validated by a registered nurse. We required 4 data elements to report a patient: date when fracture occurred; date when treatment began; date when treatment ended; and outcome (healed vs. failed, by clinical and radiological criteria). Data were used to calculate: days to treatment (DTT); and days on treatment (DOT). All fresh fractures with DTT, DOT, and outcome are reported. **RESULTS:** 5,765 patients in the registry had fresh fracture; 73% of patients (N=4,190) are reported; 13% of patients were lost to follow-up; 11% withdrew or were noncompliant; and 3% died or are missing outcome. Among compliant patients, HR was 96.2%. Logistic estimates of the odds ratio for healing are equivalent for patients aged 30 to 79 years. Nevertheless, patients who failed treatment were 4.5 years older than patients who healed ($p < 0.0009$). DTT was significantly shorter for patients who healed ($p < 0.0001$). Data show that obesity, smoking, diabetes, vascular insufficiency, osteoporosis, cancer, rheumatoid arthritis, and chronic use of NSAIDs reduce HR. **CONCLUSIONS:** LIPUS mitigates the effect of age on fracture HR. Patients who used LIPUS had a 96% HR, whereas the expected HR averages 93%. Time to treatment was significantly shorter among patients who healed ($p < 0.0001$), suggesting it is beneficial to begin treatment early. Comorbid conditions in conjunction with aging can reduce fracture HR.

PMS13

PAIN THERAPY FOR OSTEOARTHRITIS IN GERMANY: ANALYSIS OF SICKNESS FUND CLAIMS DATA

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OBJECTIVES: Using sickness fund claims data, we sought to determine osteoarthritis rate, drug compound class, pain therapy prevalence and type of medical specialists providing treatment. **METHODS:** A group of company health-sickness funds (approx. 2.1 million insured patients in 2010; 2.5 million insured patients in 2011) was used. Osteoarthritis was identified based on ICD-10 diagnoses (M16.0-9, M17.0-5, M17.9, M19.05, M19.25, M19.85, M19.95), then linked to prescriptions using the ATC codes: M01A (nonsteroidal anti-inflammatory drugs, NSAIDS), N02B (analgesics and antipyretics), and N02A (opioids). Furthermore, we determined which groups of medical specialists prescribed the drugs. **RESULTS:** Osteoarthritis was diagnosed in 7.8% (in 2010) and in 7.1% (in 2011) of patients. In one year, 65.4% of patients received a prescription for at least one drug from the analysed ATC codes: 81.4% of patients received at least one NSAID, 36.4% an analgesic and antipyretic, and 27.4% an opioid. For M01A, diclofenac (54%) was most frequently prescribed; the proportion of coxibs was 6%. For N02B, 99% of prescriptions were for metamizol; 1% for paracetamol. For N02A, most prescriptions were for tramadol (29%) or tilidin (28%). General practitioners most frequently prescribed these drugs (42.2% [M01A]/46.2% [N02B]/45.9% [N02A]). **CONCLUSIONS:** In Germany in 2010-2011, OA prevalence was 7-8%, and associated with analgesic prescriptions for the majority of evaluated patients. Diclofenac (NSAIDs, metamizol (analgesics and antipyretics), and tramadol or tilidin (opioids) were most frequently prescribed in each group. General practitioners were the most frequent painkiller prescribers.

MUSCULAR-SKELETAL DISORDERS – Cost Studies

PMS14

A BUDGET IMPACT ANALYSIS OF USTEKINUMAB IN THE MANAGEMENT OF PSORIATIC ARTHRITIS IN GREECE

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OBJECTIVES: Ustekinumab was approved for the treatment of psoriatic arthritis (PsA) in September 2013. The objective of the study was to estimate the budget impact of ustekinumab in the management of PsA in Greece. **METHODS:** A budget impact model was developed in Excel 2010 comparing the total PsA treatment costs in the current treatment pathway (including golimumab, adalimumab, etanercept and infliximab) with the respective costs of a treatment mix with the inclusion of ustekinumab. Market share data for the current treatment pathway were based on market research. Epidemiology data were taken from the published literature. Due to lack of published data on resource use, a 60-field questionnaire was developed in order to collect local data relating to the management of PsA in Greece. Two expert panels were convened, one with 8 KOL dermatologists and one with 8 KOL rheumatologists, with the Delphi technique. Unit costs were retrieved from publically available sources. The time horizon was five years and the analysis was conducted from the Social Insurance Fund perspective. **RESULTS:** The total number of eligible patients (incident and prevalent cases) was estimated to increase from 6,448 in Year 1 to 7,754 in Year 5. The total cost in the current treatment pathway was estimated to range between €48.4 million in Year 1 and €20 million in Year 5. The costs in the treatment pathway including ustekinumab were €47.8 and €18.5 million, in the respective years. Therefore, the addition of ustekinumab in the treatment mix can lead to cumulative savings for the Social Insurance Funds of €7.7 million, over the 5-year time horizon. This cost reduction is mainly attributed to the less frequent administration of ustekinumab. **CONCLUSIONS:** Inclusion of ustekinumab in the treatment mix appears to be a cost saving treatment option in the management of PsA in Greece.

PMS15

BUDGET IMPACT ANALYSIS OF CERTOLIZUMAB PEGOL IN THE MANAGEMENT OF PATIENTS WITH MODERATE-TO-SEVERE ACTIVE RHEUMATOID ARTHRITIS IN GREECE

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OBJECTIVES: To investigate the budgetary impact of increasing the patient share of certolizumab pegol (CZP) versus the other recommended biologic disease modifying anti-rheumatic drugs (bDMARDs; etanercept, adalimumab, golimumab, infliximab, abatacept, tocilizumab) for the treatment of moderate-to-severe active rheumatoid arthritis (RA) in Greece. **METHODS:** A budget impact model was adapted from a third-party payer perspective (National Organization for Healthcare Services Provision [EOPYY]) to evaluate economic aspects of RA treatment over 5 years (2014–2018). The model assumed Greek epidemiological data and local reimbursement requirements. Two main scenarios, following either a conservative or an increased market uptake of CZP in the Greek health care market, were estimated and individually compared to the current market trend scenario, which incorporates original biologics erosion from biosimilars entry in the coming year. Costs pertaining to drug acquisition, administration (only for intravenous drugs), and monitoring were included in the analysis and corresponded to 2014 costing year. Officially published sources were used to derive unit costs. The outcome measures were the annual cost of treatment with bDMARD presented as total cost and disaggregated by drug cost, administration cost and monitoring cost, as well as the incremental cost savings per year. **RESULTS:** Comparing CZP current versus conservative market uptake scenarios, the total budget was slightly increased by €0.05 million. In contrast, comparing CZP current versus increased market uptake scenarios, the total budgetary savings were €0.23 million. In the latter comparison setting, the cost savings were attributed to reduced drug and administration costs. More specifically, the greater replacement of an intravenously administered bDMARD (infliximab) conduced to the greater reduction of administration costs than in the former comparison setting (cost savings: €0.17 vs. €0.14 million). **CONCLUSIONS:** A potential increased use of CZP treatment was shown to be associated with cost savings over the next 5 years in Greece.

PMS16

PHARMACOECONOMIC EVALUATION OF BIOLOGIC THERAPIES IN RUSSIAN PATIENTS WITH RHEUMATOID ARTHRITIS AND INTOLERANCE OR INADEQUATE RESPONSE TO CONVENTIONAL BASIC THERAP

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OBJECTIVES: About 2.79% of patientswith rheumatoid arthritis (RA) in Russia receive TNF-α inhibitors; this value may vary significantly and depends on limitations of regional budgets. In this respect, the aim of our study was to conduct a comparative pharmacoeconomic analysis of the most prevalent TNF-α inhibitors in Russian patients with rheumatoid arthritis and intolerance or inadequate response to conventional basic therapy. **METHODS:** An pharmacoeconomic model was developed based on the data from indirect comparison of anti-TNF-α agents. The model considers the use of infliximab, etanercept, certulizumab pegol, adalimumab in patients with RA who lost response to conventional basic therapy. Cost-effectiveness and costs of TNF-α inhibitors for health care budget were estimated. The cost analysis included costs of pharmacotherapy. Infliximab and etanercept are included into the list of vital and essential medicines and were considered as accepted technologies in budget impact analysis: certulizumab pegol and adalimumab were novel tecnologies in our model. A 24-weeks horizon was adopted. Sensitivity analysis (SA) was performed by changing costs of medicines **RESULTS:** the costs of therapy in certulizumab pegol and etanercept groups were significantly lower than in infliximab and adalimumab groups. The cost-effectiveness ratios (CERs) in terms of ACR20 in 24 weeks were 703 625.00, 587 776.09, and 4 119 260.82 for certulizumab pegol, etanercept and infliximab groups, respectively. The same was observed in case of ACR50 and ACR70: a strategy of drug use in certulizumab pegol and etanercept groups was preferable in comparison with infliximab and adalimumab groups. Budgetary costs for health care system were higher in case of infliximab and adalimumab. SA confirmed the robustness of the model **CONCLUSIONS:** The study demonstrated that certulizumab pegol and etanercept are an economically effective strategy for Russian patients with RA and lost response to conventional basic therapy.

PMS17

MAST (MINIMAL ACCESS SPINAL TECHNOLOGIES) VERSUS OPEN SURGERY: COST ANALYSIS FROM HOSPITAL PERSPECTIVE

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OBJECTIVES: The objective of this study was to determine and compare the resource consumption associated with open vs. minimal invasive surgery in patients with degenerative spinal disorders in the Russian hospital setting. **METHODS:** Conducted cost-analysis was based on Moscow hospital setting, where resource utilization associated with average one-level spinal operation was determined through interviews with KOLs in spinal surgery. Costs were retrieved from public sources and hospital data for the following categories 1) hospital stay; 2) blood transfusion 3) consumables (suture materials, hemostatic sponges, disposable instruments); 4) time in the operating room; 5) spinal implants/instrumentation; and 6) complications. **RESULTS:** The results of the calculations have confirmed MAST economic advantages over open surgery (OS). MAST was associated with fewer costs, mainly due to shorter stay in intensive care unit (1 vs. 2 days) and general ward (9 vs. 15 days), no need for blood transfusion and less rate of complications. The difference in the duration of surgery, which depends mainly on the speed of approach and the installation of implantable structures, is approximately 20 minutes in favor of MAST. With the cost of one-hour long surgery at about 6,000 rubles (167$), excluding the cost of implantable structures, the use of MAST instead of OS translates into savings of 2,000 rubles (56$) per each surgical intervention. As for overall budget savings, the use of MAST translates into savings of between 14,783 ($410) and 35,000 ($970) rubles per whole hospital visit, depending on what materials and structures are used. **CONCLUSIONS:** The economic evaluation confirms economic domination of MAST over OS. Despite initial higher investments, MAST appears to be a cost saving alternative to OS, in terms of diminution of actual surgery time, reduction of blood transfusion costs, and prevention of post-surgery complications and shorter overall length of hospital stay.