

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
10-28	Malignant Systemic Neoplasms (Prostate)	Comparison	1,062	2.1		
		Background RH	372	1.3	0.72 (0.27,1.92)	0.508
		Low RH	255	2.4	1.04 (0.41,2.61)	0.934
		High RH	259	1.5	0.68 (0.23,2.01)	0.487
		Low plus High RH	514	2.0	0.86 (0.40,1.84)	0.697
10-29	Malignant Systemic Neoplasms (Testicles)	Comparison	1,062	0.0		
		Background RH	372	0.0	--	--
		Low RH	255	0.8	--	--
		High RH	259	0.4	--	--
		Low plus High RH	514	0.6	--	--
10-30	Malignant Systemic Neoplasms (III-Defined Sites)	Comparison	1,062	0.2		
		Background RH	372	0.0	--	--
		Low RH	255	0.0	--	--
		High RH	259	0.0	--	--
		Low plus High RH	514	0.0	--	--
10-31	Malignant Systemic Neoplasms (Connective and Other Soft Tissue)	Comparison	1,062	0.2		
		Background RH	372	0.0	--	--
		Low RH	255	0.0	--	--
		High RH	259	0.0	--	--
		Low plus High RH	514	0.0	--	--
10-32	Carcinomas in Situ of the Penis, Other, and Unspecified Sites	Comparison	1,062	0.1		
		Background RH	372	0.0	--	--
		Low RH	255	0.4	4.22 (0.26,68.18)	0.311
		High RH	259	0.0	--	--
		Low plus High RH	514	0.2	2.05 (0.13,33.72)	0.617
10-33	Hodgkin's Disease	Comparison	1,062	0.1		
		Background RH	372	0.3	2.59 (0.15,43.50)	0.509
		Low RH	255	0.0	--	--
		High RH	259	0.0	--	--
		Low plus High RH	514	0.0	--	--
10-34	Leukemia	Comparison	1,062	0.1		
		Background RH	372	0.0	--	--
		Low RH	255	0.4	4.35 (0.26,70.40)	0.300
		High RH	259	0.0	--	--
		Low plus High RH	514	0.2	2.10 (0.13,34.67)	0.603
10-35	Non-Hodgkin's Lymphoma	Comparison	1,062	0.2		
		Background RH	372	0.3	1.23 (0.11,14.03)	0.865
		Low RH	255	0.0	--	--
		High RH	259	0.0	--	--
		Low plus High RH	514	0.0	--	--

Table Q-1-7. (Continued)
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Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
10-36	Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Comparison	1,062	0.1		
		Background RH	372	0.3	2.84 (0.16,50.71)	0.477
		Low RH	255	0.0	--	--
		High RH	259	0.0	--	--
		Low plus High RH	514	0.0	--	--
10-37	Multiple Myeloma	Comparison	1,062	0.0		
		Background RH	372	0.0	--	--
		Low RH	255	0.4	--	--
		High RH	259	0.0	--	--
		Low plus High RH	514	0.2	--	--
10-38	Skin or Systemic Neoplasms	Comparison	1,055	42.0		
		Background RH	369	45.0	1.17 (0.92,1.49)	0.208
		Low RH	250	48.8	1.29 (0.98,1.70)	0.073
		High RH	257	39.3	0.87 (0.66,1.16)	0.348
		Low plus High RH	507	44.0	1.06 (0.86,1.32)	0.584
10-39	Prostate-Specific Antigen (Below vs. At or Above Sensitivity Limit)	Comparison	1,062	3.0		
		Background RH	372	2.7	0.95 (0.46,1.96)	0.882
		Low RH	255	2.4	0.76 (0.31,1.83)	0.534
		High RH	259	2.7	0.85 (0.37,1.96)	0.700
		Low plus High RH	514	2.5	0.80 (0.42,1.55)	0.512
10-41	Prostate-Specific Antigen	Comparison	1,062	5.0		
		Background RH	372	2.4	0.49 (0.24,1.00)	0.050
		Low RH	255	5.9	1.14 (0.63,2.06)	0.665
		High RH	259	3.5	0.67 (0.33,1.39)	0.282
		Low plus High RH	514	4.7	0.91 (0.55,1.49)	0.693
11-3	Inflammatory Diseases	Comparison	1,054	0.2		
		Background RH	373	0.3	1.14 (0.10,12.72)	0.916
		Low RH	260	0.4	2.19 (0.20,24.61)	0.525
		High RH	256	0.8	5.14 (0.70,37.90)	0.108
		Low plus High RH	516	0.6	3.53 (0.57,21.74)	0.174
11-4	Hereditary and Degenerative Diseases	Comparison	1,061	5.6		
		Background RH	373	6.4	1.10 (0.67,1.80)	0.714
		Low RH	260	5.8	1.09 (0.61,1.95)	0.778
		High RH	257	5.1	0.94 (0.51,1.75)	0.846
		Low plus High RH	517	5.4	1.01 (0.64,1.62)	0.952

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
11-5	Peripheral Disorders	Comparison	1,059	16.7		
		Background RH	370	16.2	0.99 (0.72,1.37)	0.947
		Low RH	260	18.8	1.14 (0.80,1.62)	0.472
		High RH	257	17.5	1.04 (0.72,1.49)	0.837
		Low plus High RH	517	18.2	1.09 (0.82,1.44)	0.550
11-6	Other Neurological Disorders	Comparison	1,056	20.4		
		Background RH	370	16.8	0.79 (0.57,1.08)	0.132
		Low RH	259	23.6	1.17 (0.85,1.62)	0.339
		High RH	257	26.1	1.40 (1.01,1.92)	0.040
		Low plus High RH	516	24.8	1.28 (0.99,1.65)	0.055
11-7	Smell	Comparison	1,062	1.3		
		Background RH	373	2.1	1.70 (0.70,4.12)	0.243
		Low RH	260	1.5	1.15 (0.37,3.53)	0.807
		High RH	257	0.4	0.28 (0.04,2.18)	0.227
		Low plus High RH	517	1.0	0.72 (0.26,2.01)	0.526
11-8	Visual Fields	Comparison	1,058	0.1		
		Background RH	372	0.3	--	--
		Low RH	260	0.0	--	--
		High RH	256	0.0	--	--
		Low plus High RH	516	0.0	--	--
11-9	Light Reaction	Comparison	1,060	0.2		
		Background RH	372	0.3	1.07 (0.10,11.97)	0.956
		Low RH	260	0.8	5.05 (0.70,36.61)	0.109
		High RH	257	0.8	5.31 (0.72,39.12)	0.101
		Low plus High RH	517	0.8	5.18 (0.93,28.94)	0.061
11-10	Ocular	Comparison	1,060	0.5		
		Background RH	372	0.5	1.16 (0.22,6.06)	0.863
		Low RH	260	1.2	2.41 (0.57,10.21)	0.232
		High RH	257	0.8	1.64 (0.31,8.59)	0.556
		Low plus High RH	517	1.0	2.03 (0.58,7.11)	0.266
11-11	Facial Sensation	Comparison	1,062	0.0		
		Background RH	373	0.3	--	0.520
		Low RH	260	0.0	--	--
		High RH	257	0.8	--	0.076
		Low plus High RH	517	0.4	--	0.214
11-12	Jaw Clench	Comparison	1,062	0.0		
		Background RH	373	0.0	--	--
		Low RH	260	0.0	--	--
		High RH	257	0.4	--	--
		Low plus High RH	517	0.2	--	--

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
11-13	Smile	Comparison	1,062	0.4		
		Background RH	373	0.5	1.58 (0.28,8.75)	0.603
		Low RH	260	1.2	2.98 (0.66,13.48)	0.155
		High RH	257	1.2	2.84 (0.62,12.94)	0.176
		Low plus High RH	517	1.2	2.91 (0.81,10.45)	0.101
11-14	Palpebral Fissure	Comparison	1,062	0.8		
		Background RH	373	1.1	1.35 (0.41,4.46)	0.624
		Low RH	260	1.2	1.35 (0.36,5.04)	0.657
		High RH	257	0.8	0.86 (0.18,4.04)	0.848
		Low plus High RH	517	1.0	1.10 (0.36,3.32)	0.866
11-15	Balance	Comparison	1,061	0.5		
		Background RH	373	0.5	1.19 (0.23,6.29)	0.836
		Low RH	259	0.4	0.71 (0.08,6.15)	0.755
		High RH	257	0.8	1.31 (0.23,7.41)	0.760
		Low plus High RH	516	0.6	1.01 (0.23,4.43)	0.994
11-16	Gag Reflex	Comparison	1,062	0.0		
		Background RH	373	0.0	--	--
		Low RH	260	0.0	--	--
		High RH	257	0.4	--	--
		Low plus High RH	517	0.2	--	--
11-17	Speech	Comparison	1,062	0.0		
		Background RH	373	0.3	--	0.520
		Low RH	260	0.8	--	0.077
		High RH	257	0.8	--	0.076
		Low plus High RH	517	0.8	--	0.023
11-18	Palate and Uvula Movement	Comparison	1,062	0.0		
		Background RH	373	0.0	--	--
		Low RH	260	0.0	--	--
		High RH	257	0.4	--	--
		Low plus High RH	517	0.2	--	--
11-19	Neck Range of Motion	Comparison	1,062	13.2		
		Background RH	373	13.4	1.07 (0.75,1.52)	0.702
		Low RH	260	15.8	1.16 (0.79,1.70)	0.446
		High RH	256	13.7	1.01 (0.67,1.51)	0.976
		Low plus High RH	516	14.7	1.08 (0.80,1.47)	0.605
11-20	Cranial Nerve Index Without Range of Motion	Comparison	1,058	3.3		
		Background RH	372	4.3	1.32 (0.72,2.43)	0.368
		Low RH	259	5.4	1.66 (0.88,3.14)	0.119
		High RH	256	4.3	1.31 (0.65,2.62)	0.450
		Low plus High RH	515	4.9	1.48 (0.88,2.51)	0.142

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
11-21	Pin Prick	Comparison	1,013	5.4		
		Background RH	361	4.4	0.93 (0.52,1.65)	0.795
		Low RH	245	7.3	1.29 (0.74,2.26)	0.363
		High RH	246	5.3	0.86 (0.46,1.62)	0.642
		Low plus High RH	491	6.3	1.07 (0.68,1.70)	0.768
11-22	Light Touch	Comparison	1,013	4.1		
		Background RH	361	4.4	1.23 (0.68,2.23)	0.500
		Low RH	245	5.7	1.30 (0.69,2.43)	0.412
		High RH	246	5.3	1.15 (0.60,2.19)	0.678
		Low plus High RH	491	5.5	1.22 (0.74,2.02)	0.433
11-23	Muscle Status	Comparison	1,062	2.5		
		Background RH	373	3.2	1.16 (0.58,2.33)	0.674
		Low RH	260	3.1	1.25 (0.56,2.79)	0.590
		High RH	257	3.1	1.34 (0.60,3.00)	0.477
		Low plus High RH	517	3.1	1.29 (0.69,2.43)	0.427
11-24	Patellar Reflex	Comparison	1,059	2.7		
		Background RH	371	0.3	0.11 (0.02,0.84)	0.033
		Low RH	260	1.9	0.62 (0.24,1.63)	0.334
		High RH	257	1.9	0.60 (0.23,1.58)	0.301
		Low plus High RH	517	1.9	0.61 (0.29,1.27)	0.188
11-25	Achilles Reflex	Comparison	1,059	9.1		
		Background RH	371	9.2	1.10 (0.73,1.67)	0.638
		Low RH	259	11.6	1.23 (0.79,1.91)	0.352
		High RH	257	9.3	0.96 (0.60,1.55)	0.879
		Low plus High RH	516	10.5	1.10 (0.77,1.56)	0.610
11-26	Biceps Reflex	Comparison	1,062	1.2		
		Background RH	373	0.0	--	0.584
		Low RH	260	2.3	1.60 (0.59,4.33)	0.351
		High RH	257	0.4	0.24 (0.03,1.89)	0.174
		Low plus High RH	517	1.4	0.91 (0.35,2.34)	0.837
11-27	Babinski Reflex	Comparison	1,061	0.7		
		Background RH	373	0.5	0.72 (0.15,3.53)	0.684
		Low RH	260	0.4	0.55 (0.07,4.54)	0.578
		High RH	257	0.0	--	0.408
		Low plus High RH	517	0.2	0.28 (0.03,2.37)	0.244
11-30	Tremor	Comparison	1,062	2.7		
		Background RH	373	3.2	1.19 (0.60,2.37)	0.623
		Low RH	260	1.5	0.57 (0.20,1.62)	0.289
		High RH	257	3.5	1.27 (0.59,2.73)	0.539
		Low plus High RH	517	2.5	0.92 (0.47,1.78)	0.797

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Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
11-31	Coordination	Comparison	1,062	2.2		
		Background RH	373	1.9	0.83 (0.35,1.96)	0.664
		Low RH	259	2.7	1.20 (0.51,2.84)	0.681
		High RH	257	2.3	1.09 (0.43,2.74)	0.858
		Low plus High RH	516	2.5	1.15 (0.57,2.30)	0.703
11-32	Romberg Sign	Comparison	1,061	0.5		
		Background RH	373	0.5	1.19 (0.23,6.29)	0.836
		Low RH	259	0.4	0.71 (0.08,6.15)	0.755
		High RH	257	0.8	1.31 (0.23,7.41)	0.760
		Low plus High RH	516	0.6	1.01 (0.23,4.43)	0.994
11-33	Gait	Comparison	1,061	3.5		
		Background RH	373	3.8	1.16 (0.61,2.18)	0.655
		Low RH	260	1.9	0.53 (0.20,1.36)	0.184
		High RH	257	4.7	1.28 (0.66,2.51)	0.467
		Low plus High RH	517	3.3	0.90 (0.50,1.62)	0.726
11-34	Central Nervous System (CNS) Index	Comparison	1,062	6.3		
		Background RH	373	6.2	1.01 (0.62,1.65)	0.969
		Low RH	259	4.2	0.64 (0.33,1.24)	0.185
		High RH	257	7.4	1.16 (0.68,1.97)	0.589
		Low plus High RH	516	5.8	0.89 (0.57,1.40)	0.622
12-3	Psychoses	Comparison	1,062	3.0		
		Background RH	373	1.9	0.67 (0.29,1.53)	0.336
		Low RH	260	3.5	1.13 (0.53,2.42)	0.745
		High RH	258	3.5	1.07 (0.50,2.28)	0.867
		Low plus High RH	518	3.5	1.10 (0.61,1.99)	0.753
12-4	Alcohol Dependence	Comparison	1,062	6.4		
		Background RH	373	7.5	1.18 (0.74,1.87)	0.484
		Low RH	260	7.7	1.21 (0.72,2.03)	0.475
		High RH	258	7.4	1.17 (0.69,1.99)	0.557
		Low plus High RH	518	7.5	1.19 (0.79,1.79)	0.404
12-5	Drug Dependence	Comparison	1,062	0.3		
		Background RH	373	0.3	0.62 (0.06,6.22)	0.684
		Low RH	260	0.0	--	--
		High RH	258	0.0	--	--
		Low plus High RH	518	0.0	--	--
12-6	Anxiety	Comparison	1,059	14.8		
		Background RH	371	13.5	0.91 (0.64,1.28)	0.585
		Low RH	259	12.7	0.84 (0.56,1.26)	0.395
		High RH	257	20.2	1.43 (1.01,2.04)	0.044
		Low plus High RH	516	16.5	1.12 (0.84,1.50)	0.433

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12-7	Other Neuroses	Comparison	1,051	38.3		
		Background RH	366	34.7	0.87 (0.68,1.12)	0.293
		Low RH	257	44.8	1.31 (0.99,1.73)	0.056
		High RH	255	45.9	1.34 (1.02,1.77)	0.037
		Low plus High RH	512	45.3	1.33 (1.07,1.64)	0.010
12-8	SCL-90-R Anxiety	Comparison	1,061	5.6		
		Background RH	373	5.1	0.94 (0.55,1.60)	0.812
		Low RH	259	7.3	1.32 (0.77,2.26)	0.309
		High RH	258	11.2	2.11 (1.32,3.38)	0.002
		Low plus High RH	517	9.3	1.71 (1.14,2.54)	0.009
12-9	SCL-90-R Depression	Comparison	1,061	8.8		
		Background RH	373	9.1	1.09 (0.72,1.65)	0.684
		Low RH	259	7.7	0.85 (0.51,1.41)	0.527
		High RH	258	13.6	1.58 (1.04,2.40)	0.031
		Low plus High RH	517	10.6	1.20 (0.85,1.71)	0.303
12-10	SCL-90-R Hostility	Comparison	1,061	4.2		
		Background RH	373	4.8	1.26 (0.71,2.21)	0.429
		Low RH	259	5.4	1.25 (0.67,2.32)	0.484
		High RH	258	8.9	2.04 (1.21,3.46)	0.008
		Low plus High RH	517	7.2	1.64 (1.05,2.58)	0.032
12-11	SCL-90-R Interpersonal Sensitivity	Comparison	1,061	8.7		
		Background RH	373	7.5	0.88 (0.57,1.37)	0.575
		Low RH	259	9.7	1.11 (0.70,1.77)	0.662
		High RH	258	13.6	1.62 (1.06,2.45)	0.024
		Low plus High RH	517	11.6	1.36 (0.96,1.92)	0.083
12-12	SCL-90-R Obsessive-Compulsive Behavior	Comparison	1,061	8.6		
		Background RH	373	10.7	1.32 (0.89,1.96)	0.171
		Low RH	259	8.9	1.01 (0.62,1.63)	0.982
		High RH	258	12.8	1.54 (1.00,2.36)	0.049
		Low plus High RH	517	10.8	1.26 (0.89,1.80)	0.196
12-13	SCL-90-R Paranoid Ideation	Comparison	1,061	4.4		
		Background RH	373	6.2	1.44 (0.86,2.41)	0.170
		Low RH	259	5.8	1.31 (0.72,2.38)	0.380
		High RH	258	8.5	2.00 (1.18,3.39)	0.010
		Low plus High RH	517	7.2	1.64 (1.05,2.57)	0.029
12-14	SCL-90-R Phobic Anxiety	Comparison	1,061	7.8		
		Background RH	373	7.5	0.98 (0.63,1.54)	0.933
		Low RH	259	6.6	0.80 (0.46,1.37)	0.413
		High RH	258	11.2	1.47 (0.94,2.31)	0.094
		Low plus High RH	517	8.9	1.12 (0.77,1.64)	0.560

Table Q-1-7. (Continued)
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12-15	SCL-90-R Psychoticism	Comparison	1,061	8.7		
		Background RH	373	8.9	1.05 (0.69,1.60)	0.809
		Low RH	259	8.5	0.96 (0.59,1.56)	0.852
		High RH	258	10.9	1.26 (0.80,1.97)	0.317
		Low plus High RH	517	9.7	1.10 (0.77,1.59)	0.598
12-16	SCL-90-R Somatization	Comparison	1,061	7.6		
		Background RH	373	8.6	1.16 (0.75,1.78)	0.505
		Low RH	259	9.7	1.27 (0.80,2.04)	0.315
		High RH	258	12.8	1.75 (1.14,2.70)	0.011
		Low plus High RH	517	11.2	1.51 (1.05,2.15)	0.024
12-17	SCL-90-R Global Severity Index	Comparison	1,061	7.7		
		Background RH	373	7.5	1.01 (0.64,1.58)	0.967
		Low RH	259	8.9	1.13 (0.70,1.84)	0.615
		High RH	258	13.6	1.82 (1.19,2.78)	0.006
		Low plus High RH	517	11.2	1.47 (1.03,2.09)	0.035
12-18	SCL-90-R Positive Symptom Total	Comparison	1,061	9.4		
		Background RH	373	8.6	0.95 (0.62,1.44)	0.791
		Low RH	259	10.4	1.08 (0.69,1.70)	0.732
		High RH	258	14.3	1.56 (1.04,2.34)	0.033
		Low plus High RH	517	12.4	1.13 (0.94,1.84)	0.110
12-19	SCL-90-R Positive Symptom Distress Index	Comparison	1,061	7.2		
		Background RH	373	6.2	0.91 (0.56,1.47)	0.691
		Low RH	259	7.7	1.06 (0.63,1.77)	0.836
		High RH	258	9.7	1.32 (0.82,2.13)	0.249
		Low plus High RH	517	8.7	1.19 (0.81,1.75)	0.380
13-3	Hepatitis (Non-A, Non-B, and Non-C)	Comparison	1,055	1.7		
		Background RH	370	1.6	0.98 (0.38,2.52)	0.973
		Low RH	258	1.9	1.10 (0.40,2.99)	0.856
		High RH	258	1.6	0.89 (0.30,2.65)	0.828
		Low plus High RH	516	1.7	0.99 (0.44,2.23)	0.985
13-4	Jaundice	Comparison	1,035	2.8		
		Background RH	363	3.6	1.36 (0.69,2.67)	0.376
		Low RH	253	0.4	0.14 (0.02,1.01)	0.052
		High RH	254	0.8	0.26 (0.06,1.09)	0.066
		Low plus High RH	507	0.6	0.20 (0.06,0.66)	0.008
13-5	Acute and Subacute Necrosis of the Liver	Comparison	1,062	0.0		
		Background RH	374	0.0	--	--
		Low RH	260	0.0	--	--
		High RH	260	0.0	--	--
		Low plus High RH	520	0.0	--	--

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
13-6	Alcoholic Chronic Liver Disease and Cirrhosis	Comparison	1,005	6.0		
		Background RH	354	5.4	0.94 (0.55,1.61)	0.821
		Low RH	245	5.7	0.91 (0.50,1.67)	0.767
		High RH	235	6.0	0.96 (0.52,1.75)	0.887
		Low plus High RH	480	5.8	0.93 (0.59,1.49)	0.776
13-7	Nonalcoholic Chronic Liver Disease and Cirrhosis	Comparison	1,062	1.1		
		Background RH	374	1.1	1.15 (0.36,3.63)	0.814
		Low RH	260	1.5	1.24 (0.38,3.99)	0.721
		High RH	260	1.2	0.79 (0.22,2.92)	0.730
		Low plus High RH	520	1.3	1.00 (0.38,2.62)	0.999
13-8	Liver Abscess and Sequelae of Chronic Liver Disease	Comparison	1,063	0.1		
		Background RH	374	0.0	--	--
		Low RH	260	0.0	--	--
		High RH	260	0.4	--	--
		Low plus High RH	520	0.2	--	--
13-9	Other Liver Disorders	Comparison	1,053	27.4		
		Background RH	371	25.1	0.96 (0.73,1.26)	0.750
		Low RH	259	29.0	1.04 (0.77,1.41)	0.787
		High RH	260	34.2	1.30 (0.97,1.74)	0.081
		Low plus High RH	519	31.6	1.17 (0.93,1.47)	0.193
13-10	Hepatomegaly	Comparison	1,061	2.6		
		Background RH	374	1.3	0.53 (0.20,1.38)	0.192
		Low RH	260	0.8	0.27 (0.06,1.13)	0.073
		High RH	259	2.7	0.98 (0.42,2.28)	0.960
		Low plus High RH	519	1.7	0.61 (0.29,1.32)	0.210
13-11	Current Hepatomegaly	Comparison	1,043	0.9		
		Background RH	371	0.3	0.34 (0.04,2.72)	0.310
		Low RH	258	0.4	0.43 (0.05,3.42)	0.425
		High RH	258	1.2	1.25 (0.33,4.71)	0.738
		Low plus High RH	516	0.8	0.85 (0.26,2.78)	0.783
13-13	AST	Comparison	1,043	3.2		
		Background RH	369	2.2	0.78 (0.35,1.71)	0.529
		Low RH	257	3.5	1.06 (0.50,2.25)	0.885
		High RH	258	1.9	0.53 (0.20,1.38)	0.192
		Low plus High RH	515	2.7	0.78 (0.41,1.48)	0.449
13-15	ALT	Comparison	1,043	7.0		
		Background RH	369	4.1	0.63 (0.36,1.12)	0.117
		Low RH	257	5.1	0.68 (0.37,1.26)	0.217
		High RH	258	7.4	0.94 (0.55,1.60)	0.812
		Low plus High RH	515	6.2	0.81 (0.52,1.26)	0.348

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
13-17	GGT	Comparison	1,043	18.0		
		Background RH	369	16.3	0.94 (0.68,1.30)	0.717
		Low RH	257	21.4	1.22 (0.87,1.72)	0.249
		High RH	258	22.5	1.24 (0.89,1.74)	0.201
		Low plus High RH	515	21.9	1.23 (0.95,1.61)	0.120
13-19	Alkaline Phosphatase	Comparison	1,043	3.1		
		Background RH	369	4.9	1.68 (0.92,3.05)	0.089
		Low RH	257	5.8	1.86 (0.99,3.50)	0.055
		High RH	258	4.7	1.50 (0.76,2.97)	0.247
		Low plus High RH	515	5.2	1.68 (0.99,2.85)	0.054
13-21	Total Bilirubin	Comparison	1,043	5.0		
		Background RH	369	5.4	1.12 (0.65,1.91)	0.682
		Low RH	247	4.7	0.92 (0.48,1.75)	0.795
		High RH	258	4.7	0.92 (0.48,1.75)	0.788
		Low plus High RH	515	4.7	0.92 (0.56,1.51)	0.732
13-22	Direct Bilirubin	Comparison	1,043	2.3		
		Background RH	369	1.4	0.71 (0.27,1.91)	0.503
		Low RH	257	1.6	0.61 (0.21,1.78)	0.363
		High RH	258	0.8	0.27 (0.06,1.16)	0.078
		Low plus High RH	515	1.2	0.43 (0.17,1.07)	0.069
13-24	LDH	Comparison	1,042	14.4		
		Background RH	369	13.3	1.01 (0.71,1.44)	0.945
		Low RH	257	12.5	0.82 (0.54,1.23)	0.332
		High RH	258	15.5	0.99 (0.68,1.46)	0.977
		Low plus High RH	515	14.0	0.91 (0.67,1.23)	0.525
13-26	Cholesterol	Comparison	1,043	12.7		
		Background RH	369	13.6	1.07 (0.75,1.53)	0.697
		Low RH	257	14.8	1.22 (0.83,1.81)	0.313
		High RH	258	16.7	1.37 (0.94,2.00)	0.101
		Low plus High RH	515	15.7	1.30 (0.96,1.75)	0.091
13-28	HDL Cholesterol	Comparison	1,033	8.4		
		Background RH	365	10.4	1.48 (0.98,2.23)	0.061
		Low RH	253	8.7	0.97 (0.59,1.60)	0.913
		High RH	253	12.3	1.36 (0.88,2.12)	0.169
		Low plus High RH	506	10.5	1.17 (0.81,1.68)	0.405
13-30	Cholesterol-HDL Ratio	Comparison	1,033	57.1		
		Background RH	365	52.9	0.93 (0.73,1.18)	0.543
		Low RH	253	58.5	1.04 (0.79,1.39)	0.769
		High RH	253	68.0	1.49 (1.11,2.00)	0.009
		Low plus High RH	506	63.2	1.24 (0.99,1.55)	0.060

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
13-32	Triglycerides	Comparison	1,043	9.7		
		Background RH	369	8.9	1.04 (0.68,1.58)	0.862
		Low RH	257	10.9	1.10 (0.70,1.72)	0.685
		High RH	258	14.7	1.46 (0.97,2.19)	0.071
		Low plus High RH	515	12.8	1.28 (0.91,1.78)	0.152
13-34	Creatine Kinase	Comparison	1,043	13.6		
		Background RH	369	12.5	1.04 (0.72,1.49)	0.845
		Low RH	257	13.6	0.95 (0.64,1.43)	0.818
		High RH	258	15.5	1.04 (0.70,1.53)	0.851
		Low plus High RH	515	14.6	1.00 (0.73,1.36)	0.982
13-36	Serum Amylase	Comparison	1,043	7.9		
		Background RH	369	6.8	0.77 (0.48,1.23)	0.273
		Low RH	257	7.0	0.91 (0.53,1.54)	0.719
		High RH	258	4.7	0.62 (0.33,1.16)	0.137
		Low plus High RH	515	5.8	0.77 (0.50,1.19)	0.232
13-37	Antibodies for Hepatitis A	Comparison	1,063	34.1		
		Background RH	374	30.5	0.88 (0.68,1.14)	0.338
		Low RH	260	35.8	1.04 (0.78,1.38)	0.810
		High RH	260	36.2	1.06 (0.80,1.42)	0.667
		Low plus High RH	520	36.0	1.05 (0.84,1.31)	0.666
13-38	Serological Evidence of Present or Prior Hepatitis B Infection	Comparison	1,063	15.1		
		Background RH	374	9.4	0.61 (0.41,0.90)	0.013
		Low RH	260	10.0	0.61 (0.40,0.95)	0.030
		High RH	260	13.1	0.80 (0.53,1.19)	0.272
		Low plus High RH	520	11.5	0.71 (0.51,0.97)	0.033
13-39	Antibodies for Hepatitis C	Comparison	1,063	1.5		
		Background RH	374	0.5	0.31 (0.07,1.37)	0.122
		Low RH	260	0.4	0.27 (0.04,2.06)	0.207
		High RH	260	0.4	0.28 (0.04,2.11)	0.215
		Low plus High RH	520	0.4	0.27 (0.06,1.20)	0.086
13-40	Stool Hemocult	Comparison	1,005	1.8		
		Background RH	358	1.7	0.93 (0.36,2.39)	0.885
		Low RH	247	4.0	2.39 (1.08,5.27)	0.031
		High RH	243	1.6	0.89 (0.30,2.68)	0.841
		Low plus High RH	490	2.9	1.62 (0.79,3.30)	0.184
13-42	Prealbumin	Comparison	1,043	1.3		
		Background RH	369	1.6	1.39 (0.52,3.69)	0.510
		Low RH	257	0.8	0.49 (0.11,2.19)	0.352
		High RH	258	1.2	0.70 (0.19,2.55)	0.590
		Low plus High RH	515	1.0	0.60 (0.21,1.70)	0.335

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
13-44	Albumin	Comparison	1,043	2.3		
		Background RH	369	2.4	1.26 (0.58,2.77)	0.559
		Low RH	257	2.7	1.05 (0.44,2.48)	0.917
		High RH	258	2.3	0.86 (0.34,2.15)	0.743
		Low plus High RH	515	2.5	0.95 (0.47,1.90)	0.887
13-46	α -1 Acid Glycoprotein	Comparison	1,043	2.6		
		Background RH	369	1.6	0.57 (0.23,1.40)	0.223
		Low RH	257	2.3	0.91 (0.37,2.24)	0.837
		High RH	258	2.3	0.96 (0.39,2.37)	0.936
		Low plus High RH	515	2.3	0.94 (0.47,1.87)	0.852
13-50	α -2 Macroglobulin	Comparison	1,043	0.6		
		Background RH	369	0.3	0.51 (0.06,4.36)	0.542
		Low RH	257	0.0	--	--
		High RH	258	0.8	1.11 (0.21,5.88)	0.905
		Low plus High RH	515	0.4	0.55 (0.11,2.86)	0.479
13-52	Apolipoprotein B	Comparison	1,043	71.8		
		Background RH	369	71.3	0.98 (0.75,1.28)	0.890
		Low RH	257	72.8	1.06 (0.78,1.44)	0.719
		High RH	258	77.9	1.37 (0.99,1.90)	0.058
		Low plus High RH	515	75.3	1.20 (0.94,1.53)	0.146
13-54	C ₃ Complement	Comparison	1,043	2.7		
		Background RH	369	3.8	1.23 (0.63,2.38)	0.549
		Low RH	257	1.9	0.72 (0.27,1.90)	0.504
		High RH	258	1.2	0.46 (0.13,1.55)	0.210
		Low plus High RH	515	1.6	0.59 (0.26,1.33)	0.207
13-56	C ₄ Complement	Comparison	1,043	0.8		
		Background RH	369	0.8	1.00 (0.26,3.85)	0.997
		Low RH	257	0.8	0.98 (0.20,4.66)	0.977
		High RH	258	0.4	0.51 (0.06,4.17)	0.530
		Low plus High RH	515	0.6	0.75 (0.20,2.88)	0.676
13-58	Haptoglobin	Comparison	1,043	11.2		
		Background RH	369	12.2	1.08 (0.74,1.56)	0.696
		Low RH	257	12.1	1.08 (0.71,1.64)	0.730
		High RH	258	15.1	1.44 (0.97,2.14)	0.068
		Low plus High RH	515	13.6	1.25 (0.91,1.73)	0.164
13-60	Transferrin	Comparison	1,043	14.7		
		Background RH	369	14.1	0.97 (0.69,1.37)	0.863
		Low RH	257	10.5	0.67 (0.43,1.03)	0.071
		High RH	258	8.9	0.56 (0.36,0.90)	0.015
		Low plus High RH	515	9.7	0.62 (0.44,0.87)	0.005

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
14-3	Occurrence of Acne (Lifetime)	Comparison	1,063	86.1		
		Background RH	374	88.2	1.28 (0.89,1.84)	0.180
		Low RH	260	88.1	1.15 (0.76,1.74)	0.507
		High RH	260	85.4	0.91 (0.62,1.35)	0.643
		Low plus High RH	520	86.7	1.02 (0.75,1.39)	0.900
14-4	Acne Relative to Time of Duty in SEA (Pre- and Post-SEA and Post-SEA vs. Pre-SEA and None)	Comparison	1,063	85.7		
		Background RH	374	88.0	1.29 (0.90,1.84)	0.168
		Low RH	260	87.3	1.11 (0.74,1.66)	0.615
		High RH	260	85.0	0.91 (0.62,1.34)	0.638
		Low plus High RH	520	86.2	1.00 (0.74,1.36)	0.985
14-5	Acne Relative to Time of Duty in SEA (Post-SEA vs. None)	Comparison	946	84.4		
		Background RH	337	86.9	1.31 (0.91,1.89)	0.150
		Low RH	237	86.9	1.18 (0.77,1.79)	0.447
		High RH	233	83.7	0.91 (0.62,1.35)	0.650
		Low plus High RH	470	85.3	1.03 (0.76,1.41)	0.845
14-6	Acne Relative to Time of Duty in SEA (Pre- and Post-SEA vs. Pre-SEA)	Comparison	117	96.6		
		Background RH	37	97.3	1.37 (0.14,13.90)	0.786
		Low RH	23	91.3	0.32 (0.05,1.99)	0.222
		High RH	27	96.3	0.82 (0.08,8.19)	0.865
		Low plus High RH	50	94.0	0.48 (0.10,2.36)	0.367
14-8	Location of Acne (Post-SEA)	Comparison	797	44.7		
		Background RH	293	48.1	1.17 (0.90,1.54)	0.246
		Low RH	205	45.9	1.02 (0.75,1.39)	0.906
		High RH	194	42.8	0.91 (0.66,1.26)	0.574
		Low plus High RH	399	44.4	0.97 (0.76,1.23)	0.781
14-10	Location of Acne (Pre- and Post-SEA and Post-SEA)	Comparison	910	46.5		
		Background RH	329	48.9	1.12 (0.87,1.44)	0.392
		Low RH	226	44.7	0.91 (0.68,1.22)	0.537
		High RH	220	44.5	0.92 (0.68,1.24)	0.594
		Low plus High RH	446	44.6	0.92 (0.73,1.15)	0.457
14-11	Other Abnormalities	Comparison	1,061	81.3		
		Background RH	374	85.3	1.44 (1.04,2.01)	0.029
		Low RH	260	84.6	1.20 (0.83,1.74)	0.342
		High RH	260	80.4	0.89 (0.63,1.26)	0.519
		Low plus High RH	520	82.5	1.03 (0.78,1.35)	0.849

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
14-12	Dermatology Index	Comparison	1,062	44.8		
		Background RH	374	46.8	1.13 (0.89,1.43)	0.332
		Low RH	260	40.4	0.83 (0.63,1.09)	0.180
		High RH	260	41.9	0.86 (0.65,1.13)	0.271
		Low plus High RH	520	41.2	0.84 (0.68,1.04)	0.114
15-3	Verified Essential Hypertension	Comparison	1,033	38.9		
		Background RH	368	34.2	1.00 (0.77,1.30)	0.993
		Low RH	249	38.6	0.90 (0.67,1.21)	0.479
		High RH	258	45.0	1.09 (0.82,1.46)	0.549
		Low plus High RH	507	41.8	0.99 (0.79,1.25)	0.953
15-4	Verified Heart Disease (excluding Essential Hypertension)	Comparison	1,046	49.7		
		Background RH	371	53.4	1.18 (0.93,1.50)	0.174
		Low RH	254	53.5	1.11 (0.84,1.47)	0.448
		High RH	259	41.3	0.71 (0.53,0.94)	0.016
		Low plus High RH	513	47.4	0.89 (0.72,1.10)	0.280
15-5	Verified Myocardial Infarction	Comparison	1,046	6.4		
		Background RH	371	6.2	1.04 (0.64,1.71)	0.868
		Low RH	254	6.3	0.90 (0.51,1.58)	0.701
		High RH	259	8.1	1.20 (0.72,2.02)	0.489
		Low plus High RH	513	7.2	1.05 (0.69,1.59)	0.838
15-7	Systolic Blood Pressure	Comparison	1,046	16.1		
		Background RH	370	13.5	0.97 (0.69,1.38)	0.871
		Low RH	254	16.9	0.99 (0.68,1.44)	0.966
		High RH	259	17.4	0.95 (0.65,1.37)	0.776
		Low plus High RH	513	17.2	0.97 (0.73,1.30)	0.832
15-8	Heart Sounds	Comparison	1,044	19.8		
		Background RH	369	19.5	1.01 (0.75,1.37)	0.936
		Low RH	253	21.7	1.10 (0.78,1.53)	0.596
		High RH	259	20.8	1.04 (0.74,1.46)	0.820
		Low plus High RH	512	21.3	1.07 (0.82,1.39)	0.626
15-9	Overall Electrocardiograph (ECG)	Comparison	1,044	23.9		
		Background RH	371	17.0	0.70 (0.52,0.96)	0.027
		Low RH	254	25.2	1.00 (0.73,1.38)	0.992
		High RH	259	18.1	0.66 (0.46,0.94)	0.021
		Low plus High RH	513	21.6	0.82 (0.64,1.07)	0.139
15-10	ECG: Right Bundle Branch Block (RBBB)	Comparison	1,045	1.4		
		Background RH	371	0.8	0.56 (0.16,1.97)	0.367
		Low RH	254	1.6	1.04 (0.34,3.17)	0.948
		High RH	259	1.9	1.33 (0.48,3.74)	0.584
		Low plus High RH	513	1.8	1.18 (0.51,2.75)	0.695

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
15-11	ECG: Left Bundle Branch Block (LBBB)	Comparison	1,045	0.7		
		Background RH	371	0.0	--	--
		Low RH	254	0.4	--	--
		High RH	259	0.0	--	--
		Low plus High RH	513	0.2	--	--
15-12	ECG: Nonspecific ST- and T-Wave Changes	Comparison	1,045	14.7		
		Background RH	371	10.5	0.75 (0.52,1.10)	0.144
		Low RH	254	16.9	1.10 (0.75,1.59)	0.631
		High RH	259	13.9	0.86 (0.58,1.27)	0.442
		Low plus High RH	513	15.4	0.97 (0.72,1.31)	0.856
15-13	ECG: Bradycardia	Comparison	1,046	2.2		
		Background RH	371	4.9	2.09 (1.10,3.94)	0.023
		Low RH	254	3.1	1.42 (0.62,3.23)	0.404
		High RH	259	1.2	0.55 (0.16,1.87)	0.341
		Low plus High RH	513	2.1	1.00 (0.48,2.08)	0.992
15-14	ECG: Tachycardia	Comparison	1,046	0.2		
		Background RH	371	0.0	--	--
		Low RH	254	0.4	--	--
		High RH	259	0.0	--	--
		Low plus High RH	513	0.2	--	--
15-15	ECG: Arrhythmia	Comparison	1,045	4.4		
		Background RH	371	3.2	0.76 (0.40,1.45)	0.403
		Low RH	254	5.9	1.29 (0.70,2.35)	0.414
		High RH	259	5.4	1.20 (0.64,2.23)	0.569
		Low plus High RH	513	5.7	1.24 (0.77,2.01)	0.378
15-16	ECG: Evidence of Prior Myocardial Infarction	Comparison	1,042	3.2		
		Background RH	370	3.0	1.00 (0.49,2.01)	0.990
		Low RH	254	2.8	0.78 (0.34,1.80)	0.563
		High RH	258	4.3	1.26 (0.62,2.57)	0.518
		Low plus High RH	512	3.5	1.02 (0.56,1.84)	0.955
15-17	ECG: Other Diagnoses	Comparison	1,046	0.1		
		Background RH	371	1.1	10.0 (1.11,90.7)	0.040
		Low RH	254	0.4	4.4 (0.27,70.0)	0.298
		High RH	259	1.9	23.2 (2.68,202.0)	0.004
		Low plus High RH	513	1.2	13.4 (1.60,112.0)	0.016
15-19	Diastolic Blood Pressure	Comparison	1,046	3.1		
		Background RH	370	2.4	0.87 (0.41,1.86)	0.721
		Low RH	254	2.0	0.62 (0.24,1.61)	0.328
		High RH	259	4.2	1.28 (0.63,2.60)	0.490
		Low plus High RH	513	3.1	0.96 (0.52,1.77)	0.896

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
15-20	Funduscopy Examination	Comparison	1,043	5.3		
		Background RH	369	6.2	1.31 (0.79,2.18)	0.298
		Low RH	251	6.0	1.05 (0.58,1.89)	0.883
		High RH	258	8.9	1.64 (0.98,2.74)	0.061
		Low plus High RH	509	7.5	1.34 (0.87,2.06)	0.190
15-21	Carotid Bruits	Comparison	1,045	1.4		
		Background RH	371	1.9	1.30 (0.52,3.26)	0.569
		Low RH	254	2.4	1.56 (0.60,4.10)	0.363
		High RH	259	1.2	0.79 (0.23,2.79)	0.719
		Low plus High RH	513	1.8	1.18 (0.51,2.75)	0.694
15-22	Radial Pulses	Comparison	1,046	0.5		
		Background RH	371	0.5	1.00 (0.19,5.28)	0.995
		Low RH	254	0.8	1.73 (0.33,9.06)	0.515
		High RH	259	0.0	--	--
		Low plus High RH	513	0.4	0.88 (0.17,4.60)	0.881
15-23	Femoral Pulses	Comparison	1,046	0.5		
		Background RH	371	0.3	0.57 (0.07,4.93)	0.609
		Low RH	254	2.8	5.44 (1.70,17.40)	0.004
		High RH	259	0.8	1.54 (0.29,8.12)	0.613
		Low plus High RH	513	1.8	3.52 (1.16,10.70)	0.026
15-24	Popliteal Pulses	Comparison	1,045	1.1		
		Background RH	371	0.5	0.51 (0.11,2.31)	0.378
		Low RH	254	2.8	2.48 (0.95,6.52)	0.064
		High RH	259	3.1	2.94 (1.15,7.50)	0.024
		Low plus High RH	513	2.9	2.71 (1.22,6.00)	0.014
15-25	Dorsalis Pedis Pulses	Comparison	1,045	7.7		
		Background RH	370	8.9	1.14 (0.74,1.76)	0.540
		Low RH	254	7.9	0.99 (0.59,1.66)	0.968
		High RH	258	9.7	1.33 (0.83,2.15)	0.238
		Low plus High RH	512	8.8	1.15 (0.78,1.70)	0.467
15-26	Posterior Tibial Pulses	Comparison	1,045	2.3		
		Background RH	371	2.7	1.10 (0.52,2.33)	0.812
		Low RH	254	3.9	1.67 (0.78,3.57)	0.184
		High RH	259	5.0	2.35 (1.16,4.76)	0.017
		Low plus High RH	513	4.5	2.00 (1.10,3.61)	0.022
15-27	Leg Pulses	Comparison	1,045	8.2		
		Background RH	370	9.7	1.16 (0.77,1.75)	0.483
		Low RH	254	8.3	0.96 (0.58,1.59)	0.886
		High RH	258	11.2	1.46 (0.93,2.30)	0.099
		Low plus High RH	512	9.8	1.20 (0.83,1.74)	0.333

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
15-28	Peripheral Pulses	Comparison	1,045	8.7		
		Background RH	370	10.0	1.12 (0.74,1.68)	0.597
		Low RH	254	8.3	0.91 (0.55,1.50)	0.707
		High RH	258	11.2	1.38 (0.88,2.17)	0.159
		Low plus High RH	512	9.8	1.13 (0.79,1.64)	0.503
15-29	Kidney, Urethra, and Bladder (KUB) X Ray (Excluding Kidney Stones)	Comparison	1,045	32.3		
		Background RH	370	31.1	1.00 (0.77,1.30)	0.974
		Low RH	254	31.9	0.90 (0.67,1.21)	0.485
		High RH	258	29.1	0.82 (0.60,1.11)	0.197
		Low plus High RH	512	30.5	0.86 (0.68,1.08)	0.197
15-30	Intermittent Claudication and Vascular Insufficiency (ICVI) Index	Comparison	1,043	2.4		
		Background RH	371	3.2	1.31 (0.65,2.65)	0.456
		Low RH	254	3.5	1.51 (0.70,3.29)	0.298
		High RH	259	3.9	1.69 (0.80,3.59)	0.168
		Low plus High RH	513	3.7	1.60 (0.87,2.95)	0.129
16-10	Hematocrit	Comparison	1,061	0.9		
		Background RH	371	1.9	2.31 (0.86,6.19)	0.096
		Low RH	259	1.5	1.51 (0.47,4.89)	0.489
		High RH	258	1.2	1.11 (0.30,4.09)	0.880
		Low plus High RH	517	1.4	1.31 (0.49,3.48)	0.592
16-12	Platelet Count	Comparison	1,060	0.9		
		Background RH	371	0.3	0.33 (0.04,2.66)	0.300
		Low RH	259	0.8	0.86 (0.19,4.04)	0.853
		High RH	258	2.7	3.12 (1.14,8.55)	0.027
		Low plus High RH	517	1.7	1.97 (0.77,5.03)	0.156
16-14	Prothrombin Time	Comparison	979	0.4		
		Background RH	342	0.9	2.80 (0.61,12.78)	0.184
		Low RH	234	1.3	2.50 (0.54,11.49)	0.239
		High RH	240	0.4	0.79 (0.09,7.21)	0.832
		Low plus High RH	474	0.8	1.62 (0.40,6.65)	0.503
16-15	RBC Morphology	Comparison	1,061	46.7		
		Background RH	371	41.5	0.82 (0.65,1.05)	0.110
		Low RH	259	46.3	0.96 (0.73,1.27)	0.788
		High RH	258	45.0	0.93 (0.71,1.23)	0.618
		Low plus High RH	517	45.7	0.95 (0.77,1.17)	0.618
16-17	Absolute Neutrophils (bands) (Zero vs. Nonzero)	Comparison	1,061	16.5		
		Background RH	371	17.0	1.05 (0.76,1.44)	0.782
		Low RH	259	17.8	1.11 (0.77,1.58)	0.583
		High RH	258	16.7	0.99 (0.69,1.44)	0.974
		Low plus High RH	517	17.2	1.05 (0.79,1.39)	0.739

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
16-20	Absolute Eosinophils (Zero vs. Nonzero)	Comparison	1,061	11.8		
		Background RH	371	9.2	0.81 (0.54,1.21)	0.305
		Low RH	259	11.2	0.90 (0.59,1.39)	0.643
		High RH	258	10.5	0.83 (0.53,1.29)	0.409
		Low plus High RH	517	10.8	0.87 (0.62,1.21)	0.404
16-21	Absolute Basophils (Zero vs. Nonzero)	Comparison	1,061	46.1		
		Background RH	371	45.8	0.98 (0.77,1.25)	0.876
		Low RH	259	44.4	0.93 (0.70,1.22)	0.587
		High RH	258	44.6	0.95 (0.72,1.25)	0.725
		Low plus High RH	517	44.5	0.94 (0.76,1.16)	0.561
17-3	Kidney Disease	Comparison	1,041	16.0		
		Background RH	364	16.2	1.07 (0.77,1.48)	0.690
		Low RH	253	17.0	1.04 (0.72,1.51)	0.830
		High RH	256	17.6	1.08 (0.75,1.55)	0.694
		Low plus High RH	509	17.3	1.06 (0.80,1.41)	0.695
17-4	Kidney Stones	Comparison	1,063	2.5		
		Background RH	374	2.7	1.02 (0.49,2.14)	0.957
		Low RH	260	3.8	1.55 (0.74,3.25)	0.246
		High RH	260	2.7	1.09 (0.47,2.54)	0.839
		Low plus High RH	520	3.3	1.32 (0.71,2.46)	0.377
17-5	Urinary Protein	Comparison	1,062	4.5		
		Background RH	374	4.8	1.31 (0.75,2.31)	0.345
		Low RH	259	3.5	0.67 (0.32,1.39)	0.280
		High RH	259	4.6	0.87 (0.45,1.68)	0.677
		Low plus High RH	518	4.1	0.77 (0.45,1.31)	0.334
17-6	Urinary Red Blood Cell Count	Comparison	1,062	2.0		
		Background RH	374	2.1	1.08 (0.47,2.47)	0.858
		Low RH	259	2.3	1.21 (0.48,3.03)	0.688
		High RH	259	5.8	3.00 (1.51,5.93)	0.002
		Low plus High RH	518	4.1	2.10 (1.13,3.90)	0.019
17-7	Urinary White Blood Cell Count	Comparison	1,062	2.4		
		Background RH	374	2.4	1.06 (0.49,2.30)	0.887
		Low RH	259	3.5	1.45 (0.67,3.16)	0.346
		High RH	259	3.9	1.63 (0.77,3.45)	0.202
		Low plus High RH	518	3.7	1.54 (0.84,2.83)	0.165
18-3	Past Thyroid Disease	Comparison	1,057	5.9		
		Background RH	371	6.7	1.22 (0.75,1.98)	0.421
		Low RH	258	4.3	0.71 (0.37,1.37)	0.305
		High RH	258	5.0	0.81 (0.44,1.50)	0.500
		Low plus High RH	516	4.7	0.76 (0.47,1.23)	0.267

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
18-4	Composite Diabetes Indicator	Comparison	1,059	14.0		
		Background RH	373	11.3	1.00 (0.69,1.47)	0.988
		Low RH	258	19.0	1.30 (0.90,1.89)	0.165
		High RH	260	18.1	1.13 (0.77,1.65)	0.523
		Low plus High RH	518	18.5	1.21 (0.90,1.63)	0.197
18-7	Thyroid Gland	Comparison	1,030	0.9		
		Background RH	365	1.1	1.23 (0.37,4.07)	0.740
		Low RH	254	0.0	--	--
		High RH	255	0.4	0.45 (0.06,3.61)	0.453
		Low plus High RH	509	0.2	0.23 (0.03,1.81)	0.162
18-10	Retinopathy Results (Diabetics)	Comparison	147	2.7		
		Background RH	41	4.9	1.87 (0.32,11.09)	0.490
		Low RH	49	2.0	0.65 (0.07,6.03)	0.702
		High RH	47	8.5	2.92 (0.67,12.80)	0.155
		Low plus High RH	96	5.2	1.68 (0.42,6.66)	0.460
18-11	Neuropathy Results (Diabetics)	Comparison	148	7.4		
		Background RH	42	14.3	2.26 (0.74,6.86)	0.151
		Low RH	49	6.1	0.68 (0.18,2.61)	0.570
		High RH	47	17.0	2.30 (0.82,6.47)	0.115
		Low plus High RH	96	11.5	1.37 (0.55,3.42)	0.502
18-12	Radial Pulses (Doppler) (Diabetics)	Comparison	148	0.7		
		Background RH	42	2.4	5.19 (0.23,96.2)	0.267
		Low RH	49	2.0	2.48 (0.14,44.0)	0.533
		High RH	47	0.0	--	--
		Low plus High RH	96	1.0	1.14 (0.06,20.91)	0.932
18-13	Femoral Pulses (Doppler) (Diabetics)	Comparison	148	2.0		
		Background RH	42	2.4	1.29 (0.12,13.36)	0.833
		Low RH	49	6.1	2.77 (0.53,14.56)	0.228
		High RH	47	2.1	0.82 (0.08,8.89)	0.872
		Low plus High RH	96	4.2	1.80 (0.38,8.56)	0.458
18-14	Popliteal Pulses (Doppler) (Diabetics)	Comparison	148	2.7		
		Background RH	42	2.4	0.86 (0.09,8.21)	0.897
		Low RH	49	6.1	2.10 (0.45,9.88)	0.348
		High RH	47	8.5	3.04 (0.70,13.15)	0.137
		Low plus High RH	96	7.3	2.54 (0.71,9.12)	0.154
18-15	Dorsalis Pedis Pulses (Doppler) (Diabetics)	Comparison	148	12.8		
		Background RH	42	14.3	0.96 (0.34,2.70)	0.932
		Low RH	49	10.2	0.65 (0.22,1.89)	0.425
		High RH	47	25.5	2.36 (0.99,5.59)	0.052
		Low plus High RH	96	17.7	1.32 (0.63,2.77)	0.461

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
18-16	Posterior Tibial Pulses (Doppler) (Diabetics)	Comparison	148	4.7		
		Background RH	42	4.8	0.83 (0.16,4.34)	0.829
		Low RH	49	8.2	1.61 (0.44,5.83)	0.471
		High RH	47	12.8	2.87 (0.89,9.32)	0.079
		Low plus High RH	96	10.4	2.18 (0.78,6.05)	0.136
18-17	Leg Pulses (Doppler) (Diabetics)	Comparison	148	12.8		
		Background RH	42	14.3	0.92 (0.33,2.59)	0.875
		Low RH	49	10.2	0.66 (0.23,1.92)	0.444
		High RH	47	29.8	3.05 (1.32,7.02)	0.009
		Low plus High RH	96	19.8	1.56 (0.76,3.21)	0.224
18-18	Peripheral Pulses (Doppler) (Diabetics)	Comparison	148	13.5		
		Background RH	42	16.7	1.05 (0.39,2.81)	0.919
		Low RH	49	10.2	0.62 (0.21,1.79)	0.376
		High RH	47	29.8	2.86 (1.25,6.55)	0.013
		Low plus High RH	96	19.8	1.47 (0.72,3.00)	0.292
18-20	Thyroid Stimulating Hormone (TSH)	Comparison	1,027	2.4		
		Background RH	365	2.5	0.93 (0.43,2.02)	0.847
		Low RH	254	1.2	0.49 (0.15,1.64)	0.246
		High RH	255	3.5	1.59 (0.73,3.47)	0.245
		Low plus High RH	509	2.4	1.02 (0.50,2.05)	0.964
18-22	Thyroxine (T ₄)	Comparison	1,027	0.8		
		Background RH	365	0.5	0.74 (0.16,3.56)	0.712
		Low RH	254	0.4	0.47 (0.06,3.83)	0.484
		High RH	255	0.8	0.95 (0.20,4.55)	0.947
		Low plus High RH	509	0.6	0.71 (0.19,2.71)	0.617
18-23	Anti-Thyroid Antibodies	Comparison	1,027	2.4		
		Background RH	365	3.6	1.48 (0.74,2.94)	0.266
		Low RH	254	4.7	1.97 (0.97,3.98)	0.060
		High RH	255	3.9	1.64 (0.78,3.48)	0.195
		Low plus High RH	509	4.3	1.80 (1.00,3.24)	0.048
18-25	Fasting Glucose (All Participants)	Comparison	1,060	13.0		
		Background RH	374	9.6	0.91 (0.61,1.35)	0.628
		Low RH	258	17.1	1.23 (0.84,1.82)	0.284
		High RH	260	15.4	1.00 (0.67,1.50)	0.983
		Low plus High RH	518	16.2	1.12 (0.82,1.52)	0.487
18-27	Fasting Glucose (Diabetics)	Comparison	148	68.2		
		Background RH	42	64.3	1.11 (0.52,2.37)	0.778
		Low RH	49	69.4	1.04 (0.51,2.13)	0.908
		High RH	47	72.3	1.15 (0.55,2.41)	0.716
		Low plus High RH	96	70.8	1.09 (0.62,1.94)	0.762

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
18-29	Fasting Glucose (Nondiabetics)	Comparison	912	4.1		
		Background RH	332	2.7	0.73 (0.35,1.53)	0.401
		Low RH	209	4.8	1.13 (0.55,2.31)	0.745
		High RH	213	2.8	0.63 (0.26,1.51)	0.297
		Low plus High RH	422	3.8	0.87 (0.48,1.58)	0.644
18-31	2-Hour Postprandial Glucose (Nondiabetics)	Comparison	911	12.0		
		Background RH	331	10.0	0.94 (0.62,1.43)	0.765
		Low RH	209	15.8	1.30 (0.85,2.00)	0.229
		High RH	213	19.2	1.56 (1.04,2.33)	0.031
		Low plus High RH	422	17.5	1.43 (1.03,1.99)	0.031
18-32	Fasting Urinary Glucose (All Participants)	Comparison	1,059	3.1		
		Background RH	374	1.6	0.67 (0.27,1.62)	0.373
		Low RH	257	3.1	0.84 (0.38,1.87)	0.673
		High RH	259	5.8	1.53 (0.80,2.93)	0.195
		Low plus High RH	516	4.5	1.19 (0.68,2.08)	0.542
18-33	Fasting Urinary Glucose (Diabetics)	Comparison	147	21.8		
		Background RH	42	14.3	0.71 (0.27,1.86)	0.483
		Low RH	49	16.3	0.69 (0.29,1.62)	0.394
		High RH	47	31.9	1.60 (0.77,3.35)	0.209
		Low plus High RH	96	24.0	1.09 (0.59,2.02)	0.780
18-34	Fasting Urinary Glucose (Nondiabetics)	Comparison	912	0.1		
		Background RH	332	0.0	--	--
		Low RH	208	0.0	--	--
		High RH	212	0.0	--	--
		Low plus High RH	420	0.0	--	--
18-35	2-Hour Postprandial Urinary Glucose (Nondiabetics)	Comparison	910	17.5		
		Background RH	331	16.9	0.96 (0.69,1.35)	0.827
		Low RH	208	18.8	1.11 (0.75,1.64)	0.604
		High RH	213	23.0	1.39 (0.97,2.00)	0.076
		Low plus High RH	421	20.9	1.25 (0.93,1.67)	0.137
18-39	Serum Insulin (Diabetics)	Comparison	148	58.1		
		Background RH	42	64.3	1.47 (0.70,3.08)	0.308
		Low RH	49	67.3	1.62 (0.80,3.26)	0.177
		High RH	47	46.8	0.61 (0.31,1.20)	0.150
		Low plus High RH	96	57.3	0.99 (0.58,1.69)	0.968
18-43	Serum Glucagon (All Participants)	Comparison	957	0.1		
		Background RH	336	0.3	4.64 (0.28,77.40)	0.287
		Low RH	228	0.9	5.67 (0.49,65.60)	0.165
		High RH	224	0.0	--	--
		Low plus High RH	452	0.4	2.64 (0.23,30.57)	0.439

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
18-45	Serum Glucagon (Diabetics)	Comparison	132	0.8		
		Background RH	38	2.6	8.33 (0.42,167.13)	0.166
		Low RH	45	4.4	6.44 (0.51,80.67)	0.149
		High RH	38	0.0	--	--
		Low plus High RH	83	2.4	2.57 (0.22,30.32)	0.453
18-47	Serum Glucagon (Nondiabetics)	Comparison	825	0.0		
		Background RH	298	0.0	--	--
		Low RH	183	0.0	--	--
		High RH	186	0.0	--	--
		Low plus High RH	369	0.0	--	--
18-49	α -1-C Hemoglobin (All Participants)	Comparison	1,060	26.1		
		Background RH	374	23.5	1.02 (0.77,1.35)	0.893
		Low RH	258	29.5	1.11 (0.81,1.50)	0.523
		High RH	260	28.8	1.01 (0.74,1.38)	0.938
		Low plus High RH	518	29.2	1.06 (0.83,1.34)	0.646
18-51	α -1-C Hemoglobin (Diabetics)	Comparison	148	73.6		
		Background RH	42	69.0	1.11 (0.50,2.45)	0.798
		Low RH	49	81.6	1.59 (0.69,3.65)	0.273
		High RH	47	85.1	1.97 (0.80,4.85)	0.140
		Low plus High RH	96	83.3	1.76 (0.90,3.42)	0.096
18-53	α -1-C Hemoglobin (Nondiabetics)	Comparison	912	18.4		
		Background RH	332	17.8	1.01 (0.73,1.41)	0.934
		Low RH	209	17.2	0.91 (0.61,1.35)	0.631
		High RH	213	16.4	0.82 (0.55,1.22)	0.324
		Low plus High RH	422	16.8	0.86 (0.63,1.17)	0.338
18-54	Urinary Protein (Diabetics)	Comparison	147	16.3		
		Background RH	42	16.7	1.26 (0.49,3.28)	0.631
		Low RH	49	8.2	0.44 (0.14,1.36)	0.151
		High RH	47	12.8	0.68 (0.26,1.83)	0.447
		Low plus High RH	96	10.4	0.56 (0.25,1.24)	0.152
18-56	Serum Proinsulin (Diabetics)	Comparison	143	44.1		
		Background RH	39	28.2	0.61 (0.27,1.35)	0.219
		Low RH	46	43.5	0.99 (0.50,1.95)	0.965
		High RH	45	48.9	1.17 (0.59,2.32)	0.656
		Low plus High RH	91	46.2	1.07 (0.63,1.84)	0.800
18-58	Serum C Peptide (Diabetics)	Comparison	143	63.6		
		Background RH	39	56.4	0.82 (0.38,1.74)	0.597
		Low RH	46	69.6	1.47 (0.70,3.08)	0.308
		High RH	45	53.3	0.65 (0.32,1.31)	0.228
		Low plus High RH	91	61.5	0.97 (0.55,1.70)	0.914

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
18-60	Total Testosterone	Comparison	1,056	5.2		
		Background RH	364	2.7	0.69 (0.34,1.38)	0.289
		Low RH	256	4.3	0.70 (0.35,1.39)	0.308
		High RH	259	7.3	1.14 (0.65,2.01)	0.645
		Low plus High RH	515	5.8	0.93 (0.58,1.49)	0.751
18-62	Free Testosterone	Comparison	1,056	19.3		
		Background RH	364	13.5	0.74 (0.52,1.04)	0.084
		Low RH	256	14.8	0.69 (0.47,1.02)	0.061
		High RH	259	19.7	0.91 (0.64,1.29)	0.582
		Low plus High RH	515	17.3	0.80 (0.60,1.06)	0.121
18-63	Sex Hormone Binding Globulin	Comparison	1,056	18.6		
		Background RH	364	17.9	1.02 (0.74,1.39)	0.922
		Low RH	256	15.2	0.77 (0.53,1.12)	0.174
		High RH	259	15.1	0.74 (0.51,1.07)	0.112
		Low plus High RH	515	15.1	0.75 (0.56,1.01)	0.054
18-64	Total Testosterone to Sex Hormone Binding Globulin Ratio	Comparison	1,056	9.6		
		Background RH	364	7.7	0.83 (0.53,1.29)	0.408
		Low RH	256	9.8	0.96 (0.61,1.53)	0.876
		High RH	259	10.0	1.02 (0.64,1.61)	0.941
		Low plus High RH	515	9.9	0.99 (0.69,1.42)	0.957
18-66	Estradiol	Comparison	1,063	4.5		
		Background RH	374	2.7	0.62 (0.31,1.25)	0.180
		Low RH	260	3.8	0.82 (0.41,1.64)	0.571
		High RH	260	4.2	0.89 (0.45,1.74)	0.729
		Low plus High RH	520	4.0	0.85 (0.50,1.44)	0.553
18-68	Luteinizing Hormone (LH)	Comparison	1,063	2.2		
		Background RH	374	2.4	1.10 (0.50,2.42)	0.811
		Low RH	260	1.2	0.50 (0.15,1.69)	0.267
		High RH	260	1.2	0.53 (0.16,1.78)	0.303
		Low plus High RH	520	1.2	0.51 (0.21,1.28)	0.153
18-70	Follicle Stimulating Hormone	Comparison	1,063	3.7		
		Background RH	374	5.3	1.44 (0.82,2.52)	0.204
		Low RH	260	5.8	1.56 (0.84,2.89)	0.159
		High RH	260	3.5	0.96 (0.46,2.02)	0.918
		Low plus High RH	520	4.6	1.27 (0.75,2.14)	0.378
19-4	Composite Skin Test Diagnosis	Comparison	1,019	2.9		
		Background RH	358	6.1	1.93 (1.09,3.43)	0.024
		Low RH	252	4.0	1.37 (0.65,2.85)	0.407
		High RH	254	2.0	0.71 (0.27,1.87)	0.491
		Low plus High RH	506	3.0	1.05 (0.55,1.98)	0.886

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
19-15	Double	Comparison	404	4.5		
	Labelled Cells:	Background RH	141	2.8	0.52 (0.17,1.58)	0.246
	CD5 with	Low RH	95	8.4	1.96 (0.81,4.72)	0.134
	CD20 (Zero vs.	High RH	108	3.7	0.96 (0.31,2.93)	0.939
	Nonzero)	Low plus High RH	203	5.9	1.45 (0.68,3.12)	0.338
19-16	Double	Comparison	404	10.6		
	Labelled Cells:	Background RH	141	10.6	1.04 (0.55,1.96)	0.905
	CD4 with CD8	Low RH	95	10.5	1.03 (0.49,2.14)	0.945
	(Zero vs.	High RH	108	12.0	1.04 (0.53,2.05)	0.902
	Nonzero)	Low plus High RH	203	11.3	1.04 (0.60,1.79)	0.900
19-17	Double	Comparison	404	3.5		
	Labelled Cells:	Background RH	141	2.8	0.79 (0.25,2.47)	0.685
	CD3 with	Low RH	95	2.1	0.62 (0.14,2.78)	0.529
	CD16+56	High RH	108	6.4	1.92 (0.74,4.96)	0.177
	(Zero vs.	Low plus High RH	203	4.4	1.30 (0.55,3.07)	0.553
19-22	Lupus Panel:	Comparison	1,051	17.1		
	Antinuclear	Background RH	367	15.5	0.88 (0.63,1.22)	0.445
	Antibody	Low RH	256	14.8	0.84 (0.58,1.23)	0.378
		High RH	255	11.4	0.63 (0.41,0.96)	0.030
		Low plus High RH	511	13.1	0.73 (0.54,1.00)	0.047
19-23	Lupus Panel:	Comparison	1,051	2.8		
	Thyroid	Background RH	367	3.5	1.31 (0.67,2.56)	0.431
	Microsomal	Low RH	256	5.9	2.14 (1.13,4.07)	0.020
	Antibody	High RH	255	4.7	1.74 (0.87,3.47)	0.119
		Low plus High RH	511	5.3	1.94 (1.13,3.33)	0.016
19-24	Lupus Panel:	Comparison	1,051	3.1		
	MSK Smooth	Background RH	367	3.8	1.32 (0.69,2.51)	0.405
	Muscle	Low RH	256	4.3	1.37 (0.68,2.75)	0.383
	Antibody	High RH	255	1.2	0.34 (0.10,1.11)	0.073
		Low plus High RH	511	2.7	0.83 (0.44,1.57)	0.563
19-25	Lupus Panel:	Comparison	1,051	0.3		
	MSK	Background RH	367	0.3	1.41 (0.14,14.30)	0.770
	Mitochondrial	Low RH	256	0.4	1.04 (0.10,10.50)	0.971
	Antibody	High RH	255	0.0	--	--
		Low plus High RH	511	0.2	0.49 (0.05,5.04)	0.545
19-26	Lupus Panel:	Comparison	1,051	2.4		
	MSK Parietal	Background RH	367	1.4	0.60 (0.23,1.60)	0.312
	Antibody	Low RH	256	3.1	1.29 (0.57,2.91)	0.537
		High RH	255	2.4	0.94 (0.38,2.33)	0.891
		Low plus High RH	511	2.7	1.11 (0.57,2.17)	0.753

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
19-27	Lupus Panel: Rheumatoid Factor	Comparison	1,051	16.8		
		Background RH	367	16.1	0.96 (0.70,1.33)	0.823
		Low RH	256	18.4	1.11 (0.78,1.58)	0.575
		High RH	255	10.6	0.57 (0.37,0.88)	0.012
		Low plus High RH	511	14.5	0.83 (0.62,1.11)	0.211
19-28	Lupus Panel: B Cell Clones Detected by Serum Protein Electrophoresis	Comparison	1,051	1.9		
		Background RH	367	3.3	1.97 (0.94,4.12)	0.072
		Low RH	256	1.6	0.77 (0.26,2.29)	0.640
		High RH	255	2.4	1.13 (0.45,2.88)	0.789
		Low plus High RH	511	2.0	0.95 (0.44,2.07)	0.906
19-29	Lupus Panel: Other Antibodies (ANA and MSK)	Comparison	1,048	4.3		
		Background RH	365	3.3	0.77 (0.40,1.49)	0.444
		Low RH	255	2.4	0.53 (0.22,1.26)	0.150
		High RH	254	3.5	0.81 (0.39,1.68)	0.566
		Low plus High RH	509	2.9	0.67 (0.37,1.21)	0.184
19-30	Lupus Panel: Summary Index	Comparison	1,050	41.4		
		Background RH	366	39.6	0.96 (0.75,1.22)	0.720
		Low RH	255	40.4	0.94 (0.71,1.25)	0.685
		High RH	254	31.1	0.62 (0.46,0.84)	0.002
		Low plus High RH	509	35.8	0.77 (0.62,0.96)	0.021
20-3	Asthma	Comparison	1,056	2.7		
		Background RH	370	4.3	1.59 (0.85,2.97)	0.150
		Low RH	257	3.9	1.46 (0.70,3.04)	0.314
		High RH	257	3.9	1.43 (0.69,3.00)	0.336
		Low plus High RH	514	3.9	1.45 (0.81,2.59)	0.215
20-4	Bronchitis	Comparison	1,040	17.5		
		Background RH	364	21.4	1.27 (0.94,1.72)	0.116
		Low RH	251	17.9	1.04 (0.72,1.49)	0.847
		High RH	254	17.7	1.02 (0.71,1.47)	0.902
		Low plus High RH	505	17.8	1.03 (0.78,1.36)	0.838
20-5	Pneumonia	Comparison	1,020	12.5		
		Background RH	350	10.6	0.85 (0.58,1.26)	0.424
		Low RH	243	8.2	0.62 (0.38,1.01)	0.055
		High RH	252	6.7	0.49 (0.29,0.83)	0.008
		Low plus High RH	495	7.5	0.55 (0.37,0.81)	0.002
20-6	Thorax and Lung Abnormalities	Comparison	1,063	10.4		
		Background RH	374	15.2	1.48 (1.04,2.09)	0.028
		Low RH	260	11.9	1.14 (0.74,1.75)	0.514
		High RH	260	13.8	1.44 (0.96,2.17)	0.078
		Low plus High RH	520	12.9	1.29 (0.93,1.78)	0.133

Table Q-1-7. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^{ab}	p-Value ^a
20-7	X Ray Interpretation	Comparison	1,063	13.7		
		Background RH	374	14.4	1.06 (0.75,1.48)	0.756
		Low RH	260	13.5	0.98 (0.66,1.45)	0.901
		High RH	259	11.6	0.83 (0.54,1.26)	0.376
		Low plus High RH	519	12.5	0.90 (0.66,1.23)	0.515

^a Adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

^b Relative risk and confidence interval relative to Comparisons.

--: Estimated relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: RH = Ranch Hand.

Comparison: Current Dioxin $\leq$ 10 ppt.

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

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin $\leq$ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table Q-1-8.
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
9-3	Self-Perception of Health	4	1.26 (1.09,1.45)	0.002
		5	1.26 (1.11,1.43)	<0.001
		6	1.18 (1.03,1.36)	0.018
9-4	Appearance of Illness or Distress	4	0.89 (0.63,1.24)	0.469
		5	0.88 (0.67,1.16)	0.372
		6	0.89 (0.63,1.24)	0.268
9-5	Relative Age Appearance	4	1.08 (0.89,1.32)	0.430
		5	1.04 (0.88,1.24)	0.618
		6	1.05 (0.87,1.27)	0.605
9-8	Body Fat	4	1.41 (1.26,1.56)	<0.001
		5	1.37 (1.25,1.51)	<0.001
		6	1.35 (1.22,1.50)	<0.001
9-9	Body Fat with Adjustment for Caloric Intake	4	1.41 (1.26,1.56)	<0.001
		5	1.37 (1.25,1.51)	<0.001
		6	1.35 (1.22,1.50)	<0.001
9-11	Sedimentation Rate	4	1.15 (1.02,1.29)	0.019
		5	1.15 (1.03,1.27)	0.009
		6	1.10 (0.99,1.23)	0.082
10-3	Skin Neoplasms	4	0.88 (0.79,0.97)	0.011
		5	0.92 (0.85,1.01)	0.065
		6	0.86 (0.78,0.95)	0.002
10-4	Malignant Skin Neoplasms	4	0.86 (0.75,1.00)	0.038
		5	0.91 (0.81,1.03)	0.132
		6	0.86 (0.76,0.98)	0.021
10-5	Benign Skin Neoplasms	4	0.90 (0.80,1.01)	0.082
		5	0.93 (0.85,1.03)	0.160
		6	0.89 (0.80,0.99)	0.029
10-6	Skin Neoplasms of Uncertain Behavior or Unspecified Nature	4	0.91 (0.46,1.82)	0.789
		5	0.93 (0.52,1.64)	0.790
		6	0.96 (0.52,1.79)	0.896
10-7	Basal Cell Carcinomas (All Sites Combined)	4	0.86 (0.74,1.01)	0.057
		5	0.91 (0.81,1.04)	0.166
		6	0.86 (0.75,0.99)	0.032
10-8	Basal Cell Carcinomas (Ear, Face, Head, and Neck)	4	0.81 (0.68,0.97)	0.016
		5	0.87 (0.76,1.00)	0.056
		6	0.82 (0.70,0.95)	0.009
10-9	Basal Cell Carcinomas (Trunk)	4	0.97 (0.77,1.23)	0.801
		5	0.97 (0.78,1.20)	0.780
		6	0.95 (0.74,1.23)	0.714

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
10-10	Basal Cell Carcinomas (Upper Extremities)	4	0.82 (0.56,1.18)	0.271
		5	0.87 (0.65,1.16)	0.340
		6	0.86 (0.63,1.18)	0.360
10-11	Basal Cell Carcinomas (Lower Extremities)	4	0.60 (0.13,2.74)	0.491
		5	1.06 (0.34,3.32)	0.923
		6	0.34 (0.07,1.74)	0.188
10-12	Squamous Cell Carcinomas	4	0.91 (0.61,1.35)	0.628
		5	0.97 (0.69,1.35)	0.834
		6	0.89 (0.62,1.28)	0.539
10-13	Nonmelanomas	4	0.86 (0.74,0.99)	0.034
		5	0.91 (0.81,1.03)	0.131
		6	0.85 (0.75,0.97)	0.016
10-14	Melanomas	4	0.98 (0.64,1.50)	0.934
		5	0.99 (0.69,1.42)	0.944
		6	1.02 (0.69,1.51)	0.938
10-15	Systemic Neoplasms	4	1.02 (0.91,1.14)	0.746
		5	1.02 (0.93,1.12)	0.668
		6	1.01 (0.91,1.12)	0.875
10-16	Malignant Systemic Neoplasms	4	0.94 (0.76,1.17)	0.585
		5	0.99 (0.82,1.18)	0.872
		6	0.95 (0.78,1.15)	0.585
10-17	Benign Systemic Neoplasms	4	1.02 (0.91,1.16)	0.712
		5	1.01 (0.91,1.12)	0.829
		6	1.02 (0.91,1.14)	0.765
10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	4	0.88 (0.60,1.28)	0.487
		5	0.88 (0.65,1.19)	0.404
		6	0.83 (0.60,1.14)	0.255
10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	4	0.99 (0.63,1.56)	0.976
		5	0.97 (0.66,1.42)	0.855
		6	1.06 (0.70,1.61)	0.793
10-20	Malignant Systemic Neoplasms (Oral Cavity, Pharynx, and Larynx)	4	1.47 (0.80,2.69)	0.229
		5	1.43 (0.82,2.50)	0.213
		6	1.43 (0.79,2.59)	0.251
10-21	Malignant Systemic Neoplasms (Esophagus)	4	--	--
		5	--	--
		6	--	--
10-22	Malignant Systemic Neoplasms (Brain)	4	0.78 (0.18,3.33)	0.726
		5	0.66 (0.26,1.64)	0.416
		6	--	--

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
10-23	Malignant Systemic Neoplasms (Thymus, Heart, and Mediastinum)	4	0.43 (0.10,1.91)	0.271
		5	0.58 (0.26,1.31)	0.259
		6	0.63 (0.22,1.81)	0.449
10-24	Malignant Systemic Neoplasms (Thyroid Gland)	4	0.88 (0.32,2.37)	0.789
		5	0.90 (0.40,2.01)	0.796
		6	0.95 (0.39,2.28)	0.902
10-25	Malignant Systemic Neoplasms (Bronchus and Lung)	4	0.80 (0.45,1.45)	0.460
		5	0.92 (0.57,1.47)	0.719
		6	0.80 (0.48,1.31)	0.378
10-26	Malignant Systemic Neoplasms (Colon and Rectum)	4	1.03 (0.57,1.87)	0.923
		5	1.14 (0.68,1.90)	0.628
		6	0.97 (0.55,1.72)	0.919
10-27	Malignant Systemic Neoplasms (Kidney and Bladder)	4	0.98 (0.56,1.71)	0.941
		5	1.03 (0.64,1.66)	0.895
		6	0.97 (0.58,1.62)	0.915
10-28	Malignant Systemic Neoplasms (Prostate)	4	0.93 (0.65,1.33)	0.697
		5	0.99 (0.73,1.33)	0.928
		6	0.92 (0.67,1.28)	0.625
10-29	Malignant Systemic Neoplasms (Testicles)	4	1.20 (0.58,2.50)	0.636
		5	1.32 (0.69,2.53)	0.409
		6	1.11 (0.54,2.31)	0.774
10-30	Malignant Systemic Neoplasms (Ill-Defined Sites)	4	--	--
		5	--	--
		6	--	--
10-31	Malignant Systemic Neoplasms (Connective and Other Soft Tissue)	4	--	--
		5	--	--
		6	--	--
10-32	Carcinomas in Situ of the Penis, Other, and Unspecified Sites	4	0.89 (0.22,3.60)	0.864
		5	0.88 (0.28,2.73)	0.826
		6	0.99 (0.28,3.47)	0.991
10-33	Hodgkin's Disease	4	0.64 (0.14,2.90)	0.553
		5	0.73 (0.27,2.00)	0.563
		6	0.78 (0.25,2.44)	0.684
10-34	Leukemia	4	1.10 (0.30,4.06)	0.885
		5	1.01 (0.32,3.22)	0.984
		6	1.25 (0.36,4.34)	0.728
10-35	Non-Hodgkin's Lymphoma	4	0.57 (0.13,2.61)	0.462
		5	0.67 (0.26,1.71)	0.450
		6	0.74 (0.25,2.26)	0.624

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
10-36	Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	4	0.57 (0.13,2.61)	0.462
		5	0.67 (0.26,1.71)	0.450
		6	0.74 (0.25,2.26)	0.624
10-37	Multiple Myeloma	4	0.82 (0.20,3.44)	0.781
		5	0.89 (0.29,2.75)	0.835
		6	0.87 (0.26,2.92)	0.817
10-38	Skin or Systemic Neoplasms	4	0.93 (0.85,1.02)	0.141
		5	0.96 (0.89,1.04)	0.358
		6	0.92 (0.84,1.00)	0.049
10-39	Prostate-Specific Antigen (Below vs. At or Above Sensitivity Limit)	4	0.97 (0.73,1.29)	0.824
		5	1.02 (0.80,1.30)	0.870
		6	0.95 (0.73,1.23)	0.677
10-41	Prostate-Specific Antigen	4	0.99 (0.78,1.25)	0.904
		5	1.03 (0.84,1.26)	0.808
		6	0.98 (0.79,1.23)	0.886
11-3	Inflammatory Diseases	4	1.20 (0.63,2.27)	0.586
		5	1.14 (0.64,2.03)	0.654
		6	1.23 (0.66,2.27)	0.521
11-4	Hereditary and Degenerative Diseases	4	0.86 (0.70,1.06)	0.145
		5	0.89 (0.75,1.04)	0.148
		6	0.86 (0.72,1.03)	0.096
11-5	Peripheral Disorders	4	1.07 (0.95,1.21)	0.253
		5	1.06 (0.95,1.17)	0.294
		6	1.06 (0.95,1.19)	0.286
11-6	Other Neurological Disorders	4	1.14 (1.02,1.27)	0.022
		5	1.09 (0.99,1.20)	0.070
		6	1.14 (1.03,1.27)	0.011
11-7	Smell	4	0.61 (0.39,0.93)	0.018
		5	0.69 (0.52,0.91)	0.015
		6	0.68 (0.50,0.92)	0.019
11-8	Visual Fields	4	--	--
		5	--	--
		6	--	--
11-9	Light Reaction	4	1.38 (0.80,2.39)	0.260
		5	1.37 (0.83,2.26)	0.221
		6	1.30 (0.76,2.23)	0.346
11-10	Ocular Movement	4	1.07 (0.65,1.76)	0.805
		5	1.07 (0.69,1.66)	0.753
		6	1.06 (0.66,1.70)	0.810

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
11-11	Facial Sensation	4	1.52 (0.76,3.04)	0.251
		5	1.47 (0.77,2.78)	0.248
		6	1.50 (0.76,2.98)	0.253
11-12	Jaw Clench	4	--	--
		5	--	--
		6	--	--
11-13	Smile	4	1.49 (0.97,2.28)	0.079
		5	1.38 (0.93,2.05)	0.115
		6	1.51 (0.99,2.31)	0.062
11-14	Palpebral Fissure	4	1.09 (0.70,1.68)	0.717
		5	1.06 (0.72,1.56)	0.761
		6	1.11 (0.73,1.68)	0.629
11-15	Balance	4	1.08 (0.60,1.95)	0.788
		5	1.10 (0.66,1.84)	0.717
		6	1.05 (0.60,1.83)	0.877
11-16	Gag Reflex	4	--	--
		5	--	--
		6	--	--
11-17	Speech	4	1.24 (0.71,2.18)	0.461
		5	1.22 (0.73,2.03)	0.446
		6	1.21 (0.70,2.10)	0.490
11-18	Palate and Uvula Movement	4	--	--
		5	--	--
		6	--	--
11-19	Neck Range of Motion	4	1.01 (0.89,1.15)	0.832
		5	1.03 (0.92,1.15)	0.650
		6	1.00 (0.89,1.13)	0.968
11-20	Cranial Nerve Index Without Range of Motion	4	1.05 (0.84,1.29)	0.683
		5	1.03 (0.85,1.24)	0.782
		6	1.02 (0.83,1.24)	0.884
11-21	Pin Prick	4	1.19 (0.98,1.44)	0.079
		5	1.18 (0.99,1.40)	0.064
		6	1.18 (0.98,1.42)	0.079
11-22	Light Touch	4	1.12 (0.92,1.38)	0.264
		5	1.14 (0.95,1.36)	0.165
		6	1.10 (0.91,1.34)	0.335
11-23	Muscle Status	4	0.99 (0.76,1.28)	0.923
		5	0.99 (0.80,1.24)	0.954
		6	1.00 (0.78,1.27)	0.971

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
11-24	Patellar Reflex	4	1.29 (0.88,1.88)	0.204
		5	1.21 (0.86,1.71)	0.275
		6	1.33 (0.92,1.92)	0.138
11-25	Achilles Reflex	4	1.02 (0.88,1.18)	0.804
		5	1.02 (0.90,1.16)	0.744
		6	1.00 (0.87,1.15)	0.974
11-26	Biceps Reflex	4	1.10 (0.67,1.81)	0.704
		5	1.04 (0.67,1.61)	0.871
		6	1.20 (0.75,1.92)	0.459
11-27	Babinski Reflex	4	0.47 (0.20,1.13)	0.087
		5	0.64 (0.38,1.08)	0.131
		6	0.63 (0.36,1.11)	0.154
11-30	Tremor	4	0.97 (0.73,1.28)	0.819
		5	0.98 (0.78,1.24)	0.898
		6	0.96 (0.75,1.24)	0.750
11-31	Coordination	4	0.97 (0.71,1.32)	0.829
		5	0.99 (0.76,1.29)	0.949
		6	0.95 (0.72,1.26)	0.726
11-32	Romberg Sign	4	1.08 (0.60,1.95)	0.788
		5	1.10 (0.66,1.84)	0.717
		6	1.05 (0.60,1.83)	0.877
11-33	Gait	4	1.01 (0.79,1.29)	0.945
		5	1.02 (0.83,1.26)	0.854
		6	1.00 (0.80,1.26)	0.970
11-34	Central Nervous System (CNS) Index	4	1.00 (0.83,1.22)	0.959
		5	1.03 (0.87,1.21)	0.721
		6	0.99 (0.83,1.18)	0.869
12-3	Psychoses	4	1.10 (0.84,1.43)	0.495
		5	1.13 (0.89,1.42)	0.324
		6	1.06 (0.82,1.37)	0.650
12-4	Alcohol Dependence	4	0.98 (0.83,1.17)	0.851
		5	0.99 (0.85,1.14)	0.865
		6	0.95 (0.81,1.11)	0.511
12-5	Drug Dependence	4	0.36 (0.08,1.54)	0.176
		5	0.55 (0.25,1.21)	0.202
		6	0.58 (0.23,1.47)	0.320
12-6	Anxiety	4	1.13 (1.00,1.28)	0.056
		5	1.12 (1.00,1.25)	0.041
		6	1.09 (0.97,1.22)	0.154

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
12-7	Other Neuroses	4	1.12 (1.02,1.23)	0.013
		5	1.12 (1.03,1.21)	0.005
		6	1.07 (0.98,1.17)	0.139
12-8	SCL-90-R Anxiety	4	1.26 (1.07,1.49)	0.005
		5	1.26 (1.09,1.46)	0.002
		6	1.22 (1.04,1.43)	0.013
12-9	SCL-90-R Depression	4	1.10 (0.95,1.27)	0.207
		5	1.11 (0.97,1.26)	0.125
		6	1.04 (0.90,1.19)	0.613
12-10	SCL-90-R Hostility	4	1.28 (1.07,1.53)	0.008
		5	1.27 (1.08,1.49)	0.004
		6	1.23 (1.04,1.46)	0.019
12-11	SCL-90-R Interpersonal Sensitivity	4	1.19 (1.03,1.37)	0.022
		5	1.18 (1.04,1.35)	0.012
		6	1.15 (1.00,1.32)	0.058
12-12	SCL-90-R Obsessive-Compulsive Behavior	4	1.02 (0.88,1.18)	0.766
		5	1.02 (0.90,1.15)	0.809
		6	0.99 (0.87,1.13)	0.893
12-13	SCL-90-R Paranoid Ideation	4	1.08 (0.90,1.28)	0.420
		5	1.09 (0.93,1.27)	0.280
		6	1.06 (0.90,1.25)	0.506
12-14	SCL-90-R Phobic Anxiety	4	1.15 (0.98,1.35)	0.089
		5	1.13 (0.99,1.30)	0.080
		6	1.08 (0.93,1.26)	0.293
12-15	SCL-90-R Psychoticism	4	1.07 (0.92,1.25)	0.371
		5	1.08 (0.94,1.23)	0.275
		6	1.05 (0.91,1.21)	0.526
12-16	SCL-90-R Somatization	4	1.15 (0.99,1.33)	0.064
		5	1.16 (1.02,1.32)	0.023
		6	1.09 (0.95,1.25)	0.227
12-17	SCL-90-R Global Severity Index	4	1.19 (1.02,1.38)	0.024
		5	1.18 (1.03,1.35)	0.014
		6	1.12 (0.97,1.29)	0.118
12-18	SCL-90-R Positive Symptom Total	4	1.17 (1.02,1.35)	0.027
		5	1.17 (1.03,1.33)	0.013
		6	1.10 (0.97,1.27)	0.149
12-19	SCL-90-R Positive Symptom Distress Index	4	1.14 (0.97,1.35)	0.118
		5	1.15 (0.99,1.33)	0.059
		6	1.08 (0.92,1.26)	0.359

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
13-3	Hepatitis (Non-A, Non-B, or Non-C)	4	1.00 (0.71,1.42)	0.991
		5	0.92 (0.69,1.25)	0.608
		6	1.00 (0.72,1.39)	0.988
13-4	Jaundice	4	0.50 (0.34,0.74)	<0.001
		5	0.62 (0.49,0.79)	<0.001
		6	0.59 (0.46,0.77)	<0.001
13-5	Acute and Subacute Necrosis of the Liver	4	--	--
		5	--	--
		6	--	--
13-6	Alcoholic Chronic Liver Disease and Cirrhosis	4	1.05 (0.86,1.28)	0.655
		5	1.04 (0.88,1.24)	0.633
		6	1.01 (0.84,1.22)	0.905
13-7	Nonalcoholic Chronic Liver Disease and Cirrhosis	4	1.15 (0.78,1.70)	0.480
		5	1.17 (0.82,1.65)	0.388
		6	1.13 (0.78,1.64)	0.530
13-8	Liver Abscess and Sequelae for Chronic Liver Disease	4	--	--
		5	--	--
		6	--	--
13-9	Other Liver Disorders	4	1.15 (1.04,1.27)	0.007
		5	1.14 (1.05,1.24)	0.003
		6	1.11 (1.01,1.21)	0.033
13-10	Hepatomegaly	4	1.00 (0.70,1.44)	0.994
		5	0.96 (0.70,1.30)	0.773
		6	0.97 (0.69,1.35)	0.850
13-11	Current Hepatomegaly	4	1.25 (0.72,2.20)	0.440
		5	1.26 (0.76,2.09)	0.380
		6	1.23 (0.72,2.12)	0.457
13-13	AST	4	1.13 (0.86,1.50)	0.393
		5	1.16 (0.91,1.49)	0.237
		6	1.08 (0.83,1.41)	0.578
13-15	ALT	4	1.24 (1.02,1.50)	0.031
		5	1.23 (1.04,1.46)	0.017
		6	1.19 (0.99,1.43)	0.063
13-17	GGT	4	1.13 (1.01,1.26)	0.033
		5	1.14 (1.03,1.26)	0.009
		6	1.09 (0.98,1.21)	0.131
13-19	Alkaline Phosphatase	4	1.03 (0.84,1.27)	0.762
		5	1.03 (0.86,1.22)	0.776
		6	0.97 (0.80,1.18)	0.764

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
13-21	Total Bilirubin	4	0.94 (0.76,1.16)	0.550
		5	0.97 (0.81,1.16)	0.768
		6	0.92 (0.76,1.12)	0.415
13-22	Direct Bilirubin	4	0.86 (0.56,1.32)	0.488
		5	1.00 (0.70,1.42)	0.990
		6	0.70 (0.48,1.02)	0.075
13-24	LDH	4	1.07 (0.94,1.21)	0.340
		5	1.06 (0.95,1.19)	0.312
		6	1.04 (0.92,1.17)	0.561
13-26	Cholesterol	4	1.06 (0.94,1.21)	0.332
		5	1.18 (1.06,1.32)	0.003
		6	0.94 (0.83,1.07)	0.360
13-28	HDL Cholesterol	4	1.04 (0.90,1.20)	0.613
		5	1.07 (0.94,1.22)	0.277
		6	0.97 (0.84,1.12)	0.676
13-30	Cholesterol-HDL Ratio	4	1.18 (1.08,1.30)	<0.001
		5	1.24 (1.14,1.35)	<0.001
		6	1.06 (0.96,1.16)	0.261
13-32	Triglycerides	4	1.19 (1.04,1.37)	0.013
		5	1.35 (1.19,1.53)	<0.001
		6	1.01 (0.86,1.17)	0.949
13-34	Creatine Kinase	4	1.08 (0.95,1.23)	0.254
		5	1.06 (0.95,1.19)	0.305
		6	1.07 (0.95,1.21)	0.248
13-36	Serum Amylase	4	0.91 (0.75,1.11)	0.343
		5	0.92 (0.78,1.08)	0.309
		6	0.96 (0.81,1.14)	0.628
13-37	Antibodies for Hepatitis A	4	1.06 (0.97,1.17)	0.209
		5	1.06 (0.98,1.15)	0.152
		6	1.05 (0.96,1.15)	0.292
13-38	Serological Evidence of Present or Prior Hepatitis B Infection	4	1.13 (0.98,1.30)	0.098
		5	1.11 (0.98,1.26)	0.109
		6	1.10 (0.96,1.26)	0.152
13-39	Antibodies for Hepatitis C	4	0.73 (0.35,1.53)	0.394
		5	0.73 (0.44,1.21)	0.245
		6	0.89 (0.47,1.70)	0.727
13-40	Stool Hemocult	4	1.05 (0.77,1.41)	0.774
		5	1.09 (0.84,1.42)	0.522
		6	1.01 (0.76,1.34)	0.962

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
13-42	Prealbumin	4	0.87 (0.57,1.33)	0.514
		5	0.78 (0.56,1.08)	0.147
		6	0.97 (0.65,1.44)	0.882
13-44	Albumin	4	1.13 (0.86,1.50)	0.387
		5	1.08 (0.84,1.39)	0.529
		6	1.09 (0.84,1.43)	0.516
13-46	α -1 Acid Glycoprotein	4	1.12 (0.82,1.52)	0.494
		5	1.09 (0.83,1.43)	0.555
		6	1.12 (0.84,1.51)	0.441
13-50	α -2 Macroglobulin	4	1.18 (0.56,2.46)	0.668
		5	1.18 (0.61,2.28)	0.623
		6	1.11 (0.55,2.27)	0.771
13-52	Apolipoprotein B	4	1.09 (0.98,1.21)	0.100
		5	1.16 (1.06,1.27)	0.001
		6	0.98 (0.89,1.09)	0.719
13-54	C ₃ Complement	4	0.68 (0.49,0.94)	0.014
		5	0.70 (0.56,0.87)	0.003
		6	0.86 (0.65,1.13)	0.282
13-56	C ₄ Complement	4	0.86 (0.48,1.54)	0.608
		5	0.83 (0.53,1.31)	0.430
		6	0.94 (0.56,1.56)	0.808
13-58	Haptoglobin	4	0.98 (0.86,1.12)	0.800
		5	1.00 (0.89,1.12)	0.999
		6	0.95 (0.84,1.08)	0.440
13-60	Transferrin	4	0.86 (0.75,1.00)	0.049
		5	0.89 (0.79,1.00)	0.053
		6	0.88 (0.77,1.00)	0.048
14-3	Occurrence of Acne (Lifetime)	4	0.96 (0.84,1.10)	0.577
		5	0.98 (0.87,1.10)	0.691
		6	0.96 (0.85,1.09)	0.514
14-4	Acne Relative to Time of Duty in SEA (Pre- and Post-SEA and Post-SEA vs. Pre-SEA and None)	4	0.96 (0.84,1.09)	0.520
		5	0.97 (0.87,1.09)	0.619
		6	0.96 (0.84,1.08)	0.470
14-5	Acne Relative to Time of Duty in SEA (Post-SEA vs. None)	4	0.96 (0.84,1.10)	0.563
		5	0.98 (0.87,1.10)	0.695
		6	0.96 (0.84,1.09)	0.498
14-6	Acne Relative to Time of Duty in SEA (Pre- and Post-SEA vs. Pre-SEA)	4	0.88 (0.48,1.61)	0.671
		5	0.88 (0.52,1.48)	0.625
		6	0.91 (0.50,1.66)	0.757

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
14-8	Location of Acne (Post-SEA)	4	0.94 (0.84,1.04)	0.207
		5	0.94 (0.86,1.03)	0.186
		6	0.93 (0.84,1.03)	0.144
14-10	Location of Acne (Pre- and Post-SEA and Post-SEA)	4	0.95 (0.86,1.05)	0.321
		5	0.95 (0.88,1.04)	0.265
		6	0.95 (0.86,1.04)	0.226
14-11	Other Abnormalities	4	0.89 (0.79,1.01)	0.062
		5	0.93 (0.84,1.03)	0.180
		6	0.89 (0.79,0.99)	0.038
14-12	Dermatology Index	4	0.94 (0.86,1.03)	0.167
		5	0.94 (0.87,1.01)	0.099
		6	0.95 (0.88,1.04)	0.253
15-3	Verified Essential Hypertension	4	1.18 (1.08,1.30)	<0.001
		5	1.19 (1.10,1.29)	<0.001
		6	1.14 (1.04,1.24)	0.005
15-4	Verified Heart Disease (excluding Essential Hypertension)	4	0.87 (0.80,0.96)	0.004
		5	0.89 (0.82,0.97)	0.004
		6	0.89 (0.81,0.97)	0.005
15-5	Verified Myocardial Infarction	4	1.03 (0.86,1.23)	0.773
		5	1.05 (0.90,1.22)	0.567
		6	1.00 (0.85,1.19)	0.978
15-7	Systolic Blood Pressure	4	1.11 (0.98,1.25)	0.103
		5	1.11 (1.00,1.23)	0.061
		6	1.10 (0.98,1.23)	0.124
15-8	Heart Sounds	4	1.03 (0.92,1.15)	0.631
		5	1.03 (0.94,1.13)	0.549
		6	1.04 (0.93,1.15)	0.496
15-9	Overall Electrocardiograph	4	1.03 (0.92,1.16)	0.561
		5	1.04 (0.95,1.15)	0.388
		6	1.02 (0.91,1.13)	0.764
15-10	ECG: Right Bundle Branch Block (RBBB)	4	1.25 (0.87,1.81)	0.233
		5	1.20 (0.86,1.67)	0.283
		6	1.26 (0.89,1.80)	0.200
15-11	ECG: Left Bundle Branch Block	4	--	--
		5	--	--
		6	--	--
15-12	ECG: Nonspecific ST- and T-Wave Changes	4	1.09 (0.96,1.24)	0.200
		5	1.09 (0.98,1.23)	0.128
		6	1.06 (0.94,1.20)	0.331

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
15-13	ECG: Bradycardia	4	0.70 (0.53,0.94)	0.012
		5	0.76 (0.62,0.94)	0.011
		6	0.79 (0.63,1.00)	0.053
15-14	ECG: Tachycardia	4	--	--
		5	--	--
		6	--	--
15-15	ECG: Arrhythmia	4	1.14 (0.93,1.40)	0.225
		5	1.12 (0.93,1.34)	0.239
		6	1.10 (0.90,1.35)	0.336
15-16	ECG: Evidence of Prior Myocardial Infarction	4	1.12 (0.88,1.43)	0.361
		5	1.16 (0.94,1.44)	0.176
		6	1.06 (0.84,1.34)	0.623
15-17	ECG: Other Diagnoses	4	1.12 (0.74,1.70)	0.585
		5	1.12 (0.78,1.61)	0.554
		6	1.11 (0.75,1.64)	0.615
15-19	Diastolic Blood Pressure	4	1.21 (0.94,1.57)	0.154
		5	1.18 (0.94,1.49)	0.167
		6	1.22 (0.95,1.56)	0.125
15-20	Funduscope Examination	4	1.17 (0.99,1.39)	0.076
		5	1.17 (1.00,1.37)	0.045
		6	1.14 (0.96,1.34)	0.132
15-21	Carotid Bruits	4	0.78 (0.54,1.13)	0.183
		5	0.84 (0.63,1.11)	0.223
		6	0.76 (0.56,1.03)	0.087
15-22	Radial Pulses	4	0.55 (0.25,1.20)	0.122
		5	0.70 (0.42,1.16)	0.192
		6	0.65 (0.38,1.12)	0.150
15-23	Femoral Pulses	4	1.04 (0.68,1.58)	0.869
		5	1.08 (0.75,1.56)	0.688
		6	1.02 (0.69,1.52)	0.915
15-24	Popliteal Pulses	4	1.17 (0.86,1.60)	0.330
		5	1.24 (0.94,1.64)	0.128
		6	1.11 (0.81,1.50)	0.521
15-25	Dorsalis Pedis Pulses	4	1.01 (0.86,1.18)	0.905
		5	1.01 (0.88,1.16)	0.895
		6	1.00 (0.87,1.16)	0.964
15-26	Posterior Tibial Pulses	4	1.01 (0.79,1.28)	0.949
		5	1.05 (0.86,1.30)	0.610
		6	0.98 (0.79,1.23)	0.880

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
15-27	Leg Pulses	4	1.00 (0.86,1.17)	0.986
		5	1.00 (0.88,1.14)	0.962
		6	0.94 (0.75,1.19)	0.621
15-28	Peripheral Pulses	4	0.99 (0.85,1.16)	0.936
		5	1.00 (0.88,1.14)	0.966
		6	0.99 (0.86,1.14)	0.883
15-29	Kidney, Urethra, and Bladder (KUB) X Ray (Excluding Kidney Stones)	4	1.01 (0.91,1.11)	0.885
		5	1.01 (0.93,1.10)	0.818
		6	0.99 (0.91,1.09)	0.892
15-30	Intermittent Claudication and Vascular Insufficiency (ICVI) Index	4	1.01 (0.79,1.29)	0.920
		5	1.11 (0.90,1.37)	0.330
		6	0.94 (0.75,1.19)	0.621
16-10	Hematocrit	4	1.16 (0.82,1.64)	0.417
		5	1.08 (0.80,1.48)	0.608
		6	1.22 (0.87,1.71)	0.247
16-12	Platelet Count	4	1.63 (1.11,2.39)	0.014
		5	1.55 (1.09,2.20)	0.017
		6	1.60 (1.09,2.34)	0.016
16-14	Prothrombin Time	4	0.82 (0.48,1.41)	0.462
		5	0.83 (0.55,1.25)	0.386
		6	0.92 (0.58,1.46)	0.712
16-15	RBC Morphology	4	1.02 (0.93,1.12)	0.619
		5	1.02 (0.95,1.11)	0.578
		6	1.04 (0.95,1.13)	0.417
16-17	Absolute Neutrophils (bands) (Zero vs. Nonzero)	4	1.01 (0.90,1.14)	0.876
		5	1.00 (0.91,1.11)	0.933
		6	1.03 (0.92,1.15)	0.589
16-20	Absolute Eosinophils (Zero vs. Nonzero)	4	1.13 (0.97,1.30)	0.116
		5	1.12 (0.98,1.27)	0.085
		6	1.11 (0.97,1.27)	0.144
16-21	Absolute Basophils (Zero vs. Nonzero)	4	0.98 (0.90,1.08)	0.715
		5	0.99 (0.91,1.07)	0.767
		6	0.98 (0.90,1.07)	0.673
17-3	Kidney Disease	4	1.02 (0.90,1.15)	0.729
		5	1.02 (0.92,1.14)	0.685
		6	1.01 (0.90,1.13)	0.918
17-4	Kidney Stones	4	0.91 (0.70,1.20)	0.510
		5	0.94 (0.75,1.18)	0.613
		6	0.94 (0.74,1.20)	0.623

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
17-5	Urinary Protein	4	1.09 (0.88,1.36)	0.417
		5	1.09 (0.90,1.32)	0.361
		6	1.07 (0.88,1.31)	0.500
17-6	Urinary Red Blood Cell Count	4	1.18 (0.92,1.50)	0.197
		5	1.16 (0.93,1.44)	0.194
		6	1.16 (0.92,1.46)	0.224
17-7	Urinary White Blood Cell Count	4	1.08 (0.84,1.40)	0.533
		5	1.06 (0.85,1.33)	0.579
		6	1.10 (0.87,1.40)	0.424
18-3	Past Thyroid Disease	4	0.95 (0.78,1.17)	0.644
		5	0.99 (0.83,1.17)	0.874
		6	0.94 (0.79,1.13)	0.543
18-4	Composite Diabetes Indicator	4	1.19 (1.05,1.34)	0.005
		5	1.20 (1.08,1.34)	<0.001
		6	1.12 (1.00,1.26)	0.050
18-7	Thyroid Gland	4	0.67 (0.34,1.30)	0.222
		5	0.78 (0.48,1.26)	0.332
		6	0.72 (0.44,1.18)	0.219
18-10	Retinopathy Results (Diabetics)	4	1.51 (0.97,2.36)	0.076
		5	1.43 (0.95,2.15)	0.088
		6	1.47 (0.93,2.31)	0.103
18-11	Neuropathy Results (Diabetics)	4	1.14 (0.83,1.57)	0.424
		5	1.09 (0.83,1.44)	0.535
		6	1.17 (0.85,1.61)	0.321
18-12	Radial Pulses (Doppler) (Diabetics)	4	0.58 (0.22,1.53)	0.271
		5	0.71 (0.38,1.30)	0.307
		6	0.78 (0.37,1.61)	0.515
18-13	Femoral Pulses (Doppler) (Diabetics)	4	0.90 (0.49,1.63)	0.715
		5	0.98 (0.61,1.60)	0.950
		6	0.86 (0.50,1.50)	0.606
18-14	Popliteal Pulses (Doppler) (Diabetics)	4	1.02 (0.65,1.62)	0.920
		5	1.09 (0.74,1.61)	0.647
		6	0.97 (0.62,1.51)	0.884
18-15	Dorsalis Pedis Pulses (Doppler) (Diabetics)	4	1.10 (0.83,1.46)	0.522
		5	1.07 (0.84,1.36)	0.605
		6	1.04 (0.78,1.37)	0.807
18-16	Posterior Tibial Pulses (Doppler) (Diabetics)	4	0.99 (0.67,1.45)	0.943
		5	1.03 (0.74,1.42)	0.874
		6	0.98 (0.68,1.41)	0.899

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
18-17	Leg Pulses (Doppler) (Diabetics)	4	1.11 (0.84,1.46)	0.476
		5	1.07 (0.84,1.35)	0.585
		6	1.06 (0.81,1.38)	0.677
18-18	Peripheral Pulses (Doppler) (Diabetics)	4	1.07 (0.81,1.41)	0.631
		5	1.04 (0.82,1.31)	0.746
		6	1.03 (0.79,1.34)	0.834
18-20	Thyroid Stimulating Hormone (TSH)	4	1.15 (0.87,1.53)	0.327
		5	1.16 (0.90,1.50)	0.242
		6	1.12 (0.85,1.47)	0.428
18-22	Thyroxine (T ₄)	4	1.08 (0.60,1.95)	0.789
		5	1.13 (0.68,1.89)	0.639
		6	1.05 (0.60,1.83)	0.868
18-23	Anti-Thyroid Antibodies	4	1.03 (0.82,1.30)	0.776
		5	1.06 (0.87,1.29)	0.563
		6	1.01 (0.82,1.26)	0.903
18-25	Fasting Glucose (All Participants)	4	1.18 (1.04,1.34)	0.011
		5	1.21 (1.08,1.36)	0.001
		6	1.11 (0.98,1.26)	0.092
18-27	Fasting Glucose (Diabetics)	4	1.13 (0.89,1.44)	0.316
		5	1.15 (0.94,1.41)	0.172
		6	1.05 (0.83,1.32)	0.701
18-29	Fasting Glucose (Nondiabetics)	4	1.02 (0.77,1.34)	0.907
		5	1.05 (0.82,1.33)	0.714
		6	0.99 (0.76,1.28)	0.920
18-31	2-Hour Postprandial Glucose (Nondiabetics)	4	1.27 (1.11,1.46)	0.001
		5	1.28 (1.13,1.45)	<0.001
		6	1.23 (1.08,1.41)	0.002
18-32	Fasting Urinary Glucose (All Participants)	4	1.58 (1.25,1.99)	<0.001
		5	1.62 (1.30,2.01)	<0.001
		6	1.48 (1.17,1.87)	0.001
18-33	Fasting Urinary Glucose (Diabetics)	4	1.46 (1.11,1.92)	0.005
		5	1.44 (1.13,1.84)	0.002
		6	1.37 (1.05,1.80)	0.018
18-34	Fasting Urinary Glucose (Nondiabetics)	4	--	--
		5	--	--
		6	--	--
18-35	2-Hour Postprandial Urinary Glucose (Nondiabetics)	4	1.16 (1.03,1.32)	0.018
		5	1.17 (1.05,1.31)	0.005
		6	1.11 (0.98,1.24)	0.095

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
18-39	Serum Insulin (Diabetics)	4	0.73 (0.58,0.93)	0.008
		5	0.78 (0.63,0.95)	0.011
		6	0.78 (0.62,0.98)	0.029
18-43	Serum Glucagon (All Participants)	4	0.98 (0.45,2.14)	0.964
		5	0.96 (0.49,1.86)	0.900
		6	1.05 (0.51,2.16)	0.894
18-45	Serum Glucagon (Diabetics)	4	0.87 (0.40,1.89)	0.722
		5	0.87 (0.48,1.56)	0.643
		6	1.03 (0.51,2.06)	0.938
18-47	Serum Glucagon (Nondiabetics)	4	--	--
		5	--	--
		6	--	--
18-49	α -1-C Hemoglobin (All Participants)	4	1.10 (0.99,1.21)	0.071
		5	1.11 (1.02,1.22)	0.016
		6	1.05 (0.95,1.15)	0.352
18-51	α -1-C Hemoglobin (Diabetics)	4	1.23 (0.92,1.64)	0.142
		5	1.20 (0.95,1.51)	0.116
		6	1.09 (0.84,1.42)	0.512
18-53	α -1-C Hemoglobin (Nondiabetics)	4	0.99 (0.86,1.12)	0.824
		5	1.01 (0.90,1.13)	0.921
		6	0.97 (0.86,1.10)	0.648
18-54	Urinary Protein (Diabetics)	4	1.11 (0.80,1.53)	0.538
		5	1.10 (0.83,1.46)	0.486
		6	1.08 (0.79,1.48)	0.619
18-56	Serum Proinsulin (Diabetics)	4	1.23 (0.97,1.55)	0.077
		5	1.24 (1.01,1.52)	0.031
		6	1.11 (0.88,1.40)	0.359
18-58	Serum C Peptide (Diabetics)	4	0.96 (0.77,1.21)	0.731
		5	0.98 (0.81,1.19)	0.860
		6	1.01 (0.82,1.26)	0.909
18-60	Total Testosterone	4	1.25 (1.02,1.54)	0.033
		5	1.27 (1.05,1.53)	0.012
		6	1.20 (0.99,1.47)	0.071
18-62	Free Testosterone	4	1.20 (1.06,1.35)	0.004
		5	1.15 (1.04,1.29)	0.009
		6	1.21 (1.07,1.36)	0.002
18-63	Sex Hormone Binding Globulin	4	1.00 (0.88,1.13)	0.994
		5	1.02 (0.92,1.14)	0.666
		6	0.98 (0.87,1.10)	0.709

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
18-64	Total Testosterone to Sex Hormone Binding Globulin Ratio	4	1.05 (0.90,1.23)	0.514
		5	1.03 (0.90,1.18)	0.630
		6	1.08 (0.93,1.25)	0.327
18-66	Estradiol	4	1.12 (0.88,1.42)	0.370
		5	1.08 (0.87,1.33)	0.485
		6	1.05 (0.84,1.32)	0.676
18-68	Luteinizing Hormone (LH)	4	0.87 (0.60,1.26)	0.454
		5	0.92 (0.68,1.24)	0.576
		6	0.86 (0.62,1.18)	0.356
18-70	Follicle Stimulating Hormone (FSH)	4	0.97 (0.79,1.20)	0.787
		5	1.00 (0.84,1.20)	0.973
		6	0.96 (0.79,1.16)	0.653
19-4	Composite Skin Test Diagnosis	4	0.72 (0.56,0.93)	0.008
		5	0.78 (0.65,0.94)	0.012
		6	0.78 (0.63,0.95)	0.014
19-15	Double Labelled Cells: CD5 with CD20 (Zero vs. Nonzero)	4	1.04 (0.73,1.47)	0.834
		5	1.06 (0.78,1.44)	0.699
		6	1.03 (0.74,1.43)	0.883
19-16	Double Labelled Cells: CD4 with CD8 (Zero vs. Nonzero)	4	1.02 (0.81,1.29)	0.852
		5	1.03 (0.84,1.27)	0.763
		6	1.02 (0.81,1.27)	0.884
19-17	Double Labelled Cells: CD3 with CD16+56 (Zero vs. Nonzero)	4	1.53 (1.06,2.22)	0.024
		5	1.56 (1.11,2.21)	0.010
		6	1.46 (1.01,2.10)	0.042
19-22	Lupus Panel: Antinuclear Antibody (ANA)	4	0.90 (0.79,1.03)	0.137
		5	0.93 (0.84,1.04)	0.233
		6	0.90 (0.80,1.02)	0.099
19-23	Lupus Panel: Thyroid Microsomal Antibody	4	1.08 (0.87,1.34)	0.478
		5	1.10 (0.91,1.32)	0.327
		6	1.06 (0.86,1.29)	0.587
19-24	Lupus Panel: MSK Smooth Muscle Antibody	4	0.78 (0.59,1.03)	0.070
		5	0.85 (0.68,1.05)	0.143
		6	0.81 (0.64,1.02)	0.082
19-25	Lupus Panel: MSK Mitochondrial Antibody	4	0.44 (0.15,1.26)	0.126
		5	0.58 (0.32,1.04)	0.114
		6	0.63 (0.31,1.26)	0.243
19-26	Lupus Panel: MSK Parietal Antibody	4	1.17 (0.87,1.57)	0.319
		5	1.16 (0.89,1.51)	0.279
		6	1.16 (0.87,1.55)	0.307

Table Q-1-8. (Continued)
Summary of Unadjusted Results for Dichotomous Variables
Models 4, 5, and 6: Ranch Hands – Log₂ (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Model ^a	Est. Relative Risk (95% C.I.)	p-Value
19-27	Lupus Panel: Rheumatoid Factor	4	0.87 (0.76,0.99)	0.038
		5	0.88 (0.79,0.98)	0.023
		6	0.91 (0.81,1.03)	0.126
19-28	Lupus Panel: B Cell Clones Detected by Serum Protein Electrophoresis	4	0.85 (0.63,1.16)	0.297
		5	0.88 (0.69,1.12)	0.306
		6	0.82 (0.63,1.07)	0.147
19-29	Lupus Panel: Other Antibodies (ANA and MSK)	4	1.07 (0.83,1.39)	0.595
		5	1.05 (0.83,1.31)	0.697
		6	1.10 (0.87,1.41)	0.424
19-30	Lupus Panel: Summary Index	4	0.90 (0.82,0.99)	0.028
		5	0.92 (0.85,1.00)	0.042
		6	0.91 (0.83,0.99)	0.030
20-3	Asthma	4	1.05 (0.84,1.32)	0.653
		5	1.00 (0.82,1.21)	0.973
		6	1.06 (0.85,1.30)	0.619
20-4	Bronchitis	4	0.92 (0.81,1.03)	0.143
		5	0.94 (0.85,1.04)	0.238
		6	0.91 (0.82,1.01)	0.089
20-5	Pneumonia	4	0.87 (0.73,1.03)	0.104
		5	0.90 (0.78,1.04)	0.145
		6	0.89 (0.77,1.04)	0.156
20-6	Thorax and Lung Abnormalities	4	0.94 (0.82,1.07)	0.334
		5	0.95 (0.85,1.07)	0.408
		6	0.94 (0.84,1.06)	0.339
20-7	X Ray Interpretation	4	0.94 (0.82,1.07)	0.339
		5	0.97 (0.87,1.09)	0.651
		6	0.92 (0.82,1.04)	0.197

^a Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 5: Log₂ (whole-weight current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

--: Estimated relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

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

Table Q-1-9.
Summary of Unadjusted Results for Polychotomous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Percent Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
13-48	α -1 Antitrypsin	Low vs. Normal	All	2.2	1.7	1.35 (0.73,2.49)	0.419
			Officer	3.6	2.6	1.40 (0.64,3.06)	0.520
			Enlisted Flyer	1.2	0.5	2.45 (0.22,27.22)	0.866
			Enlisted Groundcrew	1.4	1.3	1.16 (0.39,3.49)	0.999
		High vs. Normal	All	1.8	1.3	1.43 (0.72,2.85)	0.393
			Officer	1.9	1.0	1.96 (0.62,6.22)	0.387
			Enlisted Flyer	1.9	1.5	1.22 (0.24,6.14)	0.999
			Enlisted Groundcrew	1.7	1.4	1.19 (0.43,3.30)	0.947
	Red Blood Cell (RBC) Count	Low vs. Normal	All	3.5	2.3	1.56 (0.94,2.58)	0.087
			Officer	4.7	3.4	1.39 (0.70,2.76)	0.345
			Enlisted Flyer	2.5	1.5	1.64 (0.36,7.43)	0.522
			Enlisted Groundcrew	2.9	1.6	1.87 (0.78,4.48)	0.161
		High vs. Normal	All	1.3	1.3	0.97 (0.46,2.03)	0.926
			Officer	0.6	0.8	0.70 (0.13,3.82)	0.676
			Enlisted Flyer	0.6	2.5	0.25 (0.03,2.11)	0.201
			Enlisted Groundcrew	2.1	1.4	1.58 (0.61,4.13)	0.354
16-6	White Blood Cell (WBC) Count	Low vs. Normal	All	3.8	3.6	1.07 (0.69,1.67)	0.756
			Officer	3.9	4.2	0.92 (0.46,1.84)	0.819
			Enlisted Flyer	5.6	3.0	1.93 (0.67,5.56)	0.221
			Enlisted Groundcrew	3.1	3.3	0.95 (0.46,1.95)	0.891
		High vs. Normal	All	6.2	5.1	1.24 (0.87,1.79)	0.237
			Officer	3.9	3.0	1.29 (0.62,2.71)	0.498
			Enlisted Flyer	9.3	8.5	1.14 (0.55,2.36)	0.728
			Enlisted Groundcrew	7.1	5.7	1.26 (0.76,2.11)	0.370

Table Q-1-9. (Continued)
Summary of Unadjusted Results for Polychotomous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Percent Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
16-8	Hemoglobin	Low vs. Normal	All	3.0	2.4	1.24 (0.74,2.08)	0.419
			Officer	2.5	3.6	0.69 (0.31,1.56)	0.374
			Enlisted Flyer	3.7	1.5	2.57 (0.63,10.47)	0.186
			Enlisted Groundcrew	3.1	1.7	1.81 (0.79,4.16)	0.164
		High vs. Normal	All	2.3	1.5	1.59 (0.85,2.95)	0.144
			Officer	3.0	1.4	2.17 (0.83,5.67)	0.112
			Enlisted Flyer	1.9	0.5	3.86 (0.40,37.64)	0.245
			Enlisted Groundcrew	1.9	1.9	1.01 (0.40,2.54)	0.980
	Diabetic Severity	No Treatment vs. Nondiabetic	All	8.2	8.7	0.96 (0.71,1.30)	0.770
			Officer	8.0	6.4	1.30 (0.77,2.19)	0.329
			Enlisted Flyer	8.0	11.8	0.66 (0.32,1.35)	0.254
			Enlisted Groundcrew	8.5	9.6	0.88 (0.57,1.38)	0.587
		Diet Only vs. Nondiabetic	All	3.2	2.5	1.28 (0.77,2.11)	0.346
			Officer	3.6	1.8	2.07 (0.87,4.90)	0.098
			Enlisted Flyer	2.5	3.5	0.70 (0.20,2.43)	0.570
			Enlisted Groundcrew	3.1	2.8	1.10 (0.52,2.31)	0.805
		Oral Hypoglycemic vs. Nondiabetic	All	1.8	1.9	0.96 (0.51,1.80)	0.907
			Officer	0.8	2.4	0.36 (0.10,1.28)	0.114
			Enlisted Flyer	3.1	1.0	3.05 (0.58,16.13)	0.190
			Enlisted Groundcrew	2.1	1.8	1.22 (0.49,3.03)	0.674
		Insulin Dependent vs. Nondiabetic	All	1.8	0.9	1.93 (0.91,4.06)	0.084
			Officer	2.7	1.0	2.86 (0.97,8.46)	0.057
			Enlisted Flyer	1.9	1.5	1.22 (0.24,6.14)	0.811
			Enlisted Groundcrew	1.0	0.7	1.35 (0.27,6.76)	0.714

Table Q-1-9. (Continued)
Summary of Unadjusted Results for Polychotomous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Percent Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
Q-1-129	18-37 Serum Insulin (All Participants)	Low vs. Normal	All	4.4	4.6	0.92 (0.61,1.40)	0.703
			Officer	3.8	5.8	0.68 (0.35,1.34)	0.265
			Enlisted Flyer	4.3	3.5	1.05 (0.26,4.27)	0.947
			Enlisted Groundcrew	5.0	4.0	1.17 (0.40,3.40)	0.772
		High vs. Normal	All	56.0	57.2	0.94 (0.79,1.12)	0.508
			Officer	56.4	53.4	1.09 (0.82,1.44)	0.561
			Enlisted Flyer	58.0	64.9	0.75 (0.48,1.17)	0.206
			Enlisted Groundcrew	54.9	57.9	0.90 (0.69,1.16)	0.410
	18-41 Serum Insulin (Nondiabetics)	Low vs. Normal	All	5.2	5.2	0.94 (0.62,1.44)	0.782
			Officer	4.5	6.5	0.67 (0.34,1.33)	0.254
			Enlisted Flyer	5.1	3.0	1.37 (0.31,6.06)	0.677
			Enlisted Groundcrew	5.8	4.7	1.16 (0.40,3.37)	0.784
		High vs. Normal	All	55.2	57.6	0.90 (0.75,1.09)	0.287
			Officer	53.2	52.3	0.99 (0.74,1.34)	0.966
			Enlisted Flyer	59.1	68.1	0.70 (0.43,1.15)	0.157
			Enlisted Groundcrew	55.4	58.8	0.89 (0.67,1.18)	0.404
	20-11 Loss of Vital Capacity	Mild vs. None	All	5.4	6.5	0.81 (0.57,1.17)	0.263
			Officer	4.6	5.4	0.86 (0.46,1.60)	0.628
			Enlisted Flyer	4.3	8.9	0.46 (0.19,1.13)	0.089
			Enlisted Groundcrew	6.4	6.6	0.96 (0.58,1.60)	0.880
		Moderate or Severe vs. None	All	1.1	1.3	0.78 (0.36,1.71)	0.535
			Officer	0.8	0.8	1.02 (0.23,4.59)	0.978
			Enlisted Flyer	1.2	2.5	0.47 (0.09,2.46)	0.371
			Enlisted Groundcrew	1.2	1.4	0.85 (0.27,2.60)	0.770

Table Q-1-9. (Continued)
Summary of Unadjusted Results for Polychotomous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter	Contrast	Occupational Category	Percent Abnormal		Est. Relative Risk (95% C.I.)	p-Value
				RH	C		
20-12	Obstructive Abnormality	Mild vs. None	All	36.8	35.9	1.06 (0.89,1.27)	0.493
			Officer	40.7	38.8	1.11 (0.84,1.48)	0.454
			Enlisted Flyer	44.4	41.9	1.23 (0.80,1.91)	0.344
			Enlisted Groundcrew	30.5	31.1	0.96 (0.73,1.27)	0.786
		Moderate or Severe vs. None	All	7.7	6.6	1.21 (0.87,1.69)	0.256
			Officer	7.4	6.0	1.31 (0.75,2.28)	0.335
			Enlisted Flyer	12.4	7.9	1.82 (0.88,3.77)	0.106
			Enlisted Groundcrew	6.2	6.6	0.91 (0.54,1.54)	0.737

Note: RH = Ranch Hand
C = Comparison.

Table Q-1-10.
Summary of Unadjusted Results for Polychotomous Variables
Model 2: Ranch Hands – Log₂ (Initial Dioxin)

Table Ref.	Clinical Parameter	Contrast	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
13-48	α -1 Antitrypsin	Low vs. Normal	0.90 (0.51,1.57)	0.703
		High vs. Normal	0.75 (0.38,1.47)	0.404
16-4	Red Blood Cell (RBC) Count	Low vs. Normal	0.80 (0.52,1.22)	0.305
		High vs. Normal	1.03 (0.59,1.79)	0.918
16-6	White Blood Cell (WBC) Count	Low vs. Normal	0.94 (0.67,1.33)	0.740
		High vs. Normal	0.90 (0.67,1.20)	0.457
16-8	Hemoglobin	Low vs. Normal	0.91 (0.59,1.40)	0.669
		High vs. Normal	1.09 (0.71,1.67)	0.689
18-5	Diabetic Severity	No Treatment vs. Normal	0.88 (0.70,1.12)	0.311
		Diet only vs. Normal	1.00 (0.73,1.39)	0.979
		Oral Hypoglycemics vs. Normal	1.44 (1.03,2.00)	0.032
		Insulin Dependent vs. Normal	0.83 (0.50,1.38)	0.467
18-37	Serum Insulin (All Participants)	Low vs. Normal	0.80 (0.54,1.20)	0.242
		High vs. Normal	0.96 (0.83,1.10)	0.571
18-41	Serum Insulin (Nondiabetics)	Low vs. Normal	0.88 (0.59,1.30)	0.550
		High vs. Normal	1.10 (0.94,1.30)	0.215
20-11	Loss of Vital Capacity	Mild vs. None	1.05 (0.80,1.37)	0.720
		Moderate or Severe vs. None	0.80 (0.45,1.43)	0.452
20-12	Obstructive Abnormality	Mild vs. None	0.86 (0.74,1.00)	0.044
		Moderate or Severe vs. None	0.80 (0.60,1.06)	0.115

^a Adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

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

Table Q-1-11.
Summary of Unadjusted Results for Polychotomous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter	Contrast	Dioxin Category	n	Percent Abnormal	Est. Relative Risk (95% C.I.) ^a	p-Value ^a
Q-1-132	13-48	Low vs. Normal	Comparison	1,043	1.9		
			Background RH	369	3.0	1.51 (0.71,3.22)	0.283
			Low RH	257	1.6	0.83 (0.28,2.45)	0.736
			High RH	258	1.6	0.83 (0.28,2.45)	0.735
			Low plus High RH	515	1.6	0.83 (0.36,1.90)	0.658
		High vs. Normal	Comparison	1,043	1.3		
			Background RH	369	2.2	1.72 (0.70,4.22)	0.234
			Low RH	257	2.0	1.24 (0.43,3.53)	0.692
			High RH	258	0.4	0.20 (0.02,1.67)	0.138
			Low plus High RH	515	1.2	0.71 (0.26,1.92)	0.498
	16-4	Low vs. Normal	Comparison	1,061	2.4		
			Background RH	371	4.3	1.91 (1.00,3.65)	0.049
			Low RH	259	4.6	1.95 (0.96,3.95)	0.063
			High RH	258	1.6	0.64 (0.22,1.86)	0.410
			Low plus High RH	517	3.1	1.29 (0.68,2.45)	0.436
		High vs. Normal	Comparison	1,061	1.3		
			Background RH	371	0.8	0.77 (0.22,2.73)	0.686
			Low RH	259	1.5	1.06 (0.33,3.38)	0.919
			High RH	258	1.2	0.66 (0.18,2.39)	0.525
			Low plus High RH	517	1.4	0.84 (0.33,2.17)	0.722
	16-6	Low vs. Normal	Comparison	1,061	3.3		
			Background RH	371	3.5	0.95 (0.49,1.83)	0.884
			Low RH	259	4.6	1.51 (0.77,2.97)	0.232
			High RH	258	3.9	1.31 (0.64,2.70)	0.462
			Low plus High RH	517	4.3	1.41 (0.82,2.45)	0.217
		High vs. Normal	Comparison	1,061	5.3		
			Background RH	371	5.9	1.07 (0.64,1.78)	0.808
			Low RH	259	7.0	1.41 (0.81,2.45)	0.223
			High RH	258	5.0	1.01 (0.54,1.87)	0.987
			Low plus High RH	517	6.0	1.21 (0.77,1.90)	0.418