Medtronic

Power. Combined.

When it works together, it works better[1-3]

Combination Therapy

Aim for first pass success with a combination of compatible tools.[1-4]

Start every acute ischemic stroke procedure with the combined power of reliable, compatible tools at your fingertips.[1-3,5-8]

When you have that power, you can combat procedural variability and feel more confident to deliver positive outcomes.[†,4,9,10]

Reliability & trackability. Combined.

Aim to make the first pass at clot removal the only pass.
Choose combination therapy to combat procedural variability.†,9,10

Why combination therapy?

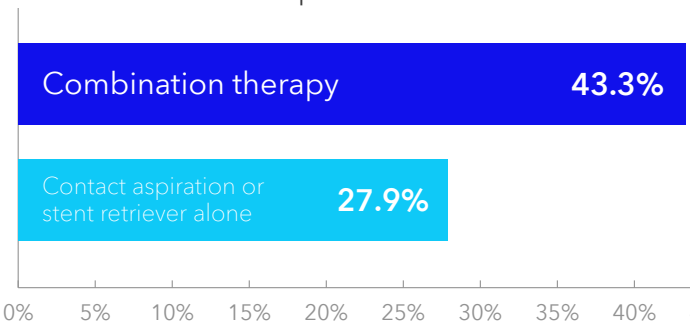
Achieve a higher rate of first pass success‡,11,12

Combination therapy has been shown to significantly achieve‡:

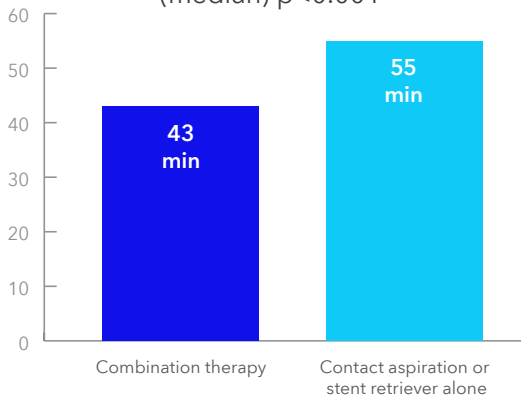
- Higher successful recanalization rates at first pass and at the end of the procedure
- Shorter puncture-to-reperfusion time
- Fewer number of passes

Achieve a higher rate of first pass success‡,11,12

First Pass Effect (FPE)[12] **(mTICI 2c-3)**
p<0.001



Puncture-to-reperfusion time[12]
(median) p<0.001



Did you know?

A multicenter analysis of nearly 3,000 patients found switching to combination therapy after a failed first aspiration pass resulted in higher reperfusion rates than continuing with aspiration alone.[13] For cases when you do not start combined, consider switching as early as second pass to increase your chances of eTICI 2c-3.[13]

† Compared to aspiration-alone technique.
‡ Compared to aspiration-alone and stent retriever-alone techniques.
§ Based on in-vitro studies and may not be indicative of clinical performance.

1. Data on file; TR-NV16168A, D00033351A. **2.** Data on file; TR-NV15999B, TR-NV15399A. **3.** Data on file; TR-NV14973B.**4.** Ribó M, Möhlenbruch M, Cognard C, Sanjeev N, Mordasini P. Combination therapy using Solitaire™ revascularization device and primarily the React™ catheter in mechanical thrombectomy: Experience from INSPIRE-S registry. Poster at: *International Stroke Conference*; February 7-9, 2024; Phoenix, AZ. **5.** Data on file; TR-NV15436C, D00272862C. **6.** Data on file; D00344794B, TR-NV15519A, TR-NV15666A. **7.** Data on file; TR-NV15346C, TR-NV14704ADDA-1, TR-NV14443A, TR-NV14704A. **8.** Data on file; TR-NV15965A, D00292166B. **9.** Bernava G, Rosi A, Boto J, et al. Direct thromboaspiration efficacy for mechanical thrombectomy is related to the angle of interaction between the aspiration catheter and the clot. *J Neurointerv Surg*. 2020;12(4):396-400. **10.** Liu Y, Gebrezgiabhier D, Zheng Y, et al. Arterial collapse during thrombectomy for stroke: Clinical evidence and experimental findings in human brains and in vivo models. *AJNR Am J Neuroradiol*. 2022;43(2):251-257. **11.** Diana F, Vinci SL, Ruggiero M, et al. Comparison of aspiration versus combined technique as first-line approach in terminal internal carotid artery occlusion: A multicenter experience. *J Neurointerv Surg*. 2022;14(7):666-671. **12.** Okuda T, Arimura K, Matsuo R, et al. Efficacy of combined use of a stent retriever and aspiration catheter in mechanical thrombectomy for acute ischemic stroke. *J Neurointerv Surg*. 2022;14(9):892-897. **13.** Martins PN, Nogueira RG, Tarek MA, et al. Early technique switch following failed passes during mechanical thrombectomy for ischemic stroke: Should the approach change and when? *J Neurointerv Surg*. Published online April 4, 2024. doi:10.1136/jnis-2024-021545.**14.** Chueh JY, Puri AS, Wakhloo AK, Gounis MJ. Risk of distal embolization with stent retriever thrombectomy and ADAPT. *J Neurointerv Surg*. 2016;8(2):197-202. **15.** Li J, Tomasello A, Requena M, et al. Trackability of distal access catheters: An in vitro quantitative evaluation of navigation strategies. *J Neurointerv Surg*. 2023;15(5):496-501. **16.** Goyal M, Menon BK, van Zwam WH, et al. Endovascular thrombectomy after large-vessel ischaemic stroke: A meta-analysis of individual patient data from five randomised trials. *Lancet*. 2016;387(10029):1723-1731. **17.** Data on file; TR-NV13807A, D00419703D, TR-NV15666A, D00324045A. **18.** Data on file; D00419703D, D00324045A, TR-NV12180A. **19.** Imamura H, Sakai N. Actual status and prospects of endovascular treatment for acute cerebral infarction; investigator-initiated clinical research REACT AIS Registry. Presented at *Japan Society of Neuroendovascular Therapy*; Nov 23-25, 2023; Kyoto, Japan. **20.** M003592CDOC2e e-IFU Artwork, Solitaire X Revascularization Device.

Decrease procedural variability[†,9,10]

Minimize distal emboli[†,11,14]

Facilitate smooth navigation
[†,§,2,5,15]

Decrease procedural variability[†,9,10]

Success of endovascular thrombectomy with a single device may be influenced by:

- Vessel anatomy
- Clot composition & length
- Angle of interaction between the aspiration catheter and clot[9]

With combination therapy, maximize procedural success by complementing the strengths of the stent retriever with the aspiration catheter to minimize the influence of a single variable.

Minimize distal emboli[†,11,14]

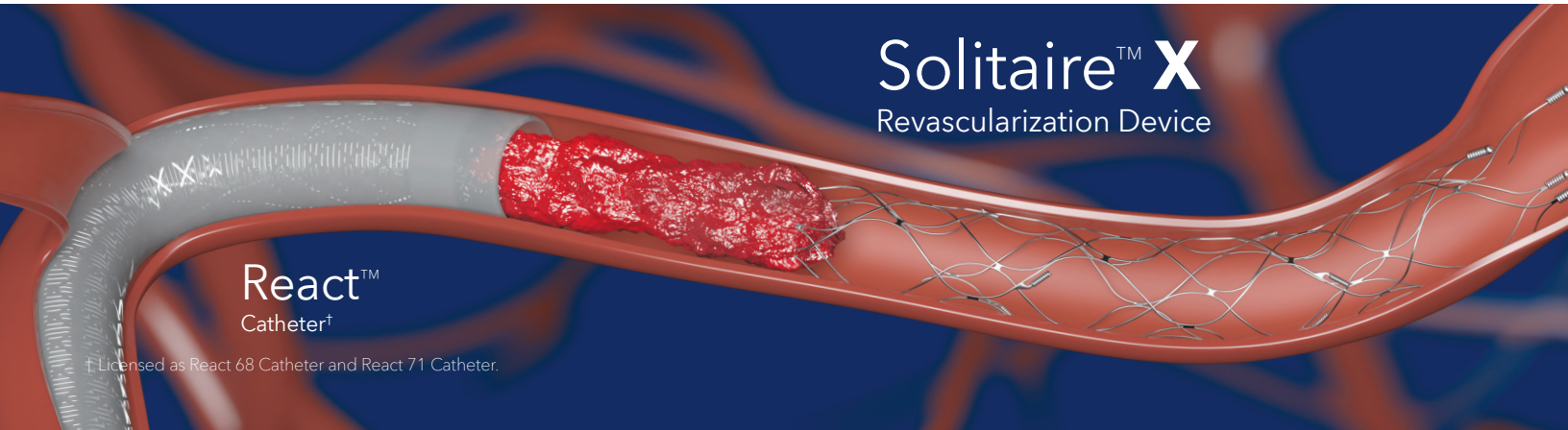
Combination therapy was found to be the most efficient method for **reducing** the rate of clot fragmentation for hard fragment-prone clots.[‡,14]

Aspiration-alone **at least doubled the risk** of soft elastic clot fragmentation compared to techniques with a stent retriever.[14]

Minimize the possibility of clot disruption by combining the stent retriever with the aspiration catheter.[11]

Facilitate smooth navigation through tortuous vasculature[†,§,2,5,15]

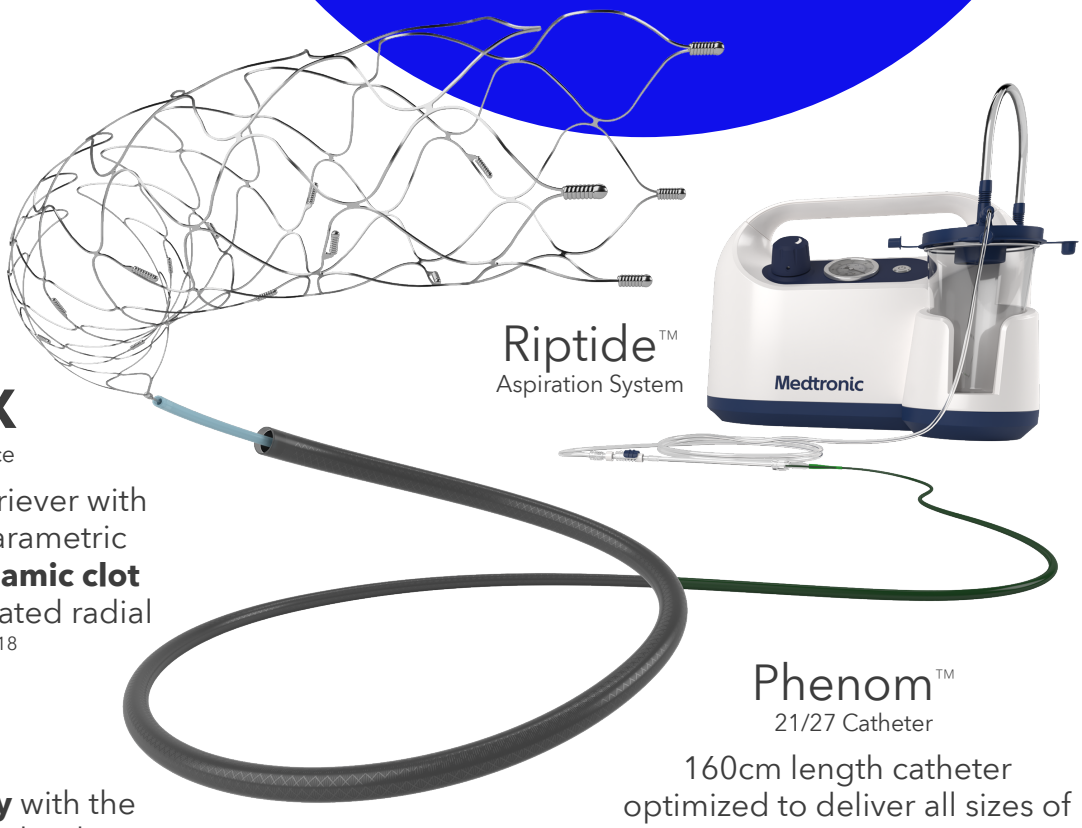
With combination therapy, use the stent retriever as an anchor to promote smooth navigation of the aspiration catheter to reach the occlusion site, improving reliability of tracking when positioning the aspiration catheter closer to the face of the clot.[†,§,15]



Compatibility & dependability. Combined.

The use of the **Solitaire™ X** device with the **React™** catheter results in **high rates of FPE**.[4]

Trust in reliable, compatible tools to combat procedural variability[†,1-3,5-10]



Solitaire™ X
Revascularization device

Clinically proven stent retriever with a unique overlapping parametric design that provides **dynamic clot integration** and differentiated radial outward force.[16-18]

Riptide™
Aspiration System

React™
68/71 Catheter

Designed for **trackability** with the COBRA (COil + BRAid) technology and **durability** of nitinol to support the Solitaire™ X device.[1,2,15]

Phenom™
21/27 Catheter

160cm length catheter optimized to deliver all sizes of the Solitaire™ X device providing **smooth deliverability with a low clot-crossing profile**.[1]

INSPIRE-S Registry Combination Therapy[‡,§,4]

Variable	Results	Sample Size
mRS 0-2 at 90 days	**54.1%**	**n=381**
Time from arterial puncture to final reperfusion (min)	**49.9 (34.7)**	**n=375**
Number of passes	**1.8 (1.25)**	**n=397**
First pass revascularization[◊]		**n=393**
eTICI ≥2b50	**61.1%**	
eTICI ≥2b67	**56.5%**	
eTICI ≥2c	**48.6%**	
eTICI = 3	**35.9%**	
Final revascularization[◊]		**n=393**
eTICI ≥ 2b50	**93.4%**	
eTICI ≥ 2b67	**88.8%**	
eTICI ≥ 2c	**75.6%**	
eTICI = 3	**52.7%**	
sICH[¶]	**1.5%**	**n=397**

REACT Registry Combination Therapy (n=429)[#,19]

Variable	Results
mRS 0-2 at 90 days	**41.5%**
Time from arterial puncture to final reperfusion (min, range)	**46.0 (11-264)**
Number of passes	**1.8 (1.2)**
First pass revascularization	
mTICI ≥2b	**66.9%**
mTICI ≥2c	**47.8%**
mTICI = 3	**39.6%**
Final revascularization	
mTICI ≥ 2b	**90.7%**
mTICI ≥ 2c	**64.8%**
mTICI = 3	**52.5%**
Overall ICH	**29.6%**

† Data are % or mean (SD) – mRS, modified Rankin Scale; eTICI, extended Thrombolysis in Cerebral Infarction; sICH, symptomatic Intracranial Hemorrhage; FPE, first pass effect
‡ Includes Solitaire™ X device, primarily, with Solitaire™ Platinum device used in combination with the React™ catheter in 76% of all the cases in the full 397-patient cohort.
§ The Innovative NeurovaScular Product Surveillance REgistry-Acute Ischemic Stroke (INSPIRE-S) Registry is a prospective, global registry that is both core-lab and clinical events committee (CEC) adjudicated.
◊ Preliminary results based on a total of 393 patients with core lab data available for revascularization.
¶ CEC adjudicated. Defined as any intracranial hemorrhage with an increase of 4 points or more in the NIHSS score within the 24 hours post-procedure visit window, or that led to death and that was identified as the predominant cause of the neurologic deterioration.
# Includes React™ catheter and Solitaire™ revascularization device in 100% of the cases.

Solitaire™ X Revascularization Device Portfolio Information[20]

Model	Recommended Vessel Diameter[A] (mm)		Microcatheter Inner Diameter Range	Push Wire Length	Stent Diameter	Usable Length[B]	Stent Length	Length from Distal Tip to Fluorosafe Marker	Radiopaque Markers		Radiopaque Stent Markers Spacing
	(min)	(max)	(min - max)	(cm)	(mm)	(cm)	(mm)	(cm)	Distal	Prox.	(mm)
SFR4-3-20-10	1.5	3.0	0.017″ - 0.027″ 0.43mm-0.69mm	200	3.0	20.0	30.6	<150	3	1	10
SFR4-3-40-10	1.5	3.0	0.017″ - 0.027″ 0.43mm-0.69mm	200	3.0	40.0	51.6	<150	3	1	10
SFR4-4-20-05	1.5	4.0	0.021″- 0.027″ 0.53mm-0.69mm	200	4.0	20.0	31.0	<130	3	1	5
SFR4-4-20-10	1.5	4.0	0.021″- 0.027″ 0.53mm-0.69mm	200	4.0	20.0	31.0	<130	3	1	10
SFR4-4-40-10	1.5	4.0	0.021″- 0.027″ 0.53mm-0.69mm	200	4.0	40.0	50.0	<130	3	1	10
SFR4-6-20-10	2.0	5.5	0.021″- 0.027″ 0.53mm-0.69mm	200	6.0	20.0	31.0	<130	4	1	10
SFR4-6-24-06	2.0	5.5	0.021″- 0.027″ 0.53mm-0.69mm	200	6.0	24.0	37.0	<130	4	1	6
SFR4-6-40-10	2.0	5.5	0.021″- 0.027″ 0.53mm-0.69mm	200	6.0	40.0	47.0	<130	4	1	10

A. Based on the smallest vessel diameter at thrombus site. **B.** Usable length that is at least as long as the length of the thrombus.

Up to 3 flow restoration recoveries[20]

React™ Catheter

Product Name	Model	Inner Diameter (in)	Max Outer Diameter (in)	Working Length (cm)
React™ 68 Catheter	REACT-68	0.068	0.083	132
React™ 71 Catheter	REACT-71	0.071	0.0855	132

Riptide™ Aspiration System

Individual Components	Model	Volume (mL)	Inner Diameter (in)	Tubing Length (in)	Distal Length (in)
Riptide™ Aspiration Pump	MAP-1000	–	–	–	–
Riptide™ Collection Canister with Intermediate Tubing	MAC-1200	1200	–	–	–
Riptide™ Large Bore Aspiration Tubing	MAT-110-110	–	0.110	112	7

Riptide™ Aspiration System

Initial Order Bundle	Model	Riptide™ Aspiration Pump	Riptide™ Collection Canister with Intermediate Tubing	Riptide™ Large Bore Aspiration Tubing	React™ Catheter
Riptide™ Aspiration System 68 Bundle	RBUNDLE-68	1 QTY	3 QTY	3 QTY	3 QTY React™ 68
Riptide™ Aspiration System 71 Bundle	RBUNDLE-71	1 QTY	3 QTY	3 QTY	3 QTY React™ 71

Phenom™ 21/27 Catheters

Product Name	Model	Outer Diameter (F)	Inner Diameter (in)	Working Length (cm)	Soft Distal Segment (cm)	Flexible Single Coil Segment (cm)	Tip Shape	Max Guidewire (in)
Phenom™ 21 Catheter	FG13160-0615-1S	2.6>2.3	0.021	160	6	15	Straight	0.018
Phenom™ 27 Catheter	FG15160-0615-1S	3.1>2.8	0.027	160	6	15	Straight	0.025

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For a listing of indications, contraindications, precautions, warnings, and potential adverse events, please refer to the Instructions for Use.

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