



MEET 2015

MULTIDISCIPLINARY EUROPEAN ENDOVASCULAR THERAPY



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Disclosure

Speaker name: Ahmed Reyad Tawfik

I do not have any potential conflict of interest

Overcoming Difficult CTOs increasing the applicability of Endovascular Intervention to patients with challenging Re-entry

- **Endovascular interventions for femoro-popliteal CTO lesions are**

- **Most technically challenging .**
 - **Time consuming .**
- **More prone to be complicated.**

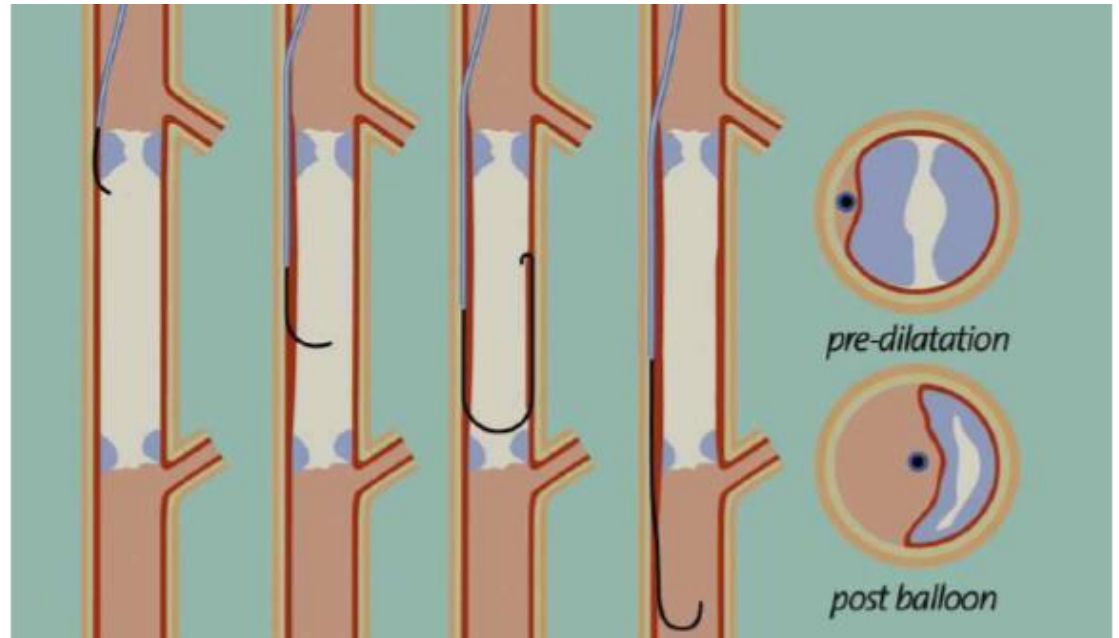
- **Successful Endovascular Revascularization of CTO lesions depend primary on how these lesions crossed and get reentry in the distal patent artery.**
- **The failure rate reaches up to 25% of cases.**

Recanalization of long SFA occlusion

- Antegrade ipsilateral or contralateral cross over is standard.
- Failure rate up to 25%.
- Mainly due to inability to re-enter patent artery distal to occlusion.

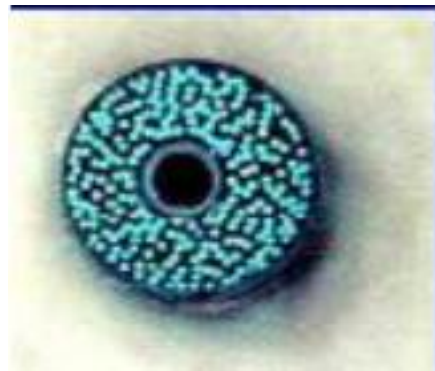
Initial passage of SFA occlusion

intraluminal versus subintimal



Tools used for (intraluminal) Recanalization of CTO

Excimer-Laser

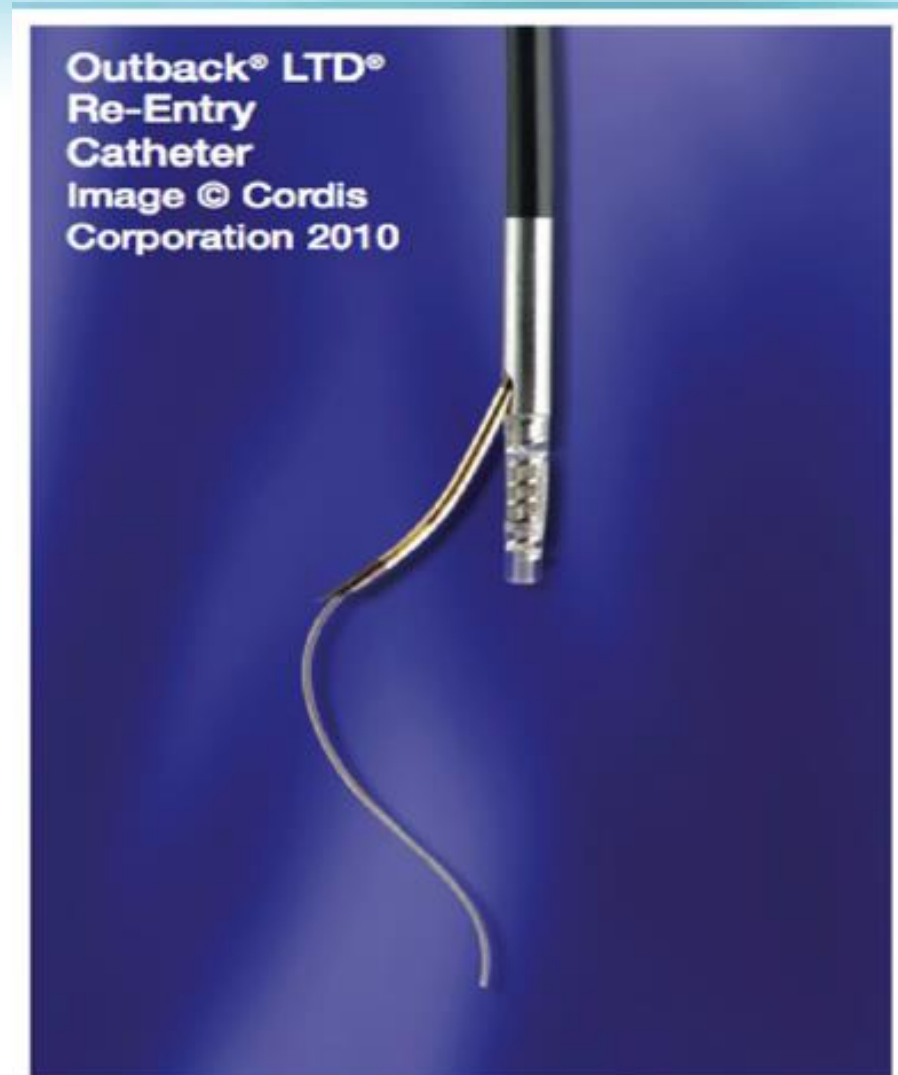


Frontrunner (Cordis)



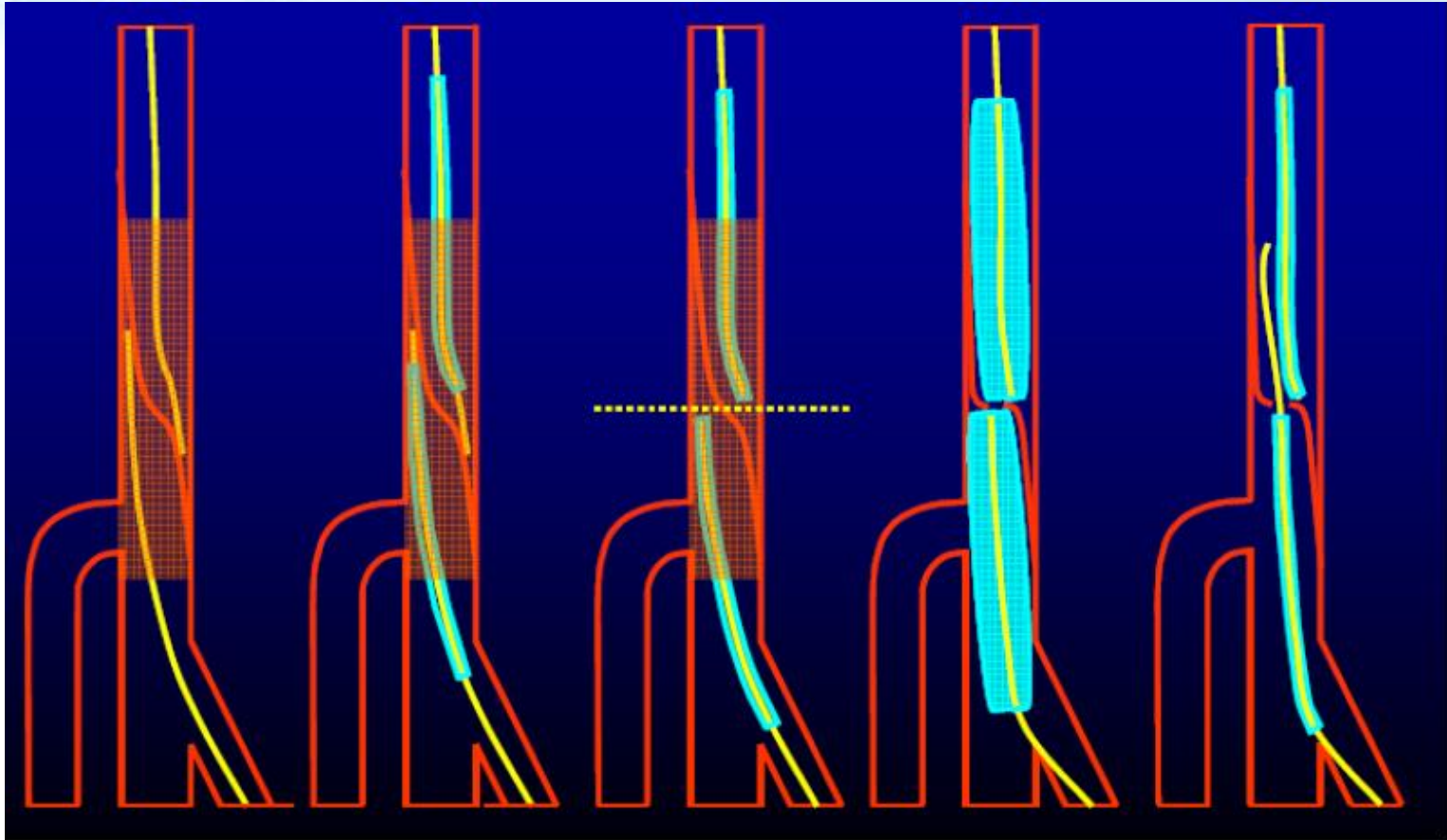
Frontrunner® XP CTO Catheter
Image © Cordis Corporation 2010

Outback Catheter



All are too expensive and unavailable in developing countries where medical insurance dose not cover all citizen and almost of patients present with CLI.

Double Balloon approach



Retrograde approach:

- Popliteal; in supine position: 21G needle, 11cm 6 F sheath



Pedal access: In Occluded Distal SFA

Obese Patient

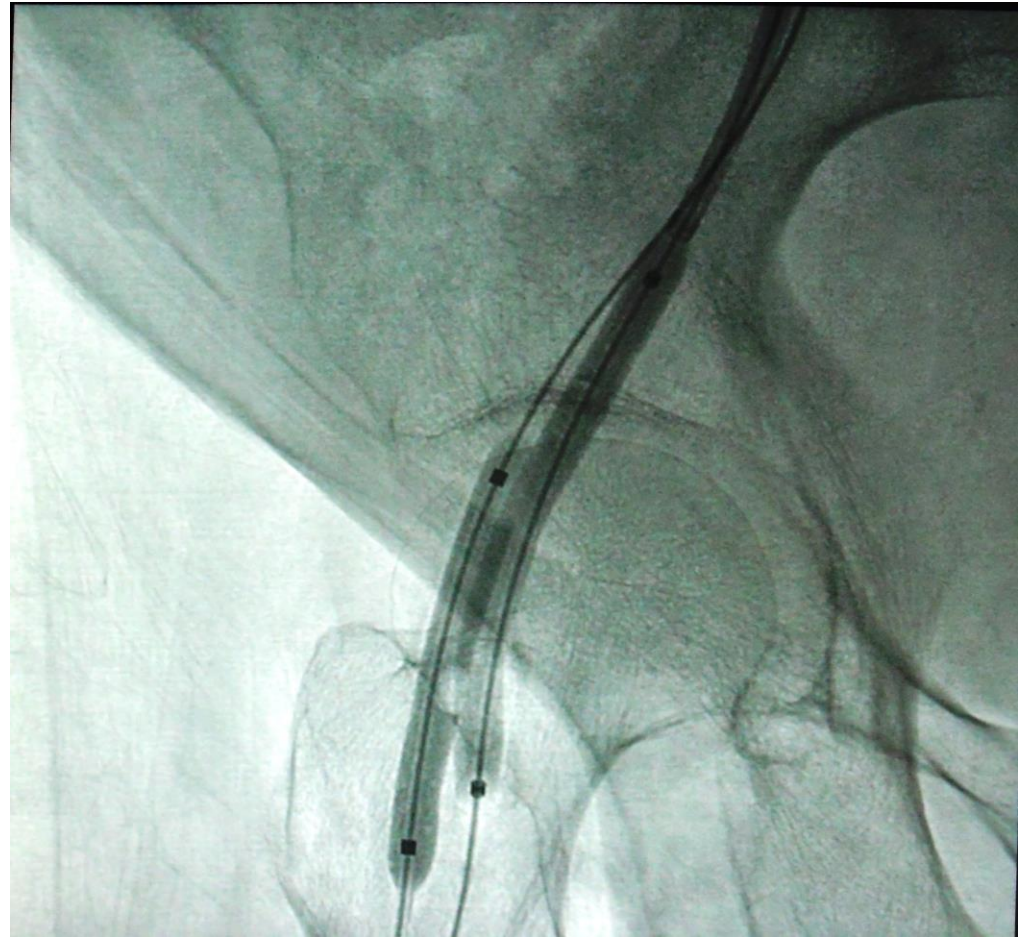
Failed Retrograde Access In Supine Position

21 G needle
5F sheath



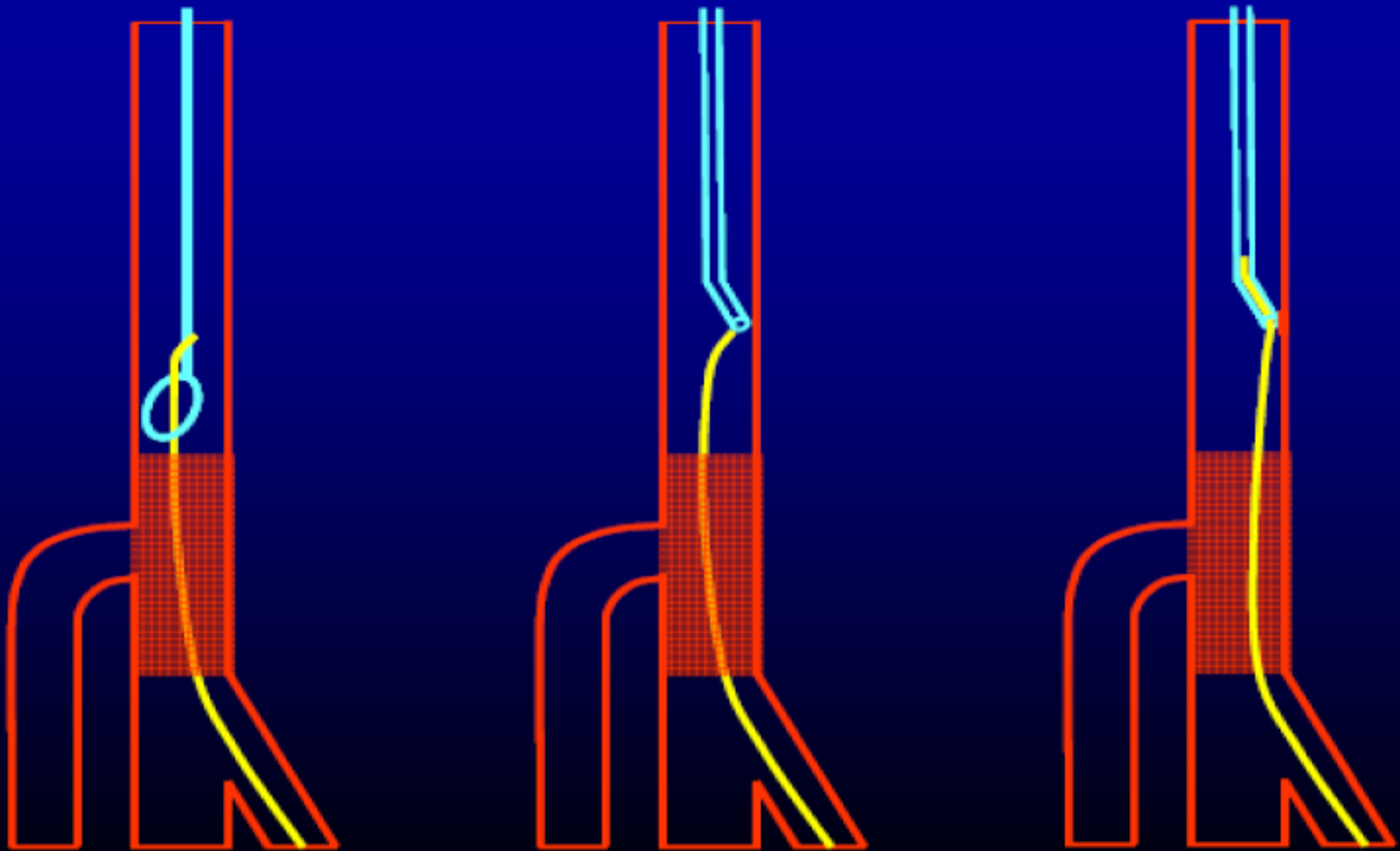
Double balloon technique:

Failed all previous standard techniques in patients with CLI and had poor general condition.



- When both antegrade and retrograde subintimal space were seems to oppose and get separated from each other by a thin plaque
- a low profile four French vertebral catheter or short tibial balloon over distal wire which its tip was not protruded through the tip of either the catheter or the balloon pushed gently while it was rolled until the tip of the catheter or the balloon crush this atherosclerotic plaque and it get in the antegrade sheath or catheter.

Snaring of the retrograde guide-wire



Naeima Mohamed Ibrahim Hassan, 70 Y. (F)

722012-144-201107180956547

F

7/18/2011

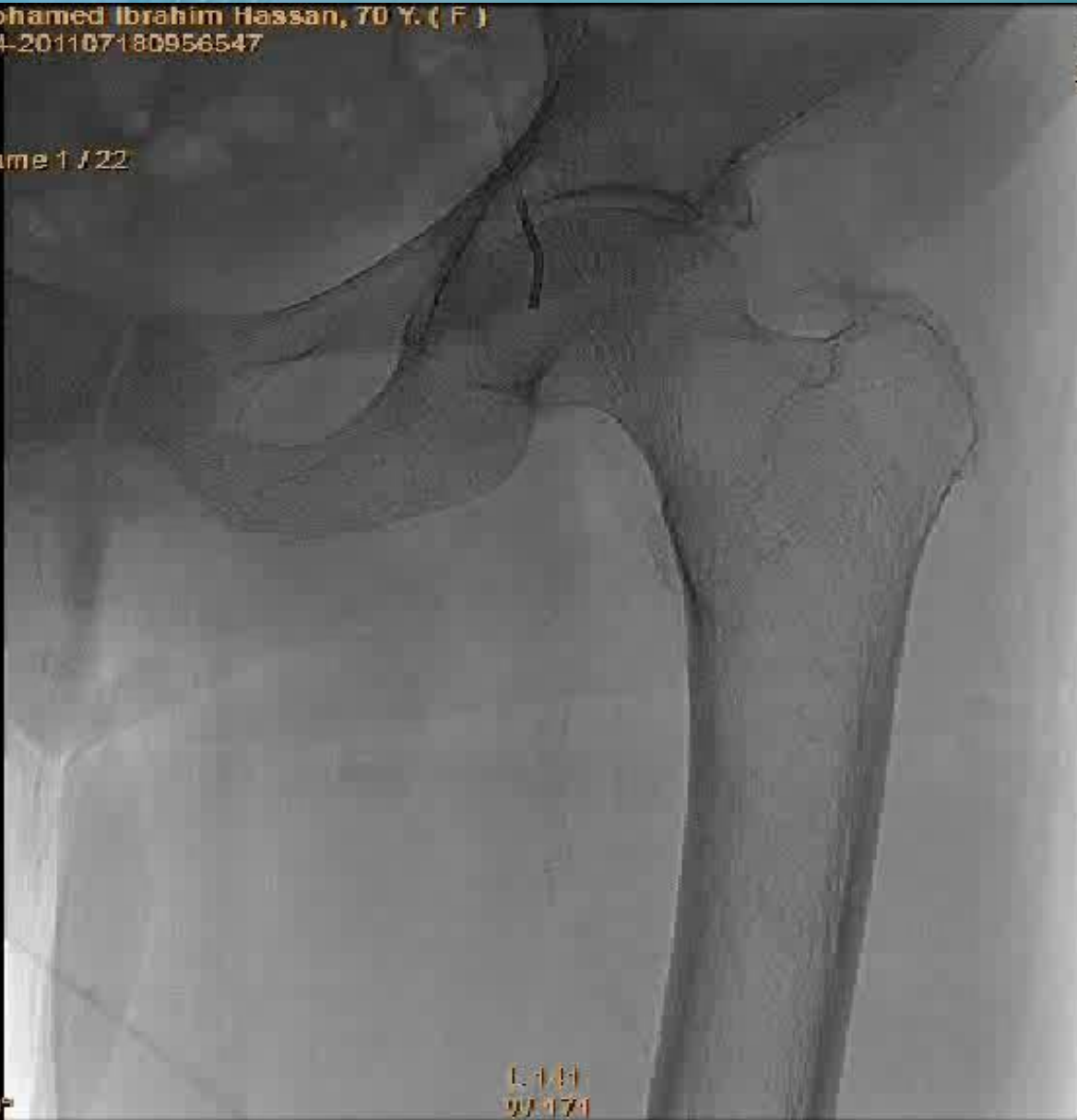
10:09 AM

Run 1 - Frame 1 / 22

722012-144

75kV, 6mAs

Zoom 129%



RAO -0.2°
Cranial 0.0°

0111
07171

Mohamad Ahmad Ramadan, 58 ys
698000887867
M
3/21/2013
11:44 AM
Run 2 - Frame 1 / 223

722012-144
射源V, - mAs, 8mA, - ms
Zoom 100%



LAO 0.1°
Cranial 0.3°

I: 140
W: 177

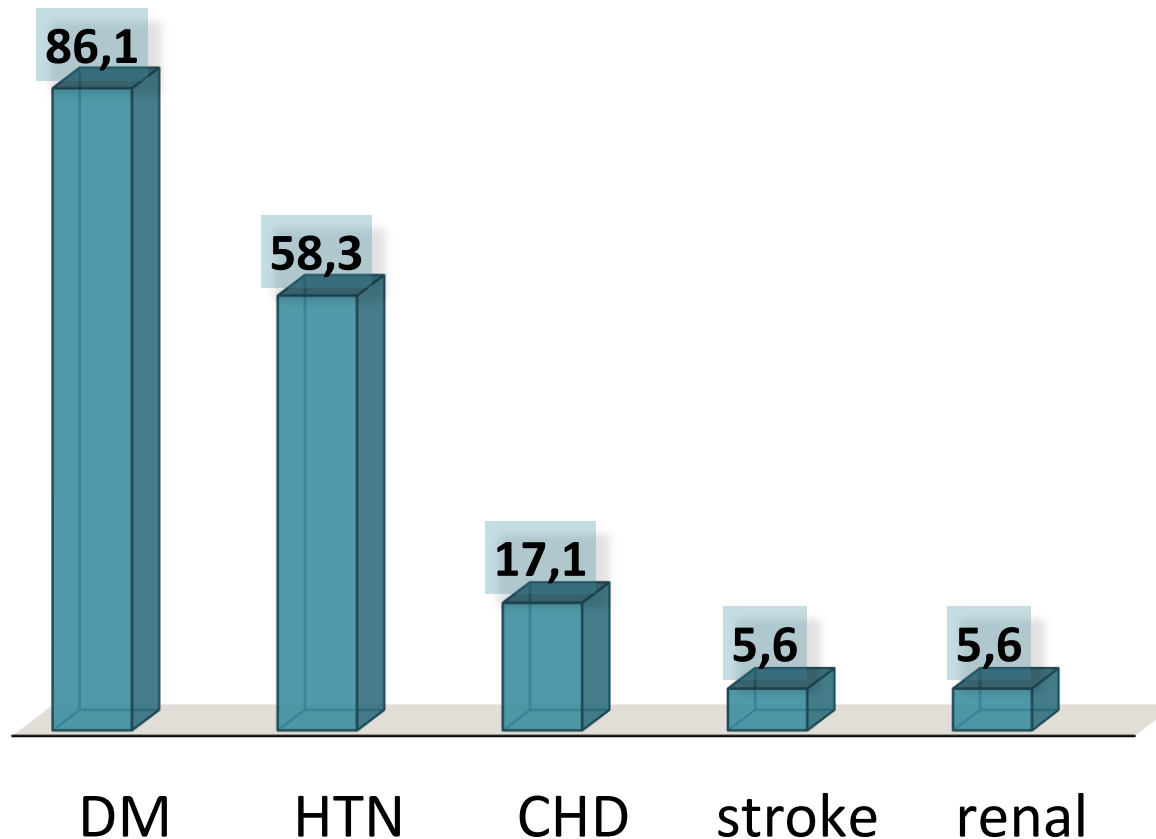
350 Patients with CTO lesions in the SFA

from June 2011 to Dec. 2014

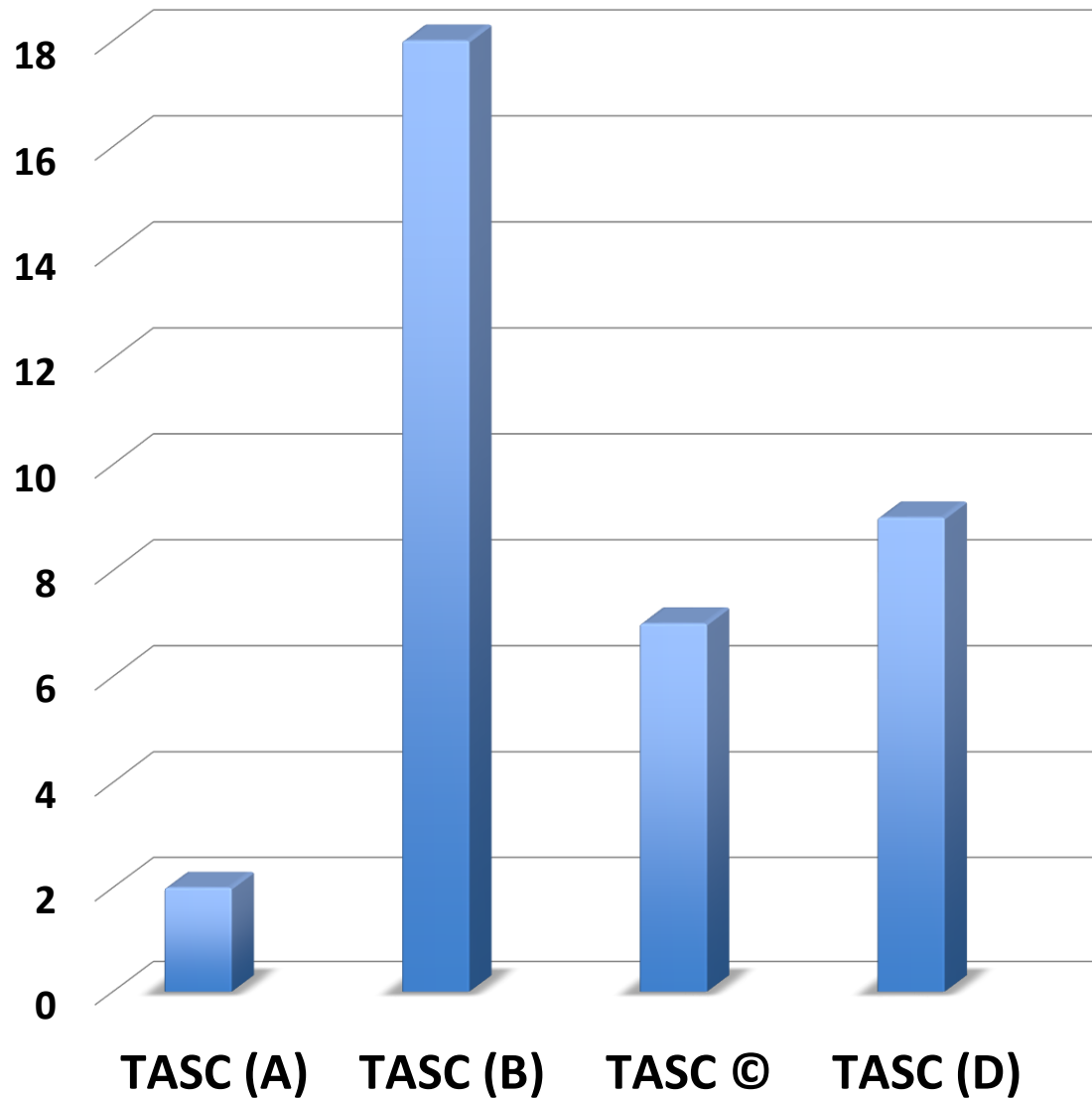
250 males
100 females

Age: 45ys to
72ys (58±10.26)

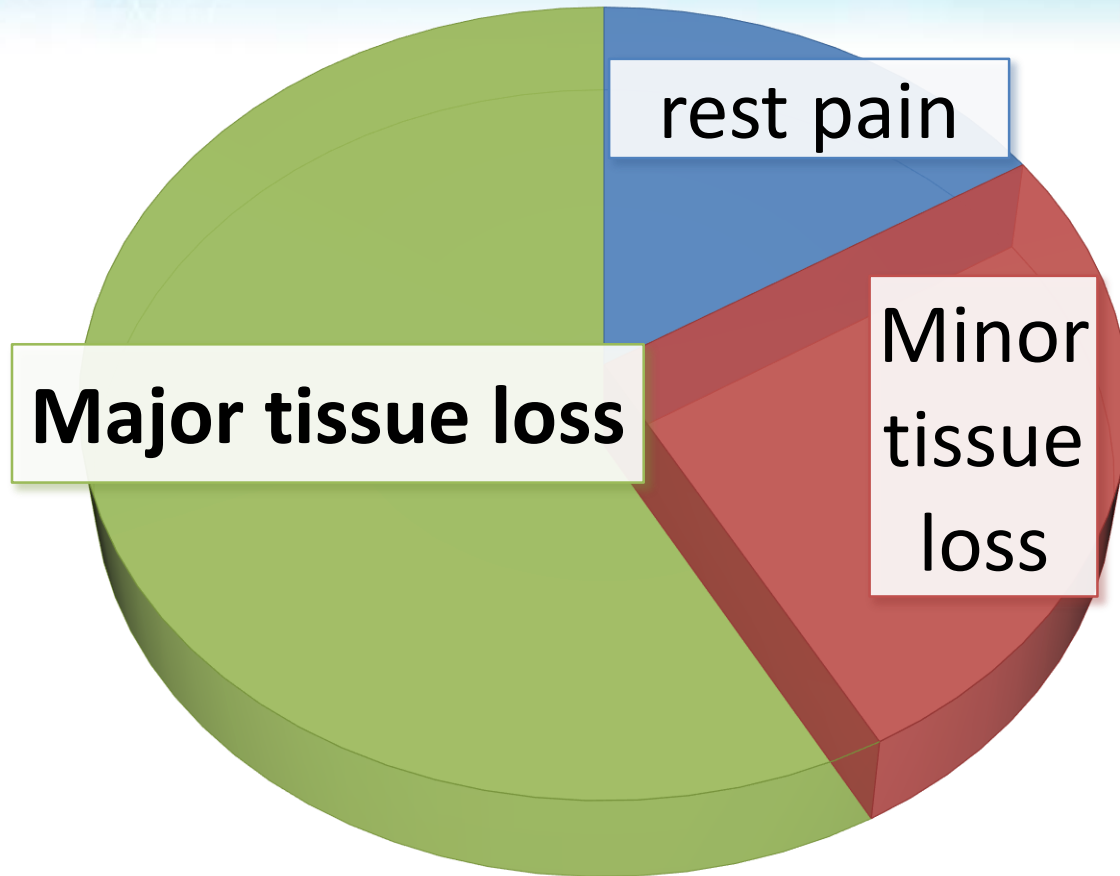
Pre-existing risk factors



Morphological description of lesions:



Clinical Presentation of patients



Results:

350 CTO Lesions

**80 lesions
(22.86%)
complex CTO
lesions**

**270 lesions
(77.14%)
managed with
conventional**

**50 (14.29%)
lesions
Referred to
Surgery**

**28 lesions (8.6%)
High risk for surgery
Double Balloon
technique done**

**2 (0.57%) lesions thin
atherosclerotic plaque; low
profile balloon over distal
wire pushed through
proximal sheath**

Double Balloon Technique

- First described by Muller and colleagues in a German abstracts 1991.
- In our experience; all lesions were successfully vascularized with no complications related to the technique.
- It should be considered as a step ladder and it should be up stairs before jumping to other new devices used for re-entry.

Conclusion

- Antegrade approach is standard in long SFA-CTOs, including reentry-devices if necessary.
- Retrograde approach only if the above techniques fail.
- Antegrade and retrograde allows more bailout-techniques than trans-popliteal only.
- Double balloon technique is a safe and cost effective than reentry devices in complex CTOs.

Thank you