The recent updated data
-Which stent is the most efficacy-

Osamu Iida, MD
Kansai Rosai Hospital
Amagasaki, Hyogo, Japan

Importance of stent design

Flexibility

Vs.

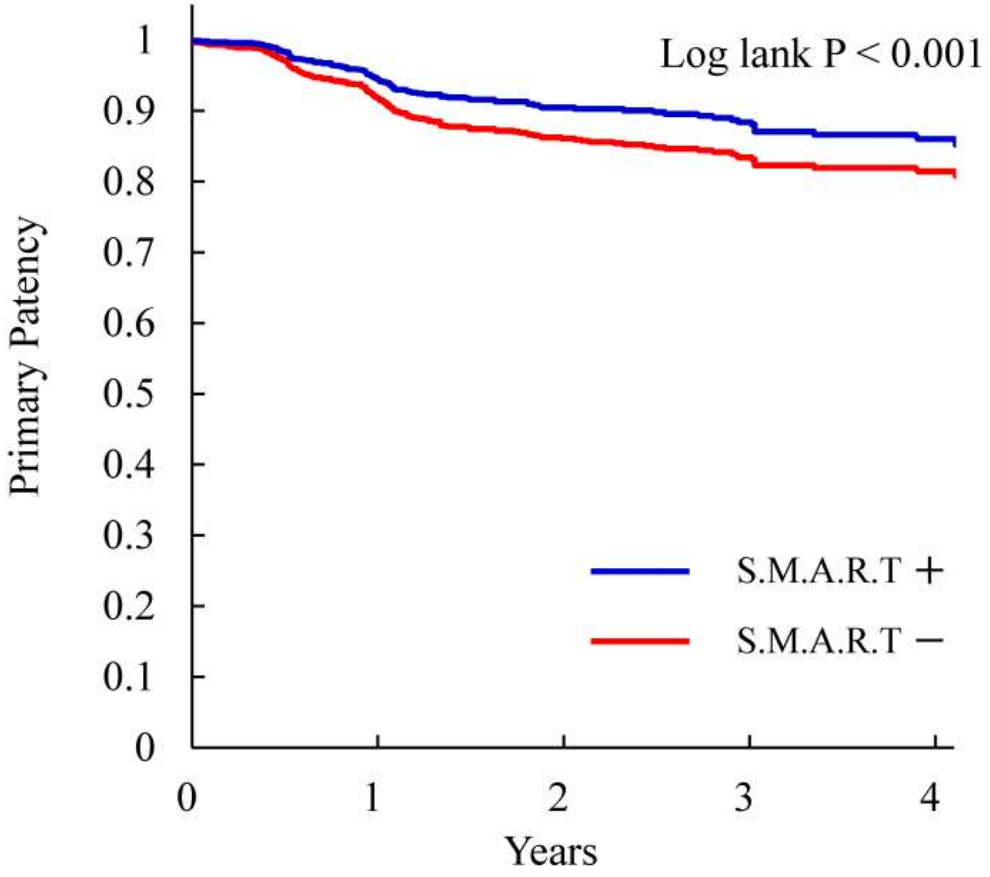
Strength

My opinion
I never see the better stent than S.M.A.R.T.
(Balance between strength, flexibility and long-term outcomes)

SMART Control
NITINOL STENT SYSTEM

Safety and Efficacy of the S.M.A.R.T Control Stent for Aorto-Iliac Occlusive Disease in Contemporary Clinical Practice (n=2541)

Primary patency (After PP matching)



5 year patency

SMART: 86.0%

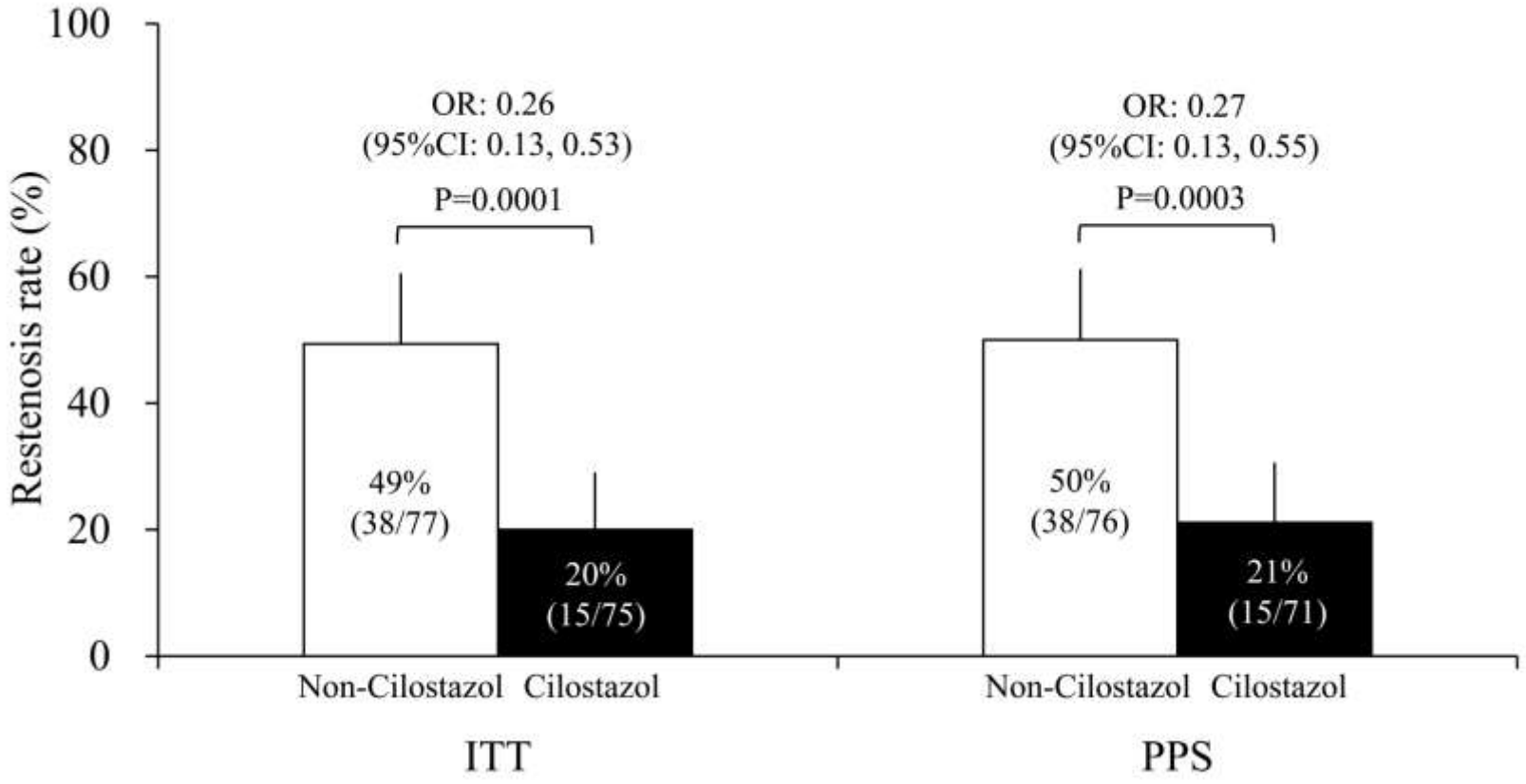
vs.

Others: 76.4%

Iida O, Soga Y, et al. JEVT 2013

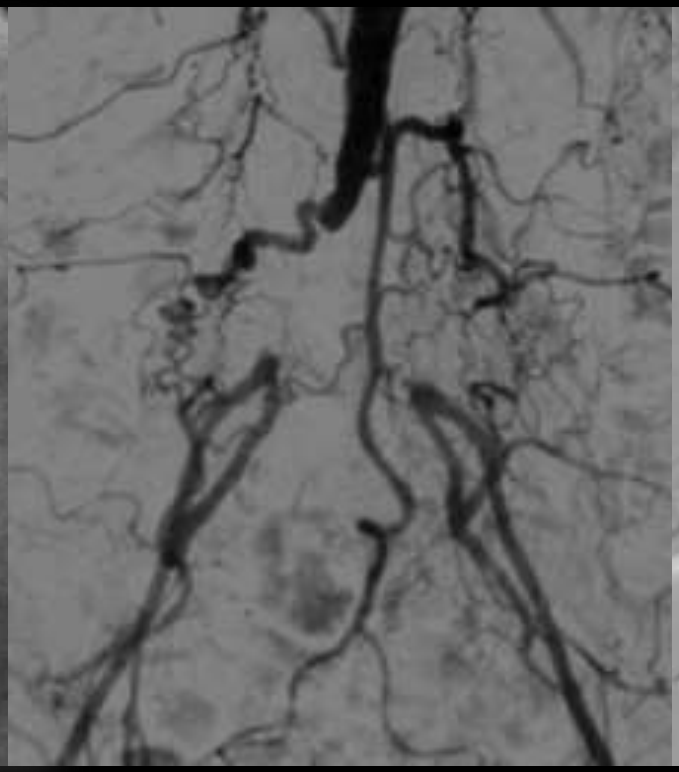
Cilostazol reduces angiographic restenosis after EVT for femoropopliteal lesions in the STOP-IC study.

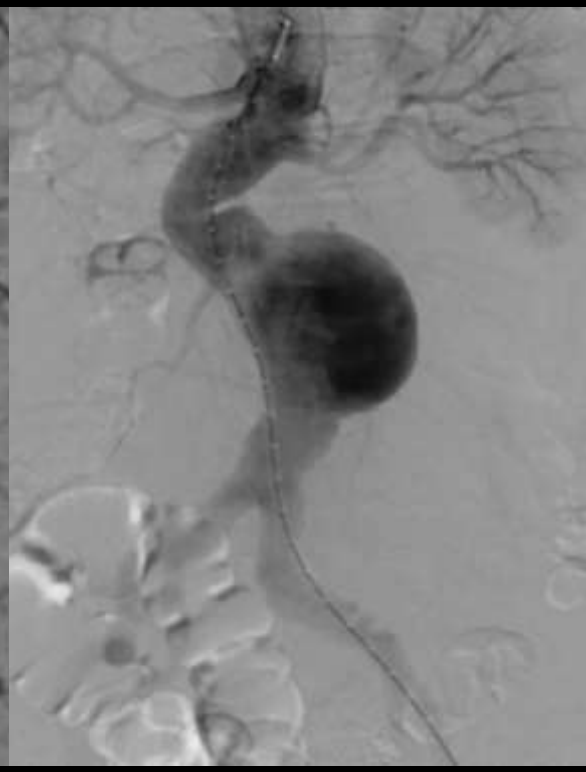
Primary Endpoint (12 months angiographic restenosis)



Iida O, Yokoi H, et al. Circulation. 2013;127:2307-15.

KRCVC Intervention in 2015

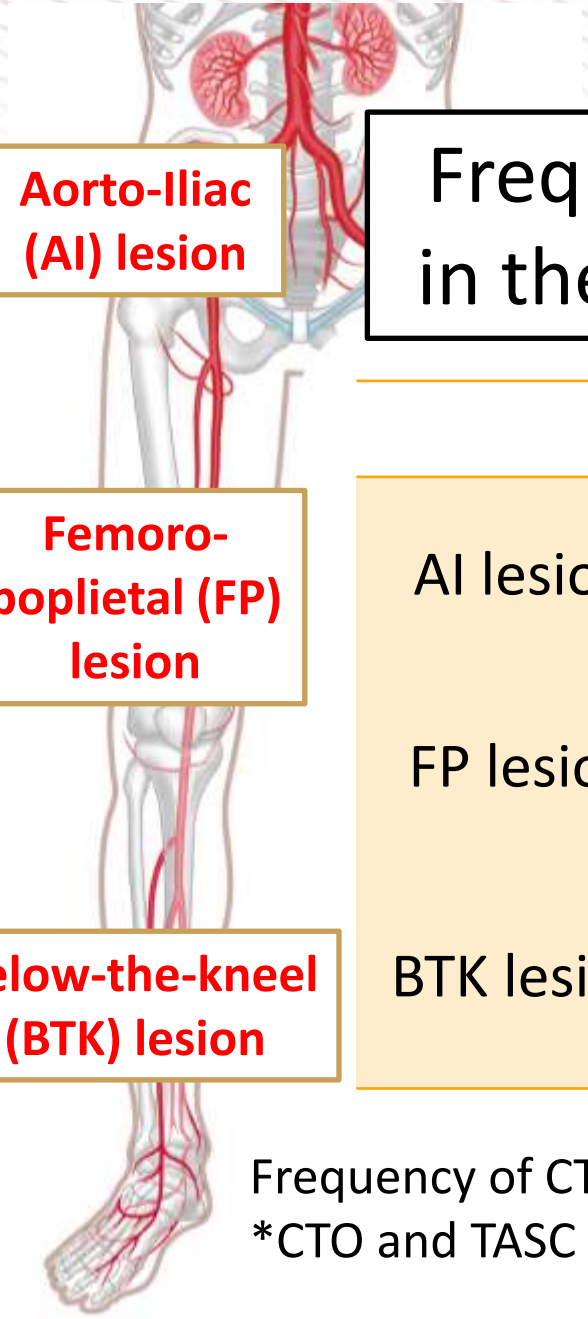




PCI	EVT	EVAR/TEVAR
715	834	76

Today's my theme

How to open
and
How to keep it open



Frequency of CTO and TASC D lesions in the symptomatic patients with PAD

	CTO	TASC D	Ref.
AI lesions	24%	15%	Soga Y, et al. Circ J 2012
	6%	35%	Chen BL, et al. JVS 2011
FP lesions	50%	24%	Soga Y, et al. JVS 2010
	40%	17%	Iida O, et al. Circulation 2013
BTK lesions	62%	98%	Iida O, et al. EJVES 2012
	-	90%	Iida O, et al. JVS 2013

Frequency of CTO and TASC D are highly observed in more distal lesions.
*CTO and TASC D: AI< FP< BTK = Technical challenge: AI< FP < BTK

CTO Steps in KRCVC

- Wire cross
- Devise cross
- Gain the lumen

CTO Steps in KRCVC

- Wire cross
- Devise cross
- Gain the lumen

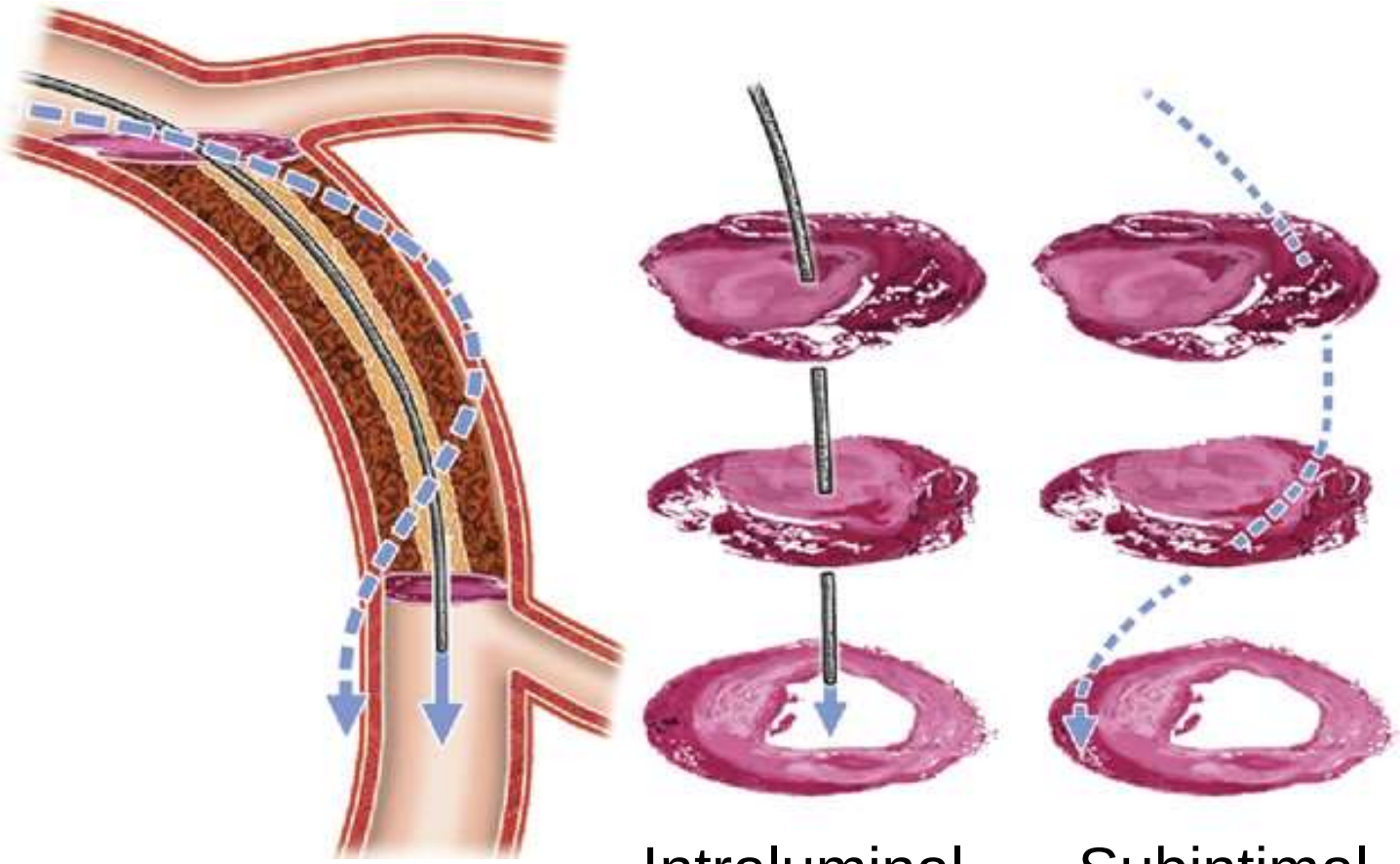
Wire cross

- Antegrade
  - Intraluminal, Sub intimal
  - IVUS guide, Echo guide

- Retrograde
  - Distal puncture
  - Trans collateral, Trans pedal

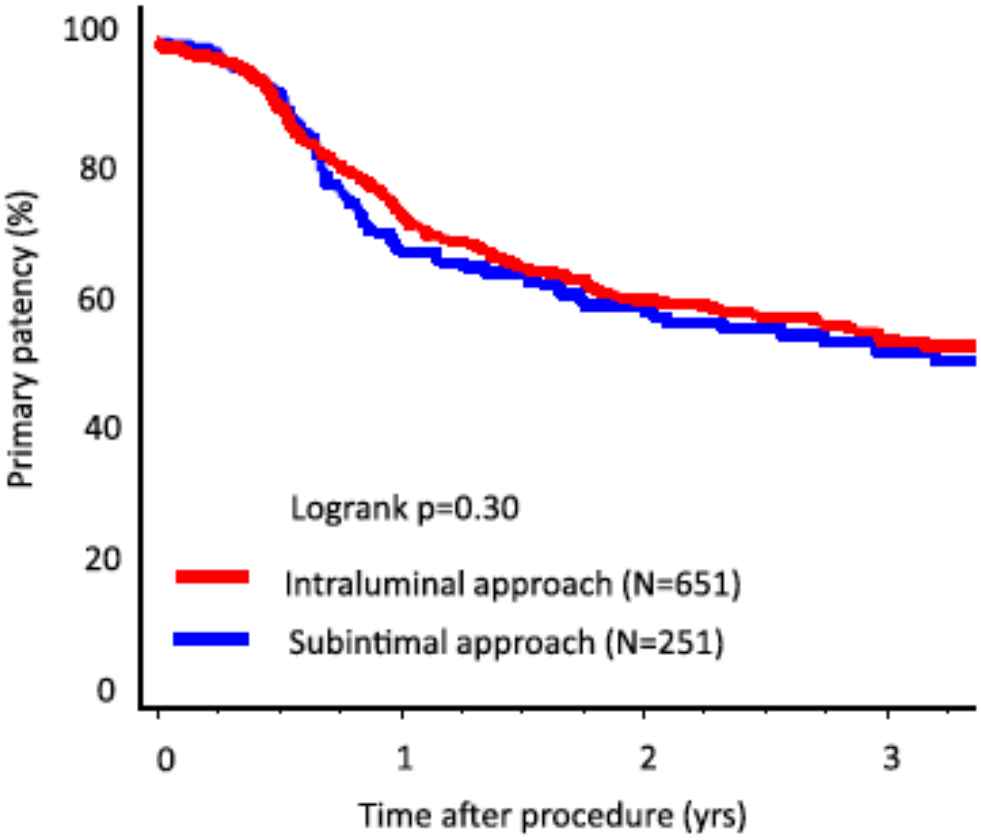
FP lesion

Revascularization for CTO



J Am Coll Cardiol Intv 2011;4:941–51

Long FP occlusion
-intra versus subintimal-

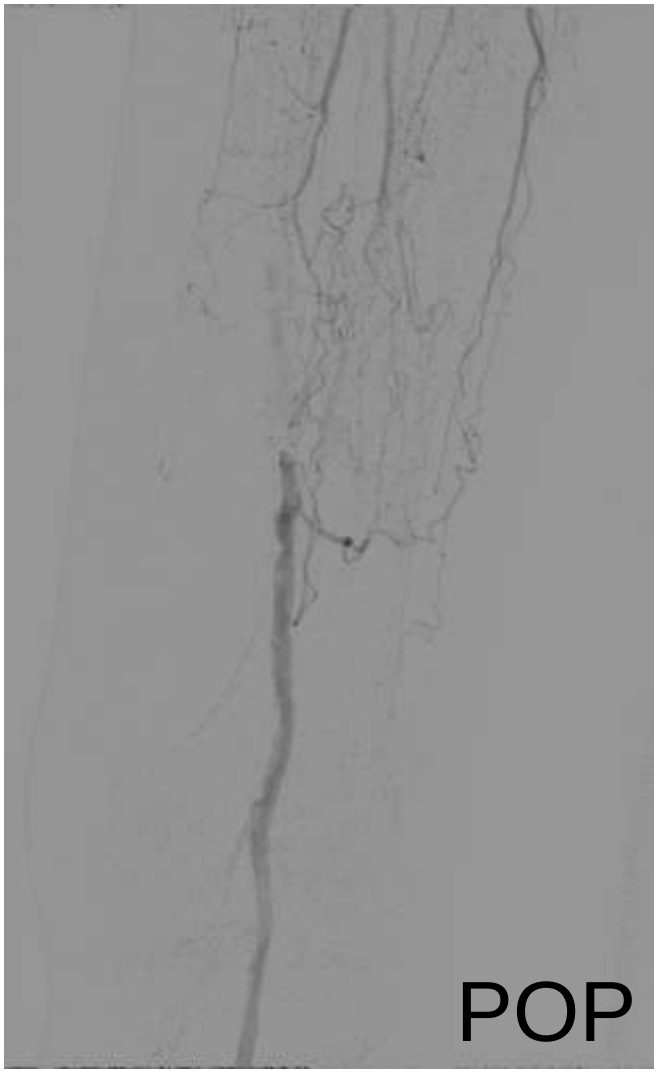


Limitation

- Retrospective
- No IVUS use

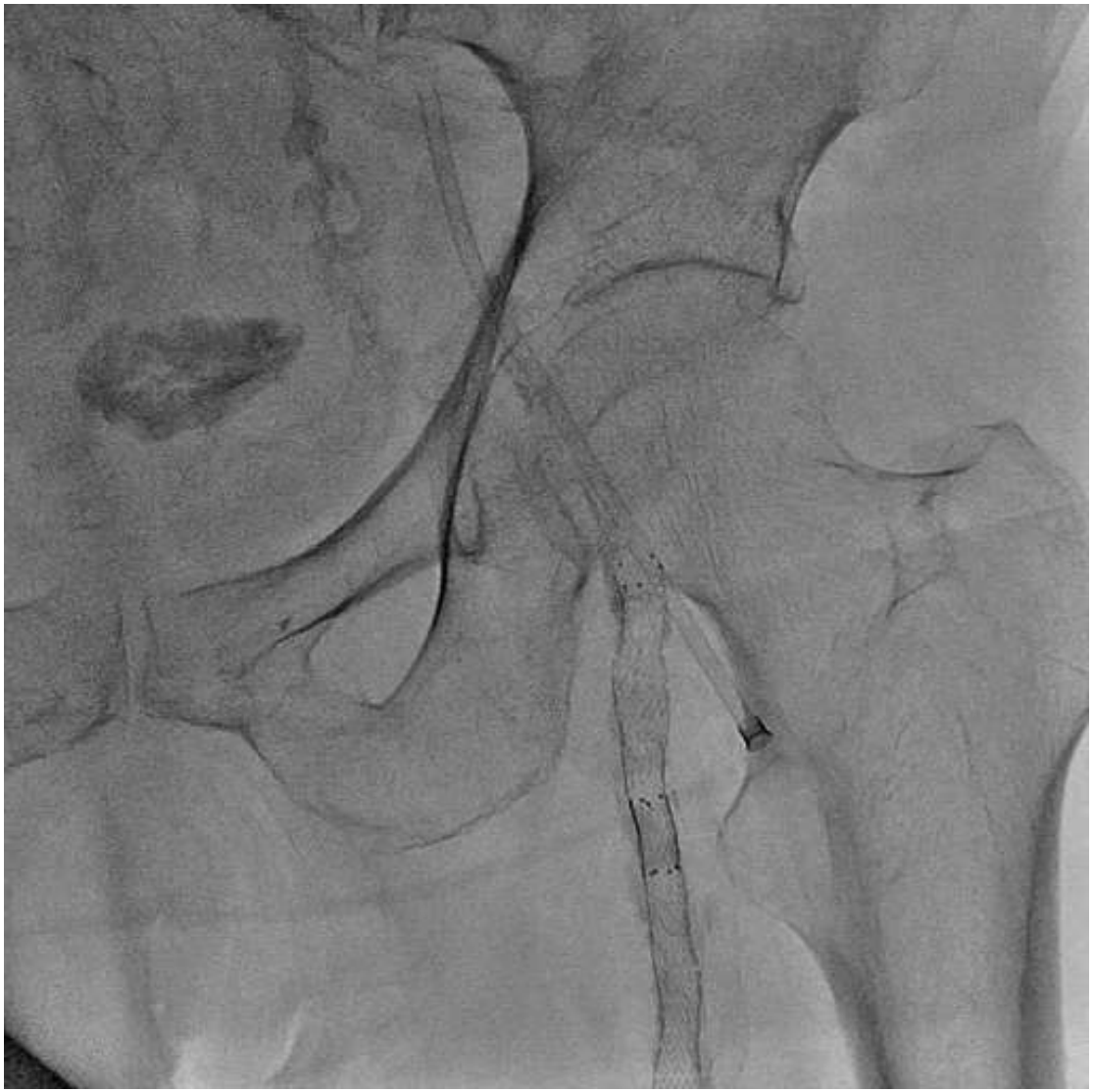
Soga Y, Iida O, et al. J Vasc Surg. 2013;58:1547-55

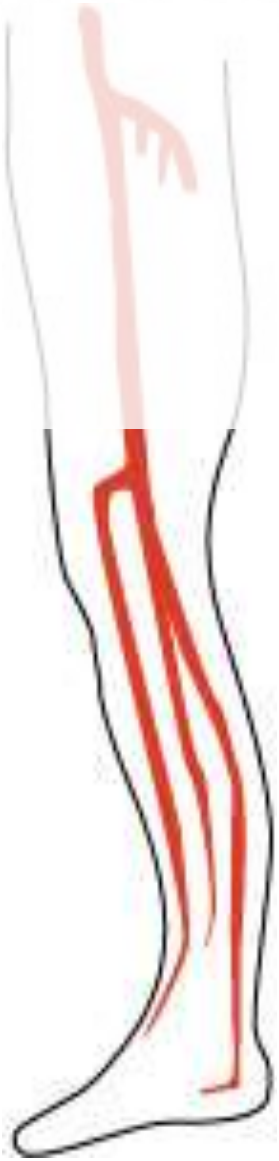
Initial angiogram



Case: Sub-intimal angioplasty

Final angiogram





BK lesion

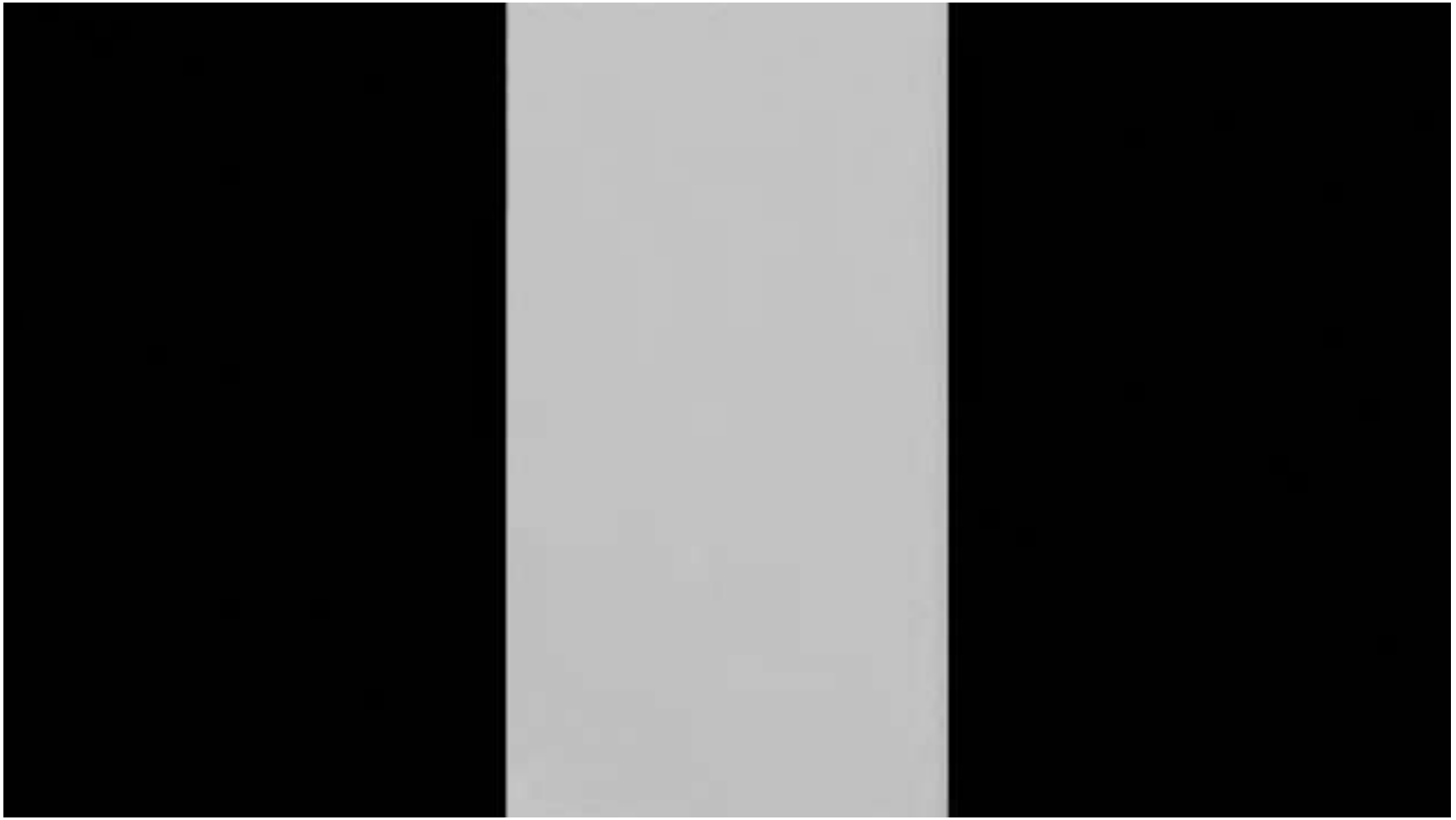
Limitation of infrapopliteal angioplasty

Repeat EVT
@ 1 year
40%

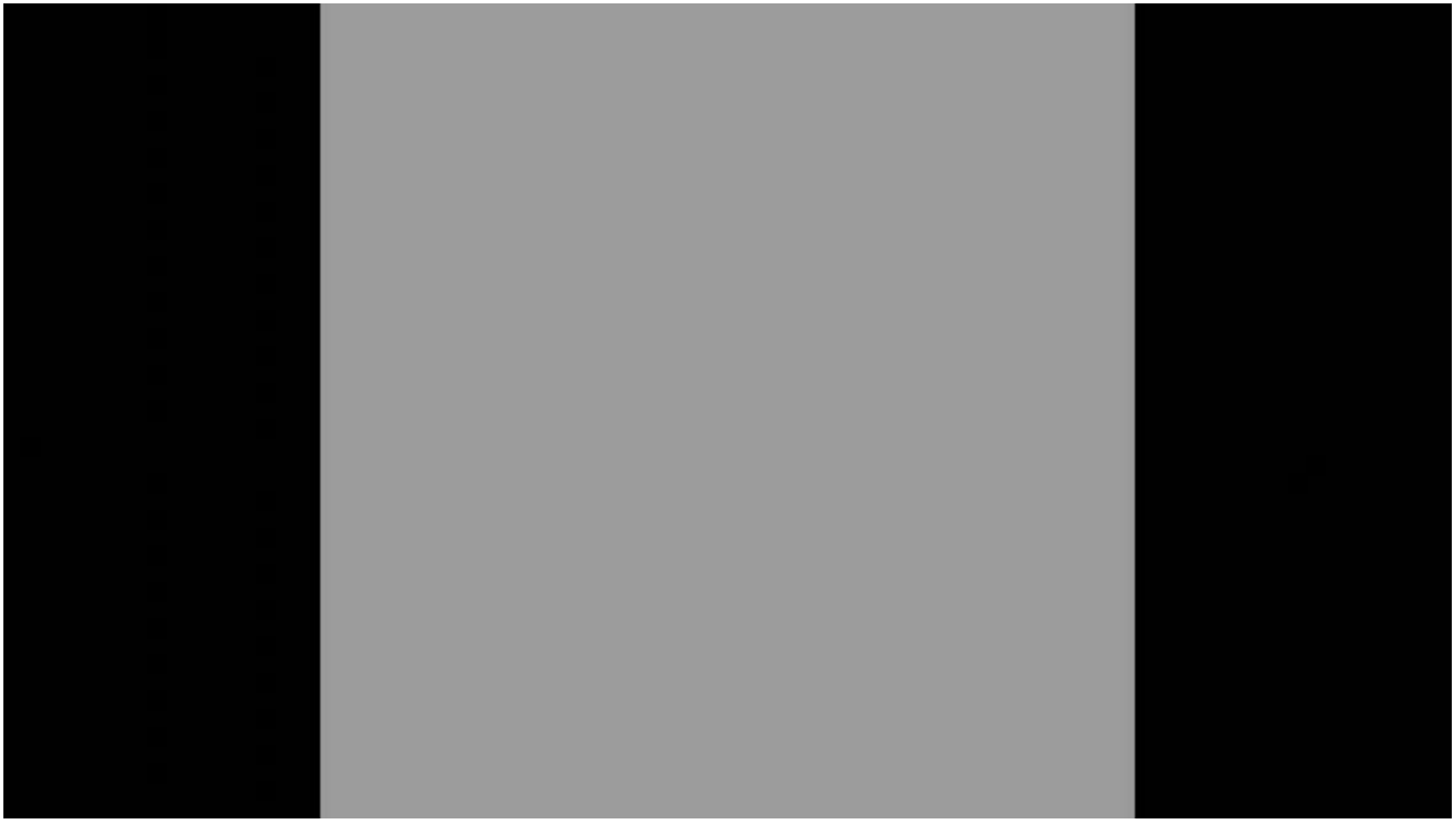
Restenosis
@ 3 months
70%

Early Recoil
@ 15 minutes
97%

Case: PTA CTO: 0.035 inch knuckle wire



Case: Trans pedal approach



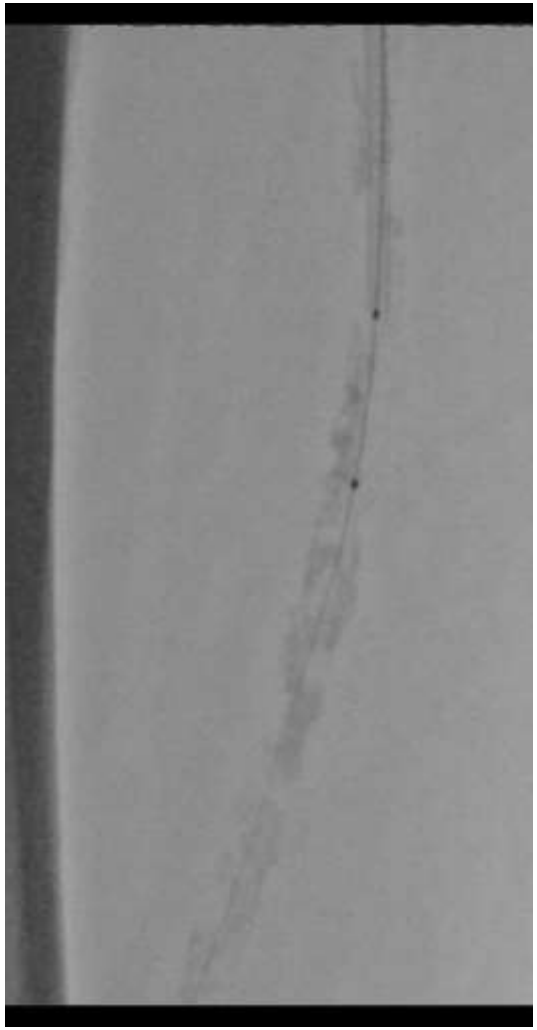
CTO Steps in KRCVC

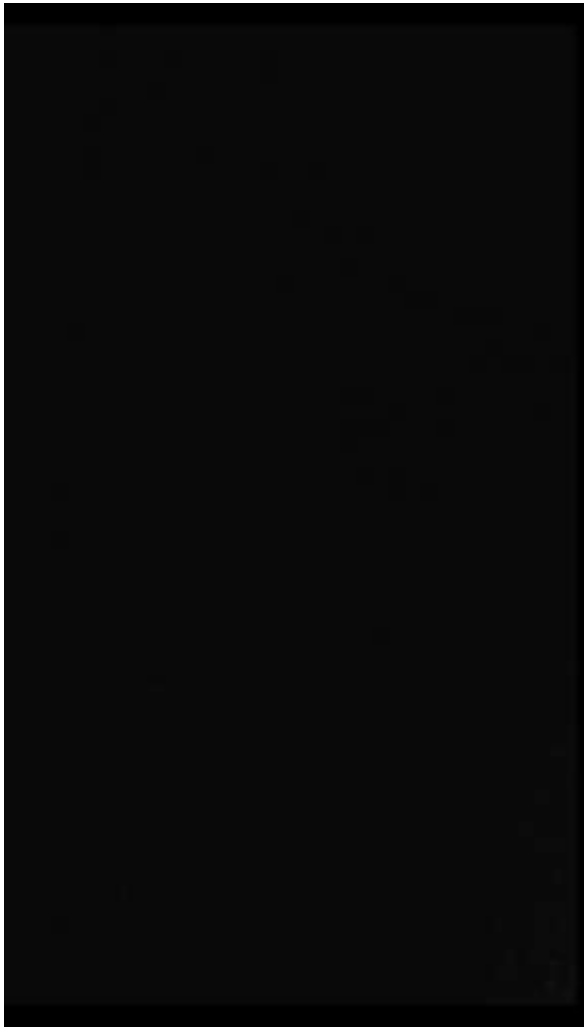
- Wire cross
- Devise cross
- Gain the lumen

Case: SFA CTO with severe calcification

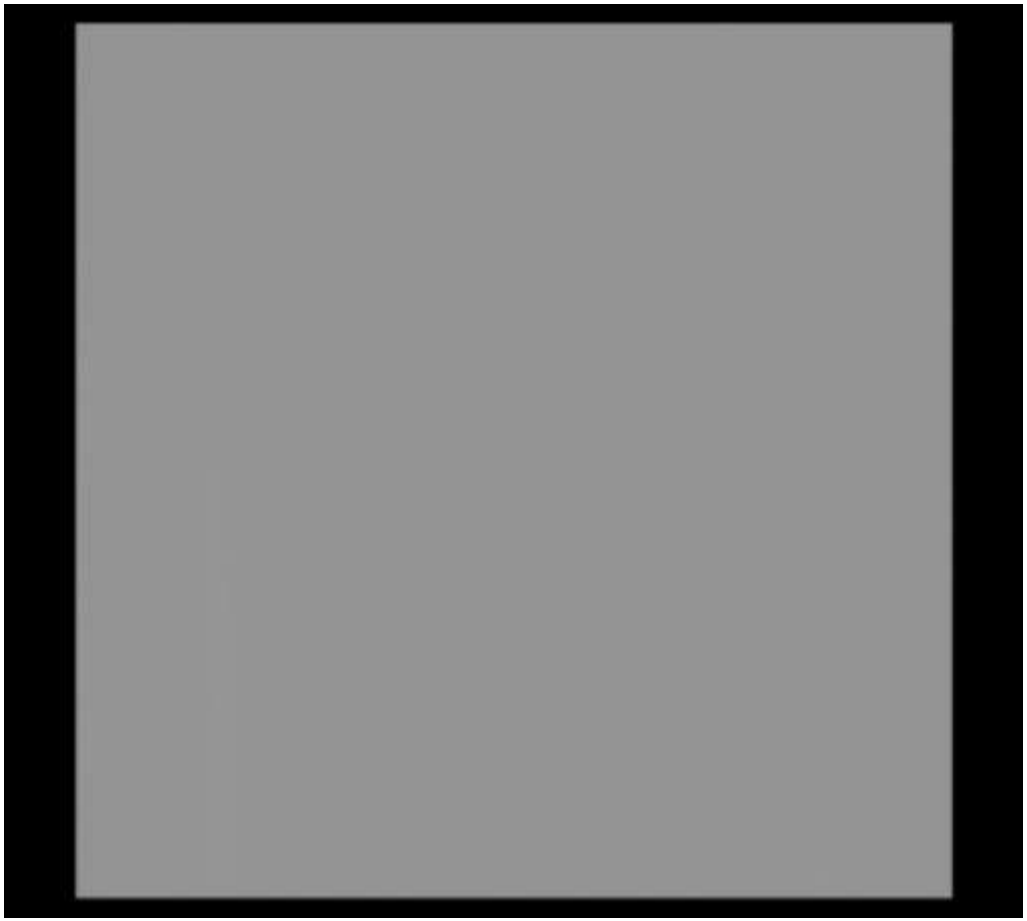
Case: Brockenbrough dilatation

Balloon dilatation





Final angiogram

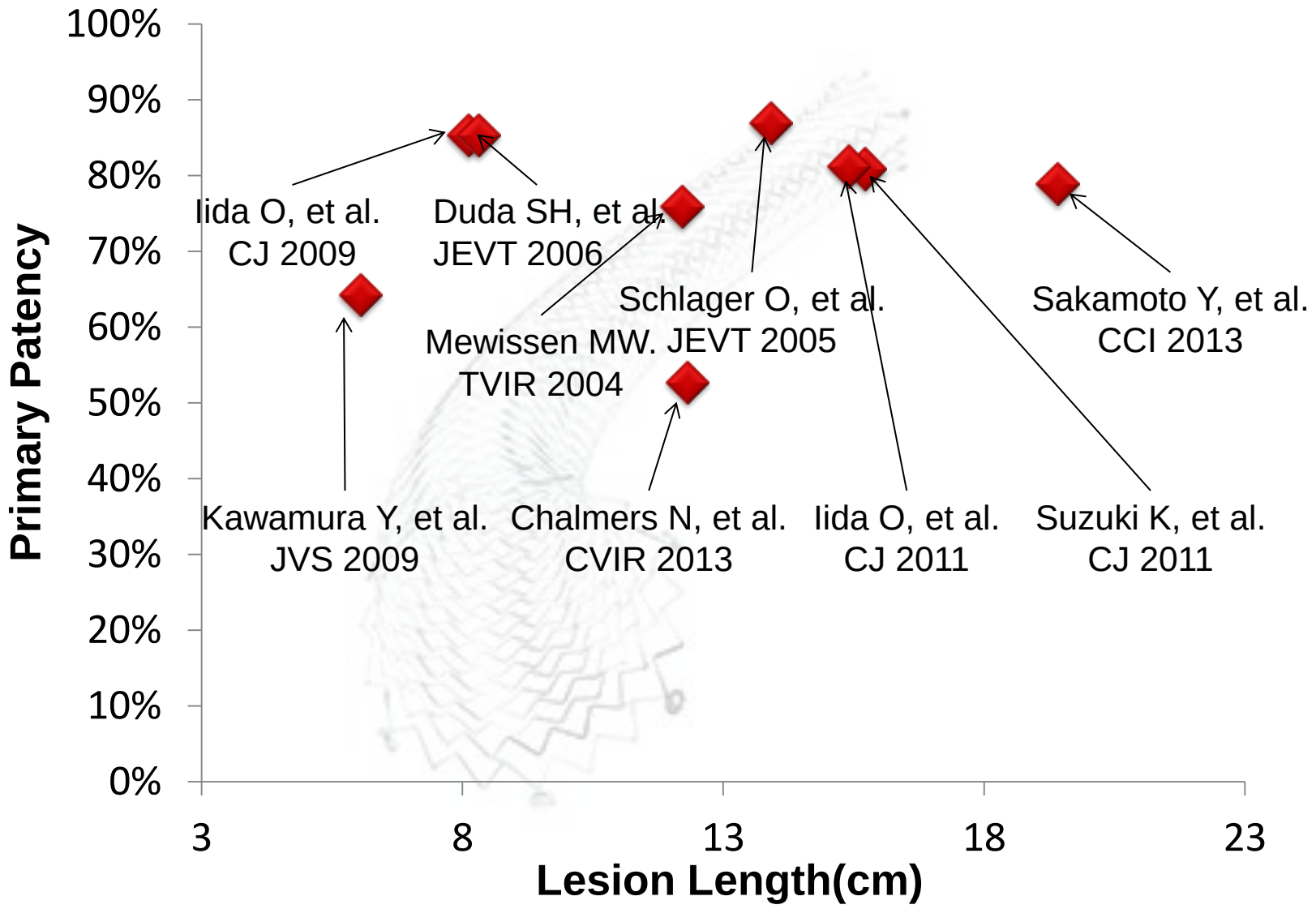


CTO Steps in KRCVC

- Wire cross
- Devise cross
- Gain the lumen

BMS era

Primary patency after S.M.A.R.T stent implantation for SFA

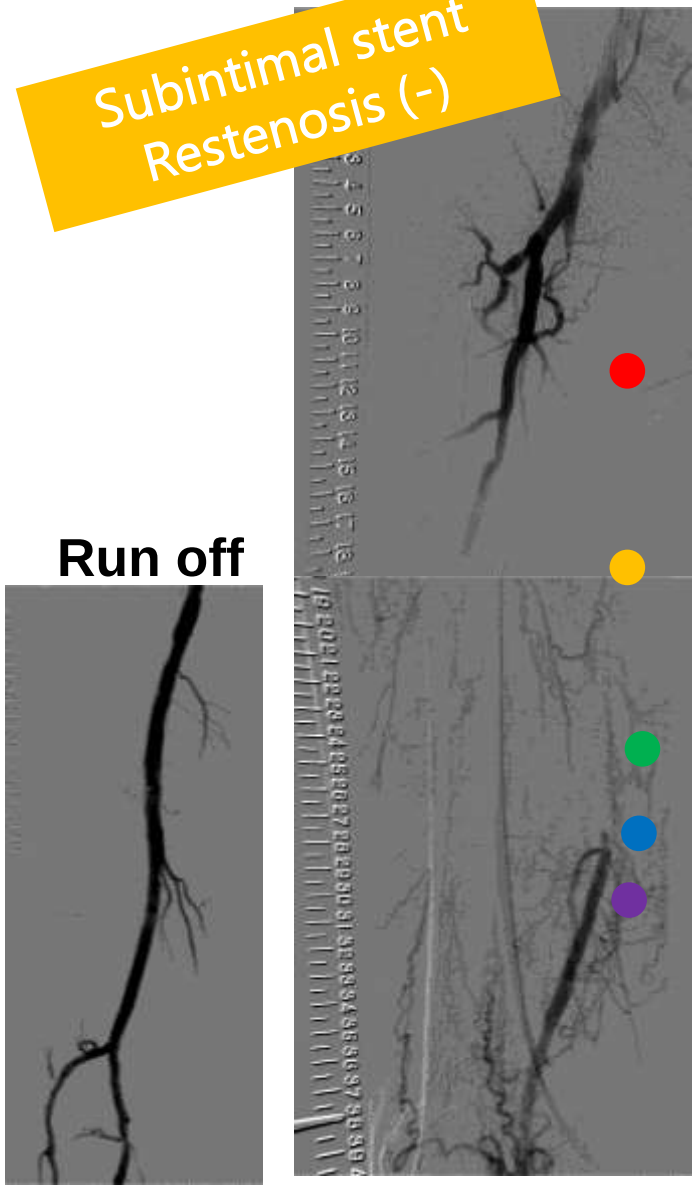


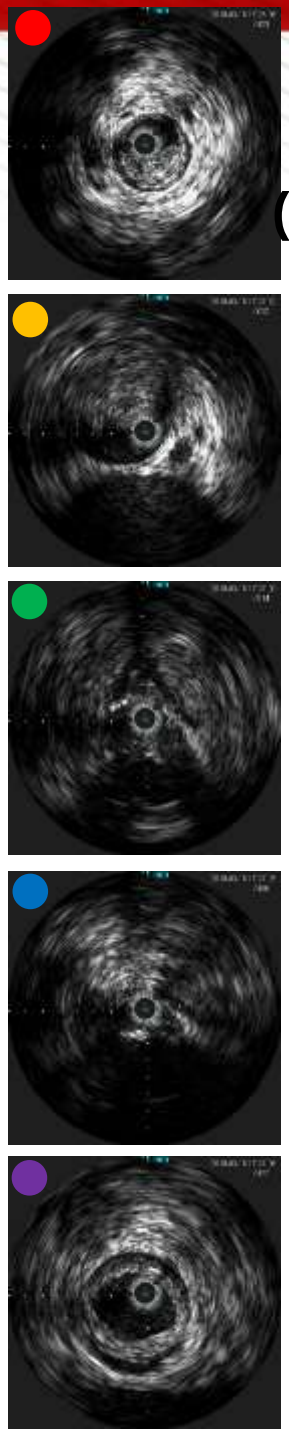
SFA CTO
Length 220mm

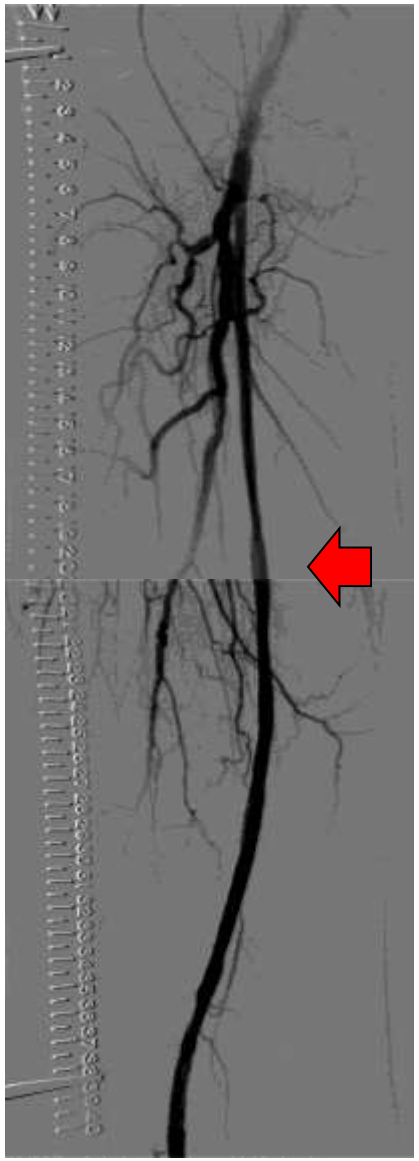
Post
Stent 6mm × 3
(post 5mm POBA)

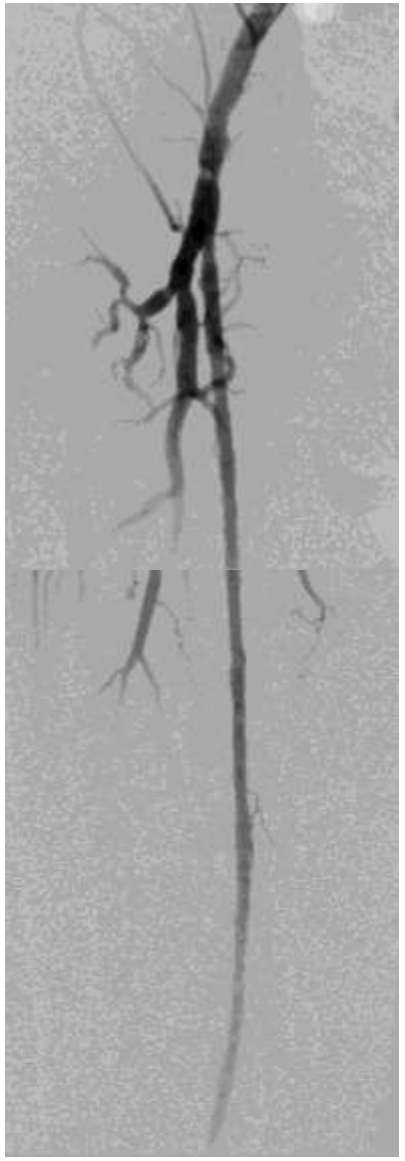
12 month
follow

Subintimal stent
Restenosis (-)

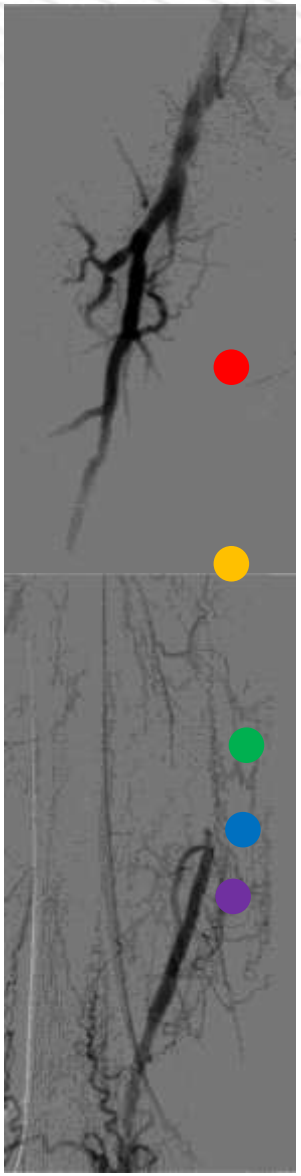








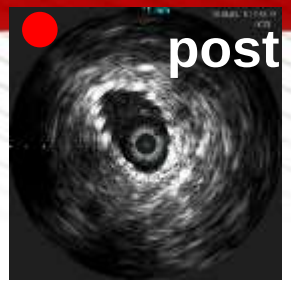
Run off

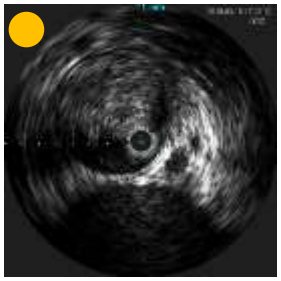


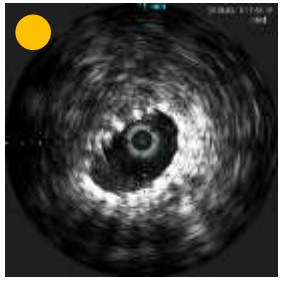
pre

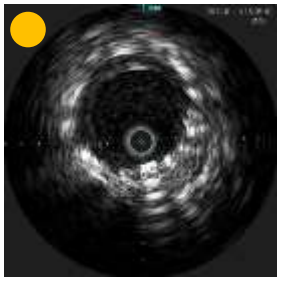
post

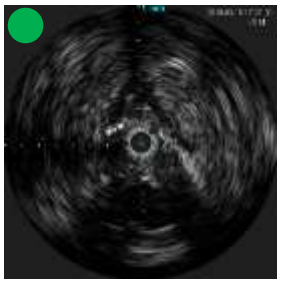
12M

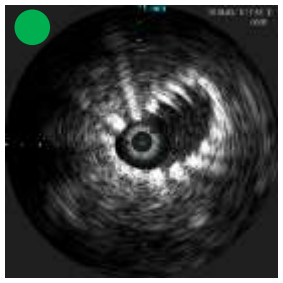


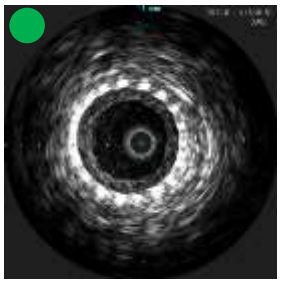


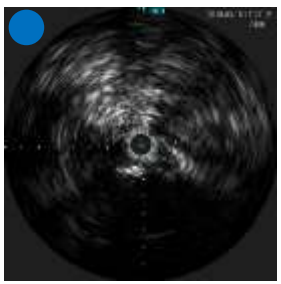


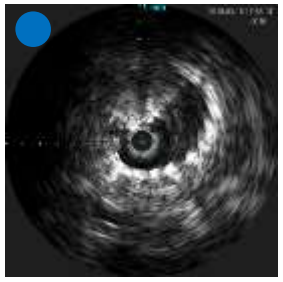


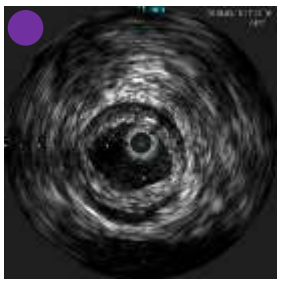


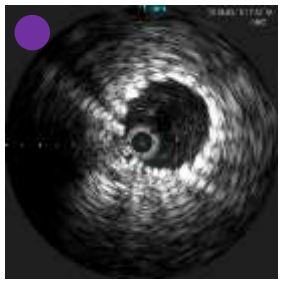


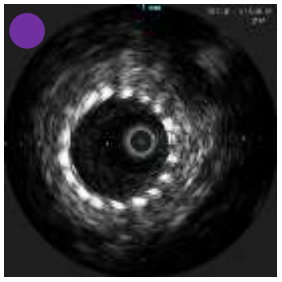




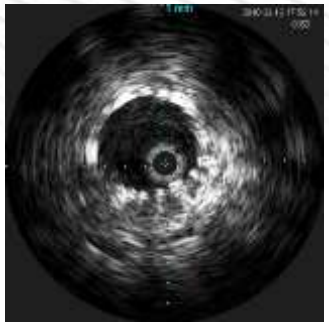


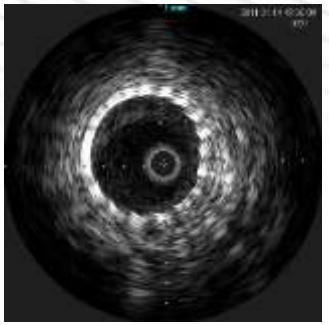




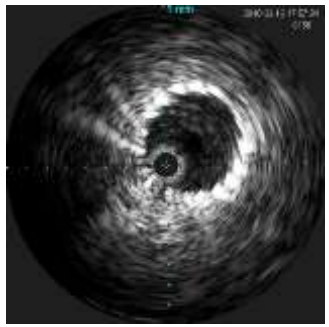


Proximal stent edge



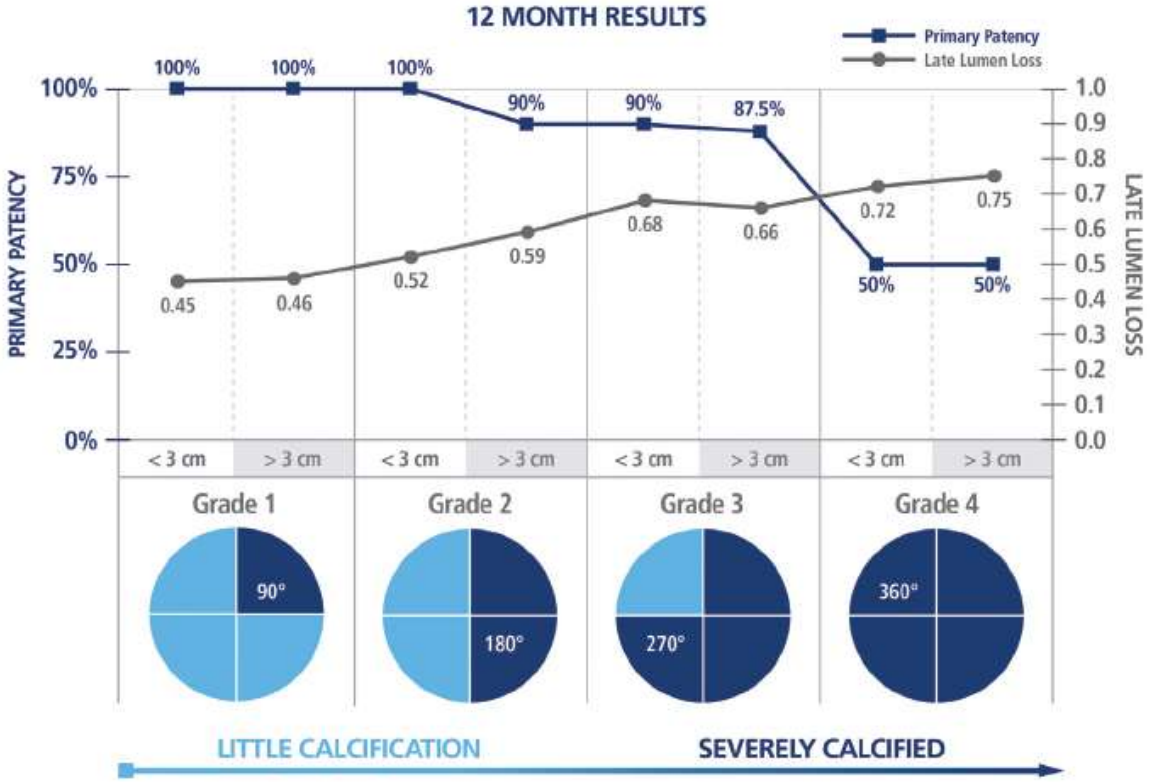


Distal stent edge



Impact of vascular calcification

Calcium burden assessment and impact on DEB in PAD

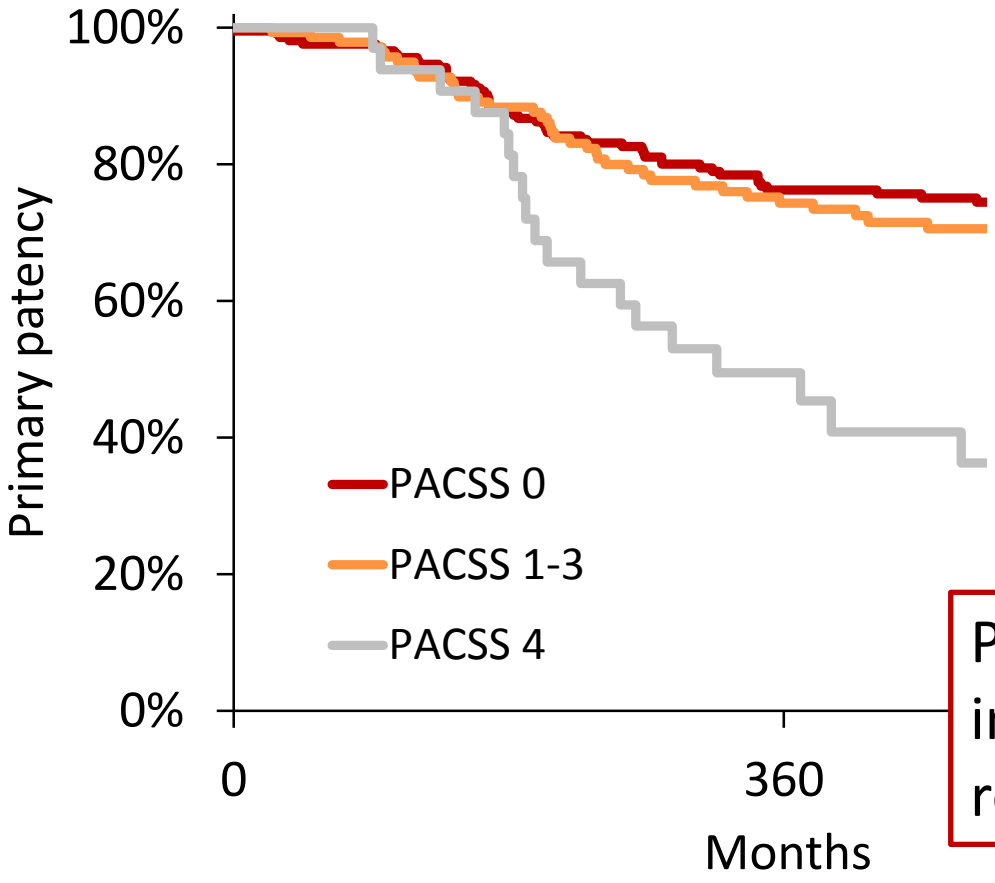


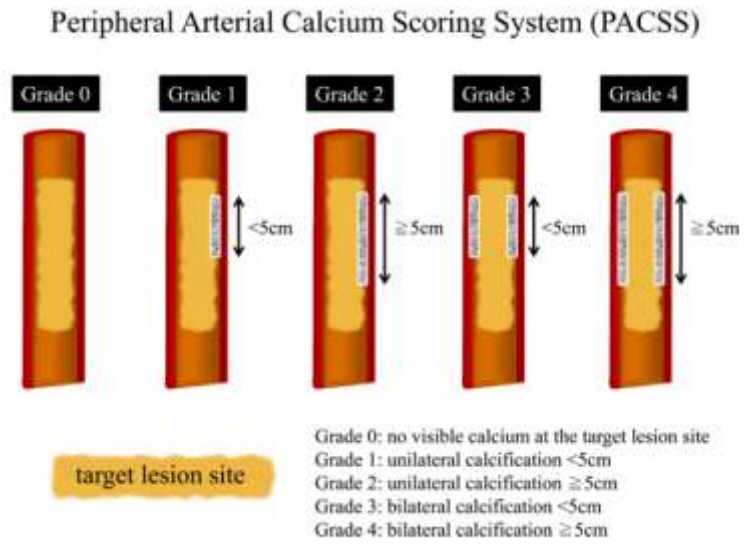
Calcium represents a barrier to optimal drug absorption. Circumferential distribution seems to be the most influencing factor with the worst effect noticed.

Fanelli F, et al. Cardiovascu Intervent Radiol. 2014;37:898-907.

Peripheral Arterial Calcium Scoring System

Primary patency according to **PACSS** grade (0 vs. 1-3 vs. 4)

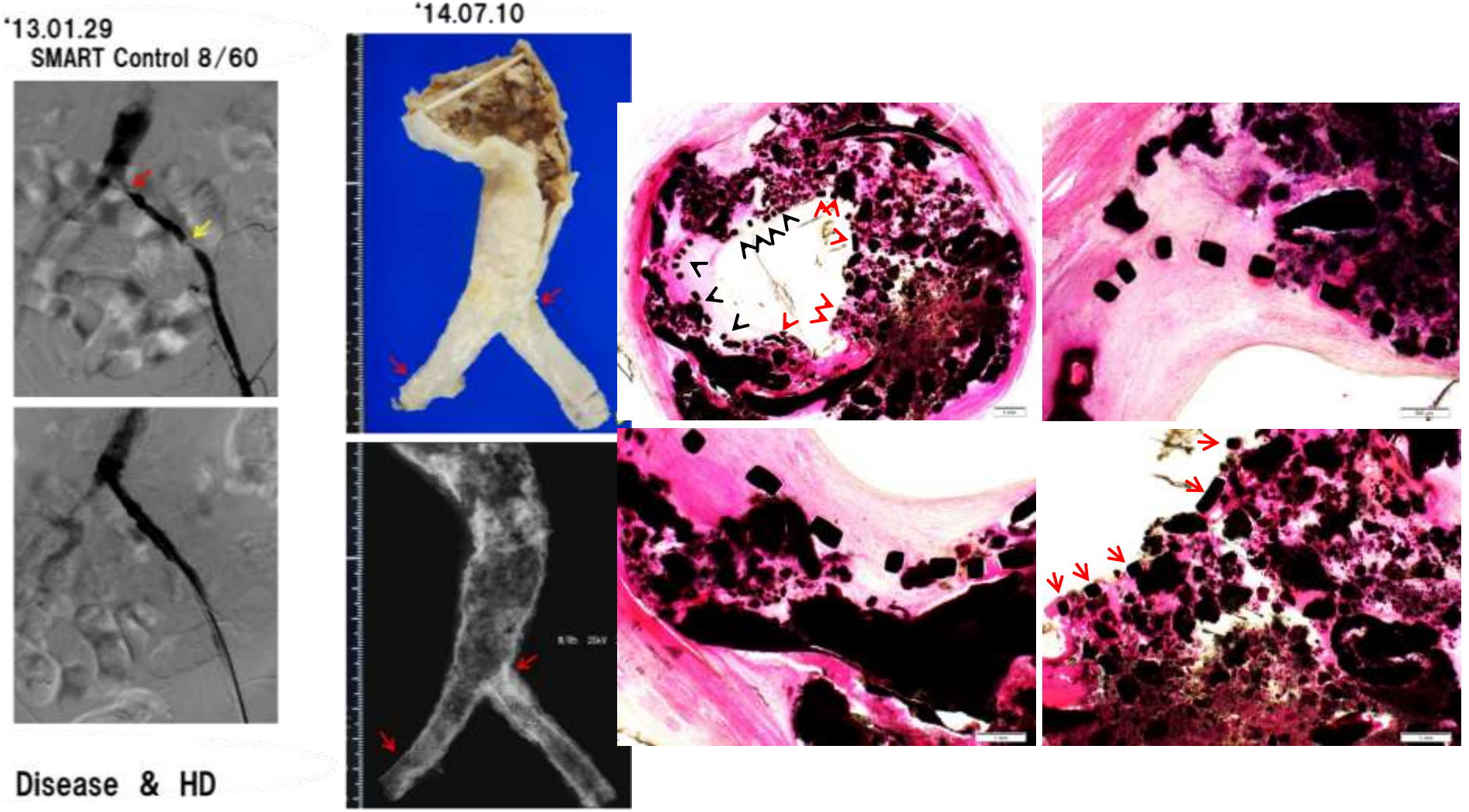




PACSS grade 4 calcification was independently associated with restenosis after SFA-EVT.

Okuno S, Iida O, et al. JEVT 2016 in press

Fighting against calcification



SMART Nitinol Self-Expanding Stent in the Treatment of Obstructive Superficial Femoral Artery Disease:

Three-year Clinical Outcomes from the STROLL Trial

Michael R. Jaff, DO

Professor of Medicine, Harvard Medical School

Medical Director, VasCore, Vascular Ultrasound Core Laboratory

Boston, Massachusetts

MASSACHUSETTS GENERAL HOSPITAL

INSTITUTE FOR HEART, VASCULAR AND STROKE CARE

Results: Primary Patency (LL: 77±31mm)

	12 months	24 months	36 months
Primary Patency (KM estimate) (PSVR < 2.5)	81.7%	74.9%	72.7%
DUS Patency (PSVR < 2.5)	81.1% (154/190)	83.5% (132/158)	83.9% (115/137)
Absence of Clinically Driven TLR	87.4% (202/231)	79.0% (173/219)	75.8% (157/207)

Primary Patency: composite endpoint of absence of clinically driven TLR and DUS assessed binary restenosis defined as diameter stenosis >50% (non-patent).

DUS patency: stent non-patency defined as a diameter stenosis >50% with a specific a peak systolic velocity ratio as measured by Duplex Ultrasonography

Clinically driven TLR: any intervention in the stented target lesion following documented recurrent symptomatic leg ischemia by Rutherford/Becker Classification (2,3,4) with a resting or exercise ABI <0.8 and >50% diameter in-lesion stenosis by angiography. Or >70% in-lesion diameter stenosis by angiography in the absence of ischemic signs and symptoms.

My opinion
I never see the better stent than S.M.A.R.T.
(Balance between strength, flexibility and long-term outcomes)

SMART Control
NITINOL STENT SYSTEM