deaths attributable to AAA in Italy represented 28.0% of the overall death rate for AAA in Italy, accounting for only 19.3% of the total number of deaths attributable to AAA in the EU. The results of our study confirmed that AAA is a major cause of mortality in Italy, contributing to 28.0% of all deaths attributable to AAA in the EU.

**Objective:** The objective of our study was to estimate the attributable fraction of AAA deaths to AAA attributable to AAA in Italy. We used a modified version of the GBD study methodology to estimate the attributable fraction of AAA deaths to AAA attributable to AAA in Italy. We estimated the attributable fraction of AAA deaths to AAA attributable to AAA in Italy by multiplying the attributable fraction of AAA deaths to AAA by the number of deaths attributable to AAA in Italy.

**Results:** Our results showed that the attributable fraction of AAA deaths to AAA attributable to AAA in Italy was 28.0%. This indicates that 28.0% of all deaths attributable to AAA in Italy are attributable to AAA.
PM76

INHERENT HANDLIES LEVELS OF EVIDENCE IN HEALTH ECONOMIC MODELLING

NUJUEN MJ1, KROO M2, REDDELEK WR3

1Ars Accessus Medic, Jisp, The Netherlands, 2Merck Serono, Schiphol-rijk, The Netherlands, 3CBPartners, New York, NY, USA, 4CBPartners, San Francisco, CA, USA

OBJECTIVES: To address the practical and methodological issues associated with using low-evidence quality outcomes in health economic modelling.

METHODS: A cost-effectiveness model for disease-modifying drugs (DMARDS) in multiple sclerosis (MS) in The Netherlands was used to assess how to deal with low-evidence quality in health economic modelling. The model adopted a 10-year time horizon and a societal perspective. A Markov model was constructed based on ESDSS staging in MS, including relapse. The central focus was on disease progression — instead of relapses, which appeared to be the driver of the cost-effectiveness outcomes. The main data source was a recent Cochrane review estimating relative efficacy and acceptability of DMARDS in relapse-remitting MS. Other data sources included additional published literature, clinical trials, and official practice guidelines. The analysis based on the Cochrane review data showed that interferon beta-1a-R (Rebiq) is cost-effective over interferon beta-1a-A (Avonex) (dominant) and interferon beta-1b (€27,654/QALY), but that interferon beta-1a-R is not cost-effective over glatiramer acetate (dominant).

CONCLUSIONS: Inclusion of low-evidence quality evidence in health economic models is supported. Differences in efficacy and acceptability between the alternative treatments were directly translated in terms of cost-effectiveness. The model adopted a cost-effectiveness framework that was considered to be appropriate for HTA submissions.

PM77

INVESTIGATING THE IMPACT OF STRUCTURAL CHANGES IN A NICE SINGLE TECHNOLOGY APPRAISAL COST-EFFECTIVENESS MODEL

ALAM M1, BARTON P2, MONAHAN M3

1Sussex University, Sussex, UK, 2University of Birmingham, Birmingham, UK

OBJECTIVES: One of the major critiques with submitted manufacturer’s cost-effectiveness models is the structural uncertainty. Methods dealing with structural uncertainties are not well-developed, even though these might have a significant impact on model results. This study investigates the impact of the structural elements constituting a National Institute for Health and Care Excellence (NICE) single technology appraisal cost-effectiveness model of Erlotinib versus Best Supportive Care as a maintenance therapy for patients with non-small cell lung cancer. The manufacturer’s model submission was in a “Markov” model not governed by transition probabilities. It considered an independent projective survival functions for progression-free survival and overall survival, which allowed a negative post-progression survival (FPS) estimate to appear. To assess the impact of structural uncertainty in this study, three approaches were adopted, covering both fixed- and time-variating, to estimate health state transition probabilities that are used in a restructured Markov model.

RESULTS: Unlike the parameter approach estimates for time-variating transition probabilities and probabilities of death for Erlotinib differently than fixed-variating approaches. The best fitting curves are achieved for both FPS and probability of death across the time for which data were available, but the curve-shape adopted for this parameter approach estimates for the Markov model which extrapolates the curves forward in time suggests that this difference between a time-variating and fixed-variating becomes even greater.

CONCLUSIONS: The alternative models produce an Incremental Cost-Effectiveness Ratio (ICER) of £54k -£66k per quality adjusted life year (QALY) gain, which is comparable to an ICER presented in the MS (€55k/QALY gain). The results from restricted alternative models do not suggest different cost-effectiveness results. Further investigation is required to understand the impact of structural changes in the model. The study provides insights on model constructs, key data elements/assumptions, and recent methodological advances in HTA submission.

PM78

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