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A Pilot Study Examining the Performance and Safety of the Temporary Spur Stent System* In Infrapopliteal Arteries:

First-Time Use with a Limus-Coated Balloon (DEEPER
LIMUS)

Disclosure

Speaker name:

Brodmann Marianne, MD

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest



Challenges to treatment of BTK arteries

Infrapopliteal disease

- Vessel Recoil
- Calcification
- Lesion length/tortuosity
- Dissection

Drug Coated Technology

- Drug uptake
- Diameter mismatch
 - Luminal surface contact
 - Uptake
 - Penetration
 - Lesion length/tortuosity

Temporary SPUR Stent System* Reflow Medical

- Self-expanding nitinol stent with radial spikes mounted on an integrated balloon system
- Controlled penetration of plaque, calcium, and artery wall
 - Channels facilitate deeper drug delivery when used with DCB
- Minimize vessel recoil and dissection
- Acute Luminal Gain
- Follow treatment with commercially available drug coated balloon
- Nothing left behind



* For clinical investigational use only



Temporary SPUR Stent System*



** For clinical investigational use only*



Controversies in Drug-coating

- Concerns for long-term impact of Paclitaxel (Katsanos, et. al., 2018, 2020)
- Limus-based drug coating historically challenging to deliver in absence of stent
- Temporary Spur Stent System → Ideal platform for DRUG DELIVERY into diseased artery, may improve tissue absorption and elution

ATTRIBUTE	LIMUS	PACLITAXEL
Mode of action	Cytostatic	Cytotoxic
Margin of safety	10,000 fold	100 fold
Anti-restenosis	Optimal	Good
Tissue absorption And elution	More difficult	Easier
Level of competition	Low	Very high
Physician perception	Positive	Controversial

Gaines: Presentation from CRR2019



DEEPER LIMUS Pilot Study

DEEPER LIMUS

(Goal N=30, current n=12)

Prospective, single-center Spur* + LIMUS-coated DCB

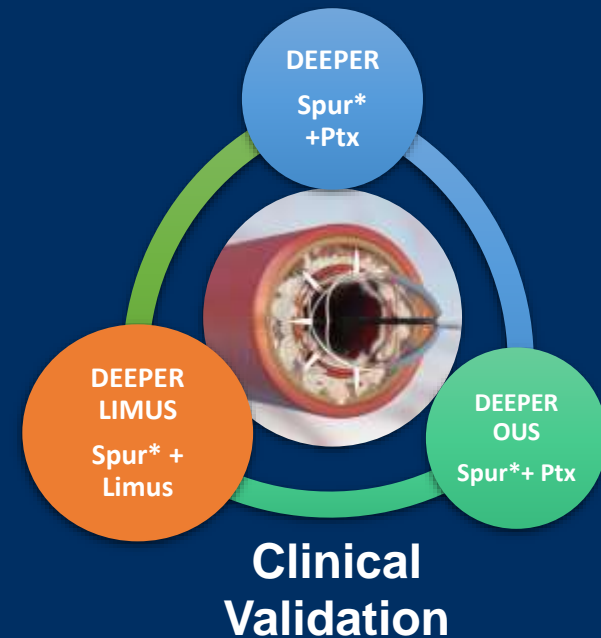
PI: Prof. M. Brodmann Univ. Graz, Austria

Primary Safety Endpoint:

6-month composite of All-Cause Mortality, Major Amputation and Clinically Driven Target Lesion Revascularization (CD-TLR)

Secondary Endpoints:

1. LLL at 6 months by QVA
2. Primary patency at 6 months by QVA
3. Freedom from MALE and POD at 30 days
4. Freedom from MALE at 6 and 12 months
5. Improvement in Rutherford at 3, 6, 12 months
6. Wound healing/Wlfl at 6 and 12 months



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DEEPER LIMBUS Case Presentation

73 year-old female, **Rutherford class 5**

- Pertinent history:
 - Type II Diabetes;
 - Chronic kidney disease
 - Heel and toe wounds
- Baseline ABI/TBI: **.66; .3**
- **Wifi:**
 - Wound: 3
 - Ischemia: 1
 - Infection: 0



DEEPER LIMUS Case Presentation

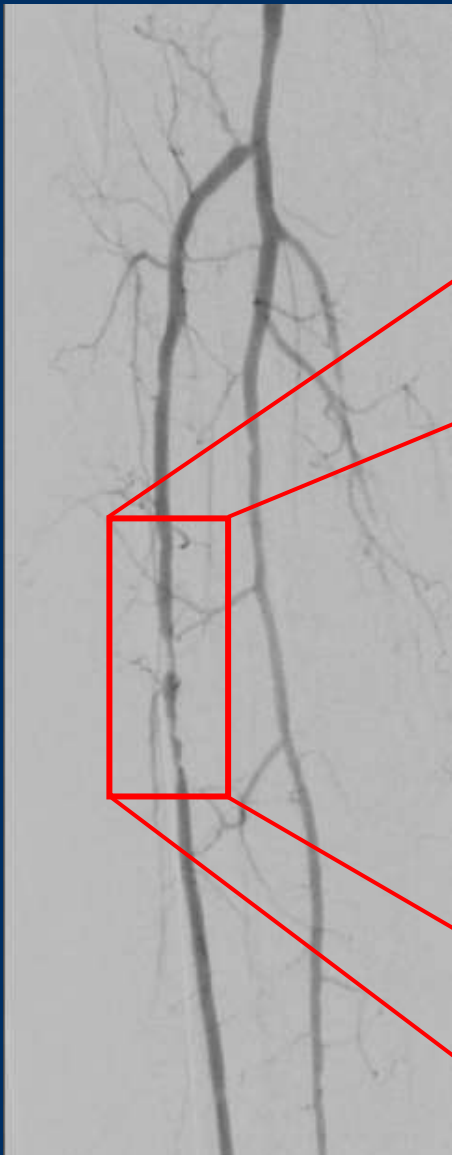
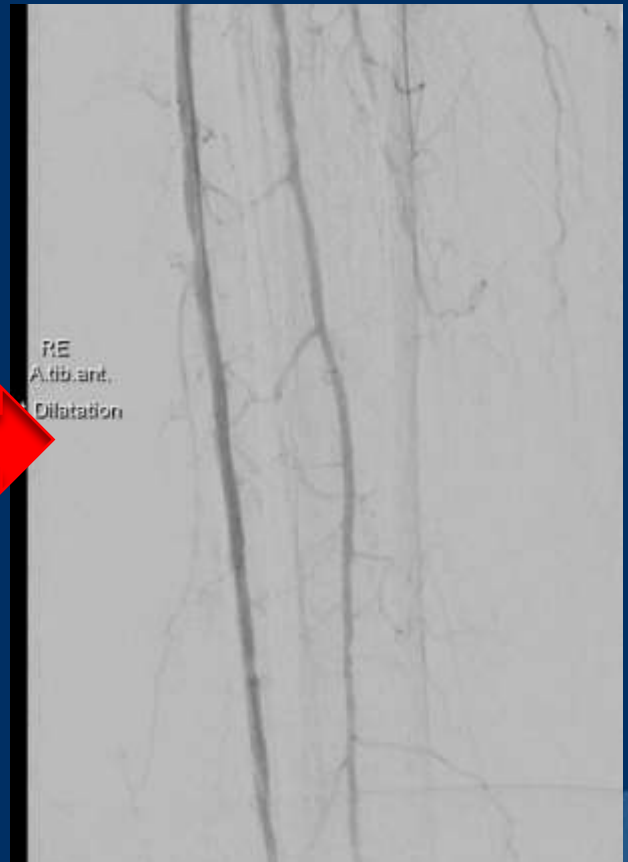


Image of 3.0x60 mm Spur* inflated



Post-Spur*

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DEEPER LIMUS Case Presentation: 6-month angiogram

Baseline avg.
subsegmental
lumen $\Phi = 1.39$ mm



Index avg.
subsegmental
lumen $\Phi = 2.34$ mm



*Corelab adjudicated (Syntropic)

6 Month avg.
subsegmental
lumen $\Phi = 2.02$ mm



- Difference post-procedure \rightarrow 6 months = **.32 mm***
- Percent difference = **13%**

DEEPER LIMBUS Case Presentation: 6 month Clinical follow up

Baseline ABI/TBI	6 Month ABI/TBI
ABI: .66/ TBI: .3	ABI: 1.41/ TBI: .75
Baseline Wifi	6 Month Wifi
<ul style="list-style-type: none">• Wound: 3• Ischemia: 1• Infection: 0	<ul style="list-style-type: none">• Wound: 0• Ischemia: 0• Infection: 0
Baseline Wound	6 Month Wound
	

DEEPER LIMUS: Clinical Data

Primary Endpoint	One Month	3 Months	6 Months
6-month composite of All-Cause Mortality, Major Amputation and Clinically Driven Target Lesion Revascularization (CD-TLR)	0/11	0/9	0/4
Important Secondary Endpoint	One Month		
Freedom from MALE and POD at 30 days	0/11		



Temporary SPUR Stent System*

- Provides Localized Drug Delivery (agnostic to drug choices)
- Temporary stent may prevent acute vessel recoil and increase luminal gain
- Reduces dissection risk through controlled penetration of vessel wall
- Leaves nothing behind, preserving natural function of the vessel and allowing future treatment options.
- Promising clinical data (DEEPER LIMUS, DEEPER OUS, DEEPER)



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Thank you for your kind
attention.

