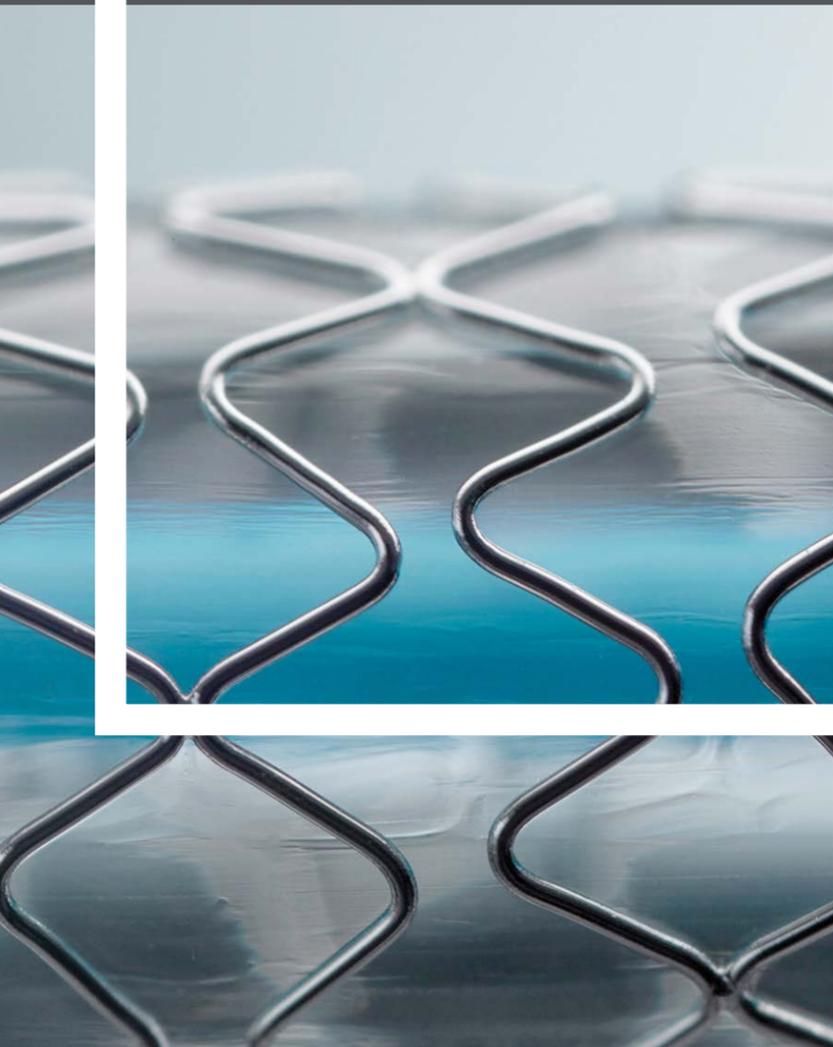
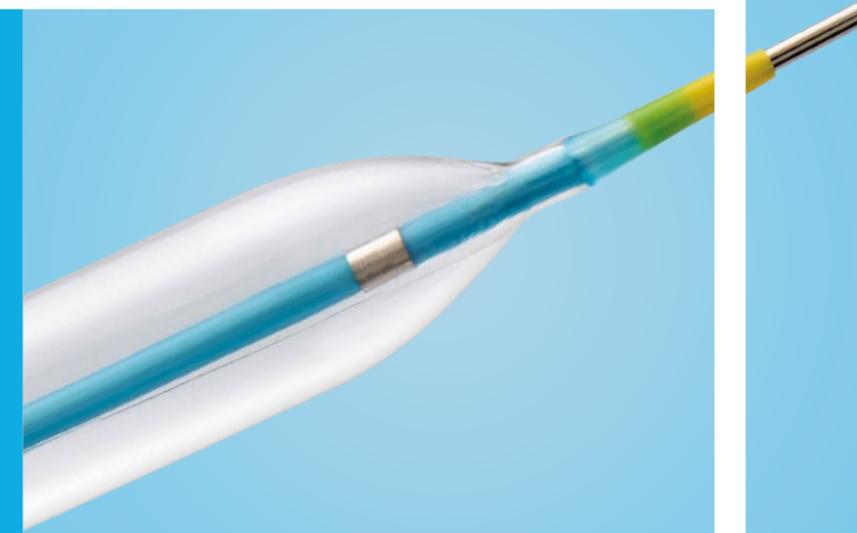
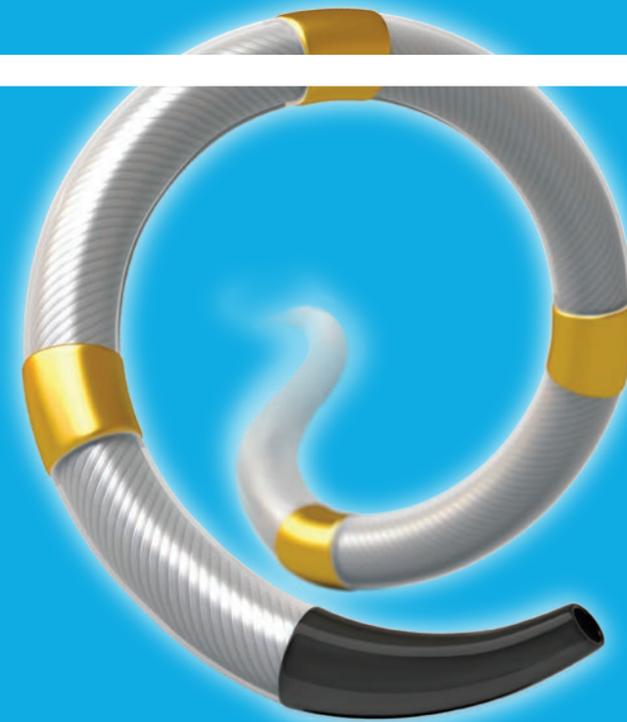
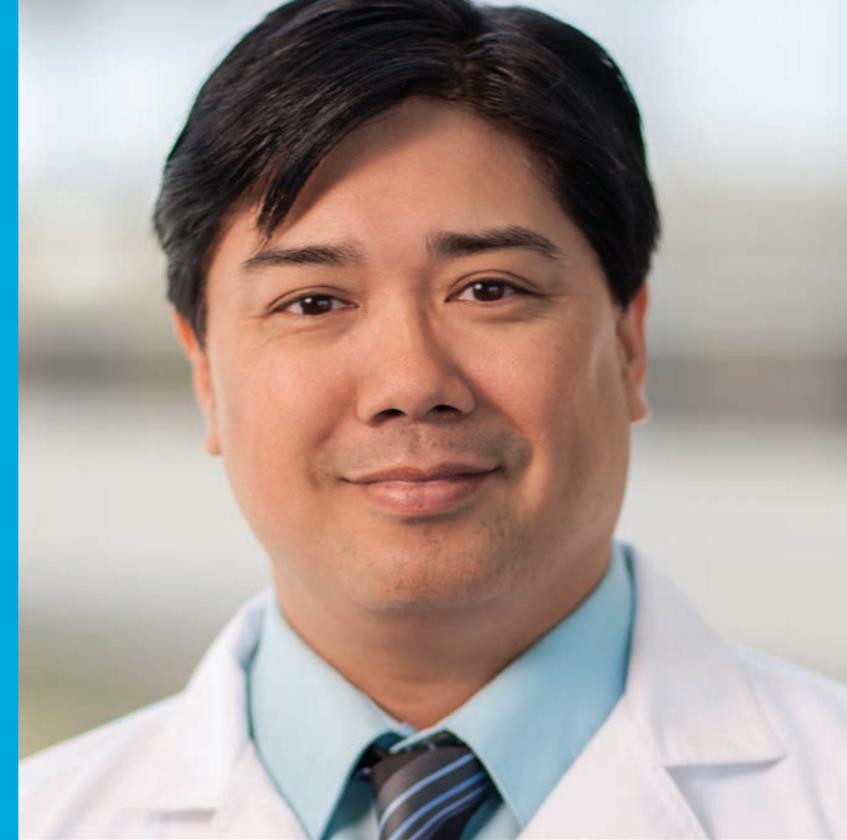


DELIVERING
MORE
**INTERVENTIONAL
PORTFOLIO**



Medtronic
Further, Together

DELIVERING MORE INTERVENTIONAL PORTFOLIO



At Medtronic, innovation is in our blood. In just a few short years, we've innovated a range of medical advancements that deliver the promise of better care for more people worldwide.

CE MARK-APPROVED: IN THE LAST 2 YEARS

										
Reveal LINQ™ Insetable Cardiac Monitoring System	NC Euphora™ Noncompliant Balloon Dilatation Catheter	SEEQ™ Mobile Cardiac Telemetry System	CoreValve™ Evolut™ R Recapturable TAVI System	Resolute Onyx™ Drug-Eluting Stent	Euphora™ Semicompliant Balloon Dilatation Catheter	Micra™ Transcatheter Pacing System	Resolute Onyx™ Large Vessel (4.5-5.0 mm) Drug-Eluting Stent	InTRAKit™ Access Kit	TRAcelet™ Compression Device	DxTerity™ and DxTerity™ TRA Diagnostic Catheters
CRHF	PCI	CRHF	TCV	PCI	PCI	CRHF	PCI	PCI	PCI	PCI

Medtronic
Further, Together

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Coronary and Renal Denervation Products



Delivering More Solutions

Coronary stents

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Resolute Integrity™ DES
Resolute™ DES
Integrity™ BMS

Coronary balloons

NC Euphora™ noncompliant balloon
Euphora™ semicompliant balloon
Sprinter™ Legend™ balloon
NC Sprinter™ balloon

Guide catheters

Launcher™ guide catheter
Sherpa NX™ guide catheter

Diagnostic catheters

DxTerity™ diagnostic catheter
DxTerity™ TRA diagnostic catheter

Transradial accessories

InTRAKit™ access kit
TRAcelet™ compression device

Guidewires

Cougar™ guidewire
Intuition™ guidewire
ProVia™ guidewire
Thunder™ guidewire
Zinger™ guidewire

Aspiration

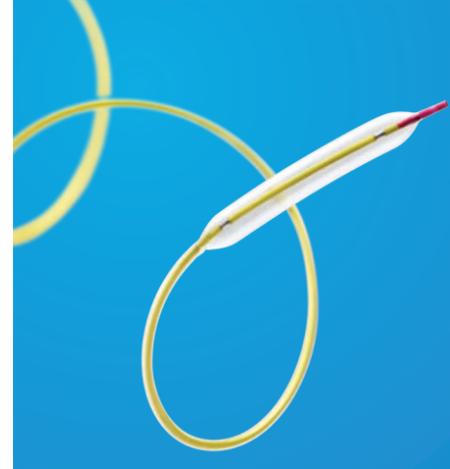
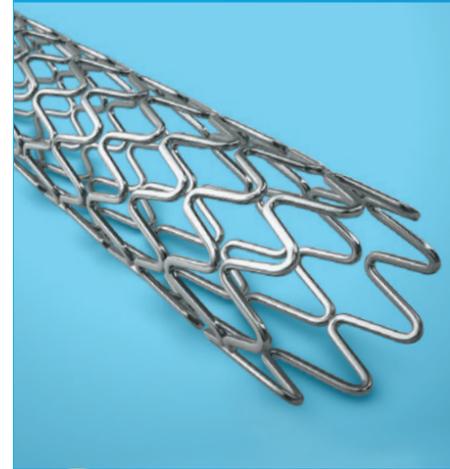
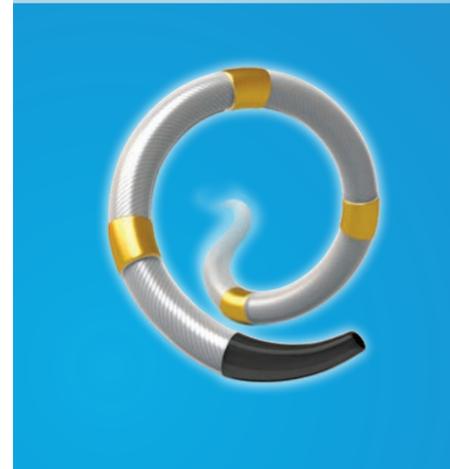
Export Advance™ aspiration catheter
Export™ AP aspiration catheter

Embolic protection and aspiration

Everest™ disposable inflation device
Input™ TS/Input™ PS introducer sheaths
Guardwire™ temporary occlusion and aspiration system

Renal denervation

Symplicity Spyral™ multi-electrode renal denervation catheter
Symplicity G3™ generator





A SYNERGISTIC APPROACH TO **INNOVATION**

Continuous Sinusoid Technology

Continuous Sinusoid Technology begins with a single strand of cobalt alloy formed into a sinusoid, wrapped in a helical pattern and laser-fused. The result is exceptional deliverability and conformability¹ — just another way Medtronic is reshaping the future of stent innovation.

CONTINUOUS SINUSOID DESIGN

- Improves flexibility and conformability

ULTRATHIN, ROUNDED STRUTS

- Smooths tracking in challenging lesions

LASER-FUSED FORMATION

- Adds strength at critical contact points

PRODUCTS FEATURING CONTINUOUS SINUSOID TECHNOLOGY

- Integrity™ BMS
- Resolute Integrity™ DES
- Resolute Onyx™ DES

¹ NC Euphora™ balloon: Bench testing vs. NC Trek* and NC Quantum Apex™* balloons on file at Medtronic. 3.00 x 2.00 mm balloons tested. Euphora™ balloon: Bench testing vs. Trek*, Emerge™*, Sprinter™ Legend™ and Ryujin™* Plus balloons. 2.50 mm x 15 mm balloons tested. Resolute Onyx™ DES: Based on bench test data vs. Promus Premier™* DES, Synergy™* II DES, Xience Xpedition™* DES, Xience Alpine™* DES, BioMatrix NeoFlex™* DES, Orsiro™* DES Ultimaster™* DES and Resolute Integrity™ DES.

A SYNERGISTIC APPROACH TO **INNOVATION**

Full-Wall Technology

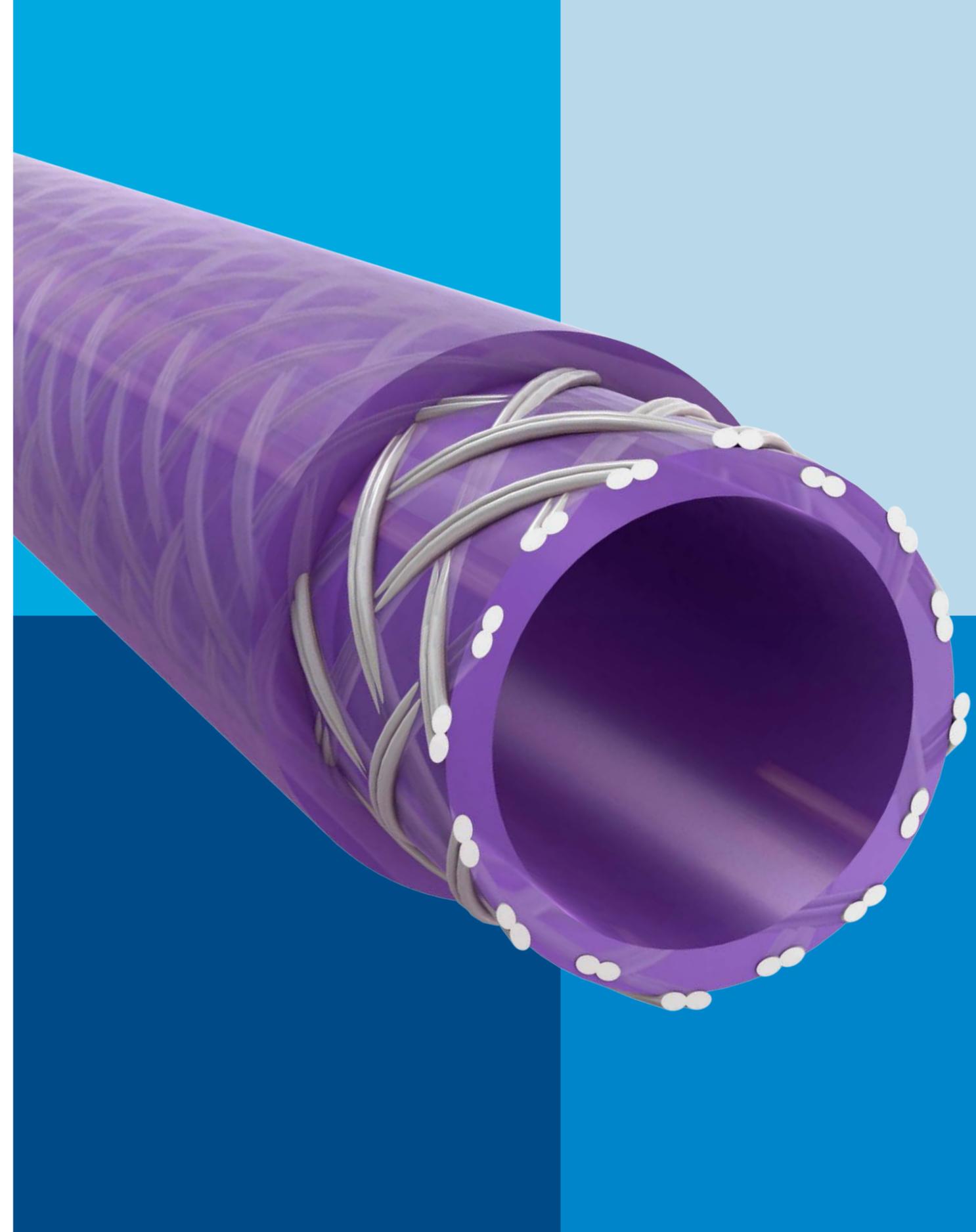
Transforming healthcare starts with thinking synergistically about how we develop our life-changing innovations. All of our market-leading guide and aspiration catheters feature our proprietary Full-Wall Technology — providing the enhanced torque, kink resistance and deliverability to meet today's procedural challenges.¹

FULL-WALL TECHNOLOGY

- A proprietary extrusion process melts layers together, forming a solid shaft construction to enhance overall catheter performance
- An encapsulated wire braid enables more robust walls for enhanced performance:
 - 1:1 torque response
 - Excellent kink-resistance²
- The innermost layer of the catheter shaft is formed over a removable core, providing structural integrity

PRODUCTS FEATURING FULL-WALL TECHNOLOGY

- Export Advance™ aspiration catheter
- Export™ AP aspiration catheter
- Launcher™ guide catheter
- Sherpa NX™ guide catheter
- DxTerity™ diagnostic catheter
- DxTerity™ TRA diagnostic catheter



¹ Data on file at Medtronic.

² Based on bench test data on file at Medtronic. Medtronic position paper on DxTerity™ deliverability impact. The lubricity bench test measures how much force is required to pull the catheter through two silicone pads while submerged in water at body temperature.

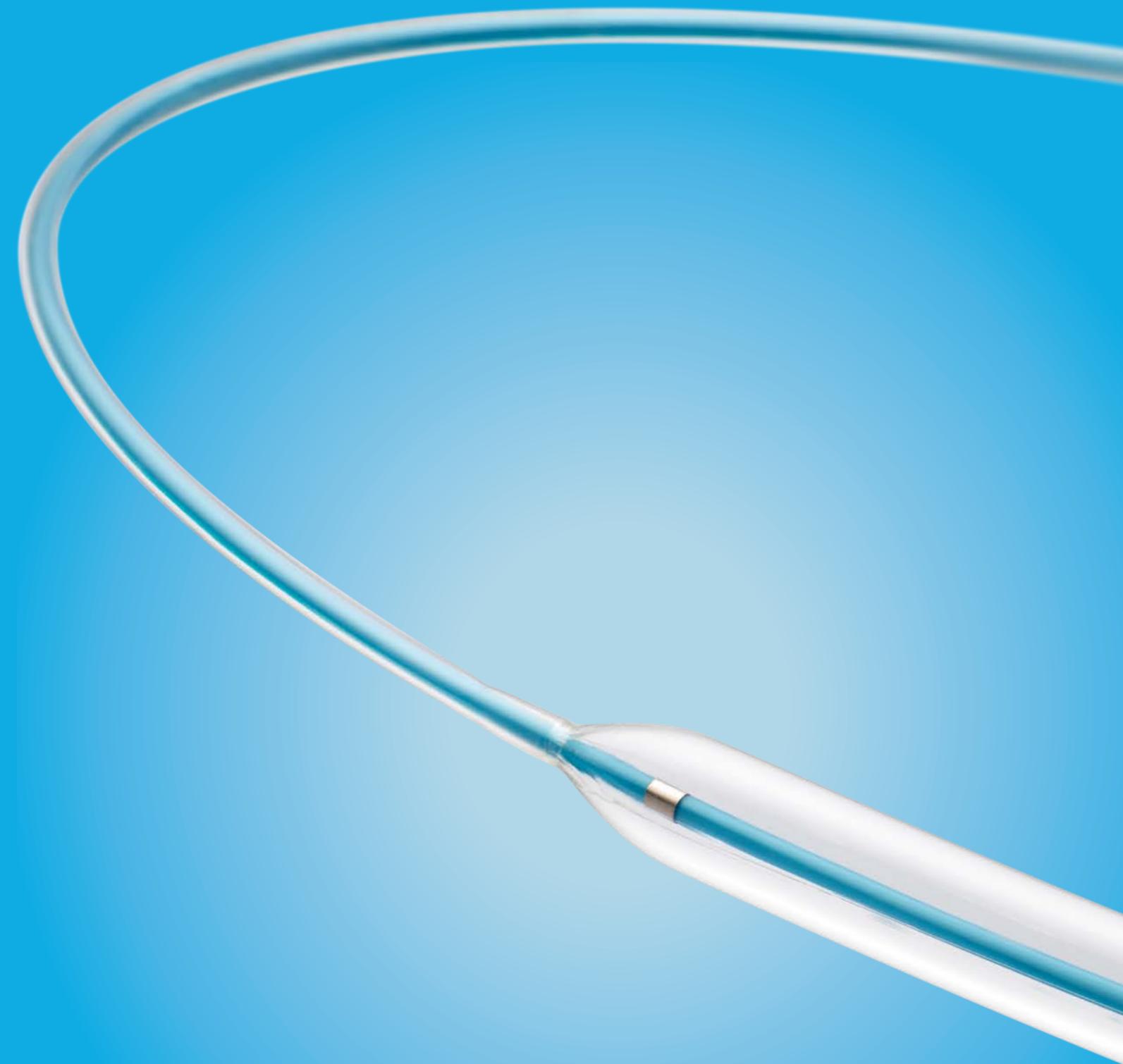
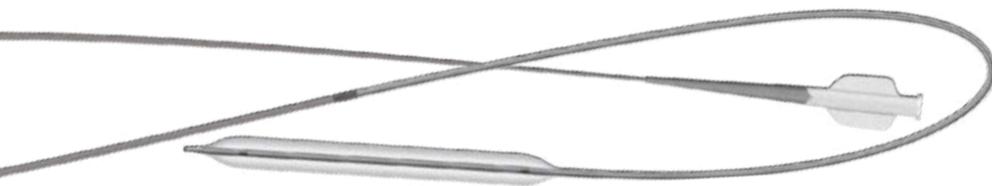
A SYNERGISTIC APPROACH TO **INNOVATION**

PowerTrac™ Technology

In partnership with industry leaders, we innovate technologies that work across products and therapies. PowerTrac™ Technology provides superior deliverability¹ for optimised performance.

PRODUCTS FEATURING POWERTRAC TECHNOLOGY

- Euphora™ semicompliant balloon
- NC Euphora™ noncompliant balloon
- Resolute Onyx™ DES



¹ NC Euphora™ balloon: Bench testing vs. NC Trek* and NC Quantum Apex™* balloons on file at Medtronic. 3.00 x 2.00 mm balloons tested.
Euphora™ balloon: Bench testing vs. Trek*, Emerge™*, Sprinter™ Legend™ and Ryujin™* Plus balloons. 2.50 mm x 15 mm balloons tested.
Resolute Onyx™ DES: Based on bench test data vs. Promus Premier™* DES, Synergy™* II DES, Xience Xpedition™* DES, Xience Alpine™* DES,
BioMatrix NeoFlex™* DES, Orsiro™* DES Ultimaster™* DES and Resolute Integrity™ DES.

WE ENGINEER WAYS TO **BETTER TREAT PATIENTS**

Medtronic collaborates with cardiologists to build on our history of technological breakthroughs. From modular design to Continuous Sinusoid Technology, we develop innovations that make lives better.



Driver™ stent platform

Driver™
BMS

Modular stent design offers greater flexibility

Endeavor™
DES

First Medtronic DES, designed for safety, featuring the highly biocompatible PC polymer

Resolute™
DES¹

Safe long-term drug elution with the BioLinx™ polymer specifically designed for DES

Integrity™ stent platform

Integrity™
BMS

Introduces Continuous Sinusoid Technology—a single wire in a helical pattern for greater flexibility and conformability

Resolute
Integrity™
DES

Greater stent deliverability with proven long-term safety and efficacy

Resolute Onyx™ stent platform

Resolute
Onyx™
DES

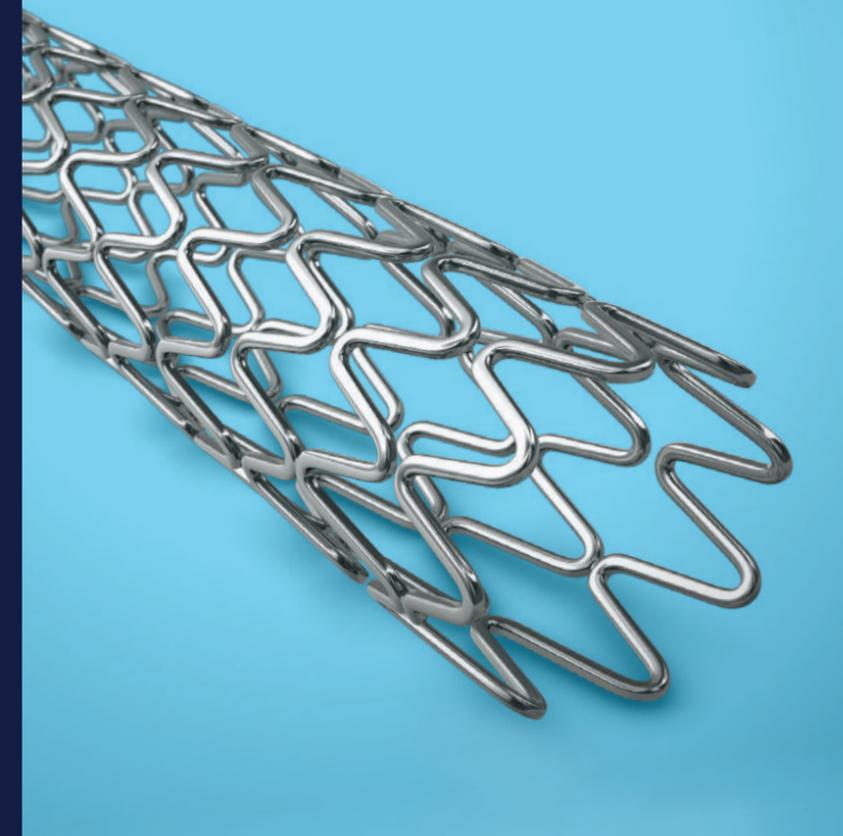
Introduces Core Wire Technology for increased radiopacity, deliverability and performance

¹ Resolute™ DES is also known as Endeavor™ Resolute™ DES.

Resolute Onyx™

Zotarolimus-Eluting Coronary Stent System

Resolute Onyx™ DES combines the full power of Continuous Sinusoid Technology and Core Wire Technology — extending its workhorse performance to more patients in need.



CORONARY
STENTS

ENABLING PROCEDURAL SUCCESS

- Increased radiopacity with premier Core Wire Technology
- 11% thinner struts with no compromise to radial strength¹
- 20% more deliverability and 36% more pushability²
- Greater flexibility and conformability³
- DAPT interruption or discontinuation after one month shows low risk for stent thrombosis

EXPANDING OPTIONS TO TREAT COMPLEX CASES

Broadest size matrix to optimise treatment of complex clinical scenarios:

- 2.0-mm diameter for small vessels
- 34- and 38-mm lengths for small vessel sizes⁴
- COMPLEXLV 4.5- and 5.0-mm diameters for extra-large vessels

¹ Based on data vs. Resolute Integrity™ DES.

² Based on bench test data vs. Resolute Integrity DES.

³ Based on a curved vessel analysis study conducted by Mortier et al. with less vessel straightening corresponding to a higher degree of stent conformability and flexibility.

⁴ 34-mm and 38-mm lengths correspond to only the 2.25-2.75-mm diameters.

Resolute Onyx™

Zotarolimus-Eluting Coronary Stent System

Resolute Onyx™ DES Size Matrix

Diameter (mm)	Length (mm)								
2.00	8	12	15	18	22	26	30	–	–
2.25	8	12	15	18	22	26	30	34	38
2.50	8	12	15	18	22	26	30	34	38
2.75	8	12	15	18	22	26	30	34	38
3.00	8	12	15	18	22	26	30	34	38
3.50	8	12	15	18	22	26	30	34	38
4.00	8	12	15	18	22	26	30	34	38
4.50	–	12	15	18	22	26	30	–	–
5.00	–	12	15	18	22	26	30	–	–

Broadest size matrix including
COMPLEXLV 4.5- and 5.0-mm sizes



Small vessels
Left main
RVD up to 5.0 mm
Long lesions
CTOs
Total occlusions
AMIs
ISR
Multivessels
Diabetes
ACS
UA
Bifurcations

DAPT: Low risk of ST after one month¹

 Indicates new sizes

First FDA-approved DES for patients with diabetes (Resolute Integrity™ DES)¹ One-year data from the RESOLUTE Clinical Program indicates low stent thrombosis rates for those that interrupted or discontinued DAPT any time after one month. While physicians should adhere to current ESC or ACC/AHA/SCAI Guidelines for PCI, patients who interrupt or discontinue DAPT medication one month or more after stent implantation are considered at low risk and showed no increased risk for stent thrombosis. Early discontinuation of prescribed antiplatelet medication could result in a higher risk of thrombosis, MI or death.

Resolute Integrity™

Zotarolimus-Eluting Coronary Stent System

Resolute Integrity™ DES has a continuous range of motion that provides uniform response along the full stent length — aiding patients with challenging anatomies.



**CORONARY
STENTS**

ENABLING PROCEDURAL SUCCESS

Continuous Sinusoid Technology provides:

- Exceptional deliverability¹
- Increased stent flexibility and conformability²

EXPANDING OPTIONS TO TREAT COMPLEX CASES

- Simplifies the challenge with outstanding performance in complex lesions, including bifurcations
- First DES FDA-approved for patients with diabetes³

¹ Compared to Resolute™ DES.

² Based on bench test data vs. Abbott Xience Prime™* DES and Boston Scientific Promus Element™* DES on file at Medtronic.

³ Resolute DES also has diabetes indication in the USA.

Resolute Integrity™

Zotarolimus-Eluting Coronary Stent System

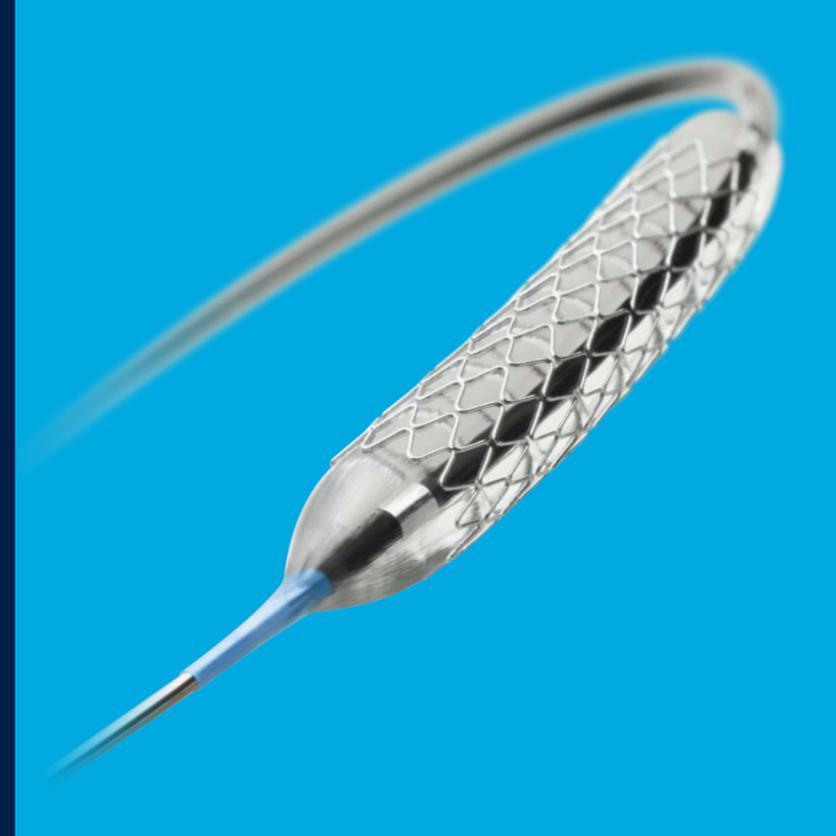
Resolute Integrity™ DES Size Matrix

Diameter (mm)	Length (mm)										
2.25	8	–	12	14	–	18	22	26	30	–	–
2.50	8	–	12	14	–	18	22	26	30	–	–
2.75	8	–	12	14	–	18	22	26	30	–	–
3.00	–	9	12	–	15	18	22	26	30	34	38
3.50	–	9	12	–	15	18	22	26	30	34	38
4.00	–	9	12	–	15	18	22	26	30	34	38

Resolute™

Zotarolimus-Eluting Coronary Stent System

Resolute™ DES combines medical excellence with a strong, long-term safety profile — delivering trusted, extra-strength therapy for patients worldwide.



**CORONARY
STENTS**

ENABLING PROCEDURAL SUCCESS

- 8 years of trusted commercial performance
- Proven DES components
- Revolutionary BioLinx™ polymer drug delivery

EXPANDING OPTIONS TO TREAT COMPLEX CASES

- Solid choice in complex daily practice

Medtronic
Further, Together

Resolute™

Zotarolimus-Eluting Coronary Stent System

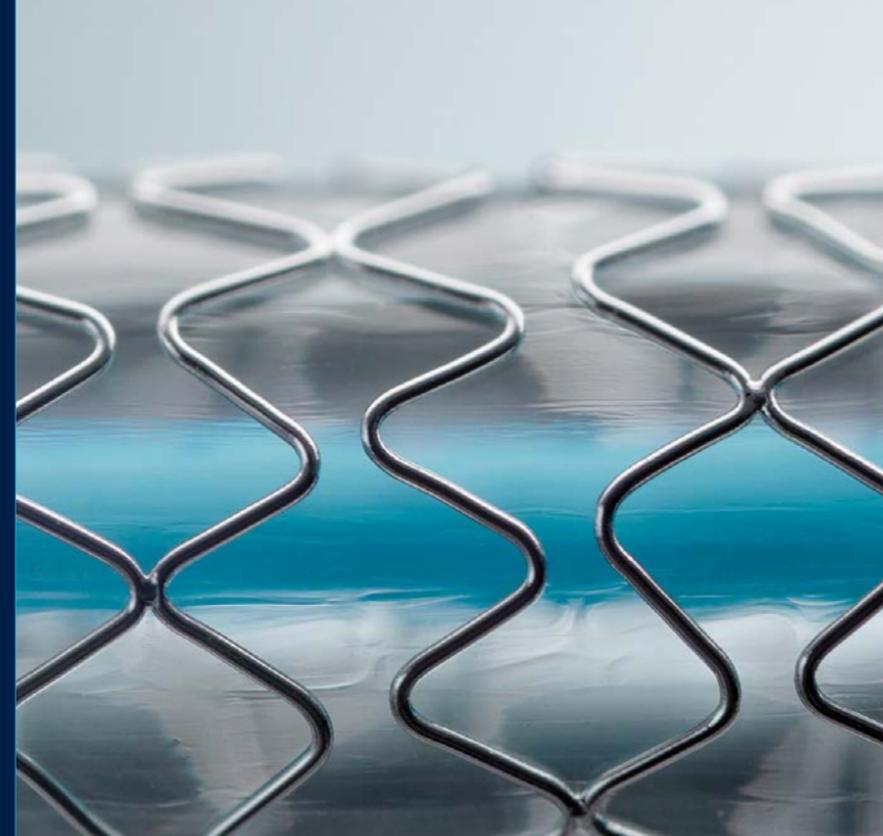
Resolute™ DES Size Matrix

Diameter (mm)	Length (mm)						
2.25	8	12	14	18	22	26	30
2.50	8	12	14	18	22	26	30
2.75	8	12	14	18	22	26	30
3.00	8	12	14	18	22	26	30
3.50	8	12	14	18	22	26	30
4.00	8	12	14	18	22	26	30

Integrity™

Coronary Stent System

Integrity™ BMS with Continuous Sinusoid Technology provides a continuous range of motion — enhancing conformability in patients with complex anatomies.



**CORONARY
STENTS**

REVOLUTIONARY STENT ENGINEERING

- Continuous Sinusoid Technology

SUPERIOR DELIVERABILITY

- Improved flexibility — 21% more trackable than the Driver™ stent
- Superior trackability² — 116% more trackable than the Multi-link Vision™* stent
- Low crossing profile

ENHANCED PROCEDURAL CONFIDENCE

- Excellent radial strength and conformability
- Optimal cell size enables sidebranch access³
- Expanded size matrix allows for a broader range of sizes

¹ Internal bench test data on file at Medtronic.

² Bench test data vs. Abbott Multi-link Vision™*, Boston Scientific Liberté™*, Biotronik Pro-Kinetic Energy™* and Terumo Tsunami™* Gold coronary stents on file at Medtronic.

³ Data on file at Medtronic.

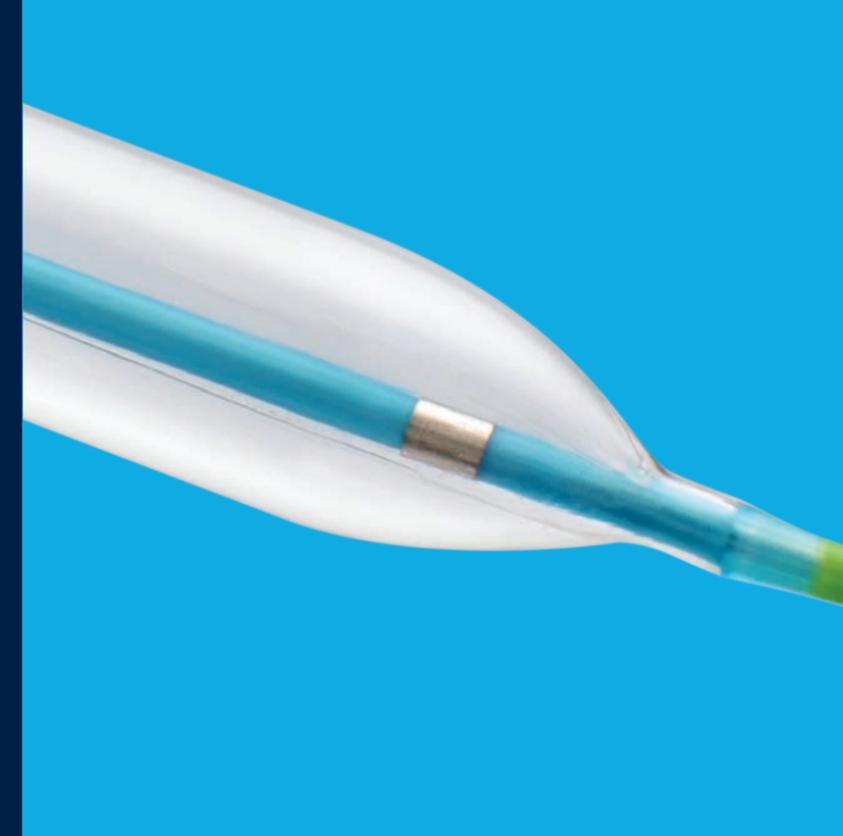
Integrity™ BMS Size Matrix

Diameter (mm)	Length (mm)						
2.25	8	12	14	18	22	26	30
2.50	8	12	14	18	22	26	30
2.75	8	12	14	18	22	26	30
3.00	8	12	14	18	22	26	30
3.50	8	12	14	18	22	26	30
4.00	8	12	14	18	22	26	30

NC Euphora™

Noncompliant Balloon Dilatation Catheter

The NC Euphora™ noncompliant balloon features a superior growth profile and best-in-class deliverability¹ for unmatched precision¹ — and peace of mind in difficult cases.



**CORONARY
BALLOONS**

DELIBERATELY DESIGNED FOR UNSURPASSED PERFORMANCE

- High RBP up to 20 atm with a superior growth profile for unmatched precision²
- Excellent recross for reliable performance in long, difficult cases³
- Designed for durability — reinflated up to 20 times to RBP without bursting
- Optimised tapered tip design and lowest lesion entry profile improves tracking through difficult lesions with less catching on stents²
- PowerTrac™ Technology enables superior deliverability³
- Platinum iridium marker bands enhance visibility

¹ Competitive testing vs. NC Trek* and NC Quantum Apex™* balloons.

² Competitive testing vs. NC Quantum Apex™* balloon.

³ Competitive testing vs. NC Trek* and NC Quantum Apex balloons on file at Medtronic. Bench test data may not be indicative of clinical performance.

NC Euphora™

Noncompliant Balloon Dilatation Catheter

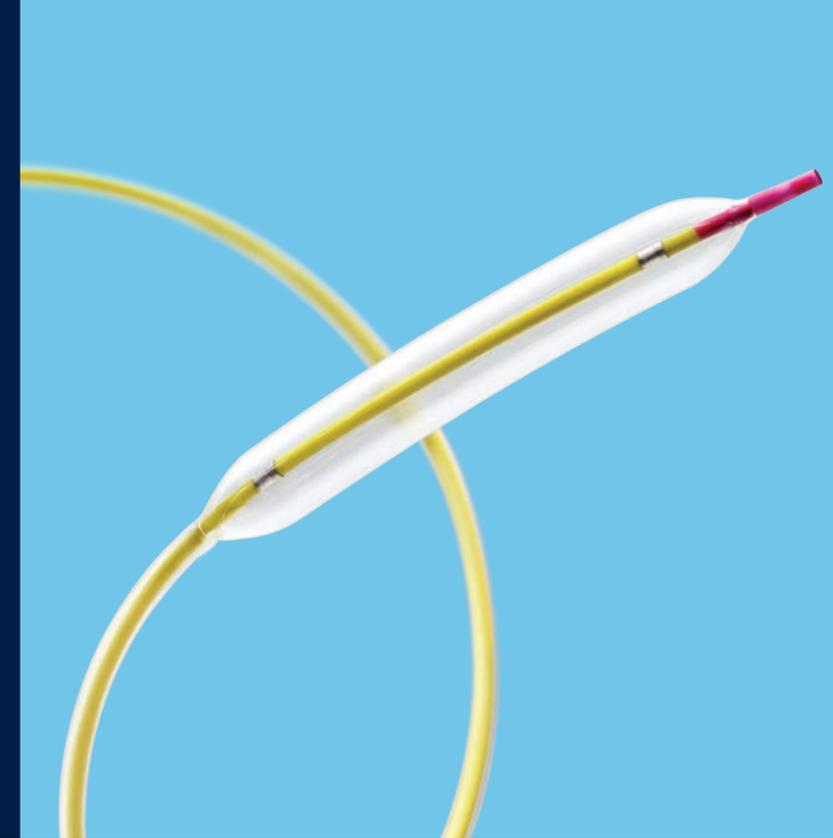
NC Euphora™ Balloon Size Matrix

Diameter (mm)	Length (mm)					
	6	8	12	15	20	27
2.00	NCEUP2006X	NCEUP2008X	NCEUP2012X	NCEUP2015X	NCEUP2020X	—
2.25	NCEUP22506X	NCEUP22508X	NCEUP22512X	NCEUP22515X	NCEUP22520X	—
2.50	NCEUP2506X	NCEUP2508X	NCEUP2512X	NCEUP2515X	NCEUP2520X	NCEUP2527X
2.75	NCEUP27506X	NCEUP27508X	NCEUP27512X	NCEUP27515X	NCEUP27520X	NCEUP27527X
3.00	NCEUP3006X	NCEUP3008X	NCEUP3012X	NCEUP3015X	NCEUP3020X	NCEUP3027X
3.25	NCEUP32506X	NCEUP32508X	NCEUP32512X	NCEUP32515X	NCEUP32520X	NCEUP32527X
3.50	NCEUP3506X	NCEUP3508X	NCEUP3512X	NCEUP3515X	NCEUP3520X	NCEUP3527X
3.75	NCEUP37506X	NCEUP37508X	NCEUP37512X	NCEUP37515X	NCEUP37520X	NCEUP37527X
4.00	NCEUP4006X	NCEUP4008X	NCEUP4012X	NCEUP4015X	NCEUP4020X	NCEUP4027X
4.50	—	NCEUP4508X	NCEUP4512X	NCEUP4515X	NCEUP4520X	—
5.00	—	NCEUP5008X	NCEUP5012X	NCEUP5015X	—	—

Euphora™

Semicompliant Balloon Dilatation Catheter

The Euphora™ semicompliant balloon provides superior deliverability¹ and excellent recross¹ — when time is of the essence.



CORONARY BALLOONS

SUPERIOR DELIVERABILITY¹

- PowerTrac™ technology — enables superior deliverability¹

UNMATCHED CROSSABILITY¹

- 4% lower crossing profile²
- Ultra-Slim balloon material — 15% thinner²
- Tapered shaft — 9% lower profile²
- Lower profile marker bands — 8% smaller²
- Optimised MiniWrap — 4% lower profile²

SUPERB KBT PERFORMANCE³

- Low-profile inner/outer shaft and balloon material

EXCELLENT RECROSS

- Uniform rewrap and maximised pushability

¹ Bench testing vs. Trek*, Emerge™*, Sprinter™ Legend™ and Ryujin™* Plus balloons. 2.50 mm x 15 mm balloons tested.

² Comparison between 2.50 mm x 15 mm Euphora and Sprinter Legend balloons.

³ Based on 6 F KBT testing.

Bench test data may not be indicative of clinical performance

Euphora™

Semicompliant Balloon Dilatation Catheter

Euphora™ Balloon Size Matrix

Diameter (mm)	Length (mm)						
	6	10	12	15	20	25	30
1.50	EUP1506X	EUP1510X	EUP1512X	EUP1515X	EUP1520X	—	—
2.00	EUP2006X	EUP2010X	EUP2012X	EUP2015X	EUP2020X	EUP2025X	EUP2030X
2.25	EUP22506X	EUP22510X	EUP22512X	EUP22515X	EUP22520X	EUP22525X	—
2.50	EUP2506X	EUP2510X	EUP2512X	EUP2515X	EUP2520X	EUP2525X	EUP2530X
2.75	EUP27506X	EUP27510X	EUP27512X	EUP27515X	EUP27520X	EUP27525X	—
3.00	EUP3006X	EUP3010X	EUP3012X	EUP3015X	EUP3020X	EUP3025X	EUP3030X
3.25	EUP32506X	EUP32510X	EUP32512X	EUP32515X	EUP32520X	EUP32525X	—
3.50	EUP3506X	EUP3510X	EUP3512X	EUP3515X	EUP3520X	EUP3525X	EUP3530X
3.75	EUP37506X	EUP37510X	EUP37512X	EUP37515X	EUP37520X	EUP37525X	—
4.00	EUP4006X	EUP4010X	EUP4012X	EUP4015X	EUP4020X	EUP4025X	EUP4030X

Sprinter™ Legend™

Semicompliant Balloon Dilatation Catheter

With the Sprinter™ Legend™ balloon, we give physicians the power to cross, open and treat complex lesions with confidence.



**CORONARY
BALLOONS**

BUILT TO PERFORM

- **0.41 mm (0.016") lesion entry profile**
Tapered FasTrac tip allows access to tightly-occluded lesions
- **0.5 mm (0.020") crossing profile**
For difficult lesions, the Sprinter™ family offers some of the lowest crossing profiles in the industry¹

- **Micro-Brite mid-marker band**
Low profile and strategically located — provides a flush fit for clear balloon advancement

¹ Bench testing vs. key competitors as of Summer 2009. Test data on file at Medtronic.
Bench testing not indicative of clinical performance.

Sprinter™ Legend™

Semicompliant Balloon Dilatation Catheter

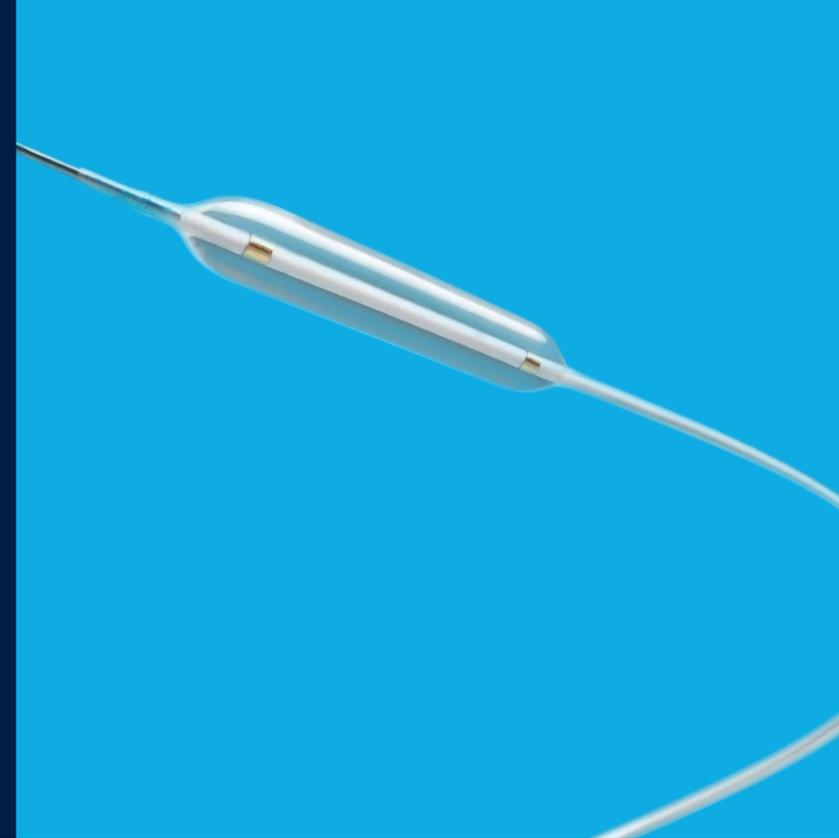
Sprinter™ Legend™ RX Balloon Size Matrix

Diameter (mm)	Length (mm)						
	6	10	12	15	20	25	30
1.25	SPL12506X	SPL12510X	SPL12512X	SPL12515X	SPL12520X	—	—
1.50	SPL15006X	SPL15010X	SPL15012X	SPL15015X	SPL15020X	—	—
2.00	SPL20006X	SPL20010X	SPL20012X	SPL20015X	SPL20020X	SPL20025X	SPL20030X
2.25	SPL22506X	SPL22510X	SPL22512X	SPL22515X	SPL22520X	SPL22525X	—
2.50	SPL25006X	SPL25010X	SPL25012X	SPL25015X	SPL25020X	SPL25025X	SPL25030X
2.75	SPL27506X	—	SPL27512X	SPL27515X	SPL27520X	SPL27525X	—
3.00	SPL30006X	SPL30010X	SPL30012X	SPL30015X	SPL30020X	SPL30025X	SPL30030X
3.25	—	—	SPL32512X	SPL32515X	SPL32520X	—	—
3.50	SPL35006X	SPL35010X	SPL35012X	SPL35015X	SPL35020X	SPL35025X	SPL35030X
3.75	—	—	SPL37512X	SPL37515X	SPL37520X	—	—
4.00	SPL40006X	SPL40010X	SPL40012X	SPL40015X	SPL40020X	SPL40025X	SPL40030X

NC Sprinter™

Noncompliant Balloon Dilatation Catheter

The NC Sprinter™ balloon delivers the compliance you need, the delivery you expect, and the clinical results you want.



**CORONARY
BALLOONS**

SAFE, OPTIMISED APPOSITION

- Combines proven Sprinter™ technology with the high-pressure capability and controlled expansion of a noncompliant balloon — for optimal stenting results

CUSTOMISED LENGTHS COMPLEMENTING BOTH DES AND BMS LENGTHS

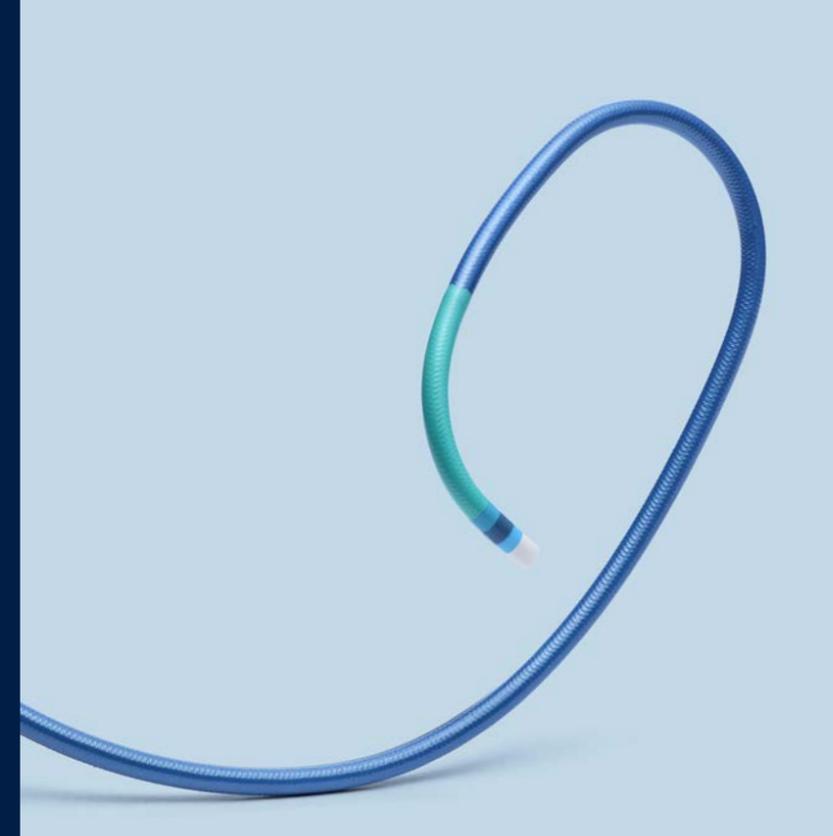
- Low longitudinal growth for more exact sizing
- RX-compliant balloon helps achieve complete stent apposition — key to positive, long-term outcomes

Medtronic
Further, Together

Launcher™

Coronary Guide Catheter

The Launcher™ guide catheter offers a blend of flexibility, support and visualisation for today's challenging procedures.



GUIDE CATHETERS

FLEXIBILITY AND SUPPORT

- Flexible distal segment enables you to engage the guide for backup support
- Supportive secondary curve for backup support and curve retention
- Workhorse construction supports a variety of anatomies and takeoffs

ENHANCED VISUALISATION

- Larger lumens allow for increased contrast flow for enhanced visualisation

- Vest-Tech nylon outer jacket provides hub-to-tip radiopacity
- Radiopaque marker band helps orient tip for ostial engagement

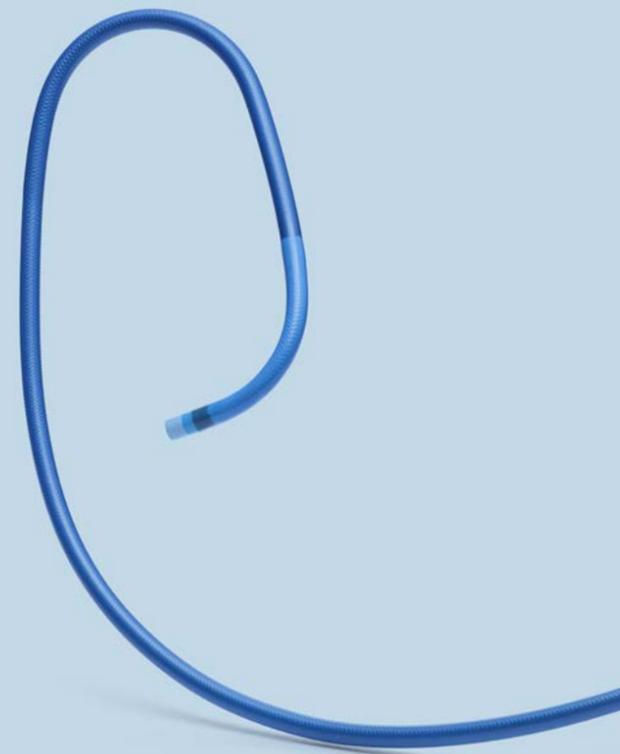
MULTIPLE GUIDE CATHETER PLATFORMS PROVIDE OPTIONS FOR GUIDE ENGAGEMENT

- Large lumens with no performance tradeoffs
- Controlled torque allows for precise movement and product placement

Sherpa NX™

Coronary Guide Catheters

Sherpa NX™ guide catheters deliver consistent and durable performance in a variety of shapes and sizes to help more patients.



GUIDE
CATHETERS

CONSISTENCY AND DURABILITY IN PERFORMANCE

- Available in two distal segments to provide options for guide engagement

SHERPA NX™ ACTIVE GUIDE CATHETER

- Soft distal segment enables active engagement
- Distal segment can reshape in anatomy

SHERPA NX™ BALANCED GUIDE CATHETER

- Flexible distal segment allows for manipulation as needed

TRUSTED PERFORMANCE FROM HUB TO TIP

- Supportive secondary curve for backup support and enhanced curve retention
- Advanced HDPE liner provides smooth, low-friction device passage
- Soft tip and distal sleeve for ease of engagement and minimal vessel trauma

DxTerity™

Diagnostic Catheter

DxTerity™ diagnostic catheters harness the same technology and design innovations found in our market-leading guide and aspiration catheters. With a broad range of shapes and sizes, DxTerity™ catheters are suitable for a variety of approaches.



DIAGNOSTIC CATHETERS

MARKET-LEADING CATHETER INNOVATION

- The innermost layer of the catheter shaft is formed over a removable core — providing structural integrity
- Double-braid wire applied from hub to tip forms the backbone of the catheter shaft — enhancing strength, torque, and kink resistance
- Proprietary Full-Wall Technology melts layers together — forming a solid shaft construction to enhance overall catheter performance
- Our InSlide™ polymer performance additive is incorporated into the outer layer — providing superior lubricity for enhanced deliverability¹

IMPROVED PERFORMANCE WHERE IT MATTERS

- Superior torque and lubricity for precise manipulation and enhanced deliverability²
- Optimised for both radial and femoral procedures³
- Wide range of shapes and sizes

¹ Based on bench test data on file at Medtronic. Medtronic position paper on DxTerity™ deliverability impact. The lubricity bench test measures how much force is required to pull the catheter through two silicone pads while submerged in water at body temperature.

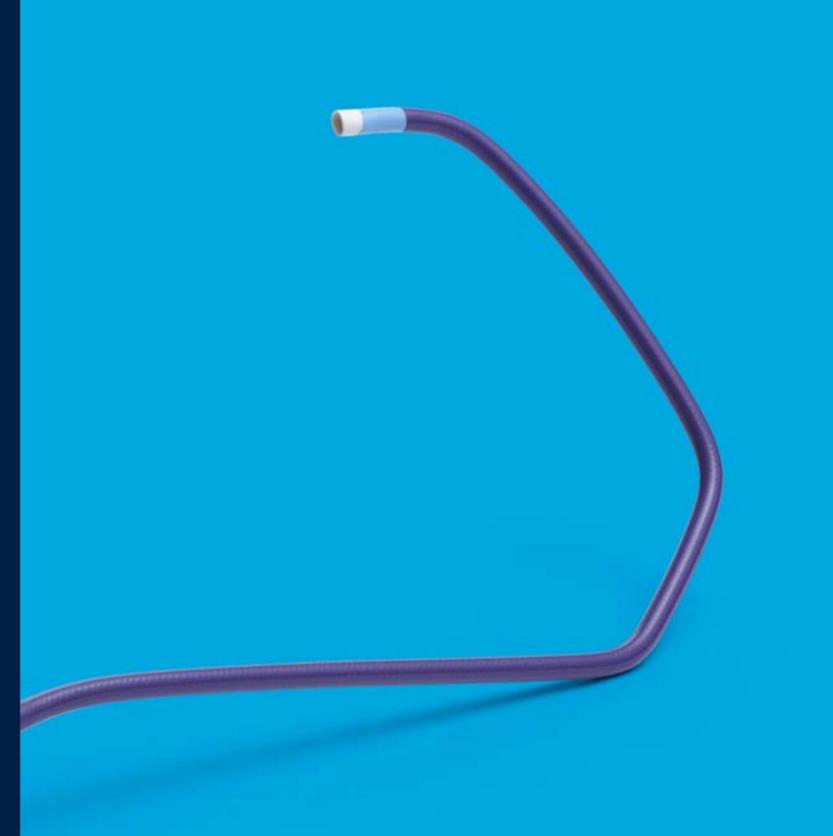
² Based on bench test data comparing leading competitors. Bench test data may not be indicative of clinical performance.

³ Based on preclinical data on file at Medtronic.

DxTerity™ TRA

Diagnostic Catheter

DxTerity™ TRA diagnostic catheters feature all of the same performance advantages as the DxTerity™ catheter line, and are specifically adapted for radial use.¹



**DIAGNOSTIC
CATHETERS**

FOUR UNIVERSAL CURVE SHAPES

Universal curves engage both coronaries without catheter exchange²

- TRApause curve
- TRAction curve
- TRAcker curve
- TRAnsformer curve

SHAPES AND SIZES TO MEET ALL OF YOUR PROCEDURAL NEEDS

- Offered in 100-cm and 100-cm lengths
- Options with and without sideholes

¹ Based on preclinical data on file at Medtronic.

² In porcine models. Based on preclinical data on file at Medtronic.

InTRAKit™

Access Kit

The InTRAKit™ access kit is our complete access kit delivering excellent components for the transradial approach.



TRANSRADIAL ACCESSORIES

Working closely with nearly 1000 transradial healthcare providers,¹ we created a comprehensive collection of transradial catheters and accessories to transform your transradial experience — from access to haemostasis.

TRANSRADIAL ACCESS COMPONENTS IN A SINGLE KIT

- IV catheter and micropuncture needle options, with highly visible bevel indicators to simplify needle orientation²
- Needle hubs with excellent flashback visualisation^{2,3} and grip²
- Mini-guidewires in your choice of stainless steel, nitinol, or plastic-jacketed
- Tapered design with smooth dilator-to-sheath transition²
- Hydrophilic coating for enhanced lubricity⁴

¹ Market research on file at Medtronic.

² Based on physician feedback during preclinical study and compared with participants' current clinical experience; data on file at Medtronic.

³ Preclinical studies on file at Medtronic. Preclinical data may not be indicative of clinical results.

⁴ Bench test data on file at Medtronic. Bench test data may not be indicative of clinical results.

TRAcelet™

Compression Device

The TRAcelet™ compression device is our innovative solution for simplified pressure control — for both cath lab and recovery area settings.



TRANSRADIAL ACCESSORIES

Working closely with nearly 1000 transradial healthcare providers,¹ we created a comprehensive collection of transradial catheters and accessories to transform your transradial experience — from access to haemostasis.

Use the TRAcelet™ compression device in cath lab and recovery area settings to uniformly deliver pressure to the access site to stop bleeding while maintaining radial artery patency.²

IN THE CATH LAB

- The syringe provided with your TRAcelet™ device facilitates pressure optimisation

IN THE RECOVERY AREA

- The unique-dial-based system allows for controlled, syringe-free pressure adjustments³

¹ Market research on file at Medtronic.

² Bench test data on file at Medtronic. Bench test data may not be indicative of clinical results.

³ Data on file at Medtronic.

Cougar™

Nitinol Workhorse Guidewire



GUIDEWIRES

TRACKABILITY FOR DISTAL AND TORTUOUS ACCESS

- Nitinol core wire provides steerability and support through tortuous anatomy and for multivessel treatment
- Double-coil tip is soft and atraumatic for shape retention

Cougar™

Nitinol Workhorse Guidewire

Cougar™ Guidewire Specifications

Guidewire diameter	0.014"
Core wire	Nitinol/stainless steel
Outer coating	Coils (stainless steel/platinum)
Radiopaque distal tip	3 cm
Tip shape	J-tip and straight tip
Total length, RX	190 cm
Total length, OTW	300 cm
Extension system	DOC compatible
Distal coating	Hydro-Track™ (hydrophilic) or Pro/Pel™ (silicone)

190 cm-wires are DOC¹-compatible.

¹ DOC is a trademark of Advanced Cardiovascular Systems, Inc.

Cougar™ LS guidewire — light support



Cougar™ XT guidewire — medium support



Intuition™

Advanced Workhorse Guidewire



GUIDEWIRES

FOR CHALLENGING WORKHORSE CASES

- Torque performance and 1-gram tip weight delivers precision and confidence during difficult workhorse cases
- Accu-Core Technology provides torque and improved crossability

Medtronic
Further, Together

Intuition™

Advanced Workhorse Guidewire

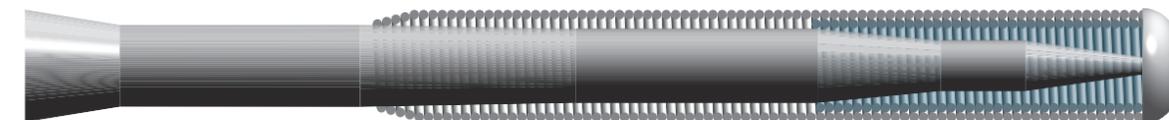
Intuition™ Guidewire Specifications

Guidewire diameter	0.014"
Core wire	Nitinol/stainless steel
Outer coating	Coils (stainless steel/platinum)
Radiopaque distal tip	3 cm
Tip shape	Straight tip
Total length	180 cm + 300 cm
Extension system	DOC compatible
Distal coating	Hydro-Track™ (hydrophilic) or Pro/Pel™ (silicone)

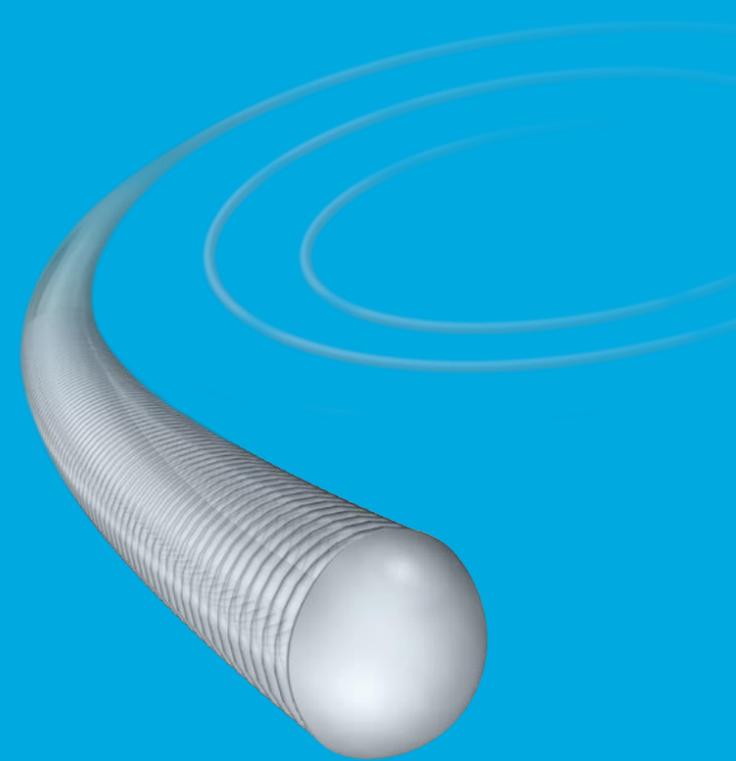
180 cm-wires are DOC¹-compatible.

¹ DOC is a trademark of Advanced Cardiovascular Systems, Inc.

Intuition™ guidewire



ProVia™
Crossing Guidewire



GUIDEWIRES

DESIGNED TO CROSS DEMANDING LESIONS

- Available in a wide range of weights and lengths
- Accu-Core Technology offers torque performance, tactile feel, improved lesion penetration and a 1-mm nonhydrophilic tip

Medtronic
Further, Together

ProVia™

Crossing Guidewire

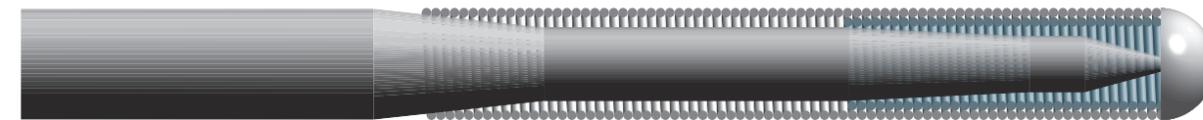
ProVia™ Guidewire Specifications

Guidewire diameter	0.014"
Core wire	Nitinol/stainless steel
Outer coating	Coils (stainless steel/platinum)
Radiopaque distal tip	3 cm
Tip shape	Straight tip, tapered tip
Total length	180 cm + 300 cm
Extension system	DOC compatible
Distal coating	Hydro-Track™ (hydrophilic) or Pro/Pel™ (silicone)

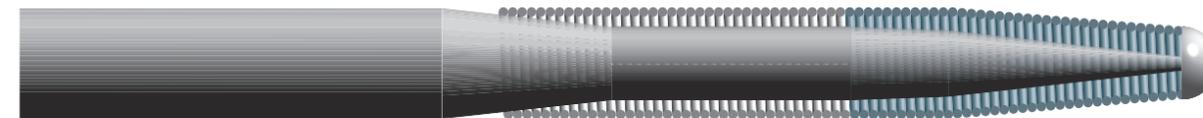
Guidewire is DOC¹-compatible.

¹ DOC is a trademark of Advanced Cardiovascular Systems, Inc.

ProVia™ 3 and 6 guidewires (0.014" tapered tip)

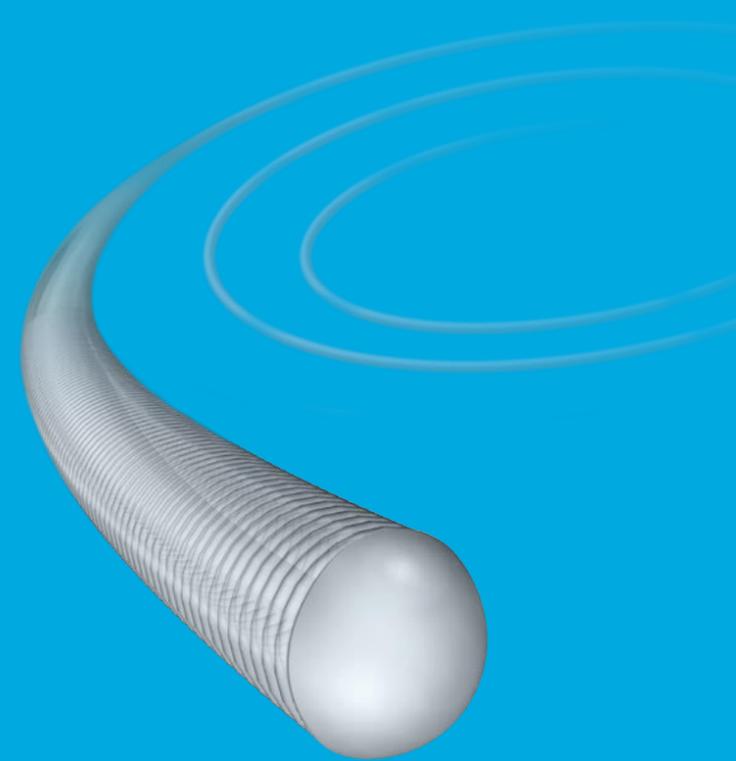


ProVia™ 9 and 15 guidewires (0.009" tapered tip)



Thunder™

Extra-Support Guidewire



GUIDEWIRES

FOR EXTRA SUPPORT

- Stainless steel, core-to-tip design provides torque, tip control and steering for cases requiring extra support

Thunder™

Extra-Support Guidewire

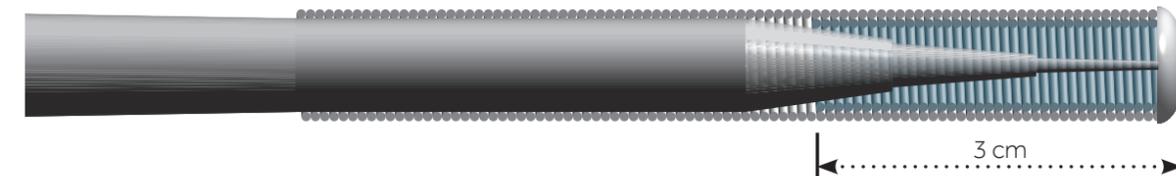
Thunder™ Guidewire Specifications

Guidewire diameter	0.014"
Core wire	Nitinol/stainless steel
Outer coating	Coils (stainless steel/platinum)
Radiopaque distal tip	3 cm
Tip shape	Straight tip, J- tip
Total length	190 cm + 300 cm
Extension system	DOC compatible
Distal coating	Pro/Pel™ (silicone)

Guidewire is DOC¹-compatible.

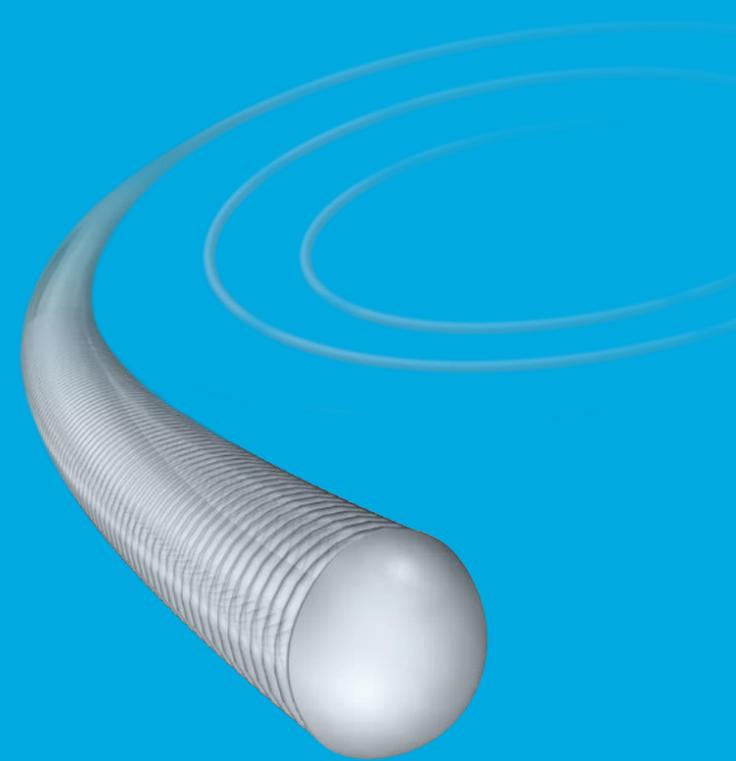
¹ DOC is a trademark of Advanced Cardiovascular Systems, Inc.

Thunder™ guidewire



Zinger™

Stainless Steel Workhorse Guidewire



GUIDEWIRES

FOR STEERABILITY AND TORQUE CONTROL

- Stainless steel core wire provides torque transmission for advanced steerability and control
- Available in a wide range of support levels for a variety of clinical situations: light, marker, medium and support

Medtronic
Further, Together

Zinger™

Stainless Steel Workhorse Guidewire

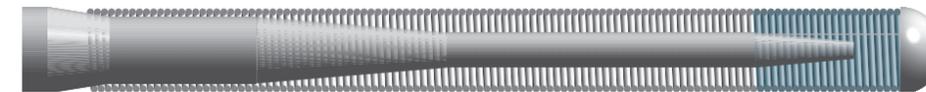
Zinger™ Guidewire Specifications

Guidewire diameter	0.014"
Core wire	Nitinol/stainless steel
Outer coating	Coils (stainless steel/platinum)
Radiopaque distal tip	3 cm
Tip shape	Straight tip, J- tip
Total length	190 cm + 300 cm
Extension system	DOC compatible
Distal coating	Pro/Pel™ (silicone)

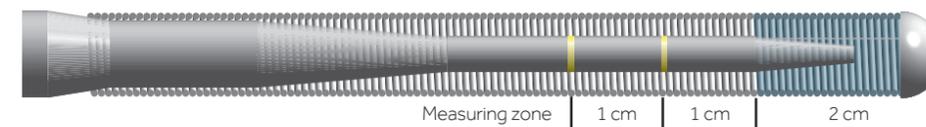
Guidewire is DOC¹-compatible.

¹ DOC is a trademark of Advanced Cardiovascular Systems, Inc.

Zinger™ Light



Zinger™ Marker



Zinger™ Medium



Zinger™ Support



Export Advance™

Aspiration Catheter

The Export Advance™ aspiration catheter delivers consistent, high-performing aspiration power — just what you'd expect from the worldwide leader in aspiration catheters.¹

ASPIRATION

SUPERIOR DELIVERABILITY² AND KINK RESISTANCE

Full Wall Variable Braiding Technology shaft construction provides variable levels of stiffness without joints for optimal catheter performance

PRELOADED STYLET FACILITATES DEPENDABLE DELIVERY TO TARGET ASPIRATION SITE

- Stylet enhances stiffness² in the shaft during catheter delivery, boosting kink resistance, trackability and pushability

Buddy wire compatibility allows for extra support, when needed

DEPENDABLE, HIGH-PERFORMING ASPIRATION POWER

- Large extraction lumen (0.044" proximal; 0.043" distal) increases aspiration power
- Optimised hub geometry provides improved flow
- Soft, short, forward-facing tip design permits excellent particle capture

MORE THAN 1,000,000 EXPORT™ PATIENTS TREATED

- The Export™ family demonstrates a statistically significant reduction of cardiac death at one year in STEMI patients²

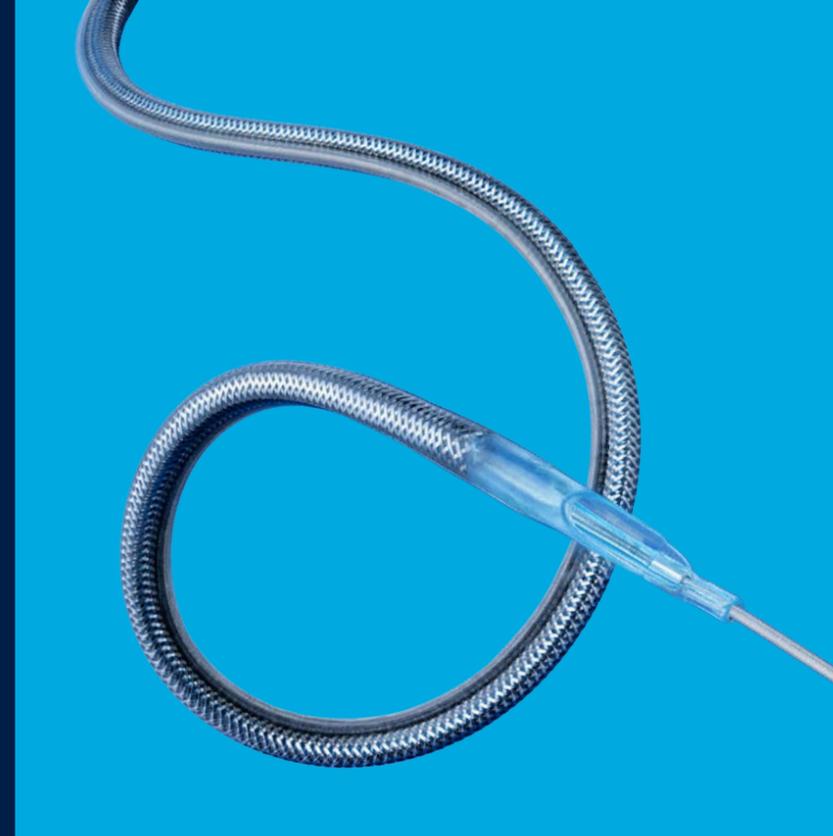
¹ Data on file at Medtronic. Based on 2003–2013 data.

² Vaar PJ et al. Cardiac death and reinfarction after 1 year in the Thrombus Aspiration during Percutaneous coronary intervention in Acute myocardial infarction Study (TAPAS): a 1-year follow-up study. The Lancet. 2008;371:1915–1920. Post hoc analysis, not adjusted for multiplicity.

Export™ AP

Aspiration Catheter

The Export™ AP aspiration catheter brings market-leading¹ performance to patients worldwide.



ASPIRATION

ENHANCED KINK RESISTANCE AND DELIVERY

Significant design attributes increase performance — excellent deliverability over a 0.014" guidewire through a simulated tortuous anatomy²

OPTIMISED PARTICLE CAPTURE

Exceptional design leads to improved performance — soft, forward-facing atraumatic tip provides effective aspiration

FULL-WALL VARIABLE BRAIDING TECHNOLOGY

Proximal shaft braiding for support; distal shaft braiding for flexibility

¹ Data on file at Medtronic. Based on 2003–2013 data.
² Based on bench test data on file at Medtronic.

Everest™

Disposable Inflation Device



**EMBOLIC
PROTECTION
AND ASPIRATION**

SURE GRIP TORQUE KNOB

- Ridged sure grip torque knob design ensures 'no-slip' torque control for precise pressure adjustment

QUICK-TRIGGER RELEASE

- Release pressure immediately, even at higher pressures
- Allows for one-handed operation — no need to dial down the pressure before releasing

UNIQUE ERGONOMIC PISTOL GRIP

- Ergonomic grip design with centered trigger fits comfortably in either hand

Medtronic
Further, Together

Input™

Introducer Sheaths



**EMBOLIC
PROTECTION
AND ASPIRATION**

INPUT™ TS INTRODUCER SHEATH

- Sheaths available in 7 cm, 11 cm, and 23 cm
- FEP sheath with silicone coating
- Hemostatic valve made of silicone
- Polyethylene dilator with silicone coating
- Double distal J-shaped stainless steel guidewire (only included with 7-cm and 11-cm sheaths)

INPUT™ PS INTRODUCER SHEATH

- Sheaths available in 11 cm and 23 cm
- Hemostatic valve made of silicone
- Polyethylene dilator
- Double distal J-shaped stainless steel guidewire (only included with 11-cm sheaths)
- Hydrophilic HydroPel coating — water-activated, super lubricated coating on distal segments of the sheath facilitates introduction

GuardWire™

Temporary Occlusion and Aspiration System



**EMBOLIC
PROTECTION
AND ASPIRATION**

SAFEGUARDS SAPHENOUS VEIN GRAFT INTERVENTIONS

- Ultra-low profile minimises risk of dislodging embolic debris while crossing brittle plaque
- Low-profile 2.5–5.0-mm system provides access to tortuous vessels and tight lesions
- Kink-resistant nitinol and proprietary helical design combine forces for distal maneuverability and flexibility

A COMPLETE RANGE OF BALLOON SIZES AVAILABLE

- 3.0–6.0 mm and 2.5–5.0 mm

DEMONSTRATED RESULTS

- 42% relative reduction in MACE¹

¹ SAFER trial: Saphenous Vein Graft Angioplasty Free of Emboli Randomised.
Baim D et al. Randomised trial of a distal embolic protection device during percutaneous intervention of saphenous vein aorto-coronary bypass grafts. Circulation, 2002; 105: 1285–1290.

Symplixity Spyrals™

Multi-Electrode Renal Denervation Catheter

The Symplixity Spyrals™ catheter builds on our proven Symplixity™ technology, bringing improved¹ renal denervation therapy to hypertension patients in need.



**RENAL
DENERVATION**

CONSISTENT FOUR-QUADRANT ABLATION PATTERN

- Helical four-electrode design delivers energy simultaneously
- Fast 60-second ablation time

TREATS A WIDE RANGE OF ANATOMIES

- Self-expanding helical design conforms to a wide range of artery shapes and sizes
- Single catheter treats 3–8-mm diameter arteries

EXCEPTIONAL DELIVERABILITY²

- Exceptional deliverability with low 4 F profile catheter
- Delivery over a standard 0.014" guidewire with rapid exchange system

¹ Compared with Symplixity Flex™ catheter.
² Data on file at Medtronic.

Symlicity Spyral™

Multi-Electrode Renal Denervation Catheter

COMPONENTS

- Symlicity Spyral™ multi-electrode renal denervation catheter: single-use RDN catheter for use only with the Symlicity G3™ generator with remote control and DVI-D output
- Symlicity G3™ renal denervation RF generator: reusable RF generator used with the Symlicity Spyral™ and Symlicity Flex™ catheters
- Symlicity G3™ generator component; cart
- Foot switch: used to activate generator
- Power cable: supplies power to generator unit



DELIVERING MORE SOLUTIONS

At Medtronic, we work closely with industry experts to create efficient, connected models of care that deliver our technologies, services, and programs to more people in more places.



CLINICIANS

**Educational programs
for clinicians, fellows and
cath lab staff**

Peer-to-peer engagements for
best-practice sharing



HOSPITALS

**Reimbursement resources
and support**

Hospital efficiencies
and management services



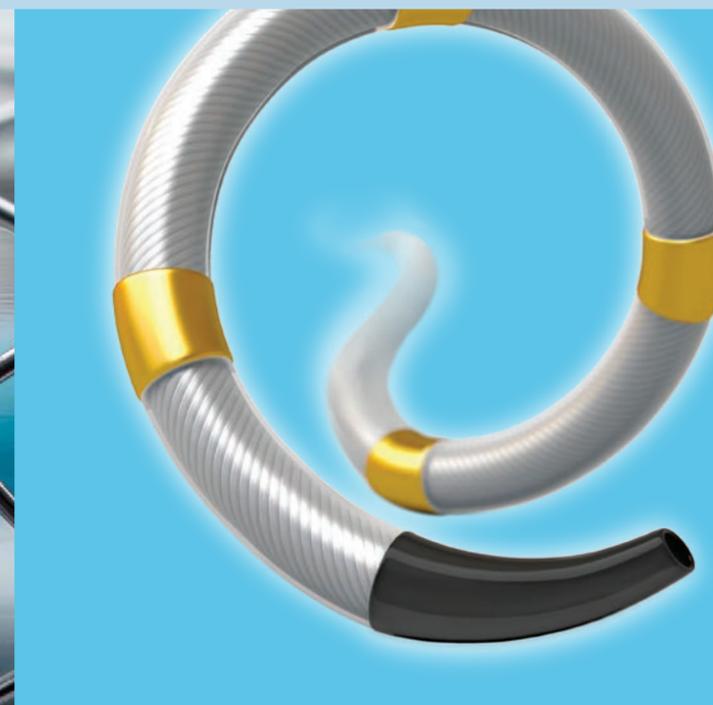
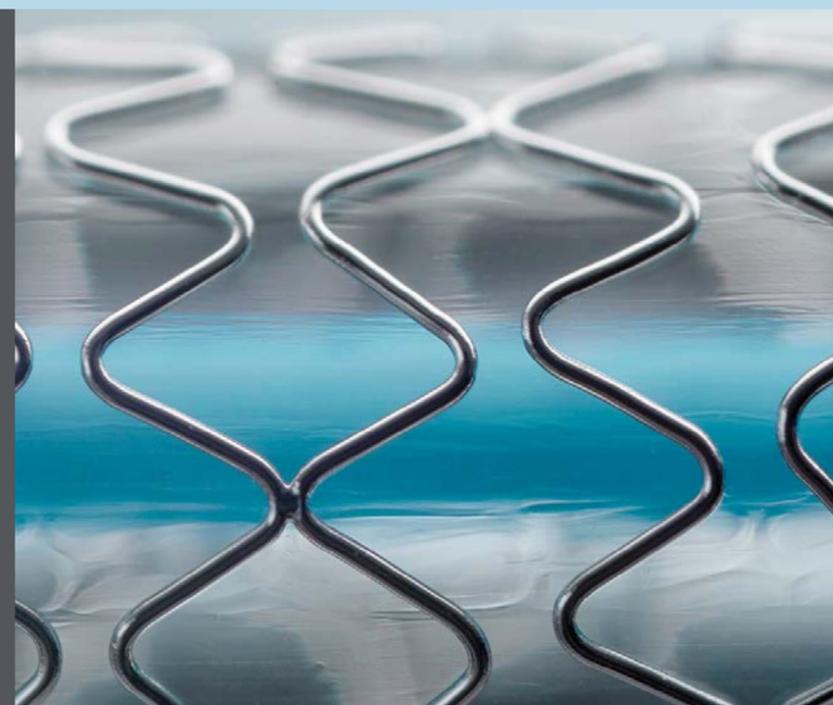
PATIENTS

**Patient awareness
and outreach programs**

Resources that connect
patients with treatments

Medtronic
Further, Together

DELIVERING MORE INTERVENTIONAL PORTFOLIO



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