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: **Non-alcoholic fatty liver disease (NAFLD): assessment and management** (short: NAFLD)

2 List of Modelling Questions

Clinical questions by scope area	**Which risk factors for NAFLD aid in the identification of people who should be investigated further?** **What is (are) the appropriate investigation(s) for diagnosing NAFLD in adults?**
Populations	Adults with risk factors for NAFLD: • High triglycerides • Low HDL-cholesterol • Metabolic syndrome • Obesity • Type 2 diabetes • Wide waist circumference
Interventions considered for inclusion	The cost-effectiveness of using different diagnostic tests for NAFLD (steatosis) in people with the risk factors above was compared. Only diagnostic tests for which published data were identified for the clinical review were included in the model. Comparators: • Controlled attenuation parameter (CAP) • Fatty liver index (FLI) • Liver fat score (LFS) • Magnetic resonance imaging proton density fat fraction (MRI-PDFF) • Magnetic resonance spectroscopy (MRS) • SteatoTest • Ultrasound • Liver biopsy (reference standard) • No test – treat all • No test – treat 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: steatosis, advanced fibrosis, compensated cirrhosis, decompensated cirrhosis, varices, bleeding, hepatocellular carcinoma, transplant, death. The starting state determined if treatment was received for steatosis, advanced fibrosis or cirrhosis. People with an initial negative diagnosis were retested using the same test at a later date. This retest frequency was varied from

	2 years to 10 years to assess the optimally cost-effective frequency of retesting.
Type of analysis	Cost–utility analysis

Clinical questions by scope area	**What is (are) the appropriate investigation(s) for diagnosing advanced fibrosis in adults with NAFLD?** **How often should adults with NAFLD be monitored to determine risk of disease progression?**
Population	Adults with diagnosed NAFLD
Interventions considered for inclusion	The cost-effectiveness of using different diagnostic tests for advanced fibrosis in people with diagnosed NAFLD was compared. Only diagnostic tests for which published data were identified for the clinical review were included in the model. Interventions: • AST to platelet ratio index (APRI) • Acoustic radiation force impulse imaging (ARFI) • AST–ALT ratio • BARD score • Enhanced liver fibrosis test (ELF) • Ferritin • Fibrosis-4 test (FIB-4) • FibroTest • Magnetic resonance elastography (MRE) • NAFLD fibrosis score (NFS) • Transient elastography (TE) • Liver biopsy (reference standard) • No test – treat all • No test – treat 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: advanced fibrosis, compensated cirrhosis, decompensated cirrhosis, varices, bleeding, hepatocellular carcinoma, transplant, death. The starting state determined if treatment was received for advanced fibrosis or cirrhosis. People with an initial negative diagnosis were retested using the same test at a later date. This retest frequency was varied from 2 years to 5 years to assess the optimally cost-effective frequency of retesting.
Type of analysis	Cost–utility analysis