Appendix 1. Search strategy

Searches were conducted from database inception to October 2022. Search terms included hepatocellular carcinoma, HCC, liver neoplasms, hepatoma; diagnostic imaging, alpha-fetoprotein, along with surveillance, early detection, diagnosis, or surveillance; and in the setting of primary care, family medicine or family practice. Five biomedical databases (Medline, PsychINFO, CINAHL, EMBASE, and Cochrane) were searched, along with the Centre for Reviews and Dissemination website, including the Database of Abstracts of Reviews of Effects (DARE) and the Health Technology Assessment Database (HTA). The grey literature was searched by targeting key professional bodies, societies and health departments, including the National Institute for Health and Care Excellence (NICE), The Royal Australian College of General Practitioners (RACGP), the Royal College of General Practitioners, UK (RCGP), the American Board of Family Medicine, the College of Family Physicians of Canada, the European Association for the Study of the Liver (EASL), the American Association for the Study of Liver Disease (AASLD), the Gastroenterological Society of Australia (GESA), the Japanese Society of Gastroenterology and the Korean Society of Gastroenterology. The reference lists of included studies were also hand searched to identify any further eligible studies.

Keywords and keyword combinations used:
Exp Liver Neoplasms/

OR

Hepatoma*or Hepatocellular or HCC

OR

(liver or hepat*) adj3 (cancer* or neoplasm* or carcinoma* or tum or* or malignan*)

AND

Diagnostic imaging/

OR

alpha-Fetoproteins/

OR

(screen* or diagnos* or detect* or early detection or early diagnosis or surveillance or imaging)

AND

(primary care or general practic* or primary healthcare or primary health care or family medicine or family practice)

Study selection

Inclusion criteria: Studies were included in the review if they were intervention or observational studies reporting on hepatocellular carcinoma (HCC) surveillance undertaken within primary care settings. Qualitative studies reporting on facilitators and barriers to HCC surveillance were also included.

Exclusion criteria: review articles including other systematic reviews, hospital-based screening, screening in specialist clinics, outpatient clinics and articles that focus on paediatric populations.

The results of all searches were exported into Covidence online software. Titles and abstracts were independently reviewed against the eligibility criteria by two reviewers (PD, KM). Discrepancies were resolved by a third reviewer (BdG). A full text review was then conducted for identified papers by three reviewers (PD, BdG, KM), with any discrepancies resolved by KM. The PRISMA flowchart (main text, Figure 1) provides an overview of this process.

Data extraction and management

Data were extracted using the Covidence extraction tool by two independent reviewers (MM, JW). The following variables were collected: title, year, authors, country, setting, study aim(s), study design and methodology, population, ethnicity/race, inclusion criteria, exclusion criteria, number of participants, clinical data (eg HCC diagnosis and staging), comorbidities, healthcare provider characteristics, practice characteristics, surveillance approach and frequency, cases detected, uptake of surveillance, perspective, barriers and enablers.