rate–cost–age curve at 70yo prompted further consideration. Markov analysis indicated that the cost–effective CoP revision rate was to be 12.5 revisions/100THAs at $25 cost difference and 9.0/100THAs at $1,003 cost difference, in a 70yo patient, indicating that CoP can be cost–effective. CONCLUSIONS: Shifting from MoP to CoP can be justified depending on the patient age, cost of the device, and actual CoP revision rate. In all THAs in patients between 70 to 90 and over 70 to MoP can be cost justified, even in the highest cost difference case.

PMS52 EFFECTIVENESS ANALYSIS OF CERTOLIZUMAB, ETANERCEPT, GOLIMUMAB AND TOFACITINIB FOR THE TREATMENT OF MODERATELY TO SEVERELY ACTIVE RHEUMATOID ARTHRITIS

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OBJECTIVES: Etanercept (ETA), certolizumab (CZP) and golimumab (GLM), each in combination with methotrexate (MTX) are the currently indicated treatment regimens for moderate to severe rheumatoid arthritis (RA). Recently, a novel oral agent, tofacitinib (CP-690550), was approved to treat RA. This study assesses the relative costs and effectiveness of these four disease modifying antirheumatic drugs (DMARDs) from a societal perspective. METHODS: We developed a Markov model that tracked a cohort of patients through the four disease states of RA progression, defined based on the patients’ disease activity score (DAS28). We estimated each drug’s effectiveness from published head-to-head clinical trial data. We derived quality of life utility scores and costs data for each disease stage from the published literature. For each agent, we estimated the discounted costs, quality-adjusted life years (QALYs) and incremental cost-effectiveness ratios (ICERs). Univariate sensitivity analyses were conducted to assess the impact of parameter uncertainty on our results. RESULTS: Relative to other drugs, and at the average US societal willingness to pay (WTP) threshold of $150,000/QALY gained, ETA-MTX was the most cost-effective treatment regimen, with an ICER of $55,670/QALY gained when compared with CZP-MTX. The novel oral agent, CP-690550, was also relatively cost-effective, with an ICER of $31,643/QALY gained relative to CZP-MTX. GLM-MTX was the most effective in the next horizon. In a model accounting for all costs included in the average US WTP threshold. Sensitivity analyses showed that results were very sensitive to the costs of each treatment. CONCLUSIONS: ETA-MTX is the most cost-effective treatment for moderate to severe RA in US patients. Compared to CZP-MTX, the novel oral agent, CP-690550, is also highly cost-effective. GLM-MTX is not cost-effective.

PMS53 EFFECTIVE ECONOMY OF TREATMENT SEQUENCES FOR THE MANAGEMENT OF PATIENTS WITH RHEUMATOID ARTHRITIS IN THE ECUADORIAN PUBLIC HEALTHCARE SECTOR

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OBJECTIVE: To compare health outcomes and costs associated with a treatment sequence that includes tofacitinib with another treatment sequence without tofacitinib in patients with Rheumatoid Arthritis (RA) who failed to DMARDs from the payer’s perspective of the Ministry of public healthcare in Ecuador. METHODS: We compared two sequences, one with tofacitinib, and the other one with DMARDs, in a lifetime Markov model, in a lifelong horizon. In the two treatment sequences, 1) treatment sequence: includes the use of tofacitinib, etanercept, adalimumab, tocilizumab, rituximab and salvation therapy, according to experts opinion from MINSA [2]. All patients received concomitant treatment with methotrexate. The characteristics included in model are: age, weight, initial HAQ score, severe adverse events (SAE) and clinical activity, all THAs in patients between 70 to 90 and over 70 to MoP can be cost justified, even in the highest cost difference case.

PMS54 COST EFFECTIVENESS OF TOFACITINIB AS SECOND LINE TREATMENT VS USING BIOLOGICAL THERAPY AS FIRST LINE TREATMENT FOR MODERATE RHEUMATOID ARTHRITIS AFTER FAILURE OF DMARDS IN PANAMA IN 2014

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BACKGROUND: Rheumatoid Arthritis (RA) affects approximately 0.4% of the Latin American population over 16 years old. [1] Many patients with rheumatoid arthritis (RA) do not respond adequately to disease-modifying antirheumatic drugs (DMARDs), being eligible for biological treatment available. OBJECTIVES: The objective was to evaluate the cost-effectiveness of Tofacitinib as second line vs continue using biological therapies in moderate RA failure after failure of DMARDs in Panamanian Ministry of Health (MINSA) in 2014. METHODS: The Markov model uses a patient-level simulation approach and assesses the economic and health benefits for the management of patients with RA who have an inadequate response to first-line treatments. The model describes a treatment sequence with Tofacitinib followed by biologic treatments vs a sequence of biological therapies only, in the patient care pathway. The sequence of biologies treatments used in both ACR20, Tocilizumab, Infliximab, Adalimumab, Etanercept and salvation therapy, according to experts opinion from MINSA [2]. All patients received concomitant treatment with methotrexate. The characteristics included in model are: age, weight, initial HAQ score, severe adverse events (SAE) and clinical activity, all THAs in patients between 70 to 90 and over 70 to MoP can be cost justified, even in the highest cost difference case.

PMS55 ECONOMIC EVALUATION OF TIMELY VERSUS DELAYED USE OF ANTI-TUMOR NUCLEIC ACID (TNA) BILOGICS IN THE TREATMENT OF PSORIATIC ARTHRITIS (PSA) IN THE US

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OBJECTIVES: Progress of PsA can lead to irreversible damage, functional impairment, and associated healthcare costs. Anti-TNF biologics have been shown to delay PsA progression and improve function compared to non-biologic agents. The objective of this study was to assess the cost-effectiveness of anti-TNF agents when used as a treatment strategy. METHODS: A Markov model was developed to evaluate the costs and outcomes of two treatment sequences over a 1 year period. The first sequence includes either adalimumab (timely use of anti-TNF) or infliximab (delayed use) as initial treatment. The model was based on the Health Assessment Questionnaire (HAQ), and reduction in skin lesions measured by the Psoriasis Area and Severity Index (PASI). Direct costs, including treatment-related costs and other medical costs, and incremental costs per respondent were calculated. Subgroup analyses among patients with moderate-to-severe psoriasis were performed. RESULTS: After one year, patients starting with adalimumab had higher ACR20 response rates and higher costs than apremilast (70.4% vs. 59.6%, $3,293 vs. $5,406, P=0.013). The one year incremental cost with adalimumab responder was $66,766 for timely vs. delayed use of anti-TNF. Among the subgroup with psoriasis, starting with adalimumab lead to higher response rates in both ACR20 and PASI 75 and higher costs compared with apremilast (43.2% vs. 30.0%, $39,329 vs. $33,143). The incremental cost per ACR20+PASI75 responder was $46,949. CONCLUSIONS: Timely use of anti-TNF is a cost-effective strategy for the management of PsA due to improvements in joint and skin condition.

PMS56 ECONOMIC ANALYSIS OF BIOLOGIC ALTERNATIVES IN THE MANAGEMENT OF RHEUMATOID ARTHRITIS, Psoriatic Arthritis, and Ankylosing Spondylitis from PUBLIC AND PRIVATE PERSPECTIVES IN BRAZIL

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OBJECTIVE: This study aims to perform a cost-effectiveness analysis of biologic alternatives for rheumatoid arthritis (RA), psoriasis (PSO) and ankylosing spondylitis (AS) in Brazil, from public and private perspectives. METHODS: A decision analytic model was developed for AR and PSO to evaluate the cost-effectiveness of biological drugs (etanercept, adalimumab, infliximab, tocilizumab, rituximab and abatacept) currently available in Brazil. The model was based on the Health Assessment Questionnaire (HAQ), and reduction in skin lesions measured by the Psoriasis Area and Severity Index (PASI). Direct costs, including treatment-related costs and other medical costs, and incremental costs per respondent were calculated. Subgroup analyses among patients with moderate-to-severe psoriasis were performed. RESULTS: After one year, patients starting with adalimumab had higher ACR20 response rates and higher costs than apremilast (70.4% vs. 59.6%, $3,293 vs. $5,406, P=0.013). The one year incremental cost with adalimumab responder was $66,766 for timely vs. delayed use of anti-TNF. Among the subgroup with psoriasis, starting with adalimumab lead to higher response rates in both ACR20 and PASI 75 and higher costs compared with apremilast (43.2% vs. 30.0%, $39,329 vs. $33,143). The incremental cost per ACR20+PASI75 responder was $46,949. CONCLUSIONS: Timely use of anti-TNF is a cost-effective strategy for the management of PsA due to improvements in joint and skin condition.

PMS57 COST EFFECTIVENESS ANALYSIS OF BISPONPHONATES FOR SECONDARY PREVENTION OF HIP FRACTURE IN TAIWAN

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