

Consensus Items: Prevention of Wrong Level Surgery

Pre-op

- Use standard vertebral numbering (SDSG)
 - Exception: Use C2 (axis) for cervical level counting
- Document the **operative plan, including levels, in the pre-op note**
- Discuss **aberrant anatomy and vertebral level selection at indications conference**

Intra-op

- Communicate the **pre-op plan, including levels, to OR staff in time-out**
- Localize with **opaque marker after exposure at level** of the pedicle
- Obtain **ideal intra-operative images**
 - Region of interest in center
 - Remove extraneous metal
 - Include a known anatomical landmark (must be **visible** and **consistent** with preop imaging)
 - Orthogonal view
 - Radiopaque marker proximal to the LIV
- Consider a **radiographic time-out** to obtain **team consensus regarding the vertebral levels**
- Consider **consulting another surgeon or radiologist** if levels remain unclear

Unclear of Level

- If uncertain of levels, **optimize and/or repeat intra-operative imaging** with fluoroscopy or portable X-ray
- Consult another spine surgeon or radiologist** if levels remain unclear

- **Note:** An opaque marker at the level of the skin should **NOT** be relied upon