

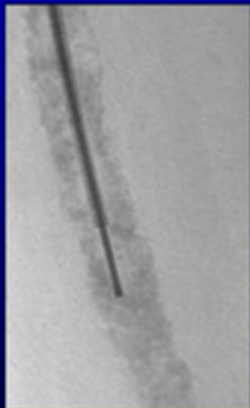
# Step-wise Approach of Ilio-femoral CTO Lesions: Antegrade or Retrograde



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Center for Vascular Medicine,  
Angiology, Cardiology and Vascular Surgery  
Park Hospital & Heart Center Leipzig, Germany

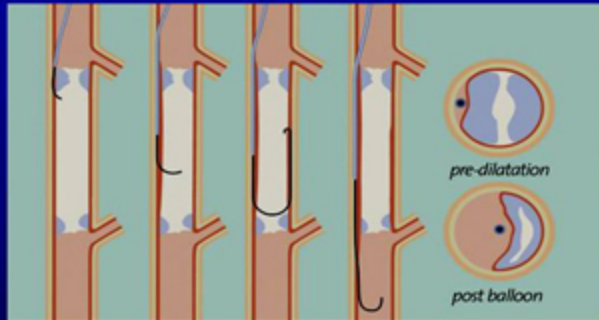
# Initial Passage of a Iliac or SFA-CTOs

Intraluminal



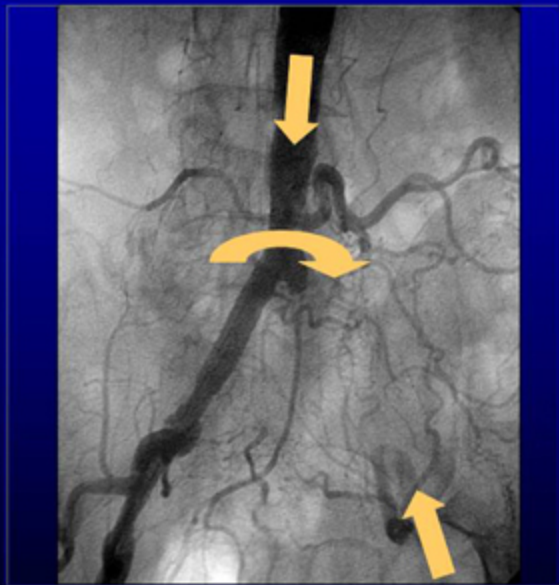
vs.

subintimal



Long and / or calcified occlusions:  
subintimal approach preferred

# Iliac Occlusions – Recanalization-Techniques

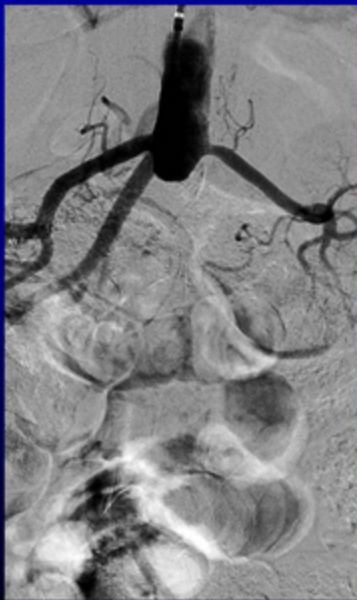


Antegrade or retrograde

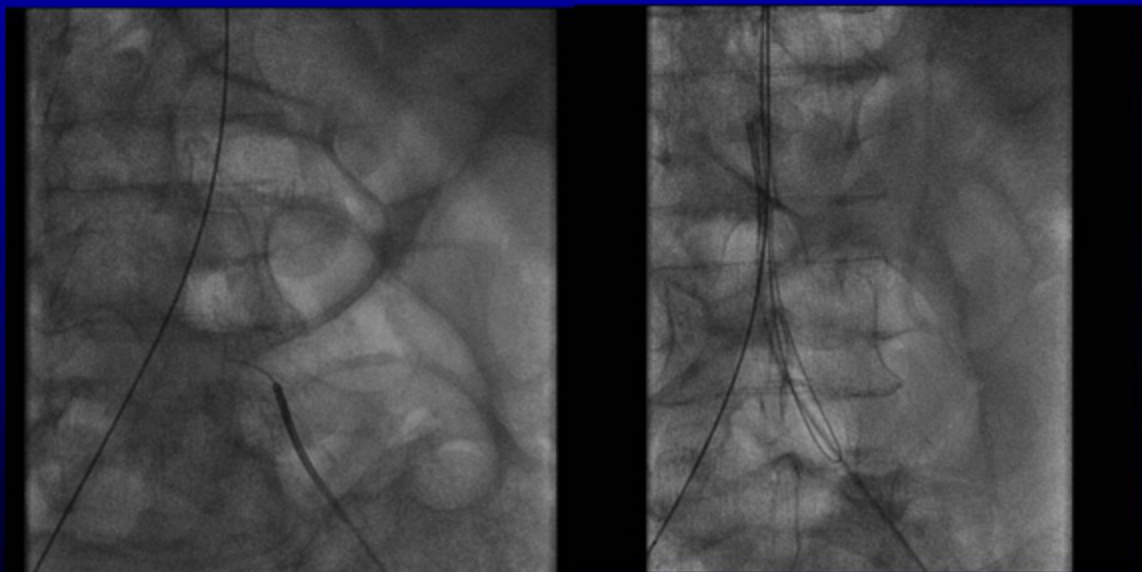


Inability to reenter directly at the bifurcation

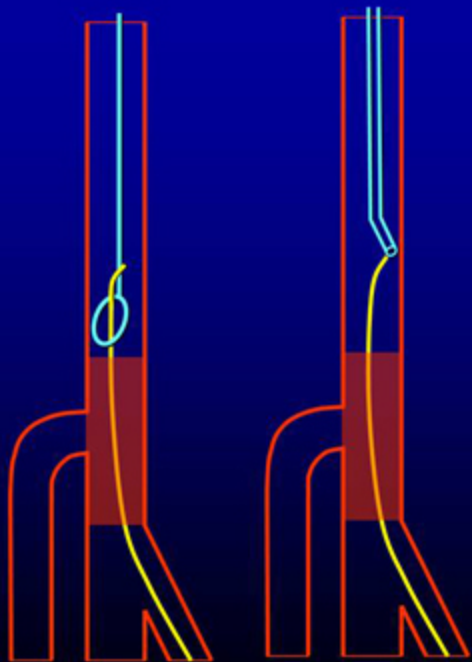
## Technique for Aorto-Iliac Occlusion PTA



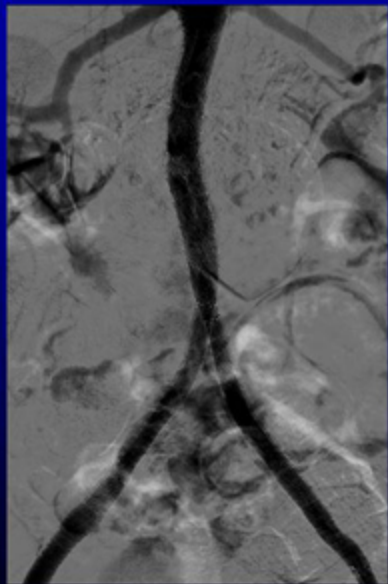
## Transbrachial GW-Passage, Three Access-Sites



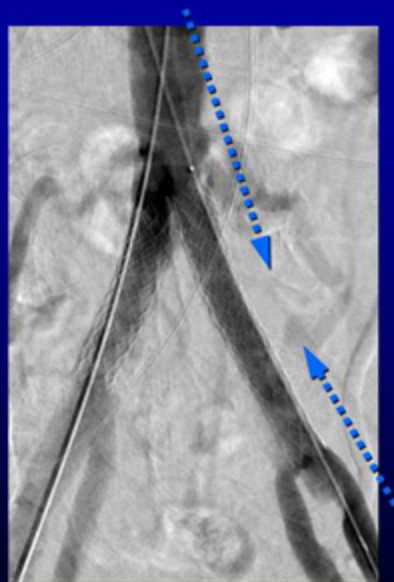
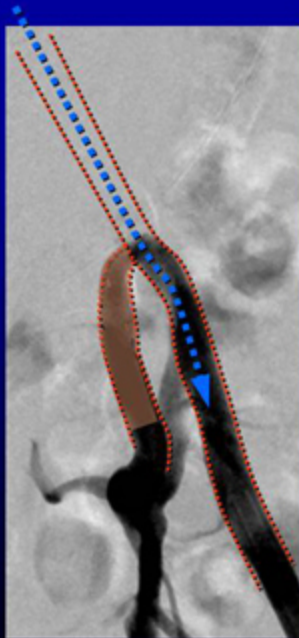
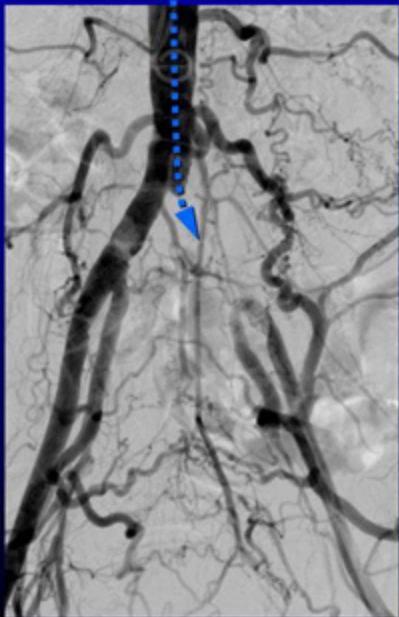
# Endovascular Treatment of Aorto-Iliac Occlusions



# Endovascular Treatment of Aorto-Iliac Occlusions



# Antegrade Recanalization always better ?



After double approach  
and kissing-stent

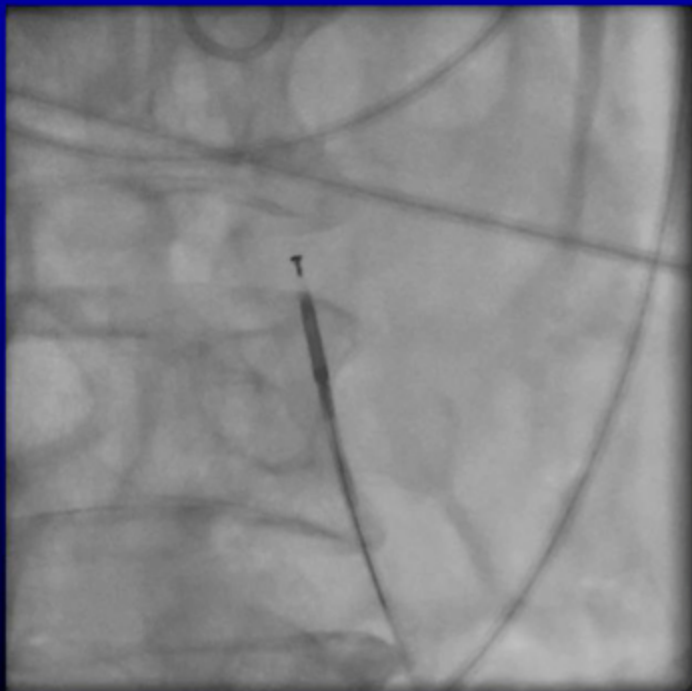


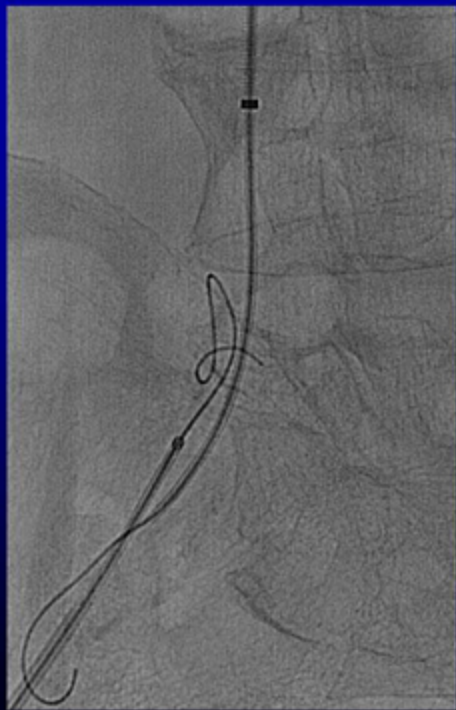
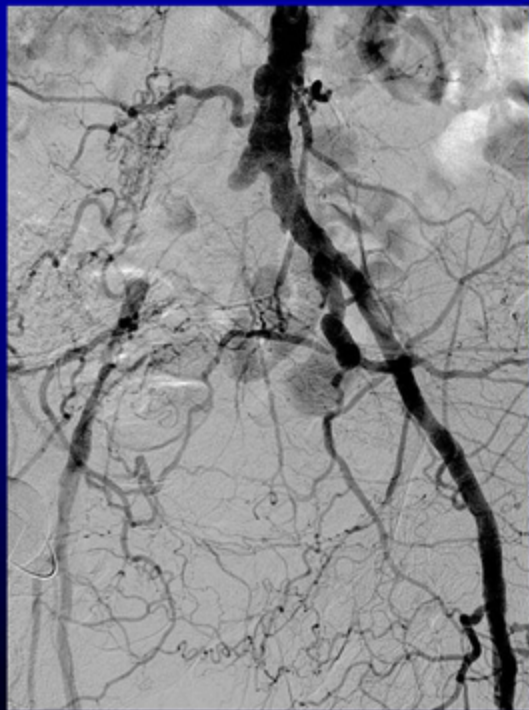
# Reentry-Device for Iliac CTOs

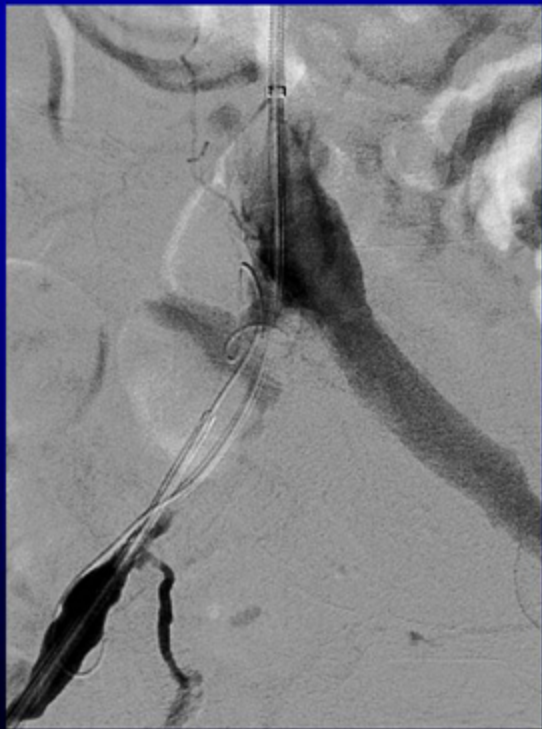


Outback-catheter











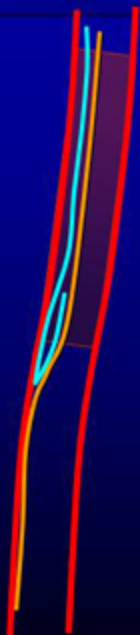




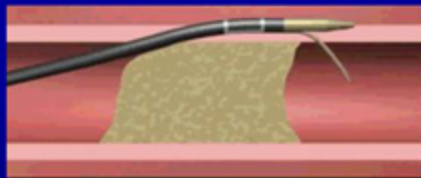
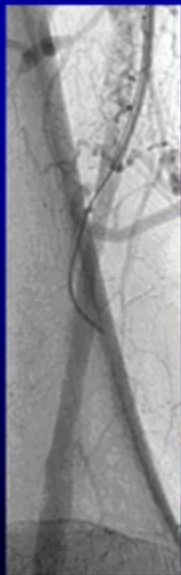




# Reentry-Devices for Passage of CTOs



Failure to reenter

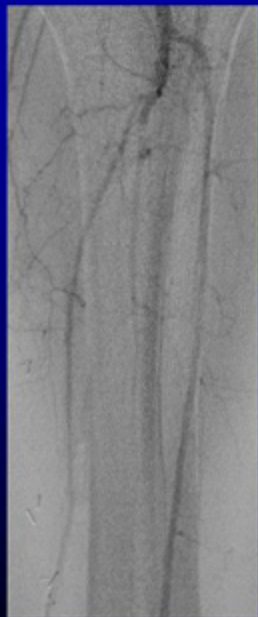
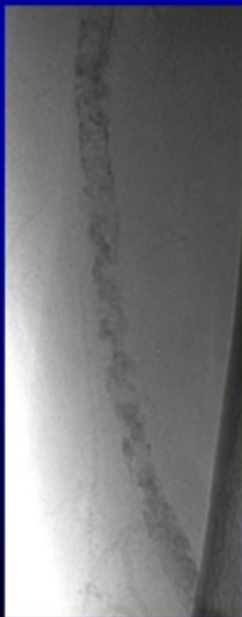
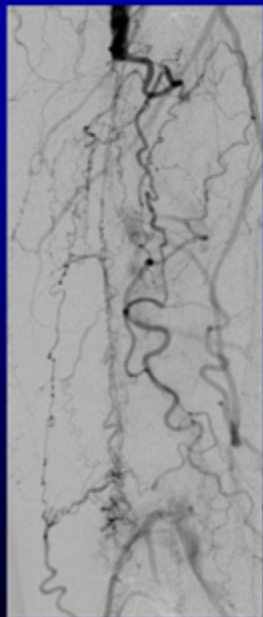


Pioneer (Medtronic)

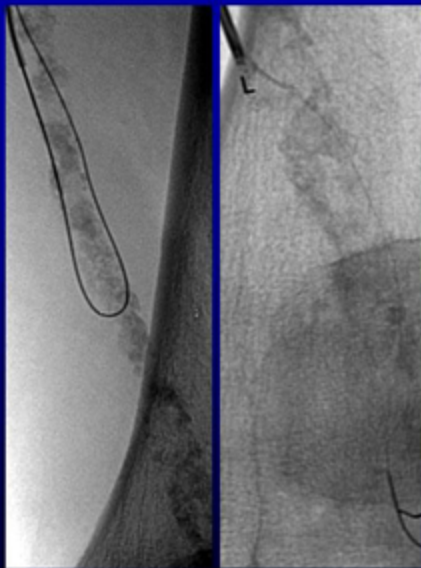


Outback (Cordis)

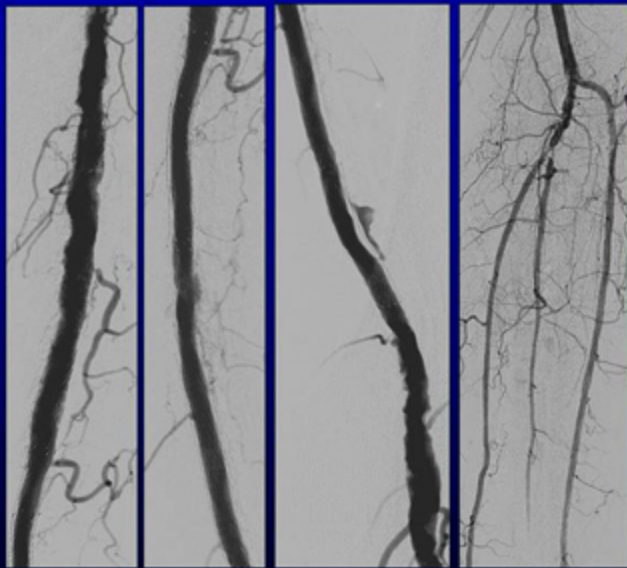
# PTA for Highly complex SFA-CTOs



# PTA for Highly complex SFA-CTOs

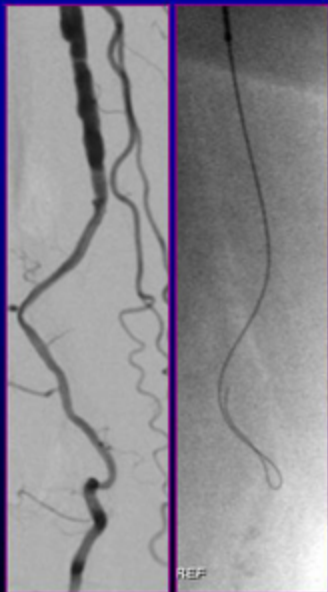


Outback-catheter

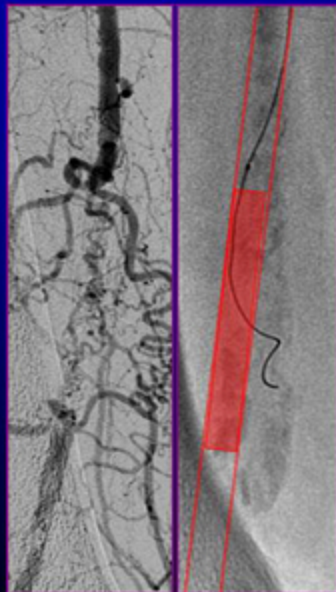


at 28 months assisted patency

# Re-Entry Devices not always applicable



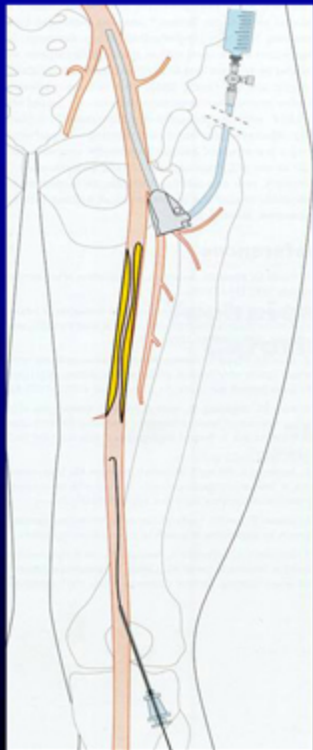
Inability to enter CTO



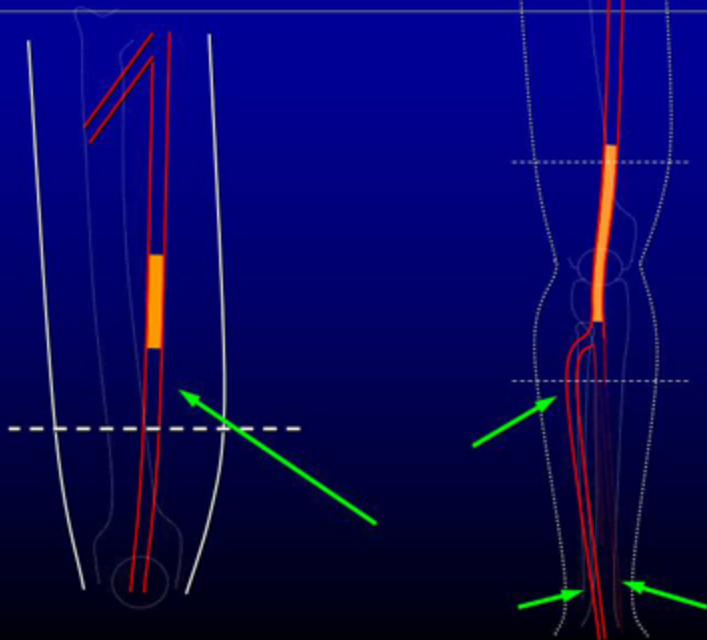
Perforation within CTO

# Retrograde Approach for proximal CTOs

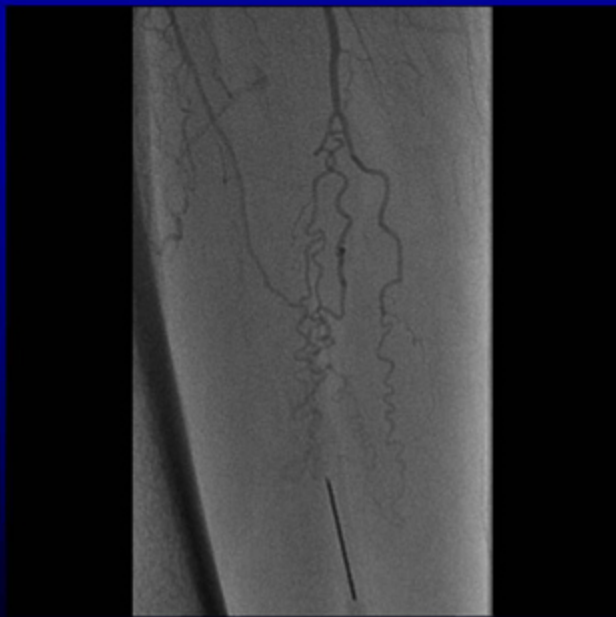
- Transpopliteal approach
- 4-6 Fr. sheath
- Patient in prone position
- Inconvenient for patient and physician



# Retrograde Approach for CTOs in Supine Patient-Position



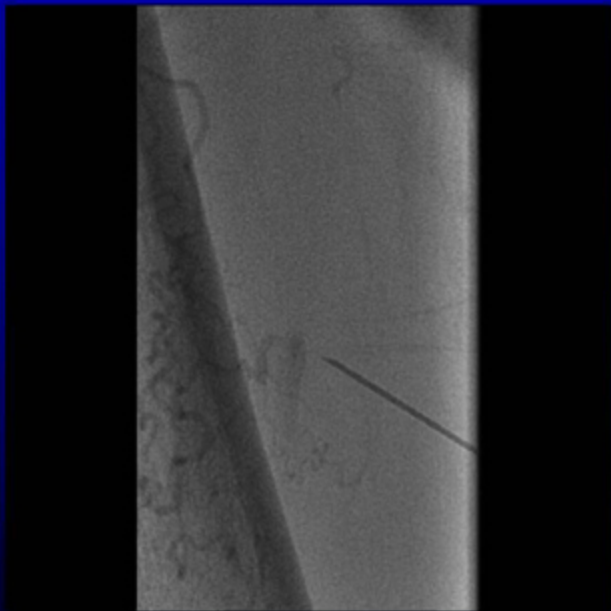
# Retrograde SFA-Recanalization



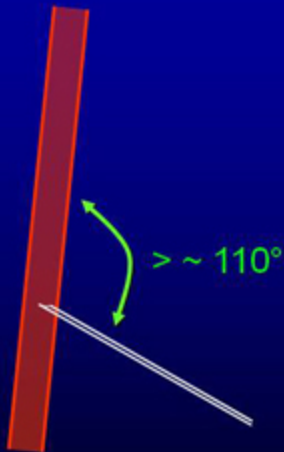
Right SFA: LAO 45°



# Retrograde SFA-Recanalization

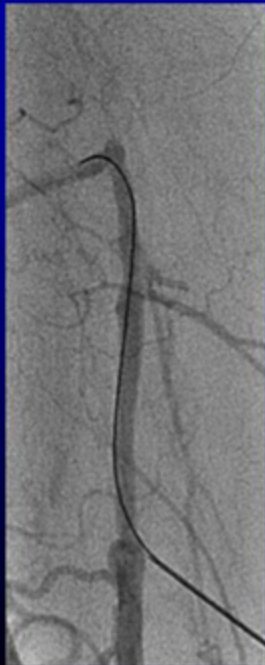


Right SFA: RAO 45°





# Retrograde SFA-Recanalization

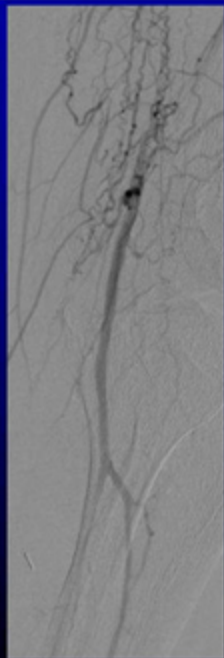


21 Gauge needle +  
0.018" V-18 Control-GW  
(Boston Scientific)

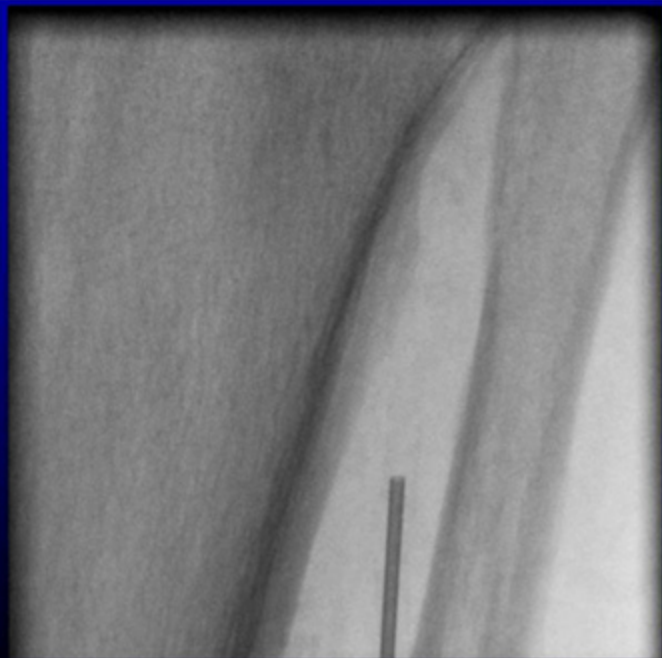
Sheathless approach  
in less calcified CTOs:

- Support-catheter
  - QuickCross (Spectranetics)
  - CXI (COOK)
  - TrailBlazer (Covidien)
- or OTW-balloon

# Double-Balloon Technique for the SFA

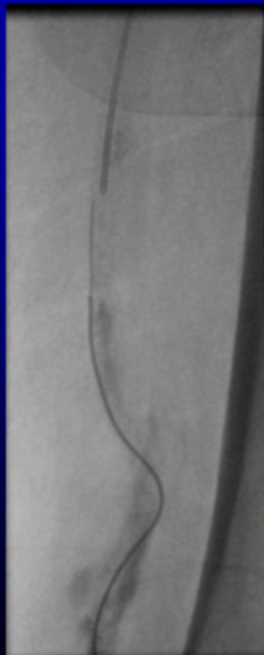


## Higher Puncture of the ATA with 4F sheath

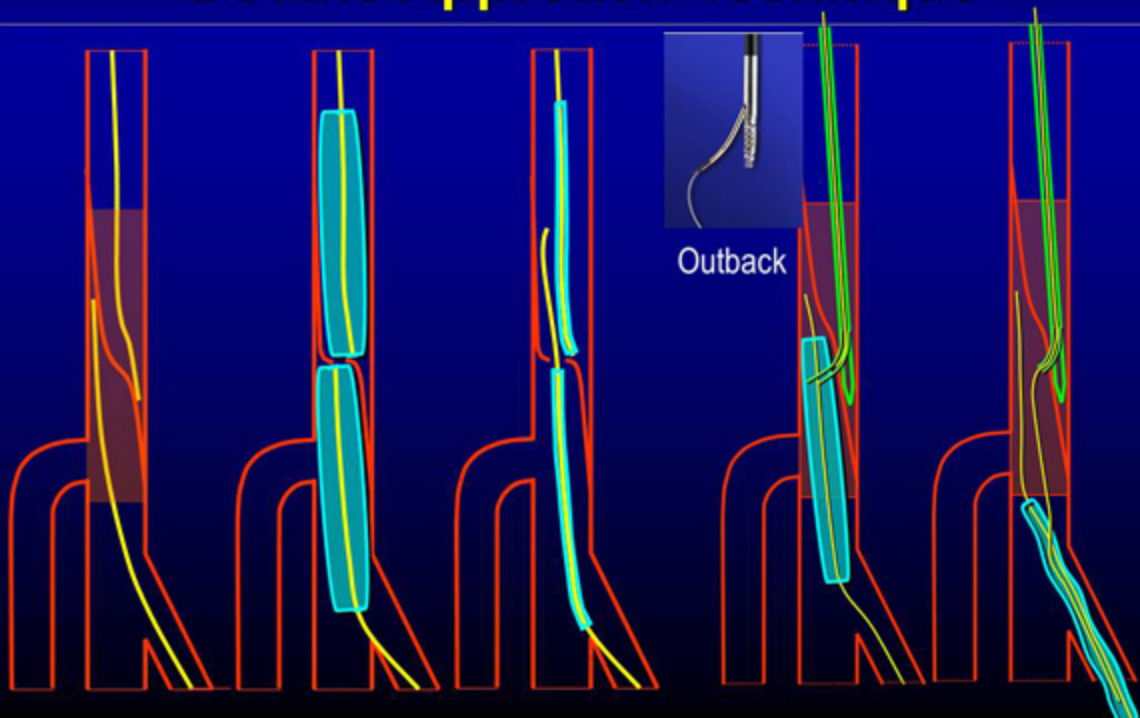


## Disadvantage of Prone Patient-Position

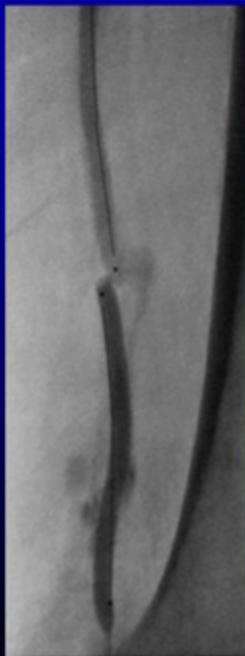
Retrograde  
guidewire does not  
pass the occlusion



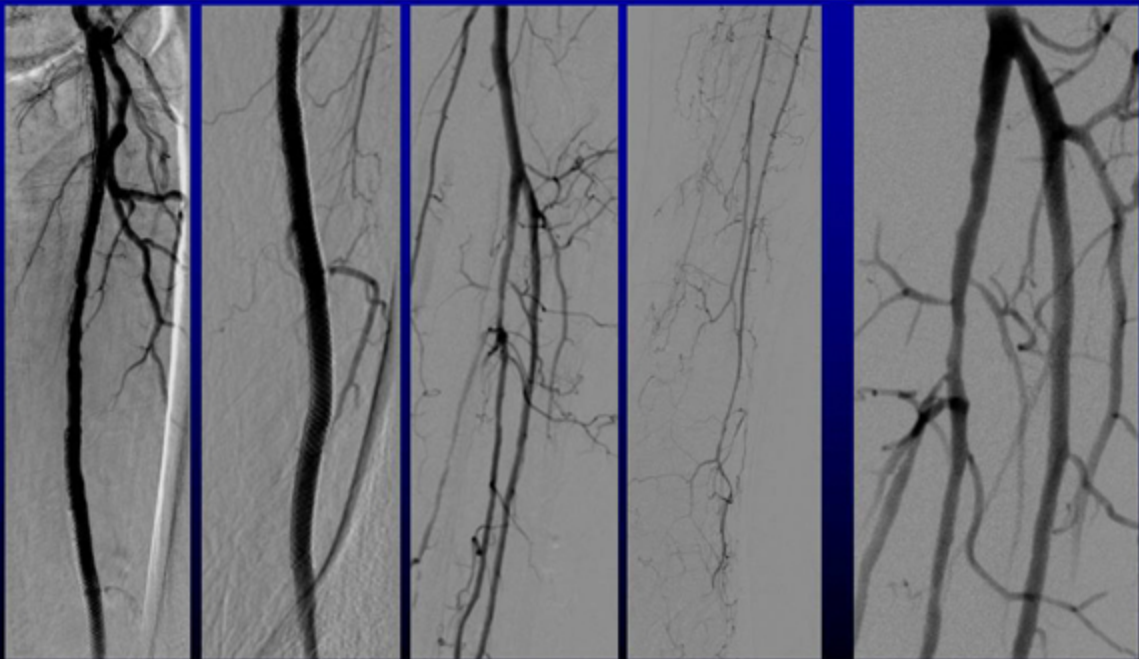
# “Double Approach Technique”



# Double-Balloon Technique



# Result

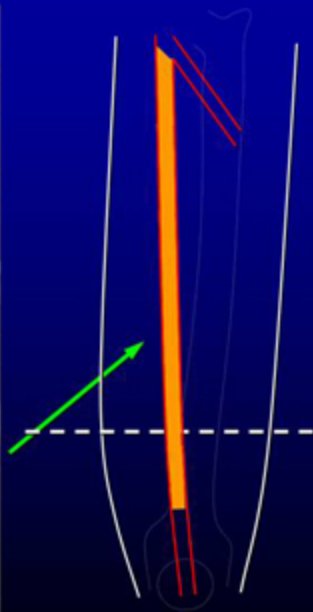
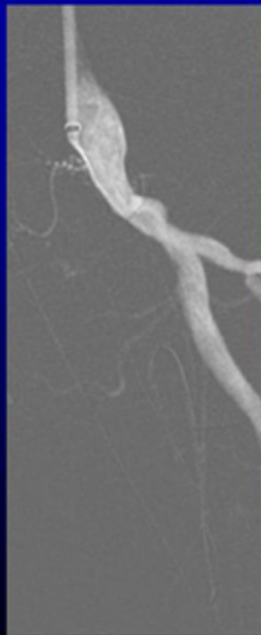


# Flush-Occlusion of the SFA require a Retrograde Approach

Requires a 6Fr sheath

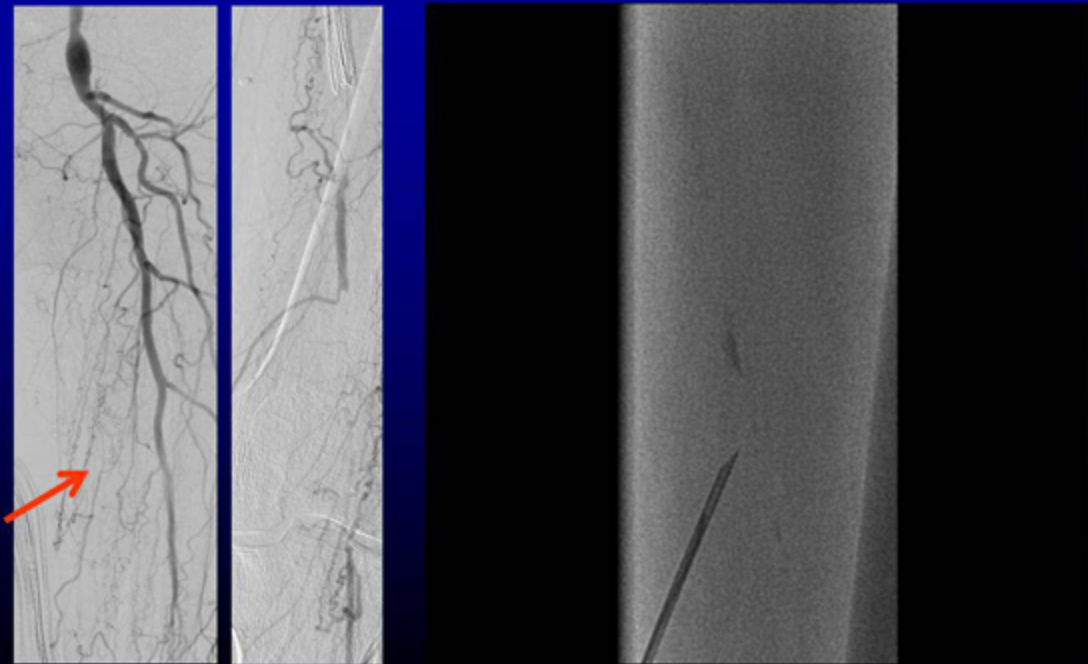
Increased bleeding-risk ?

To lower the bleeding-Risk:  
puncture into an occlusion

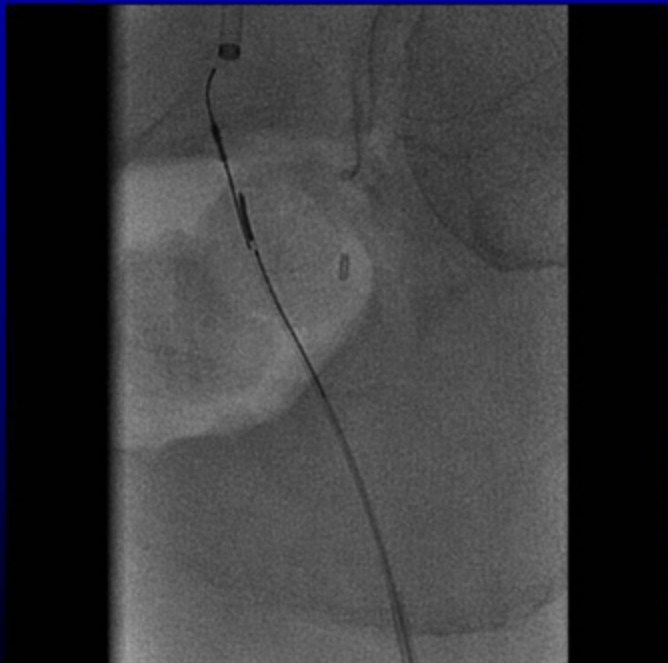




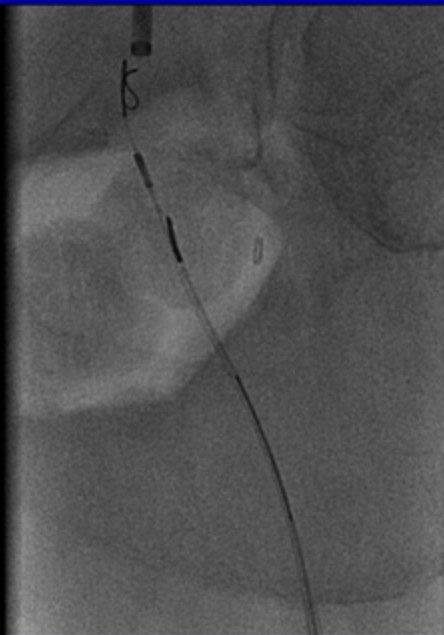
## Re-Entry-Devices via distal SFA



# Retrograde SFA-Recanalization



# Retrograde SFA-Recanalization



# Retrograde SFA-Recanalization with Access to the distal SFA with the Patient in Supine Position

- 50 SFA-occlusions with failed antegrade attempt
- Distal, retrograd access with
  - Low-profile support-catheter, 4Fr or 6Fr sheath
- Success in 48/50
- 2 small pseudoaneurysms at the distal access site
- successful duplex-assisted compression