

Supplementary Online Content

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eFigure. PheWAS plot for *IL6R* showing phenotypes (defined as ≥ 1 PheWAS code) with significant associations in the Million Veteran Program

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Association between *IL6R* and PheWAS codes in the Million Veteran Program

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
442.11	Abdominal aortic aneurysm	2.39	3.73E-15	0.87 (0.84, 0.9)
411.4	Coronary atherosclerosis	20.5	3.43E-12	0.95 (0.94, 0.97)
411	Ischemic Heart Disease	25.36	3.97E-12	0.95 (0.94, 0.97)
411.8	Other chronic ischemic heart disease, unspecified	14.89	6.04E-12	0.95 (0.93, 0.96)
442.1	Aortic aneurysm	3.01	1.02E-11	0.9 (0.87, 0.93)
442	Other aneurysm	3.44	2.57E-09	0.92 (0.89, 0.94)
411.2	Myocardial infarction	5.52	1.69E-06	0.94 (0.92, 0.97)
440.22	Atherosclerosis of native arteries of the extremities with intermittent claudication	1.57	3.92E-06	0.9 (0.87, 0.94)
443.9	Peripheral vascular disease, unspecified	6.49	5.02E-06	0.95 (0.93, 0.97)
440.2	Atherosclerosis of the extremities	2.35	9.73E-06	0.92 (0.89, 0.96)
440	Atherosclerosis	3.09	1.80E-05	0.93 (0.91, 0.96)
443	Peripheral vascular disease	6.94	3.87E-05	0.96 (0.94, 0.98)
702	Degenerative skin conditions and other dermatoses	19.42	1.72E-04	1.03 (1.01, 1.04)
736.2	Acquired deformities of finger	0.3	2.57E-04	1.19 (1.09, 1.31)
442.2	Aneurysm of iliac artery	0.27	2.73E-04	0.83 (0.75, 0.92)
690.1	Seborrheic dermatitis	4.53	3.30E-04	1.05 (1.02, 1.07)
507	Pleurisy; pleural effusion	1.83	3.47E-04	1.07 (1.03, 1.12)
939	Atopic/contact dermatitis due to other or unspecified	11.93	3.72E-04	1.03 (1.01, 1.05)
588	Disorders resulting from impaired renal function	1.06	4.92E-04	1.1 (1.04, 1.16)
690	Erythematousquamous dermatosis	4.58	5.10E-04	1.04 (1.02, 1.07)
274.11	Gouty arthropathy	1.49	5.23E-04	1.08 (1.03, 1.13)
371.2	Conjunctivitis, noninfectious	1.41	6.60E-04	1.08 (1.03, 1.13)
411.3	Angina pectoris	4.1	9.43E-04	0.96 (0.93, 0.98)
274	Gout and other crystal arthropathies	8.32	1.01E-03	1.03 (1.01, 1.05)
702.1	Actinic keratosis	13.4	1.12E-03	1.03 (1.01, 1.04)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
274.1	Gout	8.06	1.27E-03	1.03 (1.01, 1.05)
371.21	Allergic conjunctivitis	1.28	1.69E-03	1.08 (1.03, 1.13)
769	Nonallopathic lesions NEC	1.48	1.99E-03	1.07 (1.02, 1.12)
338	Pain	6.14	2.23E-03	1.04 (1.01, 1.06)
433.11	Occlusion of cerebral arteries, with cerebral infarction	0.36	2.65E-03	0.88 (0.8, 0.96)
215	Other benign neoplasm of connective and other soft tissue	0.5	2.91E-03	1.12 (1.04, 1.21)
594.1	Calculus of kidney	5	3.66E-03	1.04 (1.01, 1.06)
588.2	Secondary hyperparathyroidism (of renal origin)	0.82	3.68E-03	1.09 (1.03, 1.16)
295.2	Paranoid disorders	0.42	3.76E-03	1.13 (1.04, 1.23)
594	Urinary calculus	6.02	3.76E-03	1.03 (1.01, 1.05)
585.31	Renal dialysis	0.82	4.19E-03	1.1 (1.03, 1.17)
760	Back pain	41.8	4.56E-03	1.02 (1.01, 1.03)
1013	Asphyxia and hypoxemia	1.74	4.84E-03	1.06 (1.02, 1.1)
338.2	Chronic pain	5.31	5.26E-03	1.03 (1.01, 1.06)
740.1	Osteoarthritis; localized	11.78	5.38E-03	1.02 (1.01, 1.04)
411.1	Unstable angina (intermediate coronary syndrome)	2.27	5.46E-03	0.95 (0.92, 0.99)
250.2	Type 2 diabetes	32.81	5.73E-03	0.98 (0.97, 1)
603.1	Hydrocele	1.06	5.75E-03	1.07 (1.02, 1.13)
555.1	Regional enteritis	0.55	5.89E-03	0.91 (0.85, 0.97)
250	Diabetes mellitus	33.03	6.15E-03	0.98 (0.97, 1)
709.2	Sicca syndrome	0.19	6.55E-03	0.84 (0.75, 0.95)
472	Chronic pharyngitis and nasopharyngitis	3.7	6.65E-03	1.04 (1.01, 1.07)
427	Cardiac dysrhythmias	22.58	7.55E-03	0.98 (0.97, 1)
474.1	Acute tonsillitis	0.17	8.17E-03	1.19 (1.05, 1.35)
350.3	Lack of coordination	0.65	8.38E-03	0.92 (0.86, 0.98)
260.3	Adult failure to thrive	0.24	8.54E-03	0.86 (0.77, 0.96)
743.11	Osteoporosis NOS	3.02	8.54E-03	1.04 (1.01, 1.07)
530.13	Barrett's esophagus	1.95	8.77E-03	1.05 (1.01, 1.09)
285	Other anemias	15.1	8.77E-03	0.98 (0.96, 0.99)
598	Abnormal findings on examination of urine	1.15	8.93E-03	1.07 (1.02, 1.12)
362.27	Drusen (degenerative) of retina	1.08	1.00E-02	0.94 (0.89, 0.98)
473.4	Voice disturbance	2.63	1.05E-02	0.96 (0.93, 0.99)
132	Infestation (lice, mites)	0.29	1.11E-02	0.88 (0.8, 0.97)
401.1	Essential hypertension	67.89	1.13E-02	0.98 (0.97, 1)
401	Hypertension	68.08	1.14E-02	0.98 (0.97, 1)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
473	Diseases of the larynx and vocal cords	3.26	1.17E-02	0.96 (0.93, 0.99)
414	Other forms of chronic heart disease	2.65	1.29E-02	0.96 (0.93, 0.99)
703	Diseases of nail, NOS	5.69	1.34E-02	0.97 (0.95, 0.99)
496.3	Bronchiectasis	0.27	1.39E-02	0.88 (0.8, 0.97)
427.21	Atrial fibrillation	9.23	1.47E-02	0.98 (0.96, 1)
280.1	Iron deficiency anemias, unspecified or not due to blood loss	5.1	1.47E-02	0.97 (0.95, 0.99)
306	Other mental disorder	8.11	1.50E-02	1.03 (1, 1.05)
362.9	Retinal edema	1.04	1.53E-02	0.94 (0.89, 0.99)
452.2	Deep vein thrombosis [DVT]	1.98	1.54E-02	1.05 (1.01, 1.09)
720	Spinal stenosis	6.65	1.66E-02	1.03 (1, 1.05)
306.9	Tension headache	0.41	1.66E-02	1.11 (1.02, 1.2)
244	Hypothyroidism	10.09	1.67E-02	0.98 (0.96, 1)
227.2	Benign neoplasm of parathyroid gland	0.1	1.67E-02	1.22 (1.04, 1.43)
427.2	Atrial fibrillation and flutter	9.69	1.70E-02	0.98 (0.96, 1)
603	Other disorders of testis	1.4	1.73E-02	1.06 (1.01, 1.1)
480.5	Bronchopneumonia and lung abscess	0.11	1.76E-02	0.82 (0.7, 0.97)
71.1	HIV infection, symptomatic	1.22	1.76E-02	1.06 (1.01, 1.12)
681	Superficial cellulitis and abscess	12.95	1.80E-02	1.02 (1, 1.04)
286.2	Encounter for long-term (current) use of anticoagulants	10.18	1.81E-02	0.98 (0.96, 1)
764	Sciatica	3.15	1.83E-02	1.04 (1.01, 1.07)
496.21	Obstructive chronic bronchitis	2.29	1.86E-02	0.96 (0.93, 0.99)
495	Asthma	7.16	1.87E-02	1.02 (1, 1.05)
371	Inflammation of the eye	9.01	1.88E-02	1.02 (1, 1.04)
244.4	Hypothyroidism NOS	9.8	1.89E-02	0.98 (0.96, 1)
715.2	Ankylosing spondylitis	0.29	1.94E-02	0.89 (0.81, 0.98)
689	Disorder of skin and subcutaneous tissue NOS	6.72	2.00E-02	1.02 (1, 1.05)
280	Iron deficiency anemias	5.45	2.00E-02	0.97 (0.95, 1)
695.3	Rosacea	2.2	2.03E-02	1.04 (1.01, 1.08)
291	Other specified nonpsychotic and/or transient mental disorders	1.42	2.04E-02	1.05 (1.01, 1.1)
528	Diseases of the oral soft tissues, excluding lesions specific for	2.07	2.08E-02	1.04 (1.01, 1.08)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	gingiva and tongue			
339	Other headache syndromes	11.85	2.09E-02	1.02 (1, 1.04)
1005	Other symptoms	7.31	2.27E-02	0.98 (0.96, 1)
598.9	Other nonspecific findings on examination of urine	1.07	2.30E-02	1.06 (1.01, 1.12)
523	Gingival and periodontal diseases	15.82	2.30E-02	1.02 (1, 1.03)
261	Vitamin deficiency	13.61	2.37E-02	1.02 (1, 1.03)
743.1	Osteoporosis	3.13	2.53E-02	1.03 (1, 1.07)
573	Other disorders of liver	1.07	2.54E-02	1.06 (1.01, 1.11)
447	Other disorders of arteries and arterioles	0.58	2.54E-02	1.08 (1.01, 1.16)
703.1	Ingrowing nail	4.2	2.57E-02	1.03 (1, 1.06)
745	Pain in joint	53.2	2.66E-02	1.01 (1, 1.03)
465	Acute upper respiratory infections of multiple or unspecified sites	15.77	2.80E-02	1.02 (1, 1.03)
372	Disorders of conjunctiva	2.03	2.84E-02	0.96 (0.92, 1)
335	Multiple sclerosis	0.55	2.84E-02	0.92 (0.86, 0.99)
568	Other disorders of peritoneum	0.35	3.01E-02	0.91 (0.83, 0.99)
754.2	Spondylolisthesis, congenital	0.37	3.04E-02	1.1 (1.01, 1.19)
71	Human immunodeficiency virus [HIV] disease	1.25	3.15E-02	1.06 (1, 1.11)
750	Digestive congenital anomalies	0.21	3.18E-02	1.13 (1.01, 1.26)
334.1	Spinocerebellar disease	0.14	3.27E-02	0.86 (0.75, 0.99)
720.1	Spinal stenosis of lumbar region	4.05	3.44E-02	1.03 (1, 1.06)
771.2	Cramp of limb	1.1	3.64E-02	0.95 (0.9, 1)
301.2	Antisocial/borderline personality disorder	1.51	3.68E-02	1.05 (1, 1.1)
626.8	Infertility, female	0.13	3.85E-02	0.84 (0.72, 0.99)
550.4	Umbilical hernia	2.34	3.85E-02	1.04 (1, 1.07)
456	Chronic venous insufficiency [CVI]	3.6	3.91E-02	1.03 (1, 1.06)
377	Disorders of optic nerve and visual pathways	1.75	3.99E-02	0.96 (0.92, 1)
255	Disorders of adrenal glands	0.85	3.99E-02	0.94 (0.89, 1)
912	Insect bite	0.68	4.00E-02	1.07 (1, 1.14)
327.71	Restless legs syndrome	1.83	4.01E-02	0.96 (0.93, 1)
575.8	Other disorders of biliary tract	0.21	4.08E-02	1.12 (1, 1.26)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
687.4	Disturbance of skin sensation	6.49	4.09E-02	1.02 (1, 1.05)
296.1	Bipolar	5.8	4.14E-02	1.02 (1, 1.05)
555	Inflammatory bowel disease and other gastroenteritis and colitis	1.21	4.15E-02	0.95 (0.91, 1)
687.1	Rash and other nonspecific skin eruption	6.66	4.40E-02	1.02 (1, 1.04)
738.4	Acquired spondylolisthesis	0.34	4.41E-02	1.09 (1, 1.19)
722	Intervertebral disc disorders	13.57	4.46E-02	1.02 (1, 1.03)
695	Erythematous conditions	5.1	4.50E-02	1.02 (1, 1.05)
452	Other venous embolism and thrombosis	4.17	4.52E-02	1.03 (1, 1.06)
726	Peripheral enthesopathies and allied syndromes	19.39	4.57E-02	1.01 (1, 1.03)
292.6	Hallucinations	0.2	4.62E-02	1.13 (1, 1.28)
289.8	Polycythemia vera, secondary	0.52	4.66E-02	1.07 (1, 1.15)
172.2	Other non-epithelial cancer of skin	9.99	4.78E-02	1.02 (1, 1.04)
204.22	Myeloid leukemia, chronic	0.13	4.82E-02	1.15 (1, 1.31)
727.6	Rupture of tendon, nontraumatic	2.31	4.83E-02	1.04 (1, 1.07)
540	Appendiceal conditions	0.57	4.83E-02	0.93 (0.87, 1)
1002	Symptoms concerning nutrition, metabolism, and development	3.68	4.85E-02	0.97 (0.94, 1)
362.2	Degeneration of macula and posterior pole of retina	8.18	4.95E-02	0.98 (0.96, 1)
601.12	Chronic prostatitis	0.87	4.97E-02	1.06 (1, 1.12)
286.9	Abnormal coagulation profile	0.53	5.10E-02	0.93 (0.86, 1)
754	Congenital musculoskeletal deformities of spine	0.52	5.11E-02	1.07 (1, 1.15)
256.4	Polycystic ovaries	0.13	5.19E-02	0.86 (0.73, 1)
915	Superficial injury without mention of infection	2.47	5.26E-02	1.03 (1, 1.07)
53	Herpes zoster	2.24	5.38E-02	1.03 (1, 1.07)
509.8	Dependence on respirator [Ventilator] or supplemental oxygen	0.91	5.40E-02	1.05 (1, 1.11)
530.12	Ulcer of esophagus	0.44	5.40E-02	1.08 (1, 1.16)
736	Other acquired deformities of limbs	2.12	5.42E-02	1.04 (1, 1.07)
345.12	Partial epilepsy	0.52	5.42E-02	1.07 (1, 1.15)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
189	Cancer of urinary organs (incl. kidney and bladder)	2.59	5.52E-02	1.03 (1, 1.07)
772	Symptoms of the muscles	0.46	5.52E-02	1.08 (1, 1.17)
557.1	Celiac disease	0.19	5.59E-02	1.12 (1, 1.25)
516	Abnormal sputum	0.89	5.63E-02	0.95 (0.89, 1)
426.92	Cardiac defibrillator in situ	1.77	5.67E-02	0.96 (0.92, 1)
296	Mood disorders	40.42	5.78E-02	1.01 (1, 1.02)
947	Urticaria	1.08	5.81E-02	1.05 (1, 1.11)
480	Pneumonia	5.88	5.82E-02	1.02 (1, 1.05)
451.2	Phlebitis and thrombophlebitis of lower extremities	0.39	5.90E-02	0.92 (0.85, 1)
772.2	Spasm of muscle	2.12	5.99E-02	1.04 (1, 1.08)
272.1	Hyperlipidemia	67.23	6.03E-02	0.99 (0.98, 1)
381.3	Mastoiditis & related conditions	0.2	6.09E-02	1.11 (1, 1.24)
368.1	Amblyopia	0.99	6.13E-02	0.95 (0.9, 1)
364.4	Corneal degenerations	0.6	6.20E-02	1.07 (1, 1.14)
362.23	Cystoid macular degeneration of retina	1.23	6.26E-02	0.96 (0.91, 1)
721	Spondylosis and allied disorders	9.72	6.28E-02	1.02 (1, 1.04)
571.5	Other chronic nonalcoholic liver disease	3.45	6.52E-02	1.03 (1, 1.06)
496.2	Chronic bronchitis	2.92	6.52E-02	0.97 (0.94, 1)
327.7	Sleep related movement disorders	2.33	6.58E-02	0.97 (0.94, 1)
736.4	Genu valgum or varum (acquired)	0.19	6.66E-02	1.11 (0.99, 1.25)
204.4	Multiple myeloma	0.29	6.75E-02	1.1 (0.99, 1.21)
370.1	Corneal ulcer	0.24	6.77E-02	1.1 (0.99, 1.22)
256	Ovarian dysfunction	0.14	6.85E-02	0.87 (0.75, 1.01)
272	Disorders of lipid metabolism	67.28	6.88E-02	0.99 (0.98, 1)
573.3	Hepatomegaly	0.37	7.23E-02	1.08 (0.99, 1.18)
255.1	Adrenal hyperfunction	0.24	7.23E-02	0.9 (0.81, 1.01)
303.4	Somatoform disorder	1.79	7.33E-02	1.04 (1, 1.08)
946	Anaphylactic shock NOS	0.55	7.39E-02	0.93 (0.86, 1.01)
291.4	Specific nonpsychotic mental disorders due to brain damage	0.72	7.42E-02	1.06 (0.99, 1.12)
731.1	Osteitis deformans [Paget's disease of bone]	0.12	7.43E-02	1.15 (0.99, 1.34)
574.1	Cholelithiasis	2.86	7.46E-02	1.03 (1, 1.06)
301	Personality disorders	4.02	7.49E-02	1.03 (1, 1.06)

PheWAS code	Phenotype description	Prevalence	p-value	Odds Ratio (95% CI)
252	Disorders of parathyroid gland	0.84	7.55E-02	1.05 (0.99, 1.12)
196	Radiotherapy	1.17	7.64E-02	1.05 (1, 1.1)
315	Developmental delays and disorders	0.29	7.69E-02	1.09 (0.99, 1.2)
540.1	Appendicitis	0.54	7.71E-02	0.94 (0.87, 1.01)
216.1	Screening for malignant neoplasms of the skin	2.64	7.73E-02	1.03 (1, 1.06)
389.2	Conductive hearing loss	0.82	7.93E-02	1.05 (0.99, 1.11)
599.9	Other abnormality of urination	2.28	7.95E-02	1.03 (1, 1.07)
428	Congestive heart failure; nonhypertensive	8.61	7.99E-02	0.98 (0.96, 1)
374	Other disorders of eyelids	4.48	8.04E-02	1.02 (1, 1.05)
702.2	Seborrheic keratosis	10.69	8.04E-02	1.02 (1, 1.03)
366	Cataract	39.15	8.26E-02	0.99 (0.98, 1)
244.1	Secondary hypothyroidism	0.59	8.27E-02	0.94 (0.88, 1.01)
260.2	severe protein-calorie malnutrition	0.11	8.33E-02	1.15 (0.98, 1.34)
573.2	Liver replaced by transplant	0.18	8.39E-02	0.9 (0.79, 1.01)
574	Cholelithiasis and cholecystitis	3.49	8.40E-02	1.03 (1, 1.05)
303	Psychogenic and somatoform disorders	2	8.46E-02	1.03 (1, 1.07)
153.2	Colon cancer	1.66	8.50E-02	1.04 (1, 1.08)
698	Pruritus and related conditions	2.24	8.55E-02	1.03 (1, 1.07)
276.5	Hypovolemia	3.08	8.57E-02	1.03 (1, 1.06)
530.14	Reflux esophagitis	1.18	8.65E-02	1.04 (0.99, 1.09)
763	Thoracic or lumbosacral neuritis or radiculitis, unspecified	6.53	8.68E-02	1.02 (1, 1.04)
395	Heart valve disorders	5.05	8.79E-02	0.98 (0.96, 1)
500	Lung disease due to external agents	0.48	8.81E-02	1.07 (0.99, 1.15)
172	Skin cancer	11.13	8.82E-02	1.01 (1, 1.03)
271	Disorders of carbohydrate transport and metabolism	0.67	8.83E-02	1.06 (0.99, 1.13)
277.7	Dysmetabolic syndrome X	0.65	8.86E-02	1.06 (0.99, 1.13)
428.1	Congestive heart failure (CHF) NOS	7.9	8.90E-02	0.98 (0.96, 1)
840.2	Rotator cuff (capsule) sprain	2.35	9.01E-02	1.03 (1, 1.07)
242.1	Graves' disease	0.42	9.17E-02	0.93 (0.85, 1.01)
618	Genital prolapse	0.29	9.30E-02	1.09 (0.99, 1.2)
574.11	Cholelithiasis with acute	0.16	9.34E-02	0.9 (0.79, 1.02)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
627.2	cholecystitis Symptomatic menopause	1.8	9.56E-02	1.04 (0.99, 1.1)
362.4	Retinal vascular changes and abnormalities	1.95	9.64E-02	0.97 (0.93, 1.01)
870.1	Open wound or laceration of eye or eyelid	0.3	9.67E-02	0.92 (0.83, 1.02)
189.21	Malignant neoplasm of bladder	1.53	9.67E-02	1.04 (0.99, 1.08)
540.11	Acute appendicitis	0.44	9.75E-02	0.94 (0.87, 1.01)
516.1	Hemoptysis	0.83	9.82E-02	0.95 (0.9, 1.01)
362.8	Retinal hemorrhage/ischemia	0.72	9.87E-02	0.95 (0.89, 1.01)
255.12	Hyperaldosteronism	0.2	9.94E-02	0.9 (0.79, 1.02)
252.1	Hyperparathyroidism	0.77	9.98E-02	1.05 (0.99, 1.12)
261.4	Vitamin D deficiency	10.14	1.01E-01	1.01 (1, 1.03)
271.3	Intestinal disaccharidase deficiencies and disaccharide malabsorption	0.57	1.01E-01	1.06 (0.99, 1.14)
287.32	Secondary thrombocytopenia	0.19	1.01E-01	0.9 (0.8, 1.02)
753	Congenital anomalies of the eye	0.22	1.02E-01	1.1 (0.98, 1.23)
276	Disorders of fluid, electrolyte, and acid-base balance	11.64	1.02E-01	1.01 (1, 1.03)
568.1	Peritoneal adhesions (postoperative) (postinfection)	0.28	1.04E-01	0.92 (0.84, 1.02)
771.1	Swelling of limb	1.88	1.05E-01	1.03 (0.99, 1.07)
191.1	Cancer of brain and nervous system	0.16	1.05E-01	0.9 (0.79, 1.02)
371.3	Inflammation of eyelids	6.49	1.05E-01	1.02 (1, 1.04)
572	Ascites (nonmalignant)	0.62	1.06E-01	1.06 (0.99, 1.13)
742.2	Pathological, developmental or recurrent dislocation	0.22	1.07E-01	1.09 (0.98, 1.22)
362	Other retinal disorders	14.3	1.07E-01	0.99 (0.97, 1)
627	Menopausal and postmenopausal disorders	2.45	1.09E-01	1.04 (0.99, 1.09)
571	Chronic liver disease and cirrhosis	3.69	1.10E-01	1.02 (0.99, 1.05)
596.1	Bladder neck obstruction	1	1.11E-01	1.04 (0.99, 1.1)
440.21	Atherosclerosis of native arteries of the extremities with ulceration or gangrene	0.4	1.11E-01	0.93 (0.86, 1.02)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
781	Symptoms involving nervous and musculoskeletal systems	0.68	1.12E-01	1.05 (0.99, 1.12)
41.11	Methicillin sensitive Staphylococcus aureus	0.68	1.14E-01	0.95 (0.89, 1.01)
420.2	Pericarditis	0.53	1.15E-01	1.06 (0.99, 1.14)
739	Contracture of joint	0.4	1.18E-01	1.07 (0.98, 1.16)
276.11	Hyperosmolality and/or hypernatremia	0.15	1.18E-01	0.89 (0.78, 1.03)
153	Colorectal cancer	1.92	1.18E-01	1.03 (0.99, 1.07)
840.1	Muscle/tendon sprain	0.22	1.18E-01	1.09 (0.98, 1.22)
444	Arterial embolism and thrombosis	0.66	1.18E-01	0.95 (0.89, 1.01)
807	Fracture of ribs	0.86	1.20E-01	0.96 (0.91, 1.01)
585.32	End stage renal disease	1.21	1.20E-01	1.04 (0.99, 1.1)
227.3	Benign neoplasm of pituitary gland and craniopharyngeal duct (pouch)	0.41	1.22E-01	0.94 (0.86, 1.02)
340	Migraine	5.7	1.22E-01	1.02 (0.99, 1.04)
327.6	Circadian rhythm sleep disorder	0.14	1.23E-01	1.11 (0.97, 1.28)
500.2	Pneumoconiosis	0.38	1.24E-01	1.07 (0.98, 1.16)
836	Traumatic arthropathy	1.29	1.24E-01	0.96 (0.92, 1.01)
303.1	Dissociative disorder	0.11	1.24E-01	1.13 (0.97, 1.32)
189.11	Malignant neoplasm of kidney, except pelvis	0.95	1.24E-01	1.04 (0.99, 1.1)
277.4	Disorders of bilirubin excretion	0.22	1.26E-01	1.09 (0.98, 1.21)
279	Disorders involving the immune mechanism	0.26	1.26E-01	1.08 (0.98, 1.2)
772.1	Muscular wasting and disuse atrophy	0.24	1.26E-01	1.09 (0.98, 1.21)
575.1	Cholangitis	0.16	1.28E-01	0.9 (0.79, 1.03)
250.1	Type 1 diabetes	3.36	1.28E-01	0.98 (0.95, 1.01)
592.12	Chronic cystitis	0.14	1.28E-01	1.11 (0.97, 1.27)
426.25	Other heart block	0.16	1.30E-01	1.1 (0.97, 1.25)
601.3	Orchitis and epididymitis	1.28	1.30E-01	1.04 (0.99, 1.09)
501	Pneumonitis due to inhalation of food or vomitus	0.34	1.31E-01	0.93 (0.85, 1.02)
227.1	Benign neoplasm of adrenal gland	0.37	1.31E-01	0.93 (0.86, 1.02)
275.1	Disorders of iron metabolism	0.52	1.32E-01	1.06 (0.98, 1.13)
276.13	Hyperpotassemia	2.56	1.32E-01	1.03 (0.99, 1.06)
716.1	Unspecified polyarthropathy or polyarthritis	0.28	1.32E-01	1.08 (0.98, 1.19)
369	Infection of the eye	2.54	1.34E-01	1.03 (0.99, 1.06)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
521	Diseases of hard tissues of teeth	17.75	1.34E-01	1.01 (1, 1.03)
585.2	Renal failure NOS	1.72	1.34E-01	1.03 (0.99, 1.08)
366.2	Senile cataract	30.85	1.34E-01	0.99 (0.98, 1)
401.21	Hypertensive heart disease	0.82	1.37E-01	0.96 (0.9, 1.01)
448	Disease of capillaries	0.14	1.38E-01	1.11 (0.97, 1.26)
571.8	Liver abscess and sequelae of chronic liver disease	0.73	1.39E-01	1.05 (0.99, 1.11)
743.13	Other specified osteoporosis	0.16	1.39E-01	0.91 (0.8, 1.03)
189.1	Cancer of kidney and renal pelvis	1.04	1.40E-01	1.04 (0.99, 1.09)
253	Disorders of the pituitary gland and its hypothalamic control	1.15	1.41E-01	0.96 (0.92, 1.01)
285.1	Acute posthemorrhagic anemia	0.31	1.42E-01	1.07 (0.98, 1.18)
367	Disorders of refraction and accommodation; blindness and low vision	55.42	1.42E-01	0.99 (0.98, 1)
189.2	Cancer of bladder	1.64	1.44E-01	1.03 (0.99, 1.07)
286.81	Primary hypercoagulable state	0.35	1.47E-01	1.07 (0.98, 1.16)
571.81	Portal hypertension	0.38	1.48E-01	1.06 (0.98, 1.16)
227	Benign neoplasm of other endocrine glands and related structures	0.89	1.49E-01	0.96 (0.91, 1.02)
246.7	Abnormal results of function study of thyroid	0.42	1.50E-01	0.94 (0.87, 1.02)
368	Visual disturbances	8.56	1.50E-01	0.99 (0.97, 1.01)
619.2	Disorders of uterus, NEC	0.52	1.53E-01	1.06 (0.98, 1.15)
707	Chronic ulcer of skin	4.28	1.53E-01	1.02 (0.99, 1.05)
622	Polyp of female genital organs	0.15	1.53E-01	0.9 (0.78, 1.04)
38	Septicemia	2.06	1.53E-01	1.03 (0.99, 1.07)
440.1	Atherosclerosis of renal artery	0.18	1.54E-01	0.91 (0.81, 1.03)
426.9	Cardiac pacemaker/device in situ	3.81	1.55E-01	0.98 (0.95, 1.01)
300.13	Phobia	0.23	1.55E-01	1.08 (0.97, 1.21)
377.3	Optic neuritis/neuropathy	0.62	1.59E-01	0.95 (0.89, 1.02)
374.2	Lagophthalmos	0.15	1.60E-01	1.1 (0.96, 1.25)
585	Renal failure	13.87	1.60E-01	0.99 (0.97, 1)
578.8	Hemorrhage of rectum and anus	3.17	1.61E-01	1.02 (0.99, 1.05)
296.2	Depression	37.88	1.61E-01	1.01 (1, 1.02)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
586	Other disorders of the kidney and ureters	5	1.62E-01	1.02 (0.99, 1.04)
433.6	Acute, but ill-defined cerebrovascular disease	3.49	1.62E-01	1.02 (0.99, 1.05)
792.1	Papanicolaou smear of cervix or vagina with atypical squamous cells	0.3	1.63E-01	1.07 (0.97, 1.19)
295.3	Psychosis	2.75	1.63E-01	1.03 (0.99, 1.06)
727.4	Ganglion and cyst of synovium, tendon, and bursa	1.44	1.63E-01	1.03 (0.99, 1.08)
949	Allergies, other	2.32	1.64E-01	1.03 (0.99, 1.06)
242	Thyrotoxicosis with or without goiter	1.24	1.64E-01	0.97 (0.92, 1.01)
364	Corneal opacity and other disorders of cornea	1.82	1.64E-01	1.03 (0.99, 1.07)
345.1	Epilepsy	0.8	1.65E-01	1.04 (0.98, 1.11)
599.8	Other symptoms involving urinary system	1.51	1.65E-01	1.03 (0.99, 1.08)
356	Hereditary and idiopathic peripheral neuropathy	7.26	1.65E-01	1.01 (0.99, 1.04)
362.6	Peripheral retinal degenerations	1.27	1.65E-01	1.03 (0.99, 1.08)
172.22	Squamous cell carcinoma	1.27	1.67E-01	1.03 (0.99, 1.08)
288.1	Decreased white blood cell count	1.25	1.67E-01	0.97 (0.92, 1.01)
136	Other infectious and parasitic diseases	0.53	1.68E-01	1.05 (0.98, 1.13)
575	Other biliary tract disease	1.1	1.68E-01	1.04 (0.99, 1.09)
145.2	Cancer of tongue	0.27	1.70E-01	1.07 (0.97, 1.18)
172.3	Carcinoma in situ of skin	0.75	1.70E-01	1.04 (0.98, 1.1)
681.5	Cellulitis and abscess of leg, except foot	2.36	1.71E-01	1.02 (0.99, 1.06)
588.1	Renal osteodystrophy	0.15	1.72E-01	1.1 (0.96, 1.27)
457.2	Encounter for long-term (current) use of antiplatelets/antithrombotics	0.49	1.72E-01	0.95 (0.88, 1.02)
474	Acute and chronic tonsillitis	0.54	1.73E-01	1.05 (0.98, 1.13)
528.6	Leukoplakia of oral mucosa	0.19	1.75E-01	1.08 (0.96, 1.22)
594.2	Calculus of lower urinary tract	0.43	1.76E-01	1.06 (0.98, 1.14)
331.1	Hydrocephalus	0.14	1.76E-01	0.91 (0.79, 1.04)
458.2	Iatrogenic hypotension	0.14	1.76E-01	0.91 (0.79, 1.04)
288	Diseases of white blood cells	2.42	1.77E-01	1.02 (0.99, 1.06)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
994.1	Systemic inflammatory response syndrome (SIRS)	0.14	1.77E-01	0.91 (0.79, 1.04)
715.1	Sacroiliitis NEC	0.68	1.79E-01	1.04 (0.98, 1.11)
41.2	Streptococcus infection	0.37	1.80E-01	0.94 (0.86, 1.03)
286.8	Hypercoagulable state	0.38	1.80E-01	1.06 (0.97, 1.15)
340.1	Migraine with aura	0.47	1.80E-01	1.05 (0.98, 1.14)
296.22	Major depressive disorder	17.36	1.81E-01	1.01 (1, 1.03)
194	Cancer of other endocrine glands	0.13	1.81E-01	0.9 (0.78, 1.05)
250.25	Diabetes type 2 with peripheral circulatory disorders	0.85	1.82E-01	0.96 (0.91, 1.02)
355	Complex regional/central pain syndrome	0.34	1.82E-01	1.06 (0.97, 1.16)
743	Osteoporosis, osteopenia and pathological fracture	6.41	1.83E-01	1.01 (0.99, 1.04)
721.2	Spondylosis with myelopathy	1.14	1.83E-01	1.03 (0.98, 1.09)
512.1	Wheezing	0.61	1.85E-01	1.05 (0.98, 1.12)
379.1	Scleritis and episcleritis	0.24	1.87E-01	1.08 (0.96, 1.21)
327.41	Organic or persistent insomnia	0.53	1.87E-01	0.95 (0.89, 1.02)
740.11	Osteoarthritis, localized, primary	2.34	1.87E-01	1.02 (0.99, 1.06)
911	Blister	0.32	1.88E-01	1.06 (0.97, 1.17)
191.11	Cancer of brain	0.14	1.91E-01	0.91 (0.79, 1.05)
290.13	Senile dementia	0.18	1.92E-01	1.08 (0.96, 1.22)
585.4	Chronic kidney disease, Stage I or II	1.18	1.92E-01	0.97 (0.92, 1.02)
458.1	Orthostatic hypotension	1.74	1.92E-01	1.03 (0.99, 1.07)
728	Disorders of muscle, ligament, and fascia	0.32	1.93E-01	0.94 (0.86, 1.03)
722.6	Degeneration of intervertebral disc	10.44	1.94E-01	1.01 (0.99, 1.03)
989	Toxic effect of other substances, chiefly nonmedicinal as to source	0.17	1.95E-01	1.08 (0.96, 1.23)
794	Abnormal results of other function studies (bladder, pancreas, placenta, spleen, etc)	0.11	1.95E-01	1.11 (0.95, 1.29)
556.1	Ulceration of intestine	0.18	1.96E-01	1.08 (0.96, 1.23)
535.6	Duodenitis	0.31	1.96E-01	0.94 (0.86, 1.03)
738	Other acquired musculoskeletal deformity	0.69	1.96E-01	1.04 (0.98, 1.11)
440.9	Atherosclerosis of aorta	0.23	1.98E-01	0.93 (0.84, 1.04)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
747.11	Cardiac shunt/ heart septal defect	0.19	1.99E-01	1.08 (0.96, 1.21)
427.6	Premature beats	1.09	1.99E-01	1.03 (0.98, 1.09)
771	Musculoskeletal symptoms referable to limbs	0.22	2.00E-01	1.07 (0.96, 1.2)
389.3	Degenerative and vascular disorders of ear	0.36	2.00E-01	1.06 (0.97, 1.15)
386.1	Meniere's disease	0.35	2.01E-01	0.95 (0.87, 1.03)
426.31	Right bundle branch block	0.84	2.01E-01	0.96 (0.91, 1.02)
495.11	Chronic obstructive asthma with exacerbation	0.26	2.02E-01	0.93 (0.84, 1.04)
285.21	Anemia in chronic kidney disease	1.05	2.02E-01	1.04 (0.98, 1.09)
370.3	Keratoconjunctivitis	0.37	2.04E-01	0.95 (0.87, 1.03)
782.6	Pallor and flushing	0.11	2.05E-01	0.91 (0.78, 1.06)
259.3	Delay in sexual development and puberty NEC	0.31	2.06E-01	1.06 (0.97, 1.16)
333.4	Torsion dystonia	0.4	2.07E-01	0.95 (0.87, 1.03)
979	Adverse drug events and drug allergies	1.21	2.09E-01	1.03 (0.98, 1.08)
1009	Injury, NOS	5.13	2.11E-01	1.02 (0.99, 1.04)
580.2	Nephrotic syndrome without mention of glomerulonephritis	0.24	2.13E-01	0.93 (0.83, 1.04)
41.9	Infection with drug-resistant microorganisms	0.27	2.13E-01	0.94 (0.85, 1.04)
532	Dysphagia	7.87	2.14E-01	0.99 (0.97, 1.01)
475	Chronic sinusitis	7.39	2.14E-01	1.01 (0.99, 1.03)
681.3	Cellulitis and abscess of arm/hand	1.01	2.15E-01	0.97 (0.92, 1.02)
172.21	Basal cell carcinoma	2.49	2.17E-01	0.98 (0.95, 1.01)
263	Other nutritional deficiency	0.13	2.17E-01	0.9 (0.76, 1.06)
300	Anxiety, phobic and dissociative disorders	36.54	2.18E-01	1.01 (1, 1.02)
550	Abdominal hernia	12.07	2.20E-01	1.01 (0.99, 1.03)
735.1	Flat foot	3.7	2.20E-01	1.02 (0.99, 1.05)
536	Disorders of function of stomach	2.68	2.20E-01	1.02 (0.99, 1.05)
331	Other cerebral degenerations	0.24	2.21E-01	0.94 (0.84, 1.04)
575.7	Other disorders of gallbladder	0.49	2.22E-01	1.05 (0.97, 1.12)
151	Cancer of stomach	0.18	2.23E-01	1.08 (0.95, 1.22)
721.1	Spondylosis without myelopathy	8.7	2.24E-01	1.01 (0.99, 1.03)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
723	Other disorders of cervical region	0.47	2.24E-01	0.95 (0.88, 1.03)
627.4	Premenopausal menorrhagia	0.1	2.25E-01	1.11 (0.94, 1.31)
531.4	Peptic ulcer, site unspecified	2.03	2.26E-01	0.98 (0.94, 1.01)
735	Acquired foot deformities	12.83	2.26E-01	1.01 (0.99, 1.03)
697	Sarcoidosis	0.47	2.26E-01	0.95 (0.87, 1.03)
1006	Crushing injury	0.14	2.27E-01	0.92 (0.8, 1.05)
536.8	Dyspepsia and other specified disorders of function of stomach	2.09	2.30E-01	1.02 (0.99, 1.06)
305.2	Eating disorder	0.24	2.30E-01	0.94 (0.84, 1.04)
796	Elevated prostate specific antigen [PSA]	10.59	2.31E-01	1.01 (0.99, 1.03)
250.12	Type 1 diabetes with renal manifestations	0.15	2.31E-01	0.92 (0.8, 1.06)
246	Other disorders of thyroid	0.67	2.32E-01	0.96 (0.9, 1.03)
742	Derangement of joint, non-traumatic	1.22	2.33E-01	1.03 (0.98, 1.08)
344	Other paralytic syndromes	1.03	2.33E-01	0.97 (0.92, 1.02)
840	Sprains and strains	8.66	2.33E-01	1.01 (0.99, 1.03)
514	Abnormal findings examination of lungs	3.61	2.33E-01	1.02 (0.99, 1.05)
601.1	Prostatitis	2.32	2.33E-01	1.02 (0.99, 1.06)
187.2	Malignant neoplasm of testis	0.21	2.34E-01	0.93 (0.84, 1.04)
773	Pain in limb	15.33	2.36E-01	1.01 (0.99, 1.03)
272.9	Unspecified disorder of lipid metabolism	0.39	2.37E-01	1.05 (0.97, 1.14)
369.5	Conjunctivitis, infectious	1.8	2.37E-01	1.02 (0.98, 1.07)
722.1	Displacement of intervertebral disc	3.05	2.41E-01	1.02 (0.99, 1.05)
530.2	Esophageal bleeding (varices/hemorrhage)	0.64	2.41E-01	1.04 (0.97, 1.11)
348.9	Other conditions of brain, NOS	0.38	2.41E-01	0.95 (0.87, 1.03)
627.3	Postmenopausal atrophic vaginitis	0.37	2.43E-01	0.95 (0.87, 1.04)
347	Cataplexy and narcolepsy	0.21	2.44E-01	1.07 (0.95, 1.2)
416	Cardiomegaly	1.41	2.44E-01	0.97 (0.93, 1.02)
380.1	Otitis externa	2.29	2.47E-01	1.02 (0.99, 1.06)
509	Respiratory failure, insufficiency, arrest	2.64	2.47E-01	1.02 (0.99, 1.05)
185	Cancer of prostate	8.46	2.48E-01	1.01 (0.99, 1.03)
870.3	Other open wound of head and face	0.21	2.48E-01	1.07 (0.96, 1.2)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
596	Other disorders of bladder	4.16	2.48E-01	1.02 (0.99, 1.04)
740.9	Osteoarthritis NOS	32.17	2.48E-01	0.99 (0.98, 1)
174.11	Malignant neoplasm of female breast	0.45	2.48E-01	0.95 (0.88, 1.03)
218	Benign neoplasm of uterus	0.7	2.49E-01	1.05 (0.97, 1.13)
913	Toxic effect of venom	0.11	2.50E-01	1.09 (0.94, 1.27)
427.11	Paroxysmal supraventricular tachycardia	0.67	2.51E-01	1.04 (0.97, 1.1)
370.31	Keratoconjunctivitis sicca	0.19	2.51E-01	0.93 (0.82, 1.05)
362.26	Macular puckering of retina	2.18	2.52E-01	0.98 (0.95, 1.01)
526.41	Temporomandibular joint disorder, unspecified	0.87	2.56E-01	1.03 (0.98, 1.09)
727.5	Rupture of synovium	0.34	2.57E-01	0.95 (0.87, 1.04)
724.9	Other unspecified back disorders	0.84	2.58E-01	0.97 (0.91, 1.03)
528.1	Stomatitis and mucositis	0.31	2.58E-01	1.05 (0.96, 1.16)
755.1	Congenital deformities of feet	1.01	2.58E-01	1.03 (0.98, 1.09)
433.1	Occlusion and stenosis of precerebral arteries	3.86	2.58E-01	0.98 (0.96, 1.01)
214	Lipoma	2.89	2.60E-01	0.98 (0.95, 1.01)
496	Chronic airway obstruction	16.31	2.61E-01	0.99 (0.98, 1.01)
381	Otitis media and Eustachian tube disorders	4.16	2.62E-01	1.02 (0.99, 1.04)
571.51	Cirrhosis of liver without mention of alcohol	2.05	2.62E-01	1.02 (0.98, 1.06)
722.9	Other and unspecified disc disorder	0.63	2.63E-01	1.04 (0.97, 1.11)
835	Internal derangement of knee	4.5	2.64E-01	1.01 (0.99, 1.04)
427.41	Ventricular fibrillation and flutter	0.14	2.66E-01	0.92 (0.8, 1.06)
443.7	Peripheral angiopathy in diseases classified elsewhere	0.11	2.66E-01	0.91 (0.78, 1.07)
275	Disorders of mineral metabolism	3.61	2.66E-01	1.02 (0.99, 1.05)
70.9	Hepatitis NOS	0.67	2.66E-01	0.96 (0.9, 1.03)
429.9	Cardiac complications, not elsewhere classified	0.13	2.67E-01	0.92 (0.8, 1.07)
785	Abdominal pain	15.36	2.69E-01	1.01 (0.99, 1.02)
594.8	Renal colic	0.18	2.69E-01	1.07 (0.95, 1.21)
842	Other sprains and strains	0.96	2.69E-01	0.97 (0.92, 1.02)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
218.1	Uterine leiomyoma	0.68	2.71E-01	1.04 (0.97, 1.13)
530.9	Heartburn	0.64	2.71E-01	1.04 (0.97, 1.11)
527	Diseases of the salivary glands	0.79	2.71E-01	0.97 (0.91, 1.03)
208	Benign neoplasm of colon	20.31	2.72E-01	1.01 (0.99, 1.02)
706.3	Seborrhea	0.24	2.74E-01	1.06 (0.96, 1.17)
531.1	Hemorrhage from gastrointestinal ulcer	0.22	2.75E-01	1.06 (0.95, 1.19)
513.8	Disorders of diaphragm	0.24	2.76E-01	0.94 (0.84, 1.05)
41.8	H. pylori	0.72	2.76E-01	1.04 (0.97, 1.11)
427.4	Cardiac arrest and ventricular fibrillation	0.29	2.76E-01	0.95 (0.86, 1.04)
317.11	Alcoholic liver damage	1.23	2.76E-01	0.97 (0.93, 1.02)
270.3	Disorders of plasma protein metabolism	0.87	2.77E-01	1.03 (0.97, 1.09)
70.2	Viral hepatitis B	0.71	2.77E-01	1.04 (0.97, 1.11)
353.1	Nerve plexus lesions	0.2	2.77E-01	0.94 (0.83, 1.05)
253.1	Pituitary hyperfunction	0.18	2.78E-01	0.93 (0.82, 1.06)
624.9	stress incontinence, female	0.51	2.78E-01	1.04 (0.97, 1.13)
1004	Other signs and symptoms involving emotional state	0.38	2.79E-01	1.05 (0.96, 1.14)
601	Inflammatory diseases of prostate	4.19	2.79E-01	1.01 (0.99, 1.04)
228.1	Hemangioma of skin and subcutaneous tissue	0.24	2.80E-01	1.06 (0.96, 1.17)
687	Symptoms affecting skin	1.63	2.81E-01	1.02 (0.98, 1.07)
447.1	Stricture of artery	0.15	2.81E-01	0.93 (0.82, 1.06)
535.8	Other specified gastritis	0.53	2.81E-01	1.04 (0.97, 1.12)
969	Poisoning by psychotropic agents	0.41	2.81E-01	0.95 (0.88, 1.04)
300.4	Dysthymic disorder	6.96	2.82E-01	1.01 (0.99, 1.03)
378.1	Strabismus (not specified as paralytic)	1.51	2.82E-01	0.98 (0.94, 1.02)
802	Fracture of pelvis	0.18	2.82E-01	1.07 (0.95, 1.2)
701.4	Keloid scar	0.56	2.83E-01	0.96 (0.88, 1.04)
281.1	Megaloblastic anemia	0.9	2.84E-01	0.97 (0.92, 1.03)
580.14	Chronic glomerulonephritis, NOS	0.13	2.86E-01	0.92 (0.79, 1.07)
276.12	Hyposmolality and/or hyponatremia	1.99	2.87E-01	0.98 (0.94, 1.02)
362.22	Macular degeneration, wet	0.82	2.89E-01	1.03 (0.97, 1.09)
225	Benign neoplasm of brain and other parts of nervous system	0.48	2.90E-01	1.04 (0.97, 1.12)
555.2	Ulcerative colitis	0.77	2.91E-01	0.97 (0.91, 1.03)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
379.4	Anomalies of pupillary function	0.27	2.91E-01	1.06 (0.96, 1.17)
337	Disorders of the autonomic nervous system	0.58	2.92E-01	1.04 (0.97, 1.11)
292.12	Symbolic dysfunction	0.12	2.94E-01	1.09 (0.93, 1.27)
707.2	Chronic ulcer of leg or foot	3.1	2.95E-01	1.02 (0.99, 1.05)
510	Other diseases of lung	4.02	2.95E-01	1.01 (0.99, 1.04)
352.2	Facial nerve disorders [CN7]	0.74	2.96E-01	1.03 (0.97, 1.1)
174.1	Breast cancer [female]	0.45	2.97E-01	0.96 (0.88, 1.04)
290.12	Dementia with cerebral degenerations	0.13	2.97E-01	0.93 (0.81, 1.07)
304	Adjustment reaction	12.07	2.98E-01	1.01 (0.99, 1.03)
711	Arthropathy associated with infections	0.49	2.99E-01	0.96 (0.89, 1.04)
526.4	Temporomandibular joint disorders	0.99	3.01E-01	1.03 (0.98, 1.08)
293.1	Swelling, mass, or lump in head and neck [Space-occupying lesion, intracranial NOS]	1.52	3.01E-01	0.98 (0.94, 1.02)
364.41	Keratoconus	0.13	3.02E-01	1.08 (0.93, 1.26)
110.1	Dermatophytosis	18.93	3.02E-01	1.01 (0.99, 1.02)
38.1	Gram negative septicemia	0.13	3.02E-01	1.08 (0.94, 1.24)
443.1	Raynaud's syndrome	0.32	3.03E-01	1.05 (0.96, 1.15)
523.3	Periodontitis (acute or chronic)	8.19	3.03E-01	1.01 (0.99, 1.03)
873	Broken tooth	0.52	3.04E-01	1.04 (0.97, 1.12)
817	Concussion	0.63	3.05E-01	0.97 (0.9, 1.03)
285.22	Anemia in neoplastic disease	0.17	3.05E-01	1.07 (0.94, 1.21)
741.3	Difficulty in walking	2.45	3.06E-01	0.98 (0.95, 1.02)
291.8	Alteration of consciousness	0.47	3.07E-01	1.04 (0.96, 1.12)
797	Shock	0.1	3.07E-01	0.92 (0.78, 1.08)
38.2	Gram positive septicemia	0.11	3.07E-01	1.09 (0.93, 1.27)
962.1	Adrenal cortical steroids causing adverse effects in therapeutic use	0.12	3.09E-01	1.08 (0.93, 1.26)
691	Congenital anomalies of skin	0.5	3.10E-01	0.96 (0.89, 1.04)
695.7	Prurigo and Lichen	1.49	3.10E-01	1.02 (0.98, 1.07)
706	Diseases of sebaceous glands	10.39	3.11E-01	1.01 (0.99, 1.03)
550.6	Incisional hernia	0.87	3.13E-01	1.03 (0.97, 1.09)
721.8	Other allied disorders of spine	0.15	3.13E-01	1.07 (0.94, 1.23)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
724.2	Disorders of coccyx	0.15	3.13E-01	1.07 (0.94, 1.22)
521.1	Dental caries	17.29	3.13E-01	1.01 (0.99, 1.02)
444.1	Arterial embolism and thrombosis of lower extremity artery	0.33	3.13E-01	0.95 (0.87, 1.05)
686.3	Pilonidal cyst	0.24	3.13E-01	1.06 (0.95, 1.18)
578.2	Blood in stool	4.7	3.13E-01	0.99 (0.96, 1.01)
274.2	Crystal arthropathies	0.34	3.14E-01	1.05 (0.96, 1.14)
228	Hemangioma and lymphangioma, any site	0.79	3.14E-01	1.03 (0.97, 1.09)
686.1	Carbuncle and furuncle	0.81	3.14E-01	1.03 (0.97, 1.1)
257	Testicular dysfunction	4.39	3.17E-01	1.01 (0.99, 1.04)
704.2	Hirsutism	0.11	3.18E-01	0.91 (0.77, 1.09)
564.9	Personal history of diseases of digestive system	0.19	3.18E-01	0.94 (0.84, 1.06)
728.7	Fasciitis	6.8	3.18E-01	0.99 (0.97, 1.01)
257.1	Testicular hypofunction	4.23	3.19E-01	1.01 (0.99, 1.04)
281.11	Pernicious anemia	0.22	3.19E-01	0.95 (0.85, 1.05)
618.1	Prolapse of vaginal walls	0.22	3.19E-01	1.06 (0.95, 1.18)
200.1	Polycythemia vera	0.36	3.20E-01	1.04 (0.96, 1.14)
362.3	Other nondiabetic retinopathy	2.37	3.21E-01	0.98 (0.95, 1.02)
338.1	Acute pain	0.63	3.23E-01	1.03 (0.97, 1.1)
303.3	Psychogenic disorder	0.17	3.25E-01	0.94 (0.82, 1.07)
377.1	Optic atrophy	0.86	3.26E-01	0.97 (0.92, 1.03)
580.32	Nephritis and nephropathy with pathological lesion	0.36	3.27E-01	1.04 (0.96, 1.14)
352	Disorders of other cranial nerves	1.21	3.27E-01	1.02 (0.98, 1.07)
766	Neuralgia, neuritis, and radiculitis NOS	2.31	3.27E-01	1.02 (0.98, 1.05)
916	Contusion	3.84	3.28E-01	0.99 (0.96, 1.01)
345.11	Generalized convulsive epilepsy	0.18	3.28E-01	1.06 (0.94, 1.2)
531	Peptic ulcer (excl. esophageal)	3.15	3.29E-01	0.99 (0.96, 1.02)
333.1	Essential tremor	1.6	3.29E-01	1.02 (0.98, 1.06)
714.1	Rheumatoid arthritis	1.94	3.29E-01	0.98 (0.95, 1.02)
275.6	Hypercalcemia	0.88	3.31E-01	1.03 (0.97, 1.09)
202.21	Nodular lymphoma	0.13	3.32E-01	0.93 (0.81, 1.07)
579	Other symptoms involving abdomen and pelvis	1.02	3.32E-01	1.03 (0.97, 1.08)
300.1	Anxiety disorder	20.49	3.32E-01	1.01 (0.99, 1.02)
446.9	Arteritis NOS	0.15	3.32E-01	1.07 (0.94, 1.21)
255.2	Adrenal hypofunction	0.23	3.34E-01	0.95 (0.85, 1.06)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
381.11	Suppurative and unspecified otitis media	2.11	3.35E-01	1.02 (0.98, 1.06)
246.2	Thyroid cyst	0.1	3.36E-01	0.92 (0.78, 1.09)
38.3	Bacteremia	0.91	3.36E-01	1.03 (0.97, 1.09)
54	Herpes simplex	1.87	3.37E-01	1.02 (0.98, 1.06)
792	Abnormal Papanicolaou smear of cervix and cervical HPV	0.88	3.37E-01	1.03 (0.97, 1.1)
367.8	Hypermetropia	10.21	3.37E-01	0.99 (0.97, 1.01)
526.5	Inflammatory conditions of jaw	0.12	3.38E-01	1.08 (0.93, 1.25)
276.1	Electrolyte imbalance	8.49	3.38E-01	1.01 (0.99, 1.03)
362.7	Hereditary retinal dystrophies	0.22	3.39E-01	1.05 (0.95, 1.18)
260	Protein-calorie malnutrition	1.35	3.39E-01	0.98 (0.93, 1.02)
599	Other symptoms/disorders or the urinary system	14.19	3.42E-01	1.01 (0.99, 1.02)
791	Gangrene	0.36	3.42E-01	0.96 (0.87, 1.05)
433.8	Late effects of cerebrovascular disease	2.24	3.42E-01	0.98 (0.95, 1.02)
526	Diseases of the jaws	1.73	3.43E-01	1.02 (0.98, 1.06)
524.3	Anomalies of tooth position/malocclusion	0.88	3.43E-01	0.97 (0.92, 1.03)
458.9	Hypotension NOS	2.94	3.44E-01	0.98 (0.95, 1.02)
586.2	Cyst of kidney, acquired	1.14	3.46E-01	1.02 (0.97, 1.08)
362.21	Macular degeneration, dry	3.39	3.47E-01	0.99 (0.96, 1.02)
385	Other disorders of middle ear and mastoid	0.28	3.48E-01	1.05 (0.95, 1.15)
577.1	Acute pancreatitis	1.38	3.48E-01	1.02 (0.98, 1.07)
253.2	Pituitary hypofunction	0.15	3.49E-01	0.94 (0.82, 1.07)
292.3	Memory loss	3.06	3.50E-01	0.99 (0.96, 1.02)
513.31	Apnea	0.25	3.50E-01	0.95 (0.86, 1.06)
599.1	Urinary obstruction	0.55	3.52E-01	0.97 (0.9, 1.04)
316	Substance addiction and disorders	12.7	3.53E-01	1.01 (0.99, 1.03)
427.61	Supraventricular premature beats	0.21	3.54E-01	1.05 (0.94, 1.18)
318	Tobacco use disorder	30.47	3.55E-01	0.99 (0.98, 1.01)
295	Schizophrenia and other psychotic disorders	4.81	3.56E-01	1.01 (0.99, 1.04)
420	Carditis	1.19	3.57E-01	1.02 (0.97, 1.07)
853	Complication of colostomy or enterostomy	0.12	3.58E-01	1.07 (0.92, 1.25)
800	Fracture of lower limb	2.12	3.59E-01	1.02 (0.98, 1.05)
512	Other symptoms of	27.77	3.59E-01	1.01 (0.99, 1.02)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	respiratory system			
244.2	Acquired hypothyroidism	0.23	3.59E-01	0.95 (0.85, 1.06)
716	Other arthropathies	9.38	3.62E-01	1.01 (0.99, 1.03)
696.41	Psoriasis vulgaris	2.61	3.62E-01	0.99 (0.95, 1.02)
379.3	Aphakia and other disorders of lens	1.84	3.62E-01	0.98 (0.95, 1.02)
386.9	Dizziness and giddiness (Light-headedness and vertigo)	10.22	3.63E-01	1.01 (0.99, 1.03)
451	Phlebitis and thrombophlebitis	0.79	3.64E-01	0.97 (0.92, 1.03)
360	Disorders of the globe	0.25	3.64E-01	0.95 (0.86, 1.06)
514.2	Solitary pulmonary nodule	1.33	3.65E-01	1.02 (0.98, 1.07)
199	Neoplasm of uncertain behavior	2.42	3.66E-01	1.02 (0.98, 1.05)
414.2	ASCVD	0.89	3.66E-01	0.98 (0.92, 1.03)
593.2	Microscopic hematuria	2.75	3.67E-01	0.99 (0.95, 1.02)
574.2	Calculus of bile duct	0.36	3.68E-01	1.04 (0.96, 1.13)
592	Cystitis and urethritis	0.84	3.69E-01	1.03 (0.97, 1.09)
211	Benign neoplasm of other parts of digestive system	0.46	3.69E-01	1.04 (0.96, 1.12)
803.21	Colles' fracture	0.14	3.70E-01	0.94 (0.82, 1.08)
415.2	Chronic pulmonary heart disease	1.4	3.71E-01	0.98 (0.94, 1.02)
696	Psoriasis and related disorders	2.82	3.71E-01	0.99 (0.96, 1.02)
707.1	Decubitus ulcer	1.1	3.73E-01	0.98 (0.93, 1.03)
427.12	Paroxysmal ventricular tachycardia	1.05	3.74E-01	0.98 (0.93, 1.03)
395.3	Nonrheumatic tricuspid valve disorders	0.14	3.76E-01	1.06 (0.93, 1.22)
747.1	Cardiac congenital anomalies	0.46	3.76E-01	0.97 (0.9, 1.04)
446.5	Giant cell arteritis	0.13	3.76E-01	0.94 (0.81, 1.08)
379	Other disorders of eye	9.64	3.77E-01	0.99 (0.97, 1.01)
282.5	Sickle cell anemia	0.18	3.78E-01	1.08 (0.91, 1.27)
707.3	Chronic ulcer of unspecified site	1.12	3.78E-01	1.02 (0.97, 1.07)
613.5	Mastodynia	0.28	3.78E-01	1.05 (0.95, 1.16)
288.2	Elevated white blood cell count	1.18	3.78E-01	1.02 (0.97, 1.07)
728.71	Contracture of palmar fascia [Dupuytren's disease]	0.99	3.79E-01	0.98 (0.93, 1.03)
681.7	Cellulitis and abscess of trunk	1.1	3.80E-01	1.02 (0.97, 1.08)
577	Diseases of pancreas	2.08	3.80E-01	1.02 (0.98, 1.06)
599.5	Frequency of urination	5.57	3.81E-01	1.01 (0.99, 1.03)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	and polyuria			
465.2	Acute pharyngitis	2.84	3.81E-01	1.01 (0.98, 1.05)
751.2	Congenital anomalies of urinary system	1.31	3.82E-01	1.02 (0.97, 1.07)
357	Inflammatory and toxic neuropathy	0.38	3.82E-01	1.04 (0.96, 1.13)
601.11	Acute prostatitis	0.3	3.84E-01	1.04 (0.95, 1.15)
379.2	Disorders of vitreous body	6.12	3.85E-01	0.99 (0.97, 1.01)
225.1	Benign neoplasm of brain, cranial nerves, meninges	0.46	3.86E-01	1.03 (0.96, 1.11)
727.2	Bursitis disorders	1.47	3.86E-01	1.02 (0.98, 1.06)
1000	Burns	0.91	3.87E-01	0.98 (0.92, 1.03)
459.9	Circulatory disease NEC	2.38	3.88E-01	0.98 (0.95, 1.02)
819	Skull and face fracture and other intercranial injury	2.71	3.89E-01	1.01 (0.98, 1.05)
367.2	Astigmatism	15.71	3.89E-01	0.99 (0.98, 1.01)
585.34	Chronic Kidney Disease, Stage IV	1.52	3.89E-01	1.02 (0.98, 1.07)
560.1	Paralytic ileus	0.27	3.89E-01	1.04 (0.95, 1.15)
213	Benign neoplasm of bone and articular cartilage	0.14	3.90E-01	1.06 (0.93, 1.22)
709	Diffuse diseases of connective tissue	0.39	3.91E-01	0.96 (0.88, 1.05)
260.1	Cachexia	0.11	3.91E-01	0.93 (0.79, 1.1)
370	Keratitis	1.2	3.92E-01	1.02 (0.97, 1.07)
506	Empyema and pneumothorax	0.49	3.92E-01	0.97 (0.9, 1.04)
369.2	Eye infection, viral	0.48	3.92E-01	1.03 (0.96, 1.11)
362.31	Separation of retinal layers	0.24	3.92E-01	1.05 (0.94, 1.16)
798.1	Chronic fatigue syndrome	0.31	3.94E-01	0.96 (0.88, 1.05)
384.4	Perforation of tympanic membrane	0.5	3.95E-01	1.03 (0.96, 1.11)
801.1	Fracture of foot	1.48	3.95E-01	1.02 (0.98, 1.06)
793	Nonspecific abnormal findings on radiological and other examination of musculoskeletal system	0.32	3.95E-01	0.96 (0.87, 1.05)
360.2	Progressive myopia	0.11	3.95E-01	0.93 (0.79, 1.1)
994.2	Sepsis	1	3.95E-01	1.02 (0.97, 1.08)
930	Allergic reaction to food	0.17	3.96E-01	0.94 (0.83, 1.08)
751.1	Congenital anomalies of genital organs	0.27	3.97E-01	0.96 (0.87, 1.06)
733.9	Chondromalacia	0.24	3.97E-01	1.05 (0.94, 1.17)
716.9	Arthropathy NOS	8.73	3.97E-01	1.01 (0.99, 1.03)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
871.1	Open wound of hand except finger(s)	0.28	3.98E-01	0.96 (0.87, 1.06)
312	Conduct disorders	1.25	3.98E-01	1.02 (0.97, 1.07)
695.2	Bullous dermatoses	0.14	3.99E-01	1.06 (0.92, 1.22)
250.13	Type 1 diabetes with ophthalmic manifestations	0.4	3.99E-01	0.96 (0.89, 1.05)
334.2	Anterior horn cell disease	0.15	3.99E-01	1.06 (0.93, 1.21)
241.1	Nontoxic uninodular goiter	1.9	3.99E-01	1.02 (0.98, 1.06)
580.1	Glomerulonephritis	0.32	4.00E-01	0.96 (0.87, 1.06)
567	Peritonitis and retroperitoneal infections	0.33	4.01E-01	1.04 (0.95, 1.14)
297	Suicidal ideation or attempt	3.73	4.01E-01	1.01 (0.98, 1.04)
597	Other disorders of urethra and urinary tract	0.94	4.03E-01	0.98 (0.93, 1.03)
537	Other disorders of stomach and duodenum	0.9	4.03E-01	1.02 (0.97, 1.08)
714	Rheumatoid arthritis and other inflammatory polyarthropathies	2.12	4.04E-01	0.98 (0.95, 1.02)
509.3	Pulmonary insufficiency or respiratory failure following trauma and surgery	0.25	4.05E-01	1.04 (0.94, 1.16)
429	Ill-defined descriptions and complications of heart disease	1.81	4.06E-01	0.98 (0.95, 1.02)
508	Pulmonary collapse; interstitial and compensatory emphysema	0.6	4.08E-01	1.03 (0.96, 1.1)
317.1	Alcoholism	13.11	4.08E-01	0.99 (0.98, 1.01)
261.2	Vitamin B-complex deficiencies	4.29	4.08E-01	1.01 (0.99, 1.04)
110	Dermatophytosis / Dermatomycosis	19.6	4.09E-01	1.01 (0.99, 1.02)
696.4	Psoriasis	2.72	4.09E-01	0.99 (0.96, 1.02)
320	Meningitis	0.16	4.09E-01	1.06 (0.93, 1.21)
427.9	Palpitations	3.07	4.10E-01	1.01 (0.98, 1.04)
374.3	Ptosis of eyelid	1.83	4.13E-01	1.02 (0.98, 1.06)
585.1	Acute renal failure	5.21	4.14E-01	0.99 (0.96, 1.01)
724.1	Disorders of sacrum	0.64	4.15E-01	1.03 (0.96, 1.1)
250.14	Type 1 diabetes with neurological manifestations	0.43	4.15E-01	0.97 (0.89, 1.05)
379.9	Pain, swelling or discharge of eye	0.78	4.17E-01	1.03 (0.96, 1.09)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
210	Benign neoplasm of lip, oral cavity, and pharynx	0.42	4.19E-01	0.97 (0.89, 1.05)
204.12	Lymphoid leukemia, chronic	0.43	4.20E-01	1.03 (0.96, 1.11)
345	Epilepsy, recurrent seizures, convulsions	3.48	4.22E-01	0.99 (0.96, 1.02)
358	Myoneural disorders	0.2	4.22E-01	1.05 (0.94, 1.17)
594.3	Calculus of ureter	1.28	4.24E-01	1.02 (0.97, 1.07)
259	Other endocrine disorders	0.23	4.24E-01	0.96 (0.86, 1.07)
286.1	Congenital coagulation defects	0.11	4.24E-01	1.06 (0.91, 1.24)
353	Nerve root and plexus disorders	1.29	4.25E-01	0.98 (0.94, 1.03)
735.21	Hammer toe (acquired)	3.26	4.25E-01	0.99 (0.96, 1.02)
741	Symptoms and disorders of the joints	6.16	4.26E-01	0.99 (0.97, 1.01)
627.22	Need for Hormone replacement therapy (postmenopausal)	0.32	4.26E-01	1.04 (0.94, 1.14)
313.2	Tics and stuttering	0.19	4.27E-01	1.05 (0.93, 1.18)
288.11	Neutropenia	0.81	4.28E-01	0.98 (0.92, 1.04)
801	Fracture of ankle and foot	2.86	4.29E-01	1.01 (0.98, 1.05)
426.24	Atrioventricular block, complete	1.04	4.30E-01	0.98 (0.93, 1.03)
850	Hemorrhage or hematoma complicating a procedure	0.8	4.32E-01	1.02 (0.97, 1.09)
800.1	Fracture of neck of femur	0.59	4.32E-01	0.97 (0.91, 1.04)
701.1	Keratoderma, acquired	3.15	4.32E-01	0.99 (0.96, 1.02)
240	Simple and unspecified goiter	0.53	4.32E-01	0.97 (0.9, 1.05)
415	Pulmonary heart disease	3.06	4.33E-01	0.99 (0.96, 1.02)
362.29	Macular degeneration (senile) of retina NOS	1.87	4.33E-01	1.02 (0.98, 1.05)
859	Complication due to other implant and internal device	0.33	4.34E-01	1.04 (0.95, 1.14)
907	Injuries to the nervous system	0.94	4.34E-01	1.02 (0.97, 1.08)
334	Degenerative disease of the spinal cord	0.58	4.35E-01	0.97 (0.91, 1.04)
963.1	Antineoplastic and immunosuppressive drugs causing adverse effects	0.26	4.37E-01	1.04 (0.94, 1.15)
704	Diseases of hair and hair follicles	2.91	4.38E-01	1.01 (0.98, 1.05)
289.5	Diseases of spleen	0.26	4.39E-01	1.04 (0.94, 1.15)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
226	Benign neoplasm of thyroid glands	0.1	4.39E-01	0.94 (0.79, 1.11)
681.1	Cellulitis and abscess of fingers/toes	1.97	4.39E-01	1.02 (0.98, 1.05)
757	Congenital anomalies of the integument	0.11	4.39E-01	1.06 (0.91, 1.25)
433.5	Cerebral aneurysm	0.24	4.40E-01	0.96 (0.86, 1.07)
333	Extrapyramidal disease and abnormal movement disorders	3.31	4.40E-01	0.99 (0.96, 1.02)
509.2	Respiratory insufficiency	0.35	4.40E-01	0.97 (0.88, 1.06)
385.3	Cholesteatoma	0.23	4.41E-01	1.04 (0.94, 1.16)
591	Urinary tract infection	7.85	4.42E-01	1.01 (0.99, 1.03)
585.3	Chronic renal failure [CKD]	10.16	4.44E-01	0.99 (0.97, 1.01)
477	Epistaxis or throat hemorrhage	1.54	4.44E-01	0.98 (0.94, 1.03)
740.2	Osteoarthritis, generalized	1.94	4.45E-01	0.99 (0.95, 1.02)
726.2	Synoviopathy	0.65	4.45E-01	0.98 (0.91, 1.04)
433.12	Cerebral atherosclerosis	0.2	4.45E-01	1.05 (0.93, 1.18)
625.1	Dyspareunia	0.16	4.46E-01	1.05 (0.92, 1.2)
427.22	Atrial flutter	2.16	4.46E-01	0.99 (0.95, 1.02)
614	Inflammatory diseases of female pelvic organs	1.32	4.47E-01	1.02 (0.97, 1.08)
710.11	Acute osteomyelitis	0.48	4.49E-01	0.97 (0.9, 1.05)
367.9	Blindness and low vision	3.72	4.49E-01	0.99 (0.96, 1.02)
512.7	Shortness of breath	9.98	4.50E-01	1.01 (0.99, 1.03)
597.1	Urethral stricture (not specified as infectious)	0.84	4.51E-01	0.98 (0.92, 1.04)
191	Malignant and unknown neoplasms of brain and nervous system	0.25	4.51E-01	0.96 (0.87, 1.06)
871.4	Open wound of toe(s)	0.17	4.52E-01	1.05 (0.93, 1.19)
747	Cardiac and circulatory congenital anomalies	0.58	4.53E-01	0.97 (0.91, 1.04)
705.1	Dyshidrosis	0.33	4.53E-01	1.04 (0.94, 1.14)
605	Erectile dysfunction [ED]	23.27	4.54E-01	0.99 (0.98, 1.01)
41.12	Methicillin resistant Staphylococcus aureus	0.53	4.54E-01	1.03 (0.96, 1.1)
531.3	Duodenal ulcer	0.4	4.56E-01	0.97 (0.89, 1.05)
433.31	Transient cerebral ischemia	4.27	4.57E-01	1.01 (0.98, 1.04)
740.3	Osteoarthritis involving more than one site, but not specified as generalized	1.07	4.57E-01	1.02 (0.97, 1.07)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
378	Strabismus and other disorders of binocular eye movements	2.24	4.58E-01	0.99 (0.95, 1.02)
389.1	Sensorineural hearing loss	29.11	4.59E-01	1 (0.98, 1.01)
384	Other disorders of tympanic membrane	0.57	4.59E-01	1.03 (0.96, 1.1)
313	Pervasive developmental disorders	1.77	4.60E-01	1.01 (0.98, 1.06)
173	Neoplasm of uncertain behavior of skin	6.14	4.60E-01	1.01 (0.99, 1.03)
854	Complications of cardiac/vascular device, implant, and graft	0.64	4.61E-01	1.03 (0.96, 1.1)
8.52	Intestinal infection due to C. difficile	0.56	4.62E-01	0.97 (0.91, 1.04)
289	Other diseases of blood and blood-forming organs	0.69	4.63E-01	0.98 (0.92, 1.04)
710.19	Unspecified osteomyelitis	1.12	4.66E-01	0.98 (0.93, 1.03)
990	Effects radiation NOS	0.6	4.67E-01	1.03 (0.96, 1.1)
389.4	Tinnitus	11.1	4.68E-01	1.01 (0.99, 1.02)
379.5	Disorders of iris and ciliary body	0.74	4.69E-01	1.02 (0.96, 1.09)
429.3	Symptoms involving cardiovascular system	0.71	4.70E-01	1.02 (0.96, 1.09)
197	Chemotherapy	2.03	4.70E-01	1.01 (0.98, 1.05)
275.11	Hereditary hemochromatosis	0.15	4.70E-01	1.05 (0.92, 1.19)
250.3	Insulin pump user	3.21	4.71E-01	0.99 (0.96, 1.02)
395.2	Nonrheumatic aortic valve disorders	2.66	4.71E-01	0.99 (0.96, 1.02)
278.4	Abnormal weight gain	0.47	4.72E-01	0.97 (0.9, 1.05)
270	Disorders of protein plasma/amino-acid transport and metabolism	1.41	4.74E-01	1.02 (0.97, 1.06)
275.51	Hypocalcemia	0.29	4.77E-01	0.97 (0.88, 1.06)
701.5	Abnormal granulation tissue	0.11	4.77E-01	1.06 (0.9, 1.24)
149.1	Cancer of oropharynx	0.29	4.80E-01	1.03 (0.94, 1.14)
595	Hydronephrosis	0.81	4.81E-01	1.02 (0.96, 1.08)
327.5	Parasomnia	1.46	4.82E-01	1.02 (0.97, 1.06)
365.5	Pseudoexfoliation glaucoma	0.13	4.83E-01	1.05 (0.92, 1.2)
174	Breast cancer	0.48	4.85E-01	0.97 (0.9, 1.05)
250.21	Type 2 diabetes with ketoacidosis	0.27	4.85E-01	1.04 (0.93, 1.16)
195	Cancer, suspected or other	1.39	4.85E-01	1.02 (0.97, 1.06)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
480.3	Pneumonia due to fungus (mycoses)	0.13	4.88E-01	1.05 (0.91, 1.22)
130.1	Lyme disease	0.14	4.88E-01	0.95 (0.83, 1.09)
112.3	Candidiasis of skin and nails	0.11	4.89E-01	1.05 (0.91, 1.23)
736.6	Unequal leg length (acquired)	0.93	4.89E-01	0.98 (0.93, 1.04)
348	Other conditions of brain	0.37	4.89E-01	1.03 (0.95, 1.12)
286	Coagulation defects	2.1	4.89E-01	0.99 (0.95, 1.02)
368.4	Visual field defects	1.92	4.89E-01	0.99 (0.95, 1.03)
750.1	Upper gastrointestinal congenital anomalies	0.11	4.90E-01	1.06 (0.91, 1.23)
283	Acquired hemolytic anemias	0.13	4.90E-01	0.95 (0.82, 1.1)
504.1	Idiopathic fibrosing alveolitis	0.14	4.91E-01	1.05 (0.92, 1.2)
420.3	Endocarditis	0.63	4.92E-01	0.98 (0.92, 1.04)
496.1	Emphysema	1.54	4.92E-01	0.99 (0.94, 1.03)
271.9	Other disorders of carbohydrate transport and metabolism	0.11	4.93E-01	1.06 (0.9, 1.24)
770	Myalgia and myositis unspecified	5.23	4.94E-01	1.01 (0.98, 1.03)
286.7	Other and unspecified coagulation defects	1.05	4.96E-01	0.98 (0.93, 1.03)
804	Fracture of hand or wrist	1.76	4.96E-01	0.99 (0.95, 1.03)
874	Complication of amputation stump	0.25	4.96E-01	0.96 (0.87, 1.07)
80	Postoperative infection	1.03	4.97E-01	1.02 (0.97, 1.07)
1011	Complications of surgical and medical procedures	0.74	4.97E-01	1.02 (0.96, 1.09)
317	Alcohol-related disorders	18.46	4.97E-01	1.01 (0.99, 1.02)
613.8	Other specified disorders of breast	0.12	4.97E-01	0.95 (0.81, 1.11)
145	Cancer of mouth	0.64	4.99E-01	1.02 (0.96, 1.09)
599.4	Urinary incontinence	4.51	4.99E-01	0.99 (0.97, 1.02)
81	Infection/inflammation of internal prosthetic device; implant; and graft	0.68	5.00E-01	1.02 (0.96, 1.09)
426.23	Second degree AV block	0.22	5.03E-01	1.04 (0.93, 1.16)
624	Symptoms involving female genital tract	0.14	5.04E-01	0.95 (0.81, 1.11)
523.1	Gingivitis	3.68	5.06E-01	0.99 (0.96, 1.02)
443.8	Other specified peripheral vascular diseases	0.25	5.07E-01	1.04 (0.93, 1.15)
110.11	Dermatophytosis of nail	14.02	5.07E-01	1.01 (0.99, 1.02)
290.1	Dementias	1.62	5.08E-01	1.01 (0.97, 1.06)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
274.21	Chondrocalcinosis	0.31	5.09E-01	1.03 (0.94, 1.13)
601.8	Other inflammatory disorders of male genital organs	0.15	5.09E-01	0.95 (0.83, 1.1)
386.2	Peripheral or central vertigo	1.38	5.11E-01	1.01 (0.97, 1.06)
612.2	Hypertrophy of breast (Gynecomastia)	1	5.11E-01	0.98 (0.93, 1.04)
270.32	Paraproteinemia	0.65	5.13E-01	1.02 (0.96, 1.09)
401.3	Other hypertensive complications	0.46	5.13E-01	0.97 (0.9, 1.06)
530	Diseases of esophagus	34.5	5.14E-01	1 (0.99, 1.02)
415.1	Acute pulmonary heart disease	1.69	5.14E-01	0.99 (0.95, 1.03)
348.8	Encephalopathy, not elsewhere classified	0.2	5.16E-01	1.04 (0.92, 1.17)
1012	Late effect	0.21	5.21E-01	1.04 (0.93, 1.16)
964	Poisoning by agents primarily affecting blood constituents	0.22	5.21E-01	0.96 (0.86, 1.08)
204	Leukemia	1	5.22E-01	1.02 (0.97, 1.07)
611.3	Lump or mass in breast	1.14	5.22E-01	1.02 (0.97, 1.07)
526.8	Exostosis of jaw	0.14	5.23E-01	0.95 (0.82, 1.1)
381.1	Otitis media	3	5.23E-01	1.01 (0.98, 1.04)
394.7	Disease of tricuspid valve	0.3	5.24E-01	0.97 (0.88, 1.07)
433.3	Cerebral ischemia	4.34	5.25E-01	1.01 (0.98, 1.03)
727.1	Synovitis and tenosynovitis	3.85	5.25E-01	0.99 (0.96, 1.02)
361.2	Retinoschisis and retinal cysts	0.25	5.25E-01	1.03 (0.93, 1.14)
292.4	Altered mental status	1.26	5.28E-01	0.98 (0.94, 1.03)
270.38	Other specified disorders of plasma protein metabolism	0.14	5.29E-01	1.05 (0.91, 1.21)
737.1	Kyphosis (acquired)	0.17	5.29E-01	1.04 (0.92, 1.17)
528.3	Cellulitis and abscess of oral soft tissues	0.25	5.30E-01	1.04 (0.93, 1.16)
277	Other disorders of metabolism	0.29	5.30E-01	0.97 (0.88, 1.07)
803.1	Fracture of humerus	0.59	5.31E-01	0.98 (0.92, 1.05)
381.2	Eustachian tube disorders	1.09	5.31E-01	1.02 (0.97, 1.07)
471	Nasal polyps	0.71	5.33E-01	1.02 (0.96, 1.08)
593	Hematuria	6.71	5.33E-01	0.99 (0.97, 1.01)
415.11	Pulmonary embolism and infarction, acute	1.68	5.33E-01	0.99 (0.95, 1.03)
250.7	Diabetic retinopathy	5.75	5.33E-01	1.01 (0.98, 1.03)
574.3	Cholecystitis without cholelithiasis	0.92	5.35E-01	1.02 (0.96, 1.07)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
573.9	Abnormal serum enzyme levels	0.86	5.35E-01	0.98 (0.93, 1.04)
269	Proteinuria	1.95	5.36E-01	1.01 (0.97, 1.05)
280.2	Iron deficiency anemia secondary to blood loss (chronic)	0.42	5.36E-01	1.03 (0.95, 1.11)
687.2	Localized superficial swelling, mass, or lump	1.31	5.37E-01	1.01 (0.97, 1.06)
312.3	Impulse control disorder	1.07	5.38E-01	1.02 (0.96, 1.07)
195.1	Malignant neoplasm, other	1.04	5.38E-01	1.02 (0.97, 1.07)
751.21	Cystic kidney disease	1.23	5.38E-01	1.01 (0.97, 1.06)
282.9	Other hereditary hemolytic anemias	0.1	5.41E-01	1.06 (0.88, 1.29)
284.1	Pancytopenia	0.55	5.42E-01	0.98 (0.91, 1.05)
170	Cancer of bone and connective tissue	0.24	5.42E-01	1.03 (0.93, 1.15)
536.3	Gastroparesis	0.5	5.43E-01	0.98 (0.91, 1.05)
686	Other local infections of skin and subcutaneous tissue	0.75	5.44E-01	1.02 (0.96, 1.08)
626.2	Dysmenorrhea	0.43	5.45E-01	0.97 (0.89, 1.06)
375.2	Epiphora	0.29	5.46E-01	0.97 (0.88, 1.07)
519.2	Respiratory complications	0.1	5.47E-01	1.05 (0.89, 1.24)
157	Pancreatic cancer	0.21	5.47E-01	0.97 (0.86, 1.08)
520.2	Disturbances in tooth eruption	0.1	5.48E-01	1.05 (0.89, 1.25)
353.2	Nerve root lesions	0.85	5.50E-01	1.02 (0.96, 1.08)
711.1	Pyogenic arthritis	0.29	5.50E-01	0.97 (0.88, 1.07)
476	Allergic rhinitis	16.74	5.50E-01	1 (0.99, 1.02)
201	Hodgkin's disease	0.14	5.52E-01	1.04 (0.91, 1.19)
433.21	Cerebral artery occlusion, with cerebral infarction	2.2	5.52E-01	0.99 (0.95, 1.03)
788	Syncope and collapse	5.26	5.55E-01	0.99 (0.97, 1.02)
550.2	Diaphragmatic hernia	3.34	5.56E-01	1.01 (0.98, 1.04)
112	Candidiasis	1.43	5.56E-01	1.01 (0.97, 1.06)
705	Disorders of sweat glands	0.69	5.57E-01	1.02 (0.96, 1.09)
573.5	Jaundice (not of newborn)	0.4	5.57E-01	0.98 (0.9, 1.06)
78	Viral warts & HPV	3.67	5.58E-01	0.99 (0.96, 1.02)
686.2	Impetigo	0.11	5.58E-01	0.95 (0.82, 1.11)
195.3		0.81	5.60E-01	1.02 (0.96, 1.08)
504	Other alveolar and parietoalveolar pneumonopathy	0.48	5.65E-01	1.02 (0.95, 1.1)
428.3	Heart failure with reduced EF [Systolic or	1.49	5.66E-01	0.99 (0.94, 1.03)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	combined heart failure]			
433.2	Occlusion of cerebral arteries	2.29	5.68E-01	0.99 (0.96, 1.03)
366.1	Nonsenile Cataract	1.21	5.68E-01	1.01 (0.97, 1.06)
395.6	Heart valve replaced	1.19	5.69E-01	1.01 (0.97, 1.06)
475.9	Postnasal drip	0.14	5.69E-01	1.04 (0.91, 1.19)
202	Cancer of other lymphoid, histiocytic tissue	0.97	5.70E-01	1.02 (0.96, 1.07)
994.21	Septic shock	0.17	5.70E-01	1.04 (0.92, 1.17)
31	Diseases due to other mycobacteria	0.15	5.72E-01	0.96 (0.84, 1.1)
524	Dentofacial anomalies, including malocclusion	1.34	5.72E-01	0.99 (0.94, 1.03)
272.12	Hyperglyceridemia	3.73	5.73E-01	1.01 (0.98, 1.04)
275.3	Disorders of magnesium metabolism	1.03	5.74E-01	1.02 (0.96, 1.07)
870	Open wounds of head; neck; and trunk	2.14	5.74E-01	1.01 (0.97, 1.05)
523.31	Acute periodontitis	6.85	5.74E-01	1.01 (0.98, 1.03)
41.1	Staphylococcus infections	1.39	5.74E-01	0.99 (0.94, 1.03)
365.2	Primary angle-closure glaucoma	1.11	5.76E-01	0.99 (0.94, 1.04)
276.6	Fluid overload	0.52	5.76E-01	1.02 (0.95, 1.1)
272.11	Hypercholesterolemia	14.46	5.79E-01	1 (0.98, 1.01)
313.1	Attention deficit hyperactivity disorder	1.52	5.79E-01	1.01 (0.97, 1.06)
117.1	Histoplasmosis	0.17	5.79E-01	0.97 (0.86, 1.09)
910	Superficial injury, infected	0.1	5.81E-01	0.95 (0.81, 1.13)
530.3	Stricture and stenosis of esophagus	0.75	5.84E-01	1.02 (0.96, 1.08)
358.1	Myasthenia gravis	0.18	5.84E-01	1.03 (0.92, 1.17)
365.11	Primary open angle glaucoma	4.58	5.85E-01	0.99 (0.97, 1.02)
253.4	Anterior pituitary disorders	0.67	5.86E-01	0.98 (0.92, 1.05)
704.1	Alopecia	0.53	5.86E-01	1.02 (0.95, 1.1)
337.1	Peripheral autonomic neuropathy	0.42	5.87E-01	1.02 (0.94, 1.11)
430.1	Subarachnoid hemorrhage	0.1	5.87E-01	1.05 (0.89, 1.23)
212	Benign neoplasm of respiratory and intrathoracic organs	0.22	5.88E-01	1.03 (0.92, 1.15)
327.72	Sleep related leg cramps	0.17	5.89E-01	1.03 (0.92, 1.17)
251.1	Hypoglycemia	1.03	5.91E-01	1.01 (0.96, 1.07)
790	Nonspecific findings on examination of blood	0.28	5.91E-01	0.97 (0.88, 1.07)
287.31	Primary	0.18	5.92E-01	0.97 (0.86, 1.09)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	thrombocytopenia			
755	Congenital anomalies of limbs	1.12	5.92E-01	1.01 (0.96, 1.07)
701	Other hypertrophic and atrophic conditions of skin	7.74	5.93E-01	0.99 (0.97, 1.01)
503	Pulmonary congestion and hypostasis	0.22	5.94E-01	1.03 (0.92, 1.15)
453	Chronic venous hypertension	0.18	5.95E-01	1.03 (0.92, 1.17)
285.2	Anemia of chronic disease	1.93	5.95E-01	0.99 (0.95, 1.03)
626.12	Excessive or frequent menstruation	0.73	5.96E-01	0.98 (0.91, 1.05)
70	Viral hepatitis	6.28	5.97E-01	1.01 (0.98, 1.03)
585.33	Chronic Kidney Disease, Stage III	5.02	5.97E-01	1.01 (0.98, 1.03)
297.1	Suicidal ideation	2.99	5.98E-01	1.01 (0.98, 1.04)
740	Osteoarthritis	36.75	5.99E-01	1 (0.99, 1.01)
722.8	Postlaminectomy syndrome	0.91	5.99E-01	0.99 (0.93, 1.04)
291.1	Transient mental disorders due to conditions classified elsewhere	0.21	6.00E-01	0.97 (0.87, 1.09)
375.1	Dry eyes	11.8	6.00E-01	1 (0.98, 1.01)
433	Cerebrovascular disease	11.17	6.01E-01	1 (0.98, 1.01)
396	Abnormal heart sounds	2.26	6.01E-01	1.01 (0.97, 1.05)
573.7	Abnormal results of function study of liver	5.38	6.01E-01	1.01 (0.98, 1.03)
800.4	Fracture of patella	0.35	6.04E-01	1.02 (0.94, 1.12)
726.1	Enthesopathy	7.72	6.05E-01	1.01 (0.99, 1.03)
732	Osteochondropathies	0.17	6.05E-01	0.97 (0.85, 1.1)
350	Abnormal movement	10.38	6.06E-01	1 (0.98, 1.01)
241	Nontoxic nodular goiter	2.38	6.07E-01	1.01 (0.97, 1.04)
8.6	Viral Enteritis	0.2	6.07E-01	0.97 (0.86, 1.09)
560.4	Other intestinal obstruction	0.94	6.08E-01	0.99 (0.93, 1.04)
200	Myeloproliferative disease	0.97	6.08E-01	1.01 (0.96, 1.07)
425	Cardiomyopathy	3.28	6.09E-01	0.99 (0.96, 1.02)
579.8	Nonspecific abnormal findings in stool contents	1.35	6.13E-01	0.99 (0.94, 1.03)
741.4	Joint effusions	1.23	6.13E-01	0.99 (0.94, 1.04)
704.8	Other specified diseases of hair and hair follicles	2.36	6.14E-01	1.01 (0.97, 1.05)
367.4	Presbyopia	34.97	6.15E-01	1 (0.98, 1.01)
604.1	Redundant prepuce and phimosis/BXO	0.71	6.16E-01	1.02 (0.95, 1.08)
187.8	Neoplasm of uncertain behavior of male genital	0.12	6.16E-01	1.04 (0.89, 1.21)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	organs			
170.2	Cancer of connective tissue	0.16	6.17E-01	1.03 (0.91, 1.17)
569.2	Gastrointestinal complications	0.16	6.17E-01	1.03 (0.91, 1.18)
578	Gastrointestinal hemorrhage	10.12	6.18E-01	1 (0.98, 1.01)
1019	Other ill-defined and unknown causes of morbidity and mortality	5.4	6.19E-01	0.99 (0.97, 1.02)
1014	Effects of heat, cold and air pressure	0.15	6.19E-01	0.97 (0.84, 1.11)
615	Endometriosis	0.23	6.19E-01	0.97 (0.86, 1.09)
535.2	Atrophic gastritis	0.28	6.20E-01	0.98 (0.88, 1.08)
800.3	Fracture of tibia and fibula	0.88	6.21E-01	0.99 (0.93, 1.04)
292.1	Aphasia/speech disturbance	1.55	6.22E-01	0.99 (0.95, 1.03)
282.8	Other hemoglobinopathies	0.23	6.22E-01	0.97 (0.86, 1.09)
418	Nonspecific chest pain	23.6	6.23E-01	1 (0.99, 1.02)
527.2	Sialoadenitis	0.33	6.23E-01	0.98 (0.89, 1.07)
427.5	Arrhythmia (cardiac) NOS	5.14	6.24E-01	0.99 (0.97, 1.02)
351	Other peripheral nerve disorders	16.32	6.24E-01	1 (0.99, 1.02)
365	Glaucoma	17.36	6.25E-01	1 (0.98, 1.01)
716.2	Unspecified monoarthritis	0.26	6.25E-01	0.97 (0.88, 1.08)
798	Malaise and fatigue	6.78	6.26E-01	1.01 (0.98, 1.03)
830	Dislocation	3.12	6.26E-01	0.99 (0.96, 1.02)
737.3	Kyphoscoliosis and scoliosis	0.53	6.26E-01	0.98 (0.91, 1.06)
378.5	Paralytic strabismus	0.35	6.31E-01	1.02 (0.94, 1.11)
717	Polymyalgia Rheumatica	0.38	6.31E-01	0.98 (0.9, 1.06)
288.3	Eosinophilia	0.16	6.32E-01	1.03 (0.91, 1.18)
479	Other upper respiratory disease	2.24	6.34E-01	0.99 (0.96, 1.03)
530.1	Esophagitis, GERD and related diseases	33.65	6.34E-01	1 (0.99, 1.01)
366.3	Traumatic cataract	0.13	6.34E-01	1.04 (0.89, 1.2)
455	Hemorrhoids	11.12	6.35E-01	1 (0.98, 1.01)
610.1	Cystic mastopathy	0.31	6.36E-01	1.02 (0.93, 1.13)
430.3	Subdural hemorrhage	0.28	6.38E-01	0.98 (0.88, 1.08)
587	Kidney replaced by transplant	0.32	6.39E-01	1.02 (0.93, 1.13)
727	Other disorders of synovium, tendon, and bursa	9.58	6.40E-01	1 (0.99, 1.02)
735.3	Hallux valgus (Bunion)	3.14	6.40E-01	1.01 (0.98, 1.04)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
204.1	Lymphoid leukemia	0.46	6.41E-01	1.02 (0.95, 1.1)
155	Cancer of liver and intrahepatic bile duct	0.45	6.42E-01	1.02 (0.94, 1.1)
529	Diseases and other conditions of the tongue	0.27	6.43E-01	1.02 (0.93, 1.13)
342	Hemiplegia	0.43	6.43E-01	0.98 (0.9, 1.07)
428.2	Heart failure NOS	0.87	6.44E-01	0.99 (0.93, 1.04)
388	Other disorders of ear	0.55	6.46E-01	0.98 (0.92, 1.05)
427.7	Tachycardia NOS	1.7	6.46E-01	0.99 (0.95, 1.03)
522.5	Periapical abscess	0.94	6.48E-01	1.01 (0.96, 1.07)
281.9	Deficiency anemias	0.59	6.49E-01	1.02 (0.95, 1.09)
596.5	Functional disorders of bladder	2.22	6.49E-01	1.01 (0.97, 1.04)
747.12	Valvular heart disease/ heart chambers	0.12	6.50E-01	0.97 (0.84, 1.12)
962	Poisoning by hormones and synthetic substitutes	0.2	6.51E-01	1.03 (0.91, 1.16)
715	Other inflammatory spondylopathies	1.06	6.52E-01	0.99 (0.94, 1.04)
204.2	Myeloid leukemia	0.21	6.52E-01	1.03 (0.92, 1.15)
513	Respiratory abnormalities	2	6.52E-01	1.01 (0.97, 1.05)
977	Personal history of allergy to medicinal agents	0.19	6.53E-01	1.03 (0.91, 1.16)
522.1	Pulpitis and necrosis of tooth pulp	2.15	6.56E-01	1.01 (0.97, 1.05)
613	Other nonmalignant breast conditions	0.77	6.58E-01	1.01 (0.95, 1.08)
743.21	Pathologic fracture of vertebrae	0.15	6.59E-01	1.03 (0.9, 1.17)
260.6	Anorexia	0.28	6.59E-01	1.02 (0.92, 1.13)
530.11	GERD	32.23	6.61E-01	1 (0.99, 1.01)
349	Other and unspecified disorders of the nervous system	0.39	6.62E-01	0.98 (0.9, 1.07)
289.4	Lymphadenitis	1.83	6.62E-01	0.99 (0.95, 1.03)
292.2	Mild cognitive impairment	1.06	6.65E-01	0.99 (0.94, 1.04)
531.2	Gastric ulcer	0.58	6.67E-01	0.98 (0.92, 1.06)
565.1	Anal and rectal polyp	0.6	6.67E-01	1.01 (0.95, 1.08)
401.2	Hypertensive heart and/or renal disease	6.5	6.68E-01	1 (0.97, 1.02)
275.5	Disorders of calcium/phosphorus metabolism	1.18	6.68E-01	1.01 (0.96, 1.06)
426.7	Abnormal electrocardiogram [ECG] [EKG]	3.58	6.73E-01	1.01 (0.98, 1.04)
425.11	Hypertrophic obstructive cardiomyopathy	0.14	6.74E-01	0.97 (0.84, 1.12)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
626.14	Irregular menstrual bleeding	0.15	6.75E-01	0.97 (0.84, 1.12)
427.8	Sinoatrial node dysfunction (Bradycardia)	0.87	6.75E-01	0.99 (0.94, 1.04)
180.3	Cervical intraepithelial neoplasia [CIN] [Cervical dysplasia]	0.3	6.76E-01	0.98 (0.88, 1.08)
695.9	Unspecified erythematous condition	0.12	6.77E-01	1.03 (0.89, 1.2)
278.11	Morbid obesity	8.87	6.77E-01	1 (0.99, 1.02)
706.2	Sebaceous cyst	5.68	6.77E-01	1 (0.98, 1.03)
509.1	Respiratory failure	1.41	6.78E-01	1.01 (0.97, 1.06)
202.2	Non-Hodgkin lymphoma	0.92	6.79E-01	1.01 (0.96, 1.07)
733	Other disorders of bone and cartilage	0.58	6.81E-01	0.99 (0.92, 1.06)
426.3	Bundle branch block	1.52	6.81E-01	0.99 (0.95, 1.03)
724	Other and unspecified disorders of back	2.16	6.82E-01	1.01 (0.97, 1.05)
560	Intestinal obstruction without mention of hernia	1.33	6.82E-01	1.01 (0.96, 1.06)
155.1	Malignant neoplasm of liver, primary	0.39	6.82E-01	1.02 (0.94, 1.11)
871.3	Open wound of foot except toe(s) alone	0.35	6.83E-01	0.98 (0.9, 1.07)
223	Benign neoplasm of kidney and other urinary organs	0.22	6.84E-01	1.02 (0.92, 1.14)
149	Cancer of larynx, pharynx, nasal cavities	0.89	6.84E-01	1.01 (0.96, 1.07)
394	Rheumatic disease of the heart valves	1.08	6.85E-01	0.99 (0.94, 1.04)
198.3	Secondary malignant neoplasm of digestive systems	0.11	6.85E-01	1.03 (0.88, 1.21)
245	Thyroiditis	0.25	6.88E-01	0.98 (0.88, 1.08)
564.8	Abnormal findings on exam of gastrointestinal tract/ abdominal area	0.59	6.89E-01	1.01 (0.95, 1.09)
938.2	Chronic dermatitis due to solar radiation	0.52	6.90E-01	1.01 (0.95, 1.09)
967	Adverse effects of sedatives or other central nervous system depressants and anesthetics	0.14	6.90E-01	1.03 (0.89, 1.19)
172.11	Melanomas of skin	1.33	6.91E-01	0.99 (0.95, 1.04)
290.11	Alzheimer's disease	0.42	6.91E-01	0.98 (0.91, 1.07)
333.2	Myoclonus	0.2	6.96E-01	0.98 (0.87, 1.1)
300.9	Posttraumatic stress disorder	21.44	6.97E-01	1 (0.99, 1.02)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
442.8	Aneurysm of other specified artery	0.13	6.97E-01	1.03 (0.89, 1.19)
573.6	Nonspecific elevation of levels of transaminase or lactic acid dehydrogenase [LDH]	0.84	7.00E-01	1.01 (0.96, 1.07)
963	Poisoning by primarily systemic agents	0.3	7.01E-01	1.02 (0.93, 1.12)
589	Abnormal results of function study of kidney	0.22	7.01E-01	0.98 (0.87, 1.09)
474.2	Chronic tonsillitis and adenoiditis	0.34	7.01E-01	1.02 (0.93, 1.12)
705.8	Hyperhidrosis	0.45	7.01E-01	0.98 (0.91, 1.07)
426.2	Atrioventricular [AV] block	2.13	7.01E-01	0.99 (0.96, 1.03)
735.22	Claw toe (acquired)	0.13	7.02E-01	0.97 (0.84, 1.12)
724.8	Other symptoms referable to back	0.54	7.02E-01	1.01 (0.94, 1.09)
609	Male infertility and abnormal spermatozoa	0.34	7.03E-01	1.02 (0.93, 1.11)
600	Hyperplasia of prostate	24.32	7.03E-01	1 (0.99, 1.02)
604.3	Peyronie's disease	0.41	7.04E-01	1.02 (0.94, 1.1)
279.7	Other immunological findings	0.16	7.06E-01	0.97 (0.85, 1.12)
960.2	Allergy/adverse effect of penicillin	0.15	7.09E-01	0.97 (0.85, 1.12)
706.1	Acne	1.42	7.12E-01	1.01 (0.96, 1.06)
800.2	Fracture of unspecified part of femur	0.25	7.12E-01	0.98 (0.88, 1.09)
368.2	Diplopia and disorders of binocular vision	1.28	7.13E-01	1.01 (0.96, 1.06)
327.31	Central/nonobstructive sleep apnea	0.47	7.13E-01	1.01 (0.94, 1.09)
363	Chorioretinal inflammations, scars, and other disorders of choroid	1.42	7.14E-01	0.99 (0.95, 1.04)
590	Pyelonephritis	0.39	7.15E-01	1.02 (0.93, 1.1)
426.32	Left bundle branch block	0.54	7.16E-01	1.01 (0.94, 1.09)
972	Poisoning by agents primarily affecting the cardiovascular system	0.25	7.17E-01	0.98 (0.88, 1.09)
465.4	Acute laryngitis and tracheitis	0.12	7.19E-01	1.03 (0.88, 1.2)
382	Otalgia	1.37	7.19E-01	1.01 (0.96, 1.05)
464	Acute sinusitis	3.96	7.19E-01	1.01 (0.98, 1.03)
520	Disorders of tooth development	0.61	7.21E-01	1.01 (0.95, 1.08)
379.51	Pigmentary iris degeneration	0.24	7.21E-01	1.02 (0.92, 1.13)
53.1	Herpes zoster with nervous system	0.44	7.21E-01	1.01 (0.94, 1.1)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	complications			
1008	Crushing or internal injury to organs	0.22	7.23E-01	1.02 (0.91, 1.14)
565	Anal and rectal conditions	2.84	7.24E-01	0.99 (0.96, 1.03)
818	Intracranial hemorrhage (injury)	0.15	7.25E-01	0.98 (0.85, 1.12)
361.1	Retinal detachment with retinal defect	0.78	7.25E-01	1.01 (0.95, 1.07)
365.1	Open-angle glaucoma	11.26	7.26E-01	1 (0.98, 1.01)
241.2	Nontoxic multinodular goiter	0.81	7.26E-01	0.99 (0.93, 1.05)
222	Benign neoplasm of male genital organs	0.3	7.27E-01	1.02 (0.93, 1.12)
550.1	Inguinal hernia	5.12	7.27E-01	1 (0.98, 1.03)
277.5	Other disorders of lipid metabolism	1.38	7.28E-01	1.01 (0.96, 1.05)
327.4	Insomnia	11.36	7.30E-01	1 (0.99, 1.02)
270.2	Disorders of amino-acid metabolism	0.5	7.32E-01	0.99 (0.92, 1.06)
525.1	Loss of teeth or edentulism	11.22	7.33E-01	1 (0.99, 1.02)
214.1	Lipoma of skin and subcutaneous tissue	1.18	7.35E-01	0.99 (0.94, 1.04)
523.32	Chronic periodontitis	2.49	7.35E-01	1.01 (0.97, 1.04)
250.24	Type 2 diabetes with neurological manifestations	7.62	7.36E-01	1 (0.98, 1.02)
563	Constipation	7.65	7.37E-01	1 (0.98, 1.02)
519.8	Other diseases of respiratory system, NEC	0.44	7.38E-01	0.99 (0.91, 1.07)
686.4	Pyogenic granuloma	0.16	7.39E-01	1.02 (0.9, 1.17)
361	Retinal detachments and defects	2.24	7.40E-01	1.01 (0.97, 1.04)
964.1	Anticoagulants causing adverse effects	0.2	7.40E-01	0.98 (0.87, 1.1)
695.42	Systemic lupus erythematosus	0.26	7.41E-01	1.02 (0.91, 1.13)
958	Certain early complications of trauma or procedure	0.11	7.41E-01	1.03 (0.88, 1.2)
363.3	Chorioretinal scars	1.24	7.41E-01	1.01 (0.96, 1.06)
198.4	Secondary malignant neoplasm of liver	0.31	7.42E-01	0.98 (0.9, 1.08)
599.2	Retention of urine	3.34	7.43E-01	1 (0.98, 1.03)
370.2	Superficial keratitis	0.31	7.43E-01	0.98 (0.9, 1.08)
580.3	Nephritis and nephropathy without mention of glomerulonephritis	1.16	7.45E-01	1.01 (0.96, 1.06)
761	Cervicalgia	14.05	7.46E-01	1 (0.99, 1.02)
841	Sprains and strains of	2.4	7.47E-01	0.99 (0.96, 1.03)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	back and neck			
994	Sepsis and SIRS	1.2	7.47E-01	1.01 (0.96, 1.06)
473.3	Paralysis/spasm of vocal cords or larynx	0.22	7.49E-01	1.02 (0.91, 1.14)
187	Cancer of other male genital organs	0.39	7.50E-01	0.99 (0.91, 1.07)
428.4	Heart failure with preserved EF [Diastolic heart failure]	1.14	7.51E-01	0.99 (0.94, 1.04)
470	Septal Deviations/Turbinate Hypertrophy	2.25	7.51E-01	1.01 (0.97, 1.04)
502	Postinflammatory pulmonary fibrosis	0.77	7.52E-01	0.99 (0.93, 1.05)
250.41	Impaired fasting glucose	6.42	7.52E-01	1 (0.98, 1.02)
580.12	Non-proliferative glomerulonephritis	0.13	7.56E-01	0.98 (0.84, 1.14)
561.1	Diarrhea	7.11	7.56E-01	1 (0.98, 1.02)
402	Elevated blood pressure reading without diagnosis of hypertension	4.46	7.57E-01	1 (0.97, 1.02)
292.11	Aphasia	0.38	7.58E-01	0.99 (0.91, 1.08)
528.5	Diseases of lips	0.18	7.58E-01	1.02 (0.91, 1.15)
512.8	Cough	11.03	7.58E-01	1 (0.99, 1.02)
694.1	Vitiligo	0.29	7.59E-01	1.02 (0.92, 1.12)
751	Genitourinary congenital anomalies	1.62	7.59E-01	1.01 (0.97, 1.05)
729.1	Rheumatism, unspecified and fibrositis	0.44	7.59E-01	0.99 (0.91, 1.07)
789	Nausea and vomiting	4.63	7.61E-01	1 (0.98, 1.03)
276.4	Acid-base balance disorder	1.04	7.62E-01	1.01 (0.96, 1.06)
281	Other deficiency anemia	1.51	7.62E-01	0.99 (0.95, 1.04)
198.1	Secondary malignancy of lymph nodes	0.85	7.64E-01	1.01 (0.95, 1.07)
145.3	Cancer of major salivary glands	0.18	7.65E-01	0.98 (0.87, 1.11)
609.2	Abnormal spermatozoa	0.18	7.66E-01	1.02 (0.9, 1.15)
735.23	Hallux rigidus	1.17	7.66E-01	0.99 (0.94, 1.04)
159	Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum	0.25	7.67E-01	1.02 (0.92, 1.13)
809	Fracture of unspecified bones	1.67	7.67E-01	1.01 (0.97, 1.05)
364.1	Corneal opacity	1.15	7.68E-01	1.01 (0.96, 1.06)
577.2	Chronic pancreatitis	0.55	7.69E-01	0.99 (0.92, 1.06)
495.1	Chronic obstructive asthma	0.94	7.70E-01	0.99 (0.94, 1.05)
374.1	Ectropion or entropion	1	7.70E-01	1.01 (0.96, 1.06)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
284	Aplastic anemia	0.75	7.70E-01	0.99 (0.93, 1.05)
803.3	Fracture of clavicle or scapula	0.43	7.70E-01	1.01 (0.94, 1.09)
710.1	Osteomyelitis	1.5	7.71E-01	1.01 (0.96, 1.05)
530.5	Disorders of esophageal motility	0.33	7.73E-01	0.99 (0.9, 1.08)
726.3	Bursitis	2.39	7.73E-01	1.01 (0.97, 1.04)
539	Bariatric surgery	0.38	7.73E-01	1.01 (0.93, 1.1)
569	Other disorders of intestine	0.78	7.74E-01	1.01 (0.95, 1.07)
525	Other diseases of the teeth and supporting structures	19.2	7.74E-01	1 (0.99, 1.02)
700	Corns and callosities	5.35	7.75E-01	1 (0.97, 1.02)
110.12	Athlete's foot	3.52	7.76E-01	1 (0.97, 1.03)
302	Sexual and gender identity disorders	1.13	7.76E-01	0.99 (0.94, 1.04)
250.23	Type 2 diabetes with ophthalmic manifestations	4.93	7.76E-01	1 (0.98, 1.03)
931	Contact dermatitis and other eczema due to plants [except food]	0.28	7.77E-01	1.01 (0.92, 1.12)
480.1	Bacterial pneumonia	0.81	7.77E-01	0.99 (0.94, 1.05)
378.2	Nystagmus and other irregular eye movements	0.13	7.77E-01	0.98 (0.85, 1.13)
520.1	Hereditary disturbances in tooth structure	0.3	7.78E-01	1.01 (0.92, 1.12)
10	Tuberculosis	0.49	7.79E-01	0.99 (0.91, 1.07)
872	Traumatic amputation	0.62	7.79E-01	1.01 (0.94, 1.08)
805	Fracture of vertebral column without mention of spinal cord injury	0.77	7.80E-01	1.01 (0.95, 1.07)
364.2	Corneal edema	0.28	7.81E-01	1.01 (0.92, 1.12)
535.9	Gastritis and duodenitis, NOS	1.51	7.82E-01	1.01 (0.96, 1.05)
327.3	Sleep apnea	25.18	7.83E-01	1 (0.99, 1.01)
875	Non-healing surgical wound	0.76	7.83E-01	1.01 (0.95, 1.07)
364.9	Cornea replaced by transplant	0.21	7.84E-01	0.98 (0.88, 1.1)
528.12	Oral aphthae	0.15	7.84E-01	1.02 (0.89, 1.17)
429.2	Abnormal function study of cardiovascular system	0.76	7.86E-01	0.99 (0.93, 1.05)
938.1	Acute dermatitis due to solar radiation	0.13	7.86E-01	1.02 (0.89, 1.17)
731	Osteitis deformans and osteopathies associated with other disorders classified elsewhere	0.34	7.87E-01	1.01 (0.92, 1.11)
609.1	Infertility, male	0.15	7.88E-01	1.02 (0.89, 1.17)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
535.1	Acute gastritis	0.26	7.88E-01	0.99 (0.89, 1.09)
799	Debility unspecified	4	7.89E-01	1 (0.97, 1.02)
1001	Foreign body injury	1.3	7.89E-01	1.01 (0.96, 1.05)
450	Noninfectious disorders of lymphatic channels	0.58	7.89E-01	1.01 (0.94, 1.08)
189.4	Malignant neoplasm of other urinary organs	0.11	7.90E-01	1.02 (0.88, 1.19)
626.1	Irregular menstrual cycle/bleeding	1.52	7.91E-01	1.01 (0.96, 1.06)
574.12	Cholelithiasis with other cholecystitis	0.39	7.92E-01	1.01 (0.93, 1.1)
426	Cardiac conduction disorders	9.31	7.93E-01	1 (0.98, 1.02)
858	Complication of internal orthopedic device	0.94	7.93E-01	1.01 (0.95, 1.06)
150	Cancer of esophagus	0.25	7.95E-01	1.01 (0.92, 1.12)
375	Disorders of lacrimal system	0.39	7.97E-01	0.99 (0.91, 1.07)
592.2	Urethritis and urethral syndrome	0.23	7.98E-01	1.02 (0.9, 1.15)
130	Spirochetal infection	0.18	8.00E-01	1.02 (0.9, 1.14)
250.22	Type 2 diabetes with renal manifestations	2.32	8.00E-01	1 (0.96, 1.03)
457	Encounter for long-term (current) use of anticoagulants, antithrombotics, aspirin	2.13	8.00E-01	1 (0.96, 1.03)
290.2	Delirium due to conditions classified elsewhere	0.61	8.02E-01	1.01 (0.94, 1.08)
610	Benign mammary dysplasias	0.53	8.04E-01	0.99 (0.92, 1.07)
380.4	Impacted cerumen	8.53	8.04E-01	1 (0.98, 1.02)
279.1	Immunity deficiency	0.13	8.04E-01	1.02 (0.88, 1.17)
522	Diseases of pulp and periapical tissues	3.94	8.05E-01	1 (0.97, 1.02)
737	Curvature of spine	0.75	8.05E-01	1.01 (0.95, 1.07)
275.53	Disorders of phosphorus metabolism	0.45	8.05E-01	1.01 (0.93, 1.1)
300.3	Obsessive-compulsive disorders	0.72	8.06E-01	0.99 (0.93, 1.05)
765	Cervical radiculitis	3.55	8.07E-01	1 (0.97, 1.03)
564	Functional digestive disorders	3.72	8.08E-01	1 (0.98, 1.03)
619.4	Noninflammatory disorders of vagina	0.22	8.08E-01	0.99 (0.87, 1.11)
261.41	Rickets or osteomalacia	0.14	8.09E-01	1.02 (0.88, 1.17)
292	Neurological disorders	7.25	8.10E-01	1 (0.98, 1.02)
611.1	Abnormal mammogram	0.43	8.11E-01	0.99 (0.91, 1.08)
345.3	Convulsions	2.88	8.12E-01	1 (0.97, 1.04)
592.1	Cystitis	0.57	8.14E-01	1.01 (0.94, 1.08)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
302.1	Decreased libido	0.36	8.14E-01	0.99 (0.91, 1.08)
282	Hereditary hemolytic anemias	0.5	8.14E-01	1.01 (0.93, 1.1)
871	Open wounds of extremities	2.59	8.14E-01	1 (0.96, 1.03)
519.9	Symptoms involving respiratory system and other chest symptoms	1.43	8.17E-01	0.99 (0.95, 1.04)
695.8	Other specified erythematous conditions	0.71	8.20E-01	1.01 (0.95, 1.07)
300.11	Generalized anxiety disorder	4.44	8.21E-01	1 (0.98, 1.03)
525.2	Atrophy of edentulous alveolar ridge	0.64	8.22E-01	0.99 (0.93, 1.06)
352.1	Trigeminal nerve disorders [CN5]	0.42	8.23E-01	0.99 (0.91, 1.07)
430.2	Intracerebral hemorrhage	0.14	8.23E-01	1.02 (0.88, 1.17)
149.5	Hx of malignant neoplasm of oral cavity and pharynx	0.21	8.24E-01	1.01 (0.91, 1.13)
425.2	Secondary/extrinsic cardiomyopathies	0.4	8.25E-01	0.99 (0.91, 1.08)
564.1	Irritable Bowel Syndrome	2.21	8.26E-01	1 (0.97, 1.04)
386	Vertiginous syndromes and other disorders of vestibular system	1.93	8.27E-01	1 (0.96, 1.03)
255.21	Glucocorticoid deficiency	0.16	8.28E-01	0.99 (0.87, 1.12)
733.6	Costochondritis	0.18	8.30E-01	0.99 (0.87, 1.12)
729	Other disorders of soft tissues	0.73	8.31E-01	0.99 (0.93, 1.06)
938	Dermatitis due to solar radiation	1.18	8.32E-01	1.01 (0.96, 1.05)
276.14	Hypopotassemia	3.78	8.32E-01	1 (0.97, 1.03)
735.2	Acquired toe deformities	6.23	8.33E-01	1 (0.98, 1.03)
8	Intestinal infection	1.2	8.34E-01	0.99 (0.95, 1.04)
593.1	Gross hematuria	1.66	8.34E-01	1 (0.96, 1.05)
694	Dyschromia and Vitiligo	1.98	8.34E-01	1 (0.96, 1.03)
512.9	Other dyspnea	8.13	8.35E-01	1 (0.98, 1.02)
350.1	Abnormal involuntary movements	2.73	8.35E-01	1 (0.97, 1.04)
427.3	Other specified cardiac dysrhythmias	6.43	8.37E-01	1 (0.98, 1.02)
613.9	Breast disorder NOS	0.1	8.37E-01	1.02 (0.86, 1.2)
459	Other disorders of circulatory system	2.6	8.40E-01	1 (0.96, 1.03)
741.2	Stiffness of joint	0.55	8.40E-01	0.99 (0.92, 1.07)
198.2	Secondary malignancy of respiratory organs	0.34	8.41E-01	0.99 (0.91, 1.08)
165	Cancer within the respiratory system	1.62	8.41E-01	1 (0.96, 1.05)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
626	Disorders of menstruation and other abnormal bleeding from female genital tract	1.95	8.42E-01	0.99 (0.95, 1.05)
381.9	Otorrhea	0.14	8.44E-01	0.99 (0.86, 1.13)
580	Nephritis; nephrosis; renal sclerosis	1.56	8.44E-01	1 (0.96, 1.05)
733.4	Aseptic necrosis of bone	0.56	8.45E-01	0.99 (0.92, 1.07)
803	Fracture of upper limb	2.15	8.45E-01	1 (0.97, 1.04)
430	Intracranial hemorrhage	0.55	8.46E-01	0.99 (0.93, 1.07)
300.12	Agoraphobia, social phobia, and panic disorder	3.05	8.47E-01	1 (0.97, 1.03)
626.11	Absent or infrequent menstruation	0.22	8.47E-01	1.01 (0.9, 1.14)
742.9	Other derangement of joint	0.83	8.47E-01	0.99 (0.94, 1.05)
364.5	Corneal dystrophy	0.78	8.47E-01	0.99 (0.94, 1.05)
562	Diverticulosis and diverticulitis	9.84	8.48E-01	1 (0.98, 1.02)
229	Benign neoplasm of unspecified sites	0.15	8.49E-01	1.01 (0.89, 1.15)
172.1	Melanomas of skin, dx or hx	2.09	8.50E-01	1 (0.97, 1.04)
389.5	Disorders of acoustic nerve	0.12	8.50E-01	0.99 (0.85, 1.14)
876	Posttraumatic wound infection not elsewhere classified	0.23	8.51E-01	1.01 (0.91, 1.13)
426.21	First degree AV block	0.71	8.53E-01	1.01 (0.95, 1.07)
295.1	Schizophrenia	2.91	8.55E-01	1 (0.96, 1.03)
599.3	Dysuria	1.31	8.55E-01	1 (0.95, 1.04)
535	Gastritis and duodenitis	3.92	8.56E-01	1 (0.97, 1.03)
426.91	Cardiac pacemaker in situ	2.63	8.56E-01	1 (0.97, 1.03)
710	Osteomyelitis, periostitis, and other infections involving bone	1.56	8.57E-01	1 (0.96, 1.05)
604	Disorders of penis	1.56	8.58E-01	1 (0.96, 1.05)
429.1	Heart transplant/surgery	0.33	8.58E-01	0.99 (0.91, 1.09)
1015	Effects of other external causes	4.17	8.59E-01	1 (0.97, 1.02)
601.4	Balanoposthitis	0.44	8.61E-01	0.99 (0.92, 1.07)
245.2	Chronic thyroiditis	0.17	8.61E-01	0.99 (0.87, 1.12)
561.2	Flatulence	0.88	8.62E-01	1.01 (0.95, 1.06)
327	Sleep disorders	18.58	8.64E-01	1 (0.99, 1.02)
625	Pain and other symptoms associated with female genital organs	0.59	8.64E-01	1.01 (0.93, 1.09)
301.1	Schizoid personality	0.31	8.64E-01	0.99 (0.9, 1.09)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	disorder			
706.8	Other specified diseases of sebaceous glands	2.82	8.67E-01	1 (0.97, 1.04)
513.3	Hypoventilation	0.44	8.70E-01	1.01 (0.93, 1.09)
198	Secondary malignant neoplasm	2.02	8.70E-01	1 (0.97, 1.04)
965	Poisoning by analgesics, antipyretics, and antirheumatics	0.2	8.72E-01	1.01 (0.9, 1.14)
8.5	Bacterial enteritis	0.67	8.72E-01	0.99 (0.93, 1.06)
705.3	Hidradenitis	0.31	8.75E-01	0.99 (0.9, 1.1)
290.16	Vascular dementia	0.4	8.75E-01	0.99 (0.91, 1.08)
286.5	Hemorrhagic disorder due to intrinsic circulating anticoagulants	0.19	8.75E-01	0.99 (0.88, 1.12)
350.6	Disturbances of sensation of smell and taste	0.21	8.76E-01	1.01 (0.9, 1.13)
374.6	Dermatochalasis	1.68	8.76E-01	1 (0.96, 1.04)
401.22	Hypertensive chronic kidney disease	5.64	8.77E-01	1 (0.98, 1.03)
627.1	Postmenopausal bleeding	0.26	8.77E-01	0.99 (0.89, 1.1)
287.3	Thrombocytopenia	2.78	8.78E-01	1 (0.97, 1.03)
368.9	Subjective visual disturbances	1.49	8.80E-01	1 (0.96, 1.05)
394.1	Mitral valve stenosis and aortic valve stenosis	0.31	8.82E-01	0.99 (0.9, 1.09)
597.2	Urinary complications NEC	0.11	8.83E-01	0.99 (0.85, 1.15)
292.5	Transient alteration of awareness	0.13	8.83E-01	0.99 (0.86, 1.14)
613.7	Other signs and symptoms in breast	0.13	8.85E-01	1.01 (0.87, 1.17)
577.3	Cyst and pseudocyst of pancreas	0.34	8.87E-01	1.01 (0.92, 1.1)
224	Benign neoplasm of eye	2.24	8.87E-01	1 (0.96, 1.03)
497	Bronchitis	4.64	8.87E-01	1 (0.97, 1.02)
79	Viral infection	0.77	8.88E-01	1 (0.94, 1.07)
756	Other congenital musculoskeletal anomalies	0.16	8.89E-01	1.01 (0.89, 1.15)
519	Other diseases of respiratory system, not elsewhere classified	2.3	8.89E-01	1 (0.96, 1.03)
681.6	Cellulitis and abscess of foot, toe	0.78	8.90E-01	1 (0.95, 1.07)
386.3	Labyrinthitis	0.15	8.90E-01	1.01 (0.88, 1.15)
327.32	Obstructive sleep apnea	14.23	8.91E-01	1 (0.98, 1.01)
110.13	Dermatophytosis of the body	0.84	8.93E-01	1 (0.94, 1.05)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
290.3	Other persistent mental disorders due to conditions classified elsewhere	4.93	8.93E-01	1 (0.98, 1.03)
180	Cervical cancer and dysplasia	0.35	8.94E-01	1.01 (0.92, 1.1)
527.7	Disturbance of salivary secretion	0.29	8.96E-01	1.01 (0.91, 1.11)
512.2	Painful respiration	1.62	8.96E-01	1 (0.96, 1.04)
695.4	Lupus (localized and systemic)	0.36	8.96E-01	0.99 (0.91, 1.09)
245.21	Chronic lymphocytic thyroiditis	0.16	8.97E-01	0.99 (0.87, 1.13)
198.5	Secondary malignancy of brain/spine	0.19	8.99E-01	0.99 (0.88, 1.12)
149.4	Cancer of larynx	0.41	8.99E-01	1.01 (0.93, 1.09)
586.4	Stricture/obstruction of ureter	0.27	9.00E-01	0.99 (0.9, 1.1)
327.1	Hypersomnia	0.38	9.01E-01	0.99 (0.91, 1.08)
454	Varicose veins	3.43	9.02E-01	1 (0.97, 1.03)
733.8	Malunion and nonunion of fracture	0.31	9.03E-01	1.01 (0.92, 1.1)
713.5	Arthropathy associated with neurological disorders	0.26	9.06E-01	0.99 (0.9, 1.1)
371.1	Uveitis, noninfectious or NOS	1.1	9.06E-01	1 (0.95, 1.06)
278	Overweight, obesity and other hyperalimentation	38.52	9.06E-01	1 (0.99, 1.01)
772.4	Rhabdomyolysis	0.29	9.06E-01	0.99 (0.9, 1.1)
1010	Other tests	76.07	9.07E-01	1 (0.99, 1.01)
324	Other CNS infection and poliomyelitis	0.16	9.08E-01	0.99 (0.87, 1.13)
694.2	Other dyschromia	1.66	9.08E-01	1 (0.96, 1.04)
619	Noninflammatory female genital disorders	0.98	9.10E-01	1 (0.94, 1.07)
793.2	Nonspecific abnormal findings on radiological and other examination of other intrathoracic organs (echocardiogram, etc)	0.17	9.10E-01	0.99 (0.88, 1.12)
70.4	Chronic hepatitis	0.3	9.11E-01	1.01 (0.91, 1.11)
110.2	Dermatomycoses	0.73	9.11E-01	1 (0.93, 1.06)
457.3	Encounter for long-term (current) use of aspirin	1.55	9.13E-01	1 (0.96, 1.05)
418.1	Precordial pain	0.21	9.13E-01	0.99 (0.89, 1.11)
602	Other disorders of prostate	0.57	9.15E-01	1 (0.94, 1.08)
380	Disorders of external ear	0.69	9.15E-01	1 (0.94, 1.07)
614.52	Vaginitis and vulvovaginitis	1	9.17E-01	1 (0.94, 1.07)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
495.2	Asthma with exacerbation	0.64	9.17E-01	1 (0.94, 1.07)
483	Acute bronchitis and bronchiolitis	5.14	9.18E-01	1 (0.98, 1.03)
965.1	Opiates and related narcotics causing adverse effects in therapeutic use	0.18	9.18E-01	1.01 (0.89, 1.14)
153.3	Malignant neoplasm of rectum, rectosigmoid junction, and anus	0.58	9.19E-01	1 (0.94, 1.07)
611	Abnormal findings on mammogram or breast exam	1.54	9.21E-01	1 (0.96, 1.05)
952	Spinal cord injury without evidence of spinal bone injury	0.2	9.21E-01	1.01 (0.89, 1.13)
772.3	Muscle weakness	3.94	9.21E-01	1 (0.97, 1.03)
561	Symptoms involving digestive system	9.26	9.22E-01	1 (0.98, 1.02)
355.1	Chronic pain syndrome	2.08	9.22E-01	1 (0.97, 1.04)
555.21	Ulcerative colitis (chronic)	0.2	9.23E-01	1.01 (0.9, 1.13)
803.2	Fracture of radius and ulna	1.13	9.24E-01	1 (0.95, 1.05)
790.6	Other abnormal blood chemistry	4.45	9.24E-01	1 (0.98, 1.03)
216	Benign neoplasm of skin	5.52	9.24E-01	1 (0.98, 1.02)
701.2	Scar conditions and fibrosis of skin	1.09	9.25E-01	1 (0.95, 1.05)
840.3	Joint/ligament sprain	0.75	9.26E-01	1 (0.94, 1.06)
425.1	Primary/intrinsic cardiomyopathies	3.03	9.31E-01	1 (0.97, 1.03)
556	Ulceration of the lower GI tract	0.23	9.32E-01	1 (0.9, 1.12)
367.1	Myopia	10.44	9.32E-01	1 (0.98, 1.02)
521.2	Dental abrasion, erosion and attrition	1.52	9.32E-01	1 (0.96, 1.04)
364.51	Fuchs' dystrophy	0.46	9.32E-01	1 (0.92, 1.07)
165.1	Cancer of bronchus; lung	1.59	9.33E-01	1 (0.96, 1.04)
747.2	Congenital anomalies of peripheral vascular system	0.11	9.35E-01	1.01 (0.86, 1.18)
580.31	Nephritis and nephropathy in diseases classified elsewhere	0.8	9.35E-01	1 (0.94, 1.06)
250.42	Other abnormal glucose	5.38	9.36E-01	1 (0.98, 1.02)
559	Ileostomy status	0.34	9.36E-01	1 (0.92, 1.1)
117	Mycoses	0.55	9.36E-01	1 (0.93, 1.07)
41.4	E. coli	0.29	9.40E-01	1 (0.9, 1.1)
224.1	Benign neoplasm of eye,	2.1	9.41E-01	1 (0.97, 1.04)

PheWAS code	Phenotype description	Prevalence	p-value	Odds Ratio (95% CI)
	uveal			
276.41	Acidosis	0.84	9.41E-01	1 (0.94, 1.06)
713	Arthropathy associated with other disorders classified elsewhere	0.28	9.42E-01	1 (0.91, 1.11)
158	Neoplasm of unspecified nature of digestive system	0.41	9.42E-01	1 (0.92, 1.09)
626.13	Irregular menstrual cycle	0.34	9.42E-01	1 (0.91, 1.11)
442.3	Aneurysm of artery of lower extremity	0.15	9.44E-01	1 (0.88, 1.14)
575.2	Obstruction of bile duct	0.14	9.44E-01	1.01 (0.87, 1.16)
441	Vascular insufficiency of intestine	0.21	9.45E-01	1 (0.89, 1.11)
41	Bacterial infection NOS	4.22	9.46E-01	1 (0.97, 1.03)
550.5	Ventral hernia	1.39	9.46E-01	1 (0.96, 1.04)
696.42	Psoriatic arthropathy	0.47	9.47E-01	1 (0.93, 1.07)
743.2	Pathologic fracture	0.29	9.47E-01	1 (0.91, 1.1)
427.1	Paroxysmal tachycardia, unspecified	1.8	9.47E-01	1 (0.96, 1.04)
857	Mechanical complication of unspecified genitourinary device, implant, and graft	0.22	9.48E-01	1 (0.9, 1.12)
278.1	Obesity	34.96	9.49E-01	1 (0.99, 1.01)
454.11	Varicose veins of lower extremity, symptomatic	1.64	9.50E-01	1 (0.96, 1.04)
578.9	Hemorrhage of gastrointestinal tract	2.11	9.51E-01	1 (0.96, 1.04)
287	Purpura and other hemorrhagic conditions	2.96	9.52E-01	1 (0.97, 1.03)
578.1	Hematemesis	0.28	9.52E-01	1 (0.91, 1.11)
394.2	Mitral valve disease	0.16	9.53E-01	1 (0.88, 1.14)
614.5	Inflammatory disease of cervix, vagina, and vulva	1.2	9.54E-01	1 (0.94, 1.06)
250.4	Abnormal glucose	11.55	9.55E-01	1 (0.98, 1.02)
277.51	Lipoprotein disorders	0.24	9.55E-01	1 (0.9, 1.12)
558	Noninfectious gastroenteritis	2.62	9.56E-01	1 (0.97, 1.03)
217.1	Nevus, non-neoplastic	1.19	9.56E-01	1 (0.96, 1.05)
743.9	Osteopenia or other disorder of bone and cartilage	3.74	9.57E-01	1 (0.97, 1.03)
741.1	Ankylosis of joint	0.12	9.59E-01	1 (0.85, 1.16)
710.12	Chronic osteomyelitis	0.55	9.60E-01	1 (0.93, 1.07)
250.6	Polyneuropathy in diabetes	4.63	9.60E-01	1 (0.98, 1.03)
562.1	Diverticulosis	8.77	9.60E-01	1 (0.98, 1.02)
350.2	Abnormality of gait	7.36	9.61E-01	1 (0.98, 1.02)
608	Other disorders of male	1.76	9.62E-01	1 (0.96, 1.04)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	genital organs			
272.13	Mixed hyperlipidemia	8.69	9.62E-01	1 (0.98, 1.02)
242.3	Exophthalmos	0.18	9.63E-01	1 (0.88, 1.14)
871.2	Open wound of finger(s)	0.55	9.64E-01	1 (0.93, 1.07)
359	Muscular dystrophies and other myopathies	0.27	9.67E-01	1 (0.9, 1.11)
603.2	Spermatocele	0.33	9.67E-01	1 (0.92, 1.1)
131	Protozoan infection	0.15	9.68E-01	1 (0.84, 1.18)
818.1	Subdural hemorrhage (injury)	0.1	9.69E-01	1 (0.85, 1.17)
681.2	Cellulitis and abscess of face/neck	0.49	9.70E-01	1 (0.93, 1.08)
454.1	Varicose veins of lower extremity	2.99	9.70E-01	1 (0.97, 1.03)
415.21	Primary pulmonary hypertension	0.29	9.71E-01	1 (0.91, 1.11)
278.3	Localized adiposity	0.11	9.72E-01	1 (0.85, 1.18)
980	Encounter for long-term (current) use of antibiotics	0.64	9.72E-01	1 (0.94, 1.07)
290	Delirium dementia and amnestic and other cognitive disorders	2.36	9.73E-01	1 (0.97, 1.04)
389	Hearing loss	40.83	9.73E-01	1 (0.99, 1.01)
478	Throat pain	0.27	9.74E-01	1 (0.91, 1.11)
217	Vascular hamartomas and non-neoplastic nevi	1.2	9.75E-01	1 (0.95, 1.05)
300.8	Acute reaction to stress	0.78	9.75E-01	1 (0.94, 1.06)
395.1	Nonrheumatic mitral valve disorders	1.84	9.76E-01	1 (0.96, 1.04)
458	Hypotension	5.25	9.76E-01	1 (0.98, 1.03)
628	Ovarian cyst	0.47	9.76E-01	1 (0.92, 1.09)
193	Thyroid cancer	0.43	9.77E-01	1 (0.93, 1.08)
198.6	Secondary malignancy of bone	0.53	9.78E-01	1 (0.93, 1.08)
481	Influenza	0.47	9.78E-01	1 (0.93, 1.08)
249	Secondary diabetes mellitus	0.1	9.78E-01	1 (0.84, 1.18)
297.2	Suicide or self-inflicted injury	0.8	9.83E-01	1 (0.94, 1.06)
281.12	Other vitamin B12 deficiency anemia	0.62	9.83E-01	1 (0.94, 1.07)
960	Poisoning by antibiotics	0.25	9.83E-01	1 (0.9, 1.11)
782.3	Edema	10.16	9.85E-01	1 (0.98, 1.02)
90	Sexually transmitted infections (not HIV or hepatitis)	0.88	9.87E-01	1 (0.94, 1.06)
579.2	Splenomegaly	0.36	9.88E-01	1 (0.92, 1.09)
704.11	Alopecia Areata	0.14	9.88E-01	1 (0.87, 1.16)
722.7	Intervertebral disc	0.61	9.89E-01	1 (0.93, 1.07)

PheWAS code	Phenotype description	Prevalence (%)	p-value	Odds Ratio (95% CI)
	disorder with myelopathy			
726.4	Calcaneal spur; Exostosis NOS	2.22	9.90E-01	1 (0.96, 1.04)
427.42	Cardiac arrest	0.16	9.91E-01	1 (0.88, 1.14)
562.2	Diverticulitis	1.63	9.91E-01	1 (0.96, 1.04)
783	Fever of unknown origin	2.27	9.92E-01	1 (0.96, 1.04)
368.3	Anisometropia	0.59	9.92E-01	1 (0.94, 1.07)
612	Breast conditions, congenital or relating to hormones	1.06	9.92E-01	1 (0.95, 1.05)
359.2	Myopathy	0.23	9.93E-01	1 (0.89, 1.12)
332	Parkinson's disease	1.1	9.95E-01	1 (0.95, 1.05)
446	Polyarteritis nodosa and allied conditions	0.38	9.96E-01	1 (0.92, 1.09)
695.41	Cutaneous lupus erythematosus	0.2	9.97E-01	1 (0.88, 1.13)
70.3	Viral hepatitis C	5.74	9.99E-01	1 (0.98, 1.02)
473.1	Chronic laryngitis	0.16	1.00E+00	1 (0.88, 1.14)

eTable 2. Positive predictive value of PheWAS codes based on medical record review*

PheWAS Code Description	PheWAS Code	PPV for patients ≥1 PheWAS code	PPV for patients ≥2 PheWAS codes
Abdominal aortic aneurysm	442.11	0.65	0.8
Coronary atherosclerosis	411.4	1	1
Ischemic heart disease	411	0.95	1
Other chronic ischemic heart disease	411.8	0.95	0.94
Aortic aneurysm	442.1	0.7	0.9
Other aneurysm	442	0.95	1
Myocardial infarction	411.2	0.95	1
Atherosclerosis of native arteries of the extremities with intermittent claudication	440.22	0.55	0.5
Peripheral vascular disease, unspecified	443.9	0.95	1
Atherosclerosis of the extremities	440.2	0.8	1
Atherosclerosis	440	1	1
Peripheral vascular disease	443	0.9	0.92
Degenerative skin conditions and other dermatoses	702	0.9	0.93
Acquired deformities of finger	736.2	1	1
Aneurysm of iliac artery	442.2	0.95	1
Seborrheic dermatitis	690.1	0.85	1
Pleurisy; pleural effusion	507	0.95	0.86
Atopic dermatitis	939	1	1
Disorders resulting from impaired renal function	588	0.9	0.9
Erythematous squamous dermatosis	690	1	1

Gouty arthropathy	274.11	1	1
Conjunctivitis, noninfectious	371.2	0.9	0.67

*In order of significance with *IL6R*

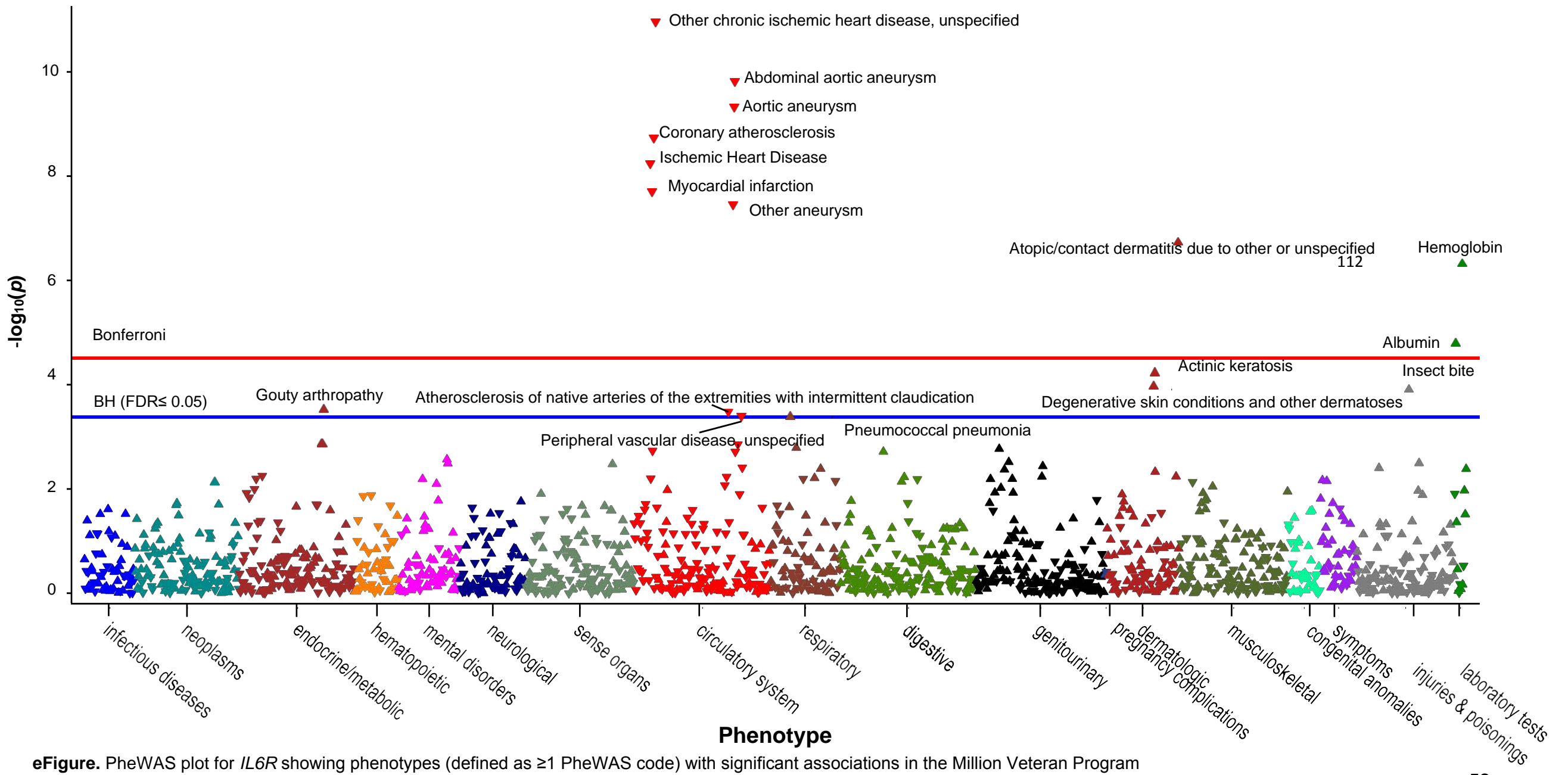
eTable 3. Replication of significant associations in the Million Veteran Program (false discovery rate < 0.05) in the UK Biobank* and BioVU

Phenotype	UK Biobank*					BioVU			
	Phenotype/ ICD10 group	(%)	OR	95% CI	p-value	(%)	OR	95% CI	p-value
Abdominal aortic aneurysm	I71 Aortic aneurysm and dissection	0.33	0.9997	0.9995, 1	0.0545	4.57	0.83	0.7082, 0.9726	0.0213
Coronary atherosclerosis	I25 Chronic ischemic heart disease	6.2	0.9983	0.9973, 0.9993	0.0016	NA	NA	NA	>0.05
Ischemic Heart Disease	I20-I25 Ischemic heart diseases	7.47	0.9979	0.9968, 0.9991	0.0003	NA	NA	NA	>0.05
Other chronic ischemic heart disease, unspecified	I25 Chronic ischemic heart disease	6.2	0.9983	0.9973, 0.9993	0.0016	NA	NA	NA	>0.05
Aortic aneurysm	I71 Aortic aneurysm and dissection	0.33	0.9997	0.9995, 1	0.0545	NA	NA	NA	>0.05
Other aneurysm	I70-I79 Diseases of arteries, arterioles and capillaries	1.84	0.9997	0.9991, 1.0003	0.4102	NA	NA	NA	>0.05
Myocardial infarction	I20-I25 Ischemic heart diseases	7.47	0.9979	0.9968, 0.9991	0.0003	NA	NA	NA	>0.05
Atherosclerosis of native arteries**	NA	NA	NA	NA	NA	NA	NA	NA	>0.05
Peripheral vascular disease, unspecified	NA	NA	NA	NA	NA	NA	NA	NA	>0.05
Atherosclerosis of the extremities	NA	NA	NA	NA	NA	NA	NA	NA	>0.05
Atherosclerosis	I70 Atherosclerosis	0.31	0.9999	0.9996, 1.0001	0.2442	NA	NA	NA	>0.05
Peripheral vascular disease	I73 Other peripheral vascular diseases	0.9	0.9998	0.9994, 1.0002	0.4020	NA	NA	NA	>0.05

Phenotype	UK Biobank*					BioVU			
	Phenotype/ ICD10 group	(%)	OR	95% CI	p- value	(%)	OR	95% CI	p- value
Acquired deformities of finger	M20 Acquired deformities of fingers and toes	2.37	1.0003	0.9996, 1.0009	0.3660	NA	NA	NA	>0.05
Aneurysm of iliac artery	I72 Other aneurysm	0.12	0.9999	0.9998, 1.0001	0.5264	NA	NA	NA	>0.05
Seborrheic dermatitis	NA	NA	NA	NA	NA	NA	NA	NA	>0.05
Pleurisy; pleural effusion	J90-J94 Other diseases of pleura	1.61	1.0005	1, 1.001	0.0494	NA	NA	NA	>0.05
Atopic/contact dermatitis due to other or unspecified	L20-L30 Dermatitis and eczema	0.76	1.0008	1.0004, 1.0012	2.85 x10 ⁻⁵	26.32	1.076	1.002, 1.1554	0.0426
Disorders resulting from impaired renal function	N25-N29 Other disorders of kidney and ureter	0.64	1.0002	0.9999, 1.0006	0.1656	NA	NA	NA	>0.05
Erythematous squamous dermatosis	L20-L30 Dermatitis and eczema	0.76	1.0008	1.0004, 1.0012	2.85 x10 ⁻⁵	NA	NA	NA	>0.05
Gouty arthropathy	M10 Gout	0.78	1.0004	1.0001, 1.0008	0.0143	NA	NA	NA	>0.05
Conjunctivitis, noninfectious	H10-H13 Disorders of conjunctiva	0.25	1.0002	1, 1.0004	0.039	NA	NA	NA	>0.05

*UK Biobank does not provide individual inpatient ICD10 codes in their dataset; data are grouped into larger groups as listed in this table. Thus, some groups were too large to map back to specific PheWAS codes. If no PheWAS code was available, association was listed as NA. In BioVU all associations with p>0.05 were listed as NA.

**Full description: Atherosclerosis of native arteries of the extremities with intermittent claudication



eFigure. PheWAS plot for *IL6R* showing phenotypes (defined as ≥1 PheWAS code) with significant associations in the Million Veteran Program

The blue line denotes the B-H FDR ≤ 0.05, and the red line provides Bonferroni correction as a reference. Arrowheads pointing up represent an increased risk while arrowheads pointing down represent a reduced risk for a phenotype or laboratory measurement.