WE ARE HERNIA CARE.
PROVEN RESULTS.
IMPROVING LIVES.

A comprehensive portfolio dedicated to clinical needs across all hernia procedures.
DELIVERING
COMPREHENSIVE
HERNIA CARE

We provide surgeons with innovative tools designed to achieve successful results in hernia repair — and impact the patient experience.

With a complete product portfolio to handle all open and laparoscopic hernia repair needs, we have solutions — no matter the procedure.
DEDICATED TO IMPACTING QUALITY OF LIFE

Today, our therapies impact the lives of more than two people every second. But therapies alone are not enough. The current model of healthcare delivery is no longer sustainable. That’s why we’re working with hospitals and health systems to restructure processes, challenge the status quo, and truly transform healthcare. It’s how we’re taking healthcare Further, Together.

†Derived from Medtronic Corporate data.
HERNIA COMPLETE SOLUTIONS FOR ALL SURGICAL NEEDS

We offer a truly comprehensive hernia repair portfolio with product options spanning mesh, fixation, dissection, and biologic mesh/implants. You can create the complete mix of products to meet your procedural and economic needs.

ONE MILLION+ Units of Parietex™ composite mesh manufactured between 1999 and 2020

ONE MILLION+ Units manufactured annually

INNOVATION IN HERNIA

Medtronic
INNOVATIVE HERNIA REPAIR SOLUTIONS
YEAR AFTER YEAR

1988
Established Hernia Care base

1999
Parietex™ composite mesh

2000
Created laparoscopic dissection

2006
Pioneered absorbable fixation

2006
ProGrip™ self-gripping polyester mesh

2008
Entered biologic mesh/implant market

2012
Established R&D center of excellence

2013
Symbotex™ composite mesh

2014
ReliaTack™ articulating reloadable fixation device
A COMPREHENSIVE HERNIA REPAIR PRODUCT PORTFOLIO

Our innovative hernia repair solutions are designed to meet the expectations of surgeons — through proven reliability, consistency, and predictability.

<table>
<thead>
<tr>
<th>LAPAROSCOPIC VENTRAL</th>
<th>OPEN VENTRAL</th>
<th>LAPAROSCOPIC INGUINAL</th>
<th>OPEN INGUINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ReliaTack™ articulating reloadable fixation device</td>
<td>Parietex™ optimized composite mesh</td>
<td>ProGrip™ laparoscopic self-fixating mesh</td>
<td>Parietene™ flat sheet mesh</td>
</tr>
<tr>
<td>Symbotex™ composite mesh</td>
<td></td>
<td>Spacemaker™ dissection balloon</td>
<td>ProGrip™ self-gripping polyester mesh</td>
</tr>
</tbody>
</table>

[Medtronic Logo]
In laparoscopic ventral procedures, products are designed to overcome challenges focused on patient outcomes. The portfolio includes:

- **Symbotex™** composite mesh
- **Parietex™** optimized composite mesh
- **Parietene™ DS** composite mesh
- **ProTack™** titanium fixation device
- **AbsorbaTack™** fixation device
- **ReliaTack™** articulating reloadable fixation device

**Symbotex™** composite mesh is designed for laparoscopic ventral procedures, while **Parietex™** optimized composite mesh is used in open ventral procedures. **Parietene™ DS** composite mesh is utilized in laparoscopic inguinal procedures, and **ProTack™** fixation device is applied to open inguinal procedures. **AbsorbaTack™** fixation device and **ReliaTack™** articulating reloadable fixation device are also part of the portfolio.

**Clinical Evidence**

The effectiveness of these products is supported by clinical evidence, demonstrating their reliability and patient outcomes.

[Medtronic logo]
Symbotex™
Composite Mesh

Our third generation composite mesh that offers improved ease of use and optimized design — with excellent tissue integration and minimized visceral attachments demonstrated in animal/preclinical models.\(^1\),\(^\dagger\)

Based on preclinical studies, Symbotex™ composite mesh delivers:

**Smart design:**
- Established hydrophilic absorbable film technology with good resistance to surgical handling\(^2,\)^\(^3\)
- Comprehensive shape and size portfolio for small, medium, and large defects\(^2,\)^\(^4\)

**Smart handling:**
- Easy mesh deployment\(^5\)
- Abdominal wall clinging effect for simplified mesh placement\(^5,\)^\(^6,\)^\(^\dagger\)

**Smart repair:**
- Excellent tissue integration\(^7,\)^\(^\dagger\)
- Minimized visceral attachment\(^1,\)^\(^\dagger\)
- Good level of neoperitonization and better minimizing tissue attachment compared with that of Bard Ventralight™ ST mesh, as demonstrated in a preclinical study at 4 weeks after implantation in a porcine model\(^8,\)^\(^5,\)^\(^\Omega\)

\(^\dagger\)Except in cases in which transfascial sutures are used as well as meshes in open approach.

\(^\dagger\)Based on preclinical animal and/or benchtop studies compared to PCOX. Results may not necessarily be indicative of human clinical outcomes.

\(^\Omega\)Four weeks after implantation.
Parietex™

Optimized Composite Mesh

Parietex™ optimized composite (PCOx) mesh offers an absorbable hydrophylic film on one side to minimize visceral attachments and a three-dimensional polyester knit structure on the other to enable differentiated tissue ingrowth and ease of use.¹,²

Based on the proven performance of original Parietex™ composite mesh, PCOx is engineered with a focus on surgeon and patient needs in laparoscopic ventral hernia repair while capitalizing on the extensive clinical experience with PCO.

Optimized collagen barrier based on preclinical studies:

Barrier is more resistant to damage than original Parietex™ composite mesh¹,†

Innovative x-stitch design:

Innovative x-stitch textile design that delivers improved visibility through the mesh and an increased tear and suture strength compared to Parietex™ composite mesh²

PCOx mesh promotes rapid abdominal wall integration, minimizes visceral attachments and facilitates strong tack fixation.¹,²,⁴,†

†Based on preclinical studies. Results may not correlate to performance in humans.
Parietene™ DS Composite Mesh

A strong, easy-to-use†, mesh for open and laparoscopic ventral hernia repairs.

†Based on bench and/or preclinical studies. Results may not correlate to performance in humans.

Based on preclinical/benchtop data, Parietene™ DS composite mesh is:

Designed for healing:
- A macroporous polypropylene mesh supports tissue ingrowth2,3,† on one side
- A synthetic film helps minimize unwanted visceral attachment4,† on the other side
- The mesh supports excellent tissue integration after the first month — and after three months as seen in preclinical studies5,†

Designed to deliver:
- Large pore size without compromising mechanical strength3,†
- High resistance to damage of the mesh film during handling2,†

REFERENCES

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

OPEN INGUINAL

LAPAROSCOPIC INGUINAL

CLINICAL EVIDENCE
ProTack™
Titanium Fixation Device

A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

Trust:
- It's built on over 20 years of clinical use in hernia repair. And with more than 60 million titanium tacks deployed worldwide, the ProTack™ fixation device is the gold standard in fixation.2,3

Strong:
- ProTack™ device is around 26 percent stronger than CapSure™ device at 30 degrees (p=0.017) and 23 percent stronger than CapSure™ device at 90 degrees (p=0.000) as seen in benchtop model.†

REFERENCES
†Comparisons between ProTack™ device and CapSure™ device when the shaft is angled at 30 degrees and 90 degrees. Shear pull test performed in synthetic foam. Results may not correlate to performance in animal or cadaveric tissue, or performance in humans.
ProTack™
Titanium Fixation Device
A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

Biocompatible:

<table>
<thead>
<tr>
<th></th>
<th>ProTack™ device</th>
<th>CapSure™ device</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biocompatibility; tack material</strong></td>
<td>Titanium tack material&lt;sup&gt;5,6&lt;/sup&gt;</td>
<td>316 L stainless steel tack contains nickel&lt;sup&gt;7&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Biocompatibility; cap material</strong></td>
<td>Low profile titanium mesh interface (no cap)&lt;sup&gt;5,6&lt;/sup&gt;</td>
<td>Contains polyetheretherketone (PEEK)&lt;sup&gt;7&lt;/sup&gt;; some patients may have allergic response to PEEK&lt;sup&gt;7&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

REFERENCES
AbsorbaTack™ Fixation Device

A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

Patient comfort, surgeon confidence, peace of mind

AbsorbaTack™ fixation device:
- Provides strong, temporary mesh fixation\(^1,2\)
- Leaves no foreign material in the body over time\(^3,4\)
- Requires no sharp piloting needle to deploy the tack, eliminating the risk of device-related, inadvertent needlesticks in the OR
- Is offered in a long version for laparoscopic techniques in both 15- and 30-tack configurations, as well as a short version for open hernia repair in a 20-tack configuration

The tack is constructed of an absorbable synthetic polyester copolymer derived from lactic and glycolic acid.\(^4,5\)

REFERENCES

\(^{†}\)Bench test results may not necessarily be indicative of clinical performance.
ReliaTack™
Articulating Reloadable Fixation Device
A fixation device with a one-of-a-kind articulating technology, interchangeable reloads, and screw-like tack designs for hernia repair.

By design, preclinical data shows that ReliaTack™ device provides:

Superior access1,†:
- Designed to articulate to 65 degrees specifically to deliver the strength that comes from perpendicular tack fixation1,2,†,‡

Stronger fixation3,†:
- Delivers superior fixation strength compared to both absorbable and permanent fixation devices when the shaft is angled at 30, 45, 65, and 90 degrees3,‡

Lower cost of care4,Ω:
- Articulates and is reloadable — interchangeable reloads may lower the cost of care by potentially eliminating the need for multiple fixation devices per case5,4
- May save up to $461 per case compared to Ethicon SECURESTRAP™* device and SorbaFix™* device4,5,††,‡‡

It also offers a single-turn knob for easier articulation† and an optimized shipping wedge for intuitive loading.§§
OPEN VENTRAL

Products designed to overcome the challenges of open ventral procedures — focused on patient outcomes.1,2

REFERENCES

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

Symbotex™ composite open skirt mesh
Parietex™ optimized composite open skirt mesh
Parietex™ composite ventral patch
Versatex™ monofilament mesh
ProGrip™ self-gripping polyester mesh
Parietene™ macroporous mesh
Permacol™ surgical implant
AbsorbaTack™ fixation device

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

Symbotex™ composite open skirt mesh
Parietex™ optimized composite open skirt mesh
Parietex™ composite ventral patch
Versatex™ monofilament mesh

ProGrip™ self-gripping polyester mesh
Parietene™ macroporous mesh
Permacol™ surgical implant
AbsorbaTack™ fixation device

Medtronic
Symbotex™
Composite Open Skirt Mesh
A skirted monofilament polyester mesh with absorbable collagen film.

Based on preclinical studies, Symbotex™ composite mesh delivers:

Smart design:
- Established hydrophilic absorbable film technology with good resistance to surgical handling
- Comprehensive shape and size portfolio for small, medium, and large defects

Smart handling:
- Easy mesh deployment
- Abdominal wall clinging effect for simplified mesh placement

Smart repair:
- Excellent tissue integration
- Minimized visceral attachment
- Good level of neoperitonization and better minimizing tissue attachment compared with that of Bard Ventralight™ ST mesh, as demonstrated in a preclinical study at 4 weeks after implantation in a porcine model.

REFERENCES

† Except in cases in which transfascial sutures are used as well as meshes in open approach.
‡ Based on preclinical animal and/or benchtop studies compared to PCOX. Results may not necessarily be indicative of human clinical outcomes.
§ Based on preclinical animal and/or benchtop studies. Results may not necessarily be indicative of human clinical outcomes.
Ω Four weeks after implantation.
Parietex™ Optimized Composite Open Skirt Mesh

Parietex™ optimized composite (PCOx) mesh offers an absorbable hydrophylic film on one side to minimize visceral attachments and a three-dimensional polyester knit structure on the other to enable differentiated tissue ingrowth and ease of use.\(^1,2\)

Parietex™ optimized composite open skirt mesh provides a new level of control during open ventral hernia repair. The open skirted design allows for easy handling during implantation in open incisional and ventral hernia repair.

Optimized collagen barrier based on preclinical studies:
Absorbable collagen barrier on the visceral side to minimize visceral attachments to the mesh\(^1,†\)

Innovative x-stitch design:
- Hydrophilic three-dimensional polyester textile on the parietal side to encourage rapid wall integration\(^1,†\)

PCOx mesh promotes rapid abdominal wall integration, minimizes visceral attachments and facilitates strong tack fixation.\(^1,2,4,†\)

REFERENCES

\(†\) Based on bench or preclinical animal study. Results may not necessarily be indicative of clinical outcomes in humans.
Parietex™
Composite Ventral Patch

Mesh with fixation and deployment system for use in small ventral hernia repair.

Designed for abdominal wall conformability¹:
- Deployment system designed to allow the patch to spring open¹
- Semi-peripheral fixation enables abdominal wall conformability¹

Provides easy deployment and fixation system²:
- Self-centering of the mesh thanks to the positioning system
- Fixation on healthy tissue away from the center of the defect
- Balanced fixation on four cardinal points

Supports tissue integration while minimizing visceral attachment with collagen film based on preclinical data¹²:
- Macroporous textile enables consistent tissue integration²¹
- Resorbable collagen film minimizes visceral attachment¹²

REFERENCES

†Based on preclinical studies. Results may not correlate to performance in humans.
Versatex™

Monofilament Mesh

Offers a combination of macroporosity, surface density, and mechanical strength for successful hernia repair based on animal studies.¹–⁴,

Versatex™ monofilament mesh is designed to simplify intra-operative handling for surgeons through improved visualization, ease of mesh positioning, and wide selection of mesh sizes.

Offers ease of use:
- Mesh transparency for improved anatomy visualization during placement and fixation.⁶
- Centering and orientation marking facilitates mesh positioning.⁷
- Flexibility for easy mesh handling and abdominal wall conformability.⁷

Designed for excellent hernia repair performance based on animal studies.¹:
- 3-D macroporous structure with hexagonal pore shape delivers reinforced textile strength and facilitates excellent tissue ingrowth.³,⁸
- Supports improved mesh integration and reduced complications related to mesh shrinkage and scar plate formation based on animal studies.³,⁸,

REFERENCES

†Based on preclinical animal study. Animal data is not necessarily indicative of clinical outcomes in humans.
ProGrip™
Self-Gripping Polyester Mesh†
Provides tension-free fixation on the entire surface of the mesh during incisional hernia repairs.

Resorbable microgrips:
Provide immediate fixation and may limit need for additional fixation.1,1, §

Semi-resorbable mesh:
PLA microgrips resorb naturally, leaving less foreign material behind.2,Ω

Macroporosity:
Favors better tissue integration and supports a lower foreign body reaction compared to microporous mesh designs, as seen in preclinical studies.3–6,Ω

†Not indicated for primary ventral hernia repair. Please refer to package insert.
‡ Additional fixation is at the surgeon’s discretion.
ΩBased on clinical and preclinical data. Animal data is not necessarily indicative of human clinical outcomes.
§Mesh fixation should be performed depending on surgical procedure, size of hernia, and patient conditions.
Parietene™ Macroporous Mesh

Intended for the repair of hernias or other fascial deficiencies that require the addition of a reinforcing material.

Parietene™ macroporous mesh has been designed for a surgeon’s ease of use during hernia repair procedures. It offers:

- Balance between softness and rigidity providing easy mesh handling and abdominal wall conformability.
- Improved visualization to aid easy mesh placement and fixation.
- A complete portfolio with multiple sizes and shapes for small, medium, and large inguinal and ventral defects.

REFERENCES

†Based on preclinical animal and/or benchtop studies. Animal data is not necessarily indicative of clinical outcomes in humans.
‡Based on the pore size and effective porosity of Parietene™ macroporous mesh versus Parietene™, Parietene™ lightweight, SurgiPro™ ranges, Bard™ mesh, Bard™ soft mesh, Prolene™*, and Prolene™ soft mesh.
Permacol™ Surgical Implant
A porcine dermal collagen implant for hernia and abdominal wall repair.

Durable:
- Optimized process of crosslinking to provide durability\textsuperscript{1,2}
- Integration and neovascularization

Material:
Acellular porcine dermis

Ease of use:
- Large variety of sizes, including large sizes — minimized need to suture small pieces together for a large wound
- Ready-to-use — no hydration of reconstitution required
- No refrigeration required
- Supplied sterile

REFERENCES
AbsorbaTack™ Fixation Device

A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

Patient comfort, surgeon confidence, peace of mind
AbsorbaTack™ fixation device:
- Provides strong, temporary mesh fixation\(^1,2\)
- Leaves no foreign material in the body over time\(^3,†\)
- Requires no sharp piloting needle to deploy the tack, eliminating the risk of device-related inadvertent needlesticks in the OR
- Is offered in a long version for laparoscopic techniques in both 15- and 30-tack configurations, as well as a short version for open hernia repair in a 20-tack configuration

The tack is constructed of an absorbable synthetic polyester copolymer derived from lactic and glycolic acid.\(^4,5\)

REFERENCES

†Bench test results may not necessarily be indicative of clinical performance.
LAPAROSCOPIC INGUINAL

Products designed to overcome the challenges of laparoscopic inguinal procedures — focused on patient outcomes.
Parietex™
Hydrophilic 2 Dimensional – 3 Dimensional Anatomical Mesh

Provides a custom-designed mesh for laparoscopic inguinal hernia repair. It combines Parietex™ 2-D textile with Parietex™ 3-D textile.

The 2-D textile is lightweight and macroporous with a design that is rigid, making it ideal for laparoscopic applications due to its handling properties.1–3,*

The 3-D textile is also a lightweight, macroporous mesh but has a design that provides compliance and softness.1,2,* 3D textile provides compliance and softness allowing for placement over sensitive nerve and vessel structure in the inguinal area.3,*

All Parietex™ products are created from a macroporous polyester material whose properties invite healthy tissue integration and mesh compliance while reducing encapsulation reported in animal studies.1,4,*

†Based on preclinical animal and/or benchtop studies. Animal data is not necessarily indicative of clinical outcomes in humans.

REFERENCES
ProGrip™

Laparoscopic Self-Fixating Mesh

Mesh and fixation combined into one device, for use in laparoscopic inguinal hernia repair. ProGrip™ laparoscopic self-fixating mesh delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where traditional tacks cannot be placed.

**Self-fixating:**

- More than 5,000 microgrips¹ eliminate the need for traditional tack fixation or glue²,³,⁴,⁵
- Superior fixation strength compared to Bard 3DMax™ light textile with SorbaFix™ tacks or fibrin sealant in animal studies³,⁴,⁵
- Tack-free fixation over the entire anatomy, including below the inguinal ligament where tacks cannot be placed⁴,⁵,⁶

---

**FOOTNOTES**

1. ProGrip™ laparoscopic self-fixating mesh
2. Parietex™ hydrophilic anatomical mesh
3. Spacemaker™ Pro access and dissector system
4. ProTack™ titanium fixation device
5. AbsorbaTack™ fixation device
6. ReliaTack™ articulating reloadable fixation device

**REFERENCES**
ProGrip™

Laparoscopic Self-Fixating Mesh

Mesh and fixation combined into one device, for use in laparoscopic inguinal hernia repair. ProGrip™ laparoscopic self-fixating mesh delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where traditional tacks cannot be placed.

Low pain:
- Eliminates the pain associated with traditional tack fixation.
- Reported with low postoperative pain and fast recovery in laparoscopic inguinal hernia repair.
- 40 percent of the mesh weight resorbs, reducing foreign material presence in patient over time.
- Resorbable, atraumatic microgrips preserve cord and nerve structures.

Easy to use:
- Doesn’t stick to itself making it easy to handle and unfold laparoscopically.
- Easy to orient with green medial marking.

References:
- [5, 6, 8, 9]

Footnotes:
- [1]
ProGrip™
Laparoscopic Self-Fixating Mesh

Mesh and fixation combined into one device, for use in laparoscopic inguinal hernia repair. ProGrip™ laparoscopic self-fixating mesh delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where traditional tacks cannot be placed.

Lower cost⁹:
- Combines the functionality of mesh and fixation into one device
- Reduces the cost associated with no fixation versus mesh with suture¹⁰
- Reported with low postoperative pain, which may result in lower cost of pain management therapy¹¹,Ω
Spacemaker™ Pro
Access and Dissector System

The Spacemaker™ Pro access and dissector system is your all-in-one access and dissector system for inguinal and abdominal wall repair.

**Optimized access**:  
- Provides easier, one-time access to surgical space, with a uniquely integrated system.  
- Offers ability to operate in small spaces, with included low-profile 5 mm optical trocars.  
- Expands access to eligible patients, because balloons aren't made with natural rubber latex.

**Optimized efficiency**:  
- Saves procedural steps with an integrated access and dissection solution.  
- Adapts to your technique, with the option to use as a system or separately.  
- Offers more choice in technique, while reducing product codes by up to 50 percent.

**FOOTNOTES**

1/2
Spacemaker™ Pro
Access and Dissector System

The Spacemaker™ Pro access and dissector system is your all-in-one access and dissector system for inguinal and abdominal wall repair.

Optimized dissection†:

- Enhances visualization, with anatomic balloons and clear cannulas²,⁴,†
- Creates the right space for each procedure, with new anatomic balloons²,⁴
- Facilitates insertion and full balloon deployment, with tailored cannulas²,⁴
**ProTack™**

Titanium Fixation Device

A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

**Trust:**
- It's built on nearly 20 years of clinical use in hernia repair. And with more than 60 million titanium tacks deployed worldwide, the ProTack™ fixation device is the gold standard in fixation.²,³

**Strong:**
- ProTack™ device is around 26 percent stronger than CapSure™ device at 30 degrees (p=0.017) and 23 percent stronger than CapSure™ device at 90 degrees (p=0.000) as seen in benchtop model.⁴,†

**REFERENCES**

†Comparisons between ProTack™ device and Capsure™ device when the shaft is angled at 30 degrees and 90 degrees. Shear pull test performed in synthetic foam. Results may not correlate to performance in animal or cadaveric tissue, or performance in humans.
**ProTack™**

Titanium Fixation Device

A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

---

**Biocompatible:**

<table>
<thead>
<tr>
<th>Biocompatibility; tack material</th>
<th>ProTack™ device</th>
<th>CapSure™ device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium tack material 5,6</td>
<td></td>
<td>316L stainless steel tack contains nickel 7</td>
</tr>
<tr>
<td>Biocompatibility; cap material</td>
<td>Low profile titanium mesh interface (no cap) 5,6</td>
<td>Contains polyetheretherketone (PEEK) 7; some patients may have allergic response to PEEK 7</td>
</tr>
</tbody>
</table>

---

**REFERENCES**
AbsorbaTack™
Fixation Device

A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

Patient comfort, surgeon confidence, peace of mind

AbsorbaTack™ fixation device:
- Provides strong, temporary mesh fixation\(^1,2\)
- Leaves no foreign material in the body over time\(^3,†\)
- Requires no sharp piloting needle to deploy the tack, eliminating the risk of device-related, inadvertent needlesticks in the OR
- Is offered in a long version for laparoscopic techniques in both 15- and 30-tack configurations, as well as a short version for open hernia repair in a 20-tack configuration

The tack is constructed of an absorbable synthetic polyester copolymer derived from lactic and glycolic acid.\(^4,5\)

REFERENCES

†Bench test results may not necessarily be indicative of clinical performance.
ReliaTack™
Articulating Reloadable Fixation Device
A fixation device with a one-of-a-kind articulating technology, interchangeable reloads, and screw-like tack designs for hernia repair.

By design, preclinical data shows that ReliaTack™ device provides:

**Superior access**¹,†:
- Designed to articulate to 65 degrees specifically to deliver the strength that comes from perpendicular tack fixation¹,²,†,‡

**Stronger fixation**³,†:
- Delivers superior fixation strength compared to both absorbable and permanent fixation devices when the shaft is angled at 30, 45, 65, and 90 degrees³,‡

**Lower cost of care**⁴,§:
- Articulates and is reloadable — interchangeable reloads may lower the cost of care by potentially eliminating the need for multiple fixation devices per case⁵,⁴
- May save up to $461 per case compared to Ethicon SECURESTRAP™* device and SorbaFix™* device ⁴,⁵,Ω, ††

It also offers a single-turn knob for easier articulation† and an optimized shipping wedge for intuitive loading."
Open Inguinal

Products designed to overcome the challenges of open inguinal procedures — focused on patient outcomes.¹
Parietene™ Macroporous Mesh

Intended for the repair of hernias or other fascial deficiencies that require the addition of a reinforcing material.

Parietene™ macroporous mesh has been designed for a surgeon’s ease of use during hernia repair procedures.

It offers:

- Balance between softness and rigidity providing easy mesh handling and abdominal wall conformability
- Improved visualization to aid easy mesh placement and fixation
- A complete portfolio with multiple sizes and shapes for small, medium, and large inguinal and ventral defects

REFERENCES

†Based on preclinical animal and/or benchtop studies.
‡Based on the pore size and effective porosity of Parietene™ macroporous mesh versus Parietene™, Parietene™ lightweight, SurgiPro™ ranges, Bard™ mesh, Bard™ soft mesh, Prolene™*, and Prolene™ soft mesh.
Parietex™
Plug and Patch System

The Parietex™ plug and patch system is easy to use and it allows surgeons to maintain their proven technique.

**Effective:**
Developed for the proven plug and patch repair that yields low recurrence rates while providing consistent reproducible results.¹

**Easy to use:**
Designed for the standard plug and patch technique.

**Conforms to defect:**
Resorbable microgrips enable plug to conform to the defect size and shape.²†

†The disk must be adequately fixated to minimize the risk of migration. We recommend the use of nonabsorbable fixation.
AbsorbaTack™
Fixation Device
A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

Patient comfort, surgeon confidence, peace of mind
AbsorbaTack™ fixation device:
- Provides strong, temporary mesh fixation
- Leaves no foreign material in the body over time
- Requires no sharp piloting needle to deploy the tack, eliminating the risk of device-related inadvertent needlesticks in the OR
- Is offered in a long version for laparoscopic techniques in both 15- and 30-tack configurations, as well as a short version for open hernia repair in a 20-tack configuration

The tack is constructed of an absorbable synthetic polyester copolymer derived from lactic and glycolic acid.

REFERENCES
†Bench test results may not necessarily be indicative of clinical performance.
Duatene™
Bilayer Mesh

A groin hernia repair solution that combines a flexible macroporous onlay with a rigid underlay to deliver a balance of rigidity and softness.¹ ²

Two distinct layers to support your technique and patient outcomes.

Onlay:
- Flexibility for enhanced anatomical conformability¹ ³
- Macroporous textile allows for good tissue integration as seen in animal/preclinical studies¹ ⁴–⁶  †
- Superior onlay porosity designed for ease of positioning¹ ³

†Based on preclinical animal and/or benchtop studies. Animal data is not necessarily indicative of human clinical outcomes.

REFERENCES
Duatene™
Bilayer Mesh

A groin hernia repair solution that combines a flexible macroporous onlay with a rigid underlay to deliver a balance of rigidity and softness.¹²

**Underlay:**
- Designed for balance between softness and rigidity to allow for good conformability to the patient’s anatomy³†
- Flexible enough for good intra-operative handling and sufficiently rigid for easy deployment in the preperitoneal space³†
- Covers the myopectineal orifice⁷,⁸

**Connector:**
- Small size fits in all groin defect sizes — including small defects — to enable tight defect closure according to the surgeon’s practice¹,⁹
- Fiber-filled design to enable tissue ingrowth and ease of positioning³,⁵†

REFERENCES

†7 out of 7 surgeons surveyed agreed.
ProGrip™
Self-Gripping Polyester Mesh†
Provides tension-free fixation on the entire surface of the mesh during incisional hernia repairs.

Resorbable microgrips:
- Provide immediate fixation and may limit need for additional fixation.1,‡,§
- PLA microgrips resorb naturally, leaving less foreign material behind.2,Ω

Macroporosity:
- Favors better tissue integration and supports a lower foreign body reaction compared to microporous mesh designs, as seen in preclinical studies.3-6,Ω

REFERENCES
†Not indicated for primary ventral hernia repair. Please refer to package insert.
‡Additional fixation is at the surgeon’s discretion.
§Based on clinical and preclinical data. Animal data is not necessarily indicative of human clinical outcomes.
ΩMesh fixation should be performed depending on surgical procedure, size of hernia, and patient conditions.
Our innovations are backed up by years of clinical and preclinical evidence.

**IPOM MESH**
- Symbotex™ composite mesh
- Parietex™ optimized composite mesh
- Parietex™ composite ventral patch

**FIXATION DEVICE**
- AbsorbaTack™ fixation device
- ProTack™ fixation device
- ReliaTack™ articulating reloadable fixation device

**PROGRIP™ MESH**
- Inguinal
- Ventral
- Laparoscopic
Large pore size and controlled mesh elongation are relevant predictors for mesh integration quality and low shrinkage: systematic analysis of key parameters of meshes in a novel minipig hernia model.

Pore size and pore shape — but not mesh density — alter the mechanical strength of tissue ingrowth and host tissue response to synthetic mesh materials in a porcine model of ventral hernia repair.
Lake SP, Ray S, Zihni AM, Thompson DM Jr, Gluckstein J, Deeken CR.

Robotic repair of ventral hernias: preliminary findings of a case series of 106 consecutive cases.

Two-year patient-related outcome measures (PROM) of primary ventral and incisional hernia repair using a novel three-dimensional composite polyester monofilament mesh: the SymCHro registry study.
Gillion J, Lepere M, Barrat C, et al.

†Animal data is not necessarily indicative of clinical outcomes in humans.
<table>
<thead>
<tr>
<th>Study Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyester-based mesh for ventral hernia repair: is it safe?</td>
<td>Rosen MJ.</td>
</tr>
<tr>
<td>Outcomes of open mesh repair of large incisional hernias using an intraperitoneal composite mesh: our experience with 100 cases.</td>
<td>Ammaturo C, Bassi UA, Bassi G.</td>
</tr>
<tr>
<td>Laparoscopic versus open ventral hernia mesh repair: a prospective study.</td>
<td>Lomanto D, Iyer SG, Shabbir A, Cheah WK.</td>
</tr>
<tr>
<td>Degradation of mesh coatings and intraperitoneal adhesion formation in an experimental model.</td>
<td>Schreinemacher MHF, Emans PJ, Gijbels MJJ, Greve JWM, Beets GL, Bouvy ND.</td>
</tr>
<tr>
<td>Laparoscopic treatment of incisional and primary ventral hernia in morbidly obese patients with a BMI over 35.</td>
<td>Marx L, Raharimanantsoa M, Mandal S, D’Urso A, Vix M, Mutter D.</td>
</tr>
<tr>
<td>Parietex™ composite mesh versus DynaMesh®-IPOM for laparoscopic incisional and ventral hernia repair: a retrospective cohort study.</td>
<td>Tandon A, Shahzad K, Pathak S, Oommen CM, Nunes QM, Smart N.</td>
</tr>
</tbody>
</table>

†Animal data is not necessarily indicative of clinical outcomes in humans.
Laparoscopic prosthetic hiatal reinforcement for large hiatal hernia repair.
Chilinsteva N, Brigand C, Meyer C, Rohr S.

Long-term results after laparoscopic reoperation for failed antireflux procedures.
Fixation Device
AbsorbaTack™ Fixation Device

Tensile strength and adhesion formation of mesh fixation systems used in laparoscopic incisional hernia repair.

Prospective randomized trial of mesh fixation with absorbable versus nonabsorbable tacker in laparoscopic ventral incisional hernia repair.
Colak E, Ozlem N, Kucuk GO, Aktimur R, Kesmer S, Yildirim K.

†Animal data is not necessarily indicative of clinical outcomes in humans.
Evaluation of four mesh fixation methods in an experimental model of ventral hernia repair.

Prospective randomized trial of mesh fixation with absorbable versus nonabsorbable tacker in laparoscopic ventral incisional hernia repair.
Colak E, Ozlem N, Kucuk GO, Aktimir R, Kesmer S, Yildirim K.

†Animal data is not necessarily indicative of clinical outcomes in humans.
Fixation Device
ReliaTack™ Articulating Reloadable Fixation Device

Mesh shift following laparoscopic ventral hernia repair.
Liang MK, Clapp ML, Garcia A, Subramanian A, Awad SS.
**ProGrip™ Mesh**

**Inguinal**

- **Tension-free open hernia using an innovative self-gripping semi-resorbable mesh.**
  Chastan P.

- **Comparison of a new self-gripping mesh with other fixation methods for laparoscopic hernia repair in a rat model.**

- **Self-fixating mesh for the Lichtenstein procedure: a prestudy.**
  Kapischke M, Schulze H, Caliebe A.

- **Optimization of open inguinal mesh repair by using Parietex ProGrip™ self-gripping mesh: improvement of postoperative comfort and reduction of operative time (interim results).**

- **Influence of nerve resection on postoperative pain following the use of non-sutured Progrip™ mesh repair vs sutured Lichtenstein mesh repair in open inguinal herniorrhaphy.**

- **Effective operative training in hernia repair for junior surgery residents.**
  Justinger C, Mikneviciute J, Schuld J, Schilling MK.

- **A comparison of Progrip™ and Adhesix™ self-adhering hernia meshes in an onlay model in a rat.**
  Gruber-Blum S, Riepl N, Brand J, et al.

- **Randomized clinical trial comparing self-gripping mesh with suture fixation of lightweight polypropylene mesh in open inguinal hernia repair.**

†Animal data is not necessarily indicative of clinical outcomes in humans.
ProGrip™ Self-Gripping Polyester Mesh
Laparoscopic


A prospective, multicenter, observational study on quality of life after laparoscopic inguinal hernia repair with ProGrip™ laparoscopic, self-fixating mesh according to the European Registry for Abdominal Wall Hernias Quality of Life Instrument. Muysoms FE, Vanlander A, Ceulemans R, et al.

Low recurrence rate and low chronic pain associated with inguinal hernia repair by laparoscopic placement of Parietex ProGrip™ mesh: clinical outcomes of 220 hernias with mean follow-up at 23 months. Birk D, Hess S, Garcia-Pardo C.


WE ARE HERNIA CARE.
PROVEN RESULTS.
IMPROVING LIVES.
DELIVERING COMPREHENSIVE HERNIA CARE

We provide surgeons with innovative tools designed to achieve successful results in hernia repair — and impact the patient experience. With a complete product portfolio to handle all open and laparoscopic hernia repair needs, we have solutions — no matter the procedure.
Today, our therapies impact the lives of more than two people every second. But therapies alone are not enough. The current model of healthcare delivery is no longer sustainable. That's why we're working with hospitals and health systems to restructure processes, challenge the status quo, and truly transform healthcare. It's how we're taking healthcare Further, Together.

†Derived from Medtronic Corporate data.

75 MILLION† LIVES TOUCHED THIS YEAR

INNOVATION

90,000+ EMPLOYEES

CLINICAL PROOF
INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

HERNIA INSTRUMENTS
MADE IN THE UNITED STATES

HERNIA MESH
MADE IN FRANCE

160 COUNTRIES
370+ LOCATIONS
92 MANUFACTURING FACILITIES

ADVANCING HEALTHCARE AROUND THE WORLD

Americas
Europe, Middle East, and Africa
Asia Pacific
Greater China

Headquarter locations
Medtronic Operational Headquarters
Minneapolis, Minnesota
Medtronic Principal Executive Office
Dublin, Ireland

160
370+
92
WE OFFER A TRULY COMPREHENSIVE HERNIA REPAIR PORTFOLIO WITH PRODUCT OPTIONS SPANNING MESH, FIXATION, DISSECTION, AND BIOLOGIC MESH/IMPLANTS.

YOU CAN CREATE THE COMPLETE MIX OF PRODUCTS TO MEET YOUR PROCEDURAL AND ECONOMIC NEEDS.

ONE MILLION+ UNITS OF PARIENTEX™ COMPOSITE MESH MANUFACTURED BETWEEN 1999 AND 2020

ONE MILLION+ UNITS MANUFACTURED ANNUALLY

INNOVATION IN HERNIA

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE
INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

INNOVATIVE HERNIA SOLUTIONS YEAR AFTER YEAR

1999
Parietex™ composite mesh

2000
Created laparoscopic dissection

2006
ProGrip™ self-gripping polyester mesh

2008
Entered biologic mesh/implant market

2013
Symbotex™ composite mesh

2014
ReliaTack™ articulating reloadable fixation device

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

INNOVATIVE HERNIA SOLUTIONS YEAR AFTER YEAR

1999
Parietex™ composite mesh

2000
Created laparoscopic dissection

2006
ProGrip™ self-gripping polyester mesh

2008
Entered biologic mesh/implant market

2013
Symbotex™ composite mesh

2014
ReliaTack™ articulating reloadable fixation device

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

INNOVATIVE HERNIA SOLUTIONS YEAR AFTER YEAR

1999
Parietex™ composite mesh

2000
Created laparoscopic dissection

2006
ProGrip™ self-gripping polyester mesh

2008
Entered biologic mesh/implant market

2013
Symbotex™ composite mesh

2014
ReliaTack™ articulating reloadable fixation device

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

INNOVATIVE HERNIA SOLUTIONS YEAR AFTER YEAR

1999
Parietex™ composite mesh

2000
Created laparoscopic dissection

2006
ProGrip™ self-gripping polyester mesh

2008
Entered biologic mesh/implant market

2013
Symbotex™ composite mesh

2014
ReliaTack™ articulating reloadable fixation device

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST

WORLD’S FIRST
A comprehensive hernia repair product portfolio

Our innovative hernia repair solutions are designed to meet the expectations of surgeons — through proven reliability, consistency, and predictability.

### OPEN VENTRAL
- Parietex™ optimized composite mesh

### LAPAROSCOPIC INGUINAL
- ProGrip™ laparoscopic self-fixating mesh
- Spacemaker™ dissection balloon

### OPEN INGUINAL
- Parietene™ flat sheet mesh
- ProGrip™ self-gripping polyester mesh
OUR INNOVATIONS ARE BACKED UP BY YEARS OF CLINICAL AND PRECLINICAL EVIDENCE.
INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

Animal data is not necessarily indicative of clinical outcomes in humans. Large pore size and controlled mesh elongation are relevant predictors for mesh integration quality and low shrinkage: systematic analysis of key parameters of meshes in a novel minipig hernia model.

Two-year patient-related outcome measures (PROM) of primary ventral and incisional hernia repair using a novel three-dimensional composite polyester monofilament mesh: the SymCHro registry study.

Pore size and pore shape — but not mesh density — alter the mechanical strength of tissue ingrowth and host tissue response to synthetic mesh materials in a porcine model of ventral hernia repair.

Robotic repair of ventral hernias: preliminary findings of a case series of 106 consecutive cases.
INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

Animal data is not necessarily indicative of clinical outcomes in humans.

TOP THREE STUDIES

Polyester-based mesh for ventral hernia repair: is it safe?
Rosen MJ.

Laparoscopic treatment of incisional and primary ventral hernia in morbidly obese patients with a BMI over 35.
Marx L, Raharimanantsoa M, Mandala S, D'Urso A, Vix M, Mutter D.

Parietex™ composite mesh versus DynaMesh®-IPOM for laparoscopic incisional and ventral hernia repair: a retrospective cohort study.
Tandon A, Shahzad K, Pathak S, Oommen CM, Nunes QM, Smart N.

Laparoscopic versus open ventral hernia mesh repair: a prospective study.
Lomanto D, Iyer SG, Shabbir A, Cheah WK.

Outcome of open mesh repair of large incisional hernias using an intraperitoneal composite mesh: our experience with 100 cases.
Ammaturo C, Bassi UA, Bassi G.

Intraperitoneal treatment of incisional and umbilical hernias using an innovative composite mesh: four-year results of a prospective multicenter clinical trial.

Evaluation of new prosthetic meshes for ventral hernia repair.
Burger JWA, Halm JA, Wijsmuller AR, ten Raa S, Jeekel J.

A comparative study of adhesion formation and abdominal wall ingrowth after laparoscopic ventral hernia repair in a porcine model using multiple types of mesh.
McGinty JJ, Hogle NJ, McCarthy H, Fowler DL.

Degradation of mesh coatings and intraperitoneal adhesion formation in an experimental model.
Schreinemacher MHF, Emans PJ, Gijbels MJJ, Greve JWM, Beets GL, Bouvy ND.

Comparison of two composite meshes using two fixation devices in a porcine laparoscopic ventral hernia repair model.
Duffy AJ, Hogle NJ, LaPerle KM, Fowler DL.

Tissue ingrowth and bowel adhesion formation in an animal comparative study: polypropylene versus Proceed™ versus Parietex™ composite.
Jacob BP, Hogle NJ, Durak E, Kim T, Fowler DL.

Degradation of mesh coatings and intraperitoneal adhesion formation in an experimental model.
Schreinemacher MHF, Emans PJ, Gijbels MJJ, Greve JWM, Beets GL, Bouvy ND.

Postoperative complications as an independent risk factor for recurrence after laparoscopic ventral hernia repair: a prospective study of 417 patients with long-term follow-up.

Long-term outcomes of 1326 laparoscopic incisional and ventral hernia repair with the routine suturing concept: a single institution experience.
Chelala E, Baraké H, Estievenart J, Dessily M, Charara F, Allé JL.

Long-term results of laparoscopic repair of incisional hernias using an intraperitoneal composite mesh.
Moreno-Egea A, Castillo Bustos JA, Girela E, Aguayo-Albasini JL.

Laparoscopic treatment of incisional and primary ventral hernia in morbidly obese patients with a BMI over 35.
Marx L, Raharimanantsoa M, Mandala S, D’Urso A, Vix M, Mutter D.

Parietex™ composite mesh versus DynaMesh®-IPOM for laparoscopic incisional and ventral hernia repair: a retrospective cohort study.
Tandon A, Shahzad K, Pathak S, Oommen CM, Nunes QM, Smart N.
A multicenter prospective study of patients undergoing open ventral hernia repair with intraperitoneal positioning using the monofilament polyester composite ventral patch: interim results of the PANACEA study.

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE

Laparoscopic prosthetic hiatal reinforcement for large hiatal hernia repair.
Chilinsteva N, Brigand C, Meyer C, Rohr S.

Long-term results after laparoscopic reoperation for failed antireflux procedures.

IPOM Mesh
Parietex™ Composite Mesh (for hiatal hernia)
Introduction

Laparoscopic ventral hernia repair is a surgical procedure used to treat hernias through small incisions in the abdomen. The use of mesh fixation systems, such as AbsorbaTack™, is common to ensure the mesh is securely attached to the abdominal wall.

**Tensile strength and adhesion formation of mesh fixation systems used in laparoscopic incisional hernia repair.**


Animal data is not necessarily indicative of clinical outcomes in humans.
Evaluation of four mesh fixation methods in an experimental model of ventral hernia repair.


Prospective randomized trial of mesh fixation with absorbable versus nonabsorbable tacker in laparoscopic ventral incisional hernia repair.

Colak E, Ozlem N, Kucuk GO, Aktimur R, Kesmer S, Yildirim K.

Fixation Device

ProTack™ Fixation Device

Animal†

Animal data is not necessarily indicative of clinical outcomes in humans.

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE
Mesh shift following laparoscopic ventral hernia repair.

Liang MK, Clapp ML, Garcia A, Subramanian A, Awad SS.

Fixation Device
ReliaTack™ Articulating Reloadable Fixation Device

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE
HUMAN

TOP THREE STUDIES

Comparison of a new self-gripping mesh with other fixation methods for laparoscopic hernia repair in a rat model.

Influence of a new self-gripping hernia mesh on male fertility in a rat model.
Kolbe T, Hollinsky C, Walter I, Joachim A, Rülicke T.

Tension-free open hernia using an innovative self-gripping semi-resorbable mesh.
Chastan P.

Self-fixating mesh for the Lichtenstein procedure: a prestudy.
Kapischke M, Schulze H, Caliebe A.

Optimization of open inguinal mesh repair by using Parietex ProGrip™ self-gripping mesh: improvement of postoperative comfort and reduction of operative time (interim results).

Influence of nerve resection on postoperative pain following the use of non-sutured Progrip™ mesh repair vs sutured Lichtenstein mesh repair in open inguinal herniorrhaphy.

Effective operative training in hernia repair for junior surgery residents.
Justinger C, Mikneviciute J, Schuld J, Schilling MK.

A comparison of Progrip™ and Adhesix™ self-adhering hernia meshes in an onlay model in a rat.
Gruber-Blum S, Riepl N, Brand J, et al.

Randomized clinical trial comparing self-gripping mesh with suture fixation of lightweight polypropylene mesh in open inguinal hernia repair.

ANIMAL†

†Animal data is not necessarily indicative of clinical outcomes in humans.
Open ventral hernia repair using ProGrip™ self-gripping mesh.

Hopson SB, Miller LE.

Open incisional hernia repair with a self-gripping retromuscular Parietex mesh: a retrospective cohort study.

Verhelst J, de Goed B, Kleinrensink GJ, Jeekel J, Lange JF, van Eeghem KHA.

ProGrip™ Self-Gripping Polyester Mesh

Ventral

INTRODUCTION

LAPAROSCOPIC VENTRAL

OPEN VENTRAL

LAPAROSCOPIC INGUINAL

OPEN INGUINAL

CLINICAL EVIDENCE
HUMAN

TOP THREE STUDIES

A prospective, multicenter, observational study on quality of life after laparoscopic inguinal hernia repair with ProGrip™ laparoscopic, self-fixating mesh according to the European Registry for Abdominal Wall Hernias Quality of Life Instrument. Muysoms FE, Vanlander A, Ceulemans R, et al.


Low recurrence rate and low chronic pain associated with inguinal hernia repair by laparoscopic placement of Parietex ProGrip™ mesh: clinical outcomes of 220 hernias with mean follow-up at 23 months. Birk D, Hess S, Garcia-Pardo C.

Today, our therapies improve the lives of more than two people every second. But that's not enough. The current model of healthcare delivery is no longer sustainable. That's why we're working with hospitals and health systems to restructure processes, challenge the status quo, and truly transform healthcare. It's how we're taking healthcare further, together.

†Derived from Medtronic Corporate data.

TRANSFORMING PATIENT CARE WITH INNOVATIVE PRODUCTS

We’re putting the patient at the center of innovative design and thinking. Anticipating needs and validating approaches in the relentless pursuit of better healthcare for all.
Today, our therapies improve the lives of more than two people every second. But that's not enough. The current model of healthcare delivery is no longer sustainable. That's why we're working with hospitals and health systems to restructure processes, challenge the status quo, and truly transform healthcare. It's how we're taking healthcare further, together.

†Derived from Medtronic Corporate data.

10,000

SCIENTISTS & ENGINEERS

We’re dedicated to developing industry-leading technology. And we believe our wide-ranging experience and expertise delivers meaningful innovations that change people’s lives.

†Derived from Medtronic Corporate data.
DEDICATED TO IMPROVING QUALITY OF LIFE

Today, our therapies improve the lives of more than two people every second.† But that’s not enough. The current model of healthcare delivery is no longer sustainable. That’s why we’re working with hospitals and health systems to restructure processes, challenge the status quo, and truly transform healthcare. It’s how we’re taking healthcare Further, Together.

†Derived from Medtronic Corporate data.

PROVEN PRODUCTS FOR IMPROVED OUTCOMES

We support our innovations with clinical and economic proof.

We’re improving patient outcomes with products that perform clinically and make sense economically.

†Derived from Medtronic Corporate data.
ADVANCING HEALTHCARE AROUND THE WORLD

HERNIA MESH AND BIOLOGIC IMPLANTS
TREVOUX, FRANCE

100 Employees in advanced manufacturing engineering, R&D, quality, finance, regulatory, clinical affairs, marketing, and project management.

HEMIA MESH MADE IN FRANCE
HERNIA INSTRUMENTS MADE IN THE UNITED STATES

160 COUNTRIES
370+ LOCATIONS
92 MANUFACTURING FACILITIES
We have a team of 1,500 people at one of our largest manufacturing facilities. We’re dedicated to making quality surgical products that can be trusted by surgeons and patients around the globe.
We offer a truly comprehensive hernia repair portfolio with product options spanning mesh, fixation, dissection, and biologics. You can create the complete mix of products to meet your procedural and economic needs.

**IMPROVING MORE THAN ONE MILLION LIVES**¹

**Parietex™ composite mesh**

With more than 10 years of documented clinical effectiveness, Parietex™ composite mesh was ahead of its time and remains the procedural standard that others strive to reach.

REFERENCES
We offer a truly comprehensive hernia repair portfolio with product options spanning mesh, fixation, dissection, and biologics. You can create the complete mix of products to meet your procedural and economic needs.

IMPROVING MORE THAN ONE MILLION LIVES

Parietex™ composite mesh

With more than 10 years of documented clinical effectiveness, Parietex™ composite mesh was ahead of its time and remains the procedural standard that others strive to reach.

REFERENCE

We offer a truly comprehensive hernia repair portfolio with product options spanning mesh, fixation, dissection, and biologics. You can create the complete mix of products to meet your procedural and economic needs.

Innovative hernia repair products meeting the needs and challenges of both open and laparoscopic procedures.
We offer a truly comprehensive hernia repair portfolio with product options spanning mesh, fixation, dissection, and biologics. You can create the complete mix of products to meet your procedural and economic needs.

10+ INNOVATIVE PRODUCT LAUNCHES IN THE LAST 5 YEARS

Including:

- Symbotex™ composite mesh
- ProGrip™ laparoscopic self-fixating mesh
- Spacemaker™ Pro access and dissector system
- ReliaTack™ articulating reloadable fixation device
- Parietene™ DS composite mesh
- Duatene™ bilayer mesh
Parietex™
Composite Mesh

- Lower incidences of visceral attachments compared to other composite mesh based on preclinical data\(^1,2,\dagger\)

- Superior cellular proliferation when compared to polypropylene mesh in vitro\(^3,\ddagger\)

\(^\dagger\)Based on comparative data versus Bard™*, Gore™*, and Ethicon™*, and animal studies.
\(^\ddagger\)Bench test results and/or animal data is not necessarily indicative of clinical outcomes in humans.
REFERENCES


†Based on comparative data versus Bard™*, Gore™*, Sepramesh™*, and Ethicon™*, and animal studies.
‡Animal data is not necessarily indicative of clinical outcomes in humans.
Spacemaker™
Pro Access and Dissector System

- Provides easier, one-time access to surgical space, with a uniquely integrated system\(^1,2,\dagger\)
- Enhances visualization, with anatomic balloons and clear cannulas\(^3,4,\ddagger\)
- Fewer procedural steps with an integrated access and dissection solution\(^3,4,\S\)

\(\dagger\) Compared to Spacemaker™ Plus device or PDB distention balloons.
\(\ddagger\) Compared to Spacemaker™ Plus device.
\(\S\) Compared to PDB distention balloons, trocar does not need to be reinserted or repositioned.

REFERENCES
Spacemaker™ Pro Access and Dissector System

REFERENCES

2. Based on internal test report # RE00010041 Spacemaker™ Pro device design verification. December 2014.

†Compared to Spacemaker™ Plus device or PDB distention balloons.
‡Compared to Spacemaker™ Plus device.
§Compared to PDB distention balloons, trocar does not need to be reinserted or repositioned.
**ProGrip™**
Self-Gripping Polyester Mesh

- Provides immediate fixation with limited need for additional fixation\(^1,\)\(^\dagger\)
- Leaves 50 percent of material after polylactic acid (PLA) absorption\(^2,\)\(^\ddagger\)

\(^\dagger\) Additional fixation is at the surgeon’s discretion.
\(^\ddagger\) Animal data is not necessarily indicative of clinical outcomes in humans.
REFERENCES


2. Based on internal test report #RAT021, PLA degradation report. 2014.

†Additional fixation is at the surgeon’s discretion.
‡Animal data is not necessarily indicative of clinical outcomes in humans.
ReliaTack™
Articulating Reloadable Fixation Device

By design, preclinical data shows that ReliaTack™ device provides:

- Superior access,1,† stronger fixation,2,‡ lower cost of care3,§
- A single-turn knob for easier articulation4,Ω
- An optimized shipping wedge for intuitive loading5,Ω

†Compared to AbsorbaTack™ fixation device.
‡ Benchtop testing based on commercially available absorbable and permanent fixation devices, which include the SECURESTRAP™*, SorbaFix™*, OptiFix™*, CapSure™*, ProTack™, and ReliaTack™ devices with standard purchase tacks when the shaft is angled at 30, 45, 65, and 90 degrees.
ReliaTack™ device deep purchase tack shear pull test performed in synthetic foam. Results may not correlate to performance in animal or cadaveric tissue, or performance in humans.
§Based on potential for eliminating contralateral ports and average savings when 31–50 tacks are needed.
ΩCompared to the first generation ReliaTack™ device.
REFERENCES

1. Based on test report #2165-055-1, Mesh overlap claims testing, p-value=0.007. March 2014.

2. Based on internal test report #RE00010135-1, ReliaTack™ device deep purchase tack shear pull test performed in synthetic foam. Results may not correlate to performance in animal or cadaveric tissue, or performance in humans. p-value=0.00. October 2015.

3. Based on test report #RE00007742, Next Gen Fixation Phase 2 Formative Usability Results Summary. Evaluation involving a total of 10 surgeons in simulated use conditions. February 2015.

Symbotex™ Composite Mesh

Our third generation composite mesh that offers improved ease of use and optimized performance for your patients — with excellent tissue integration and minimized visceral attachments demonstrated in animal/preclinical models.†

Smart design:
∙ Established bioabsorbable film technology with impressive resistance to surgical handling2,3
∙ Comprehensive shape and size portfolio for small, medium, and large defects2,4

Smart handling:
∙ Easy mesh deployment5
∙ Abdominal wall clinging effect for simplified mesh placement 5,6,‡

Smart repair:
∙ Excellent tissue integration7,†
∙ Minimized visceral attachment1
∙ Good level of neoperitonization and better minimizing tissue attachment compared with that of Bard Ventralight™* ST mesh7,†,§

† Based on preclinical animal and/or benchtop studies. Animal data is not necessarily indicative of human clinical outcomes.
‡ Except in cases in which transfascial sutures are used as well as meshes in open approach.
§ Four weeks after implantation.

REFERENCES

1. Based on an internally sponsored preclinical study NAMSA report #162750 initiated in April 2013 using a rat caecal abrasion model and evaluating local tissue effects, tissue integration, and minimizing tissue attachment performance of Symbotex™ composite mesh versus Parietex™ optimized composite mesh. May 2013.
2. Based on an internally sponsored preclinical study, design validation report #0901CR249a, carried out on a porcine model to validate the design of Symbotex™ composite mesh. June 2013.
4. Based on internal size and shape comparison chart.
5. Based on an internally sponsored preclinical study, report #0901CR252, carried out on pigs in May 2013 with 6 surgeons and aimed at validating the design of Symbotex™ composite mesh. June 2013.
6. Based on internal memorandum #0901CR261a, Definition of the Symbotex™ clinging effect observed during the design validation conducted in May 2013 on a porcine model. July 2013.
7. Based on an internally sponsored preclinical study NAMSA report #163005 initiated in May 2013, using a porcine model to evaluate local tissue effects and tissue integration of Symbotex™ composite mesh versus Parietex™ optimized composite mesh after laparoscopic ventral repair. October 2013.
8. Based on a preclinical sponsored study NAMSA report #163905, conducted in April 2013 comparing local tissue effects and integration, collagen film degradation, and tissue attachment performance of Symbotex™ composite mesh with Ventralight™* ST mesh and Physiomesh™ flexible composite mesh in a porcine model. October 2013.
Parietex™
Optimized Composite Mesh

Parietex™ optimized composite (PCOx) mesh offers a resorbable collagen barrier on one side to limit visceral attachments and a three-dimensional polyester knit structure on the other to promote differentiated tissue ingrowth and ease of use.\(^1,2\)

Based on the proven performance of original Parietex™ composite mesh, PCOx is engineered to better address surgeon and patient needs in laparoscopic ventral hernia repair.

The new design incorporates:

- A more resistant barrier\(^3,4\)
- A proprietary textile design with better visibility and increased strength\(^4,†\)

PCOx mesh:

- Allows rapid abdominal wall integration\(^1,†\)
- Minimizes visceral attachments\(^2,†\)
- Facilitates strong tack fixation\(^4,†\)

REFERENCES

1. Based on an internally sponsored preclinical study report #108515, Evaluation of the local tissue attachment minimization in a rat caecal adhesion model. February 2011.


4. Based on internal test report #1003CR053, Comparative study of textile tear and suture strength: Parietex™ optimized versus Parietex™ composite mesh. April 2011.

†Based on preclinical studies. Results may not correlate to performance in humans.
Parietene™ DS
Composite Mesh

REFERENCES

1. Based on internal preclinical test report #T2294CR212, Design validation of Parietene™ DS composite mesh in surgeon labs. Evaluation performed through users test and questionnaire in a simulated use environment using a porcine model (n=7 surgeons). September 2016.

2. Based on NAMSA study #197165. Thirteen week systemic toxicity and local tissue effects study in rats following subcutaneous implantation. August 2016.

3. Based on internal test report #T2294CR225, Comparison of nonabsorbable textile reinforcement properties of composite meshes. Descriptive comparisons of values were obtained from benchtop testing of the textiles constitutive of the devices. Properties measured included: burst strength, resistance to plunger test, tear strength, suture pull-out strength (n=5 per group), and uniaxial breaking strength (n=6 per group). November 2016.

4. Based on NAMSA Study #198929: Minimizing tissue attachment barrier performance, local tissue effects and tissue integration of Parietene™ DS composite mesh in a rat cecal abrasion model. Based on occurrence rates of cecal soft tissue attachment to the mesh through macroscopic observations in the rat (n=18 test articles vs. n=12 bare mesh; p<0.05). October 2016.

5. Based on NAMSA study #194092, Pilot in vivo study: Parietene™ DS composite mesh versus competitive product in intraperitoneal pig model. Based on macroscopic, histologic, and scanning electronic microscopic (SEM) observations at four weeks in a porcine intraperitoneal implantation model (n=6). December 2016.

†Based on preclinical studies. Results may not correlate to performance in humans.
**REFERENCES**

1. ProTack™ 5 mm fixation device [510(k) clearance]. North Haven, CT: Medtronic; 1996.


5. Based on internal report United States Surgical validation/toxicology department material qualification test results. December 2006.


7. Per CapSure™ Permanent Fixation System [instructions for use], Patients with a known sensitivity to chromium, nickel, copper, and iron and PEEK. Warwick, RI: BARD; 2014.
ProTack™
Titanium Fixation Device
A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

REFERENCES

1. ProTack™ 5 mm fixation device [510(k) clearance]. North Haven, CT: Medtronic; 1996.
5. Based on internal report United States Surgical validation/toxicology department material qualification test results. December 2006.
7. Per CapSure™ Permanent Fixation System [instructions for use], Patients with a known sensitivity to chromium, nickel, copper, and iron and PEEK. Warwick, RI: BARD; 2014.
AbsorbaTack™
Fixation Device
A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

REFERENCES

†Bench test results may not necessarily be indicative of clinical performance.


ReliaTack™
Articulating Reloadable Fixation Device

A fixation device with a one-of-a-kind articulating technology, interchangeable reloads, and screw-like tack designs for hernia repair.

Superior access:
- Designed to articulate to 65 degrees specifically to deliver the strength that comes from perpendicular tack fixation.

Stronger fixation:
- Delivers superior fixation strength compared to both absorbable and permanent fixation devices when the shaft is angled at 30, 45, 65, and 90 degrees.

Lower cost of care:
- Articulates and is reloadable — interchangeable reloads lower the cost of care by eliminating the need for multiple fixation devices per case.
- May save up to $461 per case compared to Ethicon SECURESTRAP™* device and SorbaFix™* device.

It also offers a single-turn knob for easier articulation and an optimized shipping wedge for intuitive loading.

FOOTNOTES

† Compared to AbsorbaTack™ fixation device.
‡ Based on benchtop testing on commercially available absorbable and permanent fixation devices, which include the Ethicon SECURESTRAP™*, SorbaFix™*, OptiFix™*, CapSure™*, ProTack™, and ReliaTack™ devices with standard purchase tacks when the shaft is angled at 30, 45, 65, and 90 degrees. ReliaTack™ device deep purchase tack shear pull test performed in synthetic foam. Results may not correlate to performance in animal or cadaveric tissue, or performance in humans.
§ Based on benchtop testing on average fixation strength, when the shaft is angled at 30, 45, 65, and 90 degrees. The ReliaTack™ device deep purchase tack shear pull test performed in synthetic foam. Results may not correlate to performance in animal or cadaveric tissue, or performance in humans.
Ω Based on potential for eliminating contralateral ports and average savings when 31–50 tacks are needed.
†† Average of greatest estimated per-case savings over Ethicon SECURESTRAP™* and SorbaFix™* when 31–50 tacks are needed.
‡‡ Articulation may save up to $100 per case by potentially eliminating contralateral ports.
§§ Compared to the first generation ReliaTack™ device.
ΩΩ When 30–60 tacks are needed.
ReliaTack™
Articulating Reloadable Fixation Device

A fixation device with a one-of-a-kind articulating technology, interchangeable reloads, and screw-like tack designs for hernia repair.

REFERENCES

1. Based on test report #2165-055-1, Mesh overlap claims testing, p-value=0.007. March 2014.

2. Based on design verification articulation angle engineering report #2165-050. February 2014.

3. Based on internal test report #RE00010135-1, Deep purchase tack shear pull, p-value=0.00. October 2015. Based on internal test report #RE00010135-1, Deep purchase tack shear pull, p-value=0.00. October 2015.

4. Based on ReliaTack™ deep purchase tack cost comparison, ReliaTack™ device deep purchase internal average cost data compared to Ethicon SECURESTRAP™ and SorbaFix™ fixation devices. IMS data.

5. Based on engineering report #2165-037-0, Development of reliability testing. March 2014.

6. Based on IMS analysis evaluating average selling price of trocars.
OPEN VENTRAL

Products designed to overcome the challenges of open ventral procedures — for optimized patient outcomes.¹²

REFERENCES


REFERENCES

1. Based on an internally sponsored preclinical study, design validation report #0901CR249a, carried out on a porcine model to validate the design of Symbotex™ composite mesh. June 2013.


3. Based on internal size and shape comparison chart.

4. Based on an internally sponsored preclinical study, report #0901CR252, carried out on pigs in May 2013 with six surgeons and aimed at validating the design of Symbotex™ composite mesh. June 2013.

5. Based on internal memorandum #0901CR261a, Definition of the Symbotex™ clinging effect observed during the design validation conducted in May 2013 on a porcine model. July 2013.

6. Based on an internally sponsored preclinical study NAMSA report #163005 initiated in May 2013, using a porcine model to evaluate local tissue effects and tissue integration of Symbotex™ composite mesh versus Parietex™ optimized composite mesh after laparoscopic ventral repair. October 2013.

7. Based on an internally sponsored preclinical study NAMSA report #162750 initiated in April 2013 using a rat caecal abrasion model and evaluating local tissue effects, tissue integration, and minimizing tissue attachment performance of Symbotex™ composite mesh versus Parietex™ optimized composite mesh. May 2013.

8. Based on a preclinical sponsored study NAMSA report #163905, conducted in April 2013 comparing local tissue effects and integration, collagen film degradation, and tissue attachment performance of Symbotex™ composite mesh with Ventralight™ ST mesh and Physiomesh™ flexible composite mesh in a porcine model. October 2013.
Parietex™
Optimized Composite Open Skirt Mesh
A skirted polyester mesh with absorbable collagen barrier.

Provides a new level of control during open ventral hernia repair. The open skirted design allows for easy handling during implantation in open incisional and ventral hernia repair.

Optimized collagen barrier:
- Absorbable collagen barrier on the visceral side to minimize visceral attachments to the mesh
- Barrier is more resistant to damage than original Parietex™ composite mesh

Innovative x-stitch design:
- Hydrophilic three-dimensional polyester textile on the parietal side to encourage rapid wall integration
- Innovative x-stitch textile design that delivers improved visibility through the mesh and an increased tear and suture strength compared to Parietex™ composite mesh

† Based on preclinical animal study. Animal data is not necessarily indicative of clinical outcomes in humans.

REFERENCES

1. Evaluation of the local tissue effects and tissue attachment minimization in a rat caecal adhesion model. BioMatech (NAMSA), France.
2. Based on internal test report #1003CR053. Comparative study of textile tear and suture strength: Parietex™ optimized composite versus Parietex™ composite mesh.
Parietex™
Composite Ventral Patch
Mesh with fixation and deployment system for use in small ventral hernia repair.

Designed for optimal abdominal wall conformability:

- Deployment system designed to allow the patch to spring open
- Semi-peripheral fixation enables abdominal wall conformability
- Provides easy deployment and fixation system
  - Self-centering of the mesh thanks to the positioning system
  - Fixation on healthy tissue away from the center of the defect
- Balanced fixation on four cardinal points
- Supports tissue integration while minimizing visceral attachment with collagen film
  - Macroporous textile enables consistent tissue integration
  - Resorbable collagen film minimizes visceral attachment

REFERENCES


†Based on preclinical studies. Results may not correlate to performance in humans.
Versatex™
Monofilament Mesh

Offers a combination of macroporosity, surface density, and mechanical strength for successful hernia repair.1–4

Versatex™ monofilament mesh is designed to simplify intra-operative handling for surgeons through improved visualization, ease of mesh positioning, and wide selection of mesh sizes5

Offers ease of use:
¬ Mesh transparency for improved anatomy visualization during placement and fixation 6
¬ Centering and orientation marking facilitates mesh positioning7
¬ Flexibility for easy mesh handling and abdominal wall conformability7

Designed for excellent hernia repair performance:
¬ 3-D macroporous structure with hexagonal pore shape delivers reinforced textile strength and facilitates excellent tissue ingrowth3,8
¬ Supports improved mesh integration and reduced complications related to mesh shrinkage and scar plate formation3,8

REFERENCES

2. Based on internal test report #T2306CR062a/TEX044d, evaluating 3DS/3DV textile characterization. April 2015.
5. Based on internal report #T2306CR043a, assessing size and shape comparison chart. March 2015.
7. Based on internal report #T2306CR053b, Versatex™ monofilament mesh evaluation by surgeons for design validation. March 2015.
REFERENCES


2. Based on internal test report #RAT021, PLA degradation report. 2014.


6. Based on internal test report #Type GT8 textile TEX014, justifying for the pore size. 2015.
Parietene™
Macroporous Mesh

Intended for the repair of hernias or other fascial deficiencies that require the addition of a reinforcing material.

Parietene™ macroporous mesh has been designed for a surgeon’s ease of use during hernia repair procedures. It offers:

- **Balance between softness and rigidity** providing easy mesh handling and abdominal wall conformability

- **Improved visualization** to aid easy mesh placement and fixation

- A complete portfolio with multiple sizes and shapes for small, medium, and large inguinal and ventral defects

- Compatibility with fixation devices on the market, and can be introduced through a trocar

**REFERENCES**


4. Based on internal test report #T2291CR044, Physical and mechanical properties of Parietene™ macroporous mesh.

†Based on preclinical animal and/or benchtop studies. Animal data is not necessarily indicative of clinical outcomes in humans.

‡Based on the pore size and effective porosity of Parietene™ macroporous mesh versus Parietene™, Parietene™ lightweight, SurgiPro™ ranges, Bard™ mesh, Bard™ soft mesh, Prolene™, and Prolene™ soft mesh.
Permacol™
Surgical Implant
A porcine dermal collagen implant for hernia and abdominal wall repair.

Durable:
- Optimized process of crosslinking to provide durability
- Integration and neovascularization

Material:
- Acellular porcine dermis
- 97 percent similar to human tissue

Ease of use:
- Large variety of sizes, including large sizes — minimized need to suture small pieces together for a large wound
- Ready-to-use — no hydration of reconstitution required
- No refrigeration required
- Supplied sterile

REFERENCES
Parietex™
Hydrophilic Anatomical Mesh
Provides a custom-designed mesh for laparoscopic inguinal hernia repair. It combines Parietex™ 2-D textile with Parietex™ 3-D textile.

The 2-D textile is lightweight and macroporous with a design that is rigid, making it ideal for laparoscopic applications due to its handling properties.1–3,†

The 3-D textile is also a lightweight, macroporous mesh but has a design that provides compliance and softness.1,2,† This softness allows for gentle placement over sensitive nerve and vessel structures in the inguinal area.

All Parietex™ products are created from a macroporous polyester material whose properties invite healthy tissue integration and mesh compliance while reducing encapsulation.1,4 †

REFERENCES
† Based on preclinical animal and/or benchtop studies. Animal data is not necessarily indicative of clinical outcomes in humans.

ProGrip™
Laparoscopic Self-Fixating Mesh

Mesh and fixation combined into one device, for use in laparoscopic inguinal hernia repair. ProGrip™ laparoscopic self-fixating mesh delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where traditional tacks cannot be placed.

FOOTNOTES

† Measured in millimeter scale.
‡ If the mesh is cut to size, additional fixation should be used based on surgeon’s discretion.
§ Based on preclinical animal and/or benchtop studies. Animal and/or benchtop data may not correlate to performance in humans.
Ω ProGrip™ laparoscopic self-fixating mesh and ProGrip™ self-gripping mesh have equivalent gripping and mechanical properties.
REFERENCES


3. Based on internal test report #0902CR114. Bard™ soft mesh and Bard™ 3DMax light mesh have the same textile base. October 2011.


9. Estimate derived from the use of information under license from the following IMS Health information service: Hospital Supply Index for the period Sep ’06 – Jun ’12. IMS expressly reserves all rights, including rights of copying, distribution and republication. Based on typical prices of anatomical mesh and absorbable fixation in the US.


ProGrip™
Laparoscopic Self-Fixating Mesh

Mesh and fixation combined into one device, for use in laparoscopic inguinal hernia repair. ProGrip™ laparoscopic self-fixating mesh delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where traditional tacks cannot be placed.

Low pain:
∙ Eliminates the pain associated with traditional tack fixation
∙ Allows for low postoperative pain and fast recovery in laparoscopic inguinal hernia repair
∙ 40 percent of the mesh weight resorbs, reducing foreign material presence in patient over time
∙ Resorbable, atraumatic microgrips preserve cord and nerve structures

Easy to use:
∙ Doesn’t stick to itself making it easy to handle and unfold laparoscopically
∙ Easy to orient with green medial marking

FOOTNOTES

† Measured in millimeter scale.
‡ If the mesh is cut to size, additional fixation should be used based on surgeon’s discretion.
§ Based on preclinical animal and/or benchtop studies. Animal and/or benchtop data may not correlate to performance in humans.
Ω ProGrip™ laparoscopic self-fixating mesh and ProGrip™ self-gripping mesh have equivalent gripping and mechanical properties.
REFERENCES


3. Based on internal test report #0902CR114. Bard™ soft mesh and Bard™ 3DMax light mesh have the same textile base. October 2011.


9. Estimate derived from the use of information under license from the following IMS Health information service: Hospital Supply Index for the period Sep ’06 – Jun ’12. IMS expressly reserves all rights, including rights of copying, distribution and republication. Based on typical prices of anatomical mesh and absorbable fixation in the US.


ProGrip™
Laparoscopic Self-Fixating Mesh
Mesh and fixation combined into one device, for use in laparoscopic inguinal hernia repair. ProGrip™ laparoscopic self-fixating mesh delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where traditional tacks cannot be placed.

ProGrip™ laparoscopic self-fixating mesh delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where traditional tacks cannot be placed.

Lower cost:
- Combines the functionality of mesh and fixation into one device
- Reduces the cost associated with no fixation versus mesh with suture
- Causes less postoperative pain, which may result in lower cost of pain management therapy

Footnotes:
† Measured in millimeter scale.
‡ If the mesh is cut to size, additional fixation should be used based on surgeon’s discretion.
§ Based on preclinical animal and/or benchtop studies. Animal and/or benchtop data may not correlate to performance in humans.
Ω ProGrip™ laparoscopic self-fixating mesh and ProGrip™ self-gripping mesh have equivalent gripping and mechanical properties.
REFERENCES

3. Based on internal test report #0902CR114. Bard™ soft mesh and Bard™ 3DMax light mesh have the same textile base. October 2011.
9. Estimate derived from the use of information under license from the following IMS Health information service: Hospital Supply Index for the period Sep '06 – Jun '12. IMS expressly reserves all rights, including rights of copying, distribution and republication. Based on typical prices of anatomical mesh and absorbable fixation in the US.
Spacemaker™ Pro
Access and Dissector System

The Spacemaker™ Pro access and dissector system is your next-generation, all-in-one access and dissector system for inguinal and abdominal wall repair.

Optimized access†:
∙ Provides easier, one-time access to surgical space, with a uniquely integrated system2,3,‡
∙ Offers ability to operate in small spaces, with included low-profile 5 mm optical trocars
∙ Expands access to eligible patients, because balloons aren’t made with natural rubber latex3,4,‡

Optimized efficiency†:
∙ Saves procedural steps with an integrated access and dissection solution2,4,§
∙ Adapts to your technique, with the option to use as a system or separately3,4
∙ Offers more choice in technique, while reducing product codes by up to 50 percent‡

FOOTNOTES
† Compared to Spacemaker™ Plus device.
‡ Compared to Spacemaker™ Plus device or PDB distention balloons.
§ Compared to PDB distention balloons, trocar does not need to be re-inserted or re-positioned.

FOOTNOTES  REFERENCES  1/2
Spacemaker™ Pro
Access and Dissector System

The Spacemaker™ Pro access and dissector system is your next-generation, all-in-one access and dissector system for inguinal and abdominal wall repair.

- **Optimized access†:**
  - Provides easier, one-time access to surgical space, with a uniquely integrated system²,³,‡
  - Offers ability to operate in small spaces, with included low-profile 5 mm optical trocars²,³,‡
  - Expands access to eligible patients, because balloons aren't made with natural rubber latex³,⁴,‡

- **Optimized efficiency†:**
  - Saves procedural steps with an integrated access and dissection solution²,⁴,§
  - Adapts to your technique, with the option to use as a system or separately³,⁴
  - Offers more choice in technique, while reducing product codes by up to 50 percent‡

---

**FOOTNOTES**


---

**REFERENCES**

Spacemaker™ Pro
Access and Dissector System

The Spacemaker™ Pro access and dissector system is your next-generation, all-in-one access and dissector system for inguinal and abdominal wall repair.

Optimized dissection†:
For improved visualization, with anatomic balloons and clear cannulas²,⁴,†

²/²

Spacemaker™ Pro
Access and Dissector System

FOOTNOTES

† Compared to Spacemaker™ Plus device.
‡ Compared to Spacemaker™ Plus device or PDB distention balloons.
§ Compared to PDB distention balloons, trocar does not need to be re-inserted or re-positioned.
Spacemaker™ Pro
Access and Dissector System

The Spacemaker™ Pro access and dissector system is your next-generation, all-in-one access and dissector system for inguinal and abdominal wall repair.

REFERENCES

ProTack™
Titanium Fixation Device
A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

REFERENCES

1. ProTack™ 5 mm fixation device [510(k) clearance]. North Haven, CT: Medtronic; 1996.
5. Based on internal report United States Surgical validation/ toxicology department material qualification test results. December 2006.
7. Per CapSure™ Permanent Fixation System [instructions for use], Patients with a known sensitivity to chromium, nickel, copper, and iron and PEEK. Warwick, RI: BARD; 2014.
REFERENCES

1. ProTack™ 5 mm fixation device [510(k) clearance]. North Haven, CT: Medtronic;1996.
5. Based on internal report United States Surgical validation/ toxicology department material qualification test results. December 2006.
7. Per CapSure™* Permanent Fixation System [instructions for use]. Patients with a known sensitivity to chromium, nickel, copper, and iron and PEEK. Warwick, RI: BARD; 2014.
AbsorbaTack™
Fixation Device
A sterile, single-use device for fixation of prosthetic material, such as hernia mesh, to soft tissue.

REFERENCES

†Bench test results may not necessarily be indicative of clinical performance.
FOOTNOTES

† Compared to AbsorbaTack™ fixation device.

‡ Based on benchtop testing on commercially available absorbable and permanent fixation devices, which include the Ethicon SECURESTRAP™*, SorbaFix™*, OptiFix™*, CapSure™*, ProTack™, and ReliaTack™ devices with standard purchase tacks when the shaft is angled at 30, 45, 65, and 90 degrees. ReliaTack™ device deep purchase tack shear pull test performed in synthetic foam. Results may not correlate to performance in animal or cadaveric tissue, or performance in humans.

§ Based on potential for eliminating contralateral ports and average savings when 31–50 tacks are needed.

Ω Average of greatest estimated per-case savings over Ethicon SECURESTRAP™* and SorbaFix™* when 31–50 tacks are needed.

†† Articulation may save up to $100 per case by potentially eliminating contralateral ports.

‡‡ Compared to the first generation ReliaTack™ device.

§§ When 30–60 tacks are needed.
ReliaTack™
Articulating Reloadable Fixation Device
A fixation device with a one-of-a-kind articulating technology, interchangeable reloads, and screw-like tack designs for hernia repair.

REFERENCES

1. Based on internal test report #RE00010135-1, Deep purchase tack shear pull, p-value=0.00. October 2015.

2. Based on test report #2165-055-1, Mesh overlap claims testing, p-value=0.007. March 2014.

3. Based on ReliaTack™ deep purchase tack cost comparison, ReliaTack™ device deep purchase internal average cost data compared to Ethicon SECURESTRAP™* and SorbaFix™* fixation devices, IMS data.

FOOTNOTES

Superior access1,†:
∙ Designed to articulate to 65 degrees specifically to deliver the strength that comes from perpendicular tack fixation2,‡

Stronger fixation2,‡:
∙ Delivers superior fixation strength compared to both absorbable and permanent fixation devices when the shaft is angled at 30, 45, 65, and 90 degrees†,§

Lower cost of care3,Ω:
∙ Articulates and is reloadable — interchangeable reloads lower the cost of care by eliminating the need for multiple fixation devices per case

∙ May save up to $461 per case compared to the Ethicon SECURESTRAP™* device and SorbaFix™* device††,‡‡

It also offers a single-turn knob for easier articulation‡ and an optimized shipping wedge for intuitive loading.§§
OPEN INGUINAL

Products designed to overcome the challenges of open inguinal procedures — for optimized patient outcomes.¹

REFERENCES

Parietene™
Macroporous Mesh
Intended for the repair of hernias or other fascial deficiencies that require the addition of a reinforcing material.

Parietene™ macroporous mesh has been designed for a surgeon’s ease of use during hernia repair procedures. It offers:

- Balance between softness and rigidity providing easy mesh handling and abdominal wall conformability.
- Improved visualization to aid easy mesh placement and fixation.
- A complete portfolio with multiple sizes and shapes for small, medium, and large inguinal and ventral defects.
- Compatibility with fixation devices on the market, and can be introduced through a trocar.

REFERENCES
4. Based on internal test report #T2291CR044, Physical and mechanical properties of Parietene™ macroporous mesh.

†Based on preclinical animal and/or benchtop studies.
‡Based on the pore size and effective porosity of Parietene™ macroporous mesh versus Parietene™, Parietene™ lightweight, SurgiPro™ ranges, Bard™ mesh, Bard™ soft mesh, Prolene™, and Prolene™ soft mesh.
Parietex™
Plug and Patch System

The Parietex™ plug and patch system is easy to use. Allowing surgeons to maintain their proven technique while delivering enhanced patient comfort and intra-operative security through its innovative design.

**Effective:**

Developed for the proven plug and patch repair that yields low recurrence rates while providing consistent reproducible results.1

**Easy to use:**

Designed for the standard plug and patch technique.

**Conforms to defect:**

Resorbable microgrips enable plug to conform to the defect size and shape while providing additional security prior to suture fixation.

† The disk must be adequately fixated to minimize the risk of migration. We recommend the use of nonabsorbable fixation.

**REFERENCES**


AbsorbaTack™ 20
Fixation Device
Delivers strong mesh fixation and ease of use in open ventral hernia repair.¹

REFERENCES

Duatene™ Bilayer Mesh

A groin hernia repair solution that combines a flexible macroporous onlay with a rigid underlay to deliver a balance of rigidity and softness.1,2

Two distinct layers to support your technique and patient outcomes.

Onlay:

∙ Flexibility for enhanced anatomical conformability1,3
∙ Macroporous textile allows for good tissue integration1,4–6
∙ Superior onlay porosity designed for ease of positioning1–3

REFERENCES

2. Based on internal test report #43021CR079a, Marketing claims evidence from design validation lab. April 2017.
Duatene™

Bilayer Mesh

A groin hernia repair solution that combines a flexible macroporous onlay with a rigid underlay to deliver a balance of rigidity and softness.1,2

Underlay:
- Designed for balance between softness and rigidity to allow for good conformability to the patient's anatomy3,†
- Flexible enough for good intra-operative handling and sufficiently rigid for easy deployment in the preperitoneal space3,†
- Covers the myopectineal orifice7,8

Connector:
- Small size fits in all groin defect sizes — including small defects — to enable tight defect closure according to the surgeon's practice1,9
- Fiber-filled design to enable tissue ingrowth and ease of positioning3,5,†

†7 out of 7 surgeons surveyed agreed.

REFERENCES

2. Based on internal test report #43021CR079a, Marketing claims evidence from design validation lab. April 2017.