HEAD INJURY - Adults

HISTORY

- Mechanism
- Loss of consciousness
- Persistent vomiting – far more likely to have raised intracranial pressure (ICP)
- Constant, severe, generalized headache unrelieved by analgesia (esp if worsening)
- Prolonged amnesia – duration of amnesia correlates perfectly with likelihood and severity of subsequent disability. Remember, a patient presenting to the ED may still be in the amnesic state – check on them 30 mins later to see if they remember your name.
- Previous head injuries – the effects can be cumulative, especially in alcohol-dependent individuals who sustain recurrent falls.
- Anticoagulation
- Other injuries

EXAMINATION

- C spine and consider immobilization, (**link** to c-spine imaging guidance) **(ANY UNCONSCIOUS PT WITH A HEAD INJURY HAS A CSPINE INJURY UNTIL PROVEN OTHERWISE)**
- A, B, C
- GCS
- CN exam and pupils
- Check limb power and sensation
- Any boggy haematoma
- Basal skull fracture signs - Battles sign, haemotypanum, CSF rhinorrhoea or panda eyes?
- Lacerations
- If nose injury check for septal haematoma
- Any other injuries to rest of body
- Observations **including BM**

Remember if this is an assault you may have to stand by your notes in court so document clearly and thoroughly (as we should for all patients)

IMAGING

- CT head if required (see **link**)
- If concern about facial bones and already getting a CT head then ask for a CT of facial bones too
- If not requiring a CT head then XR facial bones if required
- CT C spine if required (see guidelines for recommendations)

MANAGEMENT

- Discharge if no indication for CT head, pt is GCS 15, medically well and has a responsible adult to look after them for the next 24 hours. Provide written and verbal head injury advice including red flags and concussion advice.
- If CT head abnormal follow CT head pathway (see **link**)
- If concern medical cause for head injury or medically unwell admit to AMU
- If patient has no one to be discharged with, are awaiting sobriety or you wish to observe them for a period then consider the observation ward.

POST CONCUSSION SYNDROME

- Characterized by ongoing problems with headache, nausea, blurring of vision, irritability, concentration, memory or sleep disturbance
- Advise patients about brain rest and gradual return to ADLs and to see their GP in 2 weeks if not improving
- Advise about physical rest and Return to Play
- If very severe symptoms can be referred to neuro rehab but discuss this with a senior
- Provide the ED head injury leaflet and websites like headway.org.uk, and headOn are good

Isolated head injury (16yr+) Imaging

Addressograph, or

Name

DOB.

Unit No./CHI

NHS Lothian

- **Do not use for Injuries >24 hours old or superficial injuries to face.**
- **Do not attribute reduced GCS to intoxication with alcohol or substances until significant brain injury is excluded**

GCS Eye: Verbal: Motor: Time of injury:

Patients with the following features should have CT **within one hour <u>of arrival</u>** to ED:

GCS < 13 at triage	□
GCS < 15 two hours after the injury	□
Open or depressed skull fracture	□
Signs of skull base fracture*	□
Post-traumatic seizure	□
>1 discrete episode of vomiting	□
Focal neurological deficit**	□

Patients with the following features should receive scan within eight hours **<u>of injury</u>:**

LOC and/or amnesia *WITH* any of:

- Retrograde amnesia >30 minutes □
- Coagulopathy*** □
- Anticoagulated/clopidogrel □
- Dangerous mechanism**** □
- Age ≥65 □

*Clear fluid from ears/nose, bleeding from ears, black eye(s) without local trauma, Battle's sign

**Difficulties Speaking/reading/writing/walking, abnormal reflexes/sensation/balance, weakness, visual loss,

***Includes platelets below 100, haemophilia, Cirrhosis, or other bleeding disorders,

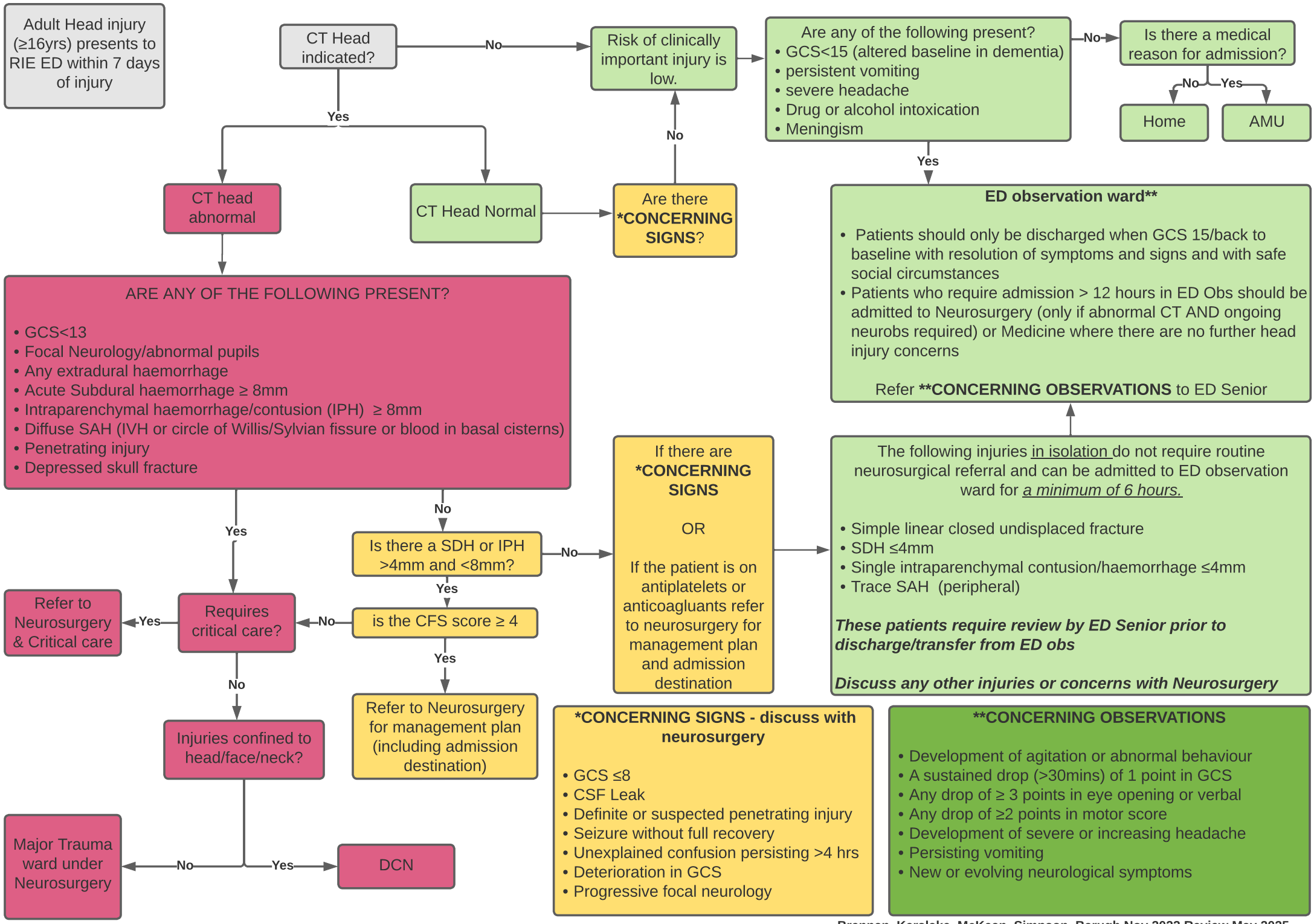
****Pedestrian vs. cyclist or motor vehicle, ejection from motor vehicle, fall >1m or >5 stairs

UPDATE 2023: *Do not scan patients from triage solely because of anticoagulation/clopidogrel* (Consider scanning and/or admission in patients with risk factors (pre-existing cognitive impairment, other injuries, No supervision, cause of incident, risk of further falls). For other patients use shared decision making if discharging without a scan (d/w ST4+).

ACTION AT TRIAGE:

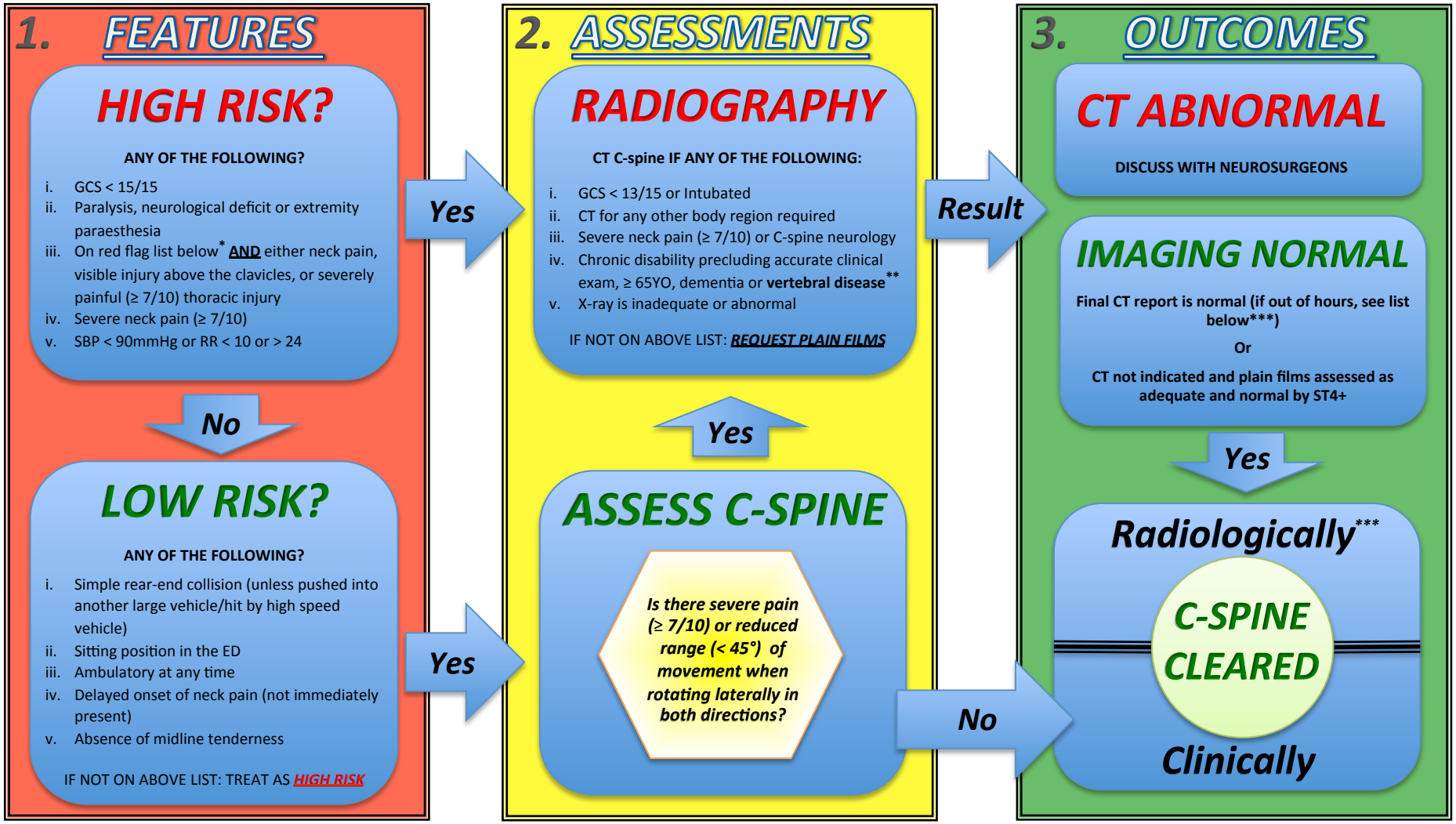
1. **If any clinical features above present at triage then speak to Dr to order CT head**
2. The Dr can phone 23797 immediately after requesting to see if slot available.

Refer to head injury pathway on EMIBANK for ongoing management



Brennan, Kerslake, McKean, Simpson, Barugh Nov 2023 Review May 2025

ADULT (≥ 16YO) BLUNT TRAUMA PATIENTS WITH A MECHANISM THAT MAY HAVE INJURED THE NECK



Red Flag List*

1. Fall from > 1m or down ≥5 stairs
2. Axial load to head (eg. diving) or a bicycle collision
3. RTC with combined speed > 60mph or rollover; ejection from vehicle; motorised recreational vehicle accident
4. ≥ 65 YO or **vertebral disease****
5. Injury > 48 hours ago or re-attending with the same injury

Vertebral disease**

1. Ankylosing spondylitis
2. Rheumatoid arthritis
3. Spinal stenosis
4. Previous spinal surgery

C-SPINE cleared radiologically***

1. Alert patients (**not** obtunded/intubated) with a provisional, 'normal' CT report: C-Spine may be cleared clinically by ST4+ (document on TRAK)
2. Normal CT and severe neck pain (≥ 7/10), C-spine neurology, or restrictions of neck movement (< 45°) should remain immobilised and be considered for **MRI** after discussion with radiologist/neurosurgeon
3. Obtunded patients should be assessed clinically when alert, but this should not delay C-spine clearance