Purpose:
Acute liver failure (ALF) is uncommon but fatal. Current management is based mostly on clinical experience. We aimed to investigate the incidence, etiology, outcomes, and prognostic factors of ALF in Taiwan.

Materials and Methods:
Patients with the admission diagnosis of ALF between January 2005 and September 2007 were identified from the Longitudinal Health Insurance Database of Taiwan. ALF was further confirmed by disease severity based on laboratory orders, prescriptions, and duration of hospital stay, and acute onset without prior liver disease. Prognostic factors were identified using Cox regression analysis.

Results:
During the study period, 218 eligible cases were identified from 28,078 potential eligible ALF patients. The incidence was 80.2 per million person-years in average and increased with age. The mean age was 57.9±17.1 years and median survival was 171 days. The most common etiologies were viral (45.4%, mainly hepatitis B virus) and alcohol/toxin (33.0%). Independent prognostic factors included alcohol consumption (HR 1.67 [1.01-2.77]), malignancy (HR 2.90 [1.92-4.37]), frequency of check-ups per week for total bilirubin (HR 1.57 [1.40-1.76]), sepsis (HR 1.85 [1.20-2.85]), and use of hemodialysis/hemofiltration (HR 2.12 [1.15-3.9]) and proton pump inhibitor (HR 0.94 [0.90-0.98]). Among the 130 patients who survived ≥90 days, 66 (50.8%) were complicated by liver cirrhosis. Eight (3.7%) were referred for liver transplantation evaluation, but only one received transplantation and survived.

Conclusion:
ALF in Taiwan is mainly due to viral infection. Patients with malignancy and alcohol exposure have worst prognosis. The use of proton pump inhibitor is associated with improved survival. Half of the ALF survivors have liver cirrhosis.