Hepatitis C SVR12 vs SVR24: Trusting That We Are Truly Cured

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More than 9 out of 10 people will be cured using the current treatments for chronic hepatitis C virus infection. It is thrilling to be told that hepatitis C is no longer detectable in your blood. However, as much as we yearn for those words, sometimes it takes a long time to believe that hepatitis C is gone forever.

The medical term for a successful hepatitis C treatment outcome is *sustained viral response* (SVR). Undetectable HCV for 24 or more weeks after the end of treatment is an SVR24. Recently, many studies use the term SVR12, meaning that hepatitis C is undetectable for twelve or more weeks after the end of treatment. For those of us had a hard time believing that being viral-free for 24 weeks meant we were cured, then 12 weeks felt unbelievable. Can we trust this?

For most of us, yes. In the January 2015 *Hepatology*, Eric Yoshida and colleagues reported that there wasn't much difference between an SVR12 and SVR24 among hepatitis C patients who were treated with regimens using sofosbuvir. It didn't matter if interferon was part of the regimen. Analyzing data from studies using sofosbuvir, researchers looked at response rates for genotypes 1 through 6. There were a total of 327 genotypes 1, 4, 5, 6 (mostly genotype 1); 294 genotype 2s; and 250 genotype 3s.

Results

Before presenting the results, there are a couple more terms that are important to understand:

- *Relapse* was defined as having a negative hepatitis C viral load (*HCV RNA*) at the end of treatment and subsequently having detectable HCV RNA above the *LLOQ*.
- In this case, LLOQ is lower limit of quantification, which is the lowest amount of virus that can be precisely counted.

SVR24 was achieved in 777 of 779 patients (99.7%) with SVR12. This means that everyone but two people who achieved an SVR12 had an SVR24. Here's the kicker: the two patients who didn't achieve an SVR 24 both had genotype 3 (both non-cirrhotic, treatment-experienced). Therefore, if you discarded the data for genotype 3 patients and counted everyone else, 100% of those who had an SVR12 had an SVR24. Using viral sequencing, these cases were relapses and not

reinfection.

What about SVR4? It isn't nearly as reliable as SVR12. Most relapsed by post-treatment week 4 (66 patients =77.6%); 17 (20.0%) had relapse between weeks 4 and 12.

Hepatitis C Treatment Follow-up in the Real World

Recommendations from the American Association for the Study of Liver Diseases (AASLD) and Infectious Diseases Society of America (IDSA) are: "Patients who have undetectable HCV RNA in the serum, when assessed by a sensitive polymerase chain reaction (PCR) assay, 12 or more weeks after completing treatment, are deemed to have achieved an SVR." So, do we just get a viral load at 12 weeks following treatment and stop there?

That is between you and your physician. One argument in favor of a post-treatment 24 week viral load is that clinical trials use extremely sensitive viral load tests, and your lab might use a less sensitive one. However, don't despair. The viral loads of patients who relapsed after post-treatment week 12 substantially exceeded the lower limit of detection of any available viral load test.

You may want a 24 week post-treatment viral load for psychological value. It takes convincing to believe that we are really cured. I would definitely have a viral load test done at post-treatment week 24 if I was genotype 3. As for everyone else, it all comes down to a matter of trust. Do you really believe you are cured? I hope so, because living with the fear that hepatitis C might come back is only marginally better than actually having the virus. Freedom from fear and hepatitis C is a much lovelier way to live.
