

Supplementary Table S1.

Diagnostic codes from the All of Us research program database used for cohort construction, outcomes, and covariates. OMOP CDM; Observational Medical Outcomes Partnership Common Data Model; SNOMED; Systematized Nomenclature of Medicine

Category	Sub-category	SNOMED Code	OMOP CDM Concept ID
Exposure	Hidradenitis suppurativa	59393003	4241223
Outcome	Multiple myeloma	109989006	437233
Outcome	Leukemia	93143009	317510
Outcome	Malignant lymphoma	118600007	432571
Covariate	Rheumatoid arthritis	69896004	80809
Covariate	Systemic lupus erythematosus	55464009	257628
Covariate	Inflammatory bowel disease	24526004	4074815
Covariate	Psoriasis	9014002	140168
Covariate	Type 1 diabetes mellitus	46635009	201254
Covariate	Type 2 diabetes mellitus	44054006	201826
Covariate	Obesity	414916001	433736
Covariate	Smoking status	77176002	4271896
Covariate	Body mass index	162864005	4060985

Supplementary Table S2.**Panel A. Covariate missingness**

Variable	HS missing, n/N (%)	Controls missing, n/N (%)	Overall missing, n/N (%)	Primary handling
Smoking status	984/2,636 (37.33%)	3,936/10,544 (37.33%)	4,920/13,180 (37.33%)	Complete-case analysis
BMI	260/2,636 (9.86%)	1,040/10,544 (9.86%)	1,300/13,180 (9.86%)	Complete-case analysis
Income	0 (0.00%)	0 (0.00%)	0 (0.00%)	Other/non-response retained as a separate category
Education	0 (0.00%)	0 (0.00%)	0 (0.00%)	Other/non-response retained as a separate category
Immunosuppression	0 (0.00%)	0 (0.00%)	0 (0.00%)	Presence or absence determined from EHR codes
Autoimmune comorbidities	0 (0.00%)	0 (0.00%)	0 (0.00%)	Presence or absence determined from EHR codes
Complete data for all model covariates	1,092/2,636 incomplete (41.43%)	4,368/10,544 incomplete (41.43%)	5,460/13,180 incomplete (41.43%)	Complete matched sets retained

Panel B. Model-specific analytic samples and event counts

Adjusted model	Matched sets, n	Analytic N	HS participants, n	Controls, n	Total events, n	HS events, n/N (%)	Control events, n/N (%)
Any hematologic malignancy	1,544	7,720	1,544	6,176	223	72/1,544 (4.66%)	151/6,176 (2.44%)
Multiple myeloma	1,544	7,720	1,544	6,176	47	22/1,544 (1.42%)	25/6,176 (0.40%)
Leukemia	1,544	7,720	1,544	6,176	65	24/1,544 (1.55%)	41/6,176 (0.66%)
Malignant lymphoma	1,544	7,720	1,544	6,176	134	39/1,544 (2.53%)	95/6,176 (1.54%)

Supplementary Table S3.

Outcome	Primary complete-case model: ever vs never smoking, aOR (95% CI)	Missing-category sensitivity model, aOR (95% CI)
Any hematologic malignancy	2.04 (1.62–2.47)	2.01 (1.59–2.54)
Multiple myeloma	3.64 (2.29–6.24)	3.58 (2.22–5.79)
Leukemia	2.30 (1.46–3.82)	2.27 (1.43–3.61)
Malignant lymphoma	1.83 (1.30–2.57)	1.80 (1.27–2.54)

Abbreviations: aOR, adjusted odds ratio; BMI, body mass index; CI, confidence interval; EHR, electronic health record; HS, hidradenitis suppurativa.