states (preclinical, MCI, mild, moderate, or severe AD). Patients’ rate of progression through the health states was based on a weighted average of rates among ‘slow’ and ‘fast’ progressing patients (derived from the AD neuroimaging initiative). Each state has unique utility and expenditure impacts. This lifetime horizon model tracks AD progression, life years, quality-adjusted life years, and expenditure. We used the following new framework and ALVS as a way for users to simulate long-term AD and MCI health outcomes and assess the comparative effectiveness of strategies using a common trial endpoint.

PRM52 A COMPARISON OF DISCRETE EVENT SIMULATION (DES) VERSUS MARKOV MODELS WITH A PRACTICAL APPLICATION TO HUMAN-IMMUNODEFICIENCY VIRUS (HIV)
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OBJECTIVES: With an increasing economic evaluation, it is important to select an appropriate model type and provide a justification. Many analyses utilise Markov models but these are associated with a number of limitations. Discrete Event Simulation (DES) models, in which events are estimated using discrete time intervals and are readily adaptable to the availability of data, can overcome many of the Markovian limitations. The aim of this study was to assess the advantages and disadvantages of DES and Markov models; utilizing an application to HIV. METHODS: A systematic literature review was conducted to identify modelling approaches assessing the cost-effectiveness of HIV treatments. Additionally, the use of DES models within Health Technology Assessments (HTA) was evaluated. A de novo DES was developed in Microsoft Excel® with VBA, based on assumptions and data from an existing literature review on HIV treatments. RESULTS: Of the HIV publications identified, 4% used a DES and 42% used a Markov model. Only 17% provided a discussion around their choice of model type. DES models have not yet been used in HTAs for HIV in the UK but nine were identified within other disease areas. The de novo DES and those in the published literature demonstrated a realistic modelling approach due to the discrete nature of events, cost accounting for both pharmacoeconomic and non-pharmacoeconomic model and which can accommodate future adaptations, however, it relies heavily on data requirements in order to maximise its potential benefit. CONCLUSIONS: Neither Markov models nor DES are superior, the key is to choose the most suitable model for the decision problem and provide a clear rationale. In the context of HIV, DES is likely to be a good choice of model providing sufficient data is available.

PRM53 SELECTING EVIDENCE-BASED PREVENTIVE TREATMENT GUIDELINES BY OPTIMIZING PREVIOUSLY PREFERRED OUTCOMES
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OBJECTIVES: We demonstrate an approach to select evidence-based preventative treatment guidelines by optimizing preferred outcomes illustrated with a study on preventative statin treatment based on 10-year coronary heart disease (CHD) risk predicted by the Framingham risk score (FRS). METHODS: A Markov decision-analytic model was used. We conducted a systematic review of studies reporting guidelines for high-risk (FRS≥20%) individuals (ATPIII guideline), or, alternatively, an explicit approach of lowering treatment threshold T from 20.0% to 0.5% decrements across T. RESULTS: Evidence-based selection of guidelines would calculate the distribution of individuals over the low (≤5.0%), intermediate (0.51-5.0%), and high (≥5.1%) risk category and corresponding observed CHD risks. Treatment complications, quality adjusted life years (QALYs), and Net Health Benefit (NHB) were measured. RESULTS: As T decreases from 20% to 1.5%, the costs increase from 20,649 to 12,753 RUB (338 to 298 EUR); while the cost to standard therapy was 457 981 RUB (7552 EUR). Reducing the direct and indirect costs was obtained in the treatment group of cerebrolysin, because of lower mortality and reduce days of hospital stay compared with the standard therapy. CONCLUSIONS: The results of budget impact analysis showed that the inclusion of cerebrolysin in standard therapy of ischemic stroke of moderate and severe degrees of severity can reduce the overall cost of the Russian health care system at 79 703 RUB (1314 EUR) per patient per year.

PRM54 A COMPARISON OF THREE SURVIVAL MODELS TO ESTIMATE THE COST-EFFECTIVENESS OF CANCER IMMUNOTHERAPY IN THE TREATMENT OF ADVANCED MELANOMA
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OBJECTIVES: We reviewed previous studies which demonstrated the importance of modelling the cost-effectiveness of cancer immunotherapy. The one year budget impact analysis showed that the inclusion of cerebrolysin in standard therapy of ischemic stroke of moderate and severe degrees of severity can reduce the overall cost of the Russian health care system at 79 703 RUB (1314 EUR) per patient per year.

PRM55 BUDGET IMPACT ANALYSIS OF CEREBROLYSIN IN THE TREATMENT OF ACUTE ISCHEMIC STROKE OF MODERATE AND SEVERE DEGREES OF SEVERITY IN THE RUSSIAN FEDERATION
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OBJECTIVES: To conduct budget impact analysis of neurotrophic and neuroprotective agents such as cerebrolysin. METHODS: The budget impact analysis was conducted by the Framingham risk score (FRS).

PRM56 A COMPARISON OF THREE SURVIVAL MODELS TO ESTIMATE THE COST-EFFECTIVENESS OF CANCER IMMUNOTHERAPY IN THE TREATMENT OF ADVANCED MELANOMA
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OBJECTIVES: We reviewed previous studies which demonstrated the importance of modelling the cost-effectiveness of cancer immunotherapy. The one year budget impact analysis showed that the inclusion of cerebrolysin in standard therapy of ischemic stroke of moderate and severe degrees of severity can reduce the overall cost of the Russian health care system at 79 703 RUB (1314 EUR) per patient per year.