and causes significantly greater risks than benefits. Even ignoring alternative treatments for osteoporosis, not using HRT is a dominant strategy in all age groups.

**ECONOMIC EVALUATION OF SHORT-TERM NON-VERTEBRAL FRACTURE-RELATED COSTS AMONG OSTEOPOROSIS PATIENTS**

Ohsfeldt RL1, Borisov NN2, Sheer RL3, Lindsay R3
1College of Public Health, University of Iowa, Iowa City, IA, USA; 2Procter and Gamble Pharmaceuticals, Mason, OH, USA; 3Regional Bone Center, Helen Hayes Hospital, Stony Point, NY, USA

**OBJECTIVES:** The objective was to estimate direct medical costs for non-vertebral fractures in the first year of therapy among risedronate, alendronate, and nasal calcitonin patients utilizing an integrated administrative, medical and pharmacy claims database. **METHODS:** A retrospective cohort study was conducted among 5024 women and men (aged 45+) with a new prescription for risedronate (5 mg/day, or 30 mg/week), alendronate (5 mg/day, 10 mg/day, 35 mg/week or 70 mg/week), or nasal calcitonin (200IU/day) between July 1, 2000, and June 30, 2001. Non-vertebral fracture-related direct medical costs (inpatient and outpatient care) were assessed for a 12-month period following initiation of the bisphosphonate or nasal calcitonin therapy using 2003 Medicare fee schedule payments. Sites at which a patient had a clinical fracture in the 6 months prior to initiation of therapy were excluded from the analysis. **RESULTS:** During the capture period patients were treated with alendronate (74%), risedronate (13%), and nasal calcitonin (13%). There were no baseline differences in age, gender or number of concomitant medications between risedronate and alendronate patients. Nasal calcitonin patients, however, were significantly older and had higher concomitant medications use than both risedronate and alendronate patients. Alendronate patients incurred almost three times the fracture-related costs of risedronate patients ($124 vs. $45, p = 0.019); Nasal calcitonin patients incurred more than four times the fracture-related costs of risedronate patients ($198 vs. $45, p = 0.028) in an adjusted model. Alendronate patients did not have significantly different fracture-related costs than nasal calcitonin patients. **CONCLUSIONS:** Observed fracture-related costs among patients initiating risedronate therapy were lower than fracture-related costs among patients of similar characteristics who initiated alendronate therapy.

**COST-EFFECTIVENESS OF TERIPARATIDE (FORTEO) IN THE PREVENTION OF OSTEOPOROTIC FRACTURES AMONG MEN AND POSTMENOPAUSAL WOMEN IN AUSTRALIA**

Graham-Clarke PL1, Lee M2, Wolthers T3, Thiebaud D1, Price N2
1 Eli Lilly, Australia, West Ryde, NSW, Australia; 2 M-TAG Pty Ltd, Chatswood, NSW, Australia

Antiresorptive therapies are used to prevent further fracture in men and women with osteoporosis. However, patients with severe osteoporosis may continue to fracture despite this therapy. New trials have shown that teriparatide (Forteo) is efficacious in preventing new vertebral and non-vertebral fractures in patients who have already experienced a vertebral fracture. **OBJECTIVES:** This study aimed to assess the cost-effectiveness of teriparatide in preventing osteoporotic fractures in this population. **METHODS:** A cost-utility model was developed to compare teriparatide with no therapy (placebo) in a population of osteoporotic patients with prior fracture. This model is a Markov process estimated using Monte Carlo simulation. Relative efficacy assumptions in the model are based solely on the results of randomised controlled trials (Neer et al., 2001), while the baseline probability of fracture is derived from Australian epidemiological data (Sanders et al., 1999). The cost-effectiveness of teriparatide was assessed in terms of its impact in preventing new vertebral and non-vertebral fractures in a cohort with at least one prior radiologically confirmed vertebral fracture and an average age of 70 years. The model was designed so that the risk of further vertebral fracture rises with each fracture. The model ran for a ten-year period. Teriparatide is provided for 18 months, after which patients have the choice of receiving a bisphosphonate or no additional therapy for a further 42 months. **RESULTS:** Over the 10-year period, teriparatide is associated with an increased cost of AUD$7377 (US$5503) and a gain of 0.4168 QALYs per patient compared with no treatment. Hence, the incremental cost per QALY gained with teriparatide compared with no treatment in this population was AUD$17,603 (US$13,202). Extensive sensitivity analyses indicated these results were robust. **CONCLUSIONS:** Teriparatide is a cost-effective therapy to reduce the risk of future fractures in men and women with prior osteoporotic vertebral fracture.