

# MicroVention® Coil Solutions

A rapidly evolving coil portfolio founded upon  
a clinically proven hydrogel technology.<sup>1</sup>



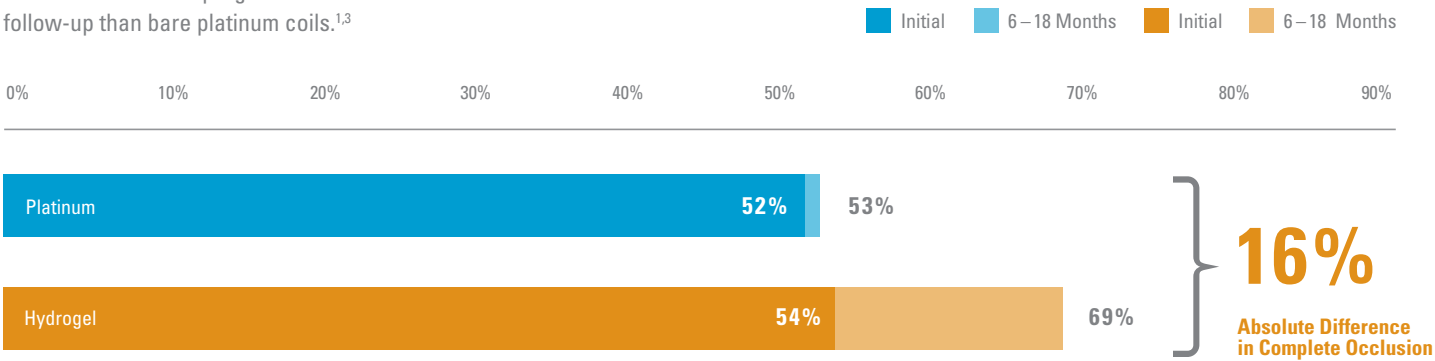
# Comprehensive Portfolio Featuring Our Breakthrough Hydrogel Technology

## Effective Results

Hydrogel coils demonstrate less recurrence, less retreatment and more progressive occlusion compared to platinum coils with comparable safety.<sup>1,3</sup> The latest Hydrogel technology has a soft, inert Hydrogel core that expands to fill the interior space of the coil to create a mechanical scaffold for neointimal growth.

### More Progressive Occlusion

In the GREAT Randomized Clinical Trial, hydrogel coils achieved more progressive occlusion at follow-up than bare platinum coils.<sup>1,3</sup>



% COMPLETE OCCLUSION

### Complete Neointimal Growth

Hydrogel serves as a mechanical scaffold for accelerated tissue formation across the aneurysm neck. Aneurysm explants (below) from in vivo testing demonstrate progressive occlusion with complete neointimal formation at 12 weeks.<sup>2</sup>

Day 0



Week 1



Week 2

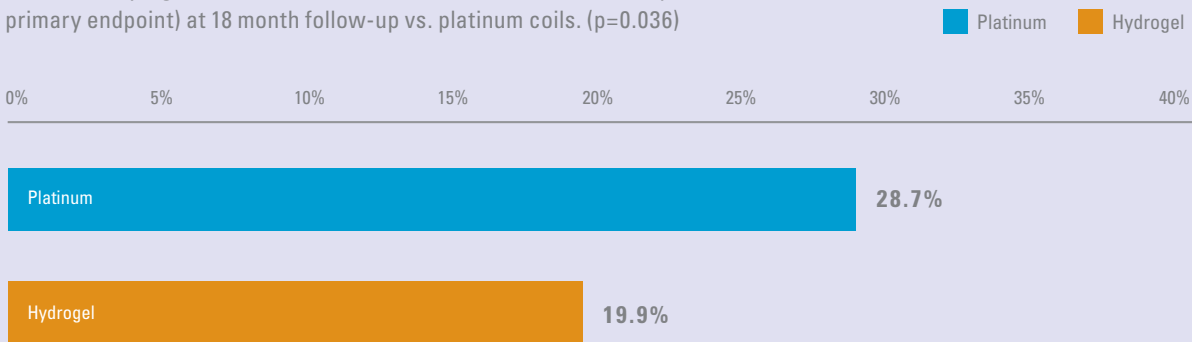


# Safe Treatment

Hydrogel coils are as safe as bare platinum coils.<sup>1</sup> The newest extra-soft hydrogel coil designs allow for placement of hydrogel at the neck and in ruptured aneurysms.

## Less Unfavorable Outcomes<sup>1</sup>

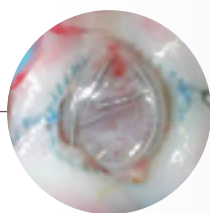
In the GREAT randomized controlled trial, hydrogel coils exhibited a statistically significant lower rate of unfavorable outcomes (composite primary endpoint) at 18 month follow-up vs. platinum coils. (p=0.036)



## % UNFAVORABLE COMPOSITE PRIMARY OUTCOME

Primary Composite Endpoint	Hydrogel	Bare Platinum
Major recurrence	12% (28/226)	18% (42/230)
Retreatment	3% (7/226)	6% (14/230)
mRS 3 to 5 (prevented angiographic follow-up)	1% (3/226)	0% (0/230)
mRS 6 (any death)	3% (7/226)	4% (10/230)

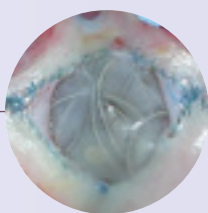
Week 4



Week 8



Week 12



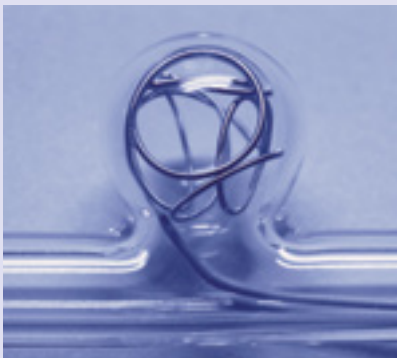
## Soft and Stable

- Hydrogel and Platinum coil lines feature a self-bracing 3D shape with progressive loop sizes
- Extra soft implants for confident coiling of acute aneurysms
- Soft pusher wire-to-coil transition minimizes microcatheter movement



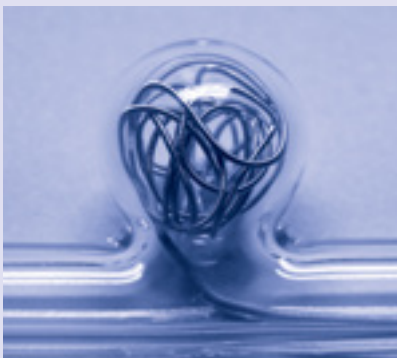
### Easy Stabilization

Smaller diameter initial loops stay inside the aneurysm.



### Versatile Conformability

Progressive loops brace the periphery and conform to diverse aneurysm morphologies.







### Dependable Security

Final loops concentrically reinforce and stabilize the basket, providing stable neck coverage.

## Efficient Filling

Long length and large outer diameter options for maximum filling efficiency and cost effectiveness.

Coil Line		Coil Volume vs. Platinum 10 System*
HydroFill** 0.018"		3.2x
HydroFrame 18 0.0145"		2.1x
HydroSoft 0.013"		1.7x
10 System Coil 0.010"		1x

\* Filling volume per cm of coil vs. 0.010" platinum coil

\*\* HydroFill >4 mm diameter sizes after Hydrogel expansion from 0.015" pre-expansion diameter

In the GREAT randomized controlled trial, hydrogel coils achieved significantly higher packing density with less coil length.<sup>1</sup>

**10 cm**  
Less Coil Length

**LESS**  
Recurrence

**LESS**  
Retreatment<sup>1</sup>

# A Complete Portfolio to Treat a Wide Range of Aneurysms and Neurovascular Lesions

MicroVention's comprehensive portfolio features clinically proven Hydrogel coils, which can be used exclusively or in combination with our trusted platinum coils.

PRODUCT CATEGORY	PRODUCT FAMILY	Diameter (mm) / Length (cm)	STANDARD <sup>4</sup>	SOFT <sup>4</sup>	EXTRA SOFT <sup>4</sup>
<b>Hydrogel Coils</b> HydroCoil® Embolic System  <b>Key Benefits:</b> <ul style="list-style-type: none"> <li>• Three softness grades for framing, filling and finishing</li> <li>• Concentric filling with soft and extra soft implants</li> </ul>		<b>HydroFrame® 18</b> 6–20 / 19–48			
		<b>HydroFrame® 10</b> 4–10 / 5–36			
		<b>HydroSoft® 3D</b> 1–3 / 2–10			
		<b>HydroSoft® Helical</b> 1.5–6 / 2–20			
<b>Platinum Coils</b> MicroPlex® Coil System  <b>Key Benefits:</b> <ul style="list-style-type: none"> <li>• Versatile framing, filling and finishing options</li> <li>• Designed to work seamlessly with Hydrogel coil technology</li> </ul>		<b>Cosmos® 18</b> 6–24 / 19–68			
		<b>Cosmos® 10</b> 2–10 / 2–36			
		<b>HyperSoft® 3D</b> 1–5 / 2–15			
		<b>HyperSoft® Helical</b> 1.5–6 / 1–8			
<b>Specialty Coils</b>  <b>Key Benefits:</b> <ul style="list-style-type: none"> <li>• Hydrogel core of HydroFill line expands coil volume by up to 50%</li> <li>• VFC coil's unique loop/wave shape and long length sizes seek out and fill available space efficiently</li> </ul>		<b>HydroFill®</b> 2–12 / 6–30			
		<b>VFC®</b> 1–20 / 3–60			



# V-Trak® Advanced Delivery and Detachment System

Ease-of-use with excellent performance from coil introduction to detachment.



**Soft distal pusher wire and detachment zone** minimizes microcatheter deflection.



**Robust, tapered introducer sheath** for smooth coil introduction.



**Robust hypotube** facilitates excellent pushability and responsiveness.



**Fluoro-safe markers** minimize radiation exposure.



**Thermal mechanical detachment system** results in rapid, reliable detachment (<1 sec).

1. Taschner CA. et al. Second-Generation Hydrogel Coils for the Endovascular Treatment of Intracranial Aneurysms - A Randomized Controlled Trial. *Stroke* 2018; 49: 667-674.
2. Yoshino et al Endovascular treatment of intracranial aneurysms: Comparative Evaluation in a Terminal Bifurcation Aneurysm Model in Dogs, *Journal of Neurosurgery*; 101:996-1003, December 2004
3. Taschner CA et al. GREAT - a randomized controlled trial comparing HydroSoft/HydroFrame and bare platinum coils for endovascular aneurysm treatment: procedural safety and core-lab-assessed angiographic results. *Neuroradiology* 2016; 58: 777-786.
4. FD18-0029A

## INDICATIONS FOR USE:

The HydroCoil® Embolic System (HES) is intended for the endovascular embolization of intracranial aneurysms and other neurovascular abnormalities such as arteriovenous malformations and arteriovenous fistulae. The HES is also intended for vascular occlusion of blood vessels within the neurovascular system to permanently obstruct blood flow to an aneurysm or other vascular malformation and for arterial and venous embolizations in the peripheral vasculature. The device should only be used by physicians who have undergone pre-clinical training in all aspects of HES procedures as prescribed by MicroVention.

The MicroPlex® Coil System (MCS) is intended for the endovascular embolization of intracranial aneurysms and other neurovascular abnormalities such as arteriovenous malformations and arteriovenous fistulae. The MCS is also intended for vascular occlusion of blood vessels within the neurovascular system to permanently obstruct blood flow to an aneurysm or other vascular malformation and for arterial and venous embolizations in the peripheral vasculature. The device should only be used by physicians who have undergone pre-clinical training in all aspects of MCS procedures as prescribed by MicroVention.

Federal (USA) law restricts this device to sale by or on the order of a physician.

This device should be used only by physicians trained in percutaneous, intravascular techniques and procedures at medical facilities with the appropriate fluoroscopy equipment. The HydroCoil Embolic System and MicroPlex Coil System should only be used by physicians who have received appropriate training for the device.

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