# Adult (>16 YO) Blunt Trauma Patients with Mechanism That May Have Injured the Neck

#### **Features**

#### High risk?

#### Any of the following?

- GCS of <15/15
- Paralysis, Neurological deficit or extremity paraesthesia
- On RED FLAG List below \*AND either neck pain, visible injury above the clavicles or severely painful (>7/10 thoracic injury)





#### Low Risk?

#### Any of the following?

- Simple rear-end collision (unless pushed into another large vehicle/hit by high speed vehicle
- Sitting position in the ED ii)
- iii) Ambulatory at any time
- iv) Delayed onset neck pain (not immediately present)
- Absence of midline tenderness V)

IF NOT ON THE ABOVE LIST, TREAT AS HIGH RISK



#### Red Flag List\*

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

#### **Assessment**

#### Radiography

#### **CT C-spine if ANY OF THE FOLLOWING**

- GCS <13/15 or intubated
- ii) CT for any other body region required
- iii) Severe neck pain (>7/10 or C-spine neurology
- Chronic disability precluding accurate clinical iv) exam >65 YO, dementia or vertebral disease \*\*
- X-ray, is inadequate or abnormal. Patient may not V) need CT unless there are high risk features.

#### IF NOT ON ABOVE LIST: REQUEST PLAIN FILMS



(>7/10 or reduced range (<45\*) of movement when rotating laterally in both directions?

- 2. Rheumatoid arthritis

#### **Outcomes**

#### **CT Abnormal**

Discuss with neurosurgeons\*\*\*\*

\*\*\*\*The following injuries do not require referral or follow up and should be managed with analgesia

- spinous process fractures not involving the lamina
- transverse process fractures not involving the facet
- end plate fractures without any loss of vertebral body height

#### **Imaging Normal**

Consultant radiologist final CT report is normal (if out of hours, see list below\*\*\*)

#### Or

**RESULT** 

NO

CT not indicated and plain films assessed as adequate and normal by ST3+



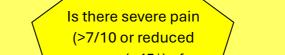
## Radiologically\*\*\*

**C-SPINE CLEARED** 

# Clinically

C-spine cleared radiologically\*\*\*

- 1. Patients fit for general ward/discharge with provisional, typed, 'normal' CT report, may have C-Spine cleared clinically by ST3+ (this must be documented)
- 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 should not delay C-spine clearance



### Veretebral disease\*\*

- 1. Ankylosing spondylitis
- 3. Spinal stenosis
- 4. Previous spinal injury