

# i-MEET

## NEXT GENERATION

Multidisciplinary European Endovascular Therapy

How to keep the foot in the shoe

- don't use the plain old balloon angioplasty

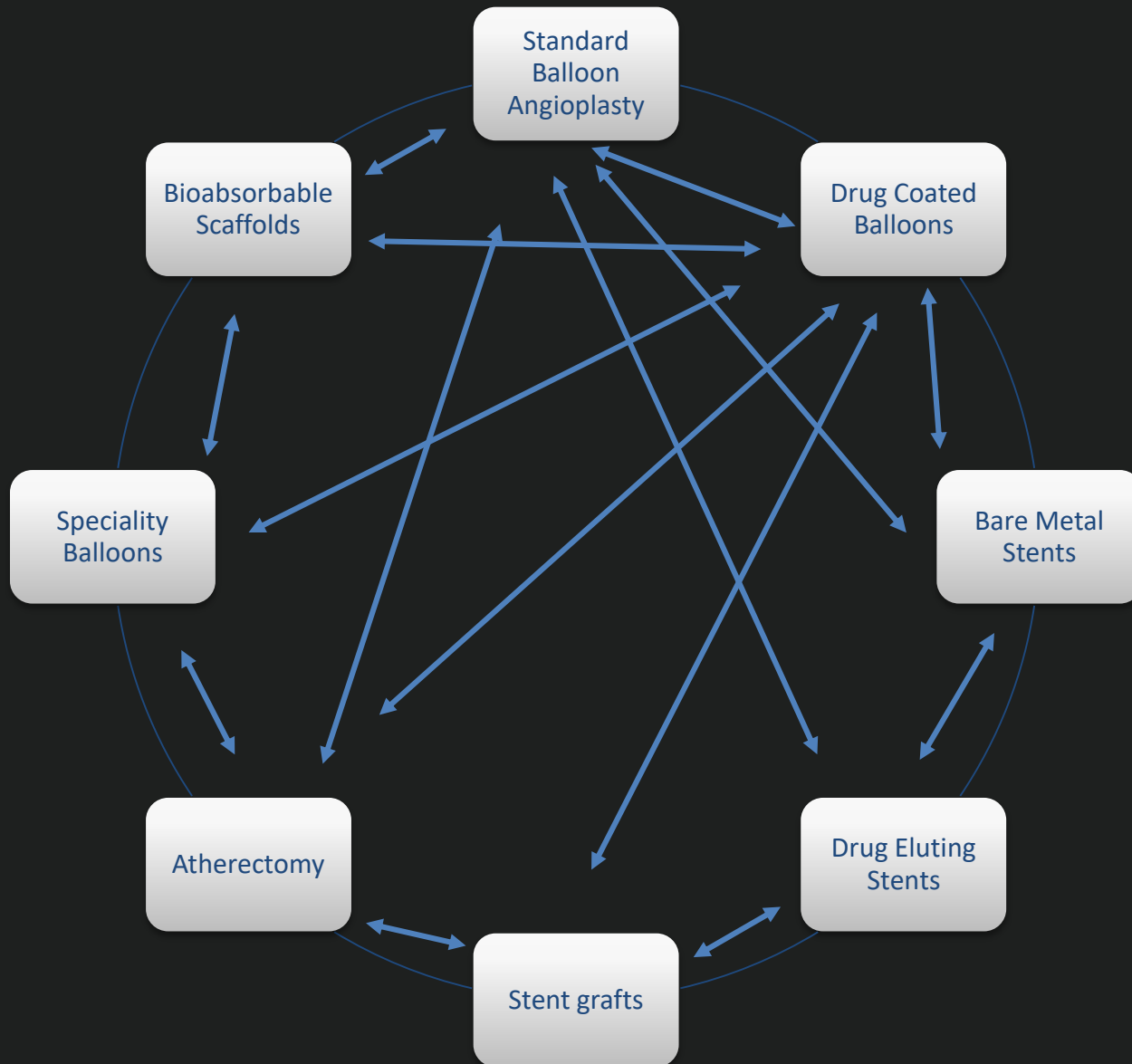
Martin Werner, Vienna, Austria

# Disclosure of Interest

Speaker name: Martin Werner

- 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**

# Possible Choices in Endovascular PAD Treatment



## Evidence in CLI treatment is scarce

- Most Fem-Pop trials have enrolled claudicants only
- DCB trials BTK have until now not shown superior results to POBA
- Many patients have multilevel disease (iliac +/- fempop +/- BTK)
- Woundhealing depends on many other factors

# Case presentation

Male patient  
74 years old

PAD Rutherford 5

Ulcerations D1-4  
+ lateral foot

Comorbidities:  
Arterial hypertension  
Hyperlipidemia



# Clinical characteristics

Male patient  
74 years old

March 29, 18: First presented at primary care physician

Wounds were treated locally

PAD Rutherford 5

April 2018: No improvement. antibiotics for 10 days.

Ulcerations D1-4  
+ lateral foot

May 2018: No Improvement, patient was referred to us.

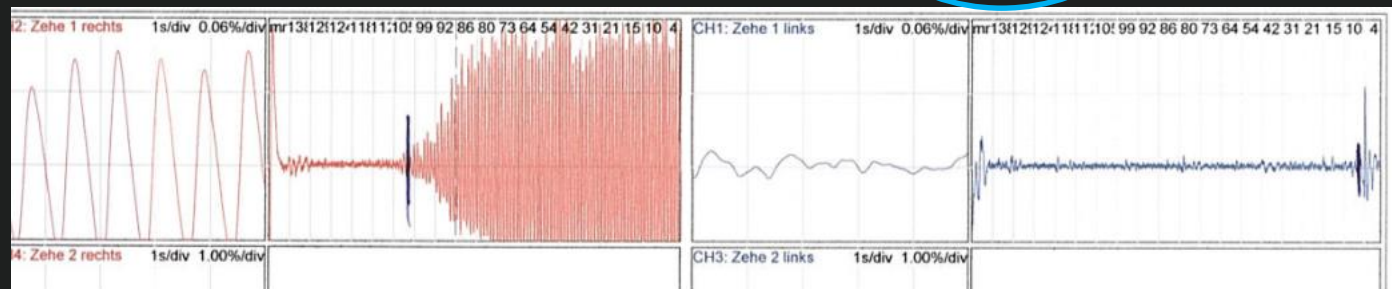
Comorbidities:  
Arterial hypertension  
Hyperlipidemia

ABI right 0,83

ABI left: 0,49

TBI right 0,6

TBI left: 0,06



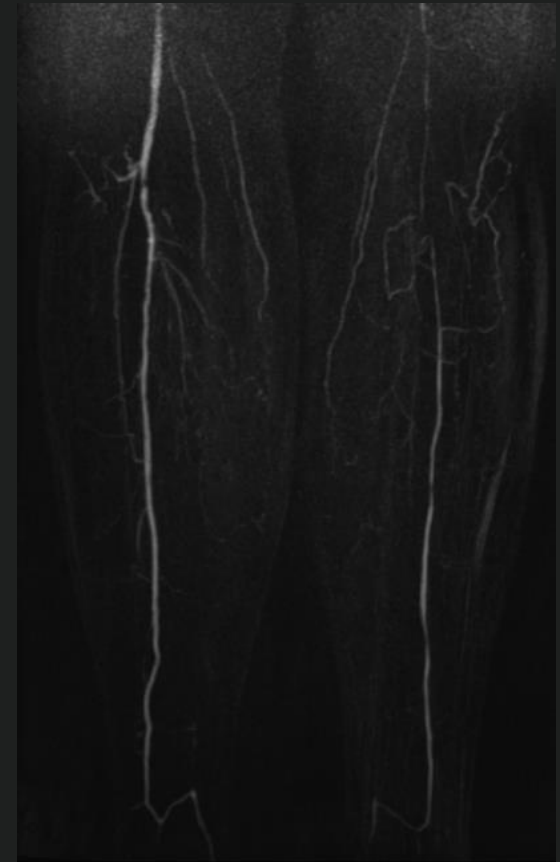
# Pre-interventional diagnostics

Duplex: Good Inflow from iliac arteries, occlusion SFA, Popliteal artery and no perfusion of A. tib ant. or post. at the foot



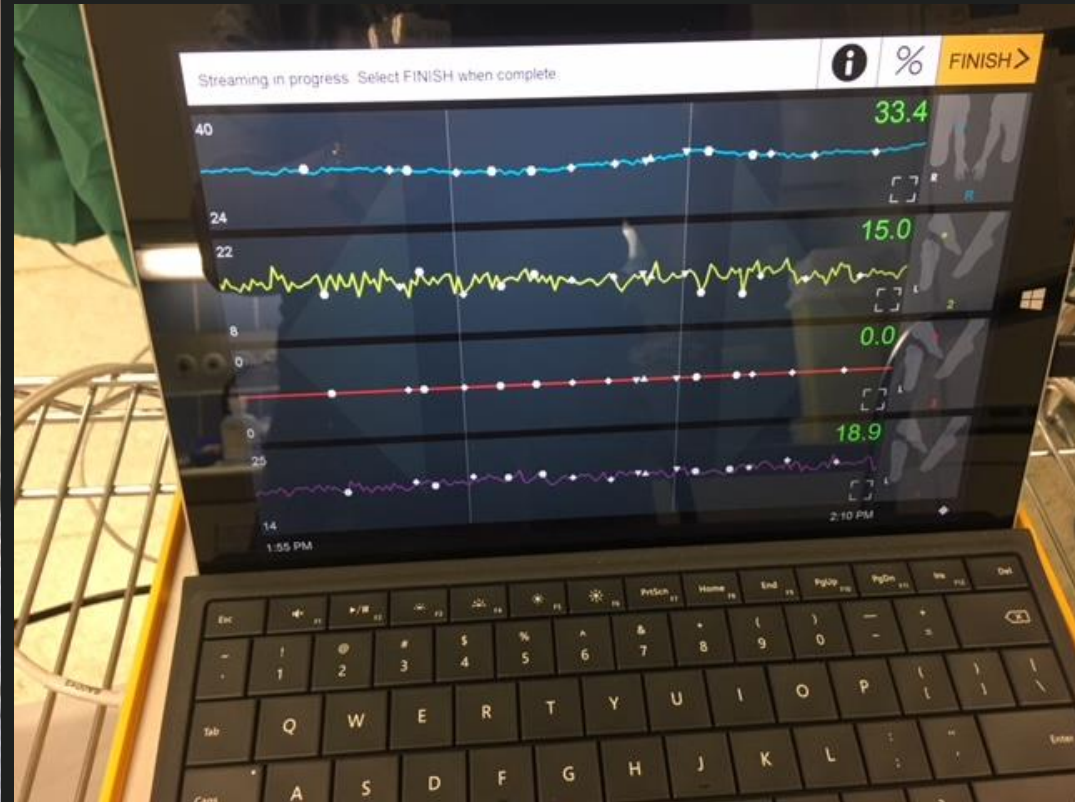
# Pre-interventional diagnostics

Patient was hospitalized, put on i.v. antibiotics and ilomedin and a MRA was performed:

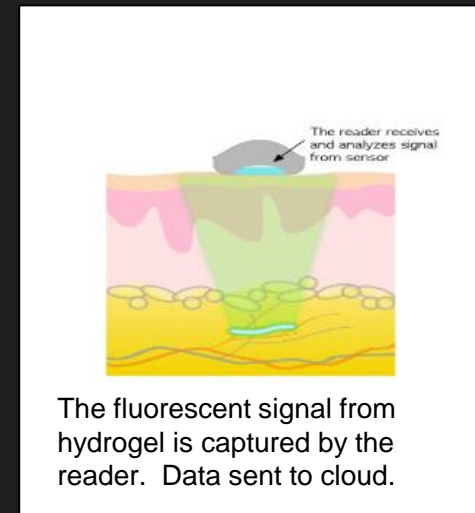
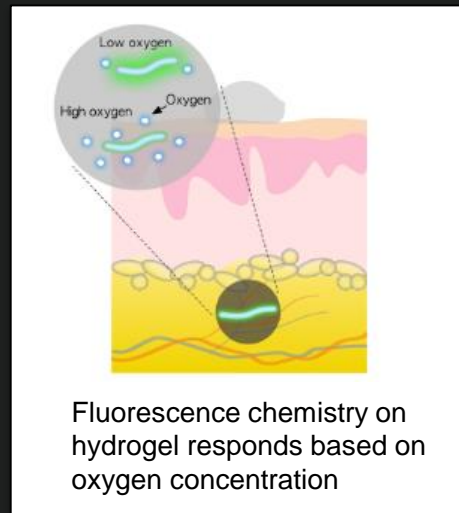
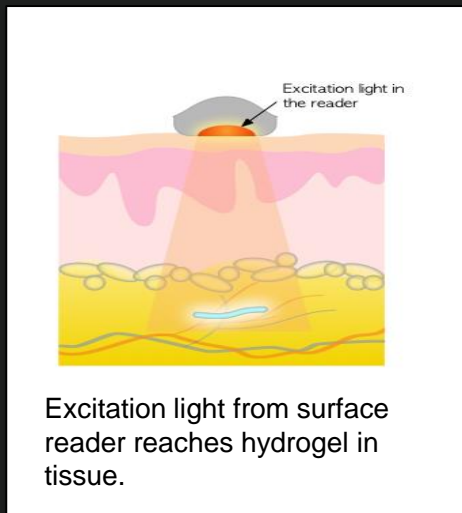




# Intraoperative measurement of tissue oxygenation: OMNIA trial (Profusa Inc.)

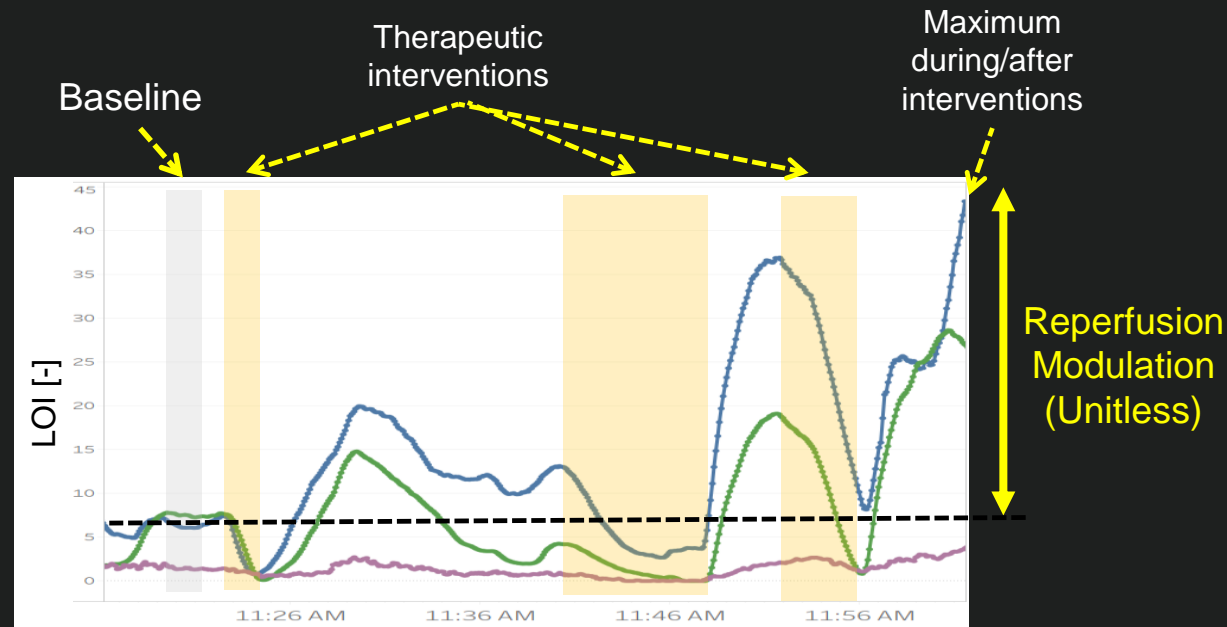


# Intraoperative measurement of tissue oxygenation: OMNIA trial (Profusa Inc.)



# What information do we extract from Lumeex Intra-Surgically? Reperfusion Modulation

- Defined as difference in LOI between baseline and maximum after intervention
- Larger values are associated with greater increases in tissue oxygen during the procedure
- Data can be averaged across all Lumees, or selected from a Lumeex of interest

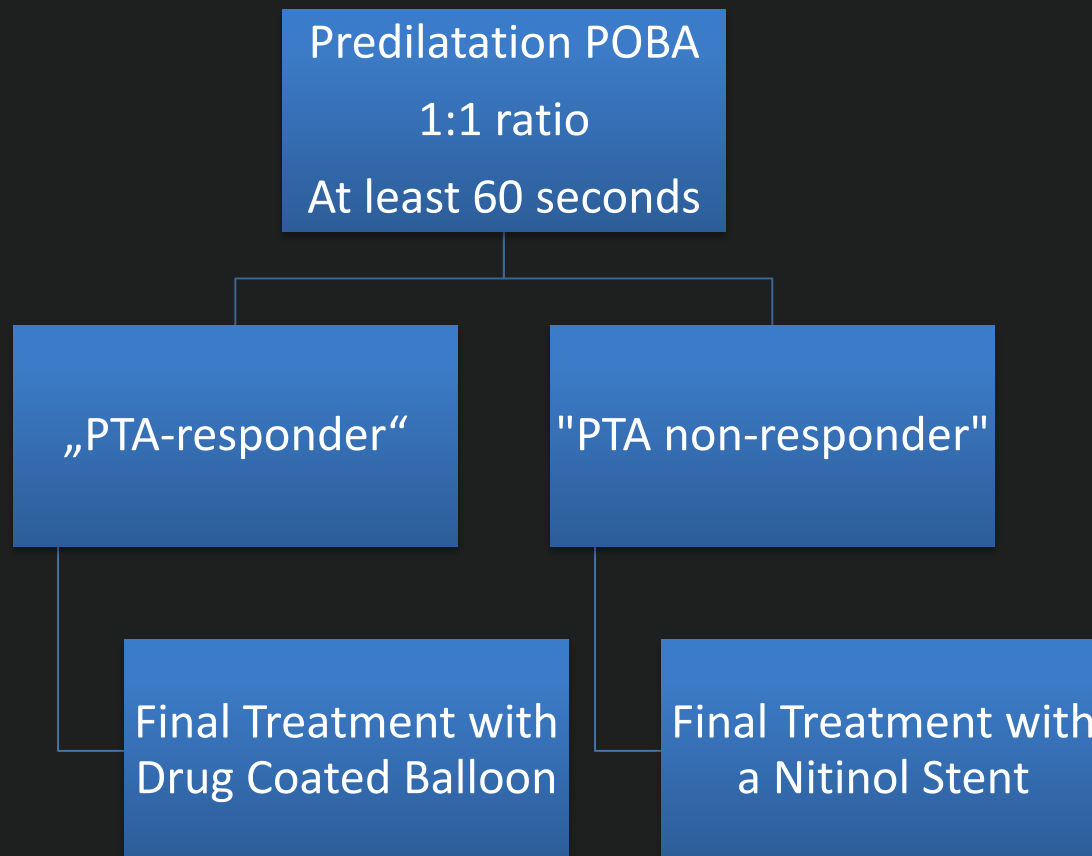


Procedure: May 24th

left antegrade 5F access



# Treatment algorithm for femoropopliteal lesions at Hanusch Hospital



Procedure: May 24th

after PTA with 5/100 POBA



Thrombus in the lesion

Embolus in mid SFA

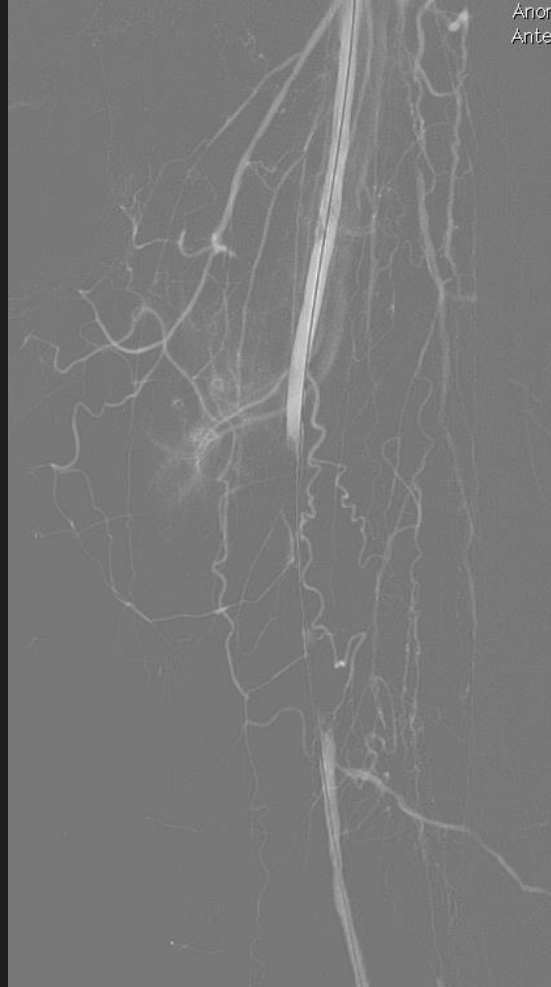
Embolus in Deep Femoral Artery

**PTA non-responder**



Procedure: May 24th

after PTA with 5/100 POBA



What now?



Procedure: May 24th

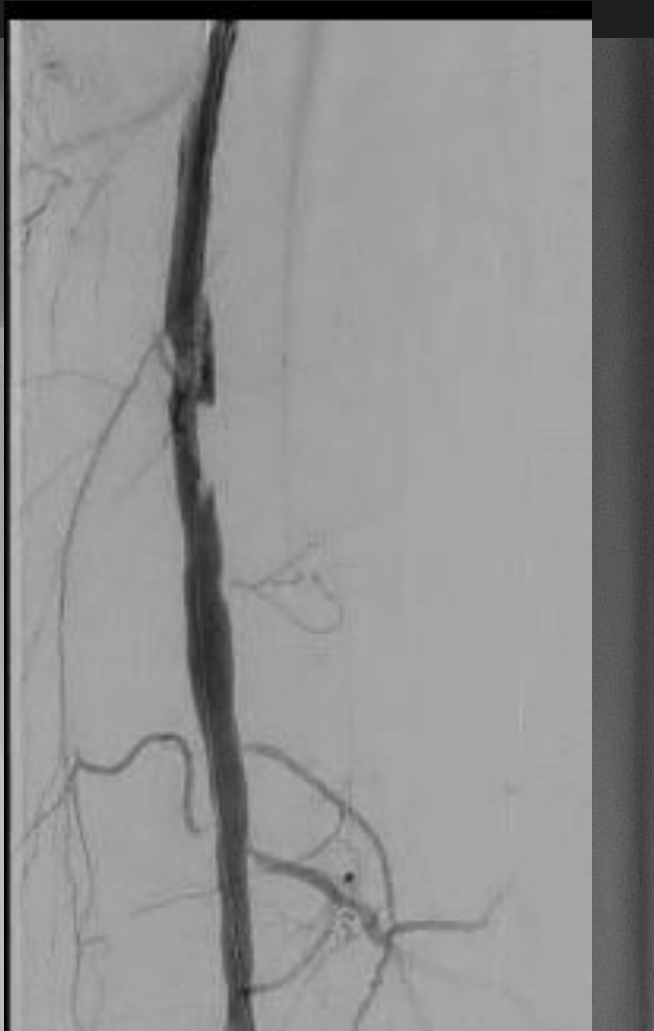
Change to 8F 45cm Sheet with detachable valve

Mechanical Aspiration  
(over the sheet)

PTA of stenosis 5/20 POBA

*PTA non-responder*

STENT NOW ?!



Procedure: May 24th

Emboli in the popliteal Artery

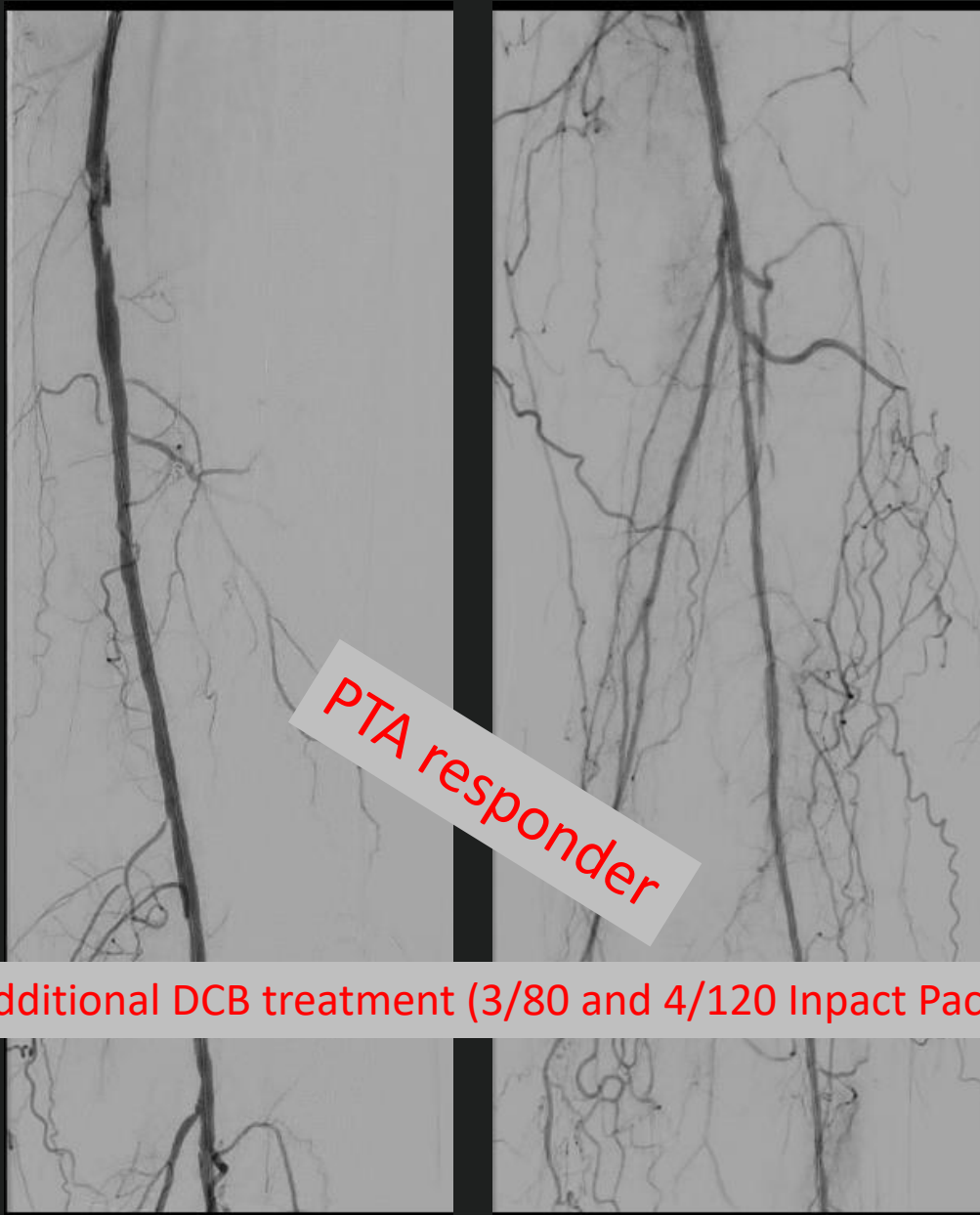


8F Aspiration

Wire Passage to the peronea

PTA with 3mm and 4mm POBA

# Procedure: May 24th

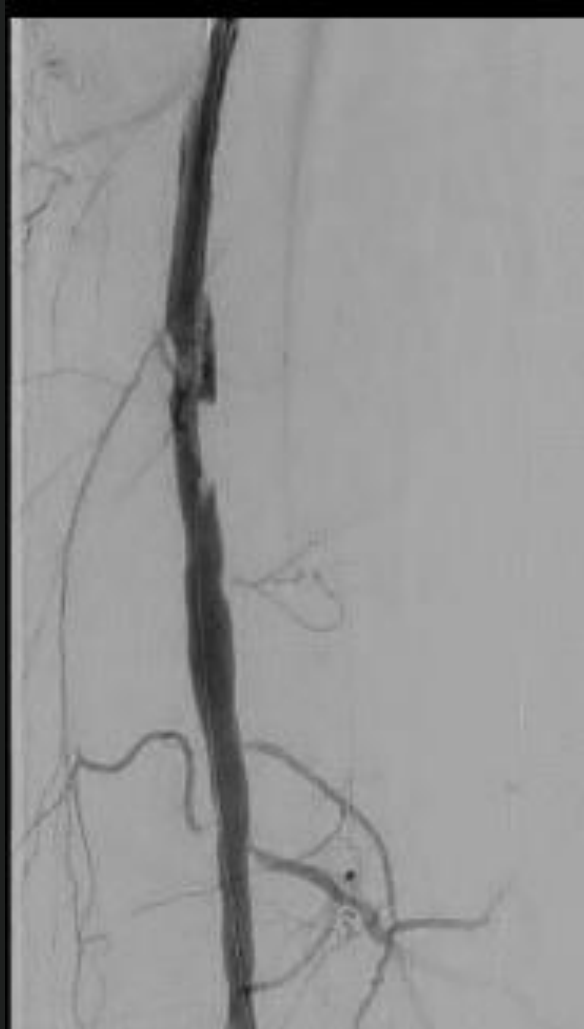


**PTA responder**

**Additional DCB treatment (3/80 and 4/120 Impact Pacific)**

Procedure: May 24th

Stenting (6/40 GORE Tigris Stent)



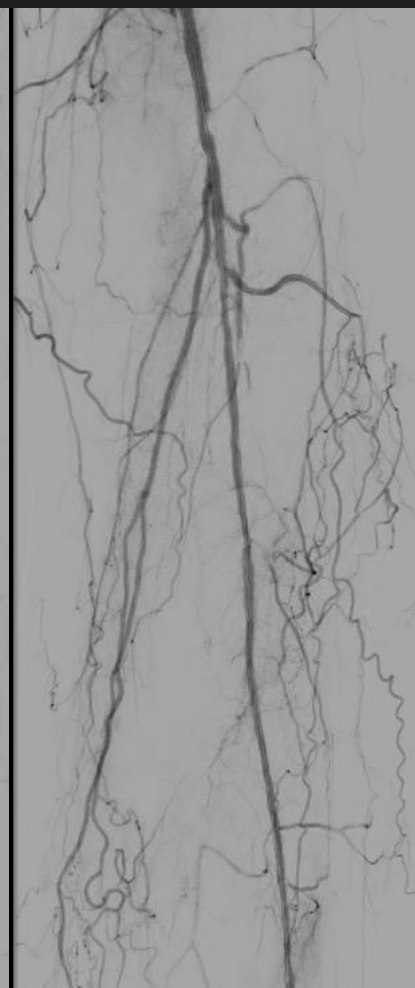
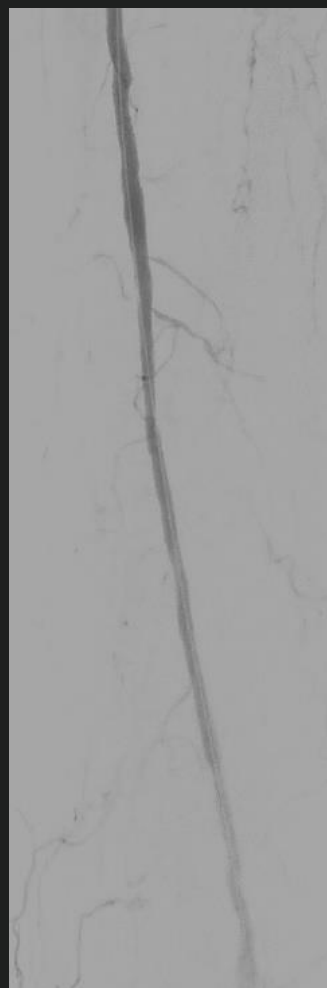
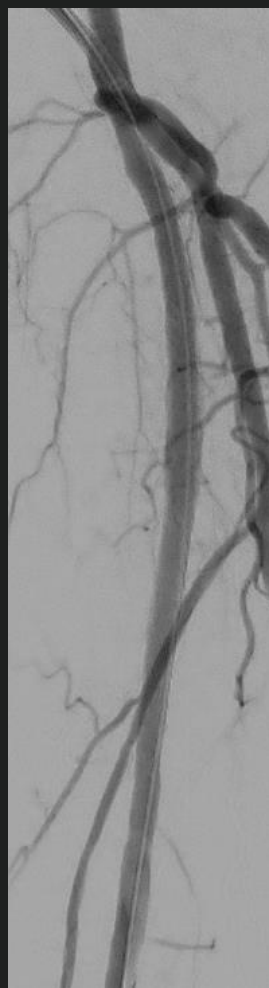
Procedure: May 24th

Stenting (6/100 GORE Tigris Stent)



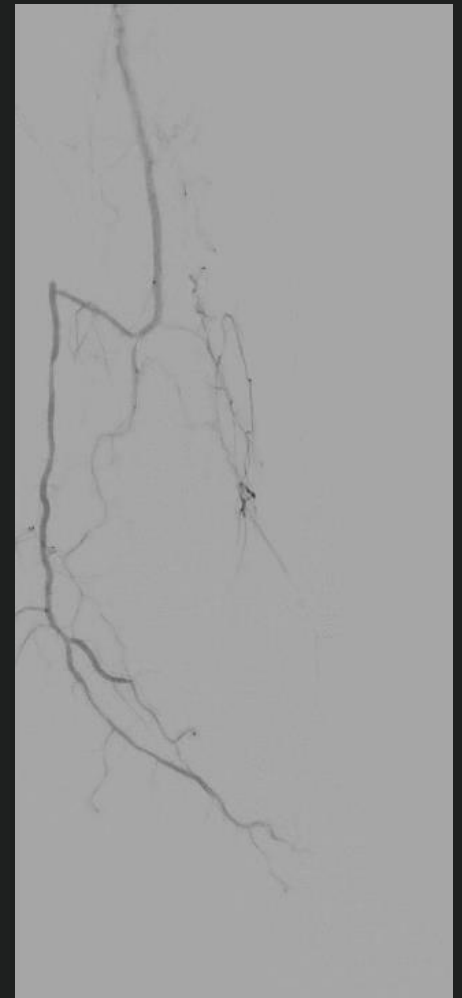
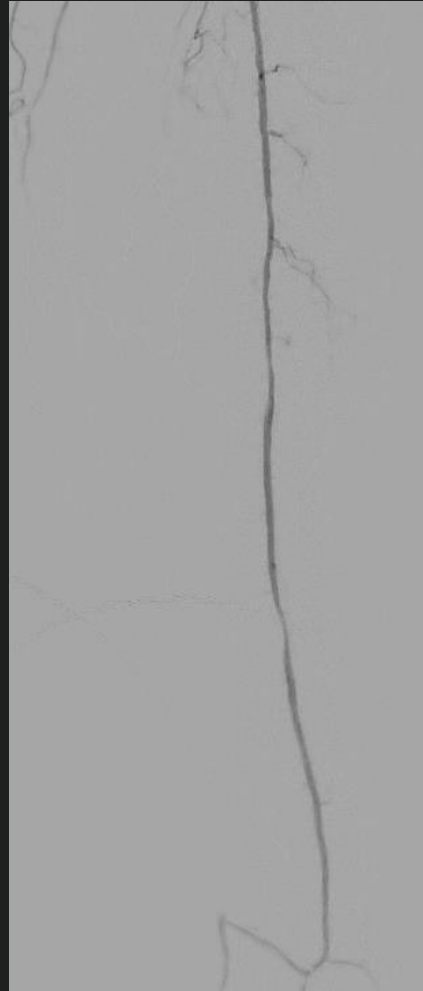
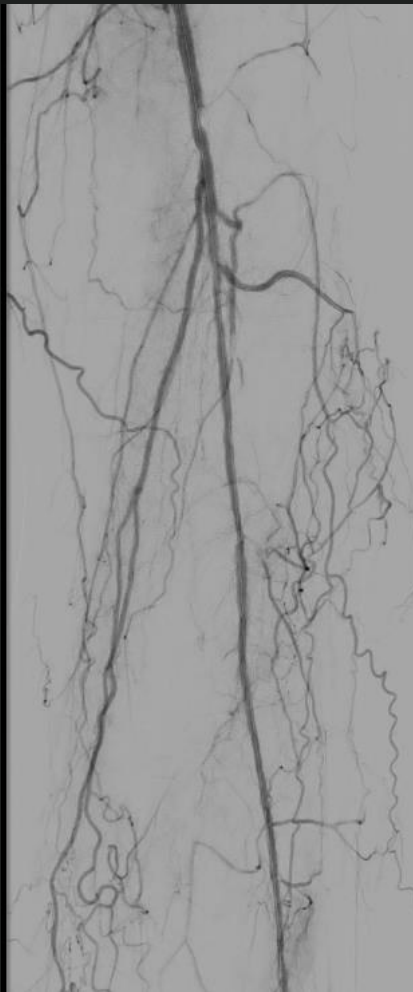
Procedure: May 24th

Final Result



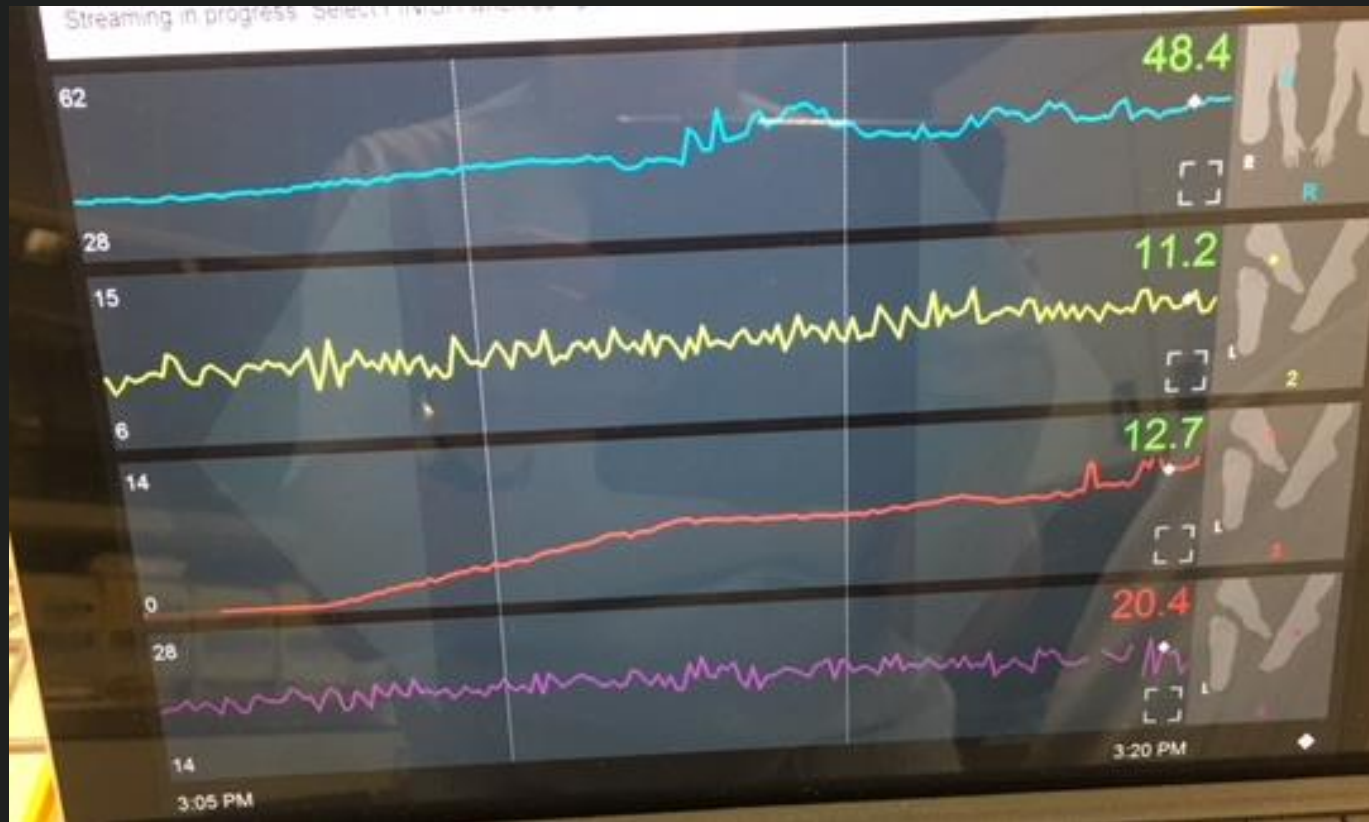
Procedure: May 24th

Final Result





# Intraprocedural: Improvement of oxygenation (CH2 -red)



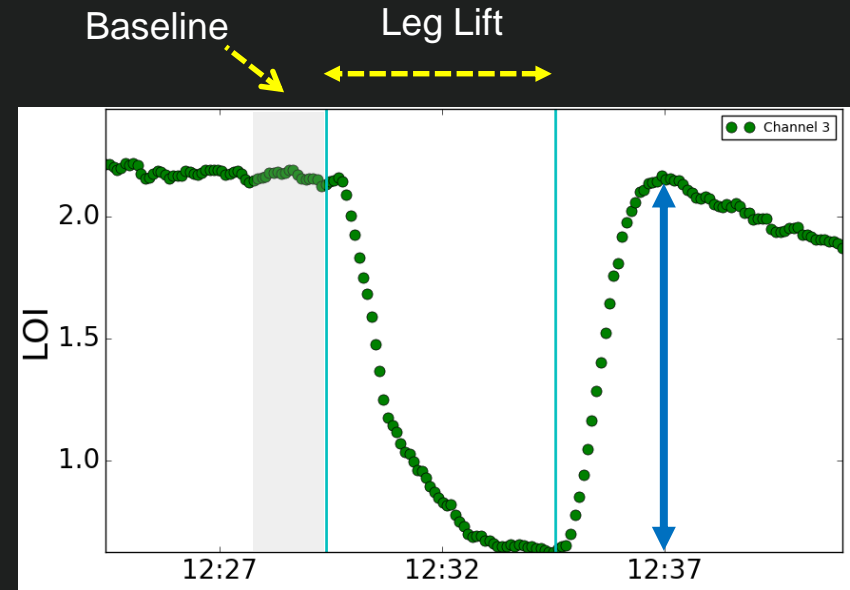
# Postprocedural (May 25th): Leg lift – Induction of relative ischemia (CH2 -red)



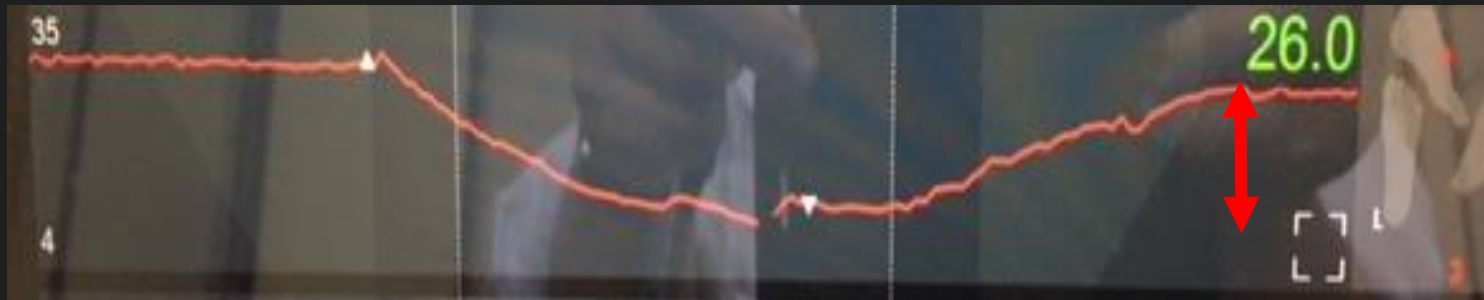
# What information do we extract from Lumee Post-Surgically?

## Recovery Modulation

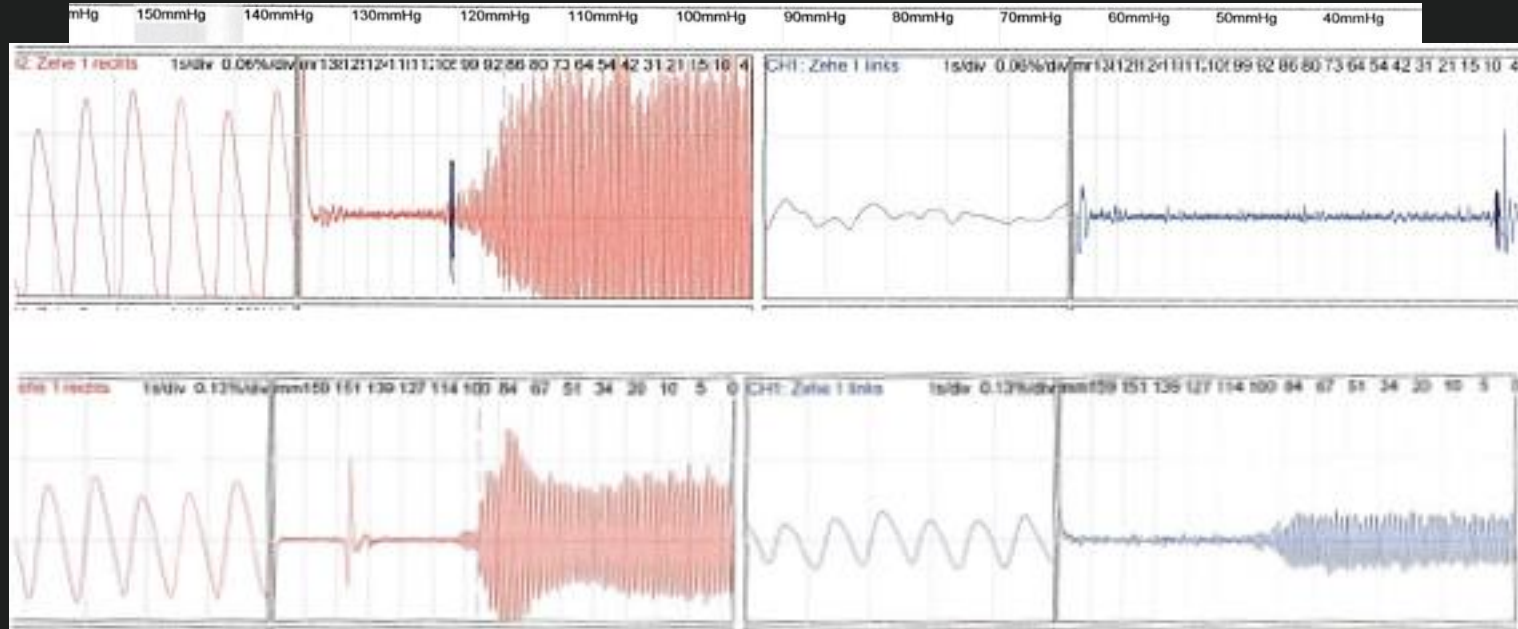
- Defined as maximal change in LOI over a 5 minute window after the end of leg lift. It is expressed as a percentage of the baseline LOI before provocation
- Designed to capture the ability of vasculature to autoregulate following a leg lift (e.g. hyperemia)
- Larger values (above 100%) may represent extended hyperemia associated with poor vascular function



**Recovery Modulation**  
 $= (1.7/2.2)$   
 $= 77\%$



# Postprocedural (May 25th):



	CH1	CH2	CH3	CH4
szillometrischer Index [mmHg]	151	145	138	126
maximale Amplitude [mmHg]	2.84	3.71	1.51	2.34
Spitzenzeit [ms]	117	139	198	175
Anstieg zu Abfall [%]	18.6	22.9	35.8	31.0
Zeitverschiebung [ms]	1			5

<b>HR</b>	<b>80</b>
<b>Index Links</b>	<b>0.91</b>
<b>Index Rechts</b>	<b>0.83</b>

Messung mit 8CH Gerät

# How to keep the foot in the shoe

- don't use the plain old balloon angioplasty

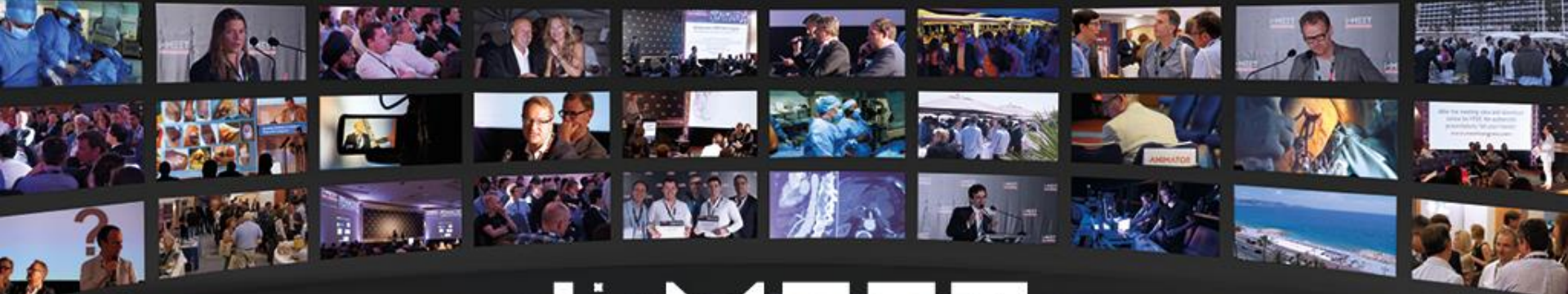
Due to the **complexity** of lesions in CLI patients,  
POBA alone is not sufficient in many cases

**Multi level Disease    Thrombus    Calcification    Long Lesions**

Predilatation with POBA is essential to  
get to know your lesion and for  
further meaningful decision making

POBA alone is still the gold standard for long BTK  
lesions (no evidence favoring DCBs in that area)





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