Save the Leg Project 2014
Road to success for complex PAD patients
Learning from Professionals

Overcoming the Challenges - Various Approaches & Strategies for Super Complex Lesions

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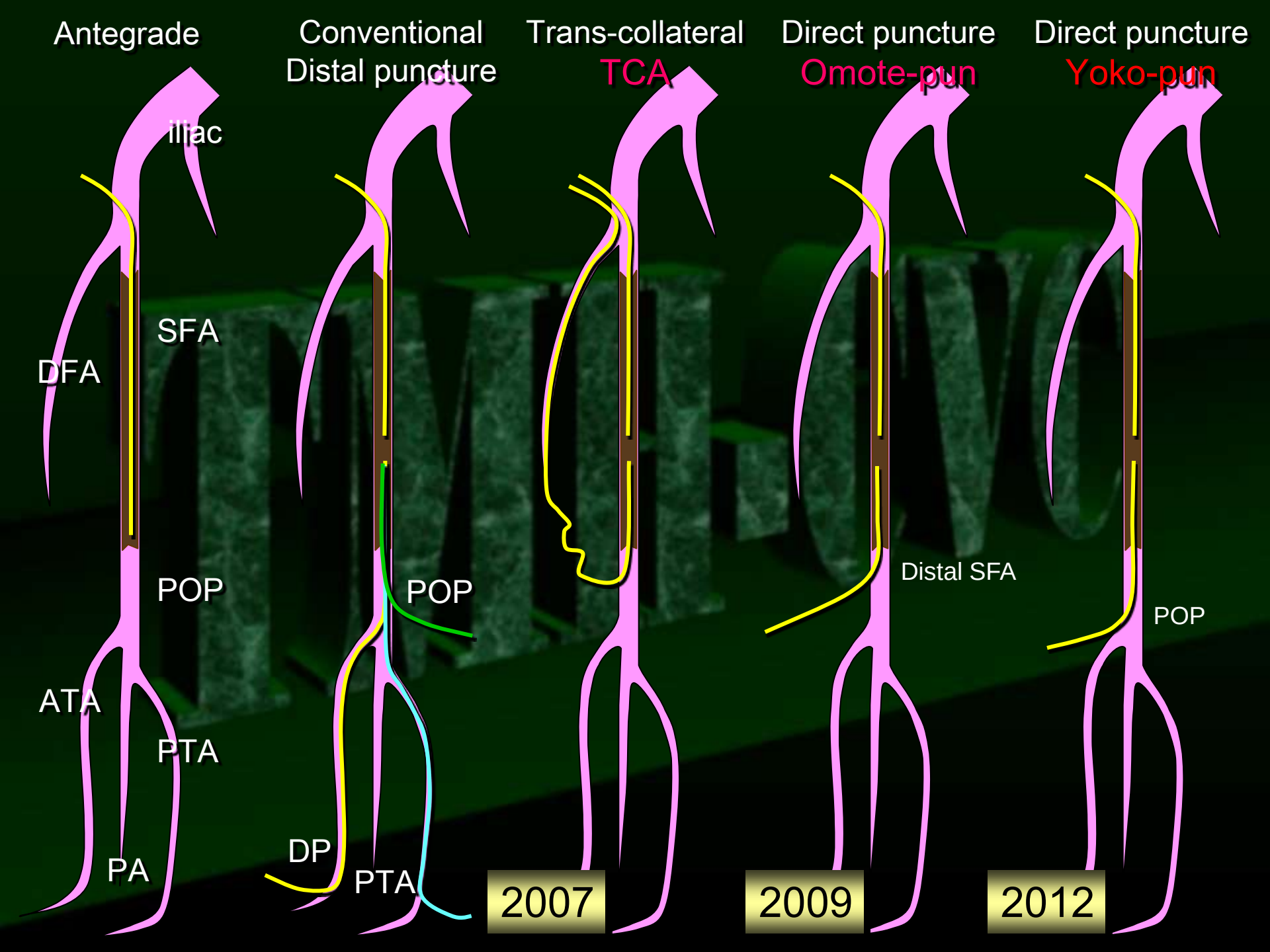
Wiring methods for long SFA-CTO lesions

Antegrade wiring

- Tactile sensation-guided wiring
- Duplex echo-guided wiring
- IVUS-guided wiring

Bi-directional wiring

- Trans-collateral angioplasty (TCA)
- Direct SFA puncture
  - Poorman's Outback Method (POB)
  - Front puncture (Omote-pun)
  - Side puncture (Yoko-pun)
- Distal puncture
  - Frontal popliteal puncture (Omote hiza-pan)
  - Popliteal puncture (Ura-pun)
  - Tibial puncture


Antegrade
Conventional
Distal puncture
Trans-collateral
TCA
Direct puncture
Omote-pun
Direct puncture
Yoko-pun
iliac
SFA
DFA
POP
POP
ATA
PTA
PA
DP
PTA
2007
Distal SFA
2009
POP
2012

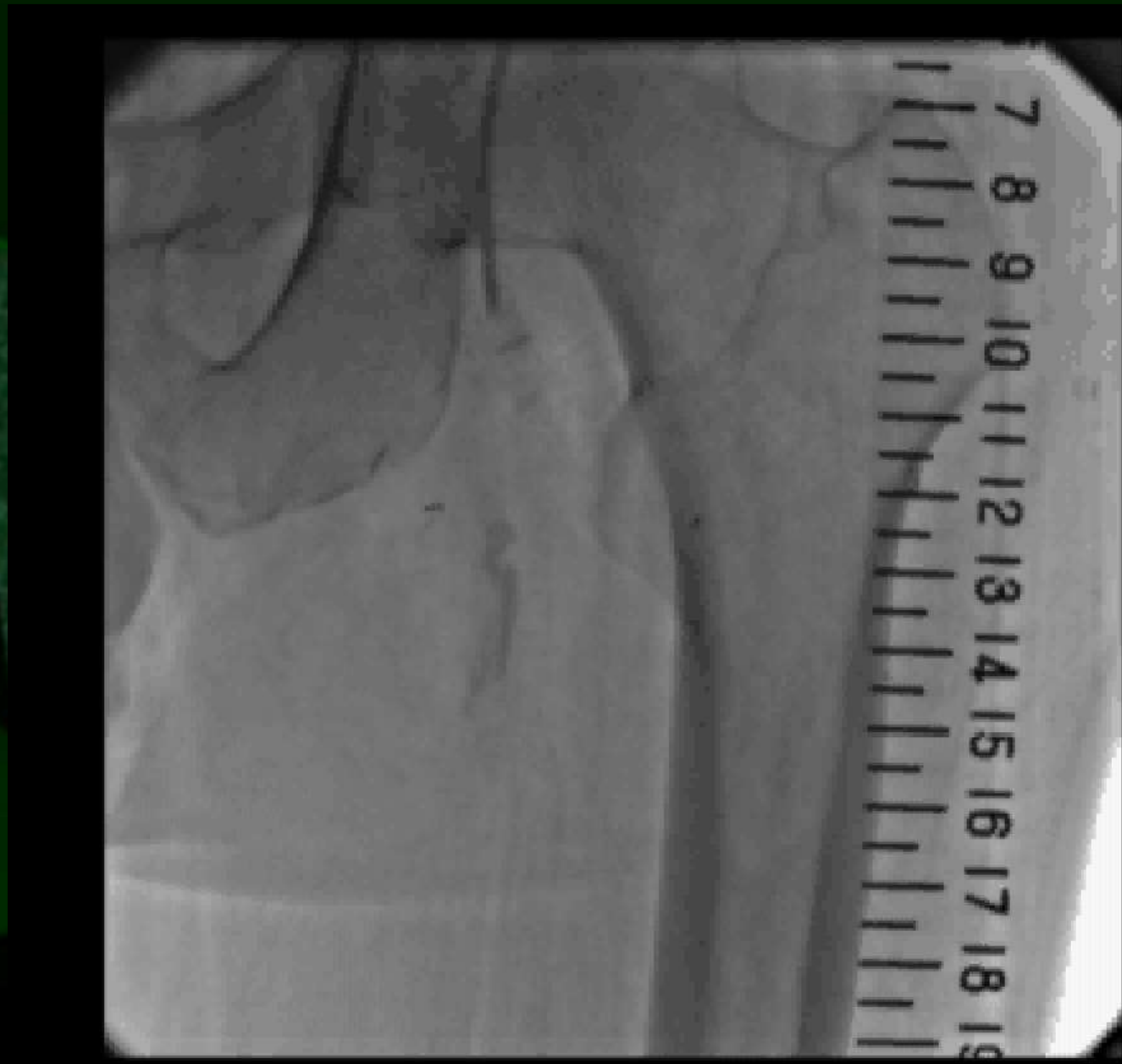
Distal SFA Direct Puncture
Front puncture (Omote-pun)

Representative Case

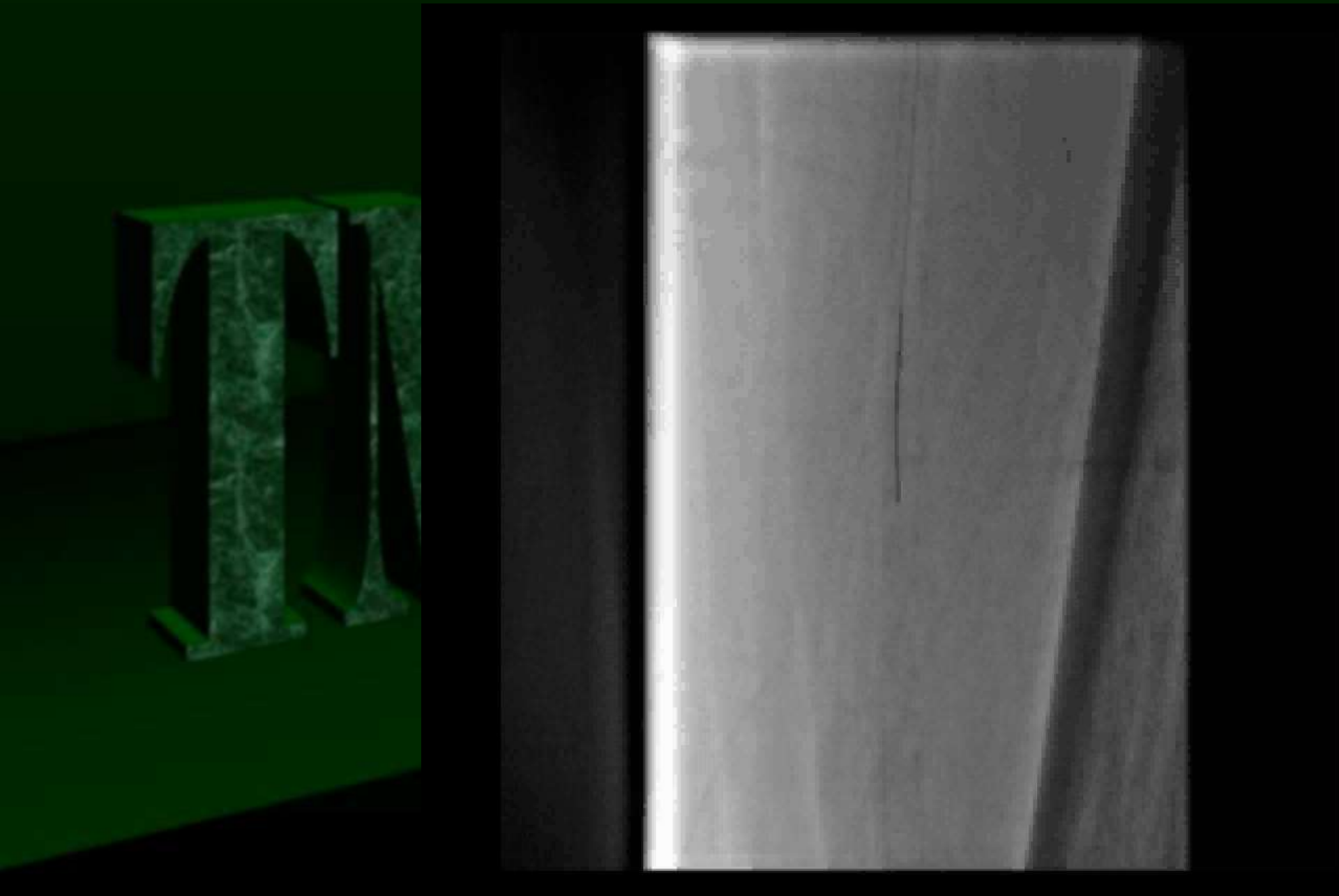
Case 68M

Diagnosis	PAD(CLI), IHD(CABG) CRF(HD)
Severity	Fontain IV, Rutherford 5
Target	SFA
Lesion type	CTO
Date of EVT	2011.4.26

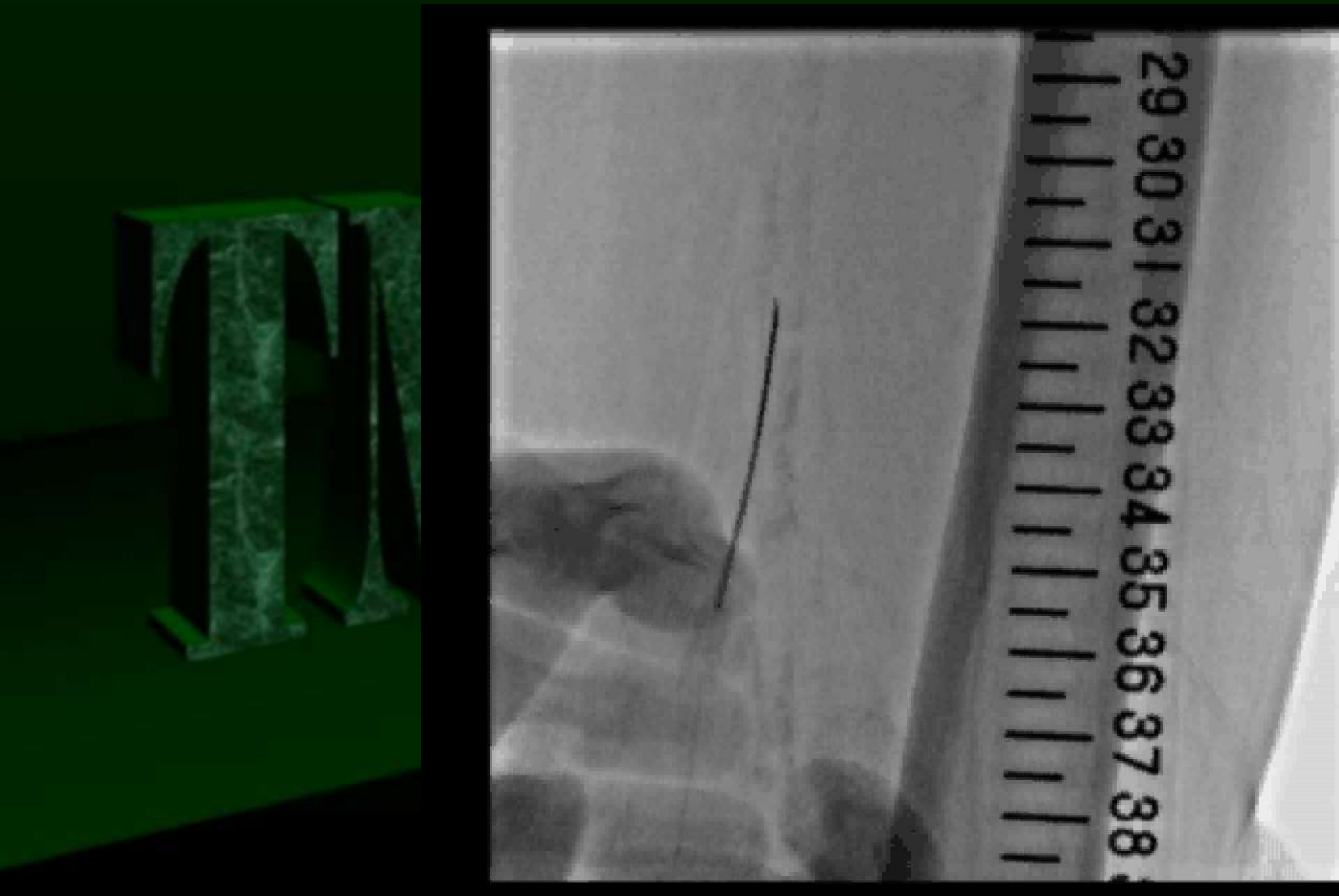
Control Angiography



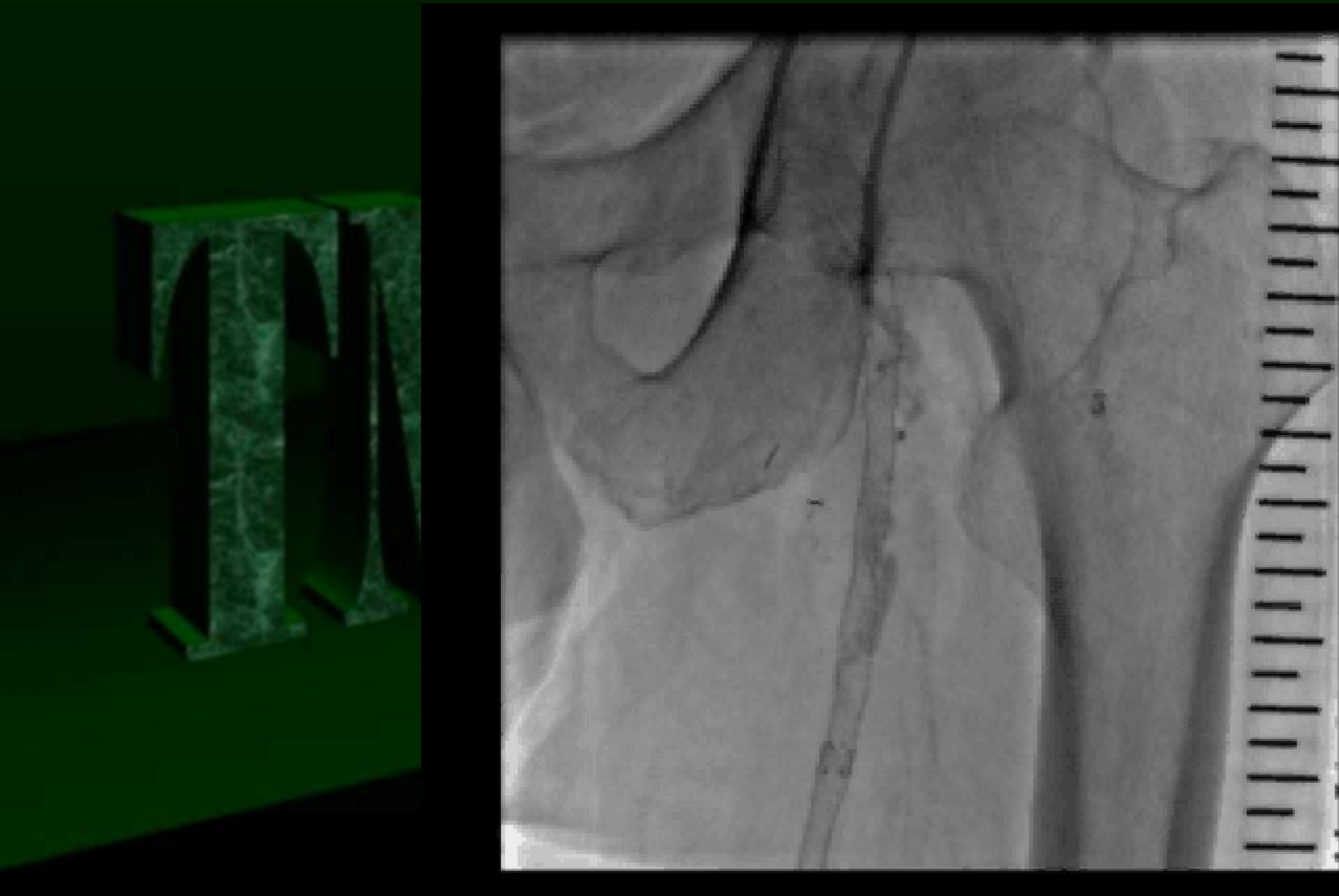
Antegrade wiring into the SFA-CTO



Direct puncture of distal SFA (Omote-pan)



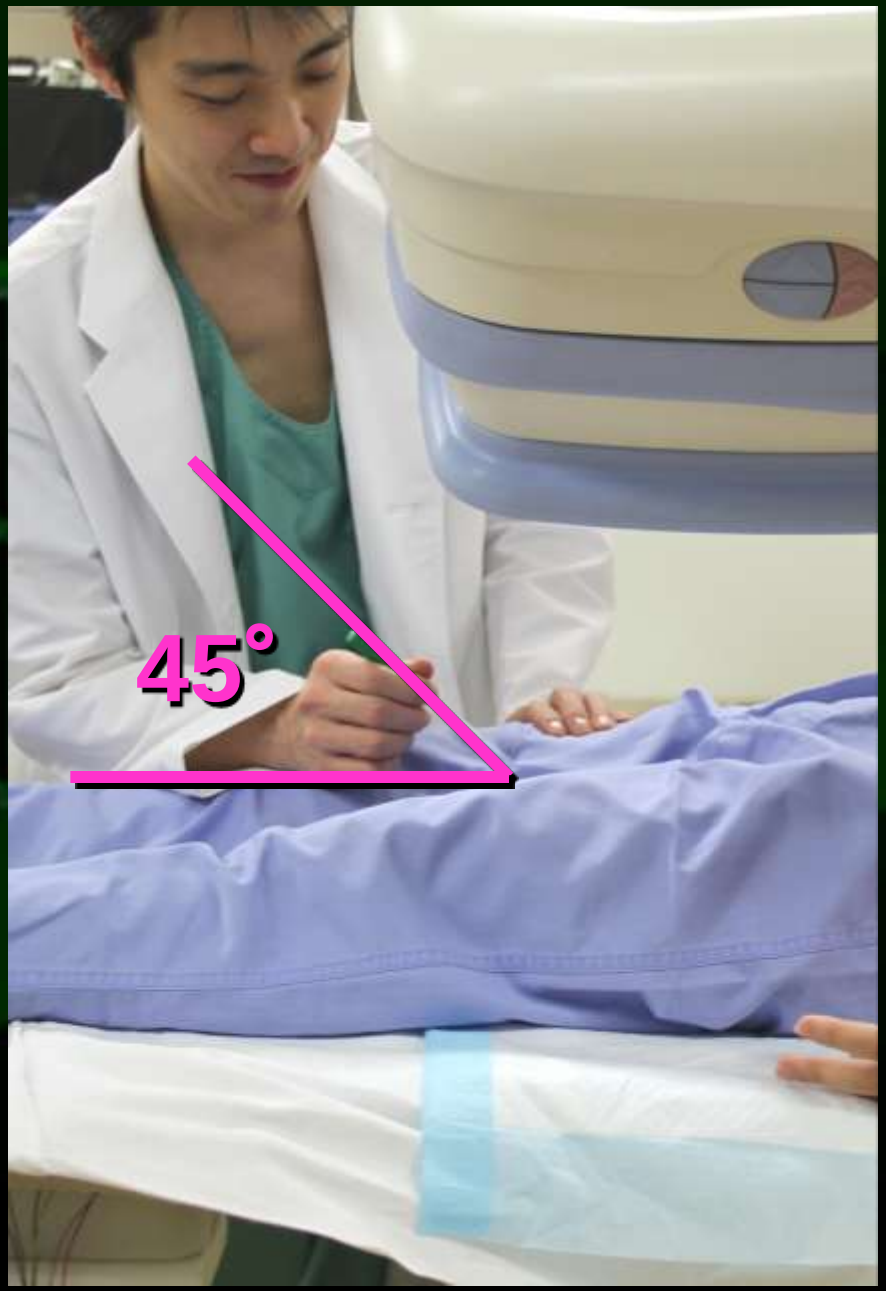
Final Angiography



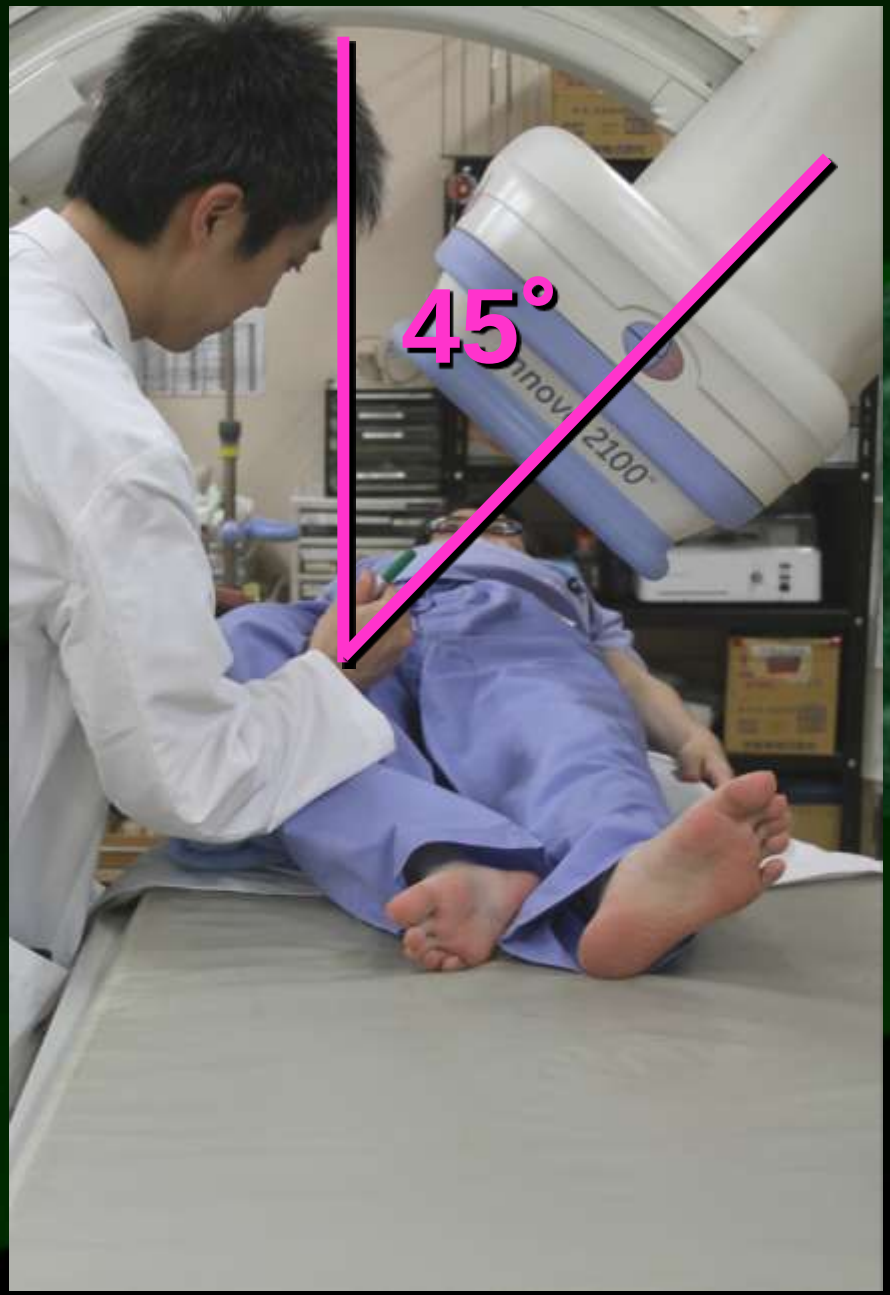
Modified Omote-pun
Side puncture (Yoko-pun)

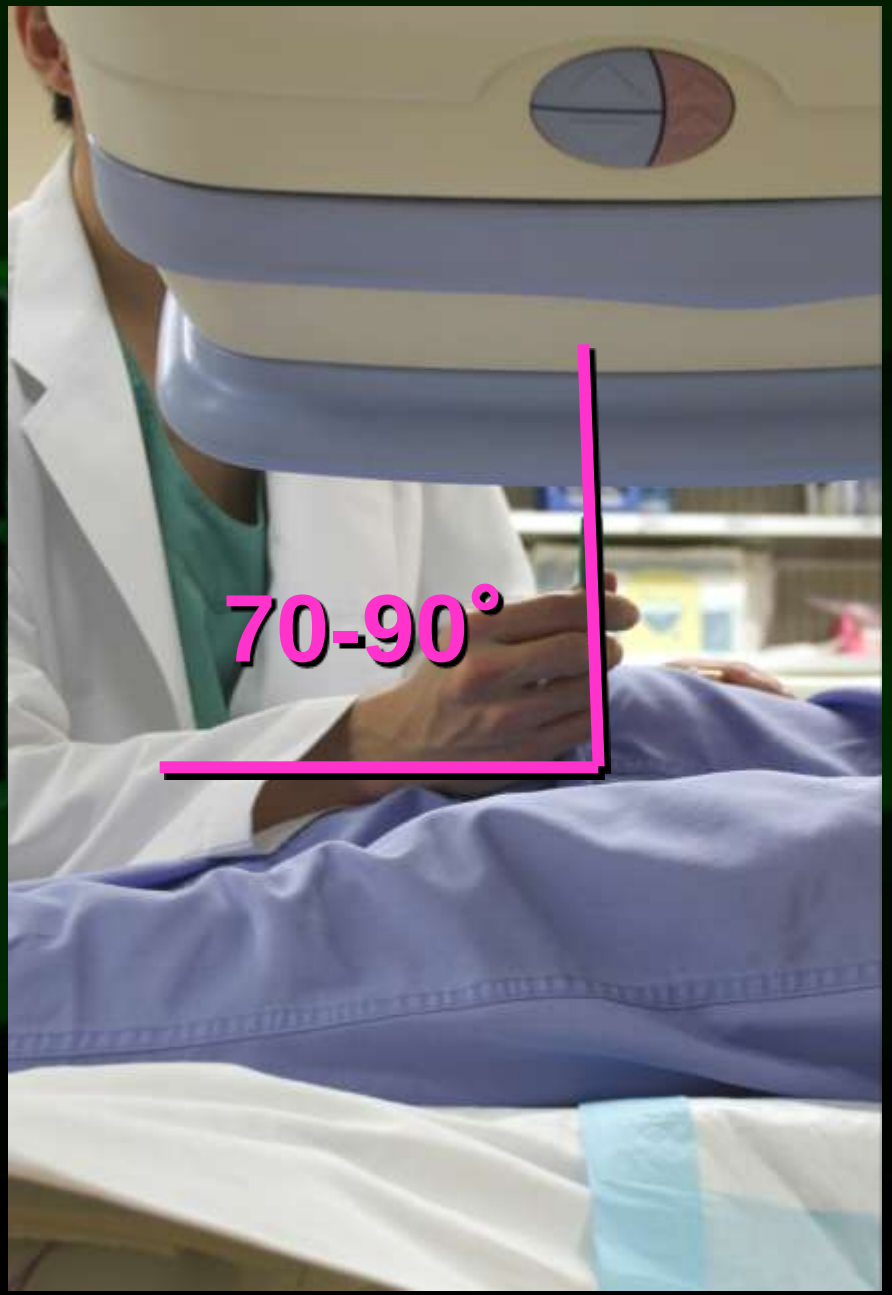
Representative Case

Omote-pun (Front puncture)



Yoko-pun (Side puncture)

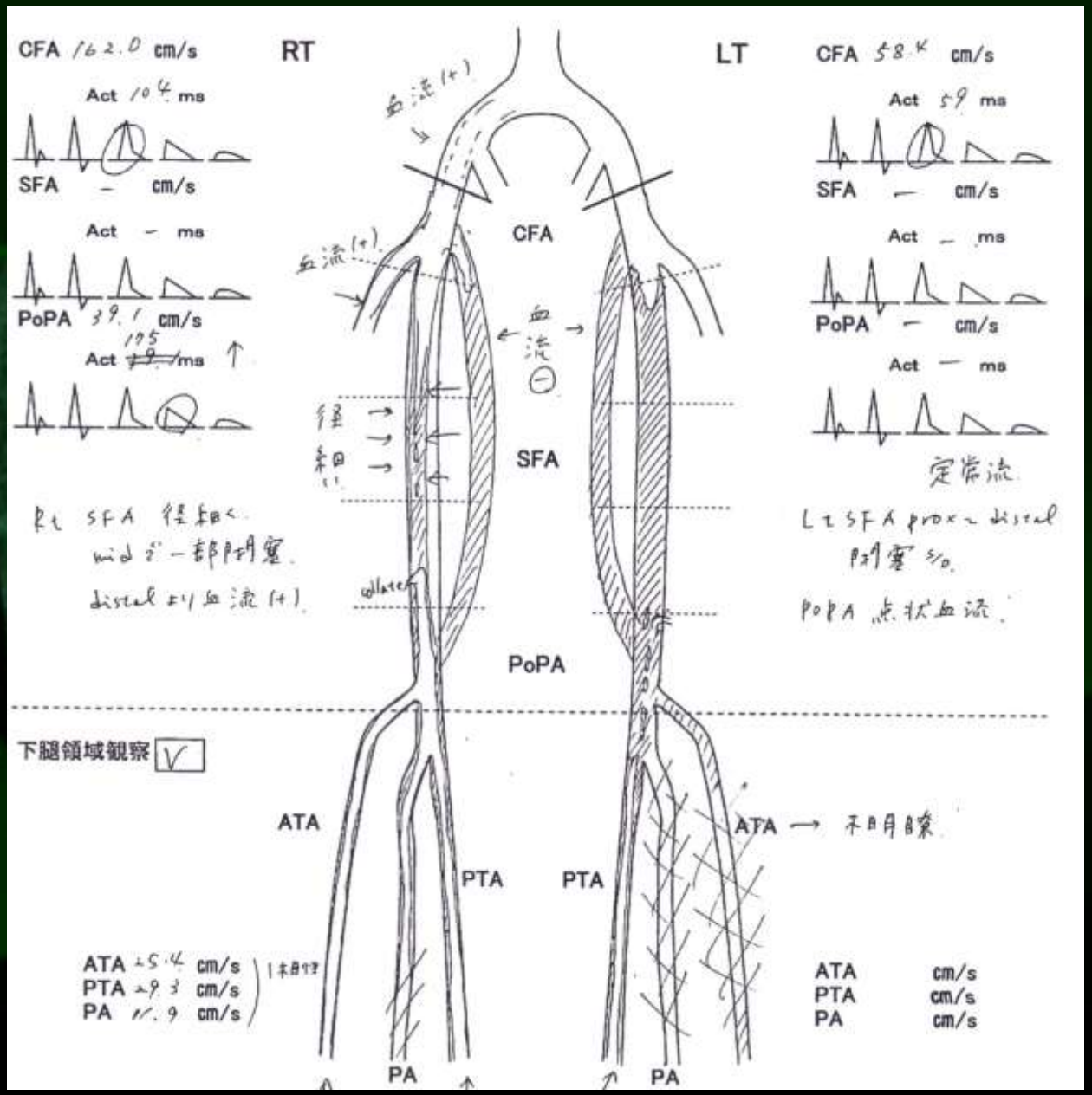




Case 80M

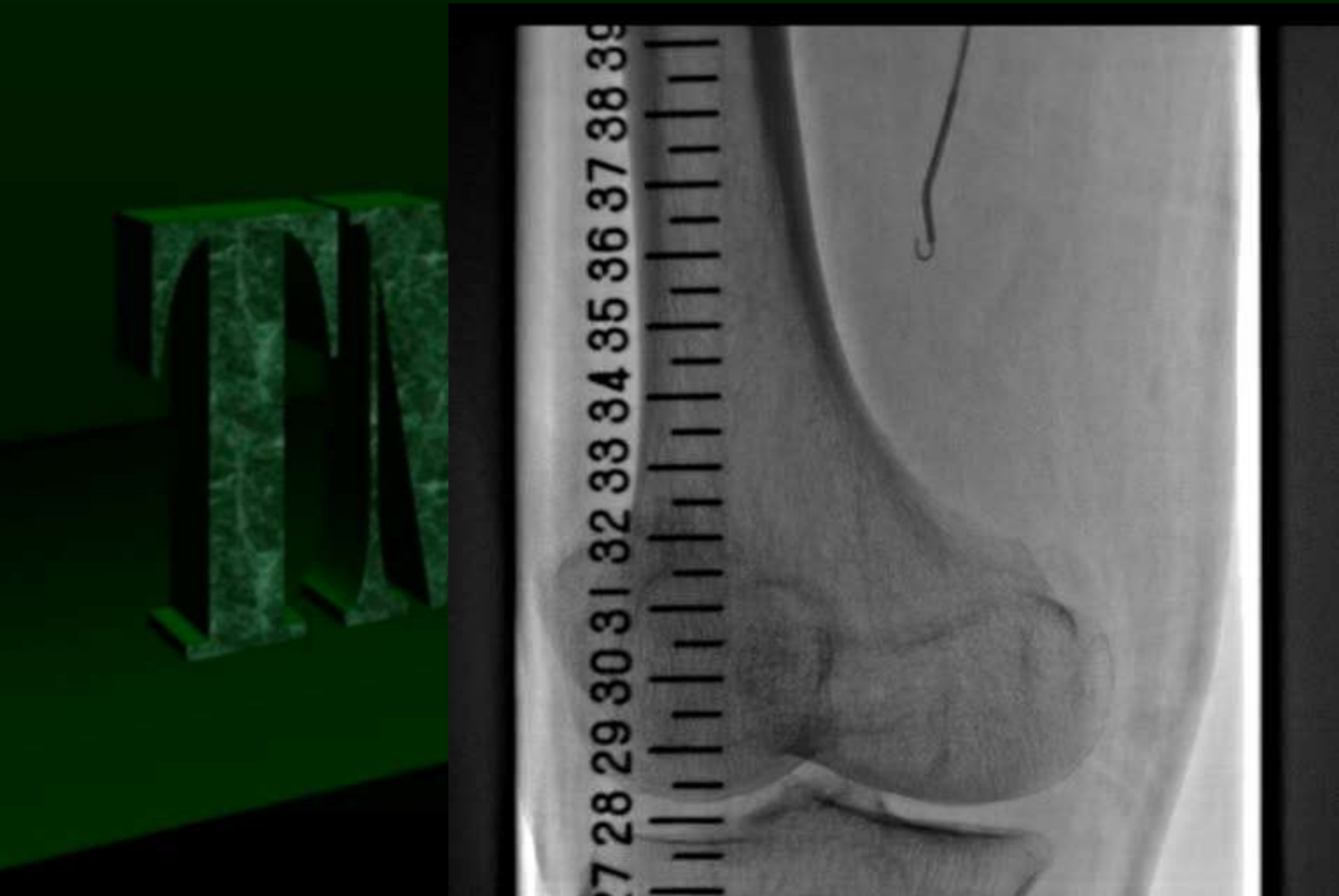
Diagnosis	PAD, HT, DM, Af
Severity	Fontain IIb, Rutherford 3
Target	Rt-SFA
Lesion type	CTO
Date of EVT	2012.4.16

Duplex echo



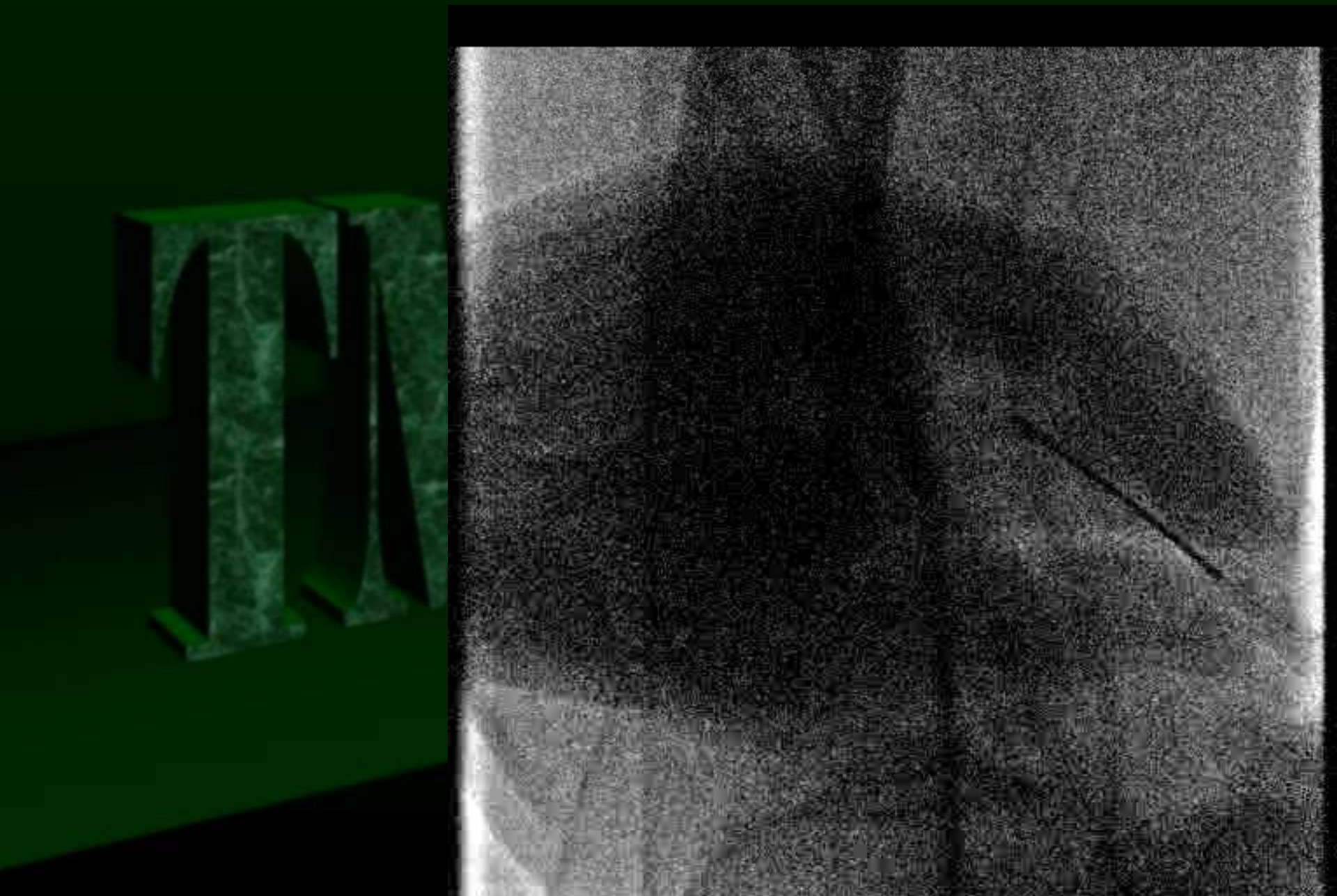
Control angiography

Antegrade wiring using Radifocus wire

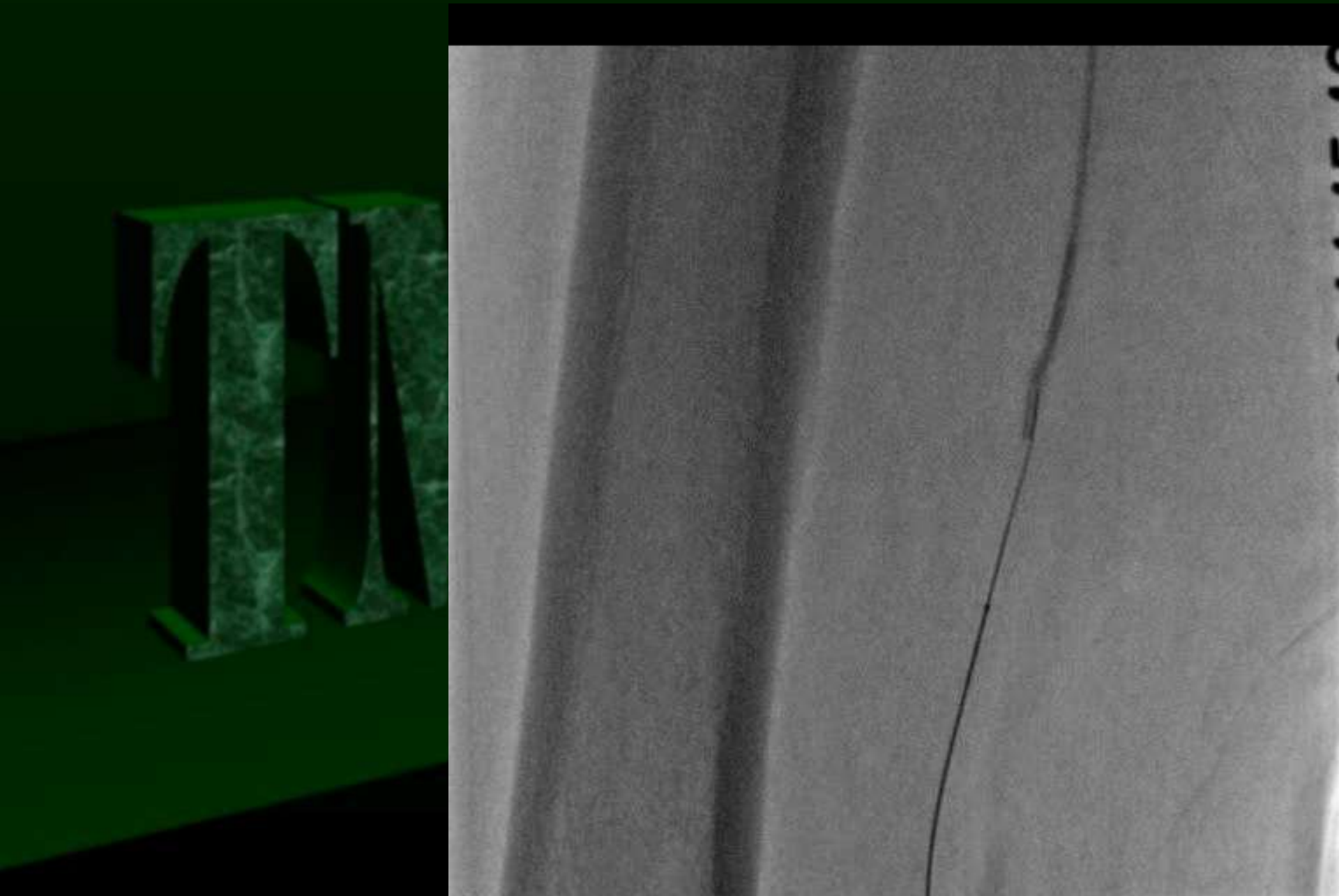


Yoko-pun using 18G metal needle

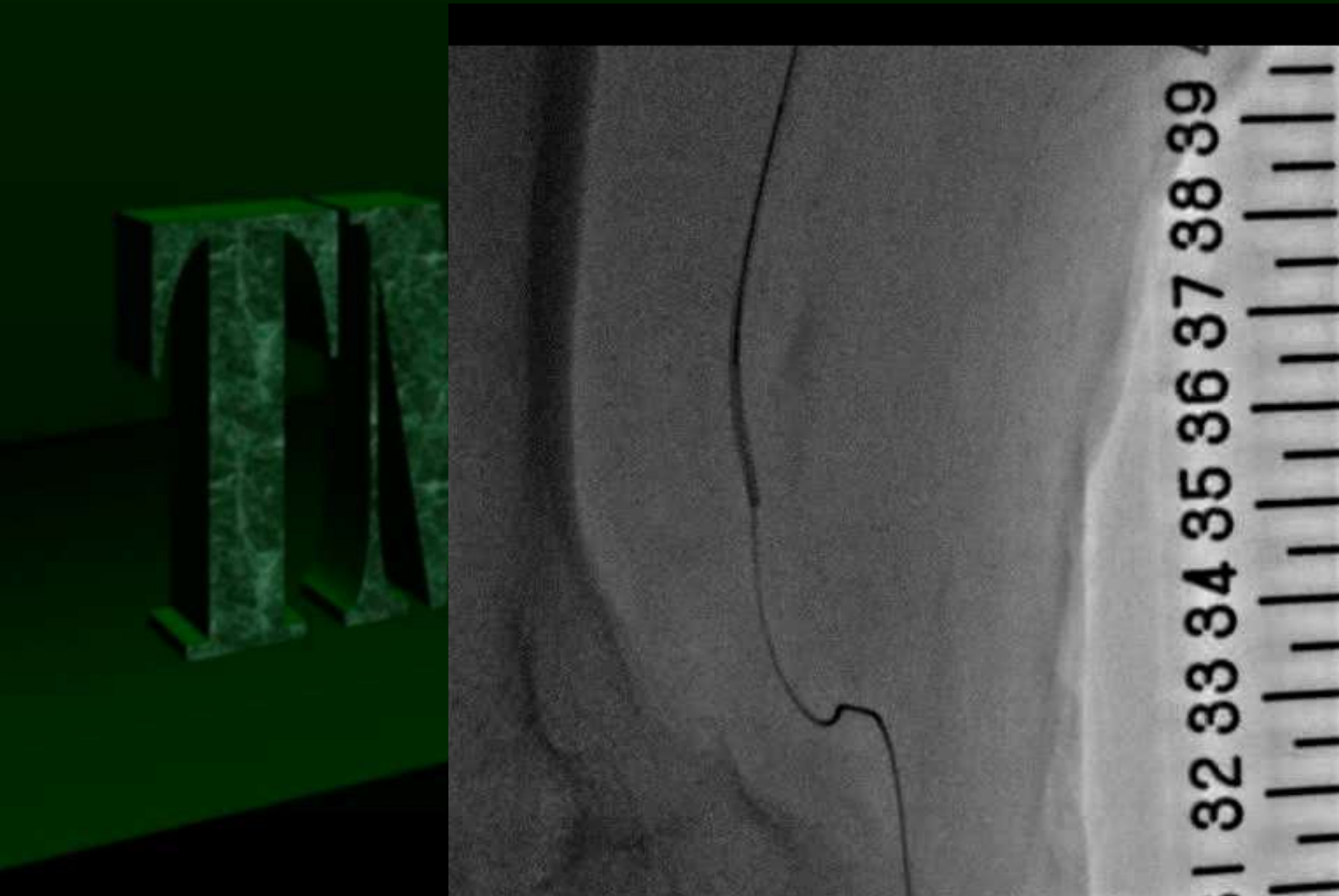
Retrograde wiring via 18G needle



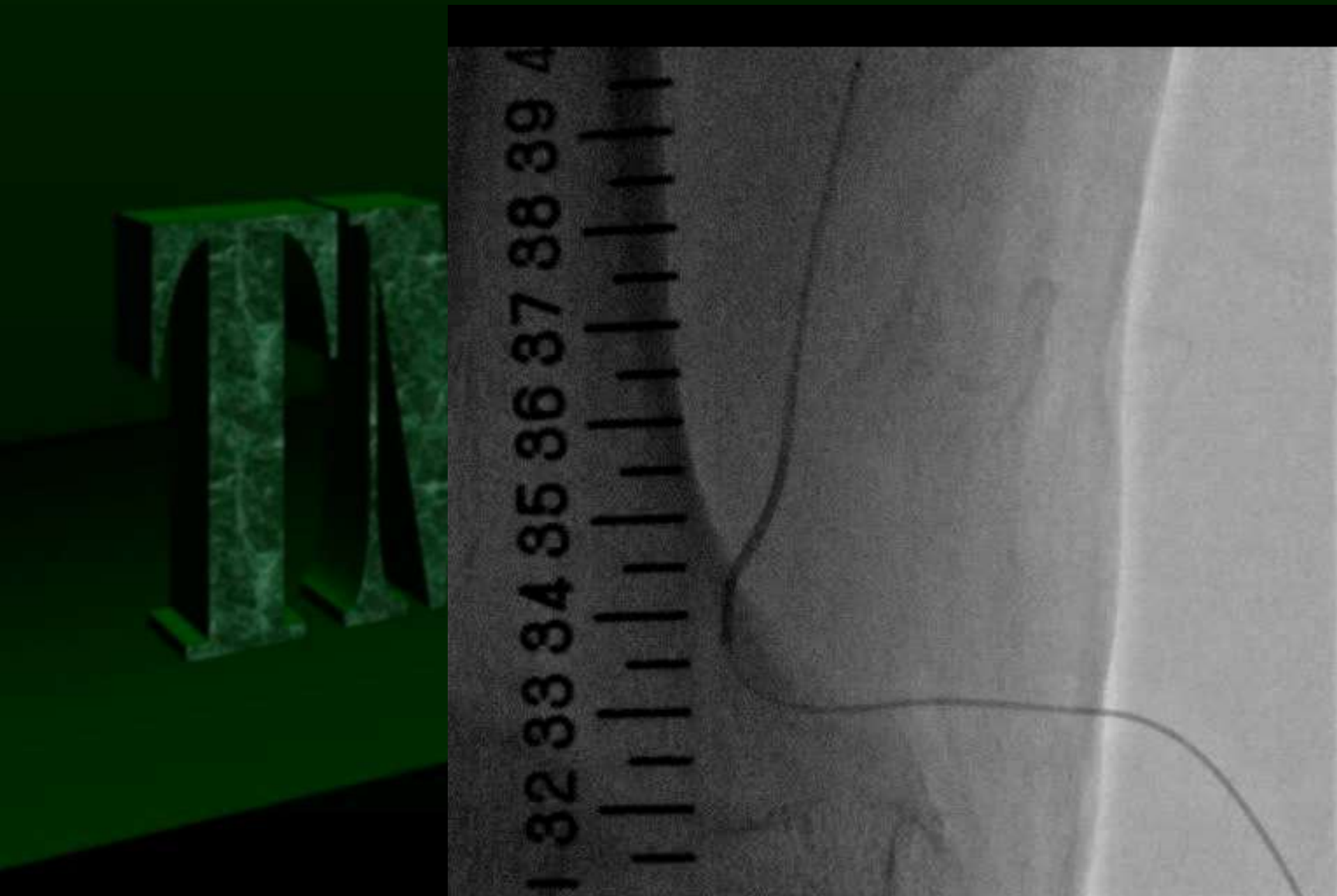
Wire Rendez-vous for antegrade 4F catheter



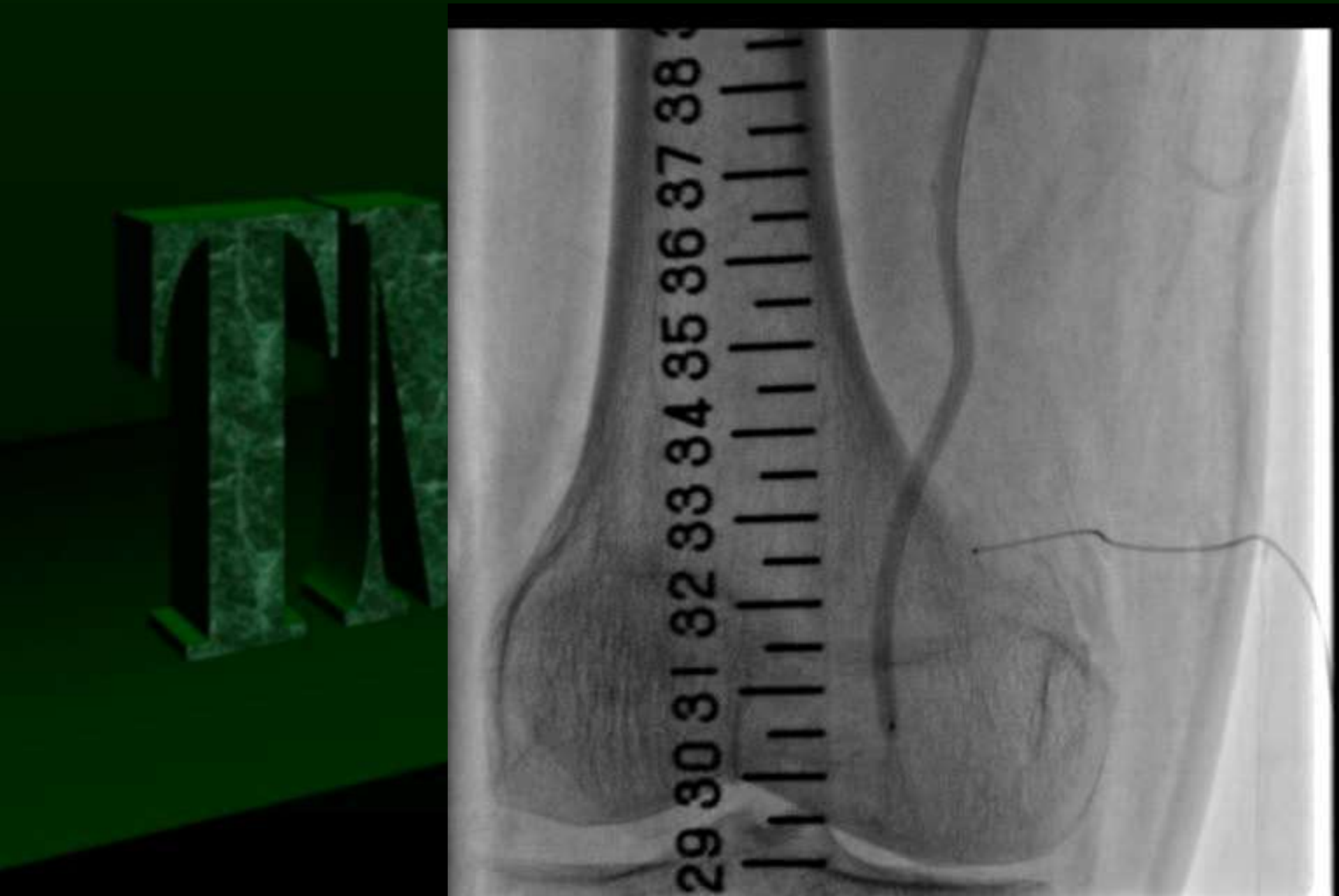
Advance the catheter beyond CTO



Advance another guidewire via 4F catheter



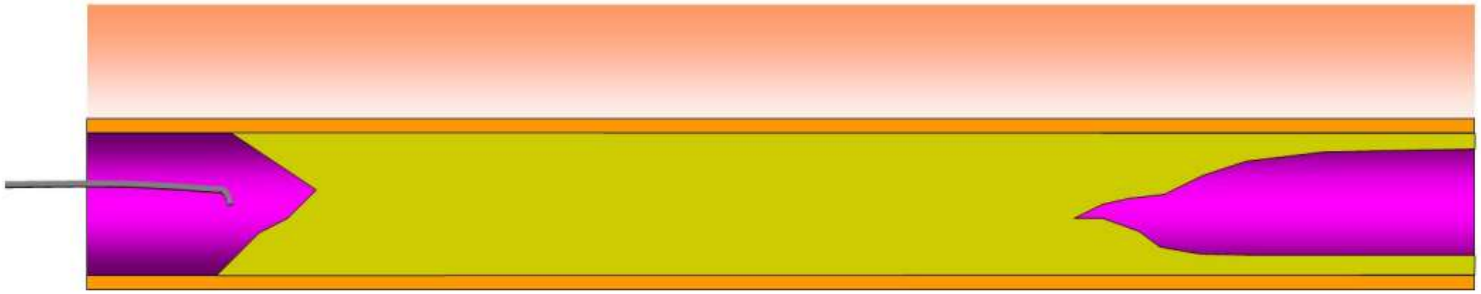
POBA and simultaneous hemostasis



Final angiography

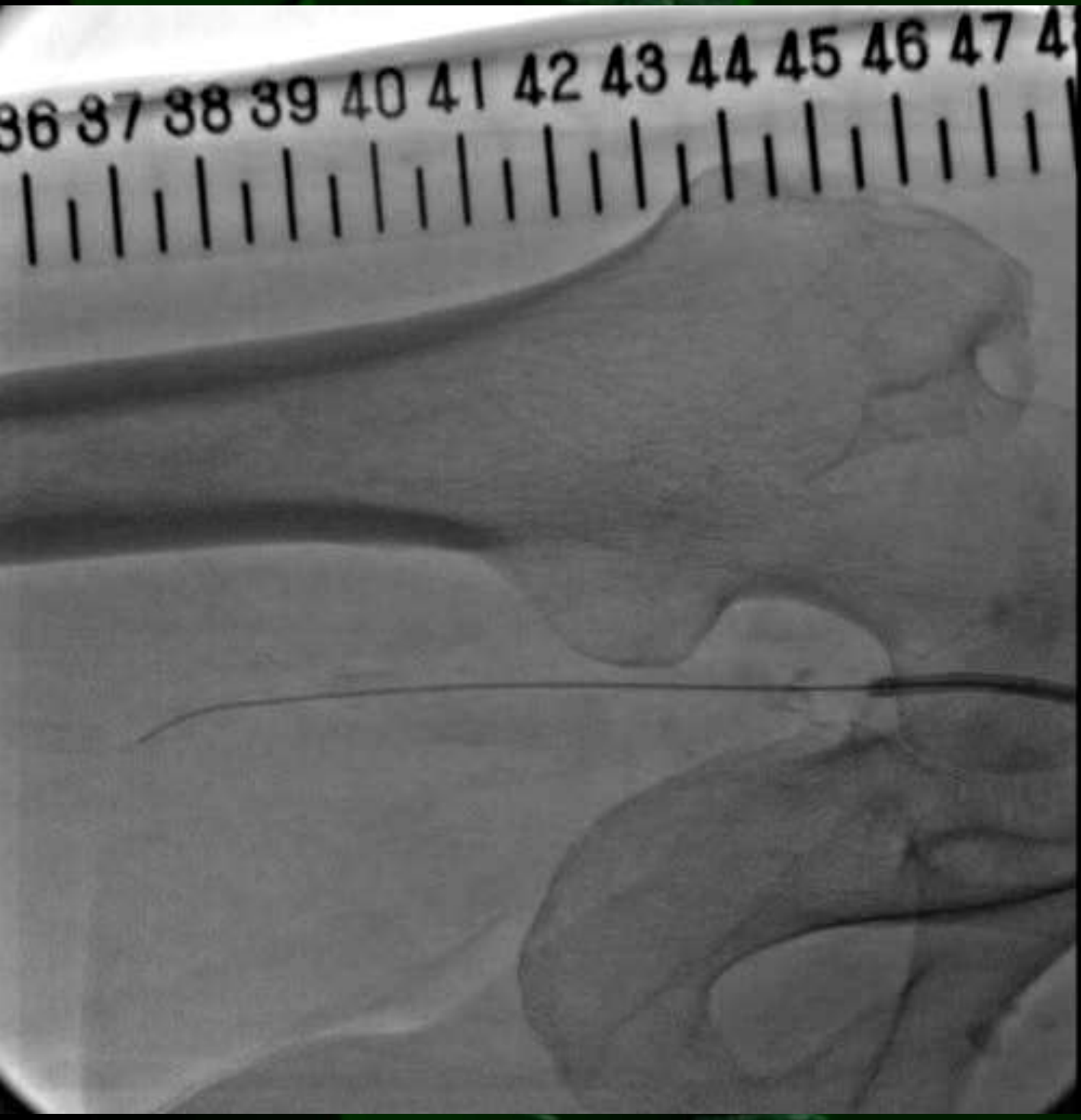
Poorman's Outback (POB) Method

Representative Case



Case 80M

Diagnosis	PAD, DM, DL, IHD
Severity	Fontain IIb, Rutherford 3
Target	Rt-SFA
Lesion type	CTO
Date of EVT	2013.11.6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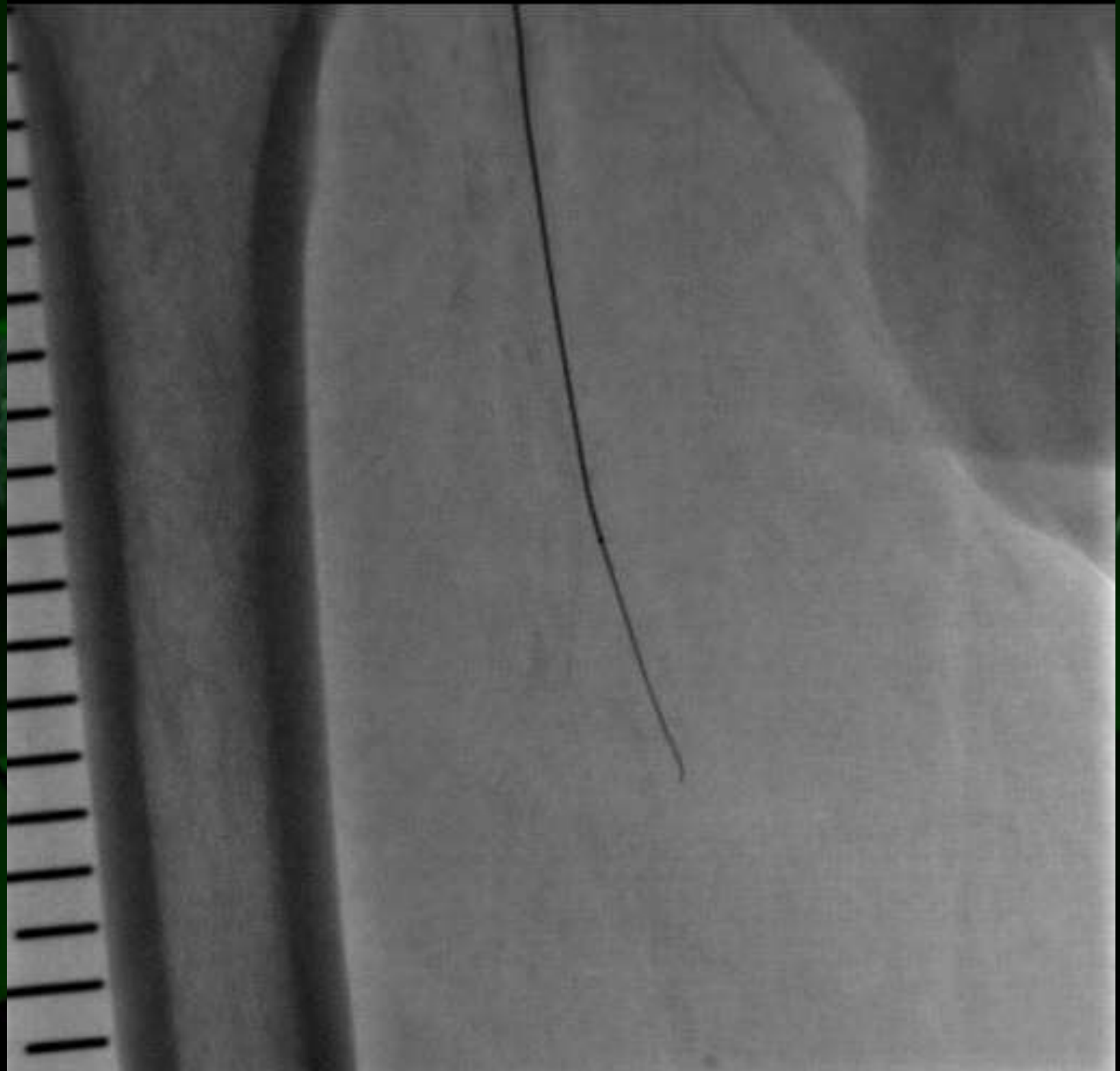
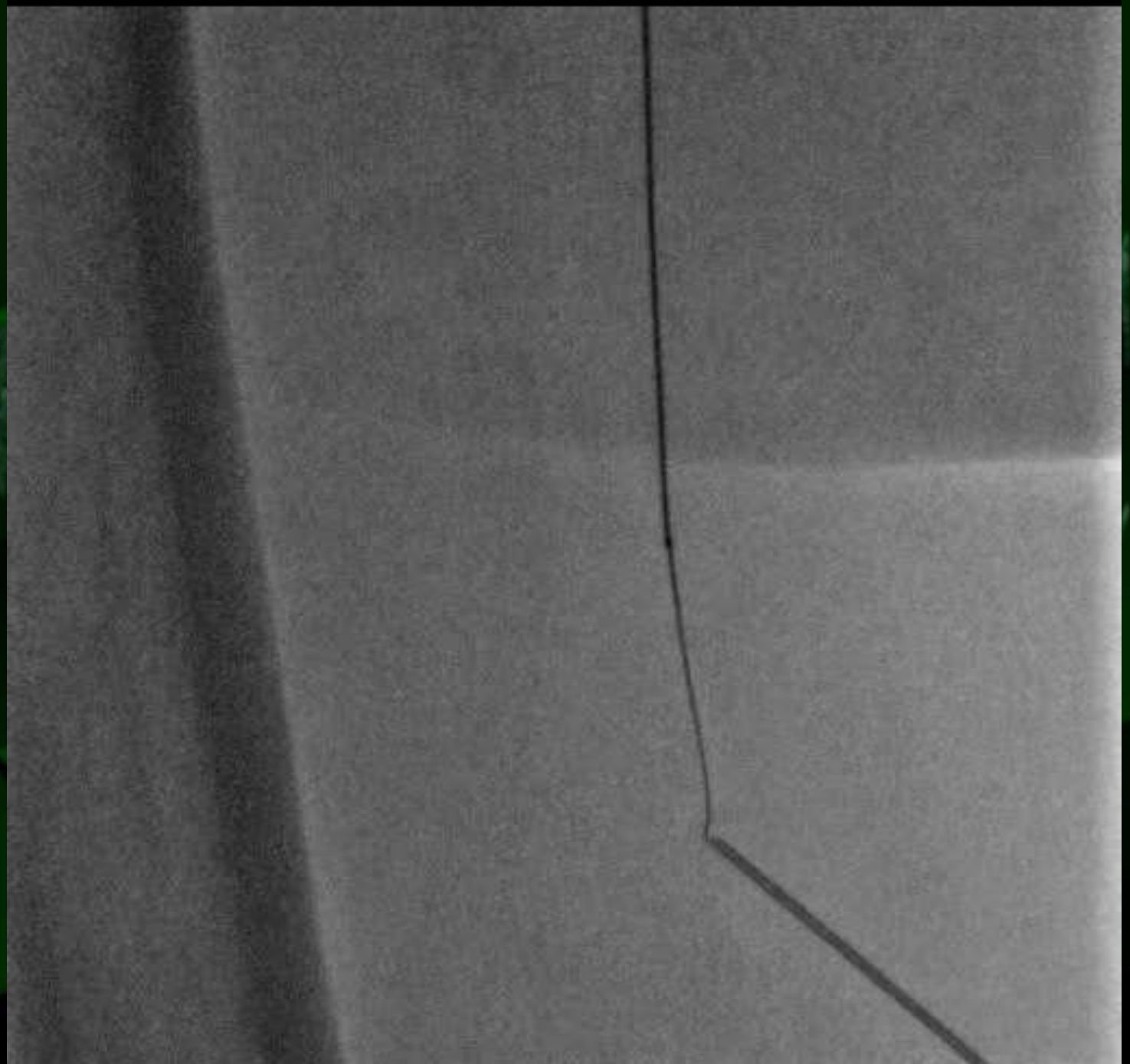
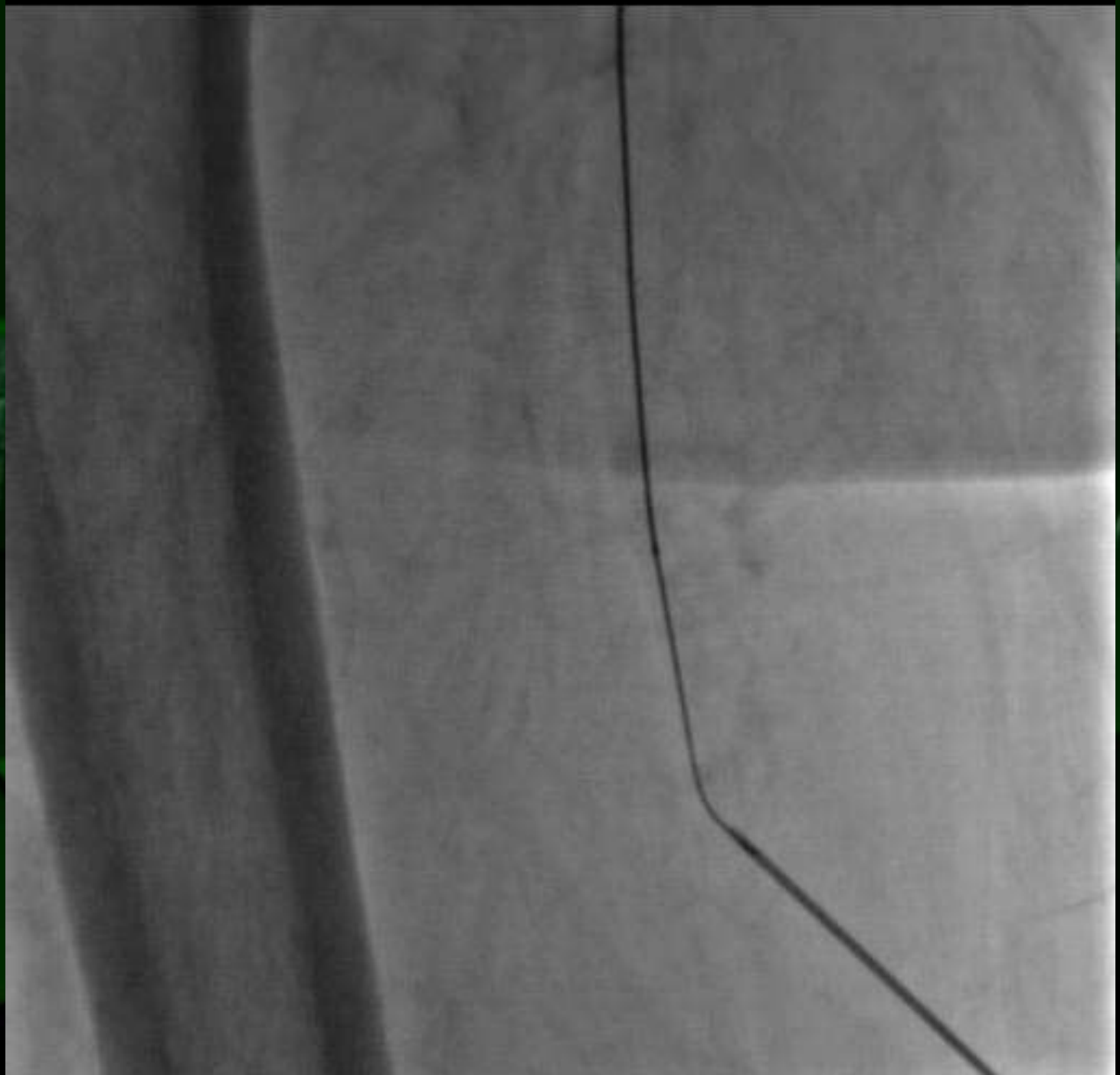
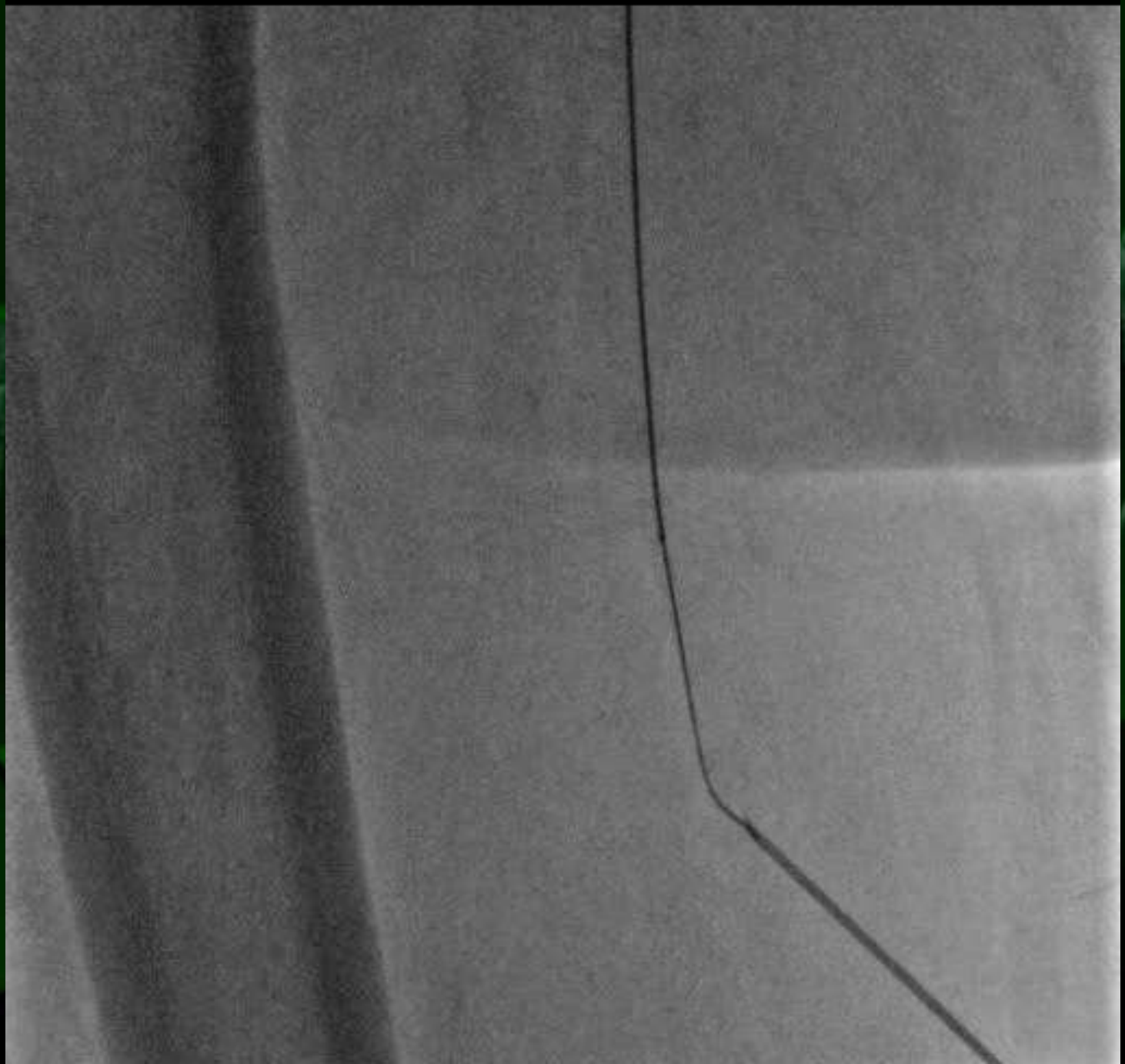
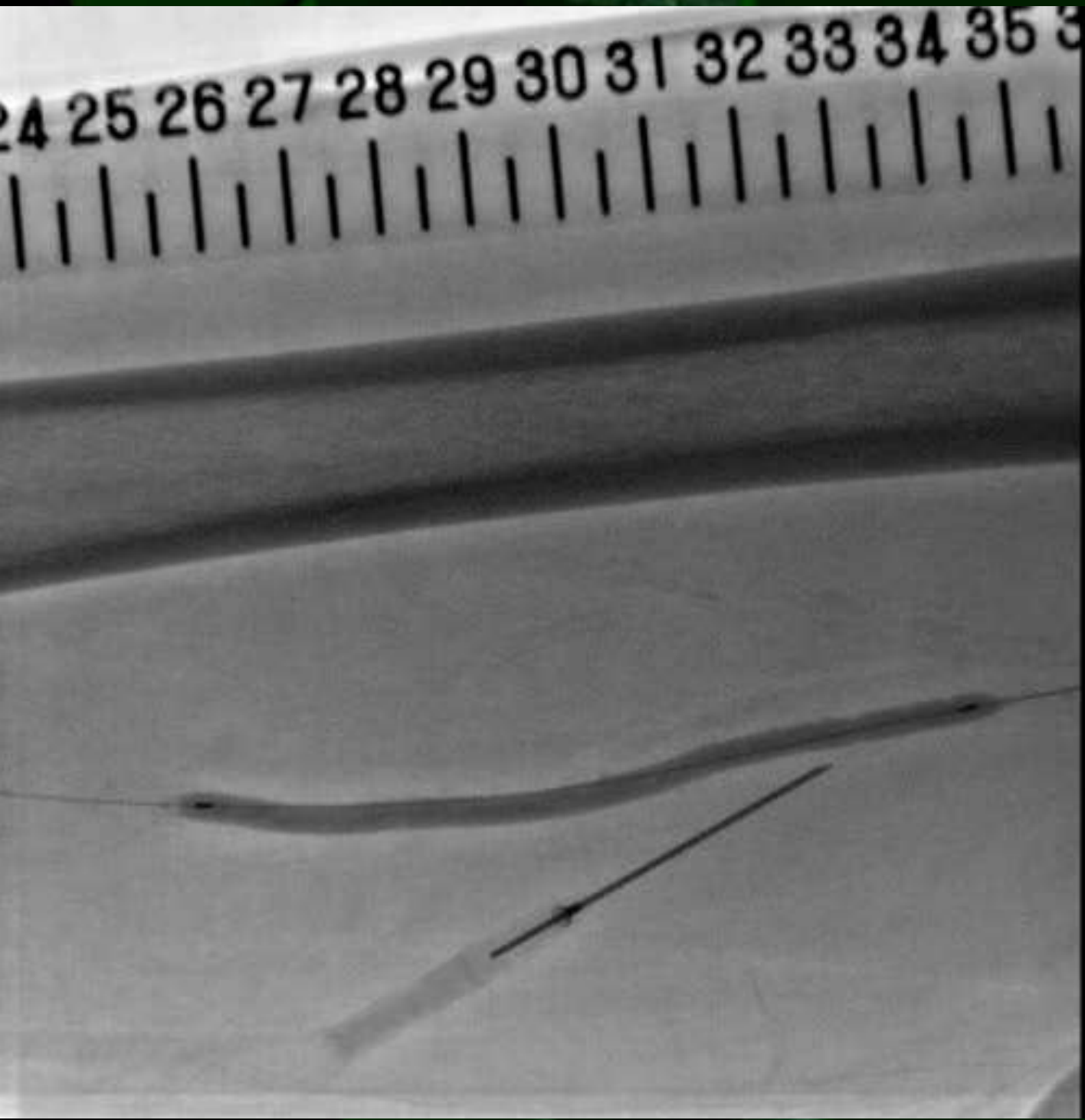









24 25 26 27 28 29 30 31 32 33 34 35


35 36 37 38 39 40 41 42 43 44 45 46

SFA-CTO in TMH-CVC

	2010	2011	Total
EVT	249	340	589
SFA-CTO	64	69	133
Antegrade	37 (57.8%)	41 (59.4%)	78 (58.6%)
Bi-directional	27 (42.2%)	28 (40.6%)	55 (41.4%)
Trans-collateral	12 (44.4%)	19 (67.9%)	31 (56.4%)
Omote-pan	15 (55.6%)	6 (21.4%)	21 (38.2%)
Distal puncture	0 (0.0%)	3 (10.7%)	3 (5.5%)

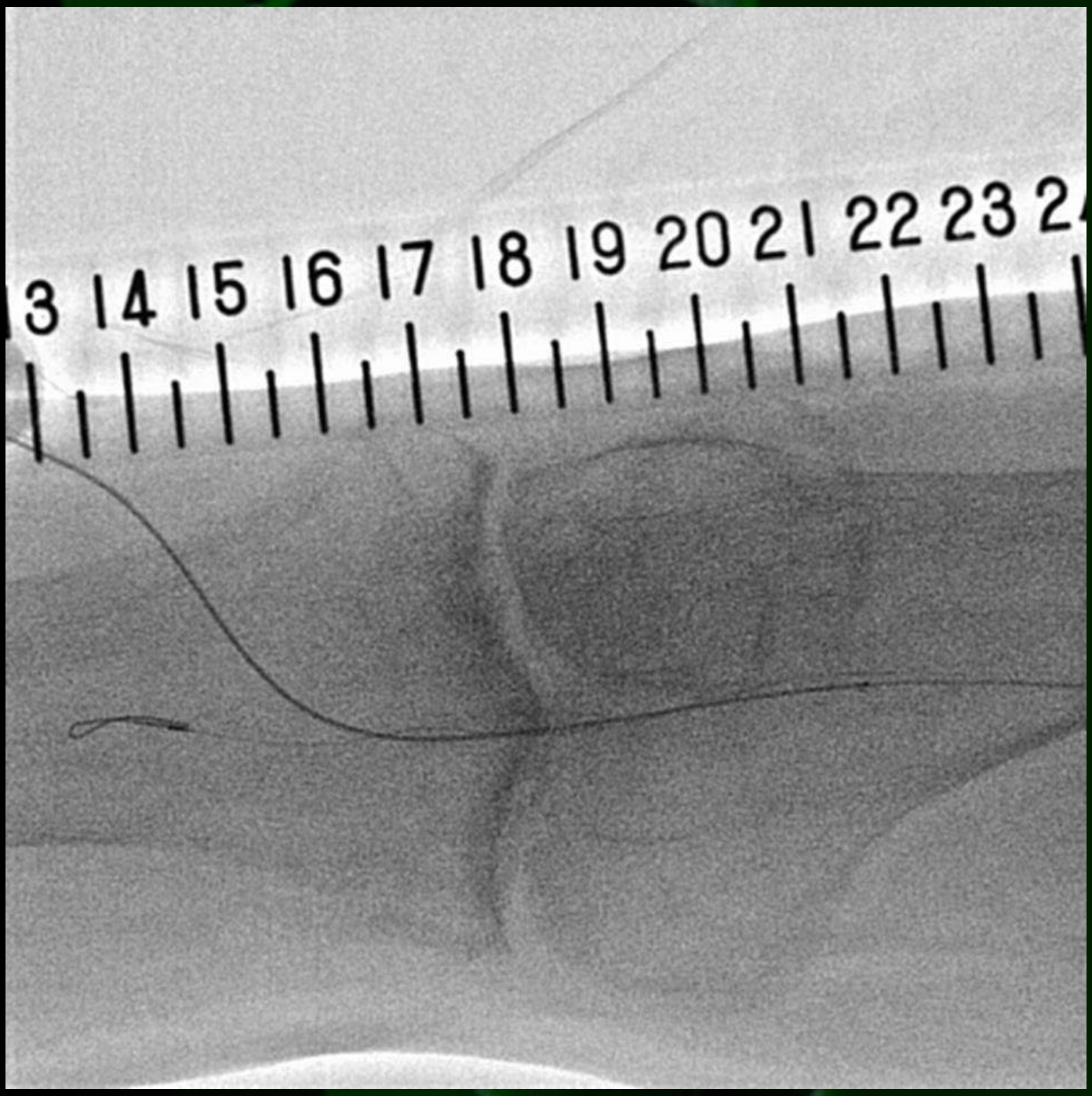
Initial Success Rate = 132 / 133 = 99.2%

One failed case: Severely calcified SFA-CTO

New Puncture Method

Frontal Popliteal Puncture (FPP)


Knee
Head
Foot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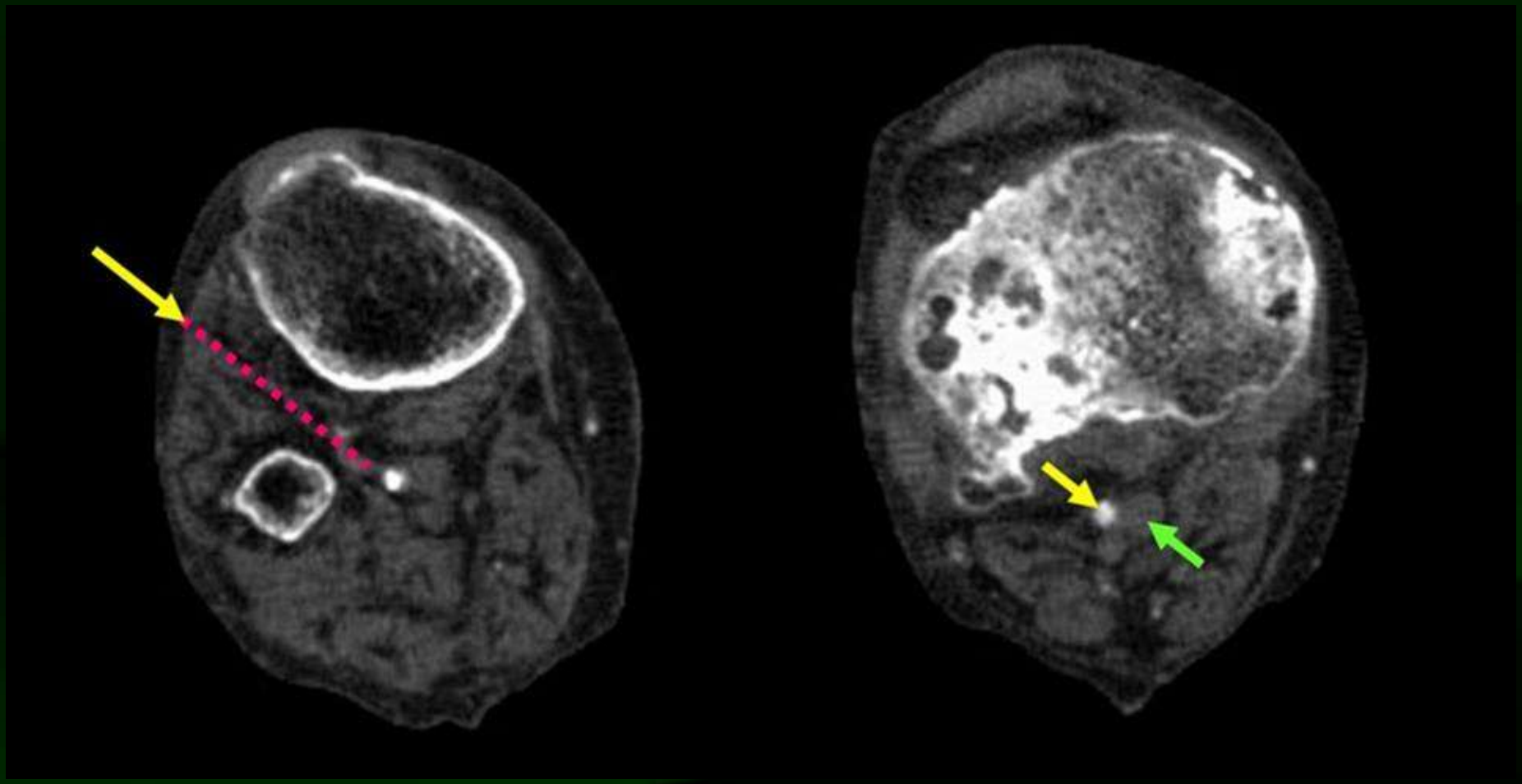


Long term outcome of EVT for SFA disease

Evidence

Mid-term clinical outcome and predictors of vessel patency after femoropopliteal stenting with self-expandable nitinol stent

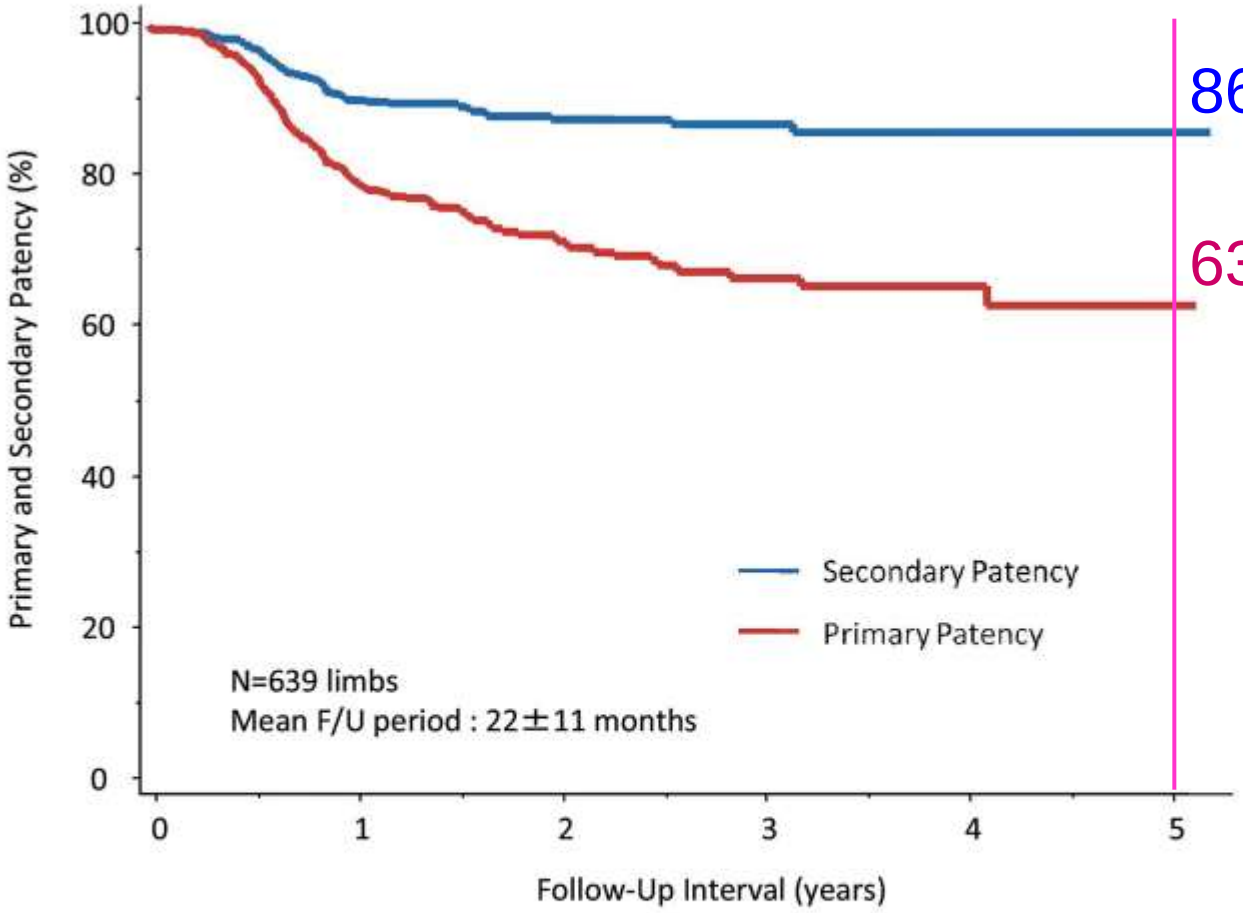
Yoshimitsu Soga, MD,[a] Osamu Iida, MD,[b] Keisuke Hirano, MD,[c] Hiroyohi Yokoi, MD,[a] Shinsuke Nanto, MD,[d] and Masakiyo Nobuyoshi, MD,[a] *Kitakyushu, Amagasaki, Yokohama, and Suita, Japan*

Background: Long-term clinical outcomes after femoropopliteal (FP) stenting with nitinol stents have not yet been clear. We investigated the mid-term efficacy of FP stenting with nitinol stents.

Methods: This study was a multicenter retrospective study. From April 2004 to December 2008, 511 consecutive patients (639 limbs; mean age 71 ± 7 years; 71% male) who underwent successful FP stenting with nitinol stents for de novo lesions were retrospectively selected and analyzed in this multicenter study. All patients had a minimum follow-up of 6 months. Restenosis was defined as >2.4 of peak systolic velocity ratio by duplex or >50% stenosis by angiogram. Primary patency was defined as treated vessels without restenosis and repeat revascularization. Secondary patency was defined as target vessels that become totally occluded and are reopened by repeat revascularization.

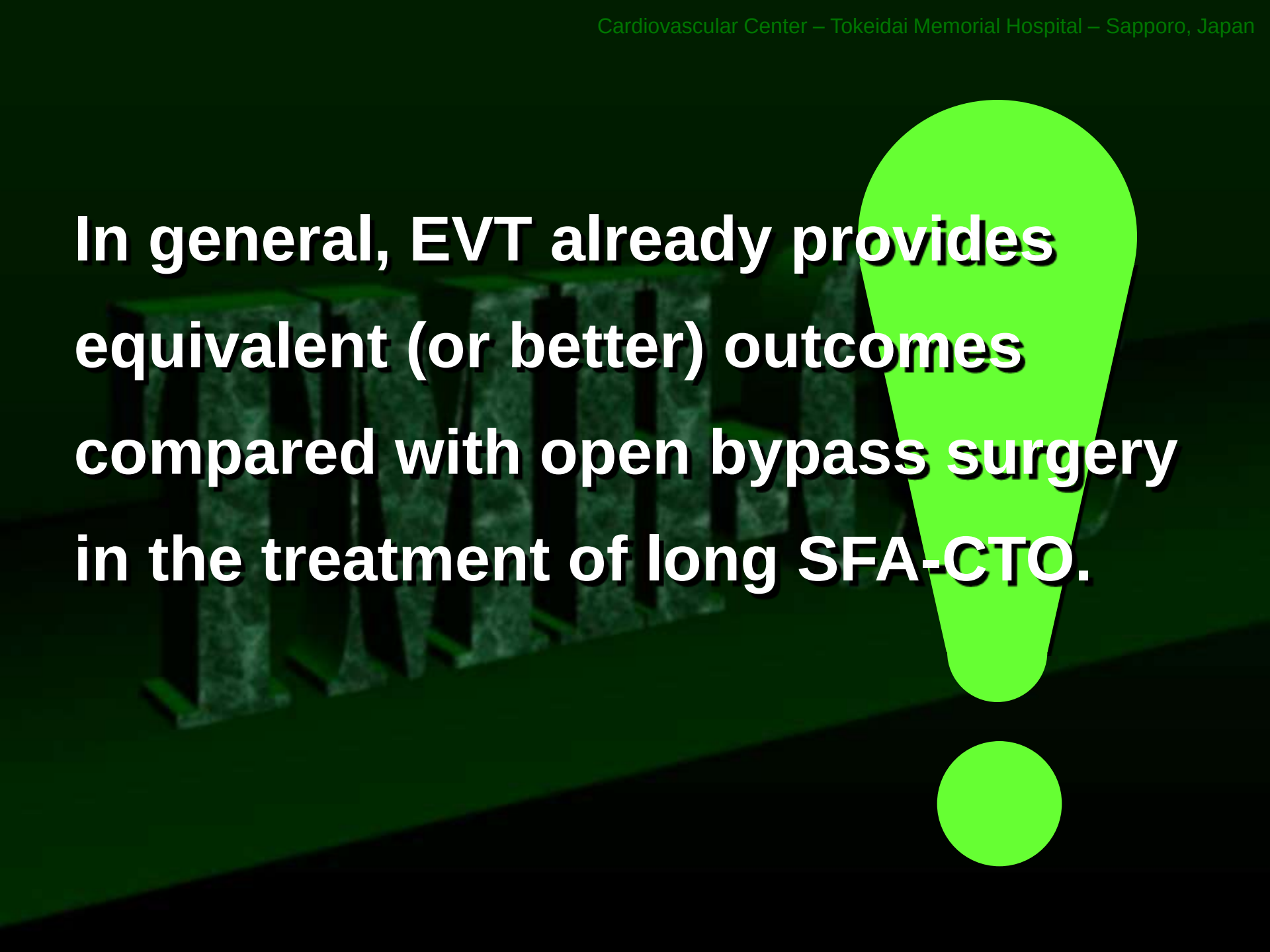
Results: Sixty-one percent of the patients had diabetes, 76% were claudicant, and 20% were on hemodialysis. Mean lesion length was 151 ± 75 mm. Mean follow-up period was 22 ± 11 months. Primary patency was 79.8%, 66.7%, and 63.1%, and secondary patency was 90.4%, 87.3%, and 86.2% at 1, 3, and 5 years, respectively. During the follow-up period, 53 patients (10%) died. Of them, cardiovascular death was 38% and stent fracture had occurred in 14%. On multivariate analysis by Cox proportional hazard ratio, cilostazol administration (hazard ratio [HR], 0.52;$P < .0001$), stent fracture (HR, 1.6; $P = .03$), hemodialysis (HR, 1.7; $P = .01$), and Trans Atlantic Inter-Society Consensus (TASC) II class C/D (HR, 2.4; $P < .0001$) were the independent predictors of primary patency after successful FP stenting.

Conclusion: Clinical efficacy of nitinol stent implantation for FP disease was favorable for up to 5 years. (J Vasc Surg 2010;52:608-15.)



years		0	1	2	3	4	5
at risk	Secondary patency	639	428	194	91	34	8
	Primary patency	639	381	160	68	27	5
%	Secondary patency	100	90.4	87.9	87.3	86.2	86.2
	Primary patency	100	79.8	71.8	66.9	65.8	63.2
SE	Secondary patency	.000	.012	.015	.016	.019	.019
	Primary patency	.000	.017	.021	.026	.028	.037

In general, EVT already provides equivalent (or better) outcomes compared with open bypass surgery in the treatment of long SFA-CTO.



Fighting for Limb salvage