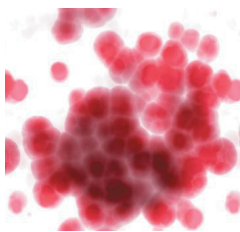


## Special Edition: Treatment of Chronic Hepatitis C

### BACKGROUND

The Kent County Health Department (KCHD) receives, on average, 30 reports a month of chronic hepatitis C virus (HCV), making it our third most commonly reported notifiable disease. (Chlamydia and gonorrhea are first and second, respectively.) **Because HCV is the leading known cause of liver disease in the U.S., it is vital that persons infected with HCV know how to reduce transmission, maintain a healthy liver, and are aware of current treatment options.**

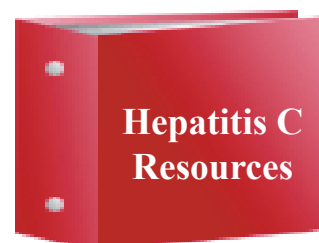
As part of a Continuous Quality Improvement initiative, the KCHD is focusing on increasing access to hepatitis C education and resources for local health care providers. Results from a 2007 survey of local physicians overwhelmingly indicated a need for information about treatment and treatment decisions for patients chronically infected with HCV.



### KCHD RESPONSE

In response to this need, KCHD sponsored a seminar for health care providers in January, 2008 at the health department. Dr. Kimberly Brown, Chief of Gastroenterology and Hepatology from Henry Ford Hospital gave a presentation entitled *Hepatitis C: The Role of the Primary Care Provider in Diagnosis and Referral*. Participants received a Hepatitis C Resource binder containing over 20 samples of HCV patient fact sheets addressing a wide range of issues. Free copies of this binder are

still available. To receive yours, please e-mail [mary.lutzke@kentcountymi.gov](mailto:mary.lutzke@kentcountymi.gov) or call 632-7228. Binder contents also are available at [www.accesskent.com/hepatitis](http://www.accesskent.com/hepatitis).



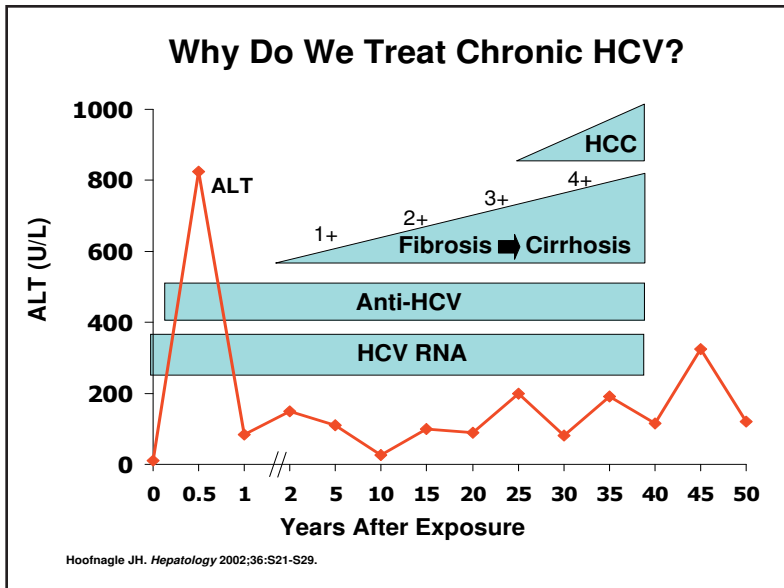
This edition of *EpiFocus* includes highlights from the seminar as well as recommendations from the *National Institutes of Health Consensus Development Conference on Management of Hepatitis C: 2002*, which has defined treatment guidelines for many years.

While far from comprehensive, we hope this information answers some basic questions about hepatitis C treatment. As always, this information is not a substitute for the expertise of our local physicians.

### EPIDEMIOLOGY

The number of new HCV infections has declined sharply since the late 1980s. However, the **estimated prevalence in the U.S. is 1.3%**, making HCV the most common chronic blood-borne infection. Because most persons with chronic HCV infection have yet to be diagnosed but will likely be diagnosed in the next decade, a fourfold increase in the number of adults diagnosed with chronic HCV infection is projected from 1990 to 2015. Currently, persons aged 40-59 years have the highest prevalence of HCV infection, and in this age group, the prevalence is highest in African Americans, at 6.1%.

Figure 1



### DECISION TO TREAT

All patients with chronic hepatitis C are potential candidates for antiviral therapy and should be referred to a specialist if possible. Even though **the decision to treat is multifaceted and made on a case-by-case basis**, members of the Consensus Development Conference have made the following recommendations:

**Combination therapy with pegylated interferon and ribavirin (PEG-IFN + R) is recommended for chronic hepatitis C patients with an increased risk of developing cirrhosis, as characterized by having all of the following:**

- Detectable HCV RNA levels > 50 IU/mL
- Liver biopsy with portal or bridging fibrosis
- At least moderate inflammation and necrosis

Most of these patients will have persistently elevated ALT values, but ALT peaks early and fluctuates over time (Figure 1). Consequently, it is estimated that approximately 20-30% of chronic cases will have persistently normal liver enzymes.

### SPECIAL POPULATIONS

**HIV-coinfected patients:** Since hepatitis C tends to be more aggressive in those coinfecting with HIV, therapy should be recommended even in patients with early and mild disease.

**Patients over 60 years old:** Patients should be managed on an individual basis because adverse

effects of treatment appear to be worse and the benefit of treatment has not been well documented in older patients.

**Therapy is not advised for patients who have:**

- Clinically decompensated cirrhosis because of hepatitis C
- A kidney, liver, heart or other solid-organ transplant
- Specific contraindications\* to either monotherapy or combination therapy

\* Contraindications to pegylated interferon therapy include severe depression or other neuropsychiatric syndrome that is not being adequately managed, autoimmune disease that is not well controlled, bone marrow compromise, *active* substance or alcohol abuse, or inability to practice birth control. Ribavirin contraindications include marked anemia, renal dysfunction, inability to practice birth control, and coronary artery or cerebrovascular disease.

### TREATMENT

The current treatment recommendation is combination therapy of PEG-IFN + R. After 12 weeks of therapy, the patient must have  $\geq 2 \log_{10}$  drop in viral load to continue treatment (Figure 2). The viral genotype determines the length of treatment (24 or 48 weeks). Monotherapy using interferon alone is occasionally used in special circumstances.

### TREATMENT OUTCOMES

**A Sustained Virologic Response (SVR)** is the primary therapeutic goal (Figure 2) defined as “the absence of HCV RNA by assay with sensitivity of at least 50 IU/mL at the end of treatment and 6 months afterwards.” A SVR is associated with:

- Improvement in health-related quality of life
- Decrease in mean histology activity index
- Decrease in ALT levels (biochemical response)

Even in the absence of a SVR, therapy has been associated with histological improvement. In patients who do not achieve a SVR, re-treatment has been

# SIDE EFFECTS

- |             |              |
|-------------|--------------|
| Nausea      | Diarrhea     |
| Weight loss | Insomnia     |
| Rash        | Depression   |
| Anxiety     | Irritability |
| Fever       | Myalgia      |
| Arthralgia  | Rigors       |

Most side effects are manageable. SSRIs are commonly prescribed to treat depression, one of the most common side effects. The majority of persons receiving treatment continue working during the course of therapy. Approximately 10-14% of people treated will not be able to tolerate the side effects.

...continued

shown to be successful about 15-20% of the time. Studies have also shown that relapse occurred in less than 1% of patients followed for 2-4 years after achieving a SVR. Effects on survival have not been well defined.

## GENOTYPES

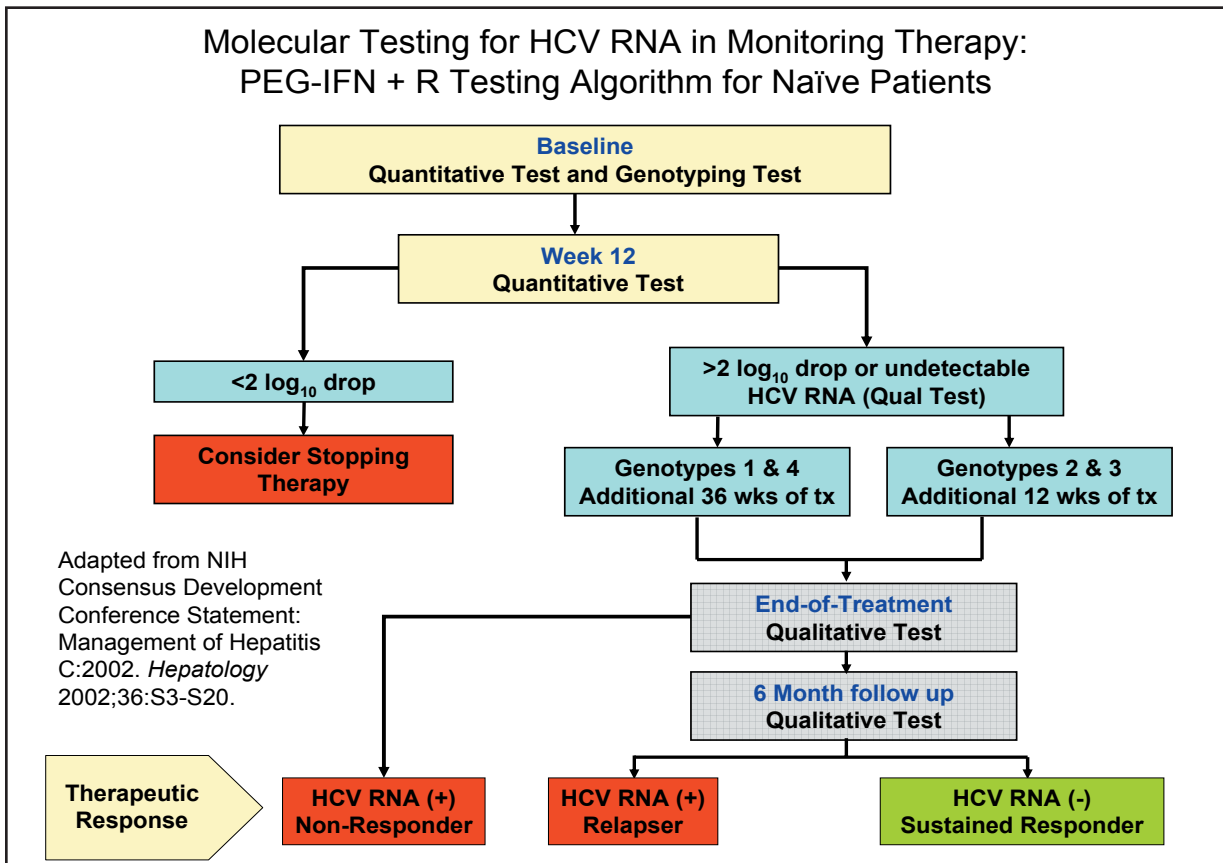
Length of treatment and potential outcome is dependent upon the genotype of the hepatitis C virus with which an individual is infected.

**Genotype 1:** Persons with genotype 1, the most common genotype in the United States, can expect a **48-week course of treatment**. Of patients completing this course, approximately **50% will achieve a SVR**. Genotype 4 reacts similarly.

**Genotype 2 and Genotype 3:** Persons with genotype 2 or 3 can expect a **24-week course of treatment**. Of patients completing this course, approximately **80% will achieve a SVR**.

**Remember: All HCV infected patients should abstain from alcohol and get vaccinated for hepatitis A and B.**

Figure 2





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## ADDITIONAL INFORMATION

Information for providers and patients can be found at the KCHD website: [www.accesskent.com/hepatitis](http://www.accesskent.com/hepatitis). The KCHD Communicable Disease Unit Nurses and Epidemiologists are available to answer your questions or recommend additional sources. Contact us at (616) 632-7228.

### References

1. National Institutes of Health Consensus Development Conference Statement: Management of Hepatitis C: 2002, <http://consensus.nih.gov/2002/2002HepatitisC2002116html.htm> (accessed 2/11/08).
2. Brown K. "Hepatitis C: The Role of the Primary Care Provider in Diagnosis and Referral." Presented at the Kent County Health Department, Grand Rapids, Michigan, January 29, 2008.
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