# **Anterior Lumbar Interbody Fusion**

# **CONSENT**

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

**Common Risks and Estimated Incidence:**

- **Any complication:** 10–26% (includes both minor and major complications)[1][2][3]

- **Vascular injury:** 3% (major vessel injury, including iliac vein/artery)[1][2][3]

- **Visceral injury (bowel, ureter):** 0.3–0.6%[2][3]

- **Neurological complications:** 4.1% (includes nerve root injury, cauda equina syndrome, or new/worsened deficit)[2]

- **Retrograde ejaculation (males):** 0.4–2.7% (higher at L5/S1, especially with anterior approach)[3]

- **Deep vein thrombosis (DVT)/pulmonary embolism (PE):** 0.65%[4]

- **Postoperative ileus:** 4.9%[4][5]

- **Surgical site infection (superficial/deep):** 1.4–5.8%[2][3]

- **Urinary tract infection:** 3.3%[2]

- **Pseudoarthrosis (nonunion):** 0.5% at 5 years with posterior fixation; higher without[1][6]

- **Reoperation (within 5 years):** 0.5% for nonunion, 6.2% for adjacent segment disease[1]

- **Readmission (within 30–90 days):** 4–7%[5][7]

**Serious or Rare Risks:**

- **Gastrointestinal complications (including bowel injury, ileus, or obstruction):** 4.9%[4]

- **Mortality:** 0.21%[4][6]

- **Myocardial infarction:** 0.4%[2]

- **Stroke:** 0.2%[2]

- **Sepsis:** 1.1%[5]

- **Incisional hernia:** 0.6%[2]

- **Hematoma/seroma requiring evacuation:** 1.4%[2]

**Risk Factors for Increased Complications:**

- Advanced age, higher BMI, higher ASA status, diabetes, tobacco use, and osteoporosis are associated with higher complication rates and poorer outcomes.[2][6]

- The risk of vascular injury is higher at the L4-L5 level and in revision cases.[3]

- The addition of posterior instrumentation reduces the risk of nonunion but may increase operative time and adjacent segment disease.[1][8]

| **Complication** | **Estimated Incidence (%)** | **Notes/Details** | **References** |
| --- | --- | --- | --- |
| Any complication | 10–26 | Minor and major combined | [1][4][8] |
| Vascular injury | 3 | Major vessel injury | [1][4][8] |
| Visceral injury | 0.3–0.6 | Bowel, ureter | [4][8] |
| Neurological complication | 4.1 | Nerve root, cauda equina, deficit | [4] |
| Retrograde ejaculation | 0.4–2.7 | Males, L5/S1, anterior approach | [8] |
| DVT/PE | 0.65 |  | [5] |
| Ileus | 4.9 |  | [5][6] |
| Surgical site infection | 1.4–5.8 | Superficial/deep | [4][8] |
| Urinary tract infection | 3.3 |  | [4] |
| Pseudoarthrosis (nonunion) | 0.5 | 5-year, with posterior fixation | [1][2] |
| Reoperation (5 years) | 0.5–6.2 | Nonunion/adjacent segment disease | [1] |
| Readmission (30–90 days) | 4–7 |  | [6][7] |
| GI complication | 4.9 | Bowel injury, ileus, obstruction | [5] |
| Mortality | 0.21 |  | [2][5] |
| Myocardial infarction | 0.4 |  | [4] |
| Stroke | 0.2 |  | [4] |
| Sepsis | 1.1 |  | [6] |
| Incisional hernia | 0.6 |  | [4] |
| Hematoma/seroma | 1.4 | May require evacuation | [4] |

**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 anterior 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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