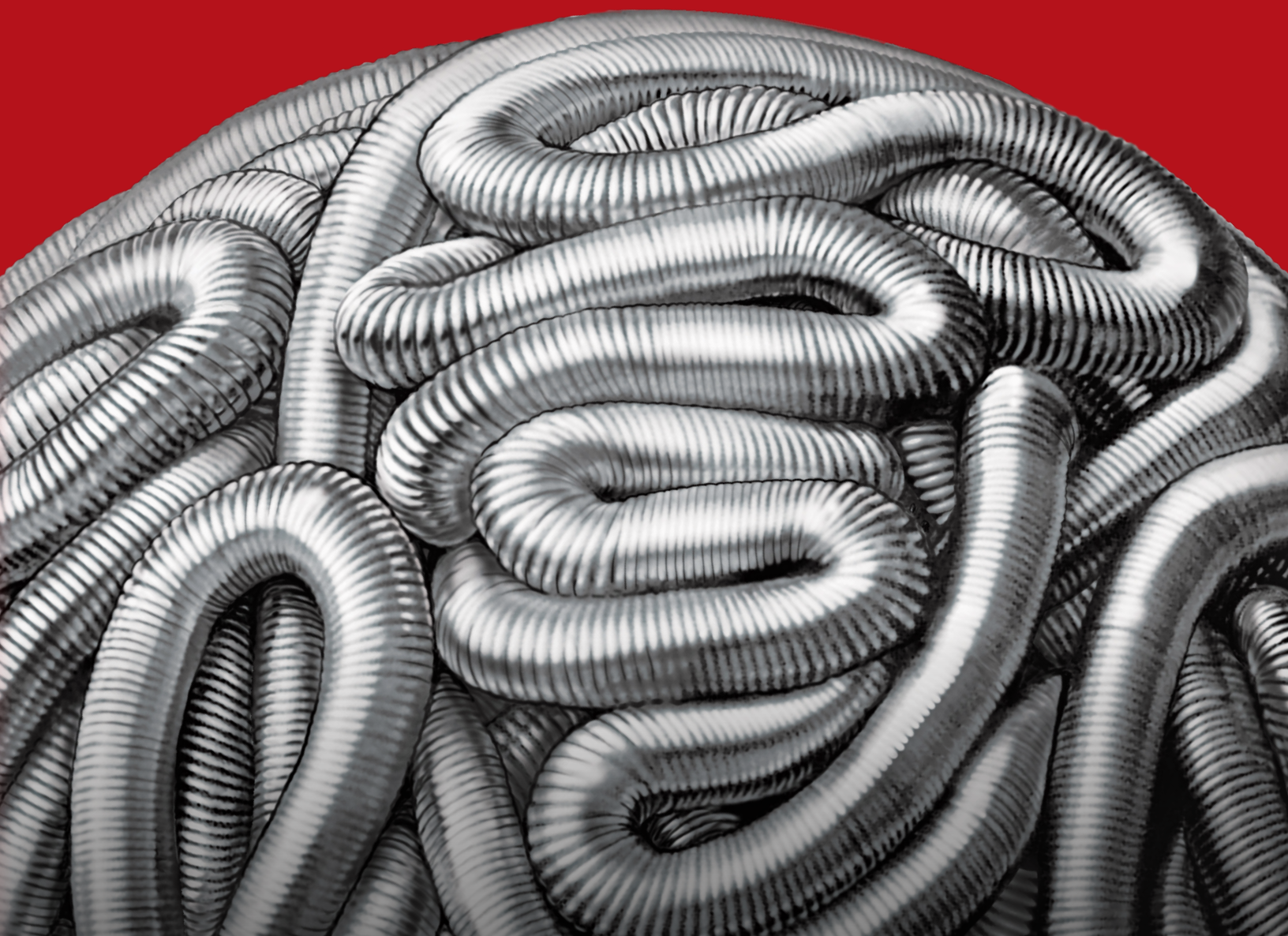




Big Coil Advantages

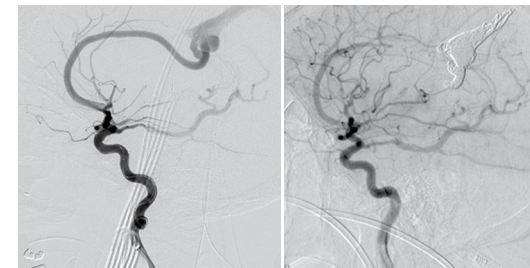


Penumbra Coil 400™

Big Coils, Big Advantages.

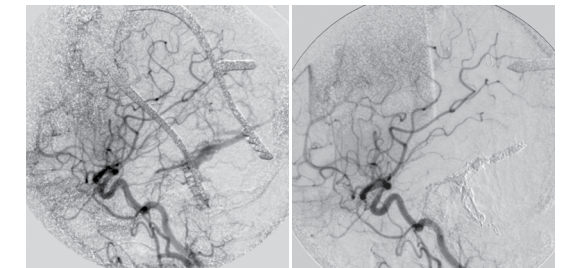
Cost Effective^{1,2,3}
 Less Radiation^{3,4}
 Dense Occlusion^{1,5,6,7,8,9,10}
 25% Faster Procedure^{3,5}

Vein of Galen Embolization



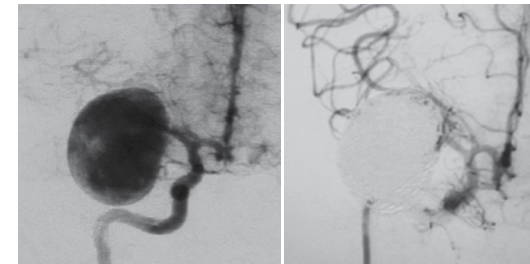
Dr. Adnan Siddiqui
 University at Buffalo, NY

Transverse Sinus Embolization



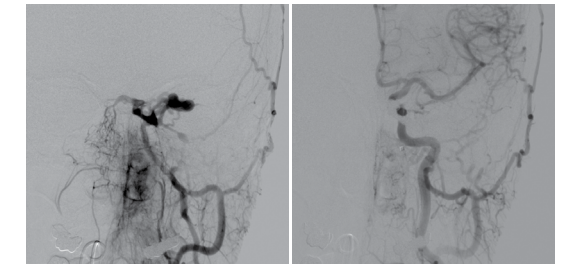
Dr. Philippe Gailloud
 Johns Hopkins University Medical Center, MD

Large Middle Cerebral Artery Aneurysm



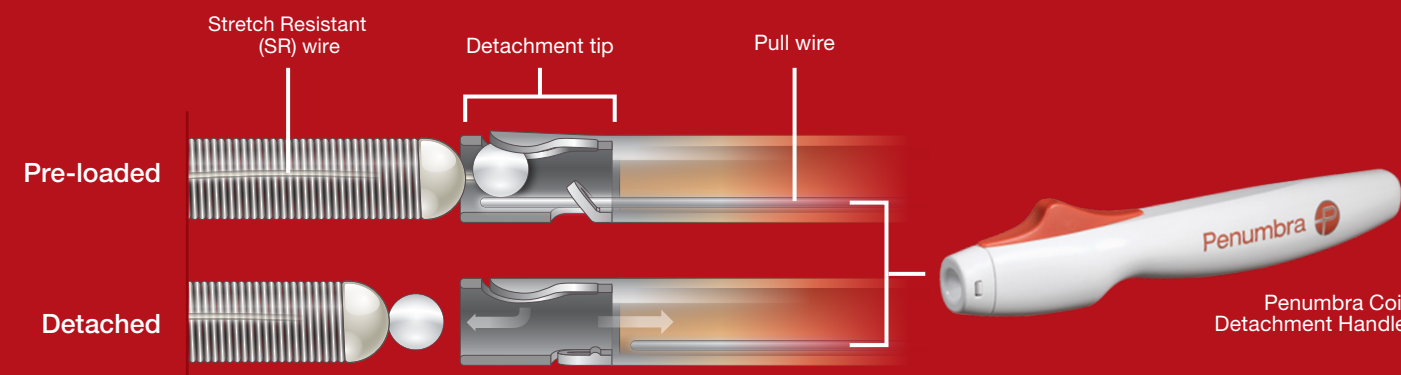
Dr. Nelson Lobelo
 Hospital Infantil San José, Bogotá, Colombia

Indirect Cavernous Carotid Fistula





Dr. Donald Frei
 Swedish Medical Center, CO

Designed for Reliable, Instant Detachment



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8. Kulcsár Z, Wanke I, Rüfenacht D, et al. Safety and effectiveness of large volume coils in the treatment of small aneurysms [Published online January 20, 2016]. J NeuroIntervent Surg. doi:10.1136/neurintsurg-2015-012100.
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10. Alexander M, Chowdhary A, Baxter B, et al. Initial U.S. multi-center experience with Penumbra Coil 400™: A series of 30 cases. Intervent Neuroradiol. 2011;17(suppl 1):141-146.

| Frame | Fill | Fill / Finish | |
|---|--------------|--------------------|---|
| COMPLEX STANDARD | COMPLEX SOFT | COMPLEX EXTRA SOFT | CURVE EXTRA SOFT |
|  | | |  |

| Catalog Number | Secondary Diameter (mm) | Length (cm) | Catalog Number | Secondary Diameter (mm) | Length (cm) | Catalog Number | Secondary Diameter (mm) | Length (cm) | Catalog Number | Secondary Diameter (mm) | Length (cm) |
|----------------|-------------------------|-------------|----------------|-------------------------|-------------|----------------|-------------------------|-------------|----------------|-------------------------|-------------|
| 4002C0408 | 4 | 8 | 4004C0306 | 3 | 6 | 4006C0202 | 2 | 2 | 4006U0201 | 2 | 1 |
| 4002C0506 | 5 | 6 | 4004C0310 | 3 | 10 | 4006C0203 | 2 | 3 | 4006U0202 | 2 | 2 |
| 4002C0510 | 5 | 10 | 4004C0406 | 4 | 6 | 4006C0204 | 2 | 4 | 4006U0203 | 2 | 3 |
| 4002C0610 | 6 | 10 | 4004C0408 | 4 | 8 | 4006C0303 | 3 | 3 | 4006U0204 | 2 | 4 |
| 4002C0615 | 6 | 15 | 4004C0412 | 4 | 12 | 4006C0304 | 3 | 4 | 4006U0302 | 3 | 2 |
| 4002C0710 | 7 | 10 | 4004C0509 | 5 | 9 | 4006C0305 | 3 | 5 | 4006U0303 | 3 | 3 |
| 4002C0715 | 7 | 15 | 4004C0513 | 5 | 13 | 4006C0306 | 3 | 6 | 4006U0304 | 3 | 4 |
| 4002C0720 | 7 | 20 | 4004C0610 | 6 | 10 | 4006C0308 | 3 | 8 | 4006U0305 | 3 | 5 |
| 4002C0820 | 8 | 20 | 4004C0615 | 6 | 15 | 4006C0404 | 4 | 4 | 4006U0306 | 3 | 6 |
| 4002C0830 | 8 | 30 | 4004C0710 | 7 | 10 | 4006C0406 | 4 | 6 | 4006U0308 | 3 | 8 |
| 4002C0925 | 9 | 25 | 4004C0715 | 7 | 15 | 4006C0408 | 4 | 8 | 4006U0404 | 4 | 4 |
| 4002C0935 | 9 | 35 | 4004C0720 | 7 | 20 | 4006C0410 | 4 | 10 | 4006U0406 | 4 | 6 |
| 4002C1020 | 10 | 20 | 4004C0815 | 8 | 15 | | | | 4006U0408 | 4 | 8 |
| 4002C1030 | 10 | 30 | 4004C0820 | 8 | 20 | | | | 4006U0410 | 4 | 10 |
| 4002C1040 | 10 | 40 | 4004C0925 | 9 | 25 | | | | | | |
| 4002C1135 | 11 | 35 | 4004C1020 | 10 | 20 | | | | | | |
| 4002C1145 | 11 | 45 | 4004C1030 | 10 | 30 | | | | | | |
| 4002C1235 | 12 | 35 | 4004C1135 | 11 | 35 | | | | | | |
| 4002C1245 | 12 | 45 | 4004C1235 | 12 | 35 | | | | | | |
| 4002C1348 | 13 | 48 | 4004C1335 | 13 | 35 | | | | | | |
| 4002C1450 | 14 | 50 | 4004C1440 | 14 | 40 | | | | | | |
| 4002C1557 | 15 | 57 | 4004C1645 | 16 | 45 | | | | | | |
| 4002C1660 | 16 | 60 | | | | | | | | | |
| 4002C1857 | 18 | 57 | | | | | | | | | |
| 4002C2060 | 20 | 60 | | | | | | | | | |
| 4002C2260 | 22 | 60 | | | | | | | | | |
| 4002C2457 | 24 | 57 | | | | | | | | | |
| 4002C2860 | 28 | 60 | | | | | | | | | |
| 4002C3260 | 32 | 60 | | | | | | | | | |



| Catalog Number | Tip Shape | ID (in.) | Distal and Proximal OD | Guidewire Compatibility (in.) | Tip Markers | Length (cm) |
|----------------|-----------|----------|------------------------|-------------------------------|-------------|-------------|
| PXSLIMSTR | Straight | .025 | 2.6/2.95 F | .020 | 2 | 150 |
| PXSLIM045 | 45° | .025 | 2.6/2.95 F | .020 | 2 | 150 |
| PXSLIM090 | 90° | .025 | 2.6/2.95 F | .020 | 2 | 150 |
| PXSLIM130 | 130° | .025 | 2.6/2.95 F | .020 | 2 | 150 |

| Catalog Number | Description |
|----------------|-------------------|
| DH1 | Detachment Handle |

Penumbra Coil System — Indication for Use
The Penumbra Coil System is indicated for the embolization of:

- Intracranial aneurysms.
- Other neurovascular abnormalities such as arteriovenous malformations and arteriovenous fistulae.
- Arterial and venous embolizations in the peripheral vasculature.

Contraindications

There are no known contraindications.

Warnings

The Penumbra Coil System should only be used by physicians who have received appropriate training in neuro-interventional techniques.

Precautions

- The device is intended for single use only. Do not resterilize or reuse. Resterilization and/or reuse may compromise the structural integrity of the device or increase the risk of contamination or infection leading to device failure and/or cross-infection and potential patient injury, illness, or death.
- Do not use kinked or damaged devices. Do not use opened or damaged packages. Return all damaged devices and packaging to the manufacturer/distributor.
- Use prior to the "Use By" date.
- Use device in conjunction with fluoroscopic guidance.
- Do not advance or retract the device against resistance without careful assessment of the cause using fluoroscopy.
- Moving or torquing the device against resistance may result in damage to the vessel or device.
- Maintain a constant infusion of an appropriate flush solution.

Potential Adverse Events

Possible complications include, but are not limited to, the following: acute occlusion; air embolism; allergic reaction and anaphylaxis from contrast media; aneurysm rupture; arteriovenous fistula; coagulopathy; coil herniation into parent vessel; death; device malfunction; distal embolization; emboli; embolic stroke and other cerebral ischemic events; false aneurysm formation; hematoma or hemorrhage at access site of entry; incomplete aneurysm occlusion; infection; intima dissection; intracranial hemorrhage; ischemia; myocardial infarction; neurological deficits including stroke; parent artery occlusion; peripheral thromboembolic events; post-embolization syndrome; premature device detachment; recanalization; renal failure; respiratory failure; revascularization; thromboembolic episodes; vessel spasm, thrombosis, dissection, or perforation.

Penumbra Delivery Microcatheters — Indication for Use
The Penumbra Delivery Microcatheters are intended to

assist in the delivery of diagnostic agents, such as contrast media, and therapeutic agents, such as occlusion coils to the peripheral and neuro vasculature.

Contraindications

There are no known contraindications.

Warnings

The Penumbra Delivery Microcatheters should only be used by physicians who have received appropriate training in interventional techniques.

Precautions

- The devices are intended for single use only. Do not resterilize or reuse. Resterilization and/or reuse may result in ineffective catheter coating lubrication, which may result in high friction and the inability to access the target location.
- Do not use kinked or damaged devices. Do not use open or damaged packages. Return all damaged devices and packaging to the manufacturer/distributor.
- Use prior to the "Use By" date.
- Use the Penumbra Delivery Microcatheters in conjunction with fluoroscopic visualization.

- Do not advance or withdraw the Penumbra Delivery Microcatheters against resistance without careful assessment of the cause using fluoroscopy. If the cause cannot be determined, withdraw the device. Moving or torquing the device against resistance may result in damage to the vessel or device.
- Maintain a constant infusion of an appropriate flush solution.
- If flow through the device becomes restricted, do not attempt to clear the lumen by infusion. Remove and replace the device.

Potential Adverse Events

Possible complications include, but are not limited to, the following: acute occlusion; hematoma or hemorrhage at access site; death; intracranial hemorrhage; hemorrhage; infection (at access site); distal embolization; ischemia (cardiac and/or cerebral); embolus (air, foreign body, thrombus, plaque); aneurysm perforation; false aneurysm formation; neurological deficits including stroke; vessel spasm, thrombosis, dissection, perforation or rupture; air embolism; emboli.

Caution: Federal (USA) law restricts these devices to sale by or on the order of a physician. Prior to use, please refer to the Instructions for Use for complete product indications, contraindications, warnings, precautions, potential adverse events, and detailed instructions for use. Renderings for illustrative purposes only. Individual results may vary based on a variety of patient-specific attributes. Images used with permission. Consent on file at Penumbra, Inc. Please contact your local Penumbra representative for more information.

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