Your partner in **confronting colorectal complications**

Complications and risk factors—and how Ethicon solutions can help

Colorectal surgeries have high rates of complications and readmissions. Leading reasons for readmissions include **staple line leaks, perioperative bleeding,** and **surgical site infections**.¹

As the causes of complications and readmissions are multifactorial, so must the solutions be multidisciplinary. Ethicon is dedicated to systematically reducing controllable risk factors—along the disease pathway as well as in the OR—to help you **reduce the risk of complications and improve patient outcomes** in colorectal surgery.

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**Adverse outcomes in colorectal surgery**

<table>
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<tr>
<th>Complications</th>
<th>Readmissions</th>
<th>Costs</th>
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<tbody>
<tr>
<td>30.5% of patients have complications²</td>
<td>11% of patients are readmitted within 30 days¹</td>
<td>$9K average readmission costs²</td>
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<tr>
<td>23% of patients are readmitted within 90 days²</td>
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</tbody>
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¹: [Reference](#)

²: [Reference](#)
1. Staple Line Leaks

- Frequency: 11.9% of colorectal surgeries
- Average incremental costs: $16K-$19K

Risk factors
- More than 2 staple firings
- Compromised staple line integrity
- Low pelvic anastomosis

Ethicon innovations

- Better hemostasis
- Less thermal spread to surrounding tissue vs. LigaSure Impact™ was shown in preclinical testing

2. Perioperative Bleeding

- Frequency: 10.5% of colorectal surgeries
- Average incremental costs: $10K-$13K
- Cost to treat a hemorrhage: up to $45K (cancer cases)

Risk factors
- Anticoagulant or antiplatelet use
- Congenital bleeding disorders

Ethicon innovations

- Less strain on the staple line during opening
- Less excess tissue draw during anvil closure

3. Surgical Site Infections (SSI)

- Frequency: 15.2% of colorectal surgeries
- Average incremental costs: $26K-$30K

Risk factors
- Anticoagulant or antiplatelet use
- Congenital bleeding disorders

Ethicon innovations

- More likely to fully capture mucosa, promoting staple line integrity

Professional Education Resources

Professional Education
- Anastomotic Leak course
- Complex Open Surgery course
- OR Colorectal Team Training course

Programs
- Procedural Videos
- In Lab training opportunities
- Acute Care Surgeon training
- Laparoscopic Training courses

Ethicon Circular Staplers

- ECHELON FLEX™ GST System (Gripping Surface Technology)
- CONTOUR® Curved Cutter Stapler

- 61% fewer leaks at the staple line
- 37% less movement at distal tip when firing

- 33% reduction in compressive force on tissue

- 14x less strain on the staple line during opening
- 3.9x less excess tissue draw during anvil closure

- 7x more likely to fully capture mucosa, promoting staple line integrity

- Claims compared to Medtronic DST Series™ EEA™ Stapler

- Claims compared to Medtronic DST Series™ ILA™ Stapler

- Claims compared to Medtronic DST Series™ EEA™ with Tri-Staple™ Technology

- Designed to be reloaded when needed to complete a single transaction with multiple firings

- May eliminate 1 reload per case due to less tissue slippage

- Claims compared to Medtronic DST Series™ ILA™ with Tri-Staple™ Technology

- 4x less tissue slippage

- 33% less movement at distal tip when firing

- 61% fewer leaks at the staple line

- 37% less movement at distal tip when firing

- 33% reduction in compressive force on tissue

- 4x less tissue slippage

- May eliminate 1 reload per case due to less tissue slippage

- Claims compared to Medtronic DST Series™ ILA™ with Tri-Staple™ Technology

- 41% less thermal spread to surrounding tissue vs. LigaSure Impact™ was shown in preclinical testing

- 33% faster transaction times vs. LigaSure™ Maryland

- 81% of surgeons indicated device has superior dissection capability

- SURGICEL® Powder Absorbable Adjunctive Hemostat

- SURGICEL SNWoW™ Absorbable Hemostat

- The CDC, WHO, ACS-SIS Guidelines on reducing the risk of surgical site infections are general to triclosan-coated sutures and are no specific to any one brand.

- Straphylococcus epidermidis, Staphylococcus aureus, Escherichia coli, Enterococcus faecalis, Pseudomonas aeruginosa

- Frequency of anastomotic leaks
SURGICEL® Powder Absorbable Hemostat Essential Product Information

INDICATIONS
SURGICEL® Powder (oxidized regenerated cellulose) is used adjunctively in surgical procedures to assist in the control of capillary, venous, and small arterial hemorrhage when ligature or other conventional methods of control are impractical or ineffective.

CONTRAINDICATIONS
• Do not inject or place SURGICEL® Powder into an open blood vessel.
• SURGICEL® Powder should not be used to control hemorrhage from large arteries.
• When SURGICEL® Powder is used to help achieve hemostasis in, around, or in proximity to foramina in bone, areas of bony confluence, the spinal cord, or the optic nerve and chiasm, it must always be removed after hemostasis is achieved since it will swell and could exert unwanted pressure.
• SURGICEL® Powder should not be used for implantation in bone defects, such as fractures, since there is a possibility of interference with callus formation and a theoretical chance of cyst formation.

WARNINGS
• Closing with SURGICEL® Powder in a contaminated wound without drainage or with wound complications and ulcers would be impractical or ineffective.
• SURGICEL® Powder should not be impregnated with anti-infective agents or with other materials such as buffering or hemostatic substances.
• SURGICEL® Powder is dry and there may be difficulties in precise delivery under certain circumstances. Unintentional device placement may result in powder scattering and device migration that may increase the risk of adhesion formation.

PRECAUTIONS
• Although SURGICEL® Powder is bacteriostatic against a wide range of pathogenic microorganisms, it is not intended as a substitute for systematically administered therapeutic or prophylactic antimicrobial agents to control or prevent postoperative infections.
• Do not attempt to trim the applicator tip.

PRECAUTIONS
• Do not attempt to trim the applicator tip.

ADVERSE EVENTS
• Paralysis and nerve damage have been reported when other SURGICEL® products were used around, in, or proximity to foramina in bone, areas of bony confluence, the spinal cord, and the optic nerve and chiasm.
• Blindness has been reported in connection with surgical repair of a lacerated left fronto-oral lobe when other SURGICEL® products were placed in the anterior cranial fossa for treatment of Warnings and Precautions.
• Foreign body reactions have been reported with other products from the SURGICEL® Family of Absorbable Hemostats.
• Bleeding has been reported when other SURGICEL® products were applied after nasal polyp removal. Headache, burning, stinging and sneezing in epistaxis and other rhinological procedures, and stinging when SURGICEL® product was applied on surface wounds (venous ulcerations, dermabrasions, and donor sites) have also been reported.
• For information and technical questions, call 1-800-795-0012.

SURGICEL® Essential Product Information

INDICATIONS
SURGICEL® Absorbable Hemostat (oxidized regenerated cellulose) is used adjunctively in surgical procedures to assist in the control of capillary venous, and small arterial hemorrhage when ligature or other conventional methods of control are impractical or ineffective.

SURGICEL® ORIGINAL, SURGICEL® FIBRILLAR® and SURGICEL® NUKINT™ Hemostats can be cut to size for use in endoscopic procedures.

PRECAUTIONS
• Use only as much SURGICEL® Absorbable Hemostat as is necessary for hemostasis, holding it firmly in place until bleeding stops. Remove any excess before surgical closure in order to facilitate absorption and minimize the possibility of foreign body reaction.

In urological procedures, minimal amounts of SURGICEL® Absorbable Hemostat should be used and care must be exercised to prevent plugging of the urethra, ureter, or a catheter by dislodged portions of the product.

Since absorption of SURGICEL® Absorbable Hemostat could be prevented in chemically cauterized areas, its use should not be preceded by application of silver nitrate or any other escharotic chemicals.

If SURGICEL® Absorbable Hemostat is used temporarily to line the cavity of large open wounds, it should be placed so as not to overlap the skin edges. It should also be removed from open wounds by forceps or by irrigation with sterile water or saline solution after bleeding has stopped.

Precautions should be taken in otorhinolaryngologic surgery to ensure that none of the material is aspirated by the patient. (Examples: controlling hemorrhage after tonsillectomy and controlling epistaxis)

Care should be taken not to apply SURGICEL® Absorbable Hemostat too tightly when it is used as a wrap during vascular surgery (see Adverse Reactions).

ADVERSE EVENTS
• “Encapsulation” of fluid and foreign body reactions have been reported.

There have been reports of stenotic effect when SURGICEL® Absorbable Hemostat has been used as a wrap during vascular surgery.

Paralysis and nerve damage have been reported when SURGICEL® Absorbable Hemostat was used around, in, or proximity to foramina in bone, areas of bony confluence, the spinal cord, and the optic nerve and chiasm.

Blindness has been reported in connection with surgical repair of a lacerated left fronto-oral lobe when SURGICEL® Absorbable Hemostat was placed in the anterior cranial fossa.

Possible prolongation of drainage in cholecystectomy and difficulty passing urine per urethra after prostatectomy have been reported.

For more information, please consult your doctor or for product quality and technical questions, call 1-800-795-0012.

Ethicon Colorectal Solutions
Your partner in Confronting Colorectal Complications

Contact your representative or visit Ethicon.com

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