

APPENDIX F

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APPENDIX F. DEPENDENT VARIABLE-COVARIATE ASSOCIATIONS

This appendix contains results of tests of association between each dependent variable and covariates for the adjusted analysis of each dependent variable. Pearson's chi-square test (continuity-adjusted for 2x2 tables) is used for significance testing of the associations between each discrete dependent variable and the covariate. When a covariate is continuous in nature (for example, 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 covariate is discrete in nature, 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 F-1. Dependent Variable-Covariate Associations for the General Health Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Self-perception of Health	Fair or Poor	(n=932) 10.7%	(n=1,188) 13.0%	0.132	(n=128) 19.5%	(n=1,992) 11.5%	0.010
Appearance of Illness or Distress	Yes	(n=933) 1.0%	(n=1,188) 1.7%	0.220	(n=128) 4.7%	(n=1,993) 1.2%	0.003
Relative Age Appearance	Older	(n=933) 7.8%	(n=1,188) 10.2%	0.072	(n=128) 7.0%	(n=1,993) 9.3%	0.485
Body Fat		(n=933)	(n=1,188)		(n=128)	(n=1,993)	
(continuous) ^a		r = -0.011			\bar{x} = 22.59	\bar{x} = 22.18	0.410
(discrete)	Obese	30.2%	28.5%	0.399	35.2%	28.9%	0.156
Erythrocyte Sedimentation Rate		(n=933)	(n=1,188)		(n=128)	(n=1,993)	
(continuous) ^b		r = -0.179			\bar{x} = 5.33	\bar{x} = 4.74	0.184
(discrete)	Abnormal	6.1%	8.7%	0.033	10.2%	7.4%	0.326

Dependent Variable	Level	Occupation			p-Value	Personality Type		
		Officer	Enlisted Flyer	Enlisted Groundcrew		Type A	Type B	p-Value
Self-perception of Health	Fair or Poor	(n=835) 7.7%	(n=338) 14.5%	(n=947) 14.9%	0.001	(n=819) 11.4%	(n=1,298) 12.4%	0.513
Appearance of Illness or Distress	Yes	(n=835) 0.8%	(n=338) 1.5%	(n=948) 1.8%	0.219	--	--	--
Relative Age Appearance	Older	(n=835) 5.6%	(n=338) 12.7%	(n=948) 11.0%	0.001	--	--	--
Body Fat		(n=835)	(n=338)	(n=948)				
(continuous)		\bar{x} = 21.94	\bar{x} = 21.97	\bar{x} = 22.52	0.059	--	--	--
(discrete)	Obese	25.3%	28.1%	33.1%	0.001	--	--	--
Erythrocyte Sedimentation Rate		(n=835)	(n=338)	(n=948)		(n=820)	(n=1,298)	
(continuous)		\bar{x} = 4.39	\bar{x} = 5.61	\bar{x} = 4.85	<0.001	\bar{x} = 4.56	\bar{x} = 4.91	0.090
(discrete)	Abnormal	6.5%	9.2%	7.9%	0.240	6.3%	8.3%	0.111

Table F-1. Dependent Variable-Covariate Associations for the General Health Assessment (Continued)

Dependent Variable	Level	Current Cigarette Smoking (cigarettes/day)				p-Value
		0-Never	0-Former	>0-20	>20	
Self-perception of Health	Fair or	(n=595)	(n=1,116)	(n=272)	(n=137)	0.001
	Poor	7.7%	11.9%	19.9%	15.3%	
Appearance of Illness or Distress	Yes	(n=595)	(n=1,116)	(n=272)	(n=137)	0.030
		0.5%	1.3%	2.9%	2.2%	
Relative Age Appearance	Older	(n=595)	(n=1,116)	(n=272)	(n=137)	0.001
		3.9%	6.5%	23.2%	25.6%	
Body Fat (continuous) ^a (discrete)	Obese	(n=595)	(n=1,116)	(n=272)	(n=137)	0.001
		27.1%	33.6%	21.3%	19.0%	
Erythrocyte Sedimentation Rate (continuous) ^b (discrete)	Abnormal	(n=595)	(n=1,116)	(n=272)	(n=137)	0.003
		4.7%	7.9%	9.9%	12.4%	

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Self-perception of Health	Fair or	(n=595)	(n=558)	(n=965)	0.001
	Poor	7.7%	10.8%	15.2%	
Appearance of Illness or Distress	Yes	(n=595)	(n=558)	(n=965)	0.027
		0.5%	1.1%	2.1%	
Relative Age Appearance	Older	(n=595)	(n=558)	(n=965)	0.001
		3.9%	7.7%	13.2%	
Body Fat (continuous) ^a (discrete)	Obese	(n=595)	(n=558)	(n=965)	0.026
		27.1%	33.7%	28.1%	
Erythrocyte Sedimentation Rate (continuous) ^b (discrete)	Abnormal	(n=595)	(n=558)	(n=965)	0.002
		4.7%	7.2%	9.5%	

Table F-1. Dependent Variable-Covariate Associations for the General Health Assessment (Continued)

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
Self-perception of Health	Fair or	(n=1,699)	(n=371)	(n=50)	0.580
	Poor	11.7%	13.5%	10.0%	
Appearance of Illness or Distress	Yes	(n=1,699)	(n=371)	(n=50)	0.082
		1.7%	0.3%	0.0%	
Relative Age Appearance	Older	(n=1,699)	(n=371)	(n=50)	0.161
		8.7%	11.6%	6.0%	
Body Fat (continuous) ^a (discrete)	Obese	(n=1,699)	(n=371)	(n=50)	<0.001 0.003
		30.9%	22.6%	22.0%	
Erythrocyte Sedimentation Rate (continuous) ^b (discrete)	Abnormal	(n=1,699)	(n=371)	(n=50)	0.217 0.532
		7.5%	8.4%	4.0%	

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Self-perception of Health	Fair or	(n=118)	(n=1,379)	(n=616)	0.214
	Poor	15.3%	11.2%	13.3%	
Appearance of Illness or Distress	Yes	(n=118)	(n=1,379)	(n=616)	0.170
		0.9%	1.1%	2.1%	
Relative Age Appearance	Older	(n=118)	(n=1,379)	(n=616)	0.114
		7.6%	8.4%	11.2%	
Body Fat (continuous) ^a (discrete)	Obese	(n=118)	(n=1,379)	(n=616)	0.022 0.642
		25.4%	29.5%	29.4%	
Erythrocyte Sedimentation Rate (continuous) ^b (discrete)	Abnormal	(n=118)	(n=1,379)	(n=616)	0.019 0.107
		6.8%	6.7%	9.4%	

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

^b Analysis performed on natural logarithm scale of sedimentation rate + 0.1; means transformed from natural logarithm scale of sedimentation rate + 0.1.

--: Covariate not applicable for dependent variable.

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

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Any Skin Neoplasm		(n=855)	(n=1,118)				
	Yes	31.5%	41.0%	<0.001	--	--	--
Malignant Skin Neoplasm		(n=855)	(n=1,118)				
	Yes	10.9%	21.3%	<0.001	--	--	--
Benign Skin Neoplasm		(n=927)	(n=1,173)				
	Yes	22.6%	23.9%	0.509	--	--	--
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		(n=855)	(n=1,118)				
	Yes	0.7%	0.8%	0.999	--	--	--
Any Basal Cell Carcinoma		(n=855)	(n=1,118)				
	Yes	8.8%	18.0%	<0.001	--	--	--
Basal Cell Carcinoma on Ear, Face, Head, or Neck		(n=855)	(n=1,118)				
	Yes	5.5%	14.9%	<0.001	--	--	--
Basal Cell Carcinoma on Trunk		(n=855)	(n=1,118)				
	Yes	2.9%	5.6%	0.007	--	--	--
Basal Cell Carcinoma on Upper Extremities		(n=855)	(n=1,118)				
	Yes	2.0%	3.8%	0.031	--	--	--
Basal Cell Carcinoma on Lower Extremities		(n=855)	(n=1,118)				
	Yes	0.4%	0.6%	0.594	--	--	--
Squamous Cell Carcinoma		(n=855)	(n=1,118)				
	Yes	0.9%	3.0%	0.002	--	--	--
Nonmelanoma		(n=855)	(n=1,118)				
	Yes	9.7%	20.3%	<0.001	--	--	--
Melanoma		(n=855)	(n=1,118)				
	Yes	1.2%	1.7%	0.435	--	--	--
Any Systemic Neoplasm		(n=927)	(n=1,170)		(n=127)	(n=1,970)	
	Yes	21.8%	37.2%	<0.001	24.4%	30.8%	0.159
Malignant Systemic Neoplasm		(n=931)	(n=1,179)		(n=127)	(n=1,983)	
	Yes	2.4%	10.2%	<0.001	6.3%	6.8%	0.986
Benign Systemic Neoplasm		(n=927)	(n=1,170)		(n=127)	(n=1,970)	
	Yes	19.2%	28.9%	<0.001	18.9%	25.0%	0.151
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		(n=931)	(n=1,179)		(n=127)	(n=1,983)	
	Yes	1.4%	2.4%	0.145	1.6%	2.0%	0.999
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		(n=931)	(n=1,179)		(n=127)	(n=1,983)	
	Yes	0.4%	1.4%	0.035	0.8%	1.0%	0.999
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		(n=931)	(n=1,179)		(n=127)	(n=1,983)	
	Yes	0.1%	0.9%	0.041	0.8%	0.5%	0.999
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		(n=931)	(n=1,179)		(n=127)	(n=1,983)	
	Yes	0.2%	0.0%	0.379	0.0%	0.1%	0.999
Malignant Systemic Neoplasm of Thyroid Gland		(n=931)	(n=1,179)		(n=127)	(n=1,983)	
	Yes	0.0%	0.3%	0.202	0.0%	0.2%	0.999
Malignant Systemic Neoplasm of Bronchus or Lung		(n=931)	(n=1,179)		(n=127)	(n=1,983)	
	Yes	0.2%	0.9%	0.070	0.0%	0.7%	0.741

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Malignant Systemic Neoplasm of Liver	Yes	(n=931) 0.2%	(n=1,179) 0.2%	0.999	(n=127) 0.0%	(n=1,983) 0.2%	0.999
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=931) 0.6%	(n=1,179) 0.8%	0.951	(n=127) 0.0%	(n=1,983) 0.8%	0.661
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=931) 0.2%	(n=1,179) 1.3%	0.014	(n=127) 0.8%	(n=1,983) 0.8%	0.999
Malignant Systemic Neoplasm of Prostate	Yes	(n=931) 0.2%	(n=1,179) 5.3%	<0.001	(n=127) 4.7%	(n=1,983) 3.0%	0.400
Malignant Systemic Neoplasm of Testicles	Yes	(n=931) 0.0%	(n=1,179) 0.3%	0.338	(n=127) 0.0%	(n=1,983) 0.2%	0.999
Malignant Systemic Neoplasm of Connective or Other Soft Tissue	Yes	(n=931) 0.2%	(n=1,179) 0.1%	0.837	(n=127) 0.0%	(n=1,983) 0.2%	0.999
Hodgkin's Disease	Yes	(n=931) 0.2%	(n=1,179) 0.2%	0.999	(n=127) 0.0%	(n=1,983) 0.2%	0.999
Non-Hodgkin's Lymphoma	Yes	(n=931) 0.1%	(n=1,179) 0.3%	0.789	(n=127) 0.0%	(n=1,983) 0.2%	0.999
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue	Yes	(n=931) 0.1%	(n=1,179) 0.4%	0.345	(n=127) 0.0%	(n=1,983) 0.3%	0.999
All Malignant Skin and Systemic Neoplasms	Yes	(n=925) 11.9%	(n=1,164) 26.6%	<0.001	(n=126) 6.4%	(n=1,963) 21.0%	<0.001
All Skin and Systemic Neoplasms	Yes	(n=922) 43.9%	(n=1,156) 59.5%	<0.001	(n=126) 37.3%	(n=1,952) 53.6%	<0.001
Prostate-Specific Antigen		(n=927)	(n=1,092)		(n=121)	(n=1,898)	
(continuous) ^a			r=0.258	<0.001	$\bar{x} = 1.16$	$\bar{x} = 1.11$	0.535
(discrete)	Abnormal	2.3%	9.7%	<0.001	6.6%	6.3%	0.999

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Any Skin Neoplasm	Yes	(n=809) 41.2%	(n=313) 33.9%	(n=851) 33.8%	0.004
Malignant Skin Neoplasm	Yes	(n=809) 21.3%	(n=313) 16.3%	(n=851) 12.7%	<0.001
Benign Skin Neoplasm	Yes	(n=823) 24.7%	(n=335) 19.7%	(n=942) 23.4%	0.193
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=809) 0.4%	(n=313) 0.3%	(n=851) 1.3%	0.060
Any Basal Cell Carcinoma	Yes	(n=809) 18.2%	(n=313) 14.4%	(n=851) 9.9%	<0.001
Basal Cell Carcinoma on Ear, Face, Head, or Neck	Yes	(n=809) 13.5%	(n=313) 12.5%	(n=851) 7.6%	<0.001
Basal Cell Carcinoma on Trunk	Yes	(n=809) 7.2%	(n=313) 2.9%	(n=851) 2.4%	<0.001
Basal Cell Carcinoma on Upper Extremities	Yes	(n=809) 5.1%	(n=313) 1.0%	(n=851) 1.8%	<0.001

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Basal Cell Carcinoma on Lower Extremities		(n=809)	(n=313)	(n=851)	
	Yes	0.9%	0.0%	0.4%	0.132
Squamous Cell Carcinoma		(n=809)	(n=313)	(n=851)	
	Yes	3.3%	1.6%	1.2%	0.007
Nonmelanoma		(n=809)	(n=313)	(n=851)	
	Yes	20.0%	16.0%	11.5%	<0.001
Melanoma		(n=809)	(n=313)	(n=851)	
	Yes	2.0%	0.3%	1.4%	0.115
Any Systemic Neoplasm		(n=821)	(n=334)	(n=942)	
	Yes	33.9%	31.1%	27.1%	0.008
Malignant Systemic Neoplasm		(n=829)	(n=336)	(n=945)	
	Yes	8.6%	8.6%	4.4%	<0.001
Benign Systemic Neoplasm		(n=821)	(n=334)	(n=942)	
	Yes	25.8%	26.1%	23.0%	0.320
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		(n=829)	(n=336)	(n=945)	
	Yes	2.9%	0.9%	1.5%	0.031
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		(n=829)	(n=336)	(n=945)	
	Yes	1.2%	1.2%	0.7%	0.570
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		(n=829)	(n=336)	(n=945)	
	Yes	0.5%	0.9%	0.4%	0.579
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		(n=829)	(n=336)	(n=945)	
	Yes	0.1%	0.0%	0.1%	0.823
Malignant Systemic Neoplasm of Thyroid Gland		(n=829)	(n=336)	(n=945)	
	Yes	0.4%	0.0%	0.1%	0.318
Malignant Systemic Neoplasm of Bronchus or Lung		(n=829)	(n=336)	(n=945)	
	Yes	0.8%	1.2%	0.2%	0.080
Malignant Systemic Neoplasm of Liver		(n=829)	(n=336)	(n=945)	
	Yes	0.1%	0.3%	0.2%	0.803
Malignant Systemic Neoplasm of Colon or Rectum		(n=829)	(n=336)	(n=945)	
	Yes	0.6%	1.2%	0.6%	0.520
Malignant Systemic Neoplasm of Kidney or Bladder		(n=829)	(n=336)	(n=945)	
	Yes	1.2%	0.9%	0.4%	0.180
Malignant Systemic Neoplasm of Prostate		(n=829)	(n=336)	(n=945)	
	Yes	4.6%	3.3%	1.7%	0.002
Malignant Systemic Neoplasm of Testicles		(n=829)	(n=336)	(n=945)	
	Yes	0.1%	0.3%	0.1%	0.709
Malignant Systemic Neoplasm of Connective or Other Soft Tissue		(n=829)	(n=336)	(n=945)	
	Yes	0.0%	0.3%	0.2%	0.355
Hodgkin's Disease		(n=829)	(n=336)	(n=945)	
	Yes	0.4%	0.0%	0.1%	0.318
Non-Hodgkin's Lymphoma		(n=829)	(n=336)	(n=945)	
	Yes	0.2%	0.0%	0.2%	0.677
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue		(n=829)	(n=336)	(n=945)	
	Yes	0.4%	0.3%	0.2%	0.838
All Malignant Skin and Systemic Neoplasms		(n=817)	(n=333)	(n=939)	
	Yes	25.8%	21.0%	14.8%	<0.001
All Skin and Systemic Neoplasms		(n=811)	(n=331)	(n=936)	
	Yes	57.7%	53.2%	48.0%	<0.001

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Prostate-Specific Antigen		(n=778)	(n=321)	(n=920)	
(continuous) ^a		$\bar{x} = 1.22$	$\bar{x} = 1.24$	$\bar{x} = 1.00$	<0.001
(discrete)	Abnormal	7.7%	7.8%	4.6%	0.014

Dependent Variable	Level	Skin Color			Hair Color		
		Non-Peach	Peach	p-Value	Black, Dark Brown	Light Brown, Blonde, Red, Bald	p-Value
Any Skin Neoplasm	Yes	(n=456) 28.7%	(n=1,517) 39.3%	<0.001	(n=1,345) 35.5%	(n=626) 39.6%	0.090
Malignant Skin Neoplasm	Yes	(n=456) 12.1%	(n=1,517) 18.2%	0.003	(n=1,345) 15.5%	(n=626) 19.7%	0.025
Benign Skin Neoplasm	Yes	(n=575) 19.8%	(n=1,525) 24.6%	0.025	(n=1,466) 23.3%	(n=632) 23.1%	0.955
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=456) 0.7%	(n=1,517) 0.8%	0.999	(n=1,345) 0.7%	(n=626) 0.8%	0.999
Any Basal Cell Carcinoma	Yes	(n=456) 10.5%	(n=1,517) 15.0%	0.019	(n=1,345) 12.7%	(n=626) 16.8%	0.019
Basal Cell Carcinoma on Ear, Face, Head, or Neck	Yes	(n=456) 7.7%	(n=1,517) 11.7%	0.018	(n=1,345) 9.4%	(n=626) 13.7%	0.005
Basal Cell Carcinoma on Trunk	Yes	(n=456) 3.3%	(n=1,517) 4.8%	0.231	(n=1,345) 4.0%	(n=626) 5.3%	0.251
Basal Cell Carcinoma on Upper Extremities	Yes	(n=456) 2.4%	(n=1,517) 3.2%	0.503	(n=1,345) 2.7%	(n=626) 3.7%	0.286
Basal Cell Carcinoma on Lower Extremities	Yes	(n=456) 0.9%	(n=1,517) 0.4%	0.371	(n=1,345) 0.5%	(n=626) 0.6%	0.825
Squamous Cell Carcinoma	Yes	(n=456) 0.9%	(n=1,517) 2.5%	0.054	(n=1,345) 1.9%	(n=626) 2.6%	0.469
Nonmelanoma	Yes	(n=456) 11.2%	(n=1,517) 17.1%	0.003	(n=1,345) 14.4%	(n=626) 18.7%	0.016
Melanoma	Yes	(n=456) 1.1%	(n=1,517) 1.6%	0.594	(n=1,345) 1.4%	(n=626) 1.6%	0.907
Any Systemic Neoplasm		--	--	--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--	--	--
Benign Systemic Neoplasm		--	--	--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--	--	--
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		--	--	--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Skin Color			Hair Color		
		Non-Peach	Peach	p-Value	Black, Dark Brown	Light Brown, Blonde, Red, Bald	p-Value
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, and Mediastinum		--	--	--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--	--	--
Malignant Systemic Neoplasm of Liver		--	--	--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--	--	--
Malignant Systemic Neoplasm of Connective or Other Soft Tissue		--	--	--	--	--	--
Hodgkin's Disease		--	--	--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue		--	--	--	--	--	--
All Malignant Skin and Systemic Neoplasms	Yes	(n=572) 13.6%	(n=1,517) 22.5%	<0.001	(n=1,460) 18.2%	(n=627) 24.7%	<0.001
All Skin and Systemic Neoplasms	Yes	(n=569) 44.1%	(n=1,509) 55.8%	<0.001	(n=1,453) 51.3%	(n=623) 55.5%	0.088
Prostate-Specific Antigen		--	--	--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Eye Color			p-Value
		Brown	Hazel, Green	Gray, Blue	
Any Skin Neoplasm		(n=604)	(n=523)	(n=846)	
	Yes	32.5%	39.2%	38.5%	0.026
Malignant Skin Neoplasm		(n=604)	(n=523)	(n=846)	
	Yes	13.4%	17.4%	18.8%	0.023
Benign Skin Neoplasm		(n=727)	(n=527)	(n=846)	
	Yes	21.2%	25.2%	23.9%	0.213
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		(n=604)	(n=523)	(n=846)	
	Yes	1.0%	1.3%	0.2%	0.054
Any Basal Cell Carcinoma		(n=604)	(n=523)	(n=846)	
	Yes	10.9%	15.3%	15.4%	0.034
Basal Cell Carcinoma on Ear, Face, Head, or Neck		(n=604)	(n=523)	(n=846)	
	Yes	8.6%	11.1%	12.2%	0.095
Basal Cell Carcinoma on Trunk		(n=604)	(n=523)	(n=846)	
	Yes	3.2%	5.9%	4.4%	0.076
Basal Cell Carcinoma on Upper Extremities		(n=604)	(n=523)	(n=846)	
	Yes	1.2%	4.2%	3.6%	0.005
Basal Cell Carcinoma on Lower Extremities		(n=604)	(n=523)	(n=846)	
	Yes	0.3%	0.6%	0.6%	0.765
Squamous Cell Carcinoma		(n=604)	(n=523)	(n=846)	
	Yes	1.5%	1.9%	2.7%	0.257
Nonmelanoma		(n=604)	(n=523)	(n=846)	
	Yes	12.6%	16.8%	17.3%	0.039
Melanoma		(n=604)	(n=523)	(n=846)	
	Yes	1.0%	1.0%	2.1%	0.109
Any Systemic Neoplasm		--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--
Benign Systemic Neoplasm		--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, and Mediastinum		--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--
Malignant Systemic Neoplasm of Liver		--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Eye Color			p-Value
		Brown	Hazel, Green	Gray, Blue	
Malignant Systemic Neoplasm of Prostate		--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--
Malignant Systemic Neoplasm of Connective or Other Soft Tissue		--	--	--	--
Hodgkin's Disease		--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue		--	--	--	--
All Malignant Skin and Systemic Neoplasms	Yes	(n=724) 14.4%	(n=525) 23.2%	(n=840) 23.1%	<0.001
All Skin and Systemic Neoplasms	Yes	(n=722) 45.4%	(n=520) 57.7%	(n=836) 55.6%	<0.001
Prostate-Specific Antigen		--	--	--	--

Dependent Variable	Level	Skin Reaction to Sun after First Exposure				p-Value
		No Reaction	Some Redness Only	Burns	Painfully Burns	
Any Skin Neoplasm	Yes	(n=715) 30.8%	(n=796) 37.6%	(n=301) 43.5%	(n=160) 48.1%	<0.001
Malignant Skin Neoplasm	Yes	(n=715) 9.8%	(n=796) 18.5%	(n=301) 23.6%	(n=160) 26.9%	<0.001
Benign Skin Neoplasm	Yes	(n=819) 22.2%	(n=809) 22.7%	(n=311) 25.1%	(n=160) 28.1%	0.346
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=715) 0.7%	(n=796) 0.9%	(n=301) 0.7%	(n=160) 0.6%	0.967
Any Basal Cell Carcinoma	Yes	(n=715) 8.1%	(n=796) 15.0%	(n=301) 20.9%	(n=160) 22.5%	<0.001
Basal Cell Carcinoma on Ear, Face, Head, or Neck	Yes	(n=715) 6.2%	(n=796) 11.3%	(n=301) 16.3%	(n=160) 18.8%	<0.001
Basal Cell Carcinoma on Trunk	Yes	(n=715) 2.5%	(n=796) 4.8%	(n=301) 6.3%	(n=160) 7.5%	0.006
Basal Cell Carcinoma on Upper Extremities	Yes	(n=715) 1.3%	(n=796) 3.4%	(n=301) 4.3%	(n=160) 6.3%	<0.001
Basal Cell Carcinoma on Lower Extremities	Yes	(n=715) 0.0%	(n=796) 1.0%	(n=301) 0.3%	(n=160) 0.6%	0.051
Squamous Cell Carcinoma	Yes	(n=715) 1.3%	(n=796) 1.9%	(n=301) 3.3%	(n=160) 5.0%	0.011
Nonmelanoma	Yes	(n=715) 9.1%	(n=796) 17.0%	(n=301) 22.9%	(n=160) 25.6%	<0.001
Melanoma	Yes	(n=715) 0.8%	(n=796) 2.0%	(n=301) 1.0%	(n=160) 2.5%	0.158
Any Systemic Neoplasm		--	--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Skin Reaction to Sun after First Exposure				p-Value
		No Reaction	Some Redness Only	Burns	Painfully Burns	
Malignant Systemic Neoplasm		--	--	--	--	--
Benign Systemic Neoplasm		--	--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--	--
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		--	--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, and Mediastinum		--	--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--	--
Malignant Systemic Neoplasm of Liver		--	--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--	--
Malignant Systemic Neoplasm of Connective or Other Soft Tissue		--	--	--	--	--
Hodgkin's Disease		--	--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue		--	--	--	--	--
All Malignant Skin and Systemic Neoplasms	Yes	(n=813) 13.3%	(n=806) 22.2%	(n=310) 26.8%	(n=159) 31.5%	<0.001
All Skin and Systemic Neoplasms	Yes	(n=806) 47.5%	(n=804) 53.9%	(n=308) 59.1%	(n=159) 59.8%	<0.001
Prostate-Specific Antigen		--	--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Skin Reaction to Sun after Repeated Exposure				p-Value
		Deep Tan	Moderate Tan	Mild Tan	Freckles	
Any Skin Neoplasm		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	31.1%	36.7%	43.2%	50.7%	<0.001
Malignant Skin Neoplasm		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	9.2%	16.1%	26.4%	35.2%	<0.001
Benign Skin Neoplasm		(n=620)	(n=1,011)	(n=383)	(n=85)	
	Yes	23.4%	24.0%	21.2%	23.5%	0.728
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	1.1%	0.5%	0.5%	2.8%	0.122
Any Basal Cell Carcinoma		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	7.6%	13.2%	22.8%	29.6%	<0.001
Basal Cell Carcinoma on Ear, Face, Head, or Neck		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	6.5%	10.2%	15.8%	26.8%	<0.001
Basal Cell Carcinoma on Trunk		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	1.6%	4.5%	7.1%	11.3%	<0.001
Basal Cell Carcinoma on Upper Extremities		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	0.9%	3.2%	5.2%	5.6%	<0.001
Basal Cell Carcinoma on Lower Extremities		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	0.5%	0.3%	0.8%	1.4%	0.452
Squamous Cell Carcinoma		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	0.9%	2.1%	2.7%	8.5%	<0.001
Nonmelanoma		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	8.7%	14.8%	25.3%	33.8%	<0.001
Melanoma		(n=553)	(n=980)	(n=368)	(n=71)	
	Yes	0.9%	1.7%	1.4%	2.8%	0.455
Any Systemic Neoplasm		--	--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--	--
Benign Systemic Neoplasm		--	--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--	--
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		--	--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		--	--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--	--
Malignant Systemic Neoplasm of Liver		--	--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Skin Reaction to Sun after Repeated Exposure				p-Value
		Deep Tan	Moderate Tan	Mild Tan	Freckles	
Malignant Systemic Neoplasm of Prostate		--	--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--	--
Malignant Systemic Neoplasm of Connective or Other Soft Tissue		--	--	--	--	--
Hodgkin's Disease		--	--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue		--	--	--	--	--
All Malignant Skin and Systemic Neoplasms		(n=617)	(n=1,005)	(n=382)	(n=84)	
	Yes	13.9%	19.7%	28.8%	31.0%	<0.001
All Skin and Systemic Neoplasms		(n=613)	(n=999)	(n=381)	(n=84)	
	Yes	48.6%	52.5%	58.5%	57.1%	0.019
Prostate-Specific Antigen		--	--	--	--	--

Dependent Variable	Level	Composite Skin-Reaction Index			p-Value
		Low	Medium	High	
Any Skin Neoplasm		(n=1,304)	(n=471)	(n=197)	
	Yes	33.4%	41.4%	48.7%	<0.001
Malignant Skin Neoplasm		(n=1,304)	(n=471)	(n=197)	
	Yes	13.0%	22.5%	27.9%	<0.001
Benign Skin Neoplasm		(n=1,394)	(n=494)	(n=211)	
	Yes	22.9%	22.7%	27.5%	0.314
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		(n=1,304)	(n=471)	(n=197)	
	Yes	0.8%	0.6%	1.0%	0.876
Any Basal Cell Carcinoma		(n=1,304)	(n=471)	(n=197)	
	Yes	10.5%	19.8%	23.4%	<0.001
Basal Cell Carcinoma on Ear, Face, Head, or Neck		(n=1,304)	(n=471)	(n=197)	
	Yes	8.5%	13.6%	19.3%	<0.001
Basal Cell Carcinoma on Trunk		(n=1,304)	(n=471)	(n=197)	
	Yes	3.2%	5.7%	9.1%	<0.001
Basal Cell Carcinoma on Upper Extremities		(n=1,304)	(n=471)	(n=197)	
	Yes	2.0%	4.5%	6.1%	<0.001
Basal Cell Carcinoma on Lower Extremities		(n=1,304)	(n=471)	(n=197)	
	Yes	0.4%	0.6%	1.0%	0.458
Squamous Cell Carcinoma		(n=1,304)	(n=471)	(n=197)	
	Yes	1.5%	2.3%	5.6%	<0.001
Nonmelanoma		(n=1,304)	(n=471)	(n=197)	
	Yes	11.9%	21.9%	26.4%	<0.001
Melanoma		(n=1,304)	(n=471)	(n=197)	
	Yes	1.5%	0.9%	3.1%	0.099
Any Systemic Neoplasm		--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Composite Skin-Reaction Index			p-Value
		Low	Medium	High	
Malignant Systemic Neoplasm		--	--	--	--
Benign Systemic Neoplasm		--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--
Malignant Systemic Neoplasm of Liver		--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--
Malignant Systemic Neoplasm of Connective or Other Soft Tissue		--	--	--	--
Hodgkin's Disease		--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue		--	--	--	--
All Malignant Skin and Systemic Neoplasms	Yes	(n=1,386) 16.7%	(n=493) 25.6%	(n=209) 29.7%	<0.001
All Skin and Systemic Neoplasms	Yes	(n=1,378) 50.0%	(n=490) 56.9%	(n=209) 59.8%	0.003
Prostate-Specific Antigen		--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Average Lifetime Residential History			Ionizing Radiation Exposure		
		<37°	≥37°	p-Value	No	Yes	p-Value
Any Skin Neoplasm	Yes	(n=993) 39.5%	(n=980) 34.2%	0.017	(n=1,484) 34.9%	(n=489) 42.7%	0.002
Malignant Skin Neoplasm	Yes	(n=993) 20.3%	(n=980) 13.2%	<0.001	(n=1,484) 15.7%	(n=489) 20.0%	0.031
Benign Skin Neoplasm	Yes	(n=1,073) 22.7%	(n=1,027) 23.9%	0.580	(n=1,572) 22.5%	(n=528) 25.8%	0.135
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=993) 0.6%	(n=980) 0.9%	0.586	(n=1,484) 0.7%	(n=489) 1.0%	0.639
Any Basal Cell Carcinoma	Yes	(n=993) 17.9%	(n=980) 10.0%	<0.001	(n=1,484) 13.1%	(n=489) 16.6%	0.069
Basal Cell Carcinoma on Ear, Face, Head, or Neck	Yes	(n=993) 14.1%	(n=980) 7.5%	<0.001	(n=1,484) 10.0%	(n=489) 13.3%	0.049
Basal Cell Carcinoma on Trunk	Yes	(n=993) 5.9%	(n=980) 2.9%	<0.001	(n=1,484) 4.3%	(n=489) 4.7%	0.812
Basal Cell Carcinoma on Upper Extremities	Yes	(n=993) 3.8%	(n=980) 2.1%	0.039	(n=1,484) 3.2%	(n=489) 2.5%	0.516
Basal Cell Carcinoma on Lower Extremities	Yes	(n=993) 0.5%	(n=980) 0.5%	0.999	(n=1,484) 0.6%	(n=489) 0.2%	0.472
Squamous Cell Carcinoma	Yes	(n=993) 3.0%	(n=980) 1.2%	0.009	(n=1,484) 2.0%	(n=489) 2.7%	0.450
Nonmelanoma	Yes	(n=993) 19.9%	(n=980) 11.4%	<0.001	(n=1,484) 14.9%	(n=489) 18.2%	0.095
Melanoma	Yes	(n=993) 0.7%	(n=980) 2.2%	0.008	(n=1,484) 1.3%	(n=489) 2.0%	0.316
Any Systemic Neoplasm	Yes	--	--	--	(n=1,565) 29.8%	(n=532) 32.0%	0.389
Malignant Systemic Neoplasm	Yes	--	--	--	(n=1,573) 5.8%	(n=537) 9.5%	0.004
Benign Systemic Neoplasm	Yes	--	--	--	(n=1,565) 24.6%	(n=532) 24.6%	0.999
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	--	--	--	(n=1,573) 1.9%	(n=537) 2.1%	0.981
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck	Yes	--	--	--	(n=1,573) 0.9%	(n=537) 1.3%	0.561
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx	Yes	--	--	--	(n=1,573) 0.3%	(n=537) 1.1%	0.061
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	--	--	--	(n=1,573) 0.1%	(n=537) 0.2%	0.999
Malignant Systemic Neoplasm of Thyroid Gland	Yes	--	--	--	(n=1,573) 0.3%	(n=537) 0.0%	0.552
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	--	--	--	(n=1,573) 0.5%	(n=537) 0.9%	0.447
Malignant Systemic Neoplasm of Liver	Yes	--	--	--	(n=1,573) 0.1%	(n=537) 0.4%	0.580
Malignant Systemic Neoplasm of Colon or Rectum	Yes	--	--	--	(n=1,573) 0.6%	(n=537) 1.1%	0.317

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Average Lifetime Residential History			Ionizing Radiation Exposure		
		<37°	≥37°	p-Value	No	Yes	p-Value
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	--	--	--	(n=1,573) 0.6%	(n=537) 1.5%	0.076
Malignant Systemic Neoplasm of Prostate	Yes	--	--	--	(n=1,573) 2.6%	(n=537) 4.5%	0.044
Malignant Systemic Neoplasm of Testicles	Yes	--	--	--	(n=1,573) 0.2%	(n=537) 0.0%	0.727
Malignant Systemic Neoplasm of Connective or Other Soft Tissue	Yes	--	--	--	(n=1,573) 0.1%	(n=537) 0.4%	0.329
Hodgkin's Disease	Yes	--	--	--	(n=1,573) 0.2%	(n=537) 0.2%	0.999
Non-Hodgkin's Lymphoma	Yes	--	--	--	(n=1,573) 0.2%	(n=537) 0.2%	0.999
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue	Yes	--	--	--	(n=1,573) 0.3%	(n=537) 0.4%	0.999
All Malignant Skin and Systemic Neoplasms	Yes	(n=1,067) 23.0%	(n=1,022) 17.1%	<0.001	(n=1,562) 18.6%	(n=527) 24.5%	0.005
All Skin and Systemic Neoplasms	Yes	(n=1,061) 54.3%	(n=1,017) 50.8%	0.126	(n=1,556) 51.0%	(n=522) 57.3%	0.015
Prostate-Specific Antigen (continuous) ^a					\bar{x} = 1.10	\bar{x} = 1.17	0.112
(discrete)	Abnormal	--	--	--	6.0%	7.2%	0.398

Dependent Variable	Level	Industrial Chemicals Exposure			Herbicide Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Any Skin Neoplasm	Yes	(n=759) 36.6%	(n=1,214) 37.0%	0.910	--	--	--
Malignant Skin Neoplasm	Yes	(n=759) 17.1%	(n=1,214) 16.6%	0.788	--	--	--
Benign Skin Neoplasm	Yes	(n=796) 23.6%	(n=1,304) 23.1%	0.819	--	--	--
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=759) 0.4%	(n=1,214) 1.0%	0.226	--	--	--
Any Basal Cell Carcinoma	Yes	(n=759) 14.6%	(n=1,214) 13.6%	0.564	--	--	--
Basal Cell Carcinoma on Ear, Face, Head, or Neck	Yes	(n=759) 10.9%	(n=1,214) 10.7%	0.933	--	--	--
Basal Cell Carcinoma on Trunk	Yes	(n=759) 5.1%	(n=1,214) 4.0%	0.257	--	--	--
Basal Cell Carcinoma on Upper Extremities	Yes	(n=759) 3.4%	(n=1,214) 2.7%	0.446	--	--	--
Basal Cell Carcinoma on Lower Extremities	Yes	(n=759) 0.5%	(n=1,214) 0.5%	0.999	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Industrial Chemicals Exposure			Herbicide Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Squamous Cell Carcinoma		(n=759)	(n=1,214)				
	Yes	2.6%	1.8%	0.284	--	--	--
Nonmelanoma		(n=759)	(n=1,214)				
	Yes	16.5%	15.2%	0.505	--	--	--
Melanoma		(n=759)	(n=1,214)				
	Yes	1.2%	1.7%	0.524	--	--	--
Any Systemic Neoplasm					(n=762)	(n=1,335)	
	Yes	--	--	--	26.4%	32.7%	0.003
Malignant Systemic Neoplasm					(n=765)	(n=1,345)	
	Yes	--	--	--	4.6%	8.0%	0.004
Benign Systemic Neoplasm					(n=762)	(n=1,335)	
	Yes	--	--	--	22.1%	26.1%	0.045
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature					(n=765)	(n=1,345)	
	Yes	--	--	--	1.4%	2.2%	0.270
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck					(n=765)	(n=1,345)	
	Yes	--	--	--	0.8%	1.1%	0.611
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx					(n=765)	(n=1,345)	
	Yes	--	--	--	0.3%	0.7%	0.349
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum					(n=765)	(n=1,345)	
	Yes	--	--	--	0.0%	0.2%	0.740
Malignant Systemic Neoplasm of Thyroid Gland					(n=765)	(n=1,345)	
	Yes	--	--	--	0.3%	0.2%	0.959
Malignant Systemic Neoplasm of Bronchus or Lung					(n=765)	(n=1,345)	
	Yes	--	--	--	0.1%	0.9%	0.063
Malignant Systemic Neoplasm of Liver					(n=765)	(n=1,345)	
	Yes	--	--	--	0.0%	0.3%	0.323
Malignant Systemic Neoplasm of Colon or Rectum					(n=765)	(n=1,345)	
	Yes	--	--	--	0.7%	0.7%	0.999
Malignant Systemic Neoplasm of Kidney or Bladder					(n=765)	(n=1,345)	
	Yes	--	--	--	0.4%	1.0%	0.177
Malignant Systemic Neoplasm of Prostate					(n=765)	(n=1,345)	
	Yes	--	--	--	2.0%	3.7%	0.035
Malignant Systemic Neoplasm of Testicles					(n=765)	(n=1,345)	
	Yes	--	--	--	0.0%	0.2%	0.480
Malignant Systemic Neoplasm of Connective or Other Soft Tissue					(n=765)	(n=1,345)	
	Yes	--	--	--	0.1%	0.2%	0.999
Hodgkin's Disease					(n=765)	(n=1,345)	
	Yes	--	--	--	0.1%	0.2%	0.999
Non-Hodgkin's Lymphoma					(n=765)	(n=1,345)	
	Yes	--	--	--	0.1%	0.2%	0.999
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue					(n=765)	(n=1,345)	
	Yes	--	--	--	0.3%	0.3%	0.999
All Malignant Skin and Systemic Neoplasms		(n=794)	(n=1,295)		(n=762)	(n=1,327)	
	Yes	21.0%	19.5%	0.440	15.8%	22.6%	<0.001
All Skin and Systemic Neoplasms		(n=789)	(n=1,289)		(n=759)	(n=1,319)	
	Yes	54.3%	51.6%	0.258	45.9%	56.5%	<0.001

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Industrial Chemicals Exposure			Herbicide Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Prostate-Specific Antigen					(n=739)	(n=1,280)	
(continuous) ^a		--	--	--	$\bar{x} = 1.12$	$\bar{x} = 1.11$	0.808
(discrete)	Abnormal	--	--	--	5.8%	6.6%	0.570

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Any Skin Neoplasm		--	--	--	--
Malignant Skin Neoplasm		--	--	--	--
Benign Skin Neoplasm		--	--	--	--
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Any Basal Cell Carcinoma		--	--	--	--
Basal Cell Carcinoma on Ear, Face, Head, or Neck		--	--	--	--
Basal Cell Carcinoma on Trunk		--	--	--	--
Basal Cell Carcinoma on Upper Extremities		--	--	--	--
Basal Cell Carcinoma on Lower Extremities		--	--	--	--
Squamous Cell Carcinoma		--	--	--	--
Nonmelanoma		--	--	--	--
Melanoma		--	--	--	--
Any Systemic Neoplasm					
	Yes	(n=589) 29.4%	(n=553) 28.8%	(n=952) 31.9%	0.357
Malignant Systemic Neoplasm					
	Yes	(n=592) 5.4%	(n=556) 4.1%	(n=959) 9.1%	<0.001
Benign Systemic Neoplasm					
	Yes	(n=589) 25.0%	(n=553) 25.1%	(n=952) 24.1%	0.870
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature					
	Yes	(n=592) 1.4%	(n=556) 1.6%	(n=959) 2.5%	0.227
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck					
	Yes	(n=592) 1.0%	(n=556) 0.4%	(n=959) 1.4%	0.170
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx					
	Yes	(n=592) 0.3%	(n=556) 0.2%	(n=959) 0.8%	0.179
Malignant Systemic Neoplasm of Thymus, Heart, and Mediastinum					
	Yes	(n=592) 0.0%	(n=556) 0.0%	(n=959) 0.2%	0.302
Malignant Systemic Neoplasm of Thyroid Gland					
	Yes	(n=592) 0.5%	(n=556) 0.0%	(n=959) 0.1%	0.102

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	(n=592) 0.0%	(n=556) 0.0%	(n=959) 1.4%	<0.001
Malignant Systemic Neoplasm of Liver	Yes	(n=592) 0.0%	(n=556) 0.2%	(n=959) 0.3%	0.388
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=592) 0.7%	(n=556) 0.5%	(n=959) 0.8%	0.800
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=592) 0.0%	(n=556) 0.4%	(n=959) 1.6%	<0.001
Malignant Systemic Neoplasm of Prostate	Yes	(n=592) 3.0%	(n=556) 1.4%	(n=959) 4.1%	0.017
Malignant Systemic Neoplasm of Testicles	Yes	(n=592) 0.0%	(n=556) 0.2%	(n=959) 0.2%	0.550
Malignant Systemic Neoplasm of Connective or Other Soft Tissue	Yes	(n=592) 0.0%	(n=556) 0.2%	(n=959) 0.2%	0.550
Hodgkin's Disease	Yes	(n=592) 0.3%	(n=556) 0.2%	(n=959) 0.1%	0.589
Non-Hodgkin's Lymphoma	Yes	(n=592) 0.3%	(n=556) 0.4%	(n=959) 0.0%	0.187
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue	Yes	(n=592) 0.2%	(n=556) 0.4%	(n=959) 0.3%	0.812
All Malignant Skin and Systemic Neoplasms	Yes	(n=585) 20.7%	(n=552) 17.4%	(n=949) 21.4%	0.163
All Skin and Systemic Neoplasms	Yes	(n=583) 52.0%	(n=549) 51.7%	(n=943) 53.6%	0.740
Prostate-Specific Antigen (continuous) ^a		(n=569)	(n=542)	(n=906)	0.468
(discrete)	Abnormal	7.7%	5.2%	6.0%	0.187

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Any Skin Neoplasm		--	--	--	--
Malignant Skin Neoplasm		--	--	--	--
Benign Skin Neoplasm		--	--	--	--
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Any Basal Cell Carcinoma		--	--	--	--
Basal Cell Carcinoma on Ear, Face, Head, or Neck		--	--	--	--
Basal Cell Carcinoma on Trunk		--	--	--	--
Basal Cell Carcinoma on Upper Extremities		--	--	--	--

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Basal Cell Carcinoma on Lower Extremities		--	--	--	--
Squamous Cell Carcinoma		--	--	--	--
Nonmelanoma		--	--	--	--
Melanoma		--	--	--	--
Any Systemic Neoplasm		(n=115)	(n=1,368)	(n=607)	
	Yes	34.8%	30.4%	29.5%	0.527
Malignant Systemic Neoplasm		(n=118)	(n=1,374)	(n=610)	
	Yes	6.8%	6.3%	7.7%	0.494
Benign Systemic Neoplasm		(n=115)	(n=1,368)	(n=607)	
	Yes	30.4%	24.6%	23.6%	0.292
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	1.9%	2.5%	0.202
Malignant Systemic Neoplasm on Eye, Ear, Face, Head, or Neck		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	1.0%	1.3%	0.400
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.4%	0.8%	0.397
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.2%	0.0%	0.588
Malignant Systemic Neoplasm of Thyroid Gland		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.2%	0.2%	0.859
Malignant Systemic Neoplasm of Bronchus or Lung		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.7%	0.5%	0.560
Malignant Systemic Neoplasm of Liver		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.2%	0.2%	0.859
Malignant Systemic Neoplasm of Colon or Rectum		(n=118)	(n=1,374)	(n=610)	
	Yes	0.9%	0.7%	0.8%	0.908
Malignant Systemic Neoplasm of Kidney or Bladder		(n=118)	(n=1,374)	(n=610)	
	Yes	3.4%	0.2%	1.6%	<0.001
Malignant Systemic Neoplasm of Prostate		(n=118)	(n=1,374)	(n=610)	
	Yes	1.7%	3.0%	3.4%	0.585
Malignant Systemic Neoplasm of Testicles		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.2%	0.0%	0.451
Malignant Systemic Neoplasm of Connective or Other Soft Tissue		(n=118)	(n=1,374)	(n=610)	
	Yes	0.9%	0.2%	0.0%	0.083
Hodgkin's Disease		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.2%	0.2%	0.859
Non-Hodgkin's Lymphoma		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.2%	0.3%	0.613
Other Malignant Systemic Neoplasms of Lymphoid or Histiocytic Tissue		(n=118)	(n=1,374)	(n=610)	
	Yes	0.0%	0.3%	0.3%	0.828
All Malignant Skin and Systemic Neoplasms		(n=115)	(n=1,364)	(n=602)	
	Yes	19.1%	19.7%	21.3%	0.688
All Skin and Systemic Neoplasms		(n=113)	(n=1,358)	(n=600)	
	Yes	54.0%	52.7%	52.3%	0.949

Table F-2. Dependent Variable-Covariate Associations for the Neoplasia Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Prostate-Specific Antigen (continuous) ^a		(n=112)	(n=1,317)	(n=583)	0.616
(discrete)	Abnormal	7.1%	6.5%	5.8%	0.818

^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 size and are not category-specific.

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Inflammatory Diseases		(n=926)	(n=1,182)		(n=128)	(n=1,980)	
	Yes	0.4%	0.3%	0.999	0.0%	0.4%	0.999
Hereditary and Degenerative Diseases		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Yes	7.0 %	10.4%	0.009	7.0%	9.0%	0.547
Peripheral Disorders		(n=928)	(n=1,182)		(n=128)	(n=1,982)	
	Yes	14.9%	24.6%	<0.001	17.2%	20.5%	0.424
Other Neurological Disorders		(n=925)	(n=1,181)		(n=127)	(n=1,979)	
	Yes	13.4%	22.0%	<0.001	33.1%	17.3%	<0.001
Smell		(n=926)	(n=1,183)		(n=128)	(n=1,981)	
	Abnormal	1.6%	2.0%	0.597	3.1%	1.8%	0.443
Visual Fields		(n=928)	(n=1,183)		(n=127)	(n=1,984)	
	Abnormal	0.2%	0.4%	0.660	1.6%	0.3%	0.086
Light Reaction		(n=926)	(n=1,182)		(n=128)	(n=1,980)	
	Abnormal	0.4%	0.8%	0.497	2.3%	0.5%	0.046
Ocular Movement		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Abnormal	1.2%	1.7%	0.440	0.8%	1.5%	0.775
Facial Sensation		(n=929)	(n=1,184)		(n=128)	(n=1,985)	
	Abnormal	0.0%	0.3%	0.204	0.0%	0.2%	0.999
Jaw Clench		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Deviated	0.0%	0.2%	0.590	0.0%	0.1%	0.999
Smile		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Abnormal	0.4%	0.6%	0.840	1.6%	0.5%	0.290
Palpebral Fissure		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Abnormal	0.5%	1.2%	0.186	2.3%	0.8%	0.192
Balance		(n=929)	(n=1,185)		(n=127)	(n=1,987)	
	Abnormal	0.7%	0.7%	0.999	0.8%	0.7%	0.999
Speech		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Abnormal	0.5%	0.8%	0.726	0.8%	0.7%	0.999
Tongue Position Relative to Midline		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Deviated	0.0%	0.2%	0.590	0.0%	0.1%	0.999
Palate and Uvula Movement		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Deviated	0.0%	0.1%	0.999	0.0%	0.1%	0.999
Cranial Nerve Index		(n=917)	(n=1,178)		(n=128)	(n=1,967)	
	Abnormal	4.4%	7.5%	0.004	10.2%	5.9%	0.075
Neck Range of Motion		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Abnormal	9.9%	22.0%	<0.001	10.9%	17.1%	0.093
Pinprick		(n=910)	(n=1,097)		(n=124)	(n=1,883)	
	Abnormal	4.5%	7.6%	0.006	4.0%	6.3%	0.405
Light Touch		(n=910)	(n=1,097)		(n=124)	(n=1,883)	
	Abnormal	3.0%	5.1%	0.022	4.0%	4.1%	0.999
Muscle Status		(n=928)	(n=1,186)		(n=128)	(n=1,986)	
	Abnormal	2.7%	4.3%	0.064	3.1%	3.6%	0.960
Patellar Reflex		(n=928)	(n=1,183)		(n=128)	(n=1,983)	
	Abnormal	1.3%	4.0%	<0.001	6.3%	2.6%	0.030
Achilles Reflex		(n=925)	(n=1,184)		(n=128)	(n=1,981)	
	Abnormal	9.3%	22.8%	<0.001	20.3%	16.7%	0.343

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Biceps Reflex		(n=928)	(n=1,186)		(n=128)	(n=1,986)	
	Abnormal	1.0%	1.3%	0.668	0.8%	1.2%	0.999
Babinski Reflex		(n=929)	(n=1,183)		(n=127)	(n=1,985)	
	Abnormal	0.7%	1.3%	0.227	0.8%	1.0%	0.999
Polyneuropathy Severity Index		(n=907)	(n=1,096)		(n=123)	(n=1,880)	
	None/Mild	99.2%	97.1%	0.002	97.6%	98.1%	0.005
	Moderate	0.7%	2.6%		0.8%	1.8%	
	Severe	0.1%	0.4%		1.6%	0.2%	
Polyneuropathy Prevalence Index		(n=907)	(n=1,097)		(n=124)	(n=1,880)	
	Abnormal	8.8%	20.9%	<0.001	18.6%	15.2%	0.385
Multiple Polyneuropathy Index		(n=907)	(n=1,097)		(n=124)	(n=1,880)	
	Abnormal	1.8%	5.7%	<0.001	4.0%	3.9%	0.999
Confirmed Polyneuropathy Indicator		(n=905)	(n=1,082)		(n=121)	(n=1,866)	
	Abnormal	0.2%	1.5%	0.007	0.8%	0.9%	0.999
Tremor		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Abnormal	6.0%	8.0%	0.095	6.3%	7.2%	0.821
Coordination		(n=928)	(n=1,185)		(n=127)	(n=1,986)	
	Abnormal	1.8%	2.8%	0.198	3.2%	2.3%	0.766
Romberg Sign		(n=929)	(n=1,185)		(n=127)	(n=1,987)	
	Abnormal	0.7%	0.7%	0.999	0.8%	0.7%	0.999
Gait		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	Abnormal	2.8%	6.8%	<0.001	4.7%	5.1%	0.999
Central Nervous System Index		(n=928)	(n=1,186)		(n=128)	(n=1,986)	
	Abnormal	8.7%	14.7%	<0.001	10.9%	12.1%	0.792

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Inflammatory Diseases	Yes	(n=830) 0.2%	(n=336) 0.6%	(n=942) 0.4%	0.642
Hereditary and Degenerative Diseases	Yes	(n=833) 8.0%	(n=338) 11.2%	(n=944) 8.8%	0.217
Peripheral Disorders	Yes	(n=831) 20.3%	(n=336) 23.8%	(n=943) 19.1%	0.182
Other Neurological Disorders	Yes	(n=830) 8.1%	(n=337) 27.0%	(n=939) 24.1%	<0.001
Smell	Abnormal	(n=829) 1.8%	(n=338) 2.1%	(n=942) 1.8%	0.947
Visual Fields	Abnormal	(n=832) 0.1%	(n=337) 0.9%	(n=942) 0.3%	0.116
Light Reaction	Abnormal	(n=829) 0.4%	(n=338) 1.5%	(n=941) 0.5%	0.078
Ocular Movement	Abnormal	(n=833) 0.8%	(n=338) 1.5%	(n=944) 2.0%	0.122
Facial Sensation	Abnormal	(n=832) 0.2%	(n=338) 0.3%	(n=943) 0.1%	0.717
Jaw Clench	Deviated	(n=833) 0.2%	(n=338) 0.0%	(n=944) 0.0%	0.214
Smile	Abnormal	(n=833) 0.4%	(n=338) 0.3%	(n=944) 0.7%	0.442
Palpebral Fissure	Abnormal	(n=833) 0.8%	(n=338) 0.6%	(n=944) 1.1%	0.718
Balance	Abnormal	(n=833) 0.8%	(n=337) 0.3%	(n=944) 0.6%	0.578
Speech	Abnormal	(n=833) 0.4%	(n=338) 0.3%	(n=944) 1.1%	0.128
Tongue Position Relative to Midline	Deviated	(n=833) 0.2%	(n=338) 0.0%	(n=944) 0.0%	0.214
Palate and Uvula Movement	Deviated	(n=833) 0.1%	(n=338) 0.0%	(n=944) 0.0%	0.463
Cranial Nerve Index	Abnormal	(n=821) 5.2%	(n=337) 6.8%	(n=937) 6.6%	0.405
Neck Range of Motion	Abnormal	(n=833) 18.1%	(n=338) 20.7%	(n=944) 14.0%	0.006
Pinprick	Abnormal	(n=791) 5.3%	(n=327) 10.1%	(n=889) 5.5%	0.006
Light Touch	Abnormal	(n=791) 3.5%	(n=327) 6.7%	(n=889) 3.7%	0.036
Muscle Status	Abnormal	(n=833) 3.7%	(n=338) 5.0%	(n=943) 3.0%	0.211
Patellar Reflex	Abnormal	(n=833) 3.4%	(n=337) 2.4%	(n=941) 2.4%	0.443
Achilles Reflex	Abnormal	(n=831) 17.9%	(n=337) 19.9%	(n=941) 14.9%	0.064
Biceps Reflex	Abnormal	(n=833) 1.3%	(n=338) 1.2%	(n=943) 1.0%	0.765

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Babinski Reflex	Abnormal	(n=832) 0.6%	(n=336) 1.2%	(n=944) 1.3%	0.337
Polyneuropathy Severity Index	None/Mild	(n=790) 98.0%	(n=326) 97.2%	(n=887) 98.4%	0.378
	Moderate	1.7%	2.8%	1.4%	
	Severe	0.4%	0.0%	0.2%	
Polyneuropathy Prevalence Index	Abnormal	(n=790) 16.5%	(n=327) 20.8%	(n=887) 12.5%	<0.001
Multiple Polyneuropathy Index	Abnormal	(n=790) 4.2%	(n=327) 6.7%	(n=887) 2.7%	0.006
Confirmed Polyneuropathy Indicator	Abnormal	(n=786) 1.0%	(n=322) 1.2%	(n=879) 0.7%	0.605
Tremor	Abnormal	(n=833) 6.1%	(n=338) 8.9%	(n=944) 7.4%	0.229
Coordination	Abnormal	(n=833) 2.2%	(n=337) 1.5%	(n=943) 2.9%	0.317
Romberg Sign	Abnormal	(n=833) 0.8%	(n=337) 0.3%	(n=944) 0.6%	0.578
Gait	Abnormal	(n=833) 5.4%	(n=338) 6.5%	(n=944) 4.2%	0.222
Central Nervous System Index	Abnormal	(n=833) 11.0%	(n=338) 15.4%	(n=943) 11.8%	0.110

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-10	>10	
Inflammatory Diseases	Yes	(n=116) 0.0%	(n=1,371) 0.4%	(n=613) 0.5%	0.725
Hereditary and Degenerative Diseases	Yes	(n=118) 5.9%	(n=1,374) 8.4%	(n=615) 10.6%	0.154
Peripheral Disorders	Yes	(n=118) 24.6%	(n=1,371) 19.4%	(n=613) 21.9%	0.233
Other Neurological Disorders	Yes	(n=117) 18.8%	(n=1,368) 17.9%	(n=613) 18.9%	0.854
Smell	Abnormal	(n=117) 1.7%	(n=1,369) 2.1%	(n=615) 1.3%	0.514
Visual Fields	Abnormal	(n=118) 0.0%	(n=1,372) 0.4%	(n=613) 0.2%	0.502
Light Reaction	Abnormal	(n=118) 0.9%	(n=1,369) 0.7%	(n=613) 0.5%	0.861
Ocular Movement	Abnormal	(n=118) 2.5%	(n=1,374) 1.5%	(n=615) 1.3%	0.589
Facial Sensation	Abnormal	(n=118) 0.0%	(n=1,372) 0.1%	(n=615) 0.5%	0.129
Jaw Clench	Deviated	(n=118) 0.0%	(n=1,374) 0.1%	(n=615) 0.2%	0.787
Smile	Abnormal	(n=118) 0.9%	(n=1,374) 0.4%	(n=615) 0.8%	0.386
Palpebral Fissure	Abnormal	(n=118) 1.7%	(n=1,374) 0.6%	(n=615) 1.3%	0.163
Balance	Abnormal	(n=118) 0.9%	(n=1,373) 0.5%	(n=615) 1.0%	0.482
Speech	Abnormal	(n=118) 0.0%	(n=1,374) 0.6%	(n=615) 1.0%	0.400
Tongue Position Relative to Midline	Deviated	(n=118) 0.0%	(n=1,374) 0.1%	(n=615) 0.2%	0.787
Palate and Uvula Movement	Deviated	(n=118) 0.0%	(n=1,374) 0.0%	(n=615) 0.2%	0.297
Cranial Nerve Index	Abnormal	(n=116) 7.8%	(n=1,356) 5.5%	(n=615) 6.8%	0.387
Neck Range of Motion	Abnormal	(n=118) 15.3%	(n=1,374) 15.8%	(n=615) 19.2%	0.156
Pinprick	Abnormal	(n=107) 9.4%	(n=1,309) 5.4%	(n=583) 7.2%	0.122
Light Touch	Abnormal	(n=107) 4.7%	(n=1,309) 3.5%	(n=583) 5.3%	0.180
Muscle Status	Abnormal	(n=118) 5.1%	(n=1,373) 3.1%	(n=615) 4.4%	0.257
Patellar Reflex	Abnormal	(n=118) 5.1%	(n=1,370) 2.6%	(n=615) 2.8%	0.300
Achilles Reflex	Abnormal	(n=118) 18.6%	(n=1,368) 15.4%	(n=615) 20.2%	0.027

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-10	>10	
Biceps Reflex	Abnormal	(n=118) 1.7%	(n=1,373) 1.2%	(n=615) 0.8%	0.635
Babinski Reflex	Abnormal	(n=118) 2.5%	(n=1,371) 0.9%	(n=615) 0.8%	0.184
Polyneuropathy Severity Index	None/Mild	(n=107) 99.1%	(n=1,305) 98.3%	(n=583) 97.3%	0.088
	Moderate	0.0%	1.6%	2.2%	
	Severe	0.9%	0.1%	0.5%	
Polyneuropathy Prevalence Index	Abnormal	(n=107) 13.1%	(n=1,306) 13.5%	(n=583) 20.2%	<0.001
Multiple Polyneuropathy Index	Abnormal	(n=107) 3.7%	(n=1,306) 3.2%	(n=583) 5.5%	0.062
Confirmed Polyneuropathy Indicator	Abnormal	(n=105) 1.0%	(n=1,299) 0.9%	(n=575) 1.0%	0.917
Tremor	Abnormal	(n=118) 3.4%	(n=1,374) 7.0%	(n=615) 8.3%	0.152
Coordination	Abnormal	(n=118) 0.9%	(n=1,372) 2.0%	(n=615) 3.4%	0.095
Romberg Sign	Abnormal	(n=118) 0.9%	(n=1,373) 0.5%	(n=615) 1.0%	0.482
Gait	Abnormal	(n=118) 5.1%	(n=1,374) 4.9%	(n=615) 5.5%	0.829
Central Nervous System Index	Abnormal	(n=118) 9.3%	(n=1,373) 11.4%	(n=615) 14.2%	0.146

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Insecticide Exposure			Industrial Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Inflammatory Diseases	Yes	(n=619) 0.7%	(n=1,489) 0.3%	0.371	(n=796) 0.1%	(n=1,312) 0.5%	0.266
Hereditary and Degenerative Diseases	Yes	(n=621) 7.1%	(n=1,494) 9.6%	0.073	(n=799) 7.0%	(n=1,316) 10.0%	0.022
Peripheral Disorders	Yes	(n=621) 16.9%	(n=1,489) 21.8%	0.014	(n=798) 20.2%	(n=1,312) 20.4%	0.934
Other Neurological Disorders	Yes	(n=620) 15.7%	(n=1,486) 19.3%	0.054	(n=797) 13.3%	(n=1,309) 21.2%	<0.001
Smell	Abnormal	(n=621) 1.5%	(n=1,488) 2.0%	0.482	(n=798) 1.9%	(n=1,311) 1.8%	0.999
Visual Fields	Abnormal	(n=620) 0.5%	(n=1,491) 0.3%	0.712	(n=798) 0.5%	(n=1,313) 0.2%	0.505
Light Reaction	Abnormal	(n=621) 1.1%	(n=1,487) 0.4%	0.103	(n=797) 0.8%	(n=1,311) 0.5%	0.737
Ocular Movement	Abnormal	(n=621) 1.3%	(n=1,494) 1.5%	0.811	(n=799) 1.4%	(n=1,316) 1.5%	0.937
Facial Sensation	Abnormal	(n=621) 0.0%	(n=1,492) 0.3%	0.458	(n=798) 0.1%	(n=1,315) 0.2%	0.991
Jaw Clench	Deviated	(n=621) 0.0%	(n=1,494) 0.1%	0.892	(n=799) 0.1%	(n=1,316) 0.1%	0.999
Smile	Abnormal	(n=621) 0.3%	(n=1,494) 0.6%	0.628	(n=799) 0.4%	(n=1,316) 0.6%	0.683
Palpebral Fissure	Abnormal	(n=621) 0.5%	(n=1,494) 1.1%	0.293	(n=799) 1.1%	(n=1,316) 0.8%	0.530
Balance	Abnormal	(n=620) 0.5%	(n=1,494) 0.7%	0.721	(n=798) 0.5%	(n=1,316) 0.8%	0.664
Speech	Abnormal	(n=621) 0.8%	(n=1,494) 0.6%	0.819	(n=799) 0.8%	(n=1,316) 0.6%	0.907
Tongue Position Relative to Midline	Deviated	(n=621) 0.0%	(n=1,494) 0.1%	0.892	(n=799) 0.1%	(n=1,316) 0.1%	0.999
Palate and Uvula Movement	Deviated	(n=621) 0.0%	(n=1,494) 0.1%	0.999	(n=799) 0.0%	(n=1,316) 0.1%	0.999
Cranial Nerve Index	Abnormal	(n=617) 5.4%	(n=1,478) 6.4%	0.401	(n=792) 6.4%	(n=1,303) 5.9%	0.691
Neck Range of Motion	Abnormal	(n=621) 15.3%	(n=1,494) 17.3%	0.297	(n=799) 17.8%	(n=1,316) 16.0%	0.327
Pinprick	Abnormal	(n=597) 5.7%	(n=1,410) 6.4%	0.629	(n=751) 6.3%	(n=1,256) 6.1%	0.985
Light Touch	Abnormal	(n=597) 3.5%	(n=1,410) 4.4%	0.434	(n=751) 4.7%	(n=1,256) 3.8%	0.425
Muscle Status	Abnormal	(n=621) 2.4%	(n=1,493) 4.1%	0.080	(n=799) 3.4%	(n=1,315) 3.7%	0.768
Patellar Reflex	Abnormal	(n=620) 2.7%	(n=1,491) 2.8%	0.999	(n=798) 2.6%	(n=1,313) 2.9%	0.827
Achilles Reflex	Abnormal	(n=619) 15.8%	(n=1,490) 17.3%	0.445	(n=796) 17.8%	(n=1,313) 16.3%	0.392
Biceps Reflex	Abnormal	(n=620) 1.1%	(n=1,494) 1.1%	0.999	(n=798) 1.5%	(n=1,316) 0.9%	0.301

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Insecticide Exposure			Industrial Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Babinski Reflex		(n=619)	(n=1,493)		(n=797)	(n=1,315)	
	Abnormal	1.1%	0.9%	0.868	0.6%	1.2%	0.273
Polyneuropathy Severity Index		(n=596)	(n=1,407)		(n=749)	(n=1,254)	
	None/Mild	98.7%	97.8%	0.443	98.0%	98.1%	0.561
	Moderate	1.2%	1.9%		1.6%	1.8%	
	Severe	0.2%	0.3%		0.4%	0.2%	
Polyneuropathy Prevalence Index		(n=597)	(n=1,407)		(n=750)	(n=1,254)	
	Abnormal	14.1%	16.0%	0.307	16.7%	14.7%	0.258
Multiple Polyneuropathy Index		(n=597)	(n=1,407)		(n=750)	(n=1,254)	
	Abnormal	3.7%	4.1%	0.795	4.4%	3.7%	0.486
Confirmed Polyneuropathy Indicator		(n=591)	(n=1,396)		(n=744)	(n=1,243)	
	Abnormal	0.5%	1.1%	0.337	0.8%	1.0%	0.907
Tremor		(n=621)	(n=1,494)		(n=799)	(n=1,316)	
	Abnormal	4.5%	8.2%	0.003	5.0%	8.4%	0.004
Coordination		(n=619)	(n=1,494)		(n=797)	(n=1,316)	
	Abnormal	1.6%	2.7%	0.192	2.3%	2.4%	0.915
Romberg Sign		(n=620)	(n=1,494)		(n=798)	(n=1,316)	
	Abnormal	0.5%	0.7%	0.721	0.5%	0.8%	0.664
Gait		(n=621)	(n=1,494)		(n=799)	(n=1,316)	
	Abnormal	3.9%	5.6%	0.132	5.0%	5.1%	0.999
Central Nervous System Index		(n=620)	(n=1,494)		(n=798)	(n=1,316)	
	Abnormal	8.2%	13.7%	<0.001	9.9%	13.4%	0.021

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Degreasing Chemical Exposure			Diabetic Class			
		No	Yes	p-Value	Normal	Impaired	Diabetic	p-Value
Inflammatory Diseases	Yes	(n=751) 0.1%	(n=1,357) 0.5%	0.318	(n=1,453) 0.5%	(n=273) 0.0%	(n=355) 0.3%	0.470
Hereditary and Degenerative Diseases	Yes	(n=752) 9.2%	(n=1,363) 8.7%	0.792	(n=1,458) 8.0%	(n=273) 10.6%	(n=357) 10.9%	0.123
Peripheral Disorders	Yes	(n=752) 18.5%	(n=1,358) 21.4%	0.130	(n=1,454) 17.5%	(n=273) 18.7%	(n=356) 33.4%	<0.001
Other Neurological Disorders	Yes	(n=748) 13.9%	(n=1,358) 20.6%	<0.001	(n=1,451) 16.0%	(n=272) 21.3%	(n=356) 23.9%	<0.001
Smell	Abnormal	(n=750) 2.0%	(n=1,359) 1.8%	0.831	(n=1,454) 1.5%	(n=273) 2.9%	(n=355) 1.7%	0.257
Visual Fields	Abnormal	(n=751) 0.1%	(n=1,360) 0.4%	0.434	(n=1,456) 0.3%	(n=273) 0.4%	(n=355) 0.6%	0.698
Light Reaction	Abnormal	(n=750) 0.7%	(n=1,358) 0.6%	0.999	(n=1,453) 0.6%	(n=273) 0.4%	(n=355) 1.1%	0.394
Ocular Movement	Abnormal	(n=752) 1.2%	(n=1,363) 1.6%	0.565	(n=1,458) 1.3%	(n=273) 1.5%	(n=357) 2.2%	0.422
Facial Sensation	Abnormal	(n=750) 0.1%	(n=1,363) 0.2%	0.999	(n=1,457) 0.2%	(n=272) 0.0%	(n=357) 0.3%	0.711
Jaw Clench	Deviated	(n=752) 0.1%	(n=1,363) 0.1%	0.999	(n=1,458) 0.0%	(n=273) 0.4%	(n=357) 0.3%	0.093
Smile	Abnormal	(n=752) 0.3%	(n=1,363) 0.7%	0.373	(n=1,458) 0.4%	(n=273) 0.0%	(n=357) 1.4%	0.030
Palpebral Fissure	Abnormal	(n=752) 0.4%	(n=1,363) 1.2%	0.117	(n=1,458) 0.8%	(n=273) 0.0%	(n=357) 2.2%	0.007
Balance	Abnormal	(n=752) 0.8%	(n=1,362) 0.6%	0.771	(n=1,458) 0.5%	(n=273) 0.4%	(n=356) 1.7%	0.036
Speech	Abnormal	(n=752) 0.5%	(n=1,363) 0.7%	0.789	(n=1,458) 0.6%	(n=273) 0.7%	(n=357) 0.8%	0.890
Tongue Position Relative to Midline	Deviated	(n=752) 0.1%	(n=1,363) 0.1%	0.999	(n=1,458) 0.0%	(n=273) 0.4%	(n=357) 0.3%	0.093
Palate and Uvula Movement	Deviated	(n=752) 0.0%	(n=1,363) 0.1%	0.999	(n=1,458) 0.0%	(n=273) 0.0%	(n=357) 0.3%	0.088
Cranial Nerve Index	Abnormal	(n=743) 5.8%	(n=1,352) 6.3%	0.718	(n=1,443) 5.2%	(n=271) 6.3%	(n=354) 9.3%	0.014
Neck Range of Motion	Abnormal	(n=752) 17.8%	(n=1,363) 16.1%	0.330	(n=1,458) 15.6%	(n=273) 15.4%	(n=357) 21.6%	0.022
Pinprick	Abnormal	(n=712) 6.0%	(n=1,295) 6.3%	0.924	(n=1,408) 4.1%	(n=251) 4.0%	(n=322) 16.8%	<0.001
Light Touch	Abnormal	(n=712) 4.1%	(n=1,295) 4.2%	0.999	(n=1,408) 3.0%	(n=251) 2.0%	(n=322) 10.6%	<0.001
Muscle Status	Abnormal	(n=752) 3.9%	(n=1,362) 3.5%	0.721	(n=1,457) 3.3%	(n=273) 2.6%	(n=357) 5.6%	0.068
Patellar Reflex	Abnormal	(n=751) 2.8%	(n=1,360) 2.8%	0.999	(n=1,455) 1.8%	(n=273) 2.6%	(n=356) 7.3%	<0.001
Achilles Reflex	Abnormal	(n=748) 18.9%	(n=1,361) 15.8%	0.084	(n=1,453) 13.4%	(n=272) 16.2%	(n=357) 31.9%	<0.001

Table F-3. Dependent Variable-Covariate Associations for the Neurology Assessment (Continued)

Dependent Variable	Level	Degreasing Chemical Exposure			Diabetic Class			
		No	Yes	p-Value	Normal	Impaired	Diabetic	p-Value
Biceps Reflex	Abnormal	(n=751)	(n=1,363)	0.676	(n=1,458)	(n=272)	(n=357)	0.007
		1.3%	1.0%		0.7%	1.8%	2.5%	
Babinski Reflex	Abnormal	(n=751)	(n=1,361)	0.999	(n=1,456)	(n=273)	(n=356)	0.678
		0.9%	1.0%		0.9%	1.1%	1.4%	
Polyneuropathy Severity Index	None/Mild	(n=710)	(n=1,293)	0.482	(n=1,405)	(n=251)	(n=321)	<0.001
	Moderate	98.0%	98.0%		98.9%	99.6%	93.2%	
	Severe	1.6%	1.8%		0.9%	0.4%	5.9%	
Polyneuropathy Prevalence Index Multiple	Abnormal	(n=710)	(n=1,294)	0.364	(n=1,405)	(n=251)	(n=322)	<0.001
		16.5%	14.8%		12.0%	12.4%	32.9%	
Polyneuropathy Index Confirmed	Abnormal	(n=710)	(n=1,294)	0.999	(n=1,405)	(n=251)	(n=322)	<0.001
		3.9%	3.9%		2.4%	1.2%	12.7%	
Polyneuropathy Indicator	Abnormal	(n=704)	(n=1,283)	0.664	(n=1,397)	(n=251)	(n=313)	<0.001
		0.7%	1.0%		0.6%	0.0%	2.9%	
Tremor	Abnormal	(n=752)	(n=1,363)	0.360	(n=1,458)	(n=273)	(n=357)	0.870
		6.4%	7.6%		7.2%	7.3%	6.4%	
Coordination	Abnormal	(n=751)	(n=1,362)	0.605	(n=1,458)	(n=272)	(n=356)	0.013
		2.7%	2.2%		1.9%	2.2%	4.5%	
Romberg Sign	Abnormal	(n=752)	(n=1,362)	0.771	(n=1,458)	(n=273)	(n=356)	0.036
		0.8%	0.6%		0.5%	0.4%	1.7%	
Gait	Abnormal	(n=752)	(n=1,363)	0.910	(n=1,458)	(n=273)	(n=357)	<0.001
		4.9%	5.1%		3.9%	5.1%	9.2%	
Central Nervous System Index	Abnormal	(n=751)	(n=1,363)	0.396	(n=1,458)	(n=272)	(n=357)	0.062

Dependent Variable	Level	Composite Exposure to Heavy Metals			Worked With Vibrating Power Equipment or Tools		
		No	Yes	p-Value	No	Yes	p-Value
Confirmed Polyneuropathy Indicator	Abnormal	(n=1,714)	(n=272)	0.476	(n=1,446)	(n=538)	0.839

Table F-4. Dependent Variable-Covariate Associations for the Psychology Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Psychoses		(n=929)	(n=1,187)		(n=128)	(n=1,988)	
	Yes	4.2%	3.6%	0.571	3.9%	3.9%	0.999
Alcohol Dependence		(n=928)	(n=1,187)		(n=127)	(n=1,988)	
	Yes	6.6%	7.1%	0.713	10.2%	6.6%	0.169
Drug Dependence		(n=929)	(n=1,187)		(n=128)	(n=1,988)	
	Yes	0.5%	0.1%	0.124	1.6%	0.2%	0.051
Anxiety		(n=926)	(n=1,183)		(n=128)	(n=1,981)	
	Yes	28.3%	25.7%	0.198	25.0%	27.0%	0.703
Other Neuroses		(n=921)	(n=1,174)		(n=127)	(n=1,968)	
	Yes	54.8%	53.0%	0.424	55.9%	53.7%	0.689
SCL-90-R Anxiety		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	11.8%	9.4%	0.087	11.7%	10.4%	0.751
SCL-90-R Depression		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	16.8%	13.5%	0.040	14.1%	15.0%	0.873
SCL-90-R Hostility		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	9.6%	7.0%	0.038	8.6%	8.1%	0.976
SCL-90-R Interpersonal Sensitivity		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	17.3%	13.6%	0.020	16.4%	15.2%	0.797
SCL-90-R Obsessive-Compulsive Behavior		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	15.5%	15.4%	0.970	14.1%	15.5%	0.756
SCL-90-R Paranoid Ideation		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	9.0%	5.2%	0.001	10.9%	6.6%	0.093
SCL-90-R Phobic Anxiety		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	12.4%	8.5%	0.005	14.8%	9.9%	0.102
SCL-90-R Psychoticism		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	15.6%	12.1%	0.025	18.8%	13.3%	0.111
SCL-90-R Somatization		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	17.2%	15.5%	0.319	20.3%	16.0%	0.247
SCL-90-R Global Severity Index		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	16.6%	13.4%	0.048	15.6%	14.8%	0.886
SCL-90-R Positive Symptom Total		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	17.6%	14.6%	0.074	18.0%	15.8%	0.589
SCL-90-R Positive Symptom Distress Index		(n=929)	(n=1,186)		(n=128)	(n=1,987)	
	High	8.4%	6.3%	0.082	8.6%	7.2%	0.662

Table F-4. Dependent Variable-Covariate Associations for the Psychology Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Psychoses		(n=834)	(n=338)	(n=944)	
	Yes	2.5%	5.0%	4.7%	0.032
Alcohol Dependence		(n=834)	(n=338)	(n=943)	
	Yes	4.9%	8.9%	7.9%	0.014
Drug Dependence		(n=834)	(n=338)	(n=944)	
	Yes	0.1%	0.0%	0.5%	0.152
Anxiety		(n=833)	(n=337)	(n=939)	
	Yes	17.3%	30.9%	33.9%	0.001
Other Neuroses		(n=829)	(n=334)	(n=932)	
	Yes	43.7%	61.4%	60.1%	0.001
SCL-90-R Anxiety		(n=834)	(n=337)	(n=944)	
	High	5.0%	13.4%	14.3%	0.001
SCL-90-R Depression		(n=834)	(n=337)	(n=944)	
	High	9.0%	17.5%	19.3%	0.001
SCL-90-R Hostility		(n=834)	(n=337)	(n=944)	
	High	4.1%	9.5%	11.2%	0.001
SCL-90-R Interpersonal Sensitivity		(n=834)	(n=337)	(n=944)	
	High	7.8%	19.0%	20.4%	0.001
SCL-90-R Obsessive-Compulsive Behavior		(n=834)	(n=337)	(n=944)	
	High	9.2%	20.5%	19.1%	0.001
SCL-90-R Paranoid Ideation		(n=834)	(n=337)	(n=944)	
	High	2.8%	7.4%	10.4%	0.001
SCL-90-R Phobic Anxiety		(n=834)	(n=337)	(n=944)	
	High	4.6%	12.5%	14.4%	0.001
SCL-90-R Psychoticism		(n=834)	(n=337)	(n=944)	
	High	7.9%	14.8%	18.3%	0.001
SCL-90-R Somatization		(n=834)	(n=337)	(n=944)	
	High	7.3%	25.2%	21.0%	0.001
SCL-90-R Global Severity Index		(n=834)	(n=337)	(n=944)	
	High	7.2%	18.7%	20.1%	0.001
SCL-90-R Positive Symptom Total		(n=834)	(n=337)	(n=944)	
	High	8.5%	20.2%	20.9%	0.001
SCL-90-R Positive Symptom Distress Index		(n=834)	(n=337)	(n=944)	
	High	3.7%	9.5%	9.5%	0.001

Table F-4. Dependent Variable-Covariate Associations for the Psychology Assessment (Continued)

Dependent Variable	Level	Education		p-Value
		College	High School	
Psychoses	Yes	(n=1,139) 3.3%	(n=976) 4.6%	0.132
Alcohol Dependence	Yes	(n=1,139) 6.0%	(n=975) 7.9%	0.097
Drug Dependence	Yes	(n=1,139) 0.4%	(n=976) 0.2%	0.826
Anxiety	Yes	(n=1,136) 23.1%	(n=972) 31.3%	0.001
Other Neuroses	Yes	(n=1,133) 47.8%	(n=961) 60.9%	0.001
SCL-90-R Anxiety	High	(n=1,139) 7.5%	(n=975) 14.1%	0.001
SCL-90-R Depression	High	(n=1,139) 11.2%	(n=975) 19.4%	0.001
SCL-90-R Hostility	High	(n=1,139) 5.4%	(n=975) 11.3%	0.001
SCL-90-R Interpersonal Sensitivity	High	(n=1,139) 10.8%	(n=975) 20.4%	0.001
SCL-90-R Obsessive-Compulsive Behavior	High	(n=1,139) 11.8%	(n=975) 19.7%	0.001
SCL-90-R Paranoid Ideation	High	(n=1,139) 4.5%	(n=975) 9.7%	0.001
SCL-90-R Phobic Anxiety	High	(n=1,139) 6.6%	(n=975) 14.5%	0.001
SCL-90-R Psychoticism	High	(n=1,139) 10.7%	(n=975) 17.1%	0.001
SCL-90-R Somatization	High	(n=1,139) 11.2%	(n=975) 22.3%	0.001
SCL-90-R Global Severity Index	High	(n=1,139) 11.1%	(n=975) 19.2%	0.001
SCL-90-R Positive Symptom Total	High	(n=1,139) 11.7%	(n=975) 20.8%	0.001
SCL-90-R Positive Symptom Distress Index	High	(n=1,139) 5.3%	(n=975) 9.5%	0.001

Table F-4. Dependent Variable-Covariate Associations for the Psychology Assessment (Continued)

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
Alcohol Dependence		--	--	--	--
Drug Dependence		--	--	--	--
Anxiety		--	--	--	--
Other Neuroses		--	--	--	--
SCL-90-R Anxiety		(n=1,694)	(n=370)	(n=50)	
	High	10.6%	8.9%	20.0%	0.055
SCL-90-R Depression		(n=1,694)	(n=370)	(n=50)	
	High	14.9%	13.2%	28.0%	0.023
SCL-90-R Hostility		(n=1,694)	(n=370)	(n=50)	
	High	8.2%	6.8%	18.0%	0.024
SCL-90-R Interpersonal Sensitivity		(n=1,694)	(n=370)	(n=50)	
	High	15.8%	11.6%	22.0%	0.051
SCL-90-R Obsessive-Compulsive Behavior		(n=1,694)	(n=370)	(n=50)	
	High	15.5%	13.8%	26.0%	0.080
SCL-90-R Paranoid Ideation		(n=1,694)	(n=370)	(n=50)	
	High	7.0%	6.0%	12.0%	0.278
SCL-90-R Phobic Anxiety		(n=1,694)	(n=370)	(n=50)	
	High	10.0%	10.5%	14.0%	0.643
SCL-90-R Psychoticism		(n=1,694)	(n=370)	(n=50)	
	High	13.5%	13.0%	24.0%	0.095
SCL-90-R Somatization		(n=1,694)	(n=370)	(n=50)	
	High	17.1%	11.9%	20.0%	0.037
SCL-90-R Global Severity Index		(n=1,694)	(n=370)	(n=50)	
	High	14.9%	12.7%	28.0%	0.017
SCL-90-R Positive Symptom Total		(n=1,694)	(n=370)	(n=50)	
	High	16.1%	14.1%	22.0%	0.302
SCL-90-R Positive Symptom Distress Index		(n=1,694)	(n=370)	(n=50)	
	High	7.7%	4.3%	12.0%	0.030

Table F-4. Dependent Variable-Covariate Associations for the Psychology Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-10	>10	
Psychoses		(n=118)	(n=1,375)	(n=615)	
	Yes	3.4%	3.3%	5.4%	0.080
Alcohol Dependence		--	--	--	--
Drug Dependence		(n=118)	(n=1,375)	(n=615)	
	Yes	0.0%	0.2%	0.5%	0.485
Anxiety		(n=118)	(n=1,371)	(n=612)	
	Yes	27.1%	26.4%	27.6%	0.851
Other Neuroses		(n=118)	(n=1,364)	(n=605)	
	Yes	50.9%	50.2%	62.8%	0.001
SCL-90-R Anxiety		(n=118)	(n=1,374)	(n=615)	
	High	11.0%	9.1%	13.7%	0.009
SCL-90-R Depression		(n=118)	(n=1,374)	(n=615)	
	High	17.0%	12.9%	19.4%	0.001
SCL-90-R Hostility		(n=118)	(n=1,374)	(n=615)	
	High	3.4%	7.4%	10.9%	0.004
SCL-90-R Interpersonal Sensitivity		(n=118)	(n=1,374)	(n=615)	
	High	14.4%	14.1%	18.2%	0.056
SCL-90-R Obsessive-Compulsive Behavior		(n=118)	(n=1,374)	(n=615)	
	High	14.4%	13.6%	19.8%	0.002
SCL-90-R Paranoid Ideation		(n=118)	(n=1,374)	(n=615)	
	High	5.1%	6.3%	8.8%	0.089
SCL-90-R Phobic Anxiety		(n=118)	(n=1,374)	(n=615)	
	High	5.9%	9.4%	13.0%	0.014
SCL-90-R Psychoticism		(n=118)	(n=1,374)	(n=615)	
	High	11.9%	12.2%	17.6%	0.004
SCL-90-R Somatization		(n=118)	(n=1,374)	(n=615)	
	High	12.7%	15.6%	18.7%	0.121
SCL-90-R Global Severity Index		(n=118)	(n=1,374)	(n=615)	
	High	15.3%	12.7%	19.5%	0.001
SCL-90-R Positive Symptom Total		(n=118)	(n=1,374)	(n=615)	
	High	16.1%	14.0%	20.3%	0.002
SCL-90-R Positive Symptom Distress Index		(n=118)	(n=1,374)	(n=615)	
	High	7.6%	7.1%	7.6%	0.887

Table F-4 Dependent Variable-Covariate Associations for the Psychology Assessment (Continued)

Dependent Variable	Level	Current Total Household Income			Current Employment		
		≤\$65,000	>\$65,000	p-Value	Yes	No	p-Value
Psychoses	Yes	(n=1,062) 5.0%	(n=1,030) 2.7%	0.010	(n=1,385) 3.3%	(n=730) 5.1%	0.052
Alcohol Dependence	Yes	(n=1,061) 8.8%	(n=1,030) 5.0%	0.001	(n=1,384) 6.0%	(n=730) 8.5%	0.039
Drug Dependence	Yes	(n=1,062) 0.4%	(n=1,030) 0.2%	0.710	(n=1,385) 0.4%	(n=730) 0.0%	0.177
Anxiety	Yes	(n=1,059) 32.8%	(n=1,027) 20.9%	0.001	(n=1,381) 26.5%	(n=727) 27.5%	0.657
Other Neuroses	Yes	(n=1,048) 61.6%	(n=1,023) 45.7%	0.001	(n=1,373) 52.4%	(n=721) 56.3%	0.101
SCL-90-R Anxiety	High	(n=1,062) 14.5%	(n=1,029) 6.2%	0.001	(n=1,384) 10.3%	(n=730) 11.0%	0.672
SCL-90-R Depression	High	(n=1,062) 19.7%	(n=1,029) 9.8%	0.001	(n=1,384) 14.7%	(n=730) 15.3%	0.760
SCL-90-R Hostility	High	(n=1,062) 10.6%	(n=1,029) 5.4%	0.001	(n=1,384) 8.2%	(n=730) 8.0%	0.881
SCL-90-R Interpersonal Sensitivity	High	(n=1,062) 20.0%	(n=1,029) 10.2%	0.001	(n=1,384) 15.2%	(n=730) 15.3%	0.969
SCL-90-R Obsessive-Compulsive Behavior	High	(n=1,062) 20.8%	(n=1,029) 9.8%	0.001	(n=1,384) 14.3%	(n=730) 17.5%	0.059
SCL-90-R Paranoid Ideation	High	(n=1,062) 9.7%	(n=1,029) 3.8%	0.001	(n=1,384) 7.4%	(n=730) 6.0%	0.286
SCL-90-R Phobic Anxiety	High	(n=1,062) 14.1%	(n=1,029) 5.9%	0.001	(n=1,384) 9.5%	(n=730) 11.5%	0.178
SCL-90-R Psychoticism	High	(n=1,062) 18.1%	(n=1,029) 8.9%	0.001	(n=1,384) 13.5%	(n=730) 14.0%	0.821
SCL-90-R Somatization	High	(n=1,062) 21.8%	(n=1,029) 10.5%	0.001	(n=1,384) 14.9%	(n=730) 18.9%	0.020
SCL-90-R Global Severity Index	High	(n=1,062) 19.9%	(n=1,029) 9.5%	0.001	(n=1,384) 14.2%	(n=730) 15.9%	0.340
SCL-90-R Positive Symptom Total	High	(n=1,062) 21.0%	(n=1,029) 10.5%	0.001	(n=1,384) 15.5%	(n=730) 16.7%	0.493
SCL-90-R Positive Symptom Distress Index	High	(n=1,062) 8.7%	(n=1,029) 5.7%	0.012	(n=1,384) 6.8%	(n=730) 8.1%	0.317

Table F-4 Dependent Variable-Covariate Associations for the Psychology Assessment (Continued)

Dependent Variable	Level	Current Marital Status			Current Parental Status		
		Married	Not Married	p-Value	Child<18 Years Old	No Child<18 Years Old	p-Value
Psychoses		(n=1,745)	(n=370)		(n=290)	(n=1,825)	
	Yes	3.0%	7.8%	0.001	3.5%	4.0%	0.808
Alcohol Dependence		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	Yes	5.3%	14.4%	0.001	3.1%	7.5%	0.009
Drug Dependence		(n=1,745)	(n=370)		(n=290)	(n=1,825)	
	Yes	0.1%	1.1%	0.008	0.3%	0.3%	0.999
Anxiety		(n=1,740)	(n=368)		(n=290)	(n=1,818)	
	Yes	25.3%	34.0%	0.001	23.8%	27.3%	0.233
Other Neuroses		(n=1,730)	(n=364)		(n=288)	(n=1,806)	
	Yes	51.9%	62.9%	0.001	56.3%	53.4%	0.398
SCL-90-R Anxiety		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	9.8%	13.8%	0.028	10.7%	10.5%	0.992
SCL-90-R Depression		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	13.8%	20.3%	0.002	16.6%	14.7%	0.462
SCL-90-R Hostility		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	8.5%	6.5%	0.247	9.3%	8.0%	0.502
SCL-90-R Interpersonal Sensitivity		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	14.4%	19.2%	0.023	14.5%	15.4%	0.769
SCL-90-R Obsessive-Compulsive Behavior		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	14.8%	18.4%	0.093	13.8%	15.7%	0.460
SCL-90-R Paranoid Ideation		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	6.1%	10.8%	0.002	7.9%	6.7%	0.538
SCL-90-R Phobic Anxiety		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	9.6%	13.0%	0.064	8.6%	10.5%	0.389
SCL-90-R Psychoticism		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	12.5%	19.2%	0.001	14.8%	13.5%	0.599
SCL-90-R Somatization		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	15.6%	19.5%	0.075	14.8%	16.5%	0.527
SCL-90-R Global Severity Index		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	13.9%	19.0%	0.016	14.5%	14.9%	0.938
SCL-90-R Positive Symptom Total		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	15.2%	19.2%	0.063	16.2%	15.8%	0.944
SCL-90-R Positive Symptom Distress Index		(n=1,745)	(n=369)		(n=290)	(n=1,824)	
	High	7.0%	8.4%	0.402	9.0%	7.0%	0.271

--: Covariate not applicable for dependent variable.

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Uncharacterized Hepatitis	Yes	(n=928) 2.3%	(n=1,179) 1.4%	0.215	(n=128) 2.3%	(n=1,979) 1.8%	0.896
Jaundice (Unspecified)	Yes	(n=914) 2.0%	(n=1,152) 2.5%	0.494	(n=127) 1.6%	(n=1,938) 2.3%	0.810
Chronic Liver Disease and Cirrhosis of the Liver (Alcohol-related)	Yes	(n=880) 4.2%	(n=1,118) 5.2%	0.358	(n=116) 9.5%	(n=1,882) 4.5%	0.025
Chronic Liver Disease and Cirrhosis of the Liver (Non-alcohol-related)	Yes	(n=933) 1.7%	(n=1,187) 1.0%	0.223	(n=128) 1.6%	(n=1,992) 1.3%	0.999
Liver Abscess and Sequelae of Chronic Liver Disease	Yes	(n=933) 0.0%	(n=1,188) 0.2%	0.588	(n=128) 0.0%	(n=1,993) 0.1%	0.999
Enlarged Liver (Hepatomegaly)	Yes	(n=932) 1.2%	(n=1,186) 2.5%	0.038	(n=127) 2.4%	(n=1,991) 1.9%	0.978
Other Liver Disorders	Yes	(n=927) 27.2%	(n=1,179) 26.2%	0.650	(n=128) 43.0%	(n=1,978) 25.6%	0.001
Current Hepatomegaly	Yes	(n=914) 0.5%	(n=1,177) 1.0%	0.343	(n=120) 0.0%	(n=1,971) 0.9%	0.618
AST		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^a (discrete)	High	r=-0.025		0.247	\bar{x} =23.44	\bar{x} =22.90	0.454
		7.8%	6.3%	0.214	6.7%	7.0%	0.999
ALT		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^a (discrete)	High	r=-0.204		<0.001	\bar{x} =41.94	\bar{x} =42.54	0.596
		10.0%	5.4%	0.001	7.5%	7.4%	0.999
GGT		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^a (discrete)	High	r=-0.103		<0.001	\bar{x} =48.65	\bar{x} =42.70	0.012
		12.6%	8.3%	0.002	13.3%	10.0%	0.309
Alkaline Phosphatase		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^a (discrete)	High	r=0.003		0.909	\bar{x} =82.64	\bar{x} =80.40	0.274
		2.5%	1.9%	0.435	3.3%	2.1%	0.582
Total Bilirubin		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^a (discrete)	High	r=0.061		0.005	\bar{x} =0.489	\bar{x} =0.521	0.153
		6.1%	5.6%	0.678	6.7%	5.8%	0.843
Direct Bilirubin	High	(n=913) 0.1%	(n=1,177) 0.4%	0.355	(n=120) 0.8%	(n=1,970) 0.3%	0.785

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Lactic Dehydrogenase		(n=913)	(n=1,175)		(n=119)	(n=1,969)	
(continuous) ^a				r=0.078	\bar{x} =157.5	\bar{x} =153.7	0.131
(discrete)	High	9.9%	10.2%	0.846	12.6%	9.9%	0.427
Cholesterol		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^b				r=-0.049	\bar{x} =212.7	\bar{x} =211.5	0.726
(discrete)	High	16.2%	13.9%	0.166	12.5%	15.1%	0.524
HDL Cholesterol		(n=912)	(n=1,176)		(n=120)	(n=1,968)	
(continuous) ^a				r=0.035	\bar{x} =48.17	\bar{x} =44.70	0.002
(discrete)	Low	7.2%	8.1%	0.527	3.3%	8.0%	0.094
Cholesterol-HDL Ratio		(n=912)	(n=1,176)		(n=120)	(n=1,968)	
(continuous) ^a				r=-0.066	\bar{x} =4.39	\bar{x} =4.69	0.011
(discrete)	High	44.5%	38.7%	0.008	28.3%	42.0%	0.004
Triglycerides		(n=913)	(n=1,176)		(n=120)	(n=1,969)	
(continuous) ^a				r=-0.073	\bar{x} =93.0	\bar{x} =123.5	<0.001
(discrete)	High	24.0%	18.6%	0.003	6.7%	21.8%	0.001
Creatine Phosphokinase		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^a				r=-0.090	\bar{x} =195.9	\bar{x} =102.0	<0.001
(discrete)	High	11.0%	7.4%	0.006	34.2%	7.1%	0.001
Serum Amylase		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous) ^a				r=0.037	\bar{x} =72.71	\bar{x} =56.04	<0.001
(discrete)	High	2.7%	3.2%	0.602	10.8%	2.5%	0.001
Antibodies for Hepatitis A	Yes	(n=933)	(n=1,187)	0.001	(n=128)	(n=1,992)	0.012
Serological Evidence of Prior Hepatitis B Infection	Yes	(n=931)	(n=1,187)	0.579	(n=127)	(n=1,991)	0.001
Current Hepatitis B	Yes	(n=933)	(n=1,188)	0.834	(n=128)	(n=1,993)	0.001
Antibodies for Hepatitis C	Yes	(n=933)	(n=1,188)	0.071	(n=128)	(n=1,993)	0.002
Stool Hemocult	Yes	(n=878)	(n=1,152)	0.006	(n=111)	(n=1,919)	0.614
Prealbumin		(n=913)	(n=1,177)		(n=120)	(n=1,970)	
(continuous)				r=-0.146	\bar{x} =29.53	\bar{x} =29.59	0.901
(discrete)	Low	0.7%	1.5%	0.099	0.8%	1.2%	0.999

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Age			Race		
		Born ≥1942 (n=913)	Born <1942 (n=1,177)	p-Value	Black (n=120)	Non-Black (n=1,970)	p-Value
Albumin							
(continuous)					\bar{x} =4,161.4	\bar{x} =4,201.2	0.209
(discrete)	Low	0.3%	0.8%	0.222	1.7%	0.6%	0.367
α -1-Acid Glycoprotein							
(continuous) ^a					\bar{x} =81.87	\bar{x} =84.51	0.131
(discrete)	High	3.2%	4.1%	0.333	4.2%	3.7%	0.969
α -1-Antitrypsin							
(continuous) ^b					\bar{x} =141.8	\bar{x} =148.3	0.006
(discrete)	Abn. Low	1.3%	1.4%	0.620	0.0%	1.5%	0.271
	Normal	98.2%	97.8%		100.0%	97.9%	
	Abn. High	0.4%	0.8%		0.0%	0.7%	
α -2-Macroglobulin							
(continuous) ^a					\bar{x} =152.1	\bar{x} =172.2	<0.001
(discrete)	High	1.2%	5.1%	0.001	0.0%	3.6%	0.063
Apolipoprotein B							
(continuous) ^b					\bar{x} =111.0	\bar{x} =111.1	0.951
(discrete)	High	53.6%	49.9%	0.103	50.0%	51.6%	0.810
C3 Complement							
(continuous) ^a					\bar{x} =124.0	\bar{x} =118.4	0.002
(discrete)	Low	2.2%	2.0%	0.824	0.0%	2.2%	0.192
C4 Complement							
(continuous) ^a					\bar{x} =29.00	\bar{x} =25.65	<0.001
(discrete)	Low	0.1%	0.3%	0.803	0.0%	0.2%	0.999
Haptoglobin							
(continuous) ^b					\bar{x} =119.8	\bar{x} =130.7	0.057
(discrete)	High	29.0%	30.5%	0.494	25.8%	30.1%	0.374
Transferrin							
(continuous) ^a					\bar{x} =237.8	\bar{x} =251.7	<0.001
(discrete)	Low	8.2%	11.0%	0.043	20.8%	9.1%	0.001

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Uncharacterized Hepatitis	Yes	(n=826) 1.5%	(n=338) 2.1%	(n=943) 2.0%	0.622
Jaundice (Unspecified)	Yes	(n=807) 3.1%	(n=330) 1.2%	(n=928) 1.9%	0.100
Chronic Liver Disease and Cirrhosis (Alcohol-related)	Yes	(n=798) 3.6%	(n=318) 6.0%	(n=882) 5.3%	0.142
Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	Yes	(n=834) 1.0%	(n=338) 1.5%	(n=948) 1.6%	0.497
Liver Abscess and Sequelae of Chronic Liver Disease	Yes	(n=835) 0.1%	(n=338) 0.0%	(n=948) 0.1%	0.823
Enlarged Liver (Hepatomegaly)	Yes	(n=833) 1.7%	(n=338) 2.7%	(n=947) 1.9%	0.540
Other Liver Disorders	Yes	(n=824) 26.0%	(n=338) 26.0%	(n=944) 27.4%	0.756
Current Hepatomegaly	Yes	(n=830) 0.7%	(n=335) 0.6%	(n=926) 1.0%	0.753
AST		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =23.37	\bar{x} =22.34	\bar{x} =22.76	0.073
(discrete)	High	6.7%	7.8%	6.8%	0.810
ALT		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =41.96	\bar{x} =41.97	\bar{x} =43.19	0.069
(discrete)	High	5.4%	10.1%	8.2%	0.009
GGT		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =41.38	\bar{x} =44.91	\bar{x} =43.87	0.026
(discrete)	High	8.2%	14.3%	10.5%	0.007
Alkaline Phosphatase		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =77.43	\bar{x} =83.60	\bar{x} =82.29	<0.001
(discrete)	High	1.9%	3.0%	2.2%	0.535
Total Bilirubin		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =0.544	\bar{x} =0.502	\bar{x} =0.504	0.001
(discrete)	High	6.9%	5.1%	5.2%	0.264
Direct Bilirubin	High	(n=830) 0.5%	(n=335) 0.0%	(n=925) 0.2%	0.328
Lactic Dehydrogenase		(n=829)	(n=334)	(n=925)	
(continuous) ^a		\bar{x} =154.2	\bar{x} =152.4	\bar{x} =154.2	0.531
(discrete)	High	10.3%	8.4%	10.5%	0.533

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Cholesterol		(n=830)	(n=335)	(n=925)	
(continuous) ^b		\bar{x} =208.5	\bar{x} =215.7	\bar{x} =212.9	0.004
(discrete)	High	12.9%	14.9%	16.8%	0.076
HDL Cholesterol		(n=829)	(n=334)	(n=925)	
(continuous) ^a		\bar{x} =46.67	\bar{x} =44.24	\bar{x} =43.59	<0.001
(discrete)	Low	5.2%	10.2%	9.1%	0.002
Cholesterol-HDL Ratio		(n=829)	(n=334)	(n=925)	
(continuous) ^a		\bar{x} =4.43	\bar{x} =4.84	\bar{x} =4.85	<0.001
(discrete)	High	32.6%	43.4%	48.2%	0.001
Triglycerides		(n=829)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =113.0	\bar{x} =131.3	\bar{x} =126.1	<0.001
(discrete)	High	17.1%	24.2%	23.2%	0.002
Creatine Phosphokinase		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =104.9	\bar{x} =99.2	\bar{x} =109.2	0.038
(discrete)	High	8.4%	6.6%	10.3%	0.101
Serum Amylase		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =56.62	\bar{x} =57.03	\bar{x} =57.06	0.906
(discrete)	High	3.5%	2.1%	2.9%	0.436
Antibodies for Hepatitis A		(n=834)	(n=338)	(n=948)	
	Yes	27.0%	47.3%	33.6%	0.001
Serological Evidence of Prior Hepatitis B		(n=834)	(n=338)	(n=946)	
	Yes	6.0%	16.6%	14.9%	0.001
Current Hepatitis B		(n=835)	(n=338)	(n=948)	
	Yes	0.0%	0.0%	0.3%	0.156
Antibodies for Hepatitis C		(n=835)	(n=338)	(n=948)	
	Yes	0.6%	0.9%	2.0%	0.024
Stool Hemocult		(n=815)	(n=325)	(n=890)	
	Yes	4.4%	2.8%	4.2%	0.431
Prealbumin		(n=830)	(n=335)	(n=925)	
(continuous)		\bar{x} =29.78	\bar{x} =29.44	\bar{x} =29.46	0.353
(discrete)	Low	1.4%	0.6%	1.1%	0.454
Albumin		(n=830)	(n=335)	(n=925)	
(continuous)		\bar{x} =4,191.6	\bar{x} =4,173.4	\bar{x} =4,214.6	0.115
(discrete)	Low	0.8%	0.3%	0.5%	0.516

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
α -1-Acid Glycoprotein		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =81.68	\bar{x} =85.71	\bar{x} =86.34	<0.001
(discrete)	High	2.8%	4.8%	4.1%	0.170
α -1-Antitrypsin		(n=830)	(n=335)	(n=925)	
(continuous) ^b		\bar{x} =143.4	\bar{x} =153.0	\bar{x} =150.2	<0.001
(discrete)	Abnormal Low	2.3%	0.6%	0.9%	0.022
	Normal	97.5%	98.5%	98.3%	
	Abnormal High	0.2%	0.9%	0.9%	
α -2-Macroglobulin		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =170.8	\bar{x} =177.2	\bar{x} =169.0	0.013
(discrete)	High	3.1%	4.8%	3.1%	0.315
Apolipoprotein B		(n=830)	(n=335)	(n=925)	
(continuous) ^b		\bar{x} =108.3	\bar{x} =114.3	\bar{x} =112.4	<0.001
(discrete)	High	47.1%	56.1%	53.7%	0.004
C3 Complement		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =114.7	\bar{x} =120.5	\bar{x} =121.6	<0.001
(discrete)	Low	2.4%	1.8%	1.8%	0.654
C4 Complement		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =25.21	\bar{x} =25.95	\bar{x} =26.35	<0.001
(discrete)	Low	0.4%	0.3%	0.0%	0.199
Haptoglobin		(n=830)	(n=335)	(n=925)	
(continuous) ^b		\bar{x} =118.7	\bar{x} =142.0	\bar{x} =136.3	<0.001
(discrete)	High	22.9%	36.1%	33.8%	0.001
Transferrin		(n=830)	(n=335)	(n=925)	
(continuous) ^a		\bar{x} =249.1	\bar{x} =252.8	\bar{x} =251.8	0.139
(discrete)	Low	9.2%	10.7%	9.9%	0.688

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
Uncharacterized Hepatitis		--	--	--	--
Jaundice (Unspecified)		--	--	--	--
Chronic Liver Disease and Cirrhosis (Alcohol-related)		--	--	--	--
Chronic Liver Disease and Cirrhosis (Non-alcohol-related)		--	--	--	--

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
Liver Abscess and Sequelae of Chronic Liver Disease		--	--	--	--
Enlarged Liver (Hepatomegaly)		--	--	--	--
Other Liver Disorders		--	--	--	--
Current Hepatomegaly	Yes	(n=1,676) 0.7%	(n=369) 1.6%	(n=46) 0.0%	0.141
AST (continuous) ^a (discrete)	High	(n=1,675) 6.3%	(n=369) 8.1%	(n=46) 21.7%	<0.001 0.001
ALT (continuous) ^a (discrete)	High	(n=1,675) 7.3%	(n=369) 7.9%	(n=46) 8.7%	0.009 0.879
GGT (continuous) ^a (discrete)	High	(n=1,675) 7.3%	(n=369) 20.1%	(n=46) 34.8%	<0.001 0.001
Total Bilirubin (continuous) ^a (discrete)	High	(n=1,675) 5.7%	(n=369) 5.4%	(n=46) 15.2%	<0.001 0.023
Direct Bilirubin	High	(n=1,675) 0.1%	(n=369) 0.8%	(n=46) 2.2%	0.004
Lactic Dehydrogenase (continuous) ^a (discrete)	High	(n=1,675) 10.4%	(n=368) 9.0%	(n=45) 6.7%	0.159 0.533
Cholesterol (continuous) ^b (discrete)	High	(n=1,675) 13.7%	(n=369) 19.8%	(n=46) 19.6%	<0.001 0.009
HDL Cholesterol (continuous) ^a (discrete)	Low	(n=1,673) 9.0%	(n=369) 2.4%	(n=46) 4.3%	<0.001 0.001
Cholesterol-HDL Ratio (continuous) ^a (discrete)	High	(n=1,673) 44.2%	(n=369) 29.3%	(n=46) 28.3%	<0.001 0.001
Triglycerides (continuous) ^a (discrete)	High	(n=1,675) 20.6%	(n=368) 21.7%	(n=46) 28.3%	0.493 0.417
Creatine Phosphokinase (continuous) ^a (discrete)	High	(n=1,675) 9.7%	(n=369) 5.1%	(n=46) 10.9%	0.013 0.018

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
Serum Amylase (continuous) ^a (discrete)	High	(n=1,675) 3.0%	(n=369) 3.3%	(n=46) 0.0%	0.001 0.471
Antibodies for Hepatitis A	Yes	(n=1,698) 33.5%	(n=371) 32.3%	(n=50) 30.0%	0.808
Serological Evidence of Prior Hepatitis B	Yes	(n=1,696) 12.0%	(n=371) 9.7%	(n=50) 14.0%	0.393
Current Hepatitis B	Yes	(n=1,699) 0.1%	(n=371) 0.0%	(n=50) 2.0%	0.002
Antibodies for Hepatitis C	Yes	(n=1,699) 1.2%	(n=371) 0.5%	(n=50) 6.0%	0.004
Stool Hemocult	Yes	(n=1,633) 3.7%	(n=355) 5.4%	(n=42) 4.8%	0.364
Prealbumin (continuous) (discrete)	Low	(n=1,675) 0.8%	(n=369) 2.4%	(n=46) 4.3%	<0.001 0.003
Albumin (continuous) (discrete)	Low	(n=1,675) 0.4%	(n=369) 1.4%	(n=46) 2.2%	0.506 0.047
α -1-Acid Glycoprotein (continuous) ^a (discrete)	High	(n=1,675) 3.0%	(n=369) 6.5%	(n=46) 6.5%	<0.001 0.003
α -2-Macroglobulin (continuous) ^a (discrete)	High	(n=1,675) 3.7%	(n=369) 2.2%	(n=46) 2.2%	0.031 0.304
Apolipoprotein B (continuous) ^b (discrete)	High	(n=1,675) 51.0%	(n=369) 53.1%	(n=46) 54.3%	0.472 0.714
C3 Complement (continuous) ^a (discrete)	Low	(n=1,675) 1.6%	(n=369) 4.6%	(n=46) 0.0%	<0.001 0.001
C4 Complement (continuous) ^a (discrete)	Low	(n=1,675) 0.1%	(n=369) 0.5%	(n=46) 0.0%	0.752 0.233
Haptoglobin (continuous) ^b (discrete)	High	(n=1,675) 28.3%	(n=369) 35.5%	(n=46) 41.3%	0.013 0.005
Transferrin (continuous) ^a (discrete)	Low	(n=1,675) 10.2%	(n=369) 8.7%	(n=46) 2.2%	0.022 0.143

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Uncharacterized Hepatitis	Yes	(n=117) 3.4%	(n=1,370) 2.3%	(n=612) 0.5%	0.010
Jaundice (Unspecified)	Yes	(n=115) 4.3%	(n=1,339) 2.3%	(n=603) 1.8%	0.250
Chronic Liver Disease and Cirrhosis (Alcohol-related)	Yes	-- --	(n=1,378) 1.3%	(n=612) 12.6%	0.001
Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	Yes	(n=118) 1.7%	(n=1,378) 1.8%	(n=616) 0.2%	0.011
Liver Abscess and Sequelae of Chronic Liver Disease	Yes	(n=118) 0.0%	(n=1,379) 0.1%	(n=616) 0.2%	0.786
Enlarged Liver (Hepatomegaly)	Yes	(n=118) 0.8%	(n=1,377) 1.0%	(n=615) 4.2%	0.001
Other Liver Disorders	Yes	(n=117) 23.9%	(n=1,368) 25.1%	(n=613) 30.3%	0.043
Current Hepatomegaly	Yes	(n=118) 0.0%	(n=1,363) 0.7%	(n=603) 1.3%	0.190
AST (continuous) ^a (discrete)	High	(n=118) 6.8%	(n=1,362) r=0.068 6.1%	(n=603) 9.0%	0.002 0.071
ALT (continuous) ^a (discrete)	High	(n=118) 10.2%	(n=1,362) r=-0.007 7.3%	(n=603) 7.0%	0.737 0.474
GGT (continuous) ^a (discrete)	High	(n=118) 4.2%	(n=1,362) r=0.096 8.7%	(n=603) 14.9%	<0.001 0.001
Total Bilirubin (continuous) ^a (discrete)	High	(n=118) 3.4%	(n=1,362) r=0.016 5.7%	(n=603) 6.5%	0.459 0.415
Direct Bilirubin	High	(n=118) 0.0%	(n=1,362) 0.1%	(n=603) 0.8%	0.013
Lactic Dehydrogenase (continuous) ^a (discrete)	High	(n=118) 14.4%	(n=1,362) r=0.001 10.4%	(n=601) 8.3%	0.952 0.096
Cholesterol (continuous) ^b (discrete)	High	(n=118) 11.9%	(n=1,362) r=0.035 14.0%	(n=603) 17.9%	0.108 0.047
HDL Cholesterol (continuous) ^a (discrete)	Low	(n=118) 14.4%	(n=1,360) r=0.127 8.4%	(n=603) 4.8%	<0.001 0.001
Cholesterol-HDL Ratio (continuous) ^a (discrete)	High	(n=118) 53.4%	(n=1,360) r=-0.098 43.3%	(n=603) 34.2%	<0.001 0.001

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Triglycerides (continuous) ^a (discrete)	High	(n=118) 20.3%	(n=1,361) r=-0.006 21.0%	(n=603) 21.2%	0.797 0.976
Creatine Phosphokinase (continuous) ^a (discrete)	High	(n=118) 6.8%	(n=1,362) r=-0.029 9.7%	(n=603) 7.3%	0.188 0.163
Serum Amylase (continuous) ^a (discrete)	High	(n=118) 5.1%	(n=1,362) r=-0.022 2.8%	(n=603) 3.2%	0.323 0.369
Antibodies for Hepatitis A	Yes	(n=118) 45.8%	(n=1,378) 30.9%	(n=616) 35.9%	0.001
Serological Evidence of Prior Hepatitis B	Yes	(n=118) 5.9%	(n=1,376) 10.2%	(n=616) 16.1%	0.001
Current Hepatitis B	Yes	(n=118) 0.0%	(n=1,379) 0.1%	(n=616) 0.2%	0.911
Antibodies for Hepatitis C	Yes	(n=118) 0.0%	(n=1,379) 1.0%	(n=616) 1.9%	0.100
Stool Hemocult	Yes	(n=107) 4.7%	(n=1,331) 3.6%	(n=585) 5.0%	0.364
Prealbumin (continuous) (discrete)	Low	(n=118) 1.7%	(n=1,362) r=0.030 0.6%	(n=603) 2.3%	0.170 0.003
Albumin (continuous) (discrete)	Low	(n=118) 0.8%	(n=1,362) r=-0.030 0.5%	(n=603) 0.8%	0.176 0.680
α-1-Acid Glycoprotein (continuous) ^a (discrete)	High	(n=118) 3.4%	(n=1,362) r=0.094 3.1%	(n=603) 5.1%	<0.001 0.082
α-1-Antitrypsin (continuous) ^b (discrete)	Abn. Low Normal Abn. High	(n=118) 0.8% 97.5% 1.7%	(n=1,362) r=0.077 1.3% 98.3% 0.4%	(n=603) 1.5% 97.5% 1.0%	0.001 0.259
α-2-Macroglobulin (continuous) ^a (discrete)	High	(n=118) 9.3%	(n=1,362) r=0.015 2.9%	(n=603) 3.3%	0.501 0.001
Apolipoprotein B (continuous) ^b (discrete)	High	(n=118) 50.8%	(n=1,362) r=-0.002 51.8%	(n=603) 50.9%	0.919 0.921
C3 Complement (continuous) ^a (discrete)	Low	(n=118) 0.0%	(n=1,362) r=-0.046 1.9%	(n=603) 2.8%	0.034 0.114

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
C4 Complement (continuous) ^a (discrete)	Low	(n=118)	(n=1,362)	(n=603)	0.668 0.858
		0.0%	r=0.009 0.2%	0.2%	
Haptoglobin (continuous) ^b (discrete)	High	(n=118)	(n=1,362)	(n=603)	<0.001 0.018
		30.5%	r=0.082 27.8%	34.2%	
Transferrin (continuous) ^a (discrete)	Low	(n=118)	(n=1,362)	(n=603)	0.893 0.265
		11.9%	r=0.003 9.0%	11.1%	

Dependent Variable	Level	Industrial Chemical Exposure			Degreasing Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Uncharacterized Hepatitis	Yes	(n=797) 1.3%	(n=1,310) 2.1%	0.191	(n=748) 1.6%	(n=1,359) 1.9%	0.735
Jaundice (Unspecified)	Yes	(n=778) 2.7%	(n=1,287) 2.0%	0.395	(n=734) 2.0%	(n=1,331) 2.4%	0.710
Chronic Liver Disease and Cirrhosis of the Liver (Alcohol-related)	Yes	(n=756) 3.3%	(n=1,242) 5.6%	0.024	(n=711) 4.2%	(n=1,287) 5.1%	0.468
Chronic Liver Disease and Cirrhosis of the Liver (Non-alcohol-related)	Yes	(n=804) 1.1%	(n=1,316) 1.4%	0.661	(n=755) 1.2%	(n=1,365) 1.4%	0.851
Liver Abscess and Sequelae of Chronic Liver Disease	Yes	(n=804) 0.1%	(n=1,317) 0.1%	0.999	(n=755) 0.1%	(n=1,366) 0.1%	0.999
Enlarged Liver (Hepatomegaly)	Yes	(n=803) 1.9%	(n=1,315) 2.0%	0.988	(n=754) 1.9%	(n=1,364) 2.0%	0.975
Other Liver Disorders	Yes	(n=796) 26.0%	(n=1,310) 27.0%	0.644	(n=750) 25.5%	(n=1,356) 27.3%	0.394
Current Hepatomegaly	Yes	(n=799) 1.1%	(n=1,292) 0.6%	0.315	(n=749) 0.5%	(n=1,342) 1.0%	0.420
AST (continuous) ^a (discrete)	High	(n=799) \bar{x} =23.33	(n=1,291) \bar{x} =22.69	0.063 0.850	(n=749) \bar{x} =23.17	(n=1,341) \bar{x} =22.80	0.294 0.783
		7.1%	6.8%		7.2%	6.8%	
ALT (continuous) ^a (discrete)	High	(n=799) \bar{x} =42.58	(n=1,291) \bar{x} =42.45	0.805 0.700	(n=749) \bar{x} =42.33	(n=1,341) \bar{x} =42.60	0.619 0.721
		7.8%	7.2%		7.1%	7.6%	

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Industrial Chemical Exposure			Degreasing Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
GGT		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =43.27	\bar{x} =42.88	0.717	\bar{x} =42.55	\bar{x} =43.29	0.494
(discrete)	High	10.0%	10.3%	0.890	8.9%	10.9%	0.183
Alkaline Phosphatase		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =79.87	\bar{x} =80.94	0.266	\bar{x} =79.91	\bar{x} =80.88	0.324
(discrete)	High	2.6%	1.9%	0.371	2.8%	1.9%	0.212
Total Bilirubin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =0.533	\bar{x} =0.511	0.052	\bar{x} =0.536	\bar{x} =0.510	0.020
(discrete)	High	5.6%	6.0%	0.827	5.6%	6.0%	0.812
Direct Bilirubin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
	High	0.4%	0.2%	0.862	0.3%	0.3%	0.999
Lactic Dehydrogenase		(n=797)	(n=1,291)		(n=747)	(n=1,341)	
(continuous) ^a		\bar{x} =153.8	\bar{x} =154.0	0.856	\bar{x} =153.9	\bar{x} =153.9	0.962
(discrete)	High	9.5%	10.4%	0.584	9.8%	10.2%	0.805
Cholesterol		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^b		\bar{x} =210.2	\bar{x} =212.4	0.193	\bar{x} =210.0	\bar{x} =212.5	0.157
(discrete)	High	14.0%	15.5%	0.392	13.5%	15.7%	0.187
HDL Cholesterol		(n=798)	(n=1,290)		(n=749)	(n=1,339)	
(continuous) ^a		\bar{x} =45.81	\bar{x} =44.33	0.005	\bar{x} =46.07	\bar{x} =44.25	0.001
(discrete)	Low	6.0%	8.8%	0.028	5.9%	8.7%	0.023
Cholesterol-HDL Ratio		(n=798)	(n=1,290)		(n=749)	(n=1,339)	
(continuous) ^a		\bar{x} =4.55	\bar{x} =4.75	<0.001	\bar{x} =4.52	\bar{x} =4.76	<0.001
(discrete)	High	35.7%	44.7%	0.001	36.2%	44.1%	0.001
Triglycerides		(n=799)	(n=1,290)		(n=749)	(n=1,340)	
(continuous) ^a		\bar{x} =116.4	\bar{x} =124.9	0.013	\bar{x} =114.7	\bar{x} =125.6	0.002
(discrete)	High	18.5%	22.5%	0.035	17.9%	22.7%	0.012
Creatine Phosphokinase		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =104.8	\bar{x} =106.5	0.568	\bar{x} =107.7	\bar{x} =104.8	0.321
(discrete)	High	8.0%	9.5%	0.270	9.5%	8.7%	0.578
Serum Amylase		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =56.47	\bar{x} =57.14	0.489	\bar{x} =56.75	\bar{x} =56.95	0.839
(discrete)	High	3.4%	2.8%	0.525	3.3%	2.8%	0.608
Antibodies for Hepatitis A	Yes	(n=804)	(n=1,316)	0.999	(n=755)	(n=1,365)	0.578

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Industrial Chemical Exposure			Degreasing Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Serological Evidence of Prior Hepatitis B Infection	Yes	(n=803) 10.1%	(n=1,315) 12.6%	0.090	(n=755) 10.6%	(n=1,363) 12.3%	0.286
Current Hepatitis B	Yes	(n=804) 0.1%	(n=1,317) 0.2%	0.999	(n=755) 0.1%	(n=1,366) 0.1%	0.999
Antibodies for Hepatitis C	Yes	(n=804) 0.5%	(n=1,317) 1.7%	0.022	(n=755) 0.7%	(n=1,366) 1.6%	0.096
Stool Hemocult	Yes	(n=781) 5.4%	(n=1,249) 3.2%	0.021	(n=726) 4.8%	(n=1,304) 3.6%	0.224
Prealbumin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous)		\bar{x} =29.80	\bar{x} =29.45	0.130	\bar{x} =29.69	\bar{x} =29.52	0.452
(discrete)	High	1.3%	1.1%	0.891	1.1%	1.2%	0.966
Albumin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous)		\bar{x} =4,207.4	\bar{x} =4,193.6	0.364	\bar{x} =4,222.3	\bar{x} =4,185.8	0.017
(discrete)	High	0.8%	0.5%	0.761	0.5%	0.7%	0.927
α -1-Acid Glycoprotein		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =83.38	\bar{x} =84.97	0.061	\bar{x} =83.46	\bar{x} =84.86	0.103
(discrete)	High	3.4%	3.9%	0.643	3.9%	3.6%	0.826
α -1-Antitrypsin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^b		\bar{x} =145.7	\bar{x} =149.3	0.001	\bar{x} =146.2	\bar{x} =148.9	0.023
(discrete)	Abn. Low	2.1%	0.9%	0.037	1.6%	1.3%	0.805
	Normal	97.0%	98.6%		97.7%	98.1%	
	Abn. High	0.9%	0.5%		0.7%	0.6%	
α -2-Macroglobulin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =171.7	\bar{x} =170.6	0.560	\bar{x} =171.8	\bar{x} =170.6	0.529
(discrete)	High	2.6%	3.9%	0.161	3.2%	3.5%	0.812
Apolipoprotein B		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^b		\bar{x} =110.4	\bar{x} =111.5	0.319	\bar{x} =110.0	\bar{x} =111.7	0.131
(discrete)	High	50.8%	51.9%	0.662	49.3%	52.7%	0.141
C3 Complement		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =116.7	\bar{x} =119.9	<0.001	\bar{x} =116.6	\bar{x} =119.9	<0.001
(discrete)	Low	1.9%	2.2%	0.766	2.4%	1.9%	0.502
C4 Complement		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =25.51	\bar{x} =26.02	0.029	\bar{x} =25.63	\bar{x} =25.94	0.204
(discrete)	Low	0.4%	0.1%	0.317	0.5%	0.0%	0.031
Haptoglobin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^b		\bar{x} =125.8	\bar{x} =132.7	0.013	\bar{x} =124.2	\bar{x} =133.4	0.001
(discrete)	High	26.5%	31.9%	0.010	25.8%	32.1%	0.003

Table F-5. Dependent Variable-Covariate Associations for the Gastrointestinal Assessment (Continued)

Dependent Variable	Level	Industrial Chemical Exposure			Degreasing Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Transferrin		(n=799)	(n=1,291)		(n=749)	(n=1,341)	
(continuous) ^a		\bar{x} =250.3	\bar{x} =251.2	0.568	\bar{x} =248.2	\bar{x} =252.4	0.009
(discrete)	Low	8.8%	10.4%	0.256	9.5%	9.9%	0.805

Dependent Variable	Level	Current Wine Consumption (drinks of wine/day)			Lifetime Wine History (drink-years of wine)		
		0	>0	p-Value	0	>0	p-Value
Alkaline Phosphatase		(n=1,199)	(n=891)		(n=585)	(n=1,500)	
(continuous) ^a		$r=-0.095$			$r=-0.091$		
(discrete)	High	2.6%	1.7%	0.215	2.2%	2.2%	0.999
α -1-Antitrypsin		(n=1,199)	(n=891)		--	--	--
(continuous) ^b		$r=-0.077$			--	--	--
(discrete)	Abn. Low	1.0%	1.9%	0.031	--	--	--
	Normal	98.1%	97.9%		--	--	--
	Abn. High	0.9%	0.2%		--	--	--

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

^b Analysis performed on square root scale; means transformed from square root scale.

--: Covariate or covariate category not applicable for dependent variable.

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

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Essential Hypertension	Yes	(n=919) 32.9%	(n=1,151) 48.0%	0.001	(n=123) 47.2%	(n=1,947) 40.9%	0.202
Heart Disease (Excluding Essential Hypertension)	Yes	(n=925) 52.3%	(n=1,166) 71.4%	0.001	(n=124) 69.4%	(n=1,967) 62.6%	0.156
Myocardial Infarction	Yes	(n=925) 3.7%	(n=1,166) 12.2%	0.001	(n=124) 5.6%	(n=1,967) 8.6%	0.327
Stroke or Transient Ischemia Attack	Yes	(n=925) 0.8%	(n=1,166) 1.5%	0.149	(n=124) 1.6%	(n=1,967) 1.2%	0.988
Systolic Blood Pressure (mm Hg)		(n=925)	(n=1,166)		(n=124)	(n=1,967)	
(continuous) ^a (discrete)	High	r=0.214		<0.001	\bar{x} =126.7	\bar{x} =125.2	0.377
		13.9%	26.9%	0.001	20.2%	21.3%	0.861
Diastolic Blood Pressure (mm Hg)		(n=925)	(n=1,166)		(n=124)	(n=1,967)	
(continuous) ^b (discrete)	High	r=-0.057		0.009	\bar{x} =76.69	\bar{x} =74.46	0.010
		5.3%	4.9%	0.747	8.9%	4.8%	0.075
Heart Sounds	Abnormal	(n=925) 2.4%	(n=1,166) 6.1%	0.001	(n=124) 4.8%	(n=1,967) 4.4%	0.999
Overall Electrocardiograph (ECG)	Abnormal	(n=925) 19.1%	(n=1,166) 40.7%	0.001	(n=124) 35.5%	(n=1,967) 30.9%	0.334
ECG: Right Bundle Branch Block	Yes	(n=925) 0.9%	(n=1,166) 3.9%	0.001	(n=124) 3.2%	(n=1,967) 2.5%	0.862
ECG: Left Bundle Branch Block	Yes	(n=925) 0.4%	(n=1,166) 1.1%	0.139	(n=124) 0.0%	(n=1,967) 0.9%	0.600
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=925) 11.8%	(n=1,166) 23.4%	0.001	(n=124) 22.6%	(n=1,967) 18.0%	0.245
ECG: Bradycardia	Yes	(n=925) 3.1%	(n=1,166) 3.8%	0.503	(n=124) 1.6%	(n=1,967) 3.6%	0.356
ECG: Tachycardia	Yes	(n=925) 0.3%	(n=1,166) 0.6%	0.555	(n=124) 0.8%	(n=1,967) 0.5%	0.999
ECG: Arrhythmia	Yes	(n=925) 2.4%	(n=1,166) 8.3%	0.001	(n=124) 5.6%	(n=1,967) 5.7%	0.999
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=925) 1.8%	(n=1,166) 6.0%	0.001	(n=124) 1.6%	(n=1,967) 4.3%	0.218
ECG: Other Diagnoses	Yes	(n=925) 0.2%	(n=1,166) 0.2%	0.999	(n=124) 0.8%	(n=1,967) 0.2%	0.578

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Funduscopy Examination	Abnormal	(n=925) 6.4%	(n=1,164) 17.4%	0.001	(n=124) 16.1%	(n=1,965) 12.3%	0.262
Carotid Bruits	Present	(n=925) 1.1%	(n=1,166) 3.9%	0.001	(n=124) 3.2%	(n=1,967) 2.6%	0.918
Radial Pulses	Abnormal	(n=925) 0.5%	(n=1,166) 0.5%	0.999	(n=124) 2.4%	(n=1,967) 0.4%	0.018
Femoral Pulses	Abnormal	(n=925) 0.8%	(n=1,165) 2.3%	0.009	(n=124) 3.2%	(n=1,966) 1.5%	0.278
Popliteal Pulses	Abnormal	(n=925) 1.1%	(n=1,164) 3.5%	0.001	(n=124) 4.0%	(n=1,965) 2.3%	0.377
Dorsalis Pedis Pulses	Abnormal	(n=925) 4.4%	(n=1,164) 10.6%	0.001	(n=124) 11.3%	(n=1,965) 7.6%	0.195
Posterior Tibial Pulses	Abnormal	(n=925) 3.0%	(n=1,162) 8.1%	0.001	(n=124) 6.5%	(n=1,963) 5.8%	0.921
Leg Pulses	Abnormal	(n=925) 5.6%	(n=1,162) 14.2%	0.001	(n=124) 14.5%	(n=1,963) 10.1%	0.162
Peripheral Pulses	Abnormal	(n=925) 5.8%	(n=1,162) 14.5%	0.001	(n=124) 16.1%	(n=1,963) 10.3%	0.061
Intermittent Claudication and Vascular Insufficiency (ICVI) Index	Abnormal	(n=924) 3.0%	(n=1,166) 4.3%	0.164	(n=124) 3.2%	(n=1,966) 3.8%	0.950

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Essential Hypertension	Yes	(n=809) 40.4%	(n=333) 45.3%	(n=928) 40.5%	0.254
Heart Disease (Excluding Essential Hypertension)	Yes	(n=818) 68.7%	(n=335) 66.6%	(n=938) 56.7%	0.001
Myocardial Infarction	Yes	(n=818) 8.6%	(n=335) 9.3%	(n=938) 8.0%	0.763
Stroke or Transient Ischemia Attack	Yes	(n=818) 1.2%	(n=335) 0.9%	(n=938) 1.3%	0.854
Systolic Blood Pressure (mm Hg)		(n=818)	(n=335)	(n=938)	
(continuous) ^a		\bar{x} =126.1	\bar{x} =127.1	\bar{x} =123.9	0.005
(discrete)	High	23.2%	23.6%	18.6%	0.029
Diastolic Blood Pressure (mm Hg)		(n=818)	(n=335)	(n=938)	
(continuous) ^b		\bar{x} =74.19	\bar{x} =75.16	\bar{x} =74.74	0.224
(discrete)	High	5.1%	4.8%	5.1%	0.965

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Heart Sounds	Abnormal	(n=818) 4.5%	(n=335) 5.4%	(n=938) 4.1%	0.597
Overall Electrocardiograph (ECG)	Abnormal	(n=818) 34.6%	(n=335) 36.4%	(n=938) 26.3%	0.001
ECG: Right Bundle Branch Block	Yes	(n=818) 2.6%	(n=335) 4.5%	(n=938) 1.9%	0.040
ECG: Left Bundle Branch Block	Yes	(n=818) 1.0%	(n=335) 0.3%	(n=938) 0.9%	0.498
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=818) 20.2%	(n=335) 20.0%	(n=938) 16.0%	0.052
ECG: Bradycardia	Yes	(n=818) 5.6%	(n=335) 3.0%	(n=938) 1.8%	0.001
ECG: Tachycardia	Yes	(n=818) 0.2%	(n=335) 0.9%	(n=938) 0.5%	0.329
ECG: Arrhythmia	Yes	(n=818) 6.1%	(n=335) 7.5%	(n=938) 4.7%	0.137
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=818) 4.6%	(n=335) 4.8%	(n=938) 3.5%	0.412
ECG: Other Diagnoses	Yes	(n=818) 0.1%	(n=335) 0.0%	(n=938) 0.3%	0.436
Funduscopic Examination	Abnormal	(n=817) 11.1%	(n=334) 18.6%	(n=938) 11.5%	0.001
Carotid Bruits	Present	(n=818) 2.2%	(n=335) 3.9%	(n=938) 2.7%	0.276
Radial Pulses	Abnormal	(n=818) 0.5%	(n=335) 0.0%	(n=938) 0.7%	0.264
Femoral Pulses	Abnormal	(n=818) 1.8%	(n=334) 2.4%	(n=938) 1.2%	0.265
Popliteal Pulses	Abnormal	(n=817) 2.3%	(n=334) 2.7%	(n=938) 2.5%	0.934
Dorsalis Pedis Pulses	Abnormal	(n=817) 7.2%	(n=334) 10.5%	(n=938) 7.5%	0.147
Posterior Tibial Pulses	Abnormal	(n=817) 5.5%	(n=332) 8.1%	(n=938) 5.3%	0.151
Leg Pulses	Abnormal	(n=817) 9.3%	(n=332) 14.2%	(n=938) 10.0%	0.044
Peripheral Pulses	Abnormal	(n=817) 9.7%	(n=332) 14.2%	(n=938) 10.3%	0.075
ICVI Index	Abnormal	(n=818) 3.4%	(n=335) 5.7%	(n=937) 3.3%	0.123

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Essential Hypertension	Yes	(n=118) 39.0%	(n=1,348) 38.5%	(n=596) 48.2%	0.001
Heart Disease (Excluding Essential Hypertension)	Yes	(n=118) 62.7%	(n=1,360) 63.0%	(n=605) 63.1%	0.996
Myocardial Infarction	Yes	(n=118) 10.2%	(n=1,360) 7.9%	(n=605) 9.4%	0.410
Stroke or Transient Ischemia Attack	Yes	(n=118) 1.7%	(n=1,360) 1.0%	(n=605) 1.7%	0.373
Systolic Blood Pressure (mm Hg) (continuous) ^a (discrete)	High	(n=118) 19.5%	(n=1,360) 19.9%	(n=605) 24.6%	<0.001 0.051
Diastolic Blood Pressure (mm Hg) (continuous) ^b (discrete)	High	(n=118) 3.4%	(n=1,360) 4.8%	(n=605) 6.1%	0.126 0.317
Heart Sounds	Abnormal	(n=118) 4.2%	(n=1,360) 4.0%	(n=605) 5.5%	0.374
Overall Electrocardiograph (ECG)	Abnormal	(n=118) 39.0%	(n=1,360) 29.9%	(n=605) 32.6%	0.082
ECG: Right Bundle Branch Block	Yes	(n=118) 1.7%	(n=1,360) 2.7%	(n=605) 2.5%	0.781
ECG: Left Bundle Branch Block	Yes	(n=118) 0.8%	(n=1,360) 1.0%	(n=605) 0.5%	0.578
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=118) 26.3%	(n=1,360) 18.5%	(n=605) 15.9%	0.024
ECG: Bradycardia	Yes	(n=118) 0.8%	(n=1,360) 3.2%	(n=605) 4.6%	0.072
ECG: Tachycardia	Yes	(n=118) 1.7%	(n=1,360) 0.2%	(n=605) 0.8%	0.029
ECG: Arrhythmia	Yes	(n=118) 9.3%	(n=1,360) 6.0%	(n=605) 4.5%	0.093
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=118) 5.1%	(n=1,360) 4.3%	(n=605) 3.8%	0.786
ECG: Other Diagnoses	Yes	(n=118) 0.0%	(n=1,360) 0.2%	(n=605) 0.2%	0.857
Funduscopy Examination	Abnormal	(n=118) 14.4%	(n=1,359) 11.2%	(n=604) 14.9%	0.057
Carotid Bruits	Present	(n=118) 2.5%	(n=1,360) 2.3%	(n=605) 3.6%	0.228
Radial Pulses	Abnormal	(n=118) 0.0%	(n=1,360) 0.2%	(n=605) 1.3%	0.006

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
Femoral Pulses	Abnormal	(n=118) 0.0%	(n=1,359) 1.1%	(n=605) 3.1%	0.002
Popliteal Pulses	Abnormal	(n=118) 0.8%	(n=1,358) 1.9%	(n=605) 4.0%	0.013
Dorsalis Pedis Pulses	Abnormal	(n=118) 8.5%	(n=1,358) 6.6%	(n=605) 10.6%	0.009
Posterior Tibial Pulses	Abnormal	(n=118) 3.4%	(n=1,356) 5.2%	(n=605) 7.9%	0.027
Leg Pulses	Abnormal	(n=118) 11.0%	(n=1,356) 9.0%	(n=605) 13.4%	0.013
Peripheral Pulses	Abnormal	(n=118) 11.0%	(n=1,356) 9.1%	(n=605) 14.0%	0.005
ICVI Index	Abnormal	(n=118) 1.7%	(n=1,360) 3.5%	(n=605) 4.6%	0.239

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
Essential Hypertension		--	--	--	--
Heart Disease (Excluding Essential Hypertension)		--	--	--	--
Myocardial Infarction		--	--	--	--
Stroke or Transient Ischemia Attack		--	--	--	--
Systolic Blood Pressure (mm Hg) (continuous) ^a		(n=1,673)	(n=367)	(n=50)	
(discrete)	High	20.8%	r=0.008 24.0%	14.0%	0.715 0.182
Diastolic Blood Pressure (mm Hg) (continuous) ^b		(n=1,673)	(n=367)	(n=50)	
(discrete)	High	4.8%	r=0.025 5.7%	8.0%	0.253 0.497
Heart Sounds	Abnormal	(n=1,673) 4.7%	(n=367) 3.5%	(n=50) 4.0%	0.634
Overall Electrocardiograph (ECG)	Abnormal	(n=1,673) 30.6%	(n=367) 34.6%	(n=50) 26.0%	0.236
ECG: Right Bundle Branch Block	Yes	(n=1,673) 2.7%	(n=367) 2.2%	(n=50) 2.0%	0.827
ECG: Left Bundle Branch Block	Yes	(n=1,673) 0.8%	(n=367) 0.8%	(n=50) 2.0%	0.638
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=1,673) 18.7%	(n=367) 17.4%	(n=50) 10.0%	0.263

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
ECG: Bradycardia	Yes	(n=1,673) 3.2%	(n=367) 5.2%	(n=50) 2.0%	0.139
ECG: Tachycardia	Yes	(n=1,673) 0.5%	(n=367) 0.5%	(n=50) 0.0%	0.872
ECG: Arrhythmia	Yes	(n=1,673) 5.5%	(n=367) 6.8%	(n=50) 4.0%	0.538
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=1,673) 4.4%	(n=367) 3.3%	(n=50) 4.0%	0.636
ECG: Other Diagnoses	Yes	(n=1,673) 0.2%	(n=367) 0.3%	(n=50) 0.0%	0.889
Funduscopy Examination	Abnormal	(n=1,671) 12.6%	(n=367) 11.7%	(n=50) 14.0%	0.846
Carotid Bruits	Present	(n=1,673) 2.6%	(n=367) 3.3%	(n=50) 0.0%	0.390
Radial Pulses	Abnormal	(n=1,673) 0.3%	(n=367) 1.6%	(n=50) 0.0%	0.005
Femoral Pulses	Abnormal	(n=1,672) 1.0%	(n=367) 4.4%	(n=50) 4.0%	0.001
Popliteal Pulses	Abnormal	(n=1,672) 1.9%	(n=366) 4.9%	(n=50) 4.0%	0.002
Dorsalis Pedis Pulses	Abnormal	(n=1,672) 7.3%	(n=366) 10.1%	(n=50) 10.0%	0.165
Posterior Tibial Pulses	Abnormal	(n=1,670) 5.0%	(n=366) 9.3%	(n=50) 10.0%	0.003
Leg Pulses	Abnormal	(n=1,670) 9.6%	(n=366) 13.4%	(n=50) 14.0%	0.073
Peripheral Pulses	Abnormal	(n=1,670) 9.8%	(n=366) 14.2%	(n=50) 14.0%	0.036
ICVI Index	Abnormal	(n=1,673) 3.5%	(n=367) 4.1%	(n=50) 8.0%	0.239

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Essential Hypertension	Yes	(n=582) 38.0%	(n=543) 43.1%	(n=942) 42.3%	0.155
Heart Disease (Excluding Essential Hypertension)	Yes	(n=587) 61.2%	(n=550) 62.9%	(n=951) 64.2%	0.474
Myocardial Infarction	Yes	(n=587) 4.9%	(n=550) 5.6%	(n=951) 12.2%	0.001
Stroke or Transient Ischemia Attack	Yes	(n=587) 0.9%	(n=550) 1.1%	(n=951) 1.4%	0.647

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Systolic Blood Pressure (mm Hg)		(n=587)	(n=550)	(n=951)	
(continuous) ^a			r=0.044		0.045
(discrete)	High	19.9%	20.0%	22.6%	0.338
Diastolic Blood Pressure (mm Hg)		(n=587)	(n=550)	(n=951)	
(continuous) ^b			r=-0.066		0.003
(discrete)	High	4.1%	7.8%	4.1%	0.003
Heart Sounds		(n=587)	(n=550)	(n=951)	
	Abnormal	2.9%	4.5%	5.4%	0.074
Overall Electrocardiograph (ECG)		(n=587)	(n=550)	(n=951)	
	Abnormal	28.3%	27.6%	35.0%	0.002
ECG: Right Bundle Branch Block		(n=587)	(n=550)	(n=951)	
	Yes	2.2%	1.5%	3.5%	0.048
ECG: Left Bundle Branch Block		(n=587)	(n=550)	(n=951)	
	Yes	0.5%	1.1%	0.8%	0.549
ECG: Non-specific ST- and T-Wave Changes		(n=587)	(n=550)	(n=951)	
	Yes	17.9%	15.6%	20.0%	0.107
ECG: Bradycardia		(n=587)	(n=550)	(n=951)	
	Yes	4.3%	4.0%	2.7%	0.216
ECG: Tachycardia		(n=587)	(n=550)	(n=951)	
	Yes	0.5%	0.5%	0.4%	0.936
ECG: Arrhythmia		(n=587)	(n=550)	(n=951)	
	Yes	4.1%	5.5%	6.7%	0.091
ECG: Evidence of Prior Myocardial Infarction		(n=587)	(n=550)	(n=951)	
	Yes	2.9%	2.7%	5.8%	0.003
ECG: Other Diagnoses		(n=587)	(n=550)	(n=951)	
	Yes	0.2%	0.4%	0.1%	0.539
Funduscopy Examination		(n=587)	(n=550)	(n=949)	
	Abnormal	8.9%	11.6%	15.2%	0.001
Carotid Bruits		(n=587)	(n=550)	(n=951)	
	Present	1.0%	2.4%	3.9%	0.003
Radial Pulses		(n=587)	(n=550)	(n=951)	
	Abnormal	0.2%	0.5%	0.7%	0.329
Femoral Pulses		(n=587)	(n=550)	(n=950)	
	Abnormal	0.3%	1.3%	2.6%	0.002
Popliteal Pulses		(n=587)	(n=549)	(n=950)	
	Abnormal	0.5%	2.0%	3.9%	0.001
Dorsalis Pedis Pulses		(n=587)	(n=549)	(n=950)	
	Abnormal	2.9%	6.2%	11.9%	0.001
Posterior Tibial Pulses		(n=587)	(n=549)	(n=948)	
	Abnormal	3.1%	3.6%	8.8%	0.001

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Leg Pulses	Abnormal	(n=587) 5.1%	(n=549) 7.5%	(n=948) 15.3%	0.001
Peripheral Pulses	Abnormal	(n=587) 5.3%	(n=549) 7.7%	(n=948) 15.7%	0.001
ICVI Index	Abnormal	(n=587) 1.4%	(n=550) 2.5%	(n=951) 5.9%	0.001

Dependent Variable	Level	Current Cigarette Smoking (cigarettes/day)				p-Value
		0-Never	0-Former	>0-20	>20	
Essential Hypertension		--	--	--	--	--
Heart Disease (Excluding Essential Hypertension)		--	--	--	--	--
Myocardial Infarction		--	--	--	--	--
Stroke or Transient Ischemia Attack		--	--	--	--	--
Systolic Blood Pressure (mm Hg) (continuous) ^a		(n=587)	(n=1,101)	(n=266)	(n=136)	0.004
(discrete)	High	19.9%	22.7%	20.3%	16.2%	0.236
Diastolic Blood Pressure (mm Hg) (continuous) ^b		(n=587)	(n=1,101)	(n=266)	(n=136)	0.001
(discrete)	High	4.1%	5.7%	5.3%	3.7%	0.438
Heart Sounds	Abnormal	(n=587) 2.9%	(n=1,101) 5.7%	(n=266) 3.4%	(n=136) 2.9%	0.030
Overall Electrocardiograph (ECG)	Abnormal	(n=587) 28.3%	(n=1,101) 32.8%	(n=266) 35.0%	(n=136) 23.5%	0.028
ECG: Right Bundle Branch Block	Yes	(n=587) 2.2%	(n=1,101) 2.9%	(n=266) 2.3%	(n=136) 2.2%	0.810
ECG: Left Bundle Branch Block	Yes	(n=587) 0.5%	(n=1,101) 1.2%	(n=266) 0.0%	(n=136) 0.7%	0.195
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=587) 17.9%	(n=1,101) 19.2%	(n=266) 19.2%	(n=136) 11.0%	0.135
ECG: Bradycardia	Yes	(n=587) 4.3%	(n=1,101) 3.1%	(n=266) 4.1%	(n=136) 2.2%	0.466
ECG: Tachycardia	Yes	(n=587) 0.5%	(n=1,101) 0.5%	(n=266) 0.4%	(n=136) 0.7%	0.965
ECG: Arrhythmia	Yes	(n=587) 4.1%	(n=1,101) 6.8%	(n=266) 5.3%	(n=136) 4.4%	0.117
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=587) 2.9%	(n=1,101) 4.7%	(n=266) 4.5%	(n=136) 4.4%	0.344

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Current Cigarette Smoking (cigarettes/day)				p-Value
		0-Never	0-Former	>0-20	>20	
ECG: Other Diagnoses	Yes	(n=587) 0.2%	(n=1,101) 0.2%	(n=266) 0.0%	(n=136) 0.7%	0.451
Funduscopy Examination	Abnormal	(n=587) 8.9%	(n=1,100) 14.0%	(n=266) 13.5%	(n=135) 14.1%	0.019
Carotid Bruits	Present	(n=587) 1.0%	(n=1,101) 3.1%	(n=266) 4.1%	(n=136) 3.7%	0.023
Radial Pulses	Abnormal	(n=587) 0.2%	(n=1,101) 0.4%	(n=266) 1.9%	(n=136) 0.7%	0.010
Femoral Pulses	Abnormal	(n=587) 0.3%	(n=1,100) 1.2%	(n=266) 4.9%	(n=136) 4.4%	0.001
Popliteal Pulses	Abnormal	(n=587) 0.5%	(n=1,099) 2.0%	(n=266) 7.1%	(n=136) 5.1%	0.001
Dorsalis Pedis Pulses	Abnormal	(n=587) 2.9%	(n=1,099) 8.0%	(n=266) 13.9%	(n=136) 16.2%	0.001
Posterior Tibial Pulses	Abnormal	(n=587) 3.1%	(n=1,098) 5.6%	(n=265) 10.6%	(n=136) 11.0%	0.001
Leg Pulses	Abnormal	(n=587) 5.1%	(n=1,098) 10.7%	(n=265) 16.2%	(n=136) 19.9%	0.001
Peripheral Pulses	Abnormal	(n=587) 5.3%	(n=1,098) 10.8%	(n=265) 17.4%	(n=136) 19.9%	0.001
ICVI Index	Abnormal	(n=587) 1.4%	(n=1,101) 3.5%	(n=266) 7.9%	(n=136) 8.1%	0.001

Dependent Variable	Level	Cholesterol (mg/dl)			p-Value
		≤200	>200-239	>239	
Essential Hypertension	Yes	(n=785) 41.0%	(n=838) 42.7%	(n=447) 38.9%	0.415
Heart Disease (Excluding Essential Hypertension)	Yes	(n=794) 66.6%	(n=848) 63.3%	(n=449) 55.9%	0.001
Myocardial Infarction	Yes	(n=794) 11.5%	(n=848) 8.0%	(n=449) 3.8%	0.001
Stroke or Transient Ischemia Attack	Yes	(n=794) 1.4%	(n=848) 1.3%	(n=449) 0.7%	0.503
Systolic Blood Pressure (mm Hg) (continuous) ^a		(n=794)	(n=848) r=0.055	(n=449)	0.012
(discrete)	High	18.1%	22.6%	23.8%	0.025
Diastolic Blood Pressure (mm Hg) (continuous) ^b		(n=794)	(n=848) r=0.096	(n=449)	<0.001
(discrete)	High	4.0%	5.3%	6.5%	0.159
Heart Sounds	Abnormal	(n=794) 4.2%	(n=848) 4.5%	(n=449) 4.9%	0.828

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Cholesterol (mg/dl)			p-Value
		≤200	>200-239	>239	
Overall Electrocardiograph (ECG)		(n=794)	(n=848)	(n=449)	
	Abnormal	34.4%	29.7%	28.3%	0.041
ECG: Right Bundle Branch Block		(n=794)	(n=848)	(n=449)	
	Yes	3.0%	2.1%	2.7%	0.512
ECG: Left Bundle Branch Block		(n=794)	(n=848)	(n=449)	
	Yes	0.9%	0.7%	0.9%	0.906
ECG: Non-specific ST- and T-Wave Changes		(n=794)	(n=848)	(n=449)	
	Yes	19.8%	17.0%	18.0%	0.339
ECG: Bradycardia		(n=794)	(n=848)	(n=449)	
	Yes	4.0%	3.5%	2.4%	0.344
ECG: Tachycardia		(n=794)	(n=848)	(n=449)	
	Yes	0.3%	0.6%	0.7%	0.493
ECG: Arrhythmia		(n=794)	(n=848)	(n=449)	
	Yes	6.4%	5.3%	5.1%	0.523
ECG: Evidence of Prior Myocardial Infarction		(n=794)	(n=848)	(n=449)	
	Yes	5.8%	3.7%	2.2%	0.007
ECG: Other Diagnoses		(n=794)	(n=848)	(n=449)	
	Yes	0.4%	0.0%	0.2%	0.213
Fundusoscopic Examination		(n=792)	(n=848)	(n=449)	
	Abnormal	13.1%	11.4%	13.4%	0.480
Carotid Bruits		(n=794)	(n=848)	(n=449)	
	Present	2.6%	2.7%	2.7%	0.996
Radial Pulses		(n=794)	(n=848)	(n=449)	
	Abnormal	0.5%	0.6%	0.4%	0.938
Femoral Pulses		(n=793)	(n=848)	(n=449)	
	Abnormal	1.5%	1.7%	1.8%	0.935
Popliteal Pulses		(n=793)	(n=847)	(n=449)	
	Abnormal	2.1%	2.6%	2.7%	0.786
Dorsalis Pedis Pulses		(n=793)	(n=847)	(n=449)	
	Abnormal	7.2%	8.3%	8.2%	0.678
Posterior Tibial Pulses		(n=793)	(n=845)	(n=449)	
	Abnormal	4.9%	6.9%	5.6%	0.235
Leg Pulses		(n=793)	(n=845)	(n=449)	
	Abnormal	9.0%	11.4%	11.1%	0.237
Peripheral Pulses		(n=793)	(n=845)	(n=449)	
	Abnormal	9.2%	11.7%	11.4%	0.226
ICVI Index		(n=793)	(n=848)	(n=449)	
	Abnormal	3.8%	3.5%	4.0%	0.909

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	HDL Cholesterol (mg/dl)			Cholesterol-HDL Ratio		
		0-35	>35	p-Value	0-5	>5	p-Value
Essential Hypertension	Yes	(n=369) 45.0%	(n=1,700) 40.5%	0.124	(n=1,217) 38.7%	(n=852) 45.0%	0.005
Heart Disease (Excluding Essential Hypertension)	Yes	(n=372) 61.3%	(n=1,718) 63.4%	0.484	(n=1,230) 64.6%	(n=860) 60.7%	0.074
Myocardial Infarction	Yes	(n=372) 11.8%	(n=1,718) 7.7%	0.012	(n=1,230) 8.1%	(n=860) 8.8%	0.622
Stroke or Transient Ischemia Attack	Yes	(n=372) 1.3%	(n=1,718) 1.2%	0.979	(n=1,230) 1.2%	(n=860) 1.2%	0.999
Systolic Blood Pressure (mm Hg) (continuous) ^a (discrete)	High	(n=372) 21.5%	(n=1,718) 21.1%	0.245 0.928	(n=1,230) 19.5%	(n=860) 23.6%	0.005 0.028
Diastolic Blood Pressure (mm Hg) (continuous) ^b (discrete)	High	(n=372) 5.4%	(n=1,718) 5.0%	0.707 0.869	(n=1,230) 4.7%	(n=860) 5.6%	0.004 0.432
Heart Sounds	Abnormal	(n=372) 5.6%	(n=1,718) 4.2%	0.274	(n=1,230) 4.2%	(n=860) 4.8%	0.630
Overall Electrocardiograph (ECG)	Abnormal	(n=372) 33.6%	(n=1,718) 30.7%	0.297	(n=1,230) 31.9%	(n=860) 30.2%	0.455
ECG: Right Bundle Branch Block	Yes	(n=372) 3.2%	(n=1,718) 2.4%	0.496	(n=1,230) 2.7%	(n=860) 2.4%	0.840
ECG: Left Bundle Branch Block	Yes	(n=372) 1.3%	(n=1,718) 0.7%	0.348	(n=1,230) 0.9%	(n=860) 0.7%	0.806
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=372) 21.5%	(n=1,718) 17.6%	0.089	(n=1,230) 17.8%	(n=860) 19.0%	0.541
ECG: Bradycardia	Yes	(n=372) 1.6%	(n=1,718) 3.9%	0.043	(n=1,230) 4.5%	(n=860) 2.1%	0.005
ECG: Tachycardia	Yes	(n=372) 0.5%	(n=1,718) 0.5%	0.999	(n=1,230) 0.3%	(n=860) 0.7%	0.372
ECG: Arrhythmia	Yes	(n=372) 4.3%	(n=1,718) 6.0%	0.248	(n=1,230) 6.3%	(n=860) 4.9%	0.215
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=372) 5.4%	(n=1,718) 3.9%	0.250	(n=1,230) 4.2%	(n=860) 4.1%	0.947
ECG: Other Diagnoses	Yes	(n=372) 0.0%	(n=1,718) 0.2%	0.782	(n=1,230) 0.2%	(n=860) 0.1%	0.882
Funduscopy Examination	Abnormal	(n=372) 11.3%	(n=1,716) 12.8%	0.489	(n=1,228) 13.4%	(n=860) 11.2%	0.139
Carotid Bruits	Present	(n=372) 1.9%	(n=1,718) 2.9%	0.382	(n=1,230) 2.5%	(n=860) 2.9%	0.688

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	HDL Cholesterol (mg/dl)			Cholesterol-HDL Ratio		
		0-35	>35	p-Value	0-5	>5	p-Value
Radial Pulses	Abnormal	(n=372) 0.5%	(n=1,718) 0.5%	0.999	(n=1,230) 0.5%	(n=860) 0.6%	0.999
Femoral Pulses	Abnormal	(n=371) 1.6%	(n=1,718) 1.6%	0.999	(n=1,230) 1.5%	(n=859) 1.7%	0.855
Popliteal Pulses	Abnormal	(n=371) 2.4%	(n=1,717) 2.4%	0.999	(n=1,229) 2.1%	(n=859) 2.9%	0.311
Dorsalis Pedis Pulses	Abnormal	(n=371) 8.6%	(n=1,717) 7.7%	0.615	(n=1,229) 7.1%	(n=859) 9.0%	0.135
Posterior Tibial Pulses	Abnormal	(n=371) 5.1%	(n=1,715) 6.0%	0.592	(n=1,229) 5.8%	(n=857) 6.0%	0.943
Leg Pulses	Abnormal	(n=371) 10.5%	(n=1,715) 10.4%	0.999	(n=1,229) 9.8%	(n=857) 11.3%	0.284
Peripheral Pulses	Abnormal	(n=371) 10.5%	(n=1,715) 10.7%	0.976	(n=1,229) 10.1%	(n=857) 11.6%	0.321
ICVI Index	Abnormal	(n=372) 5.1%	(n=1,717) 3.4%	0.164	(n=1,229) 3.6%	(n=860) 4.0%	0.745

Dependent Variable	Level	Body Fat			Personality Type		
		Lean/Normal	Obese	p-Value	Type A	Type B	p-Value
Essential Hypertension	Yes	(n=1,472) 35.2%	(n=598) 56.2%	0.001	(n=803) 38.4%	(n=1,264) 43.0%	0.039
Heart Disease (Excluding Essential Hypertension)	Yes	(n=1,482) 62.7%	(n=609) 63.7%	0.696	(n=812) 62.8%	(n=1,276) 63.0%	0.963
Myocardial Infarction	Yes	(n=1,482) 8.6%	(n=609) 8.0%	0.760	(n=812) 8.9%	(n=1,276) 8.1%	0.577
Stroke or Transient Ischemia Attack	Yes	(n=1,482) 1.1%	(n=609) 1.3%	0.923	(n=812) 0.9%	(n=1,276) 1.4%	0.359
Systolic Blood Pressure (mm Hg)		(n=1,482)	(n=609)		(n=812)	(n=1,276)	
(continuous) ^a (discrete)	High	r=0.185		<0.001	\bar{x} =124.4	\bar{x} =125.9	0.061
		18.6%	27.4%	0.001	19.2%	22.5%	0.083
Diastolic Blood Pressure (mm Hg)		(n=1,482)	(n=609)		(n=812)	(n=1,276)	
(continuous) ^b (discrete)	High	r=0.122		<0.001	\bar{x} =74.40	\bar{x} =74.71	0.457
		4.5%	6.6%	0.058	4.3%	5.5%	0.273
Heart Sounds	Abnormal	(n=1,482) 4.1%	(n=609) 5.3%	0.303	(n=812) 4.1%	(n=1,276) 4.7%	0.562
Overall Electrocardiograph (ECG)	Abnormal	(n=1,482) 29.4%	(n=609) 35.5%	0.008	(n=812) 27.8%	(n=1,276) 33.2%	0.011

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Body Fat			Personality Type		
		Lean/Normal	Obese	p-Value	Type A	Type B	p-Value
ECG: Right Bundle Branch Block	Yes	(n=1,482) 2.4%	(n=609) 3.0%	0.591	(n=812) 2.6%	(n=1,276) 2.6%	0.999
ECG: Left Bundle Branch Block	Yes	(n=1,482) 0.7%	(n=609) 1.0%	0.769	(n=812) 0.9%	(n=1,276) 0.8%	0.999
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=1,482) 16.3%	(n=609) 23.0%	0.001	(n=812) 16.9%	(n=1,276) 19.2%	0.199
ECG: Bradycardia	Yes	(n=1,482) 4.5%	(n=609) 1.0%	0.001	(n=812) 3.8%	(n=1,276) 3.3%	0.606
ECG: Tachycardia	Yes	(n=1,482) 0.3%	(n=609) 0.8%	0.268	(n=812) 0.2%	(n=1,276) 0.6%	0.366
ECG: Arrhythmia	Yes	(n=1,482) 5.6%	(n=609) 5.9%	0.861	(n=812) 5.7%	(n=1,276) 5.6%	0.999
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=1,482) 3.8%	(n=609) 5.1%	0.213	(n=812) 3.7%	(n=1,276) 4.5%	0.454
ECG: Other Diagnoses	Yes	(n=1,482) 0.3%	(n=609) 0.0%	0.464	(n=812) 0.2%	(n=1,276) 0.2%	0.999
Funduscopy Examination	Abnormal	(n=1,481) 11.1%	(n=608) 15.8%	0.004	(n=811) 9.2%	(n=1,275) 14.4%	0.001
Carotid Bruits	Present	(n=1,482) 2.8%	(n=609) 2.3%	0.589	(n=812) 2.3%	(n=1,276) 2.8%	0.596
Radial Pulses	Abnormal	(n=1,482) 0.6%	(n=609) 0.3%	0.640	(n=812) 0.6%	(n=1,276) 0.5%	0.890
Femoral Pulses	Abnormal	(n=1,481) 1.6%	(n=609) 1.6%	0.999	(n=811) 1.0%	(n=1,276) 1.9%	0.150
Popliteal Pulses	Abnormal	(n=1,480) 2.5%	(n=609) 2.3%	0.909	(n=810) 1.6%	(n=1,276) 2.8%	0.101
Dorsalis Pedis Pulses	Abnormal	(n=1,480) 8.2%	(n=609) 6.9%	0.342	(n=810) 6.4%	(n=1,276) 8.6%	0.081
Posterior Tibial Pulses	Abnormal	(n=1,478) 6.5%	(n=609) 4.3%	0.062	(n=809) 4.2%	(n=1,275) 6.7%	0.020
Leg Pulses	Abnormal	(n=1,478) 11.2%	(n=609) 8.4%	0.062	(n=809) 8.2%	(n=1,275) 11.7%	0.012
Peripheral Pulses	Abnormal	(n=1,478) 11.6%	(n=609) 8.4%	0.034	(n=809) 8.7%	(n=1,275) 11.8%	0.026
ICVI Index	Abnormal	(n=1,481) 3.6%	(n=609) 3.9%	0.845	(n=811) 4.2%	(n=1,276) 3.4%	0.394

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Family History of Heart Disease			Family History of Heart Disease Before Age 45		
		Yes	No	p-Value	Yes	No	p-Value
Essential Hypertension	Yes	(n=1,246) 45.3%	(n=808) 35.3%	0.001	(n=243) 50.2%	(n=1,784) 40.1%	0.003
Heart Disease (Excluding Essential Hypertension)	Yes	(n=1,262) 66.6%	(n=813) 57.4%	0.001	(n=249) 69.9%	(n=1,798) 62.0%	0.018
Myocardial Infarction	Yes	(n=1,262) 9.4%	(n=813) 6.9%	0.058	(n=249) 10.8%	(n=1,798) 8.0%	0.154
Stroke or Transient Ischemia Attack	Yes	(n=1,262) 1.2%	(n=813) 1.2%	0.999	(n=249) 1.2%	(n=1,798) 1.2%	0.999
Systolic Blood Pressure (mm Hg)		(n=1,262)	(n=813)		(n=249)	(n=1,798)	
(continuous) ^a (discrete)	High	\bar{x} =125.8 23.3%	\bar{x} =124.6 18.3%	0.130 0.008	\bar{x} =125.2 20.1%	\bar{x} =125.3 21.2%	0.938 0.734
Diastolic Blood Pressure (mm Hg)		(n=1,262)	(n=813)		(n=249)	(n=1,798)	
(continuous) ^b (discrete)	High	\bar{x} =74.71 5.3%	\bar{x} =74.47 4.7%	0.557 0.588	\bar{x} =74.06 4.4%	\bar{x} =74.60 4.9%	0.384 0.835
Heart Sounds	Abnormal	(n=1,262) 4.9%	(n=813) 3.7%	0.226	(n=249) 6.4%	(n=1,798) 4.1%	0.133
Overall Electrocardiograph (ECG)	Abnormal	(n=1,262) 35.3%	(n=813) 24.6%	0.001	(n=249) 36.1%	(n=1,798) 30.4%	0.076
ECG: Right Bundle Branch Block	Yes	(n=1,262) 3.2%	(n=813) 1.7%	0.060	(n=249) 2.8%	(n=1,798) 2.6%	0.999
ECG: Left Bundle Branch Block	Yes	(n=1,262) 0.6%	(n=813) 1.1%	0.251	(n=249) 0.4%	(n=1,798) 0.8%	0.732
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=1,262) 21.1%	(n=813) 14.0%	0.001	(n=249) 22.5%	(n=1,798) 17.6%	0.076
ECG: Bradycardia	Yes	(n=1,262) 3.4%	(n=813) 3.7%	0.826	(n=249) 2.4%	(n=1,798) 3.6%	0.430
ECG: Tachycardia	Yes	(n=1,262) 0.7%	(n=813) 0.1%	0.116	(n=249) 0.8%	(n=1,798) 0.4%	0.783
ECG: Arrhythmia	Yes	(n=1,262) 6.4%	(n=813) 4.6%	0.090	(n=249) 7.2%	(n=1,798) 5.3%	0.284
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=1,262) 4.4%	(n=813) 3.7%	0.525	(n=249) 4.4%	(n=1,798) 4.0%	0.890
ECG: Other Diagnoses	Yes	(n=1,262) 0.1%	(n=813) 0.4%	0.339	(n=249) 0.0%	(n=1,798) 0.2%	0.999

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Family History of Heart Disease			Family History of Heart Disease Before Age 45		
		Yes	No	p-Value	Yes	No	p-Value
Funduscopy Examination	Abnormal	(n=1,262) 12.8%	(n=811) 12.1%	0.700	(n=249) 14.5%	(n=1,796) 12.2%	0.376
Carotid Bruits	Present	(n=1,262) 2.9%	(n=813) 2.5%	0.689	(n=249) 3.6%	(n=1,798) 2.6%	0.484
Radial Pulses	Abnormal	(n=1,262) 0.6%	(n=813) 0.5%	0.999	(n=249) 0.8%	(n=1,798) 0.5%	0.881
Femoral Pulses	Abnormal	(n=1,261) 1.8%	(n=813) 1.4%	0.517	(n=249) 1.2%	(n=1,797) 1.7%	0.736
Popliteal Pulses	Abnormal	(n=1,260) 2.6%	(n=813) 2.2%	0.663	(n=249) 2.8%	(n=1,796) 2.4%	0.900
Dorsalis Pedis Pulses	Abnormal	(n=1,260) 8.1%	(n=813) 7.6%	0.762	(n=249) 8.4%	(n=1,796) 7.9%	0.846
Posterior Tibial Pulses	Abnormal	(n=1,258) 6.0%	(n=813) 5.7%	0.790	(n=248) 6.0%	(n=1,795) 5.8%	0.987
Leg Pulses	Abnormal	(n=1,258) 10.6%	(n=813) 10.3%	0.920	(n=248) 9.7%	(n=1,795) 10.5%	0.784
Peripheral Pulses	Abnormal	(n=1,258) 10.8%	(n=813) 10.7%	0.995	(n=248) 10.1%	(n=1,795) 10.8%	0.833
ICVI Index	Abnormal	(n=1,262) 4.0%	(n=813) 3.2%	0.433	(n=249) 2.8%	(n=1,798) 3.8%	0.533

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Diabetic Class				Blood Pressure Medication		
		Normal	Impaired	Diabetic	p-Value	Yes	No	p-Value
Essential Hypertension	Yes	(n=1,429) 34.6%	(n=271) 52.4%	(n=345) 59.4%	0.001	--	--	--
Heart Disease (Excluding Essential Hypertension)	Yes	(n=1,441) 60.8%	(n=273) 64.1%	(n=351) 69.5%	0.009	--	--	--
Myocardial Infarction	Yes	(n=1,441) 6.8%	(n=273) 9.9%	(n=351) 14.2%	0.001	--	--	--
Stroke or Transient Ischemia Attack	Yes	(n=1,441) 1.0%	(n=273) 1.1%	(n=351) 1.4%	0.828	--	--	--
Systolic Blood Pressure (mm Hg)		(n=1,441)	(n=273)	(n=351)		(n=617)	(n=1,474)	
(continuous) ^a		\bar{x} =123.0	\bar{x} =129.3	\bar{x} =131.8	<0.001	\bar{x} =128.6	\bar{x} =123.9	<0.001
(discrete)	High	17.1%	28.6%	31.9%	0.001	27.6%	18.5%	0.001
Diastolic Blood Pressure (mm Hg)		(n=1,441)	(n=273)	(n=351)		(n=617)	(n=1,474)	
(continuous) ^b		\bar{x} =74.32	\bar{x} =75.94	\bar{x} =74.41	0.030	\bar{x} =74.86	\bar{x} =74.48	0.392
(discrete)	High	4.5%	7.3%	5.4%	0.140	7.3%	4.1%	0.004
Heart Sounds	Abnormal	(n=1,441) 3.7%	(n=273) 5.5%	(n=351) 6.0%	0.113	--	--	--
Overall Electrocardiograph (ECG)	Abnormal	(n=1,441) 26.4%	(n=273) 37.0%	(n=351) 46.7%	0.001	--	--	--
ECG: Right Bundle Branch Block	Yes	(n=1,441) 1.9%	(n=273) 2.6%	(n=351) 5.4%	0.001	--	--	--
ECG: Left Bundle Branch Block	Yes	(n=1,441) 0.7%	(n=273) 1.1%	(n=351) 1.1%	0.613	--	--	--
ECG: Non-specific ST- and T-Wave Changes	Yes	(n=1,441) 14.6%	(n=273) 24.5%	(n=351) 29.3%	0.001	--	--	--
ECG: Bradycardia	Yes	(n=1,441) 4.5%	(n=273) 0.4%	(n=351) 1.7%	0.001	--	--	--
ECG: Tachycardia	Yes	(n=1,441) 0.2%	(n=273) 0.4%	(n=351) 1.4%	0.008	--	--	--
ECG: Arrhythmia	Yes	(n=1,441) 5.2%	(n=273) 5.1%	(n=351) 8.0%	0.121	--	--	--
ECG: Evidence of Prior Myocardial Infarction	Yes	(n=1,441) 2.8%	(n=273) 5.1%	(n=351) 9.4%	0.001	--	--	--
ECG: Other Diagnoses	Yes	(n=1,441) 0.3%	(n=273) 0.0%	(n=351) 0.0%	0.420	--	--	--

Table F-6. Dependent Variable-Covariate Associations for the Cardiovascular Assessment (Continued)

Dependent Variable	Level	Diabetic Class				Blood Pressure Medication		
		Normal	Impaired	Diabetic	p-Value	Yes	No	p-Value
Funduscopy Examination	Abnormal	(n=1,440) 10.3%	(n=273) 14.3%	(n=350) 20.0%	0.001	--	--	--
Carotid Bruits	Present	(n=1,441) 2.1%	(n=273) 2.9%	(n=351) 5.1%	0.007	--	--	--
Radial Pulses	Abnormal	(n=1,441) 0.3%	(n=273) 0.4%	(n=351) 1.1%	0.152	--	--	--
Femoral Pulses	Abnormal	(n=1,440) 1.2%	(n=273) 1.1%	(n=351) 3.7%	0.003	--	--	--
Popliteal Pulses	Abnormal	(n=1,439) 1.7%	(n=273) 1.8%	(n=351) 6.0%	0.001	--	--	--
Dorsalis Pedis Pulses	Abnormal	(n=1,439) 6.7%	(n=273) 5.5%	(n=351) 14.0%	0.001	--	--	--
Posterior Tibial Pulses	Abnormal	(n=1,437) 4.1%	(n=273) 5.5%	(n=351) 13.4%	0.001	--	--	--
Leg Pulses	Abnormal	(n=1,437) 8.7%	(n=273) 8.4%	(n=351) 18.8%	0.001	--	--	--
Peripheral Pulses	Abnormal	(n=1,437) 8.9%	(n=273) 8.4%	(n=351) 19.4%	0.001	--	--	--
ICVI Index	Abnormal	(n=1,440) 2.6%	(n=273) 2.9%	(n=351) 9.1%	0.001	--	--	--

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

^b Analysis performed on square root scale; means transformed from square root scale.

--: Covariate not applicable for dependent variable.

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

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
RBC Count (million/mm ³)		(n=928)	(n=1,187)		(n=128)	(n=1,987)	
(continuous)		r=-0.181		<0.001	\bar{x} =4.99	\bar{x} =4.95	0.291
(discrete)	Abn. Low	2.1%	7.0%	0.001	7.8%	4.6%	0.001
	Normal	97.2%	91.8%		86.7%	94.7%	
	Abn. High	0.7%	1.2%		5.5%	0.7%	
WBC Count (thousand/mm ³)		(n=928)	(n=1,187)		(n=128)	(n=1,987)	
(continuous) ^a		r=-0.010		0.658	\bar{x} =5.94	\bar{x} =6.71	<0.001
(discrete)	Abn. Low	5.9%	4.9%	0.456	18.8%	4.5%	0.001
	Normal	90.2%	91.7%		78.9%	91.8%	
	Abn. High	3.9%	3.4%		2.3%	3.7%	
Hemoglobin (gm/dl)		(n=928)	(n=1,187)		(n=128)	(n=1,987)	
(continuous)		r=-0.137		<0.001	\bar{x} =14.77	\bar{x} =15.36	<0.001
(discrete)	Abn. Low	4.5%	8.3%	0.002	17.2%	6.0%	0.001
	Normal	95.0%	91.3%		82.8%	93.5%	
	Abn. High	0.5%	0.4%		0.0%	0.5%	
Hematocrit (percent)		(n=928)	(n=1,187)		(n=128)	(n=1,987)	
(continuous)		r=-0.121		<0.001	\bar{x} =44.49	\bar{x} =45.65	<0.001
(discrete)	Abn. Low	1.3%	3.2%	0.014	4.7%	2.2%	0.169
	Normal	98.5%	96.5%		95.3%	97.5%	
	Abn. High	0.2%	0.3%		0.0%	0.3%	
Platelet Count (thousand/mm ³)		(n=926)	(n=1,179)		(n=127)	(n=1,978)	
(continuous) ^b		r=-0.120		<0.001	\bar{x} =203.7	\bar{x} =205.3	0.723
(discrete)	Abn. Low	1.9%	3.7%	0.022	1.6%	3.0%	0.526
	Normal	97.9%	95.7%		97.6%	96.6%	
	Abn. High	0.2%	0.6%		0.8%	0.4%	
Prothrombin Time (seconds)		(n=793)	(n=911)		(n=110)	(n=1,594)	
(continuous) ^a		r=0.096		<0.001	\bar{x} =10.49	\bar{x} =10.49	0.947
(discrete)	High	0.8%	1.9%	0.077	2.7%	1.3%	0.386
RBC Morphology	Abnormal	(n=928)	(n=1,187)	0.013	(n=128)	(n=1,987)	0.001
		5.2%	8.0%		14.1%	6.3%	

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment (Continued)

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Absolute Neutrophils (segs)		(n=2,115)			(n=128)	(n=1,987)	
(thousand/mm ³) ^a		r=0.006		0.767	\bar{x} =3.13	\bar{x} =3.88	<0.001
Absolute Neutrophils (bands)		(n=1,757)			(n=97)	(n=1,660)	
(continuous) ^a	Nonzero	r=0.071		0.003	\bar{x} =0.120	\bar{x} =0.200	<0.001
(discrete)	Zero	(n=928)	(n=1,187)	0.868	(n=128)	(n=1,987)	0.032
		17.1%	16.8%		24.2%	16.5%	
Absolute Lymphocytes		(n=2,115)			(n=128)	(n=1,987)	
(thousand/mm ³) ^a		r=-0.116		<0.001	\bar{x} =1.87	\bar{x} =1.75	0.035
Absolute Monocytes		(n=2,115)			(n=128)	(n=1,987)	
(thousand/mm ³) ^b		r=0.044		0.043	\bar{x} =0.466	\bar{x} =0.480	0.455
Absolute Eosinophils		(n=1,856)			(n=109)	(n=1,747)	
(thousand/mm ³)							
(continuous) ^a	Nonzero	r=0.026		0.256	\bar{x} =0.145	\bar{x} =0.161	0.132
(discrete)	Zero	(n=928)	(n=1,187)	0.516	(n=128)	(n=1,987)	0.432
		12.8%	11.8%		14.8%	12.1%	
Absolute Basophils		(n=953)			(n=54)	(n=899)	
(thousand/mm ³)							
(continuous) ^a	Nonzero	r=0.017		0.610	\bar{x} =0.068	\bar{x} =0.080	0.006
(discrete)	Zero	(n=928)	(n=1,187)	0.120	(n=128)	(n=1,987)	0.561
		56.9%	53.4%		57.8%	54.8%	

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
RBC Count (million/mm ³)		(n=834)	(n=338)	(n=943)	
(continuous)		\bar{x} =4.90	\bar{x} =4.95	\bar{x} =5.01	<0.001
(discrete)	Abnormal Low	5.6%	5.3%	3.9%	0.502
	Normal	93.6%	93.5%	95.1%	
	Abnormal High	0.8%	1.2%	1.0%	
WBC Count (thousand/mm ³)		(n=834)	(n=338)	(n=943)	
(continuous) ^a		\bar{x} =6.33	\bar{x} =6.80	\bar{x} =6.91	<0.001
(discrete)	Abnormal Low	6.1%	4.7%	4.9%	0.056
	Normal	91.6%	90.0%	91.0%	
	Abnormal High	2.3%	5.3%	4.1%	
Hemoglobin (gm/dl)		(n=834)	(n=338)	(n=943)	
(continuous)		\bar{x} =15.26	\bar{x} =15.34	\bar{x} =15.37	0.076
(discrete)	Abnormal Low	6.5%	8.6%	6.2%	0.609
	Normal	93.0%	91.1%	93.3%	
	Abnormal High	0.5%	0.3%	0.5%	
Hematocrit (percent)		(n=834)	(n=338)	(n=943)	
(continuous)		\bar{x} =45.38	\bar{x} =45.62	\bar{x} =45.74	0.050
(discrete)	Abnormal Low	2.4%	3.0%	2.1%	0.930
	Normal	97.4%	96.7%	97.6%	
	Abnormal High	0.2%	0.3%	0.3%	
Platelet Count (thousand/mm ³)		(n=828)	(n=336)	(n=941)	
(continuous) ^b		\bar{x} =201.6	\bar{x} =205.5	\bar{x} =208.2	0.015
(discrete)	Abnormal Low	3.0%	3.6%	2.7%	0.860
	Normal	96.5%	95.8%	97.0%	
	Abnormal High	0.5%	0.6%	0.3%	
Prothrombin Time (seconds)		(n=667)	(n=271)	(n=766)	
(continuous) ^a		\bar{x} =10.53	\bar{x} =10.48	\bar{x} =10.46	0.215
(discrete)	High	2.0%	0.4%	1.2%	0.140
RBC Morphology		(n=834)	(n=338)	(n=943)	
	Abnormal	5.8%	9.5%	6.7%	0.072

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Absolute Neutrophils (segs) (thousand/mm ³) ^a		(n=834) \bar{x} =3.60	(n=338) \bar{x} =3.94	(n=943) \bar{x} =4.00	<0.001
Absolute Neutrophils (bands) (thousand/mm ³) (continuous) ^a (discrete)	Nonzero	(n=700) \bar{x} =0.186 (n=834)	(n=275) \bar{x} =0.198 (n=338)	(n=782) \bar{x} =0.201 (n=943)	0.179
	Zero	16.1%	18.6%	17.1%	0.561
Absolute Lymphocytes (thousand/mm ³) ^a		(n=834) \bar{x} =1.68	(n=338) \bar{x} =1.75	(n=943) \bar{x} =1.82	<0.001
Absolute Monocytes (thousand/mm ³) ^b		(n=834) \bar{x} =0.468	(n=338) \bar{x} =0.491	(n=943) \bar{x} =0.486	0.119
Absolute Eosinophils (thousand/mm ³) (continuous) ^a (discrete)	Nonzero	(n=753) \bar{x} =0.156 (n=834)	(n=299) \bar{x} =0.163 (n=338)	(n=804) \bar{x} =0.163 (n=943)	0.395
	Zero	9.7%	11.5%	14.7%	0.005
Absolute Basophils (thousand/mm ³) (continuous) ^a (discrete)	Nonzero	(n=381) \bar{x} =0.076 (n=834)	(n=162) \bar{x} =0.081 (n=338)	(n=410) \bar{x} =0.081 (n=943)	0.114
	Zero	54.3%	52.1%	56.5%	0.332

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment (Continued)

Dependent Variable	Level	Current Cigarette Smoking (cigarettes/day)				p-Value
		0-Never	0-Former	>0-20	>20	
RBC Count (million/mm ³) (continuous) (discrete)		(n=593)	(n=1,116)	(n=268)	(n=137)	
			r=0.064			0.003
	Abnormal Low	4.1%	5.3%	6.0%	2.2%	0.627
	Normal	94.9%	93.8%	92.9%	97.1%	
	Abnormal High	1.0%	0.9%	1.1%	0.7%	
WBC Count (thousand/mm ³) (continuous) ^a (discrete)		(n=593)	(n=1,116)	(n=268)	(n=137)	
			r=0.395			<0.001
	Abnormal Low	7.9%	5.2%	1.9%	1.5%	0.001
	Normal	90.7%	93.0%	88.4%	82.4%	
	Abnormal High	1.4%	1.8%	9.7%	16.1%	
Hemoglobin (gm/dl) (continuous) (discrete)		(n=593)	(n=1,116)	(n=268)	(n=137)	
			r=0.213			<0.001
	Abnormal Low	6.2%	8.1%	4.1%	2.2%	0.031
	Normal	93.5%	91.5%	94.8%	97.1%	
	Abnormal High	0.3%	0.4%	1.1%	0.7%	
Hematocrit (percent) (continuous) (discrete)		(n=593)	(n=1,116)	(n=268)	(n=137)	
			r=0.209			<0.001
	Abnormal Low	1.7%	3.0%	1.9%	1.5%	0.292
	Normal	98.1%	96.8%	97.3%	97.8%	
	Abnormal High	0.2%	0.2%	0.8%	0.7%	
Platelet Count (thousand/mm ³) (continuous) ^b (discrete)		(n=589)	(n=1,113)	(n=267)	(n=135)	
			r=0.062			0.005
	Abnormal Low	2.9%	3.0%	3.4%	2.2%	0.070
	Normal	96.9%	96.6%	96.2%	95.6%	
	Abnormal High	0.2%	0.4%	0.4%	2.2%	
Prothrombin Time (seconds) (continuous) ^a (discrete)			(n=1,703)			
			r=-0.025			0.298
	High	(n=496)	(n=889)	(n=208)	(n=110)	0.862
		1.2%	1.4%	1.9%	0.9%	
RBC Morphology	Abnormal	(n=593)	(n=1,116)	(n=268)	(n=137)	0.001
		3.7%	7.3%	9.7%	10.2%	
Absolute Neutrophils (segs) (thousand/mm ³) ^a			(n=2,114)			<0.001
			r=0.347			

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment (Continued)

Dependent Variable	Level	Current Cigarette Smoking (cigarettes/day)				p-Value
		0-Never	0-Former	>0-20	>20	
Absolute Neutrophils (bands) (thousand/mm ³) (continuous) ^a (discrete)	Nonzero		(n=1,756) r=0.188			<0.001
	Zero	(n=593) 16.0%	(n=1,116) 17.8%	(n=268) 18.3%	(n=137) 11.0%	0.185
Absolute Lymphocytes (thousand/mm ³) ^a			(n=2,114) r=0.195			<0.001
Absolute Monocytes (thousand/mm ³) ^b			(n=2,114) r=0.160			<0.001
Absolute Eosinophils (thousand/mm ³) (continuous) ^a (discrete)	Nonzero		(n=1,855) r=0.134			<0.001
	Zero	(n=593) 12.8%	(n=1,116) 11.8%	(n=268) 11.6%	(n=137) 14.6%	0.758
Absolute Basophils (thousand/mm ³) (continuous) ^a (discrete)	Nonzero		(n=953) r=0.267			<0.001
	Zero	(n=593) 59.2%	(n=1,116) 52.5%	(n=268) 53.0%	(n=137) 59.9%	0.033

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment (Continued)

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
RBC Count (million/mm ³) (continuous)		(n=593)	(n=555)	(n=964)	
(discrete)			r=-0.047		0.031
	Abnormal Low	4.1%	4.5%	5.5%	0.684
	Normal	94.9%	94.8%	93.5%	
	Abnormal High	1.0%	0.7%	1.0%	
WBC Count (thousand/mm ³) (continuous) ^a		(n=593)	(n=555)	(n=964)	
(discrete)			r=0.236		<0.001
	Abnormal Low	7.9%	5.8%	3.4%	0.001
	Normal	90.7%	91.1%	91.3%	
	Abnormal High	1.4%	3.1%	5.3%	
Hemoglobin (gm/dl) (continuous)		(n=593)	(n=555)	(n=964)	
(discrete)			r=0.036		0.102
	Abnormal Low	6.2%	5.2%	7.8%	0.304
	Normal	93.5%	94.4%	91.6%	
	Abnormal High	0.3%	0.4%	0.6%	
Hematocrit (percent) (continuous)		(n=593)	(n=555)	(n=964)	
(discrete)			r=0.037		0.085
	Abnormal Low	1.7%	2.0%	3.0%	0.134
	Normal	98.1%	98.0%	96.5%	
	Abnormal High	0.2%	0.0%	0.5%	
Platelet Count (thousand/mm ³) (continuous) ^b		(n=589)	(n=553)	(n=960)	
(discrete)			r=0.094		<0.001
	Abnormal Low	2.9%	2.7%	3.1%	0.123
	Normal	96.9%	97.3%	96.1%	
	Abnormal High	0.2%	0.0%	0.8%	
Prothrombin Time (seconds) (continuous) ^a			(n=1,702)		
(discrete)			r=0.000		0.998
		(n=496)	(n=438)	(n=768)	
	High	1.2%	1.1%	1.6%	0.788
RBC Morphology		(n=593)	(n=555)	(n=964)	
	Abnormal	3.7%	7.0%	8.5%	0.001
Absolute Neutrophils (segs) (thousand/mm ³) ^a			(n=2,112)		
			r=0.214		<0.001

Table F-7. Dependent Variable-Covariate Associations for the Hematology Assessment (Continued)

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Absolute Neutrophils (bands) (thousand/mm ³) (continuous) ^a (discrete)	Nonzero		(n=1,754) r=0.133		<0.001
	Zero	(n=593) 16.0%	(n=555) 19.1%	(n=964) 16.3%	0.288
Absolute Lymphocytes (thousand/mm ³) ^a			(n=2,112) r=0.067		0.002
Absolute Monocytes (thousand/mm ³) ^b			(n=2,112) r=0.142		<0.001
Absolute Eosinophils (thousand/mm ³) (continuous) ^a (discrete)	Nonzero		(n=1,853) r=0.086		<0.001
	Zero	(n=593) 12.8%	(n=555) 10.6%	(n=964) 12.9%	0.393
Absolute Basophils (thousand/mm ³) (continuous) ^a (discrete)	Nonzero		(n=952) r=0.168		<0.001
	Zero	(n=593) 59.2%	(n=555) 54.4%	(n=964) 52.6%	0.038

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

^b Analysis performed on square root scale; means transformed from square root scale.

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

Table F-8. Dependent Variable-Covariate Associations for the Endocrine Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Past Thyroid Disease	Yes	(n=930) 6.5%	(n=1,179) 9.3%	0.020	(n=128) 6.3%	(n=1,981) 8.2%	0.543
Composite Diabetes Indicator	Diabetic	(n=920) 10.8%	(n=1,171) 21.8%	0.001	(n=125) 25.6%	(n=1,966) 16.4%	0.011
Diabetic Severity	Nondiabetic	(n=920) 90.5%	(n=1,171) 81.2%	0.001	(n=125) 76.0%	(n=1,966) 85.9%	0.023
	No Treat.	4.6%	6.2%		7.2%	5.4%	
	Diet Only	0.8%	2.5%		2.4%	1.7%	
	Oral Hypo.	2.9%	7.5%		11.2%	5.1%	
	Req. Insl.	1.2%	2.6%		3.2%	1.9%	
Time to Diabetes Onset		(n=2,091) β=-0.014 ^a		<0.001	(n=125) β=-0.161 ^a	(n=1,966)	0.007
Thyroid Gland	Abnormal	(n=911) 0.7%	(n=1,135) 1.4%	0.155	(n=127) 0.0%	(n=1,919) 1.1%	0.442
Testicular Examination	Abnormal	(n=923) 1.4%	(n=1,175) 6.2%	0.001	(n=127) 3.1%	(n=1,971) 4.2%	0.744
TSH (μIU/ml)		(n=910)	(n=1,130)		(n=127)	(n=1,913)	
(continuous) ^b (discrete)	Abn. Low	r=0.133		<0.001	\bar{x} =1.38	\bar{x} =1.87	<0.001
	Normal	0.8%	1.1%	0.543	2.4%	0.8%	0.105
	Abn. High	96.0%	95.0%		96.1%	95.5%	
		3.2%	3.9%		1.6%	3.7%	
Thyroxine (μg/dl)		(n=910)	(n=1,130)		(n=127)	(n=1,913)	
(continuous) ^c (discrete)	Low	r=0.004		0.870	\bar{x} =6.87	\bar{x} =7.07	0.102
		2.4%	2.9%	0.576	3.9%	2.6%	0.543
Anti-Thyroid Antibodies	Present	(n=910) 0.7%	(n=1,130) 0.5%	0.932	(n=127) 0.0%	(n=1,913) 0.6%	0.767
Fasting Glucose (mg/dl)		(n=933)	(n=1,185)		(n=128)	(n=1,990)	
(continuous) ^b (discrete)	High	r=0.142		<0.001	\bar{x} =104.0	\bar{x} =101.5	0.217
		11.4%	21.8%	0.001	24.2%	16.7%	0.040
2-Hour Postprandial Glucose (μg/dl)		(n=821)	(n=916)		(n=93)	(n=1,644)	
(continuous) ^b (discrete)	Impaired	r=0.155		<0.001	\bar{x} =101.8	\bar{x} =105.2	0.265
		10.1%	20.9%	0.001	5.4%	16.4%	0.007
Fasting Urinary Glucose	Present	(n=933) 4.0%	(n=1,185) 4.4%	0.710	(n=128) 7.0%	(n=1,990) 4.0%	0.156
2-Hour Postprandial Urinary Glucose	Present	(n=821) 22.0%	(n=912) 24.3%	0.283	(n=93) 18.3%	(n=1,640) 23.5%	0.298

Table F-8. Dependent Variable-Covariate Associations for the Endocrine Assessment (Continued)

Dependent Variable	Level	Age			Race		
		Born ≥1942 (n=821)	Born <1942 (n=916)	p-Value	Black (n=93)	Non-Black (n=1,644)	p-Value
Serum Insulin (μIU/ml)							
(continuous) ^b		r=0.088		<0.001	\bar{x} =47.11	\bar{x} =47.98	0.847
(discrete)	Abn. Low	14.5%	11.5%	0.003	9.7%	13.1%	0.553
	Normal	47.9%	43.0%		49.5%	45.1%	
	Abn. High	37.6%	45.5%		40.9%	41.8%	
α-1-C Hemoglobin (percent)							
(continuous) ^b		r=0.098		<0.001	\bar{x} =7.07	\bar{x} =6.45	<0.001
(discrete)	High	8.1%	12.7%	0.001	25.8%	9.7%	0.001
Total Testosterone (ng/dl)							
(continuous) ^c		r=-0.131		<0.001	\bar{x} =418.2	\bar{x} =423.1	0.764
(discrete)	Low	7.2%	8.3%	0.415	7.1%	7.8%	0.911
Free Testosterone (pg/ml)							
(continuous) ^c		r=-0.368		<0.001	\bar{x} =13.83	\bar{x} =13.94	0.797
(discrete)	Low	0.5%	2.6%	0.001	2.4%	1.6%	0.788
Estradiol (pg/ml)							
(continuous) ^c		r=0.010		0.632	\bar{x} =44.26	\bar{x} =40.15	0.008
(discrete)	High	26.9%	28.2%	0.539	37.5%	27.0%	0.013
LH (mIU/ml)							
(continuous) ^b		r=0.185		<0.001	\bar{x} =3.82	\bar{x} =3.86	0.856
(discrete)	High	3.1%	7.6%	0.001	5.5%	5.6%	0.999
FSH (mIU/ml)							
(continuous) ^b		r=0.256		<0.001	\bar{x} =5.65	\bar{x} =6.03	0.255
(discrete)	High	4.0%	11.2%	0.001	8.6%	8.0%	0.936

Table F-8. Dependent Variable-Covariate Associations for the Endocrine Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Past Thyroid Disease	Yes	(n=830) 9.0%	(n=337) 8.6%	(n=942) 7.0%	0.271
Composite Diabetes Indicator	Diabetic	(n=827) 14.9%	(n=332) 19.6%	(n=932) 17.8%	0.097
Diabetic Severity	Nondiabetic	(n=827) 86.5%	(n=332) 83.4%	(n=932) 85.0%	0.659
	No Treatment	5.0%	6.9%	5.5%	
	Diet Only	1.7%	1.2%	1.9%	
	Oral Hypoglycemic Requiring Insulin	4.6% 2.3%	6.3% 2.1%	6.0% 1.6%	
Time to Diabetes Onset		(n=932)	(n=332) $\beta = -0.038^d$	(n=827) $\beta = -0.052^d$	0.159
Thyroid Gland	Abnormal	(n=798) 1.9%	(n=326) 0.6%	(n=922) 0.5%	0.019
Testicular Examination	Abnormal	(n=826) 5.2%	(n=332) 5.1%	(n=940) 2.8%	0.021
TSH (μ IU/ml)		(n=794) $\bar{x} = 1.94$	(n=326) $\bar{x} = 1.77$	(n=920) $\bar{x} = 1.78$	0.007
(continuous) ^b (discrete)	Abnormal Low	0.8%	1.5%	0.9%	0.659
	Normal	95.3%	95.7%	95.5%	
	Abnormal High	3.9%	2.8%	3.6%	
Thyroxine (μ g/dl)		(n=794) $\bar{x} = 6.81$	(n=326) $\bar{x} = 7.26$	(n=920) $\bar{x} = 7.20$	<0.001
(continuous) ^c (discrete)	Low	3.7%	1.8%	2.2%	0.099
Anti-Thyroid Antibodies	Present	(n=794) 0.8%	(n=326) 0.9%	(n=920) 0.3%	0.354
Fasting Glucose (mg/dl)		(n=833) $\bar{x} = 100.4$	(n=338) $\bar{x} = 104.1$	(n=947) $\bar{x} = 101.8$	0.039
(continuous) ^b (discrete)	High	15.7%	19.2%	17.7%	0.295
2-Hour Postprandial Glucose (mg/dl)		(n=704) $\bar{x} = 103.5$	(n=267) $\bar{x} = 109.7$	(n=766) $\bar{x} = 104.8$	0.014
(continuous) ^b (discrete)	Impaired	15.1%	19.9%	15.0%	0.139
Fasting Urinary Glucose	Present	(n=833) 2.8%	(n=338) 5.0%	(n=947) 5.2%	0.029
2-Hour Postprandial Urinary Glucose	Present	(n=701) 20.1%	(n=266) 26.7%	(n=766) 24.9%	0.033

Table F-8. Dependent Variable-Covariate Associations for the Endocrine Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Serum Insulin (μ IU/ml)		(n=704)	(n=267)	(n=766)	
(continuous) ^b		\bar{x} =43.67	\bar{x} =52.55	\bar{x} =50.58	0.001
(discrete)	Abnormal Low	14.9%	10.9%	11.7%	0.024
	Normal	47.7%	42.7%	44.0%	
	Abnormal High	37.4%	46.4%	44.3%	
α -1-C Hemoglobin (percent)		(n=833)	(n=338)	(n=947)	
(continuous) ^b		\bar{x} =6.33	\bar{x} =6.61	\bar{x} =6.58	<0.001
(discrete)	High	7.8%	13.6%	12.2%	0.002
Total Testosterone (ng/dl)		(n=815)	(n=328)	(n=934)	
(continuous) ^c		\bar{x} =410.7	\bar{x} =433.4	\bar{x} =429.7	0.043
(discrete)	Low	7.7%	7.0%	8.1%	0.804
Free Testosterone (pg/ml)		(n=815)	(n=328)	(n=934)	
(continuous) ^c		\bar{x} =13.12	\bar{x} =13.99	\bar{x} =14.65	<0.001
(discrete)	Low	2.1%	2.1%	1.2%	0.267
Estradiol (pg/ml)		(n=835)	(n=338)	(n=948)	
(continuous) ^c		\bar{x} =40.39	\bar{x} =41.66	\bar{x} =39.96	0.271
(discrete)	High	26.2%	30.5%	27.8%	0.331
LH (mIU/ml)		(n=835)	(n=338)	(n=948)	
(continuous) ^b		\bar{x} =3.93	\bar{x} =3.86	\bar{x} =3.80	0.553
(discrete)	High	6.2%	4.1%	5.6%	0.372
FSH (mIU/ml)		(n=835)	(n=338)	(n=948)	
(continuous) ^b		\bar{x} =6.31	\bar{x} =6.00	\bar{x} =5.75	0.008
(discrete)	High	10.4%	9.2%	5.5%	0.001

Table F-8. Dependent Variable-Covariate Associations for the Endocrine Assessment (Continued)

Dependent Variable	Level	Personality Type			Body Fat		
		Type A	Type B	p-Value	Obese	Lean/Normal	p-Value
Past Thyroid Disease	Yes	(n=816) 7.8%	(n=1,290) 8.2%	0.822	--	--	--
Composite Diabetes Indicator	Diabetic	(n=809) 13.0%	(n=1,279) 19.5%	0.001	(n=609) 28.6%	(n=1,482) 12.1%	0.001
Diabetic Severity	Nondiabetic	(n=809) 89.0%	(n=1,279) 83.0%	0.001	(n=609) 75.7%	(n=1,482) 89.3%	0.001
	No Treat.	4.3%	6.3%		9.9%	3.7%	
	Diet Only	1.1%	2.1%		2.1%	1.6%	
	Oral Hypo.	3.5%	6.8%		10.2%	3.6%	
	Req. Insulin	2.1%	1.9%		2.1%	1.9%	
Time to Diabetes Onset		(n=809) $\beta=0.129^e$	(n=1,279)	<0.001	(n=2,091) $\beta=-0.024$		<0.001
Thyroid Gland	Abnormal	(n=791) 0.9%	(n=1,252) 1.2%	0.654	--	--	--
Testicular Examination	Abnormal	(n=810) 3.8%	(n=1,285) 4.3%	0.692	(n=612) 2.8%	(n=1,486) 4.6%	0.066
TSH (μ IU/ml)		(n=789)	(n=1,248)				
(continuous) ^b		$\bar{x}=1.81$	$\bar{x}=1.85$	0.423	--	--	--
(discrete)	Abn. Low	1.3%	0.7%	0.449	--	--	--
	Normal	95.1%	95.8%				
	Abn. High	3.7%	3.5%				
Thyroxine (μ g/dl)		(n=789)	(n=1,248)				
(continuous) ^c		$\bar{x}=7.02$	$\bar{x}=7.08$	0.368	--	--	--
(discrete)	Low	2.2%	3.0%	0.286	--	--	--
Anti-Thyroid Antibodies	Present	(n=789) 0.6%	(n=1,248) 0.6%	0.999	--	--	--
Fasting Glucose (mg/dl)		(n=817)	(n=1,298)		(n=620)	(n=1,498)	
(continuous) ^b		$\bar{x}=99.6$	$\bar{x}=102.9$	0.001	r=0.212		<0.001
(discrete)	High	13.6%	19.4%	0.001	26.8%	13.2%	0.001
2-Hour Postprandial Glucose (mg/dl)		(n=704)	(n=1,030)		(n=435)	(n=1,302)	
(continuous) ^b		$\bar{x}=103.3$	$\bar{x}=106.3$	0.035	r=0.282		<0.001
(discrete)	Impaired	16.1%	15.6%	0.866	27.4%	11.9%	0.001
Fasting Urinary Glucose	Present	(n=817) 2.6%	(n=1,298) 5.2%	0.004	(n=620) 6.8%	(n=1,498) 3.1%	0.001
2-Hour Postprandial Urinary Glucose	Present	(n=703) 23.0%	(n=1,027) 23.5%	0.884	(n=433) 24.7%	(n=1,300) 22.8%	0.446

Table F-8. Dependent Variable-Covariate Associations for the Endocrine Assessment (Continued)

Dependent Variable	Level	Personality Type			Body Fat		
		Type A	Type B	p-Value	Obese	Lean/Normal	p-Value
Serum Insulin (μ IU/ml)		(n=704)	(n=1,030)		(n=435)	(n=1,302)	
(continuous) ^b		\bar{x} =44.72	\bar{x} =50.42	0.006	r=0.433		<0.001
(discrete)	Abn. Low	14.9%	11.4%	0.018	2.5%	16.4%	0.001
	Normal	46.7%	44.5%		26.4%	51.6%	
	Abn. High	38.4%	44.2%		71.0%	32.0%	
α -1-C Hemoglobin (percent)		(n=817)	(n=1,298)		(n=620)	(n=1,498)	
(continuous) ^b		\bar{x} =6.36	\bar{x} =6.57	<0.001	r=0.227		<0.001
(discrete)	High	7.5%	12.8%	0.001	17.4%	7.9%	0.001
Total Testosterone (ng/dl)		(n=800)	(n=1,274)		(n=607)	(n=1,470)	
(continuous) ^c		\bar{x} =432.2	\bar{x} =417.1	0.059	r=-0.382		<0.001
(discrete)	Low	7.5%	7.9%	0.787	15.3%	4.7%	0.001
Free Testosterone (pg/ml)		(n=800)	(n=1,274)		(n=607)	(n=1,470)	
(continuous) ^c		\bar{x} =14.37	\bar{x} =13.68	0.001	r=-0.272		<0.001
(discrete)	Low	1.0%	2.1%	0.080	3.1%	1.1%	0.002

Dependent Variable	Level	Family History of Diabetes		
		Yes	No	p-Value
Composite Diabetes Indicator	Diabetic	(n=547) 24.9%	(n=1,525) 14.1%	0.001
Diabetic Severity	Nondiabetic	(n=547) 77.7%	(n=1,525) 88.0%	0.001
	No Treatment	7.5%	4.8%	
	Diet Only	2.2%	1.6%	
	Oral Hypoglycemic	9.1%	4.3%	
	Requiring Insulin	3.5%	1.4%	
Time to Diabetes Onset		(n=547) β =-0.196 ^f	(n=1,544)	<0.001
Fasting Glucose (mg/dl)		(n=556)	(n=1,543)	
(continuous) ^b		\bar{x} =107.1	\bar{x} =99.8	<0.001
(discrete)	High	25.2%	14.4%	0.001
2-Hour Postprandial Glucose (mg/dl)		(n=411)	(n=1,310)	
(continuous) ^b		\bar{x} =108.9	\bar{x} =104.0	0.003
(discrete)	Impaired	19.5%	14.7%	0.024

Table F-8. Dependent Variable-Covariate Associations for the Endocrine Assessment (Continued)

Dependent Variable	Level	Family History of Diabetes		p-Value
		Yes	No	
Fasting Urinary Glucose	Present	(n=556)	(n=1,543)	0.012
		6.1%	3.5%	
2-Hour Postprandial Urinary Glucose	Present	(n=411)	(n=1,306)	0.349
		25.1%	22.7%	
Serum Insulin (μ IU/ml)		(n=411)	(n=1,310)	
(continuous) ^b		\bar{x} =54.32	\bar{x} =46.28	0.001
(discrete)	Abnormal Low	8.5%	14.2%	0.001
	Normal	41.8%	46.4%	
	Abnormal High	49.6%	39.4%	
α -1-C Hemoglobin (percent)		(n=556)	(n=1,543)	
(continuous) ^b		\bar{x} =6.73	\bar{x} =6.40	<0.001
(discrete)	High	16.0%	8.8%	0.001

^a Estimated coefficient relative to non-Blacks.

^b Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

^c Analysis performed on square root scale; means transformed from square root scale.

^d Estimated coefficient relative to officers.

^e Estimated coefficient relative to personality type B.

^f Estimated coefficient relative to no family history of diabetes.

--: Covariate not applicable for dependent variable.

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

Table F-9. Dependent Variable-Covariate Associations for the Immunologic Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
CD3+ Cells (T Cells) (cells/mm ³) ^a		(n=774)			(n=46)	(n=728)	
		r=-0.099		0.006	\bar{x} =1,363.1	\bar{x} =1,239.6	0.095
CD4+ Cells (Helper T Cells) (cells/mm ³) ^a		(n=774)			(n=46)	(n=728)	
		r=-0.140		<0.001	\bar{x} =958.7	\bar{x} =844.4	0.023
CD8+ Cells (Suppressor T Cells) (cells/mm ³) ^a		(n=774)			(n=46)	(n=728)	
		r=0.007		0.845	\bar{x} =621.4	\bar{x} =575.0	0.278
CD16+56+ Cells (Natural Killer Cells) (cells/mm ³) ^a		(n=774)			(n=46)	(n=728)	
		r=0.102		0.005	\bar{x} =288.1	\bar{x} =267.7	0.326
CD20+ Cells (B Cells) (cells/mm ³) ^a		(n=773)			(n=46)	(n=727)	
		r=-0.240		<0.001	\bar{x} =232.9	\bar{x} =182.2	0.007
CD3+CD4+ Cells (Helper T Cells) (cells/mm ³) ^a		(n=774)			(n=46)	(n=728)	
		r=-0.142		<0.001	\bar{x} =860.6	\bar{x} =770.2	0.061
Absolute Lymphocytes (cells/mm ³) ^a		(n=2,029)			(n=125)	(n=1,904)	
		r=-0.097		<0.001	\bar{x} =1,879.4	\bar{x} =1,772.9	0.070
IgA (mg/dl) ^a		(n=2,029)			(n=125)	(n=1,904)	
		r=0.056		0.012	\bar{x} =247.6	\bar{x} =232.0	0.142
IgG (mg/dl) ^a		(n=2,029)			(n=125)	(n=1,904)	
		r=0.021		0.337	\bar{x} =1,266.8	\bar{x} =1,029.2	<0.001
IgM (mg/dl) ^a		(n=2,029)			(n=125)	(n=1,904)	
		r=-0.063		0.005	\bar{x} =85.4	\bar{x} =98.4	0.004
Lupus Panel: ANA Test		(n=905)	(n=1,124)		(n=125)	(n=1,904)	
	Present	49.9%	53.7%	0.098	47.2%	52.4%	0.304
Lupus Panel: ANA Thyroid Microsomal Antibody		(n=905)	(n=1,124)		(n=125)	(n=1,904)	
	Present	2.4%	3.2%	0.366	4.0%	2.8%	0.608
Lupus Panel: MSK Smooth Muscle Antibody		(n=905)	(n=1,124)		(n=125)	(n=1,904)	
	Present	11.9%	12.3%	0.867	19.2%	11.7%	0.018
Lupus Panel: MSK Mitochondrial Antibody		(n=905)	(n=1,124)		(n=125)	(n=1,904)	
	Present	0.2%	0.4%	0.885	0.0%	0.3%	0.999
Lupus Panel: MSK Parietal Antibody		(n=905)	(n=1,124)		(n=125)	(n=1,904)	
	Present	3.9%	4.6%	0.466	10.4%	3.9%	0.001
Lupus Panel: Rheumatoid Factor		(n=905)	(n=1,124)		(n=125)	(n=1,904)	
	Present	9.5%	12.2%	0.064	11.2%	11.0%	0.999

Table F-9. Dependent Variable-Covariate Associations for the Immunologic Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
CD3+ Cells (T Cells) (cells/mm ³) ^a		(n=299) \bar{x} =1,208.0	(n=134) \bar{x} =1,248.6	(n=341) \bar{x} =1,280.7	0.142
CD4+ Cells (Helper T Cells) (cells/mm ³) ^a		(n=299) \bar{x} =830.7	(n=134) \bar{x} =843.9	(n=341) \bar{x} =871.7	0.246
CD8+ Cells (Suppressor T Cells) (cells/mm ³) ^a		(n=299) \bar{x} =554.9	(n=134) \bar{x} =599.1	(n=341) \bar{x} =590.0	0.159
CD16+56+ Cells (Natural Killer Cells) (cells/mm ³) ^a		(n=299) \bar{x} =271.6	(n=134) \bar{x} =266.5	(n=341) \bar{x} =267.5	0.901
CD20+ Cells (B Cells) (cells/mm ³) ^a		(n=298) \bar{x} =170.8	(n=134) \bar{x} =178.8	(n=341) \bar{x} =200.9	0.002
CD3+CD4+ Cells (Helper T Cells) (cells/mm ³) ^a		(n=299) \bar{x} =755.7	(n=134) \bar{x} =768.6	(n=341) \bar{x} =795.7	0.236
Absolute Lymphocytes (cells/mm ³) ^a		(n=802) \bar{x} =1,703.3	(n=320) \bar{x} =1,788.5	(n=907) \bar{x} =1,845.8	<0.001
IgA (mg/dl) ^a		(n=802) \bar{x} =225.0	(n=320) \bar{x} =237.3	(n=907) \bar{x} =238.7	0.030
IgG (mg/dl) ^a		(n=802) \bar{x} =1,026.7	(n=320) \bar{x} =1,036.8	(n=907) \bar{x} =1,058.6	0.019
IgM (mg/dl) ^a		(n=802) \bar{x} =95.6	(n=320) \bar{x} =99.9	(n=907) \bar{x} =98.4	0.360
Lupus Panel: ANA Test	Present	(n=802) 52.2%	(n=320) 50.0%	(n=907) 52.6%	0.720
Lupus Panel: ANA Thyroid Microsomal Antibody	Present	(n=802) 3.1%	(n=320) 2.5%	(n=907) 2.8%	0.829
Lupus Panel: MSK Smooth Muscle Antibody	Present	(n=802) 11.5%	(n=320) 12.8%	(n=907) 12.5%	0.756
Lupus Panel: MSK Mitochondrial Antibody	Present	(n=802) 0.6%	(n=320) 0.3%	(n=907) 0.0%	0.060
Lupus Panel: MSK Parietal Antibody	Present	(n=802) 3.6%	(n=320) 4.7%	(n=907) 4.7%	0.482
Lupus Panel: Rheumatoid Factor	Present	(n=802) 12.3%	(n=320) 13.1%	(n=907) 9.0%	0.038

Table F-9. Dependent Variable-Covariate Associations for the Immunologic Assessment (Continued)

Dependent Variable	Level	Current Cigarette Smoking (cigarettes/day)				p-Value
		0-Never	0-Former	>0-20	>20	
CD3+ Cells (T Cells) (cells/mm ³) ^a			(n=773) r=0.233			<0.001
CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=773) r=0.242			<0.001
CD8+ Cells (Suppressor T Cells) (cells/mm ³) ^a			(n=773) r=0.126			<0.001
CD16+56+ Cells (Natural Killer Cells) (cells/mm ³) ^a			(n=773) r=-0.169			<0.001
CD20+ Cells (B Cells) (cells/mm ³) ^a			(n=772) r=0.151			<0.001
CD3+CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=773) r=0.257			<0.001
Absolute Lymphocytes (cells/mm ³) ^a			(n=2,028) r=0.190			<0.001
IgA (mg/dl) ^a			(n=2,028) r=-0.016			0.460
IgG (mg/dl) ^a			(n=2,028) r=-0.114			<0.001
IgM (mg/dl) ^a			(n=2,028) r=0.014			0.532
Lupus Panel: ANA Test	Present	(n=571) 50.8%	(n=1,060) 49.1%	(n=261) 63.2%	(n=136) 59.6%	0.001
Lupus Panel: ANA Thyroid Microsomal Antibody	Present	(n=571) 3.2%	(n=1,060) 3.2%	(n=261) 1.5%	(n=136) 1.5%	0.357
Lupus Panel: MSK Smooth Muscle Antibody	Present	(n=571) 11.0%	(n=1,060) 11.9%	(n=261) 17.2%	(n=136) 8.8%	0.037
Lupus Panel: MSK Mitochondrial Antibody	Present	(n=571) 0.4%	(n=1,060) 0.2%	(n=261) 0.4%	(n=136) 0.7%	0.699
Lupus Panel: MSK Parietal Antibody	Present	(n=571) 3.9%	(n=1,060) 4.3%	(n=261) 4.6%	(n=136) 5.9%	0.760
Lupus Panel: Rheumatoid Factor	Present	(n=571) 11.6%	(n=1,060) 10.5%	(n=261) 11.5%	(n=136) 11.8%	0.889

Table F-9. Dependent Variable-Covariate Associations for the Immunologic Assessment (Continued)

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
CD3+ Cells (T Cells) (cells/mm ³) ^a			(n=772) r=0.058		0.109
CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=772) r=0.070		0.053
CD8+ Cells (Suppressor T Cells) (cells/mm ³) ^a			(n=772) r=0.016		0.650
CD16+56+ Cells (Natural Killer Cells) (cells/mm ³) ^a			(n=772) r=-0.054		0.132
CD20+ Cells (B Cells) (cells/mm ³) ^a			(n=771) r=0.018		0.613
CD3+CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=772) r=0.077		0.032
Absolute Lymphocytes (cells/mm ³) ^a			(n=2,027) r=0.091		<0.001
IgA (mg/dl) ^a			(n=2,027) r=0.018		0.413
IgG (mg/dl) ^a			(n=2,027) r=-0.105		<0.001
IgM (mg/dl) ^a			(n=2,027) r=0.034		0.131
Lupus Panel: ANA Test		(n=571)	(n=540)	(n=916)	
	Present	50.8%	48.3%	55.1%	0.033
Lupus Panel: ANA Thyroid Microsomal Antibody		(n=571)	(n=540)	(n=916)	
	Present	3.2%	3.7%	2.2%	0.216
Lupus Panel: MSK Smooth Muscle Antibody		(n=571)	(n=540)	(n=916)	
	Present	11.0%	11.1%	13.4%	0.270
Lupus Panel: MSK Mitochondrial Antibody		(n=571)	(n=540)	(n=916)	
	Present	0.4%	0.0%	0.4%	0.321
Lupus Panel: MSK Parietal Antibody		(n=571)	(n=540)	(n=916)	
	Present	3.9%	5.2%	4.0%	0.482
Lupus Panel: Rheumatoid Factor		(n=571)	(n=540)	(n=916)	
	Present	11.6%	7.4%	12.8%	0.006

Table F-9. Dependent Variable-Covariate Associations for the Immunologic Assessment (Continued)

Dependent Variable	Level	Current Alcohol Use (drinks/day)			p-Value
		0-1	>1-4	>4	
CD3+ Cells (T Cells) (cells/mm ³) ^a			(n=773) r=0.029		0.415
CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=773) r=0.042		0.249
CD8+ Cells (Suppressor T Cells) (cells/mm ³) ^a			(n=773) r=-0.007		0.854
CD16+56+ Cells (Natural Killer Cells) (cells/mm ³) ^a			(n=773) r=-0.045		0.214
CD20+ Cells (B Cells) (cells/mm ³) ^a			(n=772) r=-0.097		0.007
CD3+CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=773) r=0.044		0.225
Absolute Lymphocytes (cells/mm ³) ^a			(n=2,028) r=0.010		0.649
IgA (mg/dl) ^a			(n=2,028) r=0.048		0.032
IgG (mg/dl) ^a			(n=2,028) r=-0.084		<0.001
IgM (mg/dl) ^a			(n=2,028) r=0.057		0.010
Lupus Panel: ANA Test		(n=1,628)	(n=352)	(n=48)	
	Present	51.0%	56.0%	60.4%	0.119
Lupus Panel: ANA Thyroid Microsomal Antibody		(n=1,628)	(n=352)	(n=48)	
	Present	3.0%	2.6%	0.0%	0.436
Lupus Panel: MSK Smooth Muscle Antibody		(n=1,628)	(n=352)	(n=48)	
	Present	11.9%	13.1%	12.5%	0.833
Lupus Panel: MSK Mitochondrial Antibody		(n=1,628)	(n=352)	(n=48)	
	Present	0.4%	0.0%	0.0%	0.477
Lupus Panel: MSK Parietal Antibody		(n=1,628)	(n=352)	(n=48)	
	Present	4.5%	4.0%	0.0%	0.304
Lupus Panel: Rheumatoid Factor		(n=1,628)	(n=352)	(n=48)	
	Present	10.9%	10.5%	18.8%	0.217

Table F-9. Dependent Variable-Covariate Associations for the Immunologic Assessment (Continued)

Dependent Variable	Level	Lifetime Alcohol History (drink-years)			p-Value
		0	>0-40	>40	
CD3+ Cells (T Cells) (cells/mm ³) ^a			(n=772) r=0.042		0.244
CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=772) r=0.055		0.124
CD8+ Cells (Suppressor T Cells) (cells/mm ³) ^a			(n=772) r=-0.005		0.898
CD16+56+ Cells (Natural Killer Cells) (cells/mm ³) ^a			(n=772) r=-0.051		0.154
CD20+ Cells (B Cells) (cells/mm ³) ^a			(n=771) r=-0.038		0.287
CD3+CD4+ Cells (Helper T Cells) (cells/mm ³) ^a			(n=772) r=0.059		0.104
Absolute Lymphocytes (cells/mm ³) ^a			(n=2,021) r=0.009		0.678
IgA (mg/dl) ^a			(n=2,021) r=0.038		0.086
IgG (mg/dl) ^a			(n=2,021) r=-0.060		0.007
IgM (mg/dl) ^a			(n=2,021) r=0.005		0.835
Lupus Panel: ANA Test	Present	(n=112) 49.1%	(n=1,324) 51.1%	(n=585) 54.7%	0.279
Lupus Panel: ANA Thyroid Microsomal Antibody	Present	(n=112) 1.8%	(n=1,324) 3.0%	(n=585) 2.6%	0.680
Lupus Panel: MSK Smooth Muscle Antibody	Present	(n=112) 15.2%	(n=1,324) 11.6%	(n=585) 12.7%	0.488
Lupus Panel: MSK Mitochondrial Antibody	Present	(n=112) 0.0%	(n=1,324) 0.4%	(n=585) 0.2%	0.625
Lupus Panel: MSK Parietal Antibody	Present	(n=112) 6.3%	(n=1,324) 4.7%	(n=585) 2.9%	0.116
Lupus Panel: Rheumatoid Factor	Present	(n=112) 11.6%	(n=1,324) 10.5%	(n=585) 12.0%	0.625

Table F-9. Dependent Variable-Covariate Associations for the Immunologic Assessment (Continued)

Dependent Variable	Level	Physical Activity Index			p-Value
		Active	Moderate	Sedentary	
CD3+ Cells (T Cells) (cells/mm ³) ^a		(n=202)	(n=149)	(n=418)	
		\bar{x} =1,168.8	\bar{x} =1,174.1	\bar{x} =1,315.1	<0.001
CD4+ Cells (Helper T Cells) (cells/mm ³) ^a		(n=202)	(n=149)	(n=418)	
		\bar{x} =807.1	\bar{x} =806.8	\bar{x} =889.2	0.001
CD8+ Cells (Suppressor T Cells) (cells/mm ³) ^a		(n=202)	(n=149)	(n=418)	
		\bar{x} =548.3	\bar{x} =539.1	\bar{x} =608.3	0.005
CD16+56+ Cells (Natural Killer Cells) (cells/mm ³) ^a		(n=202)	(n=149)	(n=418)	
		\bar{x} =267.5	\bar{x} =269.4	\bar{x} =268.8	0.990
CD20+ Cells (B Cells) (cells/mm ³) ^a		(n=201)	(n=149)	(n=418)	
		\bar{x} =168.2	\bar{x} =183.1	\bar{x} =194.9	0.017
CD3+CD4+ Cells (Helper T Cells) (cells/mm ³) ^a		(n=202)	(n=149)	(n=418)	
		\bar{x} =732.5	\bar{x} =728.9	\bar{x} =814.3	0.001
Absolute Lymphocytes (cells/mm ³) ^a		(n=539)	(n=400)	(n=1,077)	
		\bar{x} =1,719.7	\bar{x} =1,722.7	\bar{x} =1,831.0	<0.001
IgA (mg/dl) ^a		(n=539)	(n=400)	(n=1,077)	
		\bar{x} =231.8	\bar{x} =223.1	\bar{x} =237.2	0.088
IgG (mg/dl) ^a		(n=539)	(n=400)	(n=1,077)	
		\bar{x} =1,040.4	\bar{x} =1,030.0	\bar{x} =1,047.1	0.457
IgM (mg/dl) ^a		(n=539)	(n=400)	(n=1,077)	
		\bar{x} =99.8	\bar{x} =94.8	\bar{x} =97.5	0.344
Lupus Panel: ANA Test		(n=539)	(n=400)	(n=1,077)	
	Present	48.6%	52.5%	53.5%	0.176
Lupus Panel: ANA Thyroid Microsomal Antibody		(n=539)	(n=400)	(n=1,077)	
	Present	1.7%	4.3%	2.9%	0.061
Lupus Panel: MSK Smooth Muscle Antibody		(n=539)	(n=400)	(n=1,077)	
	Present	9.5%	13.5%	12.9%	0.085
Lupus Panel: MSK Mitochondrial Antibody		(n=539)	(n=400)	(n=1,077)	
	Present	0.4%	0.8%	0.1%	0.112
Lupus Panel: MSK Parietal Antibody		(n=539)	(n=400)	(n=1,077)	
	Present	3.9%	4.3%	4.5%	0.871
Lupus Panel: Rheumatoid Factor		(n=539)	(n=400)	(n=1,077)	
	Present	10.2%	9.5%	12.0%	0.314

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

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

Table F-10. Dependent Variable-Covariate Associations for the Pulmonary Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Asthma	Yes	(n=928) 3.9%	(n=1,177) 4.2%	0.828	(n=127) 3.1%	(n=1,978) 4.1%	0.770
Bronchitis	Yes	(n=922) 19.8%	(n=1,148) 20.5%	0.768	(n=126) 13.5%	(n=1,944) 20.6%	0.069
Pneumonia	Yes	(n=917) 8.6%	(n=1,113) 13.1%	0.002	(n=125) 12.8%	(n=1,905) 11.0%	0.628
Thorax and Lung Abnormalities	Yes	(n=933) 8.6%	(n=1,188) 13.6%	0.001	(n=128) 5.5%	(n=1,993) 11.8%	0.042
X-ray Interpretation	Abnormal	(n=931) 8.4%	(n=1,188) 11.6%	0.018	(n=128) 6.3%	(n=1,991) 10.4%	0.171
FVC		(n=2,118)			(n=128)	(n=1,990)	
			$r=-0.035$	0.108	$\bar{x}=87.84$	$\bar{x}=99.81$	<0.001
FEV ₁		(n=2,118)			(n=128)	(n=1,990)	
			$r=-0.143$	<0.001	$\bar{x}=86.83$	$\bar{x}=94.71$	<0.001
Ratio of Observed FEV ₁ to Observed FVC ^a		(n=2,118)			(n=128)	(n=1,990)	
			$r=0.266$	<0.001	$\bar{x}=0.791$	$\bar{x}=0.760$	<0.001
Loss of Vital Capacity	None	(n=931) 92.3%	(n=1,187) 89.6%	0.031	(n=128) 78.1%	(n=1,990) 91.6%	0.001
	Mild	7.0%	8.4%		17.2%	7.2%	
	Mod./Sev.	0.8%	1.9%		4.7%	1.2%	
Obstructive Abnormality	None	(n=931) 75.1%	(n=1,187) 52.1%	0.001	(n=128) 63.3%	(n=1,990) 62.2%	0.938
	Mild	21.9%	37.1%		30.5%	30.4%	
	Moderate	2.6%	8.6%		4.7%	6.0%	
	Severe	0.4%	2.2%		1.6%	1.4%	

Table F-10. Dependent Variable-Covariate Associations for the Pulmonary Assessment (Continued)

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Asthma	Yes	(n=830) 4.2%	(n=336) 3.3%	(n=939) 4.2%	0.738
Bronchitis	Yes	(n=811) 18.0%	(n=327) 22.9%	(n=932) 21.1%	0.108
Pneumonia	Yes	(n=792) 12.4%	(n=319) 10.7%	(n=919) 10.1%	0.323
Thorax and Lung Abnormalities	Yes	(n=835) 7.7%	(n=338) 18.6%	(n=948) 12.1%	0.001
X-ray Interpretation	Abnormal	(n=835) 9.7%	(n=338) 9.8%	(n=946) 10.8%	0.723
FVC		(n=835) \bar{x} =100.28	(n=337) \bar{x} =99.22	(n=946) \bar{x} =97.99	0.005
FEV ₁		(n=835) \bar{x} =95.57	(n=337) \bar{x} =91.76	(n=946) \bar{x} =93.90	0.002
Ratio of Observed FEV ₁ to Observed FVC ^a		(n=835) \bar{x} =0.759	(n=337) \bar{x} =0.745	(n=946) \bar{x} =0.771	<0.001
Loss of Vital Capacity	None Mild Moderate/Severe	(n=835) 92.1% 6.7% 1.2%	(n=337) 89.9% 8.6% 1.5%	(n=946) 90.0% 8.5% 1.6%	0.587
Obstructive Abnormality	None Mild Moderate Severe	(n=835) 61.0% 32.5% 5.4% 1.2%	(n=337) 53.1% 35.9% 7.7% 3.3%	(n=946) 66.6% 26.6% 5.8% 1.0%	0.001

Table F-10. Dependent Variable-Covariate Associations for the Pulmonary Assessment (Continued)

Dependent Variable	Level	Current Cigarette Smoking (cigarettes/day)				p-Value
		0-Never	0-Former	>0-20	>20	
Asthma	Yes	--	--	--	--	--
Bronchitis	Yes	--	--	--	--	--
Pneumonia	Yes	--	--	--	--	--
Thorax and Lung Abnormalities	Yes	(n=595) 2.2%	(n=1,116) 7.9%	(n=272) 29.8%	(n=137) 43.8%	0.001
X-ray Interpretation	Abnormal	(n=595) 8.4%	(n=1,115) 10.7%	(n=272) 10.3%	(n=136) 14.0%	0.214
FVC			(n=2,117) r=-0.068			0.002
FEV ₁			(n=2,117) r=-0.208			<0.001
Ratio of Observed FEV ₁ to Observed FVC ^a			(n=2,117) r=0.222			<0.001
Loss of Vital Capacity	None	(n=595) 92.9%	(n=1,115) 90.9%	(n=270) 86.7%	(n=137) 88.3%	0.116
	Mild	6.1%	7.5%	11.5%	10.2%	
	Moderate/Severe	1.0%	1.5%	1.9%	1.5%	
Obstructive Abnormality	None	(n=595) 78.0%	(n=1,115) 60.8%	(n=270) 45.9%	(n=137) 38.0%	0.001
	Mild	20.0%	31.4%	40.7%	46.7%	
	Moderate	1.7%	6.3%	10.4%	13.1%	
	Severe	0.3%	1.5%	3.0%	2.2%	

Table F-10. Dependent Variable-Covariate Associations for the Pulmonary Assessment (Continued)

Dependent Variable	Level	Lifetime Cigarette Smoking History (pack-years)			p-Value
		0	>0-10	>10	
Asthma	Yes	(n=590) 4.1%	(n=553) 4.5%	(n=959) 3.6%	0.703
Bronchitis	Yes	(n=582) 16.8%	(n=545) 18.0%	(n=940) 23.5%	0.002
Pneumonia	Yes	(n=575) 9.6%	(n=538) 9.3%	(n=914) 13.0%	0.037
Thorax and Lung Abnormalities	Yes	(n=595) 2.2%	(n=558) 8.1%	(n=965) 19.0%	0.001
X-ray Interpretation	Yes	(n=595) 8.4%	(n=557) 8.6%	(n=964) 12.2%	0.018
FVC			(n=2,115) r=-0.145		<0.001
FEV ₁			(n=2,115) r=-0.302		<0.001
Ratio of Observed FEV ₁ to Observed FVC ^a			(n=2,115) r=0.291		<0.001
Loss of Vital Capacity	None	(n=595) 92.9%	(n=556) 92.4%	(n=964) 88.6%	0.029
	Mild	6.1%	6.3%	9.6%	
	Moderate/Severe	1.0%	1.3%	1.8%	
Obstructive Abnormality	None	(n=595) 78.0%	(n=556) 68.7%	(n=964) 49.0%	0.001
	Mild	20.0%	27.0%	38.8%	
	Moderate	1.7%	3.4%	9.9%	
	Severe	0.3%	0.9%	2.4%	

Table F-10. Dependent Variable-Covariate Associations for the Pulmonary Assessment (Continued)

Dependent Variable	Level	Body Fat			Industrial Chemical Exposure		
		Normal	Obese	p-Value	No	Yes	p-Value
Asthma	Yes	(n=1,489) 4.0%	(n=616) 4.1%	0.999	(n=801) 3.9%	(n=1,304) 4.1%	0.847
Bronchitis	Yes	(n=1,464) 20.2%	(n=606) 20.3%	0.988	(n=786) 17.2%	(n=1,284) 22.0%	0.009
Pneumonia	Yes	(n=1,437) 10.9%	(n=593) 11.5%	0.783	(n=765) 11.4%	(n=1,265) 10.9%	0.803
Thorax and Lung Abnormalities	Yes	(n=1,501) 12.3%	(n=620) 9.2%	0.047	(n=804) 9.7%	(n=1,317) 12.5%	0.062
X-ray Interpretation	Abnormal	(n=1,499) 10.1%	(n=620) 10.5%	0.837	(n=804) 10.2%	(n=1,315) 10.2%	0.999
FVC		(n=2,118) r=-0.224		<0.001	(n=803) \bar{x} =99.77	(n=1,315) \bar{x} =98.67	0.102
FEV ₁		(n=2,118) r=-0.070		0.001	(n=803) \bar{x} =95.04	(n=1,315) \bar{x} =93.72	0.092
Ratio of Observed FEV ₁ to Observed FVC ^a		(n=2,118) r=-0.178		<0.001	(n=803) \bar{x} =0.761	(n=1,315) \bar{x} =0.763	0.587
Loss of Vital Capacity	None	(n=1,498) 92.9%	(n=620) 85.8%	0.001	(n=803) 92.5%	(n=1,315) 89.7%	0.064
	Mild	6.1%	11.9%		6.6%	8.5%	
	Mod./Severe	1.1%	2.3%		0.9%	1.7%	
Obstructive Abnormality	None	(n=1,498) 61.0%	(n=620) 65.2%	0.165	(n=803) 61.8%	(n=1,315) 62.5%	0.587
	Mild	31.4%	28.1%		31.1%	30.0%	
	Moderate	5.9%	6.0%		6.1%	5.9%	
	Severe	1.7%	0.8%		1.0%	1.7%	

^a Analysis performed on natural logarithm of (1 – ratio of observed FEV₁ to observed FVC) scale; means transformed from natural logarithm of (1 – ratio of observed FEV₁ to observed FVC) scale; because of this transformation, a negative correlation implies a positive association between the ratio and the covariate.

--: Covariate not applicable for dependent variable.

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