

## **Supplemental Material**

### **Supplemental Figure 1.** Study cohort

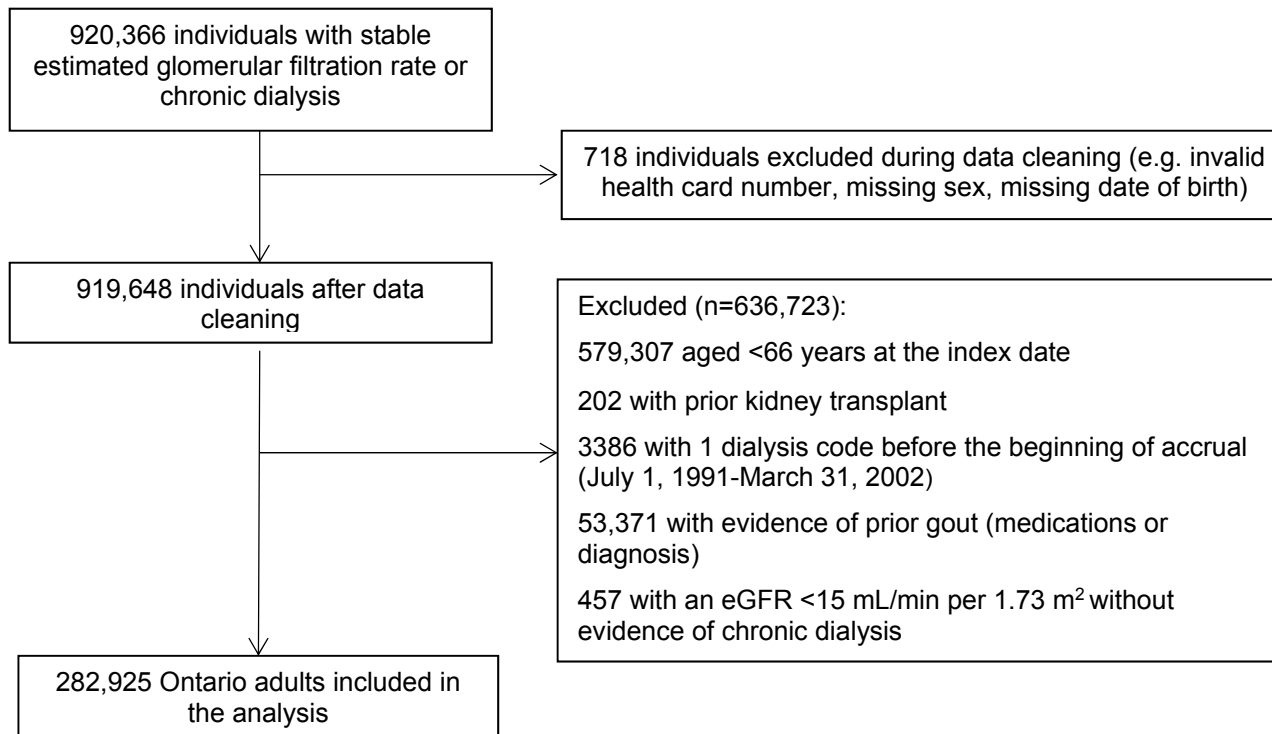
### **Supplemental Table 1.** Chronic kidney disease prognosis by estimated glomerular filtration rate and albumin-to-creatinine ratio<sup>a</sup>

### **Supplemental Table 2.** Database codes for outcome measurements

### **Supplemental Table 3.** Baseline characteristics of the 165,759 individuals in the subpopulation with urine albumin to creatinine and estimated glomerular filtration rate results presented by four categories of risk defined in the 2012 KDIGO guidelines<sup>a</sup>

### **Supplemental Table 4.** Three-year cumulative incidence, incidence rate, hazard ratios and subdistribution hazard ratios of diagnosed gout presented by four categories of risk defined in the 2012 KDIGO guidelines and sex (secondary cohort)

**Supplemental Figure 1. Study cohort**



**Supplemental Table 1.** Chronic kidney disease prognosis by estimated glomerular filtration rate and albumin-to-creatinine ratio<sup>a</sup>

		Persistent albuminuria categories (mg/g)		
		<30	30-300	>300
eGFR (mL/min /1.73 m <sup>2</sup> )	≥90	Low Risk	Moderately Increased Risk	High Risk
	60-89	Low Risk	Moderately Increased Risk	High Risk
	45-59	Moderately Increased Risk	High Risk	Very High Risk
	30-44	High Risk	Very High Risk	Very High Risk
	15-29	Very High Risk	Very High Risk	Very High Risk
	<15	Very High Risk	Very High Risk	Very High Risk

Abbreviations: eGFR, estimated glomerular filtration rate

<sup>a</sup>Refers to the 2012 Kidney Disease Improving Global Outcomes (KDIGO) nomenclature which classifies adults with a similar CKD prognosis into four categories. Risk categories are defined by eGFR and albuminuria category. The four categories include: low risk, moderate risk, high risk, or very high risk.

Source: Kidney Disease: Improving Global Outcomes Work Group. KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. *Kidney Int. Suppl.* 2013;3(1):1-150. doi:10.1038/ki.2013.243.

**Supplemental Table 2.** Database codes for outcome measurements

<b>Characteristic</b>	<b>Database</b>	<b>Codes</b>
Gout diagnosis based on administrative database codes	CIHI-DAD NACRS OHIP	ICD-10: M10 OHIP diagnosis code: 274
Tracer outcome: rheumatoid arthritis	CIHI-DAD NACRS	ICD-10: M05, M06 OHIP diagnosis code: 714

Abbreviations: CIHI-DAD, Canadian Institute of Health Information Discharge Abstract Database; ICD-10, 10<sup>th</sup> revision of the International Statistical Classification of Diseases and Related Health Problems; NACRS, National Ambulatory Care Reporting System; OHIP, Ontario Health Insurance Plan

**Supplemental Table 3.** Baseline characteristics of the 165,759 individuals in the subpopulation with urine albumin to creatinine and estimated glomerular filtration rate results presented by four categories of risk defined in the 2012 KDIGO guidelines<sup>a</sup>

Characteristic	Categories of risk for chronic kidney disease outcomes <sup>b</sup>			
	Low Risk (n=88,524)	Moderately Increased Risk (n=43,641)	High Risk (n=19,676)	Very High Risk (n=13,918)
Age (years)	72.9 ± 5.6	75.6 ± 6.3 <sup>c</sup>	77.6 ± 6.7 <sup>c</sup>	78.9 ± 7.0 <sup>c</sup>
Women	47,684 (53.9%)	24,318 (55.7%)	11,204 (56.9%)	7,668 (55.1%)
Income, lowest quintile	16,695 (18.9%)	9,188 (21.1%)	4,285 (21.8%)	3,217 (23.1%) <sup>c</sup>
Rural Residence <sup>d</sup>	7,656 (8.6%)	3,684 (8.4%) <sup>c</sup>	1,794 (9.1%) <sup>c</sup>	1,275 (9.2%) <sup>c</sup>
eGFR (mL/min per 1.73 m <sup>2</sup> )	78.4 ± 10.1	66.0 ± 14.6 <sup>c</sup>	51.4 ± 14.7 <sup>c</sup>	34.6 ± 11.0 <sup>c</sup>
<b>Comorbidities</b>				
Charlson comorbidity index <sup>e</sup>	0 (0-0)	2 (0-2) <sup>c</sup>	2 (2-2) <sup>c</sup>	2 (2-3) <sup>c</sup>
Coronary artery disease	26,335 (29.7%)	16,135 (37.0%) <sup>c</sup>	8,565 (43.5%) <sup>c</sup>	6,918 (49.7%) <sup>c</sup>
Diabetes mellitus	46,059 (52.0%)	25,676 (58.8%) <sup>c</sup>	12,146 (61.7%) <sup>c</sup>	9,119 (65.5%) <sup>c</sup>
Heart failure	5,411 (6.1%)	4,950 (11.3%) <sup>c</sup>	3,579 (18.2%) <sup>c</sup>	3,862 (27.7%) <sup>c</sup>
Hypertension	58,564 (66.2%)	32,277 (74.0%) <sup>c</sup>	15,719 (79.9%) <sup>c</sup>	11,583 (83.2%) <sup>c</sup>
Peripheral vascular disease	719 (0.8%)	682 (1.6%)	519 (2.6%) <sup>c</sup>	588 (4.2%) <sup>c</sup>
<b>Medications</b>				
Loop diuretics	3,966 (4.5%)	3,946 (9.0%) <sup>c</sup>	3,258 (16.6%) <sup>c</sup>	4,329 (31.1%) <sup>c</sup>
Potassium-sparing diuretics	2,609 (2.9%)	2,093 (4.8%)	1,477 (7.5%) <sup>c</sup>	1,131 (8.1%) <sup>c</sup>
Thiazide diuretics	16,337 (18.5%)	9,455 (21.7%)	4,970 (25.3%) <sup>c</sup>	3,488 (25.1%) <sup>c</sup>

Data are presented as number (%) except for age and eGFR which are presented as mean ± standard deviation. The Charlson comorbidity index is presented as a median (interquartile range).

Abbreviations: eGFR, estimated glomerular filtration rate; KDIGO, Kidney Disease: Improving Global Outcomes

<sup>a</sup>Standardized differences are less sensitive to sample size than traditional hypothesis tests. They provide a measure of the difference between groups divided by the pooled standard deviation; a value >10% is interpreted as a meaningful difference between groups. The referent group for the standardized difference was the low-risk group.

<sup>b</sup>Refers to the 2012 Kidney Disease Improving Global Outcomes nomenclature which classifies adults into four categories of risk based on the prognosis of chronic kidney disease (predicted risk for chronic kidney disease outcome). Risk categories are defined by estimated glomerular filtration rate and albuminuria category. The four categories include: low risk, moderate risk, high risk or very high risk. For example, all individuals in the high-risk category would have a similar relative risk of chronic kidney disease outcomes.

<sup>c</sup>Denotes a meaningful difference (>10%).

<sup>d</sup>Refers to location of residence with a population size < 10,000 persons

<sup>e</sup>All individuals with an eGFR <60 mL/min/1.73 m<sup>2</sup> with a Charlson Comorbidity Index (CCI) of 0 were given a score of 2 and those with a score of 1 were given a score of 3; one of the variables in the CCI is presence of kidney disease which automatically results in these individuals receiving a score of 2.

**Supplemental Table 4.** Three-year cumulative incidence, incidence rate, hazard ratios and subdistribution hazard ratios of diagnosed gout presented by four categories of risk defined in the 2012 KDIGO guidelines and sex (secondary cohort)

Categories of risk <sup>a</sup>	3-year cumulative incidence <sup>b</sup> (%, 95% CI)	Incidence rate per 1000 person- years (95% CI)	Hazard ratio (95% CI)		Subdistribution hazard ratio (95% CI) <sup>b</sup>	
			Unadjusted	Adjusted <sup>c</sup>	Unadjusted	Adjusted <sup>c</sup>
Women						
Low Risk (n=47,684)	1.1 (1.1-1.2)	3.9 (3.6-4.2)	1.0 (reference)	1.0 (reference)	1.0 (reference)	1.0 (reference)
Moderate Risk (n=24,318)	2.1 (1.9-2.2)	7.2 (6.6-7.9)	1.9 (1.7-2.1)	1.6 (1.4-1.8)	1.8 (1.6-2.1)	1.7 (1.5-1.9)
High Risk (n=11,204)	3.4 (3.1-3.7)	12.3 (11.1-13.6)	3.2 (2.8-3.6)	2.4 (2.1-2.8)	3.0 (2.7-3.5)	2.5 (2.2-2.9)
Very High Risk (n=7,668)	5.7 (5.2-6.2)	22.4 (20.3-24.5)	5.8 (5.1-6.5)	4.0 (3.4-4.7)	5.1 (4.5-5.8)	3.9 (3.3-4.6)
Men						
Low Risk (n=40,840)	1.9 (1.7-2.0)	6.5 (6.1-7.0)	1.0 (reference)	1.0 (reference)	1.0 (reference)	1.0 (reference)
Moderate Risk (n=19,323)	2.9 (2.7-3.1)	10.4 (9.6-11.3)	1.6 (1.4-1.8)	1.5 (1.3-1.6)	1.6 (1.4-1.7)	1.5 (1.3-1.7)
High Risk (n=8,472)	4.6 (4.1-5.0)	17.0 (15.4-18.8)	2.6 (2.3-3.0)	2.2 (1.9-2.5)	2.5 (2.2-2.8)	2.2 (1.9-2.5)
Very High Risk (n=6,250)	7.0 (6.4-7.8)	28.6 (26.0-31.4)	4.4 (3.9-4.9)	3.3 (2.9-3.9)	3.8 (3.4-4.3)	3.2 (2.8-3.7)

Abbreviation: CI, confidence interval; KDIGO, Kidney Disease: Improving Global Outcomes

<sup>a</sup> Refers to the 2012 Kidney Disease: Improving Global Outcomes nomenclature which classifies adults into four categories by prognosis of chronic kidney disease (low risk, moderate risk, high risk or very high risk).

<sup>b</sup> Estimates derived from the Fine and Gray method to account for the competing risk of death.

<sup>c</sup> Cox regression model looking at kidney function and gout, adjusted for age, diabetes, diuretic use, hypertension and Charlson comorbidity index