

Hepatitis B Management

Guidance for the Primary Care Provider

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Objectives

1. Understand the impetus for a simplified and practical hepatitis B guidance for primary care providers/non-specialists
2. Review the updated hepatitis B guidance on screening to treatment in primary care/non-specialty settings

Why do we have a separate hepatitis B guidance for primary care providers?



Primary care providers are at the front-lines in delivering hepatitis B virus (HBV) screening, vaccination, cancer screening, chronic disease management, and care coordination



Communities with high HBV prevalence face barriers to accessing specialists (e.g. cost, language, geography, navigating health care)



Per 2024 UDS data¹, there were 108,176 visits among 50,184 patients for hepatitis B infection at federally qualified health centers in the United States and U.S. Territories



Chronic hepatitis B clinical practice guidelines developed by specialty associations are complex and may deter front-line primary care providers from providing chronic hepatitis B care and treatment to their patients



Need to broaden treating community to achieve HBV elimination and address health disparities in liver cancer

¹<https://data.hrsa.gov/topics/healthcenters/uds/overview/national/table?tableName=6A&year=2024>

Why was the primary care guidance updated in 2025?

Major updates to HBV guidelines with different approaches to treatment:

- 2024 World Health Organization (WHO) HBV Guidelines
- 2025 European Association for the Study of Liver (EASL) HBV Guidelines
- 2025 Canadian Association for the Study of the Liver (CASL) HBV Guidelines
- 2025 American Association for the Study of Liver Diseases (AASLD)/Infectious Diseases Society of America (IDSA) HBV Guidelines



When applying three different HBV treatment guidelines to a community-based HBV registry, we identified 2% (AASLD), 15% (EASL), and 50% (WHO) of untreated patients eligible for HBV antiviral treatment.

Applying AASLD, EASL, and WHO Hepatitis B Treatment Guidelines to a Community-based Hepatitis B Registry

Dong Z, Tang AS

AASLD Liver Meeting
Nov 2025 (Publication #1162)

Table 1. Applying AASLD, WHO, and EASL HBV treatment guidelines to untreated HBV registry patients (N = 1,850)

	AASLD 2016/18 n (%) ¹	WHO 2024 n (%) ¹	EASL 2025 n (%) ¹
Total unique treatment-eligible patients ²	44 (2%)	921 (50%)	270 (15%)
Cirrhosis	5 (11%)	5 (1%)	-
Detectable HBV DNA	-	-	3 (1%)
Fibrosis threshold ³	26 (59%)	63 (7%)	18 (7%)
Elevated HBV DNA ⁴ & ALT ⁵	13 (30%)	210 (23%)	55 (20%)
MASLD ⁶	-	581 (63%)	88 (33%)
Diabetes mellitus ⁶	-	314 (34%)	30 (11%)
Viral coinfection ⁶	-	2 (<1%)	0
Immunosuppression ⁶	-	0	0
Extrahepatic manifestations ⁶	-	0	0
Current smoker ⁶	-	-	44 (16%)
Age ^{6,7}	0	-	209 (77%)
HBeAg+ & Age >30 years ⁶	-	-	17 (6%)
BMI ≥30 ⁶	-	-	23 (9%)
Place of birth in Africa ⁶	-	-	0

ALT: Alanine aminotransferase; BMI: body mass index; HBeAg: hepatitis B "e" antigen; MASLD: metabolic dysfunction-associated steatotic liver disease

¹ Proportions are out of total unique treatment-eligible patients by guideline
² Proportions are out of total untreated HBV registry patients
³ AASLD: ≥F2 (gray zone); WHO: ≥F2; EASL: ≥F3 & HBV DNA detectable, ≥F2 & HBV DNA ≥2,000 IU/mL
⁴ AASLD: ≥2,000 IU/mL (HBeAg-), ≥20,000 IU/mL (HBeAg+); WHO & EASL: ≥2,000 IU/mL
⁵ AASLD: >70 U/L (men), > 50 U/L (women); WHO: >30 U/L (men), >19 U/L (women); EASL: >40 U/L
⁶ EASL: No advanced fibrosis or cirrhosis & HBV DNA ≥2,000 IU/mL
⁷ AASLD: >40 years & persistent elevated ALT > ULN; EASL: >40 years (men), >50 years (women)

Figure 1. Untreated patients eligible for HBV treatment based on meeting AASLD, WHO, and/or EASL HBV treatment guideline criteria (n = 975)

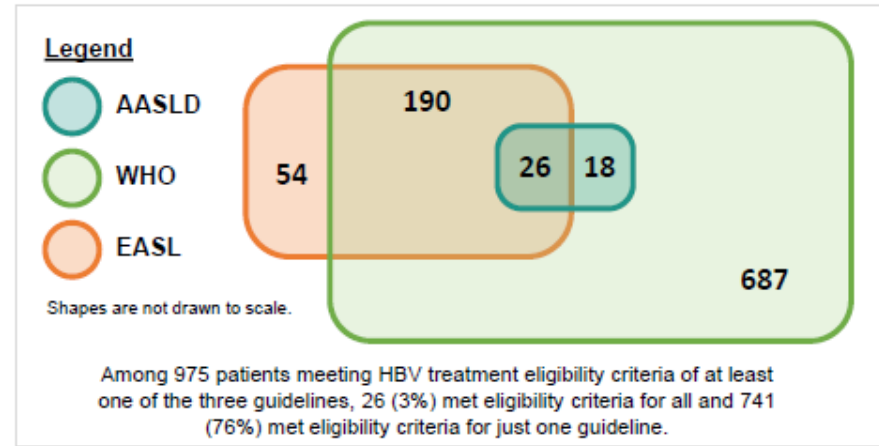
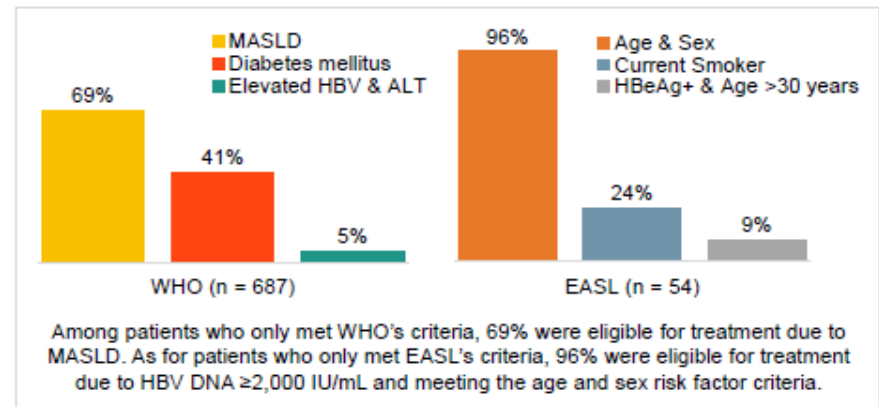


Figure 2. Top three HBV treatment eligibility factors for untreated patients who satisfy only WHO (n = 687) or EASL (n = 54) HBV treatment eligibility criteria



Hepatitis B Management: Guidance for the Primary Care Provider

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The purpose of this document is to provide simplified, up-to-date, and readily accessible guidance for primary care medical providers and non-specialists related to the prevention, diagnosis, and management of hepatitis B virus (HBV) infection, including hepatocellular carcinoma surveillance.

Collaboration with University of Washington

This guidance was produced in collaboration with the University of Washington (UW) Infectious Diseases Education & Assessment (IDEA) Program. The UW IDEA program will host the most current version of this guidance on the free *Hepatitis B Online* website (hepatitisB.uw.edu). The *Hepatitis B Online* website is funded by the Centers for Disease Control and Prevention (CDC).



2025 HBV Primary Care Workgroup

This guidance was developed and updated by a multidisciplinary panel of national experts in the field of viral hepatitis B, including representation from primary care, hepatology, infectious diseases, public health, and community coalitions.

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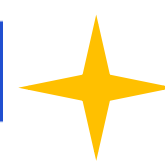
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Primary Care or Non-Specialist Care

- > HBV Screening
- > HBV and HAV vaccination
- > Initial evaluation and counseling of HBsAg(+) patient
- > Screening for coinfection with HCV and/or HIV
- > Management of metabolic syndrome risk factors (e.g., obesity, diabetes, hyperlipidemia, hypertension)
- > HBV lab monitoring every 6 months for patients not on treatment
- > Liver cancer surveillance ultrasound and serum AFP every 6 months if indicated

Either Care Setting or Shared Management

- > Initiation and monitoring of HBV treatment (including patients with compensated cirrhosis)
- > Monitoring for planned HBV treatment withdrawal
- > Screening for coinfection with HDV
- > Perinatal HBV management
- > Referral for HBV therapeutic clinical trials

Specialist Care (e.g., GI/Hepatology/ID)

- > Decompensated cirrhosis evaluation
- > Management of coinfection with HDV
- > Concern of antiviral resistance with persistent or increased viremia on treatment
- > Persistent elevation of liver enzymes despite low HBV DNA levels and lack of other identifiable cause
- > Liver lesion on CT or MRI is suspicious for liver cancer
- > Liver cancer evaluation and treatment with Hepatology/Surgery/Oncology

Abbreviations

- AFP = alpha-fetoprotein
- CT = computed tomography
- GI = gastroenterology
- HAV = hepatitis A virus
- HBV = hepatitis B virus
- HCV = hepatitis C virus
- HDV = hepatitis D virus
- HIV = human immunodeficiency virus
- ID = infectious diseases
- MRI = magnetic resonance imaging



Chronic Hepatitis B Screening and Testing

Screening




Screen for chronic hepatitis B virus (HBV) infection in all adults aged 18 years and older,^{1,2} regardless of risk, with:

Hepatitis B surface antigen (HBsAg), *and*

Hepatitis B surface antibody (anti-HBs), *and*

Hepatitis B core antibody (anti-HBc): Total or IgG³

Footnotes

- 1** HBV screening is recommended for all pregnant women, regardless of age and during each pregnancy, and for adults aged 18 years and older, regardless of risk (per U.S. Centers for Disease Control and Prevention recommendations).
- 2** HBV testing is recommended for all persons with a risk of exposure, regardless of age; periodic testing is recommended for all persons susceptible to HBV infection with ongoing exposure(s) since last testing (see [CDC site](#)  for full list of exposures).
- 3** During the typical course of chronic infection, total anti-HBc and HBsAg will persist, whereas IgM anti-HBc will disappear. IgM anti-HBc should be ordered only when acute HBV infection is a concern.



Management if HBsAg(+)

See [HBV Evaluation, Counseling, Management, Treatment, and Liver Cancer Surveillance](#)

If pregnant, see [Perinatal HBV Management](#)

If treatment candidate, see [Preferred HBV Antiviral Treatment](#)

Management if HBsAg(-)

See [HBV Serology Interpretation and Management](#)

If susceptible to HBV as indicated by anti-HBc(-) & anti-HBs(-), vaccinate^{1,2}

If prior HBV infection as indicated by anti-HBc(+), counsel on HBV reactivation risk³

Footnotes

- 1 The CDC's Advisory Committee on Immunization Practices (ACIP) recommends hepatitis B vaccination for all persons younger than 60 years of age, and adults 60 years and older with risk factors for hepatitis B or without identified risk factors but seeking protection.
- 2 If screening and vaccination are done together, draw blood before vaccination. If vaccinated first, delay HBsAg testing by ≥ 4 weeks to avoid false positives. If HBsAg is positive, do not complete the vaccine series and link to care.
- 3 Check HBV DNA if isolated anti-HBc(+) in patients with immunosuppression to evaluate for occult hepatitis B.

Hepatitis B Virus (HBV) Serology Interpretation and Management

HbsAg	Anti-HBc (Total or IgG)	Anti-HBs	Interpretation	Management
+	+	-/+	Current infection	<ul style="list-style-type: none"> > See Evaluation, Counseling, Management, Treatment, and HCC Surveillance (pages 5, 6, 7, 8) > Refer household and sexual contacts for HBV screening; if susceptible, vaccinate
-	+	+	History of infection with immune control	<ul style="list-style-type: none"> > No transmission risk; HBV dormant in liver > Reactivation risk if on select immunosuppressive medications¹
-	+	-	History of infection or occult infection ²	<ul style="list-style-type: none"> > If immunocompromised, check HBV DNA for occult infection² > If immunocompetent, counsel as history of infection above > Reactivation risk if on select immunosuppressive medications¹
-	-	+	Immune from prior vaccination	Protected. No need for booster vaccine
-	-	-	Susceptible	VACCINATE ^{3,4}



HBV Serology Interpretation and Management

How to Use This Tool

Select one option for each of the three serologic tests (HBsAg, Anti-HBc, and Anti-HBs). Once all three selections are made, the interpretation and management recommendations will appear on the right.

HBsAg

POSITIVE (+)

NEGATIVE (-)

Anti-HBc (Total or IgG)

POSITIVE (+)

NEGATIVE (-)

Anti-HBs

POSITIVE (+)

NEGATIVE (-)

Result

Interpretation

History of infection or occult infection²

Management

If immunocompromised, check HBV DNA for occult infection²

If immunocompetent, counsel as history of infection above

Reactivation risk if on select immunosuppressive medications¹

¹ See American Gastroenterological Association (AGA) HBV reactivation guidelines for list of medications and HBV reactivation risk levels with recommended management. (See [AGA](#))

² Occult HBV infection is defined by the presence of detectable HBV DNA in persons who are negative for HBsAg. Patients with occult HBV infection should be managed similarly to those with current infection.

RESET SELECTION



Post-Vaccination Serologic Testing

Response to HBV vaccination is assessed by an anti-HBs test between 1 and 2 months after the final dose of vaccine. Post-vaccination testing should be obtained in all of the following adult groups at high risk for HBV:

- > Health care personnel and public safety workers
- > Sexual and household contacts of HBsAg(+) persons
- > Hemodialysis patients
- > Persons with HIV and other immunocompromising conditions
- > Infants born HBsAg(+) mothers or mothers whose HBsAg status remains unknown
(for infants, check HBsAg and anti-HBs)



Initial Evaluation of the HBsAg(+) Patient

History/Examination

- Symptoms/signs of cirrhosis
- Alcohol and other metabolic risk factors
- Family history of hepatocellular carcinoma (HCC)
- Hepatitis A vaccination status

Routine Laboratory Tests

- Complete blood count
- Comprehensive metabolic panel including:
 - AST/ALT
 - Total bilirubin
 - Alkaline phosphatase
 - Albumin
 - Creatinine
- INR (if cirrhosis) ✨

Serology/Virology

- HBeAg/anti-HBe
- HBV DNA
- Anti-HAV (total or IgG) to determine need for vaccination if not documented
- Anti-HCV¹
- Anti-HDV, total or IgG²
- HIV-1/2 Ag/Ab

Imaging/Staging Studies

- Abdominal ultrasound
- Elastography (e.g., FibroScan) or Serum fibrosis assessment (e.g., APRI, FIB-4, FibroSure)³



 HEPATITIS B
ONLINE

Footnotes

- 1** If HCV antibody positive/reactive, check HCV RNA for current HCV infection; consider ordering HCV RNA instead of anti-HCV if history of prior HCV treatment or possible exposure within past 6 months.
- 2** If HDV antibody positive, check HDV RNA to evaluate for active coinfection and refer to liver specialist for treatment if detectable.
- 3** AST to Platelet Ratio index (APRI) and Fibrosis-4 (FIB-4) scores can be calculated using platelet count and AST and ALT from routine labs. Calculators with score interpretation are available. See [Hepatitis B Online APRI calculator](#) and [FIB-4 calculator](#). FibroSure and FibroTest are commercially available blood tests that can be ordered as well.

✨ = updated in the 2025 guidance

Counseling of the HBsAg(+) Patient

1. Provide education on HBV transmission prevention, including safe practices and the importance of notifying close contacts, using non-stigmatizing language.



Persons with chronic HBV:

✓ Should:

- Verify that sexual contacts, household contacts, family members, or injection partners are screened and vaccinated (if susceptible)
- Cover open cuts and scratches
- Clean blood spills with diluted (1:10) bleach
- Use condoms to prevent HBV transmission during sexual intercourse with partners who are susceptible to HBV infection

👍 Should feel free to safely:

- Participate in all daily and community activities, including contact sports
- Share food and utensils, or kiss others
- Pursue pregnancy (see Perinatal HBV Management section)
- Pursue educational or career opportunities without limitations, including work as a health care professional

✗ Should NOT:

- Share toothbrushes, razors, nail clippers, or earrings with those susceptible/nonimmune to HBV
- Share injection equipment
- Share glucose testing equipment
- Donate blood, organs, or sperm

★ = updated in the 2025 guidance





Counseling of the HBsAg(+) Patient

1. Provide education on HBV transmission prevention, including safe practices and the importance of notifying close contacts, using non-stigmatizing language.
2. Co-develop a plan for follow-up care. Patients will need regular (approximately every 6 months) follow-up and monitoring for disease progression.
3. Educate patients on the potential long-term complications of chronic HBV infection, such as cirrhosis, hepatocellular carcinoma (HCC), and the risk of hepatitis D virus (HDV) coinfection.
4. Encourage patients to inform all current and future medical providers of their HBsAg-positive status, particularly before starting treatment for cancer or autoimmune conditions (e.g., rheumatoid arthritis).
5. Counsel to limit alcohol consumption to reduce liver damage, and to avoid consumption if cirrhosis present.
6. Encourage patients to inform their medical provider about any use of herbal or over-the-counter medications to avoid potential liver toxicity.
7. Advise to optimize body weight and address metabolic complications, including control of diabetes and dyslipidemia (to prevent concurrent development of metabolic syndrome and fatty liver).
8. Emphasize that with proper monitoring and care, most people with hepatitis B can live long, healthy, and normal lives.



TREATMENT INDICATIONS

For Adolescents (age ≥ 12 years) and Adults with Chronic Hepatitis B

In principle, all HBsAg+ individuals with viremia are candidates for treatment. Factors to consider are fibrosis stage, HBV DNA, ALT, risk of disease progression and hepatocellular carcinoma (HCC), and patient preference.

1. Significant fibrosis or cirrhosis ($\geq F2$; elastography >7 kPa or APRI $>0.5^1$)
and
Detectable HBV DNA

-OR-

2. HBV DNA $>2,000$ IU/mL
and
Elevated ALT² *or* Family history of HCC

-OR-

3. Any of the following conditions:
> Immunosuppression³
> Viral coinfections (e.g., HIV, HDV, HCV treatment⁴)
> HBV transmission risk factors⁵
> Extrahepatic manifestations of HBV⁶

-OR-

4. Patient preference for treatment over monitoring only⁷

RECOMMENDED LAB MONITORING

For all with chronic HBV (patients on treatment and not on treatment):

- > HBV DNA, ALT every 6 (may vary from 3 to 12) months*
- > AST, platelet count, or elastography every 1 to 3 years

If HBV DNA undetectable:

- > HBsAg once yearly for HBsAg loss

* Depending on factors such as recent treatment initiation, liver enzymes, and viral load, patients may need to be monitored more or less frequently.



Preferred Antiviral Treatment of the HBsAg(+) Patient

Preferred Medications for Treatment of Chronic Hepatitis B

The following table summarizes the key characteristics for the three preferred oral antiviral medications used to treat adults with chronic hepatitis B.

Entecavir (ETV)* <i>Baraclude</i>	Tenofovir DF (TDF)* <i>Viread</i>	Tenofovir alafenamide (TAF) <i>Vemlidy</i>
ADULT DOSE	ADULT DOSE	ADULT DOSE
Standard: 0.5 mg by mouth daily	300 mg by mouth daily	25 mg by mouth daily
Take 2 hours before or after food	Take without regard to food	Take with food
Decompensated liver disease ² or lamivudine-resistant or lamivudine-experienced individuals: 1 mg by mouth daily	PREGNANCY CATEGORY¹	PREGNANCY CATEGORY¹
PREGNANCY CATEGORY¹	Formerly FDA category B	Pregnancy exposure registry available ³
Formerly FDA category C	Pregnancy exposure registry available	First-trimester exposure to TAF is not associated with increased risk of congenital anomalies ³
Limited pregnancy exposure, pregnancy exposure registry available	Extensive data from pregnant women with HIV or HBV infections indicate no increase in pregnancy complications or major birth defects	No adverse effects observed in animal studies
Insufficient human data to assess risk of major birth defects	SIDE EFFECTS	SIDE EFFECTS
	Nausea (9%)	Headache (12%)



Liver Cancer Surveillance

Indications for Liver Cancer (Hepatocellular Carcinoma) Surveillance

Persons with chronic HBV at increased risk for hepatocellular carcinoma (HCC) who require routine surveillance, including after observed HBsAg loss: ✨

- All persons with cirrhosis
- The following populations, even in the absence of cirrhosis:
 - ✨ Men over 40 years of age¹
 - ✨ Women over 50 years of age¹
 - Persons with a family history of HCC
 - Persons with hepatitis D virus or HIV² coinfection ✨

Recommended HCC Surveillance Method

HCC surveillance should be performed in the primary care setting with liver ultrasound with serum alpha-fetoprotein (AFP)³ every 6 months. More frequent monitoring or other imaging modalities, such as computed tomography (CT) or magnetic resonance imaging (MRI), with and without contrast, may be indicated to further evaluate new liver lesions. ✨

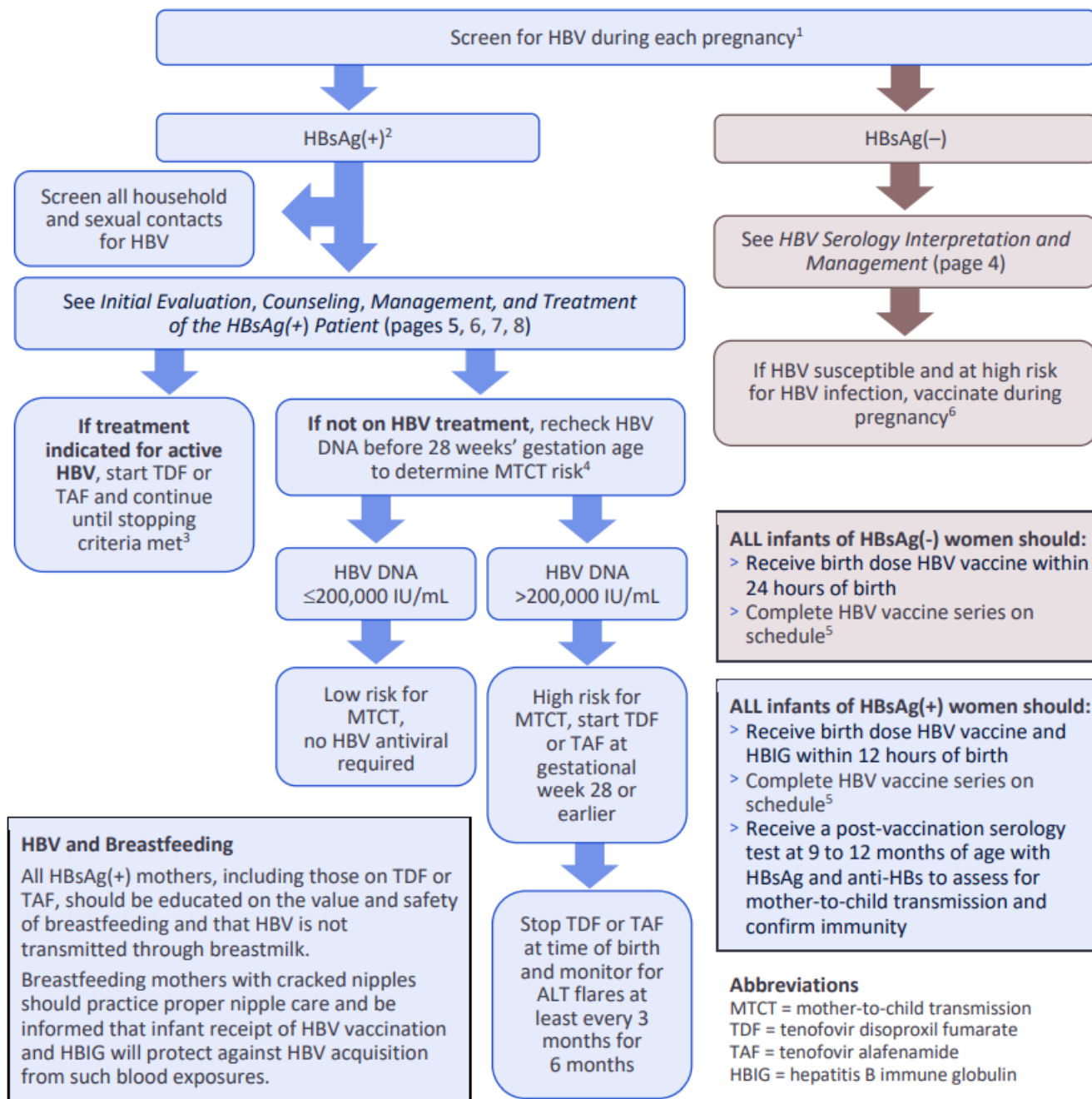
When to Stop HCC surveillance? ✨

HCC surveillance can be stopped in persons with limited life expectancy or who would not tolerate treatment for HCC, if found. Persons with observed HBsAg loss before age 50 years of age and without cirrhosis are at low risk for HCC and may stop HCC surveillance.

✨ = updated in the 2025 guidance



Perinatal HBV Management



HEPATITIS B MANAGEMENT: THE BASICS

SCREENING

- Hepatitis B surface antigen (HBsAg)
- Hepatitis B surface antibody (anti-HBs)
- Hepatitis B core antibody (anti-HBc, total or IgG)

	HBsAg	anti-HBc	anti-HBs
Susceptible	-	-	-
Immune (Vaccinated)	-	-	+
Immune (Exposed)	-	+	+
Exposed	-	+	-
Current Infection	+	+	-

VACCINATION

Hepilisav-B
(2 doses, adults only)

0 — 1
mo. mo.

Engerix-B
Recombivax HB
(3 doses)

0 — 1 — 6
mo. mo. mo.

INITIAL HBV EVALUATION

Labs

- HBV DNA
- CMP
- CBC
- HBeAg and anti-HBe
- Viral Co-infections (HAV, HCV, HDV, HIV)

Imaging/ Fibrosis Staging

- Abdominal ultrasound
- Elastography (e.g. FibroScan) or serum fibrosis test (e.g. APRI)

TREATMENT INDICATIONS

For adolescents (age ≥12 years) and adults with chronic hepatitis B

In principle, all HBsAg(+) individuals with viremia are candidates for treatment. Factors to consider are fibrosis stage, HBV DNA, ALT, risk of disease progression and hepatocellular carcinoma (HCC), and patient preference.

1. Significant fibrosis or cirrhosis (≥F2; elastography >7 kPa or APRI >0.5) and detectable HBV DNA

-OR-

2. HBV DNA >2000 IU/mL and one of the following:
 - Elevated ALT (M > 35 U/L; F > 25 U/L)
 - Family history of HCC

-OR-

3. Any of the following conditions:
 - Immunosuppression
 - Viral co-infections (e.g. HIV, HDV, HCV treatment)
 - HBV transmission risk factors (e.g. pregnant with HBV DNA > 200,000 IU/mL)
 - Extrahepatic manifestations of HBV (e.g. glomerulonephritis, polyarteritis nodosa)

-OR-

4. Patient preference for treatment over monitoring-only

Entecavir* (ETV)
0.5 / 1.0 mg PO daily

Tenofovir disoproxil fumarate* (TDF)
300 mg PO daily

Tenofovir alafenamide (TAF)
25 mg PO daily

**These are generic in the U.S.
(if insurance issues, can use Good Rx or Cost Plus Drugs)*

MONITORING

HBV DNA and ALT

(every 6 months, may vary 3-12 months)

To reassess fibrosis: AST, platelets, or elastography (every 1-3 years)

If not on antiviral: Counsel on other risk modifiers (ETOH, smoking cessation, metabolic syndrome), reassess for treatment at each visit

If taking antiviral: Goal is undetectable HBV DNA, assess for adherence and HBsAg loss (yearly)

If HBV DNA undetectable: Check HBsAg yearly to assess for HBsAg loss

Liver Cancer (HCC) Surveillance
(with liver U/S & serum AFP, every 6 months)

- All persons with cirrhosis
- Males >40 y/o, females >50 y/o (earlier age if from Africa)
- Persons with family history of HCC
- Persons with HDV or HIV co-infection



Questions?



www.hepatitisb.uw.edu/page/primary-care-workgroup/guidance