health-care context was developed, based on the use of epidemiological and clinical data obtained from literature and local data on health-care resource utilisation and health-care unit costs. Only direct medical costs were analysed. The perspective of the health-care payers (sick funds and patients) and a time horizon of six months were taken. The target population was RA patients aged 55, with an average risk of 9-12 points using Fries calculator. Effectiveness was expressed in terms of the number of patients free of symptomatic ulcer. On this basis, saved lives and life years gained were calculated. The cost-effectiveness threshold, calculated on the basis of one-year haemodialysis treatment cost of 60000 PLN (1 USD = 4 PLN), was determined to assess whether celecoxib therapy should be adopted.

RESULTS: The cost-effectiveness analysis showed that celecoxib treatment of RA patients gives additional life years for extra costs. The cost per symptomatic ulcer or death averted for celecoxib, compared with diclofenac, were 20431 to 20676 and 600887 to 608887 PLN respectively. In the study population, 1 LYG costs 32300 PLN and is below the suggested threshold. One-way sensitivity analysis showed that results are sensitive to changes in price of celecoxib and the probability of NSAID-induced GI events. The threshold analysis suggests that celecoxib would be the dominant therapy if its cost or daily dose were to decrease by 60%.

CONCLUSION: The treatment with celecoxib vs. diclofenac 75 SR in RA may be cost-effective in Poland. Cost/ LYG was below the suggested cost-effectiveness threshold, if avoidance of 1 death generates more than 10 LY.

COST-EFFECTIVENESS ANALYSIS OF USING CELECOXIB IN THE TREATMENT OF OSTEOARTHRITIS

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OBJECTIVE: To ascertain the efficiency of Celecoxib versus non-steroidal anti-inflammatory drugs (NSAID) in treating osteoarthritis.

METHODS: The study was performed using a decision analytic model that represents the daily medical practice in our country by running two hypothetical cohorts of 10,000 patients either with Celecoxib or any NSAID. The simple decision tree of the model has two different branches: a) Celecoxib, and b) NSAID, divided into NSAID + gastroprotective agents and NSAID alone. Each branch may follow different clinical evolutions: no adverse reactions; appearance of gastro-intestinal (G-I) discomfort; symptomatic ulcers, and severe G-I complications followed by death. The probabilities for the development of these adverse events have been obtained from medical literature, national statistics (life expectancy) and a local expert panel. The effectiveness unit chosen was life-years gained after the use of both options. Only direct costs were included (medications, additional examinations and analytical tests, days of hospitalization, treatment of ulcers and G-I complications). The time horizon was six months and the perspective selected was the Spanish National Health Service (NHS).

RESULTS: The total cost of the cohort treated with Celecoxib was 570,456,110 pesetas (US $2,955,731) while in the cohort treated with NSAIDs this amounted to 340,328,814 pesetas (US $1,763,361). In the Celecoxib
group, there were nine lives saved compared with the NSAID group with 18 life-years gained for each death avoided. The total cost/life saved with Celecoxib was 25,458,588 pesetas (US $131,909) with a cost/life-year gained of 1,414,366 pesetas (US $7,328) when compared with the use of NSAIDs.

CONCLUSIONS: The use of Celecoxib instead of NSAIDs to treat osteoarthritis will produce a lower incidence of severe G-I complications, thus avoiding deaths. The cost per life-year gained when using Celecoxib is a reasonable amount, easily covered by the Spanish NHS.

AN ECONOMIC EVALUATION OF THE COST OF EDEMA AND SYSTOLIC BLOOD PRESSURE DESTABILIZATION IN COX-2-TREATED PATIENTS WITH OSTEOARTHRITIS AND HYPERTENSION

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OBJECTIVES: To perform an economic evaluation on the short-term costs of managing edema and hypertension in COX-2-inhibitor-treated patients with osteoarthritis (OA) and hypertension (HTN).

METHODS: Two randomized clinical trials (RCT) in OA/HTN patients showed a significantly higher incidence of systolic blood pressure (SBP) destabilization (8.7% to 15.6%; RR = 0.61, p < .001), edema (4.8% to 8.6%, RR = 0.67, p = 0.04), and both SBP/edema (0.6% to 2.2%; RR = 0.28, p = 0.003) for rofecoxib 25 mg/day (n = 942) compared to celecoxib 200 mg/day (n = 960). The RCT results were projected onto a typical US managed-care organization (MCO) population using: (1) the age distribution from a large MCO; (2) age- and gender-specific prevalence of OA and HTN from US government data; (3) age-specific incidence of cardioevents from pooled RCT data, and (4) prevalence of COX-2 inhibitor use in a large insurer. We determined resource utilization and treatment patterns from the published literature and an expert physician panel. Costs were obtained from standardized databases and published literature.

RESULTS: For a population of 1,000,000 MCO members, 8% of members (n = 79,903) are projected to have OA and HTN, while 2.2% of members (n = 21,594) have OA/HTN and use a COX-2 inhibitor. From the analysis, the number of additional events predicted to occur with rofecoxib (relative to celecoxib) are: SBP destabilization (n = 1144); edema-alone (n = 453); edema and SBP destabilization (n = 345). The total cost savings of treatment with celecoxib would be $474,007. Translated into other parameters, the cost savings from the celecoxib usage would be $1.83 in per patient per month costs, and $0.24 in the daily cost of COX-2 inhibitor use for an average patient.

CONCLUSION: The short-term management of SBP destabilization and edema adds to the cost of rofecoxib treatment, relative to celecoxib. Clinicians and payers should not ignore the clinical effects and economic impact of arthritis medications on blood pressure and edema.

THE COST-EFFECTIVENESS OF INFLIXIMAB FOR SEVERE RHEUMATOID ARTHRITIS

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RA is a chronic disease that affects 0.5 to 1% of the population. The economic impact of RA on individuals and society is enormous and the costs of RA rise steeply with disease severity. A therapy that reduces disease progression could be expected to lead to reductions in resource use as well as maintaining quality of life.

OBJECTIVE: To estimate the costs and consequences of adding infliximab to the care of patients with severe rheumatoid arthritis (RA) already being treated with methotrexate.

METHODS: Estimates of the impact of infliximab on disease progression were obtained from the ATTRACT trial in which 428 RA patients were randomly assigned to methotrexate or methotrexate plus infliximab. Since patients in the ATTRACT trial were followed for only 54 weeks, we developed a Markov model in order to estimate the long-term consequences of RA. The model was based on a cohort (ARAMIS) involving 4258 consecutively enrolled RA patients followed in nine centres in USA and Canada. Markov health states were based on the Health Assessment Questionnaire and on drug treatment. For the first year, costs were calculated using the resource utilization by UK patients in the ATTRACT trial and applying UK unit costs. Long-term costs were obtained from the Norfolk Arthritis Register (NOAR) cohort. Utilities were based on visual analogue scale assessments in ATTRACT (first year) and ARAMIS (long-term).

RESULTS: In the base-case analysis, the incremental cost per QALY of infliximab was £33,618. Assuming radiographic stabilization of joint disease for patients treated with infliximab after the first year of treatment (as suggested in the long-term data from the ATTRACT trial) the cost-effectiveness ratio falls to £5111 per QALY. Sensitivity analyses were performed to allow for uncertainty in some of the estimates.

CONCLUSION: Infliximab is likely to be a cost-effective treatment for patients suffering from severe RA.

DISABILITY, RESOURCE UTILISATION, AND WORK ABSENCES ASSOCIATED WITH OSTEOARTHRITIS (OA) AND RHEUMATOID ARTHRITIS (RA): AN INTERNATIONAL DATABASE ANALYSIS

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