

**Literature Search**  
**ACR Appropriateness Criteria®**  
**Acute Spinal Trauma**

Literature Search Performed on: 02/08/2024

Beginning Date: January 1996

End Date: January 2024

Database: Ovid MEDLINE(R) ALL <1946 to February 07, 2024>

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**Search Strategy**

- 1 Tomography, x-ray computed/ and wounds, nonpenetrating/ and cervical vertebrae/ (232)
  - 2 (Neck injuries/ and Tomography, X-ray computed/ and wounds, nonpenetrating/) or (Head Injuries, Closed/ and Spinal Fractures/ and Carotid Artery Injuries/) (112)
  - 3 ((Angiography, Digital Subtraction/ and Head Injuries, Closed/ and stroke/ and treatment outcome/) or Carotid Artery Injuries/) and Wounds, Nonpenetrating/ and Angiography, Digital Subtraction/ (20)
  - 4 (Lumbar Vertebrae/ and Spinal Injuries/ and Wounds, Nonpenetrating/ and Thoracic Vertebrae/) or (Whiplash Injuries/ and Spinal Fractures/ and Magnetic Resonance Angiography/ and Vertebral Artery/) or (Carotid Artery Injuries/ and Image Processing, Computer-Assisted/ and Wounds, Nonpenetrating/ and Tomography, X-Ray Computed/) (21)
  - 5 (serum inflammatory biomarkers following whiplash injury or Abscopal Effect in the Era of Cancer or Whiplash-associated disorder-advances or MRI in people with neck pain compared with pain or Cervical spine findings on MRI or indications for thoracolumbar imaging in blunt trauma patients).tw. (5)
  - 6 (screening for blunt cerebrovascular injury or Management of vertebral artery injuries).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] (23)
  - 7 (Blunt carotid artery injuries or Blunt carotid artery injuries).tw. (20)
  - 8 (blunt cerebrovascular injuries or diagnostic catheter cerebral angiography or Blunt carotid artery injuries or Blunt carotid artery injuries or treatment of thoracolumbar spine trauma).tw. (161)
  - 9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (521)
  - 10 limit 9 to (abstracts and english language and humans and yr="1996 -Current") (395)
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Literature Search Performed on: 07/12/2023

Beginning Date: January 2002

End Date: June 2023

Database: Ovid MEDLINE(R) ALL <1946 to July 11, 2023>

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**Search Strategy**

- 1 (CranioCerebral Trauma/ and stroke/ and Magnetic Resonance Angiography/) or (Cervical Vertebrae/ and Evidence-Based Medicine/ and Radiography/ and Wounds, Nonpenetrating/) or (Cervical Vertebrae/ and Spinal Fractures\*.mp. and Radiography/ and Spinal Injuries\*.mp.) (53)
- 2 Spinal Injuries\*.mp. and (Tomography, X-Ray Computed.mp. and Cervical Vertebrae/ and neck pain/) [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] (20)
- 3 Cervical Vertebrae/ and Magnetic Resonance Imaging/ and Spinal Injuries/ and Wounds, Nonpenetrating/ (76)
- 4 Cervical Vertebrae/ and Spinal Fractures\*.mp. and Radiography/ and Spinal Injuries\*.mp. (45)
- 5 Hospitalization/ and Wounds.mp. and Injuries/ and registries/ [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] (203)
- 6 (surgery of trauma practice management guidelines committee or development of a cervical spine clearance protocol or Outcomes of Patients With Negative Cervical Imaging or magnetic resonance imaging in cervical spine clearance or blunt cerebrovascular injuries missed by clinical risk or Efficacy of MRI for assessment of spinal trauma).tw. (9)
- 7 Head Injuries, Closed/ and Tomography, X-Ray Computed/ and Treatment Outcome/ (66)
- 8 Cervical Vertebrae/ and Magnetic Resonance Imaging/ and Neck Injuries/ and Wounds, Nonpenetrating/ (17)
- 9 Wounds, Nonpenetrating/ and Tomography, X-Ray Computed/ and Spinal Injuries/ and Immobilization/ and Spinal Injuries/ (11)
- 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (440)
- 11 limit 10 to yr="2002 -Current" (373)

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**Acute Spinal Trauma**

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Literature Search Performed on: 05/24/2023

Beginning Date: January 2002

End Date: April 2023

Database: Ovid MEDLINE(R) ALL <1946 to May 23, 2023>

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**Search Strategy**

- 1 Tomography, X-Ray Computed/ or Angiography, Digital Subtraction/ or Multidetector Computed Tomography/ (433131)
- 2 Spinal Injuries/ and Wounds, Nonpenetrating/ and Cervical Vertebrae/ (181)
- 3 1 and 2 (115)
- 4 Cervical Vertebrae/ and Magnetic Resonance Imaging/ and Spinal Injuries/ (325)
- 5 (Spinal Cord Injuries/ and Magnetic Resonance Imaging/ and Prognosis/ and Emergency Medical Services/) or (Carotid Artery Injuries/ and Radiography/ and Stroke/) or (Carotid Artery Injuries/ and Cerebral Angiography/ and Neck Injuries/ and Vertebral Artery/) (12)
- 6 Spinal Cord Injuries/ and Spinal Cord/ and Magnetic Resonance Imaging/ (427)
- 7 3 or 4 or 5 or 6 (808)
- 8 limit 7 to (abstracts and english language and humans and yr="2002 -Current") (443)
- 9 limit 8 to "all child (0 to 18 years)" (144)
- 10 8 not 9 (299)
- 11 limit 10 to case reports (53)
- 12 10 not 11 (246)
- 13 (Cervical Vertebrae/ and Immobilization/ and Spinal Injuries/) or (Radiography/ and Cervical Vertebrae/ and Decision Support Techniques\*.mp.) (167)
- 14 (Cervical Vertebrae/ and Practice Guidelines as Topic\*.mp.) or (Spinal Injuries/ and Cervical Vertebrae/ and Practice Guidelines as Topic\*.mp.) (189)
- 15 (Thoracic Vertebrae/ and Accidents, Traffic/ and Spinal Injuries/ and Lumbar Vertebrae/) or (Spinal Fractures/ and Thoracic Vertebrae/ and Wounds, Nonpenetrating/ and Tomography, X-Ray Computed/) (62)
- 16 (Spinal injuries/ and Thoracic Vertebrae/ and Wounds, Nonpenetrating/) or (Multiple Trauma/ and Radiography/ and Spinal Fractures/ and Cervical Vertebrae/) (39)
- 17 (Spinal Injuries/ and Decision Support Techniques\*.mp.) or (Multiple Trauma/ and Spinal Fractures/ and Cervical Vertebrae/ and Radiography/) (52)
- 18 (Range of Motion, Articular/ and Cervical Vertebrae/ and Radiography/ and Spinal Injuries\*.mp.) or (Whiplash Injuries/ and Magnetic Resonance Imaging.mp.) [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] (228)
- 19 (Musculoskeletal Pain/ and Pain Measurement\*.mp. and Disability Evaluation\*.mp.) or (Whiplash Injuries/ and Cervical Vertebrae/ and Neck Pain/ and Range of Motion, Articular/) (160)
- 20 (Whiplash Injuries/ and Neck Pain/ and Physical Therapy Modalities\*.mp.) or ((neck pain/ or Cervical Vertebrae/) and Whiplash Injuries/ and Accidents, Traffic\*.mp.) (349)
- 21 (Carotid Artery Injuries/ and Radiography/ and Wounds, Nonpenetrating/) or (Angiography/ and Cerebrovascular Trauma/ and Wounds, Nonpenetrating/) (69)
- 22 (Spinal Injuries/ and Magnetic Resonance Angiography/) or (Neck Injuries/ and Spinal Injuries/ and Cerebral Angiography/) (24)
- 23 (Cerebrovascular Trauma/ and Head Injuries, Closed/) or (spinal Diseases/ and Spinal Injuries/ and Magnetic Resonance Imaging/) (76)
- 24 (Carotid Artery, Internal, Dissection/ and Cerebral Angiography\*.mp. and Magnetic Resonance Angiography\*.mp.) or (Brain Injuries/ and Cerebral Angiography/ and Wounds, Nonpenetrating/ and Tomography, X-Ray Computed/) (69)
- 25 (Spinal Fractures/ and Ligaments/ and Magnetic Resonance Imaging\*.mp.) or (Spinal Injuries/ and Wounds, Nonpenetrating/ and Radiography/) or (Algorithms\*.mp. and Cervical Vertebrae/ and Spinal Injuries/ and Tomography, X-Ray Computed/) (104)
- 26 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 (1472)
- 27 limit 26 to (abstracts and english language and humans and yr="2016 -Current") (276)

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28 limit 27 to "all child (0 to 18 years)" (64)  
29 27 not 28 (212)  
30 limit 29 to case reports (15)  
31 29 not 30 (197)  
32 12 or 31 (433)

**Summary**

Source	#Unique Refs	#Retained Refs
Old bibliography	112	73
Literature Search(es)	1005	63
Author Added	10	6
Supporting Docs	6	4
Total		146

References from the literature search that were not retained had a poor study design, were not relevant to the topic, or had unclear or biased results.

2 of the author added references were outside the search date range.