CONCLUSION: HRT is the most cost-effective option, followed by bisphosphonates, for 50-year-old hypothetical females, but some assumptions and limitations apply (including small sample sizes for the calcitonin and raloxifene groups, and a likely selection bias in that bisphosphonate users are more likely to report longer duration of glucocorticoid therapy). Because few guidelines included cost-effectiveness information, consideration of these results may facilitate better management of glucocorticoid-induced osteoporosis.

**PMS18**

**COST-EFFECTIVENESS OF ABATACEPT IN PATIENTS WITH MODERATELY TO SEVERELY ACTIVE RHEUMATOID ARTHRITIS AND INADEQUATE RESPONSE TO METHOTREXATE IN BRAZIL**

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OBJECTIVE: Abatacept is a new selective co-stimulation modulator recently approved in Brazil for the treatment of patients with moderately to severely active rheumatoid arthritis (RA) and inadequate response to one or more disease-modifying anti-rheumatic drugs (DMARDs). We estimated the cost-effectiveness of Abatacept in patients with inadequate response to Methotrexate. METHODS: We developed a Markov simulation model to depict progression of functional disability over time in patients with moderately to severely active RA and inadequate response to MTX. Functional disability was expressed in terms of the Health Assessment Questionnaire Disability Index (HAQ-DI). Patients were assumed to receive weekly pulse MTX alone or weekly pulse MTX plus abatacept administered on days 1, 14, and 29, and every 4 weeks thereafter. Costs with drug acquisition, administration and monitoring were considered. Estimations used data from a Phase III clinical trial of abatacept in patients with inadequate response to MTX (AIM) plus secondary data sources. Cost-effectiveness of abatacept was expressed in terms of the incremental cost (2006 Brazil R$) per quality-adjusted life-year (QALY) gained versus MTX therapy alone; lifetime horizons was employed in the analyses. Costs and health effects were discounted at 3% annually. RESULTS: Over the lifetime, abatacept therapy was estimated to yield an average of 1.61 additional QALYs per patient (vs. MTX alone) at a mean incremental cost of R$146,095/QALY (US$83,483, US$1 = R$1.75). CONCLUSION: Abatacept presented the best cost-effectiveness ratio vis-à-vis etanercept, adalimumab, and infliximab, with its incremental costs of R$202,581/QALY, R$189,100/QALY and R$236,479/QALY, respectively vs. Methotrexate alone.

**PMS19**

**COST MINIMIZATION AND BUDGET IMPACT ANALYSIS OF RITUXIMAB VERSUS INFlixIMAB, ADALIMUMAB, ETANERCEPT AND ABATACEPT IN RHEUMATOID ARTHRITIS FROM A PAYER PERSPECTIVE IN BRAZIL**

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OBJECTIVE: Rituximab is a monoclonal antibody with demonstrated efficacy (REFLEX trial) in rheumatoid arthritis patients who responded inadequately to anti-TNF drugs (Cohen et al. 2006). The study assessed the total cost of rituximab therapy in comparison with infliximab, adalimumab, etanercept and abatacept under a private payer perspective in Brazil. A budget impact analysis was performed. METHODS: This study assumed the same efficacy for all drugs, since there has not been any head-to-head trial available until now, although indirect comparisons show higher ACR response rates for rituximab. Direct annual medical costs for biological drugs, IV administration, weekly metotrexate (MTX) and routine exams were taken from a panel of Brazilian rheumatologists. Base case dosages considered were: rituximab (2 g every 8 months), abatacept (750 mg at weeks 0, 2, 4 and then every 4 weeks), infliximab (4 mg/kg at weeks 0, 2, 6 and every 8 weeks), adalimumab (40 mg every other week) and etanercept (50 mg every week). Local administration costs were obtained from Scheinberg et al. 2005. Costs were reported in 2007 Brazilian Reais and discounted at a 5% rate in the BIA. Therapies were evaluated using a 5-year horizon. In order to assess uncertainty, one and two-way sensitivity analyses were performed. RESULTS: In the base case scenario, rituximab therapy resulted in a total annual cost of R$46,388 per patient. Total annual costs per patient for the comparators were: R$79,394 for infliximab, R$90,831 for adalimumab, R$120,351 for etanercept and R$177,118 for abatacept. In the BIA, rituximab therapy resulted in total savings of R$94,201,413 in 5 years considering the population in the private health care system only. Results were sensitive to dosage schedule (rituximab, infliximab and abatacept) and drug costs. CONCLUSION: Results of this study suggest that therapy with rituximab is a dominant alternative for patients with rheumatoid arthritis in the Brazilian private health care system.

**PMS20**

**THE ECONOMIC CONSEQUENCES OF RHEUMATOID ARTHRITIS: AN ANALYSIS OF THE MEDICAL EXPENDITURE PANEL SURVEY (MEPS)**

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OBJECTIVE: To assess the direct and indirect economic consequences of rheumatoid arthritis (RA) using real-world data. METHODS: Medical Expenditure Panel Survey (MEPS) 2004 data was used to identify non-institutionalized U.S. persons with RA. MEPS is a comprehensive survey of approximately 35,000 individuals consisting of detailed health care resource use expenditures by payer, employment and income, insurance detail and quality of life (QoL) information. These data are novel because they are nationally representative, capture the elderly and their health care expenditures by payer, employment and income, insurance detail and quality of life (QoL) information. Multiple linear and semi-log regressions were applied to estimate the total annual health care expenditure and income loss associated with RA. Covariates in expenditure equations included demography, comorbidities and overall health status. Semi-log regression for income rendered the distribution of income symmetric. Covariates in the income equations included demography, comorbidities, education, occupation and health status. RESULTS: A total of 136 patients with RA were identified in the data; 76% were women, and 56% were 41–64 years of age. Total annual incremental expenditure associated with RA was $4422 (P < 0.01) with adjusted R2 of 0.16 in the linear regression and 0.41 in the semi-log regression. 14% of those expenses were paid by the individual or their family, 28% by Medicare, 39% by private insurance and 14% by Medicaid. As expected, deterioration in overall health status increased health care expenditures monotonically. In the income equation (adjusted R2 = 0.39), persons with RA earned $3526 less annually (P = 0.03) than the mean income of $26,594 consistent with the US Census Bureau, translating into a 13% decrease. Income increased with education and with improved overall health status. CONCLUSION: Even when controlling for other factors,