3M | PREVENA™
Incision Management System

The power to protect
In cardiovascular surgery.

Enabling low-touch post-operative care to protect patients, clinicians and hospitals from the consequences of surgical site complications.

We understand things have changed recently.

The COVID-19 pandemic has resulted in consequences which have rippled across the health care setting and beyond.

As we resume elective surgery, clinicians are redefining postoperative care and adopting their approaches to achieve:

- Early discharge
- Home-based recovery
- Virtual clinics
- Low-touch care
- Minimal complications
- Low readmissions

Surgical Site Complications are a major source of morbidity after cardiothoracic and vascular procedures.[1–2]

SSI rates are as high as

16%

in cardiac surgery.[2]

Deep sternal wound infections are associated with up to

50%

Mortality rate.[3]

SSI rates are as high as

30%

in vascular surgery.[4–8]

SSI are associated with

2x

risk of early graft loss and reoperation.[9]

SSIs are associated with an increased median length of hospital stay.

↑17.9 days

cardiac surgery[10]

↑12.2 days

vascular surgery[11]

€22,906

Additional average costs due to SSI following cardiothoracic surgery.[10*]

€3,913

Additional average costs due to SSI following vascular surgery.[12†]

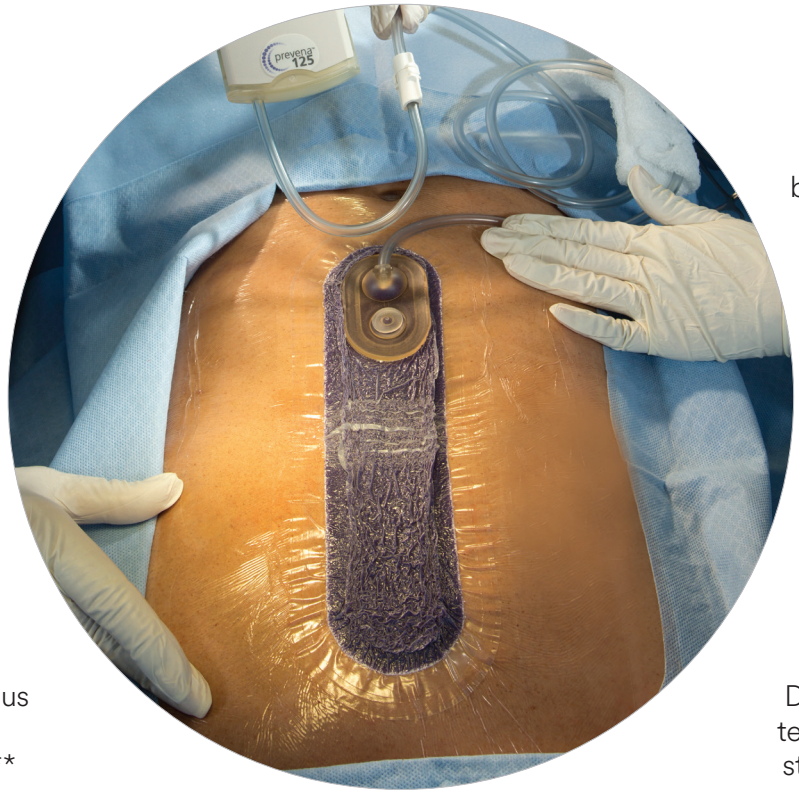
By working to protect incisions from postoperative complications, PREVENA™ Therapy works to help stop the ripple effect before it begins, protecting patients, surgeons, staff, practices, and hospitals from potential consequences through low touch care.

*Calculated as additional average costs of treating patients with an SSI of €36,261 against the average costs of treating patients without an SSI of €13,355.[10]
†Additional average costs calculated as £3,545 (GBP). Rxchange reate from GBP to EUR correct as of Jun 2020.

PREVENA™ Therapy manages and protects surgical incisions by:

Helping to hold incision edges together

Reducing edema



Acting as a barrier to external contamination

Delivering continuous -125mmHg up to 7 or 14 days**

Decreasing lateral tension of sutured/ stapled incisions†[13]

Removing fluids and infectious materials*

“NICE advice”

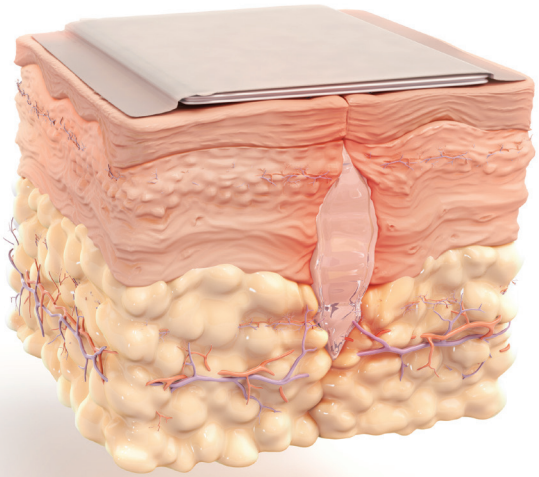
Did you know?

NICE have published a medical innovation briefing on the use of “Prevena Incision Management for Closed Surgical Incisions”. Access the full document at **https://www.nice.org.uk/advice/mib173**

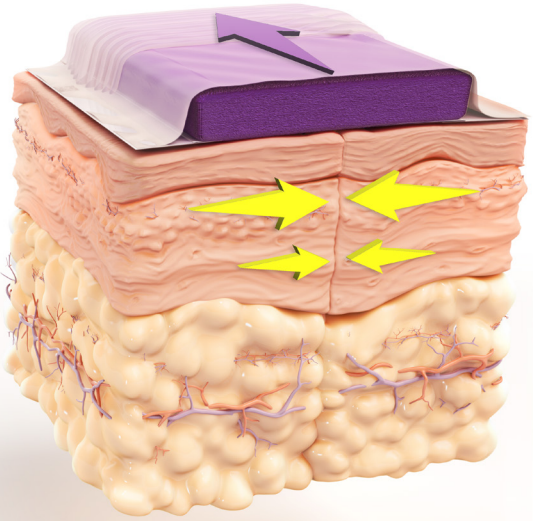
*In a canister
**length of therapy either 7 or 14 days with the PREVENA PLUS 125 Therapy Unit
† In computer and bench models

PREVENA™ Therapy utilizes reticulated open cell foam technology and -125mmHg negative pressure.

Passive therapy



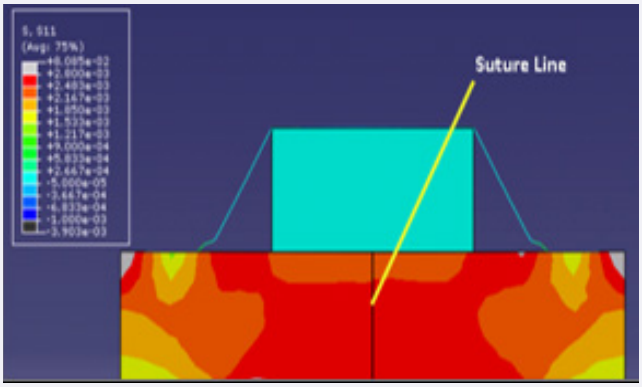
PREVENA™ Therapy



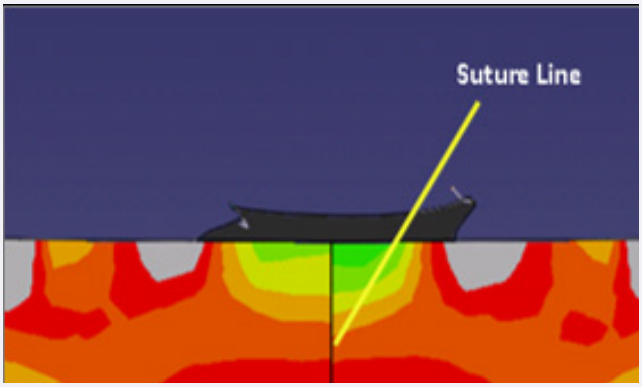
Under -125mmHg of negative pressure, the reticulated open cell foam dressing collapses to it's geometric center. This brings the incision edges together, reduces lateral tension, and also allows for improved fluid management.[13–15]

Delivering a 50% reduction in lateral tension.[13]

Reducing lateral strain is important to maintain the integrity of closed surgical incision. Using a finite computer model on a simulated incision, PREVENA™ has been shown to reduce lateral strain by approximately 50% (0.9 to 1.2kPa) along the incision.



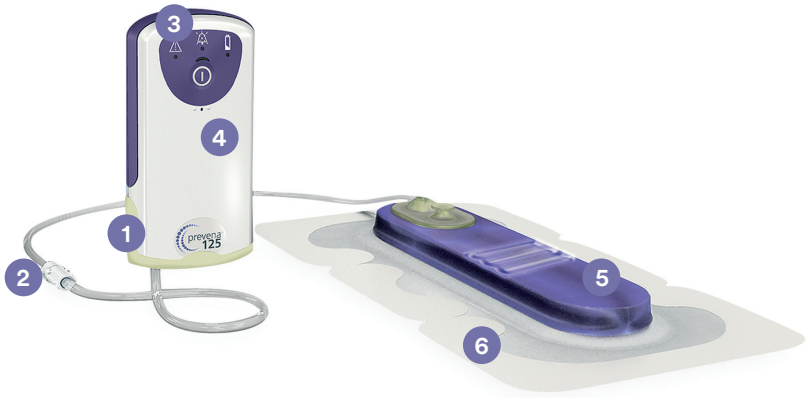
A Lateral strain on simulated incision without application of PREVENA™ therapy. Orange and red colours indicate high lateral strain.



B Lateral strain on simulated incision with application of PREVENA™ therapy. Yellow and green colours indicate low lateral strain.

The power of PREVENA™ Therapy.

PREVENA™ Therapy is packed with features specifically designed to help reduce the risk of surgical site complications.



1. **Replaceable canister**
   Store exudate and infectious fluids away from the surgical incision.
2. **V.A.C.® connector**
   Connect to other V.A.C. devices within the hospital setting for greater flexibility.
3. **Audible and visual alarms**
   Rectify therapy issues at an early stage.
4. **-125mmHg**
   To hold incision edges together and remove fluids.
5. **Foam bolster**
   Channels uniform negative pressure to the incision area, reducing lateral tension.
6. **Skin friendly interface layer**
   Wicks fluid away from the surface, with 0.019% ionic silver to help reduce bacterial colonisation.

Both the PREVENA™ and PREVENA PLUS™ Therapy units can support clinicians with early discharge into a home setting:

- Portable, singe use therapy
- No additional dressing changes for up to 7 days
- Shower friendly

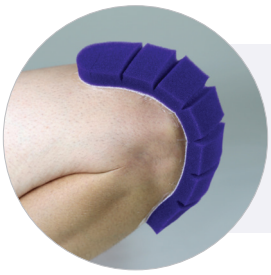
PREVENA™ 125 Therapy Unit (7 days)

Included with: PREVENA™ 13cm, PREVENA™ 20cm and PREVENA DUO™ System Kits.

PREVENA PLUS™ 125 Therapy Unit (7 days)

Included with: PREVENA™ 35cm and PREVENA CUSTOMIZABLE™ System Kits. PREVENA PLUS™ 125 Therapy Unit (14 days) can be purchased separately.

Multiple dressing sizes and configurations. With easy to use PEEL & PLACE™ dressings for linear incisions up to 35cm and CUSTOMIZABLE™ dressings for non-linear and intersecting incisions up to 90cm in length.



Designed to be flexible.

PREVENA™ Dressings are designed to allow for movement, enhancing the post-operative rehabilitation process.

Clinically proven. Across specialities.[16*]

A systematic literature review and associated meta-analysis supports the safety and effectiveness of PREVENA™ Therapy over closed incisions in reducing the incidence of surgical site infections (SSIs) and seromas versus conventional wound dressings.

Study overview

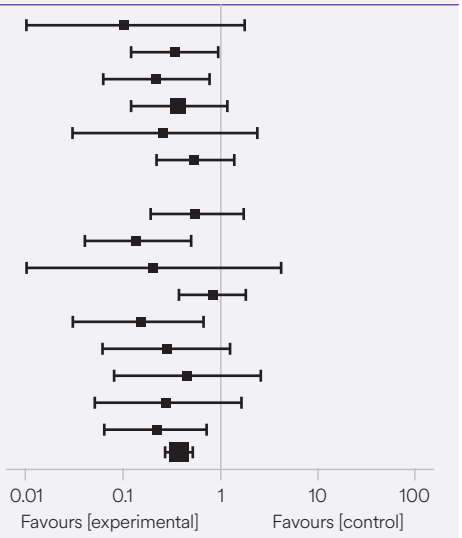
- Out of 426 studies in the initial search, ultimately, sixteen (16) prospective studies were included in this meta-analysis for SSI characterisation
- A total of up to 6,187 evaluable patients were included in this meta-analysis for SSI with 1,264 in the PREVENA™ Therapy (treatment) group and 4,923 in the conventional wound dressing (control) group
- A total of up to 952 evaluable patients were included in this meta-analysis for seroma with 366 in the PREVENA™ Therapy (treatment) group and 586 in the conventional wound dressing (control) group

Findings

- PREVENA™ Therapy aids in reducing the incidence of seroma and surgical site infections in Class I and Class II wounds.
- PREVENA™ Therapy demonstrated the greatest benefit in reducing SSIs in high risk patients

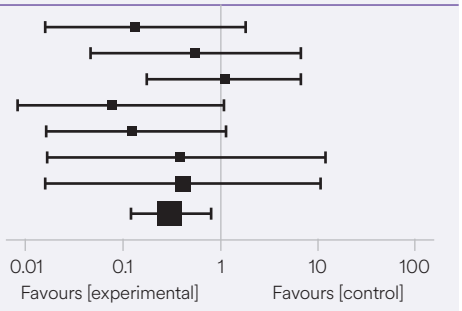
Forest plot of meta-analysis on surgical site infection

	Treatment			Control				
Study or Subgroup	Events	Total	%	Events	Total	%	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Cantero 2016	0	17	(0.0)	9	43	(20.9)	0.10 (0.01, 1.89)	
Dimuzio P 2017	6	59	(10.2)	15	60	(25.0)	0.34 (0.12, 0.95)	
Grauhan O 2013	3	75	(4.0)	12	75	(16.0)	0.22 (0.06, 0.81)	
Grauhan O 2014	3	237	(1.3)	119	3508	(3.4)	0.37 (0.12, 1.16)	
Gunatiliake RP 2017	1	39	(2.6)	4	43	(9.3)	0.26 (0.03, 2.40)	
Lavryk O 2016	7	55	(12.7)	21	101	(20.8)	0.56 (0.22, 1.40)	
Lee AJ 2016	0	27	(0.0)	0	17	(0.0)	Not estimable	
Lee K 2017	6	53	(11.3)	9	49	(18.4)	0.57 (0.19, 1.73)	
Matatov T 2013	3	52	(5.8)	19	63	(30.2)	0.14 (0.04, 0.51)	
NCT01341444	0	28	(0.0)	2	30	(6.7)	0.20 (0.01, 4.35)	
NCT02196310	13	145	(9.0)	16	154	(10.4)	0.85 (0.39, 1.83)	
NEWMAN JM 2017	2	80	(2.5)	12	80	(15.0)	0.15 (0.03, 0.67)	
Redfern RE 2017	2	196	(1.0)	14	400	(3.5)	0.28 (0.06, 1.26)	
Ruhstaller K 2017	2	61	(3.3)	4	58	(6.9)	0.46 (0.08, 2.60)	
Sabat J 2016	2	3D	(6.7)	7	33	(21.2)	0.27 (0.05, 1.39)	
Swift SH 2015	3	110	(2.7)	24	209	(11.5)	0.22 (0.06, 0.73)	
Total		1264			4923		0.37 (0.27, 0.52)	



Forest plot of meta-analysis on Seroma

	Treatment			Control				
Study or Subgroup	Events	Total	%	Events	Total	%	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Ferrando PM 2017	1	25	(4.0)	5	22	(22.7))	0.14 (0.02, 1.32)	
Gunatiliake RP 2017	1	39	(2.6)	2	43	(4.7)	0.54 (0.05, 6.19)	
NCT01341444	3	28	(10.7)	3	30	(10.0)	1.08 (0.20, 5.85)	
Pachowsky M 2012	4	9	(44.4)	9	10	(90.0)	0.09 (0.01, 1.03)	
Pauser J 2014	4	11	(36.4)	8	10	(80.0)	0.14 (0.02, 1.03)	
Pleger SP 2017	0	58	(0.0)	1	71	(1.4)	0.40 (0.02, 10.05)	
Refern RE 2017	0	196	(0.0)	2	400	(0.5)	0.41 (0.02, 8.49)	
Total		366			586		0.31 (0.13, 0.75)	



*The effectiveness of PREVENA™ Therapy in reducing the incidence of SSIs and seroma in all surgical procedures and populations has not been demonstrated. See full indications for use and limitations at myKCI.com.

Meta-analysis and trial sequential analysis of prophylactic negative pressure therapy for groin wounds in vascular surgery.[17]

Antoniou GA, Onwuka CC, Antoniou SA, Russell D. *J Vasc Surg*. 2019.

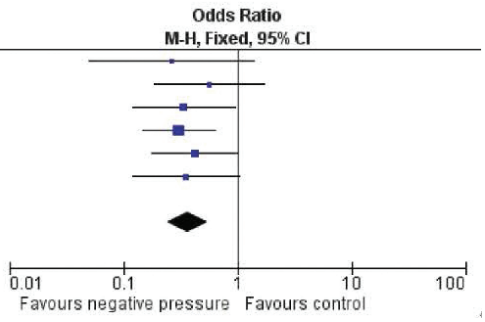
Study overview

- A review of six RCT studies, all of which compared PREVENA™ Therapy vs standard of care dressings in a total of 733 groin incisions

Findings

- Patients with PREVENA™ Therapy had a lower risk of developing SSIs by 79% (41 events with PREVENA™ Therapy and 95 events with control) (OR, 0.36; 95% CI, 0.24 to 0.54)
- PREVENA™ Therapy patients had a reduced length of hospital stay (weighted mean difference, -2.14 days; 95% CI, -3.78 to 0.49)
- Patients with PREVENA™ Therapy had a lower risk of revision surgery (OR, 0.44; 95% CI, 0.22 to 0.88)
- Negative pressure wound therapy conferred improved outcomes in patients undergoing arterial surgery via a groin incision compared with standard surgical wound care
- NPWT should be considered as a prophylactic measure in patients who have risk factors for developing surgical site complications, such as diabetes mellitus, obesity, or revision surgery

	Negative pressure		Control			Odds Ratio	
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI	Year
Sabat	2	30	7	33	7.5%	0.27 [0.05, 1.39]	2016
Lee	6	53	9	49	10.0%	0.57 [0.19, 1.73]	2017
Kwon	6	59	15	60	16.1%	0.34 [0.12, 0.95]	2018
Gombert	13	98	30	90	32.6%	0.31 [0.15, 0.63]	2018
Engelhardt	9	64	19	68	19.0%	0.42 [0.17, 1.02]	2018
Pleger	5	58	15	71	14.8%	0.35 [0.12, 1.04]	2018
Total (95% CI)		**362**		**371**	**100.0%**	**0.36 [0.24, 0.54]**	
Total events	41		95				



Meta-analysis of negative pressure wound therapy of closed groin incisions in arterial surgery.[18]

Svensson-Björk R, Zarrouk M, *et al. British Journal of Surgery*. 2019.

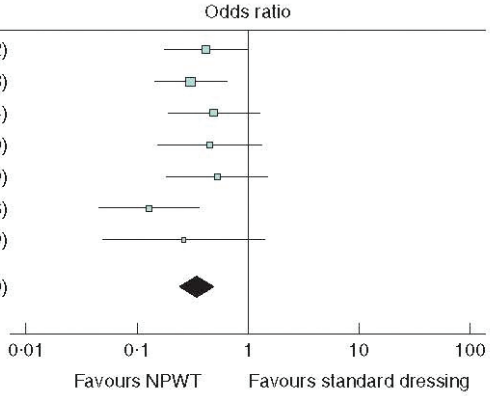
Study overview

- A meta-analysis review of 7 RCTs, 6 of which compared PREVENA™ Therapy and standard of care dressings, with a total of 1,049 groin incisions

Findings

- A reduced incidence of SSIs in the Closed Incision Negative Pressure Therapy (ciNPT) group of 9.6% compared with the standard dressing group of 23.1% (OR, 0.35; 95% CI, 0.24 to 0.50)
- In a subgroup analysis of 3 of the studies comprising lower limb revascularization procedures alone, ciNPT showed a reduction of SSIs (OR, 0.37; 95% CI, 0.22 to 0.63)

	SSI rate			
Study	NPWT	Standard dressing	Weight (%)	Odds ratio
Engelhardt *et al.*[31]	9 of 64	19 of 68	17·3	0·42 (0·17, 1·02)
Gombert *et al.*[26,27]	13 of 98	30 of 90	25·2	0·31 (0·15, 0·63)
Hasselmann *et al.*[28–30]	7 of 150	15 of 166	15·6	0·49 (0·20, 1·24)
Kwon *et al.*[24,25]	6 of 59	12 of 60	12·1	0·45 (0·16, 1·30)
Lee *et al.*[32,33]	7 of 53	11 of 49	12·4	0·53 (0·19, 1·49)
Pleger *et al.*[34]	5 of 58	30 of 71	12·6	0·13 (0·05, 0·36)
Sabat *et al.*[35,36]	2 of 30	7 of 33	4·9	0·27 (0·05, 1·39)
Total	49 of 512	124 of 537	100·0	0·35 (0·24, 0·50)



Reduction of groin wound complications in vascular surgery patients using closed incision negative pressure therapy (ciNPT): a prospective, randomised, single-institution study.[19]

Pleger SP, Nink N, Elzien M, Kunold A, Koshty A, Boning A. *Int Wound J.* 2018;15(1):75–83.

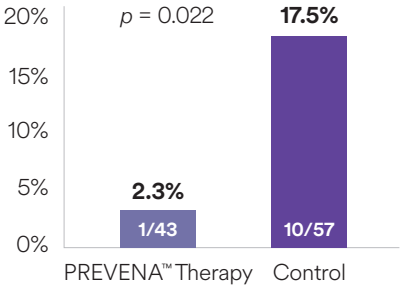
Study overview

- The aim of this prospective, randomized, single-institution study was to investigate the effectiveness of PREVENA™ Therapy compared to conventional adhesive dressing (Control) on groin incisions after vascular surgery
- The PREVENA™ Therapy group had 43 patients and 58 groin incisions and the control group consisted of 57 patients and 71 groin incisions
- Wound evaluation based on the Szilagyi classification (Grade I, II, and III) took place postoperatively on days 5–7 and 30

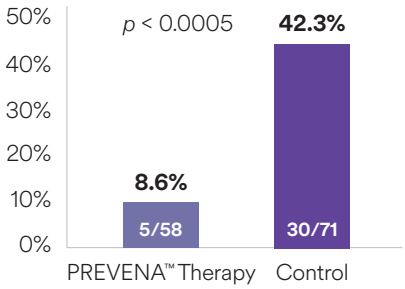
Findings

- PREVENA™ Therapy significantly reduced the incidence of local infection compared to the conventional dressing (1/43 [2.3%] vs 10/57 [17.5%], respectively; p=0.022)
- Compared to the control group, the PREVENA™ Therapy group showed a significant reduction in wound complications after both evaluation periods (5/58 [8.62%] vs 30/71 [42.3%], p<0.0005)
- PREVENA™ Therapy showed a significant reduction in revision surgeries (1/58 [1.7%] vs 10/71 [14.1%], respectively; p=0.022) until 30 days postoperatively compared to the control group

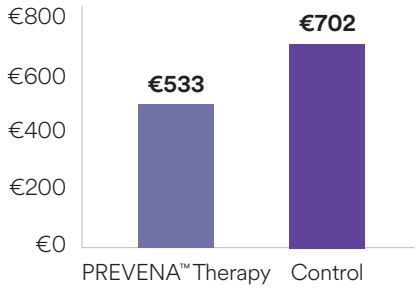
Local infection rates



Wound complications at both evaluation periods



Total per patient cost



Potential cost savings per patient €169

Cost model

A hypothetical cost model applied to the clinical results of this study shows a potential cost savings of €169 per patient with the use of PREVENA™ Therapy.

Vascular groin hypothetical economic model	PREVENA™ Therapy	Control
Number of patients (n)	43	57
Number of local infections (a)	1	10
Percent of local infections	2.3%	17.5%
Cost per local infection[6] (b)	€3,913	€3,913
Cost of local infection per patient (a*b)/n)	€91	€686
Cost of therapy per patient†	€442	€16
Total cost per patient	**€533**	**€702**

†KCI estimate based on price of PREVENA™ PEEL & PLACE™ Dressing System and Control therapy (gauze) changed once a day at €16 a week.

The hypothetical economic model uses select study data to provide an illustration of estimates of costs for use of PREVENA™ Therapy or standard post-operative dressings (Control). This model is an illustration and not a guarantee of actual individual costs, savings, outcomes or results.

The hospital is advised to use this model as an illustration only to assist in an overall assessment of products and pricing.

Prevention of poststernotomy wound infections in obese patients by negative pressure wound therapy.[20]

Grauhan O, Navasardyan A, Hofmann M, *et al. J Thorac Cardiovasc Surg.* 2013;145:1387–1392.

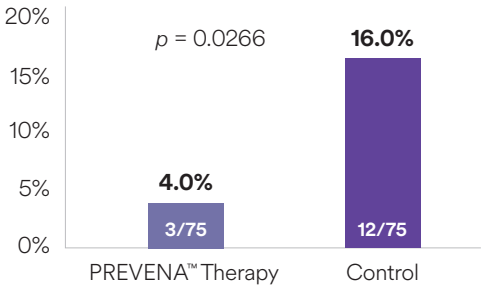
Study overview

- A prospective, single centre clinical trial evaluated the use of PREVENA™ Therapy compared to standard post-operative dressings (Control) for the prevention of wound infection within 90 days after median sternotomy procedures in 150 consecutive obese (BMI ≥ 30) patients

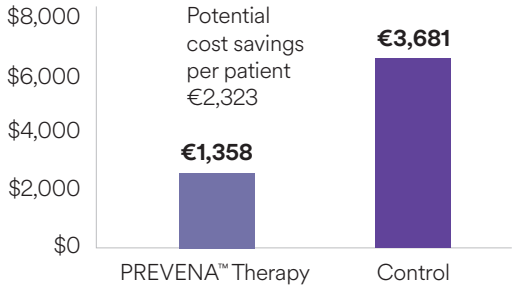
Findings

- Patients treated with PREVENA™ Therapy developed fewer wound infections (3/75 [4%] vs 12/75 [16%], p=0.0266) than patients treated with standard post-operative dressings.
- Wound infections with Gram-positive skin flora were found in only 1 patient in the PREVENA™ Therapy group compared with 10 patients in the control group (p=0.0090)

Infection rates



Total per patient cost



Cost model

A hypothetical cost model applied to the clinical results of this study shows a potential cost savings of €2,323 per patient with the use of PREVENA™ Therapy.

Post-sternotomy hypothetical economic model	PREVENA™ Therapy (n = 75)	Control (n = 75)
Number of infections (a)	3	12
Percent of infections	4.0%	16.0%
Cost per infection[10] (b)	€22,906	€22,906
Cost of infection per patient (a*b)/n)	€916	€3,665
Cost of therapy per patient	€442	€16
Total cost per patient	**€1,358**	**€3,681**

†KCI estimate based on price of PREVENA™ PEEL & PLACE™ Dressing System and Control therapy (gauze) changed once a day at €16 a week.

The hypothetical economic model uses select study data to provide an illustration of estimates of costs for use of PREVENA™ Therapy or standard post-operative dressings (Control). This model is an illustration and not a guarantee of actual individual costs, savings, outcomes or results.

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Sternal wound debridement following a three-vessel CABG.

Tanna N, MD, FACS, Northwell Health, New York, USA.

Patient information

A 58-year-old diabetic female presented with a sternal wound (Figure A) following a three-vessel coronary artery bypass graft (CABG).

Diagnosis

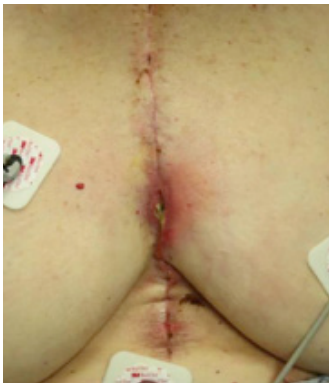
The patient was admitted for a sternal incision 2–3 weeks following the CABG. Symptoms included a 2–3 day history of drainage from the incision, presternal pain, and erythema. Comorbidities included a history of diabetes.

Initial incision treatment/application of PREVENA™ Therapy

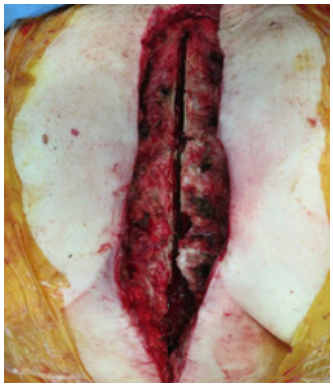
The patient was taken to the operating room for soft tissue and sternal debridement. A nonunion of the sternal bone was found, and hardware was removed (Figure B). Well-vascularized muscle flaps were needed to obliterate the dead space in the presternal area. A submuscular dissection was performed below the pectoralis major muscle (Figure C). The elevated pectoralis muscle flaps were then advanced into the midline to fill the presternal area (Figure D). The soft tissue was approximated and the skin closed with horizontal mattress sutures over closed suction drains (Figure E). A PREVENA™ Incision Management System with the PREVENA™ PEEL & PLACE™ Dressing (KCI, a 3M Company, San Antonio, TX) was applied over the closed incision at -125mmHg (Figure F).

Discharge and follow-up

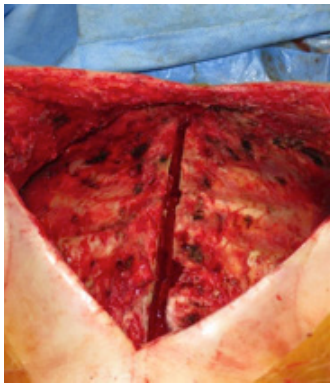
PREVENA™ Therapy was discontinued after 5 days, and upon removal of the dressing, the incision showed no signs of dehiscence, tension, or infection (Figure G). The patient was discharged from the hospital on postoperative Day 7 with no complications. The outpatient postoperative course was uneventful. At 21 days post surgery, the incision remained closed and healed (Figure H).



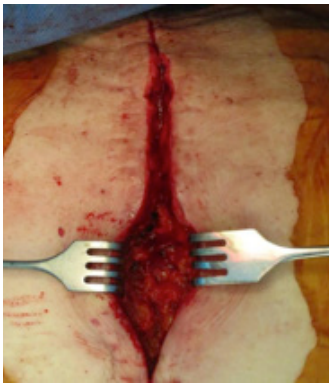
A. Presentation of sternal wound.



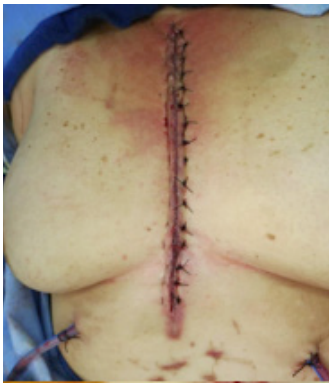
B. Wound debridement showed the patient had a nonunion of the bone.



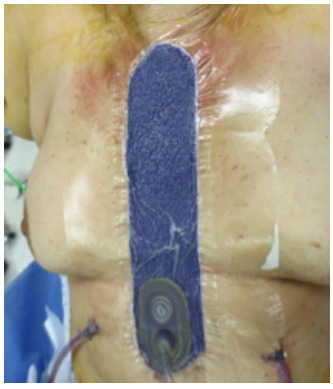
C. Submuscular dissection was performed below pectoralis major muscle.



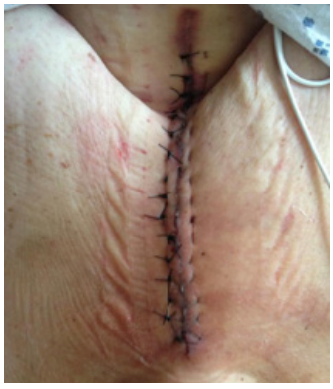
D. Pectoralis muscle flaps were advanced into the midline.



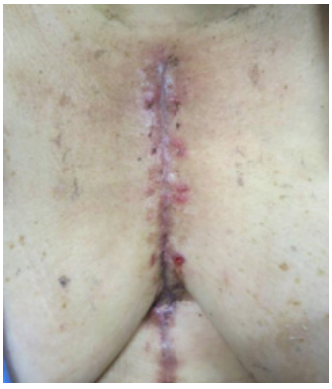
E. Sternal incision was closed following soft tissue approximation.



F. PREVENA™ PEEL & PLACE™ Dressing was applied over the sternal incision.



G. Incision on postoperative Day 5.



H. Incision on postoperative Day 21.

Patient data and photos courtesy of Tanna N, MD, FACS, Northwell Health, New York, USA.

Note: As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary, depending on the patient's circumstances and condition.

Vascular incision of the right groin.

Sumpio B, MD, PhD, FACS, Yale School of Medicine, New Haven, USA.

Patient information

A 58-year-old female patient presented to the hospital for vascular surgery. Comorbidities included diabetes, coronary heart disease, peripheral vascular disease, obesity, hypertension, chronic obstructive pulmonary disease, deep vein thrombosis, and chronic kidney disease. The patient had a history of smoking, although she had quit 10 years ago. Past procedures included a coronary artery triple bypass graft, an abdominoplasty, placement of a laparoscopic gastric band, and an angiogram within the past 14 years.

Diagnosis

The patient was diagnosed with bilateral lower extremity claudication and angiography suggestive of focal occlusion along the distal right common femoral artery, proximal superficial and profundal femoral arteries. The patient underwent right common femoral endarterectomy with a transverse 6cm groin incision.

Initial incision treatment/application of PREVENA™ Therapy

The PREVENA™ Incision Management System with PREVENA PEEL & PLACE™ Dressing was applied over the closed incision with -125 mmHg negative pressure. The goals of therapy were management of the surgical incision, reduction of tensile force, and holding the edges of the incision together. PREVENA™ Therapy was used for 7 days.

Discharge and follow-up

Following the procedure, the patient spent 1 day in intensive care. She recovered at the hospital for an additional 3 days prior to discharge. The patient was discharged with PREVENA™ Therapy and instructed to remove it one week later, on postoperative day 10. The patient returned for follow-up on postoperative day 29.

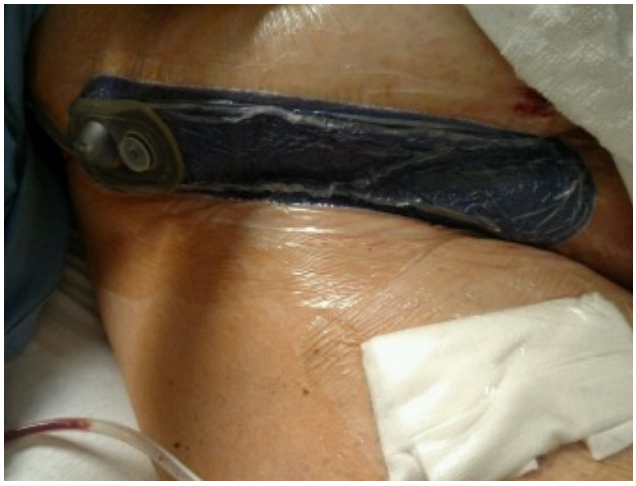


Figure 1. PREVENA PEEL & PLACE™ Dressing over the closed groin incision on postoperative day 1.

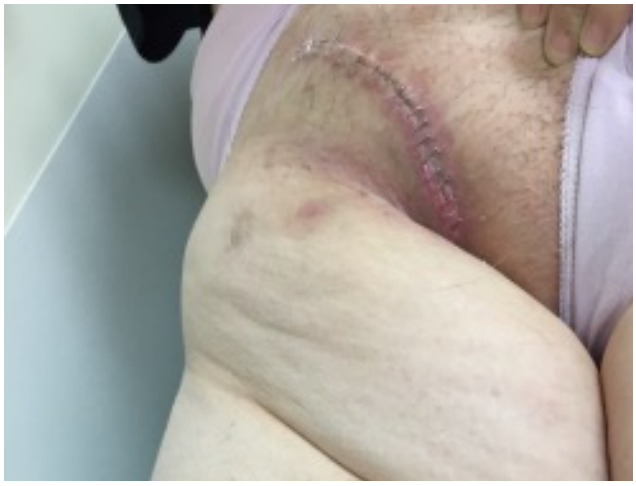


Figure 2. The fully healed groin incision on postoperative day 29.

Patient data and photos courtesy of Bauer E. Sumpio, MD, PhD, FACS, Yale Vascular Surgery, New Haven, CT

Note: As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary, depending on the patient's circumstances and condition.

Closed-incision negative-pressure therapy: international multidisciplinary consensus reccomendations.[21]

Willy C, Agarwal A, Andersen CA et al. *Int Wound J*, 14: 385–398.

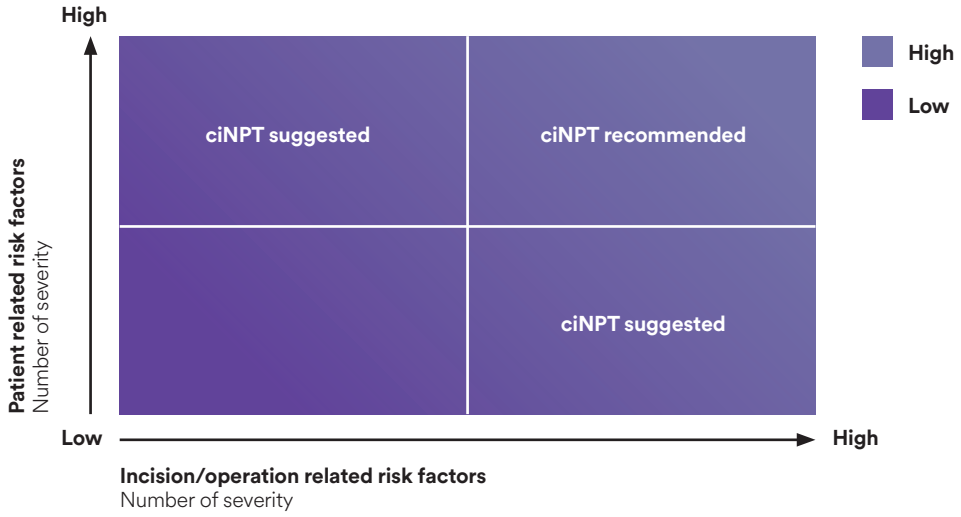
Study overview

- An extensive literature search for studies describing ciNPT use was conducted
- During a multidisciplinary consensus meeting, the 12 experts reviewed the literature, presented their own ciNPT experiences, identified risk factors for surgical site occurrences (SSOs) and developed comprehensive consensus recommendations

Findings

- Numerous publications reported SSI risk factors, with the most common including obesity (body mass index ≥30 kg/m2); diabetes mellitus; tobacco use; or prolonged surgical time
- It is recommended that the surgeon assess the individual patient's risk factors and surgical risks
- Surgeons should consider using ciNPT for patients at high risk for developing SSOs or who are undergoing a high-risk procedure or a procedure that would have highly morbid consequences if an SSI occurred

Closed incision negative pressure therapy risk factors assessment



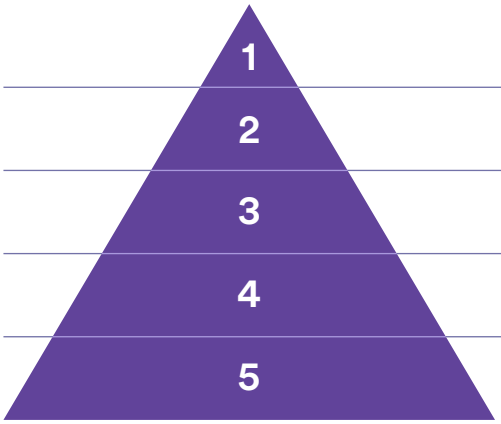
Patient related risk factors			
Diabetes mellitus	Obesity	Corticosteroid usage	Haematoma
ASA Score ≥3	Active tobacco use	Active alcoholism	Chronic renal insufficiency
Advanced age	Hypoalbuminemia	Male sex	Chronic obstructive pulmonary disease

General incision related risk factors			
High tension incision	Traumatised soft tissue	Emergency procedure	Mechanically unfavorable site
Repeated incisions	Oedema	Prolonged operation time	
Extensive undermining	Contamination	Post surgical radiation	

General incision related risk factors				
General	**Plastic**	**Orthopeadic**	**Vascular**	**Cardiovascular**
Open general	Post bariatric abdominoplasty	Open reduction and internal fixation of fractures	Above/below knee amputation	Sternotomy
Open colorectal	Breast reconstruction	Fasciotomy	Synthetic graft implantations	
Open urology	Big soft tissue defects	Above/below knee amputation		
Open obgyn	Soilage risk			
Incisional hernia repair				

There are 70+ ciNPT journal publications using our products. The following publications are specific to cardiovascular surgery.

Level of clinical evidence rating.



Level 1: Evidence obtained from at least one properly designed randomized controlled trial.
Level 1b: Systematic reviews (with homogeneity) of randomized controlled trials.

Level 2: Evidence obtained from well-designed controlled trials without randomization.
Level 2b: Individual cohort study or low quality randomized controlled trials (e.g., <80% follow-up).

Level 3: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

Level 4: Case series (and poor quality cohort and case-control studies).

Level 5: Expert opinion without explicit critical appraisal, or based on physiology, bench research or 'first principles.'

Citation	Wound/surgery type	Level of clinical evidence*	
Engelhardt M, Rashad NA, Willy C, Müller C, Bauer C, Debus S, Beck T. Closed-incision negative pressure therapy to reduce groin wound infections in vascular surgery: a randomised controlled trial. *Int Wound J*. 2018;doi: 10.1111/iwj.12848.	Groin wounds	1b	●
Gombert A, Babilon M, Barbati ME, Keskei A, *et al.* Closed incision negative pressure therapy reduces surgical site infections in vascular surgery: a prospective randomised trial (AIMS Trial). *Eur J Vasc Endovasc Surg*. 2018;doi:10.1016/j.ejvs.2018.05.018.	Groin wounds	1b	●
Kwon J, Staley C, McCullough M, Goss, S, *et al.* A randomized clinical trial evaluating negative pressure therapy to decrease vascular groin incision complications. *J Vasc Surg*. 2018;1–9.	Groin wounds	1b	●
Lee AJ, Sheppard CE, Kent WD, Mewhort H, Sikdar KC, Fedak PW. Safety and efficacy of prophylactic negative pressure wound therapy following open saphenous vein harvest in cardiac surgery: a feasibility study. *Interact Cardiovasc Thorac Surg*. 2017;24(3):324–328.	Open saphenous vein harvest in cardiac surgery	1b	●
Lee K, Murphy PB, Ingves MV, Duncan A, DeRose G, Dubois L, Forbes TL, Power A. Randomized clinical trial of negative pressure wound therapy for high-risk groin wounds in lower extremity revascularization. *J Vasc Surg*. 2017;66(6):1814–19.	Groin wounds	1b	●
Pleger SP, Nink N, Elzien M, Kunold A, Koshty A, Böning A. Reduction of groin wound complications in vascular surgery patients using closed incision negative pressure therapy (ciNPT): a prospective, randomised, single-institution study. *Int Wound J*. 2018;15(1):75–83. doi: 10.1111/iwj.12836.	Groin incisions	1b	●
Colli A. First Experience With a New Negative Pressure Incision Management System on Surgical Incisions After Cardiac Surgery in High Risk Patients. *J Cardiothoracic Surg*. 2011;6(1):160.	Sternotomy	2	●
Weir G. The use of a surgical incision management system on vascular surgery incisions: a pilot study. *Int Wound J*. 2014;11 Suppl 1:10–2.	Vascular bypass	2	●
Grauhan O, *et al.* Effect of surgical incision management on wound infections in a poststernotomy patient population. *Int Wound J*. 2014;11 Suppl 1:6–9.	Sternotomy	2b	●
Grauhan O, *et al.* Prevention of poststernotomy wound infections in obese patients by negative pressure wound therapy. *J Thorac Cardiovasc Surg*. 2013;145(5):1387–92.	Sternotomy	2b	●
Matatov T, *et al.* Experience with a new negative pressure incision management system in prevention of groin wound infection in vascular surgery patients. *J Vasc Surg*. 2013;57(3):791–5.	Vascular bypass	3	●
Santarpino G, Gazdag L, Sirch J, Vogt F, Ledwon M, Fischlein T, Pfeiffer S. A Retrospective Study to Evaluate Use of Negative Pressure Wound Therapy in Patients Undergoing Bilateral Internal Thoracic Artery Grafting. *Ostomy Wound Manage*. 2015 ec;61(12):26–30.	Thoracic artery grafting	3	●
Simon K, *et al.* [Use of Negative Pressure Wound Therapy on Surgical Incisions (Prevena™) after Surgery of Pectus Deformities Reduces Wound Complications.]. *Zentralblatt fur Chirurgie*. 2014. [German language]	Sternotomy	3	●
Atkins BZ, Tetterton JK, Petersen RP, *et al.* Does Negative Pressure Wound Therapy Have a Role in Preventing Poststernotomy Wound Complications? *Surg Innov*. 2009;16(2):140–6.	Sternotomy	4	●
Atkins BZ, *et al.* Laser Doppler flowmetry assessment of peristernal perfusion after cardiac surgery: beneficial effect of negative pressure therapy. *Int Wound J*. 2011;8(1):56–62.	Sternotomy	4	●
Reddy VS. Use of Closed Incision Management with Negative Pressure Therapy for Complex Cardiac Patients. *Cureus*. 2016;8(2):e506.	Sternotomy	4	●

Citation	Wound/surgery type	Level of clinical evidence*	
Simon K, *et al.* [Use of Negative Pressure Wound Therapy on Surgical Incisions (Prevena™) after Surgery of Pectus Deformities Reduces Wound Complications.]. *Zentralblatt fur Chirurgie*. 2014. [German language]	Sternotomy	3	●
Chopra K, Tadisina KK, Singh DP. The 'French Fry' VAC Technique: Hybridization of Traditional Open Wound NPWT with Closed Incision NPWT. *Int Wound J*. 2016;13(2):216–9.	Massive localized lymphoedema	5	●
Dohmen PM, *et al.* Can post-sternotomy mediastinitis be prevented by a closed incision management system? *GMS Hyg Infect Control.* 2014;9(3):Doc19.	Sternotomy	5	●
Dohmen PM, *et al.* Use of incisional negative pressure wound therapy on closed median sternal incisions after cardiothoracic surgery: clinical evidence and consensus recommendations. *Med Sci Monit.* 2014;20:1814-25.	Sternotomy	5	●
Haghshenasskashani A, Varcoe RL. A New Negative Pressure Dressing (Prevena) to Prevent Wound Complications Following Lower Limb Distal Arterial Bypass. *Br J Diabetes Vasc Dis.* 2011;11(1):21-4.	Vascular bypass	5	●
Wu RT, Sumpio BJ, Miller S, Sumpio BE. Use of closed-incision negative pressure therapy: cardiothoracic and vascular surgery. *Plast Reconstr Surg*. 2019;143:31S.	Sternotomy	5	●

● available on request

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PREVENA™ Therapy System Kits

Size	Code	Contents
13cm	PRE1101	1 x PREVENA™ 125 Therapy Unit, 1 × 13cm PREVENA PEEL & PLACE™ Dressing, Patch Strips, V.A.C.® Connector
20cm	PRE1001	1 x PREVENA™ 125 Therapy Unit, 1 × 20cm PREVENA PEEL & PLACE™ Dressing, Patch Strips, V.A.C.® Connector
35cm	PRE3201	1 x PREVENA™ PLUS Therapy Unit, 1 × 35cm PREVENA PEEL & PLACE™ Dressing, Patch Strips, V.A.C.® Connector
90cm	PRE4001	1 x PREVENA™ PLUS Therapy Unit, 1 × 90cm PREVENA CUSTOMIZABLE™ Dressing with SENSAT.R.A.C.™
DUO 13cm/13cm	PRE1121	1 x PREVENA™ PLUS Therapy Unit, 2 × 13cm PREVENA PEEL & PLACE™ Dressings, 1 x V.A.C.® Y-Connector

PREVENA™ Therapy Dressing Kits

Size	Code	Contents
13cm	PRE1155	5 × 13cm PREVENA PEEL & PLACE™ Dressings
20cm	PRE1055	5 × 20cm PREVENA PEEL & PLACE™ Dressings
35cm	PRE3255	5 × 35cm PREVENA PEEL & PLACE™ Dressings
90cm	PRE4055	5 × 90cm PREVENA CUSTOMIZABLE™ Dressings with SENSAT.R.A.C™

PREVENA™ Therapy Accessories

Size	Code	Contents
14 Day Therapy Unit	PRE4010	1 x PREVENA PLUS™ Therapy Unit (14 Days)
45ml Canister	PRE1095	5 × 45ml PREVENA™ Canister
150ml Canister	PRE4095	5 × 150ml PREVENA PLUS™ Canister
V.A.C.® Connector	PRE9090	10 x PREVENA™ Therapy V.A.C.® Connector

For more information about the PREVENA™ Therapy System, contact your local representative.

Note: Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. This material is intended for healthcare professionals.

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