Prevention of Liver-Related Complications With Elbasvir/Grazoprevir in Hepatitis C Infected Patients Who Are Receiving Opioid Agonist Therapy (OAT)

Methods (continued)

• Baseline patient characteristics, treatment regimens, and rates of sustained virologic response at 12 weeks (SVR12) and reinfection were obtained from C-EDGE CoSTAR (Tables 1-2)^1

• Results from the immediate and delayed treatment groups were pooled for use in the model

• Cost and utility inputs were obtained from published sources (Table 3)^2

• Wholesale acquisition cost of $4,550 per week was used for EBR/GZR

• Other outcomes included cumulative proportion of patients developing cirrhosis, DC, and HCC; receiving liver transplants; and, dying of liver-related causes over the time horizon, and the number of these events prevented per 1000 patients treated with EBR/GZR

Methods

Objective

• The objective of this study was to model the long-term impact of EBR/GZR on the incidence of liver-related complications in patients receiving OAT by extending the results of C-EDGE CoSTAR over a 30-year time horizon

• A Markov model was constructed to evaluate the cost and effectiveness of EBR/GZR in OAT (OAT) over a 30-year time horizon

• The target population was patients infected with CHC GT1 or 4, stratified by presence of cirrhosis

• The model consists of 19 health states encompassing METAVIR fibrosis score (F0-F4), treatment success or failure, decompensated cirrhosis (DC), hepatocellular carcinoma (HCC), liver transplant, and liver-related death (Figure 1)

Table 1: Baseline characteristics, C-EDGE CoSTAR^4

Table 2: Treatment and outcomes, C-EDGE CoSTAR^4

Table 3: Annual health state cost and utility inputs^2

Table 4: Base case results over 30-year time horizon

Figure 1: State transition model for chronic HCV and liver disease model

Figure 2: Proportion of patients developing liver-related complications over 30-year time horizon

Figure 3: Cases of liver complications prevented per 1000 GT1 and 4 patients treated with EBR/GZR vs no treatment over 30-year horizon

Conclusions

• Use of EBR/GZR for the treatment of CHC in patients receiving OAT in the United States was projected to prevent a considerable number of cases of cirrhosis, decompensated cirrhosis, HCC, liver transplants, and liver-related death over 30 years compared to no treatment

• Thus EBR/GZR was projected to be a cost-effective therapy for CHC GT1- and 4-infected patients on OAT in the United States

References


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