

## Introduction

- Studies suggest that cannabis use may be associated with decreased progression of liver fibrosis in chronic liver disease patients.
- Till now, no studies have examined the effect of cannabis use on hospital outcomes in patients with acute on chronic liver failure (ACLF)

## Methods

- We queried the National Inpatient Sample (NIS) databases using the ICD-10 codes.
- Acute on chronic liver failure (ACLF) was defined as the presence of renal failure or hepatic encephalopathy and one other organ dysfunction or two non-renal organ failures in patients with cirrhosis and a decompensating event.
- Decompensating events were defined as presence of ascites, varices, hepatic encephalopathy, or infection.
- The relationship between cannabis use and mortality, length of stay, total hospitalization cost, and charges was examined using a multivariate analysis after adjusting for patient demographics, hospital characteristics and acute decompensations.

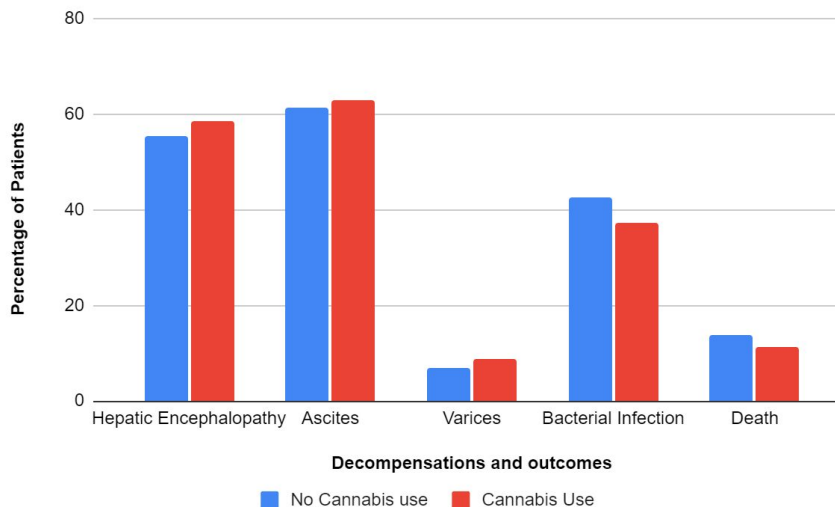


Figure 1: Decompensations and outcomes stratified by cannabis use

	No Cannabis use	Cannabis Use	p-value
LOS	8.11(+/-0.03)	8.07(+/-0.16)	0.85
Total Costs	\$22,158(+/-154)	\$21,534(+/-458)	0.17
Total Charges	\$94,863.6(+/-765.93)	91,105(+/-2,231)	0.09

Table 1: Mean of continuous outcomes, stratified by cannabis use

## Results

- A total of 1.78 million adult patients were admitted with acute decompensation of cirrhosis between 2016 and 2019. Of these, 830,365 patients (46.4%) met criteria for ACLF.
- Of these, 16,895 patients (2.04%) were reported to have cannabis use.
- Cannabis use was associated with a 24.1% lower mortality risk on multivariate analysis (aOR-0.759 95% CI-0.68-0.85,  $p < 0.001$ )
- Cannabis use was not associated with length of stay ( $p = 0.09$ ), but was associated with lower hospital charges, and cost (-\$10,820,  $p < 0.001$  and -\$2,180,  $p < 0.001$ , respectively) compared to patients with no cannabis consumption.

## Conclusion

- Our study found that cannabis use is independently associated with decreased mortality risk in hospitalized patients with ACLF.
- Further research is appropriate to further understand the effect of cannabis use on hospital outcomes in patients with ACLF