

# Quick Reference Guide



## B aware 4 care

This guide for providers summarizes the key information needed to screen, diagnose, and select patients with hepatitis B virus (HBV) infection for treatment as detailed in the *B Aware 4 Care CME/CE monograph*.

### SCREENING FOR HBV

The Centers for Disease Control and Prevention recommendations for screening persons for HBV infection are summarized in **Table 1**. All patients identified with HBV infection through screening should receive appropriate care or referral to care.

Table 1. CHB screening recommendations for US populations.
Blood, organ, plasma, semen, and tissue donors
Hemodialysis patients
All pregnant women
Infants born to HBsAg-positive mothers
Household contacts, needle sharing, or sex partners of HBV-infected persons
Sources of blood or body-fluid exposures that might warrant post-exposure prophylaxis
Persons born in countries with HBsAg prevalence $\geq 2\%$
HIV-infected persons
Persons with select medical conditions (eg, elevated ALT or AST levels of unknown etiology)
Persons with behavioral exposures (eg, IDUs, MSM)
Unvaccinated children of persons from regions with $>8\%$ prevalence

ALT, alanine aminotransferase; AST, aspartate aminotransferase; HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; HIV, human immunodeficiency virus; IDU, injection drug user; MSM, men who have sex with men.

Source: Centers for Disease Control and Prevention. Recommendations for identification and public health management of persons with chronic hepatitis B virus infection. *MMWR*. 2008;57:1-20.

### INTERPRETATION OF HEPATITIS B SEROLOGIC TEST RESULTS

A number of serologic markers can be tested to assess for HBV infection. The interpretation of common tests for HBV serologic markers is shown in **Table 2**.

Table 2. Interpretation of common tests for HBV infection.		
Interpretation of HBV serologic test results		
Patient status	HBV serologic marker	Test result
Susceptible	HBsAg	Negative
	Anti-HBc	Negative
	Anti-HBs	Negative
Immune due to natural infection	HBsAg	Negative
	Anti-HBc	Positive
	Anti-HBs	Positive
Immune due to HBV vaccination	HBsAg	Negative
	Anti-HBc	Negative
	Anti-HBs	Positive
Acutely infected	HBsAg	Positive
	Anti-HBc	Positive
	IgM anti-HBc	Positive
	Anti-HBs	Negative
Chronically infected	HBsAg	Positive
	Anti-HBc	Positive
	IgM anti-HBc	Negative
	Anti-HBs	Negative

Anti-HBc, antibody to hepatitis B core antigen; anti-HBs, antibody to hepatitis B surface antigen; HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; IgM, immunoglobulin M.

Source: Centers for Disease Control and Prevention. Division of Viral Hepatitis. Interpretation of hepatitis B serologic test results. <http://www.cdc.gov/HEPATITIS/HBV/PDFs/SerologicChartv8.pdf>



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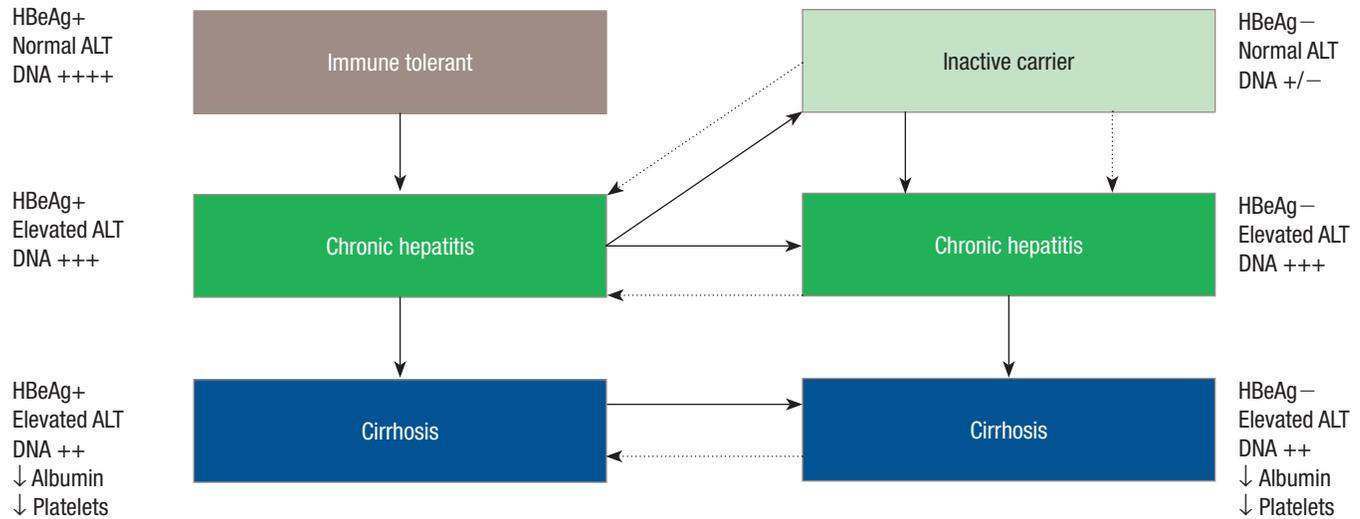


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## CLINICAL STAGES OF CHB IN ASIAN AMERICAN PATIENTS

Asian American patients may be classified into one of several clinical stages of CHB using HBeAg status and alanine aminotransferase (ALT) and HBV DNA levels, as shown in **Figure 1**. These stages can be useful for diagnosis and for making decisions about whether to initiate antiviral treatment and correlate with treatment criteria in **Table 3**.

**Figure 1.** Clinical stages of CHB in Asian American patients.



ALT, alanine aminotransferase; HBV DNA, hepatitis B viral DNA.

Sources: Tong MJ, Hsu L, Hsien C, et al. A comparison of hepatitis B viral markers of patients in different clinical stages of chronic infection. *Hepatol Int.* 2010;4:516-522; Tong MJ, Pan CQ, Hann HW, et al. The management of chronic hepatitis B in Asian Americans. *Dig Dis Sci.* 2011;56:3143-3162.

**Table 3. Serologic markers of HBV infection.**

Serologic marker	Description
HBsAg	<ul style="list-style-type: none"> <li>• Protein on the surface of HBV</li> <li>• Can be detected at high levels in serum during acute HBV infection or in CHB</li> <li>• Presence indicates the patient is infected</li> </ul>
Anti-HBs	<ul style="list-style-type: none"> <li>• Antibody to HBsAg</li> <li>• Presence may indicate recovery and immunity from HBV infection</li> <li>• Also develops in patients successfully vaccinated against HBV</li> </ul>
Total anti-HBc	<ul style="list-style-type: none"> <li>• Antibody to core antigen of HBV (core antigen is not detectable in blood)</li> <li>• Appears at the onset of symptoms in acute HBV infection and remains throughout life</li> <li>• Presence indicates previous or ongoing HBV</li> </ul>
IgM anti-HBc	<ul style="list-style-type: none"> <li>• Immunoglobulin M class antibody to the core antigen of HBV</li> <li>• Presence indicates recent acute infection with HBV (≤6 months)</li> </ul>
HBeAg	<ul style="list-style-type: none"> <li>• Protein produced by the virus when it is actively replicating</li> <li>• Can be detected in serum during acute HBV infection and CHB</li> <li>• Some strains of HBV do not make e antigen</li> <li>• Presence indicates active replication</li> </ul>
Anti-HBe	<ul style="list-style-type: none"> <li>• Antibody to HBeAg</li> <li>• Presence indicates inactive infection except strains of HBV that do not make e antigen</li> </ul>
HBV DNA	<ul style="list-style-type: none"> <li>• Genetic material of HBV</li> <li>• Number of HBV DNA copies in the blood is used to detect active HBV infection and to monitor response to antiviral therapy (10,000 copies/mL = 2000 IU/mL)</li> </ul>

Anti-HBc, hepatitis B core antibody; anti-HBe, hepatitis B e antibody; anti-HBs, hepatitis B surface antibody; CHB, chronic hepatitis B; HBeAg, hepatitis B e antigen; HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; IgM, immunoglobulin M.

Sources: Centers for Disease Control and Prevention (CDC). Division of Viral Hepatitis. Interpretation of hepatitis B serologic test results. <http://www.cdc.gov/HEPATITIS/HBV/PDFs/SerologicChartv8.pdf>; CDC. Hepatitis B FAQs for health professionals. <http://www.cdc.gov/hepatitis/HBV/HBVfaq.htm#>; CDC, Recommendations for identification and public health management of persons with chronic hepatitis B virus infection. *MMWR.* 2008;57:1-20.