Table S1. Common Risk Variants Enriched within the Loci Indicated by the Mendelian Code, Related to Figures 2 and 3A

Disease	Mendelian Genes	Comorbid Mendelian Genes
Asthma	SLC22A5; CRB1	SLC22A5 (Systemic Primary Carnitine Deficiency); CRB1 (Retinitis Pigmentosa)
Malignant Brain Neoplasm	TERT	TERT (Inherited Anomalies of the Skin)
Psoriasis	TSC1	
Diabetes Mellitus Type 1	IL7R	IL7R (Severe Combined Immunodeficiency)
Melanoma	ATM; TYR; SLC45A2	TYR (Disorders of Aromatic Amino Acid Metabolism); SLC45A2 (Disorders of Aromatic Amino Acid Metabolism)
Psoriasis	TSC1	
Bipolar Disorder	SYNE1; CACNA1C; CTNND2; PRPF3; PPP2R2B	SYNE1 (Spinocerebellar Ataxia); CACNA1C (Long QT Syndrome); PRPF3 (Retinitis Pigmentosa); PPP2R2B (Spinocerebellar Ataxia)
Breast Cancer	COL1A1; FGFR2; TERT; FBN1	TERT (Inherited Anomalies of the Skin)
Schizophrenia	SYNE1; CACNA1C; CTNND2; PRPF3; PPP2R2B	SYNE1 (Spinocerebellar Ataxia); PRPF3 (Retinitis Pigmentosa); CACNA1C (Long QT Syndrome); PPP2R2B (Spinocerebellar Ataxia)
Lung Cancer	TP63; TERT; ERCC2	TERT (Inherited Anomalies of the Skin)
Acute Myocardial Infarction	LAMC2; ABCA1; DNM2	ABCA1 (Lipoprotein Deficiencies); DNM2 (Hereditary Sensory Neuropathy; Hereditary Muscular Dystrophy)
Prostate Cancer	PKHD1; EVC; TERT; ITGA6	PKHD1 (Polycystic Kidney, Autosomal Dominant); TERT (Inherited Anomalies of the Skin)
Gastric Cancer	CHEK2	CHEK2 (Li-Fraumeni and Related Syndromes)
Diabetes Mellitus Type 2	ABCA1; LPL; APOB; NOTCH2; KCNQ1; ABCB11	ABCB11 (Other Specified Disorders of Amino Acid Metabolism); LPL (Lipoprotein Deficiencies); APOB (Lipoprotein Deficiencies); KCNQ1 (Long QT Syndrome); ABCA1 (Lipoprotein Deficiencies)
Lupus	LAMC2; ETS1; TNXB	
Cerebral Infarction	HDAC9; ADAMTS2	ADAMTS2 (Congenital Hydrocephalus)
Rheumatoid Arthritis	GCH1; ATXN2; AIRE	GCH1 (Dopa-Responsive Dystonia);

		ATXN2 (Spinocerebellar Ataxia); AIRE (Autoimmune Polyglandular Syndrome)
Parkinsonism	CYP17A1	
Lymphosarcoma, Reticulorsarcoma	POLR1D	
Celiac Disease	ETS1; ATXN2	ATXN2 (Spinocerebellar Ataxia)
Alzheimer's Disease	STK11; BIN1	
Gout	FGFR2	
Autism	SYNE1; PRPF3; CACNA1C; PPP2R2B	SYNE1 (Spinocerebellar Ataxia); PRPF3 (Retinitis Pigmentosa); CACNA1C (Long QT Syndrome); PPP2R2B (Spinocerebellar Ataxia)
Depression	SYNE1; PRPF3; CACNA1C; PPP2R2B	SYNE1 (Spinocerebellar Ataxia); PRPF3 (Retinitis Pigmentosa); CACNA1C (Long QT Syndrome); PPP2R2B (Spinocerebellar Ataxia)

This table provides the common risk variants that lie within the Mendelian disease genes included in this study (second column). Those genes that were also indicated by the complex-Mendelian comorbidity analysis (along with their corresponding diseases) are provided in the final column.