retrospective US medicare claim base data analysis have been shown to significantly decrease mortality risk of a VCF patient when treated with BKP compared to NISM. Aim of this study is the evaluation of resource usage and costs for treatment of BKP patients in comparison to NISM patients from a social insurance perspective. METHODS: A multicentre observational study was conducted, recruiting patients treated since at least four months by a second TNF α inhibitor. The therapy was a fixed-ratio "second-line" TNF α inhibitor from the DART data. The study included 277 patients. The sample could be considered as representative as the median number of included patients per region was high (r = 1149.75; Mann-Whitney-U: p = 0.007). RESULTS: The higher baseline costs of BKP versus NISM are partially off-set by reduced follow-up treatment costs. The remaining additional costs have to be weighed against shorter hospital stay and improved clinical outcomes. Full economic evaluations of BKP versus NISM in the UK, Italy and Spain have already demonstrated the cost-effectiveness of BKP versus NISM.

PM351 COST OF TREATMENT COMPARISON OF TNF-α INHIBITORS FOR THE TREATMENT OF RHEUMATOID ARTHRITIS IN SOUTH AFRICA
Launois R1, Letellier M2, Maunoury F3, Boissier MC4, Florentin V5

OBJECTIVES: TNF-α inhibitors are becoming a widely used treatment option for rheumatoid arthritis (RA) in the South African private sector. Justification for reimbursement decisions range from pure list price comparisons to cost of treatment comparisons, with limited use of health economics, since South African private health care funders have a developing understanding of health economics. The objective of this cost of treatment comparison is to estimate the total direct medical costs associated with the use of TNF-α inhibitors for the treatment of RA in the South African private sector. METHODS: This analysis compares the cost of treatment using the results of the DART dose escalation study comparing etanercept, adalimumab and infliximab. The expected direct medical costs were estimated over a one year period under two scenarios (dose escalation and no dose escalation) and included the costs of TNF-α inhibitors, administration, consultation and dispensing. The scenario excluding dose escalation was based on minimum label dose and the dose escalation scenario was based on 12 months of actual dosing of each TNF-α inhibitor from the DART data. Costs were retrieved from the perspective of the South African private health care funder. RESULTS: Total direct medical costs associated with the use of etanercept, adalimumab and infliximab are respectively R118,235, R118,357 and R121,481 per person based on the DART dose escalation study. The cost associated with adalimumab is 5% lower compared with etanercept and infliximab when the effect of dose escalation is not taken into account. The total cost of treatment for the total population of private sector RA patients using TNF-α inhibitors is R277 million (ZAR 66.9 million). CONCLUSIONS: The direct medical costs associated with the use of TNF-α inhibitors for the treatment of RA patients in South Africa are similar despite the differences in list prices of these agents.

PM352 ASSESSMENT OF THE TOTAL DIRECT MEDICAL COST OF PATIENTS IN SECOND-LINE TNF INHIBITOR THERAPY AND OF THE RESPECT OF CLINICAL PRACTICE RECOMMENDATIONS
Launois R1, Letellier M2, Maunoury F3, Boissier MC4, Florentin V5


OBJECTIVES: To establish the total direct medical costs of patients in second-line TNF α inhibitor therapy from the French health care system perspective. METHODS: A multicentre observational study was conducted, recruiting patients treated since at least four months by a second TNF α inhibitor. The therapy was a fixed-ratio "second-line" TNF α inhibitor from the DART data. The study included 277 patients. The sample could be considered as representative as the median number of included patients per region was high (r = 1149.75; Mann-Whitney-U: p = 0.007). RESULTS: The higher baseline costs of BKP versus NISM are partially off-set by reduced follow-up treatment costs. The remaining additional costs have to be weighed against shorter hospital stay and improved clinical outcomes. Full economic evaluations of BKP versus NISM in the UK, Italy and Spain have already demonstrated the cost-effectiveness of BKP versus NISM.

PM353 COST-EFFECTIVENESS OF BIOLOGIC THERAPEUTIC SEQUENCES FOR THE TREATMENT OF RHEUMATOID ARTHRITIS IN THE UK
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OBJECTIVES: Biologic agents are commonly used sequentially to treat moderate to severe rheumatoid arthritis (RA). In absence of clinical trials comparing biologic strategies, simulation models are useful to inform decisions. The objective is to compare the cost-effectiveness of the strategies used in patients with an insufficient response (IR) to at least 1 anti-TNF agent. METHODS: Simulation models were developed to assess four strategies of different biologic agents over 2 years. Assuming an IR to the 1st anti-TNF agent, Sequence 1 included etanercept-abatacept-adalimumab and Sequence 2 etanercept-etuximab-adalimumab. Assuming an IR to 2 anti-TNF agents, Sequence 3 included etanercept-adalimumab-abatacept and Sequence 4 etanercept-adalimumab-infliximab. Effectiveness data was derived from published evidence based on achieving a low disease activity state (LDAS). Switch occurred at each 6 months in case of an IR to the previous agent. UK direct medical costs and biologic drug costs were used. Extensive probabilistic sensitivity analyses were performed. RESULTS: There were 6-month medical costs (excluding biologic drug costs) were estimated at £1047 (Standard Deviation [SD] 322) for managing patients in LDAS and at £2650 (SD 963) for moderate-to-high disease activity. Over 2 years, Sequence 1 appeared more efficacious (92 days in LDAS) versus Sequence 2 (92 days in LDAS), with cost-effectiveness ratios of £281/day in LDAS vs. £289/day in LDAS, respectively. Sequence 3 appeared more efficacious (43 days in LDAS) vs. Sequence 4 (32 days in LDAS), with cost-effectiveness ratios of £630/day in LDAS vs. £809/day in LDAS, respectively. CONCLUSIONS: Medical costs associated with moderate-to-high disease activity are estimated to be 2.5 times higher than for LDAS, suggesting that efficacious treatment strategies contribute to reducing use of health care services. The results of this simulation model suggest that, for achieving LDAS, sequences including abatacept after an IR to at least 1 anti-TNF agent appear more cost-effective than similar sequences including rtx or cycled anti-TNF agents.
DOES GENERIC ALENDRONATE REALLY SAVE MONEY IN THE TREATMENT OF OSTEOPOROSIS GIVEN SUB-OPTIMAL REAL LIFE COMPLIANCE? AN EXAMPLE FROM THE DANISH SETTING

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OBJECTIVES: To evaluate the cost effectiveness of zoledronic acid 5 mg once yearly, compared to generic alendronate in postmenopausal patients with osteoporosis.

METHODS: A cost effectiveness model, based on the model used in the NICE appraisals of zoledronic acid 5 mg, and from meta-analyses from NICE reviews for generic alendronate, was adapted to be equal to branded alendronate. Compliance with zoledronic acid was assumed to be 100% (by definition of a once-yearly infusion) and sensitivity analyses were conducted for the compliance with generic alendronate, with decreased efficacy extrapolated from the relationship between compliance and probability of fracture protection were obtained from the HORIZON-PFT trial for zoledronic acid 5 mg, and from meta-analyses from NICE reviews for generic alendronate, assumed to be 70% or lower. The dominating cost effectiveness of zoledronic acid over generic alendronate increased with decreased generic alendronate compliance, with incremental cost effectiveness ratios (ICERs) of between 2.5, 3.5, 4.0, 5.0 and 6.5 between 15% and 75% for monthly OBs, cost of treatment to prevent one fracture in 3 years ($30,625 (VF) and $160,400 (HF) for ZOL; $76,800 (VF) and $272,900 (HF) for branded alendronate; $75,825 (VF) and $269,125 (HF) for generic alendronate; $17,050 (VF) and $34,000 (HF) for risedronate and $65,725 (VF) for ibandronate. Sensitivity analyses were performed. CONCLUSIONS: In the Turkish setting, compared to all OBs once-yearly administered ZOL was dominantly the most cost-effective treatment regardless of fracture type up to a level of 90% compliance with oral therapies.

ECONOMIC ANALYSIS OF DABIGATRAN ETEXILATE FOR THE PRIMARY PREVENTION OF VENOUS THROMBOEMBOLISM FOLLOWING TOTAL HIP OR KNEE REPLACEMENT IN SPAIN

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OBJECTIVES: Evaluate the cost-effectiveness of dabigatran etexilate compared with enoxaparin for the primary prophylaxis of venous thromboembolism (VTE) after total hip replacement (THR) or total knee replacement (TKR) in Spain. METHODS: A published cost-effectiveness model was adapted to the perspective of the Spanish National Health Service. Oral dabigatran etexilate 220 mg/day was compared with injectable enoxaparin 40 mg/day. The efficacy and safety of the treatments was determined from two pivotal phase III studies comparing these interventions. The model combined a decision tree for the peri-operative period (acute phase, 10 weeks) with a Markov model for long-term events (chronic phase, 60 years). The treatment patterns, consumption of resources and costs were based on quantitative (databases, patient registries, official statistics) and qualitative (systematic literature review, expert surveys) data sources for Spain. Univariate deterministic and probabilistic sensitivity analyses were performed. RESULTS: The study results suggest that overall outcomes do not differ significantly between dabigatran etexilate and enoxaparin. Mean life years were 0.018 and 0.020 higher for dabigatran patients undergoing THR and TKR respectively; mean QALYs were 0.013 and 0.015 higher respectively. Mean overall costs were lower for dabigatran patients by €189 and €53 respectively. In the probabilistic sensitivity analysis, dabigatran etexilate was dominant for most of the one thousand simulations in THR. The probability that dabigatran is cost-effective at a threshold of €30,000/QALY was 99% in THR and 87% in TKR. In the deterministic sensitivity analysis, dabigatran was dominant versus enoxaparin in all scenarios in both THR and TKR. CONCLUSIONS: From the viewpoint of the Spanish NHS, primary prophylaxis with dabigatran etexilate (220 mg/day orally) has a lower cost than enoxaparin (40 mg/day subcutaneously) after THR and TKR with a comparable efficacy and safety profile.

SEQUENTIAL COST-EFFECTIVENESS MODELLING OF DIFFERENT BIOLOGIC STRATEGIES IN RHEUMATOID ARTHRITIS IN TURKEY

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OBJECTIVES: The management of moderate to severe rheumatoid arthritis includes the use of biologic agents. Modelling allows simulation of complex biologic treatment strategies after an insufficient response (IR) to previous biologic agents. The objective is to assess the cost-effectiveness of various biologic treatment sequences over two years according to the Turkish health care system using a public payer perspective. METHODS: Six treatment strategies using three successive biologic agents [etanercept (ETA), adalimumab (ADA), infliximab (IFN), abatacept (ABA) or rituximab (RTX)], were modelled based on Turkish medical practice. Effectiveness was derived from published evidence as expected number of days in low disease activity state (LDAS). Biologic treatment was maintained for achieving LDAS or switched at each six months in case of IR. Total medical costs were estimated per level of disease activity over 6 months. Extensive probabilistic sensitivity analysis was performed. RESULTS: Consideration of IR to 1 anti-TNF agent, the sequence ETA-ABA-ADA was more efficacious and cost-effective (102 days in LDAS; 496 TL per day in LDAS) over 2 years than the sequence ETA-RTX-ADA (82 days in LDAS; 554 TL per day in LDAS or 81 days in LDAS; 563 TL/day in LDAS based on RTX current reimbursement status). CONCLUSIONS: The sequence ETA-ABA-ADA and ETA-IFN-ABA were more efficacious and cost-effective (64 days in LDAS for both; 841 and 826 TL/day in LDAS, respectively) over 2 years than a sequence of anti-TNF agents only (32 days in LDAS; 1480 TL per day in LDAS). CONCLUSIONS: These simulations suggest that over two years of therapy, sequences including abatacept after an IR to one anti-TNF agent are more efficacious and cost-effective vs. similar sequences including rituximab. Sequences including abatacept after an IR to 2 anti-TNF agents also appear more effective and cost-effective than similar sequences composed of anti-TNF agents only.

COST-EFFECTIVENESS SIMULATION MODEL OF BIOLOGIC STRATEGIES FOR THE TREATMENT OF MODERATE TO SEVERE RHEUMATOID ARTHRITIS BASED ON DISEASE ACTIVITY IN GERMANY

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OBJECTIVES: Progressive Rheumatoid Arthritis (RA) usually requires different therapeutic options used sequenced in case of an insufficient response (IR) to previous agents. As clinical trials comparing biologic treatment sequences are lacking, simulations provide an appropriate tool to evaluate optimal treatment sequences. METHODS: A cost-effectiveness sequential model was developed based on RA treatment guidelines, using DAS28 scores as dichotomous endpoints: remission/no remission or severe active RA and an IR to at least one anti-TNF agent. Therapeutic options used sequentially in case of an insufficient response (IR) to previous agents. Thromboembolic complications and costs associated with each therapy. Both drug costs and efficacies were adjusted to compliance rates. Relative risks and placebo incidences of each fracture type were estimated from recent clinical trials, meta-analyses from NICE reviews, and costs were gathered from local price database. Annual compliance rates were taken from the literature (Willemijn, Cur Med Res Opin 2008;24:3217–22). RESULTS: Compared to oral bisphosphonate (OB), ZOL generated the lowest clinical NNTs for all fracture sites. Under conservative compliant patient rate of 50% for weekly and 75% for monthly OBs, cost of treatment to prevent one fracture in 3 years was $30,625 (VF) and $160,400 (HF) for ZOL; $76,800 (VF) and $272,900 (HF) for branded alendronate; $75,825 (VF) and $269,125 (HF) for generic alendronate; $17,050 (VF) and $34,000 (HF) for risedronate and $65,725 (VF) for ibandronate. Sensitivity analyses were performed. CONCLUSIONS: In the Turkish setting, compared to all OBs once-yearly administered ZOL was dominantly the most cost-effective treatment regardless of fracture type up to a level of 90% compliance with oral therapies.