population are 18.5% for males and 9.8% for females. **CONCLUSIONS:** Random sam-
pling of the large patient-level data provided the best approximation of actual NHANES-
population predicted CVD rates. The cholesky decomposition approach was slightly
limited since only continuous variables could be utilized which could explain the
difference from the population predicted CVD rates. Independent sampling under-
estimation was done by up to 20%, an interesting finding as many individual simu-
lations created patients with this approach. Researchers should be cautious in
their use of summary statistics when populating individual simulation models.

**PRM74**

**VALIDATION OF THE SPHR DIABETES PREVENTION MODEL**

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**OBJECTIVES:** We have developed a model to evaluate type-2 diabetes prevention
interventions. We aimed to validate this model against external data to test the accu-
acy of our predictions. **Methods:** An individual patient simulation was developed to
predict longitudinal trajectories of HbA1c, 2-h glucose, FPG, BMI, systolic blood
pressure, total cholesterol and HDL cholesterol based on statistical analyses of the
Whitehall II longitudinal cohort. Criteria for diabetes diagnosis were flexibly speci-
\[\text{...} \]

**PRM75**

**USE OF MODEL AVERAGING TECHNIQUES IN COST-EFFECTIVENESS ANALYSIS IN ONCOLOGY**

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**OBJECTIVES:** Often in cost-effectiveness analysis (CEA) of oncologic drugs, survival
data from clinical trials are compared to a lifetime horizon using parametric regression techniques. To capture parameter uncertainty in the analysis, regression parameters along with other model parameters are varied in probabilistic
sensitivity analysis. However, structural uncertainty in the choice of regression models is left unaddressed. This study described an MCDA framework that provides an example to address structural uncertainty in CEA. **METHODS:** Using a cohort partition model, the numbers of patients in "progression-free", "progressed", and "dead" were calculated under uniform probabilistic, uniform non-parametric, and underesti-
\[\text{...} \]

**PRM76**

**COMBINING THREE DIFFERENT METHODS OF HALF-CYCLE CORRECTION**

**Northrop E., Steker V.**

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**OBJECTIVES:** To compare three different half-cycle correction methods and their ef-
efect on the final results of Markov models. **METHODS:** To assess the relative perfor-
\[\text{...} \]

**PRM77**

**APPLICATION OF A MODEL OF DECISION BASED ON FUZZY LOGIC TO PHARMACOECONOMICS: TREATMENT OF CROHNS DISEASE WITH ANTITNF IN OUT OF LABEL USE**

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**OBJECTIVE:** We present a model based on fuzzy logic, and apply to off-label use of anti-TNF in Crohn’s disease (CD) (Infliximab (IFB) 30 mg/kg 8 weeks, adalimumab (ADA) 80mg/2 weeks, Cetolizumab (CZB) 200mg/2weeks). The term “fuzzy logic” (FL) was introduced in 1965 by LA Zadeh. Compared to traditional logic, FL variables may have a truth value in degree. FL has been applied to many fields, from
\[\text{...} \]

**PRM78**

**MULTI-CRITERIA DECISION ANALYSIS (MCDA): TESTING A PROPOSED MCDA MODEL FOR ORPHAN DRUGS**

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**OBJECTIVE:** Since the introduction of the orphan drugs in Europe, it has been sug-
gested that the general method of appraisal of the drug has not been suitable and it is
desirable to develop a model that is more suitable for orphan drugs. The National Institute for Health and Clinical Excellence indicated that several criteria other than cost and efficacy could be considered in reimbursement decisions for orphan drugs. The aim of this study was to test the proposed model developed by Hughes-Wilson et al. (2012) to a range of orphan drugs in different diseases to test the correlation between drug price and aggregated MCDA scores for each product. **METHODS:** A CAFTA framework was developed using the nine criteria suggested by Hughes-Wilson et al. et al. A supplementary literature review was conducted to identify other attributes
described in the application of MCDA in rare diseases. A numerical scoring system was applied to each criterion. **RESULTS:** The literature review identified further commonly cited criteria: ‘convenience of administra-
\[\text{...} \]