

in the diagnosis of symptomatic UTI to enable more appropriate antibiotic therapy.

15017

### Monoclonal antibody use in rheumatoid arthritis: an evaluation of medical expenditure

Robert A. Kelly<sup>1</sup>, Alice C. Ceacareanu<sup>1,2</sup> and Zachary A.P. Wintrob<sup>1,2</sup>  
<sup>1</sup>Hartwick College and <sup>2</sup>ROAKETIN Inc.

**ABSTRACT IMPACT:** Younger patients receiving biologics for rheumatoid arthritis have higher medical expenditure. **OBJECTIVES/GOALS:** TNF inhibiting biologic disease modifying antirheumatic drugs are among the most highly regarded treatment options for rheumatoid arthritis (RA). We aimed at evaluating the medical and prescription costs associated with monoclonal antibody use vs. other RA treatment options in subjects diagnosed with RA. **METHODS/STUDY POPULATION:** Records from the Medical Panels Expenditure Survey (MEPS) database made available by the Agency for Healthcare Research and Quality were used to identify all RA subjects (n=\_\_\_\_\_). Demographics and MEPS-provided flags for RA were abstracted from the medical condition files for all the subjects surveyed (2008-2018). Prescribed biologics were identified based on generic and brand names following a manual review to detect any misspellings. Total medical expenses and prescription expenses were abstracted for all identified RA subjects. Subject were surveyed for two consecutive years, thus expenses were assessed for each of the two surveyed years. Costs were adjusted for inflation and expressed in 2018 dollars. The relationship between biologics use, cost and age or gender was evaluated by Fisher's exact test. **RESULTS/ANTICIPATED RESULTS:** Most RA subjects did not use biologics. RA was more prevalent in women than in men with no significant correlation between sex and the use of biologics in year 1, year 2, or the combined years (p=.44, p=.63, and p=.65, respectively). Biologics users were found to be significantly younger (p<.001), with a mean of 52.8 years compared to 59 years in those who did not use biologics. The 95% confidence interval was 3.7 to 8.6 years younger than non-users. Total medical and prescription costs were higher for biologics users (p<.001) in all analyses. The mean prescription cost difference was \$24,038 more per year for biologics users, and \$26,296 more total medical expenses, CI \$20,502-\$27,230 and CI \$21,947-\$30,646, respectively. There was a trend for biologics users to have higher non-prescription medical expenses (p=.05). **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Interestingly, biologics non-users had some extreme outliers with expenses far higher than any biologics users, possibly due to poorly controlled RA due to age and/or comorbidities. Yet, our most interesting findings are the higher use of biologics among younger RA subjects and the elevated costs of care being driven mainly by prescriptions cost.

20201

### Validating an in-car telemetry system for detecting frequency and severity of driving errors in patients with glaucoma.

Sharon Sabapathypillai, Monica Perlmutter, Manik Goel, Bradley Wilson, Mae Gordon and Anjali Bhorade  
 Washington University-Saint Louis

**ABSTRACT IMPACT:** The car telemetry system may be an ideal method to accurately and reliably evaluate and compare at-risk driving errors between older drivers with and without glaucoma.

**OBJECTIVES/GOALS:** Our project aims to determine whether an in-car telemetry system used during an on-road driving evaluation can accurately and reliably evaluate driving errors in lane maintenance and visual scanning and objectively quantify the frequency and severity of these errors in glaucoma patients. **METHODS/STUDY POPULATION:** This is a single center, cross-sectional study of 180 participants (125 with glaucoma and 55 controls), ages 55 or older, who underwent a comprehensive clinical assessment, including vision, cognition, motor function, followed by an on-road evaluation by a trained occupational therapist. Driving errors were recorded through a dual method including: 1. An in-car trained occupational therapist 2. In-car telemetry system. The frequency and severity of errors in lane maintenance and visual scanning from the in-car telemetry will be assessed and compared between participants with varying severity of glaucoma and normal controls. In addition, we will compare the frequency and severity of errors in lane maintenance and visual scanning to those recorded by the in-car driving evaluator. **RESULTS/ANTICIPATED RESULTS:** We anticipate (or predict) that the in-car telemetry system will be able to detect frequency and severity of driving errors in lane maintenance and visual scanning in glaucoma participants. We also predict that participants with worsening glaucoma severity will commit more driving errors. In addition, the in-car telemetry will detect a similar frequency and severity of driving errors as the in-car driving evaluator. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** The type and frequency of vision-related driving errors that place individuals at risk for a car accident is not well known. Without this critical information, it is extremely challenging to help older adults with glaucoma to be safe drivers.

46942

### Risk factors, prevention, and screening practices for human papilloma virus associated cancers in Central-Eastern Puerto Rico

Lilibeth Cruz-Martinez, Darleen Gonzalez-Galarza and Wilfredo E. De Jesus-Monge  
 Hospitales HIMA San Pablo

**ABSTRACT IMPACT:** The impact of this study is that the results may lead to the development of effective educational programs and a comprehensive cancer control program while verifying patients and medical care providers adherence and compliance with cancer clinical guidelines. **OBJECTIVES/GOALS:** The objective of this study is to assess risk factors, preventive measures, and screening practices for human papilloma virus (HPV) associated cancers in a sub-population in Central-Eastern Puerto Rico (PR). **METHODS/STUDY POPULATION:** This is a sub-analysis from an annual descriptive cross-sectional questionnaire of risk factors, preventive measures, and screening practices for cancer in PR administered at a private hospital campus using a convenience sample of healthy and non-healthy adults. **RESULTS/ANTICIPATED RESULTS:** Out of 345 enrolled subjects in 2019 for the questionnaire, 67 were enrolled by the first author, from which 66 (19%) subjects qualified for this sub-analysis for completing the study: 79% females. When analyzing HPV risk factors, 5% of the participants were smokers. Eleven percent of the subjects received the preventive HPV vaccine. Among those non-vaccinated and eligible for vaccination, 95% were willing to get it. Seventy one percent of females 21-29 years old and 97% of 30-65 years olds had age-appropriate cervical cancer screening. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Despite the low prevalence of HPV vaccination, almost all of the subjects within