

Sofosbuvir/Velpatasvir (Epclusa) for Hepatitis C

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STEPS new drug reviews cover Safety, Tolerability, Effectiveness, Price, and Simplicity. Each independent review is provided by authors who have no financial association with the drug manufacturer.

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Sofosbuvir/velpatasvir (Epclusa) is an oral medication labeled for the treatment of adults who have chronic infection with hepatitis C virus (HCV) genotypes 1 through 6. Unlike elbasvir/grazoprevir (Zepatier) and ledipasvir/sofosbuvir (Harvoni), sofosbuvir/velpatasvir can be used to treat patients with genotypes 2 and 3. It is also labeled for use in combination with ribavirin to treat patients with decompensated cirrhosis (Child-Pugh score of B or C).^{1,2}

Drug	Starting dosage	Dose form	Cost*
Sofosbuvir/velpatasvir (Epclusa)	One tablet per day for 12 weeks	400-mg/100-mg tablet	\$75,000 for a 12-week course

*—Estimated retail price of one month's treatment based on information obtained at <http://www.goodrx.com> (accessed March 27, 2017).

SAFETY

The main safety concern with sofosbuvir/velpatasvir is reactivation of hepatitis B virus (HBV) in coinfecting patients, which is unusual but may happen with any treatment of HCV infection. All patients should be tested for HBV before starting therapy by measuring hepatitis B surface antigen (HBsAg) and anti-hepatitis B core (anti-HBc) antibody. Patients with serologic evidence of HBV infection should be monitored for clinical and laboratory signs of hepatitis flare-up or HBV reactivation during treatment and posttreatment follow-up.^{1,2}

Sofosbuvir/velpatasvir affects or is affected by numerous medications, and a suitable drug interaction reference should be consulted before beginning treatment or when considering additional medications during treatment.^{1,2} Liver enzyme inducers such as rifampin, St. John's wort, and carbamazepine (Tegretol), along with others, will decrease the therapeutic effect of sofosbuvir/velpatasvir. Proton pump inhibitors should not be taken with sofosbuvir/velpatasvir; histamine H₂ receptor blockers and antacids may be used, but there are specific timing guidelines in the product labeling.

Interactions with antiarrhythmics (especially amiodarone) and anticonvulsants can cause significant adverse effects. Sofosbuvir/velpatasvir has not been studied in pregnant or breastfeeding women.¹

TOLERABILITY

Sofosbuvir/velpatasvir is generally well tolerated, with only 0.2% of patients discontinuing treatment in clinical trials because of adverse effects. Fatigue and headaches are the most commonly reported adverse effects.¹

EFFECTIVENESS

Among patients without cirrhosis or with compensated cirrhosis, 95% to 99% will achieve sustained virologic response (defined as HCV RNA less than 15 IU per mL at 12 weeks after completion of treatment; sustained virologic response is only a biomarker for cure of HCV infection and does not imply direct effects on morbidity or mortality). In one small study comparing sofosbuvir/velpatasvir (n = 64) with placebo (n = 116) in patients with HCV genotypes 1, 2, 4, 5, and 6, 99% of the patients taking sofosbuvir/velpatasvir achieved sustained virologic response vs. none of the patients treated with ►

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placebo.^{1,3} In patients with HCV genotype 3, sofosbuvir/velpatasvir is more effective than sofosbuvir/ribavirin, with response rates of 95% vs. 80%, respectively.^{1,4}

In patients with decompensated cirrhosis (Child-Pugh score of B), 94% will achieve sustained virologic response when treated with sofosbuvir/velpatasvir in combination with ribavirin.^{1,5} There are no studies comparing the effectiveness of sofosbuvir/velpatasvir with elbasvir/grazoprevir or ledipasvir/sofosbuvir.

PRICE

A complete 12-week course of sofosbuvir/velpatasvir will cost approximately \$75,000. This price is in the same range as elbasvir/grazoprevir (\$60,000 for a 12-week course; \$80,000 for a 16-week course) and ledipasvir/sofosbuvir (\$94,000 for a 12-week course). Adding 12 weeks of ribavirin (1,000 mg per day) will cost approximately \$550 to \$850 more.²

SIMPLICITY

Sofosbuvir/velpatasvir is taken orally once daily with or without food. It does not require adjustment for renal or hepatic disease.

Bottom Line

Sofosbuvir/velpatasvir is an effective treatment for patients with HCV and has minimal adverse effects. It is the preferred treatment for patients with genotype 2 or 3. As with other curative treatments, it is very expensive. Patients should be instructed to avoid using proton pump inhibitors and only take antacids and H₂ blockers if timed appropriately during treatment.

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