OBJECTIVE: Miacalcin is a recently (2000) introduced anti-osteoporosis drug. Clinical trials have demonstrated that the drug appears to be relatively free of side-effects. This preliminary analysis investigates the relationship between the consumption of Miacalcin and other health care costs.

METHODS: All physician service and medication claims submitted to the government of the province of Québec, Canada, were obtained for individuals with at least one prescription of Miacalcin or another anti-osteoporosis drug (Evista or Fosamax), during the period January 1, 1999 to March 31, 2001. Two-part models (multiple logistic regression followed by linear regression) were used to analyze the data.

RESULTS: Based on utilization records of 60,469 individuals (for all anti-osteoporosis drugs combined), increased use of Miacalcin appears associated with a small reduction in the number of subsequent diagnostic tests and prescriptions for other drugs: 100 days over the first 6 months of 2000, translating into reductions of about 0.3 tests over the next 9 months, or about $24; and a reduction in the number of prescriptions for other drugs in the subsequent 9 months of about 3.1, or about $84. Consumption of Miacalcin does not, however, appear to be associated with a subsequent overall reduction in physician service costs. People who were prescribed Miacalcin in 2000 had higher physician costs in 1999 than people who consumed either of the two other drugs in 2000.

CONCLUSIONS: Evidence that people who were prescribed Miacalcin differ systematically from those who were prescribed other anti-osteoporosis drugs may limit generalizability of the findings. Unit costs used were somewhat imprecise. Nonetheless, the cost of Miacalcin appears to be partially offset by subsequent savings in other health care costs, primarily medication costs.

AN ECONOMIC COMPARISON BETWEEN COX-2 INHIBITORS AND CONVENTIONAL NSAIDS IN THE TREATMENT PAIN RELATED TO ARTHRITIS

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OBJECTIVE: Selective COX-2 inhibitors (coxibs) provide comparable efficacy with less gastrointestinal (GI) adverse events compared to the conventional non-selective non-steroid anti-inflammatory drugs (NSAIDs) in patients with arthritis. We conducted an economic analysis, focusing specifically on differences in GI-related event rates between the coxibs and conventional NSAIDs.

METHODS: We developed a decision model, using Microsoft Excel® and Decisioneering Crystal Ball®, which focused on three areas of potential economic differentiation between treatment with COX-2 inhibitors and conventional non-selective NSAIDs: GI-related complications, uncomplicated GI ulcers, and GI-related adverse effects. The model was populated with published data describing resource implications and mortality risks, unit costs, underlying NSAID GI-event risks and relative GI-event risks for coxibs. We considered two treatment options (i) celecoxib and (ii) a single NSAID drug based on naproxen, ibuprofen, or diclofenac (as observed in the CLASS study). Sensitivity analyses considered variation in the underlying GI-event risks alongside general uncertainty in resource usage and drug cost data.