We were able to demonstrate the latter in our study but were not in a position to examine factors influencing ICU candidacy, which Hernaez and colleagues may be able to expand upon. Determining the factors and setting by which a mortality benefit was observed may result in better care for patients with ACLF at non-transplant centres and stem the potential tide of ACLF referrals to transplant centres that may flow from the Hernaez *et al.* study.

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Conflict of interest
The authors declare no conflicts of interest that pertain to this work.

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Supplementary data
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[1] Hernaez R, Kramer JR, Liu Y, Tansel A, Natarajan Y, Hussain KB, et al. Prevalence and short-term mortality of acute-on-chronic liver failure: a national cohort study from the USA. J Hepatol 2019;70:639–647.
[2] Majumdar A, Bailey M, Kemp WM, Bellomo R, Roberts SK, Pilcher D. Declining mortality in critically ill patients with cirrhosis in Australia and New Zealand between 2000 and 2015. J Hepatol 2017;67:1185–1193.

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Reply to: "Prevalence and short-term mortality in a national US cohort with acute-on-chronic liver failure"

Acute-on-chronic liver failure mortality in transplant centers is lower than non-transplant centers

To the Editors:

We appreciate the interest and comments by Dr Majumdar *et al.*[1] In our cohort, the prevalence of acute-on-chronic liver failure (ACLF, based on NASCELD criteria) was 10.3% in transplant centers compared to 9.8% in non-transplant centers. Overall, 28 and 90-day mortality rates were lower in transplant than non-transplant centers (28-day mortality 29.5% *vs.* 33.4%; 90-day mortality 44.3% *vs.* 48.0%, respectively). The adjusted odds ratio of dying from ACLF in transplant centers versus non-transplant centers was 0.79 (95% CI 0.66–0.95) at 28-days and 0.81 (95% CI 0.69–0.96) at 90-days, both estimates adjusted for age, gender, race, etiology, complications of portal hypertension, model for end-stage liver disease-sodium score, triggers of ACLF and facility complexity. Although we did not have unit-specific information, we have ICU complexity built into the facility complexity variable. Our previous report[2] as well as those reported in the current reply to Drs. Majumdar *et al.* show that there was no association between facility complexity and mortality overall; adjusting for facility complexity did not attenuate the effect of transplant centers in our analysis. These data suggest that the observed difference in mortality between patients managed in transplant versus non-transplant centers cannot be fully explained by the ICU complexity and may be related to other unobserved factors, such as early recognition and/or more aggressive management of ACLF in transplant versus non-transplant centers.

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Supplementary data

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Author names in bold designate shared co-first authorship

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