Supplementary table 1. Glass phantom's geometrical specifications.

ICA segment	Vessel diameter (mm)			Curvature (mm^{-1})	Cumulative curvature (mm^{-1})
	MIN	MAX	Average		
Cervical	3.61	4.56	4.23	0.12	0.12
Petrous	3.24	3.96	3.60	0.13	0.25
Petro-cavernous	3.42	4.60	3.77	0.17	0.42
Cavernous	3.45	4.05	3.58	0.16	0.58
Ophthalmic	3.16	3.97	3.65	0.26	0.85

Supplementary table 2. Measured track forces (F) and differences between DACs' proximal and distal end advancement (max-ΔD) using different combinations of DAC and navigation approach. Cumulative F corresponds to the sum of track forces required to navigate through petro-cavernous and ophthalmic segments of ICA.

	Trajectory petro-cavernous ICA				Trajectory ophthalmic ICA				Cumulative F	
	Bare DAC									
Device	F (mN)	SD	Max-ΔD (cm)	SD	F (mN)	SD	Max-ΔD (cm)	SD	F (mN)	SD
JET 7	894.16	18.20	1.95	0.06	577.31	19.65	0.72	0.03	1471.47	37.59
React 71	1082.08	18.24	2.25	0.05	499.28	18.33	0.81	0.03	1581.36	19.82
ACE 68	1445.65	85.39	2.15	0.06	893.19	36.60	2.29	0.01	2338.84	53.88
Cat 6	684.16	9.36	1.79	0.07	972.86	18.02	0.87	0.04	1657.03	26.85
Sofia Plus	561.19	22.95	1.95	0.15	313.85	9.29	0.71	0.02	875.04	13.70
React 68	810.52	14.04	1.81	0.06	732.70	19.23	0.81	0.02	1543.21	32.31
Vecta 74	646.66	29.99	1.46	0.03	841.39	11.73	0.68	0.00	1488.05	21.67
	DAC-mC									
Device	F (mN)	SD	Max-ΔD (cm)	SD	F (mN)	SD	Max-ΔD (cm)	SD	F (mN)	SD
JET 7	-	-	-	-	388.59	14.79	0.46	0.08	388.59	14.79
React 71	-	-	-	-	299.08	10.79	0.43	0.05	299.08	10.79
ACE 68	-	-	-	-	1111.29	33.49	0.87	0.03	1111.29	33.49
Cat 6	-	-	-	-	262.46	3.45	0.39	0.08	262.46	3.45
Sofia Plus	-	-	-	-	285.89	14.01	0.55	0.03	285.89	14.01
React 68	-	-	-	-	392.52	7.79	0.56	0.06	392.52	7.79
Vecta 74	-	-	-	-	883.53	16.91	0.55	0.01	883.53	16.91
	DAC-SR									
Device	F (mN)	SD	Max-ΔD (cm)	SD	F (mN)	SD	Max-ΔD (cm)	SD	F (mN)	SD
JET 7	-	-	-	-	257.94	14.95	0.09	0.03	257.94	14.95
React 71	-	-	-	-	147.66	4.98	0.02	0.03	147.66	4.98
ACE 68	-	-	-	-	543.02	60.40	0.78	0.04	543.02	60.40
Cat 6	-	-	-	-	251.31	17.79	0.15	0.05	251.31	17.79
Sofia Plus	-	-	-	-	195.20	10.64	0.32	0.04	195.20	10.64
React 68	-	-	-	-	264.34	9.70	0.08	0.03	264.34	9.70
Vecta 74	-	-	-	-	487.61	49.37	0.43	0.03	487.61	49.37

Supplementary table 3. Tukey's HSD post hoc analysis to assess statistical differences among DACs using bare DAC navigation technique.

Bare DAC Cumulative track forces

Tukey HSD[a]

FACTOR	N	Subset for alpha = 0.05
		1	2	3	4	5
Sofia Plus	3	875.0400				
JET 7	3		1471.4667			
Vecta 74	3		1488.0467			
React 68	3		1543.2133	1543.2133		
React 71	3			1581.3633	1581.3633	
Cat 6	3				1657.0267	
ACE 68	3					2338.8433
Sig.		1.000	.155	.760	.121	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Supplementary table 4. Tukey's HSD post hoc analysis to assess statistical differences among DACs using DAC-microcatheter navigation technique.

DAC-mC Cumulative track forces

Tukey HSD[a]

FACTOR	N	Subset for alpha = 0.05
		1	2	3	4
Cat 6	3	262.4600			
Sofia Plus	3	285.8867			
React 71	3	299.0833			
JET 7	3		388.5867		
React 68	3		392.5200		
Vecta 74	3			883.5333	
ACE 68	3				1111.2867
Sig.		.184	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Supplementary table 5. Tukey's HSD post hoc analysis to assess statistical differences among DACs using DAC-SR anchoring navigation technique.

**DAC-SR Cumulative track forces**
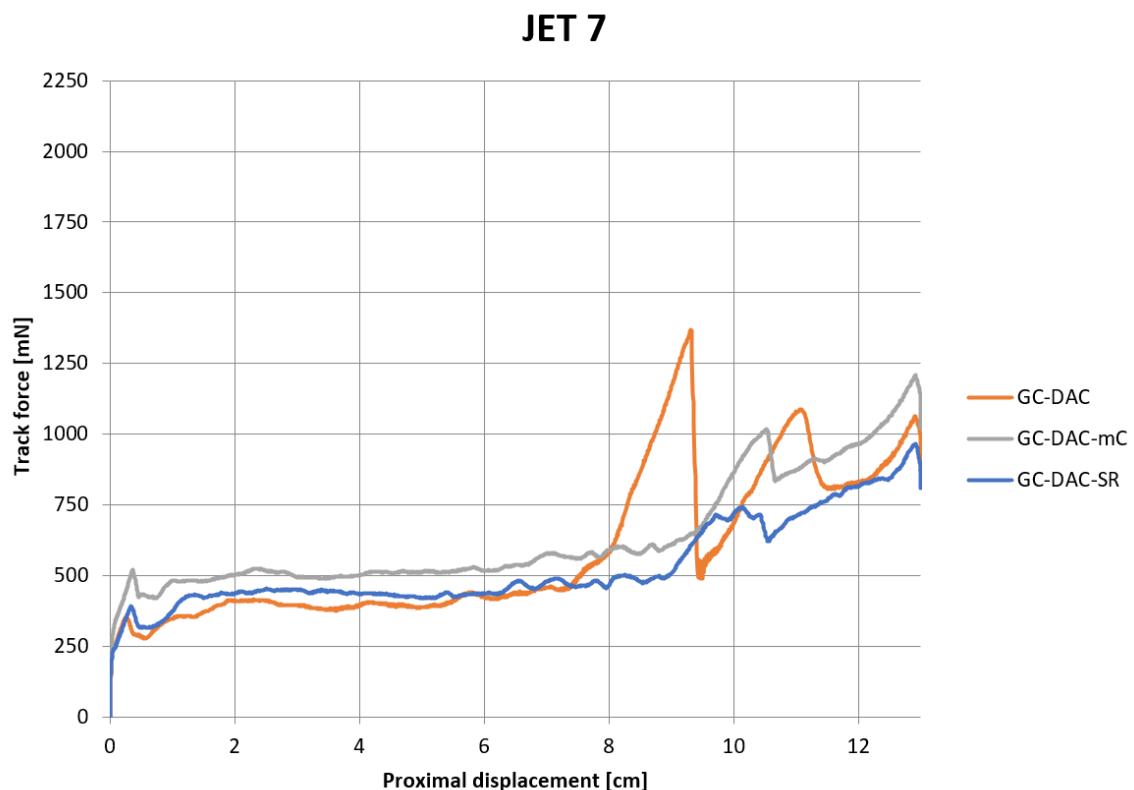
Tukey HSD[a]

FACTOR	N	Subset for alpha = 0.05		
		1	2	3
React 71	3	147.6567		
Sofia Plus	3	195.2000	195.2000	
Cat 6	3		251.3133	
JET 7	3		257.9400	
React 68	3		264.3433	
Vecta 74	3			487.6067
ACE 68	3			543.0167
Sig.		.533	.167	.369
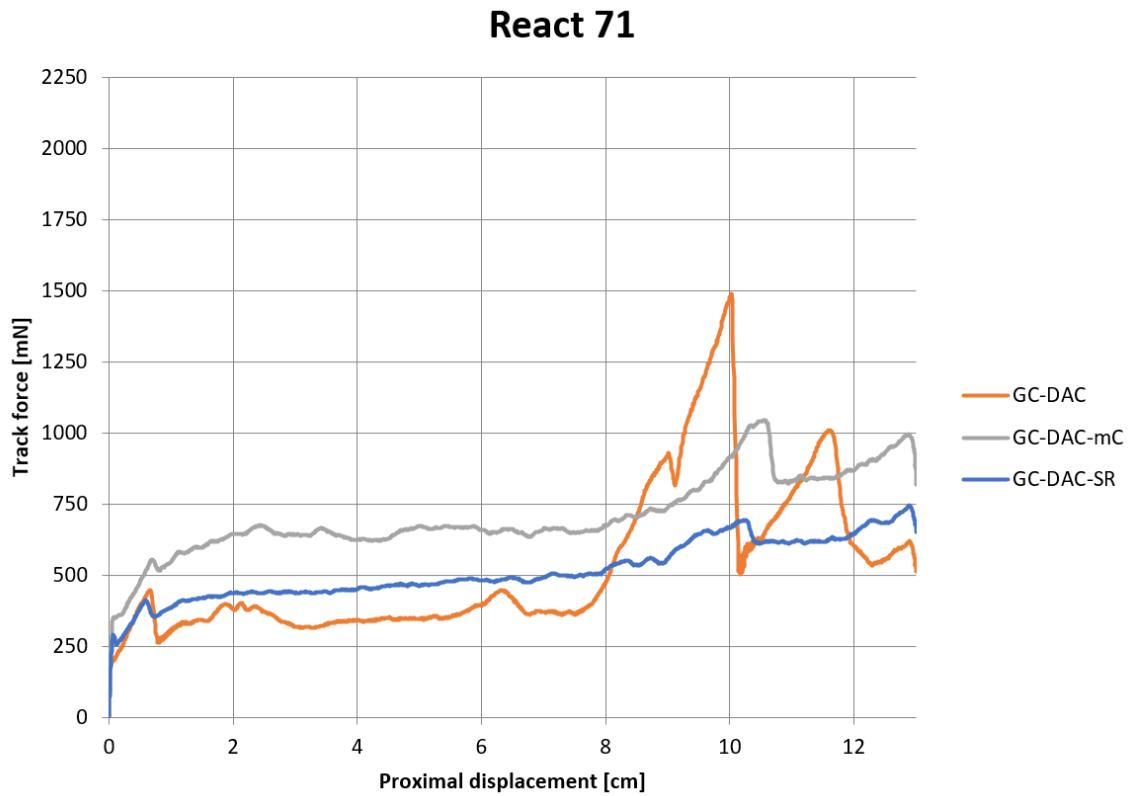
Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.
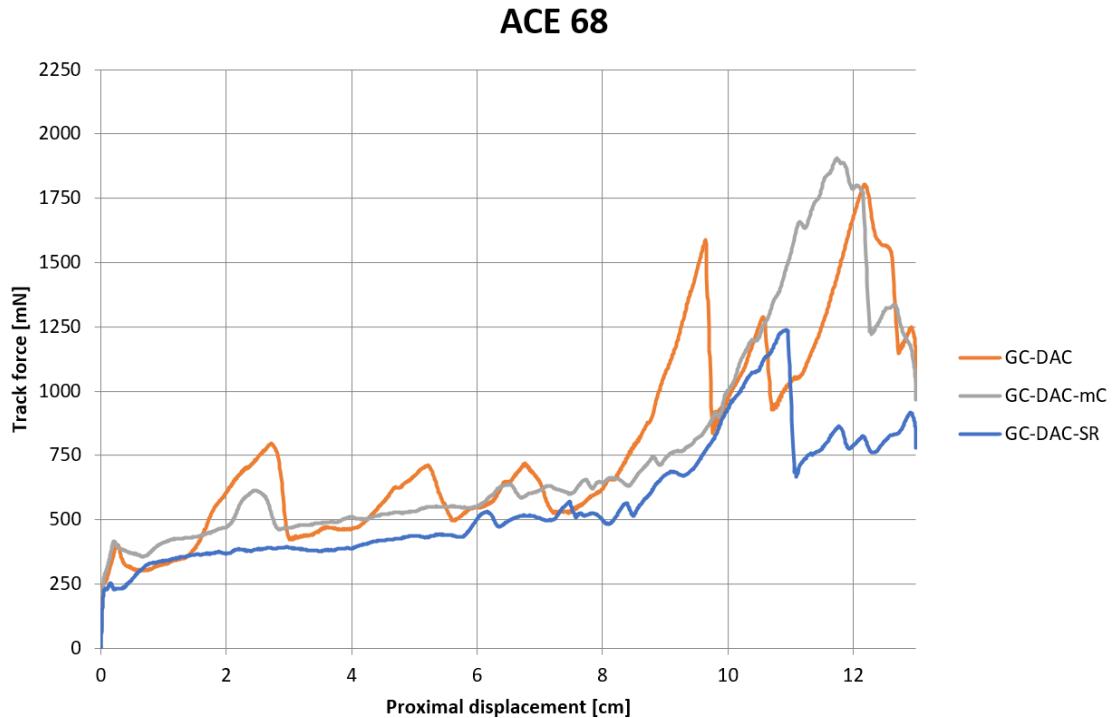
Supplementary figure 1. Proximal track force vs. proximal displacement plot for Penumbra JET 7 using different navigation strategies.

JET 7
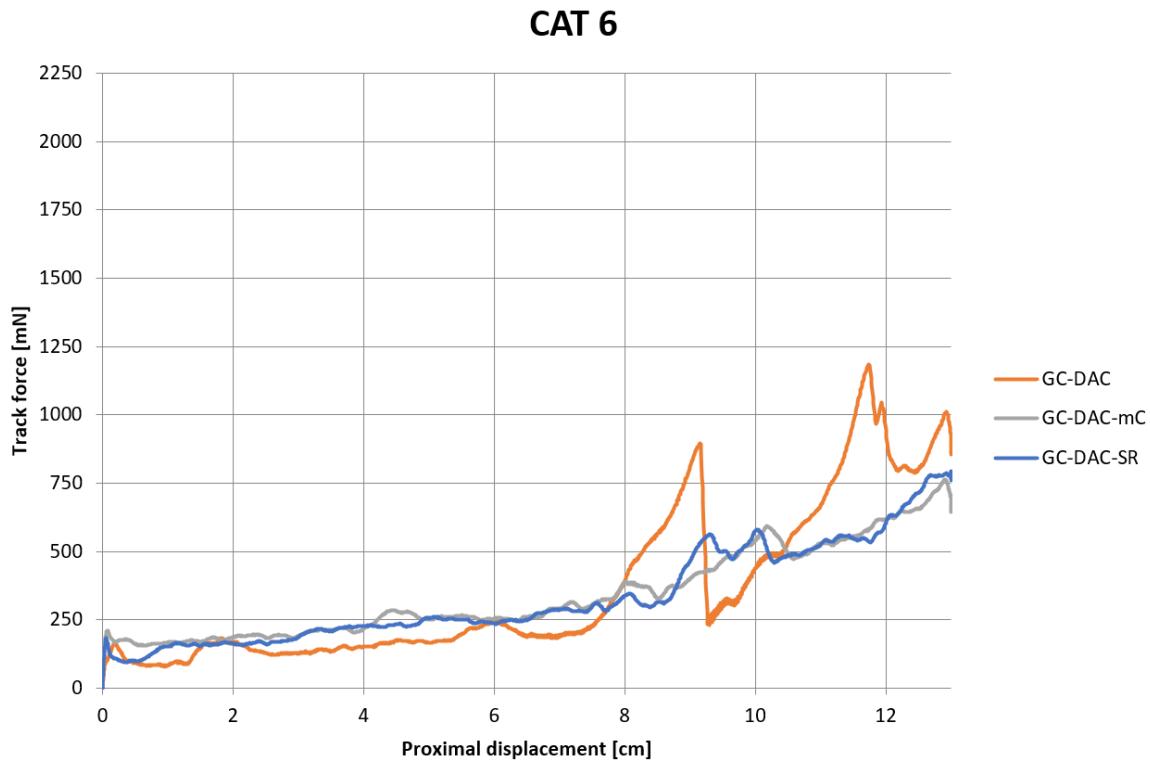
Supplementary figure 2. Proximal track force vs. proximal displacement plot for Medtronic React 71 using different navigation strategies.


React 71
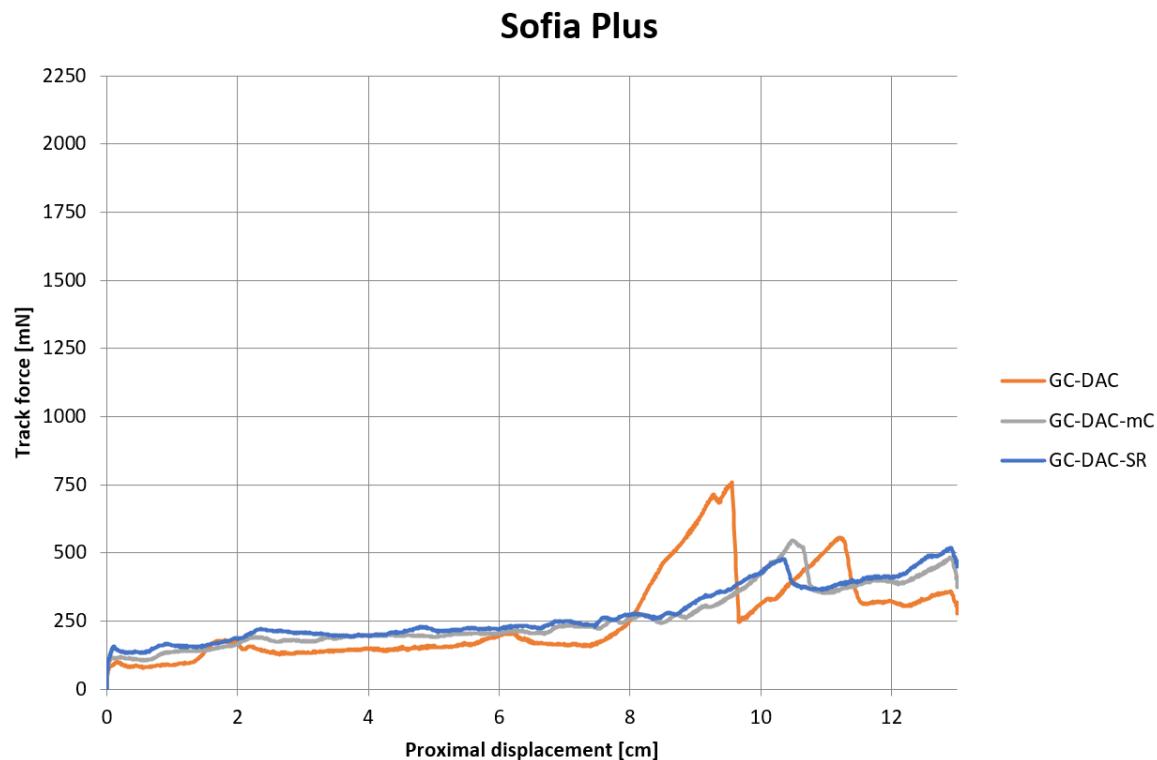
Supplementary figure 3. Proximal track force vs. proximal displacement plot for Penumbra ACE 68 using different navigation strategies.


ACE 68
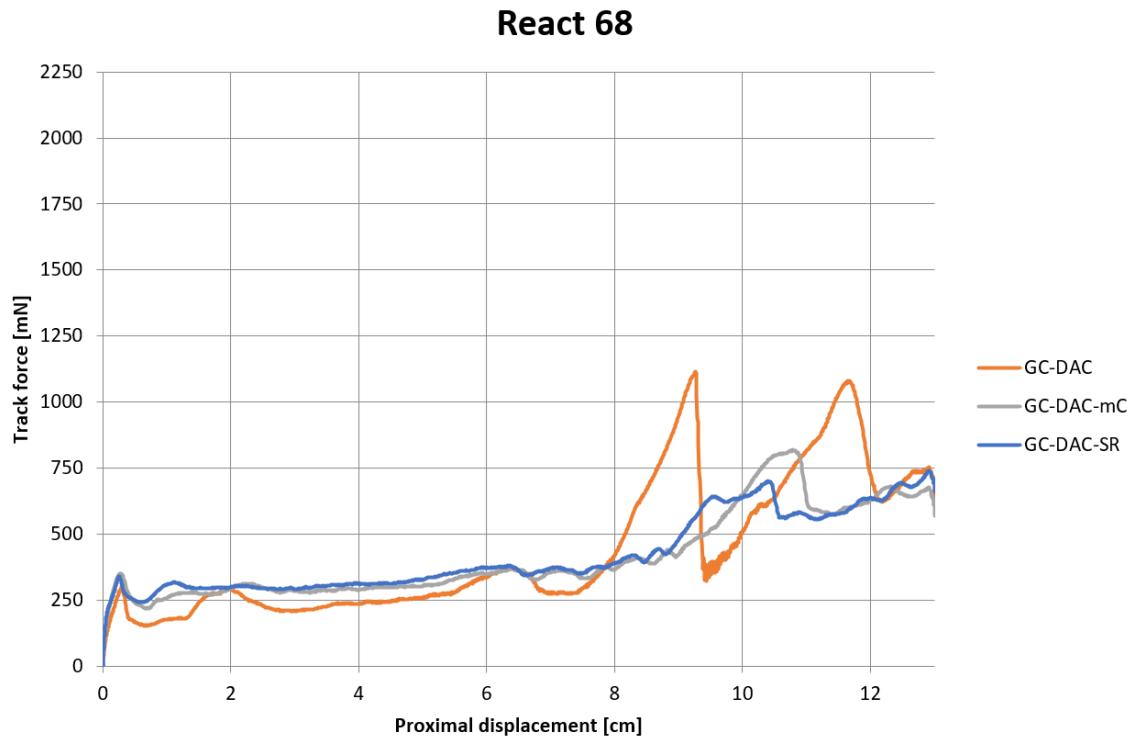
Supplementary figure 4. Proximal track force vs. proximal displacement plot for Stryker Cat 6 using different navigation strategies.

Supplementary figure 5. Proximal track force vs. proximal displacement plot for Microvention Sofia Plus using different navigation strategies.

Supplementary figure 6. Proximal track force vs. proximal displacement plot for Medtronic React 68 using different navigation strategies.

React 68

Supplementary figure 7. Proximal track force vs. proximal displacement plot for Stryker Vecta 74 using different navigation strategies.

Vecta 74