WELCOME *To the*

2026 SYMPOSIUM

One-year Reintervention Outcomes Following Use of a Cell-Impermeable Endoprosthesis vs. Angioplasty for De Novo vs. Restenotic Lesions

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Disclosures

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Background

- A cell-impermeable endoprosthesis (CIE)[1-4] was recently developed to help restore and extend functional patency within the peripheral venous outflow circuit of hemodialysis patients who experience obstructions in their arteriovenous fistula (AVF)

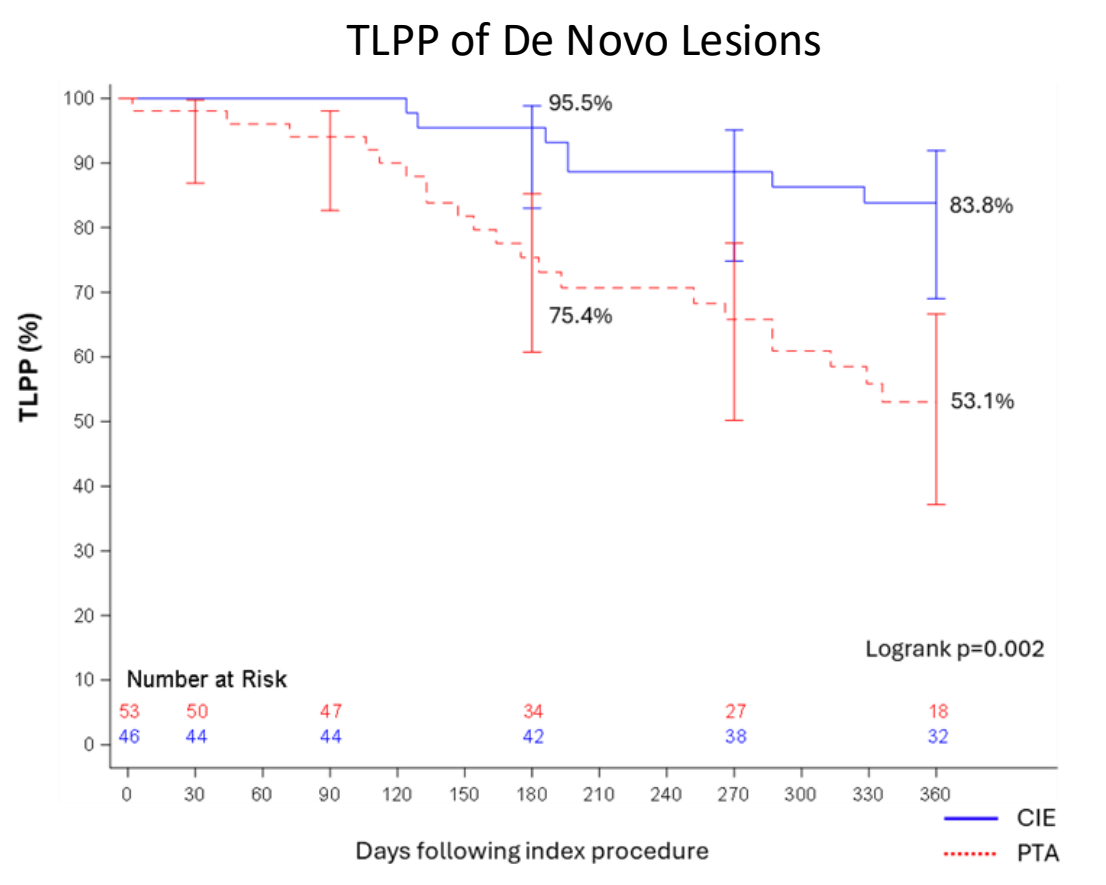
- However, evidence regarding the performance of the CIE vs. percutaneous transluminal angioplasty (PTA) for treatment of de novo and restenotic lesions is needed
  - This post-hoc analysis from the randomized arm of the WAVE trial addresses this need

[1] Gilbert et al., 2021. *Cardiovasc Intervent Radiol*. doi: 10.1007/s00270-021-02953-8; [2] Razavi et al., 2025. *Kidney Int*. doi: 10.1016/j.kint.2025.01.006; [3] Razavi et al., 2026. *J Vasc Interv Radiol.* doi: 10.1016/j.jvir.2026.108593; [4] Razavi et al., 2026. *J Vasc Interv Radiol.* doi: 10.1016/j.jvir.2026.108594

Methods

- Post-hoc analysis from a prospective, multicenter study (WAVE trial) conducted across 43 international centers
- In the randomized arm of the trial, patients with obstructions in their AVF were randomized 1:1 to treatment with the CIE (n=122) or PTA (n=123)
- TLPP and ACPP of patients treated with the CIE or PTA with de novo or restenotic lesions were compared at 6 and 12 months post-index procedure
  - TLPP: freedom from clinically-driven target lesion revascularization or thrombosis
  - ACPP: the time to loss of primary patency of the entire access circuit, specifically, the time from the index procedure to any venous outflow circuit re-intervention, access thrombosis, or access abandonment

Results

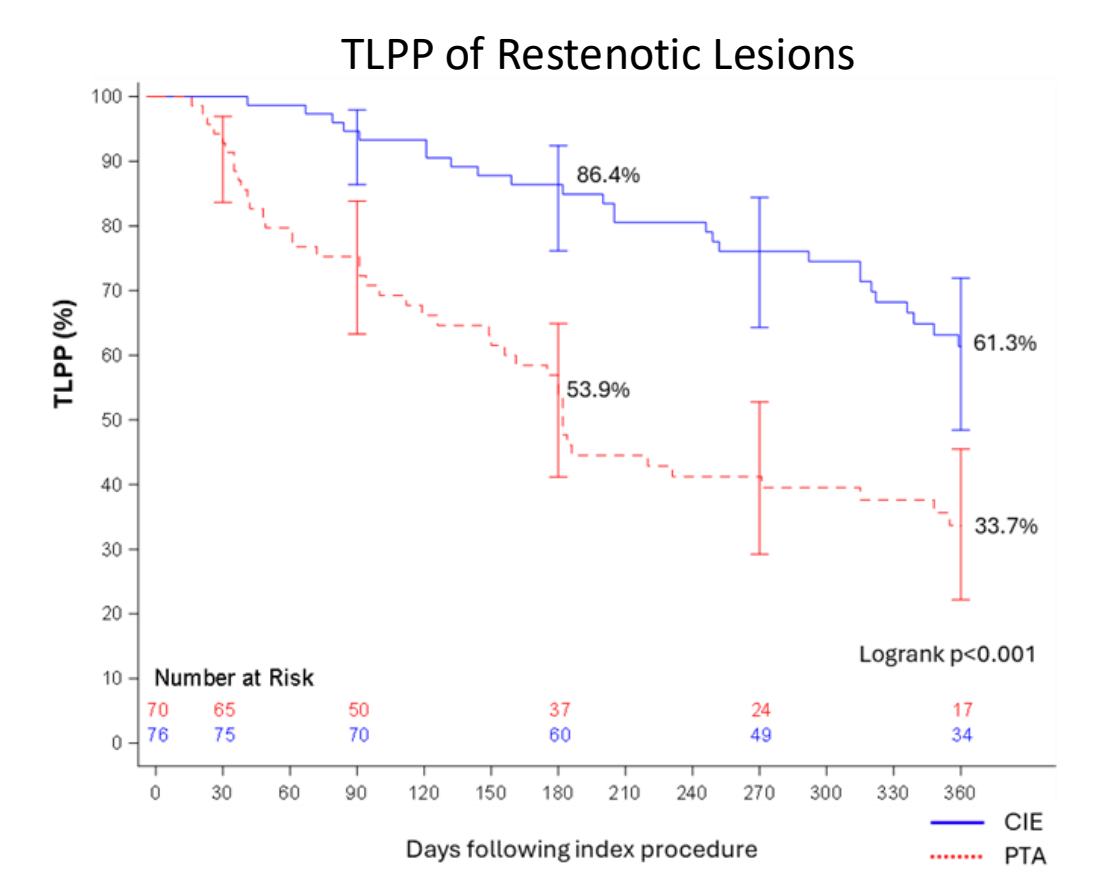


Mean number ±SD (N) of target lesions reinterventions to maintain target lesions patency

	CIE (N=48)	PTA (N=48)	p-value
6 months	0.047 ± 0.213 (43)	0.27 ± 0.49 (48)	0.007
12 months	0.17 ± 0.38 (42)	0.74 ± 0.93 (43)	<0.001

- The CIE was associated with significantly higher TLPP vs. PTA
- The mean number of target lesion reinterventions was significantly lower for CIE-treated patients vs. PTA-treated patients with de novo lesions

Results

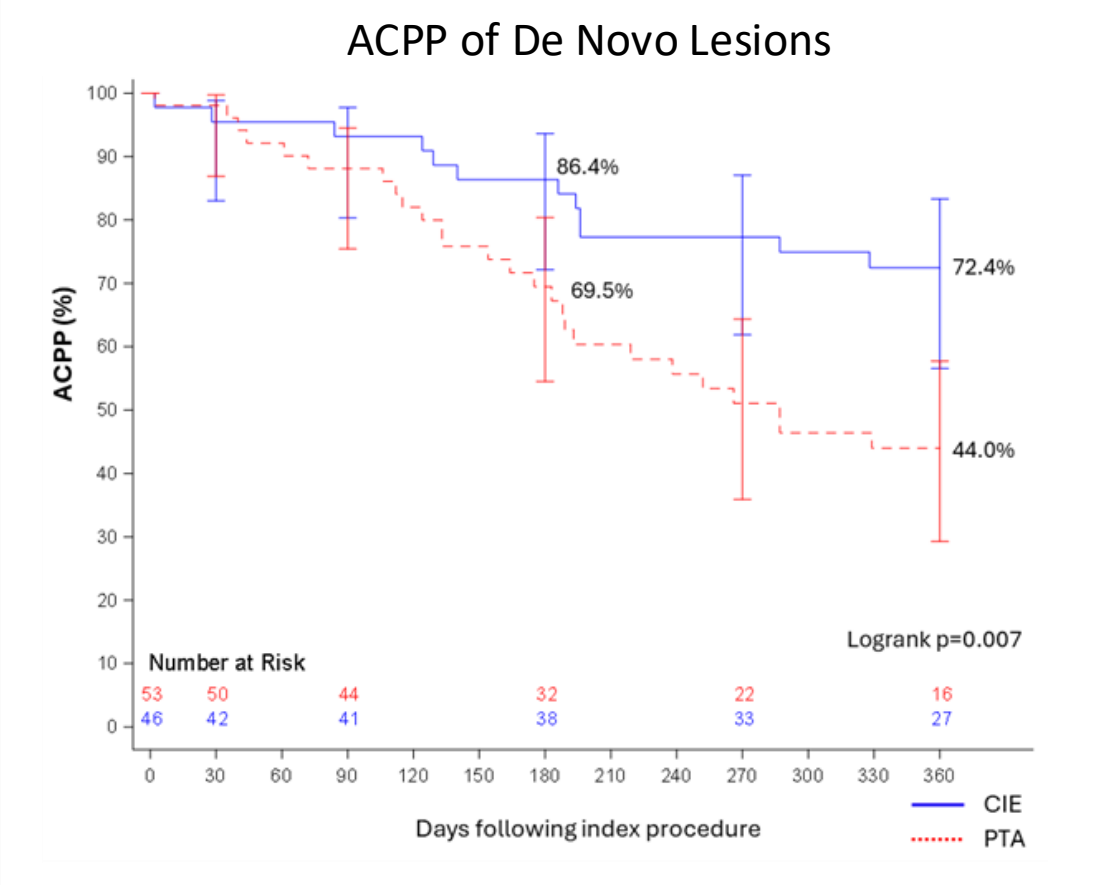


Mean number ±SD (N) of target lesions reinterventions to maintain target lesions patency

	CIE (N=48)	PTA (N=48)	p-value
6 months	0.26 ± 0.60 (72)	0.62 ± 0.72 (66)	<0.001
12 months	0.71 ± 1.09 (66)	1.31 ± 1.26 (61)	<0.001

- The CIE was associated with significantly higher TLPP vs. PTA
- The mean number of target lesion reinterventions was significantly lower for CIE-treated patients vs. PTA-treated patients with restenotic lesions

Results

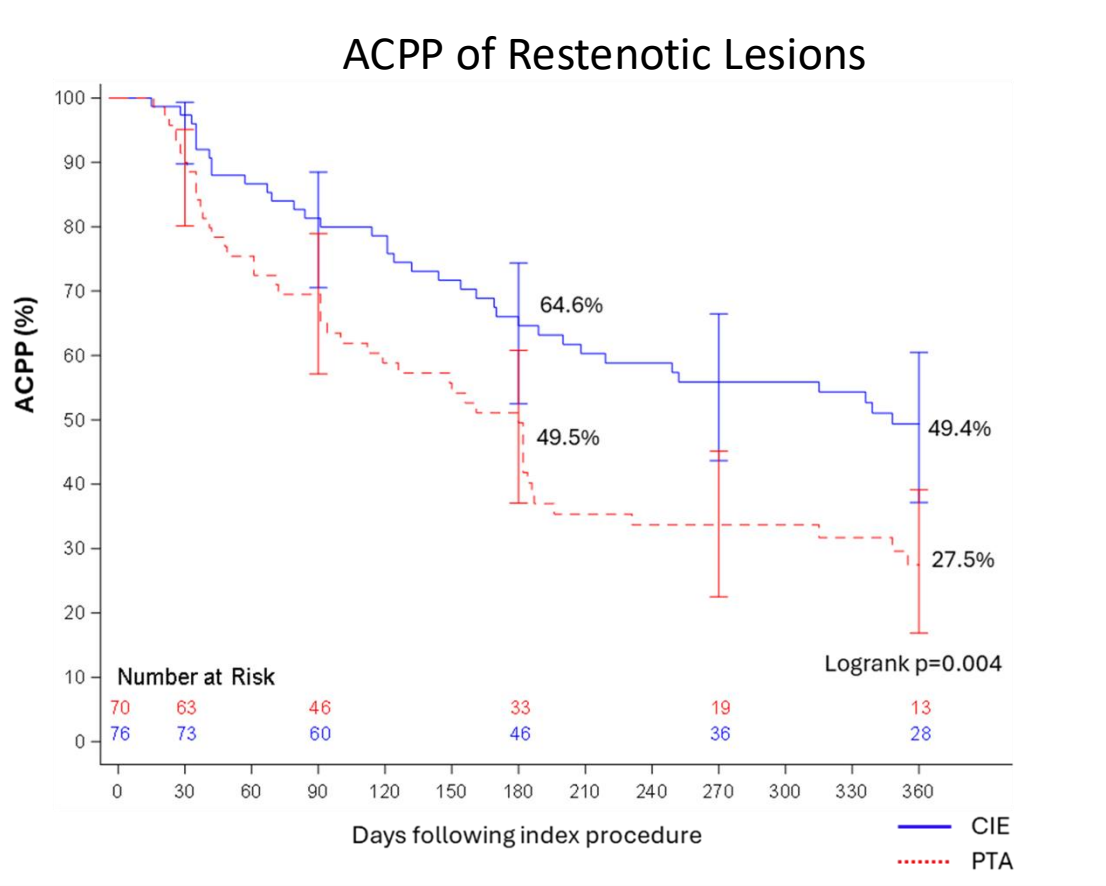


Mean number ±SD (N) of interventions to maintain access circuit patency

	CIE (N=48)	PTA (N=48)	p-value
6 months	0.26 ± 0.73 (43)	0.48 ± 0.80 (48)	0.06
12 months	0.48 ± 0.83 (42)	1.14 ± 1.47 (44)	0.011

- The CIE was associated with significantly higher TLPP vs. PTA
- The mean number of interventions required to maintain access circuit patency was lower for CIE-treated patients vs. PTA-treated patients with de novo lesions; although not statistically significant at 6 months, differences were significant at 12 months post-procedure

Results



Mean number ±SD (N) of interventions to maintain access circuit patency

	CIE (N=48)	PTA (N=48)	p-value
6 months	0.61 ± 0.99 (72)	1.00 ± 1.26 (66)	0.051
12 months	1.46 ± 1.88 (68)	2.1 ± 2.1 (61)	0.018

- The CIE was associated with significantly higher TLPP vs. PTA
- The mean number of interventions required to maintain access circuit patency was lower for CIE-treated patients vs. PTA-treated patients with restenotic lesions; although not statistically significant at 6 months, differences were significant at 12 months post-procedure

Conclusions

- The CIE was associated with significantly higher TLPP and ACPP vs. PTA, irrespective of whether lesions were de novo or restenotic
- At 12 months, patients treated with the CIE vs. PTA required significantly fewer reinterventions to maintain target lesion patency for both lesion types
  - Fewer interventions were required to maintain patency of the access circuit for CIE-treated patients vs. PTA-treated patients
- This post-hoc analysis suggest the CIE is associated with significant clinical benefits vs. PTA, regardless of whether lesions are de novo or restenotic
- WAVE trial results at 24 months will be forthcoming