

Who gets reversed? Clinical and equity predictors of Hartmann's reversal over ten years at an Australian tertiary centre

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Background

Hartmann's procedure is a common emergency surgery for diverticular disease and anastomotic leak. Published reversal rates range from 25% to 47%, and age, ASA grade and comorbidity predict non-reversal internationally.

Socioeconomic disadvantage may lead to worse colorectal outcomes in Australia, yet no study has examined interpreter need or language background as a determinant of reversal.

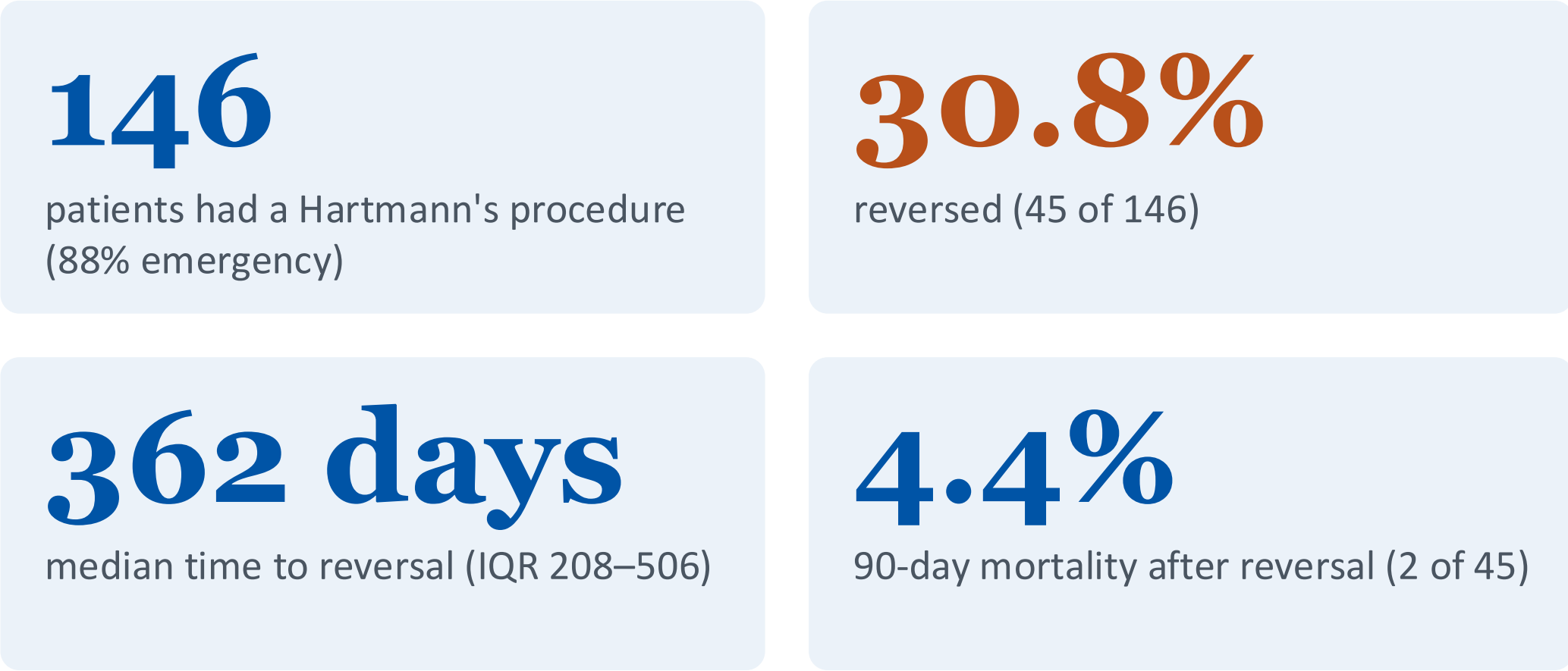
Aim: To identify clinical and equity-based predictors of reversal and describe outcomes after reversal.

Methods

- Single tertiary metropolitan centre, Melbourne; all Hartmann's procedures Jan 2013 – Dec 2022, followed to Dec 2024.
- Clinical factors: Age, sex, ASA, Charlson index, smoking, BMI. Equity: SEIFA quintile, interpreter requirement, language background.
- Primary outcome: Reversal within 24 months.
- Kaplan–Meier analysis and multivariable Cox regression (complete cases, n = 110), stratified by sex as proportional hazards were violated.
- Approved as QA 38.2026, Northern Health Office for Research.

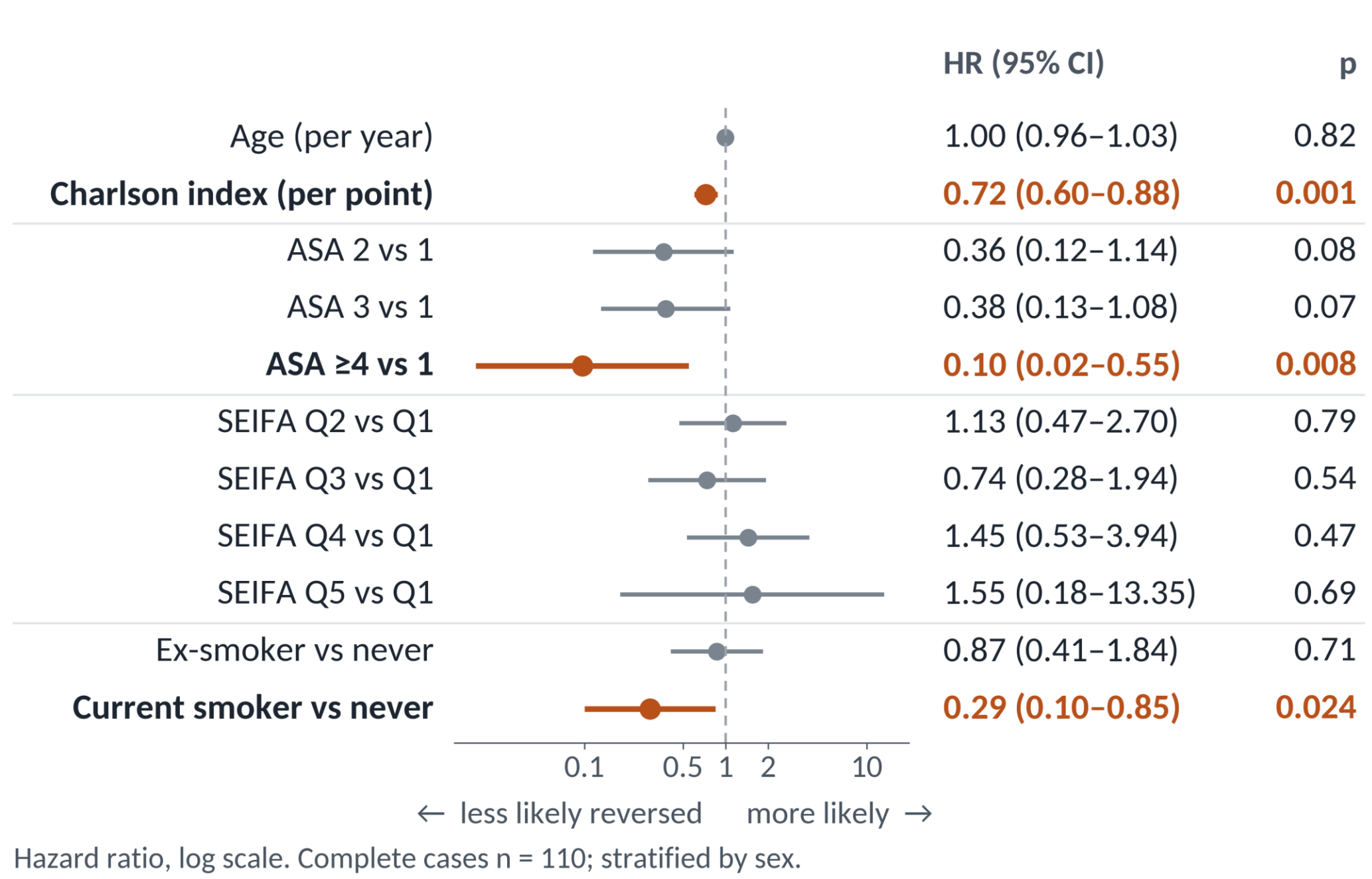
COHORT (n = 146)	
Median age (IQR)	71.5 (58.5–78.5)
Male	52%
ASA ≥ 3	113 (77%)
Diverticular disease	73 (50%)
Malignancy	43 (29%)
Anastomotic leak	12 (8%)
SEIFA quintile 1–2	77 (53%)
Non-English-speaking background	35 (24%)
Interpreter required	22 (15%)

Index admission: 30-day mortality 11% (16), 90-day 14.4% (21), all after emergency surgery.



Results

Figure 1. Adjusted hazard ratios for reversal within 24 months.



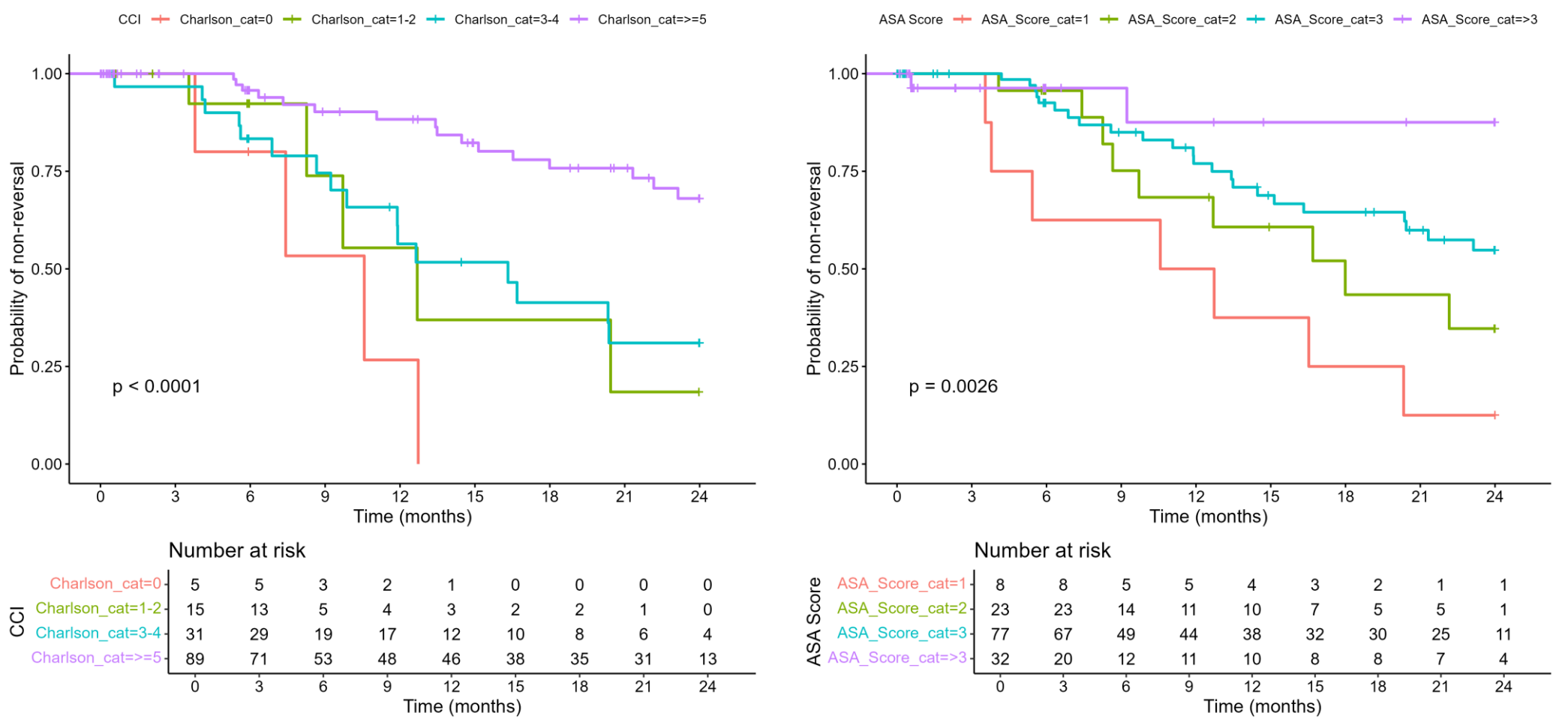
Reasons for non-reversal (n=101)

Death 26 · Palliative Disease 21 · Patient preference 20 · other 34

After reversal (n = 45)

30-day readmission 10 · 30-day reoperation 4 · 90-day mortality 2

Figure 2. Probability of permanent end-colostomy by Charlson index (left, p < 0.0001) and ASA grade (right, p = 0.003).



Conclusion

- About one in three patients were reversed, within the published 25–47% range.
- Comorbidity, ASA grade and active smoking, not socioeconomic status, predicted non-reversal.
- Reversal was safe in selected patients, with 4.4% 90-day mortality.
- A standardised pathway to reassess reversal candidacy, and optimise modifiable risk factors and co-morbidities is warranted.

Key references

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Kang JH et al. Sci Rep 2020;10:16820