WELCOME *To the*

2026 SYMPOSIUM

Stent Grafts in the Cannulation Segment

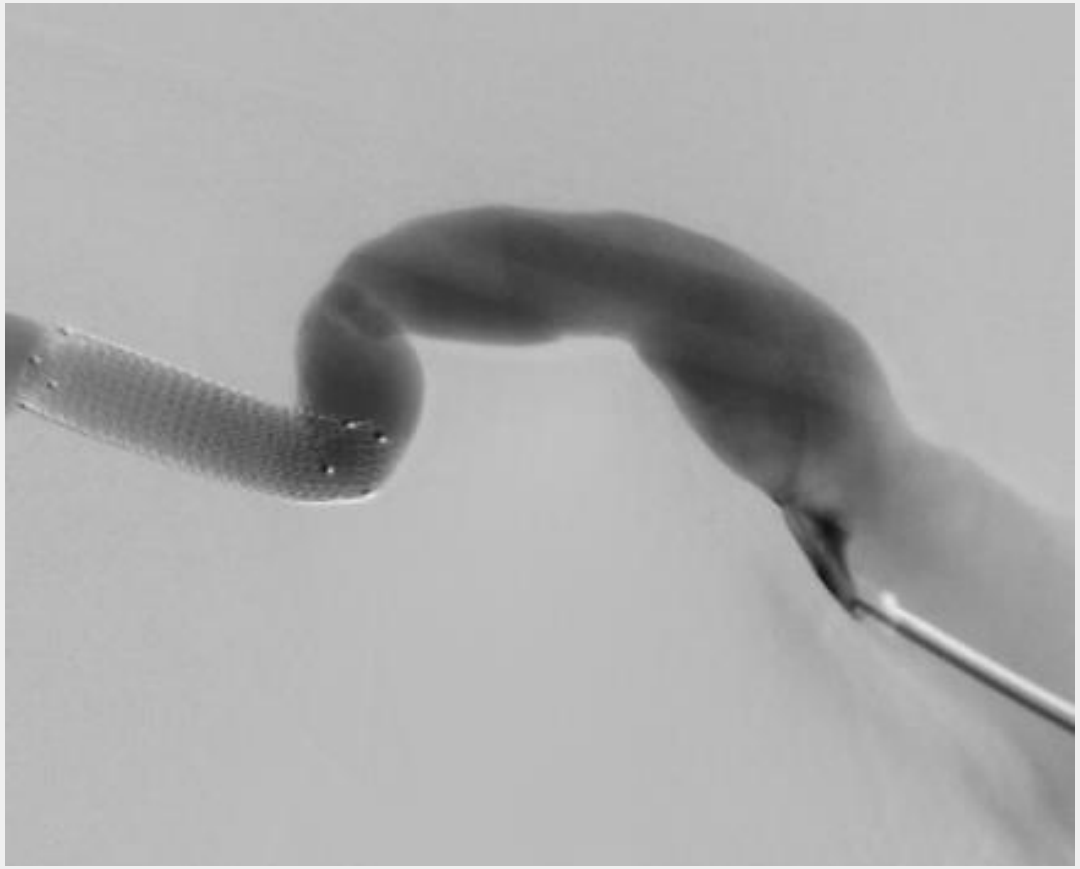
Sasha Ushinsky, MD
Washington University in Saint Louis

Disclosure

Medical Advisory Board: Boston Scientific

Ad Hoc Consulting: Cook Medical, Becton Dickinson, Angiodynamics, DeepSight Technology

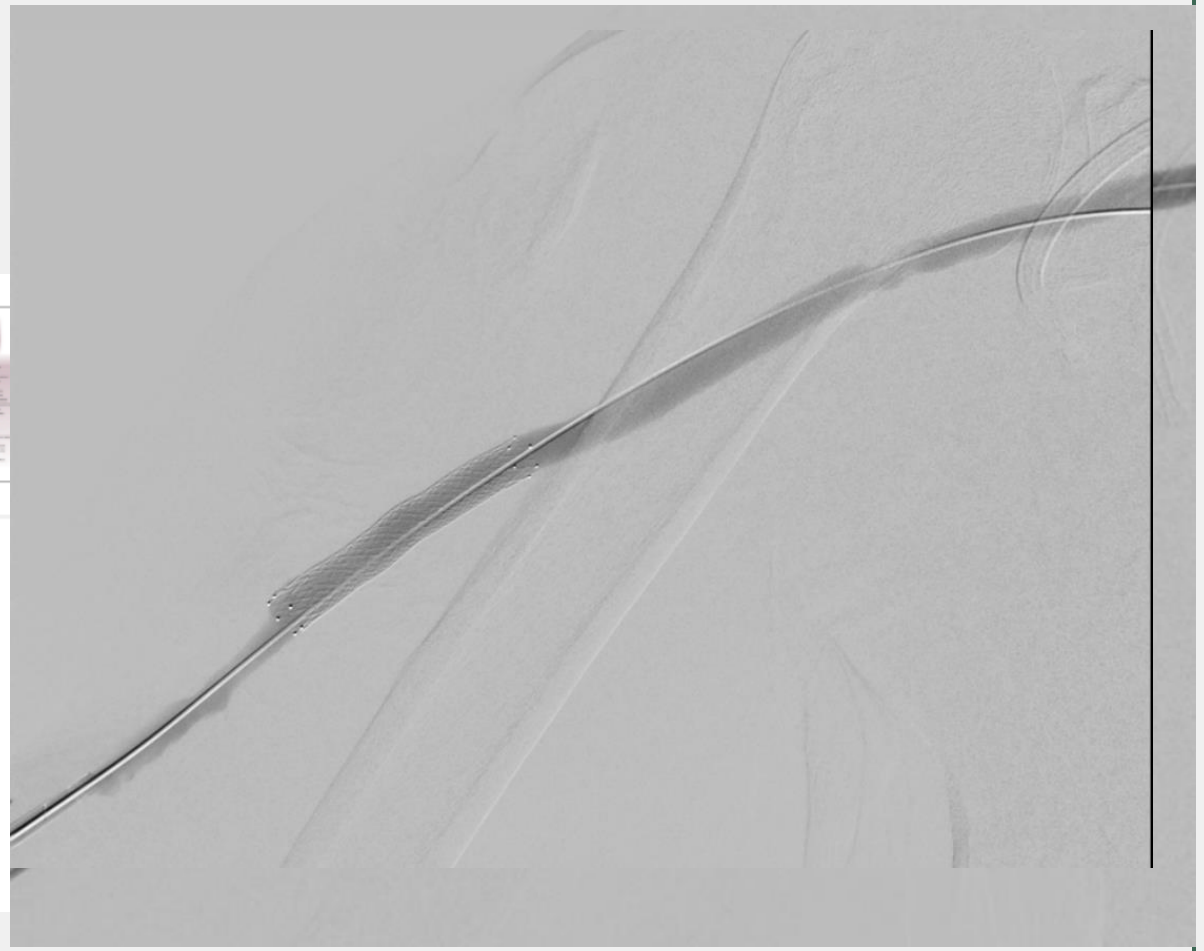
Stent Grafts - What did we think?



- KDOQI 2019 – Stent-Grafts
  - "Appropriate use avoids cannulation segments" (Guideline 15.9, 15.11)
- Fracture, cannulation difficulty, infection

Never use in the Cannulation Segment?

- Potential indications
  - Rupture
  - Pseudoaneurysm



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Volume 16, Issue 10, October 2005, Pages 1301-1307

Clinical Studies

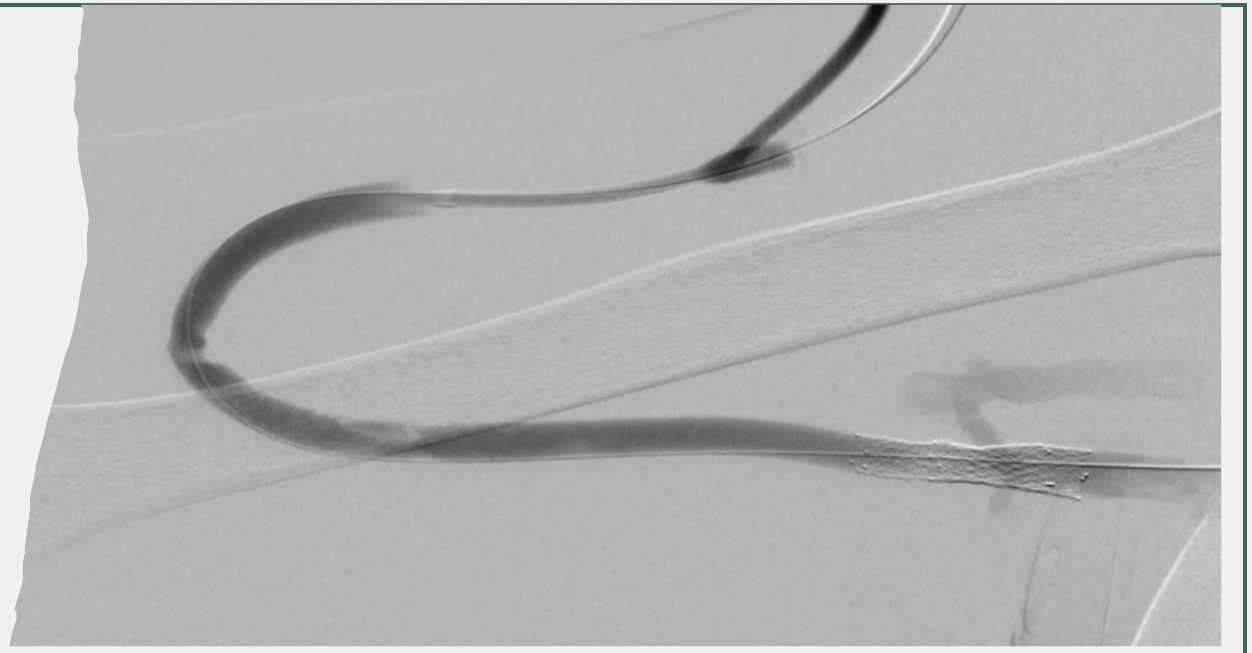
Use of Stent Grafts to Repair Hemodialysis Graft–related Pseudoaneurysms

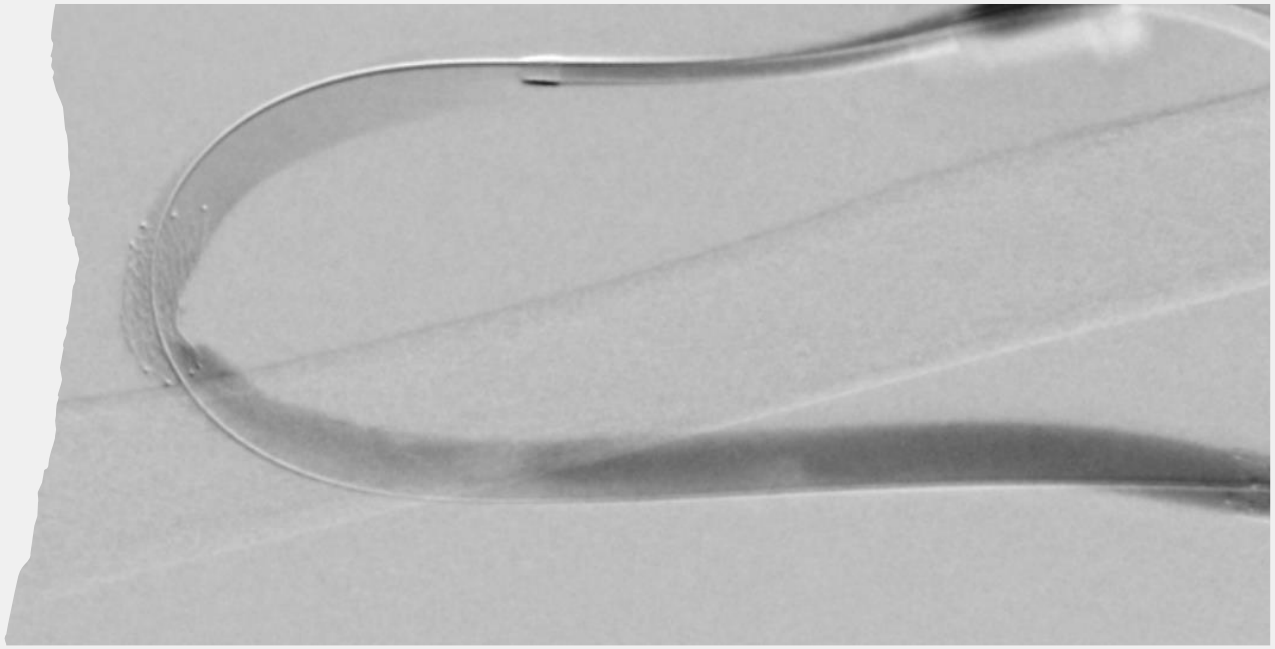
Thomas M. Vesely MD

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How about more elective indications?

- Refractory Stenosis
- Persistent thrombosis





Evolving Literature

Author	Subjects	SG	Outcomes
Aronhime et al. (2024)	40 Pts (26AVF, 14 AVG)	Covera SG (BD)	TL Primary Patency 89% at 6 months and 74% at 12 months. Access Secondary Patency 97% at 6, 12 mo. No fracture or infection
Drouven et al. (2022)	11 Pts (6 AVF, 5 AVG)	Viabahn (Gore)	Primary patency 40.9% at 6 months. Primary-assisted patency 79.5% at 12 months, secondary patency 80% at 24 months. No fracture. One AV graft infection
Wong et al (2016)	35 Pts (35 AVG)	Viabahn (Gore)	6-month and 12-month primary patency rates were 55 and 22%. secondary patency rates were 88.6%, and 78.6%. Infection (17.1%) and thrombosis (37.1%).

OK, Stent Graft Everyone!

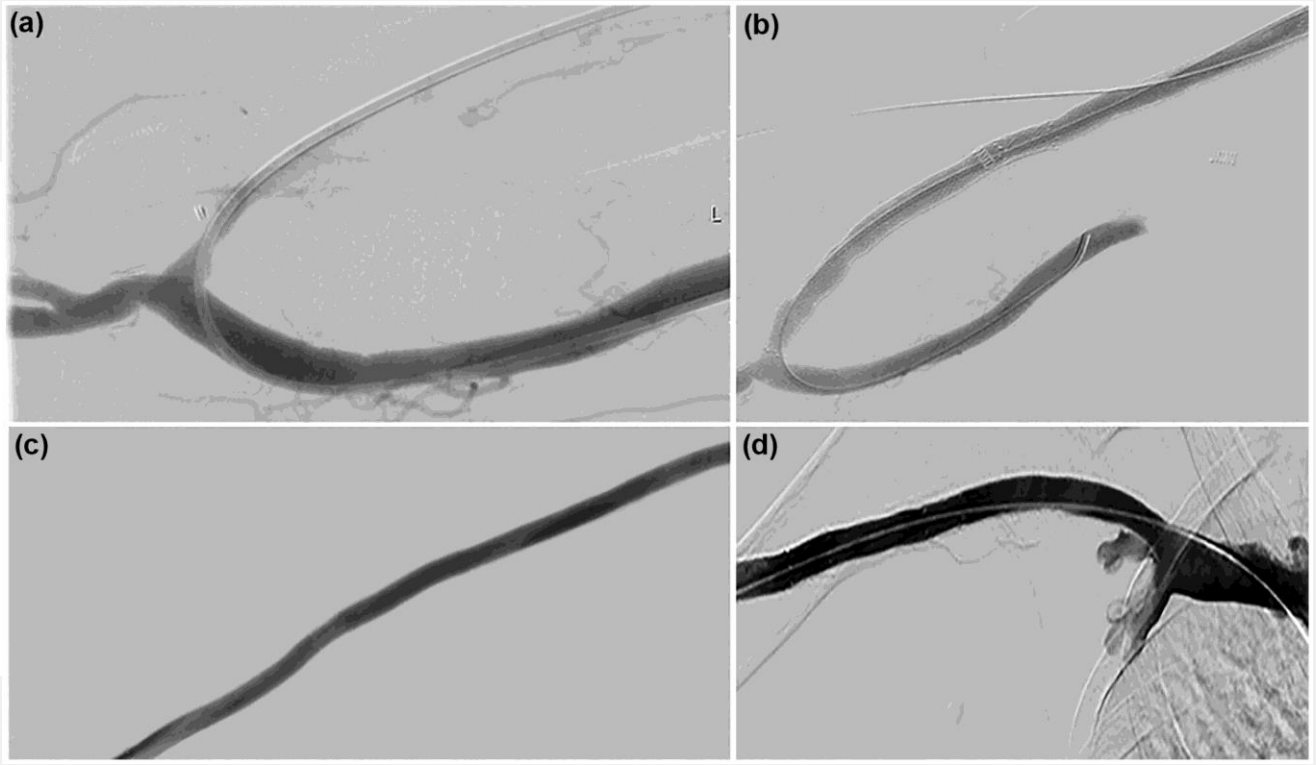
The Journal of Vascular Access
Volume 26, Issue 1, January 2025, Pages 144-148
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https://doi.org/10.1177/11297298231205006

Sage Journals

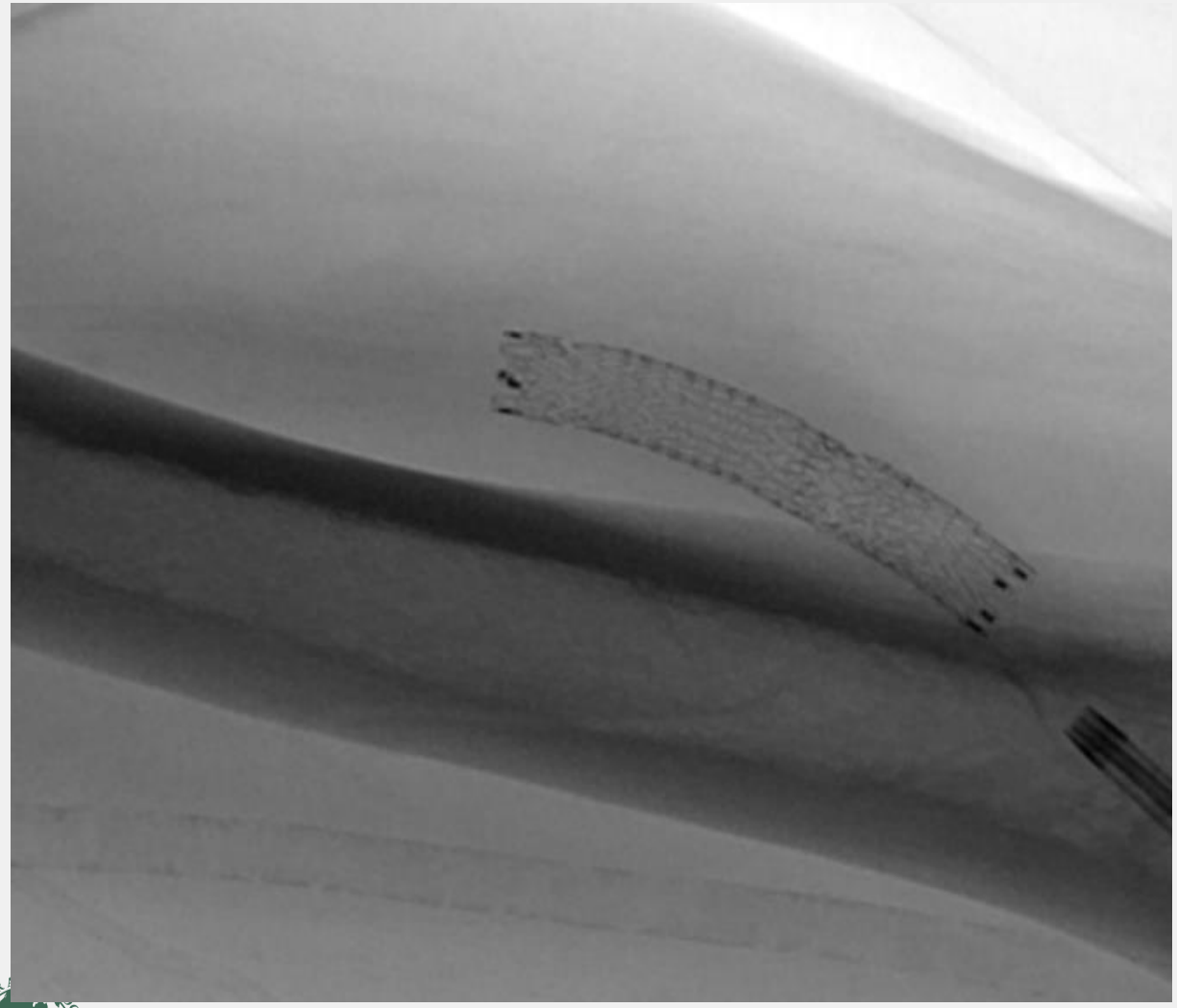
Original research articles

Complete stent graft relining of the hemodialysis access circuit for access salvage

Shimon Aronhime, Shmuel Balan, Alexei Cherniavsky, and Yaniv Avital

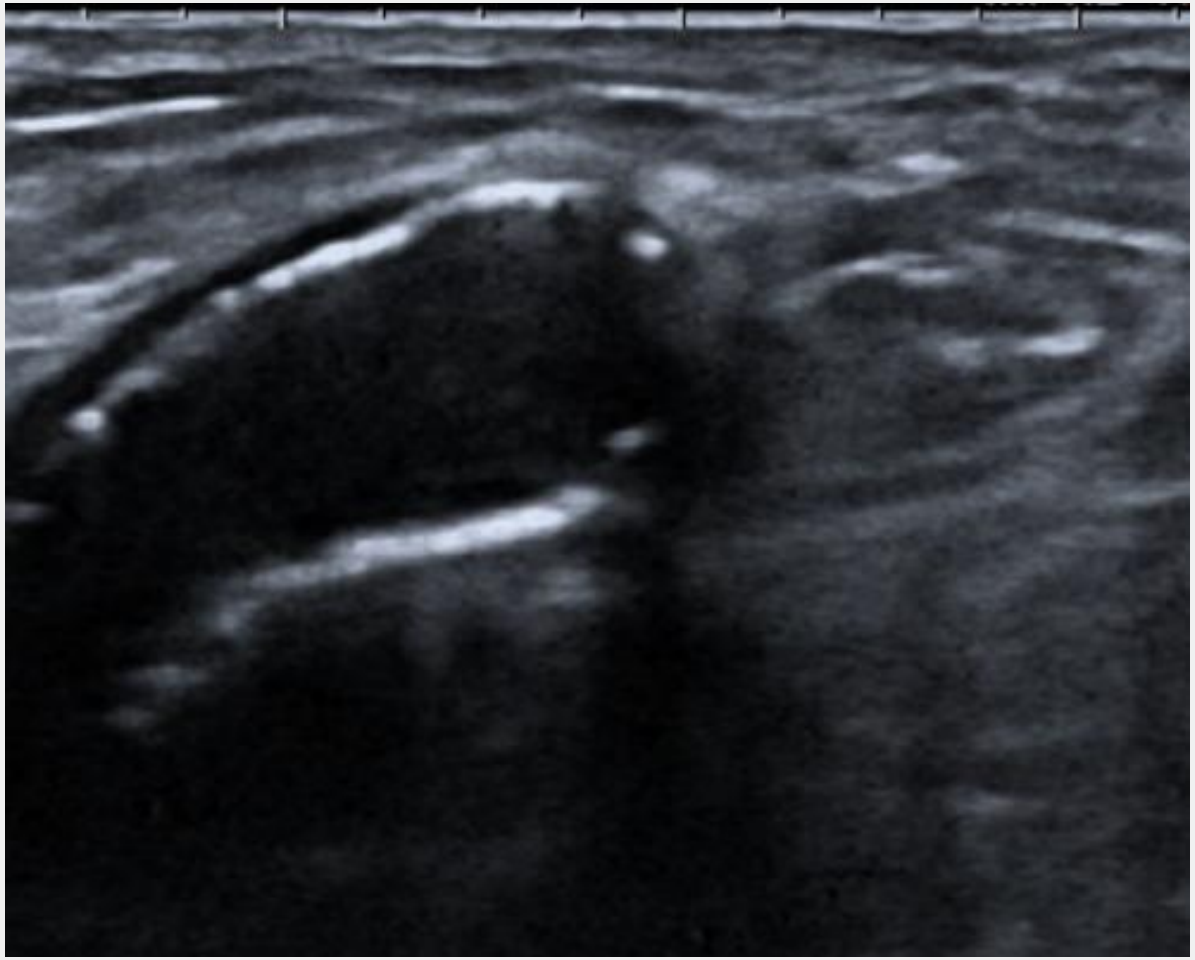


Risks to Access Site Stent Grafts



- Infection: Positive correlation with intragraft stenting and infection
- Cannulation Difficulty
  - Aronhime report non-palpable thrill and need to cannulate under ultrasound or with skin marking in some patients
- Fracture (with prolonged cannulation?)
- Migration

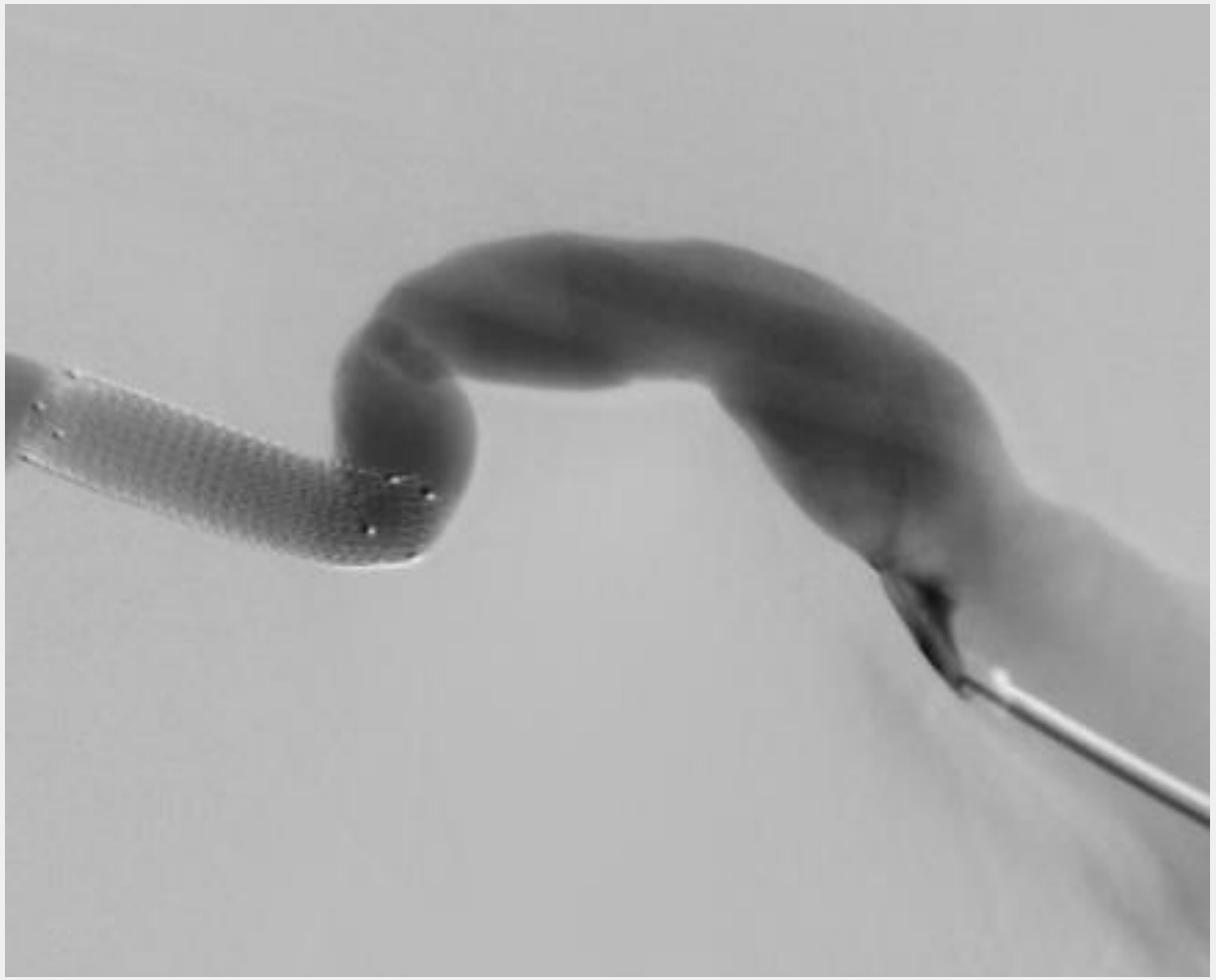
Cannulation Considerations



- Loss of thrill in the SG segment
- Palpation of the SG
- US guided access
  - Through struts?

Conclusions (mine)

- SG of the cannulation segment should not be anathema
- Indication for SG should be considered against availability and candidacy of alternatives
- Long term patency is not well studied



Citation

Kim CY, Guevara CJ, Engstrom BI, Gage SM, O'Brien PJ, Miller MJ, Suhocki PV, Lawson JH, Smith TP. Analysis of infection risk following covered stent exclusion of pseudoaneurysms in prosthetic arteriovenous hemodialysis access grafts. J Vasc Interv Radiol. 2012 Jan;23(1):69-74. doi: 10.1016/j.jvir.2011.09.003. Epub 2011 Oct 22. PMID: 22019181.

Boktor, Ivana, et al. "The case against stenting the cannulation zone of dialysis access." *Radiology Case Reports* 19.12 (2024): 5893-5895.

Aronhime, Shimon, et al. "Patency and durability of stent grafts placed in the dialysis circuit cannulation zone." *Journal of Vascular and Interventional Radiology* 35.1 (2024): 86-91.

Drouven JW, Bruin C de, van Roon, PhD AM, et al. Use of Covered Stents in Cannulation Sites as a Last Option to Salvage Failing Vascular Access. Journal of Endovascular Therapy. 2024;31(1):98-103. doi:10.1177/1526602821116745

Wong, W. K., et al. "Endovascular stent graft repair is an effective and safe alternative therapy for arteriovenous graft pseudoaneurysms." *European Journal of Vascular and Endovascular Surgery* 52.5 (2016): 682-688.

Bent, Clare L., et al. "Effectiveness of stent-graft placement for salvage of dysfunctional arteriovenous hemodialysis fistulas." *Journal of Vascular and Interventional Radiology* 21.4 (2010): 496-502.