Economic Plan

This document identifies the areas prioritised for economic modelling. The final analysis may differ from those described below. The rationale for any differences will be explained in the guideline.

1 Guideline

Full title of guideline: **Assessment and management of cirrhosis** (short: Cirrhosis)

2 List of Modelling Questions

Clinical questions by scope area	**In people under investigation for cirrhosis what is (are) the appropriate test(s) to identify whether cirrhosis is present?**
Population	Adults with risk factors for cirrhosis: • Hepatitis B (HBV) • Hepatitis C (HCV) • Alcohol-related liver disease (ALD) • Non-alcoholic fatty liver disease (NAFLD)
Interventions considered for inclusion	The cost-effectiveness of using different diagnostic tests for cirrhosis in people in the population groups shown above was compared. Only diagnostic tests for which published data were identified for the clinical review were included in the model. Interventions: For HBV group: • AST to platelet ratio index (APRI) • FibroTest • Transient elastography (TE) For HCV group: • APRI • Acoustic radiation force impulse imaging (ARFI) • AST–ALT ratio • Castera algorithm • Enhanced liver fibrosis test (ELF) • Fibrosis-4 test (FIB-4) • FibroTest • Platelet count • Point shearwave elastography (PSWE) • SAFE algorithm • TE • TE and ARFI • TE or ARFI For ALD group: • APRI • TE

	For NAFLD group: • ARFI • TE Comparators (for all groups): • Liver biopsy (reference standard) • No test – surveillance for all • No test – surveillance for none The results of the diagnostic model were used to assign a starting state (true or false positive or negative) in a lifetime state transition model of progression through liver disease. Health states included: compensated cirrhosis, decompensated cirrhosis, varices, bleeding, hepatocellular carcinoma (HCC), transplant, death. The starting state determined if surveillance was received for varices and HCC. People with an initial negative diagnosis were retested using the same test every 2 years.
Type of analysis	Cost–utility analysis

Clinical questions by scope area	**When and how frequently should surveillance testing be offered for the early detection of hepatocellular carcinoma (HCC) in people with cirrhosis?** **How frequently should surveillance testing using endoscopy be offered for the detection of oesophageal and gastric varices in people with cirrhosis?**
Populations	Adults with a true or false diagnosis of, cirrhosis with underlying aetiology of: • HBV • HCV • ALD • NAFLD
Interventions considered for inclusion	The optimal frequency of surveillance was assessed by varying the surveillance frequency in the same model outlined above for people diagnosed with cirrhosis. Frequency of surveillance for HCC: • Annual • Semi-annual Frequency of surveillance for varices: • Every 3 years • Every 2 years • Annual
Type of analysis	Cost–utility analysis