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Genetic typing for phenprocoumon dosing likely to be worth it?

Pharmacogenetic-guided phenprocoumon dosing may achieve a slight increase in health in a "cost-effective way", say investigators from the US and The Netherlands.

The investigators constructed a lifetime Markov model to assess the cost effectiveness of pharmacogenetic-guided phenprocoumon dosing, compared with standard anticoagulation care. They used QOL data derived from the literature and time spent in different INR ranges to estimate the risk of thromboembolic and bleeding events. Costs were evaluated from the perspective of a third-party payer.

According to the model, the pharmacogenetic-guided dosing strategy would produce only a slight increase in QALYs (2 days), and would raise costs by €15, compared with standard care; this would correspond to a cost-effectiveness ratio of €2658 per QALY gained. Sensitivity analysis showed the cost associated with genotyping to be the largest factor influencing the cost-effectiveness ratio.

The investigators note that, due to uncertainties around the costs related to the genetic test or the effectiveness of genotyping, "it is too early to conclude whether or not patients starting phenprocoumon should be genotyped".

Verhoef T, et al. Cost-Effectiveness of Pharmacogenetic-Guided Dosing of Phenprocoumon in Atrial Fibrillation. 29th International Conference on Pharmacoepidemiology and Therapeutic Risk Management : abstr. 657, 25 Aug 2013.

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