

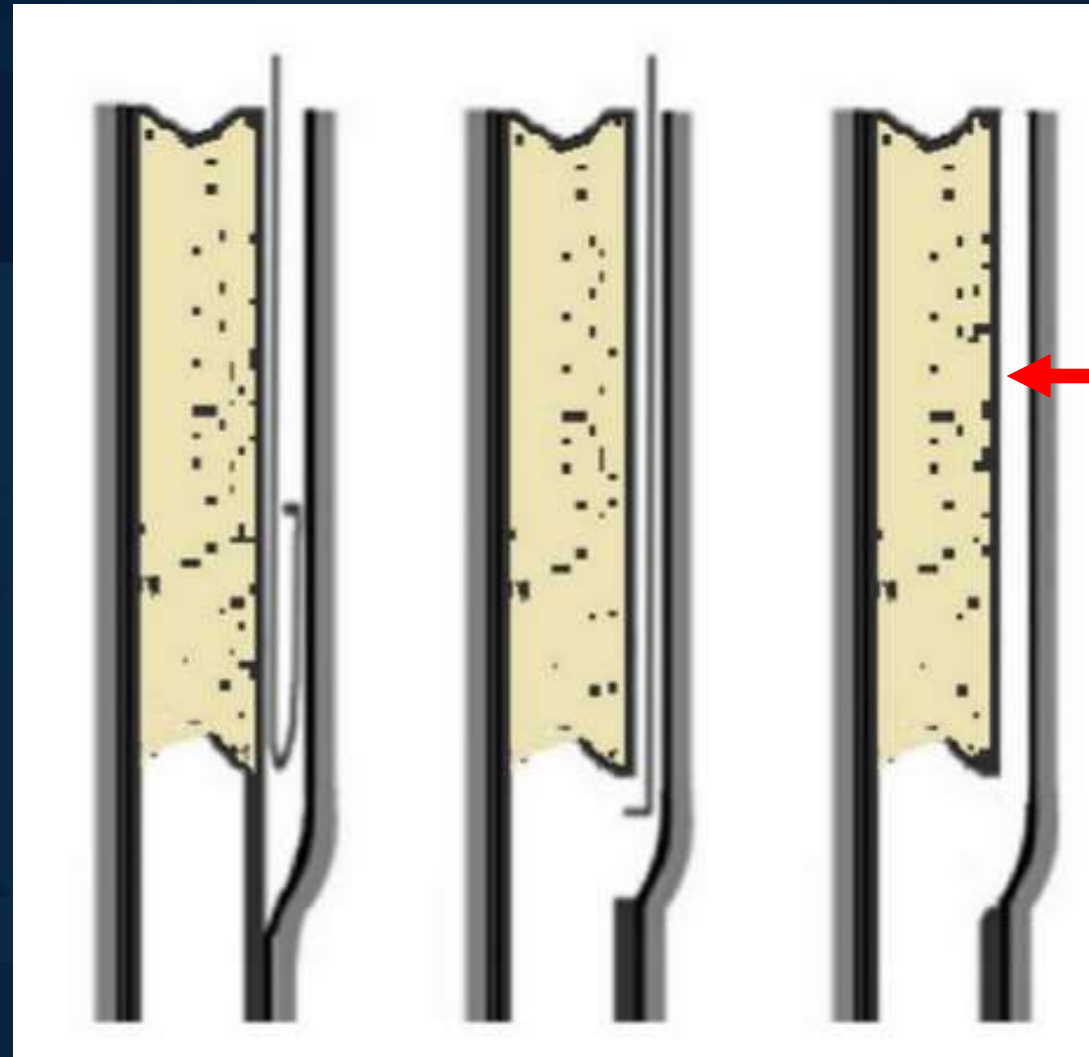
Atherectomy at Subintimal Space in Lower Limb Intervention: Is There a Role ?

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Will Atherectomy Work Here ?



Atherectomy ?

Selected articles from the XXV National Congress of the Italian Society of Geriatric Surgery

Research article | [Open Access](#) | [Published: 15 November 2012](#)

The role of atherectomy in the treatment of lower extremity peripheral artery disease

rate was 80% [[25](#)]. The SilverHawk plaque excision system performs ideally in heavily calcified femoropopliteal lesions; occlusions should be predilated with an undersized balloon to ensure that the wire crosses intraluminally. There are no data supporting the use of this system in the setting of long lesion (>15 cm) and it should be avoided when subintimal crossing is involved [[26](#)]. Table [1](#).

Grigorios Korosoglou, Sorin Giusca, Martin Andrassy, [Michael Lichtenberg](#)



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Abstract

Four methods of atherectomy have been used for the treatment of infrainguinal disease:

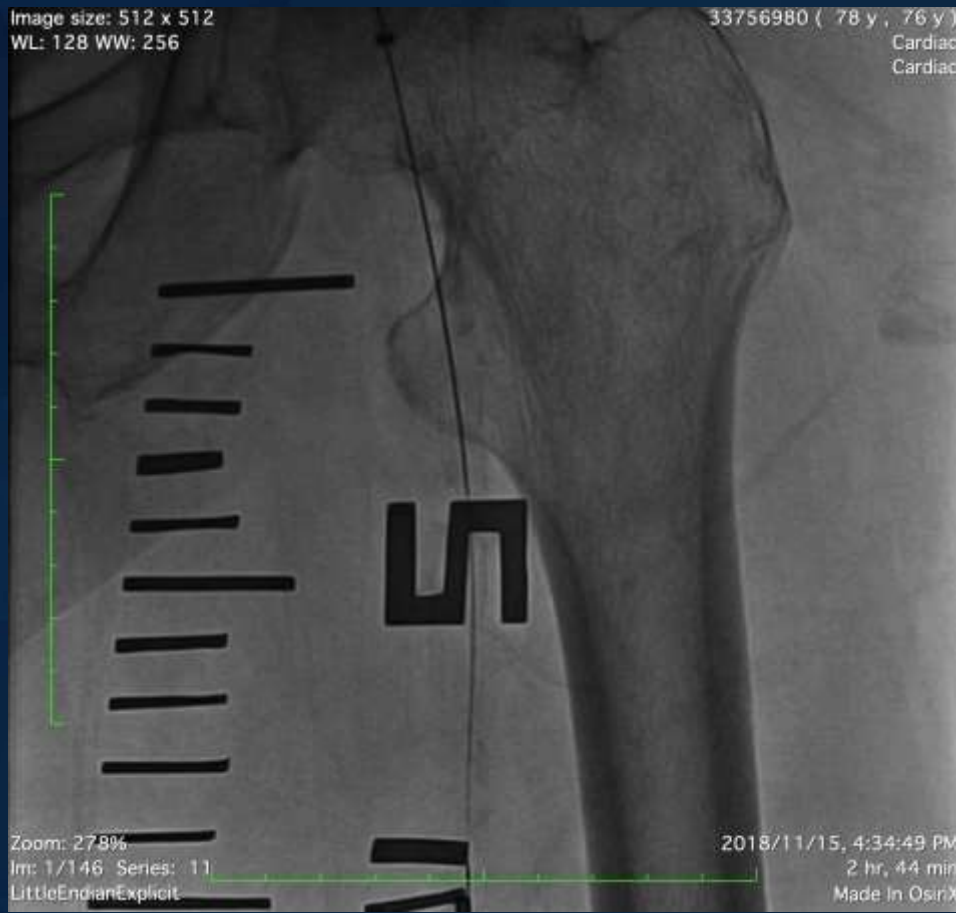
- Directional atherectomy.
- Rotational atherectomy.
- Orbital atherectomy.
- Hybrid atherectomy.

Each of these devices has unique features, with advantages and disadvantages with respect to lesion characteristics. The safety profile and efficacy of these devices has not yet been compared. Generally, atherectomy can be used for a broad spectrum of lesion characteristics although relative contraindications are subintimal crossing of the lesion and a vessel diameter smaller than that indicated for the respective device in the instructions for use. It should be noted that devices primarily designed for thrombectomy, such as Angiojet™ (Boston Scientific), Penumbra™ (Penumbra) or photoablation, such as excimer laser using the Turbo-Elite and Turbo-Power system (Spectranetics), are not discussed in the present article as the procedures do not involve atherectomy in the traditional sense of cutting or removing tissue.

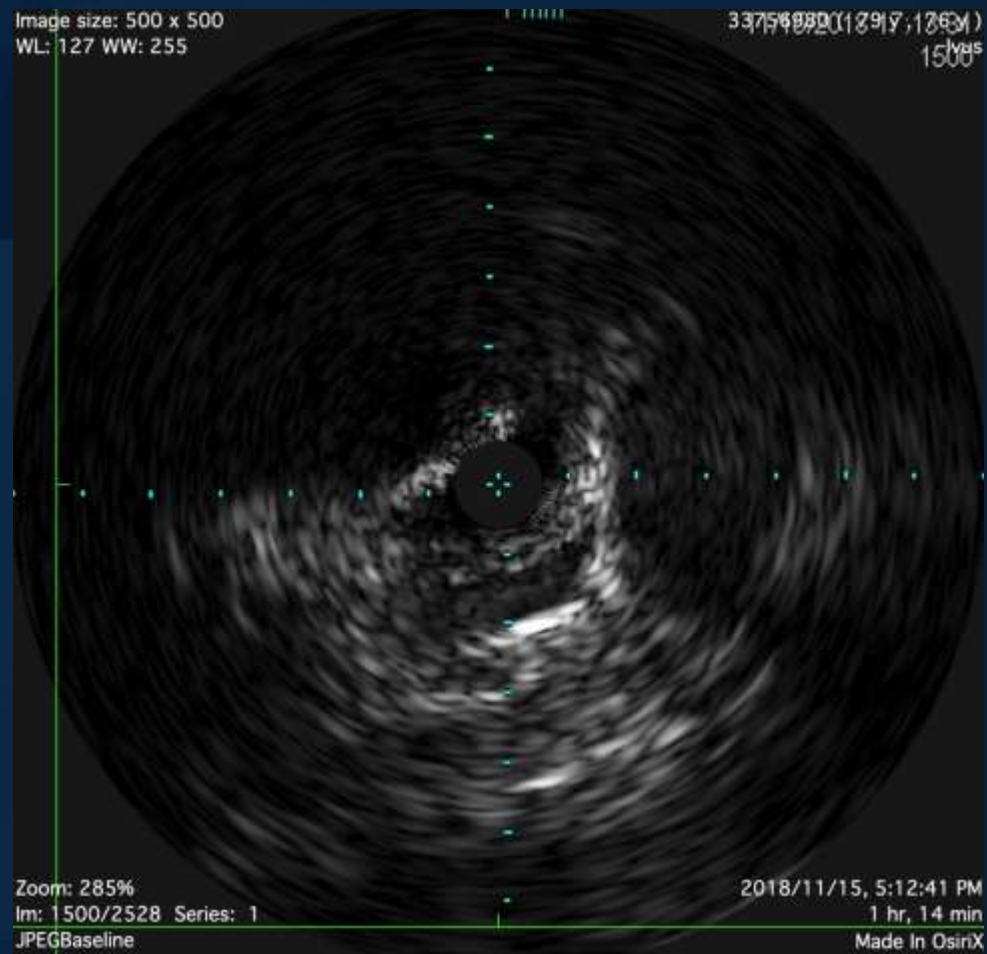
Case 1 Summary (Jetstream)

- 79 y/o woman
- DM, CAD, PUD bleeding, dyslipidemia, PAOD s/p R AK amputation
- Worsened left leg claudication with resting pain for PTA
- Rutherford class 4
- L-ABI 0

V18 Cross Lesion Subintimally



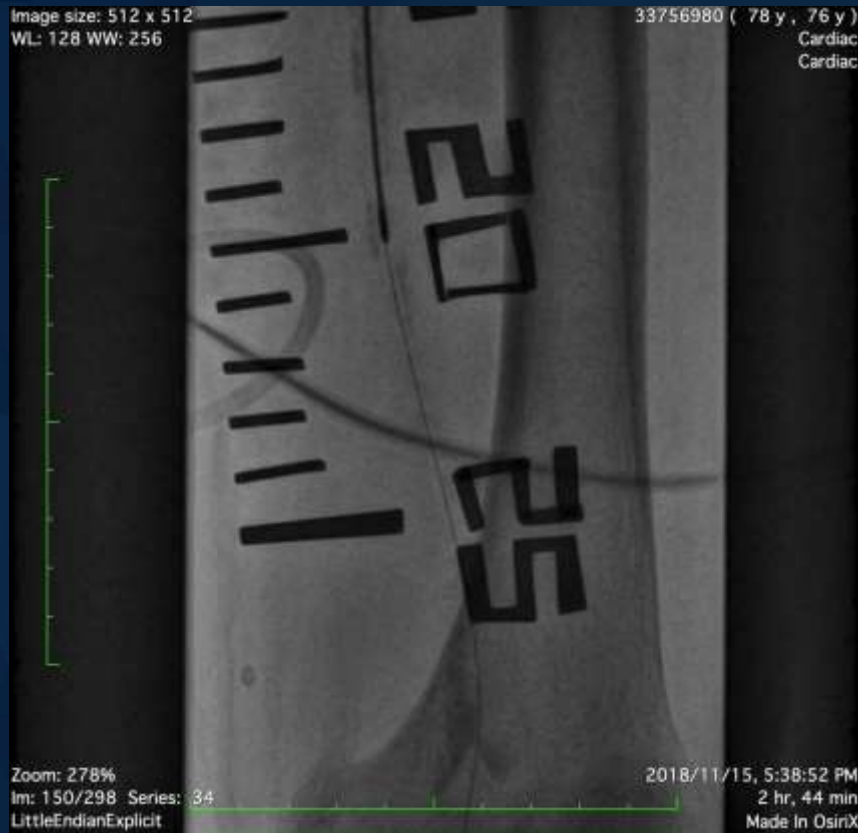
IVUS: Subintimal Crossing Distally



2.0/40 mm Armada at 16 atm



Jetstream Atherectomy



4.0/100 mm Angiosculpt



6.0/120 mm Zilver, 5.0/10 mm Cutting, 5.0 mm high pressure balloon at 26 atm



4.0/150 mm InPACT DCB 10 atm



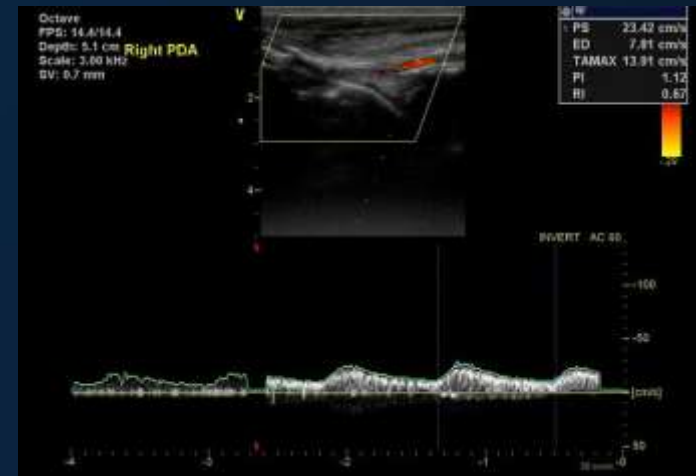
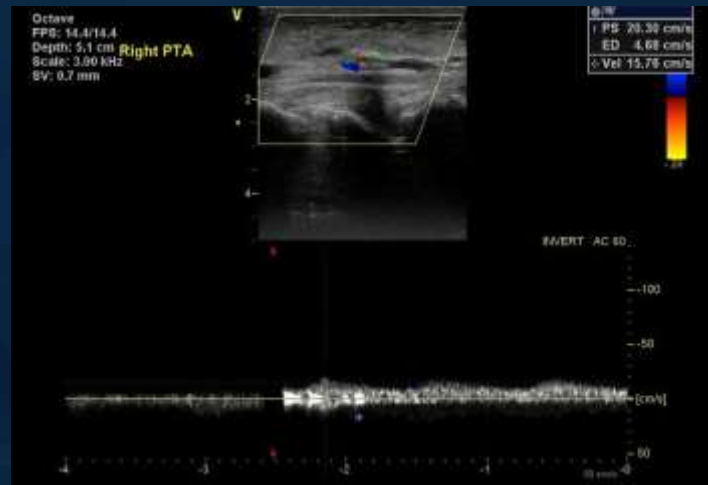
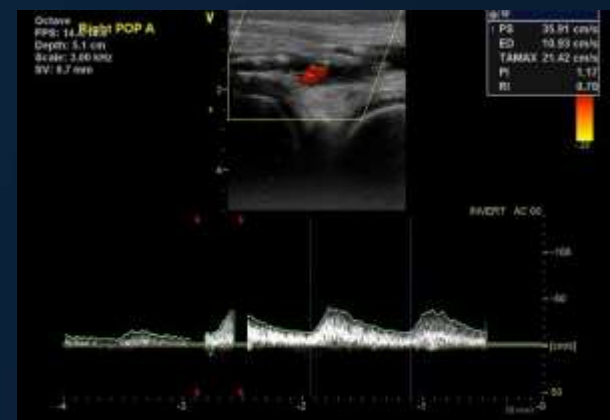
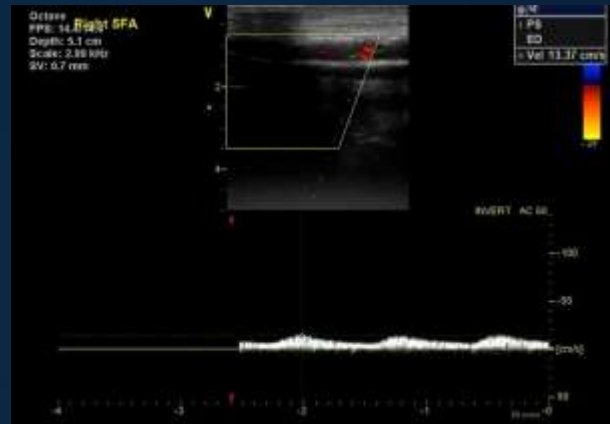
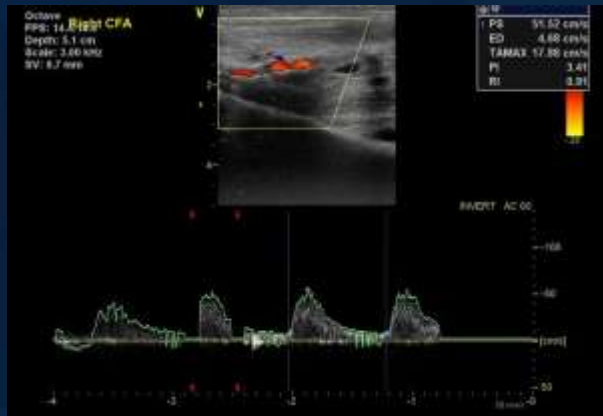
L ABI 0-0.78 (1M) – 0.81 (1Y)

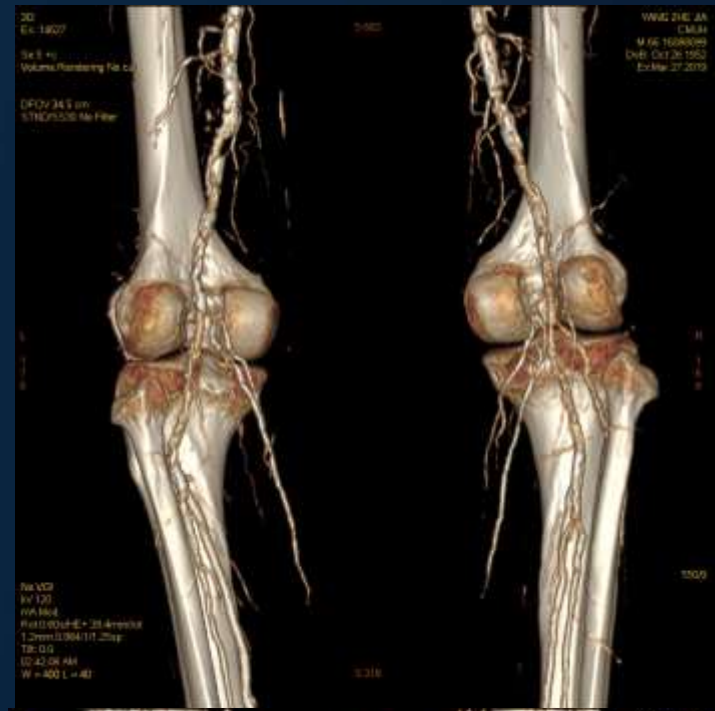
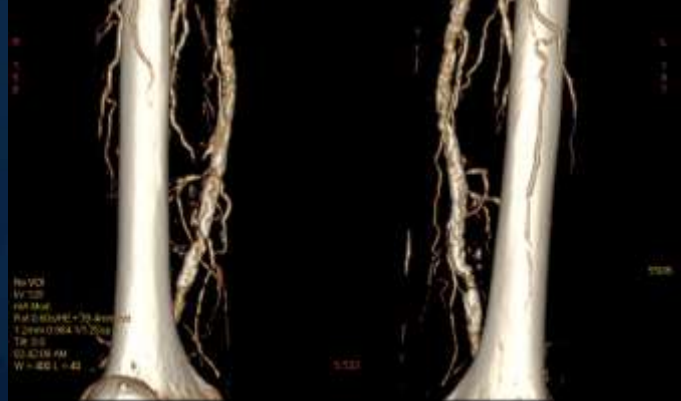
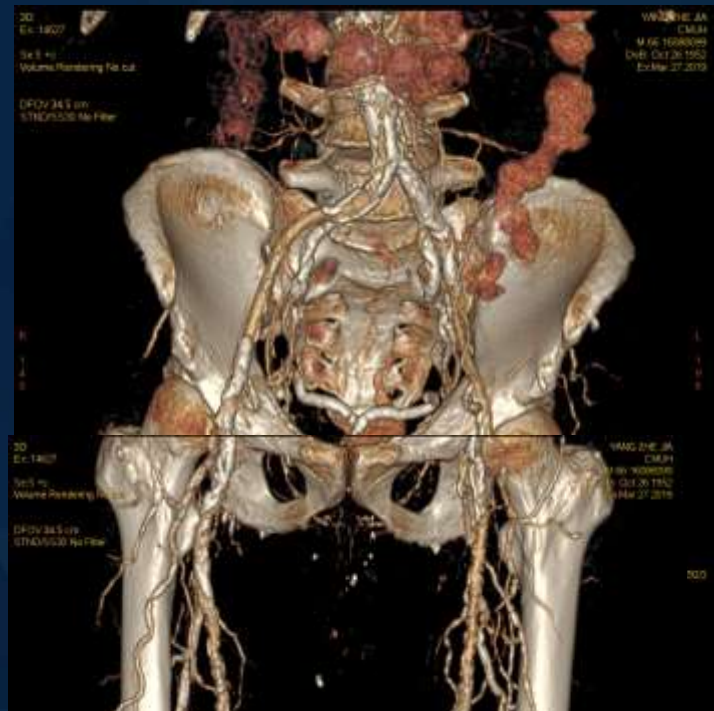


Case 2 Summary (HawkOne)

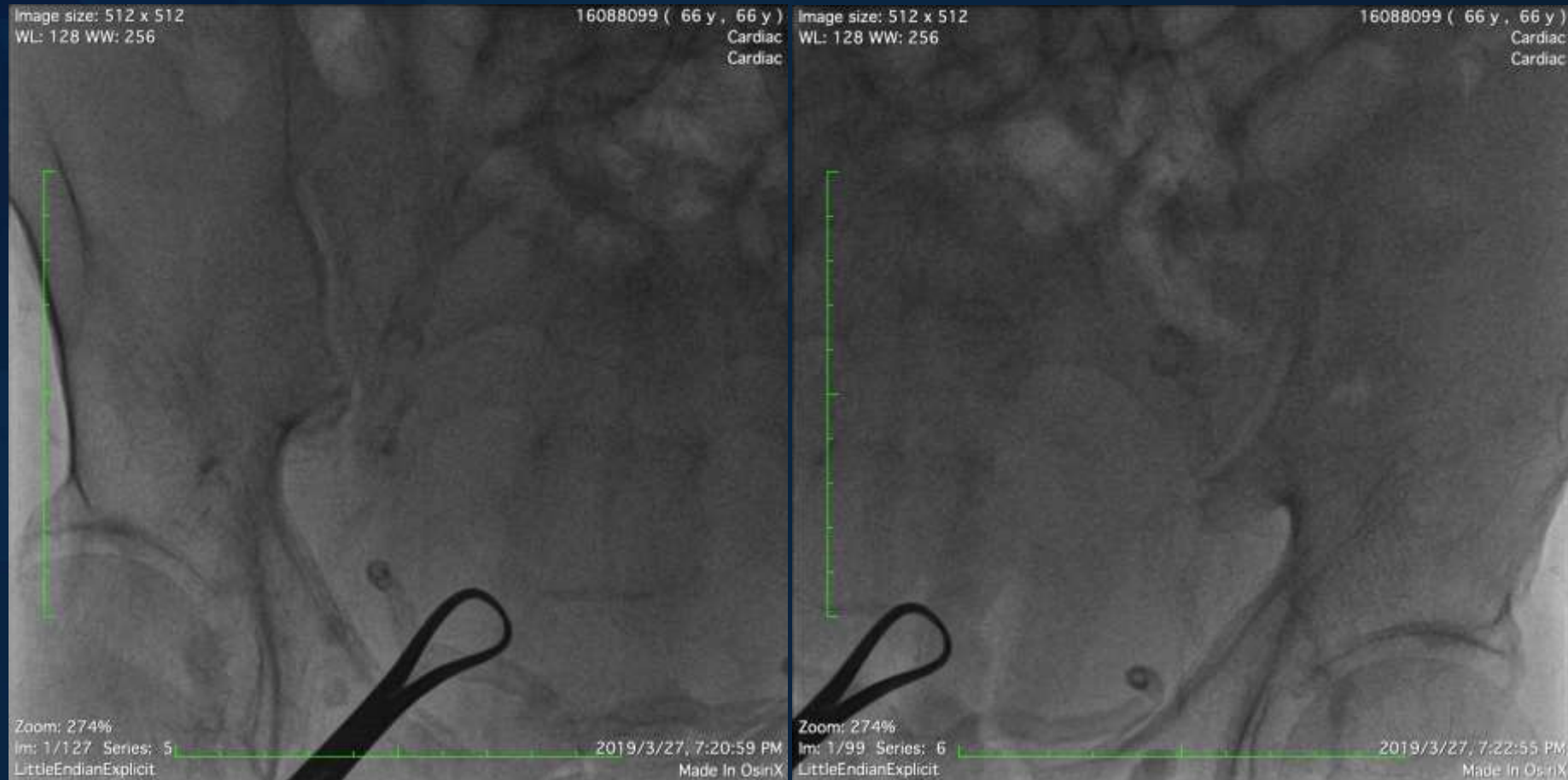
- 66 y/o man
- ESRD on HD, CAD s/p failed PCI, ischemic cardiomyopathy (EF 20-30% for 8 yrs), ascites, bilateral pleural effusion
- Bilateral foot pain and cyanosis of right foot for one day
- D-dimer 17200
- ABI 0.38/0.53 (2018) -> 0/0.46 (2019)

ABI 0/0.46





R brachial a: 4Fr (L arm AVF)



4.0/40 mm Admiral 8 atm



.014" Eagle eye IVUS (True Lumen)



2.4/3.4 mm Jetstream without protection



5.0/100, 6.0/100 mm Angiosculpt 8 atm



7.0/37 mm Express stent 10 atm



Failed Wiring with V18, Approach CTO 25 gram, Astato, Gladius wires



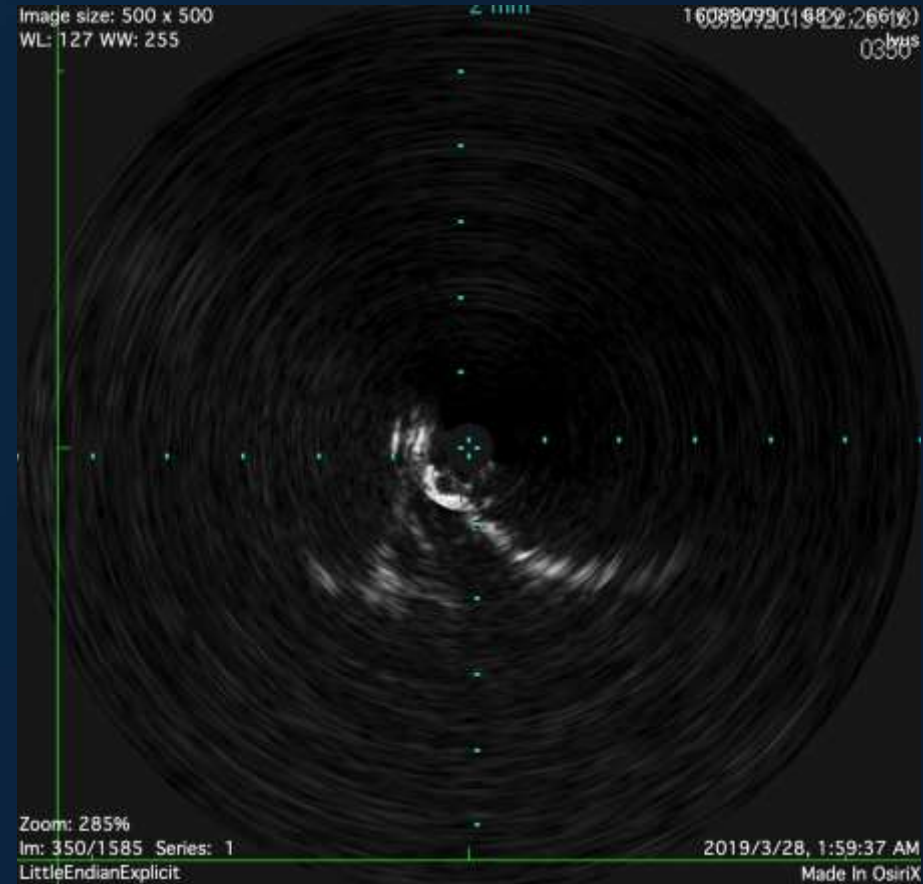
Distal RSFA, 4Fr, CXI, V18, Externalization by Snare



2.0/40, 3.0/40, 4.0/40 Pacific balloon at 16 atm



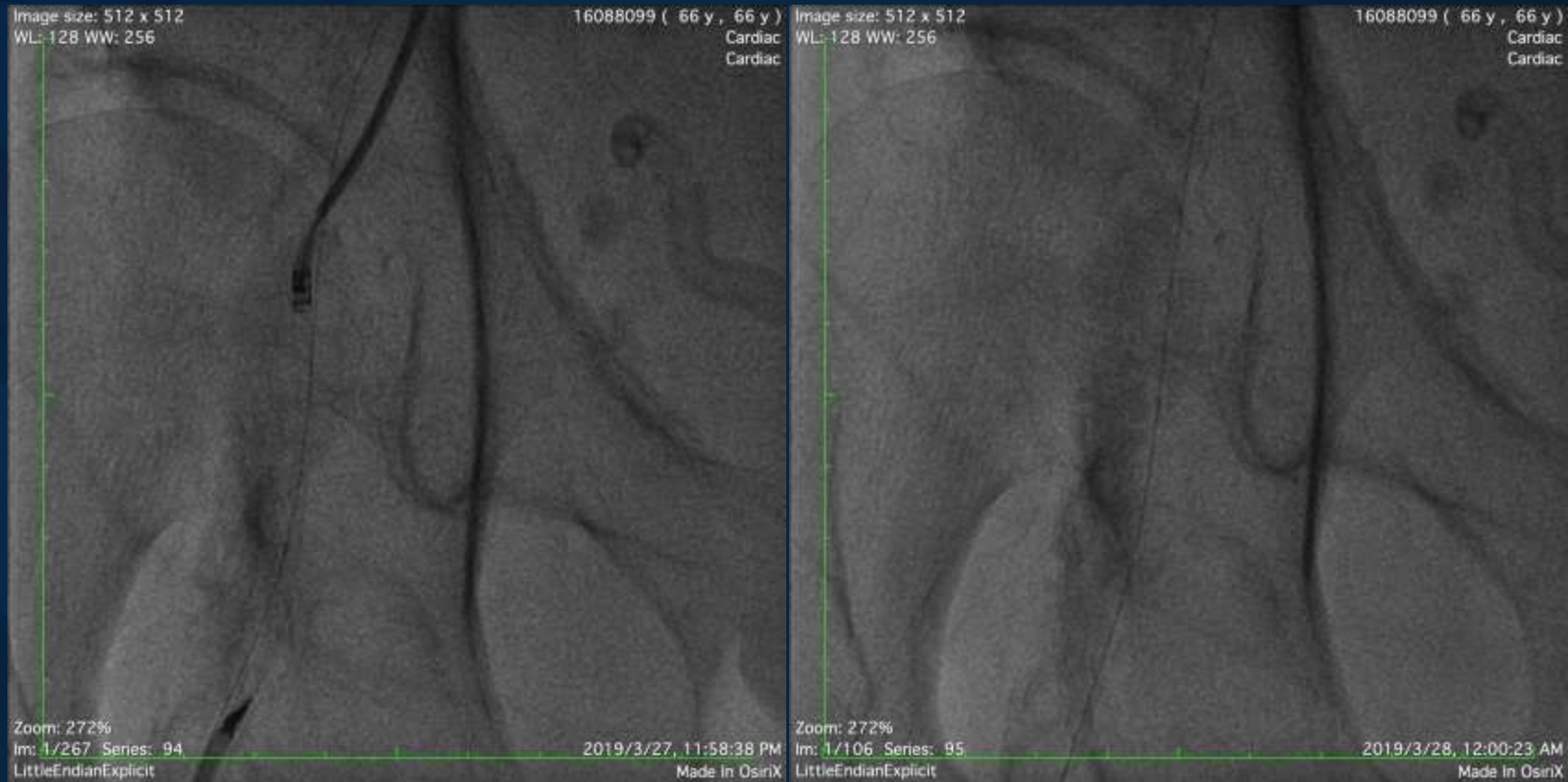
.014" Eagle eye IVUS, Wire Crossed Subintimally



5.0/200 mm Pacific balloon at 16 atm



DAART with HawkOne/Spider



5.0/200, 6.0/80 mm Pacific balloon at 16 atm

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DCB InPACT 5.0/150, 4.0/80 Supera x 2, 8.0/80, 8.0/60 Zilver flex, Kinked Express LD/V3H



Take Home Message

- Atherectomy at subintimal space is less effective than that at true lumen
- Subintimal crossing should be a relative contraindication for atherectomy

**Subintimal
HawkOne**



**Subintimal
Jetstream**



Thanks For Your Attention

