

# Shockwave<sup>®</sup> en périphérique : quand l'outil m'a sorti de l'ornière !

Avec le soutien institutionnel de

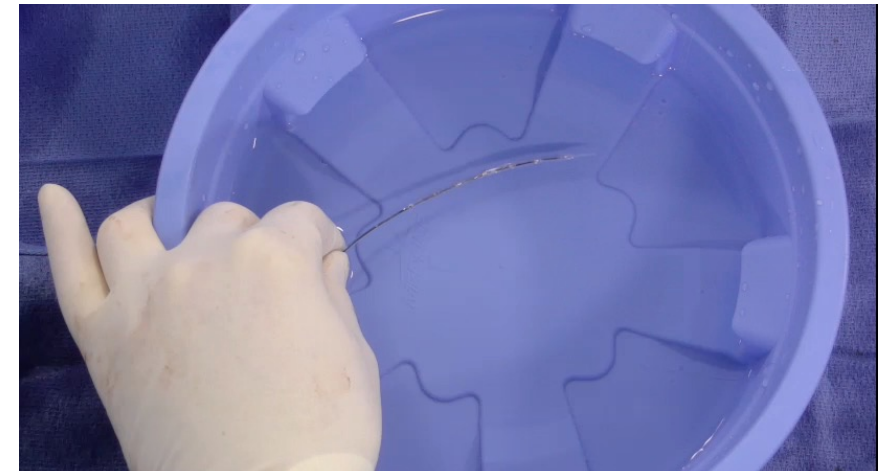
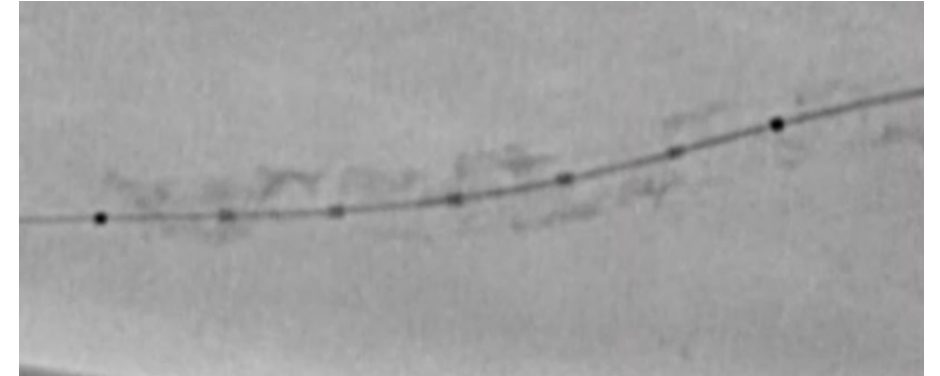
**BIOSENSORS**



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# Catheter Shockwave Périphérique : M5 et S4

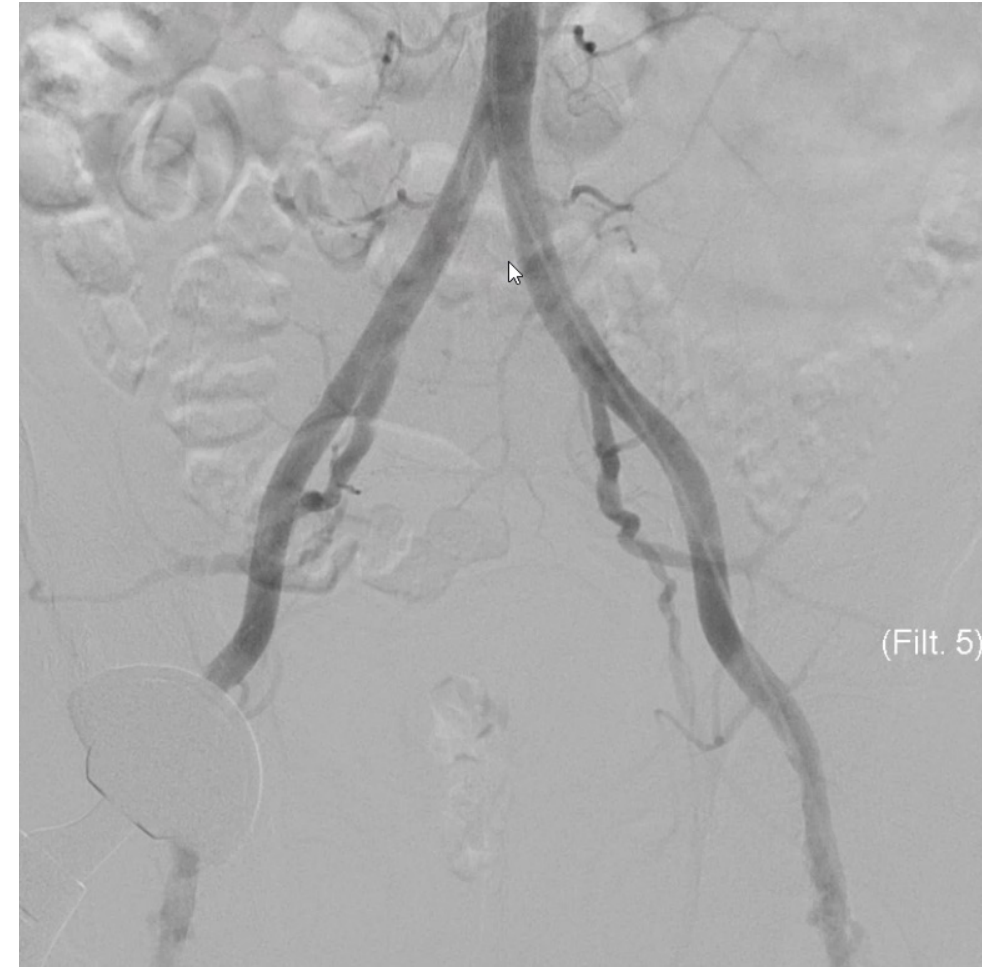
Product	C <sup>2</sup>	S <sup>4</sup>	M <sup>5</sup>
Emitters	2	4	5
Pulses	80	160	300
Diameter (mm)	2.5 – 4.0	2.5 – 4.0	3.5 – 7.0
Lengths (mm)	12	40	60
Guidewire	0.014"	0.014"	0.014"
Sheath	6F	5Fr	6F or 7F
Vascular Bed	Coronary	BTK	Iliac, CFA, SFA



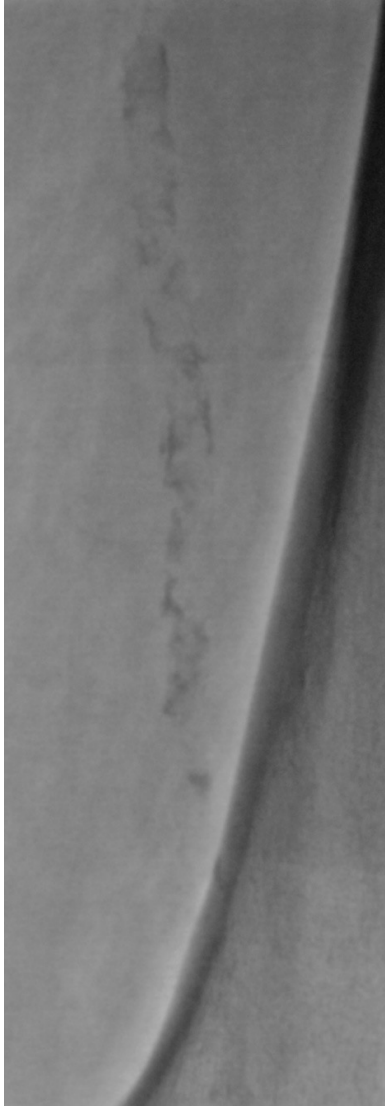
## Monsieur B, 81 ans

**ATCD :** Cardiopathie ischémique stenté  
Endartériectomie CID  
IRC : DFC à 32 ml/min/m<sup>2</sup>

**HDM :** Ischémie critique avec  
douleur de decubitus à gauche  
IPS G à 0.3 - IPS D à 0.6  
Doppler : Sténose critique AFS



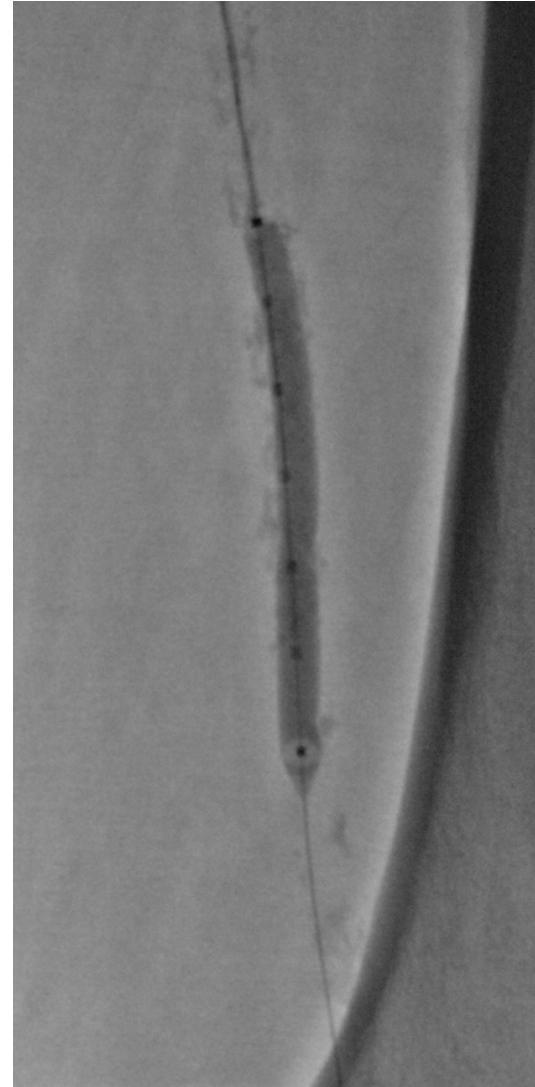
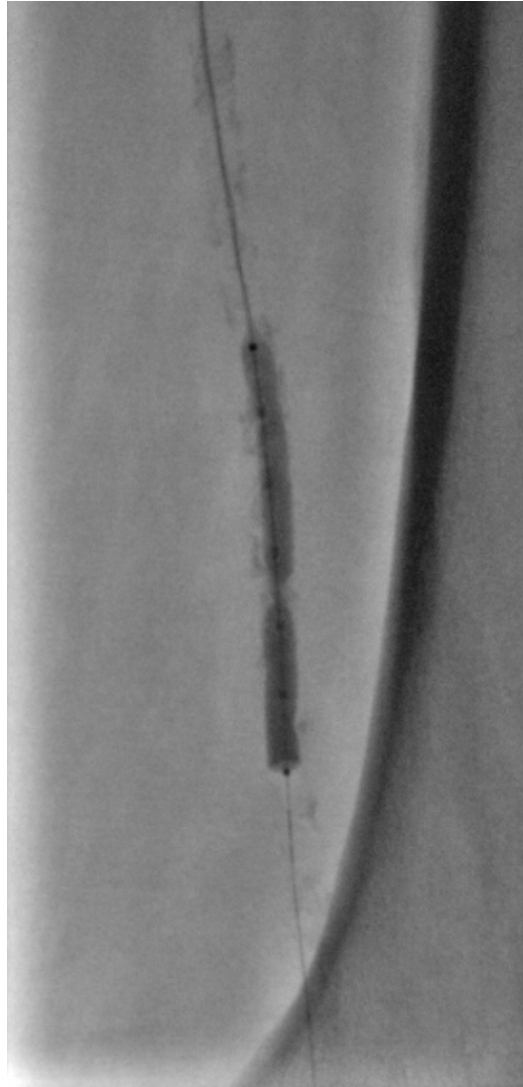
# Ornière Périphérique



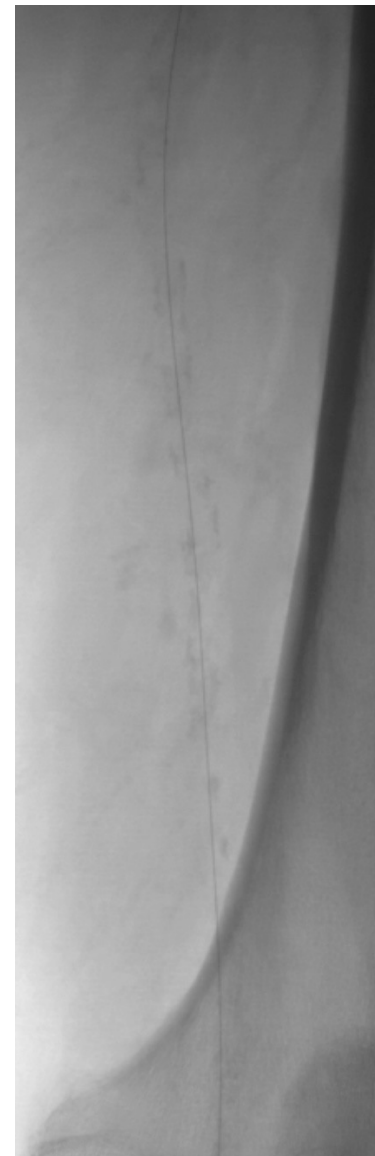
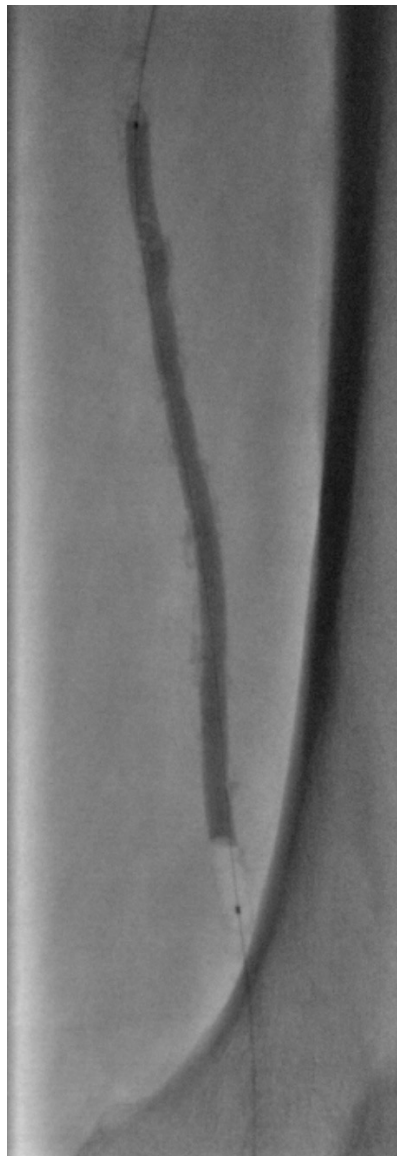
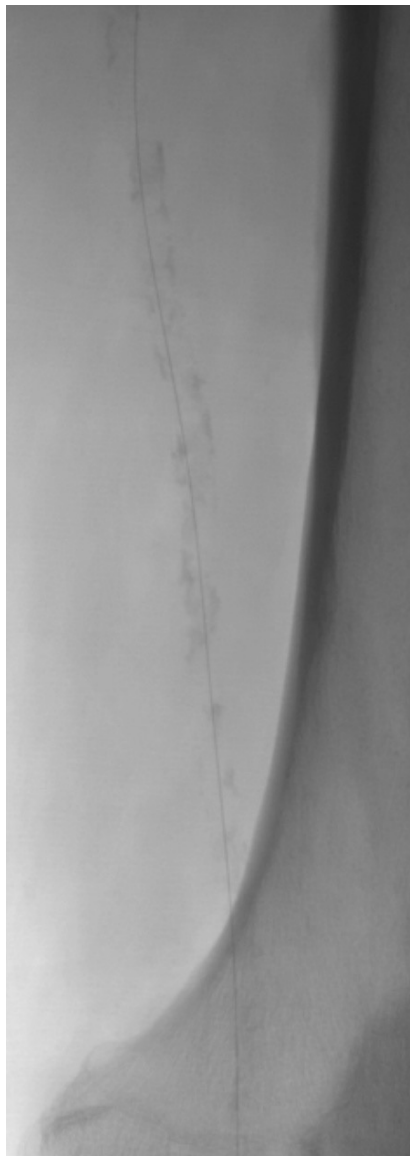
## *A gauche*

- Lésion critique calcifiée AFS tiers moyen-tiers distal
- Virole calcaire focale sur une longue plaque circonférentielle
- \* Occlusion ATA et ATP

# *ATP périphérique*



# *ATP périphérique*



*Contrôle  
distalité*



	Disrupt PAD I	Disrupt PAD II	Disrupt BTK	Disrupt PAD III RCT	Disrupt PAD III OS
Status	Enrollment completed	Enrollment completed	Enrollment completed	Enrollment completed	Enrolling
Study design	Single arm, safety & performance	Single arm, safety & effectiveness	Single arm, pilot	RCT, safety & effectiveness	Single arm, observational study
Study conduct*	CEC, ACL	CEC, ACL	ACL	CEC, ACL	ACL
# of patients	35	60	20	306	Up to 1,500
# of sites	3	8	3	45	32
Regions	NZ, EU	NZ, EU	NZ, EU	U.S., NZ, EU	U.S., NZ, EU

\*CEC: Independent clinical events committee; ACL: Angiographic core lab



Prospective, multicenter,  
single-blind, randomized  
controlled trial



Patients enrolled from February 2017 to May 2020  
N = 306

IVL  
N = 153

PTA  
N = 153

Primary Endpoint Analysis  
Images available  
N = 146

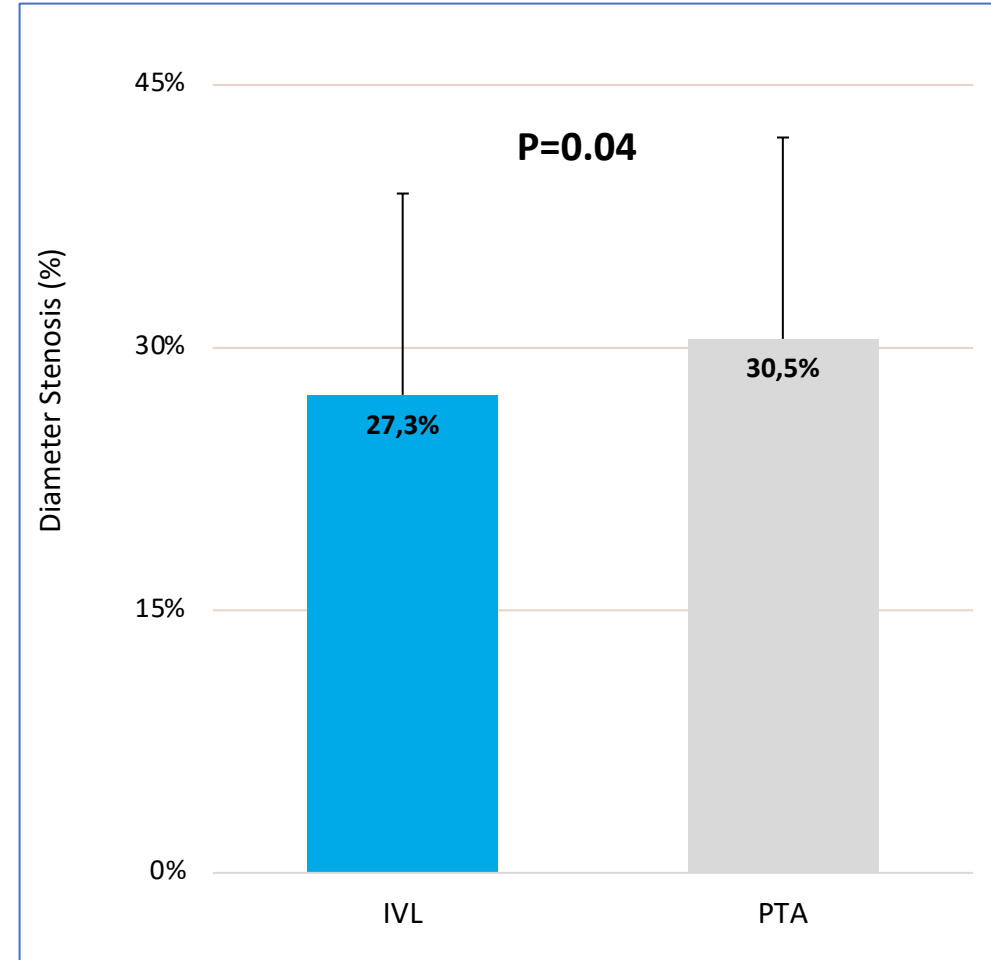
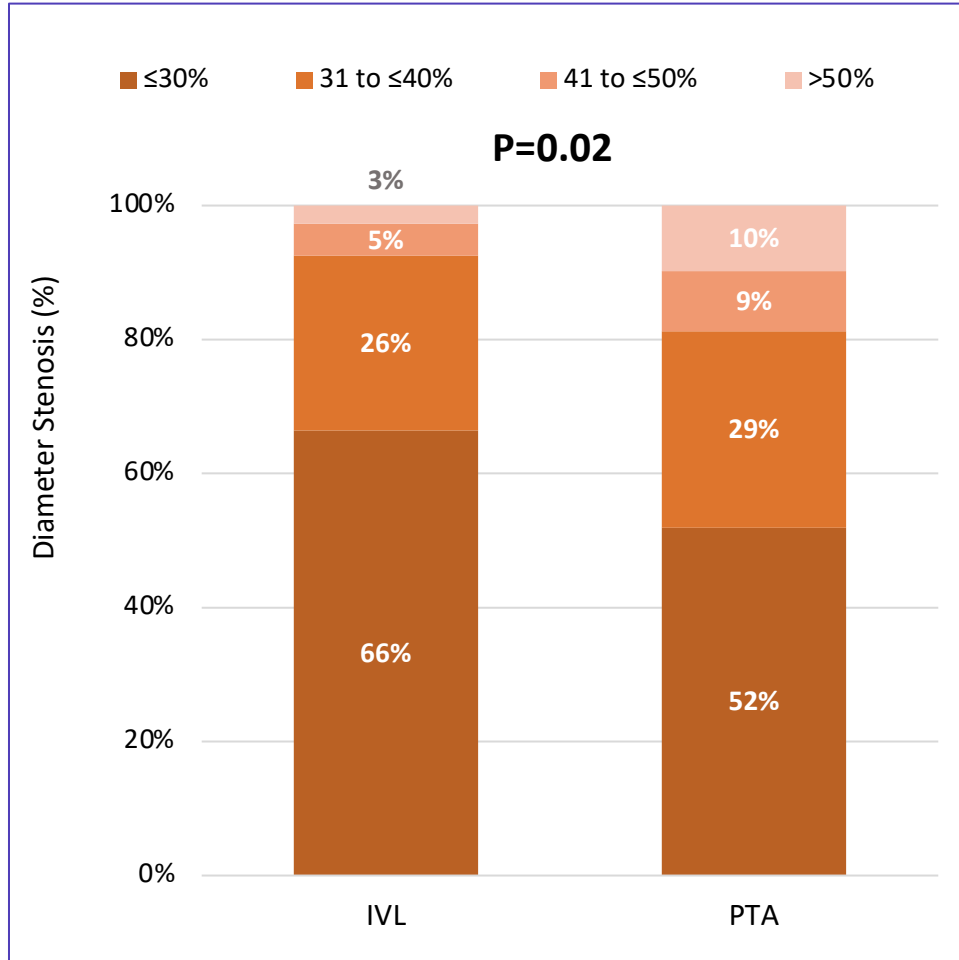
Primary Endpoint Analysis  
Images available  
N = 133

Withdrawn (n=1)

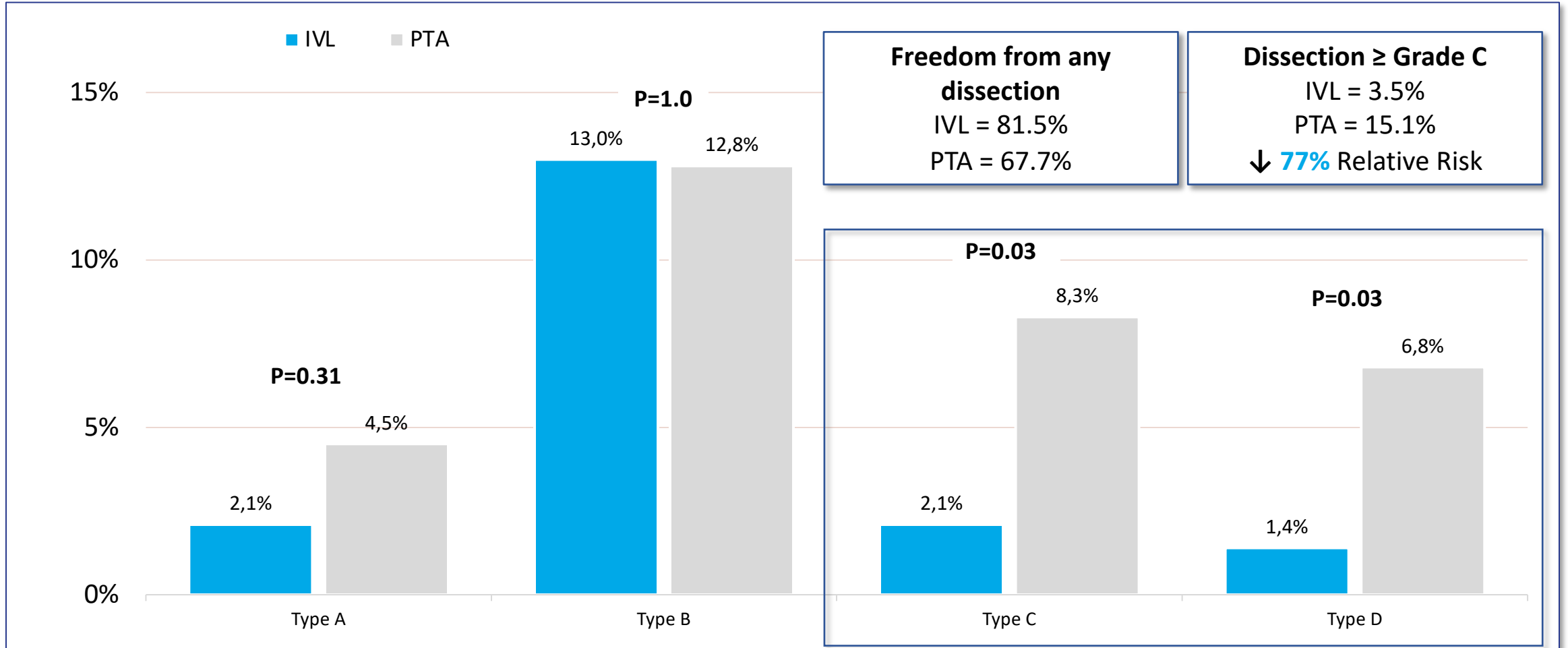
Withdrawn (n=1)

30-day Clinical Follow-up  
N = 152

30-day Clinical Follow-up  
N = 152



Significant reduction in post-treatment diameter stenosis in IVL group



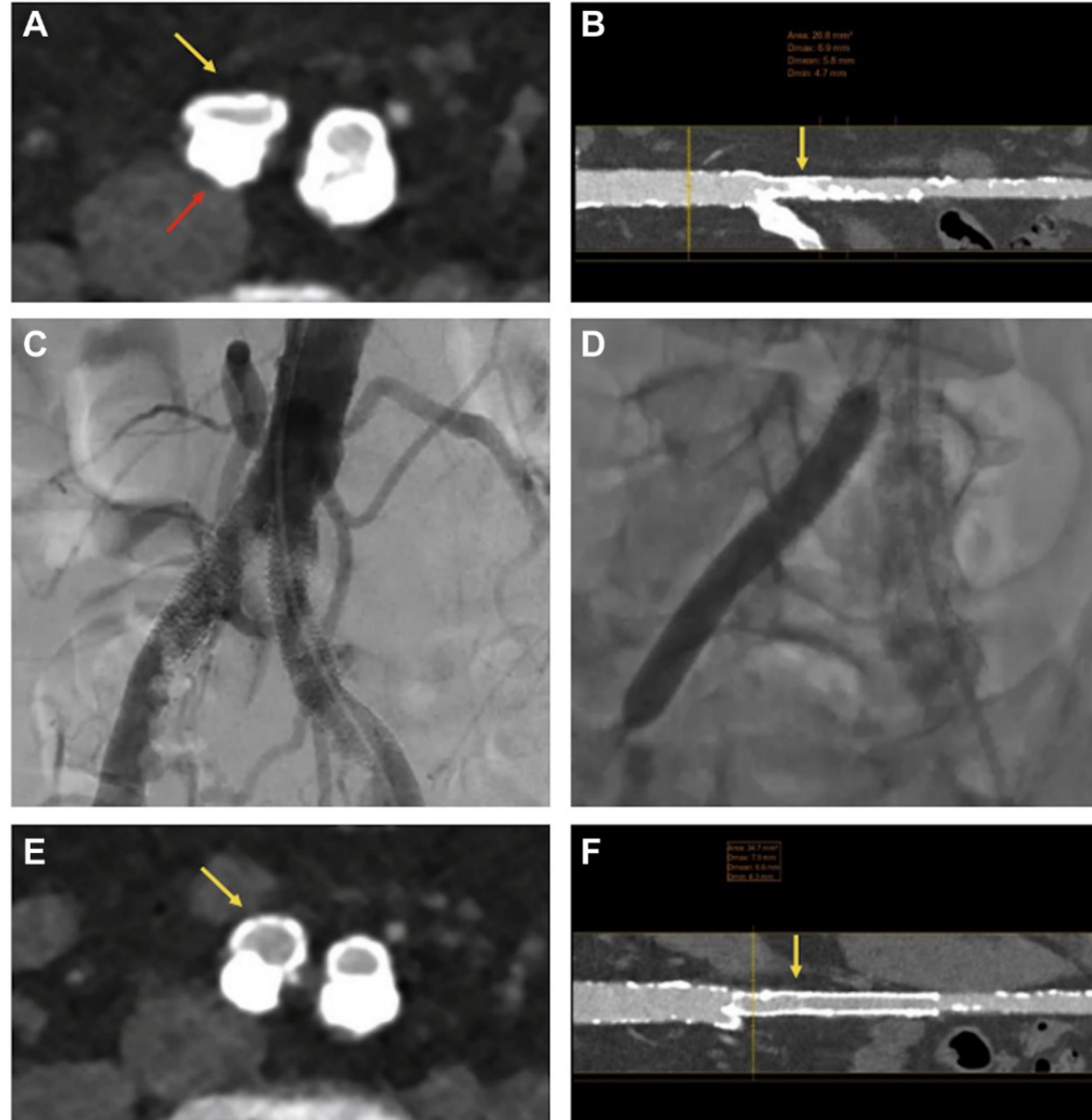
Significant reduction in the frequency and severity of dissections with IVL

\*No occurrence of thrombus, abrupt closure, no-reflow, distal emboli or perforation in both study arms

# Ornière Périphérique : OFF Label...

## IMAGES IN INTERVENTION

### First Report of Peripheral Balloon-Expandable Stent Underexpansion Treated by Intravascular Lithotripsy



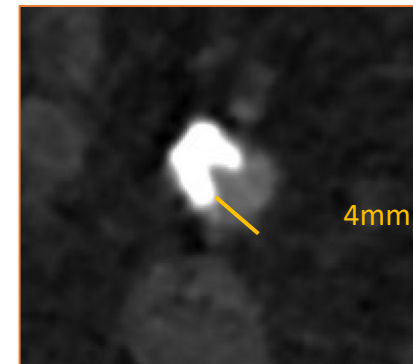
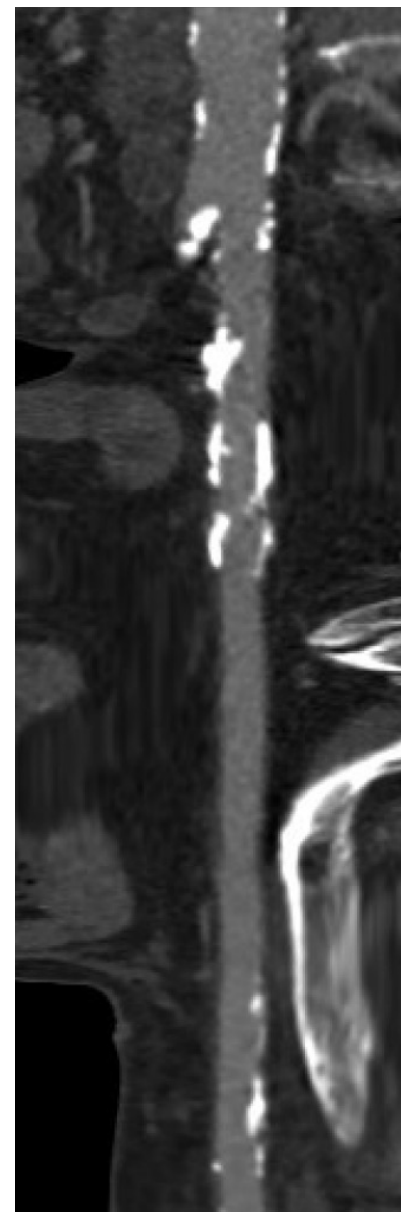
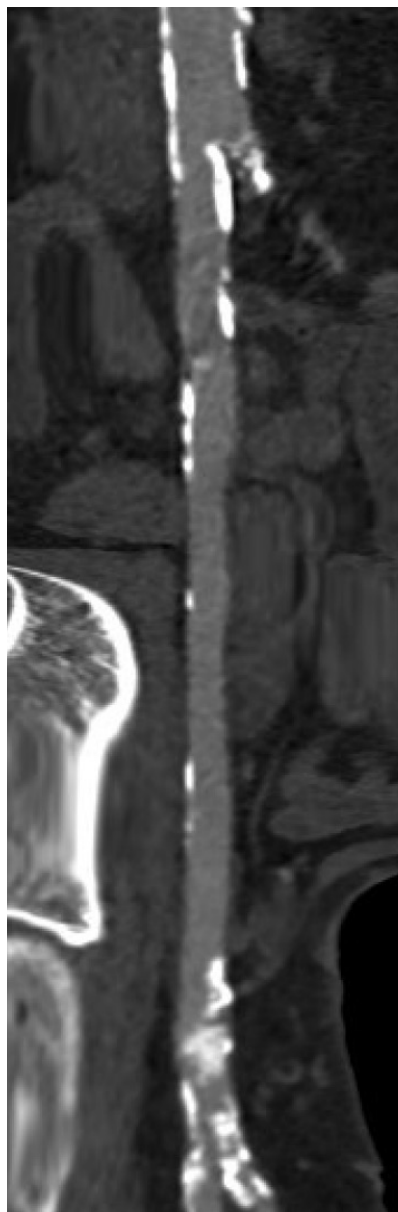
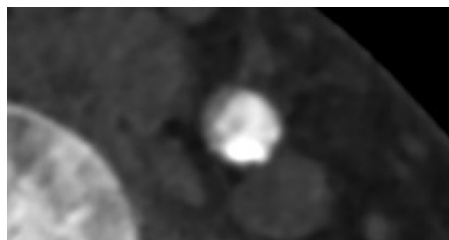
# Ornière Structurale

Patient 84 ans

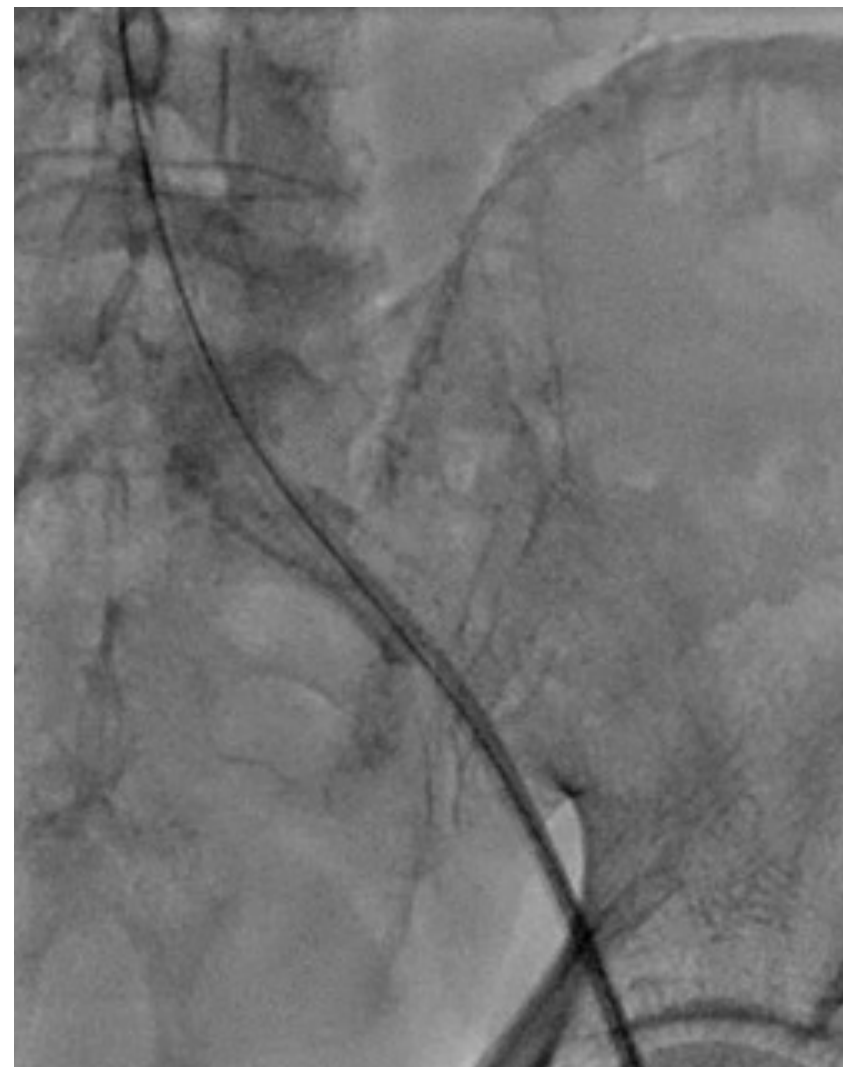
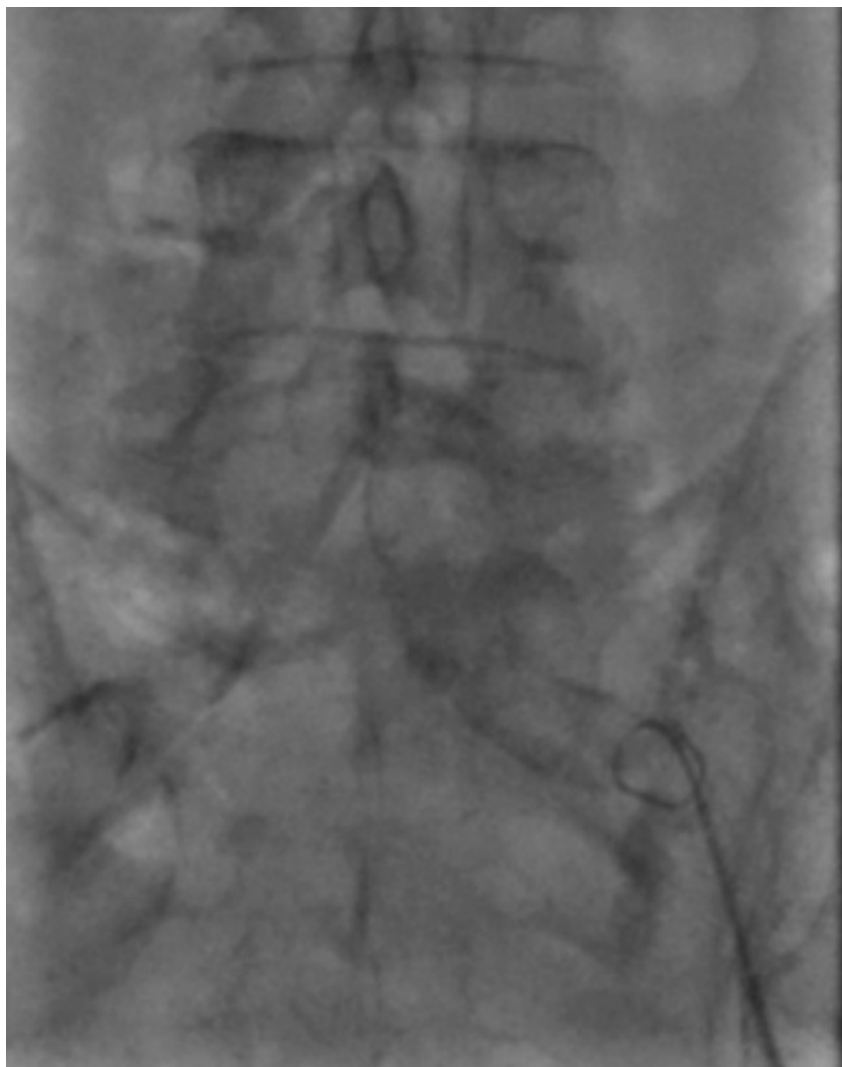
RAO serrée symptomatique

Occlusion Sous calvière gauche

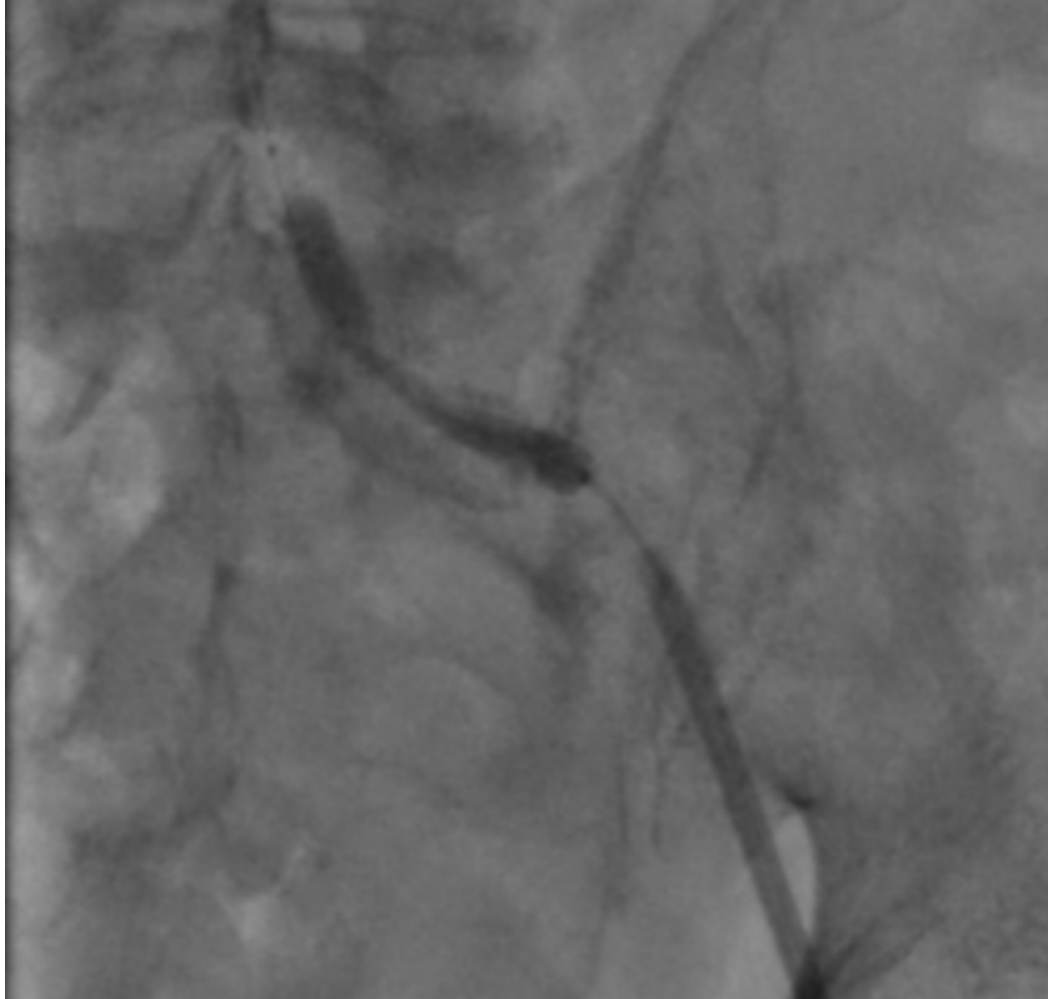
Sténose carotide bilatérale 60%



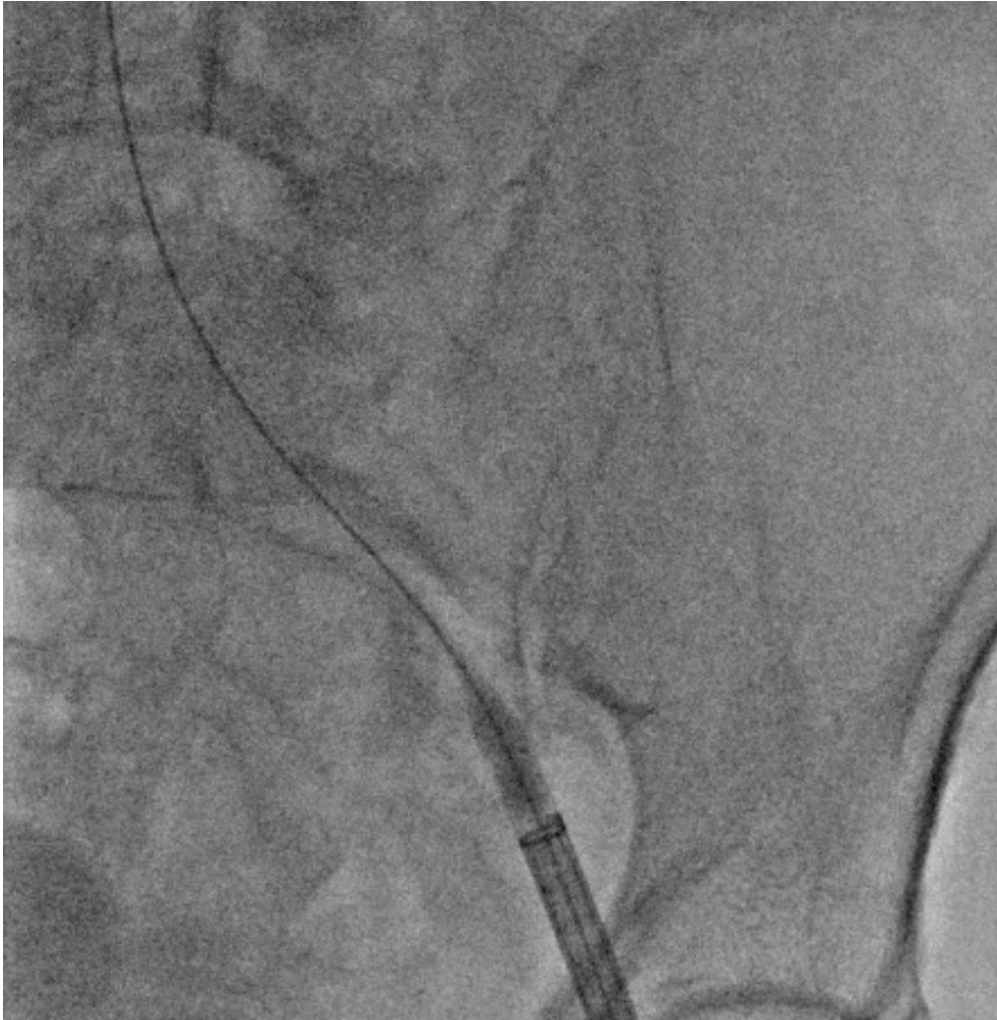
# *TAVI et Shockwave*



# *TAVI et Shockwave*



## *TAVI et Shockwave*





## RESEARCH CORRESPONDENCE

# A Prospective Registry of Intravascular Lithotripsy-Enabled Vascular Access for Transfemoral Transcatheter Aortic Valve Replacement

Procedural Details	(N = 42) (47 Lesions)	TAVR Outcomes	(N = 42)
Site access	90.5 (38)	Transfemoral valve delivery success	100 (42)
Percutaneous	9.5 (4)		
Cutdown			
Moderate sedation utilized	66.7 (28)	TAVR performed at same time as IVL	100 (42)
General anesthesia utilized	33.3 (14)		
Pre-dilatation	6.3 (3)	Type of valve	
		Sapien 3 (Edwards)	57.1 (24)
		Evolut R (Medtronic)	33.3 (14)
		Evolut Pro (Medtronic)	9.5 (4)
IVL catheter size	2.5 (1)	Size of valve	
5.0 × 60 mm	10.2 (4)	20 mm	2.4 (1)
6.0 × 60 mm	10.2 (4)	23 mm	24.3 (10)
6.5 × 60 mm	84.6 (33)	26 mm	46.3 (19)
7.0 × 60 mm		29 mm	19.5 (8)
		34 mm	4.8 (2)
Number of pulses per lesion	166 ± 68.0	Post-TAVR mean gradient	7.6 ± 3.9
		Aortic regurgitation*	
		None or trace	73.1 (30)
		Mild	24.3 (10)
		Moderate	2.4 (1)
		Severe	0 (0)

# TAVI et Shockwave

Lesion Characteristics	(N = 47)	Access Site Outcomes	(N = 42) (47 Lesions)
Target lesion location	78.7 (37)	Complications	
Common iliac	10.6 (5)	Perforation	0 (0)
External iliac	8.5 (4)	Flow-limiting dissection	0 (0)
Common femoral	2.1 (1)	Provisional stent	0 (0)
Abdominal aorta		Pseudoaneurysm	2.3 (1)
		Endarterectomy	2.3 (1)
Reference vessel diameter, mm†	8.1 ± 1.6	Access site closure method	
		Transcatheter sutures/device	92.8 (39)
		Surgical/stent	4.7 (2)
		Manual	2.3 (1)
Target lesion diameter, mm*	4.3 ± 1.1		
Diameter stenosis, %	58.6 ± 17.5		
Target lesion length, mm†	37.4 ± 23.3		
Calcification, max arc†	265.5 ± 88.3		
Calcification, min CSA†	15.7 ± 10.4		

PAS de STENT POST IVL

## *Conclusion : SW et Ornières ...*

- Outil indispensable en cathlab (coronaire – périphérique)
  - Masse calcique des lésions périphériques
- Utilisation large Transfemorale (TAVI - Assistance – EVAR - TEVAR )
- Développement actuel de ballon de plus grands diamètre