group and diclofenac group were HKD10,211 (95% CI: HKD9,807–10,615) and HKD11,505 (95% CI: HKD11,140–11,870), respectively. The results of the decision tree analysis showed that the direct cost per patient was HKD11,155 and HKD12,729 for the celecoxib and diclofenac groups, respectively. No threshold value was identified by sensitivity analysis. CONCLUSION: Based on the analysis of the data obtained from a large clinical trial, celecoxib was as safe as diclofenac with omeprazole but appeared to cost less for the treatment of arthritis in a group of high-risk Chinese patients.

**VERIFICATION OF A DECISION ANALYTIC MODEL ASSUMPTION USING REAL WORLD PRACTICE DATA: IMPLICATIONS FOR THE COST-EFFECTIVENESS OF COX-2S**

**OBJECTIVE:** Given the sensitivity of findings to the gastroprotective agent (GPA) rate assumption used in COX-2 cost-effectiveness models, the purpose of this study is to verify the GPA rate assumptions and to re-evaluate model outcomes from one published COX-2 cost-effectiveness study using GPA rates from actual practice.

**METHODS:** Prescription and medical claims data from a large preferred provider organization (PPO) located in the Midwest were used to estimate GPA rates within three samples of adult patients new to non-selective non-steroidal antiinflammatory drugs (NSAIDs) and COX-2 therapy: all new NSAID users, new NSAID users with a diagnosis of arthritis, and a cohort matched on GI risk. Members were continuously eligible over the study period of January 1, 1999 through May 31, 2001. RESULTS: Of the more than 319,000 members with at least 1 day of eligibility, the number of members meeting inclusion criteria in each of the three samples was 1,900 for new NSAID users, 289 with a diagnosis of arthritis, and 1,386 in the matched cohort sample. GPA estimates for non-selective NSAID and COX-2 users were consistent across all 3 samples with COX-2 GPA rates of 22%, 21% and 20% and nonselective NSAID GPA rates of 15%, 15%, and 18%, for new NSAID users, those with a diagnosis of arthritis, and the matched cohort, respectively. Re-estimation of the cost-effectiveness model using the most conservative GPA rates increased the cost per year of life saved for COX-2s from $18,614 to over $100,000.

**CONCLUSIONS:** Contrary to COX-2 cost-effectiveness model assumptions, the rate of GPA use is positive and marginally higher among COX-2 users than among non-selective NSAID users. These findings call into question the validity of assumptions regarding patterns of use when made prior to a product’s use in the real world. Given these findings, a re-evaluation of the cost-effectiveness of COX-2 therapies should be considered.

**COST-EFFECTIVENESS OF RALOXIFENE FOR THE PREVENTION OF OSTEOPOROTIC FRACTURES IN AUSTRALIA**

**OBJECTIVES:** In Australia, hormone replacement therapy (HRT) is the standard therapy for reducing fracture risk in postmenopausal women with no previous fracture. Therapies like bisphosphonates, calcitriol and raloxifene are used in women with radiographically defined fracture resulting from minimal trauma. The results of the Women’s Health Initiative study point to the need, however, to assess the cost-effectiveness of newer agents in preventing fracture in osteoporotic women without prior fracture. This study aimed to assess the cost-effectiveness of raloxifene in preventing osteoporotic fractures in such a population.

**METHODS:** A Markov model was developed to compare raloxifene with HRT and with alendronate in osteoporotic women with no prior fracture. Relative efficacy assumptions in the model were based solely on the results of randomised controlled trials (MORE, FIT-II, WHI), while transition probabilities and downstream fracture effects were taken from a range of literature. Primary outcomes included vertebral fractures, non-vertebral fractures, breast cancer and cardiovascular disease in a cohort with a low bone mineral density and an average age of 65 years. The model contained 12 discrete states and yielded costs per quality-adjusted life-year (QALY). Limited memory was incorporated into the model by separating each fracture health state into two states, representing the first and subsequent years after fracture. The model ran for a 30-year period, but therapy was assumed to continue for only 5 years, after which transition probabilities reverted to values associated with no treatment.

**RESULTS:** The incremental cost per QALY gained with raloxifene treatment compared with HRT in a population of osteoporotic women with no prior fracture was $14,506 (US$8,203). In the same population, raloxifene was found to be more effective and less expensive than alendronate. Extensive sensitivity analyses indicated these results were robust. CONCLUSION: Raloxifene is a cost-effective therapy to reduce fracture risk in postmenopausal osteoporotic women without prior fracture.

**COMPLIANCE WITH DRUG THERAPIES FOR THE TREATMENT AND PREVENTION OF OSTEOPOROSIS**

**OBJECTIVES:** This study investigates compliance with hormone replacement therapy (HRT), bisphosphonate