Abstract SAT0697 – Table 1. Conditional logistic regression analyses for the association between covariates with AS risk

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Univariate analysis</th>
<th>Multivariable</th>
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<tr>
<td></td>
<td>OR (95% CI)</td>
<td>aOR (95% CI)</td>
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<tr>
<td>Tonsillitis</td>
<td>1.96 (1.68–2.28)</td>
<td>1.80 (1.55–2.10)</td>
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<tr>
<td>CCI &gt;1</td>
<td>1.90 (1.19–3.03)</td>
<td>2.06 (1.33–3.19)</td>
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<tr>
<td>Appendicitis</td>
<td>1.36 (1.19–1.56)</td>
<td>1.31 (1.14–1.50)</td>
<td>1.31 (1.15–1.50)</td>
<td>1.31 (1.15–1.50)</td>
<td>1.31 (1.15–1.50)</td>
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<td>1.31 (1.15–1.50)</td>
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</table>

Abstract SAT0698 – Figure 1. Age-specific HR for men (left) and women (right) in Germany 2012. Grey regions indicate the range of possible values.

Conclusions: Despite the limitation of the data source (claims data), an estimation of excess mortality in terms of the HR is possible and yields plausible results. The obtained SMRs are similar to comparable populations. At age 40 men with RA suffer more from reduced life expectancy than women with RA. At age 60 the difference in YLL between men and women with RA is virtually vanished.

REFERENCES:

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Disclosure of Interest: None declared


SAT0699 PREDICTION OF CARDIOVASCULAR EVENTS IN RHEUMATOID ARTHRITIS PATIENTS USING A MULTI-BIOMARKER OF DISEASE ACTIVITY

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Background: The ACC/AHA recommends preventive strategies for patients with a high predicted risk of atherosclerotic cardiovascular disease (CVD). RA patients are at higher risk for CVD events, yet the role of systemic inflammation and the influence of traditional CVD risk factors is unclear with respect to risk prediction in RA.

Objectives: A simple and accurate algorithm for predicting CVD event risk that includes systemic inflammation might help risk assessment for RA patients and optimise preventative care.

Methods: We derived a U.S. cohort of RA patients with multi-biomarker disease activity (MBDA) test results linked to Medicare claims data. Patients had to have >1 year baseline with Medicare coverage prior to the first MBDA test. Exclusions were past MI, PCI/CABG, stroke, or cancer. Follow-up ended at the earliest of 1) CVD event; 2) other than CVD cause of death; 3) loss of coverage; or 4) 12/31/2014. The composite CVD event comprised of incident MI, stroke or fatal CVD event, using validated algorithms. MBDA scores were grouped as low (<30), moderate (30–44) and high (>44). Other predictors included demographics, healthcare utilisation, and comorbidities. Three separate models were developed using Cox regression. Model 1 included age, sex and race. Model 2 included age, sex race, 9 comorbidities and CVD medication classes, plus interaction terms. Model 3 included age, sex, race and all categorised MBDA score. We calculated the net reclassification index (NRI) for model 2 and 3 compared to model 1. We also plotted the observed vs. predicted probability of CVD event for each model, with risk categorised as low (<7.5), moderate (7.5–15) and high (>15) per 1000 person-years based upon annualised ACC/AHA cutoffs.

Results: A total of 15,757 RA patients were included; mean (SD) age 68.6 (10.8) years, 80% female, 80% white. A total 209 CVD events occurred in 14 843 person years (1.41/100 py). The median (IQR) follow up time was 0.84 (0.41, 1.27) year. The maximum event time was at 2.7 year. All models had reasonable discrimination and calibration; model 3 was better than models 1 and 2 and observed vs predicted risk is shown (figure 1). The sum of the absolute difference between observed and predicted probability was 0.56, 0.57 and 0.33 for models 1, 2 and 3 respectively. Compared to model 1, model 2 resulted in a positive overall NRI of 0.214 (non-event NRI=0.173, event NRI=0.441); model 3 resulted in positive overall NRI of 0.279 (non-event NRI=0.092, event NRI=0.187), consistent with more accurate CVD event classification.
Conclusions: Preliminary results from this analysis suggest that a simple algorithm consisting only of age, sex and race plus a multi-biomarker score can provide an accurate method to predict short term CVR risk in RA. Further validation with more extended time frames should improve the utility of this approach.

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SAT0701
PREGNANT OUTCOME IS IMPROVED AND SIMILAR TO THAT OF THE GENERAL OBSTETRIC POPULATION IN PATIENTS WITH RHEUMATOID ARTHRITIS WHO FOLLOW THE “IDEAL CLINICAL PATHWAY” BEFORE AND DURING PREGNANCY

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Background: With the therapeutic advances of the last decades yielding to stable disease remission in the majority of patients, the goal of a successful pregnancy appears to be attainable for women affected by Rheumatoid Arthritis (RA). However, individual risk stratification and measures to minimise it (e.g. withdrawal and wash-out of teratogenic drugs) are essential for the management of pregnancy in RA.

Objectives: This analysis aims to evaluate the adherence to a reference clinical pathway of diagnostic, pharmaceutical and follow-up management in women with RA, and the influence of the adherence to this pathway on the outcome of pregnancy.

Methods: Data were extracted from the Lombardy Region’s (Italy) health databases for the period between 2004–2013. Patients with RA were identified through the chronic disease certification by rheumatologist (ICD9-CM code 714.0). Among these, women between the ages of 18 and 51 were selected. Data of controls from the general population were also extracted. Conception has been approximated from the date of delivery or abortion. Seven healthcare quality indicators have been constructed: 1) screening of blood chemistry tests, 2) pre-conception musculoskeletal imaging, 3) pre-pregnancy antiphospholipid antibody tests, 4) ANA test and anti-ENA (antiRo/SSA) test, 5) no exposure or wash-out from teratogenic drugs (MTX/LEF); 6) no exposure to biological drugs; 7) rheumatological follow-up in outpatient visits. These 7 indicators were then summarised in 3 pathway indicators: 1) diagnostic pathway, 2) therapeutic pathway, 3) follow-up pathway. The outcome was defined as the DRG of complicated birth or abortion. Subanalysis on abortion was also done. The relationship between quality indicators and outcome variables was analysed using logistic models crude and adjusted for age and comorbidities, and the results presented as odds ratios (OR) and 95% confidence intervals (95% CI).

Results: 443 pregnancies of patients with RA were identified, with median age of 34 (IQR 31–37), median disease duration at conception of 3.8 years (IQR 1.83–6.19), 15 (35.4%) of which with unfavourable outcome pregnancy outcome, of which 115 pregnancy losses. The increase or decrease of risk for those who met specific quality indicators and pathway indicators showed a better outcome for patients screened for autoantibodies and with no exposure or washout from MTX/LEF (Table). The comparisons of those who followed the ideal pathway or not compared to the general population showed a significant increase of risk only for patients not following the ideal pathway (Table).