

**Table G-5. Summary of Unadjusted Results for Dichotomous Variables – Model 1
(Ranch Hands vs. Comparisons) (Continued)**

Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
12-12	SCL-90-R Obsessive-Compulsive Behavior	All	121 (14.0)	205 (16.4)	0.83 (0.65,1.06)	0.125
		Officer	30 (8.8)	47 (9.5)	0.92 (0.57,1.48)	0.718
		Enlisted Flyer	28 (18.7)	41 (21.9)	0.82 (0.48,1.40)	0.462
		Enlisted Groundcrew	63 (16.8)	117 (20.6)	0.78 (0.56,1.09)	0.150
12-13	SCL-90-R Paranoid Ideation	All	57 (6.6)	89 (7.1)	0.92 (0.65,1.30)	0.627
		Officer	8 (2.4)	15 (3.0)	0.77 (0.32,1.83)	0.547
		Enlisted Flyer	8 (5.3)	17 (9.1)	0.56 (0.24,1.34)	0.196
		Enlisted Groundcrew	41 (10.9)	57 (10.0)	1.10 (0.72,1.69)	0.652
12-14	SCL-90-R Phobic Anxiety	All	85 (9.8)	131 (10.5)	0.93 (0.70,1.24)	0.615
		Officer	10 (2.9)	28 (5.7)	0.50 (0.24,1.05)	0.066
		Enlisted Flyer	15 (10.0)	27 (14.4)	0.66 (0.34,1.29)	0.223
		Enlisted Groundcrew	60 (16.0)	76 (13.4)	1.24 (0.86,1.78)	0.258
12-15	SCL-90-R Psychoticism	All	105 (12.1)	184 (14.7)	0.80 (0.62,1.03)	0.084
		Officer	21 (6.2)	45 (9.1)	0.65 (0.38,1.12)	0.121
		Enlisted Flyer	19 (12.7)	31 (16.6)	0.73 (0.39,1.35)	0.317
		Enlisted Groundcrew	65 (17.3)	108 (19.0)	0.90 (0.64,1.26)	0.522
12-16	SCL-90-R Somatization	All	143 (16.5)	201 (16.1)	1.03 (0.82,1.30)	0.797
		Officer	25 (7.3)	36 (7.3)	1.00 (0.59,1.71)	0.987
		Enlisted Flyer	33 (22.0)	52 (27.8)	0.73 (0.44,1.21)	0.223
		Enlisted Groundcrew	85 (22.7)	113 (19.9)	1.18 (0.86,1.62)	0.300
12-17	SCL-90-R Global Severity Index (GSI)	All	118 (13.6)	195 (15.6)	0.85 (0.67,1.09)	0.204
		Officer	23 (6.7)	37 (7.5)	0.89 (0.52,1.53)	0.676
		Enlisted Flyer	22 (14.7)	41 (21.9)	0.61 (0.35,1.08)	0.091
		Enlisted Groundcrew	73 (19.5)	117 (20.6)	0.93 (0.67,1.29)	0.681
12-18	SCL-90-R Positive Symptom Total (PST)	All	123 (14.2)	213 (17.1)	0.81 (0.63,1.02)	0.076
		Officer	25 (7.3)	46 (9.3)	0.77 (0.46,1.28)	0.310
		Enlisted Flyer	26 (17.3)	42 (22.5)	0.72 (0.42,1.25)	0.245
		Enlisted Groundcrew	72 (19.2)	125 (22.0)	0.84 (0.61,1.17)	0.306
12-19	SCL-90-R Positive Symptom Distress Index (PSDI)	All	69 (8.0)	84 (6.7)	1.20 (0.86,1.67)	0.280
		Officer	14 (4.1)	17 (3.5)	1.20 (0.58,2.47)	0.622
		Enlisted Flyer	13 (8.7)	19 (10.2)	0.84 (0.40,1.76)	0.642
		Enlisted Groundcrew	42 (11.2)	48 (8.4)	1.37 (0.88,2.12)	0.158
13-3	Uncharacterized Hepatitis	All	17 (2.0)	21 (1.7)	1.17 (0.61,2.23)	0.634
		Officer	5 (1.5)	7 (1.4)	1.03 (0.32,3.28)	0.958
		Enlisted Flyer	4 (2.6)	3 (1.6)	1.67 (0.37,7.57)	0.507
		Enlisted Groundcrew	8 (2.1)	11 (1.9)	1.11 (0.44,2.78)	0.826
13-4	Jaundice	All	12 (1.4)	35 (2.9)	0.49 (0.25,0.94)	0.025
		Officer	6 (1.8)	19 (4.0)	0.45 (0.18,1.14)	0.091
		Enlisted Flyer	3 (2.0)	1 (0.6)	3.70 (0.38,35.9)	0.260
		Enlisted Groundcrew	3 (0.8)	15 (2.7)	0.30 (0.09,1.04)	0.057

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Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
13-5	Chronic Liver Disease and Cirrhosis (Alcohol-related)	All	39 (4.8)	56 (4.7)	1.01 (0.67,1.54)	0.958
		Officer	15 (4.6)	14 (3.0)	1.58 (0.75,3.32)	0.229
		Enlisted Flyer	7 (5.1)	12 (6.7)	0.75 (0.29,1.95)	0.553
		Enlisted Groundcrew	17 (4.8)	30 (5.6)	0.85 (0.46,1.57)	0.602
13-6	Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	All	14 (1.6)	14 (1.1)	1.44 (0.68,3.04)	0.336
		Officer	5 (1.5)	3 (0.6)	2.43 (0.58,10.18)	0.226
		Enlisted Flyer	2 (1.3)	3 (1.6)	0.82 (0.14,4.99)	0.832
		Enlisted Groundcrew	7 (1.9)	8 (1.4)	1.33 (0.48,3.69)	0.589
13-7	Liver Abscess and Sequelae of Chronic Liver Disease	All	1 (0.1)	1 (0.1)	1.44 (0.09,23.03)	0.798
		Officer	0 (0.0)	1 (0.2)	--	0.999 ^a
		Enlisted Flyer	0 (0.0)	0 (0.0)	--	--
		Enlisted Groundcrew	1 (0.3)	0 (0.0)	--	0.836 ^a
13-8	Enlarged Liver (Hepatomegaly)	All	14 (1.6)	27 (2.2)	0.74 (0.39,1.42)	0.361
		Officer	5 (1.5)	9 (1.8)	0.80 (0.27,2.40)	0.689
		Enlisted Flyer	6 (4.0)	3 (1.6)	2.54 (0.62,10.32)	0.193
		Enlisted Groundcrew	3 (0.8)	15 (2.6)	0.30 (0.09,1.03)	0.056
13-9	Other Liver Disorders	All	249 (28.8)	312 (25.2)	1.20 (0.99,1.46)	0.067
		Officer	93 (27.5)	121 (24.9)	1.15 (0.84,1.57)	0.399
		Enlisted Flyer	40 (26.5)	48 (25.7)	1.04 (0.64,1.70)	0.864
		Enlisted Groundcrew	116 (30.8)	143 (25.2)	1.32 (0.99,1.76)	0.062
13-10	Current Hepatomegaly	All	10 (1.2)	7 (0.6)	2.06 (0.78,5.43)	0.141
		Officer	4 (1.2)	2 (0.4)	2.90 (0.53,15.95)	0.220
		Enlisted Flyer	2 (1.3)	0 (0.0)	--	0.389 ^a
		Enlisted Groundcrew	4 (1.1)	5 (0.9)	1.20 (0.32,4.51)	0.783
13-12	AST	All	63 (7.3)	82 (6.7)	1.11 (0.79,1.56)	0.552
		Officer	24 (7.1)	32 (6.5)	1.09 (0.63,1.88)	0.765
		Enlisted Flyer	10 (6.7)	16 (8.6)	0.75 (0.33,1.72)	0.501
		Enlisted Groundcrew	29 (7.9)	34 (6.1)	1.31 (0.78,2.19)	0.304
13-14	ALT	All	68 (7.9)	87 (7.1)	1.13 (0.81,1.57)	0.468
		Officer	23 (6.8)	22 (4.5)	1.54 (0.85,2.82)	0.157
		Enlisted Flyer	15 (10.0)	19 (10.3)	0.97 (0.48,1.98)	0.935
		Enlisted Groundcrew	30 (8.1)	46 (8.3)	0.98 (0.61,1.59)	0.938
13-16	GGT	All	89 (10.4)	124 (10.1)	1.03 (0.77,1.38)	0.831
		Officer	31 (9.1)	37 (7.6)	1.23 (0.75,2.02)	0.419
		Enlisted Flyer	23 (15.3)	25 (13.5)	1.16 (0.63,2.14)	0.637
		Enlisted Groundcrew	35 (9.5)	62 (11.2)	0.83 (0.54,1.29)	0.419
13-18	Alkaline Phosphatase	All	22 (2.6)	24 (1.9)	1.32 (0.74,2.37)	0.352
		Officer	4 (1.2)	12 (2.4)	0.47 (0.15,1.48)	0.200
		Enlisted Flyer	6 (4.0)	4 (2.2)	1.89 (0.52,6.81)	0.333
		Enlisted Groundcrew	12 (3.3)	8 (1.4)	2.30 (0.93,5.69)	0.071

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			RH	C		
13-20	Total Bilirubin	All	46 (5.4)	76 (6.2)	0.86 (0.59,1.25)	0.430
		Officer	22 (6.5)	35 (7.1)	0.90 (0.52,1.56)	0.707
		Enlisted Flyer	8 (5.3)	9 (4.9)	1.10 (0.41,2.93)	0.846
		Enlisted Groundcrew	16 (4.3)	32 (5.8)	0.74 (0.40,1.37)	0.342
13-21	Direct Bilirubin	All	1 (0.1)	5 (0.4)	0.29 (0.03,2.45)	0.196
		Officer	1 (0.3)	3 (0.6)	0.48 (0.05,4.62)	0.524
		Enlisted Flyer	0 (0.0)	0 (0.0)	--	--
		Enlisted Groundcrew	0 (0.0)	2 (0.4)	--	0.667 ^a
13-23	Lactic Dehydrogenase	All	81 (9.4)	129 (10.5)	0.89 (0.66,1.19)	0.424
		Officer	32 (9.4)	53 (10.8)	0.85 (0.54,1.36)	0.506
		Enlisted Flyer	13 (8.7)	15 (8.2)	1.07 (0.49,2.32)	0.866
		Enlisted Groundcrew	36 (9.8)	61 (11.0)	0.88 (0.57,1.35)	0.555
13-25	Cholesterol	All	130 (15.1)	182 (14.8)	1.03 (0.81,1.31)	0.826
		Officer	39 (11.5)	68 (13.9)	0.80 (0.53,1.22)	0.310
		Enlisted Flyer	22 (14.7)	28 (15.1)	0.96 (0.53,1.77)	0.905
		Enlisted Groundcrew	69 (18.7)	86 (15.5)	1.26 (0.89,1.78)	0.198
13-27	HDL Cholesterol	All	71 (8.3)	90 (7.3)	1.14 (0.83,1.58)	0.421
		Officer	19 (5.6)	24 (4.9)	1.15 (0.62,2.13)	0.664
		Enlisted Flyer	16 (10.7)	18 (9.7)	1.12 (0.55,2.27)	0.762
		Enlisted Groundcrew	36 (9.8)	48 (8.7)	1.14 (0.73,1.80)	0.561
13-29	Cholesterol-HDL Ratio	All	356 (41.5)	505 (41.1)	1.02 (0.85,1.22)	0.843
		Officer	114 (33.5)	156 (31.9)	1.08 (0.80,1.45)	0.623
		Enlisted Flyer	58 (38.9)	87 (47.0)	0.72 (0.46,1.11)	0.138
		Enlisted Groundcrew	184 (49.9)	262 (47.1)	1.12 (0.86,1.45)	0.414
13-31	Triglycerides	All	188 (21.9)	250 (20.3)	1.10 (0.89,1.36)	0.377
		Officer	60 (17.7)	82 (16.7)	1.07 (0.74,1.54)	0.717
		Enlisted Flyer	30 (20.0)	51 (27.6)	0.66 (0.39,1.10)	0.109
		Enlisted Groundcrew	98 (26.6)	117 (21.0)	1.36 (1.00,1.85)	0.052
13-33	Creatine Phosphokinase	All	72 (8.4)	115 (9.3)	0.89 (0.65,1.21)	0.448
		Officer	26 (7.6)	44 (9.0)	0.84 (0.51,1.39)	0.497
		Enlisted Flyer	7 (4.7)	15 (8.1)	0.55 (0.22,1.40)	0.212
		Enlisted Groundcrew	39 (10.6)	56 (10.1)	1.06 (0.69,1.62)	0.807
13-35	Serum Amylase	All	25 (2.9)	38 (3.1)	0.94 (0.56,1.57)	0.816
		Officer	7 (2.1)	22 (4.5)	0.45 (0.19,1.06)	0.067
		Enlisted Flyer	4 (2.7)	3 (1.6)	1.66 (0.37,7.54)	0.510
		Enlisted Groundcrew	14 (3.8)	13 (2.3)	1.65 (0.77,3.55)	0.202
13-36	Antibodies for Hepatitis A	All	283 (32.5)	421 (33.7)	0.95 (0.79,1.14)	0.580
		Officer	92 (27.0)	133 (27.0)	1.00 (0.73,1.36)	0.999
		Enlisted Flyer	74 (49.0)	86 (46.0)	1.13 (0.73,1.73)	0.581
		Enlisted Groundcrew	117 (31.0)	202 (35.4)	0.82 (0.62,1.08)	0.153

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Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
13-37	Prior Hepatitis B	All	77 (8.9)	170 (13.6)	0.62 (0.46,0.82)	0.001
		Officer	13 (3.8)	37 (7.5)	0.49 (0.26,0.94)	0.031
		Enlisted Flyer	19 (12.6)	37 (19.8)	0.58 (0.32,1.06)	0.079
		Enlisted Groundcrew	45 (11.9)	96 (16.9)	0.66 (0.45,0.97)	0.035
13-38	Current Hepatitis B	All	1 (0.1)	2 (0.2)	0.72 (0.07,7.94)	0.784
		Officer	0 (0.0)	0 (0.0)	--	--
		Enlisted Flyer	0 (0.0)	0 (0.0)	--	--
		Enlisted Groundcrew	1 (0.3)	2 (0.4)	0.75 (0.07,8.34)	0.817
13-39	Antibodies for Hepatitis C	All	9 (1.0)	18 (1.4)	0.72 (0.32,1.60)	0.408
		Officer	1 (0.3)	4 (0.8)	0.36 (0.04,3.24)	0.362
		Enlisted Flyer	1 (0.7)	2 (1.1)	0.62 (0.06,6.87)	0.694
		Enlisted Groundcrew	7 (1.9)	12 (2.1)	0.88 (0.34,2.25)	0.785
13-40	Stool Hemocult	All	29 (3.5)	53 (4.4)	0.78 (0.49,1.23)	0.279
		Officer	14 (4.2)	22 (4.6)	0.92 (0.46,1.83)	0.818
		Enlisted Flyer	2 (1.4)	7 (3.9)	0.34 (0.07,1.65)	0.179
		Enlisted Groundcrew	13 (3.7)	24 (4.5)	0.81 (0.41,1.61)	0.547
13-42	Prealbumin	All	13 (1.5)	11 (0.9)	1.70 (0.76,3.82)	0.195
		Officer	5 (1.5)	7 (1.4)	1.03 (0.32,3.27)	0.960
		Enlisted Flyer	1 (0.7)	1 (0.5)	1.23 (0.08,19.91)	0.882
		Enlisted Groundcrew	7 (1.9)	3 (0.5)	3.56 (0.92,13.87)	0.067
13-44	Albumin	All	3 (0.3)	10 (0.8)	0.43 (0.12,1.56)	0.170
		Officer	3 (0.9)	4 (0.8)	1.08 (0.24,4.86)	0.919
		Enlisted Flyer	0 (0.0)	1 (0.5)	--	0.999 ^a
		Enlisted Groundcrew	0 (0.0)	5 (0.9)	--	0.171 ^a
13-46	α -1-Acid Glycoprotein	All	37 (4.3)	40 (3.2)	1.34 (0.85,2.11)	0.209
		Officer	8 (2.4)	15 (3.1)	0.76 (0.32,1.82)	0.542
		Enlisted Flyer	9 (6.0)	7 (3.8)	1.62 (0.59,4.47)	0.348
		Enlisted Groundcrew	20 (5.4)	18 (3.2)	1.71 (0.89,3.28)	0.105
13-50	α -2-Macroglobulin	All	24 (2.8)	47 (3.8)	0.72 (0.44,1.19)	0.199
		Officer	8 (2.4)	18 (3.7)	0.63 (0.27,1.47)	0.287
		Enlisted Flyer	5 (3.3)	11 (5.9)	0.55 (0.19,1.61)	0.271
		Enlisted Groundcrew	11 (3.0)	18 (3.2)	0.92 (0.43,1.97)	0.827
13-52	Apolipoprotein B	All	423 (49.2)	653 (53.0)	0.86 (0.72,1.02)	0.087
		Officer	149 (43.8)	242 (49.4)	0.80 (0.61,1.06)	0.114
		Enlisted Flyer	72 (48.0)	116 (62.7)	0.55 (0.35,0.85)	0.007
		Enlisted Groundcrew	202 (54.7)	295 (53.1)	1.07 (0.82,1.39)	0.615
13-54	C3 Complement	All	15 (1.7)	28 (2.3)	0.76 (0.41,1.44)	0.398
		Officer	6 (1.8)	14 (2.9)	0.61 (0.23,1.61)	0.317
		Enlisted Flyer	1 (0.7)	5 (2.7)	0.24 (0.03,2.09)	0.197
		Enlisted Groundcrew	8 (2.2)	9 (1.6)	1.35 (0.51,3.52)	0.544

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			RH	C		
13-56	C4 Complement	All	2 (0.2)	2 (0.2)	1.43 (0.20,10.20)	0.719
		Officer	2 (0.6)	1 (0.2)	2.89 (0.26,32.04)	0.386
		Enlisted Flyer	0 (0.0)	1 (0.5)	--	0.999 ^a
		Enlisted Groundcrew	0 (0.0)	0 (0.0)	--	--
13-58	Haptoglobin	All	281 (32.7)	343 (27.9)	1.26 (1.04,1.52)	0.017
		Officer	84 (24.7)	106 (21.6)	1.19 (0.86,1.65)	0.300
		Enlisted Flyer	59 (39.3)	62 (33.5)	1.29 (0.82,2.01)	0.271
		Enlisted Groundcrew	138 (37.4)	175 (31.5)	1.30 (0.99,1.72)	0.063
13-60	Transferrin	All	70 (8.1)	134 (10.9)	0.73 (0.54,0.98)	0.036
		Officer	24 (7.1)	52 (10.6)	0.64 (0.39,1.06)	0.083
		Enlisted Flyer	15 (10.0)	21 (11.4)	0.87 (0.43,1.75)	0.691
		Enlisted Groundcrew	31 (8.4)	61 (11.0)	0.74 (0.47,1.17)	0.202
14-3	Essential Hypertension	All	345 (40.6)	509 (41.7)	0.95 (0.80,1.14)	0.606
		Officer	128 (38.9)	199 (41.5)	0.90 (0.68,1.20)	0.467
		Enlisted Flyer	71 (47.7)	80 (43.5)	1.18 (0.77,1.83)	0.447
		Enlisted Groundcrew	146 (39.2)	230 (41.4)	0.92 (0.70,1.20)	0.519
14-4	Heart Disease (Excluding Essential Hypertension)	All	568 (66.1)	749 (60.8)	1.26 (1.05,1.51)	0.013
		Officer	238 (71.3)	324 (66.9)	1.22 (0.90,1.66)	0.191
		Enlisted Flyer	112 (75.2)	111 (59.7)	2.05 (1.27,3.28)	0.003
		Enlisted Groundcrew	218 (58.0)	314 (55.9)	1.09 (0.84,1.42)	0.523
14-5	Myocardial Infarction	All	74 (8.6)	102 (8.3)	1.04 (0.76,1.43)	0.786
		Officer	28 (8.4)	42 (8.7)	0.96 (0.58,1.59)	0.882
		Enlisted Flyer	16 (10.7)	15 (8.1)	1.37 (0.65,2.87)	0.403
		Enlisted Groundcrew	30 (8.0)	45 (8.0)	1.00 (0.62,1.61)	0.987
14-6	Stroke or Transient Ischemia Attack	All	11 (1.3)	14 (1.1)	1.13 (0.51,2.50)	0.766
		Officer	5 (1.5)	5 (1.0)	1.46 (0.42,5.07)	0.555
		Enlisted Flyer	0 (0.0)	3 (1.6)	--	0.330 ^a
		Enlisted Groundcrew	6 (1.6)	6 (1.1)	1.50 (0.48,4.69)	0.483
14-8	Systolic Blood Pressure	All	181 (21.1)	262 (21.3)	0.99 (0.80,1.22)	0.914
		Officer	78 (23.4)	112 (23.1)	1.01 (0.73,1.41)	0.944
		Enlisted Flyer	36 (24.2)	43 (23.1)	1.06 (0.64,1.76)	0.823
		Enlisted Groundcrew	67 (17.8)	107 (19.0)	0.92 (0.66,1.29)	0.638
14-10	Diastolic Blood Pressure	All	45 (5.2)	61 (5.0)	1.06 (0.71,1.58)	0.769
		Officer	20 (6.0)	22 (4.5)	1.34 (0.72,2.49)	0.360
		Enlisted Flyer	8 (5.4)	8 (4.3)	1.26 (0.46,3.45)	0.649
		Enlisted Groundcrew	17 (4.5)	31 (5.5)	0.81 (0.44,1.49)	0.499
14-11	Heart Sounds	All	31 (3.6)	62 (5.0)	0.71 (0.45,1.10)	0.116
		Officer	11 (3.3)	26 (5.4)	0.60 (0.29,1.23)	0.164
		Enlisted Flyer	7 (4.7)	11 (5.9)	0.78 (0.30,2.08)	0.625
		Enlisted Groundcrew	13 (3.5)	25 (4.4)	0.77 (0.39,1.52)	0.452

**Table G-5. Summary of Unadjusted Results for Dichotomous Variables – Model 1
(Ranch Hands vs. Comparisons) (Continued)**

Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
14-12	Overall Electrocardiograph	All	268 (31.2)	384 (31.2)	1.00 (0.83,1.21)	0.988
		Officer	120 (35.9)	163 (33.7)	1.10 (0.82,1.48)	0.506
		Enlisted Flyer	60 (40.3)	62 (33.3)	1.35 (0.86,2.11)	0.190
		Enlisted Groundcrew	88 (23.4)	159 (28.3)	0.77 (0.57,1.05)	0.096
14-13	Right Bundle Branch Block	All	21 (2.4)	33 (2.7)	0.91 (0.52,1.58)	0.739
		Officer	8 (2.4)	13 (2.7)	0.89 (0.36,2.17)	0.796
		Enlisted Flyer	8 (5.4)	7 (3.8)	1.45 (0.51,4.10)	0.482
		Enlisted Groundcrew	5 (1.3)	13 (2.3)	0.57 (0.20,1.61)	0.288
14-14	Left Bundle Branch Block	All	5 (0.6)	12 (1.0)	0.60 (0.21,1.70)	0.317
		Officer	2 (0.6)	6 (1.2)	0.48 (0.10,2.39)	0.370
		Enlisted Flyer	1 (0.7)	0 (0.0)	--	0.911 ^a
		Enlisted Groundcrew	2 (0.5)	6 (1.1)	0.50 (0.10,2.47)	0.391
14-15	Non-Specific ST- and T-Wave Changes	All	160 (18.6)	222 (18.0)	1.04 (0.83,1.30)	0.724
		Officer	70 (21.0)	95 (19.6)	1.09 (0.77,1.53)	0.641
		Enlisted Flyer	33 (22.1)	34 (18.3)	1.27 (0.74,2.17)	0.380
		Enlisted Groundcrew	57 (15.2)	93 (16.5)	0.90 (0.63,1.29)	0.570
14-16	Bradycardia	All	24 (2.8)	49 (4.0)	0.69 (0.42,1.14)	0.142
		Officer	15 (4.5)	31 (6.4)	0.69 (0.36,1.29)	0.245
		Enlisted Flyer	5 (3.4)	5 (2.7)	1.26 (0.36,4.43)	0.722
		Enlisted Groundcrew	4 (1.1)	13 (2.3)	0.45 (0.15,1.40)	0.170
14-17	Tachycardia	All	6 (0.7)	4 (0.3)	2.16 (0.61,7.68)	0.228
		Officer	1 (0.3)	1 (0.2)	1.45 (0.09,23.27)	0.793
		Enlisted Flyer	3 (2.0)	0 (0.0)	--	0.174 ^a
		Enlisted Groundcrew	2 (0.5)	3 (0.5)	1.00 (0.17,5.99)	0.997
14-18	Arrhythmia	All	51 (5.9)	68 (5.5)	1.08 (0.74,1.57)	0.686
		Officer	25 (7.5)	25 (5.2)	1.49 (0.84,2.63)	0.176
		Enlisted Flyer	13 (8.7)	12 (6.5)	1.39 (0.61,3.13)	0.433
		Enlisted Groundcrew	13 (3.5)	31 (5.5)	0.61 (0.32,1.19)	0.147
14-19	Evidence of Prior Myocardial Infarction	All	34 (4.0)	53 (4.3)	0.92 (0.59,1.42)	0.698
		Officer	15 (4.5)	23 (4.8)	0.94 (0.48,1.83)	0.862
		Enlisted Flyer	7 (4.7)	9 (4.8)	0.97 (0.35,2.67)	0.952
		Enlisted Groundcrew	12 (3.2)	21 (3.7)	0.85 (0.41,1.75)	0.657
14-20	ECG: Other Diagnoses	All	3 (0.3)	1 (0.1)	4.31 (0.45,41.55)	0.168
		Officer	1 (0.3)	0 (0.0)	--	0.852 ^a
		Enlisted Flyer	0 (0.0)	0 (0.0)	--	--
		Enlisted Groundcrew	2 (0.5)	1 (0.2)	3.00 (0.27,33.20)	0.370
14-21	Funduscopy Examination	All	105 (12.2)	156 (12.7)	0.96 (0.74,1.25)	0.767
		Officer	42 (12.6)	49 (10.1)	1.28 (0.83,1.99)	0.267
		Enlisted Flyer	30 (20.1)	32 (17.3)	1.21 (0.69,2.09)	0.508
		Enlisted Groundcrew	33 (8.8)	75 (13.3)	0.62 (0.41,0.96)	0.033

**Table G-5. Summary of Unadjusted Results for Dichotomous Variables – Model 1
(Ranch Hands vs. Comparisons) (Continued)**

Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
14-22	Carotid Bruits	All	23 (2.7)	33 (2.7)	1.00 (0.58,1.71)	0.999
		Officer	6 (1.8)	12 (2.5)	0.72 (0.27,1.94)	0.515
		Enlisted Flyer	8 (5.4)	5 (2.7)	2.05 (0.66,6.41)	0.215
		Enlisted Groundcrew	9 (2.4)	16 (2.8)	0.84 (0.37,1.91)	0.673
14-23	Radial Pulses	All	7 (0.8)	4 (0.3)	2.52 (0.74,8.64)	0.131
		Officer	2 (0.6)	2 (0.4)	1.45 (0.20,10.36)	0.710
		Enlisted Flyer	0 (0.0)	0 (0.0)	--	--
		Enlisted Groundcrew	5 (1.3)	2 (0.4)	3.77 (0.73,19.55)	0.114
14-24	Femoral Pulses	All	19 (2.2)	15 (1.2)	1.83 (0.93,3.63)	0.080
		Officer	7 (2.1)	8 (1.7)	1.27 (0.46,3.55)	0.643
		Enlisted Flyer	5 (3.4)	3 (1.6)	2.11 (0.50,8.96)	0.313
		Enlisted Groundcrew	7 (1.9)	4 (0.7)	2.65 (0.77,9.10)	0.123
14-25	Popliteal Pulses	All	23 (2.7)	28 (2.3)	1.18 (0.68,2.06)	0.561
		Officer	7 (2.1)	12 (2.5)	0.84 (0.33,2.16)	0.717
		Enlisted Flyer	5 (3.4)	4 (2.2)	1.57 (0.41,5.96)	0.506
		Enlisted Groundcrew	11 (2.9)	12 (2.1)	1.38 (0.60,3.16)	0.445
14-26	Dorsalis Pedis Pulses	All	69 (8.0)	95 (7.7)	1.04 (0.76,1.44)	0.796
		Officer	27 (8.1)	32 (6.6)	1.24 (0.73,2.11)	0.429
		Enlisted Flyer	18 (12.1)	17 (9.2)	1.36 (0.67,2.74)	0.392
		Enlisted Groundcrew	24 (6.4)	46 (8.2)	0.76 (0.46,1.28)	0.305
14-27	Posterior Tibial Pulses	All	58 (6.8)	64 (5.2)	1.32 (0.91,1.90)	0.142
		Officer	22 (6.6)	23 (4.8)	1.41 (0.77,2.57)	0.263
		Enlisted Flyer	14 (9.4)	13 (7.1)	1.36 (0.62,2.98)	0.449
		Enlisted Groundcrew	22 (5.9)	28 (5.0)	1.19 (0.67,2.10)	0.562
14-28	Leg Pulses	All	94 (10.9)	123 (10.0)	1.10 (0.83,1.47)	0.496
		Officer	36 (10.8)	40 (8.3)	1.34 (0.83,2.15)	0.228
		Enlisted Flyer	25 (16.8)	22 (12.0)	1.48 (0.79,2.74)	0.218
		Enlisted Groundcrew	33 (8.8)	61 (10.9)	0.79 (0.51,1.23)	0.300
14-29	Peripheral Pulses	All	97 (11.3)	126 (10.3)	1.11 (0.84,1.47)	0.454
		Officer	37 (11.1)	42 (8.7)	1.31 (0.82,2.08)	0.258
		Enlisted Flyer	25 (16.8)	22 (12.0)	1.48 (0.79,2.74)	0.218
		Enlisted Groundcrew	35 (9.3)	62 (11.0)	0.83 (0.53,1.28)	0.396
14-30	ICVI Index	All	33 (3.8)	45 (3.7)	1.06 (0.67,1.67)	0.819
		Officer	13 (3.9)	15 (3.1)	1.27 (0.59,2.70)	0.541
		Enlisted Flyer	7 (4.7)	12 (6.5)	0.71 (0.27,1.86)	0.492
		Enlisted Groundcrew	13 (3.5)	18 (3.2)	1.09 (0.53,2.24)	0.825
15-14	Prothrombin Time	All	10 (1.5)	13 (1.3)	1.14 (0.50,2.61)	0.761
		Officer	6 (2.3)	7 (1.7)	1.31 (0.43,3.93)	0.634
		Enlisted Flyer	0 (0.0)	1 (0.6)	--	0.999 ^a
		Enlisted Groundcrew	4 (1.3)	5 (1.1)	1.19 (0.32,4.45)	0.801

**Table G-5. Summary of Unadjusted Results for Dichotomous Variables – Model 1
(Ranch Hands vs. Comparisons) (Continued)**

Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
15-15	RBC Morphology	All	64 (7.4)	79 (6.3)	1.18 (0.84,1.66)	0.339
		Officer	20 (5.9)	28 (5.7)	1.03 (0.57,1.87)	0.910
		Enlisted Flyer	15 (9.9)	17 (9.1)	1.10 (0.53,2.29)	0.793
		Enlisted Groundcrew	29 (7.8)	34 (6.0)	1.32 (0.79,2.21)	0.286
15-18	Absolute Neutrophils (bands) (Zero vs. Nonzero)	All	146 (16.9)	212 (17.0)	0.99 (0.79,1.25)	0.945
		Officer	47 (13.8)	87 (17.7)	0.75 (0.51,1.10)	0.136
		Enlisted Flyer	36 (23.8)	27 (14.4)	1.86 (1.07,3.23)	0.029
		Enlisted Groundcrew	63 (16.8)	98 (17.2)	0.97 (0.69,1.38)	0.880
15-22	Absolute Eosinophils (Zero vs. Nonzero)	All	106 (12.2)	153 (12.3)	1.00 (0.77,1.30)	0.995
		Officer	36 (10.6)	45 (9.1)	1.18 (0.74,1.86)	0.493
		Enlisted Flyer	17 (11.3)	22 (11.8)	0.95 (0.49,1.86)	0.885
		Enlisted Groundcrew	53 (14.2)	86 (15.1)	0.93 (0.64,1.34)	0.689
15-24	Absolute Basophils (Zero vs. Nonzero)	All	493 (56.9)	669 (53.6)	1.15 (0.96,1.36)	0.126
		Officer	192 (56.3)	261 (52.9)	1.15 (0.87,1.51)	0.338
		Enlisted Flyer	76 (50.3)	100 (53.5)	0.88 (0.57,1.35)	0.565
		Enlisted Groundcrew	225 (60.2)	308 (54.1)	1.28 (0.98,1.67)	0.068
16-3	Past Thyroid Disease	All	65 (7.5)	105 (8.4)	0.89 (0.64,1.22)	0.456
		Officer	29 (8.6)	46 (9.3)	0.91 (0.56,1.48)	0.704
		Enlisted Flyer	15 (10.0)	14 (7.5)	1.37 (0.64,2.94)	0.415
		Enlisted Groundcrew	21 (5.6)	45 (7.9)	0.69 (0.40,1.18)	0.171
16-4	Composite Diabetes Indicator	All	145 (16.9)	209 (17.0)	0.99 (0.79,1.25)	0.960
		Officer	52 (15.4)	71 (14.5)	1.08 (0.73,1.59)	0.709
		Enlisted Flyer	27 (18.2)	38 (20.7)	0.86 (0.50,1.48)	0.583
		Enlisted Groundcrew	66 (17.6)	100 (17.9)	0.98 (0.70,1.38)	0.915
16-7	Thyroid Gland	All	6 (0.7)	16 (1.3)	0.53 (0.21,1.36)	0.171
		Officer	4 (1.2)	11 (2.3)	0.52 (0.16,1.63)	0.260
		Enlisted Flyer	1 (0.7)	1 (0.5)	1.27 (0.08,20.41)	0.868
		Enlisted Groundcrew	1 (0.3)	4 (0.7)	0.37 (0.04,3.32)	0.374
16-8	Testicular Examination	All	39 (4.5)	47 (3.8)	1.20 (0.78,1.85)	0.409
		Officer	16 (4.8)	27 (5.5)	0.86 (0.45,1.62)	0.635
		Enlisted Flyer	9 (6.1)	8 (4.3)	1.42 (0.54,3.79)	0.478
		Enlisted Groundcrew	14 (3.7)	12 (2.1)	1.77 (0.81,3.87)	0.152
16-12	Thyroxine	All	23 (2.7)	32 (2.7)	1.03 (0.60,1.77)	0.928
		Officer	13 (4.0)	16 (3.4)	1.17 (0.56,2.47)	0.674
		Enlisted Flyer	3 (2.1)	3 (1.6)	1.27 (0.25,6.39)	0.772
		Enlisted Groundcrew	7 (1.9)	13 (2.4)	0.79 (0.31,2.01)	0.624
16-13	Anti-Thyroid Antibodies	All	5 (0.6)	7 (0.6)	1.02 (0.32,3.22)	0.975
		Officer	2 (0.6)	4 (0.9)	0.72 (0.13,3.93)	0.701
		Enlisted Flyer	2 (1.4)	1 (0.5)	2.55 (0.23,28.40)	0.447
		Enlisted Groundcrew	1 (0.3)	2 (0.4)	0.74 (0.07,8.18)	0.805

**Table G-5. Summary of Unadjusted Results for Dichotomous Variables – Model 1
(Ranch Hands vs. Comparisons) (Continued)**

Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
16-15	Fasting Glucose	All	152 (17.5)	212 (17.0)	1.04 (0.83,1.31)	0.741
		Officer	56 (16.5)	75 (15.2)	1.11 (0.76,1.61)	0.603
		Enlisted Flyer	29 (19.2)	36 (19.3)	1.00 (0.58,1.72)	0.991
		Enlisted Groundcrew	67 (17.7)	101 (17.8)	1.00 (0.71,1.40)	0.992
16-17	2-Hour Postprandial Glucose	All	113 (15.8)	161 (15.7)	1.01 (0.77,1.31)	0.960
		Officer	52 (18.2)	54 (12.9)	1.51 (1.00,2.28)	0.052
		Enlisted Flyer	22 (18.2)	31 (21.2)	0.82 (0.45,1.52)	0.534
		Enlisted Groundcrew	39 (12.7)	76 (16.6)	0.73 (0.48,1.11)	0.136
16-18	Fasting Urinary Glucose	All	35 (4.0)	54 (4.3)	0.93 (0.60,1.44)	0.745
		Officer	11 (3.2)	12 (2.4)	1.35 (0.59,3.09)	0.482
		Enlisted Flyer	8 (5.3)	9 (4.8)	1.11 (0.42,2.94)	0.839
		Enlisted Groundcrew	16 (4.2)	33 (5.8)	0.72 (0.39,1.32)	0.288
16-19	2-Hour Postprandial Urinary Glucose	All	179 (25.1)	224 (21.9)	1.19 (0.95,1.50)	0.122
		Officer	68 (24.0)	73 (17.5)	1.49 (1.03,2.17)	0.034
		Enlisted Flyer	28 (23.1)	43 (29.7)	0.71 (0.41,1.24)	0.233
		Enlisted Groundcrew	83 (26.9)	108 (23.6)	1.20 (0.86,1.67)	0.291
16-23	α -1-C Hemoglobin	All	97 (11.2)	130 (10.4)	1.08 (0.82,1.43)	0.571
		Officer	28 (8.3)	37 (7.5)	1.11 (0.67,1.85)	0.684
		Enlisted Flyer	17 (11.3)	29 (15.5)	0.69 (0.36,1.31)	0.259
		Enlisted Groundcrew	52 (13.8)	64 (11.2)	1.26 (0.85,1.86)	0.250
16-25	Total Testosterone	All	72 (8.5)	90 (7.3)	1.17 (0.85,1.61)	0.344
		Officer	29 (8.8)	34 (7.0)	1.28 (0.76,2.14)	0.352
		Enlisted Flyer	12 (8.2)	11 (6.0)	1.39 (0.60,3.25)	0.445
		Enlisted Groundcrew	31 (8.3)	45 (8.0)	1.03 (0.64,1.67)	0.890
16-27	Free Testosterone	All	15 (1.8)	20 (1.6)	1.08 (0.55,2.13)	0.815
		Officer	7 (2.1)	10 (2.1)	1.03 (0.39,2.73)	0.954
		Enlisted Flyer	6 (4.1)	1 (0.5)	7.76 (0.92,65.18)	0.059
		Enlisted Groundcrew	2 (0.5)	9 (1.6)	0.33 (0.07,1.53)	0.157
16-29	Estradiol	All	236 (27.1)	350 (28.0)	0.96 (0.79,1.16)	0.666
		Officer	80 (23.5)	139 (28.1)	0.78 (0.57,1.08)	0.131
		Enlisted Flyer	44 (29.1)	59 (31.6)	0.89 (0.56,1.42)	0.632
		Enlisted Groundcrew	112 (29.6)	152 (26.7)	1.16 (0.87,1.55)	0.319
16-31	LH	All	49 (5.6)	70 (5.6)	1.01 (0.69,1.47)	0.971
		Officer	24 (7.0)	28 (5.7)	1.26 (0.72,2.21)	0.422
		Enlisted Flyer	6 (4.0)	8 (4.3)	0.93 (0.31,2.73)	0.889
		Enlisted Groundcrew	19 (5.0)	34 (6.0)	0.83 (0.47,1.49)	0.538
16-33	FSH	All	72 (8.3)	98 (7.8)	1.06 (0.77,1.46)	0.713
		Officer	39 (11.4)	48 (9.7)	1.20 (0.77,1.88)	0.424
		Enlisted Flyer	17 (11.3)	14 (7.5)	1.57 (0.75,3.29)	0.235
		Enlisted Groundcrew	16 (4.2)	36 (6.3)	0.66 (0.36,1.20)	0.171

**Table G-5. Summary of Unadjusted Results for Dichotomous Variables - Model 1
(Ranch Hands vs. Comparisons) (Continued)**

Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
17-14	ANA Test	All	432 (52.1)	624 (52.0)	1.00 (0.84,1.19)	0.998
		Officer	168 (51.4)	251 (52.8)	0.94 (0.71,1.25)	0.683
		Enlisted Flyer	73 (51.4)	87 (48.9)	1.11 (0.71,1.72)	0.653
		Enlisted Groundcrew	191 (52.9)	286 (52.4)	1.02 (0.78,1.33)	0.876
17-15	ANA Thyroid Microsomal Antibody	All	24 (2.9)	34 (2.8)	1.02 (0.60,1.73)	0.941
		Officer	11 (3.4)	14 (3.0)	1.15 (0.51,2.56)	0.739
		Enlisted Flyer	3 (2.1)	5 (2.8)	0.75 (0.18,3.18)	0.693
		Enlisted Groundcrew	10 (2.8)	15 (2.8)	1.01 (0.45,2.27)	0.984
17-16	MSK Smooth Muscle Antibody	All	101 (12.2)	145 (12.1)	1.01 (0.77,1.32)	0.959
		Officer	43 (13.2)	49 (10.3)	1.32 (0.85,2.04)	0.217
		Enlisted Flyer	12 (8.5)	29 (16.3)	0.47 (0.23,0.97)	0.040
		Enlisted Groundcrew	46 (12.7)	67 (12.3)	1.04 (0.70,1.56)	0.833
17-17	MSK Mitochondrial Antibody	All	4 (0.5)	2 (0.2)	2.90 (0.53,15.86)	0.203
		Officer	4 (1.2)	1 (0.2)	5.87 (0.65,52.76)	0.114
		Enlisted Flyer	0 (0.0)	1 (0.6)	--	0.999 ^a
		Enlisted Groundcrew	0 (0.0)	0 (0.0)	--	--
17-18	MSK Parietal Antibody	All	36 (4.3)	51 (4.3)	1.02 (0.66,1.58)	0.927
		Officer	14 (4.3)	15 (3.2)	1.37 (0.65,2.88)	0.404
		Enlisted Flyer	5 (3.5)	10 (5.6)	0.61 (0.20,1.84)	0.382
		Enlisted Groundcrew	17 (4.7)	26 (4.8)	0.99 (0.53,1.85)	0.971
17-19	Rheumatoid Factor	All	89 (10.7)	134 (11.2)	0.95 (0.72,1.27)	0.748
		Officer	43 (13.2)	56 (11.8)	1.13 (0.74,1.73)	0.565
		Enlisted Flyer	19 (13.4)	23 (12.9)	1.04 (0.54,2.00)	0.904
		Enlisted Groundcrew	27 (7.5)	55 (10.1)	0.72 (0.45,1.17)	0.184
18-3	Asthma	All	41 (4.8)	44 (3.5)	1.37 (0.89,2.11)	0.158
		Officer	18 (5.3)	17 (3.5)	1.57 (0.80,3.10)	0.191
		Enlisted Flyer	3 (2.0)	8 (4.3)	0.46 (0.12,1.76)	0.257
		Enlisted Groundcrew	20 (5.4)	19 (3.4)	1.64 (0.86,3.11)	0.132
18-4	Bronchitis	All	183 (21.6)	235 (19.2)	1.16 (0.94,1.44)	0.177
		Officer	60 (18.2)	86 (17.8)	1.03 (0.71,1.48)	0.886
		Enlisted Flyer	40 (27.8)	35 (19.1)	1.63 (0.97,2.73)	0.066
		Enlisted Groundcrew	83 (22.3)	114 (20.4)	1.12 (0.81,1.54)	0.496
18-5	Pneumonia	All	85 (10.3)	140 (11.6)	0.87 (0.66,1.16)	0.344
		Officer	34 (10.6)	64 (13.6)	0.75 (0.48,1.17)	0.200
		Enlisted Flyer	19 (13.7)	15 (8.3)	1.74 (0.85,3.57)	0.129
		Enlisted Groundcrew	32 (8.8)	61 (11.0)	0.78 (0.50,1.22)	0.271
18-6	Thorax and Lung Abnormalities	All	102 (11.7)	140 (11.2)	1.05 (0.80,1.38)	0.704
		Officer	31 (9.1)	33 (6.7)	1.40 (0.84,2.33)	0.200
		Enlisted Flyer	29 (19.2)	34 (18.2)	1.07 (0.62,1.85)	0.810
		Enlisted Groundcrew	42 (11.1)	73 (12.8)	0.85 (0.57,1.27)	0.434

**Table G-5. Summary of Unadjusted Results for Dichotomous Variables – Model 1
(Ranch Hands vs. Comparisons) (Continued)**

Table Ref.	Clinical Parameter	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
			RH	C		
18-7	X-ray Interpretation	All	98 (11.3)	118 (9.4)	1.22 (0.92,1.62)	0.166
		Officer	39 (11.4)	42 (8.5)	1.39 (0.88,2.20)	0.160
		Enlisted Flyer	16 (10.6)	17 (9.1)	1.19 (0.58,2.43)	0.643
		Enlisted Groundcrew	43 (11.4)	59 (10.4)	1.12 (0.74,1.70)	0.599

^a P-value determined using a chi-square test with continuity correction because of the sparse number of participants with abnormalities.

--: Relative risk, confidence interval, and p-value are not presented because of the sparse number of participants with abnormalities.

Note: RH = Ranch Hand; C = Comparison.

Table G-6. Summary of Unadjusted Results for Dichotomous Variables – Model 2 (Ranch Hands: Log₂ (Initial Dioxin))

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
9-3	Self-perception of Health	1.02 (0.85,1.21)	0.859
9-4	Appearance of Illness or Distress	0.71 (0.42,1.20)	0.178
9-5	Relative Age Appearance	1.05 (0.84,1.30)	0.694
9-7	Body Fat	1.00 (0.87,1.15)	0.989
9-9	Erythrocyte Sedimentation Rate	1.17 (0.93,1.46)	0.179
10-3	Skin Neoplasms	0.78 (0.67,0.91)	0.001
10-4	Malignant Skin Neoplasms	0.79 (0.64,0.96)	0.015
10-5	Benign Skin Neoplasms	0.82 (0.69,0.98)	0.022
10-6	Skin Neoplasms of Uncertain Behavior or Unspecified Nature	0.87 (0.44,1.75)	0.696
10-7	Basal Cell Carcinoma (All Sites Combined)	0.67 (0.53,0.85)	<0.001
10-8	Basal Cell Carcinoma (Ear, Face, Head, and Neck)	0.63 (0.48,0.83)	<0.001
10-9	Basal Cell Carcinoma (Trunk)	0.79 (0.56,1.13)	0.184
10-10	Basal Cell Carcinoma (Upper Extremities)	0.51 (0.26,0.99)	0.024
10-11	Basal Cell Carcinoma (Lower Extremities)	1.09 (0.39,3.02)	0.867
10-12	Squamous Cell Carcinoma	0.95 (0.58,1.55)	0.821
10-13	Nonmelanoma	0.73 (0.59,0.90)	0.003
10-14	Melanoma	1.12 (0.69,1.80)	0.660
10-15	Systemic Neoplasms (All Sites Combined)	0.93 (0.80,1.07)	0.308
10-16	Malignant Systemic Neoplasms	0.62 (0.46,0.84)	0.001
10-17	Benign Systemic Neoplasms	1.03 (0.88,1.20)	0.718
10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	0.84 (0.49,1.47)	0.534
10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	0.50 (0.20,1.23)	0.081
10-20	Malignant Systemic Neoplasms (Oral Cavity, Pharynx, and Larynx)	0.97 (0.39,2.41)	0.953
10-21	Malignant Systemic Neoplasms (Thymus, Heart, and Mediastinum)	--	--
10-22	Malignant Systemic Neoplasms (Thyroid Gland)	0.12 (0.01,2.59)	0.046
10-23	Malignant Systemic Neoplasms (Bronchus and Lung)	0.46 (0.20,1.04)	0.030
10-24	Malignant Systemic Neoplasms (Liver)	1.76 (0.73,4.22)	0.231
10-25	Malignant Systemic Neoplasms (Colon and Rectum)	0.76 (0.39,1.49)	0.405
10-26	Malignant Systemic Neoplasms (Kidney and Bladder)	0.72 (0.37,1.41)	0.312
10-27	Malignant Systemic Neoplasms (Prostate)	0.52 (0.30,0.89)	0.007
10-28	Malignant Systemic Neoplasms (Testicles)	0.65 (0.21,1.98)	0.413
10-29	Malignant Systemic Neoplasms (Connective and Other Soft Tissues)	2.44 (0.70,8.47)	0.168
10-30	Hodgkin's Disease	--	--
10-31	Non-Hodgkin's Lymphoma	--	--
10-32	Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	--	--
10-33	All Malignant Skin and Systemic Neoplasms	0.74 (0.62,0.89)	0.001
10-34	All Skin and Systemic Neoplasms	0.84 (0.73,0.97)	0.017
10-36	PSA	0.53 (0.37,0.77)	<0.001
11-3	Inflammatory Diseases	1.03 (0.48,2.18)	0.943
11-4	Hereditary and Degenerative Disorders	1.01 (0.79,1.28)	0.952
11-5	Peripheral Disorders	1.01 (0.86,1.18)	0.915
11-6	Other Neurological Disorders	1.06 (0.90,1.24)	0.483
11-7	Smell	0.94 (0.58,1.51)	0.782
11-8	Visual Fields	3.93 (0.93,16.64)	0.040
11-9	Light Reaction	--	--

**Table G-6. Summary of Unadjusted Results for Dichotomous Variables – Model 2
(Ranch Hands: Log₂ (Initial DioxIn)) (Continued)**

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
11-10	Ocular Movement	0.77 (0.44,1.32)	0.315
11-11	Facial Sensation	0.45 (0.04,5.19)	0.455
11-12	Jaw Clench	0.59 (0.09,3.87)	0.539
11-13	Smile	1.38 (0.70,2.70)	0.372
11-14	Palpebral Fissure	1.15 (0.50,2.64)	0.750
11-15	Balance	1.27 (0.48,3.35)	0.638
11-16	Speech	0.29 (0.03,2.42)	0.143
11-17	Tongue Position Relative to Midline	0.59 (0.09,3.87)	0.539
11-18	Palate and Uvula Movement	0.59 (0.09,3.87)	0.539
11-19	Cranial Nerve Index	0.86 (0.63,1.17)	0.331
11-20	Neck Range of Motion	0.85 (0.72,1.02)	0.069
11-21	Pinprick	1.10 (0.86,1.41)	0.460
11-22	Light Touch	0.92 (0.66,1.28)	0.616
11-23	Muscle Status	0.87 (0.62,1.23)	0.418
11-24	Patellar Reflex	1.18 (0.82,1.71)	0.374
11-25	Achilles Reflex	1.04 (0.87,1.23)	0.688
11-26	Biceps Reflex	0.72 (0.41,1.24)	0.203
11-27	Babinski Reflex	0.89 (0.28,2.86)	0.848
11-29	Polyneuropathy Prevalence Index	1.09 (0.91,1.31)	0.344
11-30	Multiple Polyneuropathy Index	1.30 (0.98,1.73)	0.076
11-31	Confirmed Polyneuropathy Indicator	1.63 (1.05,2.53)	0.033
11-32	Tremor	1.02 (0.77,1.36)	0.869
11-33	Coordination	0.90 (0.49,1.65)	0.735
11-34	Romberg Sign	1.27 (0.48,3.35)	0.638
11-35	Gait	1.00 (0.74,1.35)	0.998
11-36	CNS Index	1.00 (0.81,1.24)	0.976
12-3	Psychoses	0.90 (0.65,1.24)	0.501
12-4	Alcohol Dependence	1.04 (0.81,1.34)	0.747
12-5	Drug Dependence	--	--
12-6	Anxiety	1.07 (0.92,1.24)	0.360
12-7	Other Neuroses	1.02 (0.89,1.18)	0.743
12-8	SCL-90-R Anxiety	0.98 (0.79,1.21)	0.847
12-9	SCL-90-R Depression	1.10 (0.91,1.32)	0.345
12-10	SCL-90-R Hostility	1.12 (0.88,1.42)	0.377
12-11	SCL-90-R Interpersonal Sensitivity	0.98 (0.81,1.18)	0.798
12-12	SCL-90-R Obsessive-Compulsive Behavior	1.02 (0.85,1.23)	0.854
12-13	SCL-90-R Paranoid Ideation	1.16 (0.91,1.47)	0.227
12-14	SCL-90-R Phobic Anxiety	1.18 (0.97,1.44)	0.100
12-15	SCL-90-R Psychoticism	1.19 (0.99,1.44)	0.065
12-16	SCL-90-R Somatization	0.98 (0.83,1.17)	0.840
12-17	SCL-90-R Global Severity Index (GSI)	1.08 (0.90,1.29)	0.415
12-18	SCL-90-R Positive Symptom Total (PST)	1.04 (0.87,1.25)	0.647
12-19	SCL-90-R Positive Symptom Distress Index (PSDI)	1.00 (0.79,1.26)	0.992
13-3	Uncharacterized Hepatitis	1.10 (0.67,1.80)	0.705
13-4	Jaundice	1.03 (0.21,5.02)	0.973
13-5	Chronic Liver Disease and Cirrhosis (Alcohol-related)	1.06 (0.78,1.45)	0.708
13-6	Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	1.02 (0.61,1.70)	0.949
13-7	Liver Abscess and Sequelae of Chronic Liver Disease	1.99 (0.64,6.25)	0.277
13-8	Enlarged Liver (Hepatomegaly)	0.96 (0.56,1.65)	0.880

**Table G-6. Summary of Unadjusted Results for Dichotomous Variables – Model 2
(Ranch Hands: Log₂ (Initial Dioxin)) (Continued)**

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
13-9	Other Liver Disorders	1.12 (0.97,1.30)	0.119
13-10	Current Hepatomegaly	0.69 (0.36,1.31)	0.223
13-12	AST	1.08 (0.86,1.36)	0.498
13-14	ALT	1.17 (0.95,1.45)	0.140
13-16	GGT	1.00 (0.81,1.22)	0.964
13-18	Alkaline Phosphatase	0.99 (0.60,1.65)	0.971
13-20	Total Bilirubin	0.77 (0.54,1.09)	0.118
13-21	Direct Bilirubin	--	--
13-23	Lactic Dehydrogenase	0.96 (0.75,1.21)	0.709
13-25	Cholesterol	1.21 (1.01,1.45)	0.036
13-27	HDL Cholesterol	0.86 (0.66,1.12)	0.249
13-29	Cholesterol-HDL Ratio	1.25 (1.09,1.45)	0.002
13-31	Triglycerides	1.09 (0.94,1.27)	0.275
13-33	Creatine Phosphokinase	1.05 (0.83,1.32)	0.698
13-35	Serum Amylase	0.86 (0.58,1.29)	0.458
13-36	Antibodies for Hepatitis A	0.98 (0.85,1.14)	0.830
13-37	Evidence of Prior Hepatitis B	1.06 (0.86,1.31)	0.588
13-38	Current Hepatitis B	0.99 (0.17,5.76)	0.987
13-39	Antibodies for Hepatitis C	0.61 (0.24,1.60)	0.271
13-40	Stool Hemocult	0.85 (0.59,1.24)	0.390
13-42	Prealbumin	1.44 (0.84,2.47)	0.203
13-44	Albumin	--	--
13-46	α-1-Acid Glycoprotein	1.00 (0.72,1.38)	0.991
13-50	α-2-Macroglobulin	1.22 (0.87,1.71)	0.254
13-52	Apolipoprotein B	1.14 (0.99,1.31)	0.059
13-54	C3 Complement	1.06 (0.45,2.49)	0.898
13-56	C4 Complement	--	--
13-58	Haptoglobin	1.05 (0.91,1.21)	0.506
13-60	Transferrin	0.99 (0.77,1.27)	0.931
14-3	Essential Hypertension	1.06 (0.91,1.23)	0.441
14-4	Heart Disease (Excluding Essential Hypertension)	0.79 (0.68,0.91)	0.001
14-5	Myocardial Infarction	1.01 (0.79,1.28)	0.945
14-6	Stroke or Transient Ischemia Attack	1.22 (0.68,2.16)	0.513
14-8	Systolic Blood Pressure	0.83 (0.69,0.99)	0.031
14-10	Diastolic Blood Pressure	1.04 (0.79,1.37)	0.793
14-11	Heart Sounds	1.01 (0.73,1.40)	0.958
14-12	Overall Electrocardiograph	0.90 (0.77,1.05)	0.171
14-13	Right Bundle Branch Block	0.93 (0.59,1.46)	0.747
14-14	Left Bundle Branch Block	0.21 (0.01,6.22)	0.213
14-15	Non-Specific ST- and T-Wave Changes	0.91 (0.76,1.08)	0.280
14-16	Bradycardia	0.86 (0.44,1.65)	0.631
14-17	Tachycardia	1.38 (0.72,2.68)	0.340
14-18	Arrhythmia	0.81 (0.60,1.10)	0.158
14-19	Evidence of Prior Myocardial Infarction	1.05 (0.75,1.46)	0.793
14-20	ECG: Other Diagnoses	1.53 (0.62,3.79)	0.381
14-21	Funduscopy Examination	0.93 (0.76,1.15)	0.520
14-22	Carotid Bruits	1.06 (0.70,1.59)	0.797
14-23	Radial Pulses	0.58 (0.17,1.99)	0.334
14-24	Femoral Pulses	0.97 (0.61,1.53)	0.890

**Table G-6. Summary of Unadjusted Results for Dichotomous Variables – Model 2
(Ranch Hands: Log₂ (Initial Dioxin)) (Continued)**

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
14-25	Popliteal Pulses	0.89 (0.57,1.38)	0.601
14-26	Dorsalis Pedis Pulses	0.90 (0.69,1.17)	0.417
14-27	Posterior Tibial Pulses	1.01 (0.77,1.33)	0.925
14-28	Leg Pulses	0.96 (0.77,1.20)	0.739
14-29	Peripheral Pulses	0.96 (0.77,1.19)	0.703
14-30	ICVI Index	0.99 (0.71,1.37)	0.948
15-14	Prothrombin Time	0.66 (0.28,1.58)	0.315
15-15	RBC Morphology	0.94 (0.73,1.21)	0.622
15-18	Absolute Neutrophils (bands) (Zero vs. Nonzero)	0.92 (0.76,1.11)	0.381
15-22	Absolute Eosinophils (Zero vs. Nonzero)	0.95 (0.77,1.17)	0.630
15-24	Absolute Basophils (Zero vs. Nonzero)	0.84 (0.73,0.97)	0.015
16-3	Past Thyroid Disease	1.13 (0.88,1.45)	0.360
16-4	Composite Diabetes Indicator	1.11 (0.94,1.32)	0.231
16-7	Thyroid Gland	0.95 (0.32,2.81)	0.923
16-8	Testicular Examination	0.93 (0.66,1.29)	0.653
16-12	Thyroxine	1.22 (0.79,1.89)	0.375
16-13	Anti-Thyroid Antibodies	0.93 (0.30,2.89)	0.905
16-15	Fasting Glucose	1.13 (0.95,1.34)	0.172
16-17	2-Hour Postprandial Glucose	0.88 (0.71,1.10)	0.267
16-18	Fasting Urinary Glucose	1.19 (0.90,1.57)	0.220
16-19	2-Hour Postprandial Urinary Glucose	0.94 (0.78,1.14)	0.535
16-23	α-1-C Hemoglobin	1.28 (1.05,1.56)	0.013
16-25	Total Testosterone	1.00 (0.80,1.26)	0.973
16-27	Free Testosterone	0.46 (0.21,0.98)	0.019
16-29	Estradiol	1.17 (1.00,1.36)	0.045
16-31	LH	0.93 (0.65,1.32)	0.668
16-33	FSH	0.94 (0.72,1.22)	0.618
17-14	ANA Test	1.08 (0.94,1.24)	0.301
17-15	ANA Thyroid Microsomal Antibody	0.77 (0.47,1.26)	0.272
17-16	MSK Smooth Muscle Antibody	0.80 (0.62,1.02)	0.061
17-17	MSK Mitochondrial Antibody	0.11 (0.01,3.47)	0.034
17-18	MSK Parietal Antibody	0.86 (0.63,1.18)	0.335
17-19	Rheumatoid Factor	0.75 (0.57,0.99)	0.033
18-3	Asthma	1.18 (0.86,1.62)	0.318
18-4	Bronchitis	1.06 (0.89,1.25)	0.513
18-5	Pneumonia	0.81 (0.63,1.05)	0.097
18-6	Thorax and Lung Abnormalities	1.06 (0.86,1.31)	0.573
18-7	X-ray Interpretation	0.89 (0.70,1.15)	0.373

^a Adjusted for percent body fat at the time of the blood measurement for dioxin.

--: Relative risk, confidence interval, and p-value are not presented because of the sparse number of Ranch Hands with abnormalities.

Note: Relative risk for a twofold increase in initial dioxin.

Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category)

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
9-3	Self-perception of Health	Comparison	1,213	119 (9.8)		
		Background RH	380	34 (9.0)	0.97 (0.65,1.45)	0.880
		Low RH	239	39 (16.3)	1.77 (1.19,2.62)	0.005
		High RH	243	48 (19.8)	2.14 (1.48,3.10)	<0.001
		Low plus High RH	482	87 (18.1)	1.95 (1.44,2.63)	<0.001
9-4	Appearance of Illness or Distress	Comparison	1,213	13 (1.1)		
		Background RH	381	3 (0.8)	0.74 (0.21,2.63)	0.645
		Low RH	239	7 (2.9)	2.78 (1.10,7.04)	0.031
		High RH	243	5 (2.1)	1.92 (0.67,5.45)	0.223
		Low plus High RH	482	12 (2.5)	2.30 (1.03,5.13)	0.041
9-5	Relative Age Appearance	Comparison	1,213	102 (8.4)		
		Background RH	381	39 (10.2)	1.25 (0.84,1.84)	0.271
		Low RH	239	24 (10.0)	1.22 (0.76,1.94)	0.415
		High RH	243	27 (11.1)	1.36 (0.87,2.13)	0.183
		Low plus High RH	482	51 (10.6)	1.29 (0.90,1.83)	0.166
9-7	Body Fat	Comparison	1,213	361 (29.8)		
		Background RH	381	73 (19.2)	0.56 (0.42,0.74)	<0.001
		Low RH	239	85 (35.6)	1.30 (0.97,1.74)	0.076
		High RH	243	83 (34.2)	1.22 (0.91,1.64)	0.175
		Low plus High RH	482	168 (34.9)	1.26 (1.01,1.58)	0.042
9-9	Erythrocyte Sedimentation Rate	Comparison	1,213	85 (7.0)		
		Background RH	381	25 (6.6)	1.03 (0.65,1.64)	0.908
		Low RH	239	21 (8.8)	1.25 (0.75,2.06)	0.392
		High RH	243	24 (9.9)	1.34 (0.83,2.16)	0.236
		Low plus High RH	482	45 (9.3)	1.29 (0.88,1.89)	0.190
10-3	Skin Neoplasms	Comparison	1,133	389 (34.3)		
		Background RH	359	155 (43.2)	1.49 (1.17,1.90)	0.001
		Low RH	210	94 (44.8)	1.54 (1.14,2.07)	0.005
		High RH	229	75 (32.8)	0.91 (0.67,1.23)	0.546
		Low plus High RH	439	169 (38.5)	1.17 (0.93,1.47)	0.183
10-4	Malignant Skin Neoplasms	Comparison	1,133	179 (15.8)		
		Background RH	359	65 (18.1)	1.21 (0.88,1.66)	0.237
		Low RH	210	47 (22.4)	1.52 (1.06,2.19)	0.023
		High RH	229	32 (14.0)	0.84 (0.56,1.27)	0.417
		Low plus High RH	439	79 (18.0)	1.12 (0.83,1.51)	0.457
10-5	Benign Skin Neoplasms	Comparison	1,202	258 (21.5)		
		Background RH	378	115 (30.4)	1.64 (1.26,2.13)	<0.001
		Low RH	233	58 (24.9)	1.21 (0.87,1.67)	0.261
		High RH	242	51 (21.1)	0.96 (0.68,1.34)	0.802
		Low plus High RH	475	109 (23.0)	1.07 (0.83,1.38)	0.592

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
10-6	Skin Neoplasms of Uncertain Behavior or Unspecified Nature	Comparison	1,133	8 (0.7)		
		Background RH	359	2 (0.6)	0.80 (0.17,3.80)	0.777
		Low RH	210	3 (1.4)	2.03 (0.53,7.72)	0.300
		High RH	229	2 (0.9)	1.22 (0.26,5.84)	0.800
		Low plus High RH	439	5 (1.1)	1.56 (0.49,4.91)	0.449
10-7	Basal Cell Carcinoma (All Sites Combined)	Comparison	1,133	150 (13.2)		
		Background RH	359	56 (15.6)	1.24 (0.89,1.73)	0.212
		Low RH	210	42 (20.0)	1.62 (1.11,2.38)	0.012
		High RH	229	23 (10.0)	0.72 (0.45,1.14)	0.160
		Low plus High RH	439	65 (14.8)	1.06 (0.76,1.47)	0.727
10-8	Basal Cell Carcinoma (Ear, Face, Head, and Neck)	Comparison	1,133	115 (10.2)		
		Background RH	359	43 (12.0)	1.21 (0.83,1.76)	0.316
		Low RH	210	33 (15.7)	1.65 (1.08,2.50)	0.020
		High RH	229	17 (7.4)	0.71 (0.41,1.20)	0.199
		Low plus High RH	439	50 (11.4)	1.06 (0.73,1.53)	0.762
10-9	Basal Cell Carcinoma (Trunk)	Comparison	1,133	46 (4.1)		
		Background RH	359	18 (5.0)	1.28 (0.73,2.25)	0.383
		Low RH	210	14 (6.7)	1.67 (0.90,3.10)	0.105
		High RH	229	8 (3.5)	0.83 (0.39,1.79)	0.638
		Low plus High RH	439	22 (5.0)	1.16 (0.68,1.99)	0.589
10-10	Basal Cell Carcinoma (Upper Extremities)	Comparison	1,133	37 (3.3)		
		Background RH	359	11 (3.1)	0.99 (0.50,1.97)	0.981
		Low RH	210	7 (3.3)	1.00 (0.44,2.27)	0.993
		High RH	229	3 (1.3)	0.37 (0.11,1.22)	0.102
		Low plus High RH	439	10 (2.3)	0.60 (0.28,1.29)	0.188
10-11	Basal Cell Carcinoma (Lower Extremities)	Comparison	1,133	5 (0.4)		
		Background RH	359	3 (0.8)	2.07 (0.48,8.80)	0.327
		Low RH	210	1 (0.5)	1.04 (0.12,8.97)	0.972
		High RH	229	1 (0.4)	0.91 (0.10,7.91)	0.932
		Low plus High RH	439	2 (0.5)	0.97 (0.19,5.06)	0.971
10-12	Squamous Cell Carcinoma	Comparison	1,133	20 (1.8)		
		Background RH	359	10 (2.8)	1.69 (0.78,3.66)	0.187
		Low RH	210	6 (2.9)	1.60 (0.63,4.04)	0.320
		High RH	229	4 (1.8)	0.94 (0.32,2.78)	0.907
		Low plus High RH	439	10 (2.3)	1.21 (0.55,2.66)	0.634
10-13	Nonmelanoma	Comparison	1,133	169 (14.9)		
		Background RH	359	62 (17.3)	1.23 (0.89,1.70)	0.203
		Low RH	210	44 (21.0)	1.49 (1.03,2.16)	0.034
		High RH	229	28 (12.2)	0.77 (0.50,1.18)	0.231
		Low plus High RH	439	72 (16.4)	1.06 (0.78,1.44)	0.729

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
10-14	Melanoma	Comparison	1,133	12 (1.1)		
		Background RH	359	7 (2.0)	1.76 (0.68,4.54)	0.240
		Low RH	210	5 (2.4)	2.32 (0.81,6.68)	0.117
		High RH	229	4 (1.8)	1.74 (0.55,5.49)	0.341
		Low plus High RH	439	9 (2.1)	2.00 (0.83,4.83)	0.122
10-15	Systemic Neoplasms (All Sites Combined)	Comparison	1,204	358 (29.7)		
		Background RH	376	109 (29.0)	0.98 (0.76,1.26)	0.864
		Low RH	232	83 (35.8)	1.31 (0.98,1.76)	0.072
		High RH	240	72 (30.0)	1.00 (0.74,1.36)	0.995
		Low plus High RH	472	155 (32.8)	1.14 (0.91,1.44)	0.253
10-16	Malignant Systemic Neoplasms	Comparison	1,211	73 (6.0)		
		Background RH	378	21 (5.6)	0.91 (0.55,1.51)	0.727
		Low RH	234	34 (14.5)	2.65 (1.72,4.09)	<0.001
		High RH	242	11 (4.6)	0.74 (0.39,1.43)	0.374
		Low plus High RH	476	45 (9.5)	1.39 (0.91,2.13)	0.132
10-17	Benign Systemic Neoplasms	Comparison	1,204	289 (24.0)		
		Background RH	376	93 (24.7)	1.05 (0.80,1.38)	0.710
		Low RH	232	58 (25.0)	1.05 (0.76,1.46)	0.760
		High RH	240	63 (26.3)	1.12 (0.81,1.53)	0.500
		Low plus High RH	472	121 (25.6)	1.08 (0.85,1.39)	0.521
10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	Comparison	1,211	25 (2.1)		
		Background RH	378	8 (2.1)	1.08 (0.48,2.44)	0.845
		Low RH	234	6 (2.6)	1.23 (0.50,3.03)	0.657
		High RH	242	2 (0.8)	0.38 (0.09,1.61)	0.187
		Low plus High RH	476	8 (1.7)	0.67 (0.27,1.67)	0.392
10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	Comparison	1,211	12 (1.0)		
		Background RH	378	3 (0.8)	0.72 (0.20,2.58)	0.612
		Low RH	234	5 (2.1)	2.24 (0.78,6.43)	0.134
		High RH	242	1 (0.4)	0.46 (0.06,3.53)	0.451
		Low plus High RH	476	6 (1.3)	1.00 (0.29,3.41)	0.995
10-20	Malignant Systemic Neoplasms (Oral Cavity, Pharynx, and Larynx)	Comparison	1,211	7 (0.6)		
		Background RH	378	1 (0.3)	0.43 (0.05,3.52)	0.431
		Low RH	234	2 (0.9)	1.51 (0.31,7.30)	0.612
		High RH	242	1 (0.4)	0.75 (0.09,6.18)	0.791
		Low plus High RH	476	3 (0.6)	1.06 (0.25,4.39)	0.938
10-21	Malignant Systemic Neoplasms (Thymus, Heart, and Mediastinum)	Comparison	1,211	0 (0.0)		
		Background RH	378	2 (0.5)	--	0.089 ^b
		Low RH	234	0 (0.0)	--	--
		High RH	242	0 (0.0)	--	--
		Low plus High RH	476	0 (0.0)	--	--

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables - Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
10-22	Malignant Systemic Neoplasms (Thyroid Gland)	Comparison	1,211	2 (0.2)		
		Background RH	378	0 (0.0)	--	0.999 ^b
		Low RH	234	2 (0.9)	5.42 (0.76,38.74)	0.092
		High RH	242	0 (0.0)	--	0.999 ^b
		Low plus High RH	476	2 (0.4)	--	0.680 ^b
10-23	Malignant Systemic Neoplasms (Bronchus and Lung)	Comparison	1,211	3 (0.3)		
		Background RH	378	2 (0.5)	2.14 (0.35,12.94)	0.408
		Low RH	234	8 (3.4)	14.26 (3.75,54.20)	<0.001
		High RH	242	0 (0.0)	--	0.999 ^b
		Low plus High RH	476	8 (1.7)	--	0.003 ^b
10-24	Malignant Systemic Neoplasms (Liver)	Comparison	1,211	2 (0.2)		
		Background RH	378	0 (0.0)	--	0.999 ^b
		Low RH	234	0 (0.0)	--	0.999 ^b
		High RH	242	2 (0.8)	5.70 (0.78,41.53)	0.086
		Low plus High RH	476	2 (0.4)	--	0.680 ^b
10-25	Malignant Systemic Neoplasms (Colon and Rectum)	Comparison	1,211	8 (0.7)		
		Background RH	378	1 (0.3)	0.49 (0.06,3.94)	0.500
		Low RH	234	5 (2.1)	3.02 (0.97,9.45)	0.057
		High RH	242	1 (0.4)	0.51 (0.06,4.15)	0.528
		Low plus High RH	476	6 (1.3)	1.22 (0.33,4.51)	0.764
10-26	Malignant Systemic Neoplasms (Kidney and Bladder)	Comparison	1,211	6 (0.5)		
		Background RH	378	4 (1.1)	2.04 (0.57,7.34)	0.273
		Low RH	234	5 (2.1)	4.44 (1.34,14.69)	0.015
		High RH	242	2 (0.8)	1.75 (0.35,8.75)	0.497
		Low plus High RH	476	7 (1.5)	2.76 (0.87,8.80)	0.085
10-27	Malignant Systemic Neoplasms (Prostate)	Comparison	1,211	39 (3.2)		
		Background RH	378	9 (2.4)	0.73 (0.35,1.52)	0.398
		Low RH	234	12 (5.1)	1.63 (0.84,3.16)	0.150
		High RH	242	4 (1.7)	0.51 (0.18,1.44)	0.202
		Low plus High RH	476	16 (3.4)	0.90 (0.46,1.75)	0.757
10-28	Malignant Systemic Neoplasms (Testicles)	Comparison	1,211	0 (0.0)		
		Background RH	378	0 (0.0)	--	--
		Low RH	234	2 (0.9)	--	0.024 ^b
		High RH	242	1 (0.4)	--	0.371 ^b
		Low plus High RH	476	3 (0.6)	--	0.034 ^b
10-29	Malignant Systemic Neoplasms (Connective and Other Soft Tissues)	Comparison	1,211	2 (0.2)		
		Background RH	378	0 (0.0)	--	0.999 ^b
		Low RH	234	0 (0.0)	--	0.999 ^b
		High RH	242	1 (0.4)	2.34 (0.21,26.43)	0.493
		Low plus High RH	476	1 (0.2)	--	0.999 ^b

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
10-30	Hodgkin's Disease	Comparison	1,211	3 (0.3)		
		Background RH	378	1 (0.3)	0.92 (0.09,9.02)	0.945
		Low RH	234	0 (0.0)	--	0.999 ^b
		High RH	242	0 (0.0)	--	0.999 ^b
		Low plus High RH	476	0 (0.0)	--	0.656 ^b
10-31	Non-Hodgkin's Lymphoma	Comparison	1,211	3 (0.3)		
		Background RH	378	1 (0.3)	0.92 (0.09,9.02)	0.944
		Low RH	234	0 (0.0)	--	0.999 ^b
		High RH	242	0 (0.0)	--	0.999 ^b
		Low plus High RH	476	0 (0.0)	--	0.656 ^b
10-32	Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Comparison	1,211	2 (0.2)		
		Background RH	378	2 (0.5)	2.64 (0.37,19.03)	0.336
		Low RH	234	0 (0.0)	--	0.999 ^b
		High RH	242	0 (0.0)	--	0.999 ^b
		Low plus High RH	476	0 (0.0)	--	0.919 ^b
10-33	All Malignant Skin and Systemic Neoplasms	Comparison	1,200	226 (18.8)		
		Background RH	375	76 (20.3)	1.12 (0.83,1.49)	0.464
		Low RH	228	68 (29.8)	1.82 (1.33,2.51)	<0.001
		High RH	241	41 (17.0)	0.87 (0.60,1.26)	0.457
		Low plus High RH	469	109 (23.2)	1.25 (0.96,1.62)	0.103
10-34	All Skin and Systemic Neoplasms	Comparison	1,193	602 (50.5)		
		Background RH	374	211 (56.4)	1.30 (1.03,1.64)	0.030
		Low RH	227	137 (60.4)	1.49 (1.11,1.99)	0.007
		High RH	239	122 (51.1)	1.01 (0.76,1.33)	0.969
		Low plus High RH	466	259 (55.6)	1.22 (0.98,1.51)	0.076
10-36	PSA	Comparison	1,152	71 (6.2)		
		Background RH	365	20 (5.5)	0.85 (0.51,1.42)	0.526
		Low RH	222	22 (9.9)	1.69 (1.02,2.79)	0.040
		High RH	236	12 (5.1)	0.85 (0.45,1.59)	0.603
		Low plus High RH	458	34 (7.4)	1.18 (0.76,1.84)	0.454
11-3	Inflammatory Diseases	Comparison	1,204	1 (0.1)		
		Background RH	380	3 (0.8)	8.82 (0.91,85.93)	0.061
		Low RH	239	2 (0.8)	10.31 (0.93,114.27)	0.057
		High RH	240	2 (0.8)	10.86 (0.97,121.25)	0.053
		Low plus High RH	479	4 (0.8)	10.58 (1.18,95.25)	0.035
11-4	Hereditary and Degenerative Diseases	Comparison	1,211	107 (8.8)		
		Background RH	380	37 (9.7)	1.08 (0.73,1.61)	0.697
		Low RH	239	21 (8.8)	1.00 (0.61,1.63)	0.999
		High RH	240	22 (9.2)	1.07 (0.66,1.73)	0.792
		Low plus High RH	479	43 (9.0)	1.03 (0.71,1.50)	0.864

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
11-5	Peripheral Disorders	Comparison	1,209	233 (19.3)		
		Background RH	377	65 (17.2)	0.91 (0.67,1.23)	0.531
		Low RH	239	61 (25.5)	1.42 (1.03,1.97)	0.033
		High RH	240	59 (24.6)	1.32 (0.95,1.83)	0.097
		Low plus High RH	479	120 (25.1)	1.37 (1.07,1.76)	0.014
11-6	Other Neurological Disorders	Comparison	1,206	204 (16.9)		
		Background RH	377	59 (15.7)	0.88 (0.64,1.21)	0.442
		Low RH	239	55 (23.0)	1.48 (1.06,2.07)	0.023
		High RH	239	58 (24.3)	1.62 (1.16,2.26)	0.005
		Low plus High RH	478	113 (23.6)	1.55 (1.19,2.01)	0.001
11-7	Smell	Comparison	1,209	18 (1.5)		
		Background RH	378	8 (2.1)	1.42 (0.61,3.31)	0.420
		Low RH	238	7 (2.9)	2.01 (0.83,4.86)	0.122
		High RH	239	4 (1.7)	1.14 (0.38,3.40)	0.821
		Low plus High RH	477	11 (2.3)	1.51 (0.69,3.29)	0.300
11-8	Visual Fields	Comparison	1,207	5 (0.4)		
		Background RH	380	1 (0.3)	0.70 (0.08,6.09)	0.746
		Low RH	239	0 (0.0)	--	0.694 ^b
		High RH	240	1 (0.4)	0.92 (0.11,8.03)	0.940
		Low plus High RH	479	1 (0.2)	--	0.853 ^b
11-9	Light Reaction	Comparison	1,209	11 (0.9)		
		Background RH	376	1 (0.3)	0.30 (0.04,2.35)	0.252
		Low RH	239	0 (0.0)	--	0.283 ^b
		High RH	239	0 (0.0)	--	0.283 ^b
		Low plus High RH	478	0 (0.0)	--	0.079 ^b
11-10	Ocular Movement	Comparison	1,211	14 (1.2)		
		Background RH	380	4 (1.1)	0.93 (0.30,2.85)	0.896
		Low RH	239	5 (2.1)	1.82 (0.65,5.10)	0.256
		High RH	240	5 (2.1)	1.79 (0.63,5.04)	0.271
		Low plus High RH	479	10 (2.1)	1.80 (0.79,4.10)	0.159
11-11	Facial Sensation	Comparison	1,210	2 (0.2)		
		Background RH	379	1 (0.3)	1.77 (0.16,19.96)	0.646
		Low RH	239	1 (0.4)	2.46 (0.22,27.39)	0.463
		High RH	240	0 (0.0)	--	0.999 ^b
		Low plus High RH	479	1 (0.2)	--	0.999 ^b
11-12	Jaw Clench	Comparison	1,211	0 (0.0)		
		Background RH	380	1 (0.3)	--	0.540 ^b
		Low RH	239	1 (0.4)	--	0.366 ^b
		High RH	240	0 (0.0)	--	--
		Low plus High RH	479	1 (0.2)	--	0.631 ^b

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
11-13	Smile	Comparison	1,211	4 (0.3)		
		Background RH	380	3 (0.8)	2.61 (0.57,11.87)	0.214
		Low RH	239	2 (0.8)	2.49 (0.45,13.68)	0.295
		High RH	240	2 (0.8)	2.35 (0.42,13.05)	0.328
		Low plus High RH	479	4 (0.8)	2.42 (0.60,9.77)	0.215
11-14	Palpebral Fissure	Comparison	1,211	12 (1.0)		
		Background RH	380	4 (1.1)	1.20 (0.38,3.78)	0.759
		Low RH	239	2 (0.8)	0.81 (0.18,3.66)	0.785
		High RH	240	1 (0.4)	0.37 (0.05,2.91)	0.347
		Low plus High RH	479	3 (0.6)	0.55 (0.14,2.10)	0.381
11-15	Balance	Comparison	1,210	7 (0.6)		
		Background RH	380	5 (1.3)	2.52 (0.78,8.10)	0.121
		Low RH	239	1 (0.4)	0.70 (0.09,5.74)	0.741
		High RH	240	1 (0.4)	0.66 (0.08,5.43)	0.699
		Low plus High RH	479	2 (0.4)	0.68 (0.14,3.31)	0.633
11-16	Speech	Comparison	1,211	9 (0.7)		
		Background RH	380	2 (0.5)	0.81 (0.17,3.83)	0.793
		Low RH	239	2 (0.8)	1.07 (0.23,5.02)	0.929
		High RH	240	0 (0.0)	--	0.374 ^b
		Low plus High RH	479	2 (0.4)	--	0.678 ^b
11-17	Tongue Position Relative to Midline	Comparison	1,211	0 (0.0)		
		Background RH	380	1 (0.3)	--	0.540 ^b
		Low RH	239	1 (0.4)	--	0.366 ^b
		High RH	240	0 (0.0)	--	--
		Low plus High RH	479	1 (0.2)	--	0.631 ^b
11-18	Palate and Uvula Movement	Comparison	1,211	0 (0.0)		
		Background RH	380	0 (0.0)	--	--
		Low RH	239	1 (0.4)	--	0.366 ^b
		High RH	240	0 (0.0)	--	--
		Low plus High RH	479	1 (0.2)	--	0.631 ^b
11-19	Cranial Nerve Index	Comparison	1,207	68 (5.6)		
		Background RH	371	25 (6.7)	1.27 (0.79,2.05)	0.329
		Low RH	236	19 (8.1)	1.45 (0.86,2.47)	0.166
		High RH	236	11 (4.7)	0.78 (0.41,1.51)	0.469
		Low plus High RH	472	30 (6.4)	1.07 (0.68,1.69)	0.776
11-20	Neck Range of Motion	Comparison	1,211	180 (14.9)		
		Background RH	380	60 (15.8)	1.16 (0.84,1.60)	0.366
		Low RH	239	56 (23.4)	1.73 (1.23,2.43)	0.002
		High RH	240	47 (19.6)	1.31 (0.91,1.87)	0.142
		Low plus High RH	479	103 (21.5)	1.50 (1.15,1.97)	0.003

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
11-21	Pinprick	Comparison	1,149	63 (5.5)		
		Background RH	362	19 (5.3)	1.03 (0.61,1.76)	0.900
		Low RH	226	15 (6.6)	1.20 (0.67,2.15)	0.542
		High RH	227	21 (9.3)	1.64 (0.98,2.76)	0.062
		Low plus High RH	453	36 (8.0)	1.40 (0.91,2.16)	0.123
11-22	Light Touch	Comparison	1,149	43 (3.7)		
		Background RH	362	13 (3.6)	1.01 (0.54,1.92)	0.965
		Low RH	226	12 (5.3)	1.42 (0.74,2.74)	0.295
		High RH	227	11 (4.9)	1.25 (0.63,2.46)	0.528
		Low plus High RH	453	23 (5.1)	1.33 (0.79,2.24)	0.283
11-23	Muscle Status	Comparison	1,210	35 (2.9)		
		Background RH	380	14 (3.7)	1.23 (0.65,2.31)	0.530
		Low RH	239	14 (5.9)	2.11 (1.12,3.99)	0.021
		High RH	240	10 (4.2)	1.52 (0.74,3.12)	0.254
		Low plus High RH	479	24 (5.0)	1.79 (1.05,3.06)	0.033
11-24	Patellar Reflex	Comparison	1,209	33 (2.7)		
		Background RH	380	9 (2.4)	0.91 (0.43,1.93)	0.812
		Low RH	238	7 (2.9)	1.06 (0.46,2.44)	0.882
		High RH	240	8 (3.3)	1.17 (0.53,2.58)	0.693
		Low plus High RH	478	15 (3.1)	1.12 (0.60,2.08)	0.727
11-25	Achilles Reflex	Comparison	1,206	197 (16.3)		
		Background RH	379	57 (15.0)	0.99 (0.72,1.37)	0.963
		Low RH	239	46 (19.3)	1.20 (0.84,1.71)	0.325
		High RH	240	47 (19.6)	1.16 (0.81,1.65)	0.425
		Low plus High RH	479	93 (19.4)	1.18 (0.89,1.55)	0.247
11-26	Biceps Reflex	Comparison	1,210	12 (1.0)		
		Background RH	380	2 (0.5)	0.61 (0.14,2.77)	0.524
		Low RH	239	7 (2.9)	2.88 (1.12,7.44)	0.029
		High RH	240	3 (1.3)	1.10 (0.30,3.96)	0.887
		Low plus High RH	479	10 (2.1)	1.78 (0.73,4.35)	0.209
11-27	Babinski Reflex	Comparison	1,208	11 (0.9)		
		Background RH	380	5 (1.3)	1.48 (0.50,4.33)	0.477
		Low RH	239	1 (0.4)	0.46 (0.06,3.55)	0.452
		High RH	240	1 (0.4)	0.45 (0.06,3.50)	0.444
		Low plus High RH	479	2 (0.4)	0.45 (0.10,2.05)	0.303
11-29	Polyneuropathy Prevalence Index	Comparison	1,147	175 (15.3)		
		Background RH	361	47 (13.0)	0.89 (0.63,1.27)	0.530
		Low RH	226	38 (16.8)	1.10 (0.75,1.62)	0.618
		High RH	227	42 (18.5)	1.18 (0.81,1.72)	0.376
		Low plus High RH	453	80 (17.7)	1.14 (0.85,1.53)	0.370

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables - Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
11-30	Multiple Polyneuropathy Index	Comparison	1,147	36 (3.1)		
		Background RH	361	14 (3.9)	1.29 (0.68,2.43)	0.432
		Low RH	226	10 (4.4)	1.42 (0.69,2.90)	0.340
		High RH	227	15 (6.6)	2.12 (1.14,3.95)	0.018
		Low plus High RH	453	25 (5.5)	1.73 (1.02,2.94)	0.042
11-31	Confirmed Polyneuropathy Indicator	Comparison	1,141	7 (0.6)		
		Background RH	358	2 (0.6)	1.06 (0.22,5.16)	0.944
		Low RH	224	3 (1.3)	2.08 (0.53,8.17)	0.293
		High RH	223	6 (2.7)	3.89 (1.28,11.86)	0.017
		Low plus High RH	447	9 (2.0)	2.85 (1.02,7.97)	0.047
11-32	Tremor	Comparison	1,211	90 (7.4)		
		Background RH	380	30 (7.9)	1.05 (0.68,1.62)	0.821
		Low RH	239	14 (5.9)	0.78 (0.43,1.39)	0.396
		High RH	240	16 (6.7)	0.90 (0.52,1.57)	0.713
		Low plus High RH	479	30 (6.3)	0.84 (0.55,1.29)	0.417
11-33	Coordination	Comparison	1,209	30 (2.5)		
		Background RH	380	12 (3.2)	1.33 (0.67,2.65)	0.412
		Low RH	239	4 (1.7)	0.66 (0.23,1.90)	0.443
		High RH	240	3 (1.3)	0.48 (0.15,1.59)	0.231
		Low plus High RH	479	7 (1.5)	0.56 (0.24,1.30)	0.181
11-34	Romberg Sign	Comparison	1,210	7 (0.6)		
		Background RH	380	5 (1.3)	2.52 (0.78,8.10)	0.121
		Low RH	239	1 (0.4)	0.70 (0.09,5.74)	0.741
		High RH	240	1 (0.4)	0.66 (0.08,5.43)	0.699
		Low plus High RH	479	2 (0.4)	0.68 (0.14,3.31)	0.633
11-35	Gait	Comparison	1,211	55 (4.5)		
		Background RH	380	23 (6.1)	1.50 (0.91,2.49)	0.115
		Low RH	239	11 (4.6)	0.98 (0.51,1.91)	0.963
		High RH	240	15 (6.3)	1.28 (0.71,2.32)	0.414
		Low plus High RH	479	26 (5.4)	1.12 (0.69,1.83)	0.640
11-36	CNS Index	Comparison	1,210	146 (12.1)		
		Background RH	380	52 (13.7)	1.18 (0.84,1.66)	0.339
		Low RH	239	24 (10.0)	0.81 (0.51,1.28)	0.363
		High RH	240	30 (12.5)	1.02 (0.67,1.56)	0.923
		Low plus High RH	479	54 (11.3)	0.91 (0.65,1.27)	0.576
12-3	Psychoses	Comparison	1,211	47 (3.9)		
		Background RH	381	10 (2.6)	0.71 (0.35,1.43)	0.339
		Low RH	239	12 (5.0)	1.29 (0.67,2.47)	0.447
		High RH	240	12 (5.0)	1.23 (0.64,2.36)	0.535
		Low plus High RH	479	24 (5.0)	1.26 (0.76,2.09)	0.373

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
12-4	Alcohol Dependence	Comparison	1,210	80 (6.6)		
		Background RH	381	24 (6.3)	0.93 (0.58,1.50)	0.767
		Low RH	239	18 (7.5)	1.16 (0.68,1.97)	0.594
		High RH	240	20 (8.3)	1.31 (0.78,2.18)	0.307
		Low plus High RH	479	38 (7.9)	1.23 (0.82,1.84)	0.316
12-5	Drug Dependence	Comparison	1,211	4 (0.3)		
		Background RH	381	2 (0.5)	1.32 (0.24,7.34)	0.749
		Low RH	239	0 (0.0)	--	0.830 ^b
		High RH	240	0 (0.0)	--	0.828 ^b
		Low plus High RH	479	0 (0.0)	--	0.481 ^b
12-6	Anxiety	Comparison	1,208	328 (27.2)		
		Background RH	379	86 (22.7)	0.78 (0.60,1.03)	0.083
		Low RH	238	70 (29.4)	1.12 (0.82,1.52)	0.473
		High RH	239	73 (30.5)	1.18 (0.87,1.60)	0.279
		Low plus High RH	477	143 (30.0)	1.15 (0.91,1.45)	0.240
12-7	Other Neuroses	Comparison	1,202	637 (53.0)		
		Background RH	374	170 (45.5)	0.75 (0.60,0.95)	0.018
		Low RH	237	143 (60.3)	1.34 (1.01,1.79)	0.041
		High RH	237	149 (62.9)	1.48 (1.11,1.97)	0.008
		Low plus High RH	474	292 (61.6)	1.41 (1.13,1.75)	0.002
12-8	SCL-90-R Anxiety	Comparison	1,211	133 (11.0)		
		Background RH	381	27 (7.1)	0.65 (0.42,1.00)	0.051
		Low RH	239	26 (10.9)	0.98 (0.63,1.53)	0.919
		High RH	239	29 (12.1)	1.07 (0.70,1.65)	0.756
		Low plus High RH	478	55 (11.5)	1.02 (0.73,1.43)	0.895
12-9	SCL-90-R Depression	Comparison	1,211	194 (16.0)		
		Background RH	381	43 (11.3)	0.70 (0.49,1.00)	0.052
		Low RH	239	30 (12.6)	0.74 (0.49,1.12)	0.156
		High RH	239	41 (17.2)	1.03 (0.71,1.50)	0.862
		Low plus High RH	478	71 (14.9)	0.88 (0.65,1.18)	0.383
12-10	SCL-90-R Hostility	Comparison	1,211	107 (8.8)		
		Background RH	381	22 (5.8)	0.66 (0.41,1.07)	0.090
		Low RH	239	16 (6.7)	0.73 (0.42,1.26)	0.261
		High RH	239	23 (9.6)	1.05 (0.65,1.70)	0.828
		Low plus High RH	478	39 (8.2)	0.88 (0.60,1.30)	0.512
12-11	SCL-90-R Interpersonal Sensitivity	Comparison	1,211	198 (16.4)		
		Background RH	381	37 (9.7)	0.57 (0.39,0.83)	0.003
		Low RH	239	36 (15.1)	0.90 (0.61,1.32)	0.586
		High RH	239	43 (18.0)	1.08 (0.75,1.56)	0.672
		Low plus High RH	478	79 (16.5)	0.99 (0.74,1.31)	0.923

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
12-12	SCL-90-R Obsessive-Compulsive Behavior	Comparison	1,211	198 (16.4)		
		Background RH	381	43 (11.3)	0.68 (0.48,0.97)	0.032
		Low RH	239	38 (15.9)	0.96 (0.65,1.40)	0.821
		High RH	239	39 (16.3)	0.96 (0.66,1.40)	0.831
		Low plus High RH	478	77 (16.1)	0.96 (0.72,1.28)	0.773
12-13	SCL-90-R Paranoid Ideation	Comparison	1,211	85 (7.0)		
		Background RH	381	17 (4.5)	0.65 (0.38,1.10)	0.110
		Low RH	239	13 (5.4)	0.75 (0.41,1.38)	0.357
		High RH	239	26 (10.9)	1.56 (0.98,2.48)	0.062
		Low plus High RH	478	39 (8.2)	1.08 (0.72,1.64)	0.703
12-14	SCL-90-R Phobic Anxiety	Comparison	1,211	126 (10.4)		
		Background RH	381	22 (5.8)	0.53 (0.33,0.85)	0.009
		Low RH	239	25 (10.5)	1.00 (0.64,1.58)	0.986
		High RH	239	37 (15.5)	1.57 (1.05,2.33)	0.027
		Low plus High RH	478	62 (13.0)	1.25 (0.90,1.74)	0.177
12-15	SCL-90-R Psychoticism	Comparison	1,211	176 (14.5)		
		Background RH	381	33 (8.7)	0.58 (0.39,0.86)	0.006
		Low RH	239	28 (11.7)	0.77 (0.51,1.18)	0.237
		High RH	239	43 (18.0)	1.25 (0.86,1.81)	0.235
		Low plus High RH	478	71 (14.9)	0.98 (0.73,1.33)	0.914
12-16	SCL-90-R Somatization	Comparison	1,211	194 (16.0)		
		Background RH	381	44 (11.6)	0.71 (0.50,1.01)	0.056
		Low RH	239	48 (20.1)	1.31 (0.92,1.86)	0.136
		High RH	239	50 (20.9)	1.34 (0.95,1.91)	0.098
		Low plus High RH	478	98 (20.5)	1.33 (1.01,1.74)	0.042
12-17	SCL-90-R Global Severity Index (GSI)	Comparison	1,211	185 (15.3)		
		Background RH	381	35 (9.2)	0.59 (0.40,0.87)	0.007
		Low RH	239	35 (14.6)	0.94 (0.63,1.39)	0.754
		High RH	239	47 (19.7)	1.30 (0.91,1.86)	0.153
		Low plus High RH	478	82 (17.2)	1.10 (0.83,1.47)	0.500
12-18	SCL-90-R Positive Symptom Total (PST)	Comparison	1,211	204 (16.9)		
		Background RH	381	36 (9.5)	0.54 (0.37,0.78)	0.001
		Low RH	239	40 (16.7)	0.98 (0.68,1.42)	0.921
		High RH	239	45 (18.8)	1.10 (0.77,1.58)	0.604
		Low plus High RH	478	85 (17.8)	1.04 (0.79,1.37)	0.790
12-19	SCL-90-R Positive Symptom Distress Index (PSDI)	Comparison	1,211	78 (6.4)		
		Background RH	381	22 (5.8)	0.90 (0.55,1.47)	0.671
		Low RH	239	19 (8.0)	1.25 (0.74,2.11)	0.399
		High RH	239	28 (11.7)	1.91 (1.21,3.02)	0.006
		Low plus High RH	478	47 (9.8)	1.55 (1.05,2.27)	0.026

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
13-3	Uncharacterized Hepatitis	Comparison	1,206	21 (1.7)		
		Background RH	378	8 (2.1)	1.27 (0.56,2.92)	0.568
		Low RH	237	4 (1.7)	0.96 (0.33,2.82)	0.938
		High RH	241	5 (2.1)	1.15 (0.43,3.10)	0.779
		Low plus High RH	478	9 (1.9)	1.05 (0.48,2.32)	0.902
13-4	Jaundice	Comparison	1,182	34 (2.9)		
		Background RH	370	11 (3.0)	1.05 (0.52,2.11)	0.890
		Low RH	232	0 (0.0)	--	0.017 ^b
		High RH	237	1 (0.4)	0.14 (0.02,1.04)	0.055
		Low plus High RH	469	1 (0.2)	--	0.001 ^b
13-5	Chronic Liver Disease and Cirrhosis (Alcohol-related)	Comparison	1,147	54 (4.7)		
		Background RH	361	16 (4.4)	0.97 (0.55,1.73)	0.924
		Low RH	226	11 (4.9)	1.02 (0.53,1.99)	0.946
		High RH	221	12 (5.4)	1.12 (0.59,2.14)	0.725
		Low plus High RH	447	23 (5.1)	1.07 (0.65,1.77)	0.788
13-6	Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	Comparison	1,212	14 (1.2)		
		Background RH	381	6 (1.6)	1.64 (0.62,4.34)	0.321
		Low RH	239	3 (1.3)	1.01 (0.29,3.58)	0.986
		High RH	243	5 (2.1)	1.52 (0.53,4.32)	0.433
		Low plus High RH	482	8 (1.7)	1.24 (0.50,3.06)	0.639
13-7	Liver Abscess and Sequelae of Chronic Liver Disease	Comparison	1,213	1 (0.1)		
		Background RH	381	0 (0.0)	--	0.999 ^b
		Low RH	239	0 (0.0)	--	0.999 ^b
		High RH	243	1 (0.4)	5.44 (0.33,89.44)	0.236
		Low plus High RH	482	1 (0.2)	--	0.999 ^b
13-8	Enlarged Liver (Hepatomegaly)	Comparison	1,211	26 (2.1)		
		Background RH	381	6 (1.6)	0.75 (0.31,1.86)	0.540
		Low RH	239	2 (0.8)	0.38 (0.09,1.62)	0.191
		High RH	242	6 (2.5)	1.12 (0.46,2.78)	0.798
		Low plus High RH	481	8 (1.7)	0.66 (0.27,1.61)	0.357
13-9	Other Liver Disorders	Comparison	1,202	299 (24.9)		
		Background RH	378	99 (26.2)	1.15 (0.88,1.50)	0.318
		Low RH	238	64 (26.9)	1.09 (0.80,1.50)	0.578
		High RH	243	83 (34.2)	1.49 (1.10,2.00)	0.009
		Low plus High RH	481	147 (30.6)	1.28 (1.01,1.62)	0.042
13-10	Current Hepatomegaly	Comparison	1,194	7 (0.6)		
		Background RH	376	3 (0.8)	1.53 (0.39,5.99)	0.543
		Low RH	236	3 (1.3)	2.10 (0.54,8.23)	0.284
		High RH	241	4 (1.7)	2.58 (0.74,8.97)	0.136
		Low plus High RH	477	7 (1.5)	2.33 (0.80,6.76)	0.119

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
13-12	AST	Comparison	1,194	79 (6.6)		
		Background RH	376	17 (4.5)	0.72 (0.42,1.24)	0.241
		Low RH	236	19 (8.1)	1.21 (0.72,2.04)	0.476
		High RH	240	26 (10.8)	1.60 (1.00,2.56)	0.051
		Low plus High RH	476	45 (9.5)	1.39 (0.95,2.05)	0.094
13-14	ALT	Comparison	1,194	85 (7.1)		
		Background RH	376	17 (4.5)	0.67 (0.39,1.15)	0.145
		Low RH	236	20 (8.5)	1.18 (0.71,1.97)	0.522
		High RH	240	30 (12.5)	1.74 (1.11,2.71)	0.015
		Low plus High RH	476	50 (10.5)	1.43 (0.99,2.08)	0.058
13-16	GGT	Comparison	1,194	117 (9.8)		
		Background RH	376	25 (6.6)	0.70 (0.45,1.10)	0.122
		Low RH	236	29 (12.3)	1.27 (0.82,1.96)	0.283
		High RH	240	33 (13.8)	1.38 (0.91,2.10)	0.127
		Low plus High RH	476	62 (13.0)	1.33 (0.95,1.84)	0.094
13-18	Alkaline Phosphatase	Comparison	1,194	21 (1.8)		
		Background RH	376	12 (3.2)	1.76 (0.85,3.63)	0.127
		Low RH	236	4 (1.7)	0.97 (0.33,2.86)	0.960
		High RH	240	5 (2.1)	1.24 (0.46,3.33)	0.670
		Low plus High RH	476	9 (1.9)	1.10 (0.50,2.43)	0.815
13-20	Total Bilirubin	Comparison	1,194	74 (6.2)		
		Background RH	376	21 (5.6)	0.91 (0.55,1.51)	0.724
		Low RH	236	15 (6.4)	1.02 (0.58,1.81)	0.940
		High RH	240	9 (3.8)	0.58 (0.29,1.18)	0.131
		Low plus High RH	476	24 (5.0)	0.77 (0.47,1.25)	0.286
13-21	Direct Bilirubin	Comparison	1,194	5 (0.4)		
		Background RH	376	1 (0.3)	0.88 (0.10,7.75)	0.906
		Low RH	236	0 (0.0)	--	0.695 ^b
		High RH	240	0 (0.0)	--	0.686 ^b
		Low plus High RH	476	0 (0.0)	--	0.359 ^b
13-23	Lactic Dehydrogenase	Comparison	1,192	123 (10.3)		
		Background RH	376	36 (9.6)	1.05 (0.71,1.57)	0.794
		Low RH	236	21 (8.9)	0.81 (0.50,1.33)	0.406
		High RH	240	22 (9.2)	0.77 (0.47,1.25)	0.291
		Low plus High RH	476	43 (9.0)	0.79 (0.55,1.15)	0.214
13-25	Cholesterol	Comparison	1,194	177 (14.8)		
		Background RH	376	48 (12.8)	0.80 (0.56,1.12)	0.195
		Low RH	236	34 (14.4)	0.98 (0.66,1.46)	0.915
		High RH	240	48 (20.0)	1.51 (1.06,2.16)	0.023
		Low plus High RH	476	82 (17.2)	1.22 (0.91,1.63)	0.183

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
13-27	HDL Cholesterol	Comparison	1,193	88 (7.4)		
		Background RH	376	33 (8.8)	1.35 (0.88,2.05)	0.170
		Low RH	235	19 (8.1)	1.07 (0.64,1.80)	0.798
		High RH	240	19 (7.9)	0.98 (0.58,1.65)	0.937
		Low plus High RH	475	38 (8.0)	1.02 (0.69,1.53)	0.910
13-29	Cholesterol-HDL Ratio	Comparison	1,193	492 (41.2)		
		Background RH	376	136 (36.2)	0.88 (0.69,1.13)	0.321
		Low RH	235	86 (36.6)	0.80 (0.60,1.07)	0.135
		High RH	240	130 (54.2)	1.57 (1.18,2.08)	0.002
		Low plus High RH	475	216 (45.5)	1.12 (0.90,1.40)	0.295
13-31	Triglycerides	Comparison	1,194	240 (20.1)		
		Background RH	375	53 (14.1)	0.72 (0.52,1.00)	0.051
		Low RH	236	54 (22.9)	1.15 (0.82,1.62)	0.411
		High RH	240	77 (32.1)	1.74 (1.27,2.37)	<0.001
		Low plus High RH	476	131 (27.5)	1.42 (1.10,1.82)	0.006
13-33	Creatine Phosphokinase	Comparison	1,194	111 (9.3)		
		Background RH	376	26 (6.9)	0.81 (0.51,1.26)	0.345
		Low RH	236	20 (8.5)	0.87 (0.53,1.44)	0.599
		High RH	240	25 (10.4)	1.03 (0.65,1.64)	0.905
		Low plus High RH	476	45 (9.5)	0.95 (0.66,1.37)	0.781
13-35	Serum Amylase	Comparison	1,194	38 (3.2)		
		Background RH	376	8 (2.1)	0.61 (0.28,1.32)	0.210
		Low RH	236	11 (4.7)	1.51 (0.76,3.01)	0.236
		High RH	240	6 (2.5)	0.84 (0.35,2.02)	0.697
		Low plus High RH	476	17 (3.6)	1.13 (0.62,2.06)	0.701
13-36	Antibodies for Hepatitis A	Comparison	1,212	405 (33.4)		
		Background RH	381	112 (29.4)	0.84 (0.65,1.08)	0.175
		Low RH	239	84 (35.1)	1.08 (0.80,1.44)	0.619
		High RH	243	84 (34.6)	1.04 (0.78,1.39)	0.784
		Low plus High RH	482	168 (34.9)	1.06 (0.85,1.32)	0.615
13-37	Evidence of Prior Hepatitis B	Comparison	1,211	166 (13.7)		
		Background RH	381	23 (6.0)	0.42 (0.27,0.66)	<0.001
		Low RH	238	26 (10.9)	0.76 (0.49,1.18)	0.229
		High RH	243	27 (11.1)	0.76 (0.49,1.17)	0.214
		Low plus High RH	481	53 (11.0)	0.76 (0.55,1.06)	0.105
13-38	Current Hepatitis B	Comparison	1,213	2 (0.2)		
		Background RH	381	0 (0.0)	--	0.999 ^b
		Low RH	239	1 (0.4)	2.52 (0.23,27.92)	0.453
		High RH	243	0 (0.0)	--	0.999 ^b
		Low plus High RH	482	1 (0.2)	--	0.999 ^b

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
13-39	Antibodies for Hepatitis C	Comparison	1,213	17 (1.4)		
		Background RH	381	5 (1.3)	0.89 (0.32,2.44)	0.819
		Low RH	239	2 (0.8)	0.60 (0.14,2.62)	0.497
		High RH	243	2 (0.8)	0.61 (0.14,2.67)	0.512
		Low plus High RH	482	4 (0.8)	0.61 (0.20,1.81)	0.369
13-40	Stool Hemocult	Comparison	1,162	50 (4.3)		
		Background RH	365	10 (2.7)	0.68 (0.34,1.35)	0.270
		Low RH	232	11 (4.7)	1.08 (0.55,2.12)	0.814
		High RH	232	8 (3.4)	0.74 (0.35,1.59)	0.443
		Low plus High RH	464	19 (4.1)	0.90 (0.52,1.55)	0.696
13-42	Prealbumin	Comparison	1,194	10 (0.8)		
		Background RH	376	6 (1.6)	1.94 (0.69,5.41)	0.207
		Low RH	236	1 (0.4)	0.50 (0.06,3.95)	0.513
		High RH	240	5 (2.1)	2.50 (0.84,7.42)	0.099
		Low plus High RH	476	6 (1.3)	1.13 (0.33,3.90)	0.849
13-44	Albumin	Comparison	1,194	10 (0.8)		
		Background RH	376	2 (0.5)	0.68 (0.15,3.14)	0.618
		Low RH	236	0 (0.0)	--	0.325 ^b
		High RH	240	0 (0.0)	--	0.318 ^b
		Low plus High RH	476	0 (0.0)	--	0.099 ^b
13-46	α -1-Acid Glycoprotein	Comparison	1,194	39 (3.3)		
		Background RH	376	13 (3.5)	1.00 (0.52,1.90)	0.992
		Low RH	236	11 (4.7)	1.47 (0.74,2.91)	0.272
		High RH	240	12 (5.0)	1.65 (0.85,3.21)	0.141
		Low plus High RH	476	23 (4.8)	1.56 (0.92,2.64)	0.101
13-50	α -2-Macroglobulin	Comparison	1,194	45 (3.8)		
		Background RH	376	6 (1.6)	0.46 (0.19,1.10)	0.080
		Low RH	236	7 (3.0)	0.75 (0.33,1.69)	0.492
		High RH	240	10 (4.2)	1.00 (0.49,2.03)	0.999
		Low plus High RH	476	17 (3.6)	0.87 (0.49,1.55)	0.632
13-52	Apolipoprotein B	Comparison	1,194	636 (53.3)		
		Background RH	376	174 (46.3)	0.75 (0.60,0.95)	0.017
		Low RH	236	113 (47.9)	0.81 (0.61,1.07)	0.132
		High RH	240	132 (55.0)	1.08 (0.81,1.42)	0.606
		Low plus High RH	476	245 (51.5)	0.93 (0.75,1.16)	0.524
13-54	C3 Complement	Comparison	1,194	26 (2.2)		
		Background RH	376	12 (3.2)	1.28 (0.63,2.57)	0.495
		Low RH	236	1 (0.4)	0.20 (0.03,1.46)	0.111
		High RH	240	2 (0.8)	0.44 (0.10,1.86)	0.261
		Low plus High RH	476	3 (0.6)	0.29 (0.08,1.04)	0.057

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
13-56	C4 Complement	Comparison	1,194	2 (0.2)		
		Background RH	376	2 (0.5)	3.46 (0.47,25.38)	0.222
		Low RH	236	0 (0.0)	--	0.999 ^b
		High RH	240	0 (0.0)	--	0.999 ^b
		Low plus High RH	476	0 (0.0)	--	0.913 ^b
13-58	Haptoglobin	Comparison	1,194	337 (28.2)		
		Background RH	376	115 (30.6)	1.13 (0.88,1.46)	0.338
		Low RH	236	78 (33.1)	1.25 (0.93,1.69)	0.140
		High RH	240	86 (35.8)	1.41 (1.05,1.89)	0.023
		Low plus High RH	476	164 (34.5)	1.33 (1.06,1.67)	0.015
13-60	Transferrin	Comparison	1,194	133 (11.1)		
		Background RH	376	31 (8.2)	0.72 (0.48,1.09)	0.121
		Low RH	236	23 (9.7)	0.86 (0.54,1.37)	0.526
		High RH	240	16 (6.7)	0.57 (0.33,0.97)	0.039
		Low plus High RH	476	39 (8.2)	0.70 (0.48,1.02)	0.062
14-3	Essential Hypertension	Comparison	1,183	490 (41.4)		
		Background RH	372	127 (34.1)	0.86 (0.67,1.11)	0.246
		Low RH	229	94 (41.0)	0.95 (0.71,1.29)	0.758
		High RH	242	120 (49.6)	1.22 (0.91,1.63)	0.177
		Low plus High RH	471	214 (45.4)	1.08 (0.87,1.35)	0.488
14-4	Heart Disease (Excluding Essential Hypertension)	Comparison	1,195	730 (61.1)		
		Background RH	376	259 (68.9)	1.43 (1.11,1.83)	0.005
		Low RH	233	163 (70.0)	1.48 (1.09,2.00)	0.011
		High RH	243	139 (57.2)	0.84 (0.64,1.11)	0.228
		Low plus High RH	476	302 (63.4)	1.11 (0.89,1.39)	0.359
14-5	Myocardial Infarction	Comparison	1,195	98 (8.2)		
		Background RH	376	29 (7.7)	0.98 (0.63,1.51)	0.919
		Low RH	233	19 (8.2)	0.99 (0.59,1.65)	0.958
		High RH	243	24 (9.9)	1.18 (0.73,1.89)	0.496
		Low plus High RH	476	43 (9.0)	1.08 (0.74,1.58)	0.689
14-6	Stroke or Transient Ischemia Attack	Comparison	1,195	14 (1.2)		
		Background RH	376	5 (1.3)	1.13 (0.40,3.18)	0.816
		Low RH	233	1 (0.4)	0.36 (0.05,2.78)	0.330
		High RH	243	5 (2.1)	1.78 (0.63,5.02)	0.275
		Low plus High RH	476	6 (1.3)	0.82 (0.25,2.68)	0.741
14-8	Systolic Blood Pressure	Comparison	1,195	253 (21.2)		
		Background RH	376	74 (19.7)	1.00 (0.75,1.34)	0.998
		Low RH	233	59 (25.3)	1.25 (0.90,1.73)	0.188
		High RH	243	46 (18.9)	0.80 (0.56,1.14)	0.208
		Low plus High RH	476	105 (22.1)	0.99 (0.76,1.29)	0.952

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^b
14-10	Diastolic Blood Pressure	Comparison	1,195	59 (4.9)		
		Background RH	376	15 (4.0)	0.85 (0.47,1.52)	0.576
		Low RH	233	12 (5.2)	1.04 (0.55,1.96)	0.915
		High RH	243	17 (7.0)	1.37 (0.78,2.41)	0.267
		Low plus High RH	476	29 (6.1)	1.20 (0.75,1.90)	0.447
14-11	Heart Sounds	Comparison	1,195	60 (5.0)		
		Background RH	376	9 (2.4)	0.48 (0.24,0.99)	0.047
		Low RH	233	10 (4.3)	0.84 (0.42,1.67)	0.622
		High RH	243	12 (4.9)	0.94 (0.50,1.79)	0.857
		Low plus High RH	476	22 (4.6)	0.89 (0.54,1.48)	0.656
14-12	Overall Electrocardiograph	Comparison	1,195	373 (31.2)		
		Background RH	376	118 (31.4)	1.06 (0.82,1.36)	0.659
		Low RH	233	72 (30.9)	0.98 (0.72,1.33)	0.883
		High RH	243	74 (30.5)	0.92 (0.68,1.25)	0.602
		Low plus High RH	476	146 (30.7)	0.95 (0.75,1.20)	0.659
14-13	Right Bundle Branch Block	Comparison	1,195	31 (2.6)		
		Background RH	376	9 (2.4)	0.93 (0.44,1.98)	0.852
		Low RH	233	5 (2.1)	0.82 (0.32,2.14)	0.688
		High RH	243	7 (2.9)	1.10 (0.48,2.54)	0.818
		Low plus High RH	476	12 (2.5)	0.96 (0.48,1.89)	0.895
14-14	Left Bundle Branch Block	Comparison	1,195	12 (1.0)		
		Background RH	376	4 (1.1)	1.17 (0.37,3.68)	0.792
		Low RH	233	1 (0.4)	0.42 (0.05,3.23)	0.403
		High RH	243	0 (0.0)	--	0.237 ^b
		Low plus High RH	476	1 (0.2)	--	0.174 ^b
14-15	Non-Specific ST- and T-Wave Changes	Comparison	1,195	218 (18.2)		
		Background RH	376	59 (15.7)	0.91 (0.66,1.25)	0.545
		Low RH	233	47 (20.2)	1.12 (0.78,1.59)	0.537
		High RH	243	50 (20.6)	1.08 (0.76,1.52)	0.677
		Low plus High RH	476	97 (20.4)	1.10 (0.84,1.44)	0.502
14-16	Bradycardia	Comparison	1,195	47 (3.9)		
		Background RH	376	16 (4.3)	0.95 (0.53,1.71)	0.867
		Low RH	233	5 (2.1)	0.55 (0.21,1.39)	0.204
		High RH	243	2 (0.8)	0.23 (0.05,0.95)	0.042
		Low plus High RH	476	7 (1.5)	0.35 (0.14,0.85)	0.020
14-17	Tachycardia	Comparison	1,195	3 (0.3)		
		Background RH	376	1 (0.3)	1.33 (0.14,13.00)	0.806
		Low RH	233	0 (0.0)	--	0.999 ^b
		High RH	243	4 (1.6)	5.30 (1.15,24.53)	0.033
		Low plus High RH	476	4 (0.8)	--	0.206 ^b

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
14-18	Arrhythmia	Comparison	1,195	65 (5.4)		
		Background RH	376	18 (4.8)	0.90 (0.53,1.54)	0.703
		Low RH	233	19 (8.2)	1.54 (0.90,2.61)	0.114
		High RH	243	13 (5.3)	0.96 (0.52,1.77)	0.886
		Low plus High RH	476	32 (6.7)	1.21 (0.77,1.88)	0.409
14-19	Evidence of Prior Myocardial Infarction	Comparison	1,195	53 (4.4)		
		Background RH	376	12 (3.2)	0.75 (0.39,1.42)	0.374
		Low RH	233	11 (4.7)	1.06 (0.54,2.06)	0.867
		High RH	243	10 (4.1)	0.88 (0.44,1.76)	0.722
		Low plus High RH	476	21 (4.4)	0.96 (0.57,1.62)	0.891
14-20	ECG: Other Diagnoses	Comparison	1,195	1 (0.1)		
		Background RH	376	1 (0.3)	2.59 (0.16,41.85)	0.503
		Low RH	233	0 (0.0)	--	0.999 ^b
		High RH	243	2 (0.8)	12.49 (1.10,142.56)	0.042
		Low plus High RH	476	2 (0.4)	--	0.409 ^b
14-21	Funduscope Examination	Comparison	1,194	149 (12.5)		
		Background RH	375	43 (11.5)	0.99 (0.69,1.43)	0.963
		Low RH	233	30 (12.9)	1.02 (0.67,1.56)	0.921
		High RH	243	32 (13.2)	0.98 (0.65,1.49)	0.933
		Low plus High RH	476	62 (13.0)	1.00 (0.73,1.38)	0.993
14-22	Carotid Bruits	Comparison	1,195	31 (2.6)		
		Background RH	376	9 (2.4)	0.93 (0.44,1.98)	0.853
		Low RH	233	5 (2.1)	0.82 (0.32,2.14)	0.687
		High RH	243	8 (3.3)	1.27 (0.57,2.80)	0.561
		Low plus High RH	476	13 (2.7)	1.02 (0.53,2.00)	0.943
14-23	Radial Pulses	Comparison	1,195	4 (0.3)		
		Background RH	376	4 (1.1)	2.78 (0.69,11.27)	0.153
		Low RH	233	2 (0.9)	2.64 (0.48,14.54)	0.264
		High RH	243	1 (0.4)	1.41 (0.16,12.80)	0.759
		Low plus High RH	476	3 (0.6)	1.92 (0.40,9.18)	0.414
14-24	Femoral Pulses	Comparison	1,194	15 (1.3)		
		Background RH	376	7 (1.9)	1.39 (0.56,3.45)	0.481
		Low RH	233	6 (2.6)	2.10 (0.81,5.48)	0.128
		High RH	243	6 (2.5)	2.13 (0.81,5.56)	0.125
		Low plus High RH	476	12 (2.5)	2.11 (0.98,4.56)	0.056
14-25	Popliteal Pulses	Comparison	1,193	28 (2.3)		
		Background RH	376	9 (2.4)	0.94 (0.44,2.03)	0.879
		Low RH	233	7 (3.0)	1.31 (0.56,3.03)	0.535
		High RH	243	7 (2.9)	1.33 (0.57,3.08)	0.512
		Low plus High RH	476	14 (2.9)	1.32 (0.69,2.53)	0.410

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
14-26	Dorsalis Pedis Pulses	Comparison	1,193	95 (8.0)		
		Background RH	376	29 (7.7)	0.91 (0.59,1.40)	0.664
		Low RH	233	22 (9.4)	1.22 (0.75,1.98)	0.429
		High RH	243	18 (7.4)	0.98 (0.58,1.65)	0.931
		Low plus High RH	476	40 (8.4)	1.09 (0.74,1.61)	0.670
14-27	Posterior Tibial Pulses	Comparison	1,191	63 (5.3)		
		Background RH	376	22 (5.9)	1.04 (0.63,1.73)	0.865
		Low RH	233	18 (7.7)	1.52 (0.88,2.61)	0.135
		High RH	243	16 (6.6)	1.34 (0.76,2.36)	0.320
		Low plus High RH	476	34 (7.1)	1.42 (0.92,2.19)	0.113
14-28	Leg Pulses	Comparison	1,191	122 (10.2)		
		Background RH	376	39 (10.4)	0.95 (0.65,1.40)	0.812
		Low RH	233	29 (12.4)	1.26 (0.82,1.94)	0.298
		High RH	243	24 (9.9)	1.01 (0.64,1.61)	0.957
		Low plus High RH	476	53 (11.1)	1.13 (0.80,1.59)	0.498
14-29	Peripheral Pulses	Comparison	1,191	125 (10.5)		
		Background RH	376	40 (10.6)	0.95 (0.65,1.39)	0.797
		Low RH	233	30 (12.9)	1.27 (0.83,1.95)	0.266
		High RH	243	25 (10.3)	1.04 (0.66,1.63)	0.880
		Low plus High RH	476	55 (11.6)	1.15 (0.82,1.61)	0.431
14-30	ICVI Index	Comparison	1,195	43 (3.6)		
		Background RH	375	9 (2.4)	0.65 (0.31,1.35)	0.249
		Low RH	233	9 (3.9)	1.08 (0.52,2.24)	0.839
		High RH	243	14 (5.8)	1.66 (0.89,3.09)	0.112
		Low plus High RH	476	23 (4.8)	1.34 (0.79,2.27)	0.272
15-14	Prothrombin Time	Comparison	987	13 (1.3)		
		Background RH	309	6 (1.9)	1.64 (0.61,4.37)	0.327
		Low RH	182	3 (1.7)	1.17 (0.33,4.19)	0.807
		High RH	193	1 (0.5)	0.34 (0.04,2.62)	0.297
		Low plus High RH	375	4 (1.1)	0.62 (0.17,2.23)	0.461
15-15	RBC Morphology	Comparison	1,211	73 (6.0)		
		Background RH	381	24 (6.3)	1.12 (0.69,1.81)	0.639
		Low RH	239	23 (9.6)	1.63 (1.00,2.67)	0.051
		High RH	239	16 (6.7)	1.05 (0.60,1.85)	0.862
		Low plus High RH	478	39 (8.2)	1.31 (0.87,1.98)	0.196
15-18	Absolute Neutrophils (bands) (Zero vs. Nonzero)	Comparison	1,211	209 (17.3)		
		Background RH	381	65 (17.1)	0.98 (0.72,1.34)	0.908
		Low RH	239	43 (18.0)	1.05 (0.73,1.51)	0.781
		High RH	239	38 (15.9)	0.91 (0.62,1.33)	0.625
		Low plus High RH	478	81 (17.0)	0.98 (0.74,1.30)	0.881

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
15-22	Absolute Eosinophils (Zero vs. Nonzero)	Comparison	1,211	147 (12.1)		
		Background RH	381	44 (11.6)	0.96 (0.67,1.38)	0.833
		Low RH	239	33 (13.8)	1.15 (0.77,1.73)	0.487
		High RH	239	28 (11.7)	0.95 (0.61,1.46)	0.798
		Low plus High RH	478	61 (12.8)	1.04 (0.76,1.44)	0.789
15-24	Absolute Basophils (Zero vs. Nonzero)	Comparison	1,211	649 (53.6)		
		Background RH	381	213 (55.9)	1.09 (0.86,1.38)	0.459
		Low RH	239	147 (61.5)	1.39 (1.04,1.84)	0.025
		High RH	239	130 (54.4)	1.04 (0.78,1.37)	0.796
		Low plus High RH	478	277 (58.0)	1.20 (0.97,1.49)	0.098
16-3	Thyroid Disease	Comparison	1,208	102 (8.4)		
		Background RH	378	30 (7.9)	0.97 (0.64,1.49)	0.906
		Low RH	237	15 (6.3)	0.73 (0.41,1.27)	0.263
		High RH	241	20 (8.3)	0.94 (0.57,1.56)	0.825
		Low plus High RH	478	35 (7.3)	0.83 (0.55,1.24)	0.362
16-4	Composite Diabetes Indicator	Comparison	1,195	199 (16.7)		
		Background RH	379	37 (9.8)	0.67 (0.45,0.98)	0.041
		Low RH	235	49 (20.9)	1.27 (0.88,1.84)	0.202
		High RH	240	57 (23.8)	1.33 (0.94,1.90)	0.111
		Low plus High RH	475	106 (22.3)	1.30 (0.99,1.72)	0.064
16-7	Thyroid Gland	Comparison	1,165	16 (1.4)		
		Background RH	369	4 (1.1)	0.82 (0.27,2.47)	0.718
		Low RH	233	1 (0.4)	0.31 (0.04,2.32)	0.253
		High RH	234	1 (0.4)	0.30 (0.04,2.27)	0.242
		Low plus High RH	467	2 (0.4)	0.30 (0.07,1.32)	0.112
16-8	Testicular Examination	Comparison	1,199	47 (3.9)		
		Background RH	376	14 (3.7)	0.89 (0.49,1.65)	0.722
		Low RH	237	15 (6.3)	1.68 (0.92,3.06)	0.091
		High RH	241	9 (3.7)	1.00 (0.48,2.07)	0.994
		Low plus High RH	478	24 (5.0)	1.29 (0.77,2.16)	0.333
16-12	Thyroxine	Comparison	1,161	31 (2.7)		
		Background RH	367	13 (3.5)	1.40 (0.72,2.71)	0.325
		Low RH	233	3 (1.3)	0.47 (0.14,1.55)	0.215
		High RH	234	7 (3.0)	1.08 (0.47,2.49)	0.858
		Low plus High RH	467	10 (2.1)	0.71 (0.33,1.54)	0.390
16-13	Anti-Thyroid Antibodies	Comparison	1,161	7 (0.6)		
		Background RH	367	3 (0.8)	1.20 (0.30,4.69)	0.798
		Low RH	233	1 (0.4)	0.73 (0.09,5.96)	0.768
		High RH	234	1 (0.4)	0.80 (0.10,6.56)	0.834
		Low plus High RH	467	2 (0.4)	0.76 (0.16,3.70)	0.736

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
16-15	Fasting Glucose	Comparison	1,212	203 (16.7)		
		Background RH	381	48 (12.6)	0.89 (0.63,1.26)	0.517
		Low RH	238	44 (18.5)	1.07 (0.73,1.56)	0.721
		High RH	242	58 (24.0)	1.35 (0.95,1.91)	0.097
		Low plus High RH	480	102 (21.3)	1.20 (0.91,1.59)	0.200
16-17	2-Hour Postprandial Glucose	Comparison	996	155 (15.6)		
		Background RH	342	47 (13.7)	0.98 (0.68,1.40)	0.906
		Low RH	186	35 (18.8)	1.27 (0.84,1.92)	0.260
		High RH	183	31 (16.9)	1.00 (0.65,1.54)	0.999
		Low plus High RH	369	66 (17.9)	1.13 (0.82,1.56)	0.468
16-18	Fasting Urinary Glucose	Comparison	1,212	51 (4.2)		
		Background RH	381	7 (1.8)	0.53 (0.24,1.19)	0.124
		Low RH	238	9 (3.8)	0.81 (0.38,1.70)	0.571
		High RH	242	18 (7.4)	1.51 (0.85,2.69)	0.160
		Low plus High RH	480	27 (5.6)	1.11 (0.66,1.85)	0.696
16-19	2-Hour Postprandial Urinary Glucose	Comparison	994	214 (21.5)		
		Background RH	341	85 (24.9)	1.20 (0.90,1.60)	0.222
		Low RH	185	52 (28.1)	1.43 (1.00,2.03)	0.050
		High RH	183	42 (23.0)	1.10 (0.75,1.60)	0.636
		Low plus High RH	368	94 (25.5)	1.25 (0.95,1.65)	0.118
16-23	α -1-C Hemoglobin	Comparison	1,212	125 (10.3)		
		Background RH	381	25 (6.6)	0.75 (0.47,1.18)	0.210
		Low RH	238	25 (10.5)	0.95 (0.60,1.53)	0.841
		High RH	242	45 (18.6)	1.73 (1.17,2.55)	0.006
		Low plus High RH	480	70 (14.6)	1.29 (0.92,1.80)	0.138
16-25	Total Testosterone	Comparison	1,189	88 (7.4)		
		Background RH	372	23 (6.2)	1.04 (0.64,1.69)	0.878
		Low RH	234	20 (8.6)	1.08 (0.64,1.84)	0.767
		High RH	238	28 (11.8)	1.40 (0.88,2.25)	0.156
		Low plus High RH	472	48 (10.2)	1.23 (0.84,1.82)	0.285
16-27	Free Testosterone	Comparison	1,189	20 (1.7)		
		Background RH	372	5 (1.3)	0.94 (0.35,2.55)	0.906
		Low RH	234	8 (3.4)	1.95 (0.84,4.52)	0.120
		High RH	238	1 (0.4)	0.21 (0.03,1.57)	0.128
		Low plus High RH	472	9 (1.9)	0.63 (0.20,1.99)	0.431
16-29	Estradiol	Comparison	1,213	343 (28.3)		
		Background RH	381	102 (26.8)	0.96 (0.74,1.25)	0.774
		Low RH	239	59 (24.7)	0.82 (0.60,1.13)	0.234
		High RH	243	73 (30.0)	1.05 (0.78,1.43)	0.731
		Low plus High RH	482	132 (27.4)	0.93 (0.74,1.18)	0.566

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
16-31	LH	Comparison	1,213	67 (5.5)		
		Background RH	381	27 (7.1)	1.27 (0.79,2.02)	0.322
		Low RH	239	12 (5.0)	0.91 (0.48,1.71)	0.770
		High RH	243	9 (3.7)	0.68 (0.33,1.38)	0.280
		Low plus High RH	482	21 (4.4)	0.78 (0.47,1.30)	0.345
16-33	FSH	Comparison	1,213	93 (7.7)		
		Background RH	381	35 (9.2)	1.22 (0.81,1.84)	0.341
		Low RH	239	20 (8.4)	1.10 (0.66,1.82)	0.713
		High RH	243	16 (6.6)	0.85 (0.49,1.47)	0.557
		Low plus High RH	482	36 (7.5)	0.96 (0.64,1.44)	0.860
17-14	ANA Test	Comparison	1,164	606 (52.1)		
		Background RH	371	199 (53.6)	1.05 (0.83,1.33)	0.674
		Low RH	222	105 (47.3)	0.83 (0.62,1.11)	0.202
		High RH	231	127 (55.0)	1.14 (0.85,1.51)	0.380
		Low plus High RH	453	232 (51.2)	0.97 (0.78,1.21)	0.810
17-15	ANA Thyroid Microsomal Antibody	Comparison	1,164	34 (2.9)		
		Background RH	371	12 (3.2)	1.13 (0.58,2.22)	0.717
		Low RH	222	7 (3.2)	1.08 (0.47,2.46)	0.862
		High RH	231	5 (2.2)	0.72 (0.28,1.88)	0.506
		Low plus High RH	453	12 (2.7)	0.88 (0.45,1.73)	0.709
17-16	MSK Smooth Muscle Antibody	Comparison	1,164	141 (12.1)		
		Background RH	371	52 (14.0)	1.23 (0.87,1.74)	0.235
		Low RH	222	30 (13.5)	1.12 (0.73,1.71)	0.601
		High RH	231	19 (8.2)	0.63 (0.38,1.04)	0.071
		Low plus High RH	453	49 (10.8)	0.83 (0.59,1.19)	0.315
17-17	MSK Mitochondrial Antibody	Comparison	1,164	2 (0.2)		
		Background RH	371	2 (0.5)	3.74 (0.51,27.25)	0.193
		Low RH	222	2 (0.9)	4.91 (0.68,35.44)	0.114
		High RH	231	0 (0.0)	--	0.999 ^b
		Low plus High RH	453	2 (0.4)	--	0.672 ^b
17-18	MSK Parietal Antibody	Comparison	1,164	50 (4.3)		
		Background RH	371	9 (2.4)	0.61 (0.29,1.25)	0.179
		Low RH	222	16 (7.2)	1.68 (0.94,3.02)	0.082
		High RH	231	10 (4.3)	0.93 (0.46,1.87)	0.843
		Low plus High RH	453	26 (5.7)	1.24 (0.75,2.05)	0.392
17-19	Rheumatoid Factor	Comparison	1,164	130 (11.2)		
		Background RH	371	46 (12.4)	1.15 (0.80,1.65)	0.458
		Low RH	222	27 (12.2)	1.10 (0.70,1.70)	0.686
		High RH	231	15 (6.5)	0.54 (0.31,0.95)	0.032
		Low plus High RH	453	42 (9.3)	0.77 (0.52,1.12)	0.170

**Table G-7. Summary of Unadjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^b
18-3	Asthma	Comparison	1,208	42 (3.5)		
		Background RH	377	19 (5.0)	1.47 (0.84,2.58)	0.174
		Low RH	235	10 (4.3)	1.23 (0.61,2.50)	0.559
		High RH	240	11 (4.6)	1.33 (0.67,2.64)	0.408
		Low plus High RH	475	21 (4.4)	1.28 (0.75,2.19)	0.363
18-4	Bronchitis	Comparison	1,188	230 (19.4)		
		Background RH	372	84 (22.6)	1.22 (0.92,1.62)	0.174
		Low RH	228	44 (19.3)	1.00 (0.70,1.43)	0.980
		High RH	239	54 (22.6)	1.21 (0.87,1.70)	0.262
		Low plus High RH	467	98 (21.0)	1.10 (0.84,1.44)	0.479
18-5	Pneumonia	Comparison	1,168	134 (11.5)		
		Background RH	361	38 (10.5)	0.93 (0.63,1.36)	0.708
		Low RH	222	27 (12.2)	1.06 (0.68,1.65)	0.790
		High RH	236	19 (8.1)	0.66 (0.40,1.09)	0.107
		Low plus High RH	458	46 (10.0)	0.83 (0.58,1.19)	0.315
18-6	Thorax and Lung Abnormalities	Comparison	1,213	137 (11.3)		
		Background RH	381	39 (10.2)	0.82 (0.56,1.20)	0.304
		Low RH	239	31 (13.0)	1.19 (0.79,1.82)	0.408
		High RH	243	31 (12.8)	1.24 (0.82,1.89)	0.313
		Low plus High RH	482	62 (12.9)	1.22 (0.88,1.68)	0.232
18-7	X-ray Interpretation	Comparison	1,213	116 (9.6)		
		Background RH	381	53 (13.9)	1.56 (1.10,2.21)	0.013
		Low RH	239	26 (10.9)	1.15 (0.73,1.80)	0.546
		High RH	241	17 (7.1)	0.70 (0.41,1.20)	0.196
		Low plus High RH	480	43 (9.0)	0.90 (0.62,1.31)	0.576

^a Adjusted for percent body fat at the time of the blood measurement for dioxin.

^b P-value determined using a chi-square test with continuity correction because of the sparse number of participants with abnormalities.

--: Relative risk, confidence interval, and p-value are not presented because of the sparse number of participants with abnormalities.

Note: Relative risk and confidence interval relative to Comparisons.

RH = Ranch Hand.

Comparison: 1987 Dioxin $\leq$ 10 ppt.

Background: (Ranch Hand): 1987 Dioxin $\leq$ 10 ppt.

Low (Ranch Hand): 1987 Dioxin > 10 ppt, 10 ppt < Initial Dioxin $\leq$ 94 ppt.

High (Ranch Hand): 1987 Dioxin > 10 ppt, Initial Dioxin > 94 ppt.

Table G-8. Summary of Unadjusted Results for Dichotomous Variables – Model 4 (Ranch Hands: Log₂ (1987 Dioxin + 1))

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.)	p-Value
9-3	Self-perception of Health	1.22 (1.08,1.39)	0.002
9-4	Appearance of Illness or Distress	1.09 (0.78,1.52)	0.631
9-5	Relative Age Appearance	0.97 (0.83,1.12)	0.654
9-7	Body Fat	1.26 (1.14,1.40)	<0.001
9-9	Erythrocyte Sedimentation Rate	1.18 (1.01,1.39)	0.040
10-3	Skin Neoplasms	0.88 (0.80,0.97)	0.012
10-4	Malignant Skin Neoplasms	0.92 (0.81,1.04)	0.187
10-5	Benign Skin Neoplasms	0.85 (0.77,0.95)	0.003
10-6	Skin Neoplasms of Uncertain Behavior or Unspecified Nature	1.16 (0.72,1.86)	0.542
10-7	Basal Cell Carcinoma (All Sites Combined)	0.87 (0.76,0.99)	0.037
10-8	Basal Cell Carcinoma (Ear, Face, Head, and Neck)	0.84 (0.72,0.98)	0.021
10-9	Basal Cell Carcinoma (Trunk)	0.96 (0.77,1.19)	0.695
10-10	Basal Cell Carcinoma (Upper Extremities)	0.77 (0.56,1.07)	0.107
10-11	Basal Cell Carcinoma (Lower Extremities)	0.85 (0.45,1.59)	0.597
10-12	Squamous Cell Carcinoma	0.95 (0.70,1.29)	0.744
10-13	Nonmelanoma	0.89 (0.78,1.01)	0.074
10-14	Melanoma	1.05 (0.76,1.46)	0.761
10-15	Systemic Neoplasms (All Sites Combined)	1.02 (0.92,1.12)	0.734
10-16	Malignant Systemic Neoplasms	0.96 (0.81,1.14)	0.641
10-17	Benign Systemic Neoplasms	1.03 (0.93,1.14)	0.582
10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	0.84 (0.59,1.20)	0.329
10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	0.85 (0.53,1.36)	0.494
10-20	Malignant Systemic Neoplasms (Oral Cavity, Pharynx, and Larynx)	1.23 (0.66,2.29)	0.526
10-21	Malignant Systemic Neoplasms (Thymus, Heart, and Mediastinum)	0.33 (0.12,0.92)	0.038
10-22	Malignant Systemic Neoplasms (Thyroid Gland)	0.90 (0.34,2.40)	0.832
10-23	Malignant Systemic Neoplasms (Bronchus and Lung)	0.98 (0.64,1.50)	0.915
10-24	Malignant Systemic Neoplasms (Liver)	2.10 (0.92,4.78)	0.080
10-25	Malignant Systemic Neoplasms (Colon and Rectum)	1.18 (0.74,1.91)	0.495
10-26	Malignant Systemic Neoplasms (Kidney and Bladder)	1.03 (0.69,1.53)	0.902
10-27	Malignant Systemic Neoplasms (Prostate)	0.82 (0.62,1.10)	0.182
10-28	Malignant Systemic Neoplasms (Testicles)	1.22 (0.59,2.50)	0.599
10-29	Malignant Systemic Neoplasms (Connective and Other Soft Tissues)	2.36 (0.73,7.65)	0.151
10-30	Hodgkin's Disease	0.67 (0.15,2.97)	0.583
10-31	Non-Hodgkin's Lymphoma	0.60 (0.13,2.70)	0.491
10-32	Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	0.68 (0.24,1.96)	0.466
10-33	All Malignant Skin and Systemic Neoplasms	0.94 (0.84,1.05)	0.281
10-34	All Skin and Systemic Neoplasms	0.93 (0.85,1.02)	0.149
10-36	PSA	0.91 (0.75,1.10)	0.313
11-3	Inflammatory Diseases	0.97 (0.58,1.63)	0.920
11-4	Hereditary and Degenerative Disorders	0.96 (0.82,1.12)	0.590
11-5	Peripheral Disorders	1.15 (1.04,1.29)	0.010
11-6	Other Neurological Disorders	1.13 (1.01,1.26)	0.038
11-7	Smell	0.89 (0.65,1.23)	0.481
11-8	Visual Fields	1.43 (0.62,3.31)	0.421
11-9	Light Reaction	0.77 (0.18,3.29)	0.715

**Table G-8. Summary of Unadjusted Results for Dichotomous Variables – Model 4
(Ranch Hands: Log₂ (1987 Dioxln + 1)) (Continued)**

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.)	p-Value
11-10	Ocular Movement	1.09 (0.77,1.54)	0.643
11-11	Facial Sensation	0.75 (0.27,2.11)	0.572
11-12	Jaw Clench	0.92 (0.35,2.44)	0.864
11-13	Smile	1.16 (0.72,1.88)	0.541
11-14	Palpebral Fissure	1.05 (0.64,1.73)	0.840
11-15	Balance	0.88 (0.52,1.50)	0.642
11-16	Speech	0.77 (0.37,1.59)	0.462
11-17	Tongue Position Relative to Midline	0.92 (0.35,2.44)	0.864
11-18	Palate and Uvula Movement	1.13 (0.31,4.05)	0.857
11-19	Cranial Nerve Index	0.93 (0.77,1.13)	0.462
11-20	Neck Range of Motion	1.03 (0.92,1.15)	0.632
11-21	Pinprick	1.15 (0.96,1.37)	0.137
11-22	Light Touch	1.02 (0.81,1.28)	0.865
11-23	Muscle Status	1.02 (0.82,1.27)	0.863
11-24	Patellar Reflex	1.08 (0.83,1.42)	0.568
11-25	Achilles Reflex	1.07 (0.95,1.21)	0.250
11-26	Biceps Reflex	1.16 (0.80,1.68)	0.437
11-27	Babinski Reflex	0.58 (0.32,1.03)	0.056
11-29	Polyneuropathy Prevalence Index	1.09 (0.96,1.24)	0.198
11-30	Multiple Polyneuropathy Index	1.19 (0.96,1.46)	0.110
11-31	Confirmed Polyneuropathy Indicator	1.80 (1.26,2.58)	0.002
11-32	Tremor	0.94 (0.79,1.13)	0.527
11-33	Coordination	0.81 (0.58,1.13)	0.211
11-34	Romberg Sign	0.88 (0.52,1.50)	0.642
11-35	Gait	1.00 (0.83,1.22)	0.966
11-36	CNS Index	0.97 (0.84,1.12)	0.672
12-3	Psychoses	1.11 (0.89,1.39)	0.368
12-4	Alcohol Dependence	1.07 (0.90,1.28)	0.420
12-5	Drug Dependence	0.46 (0.16,1.34)	0.155
12-6	Anxiety	1.14 (1.03,1.26)	0.011
12-7	Other Neuroses	1.20 (1.09,1.32)	<0.001
12-8	SCL-90-R Anxiety	1.15 (0.99,1.34)	0.065
12-9	SCL-90-R Depression	1.15 (1.01,1.31)	0.040
12-10	SCL-90-R Hostility	1.19 (1.01,1.41)	0.045
12-11	SCL-90-R Interpersonal Sensitivity	1.12 (0.98,1.28)	0.090
12-12	SCL-90-R Obsessive-Compulsive Behavior	1.13 (1.00,1.29)	0.058
12-13	SCL-90-R Paranoid Ideation	1.21 (1.02,1.45)	0.032
12-14	SCL-90-R Phobic Anxiety	1.28 (1.11,1.48)	0.001
12-15	SCL-90-R Psychoticism	1.24 (1.08,1.42)	0.002
12-16	SCL-90-R Somatization	1.16 (1.03,1.31)	0.013
12-17	SCL-90-R Global Severity Index (GSI)	1.24 (1.09,1.41)	0.001
12-18	SCL-90-R Positive Symptom Total (PST)	1.22 (1.07,1.38)	0.003
12-19	SCL-90-R Positive Symptom Distress Index (PSDI)	1.13 (0.97,1.33)	0.130
13-3	Uncharacterized Hepatitis	0.86 (0.61,1.21)	0.377
13-4	Jaundice	0.44 (0.28,0.69)	<0.001
13-5	Chronic Liver Disease and Cirrhosis (Alcohol-related)	1.10 (0.89,1.37)	0.368
13-6	Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	1.05 (0.73,1.49)	0.803
13-7	Liver Abscess and Sequelae of Chronic Liver Disease	2.30 (0.71,7.43)	0.162
13-8	Enlarged Liver (Hepatomegaly)	0.94 (0.65,1.35)	0.731

**Table G-8. Summary of Unadjusted Results for Dichotomous Variables – Model 4
(Ranch Hands: Log₂ (1987 Dioxin + 1)) (Continued)**

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.)	p-Value
13-9	Other Liver Disorders	1.10 (1.00,1.22)	0.055
13-10	Current Hepatomegaly	1.04 (0.69,1.58)	0.853
13-12	AST	1.26 (1.06,1.48)	0.008
13-14	ALT	1.33 (1.13,1.56)	0.001
13-16	GGT	1.17 (1.01,1.35)	0.034
13-18	Alkaline Phosphatase	0.79 (0.58,1.09)	0.144
13-20	Total Bilirubin	0.89 (0.72,1.10)	0.275
13-21	Direct Bilirubin	0.78 (0.18,3.33)	0.735
13-23	Lactic Dehydrogenase	1.00 (0.85,1.17)	0.989
13-25	Cholesterol	1.15 (1.02,1.30)	0.025
13-27	HDL Cholesterol	0.92 (0.78,1.09)	0.349
13-29	Cholesterol-HDL Ratio	1.22 (1.11,1.34)	<0.001
13-31	Triglycerides	1.29 (1.16,1.44)	<0.001
13-33	Creatine Phosphokinase	1.14 (0.97,1.33)	0.123
13-35	Serum Amylase	0.93 (0.70,1.22)	0.590
13-36	Antibodies for Hepatitis A	1.08 (0.98,1.19)	0.125
13-37	Evidence of Prior Hepatitis B	1.20 (1.03,1.40)	0.023
13-38	Current Hepatitis B	1.37 (0.41,4.55)	0.617
13-39	Antibodies for Hepatitis C	0.69 (0.42,1.14)	0.139
13-40	Stool Hemocult	1.04 (0.81,1.34)	0.760
13-42	Prealbumin	1.02 (0.69,1.49)	0.931
13-44	Albumin	0.68 (0.24,1.96)	0.465
13-46	α-1-Acid Glycoprotein	1.00 (0.80,1.25)	0.986
13-50	α-2-Macroglobulin	1.37 (1.06,1.77)	0.020
13-52	Apolipoprotein B	1.12 (1.02,1.23)	0.017
13-54	C3 Complement	0.61 (0.41,0.91)	0.011
13-56	C4 Complement	0.32 (0.12,0.90)	0.033
13-58	Haptoglobin	1.03 (0.94,1.14)	0.509
13-60	Transferrin	1.03 (0.88,1.22)	0.710
14-3	Essential Hypertension	1.22 (1.11,1.34)	<0.001
14-4	Heart Disease (Excluding Essential Hypertension)	0.87 (0.79,0.96)	0.004
14-5	Myocardial Infarction	1.03 (0.87,1.21)	0.740
14-6	Stroke or Transient Ischemia Attack	0.99 (0.66,1.48)	0.957
14-8	Systolic Blood Pressure	1.00 (0.89,1.12)	0.956
14-10	Diastolic Blood Pressure	1.14 (0.94,1.39)	0.198
14-11	Heart Sounds	1.16 (0.92,1.46)	0.220
14-12	Overall Electrocardiograph	0.96 (0.87,1.06)	0.391
14-13	Right Bundle Branch Block	1.03 (0.77,1.38)	0.845
14-14	Left Bundle Branch Block	0.69 (0.35,1.36)	0.271
14-15	Non-Specific ST- and T-Wave Changes	1.06 (0.94,1.19)	0.361
14-16	Bradycardia	0.77 (0.56,1.05)	0.084
14-17	Tachycardia	1.56 (0.92,2.63)	0.111
14-18	Arrhythmia	0.99 (0.82,1.20)	0.932
14-19	Evidence of Prior Myocardial Infarction	1.09 (0.87,1.38)	0.447
14-20	ECG: Other Diagnoses	1.27 (0.63,2.59)	0.512
14-21	Funduscopy Examination	1.00 (0.87,1.15)	0.951
14-22	Carotid Bruits	1.02 (0.77,1.36)	0.897
14-23	Radial Pulses	0.75 (0.43,1.32)	0.305
14-24	Femoral Pulses	1.01 (0.75,1.38)	0.927

Table G-8. Summary of Unadjusted Results for Dichotomous Variables - Model 4
(Ranch Hands: Log₂ (1987 Dioxin + 1)) (Continued)

Table Ref.	Clinical Parameter	Est. Relative Risk (95% C.I.)	p-Value
14-25	Popliteal Pulses	0.98 (0.74,1.30)	0.891
14-26	Dorsalis Pedis Pulses	0.99 (0.84,1.17)	0.913
14-27	Posterior Tibial Pulses	1.03 (0.86,1.24)	0.746
14-28	Leg Pulses	1.00 (0.87,1.16)	0.956
14-29	Peripheral Pulses	1.00 (0.86,1.15)	0.972
14-30	ICVI Index	1.08 (0.86,1.37)	0.503
15-14	Prothrombin Time	0.86 (0.55,1.34)	0.498
15-15	RBC Morphology	1.03 (0.87,1.23)	0.698
15-18	Absolute Neutrophils (bands) (Zero vs. Nonzero)	0.99 (0.88,1.12)	0.905
15-22	Absolute Eosinophils (Zero vs. Nonzero)	1.05 (0.91,1.20)	0.528
15-24	Absolute Basophils (Zero vs. Nonzero)	0.97 (0.88,1.06)	0.496
16-3	Past Thyroid Disease	1.01 (0.85,1.20)	0.892
16-4	Composite Diabetes Indicator	1.35 (1.20,1.52)	<0.001
16-7	Thyroid Gland	0.85 (0.47,1.51)	0.562
16-8	Testicular Examination	1.01 (0.81,1.26)	0.903
16-12	Thyroxine	0.97 (0.73,1.29)	0.825
16-13	Anti-Thyroid Antibodies	0.82 (0.43,1.55)	0.535
16-15	Fasting Glucose	1.25 (1.11,1.41)	<0.001
16-17	2-Hour Postprandial Glucose	1.06 (0.92,1.22)	0.394
16-18	Fasting Urinary Glucose	1.38 (1.12,1.71)	0.004
16-19	2-Hour Postprandial Urinary Glucose	0.97 (0.86,1.10)	0.664
16-23	α-1-C Hemoglobin	1.39 (1.21,1.60)	<0.001
16-25	Total Testosterone	1.22 (1.05,1.43)	0.013
16-27	Free Testosterone	0.94 (0.65,1.36)	0.744
16-29	Estradiol	1.04 (0.94,1.15)	0.430
16-31	LH	0.84 (0.68,1.04)	0.094
16-33	FSH	0.97 (0.82,1.15)	0.712
17-14	ANA Test	0.98 (0.90,1.08)	0.732
17-15	ANA Thyroid Microsomal Antibody	0.90 (0.68,1.20)	0.486
17-16	MSK Smooth Muscle Antibody	0.88 (0.76,1.02)	0.087
17-17	MSK Mitochondrial Antibody	0.62 (0.29,1.33)	0.206
17-18	MSK Parietal Antibody	1.14 (0.92,1.42)	0.245
17-19	Rheumatoid Factor	0.81 (0.69,0.96)	0.010
18-3	Asthma	1.06 (0.86,1.31)	0.594
18-4	Bronchitis	0.97 (0.87,1.08)	0.579
18-5	Pneumonia	0.91 (0.78,1.07)	0.236
18-6	Thorax and Lung Abnormalities	1.03 (0.90,1.19)	0.653
18-7	X-ray Interpretation	0.83 (0.71,0.97)	0.015

Note: Relative risk for a twofold increase in 1987 dioxin.

Table G-9. Summary of Unadjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
11-28	Polyneuropathy Severity Index	Moderate vs. None or Mild	All	21 (2.6)	13 (1.1)	2.37 (1.18,4.76)	0.015
			Officer	7 (2.2)	6 (1.3)	1.73 (0.58,5.19)	0.330
			Enlisted Flyer	7 (4.8)	2 (1.1)	4.54 (0.93,22.20)	0.062
			Enlisted Groundcrew	7 (2.0)	5 (0.9)	2.13 (0.67,6.77)	0.199
		Severe vs. None or Mild	All	4 (0.5)	1 (0.1)	5.87 (0.65,52.61)	0.114
			Officer	3 (0.9)	0 (0.0)	--	0.130 ^a
			Enlisted Flyer	0 (0.0)	0 (0.0)	--	--
			Enlisted Groundcrew	1 (0.3)	1 (0.2)	1.52 (0.09,24.45)	0.766
13-48	α -1-Antitrypsin	Low vs. Normal	All	11 (1.3)	18 (1.5)	0.88 (0.41,1.87)	0.737
			Officer	8 (2.4)	11 (2.2)	1.06 (0.42,2.65)	0.908
			Enlisted Flyer	1 (0.7)	1 (0.5)	1.23 (0.08,19.83)	0.884
			Enlisted Groundcrew	2 (0.5)	6 (1.1)	0.50 (0.10,2.51)	0.403
		High vs. Normal	All	8 (0.9)	5 (0.4)	2.30 (0.75,7.06)	0.145
			Officer	2 (0.6)	0 (0.0)	--	0.327 ^a
			Enlisted Flyer	1 (0.7)	2 (1.1)	0.61 (0.07,5.25)	0.657
			Enlisted Groundcrew	5 (1.4)	3 (0.5)	2.52 (0.61,10.42)	0.202
15-4	RBC Count	Low vs. Normal	All	42 (4.9)	60 (4.8)	1.01 (0.67,1.51)	0.979
			Officer	19 (5.6)	28 (5.7)	0.97 (0.53,1.77)	0.921
			Enlisted Flyer	11 (7.3)	7 (3.7)	2.03 (0.77,5.36)	0.155
			Enlisted Groundcrew	12 (3.2)	25 (4.4)	0.72 (0.36,1.45)	0.357
		High vs. Normal	All	6 (0.7)	14 (1.1)	0.62 (0.24,1.61)	0.322
			Officer	1 (0.3)	6 (1.2)	0.24 (0.03,1.98)	0.185
			Enlisted Flyer	2 (1.3)	2 (1.1)	1.29 (0.18,9.27)	0.800
			Enlisted Groundcrew	3 (0.8)	6 (1.1)	0.75 (0.19,3.02)	0.685

Table G-9. Summary of Unadjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)
(Continued)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
15-6	WBC Count	Low vs. Normal	All	51 (5.9)	62 (5.0)	1.20 (0.82,1.75)	0.353
			Officer	22 (6.5)	29 (5.9)	1.10 (0.62,1.95)	0.747
			Enlisted Flyer	10 (6.6)	6 (3.2)	2.14 (0.76,6.05)	0.150
			Enlisted Groundcrew	19 (5.1)	27 (4.8)	1.08 (0.59,1.97)	0.809
		High vs. Normal	All	31 (3.6)	45 (3.6)	1.00 (0.63,1.60)	0.988
			Officer	7 (2.1)	12 (2.4)	0.85 (0.33,2.17)	0.727
			Enlisted Flyer	8 (5.3)	10 (5.4)	1.03 (0.40,2.68)	0.954
			Enlisted Groundcrew	16 (4.3)	23 (4.0)	1.07 (0.55,2.05)	0.850
15-8	Hemoglobin	Low vs. Normal	All	62 (7.2)	79 (6.3)	1.14 (0.81,1.61)	0.458
			Officer	25 (7.3)	29 (5.9)	1.27 (0.73,2.21)	0.400
			Enlisted Flyer	16 (10.6)	13 (7.0)	1.60 (0.74,3.44)	0.230
			Enlisted Groundcrew	21 (5.6)	37 (6.5)	0.85 (0.49,1.47)	0.557
		High vs. Normal	All	3 (0.4)	7 (0.6)	0.62 (0.16,2.41)	0.493
			Officer	2 (0.6)	2 (0.4)	1.47 (0.21,10.49)	0.700
			Enlisted Flyer	1 (0.7)	0 (0.0)	--	0.899 ^a
			Enlisted Groundcrew	0 (0.0)	5 (0.9)	--	0.171 ^a
15-10	Hematocrit	Low vs. Normal	All	21 (2.4)	29 (2.3)	1.04 (0.59,1.84)	0.886
			Officer	8 (2.4)	12 (2.4)	0.96 (0.39,2.37)	0.928
			Enlisted Flyer	6 (4.0)	4 (2.1)	1.91 (0.53,6.88)	0.325
			Enlisted Groundcrew	7 (1.9)	13 (2.3)	0.81 (0.32,2.05)	0.659
		High vs. Normal	All	1 (0.1)	5 (0.4)	0.29 (0.03,2.47)	0.256
			Officer	0 (0.0)	2 (0.4)	--	0.647 ^a
			Enlisted Flyer	1 (0.7)	0 (0.0)	--	0.907 ^a
			Enlisted Groundcrew	0 (0.0)	3 (0.5)	--	0.413 ^a

Table G-9. Summary of Unadjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)
(Continued)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
15-12	Platelet Count	Low vs. Normal	All	23 (2.7)	39 (3.1)	0.85 (0.50,1.43)	0.533
			Officer	16 (4.7)	9 (1.8)	2.65 (1.16,6.06)	0.021
			Enlisted Flyer	1 (0.7)	11 (6.0)	0.11 (0.01,0.83)	0.032
			Enlisted Groundcrew	6 (1.6)	19 (3.4)	0.47 (0.19,1.20)	0.115
		High vs. Normal	All	4 (0.5)	5 (0.4)	1.15 (0.31,4.29)	0.837
			Officer	1 (0.3)	3 (0.6)	0.50 (0.05,4.79)	0.545
			Enlisted Flyer	1 (0.7)	1 (0.5)	1.16 (0.07,18.72)	0.916
			Enlisted Groundcrew	2 (0.5)	1 (0.2)	3.00 (0.27,33.23)	0.370
16-5	Diabetic Severity	No Treatment vs. Nondiabetic	All	49 (5.7)	66 (5.4)	1.07 (0.73,1.57)	0.721
			Officer	16 (4.7)	25 (5.1)	0.94 (0.49,1.80)	0.859
			Enlisted Flyer	9 (6.1)	14 (7.6)	0.78 (0.33,1.87)	0.579
			Enlisted Groundcrew	24 (6.4)	27 (4.8)	1.34 (0.76,2.36)	0.314
		Diet Only vs. Nondiabetic	All	18 (2.1)	18 (1.5)	1.44 (0.75,2.79)	0.275
			Officer	8 (2.4)	6 (1.2)	1.97 (0.67,5.72)	0.215
			Enlisted Flyer	2 (1.4)	2 (1.1)	1.22 (0.17,8.76)	0.846
			Enlisted Groundcrew	8 (2.1)	10 (1.8)	1.21 (0.47,3.09)	0.697
		Oral Hypoglycemic vs. Nondiabetic	All	38 (4.4)	77 (6.3)	0.71 (0.48,1.06)	0.097
			Officer	12 (3.6)	26 (5.3)	0.68 (0.34,1.37)	0.281
			Enlisted Flyer	9 (6.1)	12 (6.5)	0.91 (0.37,2.23)	0.840
			Enlisted Groundcrew	17 (4.5)	39 (7.0)	0.66 (0.37,1.18)	0.160
		Requiring Insulin vs. Nondiabetic	All	24 (2.8)	17 (1.4)	2.04 (1.09,3.82)	0.026
			Officer	12 (3.6)	7 (1.4)	2.53 (0.98,6.50)	0.054
			Enlisted Flyer	3 (2.0)	4 (2.2)	0.91 (0.20,4.15)	0.905
			Enlisted Groundcrew	9 (2.4)	6 (1.1)	2.26 (0.80,6.41)	0.125

Table G-9. Summary of Unadjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)
(Continued)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
G-79	TSH	Abnormal Low vs. Normal	All	10 (1.2)	9 (0.8)	1.61 (0.65,3.98)	0.301
			Officer	4 (1.2)	2 (0.4)	2.92 (0.53,16.01)	0.218
			Enlisted Flyer	3 (2.1)	2 (1.1)	1.89 (0.31,11.48)	0.488
			Enlisted Groundcrew	3 (0.8)	5 (0.9)	0.91 (0.22,3.84)	0.899
		Abnormal High vs. Normal	All	36 (4.3)	37 (3.1)	1.41 (0.88,2.25)	0.149
			Officer	14 (4.3)	17 (3.6)	1.20 (0.58,2.47)	0.620
			Enlisted Flyer	3 (2.1)	6 (3.3)	0.63 (0.15,2.57)	0.519
			Enlisted Groundcrew	19 (5.1)	14 (2.6)	2.06 (1.02,4.16)	0.044
	Serum Insulin	Abnormal Low vs. Normal	All	86 (12.0)	138 (13.5)	0.85 (0.62,1.15)	0.278
			Officer	36 (12.6)	69 (16.5)	0.76 (0.48,1.20)	0.235
			Enlisted Flyer	15 (12.4)	14 (9.6)	1.11 (0.49,2.51)	0.803
			Enlisted Groundcrew	35 (11.4)	55 (12.0)	0.88 (0.55,1.42)	0.613
		Abnormal High vs. Normal	All	294 (41.2)	432 (42.2)	0.92 (0.75,1.13)	0.443
			Officer	112 (39.3)	151 (36.0)	1.08 (0.78,1.49)	0.655
			Enlisted Flyer	50 (41.3)	74 (50.7)	0.70 (0.42,1.17)	0.173
			Enlisted Groundcrew	132 (42.9)	207 (45.2)	0.89 (0.65,1.21)	0.442
18-11	Loss of Vital Capacity	Mild vs. None	All	67 (7.7)	98 (7.8)	0.98 (0.71,1.35)	0.885
			Officer	24 (7.0)	32 (6.5)	1.10 (0.63,1.90)	0.737
			Enlisted Flyer	11 (7.3)	18 (9.7)	0.72 (0.33,1.58)	0.413
			Enlisted Groundcrew	32 (8.5)	48 (8.4)	1.00 (0.62,1.59)	0.990
		Moderate or Severe vs. None	All	10 (1.2)	20 (1.6)	0.71 (0.33,1.53)	0.388
			Officer	5 (1.5)	5 (1.0)	1.46 (0.42,5.10)	0.549
			Enlisted Flyer	1 (0.7)	4 (2.2)	0.29 (0.03,2.67)	0.277
			Enlisted Groundcrew	4 (1.1)	11 (1.9)	0.54 (0.17,1.72)	0.300
18-12	Obstructive Abnormality	Mild vs. None	All	276 (31.8)	368 (29.5)	1.12 (0.93,1.36)	0.237
			Officer	124 (36.4)	147 (29.8)	1.38 (1.02,1.86)	0.034
			Enlisted Flyer	49 (32.5)	72 (38.7)	0.81 (0.50,1.28)	0.363
			Enlisted Groundcrew	103 (27.3)	149 (26.2)	1.03 (0.77,1.39)	0.845

Table G-9. Summary of Unadjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)
(Continued)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Number (%) Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
18-12	Obstructive Abnormality (continued)	Moderate vs. None	All	51 (5.9)	75 (6.0)	1.02 (0.70,1.48)	0.928
			Officer	19 (5.6)	26 (5.3)	1.20 (0.64,2.22)	0.569
			Enlisted Flyer	14 (9.3)	12 (6.5)	1.38 (0.60,3.15)	0.444
			Enlisted Groundcrew	18 (4.8)	37 (6.5)	0.72 (0.40,1.30)	0.281
		Severe vs. None	All	14 (1.6)	16 (1.3)	1.31 (0.63,2.70)	0.467
			Officer	5 (1.5)	5 (1.0)	1.64 (0.47,5.73)	0.440
			Enlisted Flyer	6 (4.0)	5 (2.7)	1.42 (0.42,4.82)	0.574
			Enlisted Groundcrew	3 (0.8)	6 (1.1)	0.75 (0.18,3.00)	0.679

^a P-value determined using a chi-square test with continuity correction because of the sparse number of participants with abnormalities.

--: Relative risk, confidence interval, and p-value not presented because of the sparse number of participants with abnormalities.

Note: RH = Ranch Hand; C = Comparison.

Table G-10. Summary of Unadjusted Results for Polytomous Variables – Model 2 (Ranch Hands: Log₂ (Initial Dioxin))

Table Ref.	Clinical Parameter	Contrast	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
11-28	Polyneuropathy Severity Index	Moderate vs. None or Mild	1.29 (0.90,1.87)	0.168
		Severe vs. None or Mild	0.68 (0.23,1.98)	0.476
13-48	α-1-Antitrypsin	Low vs. Normal	0.83 (0.37,1.90)	0.667
		High vs. Normal	1.05 (0.39,2.80)	0.925
15-4	RBC Count	Low vs. Normal	0.79 (0.53,1.15)	0.220
		High vs. Normal	0.76 (0.36,1.59)	0.464
15-6	WBC Count	Low vs. Normal	0.59 (0.39,0.89)	0.012
		High vs. Normal	0.99 (0.69,1.43)	0.964
15-8	Hemoglobin	Low vs. Normal	0.74 (0.53,1.03)	0.075
		High vs. Normal	1.16 (0.24,5.60)	0.856
15-10	Hematocrit	Low vs. Normal	0.95 (0.58,1.57)	0.840
		High vs. Normal	1.17 (0.24,5.66)	0.841
15-12	Platelet Count	Low vs. Normal	0.63 (0.33,1.19)	0.152
		High vs. Normal	1.28 (0.49,3.36)	0.616
16-5	Diabetic Severity	No Treatment vs. Nondiabetic	1.14 (0.87,1.49)	0.332
		Diet Only vs. Nondiabetic	1.12 (0.74,1.71)	0.584
		Oral Hypoglycemic vs. Nondiabetic	1.13 (0.87,1.48)	0.358
		Requiring Insulin vs. Nondiabetic	1.23 (0.86,1.76)	0.250
16-10	TSH	Low vs. Normal	1.40 (0.73,2.71)	0.311
		High vs. Normal	1.27 (0.89,1.79)	0.183
16-21	Serum Insulin	Low vs. Normal	0.96 (0.70,1.32)	0.815
		High vs. Normal	1.07 (0.90,1.28)	0.447
18-11	Loss of Vital Capacity	Mild vs. None	0.88 (0.67,1.15)	0.345
		Moderate or Severe vs. None	0.73 (0.31,1.76)	0.489
18-12	Obstructive Abnormality	Mild vs. None	0.79 (0.67,0.93)	0.005
		Moderate vs. None	0.87 (0.63,1.20)	0.393
		Severe vs. None	0.53 (0.24,1.21)	0.131

^a Adjusted for percent body fat at the time of the blood measurement of dioxin.

Note: Relative risk for a twofold increase in initial dioxin.

Table G-11. Summary of Unadjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
11-28	Polyneuropathy Severity Index	Moderate vs. None or Mild	Comparison	1,146	13 (1.1)		
			Background RH	361	5 (1.4)	1.30 (0.46,3.71)	0.619
			Low RH	226	7 (3.1)	2.76 (1.09,7.02)	0.032
			High RH	227	7 (3.1)	2.64 (1.03,6.73)	0.042
			Low plus High RH	453	14 (3.1)	2.70 (1.26,5.81)	0.011
		Severe vs. None or Mild	Comparison	1,146	1 (0.1)		
			Background RH	361	1 (0.3)	3.03 (0.19,49.25)	0.435
			Low RH	226	2 (0.9)	10.54 (0.95,116.83)	0.055
			High RH	227	1 (0.4)	5.41 (0.33,87.73)	0.235
			Low plus High RH	453	3 (0.7)	7.54 (0.75,75.71)	0.086
13-48	α -1-Antitrypsin	Low vs. Normal	Comparison	1,194	17 (1.4)		
			Background RH	376	7 (1.9)	1.14 (0.47,2.79)	0.772
			Low RH	236	2 (0.8)	0.61 (0.14,2.67)	0.513
			High RH	240	2 (0.8)	0.68 (0.16,2.98)	0.610
			Low plus High RH	476	4 (0.8)	0.65 (0.22,1.93)	0.434
		High vs. Normal	Comparison	1,194	5 (0.4)		
			Background RH	376	5 (1.3)	2.48 (0.70,8.77)	0.158
			Low RH	236	1 (0.4)	1.03 (0.11,9.33)	0.976
			High RH	240	2 (0.8)	3.49 (0.64,19.06)	0.149
			Low plus High RH	476	3 (0.6)	1.91 (0.42,8.72)	0.404
15-4	RBC Count	Low vs. Normal	Comparison	1,211	55 (4.5)		
			Background RH	381	19 (5.0)	1.09 (0.64,1.87)	0.757
			Low RH	239	12 (5.0)	1.11 (0.58,2.10)	0.753
			High RH	239	9 (3.8)	0.83 (0.40,1.70)	0.603
			Low plus High RH	478	21 (4.4)	0.96 (0.57,1.61)	0.868

Table G-11. Summary of Unadjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category) (Continued)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Number (%) Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
15-4	RBC Count (continued)	High vs. Normal	Comparison	1,211	14 (1.2)		
			Background RH	381	1 (0.3)	0.26 (0.03,1.99)	0.195
			Low RH	239	2 (0.8)	0.69 (0.15,3.06)	0.623
			High RH	239	3 (1.3)	0.94 (0.26,3.33)	0.921
			Low plus High RH	478	5 (1.1)	0.80 (0.28,2.30)	0.683
15-6	WBC Count	Low vs. Normal	Comparison	1,211	59 (4.9)		
			Background RH	381	25 (6.6)	1.22 (0.75,1.99)	0.426
			Low RH	239	20 (8.4)	1.82 (1.07,3.10)	0.027
			High RH	239	6 (2.5)	0.56 (0.24,1.32)	0.188
			Low plus High RH	478	26 (5.4)	1.01 (0.59,1.73)	0.963
		High vs. Normal	Comparison	1,211	43 (3.6)		
			Background RH	381	12 (3.2)	0.86 (0.45,1.67)	0.664
			Low RH	239	7 (2.9)	0.86 (0.38,1.94)	0.716
			High RH	239	11 (4.6)	1.32 (0.67,2.61)	0.420
			Low plus High RH	478	18 (3.8)	1.07 (0.60,1.89)	0.825
15-8	Hemoglobin	Low vs. Normal	Comparison	1,211	74 (6.1)		
			Background RH	381	30 (7.9)	1.35 (0.86,2.10)	0.188
			Low RH	239	16 (6.7)	1.09 (0.62,1.90)	0.767
			High RH	239	13 (5.4)	0.86 (0.47,1.58)	0.630
			Low plus High RH	478	29 (6.1)	0.97 (0.62,1.51)	0.887
		High vs. Normal	Comparison	1,211	7 (0.6)		
			Background RH	381	2 (0.5)	1.04 (0.21,5.12)	0.958
			Low RH	239	0 (0.0)	--	0.507 ^b
			High RH	239	1 (0.4)	0.64 (0.08,5.28)	0.677
			Low plus High RH	478	1 (0.2)	--	0.547 ^b