

**CARDIO  
RUN  
2023**

**15<sup>ème</sup> CONGRÈS  
DE PATHOLOGIE  
CARDIO-VASCULAIRE**

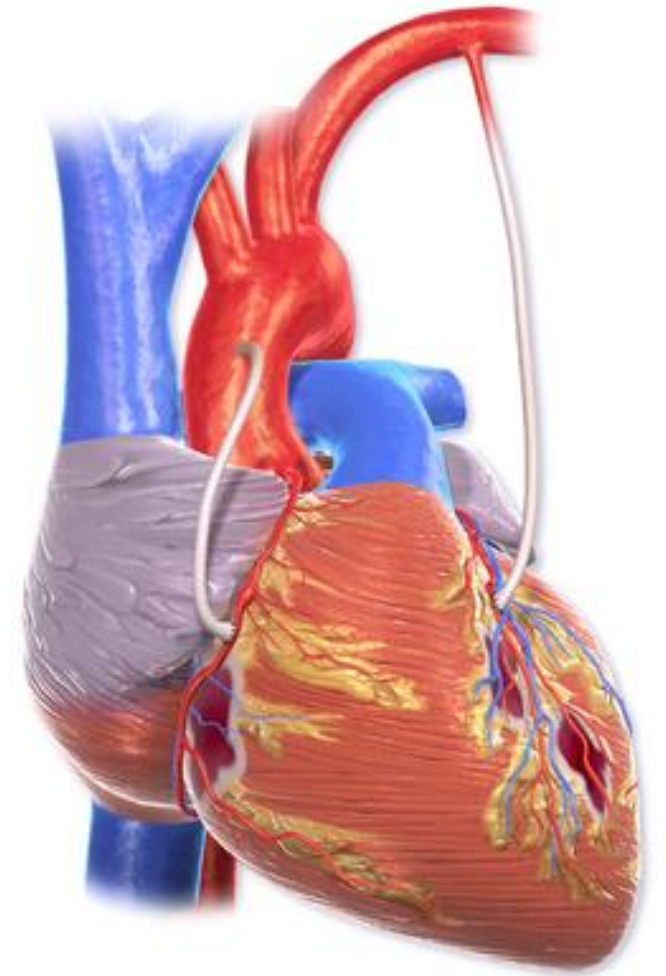


# Quand l'ANGOR PERSISTE malgré la revascularisation

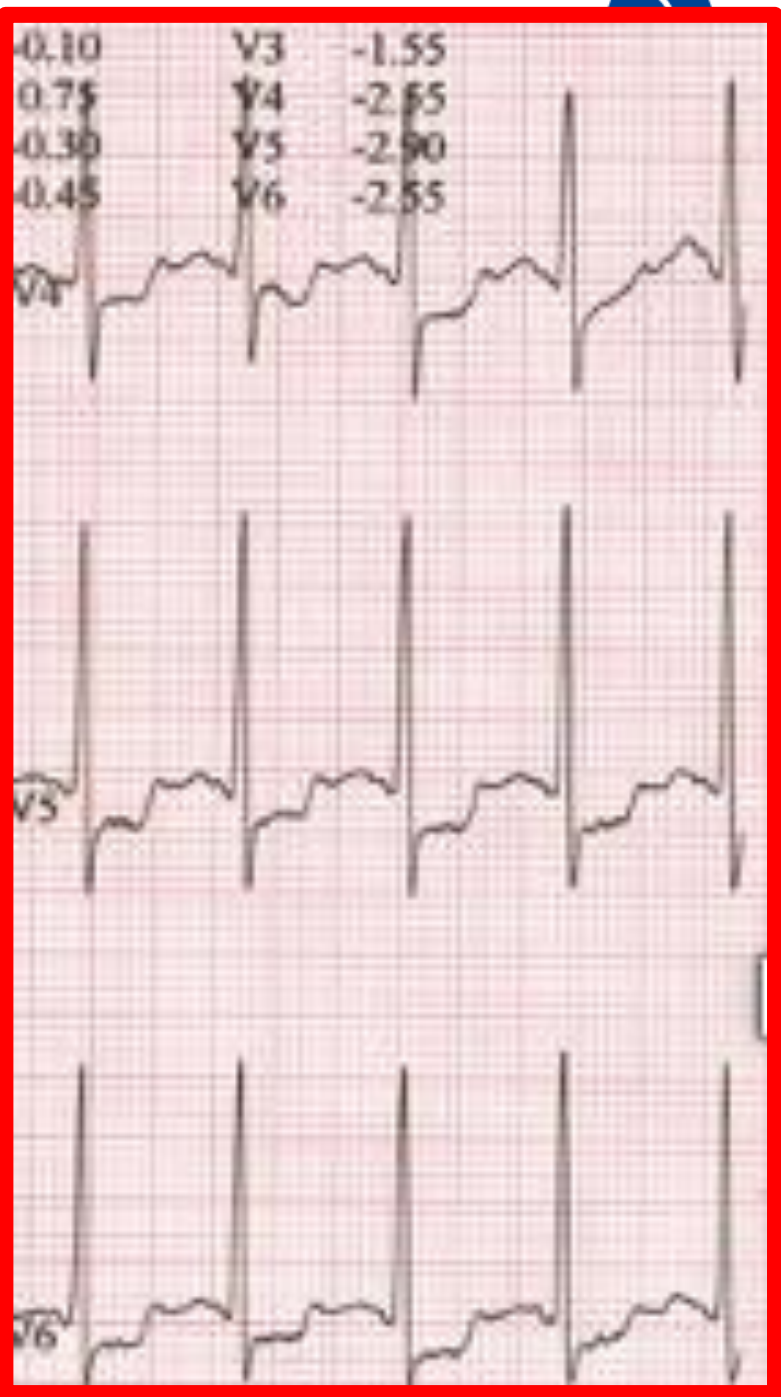
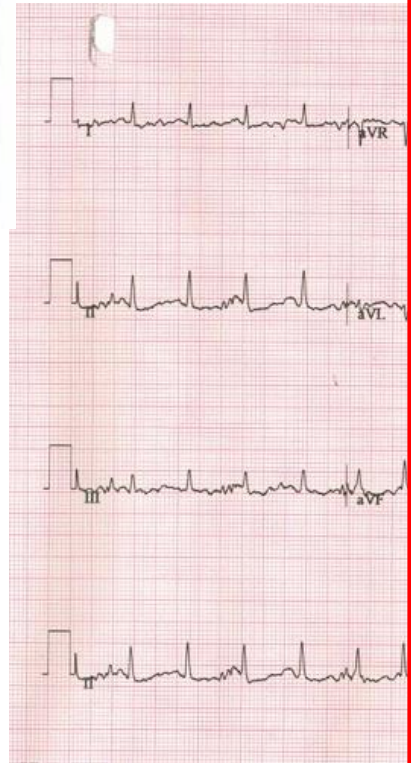
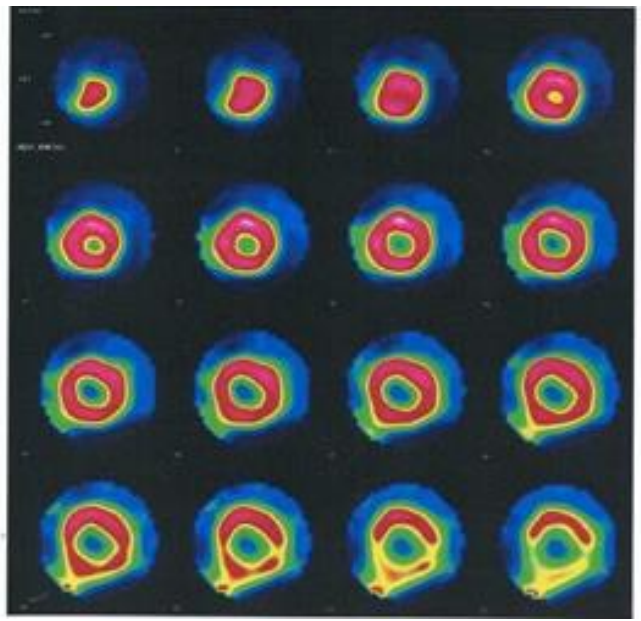
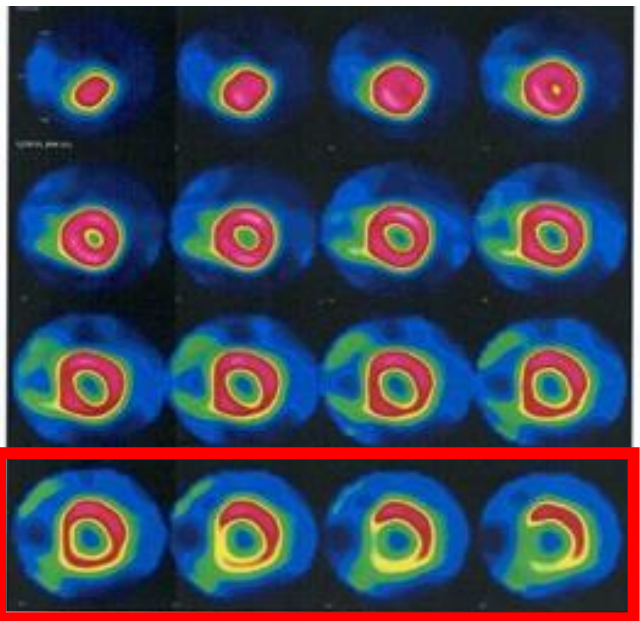
**Dr Léo CUENIN  
Saint-Laurent-du-Var**

# CAS CLINIQUE – M. C... 75 ans

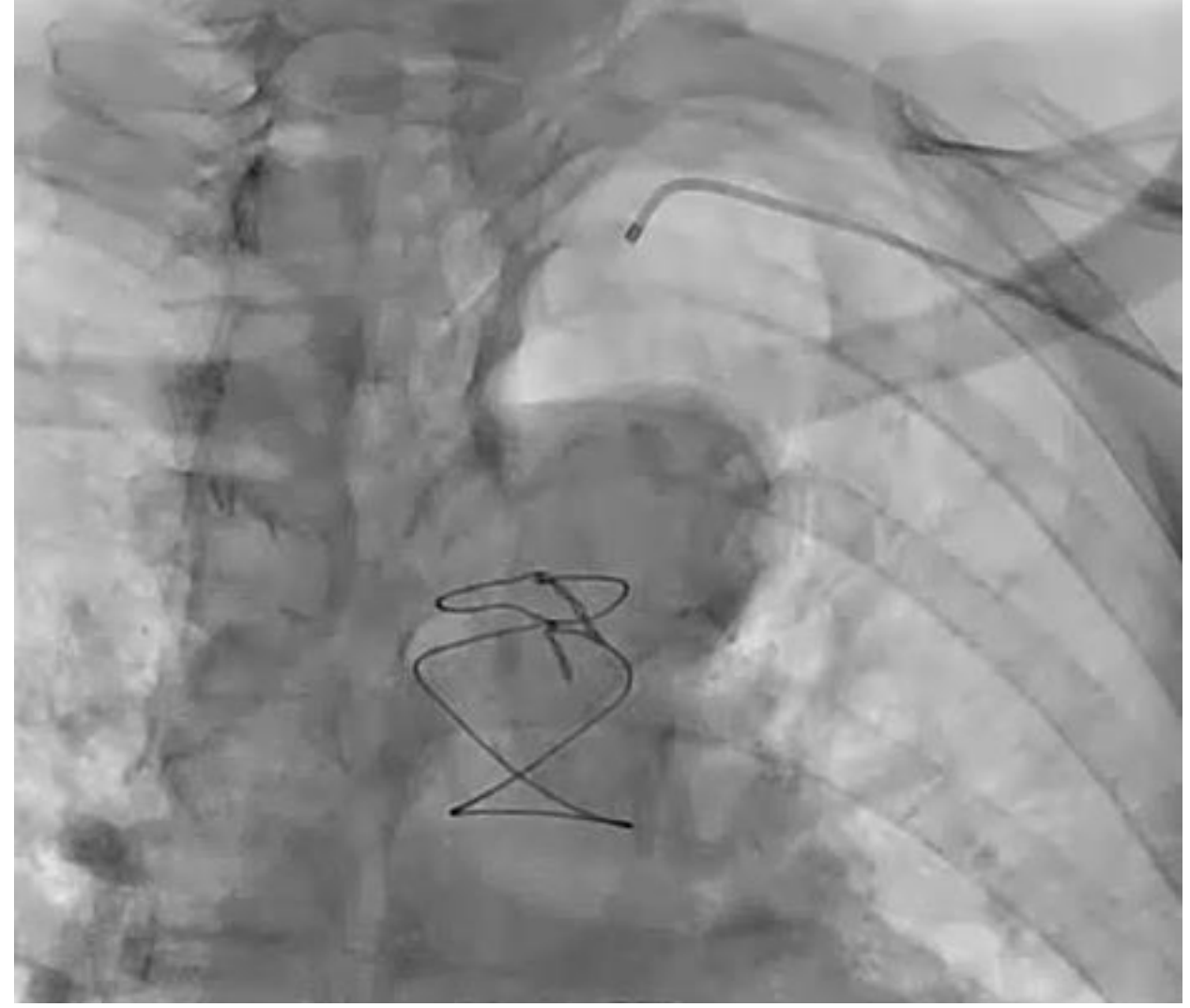
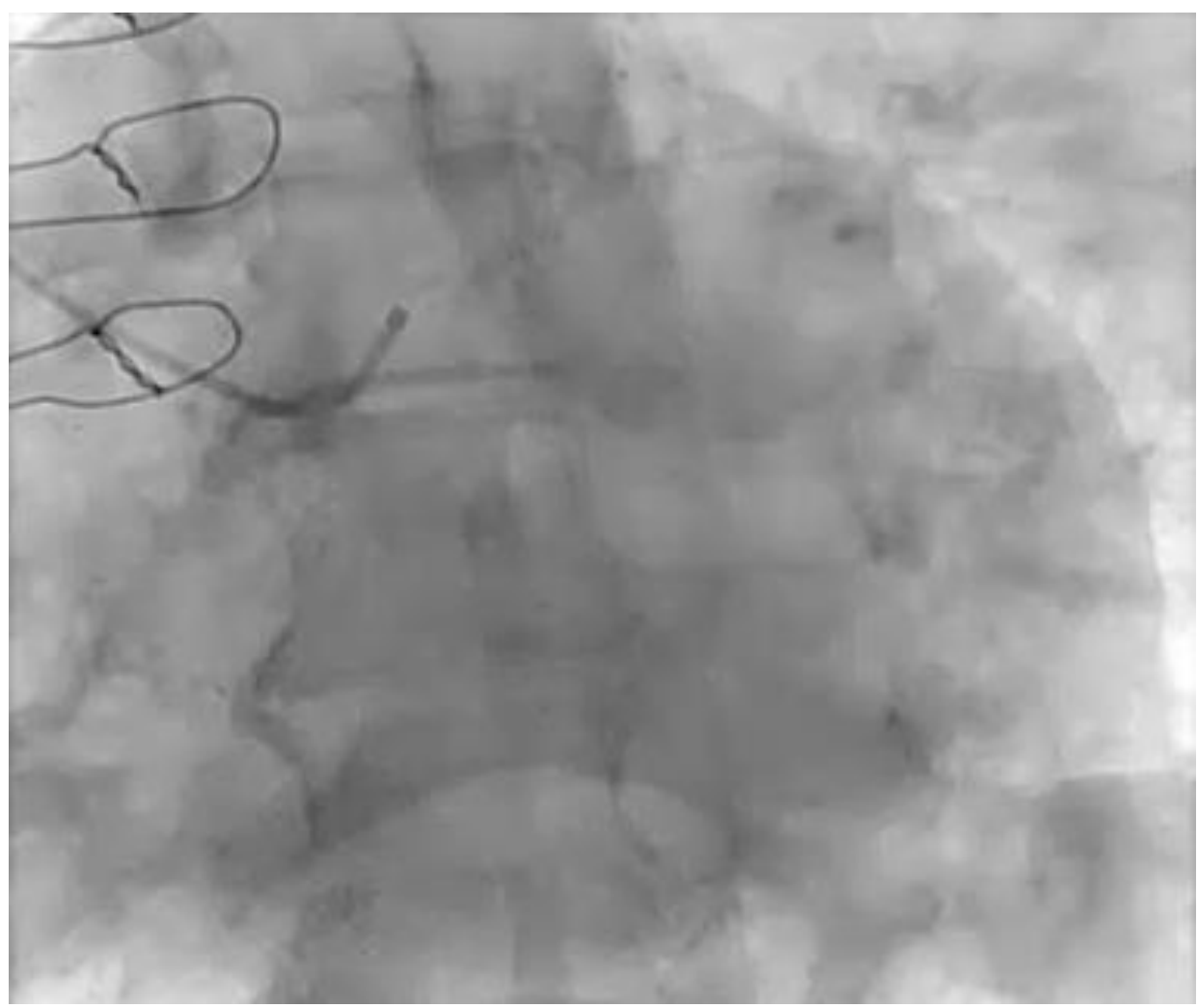
- HTA, dyslipidémie
- 2013 : PAC x2 : MIG-IVA, MID libre-IVP
- Ttt : ATENOLOL (50mg x2)  
INDAPAMIDE  
KARDEGIC  
ROSUVASTATINE  
NATISPRAY
- **Angor d'effort et de repos quotidien depuis 1 mois**



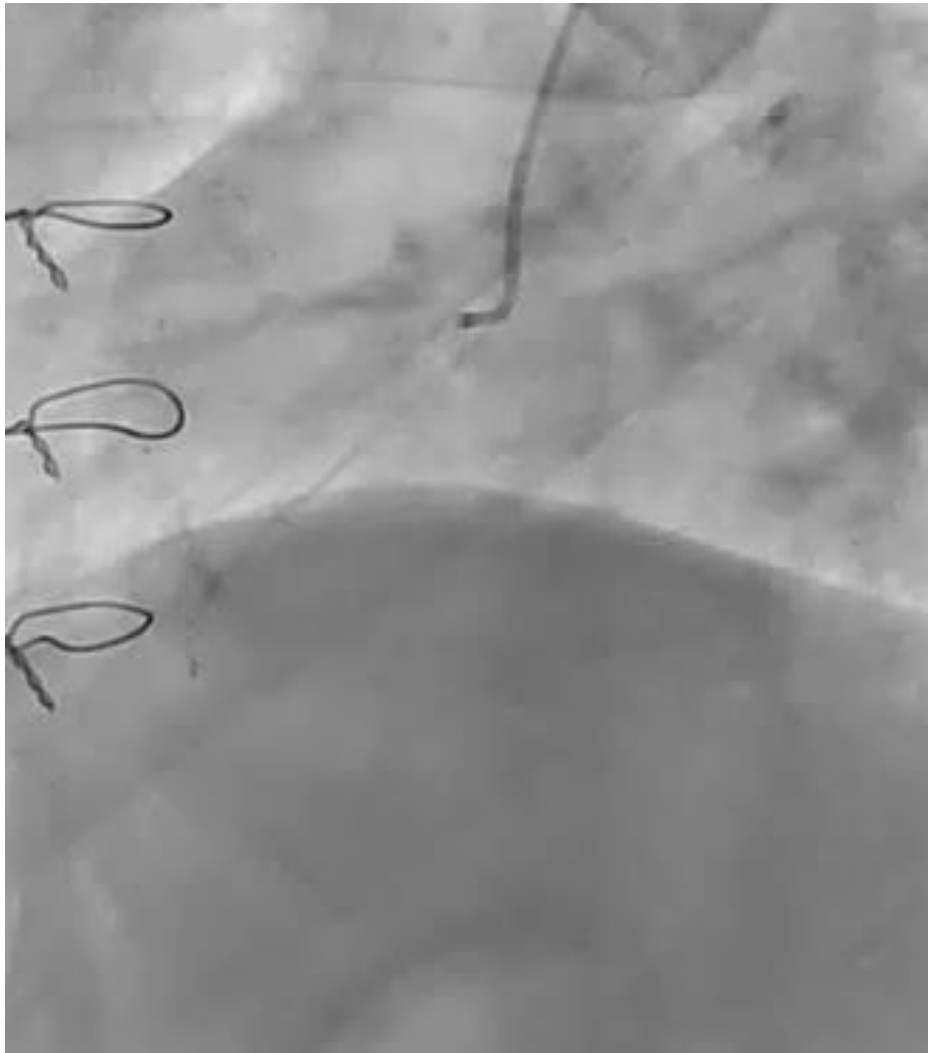
# CAS CLINIQUE



EE positive cliniquement et électriquement  
Ischémie postéro-basale

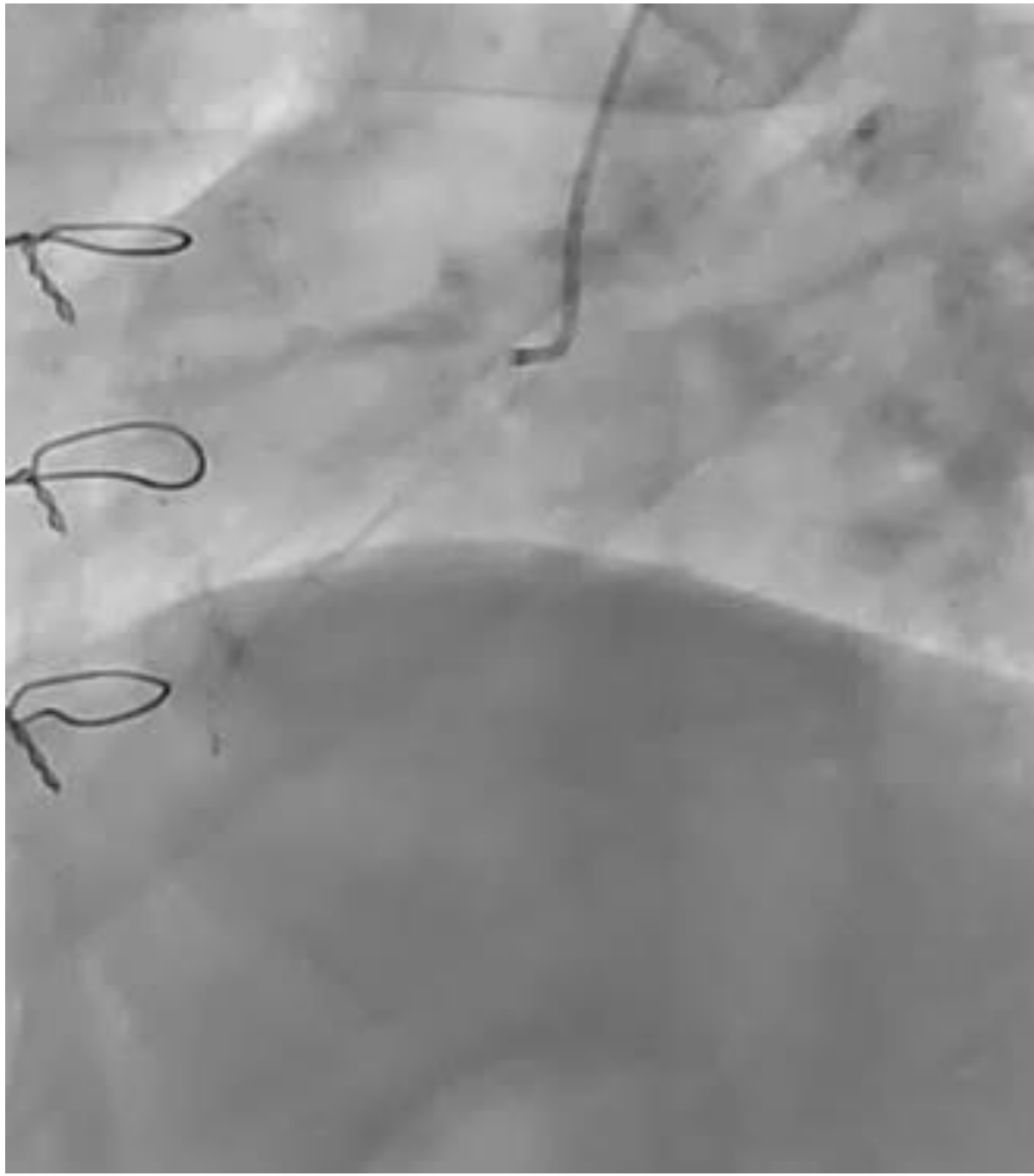


# CAS CLINIQUE



- OPTIONS THERAPEUTIQUES :
  - optimisation du ttt anti-angineux
  - tentative de désocclusion CTO CD
  - tentative d'angioplastie RVP via le pontage MID libre
  - implantation d'un Sinus Reducer

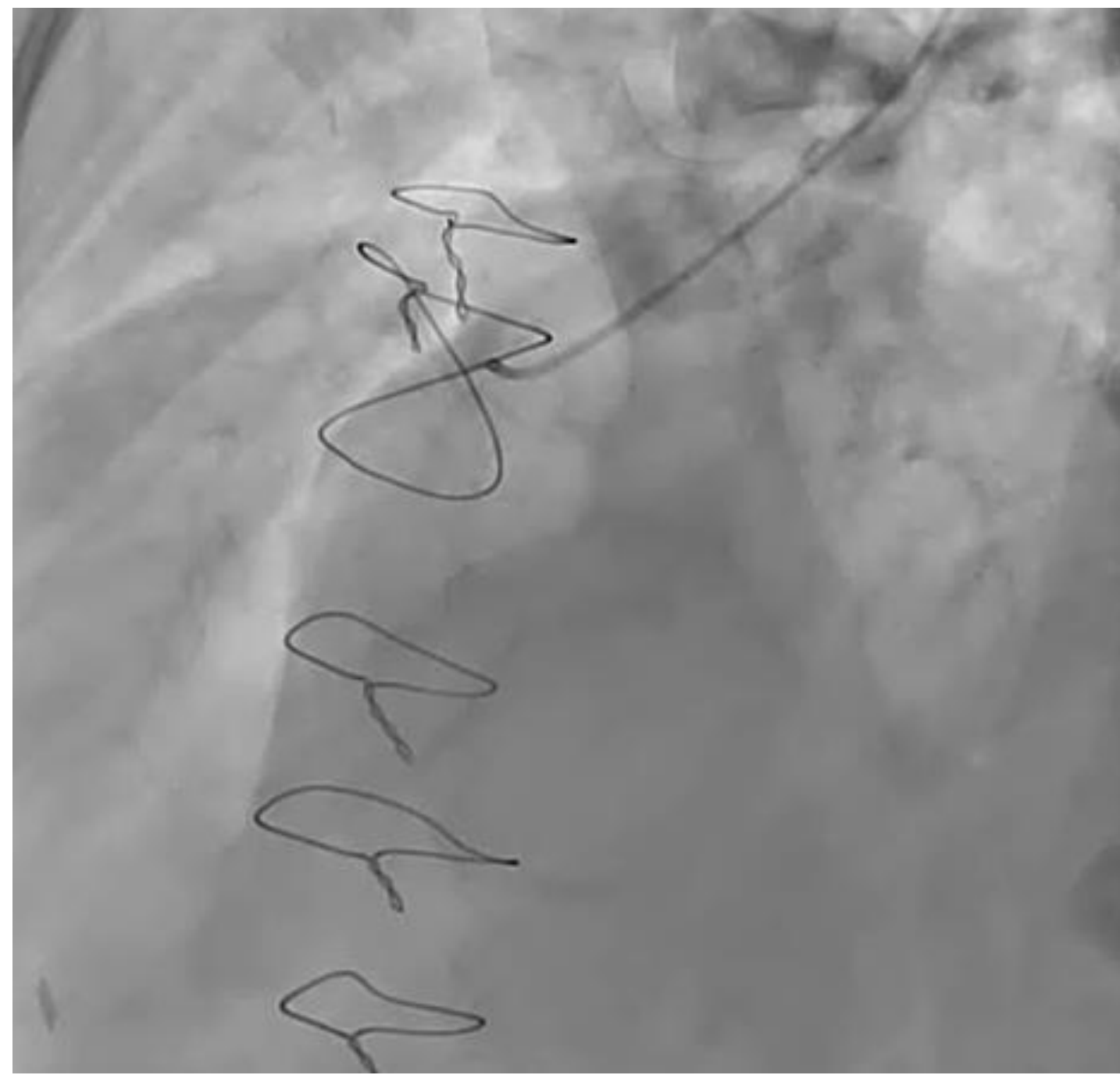
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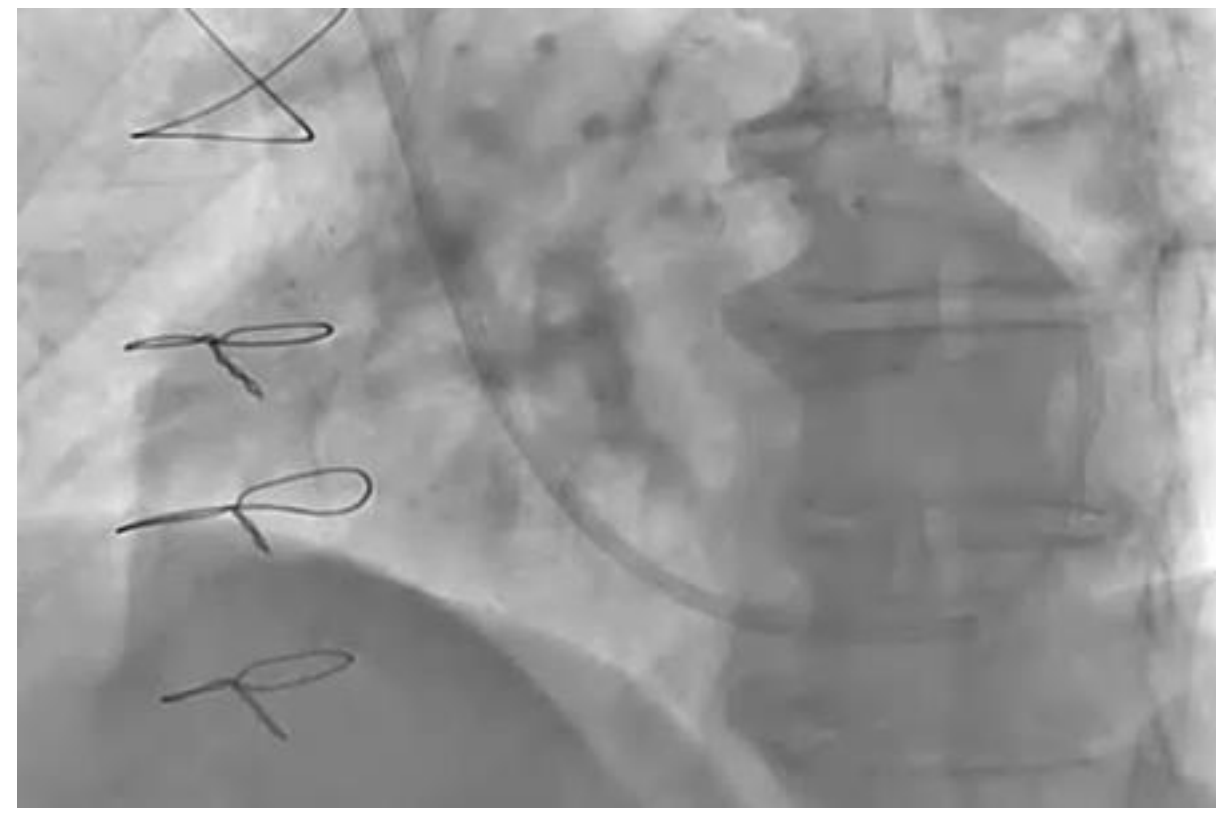
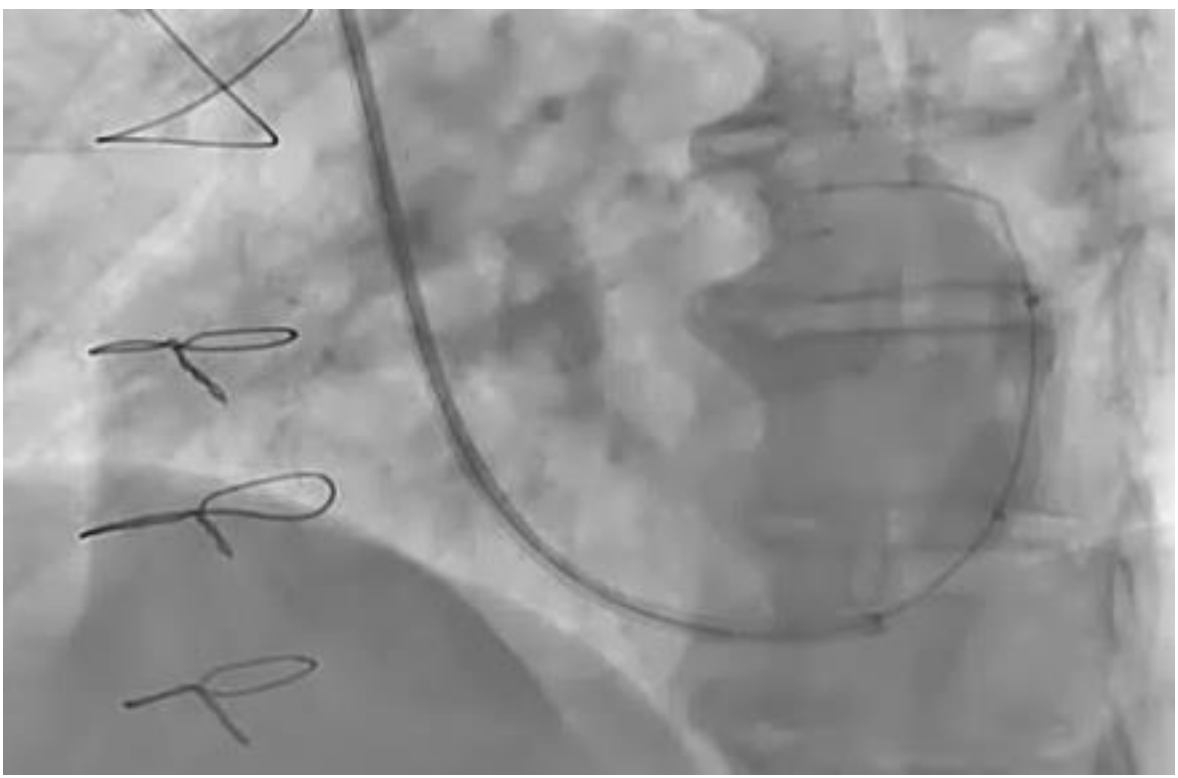


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- Implantation du Sinus Reducer



Bonjour Docteur Cuenin,

Je tiens à vous remercier sincèrement pour l'acte chirurgical « pose d'un stent par voie veineuse jugulaire » le 11 septembre 2023 à l'institut Arnault Tzanck.

Votre savoir faire m'a permis de me remettre rapidement et de poursuivre mes journées sans l'oppression sur ma poitrine.

Aujourd'hui, 10 jours seulement après hospitalisation plus d'oppression pectorale.

Grâce à votre savoir faire demain nous partons en vacances !

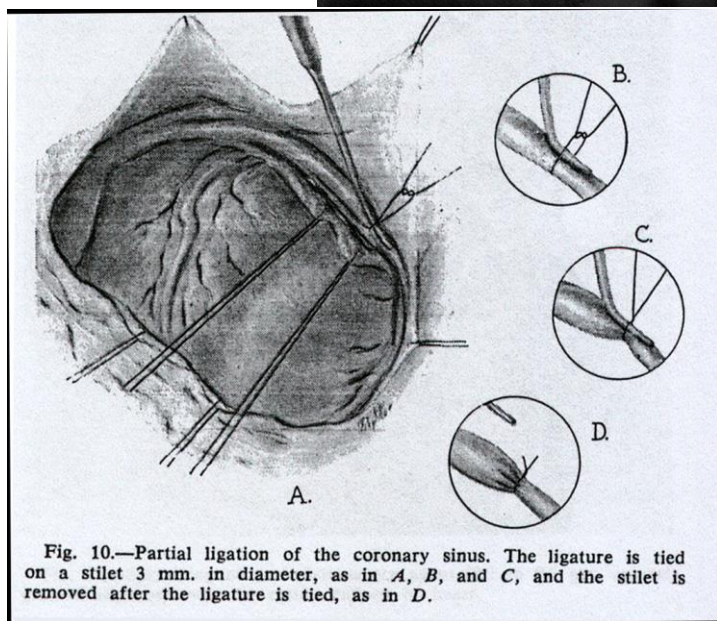
Merci.

Je vous prie d'agréer, cher docteur l'expression de ma considération distinguée.

# HISTORIQUE

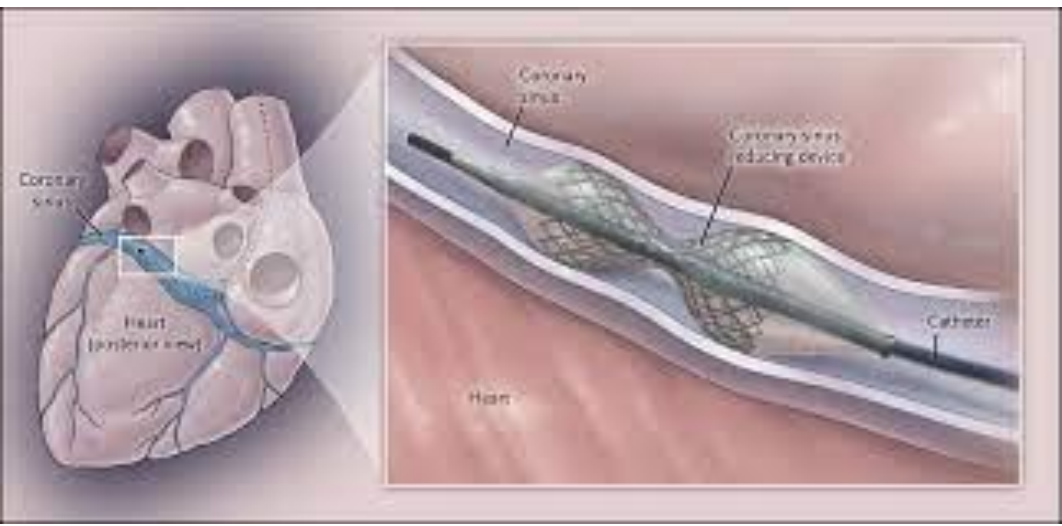
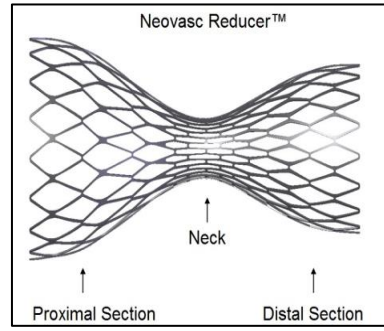
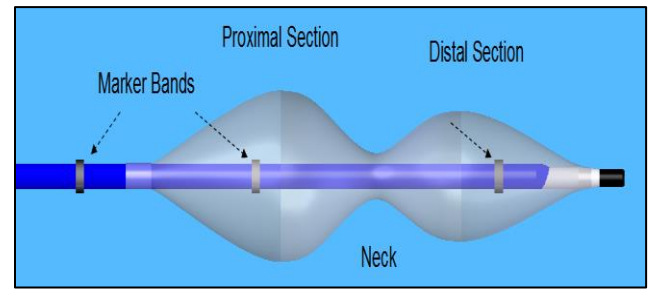


Claude Schaeffer Beck  
(1894-1971)



*Table IV. Consumption of nitrites by 45 patients who underwent Beck-I operation*

No. of patients	No of tablets/day				
	0	1—5	6—10	11—20	> 20
Before op.	0	5	27	10	3
At follow-up . . . .	16	21	3	3	0



Arceau à gauche  
OAG 30°



Table pour preparer le  
coronary sinus reducer

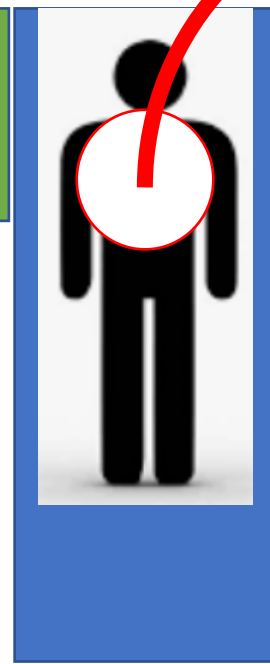
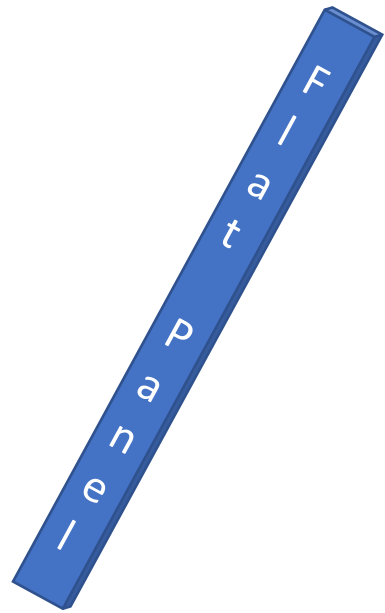


Table d'examen



# PROCEDURE

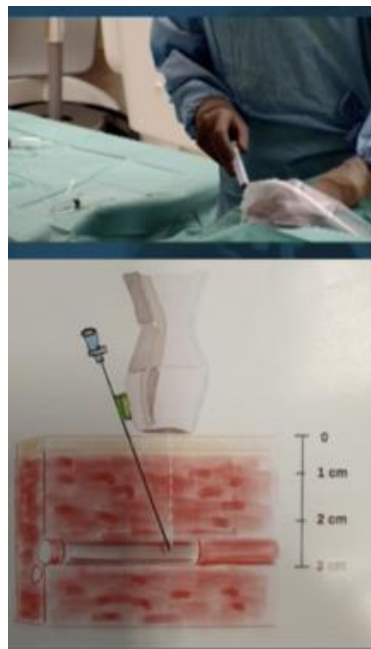
Ponction veine  
jugulaire droite 9F

Cathétérisme du sinus  
coronaire

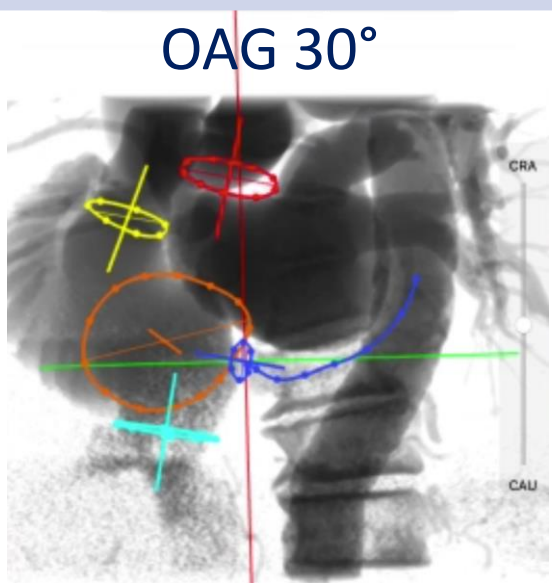
Mesure du sinus coronaire

Implantation

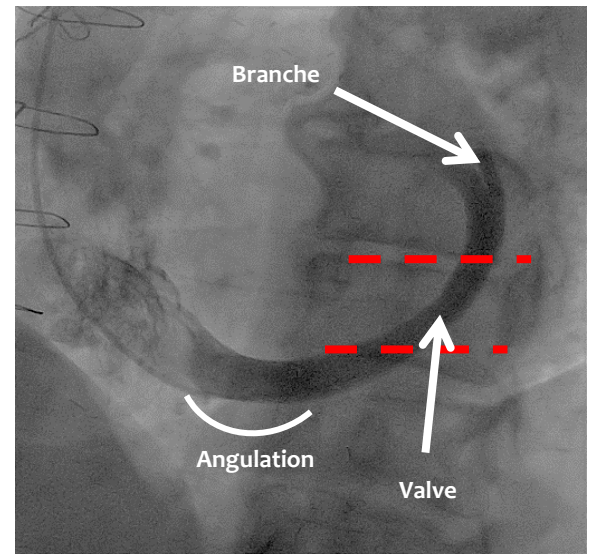
Contrôle



Echoguidage  
POD < 15mmHg



MPA2 5F/\*AL1 5F  
guide 0.035 J



Diamètre sinus  
coronaire 9-14mm

# PROCEDURE

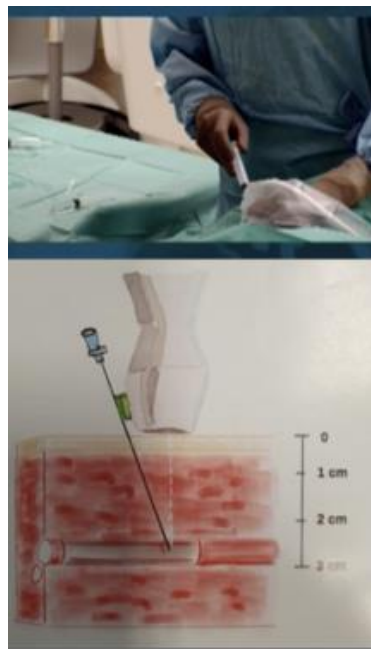
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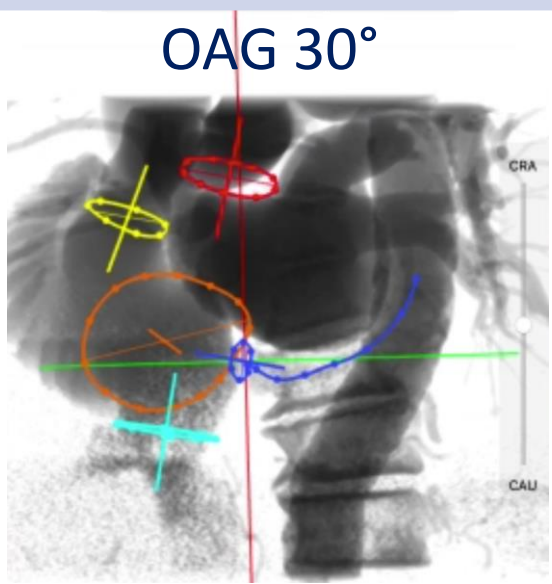
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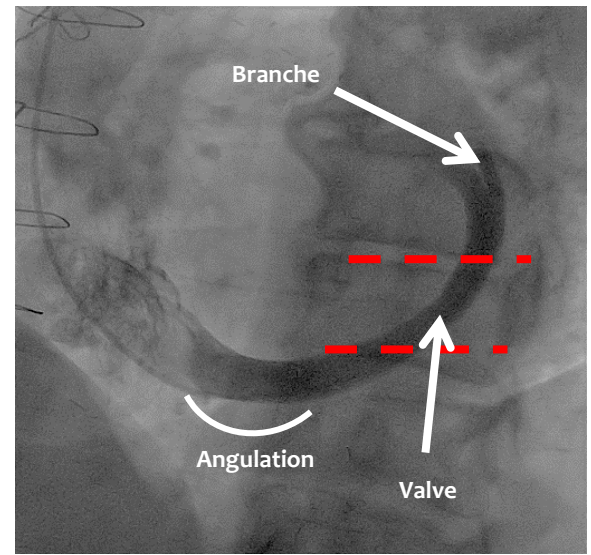
Contrôle



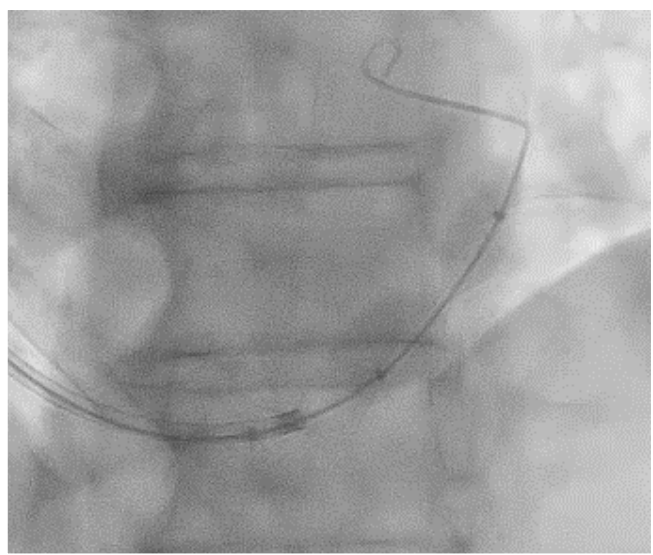
Echoguidage  
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MPA2 5F/\*AL1 5F  
guide 0.035 J



Diamètre sinus  
coronaire 9-14mm



Positionnement  
Inflation & Contrôle



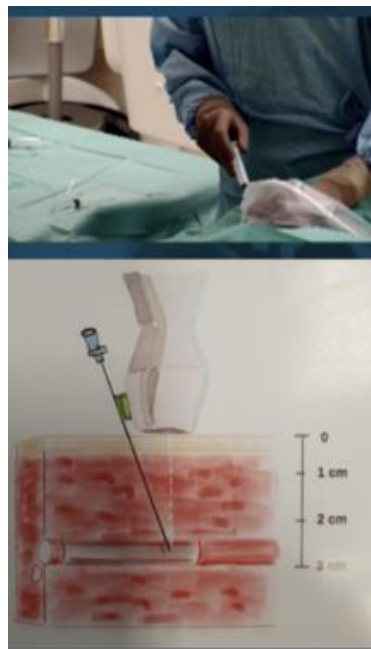
Ponction veine  
jugulaire droite 9F

Cathétérisme du sinus  
coronaire

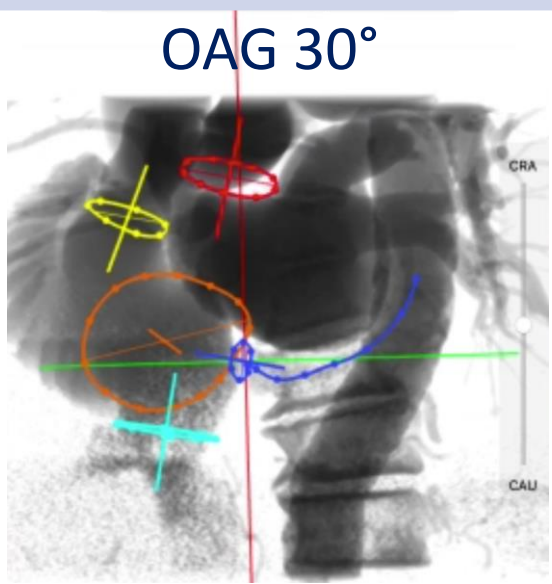
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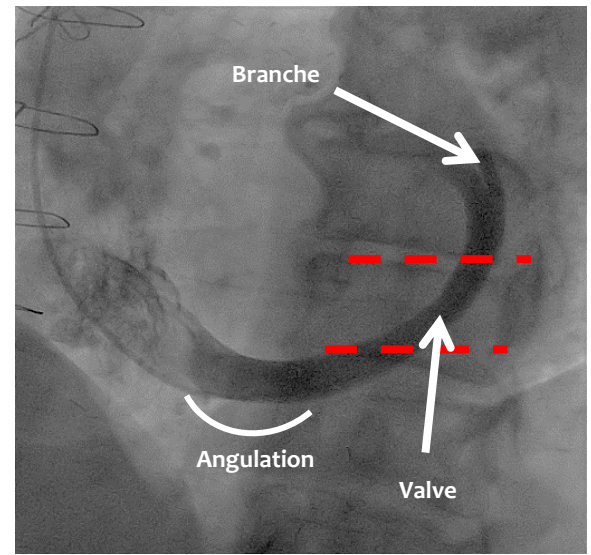
Contrôle



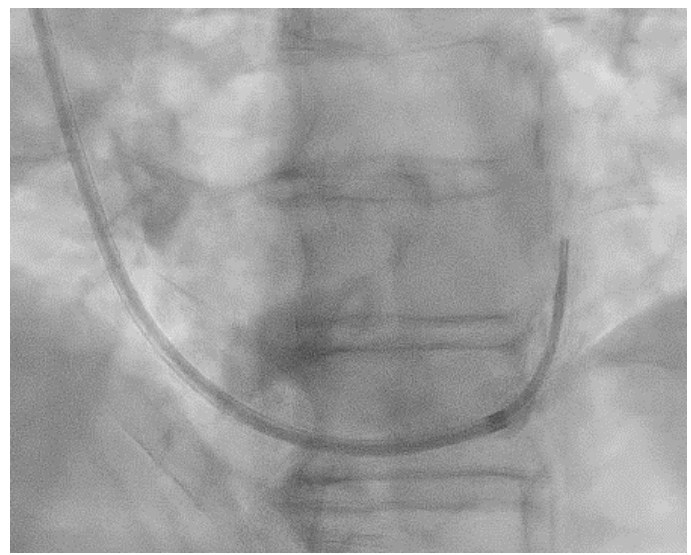
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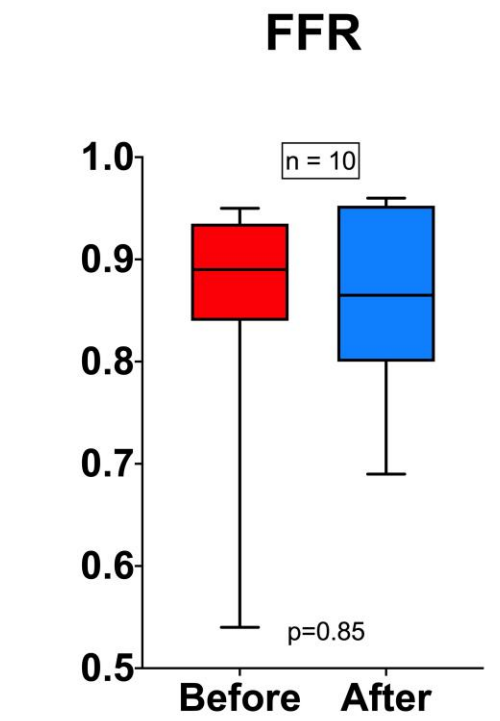
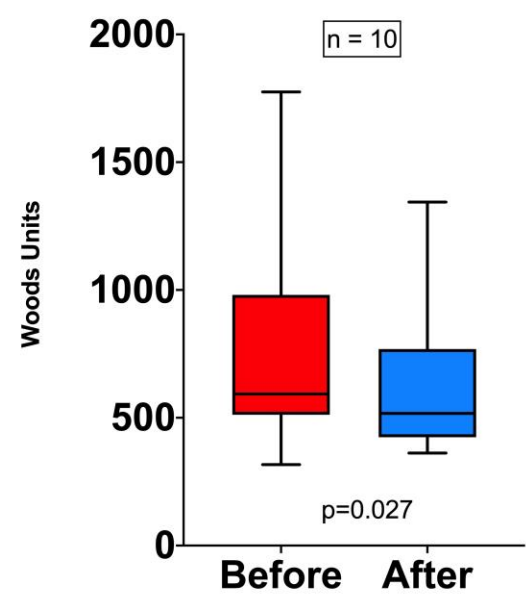
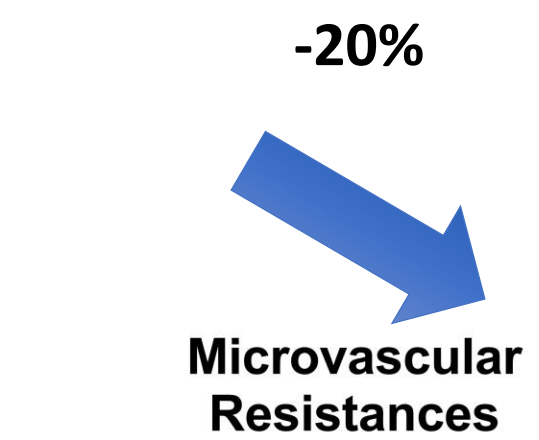
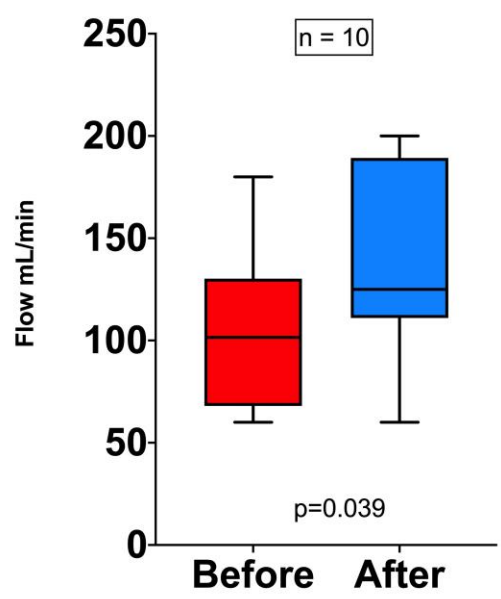
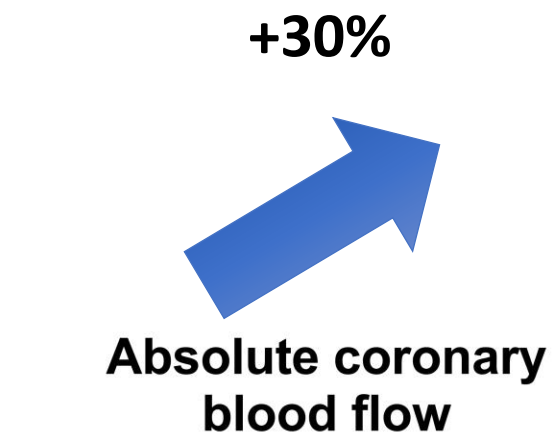
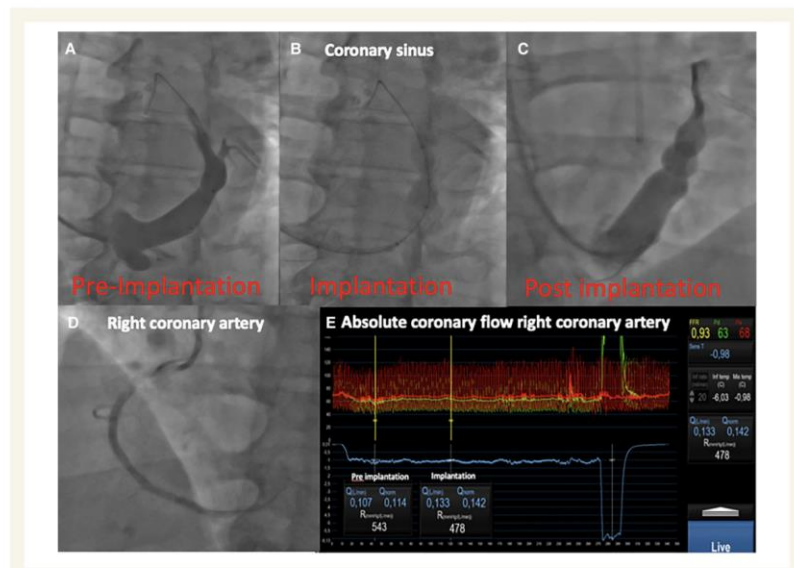


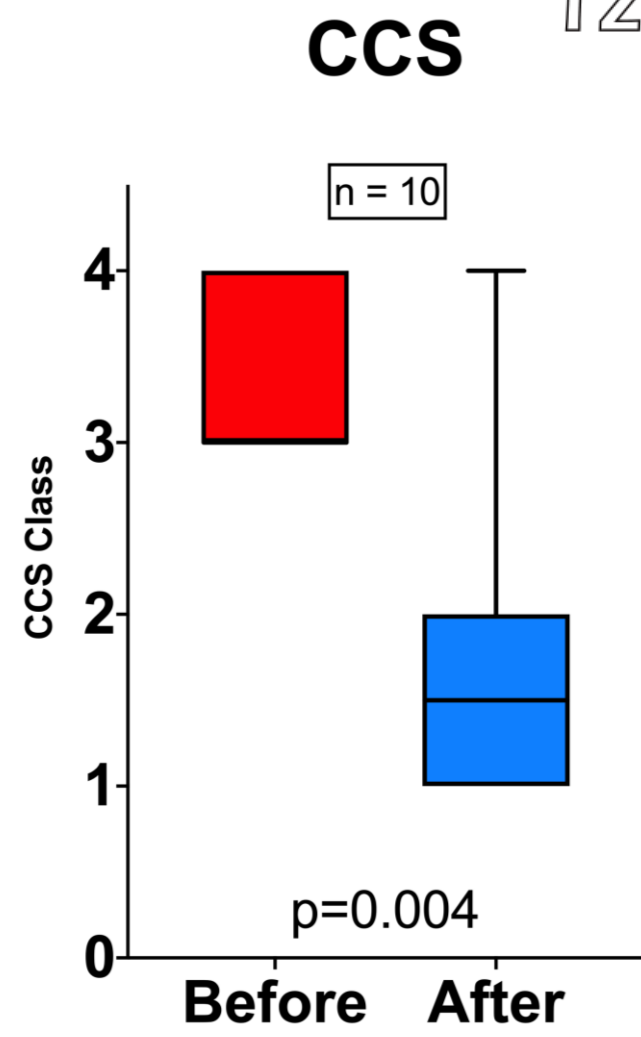
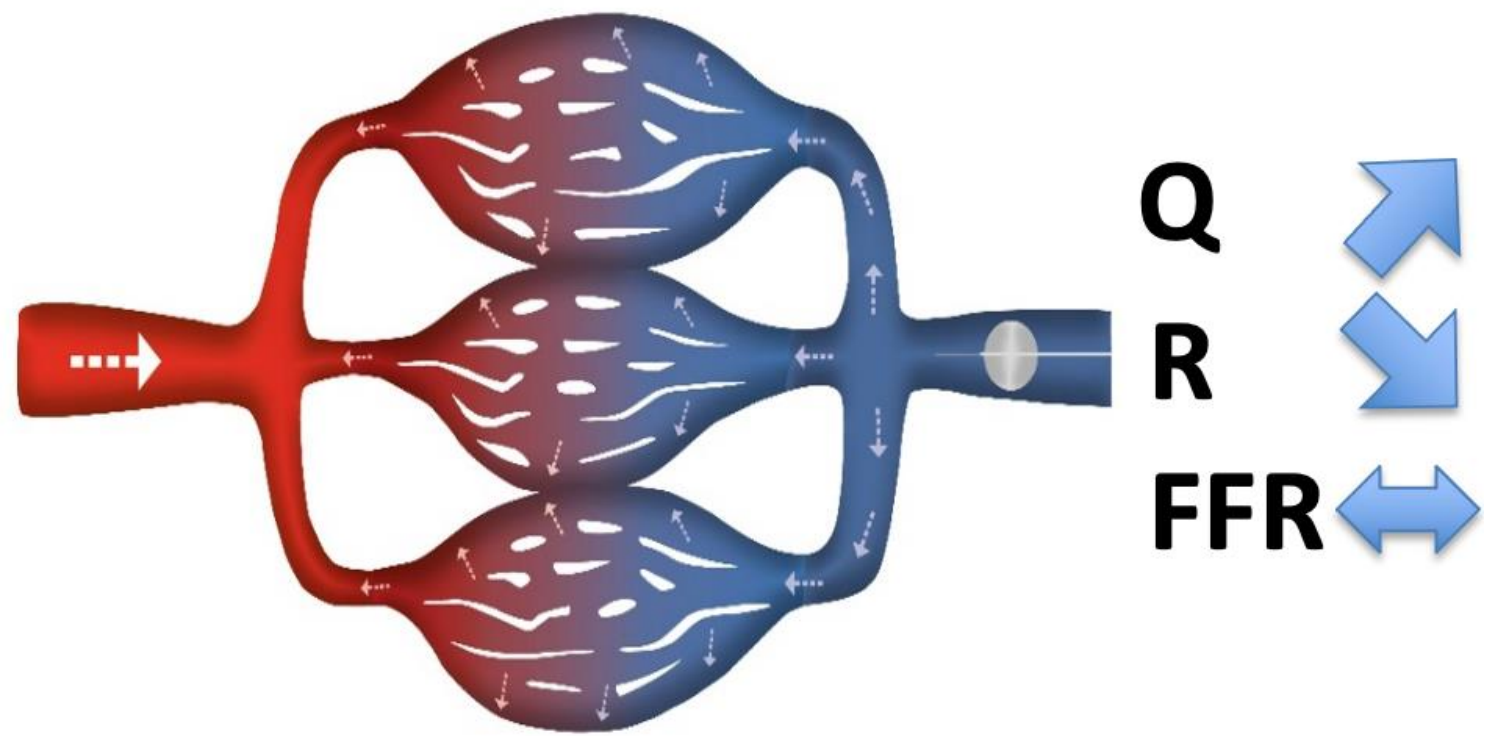
Positionnement  
Inflation & Contrôle

## Impact of the coronary sinus reducer on the coronary artery circulation cases report

Francesco Giannini<sup>1</sup>, Léo Cuenin<sup>2</sup>, and Julien Adjedj<sup>2\*</sup>

<sup>1</sup>Interventional Cardiology Unit, GVM Care and Research Maria Cecilia Hospital, Cotignola, Italy; and <sup>2</sup>Department of Cardiology, Arnauld Tzanck Institute, Saint-Laurent-du-Var, France  
 Received 22 November 2021; first decision 29 December 2021; accepted 6 April 2022; online publish-ahead-of-print 26 April 2022





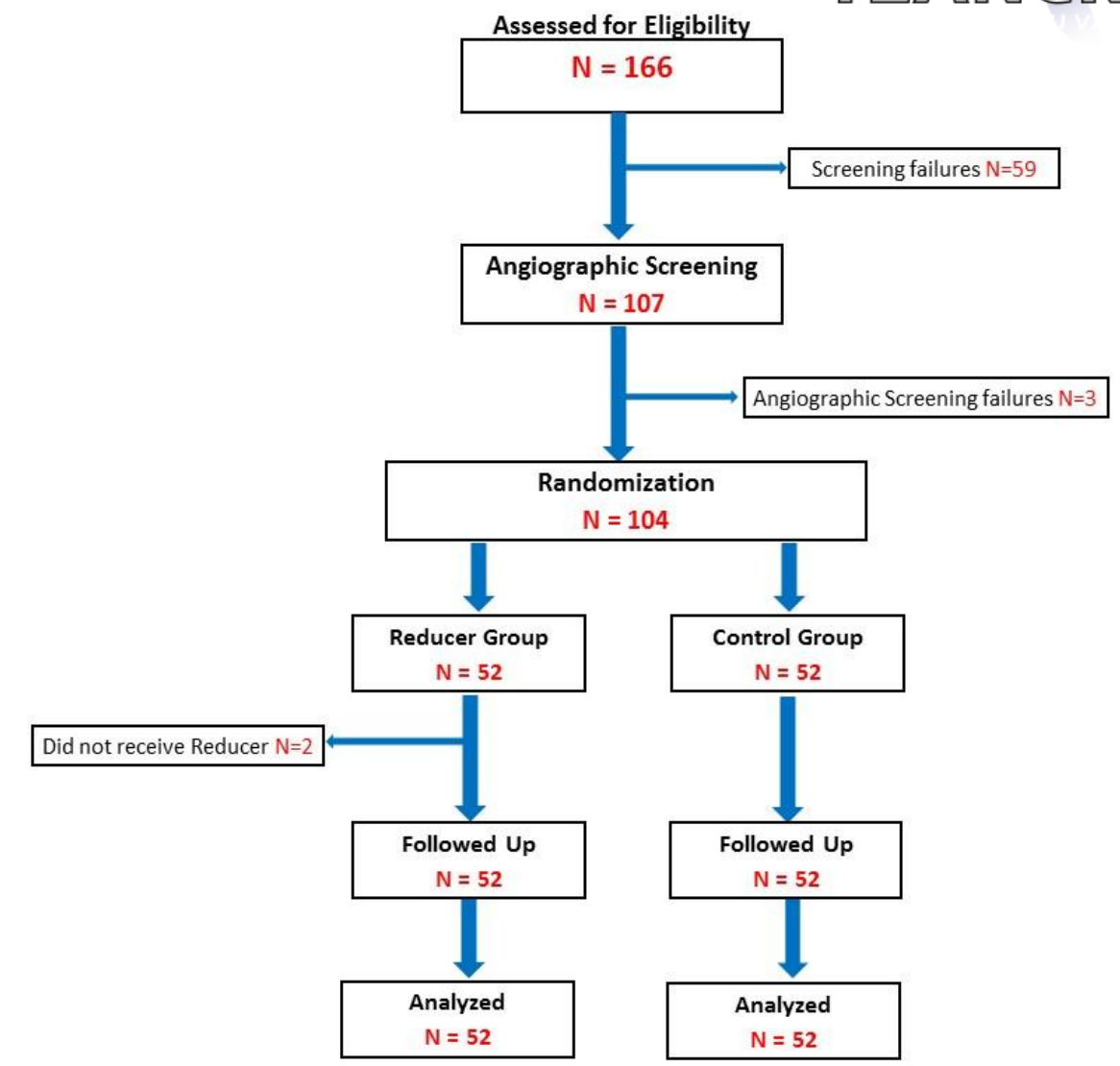
The NEW ENGLAND JOURNAL of MEDICINE

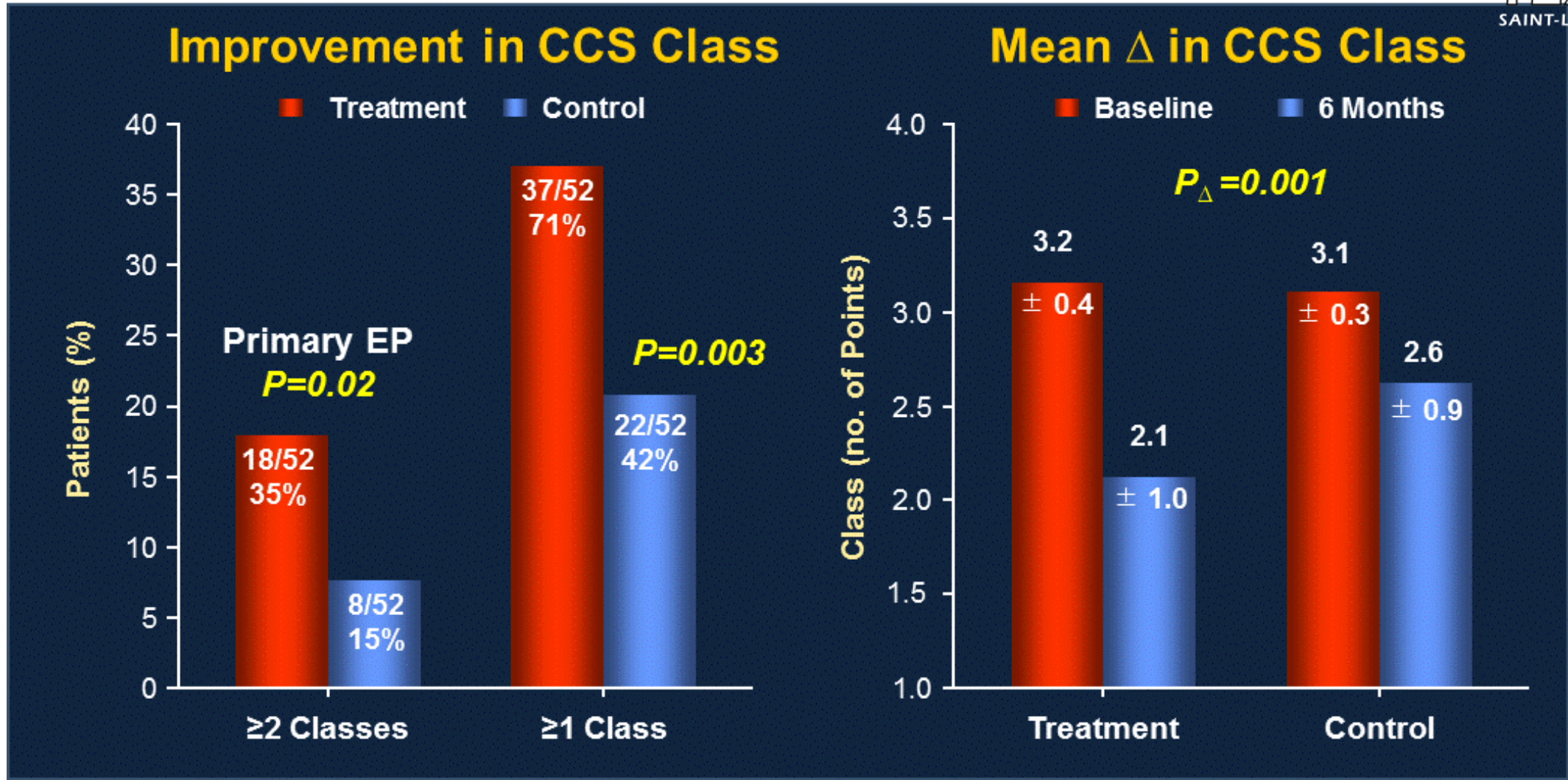
ORIGINAL ARTICLE

## Efficacy of a Device to Narrow the Coronary Sinus in Refractory Angina

Stefan Verheye, M.D., Ph.D., E. Marc Jolicœur, M.D., Miles W. Behan, M.D., Thomas Pettersson, M.D., Paul Sainsbury, M.D., Jonathan Hill, M.D., Mathias Vrolix, M.D., Pierfrancesco Agostoni, M.D., Thomas Engstrom, M.D., Marino Labinaz, M.D., Ranil de Silva, M.D., Marc Schwartz, R.C.I.S., Nathalie Meyten, M.D., Neal G. Uren, M.D., Serge Doucet, M.D., Jean-François Tanguay, M.D., Steven Lindsay, M.D., Timothy D. Henry, M.D., Christopher J. White, M.D., Elazer R. Edelman, M.D., Ph.D., and Shmuel Banai, M.D.

COSIRA trial, N Engl J Med 2015; 372: 519-527







## Coronary Sinus Reducer Implantation for the Treatment of Chronic Refractory Angina

### A Single-Center Experience

Francesco Giannini, MD, Luca Baldetti, MD, Francesco Ponticelli, MD, Neil Ruparelia, MD, Satoru Mitomo, MD, Azeem Latib, MD, Matteo Montorfano, MD, Richard J. Jabbour, MD, Andrea Aurelio, MD, Luca Ferri, MD, Antonio Mangieri, MD, Damiano Regazzoli, MD, Marco Ancona, MD, Matteo Pagnesi, MD, Alessia Faccini, MD, Alaide Chieffo, MD, Lorenzo Azzalini, MD, Mauro Carlino, MD, Antonio Colombo, MD

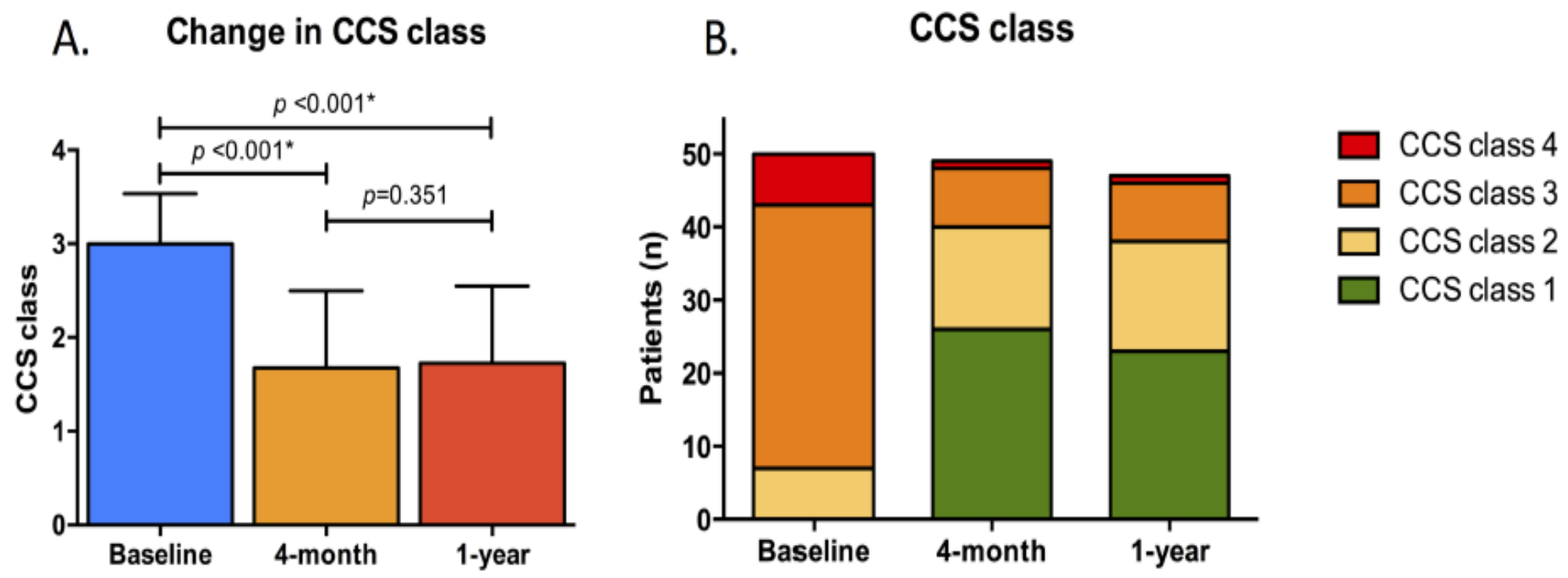
Baseline	n=50
Mean age (years)	68
Male	82%
Diabetes Mellitus	44%
Previous PCI	76%
Previous CABG	56%

Procedural success: 100%

No device-related adverse effects during the procedure or follow-up

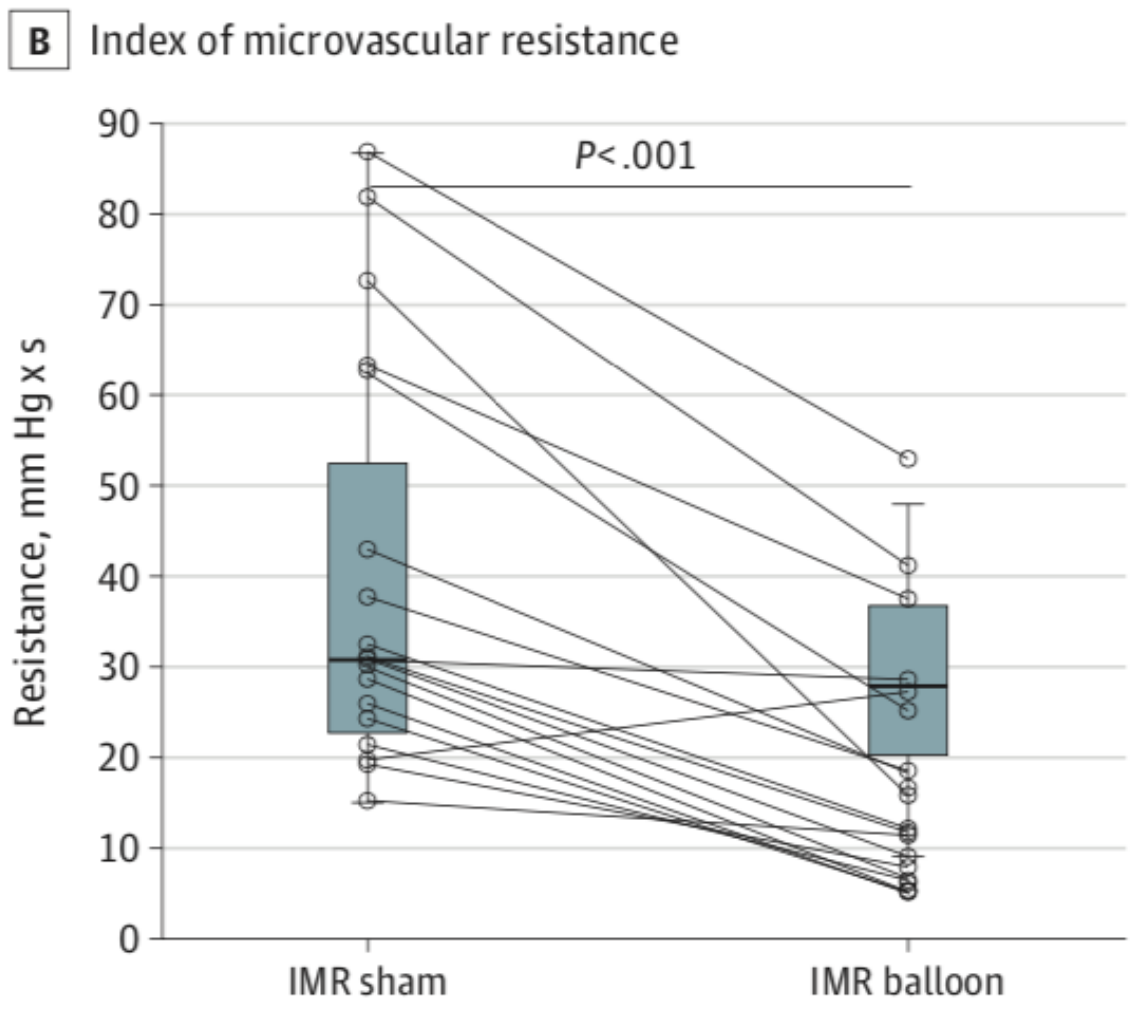
# DONNEES CLINIQUES

- Mean CCS Class reduction: from  $2.98 \pm 0.52$  to  $1.67 \pm 0.83$  ( $p < 0.001$ )
- At least 1 CCS Class reduction: 80% patients
- At least 2 CCS Class reduction: 40% patients



## Coronary Venous Pressure and Microvascular Hemodynamics in **Patients With Microvascular Angina** A Randomized Clinical Trial

Helen Ullrich, MD; Philipp Hammer, MD; Maximilian Olschewski; Thomas Münzel, MD; Javier Escaned, MD; Tommaso Gori, MD, PhD





## Tel Aviv Medical Center Reducer MVD Prospective Study

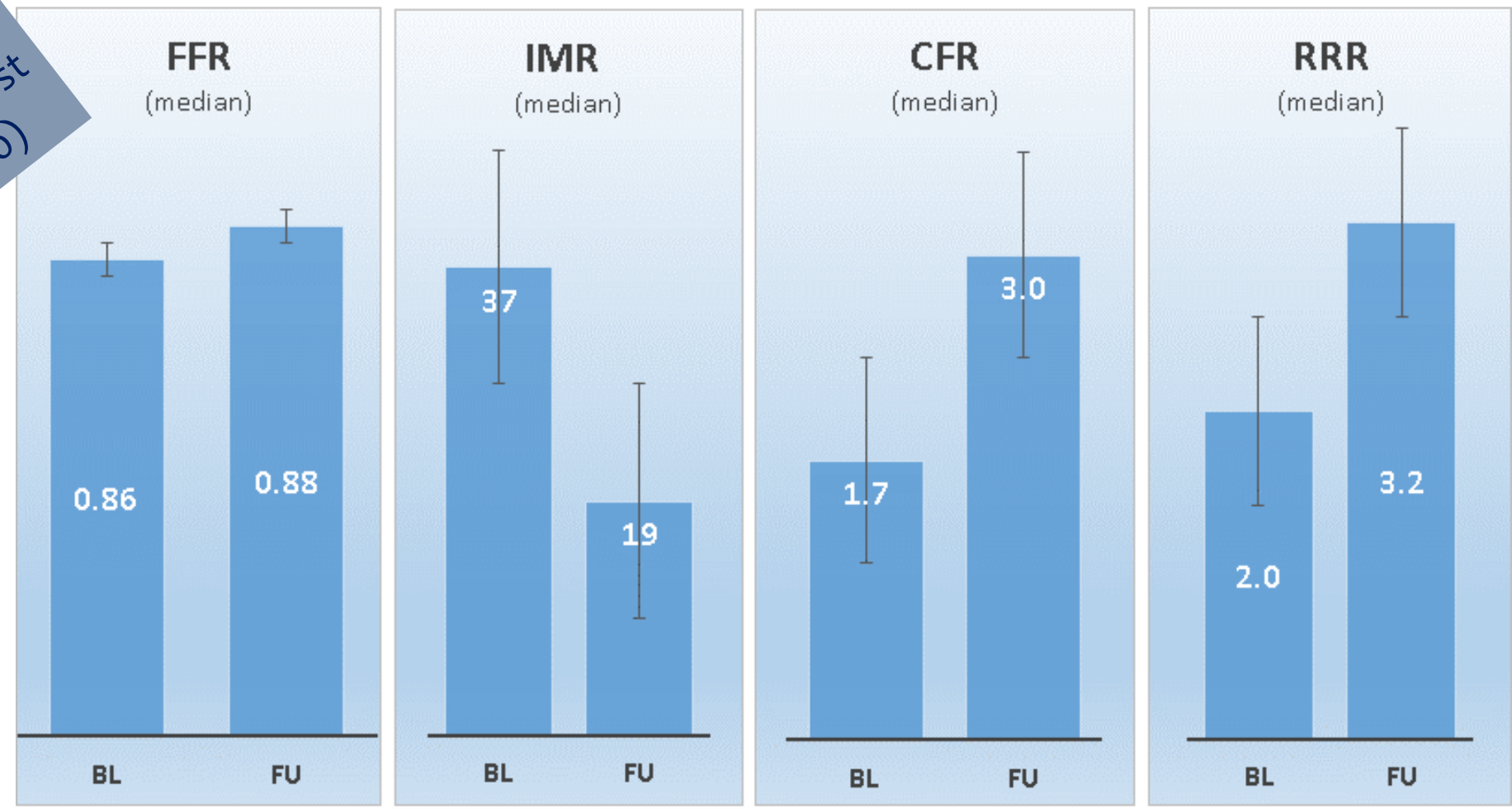
**Population** Subjects with refractory angina (CCS class 2-4) and coronary microvascular dysfunction ( $IMR > 25$ ,  $CFR \leq 2.5$ ) in the absence of obstructive CAD ( $FFR \geq 0.8$ )

**1° Endpoint** The change in IMR values at 4 months after Reducer implantation, compared with baseline

- 2° Endpoints**
- Change in CFR
  - Change in RRR
  - Change in FFR
  - Change in angina severity (CCS class)
  - Change in QOL as assessed by the Seattle Angina Questionnaire (SAQ)
  - Change in 6MWT

## Invasive Coronary Blood Flow Physiology Evaluation

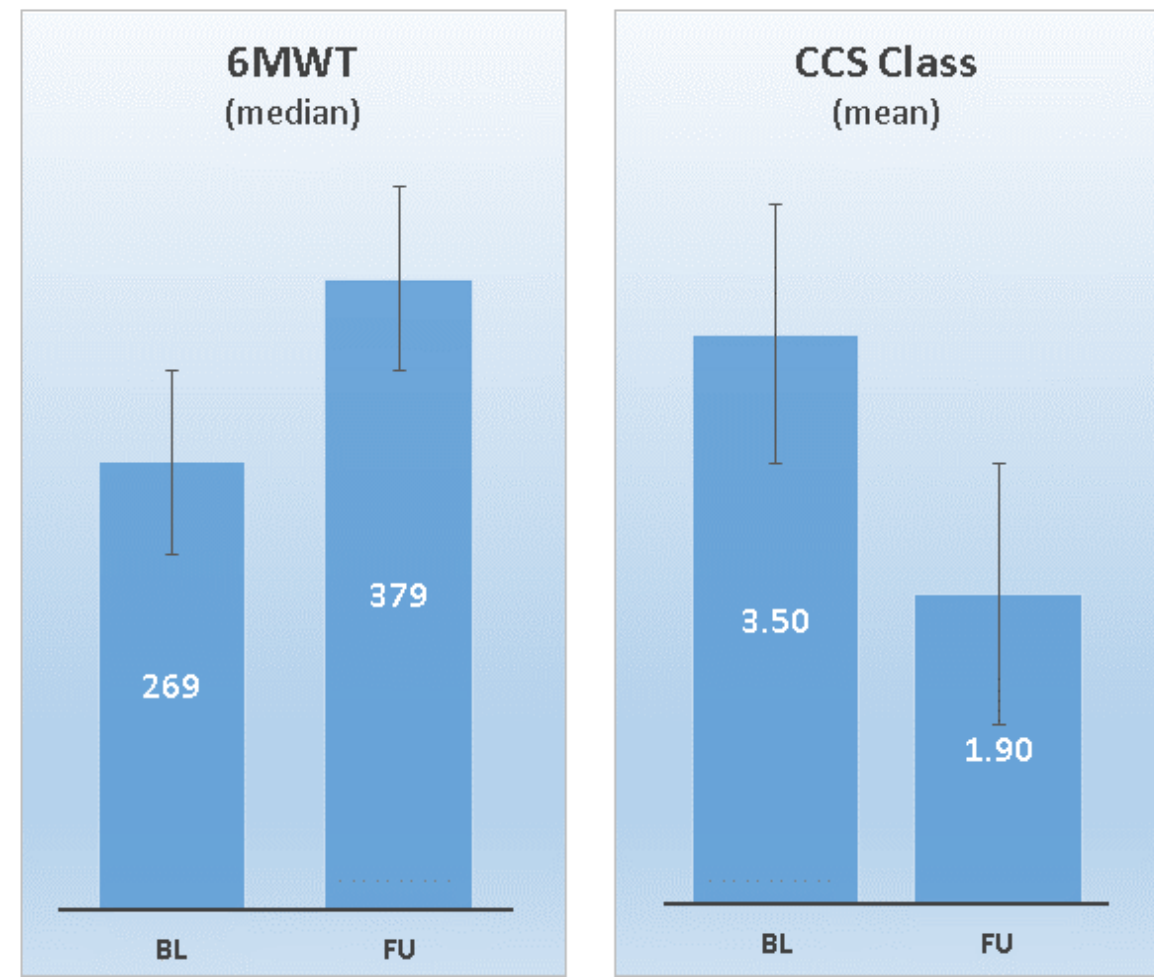
Preliminary Results  
Interim analysis of the first  
10 patients (out of 30)



Tel Aviv Medical Center single center study  
N=10

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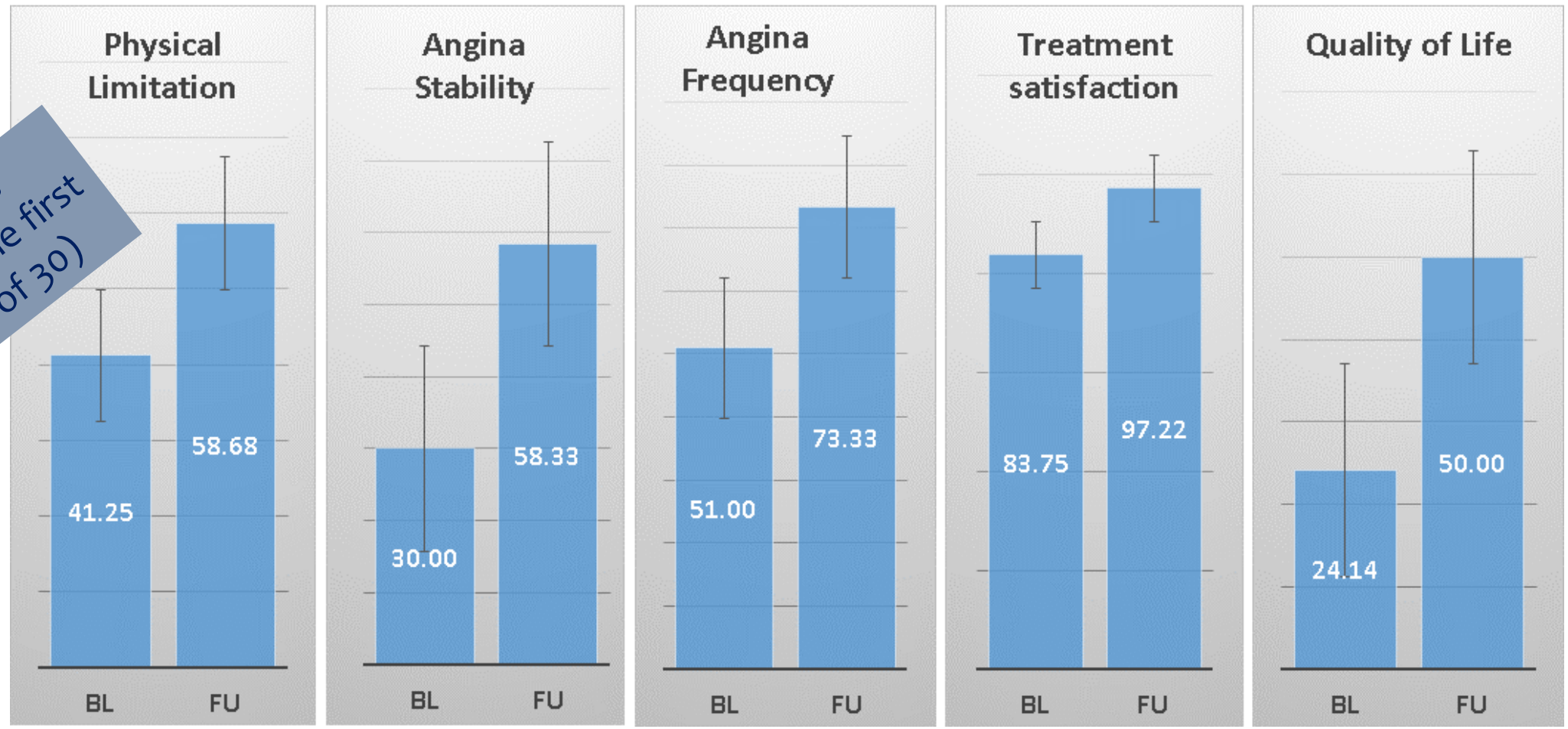
## Functional capacity and QOL



Tel Aviv Medical Center single center study  
N=10

## Seattle Angina Questionnaire

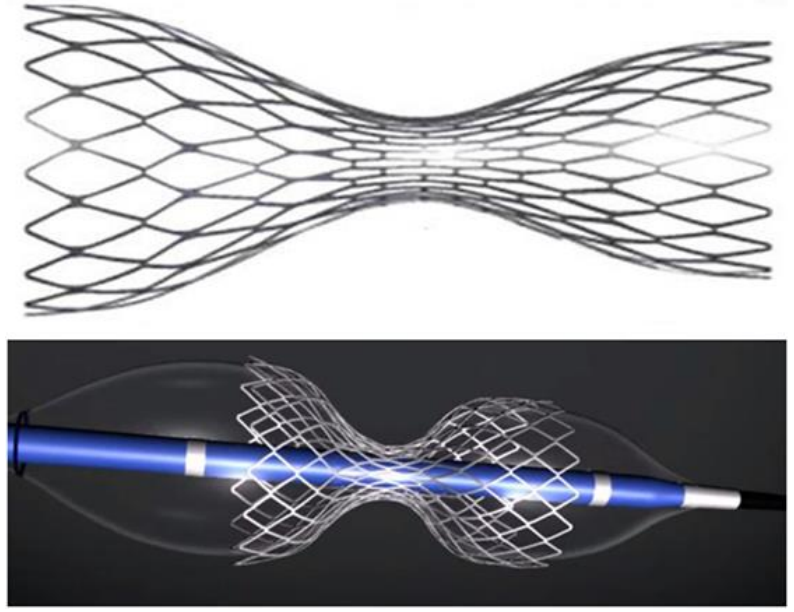
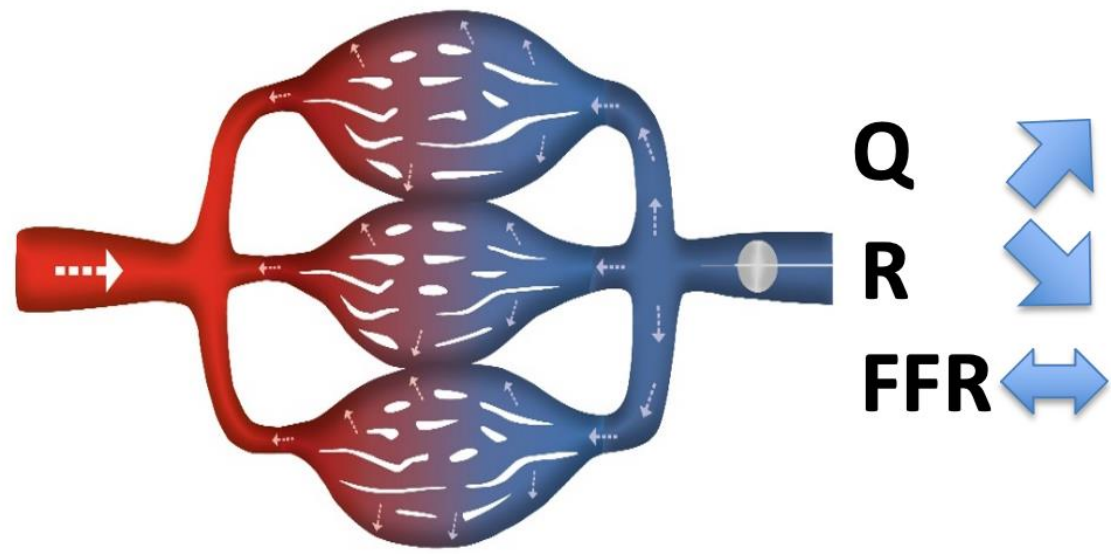
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# TAKE HOME MESSAGE / REDUCER

- **Peu de risque interventionnel**



- Est **efficace** pour traiter l'**angor réfractaire** (vs sham)
- Est **prometteur** pour traiter l'**angor micro-vasculaire**
  
- Doit faire partie de l'**arsenal thérapeutique** au cathlab