after adjusting for age, gender, gout treatment, comorbidities, and medication use. **RESULTS:** We identified 4821 AMI cases of which 1410 were women. The adjusted odds ratio (OR [95% CI]) of AMI among women with gout was 1.62 (1.21–2.16), higher than the adjusted OR for men (1.12 [0.99–1.26]; p-value for interaction <0.01). When we combined both women and men in our analyses, we found an overall adjusted OR of 1.15 (1.06–1.25). **CONCLUSIONS:** Using population-based data, we found a 62% increased risk for AMI among elderly women with gout, and a 15% increased risk for elderly gout patients overall. The association between hyperuricemia, a known precursor to gout, and cardiovascular disease provides a potential explanation for our findings. Gender differences in serum uric acid levels and metabolism may further explain the difference in risks between women and men. Findings provide support for the aggressive management of cardiovascular risk factors in gout patients.

PMS3

COMPARISON OF 3 COMORBIDITY MEASURES AFFECTING PHYSICAL FUNCTION AND QUALITY OF LIFE FOR PATIENTS WITH ANKYLOSING SPONDYLITIS

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OBJECTIVES: In clinical studies, comorbidity measurement refers to assessment of total burden of illnesses across multiple health conditions unrelated to the patients' disease under study. In non-randomized clinical studies and epidemiology studies, adjustment for comorbidity is often undertaken to ensure outcomes are not directly affected by comorbidities. This analysis compared 3 measurements of comorbidities and their effects on physical function and quality of life with data from a randomized controlled trial of adalimumab in ankylosing spondylitis (AS). **METHODS:** Data were derived from the Adalimumab Trial Evaluating Long-Term Efficacy and Safety in AS (ATLAS). Comorbidity indices at baseline were calculated as Chronic Disease Score (CDS), number of separate prescription medications (prescription count), and number of concurrent illnesses (concurrent illness count). Medications taken specifically for the treatment of AS were excluded from the CDS and prescription medication count calculations. Univariate associations between each of the 3 indices and a physical function index (SF-36 PCS) and AS disease-specific quality of life (ASQOL) at Week 12 were assessed. Correlations with each comorbidity measurement were ascertained. Model selection (Alkaike's Information Criterion [AIC]) was used to identify the best comorbidity measure for predicting SF-36 PCS and ASQOL. **RESULTS:** A total of 315 patients were included in the analysis. Their mean age was 42.2 years, and most were male (74.9%). At the univariate level, all 3 indices were significant predictors of SF-36 PCS score ($p < 0.02$), However, only CDS and prescription medication count were significantly associated with ASQOL at Week 12. All 3 indices were well-correlated with each other (range 0.750–0.917). The AIC model demonstrated that CDS was the best predictor of SF-36 PCS and ASQOL. Prescription count was the second-best ranked measure for both outcomes. **CONCLUSIONS:** The CDS is a suitable measure for comorbidity adjustment in examining physical function and quality of life for AS patients.

PMS4

RISK FACTORS FOR INCIDENT GOUT AMONG WOMEN: A PROSPECTIVE STUDY

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OBJECTIVES: Despite increasing incidence and substantial prevalence of gout among women, particularly among elderly, no prospective data on the risk factors for gout are available among women. We prospectively evaluated purported risk factors for the risk of incident gout among women and compared them with men. **METHODS:** Using data from the Framingham Heart Study, we prospectively examined over a 52-year period (1948–2001) the relation between prior serum uric acid levels and the risk of incident gout in 2,470 women and 1,951 men. We used Cox proportional hazards models to estimate the relative risk for incident gout by uric acid level after adjusting for age, body mass index, blood glucose level, blood cholesterol level, hypertension, use of diuretics, alcohol consumption, educational level and menopausal status. **RESULTS:** Over a 28-year median follow-up, we documented 304 incident cases of gout, 104 among women. The incidence rates of gout increased with increasing serum uric acid levels, similar to men. For uric acid levels of <5.0, 5.0–5.9, 6.0–6.9, 7.0–7.9 and ≥8.0 mg/dL the incidence rates of gout per 1000 person-years were 0.81, 1.42, 1.83, 6.75, and 13.09, respectively (p for trend <0.0001). The multivariate relative risk (95% CI) for incident gout for every 1.0 mg/dL increase in serum uric acid level was 1.57 (1.38–1.78) among women and 1.52 (1.36–1.71) among men. Other significant predictors of gout in women were age, obesity, hypertension, blood glucose level and diuretic use. **CONCLUSIONS:** These prospective data indicate that higher levels of serum uric acid increase the risk of gout among women in a graded manner, similar to men, and support the notion that serum uric acid is a reliable surrogate marker and precursor of incident gout among women as well. Age, obesity, hypertension, blood glucose level and diuretic use were associated with the risk of incident gout among women.

PMS5

FACTORS INFLUENCING THE LENGTH OF STAY AND TOTAL CHARGES FOR PEDIATRIC PATIENTS DIAGNOSED WITH OSTEOMYELITIS

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OBJECTIVES: Osteomyelitis is an infection of the bone caused by an untreated injury. Osteomyelitis can also come from an infection from another part of the body, such as a urinary tract infection that can spread to the bone through the blood. The purpose of this study is to determine what factors can influence a pediatric patient's stay in the hospital when the patient has a diagnosis of osteomyelitis. **METHODS:** In order to look at the length of stay and total charges for the patient's stay in the hospital, we used table analysis, summary statistics, one way frequency, kernel density, logistic regression, and linear regression. Kernel density examines the entire population distribution. Logistic regression gives a prediction of the probability of occurrence. Linear regression analyzes the effect of one variable on another. The data were taken from the 2005 National Inpatient Sample with a total of 3972 patients; 1971 have osteomyelitis and the remaining 2001 patients form a control group. **RESULTS:** The average length of stay in the hospital was about eight days. For patients who had osteomyelitis, the peak value of total charges was around $10,000, and those who did not have the disease had a peak value of total charges of around $5,000. The variables that are significant on total charges are died, length of stay, race, bacterial infection, episodic mood disorders, arthrocentesis, magnetic resonance, incision, excision, and division, other incision with drainage, injection of antibiotic, and spinal tap. **CONCLUSIONS:** Generally, patients who have osteomyelitis have a longer hospital stay and a higher bill compared to those that do not. The procedures performed on a patient influence their length of stay and total charges. Length of stay is influenced more by invasive procedures and total charges are influenced on length of stay and the number of procedures performed.

PMS6

DEVELOPMENT OF TESTS FOR DIAGNOSIS OF RHEUMATOID ARTHRITIS

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OBJECTIVES: New therapeutic options for rheumatoid arthritis (RA) have shifted the focus of treatment to early, aggressive intervention aimed at preventing further joint damage. However, early diagnosis has proved challenging, and recent efforts have been made to identify new diagnostic tests. We systematically reviewed the literature to assess the current status of tests for early diagnosis of RA. **METHODS:** We searched English-language MEDLINE-indexed publications in the 5 years prior to August 2008 concerning tests and biomarkers for early diagnosis of RA. We also searched non-MEDLINE-indexed sources such as organization websites, meeting abstracts, and governmental publications using the same keywords. **RESULTS:** We identified 94 primary studies from MEDLINE pertaining to tests or biomarkers for early diagnosis of RA. Non-MEDLINE sources yielded an additional 56 articles for a total of 150 reviewed for this study. In practice, no single test has proved sufficiently sensitive and specific for the diagnosis of RA. Tests currently in use, including the acute phase biomarkers erythrocyte sedimentation rate and C-reactive protein and the autoantibody rheumatoid factor (RF), are relatively nonspecific for RA. Recent efforts have focused on identifying new biomarkers with greater RA specificity. These include many autoantibodies, immune system biomarkers, and biomarkers of collagen breakdown and bone erosion. The autoantibody anti-cyclic citrullinated peptide (anti-CCP) offers high specificity, but lower sensitivity than RF. Newer-generation anti-CCP assays provide improved sensitivity over first-generation anti-CCP assays, but sensitivity still precludes their use as sole diagnostic tests for RA. The clinical utility of anti-CCP tests can be improved by combining with other assays such as RF, and provide particular value in predicting the development of persistent and/or erosive RA. **CONCLUSIONS:** Newer generations of the autoantibody anti-CCP assay offer high specificity for RA and appear promising as a diagnostic test in combination with other tests with greater sensitivity.

PMS7

A 2-YEAR EVALUATION OF INFLIXIMAB'S EFFECTIVENESS IN THE TREATMENT OF RHEUMATOID ARTHRITIS IN ACTUAL PRACTICE

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OBJECTIVES: To evaluate the long-term effectiveness of infliximab in the treatment of rheumatoid arthritis (RA) in the actual practice setting. **METHODS:** A retrospective chart review was conducted in six rheumatology clinics across the US. RA patients with a first infliximab encounter occurring between 2002 and 2004 were identified. Patients were required to have a minimum of 12-months of continuous records prior to the index infliximab date and were followed for up to 24-months after therapy initiation. Effectiveness was defined as reductions in joint pain, swelling, stiffness, and fatigue scores of >1 point (range from 0 to 10). Overall clinical improvement was measured as a combination of pain, swelling, stiffness, and fatigue scores. Wilcoxon Signed-Rank Tests were performed to test if there were statistically significant changes from baseline. Also, biomarker test results, C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR), were collected and compared to the baseline results. **RESULTS:** A total of 266 infliximab patients were identified (72.9% female; average

age = 57.6 years). Two years after initiation of treatment, 48.7% patients showed overall clinical improvement. On average, patients received 367.5 days treatment after the index date. Patients experienced improvements from baseline in all measures: joint pain (4.0 vs. 4.3), joint swelling (3.0 vs. 3.2), stiffness (3.6 vs. 3.8), fatigue (4.2 vs. 4.4), CRP (3.1 vs. 4.1), and ESR (24.5 vs. 31.2) (all $P < 0.001$). Percentages of patients improved >1 point were 36.9% (joint pain), 38.0% (joint swelling), 28.2% (stiffness), 27.4% (fatigue), 94.1% (CRP), and 97.5% (ESR). **CONCLUSIONS:** Understanding the real world effectiveness of RA therapies under actual practice conditions is important in the treatment decision process. This chart review indicates that infliximab therapy had good long-term effectiveness in the treatment of RA. Studies to better understand the determinants of treatment adherence beyond clinical effectiveness are recommended.

PMS8

BIOLOGIC THERAPY REDUCES PATIENT-REPORTED SEVERITY OF RHEUMATOID ARTHRITIS IN THE REAL WORLD SETTING

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OBJECTIVES: To evaluate the clinical effectiveness of biologic therapies in the treatment of rheumatoid arthritis (RA) as measured by change in disease severity. **METHODS:** Patient self-reported data were collected from the 2008 Rheumatoid Arthritis Patient Study. Patients with RA were asked to rate their current disease severity (mild, moderate or severe), as well as severity at the time of diagnosis and before treatment. Comparisons were made between respondents who received biologic therapies (abatacept, adalimumab, etanercept, infliximab, or rituximab) versus those treated with non-biologic treatments. An improvement in severity is defined as less severe (changes from severe/moderate to moderate/mild) after the current treatment. **RESULTS:** Of 2048 respondents to the survey, the mean age was 51.9, and 74.3% were female. The average duration from RA diagnosis was 11.9 years. For patients treated with biologic therapies, the average duration of the treatment was 3.7 years. There were no statistical significant differences in age, gender and duration from RA diagnosis between patients who were treated with a biologic therapy versus those who were not. At baseline more patients reported their disease status as severe (47.2%) in the biologic group, compared to patients in the non-biologic group (21.3%). Only 9.7% of patients in the biologic group versus 29.5% of patients in the non-biologic group reported their disease status as mild. However, 44.6% of patients in the biologic group versus 25.9% of the non-biologic group reported an improvement in severity after the current treatment, while 11.6% of patients in the biologic group versus 15.3% of the non-biologic group reported increased severity in disease state (chi square $P < 0.001$) after the current treatment. **CONCLUSIONS:** In the real world setting, RA patients treated with biologic therapies self-reported more severe disease than patients treated with non-biologic therapies. Biologic therapies significantly reduced patient-reported RA disease severity, compared to non-biologic therapies.

PMS9

TREATING ARTHRITIS OF THE KNEE: THE IMPACT ON PAIN IN PATIENTS' EVERYDAY LIVES

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Arthritis of the knee is a real public health problem. Its prevalence is estimated at 6.1% of adults aged over 30 years, according to data from the Framingham Study. **OBJECTIVES:** To observe, in real use conditions, the effects obtained by Hyaluronic acid in the treatment of arthritis of the knee combined with a prescription of Sodium chondroitine sulfate between 2 treatments. **METHODS:** A longitudinal, prospective observation programme. **RESULTS:** Forty-two patients were treated with Hyaluronic acid® and Soduium chondroitine sulfate®, 19 patients were treated on the left side of the knee and 22 on the right side, with hyaluronic acid. At inclusion, average pain during daily life activities was 53,289 ± 20,836, at W18, 37,963 ± 17,173 and at M6, 35,625 ± 17,956. Development of the pain during daily life activities between inclusion and W18 was significant ($p = 0.0056$) as was the same between inclusion and M6 ($p = 0.0011$). At inclusion, average pain at rest was 29,167 ± 16,889, at W18, 19,792 ± 14,255 and at M6, 19,217 ± 17,399. Development of pain at rest between inclusion and W18 was not significant ($p = 0.0594$) (however the p-value was very close to 0.05 . . .) as was the same between inclusion and M6 ($p = 0.0619$). **CONCLUSIONS:** The reduction of the pain – which was significant during patients' daily activities at 18 weeks, and then sustained at 6 months – is a testimony to the relevance of this treatment protocol. A greater number of trial subjects would make it possible to confirm the significance of the reduction of pain at rest.

PMS10

DOSING PATTERNS FOR RHEUMATOID ARTHRITIS PATIENTS T REATED WITH ABATACEPT OR INFLIXIMAB

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OBJECTIVES: To determine dosing patterns associated with real-world treatment of rheumatoid arthritis (RA) patients with infliximab or abatacept. **METHODS:** An observational, retrospective (cohort) study of patients new to abatacept and infliximab was conducted using the PharMetrics Patient-Centric Database. All adult patients with at least one claim of RA diagnosis at or prior to initial treatment with infliximab or abatacept from March 2006 to June 2007 were selected. Patients were identified and followed for at least 6 months based on their first infusion claim for infliximab or abatacept with no claims for any other biologic in the prior 6 months. Abatacept and infliximab cohorts were compared with respect to baseline characteristics and occurrence of upward dose adjustments (increase in dose or frequency). **RESULTS:** Forty abatacept and 216 infliximab patients were identified as new to biologic therapy. The two cohorts were generally similar, however 47.5% of initial infusions for abatacept patients were prescribed by a rheumatologist (also, 15% by primary care physician (PCP) and 37.5% unknown), compared to 72.7% for infliximab patients (with 4.6% by PCP and 22.6% unknown). Abatacept patients were less likely to experience upward dose adjustment than infliximab (10% vs. 57.9%, respectively). Multivariable Cox proportional hazards modeling (adjusted for age, gender, Charlson Comorbidity Index, and 1-year pre-index RA-related costs) determined that infliximab patients were more likely to experience upward dose adjustment than abatacept patients (HR = 5.5, 95% confidence interval = 2.0–14.9, $p = 0.001$). **CONCLUSIONS:** Upward dose adjustment with some biologic therapies is common and may lead to unexpectedly higher treatment costs with additional safety considerations. In this study, upward dose adjustment appears to be less likely in patients started on abatacept than infliximab. Further research should determine if the fixed dosing pattern observed with abatacept continues over time, as health care providers and patients become more familiar with this biologic.

PMS11

RELATIONSHIP BETWEEN LEVELS OF PHYSICAL ACTIVITY AT WORK AND PREVALENCE OF ARTHRITIS AMONG WORKING POPULATION

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OBJECTIVES: Arthritis is the most common chronic illness in the US. Various studies have found association between arthritis and physical demands of work. This study determines the relationship between physical activity at work and prevalence of arthritis among working population. **METHODS:** To distinguish between arthritic and non arthritic population we used question from the 2007 Behavioral Risk Factor Surveillance System (BRFSS) that indicates whether an individual was suffering from arthritis that had been diagnosed by physician. We also determined an individual level of physical activity at work through the question that classifies an individual level of physical activity at work into three levels. **RESULTS:** The sample consists of 205,533 respondents out of which (46, 078) 22.42% had arthritis and (15, 9455) 77.58% did not have any type of arthritis. Results from the logistic regression showed significant relationship between prevalence of arthritis and gender, age, race, education, income, reported health status, BMI, health coverage and physical activity at work ($\alpha = 0.05$). There was inconsistent relationship among the level of physical activity and prevalence of arthritis as people having moderate physical activity had lesser odds (O.R.–0.965, 95% CI: 0.938–0.994) of suffering from arthritis i.e. one unit increase in moderate physical activity at work was associated with 3.5% decrease in the odds of suffering from arthritis. However, people having heavy physical activity at work had greater odds of (O.R.–1.265, 95% CI: 1.220–1.311) of suffering from arthritis indicating that one unit increase in heavy physical activity was associated with 27% increase in the odds of suffering from arthritis. **CONCLUSIONS:** There is a need to investigate in greater detail the role of physical activity at work in conjunction with other factors on the prevalence of arthritis. This investigation can help in identifying people susceptible to develop arthritis along with the factors responsible for their illness.

PMS12

FIBROMYALGIA: RUSSIAN RHEUMATOLOGISTS' KNOWLEDGE

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CONTEXT: Fibromyalgia syndrome (FMS) is an under-diagnosed. **OBJECTIVES:** To describe Russian rheumatologists' knowledge of fibromyalgic patients. **METHODS:** The questionnaire was sent to a random sample of Russian practitioners, who were answering the same questionnaire as that used by French practitioners in 2003. **RESULTS:** The average number of patients seen daily by each practitioner was 58 (median 36 patients) 88% and 75% of the doctors claimed, individually, that they had not received any education on fibromyalgia or chronic fatigue during their medical studies. During their professional activity, 53.9% of the doctors have still not had any professional training on fibromyalgia. One percent of the doctors believed that fibromyalgia does not exist, while 36.5% believed that fibromyalgia is an illness and 63.2% that it is a syndrome. Forty percent of the doctors who answered were continuing to treat fibromyalgic patients, 28% referred them to a specialist rheumatologist, 14% to a neurologist and 9% to a psychiatrist. Excessive fatigue, diffuse pain, a tendency to feel depressed, anxious and sad, and muscle weakness were recognised respectively as being the main symptoms of fibromyalgia by 64, 77, 64 and 45 % of the rheumatologists respectively. Digestive problems, palpitations, swollen joints and radiological irregularities were recognised as being the main symptoms of fibromyalgia by 10, 13, 12 and 9% of the rheumatologists respectively. **CONCLUSIONS:** As in EC countries, a wide-scale training effort should be made in order to improve the diagnosing of patients. The data collected via these evaluations was close to the results for France.