

Liver frailty index as predictor of outcomes in Liver at Home program



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INTRODUCTION

- Frailty is an important and independent predictor of mortality in cirrhosis, independent of decompensation and the model for end-stage liver-disease score (MELD). Liver at Home (L@H) is an intensive 12-week home-based program designed for continued recompensation and management of liver-related issues with regular specialist nurse visits to bridge the transition from hospital. We aimed to prospectively evaluate the impact of our L@H program on morbidity and mortality in frail (score of ≥ 4.5) compared to non-frail (< 4.5) patients.

METHODS

- Hospitalised adult patients admitted with a liver-related event and discharged to the L@H program between 1 Jan 2025 and 1 Feb 2026 had dominant hand grip strength, time for 5 chair stands and time holding three-position balance recorded at index home visit. Liver frailty index was calculated using the University of California-San Francisco frailty index. Database was reviewed at 3-months for complications and mortality.

RESULTS

- Of the 64 patients enrolled into L@H, 30 patients had frailty data recorded on index visit. The remainder did not have data recorded due to equipment availability or staffing shortages. Most patients $n=17$ (56.6%) were men with a median age of 58, Child-Pugh score of 9 and MELD-Na of 17 at enrolment. Commonest aetiologies of cirrhosis included alcohol-related liver disease (63.3%) and metabolic-associated fatty-liver disease (16.6%). Ten patients (33.3%) had readmissions at 3-months and these patients were significantly more frail compared to those without readmissions (frailty 4.51 vs. 4.03, $p=0.03$). Four patients (13.3%) died within 3-months but their frailty score was not significantly greater than those who survived (4.38 vs. 4.19, $p=0.66$) (Figure 1).

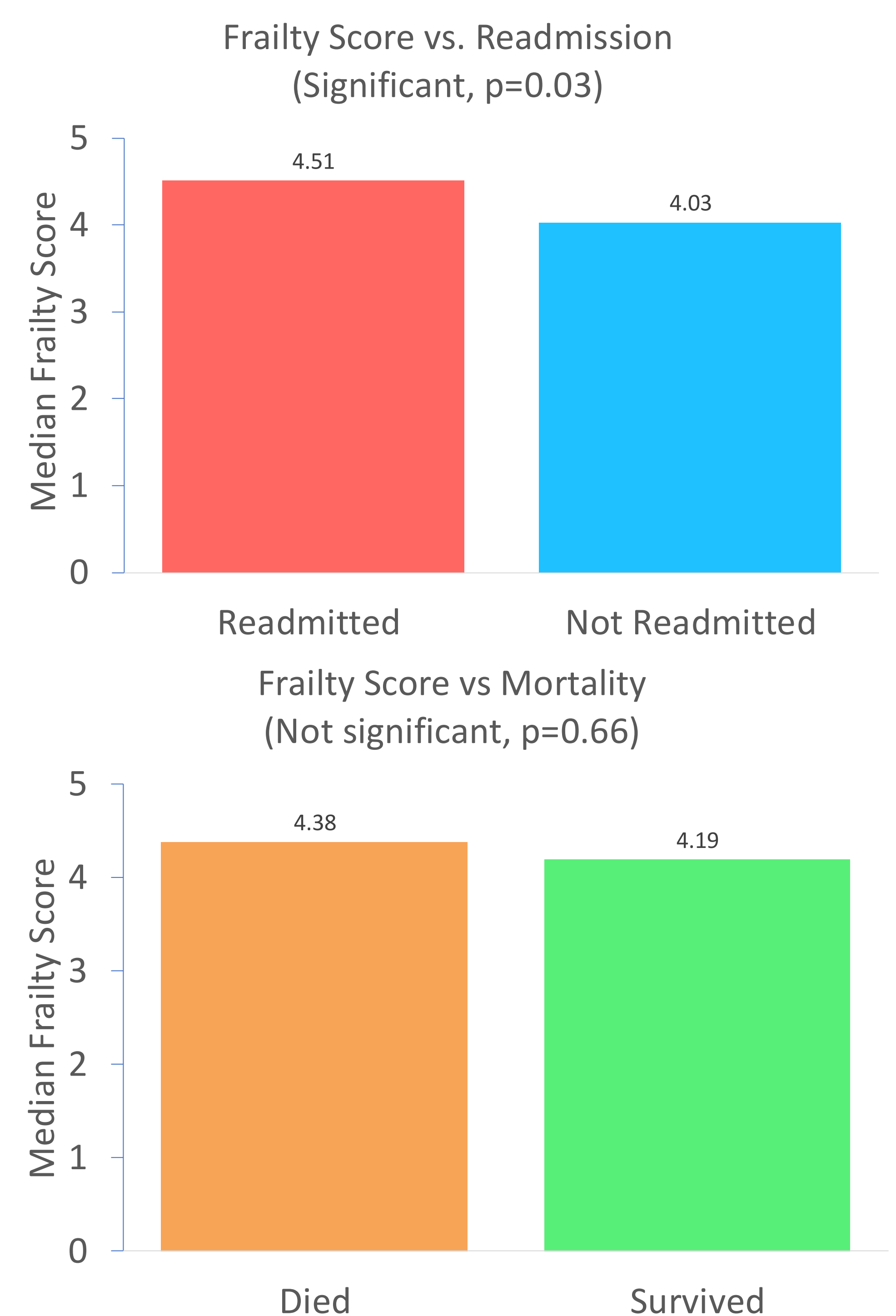


Fig 1. Frailty Scores by Clinical Outcome

CONCLUSIONS

- In patients enrolled in the L@H program, frailty was associated with greater readmission rates at 3 months. Larger sample size and longer follow-up are required to identify subgroups most likely to benefit from more intensive frailty-targeted interventions.