tis, 5 for psoriasis and 3 for Crohn's disease. Available information for each condition is presented hereafter. In rheumatoid arthritis, absenteeism ranged from 25 to 56 days per year and presenteeism was estimated to 55 days. The mean cost of absenteeism in this condition ranged from €709 to €10,166. In ankylosing spondylitis, annual absenteeism ranged from 6 to 65 days, which represented €726 to €2,532 per patient. Presenteeism was estimated to 14 days loss with an associated annual cost of €1,027. In psoriasis, annual absenteeism ranged from 3 to 14 days and presenteeism from 16 to 35 days. The costs of work productivity loss (absenteeism + presenteeism) in psoriasis ranged from €1,675 to €6,300. In Crohn's disease, annual absenteeism was of 120 days per patient in median, which represented a cost of €4,745. No data on presenteeism was found. **CONCLUSIONS:** Chronic immune-mediated inflammatory diseases have a high impact on work productivity loss due to both number of days at work lost and decreased performance with substantial costs.

PSY16

EFFECT OF THE ANTI-TUMOR NECROSIS FACTOR ADALIMUMAB ON WORK PRODUCTIVITY IN PATIENTS WITH CHRONIC IMMUNE-MEDIATED INFLAMMATORY DISEASES: LITERATURE REVIEW

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OBJECTIVES: To assess the improvement in work productivity associated with adalimumab therapy in chronic immune-mediated inflammatory diseases. **METHODS:** A systematic and computerized search was performed in the literature published in English from 2000 to 2011 in Pubmed. The search terms were: 'crohn disease', 'spondylitis, ankylosing', 'psoriasis', 'rheumatoid arthritis', 'work productivity', 'productivity', 'absenteeism', 'sick leave', 'employment status' and 'adalimumab'. Questionnaires used to measure the work productivity were identified. Results were annualized and costs converted in Euros and actualized to 2010 using exchange rates and price indexes provided by the Organisation for Economic Co-operation and Development. **RESULTS:** Nine clinical trials and one meta-analysis were analyzed: 5 in rheumatoid arthritis, 1 in ankylosing spondylitis, 3 in psoriasis and 1 in Crohn's disease. Work Productivity and Activity Impairment (WPAI) questionnaire was used in 62% of studies. In rheumatoid arthritis, adalimumab was associated with a 8-to-21-working day per year decrease in absenteeism and an 8-to-10-day decrease in presenteeism. In ankylosing spondylitis, adalimumab was associated with a decrease of 8 working days per year in absenteeism and a 50 day decrease in presenteeism. In psoriasis, adalimumab was associated with a decrease of 27 days in presenteeism but no significant improvement of absenteeism was observed in this condition. In patients with moderate to severe Crohn's disease, treatment with adalimumab was associated with a 18 working day per year decrease in absenteeism and a 47-day decrease in presenteeism. Costs saving related to increased global work productivity (absenteeism and presenteeism) were estimated to €1,720 per patient per year in rheumatoid arthritis and €7,625 in Crohn's disease. **CONCLUSIONS:** Adalimumab provided clinically significant improvements in work productivity that could be associated with savings of to € 7,625 in improved work productivity in Crohn's disease.

PSY17

ESTIMATING THE DIRECT COSTS OF PATIENTS TREATED WITH ELTROMBOPAG IN THE FRENCH SETTING

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OBJECTIVES: Immune thrombocytopenia (ITP) is an immunologic blood disorder characterised by low platelet counts and bleeding. The management of ITP aimed at minimising bleeding events. Eltrombopag is an oral thrombopoietin receptor agonist indicated as second line treatment of chronic ITP in adults. This economic study estimated the direct costs of ITP management with eltrombopag in the French setting. **METHODS:** A phase III clinical trial (RAISE) compared the response to once daily eltrombopag versus placebo in adult patients with chronic ITP during a 6-month period. Use of medical resources was assessed from the RAISE data regarding eltrombopag dosage, treatment duration, bleeding-related events (BREs grade 2+), rescue therapy (IVIG, oral steroids), concomitant medications and hospitalisations. The economic analysis was restricted to direct costs (2011 values) measured in the perspective of the French Sickness Fund (full coverage for ITP). **RESULTS:** For 6 months of treatment, total cost per patient receiving eltrombopag (mean dose: 55.2mg) was estimated at 15,318 € with 88.9 % of the costs induced by the main drug treatment. Monitoring costs related to eltrombopag (blood tests and visits) were estimated at 403 € (2.6%). At least, concomitant drugs, BREs and rescue therapy were respectively accounting for 623 € (4.1%), 730 € (4.8%) and 344 € (2.2%). These results seem consistent with other French economic estimations concerning patients treated with IVIG (13,291 €/6 months) or patient treated with romiplostim (3μg/Kg, 17,486 €/6 months). **CONCLUSIONS:** With the data from the RAISE clinical trial, the direct cost for a patient treated with eltrombopag during a 6 months period was estimated at 15,318 €. Estimation of direct costs may be envisaged in an exploratory manner when Phase III clinical trials are close to real practice management and has to be confirmed by collected resource utilization in observational studies.

PSY18

CLINICAL OUTCOMES, RESOURCE UTILIZATION AND TREATMENT COST OF MYELODYSPLASTIC SYNDROMES AND ACUTE MYELOIDE LEUKEMIA IN A REAL WORLD SETTING: SINGLE-CENTER EXPERIENCE

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OBJECTIVES: Day-to-day clinical practice outcomes and related costs are important not only to confirm clinical trial results but also to inform more efficiently clinical decision making. The objective of this retrospective study was to characterize the main treatment outcomes and associated costs of a MDS and AML patient's population in a hematology center in Portugal. **METHODS:** Adult patients (n=27) with MDS or AML at diagnosis and eligible for treatment with azacitidine at any stage of their disease were eligible. Retrospective data was obtained from hospital clinical records. Treatment outcomes included time-to-leukemia (TTL), leukemia-free survival (LFS) and overall survival (OS). Survival analysis was performed with the standard non-parametric Kaplan-Meier method. Costs were estimated by multiplying resource utilization frequencies by their unit prices. **RESULTS:** Mean follow-up was 15 months (min-max: 2.1-31.2). Mean (SD) age at diagnosis was 67 (11) years. Nine patients (33%) were in IPSS risk intermediate-1 while the reminder (67%) were IPSS intermediate-2 or high. Median TTL, LFS and OS were 20.4 months (95% CI: 11.3-NR), 15.3 months (95% CI: 11.0-20.4) and 17.2 months (95% CI: 14.1-29.8) respectively. Mean overall hospital related treatment costs were 55,470€ per patient (min-max: 2,302€- 130,264€), an average (SD) of 4,017€ (1,593€) per month. **CONCLUSIONS:** Treatment outcomes in this population are in the range of those reported in azacitidine clinical trials and other observational studies. Up to date effective management of MDS/AML is associated with costly health care.

PSY19

A COST-CONSEQUENCE ANALYSIS OF PATIENT SELF-MANAGEMENT VERSUS PHYSICIAN-MANAGED MONITORING OF LONG-TERM ORAL ANTICOAGULATION THERAPY IN CANADA

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OBJECTIVES: Oral anticoagulation therapy (OAT) with a vitamin K antagonist (VKA) requires frequent monitoring of blood clotting, which involves great amounts of time and costs. Newer technologies offer patients the possibility to perform home monitoring of OAT. The objective of this study was to assess the economic impact of patient self-management (PSM) of OAT compared with standard clinic monitoring in a Canadian context. **METHODS:** A cost-consequence analysis was performed, according to the perspective of the Province of Quebec health care system and the societal perspective. A time horizon of one year of OAT monitoring was chosen. Clinical data was obtained from a randomized Montreal Heart Institute clinical trial by Verret et al., which compared clinical efficacy and quality of life (QoL) of PSM versus standard monitoring. From the health care system perspective, costs considered were those associated with test strips, physician visits, pharmacist time and patient training. From the societal perspective, the additional costs associated with the acquisition of the monitoring machine, and time dedicated to monitoring were considered. **RESULTS:** Annual costs per patient of 372.53 CAD$ and 397.27 CAD$ were associated with standard monitoring and PSM respectively under the health care system perspective. Annual costs per patient were estimated at 1,116.08 CAD$ for standard monitoring while annual PSM costs were estimated at 533.19 CAD$ under the societal perspective. Both OAT methods were shown to be clinically equivalent, however a significant improvement of QoL was found in PSM. **CONCLUSIONS:** From the health care system perspective, PSM is slightly more expensive than standard monitoring of OAT (+24,74 CAD$), but from the societal perspective PSM is associated with significant savings compared to standard monitoring of OAT (-582.89 CAD$). Also, PSM is associated with improves patient's QoL while assuring the same monitoring quality as standard monitoring of OAT.

PSY20

COST-EFFECTIVENESS OF PROPHYLAXIS WITH AN ANTI-INHIBITOR COMPLEX CONCENTRATE IN PATIENTS WITH HAEMOPHILIA AND INHIBITORS: RESULTS FROM PRO-FEIBA STUDY

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OBJECTIVES: To assess the cost-effectiveness of prophylaxis vs on-demand therapy with Anti Inhibitor Complex Concentrate (AICC). **METHODS:** Hemophilia A patients >2 years with inhibitors and using bypassing therapy to treat bleeding were recruited in a prospective, randomized, crossover study comparing 6 months of AICC prophylaxis therapy with 6 months of on-demand therapy. The prophylactic and on demand periods were separated by a 3-month washout. Cost evaluation was based on direct (clotting factors, hospitalization, outpatient care, physicians' visit and other pharmacological therapy) and indirect (days of school/work missed because of bleeding) costs, adopting the perspective of the third party payer. Costs are expressed in US$ of 2011. We calculated the incremental cost per bleeding avoided and the cost-effectiveness acceptability-curve. **RESULTS:** Twenty-six patients were enrolled. The per-patient six-months cost during prophylaxis period was 496,393 US$ compared with 211,330 US$ on on-demand. The incremental cost-effectiveness ratio in the prophylaxis vs on demand period was 34,852 per bleeding event avoided. The acceptability curve showed there would be a 93% likelihood that prophylaxis therapy would be considered cost-effective at willingness-to-pay threshold of US$ 50,000 per bleeding event avoided. In Subjects with a ≥50% reduction in bleeding events, the incremental cost-effectiveness ratio in the prophylaxis vs on demand period was US$ 25,877 per bleeding event avoided. In

subjects with a <50% reduction in bleeding events, the incremental cost-effectiveness ratio in the prophylaxis vs. on demand period was US$ 77,067 per bleeding event avoided. **CONCLUSIONS:** Cost-effectiveness ratios are within the commonly accepted willingness-to-pay threshold. The incremental cost-effectiveness ratio noticeably was more favorable in responders, which is totally attributable to the marked difference in effectiveness. Moreover the Incremental cost per bleed avoided during prophylactic period suggest prophylaxis to be more cost effective in children, who could derive the greatest benefit in terms of joint disease and long-term disability.

PSY21

COST-EFFECTIVENESS OF POSACONAZOLE VERSUS FLUCONAZOLE IN THE PROPHYLAXIS OF INVASIVE FUNGAL INFECTIONS IN PATIENTS WITH GRAFT-VERSUS-HOST DISEASE (GVHD) IN TURKEY

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OBJECTIVES: Invasive fungal infections (IFIs) have emerged as the major infection-related cause of morbidity and mortality in patients undergoing hematopoietic stem cell transplantations (HSCT). Ullmann et al published a RCT in allogeneic HSCT recipients with grade 2–4 or extensive chronic GVHD that compared the efficacy of posaconazole and fluconazole in the prevention of IFIs. Posaconazole was shown to be as effective as fluconazole in preventing IFIs (5.3% vs. 9.0%) and reduced IFI-related mortality (2.7% vs. 8.0%). We evaluated posaconazole cost-effectiveness from the Turkish health care system perspective. **METHODS:** A trial-based decision-tree model was developed. The probabilities of experiencing an IFI, IFI-related death, and death from other causes over 112 days post treatment were provided from Ullmann trial. The model was extended to a lifetime horizon, in which survival within the initial two years was based on the Ullmann trial and survival beyond two years was based on adjustment of national life tables by standardize mortality rates obtained from literature. IFI-related costs were provided from local literature. The model was used to estimate costs, life-years saved (LYS), and the incremental cost-effectiveness ratio (ICER) of posaconazole vs. fluconazole (year 2012). **RESULTS:** Posaconazole treatment appeared to be more effective with increased LYS (3.90 vs. 3.67) however, more costly (32,717 USD vs. 31,298 USD) than the alternative over a lifetime horizon. The ICER of posaconazole was 6,373 USD/LYS compared to fluconazole. Univariate sensitivity analysis was conducted to assess the effects of parameter uncertainty, particularly concerning treatment efficacy and long-term mortality. With almost all assumptions that were analyzed, posaconazole ICER was well below the national gross domestic product per capita per LYS threshold (10,444 USD/LYS). **CONCLUSIONS:** Posaconazole appeared to be cost-effective vs. fluconazole in the prophylaxis of IFIs among patients with GVHD undergoing allogeneic HSCT.

PSY22

A COST-EFFECTIVENESS ANALYSIS OF PARECOXIB IN THE MANAGEMENT OF POST-OPERATIVE PAIN IN THE GREEK HEALTH CARE SETTING

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OBJECTIVES: To assess the costs and outcomes of parecoxib used in combination with opioids vs. opioids alone in the post-operative management of surgical patients in Greece. **METHODS:** A model comparing parecoxib plus opioid treatment, to opioids alone during the first three days post-surgery was developed. Clinical efficacy was based on a phase-III randomized, double-blind clinical trial that also provided the frequencies of occurrence of clinically meaningful opioid-related adverse events (CMEs) for both treatment arms. Resource use associated with each CME was elicited via strictly structured questionnaire based interviews to a panel of experts (surgeons and anesthesiologists). Cost calculations followed a third party payer perspective (Euros, 2012). Treatment effectiveness was calculated in Summed Pain Intensity scores (SPI). **RESULTS:** According to the clinical trial, patients under parecoxib plus opioids had lower pain scores (SPI 59.20 vs. 80.80) and fewer CMEs (0.62 vs. 1.04 per patient) compared to opioids alone, for a 3-day period. This led to a full offset of the excess cost of the addition of parecoxib and to potential savings of 858€ (total cost per patient: 819.08 vs. 1,677.08, respectively). Savings were mainly attributable to decreased CMEs, reductions in ICU and general ward bed-days as well as to reduced physician and nurse time. Results were sensitive with regards to probabilities of occurrence or co-occurrence of CMEs (>2 CMEs occurring simultaneously), although the above was of limited impact. Medication costs had a minimal impact on the results of the sensitivity analysis. Extending the model cycle to 5-days post-operatively was associated with additional savings of 1,139.9€ per patient, compared to opioid use alone (total cost per patient: 1,063.2 vs. 2,203.1 respectively). **CONCLUSIONS:** Parecoxib can be a valuable addition to opioid treatment for post operative pain, improving pain relief, reducing the probabilities of CME occurrence and lowering overall costs of treatment.

PSY23

PHARMACOECONOMIC ASPECTS OF DEXKETOPROFEN TROMETAMOL AND DICLOFENAC IN ACUTE POST-TRAUMATIC PAIN

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OBJECTIVES: Pharmacoeconomic aspects of application of dexketoprofen trometamol in routine clinical practice in Russia remain unclear. The aim of our research is comparative pharmacoeconomic analysis of administration of dexketoprofen trometamol in reduction of acute post-traumatic pain. **METHODS:** The estimation of pain relief strategies with dexketoprofen and diclofenac was performed by a cost-effectiveness analysis based on modeling method. We have calculated the costs of treatment for pain syndrome in injuries of lower extremities in two groups of 100 patients, who received dexketoprofen or diclofenac. The choice of diclofenac was motivated by the fact that it is the most frequently prescribed NSAID included into the National Essential Drug List. The main efficiency measure was the level of analgesia achieved within one hour after administration of a medication estimated using Visual Analog Scale (VAS). Only direct costs of pain syndrome relief were included in cost analysis in our model. **RESULTS:** The costs of therapy in diclofenac and dexketoprofen groups were 1033.0 RUB and 1611.1 RUB, respectively. Final cost-efficiency ratio was 39.73 RUB per unit in diclofenac, and 20.92 in dexketoprofen group. Incremental cost-effectiveness ratio (11.34 RUB/unit) revealed that treatment with dexketoprofen trometamol demands additional funding for significantly greater effect compared to diclofenac. Sensitivity analyses indicated these results to be robust. **CONCLUSIONS:** The results of our study suggest that the application of dexketoprofen trometamol has the best cost-effectivness in acute posttraumatic syndrome compared to traditionally prescribed diclofenac.

PSY24

ECONOMIC EVALUATION OF OPIOID SUBSTITUTION TREATMENT (OST) IN GREECE

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OBJECTIVES: To perform an economic evaluation of OST in Greece. Individuals wishing to participate in OST are increasing, since only 4,046 opioid-dependent persons were participating in OST programs in 2008, whilst 5,386 who were willing to receive OST were on the waiting list for treatment, with a mean waiting-list time of 6 years. **METHODS:** Data were gathered from the OKANA and EKTEPN, the Greek REITOX (European Information Network on Drugs and Drug Addiction) Focal Point of the European Monitoring Centre for Drugs and Drug Addiction .The total number of patients included in the analysis was 4046 . Statistical tests were used to test the homogeneity between treatment programs as well as among geographical areas. Cost-minimization and cost-effectiveness analyses were conducted to compare methadone and buprenorphine monotherapy with buprenorphine–naloxone. A budget-impact analysis was undertaken in order to estimate the potential costs and savings that could be gained from the expansion of OST programs in Greece. Deterministic and probabilistic sensitivity analyses were performed. To represent the output uncertainty from probabilistic sensitivity analysis scatterplots of 2000 simulated ICERs were produced on the cost-effectiveness plane as well as cost-effectiveness acceptability curves. **RESULTS:** Cost-minimization analysis predicted that buprenorphine monotherapy is more costly than buprenorphine–naloxone. Cost-effectiveness analyses demonstrated that buprenorphine–naloxone was the dominating therapy in terms of mortality avoidance and completion of treatment. In comparison to methadone, buprenorphine–naloxone reduced the mean cost by 49%; increased by ~1.5-fold the percentage of participants completing their treatment; and reduced by ~2.5-fold the percentage of deaths. Sensitivity analyses did not reverse the findings. **CONCLUSIONS:** Our findings demonstrated that switching to buprenorphine-naloxone treatment would result in significant savings, reduce waiting lists and increase access to OST. The introduction of pharmacoeconomic studies in Greece would support rational decision-making in an era of economic recession and uncertainty.

PSY25

ETANERCEPT IN EARLY RHEUMATOID ARTHRITIS: ECONOMIC EVALUATION FROM THE PUBLIC PAYER PERSPECTIVE IN BRAZIL

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OBJECTIVES: Early diagnosis and aggressive treatment is crucial in rheumatoid arthritis to prevent disease development, joint destruction and cardiovascular disease, which start within first 2 years of disease. This study aims to perform cost-effectiveness analysis of etanercept in early rheumatoid arthritis (ERA) treatment, defined as disease duration from 3 months to 2 years, from the public payer perspective in Brazil. **METHODS:** A decision model was developed to simulate ERA evolution after treatment with etanercept(50mg/week)+methotrexate (ETN+MTX) or methotrexate (MTX) as first-line therapies and their associated direct costs over a 5-year time horizon. An initial decision tree estimated the number of patients entering Markov model in the following health states: 'remission', 'non-remission', 'discontinuation', and 'non-response' (ACR20 criteria). Patients starting on 'remission' or 'non-remission' states could transit between them or to 'orthopedic intervention' (ORT), 'cardiovascular event – myocardial infarction/stroke' (CVE), 'all-cause death', 'cardiovascular death', and 'surgery-related death,' or switch to second-line (adalimumab+MTX or infliximab+MTX). Patients initiating on 'discontinuation' or 'non-response' states switched directly to second-line therapy. Remission (DAS28<2.6) was considered as effectiveness outcome. Clinical data were extracted from literature, and costs from Brazilian official databases, presented in 2012 USD. Univariate sensitivity analyses were performed. A 5% discount rate was applied annually for costs and benefits. **RESULTS:** For each 1,000 patients, 244 and 106 were in remission at year 5 for ETN+MTX and MTX groups, respectively. The number of [ORT; CVE] was [102; 38] for ETN+MTX and [125; 43] for MTX. Projected treatment costs for ETN+MTX and MTX were 54,433,960USD, and 40,175,096USD, respectively. In cost-effectiveness analysis, ETN+MTX was the most effective alternative (incremental effectiveness: 138) and presented an incremental cost (14,258,866USD) with incremental cost-effectiveness ratio of 102,968USD per remission achieved. **CONCLUSIONS:** Etanercept in ERA treatment showed to prevent disease progression, with more achieved remissions and