

Canadian C-Spine Rule

Clinically clears cervical spine fracture without imaging in alert, stable trauma patients.

PEARLS AND PITFALLS

Only use in alert, stable trauma patients!

Detects ~99-100% of significant C-spine injuries

Don't forget the exclusion criteria!

Non-trauma pts | GCS <15 | Unstable vital signs | Age <16 y |
Acute paralysis | Known vertebral disease | Prev. c-spine injury

Most useful in patients with midline tenderness
(and therefore excluded from NEXUS criteria)

Access the clinical tool:



1. Any high-risk factor which mandates radiography?

Age ≥65 years
or
Dangerous mechanism*
or
Paresthesias in extremities

No

Yes

2. Any low-risk factor which allows safe assessment of range of motion?

Simple rearend MVC**
or
Sitting position in ED
or
Ambulatory at any time
or
Delayed onset of neck pain***
or
Absence of midline c-spine tenderness

No

Yes

No

3. Able to actively rotate neck?

45° left and right

Yes

No
radiography

Radiography

*Dangerous Mechanism:

- Fall from elevation ≥3 feet or 5 stairs
- Axial load to head, e.g. diving
- MVC high speed (>100 km/hr), rollover, ejection
- Motorized recreational vehicles
- Bicycle collision

**Simple rearend MVC excludes:

- Pushed into oncoming traffic
- Hit by bus or large truck
- Rollover
- Hit by high speed vehicle

***Delayed:

- i.e., not immediate onset of neck pain

Primary Resource

Stiell IG, Wells GA, Vandemheen KL, Clement CM, Lesiuk H, De Maio VJ, Laupacis A, Schull M, McKnight RD, Verbeek R, Brison R, Cass D, Dreyer J, Eisenhauer MA, Greenberg GH, MacPhail I, Morrison L, Reardon M, Worthington J. The Canadian C-spine rule for radiography in alert and stable trauma patients. JAMA. 2001 Oct 17;286(15):1841-8. doi: 10.1001/jama.286. 15. 1841. PMID: 11597285.