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# Supplementary Table 1: SVR Rates (%) and Treatment Durations Used in the Model for HCV Patients by Fibrotic State and Genotype

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **POPULATION** | **REGIMEN** | **DURATION** | **F0** | **F1** | **F2** | **F3** | **F4** | **SOURCE** |
| **GT1a** | LDV/SOF\* | 8W | 95.5% | 95.5% | 95.5% | 95.5% |  | [1] |
| 12W | 95.9% | 95.9% | 95.9% | 95.9% | 95.9% | [2] |
| GLE/PIB | 8W | 99.1% | 99.1% | 99.1% | 99.1% |  | [3] |
| 12W |  |  |  |  | 97.9% | [4] |
| **GT1b** | LDV/SOF\* | 8W | 100% | 100% | 100% | 100% |  | [1] |
| 12W | 100% | 100% | 100% | 100% | 100% | [2] |
| GLE/PIB | 8W | 99.1% | 99.1% | 99.1% | 99.1% |  | [3] |
| 12W |  |  |  |  | 100% | [4] |
| **GT2** | LDV/SOF | 12W | 97.7% | 97.7% | 97.7% | 97.7% | 93.8% | Data on file |
| GLE/PIB | 8W | 97.9% | 97.9% | 97.9% | 97.9% |  | [5] |
| 12W |  |  |  |  | 100% | [4] |
| SOF+RBV | 12W | 96% | 96% | 96% | 96% | 96% | [1] |

\*8 weeks may be considered in patient with HCV RNA copies <6 million IU/mL; Key: GLE – glecaprevir; GT – genotype; LDV – ledipasvir; PIB – pibrentasvir; RBV – ribavirin; SOF – sofosbuvir; W – week.

# Supplementary Material 1: Description of Transition probabilities and model assumptions

The model contained 3 main modules:

1. Initial Screening Decision-tree: A proportion (risk-based screening) or all patients (‘screen once’ or ‘screen twice’ screening) were screened for HCV; based on screening and treatment acceptability, a proportion of patients with HCV RNA positivity were assigned treatment.
2. Months 0–12: patients entered the model to receive treatment in an initial decision tree; SVR rates were based on clinical trials.
3. Month 12 onwards: a state-transition model to project patients’ outcomes. Notably patients in the ‘screen twice’ strategy could receive a second round of HCV screening and subsequent treatment upon reaching age 65.

Patients entered the model at varying stages of liver fibrosis, including non-cirrhotic patients (METAVIR fibrosis scores: F0=no fibrosis, F1=portal fibrosis without septa, F2=portal fibrosis with few septa, and F3=numerous septa without cirrhosis) or those with compensated cirrhosis (METAVIR fibrosis score: F4), and received LDV/SOF, GLE/PIB or SOF+RBV. Upon completion of each regimen, patients were assessed for an SVR (stratified by fibrosis stage). Patients were assumed to then progress through the model states as detailed in **Figure 1**. The costs and health outcomes associated with HCV disease progression were modeled over a lifetime time horizon. In the state-transition model, patients remained in or transitioned between the following health states from year 1 onwards in each 1-year model cycle:

* + Baseline fibrosis stage (F0–F4)
  + SVR stratified by fibrosis score (SVR F0-F4)
  + Decompensated cirrhosis
  + HCC
  + Liver transplantation (LT)
  + Post-liver transplantation (PLT)
  + Death
  + Extra mortality (EM)

Costs and utility values were assigned to each health state. The model calculated costs, liver disease progression, and QALYs for each patient cohort as it progressed through the model.

**Model Validation**

All model assumptions and inputs were run by a panel of hepatologists and health economists, consisting of two Korean hepatologists and one health economist. These experts were selected based on their experience and expertise in treating HCV patients in Korea (for hepatologists) and familiarity with prior HCV screening cost-effectiveness models in South Korea (all experts). During the solicitation of feedback, any discrepancies between the approach previously outlined and those suggested by experts were addressed via updating of model structural / input / assumption approaches and re-validation with the broader panel until alignment on all points was achieved across experts.

# References

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