

PHYSIO DAY

JOURNÉES DE PHYSIOLOGIE
EN CARDIOLOGIE INTERVENTIONNELLE



ARNAULT
TZANCK
SAINT-LAURENT-DU-VAR

Symposium Elixir

Du concept à la pratique clinique en passant par la physiologie

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5 & 6 AVRIL 2024

HÔTEL SHERATON · NICE



Restaurer la physiologie



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- Ouvrir l'artère (Ballon)
- Maintenir la lumière de l'artère (DES, BMS)
- Faire disparaître le scaffold (BVS)
- Redonner la mobilité à l'artère



Restaurer la physiologie



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Strength and Deliverability

Sustained Dynamic Support of Diseased Vessel



RESTORE FLOW

Acute
Performance
Similar to 2nd Gen

- High device and procedure success
- High acute gain
- Low %DS



RELEASE

The vessel to
enable motion
and function

- Early uncaging at 6 months
- Restore pulsatility and compliance
- Increase blood flow volume
- Contractile SMC phenotype upregulation



RETURN

Provide dynamic
scaffolding to
support natural
function

- Reduce arterial stresses
- Improve hemodynamics
- Support positive remodeling
- Enable lesion/plaque stabilization

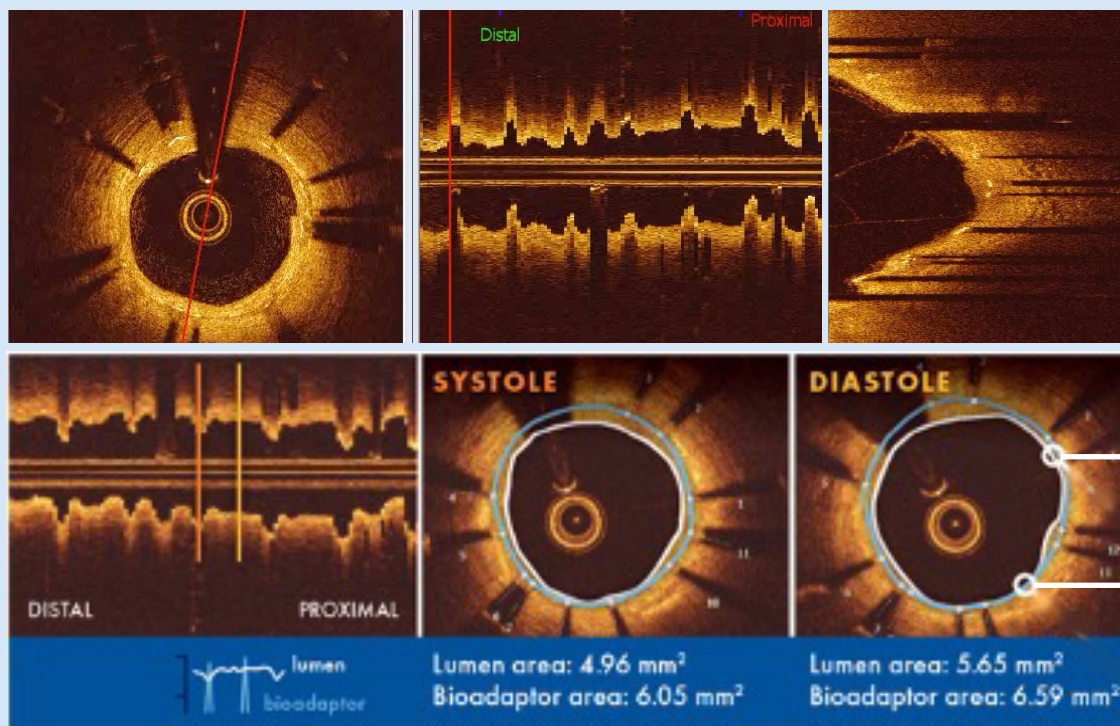


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RESTORATION OF PULSATILITY

Lumen area changes between systole and diastole cycles



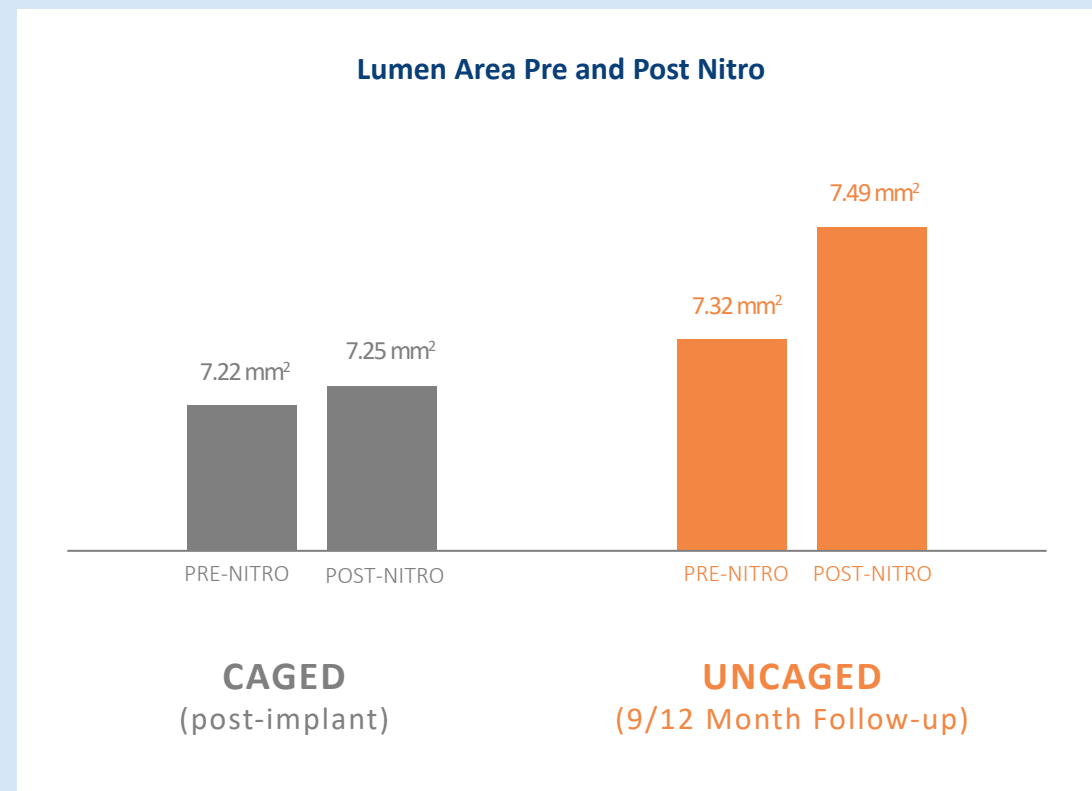
% increase between systole and diastole

Lumen area Δ 14%

Bioadaptor area Δ 9%

RESPONSE TO CHEMICAL STIMULI

Uncaging allows the artery to respond to nitro



Paired IVUS-analysis (n=18)



Principe Physiologique

DynamX– Operating Principle To Restore Flow and Vessel Function



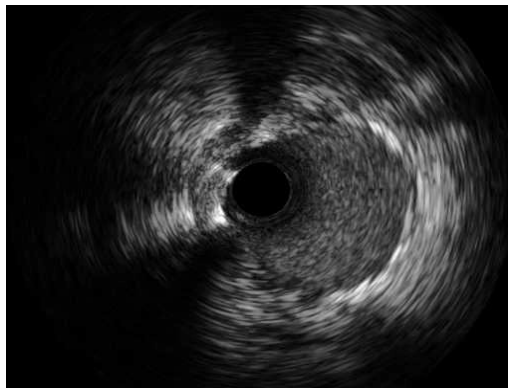
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Restoration of Flow

Restoration of Vessel Function

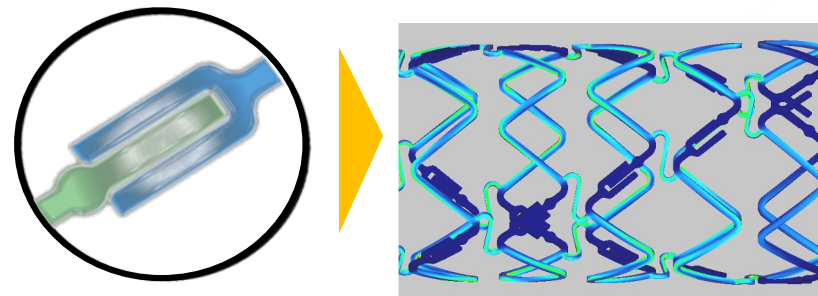


1. Connected, the device matches acute performance of standard of care DES

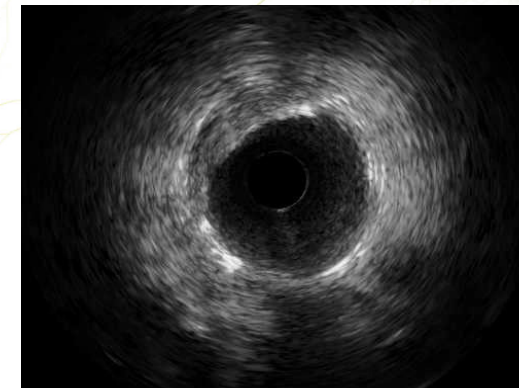


Patient image from Mechanistic study

2. By 6 months, the BASECOAT polymer resorbs separating the three helical strands



3. Return of normal vessel motion and function through the dynamic support of the vessel after unlocking the helical strands



Patient image from Mechanistic study

During neointima formation, helical strands become surrounded by smooth muscle cells* prior to unlocking of the device and uncaging the vessel while continuing to provide dynamic support of atherosclerotic vessel.

*Preclinical study. Data on file at Elixir Medical.



Principe Physiologique

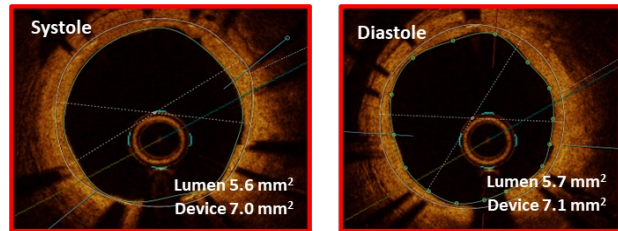


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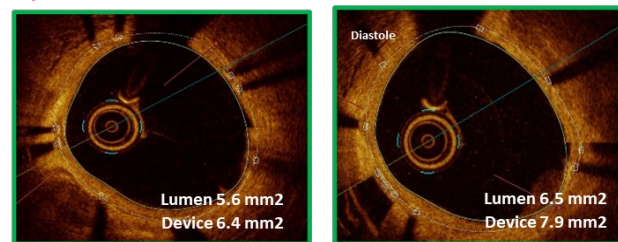
Return of Pulsatility Augmented Coronary Flow May Translate To Improved Microvascular Perfusion and Angina Symptoms

Systole/Diastole Lumen Area Change

Resolute Onyx – No Lumen Area Change

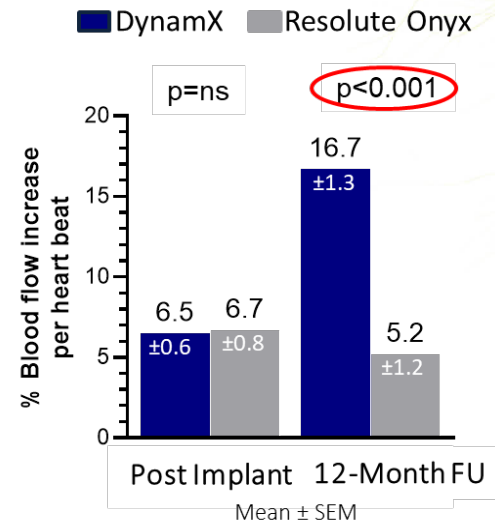


DynamX – Lumen Area Increase



BIOADAPTOR RCT Paired analysis example – OCT at 12 months

Systole/Diastole Blood Flow Volume Change¹



Estimated by Hagen Poiseuille flow equation (Pontiga and Gaytan 2005)

Arterial Compliance and Adapted Blood Flow

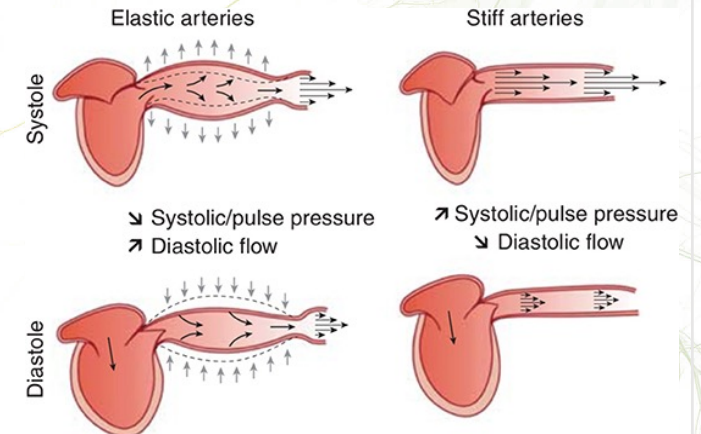


Image Source: Laurent et al. Front. Cardiovasc. Med.

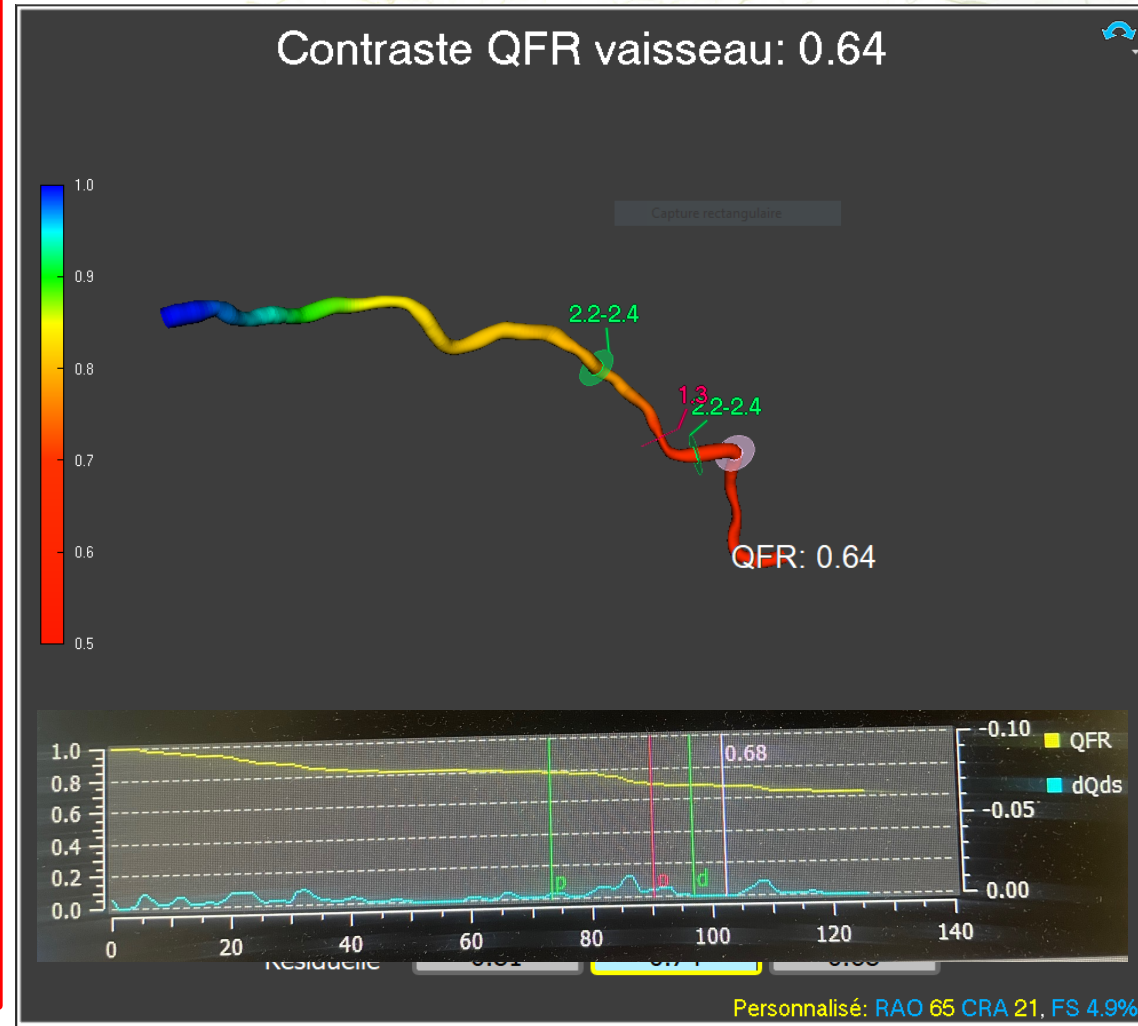
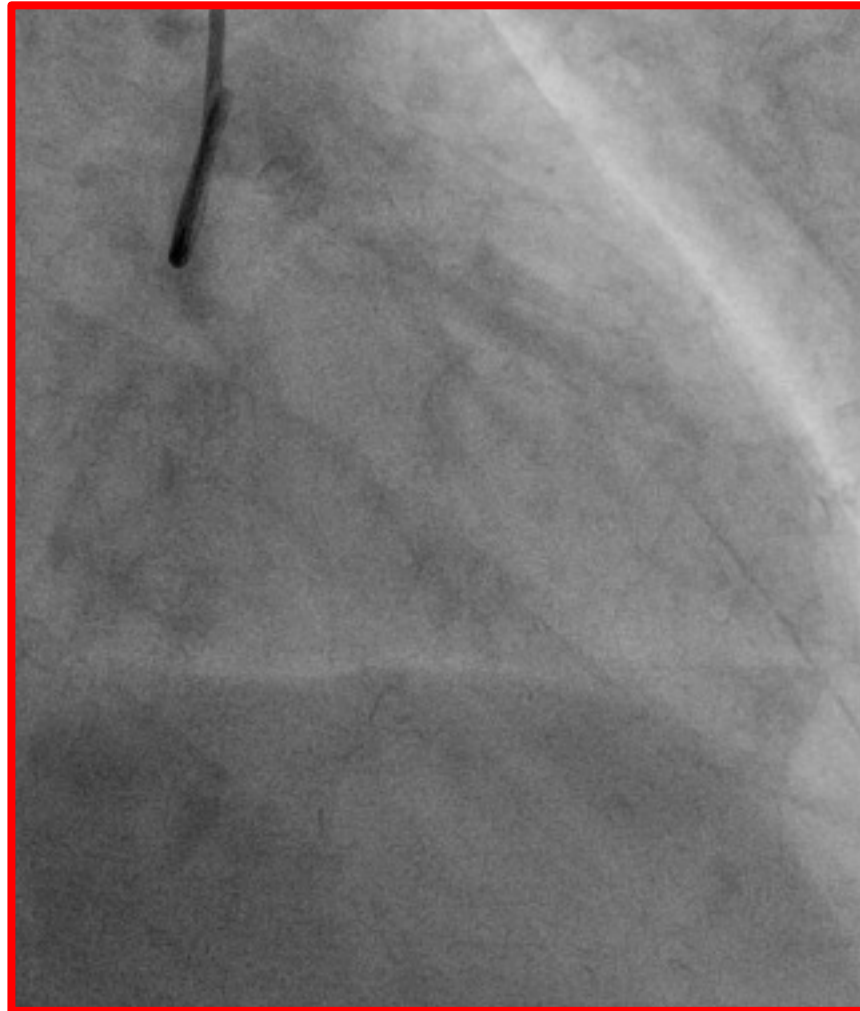
1. Saito S et al. 12-Months BIOADAPTOR-RCT. The Lancet eClinicalMedicine. 2023;65:102304.



Un cas pratique: patient de 81 ans



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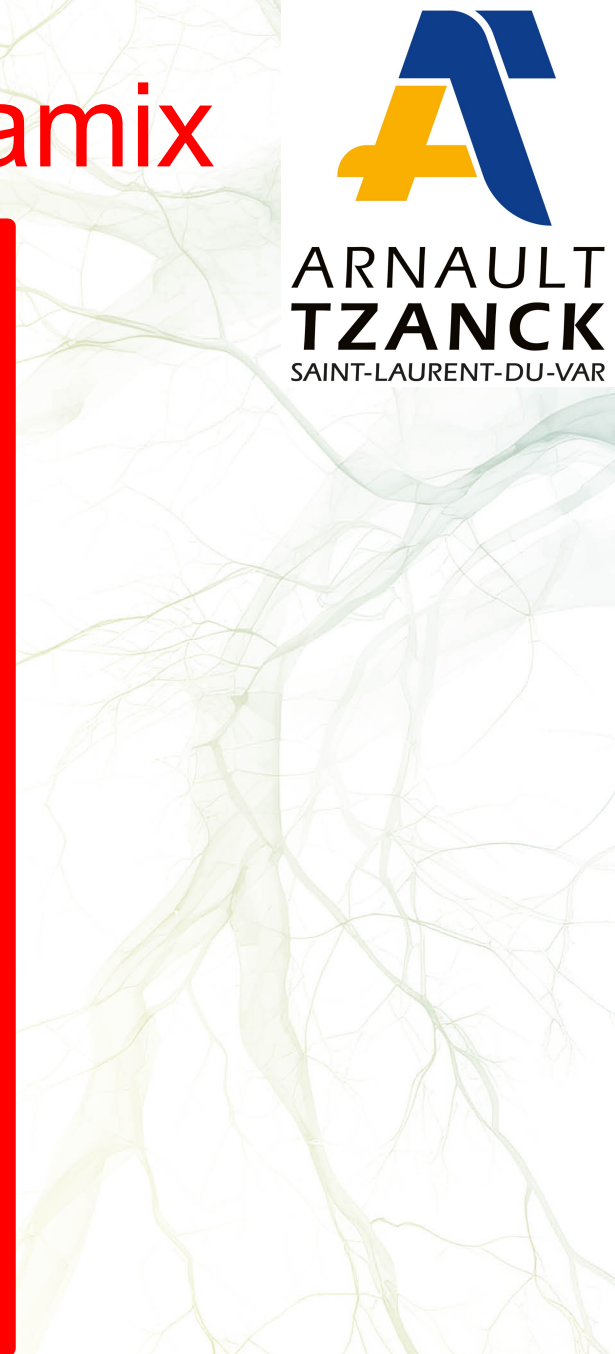
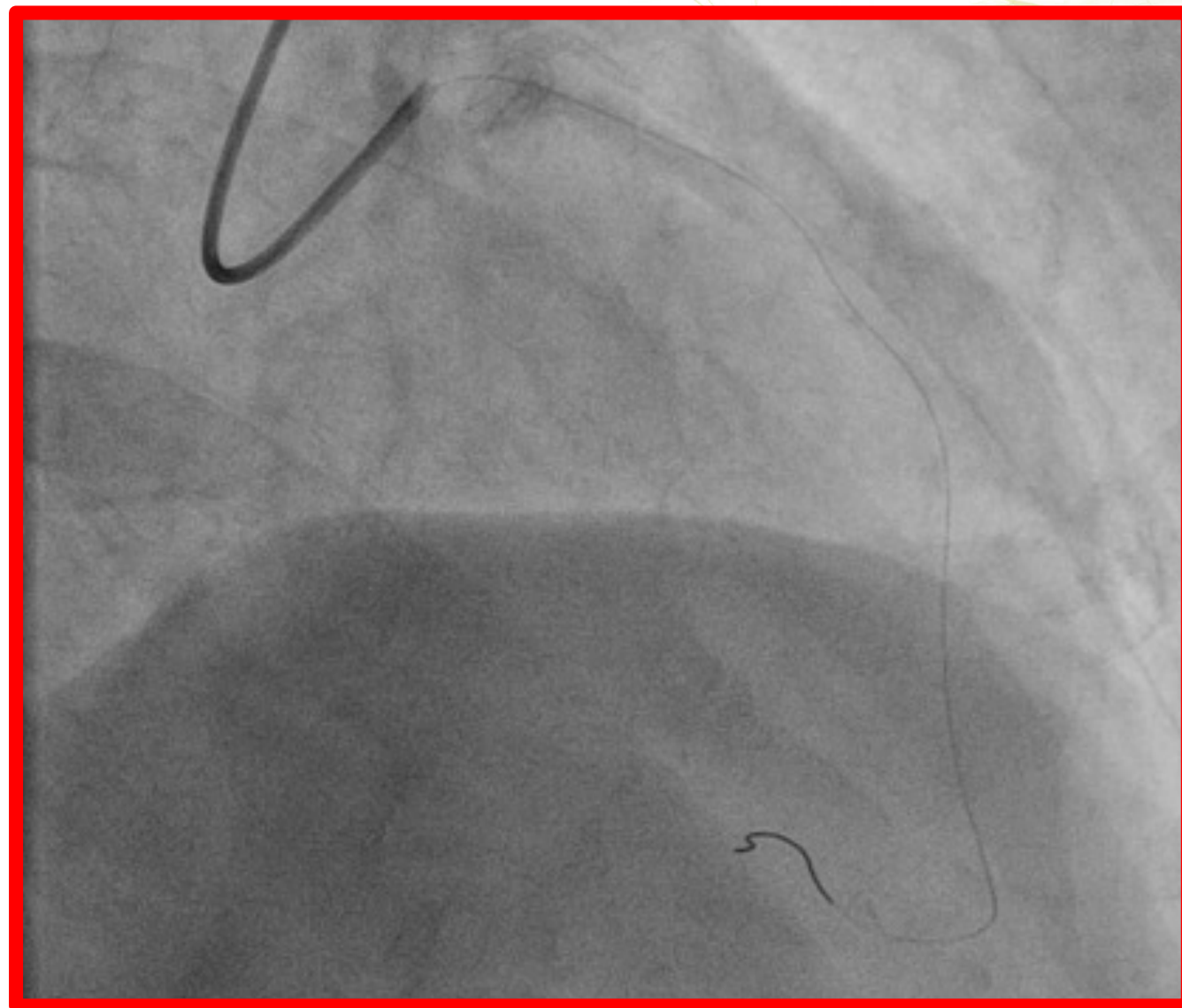




Un cas pratique avec 3 Dinamix



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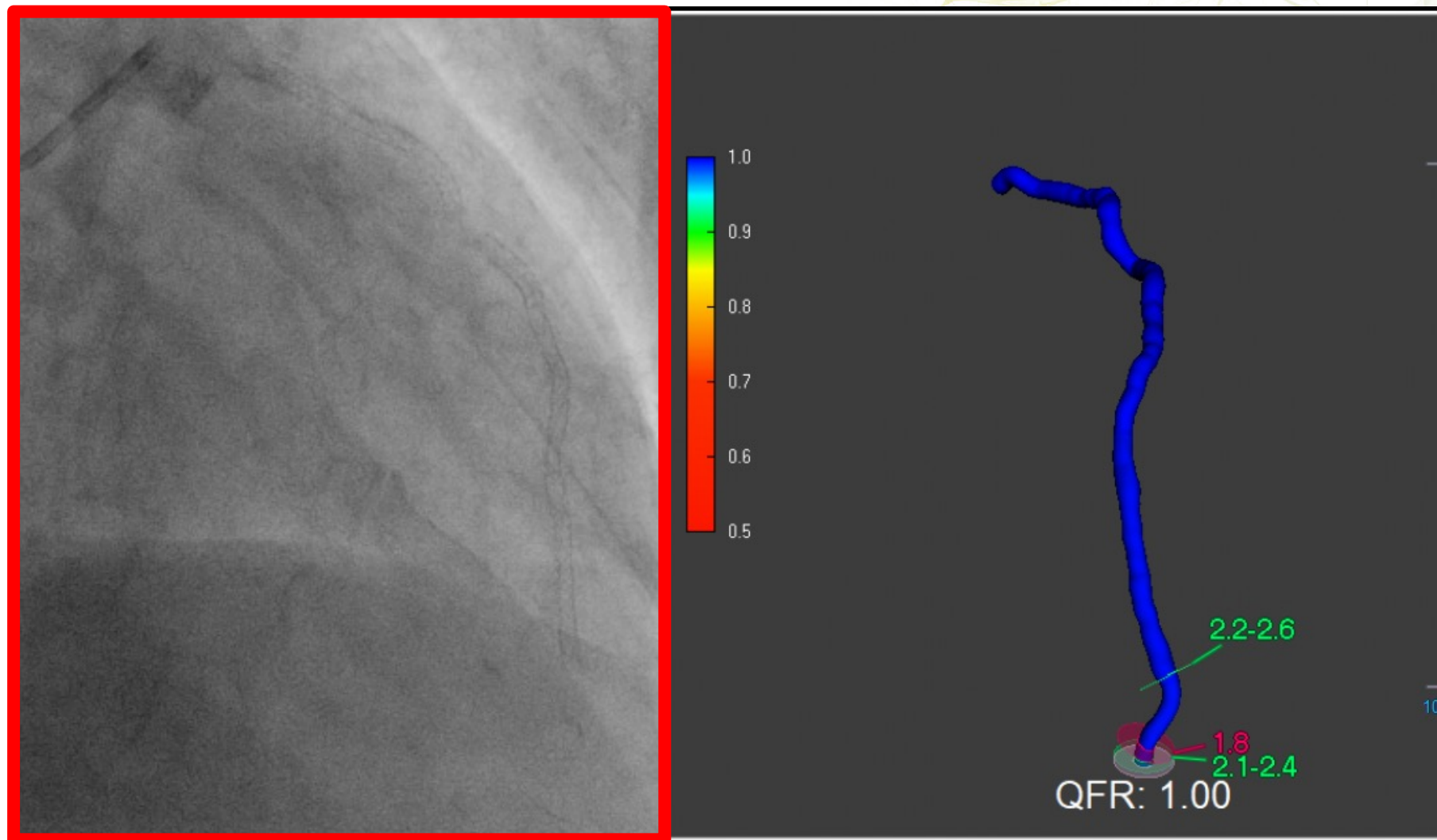




Un cas pratique avec 3 Dinamix



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Merci @ vous



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Cardio&vous