

This activity may include discussions of products or devices that are not currently labeled for use by the U.S. Food and Drug Administration (FDA).

The faculty have been informed of their responsibility to disclose to the audience if they will be discussing off-label or investigational uses (any uses not approved by the FDA) of products or devices.



Linking Knowledge to Action: Empowering HCPs in Screening and Treatment of Patients Across the Viral Spectrum

Improving Time to Treatment Initiation for Viral Hepatitis (HBV, HCV, and HDV) Through Screening and Diagnosis

This activity is supported by an independent educational grant from Gilead Sciences, Inc.



LEARNING OBJECTIVE

Interpret the latest global guidelines appropriately for the screening and diagnosis of viral hepatitis infections (HBV, HCV, and HDV) to improve time to treatment initiation from diagnosis

Key Highlights from AASLD 2025



- **New AASLD/IDSA Hepatitis B Guidelines** were released, emphasizing broader HBV screening – particularly one-time screening for all adults – along with simplified treatment initiation criteria and clearer recommendations for monitoring special populations
- Data presented highlight **promising progress toward an HBV functional cure**, with combination regimens such as siRNA- and capsid-inhibitor-based approaches, showing deeper and more sustained HBsAg declines than monotherapy. While still investigational, these regimens point toward a future of finite treatment courses
- For hepatitis C, updated studies of **ultra-short and long-acting DAA therapies showed SVR rates above 95%**, offering potential game-changers for difficult-to-reach populations, including individuals without stable housing and people who inject drugs
- **Real-world data for bulevirtide in HDV** demonstrated continued improvements in viral suppression and liver inflammation, reinforcing its role as a foundational HDV therapy



Su Wang, MD, MPH, FACP

Medical Director, Center for Asian Health

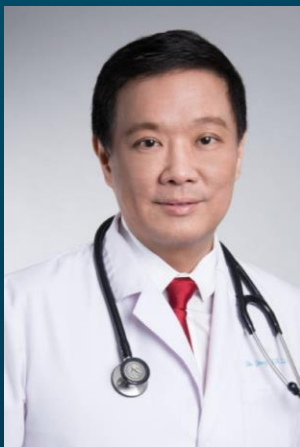
Medical Director, Viral Hepatitis Programs - Cooperman Barnabas
Medical Center

RWJBarnabas-Rutgers Medical Group

Clinical Assistant Professor, Rutgers-RWJMS

Senior Advisor, Global Health, Hepatitis B Foundation

New Brunswick, New Jersey, USA



George Lau, MD

Chairman

Humanity & Health Clinical Trial Centre

Humanity & Health Medical Group

Hong Kong

Hong Kong SAR, China





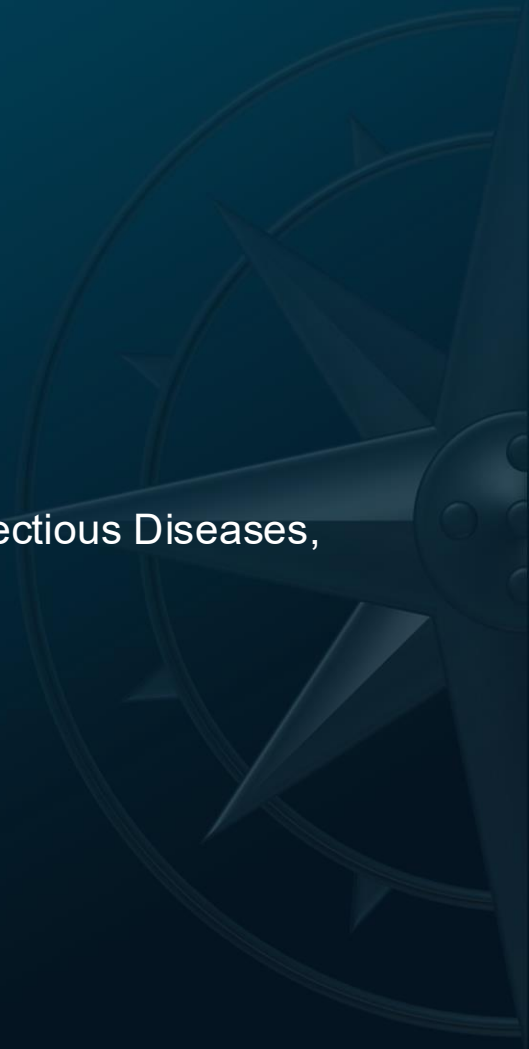
Heiner Wedemeyer, MD

Professor and Chairman

Hannover Medical School

Departments of Gastroenterology, Hepatology, Infectious Diseases,
and Endocrinology

Hannover, Germany





Jean-Michel Pawlotsky, MD, PhD

Full Professor

National Reference Center for Viral Hepatitis B, C, and D

Department of Virology

Henri Mondor Hospital – University of Paris – Est
Creteil, France





Maria Buti, MD

Full Professor of Medicine

Hospital Universitario Valle de Hebron

Barcelona, Spain





Debika Bhattacharya, MD, MSc

Professor of Medicine

David Geffen School of Medicine

University of California Los Angeles

Los Angeles, California, USA



Guidelines for Hepatitis B, C, and D



- What are the latest guidelines?
- How are the guidelines implemented in your region?
- What challenges remain in translating them to everyday clinical practice?

Guidelines for Hepatitis B, C, and D

- Spain (southernmost country on the European mainland)



Guidelines for Hepatitis B, C, and D

- Spain (southernmost country on the European mainland)
- Usually follows EASL guidelines and EASL recommendations



Guidelines for Hepatitis B, C, and D

- Spain (southernmost country on the European mainland)
- Usually follows EASL guidelines and EASL recommendations
- Hepatitis C guidelines are well-implemented in Spain



Guidelines for Hepatitis B, C, and D

- National guidelines (similar to EASL) are also followed

Gastroenterología y Hepatología 2020;43(9):559–587



Gastroenterología y Hepatología

www.elsevier.es/gastroenterologia



CLINICAL PRACTICE GUIDELINES

Consensus document of the Spanish Association for Study of the Liver on the treatment of hepatitis B virus infection (2020)[☆]



Manuel Rodríguez^{a,*}, María Buti^b, Rafael Esteban^b, Sabela Lens^c,
Martín Prieto^d, Emilio Suárez^e, Javier García-Samaniego^{f,*}

Guidelines for Hepatitis B, C, and D

- National guidelines (similar to EASL) are also followed
- Hepatitis B guidelines are more complex

Gastroenterología y Hepatología 2020;43(9):559–587



Gastroenterología y Hepatología

www.elsevier.es/gastroenterologia



CLINICAL PRACTICE GUIDELINES

Consensus document of the Spanish Association for Study of the Liver on the treatment of hepatitis B virus infection (2020)[☆]



Manuel Rodríguez^{a,*}, María Buti^b, Rafael Esteban^b, Sabela Lens^c,
Martín Prieto^d, Emilio Suárez^e, Javier García-Samaniego^{f,*}

EASL Guidelines for HCV

Practice Guidelines



JOURNAL
OF HEPATOLOGY

EASL recommendations on treatment of hepatitis C: Final update of the series*

European Association for the Study of the Liver*

Summary

Hepatitis C virus (HCV) infection is a major cause of chronic liver disease, with approximately 71 million chronically infected individuals worldwide. Clinical care for patients with HCV-related liver disease has advanced considerably thanks to an enhanced understanding of the pathophysiology of the disease, as well as developments in diagnostic procedures and improvements in therapy and prevention. These therapies make it possible to eliminate hepatitis C as a major public health threat, as per the World Health Organization target, although the timeline and feasibility vary from region to region. These European Association

occurs in less than 0.2% of cases beyond 6 months of follow-up.⁵ An SVR is generally associated with normalisation of liver enzymes and improvement or regression of liver necroinflammation and fibrosis, and improvement in liver function.⁶⁻⁸ The risk of HCC and liver-related mortality is significantly reduced, but not eliminated, in patients with cirrhosis who clear HCV compared to untreated patients and non-sustained virological responders, especially in the presence of cofactors of liver morbidity, such as the metabolic syndrome, harmful alcohol consumption and/or concurrent hepatitis B virus (HBV) infection.^{6,9-12} HCV is also associated with a number of extra-hepatic manifestations, but viral elimination can reduce all

EASL Guidelines for HCV

Practice Guidelines



JOURNAL
OF HEPATOLOGY

EASL recommendations on treatment of hepatitis C: Final update of the series*

European Association for the Study of the Liver*

Summary

Hepatitis C virus (HCV) infection is a major cause of chronic liver disease, with approximately 71 million chronically infected individuals worldwide. Clinical care for patients with HCV-related liver disease has advanced considerably thanks to an enhanced understanding of the pathophysiology of the disease, as well as developments in diagnostic procedures and improvements in therapy and prevention. These therapies make it possible to eliminate hepatitis C as a major public health threat, as per the World Health Organization target, although the timeline and feasibility vary from region to region. These European Association

occurs in less than 0.2% of cases beyond 6 months of follow-up.⁵ An SVR is generally associated with normalisation of liver enzymes and improvement or regression of liver necroinflammation and fibrosis, and improvement in liver function.⁶⁻⁸ The risk of HCC and liver-related mortality is significantly reduced, but not eliminated, in patients with cirrhosis who clear HCV compared to untreated patients and non-sustained virological responders, especially in the presence of cofactors of liver morbidity, such as the metabolic syndrome, harmful alcohol consumption and/or concurrent hepatitis B virus (HBV) infection.^{6,9-12} HCV is also associated with a number of extra-hepatic manifestations, but viral elimination can reduce all

EASL Guidelines for Hep B, C, and D



EASL Hepatitis C recommendations now considered “guidelines”

- Up to date, applicable, improves patient care

EASL Guidelines for Hep B, C, and D



EASL Hepatitis C recommendations now considered “guidelines”

- Up to date, applicable, improves patient care

**EASL hepatitis D and hepatitis
B updates will be necessary
on a regular basis**

Guidelines for Hepatitis B, C, D in Asia

- International Guidelines (EASL, AASLD, WHO)
- Asia Pacific Association for the Study of the Liver (APASL)
- Asian-Pacific Clinical Practice Guidelines on the Management of Hepatitis B: A 2025 Update (in development)



HCC Rates Projected to Significantly Increase



Lancet Commission: number of deaths from liver cancer predicted to grow from 760,000 in 2022 to 1.37 million in 2050

HCC = hepatocellular carcinoma.

Chan SL, et al. *Lancet*. 2025;406(10504):731-778; Runggay H, et al. *J Hepatol*. 77(6):1598-1606.

HCC Rates Projected to Significantly Increase

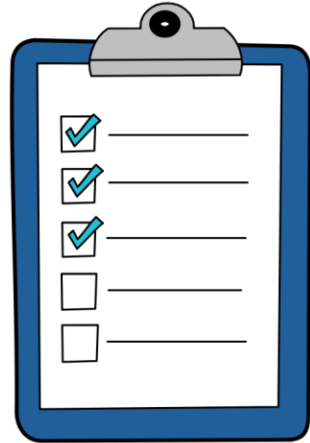


Lancet Commission: number of deaths from liver cancer predicted to grow from 760,000 in 2022 to 1.37 million in 2050

World Health Organization: number of new cases and deaths from liver cancer predicted to rise by more than 55% by 2040

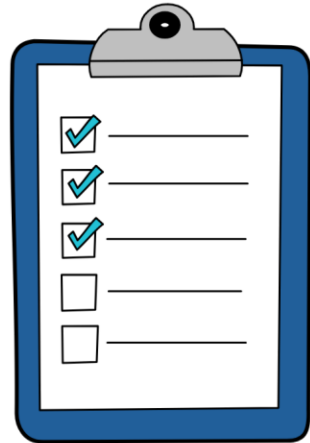
Why Guidelines?

- Evidence-based



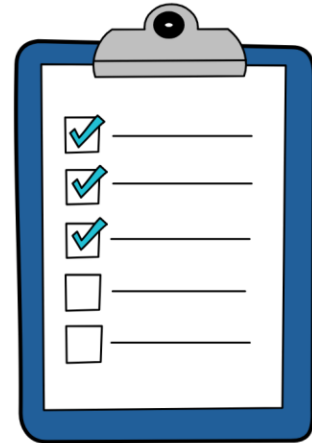
Why Guidelines?

- Evidence-based
- Impacts policy, clinicians, and patients



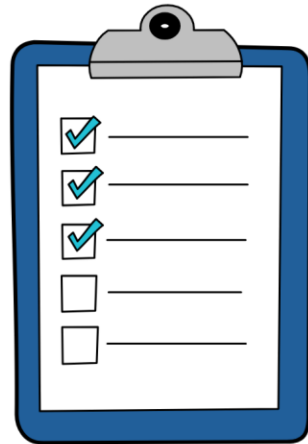
Why Guidelines?

- Evidence-based
- Impacts policy, clinicians, and patients
- “Living, breathing” documents can be updated, as needed, to provide practical guidance for improving outcomes

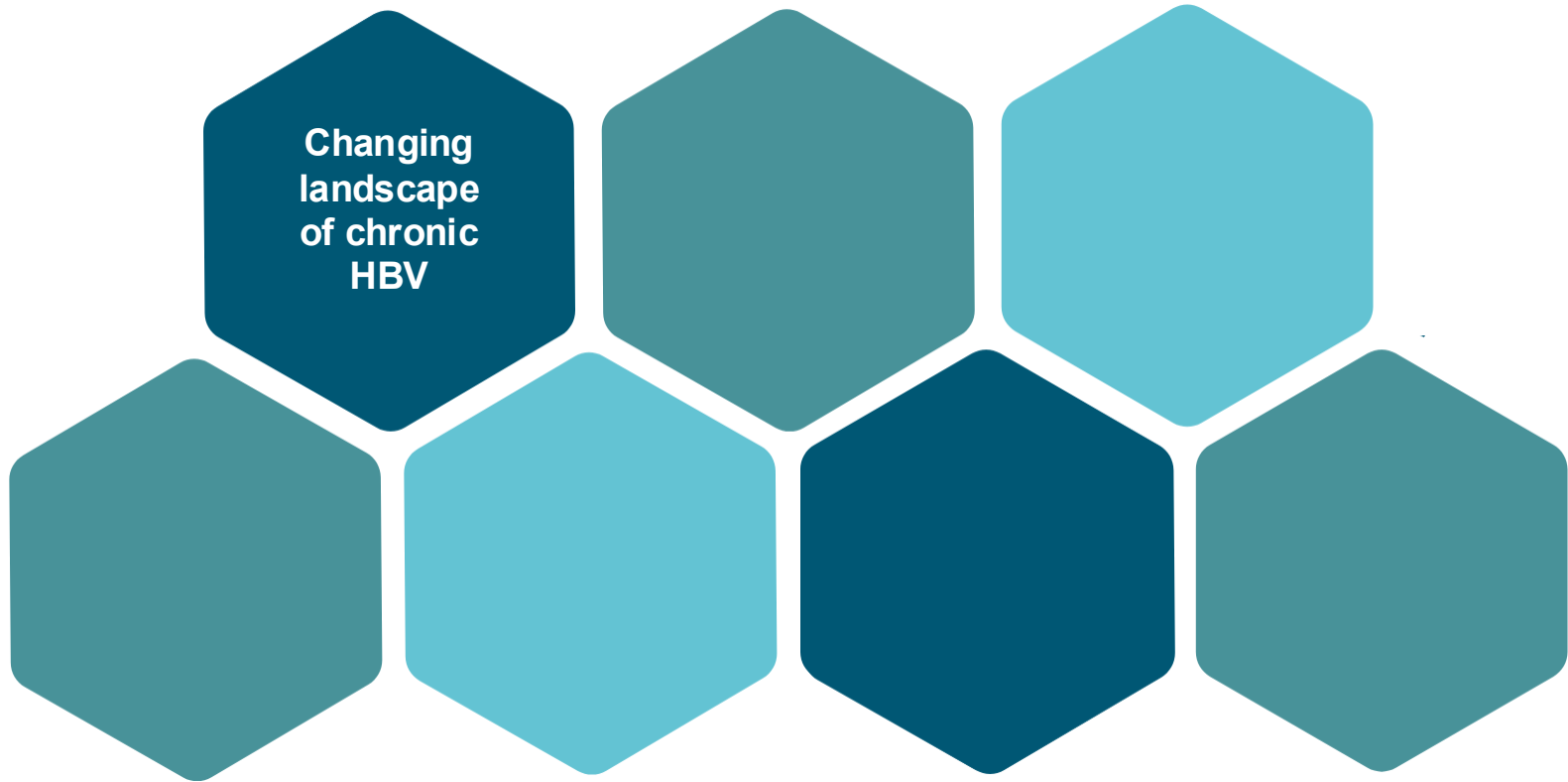


Why Guidelines?

- Evidence-based
- Impacts policy, clinicians, and patients
- “Living, breathing” documents can be updated, as needed, to provide practical guidance for improving outcomes
- Includes real-world data

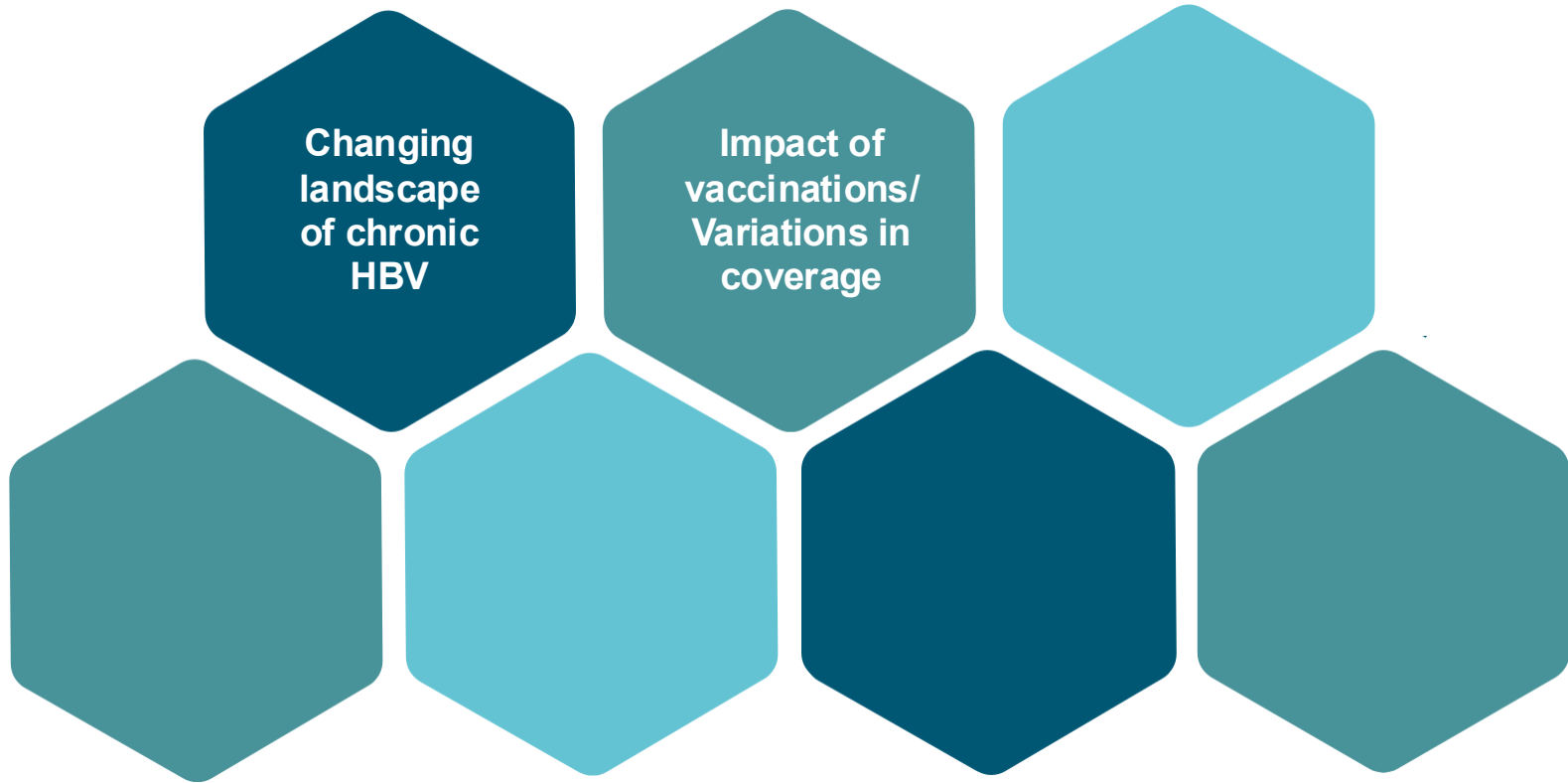


Remaining Challenges



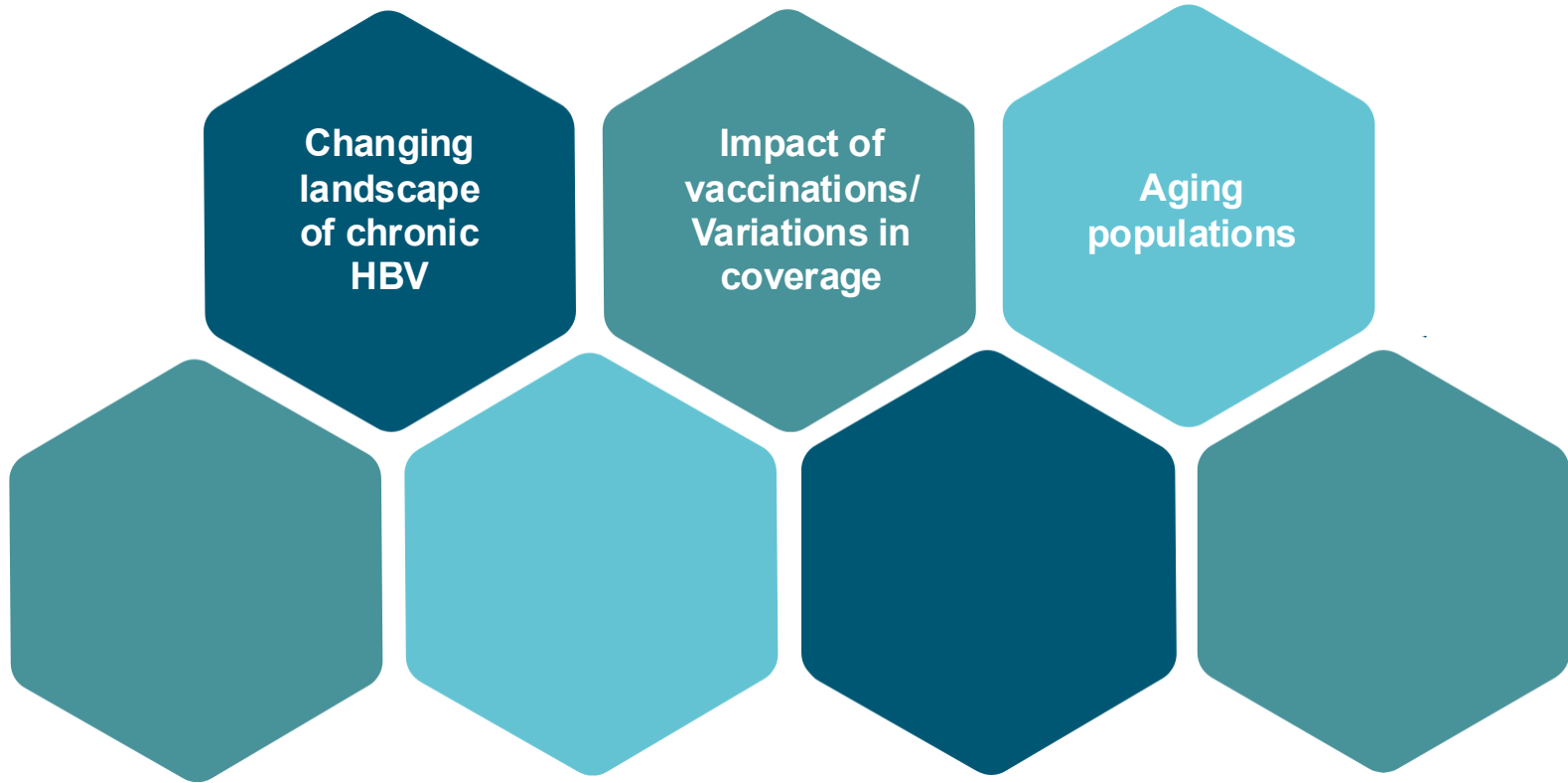
HBV = hepatitis B virus.

Remaining Challenges



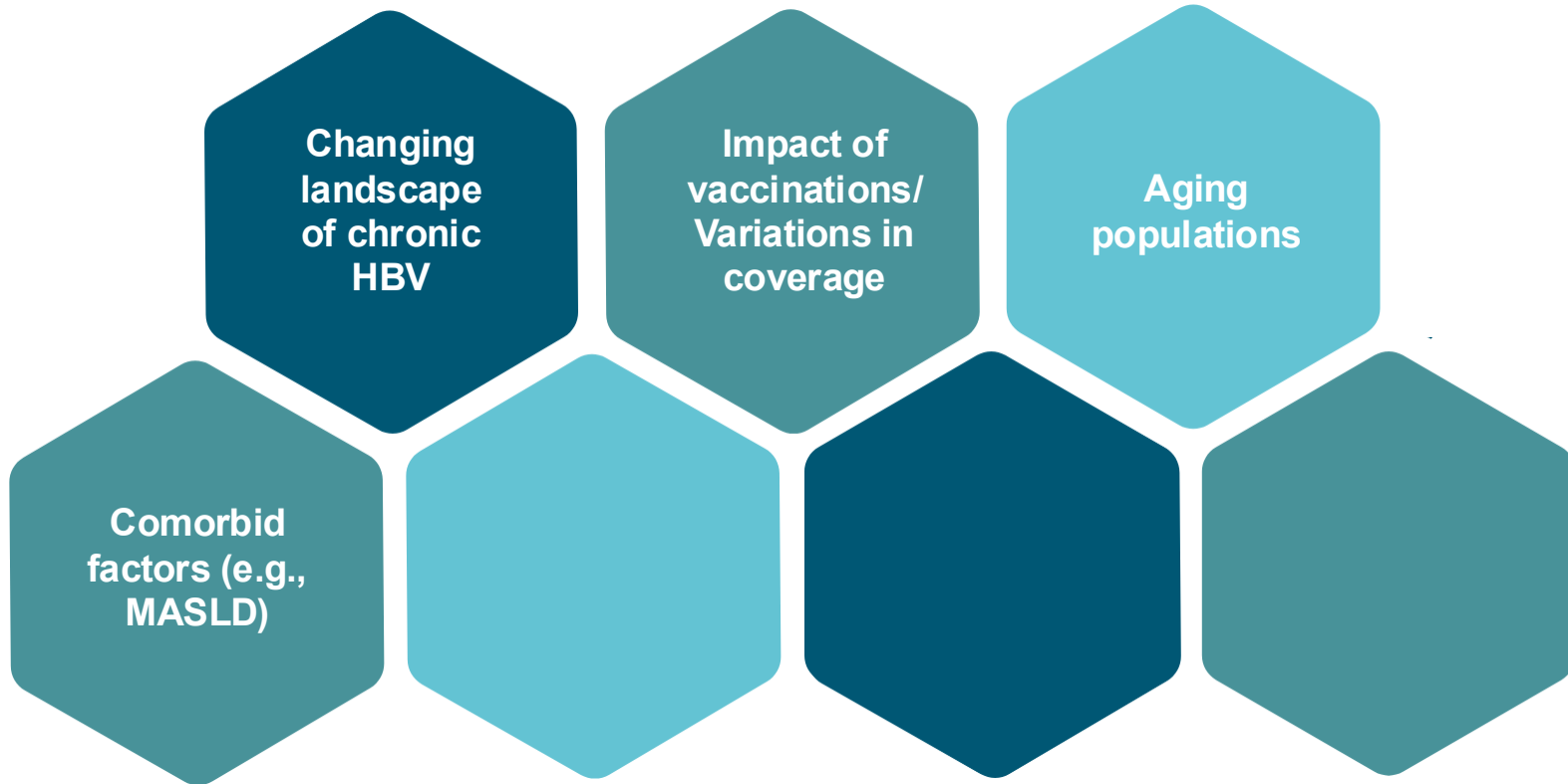
HBV = hepatitis B virus.

Remaining Challenges



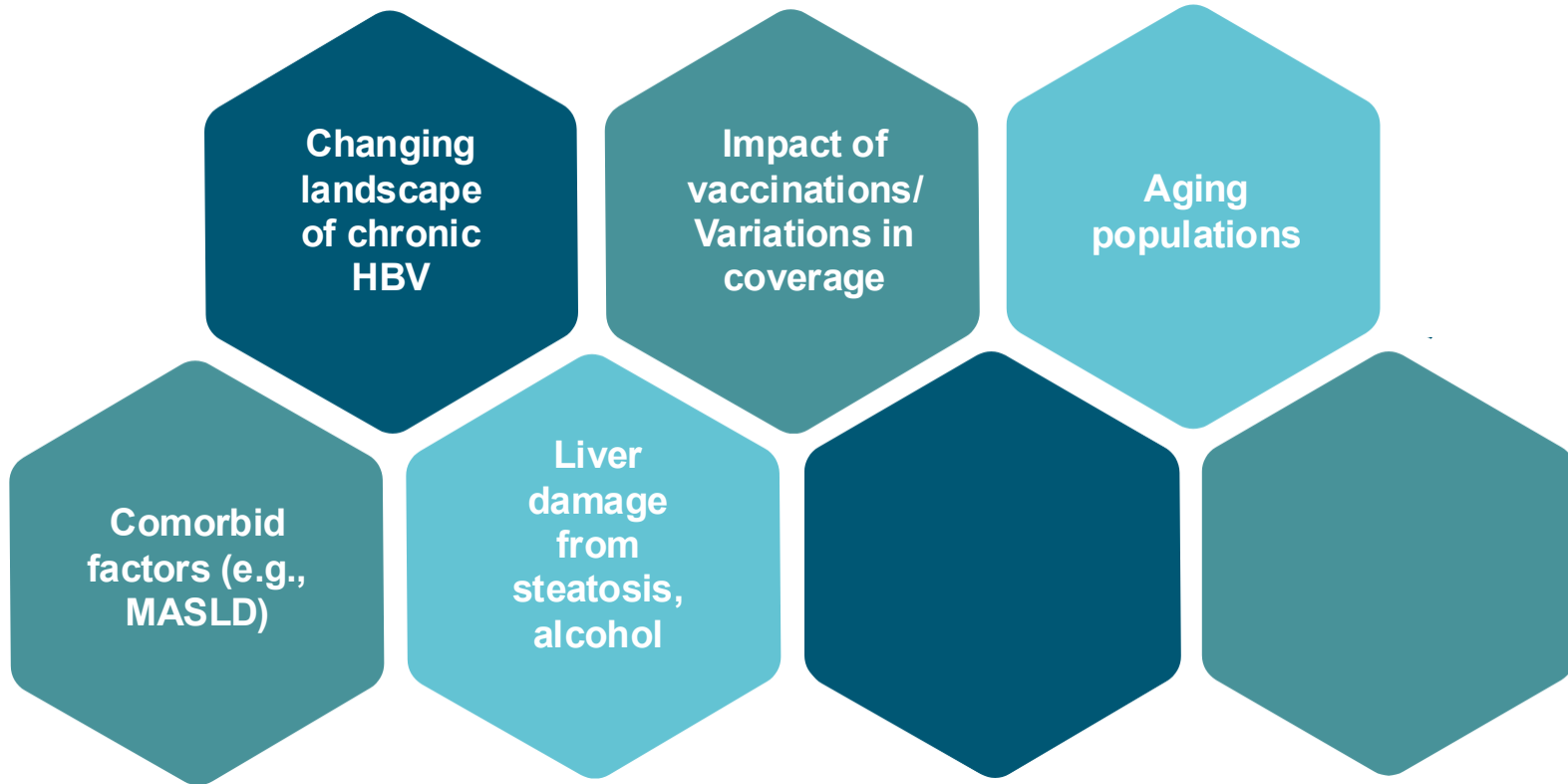
HBV = hepatitis B virus.

Remaining Challenges



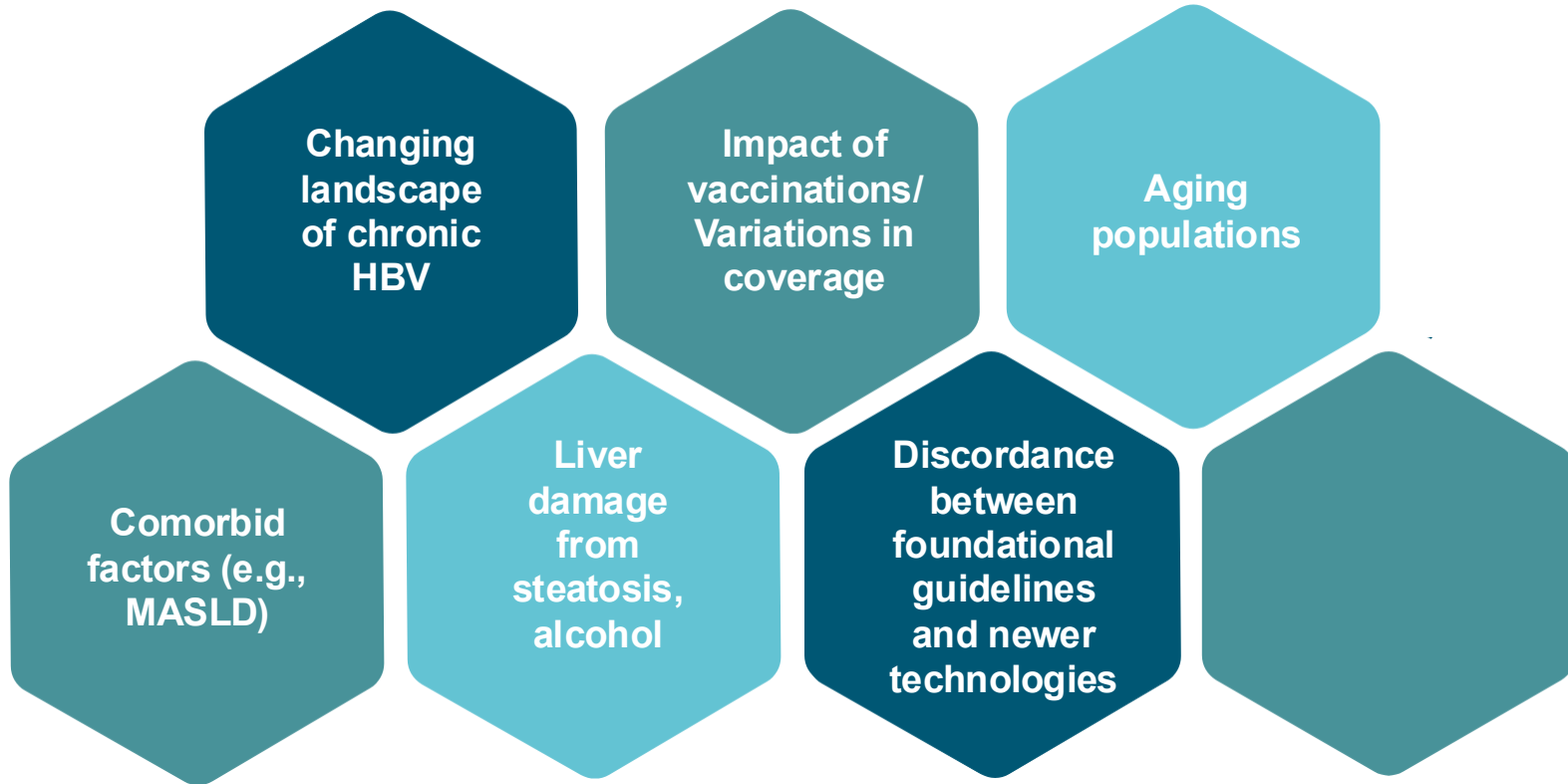
HBV = hepatitis B virus; MASLD = metabolic dysfunction-associated steatotic liver disease.

Remaining Challenges



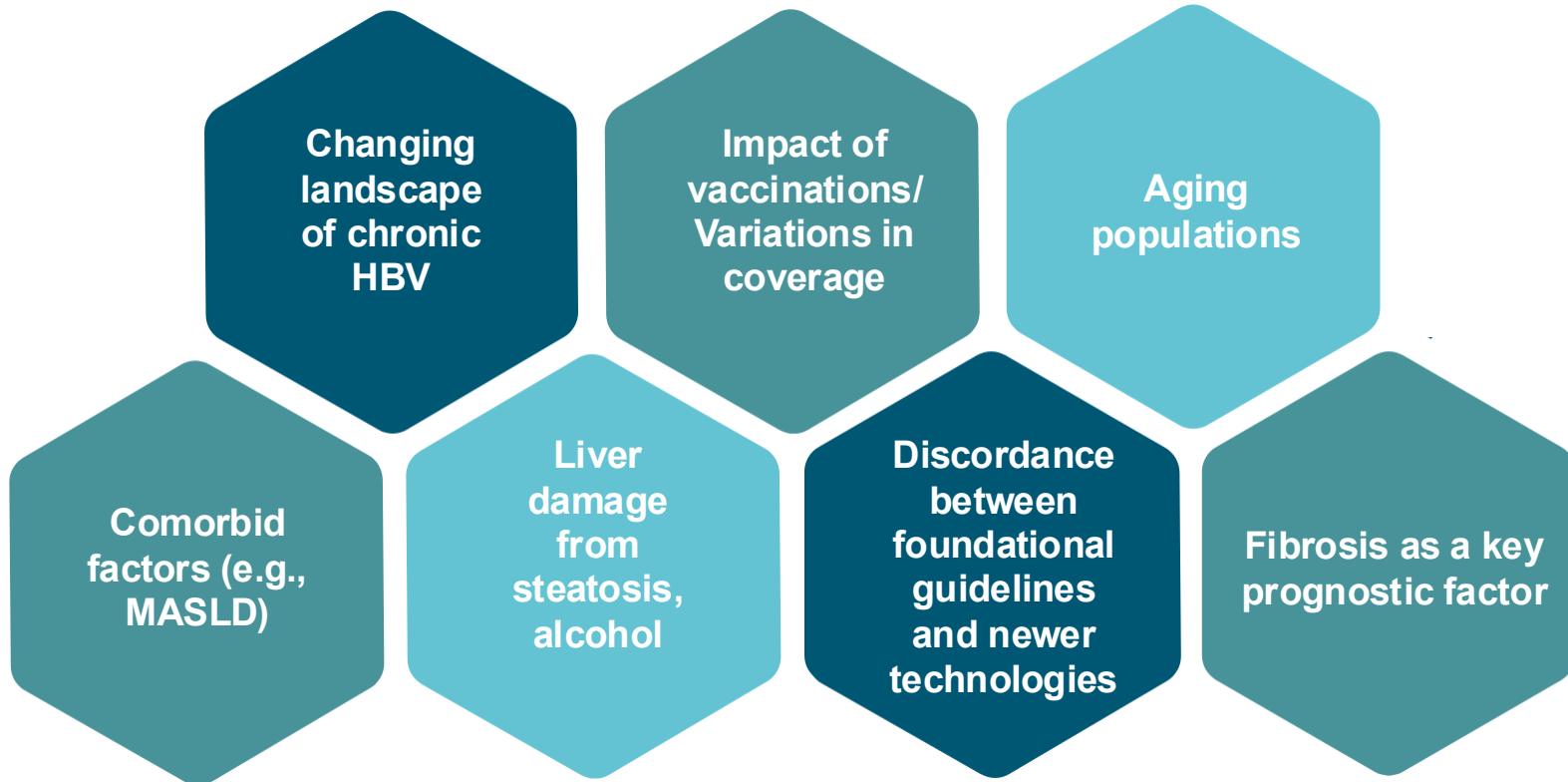
HBV = hepatitis B virus; MASLD = metabolic dysfunction-associated steatotic liver disease.

Remaining Challenges



HBV = hepatitis B virus; MASLD = metabolic dysfunction-associated steatotic liver disease.

Remaining Challenges



HBV = hepatitis B virus; MASLD = metabolic dysfunction-associated steatotic liver disease.

Non-Invasive Tests for Fibrosis



- Blood tests
 - FIB-4 index using AST, ALT, and age
 - Enhanced liver fibrosis (ELF) score
 - Others
- Imaging techniques
 - Vibration-controlled transient elastography (VCTE)
 - FibroScan
 - FibroTouch (China)
 - MRE
 - Others

HBV DNA Testing

- Provides objective, sensitive, specific data to refine diagnosis, treatment monitoring, and long-term surveillance



HBV DNA Testing

- Provides objective, sensitive, specific data to refine diagnosis, treatment monitoring, and long-term surveillance
- Expensive (may cost more than treatment)



Managing Viral Hepatitis in the United States

- General strategies
- Guidelines
 - Local practices
 - AASLD
 - WHO
 - Others





Which of the following AASLD Guideline Recommendations for viral hepatitis screening differs most clearly from European and Asian Guidelines?

- A. One-time universal HCV screening for all adults age ≥ 18 regardless of risk factors
- B. Risk-based HBV screening limited to high activity regions and known risk groups
- C. Annual HBV and HCV for all adults age ≥ 40
- D. Screening only in symptomatic patients or those with abnormal liver tests
- E. I'm not sure



 Which of the following AASLD Guideline Recommendations for viral hepatitis screening differs most clearly from European and Asian Guidelines?

- A.** One-time universal HCV screening for all adults age ≥ 18 regardless of risk factors
- B.** Risk-based HBV screening limited to high activity regions and known risk groups
- C.** Annual HBV and HCV for all adults age ≥ 40
- D.** Screening only in symptomatic patients or those with abnormal liver tests
- E.** I'm not sure

Implementing Guidelines in the U.S.

- Hep C → straightforward
 - Co-endorsed AASLD and IDSA document
 - Diverse panel of thought leaders



Implementing Guidelines in the U.S.

- Hep C → straightforward
 - Co-endorsed AASLD and IDSA document
 - Diverse panel of thought leaders
- Hep B → Not as straightforward
 - 2018 AASLD hepatitis B guidelines currently undergoing revision [Update: 2025 AASLD/IDSA Guidelines now released]



Implementing Guidelines in the U.S.

- Hep C → straightforward
 - Co-endorsed AASLD and IDSA document
 - Diverse panel of thought leaders
- Hep B → Not as straightforward
 - 2018 AASLD hepatitis B guidelines currently undergoing revision [Update: 2025 AASLD/IDSA Guidelines now released]
- Co-endorsed by IDSA for first time



Implementing Guidelines in the U.S.

- Hep C → straightforward
 - Co-endorsed AASLD and IDSA document
 - Diverse panel of thought leaders
- Hep B → Not as straightforward
 - 2018 AASLD hepatitis B guidelines currently undergoing revision **[Update: 2025 AASLD/IDSA Guidelines now released]**
- Co-endorsed by IDSA for first time
- WHO guidelines (2024): models for expanded treatment access



Implementing Guidelines in the U.S.

- Hep C → straightforward
 - Co-endorsed AASLD and IDSA document
 - Diverse panel of thought leaders
- Hep B → Not as straightforward
 - 2018 AASLD hepatitis B guidelines currently undergoing revision **[Update: 2025 AASLD/IDSA Guidelines now released]**
- Co-endorsed by IDSA for first time
- WHO guidelines (2024): models for expanded treatment access
- Use of multiple guidelines provides tools to help individualize patient care



IDSA = Infectious Diseases Society of America.

AASLD-IDSA HCV Guidance Panel. *Hepatology*. 2015;62(3):932-954. Easterbrook PJ, et al. *Lancet Gastroenterol Hepatol*. 2024;9(6):493-495.

Terrault NA, et al. *Hepatology*. 2018;67(4):1560-1599. Ghany MG, et al. *Hepatology*. 2025;DOI:10.1097/HEP.0000000000001549.

HBV: When to Start Antiviral Therapy – AASLD vs EASL vs APASL



AASLD (US)	EASL (Europe)	APASL (Asia-Pacific)
<ul style="list-style-type: none">• Treat “immune-active” CHB• HBeAg–: HBV DNA $\geq 2,000$ IU/mL AND ALT $\geq 2 \times$ ULN or \geq moderate fibrosis• Treat all with cirrhosis and any HBV DNA	<ul style="list-style-type: none">• Treat more readily at lower ALT• HBV DNA $\geq 2,000$ IU/mL AND ALT $>$ ULN or \geq moderate fibrosis• Treat all with cirrhosis and any HBV DNA	<ul style="list-style-type: none">• Keeps higher ALT trigger• HBeAg–: HBV DNA $\geq 2,000$ IU/mL AND ALT $\geq 2 \times$ ULN• Treat all with cirrhosis regardless of HBV DNA

ULN = upper limit of normal.

European Association for the Study of the Liver. *J Hepatol*. 2017;67(2):370-398. Sarin SK, et al. *Hepatol Int*. 2016;10(1):1-98.

Terrault NA, et al. *Hepatology*. 2018;67(4):1560-1599.

Implementing Guidelines in Practice



EASL Guidelines for Hepatitis B

Clinical Practice Guidelines

JOURNAL
OF HEPATOLOGY

EASL Clinical Practice Guidelines on the management of hepatitis B virus infection[☆]

European Association for the Study of the Liver[®]

Summary

The updated EASL Clinical Practice Guidelines on the management of hepatitis B virus (HBV) infection provide comprehensive, evidence-based recommendations for its management. Spanning ten thematic sections, the guidelines address diagnostics, treatment goals, treatment indications, therapeutic options, hepatocellular carcinoma surveillance, management of special populations, HBV reactivation prophylaxis, post-transplant care, HBV prevention strategies, and finally address open questions and future research directions. Chronic HBV remains a global health challenge, with over 250 million individuals affected and significant mortality due to cirrhosis and hepatocellular carcinoma. These guidelines emphasise the importance of early diagnosis, risk stratification based on viral and host factors, and tailored antiviral therapy. Attention is given to simplified algorithms, vaccination, and screening to support global HBV elimination targets. The guidelines also discuss emerging biomarkers and evolving definitions of functional and partial cure. Developed through literature review, expert consensus, and a Delphi process, the guidelines aim to equip healthcare providers across disciplines with practical tools to optimise HBV care and outcomes worldwide.

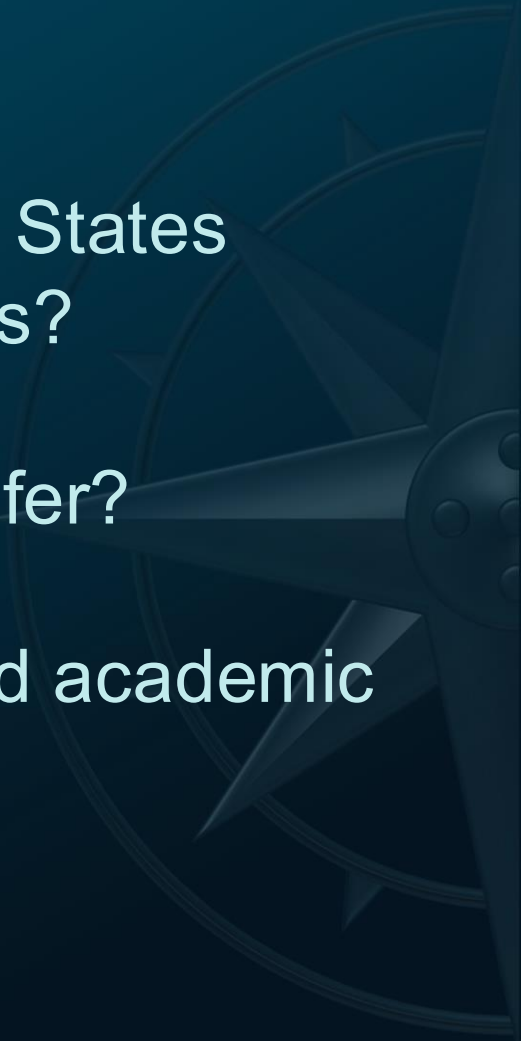
© 2025 European Association for the Study of the Liver. Published by Elsevier B.V. All rights are reserved, including those for text and data mining, AI training, and similar technologies.



Are general practitioners in the United States generally aware of the latest guidelines?

When do they treat? When do they refer?

Do guidelines get implemented beyond academic centers?



Pan-Viral Screening



Universal B Screening: U.S. Guidelines

- 2020: CDC/USPSTF → 1x HCV screening



Universal B Screening: U.S. Guidelines

- 2020: CDC/USPSTF → 1x HCV screening
- 2023: CDC → universal hep B screening
 - Opioid use, injection drug use is epidemic in the U.S.
 - Risk factors not always evident



Universal B Screening: U.S. Guidelines

- 2020: CDC/USPSTF → 1x HCV screening
- 2023: CDC → universal hep B screening
 - Opioid use, injection drug use is epidemic in the U.S.
 - Risk factors not always evident
- Thus, screening recommendations expanded



Universal B Screening: U.S. Guidelines

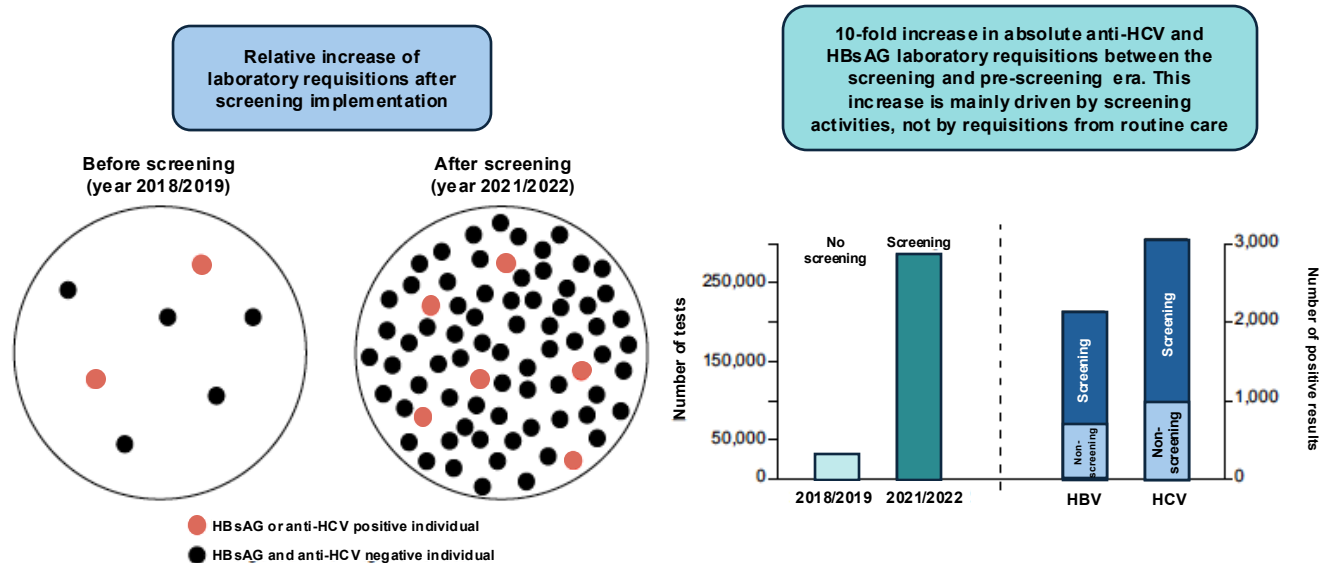
- 2020: CDC/USPSTF → 1x HCV screening
- 2023: CDC → universal hep B screening
 - Opioid use, injection drug use is epidemic in the U.S.
 - Risk factors not always evident
- Thus, screening recommendations expanded
- Rare that primary care provider takes on role of HBV treatment; treating HCV more common



Do Guideline Recommendations for Screening Lead to Significant Increases in Diagnosis? The German Experience

Successful hepatitis B and C screening in the health check-up in the German primary care setting

Authors: Olaf Bätz, David Petroff, Katrin Jedrysiak, ... Thomas Berg, Jan Kramer, Johannes Wiegand



Applying Guidelines to Clinical Practice



EHR reminders are critical to increase screening

Applying Guidelines to Clinical Practice



EHR reminders are critical to increase screening

UCLA integrated health system: screening rates improved 5-10%

Applying Guidelines to Clinical Practice



EHR reminders are critical to increase screening

UCLA integrated health system: screening rates improved 5-10%

Primary care survey: 60% were aware of universal hepatitis C screening; identified self-reported forgetfulness as greatest barrier

Applying Guidelines to Clinical Practice



EHR reminders are critical to increase screening

UCLA integrated health system: screening rates improved 5-10%

Primary care survey: 60% were aware of universal hepatitis C screening; identified self-reported forgetfulness as greatest barrier

Digital dashboard, automated screening is effective

Clinical Pathways in Viral Hepatitis



Mr. R.



47-year-old man living in Madrid, Spain

Diagnosed with chronic hepatitis B after routine bloodwork



Family history: no HCC

Feels well, asks if he needs treatment or if regular follow-up is enough



Positive HBsAg > 6 mos

HBeAG negative

HBV DNA = 2000 IU/mL

ALT within normal range

No evidence of fibrosis on noninvasive assessment





According to current Spanish and European Hepatitis B guidelines, what is the most appropriate next step for this patient?

- A. Start antiviral therapy immediately for all patients with positive hepatitis B surface antigen
- B. Monitor ALT and HBV DNA levels every 6-12 months and reassess for treatment if these rise or fibrosis develops
- C. Stop follow-up since the patient is asymptomatic and liver tests are normal
- D. Begin nutritional supplements for liver detoxification
- E. I'm not sure



According to current Spanish and European Hepatitis B guidelines, what is the most appropriate next step for this patient?

- A. Start antiviral therapy immediately for all patients with positive hepatitis B surface antigen
- B. Monitor ALT and HBV DNA levels every 6-12 months and reassess for treatment if these rise or fibrosis develops**
- C. Stop follow-up since the patient is asymptomatic and liver tests are normal
- D. Begin nutritional supplements for liver detoxification
- E. I'm not sure

Viral Hepatitis in Spain

- Majority of patients: HBeAg-negative CHB



CHB = chronic hepatitis B.

Viral Hepatitis in Spain

- Majority of patients: HBeAg-negative CHB
- Interpretation of guidelines for patients with infection but without disease (chronic carriers)
 - Difficult to diagnose and classify in an initial visit



Hepatitis Delta

- EASL guidelines address HDV



HDV = hepatitis D virus.

Hepatitis Delta

- EASL guidelines address HDV
- Reflex testing for screening patients

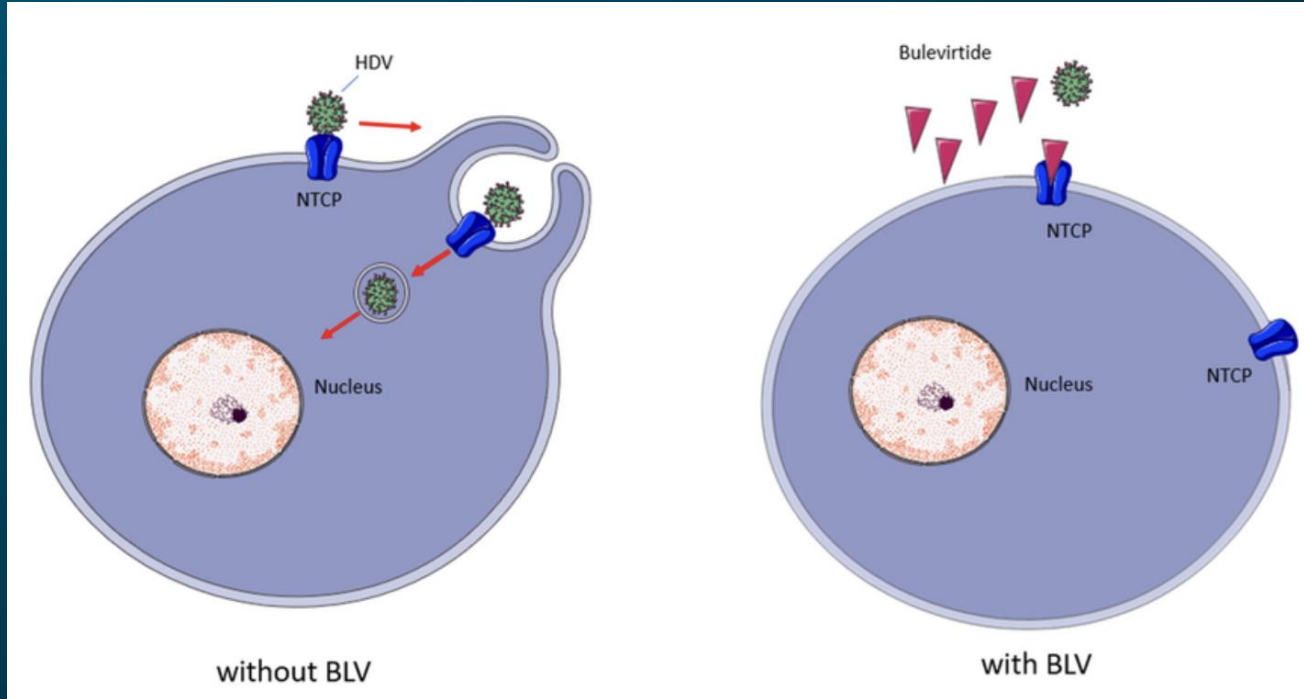


HDV = hepatitis D virus.

Hepatitis Delta

- EASL guidelines address HDV
- Reflex testing for screening patients
 - HBsAg is immediately tested for HDV antibodies
 - If anti-HDV test positive → test for HBV RNA viremia
 - Treatment: bulevirtide





Bulevirtide (BLV) mechanism of action: BLV binds with high affinity to sodium taurocholate co-transporting peptide (NTCP), reducing the availability of this receptor to bind HDV, reducing the infection of new hepatocytes. (Red arrows = steps in viral entry; red triangles = BLV)

SMART Goals

Specific, Measurable, Attainable, Relevant, Timely

Put information into action! Consider the following goals; then *set a time frame* that fits with your work environment and *a reasonable improvement target* that aligns with your patient population.

- Over the next 6 months, increase HBV, HCV and HDV screening based on guideline recommendations for your region



SMART Goals

Specific, Measurable, Attainable, Relevant, Timely

Put information into action! Consider the following goals; then *set a time frame* that fits with your work environment and *a reasonable improvement target* that aligns with your patient population.

- Over the next 6 months, increase HBV, HCV and HDV screening based on guideline recommendations for your region
- Use guideline-concordant approaches to engage and coordinate with interprofessional team members to increase screening for viral hepatitis per published practice guidelines

SMART Goals

Specific, Measurable, Attainable, Relevant, Timely

Put information into action! Consider the following goals; then *set a time frame* that fits with your work environment and *a reasonable improvement target* that aligns with your patient population.

- Over the next 6 months, increase HBV, HCV and HDV screening based on guideline recommendations for your region
- Use guideline-concordant approaches to engage and coordinate with interprofessional team members to increase screening for viral hepatitis per published practice guidelines
- Facilitate the care continuum for viral hepatitis by identifying strategies that link diagnosis to appropriate guideline-recommended treatment





Other activities in this series...

- Incorporating Collaborative Strategies to Enhance Linkage to Care and Treatment Initiation for Viral Hepatitis
- Shared Decision-Making and Motivational Interviewing in the Care of Patients with HBV, HCV, and/or HDV
- Actionable Strategies to Engage with High-Risk Patient Populations in HBV, HCV, and HDV Care

To Receive Credit

To receive CME/CE credit for this activity, participants must complete the post-test and evaluation online.

Participants will be able to download and print their certificate immediately upon completion.



Visit the
Liver Disease Hub

Free resources and education
for health care professionals and patients

<https://www.cmeoutfitters.com/practice/liver-disease-hub/>