ADHESION PREVENTION IN
PELVIC AND ABDOMINAL SURGERY

COVA+™ ABDO
Resorbable guided healing membrane
COVA+™ ABDO

BIOMATERIAL (1) DEVELOPED FOR THE PREVENTION OF POST-OPERATIVE ADHESIONS

BIOCOMPATIBLE MEMBRANE

- Acellular collagen
- Patented COVA™ technology (1)

RESORBABLE

- Resorption time adapted to the natural healing process (13 weeks) allowing it to act as a physical barrier (2, 3)

EXAMPLES OF INDICATIONS IN DIFFERENT SPECIALTIES (4)

**Abdominal** surgery
- Hepatectomy
- Colectomy
- Protective stoma
- Bariatric surgery

**Pelvic** surgery
- Myomectomy
- Endometriosis
- Hysterectomy

(1) Patent: FR2944706
(4) Instruction for use COVA+™.
**POST-OPERATIVE ADHESIONS: RISKS THAT MUST BE CONSIDERED**

**PATHOLOGICAL SCAR FORMATION**
- Post-operative adhesions develop following more than 90% of abdominal surgical procedures (1, 2, 3, 4, 5).

**A NEGATIVE IMPACT ON PATIENTS’ HEALTH**
- Adhesions: a known cause of over 50% of intestinal occlusions (2, 6, 7).
- Adhesions: a cause of 15 to 20% of secondary infertility (8, 9).
- Adhesions: a cause of abdominal pain, limiting organ mobility (7, 10).

**AT-RISK OF REVISION SURGERY**
- Up to 15% risk of revision surgery (particularly in colorectal and ovarian surgery) (1, 11, 12).
- More complex procedures (1, 13) and a risk of lesions to adjacent tissues of up to 8.7% (7).

**INCREASED MEDICAL WORKLOAD AND OVERCOSTS**
- Adhesiolysis leads to:
  - A significant increase in the duration of surgical procedures and hospital stay (1, 15).
  - Additional hospital costs of 3 355 € per patient in Finland (15).
- Complaints regarding adhesion-related complications cost on average 81 580 € (14).

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CLINICAL AND PRECLINICAL RESULTS

Comparative multicentric prospective study - Club Coelio (15 centres) (1).

MATERIALS ET METHODS:
- Performance and tolerance
- Two-stage abdominal surgery: prevent post-operative adhesion
- n=113 (n=65 in bariatric surgery; n=48 in temporary stoma)

RESULTS:

**Bariatric surgery**

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<th>COVA+™ABDO</th>
<th>Control</th>
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<td>(n=34)</td>
<td>(n=31)</td>
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- Grade 3 adhesion reduced
- COVA+™ decreases adhesion severity
- No complication due to the membrane

**Temporary stoma**

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<td>(n=18)</td>
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- No adhesion in 61% of cases
- COVA+™ decreases adhesion severity
- No complication due to the membrane

Heyden's adhesion scale:

- Grade 0: No adhesions
- Grade 1: mild adhesions, smooth dissection with finger
- Grade 2: moderate adhesions, separated by blunt and sharp dissection
- Grade 3: severe adhesions, separated only by sharp dissection

HISTOLOGICAL ANALYSES:

Histology at the surgical site (Cross-section, Masson-Goldner's trichromium; Magnification 2.5x)

**COVA+™ABDO case**

- No adhesion, anatomical planes preserved

**Control case**

- Severe fibro-cellular adhesions between the uterine horn and the peritoneum

COVA+™ABDO REDUCES THE INCIDENCE AND SEVERITY OF ADHESIONS

(2) biom’up, internal data.
EXAMPLES OF CLINICAL USE

2-STAGE HEPATECTOMY:

- Revision surgery facilitated:
  - no adhesions
  - anatomic planes preserved

RINE ABLATION:

PROTECTIVE STOMA:

COVA+™ ABDO IS VERSATILE AND IS THE ANSWER TO MANY INDICATIONS IN LAPAROSCOPY AND IN LAPAROTOMY

(1) Instruction for use COVA+™.
COVA+™ ABDO
PHYSICAL BARRIER
BETWEEN THE
ORGANS AND THE
ADJACENT TISSUES

PREVENTS ADHESIONS WHICH ARE SOURCES OF COMPLICATIONS
- Reduces the incidence and severity of adhesions (1)
- Reduces fibrosis (2, 3)
- Reduces inflammatory reaction (2, 3, 4)

FACILITATES RE-ENTRY IN CASE OF REVISION SURGERY
- Maintains the cleavage and anatomical planes (2, 3)
- Simplifies dissection to access to the surgical site (2, 3, 4)

PROVIDES NEED-BASED SOLUTIONS FOR PHYSICIANS
- Easy to handle and resistant (1)
- Can be used in laparoscopy or in laparotomy (1)
- Can be resized and repositioned (5)

(1) Biom’Up, internal data.
(5) Instruction for use COVA+™.
Each unit of COVA+™ ABDO is double packaged and sterilized by irradiation.

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LEGAL INFORMATION: COVA+™ - Implantable Medical Devices for surgery, reserved for use by qualified Healthcare professionals, reimbursement depends on each country’s social security system. NOT FOR SALES IN THE USA. Read the instructions for use on the packaging carefully before use. CE 0086: BSI. Manufacturer: biom’up SA France. Photography: Ian Abella Illustration: Les Dalton, Shutterstock.