Table Q-1-11. (Continued)
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]
16-8	Hemoglobin	Low vs. Normal	Comparison	1,061	2.3		
			Background RH	371	3.5	1.63 (0.81,3.25)	0.170
			Low RH	259	3.9	1.65 (0.78,3.51)	0.192
			High RH	258	1.2	0.49 (0.15,1.67)	0.256
			Low plus High RH	517	2.5	1.08 (0.54,2.14)	0.835
		High vs. Normal	Comparison	1,061	1.5		
			Background RH	371	1.9	1.44 (0.58,3.55)	0.434
			Low RH	259	1.9	1.25 (0.45,3.46)	0.667
			High RH	258	2.3	1.37 (0.53,3.58)	0.516
			Low plus High RH	517	2.1	1.31 (0.60,2.87)	0.493
18-5	Diabetic Severity	No Treatment vs. Normal	Comparison	1,060	8.1		
			Background RH	374	7.0	1.04 (0.65,1.66)	0.863
			Low RH	258	10.9	1.30 (0.82,2.07)	0.270
			High RH	260	7.7	0.85 (0.51,1.43)	0.545
			Low plus High RH	518	9.3	1.07 (0.73,1.56)	0.740
		Diet Only vs. Normal	Comparison	1,060	2.8		
			Background RH	374	2.1	0.92 (0.42,2.05)	0.845
			Low RH	258	4.3	1.46 (0.72,2.99)	0.298
			High RH	260	4.2	1.34 (0.65,2.74)	0.430
			Low plus High RH	518	4.3	1.40 (0.79,2.47)	0.251
		Oral Hypoglycemics vs. Normal	Comparison	1,060	1.9		
			Background RH	374	0.0	--	--
			Low RH	258	1.9	0.92 (0.33,2.53)	0.870
			High RH	260	4.6	1.94 (0.91,4.16)	0.088
			Low plus High RH	518	3.3	1.46 (0.74,2.87)	0.275
		Insulin Dependent vs. Normal	Comparison	1,060	1.1		
			Background RH	374	2.1	2.24 (0.89,5.61)	0.086
			Low RH	258	1.9	1.51 (0.52,4.39)	0.447
			High RH	260	1.5	1.11 (0.34,3.61)	0.862
			Low plus High RH	518	1.7	1.31 (0.54,3.20)	0.555

Table Q-1-11. (Continued)
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]
18-37	Serum Insulin (All Participants)	Low vs. Normal	Comparison	1,060	4.7		
			Background RH	374	5.1	0.82 (0.47,1.44)	0.489
			Low RH	258	4.3	0.92 (0.46,1.84)	0.804
			High RH	260	3.5	0.82 (0.39,1.75)	0.611
			Low plus High RH	518	3.9	0.87 (0.50,1.52)	0.626
		High vs. Normal	Comparison	1,060	58.2		
			Background RH	374	50.0	0.82 (0.64,1.05)	0.113
			Low RH	258	58.9	0.99 (0.74,1.33)	0.944
			High RH	260	61.2	0.97 (0.72,1.30)	0.835
			Low plus High RH	518	60.0	0.98 (0.78,1.23)	0.858
18-41	Serum Insulin (Nondiabetics)	Low vs. Normal	Comparison	912	5.3		
			Background RH	332	5.7	0.84 (0.48,1.49)	0.560
			Low RH	209	5.3	0.95 (0.47,1.93)	0.893
			High RH	213	4.2	0.98 (0.46,2.11)	0.960
			Low plus High RH	422	4.7	0.97 (0.55,1.70)	0.907
		High vs. Normal	Comparison	912	58.2		
			Background RH	332	48.2	0.75 (0.57,0.99)	0.040
			Low RH	209	56.9	0.89 (0.64,1.24)	0.490
			High RH	213	64.3	1.10 (0.79,1.54)	0.571
			Low plus High RH	422	60.7	0.99 (0.77,1.28)	0.934
20-11	Loss of Vital Capacity	Mild vs. None	Comparison	1,062	6.5		
			Background RH	373	5.4	0.94 (0.56,1.57)	0.802
			Low RH	260	5.4	0.77 (0.43,1.40)	0.397
			High RH	260	5.8	0.77 (0.43,1.38)	0.384
			Low plus High RH	520	5.6	0.77 (0.49,1.21)	0.263
		Moderate or Severe vs. None	Comparison	1,062	1.5		
			Background RH	373	0.5	0.41 (0.09,1.79)	0.233
			Low RH	260	1.9	1.19 (0.43,3.30)	0.738
			High RH	260	1.2	0.65 (0.19,2.28)	0.504
			Low plus High RH	520	1.5	0.91 (0.38,2.16)	0.833

Table Q-1-11. (Continued)
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]
20-12	Obstructive Abnormality	Mild vs. None	Comparison	1,062	35.4		
			Background RH	373	39.9	1.21 (0.94,1.56)	0.136
			Low RH	260	36.2	1.08 (0.81,1.45)	0.604
			High RH	260	31.5	0.85 (0.63,1.14)	0.268
			Low plus High RH	520	33.9	0.96 (0.76,1.20)	0.701
		Moderate or Severe vs. None	Comparison	1,062	7.1		
			Background RH	373	8.9	1.30 (0.83,2.03)	0.251
			Low RH	260	8.8	1.29 (0.78,2.14)	0.328
			High RH	260	5.4	0.74 (0.40,1.35)	0.321
			Low plus High RH	520	7.1	1.00 (0.66,1.53)	0.987

[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.

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

Note: Relative risk and confidence interval relative to Comparisons.
RH = Ranch Hand.
Comparison: Current Dioxin ≤ 10 ppt.
Background (Ranch Hand): Current Dioxin ≤ 10 ppt.
Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.
High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table Q-1-12.
Summary of Unadjusted Results for Polychotomous Variables
Models 4, 5, and 6: Ranch Hands − Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Contrast	Model[a]	Est. Relative Risk (95% C.I.)	p-Value
13-48	α-1 Antitrypsin	Low vs. Normal	4	0.82 (0.59,1.14)	0.236
			5	0.88 (0.67,1.14)	0.335
			6	0.88 (0.67,1.15)	0.344
		High vs. Normal	4	0.70 (0.47,1.05)	0.082
			5	0.76 (0.57,1.01)	0.056
			6	0.86 (0.62,1.20)	0.390
16-4	Red Blood Cell (RBC) Count	Low vs. Normal	4	0.87 (0.67,1.12)	0.285
			5	0.89 (0.72,1.09)	0.268
			6	0.90 (0.73,1.12)	0.359
		High vs. Normal	4	1.18 (0.79,1.77)	0.423
			5	1.16 (0.81,1.67)	0.417
			6	1.20 (0.82,1.75)	0.356
16-6	White Blood Cell (WBC) Count	Low vs. Normal	4	1.00 (0.79,1.26)	0.984
			5	1.00 (0.82,1.22)	0.982
			6	1.02 (0.82,1.25)	0.873
		High vs. Normal	4	0.88 (0.73,1.08)	0.224
			5	0.93 (0.79,1.09)	0.380
			6	0.91 (0.76,1.07)	0.259
16-8	Hemoglobin	Low vs. Normal	4	0.92 (0.70,1.21)	0.542
			5	0.92 (0.73,1.16)	0.477
			6	0.94 (0.74,1.20)	0.634
		High vs. Normal	4	1.13 (0.83,1.54)	0.448
			5	1.14 (0.86,1.50)	0.359
			6	1.15 (0.86,1.53)	0.340
18-5	Diabetic Severity	No Treatment vs. Nondiabetic	4	1.10 (0.93,1.29)	0.266
			5	1.11 (0.97,1.29)	0.140
			6	1.12 (0.96,1.30)	0.155
		Diet Only vs. Nondiabetic	4	1.27 (1.00,1.62)	0.052
			5	1.35 (1.08,1.68)	0.007
			6	1.30 (1.04,1.63)	0.020
		Oral Hypoglycemic vs. Nondiabetic	4	2.17 (1.59,2.96)	<0.001
			5	2.12 (1.57,2.85)	<0.001
			6	2.16 (1.59,2.93)	<0.001
		Insulin Dependent vs. Nondiabetic	4	0.75 (0.52,1.08)	0.120
			5	0.80 (0.61,1.05)	0.114
			6	0.78 (0.59,1.03)	0.075

Table Q-1-12. (Continued)
Summary of Unadjusted Results for Polychotomous Variables
Models 4, 5, and 6: Ranch Hands -- Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter	Contrast	Model[a]	Est. Relative Risk (95% C.I.)	p-Value
18-37	Serum Insulin (All Participants)	Low vs. Normal	4	0.77 (0.60,0.99)	0.038
			5	0.80 (0.67,0.97)	0.021
			6	0.79 (0.65,0.97)	0.021
		High vs. Normal	4	1.12 (1.02,1.24)	0.016
			5	1.14 (1.05,1.24)	0.002
			6	1.12 (1.02,1.22)	0.013
18-41	Serum Insulin (Nondiabetics)	Low vs. Normal	4	0.83 (0.64,1.07)	0.148
			5	0.85 (0.70,1.03)	0.105
			6	0.83 (0.68,1.03)	0.089
		High vs. Normal	4	1.24 (1.11,1.38)	<0.001
			5	1.26 (1.14,1.38)	<0.001
			6	1.22 (1.10,1.34)	<0.001
20-11	Loss of Vital Capacity	Mild vs. None	4	1.12 (0.93,1.36)	0.231
			5	1.13 (0.96,1.34)	0.150
			6	1.14 (0.95,1.36)	0.151
		Moderate or Severe vs. None	4	1.09 (0.72,1.66)	0.681
			5	1.08 (0.75,1.56)	0.668
			6	1.11 (0.76,1.63)	0.584
20-12	Obstructive Abnormality	Mild vs. None	4	0.84 (0.76,0.92)	<0.001
			5	0.88 (0.81,0.96)	0.003
			6	0.86 (0.79,0.94)	0.001
		Moderate or Severe vs. None	4	0.80 (0.67,0.96)	0.015
			5	0.84 (0.72,0.98)	0.022
			6	0.83 (0.71,0.97)	0.018

[a] Model 4: Log_2 (lipid-adjusted current dioxin + 1).
Model 5: Log_2 (whole-weight current dioxin + 1).
Model 6: Log_2 (whole-weight current dioxin + 1), adjusted for log_2 total lipids.

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

Table Q-1-13.
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
9-6	Body Fat (Percent)[a]	All	21.75	21.91	-0.16 --	0.449
		Officer	21.61	21.38	0.23 --	0.511
		Enlisted Flyer	21.71	21.91	-0.21 --	0.699
		Enlisted Groundcrew	21.94	22.44	-0.50 --	0.131
9-7	Body Fat (Percent) with Adjustment for Caloric Intake[a]	All	21.72	21.90	-0.18 --	0.400
		Officer	21.63	21.39	0.23 --	0.495
		Enlisted Flyer	21.62	21.87	-0.26 --	0.626
		Enlisted Groundcrew	21.94	22.46	-0.53 --	0.110
9-10	Sedimentation Rate (mm/hr)[b]	All	8.31	7.96	0.35 --	0.232
		Officer	6.93	6.91	0.02 --	0.946
		Enlisted Flyer	8.75	8.80	-0.05 --	0.945
		Enlisted Groundcrew	9.27	8.43	0.84 --	0.078
10-40	Prostate-Specific Antigen (ng/ml)[a] (Measurements at or Above Sensitivity Limit)	All	****	****	****	****
		Officer	****	****	****	****
		Enlisted Flyer	****	****	****	****
		Enlisted Groundcrew	****	****	****	****
11-28	Vibrotactile Threshold Measurement of Right Great Toe (microns)[a]	All	16.28	16.48	-0.19 --	0.798
		Officer	13.32	14.86	-1.54 --	0.136
		Enlisted Flyer	17.46	17.22	0.23 --	0.904
		Enlisted Groundcrew	18.62	17.46	1.16 --	0.349
11-29	Vibrotactile Threshold Measurement of Left Great Toe (microns)[a]	All	15.77	15.46	0.31 --	0.664
		Officer	13.15	13.40	-0.25 --	0.797
		Enlisted Flyer	15.90	17.04	-1.14 --	0.540
		Enlisted Groundcrew	18.09	16.58	1.52 --	0.205
13-12	AST (U/L)[a]	All	22.87	23.41	-0.55 --	0.138
		Officer	23.55	24.15	-0.61 --	0.319
		Enlisted Flyer	21.33	22.90	-1.57 --	0.071
		Enlisted Groundcrew	23.41	23.51	-0.11 --	0.851

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
13-14	ALT (U/L)[a]	All	26.12	27.03	-0.91 --	0.080
		Officer	26.81	27.22	-0.40 --	0.633
		Enlisted Flyer	24.59	27.39	-2.79 --	0.026
		Enlisted Groundcrew	26.17	26.80	-0.63 --	0.423
13-16	GGT (U/L)[a]	All	34.86	34.13	0.73 --	0.429
		Officer	33.70	32.90	0.80 --	0.571
		Enlisted Flyer	34.35	35.74	-1.40 --	0.545
		Enlisted Groundcrew	35.80	34.36	1.44 --	0.305
13-18	Alkaline Phosphatase (U/L)[a]	All	71.05**	68.85**	2.20 --**	0.005**
		Officer	67.51**	66.08**	1.43 --**	0.231**
		Enlisted Flyer	70.53**	71.07**	-0.54 --**	0.782**
		Enlisted Groundcrew	74.24**	70.29**	3.95 --**	0.001**
13-20	Total Bilirubin (mg/dl)[a]	All	0.61	0.62	-0.01 --	0.600
		Officer	0.64	0.63	0.01 --	0.645
		Enlisted Flyer	0.58	0.61	-0.03 --	0.221
		Enlisted Groundcrew	0.62	0.63	-0.01 --	0.637
13-23	LDH (U/H)[a]	All	145.33**	144.97**	0.36 --**	0.743**
		Officer	143.05**	143.55**	-0.49 --**	0.779**
		Enlisted Flyer	142.49**	146.51**	-4.03 --**	0.139**
		Enlisted Groundcrew	148.97**	146.15**	2.81 --**	0.096**
13-25	Cholesterol (mg/dl)[a]	All	216.07**	215.49**	0.58 --**	0.729**
		Officer	213.61**	211.20**	2.41 --**	0.365**
		Enlisted Flyer	217.80**	220.84**	-3.04 --**	0.473**
		Enlisted Groundcrew	215.66**	215.40**	0.26 --**	0.918**
13-27	HDL Cholesterol (mg/dl)[a]	All	42.61**	42.81**	-0.20 --**	0.656**
		Officer	44.29**	44.56**	-0.27 --**	0.727**
		Enlisted Flyer	42.55**	41.47**	1.08 --**	0.335**
		Enlisted Groundcrew	41.49**	42.11**	-0.62 --**	0.356**

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
13-29	Cholesterol-HDL Ratio[a]	All	5.07	5.03	0.04 --	0.565
		Officer	4.82	4.74	0.08 --	0.411
		Enlisted Flyer	5.10	5.30	-0.20 --	0.199
		Enlisted Groundcrew	5.20	5.12	0.08 --	0.383
13-31	Triglycerides (mg/dl)[a]	All	131.89**	129.01**	2.88 --**	0.362**
		Officer	125.96**	116.29**	9.67 --**	0.039**
		Enlisted Flyer	128.58**	143.70**	-15.12 --**	0.062**
		Enlisted Groundcrew	135.38**	132.62**	2.76 --**	0.572**
13-33	Creatine Kinase (U/L)[a]	All	168.64**	169.72**	-1.08 --**	0.780**
		Officer	175.29**	170.67**	4.62 --**	0.464**
		Enlisted Flyer	158.25**	167.76**	-9.52 --**	0.299**
		Enlisted Groundcrew	167.41**	169.93**	-2.53 --**	0.663**
13-35	Serum Amylase (U/L)[a]	All	82.89	83.05	-0.17 --	0.895
		Officer	81.74	85.58	-3.84 --	0.058
		Enlisted Flyer	82.86	80.81	2.05 --	0.503
		Enlisted Groundcrew	84.79	82.54	2.25 --	0.238
13-41	Prealbumin (mg/dl)	All	27.80**	27.75**	0.05 (-0.32,0.42)**	0.788**
		Officer	28.23**	28.14**	0.09 (-0.51,0.68)**	0.777**
		Enlisted Flyer	27.92**	27.78**	0.14 (-0.78,1.06)**	0.765**
		Enlisted Groundcrew	27.28**	27.29**	-0.01 (-0.57,0.55)**	0.964**
13-43	Albumin (mg/dl)	All	3,910.13**	3,922.27**	-12.15 (-38.06,13.77)	0.358**
		Officer	3,919.44**	3,942.55**	-23.11 (-64.59,18.37)	0.275**
		Enlisted Flyer	3,916.15**	3,919.14**	-2.98 (-66.92,60.95)	0.927**
		Enlisted Groundcrew	3,904.03**	3,909.48**	-5.45 (-44.42,33.53)	0.784**
13-45	α-1 Acid Glycoprotein (mg/dl)[a]	All	55.35	55.30	0.04 --	0.933
		Officer	52.38	53.15	-0.77 --	0.338
		Enlisted Flyer	56.26	56.20	0.06 --	0.967
		Enlisted Groundcrew	57.49	56.67	0.82 --	0.316

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
13-47	α-1 Antitrypsin (mg/dl)	All	148.79	146.63	2.16 (-0.12,4.44)	0.063
		Officer	142.60	141.20	1.40 (-2.26,5.05)	0.454
		Enlisted Flyer	152.05	148.56	3.49 (-2.13,9.12)	0.223
		Enlisted Groundcrew	152.18	149.83	2.34 (-1.08,5.77)	0.180
13-49	α-2 Macroglobulin (mg/dl)[a]	All	128.91	129.75	-0.84 --	0.476
		Officer	123.85	125.02	-1.17 --	0.518
		Enlisted Flyer	129.05	132.68	-3.63 --	0.216
		Enlisted Groundcrew	133.00	132.47	0.53 --	0.770
13-51	Apolipoprotein B (mg/dl)[a]	All	151.01	151.66	-0.65 --	0.685
		Officer	154.09	154.31	-0.22 --	0.934
		Enlisted Flyer	149.06	155.23	-6.17 --	0.120
		Enlisted Groundcrew	147.92	146.95	0.97 --	0.678
13-53	C_3 Complement (mg/dl)[a]	All	116.09	116.52	-0.43 --	0.566
		Officer	113.58	112.94	0.64 --	0.588
		Enlisted Flyer	115.38	118.03	-2.65 --	0.157
		Enlisted Groundcrew	118.63	119.22	-0.59 --	0.612
13-55	C_4 Complement (mg/dl)[a]	All	23.17	23.29	-0.12 --	0.617
		Officer	22.66	22.84	-0.19 --	0.619
		Enlisted Flyer	23.49	23.13	0.36 --	0.548
		Enlisted Groundcrew	23.56	23.80	-0.24 --	0.515
13-57	Haptoglobin (mg/dl)	All	110.05	105.36	4.69 (0.88,8.50)	0.016
		Officer	97.01	93.56	3.45 (-2.65,9.55)	0.267
		Enlisted Flyer	115.13	111.57	3.56 (-5.84,12.97)	0.458
		Enlisted Groundcrew	117.54	111.35	6.20 (0.47,11.93)	0.034
13-59	Transferrin (mg/dl)[a]	All	288.88	285.27	3.60 --	0.040
		Officer	287.22	283.03	4.20 --	0.132
		Enlisted Flyer	285.86	289.37	-3.52 --	0.417
		Enlisted Groundcrew	290.98	285.27	5.71 --	0.031

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
15-6	Systolic Blood Pressure (mm Hg)	All	125.55	126.47	-0.92 (-2.35,0.51)	0.206
		Officer	125.80	126.66	-0.87 (-3.17,1.43)	0.461
		Enlisted Flyer	125.36	125.81	-0.45 (-3.98,3.08)	0.802
		Enlisted Groundcrew	125.44	126.57	-1.13 (-3.27,1.00)	0.297
15-18	Diastolic Blood Pressure (mm Hg)	All	74.01**	74.46**	-0.46 (-1.24,0.33)**	0.257**
		Officer	74.24**	74.54**	-0.31 (-1.57,0.96)**	0.635**
		Enlisted Flyer	74.72**	75.01**	-0.29 (-2.22,1.65)**	0.772**
		Enlisted Groundcrew	73.65**	74.31**	-0.66 (-1.84,0.52)**	0.273**
16-3	Red Blood Cell (RBC) Count (million/mm^3)	All	****	****	****	****
		Officer	****	****	****	****
		Enlisted Flyer	****	****	****	****
		Enlisted Groundcrew	****	****	****	****
16-5	White Blood Cell (WBC) Count (thousand/mm^3)[a]	All	6.66**	6.63**	0.03 --**	0.690**
		Officer	6.37**	6.34**	0.03 --**	0.771**
		Enlisted Flyer	6.66**	6.73**	-0.08 --**	0.656**
		Enlisted Groundcrew	6.93**	6.87**	0.06 --**	0.551**
16-7	Hemoglobin (gm/dl)	All	15.62**	15.63**	-0.00 (-0.09,0.08)**	0.944**
		Officer	15.61**	15.57**	0.05 (-0.09,0.18)**	0.509**
		Enlisted Flyer	15.60**	15.69**	-0.09 (-0.30,0.11)**	0.384**
		Enlisted Groundcrew	15.63**	15.64**	-0.01 (-0.14,0.11)**	0.849**
16-9	Hematocrit (percent)	All	45.82**	45.84**	-0.02 (-0.28,0.24)**	0.879**
		Officer	45.73**	45.57**	0.16 (-0.26,0.57)**	0.451**
		Enlisted Flyer	45.75**	46.01**	-0.26 (-0.89,0.38)**	0.423**
		Enlisted Groundcrew	45.90**	45.99**	-0.09 (-0.47,0.30)**	0.658**
16-11	Platelet Count (thousand/mm^3)[c]	All	251.0**	246.1**	4.8 --**	0.036**
		Officer	242.6	246.2	-3.6 --	0.324
		Enlisted Flyer	256.2	242.2	13.9 --	0.014
		Enlisted Groundcrew	256.7	247.8	8.9 --	0.010

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
16-13	Prothrombin Time (seconds)[a]	All	12.05	12.04	0.01 --	0.662
		Officer	12.02	12.00	0.02 --	0.582
		Enlisted Flyer	12.10	12.02	0.08 --	0.155
		Enlisted Groundcrew	12.04	12.07	-0.02 --	0.481
16-16	Absolute Neutrophils (segs) (thousand/mm^3)[a]	All	3.568	3.543	0.025 --	0.608
		Officer	3.397	3.354	0.044 --	0.561
		Enlisted Flyer	3.524	3.607	-0.084 --	0.490
		Enlisted Groundcrew	3.750	3.700	0.050 --	0.519
16-17	Absolute Neutrophils (bands) (thousand/mm^3)[a] (Nonzero Measurements)	All	0.169	0.169	-0.001 --	0.916
		Officer	0.227	0.213	0.014 --	0.272
		Enlisted Flyer	0.124	0.148	-0.024 --	0.038
		Enlisted Groundcrew	0.161	0.160	0.001 --	0.946
16-18	Absolute Lymphocytes (thousand/mm^3)[a]	All	1.934	1.953	-0.019 --	0.517
		Officer	1.850	1.875	-0.025 --	0.577
		Enlisted Flyer	1.931	1.997	-0.066 --	0.643
		Enlisted Groundcrew	2.008	2.003	0.005 --	0.918
16-19	Absolute Monocytes (thousand/mm^3)[c]	All	0.450**	0.444**	0.006 --**	0.527**
		Officer	0.459**	0.446**	0.013 --**	0.426**
		Enlisted Flyer	0.435**	0.442**	-0.007 --**	0.780**
		Enlisted Groundcrew	0.451**	0.445**	0.006 --**	0.696**
16-20	Absolute Eosinophils (thousand/mm^3)[a] (Nonzero Measurements)	All	0.158	0.162	-0.004 --	0.373
		Officer	0.159	0.162	-0.004 --	0.661
		Enlisted Flyer	0.149	0.168	-0.018 --	0.133
		Enlisted Groundcrew	0.160	0.160	0.000 --	0.999
16-21	Absolute Basophils (thousand/mm^3)[a] (Nonzero Measurements)	All	0.085	0.084	0.001 --	0.653
		Officer	0.083	0.080	0.003 --	0.360
		Enlisted Flyer	0.081	0.089	-0.008 --	0.094
		Enlisted Groundcrew	0.086	0.083	0.003 --	0.386

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
17-8	Serum Creatinine (mg/dl)[a]	All	1.0031**	1.0028**	0.0002 --**	0.972**
		Officer	1.0057**	1.0047**	0.0010 --**	0.929**
		Enlisted Flyer	0.9817**	0.9782**	0.0036 --**	0.831**
		Enlisted Groundcrew	1.0235**	1.0252**	-0.0017 --**	0.873**
17-9	Urine Specific Gravity	All	1.0189	1.0192	-0.0002 (-0.0008,0.0003)	0.430
		Officer	1.0187	1.0186	0.0001 (-0.0007,0.0010)	0.762
		Enlisted Flyer	1.0181	1.0190	-0.0010 (-0.0023,0.0004)	0.152
		Enlisted Groundcrew	1.0198	1.0200	-0.0002 (-0.0010,0.0006)	0.554
18-6	Time to Diabetes Onset (years)[d]	All	--	--	0.0041 (0.0499)[d]	0.935
		Officer	--	--	-0.0664 (0.0790)[d]	0.400
		Enlisted Flyer	--	--	0.1638 (0.1169)[d]	0.161
		Enlisted Groundcrew	--	--	0.0046 (0.0774)[d]	0.953
18-8	Testicular Volume: Minimum (cm^3)	All	15.07	15.00	0.07 (-0.39,0.52)	0.769
		Officer	15.20	15.05	0.15 (-0.59,0.88)	0.694
		Enlisted Flyer	15.18	15.24	-0.06 (-1.17,1.06)	0.923
		Enlisted Groundcrew	14.95	14.91	0.04 (-0.64,0.73)	0.901
18-9	Testicular Volume: Total (cm^3)[c]	All	32.08	32.15	-0.07 --	0.872
		Officer	32.23	32.48	-0.25 --	0.730
		Enlisted Flyer	32.52	33.04	-0.51 --	0.642
		Enlisted Groundcrew	31.90	31.67	0.23 --	0.727
18-19	Thyroid Stimulating Hormone (TSH) (μIU/ml)[a]	All	1.41	1.37	0.04 --	0.282
		Officer	1.47	1.40	0.07 --	0.280
		Enlisted Flyer	1.28	1.32	-0.04 --	0.645
		Enlisted Groundcrew	1.44	1.39	0.05 --	0.377
18-21	Thyroxine (T_4) (μg/dl)	All	7.81	7.85	-0.04 (-0.15,0.07)	0.456
		Officer	7.48	7.59	-0.11 (-0.29,0.07)	0.224
		Enlisted Flyer	7.96	7.94	0.02 (-0.26,0.29)	0.892
		Enlisted Groundcrew	8.00	8.01	-0.01 (-0.17,0.16)	0.945

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
18-24	Fasting Glucose (mg/dl)[a] (All Participants)	All	107.69	107.68	0.01 --	0.993
		Officer	101.25	100.44	0.81 --	0.540
		Enlisted Flyer	111.29	114.42	-3.13 --	0.167
		Enlisted Groundcrew	109.74	109.36	0.38 --	0.779
18-26	Fasting Glucose (mg/dl)[a] (Diabetics)	All	156.94**	159.79**	-2.85 --**	0.613**
		Officer	165.33**	170.82**	-5.49 --**	0.589**
		Enlisted Flyer	153.01**	156.69**	-3.68 --**	0.781**
		Enlisted Groundcrew	152.28**	153.02**	-0.74 --**	0.926**
18-28	Fasting Glucose (mg/dl)[a] (Nondiabetics)	All	99.18**	99.20**	-0.02 --**	0.957**
		Officer	99.27	98.88	0.40 --	0.523
		Enlisted Flyer	98.01	100.46	-2.45 --	0.012
		Enlisted Groundcrew	99.45	98.95	0.49 --	0.400
18-30	2-Hour Postprandial Glucose (mg/dl)[a] (Nondiabetics)	All	****	****	****	****
		Officer	****	****	****	****
		Enlisted Flyer	****	****	****	****
		Enlisted Groundcrew	****	****	****	****
18-36	Serum Insulin (mIU/ml)[a] (All Participants)	All	37.38**	36.92**	0.91 --**	0.472**
		Officer	44.11**	40.68**	3.43 --**	0.134**
		Enlisted Flyer	30.04**	34.27**	-4.23 --**	0.114**
		Enlisted Groundcrew	38.52**	37.30**	1.22 --**	0.524**
18-38	Serum Insulin (mIU/ml)[a] (Diabetics)	All	49.23	42.96	6.27 --	0.149
		Officer	53.16	43.45	9.72 --	0.506
		Enlisted Flyer	44.35	46.39	-2.05 --	0.838
		Enlisted Groundcrew	48.45	41.54	6.90 --	0.274
18-40	Serum Insulin (mIU/ml)[a] (Nondiabetics)	All	58.55**	58.64**	-0.08 --**	0.968**
		Officer	64.42**	61.81**	2.61 --**	0.463**
		Enlisted Flyer	48.88**	56.22**	-7.34 --**	0.113**
		Enlisted Groundcrew	60.47**	59.82**	0.65 --**	0.839**

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
18-42	Serum Glucagon (pg/ml)[a] (All Participants)	All	59.82	60.50	-0.69 --	0.326
		Officer	59.08	59.61	-0.53 --	0.632
		Enlisted Flyer	57.37	60.99	-3.62 --	0.028
		Enlisted Groundcrew	62.02	61.66	0.36 --	0.735
18-44	Serum Glucagon (pg/ml)[a] (Diabetics)	All	70.27**	69.68**	0.58 --**	0.824**
		Officer	70.22**	68.62**	1.61 --**	0.709**
		Enlisted Flyer	62.58**	70.89**	-8.31 --**	0.158**
		Enlisted Groundcrew	75.61**	71.94**	3.67 --**	0.372**
18-46	Serum Glucagon (pg/ml)[a] (Nondiabetics)	All	54.55	55.51	-0.96 --	0.139
		Officer	53.83	54.80	-0.97 --	0.346
		Enlisted Flyer	52.82	55.76	-2.93 --	0.059
		Enlisted Groundcrew	56.28	56.45	-0.17 --	0.865
18-48	α-1-C Hemoglobin (percent)[a] (All Participants)	All	7.56	7.55	0.01 --	0.873
		Officer	7.05	7.04	0.01 --	0.892
		Enlisted Flyer	7.87	7.97	-0.10 --	0.433
		Enlisted Groundcrew	7.73	7.69	0.04 --	0.557
18-50	α-1-C Hemoglobin (percent)[a] (Diabetics)	All	****	****	****	****
		Officer	****	****	****	****
		Enlisted Flyer	****	****	****	****
		Enlisted Groundcrew	****	****	****	****
18-52	α-1-C Hemoglobin (percent)[a] (Nondiabetics)	All	7.07**	7.09**	-0.02 --**	0.381**
		Officer	6.96**	7.01**	-0.05 --**	0.288**
		Enlisted Flyer	7.13**	7.17**	-0.04 --**	0.558**
		Enlisted Groundcrew	7.11**	7.11**	0.00 --**	0.967**
18-55	Serum Proinsulin (ng/ml)[c] (Diabetics)	All	0.809	0.785	0.023 --	0.790
		Officer	0.757	0.856	-0.099 --	0.507
		Enlisted Flyer	0.792	0.679	0.113 --	0.738
		Enlisted Groundcrew	0.871	0.794	0.077 --	0.738

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
18-57	Serum C Peptide (ng/ml) (Diabetics)	All	7.57	6.72	0.85 (-0.09,1.78)	0.077
		Officer	7.36	6.94	0.42 (-1.16,1.20)	0.604
		Enlisted Flyer	7.39	6.61	0.78 (-1.41,2.98)	0.484
		Enlisted Groundcrew	7.84	6.64	1.20 (-0.19,2.60)	0.092
18-59	Total Testosterone (ng/dl)[c]	All	510.0	498.9	11.1 --**	0.131**
		Officer	502.3	485.9	16.5 --**	0.159**
		Enlisted Flyer	528.0	490.3	37.7 --**	0.038**
		Enlisted Groundcrew	509.5	513.0	-3.5 --**	0.753**
18-61	Free Testosterone (pg/ml)[c]	All	19.56	19.22	0.34 --	0.170
		Officer	20.17	19.76	0.41 --	0.311
		Enlisted Flyer	20.10	19.09	1.01 --	0.097
		Enlisted Groundcrew	18.67	18.63	0.04 --	0.921
18-65	Estradiol (pg/ml)[c]	All	34.22	34.21	0.01 --	0.995
		Officer	33.52	33.93	-0.41 --	0.655
		Enlisted Flyer	35.43	34.24	1.19 --	0.409
		Enlisted Groundcrew	34.11	34.18	-0.06 --	0.940
18-67	Luteinizing Hormone (LH) (mIU/ml)[a]	All	4.03	3.90	0.13 --	0.148
		Officer	3.94	3.79	0.15 --	0.288
		Enlisted Flyer	4.06	3.85	0.21 --	0.347
		Enlisted Groundcrew	4.12	4.04	0.08 --	0.547
18-69	Follicle Stimulating Hormone (FSH) (mIU/ml)[a]	All	4.37	4.31	0.06 --	0.631
		Officer	4.28	4.21	0.07 --	0.717
		Enlisted Flyer	4.42	4.13	0.29 --	0.336
		Enlisted Groundcrew	4.49	4.53	-0.04 --	0.838
19-5	CD3 Cells (cells/mm^3)[a]	All	1,483.4	1,459.0	24.4 --	0.544
		Officer	1,481.5	1,388.3	93.2 --	0.134
		Enlisted Flyer	1,410.0	1,532.3	-122.3 --	0.201
		Enlisted Groundcrew	1,523.1	1,491.5	31.6 --	0.619

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
19-6	CD4 Cells (cells/mm^3)[a]	All	956.9	937.2	19.7 --	0.454
		Officer	973.8	920.5	53.3 --	0.204
		Enlisted Flyer	900.8	976.3	-75.5 --	0.227
		Enlisted Groundcrew	966.3	937.5	28.8 --	0.484
19-7	CD5 Cells (cells/mm^3)[a]	All	1,513.7	1,477.1	36.6 --	0.377
		Officer	1,528.9	1,431.6	97.3 --	0.134
		Enlisted Flyer	1,437.1	1,559.9	-122.8 --	0.217
		Enlisted Groundcrew	1,538.1	1,490.2	47.9 --	0.460
19-8	CD8 Cells (cells/mm^3)[a]	All	628.8	632.6	-3.8 --	0.851
		Officer	626.2	602.7	23.5 --	0.453
		Enlisted Flyer	597.5	691.9	-94.4 --	0.055
		Enlisted Groundcrew	646.0	635.7	10.3 --	0.745
19-9	CD14 Cells (cells/mm^3)[a]	All	484.7**	487.5**	-2.8 --	0.784**
		Officer	478.1**	461.6**	16.5 --	0.300**
		Enlisted Flyer	449.8**	505.9**	-56.1 --	0.021**
		Enlisted Groundcrew	510.7**	509.6**	1.1 --	0.952**
19-10	CD16+56 Cells (cells/mm^3)[a]	All	254.0	267.8	-13.8 --	0.171
		Officer	256.8	253.5	3.3 --	0.832
		Enlisted Flyer	235.5	272.3	-36.8 --	0.115
		Enlisted Groundcrew	260.0	279.1	-19.1 --	0.236
19-11	CD20 Cells (cells/mm^3)[e]	All	232.9**	218.3**	14.6 --**	0.083**
		Officer	222.6**	203.4**	19.2 --**	0.129**
		Enlisted Flyer	234.6**	236.9**	-2.3 --**	0.914**
		Enlisted Groundcrew	235.9**	219.6**	16.3 --**	0.211**
19-12	CD25 Cells (cells/mm^3)[a]	All	276.3**	275.5**	0.8 --**	0.936**
		Officer	277.6	270.3	7.3 --	0.605
		Enlisted Flyer	241.5	291.4	-49.9 --	0.015
		Enlisted Groundcrew	295.4	278.1	17.3 --	0.228

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
19-13	CD4-CD8 Ratio[a]	All	1.532**	1.470**	0.062 --**	0.154**
		Officer	1.605**	1.545**	0.060 --**	0.417**
		Enlisted Flyer	1.549**	1.413**	0.136 --**	0.186**
		Enlisted Groundcrew	1.469**	1.434**	0.035 --**	0.584**
19-14	Double Labelled Cells: CD3 with CD25 (cells/mm^3)[a]	All	218.8**	218.3**	0.5 --**	0.949**
		Officer	217.8	214.6	3.1 --	0.783
		Enlisted Flyer	190.6	229.4	-38.8 --	0.022
		Enlisted Groundcrew	237.1	221.1	16.0 --	0.185
19-15	Double Labelled Cells: CD5 with CD20 (cells/mm^3)[a] (Nonzero Measurements)	All	55.1	50.9	4.2 --	0.162
		Officer	52.8	48.4	4.4 --	0.342
		Enlisted Flyer	53.0	53.6	-0.6 --	0.939
		Enlisted Groundcrew	58.6	52.1	6.6 --	0.174
19-16	Double Labelled Cells: CD4 with CD8 (cells/mm^3)[a] (Nonzero Measurements)	All	30.0	30.4	-0.4 --	0.769
		Officer	28.9	30.4	-1.5 --	0.498
		Enlisted Flyer	29.7	29.0	0.7 --	0.814
		Enlisted Groundcrew	31.3	31.1	0.2 --	0.927
19-17	Double Labelled Cells: CD3 with CD16+56 (cells/mm^3)[a] (Nonzero Measurements)	All	91.5	93.3	-1.8 --	0.771
		Officer	98.1	93.3	4.8 --	0.637
		Enlisted Flyer	84.9	89.9	-5.0 --	0.720
		Enlisted Groundcrew	88.9	95.8	-6.9 --	0.475
19-18	TLC (cells/mm^3)[a]	All	2,063.9	2,043.8	20.1 --	0.672
		Officer	2,021.4	1,961.9	59.5 --	0.413
		Enlisted Flyer	1,974.4	2,108.8	-134.4 --	0.230
		Enlisted Groundcrew	2,152.6	2,104.5	48.1 --	0.525
19-19	IgA (mg/dl)[a]	All	215.5	217.0	-1.5 --	0.729
		Officer	206.4	210.7	-4.3 --	0.528
		Enlisted Flyer	212.8	212.1	0.7 --	0.954
		Enlisted Groundcrew	228.4	228.1	0.3 --	0.970

Table Q-1-13. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter (units)	Occupational Category	Adj. Mean RH	Adj. Mean C	Difference of Adj. Means (95% C.I.)	p-Value
19-20	IgG (mg/dl)[a]	All	1,123.2	1,141.5	-18.3 --	0.092
		Officer	1,101.2	1,124.7	-23.5 --	0.169
		Enlisted Flyer	1,100.6	1,141.7	-41.1 --	0.119
		Enlisted Groundcrew	1,160.6	1,165.4	-4.8 --	0.770
19-21	IgM (mg/dl)[a]	All	97.0**	98.3**	-1.3 --**	0.579**
		Officer	98.1**	97.5**	0.6 --**	0.868**
		Enlisted Flyer	94.2**	103.0**	-8.8 --**	0.127**
		Enlisted Groundcrew	97.2**	97.4**	-0.2 --**	0.950**
20-8	FVC (Percent of Predicted)	All	95.3	95.6	-0.2 (-1.4,0.9)	0.665
		Officer	96.4	96.8	-0.4 (-2.2,1.4)	0.677
		Enlisted Flyer	96.0	94.4	1.6 (-1.2,4.4)	0.255
		Enlisted Groundcrew	94.3	95.1	-0.8 (-2.5,0.9)	0.341
20-9	FEV_1 (Percent of Predicted)	All	91.1	94.5	-0.4 (-1.7,0.9)	0.531
		Officer	92.6	93.0	-0.5 (-2.6,1.6)	0.659
		Enlisted Flyer	90.5	90.6	-0.1 (-3.4,3.1)	0.938
		Enlisted Groundcrew	90.3	90.8	-0.5 (-2.5,1.5)	0.633
20-10	Ratio of Observed FEV_1 to Observed FVC[f]	All	0.772	0.772	-0.001 --	0.853
		Officer	0.770	0.772	-0.002 --	0.633
		Enlisted Flyer	0.768	0.776	-0.008 --	0.232
		Enlisted Groundcrew	0.775	0.772	0.004 --	0.371

[a] Means transformed from natural logarithm scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm scale; p-value based on difference of means on natural logarithm scale.

[b] Means transformed from natural logarithm (clinical parameter + 0.1) scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm (clinical parameter + 0.1) scale; p-value based on difference of means on natural logarithm (clinical parameter + 0.1) scale.

[c] Means transformed from square root scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on square root scale; p-value based on difference of means on square root scale.

[d] Coefficient and standard error for Ranch Hand versus Comparison contrast in a failure time analysis model, using a censored Weibull distribution.

[e] Means transformed from natural logarithm (clinical parameter + 1) scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm (clinical parameter + 1) scale; p-value based on difference of means on natural logarithm (clinical parameter + 1) scale.

[f] Means transformed from natural logarithm (1 - clinical parameter) scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm (1 - clinical parameter) scale; p-value based on difference of means on natural logarithm (1 - clinical parameter) scale.

--: Adjusted means, difference of adjusted means, and confidence interval not presented because analysis was performed on censored Weibull distribution.

** Group-by-covariate interaction ($p \leq 0.05$); adjusted mean, difference of adjusted means, confidence interval, and p-value derived from a model fitted after deletion of this interaction.

**** Group-by-covariate interaction ($p \leq 0.01$); adjusted mean, difference of adjusted means, confidence interval, and p-value not presented.

Note: RH = Ranch Hand
C = Comparison.

Table Q-1-14.
Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands – Log_2 (Initial Dioxin)

Table Ref.	Clinical Parameter (units)	R^2	Adj. Slope (Std. Error)[a]	p-Value[a]
9-6	Body Fat (Percent)[b]	0.731	-0.0065 (0.0042)	0.123
9-7	Body Fat (Percent) with Adjustment for Caloric Intake[b]	0.734	-0.0062 (0.0042)	0.135
9-10	Sedimentation Rate[c]	0.071	0.0506 (0.0297)	0.089
10-40	Prostate-Specific Antigen (ng/ml)[b] (Measurements at or Above Sensitivity Limit)	0.140	-0.036 (0.026)**	0.179**
11-28	Vibrotactile Threshold Measurement of Right Great Toe (microns)[b]	0.165	0.0325 (0.0419)**	0.438**
11-29	Vibrotactile Threshold Measurement of Left Great Toe (microns)[b]	0.194	0.0079 (0.0375)**	0.833**
13-12	AST (U/L)[b]	0.094	0.0110 (0.0140)**	0.433**
13-14	ALT (U/L)[b]	0.088	0.0171 (0.0175)	0.328
13-16	GGT (U/L)[b]	0.111	0.0329 (0.0243)**	0.177**
13-18	Alkaline Phosphatase (U/L)[b]	0.038	-0.0076 (0.0094)**	0.422**
13-20	Total Bilirubin (mg/dl)[b]	0.020	0.0013 (0.0159)	0.934
13-23	LDH (U/L)[b]	0.032	-0.0012 (0.0067)	0.863
13-25	Cholesterol (mg/dl)[b]	0.033	0.0113 (0.0064)**	0.080**
13-27	HDL Cholesterol (mg/dl)[b]	0.195	-0.0052 (0.0090)	0.563
13-29	Cholesterol-HDL Ratio[b]	0.162	0.0142 (0.0105)**	0.178**
13-31	Triglycerides (mg/dl)[b]	0.065	0.0403 (0.0218)**	0.065**
13-33	Creatine Kinase (U/L)[b]	0.124	0.0217 (0.0167)	0.196
13-35	Serum Amylase (U/L)[b]	0.132	-0.0273 (0.0123)	0.027
13-41	Prealbumin (mg/dl)	0.077	-0.0977 (0.1530)**	0.524**
13-43	Albumin (mg/dl)	0.071	8.1440 (10.6839)**	0.446**
13-45	α-1 Acid Glycoprotein (mg/dl)[b]	0.098	-0.0134 (0.0081)**	0.097**
13-47	α-1 Antitrypsin (mg/dl)	0.116	0.1019 (1.0141)**	0.920**
13-49	α-2 Macroglobulin (mg/dl)[b]	0.150	0.0105 (0.0075)**	0.165**
13-51	Apolipoprotein B (mg/dl)[b]	0.028	0.0202 (0.0085)**	0.018**
13-53	C_3 Complement (mg/dl)[b]	0.090	0.0105 (0.0049)	0.031
13-55	C_4 Complement (mg/dl)[b]	0.088	0.0020 (0.0097)**	0.834**
13-57	Haptoglobin (mg/dl)	0.087	-1.3155 (1.7467)**	0.452**
13-59	Transferrin (mg/dl)[b]	0.035	0.0032 (0.0052)**	0.532**
15-6	Systolic Blood Pressure (mm Hg)	0.172	****	****

Table Q-1-14. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands – Log_2 (Initial Dioxin)

Table Ref.	Clinical Parameter (units)	R^2	Adj. Slope (Std. Error)[a]	p-Value[a]
15-18	Diastolic Blood Pressure (mm Hg)	0.106	****	****
16-3	Red Blood Cell (RBC) Count (million/mm^3)	0.055	0.0127 (0.0135)	0.347
16-5	White Blood Cell (WBC) Count (thousand/mm^3)[b]	0.283	0.0019 (0.0098)**	0.846**
16-7	Hemoglobin (gm/dl)	0.071	0.0496 (0.0369)	0.179
16-9	Hematocrit (percent)	0.062	0.2117 (0.1110)	0.057
16-11	Platelet Count (thousand/mm^3)[d]	0.086	0.0645 (0.0580)	0.267
16-13	Prothrombin Time (seconds)[b]	0.073	0.0051 (0.0016)**	0.002**
16-16	Absolute Neutrophils (segs) (thousand/mm^3)[b]	0.223	0.0006 (0.0132)**	0.962**
16-17	Absolute Neutrophils (bands) (thousand/mm^3)[b] (Nonzero Measurements)	0.140	-0.0228 (0.0330)**	0.490**
16-18	Absolute Lymphocytes (thousand/mm^3)[b]	0.094	0.0041 (0.0144)	0.773
16-19	Absolute Monocytes (thousand/mm^3)[d]	0.066	0.0094 (0.0058)	0.104
16-20	Absolute Eosinophils (thousand/mm^3)[b] (Nonzero Measurements)	0.041	-0.0037 (0.0267)	0.890
16-21	Absolute Basophils (thousand/mm^3)[b] (Nonzero Measurements)	0.093	0.0334 (0.0197)	0.092
17-8	Serum Creatinine (mg/dl)[b]	0.061	-0.0086 (0.0069)**	0.214**
17-9	Urine Specific Gravity	0.048	0.0003 (0.0002)**	0.231**
18-6	Time to Diabetes Onset (years)[e]	--	-0.0344 (0.0329)	0.295
18-8	Testicular Volume: Minimum (cm^3)	0.063	-0.3887 (0.2218)**	0.080**
18-9	Testicular Volume: Total (cm^3)[d]	0.078	-0.0708 (0.0374)**	0.059**
18-19	Thyroid Stimulating Hormone (TSH) (μIU/ml)[b]	0.032	-0.0017 (0.0213)	0.937
18-21	Thyroxine (T_4) (μg/dl)	0.023	-0.0101 (0.0500)	0.839
18-24	Fasting Glucose (mg/dl)[b] (All Participants)	0.201	0.0248 (0.0083)**	0.003**
18-26	Fasting Glucose (mg/dl)[b] (Diabetics)	0.343	0.0431 (0.0225)	0.059
18-28	Fasting Glucose (mg/dl)[b] (Nondiabetics)	0.115	0.0006 (0.0038)**	0.880**
18-30	2-Hour Postprandial Glucose (mg/dl)[b] (Nondiabetics)	0.162	0.0216 (0.0106)	0.041
18-36	Serum Insulin (mIU/ml)[b] (All Participants)	0.347	0.0484 (0.0310)	0.119
18-38	Serum Insulin (mIU/ml)[b] (Diabetics)	0.596	-0.0906 (0.610)	0.142
18-40	Serum Insulin (mIU/ml)[b] (Nondiabetics)	0.272	0.0729 (0.0344)	0.035
18-42	Serum Glucagon (pg/ml)[b] (All Participants)	0.084	0.0003 (0.0105)**	0.974**

Table Q-1-14. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands – Log_2 (Initial Dioxin)

Table Ref.	Clinical Parameter (units)	R^2	Adj. Slope (Std. Error)[a]	p-Value[a]
18-44	Serum Glucagon (pg/ml)[b] (Diabetics)	0.153	-0.0338 (0.0283)	0.237
18-46	Serum Glucagon (pg/ml)[b] (Nondiabetics)	0.026	0.0199 (0.0097)	0.041
18-48	α-1-C Hemoglobin (percent)[b] (All Participants)	0.195	****	****
18-50	α-1-C Hemoglobin (percent)[b] (Diabetics)	0.524	0.0300 (0.0193)	0.124
18-52	α-1-C Hemoglobin (percent)[b] (Nondiabetics)	0.105	0.0007 (0.0036)	0.837
18-55	Serum Proinsulin (ng/ml)[d] (Diabetics)	0.490	-0.003 (0.025)	0.891
18-57	Serum C Peptide (ng/ml) (Diabetics)	0.673	-0.569 (0.309)	0.069
18-59	Total Testosterone (ng/dl)[d]	0.184	-0.1868 (0.1456)**	0.200**
18-61	Free Testosterone (pg/ml)[d]	0.201	-0.038 (0.025)	0.121
18-65	Estradiol (pg/ml)[d]	0.033	0.074 (0.039)	0.057
18-67	Luteinizing Hormone (LH) (mIU/ml)[b]	0.031	-0.032 (0.017)	0.061
18-69	Follicle Stimulating Hormone (FSH) (mIU/ml)[b]	0.053	-0.003 (0.023)	0.903
19-5	CD3 Cells (cells/mm^3)[b]	0.558	-0.010 (0.031)**	0.760**
19-6	CD4 Cells (cells/mm^3)[b]	0.518	-0.008 (0.026)	0.770
19-7	CD5 Cells (cells/mm^3)[b]	0.558	-0.008 (0.032)**	0.809**
19-8	CD8 Cells (cells/mm^3)[b]	0.136	****	****
19-9	CD14 Cells (cells/mm^3)[b]	0.471	0.009 (0.024)	0.714
19-10	CD16+56 Cells (cells/mm^3)[b]	0.506	0.015 (0.049)**	0.752**
19-11	CD20 Cells (cells/mm^3)[f]	0.204	-0.009 (0.033)**	0.783**
19-12	CD25 Cells (cells/mm^3)[b]	0.596	-0.012 (0.033)	0.729
19-13	CD4-CD8 Ratio[b]	0.072	-0.017 (0.026)	0.526
19-14	Double Labelled Cells: CD3 with CD25 (cells/mm^3)[b] (Nonzero Measurements)	0.587	-0.029 (0.036)	0.422
19-15	Double Labelled Cells: CD5 with CD20 (cells/mm^3)[b] (Nonzero Measurements)	0.533	-0.040 (0.066)	0.542
19-16	Double Labelled Cells: CD4 with CD8 (cells/mm^3)[b] (Nonzero Measurements)	0.107	0.018 (0.037)**	0.628**
19-17	Double Labelled Cells: CD3 with CD16+56 (cells/mm^3)[b] (Nonzero Measurements)	0.523	-0.129 (0.081)	0.115
19-18	TLC (cells/mm^3)[b]	0.578	****	****
19-19	IgA (mg/dl)[b]	0.035	0.032 (0.016)	0.052
19-20	IgG (mg/dl)[b]	0.109	-0.001 (0.009)	0.943

Table Q-1-14. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 2: Ranch Hands – Log_2 (Initial Dioxin)

Table Ref.	Clinical Parameter (units)	R^2	Adj. Slope (Std. Error)[a]	p-Value[a]
19-21	IgM (mg/dl)[b]	0.057	0.032 (0.022)	0.145
20-8	FVC (Percent of Predicted)	0.167	-1.068 (0.502)	0.034
20-9	FEV_1 (Percent of Predicted)	0.159	****	****
20-10	Ratio of Observed FEV_1 to Observed FVC[g]	0.201	-0.016 (0.012)	0.165

[a] Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and the covariates specified in the referenced chapter table.

[b] Slope and standard error based on natural logarithm of clinical parameter versus log_2 (initial dioxin).

[c] Slope and standard error based on natural logarithm of (clinical parameter + 0.1) versus log_2 (initial dioxin).

[d] Slope and standard error based on square root of clinical parameter versus log_2 (initial dioxin).

[e] Slope and standard error based on time to diabetes onset versus log_2 (initial dioxin) under a censored Weibull distribution.

[f] Slope and standard error based on natural logarithm of (clinical parameter + 1) versus log_2 (initial dioxin).

[g] Slope and standard error based on natural logarithm of (1 - clinical parameter) versus log_2 (initial dioxin).

--: R-squared not presented because analysis was based on a censored Weibull distribution.

** Log_2 (initial dioxin)-by-covariate interaction ($p \leq 0.05$); adjusted slope, standard error, and p-value derived from a model fitted after deletion of this interaction.

**** Log_2 (initial dioxin)-by-covariate interaction ($p \leq 0.01$); adjusted slope, standard error, and p-value not presented.

Table Q-1-15.
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
9-6	Body Fat (Percent)[b]	0.785	Comparison	1,063	22.01		
			Background RH	374	21.82	-0.19 --	0.194
			Low RH	260	22.14	0.13 --	0.415
			High RH	260	21.70	-0.30 --	0.064
			Low plus High RH	520	21.92	-0.08 --	0.509
9-7	Body Fat (Percent) with Adjustment for Caloric Intake[b]	0.787	Comparison	1,061	22.01**		
			Background RH	374	21.82**	-0.19 --**	0.183**
			Low RH	260	22.14**	0.13 --**	0.446**
			High RH	258	21.72**	-0.29 --**	0.076**
			Low plus High RH	518	21.93**	-0.08 --**	0.520**
9-10	Sedimentation Rate (mm/hr)[c]	0.085	Comparison	1,062	8.02		
			Background RH	374	8.01	-0.01 --	0.980
			Low RH	259	8.70	0.68 --	0.163
			High RH	260	8.76	0.74 --	0.145
			Low plus High RH	519	8.73	0.71 --	0.064
10-40	Prostate-Specific Antigen (ng/ml)[b] (Measurements at or Above Sensitivity Limit)	0.106	Comparison	1,014	****		
			Background RH	356	****	****	****
			Low RH	244	****	****	****
			High RH	245	****	****	****
			Low plus High RH	489	****	****	****
11-28	Vibrotactile Threshold Measurement of Right Great Toe (microns)[b]	0.171	Comparison	1,040	17.35**		
			Background RH	365	16.11**	-1.24 --**	0.266**
			Low RH	253	17.13**	-0.22 --**	0.864**
			High RH	250	18.40**	1.05 --**	0.448**
			Low plus High RH	503	17.76**	0.40 --**	0.696**
11-29	Vibrotactile Threshold Measurement of Left Great Toe (microns)[b]	0.193	Comparison	1,042	15.71		
			Background RH	366	15.45	-0.26 --	0.801
			Low RH	253	16.32	0.62 --	0.603
			High RH	250	16.45	0.75 --	0.545
			Low plus High RH	503	16.39	0.68 --	0.466

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
13-12	AST (U/L)[b]	0.056	Comparison	1,025	23.20		
			Background RH	362	22.73	-0.47 --	0.370
			Low RH	251	22.91	-0.29 --	0.616
			High RH	251	22.79	-0.41 --	0.496
			Low plus High RH	502	22.85	-0.35 --	0.442
13-14	ALT (U/L)[b]	0.082	Comparison	1,025	27.56		
			Background RH	362	26.25	-1.31 --	0.072
			Low RH	251	27.47	-0.09 --	0.913
			High RH	251	27.09	-0.47 --	0.581
			Low plus High RH	502	27.28	-0.28 --	0.667
13-16	GGT (U/L)[b]	0.119	Comparison	1,025	34.34**		
			Background RH	362	32.60**	-1.75 --**	0.162**
			Low RH	251	36.99**	2.65 --**	0.080**
			High RH	251	37.67**	3.33 --**	0.031**
			Low plus High RH	502	37.33**	2.99 --**	0.011**
13-18	Alkaline Phosphatase (U/L)[b]	0.040	Comparison	1,027	67.48**		
			Background RH	366	69.68**	2.20 --**	0.043**
			Low RH	254	70.87**	3.38 --**	0.006**
			High RH	254	68.96**	1.47 --**	0.239**
			Low plus High RH	508	69.90**	2.42 --**	0.011**
13-20	Total Bilirubin (mg/dl)[b]	0.019	Comparison	1,027	0.62		
			Background RH	367	0.63	0.00 --	0.888
			Low RH	254	0.62	-0.01 --	0.700
			High RH	254	0.60	-0.03 --	0.114
			Low plus High RH	508	0.61	-0.02 --	0.198
13-23	LDH (U/L)[b]	0.044	Comparison	1,024	147.47**		
			Background RH	362	147.90**	0.43 --**	0.793**
			Low RH	251	147.40**	-0.07 --**	0.971**
			High RH	251	146.55**	-0.92 --**	0.625**
			Low plus High RH	502	146.98**	-0.50 --**	0.729**

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
13-25	Cholesterol (mg/dl)[b]	0.035	Comparison	1,025	218.97**		
			Background RH	362	219.72**	0.75 --**	0.757**
			Low RH	251	218.49**	-0.48 --**	0.861**
			High RH	251	221.45**	2.48 --**	0.381**
			Low plus High RH	502	219.96**	1.00 --**	0.641**
13-27	HDL Cholesterol (mg/dl)[b]	0.137	Comparison	1,016	42.57**		
			Background RH	358	43.01**	0.44 --**	0.495**
			Low RH	247	42.60**	0.03 --**	0.967**
			High RH	246	41.72**	-0.85 --**	0.250**
			Low plus High RH	493	42.16**	-0.41 --**	0.463**
13-29	Cholesterol-HDL Ratio[b]	0.088	Comparison	1,018	5.08**		
			Background RH	363	5.05**	-0.03 --**	0.761**
			Low RH	250	5.07**	-0.00 --**	0.967**
			High RH	249	5.21**	0.14 --**	0.177**
			Low plus High RH	499	5.14**	0.07 --**	0.387**
13-31	Triglycerides (mg/dl)[b]	0.073	Comparison	1,025	130.78		
			Background RH	362	127.25	-3.53 --	0.423
			Low RH	251	132.05	1.27 --	0.802
			High RH	251	142.50	11.72 --	0.031
			Low plus High RH	502	137.17	6.39 --	0.112
13-33	Creatine Kinase (U/L)[b]	0.133	Comparison	1,025	170.02**		
			Background RH	362	168.64**	-1.38 --**	0.801**
			Low RH	251	167.25**	-2.77 --**	0.650**
			High RH	251	172.64**	2.61 --**	0.684**
			Low plus High RH	502	169.92**	-0.10 --**	0.983**
13-35	Serum Amylase (U/L)[b]	0.080	Comparison	1,027	81.69		
			Background RH	367	79.25	-2.44 --	0.162
			Low RH	254	84.37	2.69 --	0.184
			High RH	254	80.36	-1.33 --	0.514
			Low plus High RH	508	82.34	0.65 --	0.676

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
13-41	Prealbumin (mg/dl)	0.059	Comparison	1,025	27.75**		
			Background RH	362	27.58**	-0.17 (-0.71,0.37)**	0.537**
			Low RH	251	27.82**	0.07 (-0.54,0.67)**	0.827**
			High RH	251	27.93**	0.17 (-0.45,0.80)**	0.589**
			Low plus High RH	502	27.87**	0.12 (-0.35,0.59)**	0.620**
13-43	Albumin (mg/dl)	0.064	Comparison	1,027	3,936.55**		
			Background RH	367	3,916.86**	-19.68 (-56.12,16.75)**	0.290**
			Low RH	254	3,921.28**	-15.27 (-56.22,25.69)**	0.465**
			High RH	254	3,962.35**	25.80 (-16.50,68.11)**	0.232**
			Low plus High RH	508	3,941.82**	5.27 (26.79,37.33)**	0.747**
13-45	α-1 Acid Glycoprotein (mg/dl)[b]	0.048	Comparison	1,025	54.41**		
			Background RH	362	53.95**	-0.46 --**	0.535**
			Low RH	251	55.19**	0.78 --**	0.350**
			High RH	251	54.55**	0.15 --**	0.864**
			Low plus High RH	502	54.87**	0.46 --**	0.477**
13-47	α-1 Antitrypsin (mg/dl)	0.083	Comparison	1,025	146.42		
			Background RH	362	150.72	4.30 (1.03,7.56)	0.010
			Low RH	251	147.32	0.90 (-2.77,4.56)	0.632
			High RH	251	146.25	-0.17 (-3.96,3.62)	0.929
			Low plus High RH	502	146.78	0.36 (-2.50,3.23)	0.804
13-49	α-2 Macroglobulin (mg/dl)[b]	0.110	Comparison	1,025	129.92		
			Background RH	362	130.31	0.39 --	0.819
			Low RH	251	126.98	-2.95 --	0.118
			High RH	251	127.67	-2.25 --	0.249
			Low plus High RH	502	127.32	-2.60 --	0.078
13-51	Apolipoprotein B (mg/dl)[b]	0.028	Comparison	1,025	152.03		
			Background RH	362	150.68	-1.34 --	0.556
			Low RH	251	149.75	-2.27 --	0.373
			High RH	251	154.41	2.38 --	0.374
			Low plus High RH	502	152.06	0.04 --	0.986

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
13-53	C_3 Complement (mg/dl)[b]	0.122	Comparison	1,043	116.25		
			Background RH	369	114.16	-2.09 --	0.043
			Low RH	257	117.32	1.07 --	0.361
			High RH	258	117.42	1.17 --	0.335
			Low plus High RH	515	117.37	1.12 --	0.223
13-55	C_4 Complement (mg/dl)[b]	0.035	Comparison	1,025	23.06		
			Background RH	362	22.85	-0.20 --	0.554
			Low RH	251	23.17	0.11 --	0.772
			High RH	251	22.78	-0.28 --	0.487
			Low plus High RH	502	22.98	-0.08 --	0.785
13-57	Haptoglobin (mg/dl)	0.058	Comparison	1,025	103.77		
			Background RH	362	109.06	5.29 (-0.12,10.71)	0.056
			Low RH	251	105.79	2.02 (-4.05,8.10)	0.514
			High RH	251	109.06	5.29 (-0.99,11.57)	0.099
			Low plus High RH	502	107.42	3.66 (-1.10,8.41)	0.132
13-59	Transferrin (mg/dl)[b]	0.029	Comparison	1,025	286.52		
			Background RH	362	287.12	0.60 --	0.812
			Low RH	251	292.58	6.06 --	0.035
			High RH	251	295.17	8.65 --	0.003
			Low plus High RH	502	293.87	7.35 --	0.001
15-6	Systolic Blood Pressure (mm Hg)	0.180	Comparison	1,034	126.43		
			Background RH	365	125.49	-0.94 (-2.97,1.09)	0.365
			Low RH	250	125.45	-0.98 (-3.31,1.35)	0.410
			High RH	254	126.04	-0.39 (-2.74,1.96)	0.745
			Low plus High RH	504	125.75	-0.69 (-2.49,1.12)	0.455
15-18	Diastolic Blood Pressure (mm Hg)	0.103	Comparison	1,034	73.91**		
			Background RH	363	73.27**	-0.64 (-1.76,0.48)**	0.265**
			Low RH	249	73.19**	-0.71 (-2.01,0.58)**	0.279**
			High RH	256	74.00**	0.09 (-1.19,1.38)**	0.887**
			Low plus High RH	505	73.60**	-0.31 (-1.30,0.69)**	0.546**

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
16-3	Red Blood Cell (RBC) Count (million/mm^3)	0.062	Comparison	1,059	5.060**		
			Background RH	370	5.057**	-0.003 (-0.049,0.043)**	0.897**
			Low RH	259	5.030**	-0.030 (-0.082,0.021)**	0.246**
			High RH	258	5.015**	-0.045 (-0.098,0.008)**	0.095**
			Low plus High RH	517	5.023**	-0.038 (-0.078,0.002)**	0.065**
16-5	White Blood Cell (WBC) Count (thousand/mm^3)[b]	0.250	Comparison	1,059	6.62		
			Background RH	370	6.64	0.03 --	0.792
			Low RH	259	6.66	0.04 --	0.726
			High RH	258	6.64	0.02 --	0.828
			Low plus High RH	517	6.65	0.03 --	0.713
16-7	Hemoglobin (gm/dl)	0.090	Comparison	1,059	15.65**		
			Background RH	370	15.68**	0.03 (-0.09,0.15)**	0.615**
			Low RH	259	15.57**	-0.08 (-0.21,0.06)**	0.259**
			High RH	258	15.66**	0.01 (-0.13,0.15)**	0.863**
			Low plus High RH	517	15.62**	-0.03 (-0.14,0.07)**	0.544*
16-9	Hematocrit (percent)	0.090	Comparison	1,059	45.88**		
			Background RH	370	45.98**	0.10 (-0.27,0.47)**	0.591**
			Low RH	259	45.56**	-0.31 (-0.72,0.10)**	0.138**
			High RH	258	45.89**	0.02 (-0.41,0.44)**	0.935**
			Low plus High RH	517	45.73**	-0.15 (-0.47,0.18)**	0.370**
16-11	Platelet Count (thousand/mm^3)[d]	0.045	Comparison	1,058	245.8		
			Background RH	370	246.0	0.2 --	0.949
			Low RH	259	247.8	2.1 --	0.575
			High RH	258	258.5	12.7 --	<0.001
			Low plus High RH	517	253.1	7.3 --	0.010
16-13	Prothrombin Time (seconds)[b]	0.051	Comparison	977	11.97**		
			Background RH	341	12.01**	0.04 --**	0.157**
			Low RH	234	11.92**	-0.05 --**	0.131**
			High RH	240	11.95**	-0.02 --**	0.590**
			Low plus High RH	474	11.93**	-0.03 --**	0.188**

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
16-16	Absolute Neutrophils (segs) (thousand/mm^3)[b]	0.203	Comparison	1,059	3.561		
			Background RH	370	3.559	-0.002 --	0.974
			Low RH	259	3.578	0.017 --	0.836
			High RH	258	3.595	0.034 --	0.681
			Low plus High RH	517	3.586	0.025 --	0.686
16-17	Absolute Neutrophils (bands) (thousand/mm^3)[b] (Nonzero Measurements)	0.140	Comparison	884	0.171		
			Background RH	308	0.169	-0.002 --	0.828
			Low RH	213	0.172	0.001 --	0.902
			High RH	215	0.170	-0.001 --	0.927
			Low plus High RH	428	0.171	0.000 --	0.985
16-18	Absolute Lymphocytes (thousand/mm^3)[b]	0.084	Comparison	1,059	1.931		
			Background RH	370	1.932	0.001 --	0.970
			Low RH	259	1.910	-0.021 --	0.662
			High RH	258	1.897	-0.034 --	0.484
			Low plus High RH	517	1.904	-0.027 --	0.459
16-19	Absolute Monocytes (thousand/mm^3)[d]	0.039	Comparison	1,059	0.449		
			Background RH	370	0.461	0.012 --	0.430
			Low RH	259	0.445	-0.004 --	0.789
			High RH	258	0.479	0.030 --	0.079
			Low plus High RH	517	0.462	0.013 --	0.332
16-20	Absolute Eosinophils (thousand/mm^3)[b] (Nonzero Measurements)	0.035	Comparison	934	0.162		
			Background RH	336	0.164	0.002 --	0.797
			Low RH	230	0.154	-0.008 --	0.354
			High RH	231	0.149	-0.013 --	0.103
			Low plus High RH	461	0.151	-0.011 --	0.098
16-21	Absolute Basophils (thousand/mm^3)[b] (Nonzero Measurements)	0.060	Comparison	571	0.084		
			Background RH	200	0.087	0.003 --	0.304
			Low RH	144	0.081	-0.003 --	0.316
			High RH	143	0.086	0.002 --	0.653
			Low plus High RH	287	0.083	-0.001 --	0.719

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
17-8	Serum Creatinine (mg/dl)[b]	0.053	Comparison	1,062	0.9953**		
			Background RH	373	0.9872**	-0.0081--**	0.424**
			Low RH	260	1.0095**	0.0142--**	0.217**
			High RH	260	0.9893**	-0.0060--**	0.606**
			Low plus High RH	520	1.0001**	0.0048--**	0.624**
17-9	Urine Specific Gravity	0.029	Comparison	1,061	1.0191		
			Background RH	373	1.0190	-0.0001 (-0.0009,0.0007)	0.820
			Low RH	259	1.0188	-0.0003 (-0.0011,0.0006)	0.549
			High RH	259	1.0188	-0.0003 (-0.0012,0.0006)	0.507
			Low plus High RH	518	1.0188	-0.0003 (-0.0010,0.0004)	0.414
18-6	Time to Diabetes Onset (years)[c]	--	Comparison	1,044	--		
			Background RH	368	--	0.0908 (0.0785)[c]	0.247
			Low RH	252	--	-0.0554 (0.0725)[c]	0.445
			High RH	254	--	-0.0791 (0.0744)[c]	0.287
			Low plus High RH	506	--	-0.0667 (0.0580)[c]	0.250
18-8	Testicular Volume: Minimum (cm^3)	0.032	Comparison	1,057	15.11		
			Background RH	368	15.27	0.16 (-0.49,0.80)	0.634
			Low RH	256	15.24	0.13 (-0.61,0.87)	0.734
			High RH	257	14.81	-0.30 (-1.05,0.44)	0.423
			Low plus High RH	513	15.04	-0.09 (-0.66,0.48)	0.767
18-9	Testicular Volume: Total (cm^3)[d]	0.026	Comparison	1,057	32.45		
			Background RH	368	32.60	0.15 --	0.818
			Low RH	256	32.50	0.05 --	0.945
			High RH	257	31.51	-0.94 --	0.194
			Low plus High RH	513	32.03	-0.42 --	0.427
18-19	Thyroid Stimulating Hormone (TSH) ($\mu g/dl$)[b]	0.025	Comparison	1,027	1.36		
			Background RH	365	1.37	0.02 --	0.739
			Low RH	254	1.38	0.03 --	0.655
			High RH	255	1.46	0.10 --	0.105
			Low plus High RH	509	1.42	0.06 --	0.175

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
18-21	Thyroxine (T_4) (μg/dl)	0.033	Comparison	1,026	7.75		
			Background RH	365	7.76	0.01 (-0.15,0.17)	0.874
			Low RH	253	7.79	0.04 (-0.14,0.22)	0.645
			High RH	255	7.61	-0.14 (-0.32,0.05)	0.143
			Low plus High RH	508	7.70	-0.05 (-0.19,0.09)	0.500
18-24	Fasting Glucose (mg/dl)[b] (All Participants)	0.128	Comparison	1,045	107.43**		
			Background RH	368	107.14**	-0.29 --**	0.820**
			Low RH	252	106.65**	-0.77 --**	0.588**
			High RH	254	110.16**	2.74 --**	0.067**
			Low plus High RH	506	108.40**	0.97 --**	0.385**
18-26	Fasting Glucose (mg/dl)[b] (Diabetics)	0.359	Comparison	147	159.30		
			Background RH	39	161.35	2.05 --	0.825
			Low RH	48	146.68	-12.62 --	0.112
			High RH	46	168.57	9.26 --	0.289
			Low plus High RH	94	157.01	-2.29 --	0.718
18-28	Fasting Glucose (mg/dl)[b] (Nondiabetics)	0.076	Comparison	897	****		
			Background RH	329	****	****	****
			Low RH	203	****	****	****
			High RH	208	****	****	****
			Low plus High RH	411	****	****	****
18-30	2-Hour Postprandial Glucose (mg/dl)[b] (Nondiabetics)	0.157	Comparison	896	104.72**		
			Background RH	328	104.03**	-0.70 --**	0.689**
			Low RH	203	105.13**	0.40 --**	0.845**
			High RH	208	108.06**	3.34 --**	0.119**
			Low plus High RH	411	106.60**	1.88 --**	0.245**
18-36	Serum Insulin (mIU/ml)[b] (All Participants)	0.292	Comparison	1,044	****		
			Background RH	368	****	****	****
			Low RH	251	****	****	****
			High RH	254	****	****	****
			Low plus High RH	505	****	****	****

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
18-38	Serum Insulin (mIU/ml)[b] (Diabetics)	0.540	Comparison	147	40.11		
			Background RH	39	42.66	2.55 --	0.691
			Low RH	48	54.49	14.39 --	0.027
			High RH	46	38.42	-1.69 --	0.763
			Low plus High RH	94	45.60	5.49 --	0.245
18-40	Serum Insulin (mIU/ml)[b] (Nondiabetics)	0.247	Comparison	897	58.41**		
			Background RH	329	55.85**	-2.56 --**	0.365**
			Low RH	203	56.80**	-1.61 --**	0.631**
			High RH	208	64.38**	5.97 --**	0.104**
			Low plus High RH	411	60.51**	2.10 --**	0.437**
18-42	Serum Glucagon (pg/ml)[b] (All Participants)	0.078	Comparison	944	60.81**		
			Background RH	330	59.66**	-1.16 --**	0.251
			Low RH	223	59.72**	-1.10 --**	0.337
			High RH	218	61.03**	0.21 --**	0.858
			Low plus High RH	441	60.36**	-0.45 --**	0.616
18-44	Serum Glucagon (pg/ml)[b] (Diabetics)	0.230	Comparison	132	68.44**		
			Background RH	38	72.37**	3.93 --**	0.363**
			Low RH	45	68.82**	0.38 --**	0.920**
			High RH	38	63.62**	-4.82 --**	0.233**
			Low plus High RH	83	66.39**	-2.05 --**	0.497**
18-46	Serum Glucagon (pg/ml)[b] (Nondiabetics)	0.014	Comparison	825	56.24		
			Background RH	298	54.48	-1.76 --	0.051
			Low RH	183	54.75	-1.49 --	0.171
			High RH	186	57.23	0.99 --	0.371
			Low plus High RH	369	55.98	-0.25 --	0.767
18-48	α-1-C Hemoglobin (percent)[b] (All Participants)	0.123	Comparison	1,045	7.58**		
			Background RH	368	7.57**	-0.01 --**	0.929**
			Low RH	252	7.53**	-0.05 --**	0.576**
			High RH	254	7.69**	0.11 --**	0.185**
			Low plus High RH	506	7.61**	0.03 --**	0.602**

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
18-50	α-1-C Hemoglobin (percent)[b] (Diabetics)	0.320	Comparison	148	10.22		
			Background RH	42	10.32	0.10 --	0.822
			Low RH	49	10.02	-0.20 --	0.621
			High RH	47	10.78	0.56 --	0.195
			Low plus High RH	96	10.38	0.16 --	0.605
18-52	α-1-C Hemoglobin (percent)[b] (Nondiabetics)	0.064	Comparison	898	7.12		
			Background RH	329	7.12	0.00 --	0.902
			Low RH	204	7.05	-0.07 --	0.132
			High RH	208	7.05	-0.07 --	0.142
			Low plus High RH	412	7.05	-0.07 --	0.053
18-55	Serum Proinsulin (ng/ml)[d] (Diabetics)	0.380	Comparison	143	0.738		
			Background RH	36	0.689	-0.049 --	0.723
			Low RH	45	0.692	-0.046 --	0.709
			High RH	44	0.790	0.052 --	0.688
			Low plus High RH	89	0.740	0.001 --	0.988
18-57	Serum C Peptide (ng/ml) (Diabetics)	0.645	Comparison	143	6.34**		
			Background RH	36	6.28**	-0.05 (-1.69,1.58)**	0.948**
			Low RH	45	8.28**	1.94 (0.53,3.37)**	0.008**
			High RH	44	6.75**	0.42 (-1.06,1.90)**	0.579**
			Low plus High RH	89	7.53**	1.19 (0.07,2.31)**	0.038**
18-59	Total Testosterone (ng/dl)[d]	0.135	Comparison	1,056	514.4		
			Background RH	364	545.9	31.5 --	0.004
			Low RH	256	529.5	15.1 --	0.214
			High RH	259	491.4	-23.0 --	0.061
			Low plus High RH	515	510.2	-4.2 --	0.651
18-61	Free Testosterone (pg/ml)[d]	0.147	Comparison	1,055	19.27		
			Background RH	364	19.75	0.48 --	0.184
			Low RH	255	19.66	0.39 --	0.336
			High RH	259	19.18	-0.09 --	0.826
			Low plus High RH	514	19.42	0.15 --	0.640

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
18-65	Estradiol (pg/ml)[d]	0.017	Comparison	1,063	34.80		
			Background RH	374	34.39	-0.41 --	0.621
			Low RH	260	34.23	-0.57 --	0.549
			High RH	260	35.11	0.31 --	0.752
			Low plus High RH	520	34.67	-0.13 --	0.856
18-67	Luteinizing Hormone (LH) (mIU/ml)[b]	0.049	Comparison	1,063	3.82		
			Background RH	374	3.94	0.12 --	0.322
			Low RH	260	4.15	0.33 --	0.019
			High RH	260	3.73	-0.09 --	0.516
			Low plus High RH	520	4.00	0.18 --	0.286
18-69	Follicle Stimulating Hormone (FSH) (mIU/ml)[b]	0.072	Comparison	1,063	4.10		
			Background RH	374	4.08	-0.02 --	0.923
			Low RH	260	4.35	0.25 --	0.187
			High RH	260	4.18	0.08 --	0.644
			Low plus High RH	520	4.27	0.17 --	0.249
19-5	CD3 Cells (cells/mm^3)[b]	0.248	Comparison	400	1,445.2**		
			Background RH	140	1,507.9**	62.7 --**	0.301**
			Low RH	95	1,419.6**	-25.6 --**	0.700**
			High RH	106	1,492.2**	47.0 --**	0.472**
			Low plus High RH	201	1,457.4**	12.2 --**	0.809**
19-6	CD4 Cells (cells/mm^3)[b]	0.254	Comparison	403	922.5**		
			Background RH	141	960.5**	38.0 --**	0.331**
			Low RH	95	916.7**	-5.8 --**	0.893**
			High RH	108	962.1**	39.6 --**	0.348**
			Low plus High RH	203	940.6**	18.1 --**	0.583**
19-7	CD5 Cells (cells/mm^3)[b]	0.243	Comparison	400	1,486.5**		
			Background RH	140	1,548.0**	61.5 --**	0.326**
			Low RH	95	1,464.2**	-22.3 --**	0.745**
			High RH	106	1,552.3**	65.8 --**	0.333**
			Low plus High RH	201	1,510.0**	23.5 --**	0.655**

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
19-8	CD8 Cells (cells/mm^3)[b]	0.079	Comparison	400	633.6**		
			Background RH	140	645.3**	11.7 --**	0.705**
			Low RH	95	606.3**	-27.3 --**	0.413**
			High RH	106	618.4**	-15.2 --**	0.645**
			Low plus High RH	201	612.7**	-20.9 --**	0.409**
19-9	CD14 Cells (cells/mm^3)[b]	0.314	Comparison	403	****		
			Background RH	141	****	****	****
			Low RH	95	****	****	****
			High RH	108	****	****	****
			Low plus High RH	203	****	****	****
19-10	CD16+56 Cells (cells/mm^3)[b]	0.216	Comparison	399	248.0**		
			Background RH	139	242.0**	-6.0 --**	0.678**
			Low RH	94	219.3**	-28.7 --**	0.063**
			High RH	106	236.8**	-11.2 --**	0.465**
			Low plus High RH	200	228.4**	-19.6 --**	0.097**
19-11	CD20 Cells (cells/mm^3)[f]	0.113	Comparison	400	214.0		
			Background RH	140	245.1	31.1 --	0.013
			Low RH	95	223.9	9.9 --	0.452
			High RH	106	220.2	6.2 --	0.628
			Low plus High RH	201	222.0	8.0 --	0.424
19-12	CD25 Cells (cells/mm^3)[b]	0.421	Comparison	399	268.2**		
			Background RH	139	276.4**	8.2 --**	0.540**
			Low RH	94	266.9**	-1.3 --**	0.933**
			High RH	106	270.1**	1.9 --**	0.895**
			Low plus High RH	200	268.6**	0.4 --**	0.970**
19-13	CD4-CD8 Ratio[b]	0.042	Comparison	399	1.479		
			Background RH	139	1.499	0.020 --	0.756
			Low RH	94	1.576	0.097 --	0.185
			High RH	106	1.566	0.087 --	0.222
			Low plus High RH	200	1.571	0.092 --	0.097

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
19-14	Double Labelled Cells: CD3 with CD25 (cells/mm^3)[b]	0.410	Comparison	399	212.7**		
			Background RH	139	221.1**	8.4 --**	0.456**
			Low RH	94	211.6**	-1.1 --**	0.931**
			High RH	106	215.3**	2.6 --**	0.827**
			Low plus High RH	200	213.5**	0.8 --**	0.926**
19-15	Double Labelled Cells: CD5 with CD20 (cells/mm^3)[b] (Nonzero Measurements)	0.179	Comparison	382	49.7		
			Background RH	136	51.4	1.7 --	0.681
			Low RH	87	56.2	6.5 --	0.207
			High RH	102	55.2	5.5 --	0.242
			Low plus High RH	189	55.7	6.0 --	0.115
19-16	Double Labelled Cells: CD4 with CD8 (cells/mm^3)[b] (Nonzero Measurements)	0.103	Comparison	360	31.8**		
			Background RH	126	34.8**	2.93 --**	0.230**
			Low RH	85	29.0**	-2.86 --**	0.251**
			High RH	95	29.7**	-2.10 --**	0.390**
			Low plus High RH	180	29.4**	-2.46 --**	0.192**
19-17	Double Labelled Cells: CD3 with CD16+56 (cells/mm^3)[b] (Nonzero Measurements)	0.204	Comparison	387	100.9		
			Background RH	136	106.0	5.1 --	0.603
			Low RH	93	101.3	0.4 --	0.974
			High RH	99	85.0	-15.9 --	0.103
			Low plus High RH	192	92.5	-8.4 --	0.294
19-18	TLC (cells/mm^3)[b]	0.236	Comparison	400	2,022.4**		
			Background RH	140	2,066.7**	44.3 --**	0.507**
			Low RH	95	1,998.6**	-23.8 --**	0.757**
			High RH	106	2,034.4**	12.0 --**	0.870**
			Low plus High RH	201	2,017.4**	-5.0 --**	0.931**
19-19	IgA (mg/dl)[b]	0.021	Comparison	1,051	228.2**		
			Background RH	367	226.4**	-1.8 --**	0.780**
			Low RH	256	221.7**	-6.5 --**	0.365**
			High RH	255	226.2**	-2.0 --**	0.795**
			Low plus High RH	511	224.0**	-4.2 --**	0.453**

Table Q-1-15. (Continued)
Summary of Adjusted Results for Continuous Variables
Model 3: Ranch Hands and Comparisons by Dioxin Category

Table Ref.	Clinical Parameter (units)	R^2	Dioxin Category	n	Adj. Mean[a]	Difference of Adj. Mean vs. Comparisons (95% C.I.)	p-Value
19-20	IgG (mg/dl)[b]	0.73	Comparison	1,035	1,138.7**		
			Background RH	364	1,126.9**	-11.8 --**	0.451**
			Low RH	253	1,111.2**	-27.5 --**	0.112**
			High RH	251	1,115.1**	-23.6 --**	0.189**
			Low plus High RH	504	1,113.1**	-25.6 --**	0.060**
19-21	IgM (mg/dl)[b]	0.028	Comparison	1,035	****		
			Background RH	365	****	****	****
			Low RH	253	****	****	****
			High RH	251	****	****	****
			Low plus High RH	504	****	****	****
20-8	FVC (Percent of Predicted)	0.168	Comparison	1,060	95.7		
			Background RH	372	96.1	0.3 (-1.3,1.9)	0.698
			Low RH	260	95.5	-0.3 (-2.1,1.5)	0.766
			High RH	260	94.5	-1.3 (-3.1,0.6)	0.183
			Low plus High RH	520	95.0	-0.8 (-2.2,0.7)	0.298
20-9	FEV_1 (Percent of Predicted)	0.196	Comparison	1,060	91.5		
			Background RH	372	90.5	-1.0 (-2.9,0.9)	0.315
			Low RH	260	91.4	-0.1 (-2.2,2.1)	0.932
			High RH	260	90.9	-0.6 (-2.8,1.6)	0.583
			Low plus High RH	520	91.2	-0.3 (-2.0,1.3)	0.684
20-10	Ratio of Observed FEV_1 to Observed FVC[g]	0.248	Comparison	1,060	0.773**		
			Background RH	372	0.766**	-0.007 --**	0.070**
			Low RH	260	0.776**	0.003 --**	0.536**
			High RH	260	0.777**	0.004 --**	0.400**
			Low plus High RH	520	0.776**	0.003 --**	0.344**

[a] Adjusted for percent body fat at the time of duty in SEA, change in percent body fat at the time of duty in SEA to the date of the blood draw for dioxin, and the covariates specified in the referenced chapter table.

[b] Means transformed from natural logarithm scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm scale; p-value based on difference of means on natural logarithm scale.

[c] Means transformed from natural logarithm (clinical parameter + 0.1) scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm (clinical parameter + 0.1) scale; p-value based on difference of means on natural logarithm (clinical parameter + 0.1) scale.

[d] Means transformed from square root scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on square root scale; p-value based on difference of means on square root scale.

[e] Coefficient and standard error for Ranch Hand versus Comparison contrast in a failure time analysis model, using a censored Weibull distribution.

[f] Means transformed from natural logarithm (clinical parameter + 1) scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm (clinical parameter + 1) scale; p-value based on difference of means on natural logarithm (clinical parameter + 1) scale.

[g] Means transformed from natural logarithm (1 - clinical parameter) scale; difference of means after transformation to original scale; confidence interval not given because analysis was performed on natural logarithm (1 - clinical parameter) scale; p-value based on difference of means on natural logarithm (1 - clinical parameter) scale.

--: R-squared, adjusted mean, difference of adjusted means, and confidence interval not presented because analysis was based on a censored Weibull distribution.

** Categorized dioxin-by-covariate interaction ($p \leq 0.05$); adjusted mean, difference of adjusted means, confidence interval, and p-value derived from a model fitted after deletion of this interaction.

**** Categorized dioxin-by-covariate interaction ($p \leq 0.01$); adjusted mean, difference of adjusted means, confidence interval, and p-value not presented.

Note: RH = Ranch Hand.
Comparison: Current Dioxin ≤ 10 ppt.
Background (Ranch Hand): Current Dioxin ≤ 10 ppt.
Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.
High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table Q-1-16.
Summary of Adjusted Results for Continuous Variables
Models 4, 5, and 6: Ranch Hands − Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter (units)	Model[a]	R^2	Adj. Slope (Std. Error)	p-Value
9-6	Body Fat (Percent)[b]	4	0.114	0.0619 (0.0059)**	0.001**
		5	0.123	0.0541 (0.0049)	<0.001
		6	0.111	0.0521 (0.0053)	<0.001
9-7	Body Fat (Percent) with Adjustment for Caloric Intake[b]	4	0.132	0.0604 (0.0059)**	0.001**
		5	0.140	0.0528 (0.0049)	<0.001
		6	0.135	0.0527 (0.0050)	<0.001
9-10	Sedimentation Rate (mm/hr)[c]	4	0.077	0.0443 (0.0220)	0.045
		5	0.081	0.0507 (0.0186)	0.006
		6	0.095	0.0269 (0.0200)	0.180
10-40	Prostate-Specific Antigen (ng/ml)[b] (Measurements at or Above Sensitivity Limit)	4	0.098	-0.018 (0.017)	0.275
		5	0.099	-0.019 (0.014)	0.186
		6	0.101	-0.015 (0.016)	0.353
11-28	Vibrotactile Threshold Measurement of Right Great Toes (microns)[b]	4	0.171	0.0290 (0.0295)**	0.326**
		5	0.169	0.0243 (0.0249)**	0.328**
		6	0.168	0.0178 (0.0269)**	0.508**
11-29	Vibrotactile Threshold Measurement of Left Great Toes (microns)[b]	4	0.207	0.0226 (0.0291)**	0.439**
		5	0.200	0.0167 (0.0240)**	0.487**
		6	0.200	0.0183 (0.0262)**	0.485**
13-12	AST (U/L)[b]	4	0.080	0.0137 (0.0094)**	0.147**
		5	0.081	0.0135 (0.0080)**	0.090**
		6	0.083	0.0115 (0.0086)**	0.184**
13-14	ALT (U/L)[b]	4	0.070	0.0504 (0.0118)	<0.001
		5	0.073	0.0450 (0.0099)	<0.001
		6	0.072	0.0434 (0.0108)	<0.001
13-16	GGT (U/L)[b]	4	0.088	0.0620 (0.0159)**	<0.001**
		5	0.097	0.0645 (0.0134)**	<0.001**
		6	0.124	0.0448 (0.0144)**	0.002**
13-18	Alkaline Phosphatase (U/L)[b]	4	0.045	-0.0100 (0.0067)**	0.136**
		5	0.046	-0.0078 (0.0057)**	0.167**
		6	0.051	-0.0118 (0.0061)**	0.054**
13-20	Total Bilirubin (mg/dl)[b]	4	0.022	0.0031 (0.0106)**	0.774**
		5	0.017	0.0065 (0.0090)	0.469
		6	0.019	0.0019 (0.0097)	0.847
13-23	LDH (U/L)[b]	4	0.020	0.0020 (0.0045)	0.654
		5	0.020	0.0017 (0.0038)	0.660
		6	0.020	0.0009 (0.0041)	0.820
13-25	Cholesterol (mg/dl)[b]	4	0.041	0.0066 (0.0043)	0.129
		5	0.059	0.0155 (0.0036)	<0.001
		6	0.294	-0.0055 (0.0036)	0.129

Table Q-1-16. (Continued)
Summary of Adjusted Results for Continuous Variables
Models 4, 5, and 6: Ranch Hands – Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter (units)	Model[a]	R^2	Adj. Slope (Std. Error)	p-Value
13-27	HDL Cholesterol (mg/dl)[b]	4	0.131	-0.0218 (0.0067)**	0.001**
		5	0.141	-0.0225 (0.0057)**	<0.001**
		6	0.165	-0.0138 (0.0060)**	0.022**
13-29	Cholesterol-HDL Ratio[b]	4	0.069	0.0281 (0.0069)**	<0.001**
		5	0.091	0.0395 (0.0058)**	<0.001**
		6	0.283	0.0094 (0.0056)**	0.093**
13-31	Triglycerides (mg/dl)[b]	4	0.048	0.0729 (0.0149)**	<0.001**
		5	0.116	0.1049 (0.0124)**	<0.001**
		6	0.401	0.0298 (0.0110)**	0.007**
13-33	Creatine Kinase (U/L)[b]	4	0.089	0.0392 (0.0130)	0.003
		5	0.090	0.0350 (0.0110)	0.002
		6	0.088	0.0324 (0.0119)	0.006
13-35	Serum Amylase (U/L)[b]	4	0.045	-0.0238 (0.0092)	0.010
		5	0.046	-0.0220 (0.0078)	0.005
		6	0.049	-0.0160 (0.0084)	0.058
13-41	Prealbumin (mg/dl)	4	0.055	-0.0277 (0.1080)**	0.798**
		5	0.065	0.1569 (0.0994)**	0.115**
		6	0.087	-0.1088 (0.0978)**	0.266**
13-43	Albumin (mg/dl)	4	0.047	-3.4551 (8.0212)**	0.667**
		5	0.047	0.3387 (6.7815)**	0.960**
		6	0.051	-4.8440 (7.3150)**	0.508**
13-45	α-1 Acid Glycoprotein (mg/dl)[b]	4	0.078	-0.0095 (0.0057)**	0.092**
		5	0.072	-0.0040 (0.0048)	0.398
		6	0.087	-0.0105 (0.0051)	0.040
13-47	α-1 Antitrypsin (mg/dl)	4	0.097	-2.0421 (0.7054)**	0.004**
		5	0.102	-2.1148 (0.5949)**	<0.001**
		6	0.099	-1.7231 (0.6417)**	0.007**
13-49	α-2 Macroglobulin (mg/dl)[b]	4	0.115	-0.0155 (0.0056)	0.006
		5	0.114	-0.0126 (0.0047)	0.008
		6	0.114	-0.0139 (0.0051)	0.007
13-51	Apolipoprotein B (mg/dl)[b]	4	0.019	0.0132 (0.0059)	0.026
		5	0.046	0.0246 (0.0050)**	<0.001**
		6	0.280	-0.0026 (0.0048)	0.581
13-53	C_3 Complement (mg/dl)[b]	4	0.077	0.0233 (0.0039)	<0.001
		5	0.102	0.0245 (0.0032)**	<0.001**
		6	0.149	0.0154 (0.0034)	<0.001
13-55	C_4 Complement (mg/dl)[b]	4	0.046	0.0071 (0.0064)	0.267
		5	0.058	0.0129 (0.0054)**	0.018**
		6	0.078	0.0006 (0.0058)	0.920

Table Q-1-16. (Continued)
Summary of Adjusted Results for Continuous Variables
Models 4, 5, and 6: Ranch Hands − Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter (units)	Model[a]	R^2	Adj. Slope (Std. Error)	p-Value
13-57	Haptoglobin (mg/dl)	4	0.062	-1.3884 (1.1494)	0.227
		5	0.061	-0.0936 (0.9707)	0.352
		6	0.066	-1.5966 (1.0468)	0.128
13-59	Transferrin (mg/dl)[b]	4	0.042	0.0090 (0.0036)	0.012
		5	0.047	0.0102 (0.0030)	0.001
		6	0.057	0.0066 (0.0032)	0.040
15-6	Systolic Blood Pressure (mm Hg)	4	0.183	0.027 (0.420)**	0.948**
		5	0.177	0.100 (0.362)	0.783
		6	0.176	0.056 (0.387)	0.885
15-18	Diastolic Blood Pressure (mm Hg)	4	0.117	0.310 (0.265)	0.241
		5	0.117	0.291 (0.228)	0.202
		6	0.117	0.267 (0.243)	0.243
16-3	Red Blood Cell (RBC) Count (million/mm^3)	4	0.058	0.0118 (0.0090)	0.190
		5	0.059	0.0130 (0.0077)	0.089
		6	0.064	0.0063 (0.0083)	0.445
16-5	White Blood Cell (WBC) Count (thousand/mm^3)[b]	4	0.263	0.0013 (0.0067)**	0.850**
		5	0.264	0.0014 (0.0056)**	0.803**
		6	0.265	-0.0009 (0.0061)**	0.879**
16-7	Hemoglobin (gm/dl)	4	0.095	0.0166 (0.0239)	0.487
		5	0.095	0.0202 (0.0204)	0.322
		6	0.099	0.0048 (0.0221)	0.826
16-9	Hematocrit (percent)	4	0.091	0.0783 (0.0731)	0.285
		5	0.091	0.0824 (0.0624)	0.187
		6	0.094	0.0414 (0.0678)	0.542
16-11	Platelet Count (thousand/mm^3)[d]	4	0.056	-0.0093 (0.0452)	0.836
		5	0.056	0.0105 (0.0380)	0.782
		6	0.058	-0.0050 (0.0415)	0.904
16-13	Prothrombin Time (seconds)[b]	4	0.041	0.0001 (0.0009)	0.910
		5	0.041	-0.0004 (0.0008)	0.633
		6	0.048	0.0004 (0.0009)	0.626
16-16	Absolute Neutrophils (segs) (thousand/mm^3)[b]	4	0.208	0.0068 (0.0090)**	0.451**
		5	0.210	0.0051 (0.0076)**	0.498**
		6	0.209	0.0042 (0.0083)**	0.615**
16-17	Absolute Neutrophils (bands) (thousand/mm^3)[b] (Nonzero Measurements)	4	0.076	0.0053 (0.0226)	0.814
		5	0.076	0.0052 (0.0188)	0.782
		6	0.079	-0.0078 (0.0207)	0.707
16-18	Absolute Lymphocytes (thousand/mm^3)[b]	4	0.115	-0.0061 (0.0095)	0.524
		5	0.115	-0.0035 (0.0080)	0.660
		6	0.116	-0.0075 (0.0087)	0.388

Table Q-1-16. (Continued)
Summary of Adjusted Results for Continuous Variables
Models 4, 5, and 6: Ranch Hands -- Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter (units)	Model[a]	R^2	Adj. Slope (Std. Error)	p-Value
16-19	Absolute Monocytes (thousand/mm^3)[d]	4	0.047	0.0065 (0.0041)	0.120
		5	0.047	0.0053 (0.0035)	0.134
		6	0.048	0.0058 (0.0038)	0.133
16-20	Absolute Eosinophils (thousand/mm^3)[b] (Nonzero Measurements)	4	0.046	-0.0221 (0.0178)	0.213
		5	0.046	-0.0191 (0.0151)	0.205
		6	0.046	-0.0212 (0.0164)	0.197
16-21	Absolute Basophils (thousand/mm^3)[b] (Nonzero Measurements)	4	0.067	0.0014 (0.0139)	0.921
		5	0.077	0.0020 (0.0119)**	0.869**
		6	0.086	-0.0079 (0.0128)**	0.537**
17-8	Serum Creatinine (mg/dl)[b]	4	0.035	0.0017 (0.0044)	0.697
		5	0.035	0.0027 (0.0037)	0.473
		6	0.035	0.0010 (0.0040)	0.796
17-9	Urine Specific Gravity	4	0.007	0.0004 (0.0001)	0.013
		5	0.008	0.0003 (0.0001)	0.007
		6	0.013	0.0002 (0.0002)	0.123
18-6	Time to Diabetes Onset (years)[c]	4	--	-0.0889 (0.0277)	0.001
		5	--	-0.0925 (0.0251)	<0.001
		6	--	-0.0663 (0.0263)	0.012
18-8	Testicular Volume: Minimum (cm^3)	4	0.040	-0.2301 (0.1312)	0.080
		5	0.039	-0.1428 (0.1121)	0.203
		6	0.049	-0.2411 (0.1352)**	0.075**
18-9	Testicular Volume: Total (cm^3)[d]	4	0.041	-0.0432 (0.0221)	0.051
		5	0.039	-0.0288 (0.0189)	0.128
		6	0.042	-0.0424 (0.0205)	0.039
18-19	Thyroid Stimulating Hormone (TSH) (μIU/ml)[b]	4	0.029	0.0265 (0.0165)	0.108
		5	0.030	0.0265 (0.0139)	0.056
		6	0.031	0.0233 (0.0150)	0.121
18-21	Thyroxine (T_4) (μg/dl)	4	0.030	-0.0228 (0.0350)	0.515
		5	0.030	-0.0243 (0.0295)	0.411
		6	0.031	-0.0215 (0.0320)	0.503
18-24	Fasting Glucose (mg/dl) (All Participants)[b]	4	0.102	0.0217 (0.0054)	<0.001
		5	0.112	0.0214 (0.0046)**	<0.001**
		6	0.117	0.0122 (0.0044)	0.005
18-26	Fasting Glucose (mg/dl) (Diabetics)[b]	4	0.400	0.0442 (0.0219)	0.046
		5	0.408	0.0429 (0.0177)	0.017
		6	0.421	0.0266 (0.0204)	0.195
18-28	Fasting Glucose (mg/dl) (Nondiabetics)[b]	4	0.083	0.0001 (0.0026)	0.975
		5	0.083	0.0009 (0.0022)	0.688
		6	0.057	-0.0014 (0.0021)	0.510

Table Q-1-16. (Continued)
Summary of Adjusted Results for Continuous Variables
Models 4, 5, and 6: Ranch Hands − Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter (units)	Model[a]	R^2	Adj. Slope (Std. Error)	p-Value
18-30	2-Hour Postprandial Glucose (mg/dl) (Nondiabetics)[b]	4	0.170	0.0177 (0.0071)	0.012
		5	0.174	0.0189 (0.0061)	0.002
		6	0.182	0.0134 (0.0064)	0.038
18-36	Serum Insulin (mIU/ml) (All Participants)[b]	4	0.316	0.0374 (0.0220)	0.090
		5	0.318	0.0455 (0.0186)	0.015
		6	0.328	0.0203 (0.0197)**	0.303**
18-38	Serum Insulin (mIU/ml) (Diabetics)[b]	4	0.589	-0.0750 (0.0539)	0.166
		5	0.589	-0.0633 (0.0449)	0.161
		6	0.597	-0.0449 (0.0507)	0.378
18-40	Serum Insulin (mIU/ml) (Nondiabetics)[b]	4	0.273	0.0529 (0.0235)	0.025
		5	0.278	0.0646 (0.0200)	0.001
		6	0.303	0.0351 (0.0208)	0.092
18-42	Serum Glucagon (pg/ml) (All Participants)[b]	4	0.085	****	****
		5	0.078	0.0019 (0.0059)	0.044
		6	0.080	0.0084 (0.0064)	0.187
18-44	Serum Glucagon (pg/ml) (Diabetics)[b]	4	0.096	0.0008 (0.0215)	0.970
		5	0.099	0.0095 (0.0173)	0.585
		6	0.106	-0.0005 (0.0201)	0.978
18-46	Serum Glucagon (pg/ml) (Nondiabetics)[b]	4	0.026	0.0147 (0.0073)	0.044
		5	0.028	0.0138 (0.0062)	0.027
		6	0.028	0.0123 (0.0067)	0.065
18-48	α-1-C Hemoglobin (percent) (All Participants)[b]	4	0.106	0.0113 (0.0045)**	0.012**
		5	0.132	0.0121 (0.0039)**	0.002**
		6	0.147	0.0064 (0.0041)**	0.124**
18-50	α-1-C Hemoglobin (percent) (Diabetics)[b]	4	0.475	0.0237 (0.0164)	0.152
		5	0.476	0.0196 (0.0134)	0.145
		6	0.468	0.0168 (0.0155)	0.281
18-52	α-1-C Hemoglobin (percent) (Nondiabetics)[b]	4	0.057	-0.0037 (0.0027)**	0.174**
		5	0.047	-0.0014 (0.0022)	0.519
		6	0.050	-0.0028 (0.0024)	0.233
18-55	Serum Proinsulin (ng/ml) (Diabetics)[d]	4	0.463	0.004 (0.021)	0.854
		5	0.464	0.011 (0.017)	0.529
		6	0.479	-0.006 (0.019)	0.775
18-57	Serum C Peptide (ng/ml) (Diabetics)	4	0.689	-0.234 (0.255)	0.360
		5	0.690	-0.212 (0.212)	0.319
		6	0.691	-0.125 (0.241)	0.605
18-59	Total Testosterone (ng/dl)[d]	4	0.161	****	****
		5	0.166	-0.3396 (0.0912)**	<0.001**
		6	0.168	-0.2262 (0.0976)**	0.021**

Table Q-1-16. (Continued)
Summary of Adjusted Results for Continuous Variables
Models 4, 5, and 6: Ranch Hands -- Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter (units)	Model[a]	R^2	Adj. Slope (Std. Error)	p-Value
18-61	Free Testosterone (pg/ml)[d]	4	0.162	-0.009 (0.018)	0.627
		5	0.162	-0.006 (0.015)	0.683
		6	0.093	-0.009 (0.016)	0.599
18-65	Estradiol (pg/ml)[d]	4	0.023	0.024 (0.027)	0.370
		5	0.023	0.021 (0.023)	0.362
		6	0.027	0.008 (0.025)	0.757
18-67	Luteinizing Hormone (LH) (mIU/ml)[b]	4	0.027	-0.013 (0.012)	0.264
		5	0.027	-0.011 (0.010)	0.280
		6	0.027	-0.012 (0.011)	0.264
18-69	Follicle Stimulating Hormone (FSH) (mIU/ml)[b]	4	0.066	0.012 (0.016)	0.423
		5	0.066	0.013 (0.013)	0.317
		6	0.067	0.006 (0.014)	0.664
19-5	CD3 Cells (cells/mm^3)[b]	4	0.353	-0.000 (0.016)	0.988
		5	0.353	0.003 (0.014)	0.855
		6	0.366	-0.008 (0.015)	0.616
19-6	CD4 Cells (cells/mm^3)[b]	4	0.333	0.001 (0.017)	0.972
		5	0.333	0.004 (0.014)	0.790
		6	0.340	-0.006 (0.016)	0.719
19-7	CD5 Cells (cells/mm^3)[b]	4	0.346	0.002 (0.016)	0.919
		5	0.346	0.005 (0.014)	0.750
		6	0.350	-0.003 (0.015)	0.836
19-8	CD8 Cells (cells/mm^3)[b]	4	0.068	-0.007 (0.022)**	0.742**
		5	0.048	-0.006 (0.016)	0.728
		6	0.048	-0.008 (0.017)	0.663
19-9	CD14 Cells (cells/mm^3)[b]	4	0.345	-0.007 (0.016)	0.650
		5	0.345	0.000 (0.014)	0.992
		6	0.354	-0.011 (0.015)	0.461
19-10	CD16+56 Cells (cells/mm^3)[b]	4	0.258	0.004 (0.024)	0.869
		5	0.257	-0.001 (0.021)	0.967
		6	0.258	0.003 (0.023)	0.882
19-11	CD20 Cells (cells/mm^3)[f]	4	0.136	0.008 (0.020)	0.696
		5	0.137	0.012 (0.017)	0.480
		6	0.142	0.002 (0.019)	0.927
19-12	CD25 Cells (cells/mm^3)[b]	4	0.457	-0.006 (0.020)	0.762
		5	0.448	0.002 (0.017)	0.915
		6	0.472	-0.014 (0.019)**	0.449**
19-13	CD4-CD8 Ratio[b]	4	0.022	0.003 (0.017)	0.868
		5	0.022	0.006 (0.015)	0.657
		6	0.030	-0.003 (0.016)	0.833

Table Q-1-16. (Continued)
Summary of Adjusted Results for Continuous Variables
Models 4, 5, and 6: Ranch Hands − Log_2 (Current Dioxin + 1)

Table Ref.	Clinical Parameter (units)	Model[a]	R^2	Adj. Slope (Std. Error)	p-Value
19-14	Double Labelled Cells: CD3 with CD25 (cells/mm^3)[b]	4	0.449	-0.005 (0.022)	0.826
		5	0.449	-0.000 (0.019)	0.986
		6	0.471	-0.017 (0.020)**	0.397**
19-15	Double Labelled Cells: CD5 with CD20 (cells/mm^3)[b] (Nonzero Measurements)	4	0.321	0.063 (0.033)	0.060
		5	0.322	0.058 (0.029)	0.044
		6	0.324	0.048 (0.031)	0.120
19-16	Double Labelled Cells: CD4 with CD8 (cells/mm^3)[b] (Nonzero Measurements)	4	0.083	-0.011 (0.027)	0.697
		5	0.063	0.005 (0.041)	0.906
		6	0.064	-0.002 (0.044)	0.956
19-17	Double Labelled Cells: CD3 with CD16+56 (cells/mm^3)[b] (Nonzero Measurements)	4	0.339	-0.086 (0.042)	0.040
		5	0.340	-0.077 (0.036)	0.032
		6	0.343	-0.060 (0.039)	0.122
19-18	TLC (cells/mm^3)[b]	4	0.352	0.005 (0.013)	0.684
		5	0.352	0.006 (0.011)	0.566
		6	0.361	0.002 (0.012)	0.869
19-19	IgA (mg/dl)[b]	4	0.026	0.008 (0.012)	0.530
		5	0.025	0.001 (0.010)	0.945
		6	0.033	0.014 (0.011)	0.202
19-20	IgG (mg/dl)[b]	4	0.085	-0.003 (0.006)	0.598
		5	0.086	-0.007 (0.005)	0.206
		6	0.091	-0.002 (0.006)	0.714
19-21	IgM (mg/dl)[b]	4	0.038	-0.001 (0.013)**	0.954**
		5	0.033	-0.005 (0.011)	0.685
		6	0.039	0.004 (0.012)	0.761
20-8	FVC (Percent of Predicted)	4	0.179	-0.385 (0.360)	0.286
		5	0.180	-0.367 (0.305)	0.228
		6	0.183	-0.172 (0.329)	0.600
20-9	FEV_1 (Percent of Predicted)	4	0.190	0.447 (0.448)	0.318
		5	0.185	0.301 (0.379)	0.428
		6	0.192	0.536 (0.409)	0.190
20-10	Ratio of Observed FEV_1 to Observed FVC[g]	4	0.233	-0.025 (0.007)	0.001
		5	0.232	-0.020 (0.006)	0.001
		6	0.232	-0.022 (0.007)	0.001

[a] Model 4: Log_2 (lipid-adjusted current dioxin + 1).
Model 5: Log_2 (whole-weight current dioxin + 1).
Model 6: Log_2 (whole-weight current dioxin + 1), adjusted for log_2 total lipids.

[b] Slope and standard error based on natural logarithm of clinical parameter versus log_2 (current dioxin + 1).

[c] Slope and standard error based on square root of clinical parameter versus log_2 (current dioxin + 1).

[d] Slope and standard error based on natural logarithm of (clinical parameter + 0.1) versus $\log_2$ (current dioxin + 1).

[e] Slope and standard error based on time to diabetes onset versus $\log_2$ (current dioxin + 1) under a censored Weibull distribution.

[f] Slope and standard error based on natural logarithm of (clinical parameter + 1) versus $\log_2$ (current dioxin + 1).

[g] Slope and standard error based on natural logarithm of (1 - clinical parameter) versus $\log_2$ (current dioxin + 1).

** $\log_2$ (current dioxin + 1)-by-covariate interaction ($p \leq 0.05$); adjusted slope, standard error, and p-value derived from a model fitted after deletion of this interaction.

**** $\log_2$ (current dioxin + 1)-by-covariate interaction ($p \leq 0.01$); adjusted means, adjusted slope, standard error, and p-value not presented.

Table Q-1-17.
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter	Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value
9-3	Self-Perception of Health	All	1.44 (1.07,1.94)	0.016
		Officer	1.03 (0.38,1.82)	0.926
		Enlisted Flyer	1.68 (0.87,3.25)	0.121
		Enlisted Groundcrew	1.62 (1.07,2.45)	0.023
9-4	Appearance of Illness or Distress	All	1.44 (0.77,2.68)	0.093
		Officer	1.85 (0.64,5.37)	0.258
		Enlisted Flyer	3.10 (0.60,16.07)	0.178
		Enlisted Groundcrew	0.91 (0.36,2.28)	0.841
9-5	Relative Age Appearance	All	0.86 (0.60,1.23)	0.416
		Officer	0.75 (0.35,1.58)	0.449
		Enlisted Flyer	1.36 (0.64,2.92)	0.425
		Enlisted Groundcrew	0.75 (0.46,1.24)	0.264
9-8	Body Fat	All	0.99 (0.82,1.20)	0.927
		Officer	1.04 (0.75,1.44)	0.805
		Enlisted Flyer	1.12 (0.68,1.83)	0.655
		Enlisted Groundcrew	1.09 (0.82,1.43)	0.558
9-9	Body Fat with Adjustment for Caloric Intake	All	0.99 (0.82,1.21)	0.952
		Officer	0.96 (0.69,1.32)	0.792
		Enlisted Flyer	1.04 (0.64,1.70)	0.877
		Enlisted Groundcrew	1.01 (0.77,1.34)	0.926
9-11	Sedimentation Rate	All	1.02 (0.82,1.28)	0.839
		Officer	1.06 (0.71,1.56)	0.782
		Enlisted Flyer	0.96 (0.58,1.58)	0.859
		Enlisted Groundcrew	1.03 (0.75,1.42)	0.859
10-3	Skin Neoplasms	All	1.19 (0.98,1.45)	0.074
		Officer	1.20 (0.90,1.61)	0.221
		Enlisted Flyer	1.32 (0.81,2.15)	0.259
		Enlisted Groundcrew	1.14 (0.85,1.55)	0.382
10-4	Malignant Skin Neoplasms	All	1.17 (0.90,1.54)	0.244
		Officer	1.26 (0.87,1.84)	0.228
		Enlisted Flyer	1.29 (0.67,2.46)	0.445
		Enlisted Groundcrew	0.99 (0.61,1.61)	0.972
10-5	Benign Skin Neoplasms	All	1.20 (0.97,1.49)	0.109
		Officer	1.19 (0.84,1.67)	0.372
		Enlisted Flyer	1.56 (0.89,2.74)	0.160
		Enlisted Groundcrew	1.12 (0.81,1.54)	0.543
10-6	Skin Neoplasms of Uncertain Behavior or Unspecified Nature	All	0.89 (0.25,3.17)	0.854
		Officer	0.88 (0.14,5.32)	0.886
		Enlisted Flyer	--	--
		Enlisted Groundcrew	0.96 (0.16,5.77)	0.960

Table Q-1-17. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter	Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value
10-7	Basal Cell Carcinomas (All Sites Combined)	All	1.11 (0.82,1.48)	0.502
		Officer	1.18 (0.78,1.77)	0.434
		Enlisted Flyer	1.24 (0.63,2.44)	0.541
		Enlisted Groundcrew	0.93 (0.54,1.58)	0.778
10-8	Basal Cell Carcinomas (Ear, Face, Head, and Neck)	All	1.21 (0.88,1.68)	0.244
		Officer	1.35 (0.86,2.14)	0.196
		Enlisted Flyer	1.15 (0.55,2.42)	0.703
		Enlisted Groundcrew	1.04 (0.58,1.86)	0.893
10-9	Basal Cell Carcinomas (Trunk)	All	0.90 (0.50,1.61)	0.714
		Officer	0.92 (0.46,1.87)	0.823
		Enlisted Flyer	1.62 (0.43,6.17)	0.478
		Enlisted Groundcrew	0.58 (0.18,1.86)	0.359
10-10	Basal Cell Carcinomas (Upper Extremities)	All	1.16 (0.60,2.24)	0.662
		Officer	1.32 (0.60,2.91)	0.489
		Enlisted Flyer	1.36 (0.08,22.19)	0.829
		Enlisted Groundcrew	0.71 (0.17,2.89)	0.633
10-11	Basal Cell Carcinomas (Lower Extremities)	All	--	--
		Officer	--	--
		Enlisted Flyer	--	--
		Enlisted Groundcrew	--	--
10-12	Squamous Cell Carcinomas	All	1.92 (0.69,5.35)	0.208
		Officer	1.44 (0.42,4.99)	0.564
		Enlisted Flyer	2.13 (0.26,17.61)	0.483
		Enlisted Groundcrew	3.47 (0.67,18.00)	0.138
10-13	Nonmelanomas	All	1.17 (0.88,1.54)	0.282
		Officer	1.22 (0.83,1.80)	0.310
		Enlisted Flyer	1.30 (0.68,2.49)	0.430
		Enlisted Groundcrew	1.00 (0.60,1.66)	0.997
10-14	Melanomas	All	1.37 (0.58,3.26)	0.474
		Officer	1.57 (0.47,5.21)	0.465
		Enlisted Flyer	--	--
		Enlisted Groundcrew	1.24 (0.35,4.35)	0.740
10-15	Systemic Neoplasms	All	1.03 (0.84,1.27)	0.772
		Officer	0.90 (0.64,1.25)	0.520
		Enlisted Flyer	1.13 (0.69,1.85)	0.640
		Enlisted Groundcrew	1.13 (0.82,1.57)	0.459
10-16	Malignant Systemic Neoplasms	All	1.16 (0.77,1.75)	0.479
		Officer	0.94 (0.53,1.66)	0.820
		Enlisted Flyer	1.51 (0.65,3.52)	0.340
		Enlisted Groundcrew	1.37 (0.60,3.14)	0.454

Table Q-1-17. (Continued)
Summary of Adjusted Results for Dichotomous Variables
Model 1: Ranch Hands versus Comparisons

Table Ref.	Clinical Parameter	Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value
10-17	Benign Systemic Neoplasms	All	1.06 (0.84,1.34)	0.607
		Officer	0.84 (0.58,1.24)	0.384
		Enlisted Flyer	1.15 (0.67,1.98)	0.602
		Enlisted Groundcrew	1.23 (0.87,1.74)	0.240
10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	All	0.92 (0.47,1.78)	0.803
		Officer	1.26 (0.53,3.01)	0.599
		Enlisted Flyer	--	--
		Enlisted Groundcrew	0.75 (0.25,2.27)	0.616
10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	All	1.34 (0.55,3.24)	0.519
		Officer	2.28 (0.54,9.62)	0.263
		Enlisted Flyer	0.61 (0.11,3.37)	0.571
		Enlisted Groundcrew	1.37 (0.27,6.79)	0.703
10-20	Malignant Systemic Neoplasms (Oral Cavity, Pharynx, and Larynx)	All	1.00 (0.28,3.58)	0.995
		Officer	0.77 (0.07,8.57)	0.828
		Enlisted Flyer	1.42 (0.20,10.30)	0.727
		Enlisted Groundcrew	0.72 (0.06,8.06)	0.791
10-21	Malignant Systemic Neoplasms (Esophagus)	All	--	--
		Officer	--	--
		Enlisted Flyer	--	--
		Enlisted Groundcrew	--	--
10-22	Malignant Systemic Neoplasms (Brain)	All	--	--
		Officer	--	--
		Enlisted Flyer	--	--
		Enlisted Groundcrew	--	--
10-23	Malignant Systemic Neoplasms (Thymus, Heart, and Mediastinum)	All	--	--
		Officer	--	--
		Enlisted Flyer	--	--
		Enlisted Groundcrew	--	--
10-24	Malignant Systemic Neoplasms (Thyroid Gland)	All	1.36 (0.19,9.66)	0.999
		Officer	2.80 (0.25,30.90)	0.774
		Enlisted Flyer	--	--
		Enlisted Groundcrew	--	--
10-25	Malignant Systemic Neoplasms (Bronchus and Lung)	All	1.95 (0.54,7.04)	0.301
		Officer	5.53 (0.60,50.64)	0.130
		Enlisted Flyer	0.62 (0.05,7.02)	0.700
		Enlisted Groundcrew	1.18 (0.07,20.41)	0.911
10-26	Malignant Systemic Neoplasms (Colon and Rectum)	All	1.69 (0.45,6.33)	0.432
		Officer	1.38 (0.28,6.91)	0.692
		Enlisted Flyer	--	--
		Enlisted Groundcrew	--	--