

Real World Trauma to the Abdomen

5/10/14



Disclosure

- No financial disclosures
- ATLS Instructor – ATLS images and ATLS course content



Why?

Unrecognized abdominal and pelvic injuries continue to be a cause of preventable death



Objectives

- Discuss EMS Trauma Alert Report
- Identify Key Anatomic Regions of the Abdomen
- Recognize the organs at risk for injury
- Recognize Patients at Risk for Abdominal Trauma
- Identify the acute management of abdominal Injury
- Case Presentations



EMS TRAUMA ALERT REPORT



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Handoff



Handoff



Handoff Success

- Pt. Demographics
 - Medical History
 - Mechanism
 - Injuries
 - Hemodynamics
 - Treatment
- ABC MIVT
 - Airway
 - Breathing
 - Circulation
 - Mechanism
 - Injuries
 - Vitals
 - Treatment



Handoff Practice



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Handoff Success



- 35 y/o healthy male with no allergies
- Farming Accident
- Large L abdominal wall and flank laceration with evisceration
- Tachy with normal BP
- Saline gauze over his bowels, (2) 16 gauge IV's, O2 by NRB at 15 L/min



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Handoff Failures

- Never happens
- Given to the wrong person
- Surgeon doesn't listen



KEY ANATOMIC REGIONS OF THE ABDOMEN



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Anatomy



Anterior abdomen



Flank



Back



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Anatomy

- Anterior Abdomen



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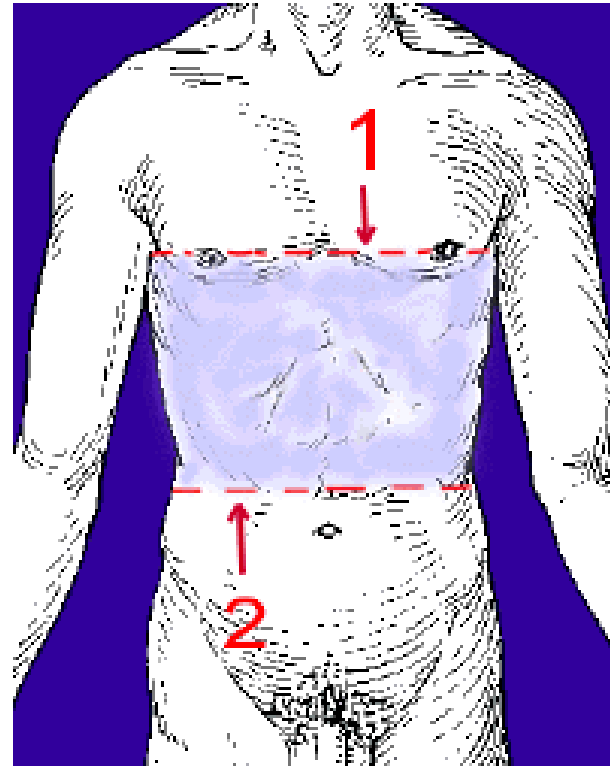


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Anatomy



Anterior abdomen



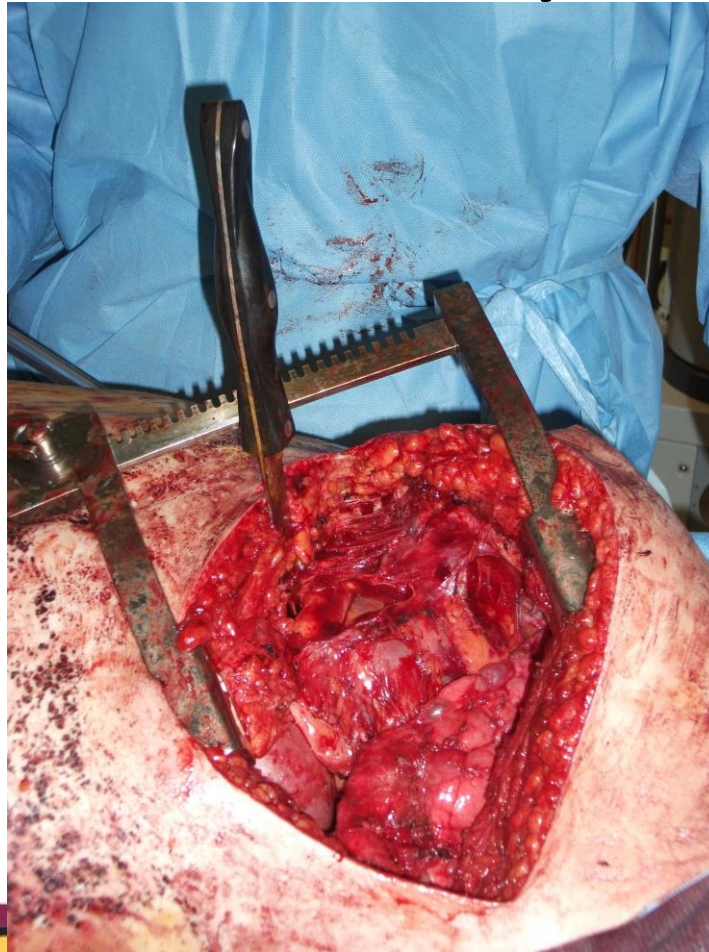
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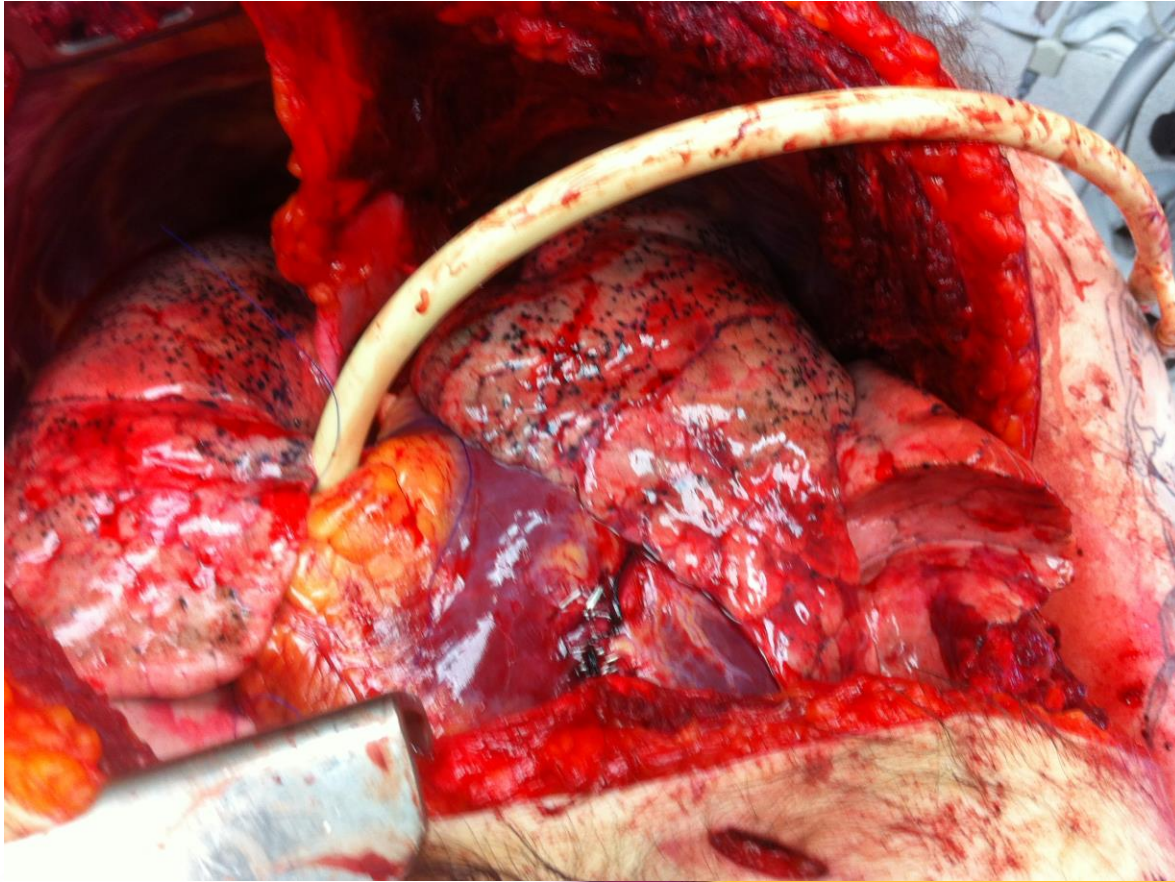
Anatomy



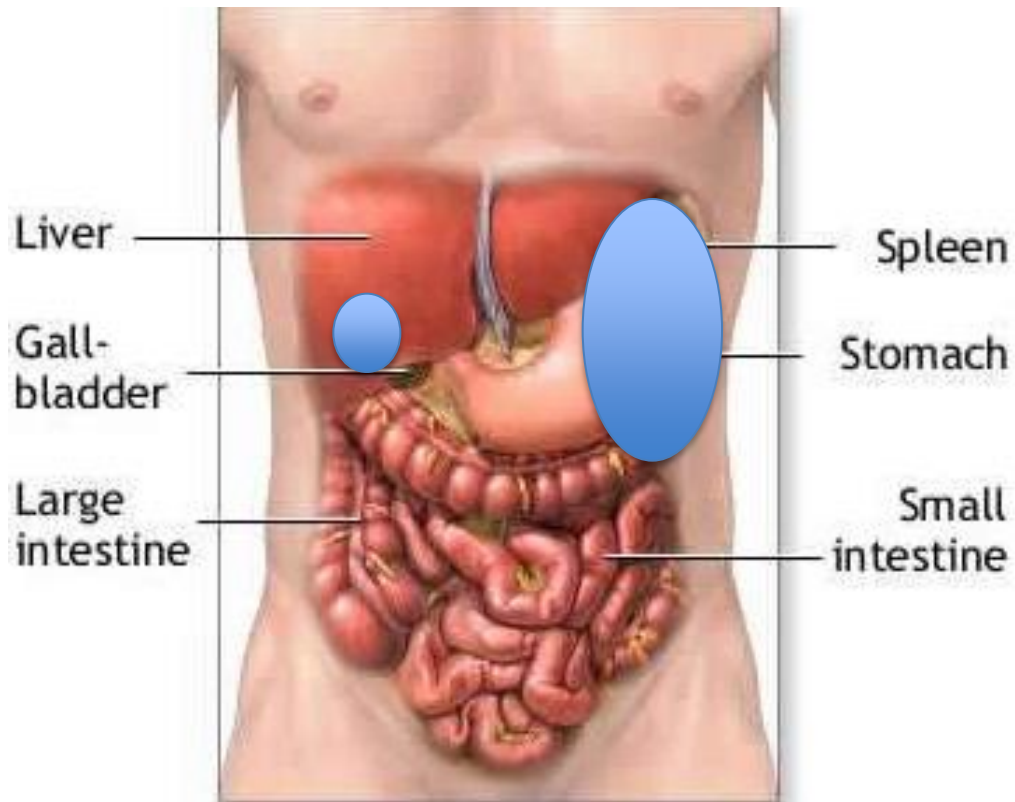
Anatomy



Anatomy



Anatomy



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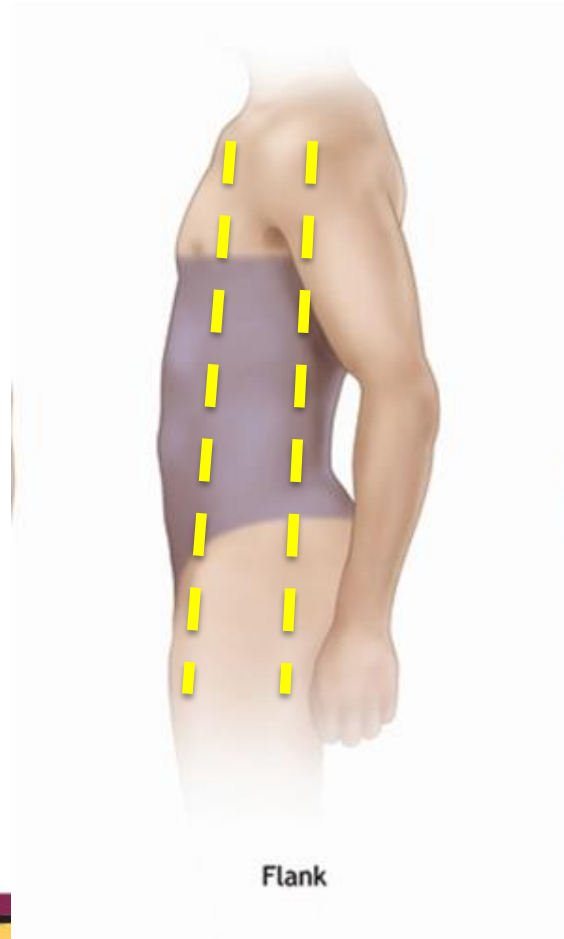
- Flank



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Anatomy



Flank



Anatomy

- Back



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Anatomy



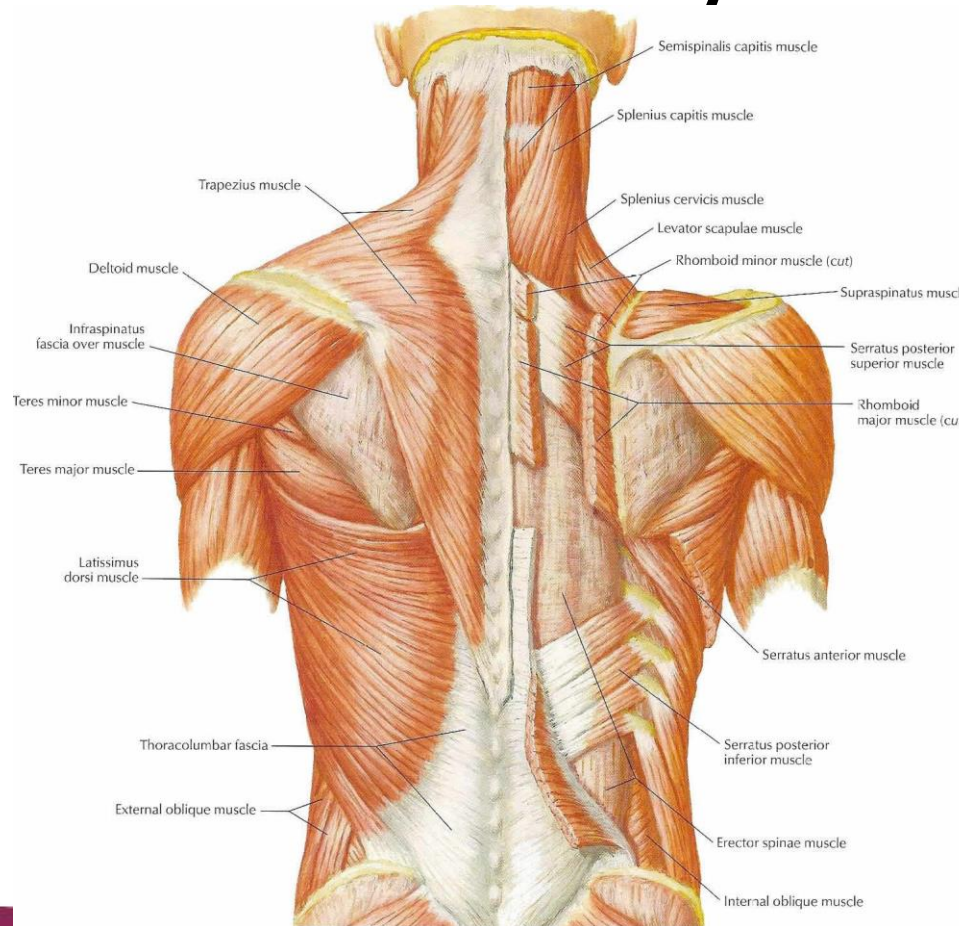
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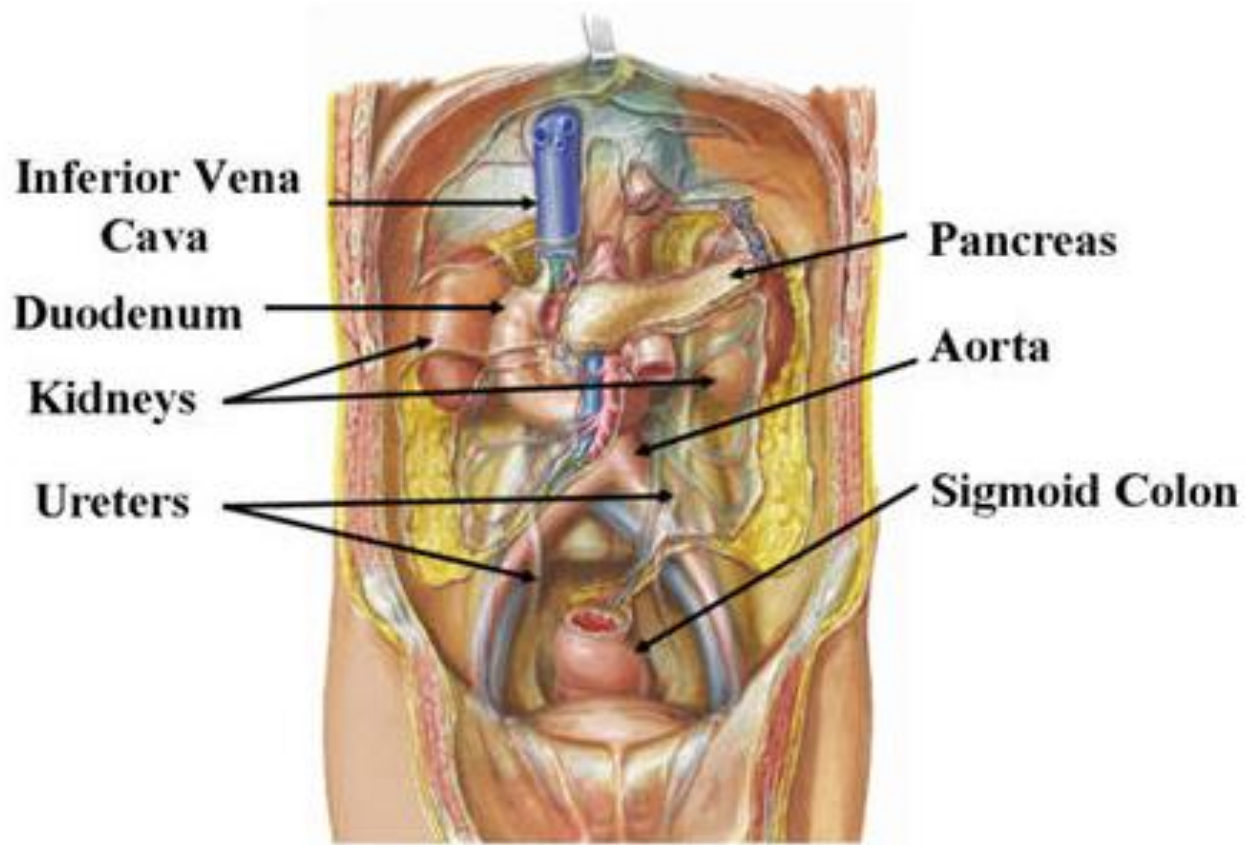
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Anatomy



Anatomy



Recognize Patients at Risk for Abdominal Trauma



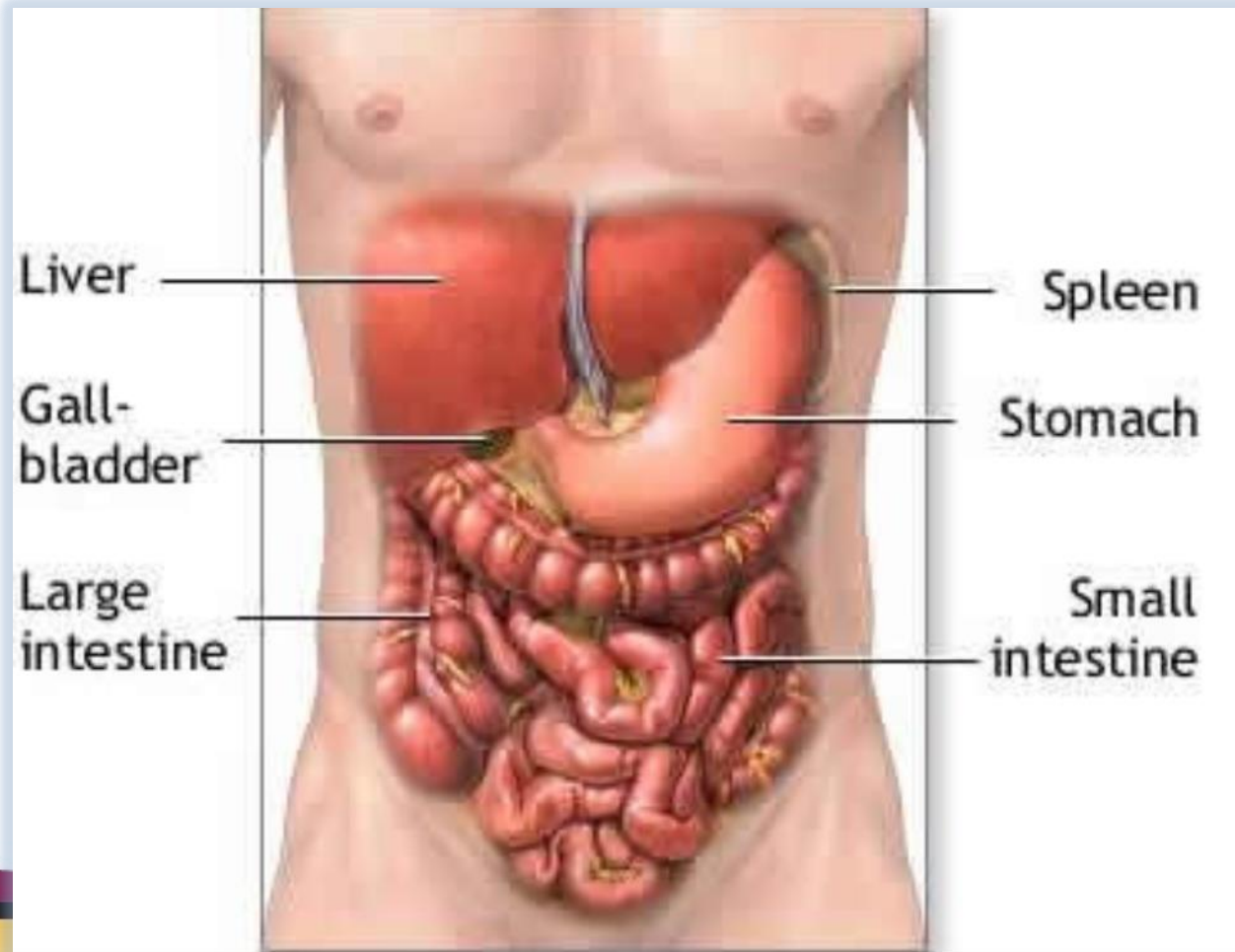
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At Risk for Abdominal Trauma

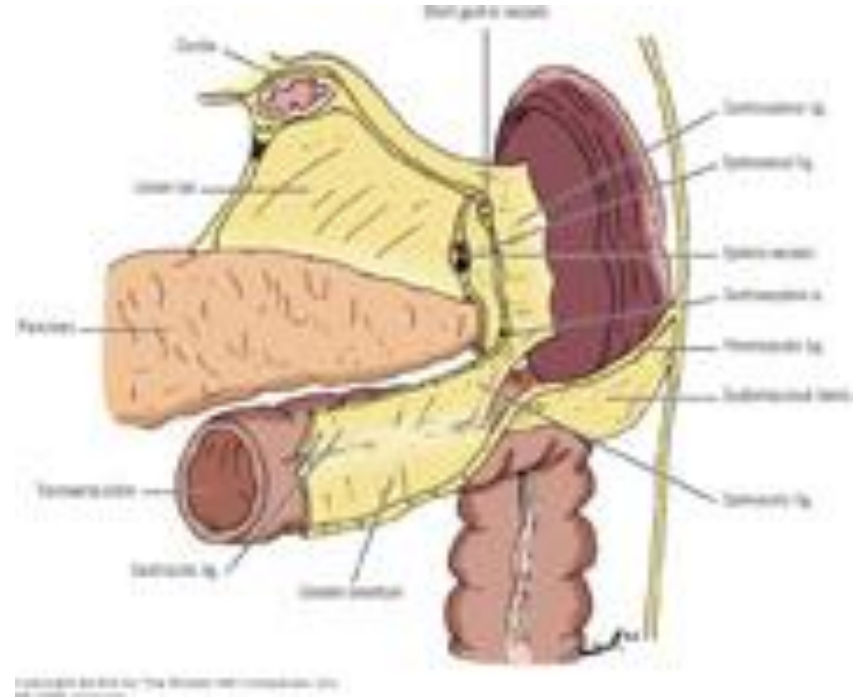


At Risk for Abdominal Trauma



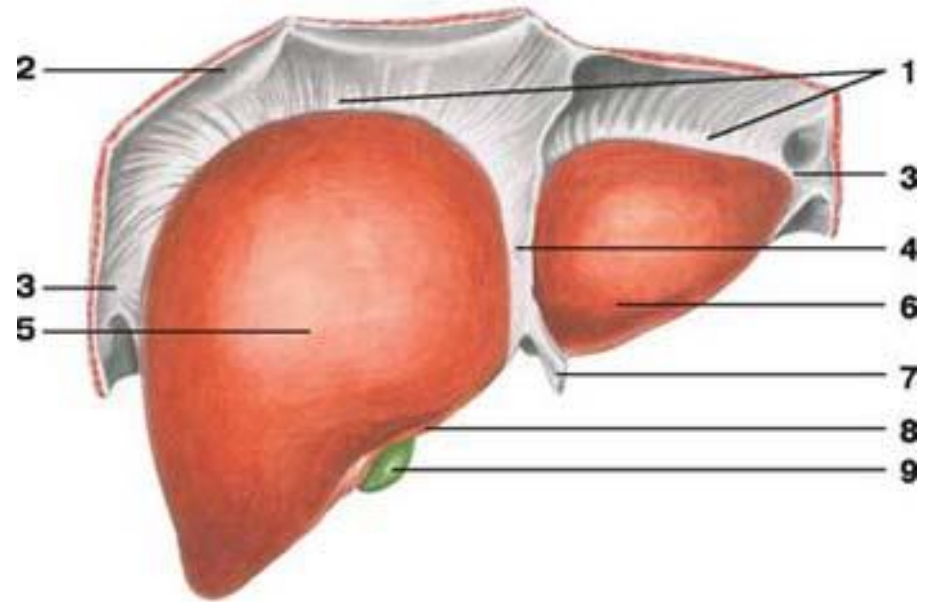
At Risk For Abdominal Trauma

- Common Inj. Organs
 - Spleen



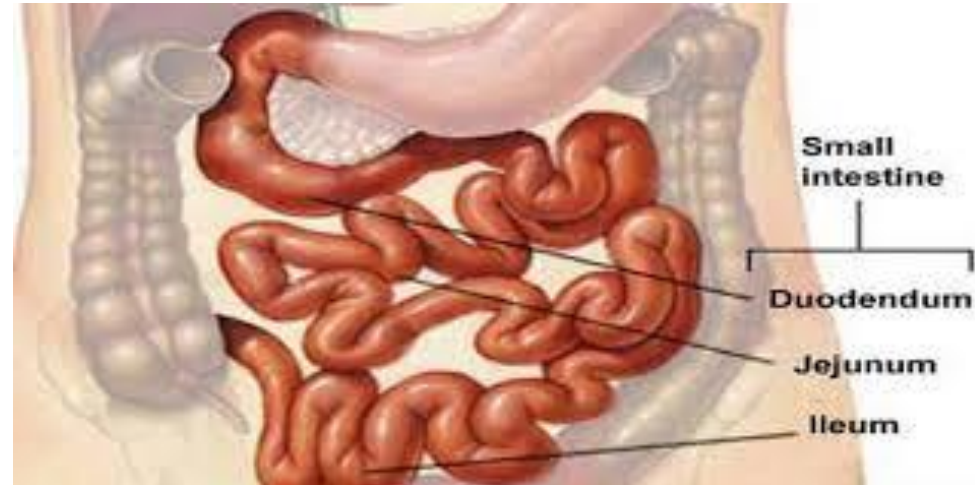
At Risk for Abdominal Trauma

- Common Inj. Organs
 - Spleen
 - Liver



At Risk for Abdominal Trauma

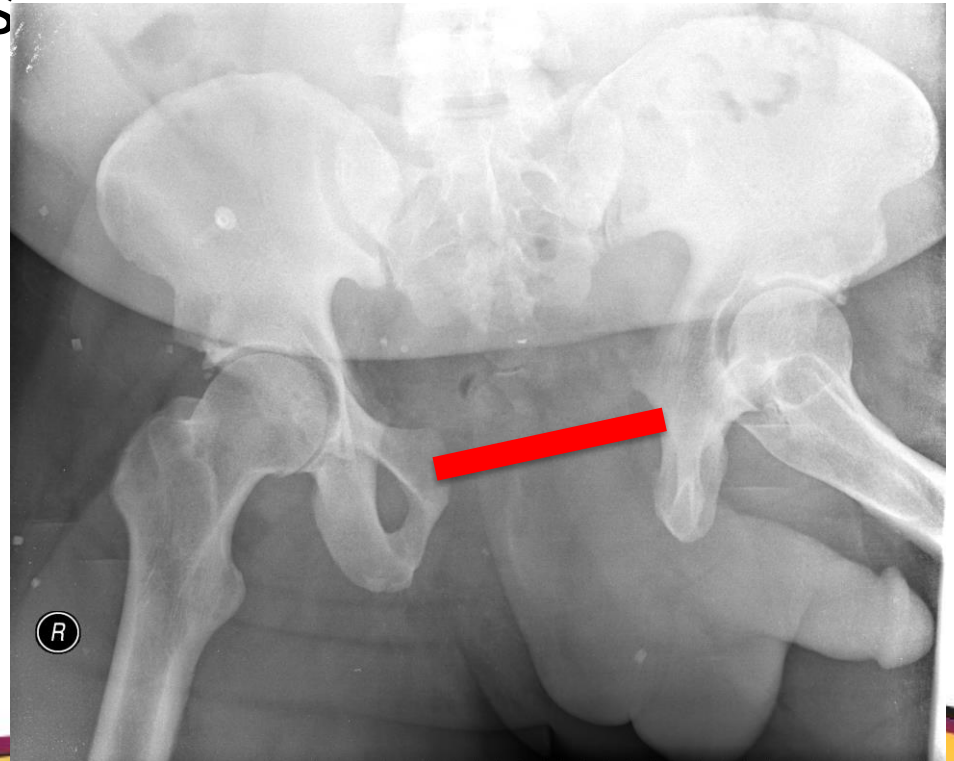
- Common Inj. Organs
 - Spleen
 - Liver
 - Small Intestine



At Risk for Abdominal Trauma

- Common Inj. Organs

- Spleen
- Liver
- Small Intestine
- Pelvis



At Risk for Abdominal Trauma

- **Penetrating Injury**

- Any organ is at Risk

- Stab

- Low Mechanism

- GSW

- Type of weapon

- Distance



At Risk for Abdominal Trauma

- Explosion Blast
 - Combination Injury
 - Blunt
 - Penetrating
 - Blast
- Consider proximity,
Enclosed space, Fragments



At Risk for Abdominal Trauma

- How do I recognize if there is an abdominal Injury?

- Physical Exam

- Inspection

- Auscultation

- Percussion

- Palpation

- Examine the Pelvis and Perineum



At Risk for Abdominal Trauma

- Factors That Compromise the Abdominal Exam
 - Alcohol and other drugs
 - Injury to the brain and spinal cord
 - Injury to the ribs, spine, and pelvis
 - Distracting injury



Acute Management of Abdominal Injury



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Managing Abdominal Injury

**Unrecognized abdominal injury
continues to be a cause of preventable
death**



Managing Abdominal Injury

- ABCDE



Managing Abdominal Injury

- **A**B **C**_D **E**



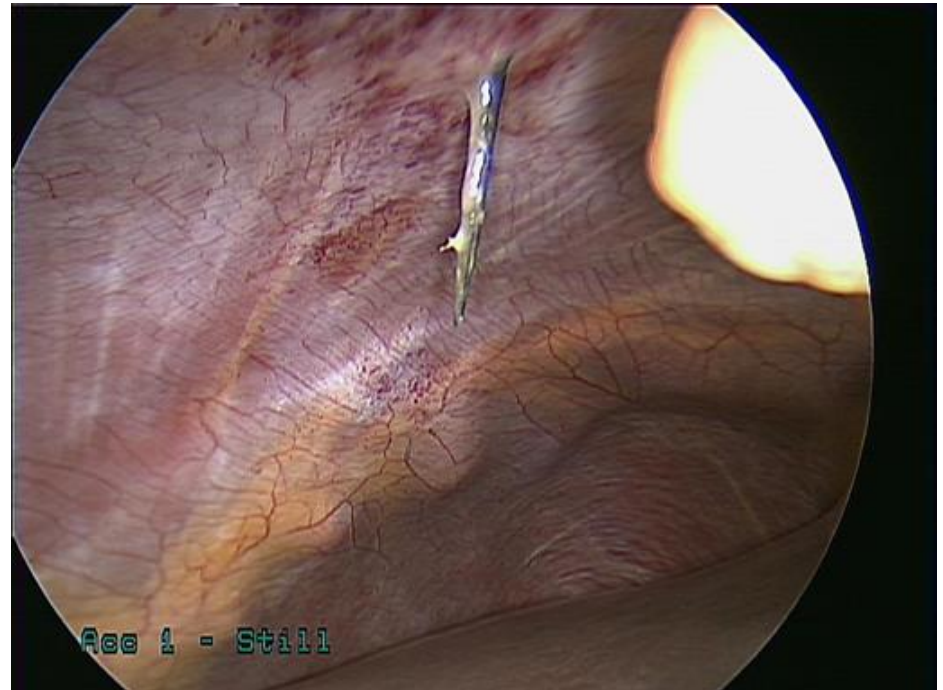
Managing Abdominal Injury

- High Index of Suspicion



Managing Abdominal Injury

- High Index of Suspicion



Managing Abdominal Injury

- Blunt Mechanism
 - Recognition
 - Load and Go
 - 2 large bore IV's
 - Fluid Resuscitation



Managing Abdominal Injury

- Penetrating Inj.
 - Stabilize foreign Objects
 - Moist dressings over viscera
 - Load and Go
 - 2 Large bore IV's
 - Fluid Resuscitate



Operating Room!



Case Presentations



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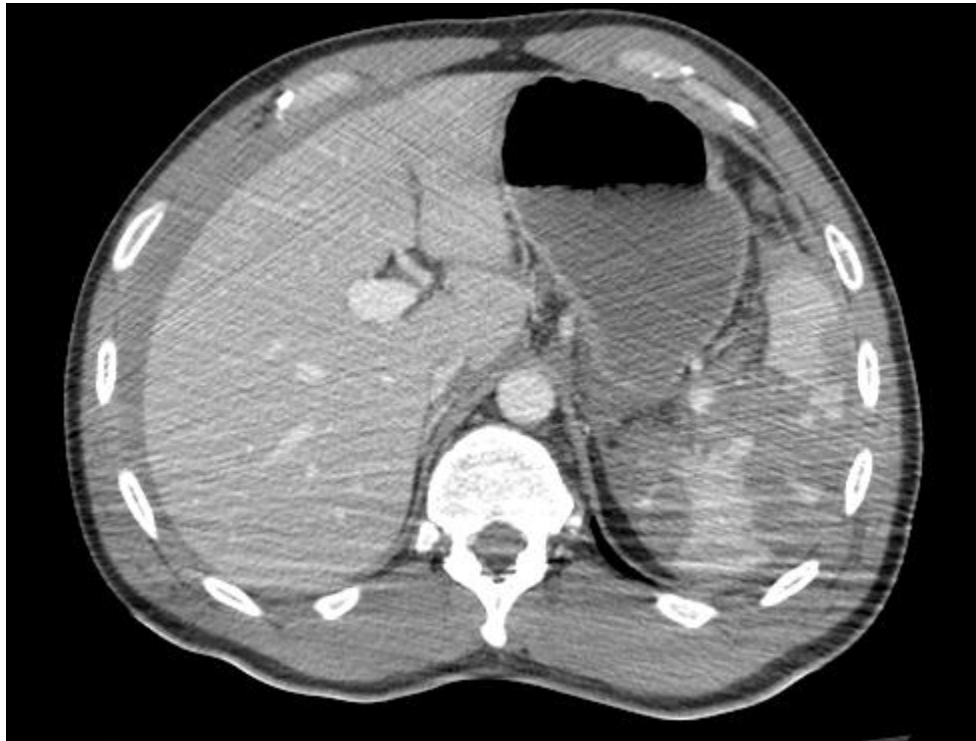
#1 Watch out for that tree

- 47 y/o male, snowboarding with his family, lost control and struck a tree on his left flank
- Confused, c/p left arm pain, left chest pain, left knee pain
- What do you do?



#1 Watch out for that tree









#1 Watch out for that tree

- Multiple L sided rib fractures
- Left pneumothorax
- Grade 4/5 splenic laceration
- Grade 2 renal laceration

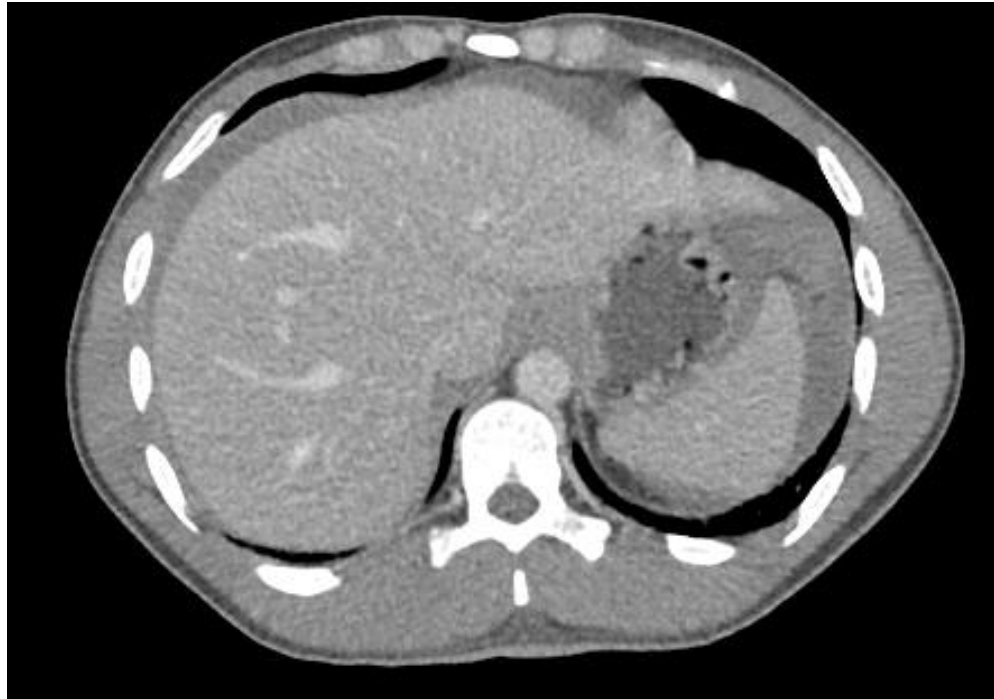


#2 Lived Through an Avalanche

- 32 y/o professional skier, jumped off a cliff, started an avalanche and was pinned between against a tree from the chest down.
- Skied down, hiked out, and complained of worsening abdominal pain and dizziness, he then called EMS
- What do you do?



#2 Lived Through an Avalanche







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#2 I Lived Through and Avalanche

- Grade 4/5 splenic laceration
- Avulsion of the inferior pole of his spleen
- Splenic flexure of the colon crush injury



#3 Helmets Save Brains

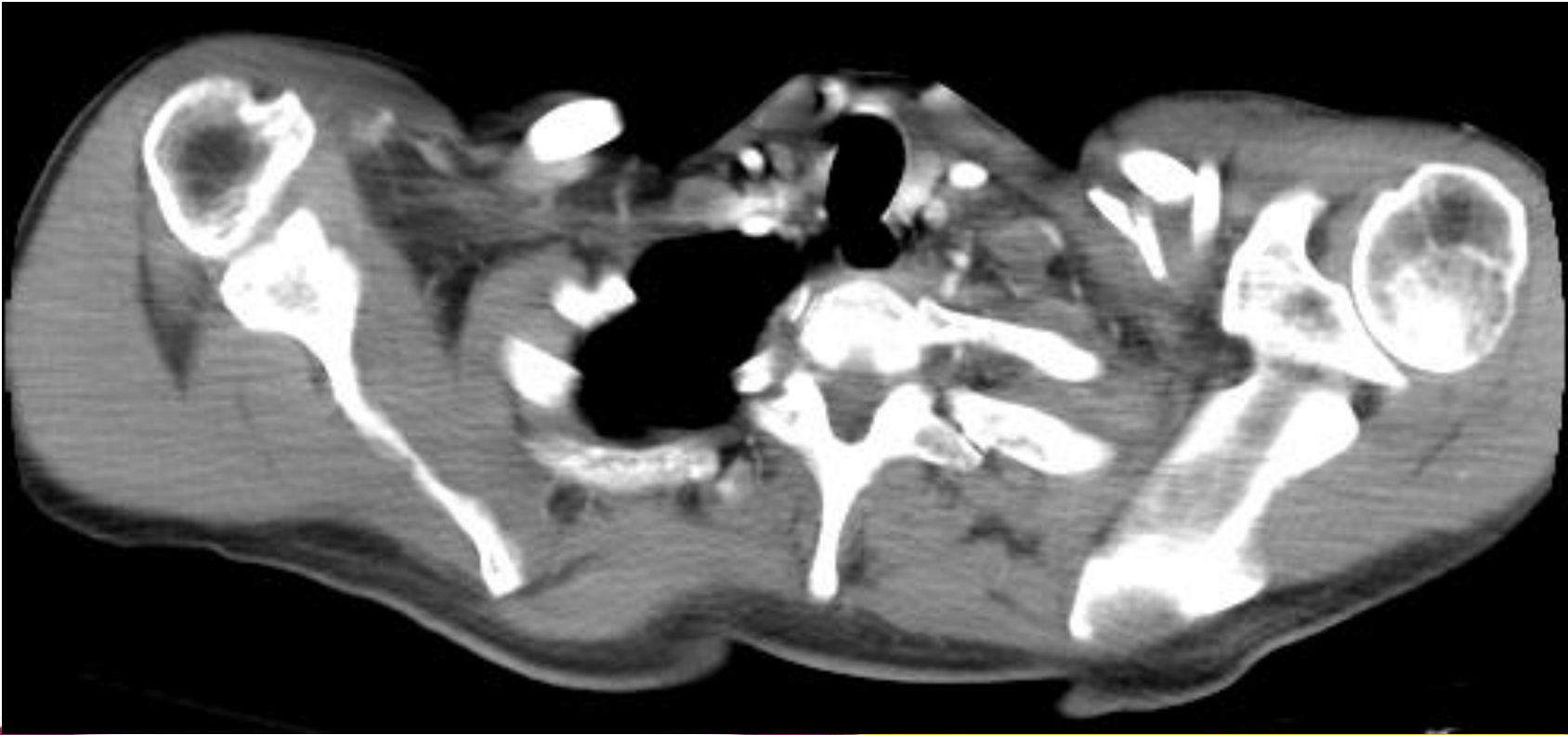
- 65 y/o male, unhelmeted, involved in an ATV rollover accident
- Confused, combative on scene, EMS called at the time of injury
- What do you do?



#3 Helmets Save Brains





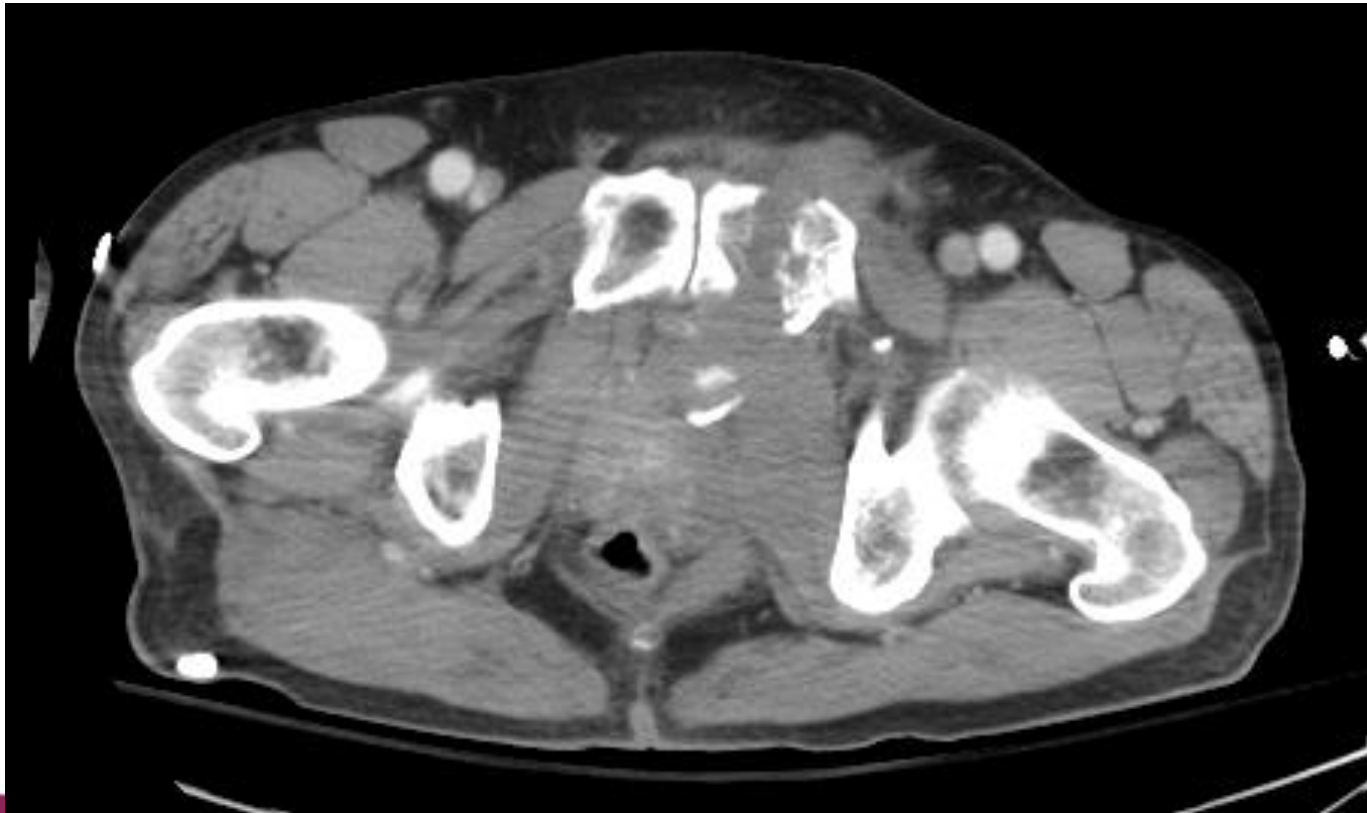


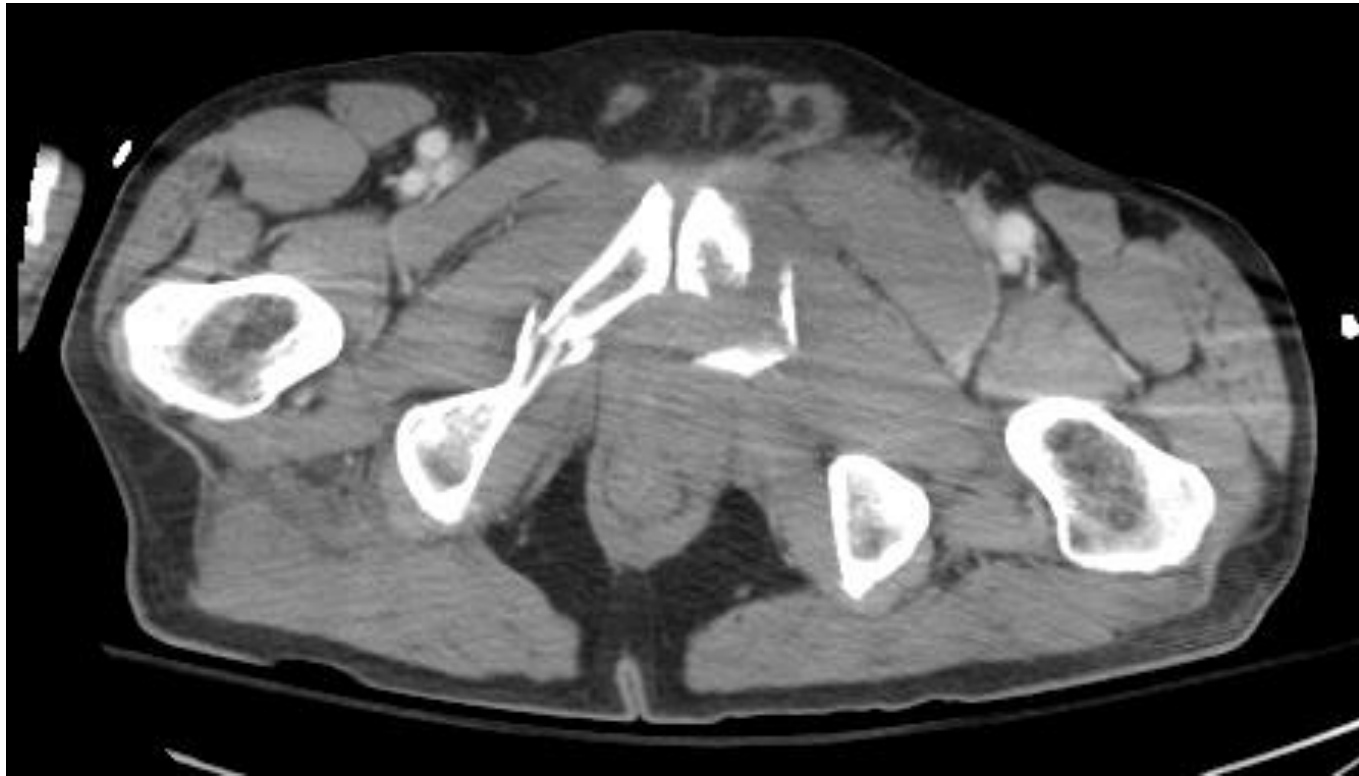
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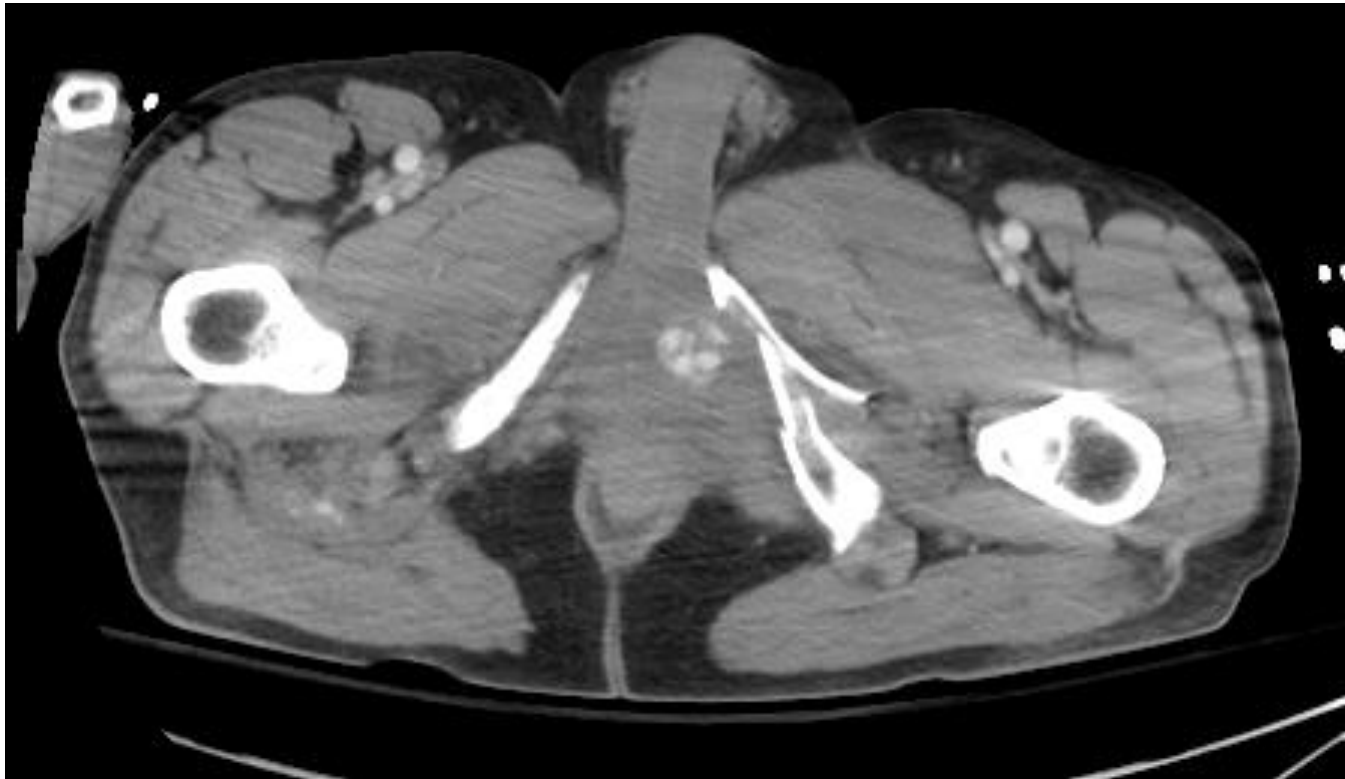


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#3 Helmets Save Brains

- SDH, SAH, IPH
- Multiple Bilateral Rib Fractures
- Multiple Pelvic Fractures
- Active Extravasation from Pelvic Arteries
- Left Clavicle fracture



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Thank You!



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