LIMBO: Adventitial Dexamethasone Micro-Infusion to Prevent Restenosis in BTK Arteries

George L. Adams, MD, MHS, FACC, FSCAI
Clinical Associate Professor of Medicine
University of North Carolina Health System
Director of Cardiovascular and Peripheral Vascular Research, Rex Healthcare
Raleigh, North Carolina

Disclosure

Speaker name: George Adams, MD

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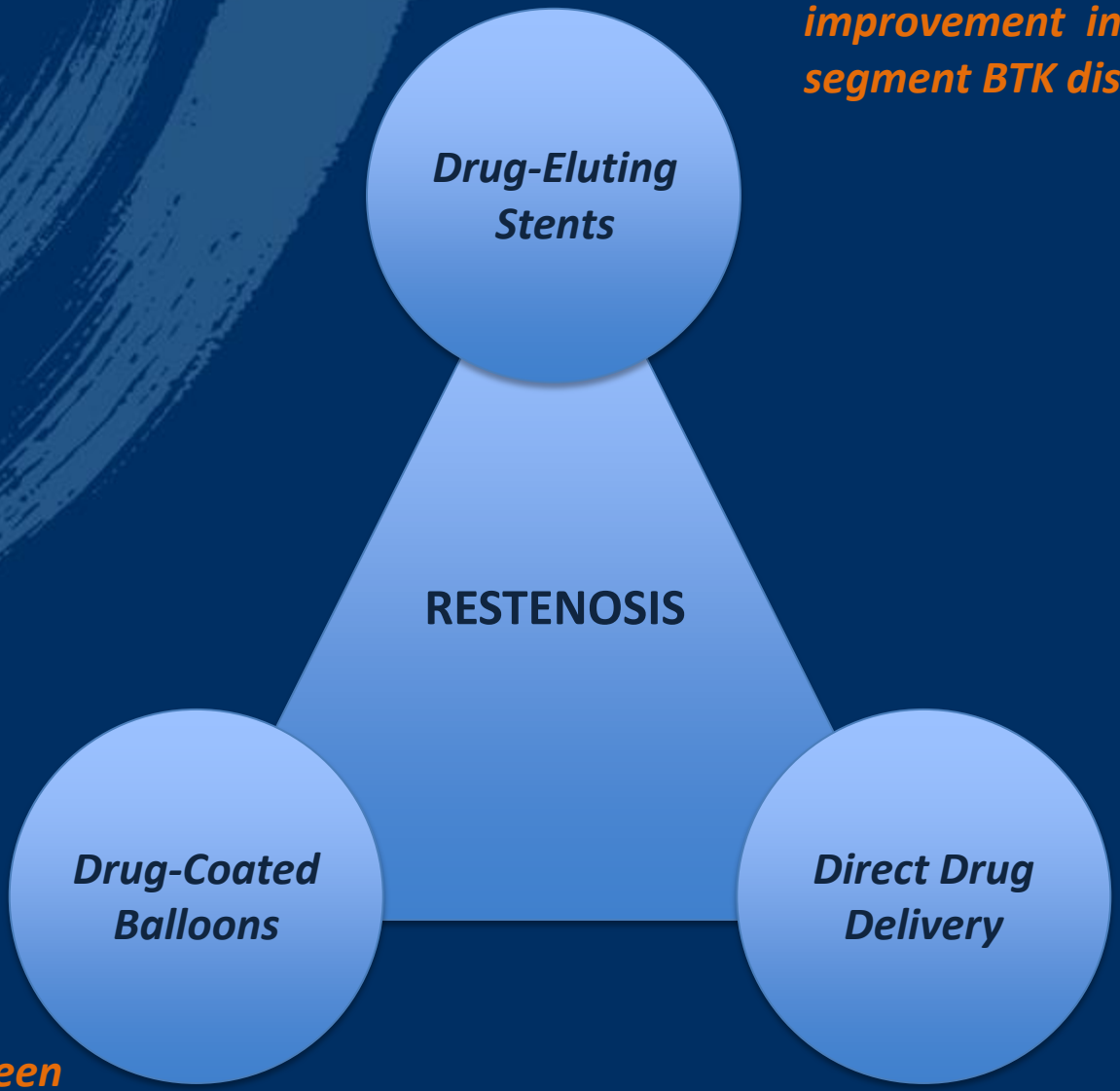
I have the following potential conflicts of interest to report:

- [x] 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

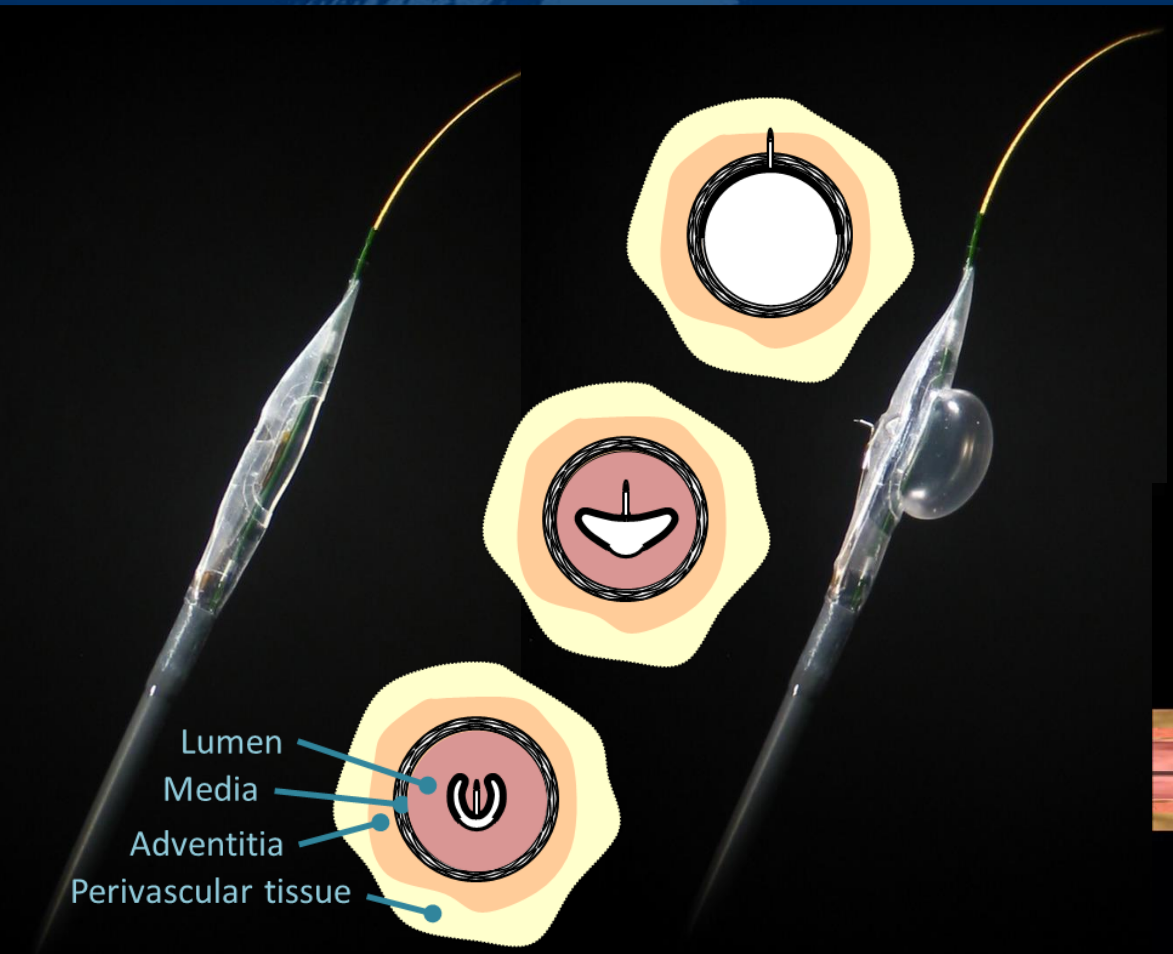
DES have shown no improvement in short segment BTK disease

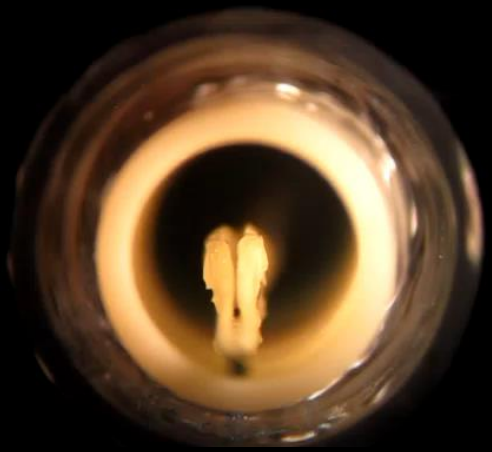


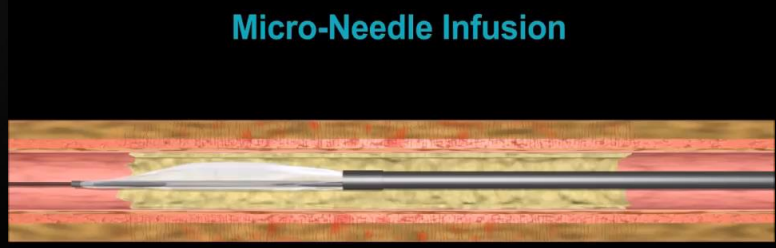
DCB trials have been disappointing (IN.PACT DEEP, BIOLUX P-II)

Direct Drug Delivery may hold promise…

The Bullfrog® Micro-Infusion Device (Mercator MedSystems)





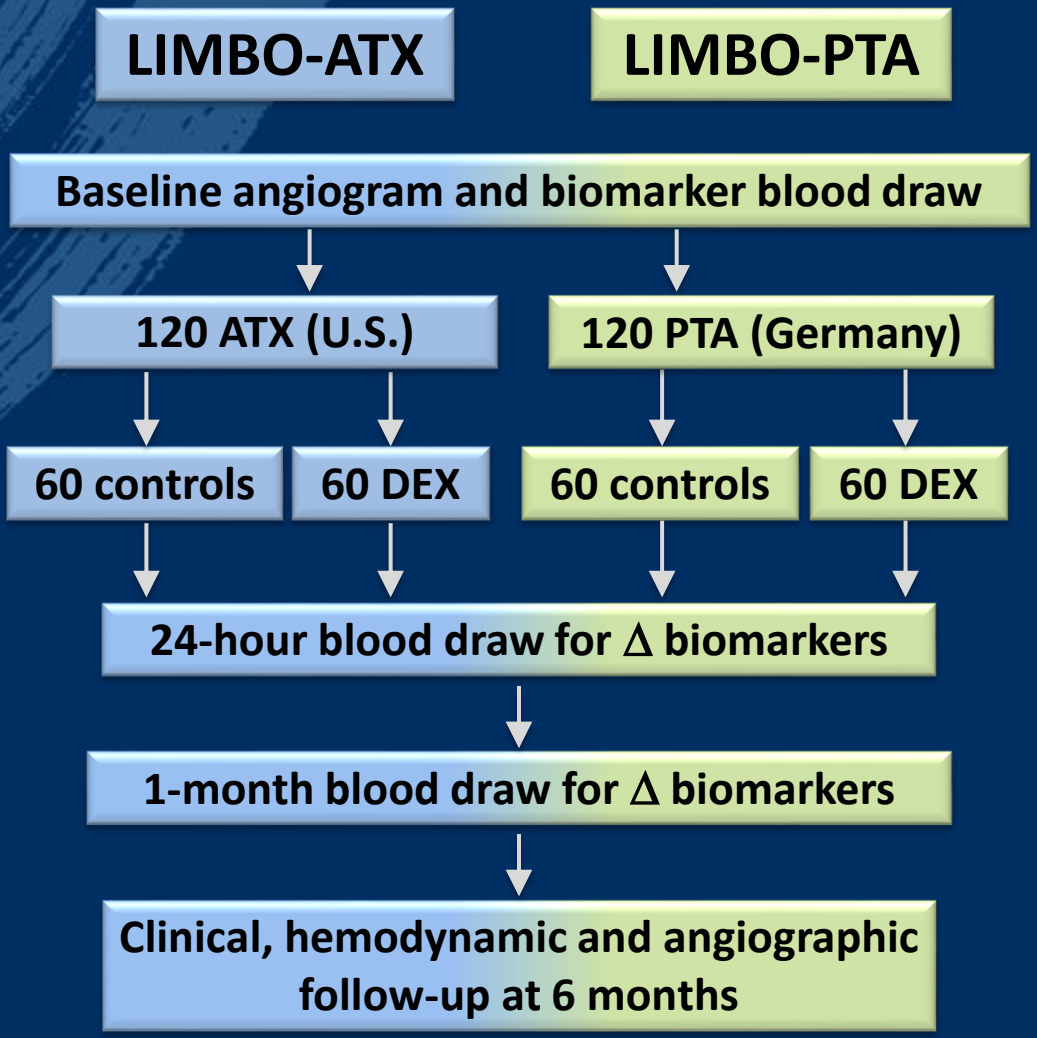


Background Data from DANCE (Adventitial DEX in SAF/Pop)

Interim: 73 DANCE Atherectomy Subjects	
Rutherford 2	23.3%
Rutherford 3	61.6%
Rutherford 4	15.1%
Severe Calcification	26.6%
Popliteal Involvement	20.5%
TASC II Classification	36% A; 59% B; 6% C
Restenosis	8.2%
Lesion Length (cm)	8.8 ± 5.2
%DS (Pre)	69% ± 17%
Total Occlusions	15.4%
Grade B-D Dissection	25.0%
Stent Utilization	34.2%
%DS (Post)	20% ± 7%

Safety (0-360 Days)	
Device-related SAE	0/83 (0%)
Drug-related SAE	0/83 (0%)
Major Adverse Limb Events	
Amputation	0/83 (0%)
Bypass	2/83 (2.4%)
Thrombolysis	0/83 (0%)
Death 0-30 Days	0/97 (0%)
Death 0-360 Days	5/88 (5.7%)
Efficacy	
TLR at 360 Days	8.3%
Patency at 360 Days	85.0%
TLR at 390 Days	8.8%
Patency at 390 Days	81.5%

LIMBO Trial


LIMBO-ATX
LIMBO-PTA
Baseline angiogram and biomarker blood draw
120 ATX (U.S.)
120 PTA (Germany)
60 controls
60 DEX
60 controls
60 DEX
24-hour blood draw for Δ biomarkers
1-month blood draw for Δ biomarkers
Clinical, hemodynamic and angiographic follow-up at 6 months

LIMBO Key Eligibility Criteria

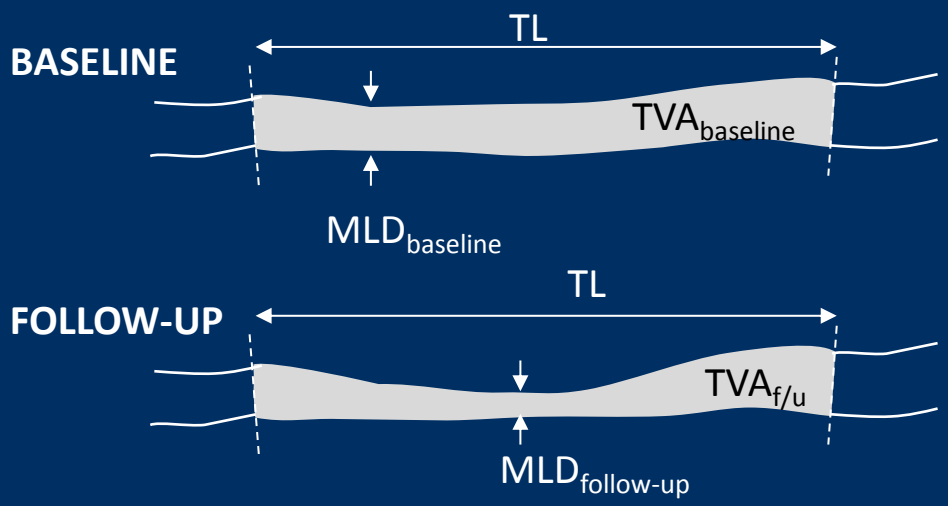
- Single or multiple atherosclerotic lesion(s); up to 30 cm in length
- ≥70% diameter stenosis in at least one infra-popliteal target vessel may extend into the distal popliteal (P3)
- Target vessel diameter of ≥2 mm

Primary LIMBO Endpoint - TVAL

TVAL:

Transverse-view Vessel Area Loss

A measurement of *AREA* opacified by contrast, rather than the narrowest cross-section, which LLL defines



LLL = $MLD_{baseline} - MLD_{follow\text{-}up}$ (in mm)

TVA = shaded area within TL end constraints (in mm^2)

TVAL = 100% - ($TVA_{f/u}$ / $TVA_{baseline}$)

Courtesy of Kirk Seward, PhD, Mercator MedSystems

LIMBO Secondary Endpoints

- Safety
  - Major adverse limb event and perioperative death (MALE-POD)
  - Clinically driven target lesion revascularization (CD-TLR)
- Effectiveness
  - Patency
  - Wound healing
  - Biomarkers (CRP and MCP-1)
- Healthcare economics
- Technical success
- Revascularization success

Bullfrog Infusion

Conclusion

- Bullfrog delivery of dexamethasone after atherectomy in SFA and popliteal arteries
  - Reduces production of inflammatory biomarkers versus atherectomy alone
  - Demonstrates adequate patency results of 82.3% at 390 days
- Bullfrog delivery into the BTK vessels is technically feasible
- LIMBO incorporates novel endpoints to the disease state (inflammatory biomarkers) and resulting outcomes (TVAL)

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