

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index			Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low	Medium	High			
LDH	Exposure Index-by- Lifetime Alcohol History (Officer)	0	n	10	3	13			
			Adj. Mean ^a	134.3	146.2	116.6	M vs. L	—	0.435
			95% C.I. ^a	(119.0,151.6)	(120.3,177.7)	(104.6,130.0)	H vs. L	—	0.041
		>0-40	n	96	92	78			
			Adj. Mean ^a	135.4	132.1	131.6	M vs. L	—	0.300
			95% C.I. ^a	(126.2,145.3)	(120.4,144.9)	(122.5,141.3)	H vs. L	—	0.256
		>40	n	21	27	31			
			Adj. Mean ^a	125.3	137.0	140.5	M vs. L	—	0.070
			95% C.I. ^a	(113.2,138.8)	(124.9,150.2)	(129.0,153.0)	H vs. L	—	0.017

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index			Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low	Medium	High			
LDH	Exposure Index-by- Age	Born >1942 Black	n	0	1	0			
			Adj. Mean ^a	—	115.5	—	M vs. L	—	—
			95% C.I. ^a	—	(81.7,163.3)	—	H vs. L	—	—
	Exposure Index-by- Race (Enlisted Flyer)	Born 1923- 1941 Black	n	1	3	3			
			Adj. Mean ^a	77.5	111.9	126.4	M vs. L	—	0.073
			95% C.I. ^a	(54.8,109.6)	(91.8,136.5)	(102.9,155.4)	H vs. L	—	0.018
		Born >1942 Nonblack	n	11	16	11			
			Adj. Mean ^a	122.6	112.9	138.1	M vs. L	—	0.238
			95% C.I. ^a	(109.8,136.8)	(103.3,123.4)	(124.4,153.4)	H vs. L	—	0.121
		Born 1923- 1941 Nonblack	n	42	40	39			
			Adj. Mean ^a	132.7	124.8	127.6	M vs. L	—	0.118
			95% C.I. ^a	(125.4,140.4)	(117.9,132.1)	(120.1,135.6)	H vs. L	—	0.321
		Born <1922 Nonblack	n	0	2	0			
			Adj. Mean ^a	—	138.1	—	M vs. L	—	—
			95% C.I. ^a	—	(107.8,176.9)	—	H vs. L	—	—

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
LDH	Exposure Index-by- Race	Black 0-1	n	11		8		9		Overall		0.449
			Number/% Abnormal	1	9.1%	0	0.0%	0	0.0%	H vs. L	—	0.999
			Normal	10	90.9%	8	100.0%	9	100.0%	H vs. L	—	0.999
	Exposure Index-by- Current Alcohol Use (Enlisted Groundcrew)	Black >1-4	n	2		2		3		Overall		—
			Number/% Abnormal	0	0.0%	0	0.0%	0	0.0%	H vs. L	—	—
			Normal	2	100.0%	2	100.0%	3	100.0%	H vs. L	—	—
		Black >4	n	2		2		0		Overall		—
			Number/% Abnormal	0	0.0%	0	0.0%	0	—	H vs. L	—	—
			Normal	2	100.0%	2	100.0%	0	—	H vs. L	—	—
		Nonblack 0-1	n	106		119		104		Overall		0.565
			Number/% Abnormal	1	0.9%	0	0.0%	1	1.0%	H vs. L	—	0.942
			Normal	105	99.1%	119	100.0%	103	99.0%	H vs. L	1.02 (0.06,16.52)	0.999
		Nonblack >1-4	n	18		23		18		Overall		—
			Number/% Abnormal	0	0.0%	0	0.0%	0	0.0%	H vs. L	—	—
			Normal	18	100.0%	23	100.0%	18	100.0%	H vs. L	—	—
		Nonblack >4	n	4		1		4		Overall		0.011
			Number/% Abnormal	0	0.0%	1	100.0%	0	0.0%	H vs. L	—	0.400
			Normal	4	100.0%	0	0.0%	4	100.0%	H vs. L	—	—

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value	
				Low		Medium		High					
Cholesterol	Exposure Index-by- Degreasing Chemical Exposure (Enlisted Flyer)	Yes	n	43		48		41		Overall			0.080
			Number/%										
			Abnormal	11	25.6%	8	16.7%	3	7.3%	M vs. L	0.58 (0.21,1.62)	0.432	
		No	Normal	32	74.4%	40	83.3%	38	92.7%	H vs. L	0.23 (0.06,0.90)	0.048	
			n	11		14		12		Overall			0.013
			Number/%										
			Abnormal	0	0.0%	1	7.1%	5	41.7%	M vs. L	—	0.999	
			Normal	11	100.0%	13	92.9%	7	58.3%	H vs. L	—	0.047	

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Cholesterol- HDL Ratio	Exposure Index-by- Lifetime Alcohol History	0 No	n	7		1		6				
			Number%									
			Abnormal	2	28.6%	1	100.0%	4	66.7%	M vs. L	—	—
		Normal	5	71.4%	0	0.0%	2	33.3%	H vs. L	5.00 (0.47,52.96)	0.170	
		0 Yes	n	3		2		7				
			Number/%									
	Abnormal		1	33.3%	1	50.0%	4	57.1%	M vs. L	2.00 (0.05,84.36)	0.710	
	Normal	2	66.7%	1	50.0%	3	42.9%	H vs. L	2.67 (0.16,45.14)	0.487		
	Exposure Index-by- Degreasing Chemical Exposure (Officer)	>0-40 No	n	74		67		48				
			Number/%									
			Abnormal	28	37.8%	24	35.8%	21	43.8%	M vs. L	0.92 (0.46,1.85)	0.804
		Normal	46	62.2%	43	64.2%	27	56.2%	H vs. L	1.28 (0.60,2.72)	0.516	
>0-40 Yes		n	22		25		30					
		Number/%										
	Abnormal	14	63.6%	9	36.0%	11	36.7%	M vs. L	0.32 (0.10,1.09)	0.057		
Normal	8	36.4%	16	64.0%	19	63.3%	H vs. L	0.33 (0.10,1.06)	0.095			
>40 No	n	8		18		18						
		Number/%										
		Abnormal	0	0.0%	8	44.4%	11	61.1%	M vs. L	—	—	
	Normal	8	100.0%	10	55.6%	7	38.9%	H vs. L	—	—		
	>40 Yes	n	13		9		13					
		Number/%										
Abnormal		4	30.8%	2	22.2%	6	46.2%	M vs. L	0.64 (0.09,4.77)	0.656		
Normal	9	69.2%	7	77.8%	7	53.8%	H vs. L	1.93 (0.37,9.92)	0.419			

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index			Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low	Medium	High			
Trigly- cerides	Exposure Index-by- Current Alcohol Use (Officer)	0-1	n	99	91	95			
			Adj. Mean ^a	104.0	88.7	100.7	H vs. L	—	0.105
			95% C.I. ^a	(77.8,138.9)	(66.5,118.2)	(75.8,133.7)	H vs. L	—	0.740
		>1-4	n	24	31	25			
			Adj. Mean ^a	84.3	117.2	109.6	H vs. L	—	0.071
			95% C.I. ^a	(59.0,120.5)	(84.7,162.3)	(77.1,155.9)	H vs. L	—	0.169
Trigly- cerides	Exposure Index-by- Lifetime Alcohol History	>4	n	4	0	2			
			Adj. Mean ^a	65.9	—	64.2	H vs. L	—	—
			95% C.I. ^a	(32.5,133.6)	—	(24.6,167.3)	H vs. L	—	0.963
		0 Yes	n	3	2	7	Overall		0.165
			Number/%						
			Abnormal	1 33.3%	1 50.0%	0 0.0%	H vs. L	2.00 (0.05,78.25)	0.999
		0 No	Normal	2 66.7%	1 50.0%	7 100.0%	H vs. L	—	0.608
			n	7	1	6	Overall		—
			Number/%						
			Abnormal	0 0.0%	0 0.0%	0 0.0%	H vs. L	—	—
		>0-40 Yes	Normal	7 100.0%	1 100.0%	6 100.0%	H vs. L	—	—
			n	30	27	27	Overall		0.023
			Number/%						
			Abnormal	4 13.3%	0 0.0%	0 0.0%	H vs. L	—	0.139
			Normal	26 86.7%	27 100.0%	27 100.0%	H vs. L	—	0.139

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Trigly- cerides (cont.)		>0-40 No	n	66		65		51		Overall		0.505
			Number/%									
			Abnormal	2	3.0%	4	6.2%	4	7.8%	H vs. L	2.10 (0.37,11.87)	0.666
			Normal	64	97.0%	61	93.8%	47	92.2%	H vs. L	2.72 (0.48,15.50)	0.454
		>40 Yes	n	10		12		10		Overall		0.169
			Number/%									
			Abnormal	0	0.0%	2	16.7%	0	0.0%	H vs. L	—	0.572
			Normal	10	100.0%	10	83.3%	10	100.0%	H vs. L	—	—
		>40 No	n	11		15		21		Overall		0.913
			Number/%									
			Abnormal	1	9.1%	2	13.3%	3	14.3%	H vs. L	1.54 (0.12,19.47)	0.999
			Normal	10	90.9%	13	86.7%	18	85.7%	H vs. L	1.67 (0.15,18.22)	0.999
Trigly- cerides	Exposure Index-by- Age (Enlisted Flyer)	Born ≥1942	n	11		17		11				
			Adj. Mean ^a	120.4		93.0		110.9		H vs. L	—	0.332
			95% C.I. ^a	(74.5,194.8)		(62.7,137.9)		(69.4,177.1)		H vs. L	—	0.781
		Born 1923- 1941	n	43		43		42				
			Adj. Mean ^a	118.5		102.0		115.6		H vs. L	—	0.308
			95% C.I. ^a	(86.4,162.5)		(75.7,137.4)		(85.0,157.2)		H vs. L	—	0.867
		Born ≤1922	n	0		2		0				
			Adj. Mean ^a	—		152.5		—		H vs. L	—	—
			95% C.I. ^a	—		(56.4,412.0)		—		H vs. L	—	—

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Trigly- cerides	Exposure Index-by- Age (Enlisted Flyer)	Born ≥1942	n	11		17		11		Overall		0.207
			Number/% Abnormal	2	18.2%	0	0.0%	1	9.1%	M vs. L	—	0.292
			Normal	9	81.8%	17	100.0%	10	90.9%	H vs. L	0.45 (0.04,5.84)	0.999
		Born 1923- 1941	n	43		43		42		Overall		0.638
			Number/% Abnormal	4	9.3%	2	4.7%	4	9.5%	M vs. L	0.48 (0.08,2.75)	0.676
			Normal	39	90.7%	41	95.3%	38	90.5%	H vs. L	1.03 (0.24,4.40)	0.999
		Born ≤1922	n	0		2		0		Overall		—
			Number/% Abnormal	0	—	0	0.0%	0	—	M vs. L	—	—
			Normal	0	—	2	100.0%	0	—	H vs. L	—	—
Trigly- cerides	Exposure Index-by- Current Alcohol Use (Enlisted Groundcrew)	0-1	n	117		127		113		Overall		0.070
			Number/% Abnormal	12	10.3%	10	7.9%	3	2.7%	M vs. L	0.75 (0.31,1.80)	0.670
			Normal	105	89.7%	117	92.1%	110	97.3%	H vs. L	0.24 (0.07,0.87)	0.035
		>1-4	n	20		25		21		Overall		0.533
			Number/% Abnormal	1	5.0%	0	0.0%	1	4.8%	M vs. L	—	0.888
			Normal	19	95.0%	25	100.0%	20	95.2%	H vs. L	0.95 (0.06,16.29)	0.999
		≥4	n	6		3		4		Overall		0.296
			Number/% Abnormal	0	0.0%	0	0.0%	1	25.0%	M vs. L	—	—
			Normal	6	100.0%	3	100.0%	3	75.0%	H vs. L	—	0.800

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index				Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value	
				Low		Medium					High
Creatine Kinase	Exposure Index-by- Industrial Chemical Exposure (Officer)	Yes	n	43		41		44			
			Adj. Mean ^a	144.5		140.9		117.3	M vs. L	0.820	
		95% C.I. ^a	(113.7,183.6)		(111.1,178.8)		(92.7,148.4)	H vs. L	0.052		
		No	n	84		81		78			
Adj. Mean ^a	132.4		132.7		150.7	M vs. L	0.970				
			95% C.I. ^a	(107.0,163.7)		(107.7,163.4)		(122.1,185.9)	H vs. L	0.098	
Creatine Kinase	Exposure Index-by- Current Alcohol Use (Officer)	0-1	n	99		91		95	Overall	0.169	
			Number/% Abnormal	10	10.1%	3	3.3%	6	6.3%	M vs. L	0.113
			Normal	89	89.9%	88	96.7%	89	93.7%	H vs. L	0.488
		>1-4	n	24		31		25	Overall	0.308	
			Number/% Abnormal	0	0.0%	3	9.7%	2	8.0%	M vs. L	0.342
			Normal	24	100.0%	28	90.3%	23	92.0%	H vs. L	0.510
		>4	n	4		0		2	Overall	—	
			Number/% Abnormal	0	0.0%	0	—	0	0.0%	M vs. L	—
			Normal	4	100.0%	0	—	2	100.0%	H vs. L	—

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Creatine Kinase	Exposure Index-by- Age (Enlisted Flyer)	Born >1942	n	11		17		11				0.272
			Adj. Mean ^a	115.8		145.0		130.5		M vs. L	—	0.602
			95% C.I. ^a	(80.0,167.7)		(107.1,196.5)		(91.0,187.2)		H vs. L	—	
		Born 1923- 1941	n	43		43		42				0.397
			Adj. Mean ^a	119.9		108.9		126.1		M vs. L	—	0.657
			95% C.I. ^a	(94.0,153.0)		(86.5,137.0)		(99.5,159.8)		H vs. L	—	
Creatine Kinase	Exposure Index-by- Age (Enlisted Flyer)	Born <1922	n	0		2		0				—
			Adj. Mean ^a	—		158.2		—		M vs. L	—	—
			95% C.I. ^a	—		(73.5,340.4)		—		H vs. L	—	—
		Born >1942	n	11		17		11		Overall		0.616
			Number/% Abnormal	0	0.0%	1	5.9%	1	9.1%	M vs. L	—	0.999
			Normal	11	100.0%	16	94.1%	10	90.9%	H vs. L	—	0.999
Creatine Kinase	Exposure Index-by- Age (Enlisted Flyer)	Born 1923- 1941	n	43		43		42		Overall		0.638
			Number/% Abnormal	4	9.3%	2	4.7%	4	9.5%	M vs. L	0.48 (0.08,2.75)	0.676
			Normal	39	90.7%	41	95.3%	38	90.5%	H vs. L	1.03 (0.24,4.40)	0.999
		Born <1922	n	0		2		0		Overall		—
			Number/% Abnormal	0	—	0	0.0%	0	—	M vs. L	—	—
			Normal	0	—	2	100.0%	0	—	H vs. L	—	—

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index				Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value		
				Low		Medium					High	
Fasting Glucose	Exposure Index-by- Lifetime Alcohol History (Officer)	0	n	10		3		13				
			Adj. Mean ^a	100.0		98.8		94.5	M vs. L	—	0.914	
			95% C.I. ^a	(88.2,113.3)		(80.8,120.9)		(84.5,105.7)	H vs. L	—	0.432	
		>0-40	n	96		92		78				
			Adj. Mean ^a	101.1		98.2		100.3	M vs. L	—	0.248	
			95% C.I. ^a	(94.0,108.7)		(91.5,105.4)		(93.2,108.0)	H vs. L	—	0.757	
		>40	n	21		27		31				
			Adj. Mean ^a	105.9		100.5		113.4	M vs. L	—	0.299	
			95% C.I. ^a	(95.3,117.7)		(91.3,110.6)		(103.8,123.9)	H vs. L	—	0.165	
Fasting Glucose	Exposure Index-by- Degreasing Chemical Exposure (Officer)	Yes	n	38		36		50	Overall	0.032		
			Number/%									
			Abnormal	11	28.9%	3	8.3%	6	12.0%	M vs. L	0.22 (0.06,0.88)	0.046
		No	Normal	27	71.1%	33	91.7%	44	88.0%	H vs. L	0.34 (0.11,1.01)	0.086
			n	89		86		72	Overall	0.230		
			Number/%									
			Abnormal	7	7.9%	11	12.8%	12	16.7%	M vs. L	1.72 (0.63,4.66)	0.410
	Normal	82	92.1%	75	87.2%	60	83.3%	H vs. L	2.34 (0.87,6.30)	0.141		

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index				Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High		
Fasting Glucose	Exposure Index-by- Race (Enlisted Flyer)	Nonblack	n	53		58		50		
			Adj. Mean ^a	98.5		104.8		96.3	M vs. L	0.033
			95% C.I. ^a	(94.2,103.0)		(100.5,109.3)		(92.1,100.8)	H vs. L	0.453
		Black	n	1		4		3		
			Adj. Mean ^a	111.0		96.7		129.0	M vs. L	0.415
			95% C.I. ^a	—		(83.3,112.2)		(108.0,154.1)	H vs. L	0.397
Fasting Glucose	Exposure Index-by- Industrial Chemical Exposure (Enlisted Flyer)	Yes	n	39		37		35	Overall	0.028
			Number/% Abnormal	5 12.8%		9 24.3%		1 2.9%	M vs. L	2.19 (0.66,7.27)
			Normal	34 87.2%		28 75.7%		34 97.1%	H vs. L	0.20 (0.02,1.80)
		No	n	15		25		18	Overall	0.099
			Number/% Abnormal	0 0.0%		2 8.0%		4 22.2%	M vs. L	0.770
			Normal	15 100.0%		23 92.0%		14 77.8%	H vs. L	0.150
Fasting Glucose	Exposure Index-by- Race	Black 0-1	n	11		8		9		
			Adj. Mean ^a	96.4		131.5		95.7	M vs. L	<0.001
			95% C.I. ^a	(86.8,107.1)		(116.1,149.0)		(84.6,108.2)	H vs. L	0.926
		Black >1-4	n	2		2		3		
			Adj. Mean ^a	87.8		98.7		85.1	M vs. L	0.511
			95% C.I. ^a	(68.4,112.7)		(77.2,126.3)		(68.0,106.5)	H vs. L	0.853
	Exposure Index-by- Current Alcohol Use (Enlisted) Groundcrew)	Black >4	n	2		2		0		
			Adj. Mean ^a	80.9		91.8		—	M vs. L	0.720
			95% C.I. ^a	(55.2,118.6)		(51.6,163.3)		—	H vs. L	—

TABLE J-4. (continued)

Summary of Exposure Index-by-Covariate Interactions for Hepatic Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index				Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value		
				Low		Medium					High	
Fasting Glucose (cont.)		Nonblack	n	106		119		104				
		0-1	Adj. Mean ^a	101.9		99.5		102.8	M vs. L	—	0.444	
			95% C.I. ^a	(97.9,106.1)		(95.1,104.2)		(97.6,108.4)	H vs. L	—	0.780	
		Nonblack	n	18		23		18				
		>1-4	Adj. Mean ^a	96.0		97.5		86.5	M vs. L	—	0.854	
			95% C.I. ^a	(87.2,105.7)		(85.5,111.1)		(75.7,99.0)	H vs. L	—	0.218	
		Nonblack	n	4		1		4				
		>4	Adj. Mean ^a	94.2		94.4		73.5	M vs. L	—	0.994	
			95% C.I. ^a	(68.6,129.4)		(57.6,154.8)		(47.3,114.0)	H vs. L	—	0.370	
Fasting Glucose	Exposure Index-by- Race (Enlisted Groundcrew)	Nonblack	n	128		143		126	Overall		0.180	
			Number/%									
			Abnormal	17	13.3%	10	7.0%	16	12.7%	M vs. L	0.49 (0.22,1.12)	0.128
			Normal	111	86.7%	133	93.0%	110	87.3%	H vs. L	0.95 (0.46,1.97)	0.999
		Black	n	15		12		12	Overall		0.009	
			Number/%									
			Abnormal	1	6.7%	5	41.7%	0	0.0%	M vs. L	10.00 (0.97,102.87)	0.087
			Normal	14	93.3%	7	58.3%	12	100.0%	H vs. L	—	0.999

^aTransformed from natural logarithm scale.

—Adjusted relative risk not applicable for continuous analysis of a variable; analysis not done due to sparse data; summary statistics not given for exposure index categories with no participants.

^bTransformed from natural logarithm (X + 0.1) scale.

Notes: Relative risks/confidence intervals and p-values for discrete variables based on stratified, unadjusted analyses. Adjusted means/confidence intervals and p-values for continuous variables based on adjusted analyses. Small sample sizes may affect validity of overall p-value.

APPENDIX K

Dermatologic Evaluation

TABLE K-1.

Dependent Variable-Covariate Associations for Dermatologic Evaluation

Dependent Variable	Level	Age				Race		
		Born ≥1942	Born 1923-1941	Born ≤1922	p- Value	Black	Nonblack	p- Value
Comedones	Yes	(n=957) 18.1%	(n=1,253) 25.4%	(n=84) 22.6%	<0.001	(n=137) 16.8%	(n=2,157) 22.6%	0.134
Acneiform Lesions	Yes	(n=957) 15.1%	(n=1,253) 7.8%	(n=84) 4.8%	<0.001	(n=137) 14.6%	(n=2,157) 10.5%	0.178
Acneiform Scars	Yes	(n=957) 13.6%	(n=1,253) 9.7%	(n=84) 6.0%	0.005	(n=137) 7.3%	(n=2,157) 11.5%	0.165
Depigmentation	Yes	(n=957) 5.3%	(n=1,253) 7.0%	(n=84) 11.9%	0.034	(n=137) 9.5%	(n=2,157) 6.3%	0.206
Inclusion Cysts	Yes	(n=957) 8.9%	(n=1,253) 11.7%	(n=84) 10.7%	0.096	(n=137) 5.1%	(n=2,157) 10.8%	0.035
Hyperpigmentation	Yes	(n=957) 16.5%	(n=1,253) 15.7%	(n=84) 10.7%	0.370	(n=137) 35.8%	(n=2,157) 14.6%	<0.001
Other Abnormalities	Yes	(n=957) 65.2%	(n=1,253) 82.0%	(n=84) 90.5%	<0.001	(n=137) 51.8%	(n=2,157) 76.8%	<0.001
Dermatology Index	0	(n=957) 61.6%	(n=1,253) 60.7%	(n=84) 70.2%	0.227	(n=137) 65.7%	(n=2,157) 61.1%	0.261
	1	25.5%	27.9%	16.7%		24.8%	26.6%	
	2	9.4%	8.4%	11.9%		9.5%	8.9%	
	3	2.9%	2.1%	1.2%		0.0%	2.5%	
	4	0.6%	1.0%	0.0%		0.0%	0.8%	

TABLE K-1. (continued)

Dependent Variable-Covariate Associations for Dermatologic Evaluation

Dependent Variable	Level	Occupation				Presence of Pre-Sea Acne		
		Officer	Enlisted Flyer	Enlisted Groundcrew	p-Value	Yes	No	p-Value
Comedones	Yes	(n=874) 17.0%	(n=383) 33.2%	(n=1,037) 22.6%	<0.001	(n=708) 22.6%	(n=1,568) 22.1%	0.816
Acneiform Lesions	Yes	(n=874) 7.9%	(n=383) 10.7%	(n=1,037) 13.1%	0.001	(n=708) 15.3%	(n=1,568) 8.7%	<0.001
Acneiform Scars	Yes	(n=874) 9.2%	(n=383) 12.5%	(n=1,037) 12.4%	0.051	(n=708) 22.5%	(n=1,568) 6.2%	<0.001
Depigmentation	Yes	(n=874) 5.8%	(n=383) 7.6%	(n=1,037) 6.7%	0.496	(n=708) 6.5%	(n=1,568) 6.6%	0.999
Inclusion Cysts	Yes	(n=874) 10.1%	(n=383) 13.8%	(n=1,037) 9.6%	0.063	(n=708) 12.3%	(n=1,568) 9.8%	0.092
Hyperpigmentation	Yes	(n=874) 9.6%	(n=383) 19.6%	(n=1,037) 19.8%	<0.001	(n=708) 12.4%	(n=1,568) 17.3%	0.003
Other Abnormalities	Yes	(n=874) 79.2%	(n=383) 78.3%	(n=1,037) 71.0%	<0.001	(n=708) 73.7%	(n=1,568) 76.1%	0.236
Dermatology Index	0	(n=874) 67.4%	(n=383) 52.2%	(n=1,037) 59.8%	<0.001	(n=708) 53.7%	(n=1,568) 64.9%	<0.001
	1	24.3%	30.0%	27.0%		27.0%	26.2%	
	2	6.1%	14.1%	9.5%		13.7%	6.8%	
	3	1.4%	2.6%	3.2%		4.4%	1.5%	
	4	0.9%	1.0%	0.6%		1.3%	0.6%	

TABLE K-2.

Group-by-Covariate Interactions for Dermatology Variables

Variable	Interaction	Stratification	Statistic	Group		Adj. Relative Risk (95% C.I.)	p-Value
				Ranch Hand	Comparison		
Comedones	Group-by-Race	Nonblack	n	932	1,211		
			Number/%				
			Yes	200 21.5%	285 23.5%	0.88 (0.71,1.08)	0.213
			No	732 78.5%	926 76.5%		
		Black	n	55	78		
			Number/%				
			Yes	12 21.8%	9 11.5%	2.33 (0.90,6.08)	0.083
			No	43 78.2%	69 88.5%		

Note: Refer to Table 14-5 for specification of adjusted model.

TABLE K-3.

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value	
				Low		Medium		High					
Comedones	Exposure Index-by- Presence of Pre-SEA Acne (Officer)	Yes	n	28		48		43					
			Number/%										
			Yes	6	21.4%	7	14.6%	2	4.7%	M vs. L	0.59 (0.18,2.01)	0.403	
		No	No	22	78.6%	41	85.4%	41	95.3%	H vs. L	0.17 (0.03,0.97)	0.046	
			No	n	101		75		81				
				Number/%									
Acneiform Lesions	Exposure Index-by- Presence of Pre-SEA Acne (Enlisted Groundcrew)	Yes		n	49		56		41				
			Number/%										
			Yes	6	12.2%	6	10.7%	9	22.0%	M vs. L	0.80 (0.24,2.68)	0.717	
		No	No	43	87.8%	50	89.3%	32	78.0%	H vs. L	2.40 (0.56,10.36)	0.240	
			No	n	97		101		97				
				Number/%									
Acneiform Lesions	Exposure Index-by- Presence of Pre-SEA Acne (Enlisted Groundcrew)	Yes		n	97		101		97				
			Number/%										
			Yes	13	13.4%	16	15.8%	5	5.2%	M vs. L	1.04 (0.46,2.35)	0.919	
		No	No	84	86.6%	85	84.2%	92	94.8%	H vs. L	0.34 (0.11,0.99)	0.049	
			No	n	97		101		97				
				Number/%									

TABLE K-3. (continued)

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Acneiform Scars	Exposure Index-by- Age (Officer)	Born >1942	n	46		21		11		Overall		0.148*
			Number/%									
			Yes	7	15.2%	0	0.0%	2	18.2%	M vs. L	—	0.123*
		Born 1923- 1941	No	39	84.8%	21	100.0%	9	81.8%	H vs. L	1.24 (0.22,6.99)*	0.999*
			n	78		88		110		Overall		0.046*
			Number/%									
		Born 1923- 1941	Yes	3	3.8%	13	14.8%	9	8.2%	M vs. L	4.33 (1.19,15.83)*	0.030*
			No	75	96.2%	75	85.2%	101	91.8%	H vs. L	2.23 (0.58,8.51)*	0.374*
			n	5		14		3		Overall		0.741*
		Born <1922	Number/%									
Yes	0		0.0%	1	7.1%	0	0.0%	M vs. L	—	0.999*		
No	5		100.0%	13	92.9%	3	100.0%	H vs. L	—	—		
Acneiform Scars	Exposure Index-by- Race (Enlisted Groundcrew)	Nonblack	n	130		144		127		Overall		0.615*
			Number/%									
			Yes	16	12.3%	22	15.3%	21	16.5%	M vs. L	1.29 (0.64,2.57)*	0.594*
		Nonblack	No	114	87.7%	122	84.7%	106	83.5%	H vs. L	1.41 (0.70,2.85)*	0.432*
			n	16		13		11		Overall		0.206*
			Number/%									
		Black	Yes	2	12.5%	0	0.0%	0	0.0%	M vs. L	—	0.592*
			No	14	87.5%	13	100.0%	11	100.0%	H vs. L	—	0.684*

TABLE K-3. (continued)

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Depigmen- tation	Exposure Index-by- Race (Enlisted Groundcrew)	Nonblack	n	130		144		127		Overall		0.027*
			Number/%									
			Yes	2	1.5%	13	9.0%	9	7.1%	M vs. L	6.35 (1.41,28.71)*	0.011*
		Black	No	128	98.5%	131	91.0%	118	92.9%	H vs. L	4.88 (1.03,23.06)*	0.055*
			n	16		13		11		Overall		0.132*
			Number/%									
Inclusion Cysts	Exposure Index-by- Presence of Pre-SEA Acne (Enlisted Groundcrew)	Yes	Yes	2	12.5%	0	0.0%	3	27.3%	M vs. L	—	0.592*
			No	14	87.5%	13	100.0%	8	72.7%	H vs. L	2.63 (0.36,19.18)*	0.632*
			n	49		56		41				
		No	Number/%									
			Yes	3	6.1%	11	19.6%	8	19.5%	M vs. L	3.91 (1.02,15.01)	0.047
			No	46	93.9%	45	80.4%	33	80.5%	H vs. L	3.86 (0.82,18.20)	0.088
	No	n	97		101		97					
		Number/%										
		Yes	13	13.4%	4	4.0%	10	10.3%	M vs. L	0.26 (0.08,0.85)	0.025	
		No	84	86.6%	97	96.0%	87	89.7%	H vs. L	0.70 (0.29,1.70)	0.437	

TABLE K-3. (continued)

Exposure Index-by-Covariate Interactions for Dermatology Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Exposure Index Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
Dermatology Index	Exposure Index-by- Presence of Pre-SEA Acne (Enlisted Groundcrew)	Yes	n	49		56		41				
			Number/%									
			Abnormal	18	36.7%	26	46.4%	22	53.7%	H vs. L	1.19 (0.67,2.10)	0.546
			Normal	31	63.3%	30	53.6%	19	46.3%	H vs. L	2.10 (1.16,3.81)	0.014
		No	n	97		101		97				
			Number/%									
			Abnormal	46	47.4%	43	42.6%	30	30.9%	H vs. L	0.64 (0.29,1.40)	0.263
			Normal	51	52.6%	58	57.4%	67	69.1%	H vs. L	0.50 (0.19,1.30)	0.156

*Unadjusted estimate of relative risk, confidence interval, and p-value based on stratified tables.

—Relative risk/confidence interval/p-value not given due to zero participants for a particular exposure index classification.

Note: Small sample sizes may affect validity of overall p-value.

APPENDIX L

Cardiovascular Evaluation

TABLE L-1.

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Age			p-Value	Race		p-Value
		Born >1942	Born 1923-1941	Born <1922		Black	Nonblack	
Reported/Verified Essential Hypertension*	Yes	(n=895) 25.5%	(n=1,066) 37.8%	(n=67) 55.2%	<0.001	(n=113) 36.3%	(n=1,915) 32.7%	0.499
Reported Heart Disease (Excluding Hypertension)	Yes	(n=895) 32.6%	(n=1,066) 41.0%	(n=67) 58.2%	<0.001	(n=113) 46.9%	(n=1,915) 37.3%	0.053
Verified Heart Disease (Excluding Hypertension)	Yes	(n=895) 32.4%	(n=1,066) 40.8%	(n=67) 58.2%	<0.001	(n=113) 46.9%	(n=1,915) 37.1%	0.047
Reported/Verified Myocardial Infarction*	Yes	(n=895) 1.4%	(n=1,066) 6.1%	(n=67) 20.9%	<0.001	(n=113) 3.5%	(n=1,915) 4.6%	0.818
Systolic Blood Pressure (continuous) (discrete)		(n=895) —	(n=1,066) r=0.187	(n=67) —	<0.001	(n=113) $\bar{x}=129.31$	(n=1,915) $\bar{x}=126.81$	0.143
	Abnormal	14.2%	23.6%	41.8%	<0.001	25.7%	19.7%	0.155
Heart Sounds	Abnormal	(n=895) 2.7%	(n=1,066) 5.2%	(n=67) 13.4%	<0.001*	(n=113) 5.3%	(n=1,915) 4.3%	0.732
ECG-Overall	Abnormal	(n=895) 10.8%	(n=1,066) 20.1%	(n=67) 47.8%	<0.001	(n=113) 22.1%	(n=1,915) 16.6%	0.170
RBBB	Abnormal	(n=895) 0.2%	(n=1,066) 0.8%	(n=67) 3.0%	0.011	(n=113) 1.8%	(n=1,915) 0.5%	0.282
LBBB	Abnormal	(n=895) 0.0%	(n=1,066) 0.5%	(n=67) 0.0%	0.104*	(n=113) 0.0%	(n=1,915) 0.3%	0.999

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Age			p-Value	Race		p-Value
		Born >1942	Born 1923-1941	Born <1922		Black	Nonblack	
Nonspecific T-Waves	Abnormal	(n=895) 6.7%	(n=1,066) 13.6%	(n=67) 26.9%	<0.001	(n=113) 15.0%	(n=1,915) 10.8%	0.214
Bradycardia	Abnormal	(n=895) 6.0%	(n=1,066) 4.9%	(n=67) 3.0%	0.360	(n=113) 3.5%	(n=1,915) 5.4%	0.536
Tachycardia	Abnormal	(n=895) 0.1%	(n=1,066) 0.0%	(n=67) 0.0%	0.531 ^a	(n=113) 0.0%	(n=1,915) 0.1%	0.999
Arrhythmia	Abnormal	(n=895) 2.0%	(n=1,066) 4.5%	(n=67) 20.9%	<0.001	(n=113) 2.6%	(n=1,915) 4.0%	0.674
ECG-Other Diagnoses	Abnormal	(n=895) 14.6%	(n=1,066) 20.9%	(n=67) 34.3%	<0.001	(n=113) 24.8%	(n=1,915) 18.2%	0.114
Diastolic Blood Pressure (continuous)		(n=895) —	(n=1,066) r=0.071	(n=67) —	0.001	(n=113) x̄=76.02	(n=1,915) x̄=74.72	0.144
(discrete)	Abnormal	3.5%	5.4%	4.5%	0.111	4.4%	4.5%	0.999
Fundoscopic Examination	Abnormal	(n=895) 0.2%	(n=1,066) 1.2%	(n=67) 0.0%	0.029	(n=113) 0.9%	(n=1,915) 0.7%	0.999
Carotid Bruits	Abnormal	(n=895) 0.3%	(n=1,066) 0.8%	(n=67) 1.5%	0.251	(n=113) 0.0%	(n=1,915) 0.7%	0.948
Radial Pulses	Abnormal	(n=889) 0.2%	(n=1,045) 0.9%	(n=61) 0.0%	0.143 ^a	(n=108) 0.9%	(n=1,887) 0.5%	0.918

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Age			p-Value	Race		p-Value
		Born ≥1942	Born 1923-1941	Born <1922		Black	Nonblack	
Femoral Pulses	Abnormal	(n=889) 0.4%	(n=1,045) 2.1%	(n=61) 4.9%	0.001	(n=108) 0.0%	(n=1,887) 1.5%	0.394
Popliteal Pulses	Abnormal	(n=889) 1.8%	(n=1,044) 3.5%	(n=61) 8.2%	0.003	(n=108) 2.8%	(n=1,886) 2.9%	0.999
Dorsalis Pedis Pulses	Abnormal	(n=888) 8.6%	(n=1,044) 12.4%	(n=61) 21.3%	0.001	(n=108) 7.4%	(n=1,885) 11.1%	0.294
Posterior Tibial Pulses	Abnormal	(n=888) 1.5%	(n=1,044) 3.6%	(n=61) 13.1%	<0.001	(n=108) 5.6%	(n=1,885) 2.8%	0.192
Leg Pulses	Abnormal	(n=888) 10.2%	(n=1,044) 15.4%	(n=61) 29.5%	<0.001	(n=108) 11.1%	(n=1,885) 13.7%	0.538
Peripheral Pulses	Abnormal	(n=888) 10.4%	(n=1,044) 15.9%	(n=61) 29.5%	<0.001	(n=108) 12.0%	(n=1,885) 14.0%	0.677
All Pulses	Abnormal	(n=888) 10.4%	(n=1,043) 15.9%	(n=60) 30.0%	<0.001	(n=108) 12.0%	(n=1,883) 14.0%	0.674

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Reported/Verified Essential Hypertension*	Yes	(n=772) 34.5%	(n=342) 35.4%	(n=914) 30.7%	0.156
Reported Heart Disease (Excluding Hypertension)	Yes	(n=772) 42.6%	(n=342) 36.6%	(n=914) 34.4%	0.002
Verified Heart Disease (Excluding Hypertension)	Yes	(n=772) 42.6%	(n=342) 36.6%	(n=914) 33.9%	0.001
Reported/Verified Myocardial Infarction*	Yes	(n=772) 4.0%	(n=342) 6.1%	(n=914) 4.4%	0.277
Systolic Blood Pressure (continuous) (discrete)	Abnormal	(n=772) $\bar{x}$ =126.94 20.3%	(n=342) $\bar{x}$ =127.61 21.9%	(n=914) $\bar{x}$ =126.72 19.0%	0.729 0.502
Heart Sounds	Abnormal	(n=772) 4.2%	(n=342) 4.7%	(n=914) 4.4%	0.919
ECG-Overall	Abnormal	(n=772) 18.5%	(n=342) 19.3%	(n=914) 14.7%	0.047
RBBB	Abnormal	(n=772) 0.6%	(n=342) 0.9%	(n=914) 0.4%	0.643 ^a
LBBB	Abnormal	(n=772) 0.5%	(n=342) 0.3%	(n=914) 0.0%	0.100 ^a

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Nonspecific T-Waves	Abnormal	(n=772) 11.5%	(n=342) 12.3%	(n=914) 10.1%	0.447
Bradycardia	Abnormal	(n=772) 6.7%	(n=342) 4.7%	(n=914) 4.4%	0.084
Tachycardia	Abnormal	(n=772) 0.0%	(n=342) 0.0%	(n=914) 0.1%	0.544 ^a
Arrhythmia	Abnormal	(n=772) 4.5%	(n=342) 3.5%	(n=914) 3.6%	0.563
ECG-Other Diagnoses	Abnormal	(n=772) 20.7%	(n=342) 19.9%	(n=914) 16.3%	0.053
Diastolic Blood Pressure (continuous) (discrete)	Abnormal	(n=772) $\bar{x}$ =74.73 4.7%	(n=342) $\bar{x}$ =75.16 5.6%	(n=914) $\bar{x}$ =74.72 4.0%	0.720 0.509
Funduscopy Examination	Abnormal	(n=772) 0.8%	(n=342) 0.6%	(n=914) 0.8%	0.935
Carotid Bruits	Abnormal	(n=772) 0.3%	(n=342) 1.5%	(n=914) 0.7%	0.068 ^a
Radial Pulses	Abnormal	(n=758) 0.7%	(n=337) 0.6%	(n=900) 0.4%	0.835 ^a

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Femoral Pulses	Abnormal	(n=758) 1.3%	(n=337) 2.7%	(n=900) 1.1%	0.116
Popliteal Pulses	Abnormal	(n=758) 2.6%	(n=336) 3.9%	(n=900) 2.8%	0.510
Dorsalis Pedis Pulses	Abnormal	(n=758) 8.8%	(n=336) 16.4%	(n=899) 10.7%	0.001
Posterior Tibial Pulses	Abnormal	(n=758) 2.4%	(n=336) 4.8%	(n=899) 2.8%	0.091
Leg Pulses	Abnormal	(n=758) 11.1%	(n=336) 19.6%	(n=899) 13.4%	0.001
Peripheral Pulses	Abnormal	(n=758) 11.4%	(n=336) 19.9%	(n=899) 13.7%	0.001
All Pulses	Abnormal	(n=756) 11.4%	(n=336) 19.9%	(n=899) 13.7%	0.001

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Lifetime Cigarette Smoking History				Current Cigarette Smoking				
		0	>0-10	>10	p-Value	0 Non-smoker	0 Former Smoker	>0-20	>20	p-Value
Reported/Verified Essential Hypertension*	Yes	(n=570) 34.2%	(n=570) 28.4%	(n=888) 35.0%	0.024	(n=569) 34.1%	(n=789) 36.9%	(n=342) 26.0%	(n=328) 28.7%	0.001
Reported Heart Disease (Excluding Hypertension)	Yes	(n=570) 39.0%	(n=570) 38.6%	(n=888) 36.7%	0.633	(n=569) 38.8%	(n=789) 40.9%	(n=342) 36.6%	(n=328) 30.2%	0.008
Verified Heart Disease (Excluding Hypertension)	Yes	(n=570) 38.8%	(n=570) 38.4%	(n=888) 36.5%	0.618	(n=569) 38.7%	(n=789) 40.9%	(n=342) 36.6%	(n=328) 29.3%	0.003
Reported/Verified Myocardial Infarction*	Yes	(n=570) 2.3%	(n=570) 3.3%	(n=888) 6.8%	<0.001	(n=569) 2.3%	(n=789) 6.0%	(n=342) 4.7%	(n=328) 4.9%	0.015
Systolic Blood Pressure (continuous) (discrete)	Abnormal	(n=570) — 18.2%	(n=570) r=0.051 19.0%	(n=888) — 21.8%	0.022 0.184	(n=569) — 18.1%	(n=789) r=-0.102 24.2%	(n=342) — 17.5%	(n=328) — 15.9%	<0.001 0.002
Heart Sounds	Abnormal	(n=570) 3.9%	(n=570) 3.5%	(n=888) 5.2%	0.250	(n=569) 3.9%	(n=789) 5.8%	(n=342) 4.4%	(n=328) 1.5%	0.013
ECG-Overall	Abnormal	(n=570) 14.2%	(n=570) 14.4%	(n=888) 20.3%	0.002	(n=569) 14.2%	(n=789) 20.5%	(n=342) 13.2%	(n=328) 16.8%	0.003
REEB	Abnormal	(n=570) 0.2%	(n=570) 0.7%	(n=888) 0.8%	0.304 ^a	(n=569) 0.2%	(n=789) 0.9%	(n=342) 0.6%	(n=328) 0.6%	0.416 ^a

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Lifetime Cigarette Smoking History				Current Cigarette Smoking				
		0	>0-10	>10	p-Value	0 Non-smoker	0 Former Smoker	>0-20	>20	p-Value
LBBB	Abnormal	(n=570) 0.4%	(n=570) 0.2%	(n=888) 0.2%	0.825 ^a	(n=569) 0.4%	(n=789) 0.4%	(n=342) 0.0%	(n=328) 0.0%	0.478 ^a
Nonspecific T-Waves	Abnormal	(n=570) 8.8%	(n=570) 9.0%	(n=888) 13.7%	0.002	(n=569) 8.8%	(n=789) 13.8%	(n=342) 9.4%	(n=328) 9.8%	0.013
Bradycardia	Abnormal	(n=570) 7.2%	(n=570) 6.5%	(n=888) 3.4%	0.002	(n=569) 7.2%	(n=789) 5.7%	(n=342) 5.3%	(n=328) 1.2%	0.002
Tachycardia	Abnormal	(n=570) 0.0%	(n=570) 0.0%	(n=888) 0.1%	0.526 ^a	(n=569) 0.0%	(n=789) 0.0%	(n=342) 0.0%	(n=328) 0.3%	0.159 ^a
Arrhythmia	Abnormal	(n=570) 4.0%	(n=570) 3.7%	(n=888) 4.0%	0.931	(n=569) 4.0%	(n=789) 4.2%	(n=342) 2.9%	(n=328) 4.3%	0.762
ECG-Other Diagnoses	Abnormal	(n=570) 15.3%	(n=570) 17.4%	(n=888) 21.5%	0.008	(n=569) 15.3%	(n=789) 20.5%	(n=342) 17.2%	(n=328) 21.0%	0.051
Diastolic Blood Pressure (continuous)		(n=570) —	(n=570) r=0.009	(n=888) —	0.688	(n=569) —	(n=789) r=-0.062	(n=342) —	(n=328) —	0.005
(discrete)	Abnormal	3.7%	3.2%	6.0%	0.022	3.5%	5.3%	3.8%	5.2%	0.356
Funduscopy Examination	Abnormal	(n=570) 0.4%	(n=570) 0.9%	(n=888) 0.9%	0.442 ^a	(n=569) 0.4%	(n=789) 0.4%	(n=342) 1.8%	(n=328) 1.2%	0.039 ^a
Carotid Bruits	Abnormal	(n=570) 0.2%	(n=570) 0.5%	(n=888) 1.0%	0.136 ^a	(n=569) 0.2%	(n=789) 0.8%	(n=342) 1.2%	(n=328) 0.6%	0.306 ^a

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Lifetime Cigarette Smoking History				Current Cigarette Smoking				p-Value
		0	>0-10	>10	p-Value	0 Non-smoker	0 Former Smoker	>0-20	>20	
Radial Pulses	Abnormal	(n=562) 0.4%	(n=560) 0.4%	(n=873) 0.8%	0.412 ^a	(n=561) 0.4%	(n=775) 0.5%	(n=334) 0.9%	(n=325) 0.6%	0.762 ^a
Femoral Pulses	Abnormal	(n=562) 0.9%	(n=560) 1.4%	(n=873) 1.8%	0.345	(n=561) 0.9%	(n=775) 1.3%	(n=334) 2.7%	(n=325) 1.5%	0.173 ^a
Popliteal Pulses	Abnormal	(n=562) 0.4%	(n=560) 2.5%	(n=872) 4.8%	<0.001	(n=561) 0.4%	(n=774) 3.5%	(n=334) 4.8%	(n=325) 4.0%	<0.001
Dorsalis Pedis Pulses	Abnormal	(n=561) 8.7%	(n=560) 10.7%	(n=872) 12.5%	0.082	(n=560) 8.8%	(n=774) 11.4%	(n=334) 14.1%	(n=325) 10.5%	0.096
Posterior Tibial Pulses	Abnormal	(n=561) 1.4%	(n=560) 2.5%	(n=872) 4.2%	0.007	(n=560) 1.4%	(n=774) 2.6%	(n=334) 5.4%	(n=325) 4.0%	0.005
Leg Pulses	Abnormal	(n=561) 10.5%	(n=560) 12.9%	(n=872) 15.9%	0.012	(n=560) 10.5%	(n=774) 13.7%	(n=334) 17.4%	(n=325) 14.5%	0.033
Peripheral Pulses	Abnormal	(n=561) 10.7%	(n=560) 13.0%	(n=872) 16.4%	0.008	(n=560) 10.7%	(n=774) 14.1%	(n=334) 18.0%	(n=325) 14.5%	0.023
All Pulses	Abnormal	(n=560) 10.7%	(n=560) 13.0%	(n=871) 16.4%	0.008	(n=559) 10.7%	(n=774) 14.1%	(n=333) 18.0%	(n=325) 14.5%	0.023

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Lifetime Alcohol History				Current Alcohol Use			
		0	>0-40	>40	p-Value	0-1	>1-4	>4	p-Value
Reported/Verified Essential Hypertension*	Yes	(n=177) 32.2%	(n=1,406) 29.9%	(n=432) 42.6%	<0.001	(n=1,605) 30.1%	(n=350) 44.6%	(n=67) 40.3%	<0.001
Reported Heart Disease (Excluding Hypertension)	Yes	(n=177) 38.4%	(n=1,406) 38.1%	(n=432) 37.0%	0.911	(n=1,605) 38.2%	(n=350) 37.4%	(n=67) 31.3%	0.519
Verified Heart Disease (Excluding Hypertension)	Yes	(n=177) 37.8%	(n=1,406) 38.0%	(n=432) 36.6%	0.857	(n=1,605) 37.9%	(n=350) 37.4%	(n=67) 31.3%	0.548
Reported/Verified Myocardial Infarction*	Yes	(n=177) 5.6%	(n=1,406) 4.1%	(n=432) 5.3%	0.432	(n=1,605) 4.6%	(n=350) 3.4%	(n=67) 9.0%	0.134
Systolic Blood Pressure (continuous) (discrete)	Abnormal	(n=177) — 19.2%	(n=1,406) r=0.054 18.5%	(n=432) — 25.5%	0.016 0.006	(n=1,605) — 18.7%	(n=350) r=0.070 24.6%	(n=67) — 28.4%	0.002 0.010
Heart Sounds	Abnormal	(n=177) 5.1%	(n=1,406) 4.0%	(n=432) 5.3%	0.436	(n=1,605) 4.2%	(n=350) 5.4%	(n=67) 3.0%	0.497
ECG-Overall	Abnormal	(n=177) 17.0%	(n=1,406) 16.2%	(n=432) 19.2%	0.348	(n=1,605) 16.2%	(n=350) 19.1%	(n=67) 22.4%	0.197
RBBB	Abnormal	(n=177) 0.6%	(n=1,406) 0.4%	(n=432) 1.4%	0.051*	(n=1,605) 0.4%	(n=350) 1.4%	(n=67) 0.0%	0.074*

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Lifetime Alcohol History				Current Alcohol Use			
		0	>0-40	>40	p-Value	0-1	>1-4	>4	p-Value
LBBB	Abnormal	(n=177) 0.0%	(n=1,406) 0.3%	(n=432) 0.2%	0.771 ^a	(n=1,605) 0.3%	(n=350) 0.0%	(n=67) 0.0%	0.521 ^a
Nonspecific T-Waves	Abnormal	(n=177) 12.4%	(n=1,406) 10.7%	(n=432) 11.3%	0.772	(n=1,605) 10.5%	(n=350) 12.9%	(n=67) 13.4%	0.349
Bradycardia	Abnormal	(n=177) 5.1%	(n=1,406) 5.4%	(n=432) 5.3%	0.984	(n=1,605) 5.2%	(n=350) 6.6%	(n=67) 1.5%	0.218
Tachycardia	Abnormal	(n=177) 0.0%	(n=1,406) 0.0%	(n=432) 0.2%	0.160 ^a	(n=1,605) 0.0%	(n=350) 0.0%	(n=67) 1.5%	—
Arrhythmia	Abnormal	(n=177) 5.1%	(n=1,406) 3.9%	(n=432) 3.7%	0.715	(n=1,605) 4.0%	(n=350) 3.4%	(n=67) 6.0%	0.614
ECG-Other Diagnoses	Abnormal	(n=177) 17.5%	(n=1,406) 17.9%	(n=432) 21.1%	0.317	(n=1,605) 17.5%	(n=350) 23.1%	(n=67) 20.9%	0.044
Diastolic Blood Pressure (continuous)	Abnormal	(n=177) —	(n=1,406) r=0.057	(n=432) —	0.010	(n=1,605) —	(n=350) r=0.059	(n=67) —	0.008
(discrete)		4.0%	4.1%	6.2%	0.166	3.6%	8.3%	9.0%	<0.001
Fundoscopic Examination	Abnormal	(n=177) 0.0%	(n=1,406) 0.6%	(n=432) 1.4%	0.101 ^a	(n=1,605) 0.4%	(n=350) 2.0%	(n=67) 1.5%	0.006 ^a
Carotid Bruits	Abnormal	(n=177) 0.0%	(n=1,406) 0.7%	(n=432) 0.7%	0.532 ^a	(n=1,605) 0.7%	(n=350) 0.6%	(n=67) 0.0%	0.776 ^a

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Lifetime Alcohol History				Current Alcohol Use			
		0	>0-40	>40	p-Value	0-1	>1-4	>4	p-Value
Radial Pulses	Abnormal	(n=169) 0.6%	(n=1,387) 0.6%	(n=426) 0.5%	0.964 ^a	(n=1,577) 0.6%	(n=348) 0.3%	(n=64) 0.0%	0.609 ^a
Femoral Pulses	Abnormal	(n=169) 0.6%	(n=1,387) 1.5%	(n=426) 1.6%	0.603	(n=1,577) 1.5%	(n=348) 1.4%	(n=64) 1.6%	0.997
Popliteal Pulses	Abnormal	(n=169) 0.6%	(n=1,386) 2.5%	(n=426) 4.7%	0.011	(n=1,576) 2.5%	(n=348) 4.6%	(n=64) 3.1%	0.118
Dorsalis Pedis Pulses	Abnormal	(n=169) 13.0%	(n=1,385) 10.3%	(n=426) 11.7%	0.458	(n=1,576) 10.6%	(n=347) 13.0%	(n=64) 9.4%	0.404
Posterior Tibial Pulses	Abnormal	(n=169) 1.2%	(n=1,385) 2.4%	(n=426) 4.9%	0.011	(n=1,576) 2.6%	(n=347) 4.6%	(n=64) 3.1%	0.136
Leg Pulses	Abnormal	(n=169) 14.8%	(n=1,385) 12.6%	(n=426) 15.7%	0.230	(n=1,576) 13.1%	(n=347) 15.8%	(n=64) 12.5%	0.396
Peripheral Pulses	Abnormal	(n=169) 15.4%	(n=1,385) 13.0%	(n=426) 15.7%	0.295	(n=1,576) 13.5%	(n=347) 15.8%	(n=64) 12.5%	0.496
All Pulses	Abnormal	(n=169) 15.4%	(n=1,383) 13.0%	(n=426) 15.7%	0.301	(n=1,574) 13.5%	(n=347) 15.8%	(n=64) 12.5%	0.500

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Cholesterol				HDL				Cholesterol-HDL Ratio			
		<200	>200-230	>230	p-Value	<40	>40-50	>50	p-Value	<4.2	>4.2-5.5	>5.5	p-Value
Reported/Verified Essential Hypertension*	Yes	(n=699) 27.8%	(n=639) 34.3%	(n=673) 37.0%	0.001	(n=589) 34.0%	(n=744) 33.6%	(n=678) 31.3%	0.527	(n=716) 29.2%	(n=721) 33.4%	(n=574) 36.9%	0.012
Reported Heart Disease (Excluding Hypertension)	Yes	(n=699) 39.9%	(n=639) 35.8%	(n=673) 37.6%	0.303	(n=589) 36.7%	(n=744) 39.5%	(n=678) 37.0%	0.491	(n=716) 39.7%	(n=721) 35.8%	(n=574) 38.2%	0.311
Verified Heart Disease (Excluding Hypertension)	Yes	(n=699) 39.5%	(n=639) 35.8%	(n=673) 37.4%	0.385	(n=589) 36.3%	(n=744) 39.5%	(n=678) 36.7%	0.409	(n=716) 39.4%	(n=721) 35.6%	(n=574) 38.0%	0.336
Reported/Verified Myocardial Infarction*	Yes	(n=699) 3.0%	(n=639) 4.2%	(n=673) 6.5%	0.007	(n=589) 8.2%	(n=744) 3.5%	(n=678) 2.6%	<0.001	(n=716) 2.9%	(n=721) 3.5%	(n=574) 8.0%	<0.001
Systolic Blood Pressure (continuous) (discrete)		(n=699) —	(n=639) r=0.097	(n=673) —	<0.001	(n=589) —	(n=744) r=0.002	(n=678) —	0.917	(n=716) —	(n=721) r=0.060	(n=574) —	0.007
	Abnormal	16.9%	19.7%	23.8%	0.006	20.4%	19.8%	20.2%	0.958	19.3%	18.9%	22.6%	0.191
Heart Sounds	Abnormal	(n=699) 4.3%	(n=639) 3.8%	(n=673) 4.9%	0.593	(n=589) 5.4%	(n=744) 3.4%	(n=678) 4.4%	0.179	(n=716) 4.6%	(n=721) 2.8%	(n=574) 5.9%	0.020
ECG-Overall	Abnormal	(n=699) 15.2%	(n=639) 16.0%	(n=673) 19.9%	0.045	(n=589) 18.7%	(n=744) 15.7%	(n=678) 17.0%	0.363	(n=716) 16.9%	(n=721) 15.0%	(n=574) 19.7%	0.081
RBBB	Abnormal	(n=699) 0.9%	(n=639) 0.6%	(n=673) 0.3%	0.400 ^a	(n=589) 0.9%	(n=744) 0.4%	(n=678) 0.6%	0.576 ^a	(n=716) 0.7%	(n=721) 0.4%	(n=574) 0.7%	0.734 ^a

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Cholesterol				HDL				Cholesterol-HDL Ratio			
		<200	>200-230	>230	p-Value	<40	>40-50	>50	p-Value	<4.2	>4.2-5.5	>5.5	p-Value
LBBB	Abnormal	(n=699) 0.3%	(n=639) 0.2%	(n=673) 0.3%	0.851 ^a	(n=589) 0.0%	(n=744) 0.5%	(n=678) 0.2%	0.119 ^a	(n=716) 0.3%	(n=721) 0.1%	(n=574) 0.4%	0.737 ^a
Nonspecific T-Waves	Abnormal	(n=699) 9.0%	(n=639) 11.1%	(n=673) 13.2%	0.046	(n=589) 12.6%	(n=744) 9.7%	(n=678) 11.4%	0.240	(n=716) 10.3%	(n=721) 10.5%	(n=574) 12.7%	0.337
Bradycardia	Abnormal	(n=699) 6.3%	(n=639) 5.5%	(n=673) 4.3%	0.262	(n=589) 2.7%	(n=744) 5.9%	(n=678) 7.1%	0.002	(n=716) 8.5%	(n=721) 4.3%	(n=574) 2.8%	<0.001
Tachycardia	Abnormal	(n=699) 0.0%	(n=639) 0.0%	(n=673) 0.2%	0.370 ^a	(n=589) 0.0%	(n=744) 0.0%	(n=678) 0.2%	0.374 ^a	(n=716) 0.1%	(n=721) 0.0%	(n=574) 0.0%	0.405 ^a
Arrhythmia	Abnormal	(n=699) 4.3%	(n=639) 3.0%	(n=673) 4.6%	0.277	(n=589) 4.8%	(n=744) 3.2%	(n=678) 4.1%	0.355	(n=716) 4.2%	(n=721) 3.0%	(n=574) 4.9%	0.232
ECG-Other Diagnoses	Abnormal	(n=699) 17.3%	(n=639) 18.5%	(n=673) 20.1%	0.423	(n=589) 19.9%	(n=744) 18.0%	(n=678) 18.1%	0.642	(n=716) 17.6%	(n=721) 19.1%	(n=574) 19.2%	0.693
Diastolic Blood Pressure (continuous)		(n=699) —	(n=639) r=0.111	(n=673) —	<0.001	(n=589) —	(n=744) r=0.002	(n=678) —	0.915	(n=716) —	(n=721) r=0.077	(n=574) —	<0.001
(discrete)	Abnormal	3.9%	4.4%	5.4%	0.407	3.4%	4.4%	5.6%	0.167	5.7%	3.5%	4.4%	0.117
Funduscopy Examination	Abnormal	(n=699) 0.9%	(n=639) 0.5%	(n=673) 0.9%	0.615	(n=589) 0.3%	(n=744) 0.7%	(n=678) 1.2%	0.213	(n=716) 1.0%	(n=721) 0.8%	(n=574) 0.4%	0.403
Carotid Bruits	Abnormal	(n=699) 0.7%	(n=639) 0.8%	(n=673) 0.4%	0.720 ^a	(n=589) 1.0%	(n=744) 0.8%	(n=678) 0.2%	0.123 ^a	(n=716) 0.3%	(n=721) 0.8%	(n=574) 0.9%	0.310 ^a

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Cholesterol				HDL				Cholesterol-HDL Ratio			
		<200	>200-230	>230	p-Value	<40	>40-50	>50	p-Value	<4.2	>4.2-5.5	>5.5	p-Value
Radial Pulses	Abnormal	(n=686) 0.6%	(n=629) 0.5%	(n=664) 0.6%	0.948	(n=582) 0.9%	(n=730) 0.6%	(n=667) 0.3%	0.415 ^a	(n=704) 0.3%	(n=709) 0.6%	(n=566) 0.9%	0.361 ^a
Femoral Pulses	Abnormal	(n=686) 1.2%	(n=629) 1.8%	(n=664) 1.5%	0.676	(n=582) 1.9%	(n=730) 1.6%	(n=667) 0.9%	0.306	(n=704) 0.6%	(n=709) 2.5%	(n=566) 1.2%	0.007
Popliteal Pulses	Abnormal	(n=686) 2.2%	(n=628) 2.9%	(n=664) 3.8%	0.227	(n=581) 3.1%	(n=730) 3.4%	(n=667) 2.2%	0.412	(n=704) 2.1%	(n=709) 3.2%	(n=565) 3.5%	0.277
Dorsalis Pedis Pulses	Abnormal	(n=686) 10.1%	(n=627) 9.9%	(n=664) 13.0%	0.135	(n=580) 11.2%	(n=730) 11.6%	(n=667) 10.0%	0.620	(n=704) 9.8%	(n=708) 10.4%	(n=565) 13.1%	0.150
Posterior Tibial Pulses	Abnormal	(n=686) 2.0%	(n=627) 3.8%	(n=664) 3.2%	0.155	(n=580) 2.9%	(n=730) 3.4%	(n=667) 2.6%	0.628	(n=704) 2.4%	(n=708) 3.5%	(n=565) 3.0%	0.467
Leg Pulses	Abnormal	(n=686) 11.7%	(n=627) 13.1%	(n=664) 16.1%	0.052	(n=580) 14.1%	(n=730) 14.7%	(n=667) 12.0%	0.317	(n=704) 11.1%	(n=708) 14.6%	(n=565) 15.6%	0.045
Peripheral Pulses	Abnormal	(n=686) 12.2%	(n=627) 13.2%	(n=664) 16.3%	0.086	(n=580) 14.5%	(n=730) 14.9%	(n=667) 2.3%	0.325	(n=704) 11.4%	(n=708) 14.8%	(n=565) 15.9%	0.044
All Pulses	Abnormal	(n=685) 12.3%	(n=627) 13.2%	(n=663) 16.3%	0.085	(n=578) 14.5%	(n=730) 14.9%	(n=667) 12.3%	0.320	(n=704) 11.4%	(n=708) 14.8%	(n=563) 16.0%	0.042

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Percent Body Fat			p-Value	Personality Type		
		<10	10-25	>25		A	B	p-Value
Reported/Verified Essential Hypertension*	Yes	(n=8) 0.0%	(n=1,655) 28.2%	(n=365) 55.3%	<0.001	(n=847) 32.6%	(n=1,071) 34.7%	0.348
Reported Heart Disease (Excluding Hypertension)	Yes	(n=8) 25.0%	(n=1,655) 38.4%	(n=365) 35.6%	0.456	(n=847) 39.8%	(n=1,071) 37.5%	0.337
Verified Heart Disease (Excluding Hypertension)	Yes	(n=8) 25.0%	(n=1,655) 38.2%	(n=365) 35.6%	0.499	(n=847) 39.7%	(n=1,071) 37.2%	0.302
Reported/Verified Myocardial Infarction*	Yes	(n=8) 0.0%	(n=1,655) 4.4%	(n=365) 5.2%	0.664	(n=847) 4.2%	(n=1,071) 4.9%	0.604
Systolic Blood Pressure (continuous) (discrete)		(n=8) —	(n=1,655) r=0.234	(n=365) —	<0.001	(n=847) —	(n=1,071) r=0.045	0.047
	Abnormal	12.5%	17.3%	32.6%	<0.001	18.2%	22.4%	0.026
Heart Sounds	Abnormal	(n=8) 0.0%	(n=1,655) 4.2%	(n=365) 4.9%	0.698	(n=847) 4.5%	(n=1,071) 4.2%	0.848
ECG-Overall	Abnormal	(n=8) 25.0%	(n=1,655) 15.8%	(n=365) 21.6%	0.023	(n=847) 16.8%	(n=1,071) 17.7%	0.618
REBB	Abnormal	(n=8) 0.0%	(n=1,655) 0.7%	(n=365) 0.3%	0.662 ^a	(n=847) 0.7%	(n=1,071) 0.6%	0.898
LEBB	Abnormal	(n=8) 0.0%	(n=1,655) 0.2%	(n=365) 0.6%	0.437 ^a	(n=847) 0.0%	(n=1,071) 0.5%	0.108

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Percent Body Fat				Personality Type		
		<10	10-25	>25	p-Value	A	B	p-Value
Nonspecific T-Waves	Abnormal	(n=8) 25.0%	(n=1,655) 9.6%	(n=365) 17.0%	<0.001	(n=847) 10.7%	(n=1,071) 11.8%	0.530
Bradycardia	Abnormal	(n=8) 0.0%	(n=1,655) 5.9%	(n=365) 3.0%	0.072	(n=847) 5.6%	(n=1,071) 5.2%	0.834
Tachycardia	Abnormal	(n=8) 0.0%	(n=1,655) 0.1%	(n=365) 0.0%	0.893 ^a	(n=847) 0.1%	(n=1,071) 0.0%	0.884
Arrhythmia	Abnormal	(n=8) 0.0%	(n=1,655) 3.9%	(n=365) 4.4%	0.763	(n=847) 3.9%	(n=1,071) 4.2%	0.830
ECG-Other Diagnoses	Abnormal	(n=8) 62.5%	(n=1,655) 18.2%	(n=365) 19.4%	0.005	(n=847) 20.1%	(n=1,071) 18.1%	0.304
Diastolic Blood Pressure (continuous) (discrete)	Abnormal	(n=8) — 0.0%	(n=1,655) r=0.196 4.0%	(n=365) — 7.1%	<0.001 0.028	(n=847) 4.1%	(n=1,071) r=0.004 4.9%	0.861 0.519
Funduscopy Examination	Abnormal	(n=8) 0.0%	(n=1,655) 0.8%	(n=365) 0.6%	0.865 ^a	(n=847) 0.6%	(n=1,071) 0.8%	0.712
Carotid Bruits	Abnormal	(n=8) 0.0%	(n=1,655) 0.6%	(n=365) 0.8%	0.872 ^a	(n=847) 0.6%	(n=1,071) 0.8%	0.893
Radial Pulses	Abnormal	(n=7) 0.0%	(n=1,636) 0.6%	(n=352) 0.3%	0.739 ^a	(n=835) 0.6%	(n=1,051) 0.6%	0.999

TABLE L-1. (continued)

Dependent Variable-Covariate Associations for Cardiovascular Evaluation

Dependent Variable	Level	Percent Body Fat				Personality Type		
		<10	10-25	>25	p-Value	A	B	p-Value
Femoral Pulses	Abnormal	(n=7) 0.0%	(n=1,636) 1.2%	(n=352) 2.6%	0.157	(n=835) 0.6%	(n=1,051) 2.2%	0.008
Popliteal Pulses	Abnormal	(n=7) 28.6%	(n=1,635) 2.6%	(n=352) 3.7%	<0.001	(n=834) 1.7%	(n=1,051) 4.1%	0.004
Dorsalis Pedis Pulses	Abnormal	(n=7) 14.3%	(n=1,634) 11.0%	(n=352) 10.5%	0.925	(n=834) 9.6%	(n=1,050) 12.4%	0.066
Posterior Tibial Pulses	Abnormal	(n=7) 14.3%	(n=1,634) 3.4%	(n=352) 0.8%	0.009	(n=834) 2.0%	(n=1,050) 3.9%	0.028
Leg Pulses	Abnormal	(n=7) 28.6%	(n=1,634) 13.3%	(n=352) 14.5%	0.424	(n=834) 11.4%	(n=1,050) 15.8%	0.007
Peripheral Pulses	Abnormal	(n=7) 28.6%	(n=1,634) 13.6%	(n=352) 14.5%	0.485	(n=834) 11.8%	(n=1,050) 16.1%	0.009
All Pulses	Abnormal	(n=7) 28.6%	(n=1,634) 13.6%	(n=350) 14.6%	0.477	(n=833) 11.8%	(n=1,049) 16.1%	0.009

TABLE L-1. (continued)

Dependent Variable-Covariate Association for Cardiovascular Evaluation

Dependent Variable	Level	Differential Cortisol				Family History of Heart Disease			Family History of Heart Disease <50		
		<0.6	>0.6-4.0	>4.0	p-Value	Yes	No	p-Value	Yes	No	p-Value
Reported/Verified Essential Hypertension*	Yes	(n=635) 35.8%	(n=659) 33.5%	(n=618) 32.0%	0.376	(n=449) 39.4%	(n=1,579) 31.1%	0.001	(n=58) 43.1%	(n=1,970) 32.6%	0.126
Reported Heart Disease (Excluding Hypertension)	Yes	(n=635) 37.5%	(n=659) 38.7%	(n=618) 39.3%	0.793	(n=449) 42.5%	(n=1,579) 36.5%	0.024	(n=58) 39.7%	(n=1,970) 37.8%	0.883
Verified Heart Disease (Excluding Hypertension)	Yes	(n=635) 37.5%	(n=659) 38.5%	(n=618) 38.8%	0.873	(n=449) 42.1%	(n=1,579) 36.4%	0.033	(n=58) 39.7%	(n=1,970) 37.6%	0.858
Reported/Verified Myocardial Infarction*	Yes	(n=635) 4.4%	(n=659) 3.8%	(n=618) 5.7%	0.270	(n=449) 7.8%	(n=1,579) 3.6%	<0.001	(n=58) 6.9%	(n=1,970) 4.5%	0.534
Systolic Blood Pressure (continuous) (discrete)	Abnormal	(n=635) — 21.3%	(n=659) r=-0.036 20.8%	(n=618) — 19.7%	0.118 0.794	(n=449) x̄=128.32 23.2%	(n=1,579) x̄=126.56 19.1%	0.062 0.072	(n=58) x̄=130.22 29.3%	(n=1,970) x̄=126.86 19.8%	0.151 0.112
Heart Sounds	Abnormal	(n=635) 4.1%	(n=659) 4.1%	(n=618) 4.7%	0.834 ^a	(n=449) 6.7%	(n=1,579) 3.7%	0.009	(n=58) 8.6%	(n=1,970) 4.2%	0.208
ECG-Overall	Abnormal	(n=635) 16.8%	(n=659) 17.8%	(n=618) 17.0%	0.898	(n=449) 18.5%	(n=1,579) 16.5%	0.348	(n=58) 13.8%	(n=1,970) 17.0%	0.664
RBBB	Abnormal	(n=635) 0.2%	(n=659) 0.9%	(n=618) 0.8%	0.181 ^a	(n=449) 0.2%	(n=1,579) 0.7%	0.436	(n=58) 0.0%	(n=1,970) 0.6%	0.999
LBBB	Abnormal	(n=635) 0.5%	(n=659) 0.2%	(n=618) 0.2%	0.444 ^a	(n=449) 0.4%	(n=1,579) 0.2%	0.614	(n=58) 0.0%	(n=1,970) 0.2%	0.999

TABLE L-1. (continued)

Dependent Variable-Covariate Association for Cardiovascular Evaluation

Dependent Variable	Level	Differential Cortisol				Family History of Heart Disease			Family History of Heart Disease <50		
		<0.6	>0.6-4.0	>4.0	p-Value	Yes	No	p-Value	Yes	No	p-Value
Nonspecific T-Waves	Abnormal	(n=635) 12.0%	(n=659) 10.6%	(n=618) 10.8%	0.714	(n=449) 12.9%	(n=1,579) 10.4%	0.168	(n=58) 12.1%	(n=1,970) 11.0%	0.916
Bradycardia	Abnormal	(n=635) 6.6%	(n=659) 4.4%	(n=618) 5.0%	0.190	(n=449) 3.3%	(n=1,579) 5.9%	0.038	(n=58) 1.7%	(n=1,970) 5.4%	0.348
Tachycardia	Abnormal	(n=635) 0.2%	(n=659) 0.0%	(n=618) 0.0%	0.366 ^a	(n=449) 0.0%	(n=1,579) 0.1%	0.999	(n=58) 0.0%	(n=1,970) 0.1%	0.999
Arrhythmia	Abnormal	(n=635) 3.5%	(n=659) 3.2%	(n=618) 5.3%	0.104	(n=449) 6.0%	(n=1,579) 3.4%	0.020	(n=58) 5.2%	(n=1,970) 3.9%	0.806
ECG-Other Diagnoses	Abnormal	(n=635) 18.6%	(n=659) 19.7%	(n=618) 18.4%	0.812	(n=449) 19.2%	(n=1,579) 18.4%	0.774	(n=58) 27.6%	(n=1,970) 18.3%	0.116
Diastolic Blood Pressure (continuous) (discrete)	Abnormal	(n=635) — 4.7%	(n=659) r=-0.057 3.8%	(n=618) — 5.3%	0.012 0.413	(n=449) $\bar{x}=75.22$ 6.2%	(n=1,579) $\bar{x}=74.68$ 4.0%	0.269 0.067	(n=58) $\bar{x}=75.74$ 10.3%	(n=1,970) $\bar{x}=74.68$ 4.4%	0.424 0.090
Funduscopy Examination	Abnormal	(n=635) 0.8%	(n=659) 0.8%	(n=618) 0.6%	0.954 ^a	(n=449) 1.3%	(n=1,579) 0.6%	0.184	(n=58) 0.0%	(n=1,970) 0.8%	0.999
Carotid Bruits	Abnormal	(n=635) 0.3%	(n=659) 0.8%	(n=618) 1.0%	0.352 ^a	(n=449) 0.9%	(n=1,579) 0.6%	0.677	(n=58) 1.7%	(n=1,970) 0.6%	0.620

TABLE L-1. (continued)

Dependent Variable-Covariate Association for Cardiovascular Evaluation

Dependent Variable	Level	Differential Cortisol				Family History of Heart Disease			Family History of Heart Disease <50		
		<0.6	>0.6-4.0	>4.0	p-Value	Yes	No	p-Value	Yes	No	p-Value
Radial Pulses	Abnormal	(n=628) 0.5%	(n=649) 0.5%	(n=604) 0.8%	0.636 ^a	(n=437) 0.7%	(n=1,558) 0.5%	0.892	(n=54) 0.0%	(n=1,941) 0.6%	0.999
Femoral Pulses	Abnormal	(n=628) 2.1%	(n=649) 1.1%	(n=604) 1.3%	0.316	(n=437) 2.1%	(n=1,558) 1.3%	0.331	(n=54) 0.0%	(n=1,941) 1.5%	0.898
Popliteal Pulses	Abnormal	(n=628) 2.9%	(n=649) 2.5%	(n=603) 3.6%	0.460	(n=437) 2.8%	(n=1,557) 3.0%	0.946	(n=54) 1.8%	(n=1,940) 2.9%	0.999
Dorsalis Pedis Pulses	Abnormal	(n=628) 11.9%	(n=648) 11.4%	(n=603) 10.0%	0.516	(n=436) 12.2%	(n=1,557) 10.6%	0.404	(n=54) 16.7%	(n=1,939) 10.8%	0.252
Posterior Tibial Pulses	Abnormal	(n=628) 3.0%	(n=648) 3.1%	(n=603) 3.2%	0.992	(n=436) 3.4%	(n=1,557) 2.8%	0.611	(n=54) 1.8%	(n=1,939) 3.0%	0.999
Leg Pulses	Abnormal	(n=628) 14.6%	(n=648) 13.6%	(n=603) 13.3%	0.760	(n=436) 14.2%	(n=1,557) 13.4%	0.700	(n=54) 18.5%	(n=1,939) 13.4%	0.379
Peripheral Pulses	Abnormal	(n=628) 15.1%	(n=648) 13.9%	(n=603) 13.4%	0.675	(n=436) 14.7%	(n=1,557) 13.6%	0.624	(n=54) 18.5%	(n=1,939) 13.7%	0.419
All Pulses	Abnormal	(n=627) 15.2%	(n=647) 13.9%	(n=603) 13.4%	0.670	(n=435) 14.7%	(n=1,556) 13.6%	0.616	(n=54) 18.5%	(n=1,937) 13.7%	0.421

*No conditions reported that were not verified; therefore, reported and verified analyses are the same.

^aSmall cell size may affect validity of p-value.

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

TABLE L-2.

Summary of Group-by-Covariate Interactions for Cardiovascular Variables

Variable	Interaction	Stratification	Statistic	Group		Adj. Relative Risk (95% C.I.)	p-Value
				Ranch Hand	Comparison		
Reported/ Verified Myocardial Infarction*	Group-by- Family History of Heart Disease	Yes	n	201	241		
			Number%				
			Yes	19 9.4%	16 6.6%	1.50 (0.72,3.14)	0.278
			No	182 90.6%	225 93.4%		
		No	n	671	898		
			Number%				
			Yes	20 3.0%	37 4.1%	0.64 (0.36,1.15)	0.130
			No	651 97.0%	861 95.9%		
Systolic Blood Pressure	Group-by- Cholesterol- HDL Ratio	<4.2	n	289	393		
			Number%				
			Abnormal	49 17.0%	85 21.6%	0.80 (0.53,1.19)	0.266
			Normal	240 83.0%	308 78.4%		
		>4.2-5.5	n	299	379		
			Number%				
			Abnormal	52 17.4%	79 20.8%	0.76 (0.51,1.14)	0.188
			Normal	247 82.6%	300 79.2%		
		>5.5	n	246	292		
			Number%				
			Abnormal	65 26.4%	62 21.2%	1.40 (0.93,2.11)	0.111
			Normal	181 73.6%	230 78.8%		

TABLE L-2. (continued)

Summary of Group-by-Covariate Interactions for Cardiovascular Variables

Variable	Interaction	Stratification	Statistic	Group		Adj. Relative Risk (95% C.I.)	p-Value
				Ranch Band	Comparison		
Nonspecific T-Waves	Group-by-Lifetime Cigarette Smoking History	0	n	247	323		
			Number%				
			Abnormal	16 6.5%	34 10.5%	0.54 (0.29,1.02)	0.052
			Normal	231 93.5%	289 89.5%		
		>0-10	n	242	328		
			Number%				
			Abnormal	17 7.0%	34 10.4%	0.66 (0.36,1.22)	0.177
			Normal	225 93.0%	294 89.6%		
		>10	n	389	499		
			Number%				
			Abnormal	60 15.4%	62 12.4%	1.37 (0.92,2.03)	0.118
			Normal	329 84.6%	437 87.6%		
Diastolic Blood Pressure (continuous)	Group-by-Age	Born $\geq$ 1942	n	354	483		
			Adj. Mean	74.91	73.56	—	0.026
			95% C.I.	(74.01,75.81)	(72.78,74.33)		
		Born 1923-1941	n	457	546		
			Adj. Mean	75.42	75.24	—	0.760
			95% C.I.	(74.57,76.26)	(74.46,76.01)		
		Born $\leq$ 1922	n	26	40		
			Adj. Mean	75.71	75.72	—	0.996
			95% C.I.	(72.15,79.26)	(72.86,78.57)		

TABLE L-2. (continued)

Summary of Group-by-Covariate Interactions for Cardiovascular Variables

Variable	Interaction	Stratification	Statistic	Group		Adj. Relative Risk (95% C.I.)	p-Value
				Ranch Hand	Comparison		
Diastolic Blood Pressure (discrete)	Group-by-Family History of Heart Disease Before Age 50	Yes	n	26	30		
			Number%				
			Abnormal	5 19.2%	1 3.3%	6.59 (0.71,61.56)	0.057 ^a
			Normal	21 80.8%	29 96.7%		
		No	n	846	1,109		
			Number%				
			Abnormal	37 4.4%	48 4.3%	1.01 (0.65,1.57)	0.999
			Normal	809 95.6%	1,061 95.7%		
Posterior Tibial Pulse	Group-by-Differential Cortisol	<0.6	n	272	355		
			Number%				
			Abnormal	9 3.3%	10 2.8%	1.09 (0.43,2.77)	0.861
			Normal	263 96.7%	345 97.2%		
		>0.6-4.0	n	301	344		
			Number%				
			Abnormal	14 4.6%	6 1.7%	3.04 (1.06,8.68) ^b	0.030 ^b
			Normal	287 95.4%	338 98.3%		
		>4.0	n	251	349		
			Number%				
			Abnormal	6 2.4%	13 3.7%	0.61 (0.22,1.68)	0.330
			Normal	245 97.6%	336 96.3%		

TABLE L-2. (continued)

Summary of Group-by-Covariate Interactions for Cardiovascular Variables

*No conditions reported that were not verified; therefore, reported and verified analyses are the same.

^aSparse cell size (p-value from Fisher's exact test [unadjusted]=0.136).

^bDue to convergence problems, adjusted only for AGE, CSMOK, ZBFAT, and PERS (i.e., RACE omitted) (reference: Table 15-8).

Note: Refer to Tables 15-4, 15-6, and 15-8 for specification of adjusted models.

TABLE 1-3.

**Association Between Central and Peripheral Abnormalities and Verified
Heart Disease in the Combined Ranch Hand and Comparison Groups**

Variable	Stratification	Total	<u>Essential Hypertension</u>		<u>Heart Disease*</u>		<u>Myocardial Infarction</u>	
			Percent Abnormal	p-Value	Percent Abnormal	p-Value	Percent Abnormal	p-Value
Systolic Blood Pressure	<140	1,622	23.1%	<0.001	37.1%	0.274	3.8%	0.003
	≥140	406	72.2%		40.2%		7.4%	
Diastolic Blood Pressure	<90	1,936	29.9%	<0.001	37.6%	0.999	4.4%	0.240
	≥90	92	97.8%		38.0%		7.6%	
ECG	Normal	1,685	30.6%	<0.001	31.8%	<0.001	1.5%	<0.001
	Abnormal	343	44.3%		66.8%		19.2%	
Heart Sounds	Normal	1,940	31.9%	<0.001	35.2%	<0.001	3.4%	<0.001
	Abnormal	88	55.7%		93.2%		29.6%	
Funduscope Examination	Normal	2,013	32.6%	<0.001	37.7%	0.936	4.5%	0.292
	Abnormal	15	80.0%		33.3%		13.3%	
Carotid Bruits	Normal	2,015	32.8%	0.064	37.4%	0.010	4.4%	0.004
	Abnormal	13	61.5%		76.9%		30.8%	
Peripheral Pulses	Normal	1,717	30.9%	0.001	37.6%	0.401	3.7%	0.002
	Abnormal	276	41.3%		34.8%		8.0%	

*Excluding hypertension.

TABLE L-4.

Exposure Index-by-Covariate Interactions for Cardiovascular Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index				Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low	Medium	High				
Bradycardia	Exposure Index-by- Cholesterol-HDL Ratio (Officer)	<4.2	n	42	45	38		Overall		0.046 ^a
			Number/%							
			Abnormal	6 14.3%	1 2.2%	1 2.6%	M vs. L	0.14 (0.02,1.18)	0.070	
		>4.2-5.5	Normal	36 85.7%	44 97.8%	37 97.4%	H vs. L	0.16 (0.02,1.41)	0.099	
			n	38	45	33		Overall		0.057 ^a
			Number/%							
			Abnormal	4 10.5%	0 0.0%	1 3.0%	M vs. L	—	0.080	
		>5.5	Normal	34 89.5%	45 100.0%	32 97.0%	H vs. L	0.27 (0.03,2.51)	0.246	
			n	32	21	33		Overall		0.315 ^a
			Number/%							
			Abnormal	1 3.1%	3 14.3%	2 6.1%	M vs. L	5.17 (0.50,53.44)	0.168	
			Normal	31 96.9%	18 85.7%	31 93.9%	H vs. L	2.00 (0.17,23.22)	0.582	

TABLE L-4. (continued)

Exposure Index-by-Covariate Interactions for Cardiovascular Variables

Variable	Interaction (Occupation)	Stratification	Statistic	Exposure Index						Contrast	Adj. Relative Risk (95% C.I.)	p-Value
				Low		Medium		High				
ECG-Other Diagnoses	Exposure Index-by- Age (Officer)	Born ≥ 1942	n	43		20		11		Overall		0.628
			Number/%	10	23.3%	3	15.0%	1	9.1%	M vs. L	0.58 (0.13,2.57)	0.472
			Abnormal Normal	33	76.7%	17	85.0%	10	90.9%	H vs. L	0.43 (0.04,4.24)	0.465
		Born 1923-1941	n	64		82		91		Overall		0.654
			Number/%	15	23.4%	19	23.2%	16	17.6%	M vs. L	1.14 (0.50,2.59)	0.749
			Abnormal Normal	49	76.6%	63	76.8%	75	82.4%	H vs. L	0.81 (0.35,1.82)	0.589
		Born ≤ 1922	n	5		9		2		Overall		0.126*
			Number/%	0	0.0%	4	44.4%	0	0.0%	M vs. L	—	0.252
			Abnormal Normal	5	100.0%	5	55.6%	2	100.0%	H vs. L	—	—