

CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE  
CONTROVERSIES & UPDATES IN VASCULAR SURGERY

**JANUARY 19-21 2017**

MARRIOTT RIVE GAUCHE & CONFERENCE CENTER

**PARIS, FRANCE**



# **Is laser worth the cost ? (In-stent restenosis)**

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## Disclosure

Speaker name:

.....S Anidjar.....

- I have the following potential conflicts of interest to report:
- Consulting
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company
- Other(s)
- I do not have any potential conflict of interest

# WHY ?

**SFA stents (i DES stents):**

**20 - 40% reinterventions**

**IN-STENT restenosis:**

**DEB / POBA ( 30% rest)**

**Laser + POBA /POBA (40 % rest)**

**Laser + DEB / DEB (0-15% rest)**

# **ISR**

**Hydrated collagen matrix**

**60-80% of restenotic volume**

**ABLATION IS THE KEY**

**PTA just compresses lesion temporaly**

**LASER ABLATE TO  
CREATE A CHANNEL**

# Excimer Laser

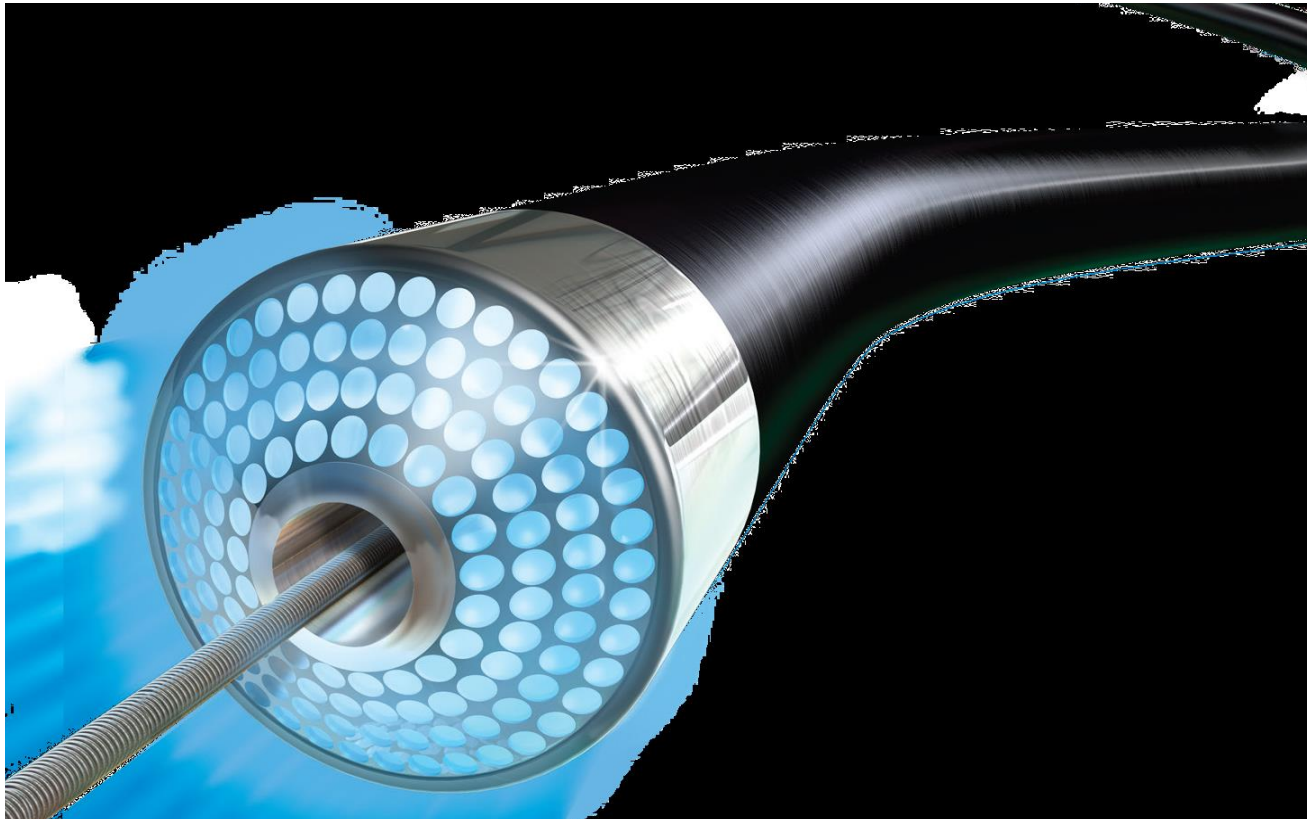
**COLD, PULSED, CONTACT**

# PHOTOABLATION

Particle size post-ablation = 1- 5 microns

**PRECISION : 50 microns depth**

**Catheters of 2 / 2.3 mm diameter,  
240 optical fibers of 61 microns  
DIRECT contact with the tissue  
7-F delivery system**





 **Excimer Laser**  
System

*Spectranetics*



# Technical steps

- **Select the appropriately sized catheter**
- **Connect the proximal end to the laser unit**
- **Calibrate the laser catheter (calibration window)**
- **Flush the lumen with heparinized saline**
- **Advance the laser cath. 1mm per sec**
- **Infuse saline continuously to remove contrast (Y connector)**
- **Multiple passes**

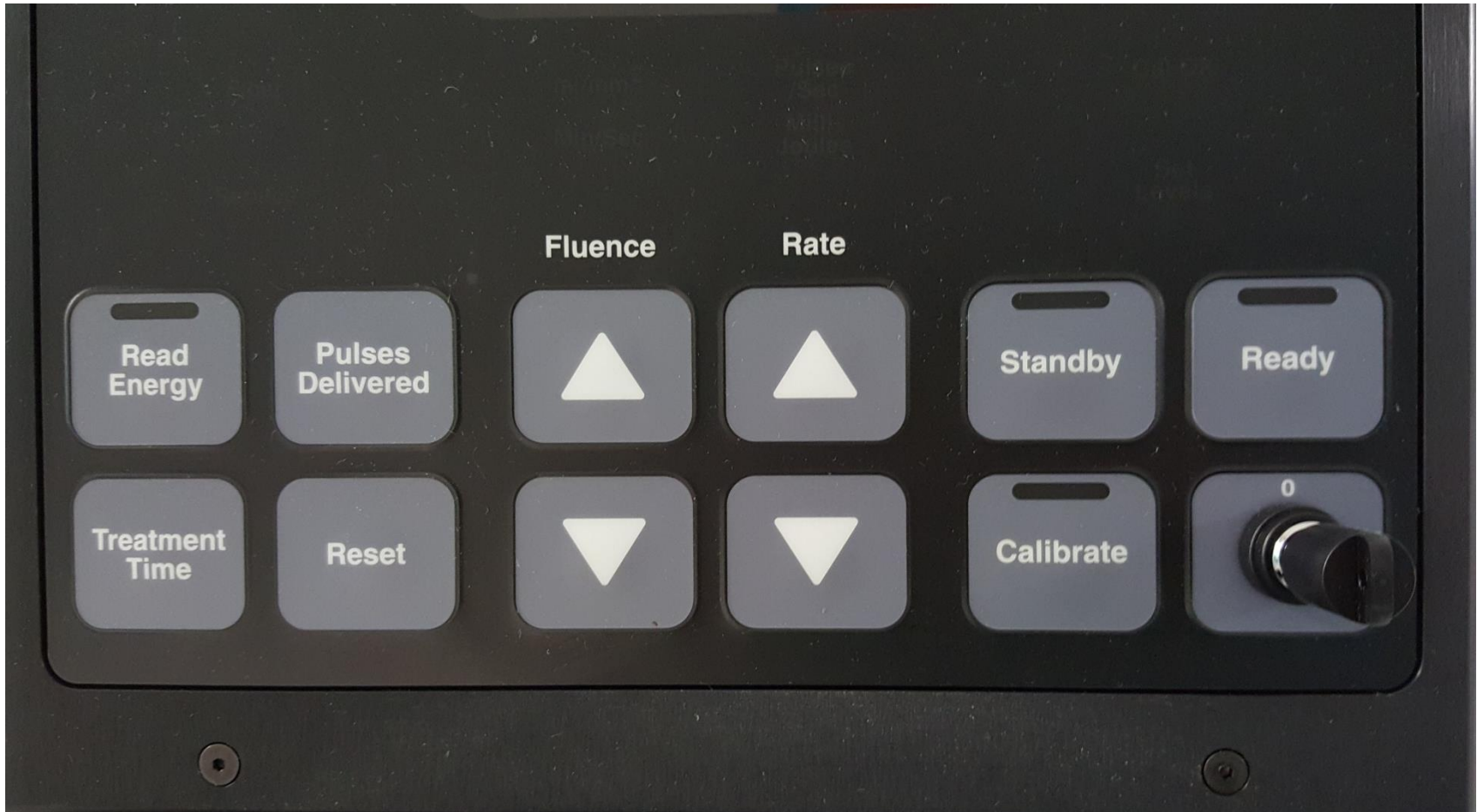
# Excimer Laser setting

**Fluence (power)**

**mJ / mm<sup>2</sup>**

**Frequency (rate)**

**Hz**



Read  
Energy

Pulses  
Delivered

Fluence

Rate

Standby

Ready

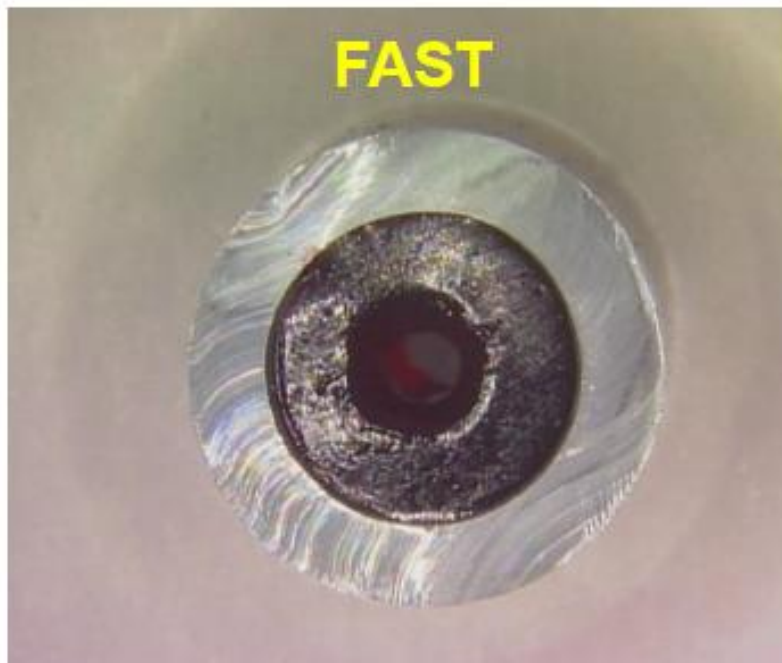
Treatment  
Time

Reset

Calibrate

0

# PROGRESSION 1 MM PER SEC

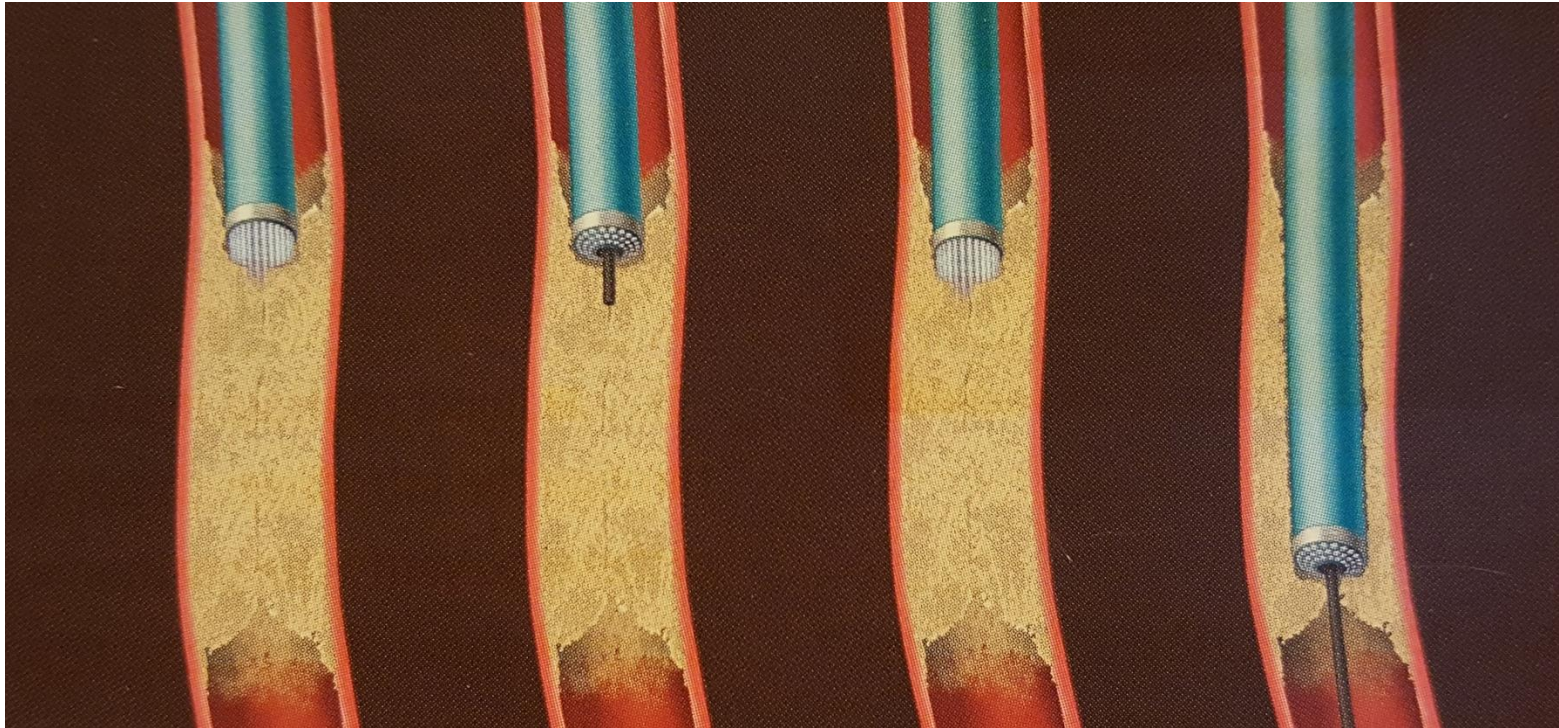


# Excimer Laser

**Crossing with a guidewire +++**

**Step-by-step technique**

# Step by step technique



# Laser excimer

**In-stent restenosis(28 pts)**

**In-stent chronic total occlusions(8 pts)**

**De novo stenosis ( high risk of restenosis)  
(6 pts)**

# **In-stent-restenosis**

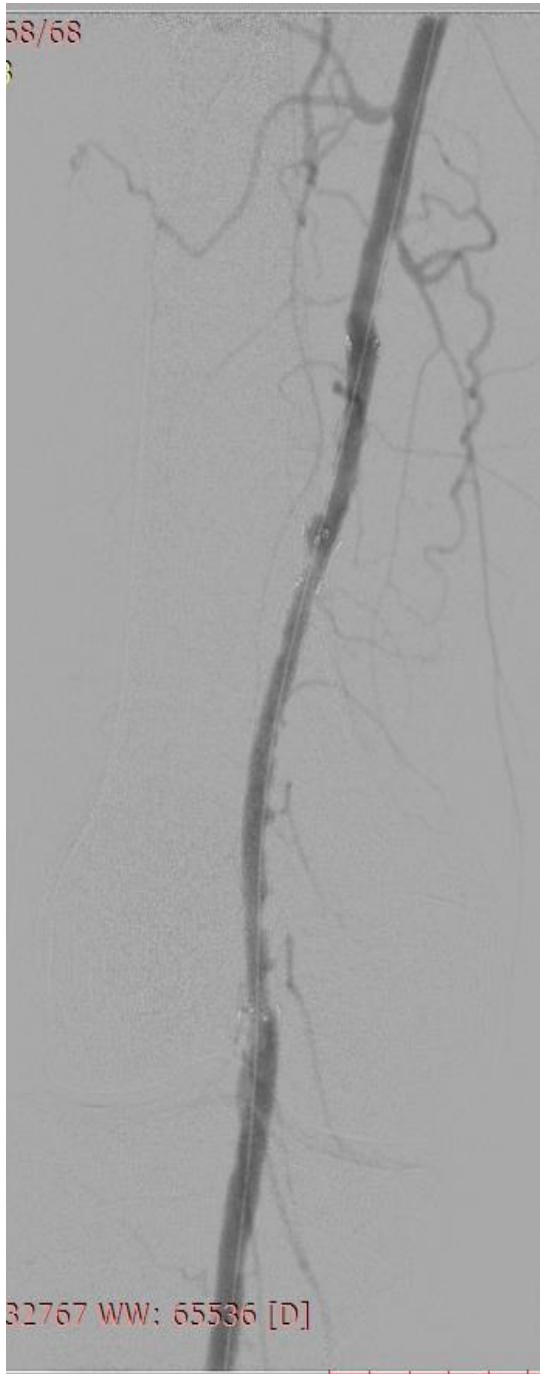
**Debulking**

**+**

**DEB**



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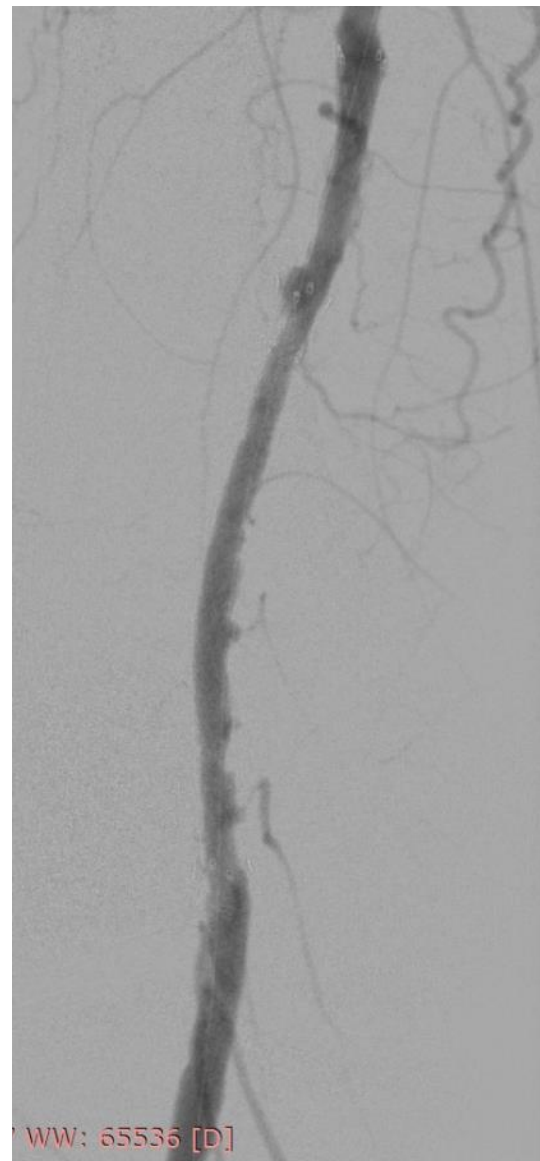
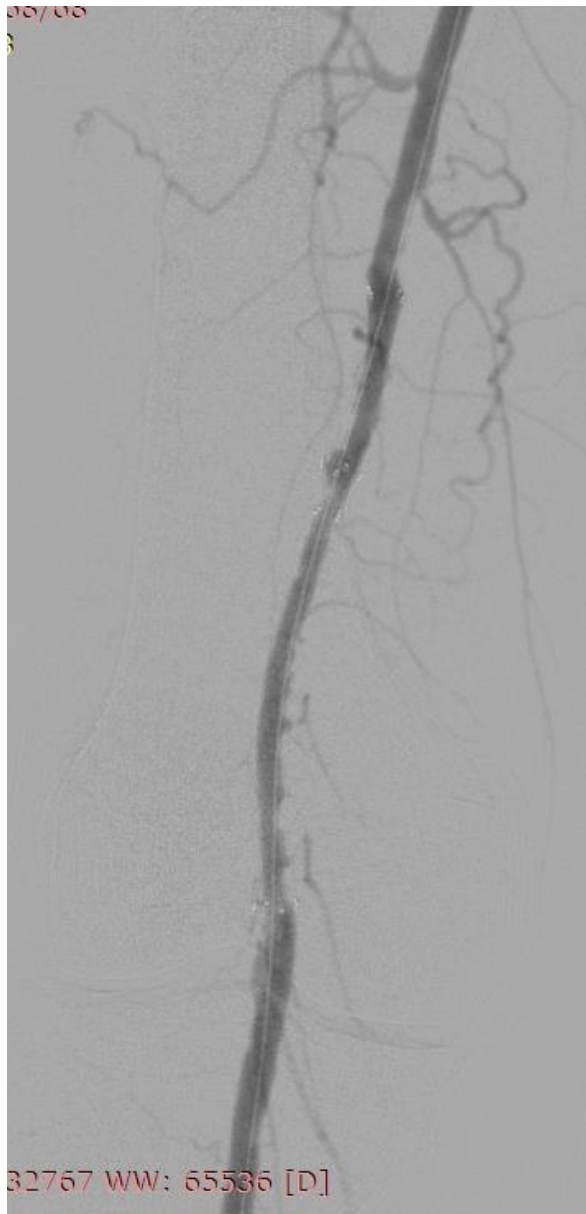


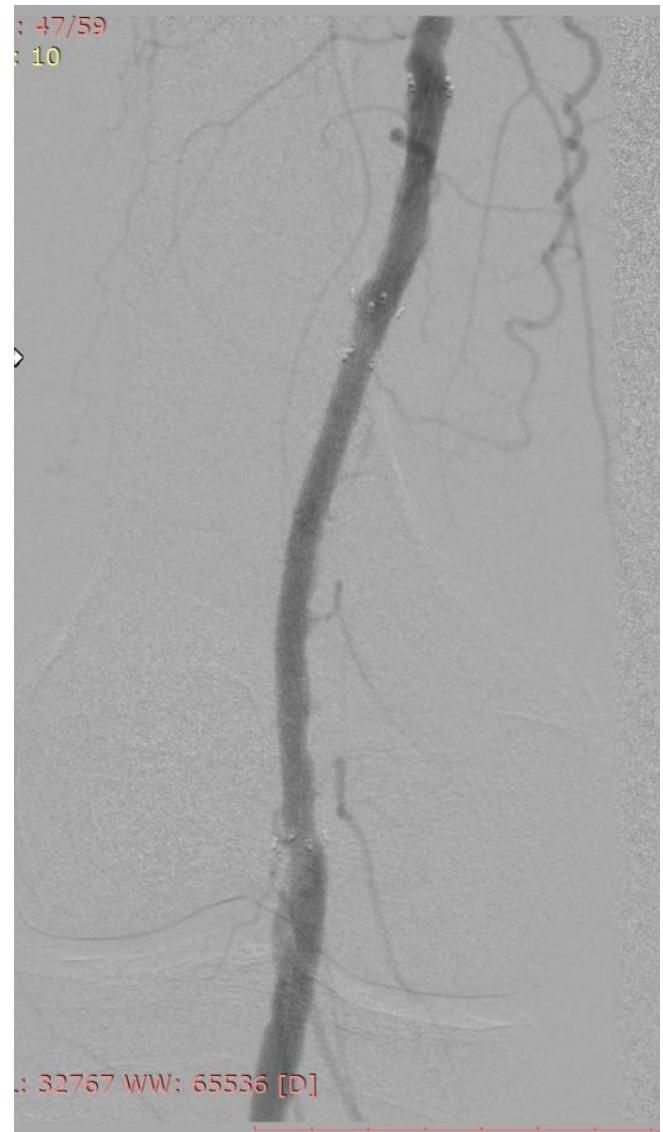
32767 WW: 65536 [D]

1/1  
:7

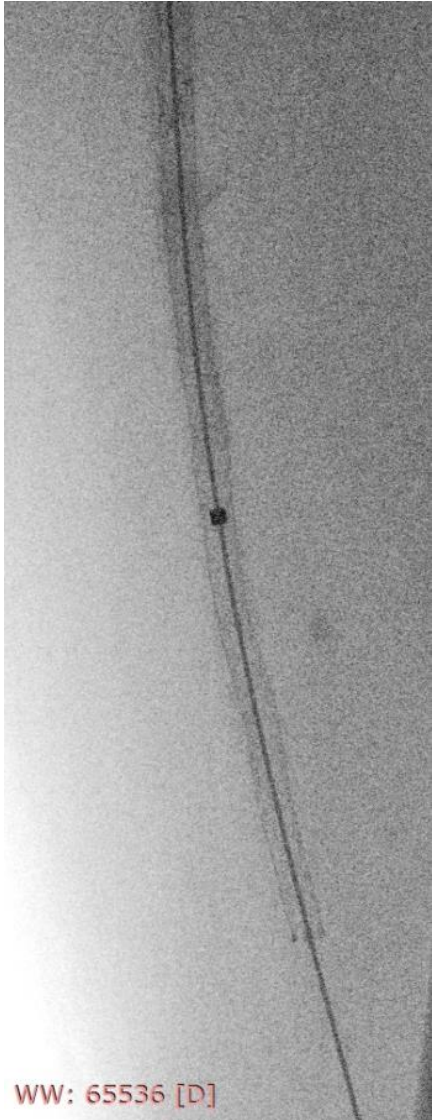


: 32767 WW: 65536 [D]





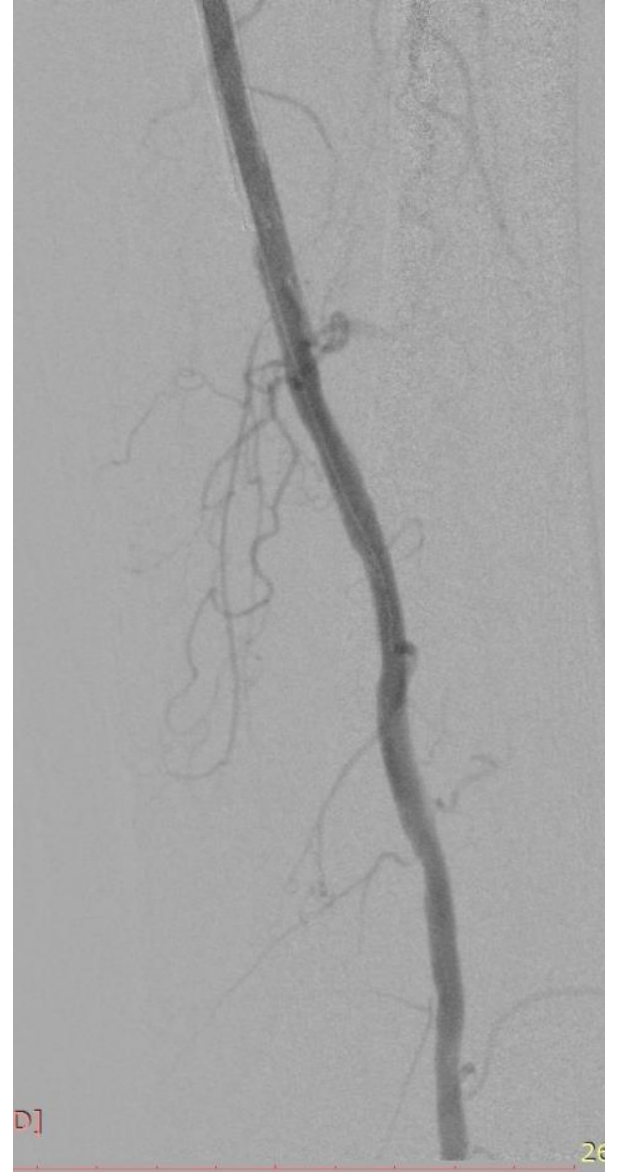




WW: 65536 [D]



65536 [D]



# **Chronic IS occlusion**

**Wire recanalisation**

**+ Debulking**

**+ DEB**

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9

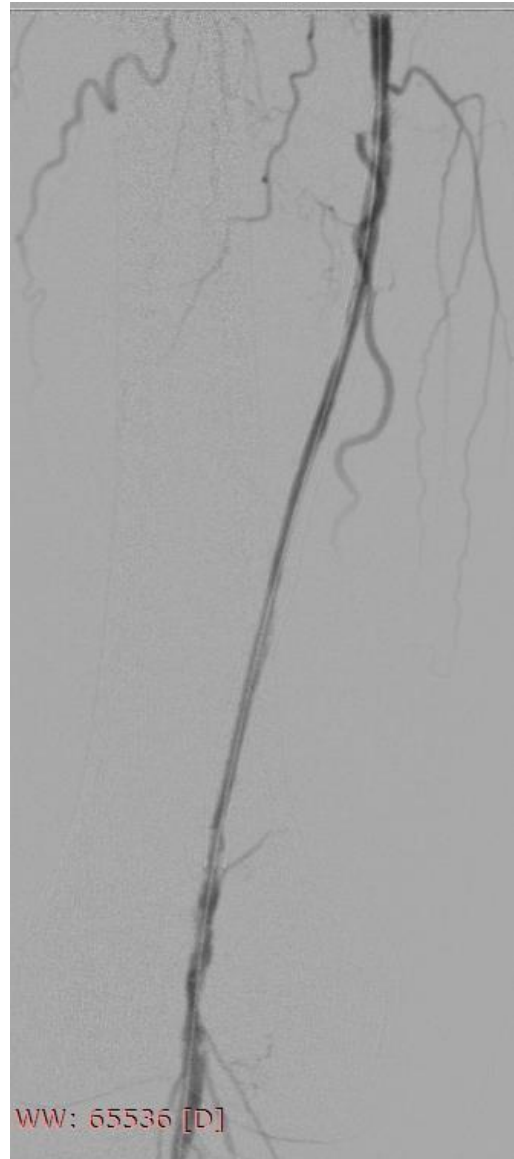
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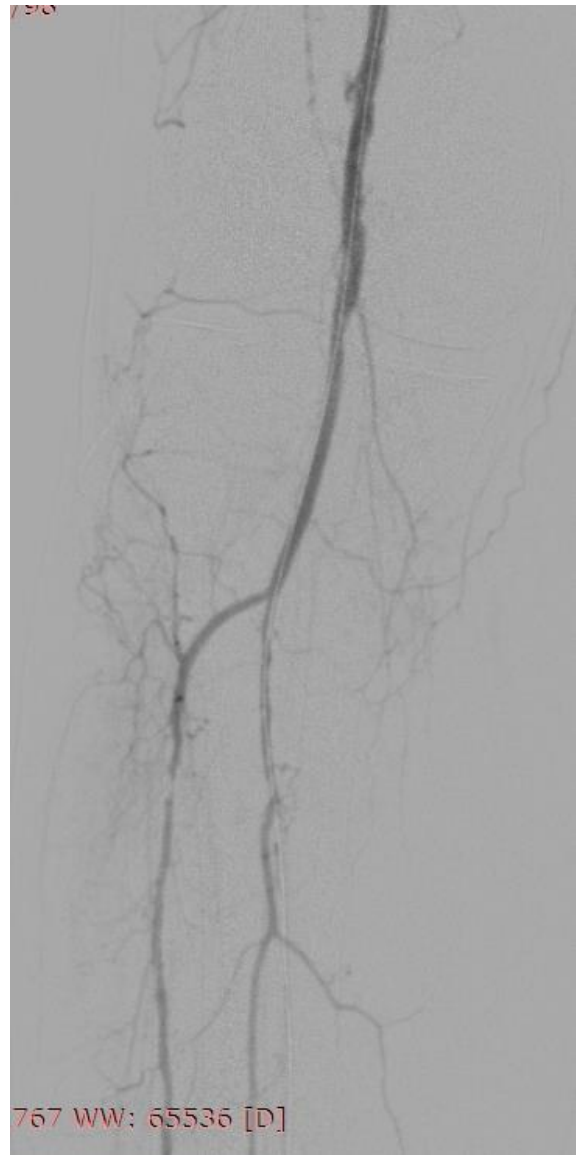
2767 WW: 65536 [D]





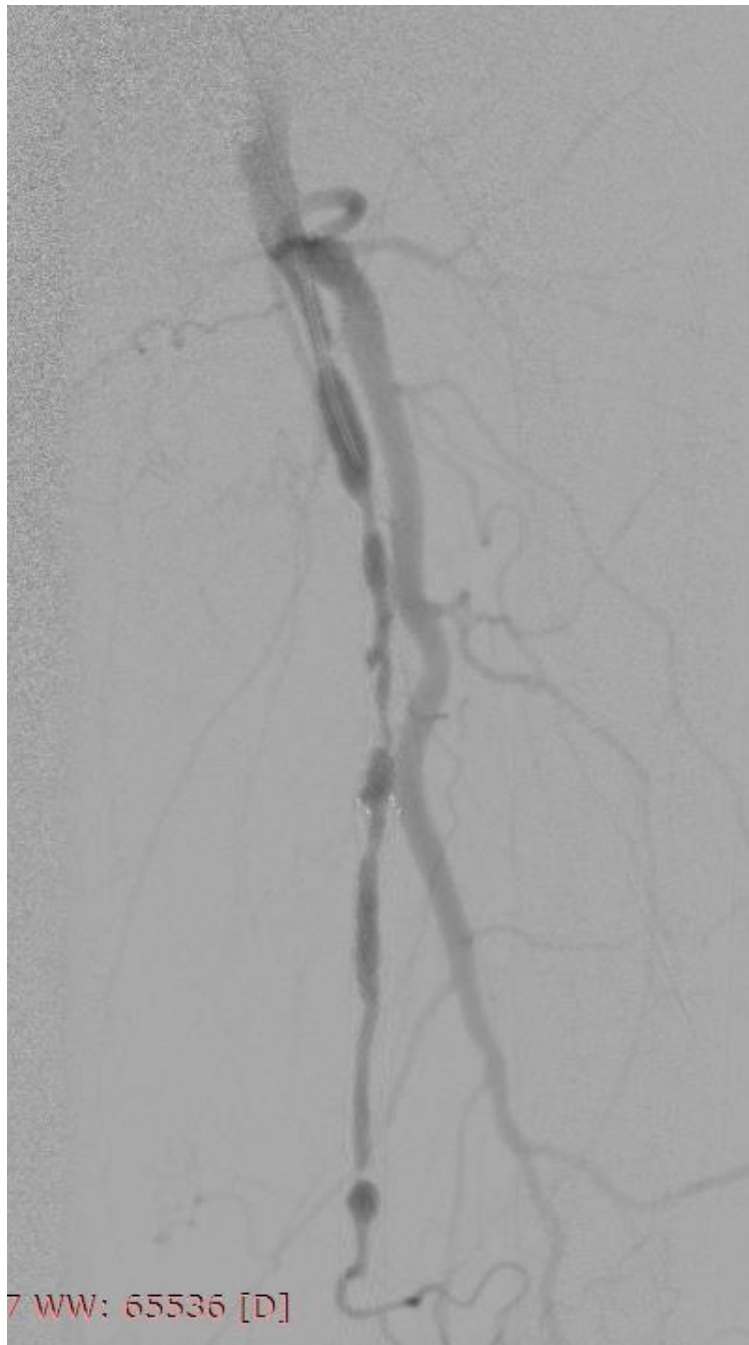




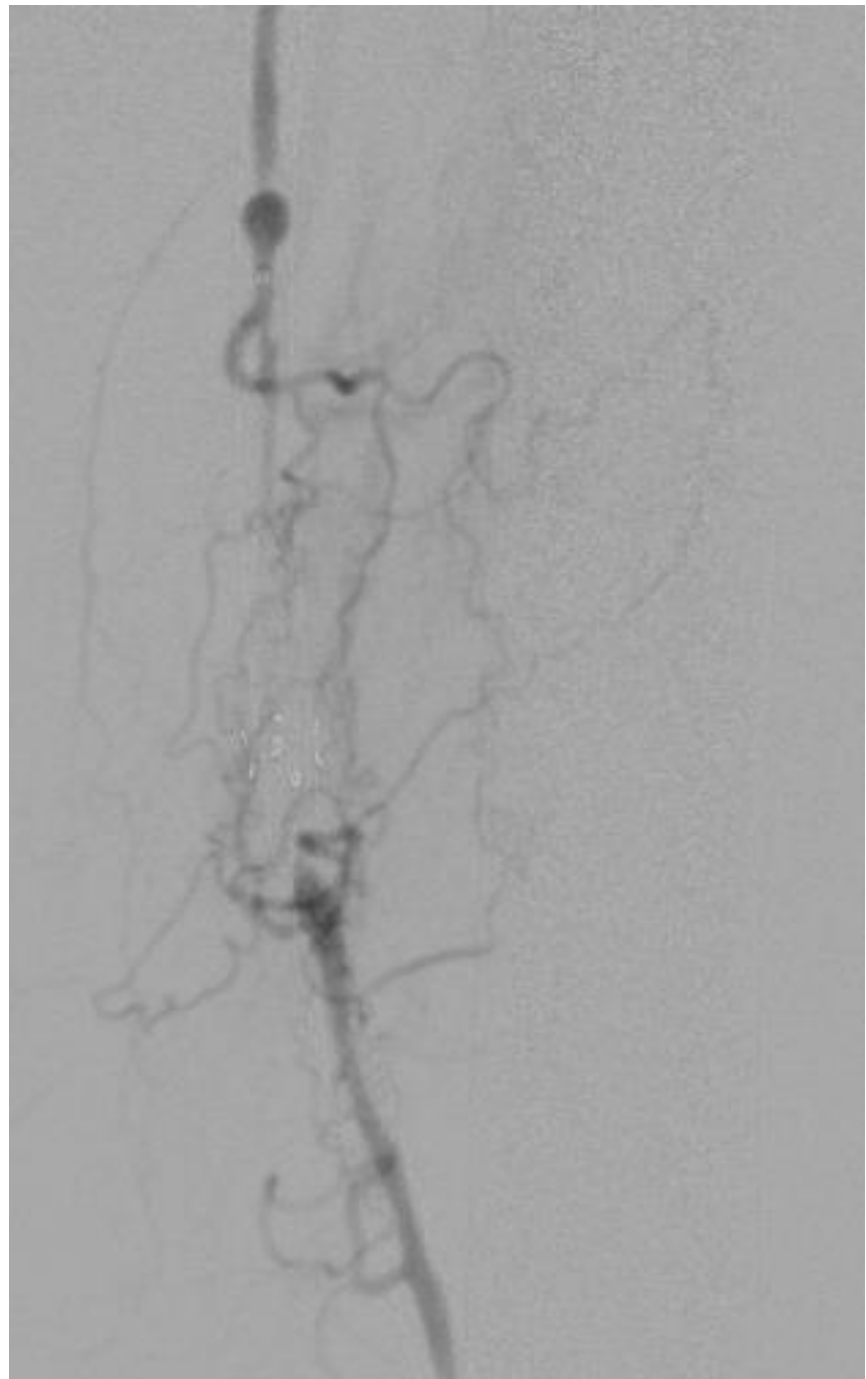


**In-stent-restenosis  
+ instent-CTO  
Cross-over**

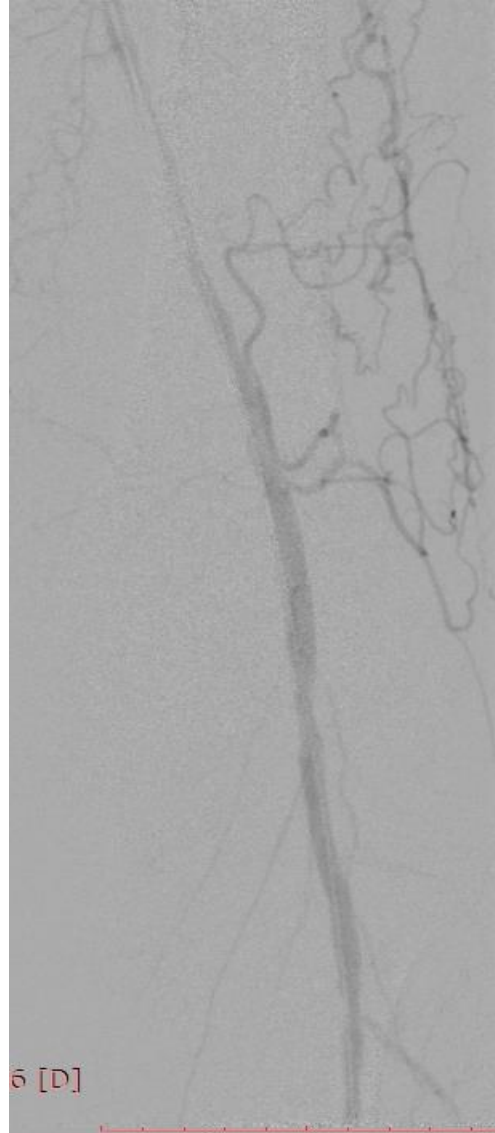
**Recanalisation (wire  
+ Laser step-by-step )  
+ Debulking Laser  
+ DEB**



7 WW: 65536 [D]

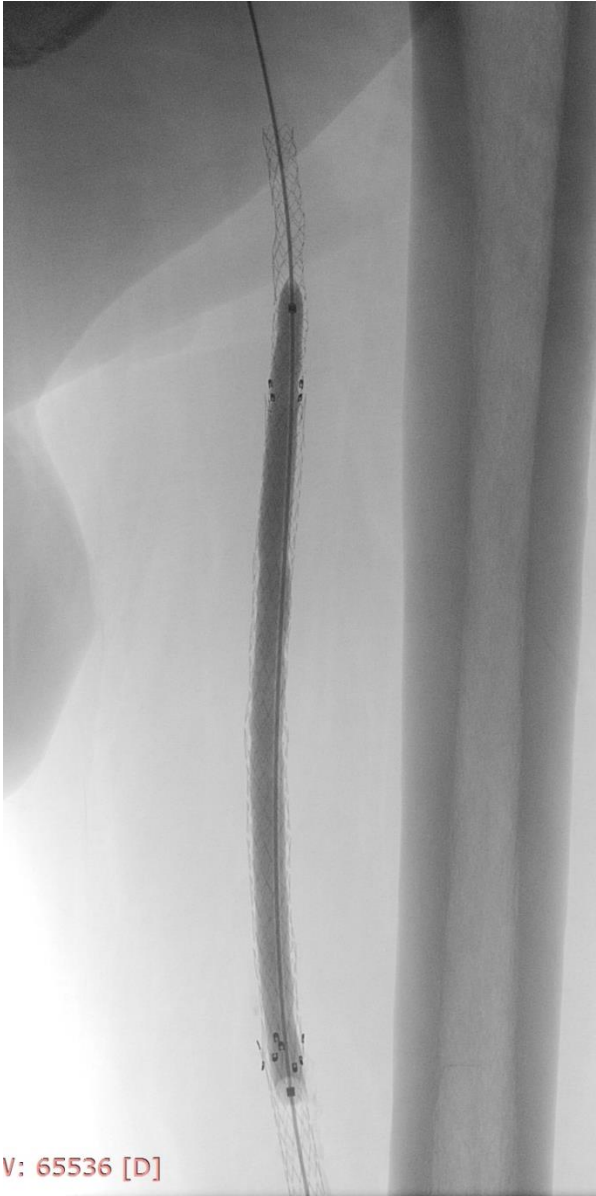


# After laser step-by-step

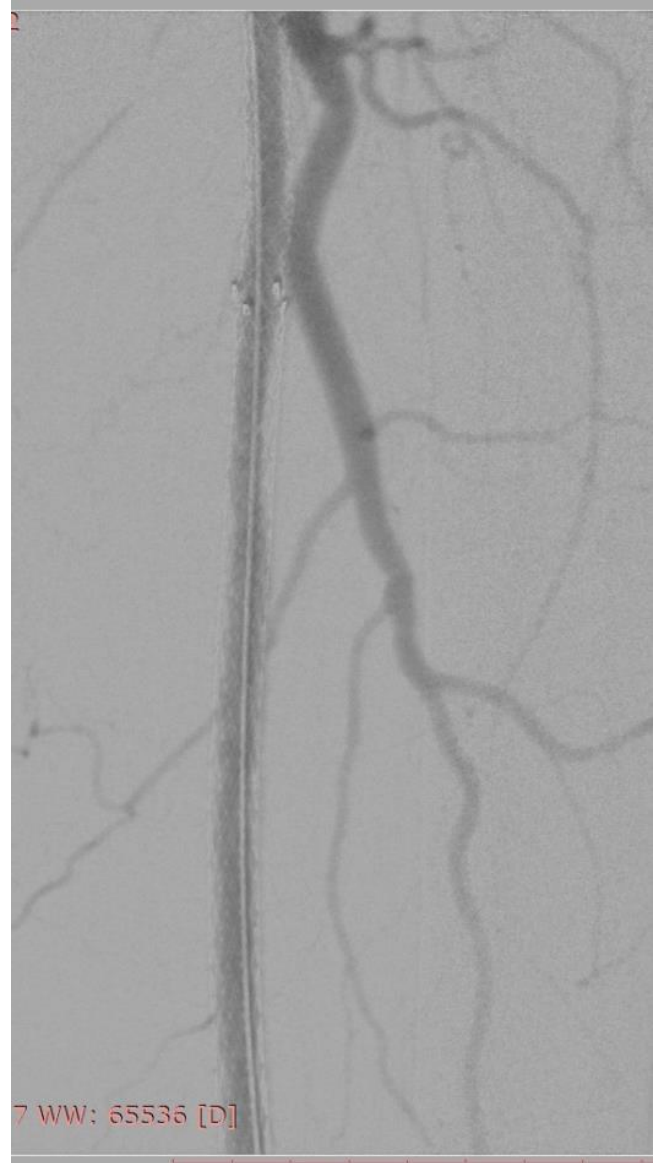
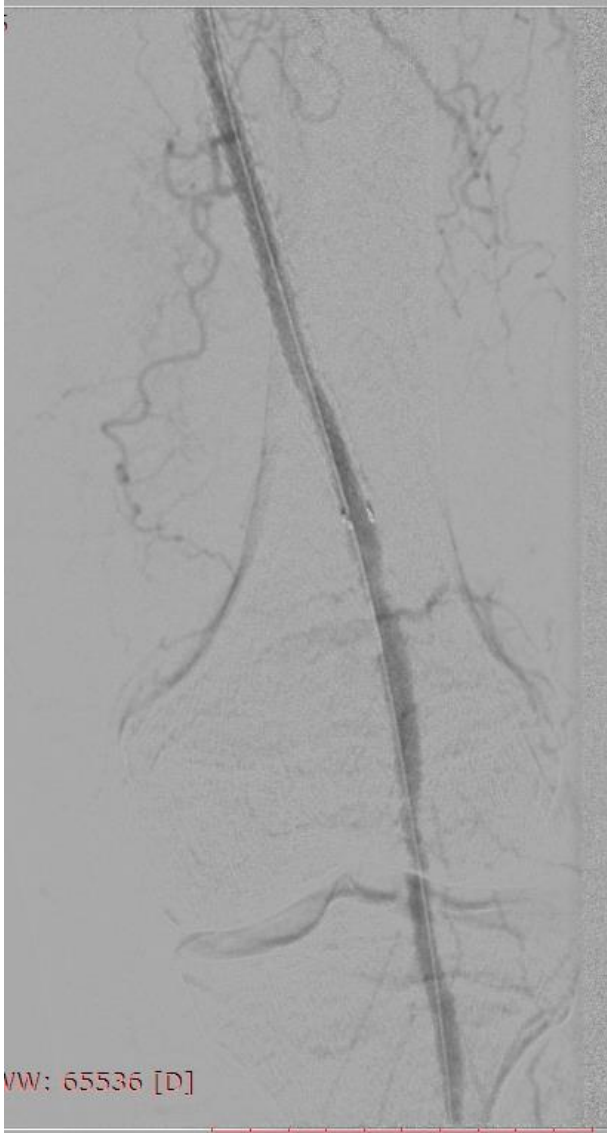












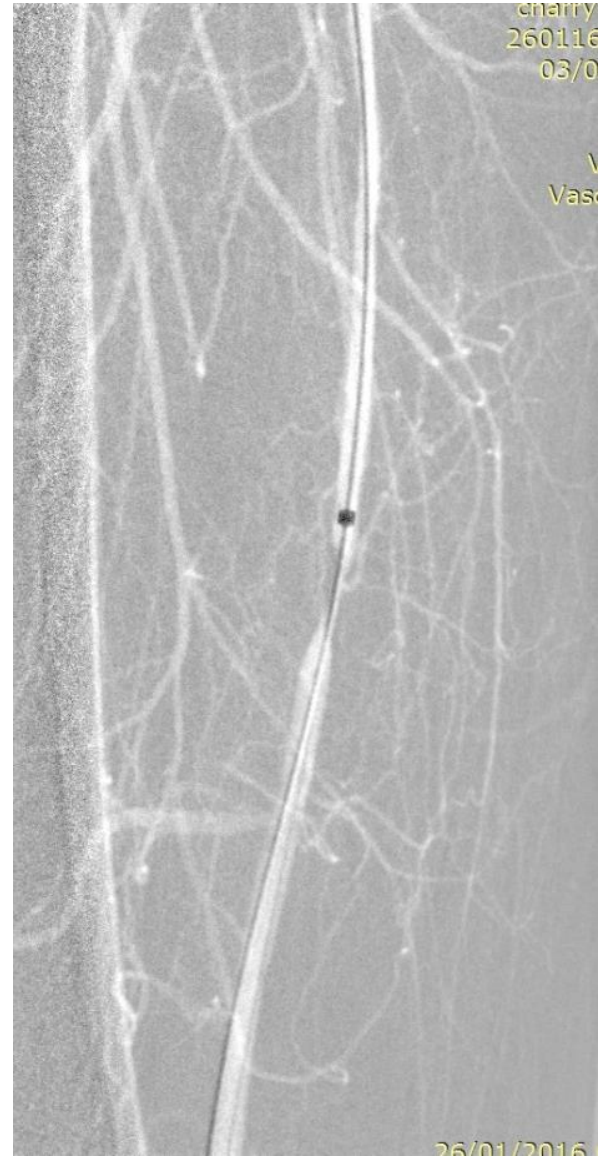
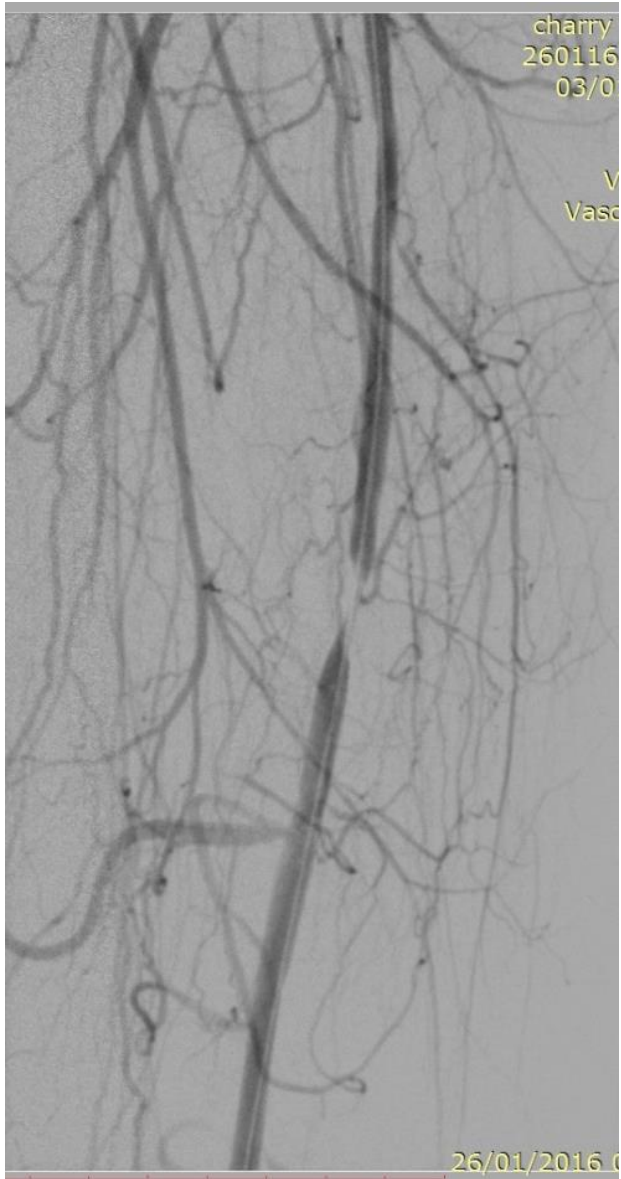
**De novo  
chronic total occlusion**

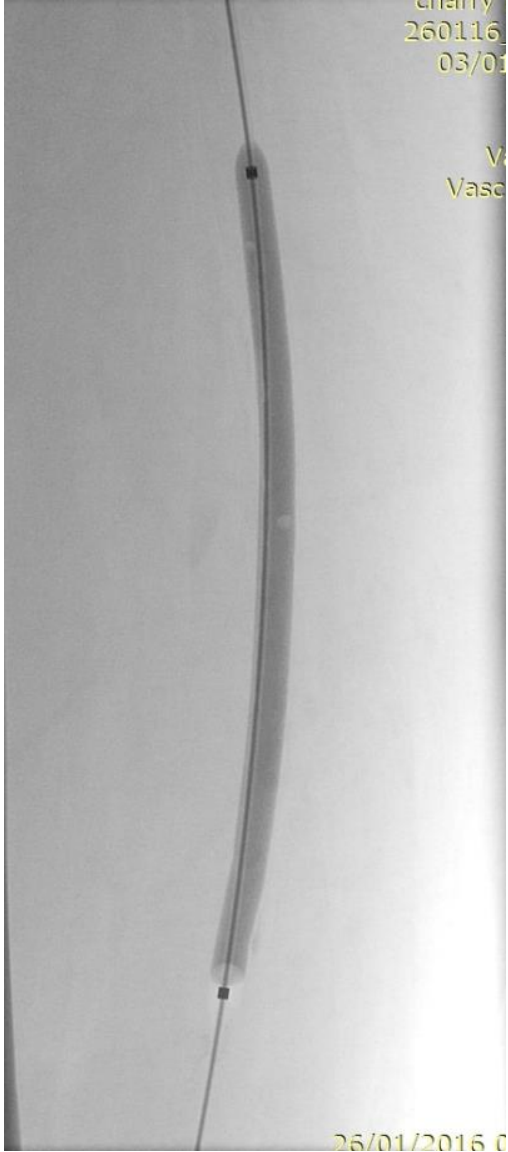
**Wire recanalisation**

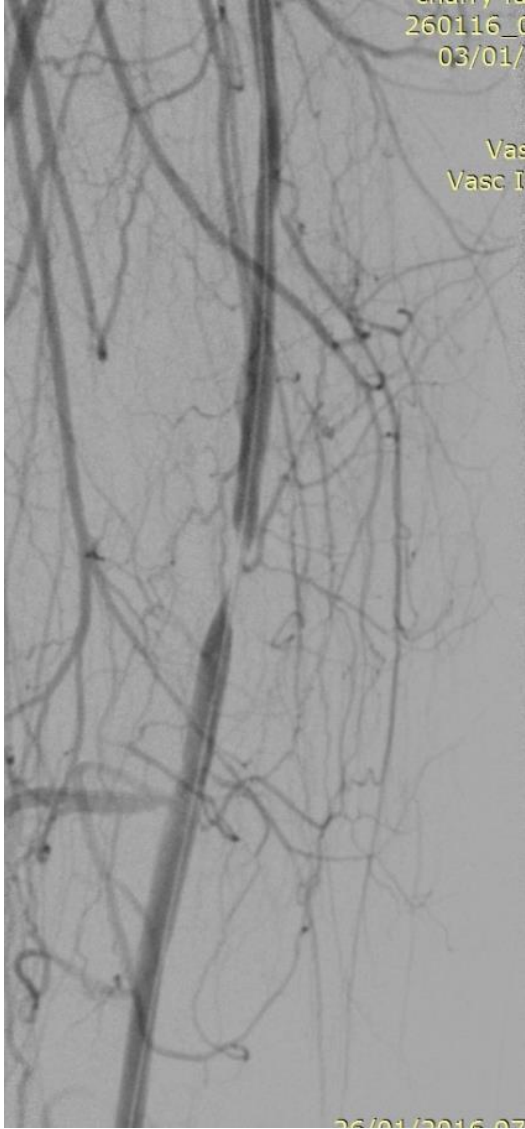
**+ Debulking**

**+ DEB**

**Elective stent**







# **SFA ISR (2014-2016)**

**36 patients ( 28 Tosaka 1-2; 8 Tosaka 3)**

**ELA + Paclitaxel eluting balloon**

**100 % procedural success**

**Duplex ultrasound 6, 12, 18, 24 months**

**100 % primary patency ( 19 pts 1 y,  
11 pts 1,5 y, 30 pts 6 months)**



# SFA IN-STENT RESTENOSIS

**EXCIMER LASER IN  
ASSOCIATION WITH  
PACLITAXEL ELUTING  
BALLOON  
IS THE SOLUTION**