

Spine Instability Neoplastic Score (SINS)

- SINS is used to assess the stability of the spine in patients with metastatic spinal cord compression
- It has near-perfect inter- and intraobserver reliability in determining three clinically relevant categories of stability.
- The sensitivity and specificity of SINS for potentially unstable or unstable lesions were 95.7% and 79.5% respectively

- **Location**
 - 3 points: Junctional (C0-C2, C7-T2, T11-L1, L5-S1)
 - 2 points: Mobile spine (C3-C6, L2-L4)
 - 1 point: Semi-rigid (T3-T10)
 - 0 points: Rigid (S2-S5)
- **Pain relief with recumbency and/or pain with movement/loading of the spine**
 - 3 points: Yes
 - 1 point: No (occasional pain but not mechanical)
 - 0 points: Pain free lesion
- **Bone lesion**
 - 2 points: Lytic
 - 1 point: Mixed (lytic/blastic)
 - 0 points: Blastic
- **Radiographic spinal alignment**
 - 4 points: Subluxation / translation present
 - 2 points: De novo deformity (kyphosis / scoliosis)
 - 0 points: Normal alignment
- **Vertebral body collapse**
 - 3 points: >50% collapse
 - 2 points: <50% collapse
 - 1 point: No collapse with >50% body involved
 - 0 points: None of the above
- **Posterolateral involvement of the spinal elements** (facet, pedicle or costovertebral joint fracture or replacement with tumor)
 - 3 points: Bilateral
 - 1 point: Unilateral
 - 0 points: None of the above

Interpretation of the SINS score

- sum score 0-6: stable
- sum score 7-12: indeterminate (possibly impending) instability
- sum score 13-18: instability
- SINS scores of 7 to 18 warrant surgical consultation.

Reference

- Fisher CG, DiPaola CP, Ryken TC, Bilsky MH, Shaffrey CI, Berven SH, et al. A novel classification system for spinal instability in neoplastic disease: an evidence-based approach and expert consensus from the Spine Oncology Study Group. *Spine* 2010; 35:E1221-9.