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SUPPLEMENTARY MATERIAL

Supplementary Table 1   Baseline demographics by T2D and tumour subgroups

	History of T2D		History of tumour		Total population
	Yes (n=21 817)	No (n=35 635)	Yes (n=24 980)	No (n=32 472)	(N=57 452)
Age, years, mean±SD	67.7±12.4	65.7±15.0	68.8±12.5	64.6±14.9	66.5±14.1
Male, n (%)	12 918 (59.2)	16 972 (47.6)	13 139 (52.6)	16 751 (51.6)	29 890 (52.0)
Index eGFR, mL/min/1.73 m^2, mean±SD	70.3±23.5	72.6±22.7	71.7±22.4	71.7±23.5	71.7±23.0
ECI, mean±SD	4.3±7.9	6.2±7.7	10.2±8.4	1.9±4.9	5.5±7.8
History of comorbidities, n (%)					
Asthma	1652 (7.6)	2594 (7.3)	1398 (5.6)	2848 (8.8)	4246 (7.4)
COPD	404 (1.9)	720 (2.0)	498 (2.0)	626 (1.9)	1124 (2.0)
Dementia	489 (2.2)	614 (1.7)	347 (1.4)	756 (2.3)	1103 (1.9)
Depression	717 (3.3)	1234 (3.5)	777 (3.1)	1174 (3.6)	1951 (3.4)
Hyperlipidaemia	11 717 (53.7)	9094 (25.5)	5224 (20.9)	15 587 (48.0)	20 811 (36.2)
Hypertension	13 509 (61.9)	13 539 (38.0)	8933 (35.8)	18 115 (55.8)	27 048 (47.1)
Cardiovascular disease	5089 (23.3)	4112 (11.5)	3234 (13.0)	5967 (18.4)	9201 (16.0)

Tumour	7406 (34.0)	17 574 (49.3)	24 980 (100.0)	0 (0.0)	24 980 (43.5)
Deficiency anaemia	2592 (11.9)	4500 (12.6)	3921 (15.7)	3171 (9.8)	7092 (12.3)
T2D	21 817 (100.0)	0 (0.0)	7406 (29.7)	14 411 (44.4)	21 817 (38.0)
Medication use, n (%)					
Anti-arrhythmia	287 (1.3)	408 (1.1)	229 (0.92)	466 (1.4)	695 (1.2)
Anti-coagulant	711 (3.3)	1067 (3.0)	516 (2.1)	1262 (3.9)	1778 (3.1)
Anti-diabetes	12 293 (56.4)	417 (1.2)	3215 (12.9)	9495 (29.2)	12 710 (22.1)
Anti-hypertensive	11 722 (53.7)	11 542 (32.4)	7084 (28.4)	16 180 (49.8)	23 264 (40.5)
Anti-platelet	2772 (12.7)	1827 (5.1)	1286 (5.2)	3313 (10.2)	4599 (8.0)
Bronchodilator	1002 (4.6)	1772 (5.0)	990 (4.0)	1784 (5.5)	2774 (4.8)
Diuretics	1280 (5.9)	1408 (4.0)	1504 (6.0)	1184 (3.7)	2688 (4.7)
Beta blockers	1555 (7.1)	1523 (4.3)	781 (3.1)	2297 (7.1)	3078 (5.4)
Calcium channel blockers	7094 (32.5)	6991 (19.6)	4225 (16.9)	9860 (30.4)	14 085 (24.5)
Iron	1015 (4.7)	1814 (5.1)	1530 (6.1)	1299 (4.0)	2829 (4.9)
RAAS inhibitors	10 814 (49.6)	10 065 (28.2)	5847 (23.4)	15 032 (46.3)	20 879 (36.3)

COPD, chronic obstructive pulmonary disease; ECI, Elixhauser Comorbidity Index; eGFR, estimated glomerular filtration rate; RAAS, renin-angiotensin-aldosterone system;

SD, standard deviation; T2D, type 2 diabetes.

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Supplementary Table 2   Subgroup analyses: risk of outcomes by eGFR slope category – by tumour at baseline, no tumour at baseline, history of diabetes at baseline and no history of diabetes at baseline

Outcome	eGFR slope category, mL/min/1.73 m²/year	HR (95% CI)*				
		Total population	History of type 2 diabetes		History of tumour	
			Yes	No	Yes	No
Cardiovascular mortality	≤−5 (rapid eGFRdec group)	2.6 (1.6, 4.3)†	2.2 (1.0, 4.5)†	2.9 (1.4, 5.9)†	3.2 (1.7, 6.1)†	1.8 (0.7, 4.4)
	>−5 to ≤−3	1.0 (0.6, 1.7)	0.6 (0.2, 1.4)	1.4 (0.7, 3.1)	1.1 (0.5, 2.3)	0.9 (0.4, 2.3)
	>−3 to ≤−1	1.0 (0.6, 1.7)	0.9 (0.4, 1.8)	1.2 (0.6, 2.3)	0.9 (0.4, 1.7)	1.2 (0.6, 2.5)
	>−1 to ≤1	1.0	1.0	1.0	1.0	1.0
	>1 to ≤3	0.9 (0.4, 1.8)	0.8 (0.3, 2.3)	0.9 (0.4, 2.4)	1.2 (0.5, 3.0)	0.5 (0.1, 1.8)
	>3 (rapid eGFRinc group)	1.3 (0.7, 2.2)	0.9 (0.4, 2.1)	1.7 (0.8, 3.7)	1.6 (0.8, 3.2)	0.8 (0.3, 2.2)
All-cause mortality‡	≤−5 (rapid eGFRdec group)	2.8 (1.9, 4.2)†	2.0 (1.1, 3.8)†	3.4 (2.0, 5.9)†	3.4 (2.1, 5.6)†	2.3 (1.0, 5.0)†
	>−5 to ≤−3	1.3 (0.8, 2.1)	0.9 (0.4, 1.8)	1.7 (0.9, 3.2)	1.4 (0.8, 2.6)	1.4 (0.6, 3.1)
	>−3 to ≤−1	1.0 (0.7, 1.6)	0.9 (0.5, 1.7)	1.2 (0.6, 2.0)	0.8 (0.5, 1.5)	1.5 (0.7, 2.9)
	>−1 to ≤1	1.0	1.0	1.0	1.0	1.0
	>1 to ≤3	0.8 (0.4, 1.3)	0.5 (0.2, 1.3)	0.9 (0.4, 1.9)	1.0 (0.5, 2.0)	0.5 (0.2, 1.5)
	>3 (rapid eGFRinc group)	1.5 (0.9, 2.3)	0.7 (0.4, 1.5)	2.4 (1.3, 4.3)†	1.8 (1.1, 3.2)†	0.9 (0.4, 2.1)
All-cause hospitalisation	≤−5 (rapid eGFRdec group)	1.8 (1.5, 2.1)†	1.9 (1.5, 2.5)†	1.7 (1.3, 2.1)†	1.8 (1.4, 2.3)†	1.7 (1.3, 2.2)†

	>−5 to ≤−3	1.4 (1.2, 1.7)†	1.6 (1.2, 2.1)†	1.3 (1.0, 1.6)†	1.1 (0.9, 1.5)	1.8 (1.4, 2.3)†
	>−3 to ≤−1	1.1 (0.9, 1.3)	1.1 (0.9, 1.4)	1.1 (0.9, 1.4)	1.0 (0.8, 1.2)	1.3 (1.0, 1.5)
	>−1 to ≤1	1.0	1.0	1.0	1.0	1.0
	>1 to ≤3	0.9 (0.7, 1.2)	0.9 (0.6, 1.3)	1.0 (0.7, 1.3)	1.1 (0.8, 1.5)	0.8 (0.6, 1.1)
	>3 (rapid eGFRinc group)	1.1 (0.9, 1.4)	1.0 (0.7, 1.4)	1.4 (1.1, 1.8)	1.3 (1.0, 1.8)	0.8 (0.6, 1.2)
Any cardiovascular event§	≤−5 (rapid eGFRdec group)	1.8 (1.4, 2.2)†	2.0 (1.5, 2.7)†	1.5 (1.1, 2.1)†	1.7 (1.2, 2.3)†	1.9 (1.4, 2.5)†
	>−5 to ≤−3	1.6 (1.3, 2.0)†	1.7 (1.3, 2.4)†	1.5 (1.1, 2.0)†	1.3 (0.9, 1.8)	2.0 (1.5, 2.7)†
	>−3 to ≤−1	1.2 (1.0, 1.5)†	1.2 (0.9, 1.6)	1.2 (0.9, 1.6)	1.2 (0.9, 1.6)	1.3 (1.0, 1.6)
	>−1 to ≤1	1.0	1.0	1.0	1.0	1.0
	>1 to ≤3	0.8 (0.6, 1.1)	0.8 (0.5, 1.2)	0.9 (0.6, 1.3)	1.2 (0.8, 1.8)	0.6 (0.4, 0.9)
	>3 (rapid eGFRinc group)	1.2 (0.9, 1.5)	1.2 (0.8, 1.8)	1.2 (0.9, 1.8)	1.4 (0.9, 2.1)	0.9 (0.6, 1.3)
Any kidney event¶	≤−5 (rapid eGFRdec group)	1.5 (0.9, 2.5)	2.1 (1.1, 4.3)†	0.9 (0.4, 1.8)	0.5 (0.2, 1.3)	2.3 (1.3, 4.2)†
	>−5 to ≤−3	2.1 (1.3, 3.4)†	2.6 (1.3, 5.2)†	1.7 (0.8, 4.0)	0.3 (0.1, 1.1)	3.1 (1.7, 5.6)†
	>−3 to ≤−1	1.9 (1.2, 2.9)†	1.5 (0.8, 3.0)	2.3 (1.3, 4.3)†	0.8 (0.3, 1.6)	3.2 (1.8, 5.7)†
	>−1 to ≤1	1.0	1.0	1.0	1.0	1.0
	>1 to ≤3	0.2 (0.0, 0.6)	0.2 (0.0, 1.0)	0.1 (0.0, 1.0)	0.3 (0.0, 1.7)	0.1 (0.0, 0.6)
	>3 (rapid eGFRinc group)	0.5 (0.1, 2.2)	0.3 (0.0, 2.5)	0.7 (0.1, 4.2)	0.4 (0.0, 3.3)	0.6 (0.1, 3.9)

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*Cox proportional hazard model for time-to-event, adjusted for age, sex, medical history, BL type 2 diabetes status, BL ECI score, BL medication use and index eGFR value, with interaction terms for slope categories. Categories 2‑6 (eGFR slopes: ≤-5, >-5 to ≤-3, >-3 to ≤-1, >1 to ≤3, >3) were analysed by outcome, with Category 1 (slope >-1 to ≤1) as reference.

†Statistically significant HRs.

‡Based on inpatient death data.

§ Stroke, chronic heart failure or myocardial infarction.

¶End-stage kidney disease, dialysis, acute kidney failure or kidney transplant.

BL, baseline; ECI, Elixhauser Comorbidity Index; eGFR, estimated glomerular filtration rate; eGFRdec, eGFR decliner; eGFRinc, eGFR increaser; HR, hazard ratio.