

Ureteral Stents

A broad portfolio to meet patients' and physicians' needs and preferences



Because all stents are not created equal.

In the world of urology and helping patients maintain drainage, all stents are not created equal. Because each patient and ureteroscopy case is unique, you can't rely on one stent to solve all challenges. Boston Scientific offers a broad portfolio of firm, soft and dual-durometer stents designed to accommodate your patient's unique anatomy, clinical presentation and tolerance. Boston Scientific stents have been developed from more than 35 years of clinical research in partnership with urologists just like you – urologists who best understand the characteristics that help advance the quality of patient care, from the routine to the most complex of cases. When you choose Boston Scientific, you can count on a stent portfolio backed by insightful evidence and innovative solutions that will help you solve common challenges related to ureteral stent procedures.

So, while our portfolio offers stents that are intentionally not created equal, our goal is to ensure you equal confidence, no matter which stent you choose – confidence that we have a stent for you, no matter the patient, no matter the case.

Most of our stents are biocompatible for up to 365 days² and feature proprietary materials and coating, such as:

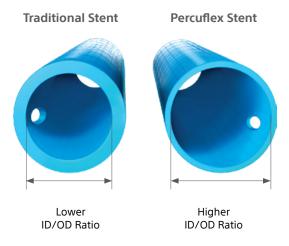


HydroPlus™ Hydrophilic Coating

 Absorbs water to provide a low-friction smooth surface that facilitates advancement and may help reduce superficial damage to the epithelium^{3,4,5,18}

Percuflex[™] **Material Construction**

- Designed to soften at body temperature and conform to the ureter^{1,6-9}
- Helps reduce potential for stent migration due to the high-retention coil strength^{3,4,10}
- Promotes optimal drainage with a thin wall design, large inner lumen and multiple side drainage holes^{1,3,11}
- Made of biocompatible material for up to 365-day indwell²
- Provides durable material strength³



Images not drawn to scale.

Designed for Excellent Drainage

Low profile and large inner lumen

are attainable due to the high tensile strength of the Percuflex Material. 3,11

The 5F version

is designed to increase drainage and may be passed over a .038" quidewire.









Percuflex™ Ureteral Stent A stent designed for migration resistance.^{3,4,10}



Ureteral Stent*Firm enough to place under difficult conditions. 3, 14-18

Percuflex[™] **Plus**



Contour™ and Contour VL™ Ureteral Stents* The soft stent designed to conform.^{1,6,9}

Now also with SureDrive[™] steerable option for Percuflex Plus, Contour and Contour VL

^{*} SureDrive $^{\mathtt{w}}$ Steerable Ureteral Stent Optional





Percuflex™ Urinary
Diversion Stent Set
The stent set designed for optimal drainage.²²



Polaris™ Loop Ureteral Stent Proprietary loop design. Less bladder irritation.¹²

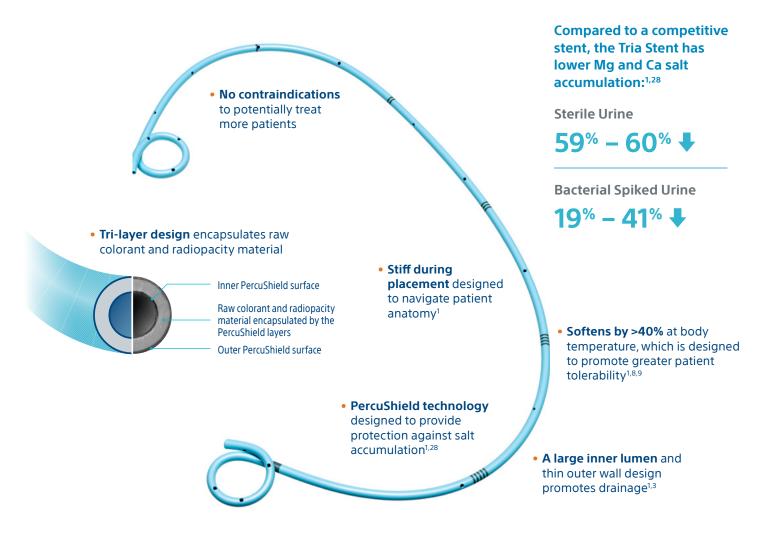


Polaris™ Ultra Ureteral Stent Firm where it needs to be. Soft where it matters.^{6,13}

Tria[™] Ureteral Stent

Unlike any other.

When it comes to ureteral stents, urine calcium (Ca) and magnesium (Mg) salt deposits can contribute to stent complications such as encrustation.^{24,25} The cause and rate of encrustation is multifactorial and can include factors such as body chemistry and medical condition of the patient, stent indwell time, and surface material or properties of the stent.^{24,26,27} The Tria Stent is the only commercially available stent that may help control the accumulation of both Mg and Ca salts.^{1,28} As a matter of fact, in a bench study, the Tria Stent showed up to 60% less accumulation compared to Bard Inlay Optima® Ureteral Stent, depending on urine characteristics.^{1,28} This is due, in part, to PercuShield™ technology on the inner and outer surfaces that are embedded, designed to provide protection against salt accumulation.^{1,28} The Tria Stent is designed to be stiffer during placement to navigate patient anatomy while softening by over 40% at body temperature, which may promote greater patient tolerability.^{1,8,9} And, with no contraindications to potentially treat more patients, the Tria Ureteral Stent is a truly unique stent – unlike any other.

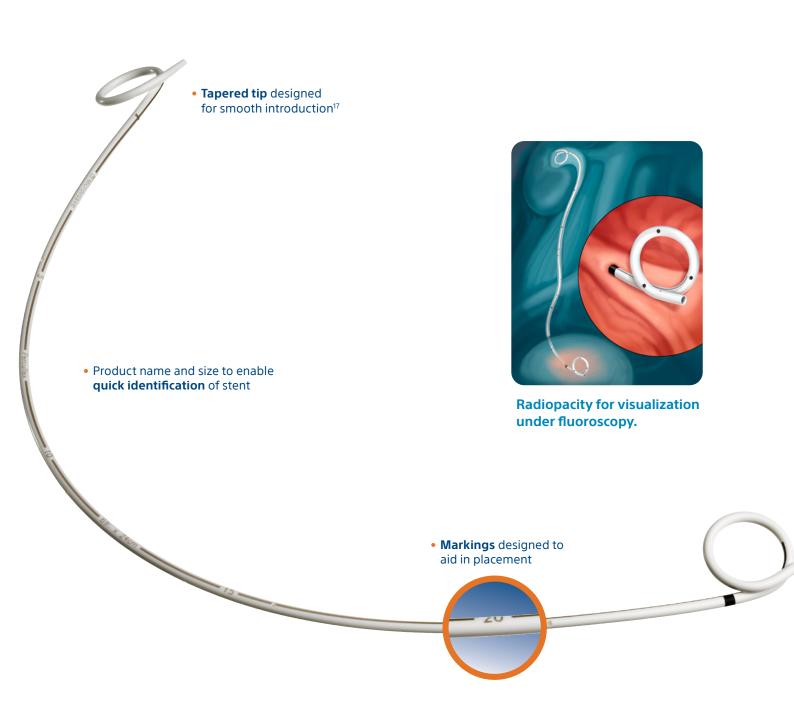


Multiple Sizes	Indwell Time
Available in 4.8F – 8F with lengths ranging from 10cm – 30cm	Up to 365 days ²

Percuflex[™] Ureteral Stent

A stent designed for migration resistance. 3,4,10

With the firm Percuflex Ureteral Stent, you can be confident in your stent placement.^{1,3,13,18} This firm stent has clear bladder markings and a tapered tip that are designed for ease of placement, and its high-retention coil strength helps to maintain its pigtail shape, thus reducing the chance of stent migration.^{3,4,10}

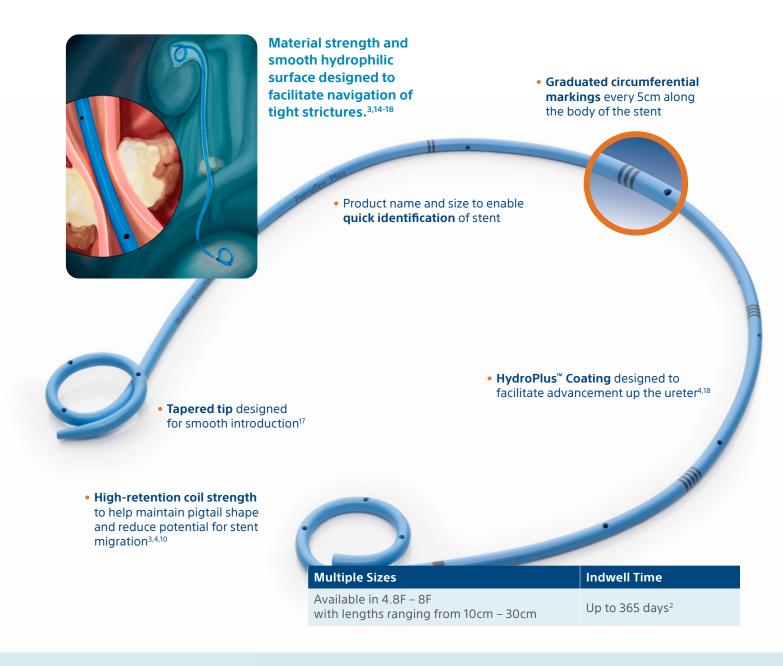


Multiple Sizes	Indwell Time
Available in 4.8F – 8F with lengths ranging from 20cm – 30cm	Up to 365 days ²

Percuflex[™] Plus Ureteral Stent

Firm enough to place under difficult conditions.^{3,14-18}

Tortuous anatomy? Tight strictures? Look no further than the Percuflex Plus Ureteral Stent designed to help you navigate a challenging tortuous anatomy.^{1,3,14-18} Its firm material and smooth hydrophilic surface may help with placement, and its high-retention coil strength helps to maintain its pigtail shape designed to prevent stent migration.^{3,4,10} The Percuflex Plus Stent is designed for patients with challenging conditions and procedures where you need rigidity during placement.^{3,14-18}

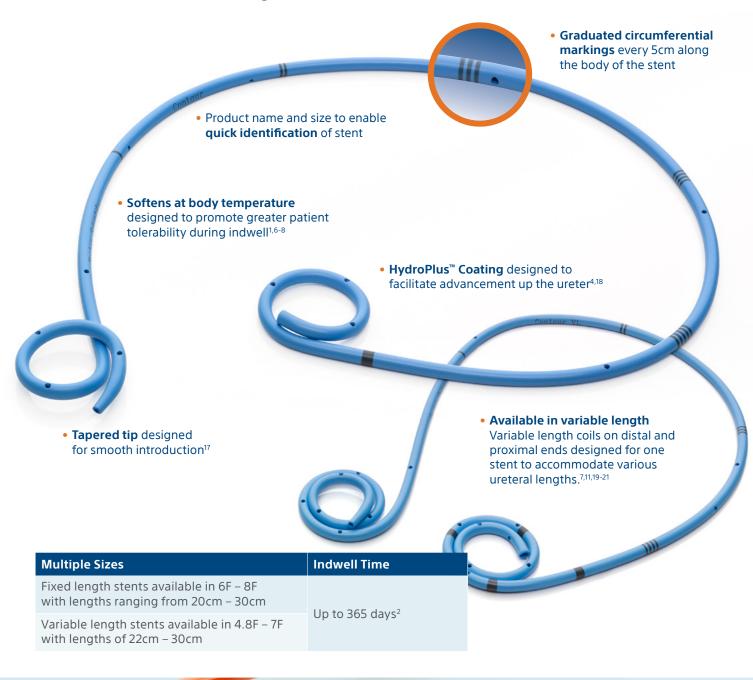




Contour[™] and Contour VL[™] Ureteral Stents

The soft stent designed to conform. 1,6,9

What sets Contour and Contour VL Ureteral Stents apart? These stents are made of soft Percuflex™ material that softens even further at body temperature, designed to conform to the shape of the ureter.^{1,6-9} This unique material may promote patient tolerance, and its variable coil length may accommodate various ureteral lengths.^{6-8,11,19-21}

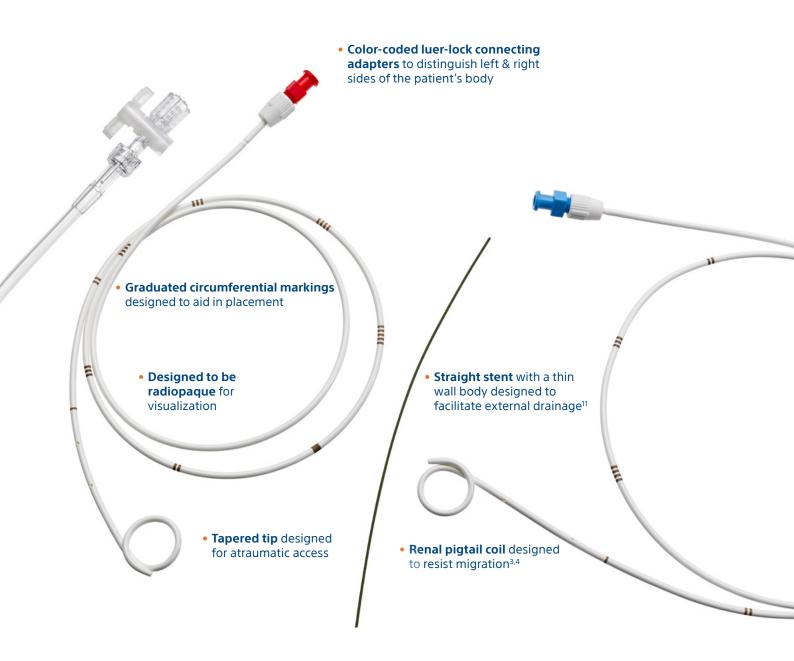


- Allows controlled advancement of the stent
- Ability to retract the stent if placed too far up the ureter
- Ability to rotate the stent, enabling renal coil formation
- Ability to position the bladder coil as desired
- Enables quick placement of the stent
- Simple release of the stent

Percuflex[™] Urinary Diversion Stent Set

The stent set designed for optimal drainage.²²

Sometimes you need to ensure optimal urinary system drainage from the patient's body. Used for external drainage following urinary diversion procedures, the Percuflex Urinary Diversion Stent Set is the perfect solution.¹¹ The single renal coil is designed to securely hold the stent in position while the straight stent with a thin wall body is designed to facilitate external drainage.¹¹ The set contains two stents, guidewire, catheter adaptors and drainage bag connectors, so you can be confident you have everything you need when external drainage is a must.

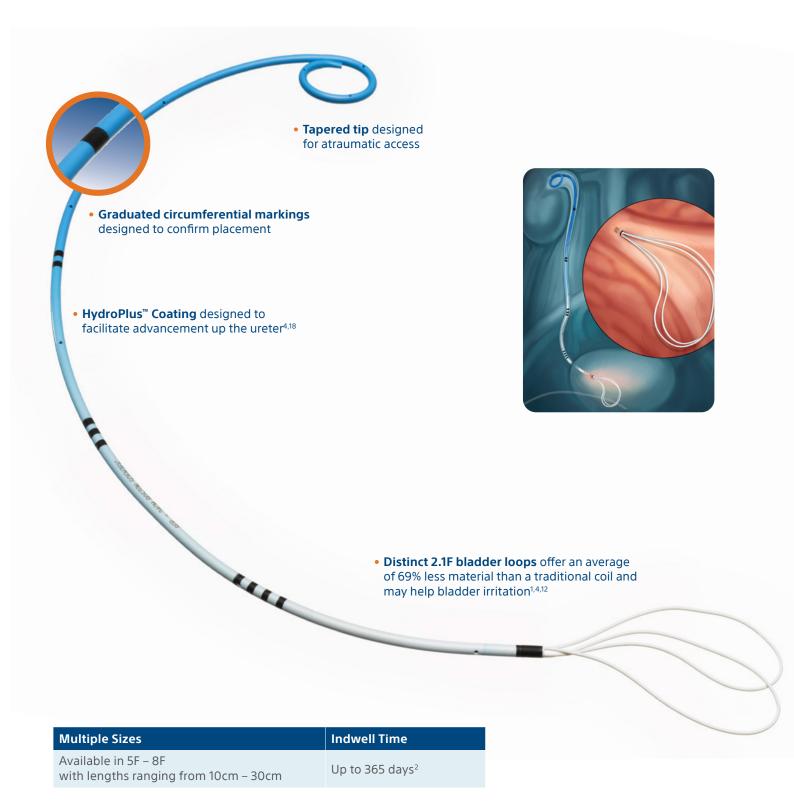


Multiple Sizes	Indwell Time
Offered in both closed and open tip configuration	Up to 90 days ³⁰
Available in 6F – 8F with length of 80cm	

Polaris[™] Loop Ureteral Stent

Proprietary loop design. Less bladder irritation.¹²

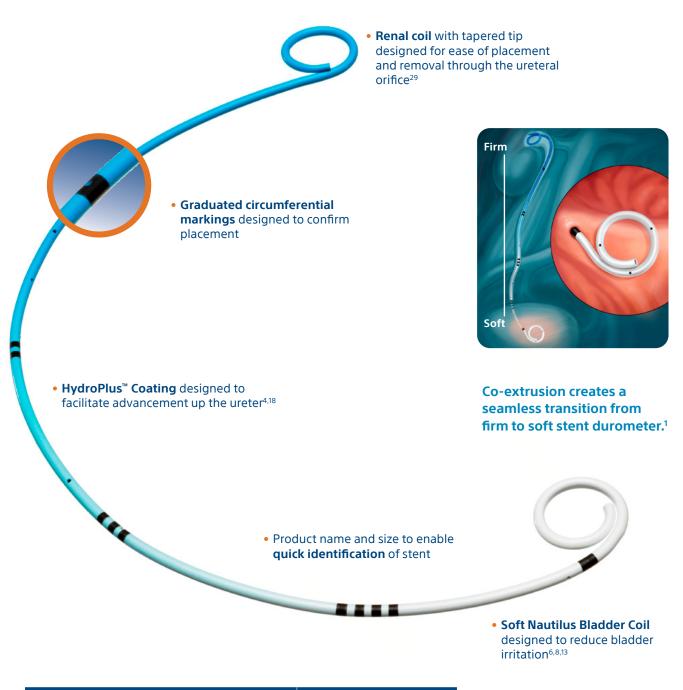
You never want to be thrown for a loop; however, the Polaris Loop Ureteral Stent may be the exception. This dual-durometer stent features two unique bladder loops that result in an average of 69% less material in your patient's bladder than a traditional stent.^{1,4} Ideally, that means less bladder irritation.¹² The stent is also designed to deliver optimal drainage, giving you confidence in the stent's performance during indwell.



Polaris[™] Ultra Ureteral Stent

Firm where it needs to be. Soft where it matters. 6,13

Every patient wants the least bladder irritation possible with their ureteral stent. We developed the Polaris Ultra Ureteral Stent that features a distinct soft Nautilus™ Bladder Coil designed to minimize bladder irritation.^{6,8,13} Its proprietary co-extrusion technology allows the stent to be firm in the kidney and soft in the bladder – creating a seamless transition from firm to soft so you can promote patient tolerance.^{6,13} These unique features combined with a tapered renal tip are designed for ease of stent placement and removal.²⁹



Multiple Sizes	Indwell Time
Available in 5F – 8F with lengths ranging from 10cm – 30cm	Up to 365 days ²



Scientific | EDUCARE

Discover a valuable portfolio of personalised educational and training opportunities

Medical education is a vital component of a safe procedure adoption. Boston Scientific offers an extensive program of EDUCARE training opportunities in Endourology.

Multi-stage programmes, delivered in specialist centers and online by recognized experts, have been developed in partnership with healthcare professionals, for healthcare professionals such as nurses, young residents, fellows and skilled doctors.

Through EDUCARE, Boston Scientific guarantees high standards of education and innovation, strengthening relationships with healthcare professionals, increasing and improving expertise and knowledge – and advancing science for life.

For more information about the courses and their formats please contact your local sales representative or visit **educare.bostonscientific.eu**



To learn more about all of our stent solutions, visit www.bostonscientific.com/en-EU/medical-specialties/urology/products.html

- Data on file with Boston Scientific. Bench test results may not necessarily be indicative of clinical performance.

 Biocompatible material designed for up to a 365-day indwelling time. Where long-term use is indicated, it is recommended that indwelling time for stent (with retrieval line removed) not exceed 365 days. This stent should be evaluated by the physician on or before 90 days post-placement.

 Mardis HK, Kroeger RM, Morton JJ, et al. Comparative evaluation of materials used for internal ureteral stents. *J Endourol.* 1993 Apr;7(2):105-15.
- Mosayyebi A, Vijayakumar A, Yue QY, et al. Engineering solutions to ureteral stents: material, coating and design. Cent European J Urol 2017:70(3):270-4.
- Cormio L. Ureteric injuries: clinical and experimental studies. Scand J Urol Nephrol Suppl. 1995;171:1-66.

 Lee JN, Kim BS. Comparison of efficacy and bladder irritation symptoms among three different ureteral stents: a double-blind, prospective, randomized controlled trial. Scand J Urol. 2015 Jun;49(3):237-41.

 Betschart P, Zumstein V, Piller A, et al. Prevention and treatment of symptoms associated with indwelling ureteral stents: A systematic review.
- Int J Urology. 2017 Apr;24(4):250-9.
- Park HK. Paick SH. Kim HG. et al. The impact of ureteral stent type on patient symptoms as determined by the ureteral stent symptom
- questionnaire: A prospective, randomized, controlled study. J Endourol. 2015 Mar;29(3):367-71.

 Reduction in stent durometer represents the average percent drop in stent durometer from 25°C to 37°C
- Reduction in Stent durometer represents the average percent drop in stent durometer from 25°C to 37°C. Liatsikos E, Kallidonis P, Karnabatidis D, Petsas T. (2012) Long-term Stenting of the Ureter In Smith's Textbook of Endourology (pp. 772-782). New York, NY: Blackwell Publishing Ltd.

 Lam JS, Gupta M. Ureteral stents. Urinary Stone Disease. 2007;(25):465-93.

 Taguchi M, Inoue T, Muguruma K, et al. Impact of loop-tail ureteral stents on ureteral stent-related symptoms immediately after ureteroscopic
- lithotripsy: comparison with pigtail ureteral stents. *Investig Clin Urol*. 2017 Nov;58(6):440-46
- 13. Al-Bareeg R, Denstedt JD. Stents and Stenting. In: Rao NP, Preminger GM, Kavanagh JP ed. Urinary Tract Stone Disease. London: Springer-Verlag; 2010; [46]: 543-51.

 Joshi HB, Chitale SV, Nagarajan M, et al. A Prospective single-blind comparison of ureteral stents composed of firm and soft polymer. *J Urol*.
- 2005 Dec;174(6):2303-6.
 Leslie SW, Sajjad H. Double J placement methods comparative analysis. In: StatPearls. Treasure Island (FL): StatPearls Publishing; June 28, 2020.
- Denstedt JD, Wollin TA, Reid G. Biomaterials used in urology: Current issues of biocompatibility, infection, and encrustation. *J Endourol*. 1998 Dec;12(6):493-500.
- Saltzman B. Ureteral stents indications, variations, and complications. *Urol Clin North Am.* 1988 Aug;15(3):481-91. Beysens M, Tailly TO. Ureteral stents in urolithiasis. *Asian J Urol.* 2018 Oct;5(4):274-86.
- Calvert RC, Wong KY, Chitale SV et al. Multi-length or 24 cm ureteric stent? A multicentre randomised comparison of stent-related symptoms using a validated questionnaire. BJU Int. 2013 Jun;111(7):1099-104.
- 20. Zilberman DE. (2012) Ureteral Anatomy In Smith AD, Badlani GH, Preminger GM, Kavoussi LR (Eds.), Smith's Textbook of Endourology (pp. 357-64). New York, NY: Blackwell Publishing Ltd.
- 21. Warren LH, ed. The ureters. In Henry Gray Anatomy of the Human Body. Edinburgh: Churchill Livingstone, 2000. Available from: URL: http://www.bartleby.com/107/254.html
- 22. Mullins JK, Guzzo TJ, Ball MW, et al. Ureteral stents placed at the time of urinary diversion decreases postoperative morbidity. *Urol Int.* 2012;88(1):66-70.
- 23. Mandhani A, Kapoor R, Zaman W, et al. Is 2-week duration sufficient for stenting in endopyelotomy? *J Urol.* 2003 Mar;169(3):886-9. 24. Vanderbrink BA, Rastinehad AR, Ost MC, et al. Encrusted urinary stents: Evaluation and endourologic management. *J Endourol.* 2008 May;22(5):905-12.
- 25. Bruce AW, Sira SS, Clark AF, et al. The problem of catheter encrustation. Can Med Assoc J. 1974 Aug 3;111(3):238-9 passim
- 26. Bultitude MF, Tiptaft RC, Glass JM, et al. Management of encrusted ureteral stents impacted in upper tract. *Urology*. 2003 Oct;62(4):622-6.
 27. Elwood CN, Lo J, Chou E, et al. Understanding urinary conditioning film components on ureteral stents: profiling protein components and
- evaluating their role in bacterial colonization. *Biofouling*. 2013;29(9):1115-22.

 28. Testing was performed by an independent third-party using the in-vitro BEST" method to evaluate salt adhesion of the ureteral stents. A total
- of 30 samples from each ureteral stent family were tested in both a sterile Artificial Urine Model and a Bacterial Infection Model (n=15 in each model) for 2 weeks. *Proteus mirabilis* was used as the microbial challenge in the Bacterial Infection Model due to its known urease production and involvement in struvite formation.
- Venkatesan N, Shroff S, Jayachandran K, et al. Polymers as ureteral stents. *J Endourol*. 2010 Feb;24(2):191-8.
- 30. Biocompatible material designed for up to a 90-day indwelling time.

CAUTION: The law restricts these devices to sale by or on the order of a physician. Indications, contraindications, warnings and instructions for use the following of the contraction of the contractioncan be found in the product labelling supplied with each device. Information for use only in countries with applicable health authority registrations. Material not intended for use in France

All images are the property of Boston Scientific. All trademarks are the property of their respective owners



© 2024 Boston Scientific Corporation or its affiliates. All rights reserved.

DINURO2467EA APR 2024