

Supplementary Online Content

Cohort's definition and inclusion/exclusion criteria

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Patient identification:

Toxoplasmosis IgG positivity diagnostic criteria:

- Any toxoplasma IgG titer in serum reported as positive

Cases: Patients with positive Toxoplasma IgG without evidence of Toxoplasmosis or Toxoplasma disease

Inclusion criteria: Positive Toxoplasma IgG in an adult population (≥ 18 years of age)

Exclusion criteria:

- Toxoplasma oculopathy (UMLS:ICD10CM:B58.0) (Data Source: EHR); or
- Pulmonary toxoplasmosis (UMLS:ICD10CM:B58.3) (Data Source: EHR); or
- Toxoplasmosis (UMLS:ICD10CM:B58) (Data Source: EHR); or
- Toxoplasma meningoencephalitis (UMLS:ICD10CM:B58.2) (Data Source: EHR); or
- Toxoplasma gondii DNA [Presence] in Unspecified specimen by NAA with probe detection (UMLS:LNC:29904-0) (labResult: Positive); or
- Toxoplasma hepatitis (UMLS:ICD10CM:B58.1) (Data Source: EHR); or
- Toxoplasmosis with other organ involvement (UMLS:ICD10CM:B58.8) (Data Source: EHR); or
- Toxoplasmosis, unspecified (UMLS:ICD10CM:B58.9) (Data Source: EHR).
- Toxoplasma gondii DNA [Positive]

Controls: Patients without positive Toxoplasma IgG without evidence of Toxoplasmosis or Toxoplasma disease

Inclusion criteria: Negative Toxoplasma IgG in an adult population (≥ 18 years of age)

Exclusion criteria:

- Toxoplasma oculopathy (UMLS:ICD10CM:B58.0) (Data Source: EHR); or

- Pulmonary toxoplasmosis (UMLS:ICD10CM:B58.3) (Data Source: EHR); or
- Toxoplasmosis (UMLS:ICD10CM:B58) (Data Source: EHR); or
- Toxoplasma meningoencephalitis (UMLS:ICD10CM:B58.2) (Data Source: EHR); or
- Toxoplasma gondii DNA [Presence] in Unspecified specimen by NAA with probe detection (UMLS:LNC:29904-0) (labResult: Positive); or
- Toxoplasma hepatitis (UMLS:ICD10CM:B58.1) (Data Source: EHR); or
- Toxoplasmosis with other organ involvement (UMLS:ICD10CM:B58.8) (Data Source: EHR); or
- Toxoplasmosis, unspecified (UMLS:ICD10CM:B58.9) (Data Source: EHR).
- Toxoplasma gondii DNA [Positive]

Supplementary Table 1S. International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes for underlying comorbidities

ICD-10 code	Description
J00-J99	Diseases of the respiratory system
C00-D49	Neoplasms
Z79	Long-term (current) drug therapy
G00-G99	Diseases of the nervous system
F01-F99	Mental, Behavioral, and Neurodevelopmental disorders
I30-I52	Other forms of heart disease (deprecated 2021)
D60-D64	Aplastic and other anemias and other bone marrow failure syndromes
N18	Chronic kidney disease (CKD)
C81-C96	Malignant neoplasms of lymphoid, hematopoietic, and related tissue
Z87	Personal history of other diseases and conditions
E11	Type 2 diabetes mellitus
B20	Human immunodeficiency virus [HIV] disease
F30-F39	Mood [affective] disorders
I50	Heart failure
Z98	Other postprocedural states
Z94	Transplanted organ and tissue status
O00-O9A	Pregnancy, childbirth, and the puerperium
K74	Fibrosis and cirrhosis of the liver
F19	Other psychoactive substance-related disorders
Z33	Pregnant state
M30-M36	Systemic connective tissue disorders
F20-F29	Schizophrenia, schizotypal, delusional, and other non-mood psychotic disorders
Z94.81	Bone marrow transplant status
F18.1	Inhalant abuse
D86	Sarcoidosis
M32	Systemic lupus erythematosus (SLE)
B58	Toxoplasmosis
B58.9	Toxoplasmosis, unspecified
F20	Schizophrenia
F20.9	Schizophrenia, unspecified
T14.91	Suicide attempt
M05	Rheumatoid arthritis with rheumatoid factor
B45	Cryptococcosis
F25	Schizoaffective disorders
F25.9	Schizoaffective disorder, unspecified
F25.0	Schizoaffective disorder, bipolar type

F25.1	Schizoaffective disorder, depressive type
Z59.7	Insufficient social insurance and welfare support
Z59.5	Extreme poverty
B58.2	Toxoplasma meningoencephalitis
X71-X83	Intentional self-harm
F20.81	Schizophreniform disorder
B58.8	Toxoplasmosis with other organ involvement
B58.89	Toxoplasmosis with other organ involvement
B58.01	Toxoplasma chorioretinitis
P37.1	Congenital toxoplasmosis
B58.3	Pulmonary toxoplasmosis
B58.00	Toxoplasma oculopathy, unspecified
B58.09	Other toxoplasma oculopathy
B58.1	Toxoplasma hepatitis
B58.81	Toxoplasma myocarditis
T14.91XA	Suicide attempt, initial encounter
T14.91XD	Suicide attempt, subsequent encounter
T14.91XS	Suicide attempt, sequela
X83.8	Intentional self-harm by other specified means

Supplementary table 2S. Logical Observation Identifiers Names and Codes (LOINC) for laboratory values

Code	Description
9015	Leukocytes
731-0	Lymphocytes
24467	CD4 cells
9037	Hemoglobin a1c
9048	Aspartate aminotransferase
9044	Alanine aminotransferase
9046	Alkaline phosphatase
9045	Albumin
9024	Serum creatinine
9042	Ferritin
9063	C reactive protein
9052	Lactate dehydrogenase

Supplementary table 3S. RxNorm codes for medications

Code	Description
CN400	ANTICONVULSANTS
2045371	Cannabidiol

Supplementary Table 4S. Outcomes-based on Current Procedural Terminology (CPT) codes, HL7 Terminology, and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes

Code(s)	Description
1013659, 1013660, 1013699 1013729, 1014309, 99291	Hospitalization
I63	Stroke
E11	DM2
N18	CKD
I50-51, I42	Heart Disease
I42	Cardiomyopathy
F31	Bipolar disorder
F20-F29	Schizophrenia
F19, F18.10, Z63.72	Substance abuse
B58, 29904-0	Toxoplasmosis AND positive Toxoplasma gondii DNA

Table 5S. Demographic and Clinical characteristics of Toxoplasma IgG seropositive patients compared to controls at one year before matching

Variable n(%), mean (SD)	Toxoplasma IgG Seropositive (n=6,768)	Toxoplasma IgG Seronegative (n=21,370)	p-value
Age at index event (years)	49.3 (16.5)	45.0 (16.2)	<0.001
Male sex	3754 (57.1)	10424 (50.6)	<0.001
Pregnant	177 (2.7)	965 (4.7)	<0.001
Ethnicity			
Hispanic or Latino	906 (13.8)	2005 (9.7)	<0.001
Non-Hispanic or Latino	4877 (74.2)	15660 (76.0)	0.005
Race			
Black or African American	1324 (20.2)	3686 (17.9)	<0.001
Asian	155 (2.4)	437 (2.1)	0.246
White	3995 (60.8)	14342 (69.6)	<0.001
Native Hawaiian or Other Pacific Islander	15 (0.2)	21 (0.1)	0.031
American Indian or Alaska Native	29 (0.4)	67 (0.3)	0.166
Underlying Medical Comorbidities			
Heart Failure	716 (10.9)	1680 (8.1)	<0.001
HIV	907 (13.8)	3050 (14.8)	0.049
Transplanted organ or tissue	527 (8.0)	1249 (6.1)	<0.001
Fibrosis or cirrhosis of the liver	299 (4.6)	1635 (7.9)	<0.001
Chronic Kidney Disease	1197 (18.2)	4319 (20.9)	<0.001
Malignant neoplasms of lymphoid, hematopoietic and related tissue	1184 (18.0)	3254 (15.8)	<0.001
Diseases of the respiratory system	1904 (29.0)	5410 (26.2)	<0.001
Diseases of the nervous system	1640 (25.0)	4870 (23.6)	0.026
Underlying Psychiatric Comorbidities			
Mood Disorders	743 (11.3)	2520 (12.2)	0.048
Schizophrenia	31 (0.5)	111 (0.5)	0.515
Schizoaffective disorder, bipolar type	10 (0.2)	10 (0)	0.007
Schizoaffective disorder, depressive type	10 (0.2)	10 (0)	0.007
Extreme Poverty	10 (0.2)	10 (0)	0.007
Laboratory Values Mean (SD)			
Leukocytes (μ L)	24.6 (267.7)	9.5 (91.3)	<0.001
Platelets (mcL)	207.4 (105.0)	212.4 (102.7)	0.001
Creatinine (mg/dL)	1.8 (2.6)	2.1 (3.1)	<0.001
CRP (mg/L)	25.2 (50.3)	25.9 (50.6)	0.729