Figure 1. A) distribution of common viral respiratory disease symptoms across patient and symptom clusters. B) Standardized residuals indicating deviation from expected frequencies of IMID diagnoses across patient clusters. sob: shortness of breath, mskpain: musculoskeletal pain

Conclusion: This analysis shows that symptoms of common respiratory viral infections are less frequent in RA patients and to a lesser extent in other IMID patients. As major clusters in this analysis can also be considered to represent exposure categories, these data suggest that IMIDs or their treatments may mitigate common respiratory viral infection symptoms.

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POS1427

NATIONAL BURDEN OF RHEUMATOID ARTHRITIS IN CANADA 1990-2017: FINDINGS FROM THE GLOBAL BURDEN OF DISEASE STUDY 2017

N. Hassen¹, D. Lacaille¹, A. Xu¹, S. Sidi¹, A. Alandejani¹, M. Mansourian², N. Sarrazadegan¹, J. Kopec¹. ¹The University of British Columbia, Faculty

of Medicine, Vancouver, Canada; ²Isfahan University of Medical Sciences, Isfahan, Iran (Islamic Republic of)

Background: According to the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2017, over 120,000 individuals currently have rheumatoid arthritis (RA) in Canada, yet a study that evaluates the combined effect of RA on the longevity and quality of life in the country is lacking.

Objectives: The objectives of this study are three: 1) to describe burden of RA levels and trends from 1990-2017 using GBD data, 2) to describe age and sex differences, and 3) to compare Canada RA burden to other countries.

Methods: We obtained publicly available data from GBD Study 2017 from the Institute for Health Metrics and Evaluation interactive visualization tool (<http://vizhub.healthdata.org/gbd-compare>). Disease burden indicators include prevalence, mortality, years of life lost (YLLs), years lived with disability (YLDs), and disability-adjusted life years (DALYs). Estimates were presented as non age-standardized and age-standardized rates per 100,000 population. GBD estimated prevalence using published literature, survey data, patient records, and health insurance claims, and mortality using cause of death ensemble modelling technique. YLLs measure premature death calculated as the sum of each death multiplied by the standard life expectancy at each age. YLDs measure amount of time in a year an individual lives with a short- or long-term health condition, calculated by combining prevalence with disability weights for each age/sex/year. DALYs were calculated as the sum of YLLs and YLDs. DALYs for Canada were compared to DALYs of countries with similar socio-demographic index (SDI) values. SDI combines income per capita, average educational attainment, and fertility rates. Data were analysed by DisMod-MR 2.1, a Bayesian meta-regression tool.

Results: In Canada, RA mortality (mortality and YLLs) improved over time, with a steeper decline after the year 2002. However, the population burden of quality of life (YLDs and DALYs) increased due to increasing prevalence. The disease burden was higher in females (prevalence, mortality, YLLs, YLDs, DALYs), and DALY rates were higher among older populations. Compared to other countries, Canada had greater improvement in mortality and YLLs over time and had a lower age-standardized DALYs rate compared to countries of similar SDI values. A weak association was found between global age-standardized DALYs and SDI ($R^2 = 0.0138$).

Conclusion: RA is a major public health challenge. Canada fares better than other countries with regards to national RA burden. Early identification and management are critical to reducing the overall burden of RA in Canada, especially in women. More data from multiple provincial RA databases would increase the accuracy of our estimates for Canada.

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POS1428

VALIDATION OF ANCA-ASSOCIATED VASCULITIS AS THE CAUSE OF END-STAGE RENAL DISEASE IN THE UNITED STATES RENAL DATA SYSTEM

C. Cook¹, H. Choi^{1,2}, Z. Wallace^{1,2}. ¹Massachusetts General Hospital, Division of Rheumatology, Allergy, and Immunology, Boston, United States of America; ²Harvard Medical School, Boston, United States of America

Background: Glomerulonephritis and other renal manifestations are common in ANCA-associated vasculitis (AAV). Renal involvement in AAV is associated with adverse outcomes, including end-stage renal disease (ESRD) in up to 25% of patients (1). The United States Renal Data System (USRDS), a national registry of ESRD patients, represents a unique nationwide data source for studying AAV patients with ESRD. Prior research has assessed how often patients with ESRD attributed to AAV have biopsy-proven glomerulonephritis in USRDS (2), but the validity of the diagnosis of AAV as the cause of ESRD in the USRDS remains unknown.

Objectives: We aim to validate the diagnosis of AAV as the primary cause of ESRD listed in USRDS.