

Effectiveness of stent-grafts for the treatment of central venous disease in haemodialysis patients with functioning AV fistulas



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LINC 2019

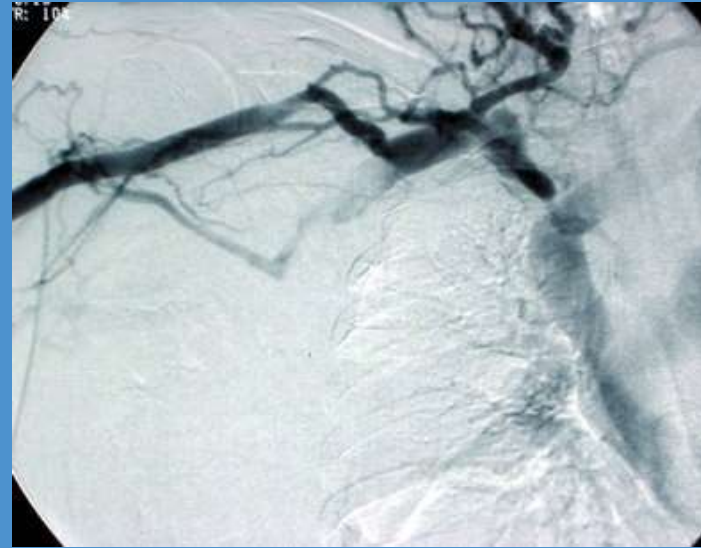


Relevant Disclosures

WL Gore – Honorarium

BD - Honorarium

Central Venous Occlusion / Stenosis



- Arm oedema
- Collaterals
- Bleeding
- High Venous Pressure
- Re-circulation

Treatment options for Symptomatic CV Disease

Endovascular options

- PTA

- Bare metal Stents

- Stent Grafts

Surgical options

- Reconstruction

- Ligation

- Inflow reduction

Endovascular options

PTA and / or stent

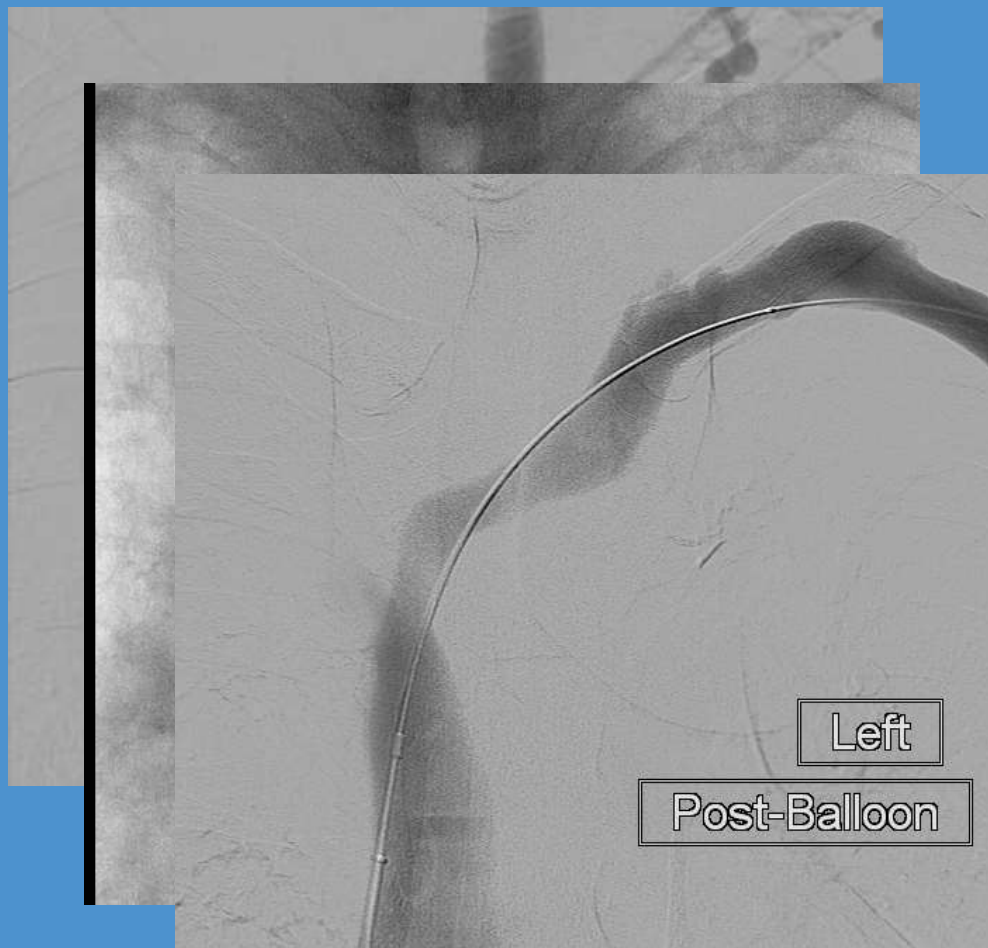
PTA

Technical success 70-90%

6 months (23 - 55%), 12 months (12 - 53%)

Bare metal stent

6 months (42 - 89%), 12 months (14 - 73%)



Higher rates of elastic recoil in the central veins (>50%)

More likely to require a stent

Stent-Grafts

Smooth muscle cell infiltration less likely

Barrier between thrombogenic vessel wall and blood flow

Lower rates of intimal hyperplasia



ORIGINAL ARTICLE

Stent Graft versus Balloon Angioplasty for Failing Dialysis-Access Grafts

Ziv J. Haskal, M.D., Scott Trerotola, M.D., Bart Dolmatch, M.D., Earl Schuman, M.D.,
Sanford Altman, M.D., Samuel Mietling, M.D., Scott Berman, M.D.,
Gordon McLennan, M.D., Clayton Trimmer, D.O., John Ross, M.D.,
and Thomas Vesely, M.D.



Balloon angioplasty versus Viabahn stent graft for treatment of failing or thrombosed prosthetic hemodialysis grafts

Thomas Vesely, MD,^a William DaVanzo, MD,^b Terry Behrend, MD,^c Amy Dwyer, MD,^d and
John Aruny, MD,^e *Saint Louis, Mo; St. Simons Island, Ga; San Diego, Calif; Louisville, Ky; and New Haven, Conn*

Central Veins and Stent-Grafts

	n =	Technical Success	Primary Patency 6, 12, 24 months	Primary Assisted Patency 6, 12, 24 months
Anaya-Ayala JE et al J Vasc Surg 2011 (Viabahn)	25	100%	-, 56%, -, -	-, 86%, -, -
Kundu S et al CVIR 2011 (Fluency)	14	100%	100%, -, -, -	-
Jones RG et al JVIR 2011 (Viabahn)	30	100%	81%, 67%, 45%	100%, 80%, 75%
Verstandig AG et al JVIR 2013 (Viabahn and Fluency)	52	100%	60%, 40%, 28%,	96%, 94%, 85%
Quaretti P et al Vasc Endovascular Surg 2016 (Fluency, Viabahn, Jostent)	20		100%, 100%, 84%	

A Prospective, Randomized Study of an Expanded Polytetrafluoroethylene Stent Graft versus Balloon Angioplasty for In-Stent Restenosis in Arteriovenous Grafts and Fistulae: Two-Year Results of the RESCUE Study

Abigail Falk, MD, Ivan D. Maya, MD, and Alexander S. Yevzlin, MD, for the RESCUE Investigators



Gore Viabahn

275 patients SG (Fluency) vs PTA

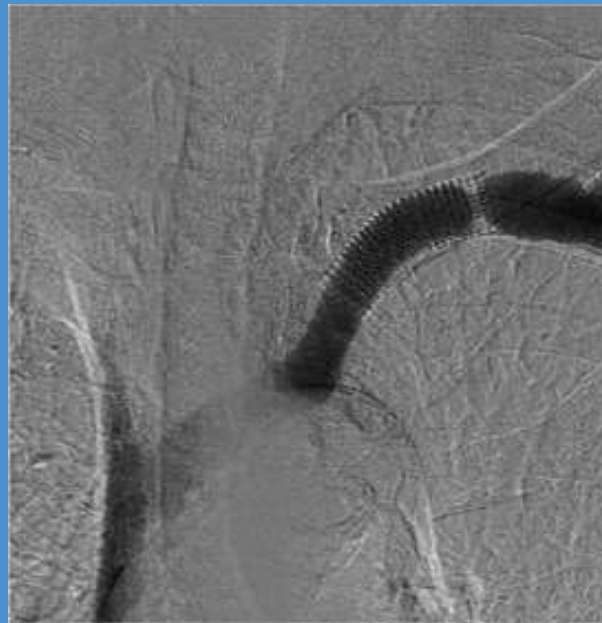
PP 6mnths 66% & 12%($p < 0.001$)

Central Vein:

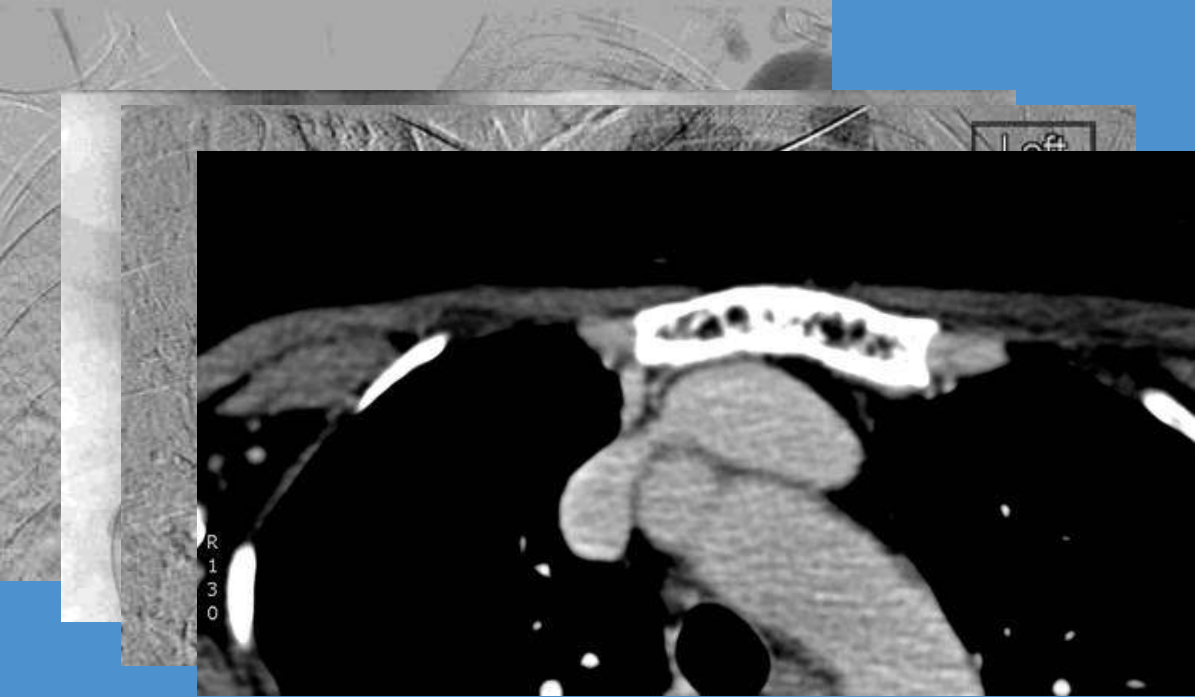
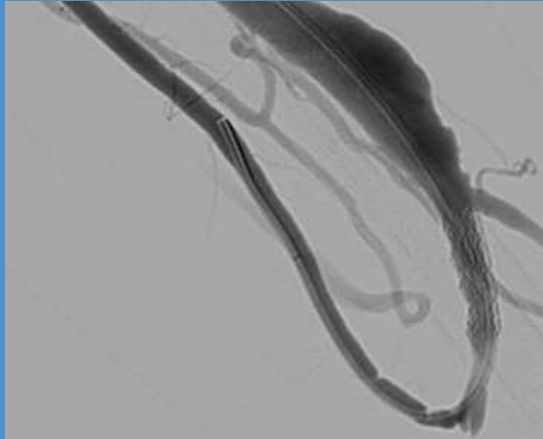
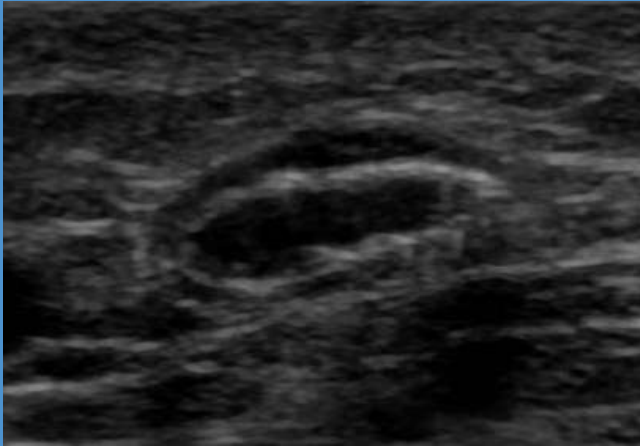
41 SG 55 PTA

PP 6mnths 63% & 4% ($p < 0.001$)

Edge Stenosis



Self-expanding vs Balloon-expandable



Summary

Stent-Grafts offer improved patency over metal stents/PTA particularly with in-stent stenosis (RESCUE RCT)

Little evidence for continued use of Bare Metal Stents in TVCO

Only treat symptomatic lesions

Covering of contralateral dominant veins not advised

Edge stenosis continues to be problematic

Thank you

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