

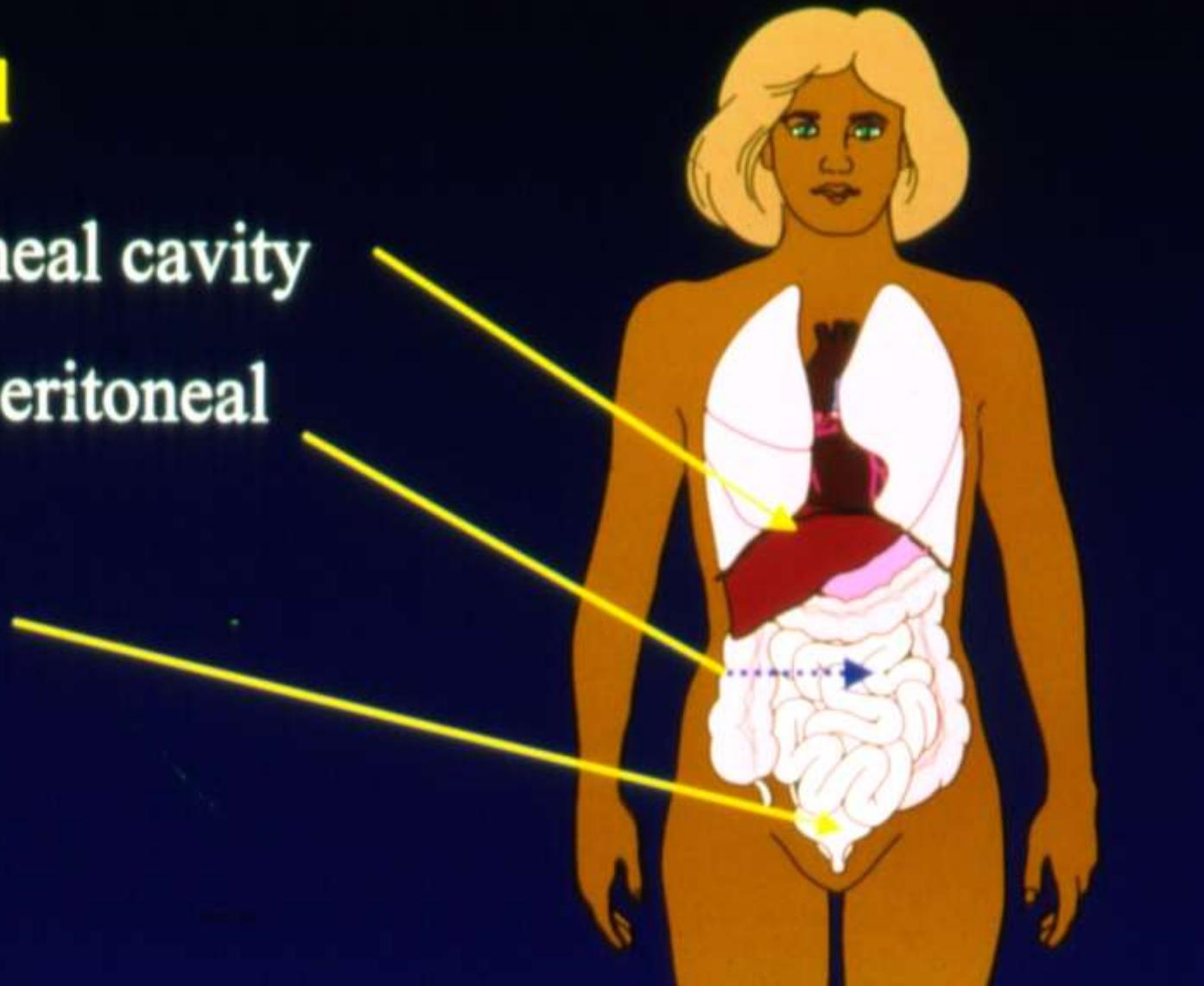
TRAUMA ABDOMEN

dan

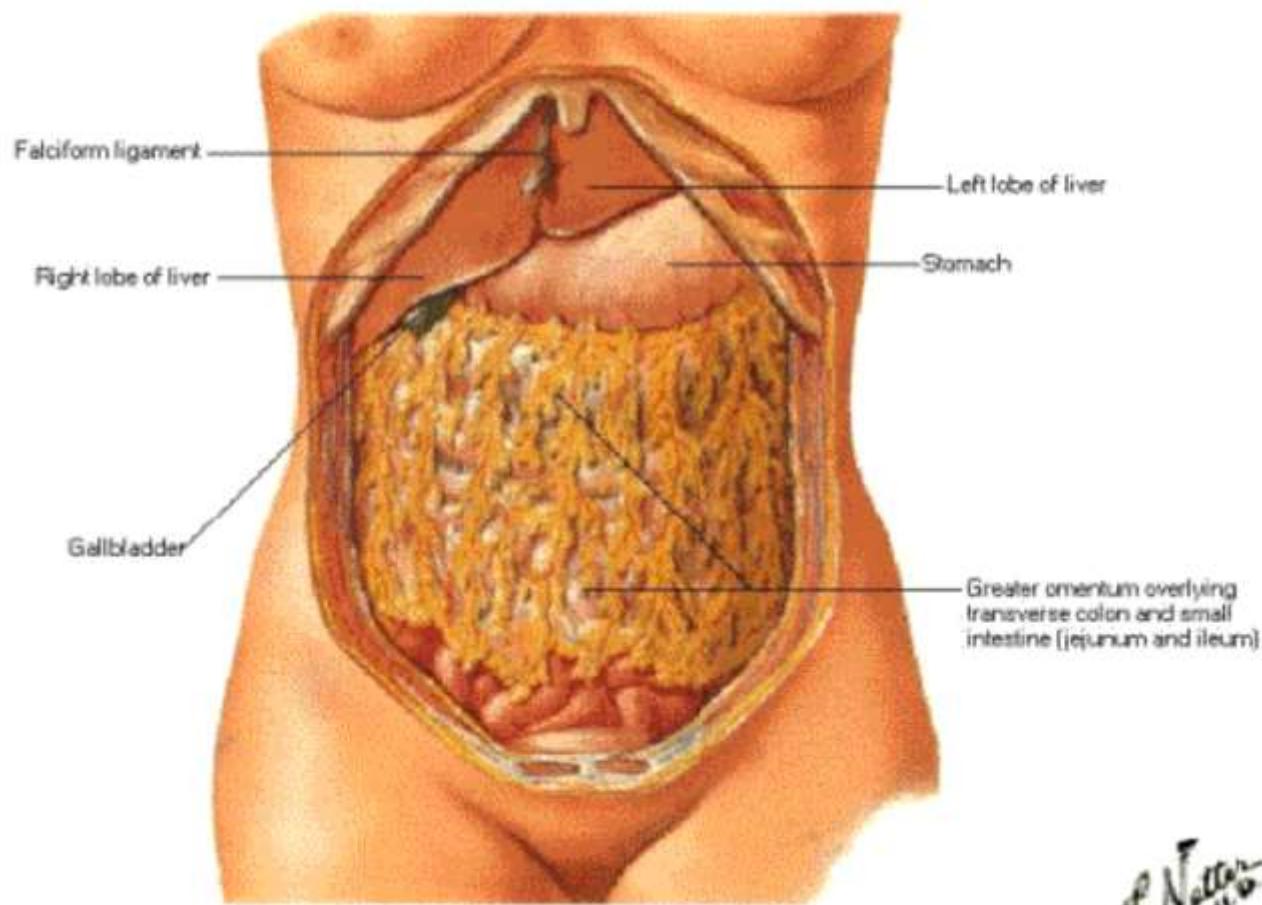
PELVIS

Internal

- ◆ Peritoneal cavity
- ◆ Retroperitoneal space
- ◆ Pelvis



Greater Omentum and Abdominal Viscera



1. Organ padat
2. Organ berongga
3. Pembuluh darah

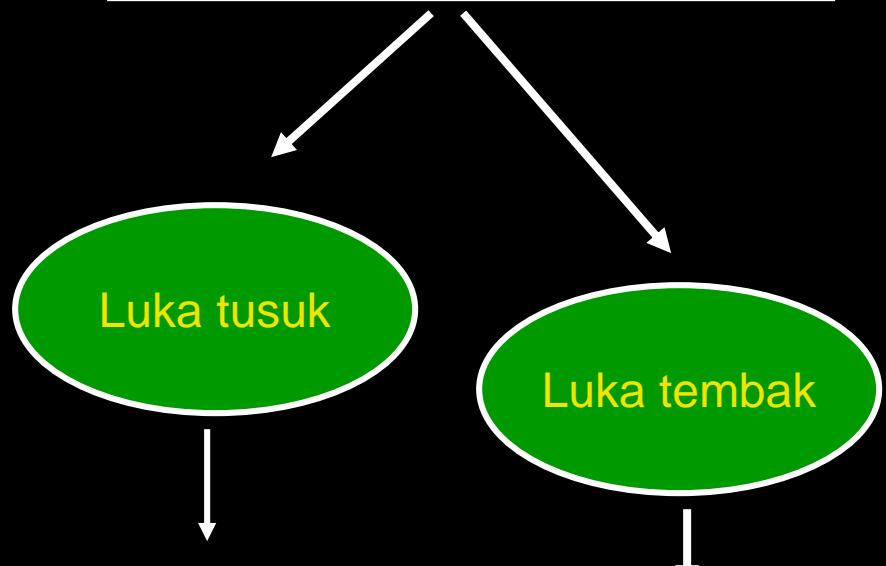
ABDOMINAL TRAUMA

- Bisa disebabkan oleh trauma tumpul (blunt abdominal trauma) → lebih sulit
 - # Kesadaran menurun menyulitkan diagnosis → perlu pemeriksaan penunjang
- Trauma tajam (penetrating trauma) :
 - # Tembus atau tidak ke peritoneum?
 - # Apabila ada eviscerasi → tembus
 - # Ragu-ragu : eksplorasi

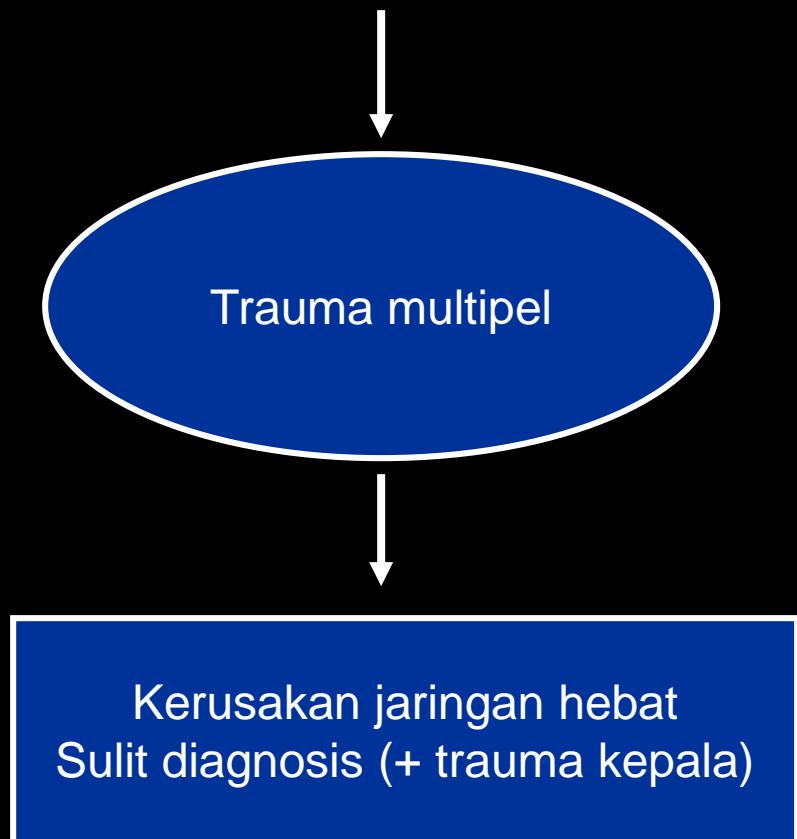


Eviscerasi → pasti tembus

TRAUMA TAJAM



TRAUMA TUMPUL





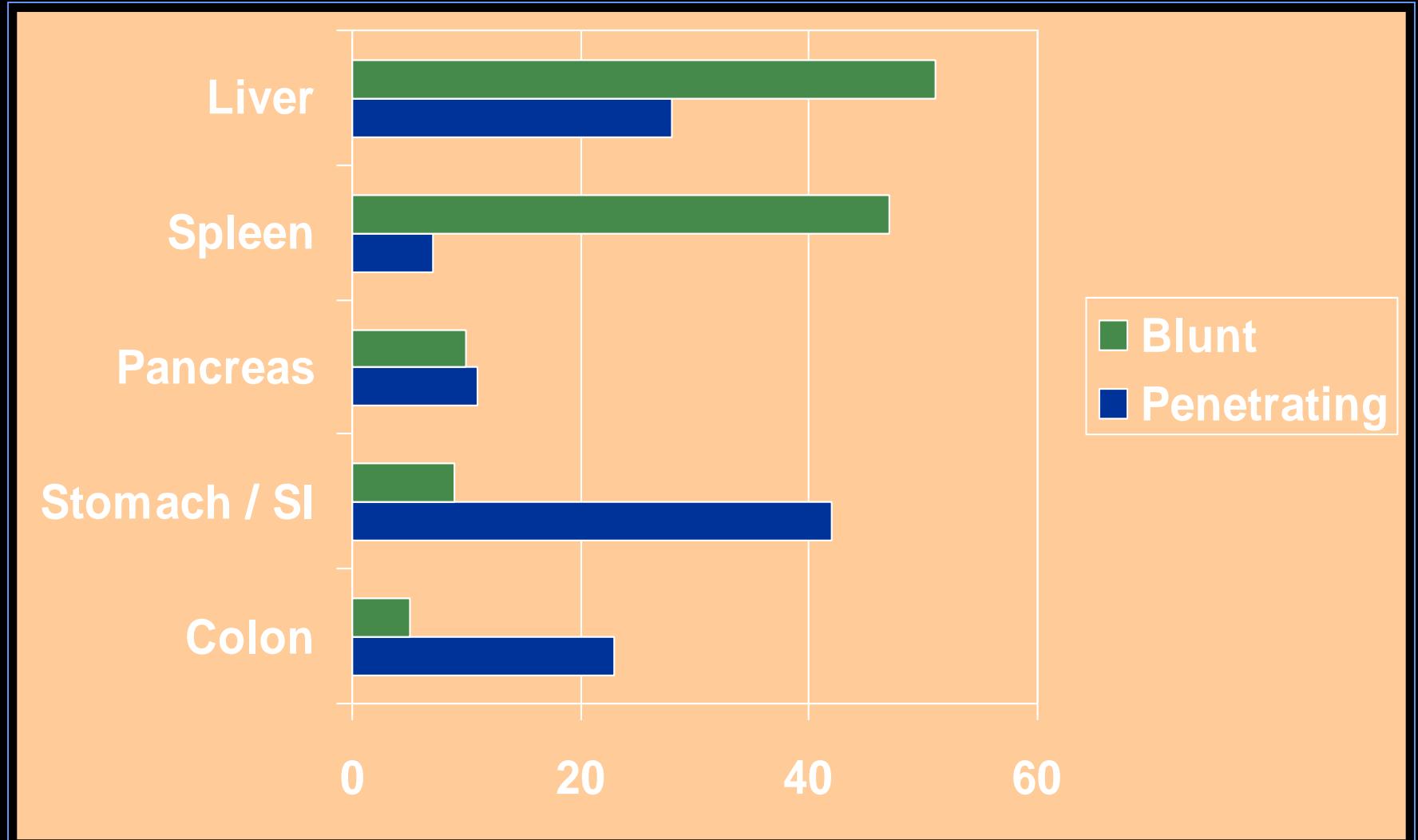
Blunt Abdominal Trauma



Penetrating Trauma



Abdominal injury



GEJALA dan TANDA

- Pecahnya organ padat / solid:
 - . Hepar, lien
 - . Perdarahan → syok
 - . Darah intraperitoneal : nyeri abdomen, bising usus menurun. Palpasi : nyeri tekan, nyeri lepas
 - . Pada kesadaran menurun → rangsang peritoneum tidak didapati
- Operasi atau konservatif



**Perdarahan
internal**

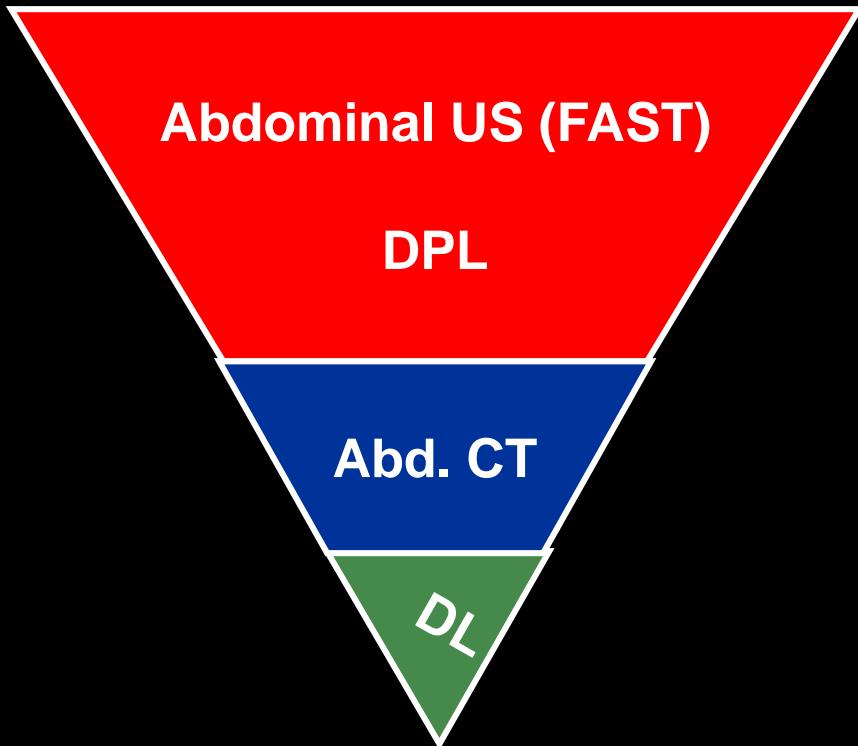
Rongga abdomen

Rongga thoraks

Pelvis

Tulang panjang

Diagnostic methods



FAST

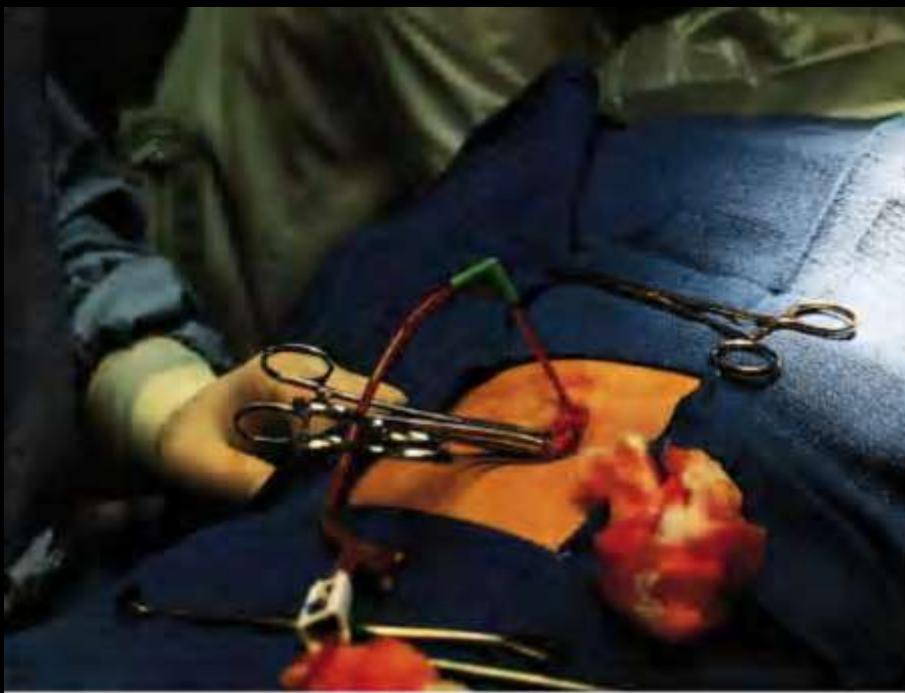
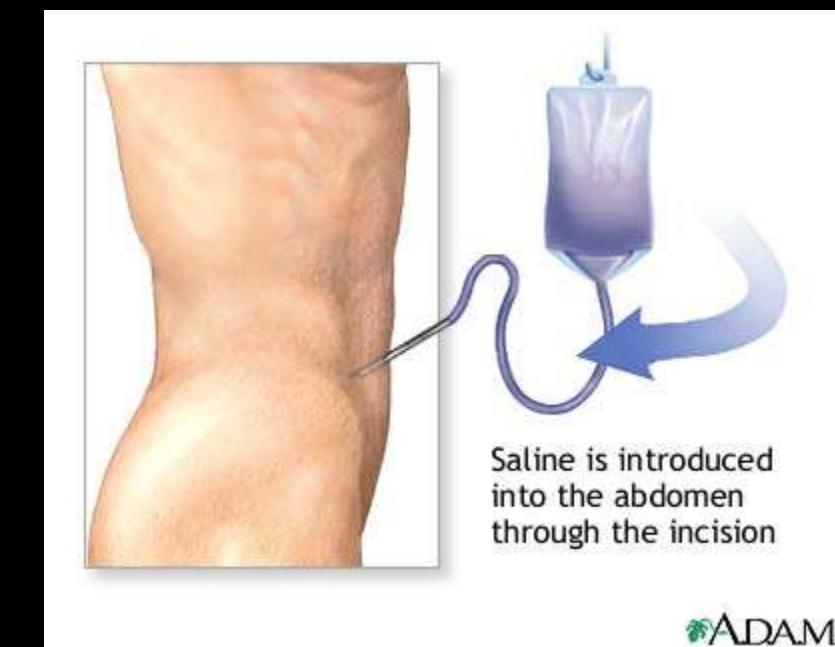
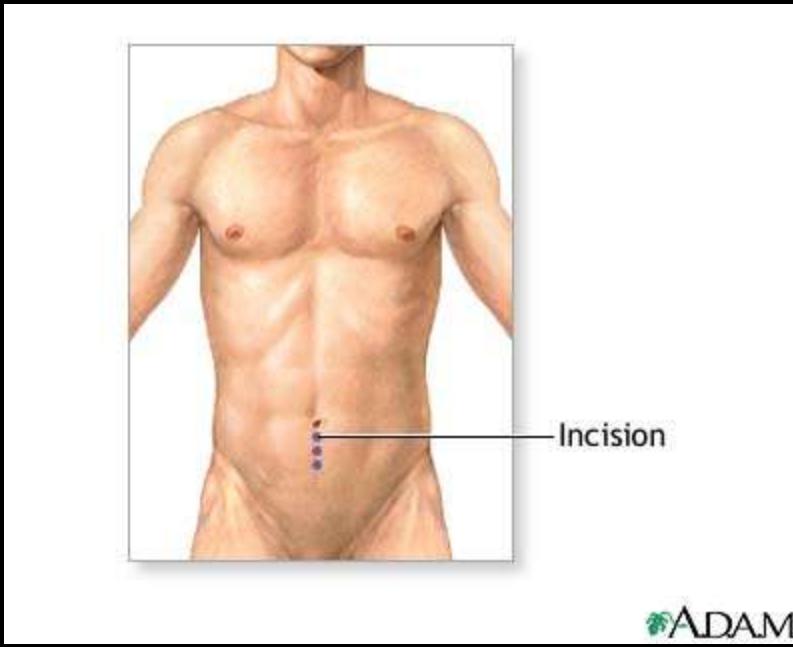
(Focused Assessment with Sonography for Trauma)

DPL

(Diagnostic Peritoneal Lavage)

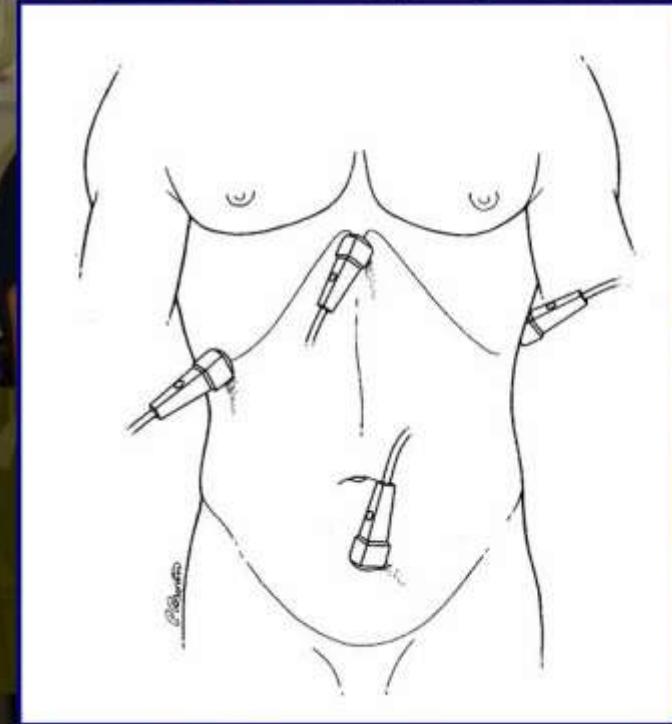
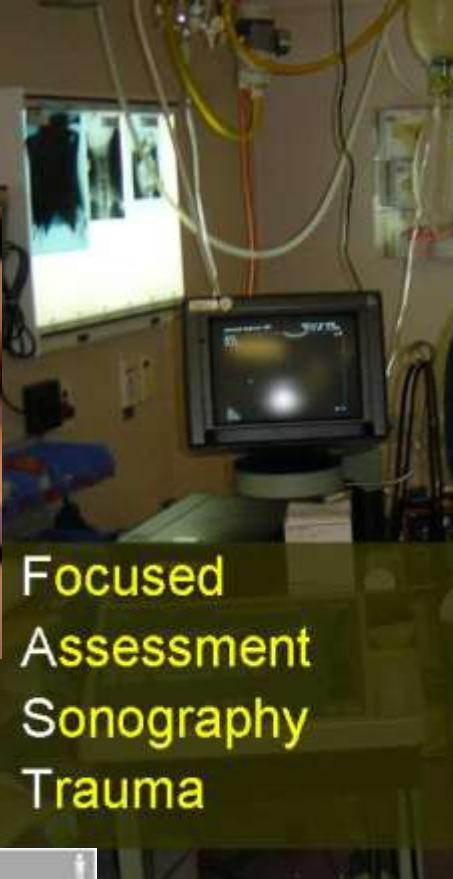
DL

(Diagnostic Laparoscopy)



Diagnostic Peritoneal Lavage

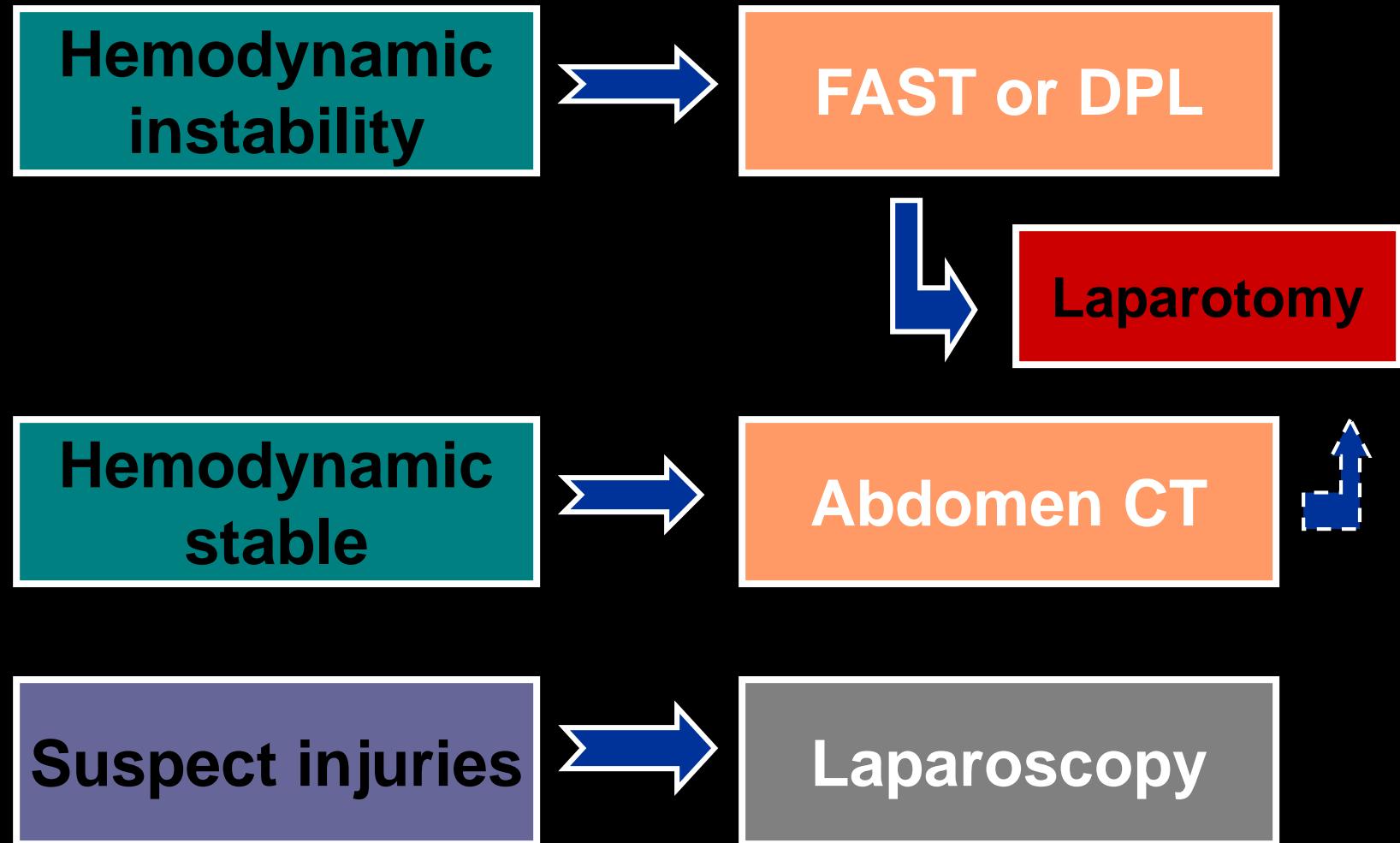
F.A.S.T.



Diagnostic methods

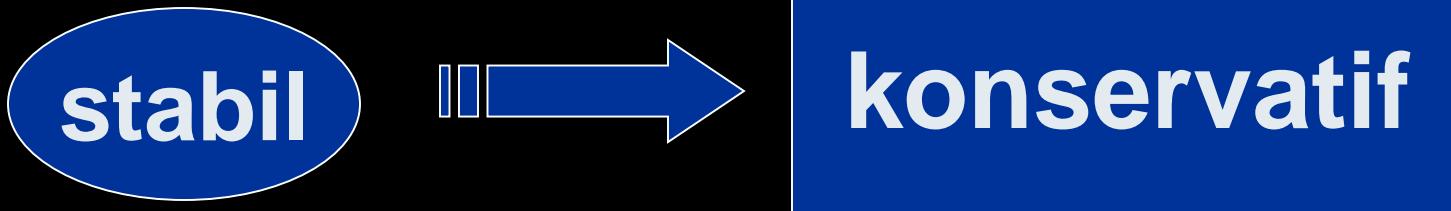
Test	Sensitivity	Specificity
DPL	85-100%	65-85%
FAST	85-95%	95-100%
Abdomen CT	85-99%	95-100%
Diagnostic Laparoscopy	25-100%	85-95%

Blunt abdominal trauma



PENANGANAN PERDARAHAN KONSERVATIF

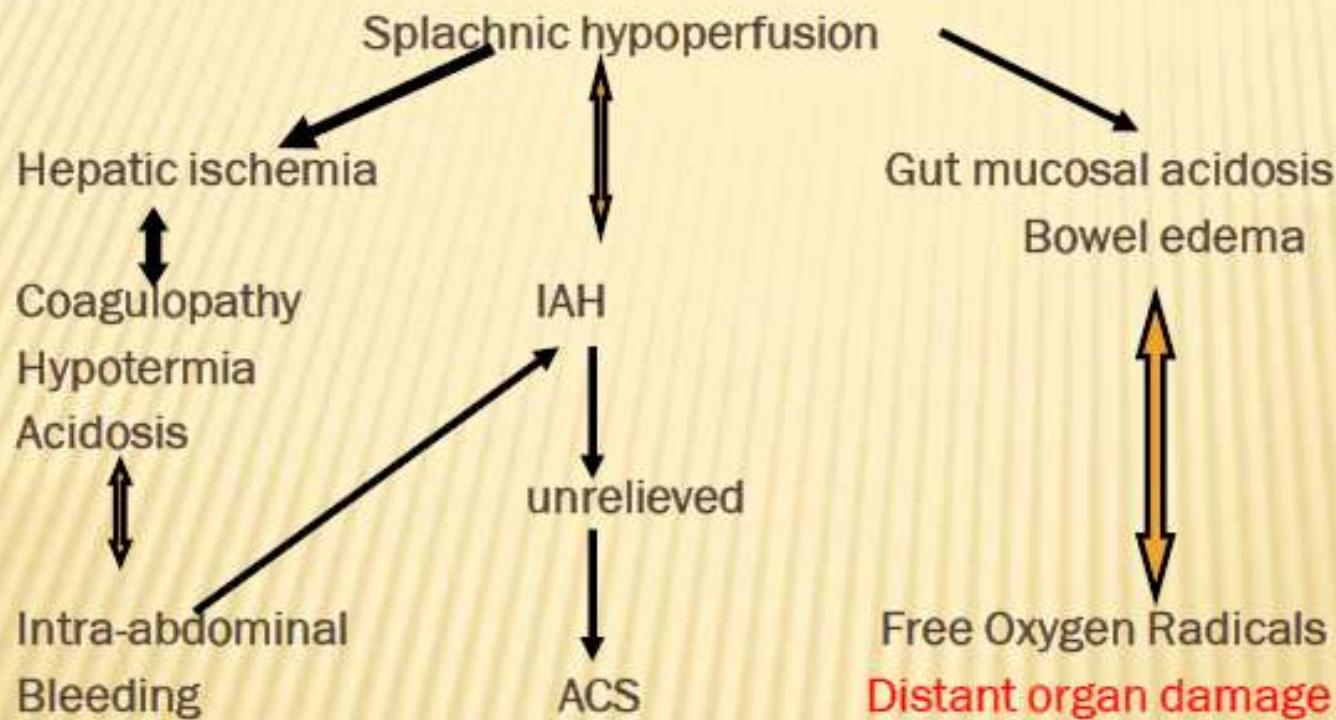
- Pengalaman pd anak dg ruptur lien / hepar yang berhasil dg konservatif
- Kemajuan dalam monitoring : SICU / ICU, CT-scan
- Kamar bedah (dan tenaga) yang selalu siap



GEJALA dan TANDA

- Pecahnya organ berlumen (Hollow Viscus)
→ peritonitis
 - # Gaster, usus halus, kolon
 - # Kembung, nyeri seluruh abdomen
 - # Bising usus menurun
- Kesulitan : penderita shock, hipotermi dan edema usus → tekanan intraabdomen meningkat → **ABDOMINAL COMPARTMENT SYNDROME**

THE VISCIOUS CIRCLE CREATED BY IAH



Ivatury RR et. Al Surg.Clin.North Am 1997;77:796

Metode Pengukuran Tekanan Intra Abdominal

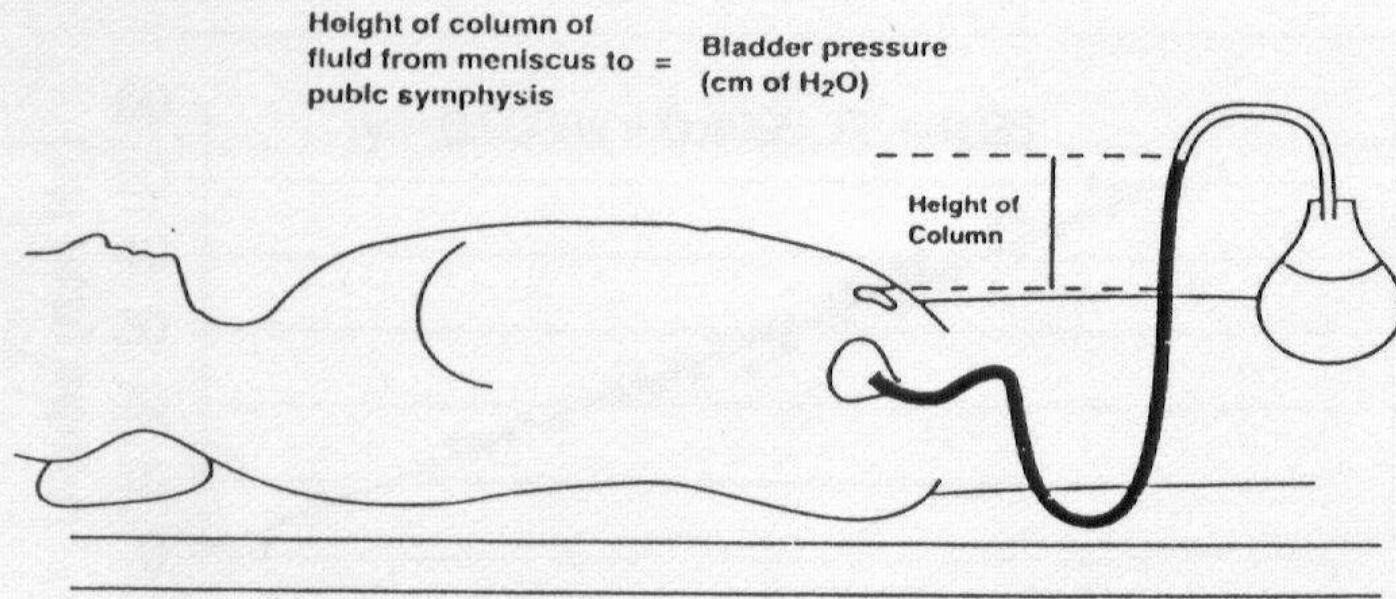


Fig. 1. Simple U-tube technique that measures bladder pressure by raising the urinary catheter above the patient and measuring the height of the column of urine above the symphysis pubis.

WORLD SOCIETY OF THE ABDOMINAL COMPARTMENT SYNDROME (WSACS) CONSENSUS DEFINITIONS

- ❖ Definition 8: IAH is graded as follows:

Grade I: IAP 12–15mmHg

Grade II: IAP 16–20mmHg

Grade III: IAP 21–25mmHg

Grade IV: IAP >25mmHg

Cheatham. Abdominal compartment syndrome. Current Opinion in Critical Care
2009,15:154–162

- 1 cmH₂O = 0,73 mmHg

Abdominal Compartment Syndrome



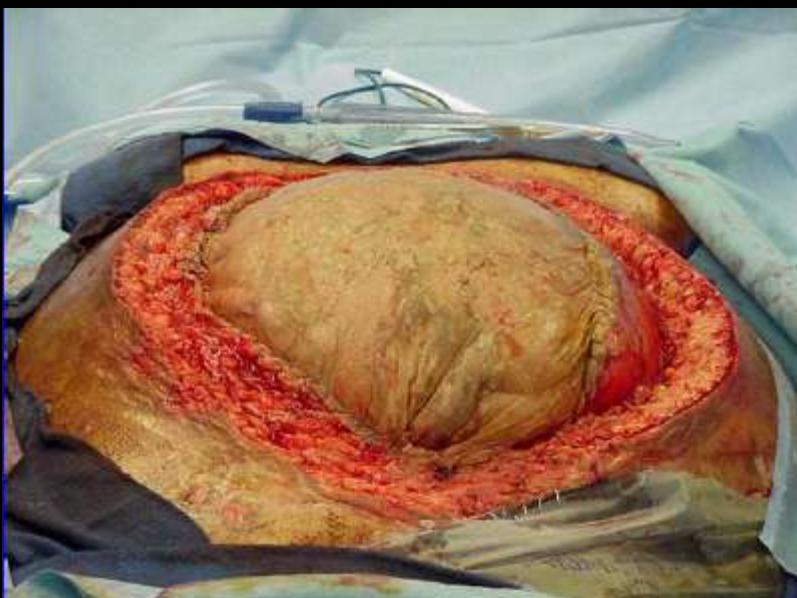
- Agar penderita selamat → operasi sesingkat mungkin, perdarahan di-packing, abdomen dibiarkan terbuka
- Penderita dirawat di ICU agar fisiologi membaik, edema berkurang
- Dilakukan operasi kedua untuk mengambil tampon, menjahit dengan lebih teliti dan menutup rongga abdomen



silo



X-ray cassette bag



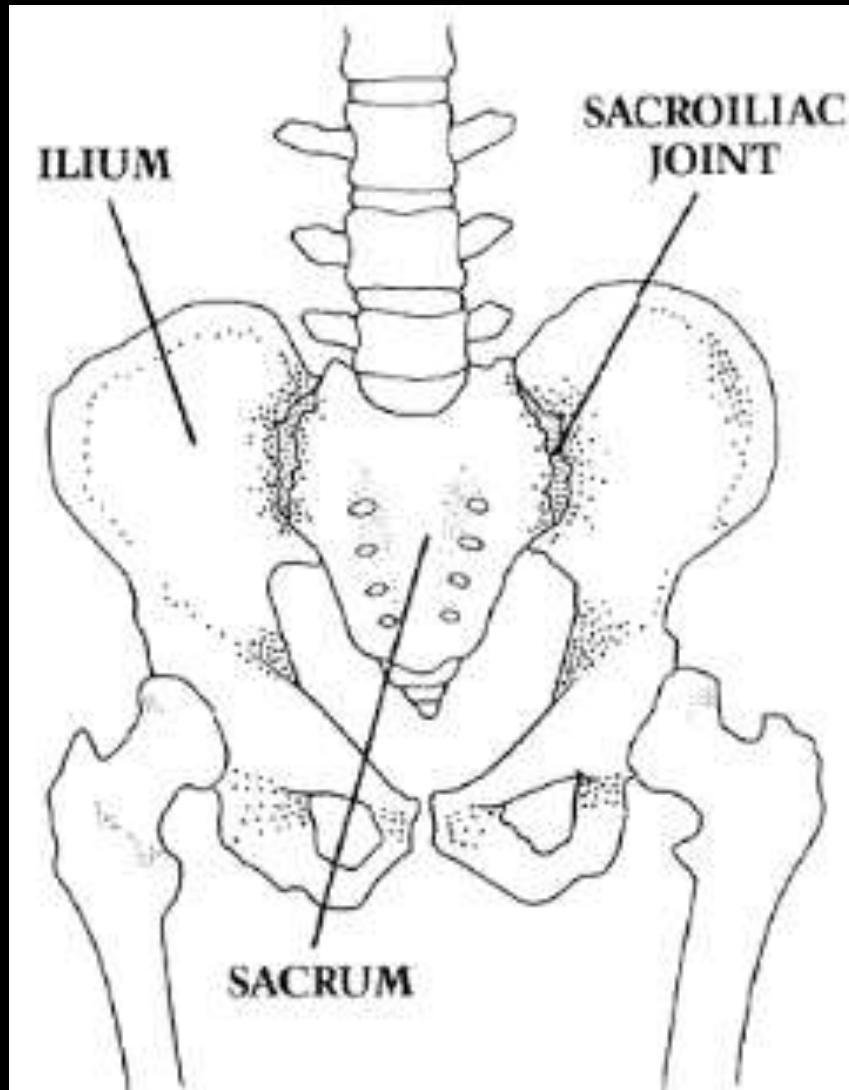
absorbable mesh



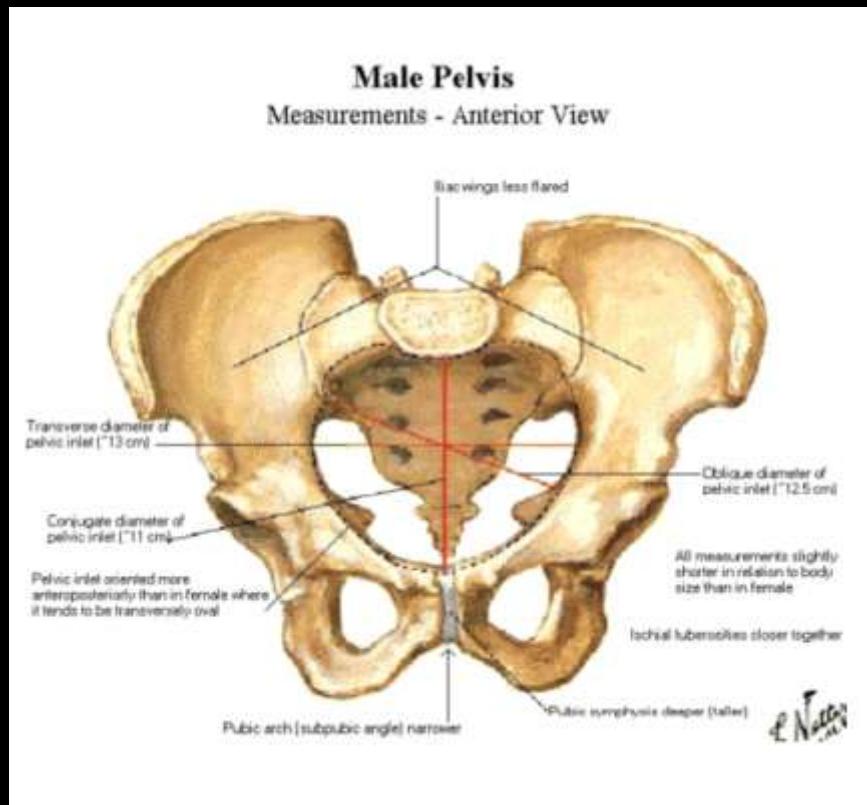
zipper

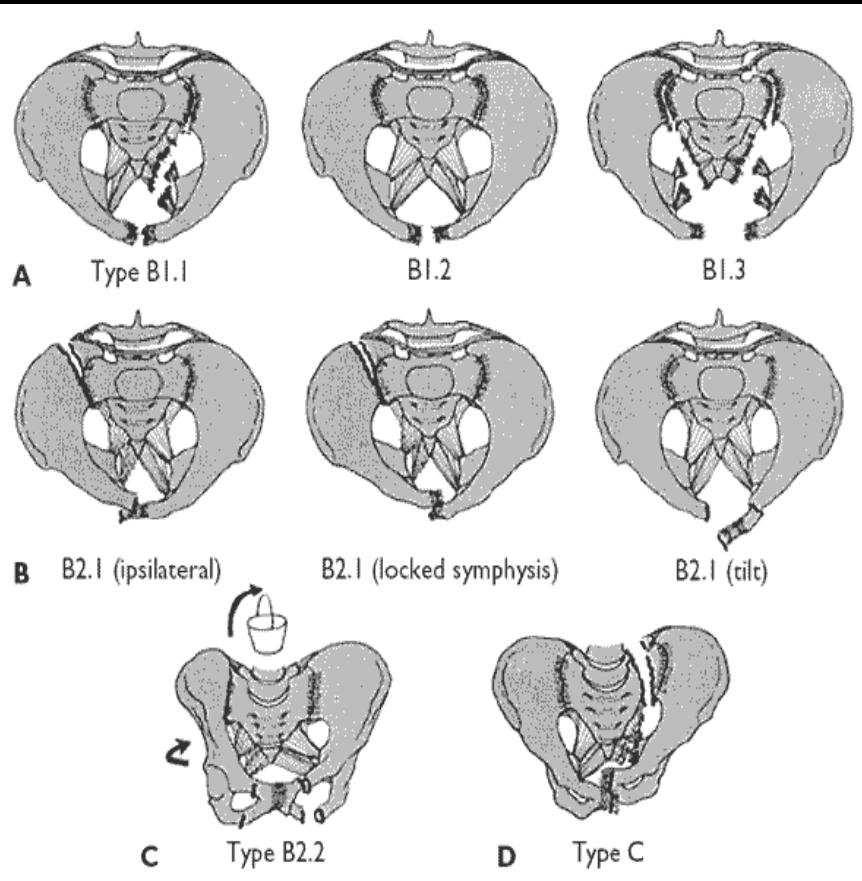
PELVIC FRACTURE

- Pelvis kuat dan terdiri dari tulang cancelous dan kompak
- Banyak pembuluh darah besar
- Merupakan kantong yang menampung perdarahan yang tidak bisa berhenti
- Trauma hebat menyebabkan fraktur pelvis dan menyebabkan perdarahan hebat



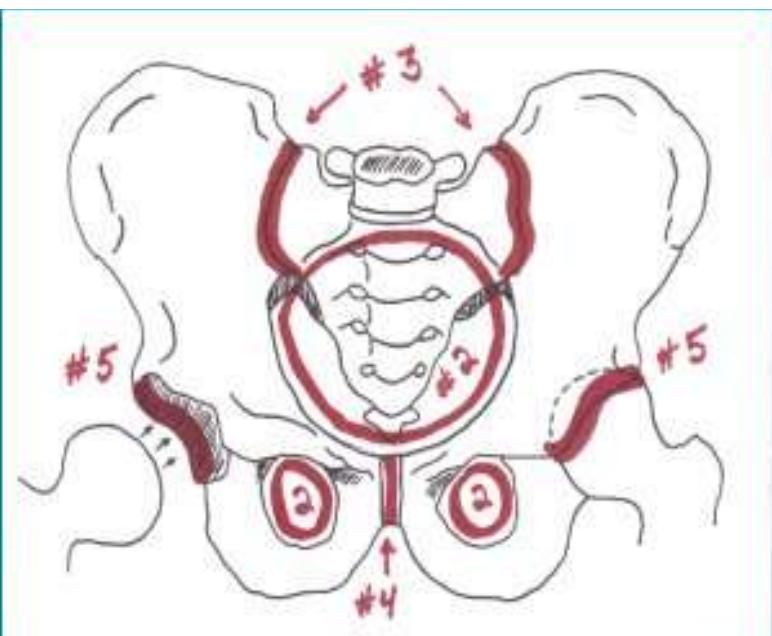
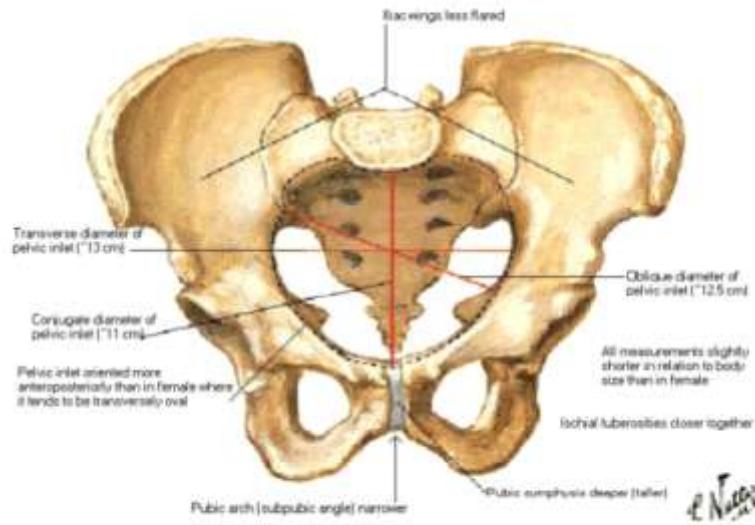
PELVIS





Fraktur pelvis

Male Pelvis Measurements - Anterior View



PERDARAHAN PELVIS



CPAS =
Circumferential Pelvic Antishock Sheathing

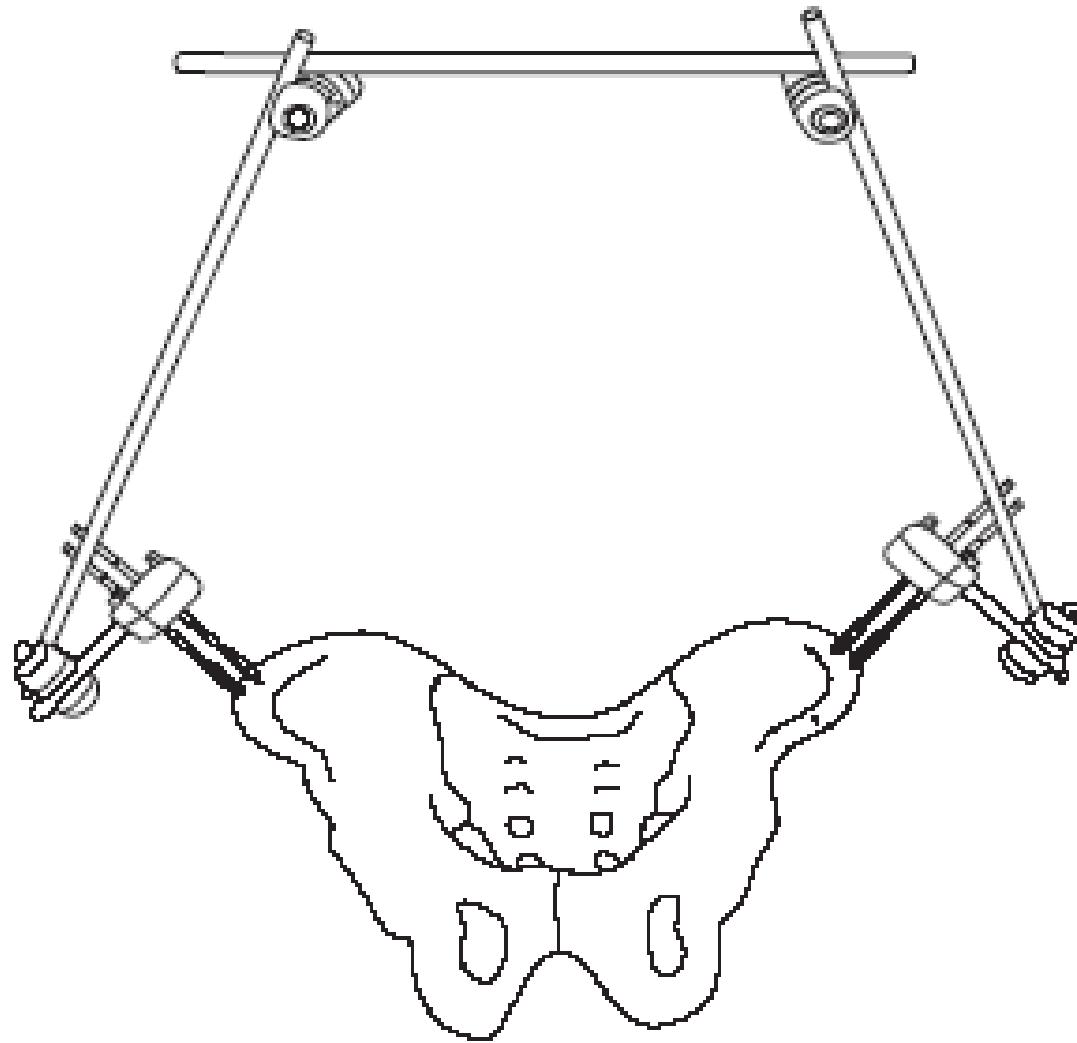


Fig. 21-1. Pelvic external fixator placement.



PASG / MAST

PASG = Pneumatic Anti Shock Garment
MAST = Military Anti Shock Trousers



QUESTIONS-DISCUSSION

