AO Spine Sacral Injury Classification System

### Type A: Lower Sacroccocygeal Injuries
- No impact on posterior pelvic or spine-pelvic instability
- **A1** Coccygeal or compression vs ligamentous avulsion fractures
- **A2** Non-displaced transverse fractures below the S-I joint
  - No implications on stability
  - Low likelihood of cauda equina injury
- **A3** Displaced transverse fractures below the S-I joint
  - Higher likelihood of neuro injury than A1 or A2 (displacement)
  - May possibly benefit from reduction and stabilization

### Type B: Posterior Pelvic Injuries
Primary impact is on posterior pelvic stability
- **B1** Central Fracture—involves spinal canal
  - Longitudinal injuries only—rare type of Denis Zone III injuries
  - Low likelihood of neurological injury
- **B2** Transalar Fracture—does not involve foramina or spinal canal
  - Unilateral Denis Zone I injury
- **B3** Transforaminal Fracture—involves foramina but not spinal canal
  - Denis Zone II injury

### Type C: Spino-Pelvic Injuries
Spino-pelvic instability
- **C0** Nondisplaced sacral U-type variant
- **C1** Sacral U-type variant without posterior pelvic instability
  - Any unilateral B-subtype where ipsilateral superior S1 facet is discontinuous with medial part of sacrum
  - May impact spino-pelvic stability (Isler)
- **C2** Bilateral complete Type B injuries without transverse fracture
  - More unstable and higher likelihood of neuro injury than C1
- **C3** Displaced U-type sacral fracture
  - Worst combination of instability and likelihood of neuro injury
  - Displaced transverse sacral fracture = canal compromise

### Sacral Fractures—Overview
Hierarchical system progressing from least to most unstable
- **Type A** Lower Sacroccocygeal Injuries
  - No impact on posterior pelvic or spine-pelvic instability
- **Type B** Posterior Pelvic Injuries
  - Primary impact is on posterior pelvic stability
- **Type C** Spino-Pelvic Injuries
  - Spino-pelvic instability

### Neurology

### Modifiers
- **Type**
  - N0: Neurological impact
  - M0: Soft tissue injury
  - M1: Transient neurological deficit
  - M2: Metabolic bone disease
  - M3: Anterior pelvic ring injury
  - M4: Sacroiliac joint injury
- **Level**
  - L0: Cannot be assessed
- **Type**
  - A: Central
  - B: Transalar
  - C: Transforaminal

### Classification Nomenclature
- **Primary Injury**
  - B3; N1, M3
  - Neurological status and modifiers

Further information: www.aospine.org/classification