

Knowing how to underwrite hepatitis C can make or break your business. What would you do in these three cases?

Consider the following life insurance applicants who have tested positive for the hepatitis C virus:

1. **A 45 year old female nurse** with a history of a needlestick five years ago, was found to have elevated liver enzymes and hepatitis C detectable in her blood. Liver biopsy showed minimal liver fibrosis, and she was successfully treated, with recent normal blood tests and no evidence of hepatitis C in the blood.
2. **A 55 year old male** with a remote history of intravenous drug use, was diagnosed with hepatitis C ten years ago, but could not complete treatment due to side effects. In response to detectable levels of virus in the blood, a liver biopsy was performed last year, which showed mild inflammation and fibrosis. Liver enzymes are currently normal.
3. **A 35 year old male** with no admitted medical history and no physician, admits to drinking three beers each day and is found on insurance lab testing to have liver enzymes over twice the normal range, the presence of hepatitis C antibodies, and a low albumin level in the blood.

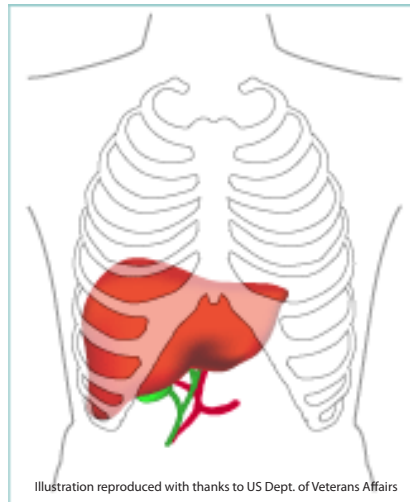
Hepatitis C is an Ribonucleic Acid (RNA) virus that attacks the liver and can cause fibrosis, cirrhosis and hepatocellular carcinoma. Besides damaging the liver, hepatitis C can also affect other parts of the body, including the kidneys, skin, joints, blood elements and others. In most applicants, it is a silent viral infection which makes it all the more

difficult to underwrite. The risk assessment for each varies according to factors such as the date of exposure, the lab data, whether a biopsy was performed, alcohol or drug use, co-infections and response to treatment. Therefore, a detailed history is preferable and allows us to make the best possible decision on a case.

Epidemiology

There are about 170 million people worldwide who are infected with HCV, which mainly occurs by exposure to blood that contains the virus. It is interesting that many who test positive for hepatitis C deny all risk factors for exposure. Of those exposed, up to 85 percent will develop a chronic infection. Among those who are

chronically infected with hepatitis C, after 10-20 years, about 20 percent will develop cirrhosis. Although the screening liver function tests may be within normal limits, this is not enough evidence to rule out liver disease, since many people with chronic HCV and significant liver damage are asymptomatic and have no biochemical evidence of active disease.



Start a dialogue with your underwriter about...

The new \$50,000 to \$99,999 band...

in the Banner and William Penn term portfolios provides opportunities for you to target applicants who need financial protection in smaller face amounts.

Applicants who smoke celebration cigars...

just might qualify for our preferred plus underwriting class if less than twelve cigars per year are smoked and all other P+ criteria are met.

Applications that call for table ratings...

for medical conditions other than cancer, most often result in offers based on standard plus rates.

Hepatitis C is an important cause of premature mortality. Unfortunately, the rate of infection has been increasing since 1995, especially in males ages 55 to 64. The current rate of infection is more than 2 per 100 thousand.

Making the Diagnosis

In order to make the diagnosis, second- and third-generation anti-HCV enzyme-linked immunosorbent assays (ELISAs) are very sensitive and specific. The recombinant immunoblot assay (RIBA) can be used to confirm a positive ELISA in low risk populations. A liver biopsy is the gold standard for determining the extent of liver damage. It can be used to determine grading and staging as well as success of treatment.

Laboratory Data

Fluctuating ALT levels may be a clue to the disease. An ALT elevation even without further symptoms can indicate chronic disease. In fact, up to 25 percent of people with normal AST and ALT levels can have clinically significant fibrosis and inflammation. Although we routinely test for hepatitis C antibodies when an applicant is found to have elevated liver function tests, it is extremely helpful to have a hepatitis C RNA level at the time of application, which detects the amount of virus circulating in the blood. An undetectable RNA level (below 100 copies/ml) suggests that the virus is not multiplying and not causing ongoing damage to the liver. Although suggestive of prior hepatitis C infection, hepatitis C antibodies are not protective and do not suggest immunity.

Treatment

With appropriate treatment, hepatitis C infection can be cured. In general, treatment is recommended for patients with persistently (more than six months) elevated LFTs and RNA levels. The current recommended treatment of choice for chronic hepatitis C is combination therapy with pegylated interferon, which is injected under the skin, and oral ribavirin. New treatments, such as protease inhibitors, are currently being studied. The response to treatment depends upon a number of factors, some of which include the extent of fibrosis seen on biopsy, the amount of hepatitis C virus detected in the blood, and which of the six known genotypes of hepatitis C that the applicant has. Genotype 1, which is most prevalent in this country, is more resistant to treatment than other genotypes.

Patients who become RNA negative during therapy and remain so for at least six months after completing treatment are considered a treatment success, placing them at low risk for relapse. A clear record of treatment success in the face of up to mild disease on liver biopsy allows us to place an applicant with a history of hepatitis C infection in the standard plus class.

Underwriting HCV infection

The 45 year old female nurse described on page one had minimal liver damage on biopsy and was successfully treated. She is considered to be cured and may receive an offer **as good as standard plus**.

The 55 year old applicant could be given a **four table offer**, since the mild findings on liver biopsy suggest a slowly progressive course.

The 35 year old applicant, with newly diagnosed hepatitis C on insurance testing, low albumin suggestive of liver dysfunction and daily alcohol use, **would be declined coverage**.