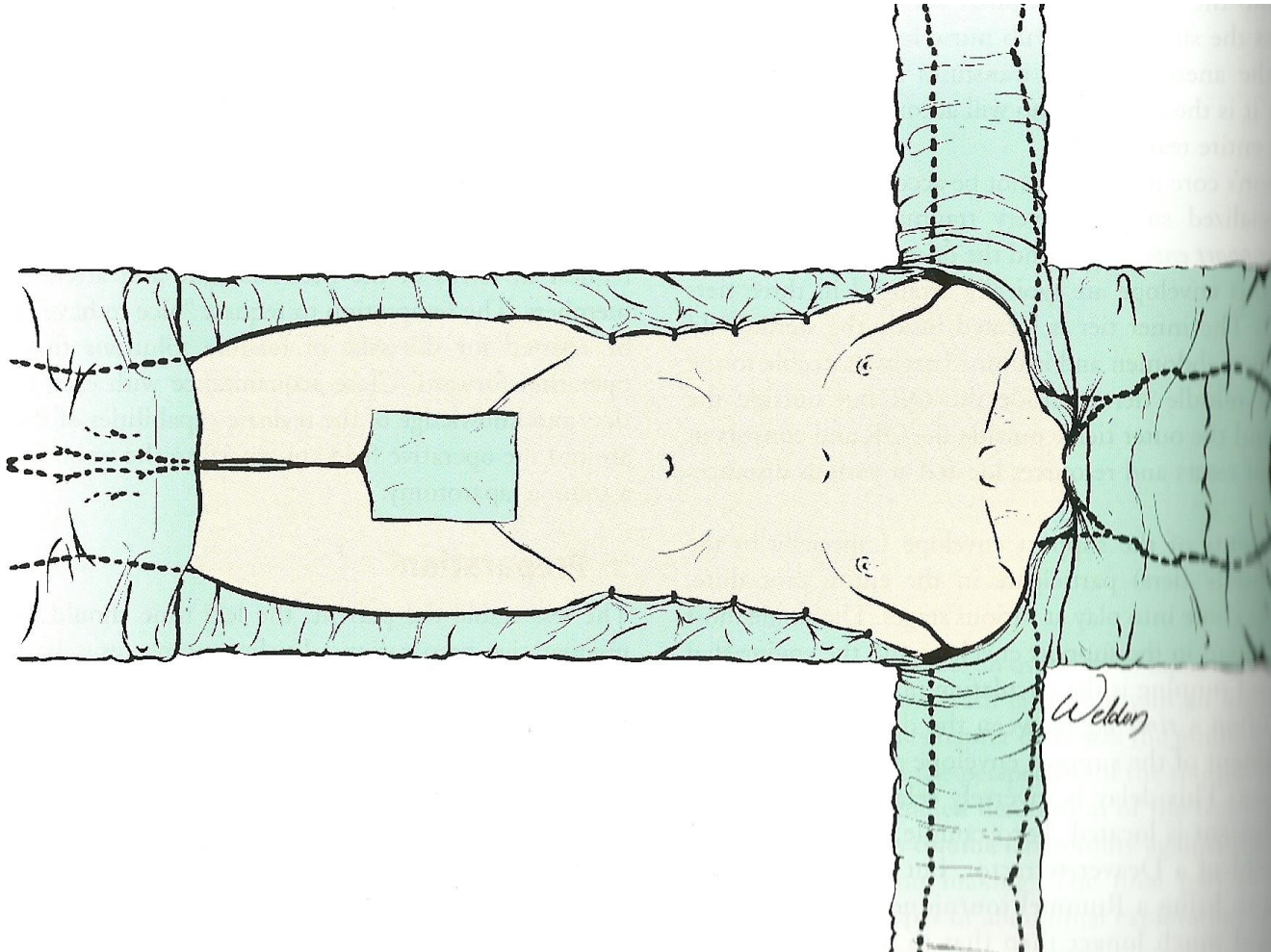
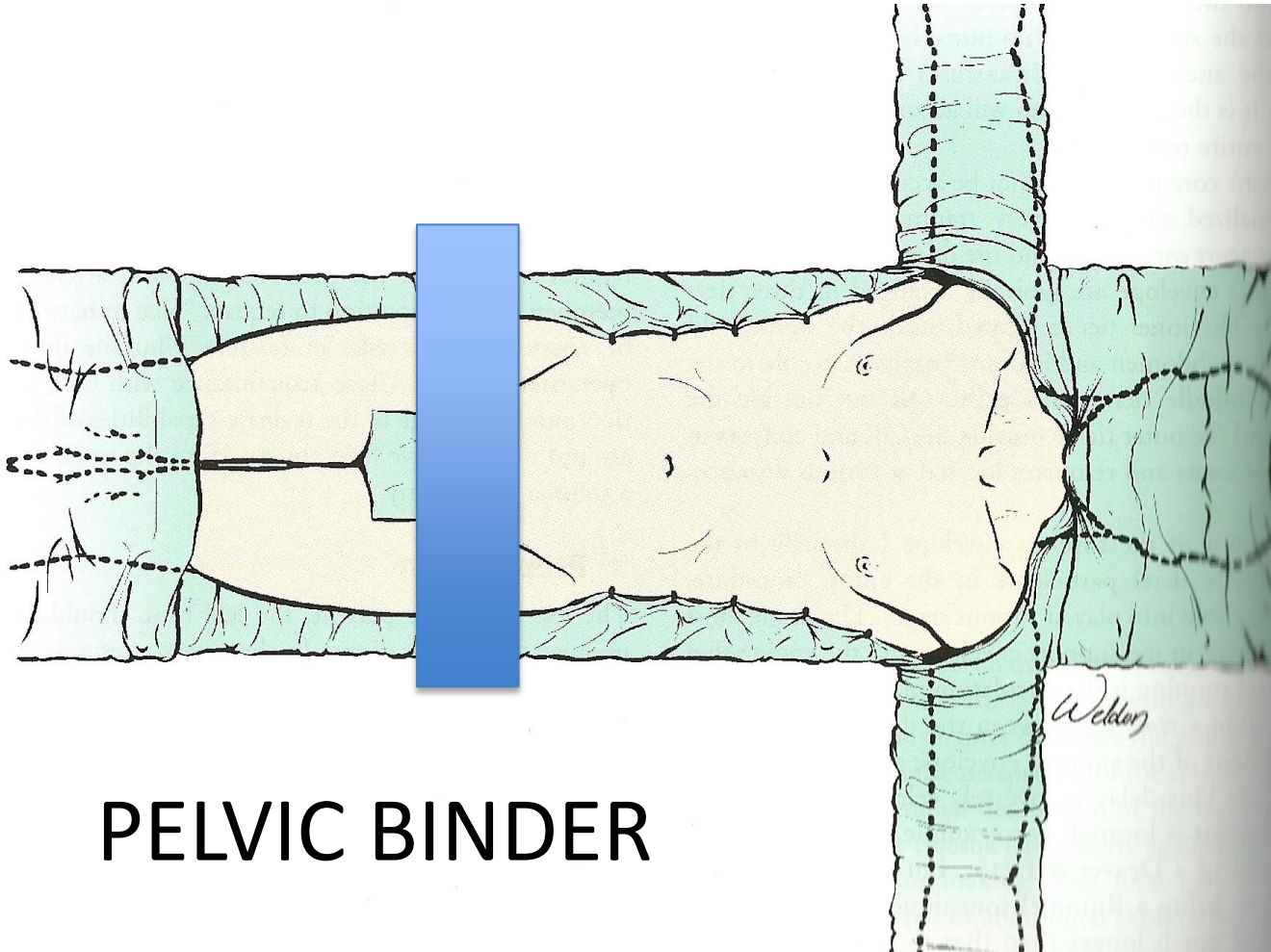


Thoroco-laparotomy: Patient Exposure



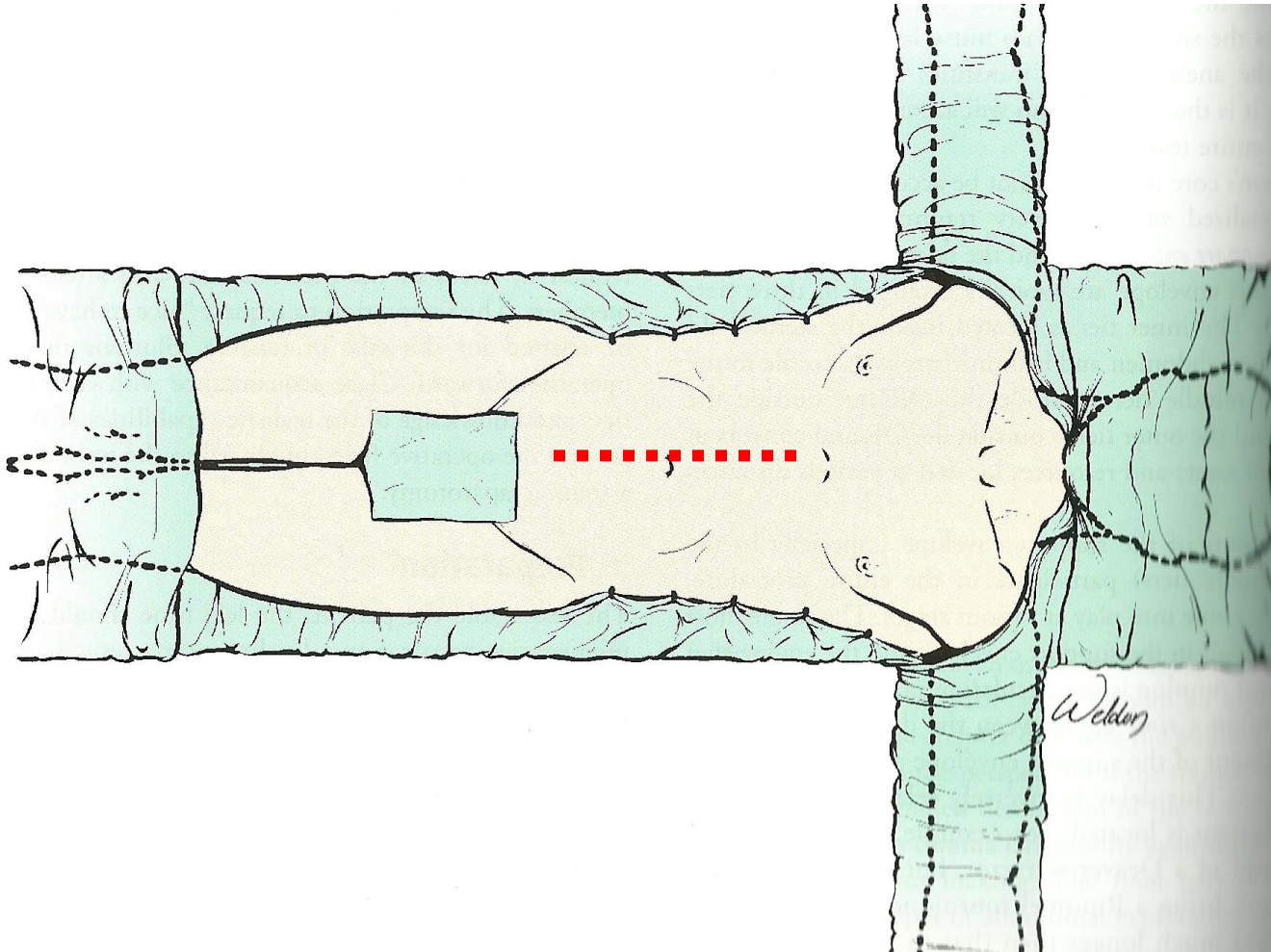
Blunt Trauma: what is missing?

Thoraco-laparotomy: Patient Exposure

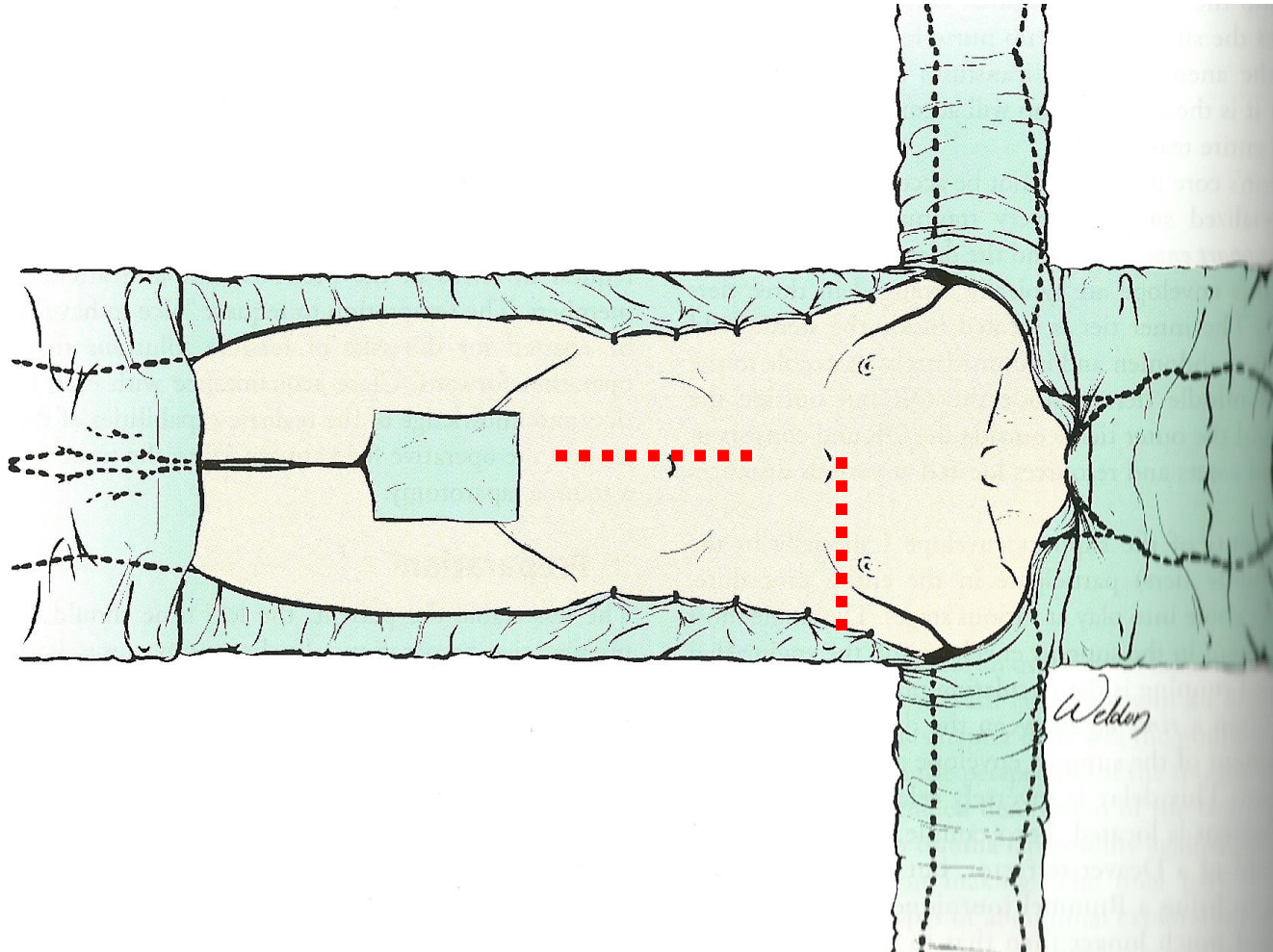


PELVIC BINDER

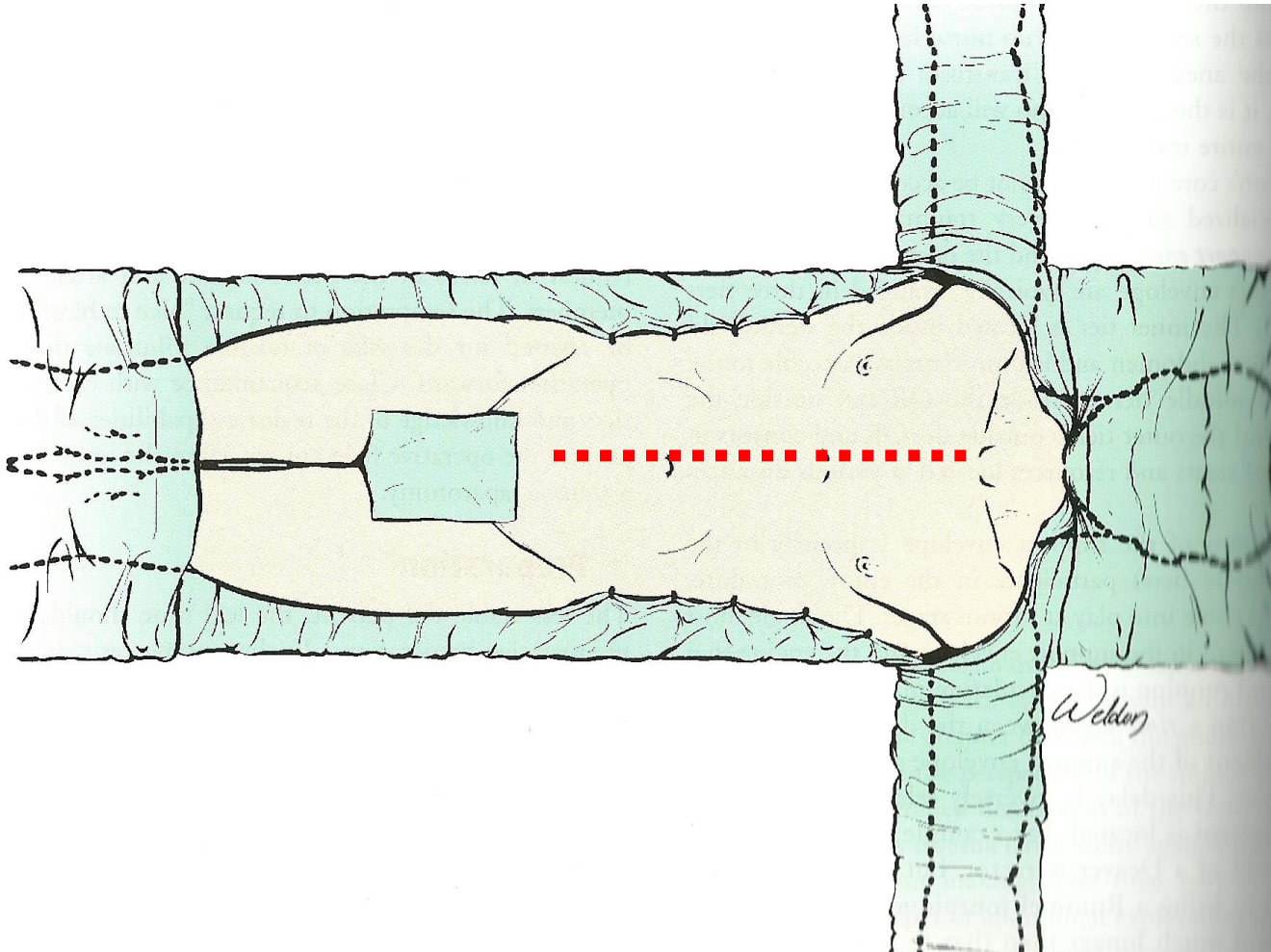
Thoroco-laparotomy: Patient Exposure



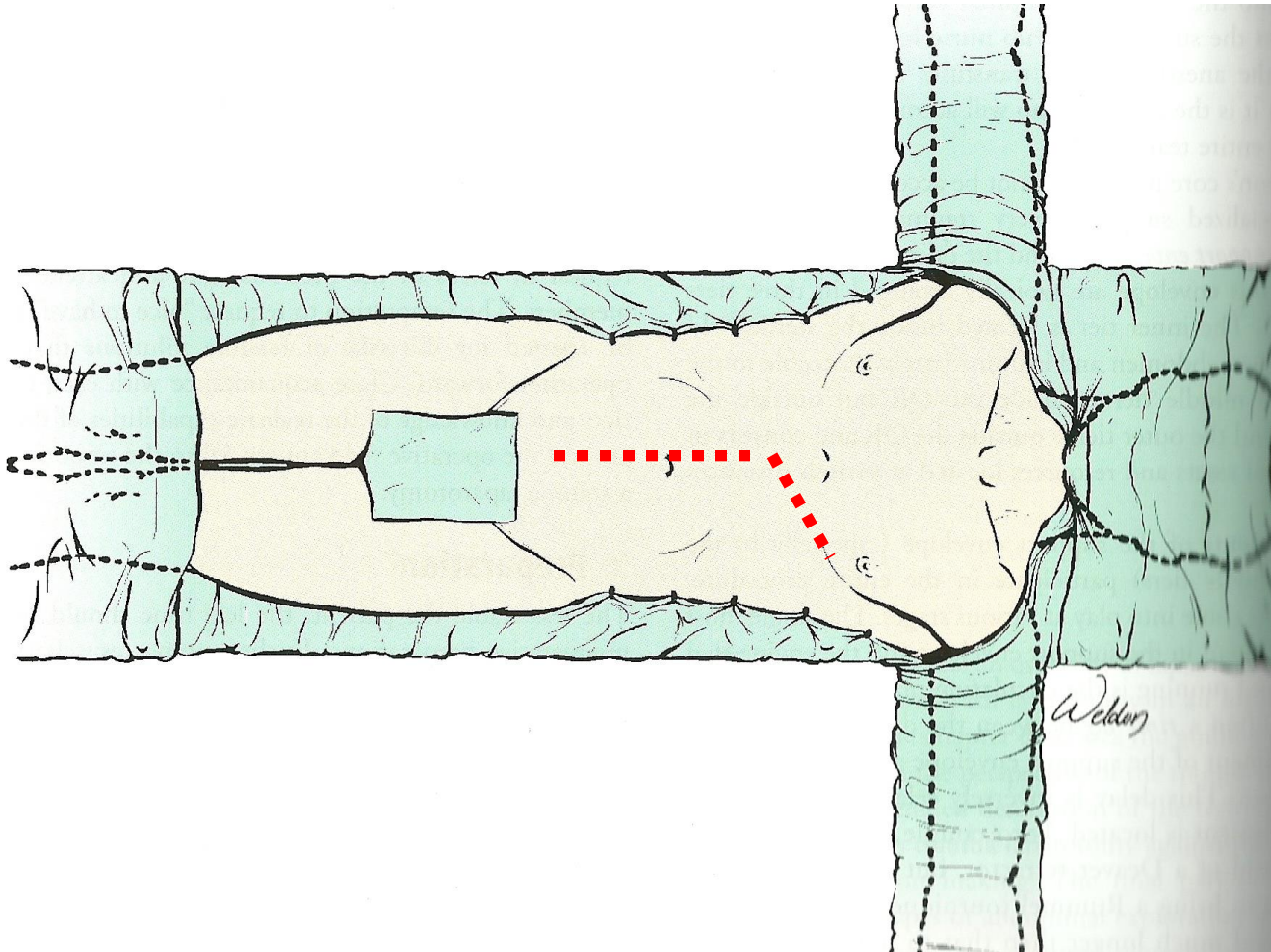
Thoroco-laparotomy: Patient Exposure



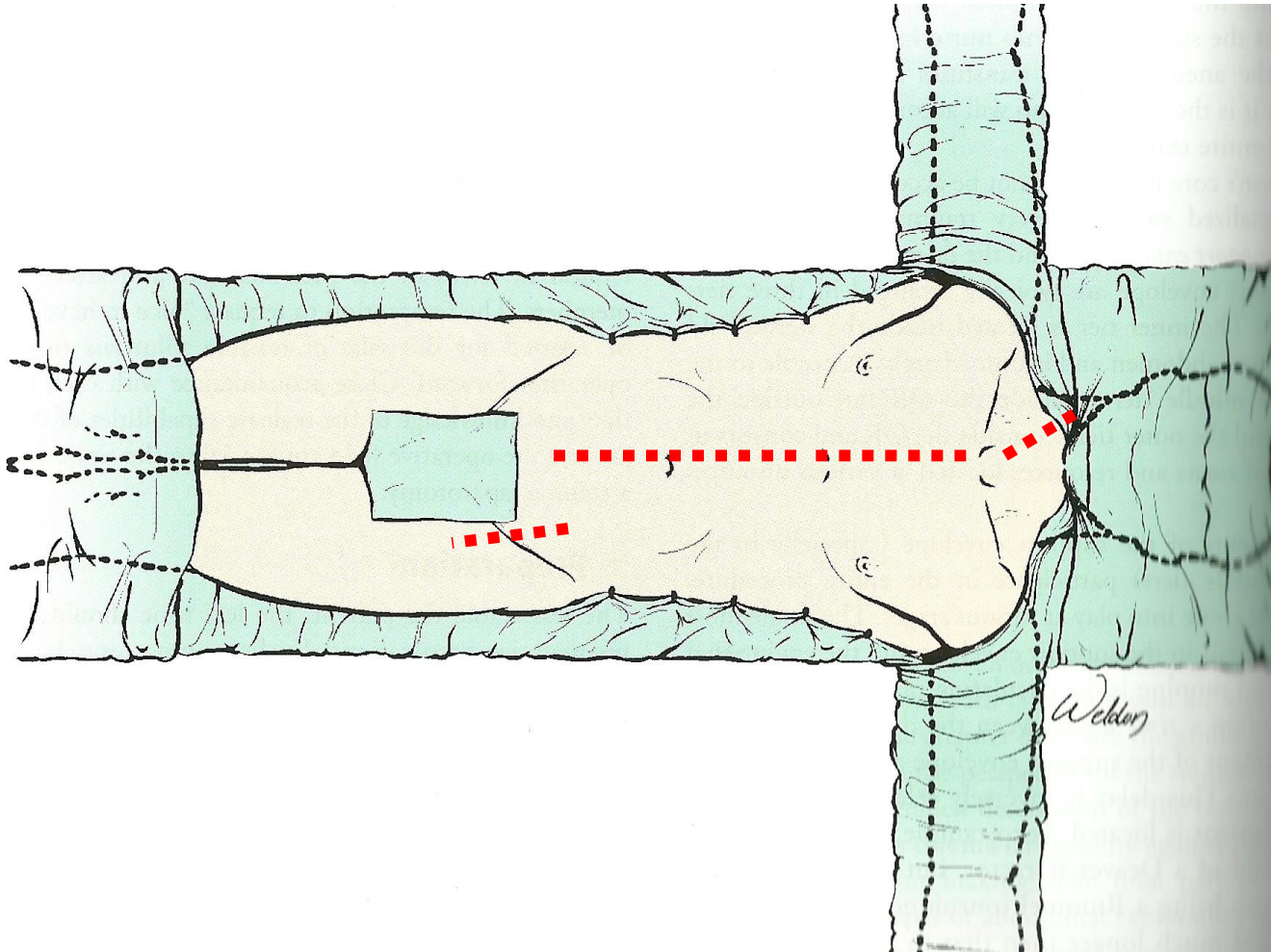
Thoroco-laparotomy: Patient Exposure



Thoroco-laparotomy: Patient Exposure



Thoroco-laparotomy: Patient Exposure



Or ignore these rules....

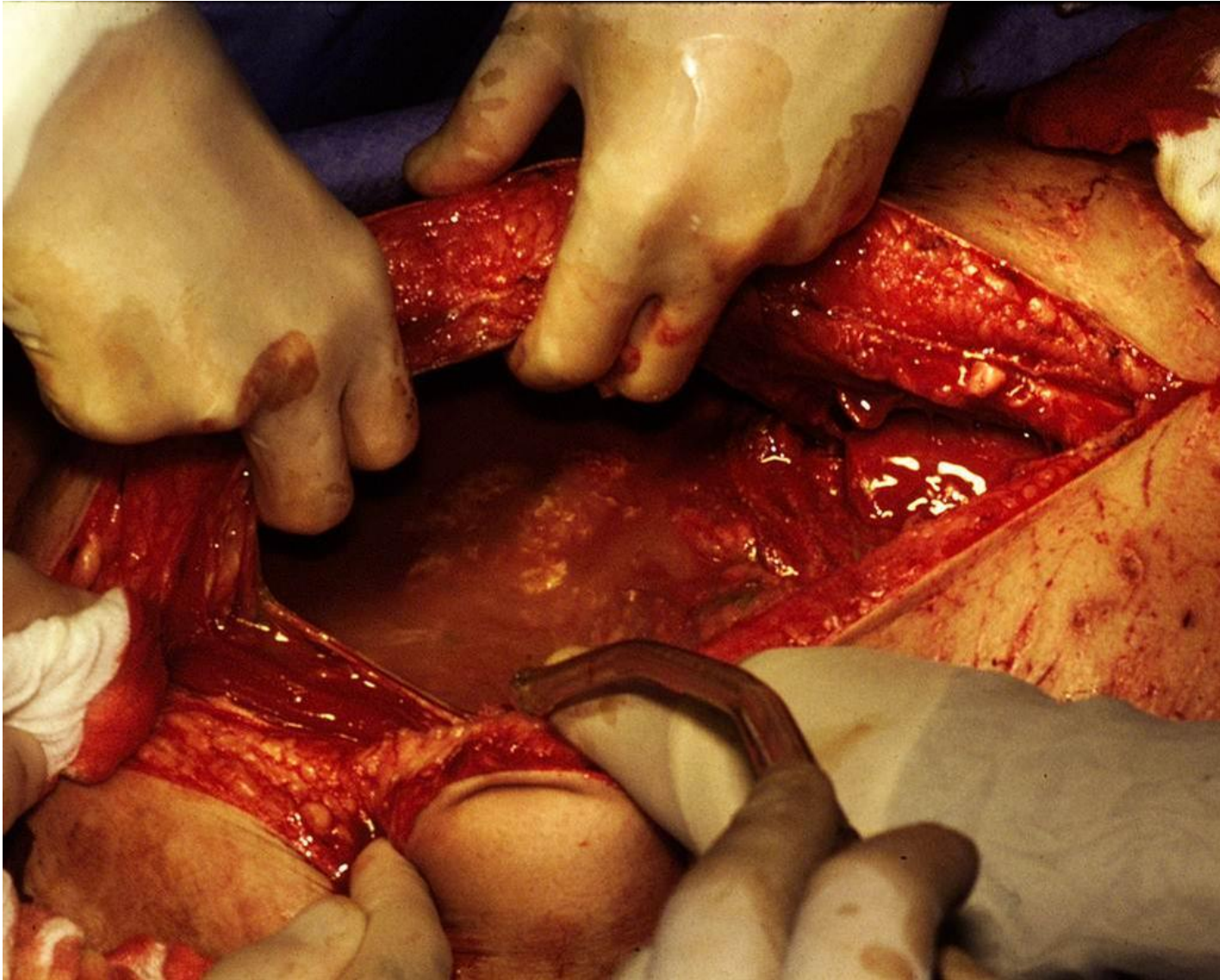


Imperial College Healthcare **NHS**
NHS Trust

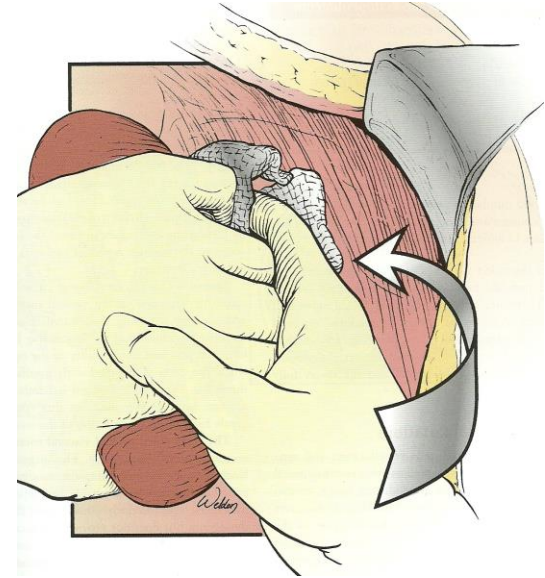
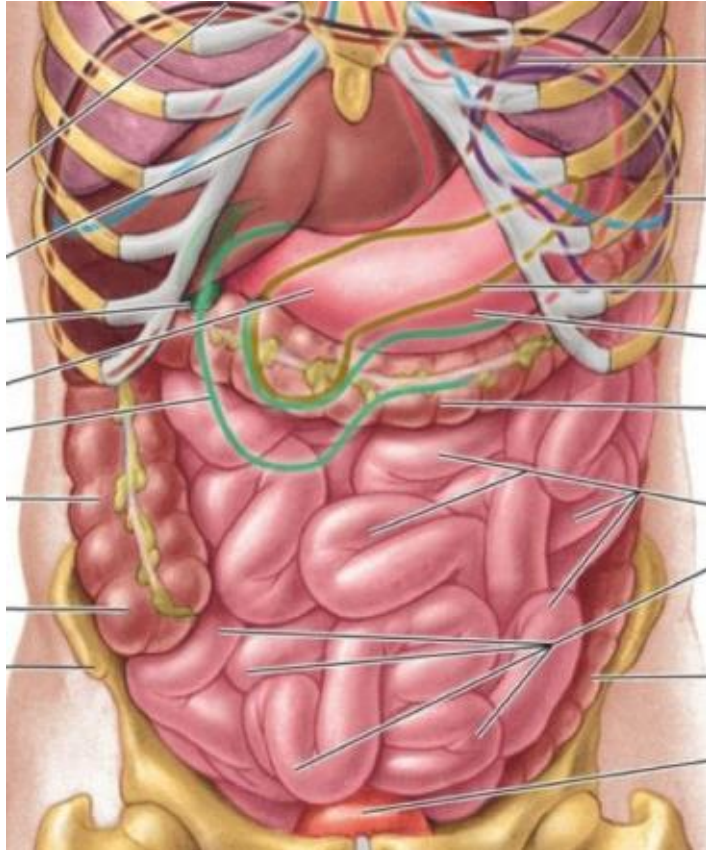
Charing Cross
Hospital



Laparotomy: Incision



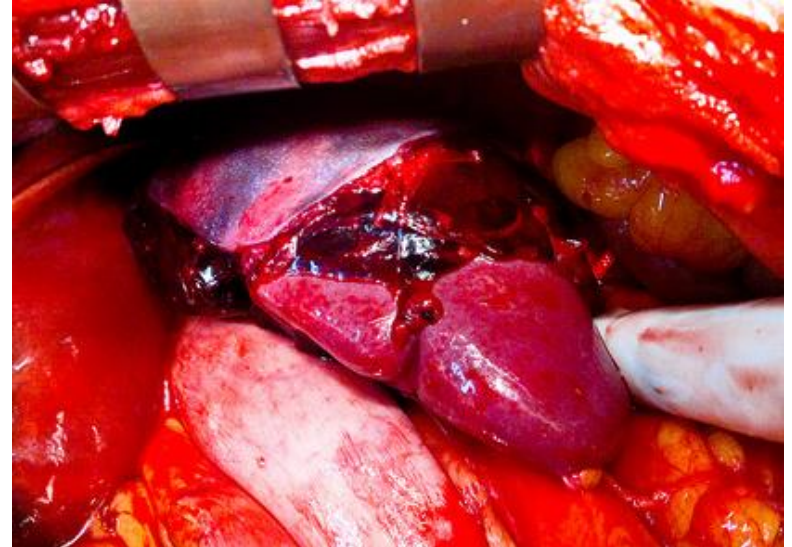
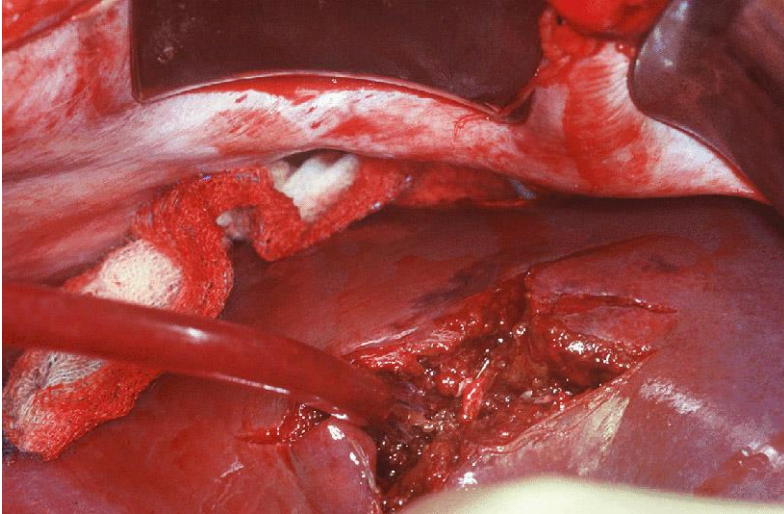
Laparotomy: Temporary Bleeding Control



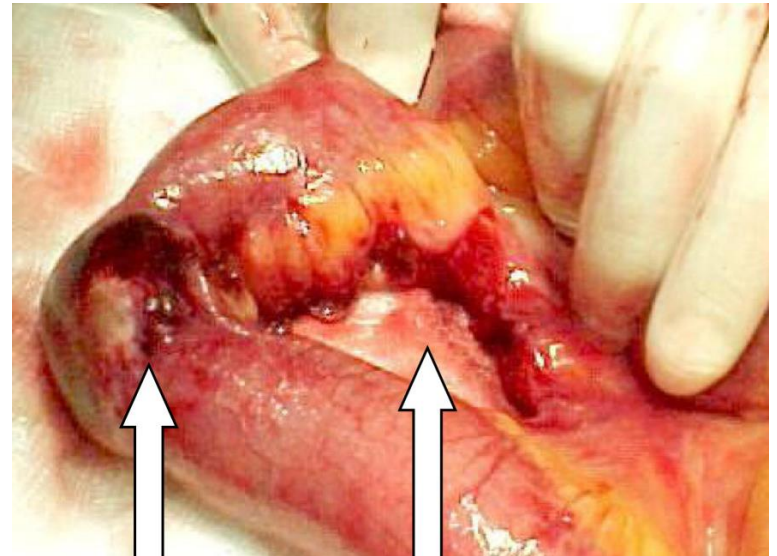




Laparotomy: Explore & Decide



- Patient physiological state
 - Injury burden
 - Pulse & blood pressure
 - Acidosis
 - Coagulopathy (?visible)
 - Temperature
 - Transfusion requirement
 - Bowel colour and temp

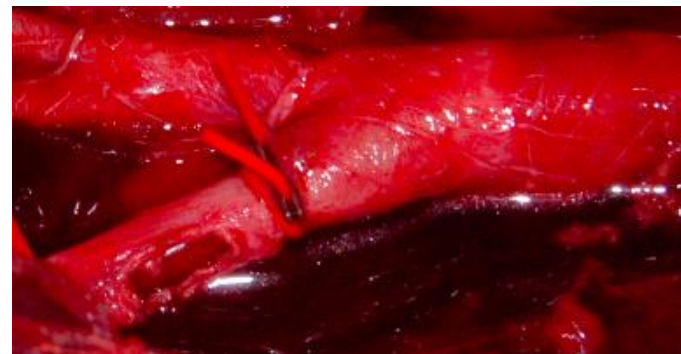
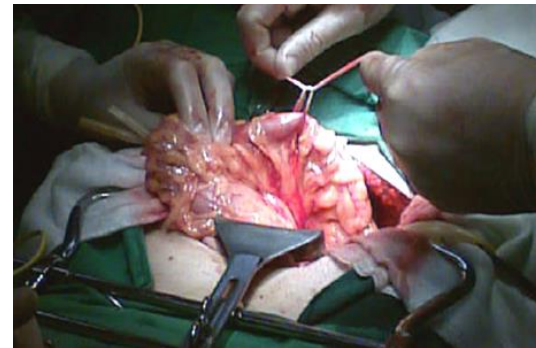
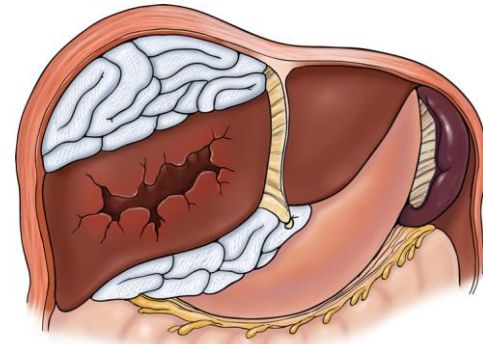






Damage control surgery

- Treatment priorities
 - Stop bleeding and restore perfusion to vital organs
 - Control contamination
 - Temporary abdominal closure
- No reconstruction or stoma
- Liver – pack
- Spleen – remove
- Bowel – staple or tape ties
- Arteries – shunt
- Veins – ligate (shunt)
- Pancreas - Drain



Damage control surgery

- Temporary abdominal closure
 - Eg Peak airway pressure rises more than 10cm H₂O on closure
- Return to ICU to continue to correct physiology
- Or perform other emergent interventions
- Revisit theatre 36-72 hours
 - Definitive repair
 - Abdominal closure



DCS Morbidity

Intra-abdominal infection 5-25%

Fistula formation 5%

Abdominal wall hernias 20%

Miller RS, Morris JA, Diaz JJ, Herring MB, May AK. Complications after 344 damage-control open celiotomies. J Trauma 2005;59:1365-71.

Sutton E, Bochicchio GV, Bochicchio K, et al. Long term impact of damage control surgery: a preliminary prospective study. J Trauma 2006;61:831-4.

Brenner M, Bochicchio G, Bochicchio K, et al. Long-term impact of damage control laparotomy: a prospective study. Arch Surg 2011;146:395-9.

DCR/ DCS \neq Stop the bleeding and fill them up

Must restore perfusion to vital organs +/- organ replacement therapy

Massive Transfusion \neq 1:1:1

Consider thromboelastometry, Ca^{2+} , TXA, Rewarming

Trauma Surgery \neq DCS/DCR

Definitive treatment may be appropriate

QUESTIONS?

Summary

- Bleeding is most common cause of shock in trauma
- Avoid hypothermia (and coagulopathy and under/over resuscitating)
- The patient is in extremis if:
 - Massive transfusion is being pumped in full tilt
 - Clamp on the aorta
 - Cold
 - Thin watery blood oozing from everywhere



The good news is that
we've managed to save
your husbands leg.

