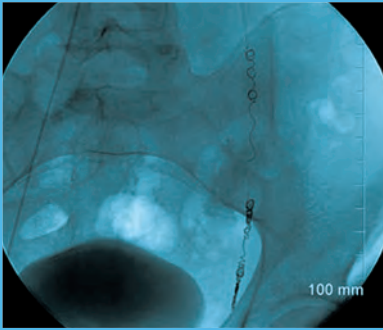


Concerto™ Detachable Coil System
Fast, precise control...

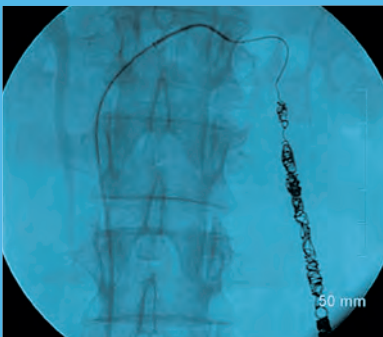


COVIDIEN

Overview



Malpositioned pushable coil in varicocele embolization



Microcatheter buckling when deploying pushable coils

Coil embolization is a minimally invasive treatment option to open surgery and is intended for various conditions in the peripheral vasculature including aneurysms, hemorrhage and vascular anomalies.

Clinical limitations of traditional pushable coils

Traditionally, pushable coils have been used to treat these lesions, however several significant clinical and technical deficits have been identified:¹

- A lack of range of coil lengths
- Coil stretching
- Inability to completely occlude, resulting in coil compaction or revascularization
- Inability to precisely deploy coils resulting in:
 - Non-target embo or collateral vascularization
 - Migration which can lead to significant morbidities

Concerto™ Detachable Coil System

Fast

Reliable, instant detachment.

Controlled

Unique instant detachment that allows full deployment and retraction of the coil before release.

Excellent for high flow regions.

Precise

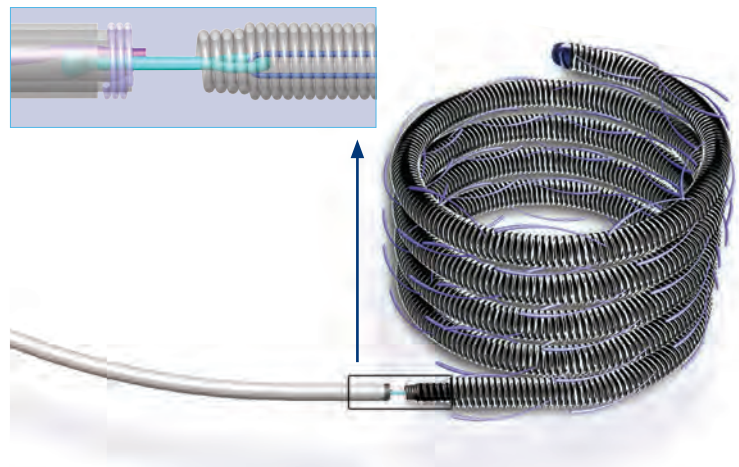
Stretch resistant design to minimize coil stretching during re-positioning with no time limit on coil placement

Instant coil detachment system

- Freely-rotating ball-and-socket mechanism
- Unique floating eyelet

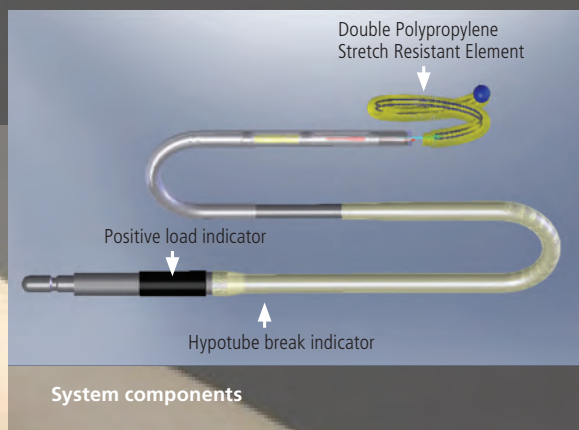
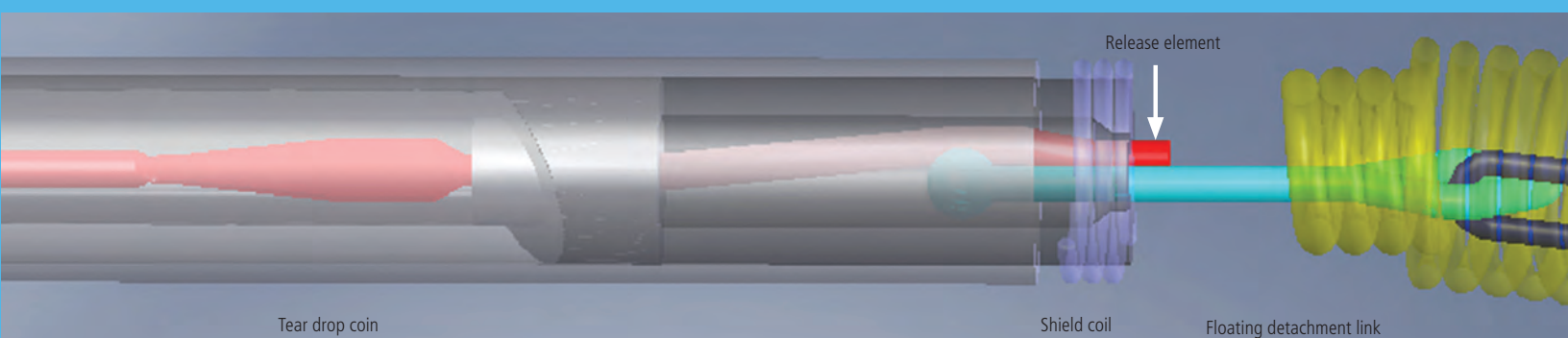
Superior stretch resistance enables responsive placement and repositioning

- Robust polypropylene strand(s)



Concerto™ Detachment System

The Concerto™ detachable coil can be carefully placed and remain attached until the configuration and secure positioning is acceptable, minimizing the risk of coil migration and non-target embolization.



Steps to detachment

Position coil

Once the coil is in the desired position, advance the implant until the coil alignment marker is just distal to the proximal catheter marker band.

Insert pusher into Instant Detacher

Retract the pusher until the "T" is formed with the catheter marker band and coil alignment marker.

Gently slide thumb-slide

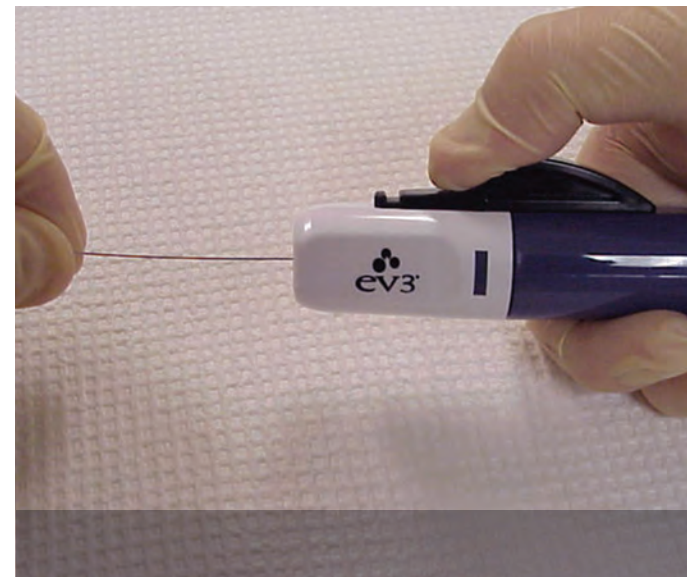
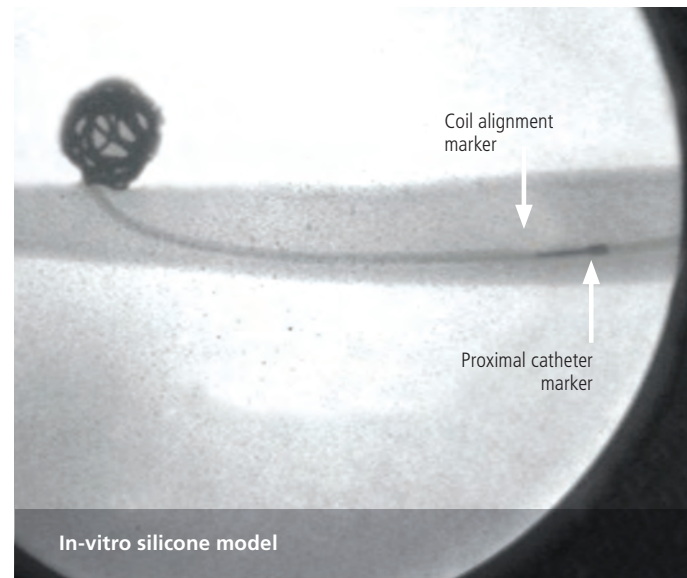
Gently pull the thumb-slide one full stroke over 1-2 seconds.

Coil instant detachment

Coil automatically detaches from system.

Release thumb-slide

Slowly allow the thumb-slide to return to its original position. Remove the Instant Detacher.



Benefits of Concerto™ Detachable Coil System

Concerto™ detachable coils are available in a wide range of lengths in PGLA and nylon fibered coils to deliver greater filling with fewer coils.

Concerto™ coils can be delivered through lower-profile, hydrophilic microcatheters and softer, smaller microwires, allowing the operator to navigate tortuous anatomy and access distal locations to achieve a more focal occlusion at the site of pathology, thus resulting in targeted focal obliteration.¹

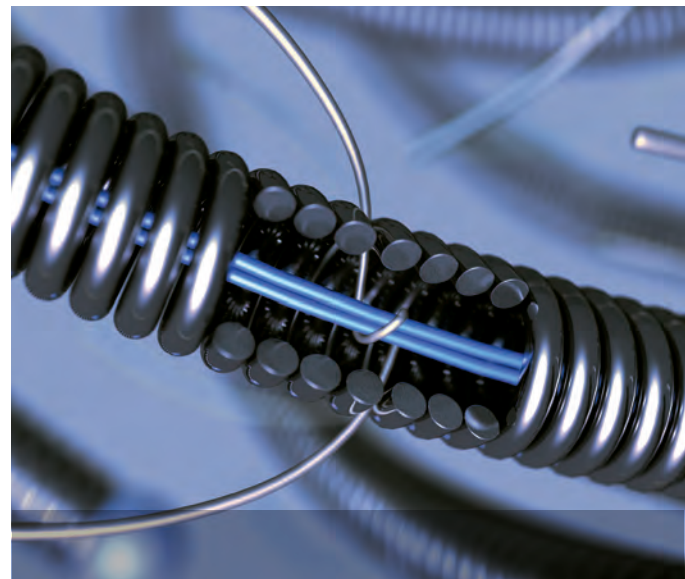
High flow areas

Concerto™ nylon and PGLA fiber systems feature the unique LatticeFX™ technology that is designed to enhance tissue response without sacrificing delivery or packing performance. This technology provides a solution in high flow peripheral lesions such as pulmonary AVMs and embolization of hemorrhages:

- Gastrointestinal hemorrhage
- Epistaxis
- Pelvic hemorrhage
- Post-traumatic hemorrhage
- Hemoptysis
- Pseudo aneurysm rupture

LatticeFX™ technology

- The LatticeFX™ or scaffolding potentially serves to orient cell adhesion and extracellular deposition²
- Proper orientation of fibrin potentially serves to enhance cell attachment and migration during wound healing^{3/4}



Order Number	Description	Diameter	Length	Shape	Type	Minimum
		(mm)	(cm)			Microcatheter Compatibility (in)
NV-2-4-Helix	Concerto™ nylon helical	2	4	Helix	Fibered	0.0165"
NV-2-6-Helix	Concerto™ nylon helical	2	6	Helix	Fibered	0.0165"
NV-2-8-Helix	Concerto™ nylon helical	2	8	Helix	Fibered	0.0165"
NV-3-4-Helix	Concerto™ nylon helical	3	4	Helix	Fibered	0.0165"
NV-3-8-Helix	Concerto™ nylon helical	3	8	Helix	Fibered	0.0165"
NV-4-8-Helix	Concerto™ nylon helical	4	8	Helix	Fibered	0.0165"
NV-4-10-Helix	Concerto™ nylon helical	4	10	Helix	Fibered	0.0165"
NV-5-15-Helix	Concerto™ nylon helical	5	15	Helix	Fibered	0.021"
NV-5-20-Helix	Concerto™ nylon helical	5	20	Helix	Fibered	0.021"
NV-6-20-Helix	Concerto™ nylon helical	6	20	Helix	Fibered	0.021"
NV-7-30-Helix	Concerto™ nylon helical	7	30	Helix	Fibered	0.021"
NV-8-30-Helix	Concerto™ nylon helical	8	30	Helix	Fibered	0.021"
NV-9-30-Helix	Concerto™ nylon helical	9	30	Helix	Fibered	0.021"
NV-10-30-Helix	Concerto™ nylon helical	10	30	Helix	Fibered	0.021"
PV-12-30-Helix	Concerto™ PGLA helical	12	30	Helix	Fibered	0.021"
PV-14-30-Helix	Concerto™ PGLA helical	14	30	Helix	Fibered	0.021"
PV-16-40-Helix	Concerto™ PGLA helical	16	40	Helix	Fibered	0.021"
PV-18-40-Helix	Concerto™ PGLA helical	18	40	Helix	Fibered	0.021"
PV-20-50-Helix	Concerto™ PGLA helical	20	50	Helix	Fibered	0.021"

References

2-4mm nylon fibered coils are able to accommodate microcatheters with ID>0.0165". Nylon and PGLA fibered Concerto™ coils sizes 5mm and above are able to accommodate microcatheters with ID>0.021".

1. Gandras E, Greben C, Putterman D, et al. Visceral arterial embolization. *Endovascular Today*. 2008;6:66–74.
2. In-vitro experimentation in two 4mm wide-neck bifurcation aneurysm models, one coiled with Axiom™ Bare and the other with Axiom™ MicroFX™. Performed by Prof. David H. Frakes, PhD, Assistant Professor, and Haithem Babiker, School of Biological and Health Systems Engineering School of Electrical, Computer, and Energy Engineering Arizona State University, in collaboration with Dr. Fernando Gonzales at the Keller Center for Imaging Innovation, Barrow Neurological Institute
3. The Behavior of Human Mesenchymal Stem Cell in 3D Fibrin Clots. *Tissue Engineering*, 2006; 12(6): 1587-1595. Ho W, et al.
4. Fibrin Microthreads Promote Stem Cell Growth for Localized Delivery in Regenerative Therapy. MS Thesis, Worcester Polytechnic Institute 2008. M Murphy.
5. Treatment of Ruptured Aneurysm with Axiom™ MicroFX™, Bhattacharaya, Jo. Case Report, ev3.

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