exists in terms of laboratory monitoring protocols and perceived barriers regarding the use of these drugs.

**ALTERNATIVE DECISION ANALYSIS MODELING IN THE ECONOMIC EVALUATION OF TUMOR NECROSIS FACTOR INHIBITORS IN PATIENTS WITH RHEUMATOID ARTHRITIS**

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**OBJECTIVES:** To provide a review of the decision analytic models used in the economic evaluations of Tumor Necrosis Factor (TNF) inhibitors (adalimumab, etanercept, and infliximab) in Rheumatoid Arthritis (RA) and to address some important issues surrounding the choice of such analytic modeling techniques in these economic analyses. **METHODS:** A systematic literature search was conducted by one researcher among publications in peer-reviewed journals from January, 1996 to October, 2004 through MEDLINE and EMBASE databases to identify studies that used decision analysis models to evaluate cost-effectiveness of TNF inhibitors in patients with RA. All the studies of TNF inhibitors in patients other than RA, and those conducted in children were excluded from the review. **RESULTS:** The systematic literature search identified 28 articles. Of these only ten studies fulfilled the inclusion criteria and were included in the review process. These ten studies used different decision analysis models, which are listed as follows: decision trees (two studies), Markov model (four studies), Monte Carlo Simulation (two studies), and Discrete Event Simulation (two studies). Since the models vary in complexity, the choice of these modeling techniques depends on the course of the disease, impact of the drugs, and the availability of data. The results of most of the studies indicate that all three TNF inhibitors are cost-effective compared with traditional agents and have cost-effectiveness ratios of less than $50,000/QALY gained. However, one study reports the cost-effectiveness ratio of more than $100,000/QALY for etanercept and infliximab. **CONCLUSION:** Based on the results derived from different modeling techniques, it would seem that all methods provide useful techniques for economic evaluations of TNF inhibitors. However, to increase the confidence of the physicians and payers, key issues such as validity of the models, transparency during construction of the models, quality of data sources, and handling of uncertainty need to be resolved.

**EFFECTS OF ADALIMUMAB MONOTHERAPY ON HEALTH UTILITY AND FATIGUE IN PATIENTS WITH LONG-STANDING, SEVERE RHEUMATOID ARTHRITIS (RA)**

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**OBJECTIVES:** In patients with long-standing, severe RA who failed methotrexate (MTX), we sought to determine whether monotherapy with the fully human, anti-TNF monoclonal antibody, adalimumab, improved two important patient-reported outcomes (health utility and fatigue) vs. placebo. **METHODS:** The Health Utilities Index Mark 3 (HUI3) and the Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F) questionnaire were administered in a health economics companion study to a placebo-controlled, pivotal trial (DEO11) of adalimumab monotherapy. HUI3 and FACIT-F were administered at baseline, three-months, and end of study. The HUI3 scale is 0–1, with “1” denoting perfect health and “0” denoting death. FACIT-F scores range from 0–52, with higher scores representing less fatigue. Changes in HUI3 of ≥0.03 and FACIT-F of ≥4 are considered clinically meaningful. **RESULTS:** Patients received either adalimumab 40mg every other week without concomitant disease-modifying antirheumatic (DMARD) therapies (n = 99) or placebo (n = 96) over 26-weeks. Baseline characteristics were indicative of long-standing, severe RA: age: 53 yrs; disease duration: 11yrs; TJC (0–68): 34; HAQ: 1.9, CRP (mg/L): 56.6; previous DMARDs: four (mean values). Baseline utility scores were comparable for adalimumab and placebo (0.27 vs. 0.28), and much worse than that of the age- and sex-adjusted population norm (0.88). Similarly, baseline FACIT-F scores were also comparable (26.1 for adalimumab and 26.3 for placebo) and, again, considerably worse than that of the general population (43.6). After 26-weeks, mean HUI3 scores increased 0.18 from baseline for adalimumab vs. 0.08 for placebo (p < 0.05). Mean FACIT-F scores increased 8.7 for adalimumab vs. 3.3 for placebo (p < 0.01). **CONCLUSION:** Although optimal use of tumor necrosis factor antagonists is with MTX, some patients do not tolerate or benefit from MTX. Adalimumab monotherapy provided statistically significant, clinically meaningful improvements in health utility and fatigue for patients with severe, long-standing RA who had failed MTX therapy.

**SATISFACTION WITH PAIN MEDICATION AND INTENTION TO COMPLY WITH TREATMENT: A STRUCTURAL EQUATION MODEL IN RHEUMATOID ARTHRITIS PATIENTS**

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**OBJECTIVES:** Patient satisfaction with medication is increasingly set as treatment goal because it is hypothesized to increase compliance. This study investigates plausible associations between levels of satisfaction with pain medication and external variables (e.g., satisfaction with medication information, medication characteristics, treatment efficacy as perceived by the patient) as established in the literature; to explore the effect of satisfaction with pain medication on intention to comply with current medication. **METHODS:** Rheumatoid arthritis (RA) patients undergoing treatment were mailed two sets of questionnaires-two-weeks apart: The Pain Treatment Satisfaction Scale, the SF-36, a pain visual analogue scale, and the Brief Pain Inventory. The influence of these variables on satisfaction with pain medication was estimated using structural equation modeling. **RESULTS:** The population consisted of 68 RA patients with a mean baseline pain score on a one to ten scale of 4.73 ± 2.72. The overall model was significant (chi-square p-value <0.001) with an excellent fit (normed fit index = 0.97). The strongest observed relationship was a positive association between satisfaction with pain medication and intention to take pain medication (unstandardized path coefficient Beta = 0.54, p < 0.001). Predictors of satisfaction with pain medication included duration of pain relief (Beta = 0.45, p < 0.001), satisfaction with the information provided by health care professionals (Beta = 0.21, p < 0.01) and expectations of pain relief (Beta = 0.20, p < 0.01). **CONCLUSION:** RA patients’ intention to comply with pain medication is influenced to a large extent by the level of satisfaction with their pain medication. Duration of pain relief positively influences satisfaction with pain medication, as do (to a lesser degree) satisfaction with information about treatment and medication expectations. Improving compliance with care not