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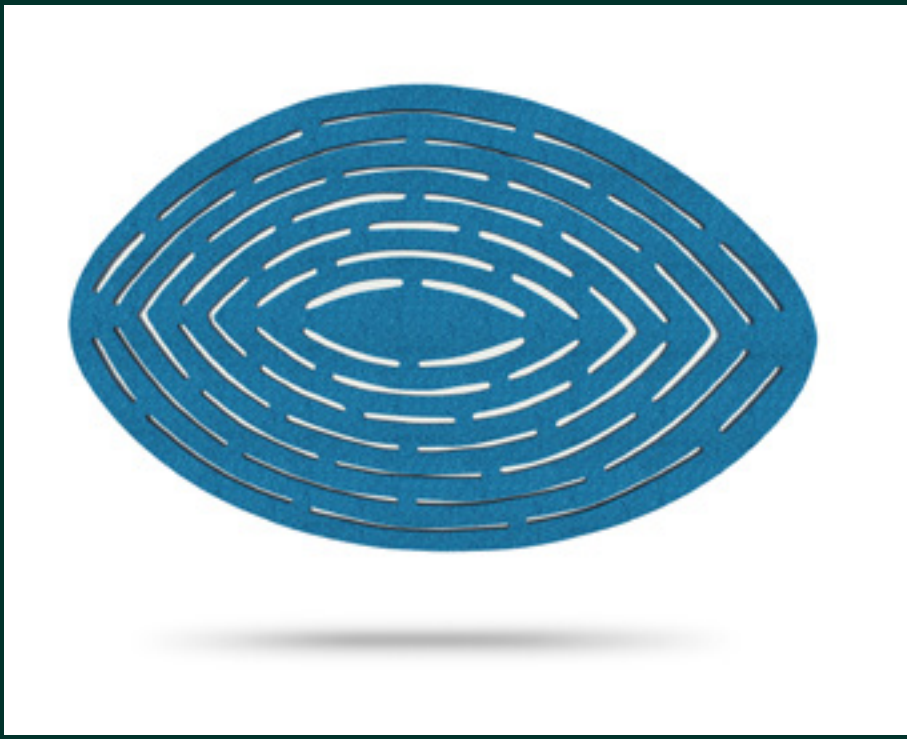

Solventum™ AbThera™ Advance Open Abdomen Dressing

Account adoption playbook

The next generation of temporary abdominal closure

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Clinical overview[1]

Open abdomen management

The open abdomen (OA) technique is defined as **intentionally leaving the fascial edges un-approximated** (laparostomy) through a surgically created entrance into the abdominal cavity.

As a result, the abdominal contents are exposed but are protected by a **temporary covering placed at the end of the surgical procedure**.

Damage control surgery

Damage control consists of abbreviated surgical interventions in critically ill patients who are too ill to continue with a laparotomy that is being performed.

This involves:

- Initial control of surgical bleeding by simple operative techniques such as packing for a lifesaving purpose
- And returning the patient to the critical care unit for correction of acidosis, hypothermia, and coagulopathy and for continued resuscitation.

Temporary abdominal closure (TAC)

If the open abdomen cannot be closed and the fascia cannot be approximated because of visceral edema, bleeding, or infection; the wound requires a dressing or temporary abdominal closure.

Features of the ideal TAC:

- Should be easily applied
- Limit contamination
- Decrease bowel edema
- Protect the viscera, fascia, and skin
- Allow for evacuation of fluids
- Minimize loss of domain

Primary fascial closure (PFC)

Ideally, PFC should be achieved **4-7 days after the initial laparotomy**. Early primary fascial closure (PFC) has been associated with lower mortality and fewer complications.

Patients in whom early definitive primary closure cannot be performed are more likely to experience:

- Sepsis
- Increased ICU and hospital LOS
- Acute kidney injury
- Enteroatmospheric fistula (EAF)
- Loss of abdominal domain
- Large incisional hernia

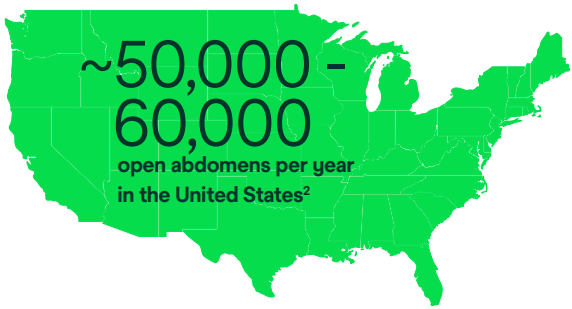
What happens if you can't close the fascia?

If primary fascial closure cannot be achieved, patients are typically discharged with a **ventral hernia**. This involves:

- Allowing the opening to granulate
- Followed by a skin graft
- And then a ventral hernia repair 6-12 months down the road

Open abdomen indications & conditions[1]

The number of open abdomens in the United States is on the rise driven by an increase in indications in **non-trauma critical care patients.**



2nd look surgery

- Intra-abdominal sepsis
- Bowel obstruction
- Intestinal ischemia due to acute mesenteric ischemia or other entity
- Necrotizing, infectious acute pancreatitis
- Gastrointestinal perforation with peritonitis

Damage control surgery

- Penetrating trauma
- Blunt trauma
- Emergent vascular surgery
- Orthotopic liver transplantation
- Uncontrolled venous bleeding in pancreatic surgery

Abdominal compartment syndrome

- Necrotizing, infected pancreatitis
- Intra-abdominal sepsis
- Massive fluid replacement
- Retroperitoneal swelling
- Bowel obstruction
- Toxic megacolon
- Tense ascites

Call points

Primary opportunities

Surgeons who treat patients requiring an abdomen to be left temporarily open: **colorectal, trauma, general, and vascular** specialties.

Secondary opportunities

Residents, surgical techs, and OR nurses can help spread usage through the hospital

2,000
trauma surgeons in the US[2]

35,000
general/colorectal surgeons in the US[2]

3,600
vascular surgeons in the US[2]

Surgeon priorities when managing an open abdomen[3]

1. Decreased mortality
2. Avoiding fistulas
3. Adequate separation between the abdominal wall and viscera
4. Primary fascial closure achievement
5. Fluid removal and edema protection

Timeline of abdominal dressings

2018

AbThera Advance Dressing

Based on the technology and success of Solventum™ AbThera™ Therapy and features a reconfigured Solventum™ AbThera™ Advance Therapy Perforated Foam that actively facilitates drawing wound edges together.

2013

Solventum™ AbThera™ SensaT.R.A.C.™ Open Abdomen Dressing

This dressing features SensaT.R.A.C.™ Technology and is compatible with the Solventum™ V.A.C.® Ulta™ Therapy Unit.

2009

Solventum™ AbThera™ Open Abdomen Negative Pressure Therapy Dressing

The first iteration of the AbThera Therapy family of products. This dressing featured encapsulated foam in the Visceral Protective Layer to assist with negative pressure distribution and fluid removal.

2004

V.A.C.® Abdominal Dressing System

The first commercially released negative pressure system specifically designed for use in the open abdomen.

AbThera Advance Dressing

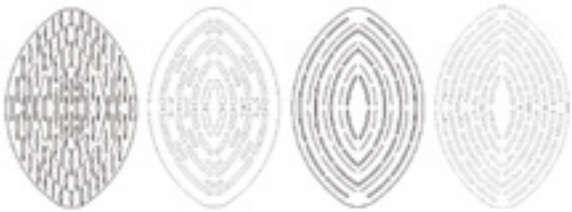
Problem statement

During our Voice of Customer (VOC) discussions, current Solventum™ AbThera™ Therapy users highlighted the importance of achieving PFC for their OA patients.

20-30%
of OA patients are still not able to close primarily[4]

The development process

Over 40+ combinations of material types and geometric cutouts were tested. The final design was selected based on its performance and the foam's proven track record of patient safety and efficacy.



Pre-clinical evidence

No correlation to human use

In a comparative study of 4 healthy pigs with an open abdominal wound that were treated with either Solventum™ AbThera™ SensaT.R.A.C.™ Open Abdomen Dressing or AbThera Advance Dressing at -125mmHg for 5 minutes, results showed that the AbThera Advance Dressing showed a difference in the following:

31%
increase in overall tissue movement[5]
(N=82, p<0.05)

39%
increase in skin movement[5]
(N=42, p<0.05)

20%
increase in fascia movement[5]
(N=40, p<0.05)

In this study, no change in intra-abdominal pressure was observed when negative pressure was applied.[5]

Account adoption pathway

1 **Prep & discovery**
Gathering the information needed to assess and understand your customer's needs, anticipate objections, and prepare for the sales call.

2 **Probing Questions**
Asking the questions that will help you better understand your customer's current open abdomen priorities and challenges.

3 **Value proposition**
Delivering a powerful value message tailored around the customer's needs or wants and translating it into benefits for them.

4 **Support tools**
Using supportive collateral and sales tools that will help reinforce the product's value proposition.

5 **Objection handling**
Uncovering what concerns or objections remain and effectively addressing them.

6 **Closing & best practices**
Asking trial closing questions to get feedback and asking for a decision.

1. Prep & discovery

Account metrics:
Know the type of facility, revenues, UIU

Customer OA summary:
Know the number of OA cases, departments managing OA patients, key surgeons

Current products and techniques:
Know what products are being used for temporary abdominal closure

Anticipate objections:
Prepare for objections by reviewing common objections and frequently asked questions (page 16)

Clear product understanding:
Have a clear understanding of the clinical overview and the value our product provide

2. Probing questions

Understanding the customer's current OA experience

- How often do you see or manage open abdomen wounds?
- What product/technique do you use for temporary abdominal closure?
- What are your key priorities when treating open abdomen wounds?
- What are your concerns when facing a complex open abdomen?
- Is surgical re-exploration sometimes needed?
- Are there times when you are unable to achieve PFC in your OA patients? What are some of the factors that contribute to this?
- Are you currently using any additional products or techniques to help with PFC?
- What are the implication/costs associated when unable to close the fascia in a timely manner?

3. Value proposition

Best practices for delivering the value proposition

AbThera Advance Dressing features the Solventum™ AbThera™ Advance Perforated Foam. **The unique configuration of the foam is designed to collapse medially when negative pressure is applied, actively drawing wound edges together.**

Best practices

Convey the purpose behind the dressing reconfiguration (page 11)

Have a clear understanding of why the current design was selected (page 11)

How to position for existing Solventum™AbThera™ Therapy users

How do the dressings compare?

The original AbThera Advance Perforated Foam was designed to provide medial tension and help prevent lateral retraction.

The AbThera Advance Perforated Foam has been reconfigured to actively draw the wound edges together.

It features all the same benefits of AbThera Therapy like negative pressure distribution and fluid removal.

No change in the instructions for use or modification to their application technique.

4. Support tools

Tools to reinforce the value proposition

AbThera Advance Dressing Sales Aid

Utilize the dressing sales aid to introduce the concept behind the dressing and pre-clinical data

Located in:

- VALO
- Market Touch
- Sales Portal

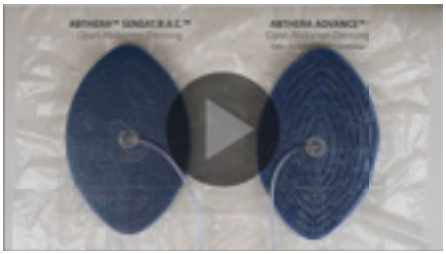
Solventum™ AbThera™ Advance Perforated Foam

The dressing demo is a powerful tool that helps customers contextualize the foam reconfiguration.

Located in:

- VALO

Display the dressing comparison video



The video will help customers visualize the medial collapse comparison between dressings.

Located in:

- Market Touch
- Sales Portal

View additional resources on page 19

5. Objection handling

I am satisfied with my temporary open abdomen closure technique, I do not need to purchase another product.

Identify reasons why they prefer their current product, i.e. price, no training, etc.

Emphasis: Identify benefits/MOA of each component, i.e. foam extensions in VPL actively removes fluid from deep within the paracolic gutters and ef fectively distributes and regulates negative pressure.

Additionally, Solventum™ AbThera™ Advance Perforated Foam is designed to draw wound edges together.

It is very expensive, and I am not sure it is worth the price.

Find out what they are using today. Do they use any additional devices (retention sutures, mesh-mediated, etc.) to help ensure they get PFC?

What are the costs associated with those additional steps and devices?

Utilize Solventum™ AbThera™ Therapy Economic Sell Sheet highlighting potential reduction in ICU and ventilation days, and association with shorter hospital stays.

I worry the use of AbThera Therapy will result in additional complications such as fistula formation?

Atema et al (2015) addresses that NPWT-managed open abdomens were not associated with an increased incidence of fistula formation.[4]

Why should I use this over my current AbThera Therapy?

During our Voice of Customer (VOC) discussions, current AbThera Therapy users highlighted the importance of achieving PFC for their OA patients.

Although, we cannot state we are able to improve or ensure this result, we listened to our customers. AbThera Advance Perforated Foam was designed so that when negative pressure is applied, the foam collapses medially, actively drawing wound edges together.

Ask about their experiences and challenges. Customers are looking for ways to help with PFC. We hear from current AbThera Therapy users that they are incorporating ABRA® Abdominal or Wittmann Patch™ with AbThera Therapy. **These therapies can cost >$1,000 just for their devices.**

I am not convinced by the current level of evidence.

Identify areas where surgeon is not convinced. Utilize Clinical Summaries and AbThera Therapy Economic Sell Sheet.

Showcase the various clinical studies currently available.

Gain alignment that PFC is important to them. Often surgeons prefer their own experience vs. a clinical study - gain approval to conduct a product evaluation and have them experience the dressing for themselves.

As Solventum has done in the past, we will be developing stronger clinical evidence over time.

6. Closing & best practices

Seek commitment from the clinician

Verify you've thoroughly addressed any objections and ask trial-closing questions. Seek commitment for a product trial or adoption.

Best practices for a successful product evaluation

- Identify HCP Champion to evaluate the dressing
- Alert necessary admin staff about the upcoming trial
- Ensure that the dressing evaluation case is reserved for the trialing physician
- Let the HCP know what they should expect and what to look for when trialing the dressing
- Make yourself available for the initial application or the following dressing change

Best practices for a successful product conversion

- Ensure that you have a clinician champion
- Provide health economic data on Solventum™ AbThera™ Therapy to the economic buyer
- Monitor account conversions to ensure the previous OA dressing doesn't mistakenly get ordered when stock runs low
- Gather feedback and ask for help identifying any other HCPs or departments that would find value in the dressing

Frequently asked questions

- **How do the “cutouts” in the foam work?**
  The cutouts reduce the stiffness of the foam in the medial direction, encouraging the foam to collapse medially when negative pressure is applied, actively drawing wound edges together.

  Show the approved AbThera Advance Dressing Comparison video.

- **Does it still deliver -125mmHg to the paracolic gutters?**
  Verification and validation testing showed the AbThera Advance Dressing meets the same specifications for negative pressure delivery as the Solventum™ AbThera™ SensaT.R.A.C.™ Open Abdomen Dressing.

- **How has the MOA changed?**
  The MOA has NOT changed.

- **Does it still remove fluid the same?**
  Verification and validation testing showed the AbThera Advance Dressing meets the same specifications for fluid removal as the AbThera SensaT.R.A.C. Dressing.

- **Is this product latex free?**
  Yes, the AbThera Advance Dressing is not made with natural rubber latex.

Additional resources

Customer presentation
Type: Presentation
Available in: Market Touch, Sales Portal

Value analysis tool
Type: Collateral
Available in: VALO, Market Touch, Sales Portal

Mechanisms of action video
Type: Video
Available in: Market Touch, Sales Portal

Application video
Type: Video
Available in: Market Touch, Sales Portal

TAC comparison chart
Type: Collateral
Available in: Market Touch, Sales Portal

OR cards
Type: Collateral
Available in: VALO, Market Touch, Sales Portal

For a full list of resources visit:
- Sales Portal
- Marketplace (VALO)
- Market Touch App
- Acelity Internal Resource Library App

Competitive messaging

AbThera Advance Dressing	**S&N Renasys◇ AB Abdominal Kit** **Invia® Abdominal Dressing Kit**	**Barker's Vacuum Pack Technique** Not a commercial product
Value messaging	**Product description**	**Value messaging**
Solventum™ AbThera™ Fenestrated Visceral Protective Layer enhances fluid removal from deep within the paracolic gutters. Solventum™ AbThera™ Therapy distributes higher pressures throughout all zones compared to Barker's Technique.[8†] Solventum products have been used in the treatment of over 95,000 open abdomen patients worldwide Large body of clinical evidence available. See page 18 for AbThera Therapy evidence.	Commercial negative pressure open abdomen dressings. **Dressings do not contain encapsulated foam in the organ protective layer.**	Utilizes a fenestrated, non-adherent polyethylene sheet placed over the viscera with a moist surgical towel cover Uses two 10-French silicone drains over the towels and an iodoform-impregnated adhesive with continuous wall suction to remove fluid.
	Responses	**Responses**
	Without any type of foam extensions, how effective can these products be in reaching fluid that is deep in the paracolic gutters? *AbThera Therapy brings years of experience in using negative pressure units to treat OA patients what type of evidence have you seen in support for these dressings?*	*Studies have shown, AbThera Therapy was associated with significantly improved primary fascial closure rate and a reduction in all-cause mortality rate when compared to BVPT.*[6]

†In a benchtop model.

Wittman Patch™	**ABRA® Abdominal**	**Bogota Bag** Not a commercial product
Product description	**Product description**	**Value messaging**
Consists of sheets of non-adherent polypropylene, loops and hooks that bind together **Dressing does not provide fluid removal and damage to the fascia occurs upon application[1]**	A dynamic wound closure device consisting of elastomer bands used for cyclic stretching of the abdominal wound opening. **Dressing does not provide fluid removal and damage to the fascia occurs upon application[7]**	Uses a sterile plastic fluid bag, which is sutured to the fascia **Prone to leaking, no peritoneal fluid removed, skin damage, loss of domain, recurrence of ACS[1]**
Responses	**Responses**	**Responses**
Are there any concerns of causing damage to fascia when suturing the device? *What is being used in conjunction to the product to manage fluid removal?*	*Are there any concerns of causing damage to the abdominal wall upon application?* *What is being used in conjunction to the product to manage fluid removal?*	*Are there any concerns for skin damage, leaking, or loss of domain?* *What are the implications/impact if recurrence of ACS occurs?*

Solventum™ AbThera™ Therapy evidence

Cheatham ML et al. (2013)[6]
Of 280 patients enrolled from 20 study sites in the U.S., 168 patients received at least 48 hours of consistent Temporary Abdominal Closure (TAC) therapy (111 AbThera Therapy, 57 BVPT).

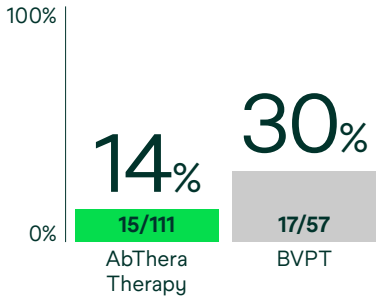
Median of days to PFC were 9 days for AbThera Therapy vs 12 days for BVPT (p=0.12).

Thirty-day PFC rate was 69% for AbThera Therapy and 51% for BVPT (p=0.03).

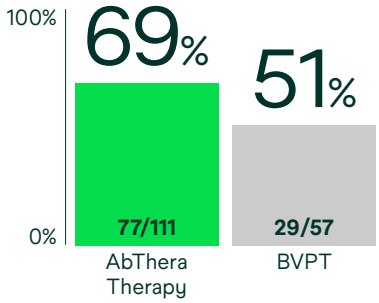
Thirty-day all-cause mortality was 14% for AbThera Therapy and 30% for BVPT (p=0.01).

Results
The use of AbThera Therapy was associated with significantly higher 30-day Primary Fascial Closure (PFC) rates and lower 30-day all-cause mortality among patients who require an open abdomen for at least 48 hours in the treatment of critical illness, versus patients receiving Barker's Vacuum Packing Technique (BVPT).

30-day all-cause mortality
p=0.01



30-day primary fascial closure
p=0.03



Additional evidence

Are commercial negative pressure systems worth the cost in open abdomen management?
Frazee RC et al. (2013)

Active Negative Pressure Peritoneal Therapy After Abbreviated Laparotomy
Kirkpatrick et al. (2015)

Ordering information

SKU	Description	Quantity
ABT1055	**Solventum™ AbThera™ Advance Open Abdomen Dressing**	**5 per case**
	Includes:	
	• Solventum™ AbThera™ Fenestrated Visceral Protective Layer	
	• (2) Solventum™ AbThera™ Advance Perforated Foam	
	• (4) Solventum™ V.A.C.® Drapes	
	• Solventum™ SensaT.R.A.C.™ Pad and Tubing	

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Lit# 29-B-308 • PRA-NP-US-00534 (08/20)