CASE A:

83yo M presenting via EMS. He had a fall down 4 steps and his wife heard a thump and found him at that bottom of the steps, unable to get up on his own.

Vitals with EMS:
BP 105/65, HR 98, O2 95% on 6L NRB, RR32, T 36C
GCS 14 (disoriented)
Obvious head trauma, in c-spine collar
Complaints of chest pain and back pain

1. **What parts of this case initially jump out to you as concerning?**

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_____
_____
_____
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_____
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High O2 needs – pulm contusion, PTX/HTX, rib fractures?
GCS 14 – baseline?
Signs head injury
Hypotensive and tachycardic based on age
Is he on antiplatelets/anticoagulants?
Cause of the fall?

2. **Would you do trauma team activation for this patient? Why or why not?**

_____
_____

BOX 184.1

Ohio Prehospital Geriatric Trauma Triage Indicators

- Trauma patients ≥70 years are defined as having suffered geriatric trauma.
- If an injured older adult has any of the geriatric indicators, he or she must be transported directly to a trauma center.

GERIATRIC ANATOMIC INDICATORS

- Injury sustained in two or more body regions

GERIATRIC PHYSIOLOGIC INDICATORS

- Glasgow Coma scale score <15 with a known or suspected traumatic brain injury
- Systolic blood pressure < 100 mm Hg

GERIATRIC MECHANISM INDICATORS

- Fracture of one or more proximal long bones (humerus or femur) sustained in a motor vehicle accident
- Pedestrian struck by a motor vehicle
- Falls from any height—including standing—with evidence of a traumatic brain injury

Adapted from State of Ohio, State Board of Emergency Medical Services, Trauma Committee: Geriatric trauma task force report and recommendations. www.publicsafety.ohio.gov/links/ems_geriatric_triage.pdf.

3. **How would you care for this patient initially at your hospital?**

_____
_____
_____
_____
_____
_____
_____

Trauma room
Monitors, IV access, vitals
ABCDE primary survey
POCUS
AMPLE history
Portable CXR, PXR
CT pan scan

4. **You get more history:**
   PMHX: hypertension, Afib, dyslipidemia, hypothyroid
   Meds: metoprolol, apixaban, atorvastatin, synthroid

   Initial Hgb 110, lactate 4.3
   BP 95/70
   CT head shows a small SDH with no significant midline shift

CT spine shows no fracture
CT Chest – 4 rib fractures, pulmonary contusion, trace hemothorax
Xray and CT Pelvis show lateral compression fracture.

What are your priorities, and next management steps?

_____
_____
_____
_____
_____

Reverse anticoagulation – PCC
Clear c-spine, remove immobilization (high risk pressure wounds, delirium)
Bind pelvis
d/w ortho vs IR vs gen surgery for management of unstable pelvic fracture
MHP (for hemorrhagic shock)
Analgesia
Non-urgent neurosurgery consult
ICU admission

CASE B:

Patient 1
76yo F with ground level fall, landed on her right side and hit her head on the bedside dresser and the fall. No LOC. No amnesia. Clinically has mild headache, with hematoma to the right side of her head. No midline c-spine tenderness. Clinically has a deformity to her right wrist. No chest, abdo/pelvis, or lower extremity tenderness/deformity.

Normally uses walker to ambulate. Lives in supportive living facility, has home care twice a week for bathing supports. Wasn't using the walker when she was trying to go from bed to bathroom.

PMHx:
HTN, hypothyroid, dyslipidemia, CAD

Meds:
ASA, ramipril, Synthroid, atorvastatin

Vitals: 140/85, HR 75, RR18, 94%RA, GCS 15

a. **What investigations would you order?**

_____

_____
_____

CT head, C-spine
CXR, pelvis XR, right wrist xray
Basic labs, lactate
Postural vitals

b. Would you order a CT head? Why or why not?

_____
_____
_____

c. Would you order C-spine imaging? Why or why not?

_____
_____
_____

d. Would your decision change if you were working at a site without a CT scanner? What if it was a 30min drive to nearest hospital with CT capabilities? 2 hour drive? 6 hour drive?

_____
_____
_____

e. Would your decision change if this patient was on an anticoagulant?

_____
_____

Patient 2:
82yo M with unwitnessed ground level fall, unwitnessed. LTC care staff found on floor beside his bed this morning. Care staff noticed some pain to his left hip when they were doing bed care and he won't walk today. He denies any symptoms at all on history, is unable to recount the events of the fall (baseline mentation). No signs of head injury. No midline c-spine tenderness. Clinically has mild tenderness to left hip and shortening. No chest or abdo/pelvis tenderness/deformity.

He normally uses a walker to ambulate, but often doesn't due to his dementia. He is cognitively at his baseline (GCS 14). Lives in LTC.

PMHx:
HTN, CHF, dyslipidemia, GERD, Alzheimer's dementia

Meds:
Rosuvastatin, Lasix, amlodipine, pantoprazole

Vitals: 130/85, HR 84, RR18, 95%RA, GCS 14

a. **What investigations would you order?**

_____
_____
_____

CT head, ?cspine
CXR, pelvis XR, left hip
Basic labs, lactate

b. **Would you order a CT head? Why or why not?**

_____
_____
_____

c. **Would you order C-spine imaging? Why or why not?**

_____
_____
_____

d. **Would your decision change if you were working at a site without a CT scanner? What if it was a 30min drive to nearest hospital with CT capabilities? 2 hour drive? 6 hour drive?**

_____
_____
_____

e. **Would your decision change if this patient was on an anticoagulant?**

_____
_____

Patient 3

78yo M with ground level fall, from home. He was outside in the garden and fell backwards when trying to stand up after prolonged kneeling. No LOC. Hit the back of his head as he landed on his backside. Able to ambulate afterwards. Denies prodromal symptoms. No voiced pain. He told his daughter, who brought him in to get checked out.

Clinically, has small abrasion to the occiput with no hematoma. No c-spine tenderness. Normal remaining exam.

Lives with his wife in a house, no gait aids. Independent with ADLs and IADLs.

PMHx:
HTN, GERD, dylipidemia

Meds:
Rosuvastatin, ramipril, pantoprazole

Vitals: 136/83, HR 64, RR18, 95%RA, GCS 15

a. **What investigations would you order?**

_____
_____
_____

b. **Would you order a CT head? Why or why not?**

_____
_____
_____

c. **Would you order C-spine imaging? Why or why not?**

_____
_____
_____

d. **Would your decision change if you were working at a site without a CT scanner? What if it was a 30min drive to nearest hospital with CT capabilities? 2 hour drive? 6 hour drive?**

_____
_____
_____

e. **Would your decision change if this patient was on an anticoagulant?**

_____
_____