

# A prospective study on the outcome of non-instrumented posterolateral fusion, instrumented posterolateral fusion and interbody fusion in isthmic spondylolisthesis.

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# Disclosures

NONE

# Background

- Various methods for the treatment of isthmic spondylolisthesis available
- The aim of this study was to compare the outcome after three different surgical techniques:
  - non-instrumented posterolateral fusion
  - instrumented posterolateral fusion
  - interbody fusion

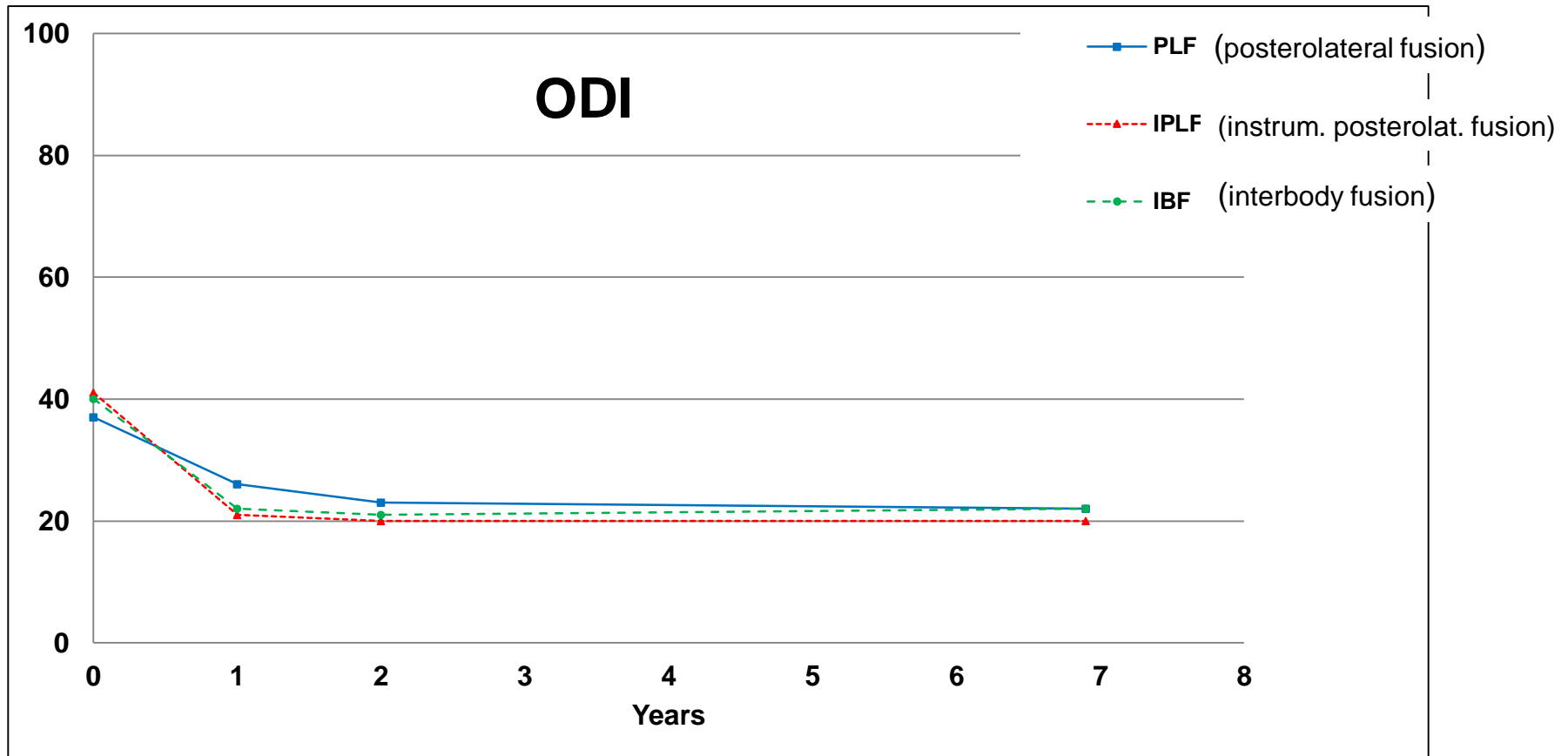


# Method

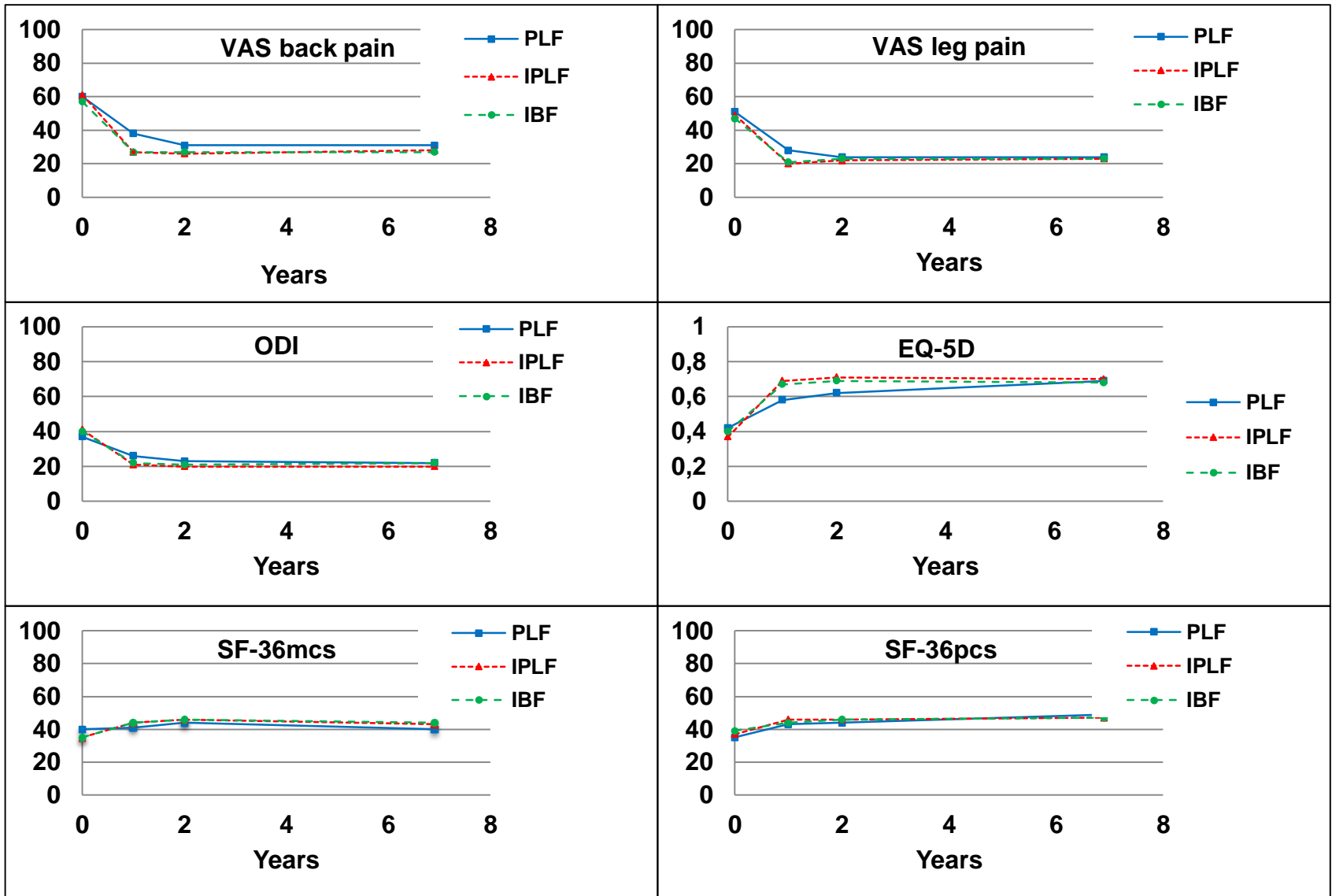
- Swespine register. 1999-2008.
- Validated. Excellent conformity.
- 765 unique cases identified.
- Compared baseline data and the outcome (PROMs) between the groups at 1, 2 and mean 6.9 years after surgery.
- Statistical analyses: analysis of covariance, adjusted for, smoking, employment status, level of fusion and the baseline value of the dependent variable
- Competing risks proportional hazards regression

- 1 yr
  - ➔ Instrumented fusion was associated with improved back pain and higher treatment satisfaction.
- 2 yr and 6.9 yr
  - ➔ Type of fusion did not affect outcome

# Results longitudinal data

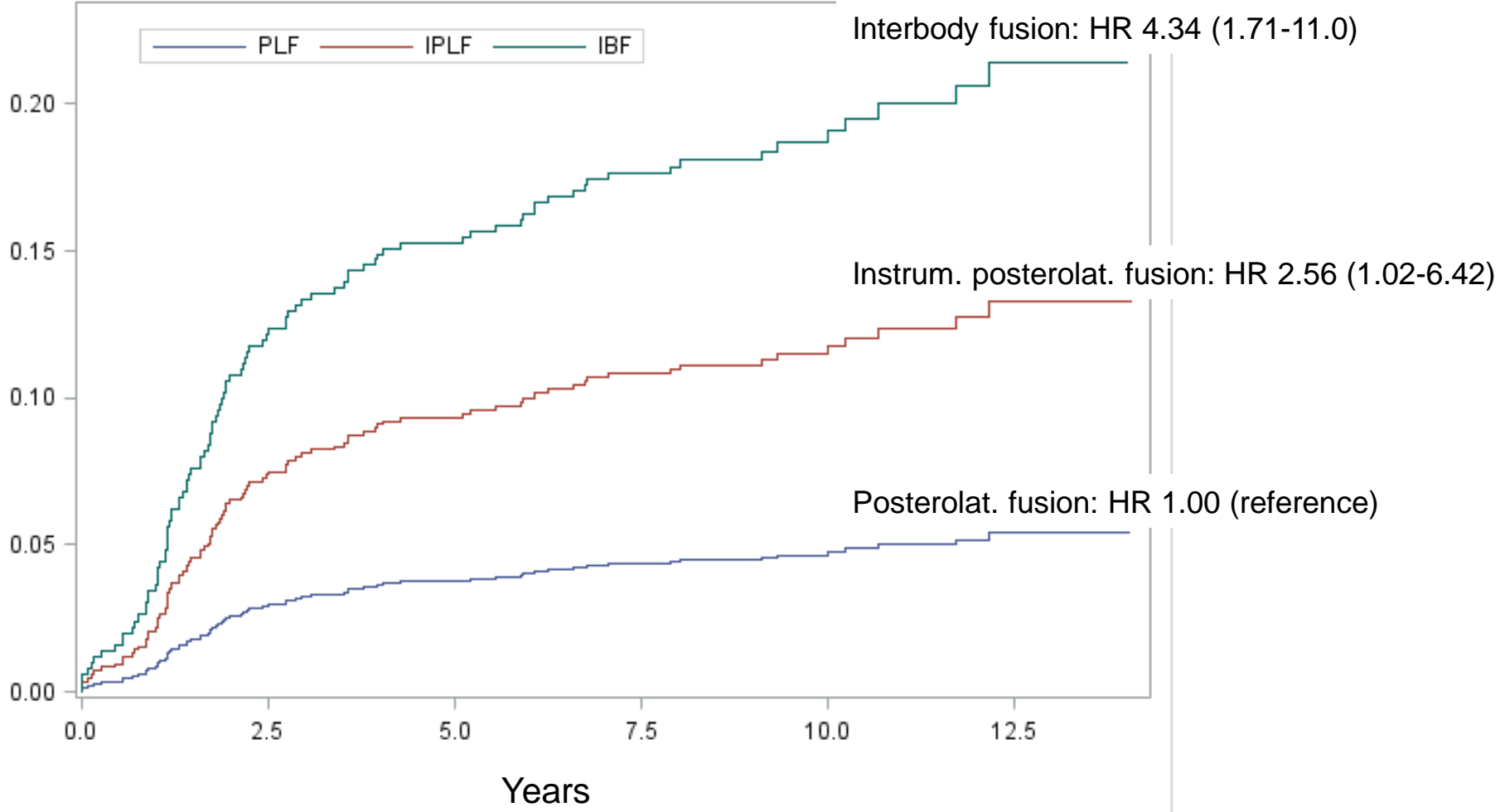


# Results



# Cumulative incidence function and competing risks proportional hazards regression (95% CI)

Probability





# Strength of this study

- Largest sample size to date on the topic
- Data is validated and has excellent conformity.
- Several well validated PROM questionnaires
- Long follow-up ( mean 6,9 years)
- Using a national quality register with a high coverage increases the generalizability of the results

# Conclusion

- Outcome independent of fusion technique at 2 and 6.9 years
- The risk for additional surgery after instrumented fusion was markedly increased compared to non-instrumented fusion.

**Thank you for your attention!**