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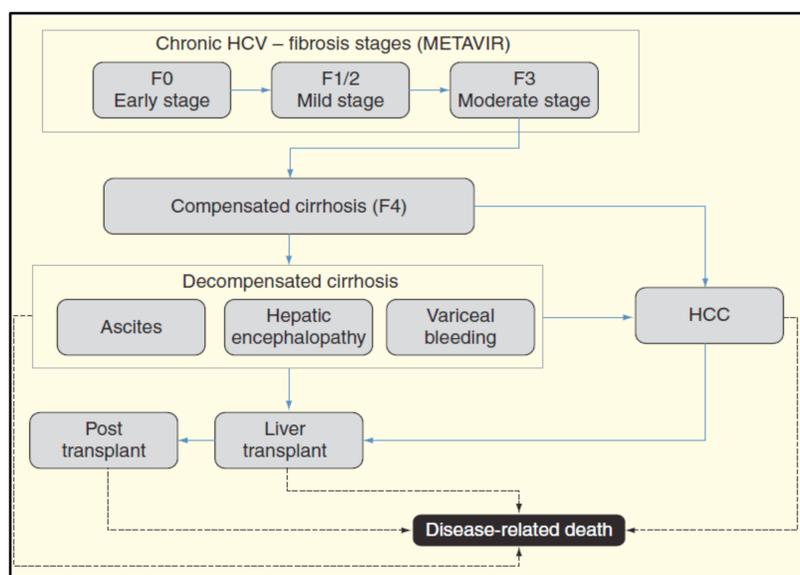
## Economic assessment of eltrombopag in the treatment of thrombocytopenia in Italy

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**Background.** According to WHO estimates, about 3% of the global population have a chronic hepatitis C virus infection (HCV) [1]. Thrombocytopenia is one of the most common complications of HCV and an obstacle to possible treatment with antiviral therapy. Studies [2] demonstrate that eltrombopag produces an increased platelet count in antiviral therapy (AVT) candidate thrombocytopenic patients, allowing an increase in the sustained virologic response (SVR).

**Objective.** This study aims to estimate the cost-effectiveness ratio of eltrombopag in the treatment of HCV-related thrombocytopenia in antiviral candidate patients.

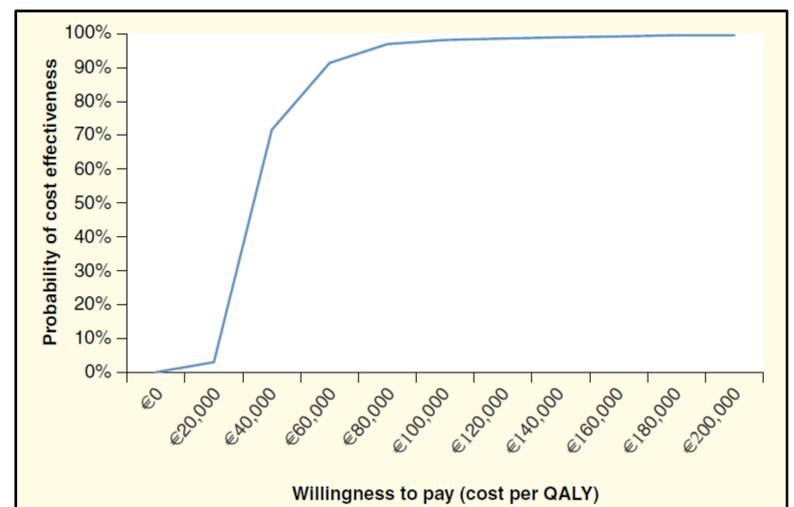
**Methods.** Cost-utility analysis was carried out from the Italian National Health Service perspective through a Markov model (Fig.1), with a lifetime horizon and one-year cycles, based on the registered clinical trials [2]. Three alternatives were considered: 1) eltrombopag treatment in both the enabling phase and during AVT; 2) no eltrombopag and no AVT; 3) no eltrombopag and subsequent administration of a reduced dose of peg-IFN. Costs and effectiveness data were derived from literature and discounted by 3.5%. Both deterministic and probabilistic sensitivity analyses were performed.



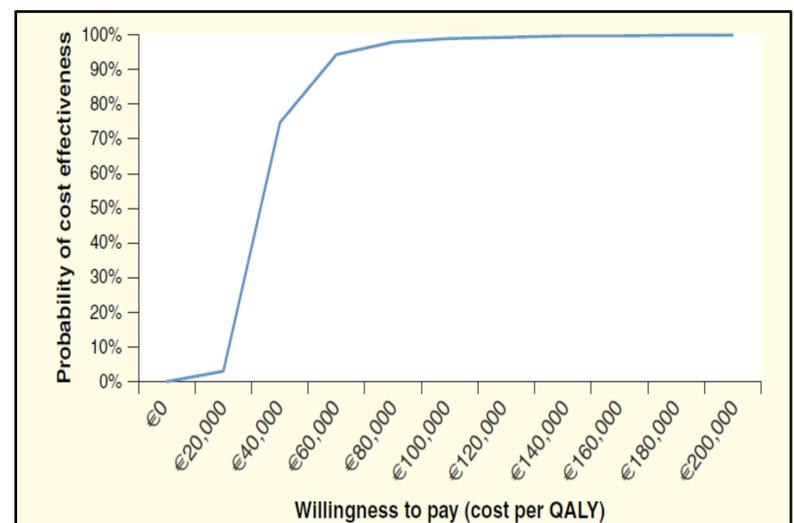
**Fig. 1 Markov model structure**

**Results.** The ICER of scenario 1 vs 2 was €30,020.94/QALY and €32,752.44/QALY when scenario 1 was compared with scenario 3. The one-way sensitivity analysis showed that the most sensitive parameter was the discount rate.

Considering a cost-effectiveness threshold of €40,000/QALY, the probabilistic sensitivity analyses showed that scenario 1 was cost-effective in 80% of simulations compared with scenario 2 and in 90% of cases compared with scenario 3.



**Fig. 2 Cost effectiveness acceptability curve: 1 vs 2**



**Fig. 3 Cost effectiveness acceptability curve: 1 vs 3**

**Conclusion.** The use of eltrombopag in HCV patients with thrombocytopenia is cost-effective. Further research should explore the cost-effectiveness of eltrombopag in sofosbuvir candidate patients.

**Disclosure.** This study was funded by GlaxoSmithKline (Brentford, UK). The views expressed here are those of the authors and not necessarily those of the funders.

### Key references

1. Lavanchy D. Evolving epidemiology of hepatitis C virus. *Clin Microbiol Infect* 2011;17:107-15.
2. Afdhal NH, Dusheiko GM, Giannini EG, et al. Eltrombopag increases platelet numbers in thrombocytopenic patients with HCV infection and cirrhosis, allowing for effective antiviral therapy. *Gastroenterology* 2013;146(2):442-52.e1