LANTERN®

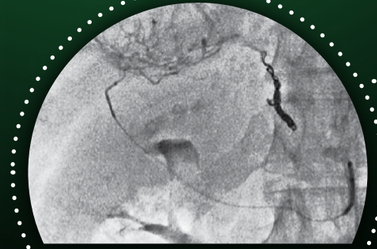
MICROCATHETER

Penumbra

CONFIDENT LARGE VOLUME COIL DELIVERY

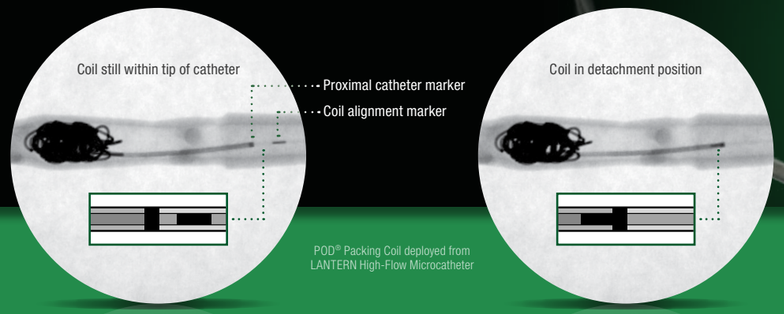
Standard Microcatheter

Advanced Tracking Technology for Access to Tortuous Anatomy



LANTERN Tracking Into Sub-1 mm Vessel[a]

PRECISE COIL DETACHMENT



POD® Packing Coil deployed from LANTERN High-Flow Microcatheter

Ruby® Coil and POD® Device are fully retractable and resheathable, allowing user to achieve ideal placement in the target vessel.

Coil alignment marker passes proximal catheter marker to form "T," indicating that Ruby Coil or POD Device can now be detached.

DUAL MARKERS
Facilitates Precise Coil Deployment

LOW PROFILE, HIGH-FLOW
2.6F, .025" ID for High Flow Access to Small Tortuous Vessels

RADIOPAQUE DISTAL 3CM
Increased Visibility

COIL WOUND CONSTRUCTION
Enables Confident Large Volume Coil Delivery by Preventing Ovalization

8 TRANSITION ZONES
for Advanced Trackability

LANTERN®
MICROCATHETER

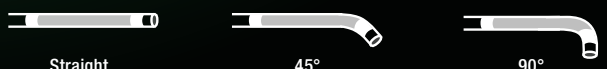
a. Case courtesy of Dr. Dmitri Samoilov, Bon Secours Maryview Medical Center, VA

Ordering Information

LANTERN® MICROCATHETER

Catalog Number	Description	Distal/Proximal OD	ID	Length	Guidewire Compatibility	Tip Markers	Tip Shape
PXSLIMLAN115STR	LANTERN Delivery Microcatheter 115 cm, Straight Tip	2.6/2.95 F	.025"	115 cm	≤.023"	2	Straight
PXSLIMLAN115T45	LANTERN Delivery Microcatheter 115 cm, 45° Tip	2.6/2.95 F	.025"	115 cm	≤.023"	2	45°
PXSLIMLAN115T90	LANTERN Delivery Microcatheter 115 cm, 90° Tip	2.6/2.95 F	.025"	115 cm	≤.023"	2	90°
PXSLIMLAN135STR	LANTERN Delivery Microcatheter 135 cm, Straight Tip	2.6/2.95 F	.025"	135 cm	≤.023"	2	Straight
PXSLIMLAN135T45	LANTERN Delivery Microcatheter 135 cm, 45° Tip	2.6/2.95 F	.025"	135 cm	≤.023"	2	45°
PXSLIMLAN135T90	LANTERN Delivery Microcatheter 135 cm, 90° Tip	2.6/2.95 F	.025"	135 cm	≤.023"	2	90°
PXSLIMLAN150STR	LANTERN Delivery Microcatheter 150 cm, Straight Tip	2.6/2.95 F	.025"	150 cm	≤.023"	2	Straight
PXSLIMLAN150T45	LANTERN Delivery Microcatheter 150 cm, 45° Tip	2.6/2.95 F	.025"	150 cm	≤.023"	2	45°
PXSLIMLAN150T90	LANTERN Delivery Microcatheter 150 cm, 90° Tip	2.6/2.95 F	.025"	150 cm	≤.023"	2	90°

Tip Shapes



Straight 45° 90°

Dead Space[b]

115 cm	135 cm	150 cm
.53 cc	.59 cc	.64 cc

Indication For Use
The Penumbra Delivery Microcatheters are indicated to assist in the delivery of diagnostic agents, such as contrast media, and therapeutic devices, such as occlusion coils, to the peripheral and neuro vasculature.

Contraindications
There are no known contraindications.

Warnings
The Penumbra Delivery Catheters 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 Catheters in conjunction with fluoroscopic visualization
- Do not advance or withdraw the Penumbra Delivery Catheters 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 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

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Indication For Use
The Ruby® Coil System is indicated for arterial and venous embolizations in the peripheral vasculature.

Contraindications
There are no known contraindications.

Warnings
The Ruby Coil System should only be used by physicians who have received appropriate training in 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 withdraw the device against resitance 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
Potential complications include but are not limited to: Acute occlusion, air embolism, death, distal embolization, emboli, false aneurysm formation, hematoma or hemorrhage at puncture/access site/site of entry, infection, intracranial hemorrhage, ischemia, neurological deficits including stroke, vessel spasm, thrombosis, dissection or perforation, thromboembolic episodes, neurological deficits including stroke and possibly death, vascular thrombosis, post-embolization syndrome. revascularization, recanalization, inadequate occlusion, aneurysm rupture, parent artery occlusion, incomplete aneurysm filling

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Indication For Use
The POD® System is indicated for the endovascular 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 POD System should only be used by physicians who have received appropriate training in 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 fluoros copy. If POD cannot be advanced or retracted, withdraw the device as a unit with the microcatheter.
- 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
Potential complications include but are not limited to: 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

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b. Data on file at Penumbra, Inc.

Product availability varies by country. Case images used with permission. Consent on file at Penumbra, Inc. Photographs taken by and on file at Penumbra, Inc. Caution: Federal (USA) law restricts this device to sale by or on the order of a physician. Prior to use, please refer to the Instructions for Use for the Penumbra Delivery Microcatheters, Ruby Coil System, and POD System for complete product indications, contraindications, warnings, precautions, potential adverse events and detailed instructions for use. Please contact your local Penumbra representative for more information.

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