SUPPLEMENTARY APPENDIX

Mortality in IgA Nephropathy – a nationwide population-based study

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Description of the national registers used in the paper

Personal identity number (PIN)

All Swedish citizens are assigned a unique ten-digit personal identity number (PIN), consisting birth date in YYMMDD format, a three-digit serial number and a one-digit checksum. The PIN is used for identification in a wide range of contexts, including all healthcare contacts, and it is also the identifier in national census and health registers.[1]

The Total Population Register (TPR)

The Swedish Total Population Register (TPR) contains demographical data on all Swedish residents, including date of birth, death, emigration or immigration, area of birth and residence, and level of education. The Multi-Generation Register (MGR) is part of the TPR and links legal spouses and first-degree relatives to all individuals born in Sweden since 1932 who were still alive in 1961. [2]

The National Patient Register (NPR)

The Swedish National Patient Register (NPR) contains information on inpatient discharge records from 1964 onward, with national coverage since 1987. Hospital-based outpatient visits are included since 2001, with a coverage of more than 99%. The register includes data on admission and discharge, main and additional diagnoses and surgical procedures, with corresponding International Classification of Diseases (ICD) codes and procedure codes. The register has been validated for several diagnoses, with positive predictive values of 85-95 % for most diagnoses, with a tendency to higher accuracy with more severe diagnoses. [4]

The Prescribed Drug Register (PDR)

The Swedish Prescribed Drug Register was started on July 1 2005 and contains information on drugs dispensed in Swedish Pharmacies, including substance with corresponding ATC code, brand name, formulation, amount and dosage, age sex, place of residence and PIN of the patient. The register has a high sensitivity. Patient identity is available for 99,7% of the drug disposals. [5]

The Cause of Death Register (CDR)

The Swedish Cause of Death Register (CDR) was launched in 1952 and became complete in 1961. Registration of a cause of death is mandatory and should be completed within three weeks from the death certificate. The register includes a primary and, if applicable, contributing cases of death. A cause of death is registered in about 99.5% of the deceased (the remaining 0.5% are assigned the ICD code R99.9. [5] For this study, we used only the primary death cause.

[1] Ludvigsson, JF, Otterblad-Olausson, P, Pettersson, BU, Ekbom, A: The Swedish personal identity number: possibilities and pitfalls in healthcare and medical research. *Eur J Epidemiol,* 24**:** 659-667, 2009.

[2] Ludvigsson, JF, Almqvist, C, Bonamy, AK, Ljung, R, Michaelsson, K, Neovius, M, Stephansson, O, Ye, W: Registers of the Swedish total population and their use in medical research. *Eur J Epidemiol,* 31**:** 125-136, 2016.

[3] Ludvigsson JF, Andersson E, Ekbom A*, et al.* External review and validation of the Swedish national inpatient register. *BMC Public Health* 2011; **11:** 450).

[4] Wettermark, B, Hammar, N, Fored, CM, Leimanis, A, Otterblad Olausson, P, Bergman, U, Persson, I, Sundstrom, A, Westerholm, B, Rosen, M: The new Swedish Prescribed Drug Register--opportunities for pharmacoepidemiological research and experience from the first six months. *Pharmacoepidemiology and drug safety,* 16: 726-735, 2007.

[5] Brooke, HL, Talback, M, Hornblad, J, Johansson, LA, Ludvigsson, JF, Druid, H, Feychting, M, Ljung, R: The Swedish cause of death register. *Eur J Epidemiol,* 32: 765-773, 2017.

eTable S1. International classification of disease (ICD) codes for renal disease, cardiovascular disease, diabetes, cancer, autoimmune disease, Henoch-Schönlein purpura (HSP) and other systemic inflammatory diseases.

Diagnostic group	ICD-8	ICD-9	ICD-10
Heredity for renal disease at study entry (adjusted for)			
End-stage renal disease	see eTable S2		
IgA Nephropathy	defined according to renal biopsy records		
IgA Nephropathy phenotype			
Concurrent extrarenal IgA vasculitis (Henoch-Schönlein purpura) before or <1 year after IgAN diagnosis	287,00	278A	D69.0
Comorbidity at study entry (adjust for 1-4)			
1. Cardiovascular disease/death	390-458	390-459	I00-99
2. Cancer	140-209	140-208	C00-D48
3. Diabetes mellitus (type 1 or 2)	250	250	E10-14
4. Other systemic inflammatory diseases (any of those below but other than diabetes)			
-*Psoriasis*	696 (969,30 excluded)	696A-C + E-W	L40
-*SLE*	734,1	710A	M32.1; M32.8; M32.9
-*Rheumatoid arthritis*	712,3; 714,93	714	M05; M06; M08; M09; M12.3
-*Crohn's disease*	572,00; 572,09; 563,00	555	K50
-*Ulcerative colitis*	572,20; 572,21; 563,10	556	K51
-*Thyroiditis*	245	245A-X	E06
-*Hyperthyroidism*	242	242	E05
-*Sarcoidosis*	135	135	D86
-*Primary biliary cirrhosis*		571G	K74.3
-*ANCA vasculitis and other vasculitis*	446,	446	M31
-*Celiac disease*	269,0	579A	K90.0
-*Pelvospondylitis*			M45.9
-*Autoimmune hepatitis*	573,08; 573,09	573D	K75.4; K75.5; K75.9
-*Primary sclerosing cholangitis*			K83.0A

eTable S2. International classification of disease (ICD) codes for renal endpoints using hospital-based in- or outpatient diagnosis.

Diagnostic group	ICD-8	ICD-9	ICD-10	Procedure codes
Medical diagnosis of end-stage renal disease (ESRD)[a]	-	585	N18.0; N18.5	
Renal dialysis[b]	Y29,01	V45B; V56	Z49; Z99.2	9200; V9200; 9212; V9212; 9314; V9531; DR012; DR013; DR016; DR024; QF006 9211; V9211; 9213; V9213; V9532; DR015; DR023; DR055; DV056 9219; V9219; 9223; V9223; DR017; DR020; DR055; DR056
Renal transplantation		V42A	Z94.0	6070; KAS10; KAS20

[a] In the Patient Register or the Cause of Death Register (underlying or contributory cause).
[b] Regarded as ESRD if *occurring ≥3 times in a patient with ≥4 months between the first and last dialysis*.

eTable S3. Anatomical therapeutic chemical (ATC) codes for medications

Drug group	ATC code
Steroids	H02AB, except H02AB08 (triamcinolone) H02B
Immunosuppressants, other	Cyclophosphamide (L01AA01); Rituximab (L01XC02) Mycophenolic acid (L04AA06) Cyclosporine (L04AD01 Tacrolimus (L04AD02) Azathioprine (L04AX01),
Inhibitors of the renin-angiotensin-aldosterone system (RAAS inhibitors).	C09
Anti-hypertensives, other	C02, C03 C07 and C08
Statins	C10AA

eTable S4. International classification of disease (ICD) codes for cause-specific death.

Cause of death[a]	ICD8	ICD9	ICD10
Cardiovascular	390-458	390-459	I00-99
Cancer	140-209	140-208	C00-D48
Other		All other causes	

[a] According to *underlying* cause but not contributory cause.

eTable S5. Death hazard in patients with IgA nephropathy (IgAN) diagnosed in Sweden from 1974-2011 compared with the general reference population (corresponds to figure 2, column 1).

Variable	IgAN: Events/py	Ref: Events/py	Events/1000 py: IgAN vs. ref	Adj HR (95% CI)
Total	577/54058	2066/277463	10.7 vs. 7.4	1.53 (1.37, 1.72)
Length of follow-up				
0 to 1 years	43/3590	71/17957	12 vs. 4	2.47 (1.50, 4.06)
1 to 5 years	111/17286	355/86664	6.4 vs. 4.1	1.21 (0.93, 1.58)
>5 years [a]	423/52782	1640/271683	8 vs. 6	1.58 (1.39, 1.80)
>10 years [a]	293/46349	1204/240801	6.3 vs. 5	1.56 (1.34, 1.82)
>20 years [a]	99/26236	438/140427	3.8 vs. 3.1	1.59 (1.22, 2.08)
>30 years [a]	13/7754	56/42980	1.7 vs. 1.3	2.03 (0.92, 4.48)
Sex				
Women	134/16422	502/83079	8.2 vs. 6	1.65 (1.32, 2.08)
Men	443/37636	1564/194384	12 vs. 8.1	1.50 (1.32, 1.71)
Age				
-17 years	4/5754	9/29152	0.70 vs. 0.31	[d]
18-39 years	73/26519	211/131622	2.8 vs. 1.6	1.73 (1.28, 2.34)
40-59 years	221/17491	781/90365	13 vs. 8.6	1.25 (1.04, 1.50)
≥60 years	279/4294	1065/26324	65 vs. 40	1.78 (1.51, 2.11)
Calendar year				
1974-1988	121/11788	459/61222	10 vs. 7.5	1.88 (1.47, 2.41)
1989-2001	313/26891	1160/138298	12 vs. 8.4	1.46 (1.25, 1.71)
2002-2015	143/15379	447/77943	9.3 vs. 5.7	1.48 (1.18, 1.85)
Education				
Compulsory school (0-9 years)	257/10974	891/59247	23 vs. 15	1.52 (1.26, 1.83)
Upper sec. school (1-3 years)	206/24829	687/124915	8.3 vs. 5.5	1.47 (1.19, 1.81)
University	76/17636	344/87645	4.3 vs. 3.9	1.21 (0.84, 1.74)
Country of birth				
Nordic	545/50257	1961/257647	11 vs. 7.6	1.52 (1.36, 1.71)
Non-Nordic	32/3796	105/19712	8.4 vs. 5.3	1.86 (1.14, 3.05)
Henoch-Schönlein purpura[b]				
Yes	20/2607	68/13101	7.7 vs. 5.2	1.54 (0.76, 3.13)
Cardiovascular disease[c]				
No	270/39425	1053/199536	6.8 vs. 5.3	1.62 (1.38, 1.89)
Yes	307/14633	1013/77927	21 vs. 13	1.33 (1.10, 1.62)
Cancer[c]				
No	530/52061	1898/266387	10 vs. 7.1	1.56 (1.38, 1.75)
Yes	47/1997	168/11076	24 vs. 15	1.51 (0.83, 2.78)
Diabetes mellitus (type 1 or 2)[c]				
No	517/52602	1883/268568	9.8 vs. 7	1.54 (1.37, 1.73)
Yes	60/1456	183/8895	41 vs. 21	1.30 (0.61, 2.77)
Other systemic inflammatory disease[c]				
No	499/50873	1851/259462	9.8 vs. 7.1	1.50 (1.33, 1.68)
Yes	78/3186	215/18001	24 vs. 12	1.79 (0.85, 3.79)
First-grade relative with renal disease				
IgAN	2/501	11/2474	4 vs. 4.4	1.80 (0.30, 10.8)
ESRD	7/942	26/4717	7.4 vs. 5.5	1.21 (0.38, 3.82)

[a] Not mutually exclusive. For instance a patient with a follow-up of 11 years would be included in both the >5-year- and the >10-year-categories.

[b] Before or within 1 year after first renal biopsy indicating IgAN.

[c] Before study entry (date of IgAN and corresponding date in reference individuals).

[d] Adjusted HR not possible to estimate due to lack of variation within strata.

py = person-years, HR = hazard ratio.

eTable S6: Death hazard in patients with IgA nephropathy (IgAN) diagnosed in Sweden in 1974-2011 compared with siblings (corresponds to Figure 3, column 2).

Variable	IgAN: Events/py	Ref: Events/py	Events/1000 py: IgAN vs. Ref	Adj HR (95% CI)
Total	257/43106	362/99467	6 vs. 3.6	1.62 (1.29, 2.03)
Length of follow-up				
0 to 1 years	10/2762	8/6191	3.6 vs. 1.3	0.90 (0.14, 5.88)
1 to 5 years	43/13425	57/30190	3.2 vs. 1.9	1.63 (0.93, 2.86)
>5 years[a]	204/42272	297/97803	4.8 vs. 3	1.67 (1.30, 2.15)
>10 years[a]	143/37403	220/87394	3.8 vs. 2.5	1.72 (1.29, 2.30)
>20 years[a]	59/21748	79/51663	2.7 vs. 1.5	2.60 (1.61, 4.19)
>30 years[a]	7/6666	8/16333	1 vs. 0.49	0.38 (0.02, 9.46)
Sex				
Women	45/12606	99/28357	3.6 vs. 3.5	1.29 (0.75, 2.23)
Men	212/30499	263/71110	6.9 vs. 3.7	1.41 (1.07, 1.86)
Age				
-17 years	4/5511	4/11968	0.73 vs. 0.33	[d]
18-39 years	54/23196	85/51255	2.3 vs. 1.7	1.65 (1.01, 2.68)
40-59 years	136/12885	220/32085	11 vs. 6.9	1.39 (1.03, 1.87)
≥60 years	63/1514	53/4159	42 vs. 13	3.01 (1.69, 5.37)
Calendar year				
1974-1988	52/9263	70/21761	5.6 vs. 3.2	1.92 (1.14, 3.25)
1989-2001	126/21492	193/49506	5.9 vs. 3.9	1.42 (1.03, 1.95)
2002-2015	79/12351	99/28201	6.4 vs. 3.5	1.80 (1.17, 2.76)
Education				
Compulsory school (0-9 years)	95/7088	103/18086	13 vs. 5.7	2.33 (1.41, 3.82)
Upper sec. school (1-3 years)	112/20694	186/48868	5.4 vs. 3.8	1.61 (1.10, 2.35)
University	47/14974	71/31257	3.1 vs. 2.3	1.60 (0.85, 3.01)
Country of birth				
Nordic	254/42312	359/96941	6 vs. 3.7	1.63 (1.30, 2.04)
Non-Nordic	3/794	3/2526	3.8 vs. 1.2	[d]
Henoch-Schönlein purpura[b]				
Yes	8/2254	12/4857	3.5 vs. 2.5	3.98 (0.36, 44.1)
Cardiovascular disease[c]				
No	126/32727	213/73359	3.8 vs. 2.9	1.65 (1.24, 2.21)
Yes	131/10379	149/26108	13 vs. 5.7	1.68 (1.01, 2.80)
Cancer[c]				
No	244/41671	341/96030	5.9 vs. 3.5	1.63 (1.30, 2.06)
Yes	13/1435	21/3436	9.1 vs. 6.1	1.71 (0.22, 13.1)
Diabetes mellitus (type 1 or 2)[c]				
No	237/42169	344/97275	5.6 vs. 3.5	1.74 (1.38, 2.20)
Yes	20/936	18/2192	21 vs. 8.2	[d]
Other systemic inflammatory disease[c]				
No	222/40789	332/93905	5.4 vs. 3.5	1.67 (1.32, 2.12)
Yes	35/2316	30/5562	15 vs. 5.4	0.53 (0.10, 2.85)

[a] Not mutually exclusive. For instance a patient with a follow-up of 11 years would be included in both the >5-year- and the >10-year-categories.
[b] Before or within 1 year after first renal biopsy indicating IgAN.
[c] Before study entry (date of first IgAN biopsy and corresponding date in reference individuals).
[d] Adjusted HR not possible to estimate due to lack of variation within strata.
py = person-years, HR = hazard ratio.

eTable S7. Death hazard in patients with IgA nephropathy (IgAN) diagnosed in Sweden in 1974-2011 compared with spouses (corresponds to Figure 2, column 3).

Variable	IgAN: Events/py	Ref: Events/py	Events/1000 py: IgAN vs. Ref	Adj HR (95% CI)
Total	400/35774	245/37566	11 vs. 6.5	1.42 (1.11, 1.83)
Length of follow-up				
0 to 1 years	27/2213	11/2225	12 vs. 4.9	4.01 (0.65, 24.7)
1 to 5 years	76/10705	31/10861	7.1 vs. 2.8	1.20 (0.55, 2.61)
>5 years[a]	297/35096	203/37055	8.5 vs. 5.5	1.41 (1.07, 1.86)
>10 years[a]	220/31711	140/33794	6.9 vs. 4.1	1.55 (1.12, 2.17)
>20 years[a]	77/18911	59/21031	4.1 vs. 2.8	1.48 (0.82, 2.68)
>30 years[a]	12/5971	8/6791	2.0 vs. 1.2	1.17 (0.19, 7.06)
Sex				
Women	77/11053	108/10543	7.0 vs. 10	0.68[d]
Men	323/24721	137/27023	13 vs. 5.1	2.46 (1.78, 3.41)
Age				
-17 years	0/1463	1/1477	0.0 vs. 0.68	[e]
18-39 years	35/16707	23/16769	2.1 vs. 1.4	1.34 (0.57, 3.16)
40-59 years	167/14273	99/15007	12 vs. 6.6	1.19 (0.82, 1.73)
≥60 years	198/3331	122/4312	59 vs. 28	1.71 (1.15, 2.52)
Calendar year				
1974-1988	91/8930	60/9514	10 vs. 6.3	2.06 (1.24, 3.40)
1989-2001	214/18358	130/19258	12 vs. 6.8	1.26 (0.86, 1.84)
2002-2015	95/8486	55/8794	11 vs. 6.3	1.44 (0.84, 2.49)
Education				
Compulsory school (0-9 years)	183/7963	106/8821	23 vs. 12	1.53 (0.98, 2.40)
Upper sec. school (1-3 years)	143/15594	87/16093	9.2 vs. 5.4	1.32 (0.80, 2.19)
University	54/12016	38/12170	4.5 vs. 3.1	0.81 (0.34, 1.90)
Country of birth				
Nordic	377/32924	229/34566	11 vs. 6.6	1.40 (1.08, 1.82)
Non-Nordic	23/2850	16/3000	8.1 vs. 5.3	3.86 (1.04, 14.3)
Henoch-Schönlein purpura[b]				
Yes	13/1247	8/1308	10 vs. 6.1	[e]
Cardiovascular disease[c]				
No	186/25391	120/26191	7.3 vs. 4.6	1.74 (1.23, 2.48)
Yes	214/10382	125/11375	21 vs. 11	0.83 (0.44, 1.59)
Cancer[c]				
No	367/34493	224/36075	11 vs. 6.2	1.45 (1.12, 1.89)
Yes	33/1281	21/1491	26 vs. 14	0.52 (0.02, 11,0)
Diabetes mellitus (type 1 or 2)[c]				
No	361/34805	219/36350	10 vs. 6.0	1.52 (1.17, 1.98)
Yes	39/968	26/1216	40 vs. 21	[e]
Other systemic inflammatory disease[c]				
No	353/33579	208/35177	11 vs. 5.9	1.43 (1.09, 1.87)
Yes	47/2194	37/2390	21 vs. 15	0.71 (0.08, 6.24)

[a] Not mutually exclusive. For instance a patient with a follow-up of 11 years would be included in both the >5-year- and the >10-year-categories.
[b] Before or within 1 year after first renal biopsy indicating IgAN.
[c] Before study entry (date of first IgAN biopsy and corresponding date in reference individuals).
[d] CI:s not available since the estimation of the variance-covariance matrix did not converge.
[e] Adjusted HR not possible to estimate due to lack of variation within strata.
py = person-years, HR = hazard ratio

eTable S8. Death in patients with IgA nephropathy (IgAN) diagnosed in Sweden in 1974-2011 compared with the general reference population, with different medications entered as time-dependent covariates in a regular Cox model, with left truncation on July 1, 2005 (this is when the Prescribed Drug Register (PDR) started).

Use of medications[a]	Number of incident users (IgAN patients) since July 2005	Adjusted hazard ratio
Steroids	1745	1.95 (1.53, 2.50)
Immunosuppressants, other	742	1.33 (1.02, 1.74)
Renin angiotensin aldosterone system (RAAS) inhibitor	2694	0.80 (0.61, 1.04)
Anti-hypertensive, other	2562	1.84 (1.19, 2.85)
Statins	1529	0.83 (0.67, 1.04)

[a] See codes in table S4 for corresponding anatomical therapeutic chemical (ATC) codes.

eTable S9. Hazard of ESRD in patients with IgA nephropathy (IgAN) diagnosed in Sweden 1974-2011 compared with the general reference population (corresponds to figure 2, column 4).

Variable	IgAN: Events/py	Ref: Events/py	Events/1000 py: IgAN vs. Ref	Adj HR (95% CI)
Total	803/42569	67/255365	19 vs. 0.26	100 (67.7, 148)
Length of follow-up				
0 to 1 years	105/3534	2/17955	30 vs. 0.11	1109 (27.1, 45400)
1 to 5 years	294/15853	12/84658	19 vs. 0.14	159 (68.7, 369)
>5 years[a]	404/40359	53/248514	10 vs. 0.21	73.3 (46.2, 116)
>10 years[a]	196/33501	39/217000	5.8 vs. 0.18	69.2 (36.9, 130)
>20 years[a]	33/17118	14/120296	1.9 vs. 0.12	87.4 (17.9, 426)
>30 years[a]	2/4325	4/30956	0.46 vs. 0.13	[d]
Sex				
Women	147/13765	11/76324	11 vs. 0.14	123 (42.1, 358)
Men	656/28804	56/179041	23 vs. 0.31	106 (68.1, 165)
Age				
-17 years	17/5122	0/26684	3.3 vs. 0	[d]
18-39 years	311/20861	18/121507	15 vs. 0.15	279 (103, 753)
40-59 years	346/13184	36/82898	26 vs. 0.43	59.5 (36.9, 96.1)
≥60 years	129/3403	13/24277	38 vs. 0.54	201 (49.5, 813)
Calendar year				
1974-1988	117/9667	14/58885	12 vs. 0.24	341 (68.5, 1700)
1989-2001	429/21037	38/129920	20 vs. 0.29	87.7 (53, 145)
2002-2015	257/11866	15/66560	22 vs. 0.23	225 (74.9, 676)
Education				
Compulsory school (0-9 years)	228/8354	16/55078	27 vs. 0.29	59.4 (23.8, 148)
Upper sec. school (1-3 years)	373/19491	34/114805	19 vs. 0.3	125 (58.6, 268)
University	194/14203	14/80276	14 vs. 0.17	203 (45.2, 908)
Country of birth				
Nordic	718/39857	62/237484	18 vs. 0.26	96.9 (64.4, 146)
Non-Nordic	85/2708	5/17783	31 vs. 0.28	[d]
Henoch-Schönlein purpura[b]				
Yes	20/2115	2/11653	9.5 vs. 0.17	[d]
Cardiovascular disease[c]				
No	419/32331	46/184905	13 vs. 0.25	116 (70.4, 192)
Yes	384/10239	21/70461	38 vs. 0.3	112 (37.1, 338)
Cancer[c]				
No	763/41023	59/245636	19 vs. 0.24	96.3 (64.5, 144)
Yes	40/1546	8/9729	26 vs. 0.82	62.9 (4.43, 894)
Diabetes mellitus (type 1 or 2)[c]				
No	762/41438	60/247360	18 vs. 0.24	115 (75.3, 175)
Yes	41/1132	7/8005	36 vs. 0.87	3.02 (0.13, 68)
Other systemic inflammatory diseases[c]				
No	744/40047	62/239096	19 vs. 0.26	99.1 (66, 149)
Yes	59/2523	5/16269	23 vs. 0.31	20.4 (0.22, 1916)
First-degree relative with renal disease				
IgAN	5/405	1/2239	12 vs. 0.45	5.37 (0.50, 57.6)
ESRD	15/710	1/4242	21 vs. 0.24	824 (51.6, 13179)

[a] Not mutually exclusive. For instance a patient with a follow-up of 11 years would be included in both the >5-year- and the >10-year-categories.

[b] Before or within 1 year after first biopsy indicating IgAN.

[c] Before study entry (date of first IgAN biopsy and corresponding date in reference individuals).

[d] Adjusted HR not possible to estimate due to lack of variation within strata.

py = person-years, HR = hazard ratio.

STROBE Statement — Checklist of items:

	Item No	Recommendation
Title and abstract	1✓	(*a*) Indicate the study's design with a commonly used term in the title **[p. 1]**
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found **[p. 5]**
Introduction		
Background/rationale	2✓	Explain the scientific background and rationale for the investigation being reported **[p. 6]**
Objectives	3✓	State specific objectives, including any prespecified hypotheses **[p. 6]** ***Comment***: We have expressed our hypothesis (and thereby our objective) in the last paragraph of our introduction.
Methods		
Study design	4✓	Present key elements of study design early in the paper **[p. 6]**
Setting	5✓	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection **[p. 6-7]**
Participants	6✓	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up **[p. 7-8]**
		(*b*) For matched studies, give matching criteria and number of exposed and unexposed **[p. 7-8]**
Variables	7✓	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable **[p. 7-8]**
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 **[p. 7-8 + Supplementary tables]**
Bias	9✓	Describe any efforts to address potential sources of bias **[p. 15]**
Study size	10✓	Explain how the study size was arrived at ***Comment***: This is a nationwide observational study in which we included all available patients with a biopsy report of IgA nephropathy. We did not perform any *a priori* power analysis; however, if the editor feels one is needed, we can carry out a post-hoc power analysis.
Quantitative variables	11✓	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why **[p. 8]**
Statistical methods	12✓	(*a*) Describe all statistical methods, including those used to control for confounding **[p. 9-10]**
		(*b*) Describe any methods used to examine subgroups and interactions **[p. 9-10]**
		(*c*) Explain how missing data were addressed **n/a**
		(*d*) If applicable, explain how loss to follow-up was addressed **n/a**
		(*e*) Describe any sensitivity analyses **[p. 10]**
Results		
Participants	✓13*	(a) Report numbers of individuals at each stage of study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed **[p. 11]**
		(b) Give reasons for non-participation at each stage ***Comment***: Because this was a strict registry-based study, study participants were not contacted (all data were analyzed without knowledge of the identity of the study participants). Hence, we had no "non-participation" at different stages of the study.
		(c) Consider use of a flow diagram **Comment:** Dropouts occurred because of largely one reason, which is described in the text.
Descriptive data	✓14*	(a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders **[p. 11, + table 1]**
		(b) Indicate number of participants with missing data for each variable of interest

		[table 1]
		(c) Summarize follow-up time (e.g., average and total amount) **[p. 11, 13 + table 1]**
Outcome data	✓15*	Report numbers of outcome events or summary measures over time **[p. 11-13 + supplementary tables S5-S8]**
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 **[p. 8, p. 11-13 + supplementary table S5-S9]**
		(*b*) Report category boundaries when continuous variables were categorized **table 1, supplementary tables S5-S8**
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful period **p. 11-13**
Other analyses	17✓	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses **[p.14-15 + Table 3 & 4 + Suppl. Table 1]**
Discussion		
Key results	18✓	Summarize key results with reference to study objectives **[p. 13]**
Limitations	19✓	Discuss limitations of the study considering sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias **[p. 15]**
Interpretation	20✓	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence **[p. 14-15]**
Generalizability	21✓	Discuss the generalizability (external validity) of the study results **[p. 14-15]**
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 **[p. 2]**

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.