MARKOV MODEL TO EVALUATE HEALTH OUTCOMES OF SOFOSBUVIR/VELPATASVIR/VOXILAPREVIR FOR SALVAGE TREATMENT OF PATIENTS WITH CHRONIC HEPATITIS C IN THE US

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Background:
Limited options exist for treatment experienced patients with chronic hepatitis C virus (HCV) failing direct-acting antivirals, including NS5A inhibitor-containing regimens (TE-NS5A). The AASLD recommends TE-NS5A non-cirrhotic (NC) genotype 1 (GT1) patients await newer treatment options, and compensated cirrhotic (CC) GT1 patients be treated immediately with regimens depending on baseline resistance-associated mutations; no recommendations currently exist for TE-NS5A patients of other genotypes. Sofosbuvir/velpatasvir/voxilaprevir (S/V/V) is an all-oral single-tablet regimen that has demonstrated excellent efficacy and tolerability in TE-NS5A patients of all genotypes. This study evaluated the health outcomes of S/V/V versus current options for TE-NS5A patients.

Methods:
A model simulated the outcomes for HCV GT1-6 NC and CC TE-NS5A patients with an average age of 52 from a US third-party payer perspective over a lifetime horizon. 83.4% of each cohort was GT1; 4.3%, GT2; 11.2%, GT3; 1.0%, GT4; and, 0.1% GT5/6. 30% of GT1-2/4-6 patients were CC (42% for GT3). S/V/V for 12 weeks was compared with no treatment (NT) for all patients except GT1 CC, who received AASLD-recommended regimens. Model inputs were extrapolated from clinical trials, published literature, or expert opinion.

Results:
Compared to current options (AASLD-recommended regimens in GT1 CC and NT for others), S/V/V demonstrated better outcomes in the overall HCV population, leading to 99%, 92%, 85%, 91% and 89% fewer cases of CC, decompensated cirrhosis (DCC), hepatocellular carcinoma (HCC), liver transplants (LT), and liver-related deaths. Per-patient life-years (LYs) and quality-adjusted life-years (QALYs) increased by 14% and 24%, respectively. In GT1/GT2-6 patients, S/V/V led to 99%/98%, 91%/93%, 84%/88%, 90%/92%, and 88%/91% fewer cases of CC, DCC, HCC, LT, and liver-related deaths; per-patient LYs and QALYs increased by 10%/35% and 19%/55%, respectively.

Conclusion:

S/V/V addresses a significant unmet medical need in HCV. Compared to current options, S/V/V leads to significant improvements in overall health outcomes across all genotypes.

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