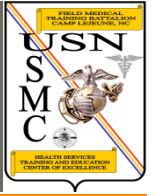




MANAGE ABDOMINAL INJURIES





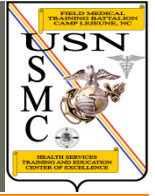
OVERVIEW



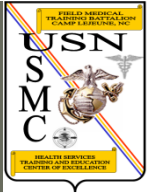
- Major Abdominal Organs
- Significance of Abdominal Organs
- Blunt and Penetrating Trauma
- Signs and Symptoms
- Treatment



LEARNING OBJECTIVES

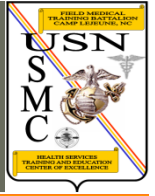


Please Read Your
Terminal Learning Objectives
And
Enabling Learning Objectives





MAJOR ABDOMINAL ORGANS

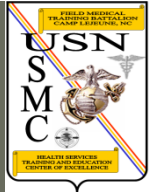


OVERVIEW

- Unrecognized abdominal injury is one of the major causes of death in the trauma casualty.
- Early deaths typically result from massive blood loss caused by either penetrating or blunt injuries.
- The abdomen contains the major organs of digestion and excretion.
- The simplest and most common method of describing the portions of the abdomen is by quadrants. In this system, the abdomen is divided into four equal parts by two imaginary lines that intersect at right angles at the umbilicus.



MAJOR ABDOMINAL ORGANS



Separated into 4 equal quadrants

- RUQ

- Colon
- Right Kidney
- Pancreas – small portion
- Liver
- Gallbladder

- LUQ

- Colon
- Left Kidney
- Pancreas
- Spleen
- Stomach



MAJOR ABDOMINAL ORGANS

Separated into 4 equal quadrants

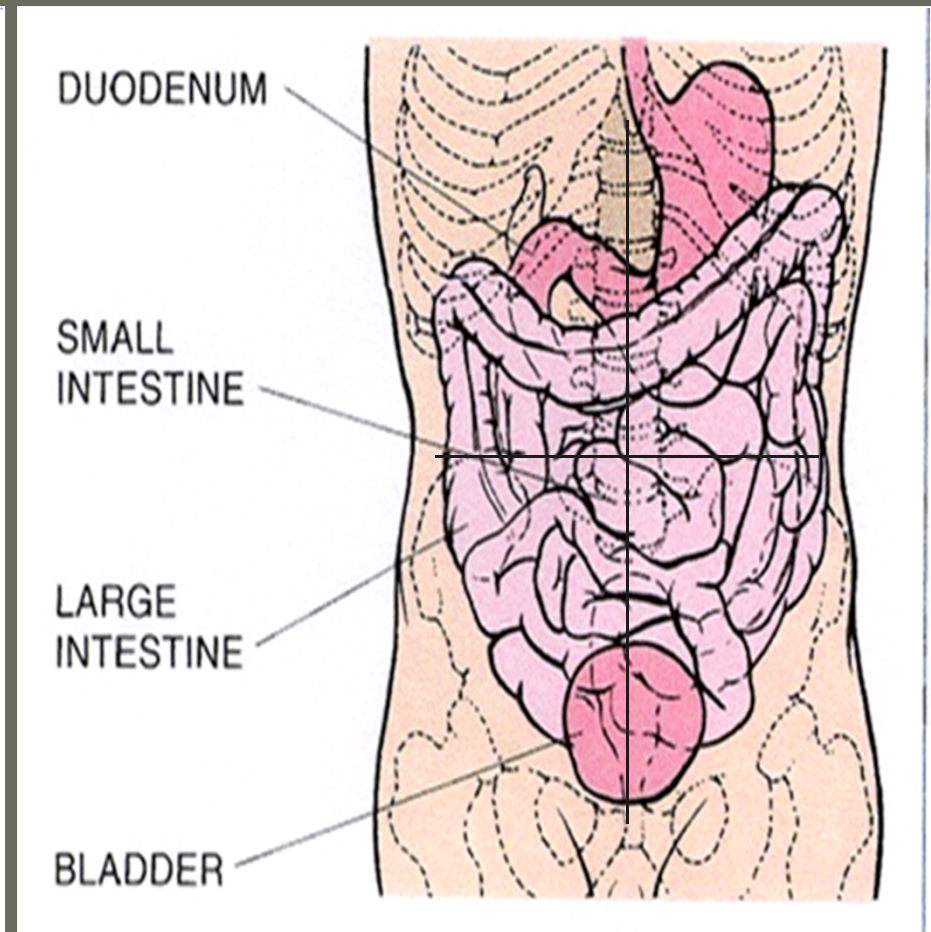
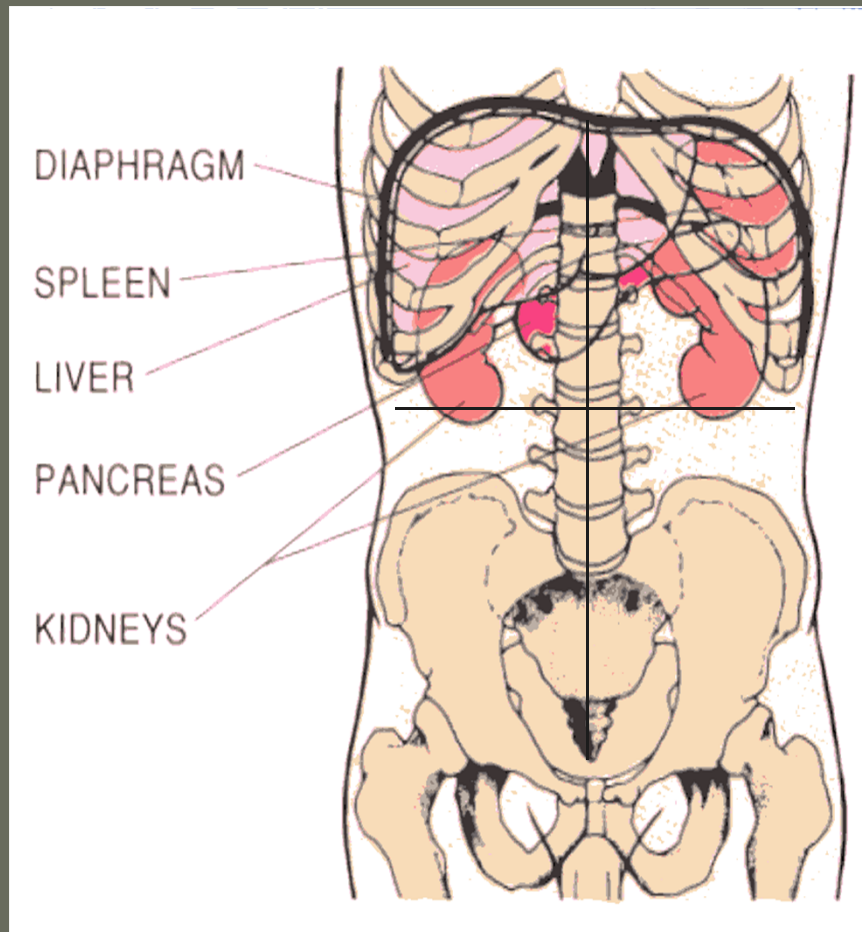
- RLQ

- Ascending Colon
- Small Intestine
- Major artery and vein for right leg
- Appendix

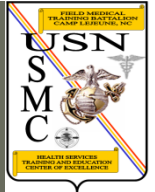
- LLQ

- Descending Colon
- Small Intestine
- Major artery and vein for left leg

ORGANS OF THE ABDOMEN



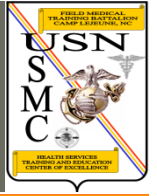




SIGNIFICANCE OF ABDOMINAL ORGANS



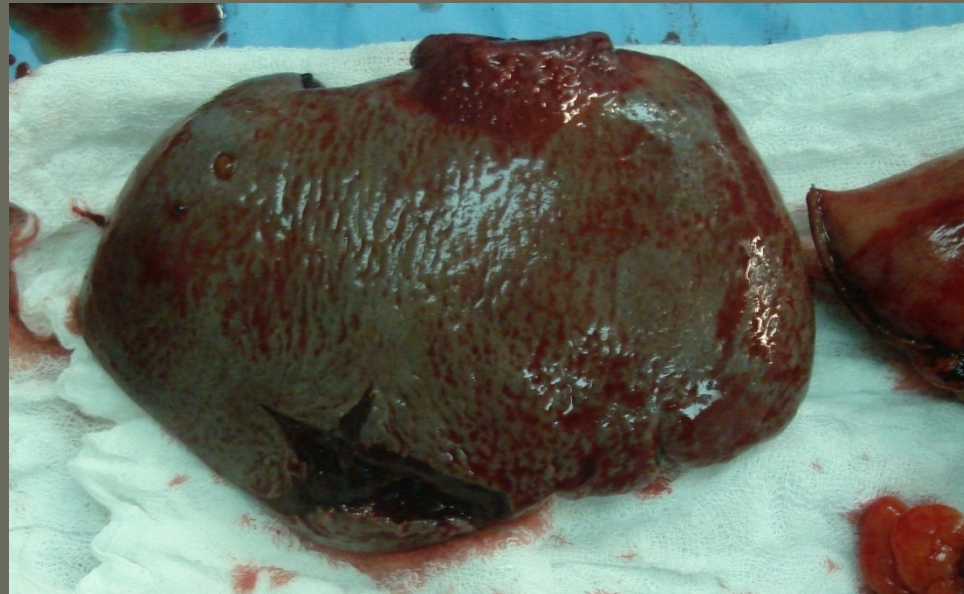
ABDOMINAL ORGANS



- HOLLOW ORGANS – Gastrointestinal and urinary tract through which material pass
 - Stomach
 - Intestines
 - Bladder
- Rupture causes septicemia and toxicity
- Bleeding is generally minimal

ABDOMINAL ORGANS

- SOLID ORGANS – Solid masses of tissue
 - Liver
 - Pancreas
 - Spleen
 - Kidneys

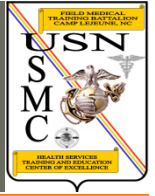


- Highly vascular, injury results in severe bleeding





MECHANISM FOR ABDOMINAL INJURIES



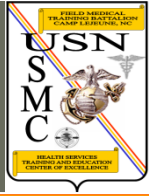
- Assessing the patient for abdominal injuries begins with knowledge of the MOI. Numerous mechanisms lead to the compression and shear forces that may damage abdominal organs. Abdominal Injuries can be caused by:

- Blunt Trauma

- Penetrating Trauma



MECHANISM FOR ABDOMINAL INJURIES

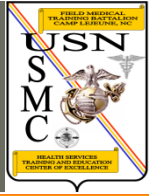


Blunt Trauma

- Great threat to life because injuries are more difficult to diagnose
- The injuries to abdominal organs result from either compression or shear forces.



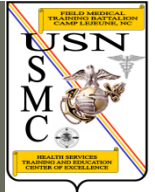
MECHANISM FOR ABDOMINAL INJURIES



Penetrating Trauma

- A foreign object enters the abdomen and opens the peritoneal cavity to the outside
- Penetrating trauma is more readily visible than blunt trauma
- Multiple organ damage can occur in penetrating trauma
- A mental visualization of the potential trajectory





SIGNS AND SYMPTOMS

SIGNS AND SYMPTOMS

- Note any protective gear worn by the casualty

- History of the injury



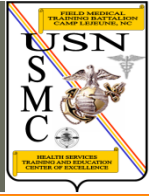
- Focus on the weapon, number of times shot or stabbed, and amount of blood at the scene



SIGNS AND SYMPTOMS



- Unless there are associated injuries, casualties with abdominal trauma generally present with a patent airway.
- When abnormalities are found it should be exposed and examined in greater detail.
- This involves inspection and palpation of the abdomen looking and feeling for soft tissue injuries and distention.

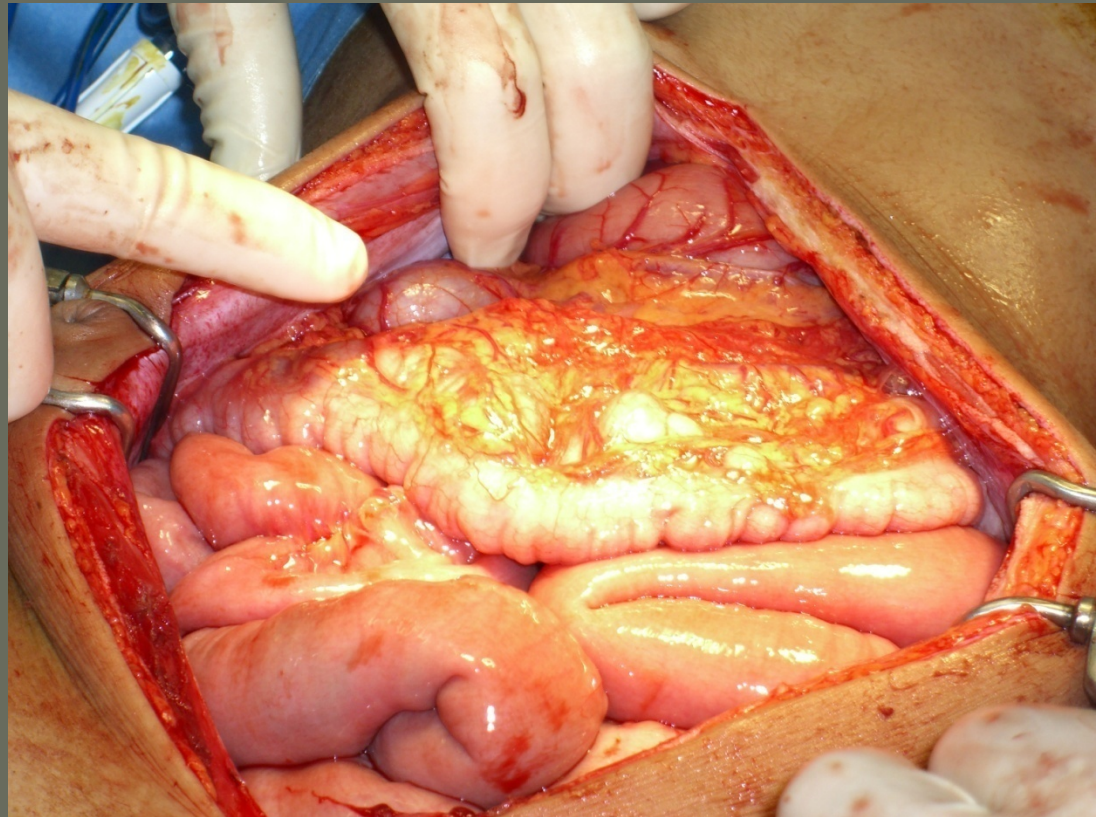


SIGNS AND SYMPTOMS

- Soft tissue injuries include contusions, abrasions, stab or gunshot wounds, obvious bleeding, and unusual findings such as evisceration or impaled objects.
- Palpate to identify areas of tenderness.
- Begun in an area where the casualty does not complain of pain. Then, each abdominal quadrant.
- While palpating a tender area, the provider may note that the casualty “tenses up” the abdominal muscles in that area. This reaction, called voluntary guarding, serves to protect the patient from pain.

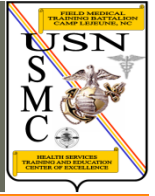
SIGNS AND SYMPTOMS

- Deep palpation of obvious injuries should be avoided
- Be careful around impaled objects





SIGNS AND SYMPTOMS



- Auscultation of bowel sounds is generally not a helpful field assessment tool.
- Time should not be wasted to determine their presence or absence as this diagnostic sign will not alter the field management of the casualty.

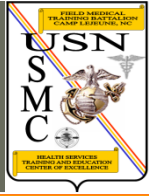


SIGNS AND SYMPTOMS

- The assessment of abdominal injuries can be difficult. Some signs that raise the index of suspicion are:
 - Mechanism of injury
 - Soft tissue injuries to the abdomen, flank, or back
 - Shock without an obvious cause
 - Level of shock greater than explained by other injuries



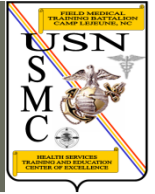
SIGNS AND SYMPTOMS



Some signs that raise the index of suspicion continued:

- Abdominal tenderness
- Involuntary guarding
- Percussion tenderness
- Diminished or absent bowel sounds

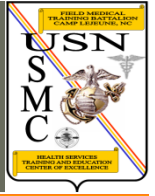




TREATMENT



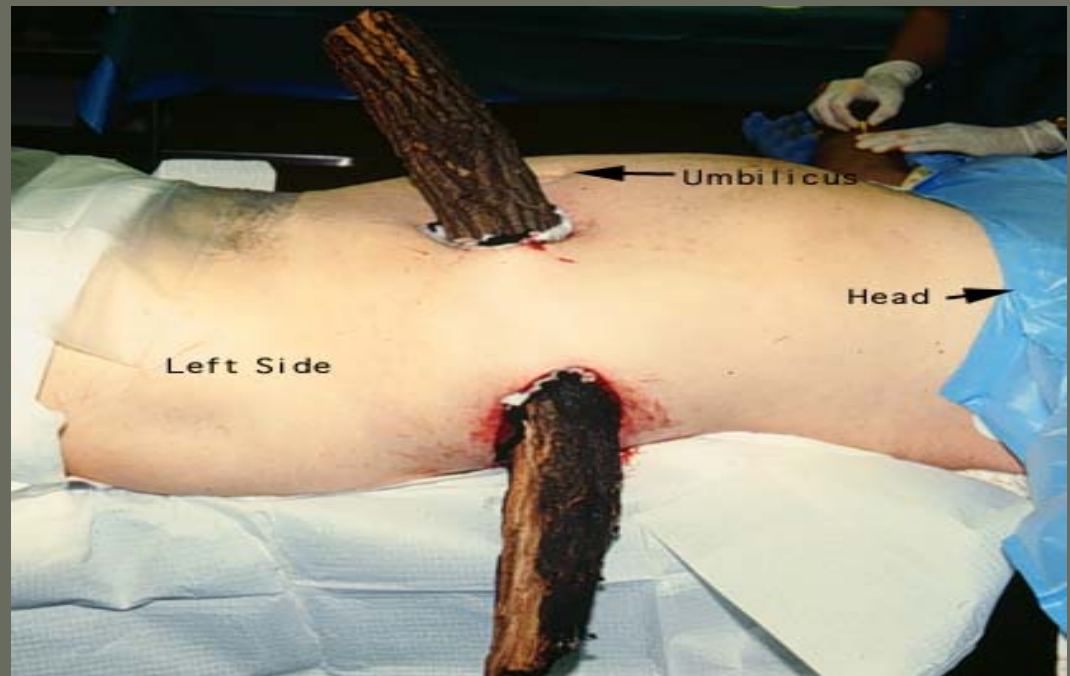
BLUNT ABDOMINAL INJURIES



- TREATMENT
 - Maintain ABC's
 - Establish baseline vital signs
 - Place in supine position with knees slightly flexed
 - History
 - Keep calm
 - Treat for shock
 - DO NOT strongly palpate the abdomen
 - Monitor and TACEVAC

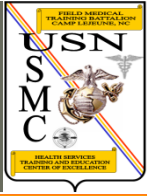
PENETRATING ABDOMINAL INJURIES

- DO NOT remove impaled objects
 - Leave in place
 - Secure with bulky dressings

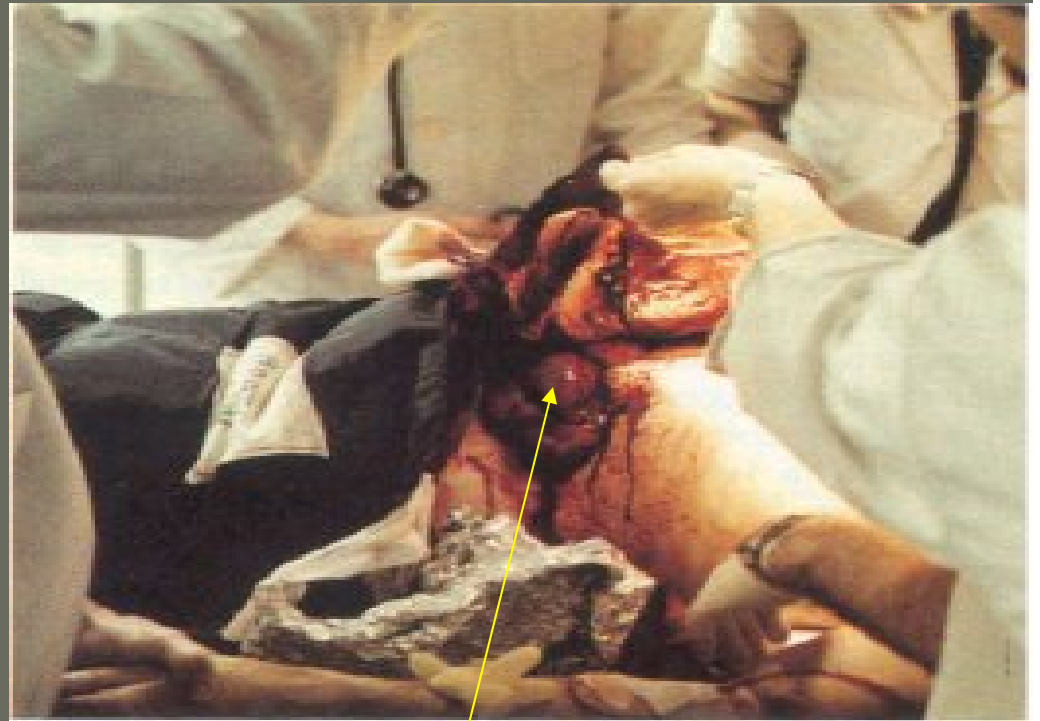




PENETRATING ABDOMINAL INJURIES



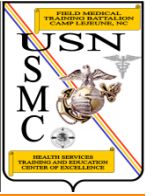
- TREATMENT
 - Maintain ABC's
 - Inspect for exit wounds
 - If intestines ARE NOT exposed
 - Apply dry, sterile dressing



EVISCERATED BOWEL

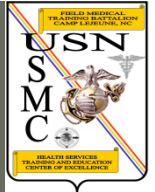


PENETRATING ABDOMINAL INJURIES



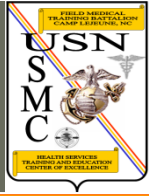
- If intestines ARE exposed:
 - Apply moist sterile dressing soaked in normal saline
 - Gently secure eviscerated bowel
 - Treat for shock
 - DO NOT probe for objects
 - Monitor and TACEVAC





DEMONSTRATION





MANAGE ABDOMINAL INJURIES