tient visit for 12 months. Annual average visit days of outpatients were 37. Annual overall costs per patient were 13.4 million Korean won (KRW), of which 10.5 million KRW (78.6%) was drug costs because of costly TNF antagonist. Inspection cost came next with 5.6% of the total costs, followed by hospitalization cost (4.6%), operation cost (3.7%), and doctor’s fee (3.2%). Mean out-of-pocket expenditure was 3.7 million KRW, 27.1% of the overall costs. As age increased, so did the total costs. Male, medical aid, and patients with hospitalization or surgery were associated with significantly higher costs than female, health insurance, and inexperienced patients of hospitalization or surgery respectively.<0.05. CONCLUSIONS: Direct medical costs per capita of RA patients receiving TNF antagonist in Korea were 13.4 million KRW. The economic burden of RA patients is strongly influenced by TNF antagonist.

PMS17 EVALUATING THE ASSOCIATION BETWEEN SERUM URIC ACID LEVEL AND HEALTH CARE COSTS IN PATIENTS WITH GOUT
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OBJECTIVES: To describe the association between serum uric acid (sUA) levels and gout-related healthcare utilization and costs. METHODS: A retrospective analysis was conducted using a database from a regional managed care organization. Patients with primary gout were included in the study if they met the following criteria between 2006 and 2007: (1) age ≥18; (2) ≥1 diagnosis of gout (ICD-9-CM 724.xx), or ≥1 prescription gout-related medications (colchicine, allopurinol, probenecid); (3) 12 months continuous eligibility pre- and post- either the first gout diagnosis or first pharmacy claim date (index date). Patients with cancer diagnoses were excluded. Patients were classified into three sUA levels based on the measured sUA values taken closest to the index date: <6.0 mg/dL, 6.0-8.99 mg/dL and ≥9.0 mg/dL. Healthcare costs in the 12 months post index period were compared across the three sUA levels using Kruskal-Wallis tests. RESULTS: A total of 1,622 patients were identified; 374 (23.0%) had an sUA <6.0 mg/dL, 788 (48.0%) had an sUA 6.0-8.99 mg/dL, and 470 (29.0%) had an sUA ≥9.0 mg/dL. The mean gout-related healthcare costs were $217 (standard deviation [SD] $631), $426 (SD $987) and $687 (SD $1,622) for patients with sUA <6.0 mg/dL, 6.0-8.99 mg/dL and ≥9.0 mg/dL, respectively. Total direct healthcare costs attributing to gout-related hospitalizations (IRR: 1.37; 95% CI: 1.07-1.75) and outpatient visits (IRR: 1.05; 95% CI: 1.01-1.09) were increased significantly with increased sUA levels. CONCLUSIONS: Direct medical costs of gout-related healthcare utilization and costs were significantly higher among patients with higher sUA levels. Further study is warranted.

PMS18 IMPACT OF TREATMENT PERSISTENCE AND COMPLIANCE ON HEALTH CARE RESOURCE UTILISATION AND TOTAL HEALTH CARE COST IN POST MENOPAUSAL WOMEN PRESCRIBED ORAL BISPHOSPHONATES – A RETROSPECTIVE STUDY USING THE GENERAL PRACTICE RESEARCH DATABASE
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OBJECTIVES: To describe the association between serum uric acid (sUA) levels and gout-related healthcare utilization and costs. METHODS: A retrospective analysis was conducted using a database from a regional managed care organization. Patients with primary gout were included in the study if they met the following criteria between 2006 and 2007: (1) age ≥18; (2) ≥1 diagnosis of gout (ICD-9-CM 724.xx), or ≥1 prescription gout-related medications (colchicine, allopurinol, probenecid); (3) 12 months continuous eligibility pre- and post- either the first gout diagnosis or first pharmacy claim date (index date). Patients with cancer diagnoses were excluded. Patients were classified into three sUA levels based on the measured sUA values taken closest to the index date: <6.0 mg/dL, 6.0-8.99 mg/dL and ≥9.0 mg/dL. Healthcare costs in the 12 months post index period were compared across the three sUA levels using Kruskal-Wallis tests. RESULTS: A total of 1,622 patients were identified; 374 (23.0%) had an sUA <6.0 mg/dL, 788 (48.0%) had an sUA 6.0-8.99 mg/dL, and 470 (29.0%) had an sUA ≥9.0 mg/dL. The mean gout-related healthcare costs were $217 (standard deviation [SD] $631), $426 (SD $987) and $687 (SD $1,622) for patients with sUA <6.0 mg/dL, 6.0-8.99 mg/dL and ≥9.0 mg/dL, respectively (p<0.001). Statistically significant differences were also detected in the gout-related outpatient costs, gout-related emergency department costs, and gout-related prescription costs among the three groups. CONCLUSIONS: Our results showed that there is a positive association between sUA levels and gout-related healthcare utilization and costs. Lowering and maintaining sUA levels <6 mg/dL may lead to lower gout-related healthcare costs and decrease gout-related utilization of services. Further study is warranted.

PMS19 FRACTURE-RELATED TREATMENT COSTS ATTRIBUTABLE TO PROTON PUMP INHIBITION IN WOMEN WITH OSTEOPOROSIS
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OBJECTIVES: To estimate the differences in fracture-related treatment costs (FTC) between osteoporosis patients with and without proton pump inhibitor (PPI) use. METHODS: Data from the 2001-2008 Medical Expenditure Panel Surveys was used to identify osteoporosis patients ≥50 years old through an ICD-9-CM code of 733 or clinical classification code of 506. Patients were categorized into two groups based on PPI use. Concomitant medications included osteoporosis agents (bisphosphonates, hormone therapy, and raloxifene) and corticosteroids (excluding topicals). Fractures were identified based on ICD-9-CM codes 804-829. Mean of treatment costs was calculated considering incident time to fracture as a time-varying variable. FTC were estimated using generalized linear model with log link function and gamma distribution. First, FTC for patients treated with PPI were predicted using the estimated coefficients from patients without PPIs using a generalized linear model with adjustments for patient characteristics, medication use, and comorbidities. Second, the attributable costs to PPI use was estimated by the difference between predicted and observed costs for PPI users. Treatment costs for one year were calculated and converted to 2009 U.S. dollar using appropriate price indices. RESULTS: We identified 4,979 patients with osteoporosis. PPI use was found in 970 patients and in 4,009 it was not. Unadjusted cost differences showed patients with PPI use had similar osteoporosis-related costs (excluding fracture costs) to patients without (883 vs. $798). However, patients treated with PPI had higher FTC by $335 than patients without PPI use ($709 vs. $374). After adjusting for the study variables, PPI use was associated with an increase in FTC by 63% when compared to patients not taking PPIs. CONCLUSIONS: Use of PPIs increases the economic burden of osteoporosis patients primarily due to fracture-related costs. Additional studies are warranted to further explore the cost attributable to fracture due to use of PPIs in osteoporosis patients.
52,448) for MTX, US $93,992 (89,366–98,982) for abatacept, and US $73,100 (68,539–81,877) for infliximab. The total QALYs gained (discounted) by MTX, abatacept, and infliximab during the same period were: 2.96 (2.89–3.03), 4.05 (3.85–4.30) and 3.26 (3.16–3.39) respectively. The Incremental Cost-Effectiveness Ratio was US $39,360 (36,168–42,703) for Abatacept compared to MTX compared to US $77,790 (72,369–98,124) per QALY gained with infliximab. CONCLUSIONS: The use of abatacept is more cost-effective than the use of infliximab, both compared to MTX, in patients with Rheumatoid Arthritis with IR MTX in Venezuela.

PMS22
COST-EFFECTIVENESS ANALYSIS OF ETANERCEPT IN THE TREATMENT OF RHEUMATOID ARTHRITIS IN MEXICO
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OBJECTIVES: Rheumatoid Arthritis (RA) critically impair the quality of life of patients. Biologic treatments represent a therapeutic alternative for patients who failed disease-modifying antirheumatic drugs. However, their high cost is a challenge for clinicians and decision makers. The aim of this study was to assess the cost-effectiveness of biologic alternatives to treat RA currently available in Mexico, from an institutional perspective. METHODS: A decision-tree model was developed to simulate the clinical course of patients treated with etanercept (reference treatment), adalimumab, infliximab, tocilizumab or rituximab as first-line therapies, as well as second-line biologic therapies continuation. The model’s switching points were defined to switch at month 6. Effectiveness measures were: proportion of patients achieving 70% improvement in both, tender or swollen joint counts following the American College of Rheumatology (ACR70) criteria and quality adjusted life years gained (QALY’s). Costs considered included: biologics, concomitant drugs, medical follow-up and side effects management. Clinical response of alternatives was extracted from published literature, while costs were collected from Instituto Mexicano del Seguro Social (IMSS) official databases. Probabilistic sensitivity analyses were done through Monte Carlo Simulation second-order approach. RESULTS: The effectiveness of therapies resulted in [ACR70, QALY = 3.39, CI 3.03, 3.70; 3.17 (3.09, 3.26); 3.03 (2.79, 3.26); 2.76 (2.58, 2.94)] for etanercept, adalimumab, infliximab, tocilizumab and rituximab respectively. The Incremental Cost-Effectiveness Ratio was US $39,980 (36,063–44,704) per QALY gained with infliximab compared to etanercept, US $41,304 (37,027–45,762) compared to adalimumab, US $43,731 (39,230–48,603) compared to tocilizumab and US $47,192 (41,616–52,643) compared to rituximab. CONCLUSIONS: Etanercept is a cost-effective strategy, in a Turkish setting, for the treatment of postmenopausal osteoporotic women.

PMS25
COST-EFFECTIVENESS OF ABATACEPT OR INFlixIMAB IN Rheumatoid Arthritis in colombia
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OBJECTIVES: Determine the cost-effectiveness of abatacept or infliximab in patients with rheumatoid arthritis (RA) with inadequate response to methotrexate (MTX). METHODS: A previously validated Markov microsimulation model with a Colombian payer’s perspective was applied to simulate the clinical course of patients treated with etanercept (reference treatment), adalimumab, etanercept plus abatacept and etanercept plus infliximab. The model was parameterized with outcomes from a previous cost-effectiveness study performed in Colombia. The model incorporated a next generation anti-TNF strategy which includes the use of etanercept, adalimumab, infliximab, tocilizumab or rituximab as second-line biologic therapies. The model was validated with local patient data, and calibrated with outcomes from local registries. A 10-year time horizon was used. The model was recalibrated with data from local registries. RESULTS: The effectiveness of etanercept plus abatacept was dominant (i.e. more effective and less costly) compared to etanercept (i.e. less effective but more costly). The total cost per QALY gained with etanercept plus abatacept was US $23,170 (20,287–26,828) compared to etanercept US $26,559 (23,289–30,344) and US $26,828 (23,474–30,579) for etanercept plus infliximab. CONCLUSIONS: Abatacept is a cost-effective second-line strategy for patients with RA in Colombia.

PMS26
COST-EFFECTIVENESS MODELING IN OSTEOARTHRITIS: A SYSTEMATIC LITERATURE REVIEW AND OVERVIEW
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OBJECTIVES: To conduct a structured review of the recent osteoarthritis cost-effectiveness modeling literature and provide an overview of their methodologies and approaches. METHODS: A detailed systematic review was performed of the following literature databases: MEDLINE, MEDLINE In-Process, EMBASE, Cochrane, NEJM, and bibliographies of included papers. Scoping and inclusion criteria for relevant studies published since January 2005 were identified. Relevant information from each identified study was extracted according to a predefined grid and essential features of each osteoarthritis cost-effectiveness model were recorded. RESULTS: Of the 138 unique publications of osteoarthritis cost-effectiveness models identified. Model structures were cohort Markov (56%) and individual-level microsimulations (44%). Most models (35) used a lifetime timeframe (i.e., death or age ≥ 100). The primary interventions investigated were bisphosphonates (79%), raloxifene (15%), and hormone replacement therapy (10%). In 98% of the cost-effectiveness models, costs included the cost of the drug itself, drug acquisition, drug administration, drug monitoring, and drug related adverse events.