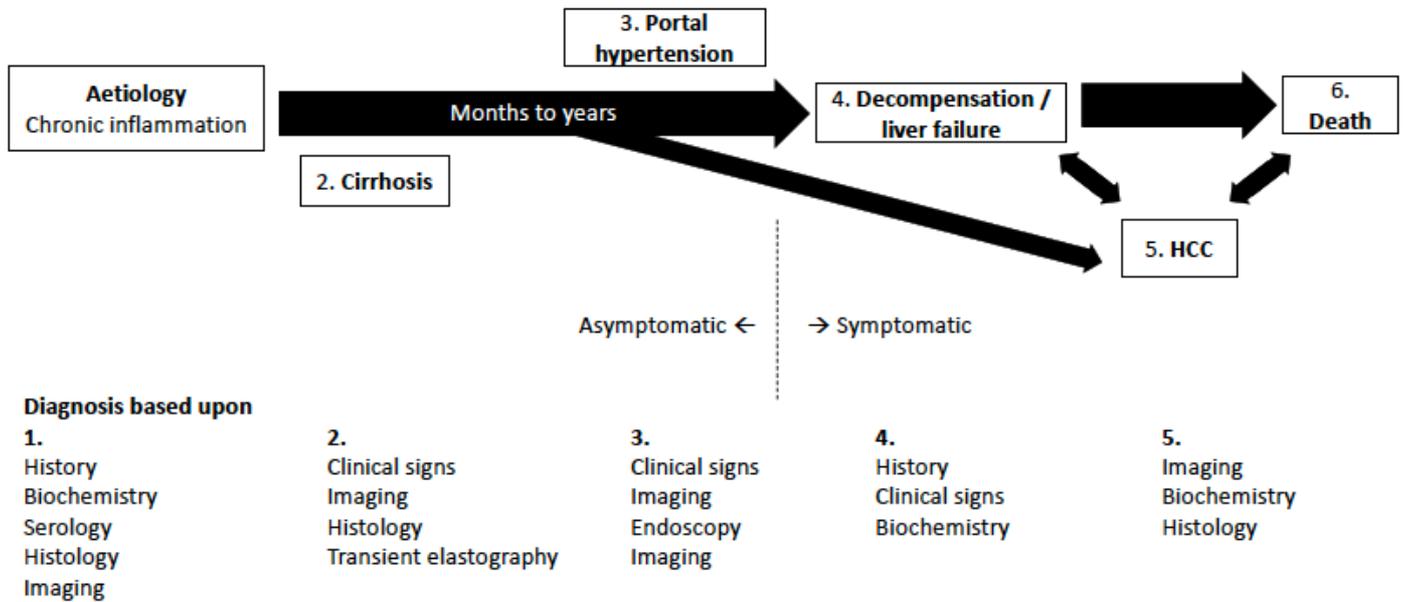


Supplementary Figure 1

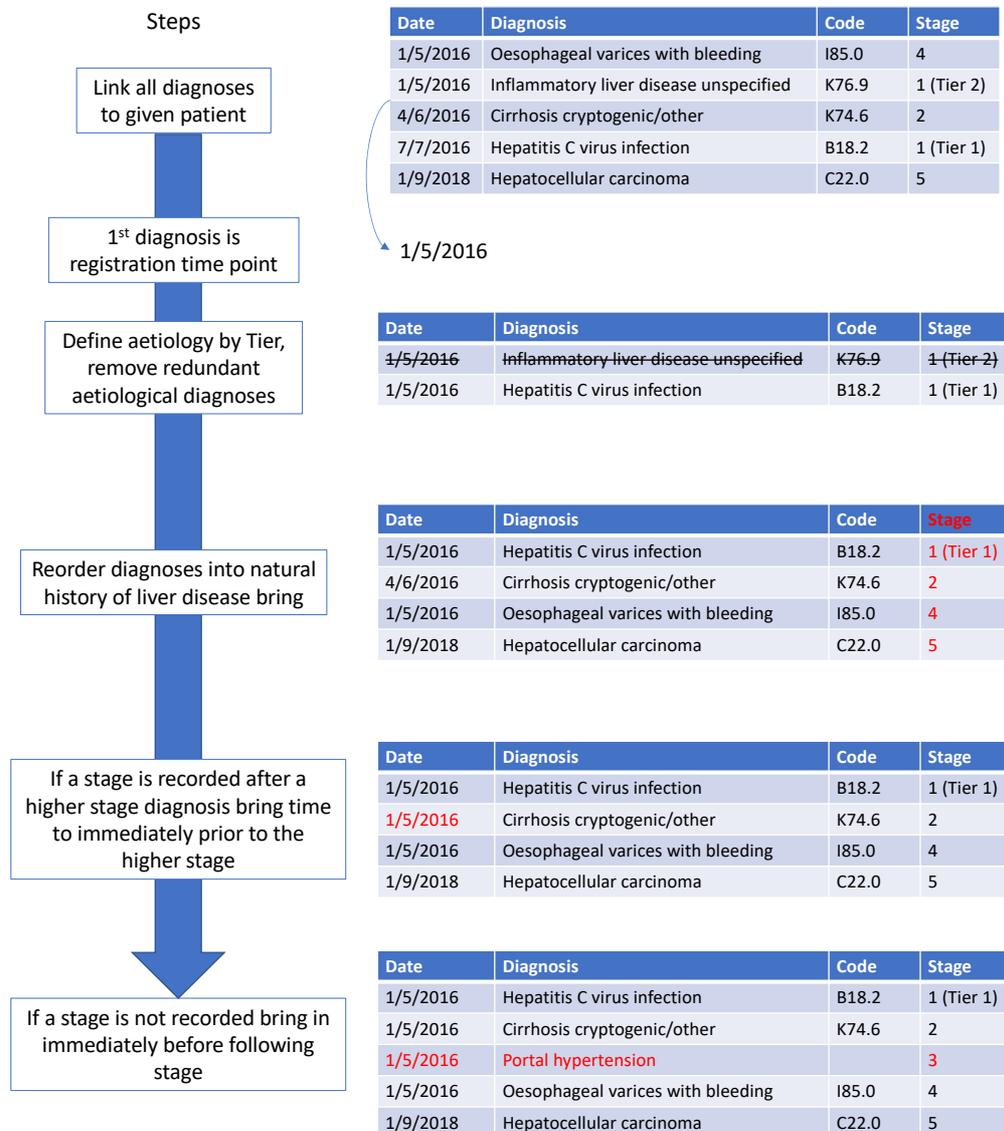
Natural history of acquired liver diseases from inflammation resulting in fibrosis, through cirrhosis, portal hypertension, decompensation hepatocellular carcinoma (HCC) to death. The means of making the diagnosis for each of these stages. Adapted from D'Amico et al.^[3]



Supplemental Figure 2

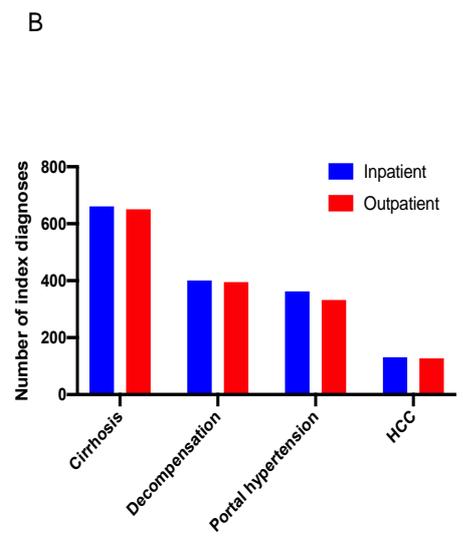
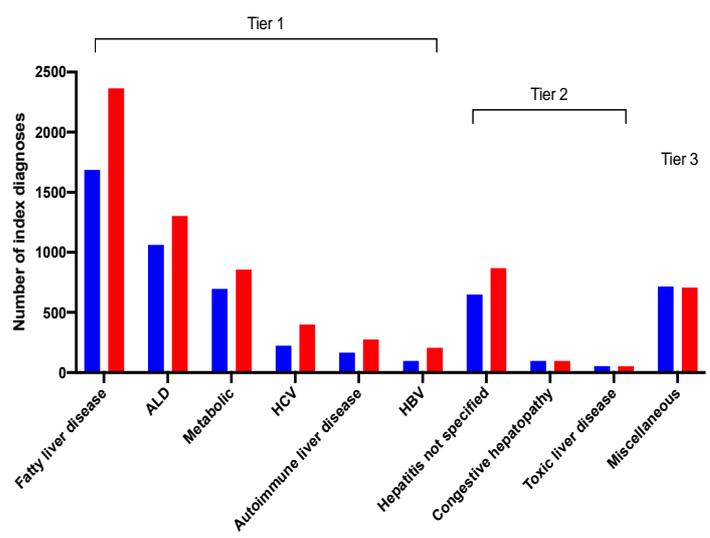
Application of the Wales Liver Disease Registry methodology of stratification of aetiological diagnoses and stages of liver diseases to record complex liver disease by natural history to a hypothetical patient. This patient presented with variceal bleeding and an unspecified hepatitis and after a month a diagnosis of cirrhosis was recorded. Two months after presentation a diagnosis of hepatitis C virus infection was recorded and after 2 years a diagnosis of hepatocellular carcinoma was recorded.

Example patient: HCV presenting as variceal bleeding with development of HCC 2 years after presentation



Supplementary Figure 3

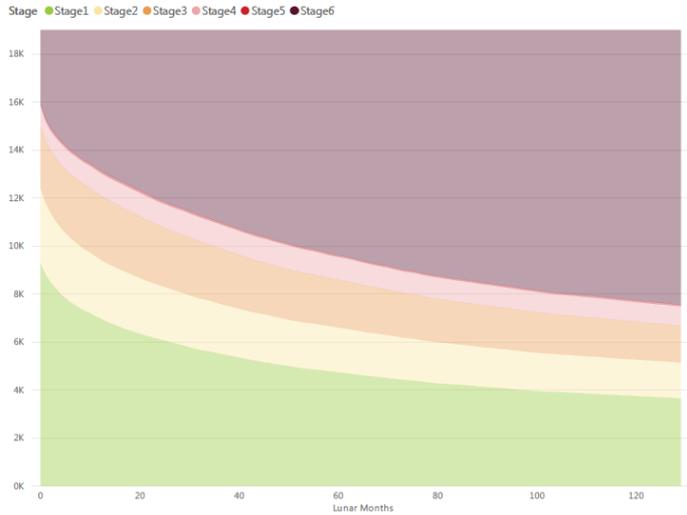
The impact of including outpatient coding to inpatient and day cause coding on index liver disease diagnoses in the Aneurin Bevan University Health Board 2002-2018. A) Comparison of the number of aetiological diagnoses with and without outpatient coding. B) Comparison of the number of liver disease stage diagnoses with and without outpatient coding.



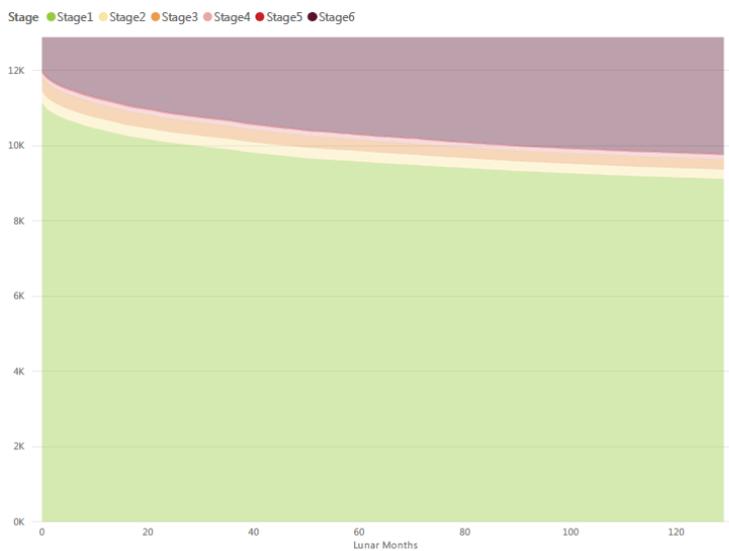
Supplementary Figure 4 disease progression by aetiology

The proportion of patients who have progressed to each stage of liver disease; stage 1 aetiology alone, 2 cirrhosis, 3 portal hypertension, 4 decompensation, 5 liver cancer, 6 all-cause mortality over 10 years.

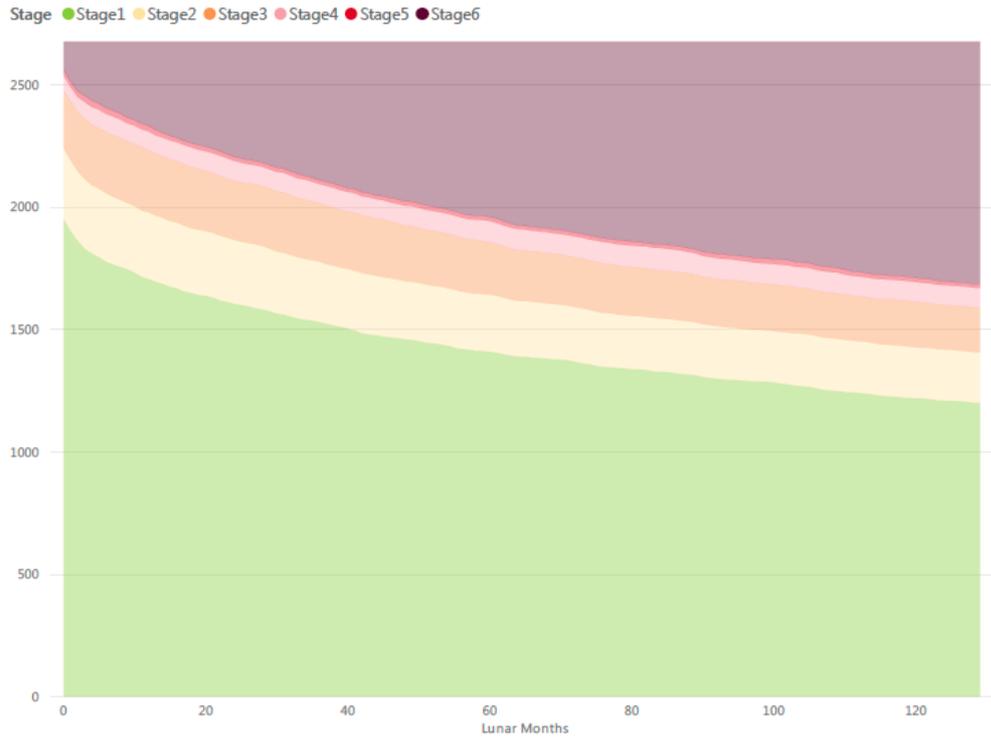
A) ALD



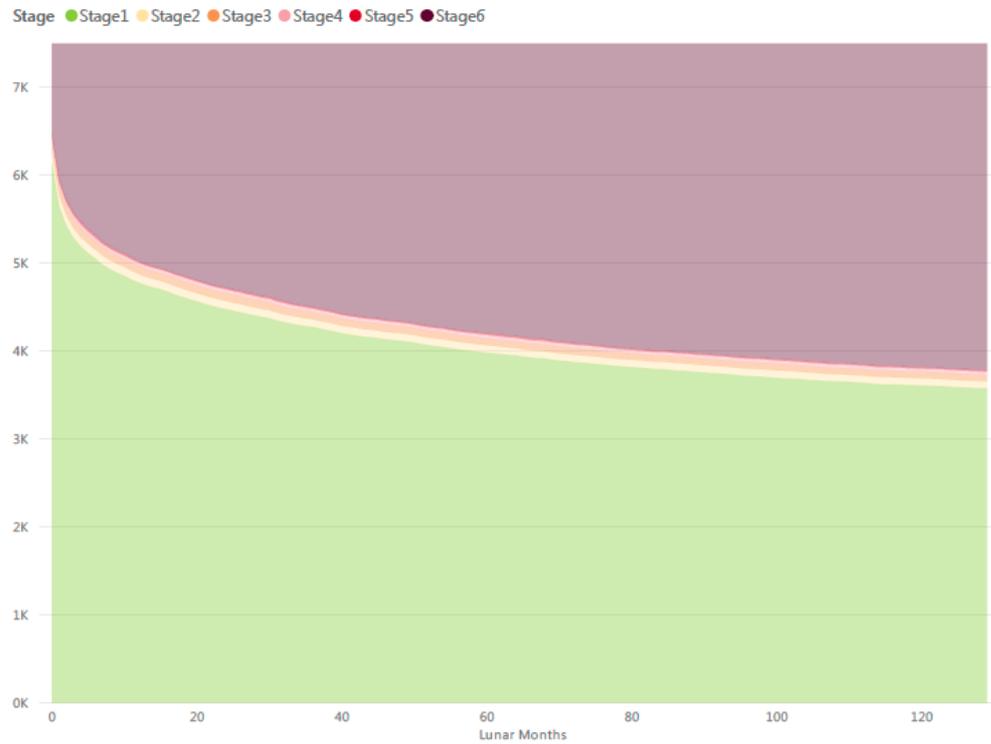
B) NAFLD,



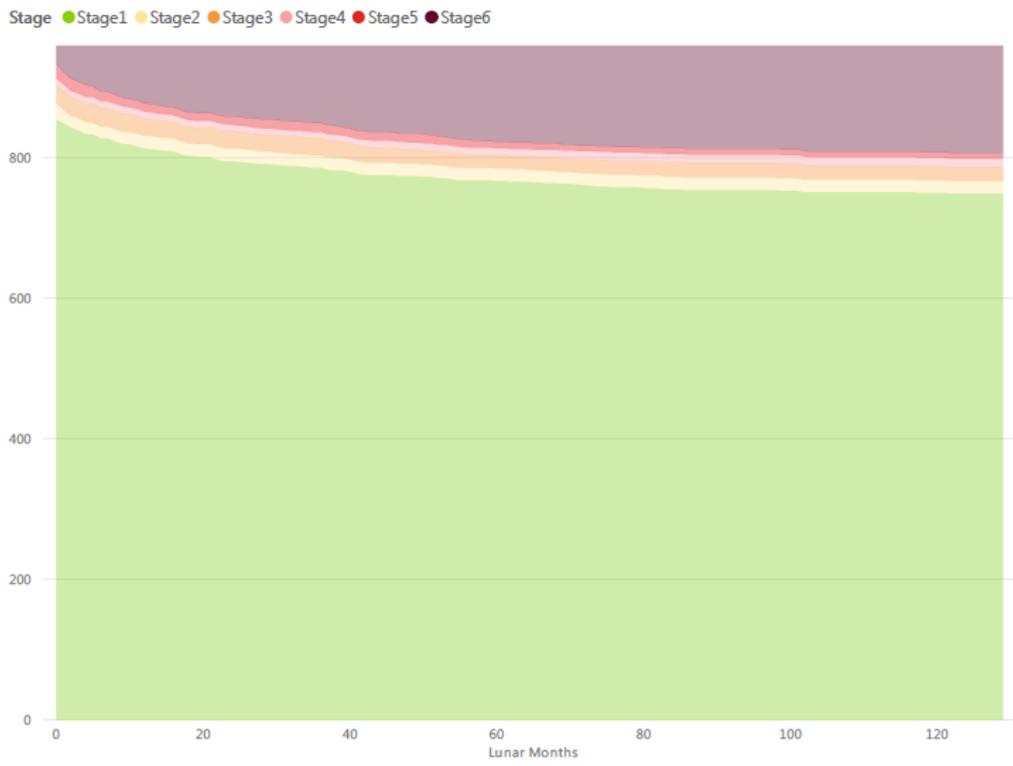
C) Autoimmune liver disease,



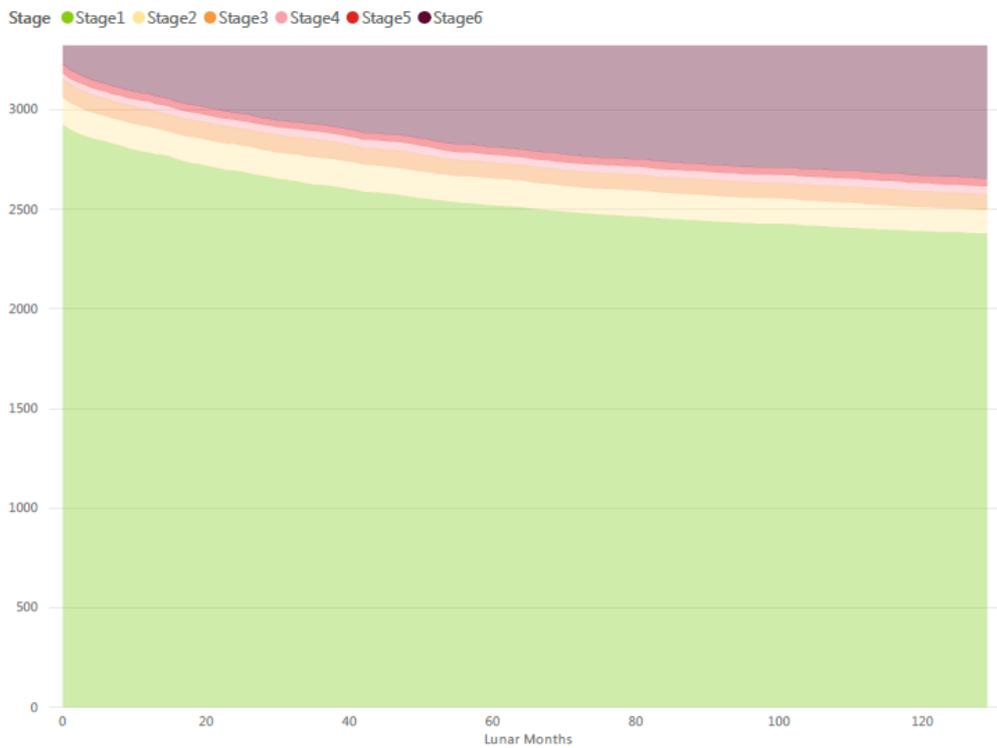
D) Metabolic liver disease,



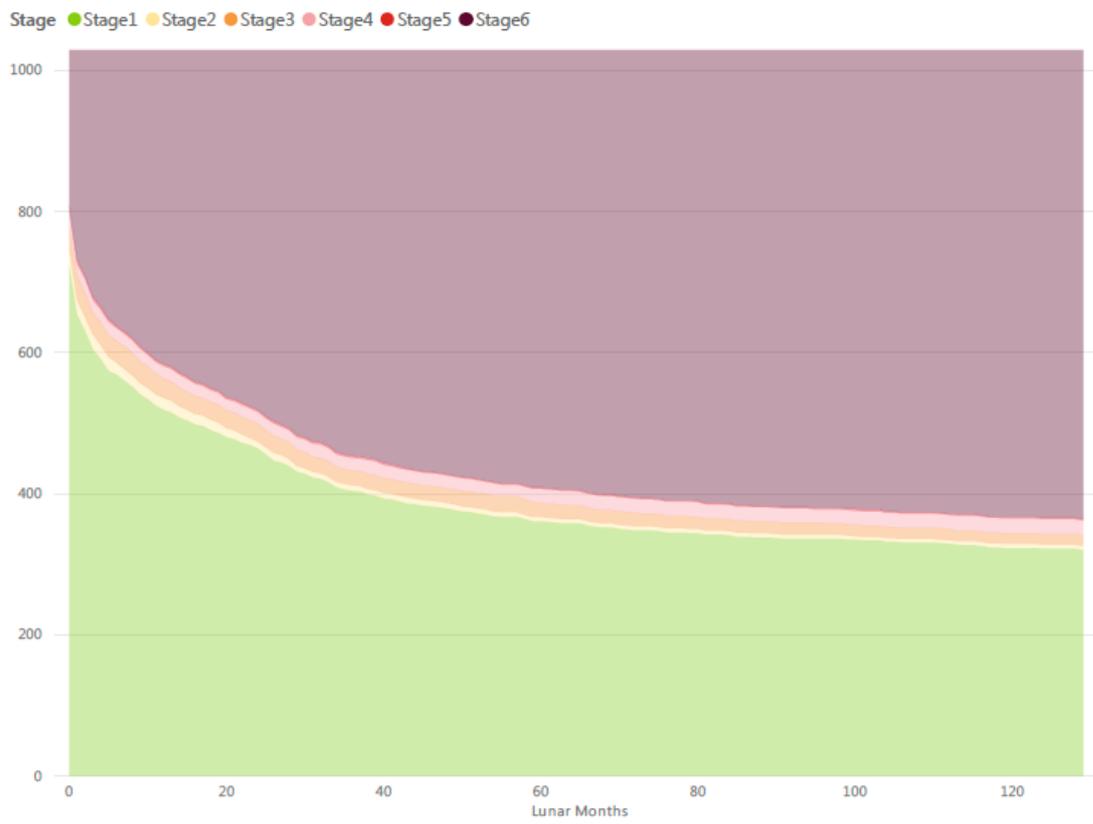
E) HBV,



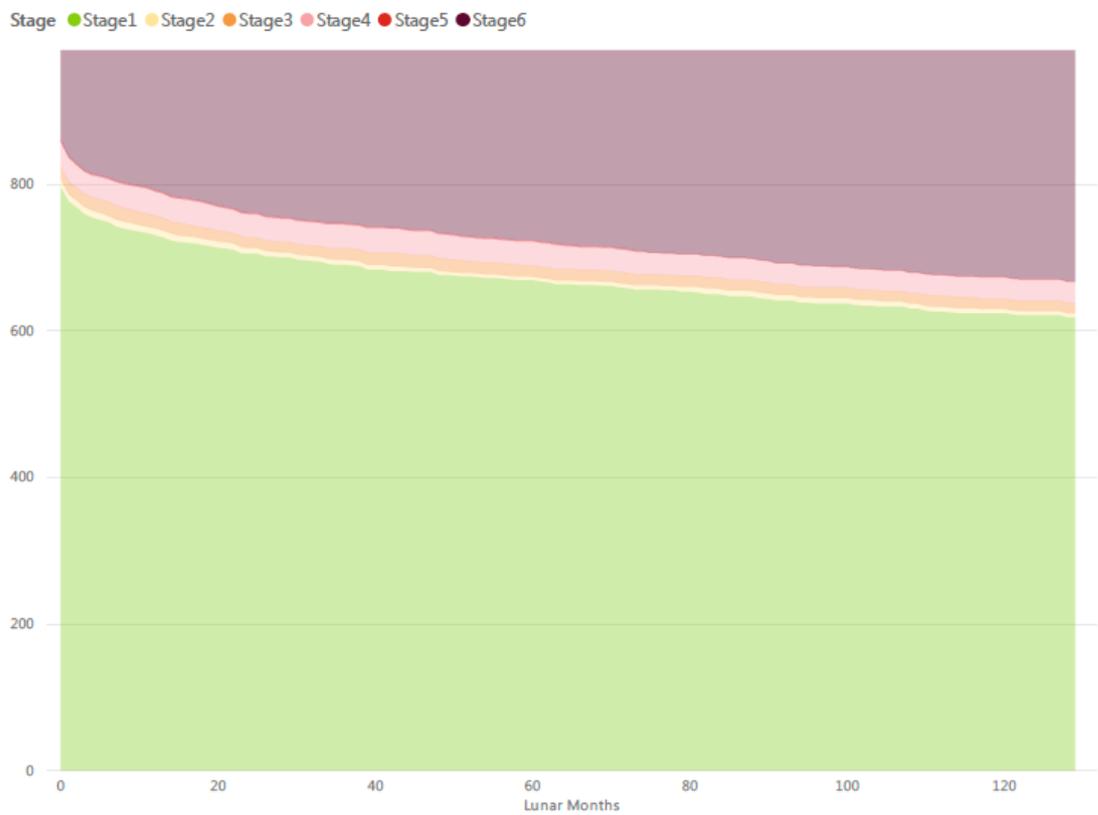
F) HCV,



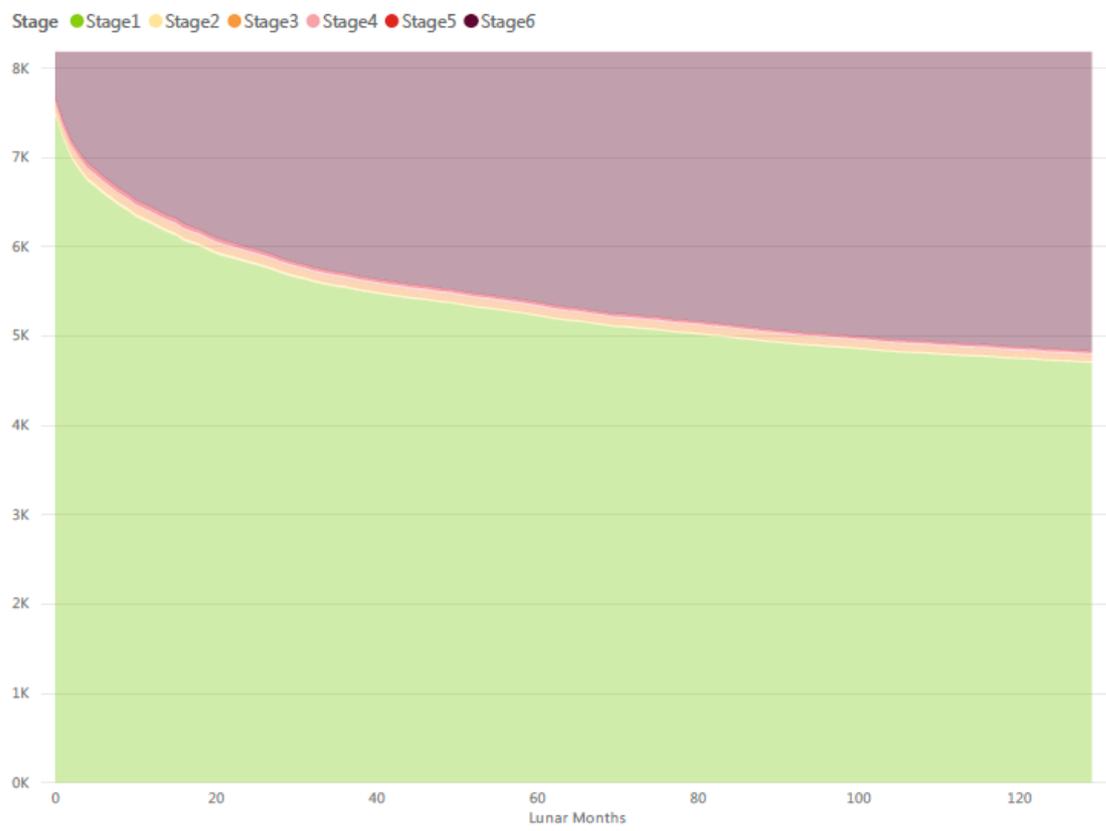
G) Congestive hepatopathy,



H) toxic liver disease,



and I) miscellaneous liver disease.



Supplementary Table 1

Case definition of acute liver diseases

Acute viral hepatitis	ICD-10 code
Hepatitis A	B15
Acute hepatitis B	B16
Hepatitis E	B17
Viral hepatitis other (does not include HBV or HCV)	B19
Acute liver failure	K72.0
Abscess of the liver	K75.0
Phlebitis of the portal vein	K75.1
Infarction of the liver	K76.3
Nonspecific reactive hepatitis	K75.2