



SHOCKWAVE | C<sup>2</sup>

## LITHOTRIPSIE INTRAVASCULAIRE



Polyclinique  
Saint George

Dr Damien BRUNET





# H de 60ans

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FDR : HTA, dyslipidémie

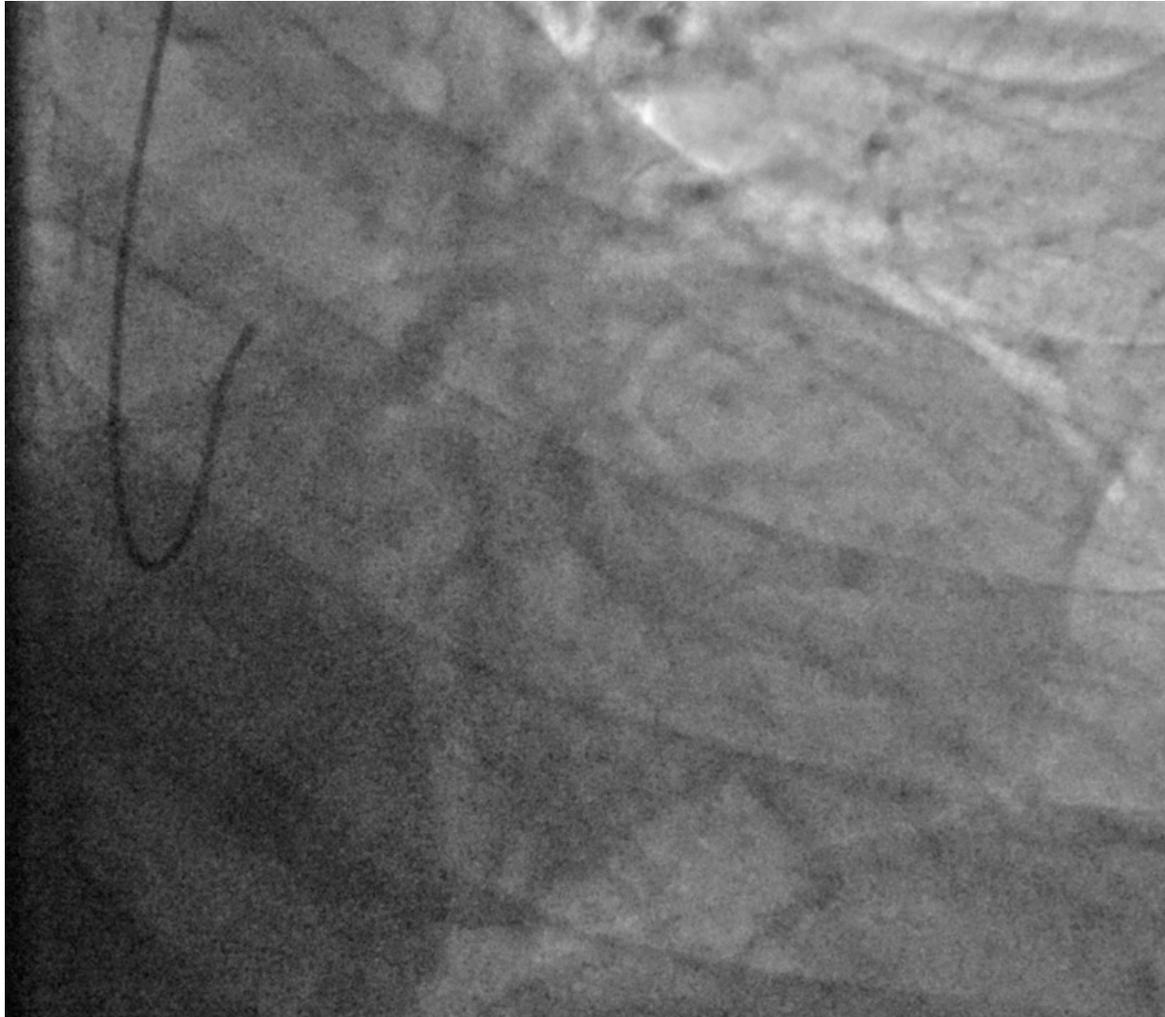
ATCD : IA + dilatation Anévrysmale Aorte ascendante

Angor d'effort avec effet « Warm Up »

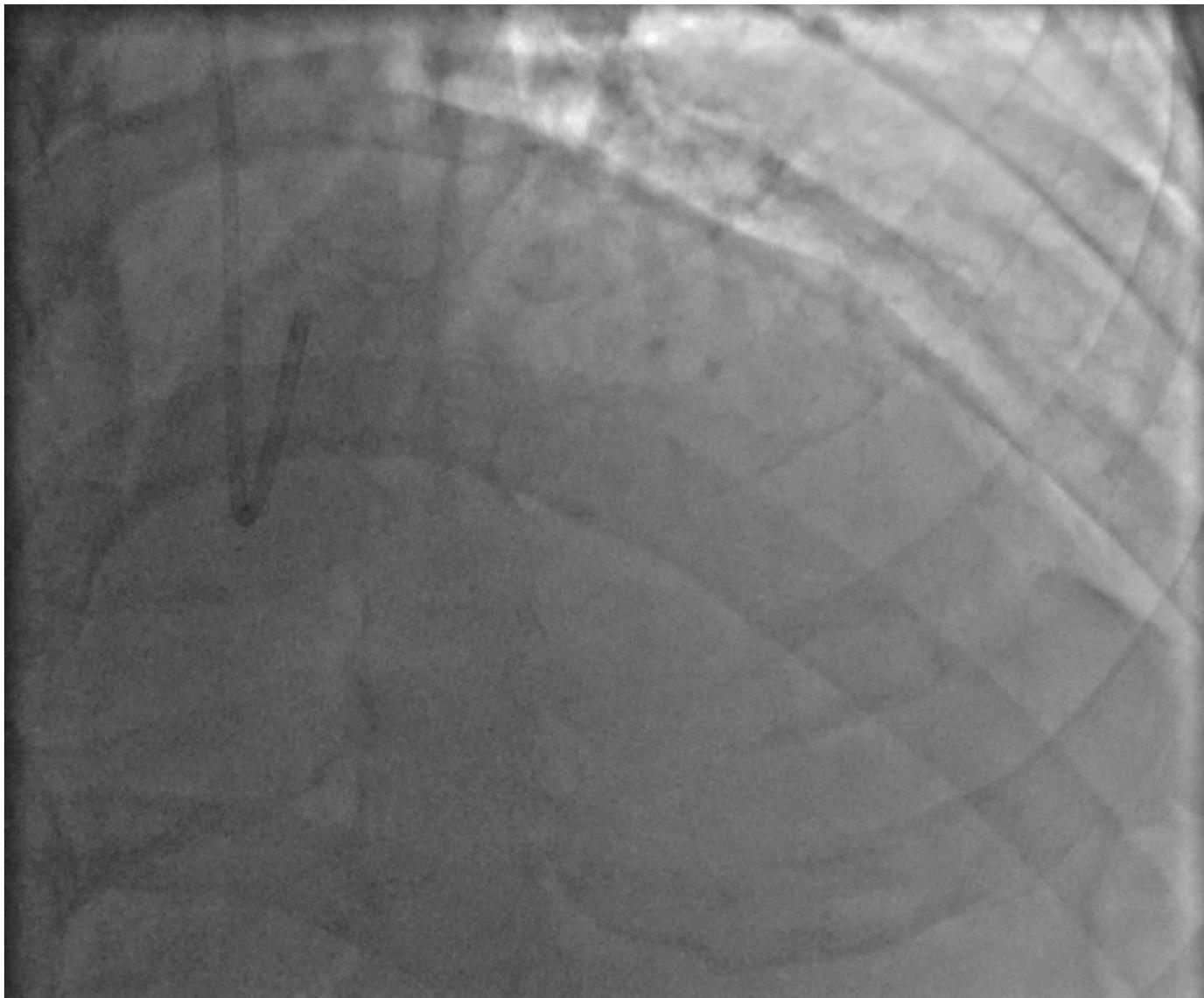
TDM coronaire : Lésion serrée IVA proximale

# Coronarographie

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# IVA

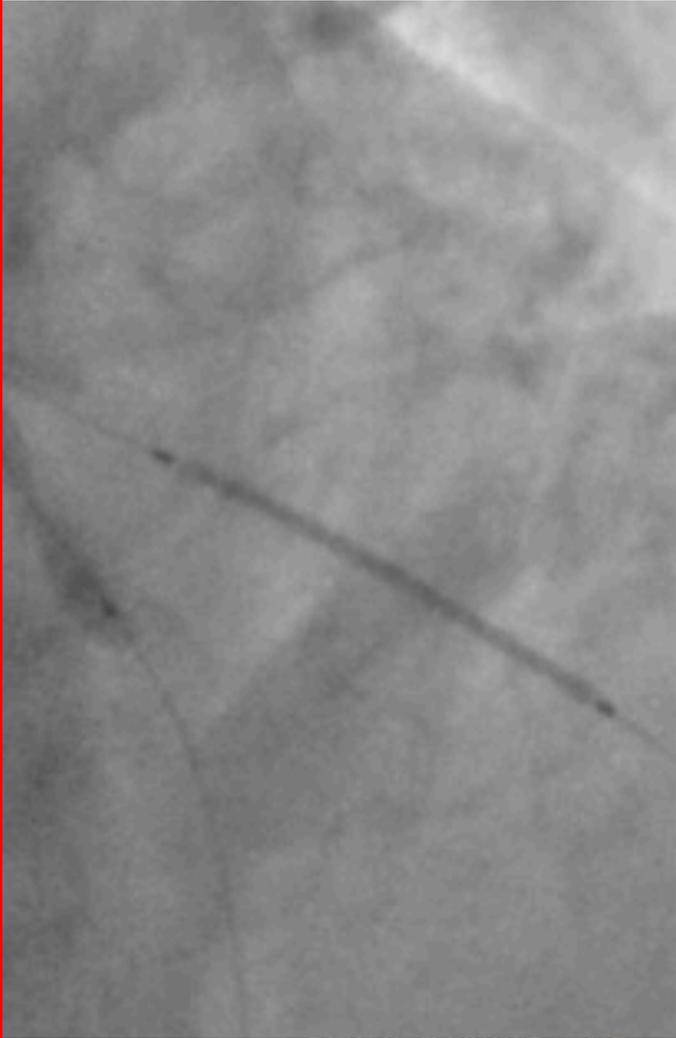
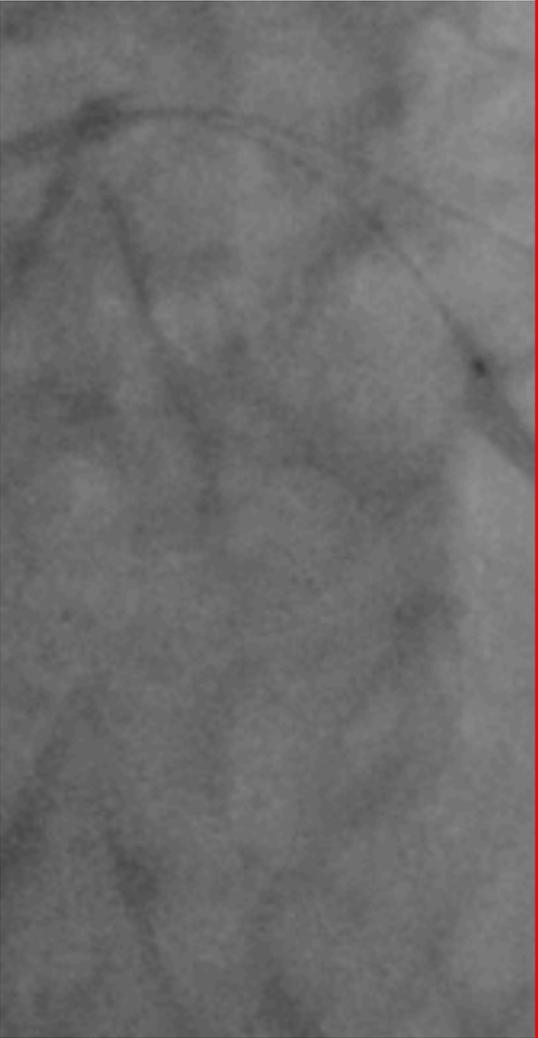
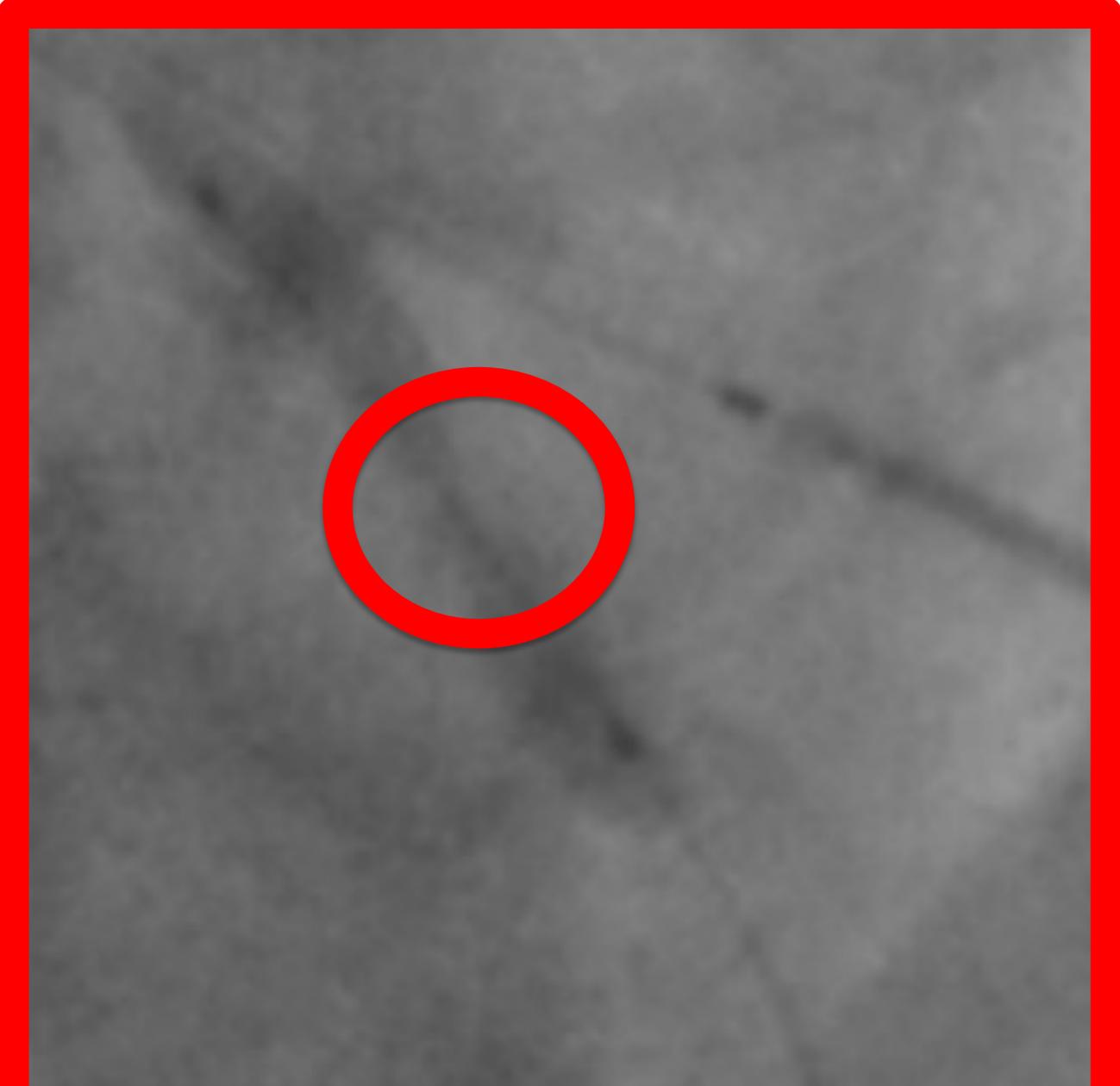


ATC Ad Hoc

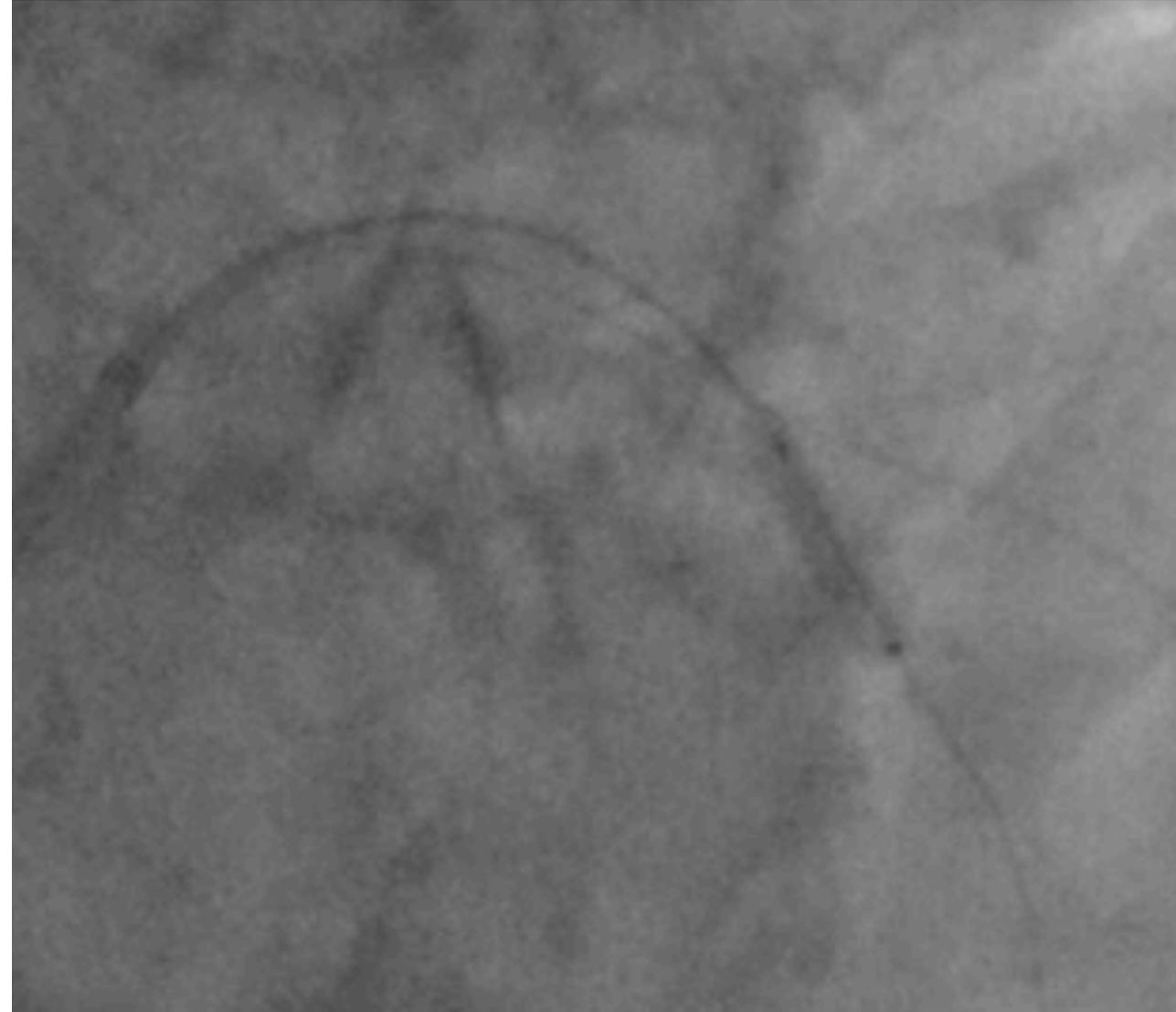
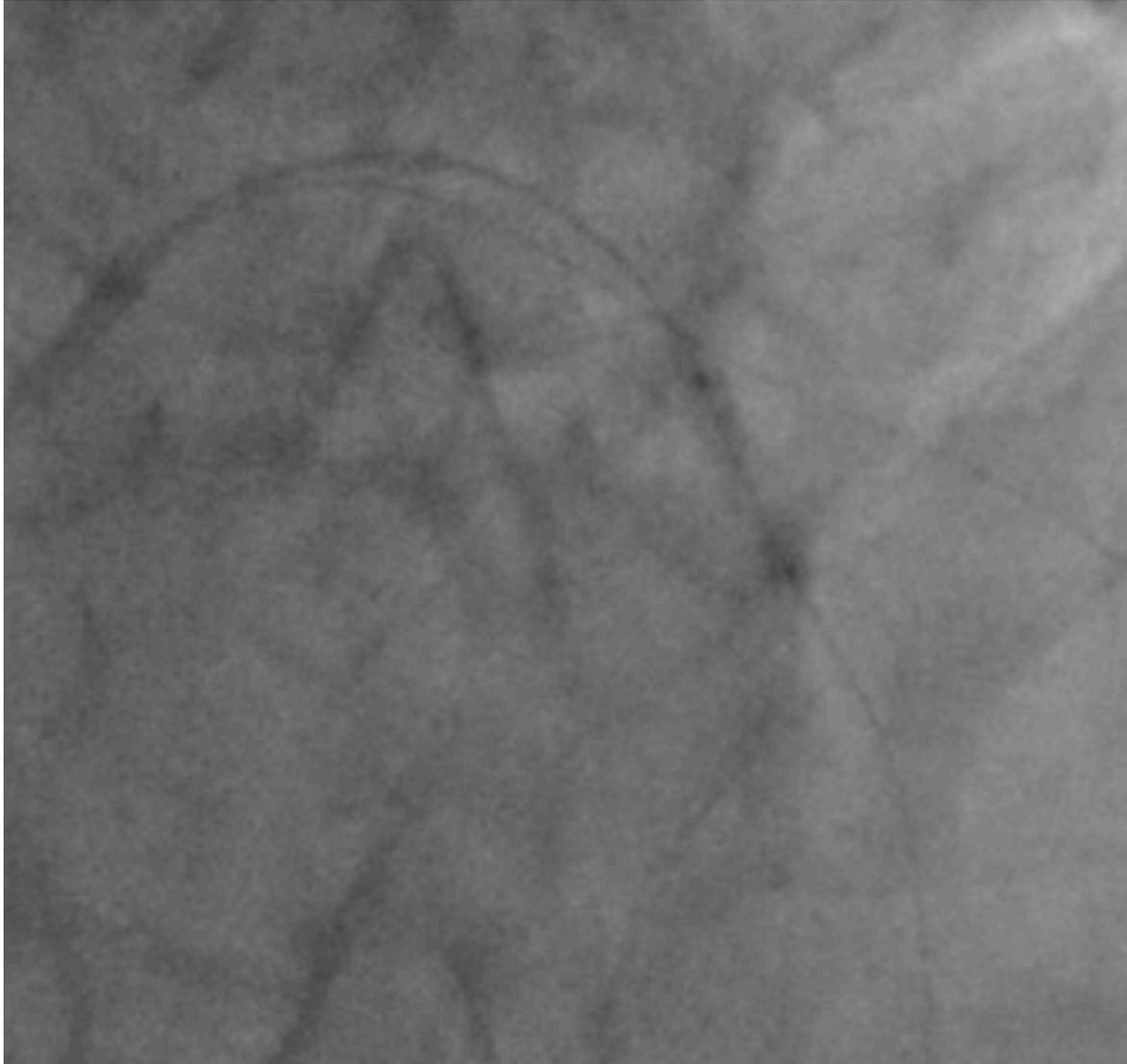
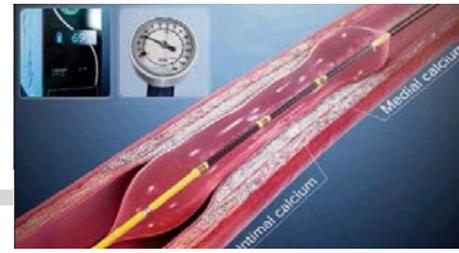
radiale Droite 6F  
EBU 3.75

Stratégie  
Stent Diagonale  
Mini crush à l'ostium  
Stent IVA  
POT/Kiss/POT

# Prédilatation Ballon 2.5 x 20mm Ikazuchi (cordis)

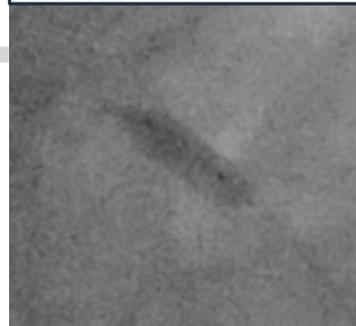


# Utilisation Ballon Shock Wave 3 x12mm



# Dilatation

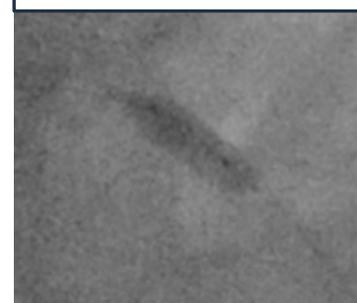
POT



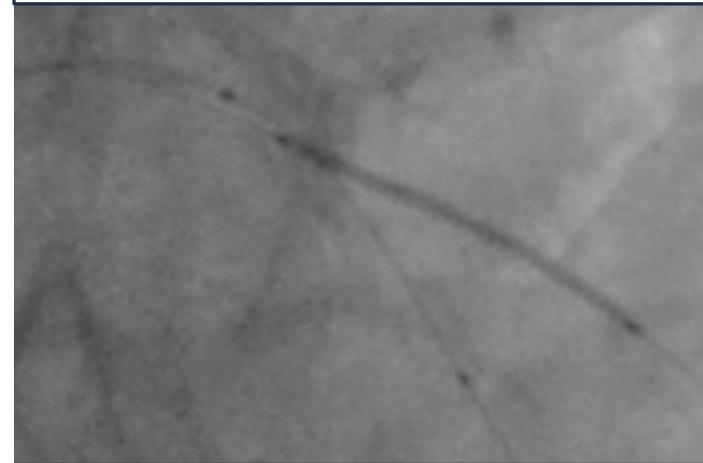
Kissing Ballon



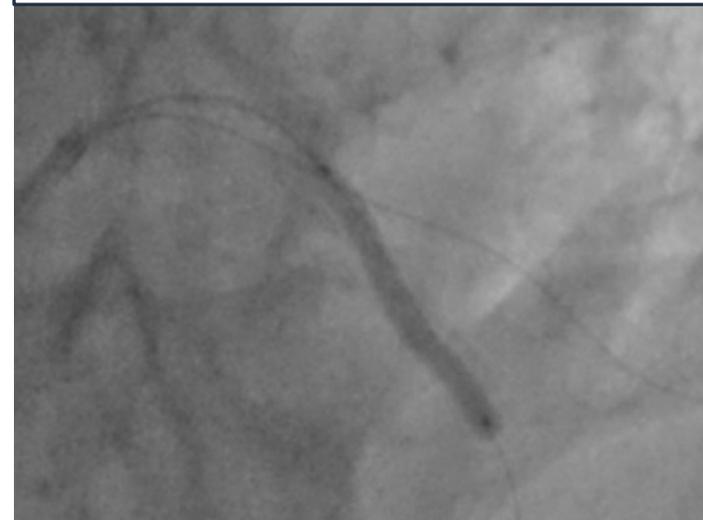
POT



Stenting Diagonale



Mini Crush



Stenting IVA X 2



Resolute Onyx : diago = 3 x 26mm

IVA2 = 3,5 x 38mm

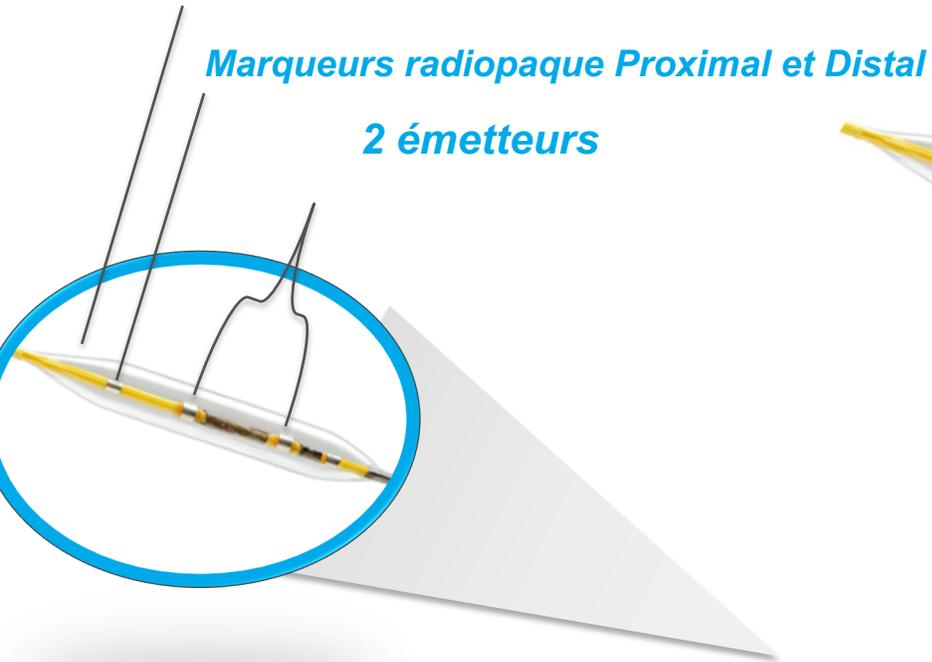
Megatron : IVA1 = 4 x 16mm

# Résultat Final



# Shockwave Système de Lithotripsie Intravasculaire (IVL)

**Ballon de 12mm Semi-compliant** facilite le transfère d'énergie;  
IVL =4 atm; Nominal =6 atm; Rupture =10 atm



**Taille des Ballons**  
2,5/3/3.5/4 mm de diamètre  
80 thérapie 8x10



**Emetteur**

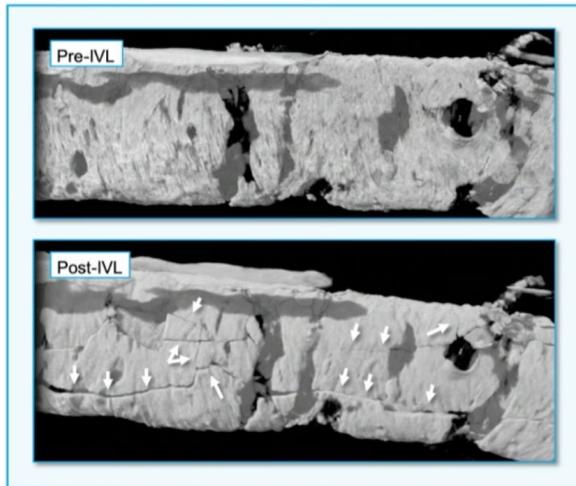
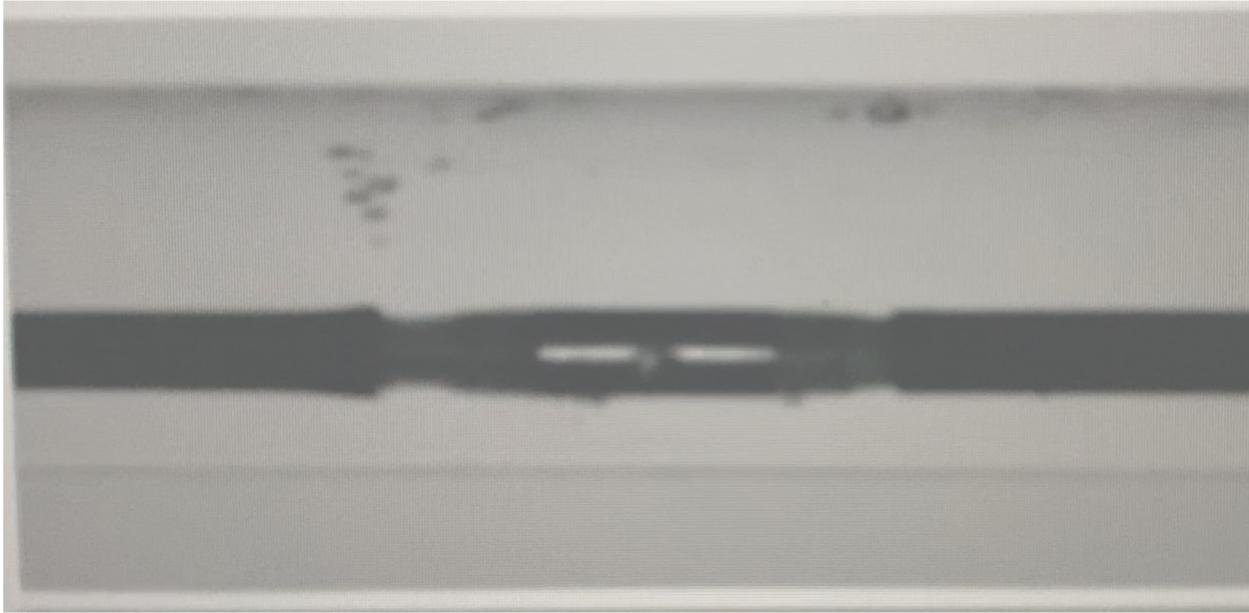
Pulse 1/s – Max 80 pulses



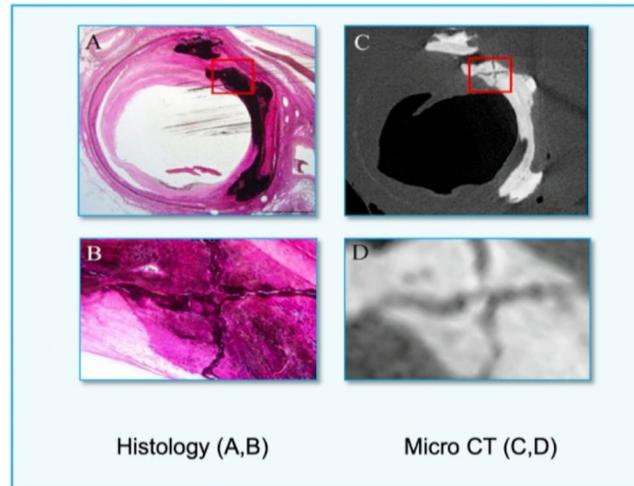
**Cathéter**

Usage unique

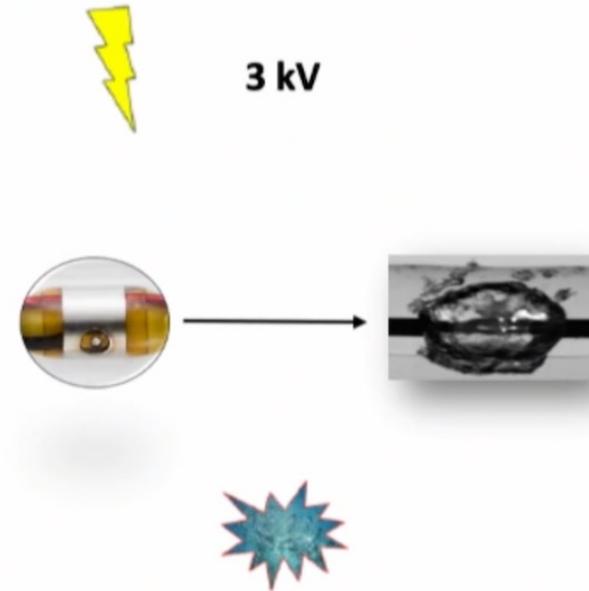
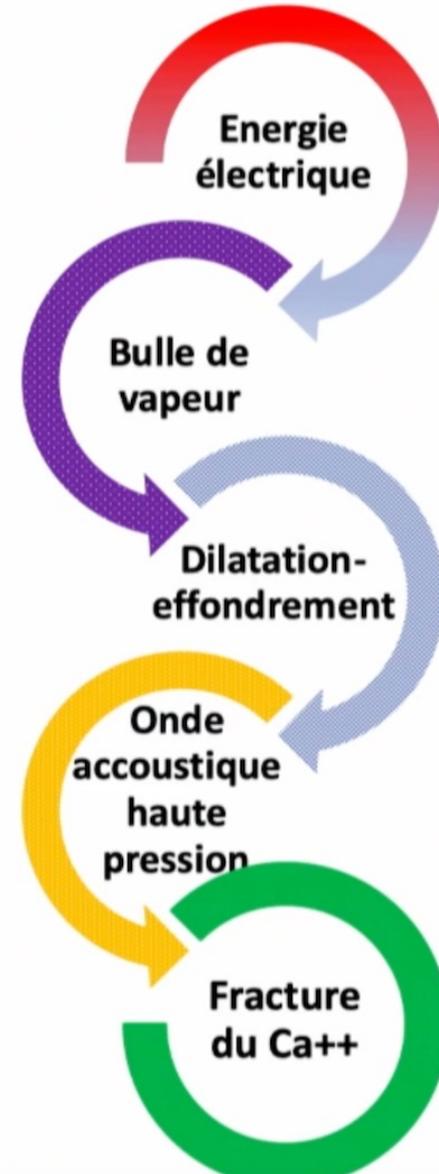
# Principe du Shockwave



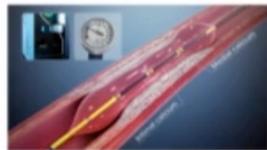
Cadaveric Superficial Femoral Artery (Micro CT)

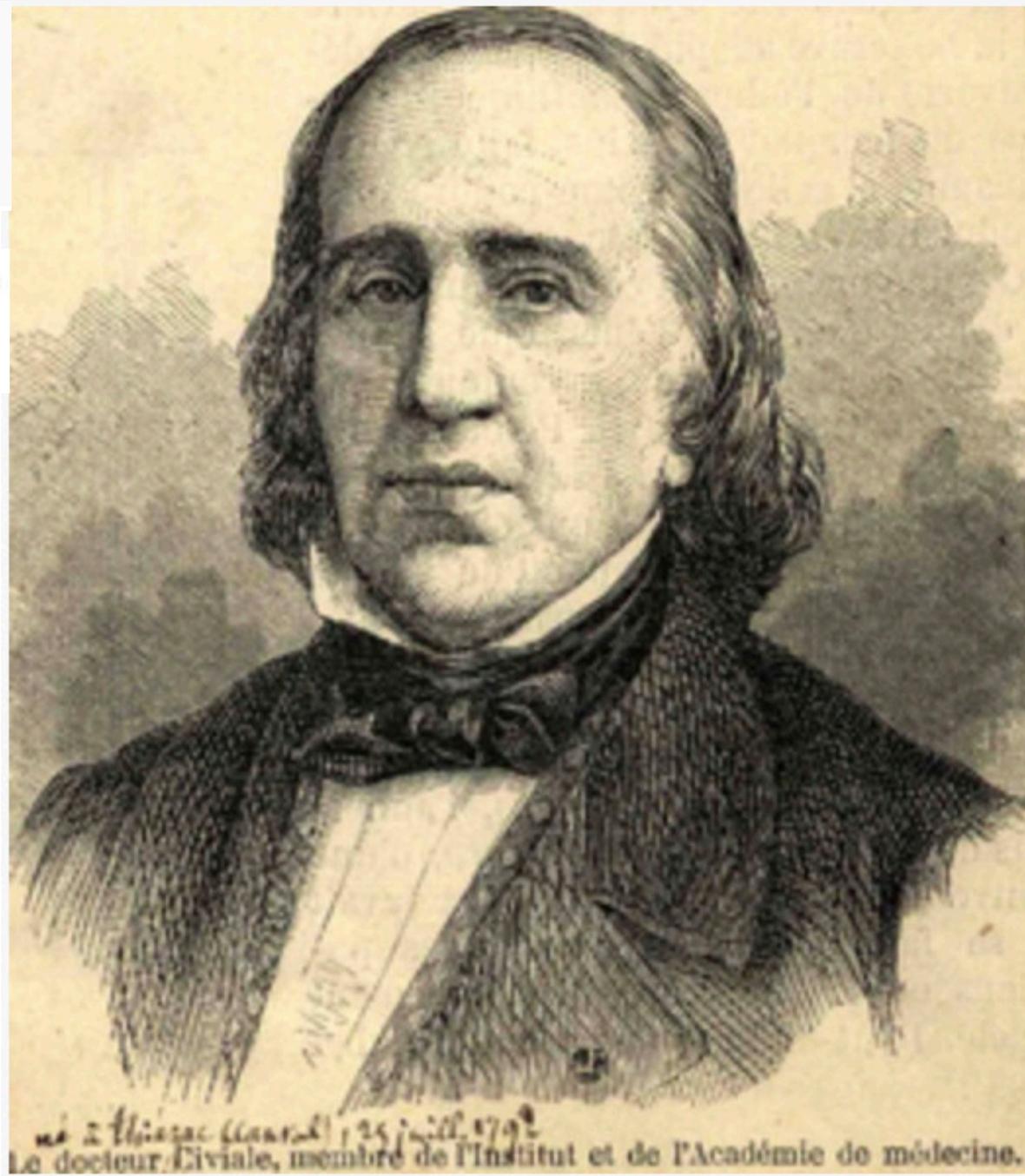
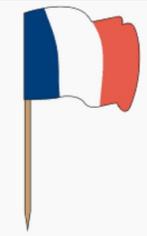


Histologic & Micro CT after IVL Treatment (SFA)



$\approx 50$  ATM  
Profondeur: 3 – 7 mm





Jean Civial (1792-1867)

Médecin Chirurgien  
Urologue

Chef de service des  
«Calculoux» à Necker

« De Civiale au cimetière  
Ou la mort vient de l'envoyer  
La tombe n'aura pas de pierre :  
Il sortirait pour la Broyer»

# Indications et Avantages

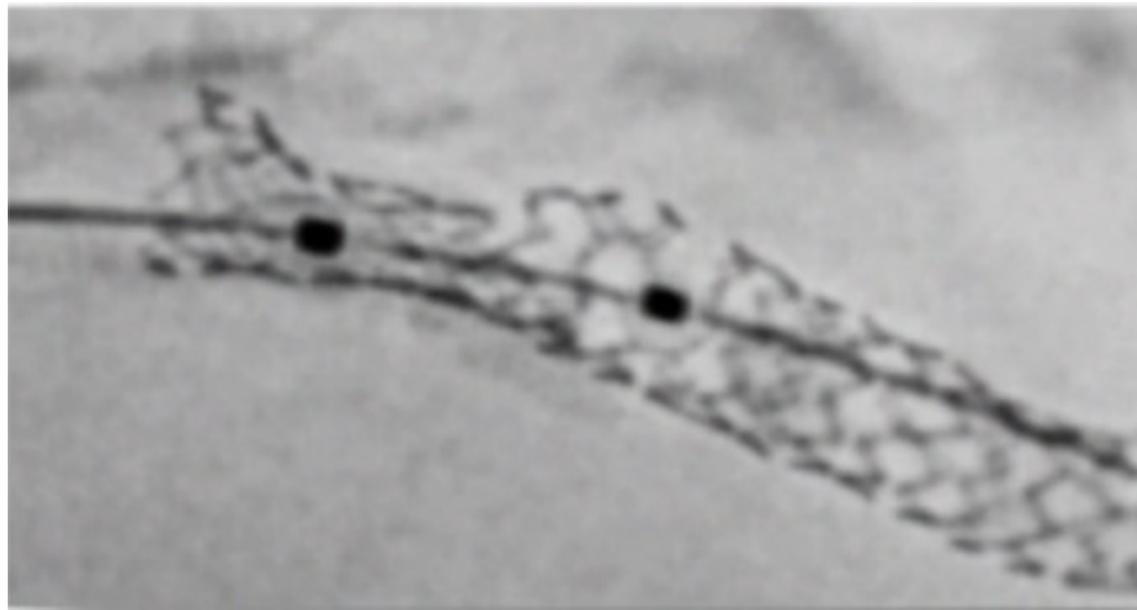
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Indication : lésions calcifiées résistantes  
aux matériels d'angioplastie conventionnels.

utilisation : simple, sûre et plus efficace  
que la dilatation au ballon seul ou avec Rotablator

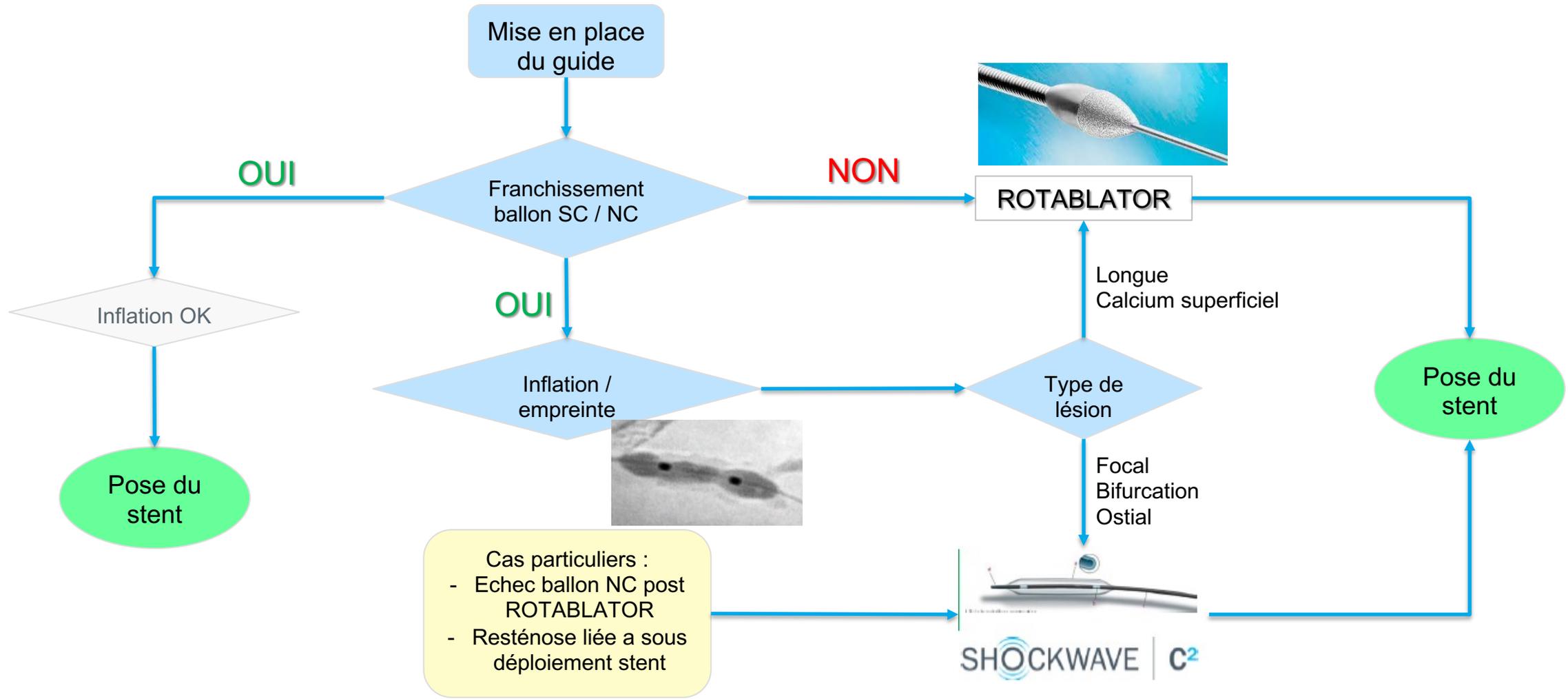
Comble un vide thérapeutique : évite les stents non déployés

Haut risque  
de  
thrombose



transfert  
en  
chirurgie

# Algorithme décisionnel : Rotablator / Shock Wave



# Publications

	Disrupt CAD I	Disrupt CAD II	Disrupt CAD III	Disrupt CAD IV
Status	Enrollment completed	Enrollment completed	Enrollment completed	Enrollment completed
Study design	Single arm, safety & feasibility	Single arm, post-market, safety & effectiveness	Single arm, IDE, safety & effectiveness	Single arm, pre-market safety & effectiveness
# of patients	60	120	384	64
# of sites	7	15	47	8
Regions	AU, EU	EU	US, EU	Japan
Published	Circulation 2019	Circ Interv 2019	JACC 2020	In Press

CAD patient level meta-analysis (n=628), in progress

# Réglementaire

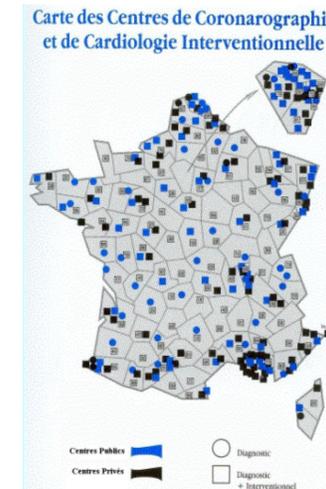
Récent : Marquage CE 2017



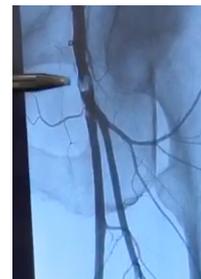
Dispositif Couteux : Non LPPR 1800€/ballon coronaire



Taux de pénétration : 115/201 Centres en France



Existe aussi en Vasculaire périphérique



GRAND-OUEST ANTIBES-CANNES-GRASSE

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Dimanche 25 Octobre 2020

nice-matin  
**Détruire les lésions calcifiées avant de poser un stent**



atruquet@nicematin.fr



« Le Shockwave – ou ballon de lithotripsie intracoronaire (illustration ci-contre) – permet de détruire des lésions calcifiées dans les artères pour pouvoir mettre un stent » explique l'équipe de cardiologues interventionnels.

Merci !

AXELLE TRUQUET