

Build A Bridge Before Drilling A Tunnel

Complex EVT to Treat

A No-Stump Left CIA-EIA CTO and Right SFA CTO

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COI

I have nothing to disclosed.

A 69 year-old Gentleman

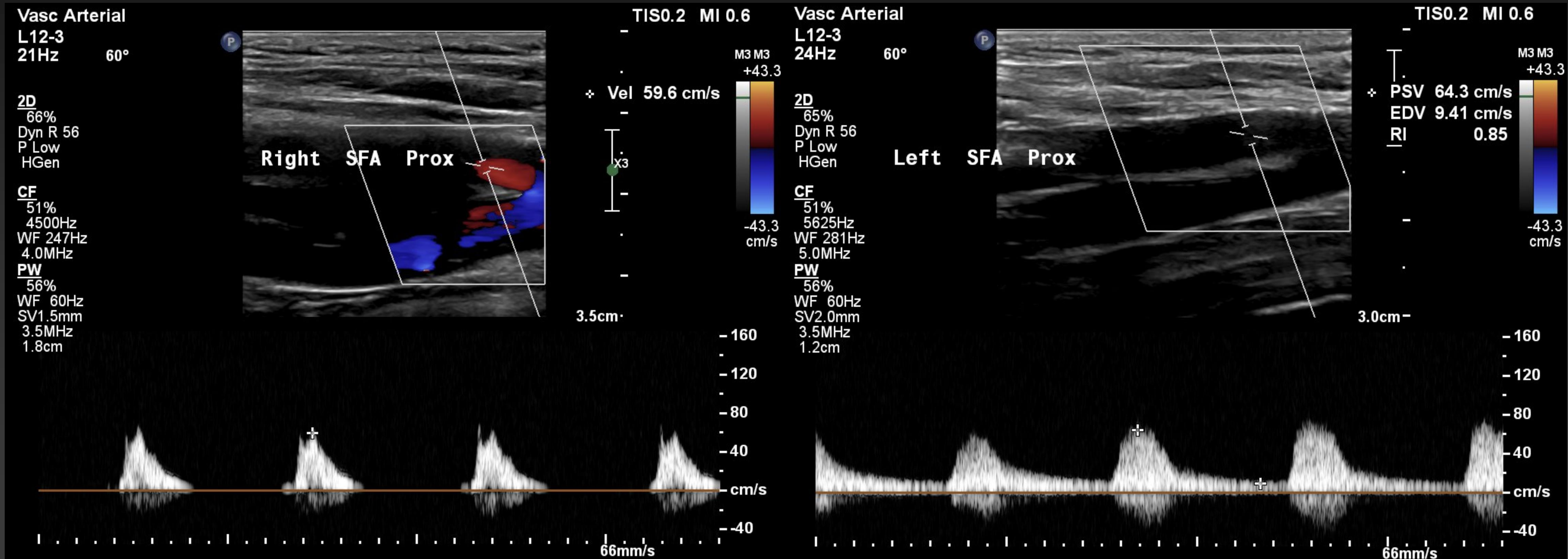
Cramp legs, unable to walk for months.

An un-healing wound at right 1st toe.

Diabetes mellitus, type II.



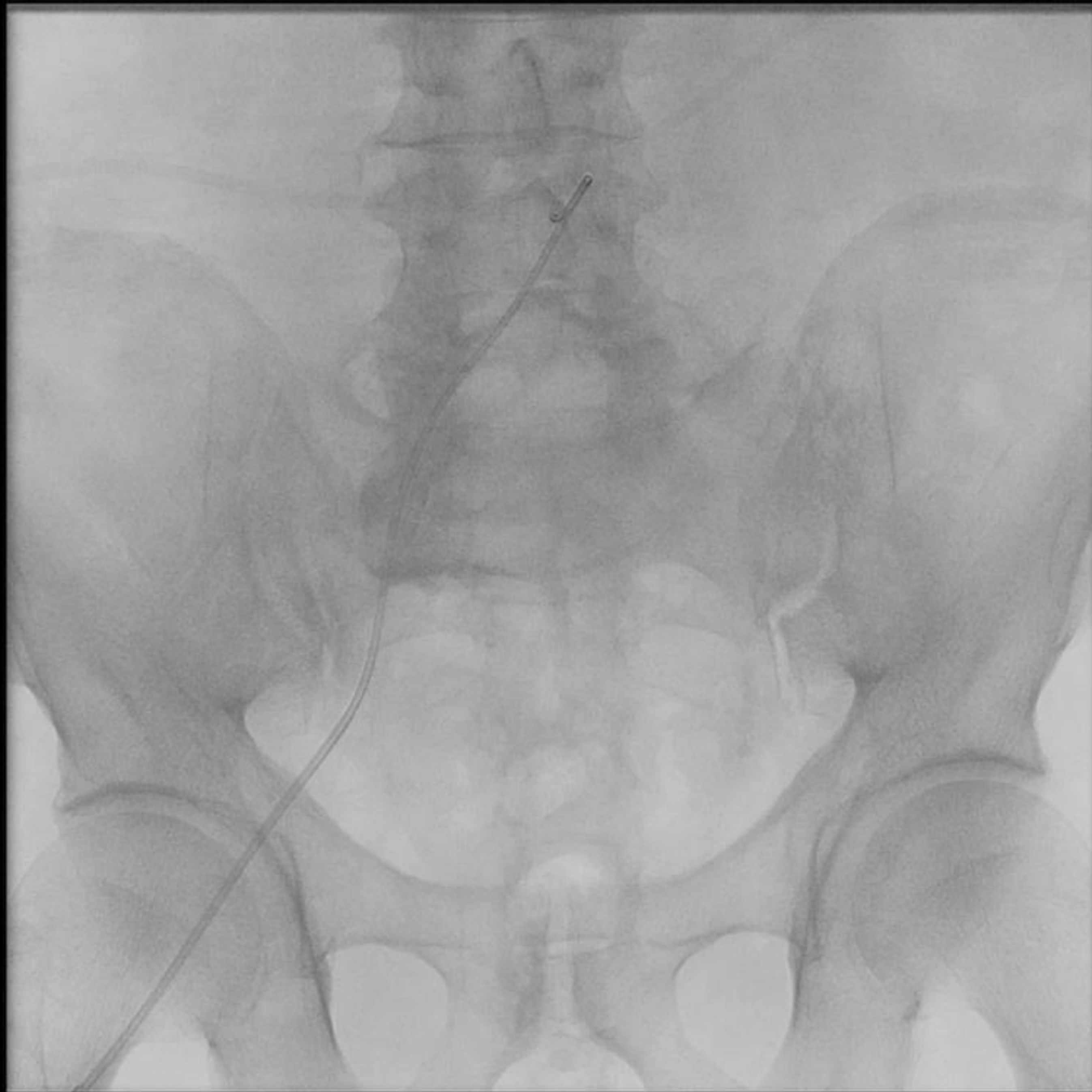
Vascular Ultrasound: Severe Stenosis of Bilateral Arteries.

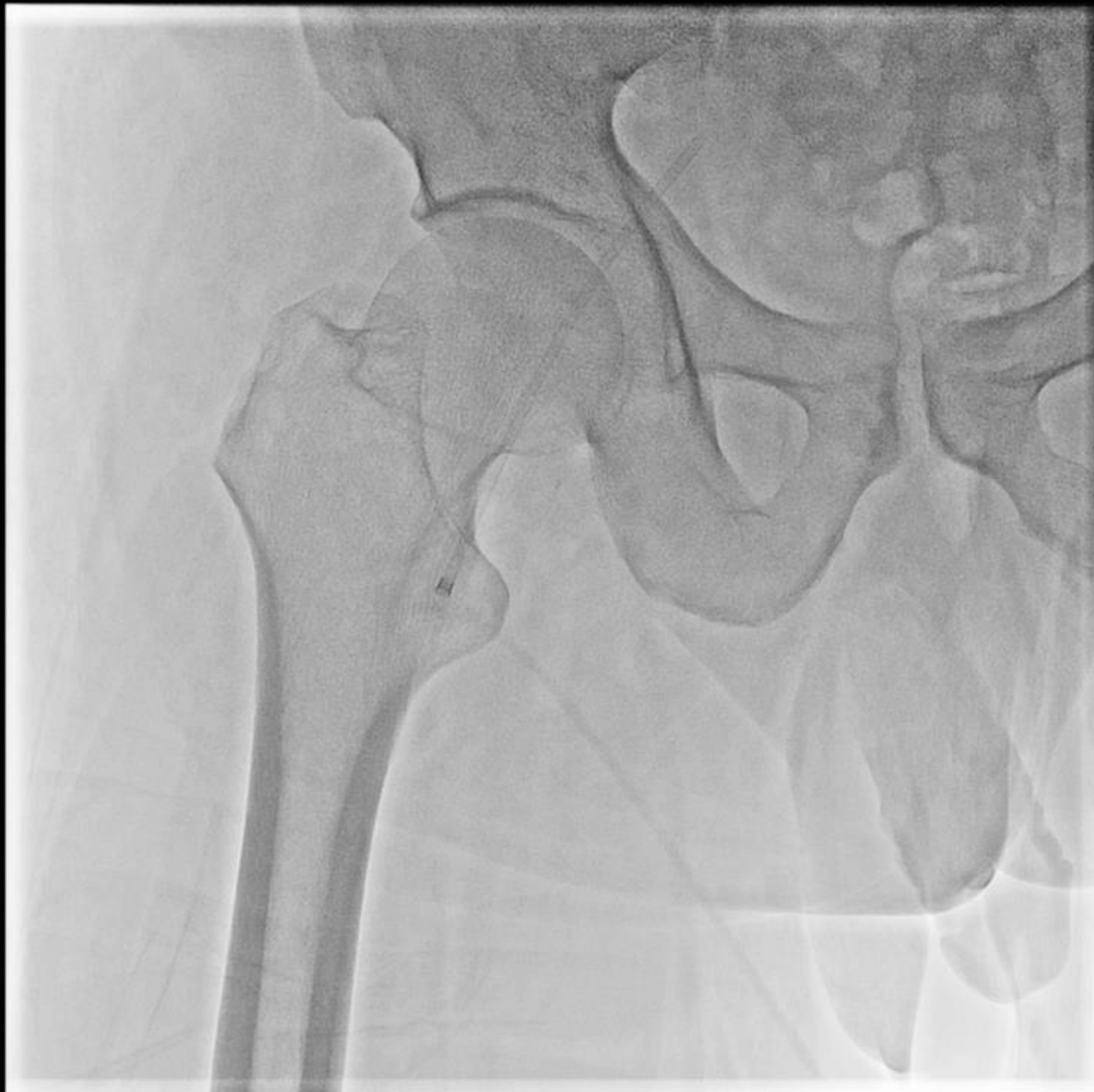


CT Angiography not performed due to relatively poor kidney function (CrCl: 45ml/min)

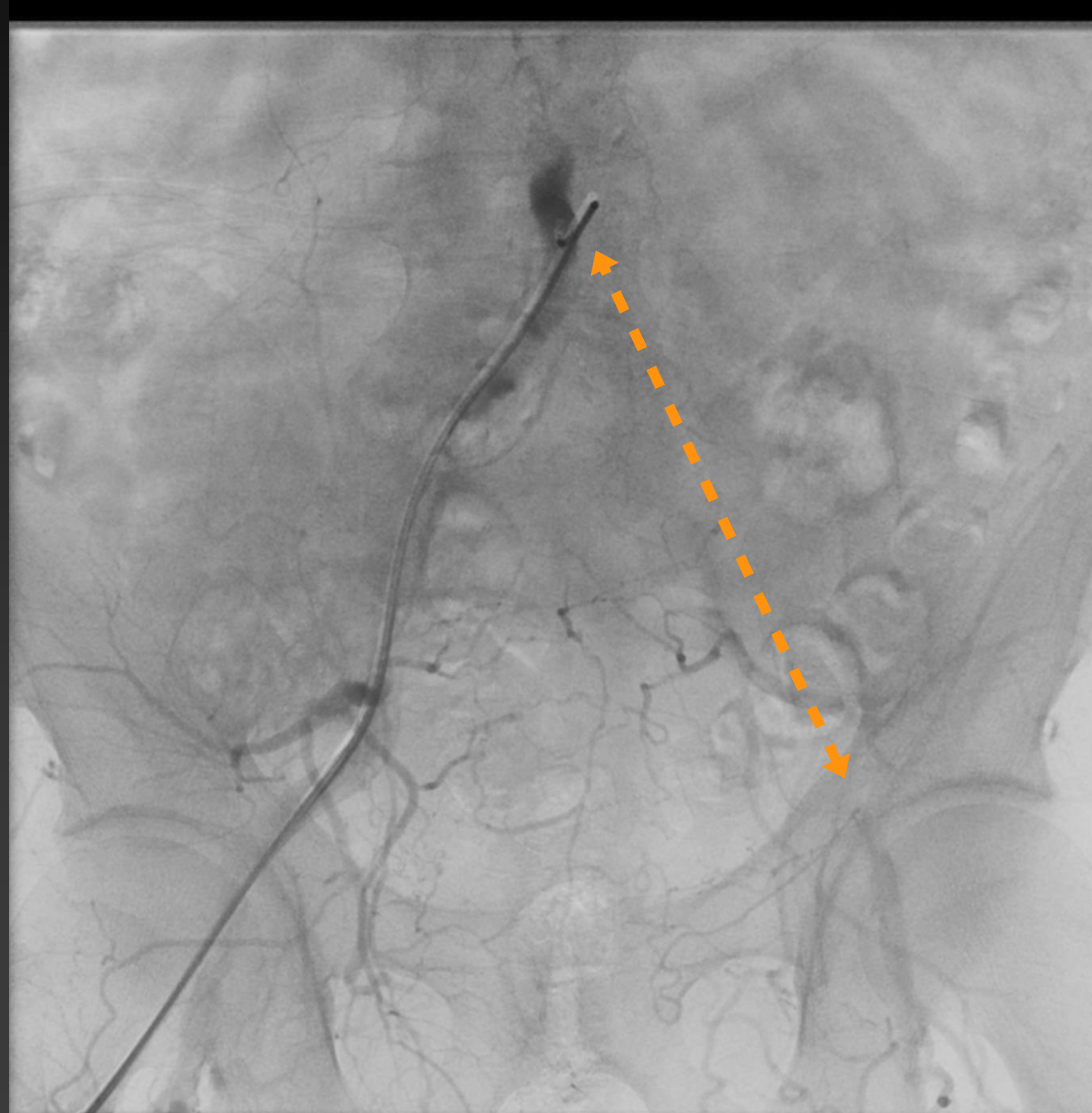
EVT on 2023.04.28

Under General Anesthesia

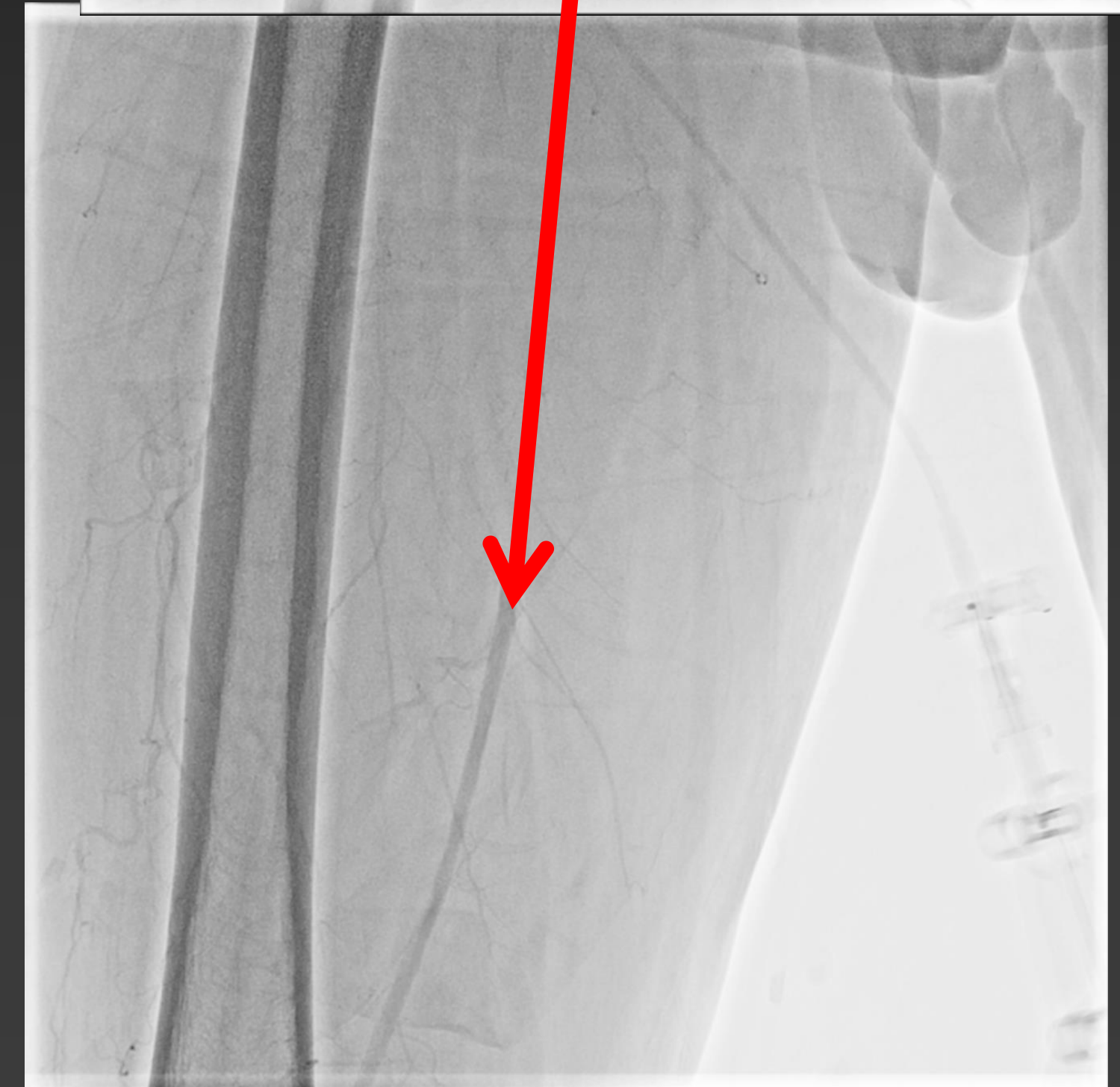
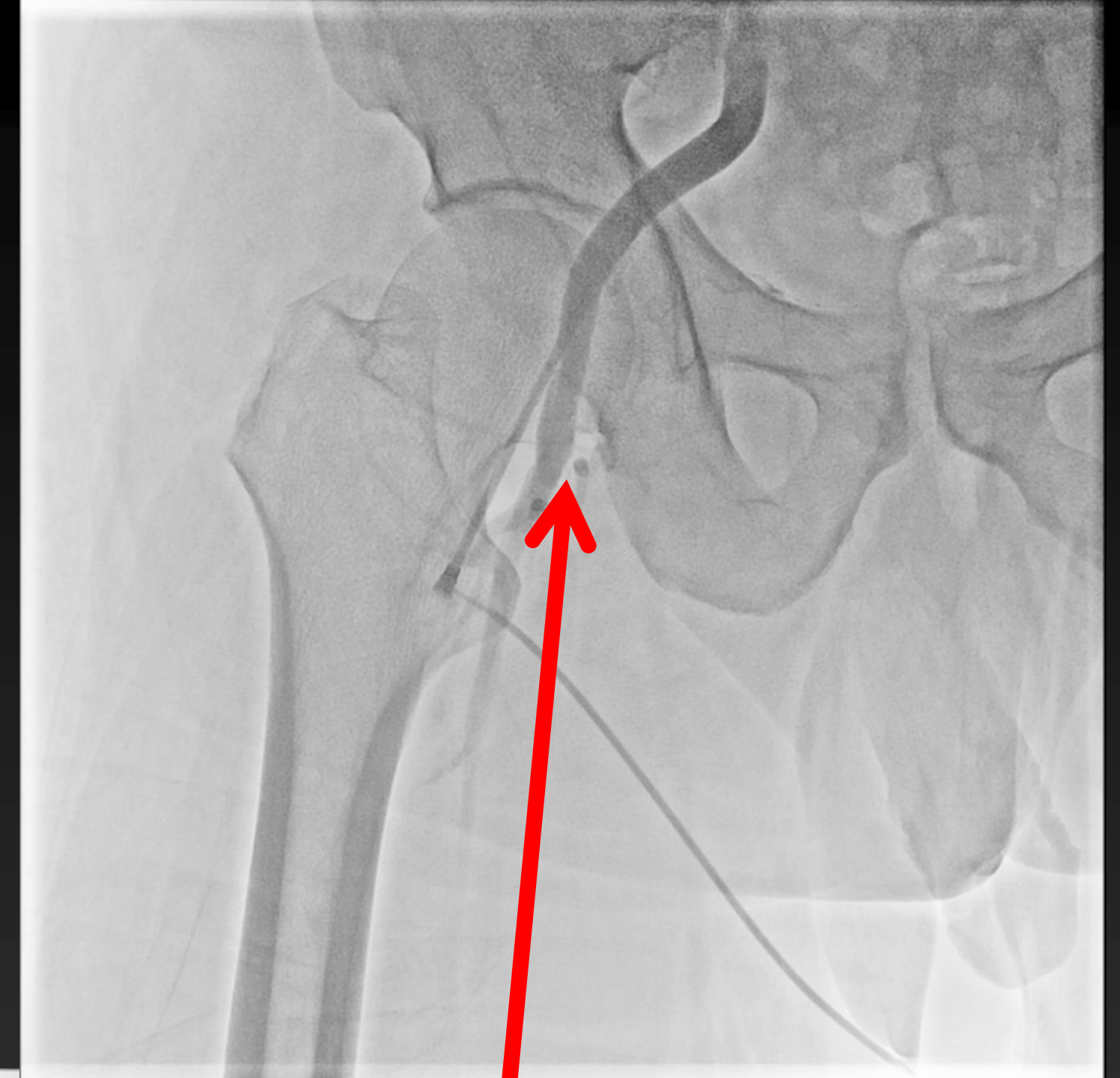




I have to build the bridge first...



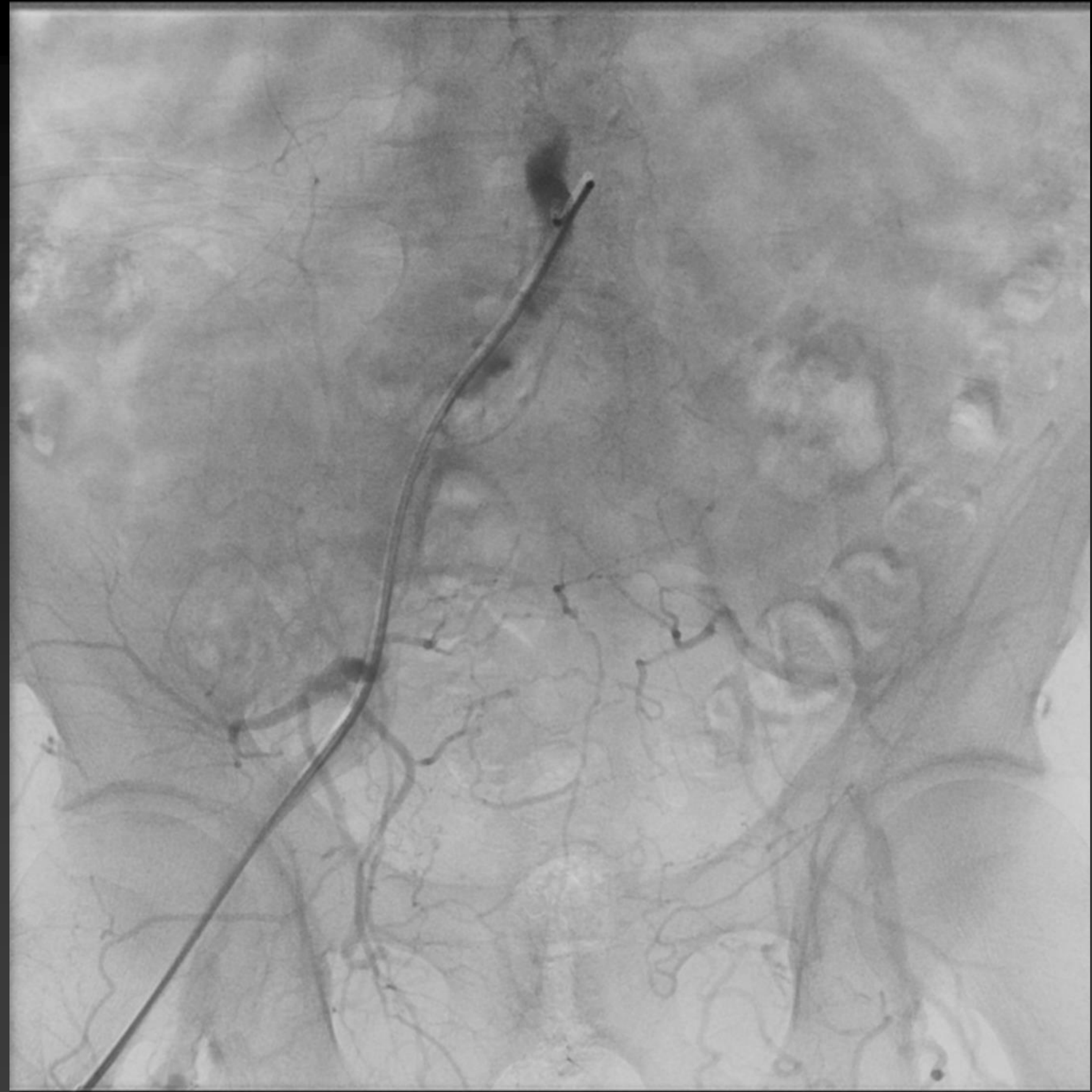
...then I could drill
the tunnel.



My Strategy

Complex EVT

- Bi-directional approach.
- Bi-femoral approach.
 - 10cm femoral sheaths with micro-puncture kits.
- Consider complete revascularization in single procedure.

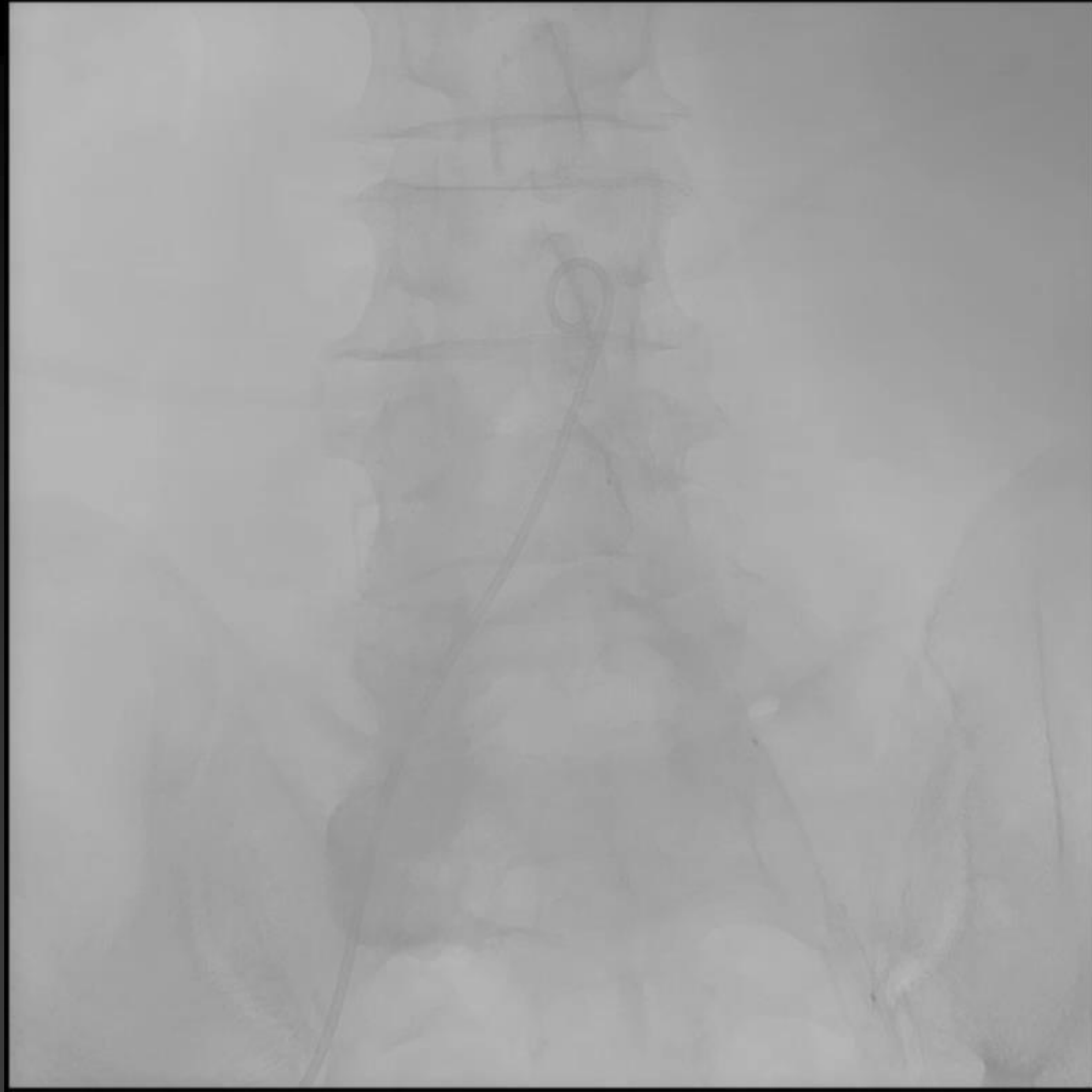


Mobile
Thrombus



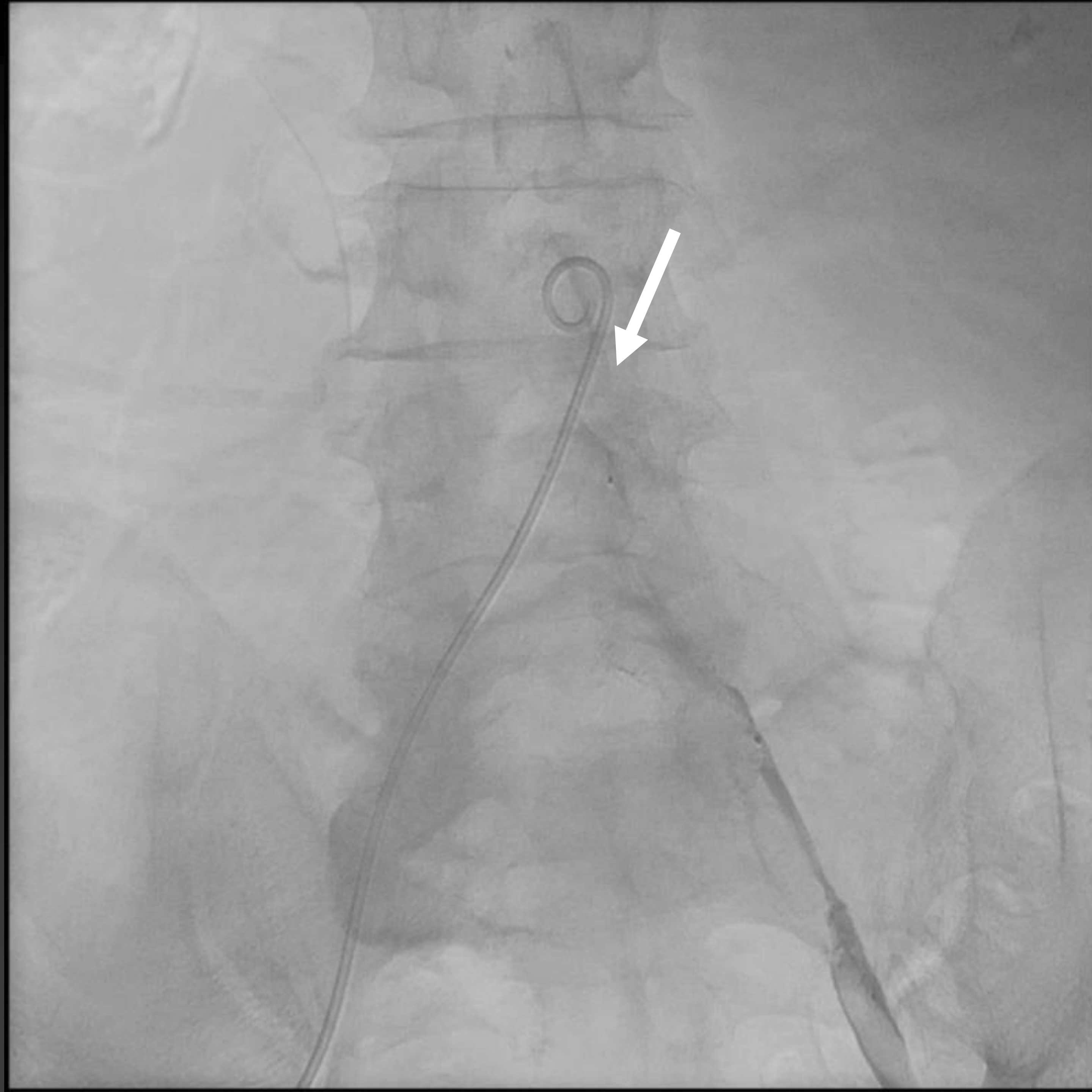
Crossing the Muddy Road...

- CXI support catheter 2.6Fr/90cm J TIP.
- Guidewire: Asahi Gladius 0.018 300cm.
- Subintimal tracking was found.



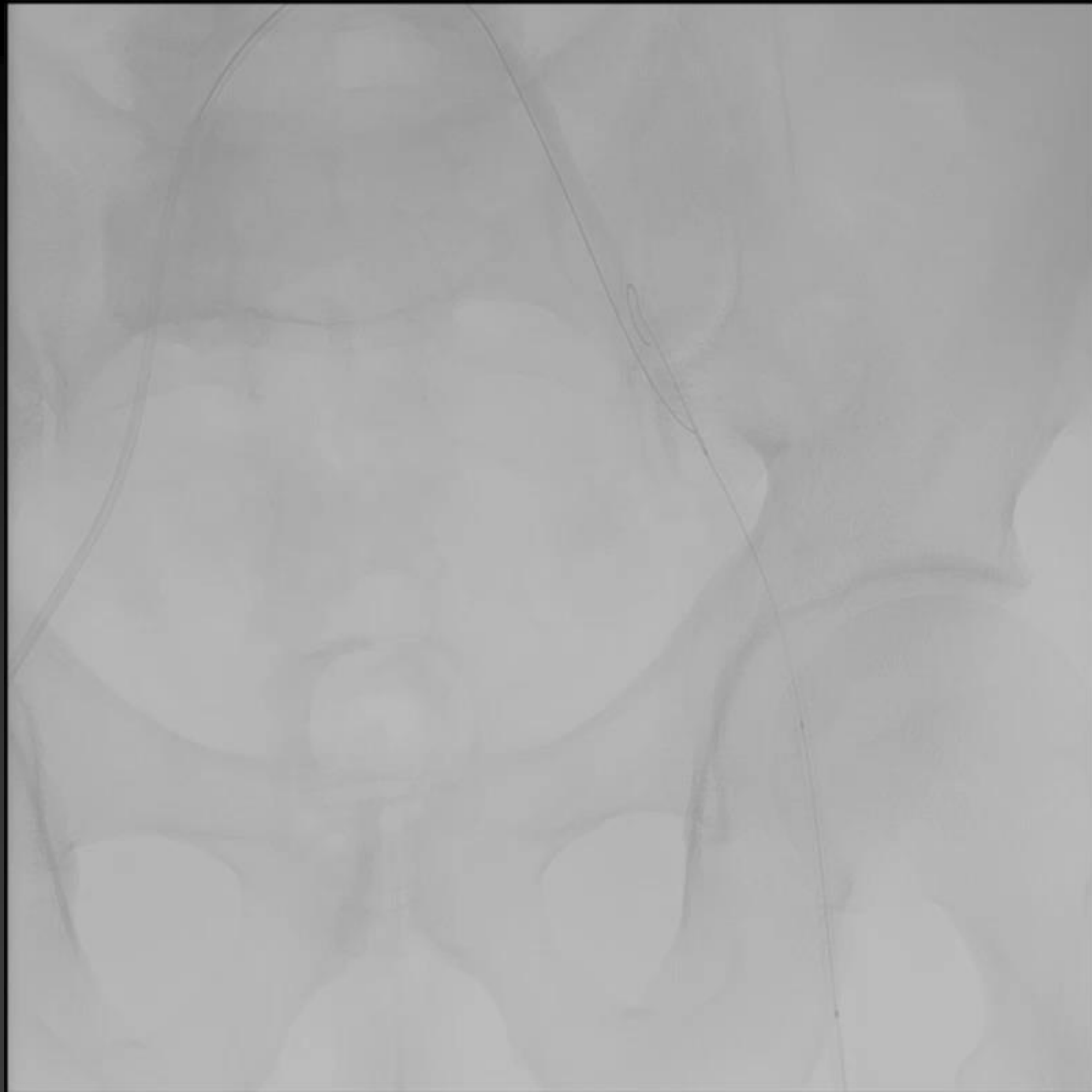
The True Path is Out There Somewhere...

- CXI support catheter 2.6Fr/90cm J TIP.
- Guidewire: Asahi Astato XS 30 0.018", 300cm.
- Subintimal tracking was found.



Which Route is the Right One? Neither.

- Antegrade: 6Fr. JR4 diagnostic catheter with guidewire Asahi Astato XS 30 0.018", 300cm.
- Retrograde: CXI support catheter 2.6Fr/90cm J TIP with guidewire Asahi Astato XS 30 0.018", 300cm.

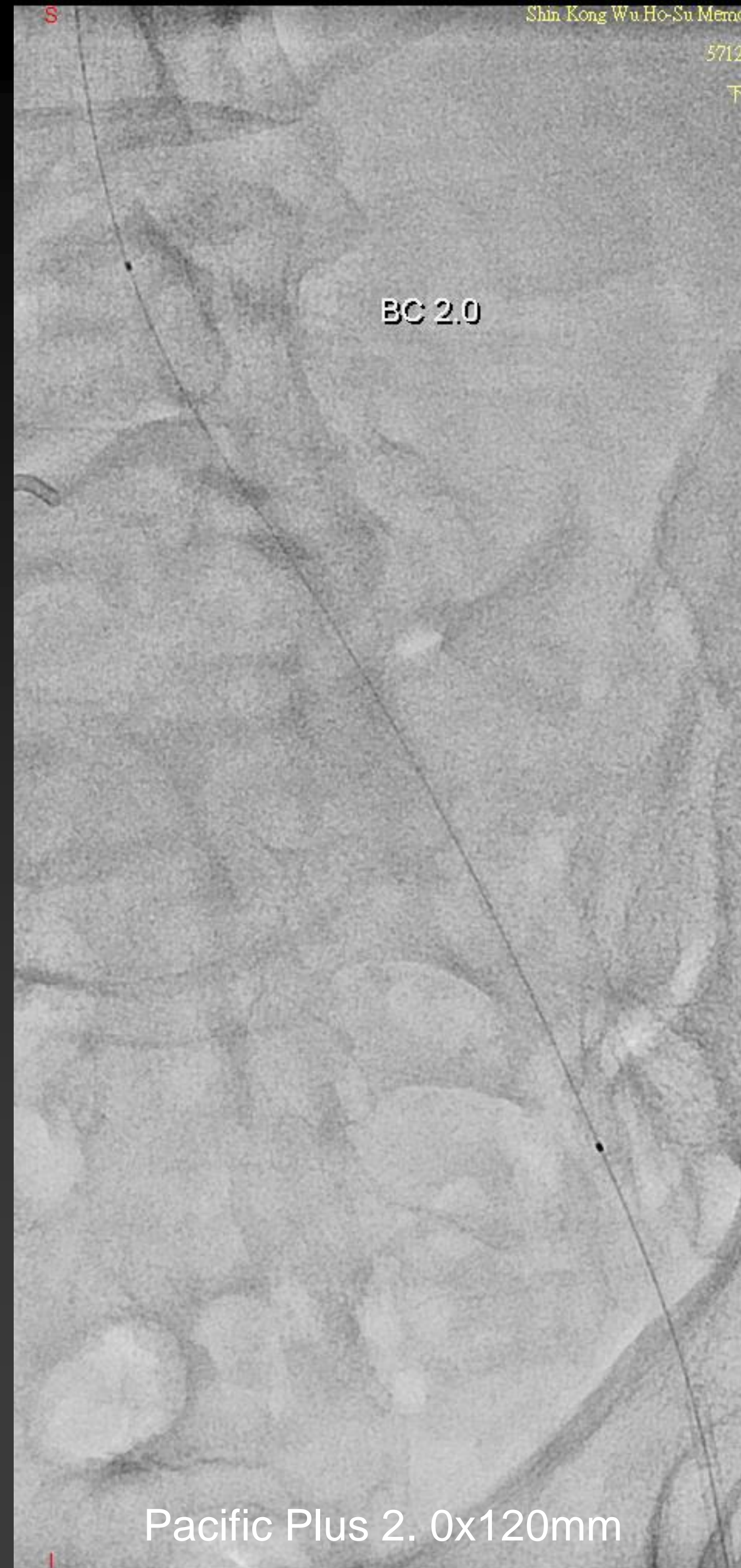


THE TRUTH IS OUT THERE.

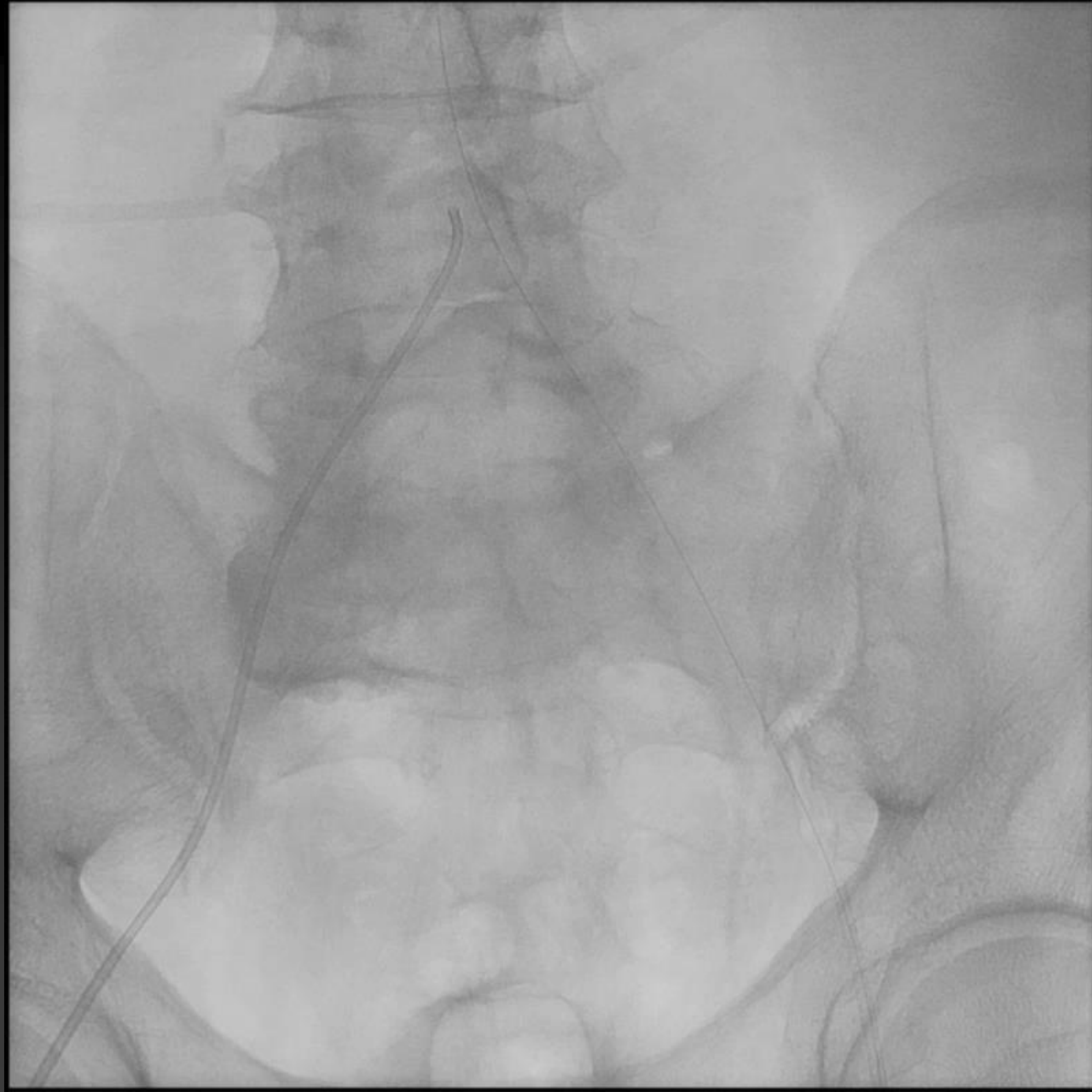
- Antegrade: 6Fr. JR4 diagnostic catheter.
- Retrograde: CXI support catheter 2.6Fr/90cm J TIP with guidewire Asahi Astatto XS 30 0.018", 300cm.
- The guidewire was advanced into terminal aorta smoothly after 30 minutes of attempt.



Gently Open
the Route using Super
Slow Inflation (1 atm. /
20 sec.)



No Extravasation Seen.
But the Flow of Left CIA went
through Subintimal Space.

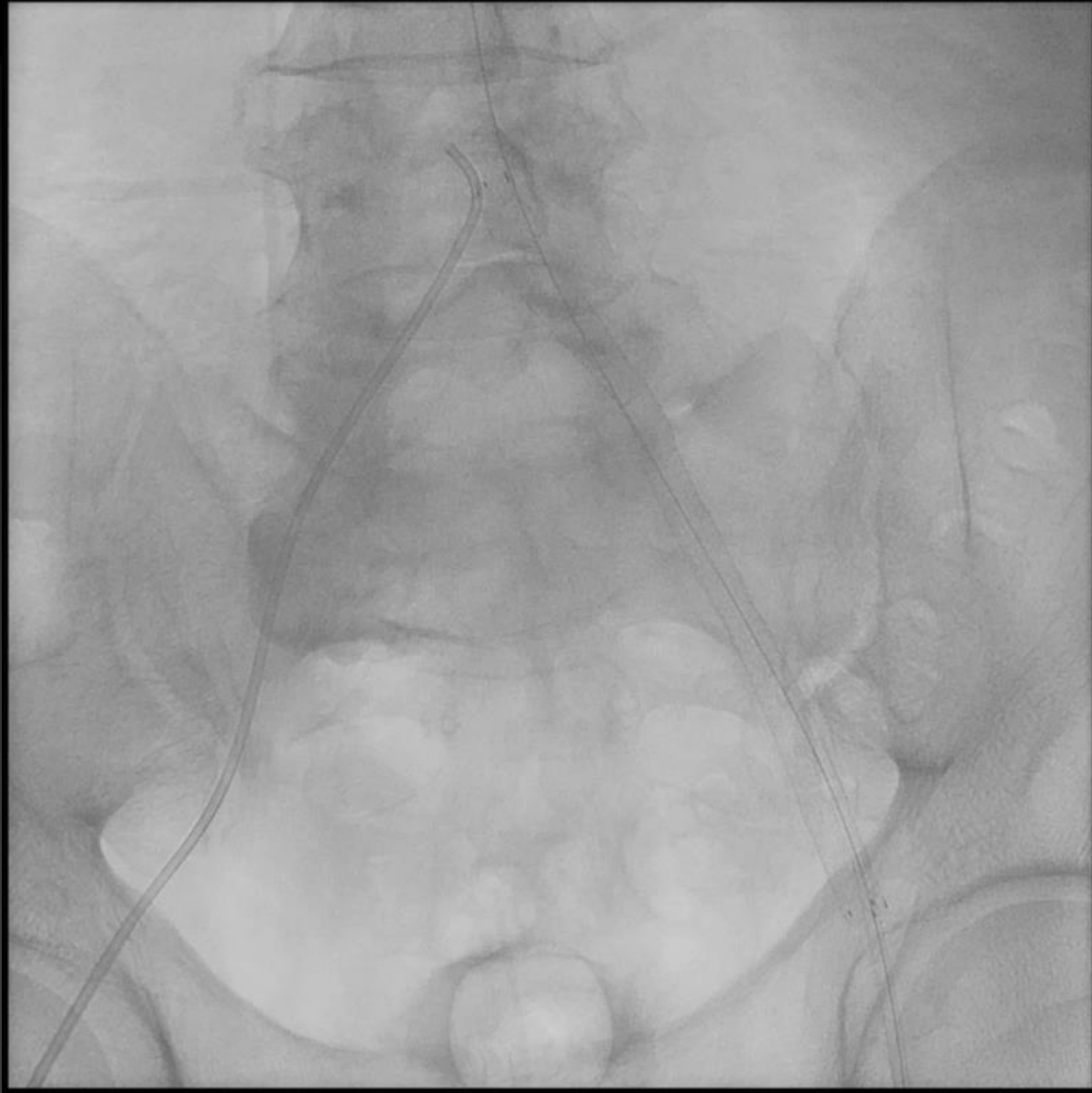


The Bridge Was Built.

- A VIABAHN 8 × 150mm (Heparin) endoprosthesis was put at CIA-EIA.
- A Mustang 8 x 40mm balloon was dilated in the endoprosthesis at 4-10 atm.

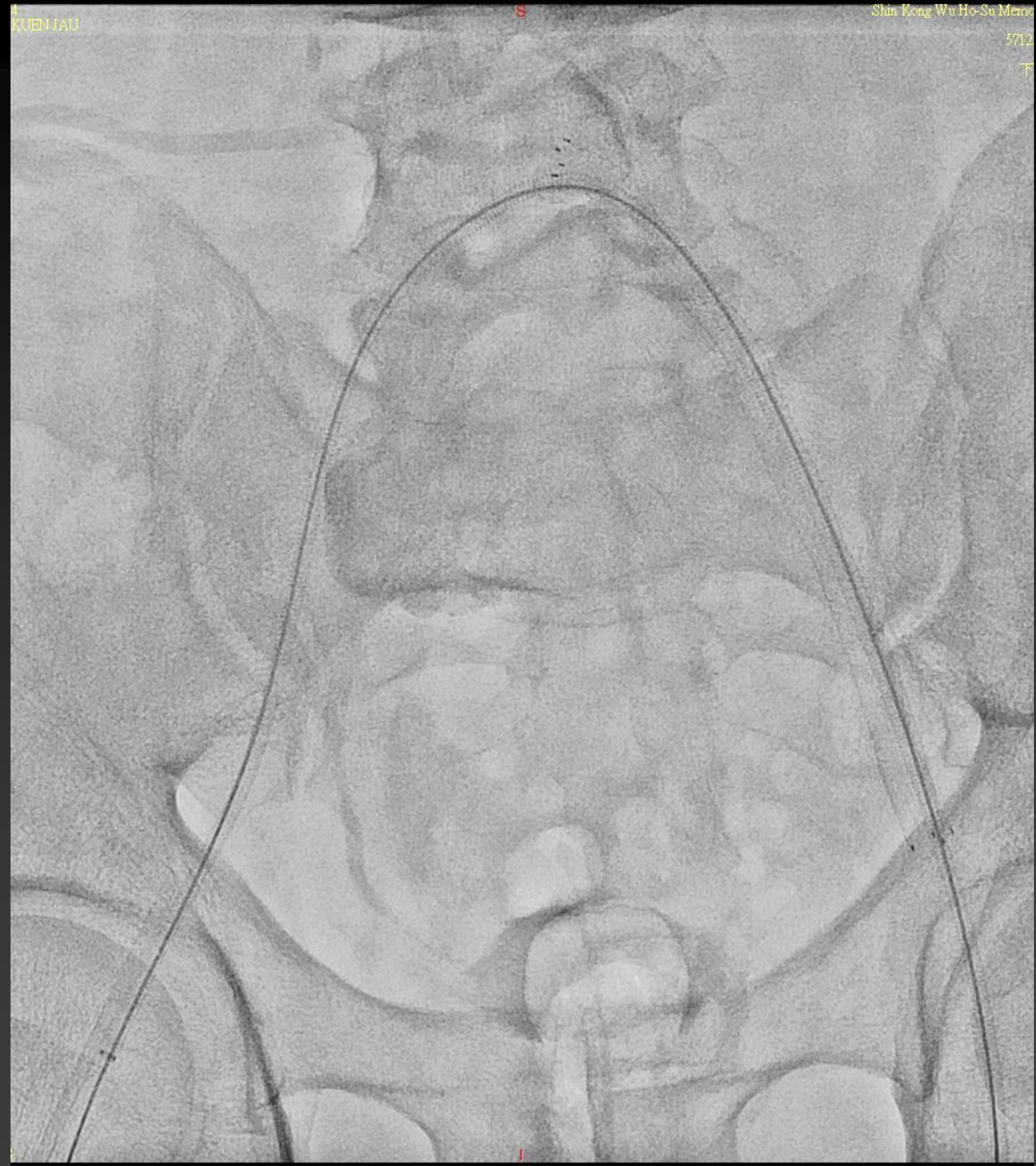


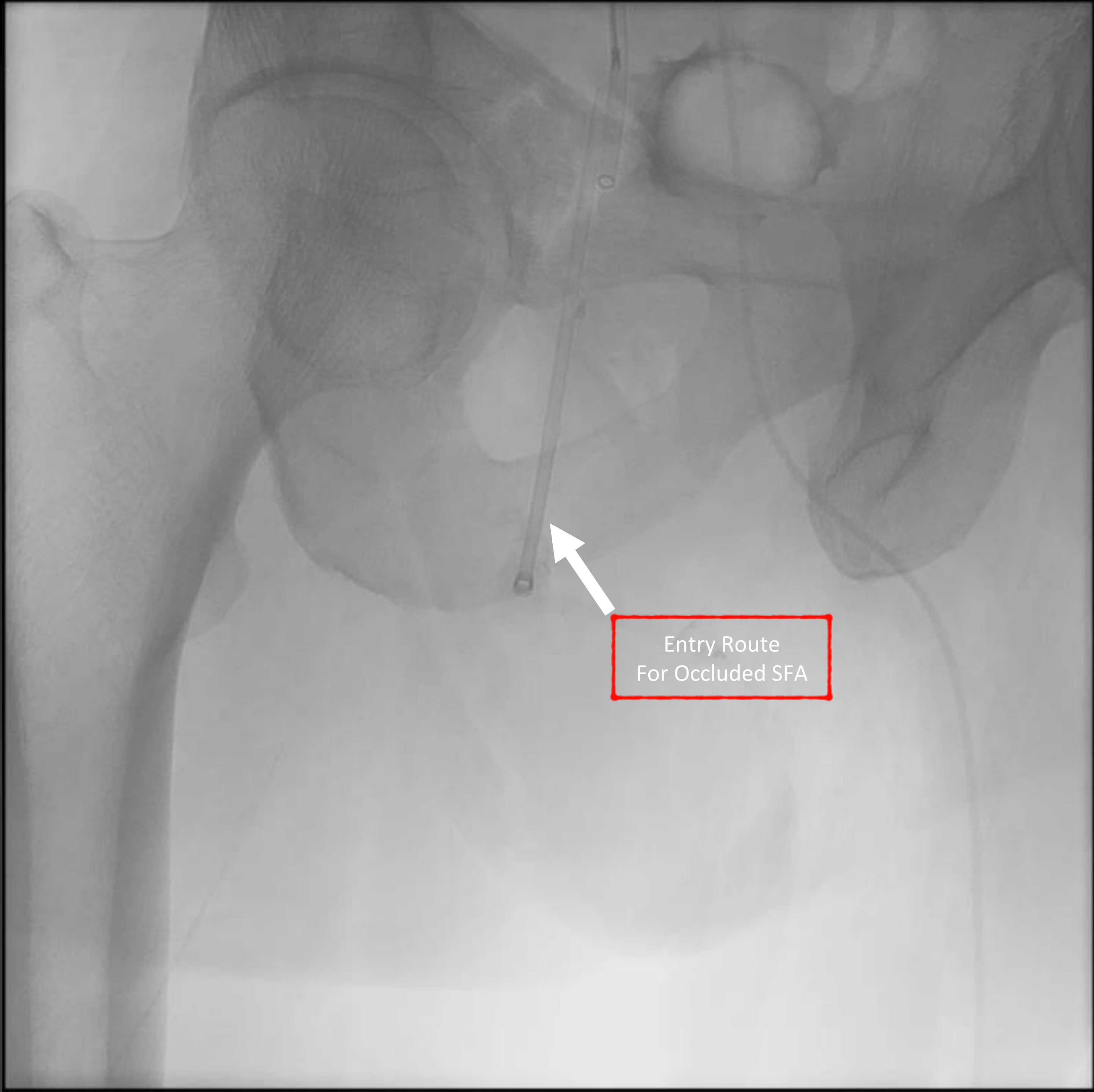
Viabahn 8.0 x 150mm Endoprosthesis



And So the Story goes...

- A 7Fr. 45cm Destination guiding sheath was put from left CFA through bilateral CIA-EIA to right CFA (6Fr. JR catheter within, “mother and child” technique).





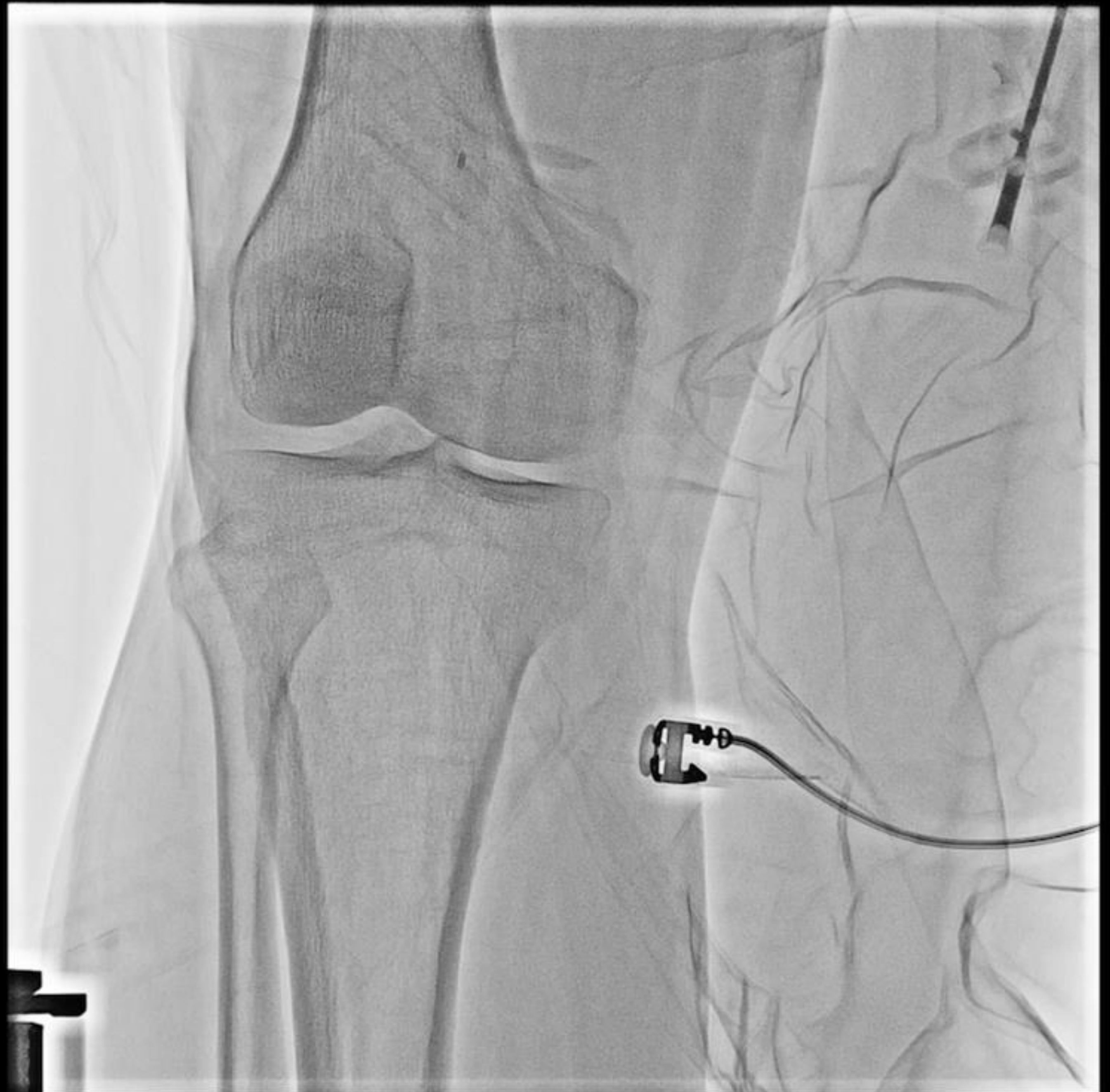
Entry Route
For Occluded SFA

The Tunnel was Drilled.

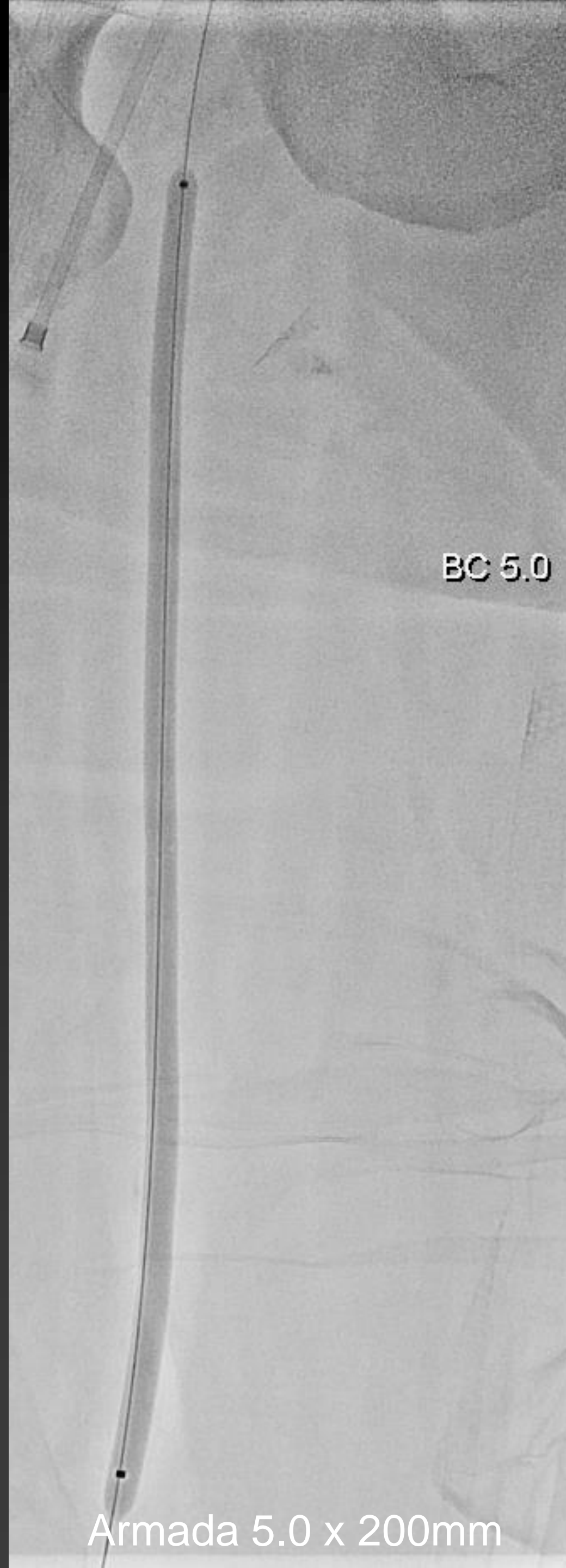
- Microcatheter: a CXI 4Fr. (0.035) 90cm J TIP catheter.
- Guidewire: Asahi Astato XS 30 0.018", 300cm.
- We passed through the occluded SFA within 5 minutes and advanced the system into ATA.



Good
Distal
Runoff.

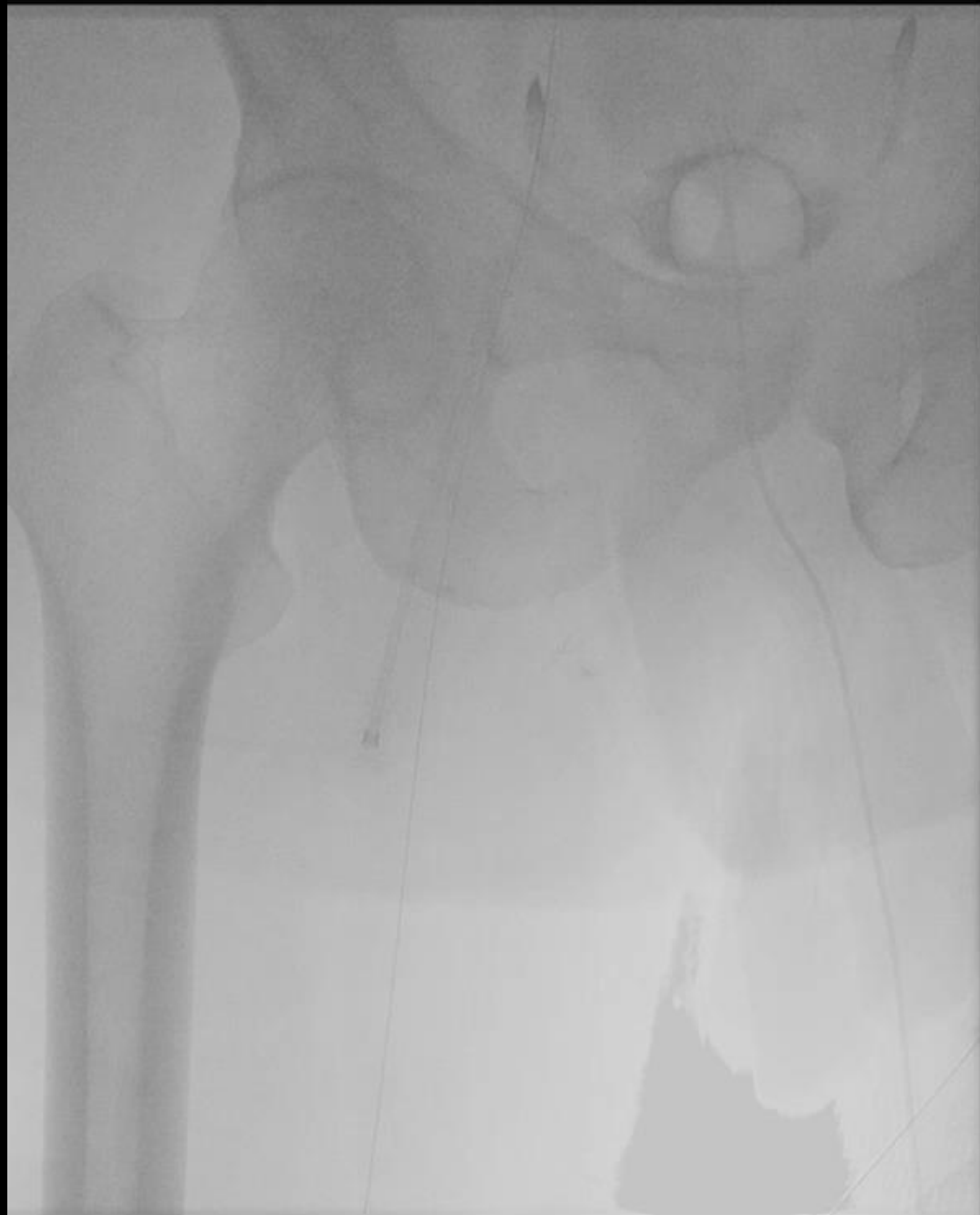
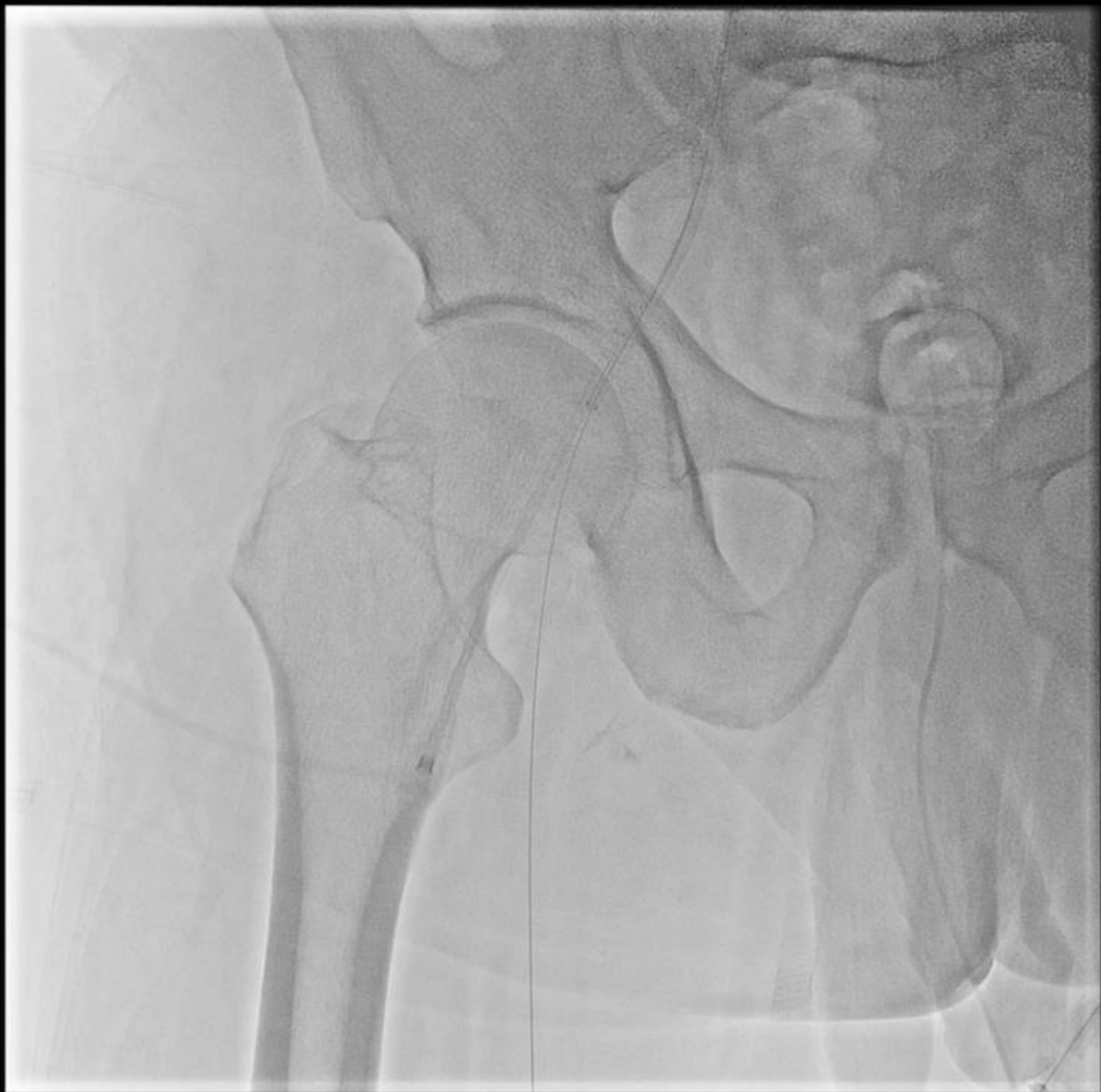


Gently Open
the Route using Super
Slow Inflation (1 atm. /
20 sec.)



The Tunnel was
Drilled.





The Tunnel was Drilled
and the Bridge was
secured.



Clinical outcome of endovascular therapy using a VIABAHN VBX-covered stent for complex aortoiliac artery disease: the AVOCADO II study

Yusuke Tomoi ¹, Mitsuyoshi Takahara ², Yoshimitsu Soga ³, Yosuke Hata ⁴, Osamu Iida ⁴, Terutoshi Yamaoka ⁵, Naoki Hayakawa ⁶, Masahiko Fujihara ⁷, Kenji Ando ³;
AVOCADO II Investigators

Affiliations + expand

PMID: 37247091 DOI: [10.1007/s00380-023-02274-5](https://doi.org/10.1007/s00380-023-02274-5)

What I've done: Self-expanded Viabahn followed by in-endoprothesis POBA.

The 1-year primary patency was 94.8% (95% confidence interval 91.0-98.6%), while the 1-year freedom rate from occlusion, CD-TLR, and surgical revision rates were 96.5% (93.5-99.5%), 94.7% (90.9-98.6%), and 97.8% (95.4-100%), respectively.

Randomized Controlled Trial

> Heart Vessels. 2022 Apr;37(4):568-573.

doi: 10.1007/s00380-021-01947-3. Epub 2021 Sep 23.

One-year results for Japanese patients in RANGER II SFA

Yoshimitsu Soga¹, Masahiko Fujihara², Yoshito Yamamoto³, Shigeru Nakamura⁴,
Osamu Iida⁵, Daizo Kawasaki⁶, Kazushi Urasawa⁷, Hiroshi Ando⁸, Shinsuke Mori⁹,
Kenji Suzuki¹⁰, Kazunori Horie¹¹, Juan Diaz-Cartelle¹², Amane Kozuki¹³

Kaplan-Meier estimates of primary patency were 89.3% and 72.0%, respectively, at 12 months (log-rank $p = 0.2134$). Japanese patients treated with Ranger DCB maintained a high patency rate through 12 months and a low re-intervention rate.

Efficacy of Super Slow Inflation as Lesion Preparation for Drug-Coated Balloons in Femoropopliteal Lesions

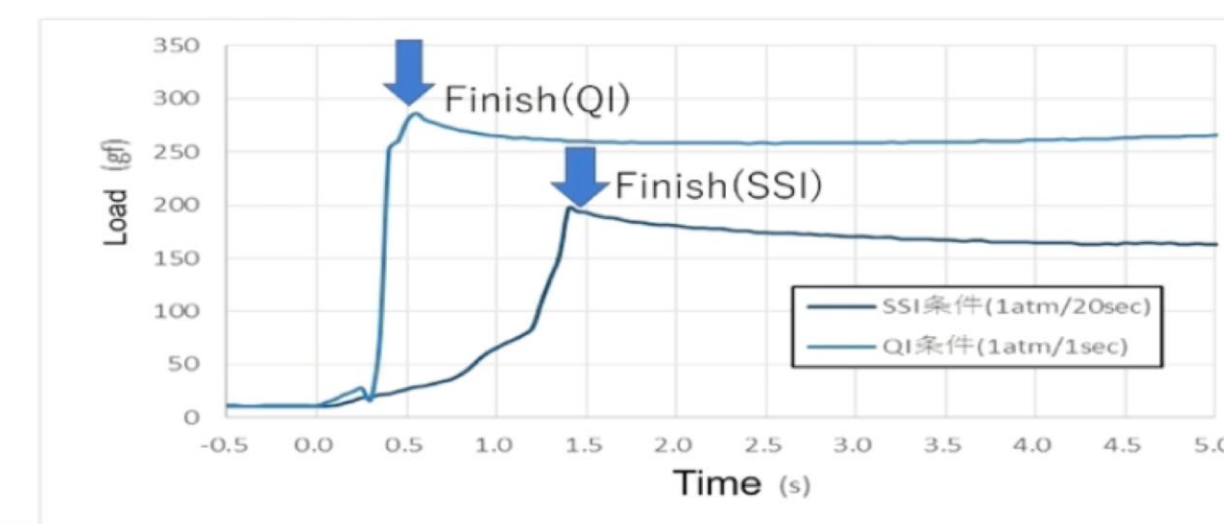
Makoto Sugihara¹, Kaori Mine¹, Makito Futami¹, Yuta Kato¹, Tadaaki Arimura¹, Masaya Yano¹, Yosuke Takamiya¹, Takashi Kuwano¹, Shin-Ichiro Miura^{1, 2}

Affiliations + expand

PMID: 33693195 PMCID: PMC7937501 DOI: 10.1253/circrep.CR-20-0095

•SSI(Super Slow Inflation)

The lesion may be expanded at lower load in SSI condition



VPは治療成功に現在最も重要なプロセスである (Debateより)
杉原 充

Japan Endovascular Treatment Conference 2020



In patients, the rate of severe vessel dissection was significantly lower in the SSI than non-SSI group (17.6% vs. 55.2%, respectively; $P < 0.001$). Multivariate regression analysis revealed that SSI was an independent factor preventing severe dissection (odds ratio 0.18; 95% confidence interval 0.06-0.53; $P = 0.002$).

Case Summary

- A 69 year-old diabetic man with CLTI (right 1st toe) was found to have a No-Stump Left CIA-EIA CTO and Right SFA CTO.
- Complex EVT was done and Viabahn endoprosthesis was put at left CIA-EIA; Ranger DCB was used at right SFA.
- Super slow inflation was useful to minimize the risk of unpredicted dissection and bail-out stent implantation.



1992-2022
週年慶
新傳30
健康 希望 幸福

Thank You for your attention.

宗旨

- 以病人為中心
- 以優質醫療服務回饋社會
- 培育優秀專業人才
- 創新醫學研究

願景

秉持「專業、熱忱、服務」的精神，提升全民的「健康、希望、幸福」，發展醫療特色，成為最受信賴的醫學中心。

目標

- 服務**
1. 注重病人安全與權利之友善就醫環境。
 2. 推動民眾健康管理及配合國家醫療政策，促進跨院際照護。
 3. 整合資源，提升服務層面，擴大遠距醫療及醫療服務國際化。

教學

1. 強化以全人照護為目標之員工在職教育。
2. 提升教學品質，推動多元師資培育，成為全國醫療人員首選之教學醫院。
3. 致力創新教學，推展國際合作與交流。

研究

1. 延攬優秀人才，充實研究設備，提升論文品質。
2. 結合學術與產業，推廣智能醫療及健康科技。

核心價值

醫療品質 · 社會公益 · 幸福企業

