

Lateral Lumbar Interbody Fusion (LLIF)

Understanding Your Risks

This document outlines the risks and potential complication rates associated with **lateral lumbar interbody fusion (LLIF) with posterior pedicle screw fixation**. The following information is based on recent evidence from multicenter studies, systematic reviews, and national surveys.

Common Risks and Estimated Incidence:

- **Any complication:** 18–31.4% (includes both minor and major complications)[1][2][3]
- **Transient neurological symptoms (thigh/groin pain, numbness, hip flexor weakness):** 13–36% (most resolve within weeks to months)[1][2][3][4][5][6]
- **Persistent neurological deficit:** 1–4% (including femoral or non-femoral neuropraxia, motor neural injury)[1][2][3][4][6]
- **Psoas muscle weakness:** 2.7–4.3%[2][3][4][6]
- **Sensory nerve injury:** 5.1–27% (majority transient)[1][2][3][4][5][6]
- **Vascular injury:** 0.03–2% (major vascular injury is rare; segmental artery injury up to 2%)[3][4][6][7]
- **Visceral injury (bowel, ureter):** 0.03–0.6%[3][6][7]
- **Musculoskeletal (MSK) complications (cage migration, subsidence, endplate injury, facet violation):** 1.6–9.2% (cage migration 1.6%, subsidence 3.8%, facet violation 13.2%)[2][4][8][9]
- **Wound infection (superficial/deep):** 0.7–1.9%[2][3][4][10]
- **Reoperation (within 30–90 days):** 1–7.9%[3][4][6][11]
- **Ileus:** 1.0%[6]
- **Psoas hematoma:** 1.3%[4]
- **Aborted interbody placement:** 0.8%[4]

Serious or Rare Risks:

- **Major vascular injury:** 0.03%[3]

- **Bowel injury:** 0.03%[\[3\]](#)
- **Anterior longitudinal ligament rupture:** 2.3%[\[4\]](#)
- **Facet joint violation (with pedicle screw fixation):** 13.2% (grade 2 violation is less common, but can occur)[\[9\]](#)

Risk Factors for Increased Complications:

- Higher number of fused segments increases risk of overall complications[\[2\]\[8\]](#)
- Advanced age, higher ASA class, and comorbidities (diabetes, obesity, COPD, disseminated cancer) are associated with higher complication rates and poorer outcomes[\[3\]\[12\]](#)

Patient Acknowledgment: By signing below, the patient acknowledges understanding of the above risks, their estimated incidence, and the potential for both common and rare complications associated with lateral lumbar interbody fusion with posterior pedicle screw fixation. All questions have been answered to the patient's satisfaction.

Signature: _____ **Date:** _____

Patient Name: _____ **DOB:** _____

References

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