



TCTAP 2014 Luncheon Seminar

# ***Current EVT trend in Japan***

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# Endovascular Procedures



**A number of Endovascular Therapy remarkably increased around the world**



# What is the underlying reason?



arrival of aging society



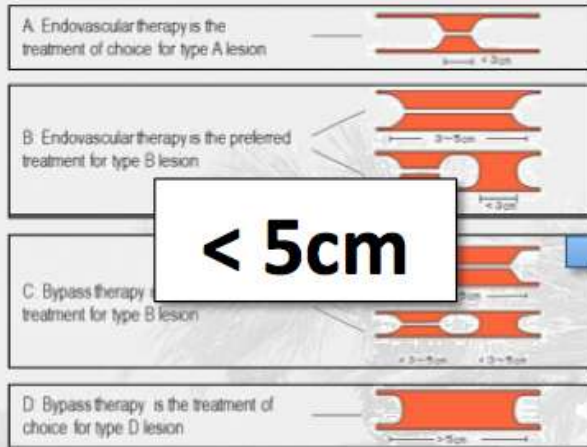
changing dietary habit

**A number of PAD patient rapidly increased**



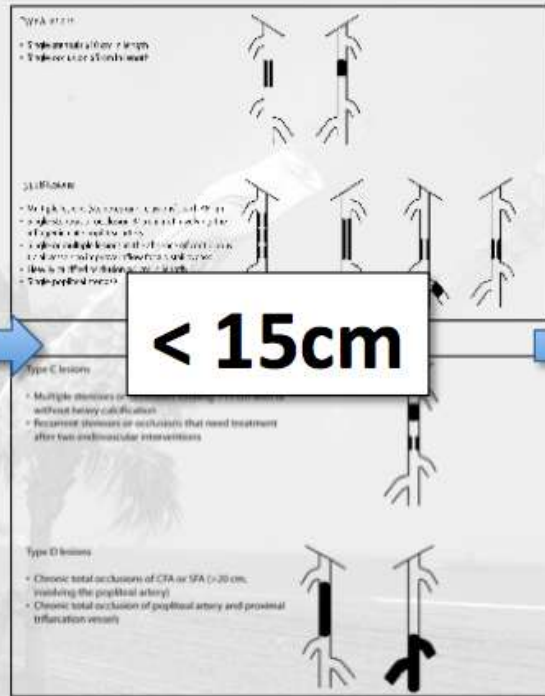
# Guideline is dramatically changed

## TASC 2000



**< 5cm**

## TASC II



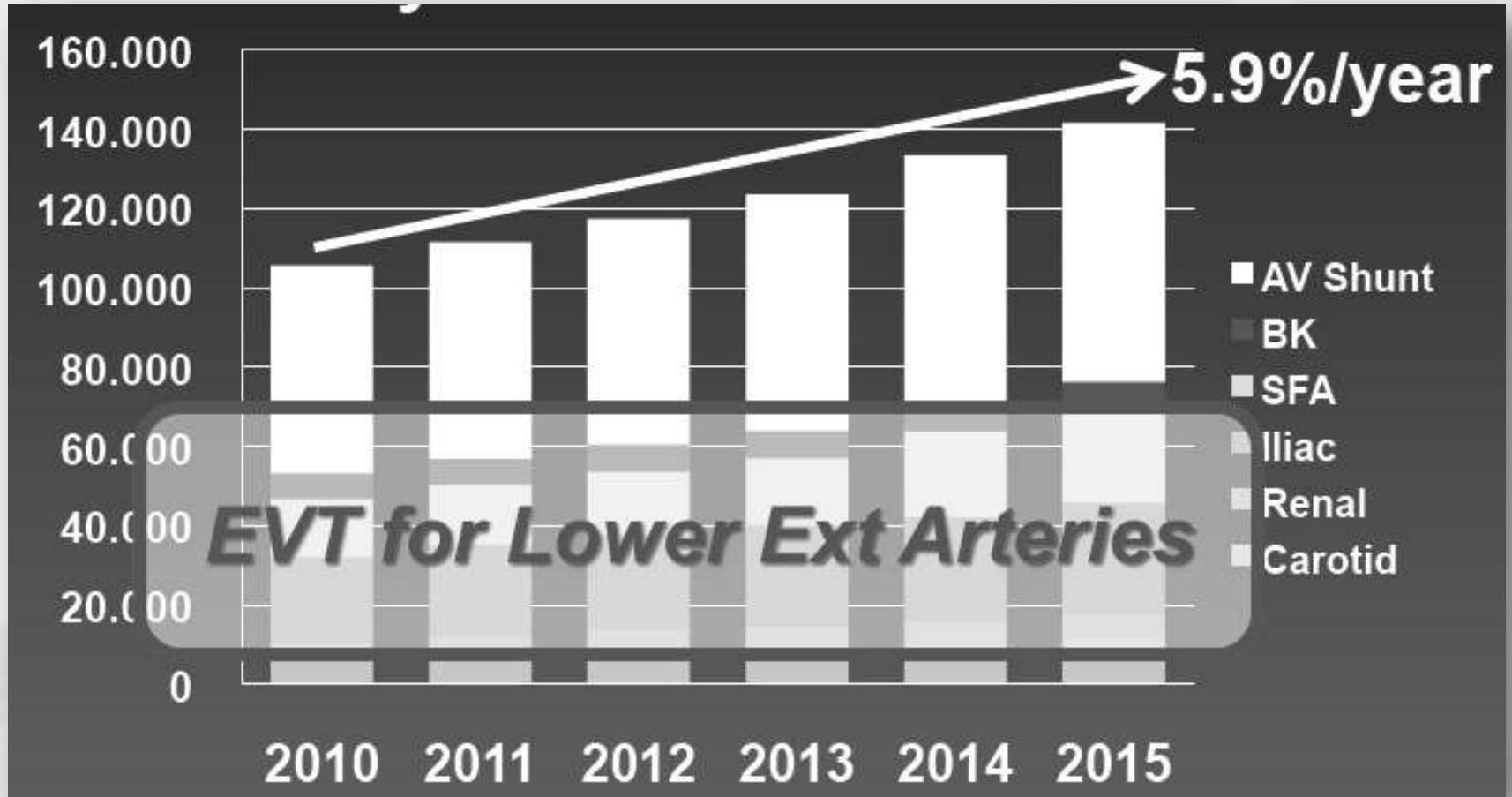
## ESC 2011

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>	Ref <sup>c</sup>
When revascularization is indicated, an endovascular-first strategy is recommended in all femoropopliteal TASC A-C lesions.	I	C	-
Primary stent implantation should be considered in femoropopliteal TASC B lesions.	IIb	C	285, 286, 291
A primary endovascular approach may also be considered in TASC D lesions in patients with severe comorbidities and the availability of an experienced interventionist.	IIb	C	-

**< 20cm**

Long term patency after EVT has been increased

# A Number of Japanese EVT



Number of endovascular therapy has been increased



# Endovascular treatment in Japan



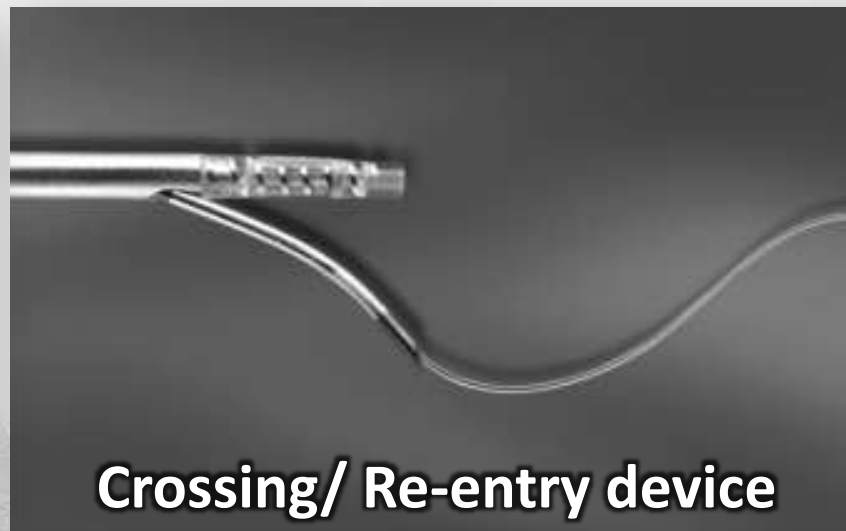
**Similar to National isolations during Edo-Era**



# Device performance is important



Graft stent



Crossing/ Re-entry device



Drug Coated Balloon



Debulking Device


**Device lag**

# Device lag caused two problems



**Lower  
initial success  
rate**

Drug-Coated Balloon

The image shows a medical procedure where a drug-coated balloon is used to dilate a coronary artery. A catheter with a balloon at the tip is inserted into the artery. The balloon is inflated, and the drug is released. The background is a grayscale image of the procedure.

**Lower  
long-term  
durability**

Debulking Device

The image shows a medical procedure where a debulking device is used to remove plaque from a coronary artery. A catheter with a debulking device at the tip is inserted into the artery. The device is used to scrape and remove plaque. The background is a grayscale image of the procedure.



# Challenges of Japanese physicians



**Artistic craftsmanship**



# Thanks to these application



Low invasive retrograde access



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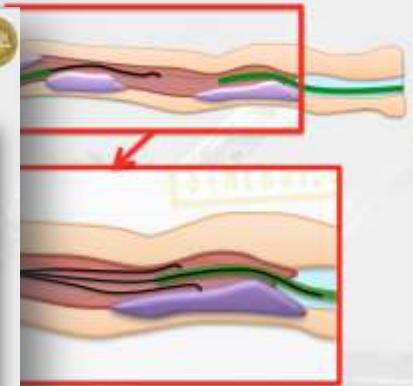
Wire rendezvous technique

Retrograde puncture



Digital puncture (Yubi-pun)

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Rendezvous = Successful guidewire passage

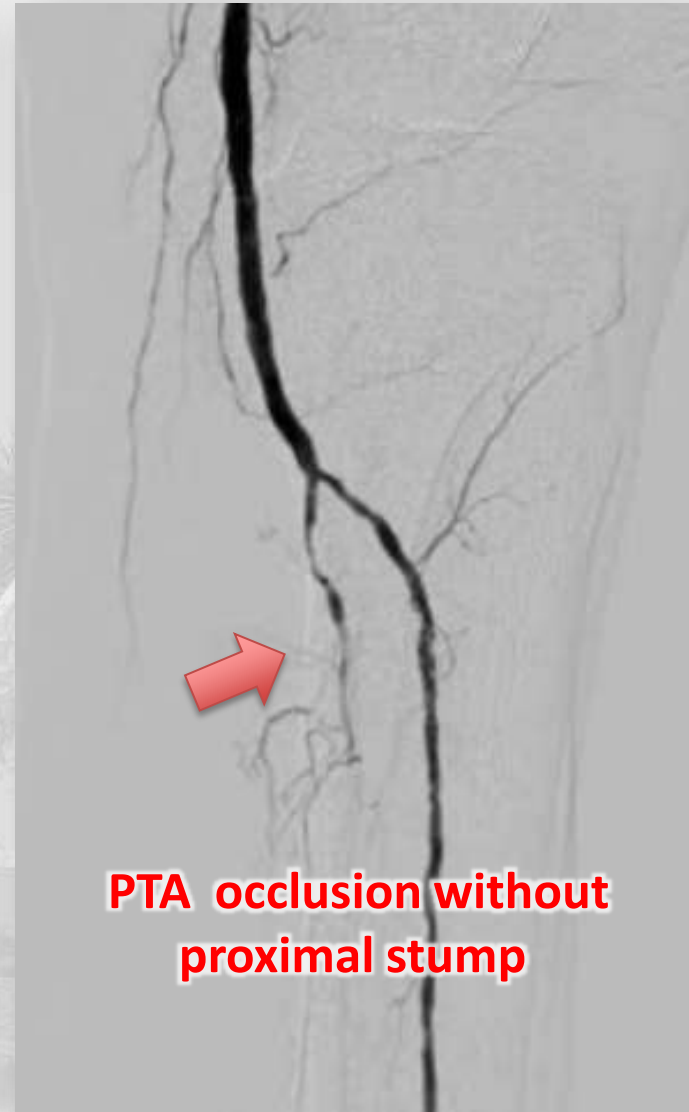
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Many **special techniques** for negotiation of the  
“**Device lag**” have been developed

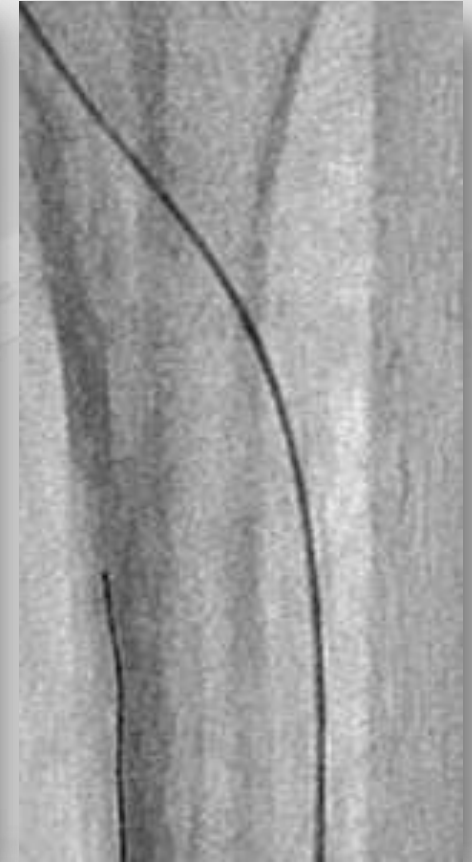
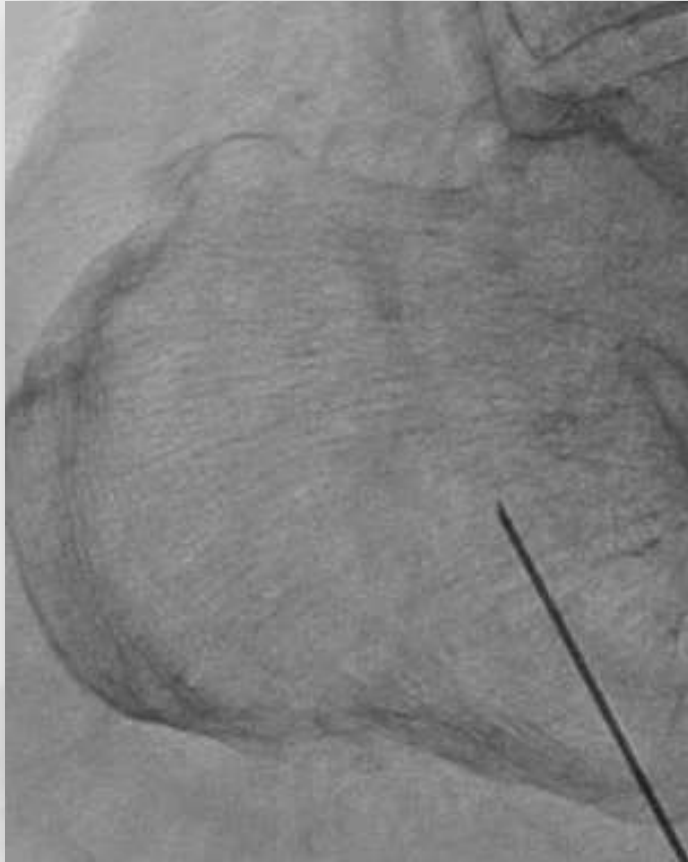
# Low invasive retrograde access



# 70s diabetic male, was on dialysis (R5)



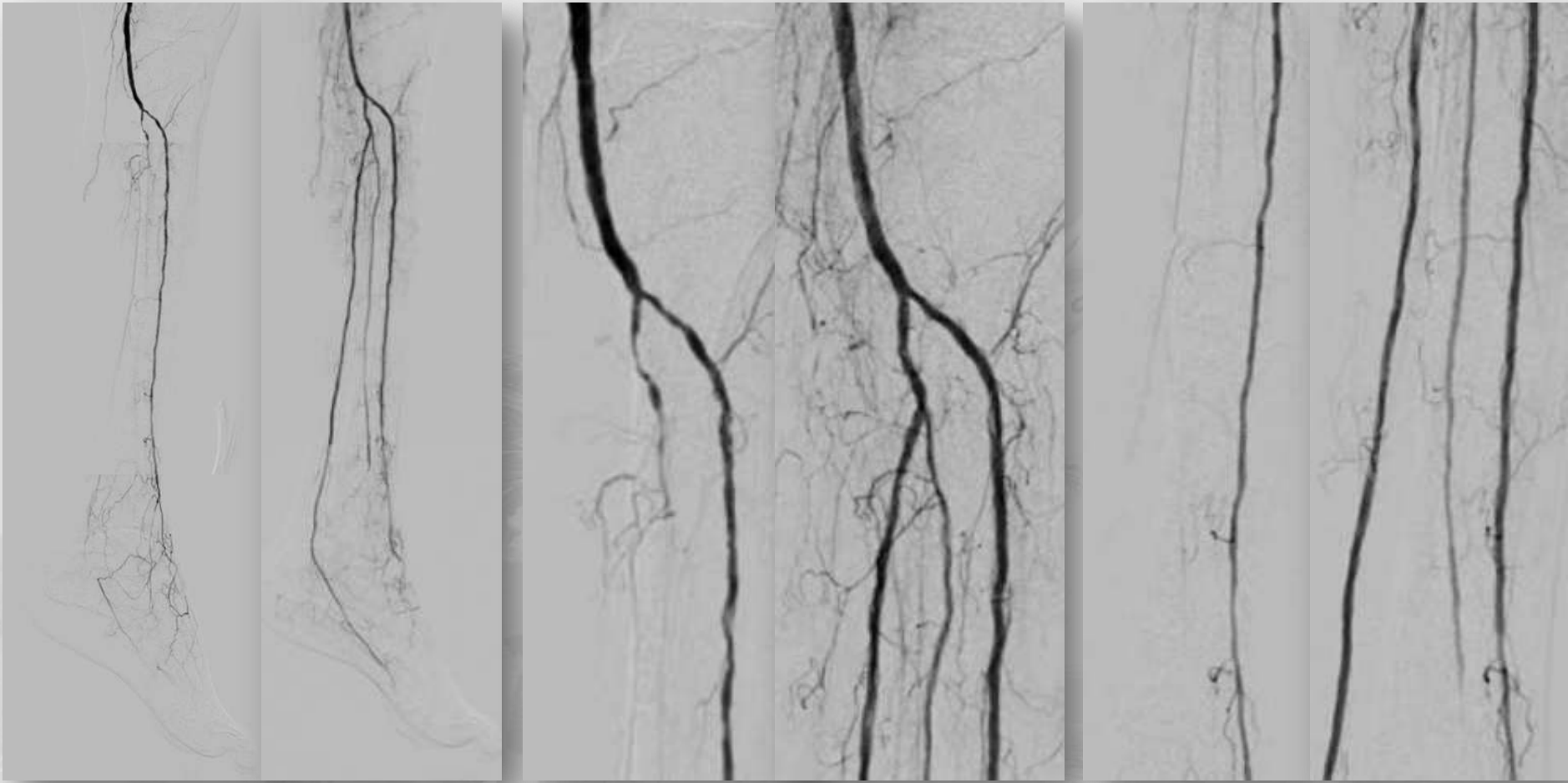
# Extreme medial plantar artery puncture



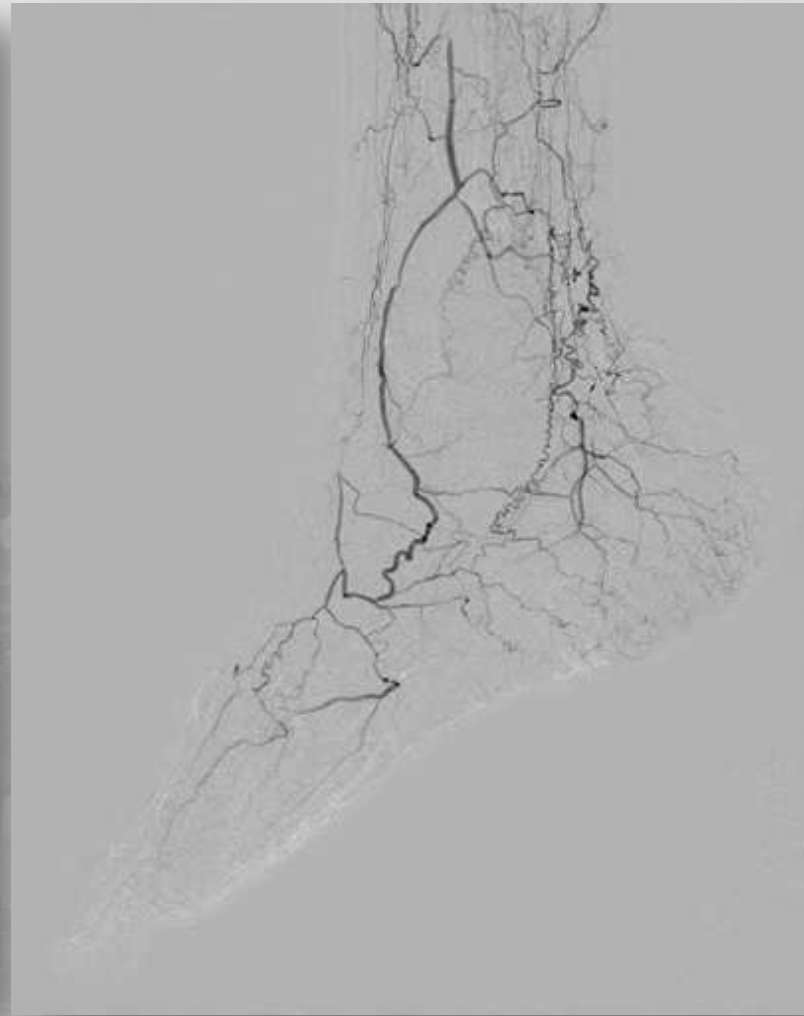
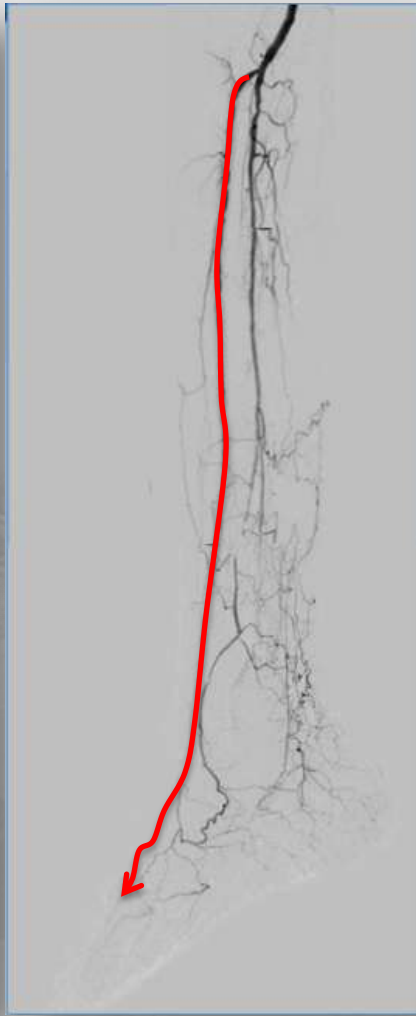
## Medial plantar puncture (Soko-pun)



# Final angiogram



# 80s diabetic female with CKD (R5)



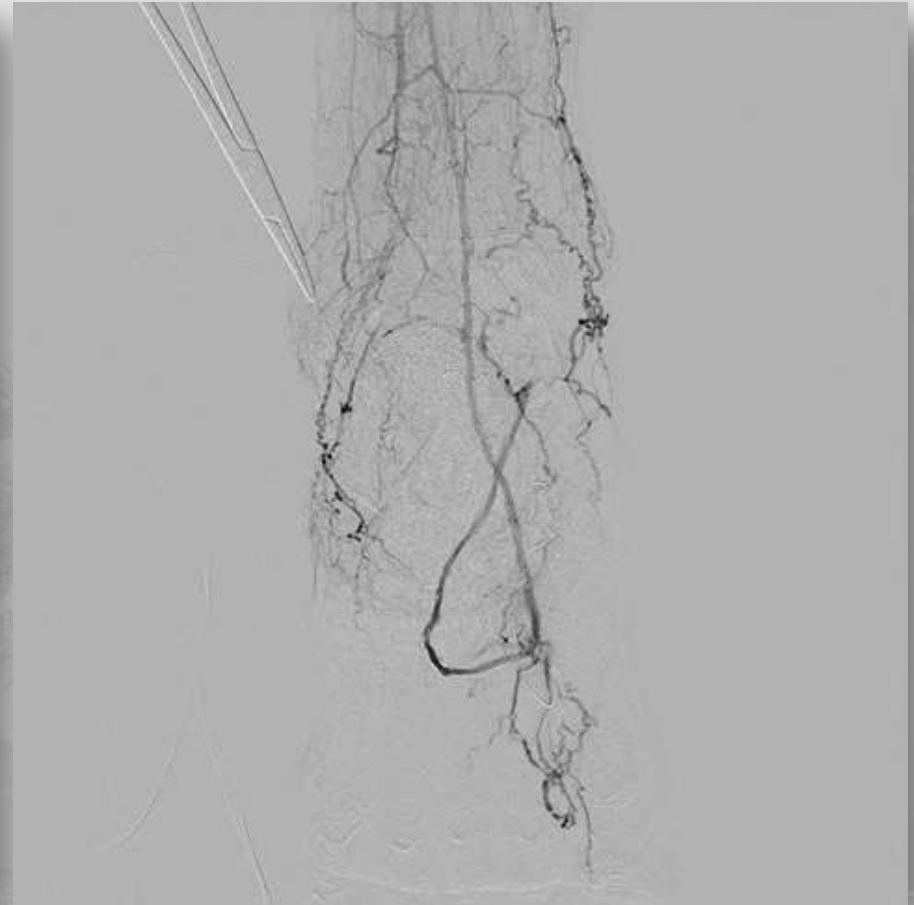
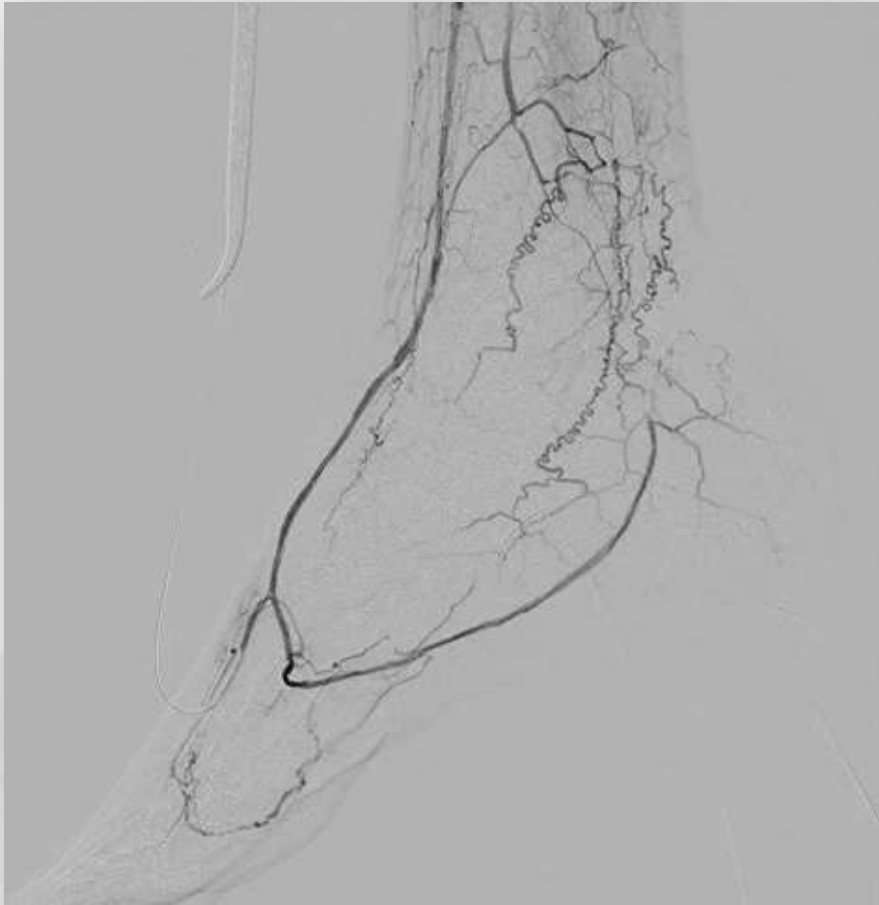
# Extreme retrograde access



## Metatarsal puncture (Yubi-pun)



# Sufficient flow for wound healing



# Trans-collateral retrograde approach



**Trans-Pedal arch**



**Medial plantar to Dorsal**



**PA to ATA**



# Procedures for guidewire passage



## 1. Direct wire crossing (Kissing wire)

Opposite site guidewire and microcatheter is good landmark for wiring

## 2. Intraluminal to sub-intimal reconstitution

CART: Controlled antegrade retrograde subintimal tracking

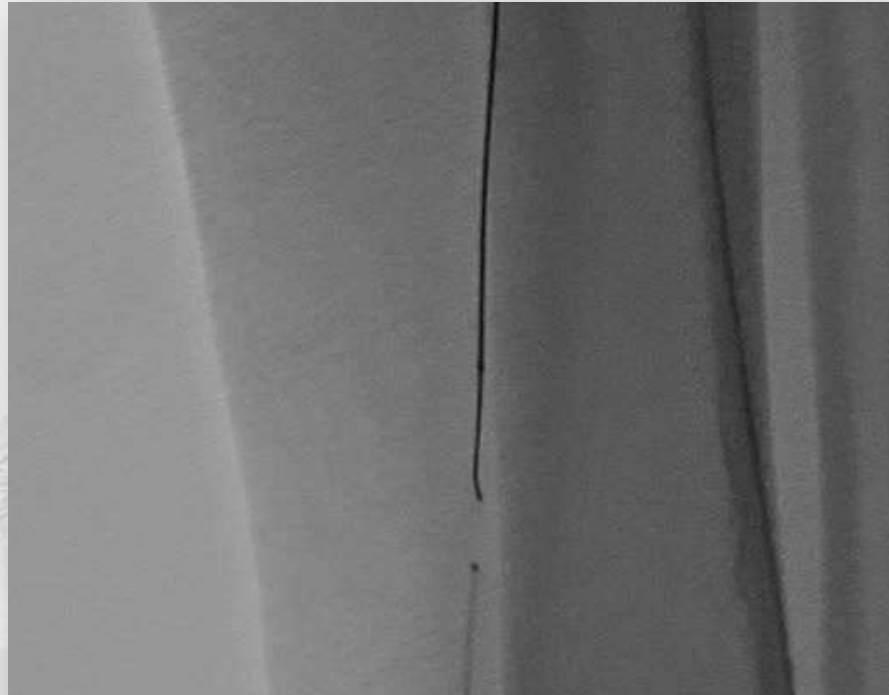
Bi-lateral loop wire technique

Double balloon technique

## 3. Wire rendezvous technique



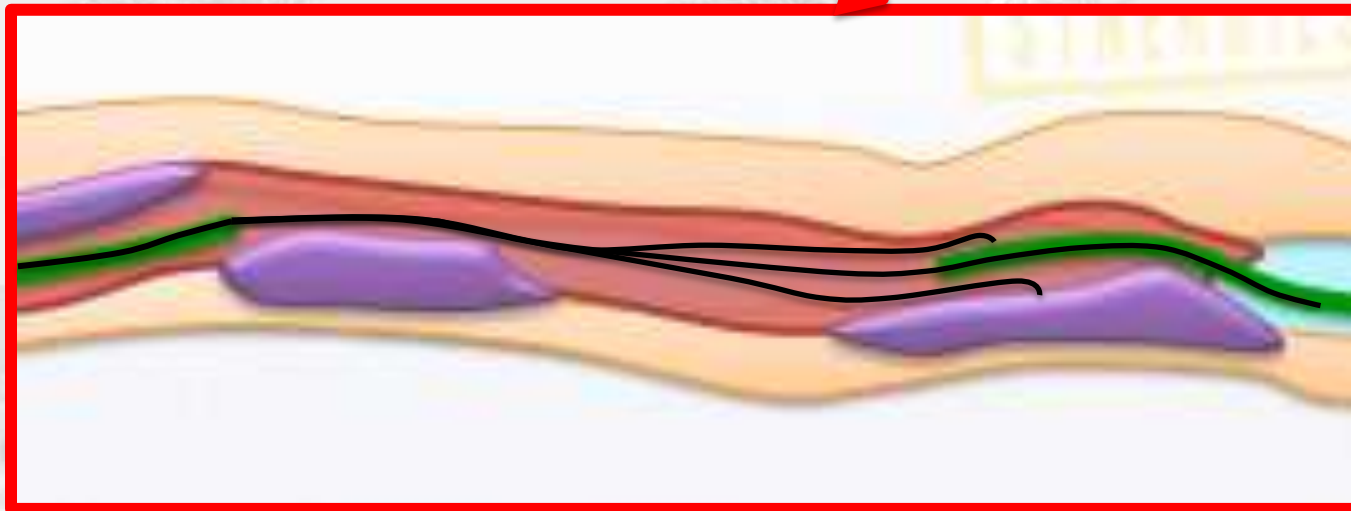
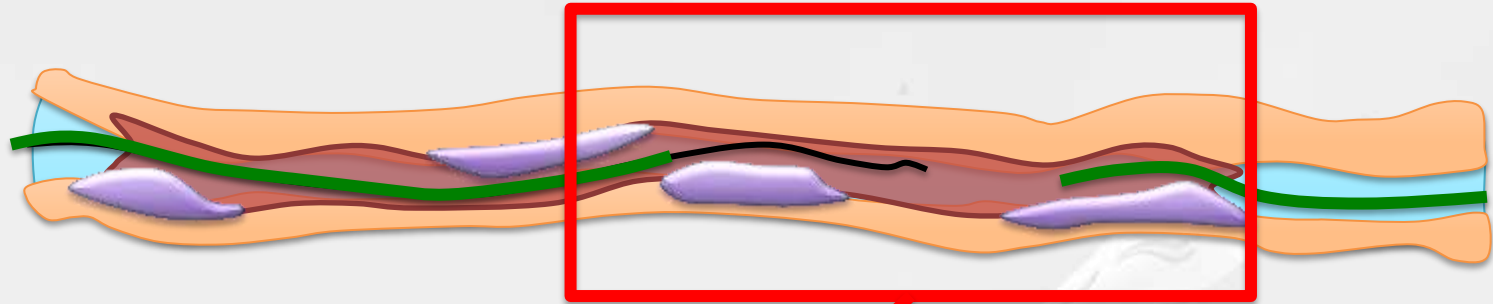
# Definition of the Wire rendezvous



**Intentional Guidewire advancing to  
opposite site microcatheter**



# Wire rendezvous technique



**Successful wire rendezvous = Successful guidewire passage**



# Thanks to these special techniques...




## From our institution (2013)



### EVT for SFA-CTO: 43 cases

- Guidewire crossing success 42/43: **97.7 %**
- Procedural success 40/43: **93.0 %**

Procedural success rate of SFA-CTO: **81~94%**, from TASC II

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## In our institution...



177 lesion BTK lesion (2012/3/1 ~)  
66 cases EVT for BTK CTO was performed

All patient is Rutherford 5 or 6 patient


**Procedural Success Rate 84.8 %**

Success with only antegrade approach **59.1 %**

**Success with Bi-directional approach 25.8%**

( Trans-collateral approach 67.8 %)

(Distal site puncture 32.2 %)

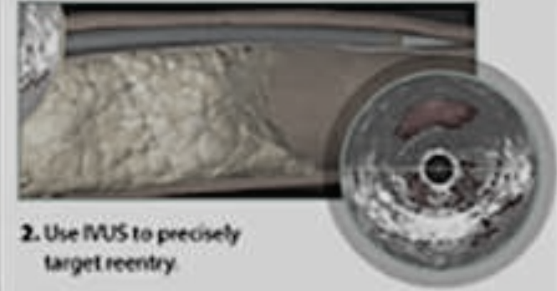
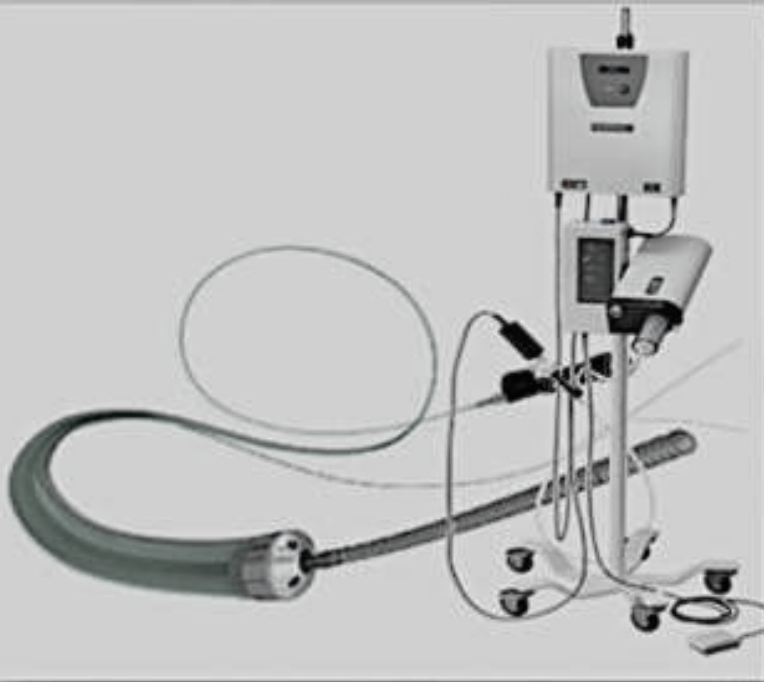
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# initial success rate is quite satisfactory

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# Many of special crossing or reentry devices



2. Use IVUS to precisely target reentry.



3. Deploy the nitinol needle to create a pathway to the true lumen.

is it truly necessary for our procedure?



# We get a satisfaction



## Evolutional history of a Galapagos islands





# We did not advance beyond the “Device lag”



Device performance is important



Graft stent



Crossing/ Re-entry device



Drug Coated Balloon



Debulking Device

Device lag

Long-term patency is highly depending on the device technology



We already experienced same phenomenon

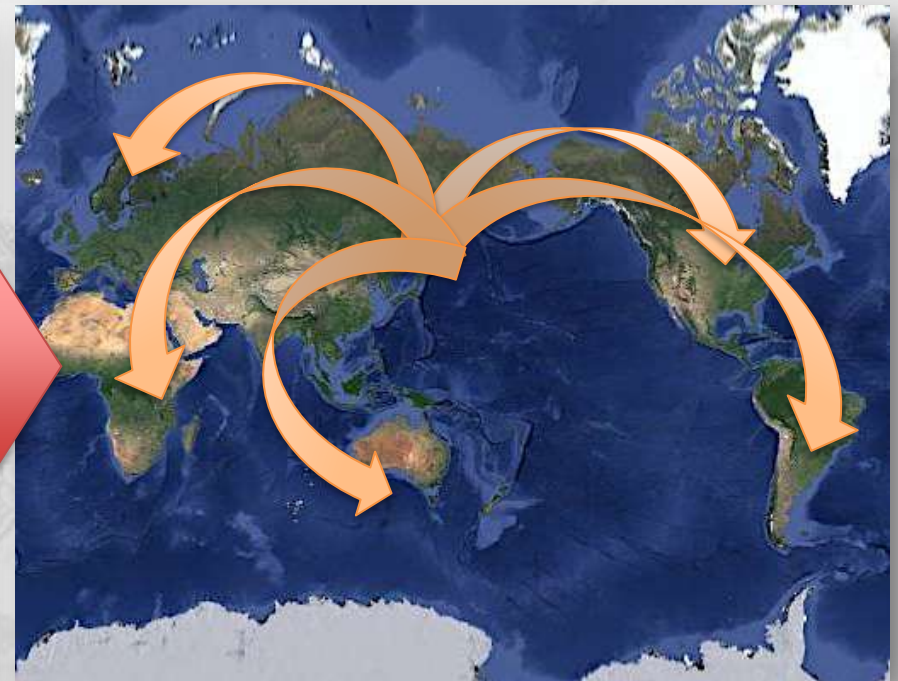


Galapagos mobile phone

Do you know “Japanese mobile phone”?



# Growing beyond the Galapagosization



We should shift our focus **beyond the isolated islands**





# Final message

## *Growing beyond the Galapagosization*

- 1. dissemination our techniques to the world**
- 2. System development for new device Approval**
- 3. Development new special devices from Japan**

