

# Torso/ Abdominal Wall Traumatic Injuries

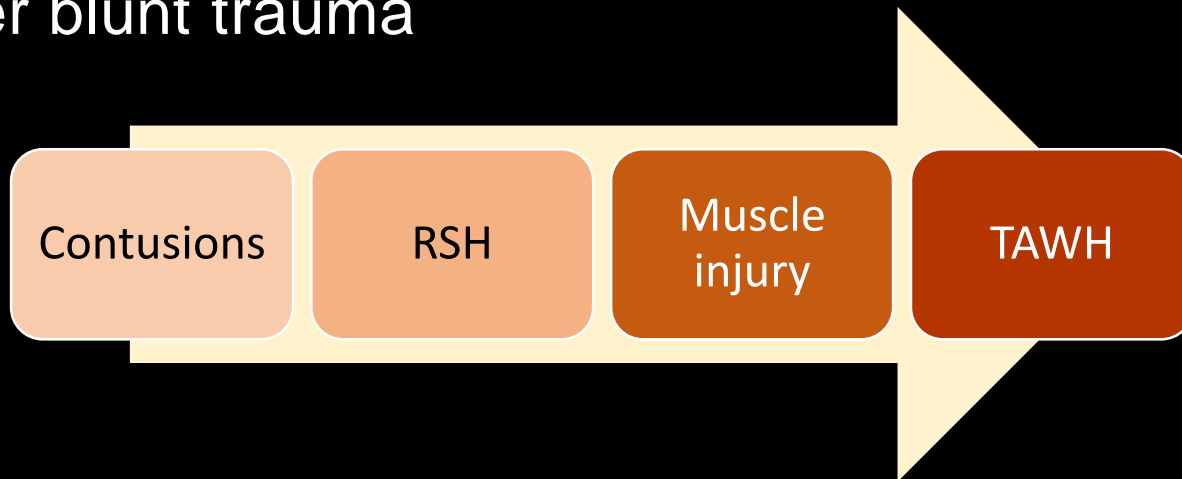
4 June 2025  
Dr. Nupur Verma MD  
nupurv@gmail.com

# Abdominal Wall Trauma

- Incidence and clinical significance
- Mechanism
- Types of Injuries: Imaging findings (cases)

# Incidence and clinical significance

- All severity: 9% of patients after blunt trauma
- Traumatic Abdominal Wall Hernias (TAWH) : < 1% after blunt trauma



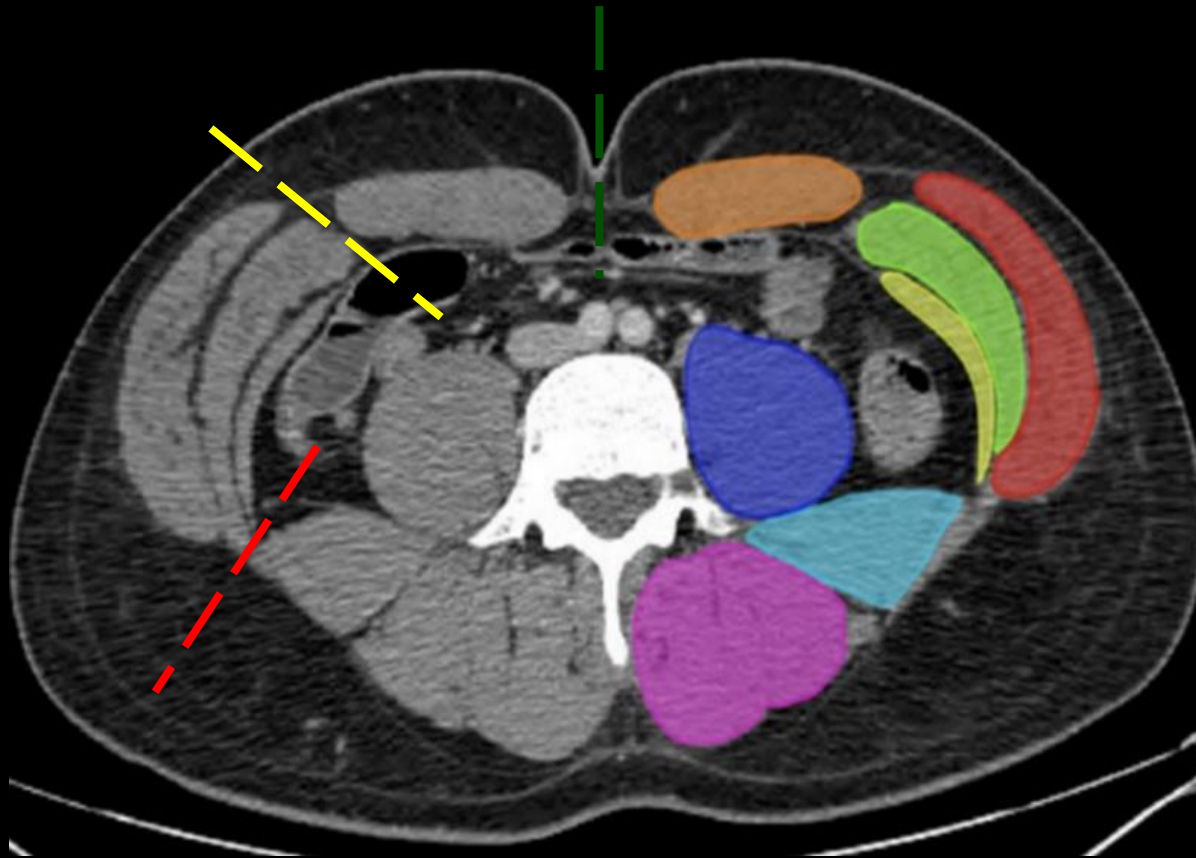
- Underlying intra-abdominal trauma: Bowel injury in ½ of TAWH cases\*
- Complications

\*Harrell, Kevin N., et al. "Management of blunt traumatic abdominal wall hernias..." *Journal of Trauma and Acute Care Surgery* 91.5 (2021): 834-840.

# Mechanism

- Causes (High Mechanism > Low)
  - MVC
  - Fall from height
  - Handlebar injury
  - Crush trauma
- Direct impact
- Shearing forces tangential to the abdominal wall during deceleration

# Mechanism



Occur at various points of anatomic weakness of the abdominal musculature

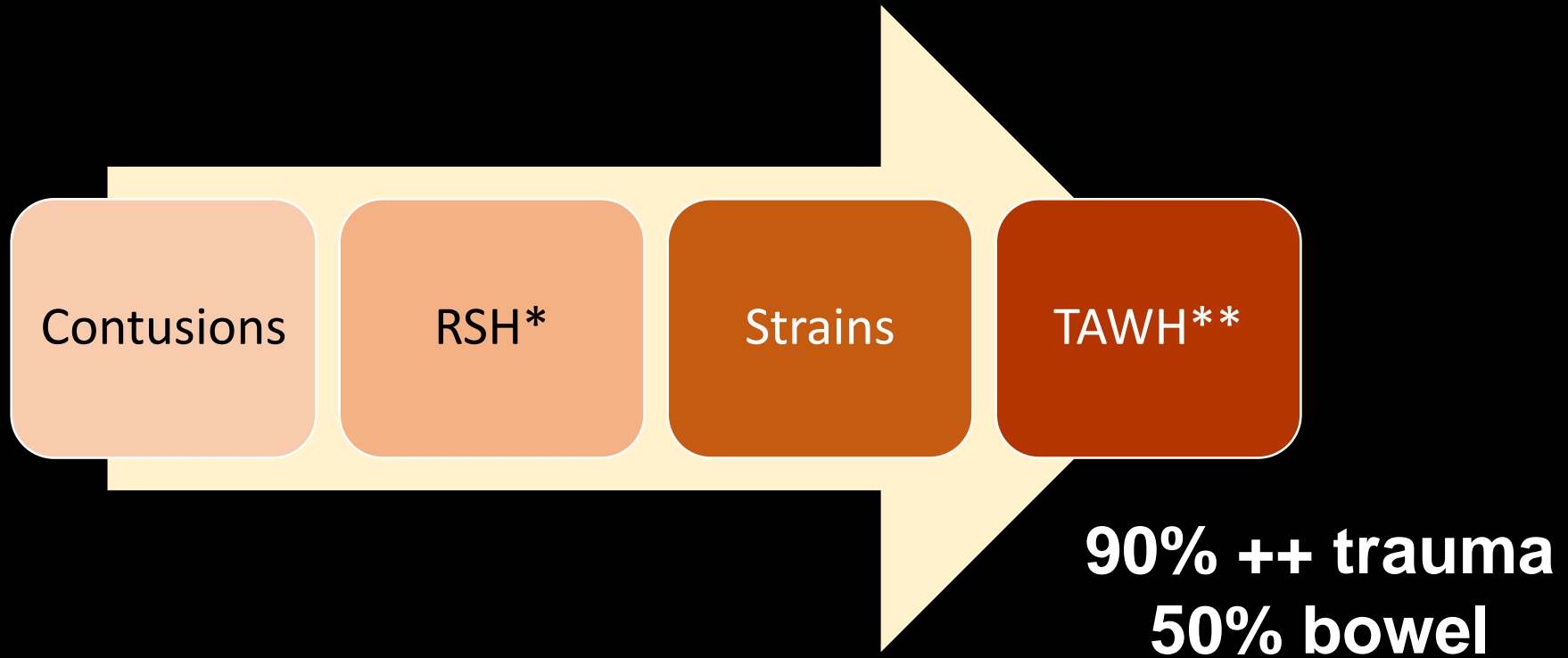
- Lumbar hernias
- Spigelian hernia
- Trans diaphragmatic intercostal hernia

Rectus abdominis  
Ex. Oblique  
Int. Oblique  
Trav. Abdominis

Psoas  
Quadratus  
lumborum  
Erector spinae

# Abdominal Wall Trauma

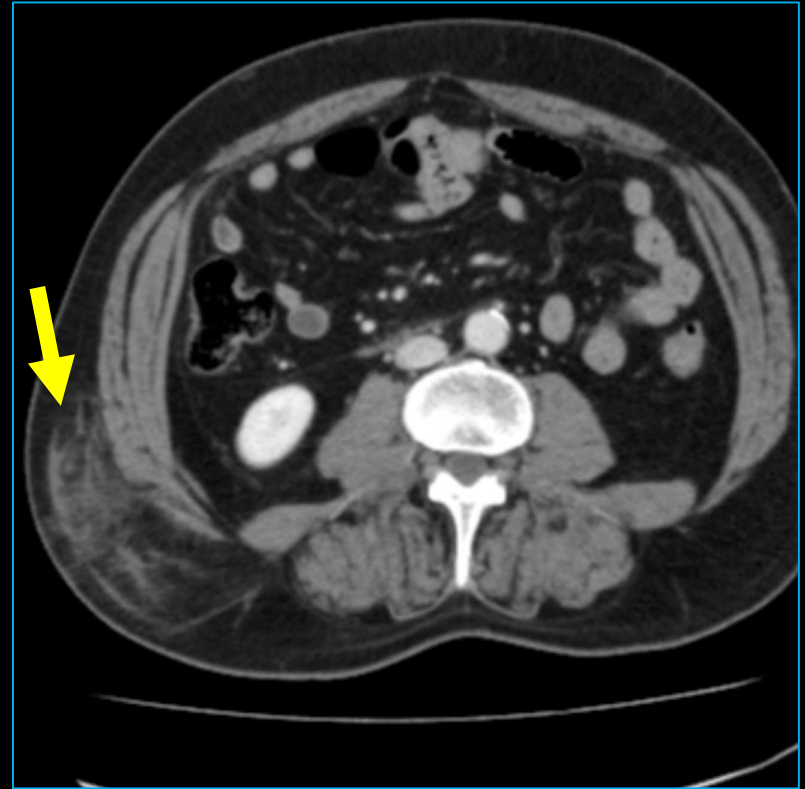
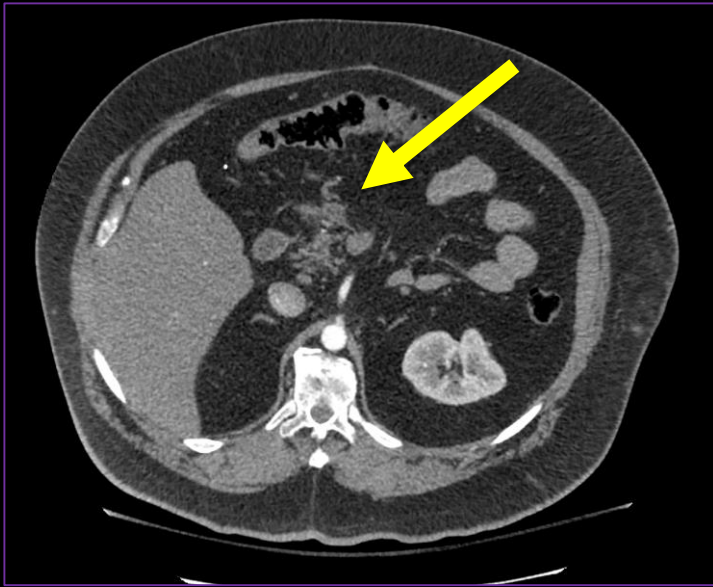
## Types of Injuries



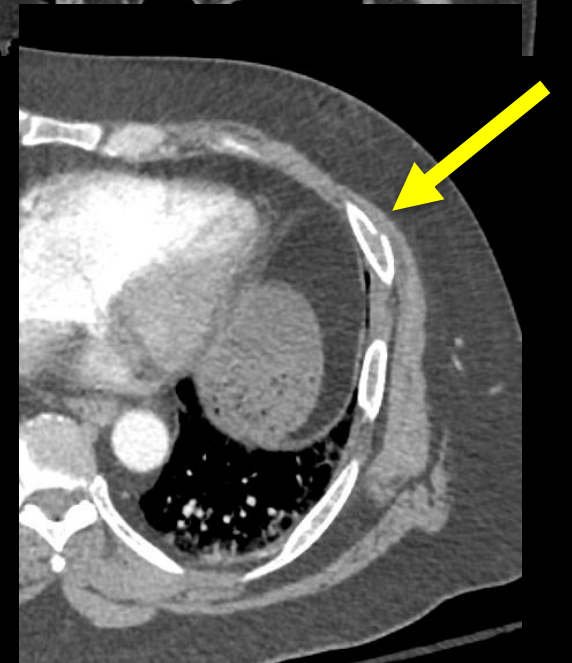
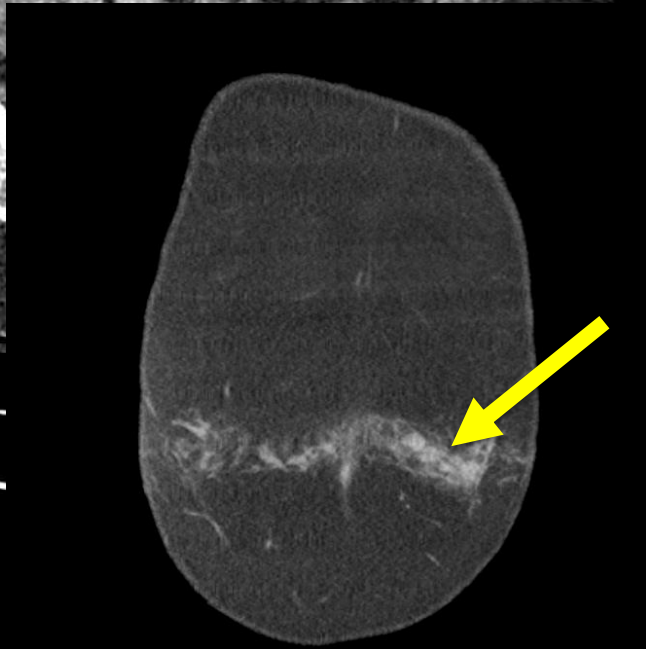
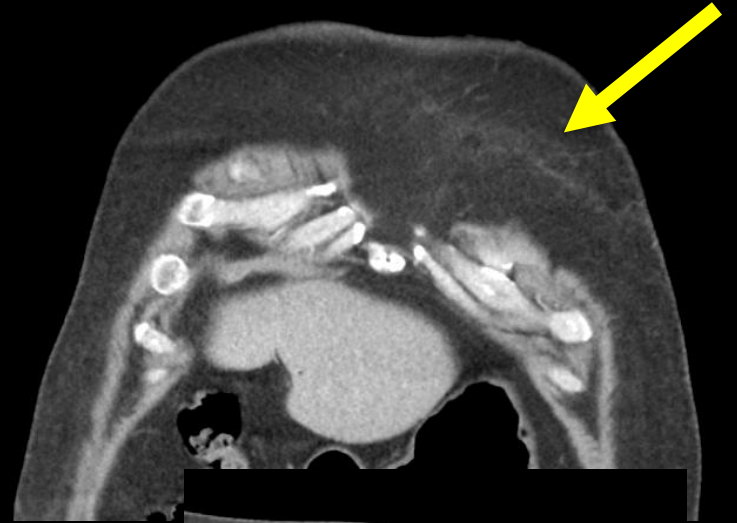
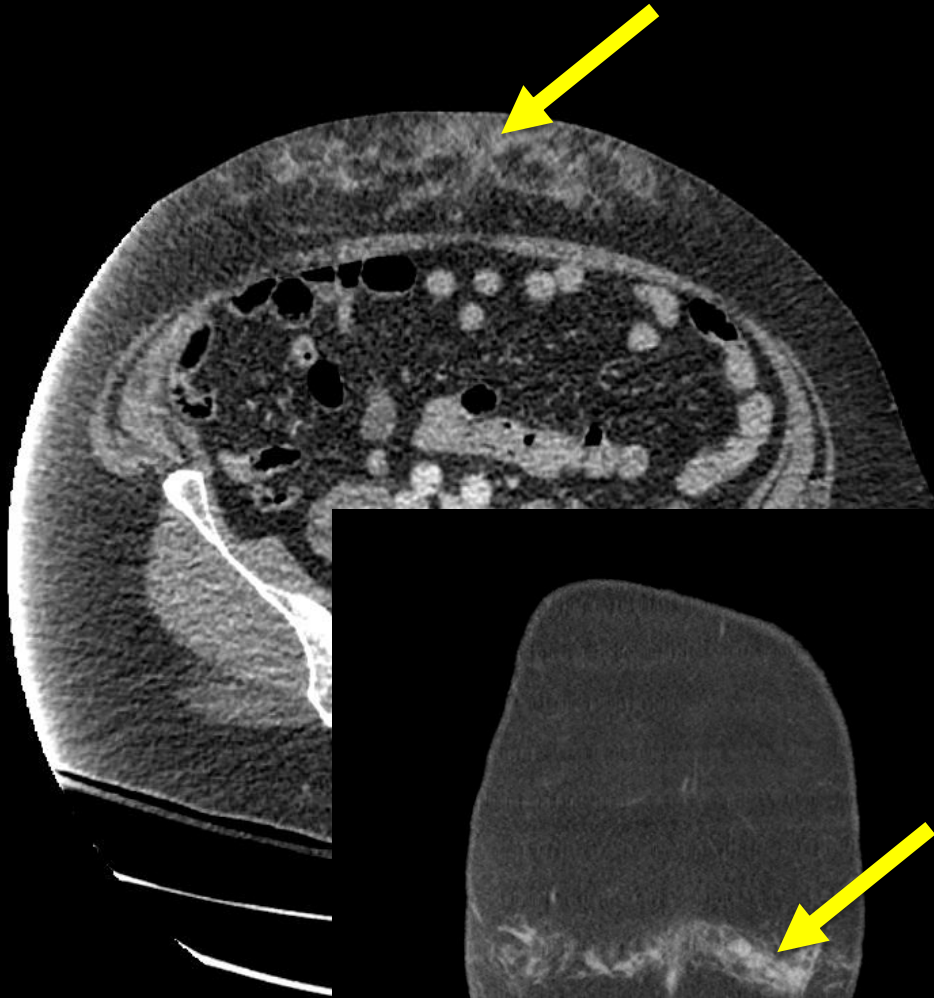
\*Hematoma (Rectus sheath hematoma)

\*\* Traumatic Abdominal Wall Hernia

# Abdominal Wall Contusion



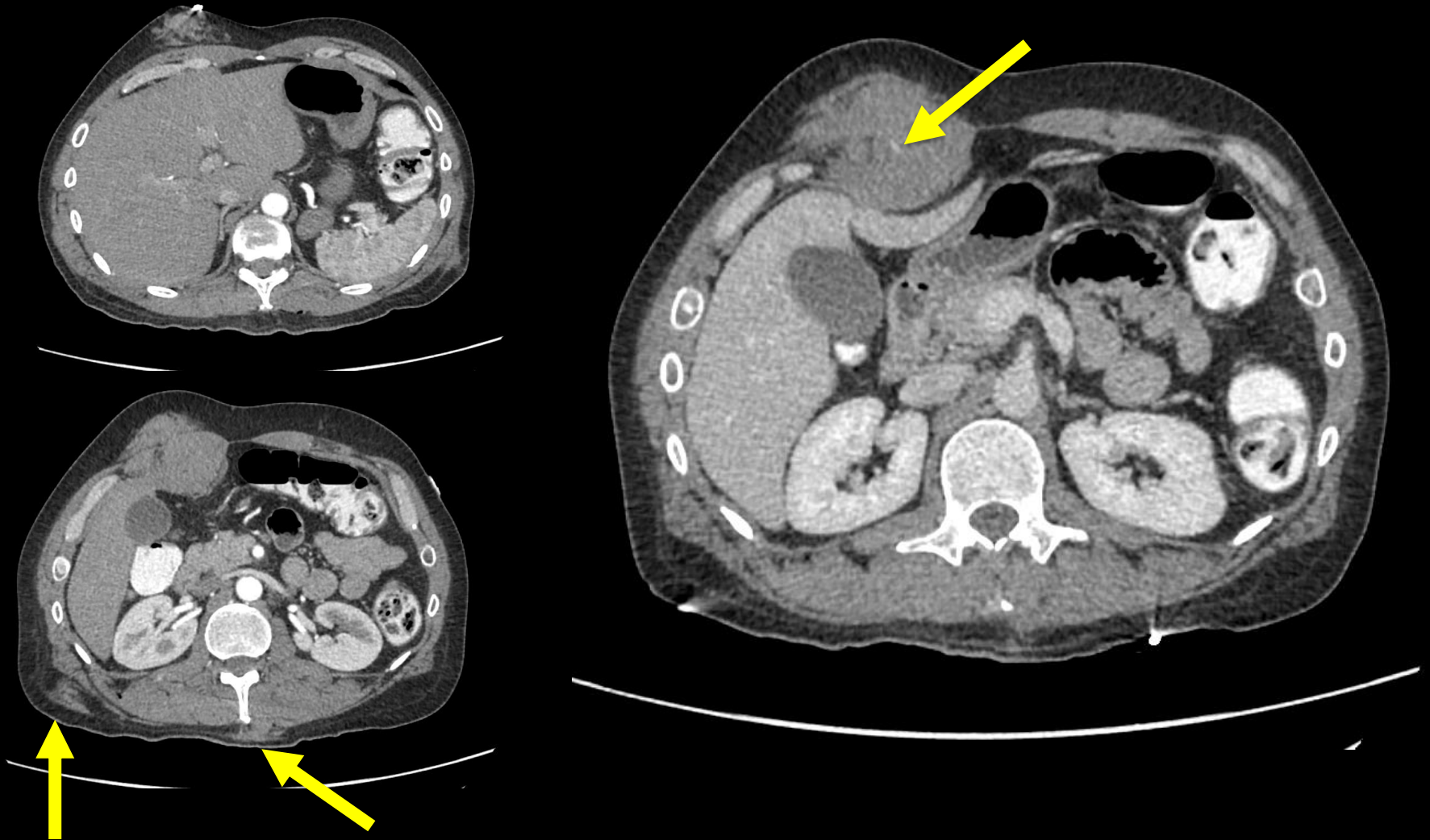
# Abdominal Wall Contusion



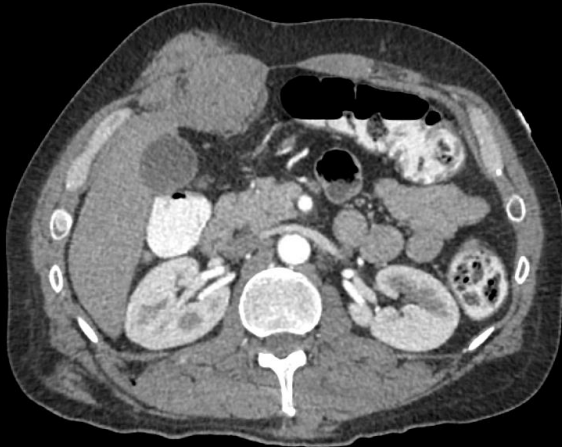
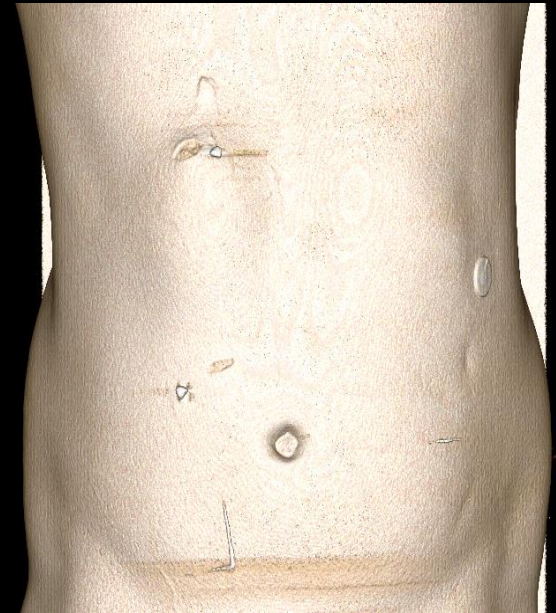
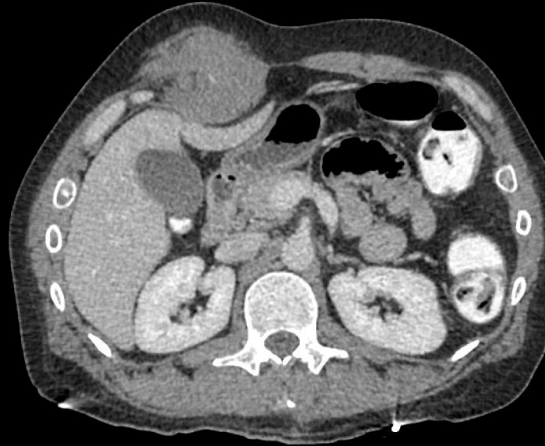
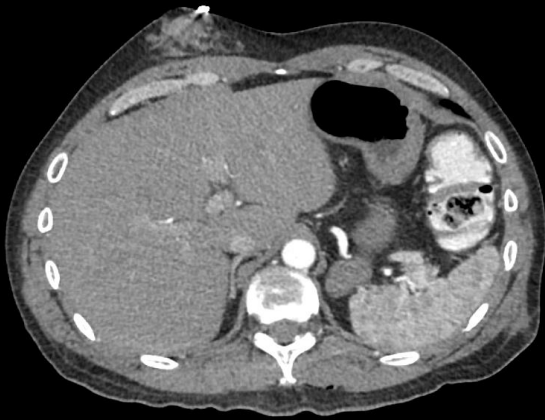




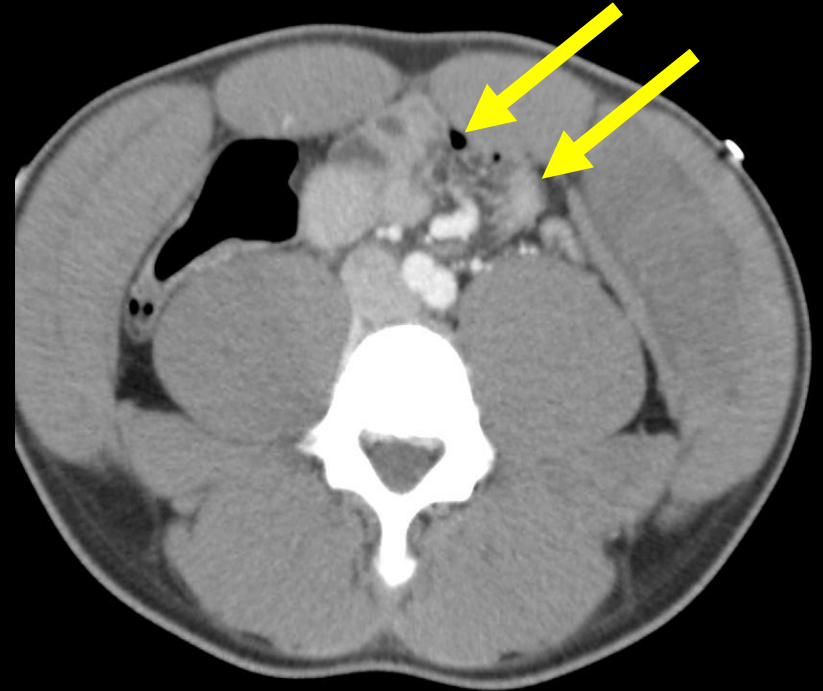
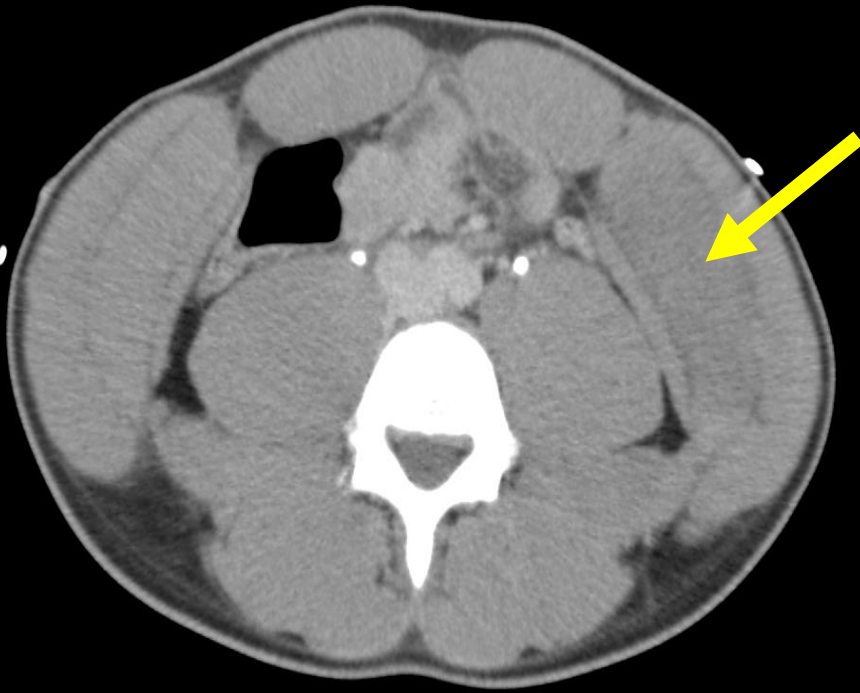
# Traumatic Rectus Sheath Hematoma



# Traumatic Rectus Sheath Hematoma



# Abdominal Wall Muscle Injury with Hematoma

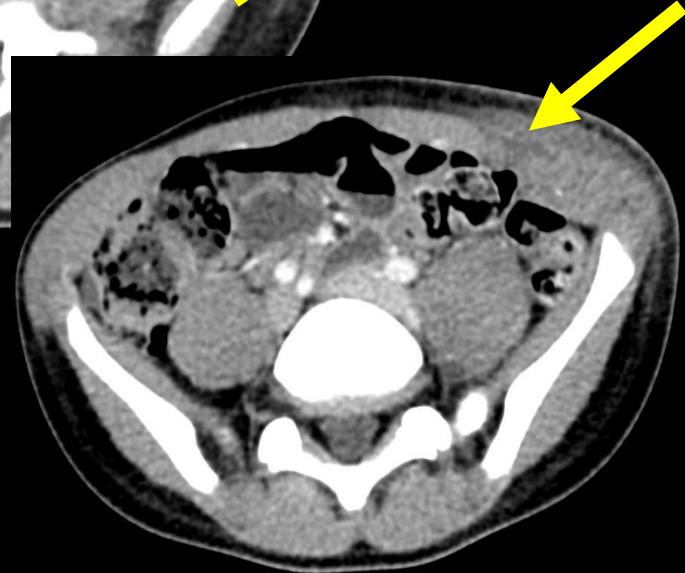
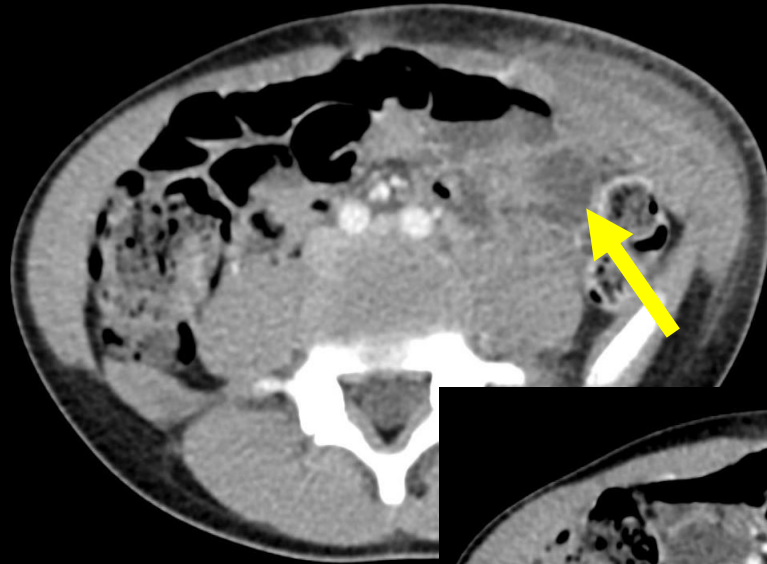




# Abdominal wall musculature full thickness tear



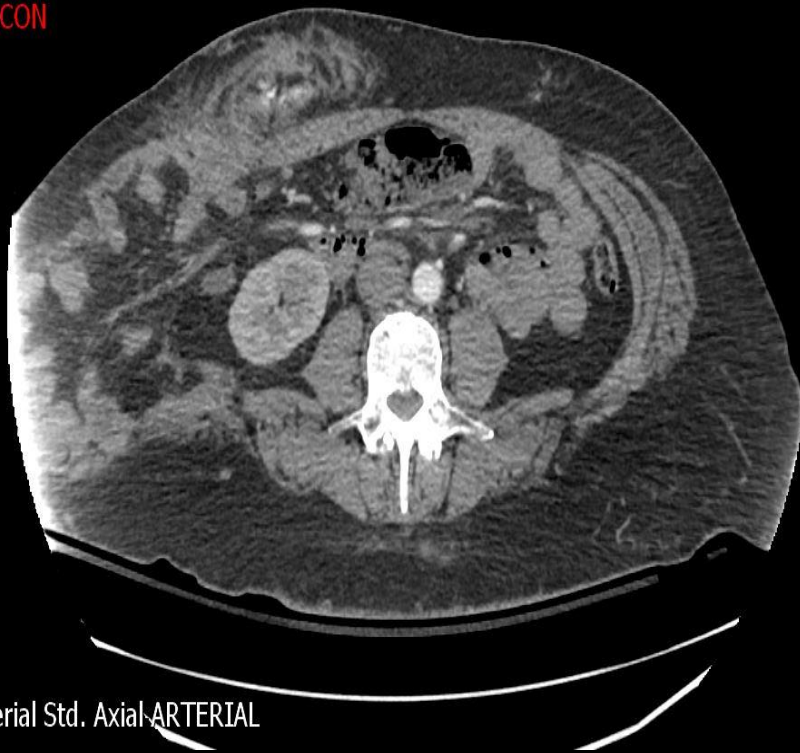
Outside hospital



3 hours later

# Contusions + hematomas w/ active bleeding + TAWH with herniation

Y  
/TVCON

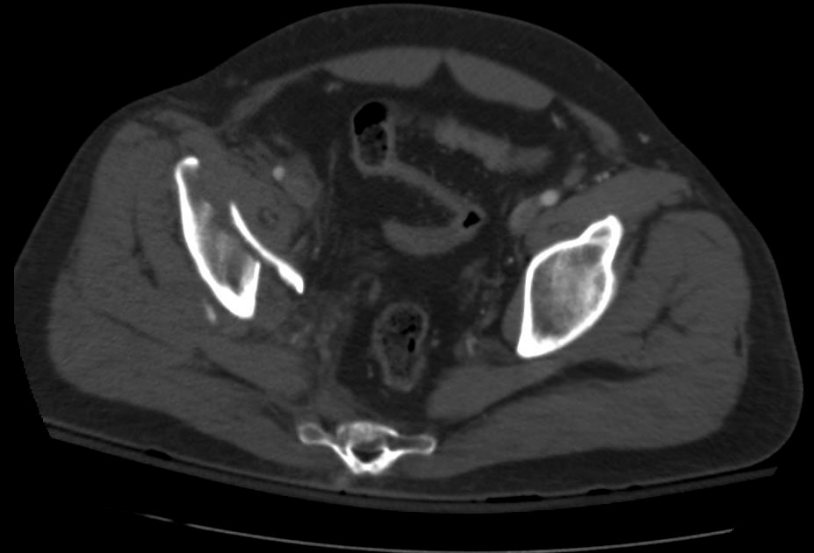
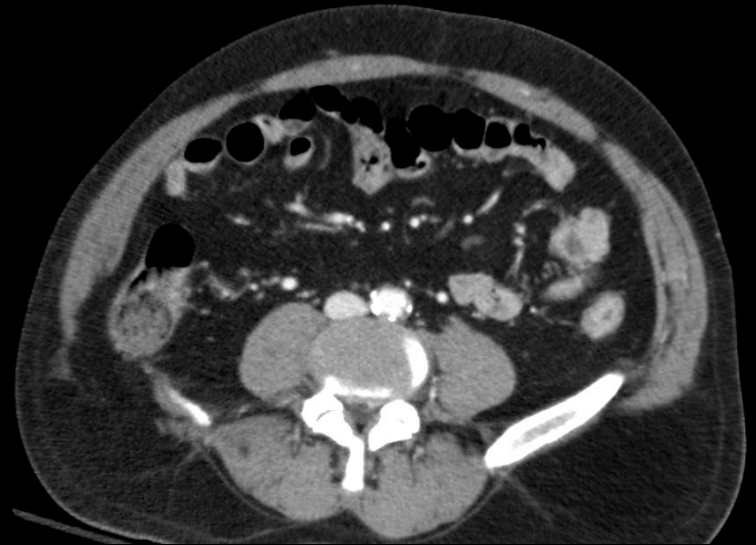
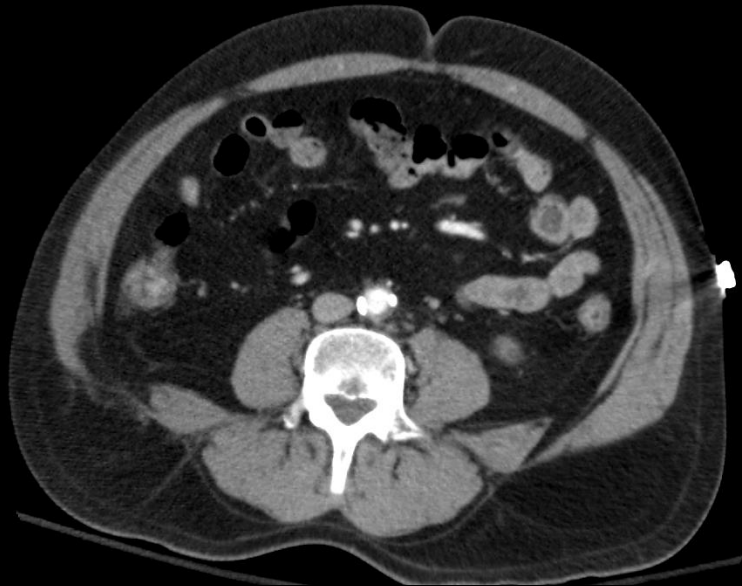


Arterial Std. Axial-ARTERIAL

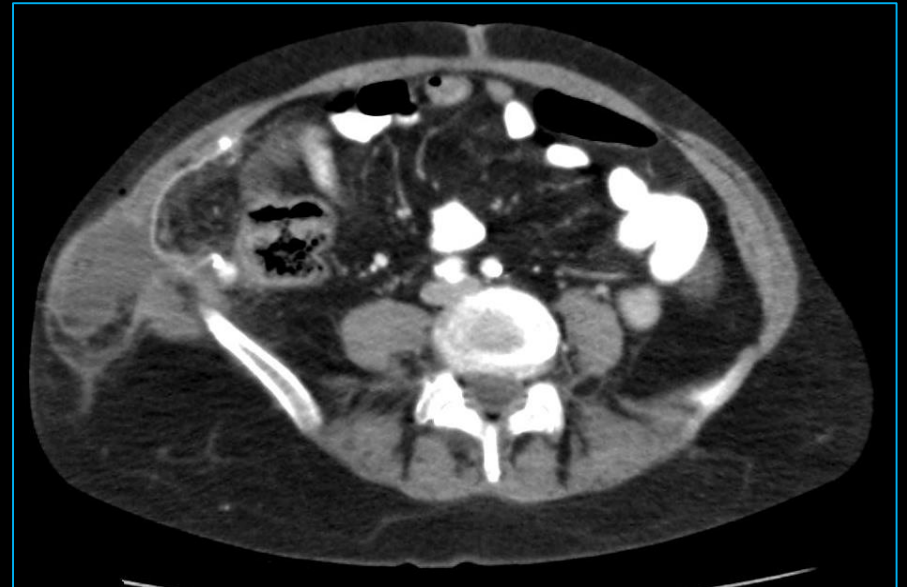


d. Axial VENOUS

# Abdominal Wall Hernia



# Post DCS (+) bowel injury



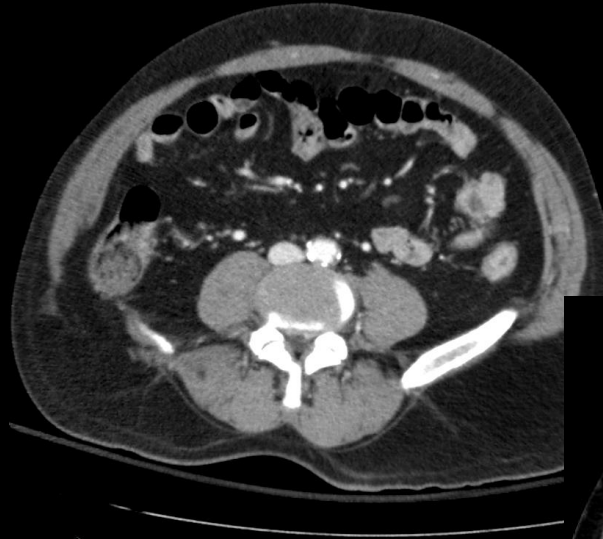


# Abdominal Wall Hernia



2017

“Pseudo – wall”



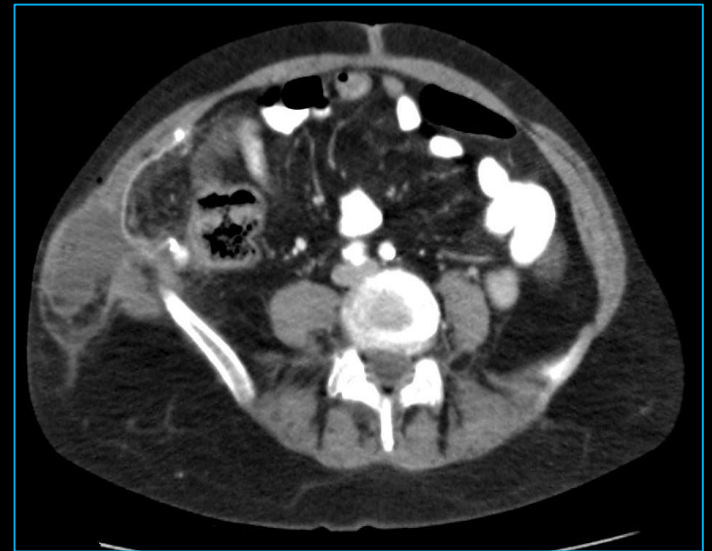
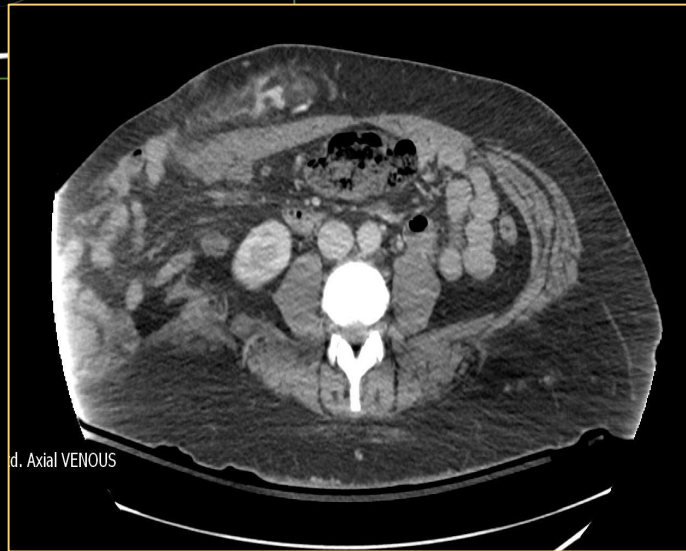
2020



2021

# To repair or not to repair today..

## Primary tension free repair vs. mesh



# Take – home points

- Abdominal wall trauma is NOT uncommon
- Higher grades of injury = more likely to have polytrauma
- TAWH has high (50%) association with bowel injury
- Look at “Points of weakness” of the abdominal wall
- TAWH can progress to include herniation of bowel, or be delayed in diagnosis