

PleurX™ catheter system

Help your patients manage recurrent pleural effusions and malignant ascites at home

The PleurX™ catheter system is the easy-to-use and effective choice for managing recurrent pleural effusions and malignant ascites at home. The system includes an indwelling catheter and vacuum bottles that provide quick, effective drainage—without draining unnecessary time, costs and energy.

The PleurX catheter system includes a comprehensive portfolio of products to support:

- Catheter placement and maintenance
- Patient education and training
- Safe and effective drainage



Why choose the PleurX catheter system for your patients?

The PleurX catheter system helps your patients take control by enabling them to manage fluid from malignant and nonmalignant pleural effusions or malignant ascites at home



PleurX catheter system

Time-tested system

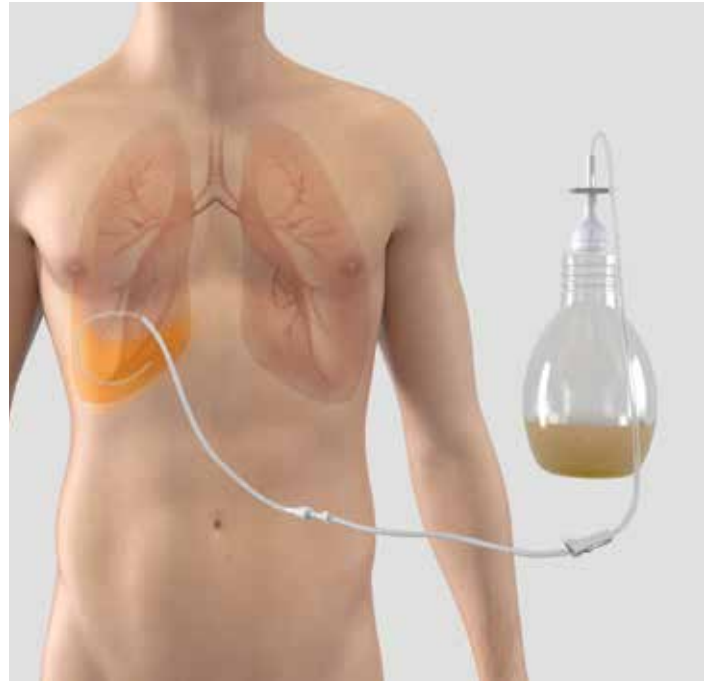
- More than 500,000 patients treated since 1997
- More than 35 references in peer-reviewed articles
- Documented < 3% infection rate and < 5% occlusion rate¹
- Indicated for spontaneous pleurodesis (*46% of patients achieve spontaneous pleurodesis at a median of 26.5 days*)²
- Can treat recurrent nonmalignant pleural effusions, including congestive heart failure (CHF) patients
- Can replace a chest tube for talc pleurodesis, giving you an additional treatment option
- Helps reduce the risk of misconnections with a unique, proprietary valve
- Promotes safe and effective drainage with active vacuum technology

Patient focus

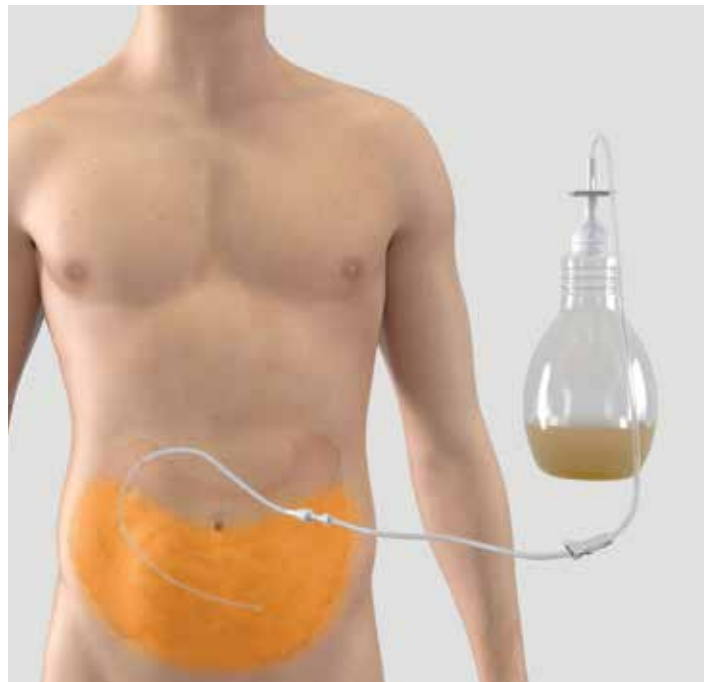
- High degree of patient compliance and few complications³
- Helps lessen hospital visits for repeat thoracentesis or paracentesis

Clinical support

- A dedicated clinical support team to help you establish policies, reduce workflow and increase effectiveness
- Clinical education presented by nationally recognized experts to help keep you up-to-date
- Web-based or on-site training from per-diem nurses to help you learn the PleurX catheter system



PleurX pleural catheter system



PleurX peritoneal catheter system

PleurX catheter system

Vacuum bottle

Active vacuum technology drains quickly and comfortably without the need for gravity. Bottles are available in 500 mL and 1,000 mL sizes.



Roller clamp

The roller clamp provides easy control of drainage flow for optimal comfort.

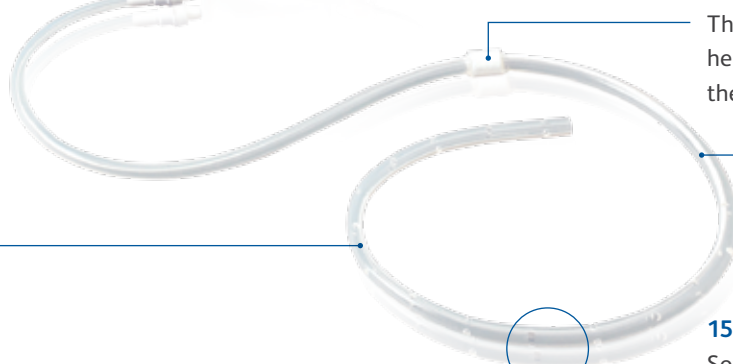
Proprietary safety valve

The valve helps prevent inadvertent passage of air or fluid through the catheter. It also helps to reduce the risk of misconnection that may occur with a standard luer connection.



Polyester cuff

This promotes tissue ingrowth to help reduce infection risk and hold the catheter securely in place.

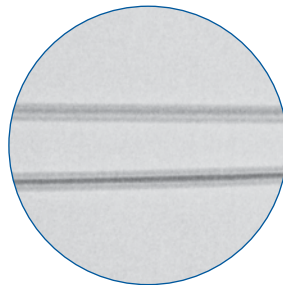


15.5 Fr Silicone catheter

Soft and flexible catheter conforms to the pleural or peritoneal space and minimizes insertion-site discomfort.

Fenestrations

Large, smooth fenestrations promote drainage and help prevent occlusions.



Barium stripe

Darker barium stripe provides more visibility under radiography.

The PleurX pleural catheter can be used in place of a chest tube for talc pleurodesis, giving you an additional treatment option

- **Decreased hospital days:** Patients may return home within 24 hours after instillation (*at the discretion of a physician*) rather than stay in the hospital for days draining from a chest tube.
- **Convenient outpatient drainage:** Patients drain the effusion at home (*per the PleurX Instructions for Use*) until pleurodesis occurs.
- **Backup for failed pleurodesis:** With chest tubes, pleurodesis procedures fail up to 28% of the time.⁴ Using the PleurX catheter provides a backup with no need for reintervention because the catheter is already in place for drainage.
- **Greater patient comfort:** With a smaller incision and soft, flexible catheter, the PleurX catheter system offers a gentle alternative to a large, stiff chest tube.
- **Support of Quality of Care goals:** Using the PleurX catheter can foster patient satisfaction—and the goal of getting and keeping patients out of the hospital.

The PleurX catheter system can relieve recurrent pleural effusions in congestive heart failure (CHF) patients, providing comfort and relief of painful symptoms without repeated trips to the hospital

If a pleural effusion due to CHF does not respond to medical management of the underlying disease, the PleurX catheter system is indicated for:

- **Palliation or resolution of symptoms:** The PleurX catheter system is indicated for palliation and pleurodesis of recurrent pleural effusions, giving patients the option to manage their symptoms at home.

Published studies show:

- **Improved New York Heart Association patient status:** Patients may experience an improvement in their symptoms, providing relief and allowing them to resume previous activity.^{5,6}
- **Fewer trips to the hospital and office:** Patients drain their effusions at home, reducing the number of physician visits due to their pleural effusions.⁵
- **Decreased hospital days:** The PleurX placement procedure may be performed as an outpatient procedure, resulting in a shorter hospital stay compared to thoracoscopic pleurodesis procedures.⁵
- **Fewer respiratory complications:** The PleurX catheter system has shown reduced risk of respiratory complications in comparison to thoracoscopic pleurodesis due to sclerosing agents.⁵
- **Support of quality-of-care goals:** Using the PleurX catheter can foster patient satisfaction and the goal of getting—and keeping—patients out of the hospital.⁷

Catheter placement kits and accessories

PleurX catheter and starter kit 50-7700 and 50-9900

The PleurX catheter and starter kit contains the items needed for catheter placement and initial drainage, as well as vacuum bottles with patient education and training materials to help ensure a smooth transition to a home or alternative care center.

PleurX pleural (50-7700) or peritoneal (50-9900) kits contain:

Preparation components	Placement components	Closing components	Drainage components	Dressing components
<ul style="list-style-type: none"> • ChloraPrep™ 10.5 mL applicators with Hi-Lite Orange™ tint (qty 2) • Fenestrated drape • Filter Straw™ filter • Lidocaine hydrochloride (HCL) USP, 1%, 5 mL (qty 3 ampoules) • BD SafetyGlide™ needles: <ul style="list-style-type: none"> – 22 G x 1½ in (3.8 cm) – 25 G x 1 in (2.5 cm) • Syringe, 10 mL 	<ul style="list-style-type: none"> • PleurX catheter (15.5 Fr) <ul style="list-style-type: none"> – 66 cm (pleural) – 71 cm (peritoneal) • Safety scalpel • Guidewire introducer with needle • Syringe, 10 mL • J-tip guidewire, 60 cm • Forceps • Dilator, 12 Fr • Peel-away introducer, 16 Fr (pleural) <ul style="list-style-type: none"> – 13.7 cm dilator length, 10 cm sheath length • Valved peel-away introducer, 16 Fr (peritoneal) <ul style="list-style-type: none"> – 17.8 cm dilator length, 14 cm sheath length • Tunneler • Needle foam stop • Catheter insertion stylet 	<ul style="list-style-type: none"> • Tweezer • Silk suture, 2-0 straight needle • Absorbable suture, 4-0 curved needle 	<ul style="list-style-type: none"> • Lockable drainage line with access tip • Needle, 17 G x 1 in (2.5 cm) • 5-in-1 drainage line adapter • Valve cap • Alcohol pad 	<ul style="list-style-type: none"> • Gauze pads, 4 in x 4 in (10.2 cm x 10.2 cm qty 6) • Foam catheter pad • Self-adhesive dressing • Lot number sticker (for traceability)

Starter kit components	Patient information kit components
<ul style="list-style-type: none"> • PleurX drainage kit, including 1,000 mL bottles and procedure packs (qty 4) • Convenient carrying box • Patient information kit 	<ul style="list-style-type: none"> • Patient education DVD • Introductory letter with ordering information • Frequently asked questions (FAQ) brochure • <i>Instructions for Use</i> booklet • Reference wall chart • Emergency information card • Drainage log





PleurX catheter kits are also available separately with cat. no. 50-7000B (*pleural*) and 50-9000B (*peritoneal*). Pleural kit shown.



Starter kits available separately with four 1,000 mL bottles (*cat. no. 50-0071*).

Catheter placement kits and accessories (cont'd)

PleurX supplemental insertion kit 50-7262

The supplemental insertion kit aids percutaneous insertion of the PleurX catheter into the pleural or peritoneal space. The orange stylet occludes the fenestrations in the catheter, helping reduce the amount of fluid leakage during catheter placement. The stylet also makes the catheter more rigid for ease of insertion into the valved introducer. The valved introducer helps reduce air entering into and fluid leaking from the pleural or peritoneal space.

Insertion kit components

- Catheter insertion stylet
- Valved peel-away introducer

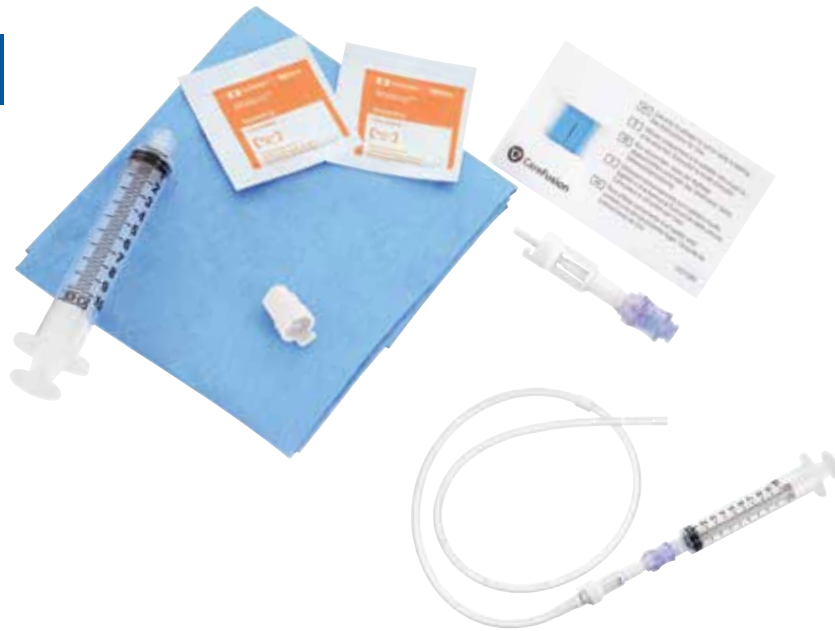


PleurX catheter access kit 50-7280

Fluid samples can help diagnose a complex problem. The PleurX catheter access kit is designed to aspirate a sterile fluid sample directly through the catheter. The catheter access kit is also designed to allow catheter flushing, perform routine maintenance and administer a sclerosing agent for pleurodesis.

Catheter access kit components

- Syringe, 10 mL
- Lockable access tip with needleless access valve
- Blue wrapping
- Valve cap
- Alcohol pads (qty 2)
- Blue emergency slide clamp



Catheter access kit assembled with catheter. (Catheter not included.)

PleurX emergency valve replacement kit 50-7270

The PleurX emergency valve replacement kit allows you to replace the PleurX valve if it is damaged.

Valve kit components

- Valve
- Valve cap
- Blue emergency slide clamp
- Scissors
- Blue wrapping
- Gauze pads, 4 in x 4 in (10.2 cm x 10.2 cm, qty 4)
- Gauze pads, (10.2 cm x 10.2 cm, qty 4)
- Foam catheter pad
- Self-adhesive dressing



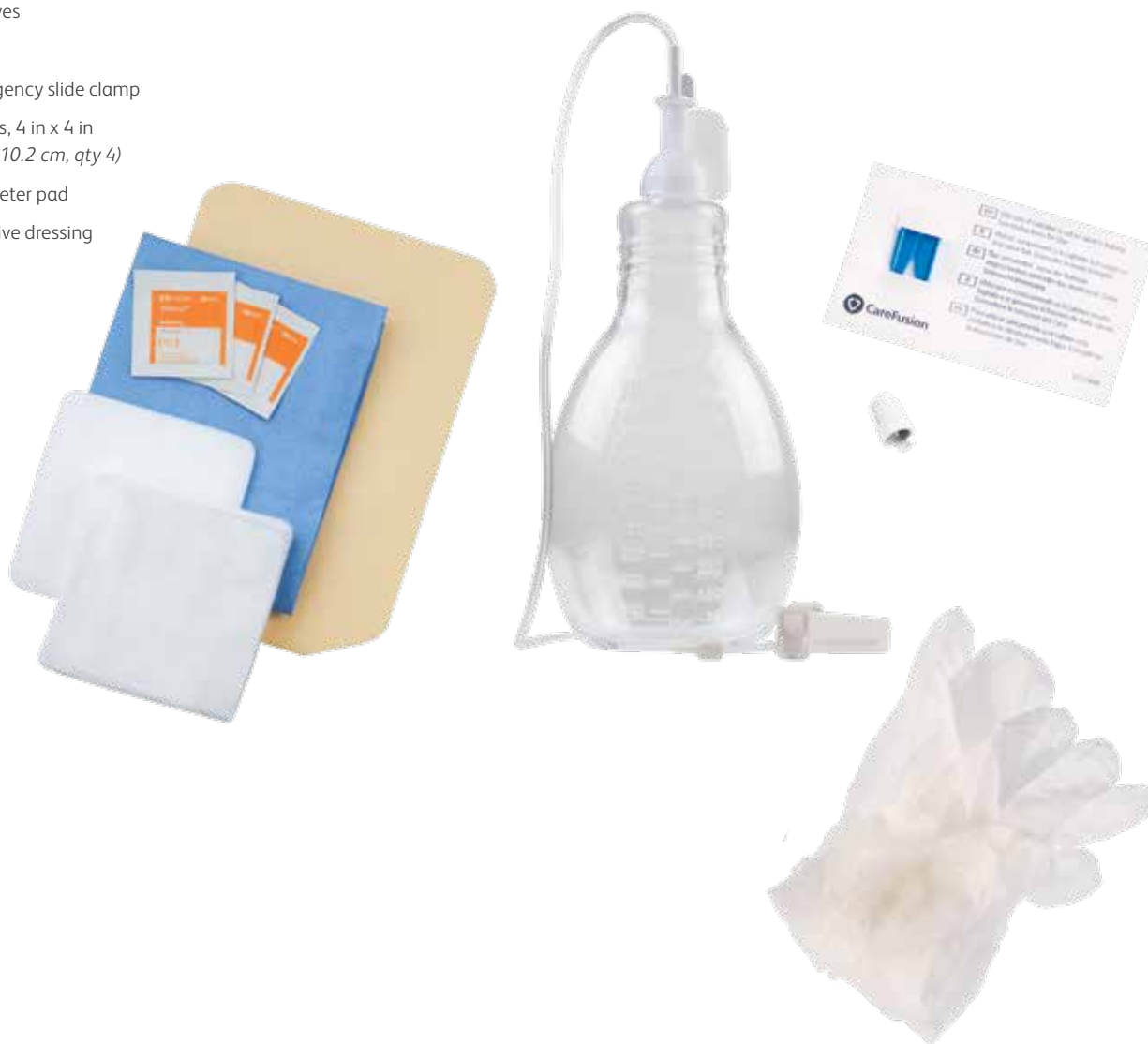
Drainage kits and accessories

PleurX drainage kit 50-7500B (500 mL) and 50-7510 (1,000 mL)

The PleurX drainage kit contains a procedure pack that provides the components needed—including a vacuum bottle with an attached drainage line—each time the patient drains fluid.

Procedure pack components

- Blue wrapping
- Alcohol pads (qty 3)
- Pair of gloves
- Valve cap
- Blue emergency slide clamp
- Gauze pads, 4 in x 4 in (10.2 cm x 10.2 cm, qty 4)
- Foam catheter pad
- Self-adhesive dressing



PleurX procedure pack 50-7290

The PleurX procedure pack allows patients to change dressings with a clean technique and sterile supplies even when they do not need to drain.

Procedure pack components

- Blue wrapping
- Alcohol pads (qty 3)
- Pair of gloves
- Valve cap
- Blue emergency slide clamp
- Gauze pads, 4 in x 4 in (10.2 cm x 10.2 cm, qty 4)
- Foam catheter pad
- Self-adhesive dressing



Drainage kits and accessories (cont'd)

PleurX lockable drainage line kit 50-7265

The PleurX lockable drainage line drains fluid through the PleurX catheter using portable or wall suction instead of PleurX vacuum bottles. The lockable drainage line is available separately (50-7245) or in a convenient kit with procedure pack components (50-7265). The procedure pack provides the components necessary to change the dressing with a clean technique and sterile supplies.

Lockable drainage line kit components

- Drainage line
- 5-in-1 adapter
- Blue wrapping
- Alcohol pads (qty 4)
- Pair of gloves
- Valve cap
- Gauze pads, 4 in x 4 in (10.2 cm x 10.2 cm, qty 4)
- Foam catheter pad
- Self-adhesive dressing
- Blue emergency slide clamp



Lockable drainage line also available separately (50-7245)

PleurX replacement valve cap 50-7235

The PleurX valve cap protects the catheter from contamination and helps maintain a clean drainage pathway. A valve cap is included in the PleurX drainage kit and should be replaced each time the patient drains.



Ordering information

Cat. no.	Description	Qty (cs)
50-7700	PleurX pleural catheter and starter kit with four 1,000 mL bottles	1
50-9900	PleurX peritoneal catheter and starter kit with four 1,000 mL bottles	1
50-7000B	PleurX pleural catheter kit	1
50-9000B	PleurX peritoneal catheter kit	1
50-0071	PleurX starter kit with four 1,000 mL drainage kits	1
50-7500B	PleurX drainage kit with 500 mL vacuum bottle	10
50-7510	PleurX drainage kit with 1,000 mL vacuum bottle	10
50-7235	PleurX replacement valve cap	10
50-7245	PleurX lockable drainage line	10
50-7265	PleurX lockable drainage line kit	5
50-7262	PleurX supplemental insertion kit	5
50-7270	PleurX emergency valve replacement kit	5
50-7280	PleurX catheter access kit	5
50-7290	PleurX procedure pack	5

The PleurX catheter system has been referenced in more than 35 peer-reviewed journal articles, including:

- 1 Warren W, Kim A, Liptay M. Identification of clinical factors predicting PleurX catheter removal in patients treated for malignant pleural effusion. *Eur J Cardio Thorac Surg*. 2008;33(1):89–94.
- 2 Putnam J, Light R, Rodriguez R, Ponn R, et al. A randomized comparison of indwelling pleural catheter and doxycycline pleurodesis in the management of malignant pleural effusions. *Cancer*. 1999;86(10):1992–1999
- 3 Warren W, Kalimi R, Khodadian L, Kim A. Management of malignant pleural effusions using the PleurX catheter. *Ann Thorac Surg*. 2008;85(3):1049–1055.
- 4 Dresler CM, Olak J, Herndon JE II, et al. Phase III intergroup study of talc poudrage vs talc slurry sclerosis for malignant pleural effusion. *Chest*. 2005;127(3):909–915.
- 5 Freeman RK, Ascoti AJ, Dake M, Mahidhara RS. A propensity-matched comparison of pleurodesis or tunneled pleural catheter for heart failure patients with recurrent pleural effusion. *Ann Thorac Surg*. 2014;97(6):1872–1876; discussion 1876–1877.
- 6 Majid A, Kheir F, Fashjian M, et al. Tunneled pleural catheter placement with and without talc poudrage for treatment of pleural effusion due to congestive heart failure. *Ann Thorac Surg*. 2016;13(2):212–216.
- 7 Chalhoub M, Harris K, Castellano M, Maroun R, Bourjeily G. The use of the PleurX catheter in the management of nonmalignant pleural effusions. *Chron Respir Dis*. 2011;8(3):185–191.
- 8 Lungren M, Kim C, Steward J, Smith T, Miller M. Tunneled peritoneal drainage catheter placement for refractory ascites: single-center experience in 188 patients. *J Vasc Interv Radiol*. 2013;24(9):1303–1308.
- 9 Courtney A, Nemcek A, Rosenberg S, Tutton S, et al. Prospective evaluation of the PleurX catheter when used to treat recurrent ascites associated with malignancy. *J Vasc Interv Radiol*. 2008;19(12):1723–1731.
- 10 Musani A, Haas A, Seijo L, Wilby M, et al. Outpatient management of malignant pleural effusions with small-bore, tunneled pleural catheters. *Respiration*. 2004;71(6):559–566.
- 11 Putnam J, Walsh G, Swisher S, Roth J, et al. Outpatient management of malignant pleural effusion by a chronic indwelling pleural catheter. *Ann Thorac Surg*. 2000;69(2):369–375.
- 12 Tapping CR, Ling L, Razack A. PleurX drain use in the management of malignant ascites: safety, complications, long-term patency and factors predictive of success. *Br J Radiol*. 2012;85(1013):623–628.
- 13 Tremblay A, Mason C, Michaud G. Use of tunneled catheters for malignant pleural effusions in patients fit for pleurodesis. *Eur Respir J*. 2007;30(4):759–762.
- 14 Tremblay A, Michaud G. Single-center experience with 250 tunnelled pleural catheter insertions for malignant pleural effusion. *Chest*. 2006;129(2):362–368.
- 15 Richard H, Coldwell D, Boyd-Kranis R, et al. PleurX tunneled catheter in the management of malignant ascites. *J Vasc Interv Radiol*. 2001;12(3):373–375.
- 16 Haas A, Sterman D, Musani A. Malignant pleural effusions: management options with consideration of coding, billing, and a decision approach. *Chest*. 2007;132(3):1036–1041.
- 17 Pien G, Gant M, Washam C, Sterman D. Use of an implantable pleural catheter for trapped lung syndrome in patients with malignant pleural effusion. *Chest*. 2001;119(6):1641–1646.
- 18 Khaleeq G, Musani A. Emerging paradigms in the management of malignant pleural effusions. *Respir Med*. 2008;102(7):939–948.

- 19 Lee Y, Light R. Management of malignant pleural effusions. *Respirology*. 2004;9(2):148–156.
- 20 Brubacher S, Gobel B. Use of the PleurX Pleural Catheter for the management of malignant pleural effusions. *Clin J Oncol Nurs*. 2003;7(1):35–38.
- 21 Ohm C, Park D, Vogen M, et al. Use of an indwelling pleural catheter compared with thoroscopic talc pleurodesis in the management of malignant pleural effusions. *Am Surg*. 2003;69(3):198–202.
- 22 van den Toorn L, Schaap E, Surmont V, et al. Management of recurrent malignant pleural effusions with a chronic indwelling pleural catheter. *Lung Cancer*. 2005;50(1):123–127.
- 23 Tremblay A, Patel M, Michaud G. Use of tunneled pleural catheters in malignant mesothelioma. *J Bronchol*. 2005;12(4):203–206.
- 24 Moffett P, Moffett B, Laber D. Diagnosing and managing suspected malignant pleural effusions. *J Thorac Oncol*. 2009;7(4):143–146.
- 25 Sioris T, Sihvo E, Salo J, et al. Long-term indwelling pleural catheter (PleurX) for malignant pleural effusion unsuitable for talc pleurodesis. *Eur J Surg Oncol*. 2009;35(5):546–551.
- 26 Mercky P, Sakr L, Heyries L, Lagrange X, et al. Use of a tunnelled pleural catheter for the management of refractory hepatic hydrothorax: a new therapeutic option. *Respiration*. 2010;80(4):348–352.
- 27 Davies H, Rahman N, Parker R, Davies R. Use of indwelling pleural catheters for chronic pleural infection. *Chest*. 2008;133(2):546–549.
- 28 Pollak J, Burdge C, Rosenblatt M, et al. Treatment of malignant pleural effusions with tunneled long-term drainage catheters. *J Vasc Interv Radiol*. 2001;12(2):201–208.
- 29 Schrader J, Ferson P. Managing recurrent pleural effusions with an indwelling pleural catheter. *JAAPA*. 2009;22(5):27–28:33–34.
- 30 Rosenberg S. Palliation of malignant ascites. *Gastroenterol Clin North Am*. 2006;35(1):189–199.
- 31 Behrendt R. Management of malignant ascites: Current treatment options. *Oncology Nursing News*. 2008;2(1):1–16.
- 32 Brooks R, Herzog T. Long-term semi-permanent catheter use for the palliation of malignant ascites. *Gynecol Oncol*. 2006;101(2):360–362.
- 33 Suzuki K, Servais E, Rizk N, et al. Palliation and pleurodesis in malignant pleural effusion: The role for tunneled pleural catheters. *J Thorac Oncol*. 2011;6(4):762–767.
- 34 Van Meter M, McKee K, Kohlwes R. Efficacy and safety of tunneled pleural catheters in adults with malignant pleural effusions: A systematic review. *J Gen Intern Med*. 2011;26(1):70–76.
- 35 Puri V, Prydeck T, Crabtree T, et al. Treatment of malignant pleural effusion: a cost-effectiveness analysis. *Ann Thorac Surg*. 2012;94(2):374–379.
- 36 Reddy C, Ernst A, Lamb C, Feller-Kopman D. Rapid pleurodesis for malignant pleural effusions: a pilot study. *Chest*. 2011;139(6):1419–1423.
- 37 Ahmed L, Ip H, Rao D, et al. Pleurodesis through indwelling pleural catheters for malignant pleural effusions: retrospective case series of a novel clinical pathway. *Chest*. 2014;146(6):190–194.

To order or learn more about how BD can assist you in your efforts to bring this valuable treatment to more patients, contact your Interventional Specialties sales representative, call **800.323.9088** or visit **bd.com/PleurX**

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