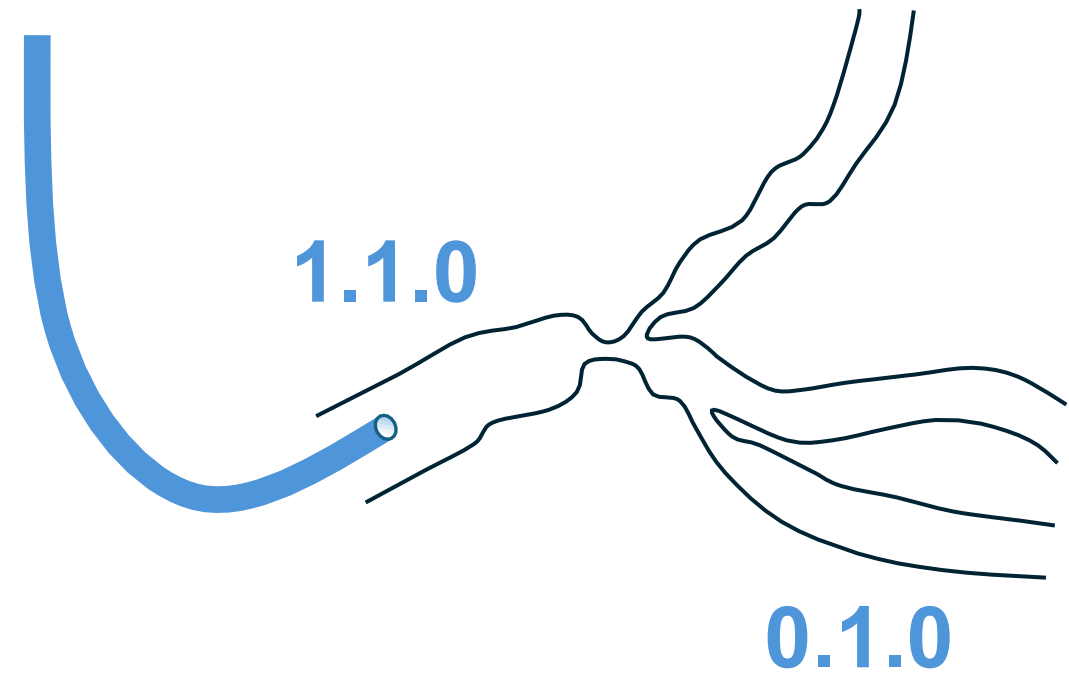


OAG 17°
CAUD 1°

Quelle stratégie ?



Comment gérer cette lésion ?



Gestion des bifurcations

Percutaneous coronary intervention for bifurcation coronary lesions using optimised angiographic guidance: the 18th consensus document from the European Bifurcation Club

EuroIntervention

2024;20:e915-e926

published online ahead of print May 2024

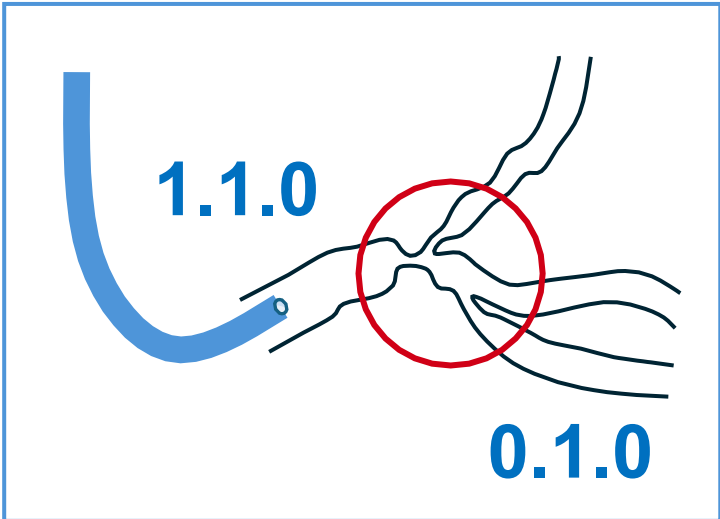
published online e-edition August 2024

DOI: 10.4244/EIJ-D-24-00160

Table 1. Key principles of bifurcation PCI promoted by the European Bifurcation Club.

Essential target	Description
<u>Keep the procedure simple and safe</u>	- Choose a provisional stepwise stenting strategy
<u>Limit the number of stents</u>	- Use a stepwise provisional strategy when the use of two stents is anticipated - Implant the first stent reversely from the SB to main branch when the SB is severely diseased - Use kissing balloons (opens the SB and centres the carina) - Implant a second stent only if needed (as T, TAP or culotte)
<u>Do not stent the SB by default</u>	- Consider the significance of the SB (CT scan, length, and diameter) - Conditions supporting SB stent implantation after provisional stenting of the main vessel: 1. impaired TIMI flow in the SB 2. significant stenosis (>70%) with angina and/or ECG changes 3. extensive dissection (>type B) in the SB

18th Consensus EBC 2024

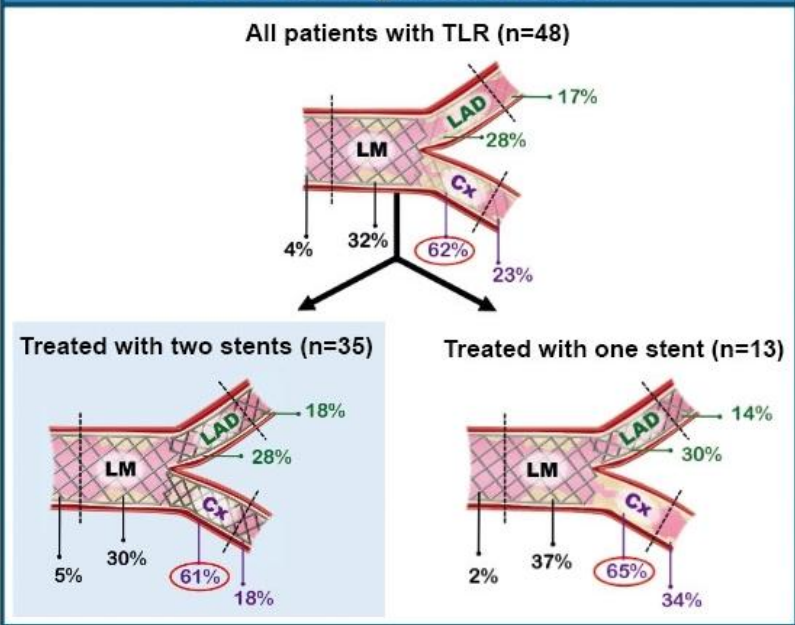


Restenosis location evaluated in patients who had TLR during 3-year follow up in the EBC MAIN trial

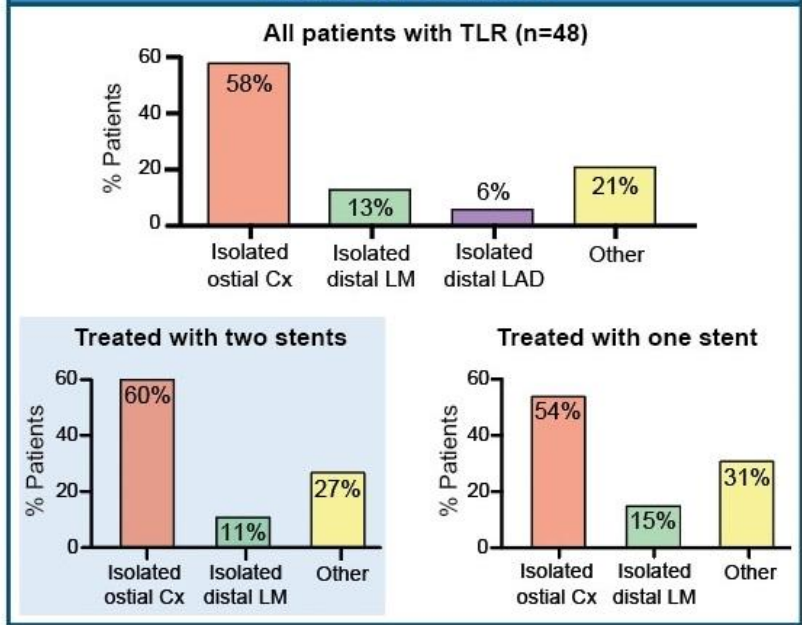


48 Patients with TLR included in sub-analysis

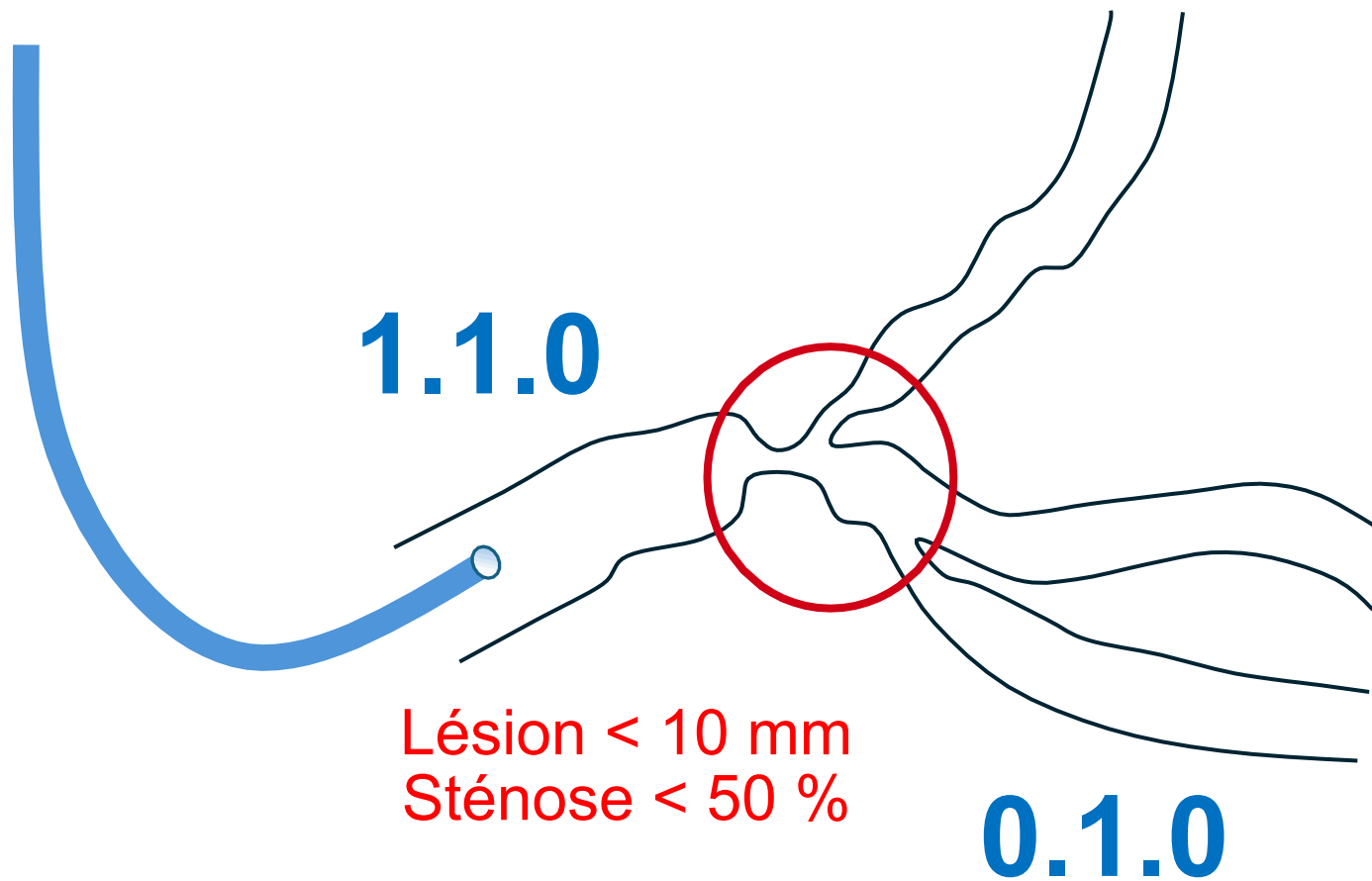
Mean % diameter coronary stenosis according to vessel segment location

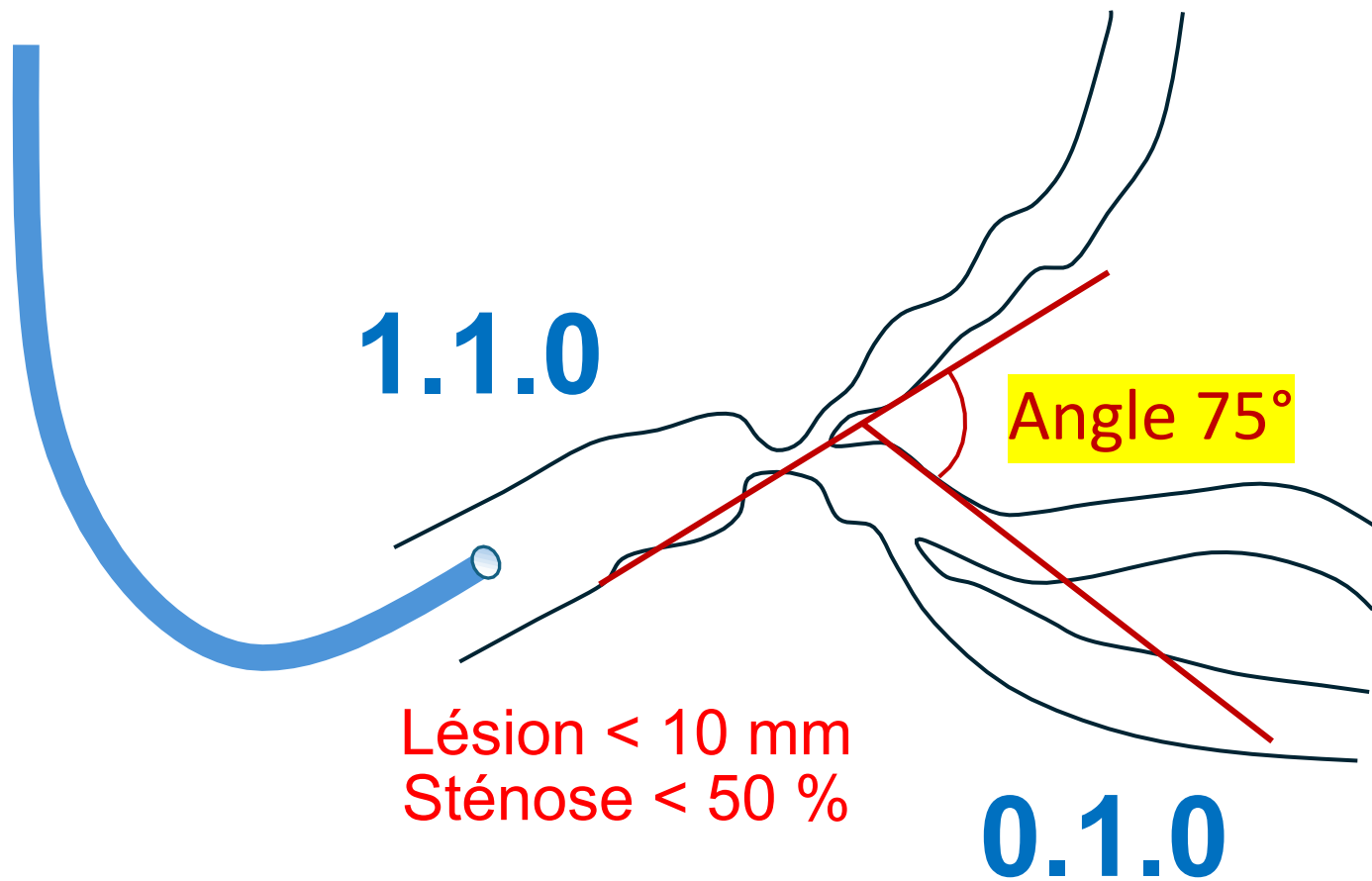


Patterns of restenosis with lesions ≥ 50% diameter stenosis



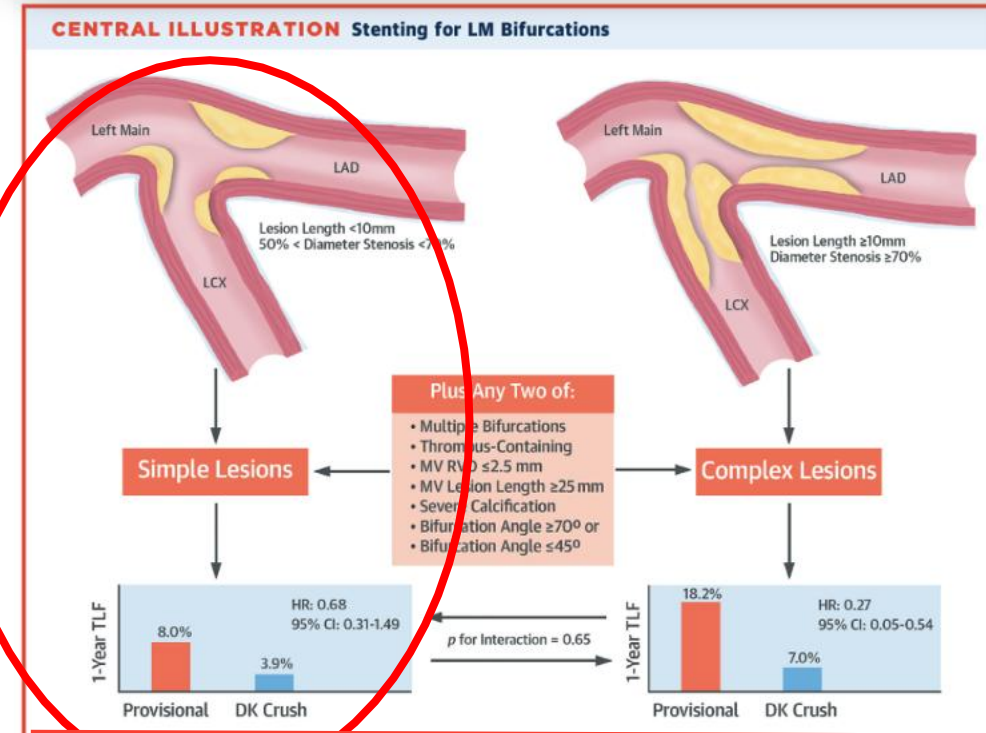
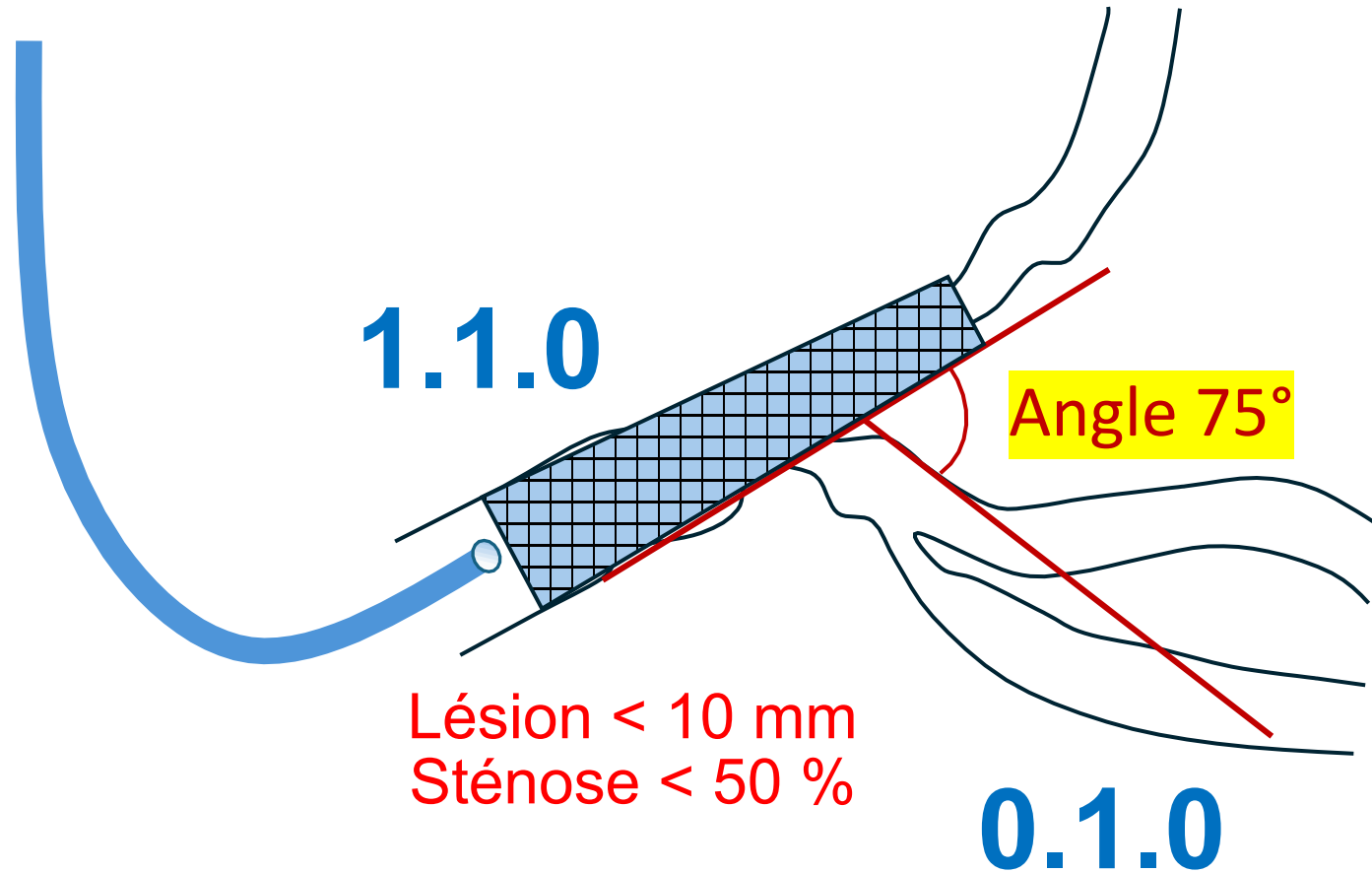
Maznyczka A, Circ Cardiovasc Interv 2025





Double Kissing Crush Versus Provisional Stenting for Left Main Distal Bifurcation Lesions

DKCRUSH-V Randomized Trial



Chen S.L, J Am Coll Cardiol 2017

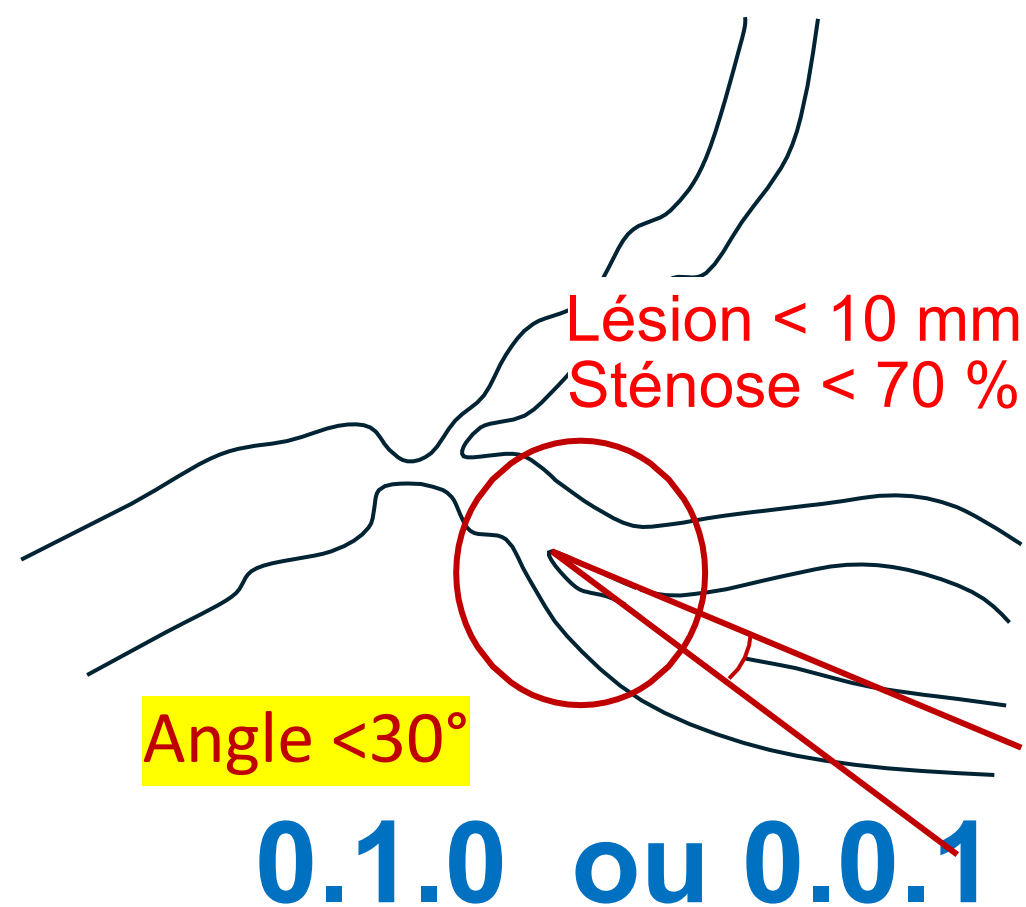
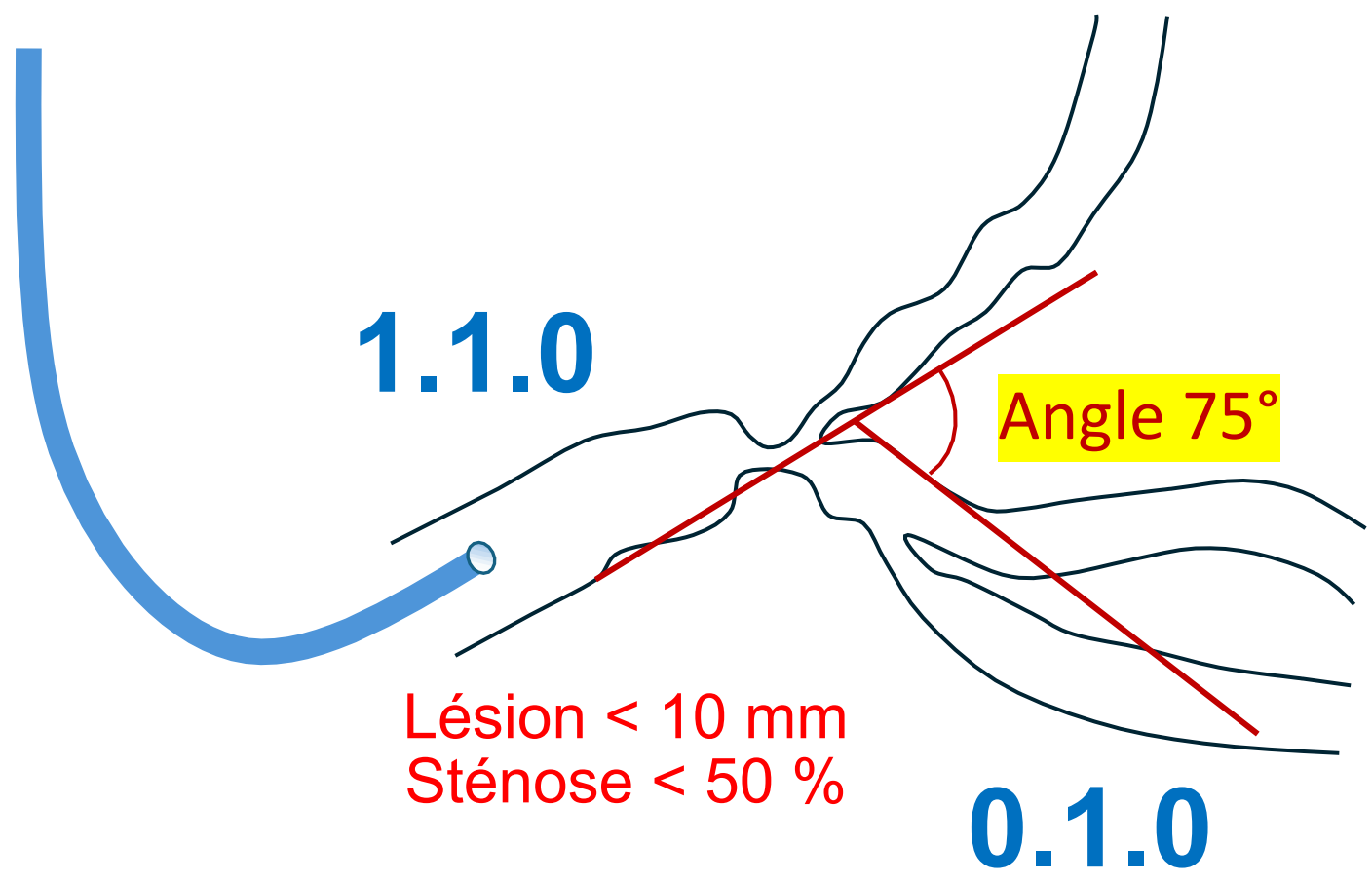
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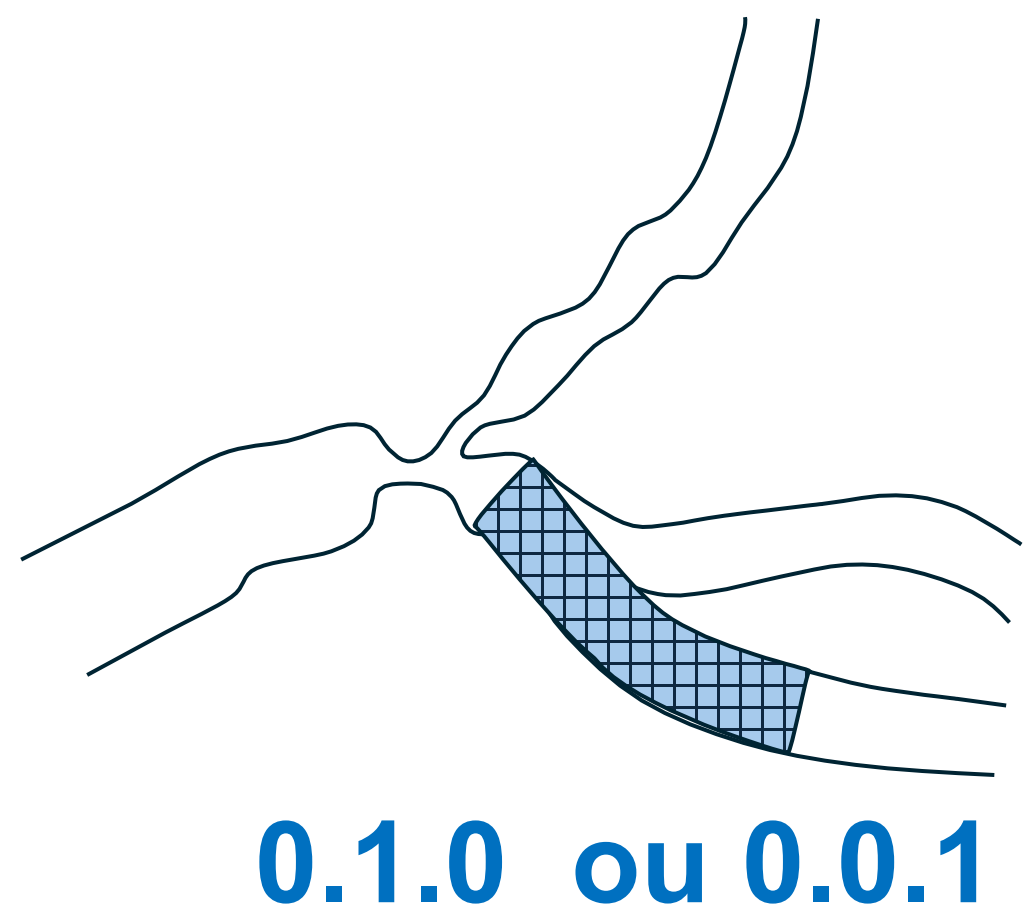
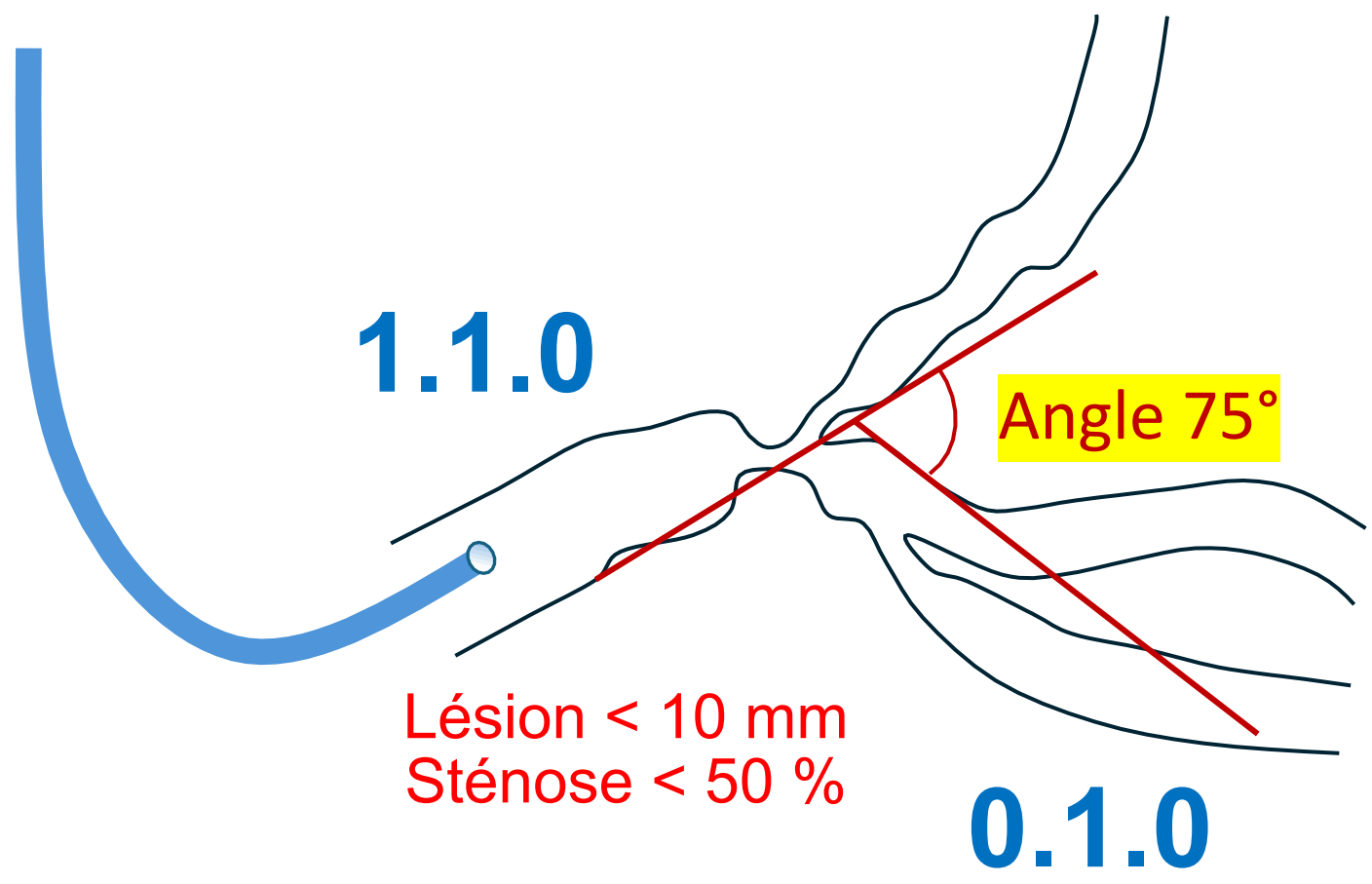
Angle 75°

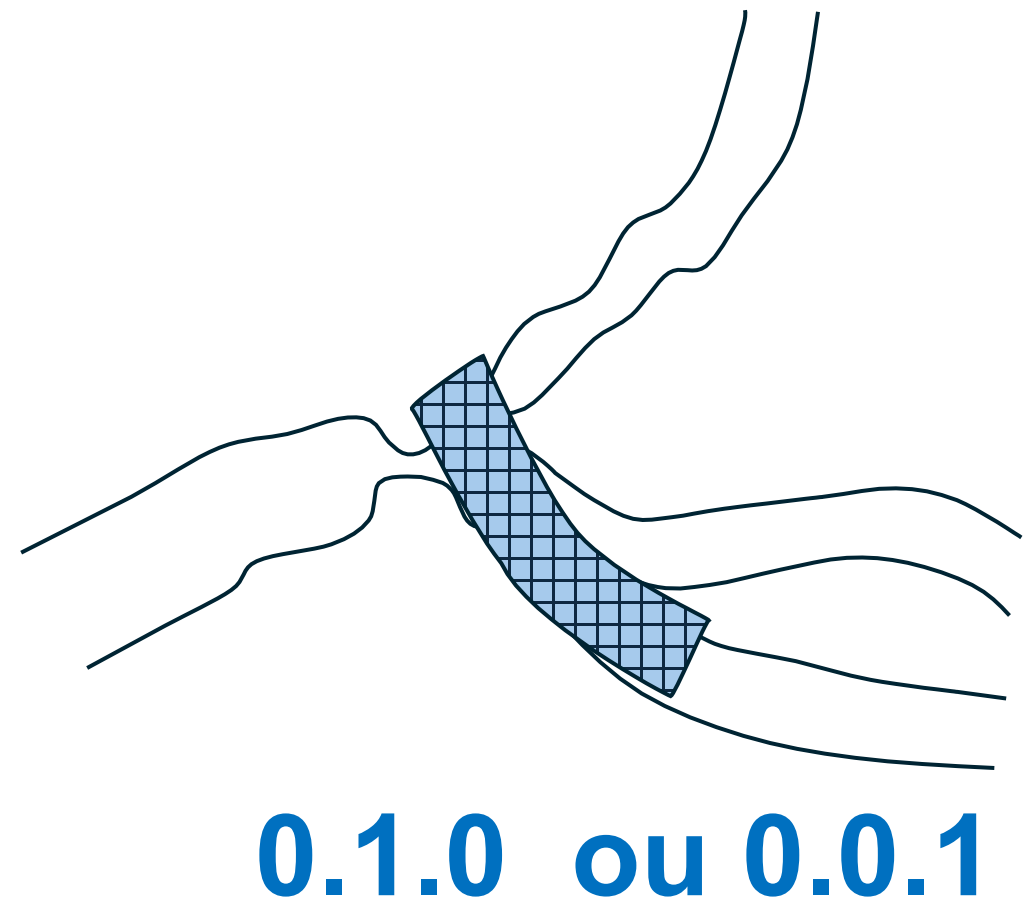
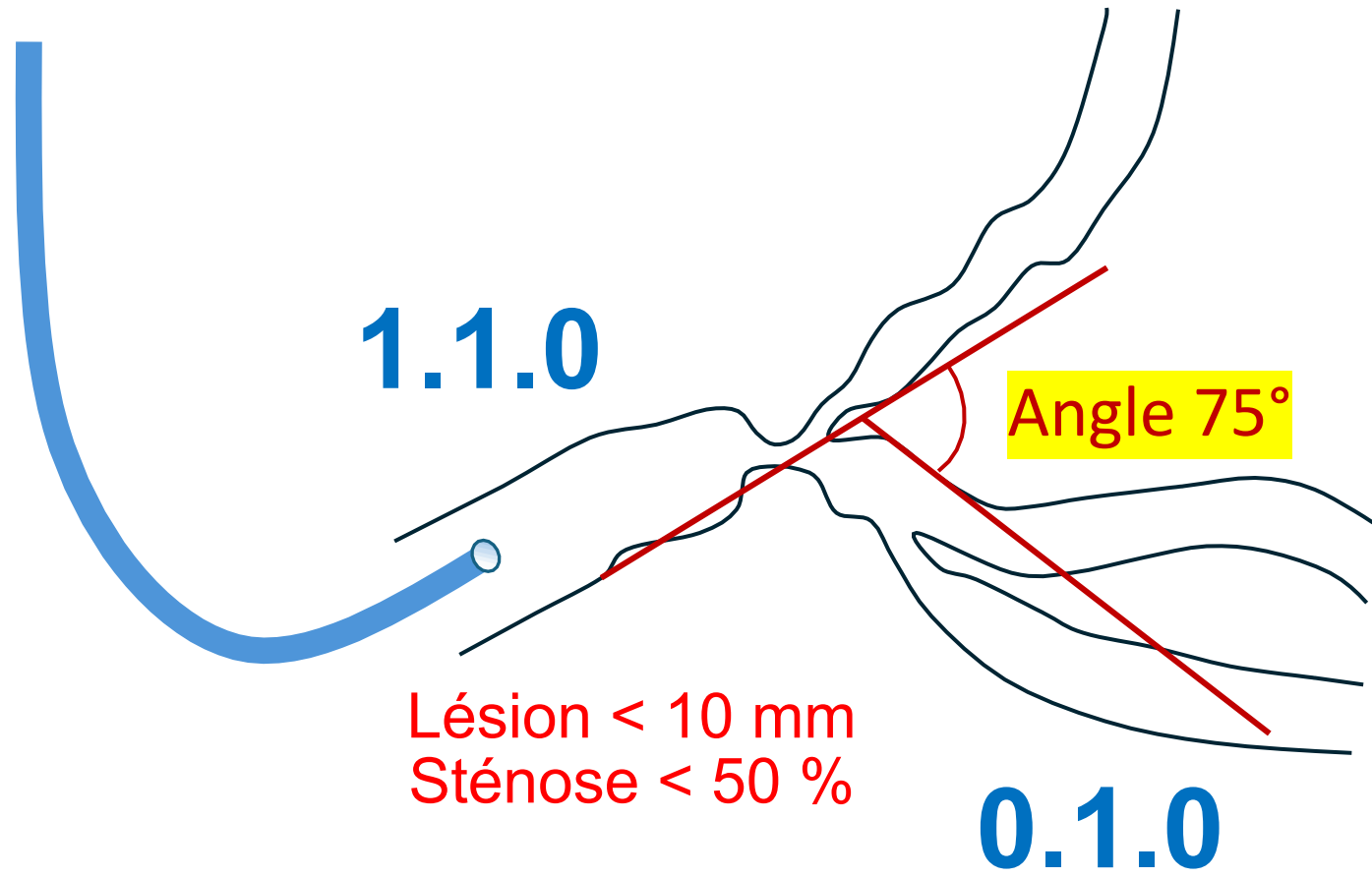
Lésion < 10 mm
Sténose < 50 %

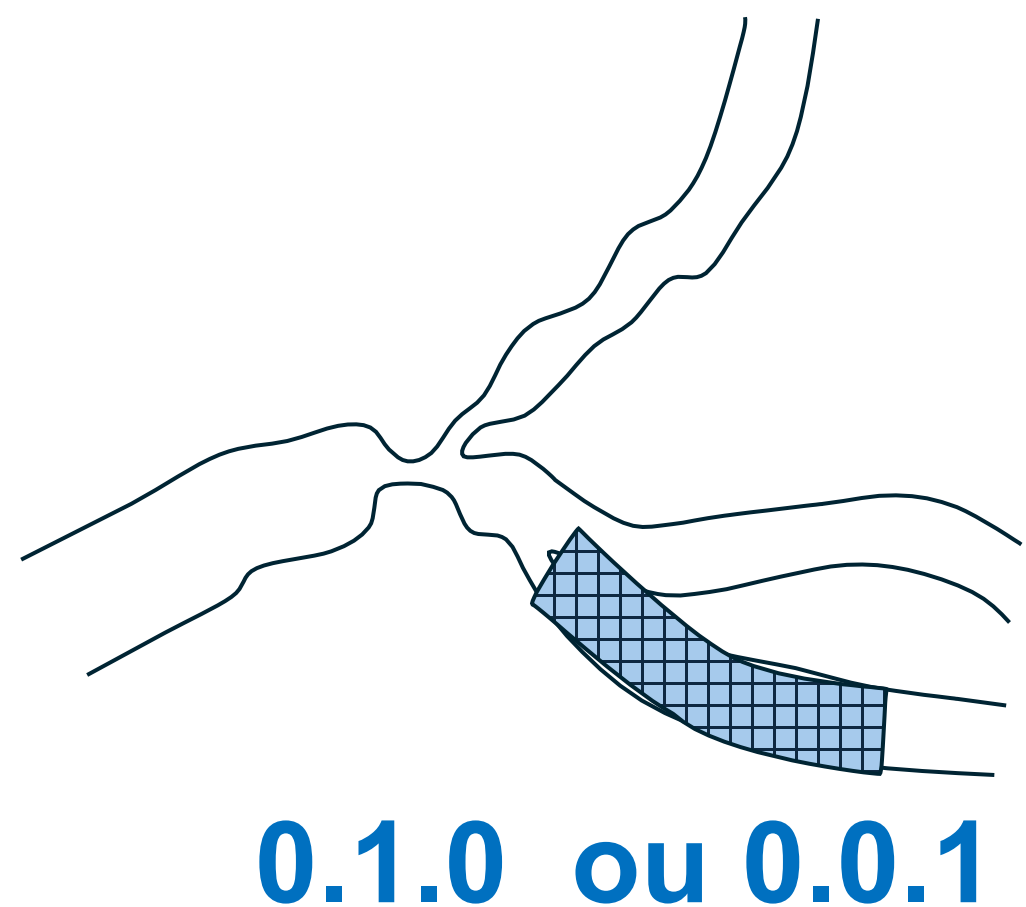
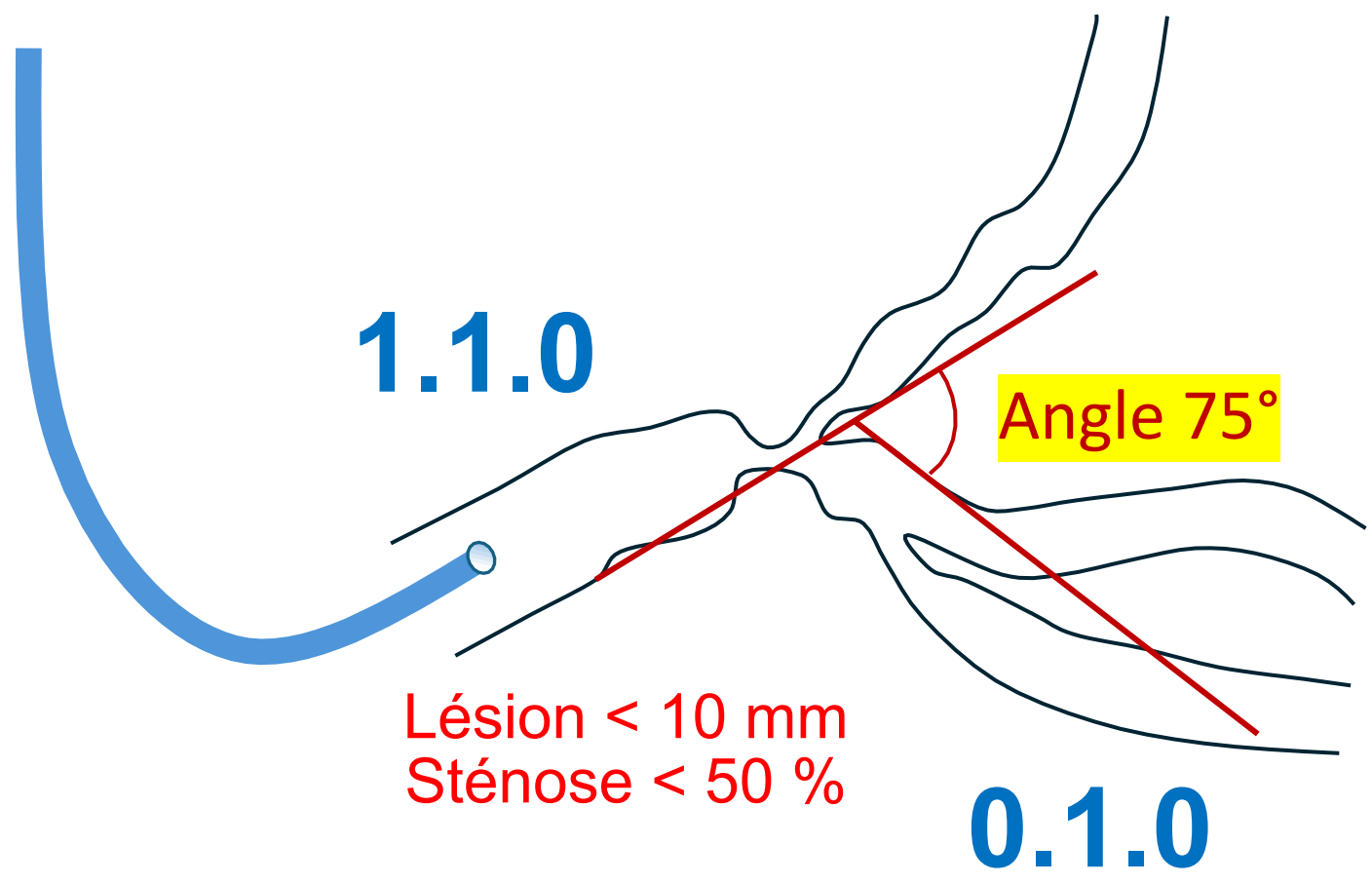
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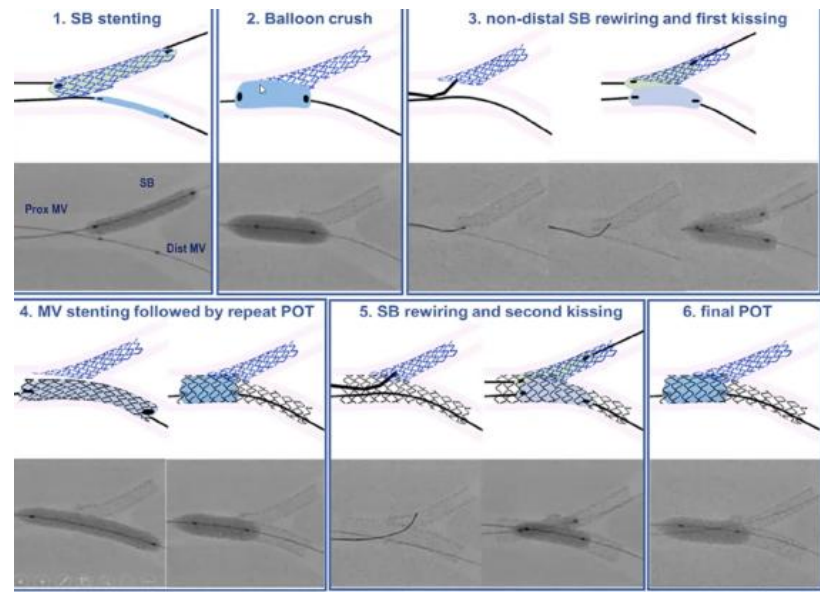
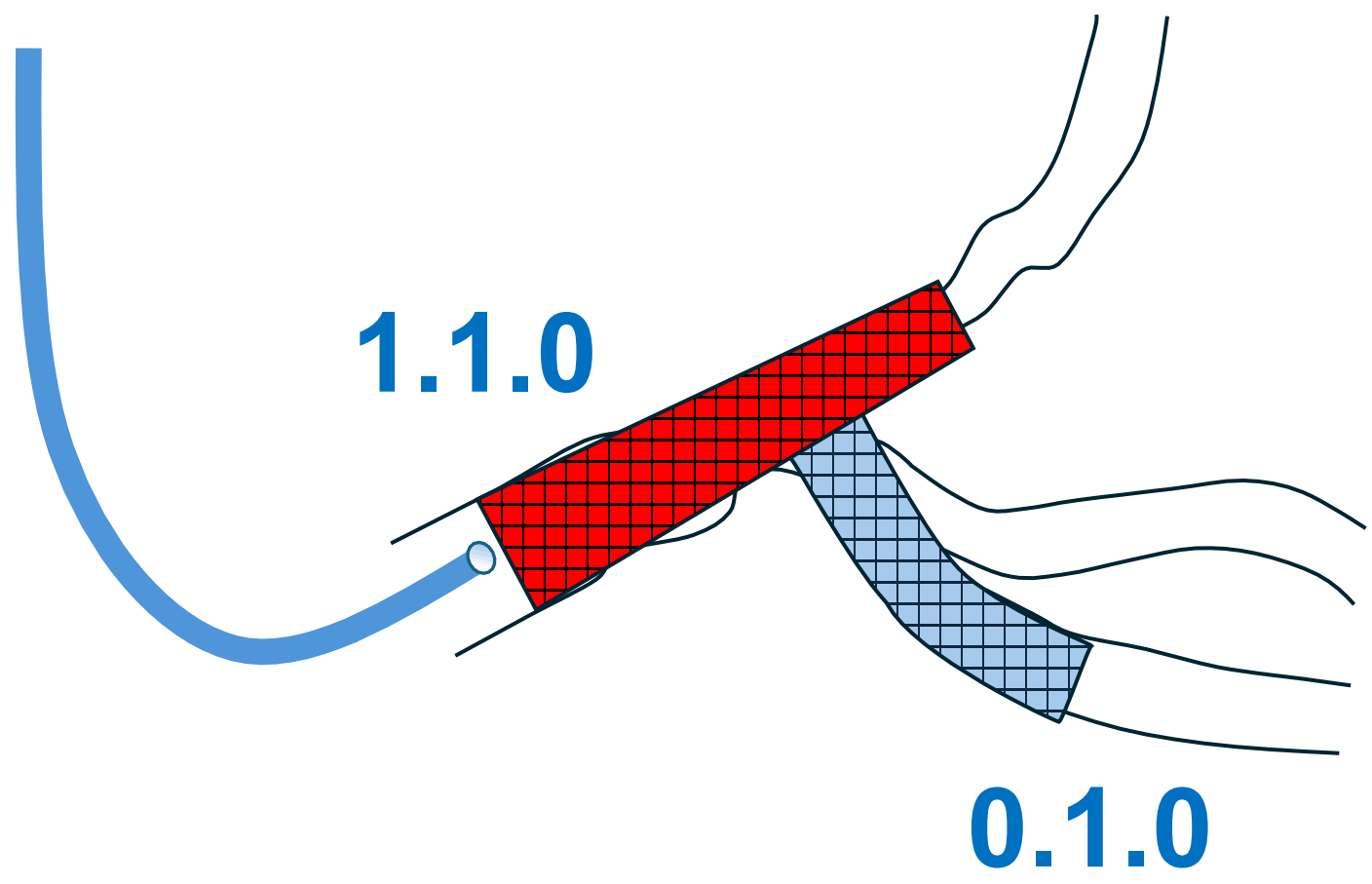
0.1.0 ou 0.0.1



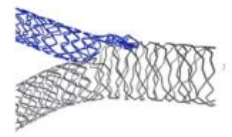








**Double Kiss
(DK) Crush**



Burzotta F. EBC white paper

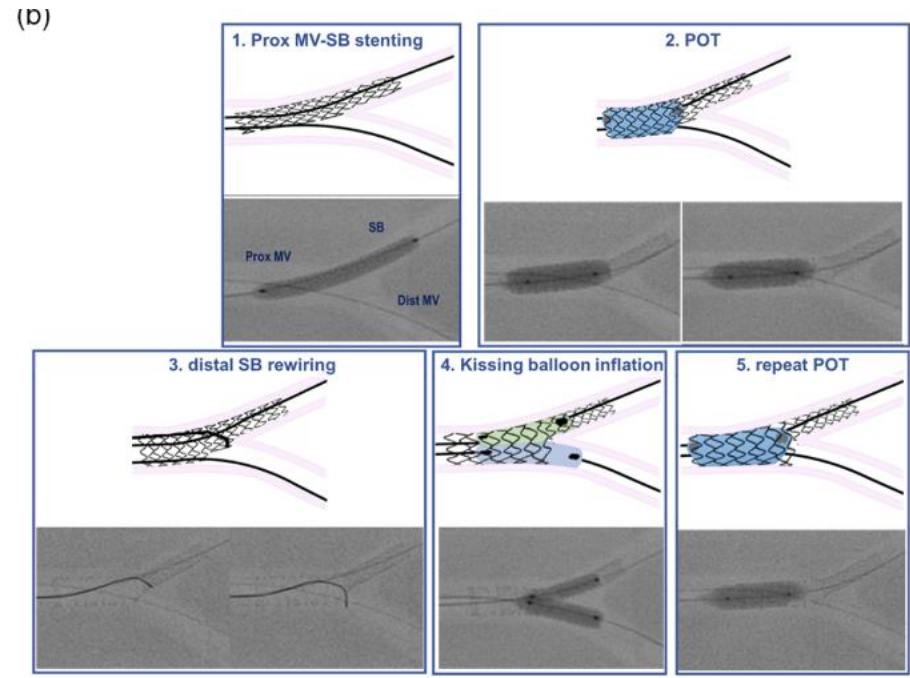
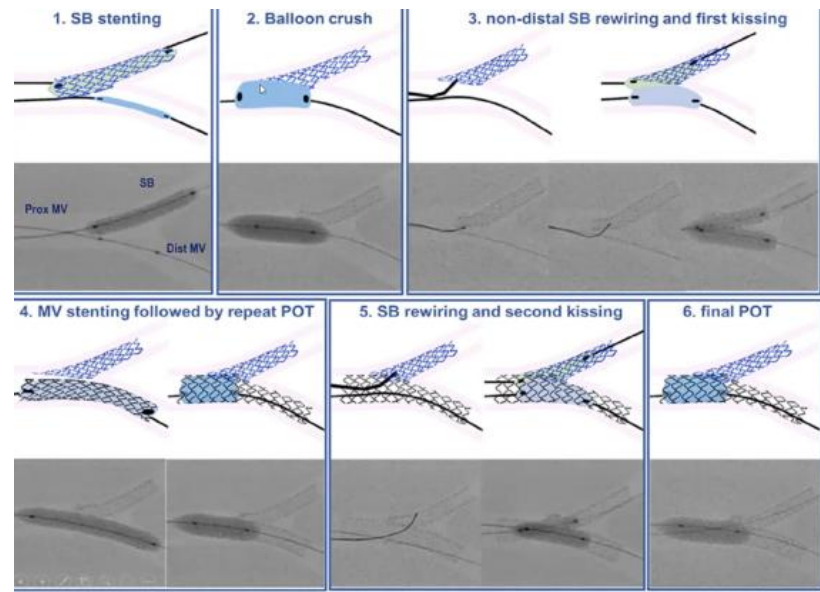
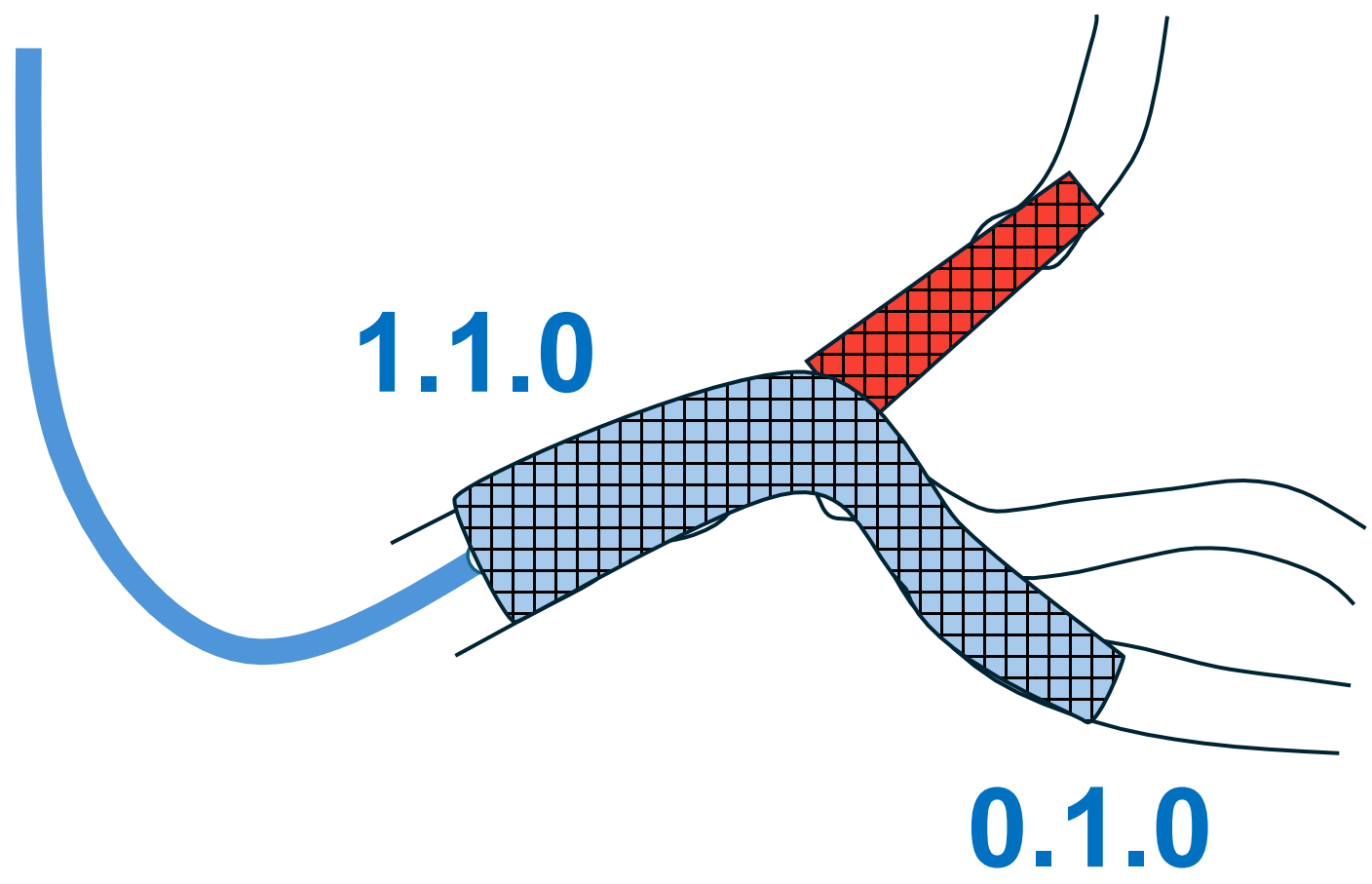


Figure 2

Mieux vaut un bon Provisionnal T
qu'un mauvais DK

1.1.0

0.0.0



Faut-il faire de l'imagerie ?



Critères de complexité angiographique



ESC

European Society
of Cardiology

European Heart Journal (2024) 45, 3415–3537

<https://doi.org/10.1093/eurheartj/ehae177>

ESC GUIDELINES

2024 ESC Guidelines for the management of chronic coronary syndromes

Vrints and al. EHJ 2024

Assessment of procedural risks and post-procedural outcomes

Intracoronary imaging guidance by IVUS or OCT is recommended when performing PCI on anatomically complex lesions, in particular left main stem, true bifurcations, and long lesions. ^{866,337,810,840,841}

I

A

- TCG
- Vraie Bifurcation (Médina 1-1-1)
- Longueur lésion > 20mm
- Calcifications modérées à sévères

Critères de complexité angiographique

Etude randomisée OCCUPI

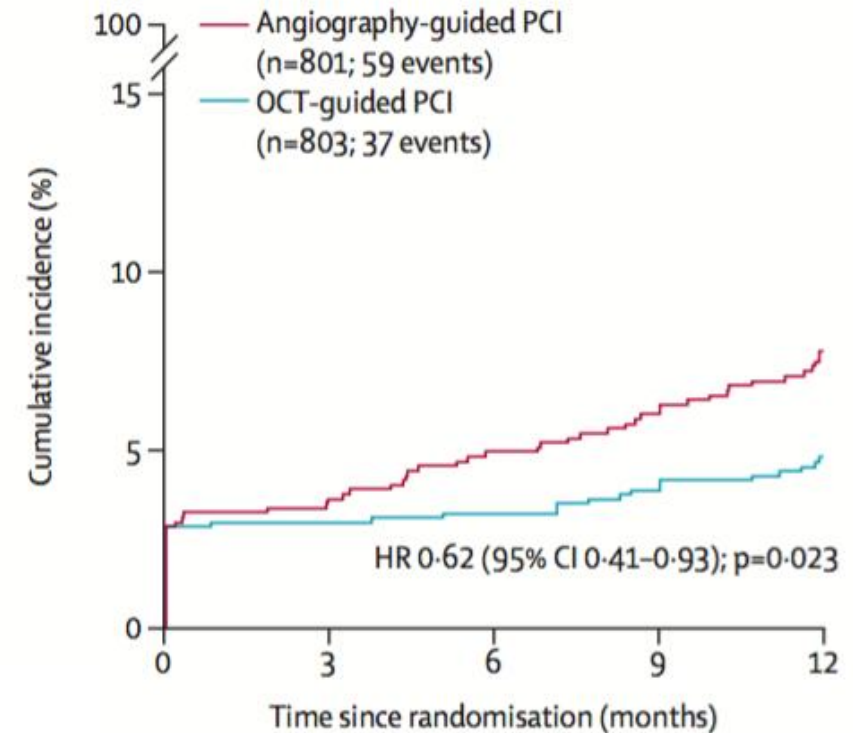
Optical coherence tomography-guided versus angiography-guided percutaneous coronary intervention for patients with complex lesions (OCCUPI): an investigator-initiated, multicentre, randomised, open-label, superiority trial in South Korea

Hong and al. Lancet 2024

4 critères de complexité comme définis dans l'étude

	OCT-guided PCI (n=803)	Angiography-guided PCI (n=801)	p value
Complex lesion type			
Acute myocardial infarction	164 (20%)	163 (20%)	>0.99
Chronic total occlusion	57 (7%)	58 (7%)	0.99
Diffuse long lesion*	575 (72%)	577 (72%)	0.89
Calcified lesion†	71 (9%)	78 (10%)	0.60
Bifurcation lesion	188 (23%)	193 (24%)	0.79
Unprotected left main artery disease	113 (14%)	116 (14%)	0.87
Small vessel disease‡	127 (16%)	140 (17%)	0.41
Intracoronary thrombus visible on the angiogram	70 (9%)	60 (7%)	0.42
Stent thrombosis	0	1 (<1%)	>0.99
In-stent restenosis	86 (11%)	85 (11%)	0.99
Bypass graft lesion	0	3 (<1%)	0.25

Réduction des MACE dans groupe PCI guidée par OCT pour lésions complexes

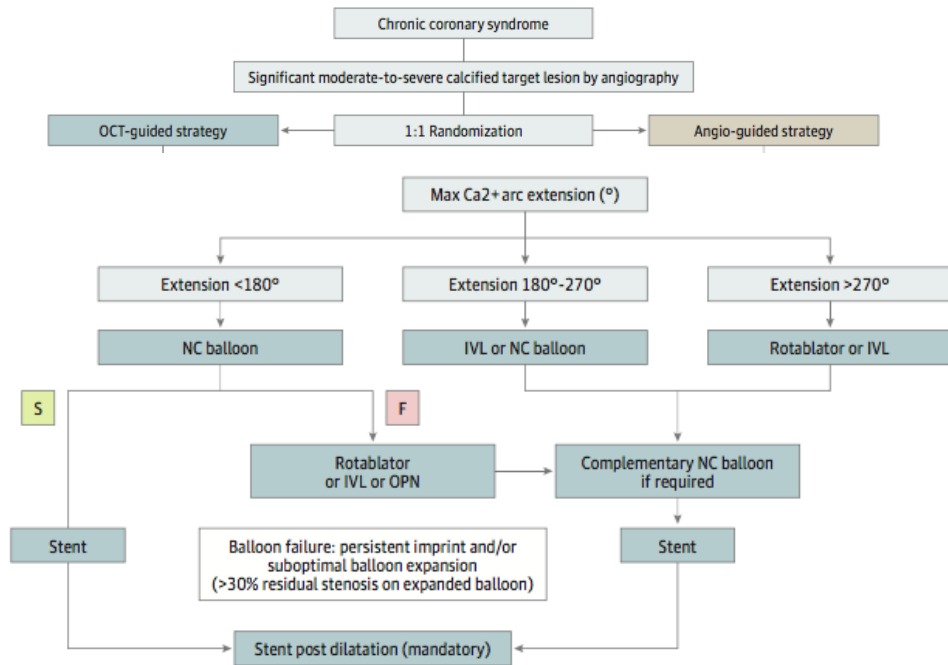


Lésion calcifiée TCG-IVA

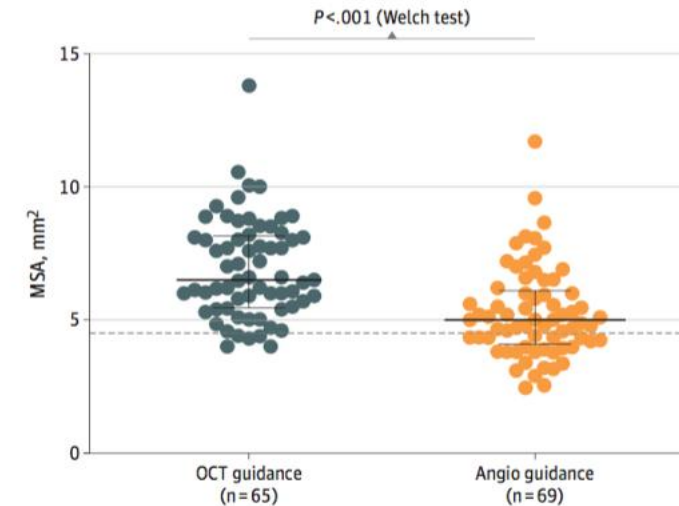
Supériorité d'une angioplastie imagerie guidée

OCT vs Angiography for Guidance of Percutaneous Coronary Intervention of Calcified Lesions
The CALIPSO Randomized Clinical Trial

Amabile and al. JAMA 2025



Plus grande MSA dans groupe OCT

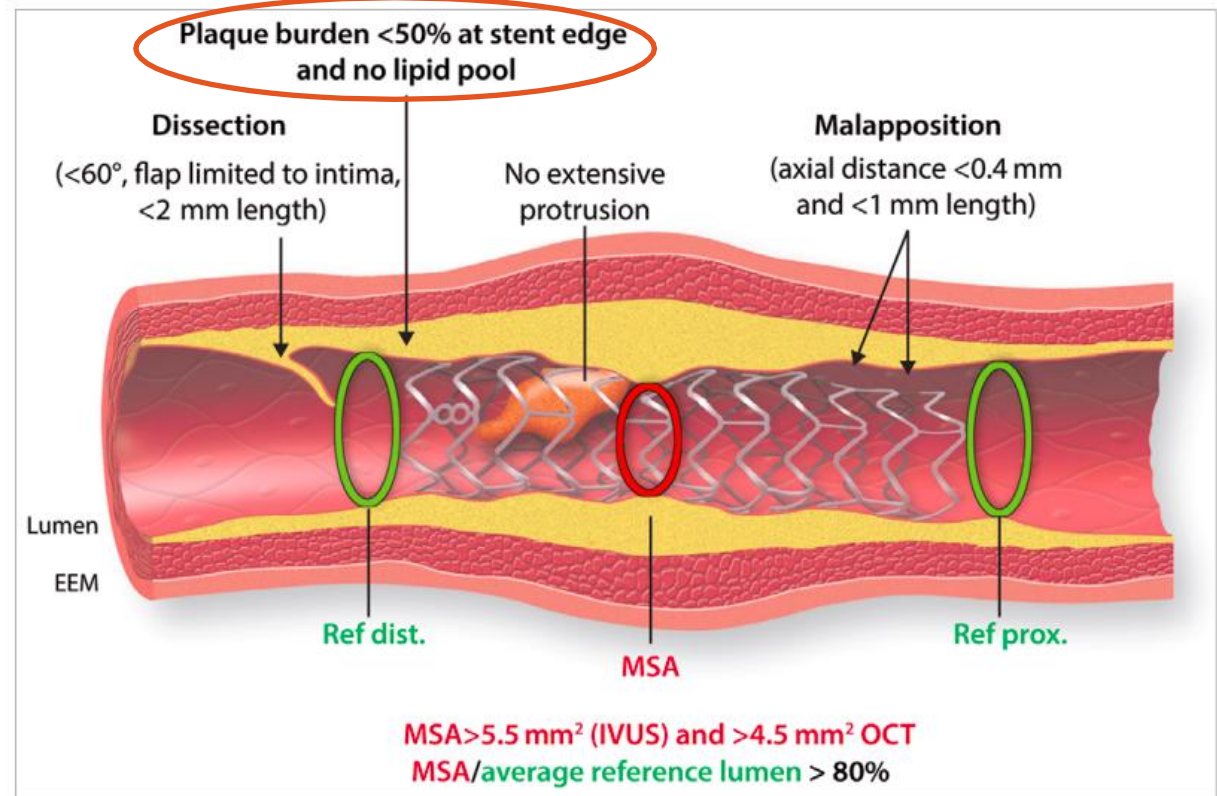


Meilleure expansion de stent et moins de malapposition

Measure	Median (IQR)		P value
	OCT guidance group (n = 65)	Angio guidance group (n = 69)	
Geometrical expansion, %	86.6 (75.2-95.0)	69.9 (59.1-77.6)	<.001
Successful geometrical expansion, No. (%)	49 (75)	20 (31)	<.001

Angioplastie guidée par imagerie endocoronaire car IVA diffusément pathologique

Définir les zones atterrissage sur un vaisseau
très pathologique



Raber and al. Eurointervention 2018



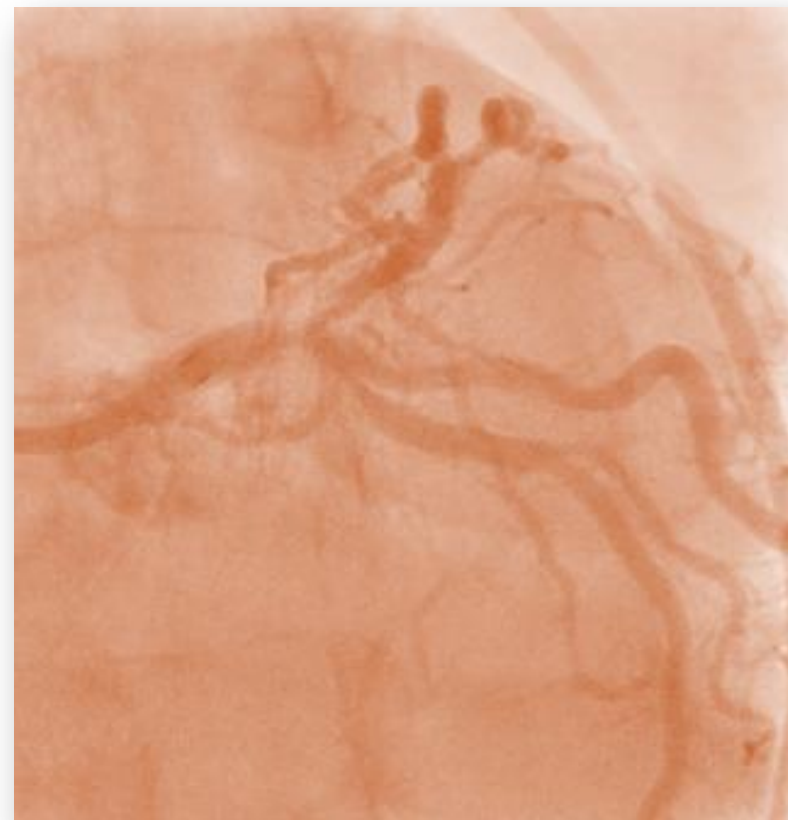


Image 23 / 23
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OAD 18°
CRAN 31°



Apport de l'imagerie



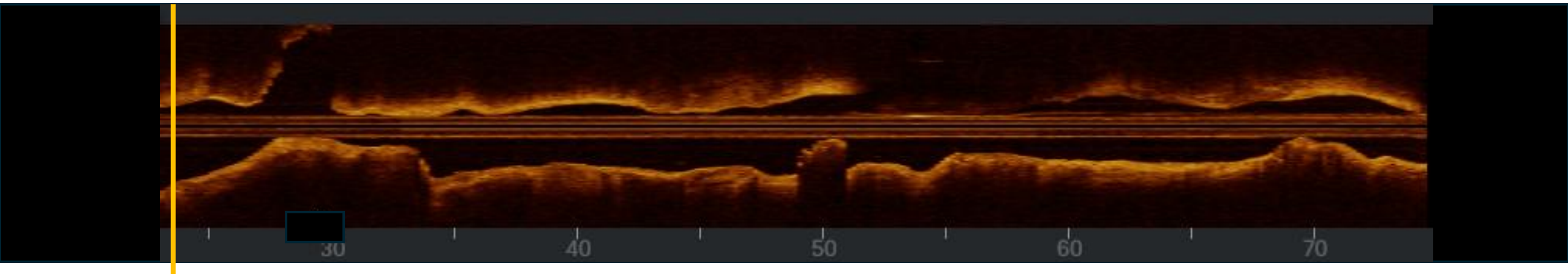
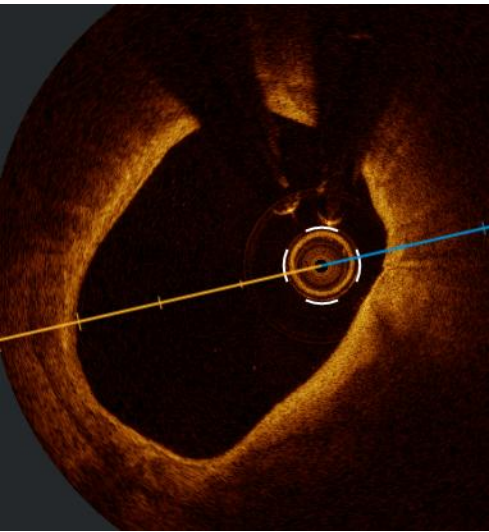
**TC pathologique
dès l'ostium**

Bourgeon calcifié
fin du TC

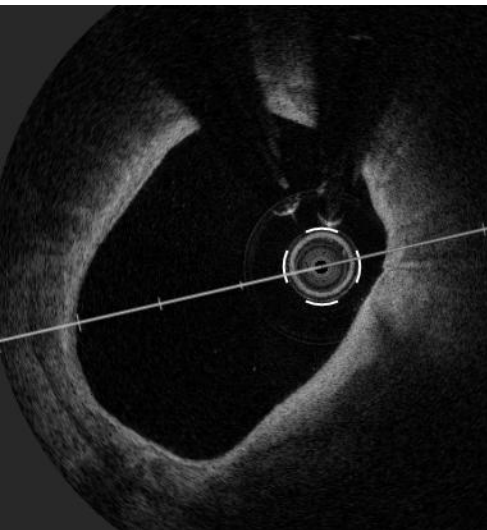
Sténose critique
excentrée IVA ostiale

Lésion longue
Calcifications diffuses

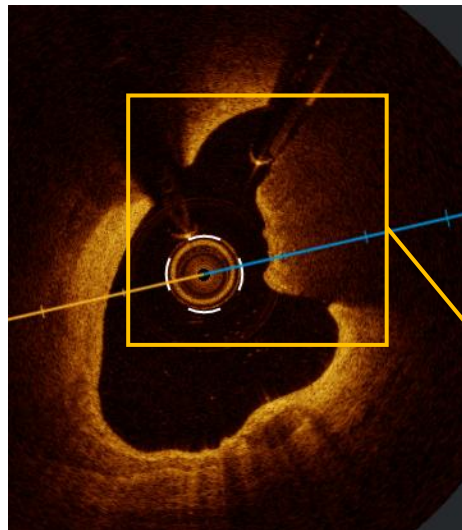
Fujino x 3



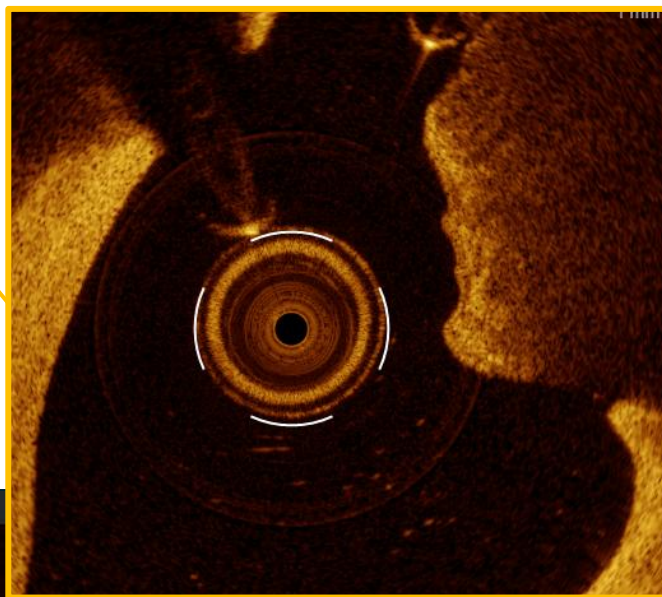
TC pathologique
dès l'ostium



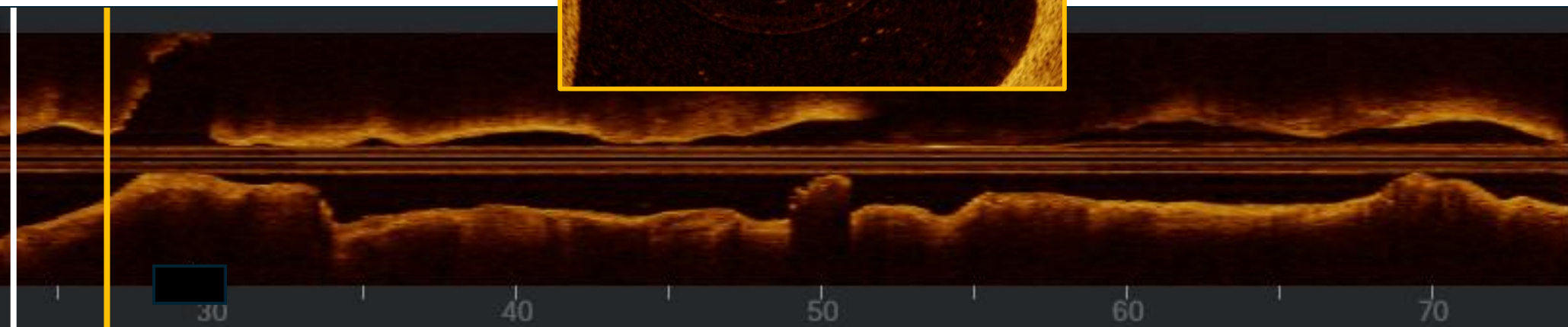
**Bourgeon calcifié
fin du TC**



Sténose critique
excentrée IVA ostiale



Lésion longue
Calcifications diffuses



Fujino x 3

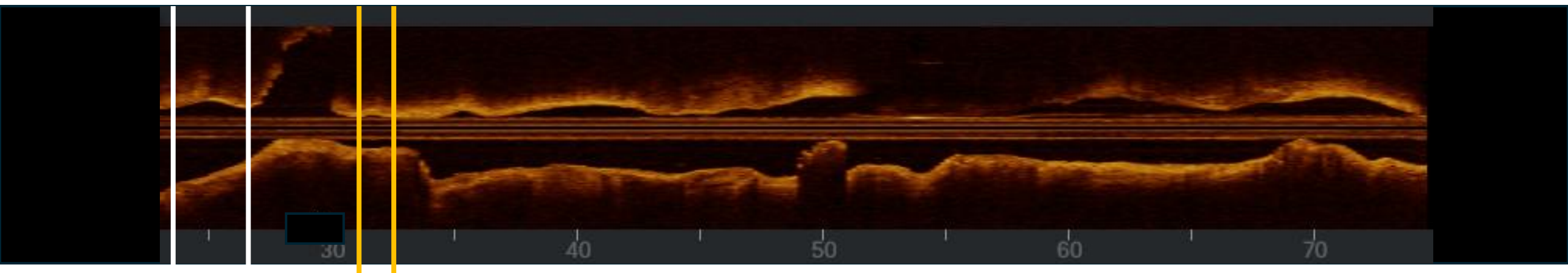
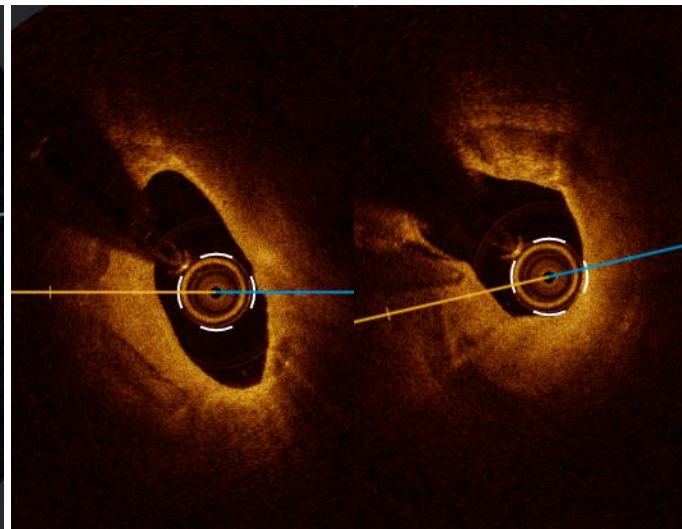
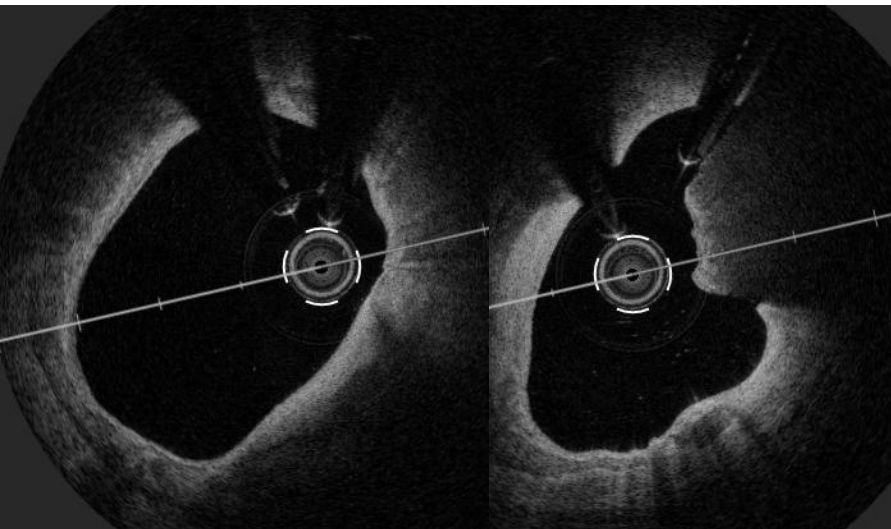
TC pathologique
dès l'ostium

Bourgeon calcifié
fin du TC

**Sténose critique
excentrée IVA ostiale**

Lésion longue
Calcifications diffuses

Fujino x 3



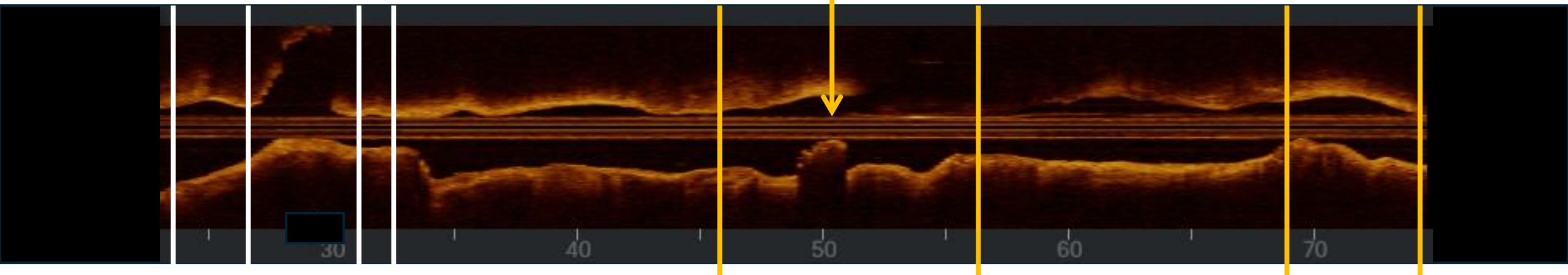
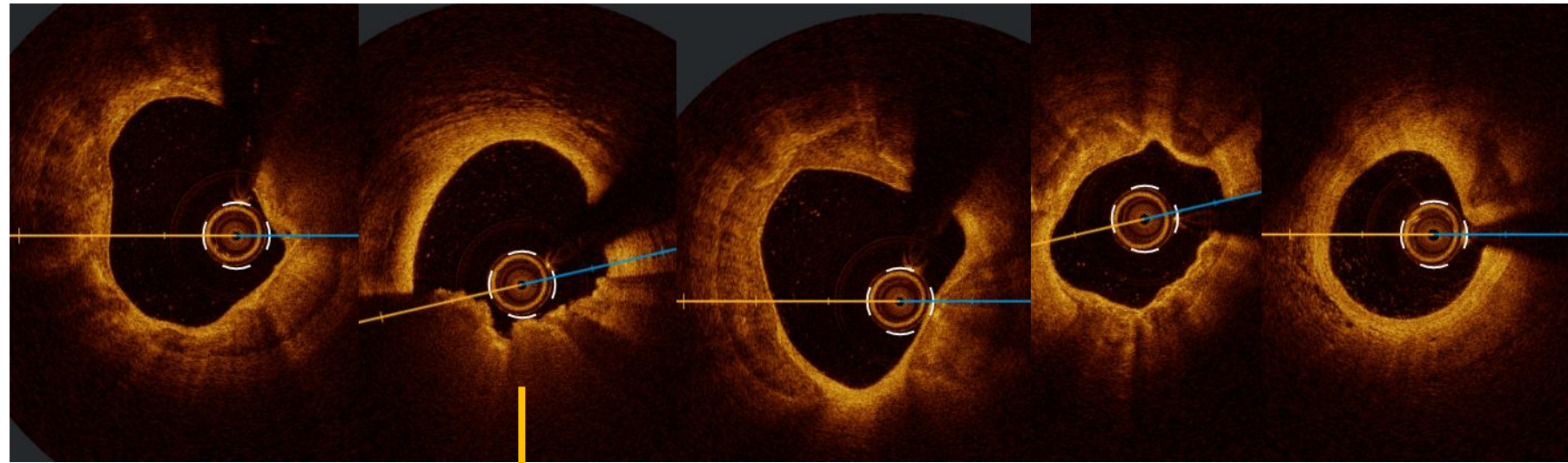
TC pathologique
dès l'ostium

Bourgeon calcifié
fin du TC

Sténose critique
excentrée IVA ostiale

Lésion longue
Calcifications diffuses

Fujino x 3



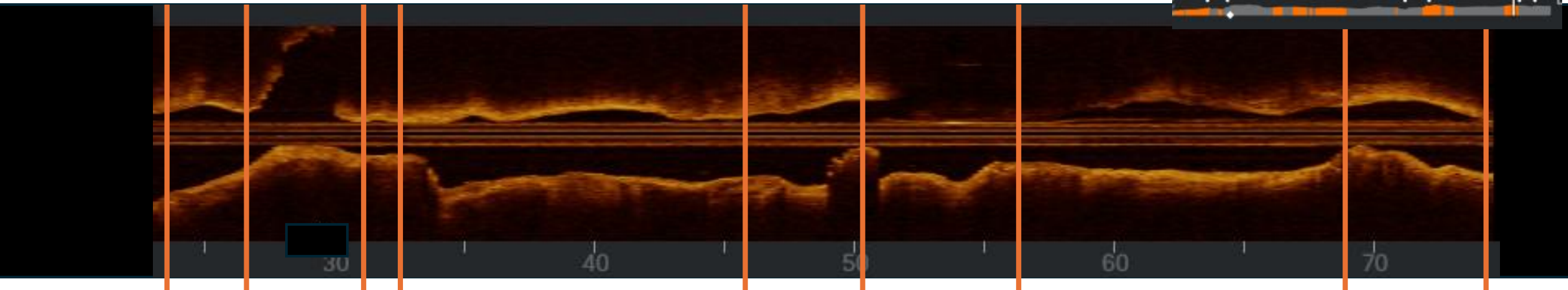
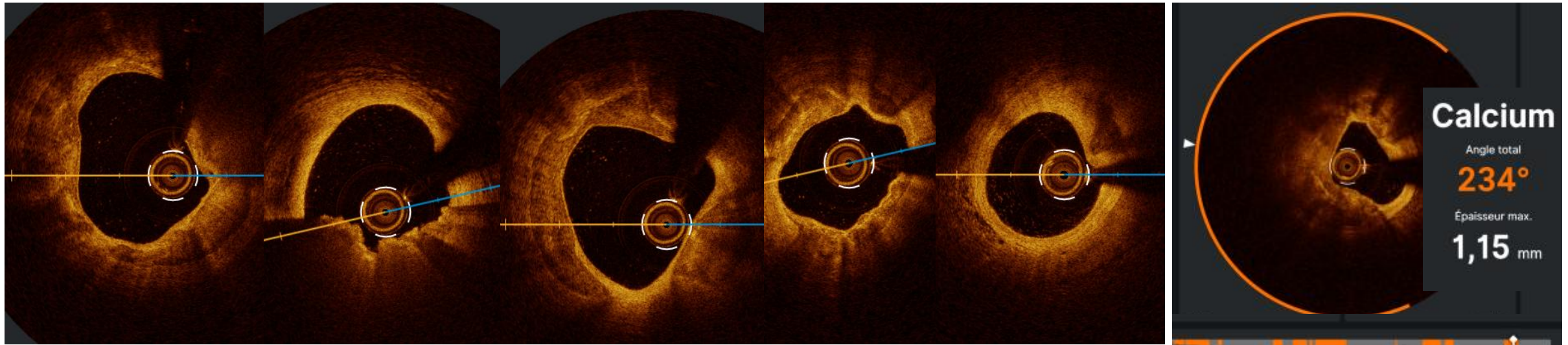
TC pathologique
dès l'ostium

Bourgeon calcifié
fin du TC

Sténose critique
excentrée IVA ostiale

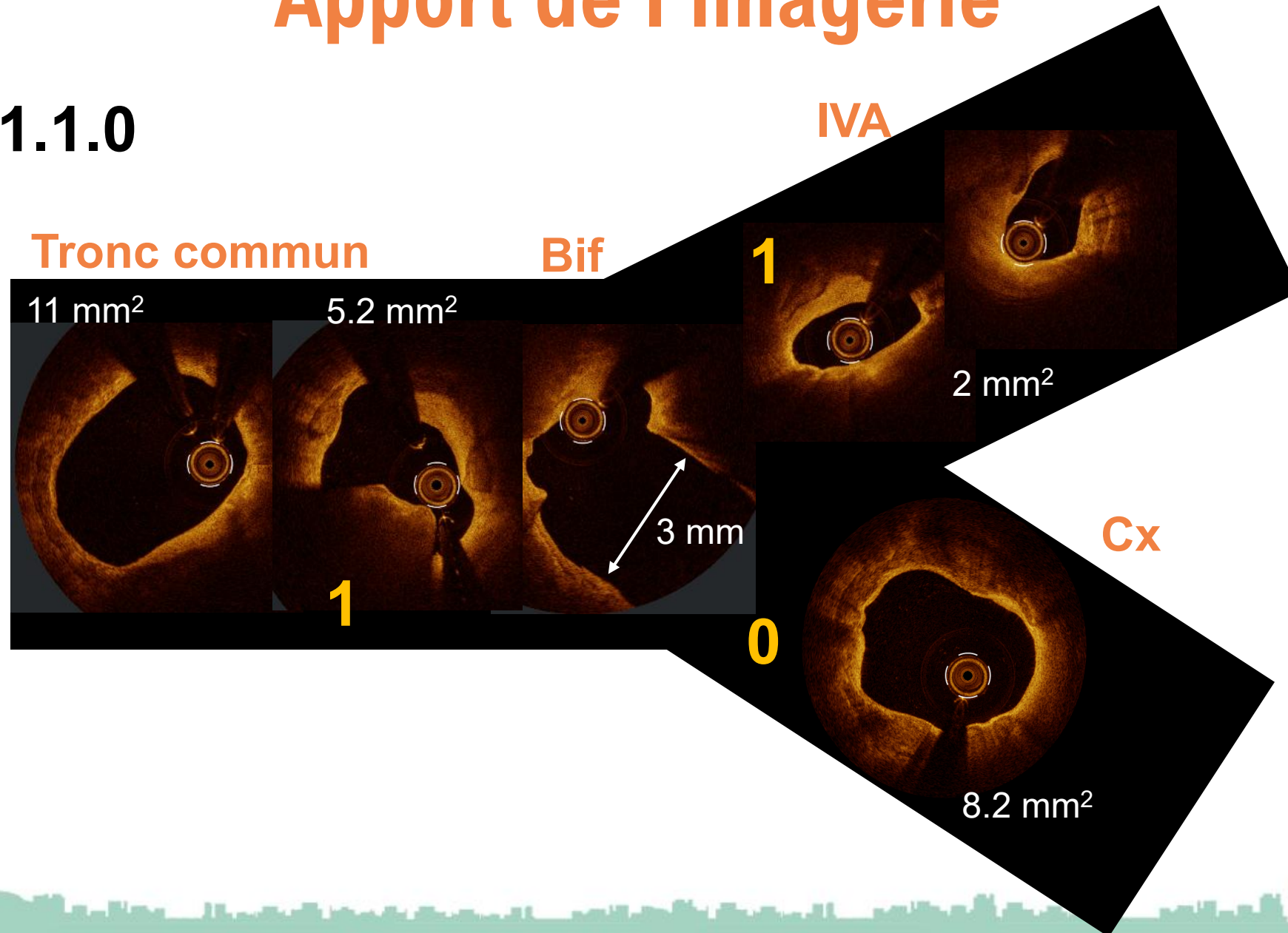
Lésion longue
Calcifications diffuses

Fujino x 3



Apport de l'imagerie

Medina 1.1.0



Apport de l'imagerie

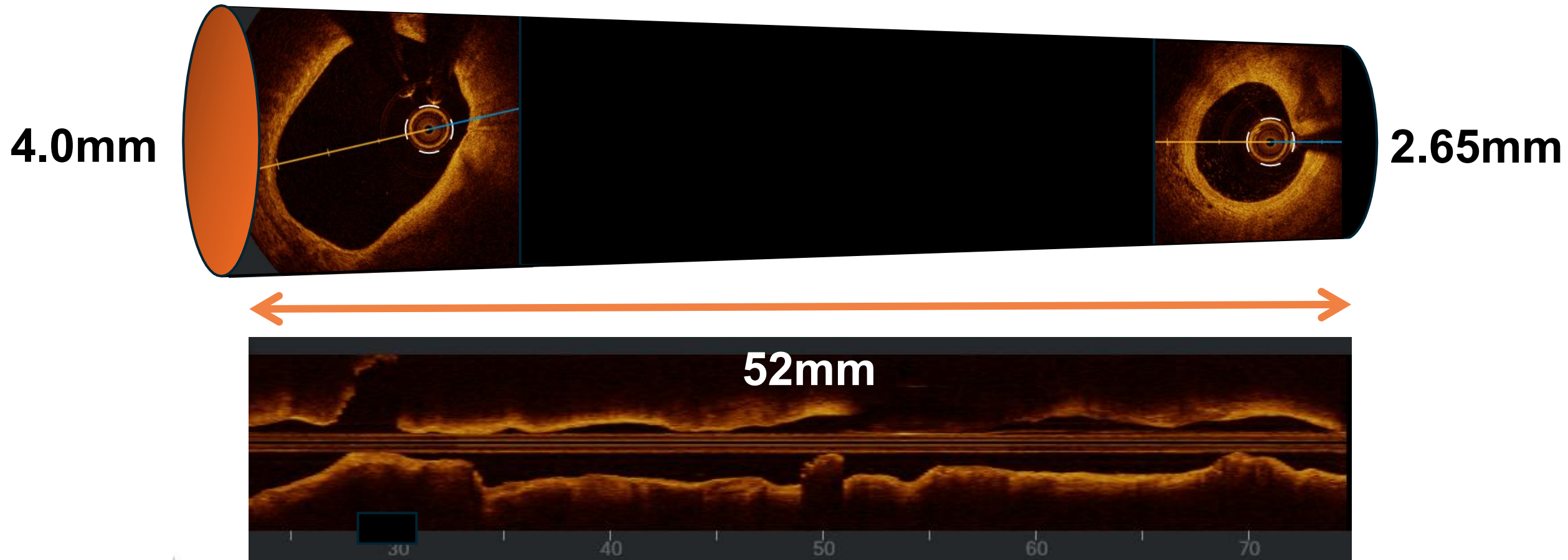
Medina 1.1.0



Visualisation 3D de la bifurcation

Apport de l'imagerie

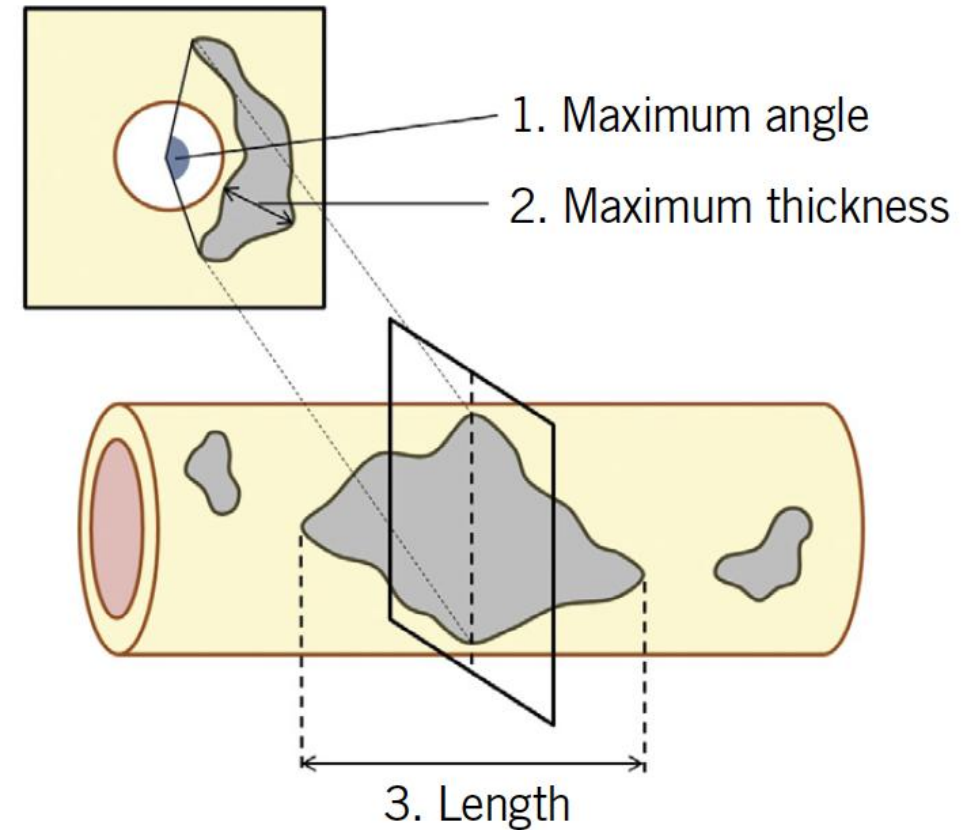
Longueur et diamètres



Comment préparer la lésion ?

Score de Fujino à 4

1. Maximum Calcium Angle (°)	$\leq 90^\circ$ $90^\circ < \text{Angle} \leq 180^\circ$ $> 180^\circ$	<p>▶ 0 point</p> <p>▶ 1 point</p> <p>▶ 2 points</p>
2. Maximum Calcium Thickness (mm)	$\leq 0.5 \text{ mm}$ $> 0.5 \text{ mm}$	<p>▶ 0 point</p> <p>▶ 1 point</p>
3. Calcium Length (mm)	$\leq 5.0 \text{ mm}$ $> 5.0 \text{ mm}$	<p>▶ 0 point</p> <p>▶ 1 point</p>
Total score	0 to 4 points	



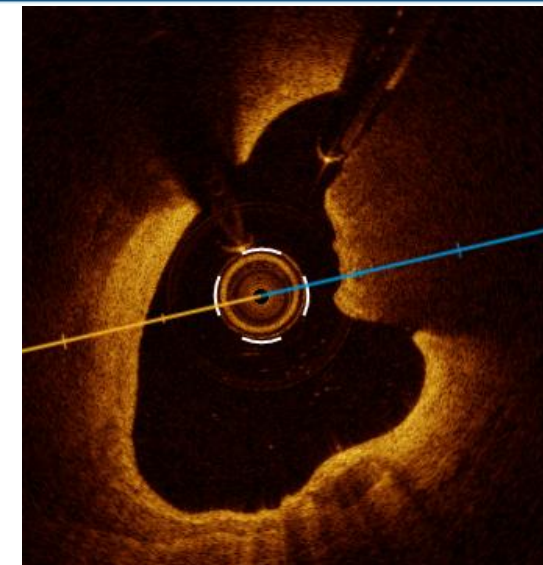
Rule of 5's

- 0.5 mm thickness
- 5.0 mm long
- 50% vessel arc

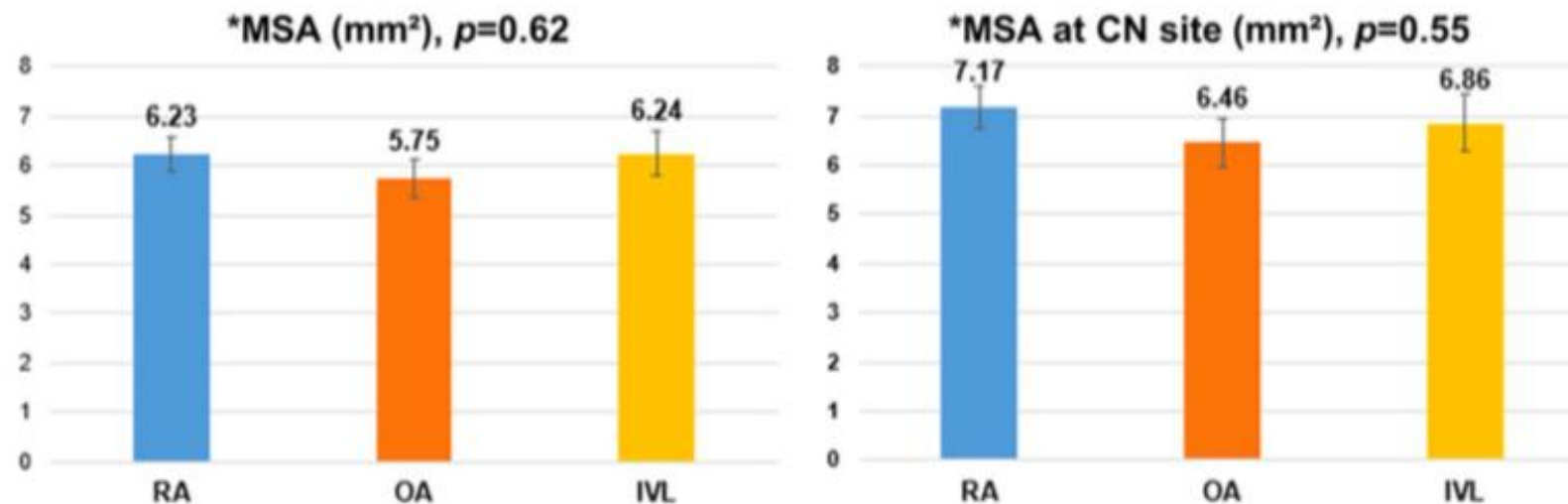
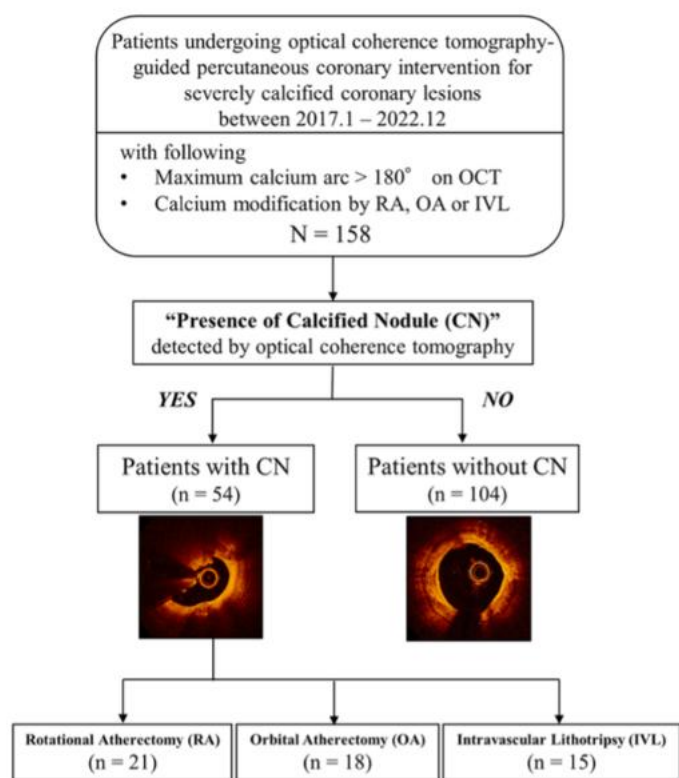
Fujino et al. Eurointervention 2018

Bourgeon calcaire

Rotational, orbital atherectomy and intravascular lithotripsy for coronary calcified nodules: insights from optical coherence tomography



Yasumura et al. CCI 2024

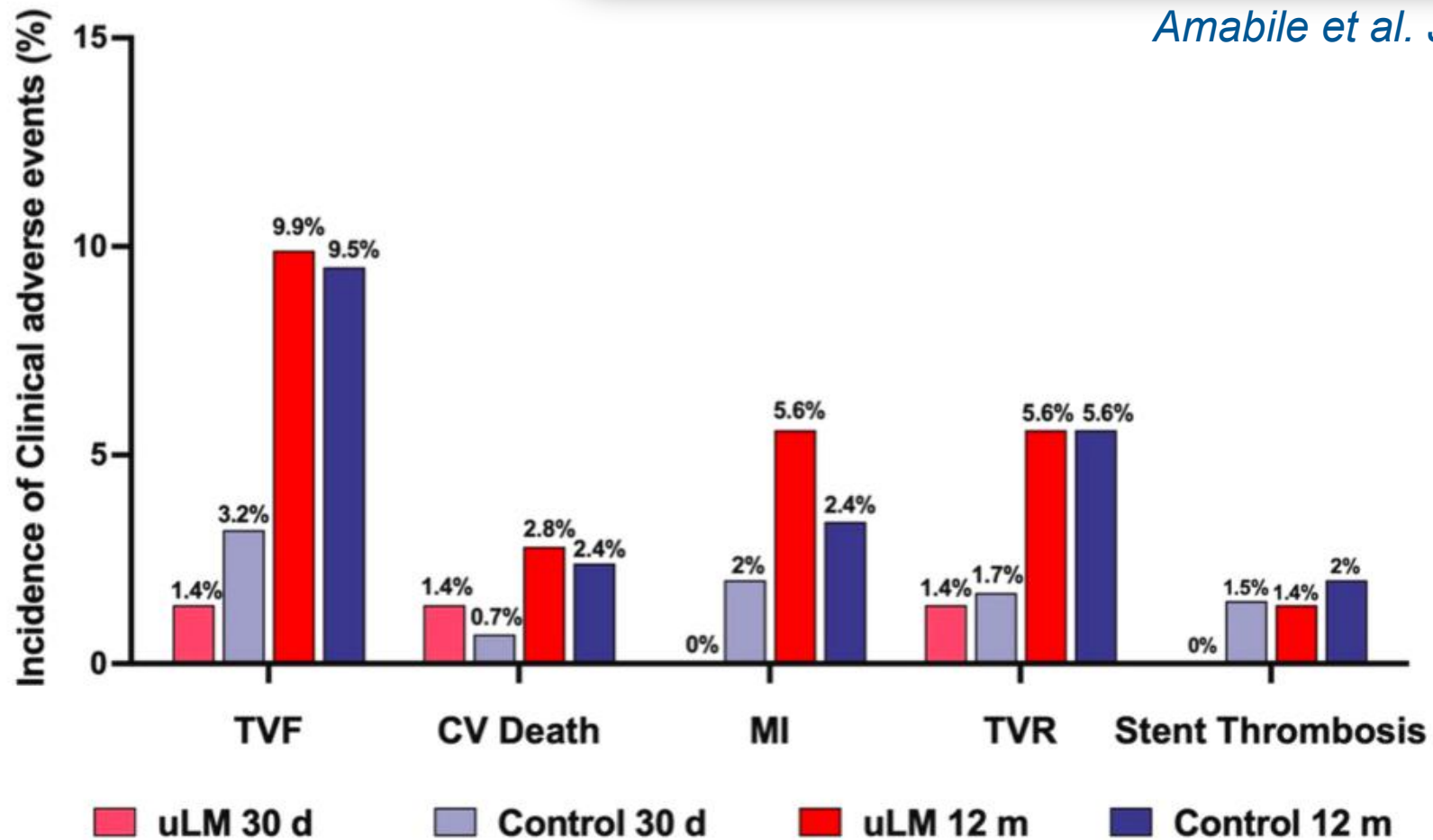


MSA similaires dans les angioplasties de nodules calcifiés traités par OA, RA ou IVL

Lésion du TCG

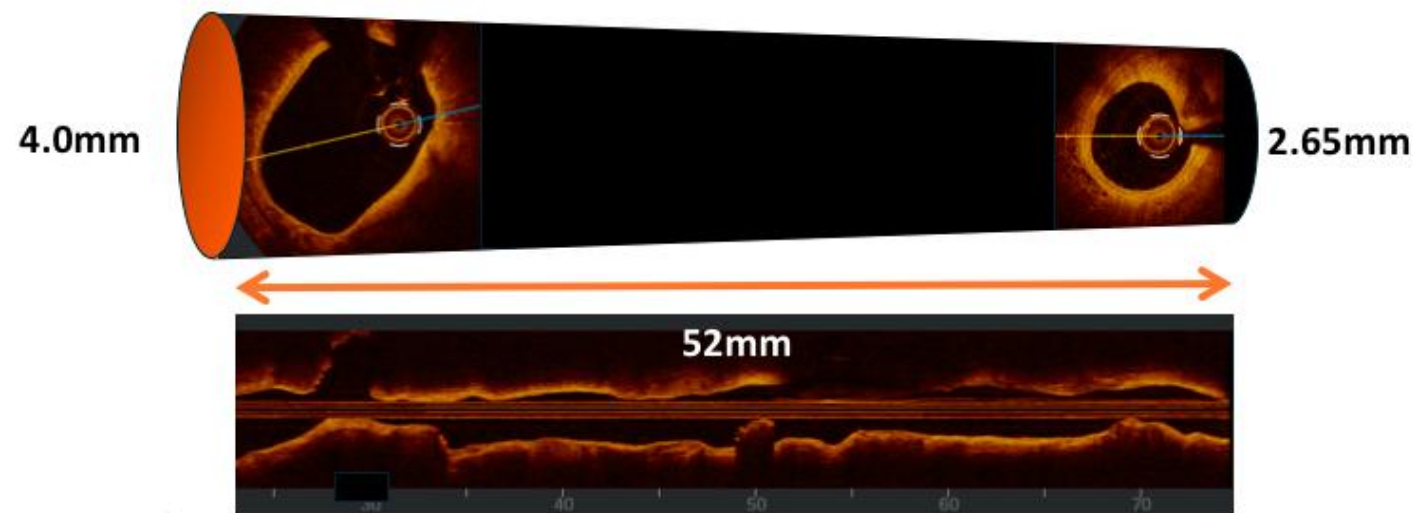
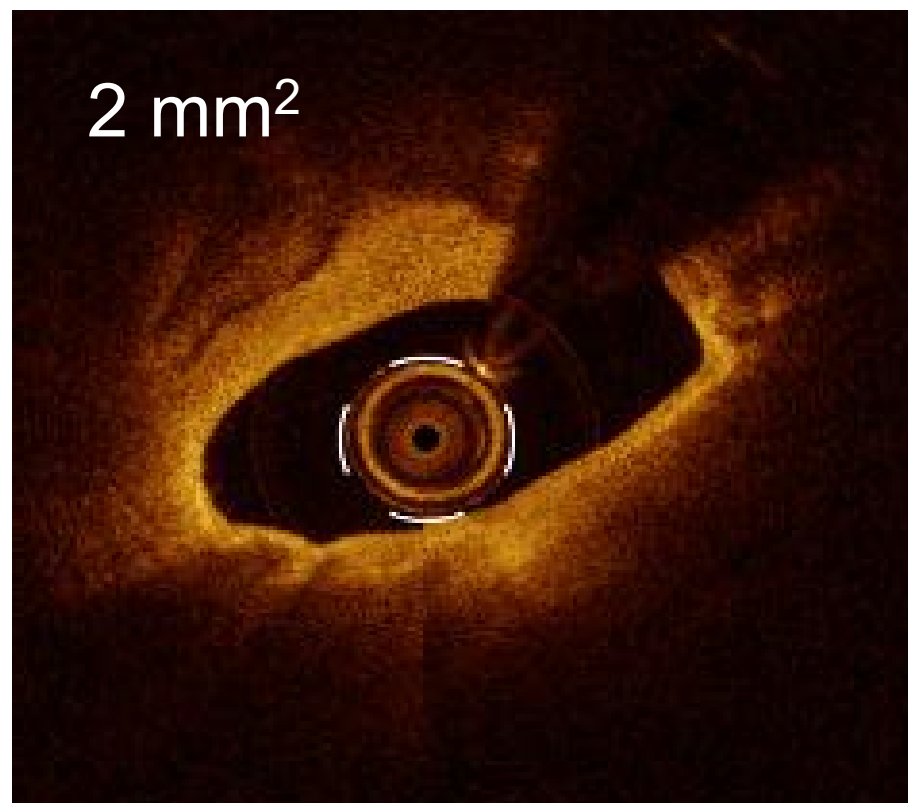
1-Year Outcomes of IVL Procedures for Unprotected Left Main Coronary Artery Lesion PCI

Amabile et al. JACC Interv 2025



Sténose très serrée de l'IVA
Crainte d'échec de crossabilité de IVL

Longueur de lésion
et calibres différents



Plutôt Athérectomie



Image 16 / 16
26-Nov-2025, 11:30



OAD 9°
CAUD 26°



Quelle stratégie de stenting ?

Quelle stratégie ?



Morphology



Length



Diameter

- Couvrir l'ensemble du TC
- Dimensions

Longueur totale = 52 mm

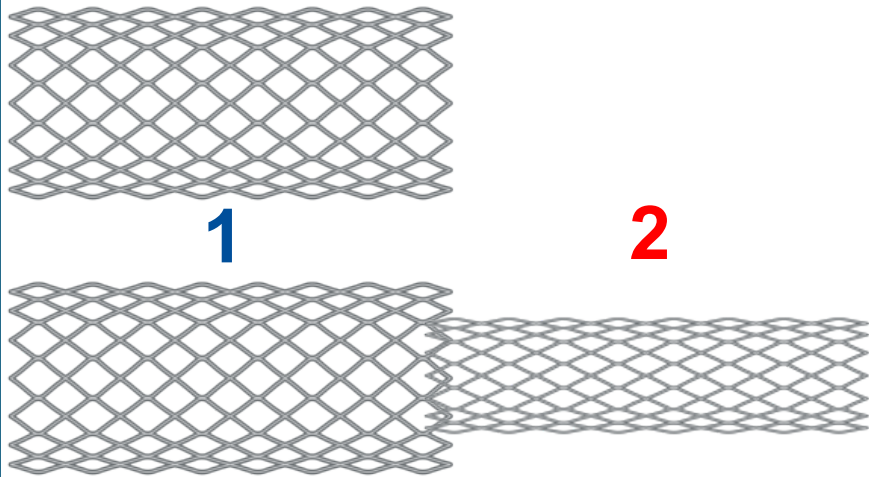
Diamètre du TC = 4.0 mm

Diamètre de l'IVA = 2.65 mm

- Deux stents, court overlap
- Proximal puis distal

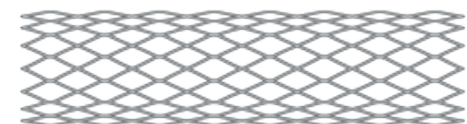
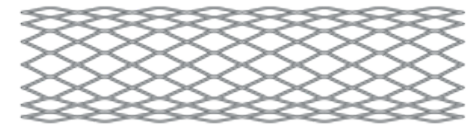
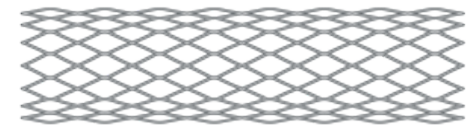
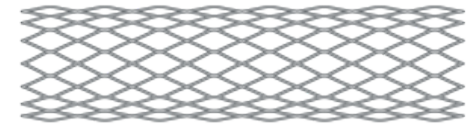
Quelle stratégie ?

Deux stents, court overlap
Proximal puis distal



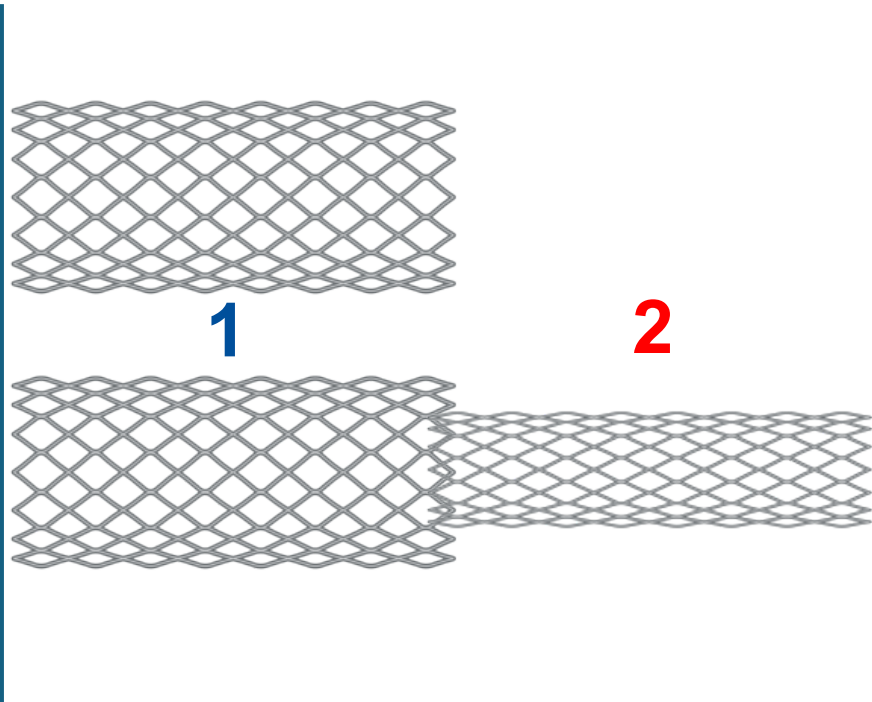
Pièges du
Distal puis proximal

1

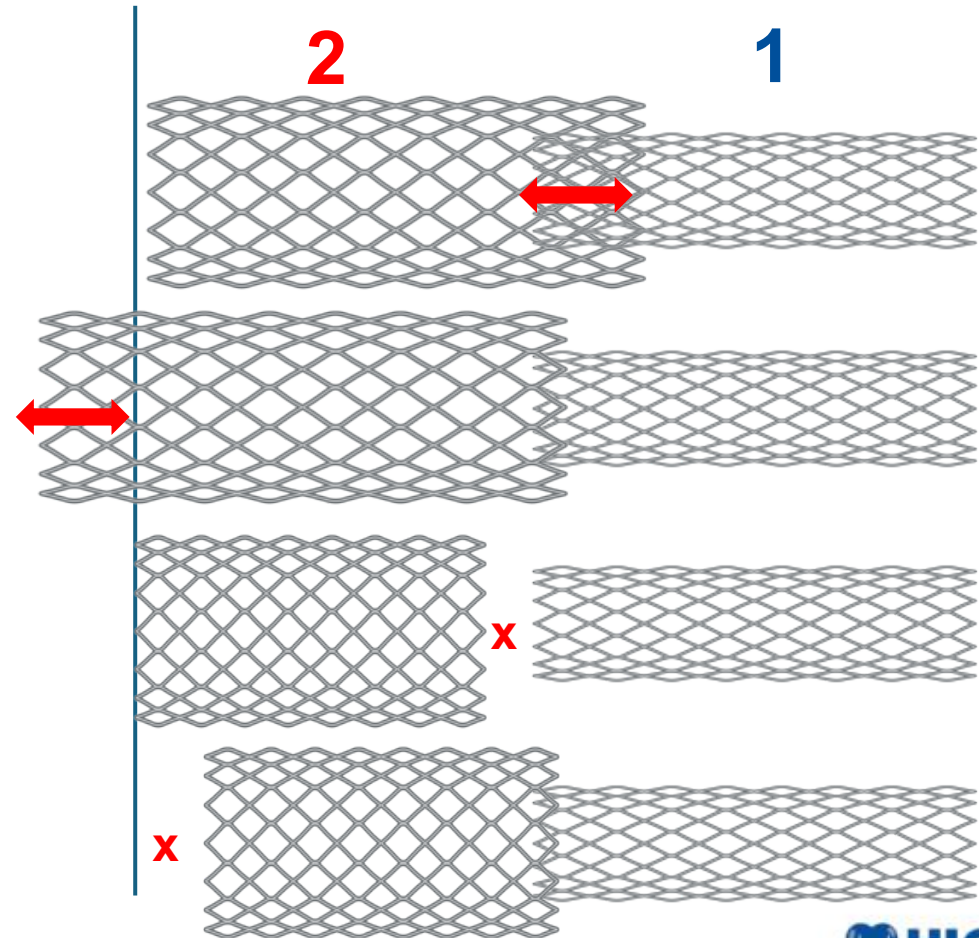


Quelle stratégie ?

Deux stents, court overlap
Proximal puis distal



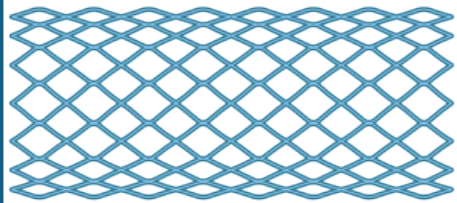
Pièges du
Distal puis proximal



Quelle stratégie ?

Stenting IVA distale **Synergy 2.5 x 12mm**

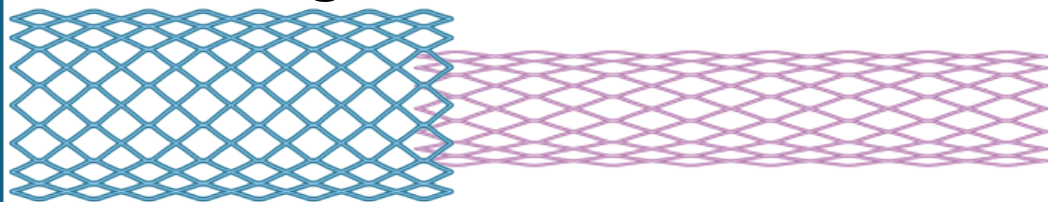
Stenting TC en direction IVA



Megatron 3.5 x 24mm

POT avec NCB 4.0mm

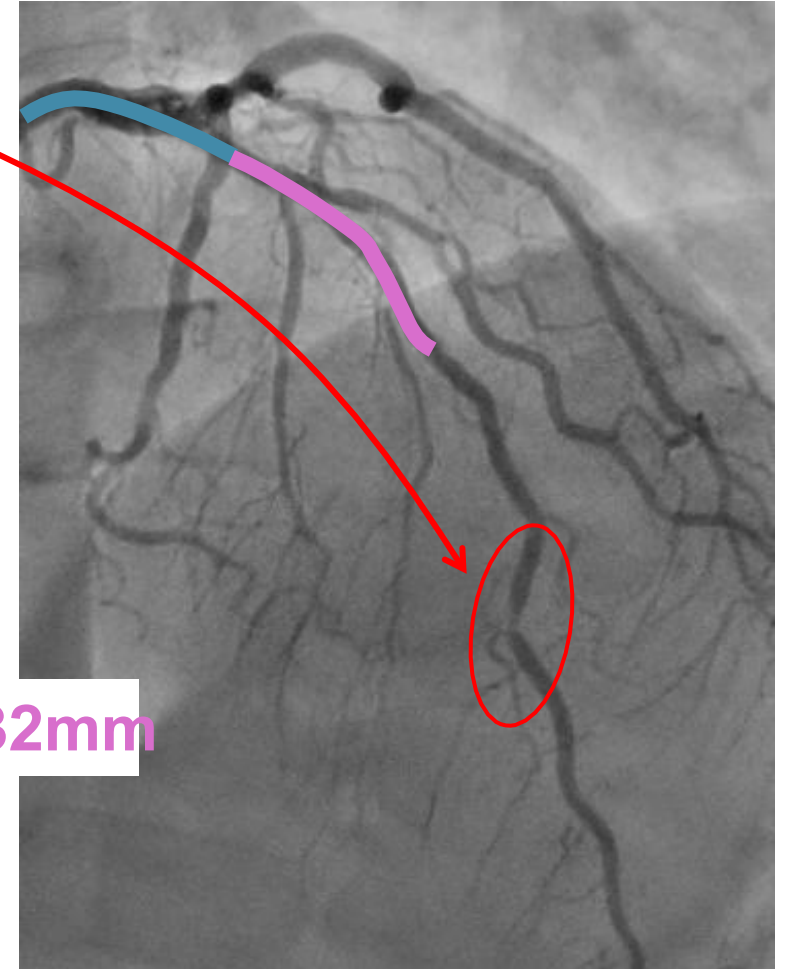
Stenting IVA avec court overlap

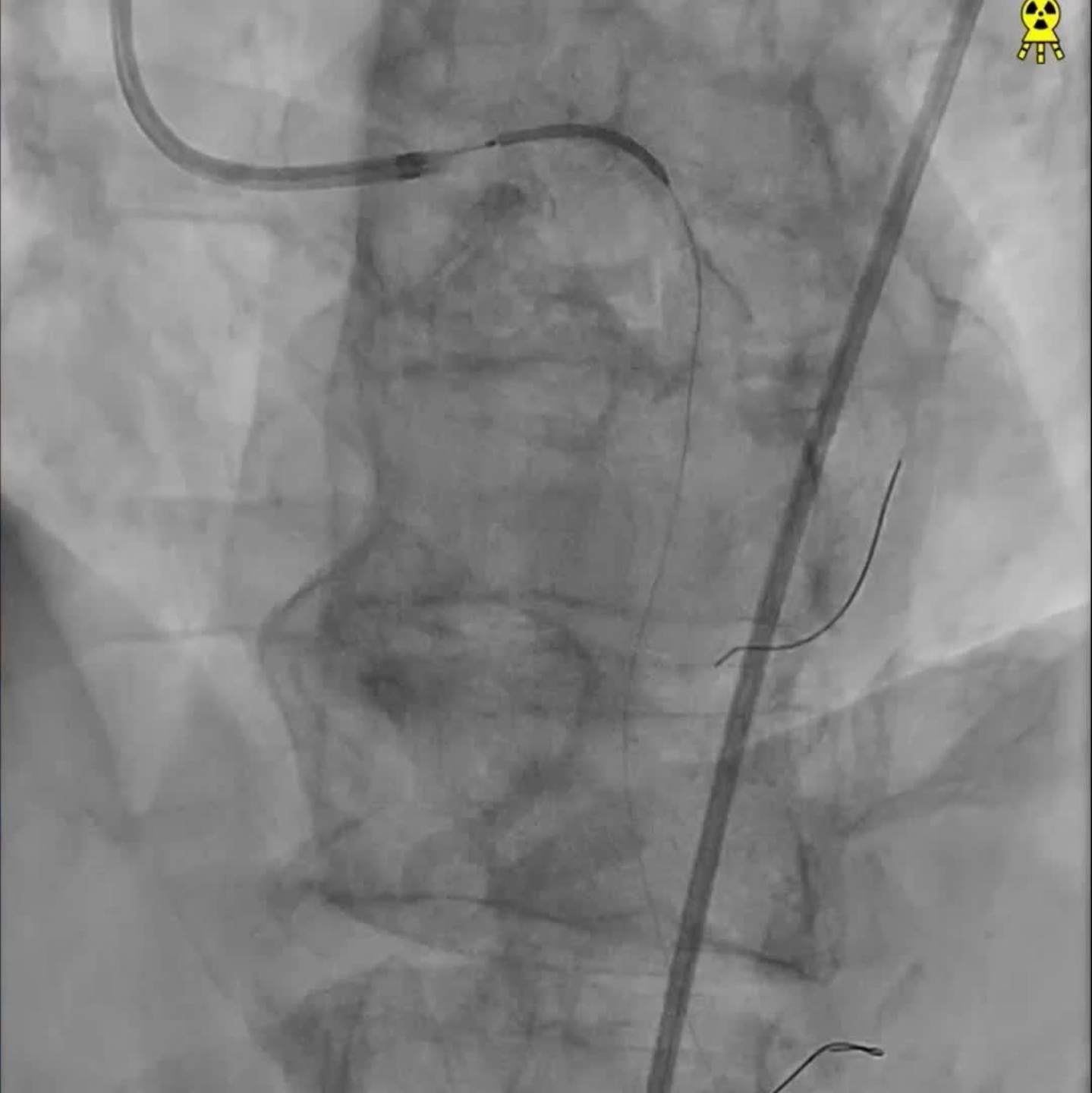


Synergy 2.75 x 32mm

Post-dilatation de l'overlap au ballon 3.0mm

Technique de bifurcation





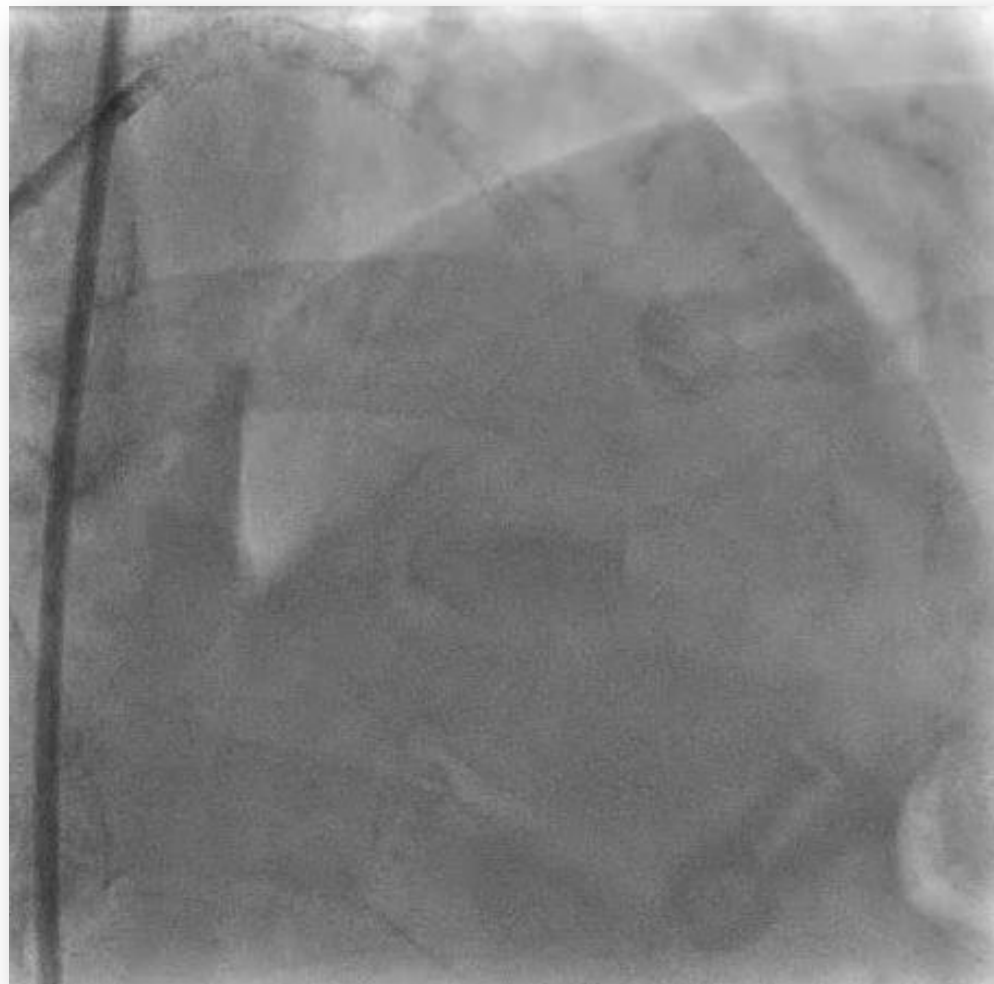
Remerciements



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MER : Clément Marquet

Que retenir de ce cas ?



Que retenir de ce cas ?



Que retenir de ce cas ?



Procédure complexe : planifiée, programmée, préparée
Importance des outils de préparation comme le SHOCKWAVE
Apport de l'imagerie : simplifie plus qu'elle ne complexifie



28-30
JANVIER
2026

MARSEILLE
PALAIS DU PHARO

Discussions autour d'un cas