COST-EFFECTIVENESS OF RITUXIMAB AS SECOND-LINE BIOLOGICAL TREATMENT COMPARED TO REGISTRY DATA
Kobelt G1, Lindgren P2
1European Health Economics, Saperacides, France, 2i3 Innovus, Stockholm, Sweden
OBJECTIVES: Using a model constructed to predict resource consumption and health outcomes in a population-based registry of biological treatments in Southern Sweden (SSATG) to estimate the cost-effectiveness of rituximab, a monoclonal antibody recently approved for the treatment of active rheumatoid arthritis (RA) in patients not responding adequately to TNF-inhibitor treatment. METHODS: The model was developed as a Discrete Event Simulation model, using SSATG data for the years 1999–2007. The dataset included 1903 patients with complete data on treatments (up to 3 treatment lines), functional capacity (HAQ), disease activity (DAS28) and utility (EQ-5D). Resource consumption is based on a regular population-based survey of patients in the area of Malmö (Southern Sweden). Rituximab was incorporated as second-line treatment, using effectiveness data for the active group (N = 311) from a clinical trial comparing rituximab to placebo (REFLEX). It is thus compared to the mix of second line biologics used in SSATG. The analysis starts after failure of the first TNF-inhibitor. Results are reported as costs (€2008) per QALY (both discounted 3%), for the societal perspective in Sweden. RESULTS: The model predicted 2.6 treatment courses in the rituximab arm and 2.4 treatment courses in the TNF-inhibitor arm. Total costs in the rituximab strategy are estimated at €403,400 compared to €406,000 in the TNF-inhibitor arm. Total QALYs are 5.98 and 5.78 respectively. Rituximab is thus the dominant strategy, with savings of €2600 and a QALY gain of 0.20. The findings were found to be robust in extensive sensitivity analysis. CONCLUSIONS: In our model, a strategy where rituximab is used as second line treatment after failure of the first TNF-inhibitor provides a small saving (essentially due to the lower price of rituximab) and a QALY gain (due to better effect than the mix of second line TNF-inhibitors).