University of California QPLE - Cervical Pain AUC 2021-08-04

Priority Clinical Area Coverage

This AUC reasonably addresses common and important clinical scenarios within the "Cervical or neck pain" Priority Clinical Area (PCA) and thus meets the minimum requirement for qCDSM to cover that PCA. However, by CMS definition of relevancy, it is not considered relevant to that PCA, as further described here https://qple.ucop.edu/auc

Condition and Score Appropriate - preferred (4) Appropriate (3) Radiology consultation recommended (2) Inappropriate (1) No AUC applicable (0)	Priors	Contra	X-ray C-spine	CT C-spine without	CT C-spine with	CT Myelogram	MR C-spine without	MR C-spine w-wo	CTAngio neck	CT Neck without	CT neck with	MR Neck w-wo	MR neck without	MR Angio	US Neck	Bone scan	CT/PET	Source - Evidence	OCEBM Evidence Grade*	References
Not for neck pain			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	UC opinion		
Neck trauma, penetrating			1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	UC opinion		
Neck trauma, penetrating		iod	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	UC opinion		
Neck trauma, penetrating		iod, gad or	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	UC opinion		
Neck trauma, 1+ NEXUS, high energy, dangerous mechanism			1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	NEXUS		
Neck trauma, 1+ NEXUS, high energy, dangerous mechanism, suspicion of vertebral artery injury	CT		1	1	1	1	1	1	4	1	1	1	1	3	1	1	1	NEXUS		
Neck trauma, 1+ NEXUS, high energy, dangerous mechanism, suspicion of vertebral artery injury	CT	iod	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	NEXUS		
Neck trauma, 1+ NEXUS, high energy, dangerous mechanism, suspicion of vertebral artery injury	CT	gad, iod	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	NEXUS	B	1-9
Neck trauma, 1+ NEXUS, high energy, dangerous mechanism, suspicion of vertebral artery injury	CT	iod, MR	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	NEXUS		
Neck trauma, 1+ NEXUS, high energy, dangerous mechansm, continued pain, ? Lig injury	CT		1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	NEXUS		
Neck trauma, 1+ NEXUS, high energy, dangerous mechanism, continued pain, ? Lig injury	CT	MR	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	NEXUS		
Suspected vascular injury			1	1	1	1	1	1	4	1	1	1	1	3	1	1	1	UC opinion		
Suspected vascular injury		iod	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	UC opinion		
Suspected vascular injury		gad, iod	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	UC opinion		
Suspected vascular injury		MR, iod	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	UC opinion		
Known cancer, suspected cervical bony met			3	4	1	1	1	4	1	1	1	1	1	1	1	3	3	UC opinion		
Known cancer, suspected cervical bony met		gad	3	4	1	1	4	1	1	1	1	1	1	1	1	3	3	UC opinion		
Known cancer, suspected cervical bony met		iod	3	4	1	1	1	4	1	1	1	1	1	1	1	3	3	UC opinion		
Known cancer, suspected cervical bony met		MR	3	4	1	1	1	1	1	1	1	1	1	1	1	3	3	UC opinion		
Known cancer, suspected cervical bony met		MR, iod	3	4	1	1	1	1	1	1	1	1	1	1	1	3	3	UC opinion		
Known cancer, suspected node involvement or local neck invasion			1	1	1	1	1	1	1	3	4	4	3	1	3	1	1	UC opinion		
Known cancer, suspected node involvement or local neck invasion		gad or MR	1	1	1	1	1	1	1	3	4	1	3	1	3	1	1	UC opinion		
Known cancer, suspected node involvement or local neck invasion		iod	1	1	1	1	1	1	1	3	1	4	3	1	3	1	1	UC opinion		
Known cancer, suspected node involvement or local neck invasion		MR, iod	1	1	1	1	1	1	1	4	1	1	1	1	3	1	1	UC opinion		
Suspected neck cancer (mass, hoarseness, swallowing)			1	1	1	1	1	1	1	3	4	4	3	1	3	1	3	UC opinion		
Suspected neck cancer (mass, hoarseness, swallowing)		gad or MR	1	1	1	1	1	1	1	3	4	1	3	1	3	1	3	UC opinion		
Suspected neck cancer (mass, hoarseness, swallowing)		iod	1	1	1	1	1	1	1	3	1	4	3	1	3	1	3	UC opinion		
Suspected neck cancer (mass, hoarseness, swallowing)		MR, iod	1	1	1	1	1	1	1	3	1	1	1	1	3	1	3	UC opinion		
Suspected infection, bone involvement (osteo)			3	4	1	1	1	4	1	1	1	1	1	1	1	3	1	UC opinion		
Suspected infection, bone involvement (osteo)		gad	3	4	1	1	4	1	1	1	1	1	1	1	1	3	1	UC opinion		
Suspected infection, bone involvement (osteo)		MR	3	4	1	1	1	1	1	1	1	1	1	1	1	3	1	UC opinion		
Suspected infection, neck soft tissue			1	1	1	1	1	1	1	1	4	4	1	1	3	1	1	UC opinion		
Suspected infection, neck soft tissue		gad	1	1	1	1	1	1	1	1	4	1	1	1	3	1	1	UC opinion		
Suspected infection, neck soft tissue		iod	1	1	1	1	1	1	1	1	1	4	1	1	3	1	1	UC opinion		
Suspected infection, neck soft tissue		gad, iod	1	1	1	1	1	1	1	3	1	1	1	1	3	1	1	UC opinion		
Suspected infection, intraspinal involvement			1	3	1	1	1	4	1	1	1	1	1	1	1	1	1	UC opinion		
Suspected infection, intraspinal involvement		gad	1	3	1	1	4	1	1	1	1	1	1	1	1	1	1	UC opinion		
Suspected infection, intraspinal involvement		MR	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Suspected pathological fracture (nontraumatic)			4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Suspected pathological fracture (nontraumatic)	XR		1	4	1	1	3	4	1	1	1	1	1	1	1	3	1	UC opinion		
Suspected pathological fracture (nontraumatic)	XR	gad	1	4	1	1	4	1	1	1	1	1	1	1	1	3	1	UC opinion		
Suspected pathological fracture (nontraumatic)	XR	MR	1	4	1	1	1	1	1	1	1	1	1	1	1	3	1	UC opinion		
Radicular neurodeficit (motor or decreased sensory)			1	1	1	3	4	1	1	1	1	1	1	1	1	1	1	UC opinion		
Radicular neurodeficit (motor or decreased sensory)		MR	1	3	1	4	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Radicular neurodeficit (motor or decreased sensory)		MR, iod	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Myelopathy			4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Myelopathy	XR		1	1	1	3	4	1	1	1	1	1	1	1	1	1	1	UC opinion		

Myelopathy	XR	MR	1	1	1	4	1	1	1	1	1	1	1	1	1	1	UC opinion		
Myelopathy	XR	MR, iod	1	3	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Neck trauma, 1+ NEXUS, low energy			4	1	1	1	1	1	1	1	1	1	1	1	1	1	NEXUS		
Neck trauma, 1+ NEXUS, low energy	XR		1	4	1	1	1	1	1	1	1	1	1	1	1	1	NEXUS		
Neck trauma, 1+ NEXUS, low energy	XR, CT		1	1	1	1	4	1	1	1	1	1	1	1	1	1	NEXUS	B	1-9
Neck trauma, 1+ NEXUS, low energy	XR, CT	MR	2	2	2	2	2	2	2	2	2	2	2	2	2	2	NEXUS		
Neck trauma, all NEXUS neg			1	1	1	1	1	1	1	1	1	1	1	1	1	1	NEXUS		
Congenital neck deformity			4	1	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Congenital neck deformity	XR		1	4	1	3	4	1	1	1	1	1	1	1	1	1	UC opinion		
Congenital neck deformity	XR	MR	1	1	1	4	1	1	1	1	1	1	1	1	1	1	UC opinion		
Congenital neck deformity	XR	MR, iod	1	3	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Neck pain 6 weeks or greater			4	1	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Neck pain 6 weeks or greater	XR		1	1	1	1	4	1	1	1	1	1	1	1	1	1	UC opinion		
Neck pain 6 weeks or greater	XR	MR	1	3	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		
Neck pain less than 6 weeks			1	1	1	1	1	1	1	1	1	1	1	1	1	1	UC opinion		

NEXUS Criteria

Cervical spine radiography is indicated for patients with neck trauma unless they meet ALL of the following criteria:

- No posterior midline cervical-spine tenderness
- No evidence of intoxication
- A normal level of alertness (score of 15 on the Glasgow Coma Scale)
- No focal neurologic deficit
- No painful distracting injuries

***AUC Evidence Grading**

The Oxford Centre for Evidence Based Medicine is used for assigning AUC grades. The grades are based on the level of evidence of the references according to the following:

Grade A = Level 1
Grade B = Level 2
Grade C = Level 3 or less

Cervical Pain AUC References and OCEBM Evidence Level

1. Bandiera, G., et al., *The Canadian C-spine rule performs better than unstructured physician judgment.* Ann Emerg Med, 2003. **42**(3): p. 395-402. Level 2

2. Coffey, F., et al., *Validation of the Canadian c-spine rule in the UK emergency department setting.* Emerg Med J, 2011. **28**(10): p. 873-6. Level 2

3. Denver, D., A. Shetty, and D. Unwin, *Falls and Implementation of NEXUS in the Elderly (The FINE Study).* J Emerg Med, 2015. **49**(3): p. 294-300. Level 2

4. Maung, A.A., et al., *Cervical spine MRI in patients with negative CT: A prospective, multicenter study of the Research Consortium of New England Centers for Trauma (ReCONECT).* J Trauma Acute Care Surg, 2017. **82**(2): p. 263-269. Level 2

5. Michaleff, Z.A., et al., *Accuracy of the Canadian C-spine rule and NEXUS to screen for clinically important cervical spine injury in patients following blunt trauma: a systematic review.* Cmaj, 2012. **184**(16): p. E867-76. Level 2

6. Morrison, J. and R. Jeanmonod, *Imaging in the NEXUS-negative patient: when we break the rule.* Am J Emerg Med, 2014. **32**(1): p. 67-70. Level 2

7. Pinheiro, D.F., et al., *Diagnostic value of tomography of the cervical spine in victims of blunt trauma.* Rev Col Bras Cir, 2011. **38**(5): p. 299-303. Level 2

8. Resnick, S., et al., *Clinical relevance of magnetic resonance imaging in cervical spine clearance: a prospective study.* JAMA Surg, 2014. **149**(9): p. 934-9. Level 2

9. Stiell, I.G., et al., *Implementation of the Canadian C-Spine Rule: prospective 12 centre cluster randomised trial.* Bmj, 2009. **339**: p. b4146. Level 1

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