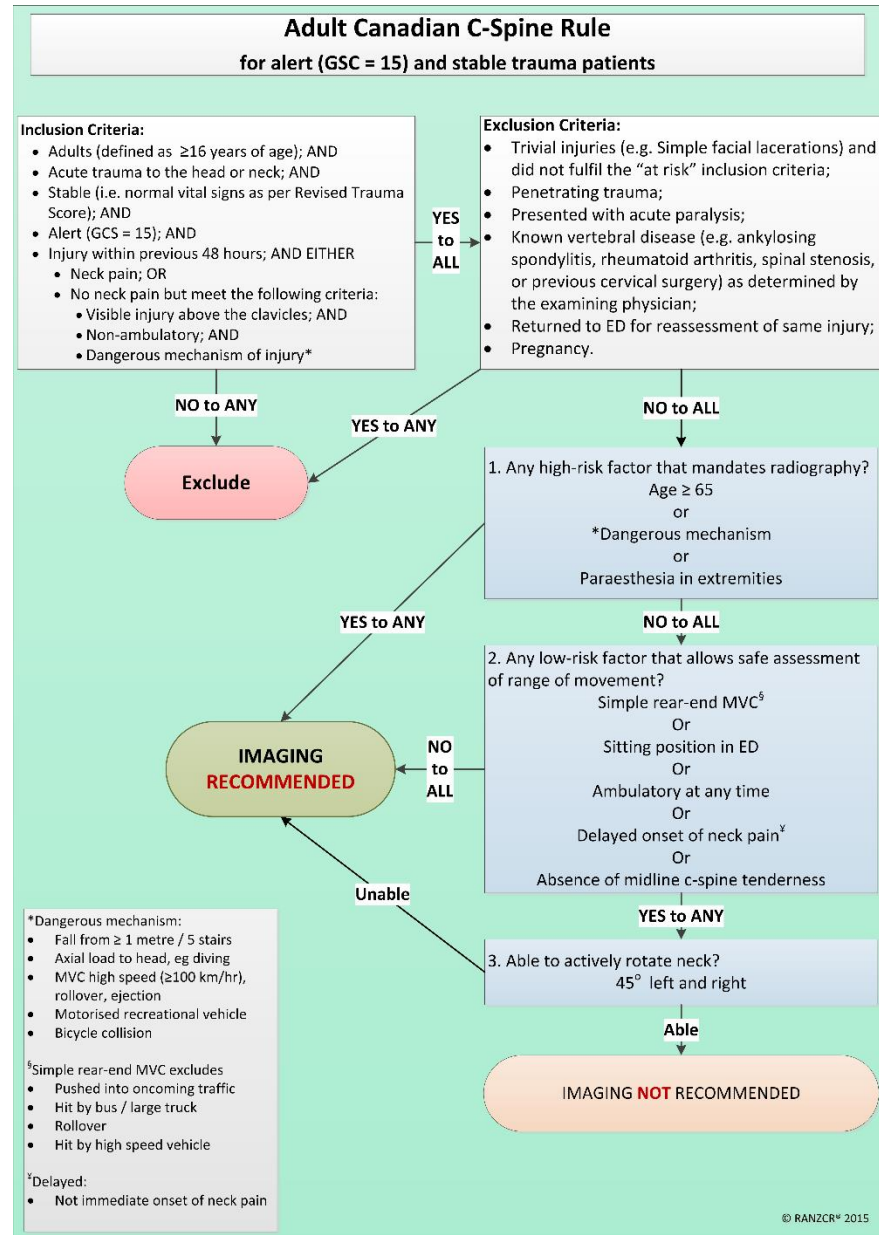


## Canadian C-Spine Rule

### Algorithm:



### Summary Statement:

The Canadian C-Spine Rule (CCR) evolved from a landmark study aimed at unifying the approach to emergency department decision-making in cervical spine assessment for alert and stable patients, to identify ‘clinically important’ cervical spine injury defined as:

“any fracture, dislocation or ligamentous instability evident on radiographic imaging *except* isolated injuries including osteophytic avulsion fracture, transverse process fracture exclusive of the facet, and spinous process fracture exclusive of the lamina, in **neurologically intact patients**”.

The authors reported the proportion of patients with clinically important injury as 1.7%, with 0.3% of patients identified as having clinically unimportant injury. A reduction in the ordering of cervical spine imaging by 15.5% occurred during the study. The sensitivity of the CCR was reported as 100% (95% CI: 98-100) and the specificity as 42.5% (95% CI: 40-44).

Following this study, the CCR was also found to be valid and effective when used in the pre-hospital setting by paramedics and in the emergency department when used by nursing staff. The CCR has consistently been found to have a sensitivity of > 99% and therefore it is unlikely that a serious cervical spine injury will be missed. Specificity has been found to range between 0.01 and 0.77.

**Only one direct comparison of the CCR and NEXUS has been completed. Based on this study the CCR should be recommend for use over the NEXUS as it is a more sensitive and specific rule.**

### References:

Stiell IG, Wells GA, Vandemheen KL, Clement CM, Lesiuk H, De Maio VJ, et al. The Canadian C-Spine Rule for radiography in alert and stable trauma patients. *JAMA*. 2001; 286(15): 1841-8.