

**Table G-18. Summary of Adjusted Results for Dichotomous Variables – Model 2
(Ranch Hands: Log₂ (Initial Dioxin)) (Continued)**

Table Ref.	Clinical Parameter	Adj. Relative Risk (95% C.I.)	p-Value
11-10	Ocular Movement	0.74 (0.40,1.36)	0.318
11-11	Facial Sensation	0.55 (0.06,5.38)	0.553
11-12	Jaw Clench	0.59 (0.08,4.24)	0.562
11-13	Smile	1.50 (0.75,3.02)	0.274
11-14	Palpebral Fissure	1.25 (0.54,2.93)	0.613
11-15	Balance	1.65 (0.61,4.45)	0.350
11-16	Speech	0.19 (0.02,2.32)	0.078
11-17	Tongue Position Relative to Midline	0.59 (0.08,4.24)	0.562
11-18	Palate and Uvula Movement	0.59 (0.08,4.24)	0.562
11-19	Cranial Nerve Index	0.75 (0.53,1.08)	0.110
11-20	Neck Range of Motion	0.91 (0.74,1.13)	0.411
11-21	Pinprick	1.29 (0.92,1.81)	0.134
11-22	Light Touch	1.01 (0.65,1.59)	0.956
11-23	Muscle Status	0.95 (0.64,1.41)	0.792
11-24	Patellar Reflex	1.81 (1.10,2.99)	0.019
11-25	Achilles Reflex	1.22 (0.98,1.51)	0.075
11-26	Biceps Reflex	0.87 (0.44,1.70)	0.675
11-27	Babinski Reflex	1.08 (0.34,3.42)	0.896
11-29	Polyneuropathy Prevalence Index	1.30 (1.03,1.65)	0.029
11-30	Multiple Polyneuropathy Index	1.85 (1.20,2.87)	0.004
11-31	Confirmed Polyneuropathy Indicator	1.98 (1.19,3.29)	0.008
11-32	Tremor	1.02 (0.73,1.44)	0.893
11-33	Coordination	1.18 (0.62,2.24)	0.632
11-34	Romberg Sign	1.65 (0.61,4.45)	0.350
11-35	Gait	1.12 (0.79,1.60)	0.530
11-36	CNS Index	1.03 (0.80,1.33)	0.840
12-3	Psychoses	0.82 (0.55,1.23)	0.338
12-4	Alcohol Dependence	1.04 (0.77,1.42)	0.790
12-5	Drug Dependence	--	--
12-6	Anxiety	0.91 (0.76,1.09)	0.302
12-7	Other Neuroses	0.88 (0.74,1.05)	0.164
12-8	SCL-90-R Anxiety	0.73 (0.57,0.95)	0.016
12-9	SCL-90-R Depression	0.84 (0.67,1.06)	0.138
12-10	SCL-90-R Hostility	0.94 (0.71,1.25)	0.692
12-11	SCL-90-R Interpersonal Sensitivity	0.78 (0.62,0.97)	0.026
12-12	SCL-90-R Obsessive-Compulsive Behavior	0.89 (0.17,1.11)	0.286
12-13	SCL-90-R Paranoid Ideation	0.88 (0.66,1.17)	0.374
12-14	SCL-90-R Phobic Anxiety	0.89 (0.70,1.12)	0.315
12-15	SCL-90-R Psychoticism	0.98 (0.78,1.22)	0.838
12-16	SCL-90-R Somatization	0.76 (0.62,0.94)	0.010
12-17	SCL-90-R Global Severity Index (GSI)	0.86 (0.69,1.06)	0.157
12-18	SCL-90-R Positive Symptom Total (PST)	0.82 (0.66,1.02)	0.067
12-19	SCL-90-R Positive Symptom Distress Index (PSDI)	0.80 (0.61,1.05)	0.107
13-3	Uncharacterized Hepatitis	1.02 (0.58,1.79)	0.936
13-4	Jaundice	1.01 (0.20,5.08)	0.995
13-5	Chronic Liver Disease and Cirrhosis (Alcohol-related)	1.06 (0.72,1.57)	0.765
13-6	Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	1.04 (0.61,1.76)	0.897
13-7	Liver Abscess and Sequelae of Chronic Liver Disease	2.09 (0.61,7.19)	0.277
13-8	Enlarged Liver (Hepatomegaly)	0.91 (0.46,1.80)	0.790

**Table G-18. Summary of Adjusted Results for Dichotomous Variables – Model 2
(Ranch Hands: Log₂ (Initial Dioxin)) (Continued)**

Table Ref.	Clinical Parameter	Adj. Relative Risk (95% C.I.)	p-Value
13-9	Other Liver Disorders	1.23 (1.03,1.47)	0.022
13-10	Current Hepatomegaly	0.66 (0.30,1.45)	0.279
13-12	AST	1.13 (0.86,1.50)	0.380
13-14	ALT	1.32 (1.00,1.73)	0.049
13-16	GGT	1.06 (0.82,1.37)	0.669
13-18	Alkaline Phosphatase	1.04 (0.61,1.76)	0.897
13-20	Total Bilirubin	0.75 (0.46,1.13)	0.154
13-21	Direct Bilirubin	--	--
13-23	Lactic Dehydrogenase	0.98 (0.74,1.30)	0.889
13-25	Cholesterol	1.23 (0.99,1.52)	0.062
13-27	HDL Cholesterol	0.72 (0.53,0.98)	0.029
13-29	Cholesterol-HDL Ratio	1.08 (0.91,1.28)	0.378
13-31	Triglycerides	0.96 (0.80,1.15)	0.690
13-33	Creatine Phosphokinase	1.09 (0.82,1.45)	0.542
13-35	Serum Amylase	1.04 (0.63,1.71)	0.884
13-36	Antibodies for Hepatitis A	1.02 (0.86,1.22)	0.813
13-37	Evidence of Prior Hepatitis B	0.95 (0.74,1.22)	0.669
13-38	Current Hepatitis B	0.39 (0.02,9.42)	0.497
13-39	Antibodies for Hepatitis C	0.63 (0.23,1.75)	0.344
13-40	Stool Hemocult	0.97 (0.62,1.51)	0.880
13-42	Prealbumin	1.76 (0.94,3.30)	0.081
13-44	Albumin	--	--
13-46	α-1-Acid Glycoprotein	0.92 (0.63,1.35)	0.684
13-50	α-2-Macroglobulin	1.48 (0.96,2.27)	0.072
13-52	Apolipoprotein B	1.06 (0.90,1.25)	0.456
13-54	C3 Complement	1.01 (0.39,2.62)	0.977
13-56	C4 Complement	--	--
13-58	Haptoglobin	0.98 (0.82,1.16)	0.785
13-60	Transferrin	0.93 (0.69,1.24)	0.615
14-3	Essential Hypertension	1.10 (0.91,1.32)	0.314
14-4	Heart Disease (Excluding Essential Hypertension)	0.90 (0.75,1.08)	0.249
14-5	Myocardial Infarction	1.30 (0.95,1.77)	0.106
14-6	Stroke or Transient Ischemia Attack	1.33 (0.72,2.47)	0.379
14-8	Systolic Blood Pressure	0.89 (0.71,1.11)	0.296
14-10	Diastolic Blood Pressure	1.15 (0.80,1.67)	0.446
14-11	Heart Sounds	1.28 (0.83,1.98)	0.266
14-12	Overall Electrocardiograph	1.14 (0.93,1.39)	0.200
14-13	Right Bundle Branch Block	1.12 (0.62,2.04)	0.707
14-14	Left Bundle Branch Block	--	--
14-15	Non-Specific ST- and T-Wave Changes	1.15 (0.91,1.44)	0.237
14-16	Bradycardia	0.98 (0.44,2.22)	0.971
14-17	Tachycardia	--	--
14-18	Arrhythmia	1.00 (0.68,1.48)	0.981
14-19	Evidence of Prior Myocardial Infarction	1.84 (1.13,2.99)	0.012
14-20	ECG: Other Diagnoses	--	--
14-21	Funduscopy Examination	1.14 (0.87,1.50)	0.342
14-22	Carotid Bruits	1.15 (0.62,2.11)	0.658
14-23	Radial Pulses	--	--
14-24	Femoral Pulses	1.17 (0.61,2.24)	0.641

**Table G-18. Summary of Adjusted Results for Dichotomous Variables – Model 2
(Ranch Hands: Log₂ (Initial Dioxin)) (Continued)**

Table Ref.	Clinical Parameter	Adj. Relative Risk (95% C.I.)	p-Value
14-25	Popliteal Pulses	0.97 (0.53,1.78)	0.924
14-26	Dorsalis Pedis Pulses	1.11 (0.78,1.57)	0.561
14-27	Posterior Tibial Pulses	1.16 (0.81,1.65)	0.417
14-28	Leg Pulses	1.13 (0.84,1.51)	0.433
14-29	Peripheral Pulses	1.06 (0.79,1.41)	0.718
14-30	ICVI Index	1.12 (0.73,1.72)	0.604
15-14	Prothrombin Time	0.72 (0.28,1.85)	0.470
15-15	RBC Morphology	1.02 (0.76,1.38)	0.878
15-18	Absolute Neutrophils (bands) (Zero vs. Nonzero)	0.87 (0.70,1.09)	0.214
15-22	Absolute Eosinophils (Zero vs. Nonzero)	0.92 (0.73,1.18)	0.521
15-24	Absolute Basophils (Zero vs. Nonzero)	0.81 (0.68,0.95)	0.012
16-3	Past Thyroid Disease	1.20 (0.88,1.64)	0.245
16-4	Composite Diabetes Indicator	1.36 (1.09,1.69)	0.005
16-7	Thyroid Gland	1.01 (0.32,3.17)	0.981
16-8	Testicular Examination	1.08 (0.72,1.61)	0.714
16-12	Thyroxine	1.51 (0.87,2.62)	0.143
16-13	Anti-Thyroid Antibodies	1.01 (0.31,3.23)	0.990
16-15	Fasting Glucose	1.31 (1.06,1.62)	0.013
16-17	2-Hour Postprandial Glucose	0.99 (0.76,1.29)	0.940
16-18	Fasting Urinary Glucose	1.27 (0.90,1.79)	0.173
16-19	2-Hour Postprandial Urinary Glucose	0.94 (0.75,1.17)	0.585
16-23	α -1-C Hemoglobin	1.53 (1.19,1.96)	0.001
16-25	Total Testosterone	1.16 (0.87,1.55)	0.307
16-27	Free Testosterone	0.41 (0.14,1.18)	0.051
16-29	Estradiol	1.12 (0.94,1.33)	0.213
16-31	LH	0.97 (0.65,1.43)	0.873
16-33	FSH	1.11 (0.81,1.53)	0.508
17-14	ANA Test	1.04 (0.88,1.24)	0.622
17-15	ANA Thyroid Microsomal Antibody	0.77 (0.43,1.35)	0.344
17-16	MSK Smooth Muscle Antibody	0.77 (0.58,1.04)	0.082
17-17	MSK Mitochondrial Antibody	0.10 (0.01,4.01)	0.049
17-18	MSK Parietal Antibody	0.93 (0.64,1.35)	0.694
17-19	Rheumatoid Factor	0.83 (0.60,1.14)	0.233
18-3	Asthma	1.22 (0.82,1.82)	0.328
18-4	Bronchitis	1.07 (0.88,1.30)	0.510
18-5	Pneumonia	0.85 (0.63,1.14)	0.274
18-6	Thorax and Lung Abnormalities	1.14 (0.86,1.51)	0.366
18-7	X-ray Interpretation	0.95 (0.71,1.27)	0.730

--: 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-19. Summary of Adjusted Results for Dichotomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category)

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
9-3	Self-perception of Health	Comparison	1,211		
		Background RH	376	1.13 (0.75,1.72)	0.555
		Low RH	237	1.62 (1.08,2.44)	0.020
		High RH	240	1.86 (1.26,2.74)	0.002
		Low plus High RH	477	1.74 (1.27,2.37)	0.001
9-4	Appearance of Illness or Distress	Comparison	1,211		
		Background RH	378	0.76 (0.21,2.80)	0.684
		Low RH	237	2.31 (0.87,6.11)	0.092
		High RH	241	1.67 (0.54,5.19)	0.372
		Low plus High RH	478	1.96 (0.84,4.58)	0.118
9-5	Relative Age Appearance	Comparison	1,211		
		Background RH	378	1.42 (0.93,2.16)	0.102
		Low RH	237	1.11 (0.67,1.82)	0.691
		High RH	241	1.05 (0.65,1.69)	0.857
		Low plus High RH	478	1.08 (0.74,1.57)	0.706
9-7	Body Fat	Comparison	1,211		
		Background RH	378	0.60 (0.45,0.80)	0.001
		Low RH	237	1.31 (0.97,1.77)	0.073
		High RH	241	1.12 (0.83,1.53)	0.451
		Low plus High RH	478	1.21 (0.97,1.53)	0.097
9-9	Erythrocyte Sedimentation Rate	Comparison	1,211		
		Background RH	376	1.07 (0.66,1.73)	0.777
		Low RH	237	1.04 (0.61,1.75)	0.897
		High RH	240	1.36 (0.82,2.26)	0.237
		Low plus High RH	477	1.19 (0.80,1.77)	0.398
10-3	Skin Neoplasms	Comparison	1,131		
		Background RH	358	1.46 (1.13,1.88)	0.004
		Low RH	210	1.49 (1.10,2.04)	0.011
		High RH	229	1.05 (0.76,1.45)	0.747
		Low plus High RH	439	1.25 (0.98,1.58)	0.073
10-4	Malignant Skin Neoplasms	Comparison	1,131		
		Background RH	358	1.13 (0.81,1.58)	0.476
		Low RH	210	1.45 (0.98,2.14)	0.062
		High RH	229	1.19 (0.76,1.85)	0.453
		Low plus High RH	439	1.30 (0.95,1.80)	0.104
10-5	Benign Skin Neoplasms	Comparison	1,200		
		Background RH	377	1.64 (1.25,2.15)	<0.001
		Low RH	233	1.21 (0.87,1.69)	0.265
		High RH	242	0.95 (0.67,1.36)	0.798
		Low plus High RH	475	1.07 (0.82,1.39)	0.603

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
10-6	Skin Neoplasms of Uncertain Behavior or Unspecified Nature	Comparison	1,131		
		Background RH	358	0.92 (0.18,4.75)	0.921
		Low RH	210	1.91 (0.47,7.69)	0.363
		High RH	229	0.89 (0.18,4.41)	0.889
		Low plus High RH	439	1.28 (0.40,4.14)	0.675
10-7	Basal Cell Carcinoma (All Sites Combined)	Comparison	1,131		
		Background RH	358	1.16 (0.81,1.65)	0.427
		Low RH	210	1.59 (1.06,2.39)	0.026
		High RH	229	0.99 (0.60,1.64)	0.979
		Low plus High RH	439	1.24 (0.88,1.77)	0.223
10-8	Basal Cell Carcinoma (Ear, Face, Head, and Neck)	Comparison	1,131		
		Background RH	358	1.19 (0.80,1.77)	0.386
		Low RH	210	1.54 (0.98,2.42)	0.061
		High RH	229	0.95 (0.54,1.67)	0.846
		Low plus High RH	439	1.19 (0.80,1.77)	0.379
10-9	Basal Cell Carcinoma (Trunk)	Comparison	1,131		
		Background RH	358	0.99 (0.55,1.79)	0.984
		Low RH	210	1.60 (0.83,3.11)	0.161
		High RH	229	1.46 (0.63,3.36)	0.374
		Low plus High RH	439	1.53 (0.85,2.73)	0.153
10-10	Basal Cell Carcinoma (Upper Extremities)	Comparison	1,131		
		Background RH	358	0.74 (0.36,1.52)	0.416
		Low RH	210	0.93 (0.39,2.21)	0.876
		High RH	229	0.64 (0.18,2.23)	0.484
		Low plus High RH	439	0.77 (0.34,1.71)	0.518
10-11	Basal Cell Carcinoma (Lower Extremities)	Comparison	1,131		
		Background RH	358	1.89 (0.43,8.34)	0.398
		Low RH	210	0.90 (0.10,8.17)	0.928
		High RH	229	1.03 (0.12,9.27)	0.976
		Low plus High RH	439	0.97 (0.18,5.16)	0.971
10-12	Squamous Cell Carcinoma	Comparison	1,131		
		Background RH	358	1.53 (0.68,3.45)	0.306
		Low RH	210	1.52 (0.56,4.10)	0.408
		High RH	229	1.74 (0.53,5.69)	0.363
		Low plus High RH	439	1.63 (0.69,3.82)	0.262
10-13	Nonmelanoma	Comparison	1,131		
		Background RH	358	1.16 (0.82,1.64)	0.398
		Low RH	210	1.43 (0.96,2.13)	0.081
		High RH	229	1.06 (0.67,1.69)	0.803
		Low plus High RH	439	1.22 (0.88,1.71)	0.235
10-14	Melanoma	Comparison	1,131		
		Background RH	358	1.56 (0.59,4.16)	0.373
		Low RH	210	2.17 (0.73,6.48)	0.164
		High RH	229	2.71 (0.76,9.67)	0.124
		Low plus High RH	439	2.44 (0.96,6.23)	0.062

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
10-15	Systemic Neoplasms (All Sites Combined)	Comparison	1,202		
		Background RH	373	0.76 (0.57,1.03)	0.076
		Low RH	230	0.98 (0.70,1.38)	0.927
		High RH	239	0.95 (0.67,1.36)	0.794
		Low plus High RH	469	0.97 (0.73,1.28)	0.823
10-16	Malignant Systemic Neoplasms	Comparison	1,209		
		Background RH	375	0.73 (0.42,1.29)	0.279
		Low RH	232	1.94 (1.16,3.24)	0.012
		High RH	240	0.86 (0.41,1.78)	0.680
		Low plus High RH	472	1.28 (0.77,2.13)	0.345
10-17	Benign Systemic Neoplasms	Comparison	1,202		
		Background RH	373	0.89 (0.66,1.22)	0.479
		Low RH	230	0.86 (0.60,1.23)	0.400
		High RH	239	1.00 (0.69,1.45)	0.996
		Low plus High RH	469	0.93 (0.69,1.24)	0.613
10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	Comparison	1,209		
		Background RH	375	0.72 (0.30,1.76)	0.475
		Low RH	232	0.85 (0.32,2.26)	0.744
		High RH	240	0.40 (0.09,1.89)	0.250
		Low plus High RH	472	0.58 (0.22,1.58)	0.288
10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	Comparison	1,209		
		Background RH	375	0.64 (0.16,2.59)	0.533
		Low RH	232	1.94 (0.58,6.44)	0.281
		High RH	240	0.49 (0.06,4.31)	0.520
		Low plus High RH	472	0.96 (0.24,3.82)	0.956
10-20	Malignant Systemic Neoplasms (Oral Cavity, Pharynx, and Larynx)	Comparison	1,209		
		Background RH	375	0.39 (0.04,3.56)	0.401
		Low RH	232	1.01 (0.18,5.59)	0.987
		High RH	240	0.56 (0.06,5.33)	0.614
		Low plus High RH	472	0.75 (0.16,3.59)	0.719
10-21	Malignant Systemic Neoplasms (Thymus, Heart, and Mediastinum)	Comparison			
		Background RH		--	--
		Low RH		--	--
		High RH		--	--
		Low plus High RH		--	--
10-22	Malignant Systemic Neoplasms (Thyroid Gland)	Comparison	1,209		
		Background RH	375	--	--
		Low RH	232	5.18 (0.71,37.60)	0.104
		High RH	240	--	--
		Low plus High RH	472	--	--
10-23	Malignant Systemic Neoplasms (Bronchus and Lung)	Comparison	1,209		
		Background RH	375	1.52 (0.21,11.09)	0.678
		Low RH	232	8.67 (1.74,43.23)	0.008
		High RH	240	--	--
		Low plus High RH	472	--	--

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
10-24	Malignant Systemic Neoplasms (Liver)	Comparison	1,209		
		Background RH	375	--	--
		Low RH	232	--	--
		High RH	240	7.06 (0.70,71.25)	0.098
		Low plus High RH	472	--	--
10-25	Malignant Systemic Neoplasms (Colon and Rectum)	Comparison	1,209		
		Background RH	375	0.60 (0.06,5.76)	0.658
		Low RH	232	3.28 (0.77,13.90)	0.107
		High RH	240	0.57 (0.05,5.85)	0.632
		Low plus High RH	472	1.34 (0.27,6.56)	0.717
10-26	Malignant Systemic Neoplasms (Kidney and Bladder)	Comparison	1,209		
		Background RH	375	2.26 (0.49,10.35)	0.292
		Low RH	232	4.44 (1.04,18.95)	0.044
		High RH	240	3.26 (0.46,23.17)	0.237
		Low plus High RH	472	3.80 (0.88,16.46)	0.075
10-27	Malignant Systemic Neoplasms (Prostate)	Comparison	1,209		
		Background RH	375	0.48 (0.21,1.07)	0.072
		Low RH	232	0.91 (0.42,1.97)	0.818
		High RH	240	0.61 (0.19,1.93)	0.404
		Low plus High RH	472	0.75 (0.35,1.60)	0.453
10-28	Malignant Systemic Neoplasms (Testicles)	Comparison	1,209		
		Background RH		--	--
		Low RH		--	--
		High RH		--	--
		Low plus High RH		--	--
10-29	Malignant Systemic Neoplasms (Connective and Other Soft Tissues)	Comparison	1,209		
		Background RH	375	--	--
		Low RH	232	--	--
		High RH	240	3.17 (0.17,57.71)	0.436
		Low plus High RH	472	--	--
10-30	Hodgkin's Disease	Comparison	1,209		
		Background RH	375	0.55 (0.05,6.15)	0.624
		Low RH	232	--	--
		High RH	240	--	--
		Low plus High RH	472	--	--
10-31	Non-Hodgkin's Lymphoma	Comparison	1,209		
		Background RH	375	0.24 (0.01,4.90)	0.351
		Low RH	232	--	--
		High RH	240	--	--
		Low plus High RH	472	--	--
10-32	Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Comparison	1,209		
		Background RH	375	1.90 (0.15,23.45)	0.618
		Low RH	232	--	--
		High RH	240	--	--
		Low plus High RH	472	--	--

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
10-33	All Malignant Skin and Systemic Neoplasms	Comparison	1,196		
		Background RH	372	0.84 (0.60,1.20)	0.339
		Low RH	226	1.51 (1.03,2.21)	0.035
		High RH	239	1.01 (0.66,1.57)	0.952
		Low plus High RH	465	1.23 (0.88,1.71)	0.221
10-34	All Skin and Systemic Neoplasms	Comparison	1,189		
		Background RH	371	1.01 (0.76,1.33)	0.956
		Low RH	225	1.15 (0.83,1.61)	0.396
		High RH	238	0.93 (0.67,1.30)	0.684
		Low plus High RH	463	1.04 (0.79,1.35)	0.799
10-36	PSA	Comparison	1,151		
		Background RH	362	0.76 (0.43,1.37)	0.368
		Low RH	221	1.42 (0.79,2.56)	0.246
		High RH	234	1.04 (0.51,2.16)	0.907
		Low plus High RH	455	1.21 (0.71,2.08)	0.484
11-3	Inflammatory Diseases	Comparison	1,203		
		Background RH	377	13.28 (1.31,135.01)	0.029
		Low RH	238	13.85 (1.20,160.07)	0.035
		High RH	238	12.43 (1.03,149.42)	0.047
		Low plus High RH	476	13.12 (1.39,123.67)	0.024
11-4	Hereditary and Degenerative Diseases	Comparison	1,193		
		Background RH	375	1.16 (0.77,1.76)	0.474
		Low RH	235	0.92 (0.56,1.52)	0.736
		High RH	236	1.01 (0.61,1.67)	0.979
		Low plus High RH	471	0.96 (0.65,1.41)	0.841
11-5	Peripheral Disorders	Comparison	1,191		
		Background RH	372	0.88 (0.64,1.21)	0.437
		Low RH	235	1.25 (0.89,1.76)	0.190
		High RH	236	1.33 (0.94,1.90)	0.111
		Low plus High RH	471	1.29 (0.99,1.69)	0.059
11-6	Other Neurological Disorders	Comparison	1,188		
		Background RH	372	1.21 (0.85,1.73)	0.281
		Low RH	235	1.31 (0.90,1.89)	0.161
		High RH	235	1.23 (0.85,1.77)	0.271
		Low plus High RH	470	1.27 (0.95,1.69)	0.106
11-7	Smell	Comparison	1,191		
		Background RH	373	1.04 (0.40,2.73)	0.929
		Low RH	234	1.57 (0.61,4.06)	0.353
		High RH	235	0.82 (0.23,2.92)	0.758
		Low plus High RH	469	1.13 (0.48,2.68)	0.777
11-8	Visual Fields	Comparison	1,189		
		Background RH	375	0.86 (0.10,7.83)	0.897
		Low RH	235	--	--
		High RH	236	0.57 (0.06,5.52)	0.629
		Low plus High RH	471	--	--

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
11-9	Light Reaction	Comparison	1,191		
		Background RH	371	0.38 (0.05,3.03)	0.359
		Low RH	235	--	--
		High RH	235	--	--
		Low plus High RH	470	--	--
11-10	Ocular Movement	Comparison	1,193		
		Background RH	375	1.18 (0.37,3.73)	0.781
		Low RH	235	1.76 (0.61,5.07)	0.291
		High RH	236	1.32 (0.45,3.83)	0.614
		Low plus High RH	471	1.52 (0.65,3.55)	0.328
11-11	Facial Sensation	Comparison	1,209		
		Background RH	376	1.70 (0.14,19.96)	0.672
		Low RH	238	2.04 (0.18,23.31)	0.564
		High RH	238	--	--
		Low plus High RH	476	--	--
11-12	Jaw Clench	Comparison			
		Background RH		--	--
		Low RH		--	--
		High RH		--	--
		Low plus High RH		--	--
11-13	Smile	Comparison	1,210		
		Background RH	377	3.14 (0.65,15.08)	0.152
		Low RH	238	2.38 (0.42,13.43)	0.326
		High RH	238	1.80 (0.30,10.67)	0.517
		Low plus High RH	476	2.07 (0.50,8.57)	0.315
11-14	Palpebral Fissure	Comparison	1,210		
		Background RH	377	0.96 (0.26,3.60)	0.955
		Low RH	238	0.79 (0.17,3.64)	0.761
		High RH	238	0.35 (0.04,2.84)	0.324
		Low plus High RH	476	0.52 (0.13,2.05)	0.352
11-15	Balance	Comparison	1,192		
		Background RH	375	2.54 (0.74,8.72)	0.138
		Low RH	235	0.63 (0.08,5.24)	0.667
		High RH	236	0.63 (0.07,5.49)	0.672
		Low plus High RH	471	0.63 (0.13,3.11)	0.567
11-16	Speech	Comparison	1,193		
		Background RH	375	1.09 (0.22,5.46)	0.919
		Low RH	235	1.38 (0.28,6.71)	0.688
		High RH	236	--	--
		Low plus High RH	471	--	--
11-17	Tongue Position Relative to Midline	Comparison			
		Background RH		--	--
		Low RH		--	--
		High RH		--	--
		Low plus High RH		--	--

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
11-18	Palate and Uvula Movement	Comparison			
		Background RH		--	--
		Low RH		--	--
		High RH		--	--
		Low plus High RH		--	--
11-19	Cranial Nerve Index	Comparison	1,189		
		Background RH	366	1.20 (0.72,2.02)	0.484
		Low RH	232	1.29 (0.74,2.24)	0.369
		High RH	232	0.60 (0.30,1.22)	0.158
		Low plus High RH	464	0.88 (0.54,1.43)	0.604
11-20	Neck Range of Motion	Comparison	1,193		
		Background RH	375	1.12 (0.80,1.57)	0.523
		Low RH	235	1.60 (1.12,2.29)	0.010
		High RH	236	1.55 (1.05,2.29)	0.028
		Low plus High RH	471	1.57 (1.18,2.11)	0.002
11-21	Pinprick	Comparison	1,132		
		Background RH	357	1.11 (0.63,1.95)	0.716
		Low RH	222	0.95 (0.51,1.77)	0.868
		High RH	223	1.55 (0.88,2.73)	0.126
		Low plus High RH	445	1.21 (0.77,1.93)	0.410
11-22	Light Touch	Comparison	1,132		
		Background RH	357	1.07 (0.54,2.10)	0.852
		Low RH	222	1.12 (0.55,2.27)	0.751
		High RH	223	1.09 (0.53,2.26)	0.808
		Low plus High RH	445	1.11 (0.64,1.93)	0.718
11-23	Muscle Status	Comparison	1,192		
		Background RH	375	1.22 (0.63,2.35)	0.550
		Low RH	235	1.90 (0.98,3.66)	0.056
		High RH	236	1.58 (0.73,3.39)	0.242
		Low plus High RH	471	1.73 (0.99,3.04)	0.056
11-24	Patellar Reflex	Comparison	1,191		
		Background RH	375	0.88 (0.40,1.91)	0.742
		Low RH	234	0.86 (0.37,2.02)	0.737
		High RH	236	1.39 (0.60,3.26)	0.446
		Low plus High RH	470	1.10 (0.57,2.10)	0.778
11-25	Achilles Reflex	Comparison	1,188		
		Background RH	374	0.96 (0.68,1.35)	0.811
		Low RH	235	0.97 (0.66,1.42)	0.880
		High RH	236	1.32 (0.89,1.95)	0.168
		Low plus High RH	471	1.13 (0.84,1.52)	0.416
11-26	Biceps Reflex	Comparison	1,192		
		Background RH	375	0.27 (0.03,2.13)	0.213
		Low RH	235	2.52 (0.95,6.70)	0.064
		High RH	236	1.37 (0.35,5.29)	0.651
		Low plus High RH	471	1.85 (0.73,4.69)	0.193

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
11-27	Babinski Reflex	Comparison	1,190		
		Background RH	375	1.53 (0.45,5.14)	0.496
		Low RH	235	0.38 (0.05,3.05)	0.364
		High RH	236	0.41 (0.05,3.33)	0.405
		Low plus High RH	471	0.40 (0.08,1.85)	0.239
11-29	Polyneuropathy Prevalence Index	Comparison	1,130		
		Background RH	356	0.83 (0.57,1.20)	0.315
		Low RH	222	0.86 (0.57,1.30)	0.484
		High RH	223	1.31 (0.86,1.98)	0.206
		Low plus High RH	445	1.06 (0.77,1.46)	0.708
11-30	Multiple Polyneuropathy Index	Comparison	1,130		
		Background RH	356	1.37 (0.69,2.72)	0.366
		Low RH	222	0.96 (0.44,2.10)	0.914
		High RH	223	2.38 (1.18,4.82)	0.016
		Low plus High RH	445	1.51 (0.84,2.71)	0.165
11-31	Confirmed Polyneuropathy Indicator	Comparison	1,138		
		Background RH	355	0.99 (0.20,4.97)	0.988
		Low RH	223	1.56 (0.38,6.40)	0.536
		High RH	221	6.04 (1.63,22.42)	0.007
		Low plus High RH	444	3.06 (1.02,9.23)	0.047
11-32	Tremor	Comparison	1,193		
		Background RH	375	1.11 (0.71,1.74)	0.659
		Low RH	235	0.71 (0.39,1.28)	0.248
		High RH	236	0.79 (0.44,1.40)	0.420
		Low plus High RH	471	0.75 (0.48,1.16)	0.194
11-33	Coordination	Comparison	1,191		
		Background RH	375	1.46 (0.71,3.01)	0.298
		Low RH	235	0.61 (0.21,1.79)	0.371
		High RH	236	0.42 (0.12,1.42)	0.161
		Low plus High RH	471	0.51 (0.22,1.19)	0.117
11-34	Romberg Sign	Comparison	1,192		
		Background RH	375	2.54 (0.74,8.72)	0.138
		Low RH	235	0.63 (0.08,5.24)	0.667
		High RH	236	0.63 (0.07,5.49)	0.672
		Low plus High RH	471	0.63 (0.13,3.11)	0.567
11-35	Gait	Comparison	1,193		
		Background RH	375	1.52 (0.90,2.59)	0.121
		Low RH	235	0.77 (0.38,1.57)	0.479
		High RH	236	1.44 (0.76,2.74)	0.262
		Low plus High RH	471	1.06 (0.63,1.78)	0.832
11-36	CNS Index	Comparison	1,192		
		Background RH	375	1.24 (0.86,1.77)	0.249
		Low RH	235	0.67 (0.42,1.09)	0.105
		High RH	236	0.94 (0.60,1.47)	0.789
		Low plus High RH	471	0.80 (0.56,1.13)	0.205

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
12-3	Psychoses	Comparison	1,196		
		Background RH	376	0.85 (0.41,1.73)	0.648
		Low RH	236	1.42 (0.73,2.77)	0.297
		High RH	236	0.90 (0.45,1.80)	0.759
		Low plus High RH	472	1.13 (0.67,1.91)	0.647
12-4	Alcohol Dependence	Comparison	1,196		
		Background RH	376	1.04 (0.63,1.69)	0.888
		Low RH	237	1.11 (0.64,1.91)	0.714
		High RH	238	1.01 (0.58,1.73)	0.985
		Low plus High RH	475	1.05 (0.69,1.60)	0.802
12-5	Drug Dependence	Comparison	1,196		
		Background RH	374	1.37 (0.19,9.67)	0.755
		Low RH	236	--	--
		High RH	236	--	--
		Low plus High RH	472	--	--
12-6	Anxiety	Comparison	1,194		
		Background RH	372	0.98 (0.74,1.31)	0.902
		Low RH	235	1.17 (0.85,1.60)	0.343
		High RH	235	0.82 (0.59,1.13)	0.225
		Low plus High RH	470	0.98 (0.77,1.25)	0.857
12-7	Other Neuroses	Comparison	1,187		
		Background RH	367	0.89 (0.69,1.14)	0.368
		Low RH	234	1.37 (1.02,1.84)	0.036
		High RH	233	1.18 (0.87,1.61)	0.286
		Low plus High RH	467	1.27 (1.01,1.60)	0.038
12-8	SCL-90-R Anxiety	Comparison	1,196		
		Background RH	374	0.86 (0.55,1.35)	0.506
		Low RH	236	1.09 (0.69,1.73)	0.717
		High RH	235	0.76 (0.48,1.20)	0.237
		Low plus High RH	471	0.91 (0.64,1.29)	0.595
12-9	SCL-90-R Depression	Comparison	1,196		
		Background RH	374	0.88 (0.60,1.27)	0.485
		Low RH	236	0.78 (0.51,1.20)	0.256
		High RH	235	0.74 (0.49,1.11)	0.142
		Low plus High RH	471	0.76 (0.55,1.04)	0.087
12-10	SCL-90-R Hostility	Comparison	1,196		
		Background RH	374	0.86 (0.52,1.40)	0.536
		Low RH	236	0.80 (0.46,1.40)	0.440
		High RH	235	0.84 (0.51,1.38)	0.488
		Low plus High RH	471	0.82 (0.55,1.22)	0.333
12-11	SCL-90-R Interpersonal Sensitivity	Comparison	1,196		
		Background RH	374	0.73 (0.49,1.07)	0.110
		Low RH	236	0.92 (0.62,1.38)	0.698
		High RH	235	0.77 (0.53,1.14)	0.190
		Low plus High RH	471	0.84 (0.63,1.14)	0.270

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
12-12	SCL-90-R Obsessive-Compulsive Behavior	Comparison	1,196		
		Background RH	374	0.84 (0.58,1.21)	0.340
		Low RH	236	1.01 (0.68,1.50)	0.948
		High RH	235	0.72 (0.48,1.07)	0.103
		Low plus High RH	471	0.85 (0.63,1.15)	0.298
12-13	SCL-90-R Paranoid Ideation	Comparison	1,196		
		Background RH	374	0.90 (0.51,1.57)	0.702
		Low RH	236	0.87 (0.47,1.61)	0.657
		High RH	235	1.16 (0.71,1.89)	0.559
		Low plus High RH	471	1.00 (0.65,1.54)	0.990
12-14	SCL-90-R Phobic Anxiety	Comparison	1,196		
		Background RH	374	0.65 (0.40,1.06)	0.086
		Low RH	236	1.04 (0.65,1.67)	0.872
		High RH	235	1.11 (0.72,1.70)	0.647
		Low plus High RH	471	1.07 (0.76,1.52)	0.694
12-15	SCL-90-R Psychoticism	Comparison	1,196		
		Background RH	374	0.71 (0.47,1.07)	0.104
		Low RH	236	0.83 (0.53,1.28)	0.394
		High RH	235	0.95 (0.64,1.40)	0.786
		Low plus High RH	471	0.88 (0.65,1.21)	0.447
12-16	SCL-90-R Somatization	Comparison	1,196		
		Background RH	374	0.92 (0.63,1.34)	0.669
		Low RH	236	1.36 (0.93,1.97)	0.108
		High RH	235	0.92 (0.63,1.33)	0.643
		Low plus High RH	471	1.11 (0.84,1.48)	0.457
12-17	SCL-90-R Global Severity Index (GSI)	Comparison	1,196		
		Background RH	374	0.77 (0.51,1.15)	0.200
		Low RH	236	1.03 (0.69,1.55)	0.877
		High RH	235	0.93 (0.64,1.36)	0.711
		Low plus High RH	471	0.98 (0.73,1.32)	0.897
12-18	SCL-90-R Positive Symptom Total (PST)	Comparison	1,196		
		Background RH	374	0.67 (0.45,0.99)	0.045
		Low RH	236	1.04 (0.71,1.54)	0.830
		High RH	235	0.78 (0.53,1.15)	0.209
		Low plus High RH	471	0.90 (0.67,1.21)	0.496
12-19	SCL-90-R Positive Symptom Distress Index (PSDI)	Comparison	1,196		
		Background RH	374	1.16 (0.70,1.92)	0.572
		Low RH	236	1.31 (0.77,2.23)	0.325
		High RH	235	1.38 (0.85,2.23)	0.191
		Low plus High RH	471	1.34 (0.91,1.99)	0.143
13-3	Uncharacterized Hepatitis	Comparison	1,205		
		Background RH	375	1.39 (0.59,3.27)	0.450
		Low RH	236	1.00 (0.34,2.97)	0.999
		High RH	239	1.04 (0.38,2.89)	0.932
		Low plus High RH	475	1.02 (0.46,2.28)	0.957

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
13-4	Jaundice	Comparison	1,181		
		Background RH	367	0.99 (0.49,2.03)	0.988
		Low RH	231	--	--
		High RH	235	0.16 (0.02,1.20)	0.075
		Low plus High RH	466	--	--
13-5	Chronic Liver Disease and Cirrhosis (Alcohol-related)	Comparison	1,146		
		Background RH	358	1.03 (0.56,1.90)	0.914
		Low RH	225	0.95 (0.48,1.91)	0.894
		High RH	219	0.88 (0.43,1.81)	0.734
		Low plus High RH	444	0.92 (0.54,1.57)	0.755
13-6	Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	Comparison	1,211		
		Background RH	378	1.89 (0.68,5.25)	0.223
		Low RH	238	1.15 (0.32,4.12)	0.829
		High RH	241	1.37 (0.47,4.00)	0.568
		Low plus High RH	479	1.26 (0.51,3.12)	0.625
13-7	Liver Abscess and Sequelae of Chronic Liver Disease	Comparison	1,212		
		Background RH	378	--	--
		Low RH	238	--	--
		High RH	241	7.76 (0.38,158.28)	0.183
		Low plus High RH	479	--	--
13-8	Enlarged Liver (Hepatomegaly)	Comparison	1,210		
		Background RH	378	0.80 (0.32,2.01)	0.630
		Low RH	238	0.35 (0.08,1.51)	0.159
		High RH	240	1.09 (0.42,2.79)	0.864
		Low plus High RH	478	0.62 (0.25,1.54)	0.302
13-9	Other Liver Disorders	Comparison	1,201		
		Background RH	375	1.13 (0.86,1.49)	0.371
		Low RH	237	1.05 (0.76,1.45)	0.757
		High RH	241	1.52 (1.11,2.08)	0.009
		Low plus High RH	478	1.27 (1.00,1.62)	0.055
13-10	Current Hepatomegaly	Comparison	1,193		
		Background RH	374	1.64 (0.40,6.69)	0.489
		Low RH	235	2.26 (0.57,9.01)	0.247
		High RH	239	2.62 (0.70,9.84)	0.154
		Low plus High RH	474	2.44 (0.82,7.24)	0.109
13-12	AST	Comparison	1,193		
		Background RH	374	0.70 (0.40,1.22)	0.212
		Low RH	235	1.28 (0.75,2.18)	0.360
		High RH	238	1.79 (1.08,2.96)	0.024
		Low plus High RH	473	1.51 (1.02,2.26)	0.041
13-14	ALT	Comparison	1,193		
		Background RH	374	0.71 (0.41,1.23)	0.223
		Low RH	235	1.30 (0.77,2.18)	0.323
		High RH	238	1.53 (0.95,2.45)	0.080
		Low plus High RH	473	1.41 (0.96,2.07)	0.079

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
13-16	GGT	Comparison	1,193		
		Background RH	374	0.77 (0.48,1.23)	0.273
		Low RH	235	1.42 (0.91,2.22)	0.127
		High RH	238	1.35 (0.86,2.11)	0.186
		Low plus High RH	473	1.38 (0.98,1.95)	0.065
13-18	Alkaline Phosphatase	Comparison	1,193		
		Background RH	375	1.85 (0.88,3.90)	0.104
		Low RH	235	0.91 (0.31,2.71)	0.871
		High RH	239	1.23 (0.44,3.41)	0.688
		Low plus High RH	474	1.06 (0.48,2.37)	0.883
13-20	Total Bilirubin	Comparison	1,193		
		Background RH	374	0.88 (0.53,1.47)	0.619
		Low RH	235	1.03 (0.58,1.84)	0.919
		High RH	238	0.59 (0.27,1.27)	0.175
		Low plus High RH	473	0.78 (0.47,1.29)	0.331
13-21	Direct Bilirubin	Comparison	1,193		
		Background RH	374	1.09 (0.12,10.31)	0.937
		Low RH	235	--	--
		High RH	238	--	--
		Low plus High RH	473	--	--
13-23	Lactic Dehydrogenase	Comparison	1,191		
		Background RH	374	1.07 (0.72,1.61)	0.729
		Low RH	235	0.80 (0.48,1.31)	0.366
		High RH	238	0.81 (0.49,1.34)	0.416
		Low plus High RH	473	0.80 (0.55,1.17)	0.255
13-25	Cholesterol	Comparison	1,193		
		Background RH	374	0.85 (0.60,1.21)	0.379
		Low RH	235	1.01 (0.68,1.51)	0.964
		High RH	238	1.41 (0.97,2.04)	0.071
		Low plus High RH	473	1.19 (0.89,1.60)	0.240
13-27	HDL Cholesterol	Comparison	1,192		
		Background RH	374	1.57 (1.00,2.45)	0.049
		Low RH	234	1.09 (0.64,1.84)	0.761
		High RH	238	0.80 (0.47,1.37)	0.416
		Low plus High RH	472	0.93 (0.62,1.40)	0.731
13-29	Cholesterol-HDL Ratio	Comparison	1,192		
		Background RH	374	1.00 (0.77,1.28)	0.982
		Low RH	234	0.83 (0.61,1.12)	0.221
		High RH	238	1.26 (0.93,1.69)	0.133
		Low plus High RH	472	1.02 (0.82,1.28)	0.849
13-31	Triglycerides	Comparison	1,193		
		Background RH	373	0.79 (0.56,1.10)	0.161
		Low RH	235	1.24 (0.88,1.76)	0.215
		High RH	238	1.55 (1.12,2.15)	0.009
		Low plus High RH	473	1.39 (1.07,1.80)	0.012

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
13-33	Creatine Phosphokinase	Comparison	1,193		
		Background RH	374	0.75 (0.46,1.20)	0.227
		Low RH	235	0.80 (0.47,1.35)	0.402
		High RH	238	1.20 (0.73,1.98)	0.465
		Low plus High RH	473	0.98 (0.67,1.45)	0.923
13-35	Serum Amylase	Comparison	1,193		
		Background RH	374	0.53 (0.24,1.16)	0.112
		Low RH	235	1.37 (0.67,2.77)	0.387
		High RH	238	1.02 (0.41,2.59)	0.959
		Low plus High RH	473	1.18 (0.63,2.21)	0.602
13-36	Antibodies for Hepatitis A	Comparison	1,211		
		Background RH	378	0.92 (0.70,1.21)	0.561
		Low RH	238	0.92 (0.67,1.25)	0.577
		High RH	241	0.96 (0.70,1.32)	0.787
		Low plus High RH	479	0.94 (0.74,1.19)	0.588
13-37	Evidence of Prior Hepatitis B	Comparison	1,210		
		Background RH	378	0.50 (0.31,0.80)	0.004
		Low RH	237	0.71 (0.45,1.12)	0.143
		High RH	241	0.59 (0.37,0.92)	0.021
		Low plus High RH	478	0.65 (0.46,0.91)	0.012
13-38	Current Hepatitis B	Comparison	1,212		
		Background RH	378	--	--
		Low RH	238	1.94 (0.14,26.64)	0.622
		High RH	241	--	--
		Low plus High RH	479	--	--
13-39	Antibodies for Hepatitis C	Comparison	1,212		
		Background RH	378	0.87 (0.28,2.73)	0.816
		Low RH	238	0.54 (0.12,2.40)	0.415
		High RH	241	0.50 (0.11,2.23)	0.359
		Low plus High RH	479	0.52 (0.17,1.57)	0.243
13-40	Stool Hemocult	Comparison	1,161		
		Background RH	363	0.63 (0.31,1.28)	0.201
		Low RH	231	1.08 (0.55,2.13)	0.822
		High RH	230	0.86 (0.39,1.90)	0.705
		Low plus High RH	461	0.96 (0.55,1.68)	0.895
13-42	Prealbumin	Comparison	1,193		
		Background RH	374	1.74 (0.61,5.01)	0.302
		Low RH	235	0.49 (0.06,3.93)	0.506
		High RH	238	4.34 (1.25,15.05)	0.021
		Low plus High RH	473	1.48 (0.41,5.32)	0.552
13-44	Albumin	Comparison	1,193		
		Background RH	374	0.67 (0.14,3.20)	0.611
		Low RH	235	--	--
		High RH	238	--	--
		Low plus High RH	473	--	--

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
13-46	α -1-Acid Glycoprotein	Comparison	1,193		
		Background RH	374	1.12 (0.58,2.16)	0.745
		Low RH	235	1.47 (0.73,2.94)	0.279
		High RH	238	1.54 (0.77,3.08)	0.222
		Low plus High RH	473	1.50 (0.88,2.58)	0.138
13-50	α -2-Macroglobulin	Comparison	1,193		
		Background RH	374	0.45 (0.19,1.10)	0.079
		Low RH	235	0.61 (0.27,1.40)	0.246
		High RH	238	1.09 (0.51,2.31)	0.823
		Low plus High RH	473	0.82 (0.45,1.49)	0.511
13-52	Apolipoprotein B	Comparison	1,193		
		Background RH	374	0.79 (0.62,1.00)	0.050
		Low RH	235	0.82 (0.62,1.09)	0.164
		High RH	238	0.97 (0.73,1.30)	0.849
		Low plus High RH	473	0.89 (0.72,1.11)	0.305
13-54	C3 Complement	Comparison	1,193		
		Background RH	374	1.25 (0.61,2.57)	0.536
		Low RH	235	0.21 (0.03,1.57)	0.128
		High RH	238	0.49 (0.11,2.17)	0.351
		Low plus High RH	473	0.32 (0.09,1.16)	0.083
13-56	C4 Complement	Comparison	1,193		
		Background RH	374	2.99 (0.40,22.39)	0.286
		Low RH	235	--	--
		High RH	238	--	--
		Low plus High RH	473	--	--
13-58	Haptoglobin	Comparison	1,193		
		Background RH	374	1.32 (1.01,1.72)	0.042
		Low RH	235	1.25 (0.92,1.69)	0.160
		High RH	238	1.15 (0.84,1.56)	0.382
		Low plus High RH	473	1.19 (0.95,1.51)	0.136
13-60	Transferrin	Comparison	1,193		
		Background RH	374	0.73 (0.48,1.11)	0.142
		Low RH	235	0.78 (0.49,1.26)	0.311
		High RH	238	0.57 (0.32,0.99)	0.045
		Low plus High RH	473	0.66 (0.45,0.98)	0.039
14-3	Essential Hypertension	Comparison	1,145		
		Background RH	356	0.87 (0.66,1.14)	0.320
		Low RH	217	0.87 (0.63,1.20)	0.395
		High RH	235	1.27 (0.93,1.74)	0.131
		Low plus High RH	452	1.06 (0.84,1.35)	0.624
14-4	Heart Disease (Excluding Essential Hypertension)	Comparison	1,155		
		Background RH	360	1.34 (1.03,1.75)	0.032
		Low RH	221	1.33 (0.96,1.84)	0.081
		High RH	236	1.03 (0.76,1.40)	0.865
		Low plus High RH	457	1.16 (0.92,1.48)	0.209

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
14-5	Myocardial Infarction	Comparison	1,155		
		Background RH	360	0.89 (0.55,1.43)	0.625
		Low RH	221	0.84 (0.49,1.46)	0.544
		High RH	236	1.39 (0.83,2.32)	0.215
		Low plus High RH	457	1.09 (0.73,1.63)	0.673
14-6	Stroke or Transient Ischemia Attack	Comparison	1,155		
		Background RH	360	0.97 (0.30,3.16)	0.956
		Low RH	221	0.42 (0.05,3.26)	0.404
		High RH	236	2.65 (0.83,8.46)	0.100
		Low plus High RH	457	1.08 (0.32,3.71)	0.900
14-8	Systolic Blood Pressure	Comparison	1,155		
		Background RH	360	1.00 (0.73,1.37)	0.983
		Low RH	221	1.12 (0.79,1.59)	0.532
		High RH	236	0.84 (0.57,1.23)	0.365
		Low plus High RH	457	0.96 (0.73,1.27)	0.791
14-10	Diastolic Blood Pressure	Comparison	1,155		
		Background RH	360	0.78 (0.41,1.48)	0.449
		Low RH	221	0.91 (0.45,1.83)	0.792
		High RH	236	1.46 (0.80,2.68)	0.221
		Low plus High RH	457	1.16 (0.71,1.91)	0.551
14-11	Heart Sounds	Comparison	1,155		
		Background RH	360	0.45 (0.21,0.97)	0.041
		Low RH	221	0.80 (0.39,1.61)	0.528
		High RH	236	1.05 (0.52,2.11)	0.901
		Low plus High RH	457	0.92 (0.54,1.56)	0.750
14-12	Overall Electrocardiograph	Comparison	1,155		
		Background RH	360	1.00 (0.76,1.32)	0.980
		Low RH	221	0.73 (0.52,1.02)	0.063
		High RH	236	1.10 (0.78,1.54)	0.578
		Low plus High RH	457	0.90 (0.70,1.16)	0.423
14-13	Right Bundle Branch Block	Comparison	1,155		
		Background RH	360	1.04 (0.47,2.29)	0.920
		Low RH	221	0.55 (0.19,1.60)	0.273
		High RH	236	1.19 (0.49,2.88)	0.704
		Low plus High RH	457	0.82 (0.39,1.71)	0.594
14-14	Left Bundle Branch Block	Comparison	1,155		
		Background RH	360	0.87 (0.23,3.33)	0.838
		Low RH	221	0.37 (0.05,2.91)	0.341
		High RH	236	--	--
		Low plus High RH	457	--	--
14-15	Non-Specific ST- and T-Wave Changes	Comparison	1,155		
		Background RH	360	0.82 (0.58,1.15)	0.242
		Low RH	221	0.91 (0.62,1.32)	0.614
		High RH	236	1.26 (0.86,1.84)	0.238
		Low plus High RH	457	1.07 (0.80,1.43)	0.628

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
14-16	Bradycardia	Comparison	1,155		
		Background RH	360	0.81 (0.44,1.49)	0.497
		Low RH	221	0.49 (0.17,1.40)	0.183
		High RH	236	0.35 (0.08,1.50)	0.156
		Low plus High RH	457	0.41 (0.16,1.05)	0.062
14-17	Tachycardia	Comparison	1,155		
		Background RH	360	2.01 (0.16,24.61)	0.585
		Low RH	221	--	--
		High RH	236	8.10 (1.19,55.01)	0.032
		Low plus High RH	457	--	--
14-18	Arrhythmia	Comparison	1,155		
		Background RH	360	0.87 (0.49,1.57)	0.647
		Low RH	221	1.17 (0.65,2.11)	0.596
		High RH	236	1.10 (0.56,2.12)	0.774
		Low plus High RH	457	1.13 (0.70,1.83)	0.604
14-19	Evidence of Prior Myocardial Infarction	Comparison	1,155		
		Background RH	360	0.69 (0.34,1.37)	0.285
		Low RH	221	0.79 (0.39,1.61)	0.524
		High RH	236	1.11 (0.52,2.36)	0.783
		Low plus High RH	457	0.94 (0.54,1.65)	0.841
14-20	ECG: Other Diagnoses	Comparison	1,186		
		Background RH	368	2.89 (0.16,52.97)	0.474
		Low RH	227	--	--
		High RH	239	12.41 (1.00,154.15)	0.050
		Low plus High RH	466	--	--
14-21	Funduscope Examination	Comparison	1,154		
		Background RH	359	1.04 (0.70,1.55)	0.842
		Low RH	221	0.82 (0.52,1.30)	0.402
		High RH	236	0.95 (0.60,1.51)	0.836
		Low plus High RH	457	0.89 (0.63,1.26)	0.500
14-22	Carotid Bruits	Comparison	1,155		
		Background RH	360	1.06 (0.47,2.38)	0.893
		Low RH	221	0.69 (0.25,1.86)	0.460
		High RH	236	1.01 (0.41,2.45)	0.991
		Low plus High RH	457	0.84 (0.41,1.71)	0.625
14-23	Radial Pulses	Comparison	1,155		
		Background RH	360	3.27 (0.64,16.71)	0.155
		Low RH	221	3.82 (0.53,27.51)	0.183
		High RH	236	1.26 (0.11,14.89)	0.856
		Low plus High RH	457	2.15 (0.36,13.04)	0.404
14-24	Femoral Pulses	Comparison	1,154		
		Background RH	360	1.22 (0.44,3.36)	0.702
		Low RH	221	1.71 (0.58,4.98)	0.329
		High RH	236	2.45 (0.76,7.90)	0.134
		Low plus High RH	457	2.06 (0.85,4.96)	0.108

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
14-25	Popliteal Pulses	Comparison	1,153		
		Background RH	360	0.88 (0.37,2.05)	0.760
		Low RH	221	1.15 (0.45,2.92)	0.776
		High RH	236	1.08 (0.40,2.86)	0.884
		Low plus High RH	457	1.11 (0.53,2.30)	0.781
14-26	Dorsalis Pedis Pulses	Comparison	1,153		
		Background RH	360	0.94 (0.59,1.50)	0.792
		Low RH	221	0.99 (0.58,1.70)	0.977
		High RH	236	0.89 (0.50,1.58)	0.685
		Low plus High RH	457	0.94 (0.61,1.43)	0.761
14-27	Posterior Tibial Pulses	Comparison	1,151		
		Background RH	360	1.08 (0.62,1.89)	0.784
		Low RH	221	1.31 (0.71,2.39)	0.387
		High RH	236	1.21 (0.63,2.30)	0.571
		Low plus High RH	457	1.25 (0.77,2.03)	0.358
14-28	Leg Pulses	Comparison	1,151		
		Background RH	360	1.01 (0.66,1.53)	0.981
		Low RH	221	1.01 (0.63,1.64)	0.955
		High RH	236	0.91 (0.54,1.53)	0.725
		Low plus High RH	457	0.96 (0.66,1.40)	0.832
14-29	Peripheral Pulses	Comparison	1,151		
		Background RH	360	1.00 (0.66,1.52)	0.997
		Low RH	221	1.05 (0.65,1.70)	0.833
		High RH	236	0.94 (0.57,1.57)	0.828
		Low plus High RH	457	1.00 (0.68,1.45)	0.981
14-30	ICVI Index	Comparison	1,155		
		Background RH	360	0.69 (0.32,1.48)	0.340
		Low RH	221	0.98 (0.46,2.11)	0.968
		High RH	236	1.41 (0.69,2.89)	0.346
		Low plus High RH	457	1.19 (0.67,2.09)	0.555
15-14	Prothrombin Time	Comparison	986		
		Background RH	308	1.41 (0.52,3.85)	0.501
		Low RH	182	1.01 (0.28,3.71)	0.984
		High RH	193	0.49 (0.06,3.96)	0.502
		Low plus High RH	375	0.70 (0.19,2.57)	0.586
15-15	RBC Morphology	Comparison	1,210		
		Background RH	380	1.18 (0.72,1.93)	0.517
		Low RH	238	1.39 (0.84,2.30)	0.206
		High RH	239	1.08 (0.60,1.94)	0.800
		Low plus High RH	477	1.22 (0.80,1.86)	0.352
15-18	Absolute Neutrophils (Zero vs. Nonzero) (bands)	Comparison	1,210		
		Background RH	380	1.02 (0.75,1.40)	0.897
		Low RH	238	1.03 (0.72,1.49)	0.859
		High RH	239	0.88 (0.59,1.30)	0.515
		Low plus High RH	477	0.95 (0.72,1.27)	0.741

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
15-22	Absolute Eosinophils (Zero vs. Nonzero)	Comparison	1,210		
		Background RH	380	1.07 (0.74,1.55)	0.705
		Low RH	238	1.16 (0.77,1.76)	0.467
		High RH	239	0.82 (0.53,1.27)	0.376
		Low plus High RH	477	0.98 (0.71,1.35)	0.885
15-24	Absolute Basophils (Zero vs. Nonzero)	Comparison	1,210		
		Background RH	380	1.11 (0.87,1.41)	0.395
		Low RH	238	1.47 (1.10,1.95)	0.009
		High RH	239	1.00 (0.75,1.33)	0.979
		Low plus High RH	477	1.21 (0.97,1.50)	0.091
16-3	Thyroid Disease	Comparison	1,208		
		Background RH	376	0.92 (0.60,1.42)	0.707
		Low RH	237	0.70 (0.40,1.22)	0.209
		High RH	240	1.07 (0.64,1.81)	0.792
		Low plus High RH	477	0.87 (0.57,1.30)	0.490
16-4	Composite Diabetes Indicator	Comparison	1,183		
		Background RH	375	0.69 (0.46,1.02)	0.065
		Low RH	232	1.22 (0.83,1.79)	0.311
		High RH	238	1.47 (1.00,2.17)	0.048
		Low plus High RH	470	1.34 (1.00,1.80)	0.049
16-7	Thyroid Gland	Comparison	1,165		
		Background RH	367	0.65 (0.21,2.01)	0.457
		Low RH	233	0.29 (0.04,2.19)	0.229
		High RH	233	0.56 (0.07,4.62)	0.590
		Low plus High RH	466	0.40 (0.09,1.81)	0.234
16-8	Testicular Examination	Comparison	1,199		
		Background RH	374	0.84 (0.45,1.58)	0.594
		Low RH	237	1.46 (0.78,2.71)	0.236
		High RH	240	1.39 (0.63,3.03)	0.415
		Low plus High RH	477	1.42 (0.82,2.45)	0.207
16-12	Thyroxine	Comparison	1,161		
		Background RH	365	1.23 (0.63,2.42)	0.545
		Low RH	233	0.45 (0.14,1.49)	0.192
		High RH	233	1.53 (0.62,3.73)	0.354
		Low plus High RH	466	0.83 (0.38,1.82)	0.641
16-13	Anti-Thyroid Antibodies	Comparison	1,161		
		Background RH	365	1.07 (0.27,4.26)	0.921
		Low RH	233	0.73 (0.09,5.99)	0.765
		High RH	233	1.07 (0.12,9.66)	0.951
		Low plus High RH	466	0.88 (0.17,4.46)	0.879
16-15	Fasting Glucose	Comparison	1,200		
		Background RH	377	0.91 (0.63,1.31)	0.609
		Low RH	235	1.03 (0.70,1.53)	0.877
		High RH	240	1.44 (0.99,2.11)	0.056
		Low plus High RH	475	1.22 (0.91,1.64)	0.178

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
16-17	2-Hour Postprandial Glucose	Comparison	987		
		Background RH	338	0.94 (0.64,1.37)	0.729
		Low RH	183	1.12 (0.73,1.72)	0.616
		High RH	181	1.01 (0.64,1.60)	0.960
		Low plus High RH	364	1.06 (0.76,1.49)	0.722
16-18	Fasting Urinary Glucose	Comparison	1,200		
		Background RH	377	0.63 (0.27,1.43)	0.265
		Low RH	235	0.92 (0.43,1.97)	0.827
		High RH	240	1.33 (0.71,2.49)	0.369
		Low plus High RH	475	1.11 (0.65,1.89)	0.704
16-19	2-Hour Postprandial Urinary Glucose	Comparison	985		
		Background RH	337	1.32 (0.98,1.78)	0.072
		Low RH	182	1.41 (0.98,2.02)	0.064
		High RH	181	0.97 (0.66,1.44)	0.885
		Low plus High RH	363	1.17 (0.88,1.56)	0.283
16-23	α -1-C Hemoglobin	Comparison	1,200		
		Background RH	377	0.84 (0.53,1.35)	0.474
		Low RH	235	0.94 (0.58,1.52)	0.799
		High RH	240	1.76 (1.16,2.67)	0.008
		Low plus High RH	475	1.29 (0.91,1.82)	0.148
16-25	Total Testosterone	Comparison	1,189		
		Background RH	370	0.98 (0.59,1.62)	0.934
		Low RH	234	0.95 (0.55,1.62)	0.841
		High RH	237	1.55 (0.94,2.55)	0.085
		Low plus High RH	471	1.21 (0.82,1.80)	0.340
16-27	Free Testosterone	Comparison	1,189		
		Background RH	370	0.88 (0.32,2.46)	0.811
		Low RH	234	1.38 (0.57,3.35)	0.470
		High RH	237	0.28 (0.04,2.21)	0.227
		Low plus High RH	471	0.62 (0.19,2.01)	0.424
16-29	Estradiol	Comparison	1,213		
		Background RH	381	0.97 (0.75,1.27)	0.842
		Low RH	239	0.79 (0.57,1.09)	0.155
		High RH	243	1.05 (0.77,1.44)	0.757
		Low plus High RH	482	0.91 (0.72,1.16)	0.460
16-31	LH	Comparison	1,213		
		Background RH	381	1.28 (0.79,2.08)	0.313
		Low RH	239	0.83 (0.44,1.58)	0.573
		High RH	243	0.76 (0.36,1.60)	0.475
		Low plus High RH	482	0.80 (0.47,1.34)	0.392
16-33	FSH	Comparison	1,213		
		Background RH	381	1.10 (0.72,1.69)	0.652
		Low RH	239	0.93 (0.55,1.56)	0.781
		High RH	243	1.16 (0.64,2.08)	0.621
		Low plus High RH	482	1.04 (0.68,1.58)	0.859

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
17-14	ANA Test	Comparison	1,154		
		Background RH	365	1.04 (0.82,1.33)	0.738
		Low RH	220	0.85 (0.63,1.14)	0.276
		High RH	229	1.15 (0.85,1.55)	0.364
		Low plus High RH	449	0.99 (0.79,1.24)	0.936
17-15	ANA Thyroid Microsomal Antibody	Comparison	1,154		
		Background RH	365	1.03 (0.51,2.12)	0.925
		Low RH	220	1.12 (0.49,2.59)	0.785
		High RH	229	0.81 (0.30,2.16)	0.671
		Low plus High RH	449	0.95 (0.48,1.90)	0.883
17-16	MSK Smooth Muscle Antibody	Comparison	1,154		
		Background RH	365	1.28 (0.90,1.83)	0.173
		Low RH	220	1.07 (0.70,1.65)	0.752
		High RH	229	0.59 (0.36,1.00)	0.048
		Low plus High RH	449	0.79 (0.55,1.14)	0.209
17-17	MSK Mitochondrial Antibody	Comparison	1,154		
		Background RH	365	3.55 (0.48,26.04)	0.213
		Low RH	220	4.30 (0.57,32.27)	0.156
		High RH	229	--	--
		Low plus High RH	449	--	--
17-18	MSK Parietal Antibody	Comparison	1,154		
		Background RH	365	0.63 (0.30,1.31)	0.216
		Low RH	220	1.50 (0.82,2.75)	0.192
		High RH	229	0.97 (0.47,1.99)	0.928
		Low plus High RH	449	1.20 (0.72,2.00)	0.490
17-19	Rheumatoid Factor	Comparison	1,154		
		Background RH	365	1.04 (0.71,1.51)	0.841
		Low RH	220	1.03 (0.66,1.61)	0.890
		High RH	229	0.59 (0.33,1.04)	0.068
		Low plus High RH	449	0.77 (0.53,1.14)	0.195
18-3	Asthma	Comparison	1,207		
		Background RH	376	1.52 (0.86,2.70)	0.149
		Low RH	234	1.13 (0.54,2.36)	0.753
		High RH	240	1.29 (0.64,2.61)	0.479
		Low plus High RH	474	1.21 (0.69,2.10)	0.506
18-4	Bronchitis	Comparison	1,187		
		Background RH	371	1.31 (0.98,1.75)	0.073
		Low RH	227	0.94 (0.65,1.36)	0.734
		High RH	239	1.10 (0.78,1.56)	0.584
		Low plus High RH	466	1.02 (0.78,1.34)	0.891
18-5	Pneumonia	Comparison	1,167		
		Background RH	360	0.90 (0.61,1.33)	0.602
		Low RH	221	0.98 (0.63,1.54)	0.929
		High RH	236	0.74 (0.44,1.25)	0.265
		Low plus High RH	457	0.85 (0.59,1.23)	0.386

**Table G-19. Summary of Adjusted Results for Dichotomous Variables – Model 3
(Ranch Hands and Comparisons by Dioxin Category) (Continued)**

Table Ref.	Clinical Parameter	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
18-6	Thorax and Lung Abnormalities	Comparison	1,212		
		Background RH	380	0.84 (0.55,1.28)	0.412
		Low RH	238	1.01 (0.63,1.62)	0.953
		High RH	243	1.01 (0.62,1.64)	0.977
		Low plus High RH	481	1.01 (0.70,1.46)	0.955
18-7	X-ray Interpretation	Comparison	1,212		
		Background RH	380	1.69 (1.18,2.43)	0.004
		Low RH	238	1.11 (0.70,1.75)	0.657
		High RH	241	0.66 (0.38,1.13)	0.127
		Low plus High RH	479	0.85 (0.58,1.24)	0.406

--: 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-20. Summary of Adjusted Results for Dichotomous Variables – Model 4 (Ranch Hands: Log₂ (1987 Dioxin + 1))

Table Ref.	Clinical Parameter	Adj. Relative Risk (95% C.I.)	p-Value
9-3	Self-perception of Health	1.14 (0.98,1.32)	0.079
9-4	Appearance of Illness or Distress	1.05 (0.72,1.52)	0.800
9-5	Relative Age Appearance	0.89 (0.75,1.05)	0.153
9-7	Body Fat	1.29 (1.14,1.46)	<0.001
9-9	Erythrocyte Sedimentation Rate	1.14 (0.94,1.38)	0.169
10-3	Skin Neoplasms	0.92 (0.82,1.03)	0.147
10-4	Malignant Skin Neoplasms	1.06 (0.91,1.25)	0.447
10-5	Benign Skin Neoplasms	0.84 (0.74,0.95)	0.005
10-6	Skin Neoplasms of Uncertain Behavior or Unspecified Nature	1.11 (0.69,1.81)	0.664
10-7	Basal Cell Carcinoma (All Sites Combined)	0.99 (0.83,1.18)	0.924
10-8	Basal Cell Carcinoma (Ear, Face, Head, and Neck)	0.89 (0.74,1.09)	0.257
10-9	Basal Cell Carcinoma (Trunk)	1.51 (1.07,2.13)	0.016
10-10	Basal Cell Carcinoma (Upper Extremities)	1.00 (0.63,1.57)	0.987
10-11	Basal Cell Carcinoma (Lower Extremities)	0.91 (0.42,1.98)	0.803
10-12	Squamous Cell Carcinoma	1.07 (0.70,1.63)	0.749
10-13	Nonmelanoma	1.02 (0.86,1.21)	0.786
10-14	Melanoma	1.18 (0.81,1.71)	0.399
10-15	Systemic Neoplasms (All Sites Combined)	1.05 (0.93,1.18)	0.399
10-16	Malignant Systemic Neoplasms	1.06 (0.84,1.34)	0.599
10-17	Benign Systemic Neoplasms	1.01 (0.89,1.14)	0.905
10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	1.07 (0.67,1.72)	0.767
10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	1.04 (0.57,1.91)	0.897
10-20	Malignant Systemic Neoplasms (Oral Cavity, Pharynx, and Larynx)	1.60 (0.65,3.97)	0.296
10-21	Malignant Systemic Neoplasms (Thymus, Heart, and Mediastinum)	0.31 (0.09,1.04)	0.017
10-22	Malignant Systemic Neoplasms (Thyroid Gland)	0.95 (0.34,2.70)	0.925
10-23	Malignant Systemic Neoplasms (Bronchus and Lung)	1.15 (0.63,2.11)	0.638
10-24	Malignant Systemic Neoplasms (Liver)	2.52 (1.03,6.15)	0.042
10-25	Malignant Systemic Neoplasms (Colon and Rectum)	1.44 (0.72,2.86)	0.291
10-26	Malignant Systemic Neoplasms (Kidney and Bladder)	1.14 (0.66,1.96)	0.634
10-27	Malignant Systemic Neoplasms (Prostate)	0.83 (0.56,1.23)	0.353
10-28	Malignant Systemic Neoplasms (Testicles)	1.35 (0.54,3.37)	0.517
10-29	Malignant Systemic Neoplasms (Connective and Other Soft Tissues)	2.36 (0.72,7.79)	0.155
10-30	Hodgkin's Disease	0.70 (0.08,6.51)	0.745
10-31	Non-Hodgkin's Lymphoma	0.31 (0.01,7.88)	0.443
10-32	Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	0.63 (0.09,4.17)	0.580
10-33	All Malignant Skin and Systemic Neoplasms	1.10 (0.94,1.27)	0.227
10-34	All Skin and Systemic Neoplasms	0.99 (0.88,1.11)	0.854
10-36	PSA	1.05 (0.81,1.35)	0.735
11-3	Inflammatory Diseases	0.90 (0.52,1.57)	0.716
11-4	Hereditary and Degenerative Disorders	0.92 (0.77,1.11)	0.380
11-5	Peripheral Disorders	1.20 (1.04,1.38)	0.011
11-6	Other Neurological Disorders	0.97 (0.84,1.11)	0.625
11-7	Smell	0.83 (0.56,1.22)	0.333
11-8	Visual Fields	1.40 (0.58,3.38)	0.456
11-9	Light Reaction	0.75 (0.18,3.12)	0.681

**Table G-20. Summary of Adjusted Results for Dichotomous Variables – Model 4
(Ranch Hands: Log₂ (1987 Dioxln + 1)) (Continued)**

Table Ref.	Clinical Parameter	Adj. Relative Risk (95% C.I.)	p-Value
11-10	Ocular Movement	0.91 (0.63,1.32)	0.614
11-11	Facial Sensation	0.79 (0.23,2.66)	0.694
11-12	Jaw Clench	1.02 (0.34,3.08)	0.969
11-13	Smile	0.99 (0.59,1.65)	0.972
11-14	Palpebral Fissure	1.17 (0.65,2.12)	0.598
11-15	Balance	0.95 (0.52,1.73)	0.860
11-16	Speech	0.73 (0.36,1.47)	0.370
11-17	Tongue Position Relative to Midline	1.02 (0.34,3.08)	0.969
11-18	Palate and Uvula Movement	1.19 (0.32,4.46)	0.800
11-19	Cranial Nerve Index	0.88 (0.71,1.10)	0.254
11-20	Neck Range of Motion	1.09 (0.94,1.26)	0.267
11-21	Pinprick	1.12 (0.88,1.42)	0.345
11-22	Light Touch	1.01 (0.75,1.36)	0.940
11-23	Muscle Status	0.98 (0.76,1.27)	0.897
11-24	Patellar Reflex	1.15 (0.80,1.64)	0.447
11-25	Achilles Reflex	1.12 (0.96,1.31)	0.157
11-26	Biceps Reflex	1.52 (0.89,2.61)	0.120
11-27	Babinski Reflex	0.65 (0.33,1.29)	0.223
11-29	Polyneuropathy Prevalence Index	1.16 (0.98,1.37)	0.080
11-30	Multiple Polyneuropathy Index	1.29 (0.95,1.76)	0.101
11-31	Confirmed Polyneuropathy Indicator	2.21 (1.24,3.96)	0.003
11-32	Tremor	0.93 (0.75,1.14)	0.478
11-33	Coordination	0.83 (0.57,1.21)	0.330
11-34	Romberg Sign	0.95 (0.52,1.73)	0.860
11-35	Gait	0.99 (0.78,1.25)	0.905
11-36	CNS Index	0.94 (0.80,1.10)	0.443
12-3	Psychoses	1.08 (0.84,1.40)	0.550
12-4	Alcohol Dependence	0.99 (0.82,1.20)	0.898
12-5	Drug Dependence	0.45 (0.10,2.11)	0.226
12-6	Anxiety	0.95 (0.84,1.07)	0.368
12-7	Other Neuroses	1.02 (0.91,1.14)	0.763
12-8	SCL-90-R Anxiety	0.96 (0.81,1.13)	0.619
12-9	SCL-90-R Depression	0.97 (0.84,1.13)	0.712
12-10	SCL-90-R Hostility	1.01 (0.84,1.23)	0.889
12-11	SCL-90-R Interpersonal Sensitivity	0.95 (0.82,1.10)	0.511
12-12	SCL-90-R Obsessive-Compulsive Behavior	1.00 (0.87,1.16)	0.964
12-13	SCL-90-R Paranoid Ideation	1.00 (0.82,1.20)	0.960
12-14	SCL-90-R Phobic Anxiety	1.03 (0.88,1.21)	0.727
12-15	SCL-90-R Psychoticism	1.06 (0.91,1.23)	0.484
12-16	SCL-90-R Somatization	0.95 (0.83,1.09)	0.458
12-17	SCL-90-R Global Severity Index (GSI)	1.04 (0.90,1.21)	0.555
12-18	SCL-90-R Positive Symptom Total (PST)	1.02 (0.89,1.18)	0.764
12-19	SCL-90-R Positive Symptom Distress Index (PSDI)	0.96 (0.81,1.15)	0.675
13-3	Uncharacterized Hepatitis	0.78 (0.55,1.12)	0.184
13-4	Jaundice	0.39 (0.24,0.65)	<0.001
13-5	Chronic Liver Disease and Cirrhosis (Alcohol-related)	1.09 (0.84,1.41)	0.506
13-6	Chronic Liver Disease and Cirrhosis (Non-alcohol-related)	1.02 (0.68,1.54)	0.920
13-7	Liver Abscess and Sequelae of Chronic Liver Disease	2.05 (0.68,6.15)	0.212
13-8	Enlarged Liver (Hepatomegaly)	0.93 (0.60,1.46)	0.753

**Table G-20. Summary of Adjusted Results for Dichotomous Variables – Model 4
(Ranch Hands: Log₂ (1987 Dioxin + 1)) (Continued)**

Table Ref.	Clinical Parameter	Adj. Relative Risk (95% C.I.)	p-Value
13-9	Other Liver Disorders	1.11 (0.99,1.25)	0.077
13-10	Current Hepatomegaly	1.05 (0.64,1.74)	0.838
13-12	AST	1.38 (1.12,1.71)	0.002
13-14	ALT	1.48 (1.20,1.83)	<0.001
13-16	GGT	1.27 (1.05,1.53)	0.012
13-18	Alkaline Phosphatase	0.69 (0.50,0.94)	0.020
13-20	Total Bilirubin	0.94 (0.73,1.21)	0.646
13-21	Direct Bilirubin	0.79 (0.17,3.72)	0.764
13-23	Lactic Dehydrogenase	1.01 (0.84,1.21)	0.892
13-25	Cholesterol	1.08 (0.93,1.24)	0.312
13-27	HDL Cholesterol	0.82 (0.68,0.98)	0.029
13-29	Cholesterol-HDL Ratio	1.13 (1.01,1.26)	0.025
13-31	Triglycerides	1.23 (1.09,1.40)	0.001
13-33	Creatine Phosphokinase	1.22 (1.00,1.49)	0.043
13-35	Serum Amylase	0.93 (0.68,1.26)	0.623
13-36	Antibodies for Hepatitis A	1.06 (0.94,1.19)	0.346
13-37	Evidence of Prior Hepatitis B	1.06 (0.89,1.25)	0.531
13-38	Current Hepatitis B	1.33 (0.27,6.59)	0.719
13-39	Antibodies for Hepatitis C	0.67 (0.40,1.14)	0.141
13-40	Stool Hemocult	1.13 (0.83,1.53)	0.448
13-42	Prealbumin	1.00 (0.63,1.60)	0.993
13-44	Albumin	0.52 (0.09,3.01)	0.442
13-46	α-1-Acid Glycoprotein	0.87 (0.68,1.11)	0.261
13-50	α-2-Macroglobulin	1.50 (1.08,2.08)	0.014
13-52	Apolipoprotein B	1.07 (0.96,1.18)	0.242
13-54	C3 Complement	0.57 (0.39,0.84)	0.004
13-56	C4 Complement	0.26 (0.08,0.86)	0.024
13-58	Haptoglobin	0.91 (0.82,1.02)	0.107
13-60	Transferrin	1.03 (0.85,1.24)	0.785
14-3	Essential Hypertension	1.18 (1.04,1.34)	0.011
14-4	Heart Disease (Excluding Essential Hypertension)	0.92 (0.81,1.04)	0.159
14-5	Myocardial Infarction	1.16 (0.94,1.44)	0.170
14-6	Stroke or Transient Ischemia Attack	1.15 (0.71,1.85)	0.578
14-8	Systolic Blood Pressure	0.88 (0.76,1.02)	0.099
14-10	Diastolic Blood Pressure	1.20 (0.89,1.61)	0.228
14-11	Heart Sounds	1.24 (0.89,1.73)	0.193
14-12	Overall Electrocardiograph	1.02 (0.89,1.17)	0.753
14-13	Right Bundle Branch Block	1.02 (0.69,1.50)	0.922
14-14	Left Bundle Branch Block	0.56 (0.23,1.39)	0.199
14-15	Non-Specific ST- and T-Wave Changes	1.12 (0.95,1.32)	0.180
14-16	Bradycardia	0.98 (0.65,1.49)	0.932
14-17	Tachycardia	1.55 (0.85,2.84)	0.165
14-18	Arrhythmia	1.12 (0.85,1.49)	0.422
14-19	Evidence of Prior Myocardial Infarction	1.33 (0.95,1.87)	0.089
14-20	ECG: Other Diagnoses	1.47 (0.58,3.73)	0.413
14-21	Funduscopy Examination	1.03 (0.85,1.24)	0.767
14-22	Carotid Bruits	0.94 (0.65,1.36)	0.755
14-23	Radial Pulses	0.61 (0.30,1.21)	0.140
14-24	Femoral Pulses	1.29 (0.83,2.03)	0.255

**Table G-20. Summary of Adjusted Results for Dichotomous Variables – Model 4
(Ranch Hands: Log₂ (1987 Dioxin + 1)) (Continued)**

Table Ref.	Clinical Parameter	Adj. Relative Risk (95% C.I.)	p-Value
14-25	Popliteal Pulses	1.02 (0.72,1.46)	0.908
14-26	Dorsalis Pedis Pulses	1.07 (0.85,1.33)	0.580
14-27	Posterior Tibial Pulses	1.12 (0.88,1.43)	0.354
14-28	Leg Pulses	1.08 (0.88,1.31)	0.467
14-29	Peripheral Pulses	1.07 (0.88,1.30)	0.485
14-30	ICVI Index	1.07 (0.79,1.45)	0.666
15-14	Prothrombin Time	0.86 (0.54,1.38)	0.526
15-15	RBC Morphology	1.02 (0.84,1.25)	0.822
15-18	Absolute Neutrophils (bands) (Zero vs. Nonzero)	0.92 (0.80,1.06)	0.264
15-22	Absolute Eosinophils (Zero vs. Nonzero)	0.99 (0.84,1.16)	0.894
15-24	Absolute Basophils (Zero vs. Nonzero)	0.94 (0.84,1.05)	0.257
16-3	Past Thyroid Disease	1.10 (0.89,1.36)	0.358
16-4	Composite Diabetes Indicator	1.43 (1.21,1.68)	<0.001
16-7	Thyroid Gland	1.09 (0.50,2.36)	0.825
16-8	Testicular Examination	1.09 (0.82,1.44)	0.545
16-12	Thyroxine	1.14 (0.79,1.64)	0.487
16-13	Anti-Thyroid Antibodies	0.86 (0.41,1.80)	0.689
16-15	Fasting Glucose	1.25 (1.08,1.46)	0.003
16-17	2-Hour Postprandial Glucose	1.10 (0.91,1.33)	0.332
16-18	Fasting Urinary Glucose	1.47 (1.11,1.94)	0.006
16-19	2-Hour Postprandial Urinary Glucose	0.90 (0.78,1.03)	0.129
16-23	α-1-C Hemoglobin	1.37 (1.15,1.64)	<0.001
16-25	Total Testosterone	1.20 (0.96,1.49)	0.106
16-27	Free Testosterone	0.94 (0.52,1.70)	0.835
16-29	Estradiol	0.99 (0.89,1.12)	0.926
16-31	LH	0.84 (0.66,1.07)	0.154
16-33	FSH	1.16 (0.93,1.45)	0.188
17-14	ANA Test	0.96 (0.86,1.08)	0.512
17-15	ANA Thyroid Microsomal Antibody	0.96 (0.69,1.35)	0.824
17-16	MSK Smooth Muscle Antibody	0.89 (0.75,1.05)	0.155
17-17	MSK Mitochondrial Antibody	0.65 (0.31,1.38)	0.245
17-18	MSK Parietal Antibody	1.22 (0.93,1.60)	0.140
17-19	Rheumatoid Factor	0.86 (0.71,1.04)	0.122
18-3	Asthma	1.06 (0.81,1.37)	0.680
18-4	Bronchitis	0.90 (0.79,1.03)	0.137
18-5	Pneumonia	0.89 (0.73,1.08)	0.229
18-6	Thorax and Lung Abnormalities	1.20 (1.00,1.43)	0.054
18-7	X-ray Interpretation	0.80 (0.67,0.96)	0.015

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

Table G-21. Summary of Adjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value
11-28	Polyneuropathy Severity Index	Moderate vs. None or Mild	All	2.32 (1.14,4.73)	0.020
			Officer	1.72 (0.57,5.24)	0.338
			Enlisted Flyer	4.13 (0.83,20.52)	0.083
			Enlisted Groundcrew	2.16 (0.67,7.01)	0.200
		Severe vs. None or Mild	All	5.44 (0.59,50.52)	0.136
			Officer	--	--
			Enlisted Flyer	--	--
			Enlisted Groundcrew	1.64 (0.09,29.24)	0.738
13-48	α -1-Antitrypsin	Low vs. Normal	All	0.81 (0.37,1.78)	0.606
			Officer	1.10 (0.44,2.78)	0.834
			Enlisted Flyer	--	--
			Enlisted Groundcrew	0.47 (0.10,2.34)	0.358
		High vs. Normal	All	2.51 (0.80,7.90)	0.116
			Officer	--	--
			Enlisted Flyer	0.73 (0.08,6.49)	0.778
			Enlisted Groundcrew	2.69 (0.63,11.58)	0.183
15-4	RBC Count	Low vs. Normal	All	1.00 (0.66,1.51)	0.991
			Officer	0.95 (0.52,1.75)	0.869
			Enlisted Flyer	1.97 (0.73,5.29)	0.180
			Enlisted Groundcrew	0.75 (0.37,1.53)	0.426
		High vs. Normal	All	0.58 (0.22,1.54)	0.278
			Officer	0.23 (0.03,1.89)	0.170
			Enlisted Flyer	1.25 (0.17,9.24)	0.830
			Enlisted Groundcrew	0.73 (0.18,2.98)	0.660
15-6	WBC Count	Low vs. Normal	All	1.18 (0.80,1.74)	0.415
			Officer	1.10 (0.62,1.96)	0.754
			Enlisted Flyer	2.12 (0.73,6.09)	0.165
			Enlisted Groundcrew	1.03 (0.55,1.93)	0.923

Table G-21. Summary of Adjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)
(Continued)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value
15-6	WBC Count (continued)	High vs. Normal	All	0.93 (0.58,1.51)	0.783
			Officer	0.91 (0.35,2.35)	0.843
			Enlisted Flyer	0.99 (0.37,2.68)	0.985
			Enlisted Groundcrew	0.93 (0.47,1.82)	0.822
15-8	Hemoglobin	Low vs. Normal	All	1.15 (0.81,1.63)	0.433
			Officer	1.25 (0.72,2.19)	0.433
			Enlisted Flyer	1.58 (0.73,3.44)	0.246
			Enlisted Groundcrew	0.90 (0.51,1.58)	0.713
		High vs. Normal	All	0.61 (0.16,2.38)	0.480
			Officer	1.52 (0.21,10.95)	0.675
			Enlisted Flyer	--	--
			Enlisted Groundcrew	--	--
15-10	Hematocrit	Low vs. Normal	All	1.04 (0.59,1.85)	0.886
			Officer	0.95 (0.38,2.36)	0.908
			Enlisted Flyer	1.84 (0.51,6.72)	0.353
			Enlisted Groundcrew	0.85 (0.33,2.18)	0.739
		High vs. Normal	All	0.28 (0.03,2.40)	0.245
			Officer	--	--
			Enlisted Flyer	--	--
			Enlisted Groundcrew	--	--
15-12	Platelet Count	Low vs. Normal	All	0.84 (0.50,1.42)	0.509
			Officer	2.64 (1.15,6.05)	0.022
			Enlisted Flyer	0.10 (0.01,0.79)	0.029
			Enlisted Groundcrew	0.48 (0.19,1.23)	0.127
		High vs. Normal	All	1.13 (0.30,4.27)	0.853
			Officer	0.55 (0.06,5.37)	0.606
			Enlisted Flyer	1.18 (0.07,19.42)	0.906
			Enlisted Groundcrew	2.61 (0.23,29.36)	0.437

Table G-21. Summary of Adjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)
(Continued)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value
16-5	Diabetic Severity	No Treatment vs. Nondiabetic	All	1.10 (0.74,1.62)	0.642
			Officer	0.96 (0.50,1.86)	0.902
			Enlisted Flyer	0.71 (0.29,1.72)	0.445
			Enlisted Groundcrew	1.48 (0.83,2.66)	0.185
		Diet Only vs. Nondiabetic	All	1.52 (0.78,2.96)	0.219
			Officer	2.04 (0.69,5.99)	0.195
			Enlisted Flyer	1.09 (0.15,7.93)	0.931
			Enlisted Groundcrew	1.32 (0.51,3.41)	0.572
		Oral Hypoglycemic vs. Nondiabetic	All	0.73 (0.48,1.11)	0.137
			Officer	0.68 (0.33,1.39)	0.288
			Enlisted Flyer	0.75 (0.29,1.91)	0.544
			Enlisted Groundcrew	0.76 (0.41,1.41)	0.384
		Requiring Insulin vs. Nondiabetic	All	2.20 (1.15,4.20)	0.017
			Officer	2.39 (0.92,6.20)	0.074
			Enlisted Flyer	1.22 (0.24,6.24)	0.811
			Enlisted Groundcrew	2.52 (0.88,7.23)	0.084
16-10	TSH	Abnormal Low vs. Normal	All	1.57 (0.63,3.88)	0.332
			Officer	2.78 (0.50,15.33)	0.241
			Enlisted Flyer	2.01 (0.33,12.28)	0.448
			Enlisted Groundcrew	0.88 (0.21,3.71)	0.859
		Abnormal High vs. Normal	All	1.42 (0.89,2.28)	0.140
			Officer	1.18 (0.57,2.44)	0.648
			Enlisted Flyer	0.63 (0.15,2.55)	0.513
			Enlisted Groundcrew	2.11 (1.04,4.28)	0.037
16-21	Serum Insulin	Abnormal Low vs. Normal	All	0.79 (0.58,1.08)	0.143
			Officer	0.76 (0.48,1.22)	0.256
			Enlisted Flyer	0.83 (0.35,1.95)	0.671
			Enlisted Groundcrew	0.81 (0.50,1.33)	0.412

Table G-21. Summary of Adjusted Results for Polytomous Variables – Model 1 (Ranch Hands vs. Comparisons)
(Continued)

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value
16-21	Serum Insulin (continued)	Abnormal High vs. Normal	All	0.96 (0.77,1.21)	0.749
			Officer	1.08 (0.75,1.53)	0.688
			Enlisted Flyer	0.72 (0.41,1.27)	0.257
			Enlisted Groundcrew	0.97 (0.69,1.36)	0.870
18-11	Loss of Vital Capacity	Mild vs. None	All	0.96 (0.69,1.35)	0.832
			Officer	1.09 (0.62,1.90)	0.768
			Enlisted Flyer	0.68 (0.31,1.52)	0.349
			Enlisted Groundcrew	1.00 (0.61,1.63)	0.999
		Moderate or Severe vs. None	All	0.67 (0.31,1.47)	0.324
			Officer	1.42 (0.40,5.00)	0.586
			Enlisted Flyer	0.25 (0.03,2.30)	0.220
			Enlisted Groundcrew	0.52 (0.16,1.70)	0.279
18-12	Obstructive Abnormality	Mild vs. None	All	1.08 (0.88,1.32)	0.449
			Officer	1.38 (1.01,1.89)	0.041
			Enlisted Flyer	0.79 (0.48,1.29)	0.345
			Enlisted Groundcrew	0.96 (0.70,1.32)	0.821
		Moderate vs. None	All	0.97 (0.66,1.44)	0.887
			Officer	1.21 (0.63,2.32)	0.560
			Enlisted Flyer	1.36 (0.57,3.23)	0.492
			Enlisted Groundcrew	0.65 (0.35,1.22)	0.180
		Severe vs. None	All	1.22 (0.57,2.59)	0.605
			Officer	1.81 (0.50,6.57)	0.366
			Enlisted Flyer	1.27 (0.35,4.58)	0.715
			Enlisted Groundcrew	0.69 (0.16,2.87)	0.607

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

Table G-22. Summary of Adjusted Results for Polytomous Variables – Model 2 (Ranch Hands: Log₂ (Initial Dioxin))

Table Ref.	Clinical Parameter	Contrast	Adj. Relative Risk (95% C.I.)	p-Value
11-28	Polyneuropathy Severity Index	Moderate vs. None or Mild	1.52 (1.02,2.28)	0.042
		Severe vs. None or Mild	0.87 (0.24,3.20)	0.832
13-48	α -1-Antitrypsin	Low vs. Normal	0.75 (0.30,1.84)	0.526
		High vs. Normal	0.80 (0.21,3.00)	0.735
15-4	RBC Count	Low vs. Normal	0.95 (0.64,1.41)	0.804
		High vs. Normal	0.88 (0.39,1.99)	0.751
15-6	WBC Count	Low vs. Normal	0.61 (0.38,0.99)	0.043
		High vs. Normal	0.83 (0.54,1.27)	0.395
15-8	Hemoglobin	Low vs. Normal	0.85 (0.61,1.20)	0.364
		High vs. Normal	1.04 (0.17,6.53)	0.966
15-10	Hematocrit	Low vs. Normal	1.10 (0.66,1.85)	0.714
		High vs. Normal	1.07 (0.17,6.61)	0.942
15-12	Platelet Count	Low vs. Normal	0.69 (0.35,1.37)	0.290
		High vs. Normal	0.67 (0.16,2.88)	0.590
16-5	Diabetic Severity	No Treatment vs. Nondiabetic	1.29 (0.93,1.78)	0.121
		Diet Only vs. Nondiabetic	1.25 (0.74,2.11)	0.411
		Oral Hypoglycemic vs. Nondiabetic	1.41 (0.98,2.01)	0.062
		Requiring Insulin vs. Nondiabetic	2.47 (1.43,4.25)	0.001
16-10	Thyroid Stimulating Hormone	Low vs. Normal	1.62 (0.82,3.20)	0.161
		High vs. Normal	1.29 (0.90,1.85)	0.169
16-21	Serum Insulin	Low vs. Normal	0.97 (0.65,1.47)	0.901
		High vs. Normal	1.15 (0.93,1.43)	0.182
18-11	Loss of Vital Capacity	Mild vs. None	0.91 (0.66,1.24)	0.539
		Moderate or Severe vs. None	1.02 (0.35,2.99)	0.973
18-12	Obstructive Abnormality	Mild vs. None	0.86 (0.72,1.02)	0.082
		Moderate vs. None	0.98 (0.67,1.42)	0.902
		Severe vs. None	0.63 (0.28,1.44)	0.276

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

Table G-23. Summary of Adjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
11-28	Polyneuropathy Severity Index	Moderate vs. None or Mild	Comparison	1,145		
			Background RH	358	1.29 (0.45,3.70)	0.641
			Low RH	225	2.35 (0.90,6.09)	0.079
			High RH	225	3.06 (1.16,8.11)	0.024
			Low plus High RH	450	2.68 (1.22,5.90)	0.014
		Severe vs. None or Mild	Comparison	1,145		
			Background RH	358	2.59 (0.15,43.89)	0.511
			Low RH	225	7.43 (0.62,89.56)	0.114
			High RH	225	9.83 (0.52,186.07)	0.128
			Low plus High RH	450	8.55 (0.77,94.34)	0.080
13-48	α -1-Antitrypsin	Low vs. Normal	Comparison	1,193		
			Background RH	374	0.78 (0.30,2.01)	0.602
			Low RH	235	0.76 (0.17,3.35)	0.712
			High RH	238	1.41 (0.28,7.06)	0.677
			Low plus High RH	473	1.03 (0.32,3.31)	0.955
		High vs. Normal	Comparison	1,193		
			Background RH	374	2.76 (0.74,10.35)	0.131
			Low RH	235	1.16 (0.13,10.62)	0.895
			High RH	238	2.64 (0.43,16.23)	0.295
			Low plus High RH	473	1.75 (0.36,8.53)	0.486
15-4	RBC Count	Low vs. Normal	Comparison	1,210		
			Background RH	380	1.07 (0.61,1.86)	0.818
			Low RH	238	0.92 (0.48,1.78)	0.809
			High RH	239	1.04 (0.49,2.23)	0.917
			Low plus High RH	477	0.98 (0.57,1.68)	0.942

Table G-23. Summary of Adjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category) (Continued)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
15-4	RBC Count (continued)	High vs. Normal	Comparison	1,210		
			Background RH	380	0.25 (0.03,1.99)	0.192
			Low RH	238	0.54 (0.12,2.48)	0.431
			High RH	239	1.16 (0.31,4.42)	0.827
			Low plus High RH	477	0.79 (0.27,2.33)	0.676
15-6	WBC Count	Low vs. Normal	Comparison	1,210		
			Background RH	380	1.16 (0.70,1.93)	0.564
			Low RH	238	1.67 (0.96,2.91)	0.070
			High RH	239	0.64 (0.26,1.56)	0.326
			Low plus High RH	477	1.03 (0.59,1.81)	0.907
		High vs. Normal	Comparison	1,210		
			Background RH	380	0.86 (0.43,1.71)	0.660
			Low RH	238	0.82 (0.36,1.90)	0.650
			High RH	239	1.09 (0.53,2.24)	0.825
			Low plus High RH	477	0.95 (0.52,1.72)	0.855
15-8	Hemoglobin	Low vs. Normal	Comparison	1,210		
			Background RH	380	1.44 (0.91,2.29)	0.118
			Low RH	238	0.96 (0.54,1.70)	0.886
			High RH	239	0.90 (0.48,1.69)	0.735
			Low plus High RH	477	0.93 (0.59,1.47)	0.746
		High vs. Normal	Comparison	1,210		
			Background RH	380	1.01 (0.20,5.14)	0.987
			Low RH	238	--	--
			High RH	239	0.69 (0.08,6.00)	0.735
			Low plus High RH	477	--	--

Table G-23. Summary of Adjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category) (Continued)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
15-10	Hematocrit	Low vs. Normal	Comparison	1,210		
			Background RH	380	1.00 (0.44,2.28)	0.998
			Low RH	238	0.78 (0.29,2.07)	0.615
			High RH	239	1.01 (0.37,2.77)	0.980
			Low plus High RH	477	0.89 (0.42,1.89)	0.757
		High vs. Normal	Comparison	1,210		
			Background RH	380	--	--
			Low RH	238	--	--
			High RH	239	0.98 (0.10,9.53)	0.986
			Low plus High RH	477	--	--
15-12	Platelet Count	Low vs. Normal	Comparison	1,204		
			Background RH	378	1.40 (0.73,2.70)	0.310
			Low RH	237	0.79 (0.33,1.92)	0.604
			High RH	238	0.26 (0.06,1.11)	0.068
			Low plus High RH	475	0.45 (0.19,1.09)	0.078
		High vs. Normal	Comparison	1,204		
			Background RH	378	0.86 (0.16,4.61)	0.858
			Low RH	237	--	--
			High RH	238	3.37 (0.50,22.63)	0.211
			Low plus High RH	475	--	--
16-5	Diabetic Severity	No Treatment vs. Nondiabetic	Comparison	1,183		
			Background RH	375	0.92 (0.51,1.65)	0.771
			Low RH	232	0.95 (0.50,1.80)	0.878
			High RH	238	1.58 (0.89,2.81)	0.122
			Low plus High RH	470	1.23 (0.77,1.95)	0.385

Table G-23. Summary of Adjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category) (Continued)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
16-5	Diabetic Severity (continued)	Diet Only vs. Nondiabetic	Comparison	1,183		
			Background RH	375	1.24 (0.47,3.30)	0.661
			Low RH	232	1.55 (0.55,4.34)	0.408
			High RH	238	2.32 (0.88,6.12)	0.089
			Low plus High RH	470	1.90 (0.87,4.15)	0.108
		Oral Hypoglycemic vs. Nondiabetic	Comparison	1,183		
			Background RH	375	0.28 (0.11,0.71)	0.008
			Low RH	232	0.89 (0.46,1.71)	0.726
			High RH	238	1.17 (0.63,2.18)	0.624
			Low plus High RH	470	1.02 (0.63,1.65)	0.931
		Requiring Insulin vs. Nondiabetic	Comparison	1,183		
			Background RH	375	1.42 (0.59,3.45)	0.435
			Low RH	232	2.41 (1.00,5.82)	0.050
			High RH	238	3.46 (1.36,8.81)	0.009
			Low plus High RH	470	2.90 (1.40,5.99)	0.004
16-10	TSH	Low vs. Normal	Comparison	1,161		
			Background RH	365	2.33 (0.79,6.87)	0.125
			Low RH	233	0.52 (0.06,4.15)	0.536
			High RH	233	1.51 (0.39,5.91)	0.550
			Low plus High RH	466	0.89 (0.24,3.33)	0.858
		High vs. Normal	Comparison	1,161		
			Background RH	365	1.43 (0.78,2.62)	0.244
			Low RH	233	0.98 (0.43,2.24)	0.963
			High RH	233	1.58 (0.74,3.35)	0.236
			Low plus High RH	466	1.24 (0.68,2.28)	0.481

Table G-23. Summary of Adjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category) (Continued)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
16-21	Serum Insulin	Low vs. Normal	Comparison	987		
			Background RH	338	0.90 (0.61,1.31)	0.573
			Low RH	183	0.82 (0.47,1.44)	0.496
			High RH	181	0.55 (0.29,1.08)	0.081
			Low plus High RH	364	0.68 (0.43,1.07)	0.093
		High vs. Normal	Comparison	987		
			Background RH	338	0.99 (0.74,1.34)	0.971
			Low RH	183	1.00 (0.70,1.44)	0.994
			High RH	181	0.94 (0.65,1.37)	0.759
			Low plus High RH	364	0.97 (0.74,1.28)	0.843
18-11	Loss of Vital Capacity	Mild vs. None	Comparison	1,210		
			Background RH	380	1.28 (0.82,1.99)	0.284
			Low RH	237	0.71 (0.41,1.24)	0.235
			High RH	243	0.75 (0.43,1.32)	0.325
			Low plus High RH	480	0.73 (0.48,1.12)	0.151
		Moderate or Severe vs. None	Comparison	1,210		
			Background RH	380	1.44 (0.54,3.81)	0.468
			Low RH	237	0.34 (0.07,1.57)	0.165
			High RH	243	0.47 (0.10,2.17)	0.337
			Low plus High RH	480	0.40 (0.13,1.25)	0.115

Table G-23. Summary of Adjusted Results for Polytomous Variables – Model 3 (Ranch Hands and Comparisons by Dioxin Category) (Continued)

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Adj. Relative Risk (95% C.I.)	p-Value
18-12	Obstructive Abnormality	Mild vs. None	Comparison	1,210		
			Background RH	380	1.21 (0.93,1.58)	0.164
			Low RH	237	1.17 (0.85,1.60)	0.338
			High RH	243	0.74 (0.52,1.06)	0.096
			Low plus High RH	480	0.93 (0.72,1.20)	0.556
		Moderate vs. None	Comparison	1,210		
			Background RH	380	1.22 (0.73,2.04)	0.440
			Low RH	237	0.78 (0.40,1.52)	0.459
			High RH	243	0.76 (0.39,1.49)	0.429
			Low plus High RH	480	0.77 (0.46,1.28)	0.311
		Severe vs. None	Comparison	1,210		
			Background RH	380	1.64 (0.62,4.34)	0.323
			Low RH	237	1.75 (0.62,4.89)	0.289
			High RH	243	0.28 (0.03,2.26)	0.232
			Low plus High RH	480	0.69 (0.20,2.37)	0.557

--: 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-24. Summary of Adjusted Results for Polytomous Variables – Model 4 (Ranch Hands: Log₂ (1987 Dioxin + 1))

Table Ref.	Clinical Parameter	Contrast	Adj. Relative Risk (95% C.I.)	p-Value
11-28	Polyneuropathy Severity Index	Moderate vs. None or Mild	1.51 (1.09,2.09)	0.013
		Severe vs. None or Mild	1.48 (0.62,3.50)	0.376
13-48	α-1-Antitrypsin	Low vs. Normal	0.84 (0.52,1.37)	0.486
		High vs. Normal	0.75 (0.44,1.29)	0.302
15-4	RBC Count	Low vs. Normal	0.91 (0.69,1.21)	0.511
		High vs. Normal	1.10 (0.60,2.00)	0.764
15-6	WBC Count	Low vs. Normal	0.76 (0.59,0.98)	0.032
		High vs. Normal	0.93 (0.72,1.20)	0.570
15-8	Hemoglobin	Low vs. Normal	0.84 (0.68,1.04)	0.108
		High vs. Normal	0.52 (0.22,1.23)	0.135
15-10	Hematocrit	Low vs. Normal	0.97 (0.67,1.42)	0.894
		High vs. Normal	1.44 (0.38,5.40)	0.588
15-12	Platelet Count	Low vs. Normal	0.73 (0.49,1.10)	0.135
		High vs. Normal	0.84 (0.43,1.64)	0.619
16-5	Diabetic Severity	No Treatment vs. Nondiabetic	1.23 (0.96,1.58)	0.097
		Diet Only vs. Nondiabetic	1.49 (1.00,2.20)	0.048
		Oral Hypoglycemic vs. Nondiabetic	1.85 (1.37,2.49)	<0.001
		Requiring Insulin vs. Nondiabetic	1.38 (0.96,2.00)	0.084
16-10	TSH	Low vs. Normal	1.08 (0.64,1.83)	0.767
		High vs. Normal	0.97 (0.74,1.27)	0.832
16-21	Serum Insulin	Low vs. Normal	0.94 (0.76,1.17)	0.589
		High vs. Normal	1.03 (0.89,1.19)	0.685
18-11	Loss of Vital Capacity	Mild vs. None	0.80 (0.65,1.00)	0.046
		Moderate or Severe vs. None	0.87 (0.50,1.50)	0.605
18-12	Obstructive Abnormality	Mild vs. None	0.91 (0.80,1.04)	0.177
		Moderate vs. None	0.87 (0.67,1.12)	0.269
		Severe vs. None	0.78 (0.50,1.22)	0.272

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

APPENDIX H

APPENDIX H. ABBREVIATIONS AND ACRONYMS

A	adjusted analyses
Adj. Mean	adjusted mean
Adj. RR	adjusted relative risk
Adj. Slope	adjusted slope
AFHS	Air Force Health Study
Ah	aryl hydrocarbon
AIDS	acquired immunodeficiency syndrome
ALT	alanine aminotransferase
ANA	antinuclear antibody
AST	aspartate aminotransferase
C	Celsius
C	Comparison(s)
C	continuous analysis only
CAPI	computer-assisted personal interview
CDC	Centers for Disease Control and Prevention
CI	Cornell Index
C.I.	confidence interval
CMI	Cornell Medical Index
CNS	central nervous system
COV	covariate
cpm	counts per minute
CS	chi-square contingency table analysis (continuity-adjusted)
CV	coefficient of variation
D	discrete analysis only
D/C	discrete and continuous analyses for dependent variables; appropriate form for analysis (either discrete or continuous) for covariates
DEP	dependent variable
DNA	deoxyribonucleic acid
DXCAT	categorized dioxin
ECG	electrocardiograph or electrocardiogram
Est. RR	estimated relative risk
EXC	exclusion

Appendix H. Abbreviations and Acronyms (Continued)

FC	fully compliant at the baseline examination
FEFmax	forced expiratory flow maximum
FEV ₁	forced expiratory volume in 1 second
FSH	follicle stimulating hormone
FTI	free thyroxine index
FVC	forced vital capacity
G	good result
GGT	gamma glutamyl transferase
GLM	general linear models analysis
GND	good result, measurable below limit of detection
GNQ	good result, measurable below limit of quantification
GSI	global severity index
HDL	high-density lipoprotein
HIV	human immunodeficiency virus
HRB	Halstead-Reitan Battery
ICD-9-CM	International Classification of Disease, 9th Edition, Clinical Modification
ICVI	intermittent claudication and vascular insufficiency
IL-2	Interleukin-2
IOM	Institute of Medicine
IQ	intelligence quotient
L	longitudinal analysis
LAB	1997 laboratory results
LBBB	left bundle branch block
LDH	lactic dehydrogenase
LH	luteinizing hormone
LR	logistic regression analysis
MCH	mean corpuscular hemoglobin
MCHC	mean corpuscular hemoglobin concentration
MCMi	Millon Clinical Multiaxial Inventory
MCV	mean corpuscular volume
MIL	Air Force military records
ml	milliliter

Appendix H. Abbreviations and Acronyms (Continued)

MLC	mixed lymphocyte culture
MMPI	Minnesota Multiphasic Personality Inventory
MR-V	medical records (verified)
MSK	mouse stomach kidney
NAS	National Academy of Sciences
NHL	non-Hodgkin's lymphoma
NIDDM	non-insulin-dependent diabetes mellitus
NIH	National Institutes of Health
NIOSH	National Institute for Occupational Safety and Health
NKC	natural killer cell
NORC	National Opinion Research Center
NR	no result
NS	new to study since the baseline examination (Chapter 5)
NS or ns	not significant ($p > 0.10$)
NS* or ns*	marginally significant ($0.05 < p \leq 0.10$)
OMR	optical mark recognition
PA	posterior-anterior
PBS	phosphate-buffered saline
PC	partially compliant at the baseline examination
PCT	porphyria cutanea tarda
PE	physical examination
PHA	phytohemagglutinin
ppq	parts per quadrillion
ppt	parts per trillion
PR	polytomous logistic regression analysis
PSA	prostate-specific antigen
PSDI	positive symptom distress index
PST	positive symptom total
PTSD	post-traumatic stress disorder
PWM	pokeweed mitogen
QA	quality assurance
QC	quality control
QRC	Quality Review Committee
Q-SR	health questionnaire (self-reported)

Appendix H. Abbreviations and Acronyms (Continued)

R	refusal at the baseline examination
R ²	coefficient of determination
RBBB	right bundle branch block
RBC	red blood cell
RH	Ranch Hand(s)
RIA	radioimmunoassay
RPM	revolutions per minute
RR	relative risk
RVN	Republic of Vietnam
SAIC	Science Applications International Corporation
SCL-90-R	Symptom Checklist-90-Revised
SEA	Southeast Asia
ST	survival time analysis
Std. Error	standard error
STS	soft tissue sarcoma
T ₃	triiodothyronine
T ₄	serum thyroxine
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
TLC	total lymphocyte count
TSH	thyroid stimulating hormone
2,4-D	dichlorophenoxyacetic acid
2,4,5-T	2,4,5-trichlorophenoxyacetic acid
U	unadjusted analyses
UNL	unlocatable at the baseline examination
USAF	United States Air Force
VA	Veterans' Administration
VES	Vietnam Experience Study
VU	vibrational units
WAIS	Wechsler Adult Intelligence Scale
WBC	white blood cell