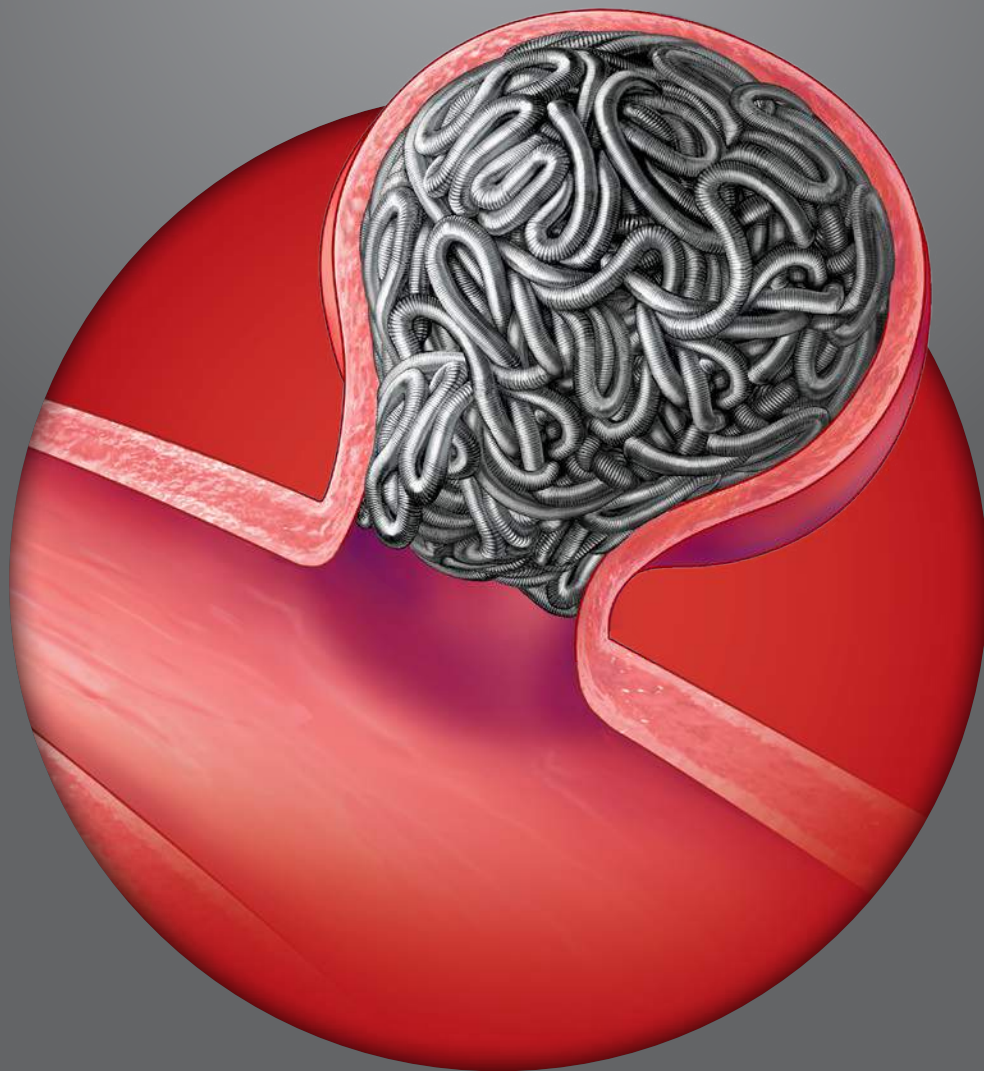


# Ruby<sup>®</sup> Coil

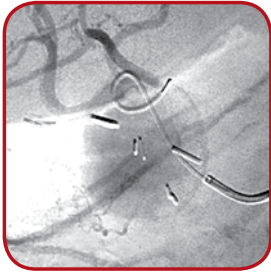
Large Volume Detachable Coils



Penumbra 

# Ruby® Case Examples

## 38 mm Hepatic Artery Aneurysm



Pre-Treatment



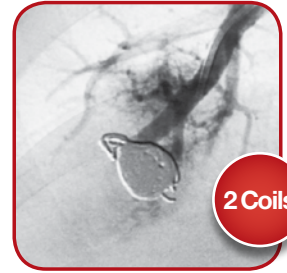
Post-Treatment

**Dr. James Benenati**  
Miami Cardiac and Vascular Institute, FL

## Pulmonary AVM



Pre-Treatment



2 Coils

Post-Treatment

**Dr. J Moskovitz**  
Florida Hospital, Orlando, FL

## Y90 Embolization



Post-Treatment

**Dr. Dmitri Samoilov**  
Medical Center Radiologists, VA

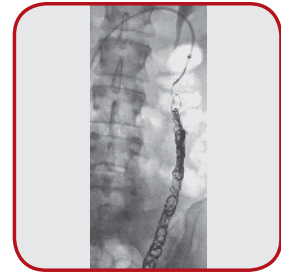
## Type 2 Endoleak



Post-Treatment

**Dr. Corey Teigen**  
Sanford Health, ND

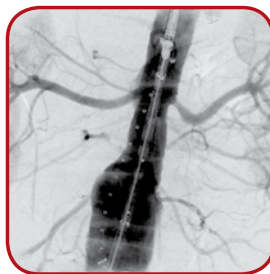
## Ovarian Vein Embolization



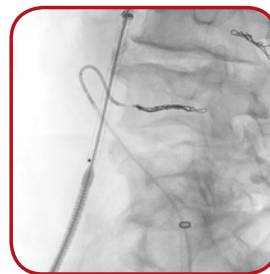
Post-Treatment

**Dr. Olga Brook**  
Beth Israel Deaconess Medical Center, MA

## Type 2 Endoleak



Pre-Treatment



Intra-Operative



Post-Treatment

**Dr. Frank Arko**  
Sanger Heart and Vascular Institute, Charlotte, NC

# Volume Advantage



30 cm Ruby® Coil

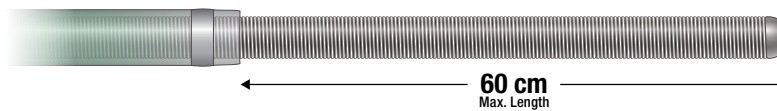


30 cm Conventional Detachable Coil

Reduces the number of coils and procedure time by maximizing length and coil thickness.<sup>1</sup>

## Only Coil to Provide 60 cm Length and .020" Thickness

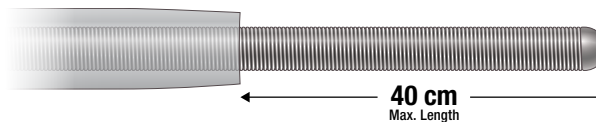
**Ruby® Coil**  
High-Flow Microcatheter  
Penumbra LANTERN™



Coil Thickness

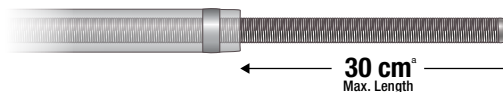
.020"

Conventional 35 Coil  
035 Diagnostic Catheter



.021"

Conventional 18 Coil  
18 Microcatheter



.012"

a. based on 8 mm coil

1. Schönholz C, Benenati J, Arko F, Teigen C, Moskovitz JD. Ruby Detachable Coils—Case reports illustrating the utility of this novel technology. Endovascular Today. 2013;12(4):78-82.

# Large Volume Detachable Coils



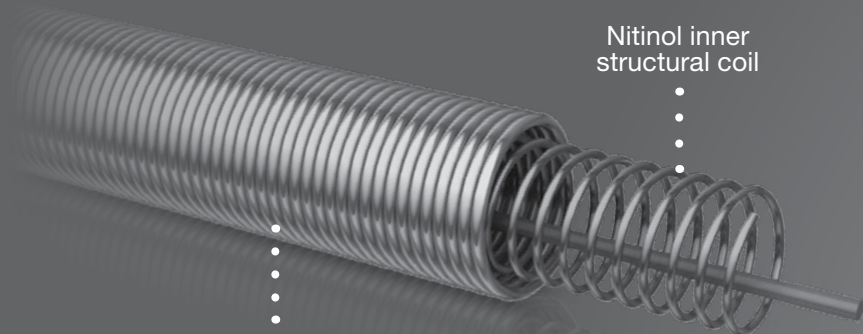
**Standard**  
32 mm x 60 cm



**Soft**  
2 mm x 1 cm

## SOFTNESS

Choice of Standard and Soft coils provide superior packing density while avoiding catheter kick-out.



Thin filament,  
.020" diameter  
platinum coil

Nitinol inner  
structural coil

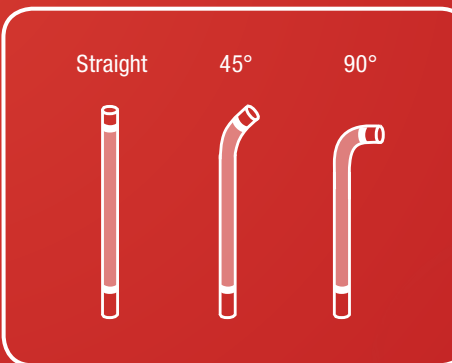
## Unique Tri-Layer Coil Design

Stretch resistant  
Nitinol wire

## EXTREME DELIVERABILITY

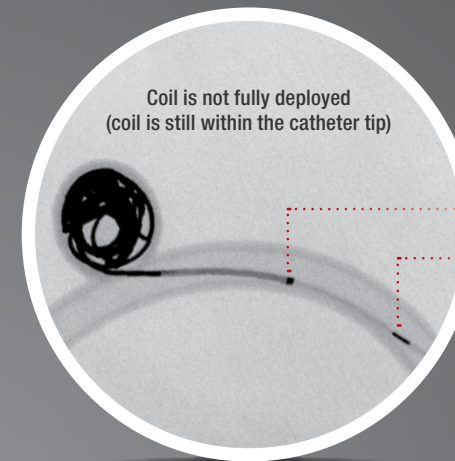
Only coil designed to be delivered through a .025-.027" high flow microcatheter.

### Tip Shapes



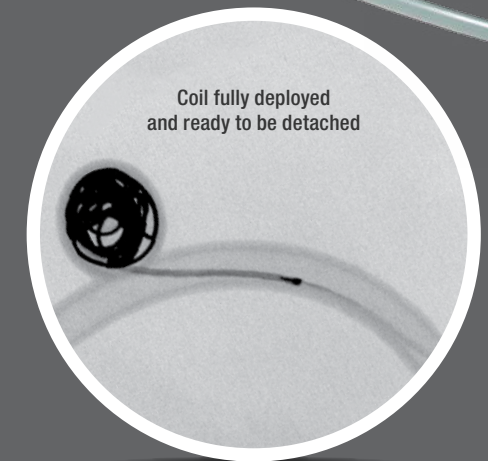
## MECHANICAL DETACHMENT

Ruby® Coil deployed from LANTERN™ High-Flow Microcatheter



Coil is not fully deployed  
(coil is still within the catheter tip)

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



Coil fully deployed  
and ready to be detached

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

## LANTERN™ Microcatheter

**Low Profile**  
2.6 F Distal Shaft  
Enables Access to Small  
Tortuous Vasculature

**High-Flow**  
Large Lumen for Optimal  
Contrast Injections

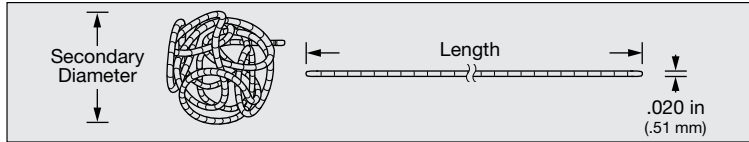
**Increased Visibility**  
Provides Confident  
Placement

**Dual Markers**  
Facilitates Precise  
Coil Deployment

**8 Transition Zones**  
for Advanced  
Trackability

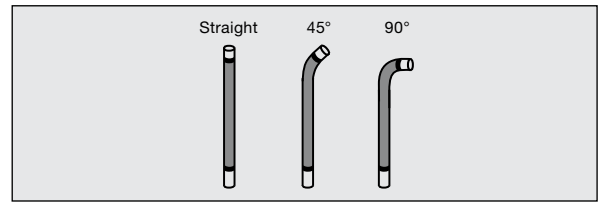
# Ordering Information

## Ruby® Coil



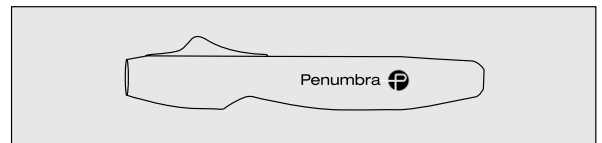
Catalog Number	Secondary Diameter (mm)	Length (cm)	Catalog Number	Secondary Diameter (mm)	Length (cm)
<b>Frame – COMPLEX STANDARD</b>			<b>Frame – COMPLEX STANDARD (cont.)</b>		
RBY2C0305	3	5	RBY2C1660	16	60
RBY2C0312	3	12	RBY2C1857	18	57
RBY2C0320	3	20	RBY2C2060	20	60
RBY2C0410	4	10	RBY2C2457	24	57
RBY2C0415	4	15	RBY2C2860	28	60
RBY2C0420	4	20	RBY2C3260	32	60
RBY2C0430	4	30			
RBY2C0435	4	35			
RBY2C0512	5	12	<b>Fill – COMPLEX SOFT</b>		
RBY2C0520	5	20	RBY4C0201	2	1
RBY2C0530	5	30	RBY4C0202	2	2
RBY2C0612	6	12	RBY4C0204	2	4
RBY2C0620	6	20	RBY4C0305	3	5
RBY2C0630	6	30	RBY4C0315	3	15
RBY2C0725	7	25	RBY4C0406	4	6
RBY2C0740	7	40	RBY4C0415	4	15
RBY2C0825	8	25	RBY4C0620	6	20
RBY2C0840	8	40	RBY4C0630	6	30
RBY2C0930	9	30	RBY4C0835	8	35
RBY2C1035	10	35	RBY4C0860	8	60
RBY2C1240	12	40	RBY4C1035	10	35
RBY2C1260	12	60	RBY4C1240	12	40
RBY2C1440	14	40	RBY4C1650	16	50
RBY2C1460	14	60	RBY4C2060	20	60

## LANTERN™ Delivery Microcatheter



Catalog Number	Tip Shape	Length (cm)	ID	OD Distal / Proximal
PXSLIMLAN115STR	Straight Tip	115	.025"	2.6F / 2.95F
PXSLIMLAN115T45	45° Tip			
PXSLIMLAN115T90	90° Tip			
PXSLIMLAN135STR	Straight Tip	135	.025"	2.6F / 2.95F
PXSLIMLAN135T45	45° Tip			
PXSLIMLAN135T90	90° Tip			
PXSLIMLAN150STR	Straight Tip	150	.025"	2.6F / 2.95F
PXSLIMLAN150T45	45° Tip			
PXSLIMLAN150T90	90° Tip			

## Ruby® Coil Detachment Handle



Catalog Number	Description
RH1	Detachment Handle

Images used with permission. Product availability varies by country. Please contact your local Penumbra representative for more information.

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 complete product indications, contraindications, warnings, precautions, potential adverse events and detailed instructions for use.

### 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 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

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, thrombo-embolic 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

### Indication For Use

The Penumbra Delivery Catheters 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 opened 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

Penumbra

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