

**Supplementary Table 1.** ICD-9-CM diagnosis codes for hepatic decompensation, liver cirrhosis, and HCC

Disease	ICD-9-CM code	Description
Hepatic decompensation		
Ascites	789.5	Ascites
SBP	567.2:9	Spontaneous bacterial peritonitis
SBP	567.8:0	Peritonitis
EVB*	456.0	Esophageal varices with bleeding
EVB	456.20	Esophageal varices classified elsewhere with bleeding
GVB*	456.8:1	Fundal varices, bleeding
GVB	456.8:2	Bleeding gastric varices
HE	348.3	Encephalopathy, unspecified
HE	349.82	Toxic encephalopathy
HE	572.2	Hepatic coma
HRS	572.4	Hepatorenal syndrome
Liver cirrhosis	571.2	Alcoholic cirrhosis of liver
Liver cirrhosis	571.5	Cirrhosis of liver without mention of alcohol
HCC	155.0	Malignant neoplasm of liver, primary
HCC	155.2	Malignant neoplasm of liver, not specified

ICD-9-CM, International Classification of Diseases, ninth revision, clinical modification; HCC, hepatocellular carcinoma; SBP, spontaneous bacterial peritonitis; EVB, esophageal variceal bleeding; GVB, gastric variceal bleeding; HE, hepatic encephalopathy; HRS, hepatorenal syndrome.

\*Esophageal or gastric variceal bleeding was also defined by the ICD-9-CM procedure codes of 42.33:3, 42.33:6, 42.33:13, and 43.41:1.