### Most Common Surgical Procedures

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Description</th>
<th>Potential Adhesion Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myomectomy/Cystectomy</td>
<td>Myomectomy is removal of benign tumors of the uterus (fibroids). Ovarian cystectomy is removal of ovarian cysts. Both procedures can be performed by open laparotomy or by laparoscopy.</td>
<td>Uterus, ovaries, fallopian tubes, small bowel, and/or peritoneum.</td>
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<tr>
<td>Hysterectomy</td>
<td>Removal of the uterus - may be partial or total including the cervix, ovaries, and/or the fallopian tubes. Can be performed by open laparotomy or by laparoscopy, or as a combined procedure, laparoscopic assisted vaginal hysterectomy (LAVH). May be indicated for several conditions including fibroids, endometriosis, and uterine/ovarian cancer.</td>
<td>Dependent on type of hysterectomy performed; may include remaining reproductive organs, small bowel, and/or peritoneum.</td>
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<tr>
<td>Adhesiolysis</td>
<td>Removal/dissection of adhesions. It may be necessary to progress during surgery or the sole purpose of surgery. By creating new scar tissue, it can be a source of reformation of adhesions. May be indicated for chronic pain, risk of bowel obstruction, or infertility. Can be performed by open laparotomy or by laparoscopy.</td>
<td>Dependent on areas of adhesiolysis. Increased potential for reformation of adhesions as well as de novo (new) adhesion formation.</td>
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<tr>
<td>Oophorectomy/Removal of Fallopian Tubes</td>
<td>Removal of one or both ovaries, may include fallopian tubes. Can be performed by open laparotomy or by laparoscopy. May be indicated for ovarian cysts, endometriosis, or cancer; however, usually performed in conjunction with hysterectomy.</td>
<td>Uterus, fallopian tubes, small bowel, and/or peritoneum.</td>
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<tr>
<td>Caesarean section</td>
<td>Incisions are made through mother’s lower abdomen (laparotomy) and uterus (hysterotomy) to deliver one or more babies. It is the most common form of pelvic surgery in females.</td>
<td>Anterior uterus, small bowel, and/or peritoneum.</td>
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<tr>
<td>Tubal Ligation</td>
<td>Procedure in which the fallopian tubes are severed and sealed or “pinched shut.” Informally known as getting one’s “tubes tied.” It’s performed for female sterilization, and can be achieved by open laparotomy or by laparoscopy.</td>
<td>Ovary and fallopian tubes.</td>
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</tbody>
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### Gynecologic Surgery Primer

Coseal Surgical Sealant is indicated for patients undergoing laparotomy or laparoscopic abdominopelvic surgery as an adjunct to good surgical technique intended to reduce the incidence, severity, and extent of postsurgical adhesion formation.

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### Application

| Benefits of Using COSEAL for Adhesion Prevention in Gynecologic Surgery |
|-------------------------------|--------------------------------------------------------------------------|
| Abdominopelvic adhesion prevention | Postoperative abdominopelvic adhesion formation may lead to chronic pelvic pain, infertility, and small bowel obstruction. It also makes repeat abdominopelvic surgery more challenging with an increased risk for inadvertent enterotomy (puncture of bowel) and prolonged operative time. COSEAL is a synthetic hydrogel designed to prevent or reduce the incidence, severity, and extent of postsurgical adhesion formation. |
Challenges in Gynecologic Surgery

- Postoperative adhesions occur in 60% to 90% of patients undergoing major gynecologic surgery, and represent one of the most common causes for intestinal obstruction in the industrialized world.1
- A lack of awareness of the clinical significance and frequency of adhesions is one of the greatest impediments to reducing their formation.2
- As many as 93% of patients undergoing laparotomy develop adhesions attributable to earlier surgery.3
- Adhesions are considered to be the most common cause of pelvic pain in women,4 and may lead to infertility.5
- Postoperative adhesions are the largest single cause of small bowel obstruction (SBO).6 SBO is the most serious adhesion-related complication with a 10% risk of mortality if not diagnosed and treated immediately.1
- Following surgical removal of adhesions (adhesiolysis), reformation is a frequent problem, even in laparoscopic procedures.7
- In 1994 the total direct cost for hospitalizations related to abdominal adhesions in the U.S. was estimated at $1.3 billion.8

Probing Questions

Questions before COSEAL introduction:

- What adhesion prevention agents do you use and when?
- Do you consider adhesion prevention agents to be a standard of care for the majority of gynecologic surgery patients?
- How often do you perform adhesiolysis? Is this to obtain surgical exposure or as a curative measure for patients with adhesions?
- Is management of female infertility a part of your practice? If so, have you found adhesions to be a source of infertility in your patients?
- Are you concerned with the medicolegal implications of postoperative abdominopelvic adhesions?
- Would you be interested in an adhesion prevention agent clinically proven to offer safe, effective coverage in both laparoscopic and open procedures?

Objections

I don’t use adhesion prevention agents because good surgical technique prevents adhesion formation.

Despite advances in gynecologic surgical techniques, epidemiological studies of adhesion formation in gynecologic surgery patients concluded that surgical techniques to reduce adhesions had little impact on the burden of adhesion-related complications.4 Adhesion prevention agents should be considered an adjunct to good surgical technique.

I only perform laparoscopic procedures, so adhesion prevention agents are unnecessary.

Adhesion formation even after laparoscopic procedures remains one of the most common complications of gynecologic surgery. An epidemiological study examining the readmission rate for complications related to adhesions following gynecologic surgery revealed that the overall risk following laparoscopic or open surgery is similar.6

I use INTERCEED, SEPARAFILM, or ADEPT for adhesion prevention.

Probe as to why they use these products. Counter with the following:
- COSEAL offers sprayable coverage for multiple sites in both laparoscopic and open procedures. Fabric or film barriers are less practical than a sprayable hydrogel, especially in laparoscopic procedures.
- Do you require coverage for multiple focal sites of potential adhesion formation, or is broad coverage needed? For example, ADEPT may be an alternative to COSEAL in patients with endometriosis for global coverage of widespread areas of potential adhesion formation.

I’ve heard COSEAL is expensive.

COSEAL is in line with other adhesion prevention agents for focal and multiple site coverage. When using fabric or film barriers, especially in laparoscopic surgery, coverage of multiple of sites may be difficult and/or impractical and require the use of multiple sheets, thus increasing overall cost.

Tips for Success

- Emphasize importance of adhesion prevention as a standard of care.
- Emphasize ease of use of sprayable hydrogel vs. fabric or film sheets, especially in laparoscopic procedures.
- Prepare and demo product with surgeon and staff prior to use:
  - Determine appropriate applicator for procedures most often performed by the surgeon.
  - Work with surgeon and staff to increase familiarity and comfort level with the device through frequent use.

Marketing Materials

Description

COSEAL Trial Kit

COSEAL DuploSpray Folder

Reference Overview

<table>
<thead>
<tr>
<th>Article Title</th>
<th>Reference</th>
<th>Key Finding</th>
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References