

## Underwriting Hepatitis B

### THE CASE

### STUDY FOR

### THIS MONTH

By Robert Quinn, MD



**Dr. Robert Quinn**  
VP and Medical Director



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Chief Underwriter

Meet Chief Underwriter Jim Landino. Jim has 34 years of underwriting experience, primarily in the impaired risk area. Jim came to Banner in 1995 to establish the brokerage underwriting department.

*Case Study: A 49 year-old man is looking for \$500,000 of term life insurance. He has a history of carrying hepatitis B but has no symptoms. He was exposed to hepatitis B during childbirth and gestation. The HbsAg is positive. His liver tests are normal. He profiles as preferred plus for his lipids, family history, blood pressure and build.*

Continuous or chronic hepatitis B virus (HBV) affects one out of every 200 Americans and up to one out of every five Asians in certain communities. Most people who become infected with HBV recover naturally. Only five percent of the time does the virus remain and continue to cause risk; these are the chronic HBV cases. HBV is a growing problem worldwide and a common concern in underwriting.

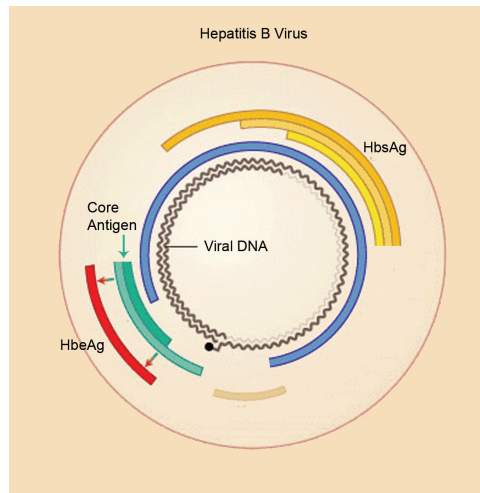
In order to live and multiply, a virus must occupy a normal cell. The liver cell is the target for HBV as well as several other viruses including hepatitis C. Hepatitis B enters the liver cell, takes control of the cell and uses its vital materials to reproduce itself. This can cause damage to the cell by inciting inflammation (hepatitis), cirrhosis (replacement of liver cells) and even liver cancer.

Most HBV infection in United States spreads through sexual activity, injection drug use, or contact with human secretions such as saliva. Doctors, lab workers, nurses, and other health-care workers are prime candidates. Thirty percent of those who become infected with the virus do not know or admit to the source of infection.

A person who has the HBV antigen has the virus. An antigen is a protein from the virus. There are several antigens, most notably the surface antigen (HbsAg), the e antigen (HbeAg), and the viral DNA (see illustration). HBV antigens trigger the production of HBV antibodies. A person who has the HBV antibody either had HBV in the past

or is currently infected with HBV and is trying to recover.

If HBV is causing continuous or chronic hepatitis, the liver tests are abnormal and there is a mortality risk. Even when a liver test shows only a mild abnormality, in 25 percent of these cases the hepatitis becomes severe or cirrhosis can develop over time. After 15 years, the survival of those with mild hepatitis is only 77 percent. For this reason, hepatitis B usually calls for a table-rated policy.



Underwriters frequently encounter applicants who have received treatment. Therefore the underwriter needs to remain aware that a future risk may still exist. There are treatments that can be effective against HBV including interferon injections and the antiviral pill lamivudine (Epivir). With either of these treatments there is a 30 percent chance of clearing the virus, however, relapses can occur. Other treatments are being studied and improved

results are anticipated in the future.

In this case study, the surface antigen (HbsAg) signals the presence of HBV. But, as represented by the normal liver tests, the HBV is in the inactive or carrier state. This state is associated with a 50 percent extra mortality due to the future possibility of developing active hepatitis, cirrhosis, or liver cancer. Therefore, the most likely offer is table 2 on standard plus base.



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