Hepatitis C virus (HCV) infection is the leading cause of liver failure and the need for liver transplant. The main way HCV spreads today is through intravenous drug abuse using contaminated needles or other tainted drug equipment. HCV can cause hepatitis, or liver inflammation, but may also cause arthritis (joint inflammation, muscle pain and weakness, and blood vessel problems). People with HCV may have no symptoms and not know they’re infected. They may have related rheumatic diseases that occur before the virus is found. Almost any joint or muscle problem may be the result of HCV infection, which activates the immune system and keeps it continuously "turned on." Before 1990, HCV passed through blood transfusions, but most people today contract it by using injectable drugs or high-risk sex behaviors. Anyone with newly diagnosed arthritis, cryoglobulinemia or HIV should be tested for HCV.

People with rheumatic diseases caused by HCV infection may first notice painful joints and muscles combined with fatigue. The virus constantly multiplies in the blood and liver, leading to a variety of rheumatic problems ranging from arthritis to cryoglobulinemia to kidney failure. Cryoglobulinemia occurs when abnormal proteins called cryoglobulins in the blood solidify in cold weather. This can cause Raynaud’s phenomenon, which causes fingers to whiten in the cold. The USPSTF recommends 1-time screening for HCV infection to adults born between 1945 and 1965. HCV diagnosis is made by testing for antibodies against the virus in the blood serum. A second blood test to find the virus confirms diagnosis. This test shows how quickly the virus is making copies, which shows how active it is. Once HCV is confirmed, diagnosing HCV-related rheumatic disease is fairly straightforward.

Patients with HCV need to see a liver specialist to assess liver damage and possibly screen for liver cancer. This doctor will also determine if the patient should start HCV therapy, including interferon-free therapies that may cure the infection in as little as 2-3 months in many people. Patients with other infections, mental health issues, or drug and alcohol problems may not be ready to begin HCV therapy. HCV-related joint problems may be treated with medications that could be toxic for the liver, so the liver doctor and a rheumatologist should work together to treat these patients. Rituximab [Rituxan, MabThera] is a drug being tested for use in patients with HCV.

Reducing risk factors may help prevent the spread of HCV to others. Those at risk should get tested for HCV. Because HCV-related joint and muscle problems may cause discomfort and make daily activities difficult, see a rheumatologist for treatment. Patients with HCV infection and related rheumatic diseases may find support groups helpful for learning ways to cope with their condition. Long-term follow-up care with a specialist for HCV infection is important, as liver disease may worsen over time and lead to liver failure or liver cancer. Treatment of HCV infection and related rheumatic disease is complex, so patients should make sure their liver specialist and doctors treating other problems are in communication. For those who have rheumatoid arthritis and hepatitis C without coexisting liver damage, TNF inhibitors are safe and effective to use for RA.