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ASSESSMENT OF THE ECONOMIC IMPACT OF BELIMUMAB FOR THE TREATMENT OF SYSTEMIC LUPUS ERITHEMATOSUS IN THE ITALIAN SETTING: A COST-EFFECTIVENESS ANALYSIS
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OBJECTIVES: Systemic Lupus Erythematosus (SLE) is a chronic non-organ specific autoimmune disease and is characterized by a dysregulation of the immune system that involves many organs and systems. It affects about 28,500 people in Italy, especially women of childbearing age (female-male ratio 9:1) that may have a compromised functional state and a decreased quality of life. The purpose of this analysis is to determine the cost-effectiveness of belimumab, a new biological treatment specifically developed for the treatment of SLE, in the Italian setting. **METHODS:** A cost-effectiveness micro simulation model with a lifetime horizon was adapted to the Italian setting. The analysis compares the standard of care (SoC) alone vs belimumab plus SoC from the perspective of the National Healthcare System. Clinical-economic consequences of the therapy and of the development of organ damage were calculated. When available, Italian data were used, otherwise UK costs were transformed into euros using the purchasing-power parity approach. The utility values were based on the EQ-5D of belimumab clinical trials (BLISS 52 and 76). The results were discounted by 3% for both costs and effects. It was considered a duration of treatment with belimumab of 6 years and it was assumed that the drug is used with wastage. **RESULTS:** The results of the cost-effective analysis in terms of cost per life year gained (ICER) and cost per QALY (ICUR) were € 22,990 and € 32,859 respectively. These values drop to € 20,119 and € 28,754 respectively when indirect costs are included. **CONCLUSIONS:** In this analysis, the results of ICER and ICUR show that belimumab is cost-effective in the Italian setting, according to the guidelines of the Italian Association of Health Economics (€ 25-40,000/QALY).

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TOCILIZUMAB IN POLYARTICULAR JUVENILE IDIOPATHIC ARTHRITIS – A COST-UTILITY MODEL FOR THE UNITED KINGDOM
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OBJECTIVES: To evaluate the cost-effectiveness of tocilizumab (TCZ) in the treatment of polyarticular juvenile idiopathic arthritis (pJIA) in the United Kingdom (UK). **METHODS:** An individual sampling model was developed to reflect the health care system and treatment pathway in the UK. Benefits were measured in terms of Quality Adjusted Life years (QALYs) and were derived from HUI3 data collected by the Dutch Arthritis and Biologicals in Children (ABC) Register [Prince et al., 2011]. Costs were calculated from a National Health Service and Personal Social Services perspective. The analysis calculated incremental costs and benefits associated with the addition of first line TCZ to the standard care pathway involving etanercept (ETN), adalimumab (ADA), and abatacept (ABA). The economic model used efficacy inputs derived from an indirect comparison of TCZ and ADA [Sawyer et al., 2013]. Due to fundamental differences in the clinical trial populations and trial design, it was not possible to compare the response rates of TCZ with ETN and ABA. Therefore in the absence comparative data, the economic analysis assumed response rates for ETN and ABA were similar to ADA. Longer-term treatment discontinuation was linked to level of response and assumed to be independent of treatment. **RESULTS:** Base case results estimated incremental costs of approximately £1,750 and incremental QALYs of 0.1011. The incremental cost-effectiveness ratio (ICER) was £17,000 per QALY gained. **CONCLUSIONS:** The results of this analysis suggest that TCZ represents an efficacious and cost-effective addition to the current standard of care for treating pJIA patients in the UK.

PMS54
COST-MINIMIZATION ANALYSIS OF SUBCUTANEOUS ABATACEPT IN THE TREATMENT OF RHEUMATOID ARTHRITIS IN SPAIN
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OBJECTIVES: To compare the cost of using subcutaneous abatacept (SC ABA) versus other first-line biological disease-modifying antirheumatic drugs (DMARDs) available in Spain, in the treatment of patients with rheumatoid arthritis (RA) who have failed an initial treatment with methotrexate (MTX). **METHODS:** With regards to efficacy and safety outcomes, SC ABA was considered non-inferior vs intravenous ABA (IV ABA), adalimumab (ADA), certolizumab pegol (CZP), etanercept (ETN), golimumab (GLM), infliximab (IFX) and tocilizumab (TCZ), based on results of an indirect comparison using mixed treatment analysis. Therefore a cost- minimization analysis for a 3 year time horizon was developed. The perspective was that of the Spanish National Health System (NHS). Pharmaceutical and administration costs (€, 2013) of all biological DMARDs which are available in Spain as first-line treatment after MTX were considered. Drug costs were included in terms of ex-factory price with mandatory rebate. Administration costs were obtained from local published data. The analysis was developed for an average patient weight of 70 kg. A 3% annual discount rate was applied. Deterministic and probabilistic sensitivity analyses were performed. **RESULTS:** SC ABA treatment was associated with a yearly cost of €11,521.36 per patient during the first year of treatment and €11,002.23 in subsequent years. The total 3-year cost of SC ABA was €32,138.43 per patient, proving to be cost saving versus most of the other biological DMARDs. In all cases, pharmaceutical costs lead to more than 85% of total disease management costs. Sensitivity analyses proved the model to be robust. **CONCLUSIONS:** According to these results, SC ABA would lead to cost-savings versus IV ABA, ADA, CZP, ETN, GLM and TZC in the management of RA patients initiating treatment with biological DMARDs.

PMS55
THREE TNF-A-INHIBITORS FOR TREATMENT OF RHEUMATOID ARTHRITIS, ANKYLOSING SPONDYLITIS AND PSORIATIC ARTHRITIS
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OBJECTIVES: To perform pharmacoeconomic analysis of golimumab (GOL) vs adalimumab (ADA) and infiliximab (INF) for rheumatoid arthritis (RA), ankylosing spondylitis (AS) and psoriatic arthritis (PA) in Russia **METHODS:** Indirect comparison demonstrated that compared drugs have similar efficacy and safety. Cost-minimization analysis was performed to compare the cost for 1-year treatment with GOL, ADA and INF in doses according to the approved recommendations. Expected cost for treating all eligible patients with RA, AS and PA with TNF-α-inhibitors in Russia were calculated in a model, assuming that INF is used in the 1st line therapy during one year and ADA or GOL in the 2d line therapy during the 2d year. Number of patients to be treated with TNF-α-inhibitors was calculated based on state statistical data and data on the percentage of patients who do not respond to therapy with synthetic disease-modifying antirheumatic drugs (DMARDs) and first-line biologic DMARDs from clinical trials. **RESULTS:** INF dosing regimen is different for RA and other rheumatic diseases, 1 year treatment with INF costs €16,212 for RA and €24,319 for AS and PA. GOL and ADA have the same dosing regimen for all rheumatic diseases and costs €16,544 and €24,243 per year correspondingly. If all eligible patients with rheumatic diseases in Russia receive biologic DMARDs when necessary, treatment with GOL in the 2d line is less expensive than ADA, difference in costs is €89,062,427 (for all eligible patients per year). It allows treating additional 4959 patients RA, 278 AS patients and 147 PA patients per year. **CONCLUSIONS:** GOL is cost-saving vs ADA for the 2d line therapy of rheumatic diseases in Russia. 1-year treatment with GOL is less expensive that INF for AS and PA and may be considered as the 1st line option.

PMS56
PHARMACOECONOMIC ANALYSIS OF ABATACEPT FOR TREATMENT OF ADULTS WITH RHEUMATOID ARTHRITIS IN RUSSIA
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OBJECTIVES: to conduct a pharmacoeconomic analysis of abatacept vs etanercept, tocilizumab and adalimumab for rheumatoid arthritis (RA) in adult patients, resistant to methotrexate therapy, in Russia. **METHODS:** Indirect comparison of clinical efficacy of abatacept, etanercept, tocilizumab and adalimumab was performed. Data on safety from clinical studies and meta-analysis was analyzed. The differences in the direct medical costs for compared biological drugs (BD) in adult patients with RA were calculated using the cost-minimisation analysis. The cost of abatacept vs etanercept and tocilizumab were calculated on the basis of the registered manufacture's prices for vital and essential drugs (VED) in 2012. The costs of abatacept vs adalimumab were calculated based on the price of tender purchases in 2011 (adalimumab is not included into the VED List, and its price is not registered). The costs of day care for patients during the BD administration were calculated based on the cost norms per volume of medical care approved by the Program of State Guarantees for the provision of free medical care to Russian citizens in 2012. The calculations were performed over the BD application period for 2 years. **RESULTS:** Indirect comparison showed no statistically significant differences in the efficacy of compared BD. There was no data about clinically meaningful differences in safety. The use of abatacept is less costly than etanercept and tocilizumab when registered manufacture's prices are used for cost estimation. The difference in costs (in favor of abatacept) amounted to 1431.34 EUR and 16058.34 EUR per patient per 2 years respectively. Abatacept is less costly than adalimumab (the costs are calculated based on prices of tender purchases in 2011): the difference in costs amounted to 1502.07 EUR per patient per 2 years in favor of abatacept. **CONCLUSIONS:** Abatacept is a cost-saving option compared with etanercept, tocilizumab and adalimumab.

PMS57
CURRENT AND FUTURE STRATEGY FOR OSTEOPOROSIS SCREENING AND DIAGNOSTICS: COST-EFFECTIVENESS OF FRAX WITH OR WITHOUT PULSE-ECHO ULTRASOUND MEASUREMENT OF BONE MINERAL DENSITY AND DXA ON DEMAND
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OBJECTIVES: Over 75% of osteoporotic patients are not diagnosed with osteoporosis and do not receive treatment because effective on-site diagnostics is lacking in primary care facilities. We compare the cost-effectiveness of two pathways of osteoporosis diagnosis: 1) Fracture Risk Assessment Tool (FRAX) followed by pocket size pulse-echo ultrasound device (Bindex®) followed by Dual-energy X-ray absorptiometry (DXA) when needed ("proposed"), and 2) FRAX followed by DXA when needed ("guideline"). **METHODS:** A new Markov model of preventive osteoporosis treatment (assumptions: generic alendronate treatment; efficacy based on published meta-analysis and modified by compliance/persistence; wrist, vertebral, hip and other fractures included; Finnish health care payer perspective with 10-year timeframe and 3% discounting per annum) was extended to include the proposed pathway and osteoporosis screening/diagnosis in terms of sensitivity/specificity. FRAX with body mass index and age dependent National Osteoporosis Guideline Group thresholds was the initial screening tool common to both pathways. Bindex® was calibrated to 90% sensitivity and specificity thresholds (International Society for Clinical Densitometry). In the proposed pathway, only the patients with Bindex result between these calibration