



# Alexis<sup>®</sup>

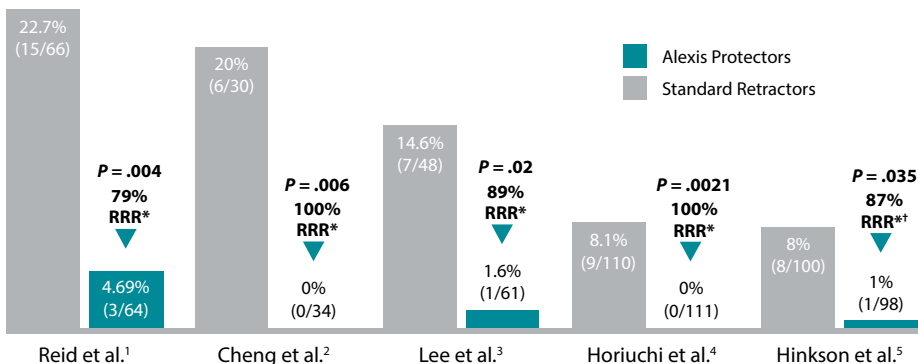
## Wound Protector-Retractors

A large teal graphic consisting of two overlapping triangles that create a diagonal line across the page, starting from the top left and extending towards the bottom right.

IS ALEXIS  
BRAND  
PART OF YOUR  
STANDARD  
OF CARE?

# Protect Every Incision with an Alexis Wound Protector

## Rate of Superficial Incisional Surgical Site Infections – Alexis Protectors vs Standard Retractors



\*RRR (relative risk reduction) was defined as the proportion of the control group (standard retractors) experiencing a given outcome minus the proportion of the treatment group (Alexis protectors) experiencing the outcome, divided by the proportion of the control group (standard retractors) experiencing the outcome.

†The data reflects both superficial and deep incisional and organ space SSI

## The Alexis wound protector

### ...offers 360-Degree Protection

- Reduces surgical site infection.<sup>1-5</sup>
- Shields the incision site from bacterial invasion.<sup>6,7</sup>
- Maintains moisture to promote healing.<sup>8</sup>

### ... provides 360-Degree Atraumatic Retraction

- Allows for maximum exposure with a minimal incision size.
- Offers unparalleled exposure without the trauma and pain associated with prolonged point retraction.
- Provides hands-free retraction, reducing the strain, discomfort and fatigue associated with traditional hand-held retractors.<sup>9</sup>
- Creates a tamponade effect to minimize blood loss.<sup>5</sup>

### ... offers Adaptability and Versatility

- Accommodates a wide range of specialties, patient sizes and incision sizes.
- Facilitates rapid and effortless setup.

# Procedural Applications



## Colon and Rectal

Lap colectomy (S and M laparoscopic system)  
Open colectomy (L, XL, XXL, XXXL)



## Bariatric

Lap gastric bypass (XS, S)  
Open gastric bypass (L, XL)



## General

|                                |                            |
|--------------------------------|----------------------------|
| Inguinal hernia repair (XS, S) | Splenectomy (L, XL)        |
| Thyroidectomy (XS, S)          | Pancreatectomy (L, XL)     |
| Appendectomy (S, M)            | Whipple (L, XL, XXL, XXXL) |



## Cardiothoracic

Video-assisted thoracoscopic surgery (VATS) (XXS, XS, S)  
Mitral valve repair or replacement (S, M)  
Thoracotomy (S, M)



## OB/GYN

|                                                |                                        |
|------------------------------------------------|----------------------------------------|
| Postpartum tubal ligation (XXS, XS)            | Myomectomy (S, M)                      |
| Bilateral salpingo-oophorectomy (XS, S)        | Total abdominal hysterectomy (S, M, L) |
| Lap hysterectomy (S and M laparoscopic system) | Cesarean section (L, XL)               |
| Mini-laparotomy (S, M)                         |                                        |



## Breast

Lumpectomy (XS, S)  
Mastectomy (S, M)  
Sentinel lymph node biopsy (XXS, XS, S)



## Orthopaedic

Total shoulder arthroplasty (XS/M, S/S, S/M)  
Total hip arthroplasty (S/M, M/L)

# Clinical Evidence

## Supporting the Use of Alexis Wound Protectors

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*"Our meta-analysis found that dual-ring wound protectors reduce the odds of SSI in patients undergoing lower gastrointestinal surgery...."*

*"... We demonstrated evidence of a subgroup difference where dual-ring wound protectors reduced SSIs while single-ring retractors did not, which provides greater insight in the choice of wound protection devices."*

Zhang L, Elsolh B, Patel SV. Wound protectors in reducing surgical site infections in lower gastrointestinal surgery: an updated meta-analysis. *Surg Endosc.* 2018;32(3):1111-1122. doi:10.1007/s00464-017-6012-0 (Level of Evidence 1)

*"Among adult patients with intrabiliary stents, the use of a dual-ring wound protector during [pancreaticoduodenectomy] significantly reduces the risk of incisional SSI."*

Bressan AK, Aubin JM, Martel G, et al. Efficacy of a dual-ring wound protector for prevention of surgical site infections after pancreaticoduodenectomy in patients with intrabiliary stents: a randomized clinical trial. *Ann Surg.* 2018;268(1):35-40. doi:10.1097/SLA.0000000000002614 (Level of Evidence 1)

*"[T]he use of plastic-sheath wound retractors such as the Alexis® O C-Section Retractor compared to the traditional Collins self-retaining metal retractor in low-risk women, having the first cesarean is associated with a significantly reduced risk of surgical site infection."*

*"There is significant reduction in the use of electric cautery for subcutaneous bleeding, bowel handling and postoperative pain. Operator satisfaction is improved and postoperative pain is less."*

Hinkson L, Siedentopf JP, Weichert A, Henrich W. Surgical site infection in cesarean sections with the use of a plastic sheath wound retractor compared to the traditional self-retaining metal retractor. *Eur J Obstet Gynecol Reprod Biol.* 2016;203:232-238. doi:10.1016/j.ejogrb.2016.06.003 (Level of Evidence 1)

*"Impervious plastic wound protectors reduce the risk of SSI when employed in non-trauma-related gastrointestinal and biliary tract surgery. Wound protectors represent a safe and simple intervention that may reduce postoperative morbidity and mortality."*

Edwards JP, Ho AL, Tee MC, Dixon E, Ball CG. Wound protectors reduce surgical site infection: a meta-analysis of randomized controlled trials. *Ann Surg.* 2012;256(1):53-59. doi:10.1097/SLA.0b013e3182570372 (Level of Evidence 1)

*"Superficial incisional SSI was significantly diminished in the ALEXIS wound retractor group (P=0.006)."*

Cheng KP, Roslani AC, Sehha N, et al. ALEXIS O-Ring wound retractor vs conventional wound protection for the prevention of surgical site infections in colorectal resections(1). *Colorectal Dis.* 2012;14(6):e346-e351. doi:10.1111/j.1463-1318.2012.02943.x (Level of Evidence 1)

*"[E]nteric organisms were cultured twice as often from the inside surface of the retractor compared with the outside surface of the retractor (49% vs 26%, respectively; P < 0.0001)."*

*"[U]se of a plastic wound retractor may result in reduced enteric bacterial colonization of the surgical incision site during gastrointestinal surgery. Reduced colonization of the surgical incision site by enteric bacteria due to the use of a plastic wound retractor should result in a reduction in SSI following gastrointestinal surgery."*

Mohan HM, McDermott S, Fenelon L, et al. Plastic wound retractors as bacteriological barriers in gastrointestinal surgery: a prospective multi-institutional trial. *J Hosp Infect.* 2012;81(2):109-113. doi:10.1016/j.jhin.2012.03.005 (Level of Evidence 2)

***“These results suggest that the [wound protector] protects an incision site from bacterial invasion.”***

Horiuchi T, Tanishima H, Tamagawa K, et al. A wound protector shields incision sites from bacterial invasion. *Surg Infect (Larchmt)*. 2010;11(6):501-503. doi:10.1089/sur.2009.072 (Level of Evidence 4)

***“There was a significant reduction in the incidence of incisional surgical site infections when the wound protector was used: 3 of 64 (4.7%) vs 15 of 66 (22.7%);  $P = .004$ ...”***

***“... In this study the use of barrier wound protection in elective open colorectal resectional surgery resulted in a clinically significant reduction in incisional surgical site infections.”***

Reid K, Pockney P, Draganic B, Smith SR. Barrier wound protection decreases surgical site infection in open elective colorectal surgery: a randomized clinical trial. *Dis Colon Rectum*. 2010;53(10):1374-1380. doi:10.1007/DCR.0b013e3181ed3f7e (Level of Evidence 1)

***“Our data demonstrate that a statistically significant reduction in the incidence of wound infection was achieved with the use of a wound-protection device. This device provides a simple intervention that may eventually have a large impact on the incidence of surgical wound infection and therefore annual health care expenditures.”***

Lee P, Waxman K, Taylor B, Yim S. Use of wound-protection system and postoperative wound-infection rates in open appendectomy: a randomized prospective trial. *Arch Surg*. 2009;144(9):872-875. doi:10.1001/archsurg.2009.151 (Level of Evidence 1)

***“We found that the wound retractor/protector prevented the incision site from drying, decreased tissue damage, and facilitated the migration of neutrophils, suggesting a preventive effect of the device with respect to wound infection...”***

***“... The studied wound retractor/protector effectively protects wound tissue from damage due to environmental factors experienced during surgery.”***

Horiuchi T, Nakatsuka S, Tanishima H, et al. A wound retractor/protector can prevent infection by keeping tissue moist and preventing tissue damage at incision sites. *Helix Review Series: Infectious Diseases*. 2007;(3):17-23. (Level of Evidence 5)

***“Wound infection was significantly diminished in the With Alexis retractor group ( $p=0.0021$ ).”***

Horiuchi T, Tanishima H, Tamagawa K, et al. Randomized, controlled investigation of the anti-infective properties of the Alexis retractor/protector of incision sites. *J Trauma*. 2007;62(1):212-215. doi:10.1097/01.ta.0000196704.78785.ae (Level of Evidence 1)



## Alexis O Wound Protector-Retractors

Featuring a rigid retraction ring for maximum exposure

| Reorder No. | Size                    | Sheath Length | Incision Range | Qty/Box |
|-------------|-------------------------|---------------|----------------|---------|
| C8401*      | Small                   | 18cm          | 2.5–6cm        | 5       |
| C8402       | Medium                  | 18cm          | 5–9cm          | 5       |
| C8403       | Large                   | 25cm          | 9–14cm         | 5       |
| C8404       | Extra Large             | 34cm          | 11–17cm        | 5       |
| C8405       | Extra Extra Large       | 36cm          | 17–25cm        | 5       |
| C8406       | Extra Extra Extra Large | 39cm          | 25–32cm        | 3       |

p.d.1.



1. Retraktoriaus žiedas koloproktologinėms operacijoms su laikiškiais:
  - retractorius suteikia 360 laipsnių žaizdos atraumatinę retrakciją bei apsaugą
  - sterilus (simbolis ant pakuotės);
  - vienkartinis (pažymėta simboliu);
  - apsaugos įmovos ilgis 18 cm;- skirtas 5 – 9 cm žaizdoms;- su rigidišku retraktoriaus žiedu- maksimaliai žaizdos ekspozicijai;
  - ant pakuotės pažymėtas produkto galiojimo laikas;
  - su numatyta pakuotės atidarymo vieta.



## Alexis Wound Protector-Retractors

Featuring a flexible retraction ring for anatomical conformity

| Reorder No. | Size                     | Sheath Length | Incision Range | Qty/Box |
|-------------|--------------------------|---------------|----------------|---------|
| C8313*      | Extra Extra Small        | 20cm          | 1–3cm          | 5       |
| C8323*      | Extra Extra Small, Short | 11cm          | 1–3cm          | 5       |
| C8312*      | Extra Small              | 19cm          | 2–4cm          | 5       |
| C8322*      | Extra Small, Short       | 13cm          | 2–4cm          | 5       |
| C8301*      | Small                    | 18cm          | 2.5–6cm        | 5       |
| C8302       | Medium                   | 18cm          | 5–9cm          | 5       |
| C8303       | Large                    | 25cm          | 9–14cm         | 5       |
| C8304       | Extra Large              | 34cm          | 11–17cm        | 5       |



## Alexis O C-Section Protector-Retractors

Featuring a rigid retraction ring for maximum uterine exposure

| Reorder No. | Size        | Sheath Length | Incision Range | Qty/Box |
|-------------|-------------|---------------|----------------|---------|
| G6313       | Large       | 25cm          | 9–14cm         | 5       |
| G6314       | Extra Large | 34cm          | 11–17cm        | 5       |



## Alexis Laparoscopic Systems

Featuring a laparoscopic cap to facilitate specimen extraction

| Reorder No. | Size   | Sheath Length | Incision Range | Qty/Box |
|-------------|--------|---------------|----------------|---------|
| C8501*      | Small  | 18cm          | 2.5–6cm        | 6       |
| C8502       | Medium | 18cm          | 5–9cm          | 6       |



## Alexis Orthopaedic Protectors

Featuring a rigid retraction ring for maximum retraction and a flexible retraction ring for maximum versatility

| Reorder No.                  | Size               | Sheath Length | Incision Range | Qty/Box |
|------------------------------|--------------------|---------------|----------------|---------|
| <i>Rigid Retraction Ring</i> |                    |               |                |         |
| HR000                        | Extra Small/Medium | 14cm          | 2.5–7cm        | 5       |
| HR001                        | Small/Small        | 14cm          | 2.5–8cm        | 5       |
| HR004                        | Small/Medium       | 14cm          | 2.5–8cm        | 5       |
| HR005                        | Medium/Large       | 17cm          | 5–13cm         | 5       |

*Flexible Retraction Ring*

|       |                    |      |         |   |
|-------|--------------------|------|---------|---|
| HR100 | Extra Small/Medium | 14cm | 2.5–7cm | 5 |
| HR101 | Small/Small        | 14cm | 2.5–8cm | 5 |
| HR104 | Small/Medium       | 14cm | 2.5–8cm | 5 |
| HR105 | Medium/Large       | 17cm | 5–13cm  | 5 |

- Reid K, Pockney P, Draganic B, Smith SR. Barrier wound protection decreases surgical site infection in open elective colorectal surgery: a randomized clinical trial. *Dis Colon Rectum*. 2010;53(10):1374–1380. doi:10.1007/DCR.0b013e3181ed3f7e (Level of Evidence 1)
- Cheng KP, Roslani AC, Sehha N, et al. ALEXIS O-Ring wound retractor vs conventional wound protection for the prevention of surgical site infections in colorectal resections(1). *Colorectal Dis*. 2012;14(6):e346–e351. doi:10.1111/j.1463-1318.2012.02943.x (Level of Evidence 1)
- Lee P, Waxman K, Taylor B, Yim S. Use of wound-protection system and postoperative wound-infection rates in open appendectomy: a randomized prospective trial. *Arch Surg*. 2009;144(9):872–875. doi:10.1001/archsurg.2009.151 (Level of Evidence 1)
- Horiuchi T, Tanishima H, Tamagawa K, et al. Randomized, controlled investigation of the anti-infective properties of the Alexis retractor/protector of incision sites. *J Trauma*. 2007;62(1):212–215. doi:10.1097/01.ta.0000196704.78785.ae (Level of Evidence 1)
- Hinkson L, Siedentopf JP, Weichert A, Henrich W. Surgical site infection in cesarean sections with the use of a plastic sheath wound retractor compared to the traditional self-retaining metal retractor. *Eur J Obstet Gynecol Reprod Biol*. 2016;203:232–238. doi:10.1016/j.ejogrb.2016.06.003 (Level of Evidence 1)
- Horiuchi T, Tanishima H, Tamagawa K, et al. A wound protector shields incision sites from bacterial invasion. *Surg Infect (Larchmt)*. 2010;11(6):501–503. doi:10.1089/sur.2009.072 (Level of Evidence 4)
- Mohan HM, McDermott S, Fenelon L, et al. Plastic wound retractors as bacteriological barriers in gastrointestinal surgery: a prospective multi-institutional trial. *J Hosp Infect*. 2012;81(2):109–113. (Level of Evidence 2)
- Horiuchi T, Nakatsuka S, Tanishima H, et al. A wound retractor/protector can prevent infection by keeping tissue moist and preventing tissue damage at incision sites. *Helv Review Series: Infectious Diseases*. 2007;3(1):17–23. (Level of Evidence 5)
- Spera P, Lloyd JD, Hernandez E, et al. AORN ergonomic tool 5: tissue retraction in the perioperative setting. *AORN J*. 2011;94(1):54–58. doi:10.1016/j.aorn.2010.08.031

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