

Chronic liver disease in Europe

Assessing Europe's policy readiness to confront the MASLD/MASH public health threat



Jeffrey V. Lazarus,^{a,b,c,*} Trenton M. White,^{a,b,**} Leire Agirre-Garrido,^b Kushala W. M. Abeysekera,^{d,e} Paul N. Brennan,^f Radan Brūha,^g Stefan Buttigieg,^h Patrizia Carrieri,ⁱ Helena Cortez-Pinto,^j Robert Flisiak,^k Sven M. A. Francque,^l Gema Frühbeck,^{m,n,o,p} Liliana Simona Gheorghe,^q Hannes Hagström,^{r,s,az} Adriaan G. Holleboom,^t Krasen Ivanov,^u Mojca Jensterle,^v Peter Jepsen,^{w,x} Juozas Kupčinskas,^y Henry E. Mark,^{b,z} Didac Mauricio,^{aa,ab,ac,ad} Saba Mohamed Bibi,^b Christophe Moreno,^{ae} Anna Mrzljak,^{af,ag} Eleni Papanicolaou,^{ah} Maria Papp,^{ai} Georgios Papatheodoridis,^{aj,ak} Markus Peck-Radosavljevic,^{al} Nicola Pugliese,^{am} John D. Ryan,^{an} Rogério T. Ribeiro,^{ao} Riina Salupere,^{ap} Lubomir Skladany,^{aq} Ieva Tolmane,^{ar,as} Hannele Yki-Järvinen,^{at,au} Jörn M. Schattenberg,^{av,aw,ba,bb} and Juan M. Pericàs,^{ax,ay,ba,bb} The European MASLD collaborator group^{bc}

^aCity University of New York Graduate School of Public Health and Health Policy (CUNY SPH), New York, NY, USA

^bBarcelona Institute for Global Health (ISGlobal), Barcelona, Spain

^cChair, *The Lancet Regional Health – Europe* Series on chronic liver disease in Europe

^dPopulation Health Sciences, Bristol Medical School, University of Bristol, Bristol, UK

^eDepartment of Liver Medicine, University Hospitals Bristol NHS Foundation Trust, Bristol, UK

^fDivision of Molecular and Clinical Medicine, School of Medicine, University of Dundee, Scotland, UK

^gGeneral University Hospital in Prague and 1st Faculty of Medicine, Charles University, Prague, Czech Republic

^hMinistry for Health and Active Ageing, Government of Malta, Valletta, Malta

ⁱAix Marseille University, Inserm, IRD, SESSTIM, Sciences Economiques & Sociales de la Santé & Traitement de l'Information Médicale, ISSPAM, Marseille, France

^jUniversidade de Lisboa, Faculdade de Medicina: Lisboa, Lisboa, Portugal

^kDepartment of Infectious Diseases and Hepatology, Medical University of Białystok, Białystok, Poland

^lDepartment of Gastroenterology and Hepatology, Antwerp University Hospital, University of Antwerp, Antwerp, Belgium

^mMetabolic Research Laboratory, Clínica Universidad de Navarra, Pamplona, Spain

ⁿCIBER Fisiopatología de la Obesidad y Nutrición (CIBEROBN), Instituto de Salud Carlos III, Pamplona, Spain

^oObesity and Adipobiology Group, Instituto de Investigación Sanitaria de Navarra (IdiSNA), Pamplona, Spain

^pDepartment of Endocrinology & Nutrition, Clínica Universidad de Navarra, Pamplona, Spain

^qCenter for Gastroenterology, Hepatology and Liver Transplantation; Fundeni Clinical Institute Bucharest, Romania

^rDepartment of Medicine, Huddinge, Karolinska Institutet, Stockholm, Sweden

^sDivision of Hepatology, Department of Upper GI Diseases, Karolinska University Hospital, Stockholm, Sweden

^tAmsterdam UMC, location AMC, Dept of Vascular Medicine, University of Amsterdam, Amsterdam, the Netherlands

^uDepartment of Gastroenterology, University Hospital "St. Ekaterina", Sofia, Bulgaria

^vDepartment of Endocrinology, Diabetes and Metabolic Diseases, University Medical Centre Ljubljana, Ljubljana, Slovenia

^wDepartment of Hepatology and Gastroenterology, Aarhus University Hospital, Aarhus, Denmark

DOIs of original articles: <https://doi.org/10.1016/j.lanepe.2026.101739>, <https://doi.org/10.1016/j.lanepe.2026.101723>, <https://doi.org/10.1016/j.lanepe.2026.101722>, <https://doi.org/10.1016/j.lanepe.2026.101731>, <https://doi.org/10.1016/j.lanepe.2026.101742>, <https://doi.org/10.1016/j.lanepe.2026.101707>, <https://doi.org/10.1016/j.lanepe.2026.101712>

Abbreviations: AASLD, American Association for the Study of Liver Diseases; APASL, Asian Pacific Association for the Study of the Liver; CI, Confidence interval; CLD, Chronic liver disease; CPG, Clinical practice guideline; CVD, Cardiovascular disease; EASD, European Association for the Study of Diabetes; EASL, European Association for the Study of the Liver; EASO, European Association for the Study of Obesity; ELF, Enhanced Liver Fibrosis; ESLD, End-stage liver disease; EU, European Union; FIB-4, Fibrosis-4; GBD, Global Burden of Disease; GI, Gastrointestinal; HCC, Hepatocellular carcinoma; HFSS, High fat, sugar, and/or salt; HLM, High-Level Meeting; iLFT, Intelligent liver function testing; MASH, Metabolic dysfunction-associated steatohepatitis; MASLD, Metabolic dysfunction-associated steatotic liver disease; MetALD, Metabolic dysfunction- and alcohol-associated liver disease; NAFLD, Non-alcoholic fatty liver disease; NCD, Non-communicable disease; NGO, Non-governmental organisation; NIT, Non-invasive test; SDGs, Sustainable Development Goals; SLD, Steatotic liver disease; SOLDA, Society on Liver Disease in Africa; T2D, Type 2 diabetes; UK, United Kingdom; UNGA, United Nations General Assembly; UPF, Ultra-processed food; WHO, World Health Organisation

*Corresponding author. CUNY SPH, New York, NY, USA.

**Corresponding author. ISGlobal, Barcelona, Spain.

E-mail addresses: jeffrey.lazarus@isglobal.org (J.V. Lazarus), trenton.white@isglobal.org (T.M. White).

^{az}Deceased author

^{ba}Co-senior authors.

^{bb}Contributed equally.

^{bc}The members of The European MASLD collaborator group are listed in the [Supplementary Material](#).

Translated abstracts: This translation in French, German, Italian and Spanish was submitted by the authors and we reproduce it as supplied. It has not been peer reviewed. Our editorial processes have only been applied to the original abstract in English, which should serve as reference for this manuscript.

- ^xDepartment of Clinical Epidemiology, Aarhus University Hospital, Aarhus, Denmark
- ^yDepartment of Gastroenterology and Institute for Digestive Research, Lithuanian University of Health Sciences, Kaunas, Lithuania
- ^zIndependent Consultant, Nottingham, UK
- ^{aa}Department of Endocrinology and Nutrition, Hospital de la Santa Creu i Sant Pau, 08025, Barcelona, Spain
- ^{ab}CIBER of Diabetes and Associated Metabolic Diseases (CIBERDEM, ID CB15/00071), Instituto de Salud Carlos III (ISCIII), 28029, Madrid, Spain
- ^{ac}Department of Medicine, University of Vic-Central University of Catalonia, 08500, Vic, Spain
- ^{ad}DAP-Cat Group, Unitat de Suport a La Recerca Barcelona Ciutat, Institut Universitari d'Investigació en Atenció Primària Jordi Gol, Barcelona, Spain
- ^{ae}Department of Gastroenterology, Hepatopancreatology and Digestive oncology, CUB Hôpital Erasme, Université Libre de Bruxelles, Brussels, Belgium
- ^{af}Department of Gastroenterology and Hepatology, University Hospital Center Zagreb, Zagreb, Croatia
- ^{ag}School of Medicine, University of Zagreb, Zagreb, Croatia
- ^{ah}Department of Internal Medicine, Nicosia General Hospital, SHSO (OKYPY), Nicosia, Cyprus
- ^{ai}Division of Gastroenterology, Department of Internal Medicine, Faculty of Medicine, University of Debrecen, Debrecen, Hungary
- ^{aj}Medical School of National & Kapodistrian University of Athens, Athens, Greece
- ^{ak}Gastroenterology Department & Liver Transplantation Unit at General Hospital of Athens "Laiko", Athens, Greece
- ^{al}Klinikum Klagenfurt, Klagenfurt, Austria
- ^{am}Division of Internal Medicine and Hepatology, Department of Gastroenterology, IRCCS Humanitas Research Hospital, 20089, Rozzano, MI, Italy
- ^{an}Beaumont Hospital/RCSI University of Medicine and Health Sciences, Dublin, Ireland
- ^{ao}Department of Research and Innovation, APDP Diabetes Portugal, Lisbon, Portugal
- ^{ap}Tartu University Hospital, University of Tartu, Tartu, Estonia
- ^{aq}HEGITO Liver Transplant Unit, F. D. Roosevelt Teaching Hospital, Banská Bystrica, Slovakia
- ^{ar}Faculty of medicine and Life Science, University of Latvia, Latvia
- ^{as}Riga East University Hospital, Riga, Latvia
- ^{at}Helsinki University Hospital, Helsinki, Finland
- ^{au}Minerva Foundation Institute for Medical Research, Helsinki, Finland
- ^{av}Department of Internal Medicine II, Saarland University Medical Center, Homburg, Germany
- ^{aw}Faculty of Medicine, Saarland University, Saarbrücken, Germany
- ^{ax}Liver Unit, Vall d'Hebron University Hospital, Vall d'Hebron Institute for Research, Universitat Autònoma de Barcelona, CIBERehd, Barcelona, Spain
- ^{ay}Johns Hopkins University-Pompeu Fabra University Public Policy Center (JHU-UPF PPC), UPF Barcelona School of Management (UPF-BSM), Barcelona, Spain

The Lancet Regional
Health - Europe
2026;65: 101713

Published Online 25 May
2026
<https://doi.org/10.1016/j.lanepe.2026.101713>

Summary

Metabolic dysfunction-associated steatotic liver disease (MASLD) is a public health threat in Europe. With an estimated 30.4% prevalence among the adult population in the European Union and United Kingdom, it is the most common chronic liver disease and is closely linked to obesity and type 2 diabetes, which can be considered as indicator conditions. Despite the scale of the burden, the spectrum of MASLD, including its advanced form, metabolic dysfunction-associated steatohepatitis (MASH), is weakly represented—or even absent—from health policy and development agendas. Further, the extent to which regional and national clinical practice guidelines (CPGs) on other liver diseases and related fields incorporate information on MASLD/MASH prevention or management is unclear. In this Series paper, we reviewed policy attention to MASLD/MASH across the European Union and the United Kingdom. We report low policy readiness across European countries to address MASLD/MASH. Only two (7.1%), Romania and Sweden, had a subnational strategy, while 13 (46.4%) referenced MASLD/MASH in other national or subnational action plans, predominantly those for liver disease and obesity. No country included MASLD/MASH in its priority non-communicable disease list. Additionally, 15 (53.6%) countries had national MASLD/MASH CPGs, while 25 (89.3%) mentioned MASLD/MASH in other national CPGs, most often those for obesity, diabetes, cirrhosis, liver transplantation, and primary care, respectively. We conclude that MASLD/MASH remains insufficiently addressed from a policy perspective, which contributes to low readiness to address this public health threat.

Copyright © 2026 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Keywords: Food policy; Health policy; Health systems; Liver health; Non-communicable diseases; Obesity; Steatotic liver disease; Type 2 diabetes

Introduction

Metabolic dysfunction-associated steatotic liver disease (MASLD, formerly non-alcoholic fatty liver disease

[NAFLD]) is the most common cause of chronic liver disease (CLD) in Europe and globally.^{1–3} It is closely linked to and shares risk factors with obesity, type 2

Key messages

- The 27 European Union countries and the United Kingdom have low policy readiness to address metabolic dysfunction-associated steatotic liver disease (MASLD), and its advanced form, metabolic dysfunction-associated steatohepatitis (MASH), despite their high economic burden and MASLD being the most prevalent chronic liver disease across the region and strongly linked to indicator conditions like obesity and type 2 diabetes.
- Inclusion of MASLD/MASH in speciality-specific clinical practice guidelines (CPGs), such as endocrinology and cardiovascular disease, remains low across countries.
- Compared with obesity and diabetes policy, MASLD/MASH continues to be under-recognised, limiting opportunities for resource allocation, timely detection, and coordinated care.
- A meta-analysis was conducted with an estimated MASLD prevalence of 30.4% (95% CI: 21.7%–39.8%) among the adult population in the 28 countries included in this Series paper.
- Actionable MASLD/MASH policy gaps include the need to strengthen national strategies, CPGs, and non-communicable disease (NCD) frameworks, invest in surveillance and risk stratification, and develop multidisciplinary care pathways.
- Rapid advances in MASLD/MASH evidence generation and management innovation require policy developments that account for multimorbidity, surveillance, primary care detection algorithms, CPGs, and multidisciplinary pathways.
- Without sustained political and system-level attention, countries face late MASLD/MASH diagnosis, fragmented care, rising healthcare costs, and widening inequities related to advanced liver and cardiometabolic disease, all of which contribute to poorer health outcomes.
- Future research should map national barriers for and enablers of change, better determine the MASLD/MASH human and economic burden, and support countries in leveraging innovation to improve outcomes along the continuum of care from prevention to treatment.

diabetes (T2D), and cardiovascular disease (CVD), thus requiring multidisciplinary management.^{2–5} An estimated 32.4% (95% confidence interval [CI] 29.9–34.9%) of adults globally are living with MASLD⁶ and 5.3% (standard error 2.6%) with its advanced form,⁵ metabolic dysfunction-associated steatohepatitis (MASH, formerly non-alcoholic steatohepatitis),¹ with these conditions being much more prevalent among individuals living with obesity or T2D.^{2,3} In 2023, the prevalence of MASLD among people living with overweight or obesity was estimated to be at 42.5% (95% CI: 32.6–53.1%) and that of MASH at 33.5% (95% CI: 28.4–39.0%),⁶ while among people living with T2D the prevalence of MASLD was estimated to be 65.0% (95% CI: 61.8–68.2%) and that of MASH 31.6% (95% CI: 17.1–50.7%).⁷ The burden of the spectrum of MASLD, including MASH,^{1,5} along with concomitant liver fibrosis, continues to increase, with marked geographic variations, in the absence of expanded access to prevention and treatment, being projected.^{8,9} Around 3% of people living with non-cirrhotic MASLD will experience progression to cirrhosis or end-stage liver disease (ESLD) within 15–20 years, from the point of diagnosis.¹⁰

MASLD/MASH has a substantial impact in Europe, with it being the second leading cause for ESLD and liver transplantation.¹¹ Similar to other highly prevalent NCDs its economic burden is also high in European countries,^{12–14} with the direct annual medical costs of MASH (resources and unit costs were identified by health state using public reimbursement schedules and private hospital data, with blended costs reflecting

public-private payer mixes), from 2021 to 2040, being estimated to increase from 0.83 billion United States (US) dollars (\$) to \$1.8 billion (euros [€] 0.7–1.6 billion), in Germany, \$1.3 to \$2.9 billion (€1.1–2.5 billion) in France, \$1.3 to \$3.0 billion (€1.1–2.6 billion) in Italy, \$1.5 to \$3.5 billion (€1.3–2.9 billion) in Spain, and \$2.2 to \$5.3 billion (€1.9–4.5 billion) in the United Kingdom (UK). This estimation was made taking into account inflation rates (the amounts in US dollars were converted into local currencies using OANDA Corporate, based on the exchange rate on the paper's acceptance date of 8 September 2025).^{12,13}

Despite its prevalence, MASLD/MASH remains under-recognised and poorly addressed in health policy and health system responses. A 2022 review of 102 countries, including 29 from Europe, found that none had a dedicated MASLD/MASH strategy.¹⁵ Furthermore, key frameworks, including the World Health Organisation (WHO) best buys (i.e., evidence-based interventions, that are the most cost-effective and feasible to implement) and WHO quick buys (i.e., evidence-based and the most cost-effective interventions with measurable public health impacts within five years of implementation) for non-communicable disease (NCD) prevention omit liver disease completely.^{16,17}

Nonetheless, some progress has been made in improving MASLD recognition. The Political Declaration of the fourth United Nations General Assembly (UNGA) High-Level Meeting (HLM) on NCDs (held in September 2025) adopted the preventive hepatology approach^{18,19} by explicitly naming MASLD (though the

outdated NAFLD nomenclature was used) as an integral part of liver cancer prevention.¹⁹ In January 2026, the World Economic Forum highlighted MASLD as a major manifestation of poor metabolic health and a condition closely linked to insulin resistance, chronic inflammation, cardiovascular disease, and chronic kidney disease and a potential indicator to be included in metabolic health policy.²⁰ The following month, a draft resolution of the WHO Executive Board recommended integrating SLD (including MASLD) into the global NCD agenda by embedding its prevention, early detection, management, surveillance and research within national health systems, universal health coverage, and multisectoral action on shared cardiometabolic and alcohol-related risk factors, with WHO to provide technical leadership, coordination and measures for accountability.²¹ Moreover, clinical practice guidelines (CPGs), including those of the American Diabetes Association and European Association for the Study of Obesity (EASO), now emphasise the need for integrated care.^{22,23}

Rapid advancements are also being made with regard to non-invasive tests (NITs), including imaging techniques, serum biomarkers, and automated algorithms like the intelligent liver function testing (iLFT) pathway, to improve MASLD/MASH detection and risk stratification.²⁴ Furthermore, the approval of resmetirom and semaglutide by the US Food and Drug Administration in 2024 and 2025, respectively,^{25,26} and of resmetirom and semaglutide by the European Medicines Agency in 2025, represent groundbreaking pharmacological progress, as these are the first-ever specific therapies for people living with non-cirrhotic

MASH.²⁷ Alongside pharmacotherapy, mounting evidence around the importance of structured lifestyle interventions that promote physical activity reduced or no alcohol use and weight management reinforces their central role in MASLD/MASH care.^{28,29} Collectively, these developments mark a paradigm shift: MASLD, which is reversible, is now manageable through evidence-based prevention and treatment, with these being facilitated by policy interventions.^{30,31} In this Series paper, we report the prevalence of MASLD in Europe and assess the policy readiness (i.e., the extent to which countries have established the foundational policy architecture and clinical guidance needed to enable action) to address the disease in relevant national policies.

Limited national policies on MASLD/MASH in Europe

Following our search and review ([Panel 1](#)), across the European Union (EU) and the UK, no country has a government-issued strategy or action plan, although Spain and the UK have national action plans published by non-state actors (a medical association and an NGO, respectively). Two (7.1%) countries have subnational MASLD/MASH strategies or action plans issued by governmental bodies and 15 (53.6%) have national MASLD/MASH CPGs ([Panel 2](#)). Although 13 (46.4%) countries referenced MASLD/MASH in other national or subnational strategies or action plans, these mentions were typically superficial and embedded within broader obesity, liver disease, diabetes, or healthy lifestyle strategies or action plans rather than constituting operational MASLD/

Panel 1: MASLD/MASH policies of European Union countries and the United Kingdom

MASLD/MASH strategies and action plans

Of the all European countries reviewed ($n = 28$), none had a national metabolic dysfunction-associated steatotic liver disease/metabolic dysfunction-associated steatohepatitis (MASLD/MASH) strategy or action plan issued by a government body, while two (7.1%) had a subnational MASLD/MASH strategy or action plan (Romania and Sweden). Thirteen (46.4%) countries had at least one national or subnational strategy or action plan (on alcohol, cancer, cardiovascular disease [CVD], diabetes, healthy lifestyle/diet, liver disease, NCDs, obesity, or others) in which MASLD/MASH was mentioned; among these, obesity ($n = 10$ out of 28 countries, 35.7%), followed by liver disease ($n = 8$ out of 28 countries, 28.6%) and diabetes ($n = 7$ out of 28 countries, 25%) documents mentioned MASLD/MASH most frequently ([Table 1](#), [Fig. 1](#), [Table S3](#)). Italy and Luxembourg had the highest number ($n = 5$) of national or subnational strategies or action plans, on diabetes, healthy lifestyle/diet, liver disease, obesity, and others mentioning MASLD/MASH ([Table 1](#)). MASLD/MASH was not included in the priority NCD list of any country ([Table 2](#), [Table S4](#)).

MASLD/MASH clinical practice guidelines

Fifteen countries (53.6%) had national MASLD/MASH CPGs. In those and the remaining countries, the European Association for the Study of the Liver–European Association for the Study of Diabetes–European Association for the Study of Obesity (EASL–EASD–EASO) MASLD CPG was commonly used.² Twenty five (89.3%) countries had at least one national CPG (on alcohol, CVD, diabetes, dyslipidaemia, end-stage liver disease [ESLD]/cirrhosis, hypertension, liver cancer, liver transplantation, obesity, primary care, and others) mentioning MASLD/MASH. Nineteen of 22 obesity CPGs (86.4%) included MASLD/MASH; this trend was followed by diabetes ($n = 12$ out of 26, 46.2%), ESLD/cirrhosis ($n = 11$ out of 14, 78.6%), liver transplantation and liver cancer ($n = 7$ out of 12, 58.3%, $n = 7$ out of 13, 53.8%, respectively), and primary care ($n = 6$ out of 12, 50%) ([Table 2](#), [Fig. 2](#)).

Countries	National MASLD/MASH strategy or action plan	Subnational MASLD/MASH strategy or action plan	MASLD/MASH mentioned in other national or subnational strategies or action plans									Priority NCD list includes MASLD/MASH
			Alcohol	Cancer	CVD	Diabetes	Healthy lifestyle/diet	Liver disease	NCDs	Obesity	Other	
Austria												
Belgium												
Bulgaria												
Croatia												
Cyprus												
Czechia												
Denmark												
Estonia												
Finland												
France												
Germany												
Greece												
Hungary												
Ireland												
Italy												
Latvia												
Lithuania												
Luxembourg												
Malta												
Netherlands												
Poland												
Portugal												
Romania												
Slovakia												
Slovenia												
Spain												
Sweden												
United Kingdom												
Total, n (%) [§]	0	2 (7.1)	2 (7.1)	1 (3.6)	1 (3.6)	7 (25.0)	5 (17.9)	8 (28.6)	0	10 (35.7)	1 (3.6)	0

Abbreviations: CVD, cardiovascular disease; MASH, metabolic dysfunction-associated steatohepatitis; MASLD, metabolic dysfunction-associated steatotic liver disease; NCD, non-communicable disease. Colour legend: blue = exists; white = absent. [§]The denominator for all calculations within this table is the number of countries that responded (n = 28).

Table 1: MASLD/MASH included in priority NCD list and national or subnational strategies or action plans on or that mention MASLD/MASH.

MASH policies. As a result, existing strategies rarely translate into actionable measures for prevention, timely detection, or integrated care, underscoring the absence of coherent, system-level planning to address MASLD/MASH across the EU and the UK. Similarly, although MASLD/MASH is included in T2D, obesity, and HIV CPGs at the European level,^{2,36} there is a lack of recommendations to prevent and manage MASLD/MASH at the population level across the region. Furthermore, said CPGs do not currently recommend MASLD/MASH management from a multidisciplinary perspective and, in many cases, CPGs of related conditions (e.g., obesity, T2D) only mention MASLD/MASH as a complication of the condition instead of addressing their co-management (Panel 2).

Current European MASLD clinical practice guidelines recommend stepwise risk stratification using simple, low-cost, and widely available serum-based non-invasive tests (such as the Fibrosis-4 [FIB-4] Index) as first-line tools in primary care, with sequential testing using more advanced biomarkers or imaging modalities reserved for individuals found to be at higher risk,² underscoring that diagnostic pathways are clearly established even if their operationalisation in policy

may vary by health system. CPG reforms could include testing people living with indicator conditions like T2D and obesity (See the GBD and World Obesity Federation [WOF] prevalence estimates of both indicator conditions in Table S5) with the current second line tests as they are more accurate than the FIB-4; the incorporation of liver-health specific dietary recommendations into European nutrition policies; enhanced preventive measures for MASLD/MASH and other metabolic disorders with shared risk factors as part of national and EU policy; and/or the establishment of cardiometabolic clinical guidelines that assess concurrent health risks.³⁷

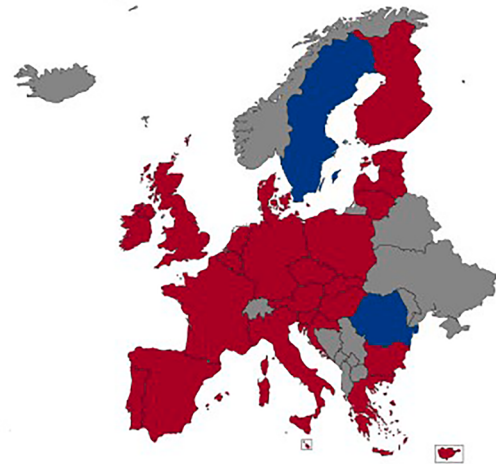
Misalignment between the epidemiological burden and policy response

Available epidemiological estimates underscore the urgency of integrating MASLD into health system priorities. For example, the 2023 Global Burden of Disease (GBD) study prevalence estimates for MASLD (referred to as the “total burden related to non-alcoholic fatty liver disease (NAFLD)”) within Europe range from 11.9% in Denmark to 22.4% in Italy (See GBD prevalence

1. National MASLD/MASH strategies or action plans



1.1. Subnational MASLD/MASH strategies or action plans



1.1.a. MASLD/MASH mentioned in national or subnational strategies or action plans on alcohol



1.1.b. MASLD/MASH mentioned in national or subnational strategies or action plans on cancer



1.1.c. MASLD/MASH mentioned in national or subnational strategies or action plans on CVD



1.1.d. MASLD/MASH mentioned in national or subnational strategies or action plans on diabetes



1.1.e. MASLD/MASH mentioned in national or subnational strategies or action plans on healthy lifestyle/diet



1.1.f. MASLD/MASH mentioned in national or subnational strategies or action plans on liver disease



1.1.g. MASLD/MASH mentioned in national or subnational strategies or action plans on NCDs



1.1.h. MASLD/MASH mentioned in national or subnational strategies or action plans on obesity



1.1.i. MASLD/MASH mentioned in other national or subnational strategies or action plans



Fig. 1: Map of national or subnational strategies or action plans on or that mention MASLD/MASH. Colour legend: blue = exists; red = absent; grey = no response.

Countries	National MASLD/MASH CPG	CPGs for other fields and their mention of MASLD/MASH																	
		Alcohol		CVD		Diabetes		Dyslipidaemia		ESLD/cirrhosis		Hypertension		Liver cancer		Liver transplantation		Obesity	
		CPGs	MASLD/MASH	CPGs	MASLD/MASH	CPGs	MASLD/MASH	CPGs	MASLD/MASH	CPGs	MASLD/MASH	CPGs	MASLD/MASH	CPGs	MASLD/MASH	CPGs	MASLD/MASH	CPGs	MASLD/MASH
Austria																			
Belgium																			
Bulgaria																			
Croatia																			
Cyprus																			
Czechia																			
Denmark																			
Estonia																			
Finland																			
France																			
Germany																			
Greece																			
Hungary																			
Ireland																			
Italy																			
Latvia																			
Lithuania																			
Luxembourg																			
Malta																			
Netherlands																			
Poland																			
Portugal																			
Romania																			
Slovakia																			
Slovenia																			
Spain																			
Sweden																			
United Kingdom																			
Total, n (%)	15 (53.6)	15 (53.6)	2 (7.1)	20 (71.4)	4 (14.3)	26 (92.9)	14 (50.0)	4 (14.3)	14 (50.0)	11 (39.3)	22 (78.6)	9 (30.7)	13 (46.4)	7 (25.0)	12 (42.9)	7 (25.0)	22 (78.6)	19 (67.9)	5 (17.9)
																		13 (46.4)	6 (21.4)

Abbreviations: CPG, clinical practice guideline; CVD, cardiovascular disease; ESLD, end-stage liver disease; MASH, metabolic dysfunction-associated steatohepatitis; MASLD, metabolic dysfunction-associated steatotic liver disease. Colour legend: blue = exists; white = absent. ⁵The denominator for all calculations within this table is the number of countries that responded (n = 28).

Table 2: National clinical practice guidelines on MASLD/MASH or other fields and their mention of MASLD/MASH.

estimates for each country in Table S5)³⁸; these figures are markedly lower than the 30.4% prevalence estimated for the European countries included in this study (EU + UK) (Panel 3). These estimated differences likely reflect variation in case ascertainment and modelling assumptions between GBD³⁹ and real-world epidemiological studies. GBD non-fatal estimates for NAFLD (i.e., MASLD) rely on heterogeneous and often sparse primary data synthesised using hierarchical models, with conservative inclusion decisions and, in data-limited settings, indirect estimation based on metabolic risk factor covariates; by contrast, many population-based and clinical studies use active case detection with liver imaging or biomarker-based assessment, capturing more asymptomatic and undiagnosed disease that is not reflected in routine health data.^{40,41} Consequently, although GBD likely under-represents the true global prevalence and burden of MASLD, particularly in regions where population-based liver imaging data are scarce, the estimates are still very high, warranting decisive policy action.

The limited recognition of MASLD/MASH in national policies in the EU and UK may partly explain the low uptake of screening and active case-finding efforts across Europe,^{15,42} despite its high prevalence. Yet, early MASLD/MASH detection enables timely risk stratification and treatment, improving the likelihood of reversing steatosis or MASH and reducing progression to advanced fibrosis and hepatocellular carcinoma (HCC).⁴³ To this end, the European Association for the Study of the Liver (EASL)-European Association for the Study of Diabetes (EASD)-EASO MASLD CPGs have explicit recommendations to screen for MASLD with

liver fibrosis using NITs in individuals living with cardiometabolic risk factors, especially in those who have abnormal liver enzymes and/or imaging evidence of steatosis, and particularly in the presence of indicator conditions like T2D or obesity, plus additional metabolic risk factors.²

In stark contrast to MASLD/MASH, other NCDs such as T2D, CVD, obesity, and cancer have achieved far greater policy attention and integration within EU frameworks.^{14,44–47} These conditions are typically featured in overarching NCD strategies, prevention programmes, and screening initiatives, often supported by dedicated funding and surveillance systems. For instance, T2D and CVD are consistently prioritised through EU-level action plans emphasising early detection, integrated care, and population-level interventions targeting modifiable risk factors such as diet, physical activity, and alcohol use. Similarly, cancer has benefitted from robust EU initiatives such as Europe's Beating Cancer Plan, which allocates substantial resources to prevention, screening, and research.⁴⁷

Gaps in non-communicable disease prevention and nutrition and physical activity initiatives

The Political Declaration of the fourth UNGA HLM on NCDs underscores persistent gaps in NCD prevention, noting that commitments on prevention and fiscal measures remain weakened, with limited mechanisms for accountability and monitoring.^{18,48} These global governance shortcomings mirror the absence of MASLD/MASH within European dietary and NCD

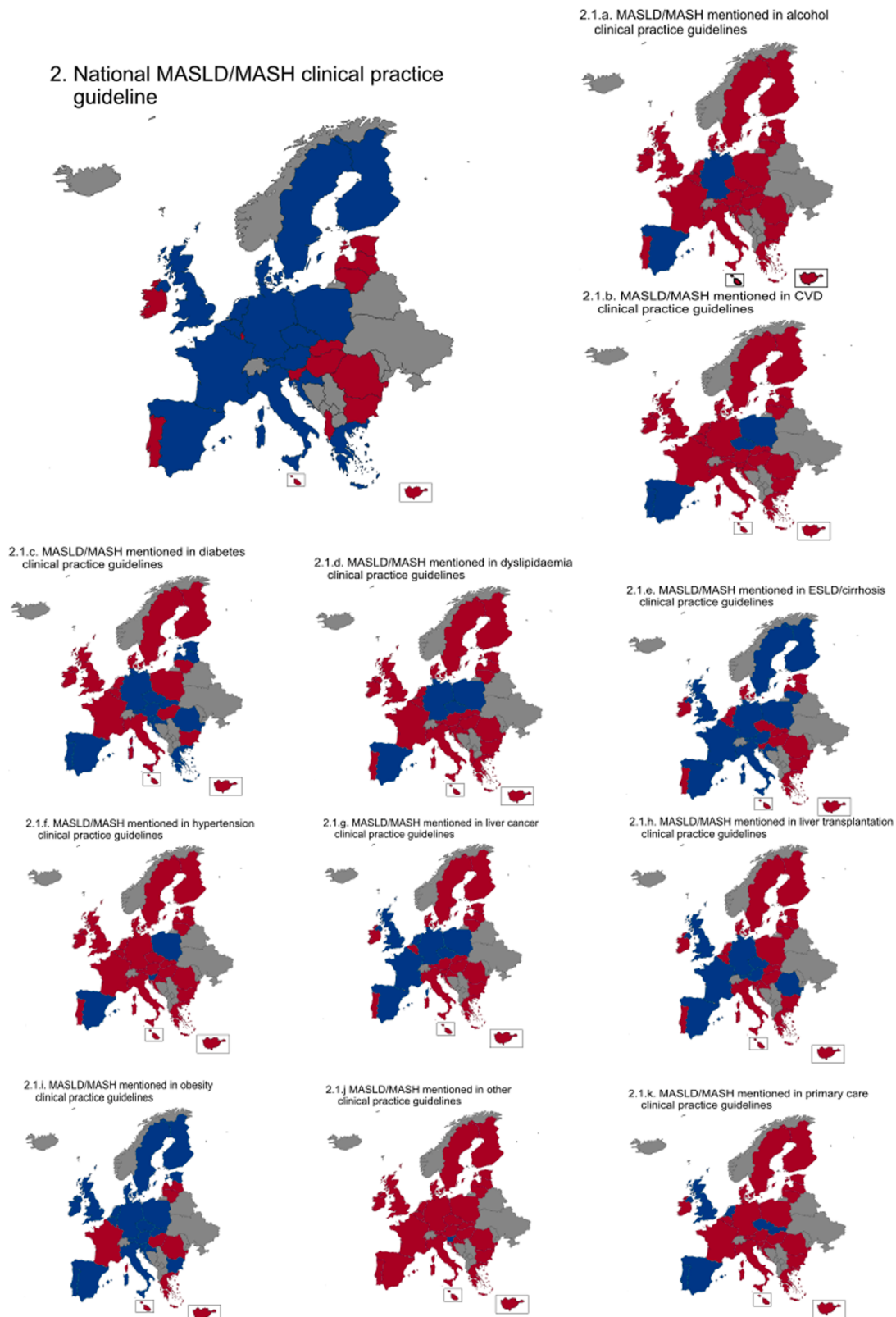


Fig. 2: Map of national clinical practice guidelines on MASLD/MASH or other fields that mention MASLD/MASH. Colour legend: blue = exists; red = absent; grey = no response.

Panel 2: MASLD prevalence in Europe

We conducted a meta-analysis of 18 studies and calculated a pooled MASLD prevalence of 30.4% (95% CI: 21.7%–39.8%), which lies within the range of prior European meta-analyses. This estimate updates the three most recent European meta-analyses. Riazi et al. (2022) (6 studies; 4 countries; publication range: 2002–2015) reported a slightly higher estimate of 32.6% (95% CI: 24.5%–40.6%), derived largely from earlier cohorts and fewer countries.⁶ In contrast, Younossi et al. (2023) (13 studies; 8 EU countries plus the UK; 2005–2021)³³ estimated a lower prevalence of 25.1% (95% CI: 20.55%–30.28%) in Western Europe. The lowest prevalence estimate comes from Cholongitas et al. (2021),³⁴ who analysed eight European (EU + UK) countries and reported 21.8% (95% CI: 19.2%–24.6%) but only among individuals without diabetes mellitus, underscoring the impact of metabolic risk enrichment on prevalence.

The Duval and Tweedie trim-and-fill³⁵ procedure was applied as a sensitivity analysis to assess the robustness of the pooled estimate under the observed funnel plot asymmetry by imputing the number and values of theoretically “missing” studies required to restore symmetry (Supplemental Methods S1). The method imputed three additional studies (18–21), increasing the Freeman-Tukey theta from 1.168 to 1.280 and yielding an adjusted prevalence of 36.4% (95% CI: 26.5%–47.1%) after back-transformation, compared with the observed 30.4% (95% CI: 21.7%–39.8%). This upward shift suggests that a small number of low-prevalence studies may be pulling the pooled estimate downward, although given the extreme heterogeneity ($I^2 \approx 100\%$), the adjusted figure should be interpreted as an upper-bound sensitivity scenario rather than a bias-corrected continental estimate.

frameworks, reinforcing how system-wide neglect of emerging NCDs delays their integration into prevention policies. A review of the European Food Based Dietary Guidelines, compiled by the European Commission's Joint Research Centre,⁴⁶ WHO regional databases,⁴⁹ and the EU Health Policy platform (on nutrition and physical activity),⁵⁰ indicates that current dietary recommendations focus on preventing cancer, CVD, respiratory diseases, and T2D, without specifically addressing MASLD/MASH. However, recent CPGs are beginning to bridge this gap in MASLD/MASH recognition. The European Society of Cardiology CPGs for the management of CVD in patients living with diabetes⁵¹ briefly refer to fatty liver, acknowledging that people living with steatotic liver disease (SLD) are at increased risk of developing T2D. Similarly, the 2022 WHO European Regional Obesity Report⁵² mentions NAFLD, describing it as the fastest-growing obesity-related NCD. The European Society for Clinical Nutrition and Metabolism CPGs on nutrition in liver disease⁵³ also incorporate NAFLD, and more recently, the 2024 EASL-EASD-EASO MASLD CPGs² recommend non-pharmacological interventions for MASLD management, highlighting dietary patterns such as the Mediterranean diet and encouraging the consumption of unprocessed/minimally processed foods and discouraging ultra-processed food (UPF, rich in sugars and saturated fat) and sugar-sweetened beverage (SSB) intake. In this context, stronger implementation of fiscal measures is warranted, as the WHO's 2025 Global Report on SSB taxes shows that despite growing global uptake, SSB taxes in Europe remain uneven, low in magnitude, and often poorly designed, limiting their effectiveness in reducing

affordability and kerbing sugar intake as part of NCD and diet-related disease prevention strategies.⁵⁴

Although the EASL-EASD-EASO nutrition recommendations are broadly consistent with general European dietary guidance for NCD prevention, MASLD/MASH remains absent from population-level European food-based dietary guidelines and this should be remedied.⁵⁵ While gains in NCD prevention have lagged, a trend that may help to explain why MASLD/MASH has not been systematically reflected in policy, since the year 2000 infectious disease indicators have driven improvements in service coverage globally.⁵⁶ The omission of MASLD/MASH from all integrated NCD strategies in the EU and UK represents a missed opportunity to leverage existing infrastructures and policy synergies that could facilitate earlier diagnosis and management. However, deep inequities in unmet needs across European countries demonstrate that access gaps in essential NCD services persist despite overall health system strength,⁵⁶ underscoring that MASLD/MASH integration cannot rely solely on clinical recognition; rather, it requires addressing systemic access barriers that disproportionately affect populations already underserved in metabolic care, and explicitly incorporating the full spectrum of SLD into universal health coverage benefit packages.⁴ Endorsement by clinical and scientific societies of population-level nutrition policies, such as front-of-pack labelling and restrictions on marketing of ultra-processed foods, can translate dietary guidance into effective prevention and counter narratives promoted by commercial actors.

European countries have also taken some action to promote physical activity, but overall policy design is weak, with most countries focussing on schools, public

communication campaigns, and workplaces while failing to implement strong, structural policies in the built environment, transportation system, and health-care, which remain the biggest gaps to creating truly enabling active environments.^{57,58}

Urban planning and transport policies are increasingly recognised as upstream determinants of physical activity and, consequently, metabolic and liver health.⁵⁹ Built-environment features such as safe walking and cycling infrastructure, mixed-use neighbourhoods, access to green space, and reliable public transport are consistently associated with higher levels of routine physical activity across diverse urban contexts.⁵⁹ At the population level, active transport policies have been shown to generate substantial health benefits, including reductions in non-communicable disease risk, premature mortality, and environmental exposures, reinforcing their relevance as public health interventions.⁶⁰ These approaches are particularly pertinent for MASLD/MASH prevention, given robust evidence that regular physical activity improves insulin sensitivity and reduces hepatic steatosis.⁶¹

Systemic and structural barriers to MASLD/MASH policy integration

Despite growing recognition of MASLD/MASH as a major public health challenge, policy responses in Europe remain limited and fragmented. MASLD/MASH exposes the weaknesses of today's health systems which were previously organised around organ- or disease-specific specialities rather than within integrated, patient-centred care. One of the most persistent challenges to comprehensive MASLD/MASH policy implementation in Europe is the structural divide between hepatology and metabolic care. Historically, liver diseases have been managed within hepatology or gastroenterology units, while diabetes or obesity have fallen under endocrinology or internal medicine.^{2,61} The absence of holistic, multidisciplinary care models has led to a fragmented division of responsibilities, resulting in siloed clinical pathways and a disjointed care experience. Other examples of how this liver-metabolic divide jeopardises the integrated and person-centred care of MASLD include the predominant lack of training on metabolic care amongst liver disease specialists and the insufficient knowledge about how to approach fibrosis and the risk of hepatic complications amongst endocrinologists and other specialists of closely related comorbidities such as cardiology, as well as the siloed pathways to access novel drugs for the treatment of obesity or diabetes that might have beneficial impacts on MASLD/MASH, including via clinical trials.^{62,63} Primary care physicians, who are often people's first point of contact within the healthcare system,⁶¹ may be unaware of the new SLD terminology⁵¹ and not have clear guidance on when to refer patients

for a liver assessment, nor access to NITs that could facilitate risk stratification. This fragmentation hinders multidisciplinary management and limits the scalability of cost-effective approaches to MASLD/MASH prevention, timely detection, and treatment. Moreover, with pharmacological treatments for MASH now becoming available in Europe, health systems must prepare by strengthening diagnostic and treatment monitoring capacity, establishing more robust care pathways, and increasing equitable access to the entire MASLD continuum of care.⁶⁴ Changes from a policy perspective should start at the backbone, namely training. For instance, all life sciences' students should learn how to approach metabolic disturbances in a holistic way early on in their degrees, and standardised training on liver fibrosis should be implemented in endocrinology programs. Moreover, policy can shape the way referrals from primary care and the community are done and, therefore, the requirements from multidisciplinary assessment including HCPs from both the metabolic and liver spheres up to highly specialised care at the hospital level.

The gaps are not only in awareness and screening but also in the structural organisation of health systems and the influence of the commercial interests that shape the policy environment. No country mentioned the deleterious impact of co-existent metabolic risk factors now known as metabolic dysfunction- and alcohol-associated liver disease (MetALD),¹ reflecting a policy incoherence that weakens MASLD/MASH prevention (Panel 2). WHO's 2025 Global Report on the Use of Alcohol Taxes shows that, across Europe, alcohol excise taxes remain too low, unevenly applied, and frequently exempt key products such as wine, limiting their effectiveness.⁶⁵ Although this paper focuses on MASLD/MASH, updated nomenclature highlights MetALD as part of the broader SLD spectrum. From a policy perspective, MetALD underscores the lack of coherence between MASLD and alcohol policies, which continue to operate in parallel despite overlapping risk profiles. Aligning these frameworks, for example by recognising alcohol as a disease-modifying factor in MASLD strategies and metabolic vulnerability in alcohol policies, could improve prevention, risk stratification, and care coordination. Furthermore, during negotiations on updated alcohol labelling and consumer protection regulations, the European Parliament reaffirmed the need to maintain the term "reduced-alcohol" in its labelling policies and rejected the inaccurate and misleading alternative term "low-alcohol", which could obscure health risks and undermine EU prevention strategies.⁶⁶ This stance also emphasises the need for coherence with the forthcoming EU Cardiovascular Health Plan,⁶⁷ where clear risk communication around alcohol will be essential. Yet, the SLD spectrum remains absent from these efforts, including the EU Healthier Together - EU Non-communicable Diseases

Initiative, which is aligned with WHO priority NCDs. It has only one mention of a former term for SLD, “fatty liver disease,” noting that it “could be related to the selected NCDs” and one mention of “liver disease” more generally, but only in the context of alcohol use,⁶⁸ reflecting a broader failure to fully align cardiovascular-kidney-metabolic syndrome prevention with other NCD strategies.⁶³ This should be remedied by state actors and their regional and global bodies by including MASLD/MASH in national, European and global policies “asks”, including the milestones and success indicators set out in Fig. 3.

Similarly, fiscal and regulatory measures to curb consumption of two major commercial determinants of poor metabolic health, sugar and UPF,⁶⁹ are unevenly implemented, with some countries adopting soft voluntary codes rather than binding regulations and the EU not mentioning UPF in their Healthier Together Initiative.^{68,70} Industry actors actively work to weaken or block the adoption of effective nutrition and advertising regulations through lobbying, policy design, the casting

of scientific doubt, the promotion of weak voluntary governance models, and even the intimidation of researchers and advocates,⁷¹ which contributes to fragmented and less protective food systems (Panel 3).^{69,71} This commercial and market actors (regulatory capture) disproportionately affects low-resource and socially disadvantaged populations, who are more exposed to unhealthy food environments and higher consumption of ultra-processed foods, thereby reinforcing socioeconomic health disparities and increasing the burden of diet-related conditions such as obesity, diabetes, and MASLD.^{72,73} The results are permissive policies and environments that sustain obesogenic and hepatotoxic exposures across populations. Clinicians and professional societies have a critical role in countering commercial interference by prioritising independent, evidence-based nutrition guidance, implementing robust conflict-of-interest safeguards, and avoiding reliance on food-industry-sponsored education or partnerships. Professional leadership in guideline development and public communication is

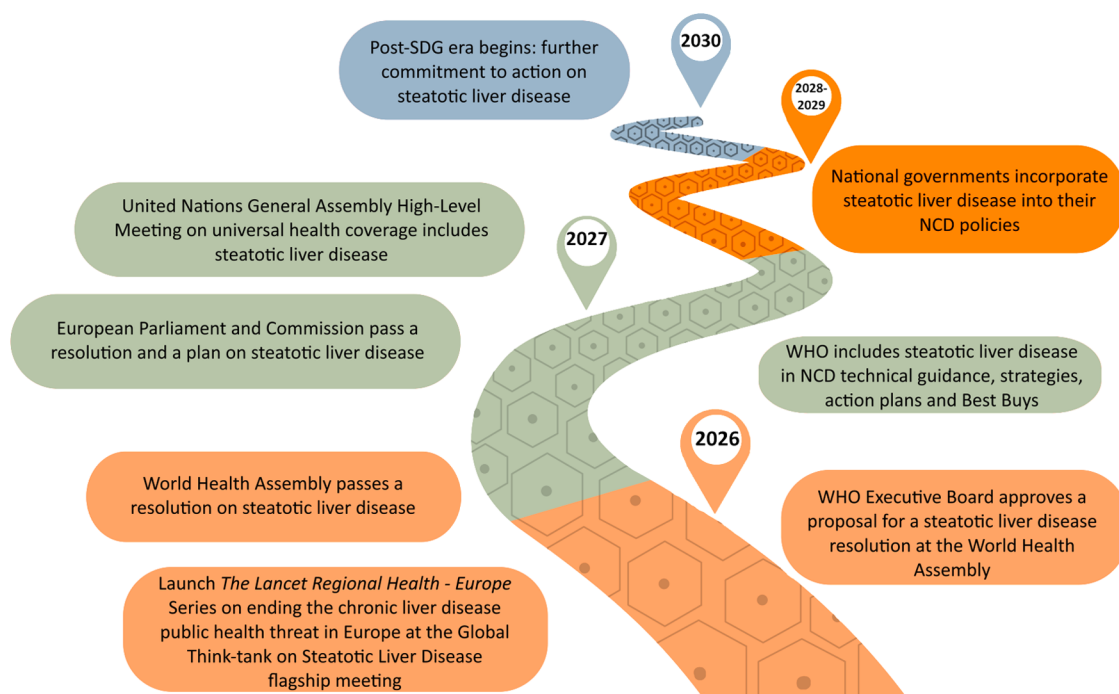


Fig. 3: The road to success in steatotic liver disease policy (2026–2030). Notes: The milestones and indicators of governmental policy success for steatotic liver disease set out in the figure build on a series of key 2025–26 policy activities led by non-governmental actors: the Barcelona Institute for Global Health (ISGlobal); Euractiv; the European Association for the Study of the Liver (EASL); the European Liver Patients Association (ELPA); the Global Liver Institute (GLI); the Global Think-tank on Steatotic Liver Disease; the Healthy Livers Healthy Lives coalition of the American Association for the Study of Liver Diseases (AASLD), the Asian Pacific Association for the Study of the Liver (APASL), EASL, the Latin American Association for the Study of the Liver (ALEH), and the Society on Liver Disease in Africa (SOLDA); and the World Obesity Federation (WOF). High-level events were held at the European Parliament (December 2025), during the United Nations General Assembly High-level Meeting on NCDs (September 2025), at the World Health Assembly (May 2025), and at the World Health Summit (October 2025) along with ELPA, ISGlobal and WOF engagement at the WHO Executive Board (February 2026); many of these events were endorsed by non-governmental organisations from around the world and four days of events are planned for the World Health Assembly in May 2026.

essential to ensure that MASLD/MASH prevention is not undermined by permissive, industry-led approaches to food system governance.

Opportunities for policy and system integration

There are substantial opportunities to integrate MASLD/MASH more effectively into existing health policies and care systems. Embedding MASLD/MASH within established NCD frameworks would enable countries to leverage existing structures for prevention, timely detection, and long-term management.⁸⁴ Although MASLD/MASH prevention aligns with broader public health priorities, including those on nutrition, physical activity, alcohol consumption, and cancer prevention, it is rarely positioned alongside them, despite shared metabolic and behavioural determinants.^{57,85} Realising these synergies requires stronger cross-disciplinary collaboration, primarily with cardiology, endocrinology, hepatology, and primary care working within coordinated care models rather than parallel, speciality-driven pathways. For example, in Italy, the National Prevention Plan (PNP) for 2020–2025

addresses multiple diseases within a single integrated framework (e.g., CVD, diabetes, cancer), illustrating how national strategies can adopt a cross-cutting approach to prevention and highlighting an opportunity to integrate MASLD/MASH into existing policy structures.⁸⁶ Additionally, digital health tools and integrated data systems also offer significant potential to enhance population surveillance, risk stratification, and care coordination, particularly as automated algorithms and primary care-based detection approaches continue to evolve.²⁴ Moreover, with pharmacological treatments for MASH now becoming available in Europe, health systems must prepare by strengthening diagnostic and treatment monitoring capacity, establishing more robust care pathways, and increasing equitable access to the entire MASLD continuum of care.⁴⁹ Together, these actions would position countries to move from fragmented responses toward a coherent, system-wide strategy for MASLD/MASH (Panel 4).

Future research and policy direction

The continued lack of policy alignment and explicit recognition of MASLD/MASH in key governmental

Panel 3: Food package warnings, MASLD/MASH and the Sustainable Development Goals

Food packaging warnings can effectively counteract the influence of an obesogenic environment. Policy interventions targeting food packaging, such as front-of-pack labelling, are designed to guide individuals toward healthier choices even when they are exposed to environments that promote unhealthy eating. One widely studied example is the Nutri-Score label, which uses a colour-coded and letter-graded system to summarise the nutritional quality of products. Evidence shows that such labels can significantly influence purchasing behaviour: a French randomised controlled trial found that Nutri-Score labelling increased the likelihood of consumers choosing healthier products by 16%, when compared with unlabelled options.⁷⁴ Beyond Nutri-Score, simpler labels such as traffic-light (green, yellow, red) systems have been shown to lead consumers to purchase selected food purchases with reduced calorie and sugar content. A systematic review of front-of-pack labelling interventions across multiple countries reported consistent improvements in the nutritional quality of consumer purchases, particularly for beverages and packaged foods.⁷⁵ Latin American countries like Mexico⁵² and Uruguay⁷⁶ provide real-world examples where a simple, stark “warning label” approach has gained public acceptance, shown effectiveness in shaping intended purchases, and holds promise to influence actual consumer behaviour even among vulnerable populations, including children.⁷⁷ These interventions illustrate that simple, easily interpretable packaging cues can effectively nudge consumers toward healthier behaviours, mitigating some of the risks posed by obesogenic environments.⁷⁸ Such labels can be combined with other policy measures to ensure preparedness for MASLD/MASH and reduce its burden. Medical and scientific societies can strengthen the effectiveness of food package warnings by publicly supporting their implementation, resisting industry efforts to weaken labelling standards, and reinforcing these policies within clinical guidance and professional education.

Drawing on lessons from the Framework Convention on Tobacco Control,⁷⁹ it is crucial that MASLD/MASH governmental policy frameworks anticipate and mitigate commercial interference, as was set out in the first NAFLD conceptual model.⁷⁸ Transparency in policymaking, conflict-of-interest safeguards, and the exclusion of industry and lobby actors from health policy forums are foundational measures to protect public health objectives.⁷¹ Without these protections, the same dynamics that delayed effective tobacco and alcohol regulation could impede progress in addressing MASLD/MASH across Europe.^{79,80} Advancing MASLD/MASH policy will require stronger accountability structures that mirror global commitments to equitable health progress, such as the Sustainable Development Goals (SDGs). MASLD/MASH intersects with several SDG domains, including universal health coverage (SDG 3.8), nutrition (SDG 2), NCD-related mortality (SDG 3.4), and the reduction of inequalities in access to essential health services (SDG 10).⁸¹ Yet, the spectrum of SLD, including MASLD, and liver health more broadly, are not included within SDG monitoring.⁸² Incorporating MASLD/MASH into existing monitoring systems and regional reporting mechanisms is essential to ensure that countries can track progress toward the SDGs, particularly as slow improvements in chronic disease prevention and persistent inequalities in unmet needs have emerged as major obstacles to achieving the 2030 SDG agenda.⁸³

and multilateral organisation policy documents has substantial implications for health systems and people living with the disease. Without inclusion in national NCD frameworks, MASLD/MASH risks remaining underdiagnosed and undertreated, which will lead to missed opportunities for timely intervention and cost-effective prevention.^{5,87} Key policy priorities that national- and European-level government entities can take, in addition to WHO and the United Nations, include the effective integration of MASLD/MASH into NCD strategies and action plans (Fig. 3), ensuring that people-first language is always used.⁸⁸ Health systems face a growing burden of advanced liver disease, cirrhosis, and HCC, alongside increased cardiovascular and metabolic complications, all of which could be mitigated through integrated, risk-based screening and management pathways set out by such policies.^{5,78} For people living with MASLD/MASH, the absence of clear policy direction translates into inconsistent access to diagnostic tools, limited clinical awareness, and insufficient referral pathways between primary care, endocrinology, cardiology, psychology, hepatology, and other medical and non-medical specialities. This fragmented approach not only delays diagnosis but may also exacerbate health inequities, since individuals living in lower-resource settings or with comorbid conditions are least likely to be identified and managed appropriately.^{89,90} These inequities are further shaped by social and commercial determinants of health, which increase the risk of MASLD/MASH and disease progression.⁹⁰ Looking forward, Europe must include MASLD/MASH into policy frameworks to mitigate the future burden of liver disease and avoid undermining the progress made in broader NCD prevention as part of the SDGs.⁸³

Limitations

While a broader view of health system readiness may examine components beyond policy (e.g., implementation, resourcing, service availability, or effectiveness), our approach assesses clinical guidelines and government policies to address MASLD/MASH. Secondly, although we conducted systematic searches of national government sources and grey literature and incorporated verification by in-country experts, relevant documents may have been missed, particularly those located outside traditional health-sector repositories. MASLD/MASH prevention is inherently cross-sectoral, and policies situated within agriculture, food systems, consumer protection, or fiscal ministries may not explicitly reference liver health, leading to potential underrepresentation of upstream prevention efforts.

Conclusions

MASLD is Europe's most prevalent liver disease and yet, it remains weakly addressed in European national and regional policy. While new diagnostics and

Search strategy and selection criteria

We searched PubMed (MEDLINE), national government sources, conference proceedings, and grey literature from regional and international public health organisations to identify evidence of metabolic dysfunction-associated steatotic liver disease (MASLD) and metabolic dysfunction-associated steatohepatitis (MASH) and the existence of related policies, defined as strategies, action plans, or clinical practice guidelines (CPGs),^{31,32} across 28 European countries (European Union countries and the United Kingdom). See [Supplemental Methods S1](#) for information on the search for MASLD prevalence estimates and analysis. Searches covered materials published until 15 November 2025, in any language used within the included countries, and incorporated studies using the previous terminology (i.e., non-alcoholic fatty liver disease [NAFLD]/non-alcoholic steatohepatitis [NASH]). Eligible sources included empirical studies, CPGs, national or subnational strategies, and strategy or action plans; no other exclusion criteria were applied. All extracted information underwent verification by in-country experts. In-country experts were purposely selected based on their demonstrated expertise in liver disease, metabolic health, health systems, and/or health policy within their respective national contexts.

treatments create unprecedented opportunities for MASLD/MASH prevention and care, most EU and UK health systems remain unprepared to address this public health threat. Integrating MASLD/MASH within existing NCD policy frameworks and healthcare services should be prioritised. Europe's response over the coming years will determine whether MASLD/MASH becomes a manageable chronic condition or the leading contributor to cirrhosis, HCC, and liver transplantation.

Contributors

JVL conceptualisation, methodology, validation, resources, writing—original draft, writing—review and editing, project administration, and supervision.

TMW conceptualisation, methodology, validation, Formal analysis, Investigation, writing—original draft, writing—review and editing, and project administration.

LA-G Formal analysis, Investigation, writing—original draft, writing—review and editing, and visualisations.

KWMA, PNB, HEM, SMB, NP, JMP investigation, writing—original draft, and writing—review and editing.

RB, SB, PC, HCP, RF, SMAF, GF, LSG, HH, AGH, KI, MJ, PJ, JK, DM, CM, AM, EP, MP, GP, MPR, JDR, RTR, RS, LS, IT, HYJ, JMS resources, validation and writing—review and editing.

European MASLD collaborator group validation, and writing—review and editing.

Editor note

The Lancet Group takes a neutral position with respect to territorial claims in published maps and institutional affiliations.

Declaration of interests

JVL received research grants to his institutions from Boehringer Ingelheim, Echosens, Gilead Sciences, Madrigal Pharmaceuticals, MSD, Novo Nordisk, and Pfizer, consulting fees from Echosens, GSK, Madrigal Pharmaceuticals, Novo Nordisk, Pfizer, Sonic Incytes, and Takeda, and honoraria for lectures from Echosens, Gilead Sciences, GSK, and Novo Nordisk, outside of the submitted work.

KWMA acknowledges grants to his institution from the Academy of Medical Sciences, NIHR and SWAG Cancer Alliance, consulting fees from Novo Nordisk, outside of the scope of this work.

PNB acknowledges consulting fees, and support for attending meetings and/or travel from Madrigal Pharmaceuticals, Novo Nordisk, and Resolution Therapeutics, outside of this work.

RB acknowledges an unpaid leadership or fiduciary role as the President of The Czech Society of Hepatology, outside of the scope of this work.

HCP acknowledges personal fees from Intercept, Genfit, Gilead Sciences, and Promethera Bioscience, outside of the scope of the submitted work.

SMAF acknowledges clinical investigator fellowship from the Research Foundation Flanders (FWO) (1802154N); his institution has received grants from Astellas, Falk Pharma, Genfit, Gilead Sciences, GlympsBio, Janssen Pharmaceutica, Inventiva, Merck, Pfizer, and Roche. He has acted as a consultant for AbbVie, Actelion, Aelin Therapeutics, AgomAb, Aligos Therapeutics, Allergan, Alnylam, Astellas, AstraZeneca, Bayer, Boehringer Ingelheim, Bristol Myers Squibb, CSL Behring, Coherus, Echoscens, Dr. Falk Pharma, Eisai, Enyo, Galapagos, Galmed, Genentech, Genfit, Genflow Biosciences, Gilead Sciences, Intercept, Inventiva, Janssen Pharmaceutica, PRO.MED.CS Praha, Julius Clinical, Madrigal Pharmaceuticals, Medimmune, Merck, Mursla Bio, NGM Bio, Novartis, Novo Nordisk, Promethera, Roche, and Siemens Healthineers. He has been a lecturer for AbbVie, Allergan, Bayer, Eisai, Genfit, Gilead Sciences, Janssen-Cilag, Intercept, Inventiva, Merck, Novo Nordisk, Promethera, and Siemens, all this outside of the scope of this work.

GF acknowledges grants to her institution from the Spanish Institute of Health ISCIII (Instituto de Salud Carlos III, Fondo de Investigación Sanitaria-FEDER Subdirección General de Evaluación and Fondos FEDER (refs P122/00745), and CIBEROBN Spanish Health Institute Carlos III, Ministry of Economy & Competitiveness (ref CB06/03/1014)), payment or honoraria from Novo Nordisk, and Eli Lilly and Company outside of the submitted work, participation on data safety monitoring board or advisory board in Eli Lilly and Company, Novo Nordisk, Regeneron, Marabou Foundation, and Boehringer Ingelheim, and unpaid leadership or fiduciary role as co-chair of the scientific advisory board of European Association for the Study of Obesity (EASO).

LSG acknowledges grants from Gilead Sciences for the ROALD RE-LINK Screening Project for Hepatitis.

B, C, and D in collaboration with Laboratory, Chain (study support), Prospective phase IV clinical trial on adherence and persistence on treatment and quality of life in patients with Chronic hepatitis delta using Hepcludex® (bulevirtide), ENHANCE D, Screening and linkage to care (SLTC) for Hepatitis D Virus (HDV) among industrial workers in Southern Romania (BlueLink-HD). She acknowledges consulting fees from Gilead Sciences Inc, AbbVie, Eli Lilly and Company, Novo Nordisk, Innergy, Ewopharma, payment or honoraria from AbbVie, Eli Lilly and Company, Novo Nordisk, Gilead, Innergy, Takeda, Sanofi, support for attending meetings and/or travel from Gilead, AbbVie, and Takeda, and participation on Data Safety Monitoring or advisory board for Eli Lilly and Company, and Novo Nordisk. This is all outside of this work.

HH's institutions have received research funding from AstraZeneca, Echoscens, Gilead Sciences, Intercept, MSD, Novo Nordisk, Takeda, and Pfizer with HH as the principal investigator. He has served as consultant, speaker, or on advisory boards for AstraZeneca, Boehringer Ingelheim, Bristol Myers-Squibb, GSK, Echoscens, Ipsen, MSD, and Novo Nordisk and has been part of hepatic events adjudication committees for Arrowhead, Boehringer Ingelheim, KOWA, and GW Pharma. This is all outside of this work.

AGH declares consultancies for Boehringer Ingelheim, Eli Lilly and Company, and Metadex Diagnostics, participation in advisory boards for Boehringer Ingelheim, Merck Sharp & Dohme, Novo Nordisk, Metadex Diagnostics, and Pfizer, and being a speaker for Eli Lilly and Company, Merck Sharp & Dohme, Novo Nordisk, and Pfizer, outside of this work, is supported by the GRIP on MASH consortium, the Innovative Health Initiative Joint Undertaking (IHI JU), under grant agreement No. 101132946.

MJ acknowledges consulting fees from Novo Nordisk, Eli Lilly and Company, Amgen, and Pfizer, payment or honoraria from Novo Nordisk, Eli Lilly and Company, AstraZeneca, Pfizer, and Sanofi, support for attending meeting and/or travel from Novo Nordisk, Eli Lilly and Company, Amgen, AstraZeneca, Pfizer, and Medis, all outside of this work.

PJ acknowledges consulting fees from AstraZeneca and grants from the Novo Nordisk Foundation, all outside of this work.

HEM acknowledges being Director of HEM Consultancy, which provides consulting services within the global health and international development sectors, and consulting fees from Panorama Global, the Barcelona Institute for Global Health, the European Association for the Study of the Liver, GBCHealth, and the United Nations University-IIGH, outside of this work.

DM has received advisory board and/or speaking fees from AB-Biotics, Abbott, Almirall, Amarna, Amgen, AstraZeneca, Ferrer, Gilead Sciences, Eli Lilly and Company, Medtronic, Menarini, MSD, NovoNordisk, and Sanofi, outside of this work.

CM has received consulting fees from AstraZeneca, Boehringer-Ingelheim, Echoscens, Gilead Sciences, GSK, Ipsen, Roche, Julius Clinical all outside of this work.

AM has received advisory board and/or speaking fees from Abbott, AstraZeneca, Astellas, Gilead Sciences all outside of this work.

GP acknowledges receiving grants to his institution from Abbvie, Gilead, and Vianex, consulting fees from Abbvie, AstraZeneca, BioArs, Gilead, GlaxoSmithKline, Ipsen, Novo Nordisk, Roche, and Vir Biotechnology, payment or honoraria from Abbvie, AstraZeneca, Gilead, Ipsen, Novo Nordisk, and Roche, support for attending meetings and/or travel from Abbvie, AstraZeneca, Gilead, Janssen, Ipsen, Novo Nordisk, Roche, and Vianex, all outside of this work.

MPR acknowledges receiving consulting fees from Roche, AstraZeneca, Bristol Myers Squibb (BMS), Eisai, payment or honorario for lectures from Roche, AstraZeneca, and Eisai, payment for expert testimony from Ipsen, support for attending meetings and travels from Gilead, Roche, and AstraZeneca, participation on data safety monitoring in Boehringer Ingelheim, and BMS, and leadership of fiduciary role form UEGW, ÖGGH, all outside of this work.

NP acknowledges payment or honoraria from Gilead, Gore, AstraZeneca, and Novo Nordisk, support for attending meetings from Gilead, and Abbvie, and participation on a Data Safety monitoring board or advisory board for Gilead, all outside of this work.

HY-J acknowledges consulting fees from Novartis, Novo Nordisk, Eli Lilly and Company, and MSD, and participation on a data safety monitoring board or advisory board in MSD, Eli Lilly and Company, and Hamni, all outside of the scope of this work.

JMS declares consultant honoraria from Akero, Alentis, Alexion, Altimune, AstraZeneca, 89Bio, Bionorica, Boehringer Ingelheim, Boston Pharmaceuticals, Gilead Sciences, GSK, HistoIndex, Ipsen, Inventiva Pharma, Madrigal Pharmaceuticals, Kriya Therapeutics, Eli Lilly and Company, MSD Sharp & Dohme GmbH, Novartis, Novo Nordisk, Pfizer, Roche, Sanofi, and Siemens Healthineers, speaker honoraria from AbbVie, Boehringer Ingelheim, Gilead Sciences, Ipsen, Eli Lilly and Company, Madrigal Pharmaceuticals, and Novo Nordisk, and stockholder options for Hepta Bio, outside of this work.

JMP has received consulting fees from Madrigal, Novo Nordisk, Boehringer Ingelheim and MSD; in addition, he has received speaking fees from Madrigal, Novo Nordisk, Boehringer Ingelheim, Novartis and Gilead and travel support from Madrigal, Novo Nordisk and Boehringer Ingelheim; he has also received educational and research support from Siemens, Gilead, Pfizer, Astellas, Accelerate, Novartis, AbbVie, ViiV and MSD; this is all outside of this work. He received funds from the European Commission/EFPIA IM12 853966-2, IM12 777377, H2020 847989, HLTH-101136299, ISCIII P119/01898 and P122/01770, Barcelona City Council-'La Caixa' Foundation 22S07286-001 and SR20-00386 and Next Generation EU-IBEC Q6922 and he is supported by a Research Intensification Grant from Vall d'Hebron University Hospital, outside of this work.

TMW, LA-G, SB, PC, RF, KI, JK, SMB, EP, MP, JDR, RTR, RS, LS, IT have no conflicts of interest to declare.

For further consultation, please refer to the attached ICMJE forms.

Acknowledgements

This paper is part of *The Lancet Regional Health - Europe* Series on chronic liver disease in Europe, developed in collaboration with the Global Think-tank on Steatotic Liver Disease. The Series was chaired by Prof Jeffrey V Lazarus and co-chaired by Dr Camila A Picchio, Dr Elisa Pose, and Dr Paul N Brennan. JVL, TMW, LA-G, and SMB acknowledge institutional support to ISGlobal from grant CEX2023-0001290-S, funded by MCIN/AEI/10.13039/501100011033, and the Generalitat de Catalunya, through the CERCA Programme. We would like to acknowledge Maija Gureviča for contributing to the response from Latvia and Nevena Chakarova and Tsvetelina Tankova for contributing to Bulgaria. We would also like to acknowledge Sergi Sanz for his valuable support with the meta-analysis.

Financial support: No financial support was received for this article. We would like to acknowledge the important contributions of Professor Hannes Hagström to this Series article. With great fondness and admiration for both his care of his patients and the lasting advancements he made upon our field, we dedicate this publication to his memory. Valued colleague and dear friend to so many, we will miss your intelligence, integrity, and commitment.

Appendix A. Supplementary data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.lanepe.2026.101713>.

References

- Rinella ME, Lazarus JV, Ratzliff V, et al. A multisociety Delphi consensus statement on new fatty liver disease nomenclature. *J Hepatol*. 2023;79(6):1542–1556. <https://doi.org/10.1016/j.jhep.2023.06.003>.
- European Association for the Study of the Liver (EASL); European Association for the Study of Diabetes (EASD); European Association for the Study of Obesity (EASO). EASL-EASD-EASO Clinical Practice Guidelines on the management of metabolic dysfunction-associated steatotic liver disease (MASLD). *J Hepatol*. 2024;81(3):492–542. <https://doi.org/10.1016/j.jhep.2024.04.031>.
- Sookoian S, Pirola CJ, Sanyal AJ. MASLD as a non-communicable disease. *Nat Rev Gastroenterol Hepatol*. 2025;22(3):148–149. <https://doi.org/10.1038/s41575-025-01039-x>.
- Lazarus JV, Anstee QM, Hagström H, et al. Defining comprehensive models of care for NAFLD. *Nat Rev Gastroenterol Hepatol*. 2021;18(10):717–729. <https://doi.org/10.1038/s41575-021-00477-7>.
- Huang DQ, Wong VWS, Rinella ME, et al. Metabolic dysfunction-associated steatotic liver disease in adults. *Nat Rev Dis Primers*. 2025;11(1):14. <https://doi.org/10.1038/s41572-025-00599-1>.
- Riazi K, Azhari H, Charette JH, et al. The prevalence and incidence of NAFLD worldwide: a systematic review and meta-analysis. *Lancet Gastroenterol Hepatol*. 2022;7(9):851–861. [https://doi.org/10.1016/S2468-1253\(22\)00165-0](https://doi.org/10.1016/S2468-1253(22)00165-0).
- Quek J, Chan KE, Wong ZY, et al. Global prevalence of non-alcoholic fatty liver disease and non-alcoholic steatohepatitis in the overweight and obese population: a systematic review and meta-analysis. *Lancet Gastroenterol Hepatol*. 2023;8(1):20–30. [https://doi.org/10.1016/S2468-1253\(22\)00317-X](https://doi.org/10.1016/S2468-1253(22)00317-X).
- En Li Cho E, Ang CZ, Quek J, et al. Global prevalence of non-alcoholic fatty liver disease in type 2 diabetes mellitus: an updated systematic review and meta-analysis. *Gut*. 2023;72(11):2138–2148. <https://doi.org/10.1136/gutjnl-2023-330110>.
- Estes C, Anstee QM, Arias-Loste MT, et al. Modeling NAFLD disease burden in China, France, Germany, Italy, Japan, Spain, United Kingdom, and United States for the period 2016–2030. *J Hepatol*. 2018;69(4):896–904. <https://doi.org/10.1016/j.jhep.2018.05.036>.
- Hagström H, Shang Y, Hegmar H, Nasr P. Natural history and progression of metabolic dysfunction-associated steatotic liver disease. *Lancet Gastroenterol Hepatol*. 2024;9(10):944–956. [https://doi.org/10.1016/S2468-1253\(24\)00193-6](https://doi.org/10.1016/S2468-1253(24)00193-6).
- Ginès P, Serra-Burriel M, Kamath PS. Metabolic dysfunction-associated steatotic liver disease-the new epidemic of chronic liver disease. *JAMA Netw Open*. 2025;8(6):e2516381. <https://doi.org/10.1001/jamanetworkopen.2025.16381>.
- Schattenberg JM, Lazarus JV, Newsome PN, et al. Disease burden and economic impact of diagnosed non-alcoholic steatohepatitis in five European countries in 2018: a cost-of-illness analysis. *Liver Int*. 2021;41(6):1227–1242. <https://doi.org/10.1111/liv.14825>.
- Younossi ZM, Paik JM, Lazarus JV, et al. Projected global clinical, humanistic, and economic impact of metabolic dysfunction-associated steatohepatitis (MASH): the cost of inaction based on data from nine countries. *Clin Gastroenterol Hepatol*. 2025;S1542–3565(25):757–758. <https://doi.org/10.1016/j.cgh.2025.09.002>.
- The Organisation for Economic Co-operation and Development (OECD). *The Health and Economic Benefits of Tackling Non-Communicable Diseases*. Paris: OECD Publishing; 2026. Available from: https://www.oecd.org/content/dam/oecd/en/publications/reports/2026/04/the-health-and-economic-benefits-of-tackling-non-communicable-diseases_6ec94420/e20cbbc3-en.pdf.
- Lazarus JV, Palayew A, Carrieri P, et al. European 'NAFLD Preparedness Index' - is Europe ready to meet the challenge of fatty liver disease? *JHEP Rep*. 2021;3(2):100234. <https://doi.org/10.1016/j.jhepr.2021.100234>.
- World Health Organization. *Tackling NCDs: Best Buys and Other Recommended Interventions for the Prevention and Control of Noncommunicable Diseases*. 2nd ed. Geneva: WHO; 2024 [cited 2025 Oct 21]. Available from: <https://www.who.int/publications/i/item/9789240091078>.
- Galea G, Ekberg A, Ciobanu A, et al. Quick buys for prevention and control of noncommunicable diseases. *Lancet Reg Health Eur*. 2025;52:101281. <https://doi.org/10.1016/j.lanepe.2025.101281>.
- Ivanovsky Wajcman D, Nicolàs A, Picchio CA, et al. Prioritising viral hepatitis elimination to prevent hepatocellular carcinoma: a public health approach for effective preventive hepatology. *JHEP Rep*. 2025;7(8):101436. <https://doi.org/10.1016/j.jhepr.2025.101436>.
- United Nations General Assembly. *Political Declaration of the Fourth High-Level Meeting of the General Assembly on the Prevention and Control of Noncommunicable Diseases and the Promotion of Mental Health and Well-Being*. Rev. 4. New York: United Nations; 2025 [cited 2025 Nov 24]. Available from: <https://www.un.org/pga/wp-content/uploads/sites/109/2025/09/Finalized-PD-on-NCDs-and-Mental-Health-REV4-3-September-2025.pdf>.
- World Economic Forum. *Catalysing Cross-Sector Leadership for Metabolic Health*; 2026 [cited 2026 Jan 26]. Available from: https://reports.weforum.org/docs/WEF_Catalysing_Cross-Sector_Leadership_for_Metabolic_Health_2026.pdf.
- World Health Organization. Steatotic liver disease: a missing piece in the global noncommunicable disease response: draft resolution proposed by Armenia, Burundi, Chad, Chile, Egypt, Kuwait, Nigeria, Palestine, Paraguay, Qatar, Romania, Tunisia and the United Republic of Tanzania. Agenda item 6, EB158/CONF.7. 2 Feb 2026 [cited 2026 Feb 5]. Available from: https://apps.who.int/gb/ebwha/pdf_files/EB158/B158_CONF7-en.pdf.
- Cusi K, Abdelmalek MF, Apovian CM, et al. Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD) in people with diabetes: the need for screening and early intervention. A consensus report of the American diabetes association. *Diabetes Care*. 2025;48(7):1057–1082. <https://doi.org/10.2337/dci24-0094>.
- McGowan B, Ciudin A, Baker JL, et al. Framework for the pharmacological treatment of obesity and its complications from the European Association for the Study of Obesity (EASO). *Nat Med*. 2025;31(10):3229–3232. <https://doi.org/10.1038/s41591-025-03765-w>.
- Dillon JF, Miller MH, Robinson EM, et al. Intelligent liver function testing (iLFT): a trial of automated diagnosis and staging of liver disease in primary care. *J Hepatol*. 2019;71(4):699–706. <https://doi.org/10.1016/j.jhep.2019.05.033>.
- U.S. Food and Drug Administration. FDA approves first treatment for patients with liver scarring due to fatty liver disease [cited 2025 Nov 24]. Available from: <https://www.fda.gov/news-events/press-announcements/fda-approves-first-treatment-patients-liver-scarring-due-fatty-liver-disease>; 2024.
- U.S. Food and Drug Administration. FDA approves treatment for serious liver disease known as 'MASH' [cited 2025 Oct 21]. Available from: <https://www.fda.gov/drugs/news-events-human-drugs/fda-approves-treatment-serious-liver-disease-known-mash>; 2025.

- 27 European Medicines Agency. *EPAR: Rezdiffra™ (resmetirom) – Summary of the Positive Opinion Adopted by CHMP on 19 June 2025*. EMA; 2025 [cited 2025 Oct 21]. Available from: <https://www.ema.europa.eu/en/medicines/human/EPAR/rezdiffra>.
- 28 Brennan PN, Kopka CJ, Agirre-Garrido L, et al. Reviewing MAESTRO-NASH and the implications for hepatology and health systems in implementation/accessibility of Resmetirom. *npj Gut Liver*. 2025;2:3. <https://doi.org/10.1038/s44355-024-00017-5>.
- 29 Ivancovsky Wajcman D, Byrne CJ, Dillon JF, et al. A narrative review of lifestyle management guidelines for metabolic dysfunction-associated steatotic liver disease. *Hepatology*. 2024;83:1303–1325. <https://doi.org/10.1097/HEP.0000000000001058>.
- 30 Lazarus JV, Agirre-Garrido L, Diaz LA, et al. Cost-Effectiveness of MASH diagnosis and management approaches among those with type 2 diabetes. *JAMA Netw Open*. 2025;8(11):e2542750. <https://doi.org/10.1001/jamanetworkopen.2025.42750>.
- 31 Kraft ME, Furlong SR. *Public Policy: Politics, Analysis, and Alternatives*. 6th ed. Thousand Oaks (CA): CQ Press; 2017.
- 32 Bardach E, Patashnik EM. *A Practical Guide for Policy Analysis: the Eightfold Path to More Effective Problem Solving*. 6th ed. Thousand Oaks, CA: CQ Press; 2020.
- 33 Younossi ZM, Golabi P, Paik JM, Henry A, Van Dongen C, Henry L. The global epidemiology of nonalcoholic fatty liver disease (NAFLD) and nonalcoholic steatohepatitis (NASH): a systematic review. *Hepatology*. 2023;77(4):1335–1347. <https://doi.org/10.1097/HEP.0000000000000004>.
- 34 Cholongitas E, Pavlopoulou I, Papatheodoridi M, et al. Epidemiology of nonalcoholic fatty liver disease in Europe: a systematic review and meta-analysis. *Ann Gastroenterol*. 2021;34(3):404–414. <https://doi.org/10.20524/aog.2021.0604>.
- 35 Duval S, Tweedie R. Trim and fill: a simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*. 2000;56(2):455–463. <https://doi.org/10.1111/j.0006-341x.2000.00455.x>.
- 36 European AIDS Clinical Society (EACS). *EACS Guidelines. Version 12.0*. Brussels: EACS; 2023. Available from: <https://www.eacsociety.org/media/guidelines-12.0.pdf>.
- 37 Gries JJ, Lazarus JV, Brennan PN, et al. Interdisciplinary perspectives on the co-management of metabolic dysfunction-associated steatotic liver disease and coronary artery disease. *Lancet Gastroenterol Hepatol*. 2025;10(1):82–94. [https://doi.org/10.1016/S2468-1253\(24\)00310-8](https://doi.org/10.1016/S2468-1253(24)00310-8).
- 38 GBD 2023 Disease and Injury and Risk Factor Collaborators. Burden of 375 diseases and injuries, risk-attributable burden of 88 risk factors, and healthy life expectancy in 204 countries and territories, including 660 subnational locations, 1990–2023: a systematic analysis for the Global Burden of Disease Study 2023. *Lancet*. 2025;406(10513):1873–1922. [https://doi.org/10.1016/S0140-6736\(25\)01637-X](https://doi.org/10.1016/S0140-6736(25)01637-X).
- 39 Kim S, Oh J, Shin J, et al. Global burden of metabolic dysfunction-associated steatotic liver disease, 1990–2023, and projections to 2050: a systematic analysis for the Global Burden of Disease Study 2023. *Lancet Gastroenterol Hepatol*. 2026;11(6):463–494.
- 40 Ge X, Zheng L, Wang M, Du Y, Jiang J. Prevalence trends in non-alcoholic fatty liver disease at the global, regional and national levels, 1990–2017: a population-based observational study. *BMJ Open*. 2020;10(8):e036663. <https://doi.org/10.1136/bmjopen-2019-036663>.
- 41 Paik JM, Henry L, Younossi Y, Ong J, Alqahtani S, Younossi ZM. The burden of nonalcoholic fatty liver disease (NAFLD) is rapidly growing in every region of the world from 1990 to 2019. *Hepatol Commun*. 2023;7(10):e0251. <https://doi.org/10.1097/HCP.0000000000000251>.
- 42 Johansen S, Åberg F, Tsochatzis EA, Krag A. Screening for advanced steatotic liver disease. *Lancet Gastroenterol Hepatol*. 2025;10(9):842–854. [https://doi.org/10.1016/S2468-1253\(25\)00097-4](https://doi.org/10.1016/S2468-1253(25)00097-4).
- 43 Tantu MT, Farhana FZ, Haque F, et al. Pathophysiology, noninvasive diagnostics and emerging personalized treatments for metabolic associated liver diseases. *npj Gut Liver*. 2025;2:18. <https://doi.org/10.1038/s44355-025-00030-2>.
- 44 MEPs Mobilising for Diabetes (MMD). *Blueprint for Action on Diabetes in the European Union by 2030*. Brussels: MEP Interest Group on Diabetes; 2021. Available from: <https://www.mepinterestgroupdiabetes.eu/wp-content/uploads/2021/03/MMD-BLUEPRINT-FOR-ACTION-ON-DIABETES.pdf>.
- 45 Council of the European Union. *Conclusions on the Improvement of Cardiovascular Health in the European Union. ST 15315/2024-INIT*. Brussels: Council of the European Union; 2024. Available from: <https://data.consilium.europa.eu/doc/document/ST-15315-2024-INIT/en/pdf>.
- 46 European Commission. *White Paper on a Strategy for Europe on Nutrition, Overweight and Obesity-Related Health Issues*. Brussels: Commission of the European Communities; 2007. COM (2007) 279 final. Available from: https://ec.europa.eu/health/archive/ph_determinants/life_style/nutrition/documents/nutrition_wp_en.pdf.
- 47 European Commission. *Europe's Beating Cancer Plan*. Brussels: European Commission; 2021. Available from: https://health.ec.europa.eu/system/files/2022-02/eu_cancer_plan_en_0.pdf.
- 48 European Commission. *Political Guidelines 2024–2029: Political Guidelines for the Next European Commission*. Brussels: European Commission; 2024. Available from: https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf.
- 49 World Health Organization Regional Office for Europe. *European Programme of Work 2020–2025: Leaving No One Behind – For Health and Well-Being for All*. Copenhagen: WHO Regional Office for Europe; 2015. Available from: <https://www.who.int/europe/publications/i/item/9789289051231>.
- 50 European Commission. *Nutrition and physical activity*. Brussels: European Commission [cited 2025 Dec 9]. Available from: https://health.ec.europa.eu/nutrition-and-physical-activity_en.
- 51 Marx N, Federici M, Schütt K, et al. 2023 ESC Guidelines for the management of cardiovascular disease in patients with diabetes. *Eur Heart J*. 2023;44(39):4043–4140. <https://doi.org/10.1093/eurheartj/ehad192>.
- 52 World Health Organization. *Regional Office for Europe. WHO European Regional Obesity Report 2022*. Copenhagen: WHO/Europe; 2022. ISBN: 9789289057738. Available from: <https://www.who.int/europe/publications/i/item/9789289057738>.
- 53 Plauth M, Bernal W, Dasarthy S, et al. ESPEN guideline on clinical nutrition in liver disease. *Clinical nutrition*. 2019;38(2):485–521. <https://doi.org/10.1016/j.clnu.2018.12.022>.
- 54 World Health Organization (WHO). *Global report on the use of sugar-sweetened beverage taxes* [Cited 2026 Jan 2]. Available on: <https://iris.who.int/server/api/core/bitstreams/971f1b69-7eda-4329-a152-3e1d15b5c2c7/content>; 2025.
- 55 European Commission, Joint Research Centre. *Food-based dietary guidelines in Europe*. Knowl Pol. https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway/topic/food-based-dietary-guidelines-europe_en.
- 56 World Cancer Research Fund International/International Cancer Control Partnership (ICCP). *MOVING policy index: physical activity policy in 30 European countries*. Available from: <https://www.iccp-portal.org/sites/default/files/resources/MOVING-Policy-Brief-May-2023.pdf>; 2023.
- 57 Ramírez Varela A, Bauman A, Woods CB, et al. Physical activity remains under-prioritized in political agendas. *Nat Health*. 2026;1:278–279. <https://doi.org/10.1038/s44360-026-00078-1>.
- 58 Fuentes-Merlos Á, Quesada-Rico JA, Reina R, Orozco-Beltrán D. Healthcare use among people with diabetes mellitus in Europe: a population-based cross-sectional study. *Fam Med Community Health*. 2022;10(4):e001700. <https://doi.org/10.1136/fmch-2022-001700>.
- 59 Sallis JF, Cerin E, Conway TL, et al. Physical activity in relation to urban environments in 14 cities worldwide: a cross-sectional study. *Lancet*. 2016;387(10034):2207–2217. [https://doi.org/10.1016/S0140-6736\(15\)01284-2](https://doi.org/10.1016/S0140-6736(15)01284-2).
- 60 Rojas-Rueda D, de Nazelle A, Andersen ZJ, et al. Health impacts of active transportation in Europe. *PLoS One*. 2016;11(3):e0149990. <https://doi.org/10.1371/journal.pone.0149990>.
- 61 Keating SE, Hackett DA, George J, Johnson NA. Exercise and non-alcoholic fatty liver disease: a systematic review and meta-analysis. *J Hepatol*. 2012;57(1):157–166. <https://doi.org/10.1016/j.jhep.2012.02.023>.
- 62 Zannad F, Sanyal AJ, Butler J, Miller V, Harrison SA. Integrating liver endpoints in clinical trials of cardiovascular and kidney disease. *Nat Med*. 2024;30(9):2423–2431. <https://doi.org/10.1038/s41591-024-03223-z>.
- 63 Numele CE, Neeland IJ, Tuttle KR, et al. A synopsis of the evidence for the science and clinical management of cardiovascular–kidney–metabolic (CKM) syndrome: a scientific statement from the American Heart Association. *Circulation*. 2023;148:1636–1664.
- 64 Zhou XD, Wong VWS, Zheng MH. Resmetirom and GLP-1 agonists for MASH: complementary rather than exclusive. *npj Gut Liver*. 2024;1:4. <https://doi.org/10.1038/s44355-024-00004-w>.
- 65 World Health Organization (WHO). *Global Report on the Use of Alcohol Taxes*; 2025 [Cited 2026 Feb 2]. Available on: <https://iris.who.int/>.

- who.int/server/api/core/bitstreams/0b17c3be-0e3e-43e4-8264-7a6281366a4f/content.
- 66 European Association for the Study of the Liver (EASL). *EASL Welcomes European Parliament's Decision to Safeguard Consumers by Endorsing Clear and Accurate "Reduced-Alcohol" Labelling*. Brussels: EASL; 2025 [cited 2025 Dec 9]. Available from: <https://easl.eu/news/easl-welcomes-european-parliaments-decision-to-safeguard-consumers/>.
 - 67 European Society of Cardiology (ESC). EU health ministers adopt landmark Council Conclusions on cardiovascular health. Brussels: ESC [cited 2025 Dec 9]. Available from: <https://www.escardio.org/The-ESC/Press-Office/Press-releases/eu-health-ministers-adopt-landmark-council-conclusions-on-cardiovascular-health>.
 - 68 European Commission. Healthier together: EU non-communicable diseases initiative. Brussels: European Commission [cited 2025 Dec 12]. Available from: https://health.ec.europa.eu/non-communicable-diseases/healthier-together-eu-non-communicable-diseases-initiative_en.
 - 69 Baker P, Slater S, White M, et al. Towards unified global action on ultra-processed foods: understanding commercial determinants, countering corporate power, and mobilising a public health response. *Lancet*. 2025;406(10520):2703–2726. [https://doi.org/10.1016/S0140-6736\(25\)01567-3](https://doi.org/10.1016/S0140-6736(25)01567-3).
 - 70 Pineda E, Poelman MP, Aaspöllu A, et al. Policy implementation and priorities to create healthy food environments using the Healthy Food Environment Policy Index (Food-EPI): a pooled level analysis across eleven European countries. *Lancet Reg Health Eur*. 2022;23:100522. <https://doi.org/10.1016/j.lanepe.2022.100522>.
 - 71 Evans-Reeves KA, Matthes BK, Chamberlain P, Paichadze N, Gilmore AB, Mialon M. Intimidation against advocates and researchers in the tobacco, alcohol and ultra-processed food spaces: a review. *Health Promot Int*. 2024;39(6):daae153. <https://doi.org/10.1093/heapro/daae153>.
 - 72 Pagliai G, Dinu M, Madarena MP, Bonaccio M, Iacoviello L, Sofi F. Consumption of ultra-processed foods and health status: a systematic review and meta-analysis. *Br J Nutr*. 2021;125(3):308–318. <https://doi.org/10.1017/S0007114520002688>.
 - 73 Zelber-Sagi S, Carrieri P, Pericàs JM, et al. Food inequity and insecurity and MASLD: burden, challenges, and interventions. *Nat Rev Gastroenterol Hepatol*. 2024;21:668–686. <https://doi.org/10.1038/s41575-024-00959-4>.
 - 74 Egnell M, Ducrot P, Touvier M, et al. Objective understanding of nutri-score front-of-package nutrition label according to individual characteristics of subjects: comparisons with other format labels. *PLoS One*. 2018;13(8):e0202095. <https://doi.org/10.1371/journal.pone.0202095>.
 - 75 Cecchini M, Warin L. Impact of food labelling systems on food choices and eating behaviours: a systematic review and meta-analysis of randomized studies. *Obes Rev*. 2016;17(3):201–210. <https://doi.org/10.1111/obr.12364>.
 - 76 World Obesity Federation. *Policies, Interventions and Actions: Uruguay*. Global Obesity Observatory; 2025. Available from: <https://data.worldobesity.org/country/uruguay-228/actions.pdf>.
 - 77 Machin L, Aschemann-Witzel J, Curutchet MR, Giménez A, Ares G. Does front-of-pack nutrition information improve consumer ability to make healthful choices? Performance of warnings and the traffic light system in a simulated shopping experiment. *Appetite*. 2018;121:55–62. <https://doi.org/10.1016/j.appet.2017.10.037>.
 - 78 Lazarus JV, Colombo M, Cortez-Pinto H, et al. NAFLD - sounding the alarm on a silent epidemic. *Nat Rev Gastroenterol Hepatol*. 2020;17(7):377–379. <https://doi.org/10.1038/s41575-020-0315-7>.
 - 79 Willemsen MC, Mons U, Fernández E. Tobacco control in Europe: progress and key challenges. *Tob Control*. 2022;31(2):160–163. <https://doi.org/10.1136/tobaccocontrol-2021-056857>.
 - 80 Hawkins B, Holden C, Eckhardt J, Lee K. Reassessing policy paradigms: a comparison of the global tobacco and alcohol industries. *Glob Public Health*. 2018;13(1):1–19. <https://doi.org/10.1080/17441692.2016.1161815>.
 - 81 Lazarus JV, Han H, Mark HE, et al. The global fatty liver disease Sustainable Development Goal country score for 195 countries and territories. *Hepatology*. 2023;78(3):911–928. <https://doi.org/10.1097/HEP.000000000000361>.
 - 82 Freihat O, Sipos D, Aamir M, Kovacs A. Global burden and future projections of non-communicable diseases (2000-2050): progress toward SDG 3.4 and disparities across regions and risk factors. *PLoS One*. 2025;20(12):e0336036. <https://doi.org/10.1371/journal.pone.0336036>.
 - 83 United Nations, Department of Economic and Social Affairs, Statistics Division. *Sustainable Development Goals Report 2025*. New York (NY): United Nations; 2025. Available from: <https://unstats.un.org/sdgs/report/2025/>.
 - 84 Standing HC, Jarvis H, Orr J, et al. GPs' experiences and perceptions of early detection of liver disease: a qualitative study in primary care. *Br J Gen Pract*. 2018;68(676):e743–e749. <https://doi.org/10.3399/bjgp18X699377>.
 - 85 Lazarus JV, Mark HE, Allen AM, et al. A global action agenda for turning the tide on fatty liver disease. *Hepatology*. 2024;79(2):502–523. <https://doi.org/10.1097/HEP.0000000000000545>.
 - 86 Istituto Superiore di Sanità. *Piano nazionale della prevenzione 2020-2025*; 2020 [cited 2026 Jan 2]. Available on: https://www.epicentro.iss.it/piano_prevenzione/pnp-2020-25.
 - 87 Targher G, Valenti L, Byrne CD. Metabolic dysfunction-associated steatotic liver disease. *N Engl J Med*. 2025;393(7):683–698. <https://doi.org/10.1056/NEJMra2412865>.
 - 88 Lazarus JV, Ivancovsky Wajcman D, Pannain S, et al. The people-first liver charter. *Nat Med*. 2025;31(7):2109–2116. <https://doi.org/10.1038/s41591-025-03759-8>.
 - 89 Talens M, Tumas N, Lazarus JV, Benach J, Pericàs JM. What do we know about inequalities in NAFLD distribution and outcomes? A scoping review. *J Clin Med*. 2021;10(21):5019. <https://doi.org/10.3390/jcm10215019>.
 - 90 Iruzubieta P, de Vega T, Crespo J. Overlooked determinants and unequal outcomes: rethinking metabolic dysfunction-associated steatotic liver disease beyond the biomedical model. *Lancet Gastroenterol Hepatol*. 2025;10(12):1132–1142. [https://doi.org/10.1016/S2468-1253\(25\)00226-2](https://doi.org/10.1016/S2468-1253(25)00226-2).