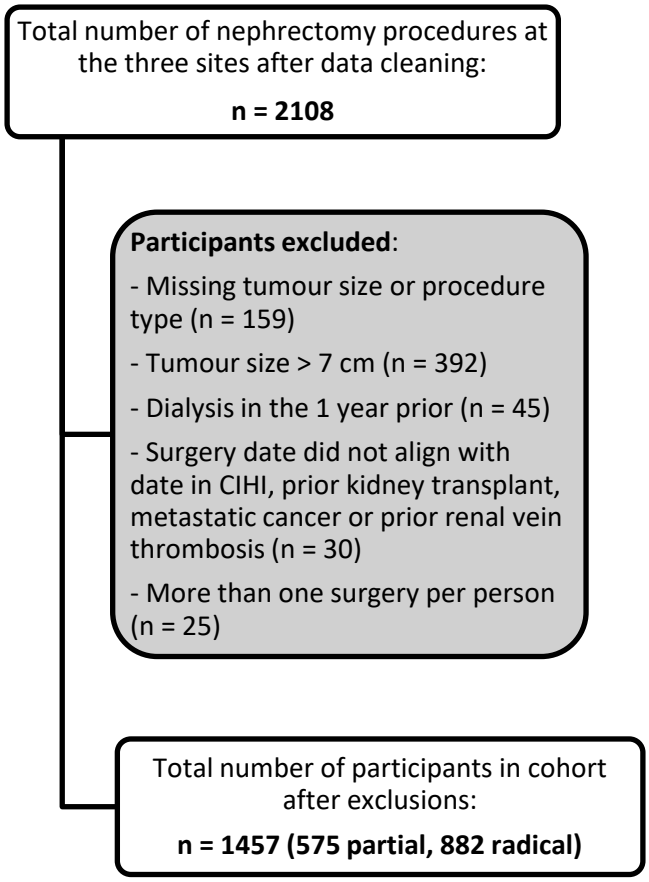
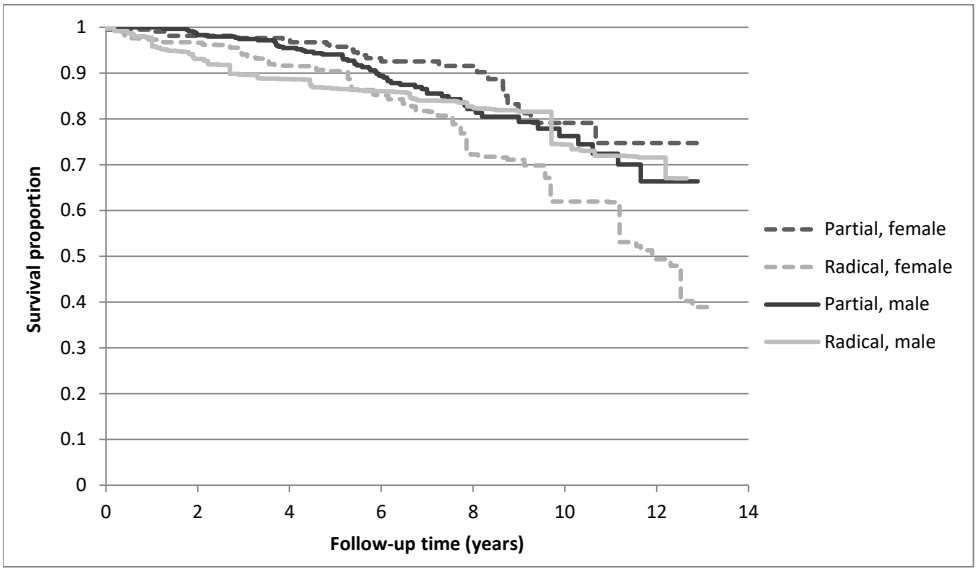
APPENDIX

Supplementary Fig. 1. Participant flow diagram.



Supplementary Fig. 2. Kaplan-Meier curve of survival time following partial and radical procedures stratified by sex.



Time-stratified proportional hazard ratios (HR) and 95% confidence interval (CI) for partial compared to radical (referent group) among females:

0-<5 years: HR (95% CI): 0.42 (0.19, 0.94)

5+ years: HR (95% CI): 0.44 (0.23, 0.84)

Time-stratified proportional hazard ratios (HR) and 95% confidence interval (CI) for partial compared to radical (referent group) among males:

0-<5 years: HR (95% CI): 0.42 (0.25, 0.71)

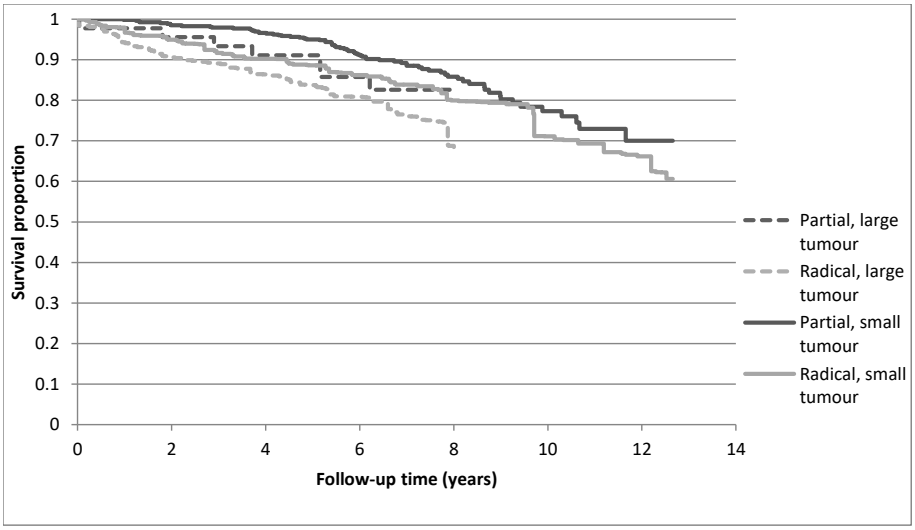
5+ years: HR (95% CI): 1.69 (1.00, 2.85)

Interaction *p*-values:

0-<5 years: 0.96

5+ years: 0.0006

Supplementary Fig. 3. Kaplan-Meier curve of survival time following partial and radical procedures stratified by tumor size.



Time-stratified proportional hazard ratios (HR) and 95% confidence interval (CI) for partial compared to radical (referent group) among patients with tumor ≤ 4 cm:

0-<5 years: HR (95% CI): 0.41 (0.26, 0.66)

5+ years: HR (95% CI): 1.02 (0.68, 1.54)

Time-stratified proportional hazard ratios (HR) and 95% confidence interval (CI) for partial compared to radical (referent group) among patients with tumor > 4 cm:

0-<5 years: HR (95% CI): 0.53 (0.16, 1.79)

5+ years: HR (95% CI): 0.85 (0.25, 2.86)

Interaction *p*-values:

0-<5 years: 0.32

5+ years: 0.32

Supplementary Table 1. REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) statement

	Item no	STROBE items	RECORD items	Reported
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract. (b) Provide in the abstract an informative and balanced summary of what was done and what was found.	(1.1) The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included. (1.2) If applicable, the geographic region and time frame within which the study took place should be reported in the title or abstract. (1.3) If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	Title and abstract
Introduction				
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported.		Introduction
Objectives	3	State specific objectives, including any prespecified hypotheses.		Introduction
Methods				
Study design	4	Present key elements of study design early in the paper.		Study design and setting
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, followup, and data collection.		Study design and setting & data sources
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of	(6.1) The methods of study population selection (such as codes or algorithms used to identify subjects) should	Data sources & patients and exposure status

		participants. Describe methods of followup. (b) For matched studies, give matching criteria and number of exposed and unexposed.	be listed in detail. If this is not possible, an explanation should be provided. (6.2) Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided. (6.3) If the study involved linkage of databases, consider use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	(7.1) A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.	Patients and exposure status, outcomes & Supplementary Table 2
Data sources/ measurement	8	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group.		Analysis
Bias	9	Describe any efforts to address potential sources of bias.		Analysis
Study size	10	Explain how the study size was arrived at.		N/A

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why.		Analysis
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding. (b) Describe any methods used to examine subgroups and interactions. (c) Explain how missing data were addressed. (d) If applicable, explain how loss to follow-up was addressed. (e) Describe any sensitivity analyses.		Analysis
Data access and cleaning methods		N/A	(12.1) Authors should describe the extent to which the investigators had access to the database population used to create the study population. (12.2) Authors should provide information on the data cleaning methods used in the study.	Access to data
Linkage		N/A	(12.3) State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	Study design and setting
Results				
Participants	13	(a) Report numbers of individuals at each stage of study, e.g., numbers potentially eligible, examined for eligibility, confirmed	(13.1) Describe in detail the selection of the persons included in the study (i.e., study population selection), including filtering based on	Baseline characteristics & Fig. 1

		eligible, included in the study, completing followup, and analyzed. (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram.	data quality, data availability, and linkage. The selection of included persons can be described in the text and/or by means of the study flow diagram.	
Descriptive data	14	(a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders. (b) Indicate number of participants with missing data for each variable of interest. (c) Summarize followup time (e.g., average and total amount).		Baseline characteristics, mortality and cardiovascular outcomes, Supplementary Table 3
Outcome data	15	Report numbers of outcome events or summary measures over time.		Postoperative outcomes, mortality and cardiovascular outcomes
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included. (b) Report category boundaries when continuous variables were categorized. (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period.		Mortality and cardiovascular outcomes, Figs. 2–4, Table 3
Other analyses	17	Report other analyses done (e.g., analyses of subgroups and interactions, and sensitivity analyses).		Mortality and cardiovascular outcomes, Table 2, Fig. 5,

				Supplementary Table 4
Key results	18	Summarize key results with reference to study objectives.		Discussion
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias.	(19.1) Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	Discussion
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence.		Discussion
Generalizability	21	Discuss the generalizability (external validity) of the study results.		Discussion
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based.		Funding
Accessibility of protocol, raw data, and programming code		N/A	(22.1) Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	Access to data

Supplementary Table 2. Administrative codes used to define outcomes and validity of codes

Outcome	Database	Codes	Validity
All-cause mortality	RPDB	Vital status variable	Sensitivity: 94%1 PPV: 100%1
Cardiovascular disease	CIHI-DAD, OHIP	Myocardial infarction ICD-10: I21, I22 Stroke ICD-10: H341, I630, I631, I632, I633, I634, I635, I638, I639 Coronary angioplasty/ CABG CCI: 1IJ26, 1IJ27, 1IJ50, 1IJ57, 1IJ76 OHIP fee: E646, E651, E652, E654, G262, G298, R741, R742, R743, Z434	Myocardial infarction Sensitivity: 89%2 PPV: 87%2 Stroke Sensitivity: 75-81%2 PPV: 69-87%2 Coronary angioplasty/ CABG Sensitivity: 99%2 PPV: 100%2
Non-cancer related mortality	ORGD, RPDB	Cause of death: cardiovascular ICD-9: 410, 411, 412, 413, 414, 4296, 4297, 428, 435, 3623, 4349, 436, 430, 431, 432, 4340, 4341, 426, 427, 7850, 394, 395, 396, 3970, 3971, 4240, 4241, 4242, 4243, 401, 402, 404, 405, 4249, 425, 4291, 4292, 4293, 4294, 4295, 4298, 4299, 433, 437, 438, 440, 441, 442, 4431, 4438, 4439, 444, 9960, V533, V450 Cause of death: other Any other cause of death code or patients with a death record in RPDB who are missing a cause of death code in ORGD	N/A
Kidney cancer-related mortality	ORGD	ICD-9: 1890	N/A

Any dialysis	CORR, CIHI-DAD, CIHI-SDS, OHIP	Treatment Code (CORR): 060, 111, 112, 113, 121, 122, 123, 131, 132, 133, 141, 151, 152, 211, 221, 231, 241, 242, 251, 252, 311, 312, 313, 321, 322, 323, 331, 332, 333, 413, 423, 433, 443, 453 CCI: 1PZ21 OHIP FEE: R849, G323, G325, G326, G860, G862, G865, G863, G866, G330, G331, G332, G333, G861, G082, G083, G085, G090, G091, G092, G093, G094, G095, G096, G294, G295, G864, H540, H740	Outpatient dialysis Sensitivity: 100%3 PPV: 96%3 Inpatient dialysis Sensitivity: 93%3 PPV: 93%3
Nephrologist visit	OHIP, IPDB	OHIP nephrologist specific visit feecode: A160, A161, A163, A164, A165, A166, A168, A865, C160, C161, C162, C163, C164, C165, C166, C167, C169, C865, W165, W160, W865, W166, W862, W864, W867, W869, W164, W162, W161, W163, W168 OHIP internal medicine visit if physician had a "nephrology" main specialty in IPDB: A130, A131, A133, A134, A135, A136, A138, A435, C121, C122, C123, C124, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C142, C143, C168, C435, C982, W121, W130, W131, W132, W133, W134, W138, W232, W234, W235, W236, W237, W239, W435, W972, W982	N/A

1. Jha P, Deboer D, Sykora K, et al. Characteristics and mortality outcomes of thrombolysis trial participants and nonparticipants: A population-based comparison. *J Am Coll Cardiol* 1996;27:1335-42. https://doi.org/10.1016/0735-1097(96)00018-6
2. Juurlink DN, Preyra C, Croxford R, et al. Canadian Information Discharge Abstract Database: A validation study. Institute for Clinical Evaluative Sciences 2006.
3. Quinn RR, Laupacis A, Austin PC, et al. Using administrative datasets to study outcomes in dialysis patients: A validation study. *Med Care* 2010;48:745-50. https://doi.org/10.1097/MLR.0b013e3181e419fd

CABG: coronary artery bypass graft surgery; CCI: Canadian Classification for Health Interventions; CIHI-DAD: Canadian Institute for Health Information's Discharge Abstract Database; CIHI-SDS: Canadian Institute for Health Information's Same Day Surgery database; CORR: ICD-9, 9th edition of the Canadian Modified International Classification of Disease system; ICD-10: 10th edition of the Canadian Modified International Classification of Disease system; IPDB: ICES Physician Database; OHIP: Ontario Health Insurance Plan; ORGD: Office of the Registrar General; PPV: positive predictive value; RPDB: Registered Persons Database.

Supplementary Table 3. Distribution of followup times for all-cause mortality in years		
Followup time (years)	**Partial**	**Radical**
Mean (SD)	7.1 (2.3)	7.2 (3.3)
Median (IQR)	6.9 (5.3–8.4)	7.2 (5.1–9.5)
Min	0.03	0.01
Max	13.1	13.8

IQR, interquartile range; SD, standard deviation.

Supplementary Table 4. 1-, 5- and 9-year cumulative incidence of all-cause mortality		
	Partial	**Radical**
1-year cumulative incidence	0.3%	2.4%
5-year cumulative incidence	5.3%	11.8%
9-year cumulative incidence	20.0%	22.2%

Supplementary Table 5. Hazard ratios for secondary outcomes using Fine and Gray's model with competing risk of death	
Outcome	**Hazard ratio (95% confidence interval)**
Hospitalization with major cardiovascular event	1.28 (0.79, 2.07)
Non-cancer-related mortality	0.86 (0.59, 1.25)
Kidney cancer-related death	0–<4 years: 0.12 (0.03, 0.55) 4+ years: 0.87 (0.22, 3.46)