### OF 1
No deformation (vertebral body edema in MRI-STIR)
- Typically not visible on x-rays: chance to find on MRI

### OF 2
Deformation of one endplate without or with only minor posterior wall involvement
- With posterior wall < 1/5 involvement

### OF 3
Deformation of one endplate with distinct posterior wall involvement
- With posterior wall > 1/5 involved

### OF 4
Deformation of both endplates with/without posterior wall involvement
- Loss of vertebral frame structure
- Vertebral body collapse
- Pincer type fracture

### OF 5
Injuries with anterior or posterior tension band failure
- Injuries with signs of distraction, rotation, or translation
- Hyperextension with anterior tension band failure
Algorithm for morphologic classification

START → Failure of anterior/posterior tension band?
  → YES → OF 5
  → NO

  → Deformity of both endplates with/without posterior wall involvement?
    → YES → OF 4
    → NO

    → Deformity of one endplate?
      → YES → Distinct posterior wall involvement?
        → YES → OF 3
        → NO → OF 2
      → NO → OF 1
    → NO → No injury

Modified score for therapeutic decision making in OF*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphology (OF 1-5)</td>
<td>1-5</td>
<td>2-10</td>
</tr>
<tr>
<td>Severity of Osteoporosis</td>
<td>T-Score &lt; -3 or qCT: HU ≤ 90</td>
<td>1</td>
</tr>
<tr>
<td>Deformity Progression</td>
<td>Yes, No</td>
<td>1, -1</td>
</tr>
<tr>
<td>Pain (under analgesia)**</td>
<td>VAS ≥ 5, &lt; 5</td>
<td>1, -1</td>
</tr>
<tr>
<td>Neurological Symptoms (N2-N4)</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Mobilisation (under analgesia)</td>
<td>No, Yes</td>
<td>1, -1</td>
</tr>
<tr>
<td>Health Status</td>
<td>ASA &gt; 3, ***mFI &gt; 2, Anticoagulation</td>
<td>Each -1, Maximum -2</td>
</tr>
</tbody>
</table>

0 points if a parameter is unknown or not determinable; 0–5 points = Conservative therapy; 6 points = Conservative therapy or surgery; > 6 points = Surgery.

* The severity score system has not been validated yet and should be used as a reference only.
** According to step II WHO pain ladder.
*** 5-item modified frailty index (mFI) = COPD, or recent pneumonia; Congestive heart failure; Functional status (not independent); Hypertension requiring medication; Diabetes mellitus.