
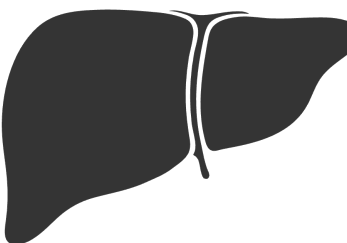


Frailty and Decompensated Cirrhosis Are Associated with Significantly Higher Mortality Independent of Race and Ethnicity

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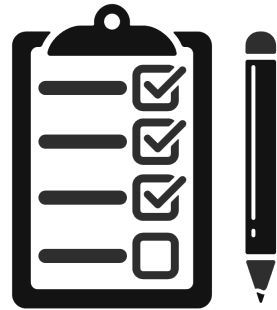
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Background

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 - Frailty and decompensation are markers of poor prognosis in cirrhosis.^{1,2}
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 - Impact on mortality across racial/ethnic groups remains unclear, few studies have evaluated this.

Research Objectives

To investigate whether mortality in patients with cirrhosis varies across different racial and ethnic groups.



Methods

- Retrospective cohort study, 18,718 adult (>18yrs) cirrhosis patients, 2016-2021
- CAPriCORN: EHR database from 6 health systems in the Chicago metropolitan area
- Frailty: Hospital Frailty Risk Score (HFRS)
 - Low : HFRS <5
 - Moderate: HFRS 5-15
 - Severe: HFRS >15
- Univariate + multivariate regressions

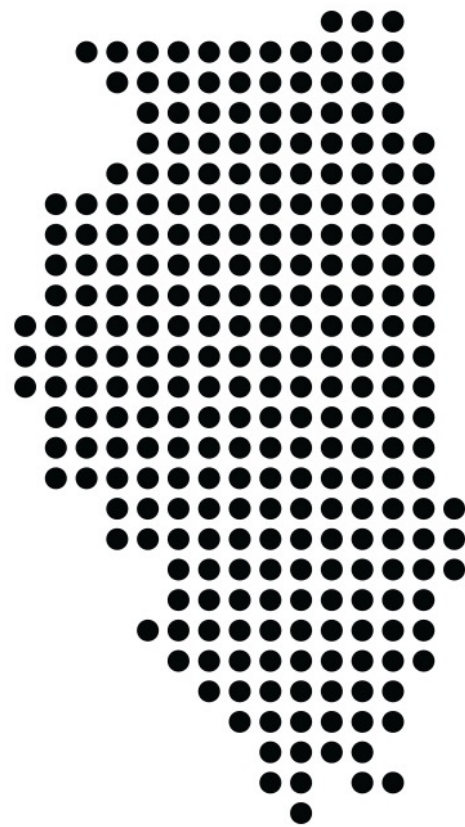
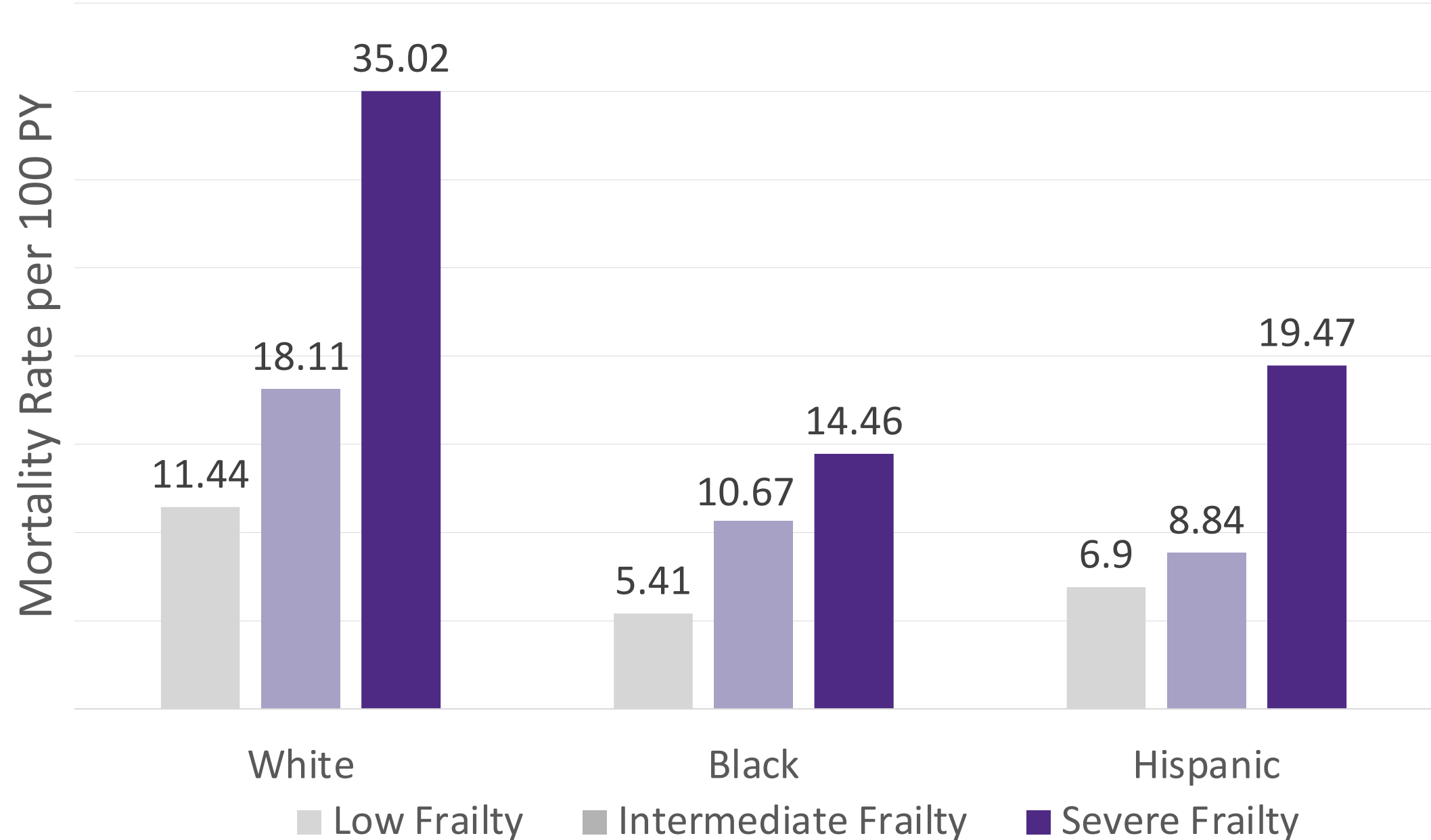


Table 1. Cohort characteristics stratified by race

Characteristics	White	Black	Hispanic	p-value
Total (n)	8,443	7,634	3,865	
Age, mean (SD)	60.7 (13.4)	59.6 (12.7)	56.9 (13.4)	<0.001
Female, n(%)	3659 (43.3%)	1587 (45.3%)	1469 (38.0%)	0.001
Frailty, n(%)				<0.001
Low	4431 (52.5%)	1396 (39.8%)	2096 (54.2%)	
Intermediate	1408 (16.7%)	852 (24.3%)	481 (12.4%)	
Severe	2405 (28.5%)	1207 (34.4%)	1210 (31.3%)	
Etiology, n(%)				<0.001
MASLD	2583 (30.6%)	779 (22.2%)	1178 (30.5%)	
metALD	2155 (25.5%)	724 (20.7%)	1130 (29.2%)	
ALD	1182 (14.0%)	338 (9.6%)	440 (11.4%)	
HCV	492 (5.8%)	696 (19.9%)	230 (6.0%)	
HBV	76 (0.9%)	88 (2.5%)	42 (1.1%)	
≥ Two Etiologies	772 (9.2%)	614 (17.5%)	381 (9.9%)	
Insurance Status n(%)				<0.001
Medicare/Medicaid	4114 (48.7%)	1644 (42.5%)	2437 (63.8%)	
Private	3275 (38.8%)	417 (11.9%)	678 (17.5%)	
Uninsured	266 (3.2%)	126 (3.6%)	621 (16.1%)	
Other	788 (9.4%)	526 (15.0%)	922 (23.8%)	
Decompensated at baseline	2683 (31.8%)	1117 (31.9%)	1231 (31.9%)	

Figure 1. Mortality by frailty and race



Results

- Mortality rate: 13.3 per 100 patient-years (PY)
 - White: 16.1 | Black: 9.1 | Hispanic: 8.9
- Severe frailty: ~3x higher mortality vs low frailty (25.5 vs 10.2 per 100 PY)
 - **White: +306% | Black: +367% | Hispanic: +289%**
- Decompensated cirrhosis: ~2x higher mortality vs compensated (21.4 vs 10.4 per 100 PY)
 - **White: +233% | Black: +251% | Hispanic: +183%**
- Associations consistent across groups (P < 0.05)



Conclusions

- Frailty and decompensated cirrhosis were associated with **3-fold** and **2-fold** higher mortality
- These associations were race-agnostic, observed consistently across racial groups.
- Functional status should be incorporated into cirrhosis care beyond demographics



Acknowledgements

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References

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2. D’Amico G, Bernardi M, Angeli P. Towards a new definition of decompensated cirrhosis. J Hepatol. 2022;76(1):202–207.