# Damage Control Surgery & Temporizing Abdominal Closure
Trauma / Emergency General Surgery / Surgical Critical Care
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## I. Indications for Damage Control Surgery

1. Trauma & EGS Patient in extremis
    a. Life threatening hemorrhage requiring abdominal packing, or temporizing vascular shunts
    b. Bowel resection in the face of dwindling physiologic reserve requiring delayed GI reconstruction
    c. Mesenteric ischemia with planned re-look laparotomy
    d. Massive intra-abdominal contamination or visceral edema precluding primary fascial closure
    e. Massive volume resuscitation (>15 units pRBC & > 10 L crystalloid) – expecting significant visceral edema and the development of Abdominal Compartment Syndrome.

## II. Temporizing Abdominal Closure

1. Plastic barrier (bowel isolation bag) to protect the bowels
2. Surgical towel & 2 Jackson Pratt drains brought out through the wound
3. Ioban adhesive cover.

## III. Time to subsequent operative procedure.

1. Unplanned re-exploration should be done in the face of ongoing surgical bleeding
2. Re-exploration is done when patient has regained physiologic reserve (End-points to be determined by Trauma / EGS surgeon: lactic acid, base deficit, correction of coagulopathy, normalization of temperature).
3. Time to unpacking of abdomen should not exceed 72 hours (Incidence of Intra-abdominal abscess significantly increased beyond 72 hrs.)
4. Planned washouts of open abdomen should be everyday for "contaminated abdomen" and every other day for "clean-contaminated" open abdomen.
5. Abdominal washouts should be done with warm saline only.

## IV. The Contaminated – Dirty Abdomen = Tertiary Peritonitis

1. Defined as gross purulent fluid in more than one quadrant (Single quadrant = Intra-abdominal abscess)
2. Irrigation to be done with warm saline only
3. Acetic Acid maybe used to soak laparotomy pads or kerlex rolls of a defined abscess cavity with planned serial washouts until visually clean.

## V. Abdominal Fascial Closure

1. Primary Fascial abdominal closure should be evaluated at each laparotomy.
2. Indications for continued open abdomen
    a. Visceral Edema with inability for primary closure
    b. Contaminated – Dirty abdomen
    c. Significant Extra-abdominal Sepsis with Acute Lung Injury on significant ventilatory support.

VI. Planned Ventral Hernia

1. Once intra-abdominal issued have been corrected and unlikely to obtain primary fascial closure by post injury day 8, trauma / EGS surgeon must consider a planned ventral hernia course.
2. Small ventral defect (< 10 cm wide) consider AlloDerm closure with or without skin closure (with or without bipedicle flaps)
3. Large defect (> 10 cm wide) vycril mesh closure with planned STSG when granulated bed matured.