APPENDIX I-1.

Dependent Variable-Covariate Associations for Gastrointestinal Assessment

Appendix I-1-1 displays the diagnoses for all participants who reported "yes" to skin bruises, patches, or sensitivity. The history of skin bruises, patches, or sensitivity was intended to be a surrogate measure for symptoms of porphyria cutanea tarda (PCT), but the diagnoses for each individual included a broad range of conditions not related to PCT.

Appendix I-1-2 contains results of tests of association between each dependent variable and candidate covariates for the adjusted analysis. Pearson's chi-square test (continuity-adjusted for 2×2 tables) is used for the significance testing of the associations between each discrete dependent variable and the candidate covariate. When a candidate covariate is continuous in nature (e.g., age), the covariate is discretized prior to the analysis of the discrete dependent variable. Pearson's correlation coefficient is used for significance testing of the associations between each continuous dependent variable and a continuous candidate covariate. When a candidate covariate is discrete in nature and the dependent variable is continuous, means (transformed back to the original scale, if necessary) are presented and an analysis of variance is used to investigate the difference between the means.

Table I-1-1.
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
01190	Unspecified Pulmonary Tuberculosis, Unspecified Examination	1	0	0	1
0539	Herpes Zoster without Mention of Complication	8	6	0	2
0549	Herpes Simplex without Mention of Complication	2	2	0	0
0780	Molluscum Contagiosum	1	0	0	1
0781	Viral Warts	7	5	0	2
1100	Dermatophytosis of Scalp and Beard	2	2	0	0
1102	Dermatophytosis of Hand	11	6	0	5
1103	Dermatophytosis of Groin and Perianal Area	9	7	0	2
1104	Dermatophytosis of Foot	25	18	1	6
1105	Dermatophytosis of the Body	4	4	0	0
1108	Dermatophytosis of Other Specified Sites	15	11	0	4
1109	Dermatophytosis of Unspecified Site	5	4	0	1
1110	Pityriasis Versicolor	65	62	0	3
1119	Dermatomycosis, Unspecified	5	5	0	0
1123	Candidiasis of Skin and Nails	1	1	0	0
1179	Other and Unspecified Mycoses	11	10	1	0
1330	Scabies	1	0	0	1
1707	Malignant Neoplasm of Long Bones of Lower Limb	1	1	0	0
1710	Malignant Neoplasm, Connective and Soft Tissue of Head, Face, Neck	1	1	0	0
1725	Malignant Melanoma of Skin of Trunk, Except Scrotum	1	1	0	0
1726	Malignant Melanoma of Skin of Upper Limb, Including Shoulder	1	1	0	0
1732	Other Malignant Neoplasm of Skin of Ear, External Ear Canal	1	1	0	0
1733	Other Malignant Neoplasm of Skin of Other and Unspecified Parts of Face	15	13	0	2
1734	Other Malignant Neoplasm of Scalp and Skin of Neck	3	2	0	1
1735	Other Malignant Neoplasm of Skin of Trunk, Except Scrotum	5	5	0	0
1736	Other Malignant Neoplasm, Skin of Upper Limb, Including Shoulder	5	4	0	1
1955	Malignant Neoplasm of Lower Limb	1	0	1	0

Table I-1-1. (Continued)
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
2141	Lipoma of Other Skin and Subcutaneous Tissue	2	2	0	0
2149	Lipoma, Unspecified Site	1	1	0	0
2162	Benign Neoplasm of Ear and External Auditory Canal	2	2	0	0
2163	Benign Neoplasm of Skin of Other & Unspecified Parts of Face	7	6	0	1
2164	Benign Neoplasm of Scalp and Skin of Neck	1	1	0	0
2165	Benign Neoplasm of Skin of Trunk, Except Scrotum	13	12	0	1
2166	Benign Neoplasm of Skin of Upper Limb, Including Shoulder	4	4	0	0
2167	Benign Neoplasm of Skin of Lower Limb, Including Hip	1	1	0	0
22801	Hemangioma of Skin and Subcutaneous Tissue	3	2	1	0
22809	Hemangioma of Other Sites	1	0	0	1
2323	Carcinoma In Situ of Skin of Face, Other, and Unspecified Parts	1	1	0	0
2324	Carcinoma In Situ of Scalp and Skin of Neck	1	1	0	0
25000	Diabetes Mellitus without Mention of Complication, Adult Onset	6	1	4	1
25001	Diabetes Mellitus without Mention of Complication, Juvenile Type	3	0	2	1
25060	Diabetes With Neurological Manifestations, Adult Onset	4	2	0	2
2532	Panhypopituitarism	1	0	1	0
2572	Other Testicular Hypofunction	1	0	0	1
2722	Mixed Hyperlipidemia	1	1	0	0
2729	Unspecified Disorder of Lipoid Metabolism	1	0	1	0
2750	Disorders of Iron Metabolism	1	1	0	0
2768	Hypopotassemia	1	0	1	0
2771	Disorders of Porphyrin Metabolism	1	0	0	1
2865	Hemorrhagic Disorder Due to Circulating Anticoagulants	1	0	1	0
2872	Other Nonthrombocytopenic Purpuras	1	0	1	0
2874	Secondary Thrombocytopenia	1	0	1	0

Table I-1-1. (Continued)
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
2875	Thrombocytopenia, Unspecified	1	0	1	0
30391	Alcohol Dependence, Other and Unspecified, Continuous Use	1	0	0	1
316	Psychic Factors Associated with Diseases Classified Elsewhere	1	1	0	0
3320	Paralysis Agitans	1	0	0	1
3510	Bell's Palsy	1	0	0	1
3540	Carpal Tunnel Syndrome	1	0	0	1
3542	Lesion of Ulnar Nerve	1	0	0	1
3550	Lesion of Sciatic Nerve	1	0	1	0
3558	Mononeuritis of Lower Limb, Unspecified	2	0	0	2
3572	Polyneuropathy In Diabetes	3	3	0	0
37024	Photokeratitis	1	1	0	0
38010	Infective Otitis Externa, Unspecified	1	0	0	1
4019	Essential Hypertension, Not Otherwise Specified	3	0	2	1
41010	Acute Myocardial Infarction, Other Anterior Wall, Episode of Care Unspecified	1	0	1	0
41041	Acute Myocardial Infarction, Other Inferior Wall, Initial Episode of Care	1	0	1	0
4140	Coronary Atherosclerosis	3	0	3	0
4241	Aortic Valve Disorders	1	0	1	0
4409	Generalized and Unspecified Atherosclerosis	2	1	1	0
4420	Aneurysm of Artery of Upper Extremity	1	0	0	1
4430	Raynaud's Syndrome	2	0	0	2
44389	Other Peripheral Vascular Disease	1	0	1	0
4439	Peripheral Vascular Disease, Unspecified	2	1	0	1
4476	Arteritis, Unspecified	3	2	1	0
4478	Other Specified Disorders of Arteries and Arterioles	1	0	0	1
4481	Nevus, Non-Neoplastic	4	3	1	0
4512	Phlebitis, Thrombophlebitis, Lower Extremities, Not Otherwise Specified	3	0	2	1
4519	Phlebitis, Thrombophlebitis, Unspecified Site	2	0	2	0

Table I-1-1. (Continued)
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
4541	Varicose Veins, Lower Extremities, with Inflammation	3	3	0	0
4549	Varicose Veins, Lower Extremities, Ulcer or Inflammation Not Mentioned	1	1	0	0
45981	Venous (Peripheral) Insufficiency, Unspecified	4	2	2	0
45989	Other Specified Circulatory System Disorders	4	0	4	0
515	Postinflammatory Pulmonary Fibrosis	1	0	1	0
5285	Diseases of Lips	1	1	0	0
5286	Leukoplakia of Oral Mucosa, Including Tongue	2	2	0	0
5570	Acute Vascular Insufficiency of Intestine	1	0	1	0
5733	Hepatitis, Unspecified	2	1	0	1
6039	Hydrocele, Unspecified	1	1	0	0
6806	Carbuncle and Furuncle of Leg, Except Foot	1	0	0	1
6826	Cellulitis and Abscess of Leg, Except Foot	3	2	0	1
6828	Cellulitis and Abscess of Other Specified Sites	1	1	0	0
6829	Cellulitis and Abscess of Unspecified Sites	1	1	0	0
684	Impetigo	2	1	1	0
6860	Pyoderma	1	1	0	0
6861	Pyogenic Granuloma of Skin and Subcutaneous Tissue	1	1	0	0
6869	Unspecified Local Infection of Skin and Subcutaneous Tissue	3	2	0	1
690	Erythematosquamous Dermatosis	30	25	1	4
6918	Other Atopic Dermatitis and Related Conditions	3	2	0	1
6920	Contact Dermatitis and Other Eczema Due to Detergents	1	1	0	0
6921	Contact Dermatitis and Other Eczema Due to Oils and Greases	1	1	0	0
6922	Contact Dermatitis and Other Eczema Due to Solvents	1	1	0	0
6924	Contact Dermatitis and Other Eczema Due to Other Chemical	2	1	0	1
6926	Contact Dermatitis and Other Eczema Due to Plants (Except Food)	3	2	0	1
69270	Unspecified Dermatitis Due to Sun	6	3	0	3

Table I-1-1. (Continued)
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
69271	Sunburn	3	3	0	0
69279	Other Dermatitis Due to Sun	4	3	0	1
69289	Contact Dermatitis, Eczema Due to Other Specified Agents	1	1	0	0
6929	Contact Dermatitis and Other Eczema, Unspecified Cause	94	62	6	26
6930	Dermatitis Due to Drugs and Medicines Taken Internally	2	2	0	0
6931	Dermatitis Due to Food Taken Internally	1	1	0	0
6950	Toxic Erythema	1	1	0	0
6951	Erythema Multiforme	1	1	0	0
6953	Rosacea	4	4	0	0
69589	Other Specified Erythematous Conditions	4	3	0	1
6959	Unspecified Erythematous Condition	9	7	0	2
6961	Other Psoriasis and Similar Disorders	37	31	2	4
6962	Parapsoriasis	2	2	0	0
6963	Pityriasis Rosea	6	5	0	1
6965	Other and Unspecified Pityriasis	1	1	0	0
6970	Lichen Planus	8	6	2	0
6980	Pruritus Ani	1	0	0	1
6983	Lichenification and Lichen Simplex Chronicus	15	9	1	5
6984	Dermatitis Factitia (Artefacta)	2	2	0	0
6989	Unspecified Pruritic Disorder	3	1	0	2
700	Corns and Callosities	2	1	1	0
7011	Keratoderma, Acquired	25	17	2	6
7013	Striae Atrophicae	5	2	2	1
7014	Keloid Scar	1	0	0	1
7018	Other Specified Hypertrophic and Atrophic Conditions of Skin	3	2	1	0
7020	Actinic Keratosis	202	171	12	19
702	Seborrheic Keratosis	8	8	0	0

Table I-1-1. (Continued)
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
7028	Other Specified Dermatoses	1	1	0	0
7038	Other Specified Diseases of Nail	2	0	1	1
70401	Alopecia Areata	3	2	0	1
7048	Other Specified Diseases of Hair and Hair Follicles	12	8	0	4
7051	Prickly Heat	4	4	0	0
70581	Dyshidrosis	5	5	0	0
7060	Acne Varioliformis	3	3	0	0
7061	Other Acne	11	6	1	4
7062	Sebaceous Cyst	10	9	0	1
7063	Seborrhea	6	4	1	1
7068	Other Specified Diseases of Sebaceous Glands	6	4	1	1
7070	Decubitus Ulcer	1	0	1	0
7079	Chronic Ulcer of Unspecified Site	2	1	1	0
7080	Allergic Urticaria	2	2	0	0
7083	Dermatographic Urticaria	2	1	0	1
7088	Other Specified Urticaria	1	0	0	1
7089	Unspecified Urticaria	5	3	0	2
7090	Dyschromia	63	57	4	2
7091	Vascular Disorders of Skin	1	1	0	0
7093	Degenerative Skin Disorders	1	1	0	0
7098	Other Specified Disorders of Skin	11	9	1	1
7099	Unspecified Disorder of Skin and Subcutaneous Tissue	17	11	2	4
7101	Systemic Sclerosis	1	0	0	1
7140	Rheumatoid Arthritis	1	0	1	0
71590	Osteoarthrosis, Unspecified Involving Unspecified Site	1	0	1	0
71596	Osteoarthrosis, Unspecified Involving Lower Leg	2	0	1	1
71690	Unspecified Arthropathy, Site Unspecified	1	0	1	0
71693	Unspecified Arthropathy Involving Forearm	1	0	1	0
71696	Unspecified Arthropathy Involving Lower Leg	1	0	1	0
71699	Unspecified Arthropathy Involving Multiple Sites	1	0	0	1

Table I-1-1. (Continued)
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
71941	Pain In Joint Involving Shoulder Region	1	0	0	1
72190	Spondylosis of Unspecified Site without Mention of Myelopathy	1	0	0	1
72252	Degeneration of Lumbar or Lumbosacral Intervertebral Disc	1	0	0	1
7234	Brachial Neuritis or Radiculitis Not Otherwise Specified	1	0	0	1
7244	Thoracic or Lumbosacral Neuritis or Radiculitis, Unspecified	1	0	0	1
72610	Disorders, Bursae, Tendons in Shoulder Region, Unspecified	1	0	1	0
72690	Enthesopathy of Unspecified Site	1	0	0	1
7279	Unspecified Disorder of Synovium, Tendon, and Bursa	1	0	1	0
7282	Muscular Wasting and Disuse Atrophy, Not Elsewhere Classified	2	0	2	0
7295	Pain In Limb	1	0	0	1
75732	Vascular Hamartomas	3	3	0	0
75733	Congenital Pigmentary Anomalies of Skin	1	1	0	0
75739	Other Specified Congenital Anomalies of Skin	2	2	0	0
7808	Hyperhidrosis	1	1	0	0
7820	Disturbance of Skin Sensation	9	0	0	9
7821	Rash and Other Nonspecific Skin Eruption	41	27	2	12
7822	Localized Superficial Swelling, Mass, Or Lump	2	0	0	2
7823	Edema	1	1	0	0
7824	Jaundice, Unspecified, Not of Newborn	1	1	0	0
7827	Spontaneous Ecchymoses	28	4	21	3
7828	Changes in Skin Texture	1	1	0	0
7829	Other Symptoms Involving Skin and Integumentary Tissues	1	1	0	0
7999	Other Unknown or Unspecified Cause of Morbidity or Mortality	1	1	0	0
80501	Closed Fracture of First Cervical Vertebra	1	0	0	1
8409	Sprain of Unspecified Site of Shoulder and Upper Arm	1	0	0	1

Table I-1-1. (Continued)
Frequencies of Diagnoses for Participants Reporting "Yes" to Skin Bruising, Skin Patches, and Sensitivity

ICD Code	Description	Total Count	Patches	Bruises	Sensitivity
9089	Late Effect of Unspecified Injury	1	0	1	0
9134	Insect Bite, Nonvenomous of Elbow, Forearm, and Wrist	1	0	0	1
9135	Insect Bite, Nonvenomous of Elbow, Forearm, and Wrist, Infected	1	1	0	0
9160	Abrasion Or Friction Burn of Hip, Thigh, Leg, and Ankle	1	0	0	1
9164	Insect Bite, Nonvenomous, of Hip, Thigh, Leg, and Ankle	1	1	0	0
92310	Contusion of Forearm	1	0	1	0
92400	Contusion of Thigh	1	0	0	1
92420	Contusion of Foot	1	1	0	0
94500	Burn, Unspecified Degree, Unspecified Site of Lower Limb	1	1	0	0
9569	Injury to Unspecified Nerve of Pelvic Girdle and Lower Limb	1	0	0	1
9651	Poisoning By Salicylates	1	1	0	0
9796	Poisoning By Other or Unspecified Viral and Rickettsial Vaccines	1	1	0	0
981	Toxic Effect of Petroleum Products	1	0	0	1
9895	Toxic Effect of Venom	1	1	0	0
9951	Angioneurotic Edema, Not Elsewhere Classified	1	1	0	0
9952	Unspecified Adverse Effect of Drugs, Medicinals, and Biologicals Not Elsewhere Classified	7	1	5	1
9988	Other Specified Complications of Procedures, Not Elsewhere Classified	1	1	0	0

Table I-1-2.
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Age: Born ≥1942	Age: Born <1942	Age: p-Value	Race: Black	Race: Non-Black	Race: p-Value
Hepatitis (Non-A, Non-B, or Non-C)	Yes	(n=950) 2.0%	(n=1,266) 1.4%	0.377	(n=131) 1.5%	(n=2,085) 1.7%	0.999
Jaundice (Unspecified)	Yes	(n=937) 2.0%	(n=1,239) 2.8%	0.296	(n=130) 1.5%	(n=2,046) 2.5%	0.673
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	Yes	(n=954) 4.3%	(n=1,274) 5.7%	0.179	(n=131) 8.4%	(n=2,097) 4.9%	0.114
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	Yes	(n=956) 1.7%	(n=1,276) 0.8%	0.082	(n=131) 1.5%	(n=2,101) 1.1%	0.999
Other Liver Disorders	Yes	(n=950) 29.6%	(n=1,268) 28.2%	0.519	(n=131) 47.3%	(n=2,087) 27.6%	<0.001
Hepatomegaly	Yes	(n=955) 1.3%	(n=1,275) 3.0%	0.010	(n=130) 2.3%	(n=2,100) 2.2%	0.999
Current Hepatomegaly	Yes	(n=939) 0.7%	(n=1,257) 0.7%	0.999	(n=124) 0.8%	(n=2,072) 0.7%	0.999
AST (continuous)[a]		(n=937) r=-0.001	(n=1,255)	0.964	(n=124) $\bar{x}$=23.73	(n=2,068) $\bar{x}$=23.47	0.746
(discrete)	High	2.8%	3.4%	0.459	1.6%	3.2%	0.457
ALT (continuous)[a]		(n=937) r=-0.141	(n=1,255)	<0.001	(n=124) $\bar{x}$=26.10	(n=2,068) $\bar{x}$=27.54	0.202
(discrete)	High	7.9%	5.4%	0.025	3.2%	6.7%	0.185
GGT (continuous)[a]		(n=937) r=-0.041	(n=1,255)	0.054	(n=124) $\bar{x}$=37.89	(n=2,068) $\bar{x}$=32.10	0.005
(discrete)	High	21.0%	17.6%	0.050	25.0%	18.7%	0.107
Alkaline Phosphatase (continuous)[a]		(n=937) r=0.047	(n=1,255)	0.029	(n=124) $\bar{x}$=70.87	(n=2,068) $\bar{x}$=69.39	0.379
(discrete)	High	3.7%	4.5%	0.462	5.6%	4.1%	0.531
Total Bilirubin (continuous)[a]		(n=937) r=0.035	(n=1,255)	0.104	(n=124) $\bar{x}$=0.61	(n=2,068) $\bar{x}$=0.63	0.342
(discrete)	High	4.6%	5.2%	0.595	4.0%	5.0%	0.795
Direct Bilirubin	High	(n=936) 1.7%	(n=1,255) 2.2%	0.560	(n=124) 0.8%	(n=2,067) 2.0%	0.534
LDH (continuous)[a]		(n=936) r=0.084	(n=1,254)	<0.001	(n=124) $\bar{x}$=147.77	(n=2,066) $\bar{x}$=145.42	0.325
(discrete)	High	13.0%	15.2%	0.164	21.0%	13.9%	0.040

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Age: Born ≥1942	Age: Born <1942	Age: p-Value	Race: Black	Race: Non-Black	Race: p-Value
Cholesterol		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=0.020		0.343	$\bar{x}$=216.60	$\bar{x}$=215.12	0.681
(discrete)	High	14.5%	13.9%	0.711	12.1%	14.3%	0.589
HDL Cholesterol		(n=923)	(n=1,243)		(n=124)	(n=2,042)	
(continuous)[a]		r=0.034		0.117	$\bar{x}$=44.80	$\bar{x}$=40.53	<0.001
(discrete)	Low	8.8%	10.1%	0.352	4.0%	9.8%	0.047
Cholesterol-HDL Ratio		(n=923)	(n=1,243)		(n=124)	(n=2,042)	
(continuous)[a]		r=-0.015		0.490	$\bar{x}$=4.84	$\bar{x}$=5.30	0.001
(discrete)	High	57.5%	57.8%	0.948	46.8%	58.3%	0.015
Triglycerides		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=-0.005		0.818	$\bar{x}$=115.23	$\bar{x}$=147.74	<0.001
(discrete)	High	8.8%	11.2%	0.076	4.0%	10.5%	0.031
Creatine Kinase		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=-0.093		<0.001	$\bar{x}$=233.07	$\bar{x}$=124.27	<0.001
(discrete)	High	15.0%	13.1%	0.207	51.6%	11.7%	<0.001
Serum Amylase		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=0.060		0.005	$\bar{x}$=94.16	$\bar{x}$=72.35	<0.001
(discrete)	High	5.4%	7.7%	0.043	21.8%	5.9%	<0.001
Antibodies for Hepatitis A	Yes	(n=955) 22.8%	(n=1,277) 42.0%	<0.001	(n=131) 45.0%	(n=2,101) 33.1%	0.007
Serological Evidence of Prior Hepatitis B Infection	Yes	(n=955) 13.0%	(n=1,277) 13.8%	0.628	(n=131) 26.7%	(n=2,101) 12.6%	<0.001
Antibodies for Hepatitis C	Yes	(n=955) 1.7%	(n=1,277) 1.2%	0.414	(n=131) 3.8%	(n=2,101) 1.2%	0.039
Stool Hemoccult	Yes	(n=880) 2.0%	(n=1,218) 2.3%	0.810	(n=113) 2.7%	(n=1,985) 2.2%	0.988
Prealbumin		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)		r=-0.143		<0.001	$\bar{x}$=27.57	$\bar{x}$=27.74	0.687
(discrete)	Low	0.4%	1.9%	0.004	0.8%	1.3%	0.945
Albumin		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)		r=-0.161		<0.001	$\bar{x}$=3,884.4	$\bar{x}$=3,951.2	0.019
(discrete)	Low	1.9%	2.6%	0.345	2.4%	2.3%	0.999
α-1 Acid Glycoprotein		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=0.001		0.959	$\bar{x}$=54.90	$\bar{x}$=56.57	0.145
(discrete)	High	1.8%	3.0%	0.097	1.6%	2.6%	0.718

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Age: Born ≥1942	Age: Born <1942	Age: p-Value	Race: Black	Race: Non-Black	Race: p-Value
α-1 Antitrypsin		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)		r=0.152		<0.001	$\bar{x}$=145.81	$\bar{x}$=150.66	0.059
(discrete)	Low	2.0%	1.8%	0.040	0.0%	2.0%	0.097
	Normal	97.3%	96.1%		100.0%	96.4%	
	High	0.7%	2.1%		0.0%	1.6%	
α-2		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
Macroglobulin		r=0.251		<0.001	$\bar{x}$=124.24	$\bar{x}$=134.31	<0.001
(continuous)[a]	High	0.0%	0.8%	0.016	0.8%	0.4%	0.999
(discrete)							
Apolipoprotein B		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=0.047		0.027	$\bar{x}$=147.26	$\bar{x}$=147.70	0.895
(discrete)	High	70.4%	74.7%	0.028	74.2%	72.8%	0.819
C_3 Complement		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=0.025		0.249	$\bar{x}$=120.23	$\bar{x}$=113.92	<0.001
(discrete)	Low	2.2%	2.6%	0.659	1.6%	2.5%	0.741
C_4 Complement		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=0.017		0.431	$\bar{x}$=25.22	$\bar{x}$=21.58	<0.001
(discrete)	Low	0.6%	0.7%	0.999	0.0%	0.7%	0.696
Haptoglobin		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)		r=0.094		<0.001	$\bar{x}$=105.41	$\bar{x}$=111.96	0.123
(discrete)	High	9.7%	14.0%	0.003	10.5%	12.3%	0.650
Transferrin		(n=937)	(n=1,255)		(n=124)	(n=2,068)	
(continuous)[a]		r=-0.054		0.011	$\bar{x}$=282.79	$\bar{x}$=293.84	0.003
(discrete)	Low	10.6%	15.1%	0.002	21.8%	12.7%	0.006

[a] Analysis performed on natural logarithm scale; means transferred from natural logarithm scale.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Occupation			
		Officer	Enlisted Flyer	Enlisted Groundcrew	p-Value
Hepatitis (Non-A, Non-B, or Non-C)	Yes	(n=858) 1.0%	(n=365) 2.2%	(n=993) 2.0%	0.189
Jaundice (Unspecified)	Yes	(n=841) 3.4%	(n=356) 1.7%	(n=979) 1.9%	0.068
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	Yes	(n=867) 4.4%	(n=364) 5.8%	(n=997) 5.4%	0.480
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	Yes	(n=868) 0.9%	(n=365) 1.1%	(n=999) 1.4%	0.623
Other Liver Disorders	Yes	(n=858) 28.1%	(n=365) 26.3%	(n=995) 30.4%	0.288
Hepatomegaly	Yes	(n=867) 2.0%	(n=365) 2.5%	(n=998) 2.4%	0.772
Current Hepatomegaly	Yes	(n=859) 0.7%	(n=360) 0.3%	(n=977) 0.9%	0.467
AST (continuous)[a]		(n=856) $\bar{x}$=24.07	(n=358) $\bar{x}$=22.30	(n=978) $\bar{x}$=23.41	0.005
(discrete)	High	3.9%	2.5%	2.8%	0.308
ALT (continuous)[a]		(n=856) $\bar{x}$=27.14	(n=358) $\bar{x}$=26.54	(n=978) $\bar{x}$=28.09	0.082
(discrete)	High	6.0%	5.6%	7.3%	0.399
GGT (continuous)[a]		(n=856) $\bar{x}$=31.61	(n=358) $\bar{x}$=33.07	(n=978) $\bar{x}$=32.86	0.340
(discrete)	High	17.9%	19.6%	19.9%	0.515
Alkaline Phosphatase (continuous)[a]		(n=856) $\bar{x}$=67.06	(n=358) $\bar{x}$=71.22	(n=978) $\bar{x}$=71.01	<0.001
(discrete)	High	2.7%	4.5%	5.3%	0.018
Total Bilirubin (continuous)[a]		(n=856) $\bar{x}$=0.64	(n=358) $\bar{x}$=0.60	(n=978) $\bar{x}$=0.62	0.006
(discrete)	High	5.5%	3.6%	4.9%	0.394
Direct Bilirubin	High	(n=856) 2.3%	(n=357) 0.8%	(n=978) 2.0%	0.224
LDH (continuous)[a]		(n=855) $\bar{x}$=144.51	(n=358) $\bar{x}$=145.68	(n=977) $\bar{x}$=146.43	0.276
(discrete)	High	13.2%	15.1%	14.9%	0.514

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Cholesterol		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=212.83	$\bar{x}$=220.81	$\bar{x}$=215.27	0.005
(discrete)	High	11.4%	16.8%	15.5%	0.013
HDL Cholesterol		(n=844)	(n=351)	(n=971)	
(continuous)[a]		$\bar{x}$=42.20	$\bar{x}$=40.22	$\bar{x}$=39.74	<0.001
(discrete)	Low	9.1%	10.0%	9.7%	0.875
Cholesterol-HDL Ratio		(n=844)	(n=351)	(n=971)	
(continuous)[a]		$\bar{x}$=5.04	$\bar{x}$=5.46	$\bar{x}$=5.41	<0.001
(discrete)	High	49.9%	64.4%	62.0%	<0.001
Triglycerides		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=138.83	$\bar{x}$=154.27	$\bar{x}$=148.79	0.003
(discrete)	High	9.6%	12.3%	9.8%	0.328
Creatine Kinase		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=125.94	$\bar{x}$=122.79	$\bar{x}$=133.60	0.014
(discrete)	High	12.6%	13.1%	15.3%	0.219
Serum Amylase		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=73.76	$\bar{x}$=72.66	$\bar{x}$=73.45	0.800
(discrete)	High	8.2%	3.1%	6.9%	0.005
Antibodies for Hepatitis A	Yes	(n=869) 25.4%	(n=364) 45.9%	(n=999) 36.6%	<0.001
Serological Evidence of Prior Hepatitis B Infection	Yes	(n=869) 7.6%	(n=364) 17.9%	(n=999) 16.9%	<0.001
Antibodies for Hepatitis C	Yes	(n=869) 1.2%	(n=364) 1.1%	(n=999) 1.7%	0.523
Stool Hemoccult	Yes	(n=830) 2.0%	(n=344) 0.6%	(n=924) 2.9%	0.038
Prealbumin		(n=856)	(n=358)	(n=978)	
(continuous)		$\bar{x}$=27.89	$\bar{x}$=27.66	$\bar{x}$=27.61	0.383
(discrete)	Low	1.6%	1.1%	1.0%	0.485
Albumin		(n=856)	(n=358)	(n=978)	
(continuous)		$\bar{x}$=3,944.4	$\bar{x}$=3,932.2	$\bar{x}$=3,955.7	0.436
(discrete)	Low	1.8%	2.8%	2.7%	0.357
α-1 Acid Glycoprotein		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=54.45	$\bar{x}$=57.79	$\bar{x}$=57.81	<0.001
(discrete)	High	2.1%	3.6%	2.5%	0.296

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Occupation			
		Officer	Enlisted Flyer	Enlisted Groundcrew	p-Value
α-1 Antitrypsin		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=146.35	$\bar{x}$=155.16	$\bar{x}$1=152.16	<0.001
(discrete)	Low	3.0%	0.8%	1.3%	0.043
	Normal	95.6%	97.5%	97.2%	
	High	1.4%	1.7%	1.5%	
α-2 Macroglobulin		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=132.67	$\bar{x}$=137.55	$\bar{x}$=133.26	0.024
(discrete)	High	0.2%	0.8%	0.5%	0.342
Apolipoprotein B		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=144.37	$\bar{x}$=154.03	$\bar{x}$=148.33	<0.001
(discrete)	High	69.6%	81.0%	72.8%	<0.001
C_3 Complement		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=111.26	$\bar{x}$=115.46	$\bar{x}$=116.52	<0.001
(discrete)	Low	3.0%	3.1%	1.7%	0.145
C_4 Complement		(n=856)	(n=358)	(n=978)	
(continuous)[a]		$\bar{x}$=21.23	$\bar{x}$=22.01	$\bar{x}$=22.17	<0.001
(discrete)	Low	0.7%	1.7%	0.3%	0.027
Haptoglobin		(n=856)	(n=358)	(n=978)	
(continuous)		$\bar{x}$=103.55	$\bar{x}$=120.88	$\bar{x}$=115.22	<0.001
(discrete)	High	9.3%	17.0%	12.9%	0.001
Transferrin		(n=856)	(n=358)	(n=978)	0.038
(continuous)[a]		$\bar{x}$=290.40	$\bar{x}$=294.57	$\bar{x}$=295.17	0.222
(discrete)	Low	13.9%	15.1%	11.9%	

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Industrial Chemical Exposure			Degreasing Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Hepatitis (Non-A, Non-B, or Non-C)	Yes	(n=914) 1.0%	(n=1,302) 2.2%	0.052	(n=820) 1.0%	(n=1,396) 2.1%	0.075
Jaundice (Unspecified)	Yes	(n=894) 2.9%	(n=1,282) 2.2%	0.353	(n=803) 2.1%	(n=1,373) 2.7%	0.488
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	Yes	(n=918) 4.5%	(n=1,310) 5.5%	0.321	(n=822) 4.9%	(n=1,406) 5.2%	0.812
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)	Yes	(n=922) 1.0%	(n=1,310) 1.3%	0.619	(n=825) 1.1%	(n=1,407) 1.2%	0.964
Other Liver Disorders	Yes	(n=914) 28.4%	(n=1,304) 29.1%	0.788	(n=820) 28.0%	(n=1,398) 29.3%	0.577
Hepatomegaly	Yes	(n=921) 2.2%	(n=1,309) 2.3%	0.965	(n=824) 1.9%	(n=1,406) 2.4%	0.558
Current Hepatomegaly	Yes	(n=910) 0.8%	(n=1,286) 0.7%	0.999	(n=813) 0.4%	(n=1,383) 0.9%	0.208
AST (continuous)[a] (discrete)	High	(n=908) $\bar{x}$=23.74 3.9%	(n=1,284) $\bar{x}$=23.30 2.6%	0.244 0.142	(n=811) $\bar{x}$=23.32 2.7%	(n=1,381) $\bar{x}$=23.57 3.4%	0.520 0.443
ALT (continuous)[a] (discrete)	High	(n=908) $\bar{x}$=27.26 6.3%	(n=1,284) $\bar{x}$=27.60 6.6%	0.526 0.816	(n=811) $\bar{x}$=26.67 5.4%	(n=1,381) $\bar{x}$=27.93 7.1%	0.023 0.149
GGT (continuous)[a] (discrete)	High	(n=908) $\bar{x}$=32.35 19.5%	(n=1,284) $\bar{x}$=32.44 18.8%	0.927 0.712	(n=811) $\bar{x}$=31.97 19.5%	(n=1,381) $\bar{x}$=32.66 18.8%	0.445 0.748
Alkaline Phosphatase (continuous)[a] (discrete)	High	(n=908) $\bar{x}$=69.13 3.4%	(n=1,284) $\bar{x}$=69.72 4.7%	0.453 0.178	(n=811) $\bar{x}$=68.75 3.5%	(n=1,381) $\bar{x}$=69.90 4.6%	0.148 0.252
Total Bilirubin (continuous)[a] (discrete)	High	(n=908) $\bar{x}$=0.63 4.4%	(n=1,284) $\bar{x}$=0.62 5.3%	0.619 0.396	(n=811) $\bar{x}$=0.63 4.9%	(n=1,381) $\bar{x}$=0.63 4.9%	0.796 0.999
Direct Bilirubin	High	(n=908) 1.3%	(n=1,283) 2.4%	0.096	(n=811) 2.0%	(n=1,380) 2.0%	0.999
LDH (continuous)[a] (discrete)	High	(n=906) $\bar{x}$=145.30 14.0%	(n=1,284) $\bar{x}$=145.74 14.5%	0.690 0.805	(n=811) $\bar{x}$=144.37 12.8%	(n=1,379) $\bar{x}$=146.26 15.2%	0.094 0.149

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Industrial Chemical Exposure			Degreasing Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Cholesterol		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=214.07	$\bar{x}$=216.01	0.249	$\bar{x}$=212.88	$\bar{x}$=216.59	0.030
(discrete)	High	12.0%	15.7%	0.019	11.5%	15.7%	0.007
HDL Cholesterol		(n=900)	(n=1,266)		(n=802)	(n=1,364)	
(continuous)[a]		$\bar{x}$=41.33	$\bar{x}$=40.36	0.031	$\bar{x}$=41.48	$\bar{x}$=40.34	0.014
(discrete)	Low	9.6%	9.5%	0.999	10.3%	9.0%	0.345
Cholesterol-HDL Ratio		(n=900)	(n=1,266)		(n=802)	(n=1,346)	
(continuous)[a]		$\bar{x}$=5.17	$\bar{x}$=5.34	0.013	$\bar{x}$=5.12	$\bar{x}$=5.36	<0.001
(discrete)	High	55.0%	59.6%	0.038	52.6%	60.6%	<0.001
Triglycerides		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=141.35	$\bar{x}$=148.81	0.035	$\bar{x}$=140.37	$\bar{x}$=148.89	0.018
(discrete)	High	9.3%	10.7%	0.284	10.0%	10.2%	0.926
Creatine Kinase		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=127.74	$\bar{x}$=129.51	0.561	$\bar{x}$=130.03	$\bar{x}$=128.03	0.520
(discrete)	High	13.4%	14.3%	0.630	13.6%	14.1%	0.764
Serum Amylase		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=72.78	$\bar{x}$=73.91	0.318	$\bar{x}$=74.42	$\bar{x}$=72.87	0.181
(discrete)	High	6.6%	6.9%	0.889	6.8%	6.7%	0.999
Antibodies for Hepatitis A	Yes	(n=921) 33.2%	(n=1,311) 34.2%	0.674	(n=825) 32.1%	(n=1,407) 34.8%	0.221
Serological Evidence of Prior Hepatitis B Infection	Yes	(n=921) 11.3%	(n=1,311) 15.0%	0.015	(n=825) 10.9%	(n=1,407) 14.9%	0.009
Antibodies for Hepatitis C	Yes	(n=921) 1.1%	(n=1,311) 1.6%	0.400	(n=825) 1.1%	(n=1,407) 1.6%	0.463
Stool Hemoccult	Yes	(n=875) 1.9%	(n=1,223) 2.4%	0.610	(n=778) 2.1%	(n=1,320) 2.3%	0.863
Prealbumin		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)		$\bar{x}$=27.78	$\bar{x}$=27.69	0.610	$\bar{x}$=27.87	$\bar{x}$=27.64	0.260
(discrete)	Low	1.4%	1.2%	0.728	1.1%	1.4%	0.735
Albumin		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)		$\bar{x}$=3,943.8	$\bar{x}$=3,950.0	0.640	$\bar{x}$=3,956.0	$\bar{x}$=3,942.4	0.318
(discrete)	Low	2.2%	2.4%	0.857	2.0%	2.5%	0.487
α-1 Acid Glycoprotein		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=55.80	$\bar{x}$=56.96	0.032	$\bar{x}$=55.46	$\bar{x}$=57.08	0.003
(discrete)	High	2.3%	2.6%	0.722	2.7%	2.4%	0.745

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Industrial Chemical Exposure			Degreasing Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
α-1 Antitrypsin		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)		$\bar{x}$=148.41	$\bar{x}$=151.78	0.005	$\bar{x}$=147.33	$\bar{x}$=152.17	<0.001
(discrete)	Low	2.4%	1.6%	0.339	2.8%	1.4%	0.051
	Normal	96.2%	96.8%		95.8%	97.0%	
	High	1.4%	1.6%		1.4%	1.6%	
α-2 Macroglobulin		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=133.18	$\bar{x}$=134.10	0.468	$\bar{x}$=133.09	$\bar{x}$=134.09	0.438
(discrete)	High	0.7%	0.3%	0.382	0.9%	0.2%	0.066
Apolipoprotein B		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=146.62	$\bar{x}$=148.43	0.249	$\bar{x}$=145.26	$\bar{x}$=149.11	0.015
(discrete)	High	72.6%	73.1%	0.811	72.0%	73.4%	0.503
C_3 Complement		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=112.94	$\bar{x}$=115.22	0.002	$\bar{x}$=112.26	$\bar{x}$=115.46	<0.001
(discrete)	Low	2.6%	2.3%	0.752	2.5%	2.5%	0.999
C_4 Complement		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=21.45	$\bar{x}$=22.00	0.015	$\bar{x}$=21.67	$\bar{x}$=21.83	0.482
(discrete)	Low	0.7%	0.7%	0.999	0.7%	0.7%	0.999
Haptoglobin		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)		$\bar{x}$=109.25	$\bar{x}$=113.24	0.045	$\bar{x}$=106.92	$\bar{x}$=114.32	<0.001
(discrete)	High	10.9%	13.1%	0.141	9.6%	13.7%	0.006
Transferrin		(n=908)	(n=1,284)		(n=811)	(n=1,381)	
(continuous)[a]		$\bar{x}$=291.96	$\bar{x}$=294.09	0.237	$\bar{x}$=289.26	$\bar{x}$=295.55	0.001
(discrete)	Low	14.0%	12.6%	0.384	14.7%	12.3%	0.130

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Current Alcohol Use (drinks/day) 0-1	>1-4	>4	p-Value
Hepatitis (Non-A, Non-B, or Non-c)		--	--	--	--
Jaundice (Unspecified)		--	--	--	--
Chronic Liver Disease and Cirrhosis (Alcohol-Related)		--	--	--	--
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)		--	--	--	--
Other Liver Disorders		--	--	--	--
Hepatomegaly		--	--	--	--
Current Hepatomegaly	Yes	(n=1,715) 0.6%	(n=396) 1.0%	(n=57) 1.8%	0.403
AST (continuous)[a]		(n=1,712)	(n=395) r=0.169	(n=57)	<0.001
(discrete)	High	1.8%	6.6%	17.5%	<0.001
ALT (continuous)[a]		(n=1,712)	(n=395) r=0.091	(n=57)	<0.001
(discrete)	High	5.5%	9.6%	14.0%	0.001
GGT (continuous)[a]		(n=1,712)	(n=395) r=0.268	(n=57)	<0.001
(discrete)	High	15.4%	32.2%	43.9%	<0.001
Alkaline Phosphatase (continuous)[a]		(n=1,712)	(n=395) r=0.024	(n=57)	0.270
(discrete)	High	4.0%	3.8%	7.0%	0.509
Total Bilirubin (continuous)[a]		(n=1,712)	(n=395) r=0.081	(n=57)	<0.001
(discrete)	High	4.9%	4.3%	12.3%	0.033
Direct Bilirubin	High	(n=1,711) 1.9%	(n=395) 1.8%	(n=57) 7.0%	0.022
LDH (continuous)[a]		(n=1,711)	(n=394) r=0.009	(n=57)	0.685
(discrete)	High	13.5%	14.7%	28.1%	0.007

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

--: Covariate not applicable for dependent variable.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Current Alcohol Use (drinks/day) 0-1	>1-4	>4	p-Value
Cholesterol		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=0.074		0.001
(discrete)	High	12.6%	21.3%	17.5%	<0.001
HDL Cholesterol		(n=1,693)	(n=389)	(n=57)	
(continuous)[a]			r=0.221		<0.001
(discrete)	Low	10.6%	6.4%	1.8%	0.005
Cholesterol-HDL Ratio		(n=1,693)	(n=389)	(n=57)	
(continuous)[a]			r=-0.147		<0.001
(discrete)	High	60.7%	45.8%	49.1%	<0.001
Triglycerides		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=-0.012		0.592
(discrete)	High	9.8%	11.1%	8.8%	0.695
Creatine Kinase		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=-0.037		0.085
(discrete)	High	14.4%	12.4%	10.5%	0.451
Serum Amylase		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=-0.046		0.032
(discrete)	High	6.7%	6.6%	10.5%	0.514
Antibodies for Hepatitis A		--	--	--	--
Serological Evidence of Prior Hepatitis B Infection		--	--	--	--
Antibodies for Hepatitis C		--	--	--	--
Stool Hemoccult		(n=1,643)	(n=376)	(n=52)	
	Yes	2.1%	2.1%	3.8%	0.704
Prealbumin		(n=1,712)	(n=395)	(n=57)	
(continuous)			r=0.087		<0.001
(discrete)	Low	0.9%	2.0%	7.0%	<0.001
Albumin		(n=1,712)	(n=395)	(n=57)	
(continuous)			r=0.024		0.271
(discrete)	Low	2.3%	2.3%	3.5%	0.843
α-1 Acid Glycoprotein		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=0.075		<0.001
(discrete)	High	2.1%	4.1%	5.3%	0.036

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

--: Covariate not applicable for dependent variable.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Current Alcohol Use (drinks/day) 0-1	>1-4	>4	p-Value
α-1 Antitrypsin		(n=1,712)	(n=395)	(n=57)	
(continuous)			r=0.006		0.791
(discrete)	Low	1.8%	2.8%	1.8%	0.017
	Normal	97.1%	94.7%	93.0%	
	High	1.1%	2.5%	5.3%	
α-2 Macroglobulin		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=-0.032		0.135
(discrete)	High	0.5%	0.5%	0.0%	0.868
Apolipoprotein B		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=0.030		0.166
(discrete)	High	72.1%	75.2%	82.5%	0.118
C_3 Complement		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=-0.051		0.018
(discrete)	Low	2.5%	2.5%	3.5%	0.880
C_4 Complement		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=0.024		0.258
(discrete)	Low	0.9%	0.0%	0.0%	0.136
Haptoglobin		(n=1,712)	(n=395)	(n=57)	
(continuous)			r=0.058		0.007
(discrete)	High	11.6%	14.2%	14.0%	0.341
Transferrin		(n=1,712)	(n=395)	(n=57)	
(continuous)[a]			r=0.042		0.052
(discrete)	Low	13.7%	11.1%	8.8%	0.240

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Lifetime Alcohol History (drink-years) 0	>0-40	>40	p-Value
Hepatitis (Non-A, Non-B, or Non-C)	Yes	(n=133) 1.5%	(n=1,482) 1.7%	(n=560) 1.8%	0.972
Jaundice (Unspecified)	Yes	(n=132) 3.8%	(n=1,450) 2.6%	(n=552) 2.2%	0.567
Chronic Liver Disease and Cirrhosis (Alcohol-Related)	Yes	(n=134) 0.0%	(n=1,491) 1.7%	(n=560) 15.7%	<0.001
Chronic Liver Disease and Cirrhosis (Nonalcohol-Related)		--	--	--	--
Other Liver Disorders	Yes	(n=133) 27.8%	(n=1,482) 26.9%	(n=562) 34.5%	0.003
Hepatomegaly	Yes	(n=134) 0.7%	(n=1,490) 1.5%	(n=563) 4.8%	<0.001
Current Hepatomegaly	Yes	(n=132) 0.0%	(n=1,468) 0.5%	(n=553) 1.4%	0.040
AST		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.066		0.002
(discrete)	High	1.5%	1.9%	6.7%	<0.001
ALT		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=-0.016		0.468
(discrete)	High	7.6%	5.5%	9.1%	0.012
GGT		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.085		<0.001
(discrete)	High	13.6%	16.4%	28.4%	<0.001
Alkaline Phosphatase		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.015		0.491
(discrete)	High	5.3%	4.0%	4.2%	0.753
Total Bilirubin		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.032		0.133
(discrete)	High	1.5%	5.1%	5.8%	0.129
Direct Bilirubin	High	(n=132) 1.5%	(n=1,464) 1.8%	(n=552) 2.5%	0.563
LDH		(n=132)	(n=1,464)	(n=551)	
(continuous)[a]			r=0.003		0.876
(discrete)	High	12.1%	14.5%	13.6%	0.680

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

--: Covariate not applicable for dependent variable.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Lifetime Alcohol History (drink/years) 0	>0-40	>40	p-Value
Cholesterol		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.018		0.400
(discrete)	High	11.4%	13.3%	17.2%	0.052
HDL Cholesterol		(n=131)	(n=1,450)	(n=543)	
(continuous)[a]			r=0.102		<0.001
(discrete)	Low	19.1%	9.4%	7.7%	<0.001
Cholesterol-HDL Ratio		(n=131)	(n=1,450)	(n=543)	
(continuous)[a]			r=-0.077		<0.001
(discrete)	High	66.4%	58.4%	53.6%	0.017
Triglycerides		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.007		0.735
(discrete)	High	13.6%	9.4%	11.2%	0.174
Creatine Kinase		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=-0.057		0.008
(discrete)	High	17.4%	14.2%	12.3%	0.269
Serum Amylase		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=-0.006		0.792
(discrete)	High	4.5%	7.1%	6.5%	0.513
Antibodies for Hepatitis A		(n=134)	(n=1,491)	(n=564)	
	Yes	41.0%	32.1%	35.8%	0.046
Serological Evidence of		(n=134)	(n=1,491)	(n=564)	
Prior Hepatitis B Infection	Yes	11.2%	12.4%	16.7%	0.030
Antibodies for Hepatitis C		(n=134)	(n=1,491)	(n=564)	
	Yes	1.5%	1.2%	2.0%	0.444
Stool Hemoccult		(n=124)	(n=1,412)	(n=521)	
	Yes	2.4%	1.9%	2.9%	0.428
Prealbumin		(n=132)	(n=1,465)	(n=552)	
(continuous)			r=-0.010		0.629
(discrete)	Low	0.0%	0.9%	2.5%	0.005
Albumin		(n=132)	(n=1,465)	(n=552)	
(continuous)			r=-0.010		0.650
(discrete)	Low	1.5%	2.4%	2.5%	0.785
α-1 Acid Glycoprotein		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.082		<0.001
(discrete)	High	1.5%	2.1%	4.0%	0.044

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Lifetime Alcohol History (drink/years) 0	>0-40	>40	p-Value
α-1 Antitrypsin		(n=132)	(n=1,465)	(n=552)	
(continuous)			r=0.099		<0.001
(discrete)	Low	1.5%	1.9%	2.0%	0.011
	Normal	97.7%	97.1%	94.9%	
	High	0.8%	1.0%	3.1%	
α-2 Macroglobulin		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.061		0.004
(discrete)	High	0.8%	0.4%	0.5%	0.813
Apolipoprotein B		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.008		0.696
(discrete)	High	72.0%	72.6%	73.7%	0.859
C_3 Complement		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=-0.002		0.925
(discrete)	Low	0.8%	2.7%	2.5%	0.408
C_4 Complement		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.039		0.068
(discrete)	Low	0.8%	0.8%	0.4%	0.545
Haptoglobin		(n=132)	(n=1,465)	(n=552)	
(continuous)			r=0.089		<0.001
(discrete)	High	13.6%	10.9%	14.9%	0.046
Transferrin		(n=132)	(n=1,465)	(n=552)	
(continuous)[a]			r=0.004		0.864
(discrete)	Low	15.2%	12.4%	14.7%	0.301

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

Note: Correlations (r) are based on total sample and are not category-specific.

Table I-1-2. (Continued)
Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Lifetime Wine History: 0 Drinks/Day	Lifetime Wine History: >0 Drinks/Day	Lifetime Wine History: p-Value	Current Wine Use: 0 Drink-Years	Current Wine Use: >0 Drink-Years	Current Wine Use: p-Value
Alkaline Phosphatase		(n=669)	(n=1,483)		(n=951)	(n=1,212)	
(continuous)[a]		r=-0.044		0.043	r=-0.060		0.005
(discrete)	Yes	5.4%	3.5%	0.055	5.6%	2.9%	0.002
α-1 Antitrypsin					(n=951)	(n=1,212)	
(continuous)					r=-0.084		<0.001
(discrete)	Low	--	--	--	1.4%	2.4%	0.001
	Normal	--	--	--	96.2%	96.9%	
	High	--	--	--	2.4%	0.7%	

[a] Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

--: Covariate not applicable for dependent variable.

Note: Correlations (r) are based on total sample and are not category-specific.