A TERRIBLE FALL

Kevin Lai

Westmead ED / Trauma

Objectives

Complex Critically Ill Trauma

Active Audience Participation

Salient Points Learning

Monday 10:30 am

- Level 1 Trauma Centre
- Bat call
  - 62 yo M fall of 5 meters
  - Open head injury
  - HR 120, SBP 190/, Sat 95%, GCS 7-8 agitated
  - Intubated
  - ETA 5min

- Clinical Anticipation?

1035

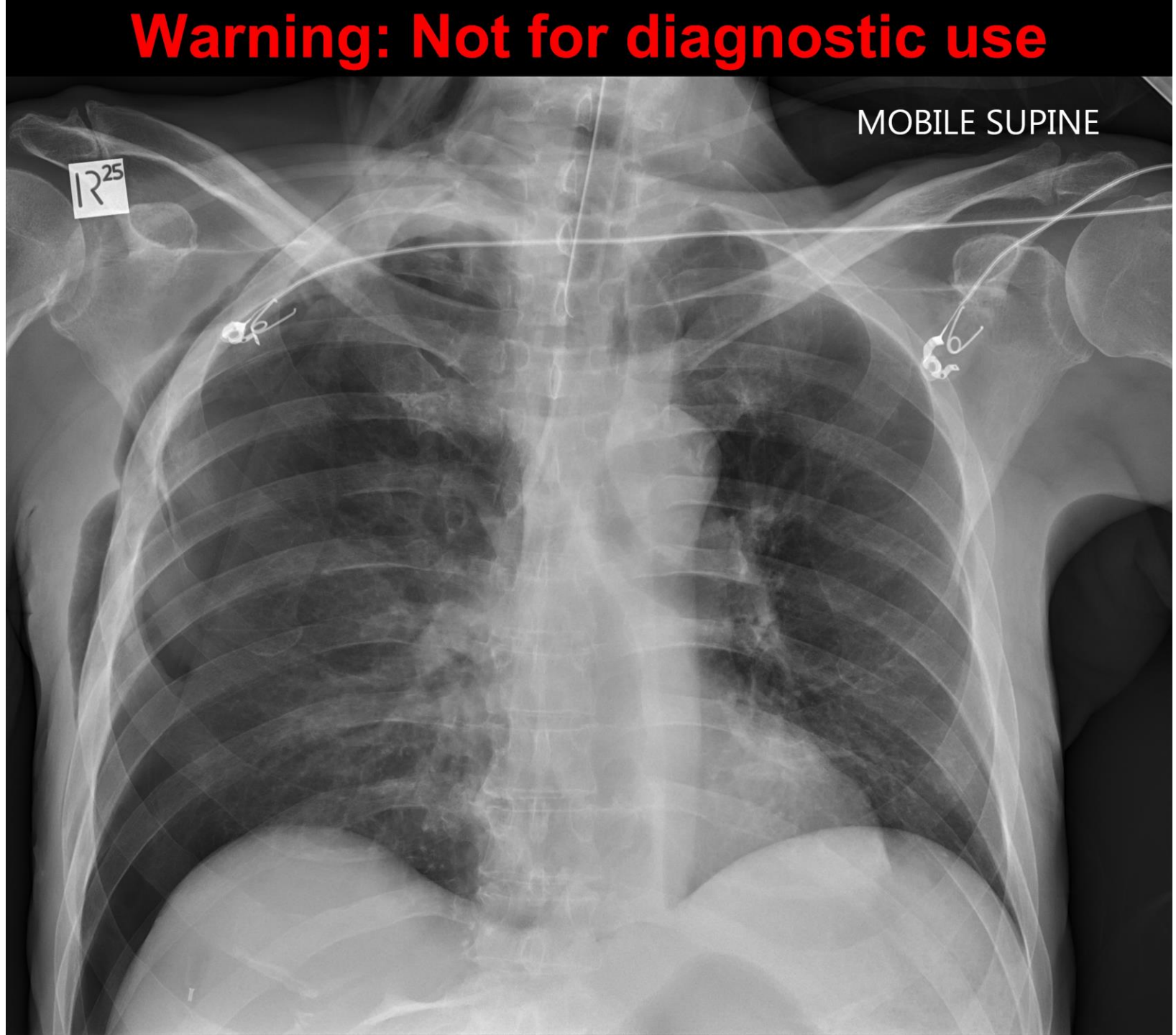
- Handover from medical retrieval
  - 62 yo m, recently diagnosed pancreatic Ca, treated at the Hospital
  - Ambulance called 0835 for fall off balcony,
  - Open head injury,
  - HR 120, **BP 80/**, Sat 95%, GCS 8-10 agitated, fixed dilated pupils x2 post intubation
  - 1 x IVC, pelvic binder applied
  - RSI Ketamine and Metaraminol, grade 1 view
  - Retrieval specialist:
    - No time for pre-hospital FAST as patient only 5 min from Hospital
    - Thought the hypotension is due to catastrophic head injury
    - Hinted that approach should be conservative in view of known pancreatic Ca

1038

- Primary Survey
  - A: intubated, size 7 ETT, 21cm, confirmed on ETCO2
  - B: bagged, Sats 100%, TML, no subcutaneous emphysema
  - C: HR 125, sinus, BP 66/18, cool periphery,
  - D: GCS 3, pupils 5mm bilateral, fixed
  - E: BSL 6.9, temp 35.4

1042

- Brief Secondary Survey
  - No open head injury
  - No external bleeding
  - No major limb deformities
- eFAST –ve
- CXR
- Pelvic XR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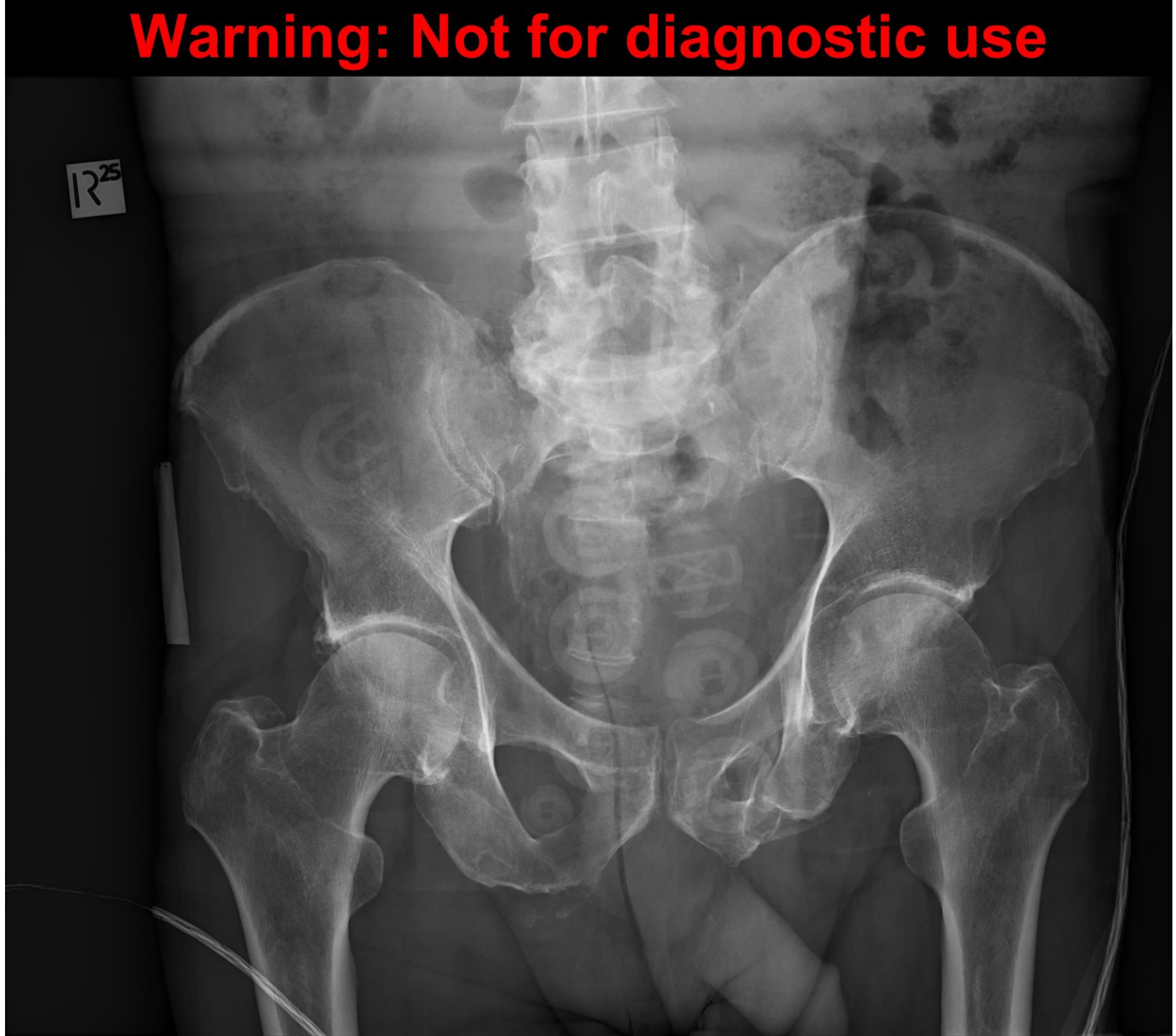
MOBILE SUPINE
R25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What's the cause of shock?

1.Chest

2.Abdomen

3.Pelvis

4.Other

1049

- Ambulance officer comes in with reported suggestions the patient had jumped off building

- MTP activated
- Right ICC inserted, bubbling but minimal blood drained
- Boluses of metaraminol to keep BP >70
- Difficult IV access, difficult to draw blood

- Medical oncologist said the patient has 6 – 9 months of survival
- Difficult to draw conclusion on cancer status on electronic notes
- Discussions with wife
  - Pt told wife he wanted to kill himself 3 weeks ago
  - Wife was aware of poor prognosis of cancer

What Next? Why?

1. Code Crimson to OT

Which body region does the surgeon open?

2. CT, then OT

Tunnel of death…

3. Palliation

Is there enough clinical and ethical justification?

4. Other

REBOA? Mobile CT? None available

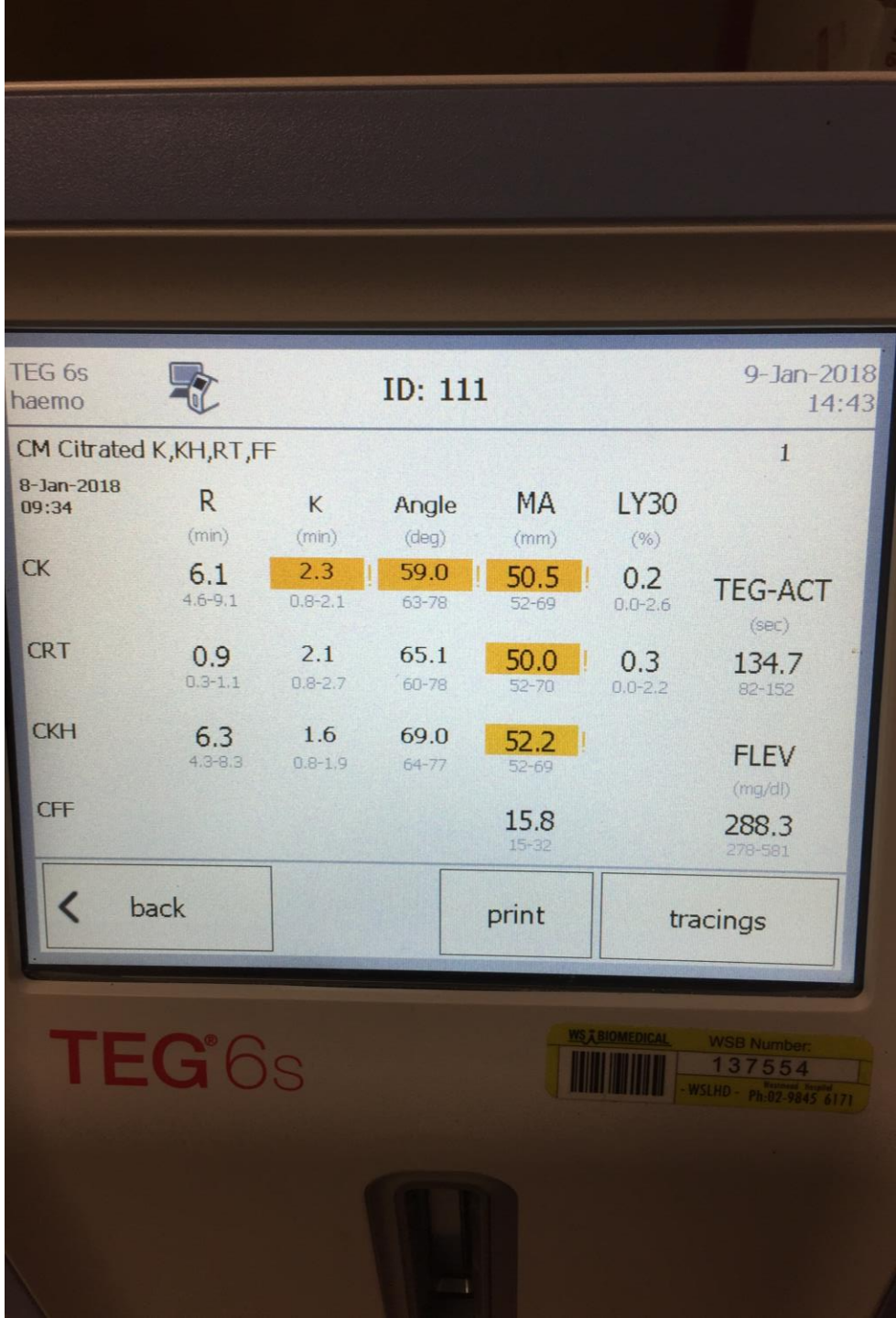
1055

- Consensus decision made to go to CT, to palliate if non-survival head injury is present
- Decision made not for Resuscitative Thoracotomy in event of arrest
- Anaesthetist concerned ETT was leaking
- 2nd IVC obtained, but the first cannular blown

1105

- CT room
- IO inserted

- Blood gas result available
  - pH 7.08, PCO2 69, PO2 389, HCO3 20, BE -10,
  - Hb 82, Na 147, K 4.7, Glc 19.2
  - Lactate 6.8
- TEG available
  - Borderline reduced CRT - MA



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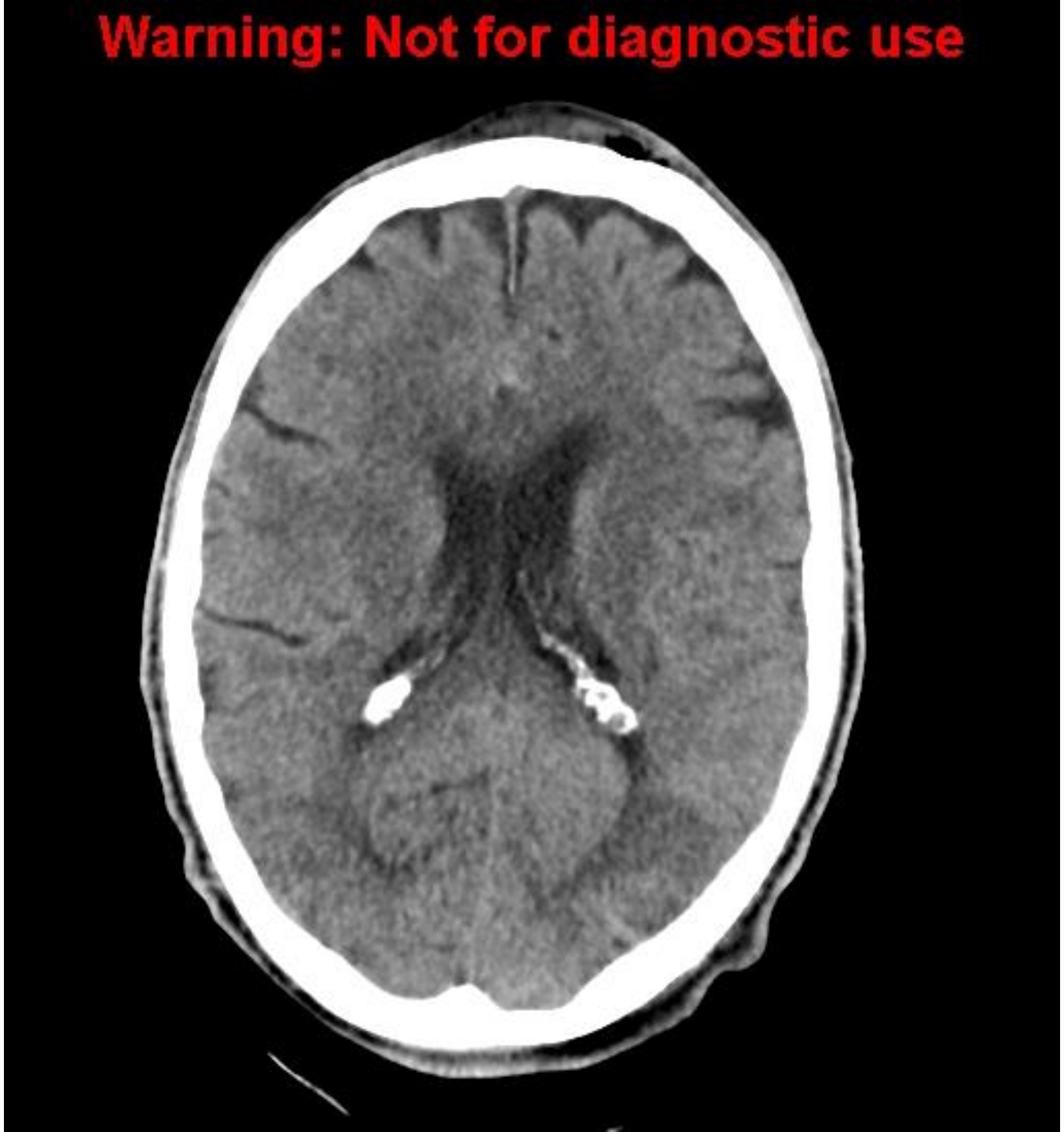
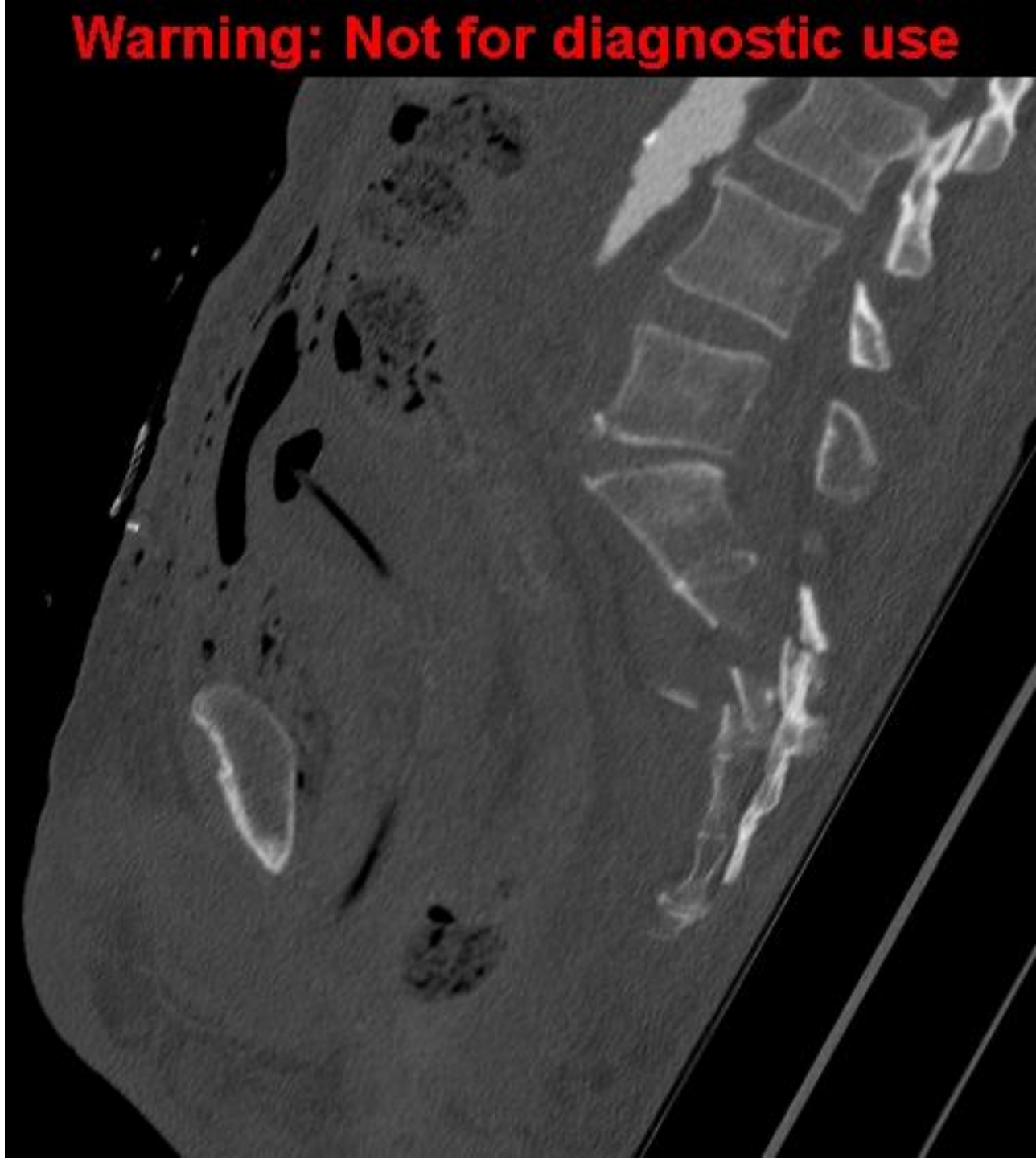
- CT B



Progress

- Code Crimson from CT
- Trauma Laparotomy:
  - No intraperitoneal bleed
  - Pelvic haematoma, packed
  - 3 rounds of MTP
- CT pan
  - Pelvic bleed, active blush
- Angioembolisation
  - Extremely unstable
  - Hb 29
  - Internal iliac artery colied



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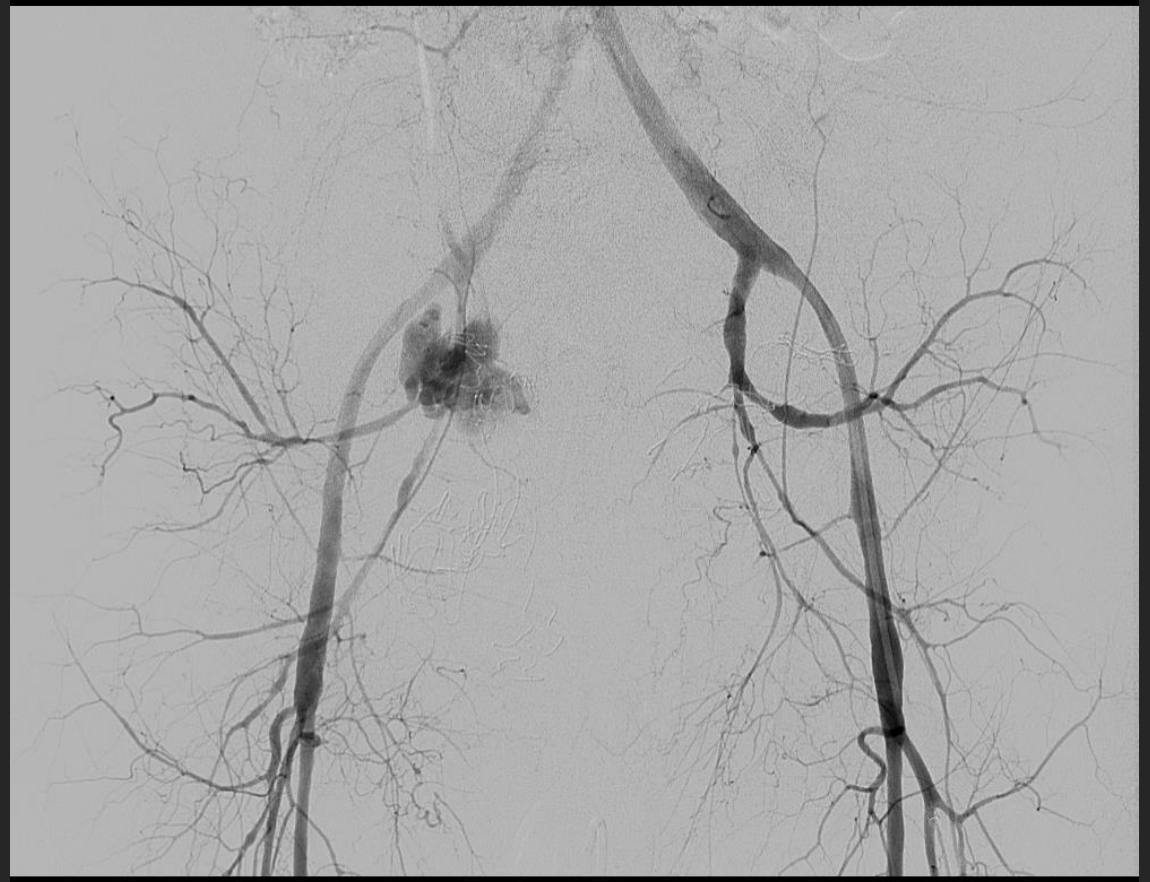

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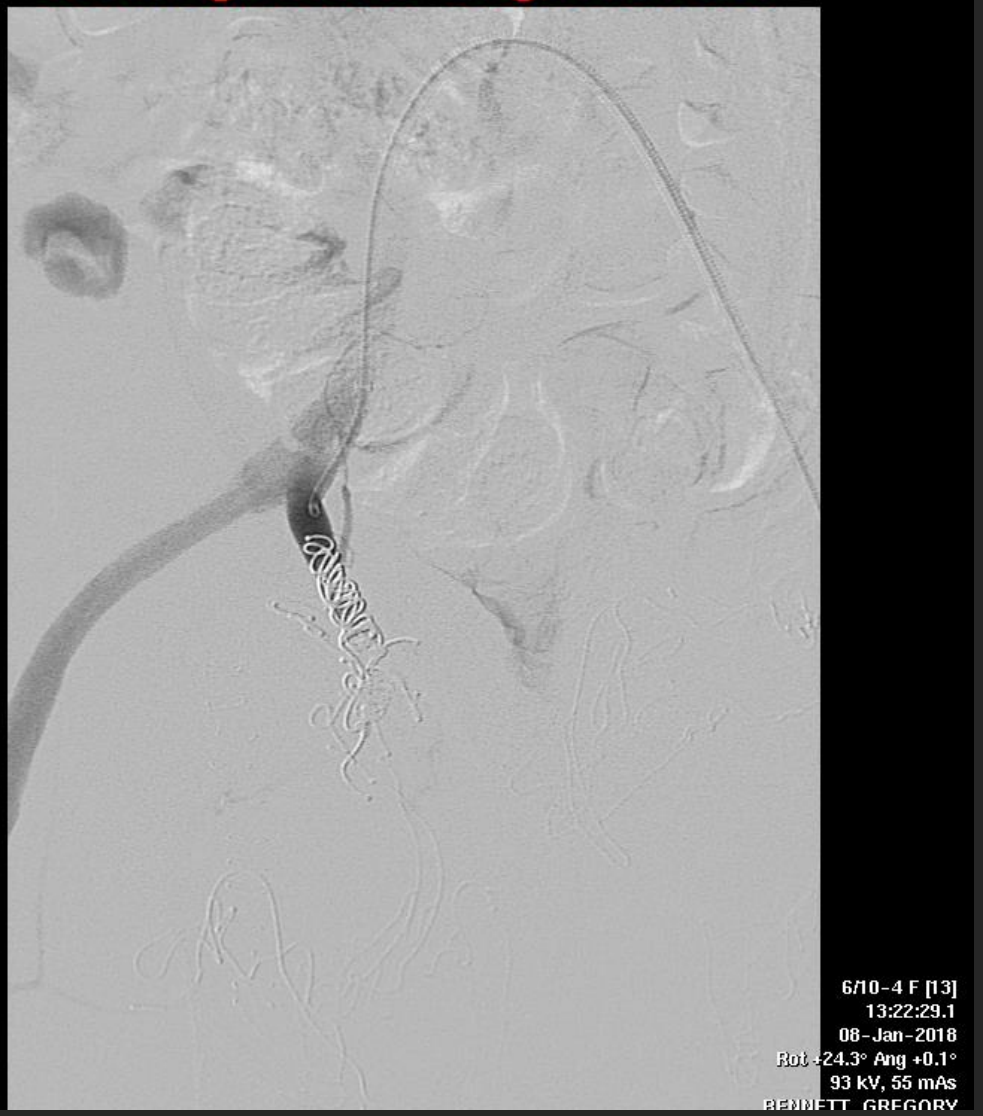

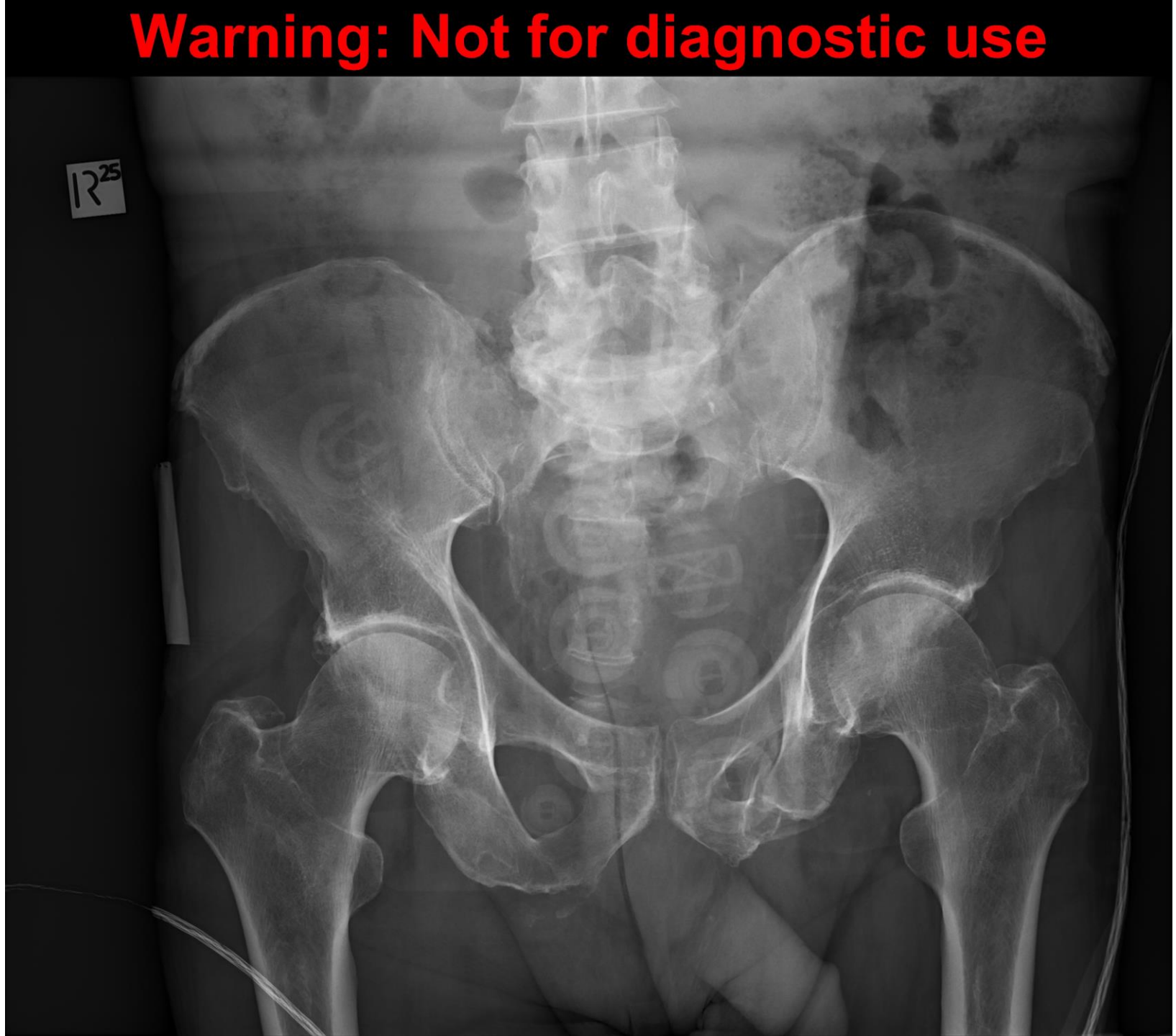
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Progress

- Stabilised in ICU
- Reviewed by multiple subspecialties
- Extensive discussions with patient's family and primary care upper GI surgery and medical oncology
- Palliative fixation of sacrum, ORIF lower limbs
- Started bleeding again post orthopaedic ORIF of pelvis
- Palliated
- Patient died day 3

Lessons learned

- Attribution bias to brain injury
- Look for bleeding, stop bleeding
- Assume pelvic as source of bleed if there are any fractures of pelvis
- Careful with pelvic XR interpretation in presence of pelvic binder
- Don’t dilly dally with access / bloods
- Should presence to terminal cancer, or suicidal mechanism make a difference?
- Deviation from trauma pathway may be required, but needs early senior communications