0.52 (95% CI 0.16-0.89, p=0.005) ml/min/1.73m²/year (linear trend p=0.002), in a fully adjusted model. Increasing frequency of PA was associated with a lower odds ratio (OR) of rapid kidney function decline, with an OR of 0.25 (95% CI 0.1-0.6, p=0.004) for the highest frequency of weekly PA compared to the group that never exercise, in a model adjusted for established risk factors for GFR decline (linear trend across groups p=0.011).

Conclusions: In this population-based study with repeated measurements of GFR during 11 years of follow-up, higher frequencies of leisure-time PA are associated with slower GFR decline.

Funding: Government Support - Non-U.S.

PO2279
Serum Uric Acid Levels and Nephrosclerosis in a Population-Based Autopsy Study: The Hisayama Study
Kenji Maki, Jun Hata, Satoko Sakata, Yoshifuko Furuta, Emi Oishi, Toshikaki Nakano, Yosihisa Oda, Takehito Kitazono, Toshihiko Ninomiya, Kyushu Daigaku Iigakukan Daiigakukan Iigaküku Gaiyuu Daigakuigaku Iigaku Kenkyusho, Fukuoka, Japan.

Background: The information regarding the influence of serum uric acid levels on the pathological changes in kidneys is limited. We aimed to examine the association between serum uric acid levels and pathological findings of nephrosclerosis in population-based autopsy samples.

Methods: A total of 923 deceased subjects in a Japanese community underwent autopsy examinations between 1974 and 1994. Of these, 547 cases with available kidney tissues and health examinations data within a median of 3 years before death were eligible for the present study. Serum uric acid levels were categorized into quintiles (Q1, 1.8-3.9; Q2, 4.0-4.6; Q3, 4.7-5.4; Q4, 5.5-6.3; Q5, 6.4-12.7 mg/dL). The presence of advanced degree of glomerular sclerosis, kidney arteriolar hyalinosis, and kidney arteriosclerosis were determined by the 90th percentile or more of a glomerular sclerosis index and an arteriolar hyalinosis index, and the 10th percentile or less of a wall-lumen ratio, respectively. A logistic regression model was used to evaluate odds ratios and their 95% confidence intervals of serum uric acid levels on the incidence of advanced nephrosclerosis.

Results: Higher serum uric acid levels were associated significantly with greater age- and sex-adjusted glomerular sclerosis index and lesser wall-lumen ratio. Subjects in the Q5 group had a significantly greater likelihood of advanced glomerular sclerosis and advanced kidney arteriolar hyalinosis than in subjects in the Q1 group after adjusting for potential covariates. There was no evidence of significant associations of serum uric acid levels with arteriolar hyalinosis index and the presence of advanced arteriolar hyalinosis.

Conclusions: Elevated serum uric acid levels were associated significantly with advanced glomerular sclerosis and advanced kidney arteriolar hyalinosis, but not with advanced arteriolar hyalinosis in community based autopsied samples of Japanese.

PO2280
Prescribed Medications for Nausea and Vomiting Symptoms and Incident CKD in US Veterans
Diana S. Kalantar-Zadeh,1 Cachet Wenziger,2 Praveen Kumar Potukuchi,3 Anukar A. Dashputre,4 Keiichi Sumida,1 Csaba P. Kovedy,4 Kamary Kalantar-Zadeh,1,2 Elani Streja,1,3 1VA Long Beach Healthcare System, Long Beach, CA; 2School of Medicine, University of California Irvine, Irvine, CA; 3The University of Tennessee Health Science Center, Memphis, TN; 4VA Memphis Medical Center, Memphis, TN.

Background: Unpleasant upper gastrointestinal symptoms including nausea and vomiting prescribed medication for their management may have important clinical implications as prelude to incident of chronic kidney disease (CKD), a hypothesis we sought to examine in US Veterans without reduced kidney function.

Methods: In 2,524,842 US Veterans with normal baseline eGFR (≥60 ml/min/1.73m^2) and available data on albuminuria in 2004-2006, we examined the association of de novo prescription of anti-emetic medications during the baseline period with incident CKD over 14 years. Associations were examined in hazard models adjusted for demographics, major comorbidities, baseline eGFR, and albuminuria category.

Results: We identified 14,831 Veterans who were incident new anti-emetic users. Patients were a mean 61±14 years old, 7% female, 16% Black, and 5% Hispanic. Anti-emetic medication users were more likely to be female, White, smokers, with higher frequencies of comorbidities such as chronic obstructive pulmonary disease, cancer, and diabetes. Anti-emetic medication users had an almost 2-fold higher incidence rate of CKD compared to non-users (4.7% [95% CI 4.6-4.9] per 100 patient years vs. 2.4-10PPY [2.4-2.4], a faster time to incident CKD (Figure 1), and a 73% higher multivariable adjusted hazard (HR: 1.73, 95%CI: 1.69, 1.78) of incident CKD.

Conclusions: De novo prescription of anti-emetic medications in Veterans without reduced kidney function is associated with 73% higher likelihood of incident CKD independent of comorbidities and other potential confounders. Higher incident CKD likelihood may be due to prescribed anti-emetic medications or this relationship may represent the association of the unpleasant upper gastrointestinal symptoms with CKD risk, which warrants additional studies.

Funding: Veterans Affairs Support

PO2281
Polypharmacy and Potentially Inappropriate Medication Use in Patients with CKD Managed in Canadian Primary Care
Mohammed M. Tiwada,1 Deenaz Zaidi,2 Fegh Fei,2 Shezel Muneer,2 Anakul Ghimire,3 Maryam Farhat,4 Noma Salta,5 Ikchi G. Okpocha,1 Paul E. Ronksley,1 Neil Drummond,1 Dee Margin,2 Aminu K. Bello,1 1University of Alberta Faculty of Medicine & Dentistry, Edmonton, AB, Canada; 2McMaster University Faculty of Health Sciences, Hamilton, ON, Canada; 3University of Calgary Cumming School of Medicine, Calgary, AB, Canada.

Background: Polypharmacy and the use of potentially inappropriate medications (PIMs) are an increasingly serious public health challenge attributable to aging populations and multimorbidity. This study assessed the prevalence of polypharmacy and use of PIMs in chronic kidney disease (CKD).

Methods: A cross-sectional analysis using the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) database (January 1, 2010 through December 31, 2018). Polypharmacy was defined as the use of 5 medications, excessive polypharmacy as a 10 medications, and PIMs as medications recommended to be avoided in CKD.

Results: The cohort was comprised of 70,331 patients (mean [SD] age, 73.1 [11.4] years; 40,502 [57.6%] female) with CKD stages G3a to G5. The most common chronic conditions were hypertension (60.8%), diabetes (29.4%), and osteoarthritis (25.4%). Overall, the prevalence of polypharmacy and excessive polypharmacy was 91.5% and 74.9%, respectively. The median number of medications was 14 (IQR 9-23). The most commonly prescribed medications were atorvastatin (29.8%), amiodipine (28.9%), and rosuvastatin (27.2%). About 45% of patients with CKD had at least one PIM, 11.1% had two PIMs, and 3.6% had three or more PIMs. The most commonly prescribed PIMs were metformin (21.7%), nitrofurantoin (16.2%), and rivaroxaban (4.5%).

Conclusions: Polypharmacy and use of PIMs are highly prevalent among patients with CKD managed in primary care. These findings highlight opportunities for interventions aimed at improving prescribing practices in the management of CKD.

Funding: Government Support - Non-U.S.

PO2282
Association of SGLT2 Inhibitors and DPP-4 Inhibitors vs. GLP-1 Agonists with Incident CKD in US Veterans
Kamary Kalantar-Zadeh,1 Connie Rhee,1 Yoko Narasaki,1 Amy S. You,2 Anukar A. Dashputre,2 Keiichi Sumida,2 Fridjof Johnsson,2 Elani Streja,1 Praveen Kumar Potukuchi,2 Csaba P. Kovedy,2 1University of California Irvine, Irvine, CA; 2The University of Tennessee Health Science Center College of Medicine, Memphis, TN.

Background: Randomized controlled trials (RCTs) have demonstrated that SGLT2 inhibitors (SGLT2i) reduce the risk of eGFR decline and ESRD as compared with placebo in patients with pre-existing CKD. These RCTs showed an initial dip in eGFR with initiation of SGLT2i that stabilized over time. Little is known about the impact SGLT2i vs. other newer anti-diabetic medications (DPP-4 inhibitors [DPP4i], GLP1 agonists [GLP1a]) upon risk of developing de novo kidney dysfunction in patients without underlying CKD.

Methods: Among US Veterans with diabetes and absence of pre-existing CKD (normal eGFR and no proteinuria) followed over 2004-18, we identified incident (new) users of SGLT2i vs. DPP4i vs. GLP1a therapy, excluding combined users of the examined classes. We examined associations of SGLT2i vs. DPP4i vs. GLP1a use with the risk of incident CKD (primary outcome) and ESRD (secondary outcome) using multivariable Cox models.