Mathematical Model Predicts Who Can Stop Hepatitis C Treatment Early

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Researchers have developed a mathematical model that can help determine if individuals can stop hepatitis C virus (HCV) treatment early, a move that would save a considerable amount of money. Publishing their findings in the Journal of Hepatology, investigators analyzed 58 people with hep C receiving 12 weeks of treatment with Sovaldi (sofosbuvir)–based therapies in three French referral centers.

Nineteen of the participants took Sovaldi and Olysio (simeprevir), 19 took Sovaldi and Daklinza (daclatasvir), and 20 took Harvoni (ledipasvir/sofosbuvir).

All but one of the participants achieved a sustained virologic response 12 weeks after completing therapy (SVR12, considered a cure). The one individual who was not cured experienced a viral relapse.

The researchers measured the hep C viral load of the participants just before they started treatment, at day two, every other week after starting treatment, at the end of treatment, and again 12 weeks after completing treatment.

At weeks two, four and six of treatment, a respective 48 percent, 88 percent and 100 percent of the participants had a viral load below 15. The mathematical model predicted that a respective 43 percent, 30 percent, 13 percent, 9 percent and 5 percent of the participants would be cured within six, eight, 10, 12 and 13 weeks of treatment. The one person who relapsed would have benefitted from an extra week of Harvoni, the model predicted.

Using the model could lead to a cost savings of 16 to 20 percent among all people treated for hep C, the researchers predicted. The model could save up to 50 percent of treatment costs among 40 percent of those treated.

To read a press release about the study, click here.

To read the study abstract, click here.