controlled, longer RA duration") sustained the lowest mean SJC throughout follow-up. Cluster 4 patients ("health low–moderate, moderate RA") exhibited the greatest improvement in mental health (FSMHI; Figure). Cluster 5 patients ("health low, RA uncontrolled, longer RA duration") exhibited the highest CDAI scores (Figure) and maintained baseline line of therapy the longest.

Conclusion: Five patient clusters identified by data-driven PC analysis of the BRASS registry exhibited distinct patterns of clinical outcome and management over a 4-year follow-up period. The clinical outcomes data suggest the clusters represent clinically meaningful categories of RA and illustrate the potential of data-driven patient profiling as a tool to support personalized medicine in RA. Validation in an independent dataset is ongoing.

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SAT0600 COMPARATIVE CARDIOVASCULAR SAFETY OF NON-STEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDS) AMONG INDIVIDUALS WITH OSTEOARTHRITIS; FINDINGS FROM PROVINCIAL PRESCRIPTION CLAIM RECORDS IN BRITISH COLUMBIA, CANADA

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Background: Osteoarthritis (OA) has been reported as an independent risk factor for cardiovascular diseases (CVD) (1). Furthermore, mediating role of NSAIDs in the observed OA-CVD association has also been noted (2). Thus, a substantial proportion of the total risk of CVD among OA patients compared to non-OA controls was attributable to NSAID use (2). This is particularly worrisome as there is no cure for OA and NSAIDs are the mainstay of treatment in controlling the primary symptoms of pain and inflammation among OA patients. However, only a handful of observational studies evaluated the risk of a specific NSAID among OA patients for a specific CVD event such as myocardial infarction (MI) (3). The overall cardiovascular safety of NSAIDs used in treating OA in the real-world therefore remains unknown.

Objectives: To evaluate the comparative safety of various NSAIDs against CVD when treating patients with OA.

Methods: We used linked health administrative data (HAD) of a previously assembled, population-based cohort of 720,055 British Columbians from Canada. We identified individuals with OA who received at least one NSAID prescription from January 1996 to December 2013. Eligible study subjects were at least 20 years old, did not have CVD and had not received an NSAID prescription within the last 90 days from their OA diagnosis date. We defined composite CVD outcome from hospital discharge abstract database, payment information file of Medical Services Plan and vital statistics deaths data file using ICD-9 or ICD-10 codes. We created an NSAID exposure variable in a time-dependent fashion in which individuals were considered at risk for the duration of NSAID prescriptions. We used time-dependent Cox regression analysis to estimate CVD risk associated with NSAID use overall as well as four unique groups of NSAIDs, i.e., coxibs, naproxen, ibuprofen and other conventional NSAIDs.

Results: Our cohort included 3,806 OA individuals. There were 1,147 CVD events. After adjusting for age, sex, SES, COPD, diabetes, hypertension, hyperlipidemia, peptic ulcer disease and Romano comorbidity score, the hazard ratio (HR) and 95% confidence interval (CI) from the time-dependent Cox regression model was 1.48 (1.27, 1.73). When exposure to different groups of NSAID was compared with unexposed person-time, CVD risk were similar among coxibs and naproxen followed by other conventional NSAIDs and ibuprofen, adjusted HR (95% CI) were 1.58 (1.24, 2.00), 1.58 (1.11, 2.24), 1.39 (1.10, 1.75) and 1.36 (0.75, 2.47), respectively.

Conclusion: Our study is the first retrospective cohort study using BC HAD that looked at the overall CVD risk of NSAID use in treating OA in a real-world setting. After modelling exposure to NSAIDs as time-dependent, we found that exposure to NSAIDs substantially increased overall CVD risk compared to non-exposed periods. We also found that coxibs and naproxen may increase CVD risk more than conventional NSAIDs including ibuprofen.

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SAT0601 MORTALITY RATE IN PATIENTS TREATED WITH BIOLOGICS: DATA FROM THE ROMANIAN REGISTRY OF RHEUMATIC DISEASES

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Background: Rheumatoid arthritis (RA) is associated with increased mortality, with longitudinal studies averaging a standardised mortality ratio of