

Risk Factors for Recurrence Following Incisional Hernia Repair: A Single-Centre Nested Case-Control Study

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INTRODUCTION

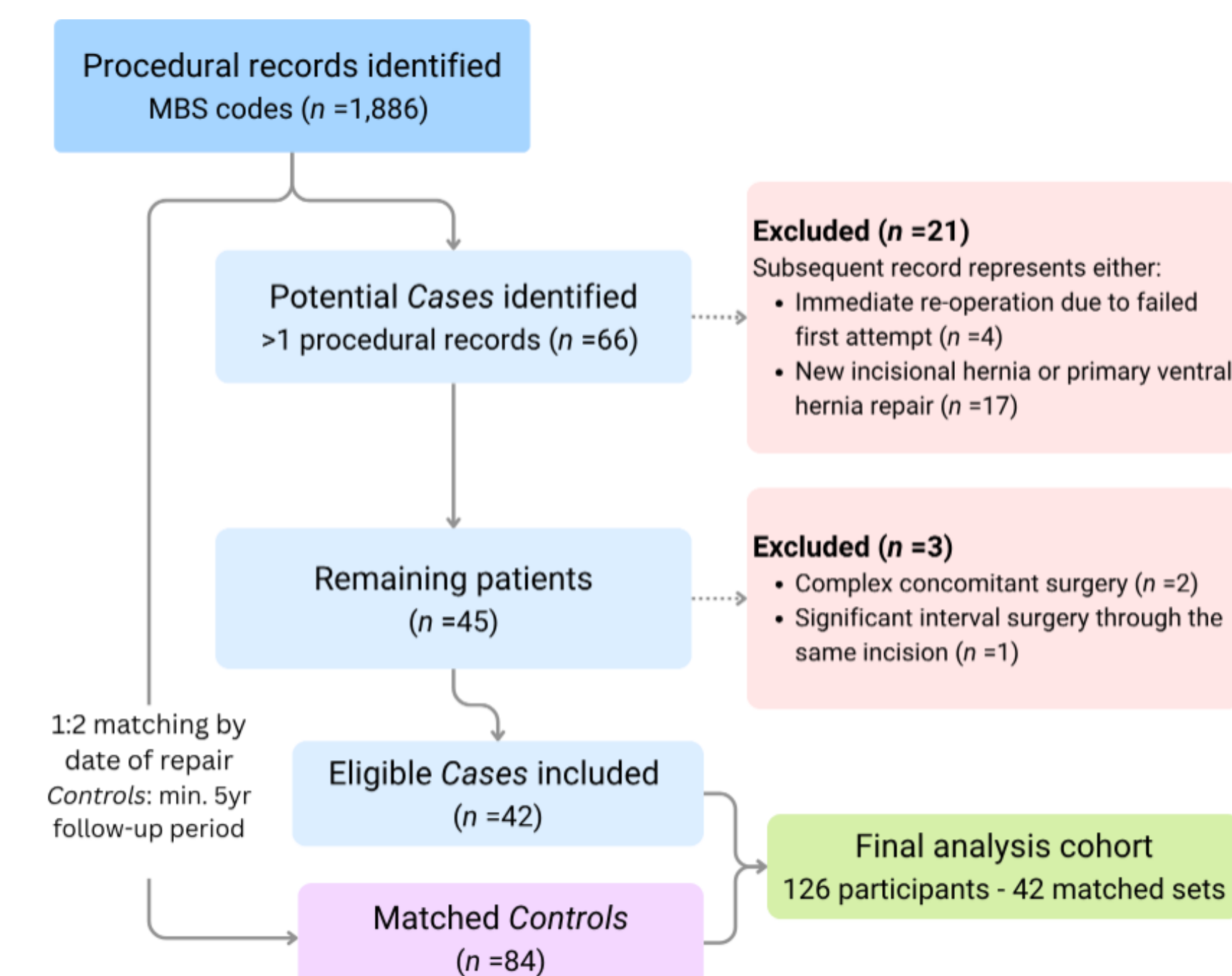
- Incisional hernia (IH) affects 2-20% of patients after abdominal surgery.^[1]
- Up to 32% recur at five years.^[2]
- Risk factor evidence is inconsistent.^[2-4]
- Local evidence is needed to tailor IH repair.

AIM:

Identify patient-, hernia- and procedure-related risk factors for IH recurrence.

METHODS

- Nested case-control study, Northern Health (Index Period: 2015-2020)
- Case: re-operation for IH recurrence
- Control: recurrence-free ≥ 5 years, matched
- Conditional logistic regression (clogit in R)



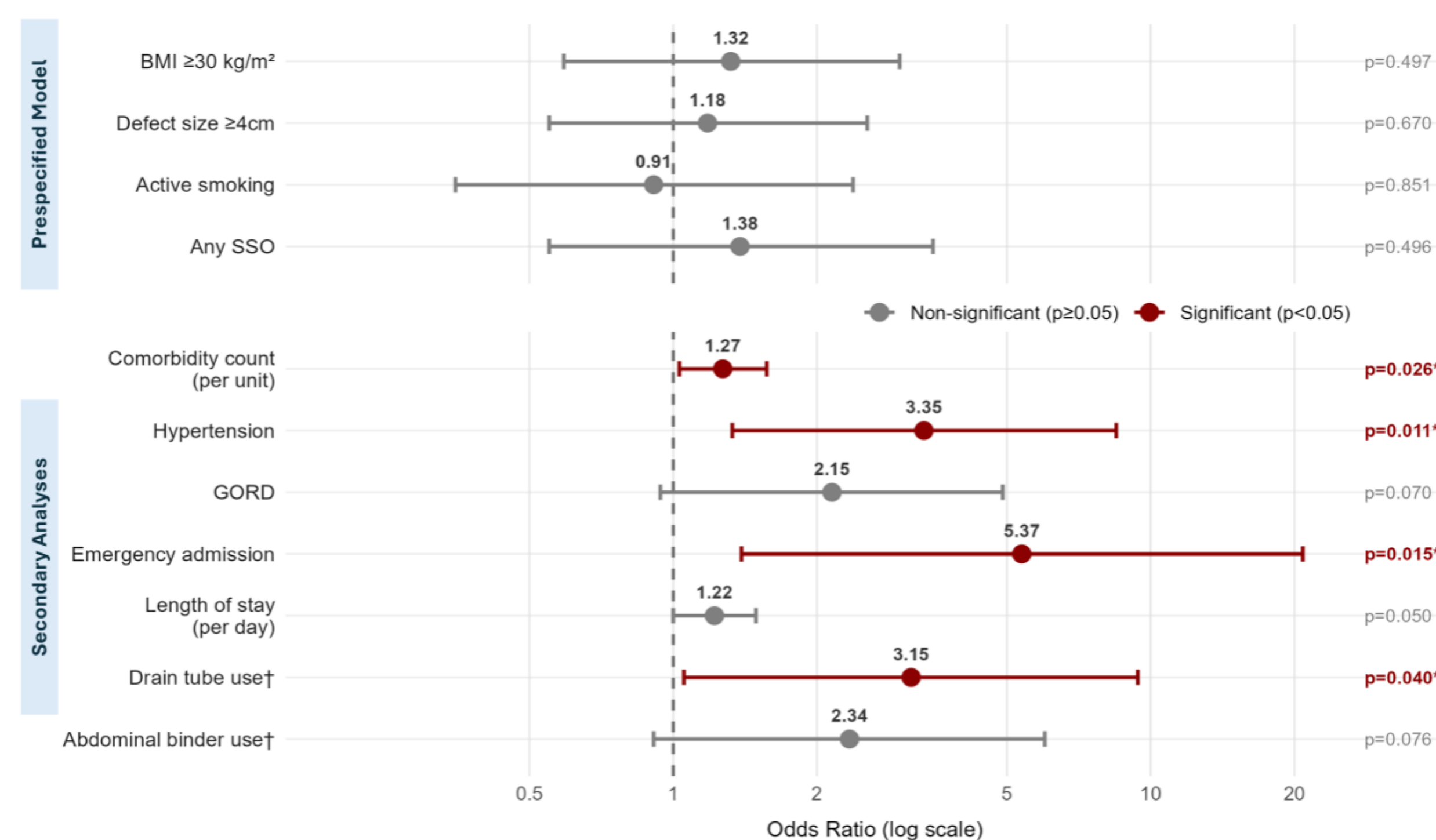
RESULTS

- 42 cases (median time to recurrence 27.2 months), 84 controls

Cases vs controls:

Mean Age: 59.2 vs 60.2 yrs	Mean BMI: 32 vs 31.1
Median comorbidity n.: 3.5 vs 2	Hypertension: 73.8% vs 52.4%
GORD: 57.1% vs 38.1%	OSA: 21.4% vs 9.5%
W3 hernia (>10cm): 16.7% vs 9.5%	Median stay: 3 vs 2 days
Emergency repair: 23.8% vs 8.3%	Mesh use: 83.3% vs 86.9%

Multivariable Conditional Logistic Regression Results



KEY FINDINGS:

- Hypertension:** strongest comorbidity predictor.^[5]
- Comorbidity burden:** dose-dependent risk.
- Emergency repair:** defer to elective where appropriate.
- Procedural factors:** minimal independent role.

CONCLUSION

- Comorbidity burden, hypertension, and emergency repair independently predict IH recurrence. As operative techniques continue to standardise and improve, **patient-related factors may have a greater impact on IH recurrence risk.**^[6]

KEY TAKEAWAY:

Pre-operative patient optimization may be the primary modifiable target for recurrence prevention in contemporary IH practice.



REFERENCES

- [5] Müller, A. M., Toepfer, A., Harrasser, N., et al. (2019). Significant prevalence of peripheral artery disease in patients with disturbed wound healing following elective foot and ankle surgery: Results from the ABI-PRIORITY (ABI as a Predictor of Impaired wound healing after ORthopedic surgery) trial. *Vascular Medicine*, 25(2), 118–123.
- [6] Howard, R., Thumma, J., Ehlers, A., et al. (2023). Trends in surgical technique and outcomes of ventral hernia repair in the United States. *Annals of Surgery*, 278(2), 274.

*for full list of references, please scan the QR code.

