

# CAROTID STENTING WILL EVENTUALLY REPLACE CEA

For the Motion:

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03 April, 2025

# PRESENTER DISCLOSURE

I have no current relationships with commercial entities.

# CAS WILL EVENTUALLY REPLACE CEA

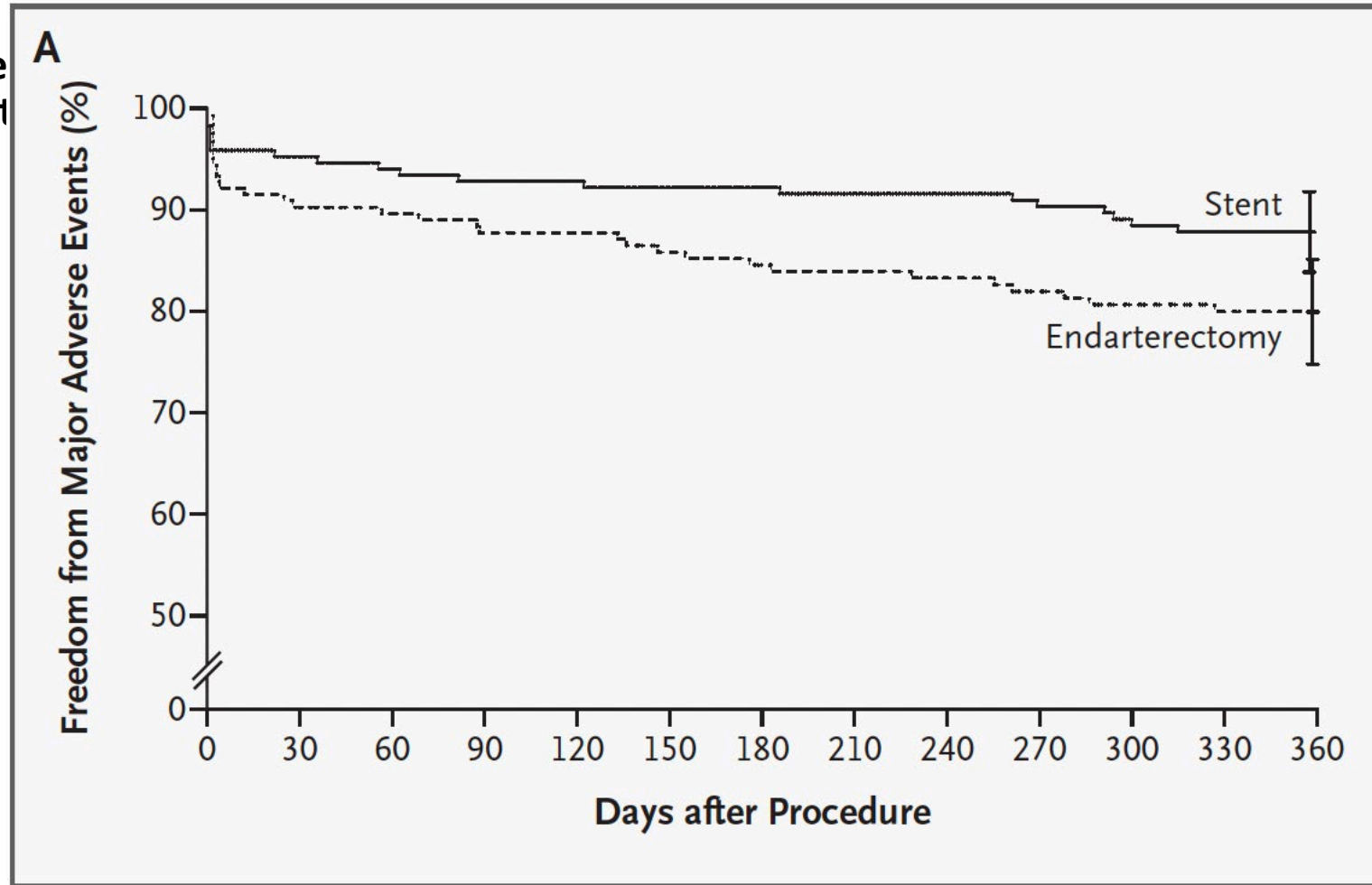
# SAME SAME, BUT DIFFERENT

1. Even in the absence of contemporary medical therapy, CAS has already been shown to offer comparable long-term outcomes to CEA.

# SAME SAME, BUT DIFFERENT

1. Even in the absence of short-term outcomes

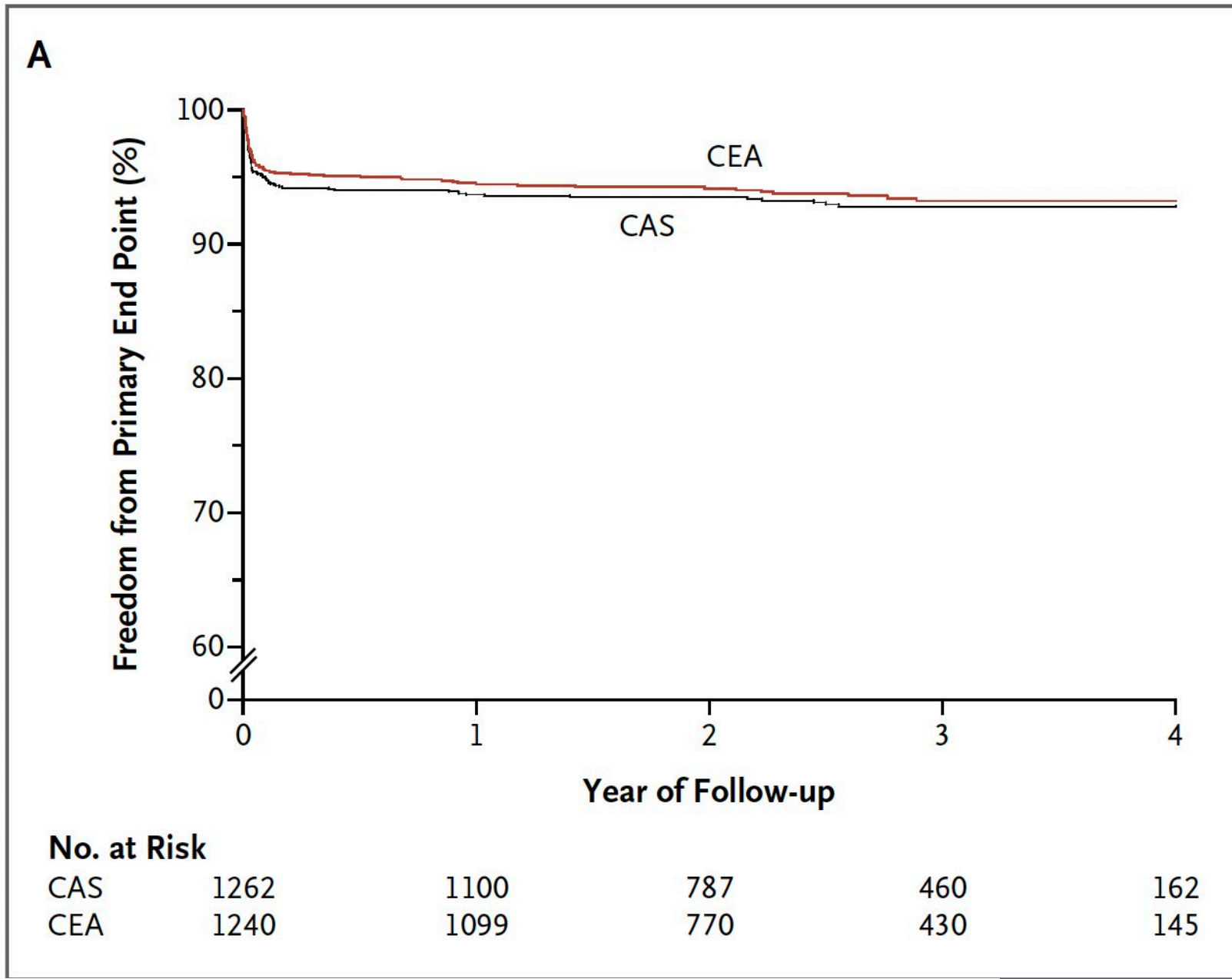
comparable long-



Yadav JS, Wholey MH, Kuntz RE, et al. Protected carotid-artery stenting versus endarterectomy in high-risk patients. N Engl J Med 2004;351:1493-501.

# SAME SAN

1. Even in the ab term outcome

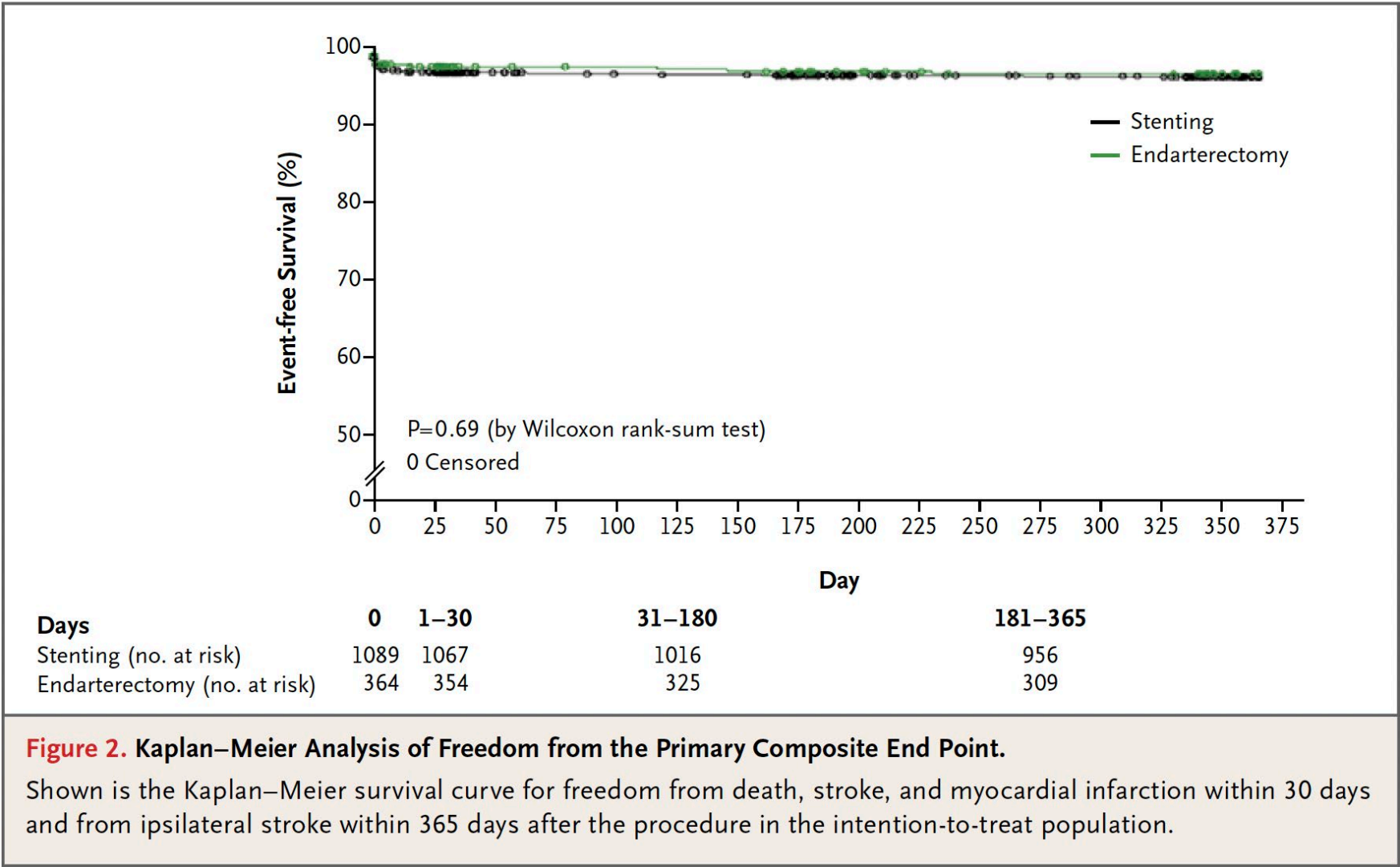


parable long-

Brott TG, Hobson RW II, Howard G, et al. Stenting versus endarterectomy for treatment of carotid-artery stenosis. N Engl J Med 2010; 363: 11-23

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1. Even in the term outco



rable long-

Rosenfield K, Matsumura JS, Chaturvedi S, et al. Randomized Trial of Stent versus Surgery for Asymptomatic Carotid Stenosis. N Engl J Med 2016;374:1011-20.



Winnipeg Vascular & Endovascular Symposium

# SAME SAME, BUT DIFFERENT

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	CEA				tfCAS			
	No statin (n = 13,434)	Statin (n = 13,434)	RR (95% CI)	P Value	No statin (n = 2707)	Statin (n = 2707)	RR (95% CI)	P Value
All patients								
Stroke/ death	228 (1.7%)	185 (1.4%)	1.2 (1.02-1.5)	.03	130 (4.8%)	76 (2.8%)	1.7 (1.3-2.3)	<.01
Stroke	200 (1.4%)	163 (1.3%)	1.1 (0.92-1.4)	.22	82 (3.0%)	51 (1.9%)	1.6 (1.1-2.3)	.01
Death	60 (0.4%)	39 (0.3%)	1.6 (1.03-2.4)	.04	61 (2.3%)	35 (1.3%)	1.7 (1.2-2.6)	.01
MI	73 (0.5%)	44 (0.3%)	1.8 (1.2-2.6)	<.01	10 (0.4%)	6 (0.2%)	1.7 (0.6-4.6)	.32

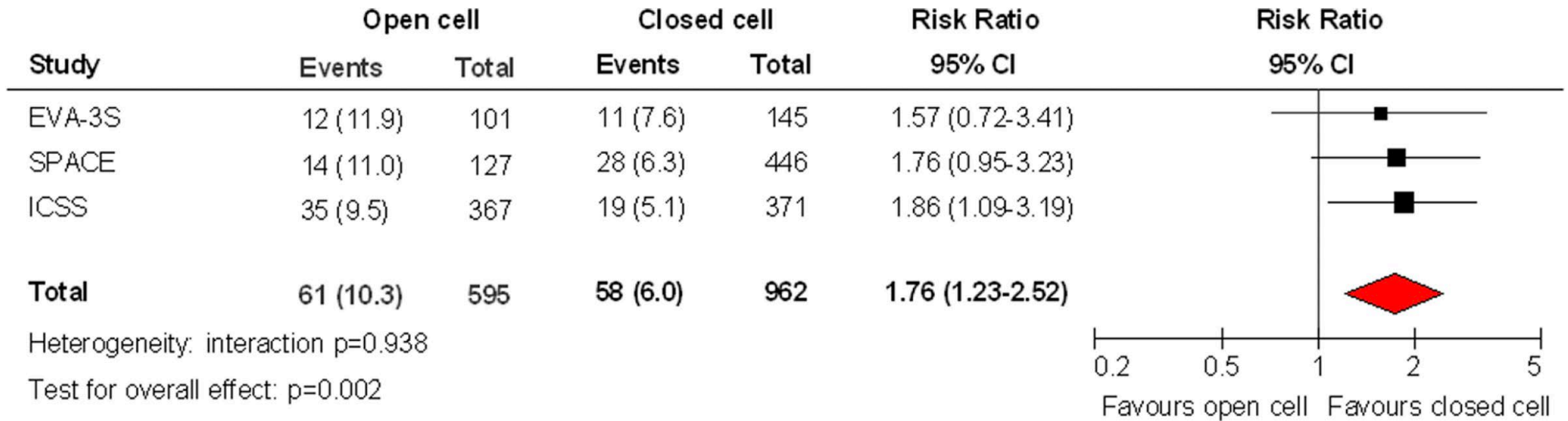
Anjorin AC, Marcaccio CL, Rastogi V, et al. Statin therapy is associated with improved perioperative outcomes and long-term mortality following carotid revascularization in the Vascular Quality Initiative. J Vasc Surg 2023;77:158-69 e8.



# OLD AND BUSTED, OR NEW HOTNESS?

1. Even in the absence of contemporary medical therapy, CAS has already been shown to offer comparable long-term outcomes to CEA.
2. **Ongoing technological and procedural advancements continue to address shortcomings of CAS.**

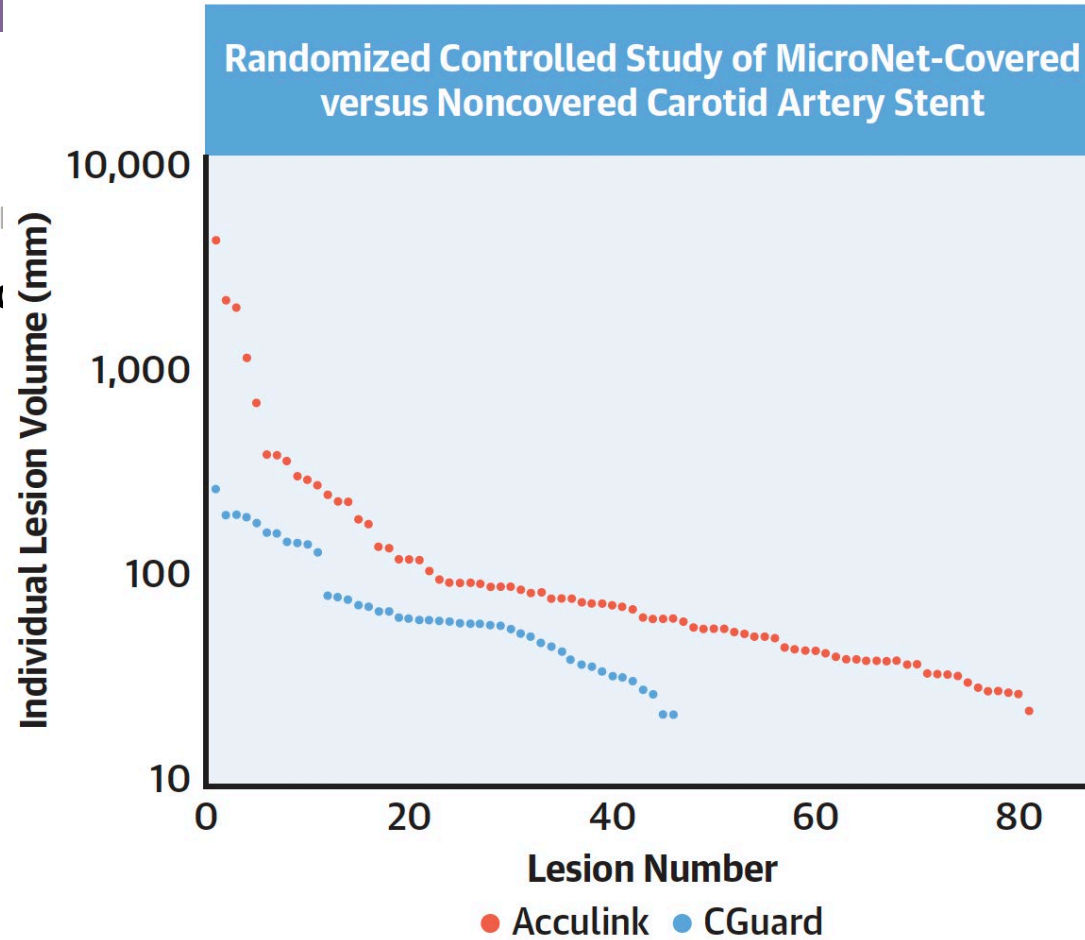
# OLD AND BUSTED, OR NEW HOTNESS?



Wodarg F, Turner EL, Dobson J, et al. Influence of stent design and use of protection devices on outcome of carotid artery stenting: a pooled analysis of individual patient data. J Neurointerv Surg 2018;10:1149-54.

# OLD AND BUSTED, OR NEW HOTNESS?

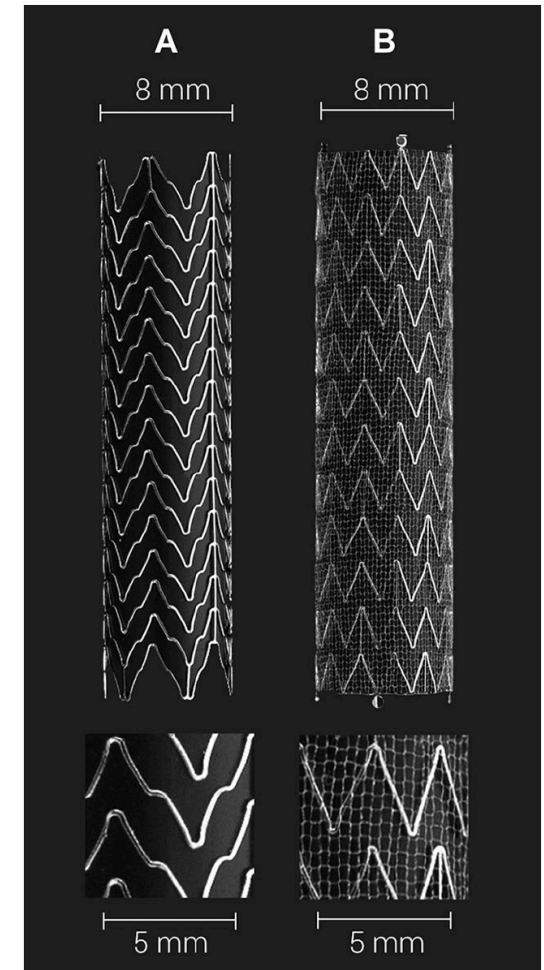
1. Even in the term outcome
2. Ongoing treatment



Karpenko, A. et al. J Am Coll Cardiol Interv. 2021;14(21):2377-2387.

Karpenko A, Bugurov S, Ignatenko P, et al. Randomized Controlled Trial of Conventional Versus MicroNet-Covered Stent in Carotid Artery Revascularization. JACC Cardiovasc Interv 2021;14:2377-87.

**FIGURE 2** The Study Devices



OLD AND B

- 1. E
- 2. O

TABLE 2. In-hosp

In-hospital Outcome

Stroke/death
Death
Ipsilateral Stroke
Stroke
★ Myocardial infarction
★ Stroke/death/Myocardial infarction
★ Cranial nerve injury
★ Post-procedural Hypertension
★ Post-procedural Hypotension
Bleeding with intervention
★ LOS more than 1 day
Non-Home Discharge

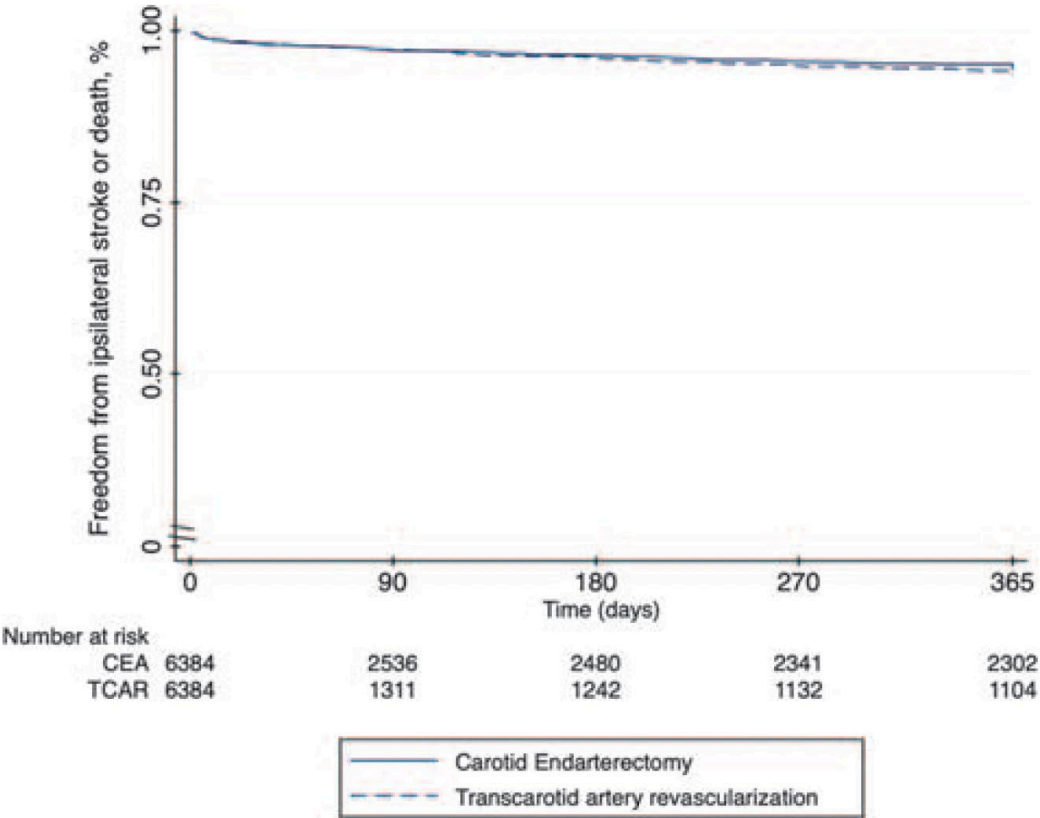


FIGURE 1. Kaplan-Meier curve for Ipsilateral Stroke or Death after transCarotid artery revascularization and carotid endarterectomy.

tic (N = 9435)

TCAR Versus CEA

Relative Risk (95% CI)	P-value
1.13 (0.80–1.59)	0.490
1.14 (0.56–2.33)	0.722
1.48 (0.95–2.30)	0.080
1.09 (0.75–1.59)	0.641
0.56 (0.34–0.93)	0.025 ★
0.90 (0.68–1.20)	0.486
0.14 (0.08–0.25)	< 0.001 ★
1.67 (1.51–1.86)	< 0.001 ★
0.69 (0.63–0.76)	< 0.001 ★
0.90 (0.64–1.26)	0.527
0.88 (0.82–0.94)	< 0.001 ★
0.91 (0.75–1.10)	0.343

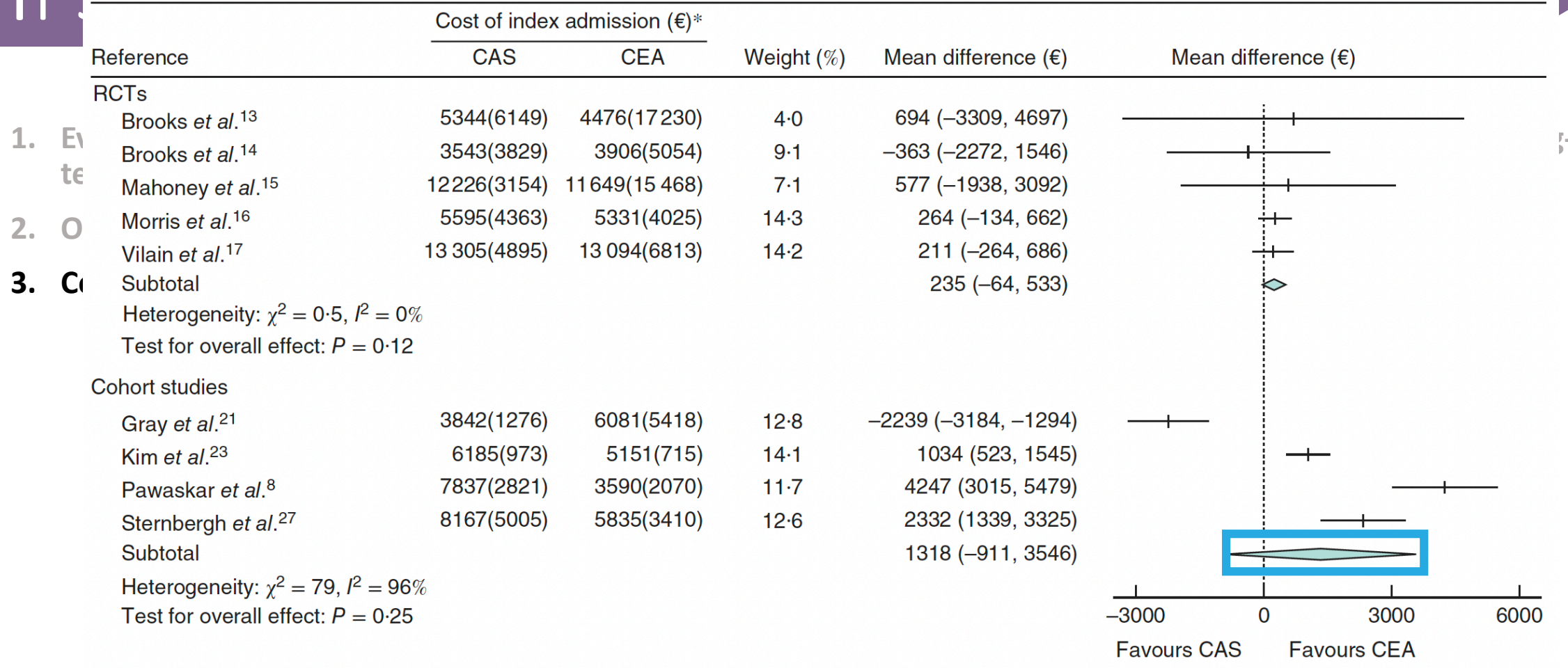
Malas MB, Dakour-Aridi H, Kashyap VS, et al. TransCarotid Revascularization With Dynamic Flow Reversal Versus Carotid Endarterectomy in the Vascular Quality Initiative Surveillance Project. Ann Surg 2022;276:398-403.

# IT'S ALL ABOUT THE BENJAMINS

1. Even in the absence of contemporary medical therapy, CAS has already been shown to offer comparable long-term outcomes to CEA.
2. Ongoing technological and procedural advancements continue to address shortcomings of CAS.
3. **Comparable economic outcomes with shorter hospital stays makes CAS an attractive economic option.**



# IT'S ALL ABOUT THE BENJAMINS



**Fig. 3** Differences in costs of index hospital admission between patients treated with carotid artery stenting (CAS) or carotid endarterectomy (CEA). \*Values are mean(s.d.). Mean differences are shown with 95 per cent confidence intervals

de Vries EE, Baldew VGM, den Ruijter HM, de Borst GJ. Meta-analysis of the costs of carotid artery stenting and carotid endarterectomy. *Br J Surg* 2017;104:1284-92.

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