

Magerl Classification

This newer and more elaborate classification ¹⁾ is based on the three column concept by Denis (see [Denis classification](#)) ²⁾, and the [McAfee classification](#) ³⁾. It relies exclusively on CT findings.

A - Compression injuries

A1 Impaction fractures A1.1 Endplate impaction A1.2 Wedge impaction A1.3 Vertebral body collapse

A2 Split fractures A2.1 Frontal split fracture A2.2 Sagittal split fracture A2.3 Pincer fracture

A3 Burst fractures A3.1 Incomplete burst fracture A3.2 Burst split fracture A3.3 Complete burst fracture A3.3.1 Pincer A3.3.2 Flexion A3.3.3 Axial

B - Distraction injuries

B1 Predominantly transligamentous flexion-distraction injury B1.1 with transverse disc disruption B1.1.1 Flexion subluxation B1.1.2 Anterior dislocation B1.1.3 B1.1.1 or B1.1.2 the with fractures of the articular processes B1.2 with type A vertebral body fracture

B2 Predominantly osseous flexion-distraction injury B2.1 Transverse bicolun fracture B2.2 Posterior osseous disruption with transverse disc disruption B2.2.1 through the pedicles B2.2.2 through the interarticular portions (flexion spondylolysis) B2.3 with type A vertebral body fracture B2.3.1 through the pedicles B2.3.2 through the isthmus

B3 Anterior disruption through the disc B3.1 Hyperextension-subluxation B3.2 Hyperextension-spondylolysis B3.3 Posterior dislocation

C - Torsion injuries

C1 Rotation-compression injury C1.1 Impaction C1.2 Split C1.2 Burst

C2 Rotation-distraction injury C2.1 with transligamentous flexion-distraction C2.2 with transosseous flexion-distraction C2.3 with hyperextension-distraction

C3 Rotational shear injury

¹⁾

Magerl F, Aebi M, Gertzbein SD et-al. A comprehensive classification of thoracic and lumbar injuries. Eur Spine J. 1994;3 (4): 184-201.

²⁾

Denis F. The three column spine and its significance in the classification of acute thoracolumbar spinal injuries. Spine 1983. 8 (8): 817-31.

³⁾

McAfee PC, Yuan HA, Fredrickson BE et-al. The value of computed tomography in thoracolumbar fractures. An analysis of one hundred consecutive cases and a new classification. J Bone Joint Surg Am. 1983;65 (4): 461-73. J Bone Joint Surg Am

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