the models hip fracture was a specific outcome, 94% contained vertebral fractures, and 89% incorporated. Treatment compliance and extraskeletal effects are extremely important in modeling real-world scenarios, yet they are not incorporated into the majority of the published models. Modeled treatment effectiveness should be properly imputed to account for the intention-to-treat impact of RCT-reported values as well as the reduced benefits of treatment noncompliance.

**PMS27**

**A COST-EFFECTIVENESS ANALYSIS FROM AN INSTITUTIONAL PERSPECTIVE TO COMPARE ZOLEDRONIC ACID WITH STANDARD CARE IN THE PREVENTION OF HIP FRACTURES IN PATIENTS WITH OSTEOPOROSIS**

**RESULTS:** We calculated the annual cost of osteoporosis care in Mexican hospitals using direct (medical) and indirect costs. We included major costs associated with the prevention and treatment of osteoporotic fractures, including in-patient medical care, medications, and work productivity losses. The predominant cost was medical care, which accounted for 77% of the total cost. The cost of in-patient care was $613.81 USD, and the cost of medical consultations was $590.29 USD. The cost of hospitalization was approximately $88.27 USD per day. Our findings indicate that osteoporosis care in Mexican hospitals is expensive and highlights the need for effective prevention strategies to reduce these costs. The results also suggest that health authorities in recent years have recognized the importance of osteoporosis, and it is now considered a major concern for the elderly population in Mexico. Osteoporosis has become a major concern for health authorities in recent years, and efforts to prevent and treat osteoporosis have increased. The objective of this study is to evaluate the cost-effectiveness of the most effective treatments for hip fracture prevention in osteoporosis patients in Mexico.

**METHODS:** A cost-effectiveness analysis was performed within an institutional setting (Mexican Institute of Social Security, IMSS). Patients were categorized into 2 groups by age: group A comprised patients aged 60 years and over, and group B comprised patients aged 50–64 years. The standard of care for osteoporosis in Mexico used was all biphosphonates available in the National Formulary: risedronate, alendronate, and ibandronate. Resource use data was obtained from published studies; total direct costs of osteoporosis and hip fractures were used. The source of unit costs was the institution, current year, 2006. All costs are expressed in local currency (Mexican Pesos, MX$). The time horizon was 10 years; a discount rate of 3% was used. Effective data was obtained from published studies; the measure used was hip fractures prevented. A probabilistic sensitivity analysis was performed. A Monte Carlo simulation was performed (10,000 iterations in the weakest parameters). **RESULTS:** In both groups, alendronate was the most cost-effective treatment. In group A, the C/E ratio was $221.43 MX$, which was equal to $207.77 for generic alendronate, $332.50 for ibandronate, $340.24 for risedronate and $353.32 for alendronate. Likewise, in group B the C/E ratio for alendronate was $574.50, as compared to $799.77 for generic alendronate, $941.52 for ibandronate, $961.38 for risedronate, and $993.89 for alendronate. The sensitivity analysis confirmed the robustness of the model. **CONCLUSIONS:** From an institutional perspective, zoledronic acid is the most cost-effective alternative for the prevention of hip fractures in patients with osteoporosis in Mexico.

**PMS28**

**COST-EFFECTIVENESS ANALYSIS OF NSAIDS FOR SYMPTOMATIC TREATMENT OF RHEUMATOID ARTHRITIS AND OSTEOSARCOMA**

**METHODS:** A cost-effectiveness analysis was performed using an institutional perspective. Three different treatment options were compared: ibuprofen, diclofenac, and meloxicam. A Markov model was used to simulate the progression of RA and OA patients over a 10-year period. The model was based on the FREEDOM randomized double-blind clinical trial and for the comparator from a meta-analysis conducted by NICE. Epidemiological data were derived from Portuguese sources and complemented with Swedish data whenever the former were unavailable. Resource use data were collected through a modified Delphi panel of Portuguese experts (including rheumatologists, GPs and orthopaedic surgeons). Resources were valued using various national sources on unit costs. EQ-5D decrements per fracture were based on the international literature. Expected persistence differences between treatments were also considered. Deterministic sensitivity analysis was conducted on key variables (including costs, utilities, impact of fractures on mortality, non-inclusion of sub-optimal persistence, comparator’s price, age and T-score for treatment initiation). Probabilistic sensitivity analysis was performed on the model’s treatment effects, fracture costs, EQ-5D fracture decrements and persistence rate differences. **RESULTS:** Considering an annual NHS cost of €882.20 for diclofenac, the estimated ICER was €14,487 per QALY gained. The model predicts that, relative to the comparator, diclofenac would prevent 1.11 and 22 vertebral, 1.12 and 26 extraossseous fractures, per 1,000 patients, over a 10 year period. Deterministic sensitivity analysis identified the absence of a persistence effect and the use of generic alendronate price as the most sensitive parameters (22,906, 20,817 €/QALY, respectively). The probability of cost-effectiveness ranged between 59% and 66% (will accept at €20,000 and €20,000 /QALY, respectively). **CONCLUSIONS:** Results from the model suggest that, compared to the most commonly used strategy (alendronate + calcitriol), deca is a cost-effective therapy in the treatment of PMO in Portugal.

**PMS31**

**TITLE:** THE RELATIVE COST-EFFECTIVENESS OF THE MOST COMMON NON-SURGICAL TREATMENTS FOR NECK PAIN

**METHODS:** A Markov model was developed to simulate Dupuytren’s contracture progression and estimate clinical/economic implications of LF, PNF, and CCH treatments from a US healthcare payer perspective. Transition probabilities were assumed to follow a beta distribution and were estimated based on results from randomized, clinical trials. Health state utilities (utility weights) were assumed to follow a gamma distribution and were obtained from published sources. Half-cycle correction was used with a 1-year cycle length over a 10-year time horizon. One-way sensitivity analyses were performed on relevant variables to test the robustness of the model. Probabilistic sensitivity analysis was performed using 10,000 trial simulations for all variables and results were presented as acceptability curves. The model used a discount rate of 3% per annum and reported in 2010 US$ dollars. Primary outcomes evaluated included incremental cost-effectiveness ratios. **RESULTS:** Of the 3 treatment decisions, LF was the dominant strategy. PNF and CCH were estimated to cost an additional €247 and €1844 compared to LF, respectively. An expected difference of 0.1 and 0.04 quality-adjusted life years (QALYs) were projected for PNF and CCH relative to LF, respectively. In the one-way sensitivity analysis, the model was sensitive to direct cost of LF with a break-even point of $2000 compared to PNF. The acceptability curve showed that LF had a higher probability of being cost-effective compared to other treatment modalities across a WTP threshold of $0 to $500,000. **CONCLUSIONS:** Across a WTP threshold between $0 and $500,000, LF was the most cost-effective therapy for the treatment of Dupuytren’s contracture compared to PNF and CCH. However, the cost of surgery was sensitive in our model which may vary from site to site.

**PMS30**

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**COST-UTILITY ANALYSIS OF DENOSUMAB VERSUS STANDARD CARE IN THE TREATMENT OF POST-MENOPAUSAL OSTEOSARCOMA IN PORTUGAL**

**OBJECTIVES:** To estimate the cost-effectiveness of denosumab vs. the most commonly used therapy (alendronate + calcitriol) in treatment of post-menopausal osteoporosis (PMO) in Portugal. **METHODS:** A Markov cost-utility life-cycle model with six health states was used. The analysis was undertaken from a National Health Service (NHS) perspective. Efficacy data for denosumab was taken from the FREEDOM randomized double-blind clinical trial and for the comparator from a meta-analysis conducted by NICE. Epidemiological data were derived from Portuguese sources and complemented with Swedish data whenever the former were unavailable. Resource use data were collected through a modified Delphi panel of Portuguese experts (including rheumatologists, GPs and orthopaedic surgeons). Resources were valued using various national sources on unit costs. EQ-5D decrements per fracture were based on the international literature. Expected persistence differences between treatments were also considered. Deterministic sensitivity analysis was conducted on key variables (including costs, utilities, impact of fractures on mortality, non-inclusion of sub-optimal persistence, comparator’s price, age and T-score for treatment initiation). Probabilistic sensitivity analysis was performed on the model’s treatment effects, fracture costs, EQ-5D fracture decrements and persistence rate differences. **RESULTS:** Considering an annual NHS cost of €882.20 for denosumab, the estimated ICER was €14,487 per QALY gained. The model predicts that, relative to the comparator, denosumab would prevent 1.11 and 22 vertebral, 1.12 and 26 extraossseous fractures, per 1,000 patients, over a 10 year period. Deterministic sensitivity analysis identified the absence of a persistence effect and the use of generic alendronate price as the most sensitive parameters (22,906, 20,817 €/QALY, respectively). The probability of cost-effectiveness ranged between 59% and 66% (will accept at €20,000 and €20,000 /QALY, respectively). **CONCLUSIONS:** Results from the model suggest that, compared to the most commonly used strategy (alendronate + calcitriol), deca is a cost-effective therapy in the treatment of PMO in Portugal.

**PMS29**

**COST-UTILITY ANALYSIS OF COLLAGENASE CLOSTRIDIUM HISTOLYTIMUS, LIMITED FASCIOCTOMY, AND PERCUTANEOUS NEEDLE FASCIOCTOMY IN DUPUYTREN’S CONTRACTURE**

**METHODS:** A Markov model was developed to simulate Dupuytren’s contracture progression and estimate clinical/economic implications of LF, PNF, and CCH treatments from a US healthcare payer perspective. Transition probabilities were assumed to follow a beta distribution and were estimated based on results from randomized, clinical trials. Health state utilities (utility weights) were assumed to follow a gamma distribution and were obtained from published sources. Half-cycle correction was used with a 1-year cycle length over a 10-year time horizon. One-way sensitivity analyses were performed on relevant variables to test the robustness of the model. Probabilistic sensitivity analysis was performed using 10,000 trial simulations for all variables and results were presented as acceptability curves. The model used a discount rate of 3% per annum and reported in 2010 US$ dollars. Primary outcomes evaluated included incremental cost-effectiveness ratios. **RESULTS:** Of the 3 treatment decisions, LF was the dominant strategy. PNF and CCH were estimated to cost an additional €247 and €1844 compared to LF, respectively. An expected difference of 0.1 and 0.04 quality-adjusted life years (QALYs) were projected for PNF and CCH relative to LF, respectively. In the one-way sensitivity analysis, the model was sensitive to direct cost of LF with a break-even point of $2000 compared to PNF. The acceptability curve showed that LF had a higher probability of being cost-effective compared to other treatment modalities across a WTP threshold of $0 to $500,000. **CONCLUSIONS:** Across a WTP threshold between $0 and $500,000, LF was the most cost-effective therapy for the treatment of Dupuytren’s contracture compared to PNF and CCH. However, the cost of surgery was sensitive in our model which may vary from site to site.